VISIONULTRA
System Manual

MATRIX
TELECOM SOLUTIONS
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Documentation Information

This is a general documentation and it covers many models with different specifications. A particular product may not support all the features and facilities described in the documentation.

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Contents

Section 1: Introduction

Welcome

Welcome to the world of telecom solutions from Matrix and thanks for purchasing a Matrix product.

We want you to get the maximum performance from our product. If you run into technical difficulties, we are here to help. But please consult this system manual first.

If you still can't find the answer, gather all the information or questions that apply to your problem and with the product close to you, call your dealer. Matrix dealers are trained and ready to give you the support you need to get the most from your Matrix product. In fact, most problems reported are minor and can be easily solved over the phone.

In addition, technical consultation is available from Matrix engineers every business day. We are always ready to give advice on application requirements or specific information on installation and operation of our products.

This is a common system manual for all variants of VisionUltra viz. VisionUltra-616, VisionUltra-412. (VisionUltra-206, VisionUltra-208 and VisionUltra-308 are only for Italy). The range of variables and the reports attached in the system manual are with reference to VisionUltra-616.

The table below lists the range applicable to all the variants:

		VisionUltra 206	VisionUltra 208	VisionUltra 308	VisionUltra 412	VisionUltra 616
Maximum SLT (conventional Phones)		7	9	9	13	17
Maximum Analog Trunks		2	2	3	4	6
Door Phone Port (2 wire/4 wire)		1	1	1	1	1
RSD Port		6	6	6	6	6
Data Port (Internet Ready Port)		1	1	1	1	1
Digital Input Port		1	1	1	1	1
Digital Output Port		3	3	3	3	3
PAS Port (Analog Input Port)		1	1	1	1	1
External Music Port (Analog Output Port)		1	1	1	1	1
Auto Attendant Module	User VM	8x23 secs.	8x23 secs.	8x23 secs.	8x23 secs.	8x23 secs.
	System VM	8x7 secs.	8x7 secs.	8x7 secs.	8x7 secs.	8x7 secs.
Communication Port (RS232)		1	1	1	1	1

Also note that, this is also a common user's guide for all the customers worldwide. Few feature access codes are country dependent and hence the use of system is subject to the settings (country selection) made in the system.

The feature access codes used in this system manual are referenced to the default country code: India. The user is requested to change the country code explicitly first and then use the feature access codes depending on the country where the system is installed. For e.g. if the country code is selected as USA/Canada (3), then the operator is accessed by dialing '0'. The equivalent feature access codes and default settings for different regions are listed in topics Default Settings and Country Code.

The system manual is divided in following sections:
Section 1: Introduction
Section 2: Features and Facilities
Section 3: Appendices

We suggest the first time users to read this system manual in the following sequence.
Section 1
Section 2 (in the given below hierarchy)

- Department Call   90
- Paging   143
- External Call Forward (ECF)   115

*The user can use the pages named '*Notes*' given at the end of the system manual for making note of customer's requirements and '*Programming Register*' for registering the programming changes Datewise. These could be used for future reference.*

Packing List

The ideal sales package contains the following:

Sr.	Description	Qty.
01	VisionUltra	1
02	Power Cord	1
03	System Manual	1
04	User's Guide	1
05	Quick Start	4
06	Fuse (F2) 2 Amp, Fast Blow	1
07	Fuse (F4) 2 Amp, Slow Blow	1
08	Battery Cable	1
09	Battery Link	1
10	Screw Grip	2
11	Screw M7 x 30	2
12	Warranty Card Set	1
13	Support Card	1
14	Telephone Message Pad	1
15	Telephone Personality Guide	1
16	Matrix Logo Small	5
17	Wall Mounting Template	1
18	VisonUltra CD (Jeeves Software, System Manual PDF, User's Guide PDF, Quick Start PDF)	1

In case of short supply, please contact the source from where you have purchased the system.

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Warranty Statement

Matrix Telecom Pvt. Ltd. (Matrix) warrants to its consumer purchaser any of its products to be free of defects in material, workmanship and performance for a period of 15 months from date of manufacturing or 12 months from the date of installation which ever is earlier.

During this warranty period, Matrix will at its option, repair or replace the product at no additional charge if the product is found to have manufacturing defect. Any replacement product or part/s may be furnished on an exchange basis, which shall be new or like-new, provided that it has functionality at least equal to that of the product, being replaced. All replacement parts and products will be the property of Matrix. Parts repaired or replaced will be under warranty throughout the remainder of the original warranty period only.

This limited warranty does not apply to:
1. Products that have been subjected to abuse, accident, natural disaster, misuse, modification, tampering, faulty installation, lack of reasonable care, repair or service in any way that is not contemplated in the documentation for the product or if the model or serial number has been altered, tampered with, defaced or removed.

2. Products which have been damaged by lightning storms, water or power surges or which have been neglected, altered, used for a purpose other than the one for which they were manufactured, repaired by customer or any party without Matrix's written authorization or used in any manner inconsistent with Matrix's instructions.

3. Products received improperly packed or physically damaged.

4. Products damaged due to operation of product outside the products' specifications or use without designated protections.

Warranty valid only if:
- Primary protection on all the ports provided.
- Mains supply is within limit and protected.
- Environment conditions are maintained as per the product specifications.

Warranty Card:
- When the product is installed, please return the warranty card with:
  - Date, signature and stamp of the customer
  - Date, signature and stamp of the channel partner

- Matrix assumes that the customer agrees with the warranty terms even when the warranty card is not signed and returned as suggested.

The Purchaser shall have to bear shipping charges for sending product to Matrix for testing/rectification. The product shall be shipped to the Purchaser at no-charge if the material is found to be under warranty. The Purchaser shall have to either insure the product or assume liability for loss or damage during transit.

Matrix reserves the right to waive off or make any changes in its warranty policy without giving any notice.

If Matrix is unable to repair or replace, as applicable, a defective product which is covered by Matrix warranty, Matrix shall, within a reasonable time after being notified of the defect, refund the purchase price of the product provided the consumer/purchaser returns the product to Matrix.

In no event will Matrix be liable for any damages including lost profits, lost business, lost savings, downtime or delay, labor, repair or material cost, injury to person, property or other incidental or consequential damages arising out of use of or inability to use such product, even if Matrix has been advised of the possibility of such damages or losses or for any claim by any other party.

Except for the obligations specifically set forth in this Warranty Policy Statement, in no event shall Matrix be liable for any direct, indirect, special, incidental or consequential damages whether based on contract or any other legal theory and where advised of the possibility of such damages. Neither Matrix nor any of its distributors, dealers or sub-dealers makes any other warranty of any kind, whether expressed or implied, with respect to Matrix products. Matrix and its distributors, dealers or sub-dealers specifically disclaim the implied warranties of merchantability and fitness for a particular purpose.

This warranty is not transferable and applies only to the original consumer purchaser of the Product. Warranty shall be void if the warranty card is not completed and registered with Matrix within 30 days of installation.

All legal course of action subjected to Vadodara (Gujarat, India) Jurisdiction only.

Introducing the System

The VisionUltra is a versatile PBX system specifically designed for small offices, banks, schools, big departmental stores, hospitals and other such places. The VisionUltra is shown in the figure given below:

The VisionUltra offers a number of extra interfaces as shown below:
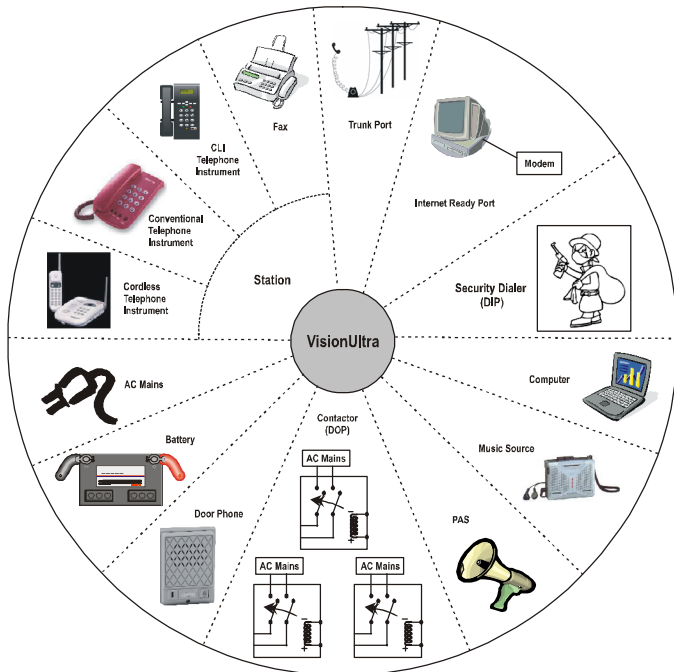
VisionUltra offers 5 variants viz.
- VisionUltra-616
- VisionUltra-412
- VisionUltra-308
- VisionUltra-208
- VisionUltra-206

Basic features of VisionUltra
- Efficient Power Supply based on Switched Mode Power Supply Scheme
- Wide Input Voltage Range: 90V to 265VAC
- Built-In Battery Charger
- Internet Ready Port.
- Supports On-site programming as well as Remote programming.
- Compatible with any type of telephone instrument.
- Supports basic features like:
  - Alarms
  - Auto Call Back
  - Barge-In
  - Internal Dialing
  - Hold/Toggle
  - Call Forward
  - Call Park
  - Call Pick Up
  - Call Transfer
  - Class of Service
  - Distinctive Rings
  - Executive-Secretary (Hotline)
  - Flexible Numbers
  - Hotline
  - Interrupt Request
  - Last Number Redial

- Music on hold
- On site programming
- Power Down Stations
- Programmable Feature Access
- Programmable Access to Programming of System
- Pulse and DTMF dialing

- It also supports advanced features like:
  - Abbreviated Dialing
  - Alternate Number Dialing
  - Automatic Call Disconnector
  - Auto Day/Night Mode
  - Auto Redial
  - Auto Shut Dynamic Lock
  - Boss Ring
  - Call Privacy
  - CLI Based ECF
  - CLI Based Routing
  - Conference
  - DID
  - DISA
  - External Call Forwarding
  - Flashing on Trunk
  - Fax Homing
  - Group Call
  - Least Cost Routing-An Introduction
  - Live Call Supervision
  - Programmable Timers
  - Programmable Trunk Access
  - Raid
  - Schedule Dialing
  - Selective Trunk Access
  - Toll Control
  - Trunk Groups
  - Walk-In Class of Service
  - Auto-Attendant
  - Computer Connectivity
  - Dial by Name
  - Digital Input Port
  - Digital Output Port
  - Door Lock
  - Door Phone
  - Remote Status Display Port
  - External Music Port
  - Inbound Call Analysis
  - PAS Port
  - Security Dialer
  - SMDR
  - Voice Guidance

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Protecting the System

The VisionUltra does not work in isolation with the environment. It is connected to the environment in following ways.
- Power is fed to the system for functioning of the system.
- Being a PBX system, trunk lines and stations are also connected to the system.
- System also has other interfaces like External Music, PAS, DIP, Computer, Relay Port. Hence there are chances that heavy voltages can enter the system through these interfaces.
- The system should be protected from static charges that could find their way through the system components.

If the system is protected from these interfaces, 100% satisfactory and trouble free performance of the system is guaranteed.

Protecting the system from heavy voltages from the mains:

The VisionUltra is designed to work with input voltages ranging between 90-265VAC. The Power Supply of VisionUltra is designed on switch mode design and hence support such a wider range of operating voltage. However to protect the system from abrupt changes in the input voltage, use of CVT is recommended. CVT of 100VA or 150VA is recommended.

Protecting the system from heavy voltages on the trunk lines and the overhead stations:

The VisionUltra can get damaged if heavy voltages enter the system from trunk lines or from overhead stations.
These heavy voltages could be due to:
- Heavy voltage line falling on the CO line or on the overhead stations cable
- Thunderbolts
- Short-circuit of trunk lines or overhead station cables with electric cables

It is necessary to protect the VisionUltra from these voltages. The protection can be in the form of some protection devices like GDTs, MOVs, Fuses, etc. These protection devices are in-built for each trunk in the system.

These devices work satisfactorily only if they are properly earthed. It is recommended that VisionUltra is provided a separate telecom earth. A dedicated terminal marked 'ETH' is provided on the MDF of the system to which the telecom earth should be connected. Telecom earth is a dedicated earth only for the PBX. The advantage of having a dedicated earth is that there is no risk of back voltage. There are chances that if the earth is not perfect, instead of providing protection to the system, it may damage the system.

Protecting the system from static charges:

While installing the system or servicing the system, care must be taken to provide a path to the static charges. It is advisable for the System Engineer (SE) to touch a grounded object before touching the system before installation or maintenance.

Protecting the system from heavy voltage on the communication cable:

The VisionUltra provides a communication port to which a computer can be connected. It is recommended to run the cable connecting both the devices through the conduit carrying telephone cables or through a separate conduit. By fluke if an electrical wire carrying heavy voltage shorts with this cable, heavy voltages can damage the communication port.

Protecting the system from heavy voltage on the External music port (Analog Input Port):

The external music port of the VisionUltra should be protected from:
- Heavy voltages on the cable connecting the VisionUltra and the external music source due to shorting with any electrical wire.
- An audio signal, which is not as per the specifications, is fed to this port. Please refer 'Music on Hold' for specifications.

Protecting the system from heavy voltage on the PAS port (Analog Output Port):

The PAS port of the VisionUltra should be protected from:
- Heavy voltages on the cable connecting the VisionUltra and the amplifier/speaker due to shorting with any electrical wire.
- Faulty Amplifier

Protecting the system from heavy voltage on the DIP (Digital Input Port):

The DIP of the VisionUltra should be protected from:
- Heavy voltages on the cable connecting the VisionUltra and the panic switch or the sensor.
- Faulty panic switch or the sensor.

Protecting the system from heavy voltage on the Relay Port (Digital Output Port):

The Relay port of the VisionUltra should be protected from:
- Heavy voltages on the cable connecting VisionUltra and the equipment/Doorlock/Contactor connected to it.
- Faulty or overrated contactor/equipment/Doorlock.

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Installing the System

Precautions:

Before installing the system, please read the following precautions carefully:
- Do not open the system in power-ON condition
- Do not plug/unplug any card in power-ON condition. This may damage the system. Warranty does not cover such damages.
- The VisionUltra uses CMOS parts. These parts are sensitive to electro-static discharges. Observe anti static rules strictly.
- Do not install this product near water, for example near a bathtub, washing bowl, kitchen sink, laundry tub, swimming pool etc.
- Slots on enclosure are for proper ventilation. They will protect the system from overheating. Never cover the slots.
- Never place this product on heated place or any other equipment.
- Never push objects of any kind inside this product. This may short-circuit various parts.
- Operate these products only with 90-265VAC, 47-63Hz supply and if you are not sure about supply voltage, contact authorized dealer. It is advisable to give proper, stabilized power.
- This product is equipped with a plug having a third (ground) pin, which fits only into a grounding-type outlet. This is a safety feature. If you are unable to insert the plug into the outlet, ask an electrician to replace the obsolete outlet. Do not defeat the purpose of the grounding type plug.
- Unplug this product from electric wall outlet in following cases and contact authorized service personnel.
  - Liquid spills on to the product.
  - Product exposed to rain or water.
  - Product does not operate normally by following operating instructions.
  - Product dropped from height.
  - Product exhibits unusual change in performance.
- Never do telephone wiring during a lightening storm.
- Avoid using telephone other than a cordless type during an electric storm. There may be a remote risk of electric shock from lightening.
- Never use a telephone to report gas leaks if it is near to gas leak.
- Do not touch non-insulated telephone wires or terminals before disconnecting at the network interface.
- Please connect a Telecom earth to the system (to the port marked 'ETH' on the MDF).
- The protection device, GDT protects the system efficiently only if it is provided good telecom earth. Please note that protection device protects the system, however they do not guarantee 100% protection from lighting storm, induced voltages, etc. Please note that warranty does not cover such damages.

- Please note that these products are designed to work efficiently at temperature ranging from -10°C to +55°C (14° to 131°F) with 5 to 95% relative humidity, non-condensing.
- Don't try to replace the 3.6V DC battery (marked as B1) at your end. Always prefer to contact authorized dealer of Matrix.

Site Selection

- The VisionUltra should always be installed at a place equidistant from all the stations. This reduces the cabling cost and also makes cabling network less complicated.
- It should preferably be installed at 3.5 feet height (approx.) in airy, dust free and moisture free place. An installation at this height makes preventive or curative maintenance task easy.
- It is advisable that the system should be installed away from any source of electromagnetic noise such as any radio equipment, heavy transformers, faulty electric chokes of tube-lights, any device having a faulty coil etc. This will reduce any problem arising due to electromagnetic effect.

Cabling

- Select a good quality telephone cable (with 0.5 mm conductor diameter) for internal cabling as well as for overhead cabling.
- Take care that cables are not left open on the ground where they may get damaged due to entanglement in the foot or due to pressure from other heavy objects.
- Avoid long length cables and at the same time keep number of joints to a minimum i.e. strike a balance between the two. This will help you to find out a cable fault easily.
- Ensure separate cable conduits for both electrical and telephone cables.

Power Supply

- The VisionUltra operates on 90-265VAC, 47-63Hz supply. Arrange for a separate power point and switch, close to the system.
- Power Supply for the VisionUltra must be separate from other heavy electrical loads like Air-conditioners, Heaters, Welding machines, Electrical motors, heavy transformers, tube lights having faulty chokes, electric bell and other such noise generating equipments.
- Please ensure that the system is properly earthed. For more details, please refer Protecting the System.

Battery

The VisionUltra provides battery backup. A battery of 24V/7-10AH or two batteries of 12V/7-10AH can be connected. With these batteries, a back up time of 5-6 hours can be ensured, provided the batteries are fully charged. However, the battery

back up time depends upon the load of the system during the power failure condition.

About the System

The VisionUltra houses following three types of cards viz.
- The VisionUltra CPU card
- The VisionUltra TRK/SLT card
- The VisionUltra Door Phone + DOP card

Photograph of VisionUltra:

Power Cord

ON-OFF Switch

Battery Switch

Battery Connector

COM Port

A brief description of each card is given below:

VisionUltra CPU Card
This card controls and coordinates all the activities of the entire system. It performs all higher level function. It controls all the ports. It houses the power supply circuit and the battery charger circuit. All the configuration and programming information is stored on this card. This card supports following interfaces.
- Communication Port
- External Music Port
- Paging Port
- Digital Input Port

The functions and significance of each of these interfaces are explained in respective topics of this system manual.

VisionUltra TRK + SLT Card
This module supports SLT ports to which conventional telephone instruments can be connected and trunk port to which analog trunk line can be terminated. The number of such ports depend on the configuration. For e.g. the TRK + SLT card for the VisionUltra-412 variant will house 4 trunk ports and 12 SLT ports and TRK+SLT card for VisionUltra-616 variant will house 6 trunk ports and 16 SLT ports. The

TRK+SLT card have a RSD port to which 6 RSD units can be connected in parallel and Data port (Internet Ready Port).

VisionUltra Door Phone + DOP Card
- Two-wire Door Phone-DOP card
- Four-wire Door Phone-DOP card

Door phone module with 2 wire door phone interface supports 3 digital output ports, DOP1, DOP2, DOP3 and a Door Phone port to connect the 2 wire door phone. The door phone port is marked 'DP' on the MDF. The DOP ports are marked 'DOP1', 'DOP2', 'DOP3' on the MDF. The user has to connect the two wires of the door phone to the Door Phone port. This Door Phone Port can be used as a Normal port also.

Doorphone module with 4 wire door phone interface supports 3 digital output port (DOP1, DOP2, DOP3) and a 5 pin Door Phone port to connect the 4 wire door phone. The door phone port is marked 'DP' on the MDF. The DOP ports are marked 'DOP1', 'DOP2', 'DOP3' on the MDF.

The pin configurations are as follows:

Pin 1 and 2	20VAC Power Supply
Pin 3	Rx Speech (Tx of doorphone to be terminated here)
Pin 4	Tx Speech (Rx of Doorphone to be terminated here)
Pin 5	Reference ground (To be used only if required)

For details on "How to install a doorphone", please refer the topic 'Door Phone'.

Installation
- Unpack the box. Get satisfied with the contents and the condition of all the parts. In case of short supply or damaged parts, please contact the source from where you purchased the system immediately.
- Please refer to the Mechanical Dimensions given at the end of this topic. To know the pitch of mounting holes.
- Check the mains voltage at the power plug from where the supply is to be given to the system. It should be as per the specifications. Earth the system properly.
- Connect 2 conventional telephone instruments directly at the system MDF.
- Connect the power cord to the power plug. Ensure proper contacts. Switch 'ON' the system. Observe the reset cycle on the front panel of the system.
- Please refer 'Getting Started' for more details on reset cycle.
- Check for dial tone on the telephone instruments connected to the system.
- Switch 'OFF' the system. Remove the power cord of the system from the power plug.

- Remove the telephone instruments connected to the system for testing purpose.
- Now connect all the trunk and station cables to the system.
- Ensure proper telecom earth on system MDF for best protection.
- Tag each wire pair with respective Station/Trunk number. Different color tags for Trunk/Station can be used for better identification.
- Now again power the system for final switch ON. Ensure proper contacts.
- To use other interfaces like Computer, External Music, Security Dialer and Public Address System (PAS), please refer respective topics in this system manual.

How to make a perfect earth?

- Dig a pit of area 2 feet x 2 feet x 6 feet. (lxbxd). Please refer to the figure on the next page.
- Get a copper plate of size 1.5 feet x 1.5 feet x 0.25 feet.
- Connect a copper strip of size 1-inch wide, 0.12 inch thick and 6 feet length at the center of the copper plate by welding or nuts and bolts.
- Insert a G.I pipe onto the copper strip till it reaches the copper plate.
- Place this set up into the pit and ensure that at least 4 inch of the G.I pipe is above the ground level.
- Fill the pit 1-inch layer of charcoal and salt in 3:1 ratio at the bottom and then with the soil.
- Connect a bare 14 SWG copper wire (double) on the top of the copper strip and run it to the exchange room and connect it on the bus bar.
- Bus bar is a copper strip 4-inch long with 6 nos. of screws and nuts mounted on it. It has to be fixed on the wall in the exchange room.
- The earth wire of the system should be connected to this bus bar.
- It is recommended to water the earth at regular intervals.

VisionUltra Mechanical Drawing:
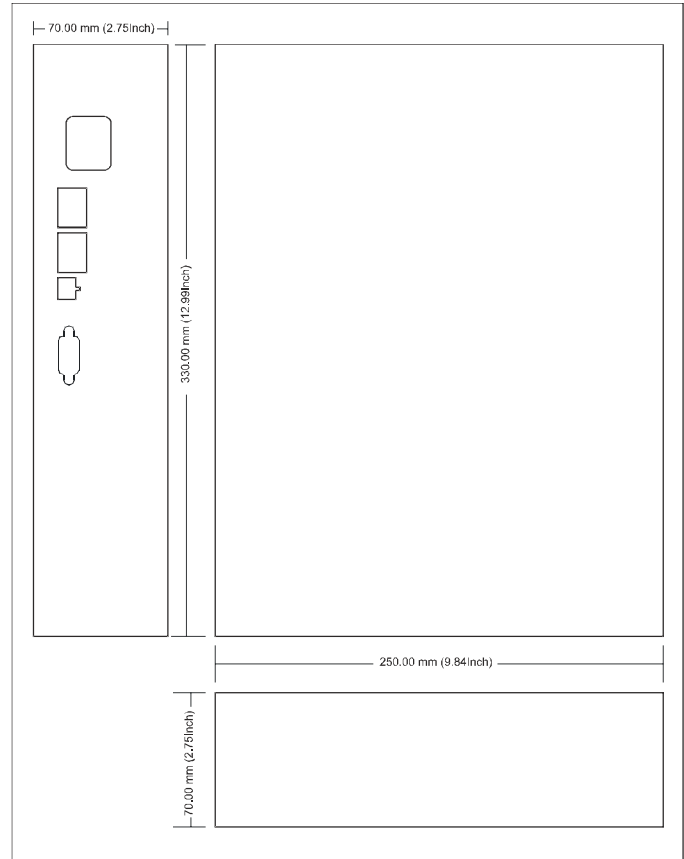
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Getting Started

After the VisionUltra is successfully installed, the system is now ready to be switched ON. To check the correctness of installation, configurations and connection it is always advised to test the basic features like Making Call (Internal and External), Receiving a Call before proceeding with the complex programming as per requirement.

Switching ON the System

Now switch ON the system. The system takes about 3 to 4 seconds to reset. Observe the Reset Cycle on the front panel of the system. The VisionUltra has 4 LED's in the front panel.

LED Label	Meaning	Color
ON	Power	Green
TST	Test	Red
TZ	Time Zone	Red
BUF	Buffer	Red

On power ON all the LEDs glow at once and remain ON 500 msec. All the LEDs turn OFF except ON. The reset cycle is completed. After this the system is ready for use. The behavior of the LEDs during normal conditions is given below:

Meaning	Behavior
Power	This LED glows when the VisionUltra is powered
Test	Glows 1 sec. ON/1sec. OFF when the system is in working condition
Time Zone	This LED is OFF during the Day Time and ON during the Night Time
SMDR	This LED glows steady ON when SMDR buffer (with incoming or outgoing) gets 80% full

Default the System

On default the system all the LEDs glow in sequence (with a delay of 200 msec.)

Testing the Installation

- In the power ON mode the system is ready for use with the default country code (India) and the flexible values for variables like extension's parameters to suit the Indian market.
- If the system is being used elsewhere then the user is required to perform the following steps:
  - Dial *1#91-1234* (To enter SE mode)
  - Dial *1110-Country Code-#** (To select the suitable Country where, 1-India, 2-Italy, 3-USA/Canada)
  - Dial *00-#** (To exit SE mode)
- After selecting the country code, the user may default the system (*1103-4321-#**).

- It is required to check the functioning of the system by testing all the extension lines and the trunk.
- Test all extension lines for dial tone, ring back tone, speech and ring, one by one.
- Test functioning of the trunk by dialing outside number from one of the extension lines and check the trunk tones and speech. Ring on the trunk line can be accomplished by asking your friends to dial your number.

How to make External Call?

- Lift the handset
- Dial trunk access code
- Dial the external telephone number

Important Points:
- The stations having access to trunk will only be able to make External Calls.
- The station with higher Toll Control will only be able to make External Calls.

How to make an Internal Call?

- Lift the handset
- Dial the desired station's flexible number
- The called station rings
- Speech is established when the called party lifts the handset

Important Points:
- Hands free operation is also possible if a speakerphone is used.
- The stations having access to internal call will only be able to make Internal Calls.

Programming the System

Please refer to the topic 'Default Settings' and 'Country Code'. Most of the time the default values suit your requirements and there is no need for extensive programming.

To program the system it is required to enter the SE (Programming) Mode.
Dial 1#91-1234 (default SE Password)

A model hierarchy for programming is listed below. The user has a flexibility to follow his own hierarchy as per his requirement.

Steps for programming
- Real Time Clock
- Time Table
- Flexible Numbers
- Class of Service (COS)
- Trunk Access Groups
- Toll Control
- Call Pick Up

- Station Group
- Privacy
- Trunk Parameters
- DID
- LCR
- Trunk Landing Destinations
- Operator
- SMDR
- DISA
- Voice Message Applications
- Department Call
- Paging
- External Call Forward

Press '00-#*' to exit the programming mode after the programming is complete.

Relevant Topics:

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Section 2: Features and Facilities

Abbreviated Dialing

What's this?

- Frequently called numbers can be stored in the system. These numbers can be dialed using specific codes. This is called Abbreviated dialing. It is also known as Memory Dialing.
- This helps save time while dialing such frequently used numbers.
- An abbreviated number is dialed by dialing its directory index.

The VisionUltra offers two types of abbreviated dialing: *Personal Abbreviated Dialing and Global Abbreviated Dialing.*

- Each user is allocated memory space called personal memory to store 10 numbers of his own choice. This is called Personal Abbreviated Dialing. These numbers are dialed out using access codes 801-810.
- Besides personal memory, 89 numbers can be stored in a common memory space called global memory. These numbers are dialed out using Access codes 811-899. This is called Global Abbreviated Memory.

Personal Abbreviated Dialing

- The numbers stored in the personal memory of a user are dialed out.
- Each user can store up to 10 numbers of his choice in his personal memory.
- User can change these numbers anytime from his station without consulting the System Administrator or the System Engineer.
- The location codes for Personal Abbreviated Dialing are 01-10. Hence the access codes are 801 to 810.
- Personal Abbreviated Dialing is allowed to all the users.

Personal Abbreviated Dialing

Directory Index	Trunk	Number
01	1	952666269156
⋮	⋮	⋮
⋮	⋮	⋮
10	8	02612266266

Station 21
Toll Control
Trunk Access Group

Directory Index	Trunk	Number
01	1	02612446266
⋮	⋮	⋮
⋮	⋮	⋮
10	5	02228956212

37
Toll Control
Trunk Access Group
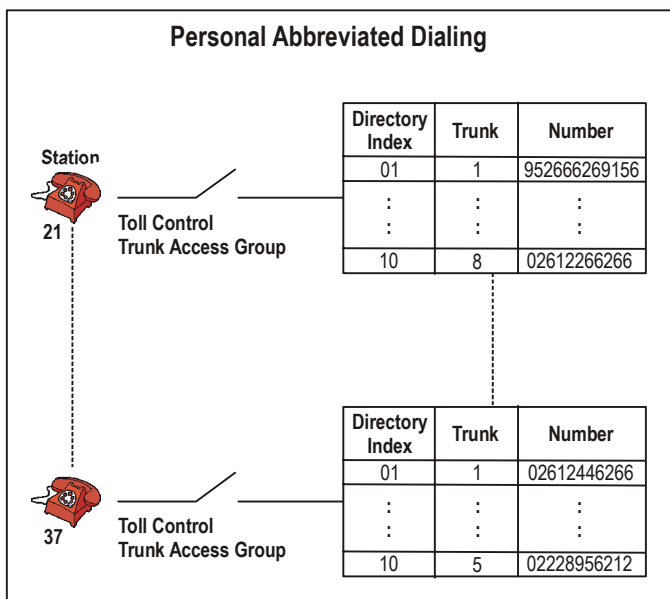
- The system checks Trunk Access Group and Toll Control allowed list and denied list before dialing the Personal Abbreviated number. Hence for Personal Abbreviated Dialing, Trunk Access Group, Toll Control allowed list and Toll Control denied list should be programmed properly.
- A printout of station parameters will show the telephone numbers programmed in the personal directory by the station user.

How to use Personal Abbreviated Dialing?

1	Lift the handset.	Dial tone
2	Dial *8-Location Code.*	Number dialed out.

How to program Personal Abbreviated Dialing?

1	Lift the handset.	Dial tone
2	Dial *18-Location Code-Trunk Access Code-Number-#**	Number dialed out.
3	Replace the handset.	

In the above command
Location code is from 01 to 10.
Trunk Access Code is 0, 5, 61 to 66.
Number is the telephone number, which is to be abbreviated.
Maximum Digits in the telephone number is 16.

Example:
To program telephone number 0265-2630555 at directory index 01 with trunk access code '62',
dial *18-01-62-02652630555-#**
Once this location is programmed with the number, dial 801 to call the number.

Global Abbreviated Dialing

- The numbers stored in the global memory of the system are dialed out.
- Global directory can be programmed either by the System Administrator or the System Engineer.
- The global directory is common for all the users.
- Maximum 89 numbers can be stored in the global directory. Location codes for global directory are from 11 to 99. Hence the access codes for global abbreviated dialing are 811 to 899.
- Global Directory is divided into two parts i.e. Global Directory part 1 and Global Directory part 2.
- A user can dial these numbers irrespective of his Toll Control and Trunk Access Group. However these numbers can be dialed only if the user is allowed this feature from Class of Service.
- Telephone numbers of fire, police, branch offices or such other places can be stored in global directory part 1 and its access be given to all the users so that any user can access this facility.

- Long distance numbers can be stored in global directory part 2 and its access be given to selected users.
- In case of long distance numbers, complete numbers with preceding codes should be entered.
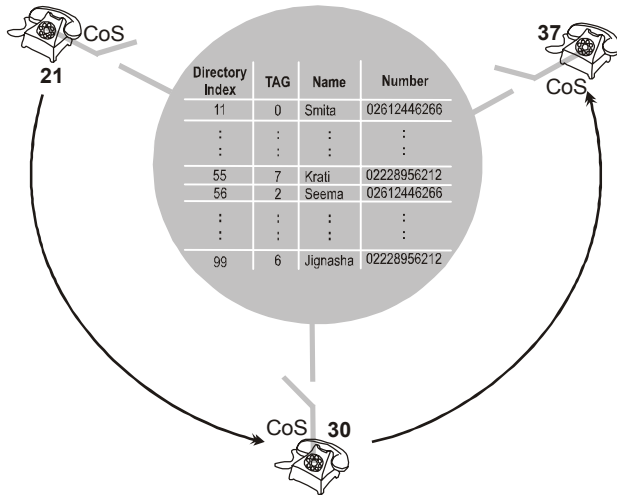
How to use Global Abbreviated Dialing?

1	Lift the handset.	Dial tone
2	Dial **8-Location Code.**	Number dialed out.

Example:
To program a telephone number 312-265-4322 at location 11.
1301-11-3122654322-#*
To dial this number the user has to dial 811.

How to program?

Step 1: Make a list of telephone numbers to be stored in global directory.
Step 2: Program the telephone numbers in appropriate part at various locations using command **1301.**
Step 3: Clear the numbers from a various locations using command **1301.** (if wrongly programmed)
Step 4: Set Trunk Access group using command **1302.**

Commands
Step 1
Take a piece of paper and a pen and make a list of telephone numbers.

Step 2
Use following command to program a telephone number in Global Directory list:
1301-Location Code-Number-#*
Where,
Location Code is from 11 to 99
Global Directory part 1 is from 11 to 55
Global Directory part 2 is from 56 to 99
Number is the telephone number (maximum 16 digits)
By default, the number is blank.

Step 3
Use following command to clear a number in a particular global directory index:
1301-Location Code-#*
Where,
Location Code is from 11 to 99.

Use following command to clear the numbers from all global directory indices:
1301--#***

Step 4
Use following command to program Trunk Access Group for particular location:
1302-Location Code-Trunk Access Group-#*
Where,
Location Code is from 11 to 99
Trunk Access Group is from 1 to 8
By default, TAG is 1.

Use following command to set same Trunk Access Group for all locations:
1302--Trunk Access Group-#***

Important Points:
- To know programming details, please refer "Configuration Reports".
- Pause can be entered while storing the telephone number if required. A code '#3' can be used as Pause digit. Suppose, a string of digits **265 Pause 2556575** is to be stored then it should be programmed as 265#325556575.

Relevant Topics:

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Access Codes

What's this?

Access code is a string of digits dialed by a User to, access some important features like:
- Call another Station
- Grab a trunk line
- Call a Department Group

- Turn on/off PAS, DOP, Door Lock, etc.
- Use a feature like ACB, Barge-In, etc.

Feature access codes are country dependent. For example, Access Code for ACB is '2' for India whereas for Italy, USA/Canada and Spain, it is '5'. The table below lists a feature access codes for different countries.

Feature Name	India	Italy	USA/Canada	Spain
Abbreviated Dialing	8	8	6	8
ACB on Busy Station	2	5	5	5
ACB on Busy Trunk	2	5	5	5
Alarms	16	16	16	16
Auto Redial	77	Not Allowed	Not Allowed	Not Allowed
Barge-In	4	7	7	7
Call Forward	13	13	13	13
Call Park	7	7	7	7
Call Pick Up-Group	4	4	4	4
Call Pick Up-Selective	12	12	12	12
Call Splitting (Toggle)	Flash + 1	Flash + 2	Flash + 2	Flash + 2
Cancel ACB	102	105	105	105
Cancel Auto Redial	70	Not Allowed	Not Allowed	Not Allowed
Cancel Station Features	100	100	100	100
Change Day/Night Status	1#93	1#93	1#93	1#93
Conference	Flash + 0	Flash + 3	Flash + 3	Flash + 3
Continued Dialing	Flash-#	Flash-#	Flash-#	Flash-#
Department Call	3981-3984	3981-3984	3981-3984	3981-3984
Digital Output Port-OFF	60	60	80	60
Digital Output Port-ON	69	69	89	69
Do Not Disturb (DND)	137	137	137	137
Door Phone	3996	3996	3996	3996
Dynamic Lock	14	14	14	14
Enter SA Mode	1#92	1#92	1#92	1#92
Enter SE Mode	1#91	1#91	1#91	1#91
Grab Second Trunk	Flash+8+Trunk	Flash+8+Trunk	Flash+6+Trunk	Flash+8+Trunk
Hold	Flash	Flash	Flash	Flash
Hotline	15	15	15	15
Interrupt Request	3	6	6	6
Internet Ready Port-Deactivate	198-0	198-0	198-0	198-0
Internet Ready Port-Activate	198-1	198-1	198-1	198-1
Last Number Redial	7	7	7	7
Live Call Supervision	199	199	199	199
Local/Remote Door phone	1#94	1#94	1#94	1#94
Operator	9	9	0	9
Paging	3998	3998	3998	3998
Personal Abbreviated Dialing	18	18	18	18

Feature Name	India	Italy	USA/Canada	Spain
Raid	5	Disable	Disable	Disable
Release Current Call (From 3 way)	Flash + 2	Flash + 1	Flash + 1	Flash + 1
Release Held Call (From 3 way)	Flash + 3	Not Allowed	Not Allowed	Not Allowed
Retrieve Call Park	17	17	17	17
Software Version and Revision Display	1#95	1#95	1#95	1#95
Trunk Access Code	0, 5, 61-66	0, 5, 61-66	9, 5, 81-86	0, 5, 61-66
Trunk-to-Trunk Transfer	Flash-6	Flash-6	Flash-6	Flash-6
User Password	144	144	144	144
Walk-In Class of Service	111	111	111	111

Relevant Topics:
1. Flexible Numbers   122
2. Country Code   86
3. Default Settings   87
4. Trunk Access Groups   185
5. Department Call   90

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Alarms

What's this?

The VisionUltra offers four different types of alarms satisfying most of the needs.
They are:
• Duration Alarm
• Time Alarm
• Daily Alarm
• Remote Alarm

Duration Alarm

• You can ask the VisionUltra to remind you after some specific time.
• On expiry of the set time, your station starts ringing (different ring cadence).
• When you lift the handset, you get music/voice message.
• Only one reminder can be set at a time on one station. The latest set alarm supersedes all the previous timings.
• All stations can set duration alarm for same duration simultaneously.

How to use it?

1	lift the handset.	Dial tone
2	Dial *161-Minutes.*	Confirmation tone
3	Replace the handset.	

Minutes is from 01 to 99.

Example:
Dial *161-09* to set a reminder after 09 minutes.

Time Alarm

• You can ask the VisionUltra to remind you at some specific time.
• At the set time, your station starts ringing (different ring cadence).
• When you lift the handset, you get music/voice message.
• Only one time alarm can be set at a time on one station.
• All stations can set time alarm for same time simultaneously.

How to use it?

1	lift the handset.	Dial tone
2	Dial *162-Hours-Minutes.*	Confirmation tone
3	Replace the handset.	

Hours-Minutes is in 24-hour format.

Example:
Dial *162-1630* to set an alarm at 4:30PM.

Daily Alarm

• You can ask the VisionUltra to remind you daily at some specific time.

• At the set time, your station starts ringing (different ring cadence).
• When you lift the handset, you get music/voice message.
• Only one daily alarm can be set at a time on one station. The latest set alarm supersedes the previous one.
• All stations can set daily alarm for same time simultaneously.
• If the station is engaged at the time of alarm then the station gets alarm when the station becomes free.

How to use it?

1	lift the handset.	Dial tone
2	Dial *163-Hours-Minutes.*	Confirmation tone
3	Replace the handset.	

Example:
Dial *163-1230* to set a daily reminder for break at 12:30PM.

Remote Alarm

• You can set alarm for some other station from your station.
• At the set time, the station starts ringing (different ring cadence).
• When the station on which alarm is set, lifts the handset, he gets music.
• Only one time alarm/duration alarm/daily alarm can be set at a time on one station. The last set alarm supersedes all the previous timings.
• You can set all types of alarms on a station simultaneously from any station.
• Secretary can use this feature to remind her boss of his appointments.
• To cancel remote alarm for any station, dial *164-Station-0*. Here, station refers to the station on which remote alarm was set earlier.
• This feature can be used only if it is allowed from Class of Service.

How to use it?

1	lift the handset.	Dial tone
2	Dial *164-Station-1-Minutes* (Duration) or Dial *164-Station-2-Hour-Minutes* (Time) or Dial *164-Station-3-Hours-Minutes* (Daily) or Dial *164-Station-0* (To cancel Remote Alarms)	CT.
3	Replace the handset.	

Where,
Station is a flexible number of the extension

Example:
To set a daily wake up alarm at 5:30AM on station 23 from station 26, dial *164-23-3-0530* from station 26.

Cancel Alarms

What's this?
- You can ask the VisionUltra to cancel all the pending alarms.
- Dialing 160 from the station will cancel all the alarms set on that station. Suppose time alarm, duration alarm and daily alarm all are set on station 23. Now, if you dial 160 from the station, all the alarms will be cancelled.

How to use it?

1	lift the handset.	Dial tone
2	Dial **160.**	Confirmation tone
3	Replace the handset.	

Example:
To cancel the alarms set on station 26, dial **160** from station 26.
To cancel remote alarm set on station 26 from station 23, dial **164-26-0** from station 23.

How to program?

Alarm and Remote Alarm are a programmable features. Please refer Class of Service (COS) for details on how to allow Alarm and Remote Alarm to a user.

Timer of Relevance:
- **Alarm Ring Timer**-Time for which the station gets alarm ring.
  Command: **3013-Seconds-#***
  Default: 045 seconds
  Valid Range: 000 to 255 seconds

Important Point:
- A station gets alarm ring for 45 seconds. This is called Alarm Ring Timer and is programmable.

Relevant Topics:
1. Class of Service (COS)   62
2. Voice Message Applications   200

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Allowed and Denied Lists

What's this?

Allowed and Denied Lists are a group of number strings. VisionUltra uses these lists to support three different features viz. Toll Control, Dynamic Lock and Call Duration Control.
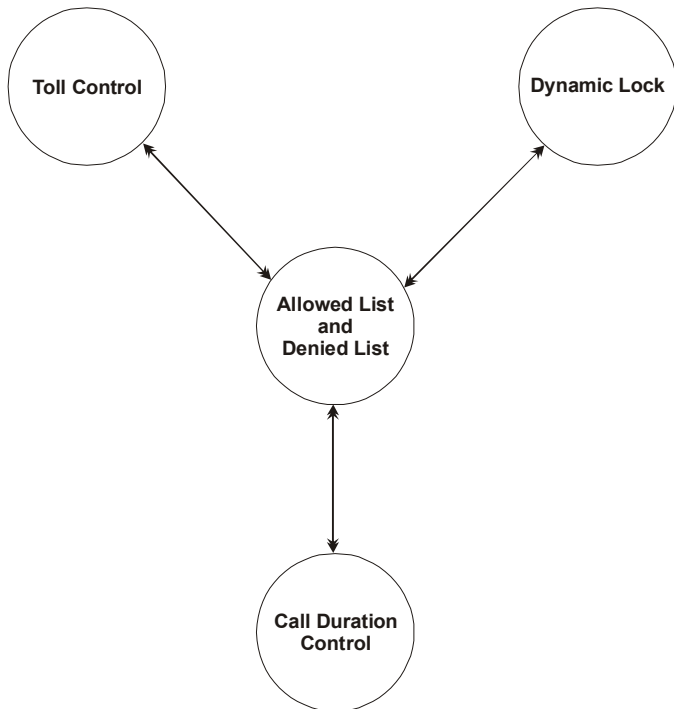
Association of Allowed list and Denied list with Toll Control:

When the number is dialed from a station, the VisionUltra compares the dialed number string with the number strings in allowed list and denied list. If the number is present in the allowed list, the system allows the dialing out of the number.

Association of Allowed list and Denied list with Dynamic Lock:

If the user locks the station and thereafter dials a number from his station, the VisionUltra compares the dialed number string with the number strings in allowed list and denied list for the locked status dialing. If the number is present in the allowed list, the system allows the dialing out of the number.

Association of Allowed list and Denied list with Call Duration Control:

If Call Duration Control feature is set on a station, the VisionUltra compares the dialed number string with the number strings in allowed list and denied list for Call Duration Control (CDC) condition. The VisionUltra disconnects the call if the number string dialed by the station matches with the denied list for CDC condition.

How it works?

- Maximum 8 allowed lists could be formed.
- Maximum 8 denied lists could be formed.
- Maximum 16 entries (i.e. number strings) can be programmed in one allowed or one denied list.
- Each entry (i.e. one number string) can have maximum of 16 digits.
- Number string can be a complete telephone number, area code or few initial digits of a telephone number.
- An allowed and a denied list should be assigned to each station depending upon the feature and the requirement.
- A completed allowed list would look as below:

Allowed List	Number String 01	Number String 02	...	Number String 16
1	Max. 16 Digits	Max. 16 Digits	...	Max. 16 Digits
2	Max. 16 Digits	Max. 16 Digits	...	Max. 16 Digits
3	Max. 16 Digits	Max. 16 Digits	...	Max. 16 Digits
:	:	:	:	:
8	Max. 16 Digits	Max. 16 Digits	...	Max. 16 Digits

- A complete denied list would look as below:

Denied List	Number String 01	Number String 02	...	Number String 16
1	Max. 16 Digits	Max. 16 Digits	...	Max. 16 Digits
2	Max. 16 Digits	Max. 16 Digits	...	Max. 16 Digits
3	Max. 16 Digits	Max. 16 Digits	...	Max. 16 Digits
:	:	:	:	:
8	Max. 16 Digits	Max. 16 Digits	...	Max. 16 Digits

Default Allowed Lists for country code India:

Loc./List	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
1	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
2	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
3	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
4	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
5	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
6	0	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
7	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
8	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B

Default Denied Lists for country code India:

Loc./List	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
1	0	1	2	3	4	5	6	7	8	9	B	B	B	*	#	Flash
2	0	95	98	96	94	B	B	B	B	B	B	B	B	*	#	Flash
3	0	95	98	94	B	B	B	B	B	B	B	B	B	*	#	Flash
4	0	95	B	B	B	B	B	B	B	B	B	B	B	*	#	Flash
5	0	B	B	B	B	B	B	B	B	B	B	B	B	*	#	Flash
6	00	B	B	B	B	B	B	B	B	B	B	B	B	*	#	Flash
7	B	B	B	B	B	B	B	B	B	B	B	B	B	*	#	Flash
8	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B

Default Denied Lists for country code Italy/USA/Canada/Spain:

Loc./ List	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
1	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
2	0	1	2	3	4	5	6	7	8	9	B	B	B	*	#	Flash
3	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
4	00	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
5	00	3	B	B	B	B	B	B	B	B	B	B	B	B	B	B
6	0	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
7	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
8	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B

By default, Allowed List is Blank.

How to program?

Step 1: Take a pen and a paper and decide which number strings are to be programmed in allowed list and the denied list.
Step 2: Program the number strings in the allowed list using command *1202*.
Step 3: Program the number strings in the denied list using command *1204*.

Take printout of system parameters to know the number string programmed in Allowed Lists and Denied Lists.

Step 1

Take a pen and a paper. Decide which of the above-mentioned three features are to be used. Make the allowed and denied lists accordingly.

Step 2

Use following command to program numbers in the allowed list:
*1202-Allowed List-Location Index-Number-#**
Where
Allowed list is from 1 to 8.
Location Index is from 01 to 16.
Number is a complete telephone number, truncated telephone number or an area code (16 digit maximum).

Use following command to program same number at the same location index in all the allowed lists:
1202--Location Index-Number-#**

Use following command to default an allowed list:
*1201-Allowed List-#**
Where,
Allowed List is from 1 to 8

Use following command to default all allowed lists:
1201--#**

Step 3

Use following command to program numbers in the denied list:
*1204-Denied List-Location Index-Number-#**

Where
Denied List is from 1 to 8
Location Index is from 01 to 16
Number is a complete telephone number, truncated telephone number or an area code (16 digits maximum).

Use following command to program same numbers at the same location in all the denied lists:
1204--Location Index-Number-#**

Use following command to default a denied list:
*1203-Denied List-#**
Where,
Denied List is from 1 to 8

Use following command to default all the denied lists:
1203--#**

Example:
Program Allowed List and Denied List for following constraints:
• Allow all numbers except number beginning with '00'.
• Only local calls should be allowed in dynamic lock condition.
• Disconnect all calls starting with '0' after 180 seconds except calls starting with '312'.

Solution:
First examine the default lists.
• This condition can be met using default denied list 6
• This condition can also be met using default denied list 2
• In this case default denied list 5 could be used (since it contains 0). However an allowed list should be programmed to program 312 in allowed list.

Use following command to program 312 in allowed list 4
*1202-4-01-312-#**
However, 312 can be programmed in any of the allowed lists.

Important Point:
• To know programming details, please refer "Configuration Reports".

Relevant Topics:
1. Toll Control   182
2. Dynamic Lock   113
3. Call Duration Control   43
4. Country Code   86
5. Default Settings   87

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Alternate Number Dialing

What's this?

- The VisionUltra tries alternate numbers if the dialed number is busy.
- Many times when we make a call, we find that the called number is busy. Hence we try alternate numbers. We keep trying all the alternate numbers of the person till the call gets through and we talk to the person. This is very frustrating and time-consuming. Alternate Number Dialing rescues us from this sheer wastage of time.
- We need not keep dialing the alternate numbers. Instead we simply need to Redial the number or set Auto-Redial for the number. Doing so, the system tries alternate numbers. If Auto-Redial is requested, the system gives you the ring when the number goes through.

How to use it?

The Station user simply has to Redial or Auto-Redial the last number. The system automatically tries Alternate numbers.

How it works?

- Global Directory is used to accomplish this feature.
- An Alternate group number should be assigned to a number in the Global Directory.
- An Alternate group number can range between 00 to 99.
- Suppose two numbers programmed at index 12 and 13 are to be used as Alternate numbers then both the numbers should be programmed as one group.
- Doing so, when a station user dials an external number, the system checks for it in the global directory. If the number is busy and if the user tries Redial then the system automatically opts for Alternate Number dialing. It tries next number available in the Alternate group. If this number is also busy, it tries next number in the group. All the numbers are tried in this way. This continues as long as the user tries redial.
- If the user tries Auto Redial, the system tries for all the numbers in the group one by one. If any of the number is through, it gives the ring to the caller. If all the numbers are busy in the group then the system sets Auto Redial for the last number dialed and waits for RBT from the called end. It informs the caller when the call is through by giving a ring.

For example, ABC Ltd. has four telephone numbers viz. 2640459, 2631235, 2635589 and 2565590 and all are to be used as Alternate Numbers then these four numbers should be programmed in the global directory from index 15 to 18. All these numbers should be assigned one Alternate group say 03. Doing so, all these numbers act as an Alternate Numbers for each other. Whenever a user dials any of these numbers and tries Redial or Auto Redial, Alternate Number dialing logic gets activated i.e. when a user dials 2640459 and if it is busy and if the user tries redial then the system automatically dials 2631235. This is repeated every time a redial is tried.

If no alternate number is available for a number in the global directory (alternate group assigned is 00) then the system redials the last dialed number while trying redial feature or Auto Redial feature.

How to program?

Step 1: List down the Numbers to be programmed in an alternate group.
Step 2: Assign an unique Alternate Number group to all the numbers using command *1303.*

The Global Directory without assigning alternate number group looks as shown below:

Index	Main Number	TAG	Alternate Number Group
11	022281110001	1	00
12	011234567890	2	00
:	:	:	:
:	:	:	:
:	:	:	:
99	033298765423	3	00

Step 1

List down the Numbers to be programmed in an alternate group on a piece of paper.

Step 2

Use following command to assign Alternate group number:
*1303-Index-Alternate Group Number-#**
Where,
Index is from 11 to 99
Alternate Group Number is from 00 to 99
By default, 00 is assigned as alternate group number.

The Global Directory after assigning Alternate Group Number looks as shown below:

Index	Main Number	TAG	Alternate Number Group
11	022281110001	1	02
12	022234567890	2	02
13	022281110002	3	03
:	:	:	:
98	033298765432	4	01
99	033398564234	2	01

Use the following command to clear the alternate group number:
*1303-Index-00-#**
Where,
Index is from 11 to 99.

Example:
Program the system for following constraints:
- ABC Ltd. has five telephone numbers viz. 2640075, 2640076, 2640077, 2635151 and 2635173.
- XYZ Ltd. has three telephone numbers viz. 2788856, 2788896, 2788857.

Step 1

For ABC ltd. Make a table as shown below:

Index	Main Number	TAG	Alternate Number Group
11	022281110001	1	00
12	011234567890	2	00
:	:	:	:
:	:	:	:
:	:	:	:
99	033298765423	3	00

(If the global directory is not programmed then please program the global directory as explained in the topic "Abbreviated Dialing")

Step 2

Use following command to program Alternate Group number:
1303-11-01-#*
1303-12-01-#*
1303-13-01-#*
1303-14-01-#*
1303-15-01-#*
1303-16-05-#*
1303-17-05-#*
1303-18-05-#*

Important Points:
- Alternate Numbers are used during Redial and Auto-redial. Hence all the timers related to these features should be programmed properly.
- If Auto-Redial is set for a number having Alternate numbers, the system tries all the Alternate numbers first and then sets the Auto-Redial for the last number dialed.
- One number can have one or more than one Alternate number. Maximum 89 alternate numbers can be assigned to a number.
- Alternate number works even when abbreviated dialing is used. Suppose user dials 811 and if the dialed out number is busy then on trying Redial system tries alternate number related to 811.
- Alternate number is allowed to all the stations.
- Stations not having access to Global Directory can also use Alternate Number Dialing.

Relevant Topics:
1. Abbreviated Dialing   21
2. Last Number Redial   130
3. Auto Redial   33

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AutoAttendant

What's this?

AutoAttendant is a feature by which the system handles the incoming calls just like an operator. It guides the caller via various prompts giving options to choose and process the call. Lot of flexibility is offered in the transferred call similar to real life scenario where an operator is present. VisionUltra supports 8 voice messages of 7 seconds for system VM or 23 seconds for User VM each. These messages guide the user during the call and enable the successful processing of the call.

The Autoattendant Facility is primarily of great help during:
*   DID Call
*   DISA Call
*   Fax Call
*   Dial by Name

For More details about the individual features, please refer the individual chapters.

Important Points:
*   The AutoAttendant module (Voice Module) is available in all variants.
*   The Auto Attendant module is onboard and is of 240 seconds (4 Minutes).
*   It can be divided into 8 parts each of 7 seconds for system VM or 23 seconds for User VM. For more details please refer the topic 'Voice Message Applications'.

Relevant Topics:
1. Direct Inward Dialing (DID)   95
2. Direct Inward System Access (DISA)   100
3. Dial by Name   91
4. Fax Homing   117
5. Voice Message Applications   200

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Auto Call Back

What's this?

VisionUltra offers two types of Auto Call Back viz. Auto Call Back-On Busy and Auto Call Back on No-Reply.

Auto Call Back-On Busy

What's this?
- Station user need not keep dialing busy station repeatedly.
- Station user can request Auto Call Back by dialing '2' during busy tone.
- When the requested station becomes free it rings. Simultaneously station that requested Auto Call Back also starts ringing.
- Whomsoever answers first gets ring-back tone, whereas other end keeps ringing.
- Once the ring is answered, ring-back tone stops and speech is established.
- Auto Call Back can also be requested on busy trunk.

To Set ACB-On Busy

1	Lift the handset.	Dial tone
2	Dial **Station.**	Busy tone
3	Dial **2.**	Confirmation tone
4	Replace the handset.	

If Auto Call Back ring is not answered within 30 seconds, it stops and Auto Call Back request gets cleared. This is called Auto Call Back Ring Timer and is programmable.

To Cancel ACB-On Busy

1	Lift the handset.	Dial tone
2	Dial **102.**	Confirmation tone
3	Replace the handset.	

Example:
Station 23 is busy. To enable Auto Call Back, dial 2 during busy tone. If you have wrongly dialed 23 and want to cancel Auto Call Back request, dial **102** to cancel it.

Auto Call Back-On No Reply

What's this?
- Station user need not keep trying "no-reply" station repeatedly.
- Station user can set ACB-No Reply.
- When the station user for whom ACB request was made returns to his desk and picks up the handset and replaces it back the station that requested ACB rings.
- Both the stations come in speech when the station that requested ACB answers the call.

To Set ACB-On No reply

1	Lift the handset.	Dial tone
2	Dial **Station.**	Confirmation tone
3	Replace the handset.	

To Cancel Auto Call Back

1	Lift the handset.	Dial tone
2	Dial **102.**	Confirmation tone
3	Replace the handset.	

The following table shows the command used for various features in India/Italy/USA/Canada/Spain:

Feature	India	Italy	USA/Canada	Spain
Auto Call Back on Busy	2	5	5	5
Auto Call Back on No Reply	Flash-2	5	5	5
Cancel ACB on Busy/No Reply	102	105	105	105

How to program?
Auto Call Back is a programmable feature. Please refer "Class of Service (COS)" for details on how to allow Auto Call Back to a user.

Timer of Relevance:
Auto Call Back Ring Timer-Time after which the Auto Call Back ring on the station stops:
Command: **3014-Seconds-#***
Default:030 seconds
Valid Range: 000 to 255 seconds.

Important Points:
- Only one ACB-on Busy request is entertained at a time.
- Only one ACB-on No Reply request is entertained at a time.
- The last ACB request supersedes all other previous ACB requests.

Relevant Topics:
1. Class of Service (COS)   62
2. Country Code   86
3. Default Settings   87

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Auto Redial

What's this?

- The VisionUltra helps you to get through a busy external number by dialing the number repeatedly.
- Many times when we make a call, we find that the called person is busy. Hence we have to try the same number again and again to contact him. This is very frustrating and time-consuming. Auto Redial rescues us from this sheer wastage of time. You need not keep trying busy number repeatedly. You can ask the VisionUltra to keep trying the number. The VisionUltra will give you ring when the call goes through.
- The VisionUltra also allows multiple Auto Redial. Three different numbers can be set for Auto Redial simultaneously.

How to use it?

Single Auto Redial

1	Lift the handset.	Dial tone
2	Dial **Trunk Access Code.**	Trunk dial tone
3	Dial **Number.**	Busy tone
4	Disconnect.	
5	Lift the handset.	Dial tone
6	Dial **77.**	Confirmation tone
7	Replace the handset.	

Example:
Dialed number 0265-2630555 is busy. To use Auto Redial feature, disconnect and dial *77.*

Multiple Auto Redial

1	Lift the handset.	Dial tone
2	Dial **Trunk Access Code.**	Trunk dial tone
3	Dial **Number.**	Busy tone
4	Disconnect.	
5	Lift the handset.	Dial tone
6	Dial **77.**	Confirmation tone
7	Replace the handset.	Auto Redial set for one number.
8	Repeat step 1 to 7.	Auto Redial set for second number.
9	Repeat step 1 to 7.	Auto Redial set for third number.

Example:

- Dialed number 28010101 is busy. To set auto redial Disconnect and dial 77.
- Dialed number 02228101011 is busy. To set second auto redial, disconnect and dial 77.
- Dialed number 312-234-4567 is busy. To set third auto redial, disconnect and dial 77.

To cancel Auto Redial

1	Lift the handset.	Dial tone
2	Dial **70.**	Confirmation tone
3	Replace the handset.	

Example:
Dialed number 0265-2630555 was busy. Auto Redial was requested. To cancel Auto Redial request, the station user should dial 70.

How it works?
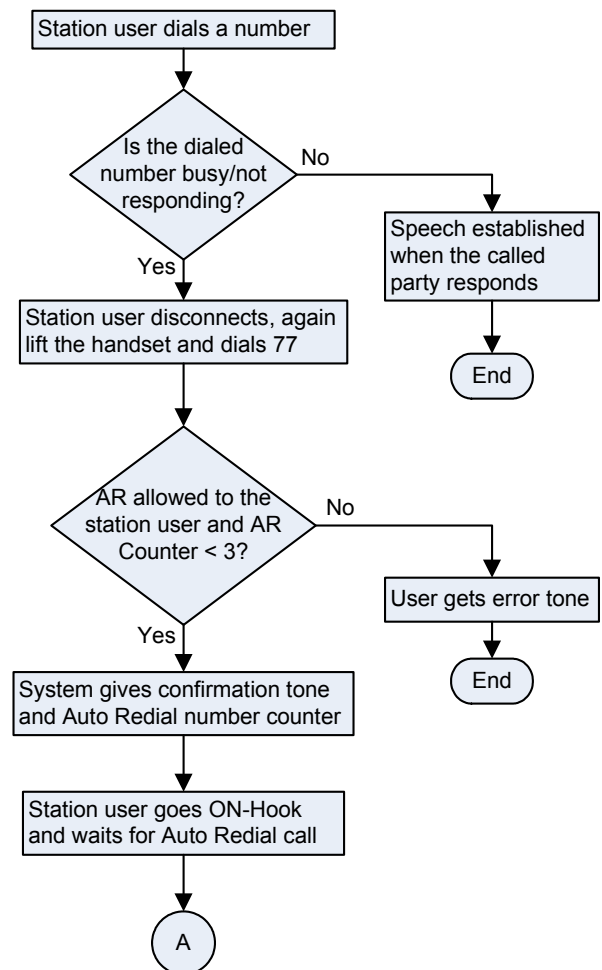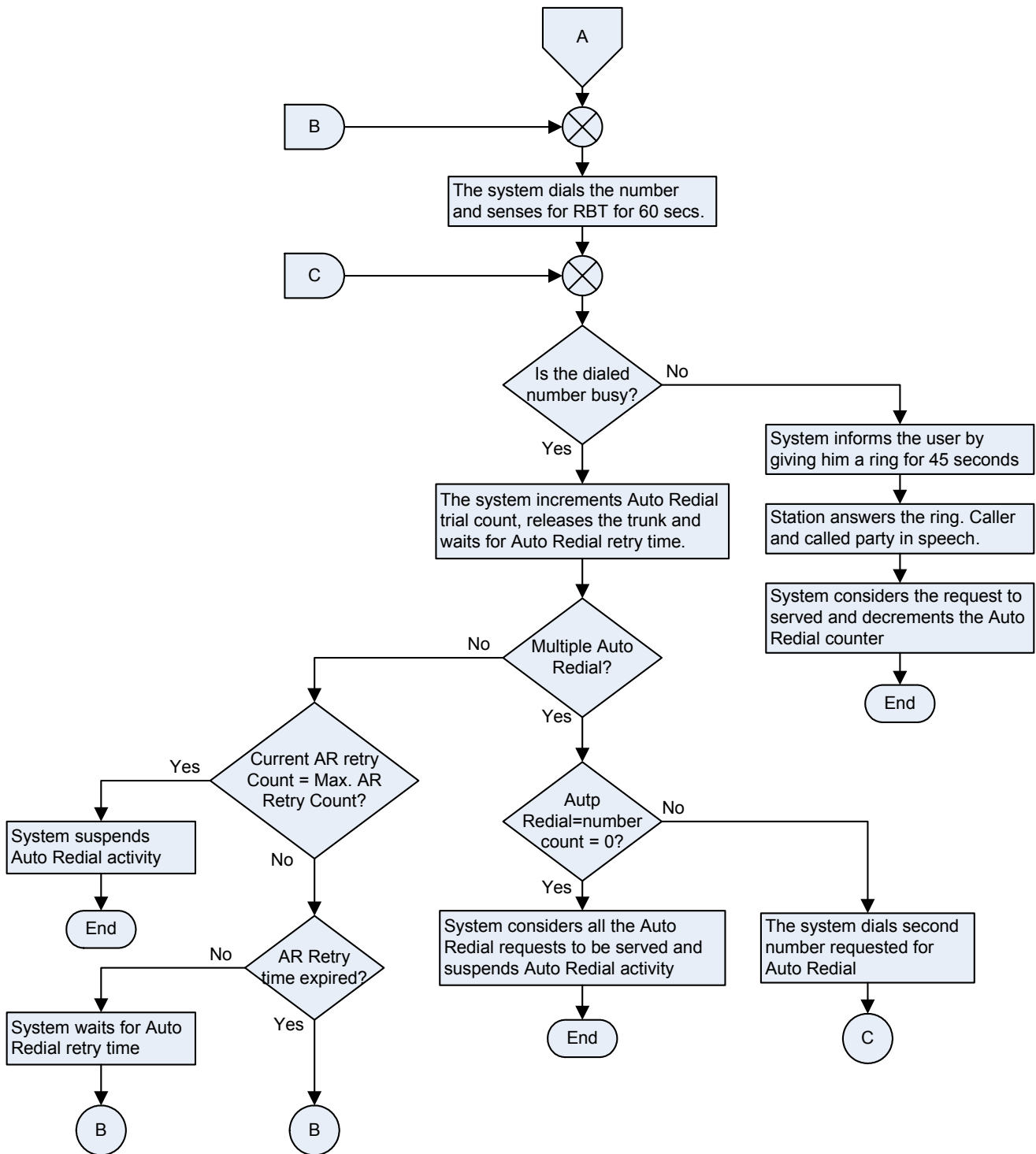
How to program?

Auto Redial is a programmable feature. Please refer [Class of Service (COS)](#) for details on how to allow Auto Redial to a user.

Timers of Relevance:
Auto Redial RBT Wait Timer-Time for which VisionUltra waits to sense RBT from the CO after dialing the requested

number:
Command: ***3031-Seconds-#****
Default: 060 seconds
Valid Range: 000 to 255 seconds.

Auto Redial Ring Timer-Time for which the station that has requested Auto Redial rings in case of Auto Redial Call:
Command: ***3032-Seconds-#****
Default: 045 seconds

Valid Range: 000 to 255 seconds

Auto Redial Retry Interval-It specifies the time between two
Auto Redials.
Command: ***3029-Seconds-#****
Default: 030 seconds
Valid Range: 000 to 255 seconds

Auto Redial Trial Count-It specifies the number of times the
VisionUltra tries the same number.
Command: ***3030-Count-#****
Default: 005
Valid Range: 000 to 255

Auto Redial Number Count-It specifies the number of
external numbers that can be used for AR simultaneously
from one station. Auto Redial Number Count is 3 and it is
non-programmable.

Important Points:
- Three numbers can be requested for Auto Redial at a
  time from one station.
- More than one station can attempt auto redial/multiple
  auto redial simultaneously.
- The system uses the same trunk access group used
  while dialing the number the first time. If the number was
  dialed using group 0, the system takes one of the free
  trunks from group 1 for auto redial.
- The system suspends auto redial if there is any activity
  (ringing/speech/dialing) on the station that requested
  auto redial. It resumes as soon as the station becomes
  free.
- Frequency and timings are critical for Auto Redial to work.
- In case of multiple Auto Redial selective cancellation of
  Auto Redial for a particular number among the numbers
  set cannot be done.
- If multiple Auto Redial is set, all the Auto Redial requests
  of a station are cancelled on using cancel Auto Redial
  code.

CAUTION
Auto-Redial does not work in following cases:
- If the trunk lines do not support standard tones.
- If trunk condition is poor and various tones cannot be
  detected properly.
- If the called party lifts within 3 seconds after the ring starts
  on his phone.

Relevant Topics:
1. Class of Service (COS)   62
2. Alternate Number Dialing   29
3. Voice Message Applications   200
4. Country Code   86
5. Default Settings   87

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Automated Control Applications

What's this?

The VisionUltra offers digital output ports for various control applications. There are seven different ways in which the DOPs can be operated.
- Digital Output Port deactivated (no action)
- Total Manual
- Duration based Auto OFF
- Duration based Auto ON
- Duration based Auto ON and Duration based Auto OFF
- Time based Auto OFF
- Time based Auto ON
- Time based Total Auto

The switching mechanism and application of each mode is given in the table below:

Mode Type	Switch ON Mechanism	Switch OFF Mechanism	Application
No Action	--	--	The DOP deactivated and cannot be used for any control application.
Total Manual	Manual	Manual	Any gadget connected to the DOP can be operated at any time as per the requirement (issue the commands 60/69 for this purpose). A typical application could be switching ON/OFF office lights.
Duration Based Auto OFF	Manual	Automatic	A gadget can be switched ON manually (69). It is switched OFF automatically after the programmed time (Off Duration Timer). A typical application could be doorlock.
Duration Based Auto ON	Automatic	Manual	A gadget can be switched ON automatically (After the command 69 is issued and the Duration Based Auto ON Timer elapses) and switched OFF manually (issue command 60). Typical application can be turning on of Air-Conditioner's in an office.
Duration Based Auto ON and Duration Based Auto OFF	Automatic	Automatic	A gadget can be switched ON automatically (After Duration Based Auto ON Timer elapses) and switched OFF automatically (After duration Based Auto OFF Timer elapses). Typical application could be fancy lights operated during festivals.
Time Based Auto OFF	Manual	Scheduled	A gadget can be switched ON manual (69) and switched OFF automatically at a scheduled time (when the scheduled time in the DOP time table matches with the system time). typical application could be Glowsign Board. Generally, glowsign boards are switched ON.
Time Based Auto ON	Scheduled	Manual	a gadget can be switched ON automatically at a scheduled time (when the scheduled time in the DOP time table matches with the system time) as per the DOP timetable and switched OFF manually (60). Typical application could be porch lights. Porch Lights can be switched ON at a set time easily in the morning and can be switched OFF when required.
Time Based Total Auto	Scheduled	Scheduled	A gadget can be switched ON and OFF at scheduled times as per the DOP timetable. Typical application could be School Bell.

- In duration based Auto ON, the duration timer starts immediately on completion of command.
- In duration based Auto OFF, the duration timer starts on getting ON command.

How to program?

Step 1: Program mode of operation of DOP using command **1801.**
Step 2: Program 'ON' time in DOP table using command **1802.**
Step 3: Program 'OFF' time in DOP table using command **1805.**
Step 4: Program the DOP 'ON' duration timer using command **1808.**

Step 5: Program the DOP 'OFF' duration timer using command **1809.**
Step 6: Operate the relay if programmed for total or partial manual mode using command **60** and **69.**

Step 1
Use following command to program the mode of the DOP:
1801-DOP-Mode-#
Where,
DOP is from 1 to 3.

Mode	Mode Type
0	No action
1	Total Manual
2	Duration Based Auto OFF

Mode	Mode Type
3	Duration Based Auto ON
4	Duration Based Auto ON and Duration Based Auto OFF
5	Time Based Auto OFF
6	Time Based Auto ON
7	Time Based Total Auto

By default, DOP is programmed for manual operation.

Use following command to program the same mode for all DOPs:
1801-*-Mode-#*

Step 2
Use following command to program the switch ON time in the DOP table:
1802-DOP-Index-HH-MM-SS-#*
Where,
DOP is from 1 to 3
Index is from 01 to 24
HH-MM-SS is in 24-hours format

Use following command to clear a Switch ON time entry from the DOP table:
1803-DOP-Index-#*

Use following command to clear all the switch ON time entries from all DOP table:
1804-#*

Step 3
Use following command to program switch OFF time in the DOP table:
1805-DOP-Index-HH-MM-SS-#*
Where,
DOP is from 1 to 3
Index is from 01 to 24
HH-MM-SS is in 24-hours format

Please note that OFF time should be greater than ON time. Also the system makes each entry in ascending order of time i.e. morning activities time should be programmed before evening time activities.

Use following command to clear a Switch OFF time entry from the DOP table:
1806-DOP-Index-#*

Use following command to clear all the switch OFF time entries from all the DOP table:
1807-#*

On using commands, the DOP table would look as shown below:

Index	Switch ON Time	Switch OFF Time
01	HH:MM:SS	HH:MM:SS
02	HH:MM:SS	HH:MM:SS
03	HH:MM:SS	HH:MM:SS
04	HH:MM:SS	HH:MM:SS
05	HH:MM:SS	HH:MM:SS
06	HH:MM:SS	HH:MM:SS
07	HH:MM:SS	HH:MM:SS
08	HH:MM:SS	HH:MM:SS
09	HH:MM:SS	HH:MM:SS
10	HH:MM:SS	HH:MM:SS
11	HH:MM:SS	HH:MM:SS
12	HH:MM:SS	HH:MM:SS
13	HH:MM:SS	HH:MM:SS
14	HH:MM:SS	HH:MM:SS
15	HH:MM:SS	HH:MM:SS
16	HH:MM:SS	HH:MM:SS
17	HH:MM:SS	HH:MM:SS
18	HH:MM:SS	HH:MM:SS
19	HH:MM:SS	HH:MM:SS
20	HH:MM:SS	HH:MM:SS
21	HH:MM:SS	HH:MM:SS
22	HH:MM:SS	HH:MM:SS
23	HH:MM:SS	HH:MM:SS
24	HH:MM:SS	HH:MM:SS

Step 4
Use following command to program DOP 'ON' duration timer:
1808-DOP-On Duration Timer-#*
Where,
DOP is from 1 to 3
On Duration Timer is from 000 to 255 seconds
By default, Replay port 'ON' duration timer is 060 seconds.

Step 5
Use following command to program DOP 'OFF' duration timer:
1809-DOP-Off Duration Timer-#*
Where,
DOP is from 1 to 3
Off Duration Timer is from 000 to 255 seconds
By default, DOP 'OFF' duration timer is 060 seconds.

Step 6
Use following command to operate relay if used in total manual/partially manual mode:
60-DOP : To turn OFF the relay
69-DOP : To turn ON the relay

Example:
Program VisionUltra for following constraints:
A school wants to ring the school bell connected to the DOP1
at following times:

ON Time	OFF Time
07:00:00	07:00:45
07:20:00	07:20:30
08:00:00	08:00:30
08:30:00	08:30:30
09:00:00	09:00:30
09:30:00	09:30:45
10:15:00	10:15:45
10:45:00	10:45:30
11:15:00	11:15:30
11:45:00	11:45:30
12:15:00	12:15:45

Issue following commands:
*1801-1-7-#**
*1802-1-01-070000-#**
*1802-1-02-072000-#**
*1802-1-03-080000-#**
*1802-1-04-083000-#**
*1802-1-05-090000-#**
*1802-1-06-093000-#**
*1802-1-07-101500-#**
*1802-1-08-104500-#**
*1802-1-09-111500-#**
*1802-1-10-114500-#**
*1802-1-11-121500-#**

*1803-1-01-070045-#**
*1803-1-02-072030-#**
*1803-1-03-080030-#**
*1803-1-04-083030-#**
*1803-1-05-090030-#**
*1803-1-06-093045-#**
*1803-1-07-101545-#**
*1803-1-08-104530-#**
*1803-1-09-111530-#**
*1803-1-10-114530-#**
*1803-1-11-121545-#**

Relevant Topics:
1. Real Time Clock   155
2. Class of Service (COS)   62
3. Digital Output Port (DOP)   94
4. Digital Input Port (DIP)   93
5. Default Settings   87

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Barge-In

What's this?

- When your call is urgent and you cannot wait for the called person to become free, you can land in his conversation after intimating him.
- While landing, you get ring back tone and the called person get Barge-In tone for 10 seconds. This timer is called Barge-In timer. This timer is programmable.
- During the beeps, the called person can dial '*Flash*' to answer your call.
- If the called party does not respond during these 10 seconds, caller forcefully gets connected with the called person. The third party is put on hold, gets music, and hence cannot listen to your conversation.
- Disconnect once your talk is over. This will automatically restore the original talk of the called person with the held-up party.

How to use it?

1	Lift the handset.	Dial tone
2	Dial *Station.*	Busy tone
3	Dial *4* for India **or** Dial *7* for italy/USA/Canada/Spain	RBT. The called person gets Barge-In tone
4	The system connects you to the destination after 10 seconds. Start talking after the RBT stops.	
5	Replace the handset on completion of talk.	

How to program?

Barge-In is a programmable feature. Please refer Class of Service (COS) for details on how to allow Barge-In to a user.

Timer of Relevance:
Barge-In Timer-Timer after which the caller gets connected to the called party:
Command: *3016-Seconds-#**
Default: 010 seconds
Valid Range: 000 to 255 seconds.

Important Points:
- Barge-In can be used only if it is enabled for a station.
- Barge-In works even when the destination is talking on the trunk line.
- Barge-In works if the called person is in 2-way, normal speech.
- Barge-In is ineffective if the called person is having call privacy from Barge-In.
- Barge-In can also be used after putting one party on hold. An important trunk call can be transferred to a busy station after putting the calling party on hold and barging-in on the busy destination to inform him about his call.

This is most advantageous feature for the operator while transferring calls.
- For more details on the Barge-In Tone, please refer the topic 'Call Progress Tones'.

Relevant Topics:
1. Class of Service (COS)   62
2. Privacy   145
3. Call Progress Tones   50
4. Country Code   86
5. Default Settings   87

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Battery Back-Up

What's this?

The VisionUltra provides battery backup. A battery of 24 V/7-10AH or two batteries of 12V/7-10 AH can be connected. With these batteries, a back up time of 5-6 hours can be ensured, provided the batteries are fully charged. However, the battery back up time depends upon the load of the system during the power failure condition.

How to connect?

The Battery cable is provided by Matrix. The polarity is marked on the battery cable and also at the battery connector provided on the system.

If a 24V/7-10 AH battery is used, then connect one end of the battery cable to the battery and the other end of the battery cable to the battery connector on the system.
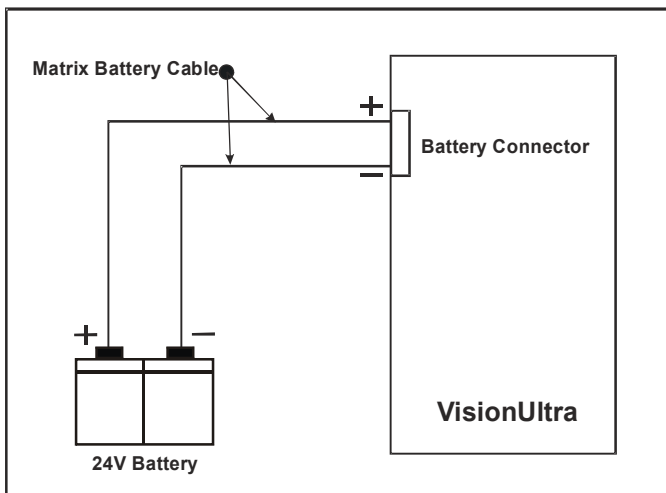
If two 12 V /7-10 AH battery is used then first connect these two batteries using the Battery link provided by Matrix. Please refer the figure given below. Connect one end of the battery cable to the battery and the other end of the cable to the battery connector on the system.
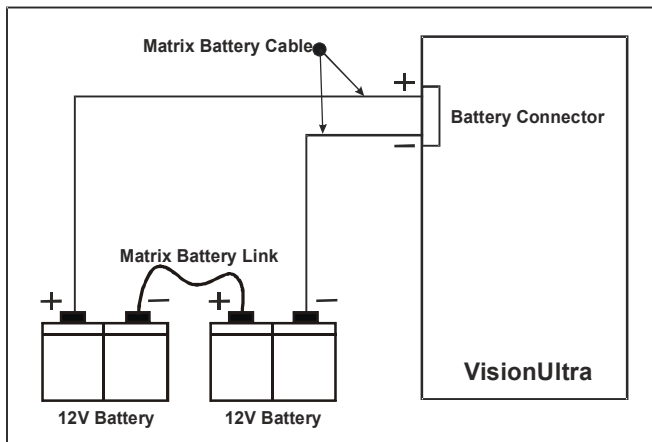
Technical Specifications:

Charging Current	1 Amp.
Charging Under Voltage Cut Off	20 Volts

Important Points:
- The system cannot be directly operated on the battery. During Power ON the system should reset on AC mains supply. However, if there is a power failure and the battery is connected, the system will now operate with battery backup.
- Explosion might occur if the battery is incorrectly replaced.
- Replace the battery only with the same or equivalent type.
- Dispose the used batteries.
- Please ensure the batteries are charged, before operating the system on battery.

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Behind the PBX Applications

What's this?

Many times, small and medium range PBX systems are connected behind some bigger PBX systems. Such applications are used mainly to expand the existing capacity of the big PBX already in use. Stations coming from the big PBX are used as trunks of the small PBX. There could also be some CO trunks coming directly on the smaller PBX. Such configurations are known as 'Behind the PBX Application'.

PBX A
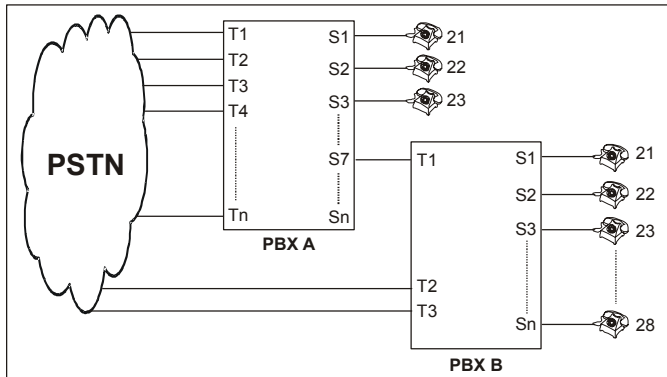
PBX B

In such situations, it is not easy to implement toll control restrictions.

Consider a simple event
Station 21 of PBX B in the figure above is not given long distance dialing facility. It has access to all the trunks. Now when he wants to use T2 or T3, which are directly coming from CO, he dials '0'. He gets CO dial tone and dials the number.

But when he does similar procedure on T1, he gets error tone. Because, in this case when station 21 grabs T1 by dialing a code, he gets dial tone of the PBX A. Now when he again dials '0' to grab CO dial tone, PBX understands it to be a long distance call and since station 21 is not allowed long distance calls, the system rejects dialing on trunk and gives error tone to station A.

Hence now if station 21 of PBX B is to be allowed external dialing through T1, he should be given long distance dialing access. If this is done then station 21 may make long distance calls on T2 and T3.
The VisionUltra solves this problem by providing programmable PBX Expansion count for each trunk. This count is the number of digits to be ignored before toll control check is begun. The PBX Expansion count is same as the number of PBXs connected between the main PBX and the last subscriber.

In the figure shown, the PBX Expansion count of T1 should be kept 1 and for T2 and T3, it should be kept '0'.

CAUTION

For all normal applications, keep this PBX Expansion count to 0 for all the trunks. Otherwise, outside dialing may be hampered. LCR and SMDR will also be affected.
The VisionUltra supports PBX Expansion count for each trunk.

How to program?

Use following command to program PBX Expansion count for a trunk:
3201-Trunk-PEC Count-#*
Where,
Trunk is the software port number from 1 to 6
PEC Count = PBX Expansion Count from 0 to 9
By default, PEC for all trunks is 0.

Use following command to program same PBX expansion count for all trunks:
3201-*-PEC Count-#*
Where,
PEC Count is from 0 to 9

Example:
Program PBX Expansion Count = 1 for trunk port 2.
3201-2-1-#*

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Boss Ring

What's this?

This feature helps the user to identify the caller. A person in the organization having higher hierarchy can be assigned this feature. Whenever a person having access to Boss Ring calls any other person in the organization, the called station rings differently. This helps the called party to identify the caller.

How to program?

Boss Ring is a programmable feature. Please refer Class of Service (COS) for details on how to allow Boss Ring to a user.

Important Point:
• Boss Ring is same as Alarm Ring, Paging and Door Phone Ring.

Relevant Topics:
1. Distinctive Rings   107
2. Class of Service (COS)   62

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Call Duration Control

What's this?

Call Duration Control (CDC) helps the customer to restrict the duration of the calls whether, incoming or outgoing external calls. This feature disconnects incoming or outgoing external calls after a set time. People tend to talk about sports, movies, politics and such other subjects over telephone. Now, these topics are generally not related to business. Moreover, such topics tend to take more time than the business talk for which the call was originally made. If duration of each call can be restricted, people will talk to the point and not drift to other unproductive talk. There are many advantages:

- Reduction in telephone bills.
- Trunks will be easily available for other outgoing calls. More business calls can be made during working hours leading to more business.
- Your trunks remain free for incoming calls. More customers can call.
- People spend more time on the actual job on hand rather than on telephone. This means increased productivity.

How to use it?

- Call Duration Control can be set for each station.
- Call Duration Control for External Outgoing calls can be enabled/disabled.
- Call Duration Control for Incoming calls can be enabled/disabled.
- Call Duration Control for Internal calls can be enabled/disabled.
- Enabling CDC for different types of calls, defining the CDC timer, assigning allowed and denied lists, etc. forms a table called CDC Table. Each CDC Table looks like:

Parameters	value
Internal Call Control	Yes/No
Incoming Call Control	Yes/No
Outgoing Call Control	Yes/No
Allowed List	List Number from 1 to 8
Denied List	List Number from 1 to 8
CDC Timer	000-999 seconds
CDC Disconnection Flag	Yes/No

- Maximum four CDC tables can be programmed.
- One such table can be assigned to the station user.
- All CDC tables are available by default, which satisfies most of the requirements. Hence these tables can be directly assigned to the stations.
- However for special types of requirements, customized Allowed Lists and Denied Lists should be programmed and should be assigned to a CDC table. Then after this CDC table should be assigned to a station. Please refer "Allowed and Denied Lists" for more details.

- For example, to disconnect all calls starting with '0' except those starting with '022', program an allowed list with string '022' and denied list with string '0' and assign these lists to the CDC table.
- **By default, CDC table 1 is assigned to each station.**

How it works?

- VisionUltra uses Allowed Lists and Denied Lists to support this feature.
- When a call is made, the system compares each digit of the dialed number string with the number strings in Allowed List and Denied List.
- If the dialed number string matches with any of the number strings available in allowed list, the system treats CDC to be OFF and does not disconnect the call.
- If the dialed number string matches with any of the number strings available in denied list, the system treats CDC to be ON and disconnects the call after CDC timer (Provided CDC Disconnection flag is enabled).
- If the dialed number matches with a number string that is available in both allowed and denied list then allowed list is given priority and the system treats CDC to be OFF.
- The system gives warning beep to the user on expiry of the CDC timer. The call continues for another 20 seconds after the beep and gets disconnected if the disconnection flag is enabled. This timer is fixed.
- If the disconnection flag is disabled then the system does not disconnect the call but reloads the CDC timer again. The system gives warning beeps every time the CDC timer is matured. This helps the user to know the duration for which he has been talking.
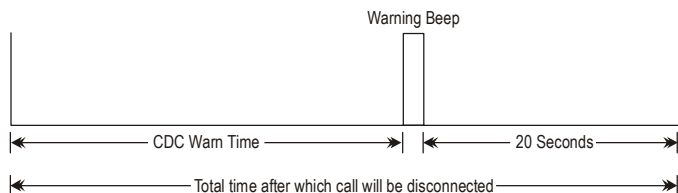
How to program?

Step 1: Take a pen and a paper pad. Decide the types of Call Duration Controls to be programmed for each station.

Step 2: Assign a CDC table to a station using command **4920.**

Step 3: If the requirement cannot be met by default CDC tables then program all the parameters of a CDC table like Enable CDC for Outgoing call/Incoming call, disconnection flag, CDC timer, etc. This programs one complete CDC table. Program remaining three CDC tables likewise, if required.

Step 4: A CDC table can be set to default using command **4901.**

Commands
Step 1
Take a pen and a paper pad. Decide the type of calls viz. Outgoing or Incoming for which CDC is to be enabled.

Step 2
Use following command to assign a CDC table to a station user:
4920-Station-CDC Table-#*
Where,
Station is from 01 to 17
CDC table is from 1 to 4

Use following command to assign same CDC table to all stations:
4920-**-CDC Table-#*
Where,
CDC table is from 1 to 4

Step 3
Use following command to enable/disable CDC for Outgoing Call in a CDC table:
4910-CDC Table-Code-#*
Where,
CDC Table is from 1 to 4

Code	Meaning
0	CDC for Outgoing Call is to be disabled
1	CDC for Outgoing Call is to be enabled

Use following command to enable/disable CDC for Outgoing Call in all CDC tables:
4910-*-Code-#*

Use following command to enable/disable CDC for Incoming Call in a CDC table:
4911-CDC Table-Code-#*
Where,
CDC Table is from 1 to 4

Code	Meaning
0	CDC for Outgoing Call is to be disabled
1	CDC for Outgoing Call is to be enabled

Use following command to enable/disable CDC for Incoming Call in all CDC tables:
4911-*-Code-#*

Use following command to enable/disable CDC for Internal Call in a CDC table:
4912-CDC Table-Code-#*
Where,
CDC Table is from 1 to 4.

Code	Meaning
0	CDC for Outgoing Call is to be disabled
1	CDC for Outgoing Call is to be enabled

Use following command to enable/disable CDC for Internal Call in all CDC tables:
4912-*-Code-#*

Use following command to enable/disable disconnection flag:
4913-CDC Table-Disconnection Flag-#*
Where,
CDC Table is from 1 to 4

Disconnection Flag	Meaning
0	Call is not disconnected
1	Call is disconnected

Use following command to assign same disconnection flag to all CDC tables:
4913-*-Disconnection Flag-#*

Use following command to assign CDC Timer:
4914-CDC Table-CDC Timer-#*
Where,
CDC Table is from 1 to 4
CDC Timer is from 000 to 999 seconds.

Use following command to assign same CDC Timer to all CDC tables:
4914-*-CDC Timer-#*

Use following command to assign Allowed List to a table:
4915-CDC Table-Allowed List-#*
Where,
CDC Table is from 1 to 4
Allowed List is from 1 to 8

Use following command to assign same Allowed List to all the tables:
4915-*-Allowed List-#*

Use following command to assign Denied List to a table:
4916-CDC Table-Denied List-#*
Where,
CDC Table is from 1 to 4
Denied List is from 1 to 8

Use following command to assign same Denied List to all the tables:
4916-*-Denied List-#*

Step 4
Use following command to default a CDC table:
4901-CDC Table-#*
Where,
CDC Table is from 1 to 4

Use following command to default all the CDC Tables:
4901-*-#*

Default CDC tables are given below:

CDC Table	OG	IC	Internal	Allowed List	Denied List	Time	Call Disc. Flag
1	OFF	OFF	OFF	8	8	160	OFF
2	ON	OFF	OFF	5	5	160	ON
3	ON	OFF	OFF	3	3	160	ON
4	ON	OFF	OFF	1	1	160	ON

For Italy, Call Disconnection Flag is OFF for all tables, by default.

Step 6
To know programming details, please refer "Configuration Reports".

Example 1:
Program station 21 (software port number 01) for following constraints:
Disconnect all calls after 180 seconds.

Solution
- Assign default CDC table 3 to station 21.
  4920-01-3-#*
- Since default CDC Timer is 160 seconds and 20 seconds are added as warning time the calls will get disconnected after 180 seconds. Hence no programming is required.

Example 2:
Program station 22 (software port number 01) for following constraints:
Disconnect all calls starting with '0' after 240 seconds except calls starting with '022'.

Solution:
As observed this type of requirement cannot be met by any of the default CDC tables. Hence, customize CDC Table 2 and assign it to station 22.
- Program the number '0' in denied list 7 and '022' in allowed list 7. (This step is necessary because default allowed and denied lists does not contain such option whereby 022 is available in allowed list and 0 is available in denied list).
  1202-7-01-022-#*
  1203-7-01-0-#*
- Assign this allowed list to CDC table 1
  4915-2-7-#*
- Assign this denied list to CDC table 1
  4916-2-7-#*
- Assign CDC Timer of 220 seconds (not 240 seconds because 20 seconds are added to CDC Timer for actual disconnection)
  4914-1-220-#*
- Other parameters are already available by default hence no need to reprogram them.
- Assign CDC table 2 to station 01
  4920-01-2-#*

Important Point:
- It is possible to disconnect specific outgoing calls. For example it is possible to disconnect all calls to 022-28765432 after 180 seconds.

Relevant Topics:
1. Allowed and Denied Lists   27
2. Default Settings   87

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Call Forward

What's this?

- In an organization people might move from one place to another to accomplish a job. They do not sit at fixed places. A user might go to his colleague's desk to work on a project they are doing jointly. A manager might go on the production floor or remain in conference room for few hours. In such situations, a user cannot afford to miss his calls. He would like to attend his calls from his new location. To fulfill this requirement, VisionUltra offers a facility called "Call Forward".
- Access to Call Forward is programmable and hence can be allowed or denied to a user. Please refer topic "Class of Service (COS)" for details on how to enable this feature on a particular station.

How to use it?

Call Forward-All calls to another Station.
One can forward all the calls of his station to another station where he might be temporarily shifted.

1	Lift the handset.	Dial tone
2	Dial *131-Station.*	Confirmation tone
3	Replace the handset.	

Example:
If Station 23 wants to forward his calls to Station 24, he should dial *131-24*.

Call Forward-Follow Me
After going to your co-worker's desk if you desire to receive all your calls on his station, then this feature could be of help.

1	Lift the handset.	Dial tone
2	Dial *132-Your Station-Your Station Password.*	Confirmation tone
3	Replace the handset.	

Example:
My station is 23 and user password is 1212. At present I am at station 21. I want that all my calls on station 23, should come to station 21 then I should dial *132-23-1212* from station 21.

Call Forward-If No Reply
One can forward all the calls if he does not answer the call within 30 seconds. This timer is called Ring back timer: Transfer on no-reply. This timer is programmable.

1	Lift the handset.	Dial tone
2	Dial *133-Station.*	Confirmation tone
3	Replace the handset.	

Example:
Station User 23 wants that if he does not answer the calls within 30 seconds the calls should go to Station 24 (his colleague), he should dial *133-24*.

Call Forward-If Busy
One can forward all the calls to his station if he is busy with some other station when the call arrives.

1	Lift the handset.	Dial tone
2	Dial *134-Station.*	Confirmation tone
3	Replace the handset.	

Example:
If station 23 wants to forward all his calls to station 24 when he is busy, he should dial *134-24*.

Cancel Call Forward

1	Lift the handset.	Dial tone
2	Dial *130.*	Confirmation tone
3	Replace the handset.	

How it works?

The following flow chart explains the logic:
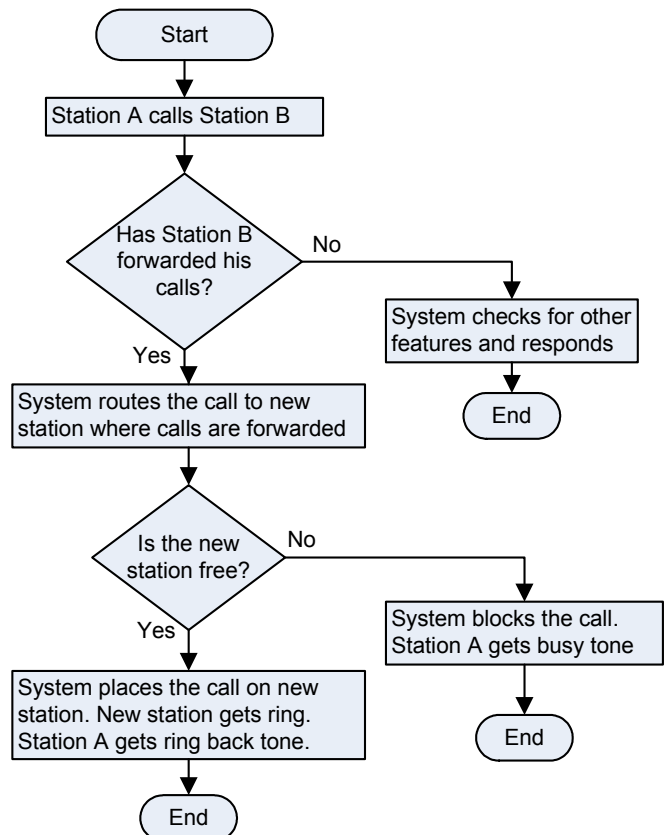
How to program?

Call Forward is a programmable feature. Please refer Class of Service (COS) for details on how to allow Call Forward to a user.

Timer of Relevance:
Ring Back Timer: Forward on No-Reply-Time after which the call gets forwarded.
Command: *3018-Timer-#**
Default: 030 seconds
Valid Range: 000 to 255 seconds.

Important Points:
- Only one type of call forward features viz. Call Forward if busy, Call forward if no reply etc. can be enabled at one point of time.
- If station A forwards his calls to Station B, Station B can now forward his calls to station C. But Station A's call forward is cancelled. All the calls for Station A now land on station A only.
- The station that has forwarded the call gets feature tone till call forward is cancelled.
- Call Follow-Me will not work with default user password.

Relevant Topic:
1. Class of Service (COS)   62

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Call Park

What's this?

- You can free, yourself from current call to attend to other calls.
- The current call gets parked and caller gets music.
- While a call is parked, you are totally freed from the call.
- You may use other system features like Call Pick Up, Call Follow Me, etc.
- After completing the current call, retrieve the parked call.

How to use it?

To Park a call

1		Speech with trunk (or station)
2	Dial **Flash.**	Dial tone
3	Dial **7.**	Call Parked.

To retrieve the Parked call

1	Lift the handset.	Dial tone
2	Dial **17.**	Speech.

How to program?

Call Park is a programmable feature. Please refer Class of Service (COS) for details on how to allow Call Park to a user.

Timer of Relevance:
Call Park Timer-Time after which the call comes back to the station that has parked the call.
Command: *3015-Timer-#**
Default: 045 seconds
Range: 000 to 255 seconds

Important Points:
- If you don't retrieve the call within 45 seconds, the call comes back to you automatically. Your station starts ringing. This timer is called Call Park Timer and is programmable.
- If you are busy for longer period of time than call park timer, than call comes back to you once you get free.
- Any number of external as well as internal call can be parked on a station.
- **Call Park Retrieve Priority:** First trunk (1-6) call will be retrieved and then station (01-16) will be retrieved.

Relevant Topics:

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Call Pick Up

You can answer calls of your colleague or co-worker without physically going to his station. You can use this feature to answer even trunk calls ringing on other stations.
VisionUltra offers two types of call pick up facility viz. Call Pick Up-Group and Call Pick Up-Selective.

Call Pick Up-Group
• Calls of any station within your group can be answered simply by dialing `4' after lifting the handset.
• Maximum 9 call pick up groups can be formed.
• In case more stations are ringing, the station with the least port number will be picked up first.
• This feature can be used when people performing same job sit in groups and intragroup call pick up is to be allowed whereas inter group call pick up is to be restricted.
• ***By default, all stations are in the same group.***
• All stations can use this feature.

How to use it?

1	Lift the handset.	Dial tone
2	Dial *4.*	Speech.

Call Pick Up-Selective
• Call of any ringing station can be answered by dialing *12-Station's Flexible Number* after lifting the handset.
• This is useful when more than one stations are ringing and you want to answer one of them selectively.
• For selective call pick up, it is not necessary for the station to be in the same pick up group.

How to use it?

1	Lift the handset.	Dial tone
2	Dial *12-Station.*	Speech.

How to program?

Step 1: Decide number of call pick up groups to be formed.
Step 2: Program the station in call pick up group using command *4301*.
Step 3: Assign a Class of Service group with call pick up selective feature enabled.

Step 1
Decide the number of call pick up groups to be formed.

Step 2
Use following command to program a station in call pick up group:
4301-Station-Call Pick Up Group-#
Where,
Station is the software port number from 01 to 17
Call Pick Up Group is from 0 to 9

Use following command to program all stations in same call pick up group:
*4301-**-Call Pick Up Group-#*
Where,
Call Pick Up Group is from 0 to 9
By default, the call pick up group assigned is 1.

Assigning 0 as the call pick up group to stations means the station does not belong to any group (deassigning the call pick up group)

Step 3
Please refer '<u>Class of Service (COS)</u>' for details on how to allow call pick up selective feature to the user.

Relevant Topic:
1. <u>Class of Service (COS)   62</u>

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Call Progress Tones

The VisionUltra gives various tones in different situations. This is how the VisionUltra responds to dialing of codes and commands. The VisionUltra offers 3 sets of Call Progress Tones to suit the worldwide customers. On selection of the appropriate country code, the default call progress tone for the country is loaded.

Dial Tone

When you lift the handset you get dial tone. Dial tone stays for 7 seconds. This Dial Tone Timer is programmable. After that error tone starts.
• Sound: Tooooooooooooo

Use following command to program the Dial Tone Timer:
3001-Seconds-#*
Range = 000 to 255 seconds
Default = 007 seconds

Ring Back Tone

When you dial internal number and if that number is free, you will get the ring back tone. The ring back tone continues for 45 seconds. This Ring Back Tone Timer is programmable.
• Sound: Turroo... Turrroo

Use following command to program the Ring Back Tone Timer:
3002-Seconds-#*
Range = 000 to 255 seconds
Default = 045 seconds

Busy Tone (Engage Tone)

High pitch beeps with equal on and off periods. When you dial any station that is busy, you get busy tone. Busy tone continues for 7 seconds. This timer is programmable.
• Sound: Tooooooo.........Tooooooooo

Use following command to program the Busy Tone timer:
3003-Seconds-#*
Range = 000 to 255 seconds
Default = 007 seconds

Error Tone

The Error Tone is made of fast beeps. When you perform some wrong operation or try using a feature without access, you get error tone.
• Sound: Too…Too…Too…Too

Use following command to program the Error Tone timer:
3004-Seconds-#*
Range = 000 to 255 seconds
Default = 030 seconds

Internal Call Waiting Tone

Short beep followed by longer off duration repeated every second. This is also known as intrusion tone. Busy user gets this tone over his speech when some other station attempts interrupt request/barge-in.
• Sound: Beep…………Beep
The user gets this tone till the Interrupt request timer or the barge in timer.

External Call Waiting Tone (CCWT)

This tone is of two ticks followed by a longer off time of approximately 3 seconds. Busy programmed destination station gets this tone when there is a fresh CO call.
• Sound: Beep...Beep…………...Beep...Beep
This tone continues for transfer-On busy timer.

Feature Tone

Short beep followed by a longer off duration repeated every second. The feature tone is given to the user when he has one party as held party and tries to access a feature same time as dial tone. By default, feature tone remains for 10 seconds.
• Sound: Beep… Beep

Feature Confirmation Tone

This tone is continuous, fast beeps. The VisionUltra confirms successful usage of features with this tone. The confirmation tone remains for 3 seconds. This is called Feature Confirmation Tone Timer and is programmable.
• Sound: Beep... Beep... Beep

Use following command to program the Feature Confirmation Tone Timer:
3005-Seconds-#*
Range = 000 to 255 seconds
Default = 003 seconds

Programming Tone

Short beeps followed by a longer off duration repeated every second. It is exactly same as the feature tone. The VisionUltra prompts you to enter fresh commands during programming with this tone.

Programming Inter Digit Timer

This timer signifies the time for which the VisionUltra waits between accepting two digits from the SE/SA. This timer is loaded when the SE/SA dials first digit and waits for the seconds digit.

Use following command to program Programming Inter Digit Timer:
3006-Seconds-#*
Range = 000 to 255 seconds
Default = 015 seconds

Programming Error Tone

This tone is exactly same as the Error Tone. This tone is given when some wrong programming command is dialed. This tone remains for 3 seconds. This Programming Error Tone timer is programmable.
• Sound: Too…Too…Too…Too

Use following command to program the Programming Error Tone Timer:
3007-Seconds-#*
Range = 000 to 255 seconds
Default = 003 seconds

Programming Confirmation Tone

This is exactly same as the feature confirmation tone. This tone is continuous, fast beeps. During programming, this tone indicates that valid command is received by the system and it has taken necessary action. This tone remains for 2 seconds. This is called Programming Confirmation Tone Timer and is programmable.
• Sound: Beep... Beep... Beep

Use following command to program the Programming Confirmation Tone Timer:
3008-Seconds-#*
Range = 000 to 255 seconds
Default = 003 seconds

Barge-In Tone

When a third party performs Barge-in on a busy station*,* the busy user gets this tone for the programmed time after which the caller can get into conversation. For more details please refer the topic 'Barge-In'.

Interrupt Request Tone

When a third party performs Interrupt Request on a busy station*,* the busy user gets this tone for the programmed time after which the caller can get into conversation. For more details please refer the topic 'Interrupt Request'*.*

Door Phone Tone

When a visitor presses the door phone key, the PBX starts special triple ring on the stations of door phone group. If the stations are busy then the station user gets this tone informing them of the incoming doorphone call. For more details please refer the topic 'Door Phone'*.*

Night Mode Tone

When the system is in night mode, the user hears this tone when he picks his handset. This is applicable only when country code is Italy, Spain or USA/Canada. If the country code is India then the user gets dial tone even in night mode.

Night Mode Indication to Stations:

Situation	India	Italy/USA/Canada/Spain
Day Mode-No Call Forward	Dial tone	Dial tone
Day Mode-Call Forward	Feature/Prog. Night Mode Tone	Feature/Prog. Night Mode Tone
Night Mode	Dial tone	Feature/Prog. Night Mode Tone
Night Mode-Call Forward	Feature/Prog. Night Mode Tone	Feature/Prog. Night Mode Tone

Tone Specifications:

Tone Type/Country		Freq.	ON	OFF	ON	OFF	ON	OFF
Dial Tone	India	350+440	Cont.					
	Italy	400	Cont.					
	USA/Canada	350+440	Cont.					
	Spain	400	Cont.					
Feature/Programming Night Mode tone	India	350+440	100	900				
	Italy	400	1750	100				
	USA/Canada	350+440	100	900				
	Spain	400	1750	100				
Ring Back Tone	India	350+440	400	200	400	2000		
	Italy	400	1000	2000				
	USA/Canada	350+440	1000	3000				
	Spain	400	1000	2000				
Busy Tone	India	400	750	750				
	Italy	400	500	500				
	USA/Canada	440	500	500				
	Spain	400	500	500				

Tone Type/Country		Freq.	ON	OFF	ON	OFF	ON	OFF
Error Tone	India	400	250	250				
	Italy	400	250	250				
	USA/Canada	440	250	250				
	Spain	400	250	250				
Interrupt Request Tone	India	350+440	100	2900				
	Italy	400	200	200	200	2500		
	USA/Canada	440	100	2900				
	Spain	400	200	200	200	2500		
Barge-In Tone	India	350+440	500	500	1000	5000		
	Italy	400	500	500	1000	5000		
	USA/Canada	440	500	500	1000	5000		
	Spain	400	500	500	1000	5000		
CCWT	India	350+440	100	100	100	2700		
	Italy	400	200	2500				
	USA/Canada	350+440	100	100	100	2700		
	Spain	400	200	2500				
Confirmation Tone	India	350+440	100	100				
	Italy	400	100	100				
	USA/Canada	350+440	100	100				
	Spain	400	100	100				
Door Phone Tone	India	350+440	200	200	200	200	200	2500
	Italy	400	200	200	200	200	200	2500
	USA/Canada	350+440	200	200	200	200	200	2500
	Spain	400	200	200	200	200	200	2500

Important Point:
- Confirmation Tone and Error Tone are heard only if Voice Message Application is busy. If Voice Message Application resource is free, 'Confirmation' and 'Error' messages are played instead of them.

Relevant Topics:

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Call Splitting

What's this?

- This feature enables you to talk to two persons alternately.
- Call Splitting is also known as Hold-Consult or Hold-Toggle.

How to use it?

Call Splitting can be used in any of the following three combinations:
- Two stations
- One station and one trunk
- Two trunks

Call Splitting between two stations

1	Speech with station.	
2	Dial **Flash.**	Dial tone. Called station goes on hold.
3	Dial another **Station.**	Ring Back Tone
4		Speech with the station when the call is answered.
5	Dial **Flash-1.**	Speech with held party.

Call Splitting between a station and a trunk

1	Speech with trunk.	
2	Dial **Flash.**	Dial tone. External party goes on hold.
3	Dial **Station.**	Ring Back Tone
4		Speech with the station when the call is answered.
5	Dial **Flash-1.**	Speech with held party.

Call Splitting between two trunks

1	Speech with trunk.	
2	Dial **Flash.**	Dial tone. Trunk goes on hold.
3	Dial **8.**	Feature tone
4	Dial **0** or **5** or **61** to **66** to grab another trunk.	Trunk dial tone
5	Dial **Telephone Number.**	Ring Back Tone
6		Speech with called party when the call is answered.
7	Dial **Flash-1.**	Speech with held party.

How to program?

Call Splitting is a programmable feature. Please refer Class of Service (COS) for details on how to allow Call Splitting to a user.

Important Points:

- Users of Italy/USA/Canada/Spain should use the command Flash-2 for Call Split.
- Only one of the two persons will be in conversation with you at a time. The third person is on hold. He gets music and cannot hear your conversation.
- When in speech with a station and getting external call waiting tone, you can dial Flash to answer the trunk call. The station is put on hold and gets music. Now, you can split between the two persons.
- Interrupting station can also be answered very much in the same way as described above. Your current call is put on hold and speech with the interrupting station is established. Once again, you can split between the two persons.
- Conference can be established to include both the parties by dialing **'Flash-0' (for India) or 'Flash-3' (for Italy/ USA/Canada/Spain).**
- A is in speech with B. A holds B and calls C. A and C are in speech. B is the held party. Now A wants to call external party. A can make an external call by dialing **Flash-7**. Dialing **Flash-7** parks C. B is again in speech with A. Now, if A wants to dial external number he will dial Flash and Trunk Access Code 0, 5, 61 to 66 to grab a trunk. A can have conference between himself, Station B and external party.
- You can also transfer the active person (one who is in conversation with you) to the third person.
- You can also park the current person by dialing '**Flash-7**'.
- A is in speech with B. A holds B and calls C. A and C are in speech. B is the held party. You can release the party in speech by dialing **'Flash-2' (for India) or 'Flash-1' (for Italy/USA/Canada/Spain).**
- You can release the held party by dialing **'Flash-3'.** This feature is not allowed for the users of Italy/USA/Canada/ Spain.
- Access to Call Splitting is programmable.

Relevant Topics:

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Call Transfer

What's this?

VisionUltra offers four types of call transfer:
*   Call Transfer-Screened
*   Call Transfer-While ringing
*   Call Transfer-On Busy
*   Call Transfer-Trunk-to-Trunk

Call Transfer-Screened
*   This is normal call transfer and the most widely used.
*   Operators can use this method to transfer incoming calls.

How to use it?

1	Speech with trunk.	
2	Dial *Flash.*	Dial tone
3	Dial *Station.*	Ring Back Tone
4	Wait for the station to answer.	Speech when ring answered.
5	Put down the handset.	Call is transferred.

Call Transfer-While Ringing
*   Transfer a call without waiting for the destination to answer.
*   An operator can use this feature when there are other calls pending and she cannot wait for the station to respond to intimate the call.
*   This is also known as "Wait For Ring Transfer".
*   If the called station does not respond to the ring within 45 seconds, the call comes back to the station that transferred the call. This is same as Ring back tone timer.
*   If the station that transferred the call is free at the time of call return, caller gets ring.
*   If the station that transferred the call is busy at the time of call return and if it was an internal call transfer then the caller gets error tone.
*   If the station that transferred the call is busy at the time of call return and if it was a trunk call transfer then the system gives beeps to the station who transferred the call (provided privacy against beeps is not enabled).

How to use it?

1	Speech with trunk.	
2	Dial *Flash.*	Dial tone
3	Dial *Station.*	Ring Back Tone
4	Put down the handset.	

Call Transfer-On Busy
What's this?
*   Transfer a call on a station already in speech with some other person.
*   Operators can transfer calls without even checking for the status of the destination station.

*   This is also known as "Blind Transfer".
*   The busy destination station gets intrusion tone. He can speak to the calling person by dialing '*Flash*'
*   A call can be transferred on busy station only if it is not programmed with call privacy from trunk call and privacy from barge-In and interrupt request.
*   If the called station does not respond to the intrusion tone within 45 seconds, the call comes back to the station that transferred the call.
*   If the station that transferred the call is free at the time of call return, caller gets ring.
*   If the station that transferred the call is busy at the time of call return and if it was an internal call transfer then the caller gets busy tone.
*   If the station that transferred the call is busy at the time of call return and if it was a trunk call transfer then the system waits for the station to become free. The caller gets ring back tone.

How to use it?

1	Speech with trunk.	
2	Dial *Flash.*	Dial tone
3	Dial *Station.*	Busy tone
4	Dial *3.*	Ring Back Tone
5	Disconnect.	Call will be transferred on the busy station and it will get intrusion tone.

Call Transfer-Trunk-to-Trunk
*   An external call can be transferred on another trunk line.
*   The operator need not remain in speech. Two external persons can speak through the VisionUltra.
*   In case a colleague has not come to the office, his incoming calls can be transferred on his residence's phone line or on his mobile.
*   In case a remote colleague is not having long distance or international dialing facility from his present location. He can dial his office and request the operator to connect him to the desired number.
*   A warning tone is given after DISA inactivity timer. To extend the call, either of the person has to dial a digit in tone (DTMF). Dialing of '*#0*' terminates the call and both the trunks get released.

How to use it?

1		3-way mode as described in call splitting.
2	Dial *Flash.*	Feature tone
3	Dial *6.*	Station disconnects. Trunk1 and Trunk2 remain in speech.

How to program?

Call Transfer is a programmable feature. Please refer Class of Service (COS) for details on how to allow Call transfer to a user.

Important Points:
- Internal station calls can also be transferred to some other station.
- While waiting for the station to answer, you can abandon the transfer by dialing *Flash*. The ring on the station is stopped and you get connected to the person on hold.
- In case of Call Transfer, the VisionUltra provides a flexibility to display either the station number that is transferring the call or the calling party's number. This is called CLIP-Hold Party.

Relevant Topics:
1. Class of Service (COS)   62
2. Privacy   145
3. Conference   68
4. Direct Inward System Access (DISA)   100
5. Country Code   86
6. Default Settings   87

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Calling Line Identification Based Routing

What's this?

The VisionUltra identifies the calling party's telephone number and is displayed on the LCD of the Telephone instrument.
The calling party's telephone number is also stored in the incoming SMDR buffer of the system. It appears in the incoming SMDR report. The VisionUltra also provides a facility to route selected incoming calls to particular stations, based on their CLI number.

How it works?

The VisionUltra senses the digits sent by CO during the ringing phase. It sends this information to the landing station/ operator along with the ringing signal. The telephone number of the Calling party is displayed on the LCD of the telephone instrument. The system also stores this information in its memory. When the operator transfers the call to a station, the system sends this information to the transferred station.

The incoming telephone number is stored in the incoming SMDR buffer. This telephone number appears in the incoming SMDR report.

On arrival of an incoming call, the system identifies the calling party's number and compares it with the numbers in the CLI table. (The CLI table is constructed by the system internally when the programming is done). If the number is present in the CLI table, the call is routed according to CLI programming else the number is routed according to normal trunk landing group programming. This is called CLI based routing. CLI based routing can be enabled/disabled during day/night time separately.

VisionUltra offers a facility to route a call to an external number based on the CLI numbers. Using this feature it is possible to forward a call from a known destination to a desirable destination.

VisionUltra offers a facility to display the transferring party's number or held party's (calling) number (while transferring).

How to program?
Step 1: Program the signalling type of the station as CLI port using command *4101.*
Step 2: Enable/disable CLI based routing during day time using command *1602.*
Step 3: Enable/disable CLI based routing during night time using command *1603.*
Step 4: Program the telephone numbers to be routed directly to the stations using command *1604.*
Step 5: Clear all the incoming telephone number from table using command *1605.*

Step 6: Program the destination where the incoming call is to be routed using command *1606.*
Step 7: Program the external phone number where the call is to be routed using command *1607*.
Step 8: Default CLI parameters using command *1601.*

Step 1
Please refer 'Calling Line Identification-Station and Calling Line Identification-Trunk' for more details.

Step 2
Use following command to enable/disable CLI based routing during day time:
*1602-Code-#**
Where,

Code	Meaning
0	Disable CLI Based Routing
1	Enable CLI Based Routing

By default, CLI based routing is disabled during day time.

Step 3
Use following command to enable/disable CLI based routing during night time:
*1603-Code-#**
Where,

Code	Meaning
0	Disable CLI Based Routing
1	Enable CLI Based Routing

By default, CLI based routing is disabled during night time.

Step 4
Use following command to program caller's telephone number in a CLI table:
*1604-Index-Telephone Number-#**
Where,
Index is from 01 to 25
Telephone Number is the calling party's telephone number (Maximum 16 digits).
By default, telephone numbers are blank.

Step 5
Use following command to clear all the incoming telephone numbers from the CLI table:
*1605-#**

Step 6
Use following command to assign destination type and destination for the incoming telephone number in the CLI table:
*1606-Index-Destination Type-Destination-#**

Where,
Index is from 01 to 25.

Destination Type	Meaning	Destination
1	If call is to be routed to particular station	01-17 (Station)
2	If call is to be routed to a station Group	01-16 (Station Group)
3	If call is to be routed to external number	01-08 (Trunk Access Group)

By default, destination type is 2 and destination is 01.

If the destination type is 3, then the TAG on which the external number is to be dialed out is programmed as destination.

Use following command to assign same destination type and destination for all the incoming telephone numbers in the CLI table:
1606-**-Destination Type-Destination-#*
This command is not applicable for Destination Type=3.

Step 7
Use following command to program the external destination number for CLI based routing:
1607-Index-Destination Number-#*
Where,
Index is from 01 to 25
Destination Number is the telephone number (maximum 16 digits) where the calls are to be forwarded.

On using above command a table shown below will be created in the system's memory automatically.

Index	Caller's Telephone No.	Dest. Type	Dest.	Dest. Number
01	022-8585858	3	01	2656565
02	011-7575757	3	01	2781085
03	020-5889988	3	01	2662266
:	:	:	:	:
:	:	:	:	:
25	033-5656565	1	01	2856757

By default, Destination Number is blank.

Step 8
Use following command to default the CLI parameters:
1601-#*

On issuing above command
• CLI based routing turns OFF.
• All entries in the CLI table are cleared
• Routing destination is cleared
• Number string of the external destination programmed is also cleared.

Example:
During day time calls from Rakesh (03325656565) should land on 201 (software port 04). Calls from Mahesh (022-27878787) should land on 205, 206, 207. Calls from Suresh (011-28111000) should be forwarded to 2656575.
• Make a station group (01) containing station 205, 206 and 207.
• Program the CLI numbers to be forwarded to external numbers in indexes from 00 to 07 and remaining from indexes 11 onwards.

1602-1-#*

1604-01-01128111000-#*
1604-11-03325656565-#*
1604-12-02227878787-#*

1605-11-1-04-#*
1605-12-2-01-#*
1605-01-3-01-#*

1606-01-2656575-#*

On giving above commands, a table as shown below is formed.

Index	Caller's Telephone No.	Dest. Type	Dest.	ECF Dest.
01	01128111000	3	01	2656575
:	:	:	:	:
:	:	:	:	:
11	0332656565	1	04	
12	02227878787	2	01	

Timer of Relevance:
CLI Based Routing Ring Timer-It specifies the time for which a station rings, if the call is routed to it based on Routing Table.
Command: ***3019-Seconds-#****
Default: 015 seconds
Valid Range: 000 to 255 seconds.

Important Points:
• Maximum 25 CLI numbers can be routed to desired destinations.
• If the call is routed to a station and if the station is busy/not responding, the call is routed to its normal trunk landing group.
• To know programming details, please refer "Configuration Reports".

Relevant Topics:

=X=X=

Calling Line Identification-Station

What's this?

- The VisionUltra offers a facility to detect the calling party's number whether internal or external on each station. The VisionUltra offers flexibility to display the calling party's number on the station. This is called Calling Line Identification-Station. The stations support both DTMF and FSK signaling.
- In case of Call transfer, the VisionUltra provides a flexibility to display either the station number that is transferring the call or the calling party's number. This is called CLIP-Hold Party.

How to program?

Step 1: Program the signaling type for the Stations using command **4101.**
Step 2: Program the CLI transfer mode using command **1607.**

Step 1

Use following command to program the signaling type for a station:
4101-Station-Signalling Type-#*
Where,
Station is the software port number from 01 to 17.

Signaling Type	Meaning
0	None CLI
1	DTMF Signaling
2	FSK V.23
3	FSK BellCore

By default, Signalling Type is DTMF.

Step 2

Use following command to program the CLI display during Call transfer (CLIP-Hold):
1608-Station-Mode-#*
Where,
Station is from 01 to 17.

Mode	Meaning
1	Transferring Party
2	Calling Party

By default, CLI display during call transfer is 1.

Range Commands:

Assign a common signaling type to all the station.	**4101-**-Signaling Type-#***
Assign a common CLI display during Call Transfer (CLIP Hold) to all the stations.	**1608-**-Mode-#***

Important Points:

- Date and Time in CLIP: VisionUltra supports sending of date-time in caller ID (CLIP) for all internal calls, if the destination SLT is programmed for FSK CLIP. For external incoming call it sends date and time to SLT which is received from CLIP on a trunk port.
- For other types of calls like Alarm Call, Auto Redial Ring, Hold or Park Return Call Ring, Door Phone Call, Programing Mode Ring and Version Number Display Ring system uses it's own RTC-Date and Time.

Relevant Topics:

=X=X=

Calling Line Identification-Trunk

What's this?

The VisionUltra offers a facility to detect the calling party's number. This is known as Calling Line Identification. Since it is applicable for incoming calls on trunk, it is named as Calling Line Identification-Trunk. The calling party's number is stored in the incoming SMDR buffer of the system. This number is presented to the stations. The trunks of VisionUltra-616 support both DTMF and FSK signaling.

How it works?

- The VisionUltra senses the digits/codes sent by Central Office. It sends this information to the landing station along with the ringing signal. If the station transfers the call to another station, the system sends this information to the transferred station. Please refer 'Calling Line Identification-Station' for more details.
- The incoming telephone number is stored in the incoming SMDR buffer also. This telephone number appears in the incoming calls SMDR reports in the space provided for Number.
- On arrival of an incoming call, the system identifies the calling party's number and compares it with the numbers in the CLI table. (The CLI table is constructed by the system internally when the programming is done. Please refer Calling Line Identification Based Routing for more details). If the number is present in the CLI table, the call is routed according to CLI programming else the number is routed according to normal trunk landing group programming.

Use following command to program the signalling type for the trunk:
3105-Trunk-Signalling Type-#*
Where,
Trunk is from 1 to 6.

Signaling Type	Meaning
0	None CLI
1	DTMF Signaling
2	FSK V.23
3	FSK BellCore

By default, signalling type is DTMF.

Use the following command to program the signalling type for all the trunks:
3105-*-Signalling Type-#*

Important Point:
- If signaling type is programmed as FSK V.23, the phone will display:
  - Name of calling party (ID Number of total 8 characters in first line).

- Date and Time (DDHHMM format) in second line of the LCD display, for remaining 8 characters.

Relevant Topics:

=X=X=

Cancel Station Features

What's this?

- Features like Alarms, Auto Call Back, Call Follow-Me, Call Forward, Hot Line, Hot Outward Dialing and Walk In Class of Service can be cancelled from the station.
- The VisionUltra supports separate cancellation code for each feature. But it is desirable to have a master command to cancel all the features with a single command.
- All stations can avail this facility.

How to use it?

1	Lift the handset.	Dial tone
2	Dial *100.*	Confirmation tone
3	Replace the handset.	

=X=X=

Class of Service (COS)

What's this?

For the purpose of utilizing the features of a PBX, all users in an organization are not equal. Some users are important and their time is more valuable. Further, their nature of job also differs.

Keeping this diversity in mind, it is imperative that the features they need from a system differ from person to person. The feature requirements can also vary from time to time. For example, the features required during day time and during night time need not be the same. It is the system's responsibility to allow or deny a feature access to a user depending on his needs. The system should support flexible allocation of features to different users. This accessibility of different features for a user is known as his Class of Service (COS).

How it works?

The VisionUltra supports very flexible COS programming. Each user can be assigned different COS depending on his and the organization's needs. All the features supported by the system are presented in the form of a list. Each feature in the list is identified with a 2-digit number. Following table lists all the features with feature index to be used during programming:

Index	Feature Name
01	Internal Call
02	Hold and Transfer
03	Selective Call Pick-Up
04	Auto Call Back
05	Call Park
06	Global Directory Part-I
07	Global Directory Part-II
08	Continued Dialing
09	SE Programming Access
10	SA Programming Access
11	Dynamic Lock
12	Call Forward (Always, Busy, No-Reply, Follow-Me)
13	Hotline
14	Auto Redial
15	Alarm
16	Remote Alarm

Index	Feature Name
17	Interrupt Request
18	PAS
19	Door Phone
20	Relay Port
21	Trunk-to-Trunk Transfer
22	Barge-In
23	Conference
24	Privacy from DID
25	Privacy from Trunk Beeps
26	Privacy from Barge-In and Interrupt Request
27	Privacy from Raid
28	Boss Ring
29	Live Call Supervision
30	Raid
31	DISA
32	DND

Relevant features from this list can be selected and put in a group. One can make few feature access groups depending upon the requirement. First group contains none of the features. Second group contains only internal dialing. Third group contains very common features like Call Pick Up, Call Transfer, Internal Dialing etc. Fourth group contains more advanced features and so on eight group contains all the features. Once programmed, COS groups may look like:

Group	01	02	03	05	06	...	29	30	31	32
1	N	N	N	N	N	...	N	N	N	N
2	N	N	Y	Y	N	...	N	Y	N	N
3	Y	N	N	Y	Y	...	Y	Y	Y	N
4	N	N	N	Y	Y	...	N	N	N	N
5	Y	Y	Y	N	Y	...	N	Y	N	N
6	Y	Y	Y	N	Y	...	Y	Y	N	N
7	Y	Y	Y	Y	Y	...	Y	Y	Y	Y
8	Y	Y	Y	Y	Y	...	Y	Y	Y	Y

By default, in all the 8 COS groups a set of features is allowed based on common requirement.

Default COS groups chart is attached herewith (India)

Group	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
1	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
2	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
3	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
5	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	N	N	N	N	N	N	N	N

Group	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
6	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	N	N	N	N	N
7	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	Y	N	N	N	Y
8	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	Y	Y	Y	Y	Y

Default COS groups chart is attached herewith (Italy/Spain)

Group	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
1	Y	Y	N	Y	N	Y	Y	Y	N	N	N	N	N	N	Y	Y	N	N	Y	Y	N	N	Y	N	N	N	N	N	N	N	N	Y
2	Y	Y	Y	Y	Y	Y	Y	Y	N	N	Y	Y	Y	N	Y	N	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	N	N	N	N	Y
3	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	N	N	N	N	Y
4	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	N	N	N	Y	Y
5	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y	N	N	N	N	N	N	N	N	Y	N	N	N	N	N	N	Y
6	Y	Y	Y	Y	N	Y	Y	Y	N	N	Y	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y	N	N	N	N	N	N	N
7	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N	Y	N	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	N	N	N	N	N
8	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	N	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	N	N	N	N	N

Default COS groups chart is attached herewith (USA/Canada)

Group	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
1	Y	Y	N	Y	N	Y	Y	Y	N	N	N	N	N	N	Y	N	N	N	Y	Y	N	N	Y	N	N	N	N	N	N	N	N	Y
2	Y	Y	Y	Y	Y	Y	Y	Y	N	N	Y	Y	Y	N	Y	N	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	N	N	N	N	Y
3	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N	Y	N	Y	Y	Y	Y	Y	Y	Y	N	N	Y	N	Y	Y	N	N	Y
4	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	N	N	N	N	Y
5	Y	N	N	N	N	N	N	N	N	N	N	N	Y	N	Y	N	N	N	N	N	N	N	N	Y	N	N	N	N	N	N	N	Y
6	Y	Y	Y	Y	N	Y	Y	Y	N	N	Y	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y	N	N	N	N	N	N	N
7	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	N	N	N	N	N
8	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	N	N	N	N	N

Now, these groups can be allocated to the users depending upon the hierarchy of the user in the organization. A user can be assigned different COS groups for day time and night time. Once these groups are assigned to the users, the user's COS table looks like:

Station Number	COS Group for Day Time	COS Group for Night Time
01	7	1
02	6	4
03	4	4
04	3	3
05	6	4
:	:	:
:	:	:

Following points are relevant:
- Maximum 8 feature groups (COS) can be formed (1-8)
- Each feature can be enabled or disabled in each group
- 3rd group is the default COS group

The following flowchart elaborates this procedure.

```
            ( Start )
                |
   ┌─────────────────────────────┐
   │ Read the list of the features│
   │ offered by the system        │
   └─────────────────────────────┘
                |
   ┌─────────────────────────────┐
   │ Prepare a lost of all stations│
   └─────────────────────────────┘
                |
   ┌─────────────────────────────┐
   │ Write features needed for both│
   │ day time and night time for   │
   │ each individual station       │
   │ against his name in the list  │
   │ of stations                   │
   └─────────────────────────────┘
                |
   ┌─────────────────────────────┐
   │ You will notice that features │
   │ needed by many stations are   │
   │ identical. Hence feature      │
   │ variety gets reduced.         │
   └─────────────────────────────┘
                |
   ┌─────────────────────────────┐
   │ Each variety is called a COS  │
   │ group. Assign a group number  │
   │ to it.                        │
   └─────────────────────────────┘
                |
   ┌─────────────────────────────┐
   │ This way prepare all COS groups│
   └─────────────────────────────┘
                |
   ┌─────────────────────────────┐
   │ Assign COS groups to all the  │
   │ stations                      │
   └─────────────────────────────┘
                |
   ┌─────────────────────────────┐
   │ Print system parameters       │
   │ reports and verify the        │
   │ programming                   │
   └─────────────────────────────┘
                |
   ┌─────────────────────────────┐
   │ Test the programming by       │
   │ checking features from every  │
   │ station                       │
   └─────────────────────────────┘
                |
            ( End )
```

How to program?

Step 1: Decide the number of COS groups to be used.
Step 2: Prepare list of the features required in each COS group and program it using command **4602.**
Step 3: Default the features in COS group using command **4601.** (if required)
Step 4: Assign COS group to a station during day time using command **4610.**
Step 5: Assign COS group to a station during night time using command **4611.**

Step 1

Take a pen and a paper pad and decide the number of groups to be formed and what all features are to be assigned to each group.

Step 2

Use following command to enable or disable a feature in a COS group:
4602-COS Group-Feature Index-Code-#*
Where,
COS Group is from 1 to 8
Feature Index is from 01 to 32

Code	Meaning
0	Feature Disabled
1	Feature Enabled

Use following command to program a feature in all the COS groups:
4602-*-Feature Index-Code-#*
Please note that default COS groups meet most of the requirements and hence above commands are seldom used.

Step 3

Use following command to default a COS group:
4601-COS Group-#*
Where,
COS Group is from 1 to 8

Use following command to default all features in all the COS groups:
4601-*-#*

Step 4

Use following command to assign a COS group to a station during day time:
4610-Station-COS Group-#*
Where,
Station is the software port from 01 to 17
COS Group is from 1 to 8

Use following command to assign the same COS group to all stations during day time:
4610--COS Group-#***

Step 5

Use following command to assign a COS group to a station during night time:
4611-Station-COS Group-#*
Where,
Station is the software port from 01 to 17
COS Group is from 1 to 8

Use following command to assign the same COS group to all stations during night time:
4611--COS Group-#***

Example:
Make a COS group '5' having features like Internal Call, Hold, Selective Call Pick Up, Auto Call Back, Remote Alarm, Conference and Call Park.

4602-5-01-1-#*
4602-5-02-1-#*
4602-5-03-1-#*
4602-5-04-1-#*
4602-5-15-1-#*
4602-5-22-1-#*
4602-5-05-1-#*

Important Point:
• To know programming details, please refer "Configuration Reports".

Relevant Topics:

=X=X=

Communication Port

What's this?

- The VisionUltra has a communication port (DB-9 connector), which is used to download the configuration reports SMDR outgoing and SMDR incoming reports on the computer.
- The communication port uses RS-232C protocol.
- Pin details of the COM ports:

PIN No.	Details
1	V+
2	RXD
3	TXD
4	NC
5	V+
6	GND
7	NC
8	NC
9	NC

Communication Port

- The Communication port parameters are fixed and not programmable. These are Baud Rate = 9600 bps, Data bits =8, Start bit = 1, Stop bit = 1, Parity bit = 0 and Flow control = none.
- On giving print command, corresponding configuration report is downloaded on the computer.

How to use it?

- To communicate with the computer, install communication software like ProComm, Bitcomm, Xtalk, Mirror, etc. However if you have Windows 95 or Windows NT then its in-built software viz. HyperTerminal can be used. For details, please refer section "Connecting VisionUltra with Computer using HyperTerminal".
- Connect the communication port of the VisionUltra with the communication port of the computer using Matrix communication cable. Please contact Matrix dealer or Matrix Telecom Pvt. Ltd. for Matrix communication cable. *(Matrix communication cable has 9-pin D-type female connector on both the sides and is 10 meters* long)

Connecting VisionUltra with Computer

- Start your computer and go to command prompt. You get C:\>. Type CD ProComm. You get C:\ProComm>. Type ProComm. You get C:\ProComm>ProComm. Press Enter. The computer runs the ProComm Software and you get a full screen showing ProComm.
- Press Esc. You get a Status bar at the bottom of the screen.
- Press ALT-P to set the communication port of the computer for following settings:
  - Baud rate = 9600 bps

- Start bit = 1
- Stop bit = 1
- Parity bit = none.
- These settings are available in the option '11'. Hence press '11' and press enter.
- Now press '20' if you have connected the cable to COM port 1 (where normally a mouse is connected) and press enter.
- Press '21' if you have connected the cable to COM port 2 and press enter.
- To save the changes made in the settings, press 24.
- After some time you get a screen with a status bar at the bottom.
- Press ALT+F1 to create a file to store data. On pressing ALT+F1 the computer asks you a file name. Give appropriate filename and press enter. The status bar at the bottom now shows **LOG OPEN**.
- Now on giving printing commands, the reports get downloaded on the computer (you can see them on the screen). These reports can be saved in a file and can be retrieved, edited, deleted, printed, etc.
- To come out of the DOS mode, press ALT-X.
- Suppose you have stored the configuration reports in a filename viz. <Sumer> and you want to retrieve this file. Then go to command prompt, type CD ProComm press enter and then type EDIT <filename>. Now you can edit, delete and print this file.

Connecting VisionUltra with Computer using HyperTerminal

ASSUMPTIONS:
- Your computer has Microsoft Windows and has a facility of HyperTerminal under accessories option.
- You are using a communication port other than the one used for Mouse.

PROCEDURE:

Start the Computer.	You get **Desktop Menu** on the screen.
Click on **Start > Program > Accessories > HyperTerminal**.	You get a dialog box viz. **C:\Program\Accessor....** on the screen.
Double click on **HyperTerminal** icon.	You get a dialog box viz. **New connection-HyperTerminal** asking to give name for new connection.
Give the name you desire and press <Enter>.	You get a dialog box viz. **'Phone Number'**.
No need to enter any phone number but change the settings of **'Connect to'** using its options to '**Direct to COM Port 2** or **Other Port** and clock **OK.**	You get a dialog box viz. **'Port Settings'**.
Set **Bits per Second** to 9600, **Data Bits** to 8, **Parity Bit** to None, **Stop bits** to 1, **Flow Control** to None and Click **OK.**	You get a dialog box having options like **File, Edit, View, Call, Transfer,** etc.
Click on **Transfer.**	You get **Pop Down Menu.**
Click on **Capture Text.**	You get a dialog box asking file name.
Give filename with path or **Browse** to store in your desired folder. In the desired folder create a text file. To do so right click **New > New text documents** and click on it, give a file name say <prog. as on xx.xx.xx>. Now type the same file name in the File name block and click **Open.**	You get a dialog box viz. **Capture Text.**
Click on **Start** button of the window.	Now the communication port is ready to receive the data from the EPABX.
Click on **File** > **Properties > Settings** and change **Emulation** option to VT100 and click **OK.**	You again get the dialog box having options like **File, Edit, View, Call, Transfer, etc.**
Now enter the programming mode in the AutoAttendant and give the printing commands.	You get the desired reports on the screen.
After getting the reports on the computer, click on **Transfer > Capture Text > Stop** and click on **Stop.** Click on **File > Exit.**	All the data has been received by the computer and is stored in the given filename.
Computer asks a question, **Do you want to disconnect?**	Click on **Yes.**
Computer asks a question, **Do you want to save this session?**	Click on **Yes.** You come back to the desktop menu.
To print the file, open that file again in wordpad or notepad. Give the print command.	You get the print out. Keep it with you for reference.

Relevant Topic:
1.

<div align="center">

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</div>

Conference

What's this?

The VisionUltra offers the facility of 3-party conference. 3-Party conference can be conducted easily without much prior planning. If a user is talking to some one and he feels he should include a third person in his present talk and have a conference, he can do so without disconnecting his present talk. All he has to do is to hold present person, dial the third person and then dial conference code.

Following three combinations are allowed in 3-party conference:
• All three stations
• Two stations and one trunk
• One station and two trunks

How to use it?

1		3-way mode as described in call splitting.
2	Dial *Flash-0.*	3-way speech.

How it works?

Flow chart on the next page explains these steps.

Start

Station A is speaking to station B

They need to include station C in their talk

Station A puts station B on hold. Station A gets dial tone. Station B gets music on hold.

Station A dials Station C

Station C answers the call. Station A and Station C are in speech. This is a normal situation occurring during a call transfer.

Station a dials flash-0 to activate 3-party conference

Station A, Station B and Station C in speech

Any station disconnects?

No → Station A dials flash? — No

Yes ↓ Remaining two station in normal 2-ay speech

Once again they can conduct a conference with a new station

End

Yes → Station C goes on hold and gets music. Station A and Station B remain in speech.

This is normal situation occurring during a call transfer

End

It is possible to have Conference-Unsupervised
This feature enables the operator to connect two trunks through the system and get herself free from the discussion. This feature is also known as Trunk to trunk transfer.

Suppose you are at city A. Your two colleagues are at city B and city C. Now using this feature, you being at City A person

can make conference with City B person and City C person and once in conversation, if you disconnect then City B person and City C person can talk to each other.

How to use it?

1		3-way mode as described in call splitting
2	Dial **Flash-0.**	3-way speech.
3	Dial **Flash.**	One of the trunks goes on hold. Operator is in speech with other trunk.
4	Dial **6.**	Trunk1-Trunk2 speech.

For more details, please refer "Call Splitting" and "Call Transfer".

How to program?

Conference is a programmable feature. Please refer Class of Service (COS) for details on how to allow Conference to a user.

Important Points:
- Unsupervised calls are same as DISA calls. The unsupervised call shall get disconnected after time = DISA Inactivity Timer + DISA Wait Timer. Hence to continue as unsupervised conference, it is mandatory for the user to dial any digit after the warning beeps.
- To disconnect the call it is advisable to dial '#0'.

Relevant Topics:

=X=X=

Configuration Reports

What's this?

The VisionUltra supports downloading the system's
configuration in form of a report. This report is useful for:
1. Verifying whether the programming done is correct.
2. Storing it for future reference.

How it works?
• A Configuration report is generated on a computer.
• Configuration report can be generated only from the SE
  (programming) mode.
• The report can be reachieved, printed or mailed.
• Pure ASCII text format is used for report.
• No graphics are used.

The VisionUltra supports downloading the system's
configuration in two languages. The SE can choose the
language in which the report is to be generated.

Use following command to choose the language for reports:
1111-Language-#*
Where,

Language	Meaning
1	English
2	Italian
3	Spain

By default, the Language is English.

• When the command to download the system
  configuration report is issued, if the communication port is
  free the data is sent to the communication port and the
  report is generated.
• When the command to download the system
  configuration report is issued, if the communication port is
  busy (Jeeves enabled or SMDR report is being
  generated) the user gets error tone.

How to use it?

Use following command to download system configuration
report:
1100-#*

A printout of all configuration reports is attached herewith.

Relevant Topics:
1. Communication Port   66
2. Default Settings   87
3. Programming Using Jeeves   149

```
System Parameters                                    Sat 01-01-2005 AT 10:12
-----------------------------------------------------------------------------
 Country                                             :India
 Music On Hold Source                                :Internal
 Operator Port Number                                :01
 Internet-Ready Port                                 :Inactive
 Trunk Pulse Dial Ratio                              :33:67
 Allow all the digits as first digit of flex no.:No

System Timers
 Internal Inter Digit Timer                          :007 Seconds
 Programming Inter Digit Timer                       :015 Seconds
 Trunk First Digit Timer                             :025 Seconds
 Trunk Inter Digit Timer                             :006 Seconds
 Trunk Pause Timer                                   :003 Seconds

Call Progress Tone Timers
 Dial Tone Timer                                     :007 Seconds
 Ring Back Tone Timer                                :045 Seconds
 Busy Tone Timer                                     :007 Seconds
 Error Tone Timer                                    :030 Seconds
 Confirmation Tone Timer                             :003 Seconds
 Programming Error Tone Timer                        :003 Seconds
 Programming Confirmation Tone Timer                 :003 Seconds

Feature Timers
 Alarm Ring Timer                                    :045 Seconds
 ACB Ring Timer                                      :030 Seconds
 Call Park Timer                                      :045 Seconds
 Barge-In Timer                                      :010 Seconds
 Interrupt Request Timer                             :045 Seconds
 Call Forward - No Reply Timer                       :030 Seconds
 CLI Based Routing Ring Timer                        :015 Seconds
 DISA Inactivity Timer                               :060 Seconds
 DISA Warn Timer                                     :015 Seconds
 DID Inactivity Timer                                :060 Seconds
 DID-DISA-FAX Music Timer                            :005 Seconds
 DID-DISA Dial Timer                                 :010 Seconds
 DID Ring Timer                                      :030 Seconds
 DID-DISA Busy Timer                                 :005 Seconds
 DID-DISA Error Timer                                :005 Seconds
 Redial Wait Timer                                   :002 Seconds
 Auto Redial Retry Interval Timer                    :030 Seconds
 Auto Redial Trial Count                             :005
 Auto Redial RBT Wait Timer                          :060 Seconds
 Auto Redial Ring Timer                              :045 Seconds
 FAX Tone Wait Timer                                 :006 Seconds
 FAX Ring Timer                                      :010 Seconds
-----------------------------------------------------------------------------
                           Department Groups
-----------------------------------------------------------------------------
 Group No.      Access Code      Station Group
    1             3981               01
    2             3982               01
    3             3983               01
    4             3984               01
-----------------------------------------------------------------------------
MATRIX VisionUltra(616) V03R04                                      Page: 01
```

```
System Parameters                                Sat 01-01-2005 AT 10:12
------------------------------------------------------------------------------
 Features                                 COS Groups
                                   1   2   3   4   5   6   7   8
 01 Internal Call          :   N   Y   Y   Y   Y   Y   Y   Y
 02 Hold and Transfer      :   N   N   Y   Y   Y   Y   Y   Y
 03 Selective Call Pick Up :   N   N   Y   Y   Y   Y   Y   Y
 04 Auto Call Back         :   N   N   Y   Y   Y   Y   Y   Y
 05 Call Park              :   N   N   Y   Y   Y   Y   Y   Y
 06 Global Directory Bank-1:   N   N   Y   Y   Y   Y   Y   Y
 07 Global Directory Bank-2:   N   N   Y   Y   Y   Y   Y   Y
 08 Continued Dialing      :   N   N   Y   Y   Y   Y   Y   Y
 09 SE Programming         :   N   N   N   Y   Y   Y   Y   Y
 10 SA Programming         :   N   N   Y   Y   Y   Y   Y   Y
 11 Dynamic Lock           :   N   N   N   Y   Y   Y   Y   Y
 12 Call Forward           :   N   N   N   Y   Y   Y   Y   Y
 13 Hot Line               :   N   N   N   Y   Y   Y   Y   Y
 14 Auto Redial            :   N   N   N   Y   Y   Y   Y   Y
 15 Alarm                  :   N   N   N   Y   Y   Y   Y   Y
 16 Remote Alarm           :   N   N   N   N   Y   Y   Y   Y
 17 Interrupt Request(IR)  :   N   N   N   N   Y   Y   Y   Y
 18 Paging                 :   N   N   N   N   Y   Y   Y   Y
 19 Door Phone             :   N   N   N   N   Y   Y   Y   Y
 20 Relay Port             :   N   N   N   N   Y   Y   Y   Y
 21 Trunk-To-Trunk Transfer:   N   N   N   N   Y   Y   Y   Y
 22 Barge-In (BI)          :   N   N   N   N   N   Y   Y   Y
 23 Conference             :   N   N   N   N   N   Y   Y   Y
 24 Privacy From DID       :   N   N   N   N   N   N   N   N
 25 Privacy From Trk Beeps :   N   N   N   N   N   N   N   N
 26 Privacy From BI-IR     :   N   N   N   N   N   N   N   N
 27 Privacy From Raid      :   N   N   N   N   N   N   N   N
 28 Boss Ring              :   N   N   N   N   N   N   Y   Y
 29 Live Call Supervision  :   N   N   N   N   N   N   N   Y
 30 Raid                   :   N   N   N   N   N   N   N   Y
 31 DISA                   :   N   N   N   N   N   N   N   Y
 32 Do Not Disturb (DND)   :   N   N   N   N   N   N   Y   Y
------------------------------------------------------------------------------
                                Time Table
------------------------------------------------------------------------------
                              Days
                     Sun   Mon   Tue   Wed   Thr   Fri   Sat
Auto Day Start Time1 : 00:00 09:00 09:00 09:00 09:00 09:00 09:00
Auto Day End Time1   : 00:00 13:00 13:00 13:00 13:00 13:00 13:00
Auto Day Start Time2 : 00:00 13:00 13:00 13:00 13:00 13:00 13:00
Auto Day End Time2   : 00:00 18:00 18:00 18:00 18:00 18:00 18:00
Mode                 : Auto
Manual Time Zone     : Day

Digital Input Port(DIP) Port Status              :Disable
Digital Input Port(DIP) Logic Type               :Active Low
Digital Input Port(DIP) Trial Count              :003
Digital Input Port(DIP) Retry Timer              :001 Minutes
Digital Input Port(DIP) TAG for Emergency Number :1
Digital Input Port(DIP) Emergency Number :
                                      1)
                                      2)
                                      3)
------------------------------------------------------------------------------
MATRIX VisionUltra(616) V03R04                              Page: 02
```

```
System Parameters                                      Sat 01-01-2005 AT 10:12
-------------------------------------------------------------------------------
                          Trunk Access Group (TAG)
-------------------------------------------------------------------------------
TAG       Trunks        Rotation        LCR Type   CPS
 1    1 2 3 4 5 6         On             NONE       Off
 2    1 2 3 4 5 6         On             NONE       Off
 3    1 0 0 0 0 0         On             NONE       Off
 4    2 0 0 0 0 0         On             NONE       Off
 5    3 0 0 0 0 0         On             NONE       Off
 6    4 0 0 0 0 0         On             NONE       Off
 7    5 0 0 0 0 0         On             NONE       Off
 8    6 0 0 0 0 0         On             NONE       Off
-------------------------------------------------------------------------------
                          LCR - Time Zone Based
-------------------------------------------------------------------------------
  Time Zone        Start Time       End Time          Service Providers
-------------------------------------------------------------------------------
     1             00:00            23:59                1234
     2             00:00            23:59                1234
     3             00:00            23:59                1234
     4             00:00            23:59                1234
-------------------------------------------------------------------------------
                          LCR - Number Based
-------------------------------------------------------------------------------
Index         Number          Service Providers
-------------------------------------------------------------------------------
 01                                1234
 02                                1234
 03                                1234
 04                                1234
 05                                1234
 06                                1234
 07                                1234
 08                                1234
 09                                1234
 10                                1234
-------------------------------------------------------------------------------
                          LCR - Number Time Based
-------------------------------------------------------------------------------
  Index            1     2     3     4
-------------------------------------------------------------------------------
  Start Time     00:00 00:00 00:00 00:00
  End   Time     23:59 23:59 23:59 23:59
-------------------------------------------------------------------------------
Index         Number          Service Providers
-------------------------------------------------------------------------------
 01                            1234 1234 1234 1234
 02                            1234 1234 1234 1234
 03                            1234 1234 1234 1234
 04                            1234 1234 1234 1234
 05                            1234 1234 1234 1234
 06                            1234 1234 1234 1234
 07                            1234 1234 1234 1234
 08                            1234 1234 1234 1234
 09                            1234 1234 1234 1234
 10                            1234 1234 1234 1234
-------------------------------------------------------------------------------
MATRIX VisionUltra(616) V03R04                                      Page: 03
```

```
System Parameters                                Sat 01-01-2005 AT 10:12
--------------------------------------------------------------------------
                       LCR - Carrier Pre-Selection(CPS)
--------------------------------------------------------------------------
        CPS for TAG-1:Off      CPS for TAG-2:Off       CPS for TAG-3:Off
Index Destination CPS String  Destination CPS String  Destination CPS String
--------------------------------------------------------------------------
 01
 02
 03
 04
 05
 06
 07
 08
 09
 10
 11
 12
 13
 14
 15
 16
--------------------------------------------------------------------------
        CPS for TAG-4:Off      CPS for TAG-5:Off       CPS for TAG-6:Off
Index Destination CPS String  Destination CPS String  Destination CPS String
--------------------------------------------------------------------------
 01
 02
 03
 04
 05
 06
 07
 08
 09
 10
 11
 12
 13
 14
 15
 16
--------------------------------------------------------------------------
MATRIX VisionUltra(616) V03R04                              Page: 04
```

```
System Parameters                                    Sat 01-01-2005 AT 10:13
-----------------------------------------------------------------------------
                       LCR - Carrier Pre-Selection(CPS)
-----------------------------------------------------------------------------
         CPS for TAG-7:Off          CPS for TAG-8:Off
Index Destination CPS String   Destination CPS String
-----------------------------------------------------------------------------
 01
 02
 03
 04
 05
 06
 07
 08
 09
 10
 11
 12
 13
 14
 15
 16
-----------------------------------------------------------------------------
                       Call Duration Control(CDC) Tables
-----------------------------------------------------------------------------
Table    Control     Control     Control     Allowed   Denied   Timer   Disconnect
No.     OG Calls?   IC Calls?   INT Calls    List      List     (Secs)   Call?
1          No          No          No          8         8       160       No
2          Yes         No          No          5         5       160       Yes
3          Yes         No          No          3         3       160       Yes
4          Yes         No          No          1         1       160       Yes
-----------------------------------------------------------------------------
                       Voice Message Applications
-----------------------------------------------------------------------------
 Voice Recording Source      :Telephone Instrument
 User VM Messages Parts       :8
 System VM Messages Parts     :8

User Voice Messages                              Voice Module No.
 1 Day Greeting                                       1
 2 Night Greeting                                     2
 3 Initial Guidance                                   3
 4 Dial By Name                                       4
 5 Music On Hold                                      5
 6 Alarm                                              0
 7 Security Dialer                                    7
 8 Auto Redial                                        8

System Voice Messages                            Voice Module No.
 1 No Dial                                            1
 2 Wrong Dial                                         2
 3 Call Transfer                                      3
 4 Busy                                               4
 5 No Reply                                           5
 6 Programming Guidance                               0
 7 Programming Command Acceptance                     0
 8 Programming Command Rejection                      0
-----------------------------------------------------------------------------
MATRIX VisionUltra(616) V03R04                              Page: 05
```

```
System Parameters                               Sat 01-01-2005 AT 10:13
-------------------------------------------------------------------------
                            Allowed Lists
-------------------------------------------------------------------------
List  Index                        Number Strings
-------------------------------------------------------------------------
01    01-04              ,                 ,                 ,
      05-08              ,                 ,                 ,
      09-12              ,                 ,                 ,
      13-16              ,                 ,                 ,
02    01-04              ,                 ,                 ,
      05-08              ,                 ,                 ,
      09-12              ,                 ,                 ,
      13-16              ,                 ,                 ,
03    01-04              ,                 ,                 ,
      05-08              ,                 ,                 ,
      09-12              ,                 ,                 ,
      13-16              ,                 ,                 ,
04    01-04              ,                 ,                 ,
      05-08              ,                 ,                 ,
      09-12              ,                 ,                 ,
      13-16              ,                 ,                 ,
05    01-04              ,                 ,                 ,
      05-08              ,                 ,                 ,
      09-12              ,                 ,                 ,
      13-16              ,                 ,                 ,
06    01-04  0           ,                 ,                 ,
      05-08              ,                 ,                 ,
      09-12              ,                 ,                 ,
      13-16              ,                 ,                 ,
07    01-04              ,                 ,                 ,
      05-08              ,                 ,                 ,
      09-12              ,                 ,                 ,
      13-16              ,                 ,                 ,
08    01-04              ,                 ,                 ,
      05-08              ,                 ,                 ,
      09-12              ,                 ,                 ,
      13-16              ,                 ,                 ,
-------------------------------------------------------------------------
MATRIX VisionUltra(616) V03R04                              Page: 06
```

```
System Parameters                              Sat 01-01-2005 AT 10:13
------------------------------------------------------------------------
                              Denied Lists
------------------------------------------------------------------------
List  Index                        Number Strings
------------------------------------------------------------------------
01   01-04  0            ,1              ,2              ,3
     05-08  4            ,5              ,6              ,7
     09-12  8            ,9              ,               ,
     13-16               ,*              ,#              ,F
02   01-04  0            ,95             ,98             ,96
     05-08  94           ,               ,               ,
     09-12               ,               ,               ,
     13-16               ,*              ,#              ,F
03   01-04  0            ,95             ,98             ,94
     05-08               ,               ,               ,
     09-12               ,               ,               ,
     13-16               ,*              ,#              ,F
04   01-04  0            ,95             ,               ,
     05-08               ,               ,               ,
     09-12               ,               ,               ,
     13-16               ,*              ,#              ,F
05   01-04  0            ,               ,               ,
     05-08               ,               ,               ,
     09-12               ,               ,               ,
     13-16               ,*              ,#              ,F
06   01-04  00           ,               ,               ,
     05-08               ,               ,               ,
     09-12               ,               ,               ,
     13-16               ,*              ,#              ,F
07   01-04               ,               ,               ,
     05-08               ,               ,               ,
     09-12               ,               ,               ,
     13-16               ,*              ,#              ,F
08   01-04               ,               ,               ,
     05-08               ,               ,               ,
     09-12               ,               ,               ,
     13-16               ,               ,               ,
------------------------------------------------------------------------
MATRIX VisionUltra(616) V03R04                              Page: 07
```

```
System Parameters                                        Sat 01-01-2005 AT 10:13
--------------------------------------------------------------------------------
                                 Station Groups
--------------------------------------------------------------------------------
                              Group Members                                  Rot
            1/9     2/10    3/11    4/12    5/13    6/14    7/15    8/16
Group 01 :  01      02      03      04      05      06      07      08   Off
 Ring Timer 015     015     015     015     015     015     015     015
 Cont. Ring Off     Off     Off     Off     Off     Off     Off     Off
            09      10      11      12      13      14      15      16
 Ring Timer 015     015     015     015     015     015     015     015
 Cont. Ring Off     Off     Off     Off     Off     Off     Off     Off
Group 02 :  01      02      03      04      05      06      07      08   Off
 Ring Timer 015     015     015     015     015     015     015     015
 Cont. Ring Off     Off     Off     Off     Off     Off     Off     Off
            09      10      11      12      13      14      15      16
 Ring Timer 015     015     015     015     015     015     015     015
 Cont. Ring Off     Off     Off     Off     Off     Off     Off     Off
Group 03 :  01      02      03      04      05      06      07      08   Off
 Ring Timer 015     015     015     015     015     015     015     015
 Cont. Ring Off     Off     Off     Off     Off     Off     Off     Off
            09      10      11      12      13      14      15      16
 Ring Timer 015     015     015     015     015     015     015     015
 Cont. Ring Off     Off     Off     Off     Off     Off     Off     Off
Group 04 :  01      02      03      04      05      06      07      08   Off
 Ring Timer 015     015     015     015     015     015     015     015
 Cont. Ring Off     Off     Off     Off     Off     Off     Off     Off
            09      10      11      12      13      14      15      16
 Ring Timer 015     015     015     015     015     015     015     015
 Cont. Ring Off     Off     Off     Off     Off     Off     Off     Off
Group 05 :  01      02      03      04      05      06      07      08   Off
 Ring Timer 015     015     015     015     015     015     015     015
 Cont. Ring Off     Off     Off     Off     Off     Off     Off     Off
            09      10      11      12      13      14      15      16
 Ring Timer 015     015     015     015     015     015     015     015
 Cont. Ring Off     Off     Off     Off     Off     Off     Off     Off
Group 06 :  01      02      03      04      05      06      07      08   Off
 Ring Timer 015     015     015     015     015     015     015     015
 Cont. Ring Off     Off     Off     Off     Off     Off     Off     Off
            09      10      11      12      13      14      15      16
 Ring Timer 015     015     015     015     015     015     015     015
 Cont. Ring Off     Off     Off     Off     Off     Off     Off     Off
Group 07 :  01      02      03      04      05      06      07      08   Off
 Ring Timer 015     015     015     015     015     015     015     015
 Cont. Ring Off     Off     Off     Off     Off     Off     Off     Off
            09      10      11      12      13      14      15      16
 Ring Timer 015     015     015     015     015     015     015     015
 Cont. Ring Off     Off     Off     Off     Off     Off     Off     Off
Group 08 :  01      02      03      04      05      06      07      08   Off
 Ring Timer 015     015     015     015     015     015     015     015
 Cont. Ring Off     Off     Off     Off     Off     Off     Off     Off
            09      10      11      12      13      14      15      16
 Ring Timer 015     015     015     015     015     015     015     015
 Cont. Ring Off     Off     Off     Off     Off     Off     Off     Off
--------------------------------------------------------------------------------
MATRIX VisionUltra(616) V03R04                                      Page: 08
```

```
System Parameters                                      Sat 01-01-2005 AT 10:13
-------------------------------------------------------------------------------
                                Station Groups
-------------------------------------------------------------------------------
                               Group Members                            Rot
            1/9      2/10     3/11     4/12     5/13     6/14     7/15     8/16
 Group 09 :  01       02       03       04       05       06       07       08   Off
  Ring Timer 015      015      015      015      015      015      015      015
  Cont. Ring Off      Off      Off      Off      Off      Off      Off      Off
             09       10       11       12       13       14       15       16
  Ring Timer 015      015      015      015      015      015      015      015
  Cont. Ring Off      Off      Off      Off      Off      Off      Off      Off
 Group 10 :  01       02       03       04       05       06       07       08   Off
  Ring Timer 015      015      015      015      015      015      015      015
  Cont. Ring Off      Off      Off      Off      Off      Off      Off      Off
             09       10       11       12       13       14       15       16
  Ring Timer 015      015      015      015      015      015      015      015
  Cont. Ring Off      Off      Off      Off      Off      Off      Off      Off
 Group 11 :  01       02       03       04       05       06       07       08   Off
  Ring Timer 015      015      015      015      015      015      015      015
  Cont. Ring Off      Off      Off      Off      Off      Off      Off      Off
             09       10       11       12       13       14       15       16
  Ring Timer 015      015      015      015      015      015      015      015
  Cont. Ring Off      Off      Off      Off      Off      Off      Off      Off
 Group 12 :  01       02       03       04       05       06       07       08   Off
  Ring Timer 015      015      015      015      015      015      015      015
  Cont. Ring Off      Off      Off      Off      Off      Off      Off      Off
             09       10       11       12       13       14       15       16
  Ring Timer 015      015      015      015      015      015      015      015
  Cont. Ring Off      Off      Off      Off      Off      Off      Off      Off
 Group 13 :  01       02       03       04       05       06       07       08   Off
  Ring Timer 015      015      015      015      015      015      015      015
  Cont. Ring Off      Off      Off      Off      Off      Off      Off      Off
             09       10       11       12       13       14       15       16
  Ring Timer 015      015      015      015      015      015      015      015
  Cont. Ring Off      Off      Off      Off      Off      Off      Off      Off
 Group 14 :  01       02       03       04       05       06       07       08   Off
  Ring Timer 015      015      015      015      015      015      015      015
  Cont. Ring Off      Off      Off      Off      Off      Off      Off      Off
             09       10       11       12       13       14       15       16
  Ring Timer 015      015      015      015      015      015      015      015
  Cont. Ring Off      Off      Off      Off      Off      Off      Off      Off
 Group 15 :  01       02       03       04       05       06       07       08   Off
  Ring Timer 015      015      015      015      015      015      015      015
  Cont. Ring Off      Off      Off      Off      Off      Off      Off      Off
             09       10       11       12       13       14       15       16
  Ring Timer 015      015      015      015      015      015      015      015
  Cont. Ring Off      Off      Off      Off      Off      Off      Off      Off
 Group 16 :  01       02       03       04       05       06       07       08   Off
  Ring Timer 015      015      015      015      015      015      015      015
  Cont. Ring Off      Off      Off      Off      Off      Off      Off      Off
             09       10       11       12       13       14       15       16
  Ring Timer 015      015      015      015      015      015      015      015
  Cont. Ring Off      Off      Off      Off      Off      Off      Off      Off
-------------------------------------------------------------------------------
MATRIX VisionUltra(616) V03R04                                    Page: 09
```

```
System Parameters                                   Sat 01-01-2005 AT 10:13
-------------------------------------------------------------------------------
                                Door Phone
-------------------------------------------------------------------------------
 Port Usage                            :Normal Station
 Door Phone Port Type                  :2-Wire
 Door Phone Call Destination           :Internal
 Door Phone Day Station Group          :01
 Door Phone Night Station Group        :01
 Door Phone Ring Timer                 :030 Seconds
 Door Phone Day External Number        :
 Door Phone Night External Number      :
 Door Phone Day Trunk Access Group     :1
 Door Phone Night Trunk Access Group   :1
-------------------------------------------------------------------------------
                              SMDR Parameters
-------------------------------------------------------------------------------
Outgoing SMDR Storage Filters
-------------------------------------------------------------------------------
Outgoing Call Storage Flag      :On
 Numbers
 01 :
 02 : 1
 03 : 2
 04 : 3
 05 : 4
 06 : 5
 07 : 6
 08 : 7
 09 : 8
 10 : 9
 11 : 0
 12 : *
 13 : #
 14 : F
 15 :
 16 :
Duration(Minimum)               :00:00
Call Splitting                  :On
Log the Call to                 :Originator
Calls Stored in Buffer          :0000/1000
-------------------------------------------------------------------------------
 Outgoing Call Printing Filters
-------------------------------------------------------------------------------
Online Printing                 :Off
Station                         :01-17
Trunk                           :1-6
Date                            :01-01-2005 to 01-01-2005
Time                            :00:00 to 23:59
Number                          :
Duration(Minimum)               :00:00
-------------------------------------------------------------------------------
MATRIX VisionUltra(616) V03R04                                       Page: 10
```

```
System Parameters                              Sat 01-01-2005 AT 10:13
-------------------------------------------------------------------------------
Incoming SMDR Storage Filters
-------------------------------------------------------------------------------
 Incoming Call Storage Flag      :On
 Store Normal Calls              :No
 Store DID Calls                 :No
 Store Unanswered Calls          :No
 Store DID Unanswered Calls      :No
 Store Alarm Calls               :No
 Store Alarm Unanswered Calls    :No
 Store DISA Calls                :No
 Store All Calls                 :Yes
 Answer Time(Minimum)            :00:00
 Speech Time(Minimum)            :00:00
 Calls Stored in Buffer          :000/500
-------------------------------------------------------------------------------
Incoming Call Printing Filters
-------------------------------------------------------------------------------
 Online Printing                 :Off
 Station                         :01-17
 Trunk                           :1-6
 Date                            :01-01-2005 to 01-01-2005
 Time                            :00:00 to 23:59
 Normal Calls                    :No
 DID Calls                       :No
 Unanswered Calls                :No
 DID Unanswered Calls            :No
 Alarm Calls                     :No
 Alarm Unanswered Calls          :No
 DISA Calls                      :No
 All Calls                       :Yes
 Answer Time(Minimum)            :00:00
 Speech Time(Minimum)            :00:00
-------------------------------------------------------------------------------
                             Scheduled Dialing
-------------------------------------------------------------------------------
 Index     Time        TAG      Number
   1       00:00        1
   2       00:00        1
   3       00:00        1
   4       00:00        1
   5       00:00        1
   6       00:00        1
   7       00:00        1
   8       00:00        1
-------------------------------------------------------------------------------
MATRIX VisionUltra(616) V03R04                                    Page: 11
```

```
System Parameters                                    Sat 01-01-2005 AT 10:13
-----------------------------------------------------------------------------
         Global Directory Bank-1              Global Directory Bank-2
-----------------------------------------------------------------------------
 Index  TAG     Number     Alt Grp Index   TAG     Number         Alt Grp
  11     1                   00     56      1                        00
  12     1                   00     57      1                        00
  13     1                   00     58      1                        00
  14     1                   00     59      1                        00
  15     1                   00     60      1                        00
  16     1                   00     61      1                        00
  17     1                   00     62      1                        00
  18     1                   00     63      1                        00
  19     1                   00     64      1                        00
  20     1                   00     65      1                        00
  21     1                   00     66      1                        00
  22     1                   00     67      1                        00
  23     1                   00     68      1                        00
  24     1                   00     69      1                        00
  25     1                   00     70      1                        00
  26     1                   00     71      1                        00
  27     1                   00     72      1                        00
  28     1                   00     73      1                        00
  29     1                   00     74      1                        00
  30     1                   00     75      1                        00
  31     1                   00     76      1                        00
  32     1                   00     77      1                        00
  33     1                   00     78      1                        00
  34     1                   00     79      1                        00
  35     1                   00     80      1                        00
  36     1                   00     81      1                        00
  37     1                   00     82      1                        00
  38     1                   00     83      1                        00
  39     1                   00     84      1                        00
  40     1                   00     85      1                        00
  41     1                   00     86      1                        00
  42     1                   00     87      1                        00
  43     1                   00     88      1                        00
  44     1                   00     89      1                        00
  45     1                   00     90      1                        00
  46     1                   00     91      1                        00
  47     1                   00     92      1                        00
  48     1                   00     93      1                        00
  49     1                   00     94      1                        00
  50     1                   00     95      1                        00
  51     1                   00     96      1                        00
  52     1                   00     97      1                        00
  53     1                   00     98      1                        00
  54     1                   00     99      1                        00
  55     1                   00
-----------------------------------------------------------------------------
MATRIX VisionUltra(616) V03R04                              Page: 12
```

```
System Parameters                                      Sat 01-01-2005 AT 10:14
-------------------------------------------------------------------------------
                            Digital Output Port(DOP)
-------------------------------------------------------------------------------
 DOP Port              On Timer            Off Timer    Mode
    1                    060                  060        1
    2                    060                  060        1
    3                    060                  060        1
-------------------------------------------------------------------------------
                                 DOP Number
             1                          2                          3
 Index      Scheduled              Scheduled                  Scheduled
        On Time   Off Time   Index  On Time   Off Time   Index  On Time   Off Time
   01   00:00:00  00:00:00    01   00:00:00  00:00:00    01   00:00:00  00:00:00
   02   00:00:00  00:00:00    02   00:00:00  00:00:00    02   00:00:00  00:00:00
   03   00:00:00  00:00:00    03   00:00:00  00:00:00    03   00:00:00  00:00:00
   04   00:00:00  00:00:00    04   00:00:00  00:00:00    04   00:00:00  00:00:00
   05   00:00:00  00:00:00    05   00:00:00  00:00:00    05   00:00:00  00:00:00
   06   00:00:00  00:00:00    06   00:00:00  00:00:00    06   00:00:00  00:00:00
   07   00:00:00  00:00:00    07   00:00:00  00:00:00    07   00:00:00  00:00:00
   08   00:00:00  00:00:00    08   00:00:00  00:00:00    08   00:00:00  00:00:00
   09   00:00:00  00:00:00    09   00:00:00  00:00:00    09   00:00:00  00:00:00
   10   00:00:00  00:00:00    10   00:00:00  00:00:00    10   00:00:00  00:00:00
   11   00:00:00  00:00:00    11   00:00:00  00:00:00    11   00:00:00  00:00:00
   12   00:00:00  00:00:00    12   00:00:00  00:00:00    12   00:00:00  00:00:00
   13   00:00:00  00:00:00    13   00:00:00  00:00:00    13   00:00:00  00:00:00
   14   00:00:00  00:00:00    14   00:00:00  00:00:00    14   00:00:00  00:00:00
   15   00:00:00  00:00:00    15   00:00:00  00:00:00    15   00:00:00  00:00:00
   16   00:00:00  00:00:00    16   00:00:00  00:00:00    16   00:00:00  00:00:00
   17   00:00:00  00:00:00    17   00:00:00  00:00:00    17   00:00:00  00:00:00
   18   00:00:00  00:00:00    18   00:00:00  00:00:00    18   00:00:00  00:00:00
   19   00:00:00  00:00:00    19   00:00:00  00:00:00    19   00:00:00  00:00:00
   20   00:00:00  00:00:00    20   00:00:00  00:00:00    20   00:00:00  00:00:00
   21   00:00:00  00:00:00    21   00:00:00  00:00:00    21   00:00:00  00:00:00
   22   00:00:00  00:00:00    22   00:00:00  00:00:00    22   00:00:00  00:00:00
   23   00:00:00  00:00:00    23   00:00:00  00:00:00    23   00:00:00  00:00:00
   24   00:00:00  00:00:00    24   00:00:00  00:00:00    24   00:00:00  00:00:00
-------------------------------------------------------------------------------
MATRIX VisionUltra(616) V03R04                                      Page: 13
```

```
System Parameters                              Sat 01-01-2005 AT 10:14
------------------------------------------------------------------------
                          CLI Based Routing
------------------------------------------------------------------------
Index    CLI Number       Destination    External Call Forward (ECF) Number
 01                       STATION GRP-01
 02                       STATION GRP-01
 03                       STATION GRP-01
 04                       STATION GRP-01
 05                       STATION GRP-01
 06                       STATION GRP-01
 07                       STATION GRP-01
 08                       STATION GRP-01
 09                       STATION GRP-01
 10                       STATION GRP-01
 11                       STATION GRP-01
 12                       STATION GRP-01
 13                       STATION GRP-01
 14                       STATION GRP-01
 15                       STATION GRP-01
 16                       STATION GRP-01
 17                       STATION GRP-01
 18                       STATION GRP-01
 19                       STATION GRP-01
 20                       STATION GRP-01
 21                       STATION GRP-01
 22                       STATION GRP-01
 23                       STATION GRP-01
 24                       STATION GRP-01
 25                       STATION GRP-01

 CLI Based Routing - Day        : Off
 CLI Based Routing - Night      : Off
------------------------------------------------------------------------
MATRIX VisionUltra(616) V03R04                            Page: 14
```

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Continued Dialing

What's this?

Trunk exchanges support many advanced features like call waiting, call forward etc. To use these features it is required to dial codes during speech. The dialing of codes during speech do not create problem when you are dialing on the trunk directly. But with the PBX connected between the user and the central office, the central office codes clash with PBX codes. This leads to difficulty in accessing CO features while in speech. However, VisionUltra supports dialing codes on trunk when in speech to all codes from any extension. This is known as Continued dialing.

Continued Dialing allows a station to dial the desired digits even after the speech has been established on a trunk. But it is required to inform the PBX, prior to dialing some code on the trunk.

How to use it?

1		Speech with trunk.
2	Dial **Flash.**	Feature tone
3	Dial **#.**	Feature tone stopped.
4	Dial **Desired Code.**	

Example:
To use Call Waiting facility of service provider exchange from any station, perform following steps:

1	Dial **Flash-#.**	This informs the system to pass following code
2	Dial **Flash-1.**	Speech with second call
3	Dial **Flash-#.**	This informs the system to pass following code
4	Dial **Flash-1.**	Speech with first call
5	Dial **Flash-#.**	This informs the system to pass following code
6	Dial **Flash-1.**	Speech with second call

How to program?

Refer Class of Service (COS) for details on how to allow Continued Dialing to a user.

Important Points:
- Access to Flashing on Trunk is programmable. Please refer Class of Service (COS) for details.
- The system allows dialing the code within 10 seconds after dialing #. If the code to be dialed on trunk line is disabled after 10 seconds of dialing the system considers it as an invalid code and does not pass it on the trunk line. This time of 10 seconds is fixed and not programmable.

Relevant Topics:

=X=X=

Country Code

What's this?

The VisionUltra is a versatile system that can operate to suit the requirement of customers worldwide. It supports three country codes and three sets of default values to suit the country code.

How to program?

By default, the country code is 1 and Indian defaults are loaded in the system. The user who wants to operate the system in other market, needs to change the country code accordingly. Changing the country code changes certain parameters.

Listed below are the parameters and the values that change based on country code.

Date Format

Country	Date Format
India	DD-MM-YY
Italy	DD-MM-YY
USA/Canada	MM-DD-YY
Spain	DD-MM-YY

Call Progress Tones
Please refer 'Call Progress Tones' for more details.

Distinctive Rings
Please refer 'Distinctive Rings' for more details.

Feature Access Codes

Feature Name	India	Italy	USA/Canada	Spain
ACB on Busy Station	2	5	5	5
ACB on Busy Trunk	2	5	5	5
Cancel ACB	102	105	105	105
Interrupt Request	3	6	6	6
Barge-In	4	7	7	7
Raid	5	Disable	Disable	Disable
Call Splitting (Toggle)	Flash+1	Flash+2	Flash+2	Flash+2
Grab seconds trunk	Flash+8 +Trunk	Flash+8 +Trunk	Flash+6 +Trunk	Flash+8 +Trunk
Release Current Call (3-way)	Flash+2	Flash+1	Flash+1	Flash+1
Release Held Call (3-way)	Flash+3	NA	NA	NA
Conference	Flash+0	Flash+3	Flash+3	Flash+3

Feature Name	India	Italy	USA/Canada	Spain
Operator	9	9	0	9
Abbreviated Dialing	8	8	6	8
Trunk Access Code	0, 5, 61-66	0, 5, 61-66	0, 5, 81-86	0, 5, 61-66

Use the following command to select the country:
1110-Country Code-#*
Where,

Country Code	Meaning
1	India
2	Italy
3	USA/Canada
4	Spain

By default, the country code is 1.

After selecting the country, if a software default command is issued the default values for the programmable parameters of selected country are loaded. Please refer 'Default Settings' for more details. The software default doesn't default the country code.

Relevant Topics:

=X=X=

Default Settings

What's this?

Every system comes with pre-defined set of values for programmable variables like station's flexible numbers, timers etc. These pre-defined values are called default settings. The default value of each programmable parameter is mentioned in the respective section. If the default setting suits your requirement then you may not even program the system and the system will work according to default settings.

When to use it?

Many times it happens that due to some programming error, the system goes haywire and you are unable to analyse the problem. During such situation, it is advisable to software default the system. However, software default of the system can be done from the programming mode only and hence

programming password should be known. If you forget the password, software default cannot be performed and in that case hardware default of the system is the solution. Please refer 'User Password' for more details.

How to program?

The VisionUltra offers default settings to suit the worldwide customers. By default, VisionUltra is programmed for Type1 default settings. However, the default settings depends on the country where the system is operated. Please refer 'Country Code' for more details. VisionUltra offers the flexibility to software default the system from the programming mode.

The following table lists the default values of parameters based on country:

Parameters	India	Italy	USA/Canada	Spain
Alarm Ring Timer	45	60	60	60
ACB Ring Timer	30	10	10	30
Auto Redial RBT Wait Timer	60	60	60	60
Auto Redial Ring Timer	45	10	10	45
Auto Redial Retry Interval	30	100	100	100
Auto Redial Retry Count	5	10	10	10
DOP Mode Type	Total Manual	Duration Based Auto OFF (Mode=2)	Duration Based Auto OFF (Mode=2)	Duration Based Auto OFF (Mode=2)
ON Duration Timer	60	1	1	1
OFF Duration Timer	60	2	2	2
Barge-In Timer	10	10	10	10
PEC Count	0	0	0	0
CDC Table	Table 1	Table 1	Table 1	Table 1
CDC Timer	160	999	999	999
Call Forward No Reply Timer	30	30	30	30
Call Park Timer	45	45	45	45
Dial Tone Timer	7	10	10	10
Ring Back Tone	45	45	45	45
Busy Tone	7	10	10	10
Error Tone	30	30	30	30
Feature Confirmation Tone	3	3	3	3
Programming Inter Digit Timer	15	15	15	15
Programming Error Tone	3	3	3	3
Programming Confirmation Tone	3	3	3	3
CLIP	DTMF	FSK ITU-T	FSK Bell212	FSK ITU-T
CLI Based Routing	Disabled	Disabled	Disabled	Disabled
CLI Based Routing Ring Timer	15	15	15	15
Language for Configuration Report	English	Italian	English	Spanish

Parameters	India	Italy	USA/Canada	Spain
DIP	Disabled	Disabled	Disabled	Disabled
DIP Active	Low	Low	Low	Low
DID	Off (Day & Night)	Off (Day & Night)	Off (Day & Night)	Off (Day & Night)
DID/DISA/Fax Voice Guidance	On (Day & Night)	On (Day & Night)	On (Day & Night)	On (Day & Night)
DID Inactivity Timer	60	50	60	50
DID/DISA/Fax Music and Answer Wait Timer	5	1	1	1
DID/DISA Dial Tone Timer	10	5	7	5
DID/DISA Ring Timer	30	25	25	25
DID/DISA Busy Tone Timer	5	5	5	5
DID/DISA Error Tone Timer	5	5	5	5
DID/DISA/Fax Abandoned Call Filter	Yes	Yes	Yes	Yes
DID/DISA/Fax Abandoned Call Detection Timer	3 sec.	2 sec.	3 sec.	3 sec.
DID/DISA/Fax route call before answer for daytime	Disabled	Disabled	Disabled	Disabled
DID/DISA/Fax route call before answer for nighttime	Disabled	Disabled	Disabled	Disabled
DISA Inactivity Timer	60	90	90	60
DISA Warn Timer	15	15	15	15
Door Phone Station	Normal Station	Door Phone	Door Phone	Door Phone
Door Phone Ring Timer	30	20	20	20
Door Phone Type	Two Wire	Four Wire	Four Wire	Four Wire
Hotline Timer	3	3	3	3
Internet Ready Port	Inactive	Inactive	Inactive	Inactive
Interrupt Request Timer	45	45	45	45
Redial Wait Timer	2	0	0	0
LCR CPS	Off	Off	Off	Off
LCR-Mixed Timezone	00:00 to 23:59	00:00 to 23:59	00:00 to 23:59	00:00 to 23:59
Operator Station	1	1	1	1
Scheduled Dialing Number	Blank	Blank	Blank	Blank
Scheduled Dialing TAG	1	1	1	1
Scheduled Dialing Time	0:00	0:00	0:00	0:00
Security Dialer Trials	3	3	3	3
Security Dialer Duration	1	1	1	1
Station Groups	01-16 (All Station groups)	01-16 (All Station groups)	01-16 (All Station groups)	01-16 (All Station groups)
Station Group Ring Timer	15	0	0	0
Station Group Rotation	Off	Off	Off	Off
SMDR Storage Filters	Store All Calls	Store All Calls	Store All Calls	Store All Calls
SMDR-OG Call Splitting	On	On	On	On
Internal Inter Digit Wait Timer	7	7	7	7
Station Flash Timer	600ms	150ms	600ms	100ms
SE Password	1234	1234	1234	1234
SA Password	1111	1111	1111	1111
Time Table	Automatic Mode	Manual Mode	Manual Mode	Manual Mode

Parameters	India	Italy	USA/Canada	Spain
TAG Rotation	On	Off	Off	Off
TLG	01 (all trunks for both day/night)	01 (all trunks for both day/night)	01 (all trunks for both day/night)	01 (all trunks for both day/night)
Trunk Parameters	All trunks are enabled	All trunks are enabled	All trunks are enabled	All trunks are enabled
Trunk Dial Type	Normal Dial Type	Normal Dial Type	Normal Dial Type	Normal Dial Type
Trunk Pulse Dial Ratio	33:67 (type1)	40:60 (type2)	40:60 (type2)	50:50 (type3)
Trunk First Digit Wait Timer	25	25	25	25
Trunk Inter Digit Wait Timer	6	6	6	6
Trunk Pause Timer	3	1	1	3
Trunk Flash Timer	600ms	150ms	600ms	100ms
User Password	1111	1111	1111	1111
User VM Duration	8x23 secs.	7x26 secs.	7x26 secs.	7x26 secs.
System VM Duration	8x7 secs.	7x8 secs.	7x8 secs.	7x8 secs.
Number of System Messages	8	7	7	7
Number of User Messages	8	7	7	7
VM Recording Source	Telephone	Telephone	Telephone	Telephone
COS Group	3	2	2	2
Trunk Name	Blank	L.U.1	L.U.1	Linea.1
Dynamic Toll Control Denied List for Day and Night	1	2	2	2
Trunk Ring Cadence OFF Timer	5000	5000	5000	3500
Trunk Answer Wait Timer	5	1	1	1

Use the following command to default the system:
1103-Reverse SE Password-#*
Please note that on issuing this command the system defaults the programmable parameters to values that suit the current country code of the system. That is if the country code selected is USA/Canada, then on defaulting the system, defaults to suit country code USA/Canada are loaded.

The various timers used in the system are configurable to provide total flexibility. As such there is no need to change the timers. Default values are so selected that the system works normally. The timers of relevance are mentioned in the corresponding topics.
If the programming of the timers affects the functioning of the system VisionUltra provides a facility to default the timers.

Use the following command to default the timers:
1107-#*

System Restart

- VisionUltra provides facility to restart the system without making it switch OFF and ON. SA and SE can use following command for this.

Use the following command to restart the system:
1112-#*

Important Points:
- It is always recommended to know the selected country code before issuing the default command.
- The default command doesn't default the country code.

Relevant Topics:
1. Programming the System   147
2. Station Parameters   175
3. Country Code   86

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Department Call

What's this?

Many times it is required to call any one of the persons in a department (group). It is not important to talk to a particular person. The caller just wants any member of the group. VisionUltra offers flexibility to group the stations belonging to a particular department. This group is called department group. The call made to this group using a code is called Department Call. The access code used to make such call is called Department Number. Hence now the caller has to dial only the Department Number. However, the caller can even access individual station of the group by dialing the station number.

Department Call is allowed from any station. Department call can also be made through DID. Hence if the caller is making a call to you for the first time and wants some information about your company then he may dial the Information Department instead of dialing any particular station or waiting for the operator.

How to use it?

1	Lift the handset.	Dial tone
2	Dial Department Number *3981 or 3982 or 3983 or 3984.*	RBT (the call lands on the programmed station within the department group).

Example:
To access any of the free stations in a group 1, dial *3981*.

How it works?

• Maximum 4 department groups can be formed. Groups are given numbers from 1 to 4.
• These groups can be accessed by dialing department numbers *3981* to *3984*.

How to program?

Step 1: Decide the number of department groups to be used
Step 2: Program station groups accordingly.
Step 3: Program station group as department group using command *4801.*

Step 1
Decide the number of department groups to be used.

Step 2
Program station groups for the purpose. Please refer 'Station Group' for details.

Step 3
Use following command to program station group as department group:
4801-Department Group-Station Group-#*

Where,
Department group is from 1 to 4
Station Group is from 01 to 16.

Use the following command to program the same station group for all department group:
4801-*-Station Group-#*

Use the following command to clear station group programmed as department group:
4801-Department Group-00-#*
Where,
Department group is from 1 to 4

Example:
Program station group 01 as department group 1 and department group 2 whereas station group 02 as department group 3 and department group 4.
4801-1-01-#*
4801-2-01-#*
4801-3-02-#*
4801-4-02-#*

Important Points:
• Department Call is allowed through DID also.
• To know programming details, please refer "Configuration Reports".
• Call transfer-Screen is only possible on a department group.
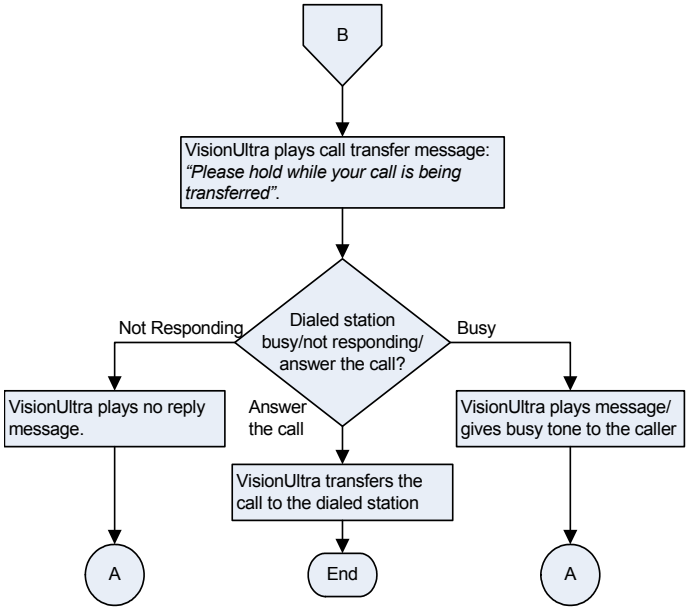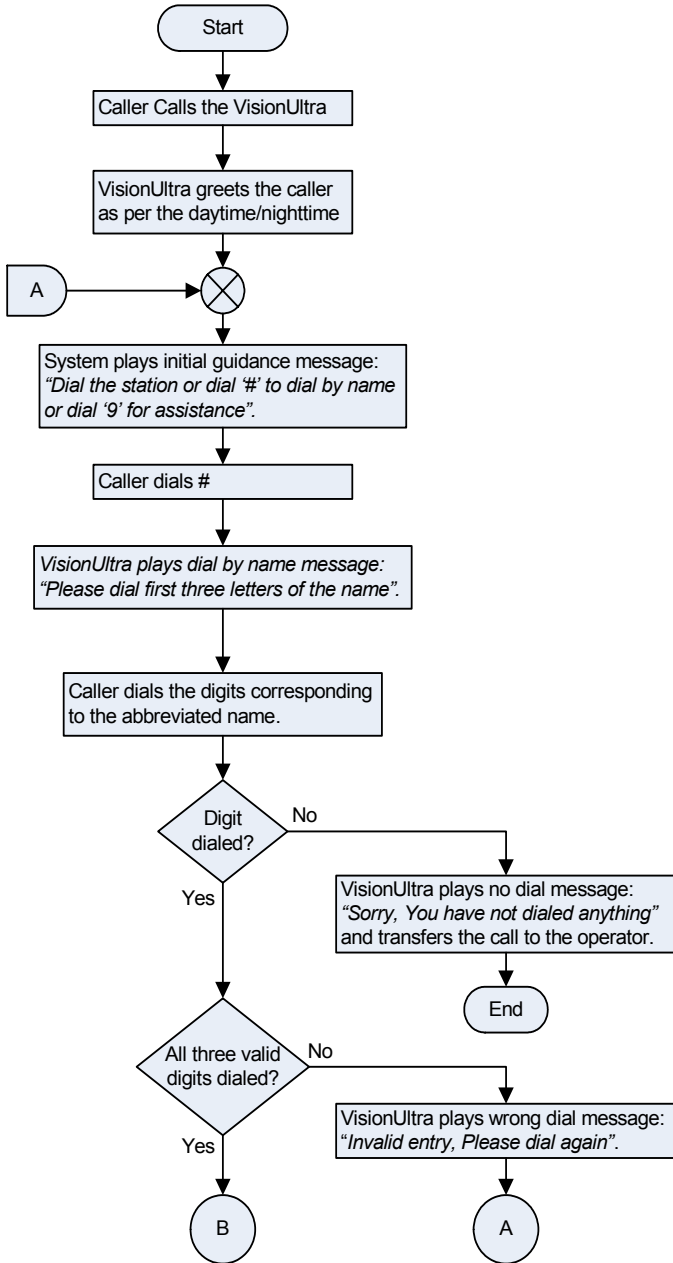
Relevant Topics:

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Dial by Name

What's this?

A caller can reach the desired person in an organization by dialing the name of the person. This helps the caller to access the desired person by his name in case his station number is forgotten. This is an advanced feature of an auto-attendant (DID).

How it works?

Start

Caller Calls the VisionUltra

VisionUltra greets the caller as per the daytime/nighttime

A

System plays initial guidance message: *"Dial the station or dial '#' to dial by name or dial '9' for assistance".*

Caller dials #

VisionUltra plays dial by name message: "Please dial first three letters of the name".

Caller dials the digits corresponding to the abbreviated name.

Digit dialed? — No → VisionUltra plays no dial message: *"Sorry, You have not dialed anything"* and transfers the call to the operator. → End

Yes

All three valid digits dialed? — No → VisionUltra plays wrong dial message: *"Invalid entry, Please dial again".* → A

Yes → B

B

VisionUltra plays call transfer message: *"Please hold while your call is being transferred".*

Dialed station busy/not responding/ answer the call?

Not Responding → VisionUltra plays no reply message. → A

Answer the call → VisionUltra transfers the call to the dialed station → End

Busy → VisionUltra plays message/ gives busy tone to the caller → A

How to use it?

- Call the VisionUltra.
- Dial '#'.
- Dial first three letters of the abbreviated name of the person you wish to call.
- VisionUltra transfers the call to the dialed station.

How to program?

Step 1: Program the Station abbreviated name using command *4103.*
Step 2: Activate Voice Guidance on the trunks.

Step 1

Use following command to program the station abbreviated name:
4103-Station-Abbreviated Name-#*
Where,
Station is the software port number of the station from 01 to 17
Abbreviated Name is the numeric string of three characters.
By default, the abbreviated name is blank.

1	abc 2	def 3
ghi 4	jkl 5	mno 6
pqrs 7	tuv 8	wxyz 9
. *	oper 0	#

Use following command to clear a station abbreviated name:
4103-Station-#*
Where,
Station is the software port number of the station from 01 to 17.

Use following command to clear abbreviated name of all stations:
4103-**-#*

Step 2
Please refer 'Voice Message Applications' for more details.

Examples:
- Program abbreviated name 'Sumer' for station 21 (s/w port 01)
  4103-01-786-#*
  (786 should be dialed because '7' corresponds to 'S', 8 corresponds to 'U' and '6' corresponds to 'M').

- Program abbreviated name 'Prakash' for Station 22 (s/w port 02)
  4103-02-772-#*

Important Points:
- It is mandatory to program the abbreviated name for a station if this feature is to be used.
- It is advisable to abbreviate the name of the station user to his first three alphabets. For example, Abbreviate Ganesh to Gan, Hiren to Hir, Sagar to Sag, etc.
- However, a station user's name can be abbreviated to any desirable acronym with maximum of three letters. (All the alphabets are allowed).
- It is advisable that the SE programs the station names in such a manner that no acronym corresponds to two different names.
- If in an organization, two persons have the same name then a suitable acronym should be given to each of them to avoid any confusion. It is also possible to include such typical case in the Dial by Name message itself, which is programmable. For Example, the message could be recorded as: "Please dial first three letters of the name of the person you wish to talk. For Sumer Mehra dial 786 and for Sumer Mehta dial 728".
- Please note that VisionUltra does not distinguish between two names having same dialing digits. For example, VisionUltra cannot distinguish between Kaushik and Jatin because caller would dial 528 in both the cases, such combination is not allowed. VisionUltra will not allow programming of same name or names with common codes.
- The caller should have telephone instrument with alphabets printed on the keys.
- VisionUltra checks the dialed abbreviated name for its validity. If the dialed name is not valid, it plays wrong dial message and asks the caller to dial again.
- This feature can only be used to DID.

Relevant Topics:
1. Direct Inward Dialing (DID)   95
2. Station Parameters   175

=X=X

Digital Input Port (DIP)

What's this?

VisionUltra provides a highly reliable solid state digital input ports for various control applications. An Emergency switch, output of a Smoke detector, Glass break detector, Fire Alarm, etc. can be connected as an activator.

How it works?

- Whenever the DIP gets activated, the VisionUltra works as per programming. Suppose a system is programmed to make an external call on receiving instigation from the DIP, then in such case when the DIP receives a signal from the sensor the system makes an external call to the programmed destination as per the programming.
- DIP can be programmed as Normally Open/Normally Close depending upon the application.

How to program?

Step 1: Enable/disable the DIP using command *1901.*
Step 2: Program the DIP as Active High/Active Low using command *1902.*

Step 1
Use following command to enable/disable DIP:
1901-Code-#*
Where,

Code	Meaning
0	DIP Disabled
1	DIP Enabled

By default, the DIP is disabled.

Step 2
Use following command to program the DIP as Normally Open/Normally Close:
1902-Code-#*
Where,

Code	Meaning
0	DIP Programmed as Normally Open
1	DIP Programmed as Normally Close

By default, the DIP is programmed as Normally Open.

Technical Specifications of the DIP

Type	Lop Open/Close Sensing
Loop Current Supplied	5mA (max.)

Relevant Topics:

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Digital Output Port (DOP)

What's this?

- VisionUltra provides three non-energized DOP, which can be, switched ON/OFF manually or automatically.
- The DOPs can be operated locally as well as remotely.
- The external device that can be operated by these relay ports should conform to the specifications of this port.
- In practical use, a load of 80-100W like a fluorescent tube-light, incandescent lamp, etc. can be operated through this port with the use of DC contactor (up to 60VDC 1Amp) only.
- VisionUltra remembers the state of relay during power failure. Suppose, a water pump is being controlled using this feature and if while it is running, power failure occurs then the operator need not turn the water pump again on power restoration. VisionUltra will retain the last state and will switch ON the water pump on power restoration.

How it works?

The digital Output port can be deactivated, manually operated or automatically operated.

- The DOP has a Single Pole Dual Throw (SPDT) type of relay. As shown in the figure in normal condition the contact terminal (pole) of the relay rests on 'NO' terminal. When the user issues a command to turn ON the relay, the coil of this relay gets energised, which throws the contact terminal (pole) of the relay to 'NC' terminal. This closes the path as shown in figure 2 and energises the coil of the contactor. When the user issues a command to turn OFF the relay, the coil gets de-energised which throws the contact terminal to `NO' position. This opens the circuit path, which in turn, turns OFF the device connected to it.

How to use it?

| 1	Lift the handset.	Dial tone
2	Dial **60-DOP** (DOP OFF).	Confirmation tone
3	Dial **69-DOP** (DOP ON).	Confirmation tone

Where,
DOP is from 1 to 3
The above commands are applicable only when DOP is programmed for any of the mode. Totally Manual, Duration Based Auto OFF, Duration Based Auto ON, Time Based Auto ON, Time Based Auto OFF.

How to connect external devices to relay port?

A 3-Phase load can be connected to the DOP as shown below:
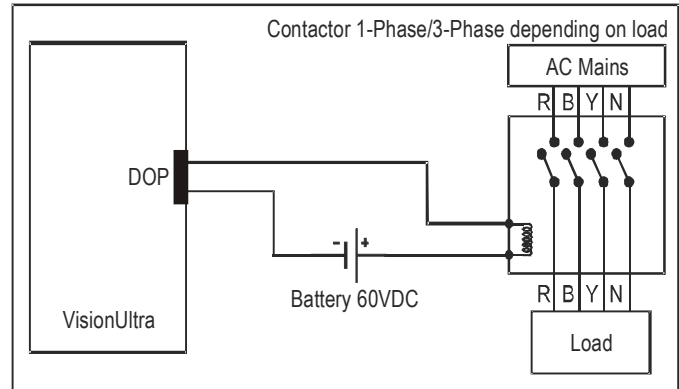
A door lock should be connected to the DOP as shown below:
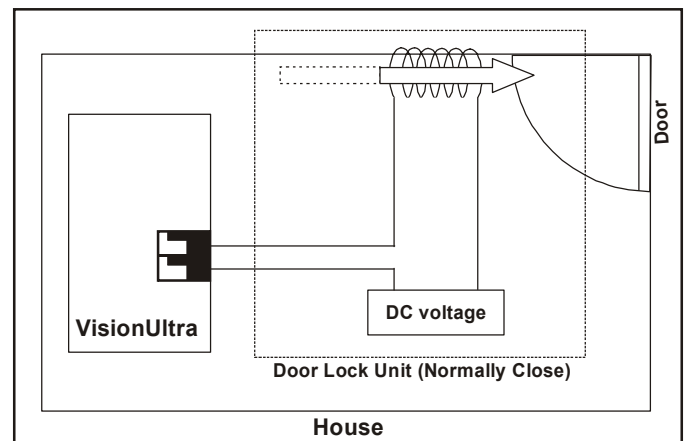
Technical specifications of DOP:

- The external devices that can be operated by this DOP should conform to the specifications of it.

The specifications of these DOP are given below:

Contact arrangement	1 Normally Open, 1-Form-A
Contact Rating (Resistive Load)	VDC Max. 60V, IDC MAx. 1Amp.
Operate Time	5ms Maximum

Relevant Topics:

1. Real Time Clock   155
2. Class of Service (COS)   62
3. Automated Control Applications   36
4. Direct Inward System Access (DISA)   100
5. Door Phone   109

=X=X=

Direct Inward Dialing (DID)

What's this?

- The System can perform the task of an operator by greeting the external caller and transferring the call to the desired station. This facility is called Direct Inward Dialing (DID).
- By using this facility, frequent callers can reach desired stations by dialing the station numbers or dialing the station name from their phone. DID offers following advantages:
  - Reduces traffic burden on the operator.
  - Calls are transferred faster, which saves the caller's time.
  - Useful even during non-working hours and holidays.
- Gives professional image to the company.
- Calls can be routed to destination even during the period of Answer Wait Timer, if that option is enabled.

How it works?

Flow charts on the next pages depict the logic the system follows for DID call. (Logic followed when only DID is enabled on the trunk).
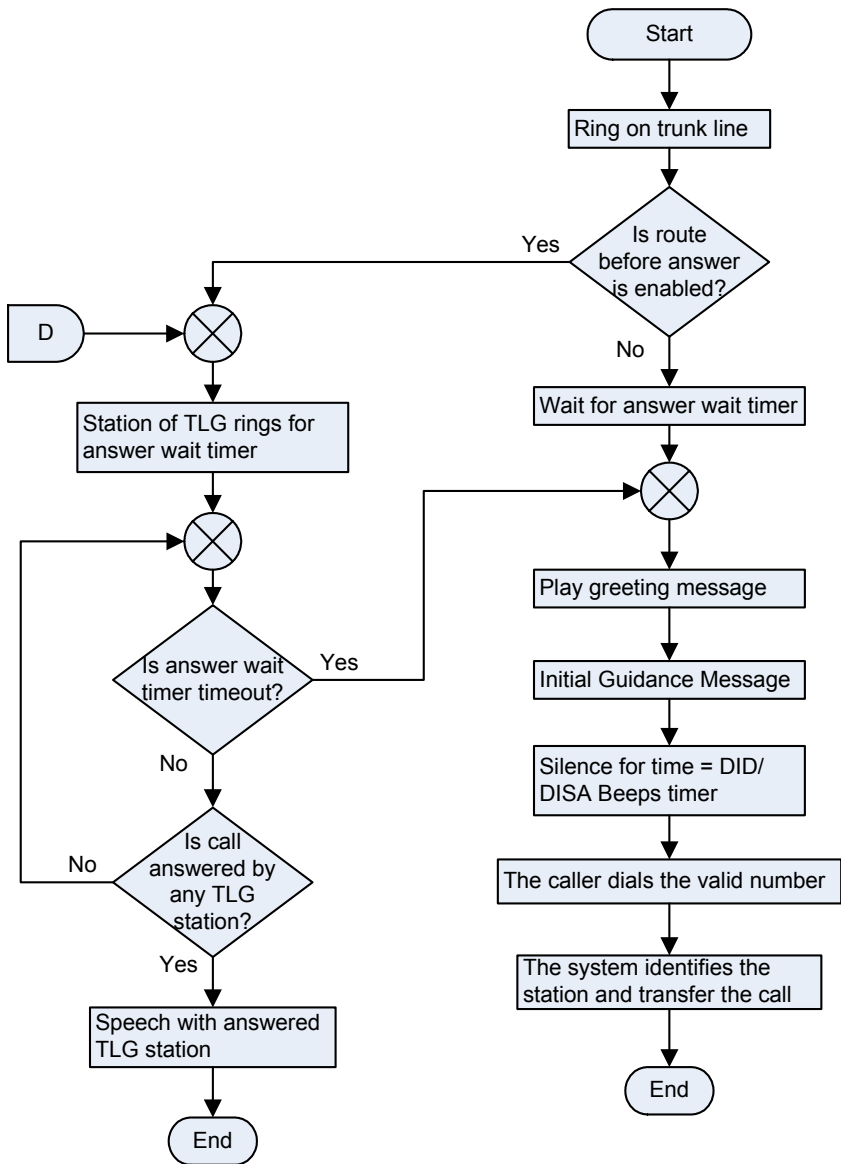
- Logic followed when DID/DISA/Fax Homing is enabled on a trunk.

```
                         ┌──────────┐
                         │  Start   │
                         └────┬─────┘
                              │
                    ┌─────────────────┐
                    │  Ring on Trunk  │
                    └────────┬────────┘
                             │
                        ╱────┴────╲
           Yes        ╱  Is route  ╲
     ┌───────────────  before answer is
     │               ╲  enabled?  ╱
     │                 ╲────┬────╱
    ╱─╲                     │ No
   ( ZZ )      ┌────────────────────────┐
    ╲─╱        │ Wait for answer wait timer│
               └───────────┬────────────┘
                           │
               ┌────────────────────────────┐
               │ Play greetings and dial message│
               └───────────┬────────────────┘
                           │
     ┌───┐                ⊗
     │ C ├───────────────►│
     └───┘                │
               ┌────────────────────────┐
               │ Initial guidance Message│
               └───────────┬────────────┘
                           │
               ┌────────────────────────┐
               │ Silence for time=DID/   │
               │ DISA Beeps Timer        │
               └───────────┬────────────┘
                           │
   DTMF Code          ╱────┴────╲      Timeout
 ┌────────────────── DTMF Code/  ───────────────┐
 │                  ╲ Timeout? ╱                 │
 │                   ╲────┬───╱                  │
 │                        │                      │
╱─┴──╲       Yes          ⊗                  ╱───┴───╲     No
 Is the DTMF ──────────► │                  ╱  Fax    ╲ ──────────┐
 code valid?             │                  ╲ enabled? ╱          │
 ╲────┬────╱            ╱─╲                  ╲───┬────╱            │
      │ No            ( A )                      │ Yes            │
┌────────────────┐     ╲─╱          ┌────────────────────┐  ┌───────────────────┐
│Play wrong dial │                  │ RBT for time=Fax   │  │Trunk Landing Group│
│message or give │                  │ Homing Beeps Timer │  └─────────┬─────────┘
│error tone      │                  └──────────┬─────────┘            │
└───────┬────────┘                             │                 ┌────────┐
       ╱─╲                      No        ╱────┴────╲            │  End   │
      ( C )          ┌───────────────────  Fax Tone  ╲           └────────┘
       ╲─╱           │                    ╲ Present? ╱
                     │                     ╲───┬────╱
            ┌───────────────────┐              │ Yes
            │Trunk Landing Group│             ╱─╲
            └─────────┬─────────┘            ( B )
                 ┌────────┐                   ╲─╱
                 │  End   │
                 └────────┘
```
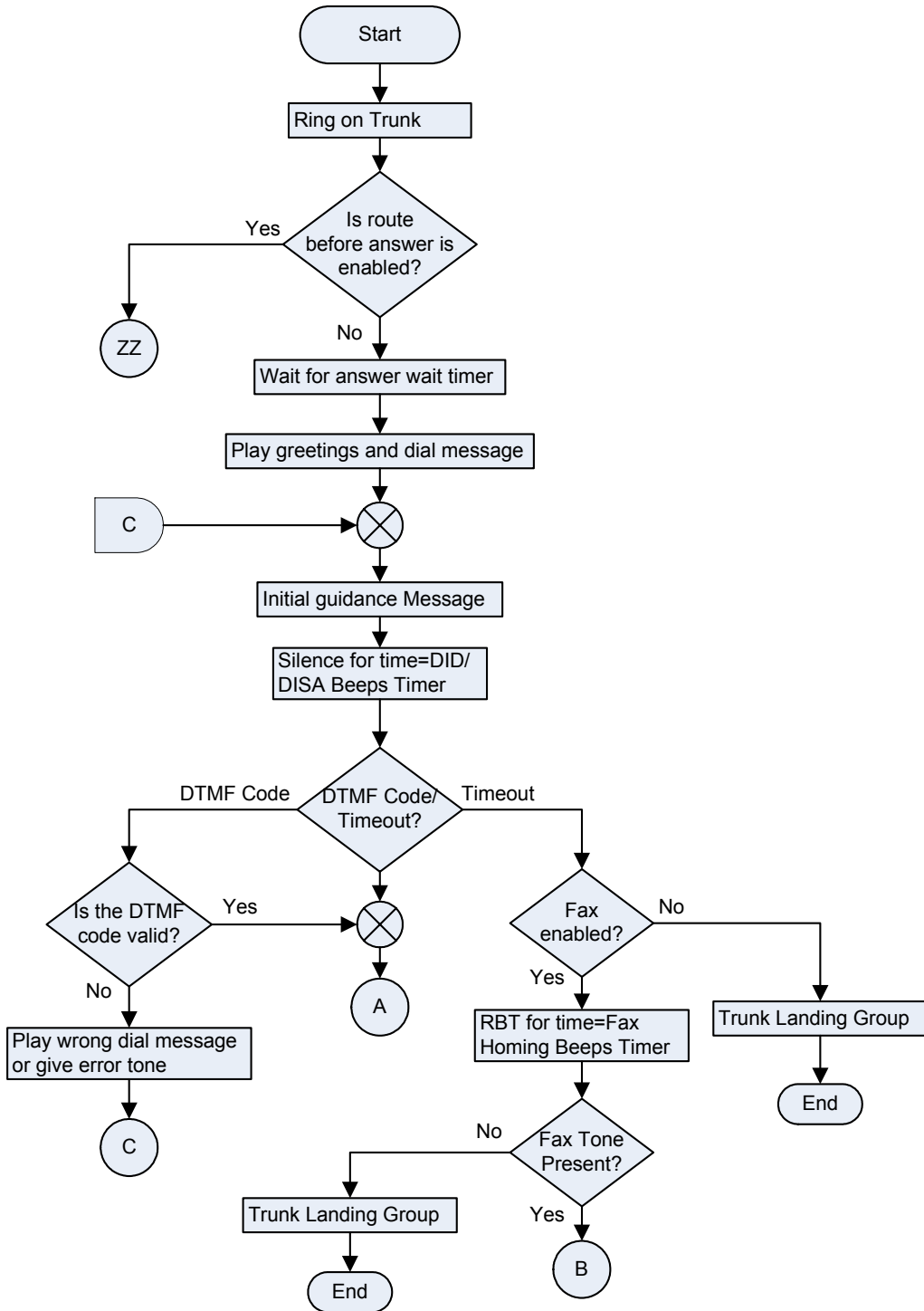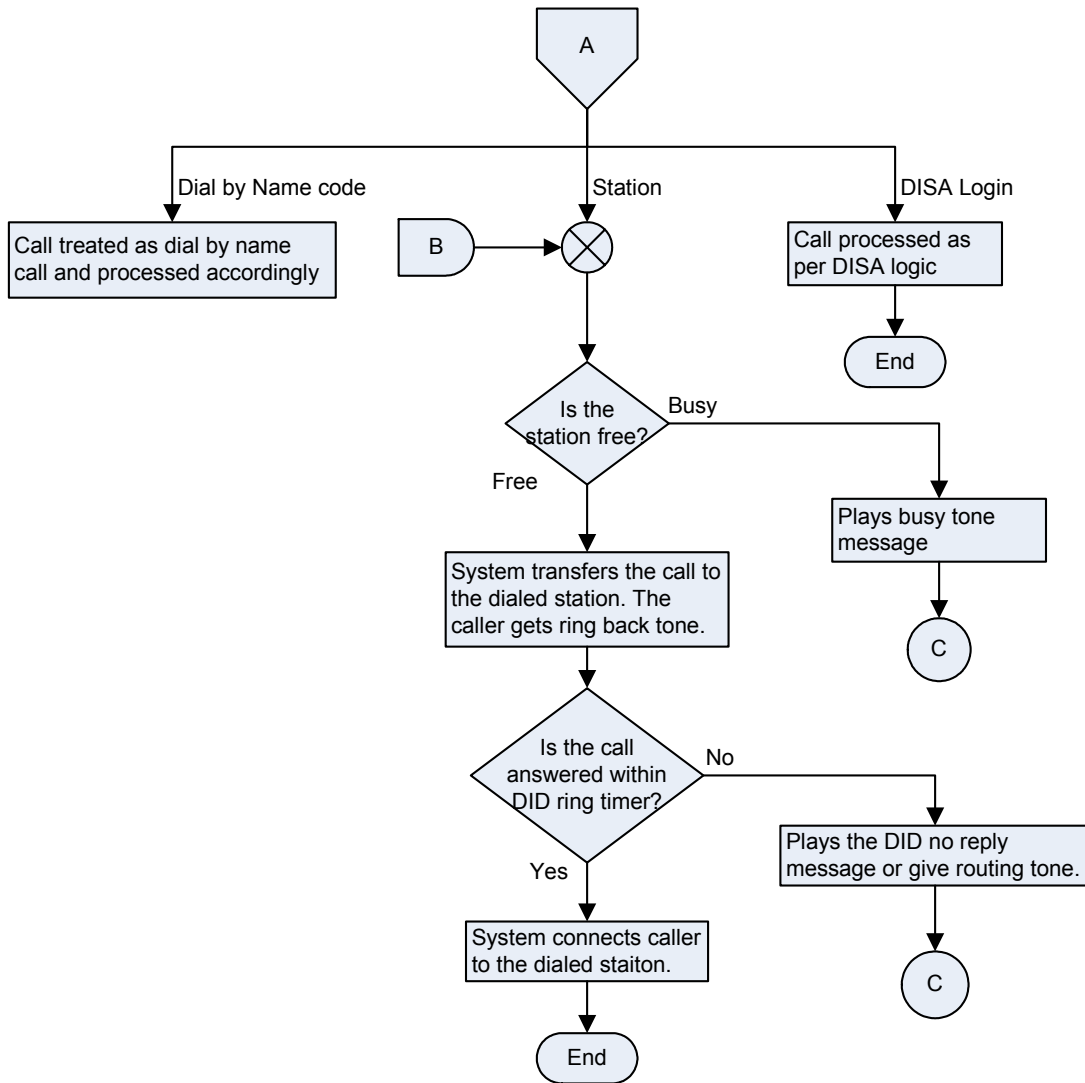
How to program?

Step 1: Enable/Disable DID on trunk/s during daytime using command *3501.*

Step 2: Enable/Disable DID on trunk/s during nighttime using command *3502.*

Step 3: Enable/Disable Voice Guidance for DID on trunk/s during daytime using command *3108.*

Step 4: Enable/Disable Voice Guidance for DID on trunk/s during nighttime using command *3109.*

Step 5: Program the DID timers using command *3022-3028.*

Step 6: Enable/Disable route calls before DID Answer for day time using command *3503.*

Step 7: Enable/Disable route calls before DID Answer for night time using command *3504.*

Step 8: Record DID voice message. (if required).

Step 1

Use following command to activate DID on a trunk during day time:

3501-Trunk-Code-#*

Where,

Trunk is the software port from 1 to 6.

Code	Meaning
0	DID deactivated
1	DID activated

Use following command to activate DID on all trunks during day time:

3501-*-Code-#*

Step 2

Use following command to activate DID on a trunk during night time:

3502-Trunk-Code-#*

Where,

Trunk is the software port from 1 to 6.

Code	Meaning
0	DID deactivated
1	DID activated

Use following command to activate DID on all trunks during night time:
3502-*-Code-#*
By default, DID is OFF on all trunks during day time and night time.

Step 3
Use following command to activate Voice Guidance for DID/Fax on a trunk during day time:
3108-Trunk-Code-#*
Where,
Trunk is the software port from 1 to 6.

Code	Meaning
0	Voice Guidance for DID deactivated
1	Voice Guidance for DID activated

Use following command to activate Voice Guidance for DID/Fax on all trunks during day time:
3108-*-Code-#*

Step 4
Use following command to activate Voice Guidance for DID/Fax on a trunk during night time:
3109-Trunk-Code-#*
Where,
Trunk is the software port from 1 to 6.

Code	Meaning
0	Voice Guidance for DID deactivated
1	Voice Guidance for DID activated

Use following command to activate Voice Guidance for DID/Fax on all trunks during night time:
3109-*-Code-#*
By default, Voice Guidance for DID is ON on all trunks during day time and night time.

Step 5
Use following commands to set the various timers:

Timer Name	Command	Default (In sec.)	Valid Range
DID Inactivity Timer	**3022-Seconds-#***	060	000 to 255
DISA/DID/Fax Music Timer	**3024-Seconds-#***	005	000 to 255
DISA/DID Dial tone timer and Beeps Timer	**3025-Seconds-#***	010	000 to 255
DID Ring Timer	**3026-Seconds-#***	030	000 to 255
DISA/DID Busy Tone Timer	**3027-Seconds-#***	015	000 to 255
DISA/DID Error Tone Timer	**3028-Seconds-#***	005	000 to 255

- **DID Inactivity Timer:** It signifies the time after which the system disconnects the trunk call if not replied by any station. To elaborate, when a DID call arrives to a system, the system attends the call after DID answer wait timer. If no digit is dialed then the call goes to the landing destination. The system waits for the call to be answered by a station for DID Inactivity timer. On expiry of the DID inactivity timer, the system disconnects the call.
- **DISA/DID/Fax Music Timer:** It signifies the time for which the system plays music after answering the call.
- **DISA/DID Dial Tone Timer:** It signifies the time for which the system gives dial tone to the caller to dial a station number.
- **DISA/DID Beeps Timer:** It signifies the time for which the system gives beeps to the caller to grab the trunk line or dial the station name. This timer is same as DISA/DID Dial Tone Timer.
- **DID Ring Timer:** It signifies the time for which the station rings when reached through DID.
- **DISA/DID Busy Tone Timer:** It signifies the time for which the system gives busy tone to the caller if the station dialed by the caller is busy.
- **DISA/DID Error Tone Timer:** It signifies the time for which the system gives error tone to the caller if the caller dials invalid codes.

Example:
Activate DID for a trunk (Software port number 2) during Day time and Night time.
3501-2-1-#*
3502-2-1-#*

Step 6
Routing Calls before Answer: System can also route the DID/DISA/Fax Homing calls to programmed destination before they are answered and DID takes over. The Answer Wait Timer is applied to DID/DISA/Fax Homing.

Use the following command to enable/disable routing calls before DID answer for day time:
3503-Trunk-Flag-#*
Where,
Trunk is the software port number is from 1 to 6.

Flag	Meaning
0	Enabled
1	Disabled

By default, Routing Calls before DID Answer for Day Time is disable.

Step 7
Use the following command to enable/disable routing calls before DID answer for night time:
3504-Trunk-Flag-#*
Where,
Trunk is the software port number is from 1 to 6.

Flag	Meaning	Description
0	Do not route calls during answer wait timer	Call are handled DID/DISA/Fax Homing
1	Route calls during answer wait timer	Call goes to DID/DISA/Fax Homing only, if not answered by a destination.

By default, Routing Calls before DID Answer for Night Time is disable.

Step 8

Please refer 'Voice Message Applications' for more details.

Important Point:
- When there is an incoming call on a trunk programmed for DID Voice Guidance, if the VM is not free the call is directly routed to the TLG.

Relevant Topics:

=X=X=

Direct Inward System Access (DISA)

What's this?

Direct Inward System Access (DISA) permits a user to use the system's resources from a remote location.

The user can:
• Call any of the stations (Generally known as DID)
• Make external calls.
• Activate/deactivate features of his station.
• Use PAS and such other facilities of the system.
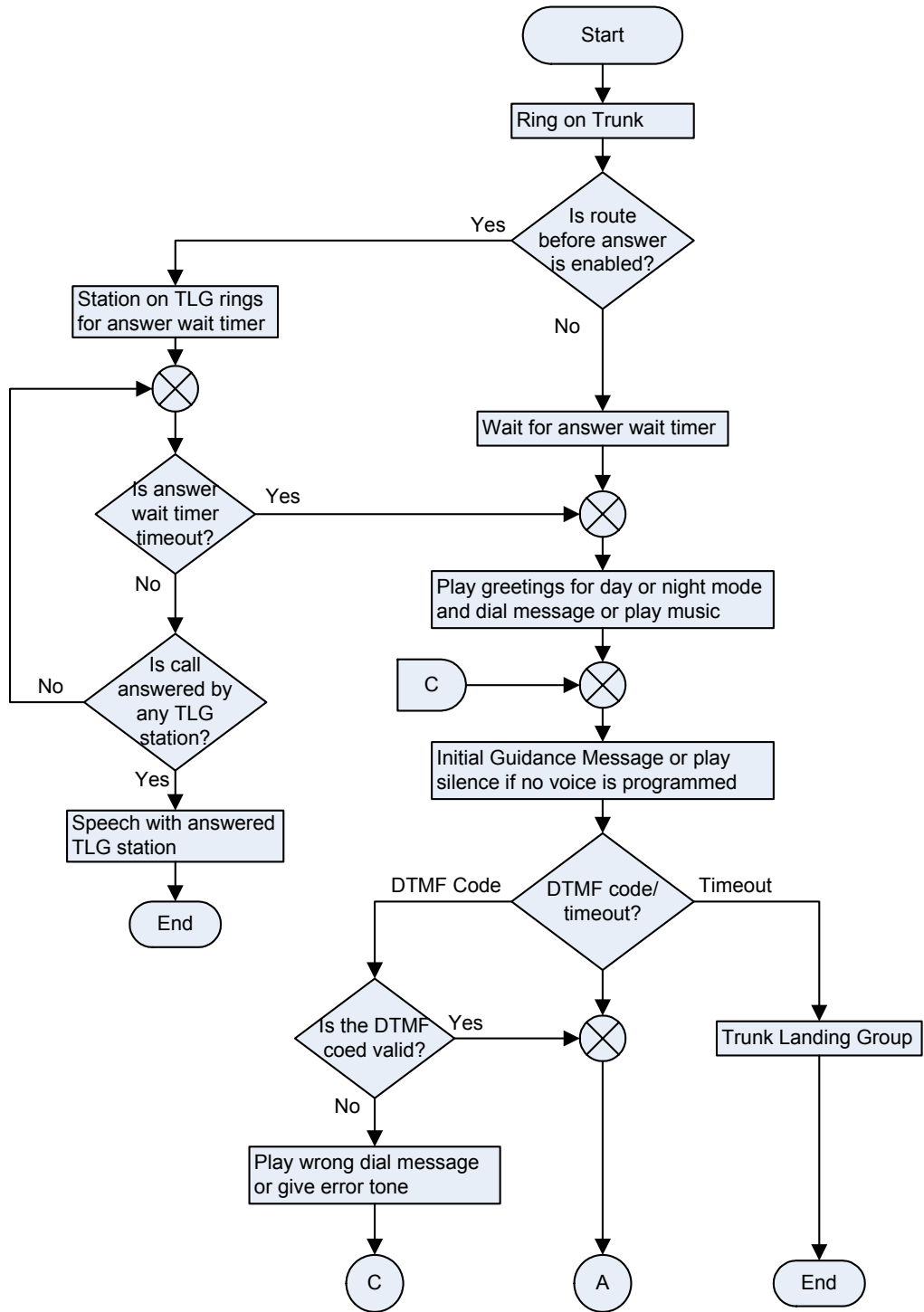• Program or Administer the system.
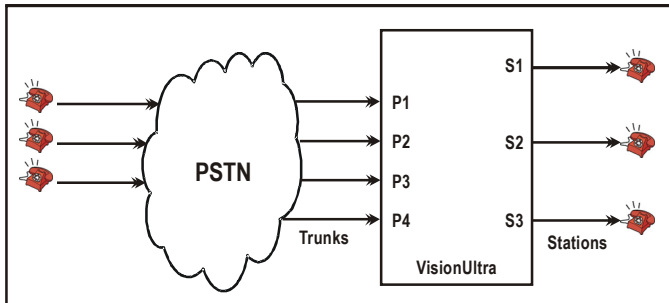
DISA is a programmable facility for each trunk. In order to use DISA, one or more trunks should be programmed for DISA. Further, the station user has to have class of service (COS) rights to use DISA.
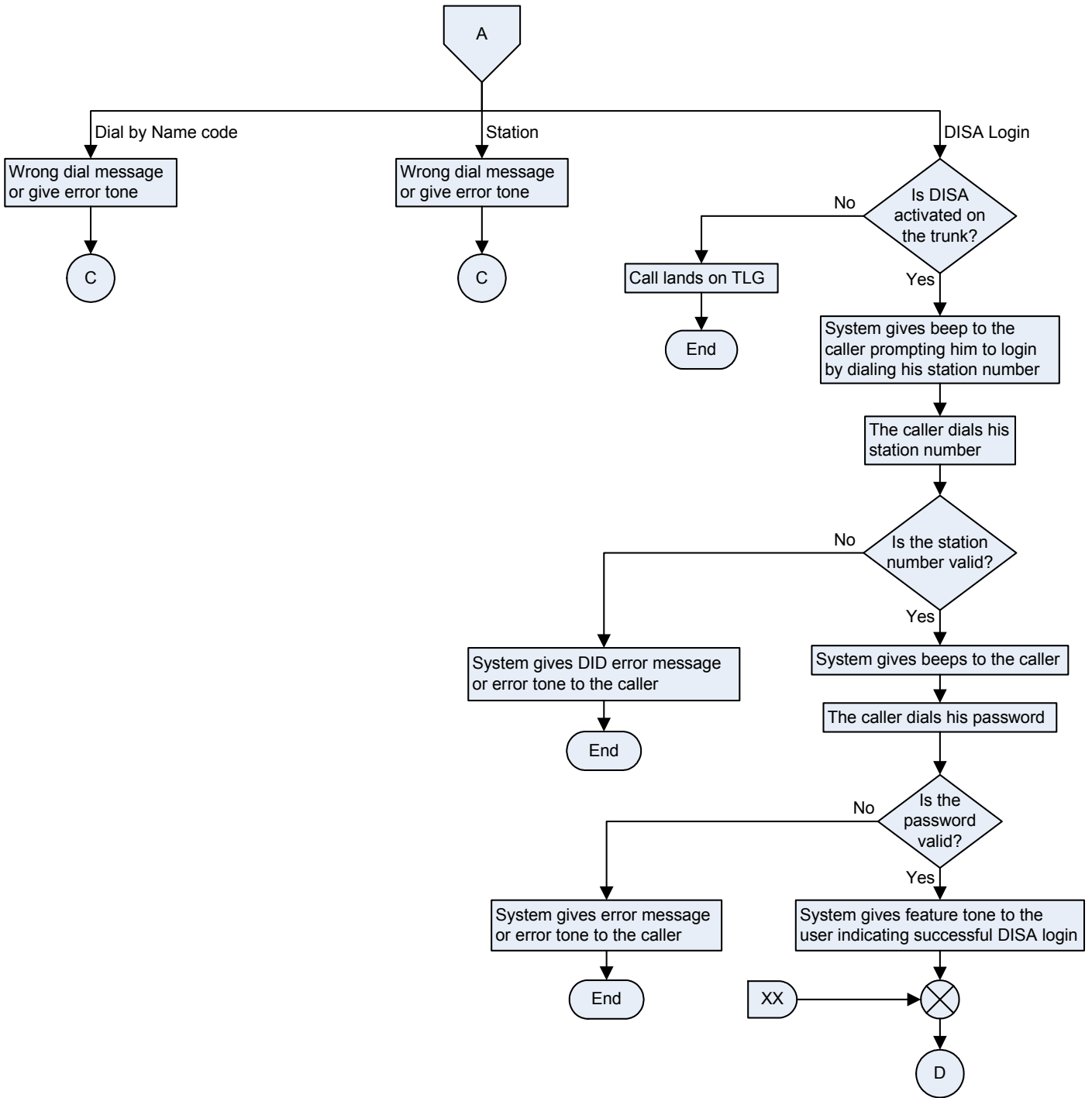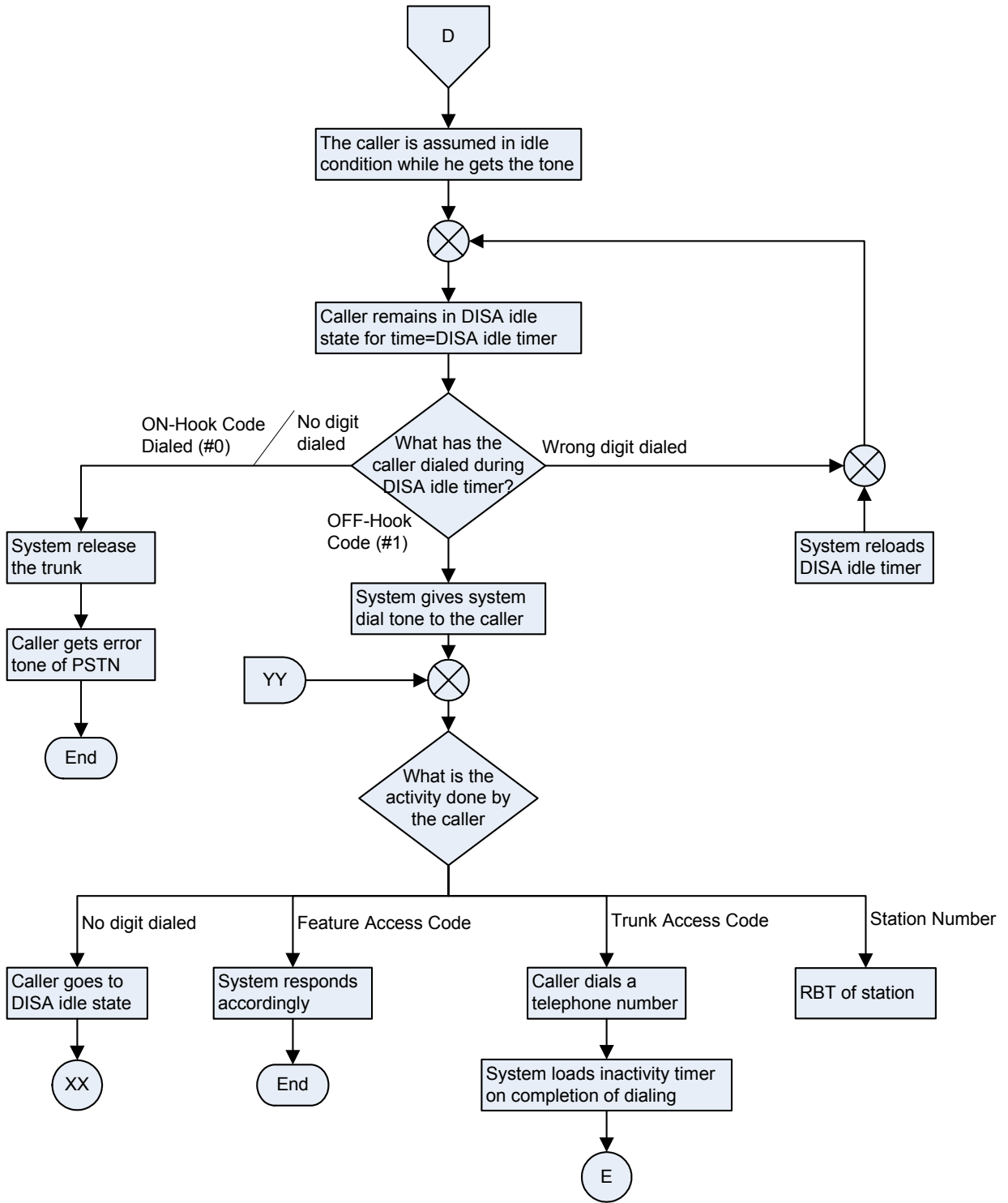
Main Difference between DID and DISA

• DID is for external callers to reach extensions without operator assistance, whereas DISA is for VisionUltra users to use and operate the system remotely.
• DID is allowed without login and password, whereas DISA login needs extension number and its password.
• DID Password is same as dynamic lock password, whereas the DISA password is separate for each extension and hence offers more security.
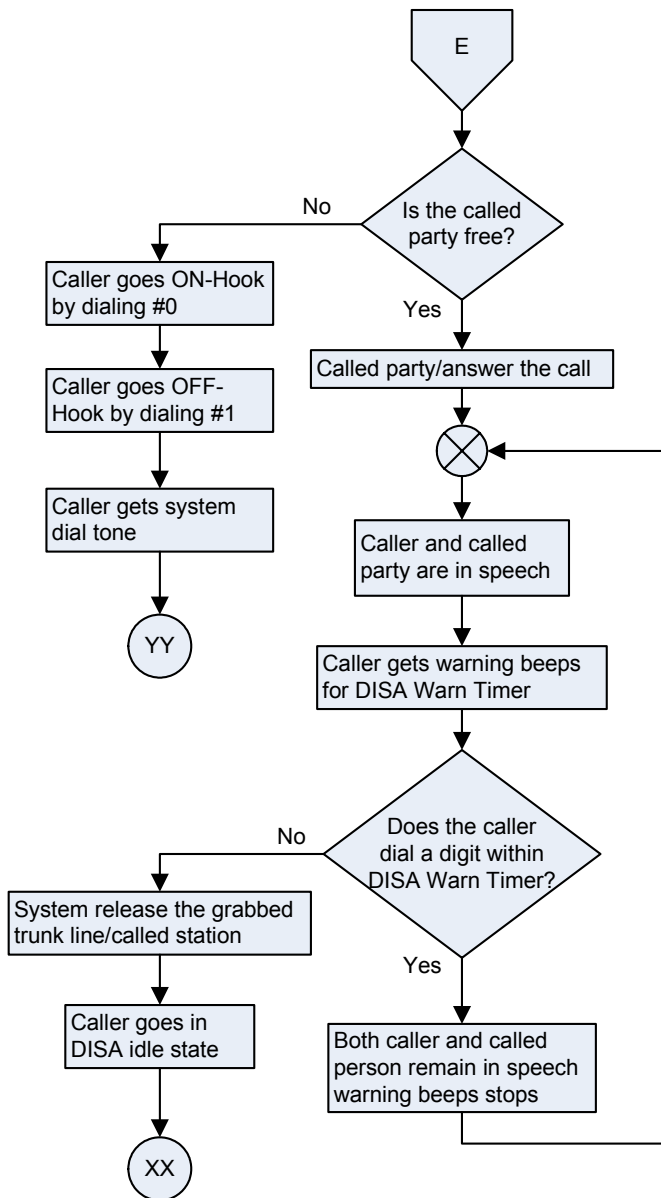
How it works?

Following flow chart elaborates the steps involved in using DISA:

Start

Ring on Trunk

Is route before answer is enabled?

Yes

No

Station on TLG rings for answer wait timer

Wait for answer wait timer

Is answer wait timer timeout?

Yes

No

Play greetings for day or night mode and dial message or play music

Is call answered by any TLG station?

No

C

Yes

Initial Guidance Message or play silence if no voice is programmed

Speech with answered TLG station

End

DTMF Code

DTMF code/ timeout?

Timeout

Is the DTMF coed valid?

Yes

Trunk Landing Group

No

Play wrong dial message or give error tone

C

A

End

A

Dial by Name code

Wrong dial message or give error tone

C

Station

Wrong dial message or give error tone

C

DISA Login

Is DISA activated on the trunk?

No → Call lands on TLG → End

Yes

System gives beep to the caller prompting him to login by dialing his station number

The caller dials his station number

Is the station number valid?

No → System gives DID error message or error tone to the caller → End

Yes

System gives beeps to the caller

The caller dials his password

Is the password valid?

No → System gives error message or error tone to the caller → End

Yes

System gives feature tone to the user indicating successful DISA login

XX → ⊗

D

D

The caller is assumed in idle condition while he gets the tone

⊗

Caller remains in DISA idle state for time=DISA idle timer

ON-Hook Code Dialed (#0)

No digit dialed

What has the caller dialed during DISA idle timer?

Wrong digit dialed

OFF-Hook Code (#1)

System reloads DISA idle timer

System release the trunk

Caller gets error tone of PSTN

End

System gives system dial tone to the caller

YY

⊗

What is the activity done by the caller

No digit dialed

Feature Access Code

Trunk Access Code

Station Number

Caller goes to DISA idle state

System responds accordingly

Caller dials a telephone number

RBT of station

XX

End

System loads inactivity timer on completion of dialing

E

E

Is the called party free?

No → Caller goes ON-Hook by dialing #0 → Caller goes OFF-Hook by dialing #1 → Caller gets system dial tone → **YY**

Yes → Called party/answer the call → Caller and called party are in speech → Caller gets warning beeps for DISA Warn Timer → **Does the caller dial a digit within DISA Warn Timer?**

No → System release the grabbed trunk line/called station → Caller goes in DISA idle state → **XX**

Yes → Both caller and called person remain in speech warning beeps stops

The VisionUltra supports these activities by the way of dialing special digits. They are as under:

ON-Hook	#0
OFF-Hook	#1

Calling a Station

- Calling a station from DISA is same as a call made from local station. Only differences are in the OFF-Hook and ON-Hook steps. As the caller is not physically connected with the system, he has to use appropriate code for giving OFF-Hook and ON-Hook.
- Once speech is established between the caller and any other external person, it is likely that the caller will not dial a digit as long as he is talking to the called person. This null in the dialing might be taken as an event of no activity state by the system and it might terminate the DISA session forcing the caller to make a fresh call.

- To overcome this problem, VisionUltra gives warning tone after time = DISA Inactivity timer. The VisionUltra waits for DISA Warn Timer after the warning tone for the caller to dial a digit. If the caller does not dial any digit even after this, VisionUltra disconnects the call and the caller gets feature tone of the DISA idle state.

Flow Chart for Calling a Station:

Start

Caller has logged in and entered the DISA idle state → **Any digit dialed within 20 secs?**

No → DISA session terminated. The trunk released. → **End**

Yes → The caller has dialed the OFF-Hook code and dialed an extension or external number → **Any digit dialed within DISA Inactivity Timer?**

Yes → Reload the Inactivity Timer

No → The caller gets warning tone → **Any digit dialed within DISA Warn Timer?**

Yes → Reload the Inactivity Timer

No → The call is disconnected

The caller can reach any station user just by dialing the respective station number. As such he cannot dial his own station number. He can reach and request a third person to transfer him on his own station.

Making an external call using DISA
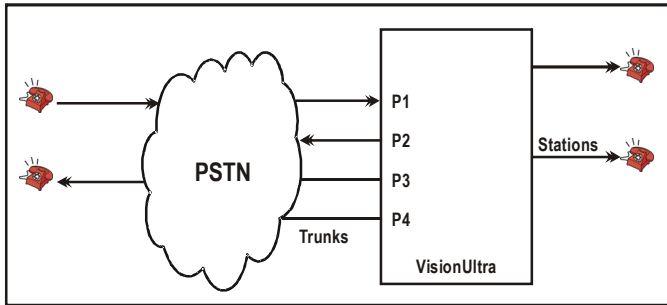
As shown in the diagram the DISA caller can make an external outgoing call by grabbing a trunk and then dialing the required external number.

Following points are relevant:

*   The remote user is allowed all the features, trunk access and toll control programmed for his local station.
*   The outgoing trunks are subjected to the same treatment as if they were made from local station.
*   Call Duration Control and SMDR features work the same way as a call being made from a local station.
*   When such calls are stored in the SMDR buffer, they are marked specifically and printed with character 'I' in the remarks column.

Using features through DISA:

Remote caller can use the features available on his station. He can activate or cancel any feature from DISA, as he would have done from his local station.
These include:
*   Call Pickup
*   Call Forward/Call Follow Me.
*   Setting and canceling Alarms
*   Personal Lock settings
*   Conference
*   PAS
*   Abbreviated Dialing
*   Others

Please note that some of the features involve ring on station from the system. In such cases, the ring is given on the local station instead of the remote end. Obviously the VisionUltra does not know from where the caller is using DISA. And hence cannot reach him at the remote location.

Programming through DISA

VisionUltra can be programmed through DISA mode since after DISA login, the remote end behaves as normal local station. Programming is done the same way as is done from a Local Station.

Terminating a DISA session

If the caller dials the on-hook code from the DISA idle state, the DISA session is terminated and the trunk is released.

During DISA state, the VisionUltra monitors dialing of the caller. In case there is no dialing of a digit for 90 secs, the system assumes that the caller has hung-up. Accordingly, it terminates the DISA session and releases the trunk.

How to program DISA facility?

Step 1: Enable/disable DISA on trunk/s during day time and night time using command **3601 and 3602.**
Step 2: Assign a COS group with DISA enabled to a station to which DISA call is to be allowed.
Step 3: Set DISA Inactivity Timer using command **3020.**
Step 4: Set DISA Warn Timer using command **3021.**

Step 1
Use following command to enable DISA on a trunk during day time:
3601-Trunk-Code-#*
Where,
Trunk is the software port from 1 to 6.

Code	Meaning
0	DISA deactivated
1	DISA activated

Use following command to enable DISA on all the trunks during day time:
3601-*-Code-#*

Use following command to enable DISA on a trunk during night time:
3602-Trunk-Code-#*

Where,

Code	Meaning
0	DISA deactivated
1	DISA activated

Use following command to enable DISA on all the trunks during night time:
3602-*-Code-#*

Step 2
Assign a COS group with DISA enabled to a station. For more details, please refer 'Class of Service (COS)'.

Step 3
DISA Inactivity Timer-Time after which the system gives warning beeps to the caller:
Command: ***3020-Seconds-#****
Default: 060 seconds
Valid Range: 000 to 999 seconds.

Step 4
DISA Warn Timer-Time after which the system disconnects the call.
Command: ***3021-Seconds-#****
Default: 015 seconds

Valid Range: 000 to 255 seconds.

Example:
Enable/Disable DISA on station 23 during night time/day time. DISA enabled trunk is 1.
Station: 23 (software port 02)
Trunk: 1
COS group: 8 (DISA enabled)
COS group: 5 (DISA disabled)
Disable DISA during day time
Enable DISA during night time

3601-1-0-#
3602-1-1-#
4610-02-5-#
4611-02-8-#

How to use it?

• Dial a DISA enabled trunk.
• PBX answers the call.
• Dial DISA login code i.e. *1-Station Number-User Password.*
• You get DISA login beeps.
• Dial OFF-Hook Command (*#1*).
• Dial a station or grab a trunk line and dial an external number.
• To continue the speech, dial any digit.
• To terminate the speech, dial ON-Hook command(*#0*).
• You are still logged in the system. You can make another call by grabbing CO line.
• To terminate DISA mode, dial ON-Hook command again(*#0*).

Important Points:
• DISA doesn't work with default password.
• DISA facility can be enabled on one or more trunks.
• DISA can be enabled/disabled for day and night modes independently.
• DISA inactivity timer is the time for which a line remains active even after the call is finished if the user forgets
• to log out by dialing '#0'. Hence it is advisable to program this timer for optimum period.
• Because of poor line conditions, it is possible that DISA facility may not work.
• A DISA call gets stored in the buffer just like other calls and it is indicated by a letter 'O (Outgoing calls) and I (Incoming calls)' in the remarks column.
• Abbreviated Dialing is allowed through DISA.

DISA facility allows remote users to make long distance calls. It is advisable for all the users to understand the power and cost implication of this facility and hence enable this facility very carefully. It is strongly recommended to protect this facility with a unique password.

Relevant Topics:
1. Voice Message Applications   200
2. Class of Service (COS)   62
3. Default Settings   87
4. Door Phone   109

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Distinctive Rings

What's this?

The VisionUltra offers three sets of ring types viz. India, Italy, Spain and USA/Canada. Each ring type is a set of rings. On selecting the country code, the appropriate ring type (suitable frequency and cadence) to suit the selected country is loaded.

Following eight different rings situations are possible:
- Internal Call Ring
- Trunk Call Ring
- Alarm Ring
- Auto Call Back Ring
- Door Phone Ring
- Programming Ring
- Boss Ring
- PAS Ring

Each ring type is made up of 6 different rings:

Ring	Region	Freq.	ON	OFF	ON	OFF	ON	OFF
Internal	India	30	750	2250				
	Italy	30	400	200	400	4000		
	USA/Canada	30	400	200	400	4000		
	Spain	30	400	200	400	4000		
Trunk	India	30	400	400	400	1800		
	Italy	30	1000	4000				
	USA/Canada	30	1000	4000				
	Spain	30	1000	4000				
Door Phone/ PAS	India	30	200	200	200	200	200	4000
	Italy	30	200	200	200	200	200	4000
	USA/Canada	30	200	200	200	200	200	4000
	Spain	30	200	200	200	200	200	4000
Boss	India	30	600	200	200	2000		
	Italy	30	600	200	200	2000		
	USA/Canada	30	600	200	200	2000		
	Spain	30	600	200	200	2000		
Alarm	India	30	200	200	200	200	200	2000
	Italy	30	200	200	200	200	200	2000
	USA/Canada	30	200	200	200	200	200	2000
	Spain	30	200	200	200	200	200	2000
ACB and Programming	India	30	750	750				
	Italy	30	750	750				
	USA/Canada	30	750	750				
	Spain	30	750	750				

Relevant Topics:

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Do Not Disturb (DND)

What's this?

Many times it happens that a user wishes privacy for some duration and would not like to be disturbed by phone calls. Do Not Disturb (DND) feature is very useful in such situations.

How to use it?

Set DND for Internal Calls

1	Lift the handset.	Dial tone
2	Dial *1371.*	Confirmation tone

Set DND for External Incoming Calls

1	Lift the handset.	Dial tone
2	Dial *1372.*	Confirmation tone

Set DND for all (Internal+External) Calls

1	Lift the handset.	Dial tone
2	Dial *1373.*	Confirmation tone

To Cancel DND

1	Lift the handset.	Dial tone
2	Dial *1370.*	Confirmation tone

How to program?

Please refer topic Class of Service (COS) for more details to enabled DND.

Important Points:
- After setting the DND, the station user hears feature tone in place of normal dial tone.
- When DND is set, the internal caller gets error tone.
- System doesn't support voice messages for internal callers.
- When TLG member has set DND for external incoming calls, it will be skipped by the trunk call routing logic and would not receive any external calls.
- DID destination station can set DND for external IC calls.
- An external caller, when dials to a station which has set DND for external calls, the system plays messages 'The person is not available'. Which is recorded on #5. After playing this message, other 'Initial Guidance Message' is once again played.

Relevant Topic:
1.

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Door Phone

What's this?

Door phone is very similar to ordinary phone except that it does not have a hook-switch and dialing keypad. Instead, it normally has a key to be used as doorbell. Doorphone is installed in place of Doorbell. It is very useful accessory with a PBX in flats, bungalows, offices, etc.

Generally, two variants of Door phones are commonly used viz. Two-wire Door Phone and Four-wire Door Phone. The VisionUltra supports both the variants. Matrix offers two types of doorphone interface cards viz. Two-wire Door Phone-DOP card and Four-wire Door Phone-DOP card. Generally, Two-wire Door Phone-DOP card is shipped with the system. However, Four wire Door Phone-DOP card can be shipped in case of special request.

The VisionUltra also offers a facility to use the two-wire door phone port available in two-wire Door Phone-DOP card as a station port. However, please note that this is not possible in case of four-wire door phone port.

It is observed that Door Phone and Door Lock are generally used in conjunction to each other. This aspect is taken care by providing three Digital Output Ports (DOPs). The door lock can be installed to any of these DOPs and the system can be programmed accordingly. For more details, please refer 'Door Phone-Door Lock Conjunction' on next page.

How to operates DOP from DISA?

- Enable DOP from COS, for your extension.
- Login as an internal extension using your extension number and password.

Remote Door Phone:

- Many times the owner of a clinic, pharmacy and even residence is not at home when some patient or a guest arrives at his door. When the visitor presses the doorbell on the doorphone, the owner would like to receive a call on his mobile or other remote number.
- Any call from the doorphone would be transferred on his mobile or any other external number programmed.
- Whenever he returns back to his residence or pharmacy, he can deactivate the feature. Now any call from the door phone would land on the internal SLT group.

Thus, we should have two modes for the doorphone calls:
- Local Doorphone, the doorphone call routed on the SLT group.
- Remote Doorphone, the doorphone call routed on the external number.

How it works?

Generally, the working of the door phone depends upon the door phone and the features that it provides like LED indication, message on a LCD, etc.
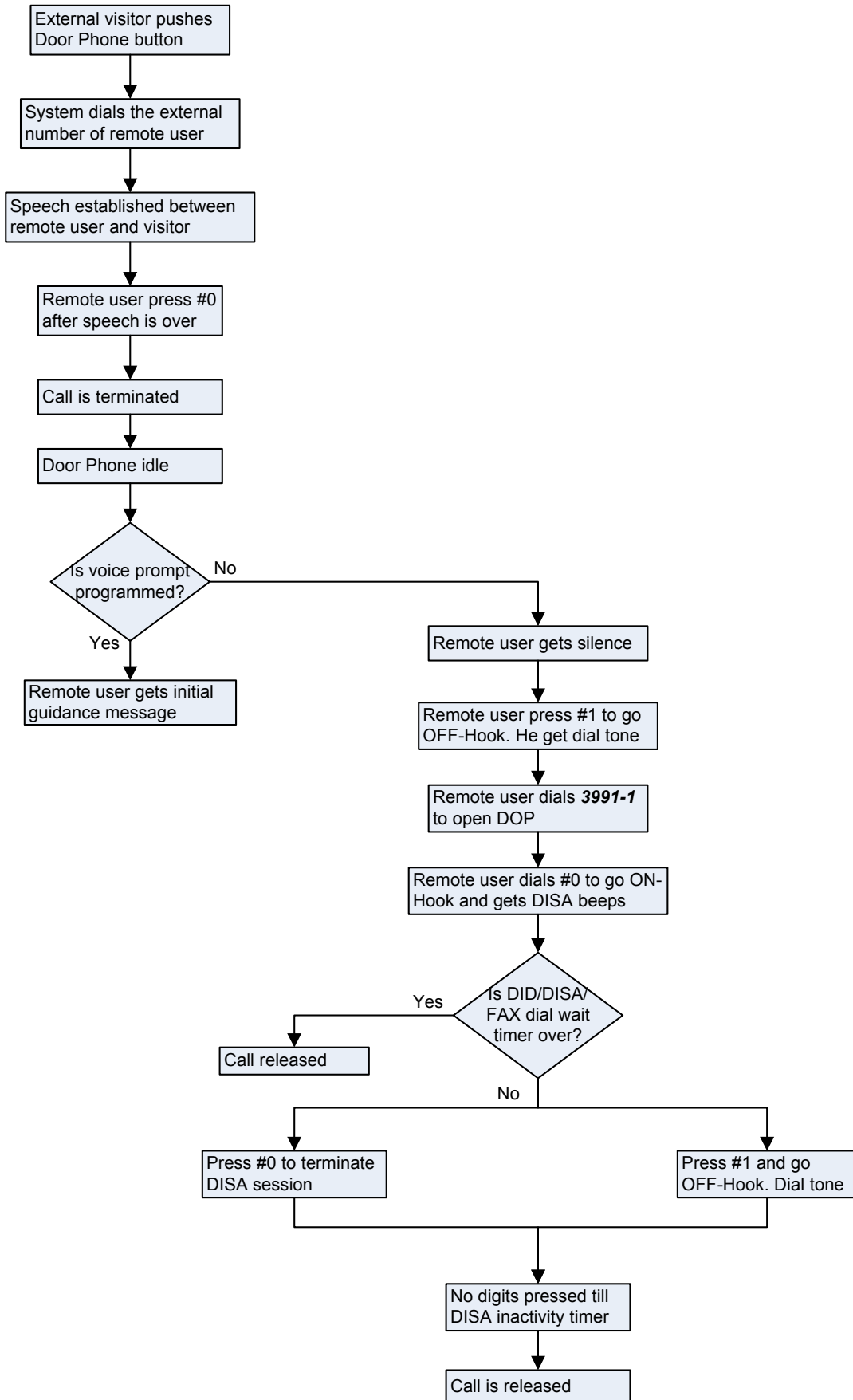The working of the two-wire Door Phone (provided by Matrix) when connected with VisionUltra is explained below.
- When a visitor arrives at the house and presses the door phone key, the PBX senses the doorbell and starts special triple ring on the stations of door phone group. The LED on the door phone flickers.
- The station user inside the house hears the ring. The ring cadence is different which helps to the station user to identify it as door phone call.
- The station user answers the call. The LED on the key of Door Phone turns steady ON.
- The Door Phone circuit is activated and two-way speech is established between the visitor and the station that answered the call.
- The owner verifies identity of the visitor by speaking to him.
- He goes to open the door.
- The Door Phone LED turns OFF, when Door Phone goes idle. It remains OFF in Door Phone idle condition. The owner can establish speech with the Door Phone even when there is no ring by dialing *3996* after lifting the handset.

How it works?

How to use DISA for remote door phone feature.
- Program the system by setting external numbers.
- User dials *1#94-1* from a station which is having DISA access.

External visitor pushes
Door Phone button

↓

System dials the external
number of remote user

↓

Speech established between
remote user and visitor

↓

Remote user press #0
after speech is over

↓

Call is terminated

↓

Door Phone idle

↓

Is voice prompt programmed? —No→ Remote user gets silence

Yes ↓

Remote user gets initial
guidance message

Remote user gets silence

↓

Remote user press #1 to go
OFF-Hook. He get dial tone

↓

Remote user dials *3991-1*
to open DOP

↓

Remote user dials #0 to go ON-
Hook and gets DISA beeps

↓

Is DID/DISA/
FAX dial wait
timer over? —Yes→ Call released

No ↓

Press #0 to terminate
DISA session

Press #1 and go
OFF-Hook. Dial tone

↓

No digits pressed till
DISA inactivity timer

↓

Call is released

How to install a Door Phone?

Installing two-wire Door Phone
Following steps describe the procedure of installing the two-wire door phone:
- Decide a proper location for mounting the door phone. It is advisable to put it on the wall at a height of 5 feet. Height and distance from the door are two important parameters that can affect quality of speech.
- Arrange a separate pair of wires from the PBX to the door phone.
- Connect one end of the cable to the door phone and other end to the 'Door Phone' port.

Installing four-wire Door Phone
- Decide a proper location for mounting the door phone. It is advisable to put it on the wall at a height of 5 feet. Height and distance from the door are two important parameters that can affect quality of speech.
- Arrange a separate pair of wires from the PBX to the door phone.
- Connect the door phone by taking care to connect the transmitting cable to pin no. 3 and receiving cable to pin no. 4 at the 'Door Phone' port.

How to program?

Use following command to program door phone port:
*1701-Code-#**
Where,

Code	Meaning
1	Door Phone port as station
2	Door Phone port for Door Phone application

* For all the configurations of VisionUltra, the software port for Doorphone port is 17.
By default, Doorphone port is a Station port.

Please note that this command is applicable only for two-wire door phone interface.

Use following command to assign station group as door phone group for daytime:
*1702-Station Group-#**
Where,
Station Group is from 01 to 16
By default, the station Group is 01.

Use following command to assign station group as door phone group for night time:
*1703-Station Group-#**
Where,
Station Group is from 01 to 16
By default, the station Group is 01.

Use following command to select the Door Phone Type:
*1704-Type-#**
Where,

Type	Meaning
1	Two Wire Door Phone
2	Four Wire Door Phone

A user can activate remote doorphone whenever he closes his residence or pharmacy and goes out. The user would like to switch between local and remote doorphone as per his convenience by using following commands from the dial tone (normal access state).

Command	Meaning
1#94-0	Door Phone call should land on local stations (Remote Door Phone disabled).
1#94-1	Door Phone calls are forwarded on the external number.

By default, doorphone call lands on local station group.

Use the following command to program external number for day mode:
*1710-External Number-#**
Where,
External Number is number string of maximum 16 digits.
By default, External Number is Blank.

Use the following command to program external number for night mode:
*1711-External Number-#**
Where,
External Number is number string of maximum 16 digits.
By default, External Number is Blank.

Use the following command to assign trunk access group for day time:
*1712-Trunk Access Group-#**
Where,
Trunk Access Group is from 1 to 8
By default, Trunk Access Group is 1.

Use the following command to assign trunk access group for night time:
*1713-Trunk Access Group-#**
Where,
Trunk Access Group is from 1 to 8
By default, Trunk Access Group is 1.

How to disconnect Remote Doorphone call:

- The DISA inactivity timer is applicable here also. If user doesn't disconnect the call by *#0,* the system would forcefully release the call after the timer expires.

Opening the Doorphone:

- When call is terminated by *#0*, the doorphone is disconnected and becomes idle.
- The remote user can now, login the system through DISA login command and password and issue following commands:

- Operate DOP
- Make Internal Calls
- Make External Calls
- Activate/Deactivate remote doorphone by *1#94.*

Timer of Relevance:
Door Phone Ring Timer-This timer signifies the total time for which the stations in the station group would ring when there is a call from Door Phone:
Command: *3034-Seconds-#*
Default: 030 seconds
Valid Range: 000 to 255 seconds.

Door Phone-Door Lock Conjunction
As stated earlier, Door Phone and Door Lock are used in conjunction to each other. The user is requested to follow following steps to use them in conjunction to other.
Step 1: Install the Door Phone as explained above to the Door Phone Port of the Door phone-DOP interface card.
Step 2: Program the system as explained above for the Door Phone feature.
Step 3: Install the Door lock to DOP1. Program the DOP 1 for manual mode of operation (or any other mode as per the requirement) using command *1801*. However, by default it is programmed for manual mode of operation.
Step 4: Program the DOP ON timer and DOP Off timer using commands *1804* or *1805* (This is required I if you want the operation of the DOP (closing and opening of the doorlock) in the fully automatic or Partial automatic mode).
Step 5: The user can use commands *69* and *60* to operate the doorlock.

The working of the two-wire Door Phone (provided by Matrix) when connected with VisionUltra in conjunction with Door Lock (manually operated) is explained below.
- When a visitor arrives at the house and presses the door phone key, the PBX senses the doorbell and starts special triple ring on the stations of door phone group. The LED on the door phone flickers.
- The station user inside the house hears the ring. The ring cadence is different which helps to the station user to identify it as door phone call.
- The station user answers the call. The LED on the key of Door Phone turns steady ON.
- The Door Phone circuit is activated and two-way speech is established between the visitor and the station that answered the call.
- The owner verifies identity of the visitor by speaking to him.
- The owner can open the door-lock by dialing a code (*69-DOP*) from the dial tone.
- The owner can let in the visitor and close the door-lock by dialing a code (*60-DOP*) from the dial tone.

- The Door Phone LED is OFF, when Door Phone goes idle. It remains OFF in Door Phone idle condition.

Important Points:
- The user has to have a Class of Service (COS) rights to use Door Phone from DISA Mode.
- Door Phone port is optional.
- The door phone port is marked 'DP' on the MDF. For connection details, please refer 'Installing the System'.
- Visitors can be kept on hold.
- Access to door phone is programmable. Please refer 'Class of Service (COS)' for more details.
- It is possible to establish conference with Door Phone.
- Door Phone call can be picked using general pickup or selective pickup code.
- Door Phone parameters are printed alongwith system parameters.
- To know programming details, please refer "Configuration Reports".
- If a four-wire Door Phone is installed then the Door Phone Port cannot be used as a normal station.
- When a Door Phone is in conversation, and there is an incoming call, the users in conversation get an intrusion tone known as Door Phone Tone.

Relevant Topics:
1. Station Group   165
2. Digital Output Port (DOP)   94
3. Automated Control Applications   36
4. Installing the System   14
5. Call Progress Tones   50
6. Country Code   86
7. Default Settings   87
8. Direct Inward System Access (DISA)   100

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Dynamic Lock

What's this?

- A user can lock his station to avoid misuse of local and long distance dialing in his absence.
- When a user locks his station, his toll control changes to limited dialing or no dialing.
- The lock operates with a 4-digit password. Each user has his personal password called User Password.
- Station can be locked manually or automatically.
- If manual lock is selected, then user should lock the station while leaving his work place by dialing the required code. On returning back to work place, he can unlock the station.
- If automatic lock is selected, the system locks the station after a set time automatically.
- The timer starts from the time when the station is unlocked.

How to use it?

To Select Auto or Manual Lock

1	Lift the handset.	Dial tone
2	Dial *143-User Password-Minutes.*	Confirmation tone

- User Password is a 4-digit secret code. Default User Password is 1111.
- Minutes specify time in minutes after which the station gets locked automatically.
- Set minutes to 00 for manual locking. By default, it is manual lock.
- Range for time is 00 to 99 minutes. 00 for manual locking and 01-99 for auto locking.

To Lock the Station

1	Lift the handset.	Dial tone
2	Dial *140.*	Confirmation tone

To Unlock the Station

1	Lift the handset.	Dial tone
2	Dial *141-User Password.*	Confirmation tone

- Once the station is locked, you will be able to dial the numbers depending on the dynamic toll control.

To Change User Password

1	Lift the handset.	Dial tone
2	Dial *144-Old User Password-New User Password.*	Confirmation tone

- In case you forget your password, do not panic. Contact the System Administrator (SA) or the System Engineer (SE). He can clear your password to its default value. Refer "User Password" for more details.

How to program?

Dynamic Lock is a programmable feature. Please refer Class of Service (COS) for details on how to allow Dynamic Lock to a user.

- Decide whether you want to use Manual or Auto Dynamic lock
- If you decide to use Manual Dynamic Lock set the parameter 'minutes' in the command *143-User Password-Minutes* to 00.
- Use command *140* and *141-User Password* to lock the station and unlock the station.
- If you decide to use Auto Dynamic Lock, set the parameter 'minutes' in the command *143-User Password-Minutes* to a desirable value.
- Use the command *'141-User Password'* to unlock the station.

Important Point:
- Dynamic lock does not work with default password.

Relevant Topics:
1. Toll Control   182
2. User Password   199

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Emergency Dialing

What's this?

• Emergency Dialing allows the user to dial the emergency number from his station and ask for help in case of uncalled situations.
• While dialing the emergency number the system does not check the toll control level assigned to the station.
• A Station user can dial the emergency number:
• From the PBX dial tone. i.e just after lifting the handset.
• After grabbing the trunk line.
• The Emergency number can be dialed out from dial tone, busy tone.

How it works?

• When the emergency number is dialed from the dial tone, the system grabs a free trunk and dials out the number on the trunk.
• When an user dials a trunk access code, there are chances of receiving a busy tone if all the trunks in the trunk access group are busy. But, at this point if the user dials the emergency number the system grabs a free trunk (outside the trunk access group grabbed) and dials out the number.
• When a user dials a trunk access code, there are chances of receiving an error tone if he is not allowed trunk access. But, at this point if the user dials the emergency number the system grabs a free trunk and dials out the number.
• The emergency numbers are dialed out irrespective of the user's toll control settings.

The Table below gives the list of numbers treated as emergency numbers depending on the country code.

Country Code	Emergency Numbers
India	None
Italy	112, 113, 115, 118
USA/Canada	911
Spain	112, 113, 115, 118

These numbers are fixed and cannot be altered.

Relevant Topics:
1. Country Code   86
2. Trunk Access Groups   185
3. Default Settings   87

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External Call Forward (ECF)

What's this?

It is possible to divert the calls on your personal trunk line to your residence or your mobile number. This facility of diverting your incoming trunk calls is known as External Call Forwarding or ECF in short.

How to program?

Step 1: Decide the trunk of which the calls are to be forwarded.

Step 2: Assign a trunk access group to be used to forward these calls.

Step 3: Assign the destination number where the calls are to be forwarded.

Step 1

Use following command to enable/disable ECF on a trunk during day time:

3701-Trunk-Code-#*

Where,

Trunk is from 1 to 6.

Code	Meaning
0	ECF disabled
1	ECF enabled

Use following command to enable/disable ECF on all trunks during day time:

3701-*-Code-#*

Use following command to enable/disable ECF on a trunk night time:

3702-Trunk-Code-#*

Where,

Trunk is from 1 to 6.

Code	Meaning
0	ECF disabled
1	ECF enabled

Use following command to enable/disable ECF on all trunks during night time:

3702-*-Code-#*

By default, ECF is off on all the trunks.

Step 2

Use following command to assign trunk group to forward the calls of a trunk:

3703-Trunk-Trunk Access Group-#*

Where,

Trunk is from 1 to 6.

Trunk Access Group is from 1 to 8.

Step 3

Use following command to assign destination number where the calls are to be forwarded for a trunk:

3704-Trunk-Telephone Number-#*

Where,

Trunk is from 1 to 6

Telephone Number is the number string is of maximum 16 digits.

Example:

Calls on trunk 1 during night time are to be forwarded to 02653630555 using trunk access group 1.

Use following command to program this requirements:

3702-1-1-#*

3703-1-1-#*

3704-1-02562630555-#*

Important Points:

• ECF calls are same as DISA calls. The ECF call shall get disconnected after time = DISA Inactivity Timer + DISA Wait Timer. Hence to continue as ECF call, it is mandatory for the user to dial any digit after the warning beeps.

• To disconnect the call it is advisable to dial '#0'.

Relevant Topics:

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External Music

What's this?

VisionUltra provides a facility to give external music to the users by way of connecting an external music source. It is possible to give external music to the station and external callers while they are kept on hold. For more details, please refer 'Music on Hold'.
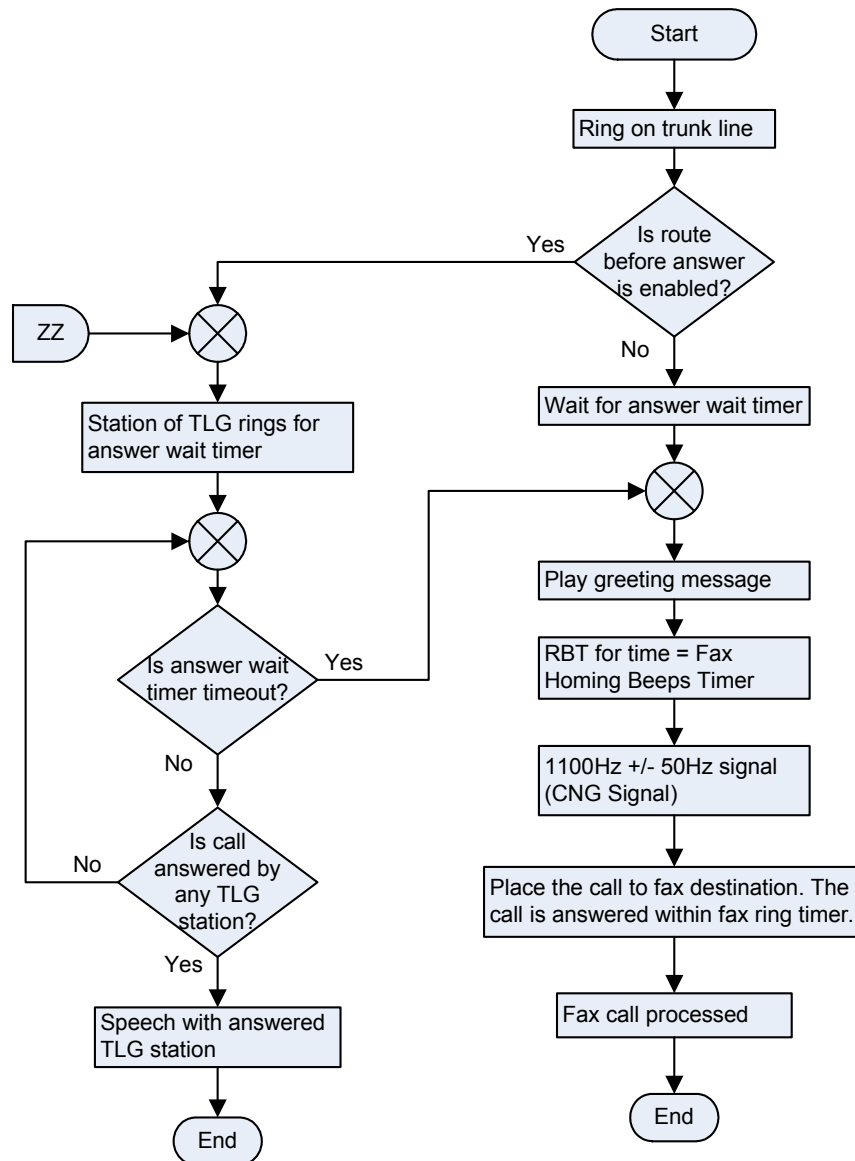
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Fax Homing

What's this?

VisionUltra is generally installed in small offices with limited CO lines. For optimum utilization of trunk lines, it is often required to use the same trunk line for speech as well as for fax. The system has the capability to detect fax tone over trunk line and route the call to the extension where the fax machine is connected, provided fax tone of CNG signal (CNG stands for **C**alli**NG,** Frequency:1100Hz ±50Hz; Cadence: 325ms> On Time <750ms, 1000ms> Off Time <5500ms) is available from the caller's end. This feature of routing the fax call to the fax machine automatically is known as Fax Homing.

How it works?

The flowcharts below depict the logic of fax homing on a trunk when Fax Homing alone is enabled and DID/DISA/Fax Homing is enabled on a trunk.

Flowchart 1: Only Fax Homing enabled.

Flowchart 2: DID/DISA/Fax Homing is enabled.

Start

Ring on Trunk

Is route before answer is enabled? — Yes → ZZ

No

Wait for answer wait timer

Play greetings and dial message

C → ⊗

Initial guidance Message

Silence for time=DID/DISA Beeps Timer

DTMF Code/Timeout?
- DTMF Code
- Timeout

Is the DTMF code valid? — Yes → ⊗ → A

No

Play wrong dial message or give error tone

C

Fax enabled? — No → Trunk Landing Group → End

Yes

RBT for time=Fax Homing Beeps Timer

Fax Tone Present? — No → Trunk Landing Group → End

Yes → B

How to program?

Use the following steps to program Fax Homing.
Step 1: Enable Fax Homing on trunk lines for Day Time and Night Time using the command *3801 and 3802.*
Step 2: Define Fax Homing station for a trunk using the command *3803*.
Step 3: Program the Fax Homing wait timer using the command *3037.*
Step 4: Program the Fax Ring timer using the command *3038.*

Step 1
Use following command to enable/disable Fax homing on CO line during Day Time:
3801-Trunk-Fax Homing-#*
Where,
Trunk is from 1 to 6

Fax Homing	Meaning
0	Disabled
1	Enabled

Use following command to enable/disable Fax homing on all CO line during Day Time:
3801-*-Fax Homing-#*
By default, fax homing is disabled on all trunks during Day Time.

Use following command to enable/disable Fax homing on CO line during Night Time:
3802-Trunk-Fax Homing-#*
Where,
Trunk is from 1 to 6

Fax Homing	Meaning
0	Disabled
1	Enabled

Use following command to enable/disable Fax homing on all CO line during Night Time:
3802-*-Fax Homing-#*
By default, fax homing is disabled on all trunks during break hours.

Step 2

Use following command to define fax homing station for a trunk:

3803-Trunk-Station-#

Where,

Trunk is from 1 to 6.

Station is from 01 to 17.

Use following command to define fax homing station for all trunks:

3803-*-Station-#

By default, Fax Homing destinations are as follows:

Trunk	Stations
1	21
2	22
3	23
4	24
5	25
6	26

Step 3

Use following command to define Fax Homing Wait Timer for a trunk. Fax Homing Wait Timer is the time for which the system senses the CNG signal (Frequency: 1100Hz ±50Hz; Cadence: 325ms> On Time <750ms, 1000ms> Off Time <5500ms):

3037-Fax Homing Wait Timer-#

Where,

Fax Homing Wait Timer is from 000 to 255.

By default, Fax Homing Wait Timer is 006 seconds.

Step 4

Use following command to define Fax Ring timer: Fax Ring Timer is the time for which the fax destination rings after the fax call has been placed:

3038-Fax Ring Timer-#

Where,

Fax Ring Timer is from 000 to 255 seconds.

By default, Fax Ring Timer is 010 seconds.

Relevant Topics:

1. Direct Inward Dialing (DID)   95
2. Direct Inward System Access (DISA)   100
3. Default Settings   87

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Flash Timer

What's this?

Pulse dialing is a type of signaling in which codes (digits) are dialed in pulses. Flash is also a code just same as digits 0 to 9. A hook switch or a Flash key is generally used to dial this code. Technically, Flash is breaking the loop current for 200 milliseconds to 900 milliseconds. Please note that since this code is not simulated in standard DTMF convention, one cannot dial it in DTMF mode. Flash timer signifies the time period for which the loop current breaks. Flash timer is programmable. Flash timer values ranges from 083 ms to 900 ms.

Please take care to see that the flash timer of the port is greater than the flash timer of the instruments. That is if an instrument of flash timer 600ms is connected to the port, then the flash timer of the port must be greater than 600ms.

Where is it used?

Stations dial flash to use few PBX features and also to use few CO features. Flash is used in following cases:
- While transferring a call from one station to another.
- While making conference between few stations.
- While toggling call between two stations.

Now a days, more number of basic service providers and different types of advanced electronic telephone exchanges are prevailing. It is possible that one service provider interprets breaking of loop current for 300 ms as flash, other service provider interprets breaking of loop current for 900 ms as flash and system interprets breaking of loop current for 600 ms as flash. Hence if the system engineer sets the flash timer to 600 ms then he might not be able to use features provided by the service provider interpreting 900 ms for flash. To take care of this situation, Vision offers Flexibility to program different flash timers for both stations and trunks.

How to program?

Use following command to program flash timer for a SLT:
4102-Station-Flash Timer-#
Where,
Station is the software port number of the SLT user from 01 to 17.
Flash Timer is from 083 to 900 ms.

Use following command to program flash timer for a Trunk:
3107-Trunk-Flash Timer-#
Where,
Trunk is the software port number of the trunk from 1 to 6
Flash Timer is from 083 to 900 ms.
By default, Flash Timer is 600ms.

Range Commands:

Program flash timer for all stations	*4102-**-Flash Timer-#**
Program flash timer for all trunks	*3107-*-Flash Timer-#**

Relevant Topics:

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Flexible Numbers

What's this?

VisionUltra offers flexibility to assign a number of your choice to a station. This code is called flexible number. For example, to access first station having software port 01, one has to dial 21. It is possible to change this code to any other number of your choice.

The system loads default access codes (flexible numbers) to all the stations on first power ON. Later on the stations can be assigned desired flexible numbers.

How it works?

Flexible numbers are dialed from the dial tone like the feature access codes. Since the flexible numbers are programmable, it can happen that they clash with the feature access codes. Keeping this in mind the commonly used digits 1,5,6,7,8,9 are not allowed to be programmed as first digit of the flexible number by default. However this is programmable and the above mentioned digits can be allowed to be used as first digit in the flexible digit.

How to program?

Use following command to program the digit flag for the flexible number for a station:
1120-Flag-#
Where,

Flag	Meaning
0	Allow only 2,3 and 4 as first digit for station numbers
1	Allow all (1-9) as first digit for station numbers

By default, the flag is 0.

Use following command to program the flexible number for a station:
4201-Station-Flexible Number-#
Where,
Station is from 01 to 17
Flexible Number can be of 1, 2, 3 or 4 digits.

Use following command to clear the flexible number of a station:
4201-Station-#

Use following command to default the flexible numbers of all the stations:
4203-#

A typical table of default flexible numbers looks like:

Software Port	Flexible Number
01	21
02	22
03	23
04	24

Software Port	Flexible Number
05	25
06	26
07	27
08	28
09	29
10	30
11	31
12	32
13	33
14	34
15	35
16	36
17	37

All configurations of VisionUltra the flexible number of the Door Phone port is 37 by default.

Use following command to clear the flexible numbers of all the stations:
4202-#

Example:
Software port 01 to 04 should be assigned flexible numbers as 31 to 34 and software port from 05 to 08 should be assigned flexible numbers as 21 to 24.
4201-01-31-#
4201-02-32-#
4201-03-33-#
4201-04-34-#
4201-05-21-#
4201-06-22-#
4201-07-23-#
4201-08-24-#

Important Points:
• Flexible numbers are the codes dialed from dial phase to call another station. These flexible numbers should be unique and should not match with any other station or any of the features available from the dial phase.
• It is possible to have single digit, 2-digit, 3-digit and 4-digit flexible numbers.
• It is also possible that few stations have single digit, few have 2-digit, few have 3-digit and remaining have four digit flexible Numbers.
• Flexible number having common digits can't be assigned to another station. For example if 3101 is used then 310 can't be used/programmed. Same way if 3111 is used then 311 can't be used/programmed.

- Same flexible number cannot be assigned to two different stations. For example you if have used 211 for one station then 211 can't be assigned to any other station.
- It is possible to clear the flexible number of all the stations.
- When the flexible number of a station is cleared, one cannot call that station. However the station will have null flexible number and it can make calls as usual.
- Use flexible numbers for all the features used from User mode. Software port numbers are to be used only during for SE mode or SA mode.
- If a flexible number of a station starts with a digit which is same as feature access code then '*' is required to be dialed before accessing the feature. e.g. if a station flexible number is 42 then for call pick up the user has to dial '*4'.

Important Point:
1.

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Hold

What's this?

This feature allows the user to talk to other station or external party without releasing the present party. This feature is also called Consultation-Hold.

How to use it?

1		Speech with Party A
2	Dial *Flash.*	Party A on Hold and gets Music on Hold. Caller gets dial tone.
3	Dial *Station* or *Trunk Access Code.*	Speech with dialed station or trunk dial tone.

Important Points:
- We can dial the Trunk Access Code only if the held party is a station.
- Dial Flash again to get back the held party.

Relevant Topics:

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Hotline

What's this?

To avoid repeated dialing of a station number or destination number, the Matrix system offers, a feature by which the user has to just pick up his handset and the system will automatically dial out the number. This feature is called Hotline.

VisionUltra offers three types of hotline viz. Hotline-Internal, Hotline-Trunk and Hotline-External Number. The detailed explanation is as given below:

Hotline-Trunk
- You get connected to any of the free trunk from the desired trunk access group, the moment you lift the handset.
- This feature is useful when you are making more number of trunk calls compared to internal calls. Once this feature is enabled, as soon as you lift the handset you get the trunk dial tone after the set time.
- This feature is also called Hot Outward Dialing (HOD).

How to use it?

1	Lift the handset.	Dial tone
2	Dial *151-Trunk Access Group Code.*	Confirmation tone

Trunk Access Group Code can be '0', '5', 61 to 66.

Example:
To simulate dialing of trunk access code 62 immediately on lifting the handset, dial *151-62.*

Hotline External Number
- You get connected to a desired external number the moment you lift the handset.
- This feature is useful when you are making call to a particular external number many times in a day. Oncethis feature is enabled, as soon as you lift the handset, the system dials the telephone number and you get connected to the external person.
- This feature is also called Hotline with Number.

How to use it?

1	Lift the handset.	Dial tone
2	Dial *152-Trunk Access Group Code-Number-#*.*	Confirmation tone

Trunk Access Group Code can be '0', '5', 61 to 66

Example:
Let us activate Hotline for external number 0265 2630555. Let us assume trunk access group code '62'. Dial following code to set this feature:

152-62-02652630555-#

Hotline Internal
- Hotline-Internal helps avoiding repeated dialing of a station number.
- Simply by lifting the handset, the caller gets connected to the programmed station.
- In an office environment, it is found that a boss calls his secretary or his co-worker frequently. This feature could be of great help to him.
- This feature is also called Boss-Secretary feature.

How to use it?

1	Lift the handset.	Dial tone
2	Dial *153-Station.*	Confirmation tone

Example:
The boss needs to speak to his secretary (station number 22) many times in a day. He can avoid repeated dialing by activating the Hotline Internal feature from his station:
153-22

Delayed Hotline
After lifting the handset you do not get connected to the station immediately but get regular dial tone. If the user does not dial anything during this short dial tone, the PBX places the hotline call to the station. This delay timer allows the user to dial other numbers without cancelling hotline.

Ho to use it?

1	Lift the handset.	Dial tone
2	Dial *154-Seconds.*	Confirmation tone

- The default value of hot line timer is 3 seconds and its range is 2-9 seconds.
- The hotline timer cannot be set to 0 or 1 seconds.

Cancel Hotline

1	Lift the handset.	Dial tone
2	Dial *150.*	Confirmation tone

- Please note that the cancellation code must be dialed from the PBX dial tone. If the Hotline timer is 1 second, you have to be very quick in dialing the code.

How to program?

Hotline is a programmable feature. Please refer "Class of Service (COS)" for details on how to allow Hotline to a user.

Important Point:
- Only one type of Hotline can be activated on the same station at the same time.
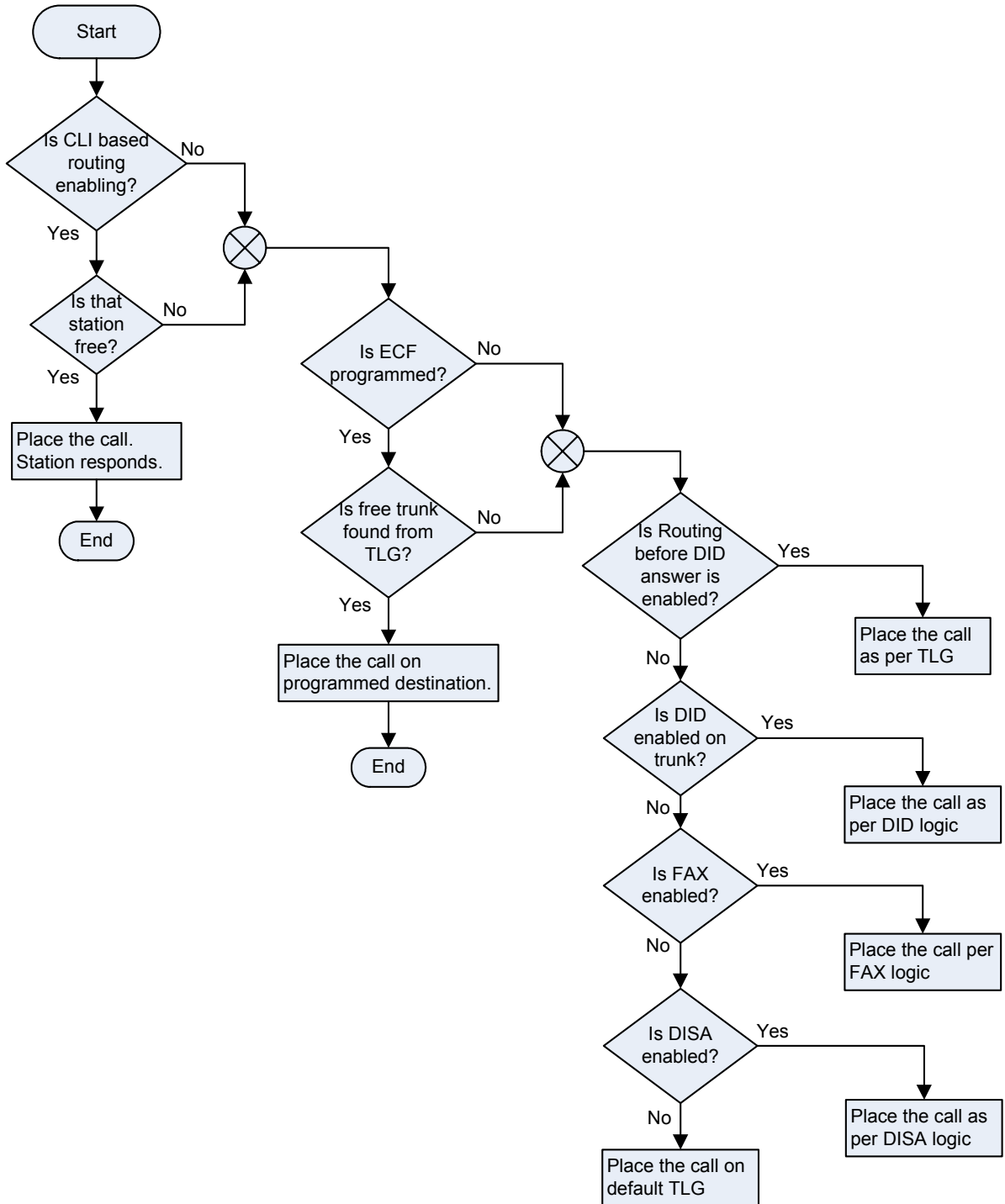
Relevant Topics:

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Incoming Call Management

What's this?

VisionUltra supports multiple options of incoming call routing and landing on a station. It takes into account whether CLI based routing is enabled, DID is enabled or external call forward is programmed, etc.

How it works?

Following flow chart will clarify the logic of Incoming Call Management by the system.

```
                    ┌──────────┐
                    │  Start   │
                    └────┬─────┘
                         │
                    ◇ Is CLI based ◇ ── No ──┐
                      routing                 │
                      enabling?               ▼
                         │ Yes          ⊗──────────┐
                         │              │          │
                    ◇ Is that ◇ ── No ──┘          ▼
                      station                  ◇ Is ECF ◇ ── No ──┐
                      free?                      programmed?        │
                         │ Yes                      │ Yes           ▼
                    ┌──────────────┐         ◇ Is free trunk ◇─No─ ⊗─────┐
                    │ Place the    │           found from            │
                    │ call.        │           TLG?                  ▼
                    │ Station      │              │ Yes       ◇ Is Routing ◇─Yes─┐
                    │ responds.    │       ┌──────────────┐     before DID         │
                    └──────┬───────┘       │ Place the    │     answer is          ▼
                         │                 │ call on      │     enabled?    ┌────────────┐
                    ┌──────────┐           │ programmed   │        │ No     │ Place call │
                    │   End    │           │ destination. │   ◇ Is DID ◇─Yes─│ as per TLG │
                    └──────────┘           └──────┬───────┘     enabled on   └────────────┘
                                           ┌──────────┐           trunk?
                                           │   End    │              │ No    ┌────────────┐
                                           └──────────┘        ◇ Is FAX ◇─Yes│ Place call │
                                                                 enabled?     │ per DID    │
                                                                    │ No      └────────────┘
                                                              ◇ Is DISA ◇─Yes─┐
                                                                enabled?      │
                                                                    │ No      ▼
                                                            ┌──────────────┐
                                                            │ Place call on│
                                                            │ default TLG  │
                                                            └──────────────┘
```

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Internet Ready Port

What's this?

- The VisionUltra offers a dedicated port to surf the Internet. This port is called Internet Ready Port. The modem of the PC used to surf the Internet should be connected to this Internet Ready Port. Whenever internet connection is to be done a command should be issued which will connect trunk 2 directly to this port.
- The user is not required to direct the trunk connection, up to computer or does not even need to dial the trunk access code in the dial up sequence.

How it works?

- On issuing Internet ready code, trunk 2 gets directly connected to Internet Ready Port. Now trunk 2 is not accessible to the stations. This code shall be accepted by the system only when trunk 2 is free.
- On completion of surfing, a command to cancel this feature can be issued, trunk 2 gets diverted to trunk port 2. Now it becomes accessible to the stations.

How to use it?

Activate Internet Ready Port:

Lift the handset.	Dial tone
Dial *198-1.*	Confirmation tone
Replace the handset.	Station is configured as internet ready port directly connected to trunk 2.
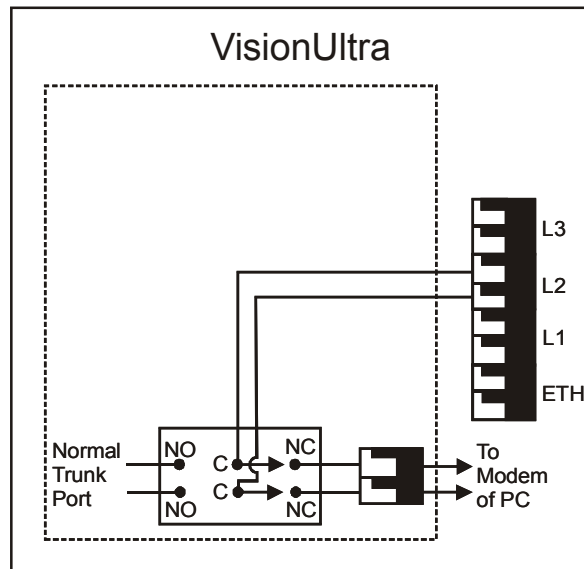
Deactivate Internet Ready Port:

Lift the handset.	Dial tone
Dial *198-0.*	Confirmation tone
Replace the handset.	Station is configured as normal station.
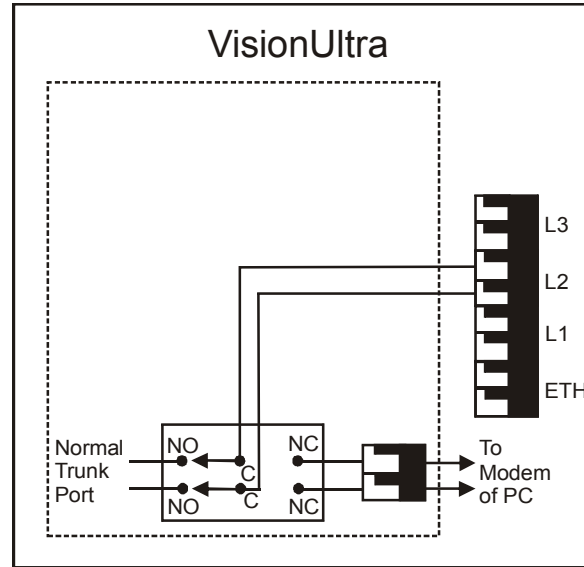
How to program?

Use following command from SA/SE Mode, to activate/deactivate Internet Ready Port:

2101-Code-#*

Where,

Code	Meaning
0	Deactivate Internet Ready Port
1	Activate Internet Ready Port

By default, Internet Ready Port is Inactive.

Important Points:

- This command is allowed from SA mode/SE mode.
- Please note that trunk2, marked L2 on the MDF can only be diverted to Data port.
- To know programming details, please refer "Configuration Reports".

Relevant Topics:

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Interrupt Request

What's this?

- When your call is urgent and you cannot wait for the called person to become free, you can land in his conversation after intimating him.
- While landing, you get ring back tone and the called person gets Interrupt- Request Tone for 45 seconds.
- During the beeps, the called person can dial '*Flash*' to answer your call. He can talk to you while his previous partner is put on hold and gets music.
- Replace your handset once your talk is over. This will automatically restore his original speech with the held-up party.

How to use it?

1	Lift the handset.	Dial tone
2	Dial *Station.*	Busy tone
3	Dial *3* (for India) or Dial *6* (for Italy/USA/ Canada/Spain).	RBT. The called person gets interrupt Request Tone.
4	The destination dials *Flash.*	Speech with the called person.

How to program?

Interrupt Request is a programmable feature. Please refer Class of Service (COS) for details on how to allow Interrupt Request to a user.

Timer of Relevance:
Interrupt Request Timer-Time for which the station on which interrupt request is made gets the beeps:
Command: *3017-Seconds-#**
Default: 045 seconds
Valid Range: 000 to 255 seconds.

Important Points:
- Interrupt Request works even when the destination is talking on a trunk line.
- Interrupt Request is ineffective if the called person is having call privacy from Interrupt Request.
- The called party can toggle both the calls.
- Interrupt Request can also be used after putting one party in hold. An important trunk call can be transferred to a busy station after putting the calling party in hold and interrupting the busy destination to inform him about his call. This is most advantageous feature for the operator while transferring calls.
- For more details on Interrupt Request Tone please refer the topic Call Progress Tones.

Relevant Topics:
1. Class of Service (COS)   62
2. Privacy   145
3. Call Progress Tones   50
4. Country Code   86
5. Default Settings   87

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Last Number Redial

What's this?

- This feature redials the last number dialed, from the station.
- This feature saves time during retrying a busy external number. It is same as REDIAL button of the telephone instrument.
- This feature is also known as Last Number Redial (LNR).

How to use it?

1	Lift the handset.	Dial tone
2	Dial **7.**	Silence.
3	The system grabs a trunk	Trunk dial tone
4	The system inserts pause.	
5	The system dials out the last number.	

Timer of Relevance:
Redial Wait Timer-It signifies the time for which the system waits once the user dials '7'. The Auto Redial code is 77. Hence if user wants to try redial when he presses 7, the system waits for redial wait timer and then dials out the number. This timer can be reduced to 0 if Auto Redial is not used.
Command: *3033-Seconds-#**
Default : 002 seconds
Valid Range : 000 to 255 seconds.

Important Point:
- The system uses the same trunk access code you used for dialing the number last time.

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Least Cost Routing-An Introduction

What's this?

Different basic service providers offer different rates for different times of the day and the destination numbers. For example, SP1 may offer cheaper rates compared to SP2 for calls made during peak hours. i.e. 09.00 to 22.00. Whereas SP2 may offer cheaper rates as compared to SP1 during off peak hours i.e. 22.00 to 09.00.

Least cost routing logic is used to select the cheapest trunk from the total allotted trunks to the station to make outgoing calls automatically. This way, the cost of outgoing calls can be minimized, by selecting the most economical trunk depending upon the time of call and the destination number.
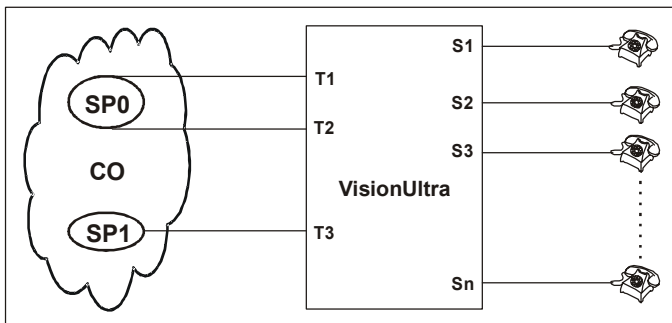
Above diagram shows that few trunks of both SP1 and SP2 are interfaced with VisionUltra. Here it would be desirable to use LCR facility if these service providers offer different rates.

VisionUltra offers four different types of LCR logic.
Time Based LCR-This logic is used when different SPs provide different rates during different timings of the day. This logic uses online dialing. In online dialing, the digits dialed by the user are directly passed on the trunk.
Number Based LCR-This logic is used when different SPs provides different rates for different areas, different phone numbers. For example, SP2 provides cheaper rates for a call made from City A to City B as compared to SP1. This logic uses Store and Forward dialing. In Store and Forward dialing, the digits are first stored in a memory location and then these are dialed on the trunk.
Mixed LCR-This logic is used when the rates of service providers differ both time wise and number wise. For example, SP1 provides cheaper rates for a call made from City A to City B during peak hrs (09.00 to 22.00) as compared to SP2. Whereas SP2 provides cheaper rates for a call made from City A to City B during off peak hours (22.00 to 09.00). This logic uses Store and Forward dialing. In Store and Forward dialing, the digits are first stored in a memory location and then these are dialed on the trunk.
Carrier Pre-Selection LCR-In countries where the telephone system has been deregulated it is possible for subscriber to choose the carrier they want to use for long distance calls. The choice of the carrier is based on cost of

calls and the quantity of lines offered. The subscriber does not have to change his telephone lines to be able to access cheap long distance calls.

To program the LCR, first of all, type of LCR for a TAG has to be chosen (viz. Time zone, Number, Mixed LCR) and a service provider code to each trunk has to be assigned.
To program LCR-CPS, the CPS has to be enabled for the TAG.

For more details on how each type is to be programmed refer the respective topics viz. Least Cost Routing-Number Based, Least Cost Routing-Time Based, Least Cost Routing-Number and Time Based, Least Cost Routing-Carrier Pre-Selection.

Relevant Topics:
1. Least Cost Routing-Carrier Pre-Selection   132
2. Least Cost Routing-Number and Time Based   134
3. Least Cost Routing-Number Based   136
4. Least Cost Routing-Time Based   138
5. Default Settings   87

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Least Cost Routing-Carrier Pre-Selection

What's this?

This feature is more suitable for country code Italy, Spain and USA/Canada. In India the service provider for local calls and long distance calls is the same. However, in Italy and other western countries this is not true. In these countries, the service providers for short distances (Local area) and long distances are different unlike India, where the service provider is the same for short and long distances. For e.g. in India SP1, SP2, SP3, etc. provide both short distance as well as long distance services. In simple words, a customer stationed at City A and has a SP1 connection can call a friend in city A using SP1 services. Also he can call another friend in city B using SP1 services because SP1 also provides services in City B.
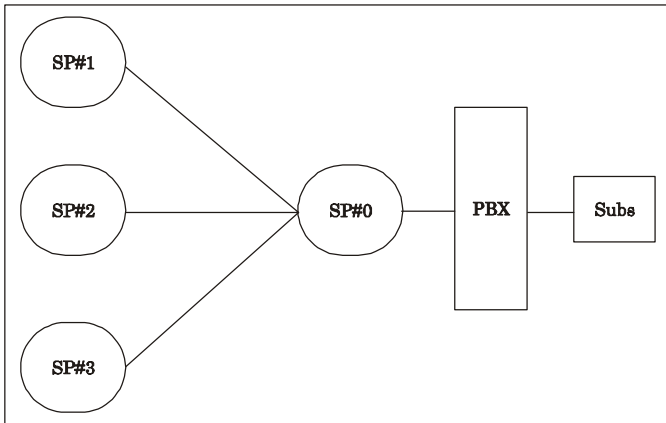
However this is not true in country code USA/Canada, Spain and Italy. A user is a subscriber of SP1 and has trunk lines of SP1 only. He can call other subscriber in the local area simply by grabbing a trunk. However, when he wants to make a long distance call, he needs to dial a string (Called CPS string) to select a carrier (trunk) of the desired long distance Service Provider. That is accessing a secondary service provider by dialing a short code. He can make the long distance call using SP1, SP2 or SP3 and to select either of these SPs, he needs to dial a CPS string. Once the trunk of the secondary SP is selected all your calls are re-routed to your secondary SP's network.

How to program?

Step 1. Enable/disable CPS on a TAG using command **3450.**
Step 2: Program the CPS string table for every TAG **3451** and **3452.**

Step 1

Use the following command to enable/disable CPS for a trunk access group:
3450-TAG-Code-#*
Where,
TAG is from 1 to 8.

Code	Meaning
0	CPC OFF
1	CPC ON

Use the following command to enable/disable CPS on all trunk access groups:
3450-*-Code-#*

Step 2

Each TAG can have a CPS string table with 16 entries. That means 8 such tables one each for each TAG can be accommodated.
The complete CPS string table looks like the figure below:

Index	Destination	CPS String
01	DDDD...	DDDD...
02	DDDD...	DDDD...
:	DDDD...	DDDD...
16	DDDD...	DDDD...

The CPS string table for a Trunk Access Group is created in two steps:
• Program the Destination numbers in the CPS string table for a trunk access group.
Use the following command to program the destination numbers in the CPS string table for a trunk access group:
3451-TAG-Index-Destination Number-#*
Where,
TAG is from 1 to 8
Index is from 01 to 16
Destination Number is of maximum 08 digits.
• Program the CPS string in the CPS string table for a trunk access group.
Use the following command to program the CPS strings in the CPS string table for a trunk access group:
3453-TAG-Index-CPS String-#*
Where,
TAG is from 1 to 8
Index is from 01 to 16

CPS String is of maximum 08 digits. If the CPS string is less than 08 digits, than terminate the CPS string by #*. A special digit '#3' can be a part of the CPS string to insert pause. The pause generated is the same as pause timer programmed for the system.

Default Commands:

Default the destination number in CPS string table	**3452-TAG-#***
Default the CPS strings in CPS string table	**3454-TAG-#***

Relevant Topics:

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Least Cost Routing-Number and Time Based

What's this?

This logic is used when the rates of service providers differ both time wise and number wise. For example, SP1 provides cheaper rates for a call made from City A to City B during peak hrs (09.00 to 22.00) as compared to SP2. Whereas SP2 provides cheaper rates for a call made from City A to City B during off peak hours (22.00 to 09.00). This logic uses Store and Forward dialing. In Store and Forward dialing, the digits are first stored in a memory location and then these are dialed on the trunk.

How to program?

Step 1: Decide the type of LCR to be programmed to a trunk access group viz. No LCR, Time zone wise LCR, Number wise LCR or Mixed LCR using command *3401.*

Step 2: Assign the service provider code to each trunk using command *3402.*

Step 3: Program the LCR table as per the LCR type selected using commands *3432, 3433* and *3434.*

Step 1

Decide the LCR type i.e. whether no LCR, Time wise LCR, Number wise LCR or Mixed LCR.
Use following command to program LCR type for a trunk access group:
*3401-Trunk Access Group-LCR Type-#**
Trunk Access Group is from 1 to 8.

LCR Type	Meaning
0	No LCR
1	Timezone wise LCR
2	Number wise LCR
3	Mixed LCR (Timezone wise + Number wise)

Use following command to program LCR type for all Trunk Access Groups:
3401--LCR Type-#**

Step 2

Use following command to assign service provider code to each trunk:
*3402-Trunk-SP Code-#**
Where,
Trunk is a software port from 1 to 6
SP Code is from 1 to 4

Use following command to assign same service provider to all trunks:
3402--SP Code-#**

Step 3

If mixed LCR is to be used, make following table on a plain paper.

Number Index/ Timezone Index	1 (022)	2 (011)
1 (08.00 to 12.00)	1,2,3,4	4,1,3,2
2 (12.00 to 16.00)	3,2,1,4	1,2,3,4

Suppose we have four basic service providers viz. SP1, SP2, SP3 and SP4.

For Area code 022 (Number String 01) in time zone 08.00-12.00, (time zone 1), SP1 provides cheapest services followed by SP2, SP4 and SP3. Then the first entry in first row would be as shown.
For Area code 011 (Number String 02) in time zone 08.00-12.00 (time zone 1), SP4 provides cheapest services followed by SP1, SP3 and SP2, then the second entry in first row would be as shown.

For Area code 022 (Number String 01) in time zone 12.00-18.00 (time zone 2), cheapest services are offered by SP3 followed by SP2, SP1 and SP4. The 1st entry in 2nd row would be as shown in the table.

Use following command to program Time Zone Index for Mixed LCR:
*3432-Time Zone Index-Start Time-End Time-#**
Where,
Time Zone Index is from 1 to 4
Start Time is the time in HH:MM format when the Time zone starts.
End Time is the time in HH:MM format when the Time zone ends.
By default, Time zone is 00.00 to 23.59

The time zone table looks like:

Timezone Index	Start Time	End Time
1	HH:MM	HH:MM
2	HH:MM	HH:MM
3	HH:MM	HH:MM
4	HH:MM	HH:MM

Use following command to program Number Index for Mixed LCR:
*3433-Number Index-Number String-#**
Where,
Number Index is from 01 to 10
Number string can be a complete telephone number, a truncated telephone number or an area code. Number string is of maximum 16 digits.
By default, Number String is 'Blank'.

The number string table look like:

Number Index	Number String
01	(16 digits allowed)
02	(16 digits allowed)
:	:
10	(16 digits allowed)

Use following command to program the **Service Provider (SP)** sequence for each Time Zone:
3434-Number Index-Time Zone Index-SP1-SP2-SP3-SP4-#
Where,
Number Index is from 01 to 10
Time Zone Index is from 1 to 4
SP1: Cheapest service provider
SP2: Cheaper service provider
SP3: Cheap service provider
SP4: Costly service provider
Please note that it is mandatory to complete this command. If fewer number of service providers are used, then the repeat the cheapest service provider for remaining SPs.

Use following command to default Mixed LCR table:
3431-#
By default, Number Strings is 'Blank'.
By default, Time Zone is 00:00 to 23:59
By default, Service Provider sequence is from 1 to 4.

Default mixed LCR table for India is shown below:

Number Index/ Timezone Index	B	B	....	B
00:00 to 23:59	1 to 4	1 to 4	**....**	1 to 4
00:00 to 23:59	1 to 4	1 to 4	**....**	1 to 4
00:00 to 23:59	1 to 4	1 to 4	**....**	1 to 4
00:00 to 23:59	1 to 4	1 to 4	**....**	1 to 4

Default mixed LCR table for Italy and USA/Canada/Spain is shown below:

Index	Number	Service Providers			
		TZ1	TZ2	TZ3	TZ4
01	0	1111	1111	1111	1111
02	3	2111	2111	2111	2111
03	00	3111	3111	3111	3111
04		1111	1111	1111	1111
:	:	:	:	:	:
10		1111	1111	1111	1111

Example:
- Three trunks, one trunk of SP1, one of SP2 and one of SP3 are available.
- SP1 is cheapest for calls from City A(022) and City B(011) followed by SP3 and SP2 in the time zone 08:00-20:00.

- SP2 is cheapest for calls City A and City B followed by SP1 and SP3 in the timezone 20:00-08:00.

Use following command to assign SP numbers to each trunk:
3402-1-1-#
3402-2-2-#
3402-3-3-#

Use following command to define LCR type:
3401-1-3-#

Use following command to program time zone index in mixed LCR:
3432-1-0800-2000-#
3432-2-2000-0800-#

Use following command to program number index in mixed LCR:
3433-01-022-#

Use following command to assign SPs for respective number wise & zone wise LCR:
3434-01-1-1-3-2-1-#
3434-01-2-2-1-3-2-#

The table will look as below:

Number Index/ Timezone Index	022	B	....	B
08:00 to 20:00	1,3,2,1	1,2,3,4	**....**	1,2,3,4
20:00 to 08:00	2,1,3,2	1,2,3,4	**....**	1,2,3,4
00:00 to 23:59	1,2,3,4	1,2,3,4	**....**	1,2,3,4
00:00 to 23:59	1,2,3,4	1,2,3,4	**....**	1,2,3,4

Important Point:
- If no match is found in the table the first entry in the table is used.

Relevant Topics:
1. Least Cost Routing-An Introduction   131
2. Default Settings   87

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Least Cost Routing-Number Based

What's this?

This logic is used when different SPs provides different rates for different areas, different phone numbers. For example, SP1 provides cheaper rates for a call made from City A to City B as compared to SP1. This logic uses Store and Forward dialing. In Store and Forward dialing, the digits are first stored in a memory location and then these are dialed on the trunk.

How to program?

Step 1: Decide the type of LCR to be programmed to a trunk access group viz. No LCR, Time zone wise LCR, Number wise LCR or Mixed LCR using command **3401.**

Step 2: Assign the service provider code to each trunk using command **3402.**

Step 3: Program the LCR table as per the LCR type selected using commands **3422 and 3423.**

Step 1

Decide the LCR type i.e. whether no LCR, Time wise LCR, Number wise LCR or Mixed LCR.
Use following command to program LCR type for a trunk access group:
3401-Trunk Access Group-LCR Type-#*
Trunk Access Group is from 1 to 8.

LCR Type	Meaning
0	No LCR
1	Timezone Wise LCR
2	Number Wise LCR
3	Mixed LCR (Timezone Wise + Number Wise)

Use following command to program LCR type for all Trunk Access Groups:
3401-*-LCR Type-#*

Step 2

Use following command to assign service provider code to each trunk:
3402-Trunk-SP Code-#*
Where,
Trunk is a software port from 1 to 6
SP Code is from 1 to 4

Use following command to assign same service provider to all trunks:
3402-*-SP Code-#*

Step 3

If Number wise LCR is to be used, make following table on a plain paper.

Number Index	Service Providers in hierarchical order of increasing cost			
01	1	3	4	2
02	2	1	3	4
: :	:	:	:	:
10	B	B	B	B

Here 'B' is Blank
In the above table for Number Index (number string in Number Index 1 can be a complete telephone number, a truncated number or an area code), program the service providers in hierarchical order of increasing cost. For example, if we have four service providers viz. SP1, SP2, SP3 and SP4 and if for area code 022, the services of SP1 are cheapest followed by SP3, SP4 and SP2 then the first row in the table would appear as shown.

Use following command to program Number Index:
3422-Number Index-Number String-#*
Where,
Number Index is from 01 to 10
Number string can be a complete telephone number, a truncated telephone number or an area code. Number string is of maximum 16 digits.
By default, no number string is programmed in Number Index.

The number string table looks like:

Number Index	Number String
01	(16 digits allowed)
02	(16 digits allowed)
:	:
10	(16 digits allowed)

Use following command to program the **Service Provider (SP)** sequence for the each number index:
3423-Number Index-SP1-SP2-SP3-SP4-#*
Where,
Number Index is from 01 to 10
SP1: Cheapest service provider
SP2: Cheaper service provider
SP3: Cheap service provider
SP4: Costly service provider
Please note that it is mandatory to complete this command. If fewer number of service providers are used, then repeat the cheapest service provider for remaining.

Use following command to default Number wise LCR table:
3421-#*

The default number wise LCR table for India would look like:

No. Index	SPs in hierarchical order of increasing cost			
B	1	2	3	4
B	1	2	3	4
: :	: :	: :	: :	: :
B	1	2	3	4

The default number wise LCR table for Italy and USA/ Canada/Spain would look like:

Index	Number	Service Provider
01	0	1111
02	3	2111
03	00	3111
04		1111
:	:	:
10		1111

Example:
- Three trunks, one trunk of SP1, one of SP3 and one of SP2 are connected to VisionUltra.
- SP2 is cheapest for City A(022)-City B calls followed by SP3 and SP4.
- SP4 offers cheapest service for City B(011)-City A calls followed by SP2 & SP3.

Use following command to assign SP numbers to each trunk:
*3402-1-1-#**
*3402-2-2-#**
*3402-3-3-#**

Use following command to program number wise LCR type:
*3401-1-2-#**

Use following command to program the number strings in number index:
*3422-01-022-#**
*3422-02-011-#**

Use following command to assign the SPs for respective numbers:
*3423-01-1-2-3-1-#**
*3423-02-3-1-2-3-#**

With above programming the Number LCR table will look as below:

No. Index	SPs in hierarchical order of increasing cost			
022	1	2	3	1
011	3	1	2	3
B	1	2	3	4
:	:	:	:	:
B	1	2	3	4

Important Point:
- If no match is found in the table the first entry in the table is used.

Relevant Topics:
1.
2.

=X=X=

Least Cost Routing-Time Based

What's this?

This logic is used when different SPs provide different rates during different timings of the day. This logic uses online dialing. In online dialing, the digits dialed by the user are directly passed on the trunk.

How to program?

Step 1: Decide the type of LCR to be programmed to a trunk access group viz. No LCR, Time zone wise LCR, Number wise LCR or Mixed LCR using command *3401.*
Step 2: Assign the service provider code to each trunk using command *3402.*
Step 3: Program the LCR table as per the LCR type selected using commands *3412* and *3413.*

Step 1

Decide the LCR type i.e. whether no LCR, Time wise LCR, Number wise LCR or Mixed LCR.
Use following command to program LCR type for a trunk access group:
*3401-Trunk Access Group-LCR Type-#**

Trunk Access Group is from 1 to 8.

LCR Type	Meaning
0	No LCR
1	Timezone Wise LCR
2	Number Wise LCR
3	Mixed LCR (Timezone Wise + Number Wise)

Use following command to program LCR type for all Trunk Access Groups:
3401--LCR Type-#**

Step 2

Use following command to assign service provider code to each trunk:
*3402-Trunk-SP Code-#**
Where,
Trunk is a software port from 1 to 6.
SP Code is from 1 to 4.

Use following command to assign same service provider code to all trunks:
3402--SP Code-#**

Step 3

If time wise LCR is to be used make following table on a plain paper.

Timezone Index	Service Providers in hierarchical order of increasing cost			
1	3	2	1	4
2	3	2	4	1
3	2	3	4	1
4	1	2	3	4

In the above table for different time zones, program the service providers in hierarchical order of increasing cost.

For example, If we have four service providers SP1, SP2, SP3 and SP4 and if for time zone 1 (08.00 to 22.00) the services of SP3 are cheapest followed by SP2, SP1 and SP4 then the first row in the table would appear as shown in the table.

Use following command to program Time Zone Index:
*3412-Time Zone Index-Start Time-End Time-#**
Where,
Time Zone Index is from 1 to 4
Start time is the time in HH:MM format when the time zone starts.
End Time is the time in HH:MM format when the time zone ends.

The Time Zone table looks like:

Timezone Index	Start Time	End Time
1	HH:MM	HH:MM
2	HH:MM	HH:MM
3	HH:MM	HH:MM
4	HH:MM	HH:MM

Use following command to program the **Service Provider (SP)** sequence for the each Time Zone:
*3413-Time Zone Index-SP1-SP2-SP3-SP4-#**
Where,
Time Zone Index is from 1 to 4
SP1: Cheapest service provider
SP2: Cheaper service provider
SP3: Cheap service provider
SP4: Costly service provider
Please note that it is mandatory to complete this command. If fewer number of service providers are used, then repeat the cheapest service provider for remaining SPs.

Use following command to default Time Zone wise LCR table:
*3411-#**
By default, Time Zone is 00:00 to 23:59
By default, Service Provider sequence is from 1 to 4

The default time zone wise LCR table would look like:

Timezone Index	Service Providers in hierarchical order of increasing cost			
00:00 - 23:59	1	2	3	4
00:00 - 23:59	1	2	3	4
00:00 - 23:59	1	2	3	4
00:00 - 23:59	1	2	3	4

Example:
- Three trunks viz. One trunk of SP1, one of SP3 and one of SP2 are connected to the VisionUltra.
- SP1 is cheapest during 08.00 to 16.00 followed by SP3 and SP2.
- SP3 is cheapest during 16.00 to 20.00 followed by SP1 & SP2.
- SP2 is cheapest for 20.00 to 23.00 followed by SP1 & SP3.
- SP1 is cheapest for 23.00 to 08.00 followed by SP2 & SP3.

Use following command to assign SP number to trunks:
3402-1-1-#*
3402-2-2-#*
3402-3-3-#*

Use following command to program time zone LCR type for the trunk access group:
3401-1-1-#*

Use following command to program LCR time zones:
3412-1-0800-1600-#*
3412-2-1600-2000-#*
3412-3-2000-2300-#*
3412-4-2300-0800-#*

Use following commands to assign service providers for the respective time zone:
3413-1-1-3-2-1-#*
3413-2-3-1-2-3-#*
3413-3-2-1-3-2-#*
3413-4-1-2-3-1-#*

With above programming the time zone LCR table will look as below:

Timezone Index	Service Providers in hierarchical order of increasing cost			
08:00 - 16:00	1	3	2	1
16:00 - 20:00	3	1	2	3
20:00 - 23:00	2	1	3	2
23:00 - 08:00	1	2	3	1

Important Point:
- If no match is found in the table the first entry in the table is used.

Relevant Topics:

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Live Call Supervision

What's this?

A person with higher hierarchy in an organization can know; to which destination (external) his subordinate is making a call.

How it works?

The number dialed by a station is stored in the system's memory. When the boss requests live call supervision for a station, the system retrieves the last external number dialed by the station (which is to be supervised) and presents it on the LCD of the requesting station.

How to use it?

1	Lift the handset.	Dial tone
2	Dial **199-Station.**	Confirmation tone
3	Disconnect.	Station rings. The number is displayed on the LCD of the CLI phone.
4	Lift the handset.	Dial tone

How to program?

Live Call Supervision is a programmable feature. Please refer "Class of Service (COS)" for details on how to allow Live Call Supervision to a user.

Important Points:
• This feature can be used even when the station that is to be supervised is in speech with an external party.
• This feature is supported with CLI phone only.
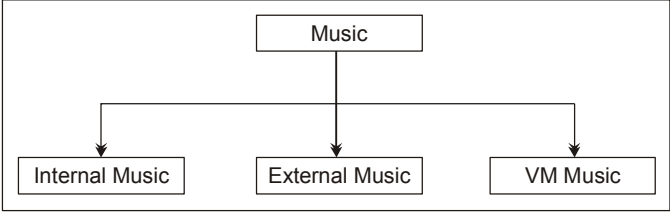
Relevant Topics:
1. Station Parameters   175
2. Class of Service (COS)   62

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Music on Hold

What's this?

Whenever a person is put on hold while his call is being transferred or otherwise, the person gets music. VisionUltra supports three types of music sources.
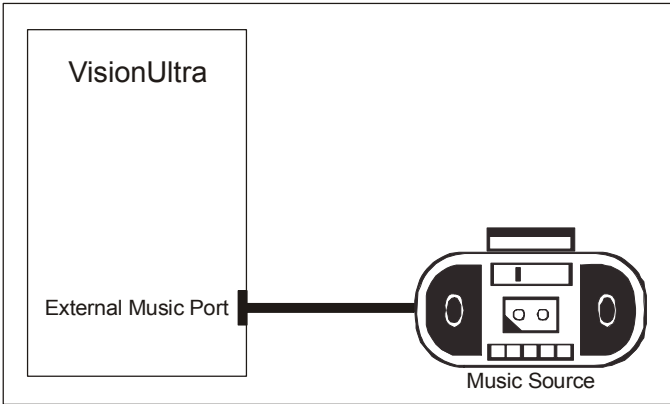

Internal Music Source
VisionUltra offers a 16 tune hold on music.

External Music Source
A hold-on music of your choice can be played while you keep a person on hold. The VisionUltra supports an external music interface marked 'Music'. This interface can handle un-amplified, isolated, analog speech signal from an external music source.

The specifications of an external music interface are given below:

Specifications	Value
Interface Type	Audio Signal
Frequency	300Hz to 3400Hz
Maximum Voltage	0.707 Vrms
DC Bias	Not more than 10V DC
Isolation	Internal Transformer
Source Impedance required	100 Ohms

Any external device meeting above specifications can be connected with the system. The volume must be set to a level such that the music is not very low or very loud. The volume of the signal coming from this device must never increase beyond the specified limits.

Caution!

The external music port is an audio input port and no electrical signal of higher value than the specified limit should be applied to this port. This may result in permanent damage to the system. Matrix warranty does not cover damages resulting from improper use.

VM Music
A music of your choice can be recorded in the Voice Module and the same can be played while keeping a trunk/station on hold.

How to program?

Use following command to select music source:
1131-Source-#*
Where,

Source	Meaning
1	Internal Preprogrammed Chip (Fixed)
2	Voice Module
3	External (AIP)

By default, Music Source is '1'.

Important Points:
- On inserting the audio signal jack of the external music source, the internal hold on music stops and the hold party gets external music. The hold party can be trunk or a station.
- To know programming details, please refer "Configuration Reports".

Relevant Topic:
1. Voice Message Applications   200

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Operator

What's this?

- Operator is a person who handles more number of calls at a time. She acts as a link between the caller and the called person.
- Any station can be interpreted as an Operator.

How it works?

- When any station presses '9' the system diverts the call to the operator. The Operator access code is region dependent and changes along with region code. Please refer the topics 'Country Code' and 'Default Settings' for more details.

How to program?

Use following command to program the operator station:
1101-Station-#*
Where,
Station is from 01 to 17
By default, Operator Station is 01.

Example:
Program station 28 (software port 08) as operator.
1101-08-#*

Important Point:
- To know programming details, please refer "Configuration Reports".

Relevant Topics:
1. Station Parameters   175
2. Country Code   86
3. Default Settings   87

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Paging

What's this?

- A station can deliver a message to a mass of people just by lifting your handset and dialing a code.
- This feature is helpful when it is required to call few people for meeting.
- This feature is of great use in factories, offices, etc. where it is not feasible to provide a station to every individual. In such cases, if you need to call somebody you can just make an announcement naming him to come and see you or call you.
- This can also be used for mass communication.

How to make connection for the PAS port?

The VisionUltra supports one audio output port for personal address/public address.
- If personal address is to be made, a speaker of 4 Ohms/8 Ohms can be directly connected to the PAS port.
- Connect a good quality amplifier and matching speaker to the audio port marked PAS as shown in the figure given below:
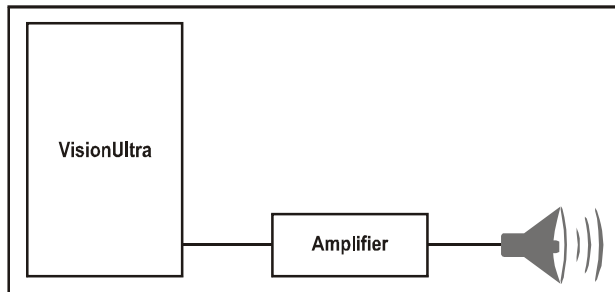
- Keep the distance between the PBX and the amplifier to reduce noise pick up.
- Use shielded cable for connecting the system with the amplifier
- The specifications of the PAS port are given below:

Specification	Value
Interface Type	Audio Signal
Frequency	300Hz to 3400Hz
Maximum Voltage	0.707 Vrms across 600 Ohms
Termination Required	600 Ohms
Isolation	Transformer

How to use it?

1	Lift the handset.	Dial tone
2	Dial *3998.*	Start Announcement.

Example:

To announce a message, dial 3998 from your station and start announcement.

How to program?

PAS is a programmable feature. Please refer 'Class of Service (COS)' for details on how to allow PAS to a user.

Important Points:
- It is possible to hold PAS activity and attend another call.
- It is possible to have conference with PAS port as one of the parties.
- It is possible to toggle between paging port and another party (trunk or station).

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Power Down Mode

What's this?

During power failure, it is desirable to have trunk lines available directly on few stations. This is known as Power Down Mode. When mains power returns, normal operation resumes. Change over from normal to power down operation and back is automatic.

During power failure condition, calls can be made from these stations. Also the incoming calls lands on respective stations. This way, your link with the outside world is retained even during dark-outs.

How it works?

Following block diagram shows the power fail transfer function for one port:

Figure 1: Normal Condition

Normal Condition
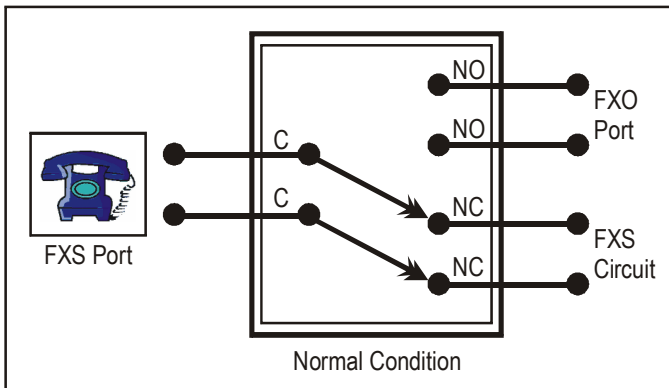
Figure 2: Power Fail Condition

Power Fail Condition
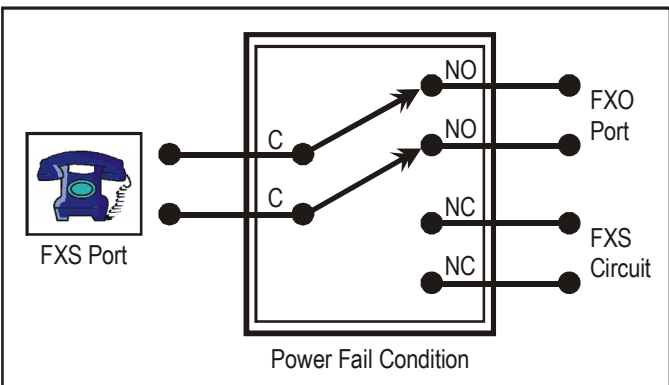
Important Points:
- During power down mode, by default, Trunk 1 gets connected to station 21, Trunk 2 gets connected to station 22, whereas Trunk 3 gets connected to station 23.

Trunk	Power Down Station
CO1	21
CO2	22 and Data Port
CO3	23

Trunk	Power Down Station
CO4	24
CO5	25
CO6	26

- At the time of power failure/power return ongoing calls will be disconnected.

Relevant Topics:
1. Installing the System   14
2. Appendix B: Troubleshooting   211

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Privacy

What's this?

While two stations are in speech, it is desired that no third person can listen their talk i.e. privacy of their conversation is maintained.

However if few important stations are allowed to use features like interrupt request, barge-in and raid, they can intrude other's conversation. Also if DID is activated, outside caller can reach any station or if there is a call from another trunk line, it will interrupt your conversation by giving intrusion tone. Some times this is very annoying and undesirable. VisionUltra provides privacy against all these types of intrusions. This is known as Privacy.

There are four types of intrusions against whom a user might wish privacy:
*   Privacy from Interrupt Request and Barge-In
*   Privacy from Raid
*   Privacy from Trunk call intrusion
*   Privacy from DID call

These four types are provided as programmable features in the Class of Service groups. A user can be assigned any combination of above four privacy flags by selecting an appropriate Class of Service group. If it is required that no other station can raid you then the corresponding feature i.e. Privacy-Raid in the Class of Service should be enable. Likewise, other feature should be enable or disable as per the requirement.

How it works?

Following flow charts depicts the series of events in which it works.

Privacy from Interrupt/Barge-In/Raid

Privacy From Trunk Call Beeps

```
        Start
          │
          ▼
Station A and Station
B are in speech
          │
          ▼
Fresh call arrives on trunk. Station A is
the fist destination for this trunk.
          │
          ▼
     Is station A
     programmed with ──Yes──► Station A is not interrupted.
     Privacy against trunk     System lands the call on
     call beeps?               next landing station in the
          │                    trunk landing group.
          No                          │
          │                           ▼
          ▼                          End
System gives beeps to station
A for trunk landing ring timer.
          │
          ▼
     Does Station
     A attends the ──Yes──► System routes the call
     trunk call              to the next destination
          │                  in trunk landing gorup
          No                        │
          │                         ▼
          ▼                        End
Station A gets beeps in his
speech
          │
          ▼
Logic of Interrupt Request,
Barge-In and Raid follows here
          │
          ▼
         End
```
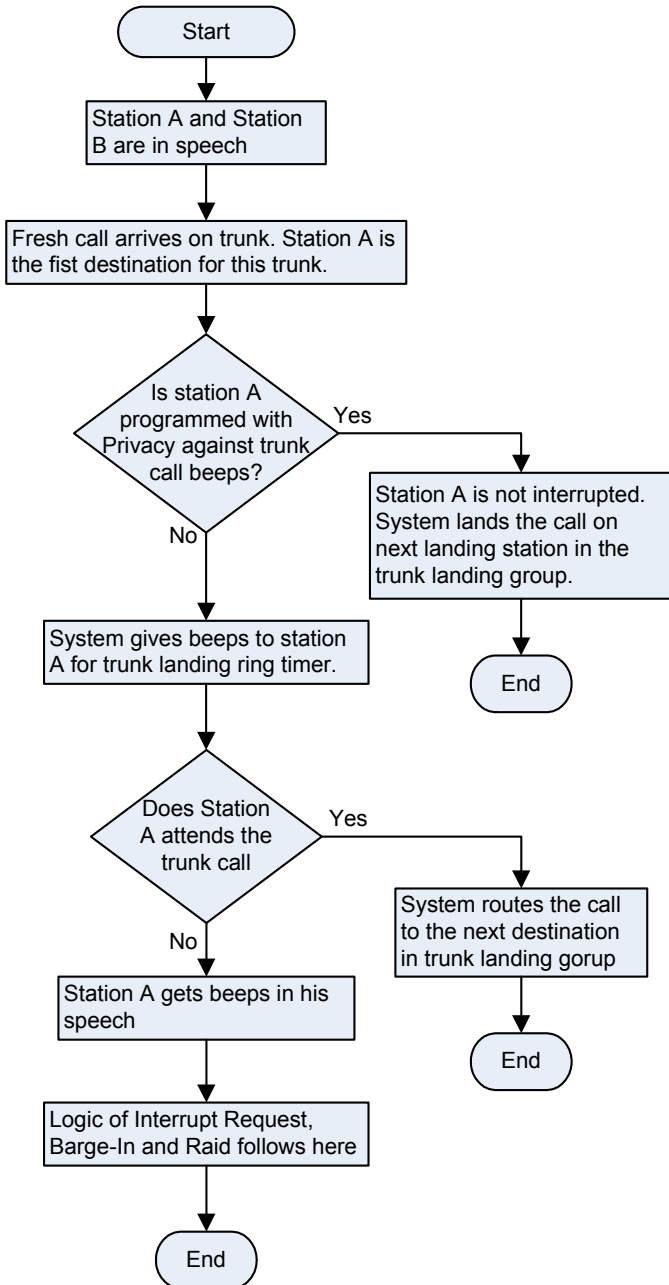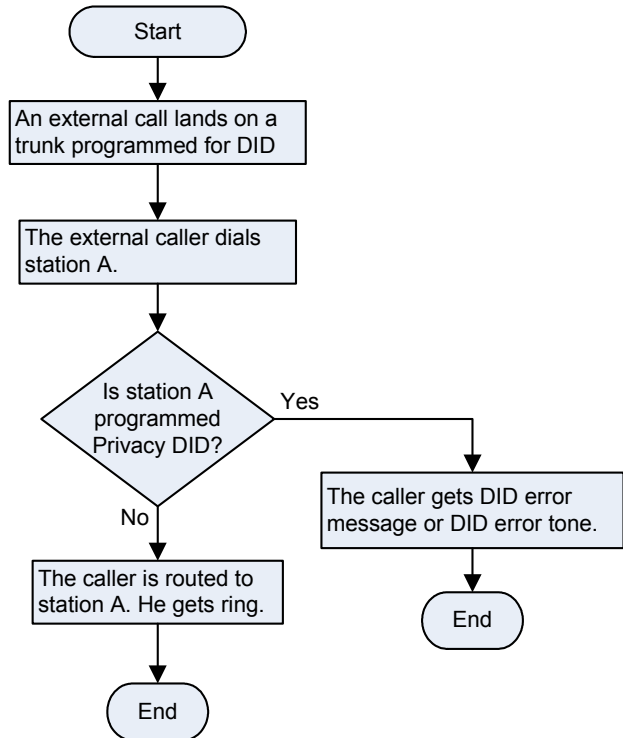
Privacy from DID calls

```
        Start
          │
          ▼
An external call lands on a
trunk programmed for DID
          │
          ▼
The external caller dials
station A.
          │
          ▼
     Is station A
     programmed ──Yes──► The caller gets DID error
     Privacy DID?          message or DID error tone.
          │                       │
          No                      ▼
          │                      End
          ▼
The caller is routed to
station A. He gets ring.
          │
          ▼
         End
```

How to program?

Call Privacy is a programmable feature. Please refer Class of Service (COS) for details on how to allow Call Privacy to a user.

Example:
Program station 21 such that no other station can raid it. Assign it a Class of Service group with call Privacy-Raid enabled.

Relevant Topic:
1. Class of Service (COS)   62

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Programming the System

What's this?

VisionUltra is a flexible system and can be programmed to suit your needs. Programming can be done at three levels:
- **System Engineer Level**
  At this level, System Engineer does the programming. This is called System Engineer mode.
- **System Administrator Level**
  At this level, System Administrator does the programming. This is called System Administrator mode.
- **User Level**
  At this level, User does the programming for himself for features like Alarms, Personal memory. For more details, please refer respective sections.

VisionUltra has fixed number of station ports and trunk ports. Each port has a hardware port and a software port associated. The software port of the station has a flexible number associated with it.
- All the programming either from SE/SA mode is based on software port. Whereas the user programming like Personal Memory, Dynamic Lock, etc. is based on flexible number.
- Hardware port number is not used anywhere.
- The relation between hardware and software port is fixed and not programmable.
- The flexible number of the software port is programmable.
- The following table shows the relationship.

Flexible Number (default)	Hardware Port Number	Software Port Number
21	01	01
22	02	02
23	03	03
24	04	04
25	05	05
26	06	06
27	07	07
28	08	08
29	09	09
30	10	10
31	11	11
32	12	12
33	13	13
34	14	14
35	15	15
36	16	16
37	17	17

Steps for programming

It is advisable to program the system in following hierarchy. One may skip programming of undesirable features.
- Real Time Clock
- Time Table
- Flexible Numbers
- Class of Service (COS)
- Trunk Access Groups
- Toll Control
- Call Pick Up
- Station Group
- Privacy
- Trunk Parameters
- DID
- LCR
- Trunk Landing Destinations
- Operator
- SMDR
- DISA
- Voice Message Applications
- Department Call
- Paging
- External Call Forward

Important Points:
- Programming can be done at the site from any station without opening the system. However, the station from which programming is to be done should access to programming mode. Please refer 'Class of Service (COS)' for more details.
- Station 21 is always given access to programming mode.
- System can also be programmed from a remote end from anywhere in the world. For more details, please refer section 'Remote Programming'.
- Programming is accomplished by dialing separate codes (string of digits) for different settings. This eliminates need for entering long and confusing programming sequences. Programming commands are broken into two parts:
  - Codes
  - Values.
- The system continues to function normally even during programming. This allows the SE or SA to change the settings without disturbing any communication.
- The SE mode and the SA mode are password protected so that no other person can make any unauthorized alterations and subsequent misuse of features and facilities.
- Programming command can be issued from confirmation or error tone/message. While programming a valid command generates a confirmation message/tone and an invalid command generates an error message/tone. The SE/SA need not wait for the message/tone to be completed instead can go ahead with the next command.

• The Exit from Programming Mode command can also be issued from confirmation or error message/tone.

Relevant Topics:

=X=X=

Programming Using Jeeves

What's this?

Matrix supplies a customized, windows based software to program the VisionUltra known as Jeeves. The Jeeves is a flexible and friendly tool with mouse operated GUI.

Jeeves supports following functions:
- Single command programming
- Storing and retrieval of Customer profile.
- Retrieval of existing configuration of the VisionUltra.
- Recording Voice Guidance messages for both System and User.

How to program?

Use following command to enable/disable Jeeves:
1108-Code-#*
Where,

Code	Meaning
0	Disable
1	Enable

By default, Jeeves is enabled.

- Enabling Jeeves means the COM port is assigned to Jeeves.
- Once Jeeves is enabled, the COM port is marked busy for other processes like configuration reports, SMDR-IC online.
- It is required to disable Jeeves and then assign the COM port to generate a configuration or SMDR report.

How to generate SMDR Report?

- Select generate SMDR report.
- Click on 'Capture Report'.
- Jeeves opens Windows dialog box for selecting a file.
- Select a file.
- The system sends 'Start Report' command to the text format.
- Visual message is displayed showing that activity is going on.

Relevant Topics:

=X=X=

Programming using Phone Wizard

What's this?

- Matrix supports a special mode for quickly programming some of the Basic Features like Setting Current Date, Setting Current Time etc of VisionUltra. This is called Phone Wizard.
- These basic programming parameters and other parameters for advanced programming of features like DID, DISA, FAX Homing etc with default values are also provided in other chapters.
- Phone Wizard is applicable for the products used in India only.

How it works?

- Like normal programming method, it will be required to enter the programming mode to start programming. For Phone Wizard Programming mode, SE Programming should be allowed from COS (Class of Service).
- Wizard Programming mode can be entered from station-21 irrespective of COS.
- Wizard command can be of 2 or 3 digits.
- Each Wizard command is terminated by #*. Upon receiving #* the command is decoded further.
- Wizard Exit command is "*0-#**".

How to program?

- To enter programming mode, dial:
  1#98-SE Password
  Default password is '1234'.
- The wizard consists of commands for following parameters:
  - System Parameters
  - Extension Parameters
  - Trunk Parameters

System Parameters

Following parameters are programmed:
- Set Current Date
- Set Current Time
- Set New SE Password
- Set New SA Password

Set Current Date
Command: *27-Date-Month-Year-Day-#**
Where,
Date is from 01 to 31, Month is from 01 to12, Year is from 05 to 99 (Base year is '2000'. Enter '07' for year '2007').
Day is from 1 to 7 (1= Sunday).
For details, please refer chapter 'Real Time Clock'.

Example:
To program the system for date, day and year, say 14-12-2007, dial
*27-14-12-07-6-#**

Set Current Time
Command: *28-Hour-Minute-#**
Where,
Hour is from 00 to 23.
Minute is from 00 to 59.
Time has three parameters: hour, minute and seconds. Above command has only two parameters. Third parameter will be taken as '00' whenever new time is programmed.
For details, please refer chapter 'Real Time Clock'.

Example:
To program system for time of 17:00 hours, dial
*28-1700-#**

Set New SE Password
Command: *291-New SE Password-#**
Where,
SE Password is a 4 digits number string.
Valid digits are from 0-9. SE password can not be less than 4 digits.
For details, please refer chapter 'System Engineer Mode'.

Example:
To change the SE Password from '1234' to '6789', dial
*291-6789-#**

Set New SA Password
Command: *292-New SA Password-#**
Where,
SA Password is a 4 digits number string.
Valid digits are from 0-9. SA password can not be less than 4 digits.
For details, please refer chapter 'System Administrator Mode'.

Example:
To change the SA Password from '1111' to '3456', dial
*292-3456-#**

Extension Parameters

Following parameters are programmed:
- Class Of Service
- Toll Control
- Clear All The Features
- Flash Timer For Extension
- Flexible Number
- Operator Extension

Class of Service (COS)
Command: *31-Ext-Day COS Group-Night COS Group-#**
Command for All Extensions: *31-*-Day COS Group-Night COS Group-#**
Where,

Ext is flexible number of the extension. Flexible number is a 4 digit number string. Flexible number can be of 1, 2, 3 or 4 digits.
Day COS group is from 0 to 7.
Night COS Group is from 0 to 7.
For details, please refer chapter 'Class of Service (COS)'.
When above chapter is used, separate commands are used to assign Day time COS and Night time COS to a Station.

Example:
To assign COS group '4' for Day time and '6' for Night time to the Extension '23' use following command:
31-23-4-6-#*

Toll Control
Command: ***32-Ext-Day AL/DL List - Night AL/DL List-#****
Command for All extensions: ***32-*-Day AL/DL List - Night AL/DL List-#****
Where,
Ext is flexible number of the extension. Flexible number is a 4 digit number string. Flexible number can be of 1, 2, 3 or 4 digits.
Allowed List (AL) is from 0 to 7.
Denied List (DL) is from 0 to 7.
For details, please refer chapter 'Toll Control'.

Example:
To program AL/DL List number 3 for Day time and 4 for Night time for extension '25': dial
32-25-3-4-#*

Clear All the Features
Command: ***343-Ext-#****
Where,
Ext is the flexible number of a extension. Flexible number is a 4 digit number string. Flexible number can be of 1, 2, 3 or 4 digits.
This is same as using Access code '100'. But this code can be use by a user whereas command '343' can be used by SE only.
For details, please refer chapter 'Cancel Station Features'.

Flash Timer for Extension
Command: ***36-Ext-Flash Timer Count-#****
Command for All Extensions: ***36-*-Flash Timer Count-#****
Where,
Ext is the flexible number of an extension. Flexible number is a 4 digit number string. Flexible number can be of 1, 2, 3 or 4 digits.
Flash Timer Count is from 1 to 9 (Count 1 implies 100ms) i.e Flash Timer Count is 6 then Flash timer is 600ms.
For details, please refer chapter 'Flash Timer'.

Example:
To program Flash timer of 800ms for Extension 25, dial
36-25-8-#*

Flexible Number
Command: ***37-Software Port No.-Flexible Number-#****
Command to load Default Flexible Numbers: ***37-*-0-#****
Where,
Software Port number is from 00-16.
Flexible number is a 4 digit number string. Flexible number can be of 1,2,3 or 4. Two stations can not have the same flexible number.
For details, please refer chapter 'Flexible Numbers'.

Example:
To assign Software port number 13 for the Flexible number 25, dial
37-13-25-#*

Operator Extension
Command: ***391-Ext-#****
Where,
Ext is the flexible number of an extension. Flexible number is a 4 digit number string. Flexible number can be of 1, 2, 3 or 4 digits.
For details, please refer chapter 'Operator'.

Example:
To program extension 25 as an Operator Extension, dial
391-25-#*

Trunk Parameters
Following parameters are programmed:
- Enable/Disable and Dial Type
- DID On/Off
- Fax Homing On/Off
- DISA On/Off
- Trunk Landing Destination For Day Mode
- Trunk Landing Destination For Night Mode
- Fax Homing Destinations
- Hunt Timer
- Hunting Scheme

Enable/Disable and Dial Type
Command: ***41-Trunk-Enable/Disable Flag- Dial Type-#****
Command for All Trunks: ***41-*-Enable/Disable Flag- Dial Type-#****
Where,
Trunk is from 0 to 5.
Enable/Disable Flag
0 : Disable
1 : Enable

Dial type can be Pulse or Tone Type
0 : Pulse
1 : Tone.
For details, please refer chapter 'Trunk Parameters'.

Example:
To Enable the trunk-4 and program it for Dialing type as 'Pulse type', dial

41-4-1-0-#

DID On/Off
Command: *43-Trunk-Day Code-Night Code-#*
Where,
Trunk is from 0 to 5.
Day Code/Night Code
0 : Disable
1 : Enable
For details, please refer chapter 'Direct Inward Dialing (DID)'.

Example:
To program the Trunk-3 for not allowing DID facility in Day time and allowing only during Night time, dial
43-3-0-1-#

Fax Homing On/Off
Command: *44-Trunk-Day Code-Night Code-#*
Where,
Trunk is from 0 to 5.
Day code/Night Code
0 : Disable
1 : Enable
For details, please refer chapter 'Fax Homing'.

Example:
To enable the Fax Homing feature during day time and night time on a Trunk-4, dial
44-4-1-1-#

DISA On/Off
Command: *45-Trunk-Day Code-Night Code-#*
Where,
Trunk is from 0 to 5.
Day code/Night Code
0 : Disable
1 : Enable
For details, please refer chapter 'Direct Inward System Access (DISA)'.

Example:
To enable the DISA feature during day time and night time on a Trunk-4, dial
45-4-1-1-#

Trunk Landing Destination for Day Mode
Command: *47-Trunk-Ext1-Ext2-Ext3-Ext4-Ext5-#*
Command for All Trunks: *47-*-Ext1-Ext2-Ext3-Ext4-Ext5-#*
Where,
Trunk is from 0 to 5.
Ext1 to Ext5 are the flexible numbers. Flexible number is a 4 digit number string. Flexible number can be of 1, 2, 3 or 4 digits. Maximum five destinations can be programmed for one trunk.
For details, please refer chapters 'Station Group' and 'Trunk Landing Groups'.

Example:
To assign Extension numbers 21,22 and 23 as Trunk landing extensions for a Trunk 1 for Day Time, dial
47-1-21-22-23-#

Trunk Landing Destination for Night Mode
Command: *48-Trunk-Ext1-Ext2-Ext3-Ext4-Ext5-#*
Command for All Trunks: *48-*-Ext1-Ext2-Ext3-Ext4-Ext5-#*
Where,
Trunk is from 0 to 5.
Ext1 to Ext5 are the flexible numbers. Flexible number is a 4 digit number string. Flexible number can be of 1, 2, 3 or 4.
For details, please refer chapters 'Station Group' and 'Trunk Landing Groups'.

Example:
To assign Extension numbers 24, 25, as Trunk landing extensions for a Trunk 1 for Night Time, dial
48-1- 24-25-#

Fax Homing Destination
Command: *49-Trunk-Ext-#*
Where,
Trunk is from 0 to 5.
Ext is the flexible number of an extension. Flexible number is a 4 digit number string. Flexible number can be of 1,2,3 or 4 digits.
For details, please refer chapter 'Fax Homing'.

Example:
To assign Extension numbers 24, as Fax Homing Destination for a Trunk 1, dial
49-1-24-#

Hunt Timer
Command: *212-Timer-#*
Where,
Timer is from 01-99 seconds.
For details, please refer chapter 'Station Group'.

Notes:
• Hunt Timer is defined as the 'Time' for which an extension rings when a call lands on that station. It is similar to parameter, 'ring timer'. On expiry of this 'Time', next station of the Station Group assigned to the Trunk will ring.
• For example, maximum five stations can be programmed for one trunk. Now if the CO office gives ring for 90 seconds and the Hunt Timer programmed is 18 seconds; then all five stations will get ring for 18 seconds each. Refer command '46' for more detail. Default is 18 seconds.

Example:
To program the time for Hunt timer as 20 second, dial
212-20-#

Hunting Scheme
Command: **46-Trunk-Day Hunting Scheme-Night Hunting Scheme-#***
Command for All Trunks: **46-*-Day Hunting Scheme-Night Hunting Scheme-#***
Where,
Trunk is from 0 to 5.
Hunting Scheme is from 0 to 3.
0 : Hunting Off
1 : Round Robin
2 : Delayed Simultaneous
3 : Immediate Simultaneous
For details, please refer chapters 'Station Group' and 'Trunk Landing Groups'.

Different hunting schemes are explained below:
Hunting Off: The call lands on the programmed extension and only that extension would ring.

Round Robin: The call lands on the programmed extension, rings on that extension for time = hunt timer, then it goes to next defined extension, again rings there for time = hunt timer and so on. Hence this scheme is called round robin.

Delayed Simultaneous: The call lands on programmed extension, the extension rings for time = hunt timer. Then all the extensions starts ringing till the call is answered. The call can be answered from any of the ringing extensions.

Immediate Simultaneous: The call lands on programmed extensions and all the extensions start ringing simultaneously till the call is answered. Any extension can answer the call.

Example:
To program the system so that the call on trunk-1 lands in round robin fashion on programmed extensions during daytime and lands simultaneously on these extensions during night time, dial
*46-1-1-3-#***

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Raid

What's this?

- Without knowledge of the called busy station, one can enter his conversation by using this feature.
- The raided station does not come to know that it has been raided unless the person who has raided speaks something.

How to use it?

1	Lift the handset.	Dial tone
2	Dial **Station.**	Busy tone
3	Dial **5.**	Speech.
4	Start talking.	

How to program?

Raid is a programmable feature. Please refer Class of Service (COS) for details on how to allow Raid to a user.

Important Points:
- If a station is programmed with privacy against raid, it cannot be raided. Please refer "Privacy" for details.
- This feature is not allowed for the user of Italy/USA/ Canada/Spain.

CAUTION!
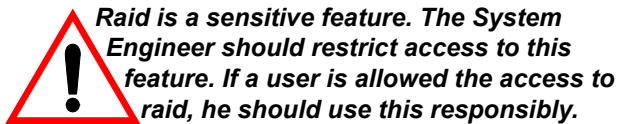
Raid is a sensitive feature. The System Engineer should restrict access to this feature. If a user is allowed the access to raid, he should use this responsibly.

Relevant Topics:

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Real Time Clock

What's this?

Various features and facilities provided by the VisionUltra use date and time parameters. Such facilities work properly only if the system is set with correct date and time values. These features are:

•   Alarms
•   SMDR
•   Time Table

The VisionUltra is equipped with built in Real Time Clock (RTC) circuit. This circuit is to be set once with current date, day and time values. It then updates itself regularly to keep track of the parameters. However, please note that the RTC circuit can drift over a long period. Hence it is recommended to check and reset RTC values at least once every month to correct this drift.

How to program?

Use following command to set date parameters:
1001-Date-Month-Year-#*
Where,
Date = 01 to 31 (leading zero must in case of single digit date)
Month = 01 to 12 (leading zero must in case of single digit month)
Year = Year in four digits from 2005 to 9999.

Use following command to set day of the week:
1002-Day-#*
Where,

Sun	Mon	Tue	Wed	Thu	Fri	Say
1	2	3	4	5	6	7

Use following command to set time:
1003-Hours-Minutes-Seconds-#*
Where
Hours = Hours in 24-hours format in two digits from 00 to 23 (leading zero must)
Minutes = Minutes in two digits from 00 to 59 (leading zero must)
Seconds=Seconds is in tow digits 00 to 59.

Example:
Set the system with 1st April 2003, Monday at 9:00 am. Use following commands:
1001-01-04-2003-#*
1002-2-#*
1003-090000-#*

The date format depends on the country code selected. For more defaults refer the topics '<u>Country Code</u>' and '<u>Default Settings</u>'.

Relevant Topics:

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Remote Programming

What's this?

One can program VisionUltra from any remote location. The remote user can program the system using the same commands as used by a normal local station to program the system.

How it works?
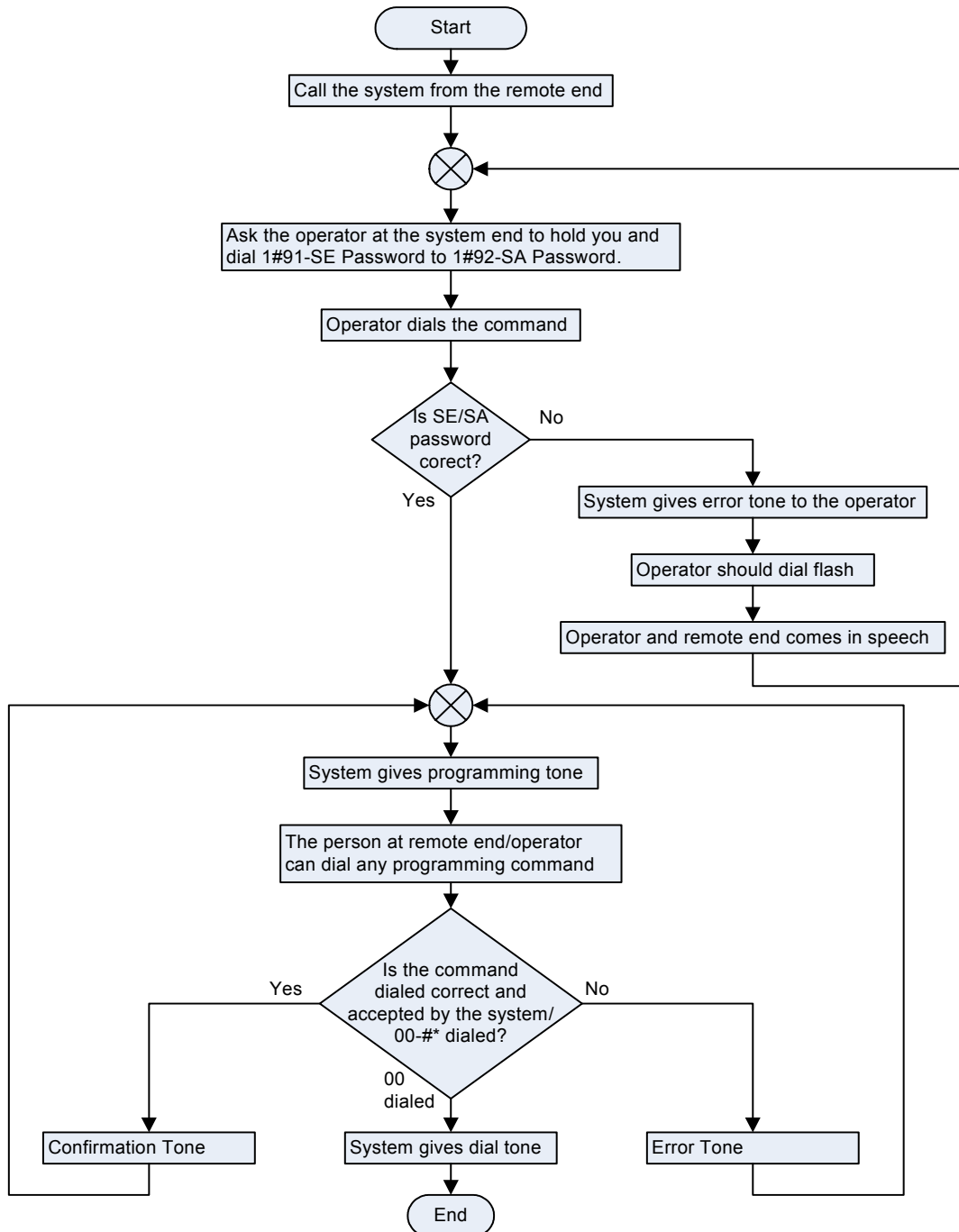
Following flow chart depicts the process:

Important Point:
- When '*00-#*' is dialed to come out of SE mode the remote end goes on hold. The operator at the system end should dial '*Flash*' to retrieve the remote end.

Relevant Topics:
1. Programming the System   147
2. Default Settings   87

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```
                    ┌──────────┐
                    │  Start   │
                    └────┬─────┘
                         ▼
        ┌────────────────────────────────────┐
        │ Call the system from the remote end │
        └────────────────┬───────────────────┘
                         ▼
                        (⊗)◄──────────────────────────┐
                         ▼                            │
   ┌──────────────────────────────────────────────┐  │
   │ Ask the operator at the system end to hold    │  │
   │ you and dial 1#91-SE Password to 1#92-SA      │  │
   │ Password.                                     │  │
   └──────────────────┬────────────────────────────┘ │
                      ▼                               │
         ┌──────────────────────────┐                │
         │ Operator dials the command│                │
         └────────────┬─────────────┘                │
                      ▼                               │
                 ╱ Is SE/SA ╲      No                 │
                ╱  password   ╲─────────┐             │
                ╲  corect?    ╱         ▼             │
                 ╲          ╱   ┌──────────────────────────────┐
                   Yes         │ System gives error tone       │
                    │          │ to the operator               │
                    │          └───────────┬──────────────────┘
                    │                      ▼                   │
                    │          ┌──────────────────────────┐    │
                    │          │ Operator should dial flash │   │
                    │          └───────────┬──────────────┘    │
                    │                      ▼                   │
                    │          ┌──────────────────────────────┐│
                    │          │ Operator and remote end       ││
                    │          │ comes in speech               ││
                    │          └───────────────────────────────┘
                    ▼
   ┌───────────────(⊗)◄──────────────────────────────────┐
   │                ▼                                      │
   │    ┌──────────────────────────────┐                  │
   │    │ System gives programming tone │                 │
   │    └──────────────┬───────────────┘                  │
   │                   ▼                                   │
   │    ┌──────────────────────────────┐                  │
   │    │ The person at remote end/      │                 │
   │    │ operator can dial any          │                 │
   │    │ programming command            │                 │
   │    └──────────────┬───────────────┘                  │
   │                   ▼                                   │
   │         ╱ Is the command ╲       No                   │
   │  Yes   ╱ dialed correct and ╲──────────┐              │
   │ ┌─────╱ accepted by the      ╲         │              │
   │ │     ╲ system/00-#* dialed? ╱         │              │
   │ │      ╲                    ╱          │              │
   │ │        00 dialed                     │              │
   │ │          │                           │              │
   ▼ ▼          ▼                           ▼
┌──────────┐ ┌──────────────────┐    ┌──────────┐
│Confirmation│ │System gives dial │    │Error Tone│
│Tone       │ │tone              │    └──────────┘
└──────────┘ └────────┬─────────┘
                      ▼
                ┌──────────┐
                │   End    │
                └──────────┘
```

Remote Status Display Port

What's this?

- The VisionUltra provides a special two wire port (Remote Status Display Port) to which the Remote Status Display Units (RSD) can be connected.
- The RSD port is standard push type MDF connector with 2.54 mm (0.1 Inch) pitch.
- The RSD port uses isolation transformer to protect the system from external voltages.

How it works?

- Remote Status Display port can send status information to 16 RSD units (All of them connected in parallel).
- VisionUltra provides individual interfaces (internally in parallel) for six RSD Units. If more than six RSD Units are to be connected then they have to be connected in parallel explicitly.
- VisionUltra can feed power to a maximum of 6 RSD units. If more than 6 RSD units are connected to the Remote Status Display Port, they should be powered externally with help of adapters (9 volts, 100mA).
- The status information is sent to the RSDs in DTMF format.
- Remote Status Display Port sends 25 status signals in all to each Remote Status Display Unit.
- These 25 status signals are elaborated in the following table:

Status Signal	No. of Signals
Day/Night Mode	1
SMDR Buffer	1
Trunks	6
Extensions	16
Door Phone Port/Station	1

- The LEDs on the Remote Display Unit effectively display status of extensions and trunks like dialing, busy, etc. the status of the SMDR buffer like 75% full, Completely full, Door Phone status etc.
- For the detailed response of the LEDs on the Remote Display Unit to the status signal send by the Remote Status Display Port, refer topic 'Remote Status Display Unit'.

Relevant Topics:

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Remote Status Display Unit

What's this?

- Remote Status Display Unit (RSD Unit) is a very useful unit for monitoring the status of trunks and stations of VisionUltra.
- The proprietary Remote Display Unit is a micro controller based, software driven terminal.
- It houses 26 LEDs in the front to display the status of different stations, trunks, door phone, buffer, time zone, etc.
- The VisionUltra provides a special port (Remote Status Display Port) to which the RSD units can be connected (for more details of the port, please refer the topic 'Remote Status Display Port').
- RSD (Remote Status Display) can be mounted on wall as well as placed on desk.
    - **Wall Mount RSD:** Please do not attach base plate to RSD unit to mount on wall. Mounting hole is provided on back top side of the RSD unit.

Front View of RSDU — Back View of RSDU
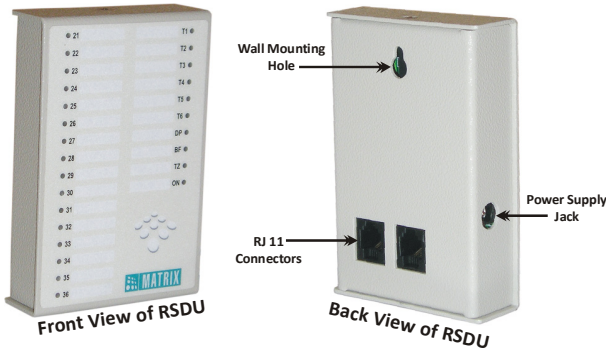
- **Desk Top RSD:** Please attach base plate to RSD unit at bottom by screws provided along with RSD Unit.

How to connect?

- Remote Status Display Unit (RSD Unit) is connected to Remote Status Display Port of VisionUltra using the RJ11 connector.

- VisionUltra can feed power to maximum 4 RSD units. If more than 4 RSD units are connected, they should be powered externally with help of adapters (9V, 100mA).
- The cable of the RSD Unit can be extended to maximum 500 meters (0.31 miles) if VisionUltra feeds power to the RSD unit.
- Multiple RSD units can be connected to this port in parallel.

Connection diagram of RSDU Port
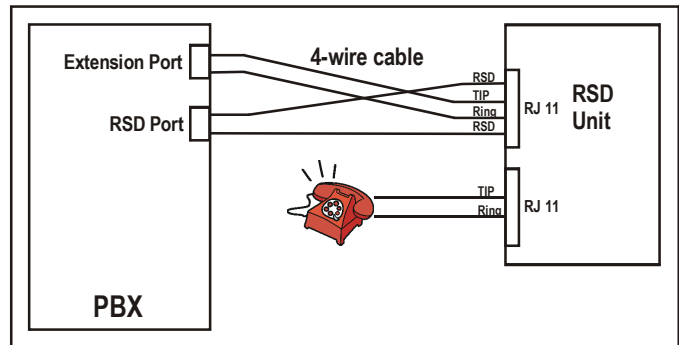
Connection to be made if multiple S Units are to be connected.
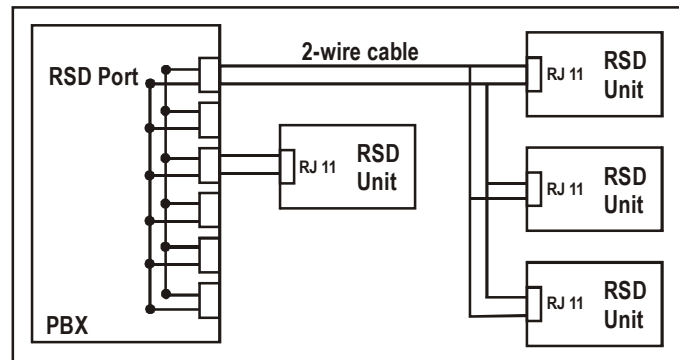
How it works?

- The VisionUltra informs the RSD Unit about the changes in the status of stations, trunks, buffer, timezone in form of DTMF signals (total 25 signals).
- A separate LED is assigned for its function. The table format below shows the LED association with each function.

Sr.	LED Label	Meaning
01	21	Station 21
02	22	Station 22
03	23	Station 23
04	24	Station 24
05	25	Station 25
06	26	Station 26

Sr.	LED Label	Meaning
07	27	Station 27
08	28	Station 28
09	29	Station 29
10	30	Station 30
11	31	Station 31
12	32	Station 32
13	33	Station 33
14	34	Station 34
15	35	Station 35
16	36	Station 36
17	T1	Trunk 1
18	T2	Trunk 2
19	T3	Trunk 3
20	T4	Trunk 4
21	T5	Trunk 5
22	T6	Trunk 6
23	DP	Door Phone
24	BF	Buffer
25	TZ	Day/Night Mode
26	ON	Power

- Based on signals received from VisionUltra the respective LED on the RSD changes its cadence. The tables below lists the LED response to the different signals received.

Trunk and Station Signals

LED Indication	Status
OFF	Idle
Flashing (10 pulses per second)	Dialing
Flashing (200ms ON, 400ms OFF)	Ringing
ON	Speech
Flashing (500ms ON, 500ms OFF)	Hold

Door Phone Signals

| LED Indication	Status
OFF	Idle
Flashing (10 pulses per second)	Visitor Calling
ON	Speech
Flashing (500ms ON, 500ms OFF)	Hold

Day/Night Mode Signals

LED Indication	Status
OFF	Day Mode
ON	Night Mode

SMDR Buffer Status Signals

LED Indication	Status
OFF	Buffer less than 75%
Fast Flash	Buffer between 75% and 100%
ON	Buffer Full

- At any instance of time all the RSD units show identical status information.
- If station 17 is used as a normal port, its status is reflected on the Doorphone LED (LED 23) only. But the LED indication will follow the station signals.

Mechanical Dimension for Remote Status Display Unit:
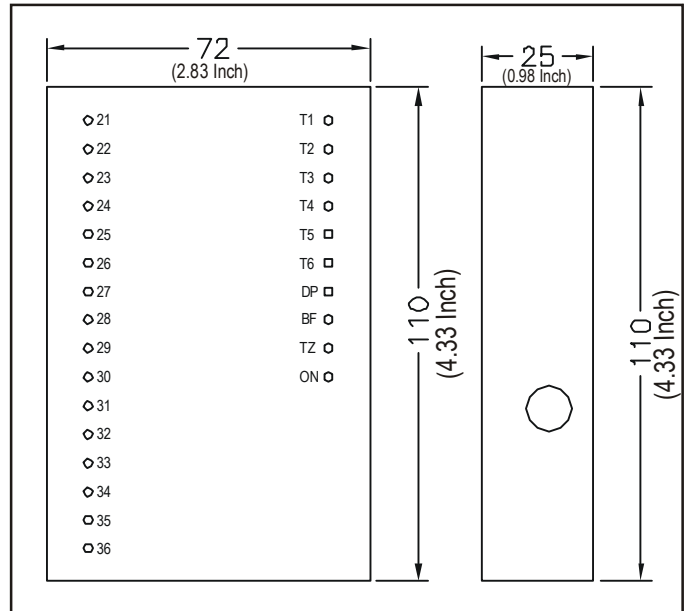

Relevant Topics:

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Scheduled Dialing

What's this?

- The system can be programmed to dial out a pre-defined number on a trunk at a programmed time.
- Eight different numbers can be dialled out at a pre-set time.
- This facility is of great use in offices, house, work-place, etc. where people tend to forget locking the Out-dial facility, long distance dialing facility on their trunk line after making a call. This facility can be used to dial out the locking codes for Out-dial facility, long distance dialing facility, etc. The lock codes for these facilities should be programmed in the system along with the time at which these codes should be dialled out.

How it works?

Following flowchart explains how this feature works:
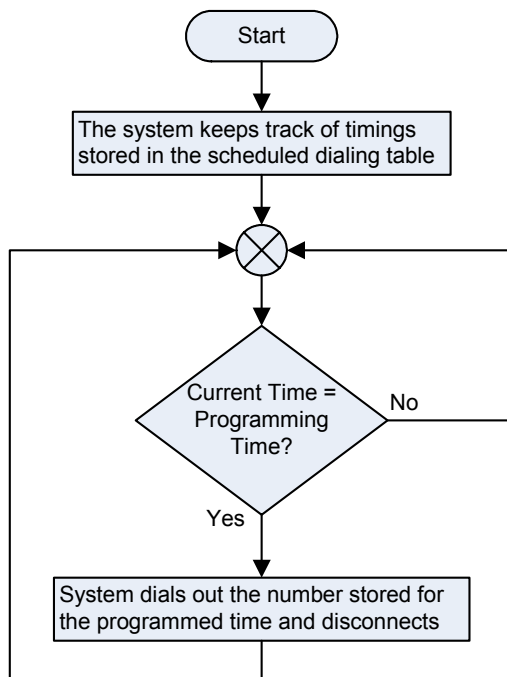
How to program?

Step 1: Program a number to be dialed in the Scheduled Dialing table using command ***2003.***

Step 2: Program the trunk access group to be used to dial the number programmed using command ***2004.***

Step 3: Program the time at which the number is to be dialed using command ***2005.***

Step 4: Default all the parameters of the Scheduled dialing using command ***2001.*** (if required)

After programming a table as shown below is formed:

Number Index	Number to be dialed	Trunk Access Group	Time
1	161912112	1	09:00
2	1611912111	1	18:00
:	:	:	:
8	:	:	:

Step 1
Use following command to program a number in the scheduled dialing table:
2003-Number Index-Number-#*
Where,
Number Index is from 1 to 8. (Maximum eight different numbers can be programmed)
Number is the number to be dialed. The number can have maximum 16 digits.

Use following command to clear all the numbers in the scheduled dialing table:
2002-#*

Step 2
Use following command to program trunk access group for the number to be dialed out:
2004-Number Index-Trunk Access Group-#*
Where,
Number Index is from 1 to 8
Trunk Access Group is from 1 to 8

Step 3
Use following command to program time at which the number is to be dialed out:
2005-Number Index-Time-#*
Where,
Number Index is from 1 to 8
Time is in Hour-Minute, 24-hour format.

Step 4
Use following command to default all the parameters related to Scheduled dialing:
2001-#*
By default:
No numbers are programmed in the Scheduled dialing table (Blank)
Trunk Access Group = 1
Scheduled Time = 00:00

Important Points:
- If this facility is used to lock the long distance facility on the trunk line. Then it is advisable to program only one trunk with long distance facility in the trunk access group

because while dialing out the number the system selects the free trunk from the trunk access group.

- To know programming details, please refer "Configuration Reports".

Relevant Topics:

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Security Dialer

What's this?

The VisionUltra offers a security feature, which dials out three different numbers one by one in case of emergency. In each case, when the called party answers the call, it delivers a pre-recorded message. This feature is called 'Security Dialer'.

This feature finds its application in Banks, Offices, Departmental stores, Houses, Commercial places, Schools, etc.

How it works?

To accomplish this feature, the VisionUltra supports a Digital Input Port marked 'DIP' on the MDF. An Emergency switch, output of a Smoke detector, Glass break detector, Fire Alarm, etc. can be connected as an activator. Whenever the DIP gets activated, the VisionUltra considers it to be an emergency condition and dials out a number assigned for Emergency situation. When the called party answers the call, the VisionUltra delivers a pre-recorded Emergency message. If the called party is busy, the system tries another Emergency number and tries to deliver emergency message. This is repeated for all the three emergency numbers. If the Emergency message is delivered to all the emergency numbers, and the acknowledgment is obtained this activity is suspended otherwise the system keeps trying all the unserved requests for programmed number of trials. The system considers the request to be served when the called party answers the call, and gives acknowledgment.

This feature could be of great help in Banks. When the Banks are raided by the burglars, all the employees of the bank are made standstill. In such a situation, if the cashier presses the Emergency Alarm (which could be placed quite close to the cashier), the burglars would not come to know whereas the system would dial out the Emergency number, which could be of Police, Security Agency and another branch office.

Following flowchart explains this in more detail:
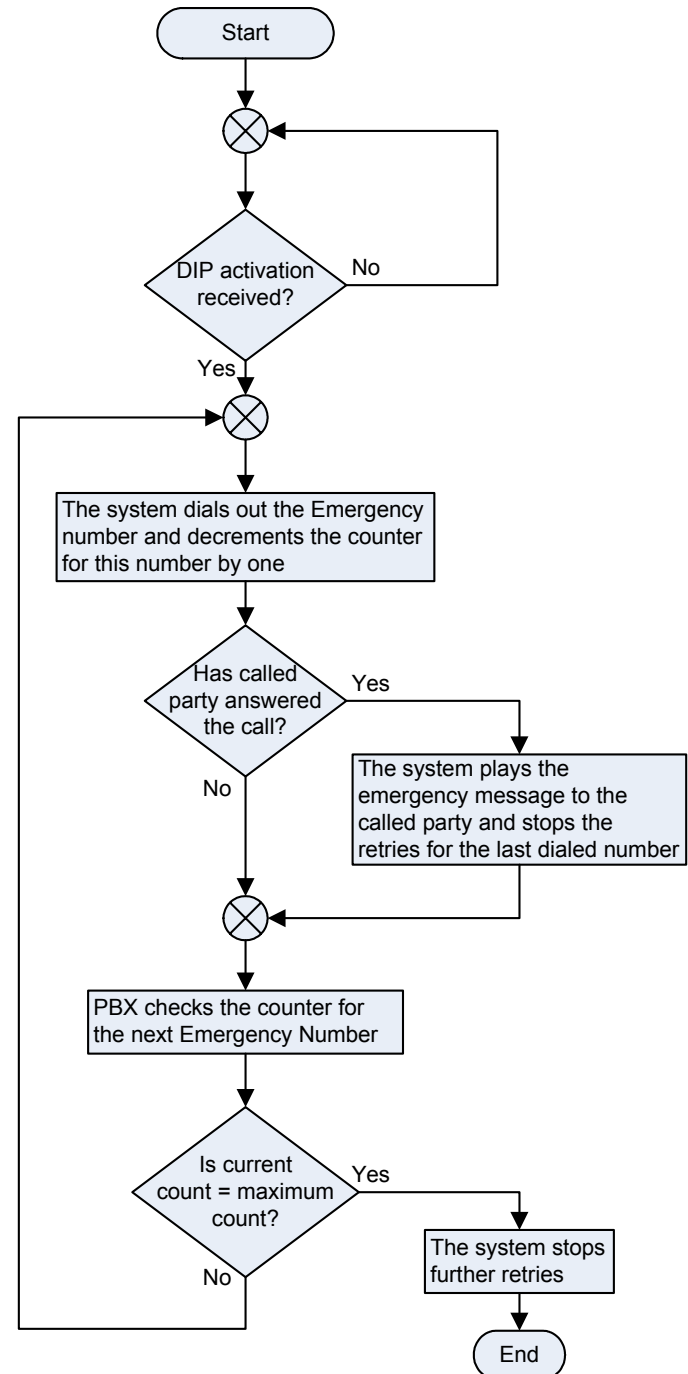
How to program?

Step 1: Program the trunk access group for making external call using command *1903.*

Step 2: Program the emergency phone number where the call is to be made using command *1904.*

Step 3: Program the number of trials to be made for one emergency number using command *3036.*

Step 4: Program the time gap after which the system should try another number using command ***3037.***

Step 5: Assign a voice module part containing Emergency message for DIP application.

Step 1

Use following command to assign a Trunk Access Group to a DIP:

1903-Trunk Access Group-#*

Where,

Trunk Access Group is from 1 to 8

Step 2

Use following command to program the Emergency phone number where the call is be made:

1904-Index-Emergency Phone Number-#*

Where,

Index is from 1 to 3

Emergency Phone Number is number string of maximum 16 digits where the call is to be made.

The programming table would look as shown below:

Index	Emergency Number
1	100
2	911
2	101

By default, the numbers are blank.

Step 3

Use following command to program the number of trials to be made for one emergency number:

3035-Count-#*

Where,

Count is the number of trials to be made for one emergency number from 000 to 255

By default, 3 trials are made for an emergency number.

Step 4

Use following command to program the time gap between two trials:

3036-Duration-#*

Where,

Duration is the time duration after which the system should try for the next number.

Duration is in minutes from 000 to 255.

By default, system tries for next number after every 1 minute.

Step 5

Please refer 'Voice Message Applications' on how to assign an Emergency message for DIP Application.

Important Points:
- This feature works on tone sensing. It is possible that there could be lot of disturbances on the trunk line and tones may not be sensed properly. In such case, it is

possible that the system might consider an immature call as a served request. Hence it is advisable to install dedicated security devices to ensure 100% security.
- If three emergency numbers are programmed then the system first tries the first number. Then after the programmed time duration, it tries second number. If all three numbers are found busy then system starts a fresh from first number again.
- ***If the called party dials '0' during the message, the system considers it to be an acknowledgment and***
- ***suspends dialing.***
- To know programming details, please refer "Configuration Reports".

Relevant Topics:
1. Voice Message Applications   200
2. Digital Input Port (DIP)   93
3. Automated Control Applications   36

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Software Version and Revision Display

What's this?

The system displays the version and the revision of the software at the station. This display remains till the user goes OFF-Hook.

How to use it?

1	Lift the handset.	Dial tone
2	Dial *1#95.*	Confirmation tone
3	Go *ON-Hook.*	

The display is shown as below for different CLI types:

CLI Type	Display (Numeric)	Display (Alphanumeric)
None	--	--
DTMF	nnmm	--
V.23 FSK	nnmm	VnnRmm
Bell202	nnmm	VnnRmm

Display for DTMF CLIP Type
The Length of the Display is 4. The first two digits represent the Version and the next two digits the Revision. For Version2 Revision1 of the software the system display looks like 0201.

Display for FSK CLIP Type
The Length of the Display is 6. The first 3 characters represent the Version and the next three characters the Revision. For Version2 Revision1 of the software the system display looks like V02R01.

Important Point:
• If user does not go ON-Hook during confirmation tone, he would get error tone. If he goes ON-Hook from error tone, this feature would not work.
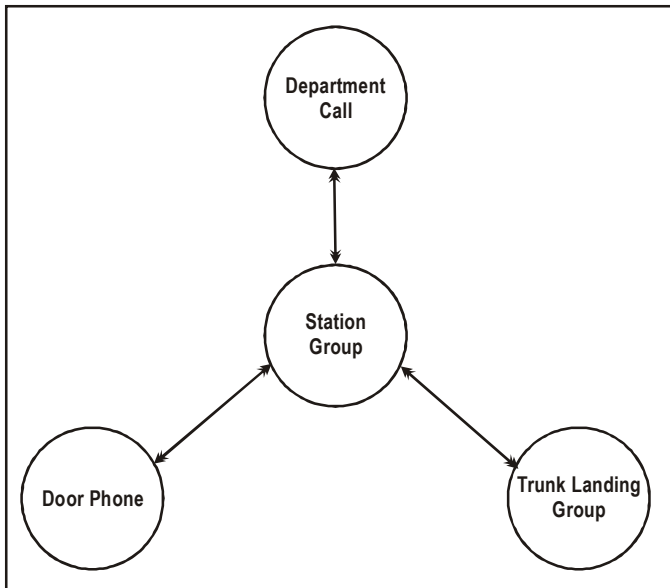
Relevant Topic:
1. Programming the System   147

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Station Group

What's this?

Station group is a group of stations. The destinations in this group can be used as destinations for incoming call or destinations for door phone call or destinations for department call.

A station group can be programmed as trunk landing group or as door phone group or as department group. Same station group can also be assigned for all the three features viz. Trunk Landing, Department Call and Door Phone.

How it works?

- Maximum sixteen station groups can be formed.
- Maximum 16 stations can be programmed in each station group.
- The time for which each station rings can be programmed.
- The sequence in which various stations in the group should ring can be arranged.
- The number of stations that should ring at a time can be programmed. All the stations can be programmed to ring simultaneously.
- Once a station receives a ring, it can be set to ring continuously till the call matures. Such a station continues ringing even when other stations of the group are hunted. This is called "Continuous" ringing and can be programmed for each station.
- If the call is not answered even after hunting the last station, the system will loop back and start from the first station once again till the ring from the exchange expires.
- A fresh call can start hunting either from the first station of the group or from the station where the previous call was terminated. This method is called Rotation Method and can be set for each group. If rotation method is enabled, the fresh call will land on the destination next to the one,

which received the last call. This would enable equal distribution of incoming calls to all the destinations within the group. If the rotation method is disabled, the fresh call will always land on first station of the station group.
- Any station can answer the call using call pick up feature.
- Any station group can be programmed as Department group.
- Any station group can be programmed as Doorphone group.
- Any station group can be programmed as Trunk Landing Group.

How to program?

Step 1: Decide the number of station groups to be formed, decide the sequence in which the stations should be arranged. Program these parameters using command *4702.*
Step 2: Define ring timer for which each station should ring using command *4703.*
Step 3: Decide whether the station should get continuous ring and program it using command *4704.*
Step 4: Program the rotation type for the station group using command *4705.*
Step 5: It is possible to default a station group using command *4701.*

Each group entry in the station group table looks like:

	Dest01	Dest02	.....	Dest16
Station Number				
Ring Timer				
Continuous Ring				
Rotation Method				

<u>Step 1</u>
Use following command to program station group:
4702-Station Group-Destination Index-Station-#*
Where,
Station Group is from 01 to 16
Destination Index is from 01 to 16
Station is a software port number is from 00 to 17

Use following command to program null at an index (Clear an index) in a station group:
4702-Station Group-Destination Index-00-#*
With this VisionUltra allows flexible number of stations in a station group.

Use following command to program same station at the same index in all station groups:
4702-**-Destination Index-Station-#*

Step 2
Use following command to program the time for which each station in the group should ring:
4703-Station Group-Destination Index-Timer-#
Where,
Station Group is from 01 to 16
Destination Index is from 01 to 16
Timer is in seconds from 000 to 255

Use following command to program the same ring timer for destination index in all the station groups:
4703-**-Destination Index-Timer-#

Step 3
Use following command to program continuous or non-continuous ring for a destination in the group:
4704-Station Group-Destination Index-Continuous Ring-#
Where,
Station group is from 01 to 16
Destination Index is from 01 to 16

Continuous Ring	Meaning
0	The station rings for the time set (non-continuous)
1	The station rings till the call matures (continuous)

Use following command to program continuous or non-continuous ring at the same destination index in all the station groups:
4704-**-Destination Index-Continuous Ring-#

Step 4
Use following command to program rotation method for a station group:
4705-Station Group-Rotation Method-#
Where,
Station Group is from 01 to 16

Rotation Method	Meaning
0	Fresh call should always land on the fist station within the group
1	Fresh call lands on station following the rotation method

By default, Rotation Method is 0.

Use following command to program rotation method for all the station groups:
4705-**-Rotation Method-#

Step 5
Use following command to default a station group:
4701-Station Group-#
Where,
Station Group is from 01 to 16.

Use following command to default all station groups:
4701-**-#
By default,
• ***Stations 01 to 16 are available in all Station groups***
• ***Ring timer is set to 015***
• ***Group rotation is OFF.***
• ***The ring is non-continuous***

Step 6
Use following command to clear a station group:
4710-Station Group-#
Where,
Station Group is from 01 to 16

Example 1:
Program the system for following constraints.
• Marketing department is frequently accessed by callers using DID facility.
• Marketing department in a company has four stations viz. 21, 22, 23 and 24 (s/w ports 01, 02, 03 and 04).
• The stations should ring in a sequence viz. 21, 22, 23, 24.
• Station 21 should ring for 20 seconds.
• If no reply, 21 should continue ringing and 22 should also ring for 10 seconds.
• If no reply, 21 should continue ringing and 23 should also ring for 15 seconds.
• If still no reply, 21 should continue ringing and 24 should also ring for 20 seconds.
• Call traffic should be distributed equally on all four destinations.

The requirement is for department call. Hence a station group for this purpose should be formed.
Use following command:
4702-01-1-01-#
4702-01-2-02-#
4702-01-3-03-#
4702-01-4-04-#
4703-01-1-020-#
4703-01-2-010-#
4703-01-3-015-#
4703-01-4-020-#

4704-01-1-1-#
4704-01-2-0-#
4704-01-3-0-#
4704-01-4-0-#
4705-01-1-#
To program this station group as department group, please refer '<u>Department Call</u>'.

Example 2:
Program a station group to meet following requirements
• A company has eight stations 21, 22, 23, 24, 25, 26, 27, 28 (Software port numbers 01, 02, 03, 04, 05, 06, 07, 08).

- Call on trunk 1 should land on station 21, 22, 23, 24 in day time and on station 21, 22, 27, 28 in night time.
- In day time, each station should ring for 20 seconds. Calls should always land on station 21 first.
- In night time, station 21 and 22 should ring continuously. Station 27 and 28 should ring for first 30 seconds alongwith station 21 and 22.

The requirement is for trunk landing. Two station groups one for day time and other for night time should be formed to meet the requirement.
Use following commands:
4702-02-01-01-#*
4702-02-02-02-#*
4702-02-03-03-#*
4702-02-04-04-#*

4703-02-01-020-#*
4703-02-02-020-#*
4703-02-03-020-#*
4703-02-04-020-#*

4704-02-01-0-#*
4704-02-02-0-#*
4704-02-03-0-#*
4704-02-04-0-#*

Refer 'Trunk Landing Groups' to assign a station group as trunk landing group for daytime.
4702-03-01-05-#*
4702-03-02-06-#*
4702-03-03-07-#*
4702-03-04-08-#*
4703-03-01-030-#*
4703-03-02-030-#*
4703-03-03-030-#*
4703-03-04-030-#*
4704-03-01-1-#*
4704-03-02-1-#*
4704-03-03-0-#*
4704-03-04-0-#*

4705-02-0-#*

Refer 'Trunk Landing Groups' to assign a station group as trunk landing group for nighttime.

Example 3:
Program a station group for following constraints.
Door Phone call should land on station 22, 23, 26, 25 (Software ports 10,11,12,13). All stations should ring continuously. Use following commands:
4702-04-01-10-#*
4702-04-02-11-#*
4702-04-03-12-#*
4702-04-04-13-#*

4704-04-01-1-#*
4704-04-02-1-#*
4704-04-03-1-#*
4704-04-04-1-#*

Please refer 'Door Phone' to assign a station group to Door Phone.

Important Point:
- To know programming details, please refer "Configuration Reports".

Relevant Topics:
1. Trunk Landing Groups   192
2. Door Phone   109
3. Department Call   90
4. Default Settings   87

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Station Message Detail Recording

What's this?

The VisionUltra can record the details of incoming (IC) and outgoing (OG) calls made from/to all the stations. This is called Station Message Detail Recording (SMDR).
The VisionUltra can send the details of these calls on communication ports or the printer port. These can be printed either immediately on completion of the call or afterwards when desired.

Following diagram shows the logic in which the calls are stored and printed.
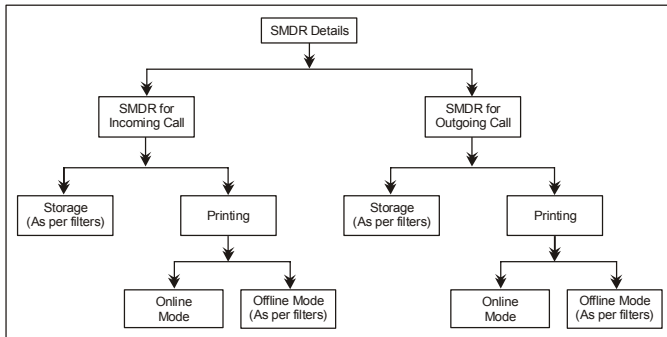
The VisionUltra offers facility to store the call details as per the requirement and even print the call as per the requirement. All the parameters like Incoming calls-Storage filters, Incoming calls-Printing filters, Outgoing calls-Storage filters and Outgoing call-Printing filters, etc. programmed for incoming calls and outgoing calls can be printed in the form of a report.

SMDR configuration report for default parameters is attached on next page for ready reference.

Please refer 'Station Message Detail Recording-Incoming' and 'Station Message Detail Recording-Outgoing' for more details.

Relevant Topics:
1.
2.
3.

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Station Message Detail Recording-Incoming

What's this?

Incoming calls can be stored and printed in a desired way.

Incoming Calls-Storage

Station message detail recording (SMDR) facility is used to keep track of the incoming calls received by the VisionUltra. SMDR is useful in monitoring and managing the incoming traffic in more effective manner. The VisionUltra can keep log of each call received by it in the SMDR buffer. The buffers for the incoming calls and outgoing calls are different. Each incoming call is stored in the form of a record in the buffer. The SA or SE can print these calls on a printer in the form of various reports. The SA or SE can even transfer this data on a computer for storage and further analysis.

A record has following fields:
- Serial Number
- Telephone number from where call has come
- Station to which call was routed
- Trunk on which call was received
- Date on which call was received
- Time at which call was received
- Time taken to answer the call
- Speech duration
- Remarks

One incoming call can occupy one or more records in the buffer. When an incoming call is transferred on another station, a new entry will be made in the SMDR buffer. The SMDR buffer data is maintained even during power failures. It is advisable to frequently download the calls to avoid inadvertent or accidental loss of the data.

Maximum 500 records can be stored in the SMDR IC buffer. Once the SMDR buffer is full, the next incoming call is stored in place of the oldest call in the SMDR IC buffer. This is known as First In First Out (FIFO) logic. The system parameters configuration report shows the number of SMDR IC records in the buffer. The SA or SE can clear the SMDR IC buffer using appropriate command and password from the SA/SE mode.

Alarms records in the Incoming SMDR:

VisionUltra supports storing of alarm records in the SMDR-Incoming buffer. Alarm ring is treated as an incoming call. Alarm is logged in the SMDR when the alarm call is disconnected by user after answering the alarm ring or if the alarm ring timer matures. In the SMDR report various parameters for the report are as mentions below:
- Number = Blank
- Trunk = 0
- Station = Station
- Date-Time = Date-Time

- Answer Time = Ring Timer (Time taken to answer the alarm ring)
- Speech duration = Actual OFF-Hook period, to listen to the message.
- Remark = 'A' for Alarm, if answered.
           = 'AU' for Alarm, if Unanswered.

Commands
Master command:
This command enables/disables the storage of incoming calls depending upon the filters set
Use following command to set SMDR storage flag:
1550-Storage Flag-#
Where,

Storage Flag	Meaning
0	Don't store incoming calls
1	Store incoming calls as per the filters programmed.

Filter commands: These commands enable the user to select the type of calls to be stored viz. All calls, Trunk wise calls, Unanswered calls, DID calls, etc.

Filter	Command
Store Normal Calls	***1561-Flag-#***
Store DID Calls	***1562-Flag-#***
Store Unanswered Calls	***1563-Flag-#***
Store DID Unanswered Calls	***1564-Flag-#***
Store All Calls	***1565-Flag-#***
Store Alarm records	***1566-Flag-#***
Store Unanswered Alarm records	***1567-Flag-#***
Store DISA Calls	***1568-Flag-#***
Store Calls on a Station	***1551-Station-Flag-#***
Store Calls on all Stations	***1551-**-Flag-#***
Store Calls on a Trunk	***1552-Trunk-Flag-#***
Store Calls on all Trunks	***1552-*-Flag-#***
Store Calls-Unanswered duration higher than specified value	***1553-MM-SS-#***
Store Calls-Speech duration higher than specified value	***1554-MM-SS-#***

Where,

Flag	Meaning
0	Don't Store
1	Store

MM is from 00 to 59
SS is from 00 to 59

Use following command to default the incoming call storage filters:
1505-#*
By default, all incoming calls will be stored.

Use following command to clear SMDR-Incoming buffer:
1560-Reverse SE Password-#*

Incoming Calls-Printing

Each SMDR record has following parameters or fields:
• Serial Number
• Calling Number (optional)
• Trunk port number on which the call was received
• Station Number who received the call
• Date on which the call is received
• Time when the call arrived
• Call Answer Duration
• Call Speech duration
• Remark

'Remark' column indicates following information:

Character	Meaning
N	Normal Call
D	DID Call
U	Unanswered Call
DU	DID Unanswered Call
I	IC DISA Call
O	OG DISA Call
A	Alarm Answered
AU	Alarm Unanswered

The reports are transferred on a computer through the RS232C (COM) port of the VisionUltra. ASCII format is used for this. It is possible to generate these reports as and when the call is made i.e. online printing (provided a printer or a computer is connected) or offline. The calls are stored in the SMDR buffer in both cases.

Incoming Printing-Online

Use following command to enable/disable online printing.
1570-Code-#*
Where,

Code	Meaning
0	Online disabled
1	Online enabled

Incoming Printing-Offline

Step 1: Set the filters as per the need.
Step 2: Give the command to download the Incoming SMDR data.

Various filters can be used to generate a report. These commands enable the user to select the type of calls to be printed viz. Normal calls, DID calls, Unanswered calls, Long Speech Duration calls. It is also possible to print the calls with desirable combination like Long Speech Duration calls and DID calls. It is possible to sort on one or more keys and generate a report.

A summary of the report is printed at the end of each report.

Filter	Command
Set default filters	**1506-#***
Normal Calls	**1591-Flag-#***
DID Calls	**1592-Flag-#***
Unanswered Calls	**1593-Flag-#***
DID Unanswered Calls	**1594-Flag-#***
All Calls	**1595-Flag-#***
Alarm Calls	**1596-Flag-#***
Unanswered Alarm Calls	**1597-Flag-#***
DISA Calls	**1598-Flag-#***
Calls received of station wise	**1581-Station-Station-#***
Calls received of trunk wise	**1582-Trunk-Trunk-#***
Calls received of date wise	**1583-Date-Month-Year-Date-Month-Year-#***
Call received of time wise	**1584-Hour-Minute-Hour-Minute-#***
Calls unanswered for duration	**1585-Duration-#***
Calls with speech duration	**1586-Duration-#***

By default, only All Calls flag is enabled, others are disabled.

Use following command to start printing of SMDR Incoming calls.
1580-#*

Important Points:
• When an unanswered call is stored, SMDR remembers last ringing destination.
• When an answered call is stored SMDR remembers last speech duration.
• The ring duration stored is the total ringing time.
• The speech duration shows the total speech time and not the speech duration of the last talking station.

Relevant Topics:
1. Station Message Detail Recording   168
2. Communication Port   66

```
SMDR INCOMING CALLS REPORT                    Sat 01-01-2005 AT 09:05
Station: 01-17     Trunk: 1-6      Time: 00:00 to 23:59
Date: 01-01-2005 to 01-01-2005      Timers-> Answer:      00:00ech:       00:00
Call Types: Normal = No , DID = No , Unanswered = No , DID Unanswered = No
          Alarm = No , Alarm Unanswered = No , DISA = No , All = Yes
------------------------------------------------------------------------------
   SR      NUMBER       TRUNK  STATION    DATE      TIME   ANSWER   SPEECH  REM
------------------------------------------------------------------------------
   1                      6      22    01-01-2005 09:04  00:00:03 00:00:00   U
   2   23                 6      21    01-01-2005 09:04  00:00:03 00:00:02   N
   3                      0      26    01-01-2005 10:00  00:00:02 00:00:00   U
   4   22                 0      27    01-01-2005 10:14  00:00:05 00:00:03   N
   5                      6      24    01-01-2005 11:20  00:00:01 00:00:00   U
   6   23                 6      28    01-01-2005 11:22  00:00:08 00:00:05   N
------------------------------------------------------------------------------
 N: Normal, D: DID, U: Unanswered, DU: DID Unanswered
 A: Alarm, AU: Alarm Unanswered, I: DISA
------------------------------------------------------------------------------
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Station Message Detail Recording-Outgoing

What's this?

Outgoing calls can be stored and printed in a desired way.

Outgoing calls-Storage

- Station message detail recording facility is used to keep records of calls made from the system. SMDR is useful in monitoring and controlling the cost of telephone calls. The VisionUltra can keep track of each call made by any station. Each call is stored in form of a record in the SMDR buffer. One outgoing call occupies one record space in the SMDR buffer. The SMDR buffer data is maintained even during power failures.
- It is advisable to take frequent printouts of the calls to avoid inadvertent or accidental loss of the SMDR records. Maximum 1000 records can be stored in the SMDR buffer. Once the SMDR buffer is full, fresh call is stored in place of the oldest call in the SMDR buffer. This is known as First In First Out (FIFO) logic.
- The SMDR parameters configuration report shows the number of SMDR records in the buffer. The SA or SE can clear the SMDR-OG buffer by using appropriate password from the SA mode. The SA or SE can transfer this data on a computer for storage or printing or further analysis.

Each outgoing call is stored with following fields:
- Serial Number
- Station that made the call
- Trunk line port used for the call
- Number dialed (16 digits)
- Date on which call is made.
- Time at which call is made
- Duration of the call in seconds
- Call type (Normal, DISA, ECF etc.)

In case of a call transfer from one station to another station, the system stores two calls with same number but different duration for both the stations. This is called 'Call Splitting'. If call splitting mode is kept on, the cost of the call as per the duration of the call will be added to both the stations.

Commands

Master command: This command enable/disable the storage of outgoing calls depending upon the filters set
Use following command to set SMDR storage flag:
1510-Storage Flag-#*
Where,

Storage Flag	Meaning
0	Don't store outgoing calls
1	Store outgoing calls as per the filter command

Filter commands: These commands enables the user to select the type of calls to be stored viz. station wise, trunk wise, destination wise, duration wise.

Use following command to store outgoing calls made on particular station:
1511-Station-Storage Flag-#*
Where,
Station is from 01 to 17

Storage Flag	Meaning
0	Don't store outgoing calls
1	Store outgoing calls as per the filter command

Use following command to store outgoing call made on all stations:
1511-**-Storage Flag-#*

Use following command to store outgoing calls made on particular trunk:
1512-Trunk-Storage Flag-#*
Where,
Trunk is the software port number from 1 to 6

Storage Flag	Meaning
0	Don't store outgoing calls
1	Store outgoing calls as per the filter command

Use following command to store outgoing calls for all the trunks:
1512-*-Storage Flag-#*

Destination wise
It is to store outgoing calls selectively depending on the destination numbers. The VisionUltra supports a list of 16 numbers. An outgoing call will be stored only if the destination matches with one of the numbers from the list. Thus, it is also possible to store only the international or long distance calls or calls made to an ISP, etc.

The list of 16 numbers looks like:

Index	Number
01	
02	1
03	2
04	3
05	4
06	5
07	6
08	7

Index	Number
09	8
10	9
11	0
12	*
13	#
14	F
15	
16	

Use following command to program a number in the list:
*1513-Index-Number-#**
Where,
Index is from 01 to 16
Number is a string of maximum 16 digits.

Use following command to default the OG SMDR storage filters:
*1501-#**

Default Storage settings
- All calls are stored
- Call Splitting in ON

Use following command to clear all the numbers in the list:
*1514-#**

Duration wise
Sometimes it is required to filter out the calls of small durations or in other words only calls of a specific duration or greater are required to be stored.

Use following command to set the filter for call duration:
*1515-MM-SS-#**
Where,
MM is from 00 to 59.
SS is from 00 to 59.

Supportive commands:
If an outgoing call is transferred from one station to another station, it can be stored either as one call or two different calls. This is known as Call Splitting.

Use following command to decide this:
*1516-Call Split Flag-#**
Where,

Call Split Flag	Meaning
0	Store one call (Call Splitting Disabled)
1	Store multiple calls (Call Splitting Enabled)

By default, Call Split Flag is '1'.

If above option is selected as 'Store One Call' then it is possible to store the call with originating station or terminating station.

Use following command to program the originator/terminator flag:
*1517-Flag-#**
Where,

Flag	Meaning
0	Store the call at originating station
1	Store the call at terminating station

By default, Flag is '0'.

Use following command to clear SMDR-Outgoing buffer:
*1520-Reverse SE Password-#**

Outgoing calls-Printing
Each SMDR record has following parameters or fields:
- Serial Number
- Station that made the call
- Trunk used to make the call
- Number dialed
- Date on which the call is made
- Time at which the call is made
- Duration of the call in seconds
- Remark

"Remark" column indicates following information:

Character	Meaning
N	Normal Call
O	DISA Call
E	ECF Call
A	Auto Redial

The reports are transferred on a computer through the RS232C (COM) port of the VisionUltra. ASCII format is used for this. The report can be stored modified and printed.

It is also possible to generate these reports as and when the call is made i.e. online printing (provided computer is connected) or offline. The calls are stored in the SMDR buffer in both cases.

Outgoing Printing-Online
Use following command to enable/disable online printing:
*1530-Code-#**
Where,

Code	Meaning
0	Immediate printing of Outgoing Calls OFF
1	Immediate printing of Outgoing Calls ON

Outgoing Printing-Offline

Step 1: Set the filters as per requirement
Step 2: Issue print command

Various filters can be used to generate a report. These filters enable the user to select the type of calls to be included in the report viz. Calls made by the particular station, calls made on a particular date or calls made between two dates,

Long duration calls. It is also possible to generate a report contains calls with desirable combination like calls made by particular station on a particular date for duration greater than 10 minutes.

Header and footer are printed on every page of the report.

Filter	Command
Default print filter	*1502-#**
Calls made by range of station	*1541-Station-Station-#**
Calls made on a range of trunks	*1542-Trunk-Trunk-#**
Calls made between two specific dates	*1543-Date-Month-Year-Date-Month-Year-#**
Calls made between the range of time	*1544-Hour-Minute-Hour-Minute-#**
Calls made a number	*1545-Number-#**
Calls having duration of higher value	*1546-MM-SS-#**

Use following command to start printing the reports of outgoing calls:
*1540-#**

Relevant Topics:
1. Communication Port   66
2. Station Message Detail Recording   168

```
SMDR OUTGOING CALLS REPORT                          Sat 01-01-2005 AT 09:05

Station: 01-17  Trunk: 1-6 Time:00:00 to 23:59     Number:
Date:01-01-2005 to 01-01-2005        Duration:  00:00
---------------------------------------------------------------------------
   SR    STATION   TRUNK      NUMBER         DATE        TIME    DUR    REM
---------------------------------------------------------------------------
   1      21         3      2630555       01-01-2005    09:05   00:03    N
   2      22         2      2630555       01-01-2005    10:00   00:06    N
   3      23         1      2645656       01-01-2005    11:10   00:08    N
   4      24         3      2653500       01-01-2005    11:45   00:09    N
   5      25         2      2670959       01-01-2005    12:07   00:04    N
   6      26         1      2680303       01-01-2005    12:48   00:05    N
---------------------------------------------------------------------------
 N: Normal Call   A: Auto Redial  E: ECF Call  S: System Call  O: DISA Call
---------------------------------------------------------------------------
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Station Parameters

What's this?

In an organization, all the stations cannot have same characteristics. Each station differs from the other in one respect or the other like Flexible number, Toll Control, Class of Service, Flash Timer, Station Name, etc.

Following parameters should be programmed along with above-mentioned parameters for smooth functioning of the system:

Digit Padding

Certain telephone instruments do not display for DTMF CLI Information (calling party number) if the number of digit received are less than a particular count. To take care of it, the length of the incoming number is adjusted by padding digits.

Use following command to program digit padding on station:
4105-Station-Count-#*
Where,
Station is from 01 to 17
Count is from 0 to 9.

When the count is programmed as zero the calling party number is displayed as it is. When the count is programmed between 1 to 9, it means the length of the calling party number displayed should be equal to the count. i.e. if the count value is programmed as 5 and station number 21 is calling, then 3 zeroes are padded to 21 to maintain the length as 5 (21000).

Use the following command to program digit padding for all stations:
4105--Count-#***

Station Name

Use the following command to program the station name:
4104-Station-Name-#*
Where,
Station is from 01 to 17
Name is a string of alphanumeric characters (Maximum of 8 characters then terminate it with #)

Please refer the ASCII code character chart at the end of the topic for name programming. Each character is programmed by dialing 3 digits are from 033 to 127. If the user wants to name his station 3 as 'ABC' then he dials
4104-03-065066067#. *(where 065, 066, 067 are the ASCII codes for 'A', 'B', 'C' respectively).*

Use the following command to clear a station name:
4104-Station-#*

Use the following command to clear all station names:
4104--#***

Station Parameter Report

Use following command to download station parameters of a station:
4100-Station-#*
Where,
Station is the software port number is from 01 to 17

Use following command to download station parameters of all the stations:
4100--#***
Station parameters for two stations are attached herewith for ready reference.

Timer for Relevance:
Internal Inter Digit Wait Timer-This timer signifies the time for which the system waits for the next digit during dialing internal numbers and features. (Station numbers, Feature access codes etc.)
Command: **3009-Seconds-#***
Default: 007 seconds
Valid Range: 001 to 255 seconds.

Important Point:
• Jeeves should be disabled to take station parameters report.

Relevant Topics:
1. Class of Service (COS)   62
2. Toll Control   182
3. Trunk Access Groups   185
4. Dial by Name   91
5. Call Pick Up   49
6. Calling Line Identification-Station   59

ASCII Character Chart:

Decimal	Value	Meaning
033	!	(exclamation mark)
034	"	(double quote)
035	#	(number sign)
036	$	(dollar sign)
037	%	(percent)
038	&	(ampersand)
039	'	(single quote)
040	(	(left/opening patenthesis)
041	)	(right/closing patenthesis)
042	*	(asterisk)
043	+	(plus)
044	,	(comma)

Decimal	Value	Meaning	Decimal	Value	Meaning
045	-	(minus or dash)	089	Y	
046	.	(dot)	090	Z	
047	/	(forward slash)	091	[	(left/opening bracket)
048	0		092	\	(black slash)
049	1		093	]	(right/closing bracket)
050	2		094	^	(caret/cirumflex)
051	3		095	_	(underscore)
052	4		096	'	
053	5		097	a	
054	6		098	b	
055	7		099	c	
056	8		100	d	
057	9		101	e	
058	:	(colon)	102	f	
059	;	(semi-colon)	103	g	
060	<	(less than)	104	h	
061	=	(equal sign)	105	i	
062	>	(greater than)	106	j	
063	?	(question mark)	107	k	
064	@	(AT symbol)	108	l	
065	A		109	m	
066	B		110	n	
067	C		111	o	
068	D		112	p	
069	E		113	q	
070	F		114	r	
071	G		115	s	
072	H		116	t	
073	I		117	u	
074	J		118	v	
075	K		119	w	
076	L		120	x	
077	M		121	y	
078	N		122	z	
079	O		123	{	(left/opening brace)
080	P		124	|	(vertical bar)
081	Q		125	}	(right/closing brace)
082	R		126	~	(tilde)
083	S		127	DEL	(delete)
084	T				
085	U				
086	V				
087	W				
088	X				

```
Station Port Parameters                              Sat 01-01-2005 AT 09:04
--------------------------------------------------------------------------------
Software Port Number                 :01
Flexible Number                      :21
Station Name                         :
Dial By Name                         :
Flash Timer                          :600ms
CLIP Type                            :DTMF
Show External CLIP During Xfer       :Off
DMTF CLIP Digit Padding Length       :0
DialBack Trunk Access Prefix Code    :NONE
Call Pick-Up Group                   :1
Call Duration Control Table          :1
Dynamic Lock Status                  :Open
Dynamic Allowed List                 :1
Dynamic Denied List                  :1
Outgoing SMDR Storage                :On
Incoming SMDR Storage                :On
Daily Alarm Time                     :Off
Hotline Delay Timer                  :03 Seconds
Hotline Destination Station          :NONE
Call Forward Type                    :NONE
Call Forward Destination Station     :
Do Not Disturb (DND)Type             :NONE
             0   5  61 62 63 64 65 66   COS   Allowed List  Denied List
Day     : 1  2  3  4  5  6  7  8     3          3             3
Night   : 1  2  3  4  5  6  7  8     3          3             3
Dialing Method:  0       5        61      62      63      64      65      66
                Normal  Normal  Normal  Normal  Normal  Normal  Normal  Normal
Personal Memory Numbers
 Index   Trunk Access Code     Number
   01
   02
   03
   04
   05
   06
   07
   08
   09
   10
--------------------------------------------------------------------------------
MATRIX VisionUltra(616) V03R04                               Page: 01
```

=X=X=

System Administrator Mode

What's this?

VisionUltra programming/usage is secured at three levels:
- System Engineer level. This level is protected by SE password.
- System Administrator level. This level is protected by SA password.
- User level. This level is protected by user password.

System Administrator (SA) Mode

- SA mode allows SA to change few system settings without entering the SE mode. It is a subset of the full-blown SE mode and hence supports only a few programming commands.
- In this mode, only SA or SE can do programming.
- This mode is password protected so that no other person can make any unauthorized alterations and subsequent misuse of features and facilities.
- System Administrator is a person who carries out routine jobs like taking SMDR printouts, making operator absent/present, etc. Generally an operator in an organization is selected as a System Administrator.

How to use it?

1	Lift the handset.	Dial tone
2	Dial *1#92-SA Password.*	Programming tone/message.

- SA password is a 4-digit secret code used to avoid unauthorized access to SA mode.
- Default SA password is 1111.
- System gives programming tone/message on entering SA mode.
- If the SA password is not entered correctly, system gives error message/tone.
- Only one person can enter SA mode at a time.
- To exit SA, dial '*00-#**'. You get Matrix dial tone.
- Following programming commands are allowed from the SA mode:
  - SMDR Reports Printing Commands
  - Day to Night and Night to Day switching command. (if programmed in manual mode)
  - Configuration Reports commands.
  - Scheduled Dialing Number string command.
  - Internet Ready Port command
  - Global Abbreviated Dialing command

Forgot your SA Password?

In case your SA password is lost the SE can assign a new pass word to the SA.
Use following command to change SA Password:
*1105-New SA Password-#**
New SA password is a number string of 4-digits.
By default, SA Password is 1111.

Relevant Topics:

=X=X=

System Engineer Mode

What's this?

VisionUltra programming/usage is secured at three levels:
- System Engineer level. This level is protected by SE password
- System Administrator level. This level is protected by SA password.
- User level. This level is protected by user password.

System Engineer (SE) Mode

- SE mode allows SE to change system settings. All programming is allowed from this mode.
- This mode is password protected so that no other person can make any unauthorized alterations and subsequent misuse of features and facilities.
- SE password is 4-digit secret code used to avoid unauthorized access to SE mode.
- Default SE password is 1234.
- This password is the main password of the system and should be kept by the system engineer. SE password is needed to enter the system engineer mode of the system to change any setting of the system.
- System gives programming tone/message on entering SE mode.
- If the SE password is not entered correctly, system gives error message/tone.
- Only one person can enter SE mode at a time.
- To exit SE, dial '*00-#*'. You get Matrix dial tone.
- Please note that the system engineer cannot know SA password or user password.

How to use it?

1	Lift the handset.	Dial tone
2	Dial *1#91-SE Password.*	Programming tone/ Message.

How to program?

Use following command to change SE Password:
1104-New SE Password-#
New SE password is a number string of 4-digits.
By default, SE Password is 1234.

Forgot your SE password?

- It is very important to remember the SE password. Without this password, it is not possible to enter the program mode and change the settings. It is advisable to make a note of this password at a safe place.
- However, if the system engineer (SE) password is lost, then it can be set to its default value. Following steps describe the procedure:
  - Switch OFF the system.
  - Locate a mini jumper on PCB.
  - Put the jumper J7 in A-B Position.
  - Switch ON the System.

- Wait for 15 seconds.
- Switch OFF the system.
- Open the system, restore the jumper in its original position (B-C) and switch ON the system.
- The SE password gets default to *1234*.
- Enter SE mode by dialing *1#91-1234*.

Relevant Topics:

=X=X=

Time Table

What's this?

A station user having access to long distance dialing would prefer this facility disabled to avoid misuse during nighttime once the office is closed. Trunks calls should be routed to the security staff when the office is closed. Few calls should be forwarded to an external number during nighttime.

Above examples highlight the need for the system to behave differently depending on the time of the day. The VisionUltra offers flexibility to program a day in two time zones viz. Daytime1 (pre-lunch session) and Daytime2 (post-lunch session). The remaining time is assumed as Night time. Each day of the week can be programmed separately. Such a schedule of a week is called time table.

Time Table

Timezone/ Week Days	Daytime1		Daytime2	
	Start	**End**	**Start**	**End**
Sunday	HH:MM	HH:MM	HH:MM	HH:MM
Monday	HH:MM	HH:MM	HH:MM	HH:MM
Tuesday	HH:MM	HH:MM	HH:MM	HH:MM
Wednesday	HH:MM	HH:MM	HH:MM	HH:MM
Thursday	HH:MM	HH:MM	HH:MM	HH:MM
Friday	HH:MM	HH:MM	HH:MM	HH:MM
Saturday	HH:MM	HH:MM	HH:MM	HH:MM

Default Time Table

Timezone/ Week Days	India		Italy/USA/Canada/Spain	
	Day Time1	Day Time2	Day Time1	Day Time2
Sunday	00:00-00:00	00:00-00:00	00:00-00:00	00:00-00:00
Monday	09:00-13:00	13:00-18:00	08:30-13:00	13:00-17:30
Tuesday	09:00-13:00	13:00-18:00	08:30-13:00	13:00-17:30
Wednesday	09:00-13:00	13:00-18:00	08:30-13:00	13:00-17:30
Thursday	09:00-13:00	13:00-18:00	08:30-13:00	13:00-17:30
Friday	09:00-13:00	13:00-18:00	08:30-13:00	13:00-17:30
Saturday	09:00-13:00	13:00-18:00	00:00-00:00	00:00-00:00

Generally following features/facilities can be programmed differently timetable wise are:
- Class of Service
- Toll Control
- Trunk Access
- Trunk Landing Destination
- Features like ECF, DID, DISA, etc.

VisionUltra offers two modes of operation viz. Manual and Auto. If the system is set for Auto mode, the system itself switches between the timezones automatically. If the system is set for manual mode, the timezone for the system is to be programmed explicitly as Day or Night. This mode is useful in offices where there are no fixed office hours, pre lunch and post lunch sessions or at residences where these bifurcations in a day hold no meaning.

Day/Night Switching:

How to use it?

1	Lift the handset.	Dial tone
2	Dial *1#93-Code.*	Confirmation tone

Where,

Code	Meaning
0	Night Mode
1	Day Mode
2	Auto Mode

Note:
- DSS LED, if ON for Day time, will now be OFF after changing the Status.
- Day dial tones changes to night dial tone.
- SA mode should be enabled in COS.

How to program?

Step 1: Set the time table in Manual or Auto mode using command *1051.*
Step 2: Set Day/Night using command *1052.* (if manual mode is selected)
Step 3: Program the time table (Daytime1/Daytime2) for the week using command *1053* and *1054.*

<u>**Step 1**</u>
Use following command to program the system in Manual/ Auto mode: (from SE mode)
1051-Code-#*
Where,

Code	Meaning
1	Manual
2	Auto

By default, system is in Auto Mode.

Example:
Program the system in Auto day-night mode.
1051-1-#*

<u>**Step 2**</u> (For Manual Mode only)
Use following command to set Day/Night: (from SA/SE mode)
1052-Code-#*
Where,

Code	Meaning
1	Day Mode

Code	Meaning
2	Night Mode

By default, the mode is day mode.

Example:
Set system in Day mode
1052-1-#*

Step 3
Use following command to program the time table (Daytime1)
1053-Day-Start Time-End Time-#*
Where,

Day	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Code	1	2	3	4	5	6	7

Start Time = Working hours start time in 24 hours (HH:MM) format, HH is from 00 to 23, MM is from 00 to 59.
End Time = Working hours end time in 24 hours (HH:MM) format, HH is from 00 to 23, MM is from 00 to 59.

Use following command to program the time table (Daytime2)
1054-Day-Start Time-End Time-#*
Where,

Day	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Code	1	2	3	4	5	6	7

Start Time = Working hours start time in 24 hours (HH:MM) format, HH is from 00 to 23, MM is from 00 to 59.
End Time = Working hours end time in 24 hours (HH:MM) format, HH is from 00 to 23, MM is from 00 to 59.
The left over time is taken as nighttime. Hence night time (non-working hours) need not be programmed.

Example:
Program a time table with normal office hours from 08:00 to 01:00 hours and 02:00 to 06:00 from Monday to Friday. Saturday and Sunday are Holidays. Set the time table in Auto mode.
1053-1-0000-0000-#*
1053-2-0800-1300-#*
1053-3-0800-1300-#*
1053-4-0800-1300-#*
1053-5-0800-1300-#*
1053-6-0800-1300-#*
1053-7-0800-1300-#*
1054-1-0000-0000-#*
1054-2-1400-1800-#*
1054-3-1400-1800-#*
1054-4-1400-1800-#*
1054-5-1400-1800-#*
1054-6-1400-1800-#*
1054-7-0000-0000-#*
1051-2-#* (Not required because default mode is auto)

Important Points:
- The system will not take care of any holiday coming on the working days. On these days, the system should be programmed to manual mode and should be changed to night mode before leaving the office on the day before the holiday. On coming back to the office, you can change it to daytime and then to automatic mode.
- To know programming details, please refer "Configuration Reports".

Relevant Topics:
1. Real Time Clock   155
2. Country Code   86
3. Default Settings   87

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Toll Control

What's this?

Toll Control can:
- Restrict dialing all local telephone numbers.
- Restrict dialing certain local telephone numbers.
- Allow dialing only certain telephone number. (2630555)
- Allow dialing only certain area code.
- Allow dialing only those telephone numbers starting with particular digit. (1)

How to use it?

- By default, few number strings are available in the allowed list and denied list. If these number strings satisfy the requirement then these should be assigned to the station for day time and night time.
- If the requirement is not meet by default allowed and denied list then customized allowed list and denied list should be programmed.
- The number strings which are to be allowed should be programmed in allowed list.
- The number strings which are to be denied should be programmed in denied list.
- One such allowed and a denied list should be assigned to each station for day time and night time individually.
- If customized toll control is to be provided then customized numbers should be programmed in the allowed list and the denied list. For example, the requirement is that station 21 can make a call to City A (022) but should not make any other long distance call. In this case, number string 022 should be programmed in one of the locations of the allowed list and should be assigned to station 21. Similarly, station 21 is not allowed any long distance call, hence it should be assigned default denied list 4.
- One such allowed and a denied list should also be assigned to the station for the locked condition.
- Once the station has been locked, the station user can make calls as per the allowed and denied lists as signed to the station for the locked condition. **This is called Dynamic Toll Control.**

How it works?

- VisionUltra uses Allowed Lists and Denied Lists to support this feature.
- When a call is made, the VisionUltra compares each digit of the dialed number string with the number strings in allowed list and denied list.
- If the dialed number string matches with any of the number strings available in allowed list, the VisionUltra dials the number on the trunk, else compares with the number strings in the denied list.
- If the dialed number string matches with any of the number strings available in denied list, the VisionUltra restricts dialing the number and gives error tone to the station user.

- If the dialed number matches with a number string that is available in both allowed and denied list then allowed list is given priority and the dialed number is dialed on the trunk.

The following flow chart explains the logic of Toll Control Group.
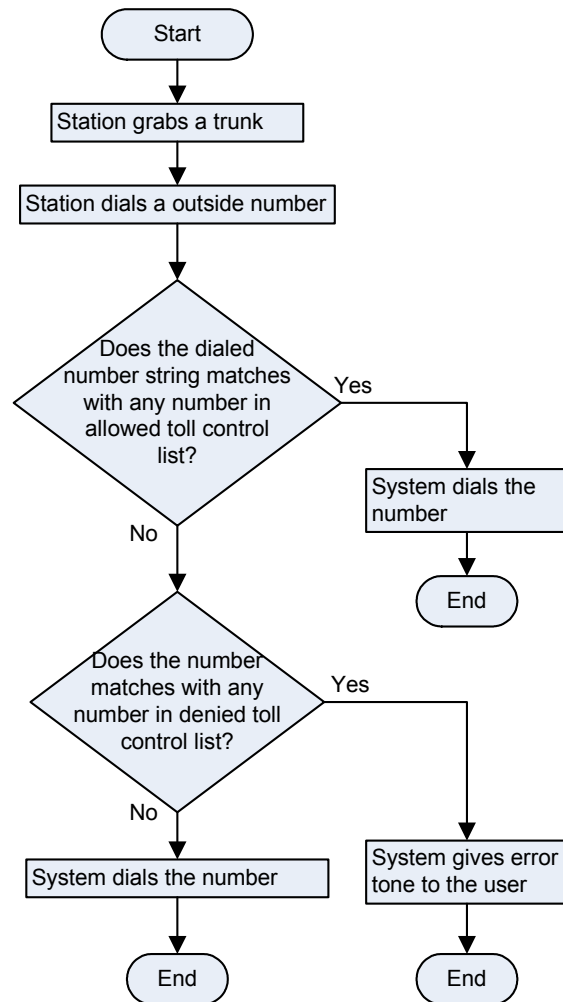
How to program?

Step 1: List the toll control to be programmed station wise.
Step 2: Check whether the requirement can be met by using default Allowed Lists and Denied Lists.
Step 3: If default allowed lists satisfy the requirement, assign allowed list to the stations using commands *4501* and *4511* for day time.
Step 4: If default denied lists satisfy the requirement, assign denied lists to the stations using commands *4502* and *4512* for night time.
Step 5: If the requirement cannot be satisfied by default allowed lists and denied lists then list down the

customized numbers to be programmed in allowed list and denied list.

Step 6: Program the numbers/number strings to be allowed in the allowed list using command *1202*.

Step 7: Program the number/number strings to be denied in the denied list using command *1204*.

Step 8: Assign customized allowed list to the stations using commands *4501* and *4502*.

Step 9: Assign customized denied lists to these stations using commands *4511* and *4512.*

Step 10: Also assign a default/customized allowed list to these stations for the locked condition using commands *4521.*

Step 11: Similarly, assign a default/customized denied list to these stations for the locked condition using commands *4522.*

Step 12: Take a printout of configuration report to verify the allowed/denied lists and their assignment for toll control application.

Commands
Step 1
Take a pen and a paper. Write down the toll control to be assigned to each station.

Step 2
Have a look at default allowed lists and denied lists and check whether the requirement can be met with these lists.

Step 3
Use following command to assign an allowed list to a station for daytime:
4501-Station-Allowed List-#
Where,
Station is the software port number of the user from 01 to 17
Allowed List is from 1 to 8

Use following command to assign the same allowed list to all stations for daytime:
*4501-**-Allowed List-#*

Use following command to assign allowed list to a station for night time:
4502-Station-Allowed List-#
Where,
Station is the software port number of the user from 01 to 17
Allowed List is from 1 to 8

Use following command to assign the same allowed list to a all stations for night time:
*4502-**-Allowed List-#*

Step 4
Use following command to assign a denied list to a station for daytime:
4511-Station-Denied List-#
Where,

Station is the software port number of the user from 01 to 17
Denied List is from 1 to 8

Use following command to assign a common denied list to all stations for daytime:
*4511-**-Denied List-#*

Use following command to assign a denied list to a station for nighttime:
4512-Station-Denied List-#
Where,
Station is the software port number of the user from 01 to 17
Denied List is from 1 to 8

Use following command to assign a denied list to all stations for nighttime:
*4512-**-Denied List-#*

Step 5
If the requirement is not met by default allowed lists and denied lists then write down the requirement on a piece of paper and make corresponding allowed lists and denied lists using step 6 and step 7.

Step 6 and Step 7
Please refer "Allowed and Denied Lists".

Step 8 and Step 9
Please refer step 3 and step 4 explained above.

Step 10
Use following command to assign an allowed list to a station for locked condition:
4521-Station-Allowed List-#
Where,
Station is the software port number of the user from 01 to 17
Allowed List is from 1 to 8

Use following command to assign an allowed list to all stations for locked condition:
*4521-**-Allowed List-#*

Step 11
Use following command to assign a denied list to a Station for locked condition:
4522-Station-Denied List-#
Where,
Station is the software port number of the user from 01 to 17
Denied List is from 1 to 8

Use following command to assign denied list to all stations for locked condition:
*4522-**-Denied List-#*

Step 12
Please refer "Configuration Reports".

- Allowed list 1 and Denied list 1 are assigned in locked condition by default.
- Default allowed and denied list for day and night is '3'.

Example:

Let us program the system for following conditions:
- We have two station users 21 and 22 (software port number 01 and 02)
  - For 21: During daytime: Allow 011-6565655 and 011-6565656 but restrict all other 011 calls. Allow all 022 calls but restrict 022-7878787 and 022-7878788. Allow all local calls and other long distance calls. Restrict all calls during night time.
  - For 22: Allow all calls except '0' calls during daytime. Restrict all calls during night time.

Solution:

It is advisable to make changes for any customized requirement in allowed list 6 & 7 and denied list 6 & 7 which are by not assigned by default to any station.

Let us make an allowed list 6 which shall allow 011-6565655, 011-6565656, 022,0,1,2,3,4,5,6,7,8 and 9.

Let us make a denied list 6 which shall restrict 022-7878787, 022-7878788 and 011 but shall allow all other calls.

Use following command to program allowed list 6:
*1202-6-01-0116565655-#**
*1202-6-02-0116565656-#**
*1202-6-03-022-#**

Other location in the allowed list are blank and hence other numbers like 0,1,2,3,4,5,6,7,8 and 9 need not be entered.

Use following command to program denied list 6:
*1204-6-01-0227878787-#**
*1204-6-02-0227878788-#**
*1204-6-03-011-#**

Use following command to assign allowed list to station 21 (software port is 01) during day time:
*4501-01-6-#**

Use following command to assign allowed list to station 21 (software port is 01) during night time:
*4502-01-1-#** (This need not be done explicitly because it is assigned by default)

Use following command to assign denied list to station 21 (software port is 01) during day time:
*4511-01-6-#**

Use following command to assign denied list to station 21 (software port is 01) during night time:
*4512-01-1-#** (This need not be done explicitly because it is assigned by default)

Use following command to assign allowed list to station 22 (software port is 02) during day time:
*4501-02-1-#** (This need not be done explicitly because it is assigned by default)

Use following command to assign allowed list to station 22 (software port is 02) during night time:
*4501-02-1-#** (This need not be done explicitly because it is assigned by default)

Use following command to assign denied list to station 22 (software port is 02) during day time:
*4502-02-1-#** (This need not be done explicitly because it is assigned by default)

Use following command to assign denied list to station 22 (software port is 02) during night time:
*4502-02-1-#** (This need not be done explicitly because it is assigned by default)

Relevant Topics:
1. Allowed and Denied Lists   27
2. Station Parameters   175
3. Configuration Reports   70
4. Dynamic Lock   113
5. Default Settings   87

=X=X=

Trunk Access Groups

What's this?

- Trunk Access Groups provide efficient allocation of trunks to different stations.
- All the trunks connected to the system can be bunched in different groups called trunk access group.
- Maximum 6 trunks can be put in one trunk access group and 8 such trunks access groups can be formed.
- These trunk access groups can be allotted to each individual station.
- A station can be allotted different trunk access groups during daytime and nighttime.
- Eight trunk access codes viz. 0, 5, 61 to 66 can be used to access these group.
- It is possible to assign trunk access code '0' to a trunk access group containing all the trunks in day time. Doing so, when a station dials '0' he gets any of the free trunks from trunk access group.
- It is possible to assign same trunk access code '0' to a trunk access group containing no trunk, in night time. Doing so, when a station dials '0' during night time he gets error tone.

System uses two methods while selecting a trunk from the trunk access group viz. Remember last trunk and don't remember last method. In Remember last trunk method the system remembers the last trunk used and allots next trunk in the group to the station. In Don't remember last trunk method, the system searches for a free trunk from the first trunk programmed in the group. If first trunk is free, it allotted to the station. In such case it is possible that first few trunks in a group would be used frequently.

Memory Dialing with 'Dial Back Trunk Access Prefix':
- VisionUltra supports dialing back of CLI number received by the SLT, on a trunk from predefined trunk access group.
- Each SLT port can select trunk access code for dialing with the numbers received on his CLI-phone based on preprogrammed prefix.
- This prefix is assigned to the SLT for trunk access code and country. For example, if prefix '4' assigned to SLT '02', than system will select trunk access code 62 (for India, Italy), or 82 (for US, Canada), while dialing, back the CLI number from the memory of SLT '02'. Thus, trunk groups are preprogrammed while dialing back, CLI number.
- Prefix is added only for external incoming call on SLT.
- The CLI, number which is dialed back follows, Number and Mixed LCR.

How it works?

Following flow chart depicts the chronology of events when a station grabs a trunk (For Normal Dialing Method):

```
                              ( Start )
                                 │
                                 ▼
                    ┌──────────────────────────┐
                    │ Station user dials trunk  │
                    │ group access codes        │
                    └──────────────────────────┘
                                 │
                                 ▼
                            ◇ LCR type
                              selected? ◇
```

Time Based LCR — Mixed LCR — No LCR — Number Based LCR

```
┌─────────────────────┐      (A)    ┌──────────────────────┐   ┌──────────────────────┐
│ System finds the     │            │ System allots a free  │   │ System allots free trunk │
│ cheapest trunk from  │            │ trunk from the TAG    │   │ from the trunk access    │
│ the group depending  │            │ depending upon the    │   │ group as per number      │
│ upon the time of call│            │ rotation flag         │   │ logic and rotation logic │
└─────────────────────┘            └──────────────────────┘   └──────────────────────┘
         │                                    │                            │
         ⊗                               ( End )                           ▼
         │                                              ┌──────────────────────┐
         ▼                                              │ System waits for dialing │
   ◇ Is the cheapest        Yes                         │ of entire number      │
     trunk free? ◇ ─────────────┐                       └──────────────────────┘
         │                      ▼                                  │
         │ No         ┌──────────────────┐                         ▼
         │            │ System allots the │              ┌──────────────────────┐
         ▼            │ trunk to the      │              │ System finds cheapest │
   ◇ Are other trunk  │ station           │              │ trunk for this number │
     available in     └──────────────────┘              └──────────────────────┘
     this group? ◇ No       │                                      │
         │        ────┐   ( End )                                  ⊗
         │ Yes        ▼                                            │
         ▼      ┌──────────────┐                                   ▼
  ┌──────────┐  │ System gives  │          No          ◇ Is cheapest
  │ Select next│ │ busy tone to  │  ┌───────────────────  trunk free? ◇
  │ cheaper    │ │ the station   │  ▼                          │
  │ trunk in   │ └──────────────┘  ┌──────────────┐            │ Yes
  │ this group │       │           │ Select next   │            ▼
  └──────────┘  ┌──────────────┐  │ cheap trunk   │   ┌──────────────────┐
                │ System waits  │  │ in this group │   │ System dials out  │
                │ for next      │  └──────────────┘   │ the number        │
                │ action from   │         │           └──────────────────┘
                │ the user      │         ▼                    │
                └──────────────┘  ◇ Is cheaper              ( End )
                       │          Yes  trunk
                   ( End )   ───── available? ◇
                                        │ No
                                        ▼
                               ┌──────────────┐
                               │ System gives  │
                               │ busy tone to  │
                               │ the station   │
                               └──────────────┘
                                        │
                                        ▼
                               ┌──────────────┐
                               │ System waits  │
                               │ for next      │
                               │ action from   │
                               │ user          │
                               └──────────────┘
                                        │
                                    ( End )
```
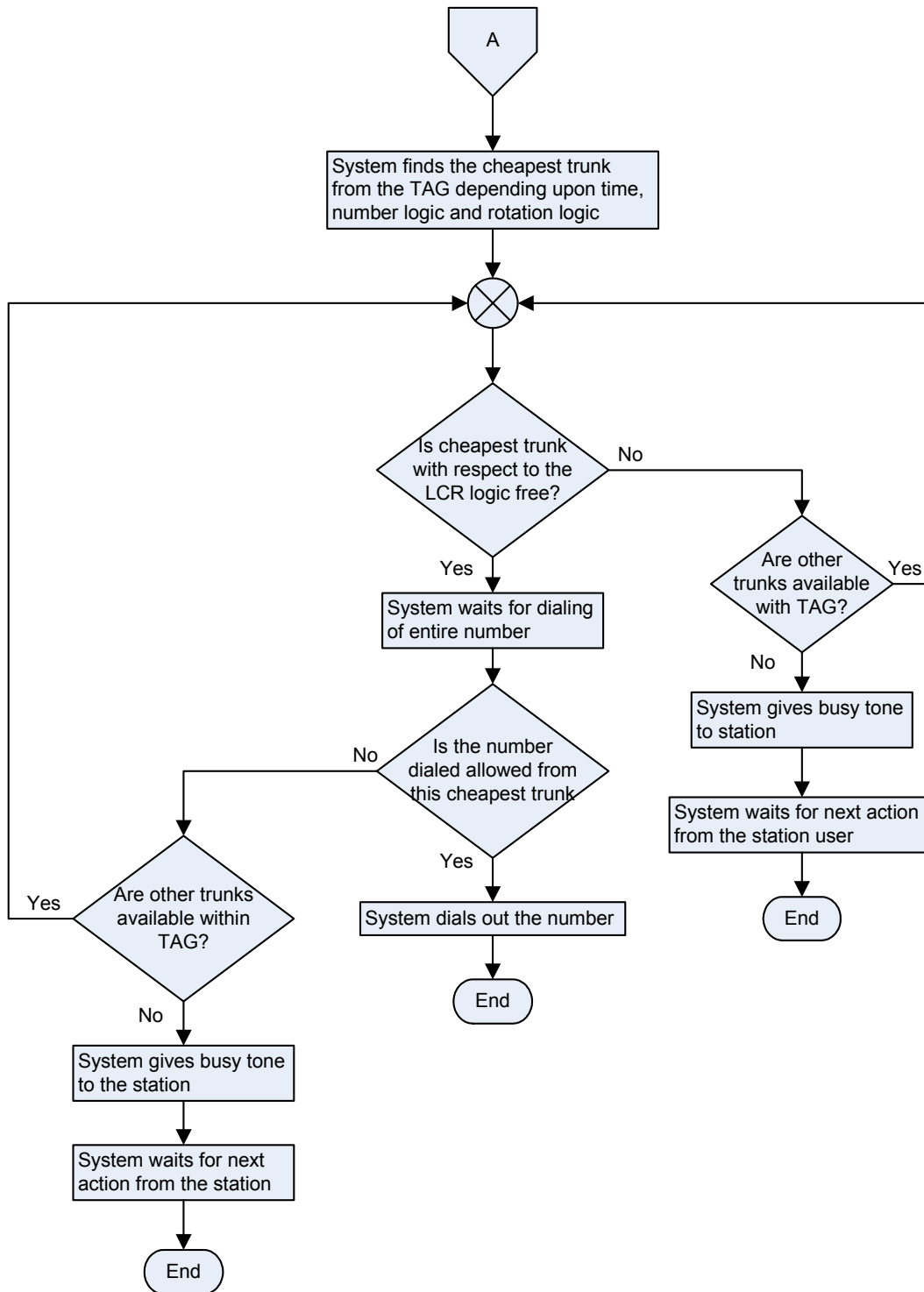
Flow Chart for Store and Forward Dialing Method:

```
                              ┌─────────┐
                              │  Start  │
                              └────┬────┘
                                   │
                    ┌──────────────────────────┐
                    │ Station user dials trunk  │
                    │ group access codes        │
                    └──────────────┬────────────┘
                                   │
                    ┌──────────────────────────────────┐
                    │ System allots free trunk from the │
                    │ TAG as per number logic and       │
                    │ rotation logic                    │
                    └──────────────┬────────────────────┘
                                   │
                              ◇ LCR type
                                selected? ◇
```

Time Based LCR — System finds the cheapest trunk from the group depending upon the time of call

Mixed LCR — A

No LCR — System allots a free trunk from the TAG depending upon the rotation flag → End

Number Based LCR — System finds cheapest trunk for this number

Is the cheapest trunk free? — Yes → System allots the trunk to the station → End

No → Are other trunk available in this group? — No → System gives busy tone to the station → System waits for next action from the user → End

Yes → Select next cheaper trunk in this group

Is cheapest trunk free? — No → Select next cheap trunk in this group → Is cheaper trunk available? — Yes (loop back) — No → System gives busy tone to the station → System waits for next action from user → End

Yes → System dials out the number → End

A

System finds the cheapest trunk
from the TAG depending upon time,
number logic and rotation logic

⊗

Is cheapest trunk
with respect to the
LCR logic free? → No

Yes

System waits for dialing
of entire number

No ← Is the number
dialed allowed from
this cheapest trunk

Yes

Are other trunks
available within
TAG?

Yes

No

System dials out the number

End

System gives busy tone
to the station

System waits for next
action from the station

End

Are other
trunks available
with TAG? → Yes

No

System gives busy tone
to station

System waits for next action
from the station user

End

How to program?

Step1: Decide number of Trunk Access Groups to be formed. Program these groups using command *4402.*

Step2: Program rotation code to select a trunk within the trunk access group using command *4403.*

Step3: Set a Trunk Access Group to default settings using command *4401.* (if required)

Step4: Assign a trunk access group and a trunk access code to a station for day time.

Step5: Assign a trunk access group and a trunk access code to a station for night time.

Step6: Assign SLT dial back trunk access prefix using command *4421.*

Step7: Assign dialing method to each trunk access code using command *4422.*

Step 1

Use following command to put trunks in a trunk access group:
4402-Trunk Access Group-Trunk1.....Trunk6-#*
Where,
Trunk Access Group is from 1 to 8
Trunk1..Trunk6 are the software port numbers of the trunks from 1 to 6

Use following command to put same trunks in all trunk access groups:
4402-*-Trunk1....Trunk6-#*
By default, the trunk access groups and trunks allocated are as tabulated below:

Trunk Access Group	Trunk Allowed	Trunk Access Code
1	1 to 6	0
2	1 to 6	5
3	1	61
4	2	62
5	3	63
6	4	64
7	5	65
8	6	66

Step 2

Use following command to program rotation code for a group:
4403-Trunk Access Group-Rotation Code-#*
Where,

Rotation Code	Meaning
0	Trunk rotation off within the group, system always selects the first trunk from the group.
1	Trunk rotation ON within the group.

Use following command to program same rotation code for all the groups:
4403-*-Rotation Code-#*
By default, Trunk Rotation is ON within the group.

Step 3

Use following command to default a trunk access group:
4401-Trunk Access Group-#*
Where,
Trunk Access Group is from 1 to 8

Use following command to default all trunk access groups:
4401-*-#*

Step 4

VisionUltra offers maximum 8 trunk access codes viz. 0, 5, 61 to 66. These codes are common for all the station users.

A trunk access codes table is given below:

Trunk Access Group Index	Trunk Access Code
1	0
2	5
3	61
4	62
5	63
6	64
7	65
8	66

Use following command to assign a trunk access group and trunk access code to a station for daytime:
4411-Station-Trunk Access Group Index-Trunk Access Group-#*
Where,
Station is from 01 to 17
Trunk Access Group Index is from 1 to 8
Trunk Access Group is from 1 to 8

Use following command to assign trunk access group and trunk access code to all the stations for daytime:
4411-**-Trunk Access Group Index-Trunk Access Group-#*
By default, all trunks are allowed to all stations.

Step 5

Use following command to assign a trunk access group and trunk access code to a station for nighttime:
4412-Station-Trunk Access Group Index-Trunk Access Group-#*
Where,
Station is from 01 to 17
Trunk Access Group Index is from 1 to 8
Trunk Access Group is from 1 to 8

Use following command to assign a trunk access group and trunk access code to all the stations for nighttime:
4412-**-Trunk Access Group Index-Trunk Access Group-#*
Where,

Trunk Access Group	Trunk Allowed	Trunk Access Code (Both Day/Night Time)
1	1 to 6	0
2	1 to 6	5
3	1	61
4	2	62
5	3	63
6	4	64
7	5	65
8	6	66

By default, all trunks are allowed to all stations.

Step 6

- VisionUltra has a facility to dial back the number using specific prefix. Each SLT port can select trunk access code for dialing back the number received on his CLIP phones. This parameter is called SLT dial back trunk access prefix.
- This feature works only for store and forward dialing mode. Hence, program S&F first, for this feature to work.
- No prefix is added for an incoming call on a SLT.
- The programming prefix is added for an incoming external call on a SLT.
- The hotline number is dialed by the system and not by station phone.

Use the following command to assign prefix to a SLT for trunk access code:

4421-SLT-Prefix-#*

Where,

SLT is software port number of user from 01 to 17

Prefix	Country Code			
	India	**Italy**	**USA/Canada**	**Spain**
0	None	None	None	None
1	0	0	9	0
2	5	5	5	5
3	61	61	81	61
4	62	62	82	62
5	63	63	83	63
6	64	64	84	64
7	65	65	85	65
8	66	66	86	66
Default	*None*	*None*	*None*	*None*

Simultaneous Ring:

- In case of simultaneous ring, the system sends common CLIP on all the stations. Hence, all station use same prefix.
- If any station has to use 'Dial Back' feature that station should be member of the group and rotation should be 'OFF' for the station group.
- Hence if first member uses a prefix, all members show CLIP with prefix-code in front of calling number. For example '***6-2212***' that is, prefix for using 'Trunk Access Code' is '6' for the calling number 2212. Thus if station 2212 use 'Dial Back' feature, in India, trunk access code '64' will be applicable while dialing an OG call.

Step 7

Use the following command to program a dialing method for a trunk access code of a station:

4422-Station-Trunk Access Code-Dialing Method-#*

Where,

Station is from 01 to 17

Trunk Access Code is from 1 to 8

Use the following command to program a dialing method for a trunk access code of all the stations:

4422-**-Trunk Access Code-Dialing Method-#*

By default, Dialing Method is Normal.

Example:

Program the system for following constraints:

- 3 trunks
- 3 departments: Technical, Marketing and Administration
- Technical department should get access to trunk 1 and 2 during day time by dialing '0'.
- Marketing department should get access to trunk 1 and 2 during day time by dialing '0'.
- Administration department should get access to all the three trunks during day time by dialing '0'.
- Security station (station 29) should not get access to any trunk during day time.
- Technical department and Marketing department should not get trunk access to any trunk during night time.
- Administration department should get access to trunk 1 by dialing '0' during night time.
- Station 29 (security station-software port 08) should get access to all the trunks by dialing '0' during night time only.
- Technical department has two stations 21 and 22 (software ports 01 and 02).
- Marketing department has two stations 23 and 24 (software ports 03 and 04).
- Administration department has four stations 25, 26, 27 and 28 (software ports 05, 06, 07 and 08).

Solution:

Programming the Trunk Access Group

4402-1-1-#*
4402-2-1-2-#*
4402-3-1-2-3-#*

Daytime allocation

4411-01-1-2-#*
4411-02-1-2-#*
4411-03-1-2-#*
4411-04-1-2-#*
4411-05-1-3-#*
4411-06-1-3-#*
4411-07-1-3-#*
4411-08-1-3-#*

The security station can be denied trunk access during the day with appropriate COS.

The Technical Department can be denied trunk access during the night with appropriate COS.

The Marketing Department can be denied trunk access during the night with appropriate COS.

Nighttime allocation

4412-05-1-1-#*
4412-06-1-1-#*

4412-07-1-1-#*
4412-08-1-1-#*
4412-09-1-3-#*

Important Point:
• To know programming details, please refer "Configuration Reports".

Relevant Topics:
1. Least Cost Routing-An Introduction   131
2. Time Table   180
3. Class of Service (COS)   62
4. Trunk Parameters   194
5. Country Code   86
6. Default Settings   87
7. Station Group   165

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Trunk Landing Groups

What's this?

VisionUltra offers flexibility to make all the different trunks land on different station during day time and night time.

VisionUltra uses the Station Groups for this purpose. It is possible to assign a station group to a trunk. The trunk call would land on these stations as per the programming of the station group. This station group is called trunk landing group.

How it works?

- A station group should be assigned to a trunk as trunk landing group.
- Different Station groups can be assigned to a trunk during day time and night time. Thereby a trunk can be made to land on different stations during day time and night time.
- Refer '<u>Station Group</u>' for more details.

How to program?

Step 1: Decide the number of station groups to be used as trunk landing groups, define a station group using commands **4702, 4703, 4704** and **4705.**

Step 2: Assign a station group to a trunk for day time landing using command **3301.**

Step 3: Assign a station group to a trunk for night time landing using command **3302.**

Commands:
Step 1
Please refer '<u>Station Group</u>' on how to program a station group.

Step 2
Use following command to assign station group as trunk landing group to a trunk for day time:
3301-Trunk-Station Group-#*
Where,
Trunk is the trunk software port from 1 to 6
Station Group is from 01 to 16

Use following command to assign same station group as trunk landing group to all the trunks for day time:
3301-*-Station Group-#*

Step 3
Use following command to assign station group as trunk landing group to a trunk for night time:
3302-Trunk-Station Group-#*
Where,
Trunk is the trunk software port from 1 to 6
Station Group is from 01 to 16

Use following command to assign same station group as trunk landing group to all the trunks for night time:

3302-*-Station Group
By default, station group '01' is assigned to all trunks for both day time and night time.

Example:
Program system for following constraints:
- 3 CO lines (S/w ports 1 to 3) are interfaced with VisionUltra.
- First two CO lines, CO1 and CO2 should land on station 21, 23, 25, 22 (S/w ports 01,02,03,06 respectively) during day time. Rotation to be allowed.
- CO1 and CO2 should ring on each station for 10 seconds. Station should ring in the given sequence only.
- First two CO lines, CO1 and CO2 should land on station 21 (S/w ports 01) during night time.
- CO1 and CO2 should ring on station 21 continuously.
- Third line should land on station 28 and 29 simultaneously (S/w port 07 and 08 respectively) during day time and night time.
- CO3 should ring continuously on both the stations.

Use following commands:
Make Group 01 as per the requirement:
4702-01-1-01-#*
4702-01-2-02-#*
4702-01-3-03-#*
4702-01-4-04-#*

4703-01-1-010-#*
4703-01-2-010-#*
4703-01-3-010-#*
4703-01-4-010-#*

4704-01-1-0-#*
4704-01-2-0-#*
4704-01-3-0-#*
4704-01-4-0-#*

4705-01-1-#*

Make Group 02 as per the requirement:
4702-02-1-01-#*
4702-02-2-01-#*
4702-02-3-01-#*
4702-02-4-01-#*

4703-02-1-010-#*
4703-02-2-010-#*
4703-02-3-010-#*
4703-02-4-010-#*

4704-02-1-1-#*
4704-02-2-1-#*
4704-02-3-1-#*

4704-02-4-1-#*

Make Group 03 as per the requirement:
4702-03-1-07-#*
4702-03-2-08-#*
4702-03-3-07-#*
4702-03-4-08-#*

4703-03-1-010-#*
4703-03-2-010-#*
4703-03-3-010-#*
4703-03-4-010-#*
4704-03-1-1-#*
4704-03-2-1-#*
4704-03-3-1-#*
4704-03-4-1-#*

4705-03-0-#*

3301-1-01-#*
3301-2-01-#*
3301-3-03-#*

3302-1-02-#*
3302-2-02-#*
3302-3-03-#*

Important Points:
• By default, all the station groups contain first four stations. Hence, if less number of stations are to be programmed in a station group then assign the same stations again for remaining destinations within the group. As shown in the example above, station group 01 contains only one station i.e. station 21. Hence all other destinations within a group are assigned same station.
• ***By default, station group '01' as assigned to all trunks.***

Relevant Topics:

=X=X=

Trunk Parameters

What's this?

Trunks differ in their parameters like pulse type or tone type, enable/disable, etc. The VisionUltra offers flexible settings for each trunk.

How to program?

Trunk parameters can be programmed in following hierarchy:
* Enable/disable a trunk using command *3101.*
* Define dial type of the trunk using command *3102.*
* Define trunk type using command *3103.*
* Program speech connection delay timer using command *3104.* (if required).
* Pulse Dial Ratio.

Trunk Enable/Disable
A trunk port can individually be enabled or disabled. This can be useful when a particular trunk goes out of order and should be stopped from being allocated to a user.
Use following command to enable/disable a trunk:
3101-Trunk-Code-#*
Where,
Trunk = Trunk Software Port Number from 1 to 6

Code	Meaning
0	Trunk Port disabled
1	Trunk Port enabled

Use following command to enable/disable all the trunks:
3101-*-Code-#*

Example:
Let us disable trunk 2
3101-2-0-#*
By default, all trunks are enabled.

Dial Type
The VisionUltra supports both pulse and tone (DTMF) dialing on the trunk ports. Depending on a trunk port's dial type, the same can be programmed.

Use following command to program the dial type of a trunk:
3102-Trunk-Code-#*
Where,
Trunk = Trunk Software Port Number from 1 to 6

Code	Meaning
0	Pulse Type
1	Tone Type

Use following command to program the same dial type of all the trunks:
3102-*-Code-#*

Example:
Let us program trunk 2 with Pulse dialing
3102-2-1-#*
By default, all trunks are programmed as tone type.

Trunk Type
A normal dial trunk, hotline trunk can be interfaced with the VisionUltra. These parameters should be programmed for these lines.
* Normal type trunk is the conventional trunk available from the Service Provider.
* Hotline trunk is the trunk connecting two destinations immediately on grabbing it.

Use following command to define a trunk type for a trunk:
3103-Trunk-Code-#*
Where,
Trunk = Trunk software port number from 1 to 6

Code	Meaning
0	Normal Dial Type
1	Hotline Type

By default, trunk type is normal dial type.

Use following command to define a trunk type for all the trunks:
3103-*-Code-#*

Pulse Dial Ratio
The Pulse Dial Ratio of the trunks in VisionUltra is programmable. The ratio is programmed system wise and is applicable to all trunks.

Use the following command to program the pulse dial ratio for the system trunk:
3110-Type-#*
Where,

Type	Value
1	33:67 ms
2	40:60 ms
3	50:50 ms

By default, the type is 1.

Answer Wait Timer
It is the time for which the system waits before answering the call. VisionUltra has the facility to program this time as per the time zone. This timer is relevant in DID, DISA, Fax Homing and Route Calls. Whenever either of features DID, DISA or Fax Homing is enabled on trunk, system will wait for this time before answering the call. Whenever, Route calls before 'Answer Wait Timer' is set along with the feature DID/DISA/Fax Homing, stations of TLG will ring for this timer before answering the call. If during this timer call is answered

by any of the TLG stations then DID/DISA/Fax Homing will not be served. Else system will answer the call on the expiry of the Answer Wait Timer.
Use the following command to program answer wait timer for a trunk for day mode:
3111-Trunk-Answer Wait Timer-#*
Where,
Trunk is from 1 to 6
Answer Wait Timer is from 000-255 seconds.
By default, Answer Wait Timer for a trunk for day mode is 5 secs.

Use the following command to program answer wait timer for all the trunks for day mode:
3111-*-Answer Wait Timer-#*

Use the following command to program answer wait timer for a trunk for night mode:
3112-Trunk-Answer Wait Timer-#*
Where,
Trunk is from 1 to 6
Answer Wait Timer is from 000-255 seconds.
By default, Answer Wait Timer for a trunk for day mode is 5 secs.

Use the following command to program answer wait timer for all the trunks for night mode:
3112-*-Answer Wait Timer-#*

Speech Connection Delay Timer
It is the time after which the system gives dial tone to the station user on grabbing the trunk line. To understand the significance of this timer, let us consider a situation. A telephone line coming from an old telephone exchange is interfaced with the VisionUltra. Now when the user station not having access to long distance numbers, grabs a trunk line and dials a number 1022-26305555. The PBX allows this number since it starts with 1 but since the actual dial tone from the telephone exchange comes after some time, the telephone exchange interprets this number as 022-26305555 and establishes the speech. This way a station user not having access to this number can dial out a long distance number. To avoid this situation, VisionUltra offers this timer. This timer can be set for individual trunks.
Use following command to program speech connection delay timer for trunk:
3104-Trunk-Speech Timer-#*
Where,
Trunk is the software port number from 1 to 6
Speech Timer is from 0 to 9
By default, Speech Timer is 0.

Use following command to program speech connection delay timer for all trunks:
3104-*-Speech Timer-#*
Where,
Speech Timer is from 0 to 9.

Trunk Name
Use the following command to program the trunk name:
3106-Trunk-Name-#*
Where,
Trunk is from 1 to 6
Name is a string of alphanumeric characters (Maximum 8 characters).
Please refer the ASCII code character chart at the end of the topic for name programming. Each character is programmed by dialing 3 digits are from 037 to 127. If user wants to name is trunk as 'ABCD' then he dials,
3106-1-0-065066067068-#*. (where 065, 066, 067, 068 are the ASCII codes for 'A', 'B', 'C', 'D' respectively).

Use the following command to clear a trunk name:
3106-Trunk-#*

Use the following command to clear the name of all trunks:
3106-*-#*

Trunk First Digit Wait Timer
Trunk first digit wait timer-This timer signifies the time for which the VisionUltra waits for the first digit after grabbing the trunk.
Command: ***3010-Seconds-#****
Default: 025 seconds
Valid Range: 000 to 255 seconds

Trunk Inter Digit Wait Timer
Trunk Inter Digit Wait Timer-This timer signifies the time for which the VisionUltra waits between accepting two digits from the caller. This timer is loaded when the caller dials first digit (digit could be other then station number) and waits for the second digit, while reaching a desired station.
Command: ***3011-Seconds-#****
Default: 006 seconds
Valid Range: 000 to 255 seconds

Pause Timer
Pause Timer-It is the time for which the system waits before dialing the outside number after grabbing the trunk. Some times it is observed that after grabbing the trunk line, the user does not get CO dial tone immediately. Instead he gets the dial tone from the CO after some time. This is due to old types of COs. When user himself is dialing the number, he inadvertently waits for the dial tone and then dials the number. But this is not so when PBX dials the number. When Redial or Auto Redial or Abbreviated Dialing feature is used the PBX grabs the trunk line and dials the number at its own. Now if there is no pause time and if the CO is old type then it is possible that the PBX may dial out the number before getting the dial tone. This may result in dialing wrong number. To avoid this situation, VisionUltra offers pause timer, which can be set for individual trunks. Pause timer is used during Redial, Auto Redial and Memory Dialing.
Command: ***3012-Seconds-#****
Default: 003 seconds

Valid Range: 000 to 255 seconds.

Trunk Ring Cadence OFF Timer

It is the timer for stopping ring for incoming call on a specific trunk, if the OFF time of that ring cadence exceeds beyond specific time period. This has significance, as the OFF time of ring cadence varies from exchange to exchange and PBX to PBX. In this situation if OFF time of ring cadence increase for long time, user thinks that ring has stopped. To avoid this, OFF period is programmed for specific trunk.

Use the following command to program ring cadence OFF timer on a trunk:

*3113-Trunk-Seconds-#**
Where,
Trunk is from 1 to 6
Seconds is from 1000 to 9999 (Corresponding to 1.0 to 9.9 seconds)
By default, Trunk Ring Cadence OFF Timer is 5000 (5.0 Seconds)

DID-DISA-FAX Homing Abandoned Call Filter

- In case a caller of some Incoming Call, who is calling to the system, disconnects the call without dialing a digit and the system is pre programmed for 'fixed destination', then the system routes the call to the programmed destination. But when the destination answers the incoming ring, he gets 'busy' or 'disconnect' tone because the caller has already disconnected the call. Thus the destination (user) thinks this as a spurious (ghost) call.
- In order to prevent such calls on the user, the system is programmed to detect the 'disconnect tone' on a trunk. If it is detected, the system does not route the call on the destination. This feature is called 'Abandoned Call Filter'.
- This feature is applicable to DID, DISA and FAX Homing. Refer chapter, 'Call Progress Tones' for Disconnect Tone specifications for different countries.
- The system detects only specific tones. Because of limitations of tone-detection, the feature may not always work 100% in following situations:
  - The caller A makes a call while talking to someone in front of him.
  - The caller A makes a call while watching TV or listening to music.
  - The caller A makes a call from a noisy environment (factory shop-floors, railway stations, airports, restaurants, SOCCER STADIUMS, etc.)
  - The caller A is calling from other country having non-matching tones frequencies and cadences (if the disconnection tone is given by the source exchange)
  - The caller A is calling from other equipment having non-matching tones frequencies and cadences (PBXs, gateways, routers etc.)

Tone Specifications:

India:
Frequency Band = 350-450Hz

Disconnection Tone 1 Cadence: ON = 450-800 ms, OFF = 450-800 ms

Italy:
Frequency Band = 350-450Hz
Disconnection Tone 1 Cadence: ON = 90-110 ms, OFF = 90-110 ms
Disconnection Tone 2 Cadence: ON = 180-220 ms, OFF = 180-220 ms
Disconnection Tone 3 Cadence: ON = 450-550 ms, OFF = 450-550 ms

USA/Canada:
Frequency Band = 400-440Hz
Disconnection Tone 1 Cadence: ON = 450-800 ms, OFF = 450-800 ms

Spain:
Frequency Band = 350-450Hz
Disconnection Tone 1 Cadence: ON = 90-110 ms, OFF = 90-110 ms
Disconnection Tone 2 Cadence: ON = 180-220 ms, OFF = 180-220 ms
Disconnection Tone 3 Cadence: ON = 450-550 ms, OFF = 450-550 ms

How to program?

Use following command to activate 'DID-DISA-Fax Abandoned Call Filter' for the trunk using command:
*3114-Trunk-Flag-#**
Where,
Trunk is from 1 to 6

Flag	Meaning
0	No
1	Yes

By default, DID-DISA-Fax abandoned Call Filter is 1 for India.

Use following command to program the 'DID-DISA-Fax Abandoned Call Detection Timer' for the trunk using command:
*3115-Trunk-Timer-#**
Where,
Timer is from 1 to 9 Seconds
By default, DID-DISA-Fax abandoned Call Disconnector Timer is 3 second for India.

Print commands
Use following command to print Trunk Parameters of a trunk:
*3100-Trunk-#**
Where,
Trunk is trunk software port number from 1 to 6.

Use following command to print Trunk Parameters of all trunks:
3100--#**

Relevant Topic:
1.

ASCII Character Chart:

Decimal	Value	Meaning
033	!	(exclamation mark)
034	"	(double quote)
035	#	(number sign)
036	$	(dollar sign)
037	%	(percent)
038	&	(ampersand)
039	'	(single quote)
040	(	(left/opening patenthesis)
041	)	(right/closing patenthesis)
042	*	(asterisk)
043	+	(plus)
044	,	(comma)
045	-	(minus or dash)
046	.	(dot)
047	/	(forward slash)
048	0	
049	1	
050	2	
051	3	
052	4	
053	5	
054	6	
055	7	
056	8	
057	9	
058	:	(colon)
059	;	(semi-colon)
060	<	(less than)
061	=	(equal sign)
062	>	(greater than)
063	?	(question mark)
064	@	(AT symbol)
065	A	
066	B	
067	C	
068	D	
069	E	
070	F	
071	G	
072	H	
073	I	

Decimal	Value	Meaning
074	J	
075	K	
076	L	
077	M	
078	N	
079	O	
080	P	
081	Q	
082	R	
083	S	
084	T	
085	U	
086	V	
087	W	
088	X	
089	Y	
090	Z	
091	[	(left/opening bracket)
092	\	(black slash)
093	]	(right/closing bracket)
094	^	(caret/cirumflex)
095	_	(underscore)
096	`	
097	a	
098	b	
099	c	
100	d	
101	e	
102	f	
103	g	
104	h	
105	i	
106	j	
107	k	
108	l	
109	m	
110	n	
111	o	
112	p	
113	q	
114	r	
115	s	
116	t	
117	u	

Decimal	Value	Meaning
118	v	
119	w	
120	x	
121	y	
122	z	
123	{	(left/opening brace)
124	|	(vertical bar)
125	}	(right/closing brace)
126	~	(tilde)
127	DEL	(delete)

```
Trunk Port Parameters                              Sat 01-01-2005 AT 10:11
--------------------------------------------------------------------------------
Port Number                                   :1
Status                                        :Enable
Name                                          :T1
Dial Type                                     :Tone
Trunk Type                                    :Normal
CLIP Type                                     :DTMF
Flash Timer                                   :600ms
Ring Cadence Off Timer                        :5000ms
Store Outgoing Calls?                         :Yes
Store Incoming Calls?                         :Yes
Speech Connection Delay Timer                 :0
Pre-PSTN Digit Count                          :0
Service Provider                              :1
ECF Trunk Access Group                        :1
ECF Number                                    :
FAX Homing Destination Station               :01
Filter DID-DISA-FAX Abandoned Calls          :Yes
DID-DISA-FAX Abandoned Calls Detection Timer:3 Seconds
                                          Day Time        Night Time
Station Group                             01              01
DID-DISA-FAX Answer Wait Timer(Seconds)   005             005
DID                                       Off             Off
Route Calls Before DID Answer             Off             Off
DISA                                      Off             Off
ECF                                       Off             Off
FAX Homing                                Off             Off
Voice Guidance                            On              On
--------------------------------------------------------------------------------
MATRIX VisionUltra(616) V03R04                                    Page: 01
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User Password

What's this?

VisionUltra is a flexible system and can be programmed to suit your needs. Programming can be done at three levels:

- **System Engineer Level**
  At this level, System Engineer does the programming. This is called System Engineer mode.
- **System Administrator Level**
  At this level, System Administrator does the programming. This is called System Administrator mode.
- **User Level**
  At this level, User does the programming for himself for features like Alarms, Personal memory. For more details, please refer respective sections.
- VisionUltra provides security to the user by way of a Password. This helps to avoid any unauthorised use.
- Each station of VisionUltra has a password. This password helps the user in using following features
  - Call follow me
  - Dynamic lock
  - DISA.
  - Walk-In Class of Service
- User password is a 4-digit password. It cannot have either less than or more than 4 digits.
- User password can be changed only from the station. However it can be cleared by SE from any other station, which is having access to programming feature.
- The default User password is 1111 for all the users. Please note that the features requiring password cannot
- be used with default password. Thus it is compulsory for the user to change the User password if he wishes
- to use any of the features that are protected by the password.
- In case the user has forgotten his password, the system engineer (SE) can clear the password for any user.

How to use it?

1	Lift the handset.	Dial tone
2	Dial **144-Old User Password-New User Password.**	Feature tone
3	Replace the handset.	Confirmation tone

By default, User Password is 1111.

How to program?

Use following command to assign default password to a station:
1106-Station-# *
Where,
Station is from 01 to 17

Relevant Topics:

=X=X=

Voice Message Applications

What's this?

VisionUltra can store various messages. These messages can be played back to the caller/user depending on the situation. If Auto Attendant is activated on few trunk lines then it is possible to guide caller to reach his desired person using this facility. If auto redial feature is used then a suitable message can be given to the called person in case he answers the call before the caller. Desirable 'Music-on-Hold' can be played back to the caller instead of the hard-wired 'Music-on-Hold'.

Voice messages find their applications in following features/ facilities.
- Day Greeting
- Night Greeting
- Initial Guidance Message
- Dial by Name Message
- No Dial Message
- Wrong Dial Message
- Transfer Message
- Busy Message
- No Reply Message
- Music on Hold
- Alarm
- Emergency Message
- Auto Redial
- Programming Tone
- Programming Confirmation Message
- Programming Error Message.
- Voice guidance can be activated on all the trunks. However, if the voice module is engaged for one trunk, the caller on the other trunk will not get voice guidance. He would get music followed by dial tone of the PBX.

Application of voice guidance:

Voice guidance for Day time greeting
Any greeting or welcome message can be recorded in the chip. The system will greet and guide the caller by playing back the recorded message:

The Default DID Day time message is:
"Welcome"

Voice guidance for Night time greeting
Your system will greet the caller even in your absence and will also guide him. It is only required to record the message and program the system to playback it in night mode.

The Default DID Night time message is:
"Sorry, we are closed. Please call later".

Voice message for DID Dial or Initial Guidance
The Default Initial Guidance message is:

"Dial an extension number. Dial # if you wish to dial by name. Or dial 9 for operator".

Voice guidance for Dial by Name
The Default message is:
"Dial first three letters of the name of the person you wish to call".

Voice guidance for Music On Hold
Normally, when a caller is kept on hold, he gets internal 16-tone hold on music. This internal music can be replaced with the external music (Please refer section "External Music"). But to feed external music, a separate music source is required which may not be feasible all the time. However, this same requirement can be fulfilled using this feature. Any message like advertisement of your company or any message related to your new marketing plans can be recorded in the voice chip and can be played back to the caller when he is on hold. This way, two jobs are done at a time; the operator can attend to other call and the message, which otherwise you had to give to the caller, has reached him in a much better manner.

Voice guidance for Alarm
This feature is very useful in hotels where it is required to wake up guests at odd time. At the same time it is also required to greet them. Any greeting message can be recorded in the chip. When the guest picks up the handset on getting ring, he is greeted with this recorded message. If the user does not hang up after the alarm message the system will feed MOH to the user.

The Default alarm message is:
"Greetings! This is your reminder call. Have a nice day!".

Voice guidance for Emergency Message
This feature is very useful in an emergency situation.

The Default Emergency Message is:
"This is an emergency call; Please dial '0' to acknowledge".

Voice guidance for Auto Redial
During auto redial, if the call goes through and the system detects ring back tone, the system gives ring to the Station, which has requested auto redial. At this point of time both, the Station as well as the destination are ringing. Now if the destination answers the before the Station, he gets internal hold on music. It could be surprising for him, why should he get music while answering a fresh call. This event can be avoided by replacing music with a voice message. An appropriate voice message can be recorded and can be played back in such situation.

The Default Auto Redial message is:

"Please hold; The caller is coming on the line soon".

Voice guidance for DID No dial message
The Default message is:
"Sorry! You have not dialed any number. Please wait; Your call is being transferred to the operator."

Voice guidance for DID Wrong dial
The Default message is:
"The number is not valid."

Voice guidance for DID Transfer message
The Default message is:
"Please wait; Your call is being transferred".

Voice guidance for DID Busy
The Default message is:
"The person you dialed is busy. Please dial another Extension. Or wait for the operator".

Voice guidance for DID No Reply
The Default message is:
"The person you are trying to reach is not available at present".

Voice guidance for Programming Confirmation Tone
This message is played whenever a valid command is executed from the programming mode (if assigned).
The Default message is:
"Command Executed"

Voice guidance for Programming Error Tone
This message is played whenever an invalid command is issued from the programming mode (if assigned).
The Default message is:
"Programming Command is not valid"

Voice guidance for Programming Dial Prompt
This message is played whenever the SE gets in to the programming mode.(if assigned)
The default message is:
"Dial Programming Command"

How it works?

VisionUltra comes with prerecorded messages. One Voice Module of 240 seconds is available in VisionUltra. The VM space is divided in two groups viz. User and System messages. The user has the flexibility of recording messages of his own choice. The VM programming is done in two levels viz Limited and Full VM programming. By default, VM programming is Limited and in this level; only the User messages can be altered. In the Full VM programming mode the User as well as System messages can be altered.

System VM Messages
System VM programming is not allowed by default and can be done only if Advanced VM Programming is enabled. By default there are 8 system messages i.e the System VM programming area has 8 parts (8 messages). The total duration assigned for system messages is 56 seconds. All the messages are of equal length i.e each message is 7 seconds in length by default. The Number of parts can be altered. In such cases the length of messages also alters, but all the messages are of equi length. At any instance the length of any system message i.e 56/Number of parts.

Number of Parts	Maximum duration for each part (Seconds)
1	56
2	28
3	18
4	14
5	11
6	9
7	8
8	7

How to program?

Step 1: Program the VM programming level using command *1410.*
Step 2: Divide the system VM in required number of parts using command *1411.*
Step 3: Program the source of recording using command *1420.*
Step 4: Record system VM partition using command *1412.*
Step 5: Playback the recorded system partition using command *1413.*
Step 6: Assign a system partition to system VM application using command *1414.*
Step 7: Default system VM config using command *1415.*

Step 1
Use following command to program the VM programming Level.
*1410-Flag-#**
Where,

Flag	Meaning
0	Limited VM Programming
1	Full VM Programming

By default, Flag is 0.

Step 2
System VM can be divided into maximum 8 parts. Each part is of equal duration i.e. 7 seconds. If the VM is divided in to 7 parts, each part would be of 8 seconds.
Use following command to program the number of parts.
*1411-Number of Parts-#**
Where,
Number of Parts can be 1 to 8
By default, number of parts = 8.

Step 3
Use following command to program the source of recording as internal/external:
1420-Code-#*
Where,

Code	Meaning
1	Recording from Telephone
1	AIP (Analog Input Port)

By default, Code is 1.

Step 4
Use following command to record System VM partition:
1412-Part Number-#*
Where,
Part Number is from 1 to 8.

Step 5
Use following command to playback the recorded System VM partition:
1413-Part Number-#*
Where,
Part Number is from 1 to 8.
This command can be executed by the SE even when the VM programming level is limited.

Step 6
Use following command to assign a system application to a System VM partition:
1414-Voice Message Application-Part Number-#*
Where,
Part Number is from 1 to 8.

System VM App. No.	System Message	Default VM Part No.	
		India	Italy/USA/Canada/Spain
1	DID/DISA-No Dial	1	1
2	DID/DISA-Wrong Dial	2	2
3	DID/DISA-Transfer	3	3
4	DID/DISA-Busy	4	4
5	DID/DISA-No Reply	5	5
6	Programming-Programming Tone	0	0
7	Programming-Confirmation tone	0	6
8	Programming-Error Message	0	7

Use following command to de-assign an application from a System VM partition:
1414-Voice Message Application-0-#*
Assigning 0 as the part number to a system voice message application is deassigning the part number.

Step 7
Use following command to set default values for all the System VM parameters:
1415-#*

On issuing this command system VM config is changed as follows:
• Number of VM parts = 8
• Message duration = 7 seconds
• Recording source = Telephone
• Assignment of Voice Message Application to part number = As shown in the above table.

User VM Messages
User VM programming is allowed by default. By default there are 8 User messages i.e the User VM programming area has 8 parts. The total duration for user messages is 184 seconds. All the messages are of equal length i.e each message is 23 seconds in length. The Number of parts can be altered. In such cases the length of messages is altered, but all the messages are of equi length i.e 184/Number of parts.

How to program?

Step 1: Divide the user VM in required number of parts using command ***1401.***
Step 2: Program the source of recording using command ***1420.***
Step 3: Record user VM partition using command ***1402.***
Step 4: Playback the recorded partition using command ***1403.***
Step 5: Assign user partition to an user VM application using command ***1404.***
Step 6: Default user VM config using command ***1405.***

Step 1
User VM can be divided into maximum 8 parts. Each part is of equal duration i.e. 23 seconds. If the VM is divided in to 6 parts, each part would be of 46 seconds.
Use following command to program the number of parts.
1401-Number of Parts-#*
Where,
Number of Parts can be 1 to 8
By default, number of parts = 8.

Step 2
Use following command to program the source of recording as internal/external:
1420-Code-#*
Where,

Code	Meaning
1	Recording from Telephone
2	AIP (Analog Input Port)

By default, Code is 1.

Step 3
Use following command to record VM partition:

1402-Part Number-#*
Where,
Part Number is from 1 to 8.

Step 4

Use following command to playback the recorded VM partition:
1403-Part Number-#*
Where,
Part Number is from 1 to 8

Step 5

Use following command to assign an application to a VM partition:
1404-Voice Message Application-Part Number-#*
Where,

Part Number is from 1 to 8.

User VM App. No.	User Message	Default VM Part No.	
		India	Italy/USA/ Canada/Spain
1	Day Greeting	1	1
2	Night Greeting	2	2
3	Initial DID/FAX/DISA Guidance Message	3	3
4	Dial by Name	4	4
5	MOH	5	5
6	Alarm	6	6
7	Emergency	7	7
8	Auto Redial	8	0

Use following command to de-assign an application from a User VM partition:
1404-Voice Message Application-0-#*
Assigning 0 as the part number to a User voice message application is deassigning the part number.

Step 6

Use following command to set default values for all the User VM parameters:
1405-#*

On issuing this command User VM config is changed as follows:
• Number of VM parts = 8
• Message Length = 23 Seconds
• Recording source = Telephone
• Assignment of Voice Message Application to part number = As shown in the above table.

How to record/verify a voice message (User Message)?
Recording from a telephone:
This method is very simple. Whatever we speak on the phone is recorded. It is done as follows:
• Select a good quality extension with good telephone.

• Request a person with clear voice to record the message in his or her voice.
• Select a peaceful place. Switch Off fans and other sources of noise.
• Avoid room noise to maintain clarity of the message.
• Enter in the programming mode from this extension.
• Issue command *1420-1-#*.* You will get confirmation message/Tone.
• Issue command *1402-Part Number-#*.* You will get confirmation message/Tone.
• Start recording your message.
• The recording is now going on. Whatever you speak on the phone is being recorded.
• Replace the handset as soon as the message is over. You may use your hand to press the hook switch to reduce the delay.
• You will get ring because you are in programming mode.
• To verify the recording, issue command: *1403-Part Number-#*.* You will get confirmation message/Tone.
• Listen to the whole message.
• Repeat above procedure if you are not satisfied with the message.

Recording from an external source:
The simple method described above is good enough for most of the applications. But if a better quality of voice message is required, we need to eliminate all the room noise picked up by the phone while recording.
A better option is supported by VisionUltra to record high quality message. We need a cassette or CD player with pre-amplified output port. This can be done as follows:
• Select the piece of music or message you want to record.
• Get this message recorded with the proper media.
• Select the track or the position on the media so that when you press PLAY, the desired message should start without delay.
• Connect the player with the VisionUltra using an audio cable.
• The external music source can be connected to the music port.
• Enter in the programming mode from a station.
• Issue command: *1420-2-#*.* You will get confirmation message/Tone.
• Issue command: *1402-Part Number-#*.* You will get confirmation message/Tone.
• Start the player.
• The recording has started.
• Replace the handset as soon as the message is over. You may use your hand to press the hook switch to reduce the delay.
• You will get ring because you are in the programming mode.
• Stop the music source.
• To verify the recording, issue the command: *1403-Part Number-#*.*
• You will get confirmation message/Tone.
• Listen to the whole message.

- Repeat the above procedure if you are not satisfied with the message.

The same method can be followed to record system message also. Please Ensure that the VM Programming Level is programmed as Full VM programming.

Recording Messages through the Jeeves
- Both the System and User Messages can be recorded from Jeeves.
- Connect the AIP port (External Music Port) of VisionUltra to the audio output port of the Computer.
- Record the required message and store it .wav format.
- From Jeeves (Voice Message Application Page) select the file and part number. Click on start. The message from the file is now recorded in the selected part number.
- If the system messages are to be recorded, please ensure that Full VM programming is enabled.

Example:
Voice module is to be used for emergency call.

Solution:
Record an Emergency message using command *1402-7-#*.*
Verify the recorded message using command *1403-7-#*.*

Important Points:
- It is possible to use the voice module for multiple applications. However, only one application shall work at a time.
- To know programming details, please refer "Configuration Reports".
- Two Voice message applications cannot be played simultaneously.
- On defaulting the system,

  System VM config is changed as follows:
  - Number of VM parts = 8
  - Message duration = 7 seconds
  - Recording source = Telephone
  - Default Assignment of Voice Message Application to part number.

  User VM config is changed as follows:
  - Number of VM parts = 8
  - Message Length = 23 Seconds
  - Recording source = Telephone
  - Default Assignment of Voice Message Application to part number.

Relevant Topics:

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Walk-In Class of Service

What's this?

- A user can make calls from some other stations according to his Toll Control programming.
- A user can make calls from any other station using this feature.
- This feature is useful to managers when they move away from their desk. Using this feature, they can make long distance calls from any other station where such dialing is not allowed.
- This facility is protected with the user password.

How to use it?

1	Lift the handset.	Dial tone
2	Dial *111-Station-User Password.*	Confirmation tone
3	Wait for dial tone.	Dial tone
4	Dial out the desired outside number.	

Example:
A user is having station number 23. His user password is 3535. He is sitting at station number 25. He needs to make a long distance call from 25 but such facility is not allowed from there.

The user can dial Walk-in Class of Service from 25 and make necessary calls by dialing:
111-23-3535
On dialing above command, the system gives confirmation tone. The user has to wait for the dial tone once the confirmation tone expires for dialing.

Important Points:
- Only one call is allowed at a time using this feature.
- To make two calls one after the other, the user needs to dial the code twice.
- Walk in Class of Service is not allowed with default user password.
- Walk in Class of Service is available to all the stations.

Relevant Topic:
1. User Password   199

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Section 3: Appendices

Appendix A: Technical Specifications

System Capacity and Resources

VisionUltra		206	208	308	412	616
Total User Ports		9	11	12	17	23
Maximum SLT (Conventional Phones)		7	9	9	13	17
Maximum Analog trunks		2	2	3	4	6
Door Phone Port (2 wire/4 wire)		1	1	1	1	1
RSD Port		6	6	6	6	6
Data Port (Internet Relay Port)		1	1	1	1	1
Digital Input Port		1	1	1	1	1
Digital Output Port		3	3	3	3	3
PAS Port (Analog Output Port)		1	1	1	1	1
External Music Port (Analog Input Port)		1	1	1	1	1
Auto Attendant Modules	User VM	8x23 secs.	8x23 secs.	8x23 secs.	8x23 secs.	8x23 secs.
	System VM	8x7 secs.	8x7 secs.	8x7 secs.	8x7 secs.	8x7 secs.
Speech Paths		7	7	7	7	7
DTMF Decoders		2	2	2	4	4
DTMF Encoders		1	1	1	2	4
Communication Port (RS232)		1	1	1	1	1

Type of Switching : Space division 7 (COMS Cross Point)

Control Architecture : CMOS Micro-Controller with Stored Program Control

CO line (FXO)

OFF-Hook AC Impedance	:	600 Ohms
Loop Limit	:	1500 Ohms
Pulse Dialing	:	10PPS +/-10%, Make/Break ratio = 1:2
DTMF Dialing and Reception	:	As per ITU-T Q.23 and Q.24
CLI Reception	:	DTMF, FSK ITU-T V.23 and FSK Bellcore 212
Call Maturity	:	Delay Based
Protection	:	Solid State (over voltage and over current protection) as per EN55024 standard
Connectivity	:	Push Type (Single Pair Wire, 0.5mm/0.091Inch)

Station lines (FXS)

Loop Limit	:	250 Ohms
Loop Current	:	39mA max.
Ring Voltage	:	50Vms, 25Hz
OFF-Hook Line Impedance	:	600 Ohms
Pulse Detection	:	10PPS +/-5%, Make/Break = 33:67
DTMF Detection	:	As per ITU-T Q.24
CLI Presentation	:	DTMF, FSK ITU-T V.23 and FSK Bellcore 212
Protection	:	Solid State (over voltage and over current protection) as per EN55024 standard
Connectivity	:	Push Type (Single Pair Wire, 0.5mm/0.091Inch)

Digital Input Port

Type	:	Loop Open/Close Sensing
Loop Current Supplied	:	5mA (max)
Connectivity	:	Push Type Connector

Digital Output Port

Contact Arrangement	:	1-Form-A
Contact Rating (Resistive Load)	:	VDC Max. 60V, IDC Max. 1Amp.
Operation Time	:	5ms
Connectivity	:	Push Type Connector

Analog Input Port

Interface Type	:	Audio Signal
Frequency	:	300Hz to 3400Hz
Maximum Voltage	:	0.707Vmrs
Isolation	:	Internal Transformer
Termination Impedance	:	1KOhms

Analog Output Port

Interface Type	:	Audio Signal
Frequency	:	300Hz to 3400Hz
Maximum Voltage	:	0.707Vmrs
Isolation	:	Internal Transformer
Source Impedance	:	100 Ohms

Transmission Parameters

Return Loss	:	More than 18dB

Insertion Loss	:	Less than 1dB
Inter channel cross talk	:	Less than -65dBm
Idle channel noise	:	Less than -60dBm
Longitudinal Balance	:	Better than 40dB

Power Supply

Supply Input Options	:	Mains 90-265VAC, 47-63Hz
Power Consumption (Typical)	:	25W

Battery Specifications

Ratings	:	24V, 7-10AH
Charging Current	:	1Amp.
Under Voltage Cut OFF	:	20 Volts

Connections

MDF Connectors	:	Push Up Connectors
Wiring	:	Single Pair, 0.5mm (0.091 Inch) wire

Compliances

Immunity:

ESD	:	IEC-61000-4-2
EFT	:	EN 55024
Surge	:	EN 55024
Conducted Disturbance	:	IEC 61000-4-6
Radiated Immunity	:	IEC 61000-4-3
Power Frequency Magnetic Field	:	EN 61000-4-8
Voltage Flicker	:	BS EN 61000-3-3

EMC (Emissions)

Conducted Emission	:	CISPR 22 Class B
Radiated Emission	:	CISPR 22 Class A
Harmonic Current Emission	:	BS EN 61000-3-2
Voltage Flicker	:	BS EN 61000-3-3

Safety	:	IEC 60950

Operational Conditions

Temperature	:	0^oC to $+32^oC$ (14^oF to 131^oF)
Humidity	:	5-95% RH, non-condensing

Storage Conditions

Temperature	:	-40^oC to $+85^oC$ (40^oF to 185^oF)
Humidity	:	5-95% RH, non-condensing

Mechanical Parameters

Dimension (WXHxD)	:	25x33x7 cms (9.84x12.99x2.76 Inch)
Weight	:	1.8Kg (3.97 lbs)
Shipping Weight	:	3.45Kg (7.61 lbs)
Mounting	:	Wall Mounting

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Appendix B: Troubleshooting

- All servicing to be undertaken ONLY by qualified service personnel. There are no user serviceable parts inside the unit.
- Always switch off "MAINS" and "BATTERY" marked switches of the system before opening the system, and remove power cable from Mains plug, to avoid risk of electric shock.
- Fuse locations are marked on PCB as 'F4' and 'F2', where 'F4' means Fuse provided for AC Mains and 'F2' means fuse provided for external Battery port.

VisionUltra is not turning ON
- Please check the Mains Power.
- Please check the Switch.
- Please check the Main Fuse.
- Please check the MOV (275/20).
- Please contact authorised Matrix dealer.

One Station is not working
- Please change the telephone instrument and check.
- Please check wiring of that Station.
- Please contact authorised Matrix dealer.

When I call 21 Station the call goes to 22
- Dial 130 from 21 (your call might have been forwarded).

Station not ringing
- Check ringer volume of the telephone instrument.
- Try replacing the telephone instrument.
- Dial 130 to disable call forward/call follow me feature.

Station found busy
- Check whether hook-set is properly kept on the cradle.
- Try replacing telephone instrument.
- Check wiring.

Station cannot dial
- Try replacing telephone instrument.
- Ensure dialling is not disabled through programming.

Incoming Call does not land correctly
- Ensure proper programming of trunk landing group for the trunk.
- Check for Call Privacy from incoming calls.
- Check the Time programmed in the PBX. This is a time sensitive feature.

CLI Number does not come on the Station
- Please check up with your Telephone Company (Service Provider) for CLI facility.
- Please check whether the Station where you are checking CLI function is programmed as CLI Phone.
- Please contact authorised Matrix dealer.

There is lot of hum on PAS port.
- Please check PAS port.
- Please check the amplifier.
- Please check for any open in the wiring.
- Please check for any mismatch of speaker and amplifier.

Digital Output Port does not operate
- Please check the connections made.
- Please check for the polarity. Refer to the figure shown in topic "Digital Output Port (DOP)".
- Please check for any open circuit in the wiring.

Security Dialer does not work
- Please check the connections of the Panic Switch/Sensor to the Digital Input Port.
- Please check for any open circuit in the wiring.
- Please check the programming for Security Dialer.
- Please contact authorized Matrix dealer.

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Appendix C: Software Specifications

Parameters		Maximum Value
Allowed Lists and Denied Lists	:	8
Alternate Numbers	:	99
Auto Call Back-No Reply	:	1
Auto Call Back-On Busy	:	1
Auto Redial Numbers	:	3
Call Duration Control tables	:	4
Call Pick Up Groups	:	9
Call Progress Type Generators	:	3
Class of Service Groups	:	8
Conference-3 party	:	1
Country Codes	:	3
Daily Alarm	:	1
Date Formats	:	2
Department Groups	:	4
Distinctive Rings	:	3
Duration Alarm	:	1
Emergency Number	:	1 (USA/Canada), 4 (Italy/Spain)
Global Abbreviated Directory	:	89
LCR Types	:	4
Maximum Number of Incoming and Outgoing Calls	:	Equal to the trunk lines
Music Sources	:	3
Number of Service Providers	:	4
Operator	:	1
PBX Expansion Count	:	9
Personal Abbreviated Directory	:	10
System Engineer	:	1
System Administrator	:	1
SMDR Outgoing Buffer	:	1000
SMDR Incoming Buffer	:	500
Time Alarm	:	1
Time Table	:	1
Trunk Access Groups	:	8
User Voice Messages	:	8x23 seconds
System Voice Messages	:	8x7 seconds
Call transfer Type	:	4
Remote Status Display Units	:	16
Station Groups	:	16
Number of languages supported for configuration reports	:	2

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Appendix D: Features at a Glance

	India	Italy	USA/Canada	Spain
Abbreviated Dialing				
Personal Abbreviated Dialing	*8-Location Code*	*8-Location Code*	*6-Location Code*	*6-Location Code*
Global Abbreviated Dialing	*8-Location Code*	*8-Location Code*	*6-Location Code*	*6-Location Code*
To Prog. Nos. in Personal Abbreviated Dialing	*18-Loc. Code-TAC-No-#**	*18-Loc. Code-TAC-No-#**	*18-Loc. Code-TAC-No-#**	*18-Loc. Code-TAC-No-#**
Alarms				
Set Duration Alarms	*161-Minutes*	*161-Minutes*	*161-Minutes*	*161-Minutes*
Set Time Alarms	*162-Hours-Minutes*	*162-Hours-Minutes*	*162-Hours-Minutes*	*162-Hours-Minutes*
Set Daily Alarms	*163-Hours-Minutes*	*163-Hours-Minutes*	*163-Hours-Minutes*	*163-Hours-Minutes*
Cancel Alarms	*160*	*160*	*160*	*160*
Set Remote Alarms	*164-Station-Type-Para.*	*164-Station-Type-Para.*	*164-Station-Type-Para.*	*164-Station-Type-Para.*
Cancel Alarms Remotely	*164-Station-0*	*164-Station-0*	*164-Station-0*	*164-Station-0*
Auto Call Back				
To set Auto Call Back-On Busy	*2*	*5*	*5*	*5*
To set Auto Call Back-on No Reply	*Flash-2*	*Flash-5*	*Flash-5*	*Flash-5*
To cancel Auto Call Back	*102*	*105*	*105*	*105*
Auto Redial				
To set Auto Redial	*77*	*Disable*	*Disable*	*Disable*
To Cancel Auto Redial	*70*	*Disable*	*Disable*	*Disable*
Barge-In				
Barge-In on a station	*4*	*7*	*7*	*7*
Call Forward				
To Set Call forward-All Calls	*131-Station*	*131-Station*	*131-Station*	*131-Station*
To Set Call Forward-Follow Me	*132-Stn.-User Password*	*132-Stn.-User Password*	*132-Stn.-User Password*	*132-Stn.-User Password*
To Set Call Forward-If No Reply	*133-Station*	*133-Station*	*133-Station*	*133-Station*
To Set Call Forward-If Busy	*134-Station*	*134-Station*	*134-Station*	*134-Station*
To Cancel Call Forward	*130*	*130*	*130*	*130*
Call Park				
To Park a Call	*7*	*7*	*7*	*7*
To Retrieve the Parked Call	*17*	*17*	*17*	*17*

	India	Italy	USA/Canada	Spain
Call Pick Up				
To Call Pick Up-Group	*4*	*4*	*4*	*4*
To Call Pick Up-Selective	*12-Station*	*12-Station*	*12-Station*	*12-Station*
Call Splitting				
Call Splitting	*Flash-1*	*Flash-2*	*Flash-2*	*Flash-2*
Call Transfer				
Call Transfer	*Flash-Station*	*Flash-Station*	*Flash-Station*	*Flash-Station*
Call Transfer-On Busy	*Flash-Station-3*	*Flash-Station-6*	*Flash-Station-6*	*Flash-Station-6*
Call Transfer-Trunk-To-Trunk	*Flash-6*	*Flash-6*	*Flash-6*	*Flash-6*
Cancel Station Feature				
To Cancel all Features of Station	*100*	*100*	*100*	*100*
Conference				
Conference-3 Party	*Flash-0*	*Flash-3*	*Flash-3*	*Flash-3*
Conference-Unsupervised	*Flash-0-Flash-6*	*Flash-0-Flash-6*	*Flash-0-Flash-6*	*Flash-0-Flash-6*
Continued Dialing				
Continued Dialing	*Flash-#*	*Flash-#*	*Flash-#*	*Flash-#*
Department Call				
Call on Department Number	*3981 to 3984*	*3981 to 3984*	*3981 to 3984*	*3981 to 3984*
Digital Output Port (DOP)				
To turn ON the relay	*69-DOP*	*69-DOP*	*89-DOP*	*69-DOP*
To turn OFF the relay	*60-DOP*	*60-DOP*	*80-DOP*	*60-DOP*
Do Not Disturb (DND)				
Set DND for Internal Calls	*1371*	*1371*	*1371*	*1371*
Set DND for External Incoming Calls	*1372*	*1372*	*1372*	*1372*
Set DND for all Incoming Calls	*1373*	*1373*	*1373*	*1373*
To cancel DND	*1370*	*1370*	*1370*	*1370*
Door Lock				
Door Lock Open	*69-DOP*	*69-DOP*	*89-DOP*	*69-DOP*
Door Lock Close	*60-DOP*	*60-DOP*	*80-DOP*	*60-DOP*
Door Phone				
Doorphone call land on local station	*1#94-0*	*1#94-0*	*1#94-0*	*1#94-0*

	India	Italy	USA/Canada	Spain
Doorphone call FWD on ext. no.	*1#94-1*	*1#94-1*	*1#94-1*	*1#94-1*
Dynamic Lock				
To select Auto or Manual Lock	*143-User Password-Min.*	*143-User Password-Min.*	*143-User Password-Min.*	*143-User Password-Min.*
To Lock the Station	*140*	*140*	*140*	*140*
To Unlock the Station	*141-User Password*	*141-User Password*	*141-User Password*	*141-User Password*
Emergency Dialing				
Dial Emergency Number	—	*112, 113, 115, 118*	*911*	*112, 113, 115, 118*
Grab a Second Trunk				
Grab 2nd trunk by putting 1st trunk on hold	*Flash-8*	*Flash-8*	*Flash-6*	*Flash-8*
Hold				
Put the caller on Hold	*Flash*	*Flash*	*Flash*	*Flash*
Hotline				
Set Hotline-Trunk	*151-TAC*	*151-TAC*	*151-TAC*	*151-TAC*
Set Hotline-External Number	*152-TAC-Number-#**	*152-TAC-Number-#**	*152-TAC-Number-#**	*152-TAC-Number-#**
Set Hotline-Internal	*153-Station*	*153-Station*	*153-Station*	*153-Station*
Set Hotline Timer	*154-Seconds*	*154-Seconds*	*154-Seconds*	*154-Seconds*
Cancel Hotline	*150*	*150*	*150*	*150*
Internet Ready Port				
Internet Ready Port-Deactivate	*198-0*	*198-0*	*198-0*	*198-0*
Internet Ready Port-Activate	*198-1*	*198-1*	*198-1*	*198-1*
Interrupt Request				
Interrupt Request	*3*	*6*	*6*	*6*
Last Number Redial				
Last Caller Recall	*7*	*7*	*7*	*7*
Live Call Supervision				
Live Call Supervision	*199-Station*	*199-Station*	*199-Station*	*199-Station*
Operator				
Operator Dialing	*9*	*9*	*0*	*9*
Paging				
To announce a message	*3998*	*3998*	*3998*	*3998*

	India	Italy	USA/Canada	Spain
Raid				
Raid on a station	*5*	*Disable*	*Disable*	*Disable*
Released Current Party				
Release Current Party from 3-way mode	*Flash-2*	*Flash-1*	*Flash-1*	*Flash-1*
Release Held Party				
Rel. Held Party from 3-way mode	*Flash-3*	*Disable*	*Disable*	*Disable*
Software Version and Revision Display				
View S/w version and revision	*1#95*	*1#95*	*1#95*	*1#95*
System Administrator (SA) Mode				
Enter SA Mode	*1#92-SA Password*	*1#92-SA Password*	*1#92-SA Password*	*1#92-SA Password*
Exit SA Mode	*00-#**	*00-#**	*00-#**	*00-#**
System Engineer (SE) Mode				
Enter SE Mode	*1#91-SE Password*	*1#91-SE Password*	*1#91-SE Password*	*1#91-SE Password*
Exit SE/SA Mode	*00-#**	*00-#**	*00-#**	*00-#**
Time Table				
Day/Night Switching	*1#93-Code*	*1#93-Code*	*1#93-Code*	*1#93-Code*
Trunk Access Groups				
Accessing a Trunk	*0, 5, 61-66*	*0, 5, 61-66*	*9, 5, 81-86*	*0, 5, 61-66*
User Security (User Password)				
Change User Password	*144-Old P/w-New P/w*	*144-Old P/w-New P/w*	*144-Old P/w-New P/w*	*144-Old P/w-New P/w*
Walk-In Class Of Service				
To Walk-In	*111-Stn.-User Password*	*111-Stn.-User Password*	*111-Stn.-User Password*	*111-Stn.-User Password*

=X=X=

Appendix E: Programming Commands

Note: *(#) is indicates Range and All commands*
supported.

Abbreviated Dialing
To program a telephone number in global directory
1301-Location Code-Number-#*
To clear a number in a particular global directory index
1301-Location Code-#*(#)
To set TAG for particular location
1302-Location Code-Trunk Access Group-#*(#)

Alarms
To program Alarm Ring Timer
3013-Seconds-#*

Allowed and Denied Lists
To program numbers in the allowed list
1202-Allowed List-Location Index-Number-#*(#)
To default all number strings in the allowed list
1201-Allowed List-#*(#)
To program numbers in the denied list
1204-Denied List-Location Index-Number-#*(#)
To default all number strings in the denied list
1203-Denied List-#*(#)

Alternate Number Dialing
To assign alternate group number
1303-Index-Alternate Group Number-#*
To clear all the alternate group numbers
1303-Index-00-#*

Auto Call Back
To program auto call back ringer timer
3014-Seconds-#*

Auto Redial
To program auto redial RBT wait timer
3031-Seconds-#*
To program auto redial ring timer
3032-Seconds-#*
To program auto redial retry interval
3029-Seconds-#*
To program auto redial trial count
3030-Count-#*

Automated Control Applications
To program the mode of the DOP
1801-DOP-Mode-#*(#)
To program the switch ON time in the DOP table
1802-DOP-Index-HH-MM-SS-#*
To clear switch ON time entry from the DOP table
1803-DOP-Index-#*
To clear switch ON time entry from all the DOP table
1804-*-#*

To program switch OFF time in the DOP table
1805-DOP-Index-HH-MM-SS-#*
To clear switch OFF time entry from the DOP table
1806-DOP-Index-#*
To clear switch OFF time entry from all the DOP table
1807-*-#*
To program DOP ON duration timer
1808-DOP-ON Duration Timer-#*
To program DOP OFF duration timer
1809-DOP-OFF Duration Timer-#*

Barge-In
To program Barge-In timer
3016-Seconds-#*

Behind the PBX Applications
To program PBX expansion count for a trunk
3201-Trunk-PEC Count-#*(#)

Call Duration Control
To assign a CDC table to a station user
4920-Station-CDC Table-#*(#)
To enable/disable CDC for outgoing call in CDC table
4910-CDC Table-Code-#*(#)
To enable/disable CDC for incoming call in CDC table
4911-CDC Table-Code-#*(#)
To enable/disable CDC for internal call in CDC table
4912-CDC Table-Code-#*(#)
To assign disconnection flag
4913-CDC Table-Disconnection Flag-#*(#)
To assign CDC timer
4914-CDC Table-CDC Timer-#*(#)
To assign allowed list to a table
4915-CDC Table-Allowed List-#*(#)
To assign denied list to a table
4916-CDC Table-Denied List-#*(#)
To default a CDC table
4901-CDC Table-#*(#)

Call Forward
To program ring back timer: Forward on No-Reply
3018-Timer-#*

Call Park
To program call park timer
3015-Timer-#*

Call Pick Up
To program a station in call pick up group
4301-Station-Call Pick Up Group-#*(#)

Call Progress Tones
To program dial tone timer
3001-Seconds-#*

To program ring back tone timer
*3002-Seconds-#**
To program busy tone timer
*3003-Seconds-#**
To program error tone timer
*3004-Seconds-#**
To program feature confirmation tone timer
*3005-Seconds-#**
To program inter digit timer
*3006-Seconds-#**
To program the programming error tone timer
*3007-Seconds-#**
To program programming confirmation tone timer
*3008-Seconds-#**

Calling Line Identification Based Routing
To enable/disable CLI based routing during day time
*1602-Code-#**
To enable/disable CLI based routing during night time
*1603-Code-#**
To program the telephone number in a CLI table
*1604-Index-Telephone Number-#**
To clear all the telephone no. from the CLI table
*1605-#**
To assign destination and type in CLI table
1606-Index-Destination Type-Destination-#(#)*
To program the destination no. for CLI based ECF
*1607-Index-Destination Number-#**
To default the CLI parameters
*1601-#**
To program CLI based routing ring timer
*3019-Seconds-#**

Calling Line Identification-Station
To program the signaling type for a station
4101-Station-Signaling Type-#(#)*
To program the CLI display during call transfer (Hold)
1608-Stations-Mode-#(#)*

Calling Line Identification-Trunk
To program the signaling type for the trunk
3105-Trunk-Signaling Type-#(#)*

Class of Service (COS)
To enable/disable a feature in a COS group
4602-COS Group-Feature Index-Code-#(#)*
To default all features in a COS group
4601-COS Group-#(#)*
To assign a COS group to a station during day time
4610-Station-COS Group-#(#)*
To assign a COS group to a station during night time
4611-Station-COS Group-#(#)*

Configuration Report
To download configuration report
*1100-#**

To Select the language of reports
*1111-Language-#**

Country Code
To select the country
*1110-Country Code-#**

Default Settings
To default the system
*1103-Reverse SE Password-#**
To default the timers
*1107-#**
To restart the system
1112-#(#)*

Department Call
To program station group as department group
4801-Department Group-Station Group-#(#)*
To clear station group assigned to a department group
*4801-Department Group-00-#**

Dial by Name
To program the station abbreviated name
*4103-Station-Abbreviated Name-#**
To clear a station abbreviated name
4103-Station-#(#)*

Digital Input Port (DIP)
To active/inactive DIP
*1901-Code-#**
To program the DIP as active high or active low
*1902-Code-#**

Direct Inward Dialing (DID)
To activate DID on a trunk during day time
3501-Trunk-Code-#(#)*
To activate DID on a trunk during night time
3502-Trunk-Code-#(#)*
To activate VG for DID/Fax on a trunk during day time
3108-Trunk-Code-#(#)*
To act. VG for DID/Fax on a trunk during nighttime
3109-Trunk-Code-#(#)*
To set DID inactivity timer
*3022-Seconds-#**
To set DISA/DID/Fax music timer
*3024-Seconds-#**
To set DISA/DID dial tone & DISA/DID beeps timer
*3025-Seconds-#**
To set DID ring timer
*3026-Seconds-#**
To set DISA/DID busy tone timer
*3027-Seconds-#**
To set DISA/DID error tone timer
*3028-Seconds-#**
To ena/dis. Routing calls before answer for daytime
*3503-Trunk-Flag-#**

To ena/dis. Routing calls before answer for nighttime
3504-Trunk-Flag-#*

Direct Inward System Access (DISA)
To enable DISA on a trunk during day time
3601-Trunk-Code-#*(#)
To enable DISA on a trunk during night time
3602-Trunk-Code-#*(#)
To set DISA inactivity timer
3020-Seconds-#*
To set DISA warn timer
3021-Seconds-#*

Door Phone
To program door phone
1701-Code-#*
To assign station group as doorphone group for daytime
1702-Station Group-#*
To assign station grp. as doorphone group for nighttime
1703-Station Group-#*
To select the door phone type
1704-Type-#*
To program external number for day mode
1710-External Number-#*
To program external number for night mode
1711-External Number-#*
To assign trunk access group for day time
1712-Trunk Access Group-#*
To assign trunk access group for night time
1713-Trunk Access Group-#*
To set door phone ring timer
3034-Seconds-#*

External Call Forward (ECF)
To enable/disable ECF on a trunk during day time
3701-Trunk-Code-#*(#)
To enable/disable ECF on a trunk during night time
3702-Trunk-Code-#*(#)
To assign trunk group to forward the calls of a trunk
3703-Trunk-Trunk Access Group-#*
To assign dest. no. where the calls are frwd. for a trunk
3704-Trunk-Telephone Number-#*

Fax Homing
To ena./dis. fax homing on CO line during daytime
3801-Trunk-Fax Homing-#*(#)
To ena./dis. fax homing on CO line during nighttime
3802-Trunk-Fax Homing-#*(#)
To define fax homing station for a trunk
3803-Trunk-Station-#*(#)
To program the fax homing wait timer
3037-Fax Homing Wait Timer-#*
To program fax ring timer
3038-Fax Ring Timer-#*

Flash Timer
To program flash timer for a SLT
4102-Station-Flash Timer-#*(#)
To program flash timer for a Trunk
3107-Trunk-Flash Timer-#*(#)

Flexible Number
To program the flexible number for a station
4201-Station-Flexible Number-#*
To clear the flexible number of the station
4201-Station-#*
To default the flexible number of all the stations
4203-#*
To clear the flexible numbers of the all the stations
4202-#*
To program digit flag for flexible number for a station
1120-Flag-#*

Internet Ready Port
To activate/deactivate internet ready port
2101-Code-#*(#)

Interrupt Request
To set interrupt request timer
3017-Seconds-#*

Last Number Redial
To set redial wait timer
3033-Seconds-#*

Least Cost Routing-Carrier Pre Selection
To enable/disable CPS for a trunk access group
3450-TAG-Code-#*(#)
To prg. the dest. no. in the CPS string table for TAG
3451-TAG-Index-Destination Number-#*
To program CPS string in the CPS string table for TAG
3453-TAG-Index-CPS String-#*
To default the dest. no. in CPS string table
3452-TAG-#*
To default the CPS string in CPS string table
3454-TAG-#*

Least Cost Routing-Number and Time Based
To program LCR type for a trunk access group
3401-Trunk Access Group-LCR Type-#*(#)
To assign service provide code to each trunk
3402-Trunk-SP Code-#*(#)
To program time zone index for mixed LCR
3432-TZ Index-Start Time-End Time-#*
To program number index for mixed LCR
3433-Number Index-Number String-#*
To program the SP sequence for the each time zone
3434-No. Index-TZ Index-SP1-SP2-SP3-SP4-#*
To default mixed LCR table
3431-#*

Least Cost Routing-Number Based
To program LCR type for a trunk access group
3401-Trunk Access Group-LCR Type-#(#)*
To assign service provider code to each trunk
3402-Trunk-SP Code-#(#)*
To program number index
*3422-Number Index-Number String-#**
To program the SP sequence for the each no. index
*3423-Number Index-SP1-SP2-SP3-SP4-#**
To default number wise LCR type
*3421-#**

Least Cost Routing-Time Based
To program LCR type for a trunk access group
3401-Trunk Access Group-LCR Type-# (#)*
To assign service provider code to each trunk
3402-Trunk-SP Code-#(#)*
To program time zone index
*3412-Time Zone Index-Start Time-End Time-#**
To program the SP sequence for the each time zone
*3413-Time Zone Index-SP1-SP2-SP3-SP4-#**
To default time zone wise LCR table
*3411-#**

Music-On-Hold
To select music source
*1131-Source-#**

Operator
To program the operator station
*1101-Station-#**

Programming Using Jeeves
To enable/disable Jeeves
*1108-Code-#**

Real Time Clock (RTC)
To set the date parameters
*1001-Date-Month-Year-#**
To set day of the week
*1002-Day-#**
To set time
*1003-Hours-Minutes-#**

Scheduled Dialing
To program a number in the scheduled dialing table
*2003-Number Index-Number-#**
To clear all the numbers in the scheduled dialing table
*2002-#**
To program TAG for the number to be dialed out
*2004-Number Index-Trunk Access Group-#**
To program time at which the no. is to be dialed out
*2005-Number Index-Time-#**
To default all the para. related to scheduled dialing
*2001-#**

Security Dialer
To assign a trunk access group to a DIP
*1903-Trunk Access Group-#**
To program emergency no. where the call is made
*1904-Index-Emergency Phone Number-#**
To program the no. trials to be made for one emrg. no.
*3035-Count-#**
To program the time gap between two trials
*3036-Duration-#**

Station Group
To program station group
4702-Station Group-Desti. Index-Station-#(#)*
To program NULL at an Index in station group
*4702-Station Group-Dest. Index-Station-#**
To prog.the time for which each stn. in grp. should ring
4703-Station Group-Dest. Index-Timer-#(#)*
To program continuous or non-conti. ring for dest. grp.
4704-Stn. Grp.-Dest. Index-Continuous Ring-#(#)*
To program rotation method for a station group
4705-Station Group-Rotation Method-#(#)*
To assign default stations to all station groups
4701-Station Group-#(#)*
To clear a station group
*4710-Station Group-#**

Station Message Detail Recording-Incoming
To set SMDR Storage Flag
*1550-Storage Flag-#**
To set filter to store normal calls
*1561-Flag-#**
To set filter to store DID calls
*1562-Flag-#**
To set filter to store Unanswered calls
*1563-Flag-#**
To set filter to store DID Unanswered calls
*1564-Flag-#**
To set filter to store all calls
*1565-Flag-#**
To set filter to store alarm records
*1566-Flag-#**
To set filter to store alarm unanswered record
*1567-Flag-#**
To set filter to store DISA calls
*1568-Flag-#**
To set filter to store calls of a station
*1551-Station-Flag-#**
To set filter to store calls of all the stations
*1551-**-Flag-#**
To set filter to store calls of a trunk
*1552-Trunk-Flag-#**
To set filter to store calls of all the trunks
*1552-**-Flag-#**
To set filter to store unanswered duration
*1553-MM-SS-#**
To set filter to store speech duration
*1554-MM-SS-#**

To default the incoming call storage filter
1505-#*
To clear SMDR-Incoming buffer
1560-Reverse SE Password-#*
To enable/disable online printing
1570-Code-#*
To set default filter for online printing
1506-#*
To print calls of normal calls
1591-Flag-#*
To print calls of DID calls
1592-Flag-#*
To print calls of Unanswered calls
1593-Flag-#*
To print calls of DID Unanswered calls
1594-Flag-#*
To print calls of all calls
1595-Flag-#*
To print calls of Alarm calls
1596-Flag-#*
To print calls of Unanswered Alarm calls
1597-Flag-#*
To print calls of DISA calls
1598-Flag-#*
To print calls of range of stations
1581-Station-Station-#*
To print calls of range of trunks
1582-Trunk-Trunk-#*
To print calls of range of dates
1583-Date-Month-Year-Date-Month-Year-#*
To print calls of range of times
1584-Hour-Minute-Hour-Minute-#*
To print calls of Unanswered duration
1585-Duration-#*
To print calls of speech duration
1586-Duration-#*
To start printing of SMDR-Incoming calls
1580-#*

Station Message Detail Recording-Outgoing
To set SMDR storage flag for the system
1510-Storage Flag-#*
To set SMDR storage flag for particular station
1511-Station-Storage Flag-#*(#)
To set SMDR storage flag for particular trunk
1512-Trunk-Storage Flag-#*(#)
To set the SMDR storage flag number wise
1513-Index-Number-#*
To default the OG SMDR storage filter
1501-#*
To clear all the number in the list
1514-#*
To set the SMDR storage flag duration wise
1515-MM-SS-#*
To set the SMDR storage flag call split wise
1516-Call Split Flag-#*

To set SMDR storage flag for org./terminating station
1517-Flag-#*
To clear SMDR-outgoing buffer
1520-Reverse SE Password-#*
To enable/disable online printing
1530-Code-#*
To default the print settings
1502-#*
To print calls made by a range of stations
1541-Station-Station-#*
To print calls made on a range of trunks
1542-Trunk-Trunk-#*
To print calls made on a range of dates
1543-Date-Month-Year-Date-Month-Year-#*
To print calls made at a range of fixed times
1544-Hour-Minute-Hour-Minute-#*
To print calls make to a destination
1545-Number-#*
To print calls having duration of higher value
1546-MM-SS-#*
To initiate printing of SMDR outgoing calls report
1540-#*

Station Parameters
To program digit padding on station
4105-Station-Count-#*(#)
To program the station name
4104-Station-Name-#*
To clear a station name
4104-Station-#*(#)
To download station parameters of a station
4100-Station-#*(#)
To set internal inter digit wait timer
3009-Seconds-#*

System Administrator Mode
To change SA password
1105-New SA Password-#*

System Engineer Mode
To change SE password
1104-New SE Password-#*

System Timer
To default the system timers
1107-#*

Time Table
To program the system in manual/auto mode
1051-Code-#*
To set day or night mode
1052-Code-#*(#)
To program the time table (daytime 1)
1053-Day-HH-MM-HH-MM-#*
To program the time table (daytime 2)
1054-Day-HH-MM-HH-MM-#*

Toll Control
To assign allowed list to a station during daytime
4501-Station-Allowed List-#(#)*
To assign allowed list to a station during nighttime
4502-Station-Allowed List-#(#)*
To assign denied list to a station during daytime
4511-Station-Denied List-#(#)*
To assign denied list to a station during nighttime
4512-Station-Denied List-#(#)*
To assign allowed list to a station for locked condition
4521-Station-Allowed List-#(#)*
To assign denied list to a station for locked condition
4522-Station-Denied List-#(#)*

Trunk Access Groups
To put trunks in a trunk access group
4402-TAG-Trunk1…..Trunk6-#(#)*
To program rotation code for a group
4403-Trunk Access Group-Rotation Code-#(#)*
To default a trunk access group
4401-Trunk Access Group-#(#)*
To assign a TAG and TAG code to a station for daytime
4411-Station-TAG Index-TAG-#(#)*
To assign a TAG and TAG code to a stn. for nighttime
4412-Station-TAG Index-TAG-#(#)*
To assign a prefix to a SLT for trunk access code
4421-SLT-Prefix-#
To program a dialing method for a TAC of a station
4422-Station-TAC-Dialing Method-#(#)*

Trunk Landing Groups
To assign station group as TLG for trunk for daytime
3301-Trunk-Station Group-#(#)*
To assign station group as TLG for trunk for nighttime
3302-Trunk-Station Group-#(#)*

Trunk Parameters
To enable/disable a trunk
3101-Trunk-Code-#(#)*
To program the dial type of a trunk
3102-Trunk-Code-#(#)*
To define a trunk type
3103-Trunk-Code-#(#)*
To program speech connection delay timer for trunk
3104-Trunk-Speech Timer-#(#)*
To program a trunk name
3106-Trunk-Name-#
To clear a trunk name
3106-Trunk-#(#)*
To program the pulse dial ration for the trunks
3110-Type-#
To set trunk first digit wait timer
3010-Seconds-#
To set trunk inter digit wait timer
3011-Seconds-#
To set pause timer
3012-Seconds-#

To program answer wait timer for trunk for a daymode
3111-Trunk-Answer Wait Timer-#(#)*
To program answer wait timer for trunk for a nightmode
3112-Trunk-Answer Wait Timer-#(#)*
To program trunk ring cadence OFF timer
3113-Trunk-Seconds-#
To activate DID-DISA-Fax Abandoned Call Filter
3114-Trunk-Flag-#(#)*
To prg. DID-DISA-Fax Abandoned Call Detection Timer
3115-Trunk-Timer-#(#)*
To print trunk parameter of a trunk
3100-Trunk-#(#)*

User Security (User Password)
To assign default password to a station
1106-Station-#

Voice Message Applications
To program VM programming level
1410-Flag-#
To program the source of recording
1420-Code-#

For System VM Message
To program the number of parts
1411-Number of Parts-#
To record system VM partition
1412-Part Number-#
To playback the recorded VM partition
1413-VM Application-Part Number-#
To assign a VM application to a system VM
1414-VM Application-Part Number-#
To de-assign a VM application to a system VM
1414-VM Application-0-#
To default the values for all the VM parameters
1415-#

For User VM Message
To program the number of parts
1401-Number of Parts-#
To record VM partition
1402-Part Number-#
To playback the recorded VM partition
1403-Part Number-#
To assign a VM application to a VM partition
1404-VM Application-Part Number-#
To de-assign a VM application to a VM partition
1404-VM Application-0-#
To default the values for all the VM parameters
1405-#

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Appendix F: Regulatory Information

DECLARATION OF CONFORMITY
EC Directives

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We, Matrix Telecom Private Limited, hereby declare that the product listed below, to which this Declaration of Conformity relates, is in the conformity with Directives, Standards and other Normative Documents as listed.

- 1995/5/EC, Radio Equipment and Telecommunications Terminal Equipment Directive (R&TTE)
- 73/23/EEC, Low Voltage Directive (LVD)
- 89/336/EEC, Electromagnetic Compatibility Directive (EMC)

Type of Product	: Private Branch Exchange
Product Name	: VisionUltra
Models	: VisionUltra206P, VisionUltra208P, VisionUltra308P VisionUltra412P, VisionUltra616P
Model Number	: M-140
Intended Use	: PBX for Internal and External Communication

1. **STANDARDS:**

EMI/EMC	: CISPR22	IEC 61000-3-2	IEC 61000-3-3
	IEC 61000-4-2	IEC 61000-4-3	IEC 61000-4-4
	IEC 61000-4-5	IEC 61000-4-6	IEC 61000-4-8
	IEC 61000-4-11		

LVD, Safety : IEC 60950 3rd Edition (1999)

2. **NORMATIVE DOCUMENTS AND REFERENCES:**

Test reports are available at Matrix Telecom Private Limited, 394, GIDC, Makarpura, Vadodara -390 010, India

User Information:

User information on intended use, interface compatibility, system facilities and features are laid down in the following documentation

- VisionUltra System Manual
- VisionUltra User's Guide

Date : 05th February 2007
Place : Vadodara, India

Ganesh Jivani
(Director)
Matrix Telecom Private Limited, Vadodara

Declaration of Conformity
(RoHS Declaration)

We, Matrix Telecom Private Limited hereby declare that the product listed below, to which this Declaration of Conformity relates, is in the conformity with the requirement of the following European Union Directive for RoHS compliance:

Document No.	Title	Edition/Date of Issue
EN 2002/95/EC	Restriction of Hazardous Substances	27 January 2003

Type of Equipment : PABX
Equipment Name   : VisionUltra
Equipment Models   : 206P, 306P, 412P, 616P

Manufacturer's Name : Matrix Telecom Private Limited
Address   : 39 – GIDC
                     Waghodia – 391 760
                     Dist: Vadodara, India

Additional Information:

The text of EU Directive 2002/95/EC may be found at the following website:
http://europa.eu.int/eur-lex/pri/en/oj/dat/2003/l_037/l_03720030213en00190023.pdf

Date   : 9th April 2007
Place   : Vadodara, India

Ganesh Jivani
(Director)
Matrix Telecom Private Limited

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Glossary

CO	:	Central Office.
DIP	:	Digital Input Port
DISA	:	Direct Inward System Access
DND	:	Do Not Disturb
DOP	:	Digital Output Port
DTMF	:	Dual Tone Multi Frequency. When a code (digit) is dialed, two different specific frequencies are transmitted.
FLASH	:	A code required to use various system features.
LED	:	Light Emitting Diode
LCD	:	Liquid Crystal Display
MDF	:	Main Distribution Frame
OFF-Hook	:	A condition in which the handset of the telephone instrument is lifted from the cradle.
ON-Hook	:	A condition in which the handset of the telephone instrument rests on the cradle. (Idle condition of the phone)
PAS	:	Public Address System.
PSTN	:	Public Switch Telephone Network
PULSE DIALING	:	A type of signaling in which codes (digits) are dialed in pulses.
PULSE	:	A waveform generated by making and breaking of loop current.
RTC	:	Real Time Clock. Date and Time keeping circuit.
SA MODE	:	System Administration Mode. General housekeeping functions are allowed from SA Mode
SA	:	System Administration
SE MODE	:	System Engineer Mode. Entire programming can be done from this mode
SE	:	System Engineer
SMDR	:	Station Message Detail Recording
SP	:	Service Provider
STATION/EXTENSION	:	Internal station to which a telephone is connected.
SWG	:	Standard Wire Gauge
TONE DIALING	:	A type of signalling in which codes (digits) are dialed in DTMF mode.
TONES	:	Different frequencies used for signaling
TRUNK	:	An external trunk line coming from Service Provider.
PBX	:	Private Branch Exchange

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Notes

Requirement

Notes

Programming Register

Sr. No.	Date	Major Programming Changes Made

Programming Register

Sr. No.	Date	Major Programming Changes Made