

SIMADO GFX11
System Manual



SIMADO GFX11
GSM Fixed Cellular Terminal for Voice Applications
System Manual



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Welcome

Thank You for choosing SIMADO GFX11. This product is designed to give you the highest performance, combined with real ease of use. We hope you will make optimum use of this intelligent, intuitive, feature-packed GSM FCT for Voice Applications. Please read this document carefully before installing your SIMADO GFX11.

About this System Manual

This System Manual contains detailed information and instructions for installing, configuring and using SIMADO GFX11. It also contains information on protecting and maintaining the system.

Intended Audience

This System Manual is aimed at:

Network and System Engineers (SE): Persons who install, configure and maintain SIMADO GFX11. It is assumed that they have some experience in installing and configuring GSM Fixed Cellular Terminals (FCT). System Engineer has full access to the system.

System Administrators (SA): Persons who operate the system and perform administrative functions. System Administrator has limited access to the system.

Users: Persons who actually uses SIMADO GFX11 to make and receive calls and use its features.

Organization of this Document

This System Manual contains the following chapters:

Introduction: Gives an overview of this document, its purpose, intended audience, terms and conventions used to present information and instructions.

Know Your SIMADO GFX11: Provides an overview of SIMADO GFX11.

Installing SIMADO GFX11: Contains information on how to install SIMADO GFX11.

Configuring SIMADO GFX11: Provides instructions for configuring the basic parameters of SIMADO GFX11.

Features of SIMADO GFX11: Describes in detail the various features of SIMADO GFX11 such as Allowed-Denied Numbers, Automatic Number Translation, Call Progress Tones, Location Information Indication, Hotline, and provides instructions for configuring and using them.

How to Read this System Manual

This System Manual is organized in such a way that you will find all the information you need quickly and easily.

You may use the table of contents and the Index in this document to reach the relevant topic or information you want to look up.

Cross-references are provided in blue font with hyperlinks. You can look up the source by clicking the links.

Conventions used in this System Manual

Instructions

Instructions are provided in this document in step-by-step format. Command strings to be dialed for configuring the port parameters and features are presented in the following format:

- To configure answer signaling on FXS Port, dial:

221-Answer Signal-#*

Where,

Answer Signal is

0 for None

1 for Polarity Reversal

Default: **Polarity Reversal**

This is an instruction to configure Answer Signaling on the FXS Port of SIMADO GFX11, along with the default value. You must dial the digits and characters in the command string in a continuous sequence.

In the above example, by default, **Polarity Reversal** is set as Answer Signal on the FXS Port. If you do not want Answer Signaling on the FXS Port, you must dial '0' (the code for None) in the command string. Thus, to remove Answer Signaling on the FXS Port, you must dial the command string in a continuous sequence as: **2210#***

Notices

The following symbols have been used to draw your attention to important things:



Note: It indicates something that requires your special attention or it reminds you of something you need to do when you are using SIMADO GFX11.



Caution: It indicates an action or condition that is likely to result in malfunction or damage to SIMADO GFX11 or your property.



Warning: It indicates a hazard or an action that will cause damage to SIMADO GFX11 and/or cause bodily harm to the user.



Tip: It indicates a helpful hint giving you an alternative way to operate the system or carry out a procedure, or use a feature more efficiently.

Terminology

You will find '**SIMADO GFX11**' and '**System**' used interchangeably throughout this system manual.

Some of the terms used in this System Manual are defined below:

System Engineers (SE): Persons who install, configure and maintain SIMADO GFX11.

System Administrators (SA): Persons who operate the system and perform administrative functions.

Users: Persons who uses SIMADO GFX11.

Caller/ Calling party: A person who make calls.

Called party: A person to who receive calls, made by the Caller.

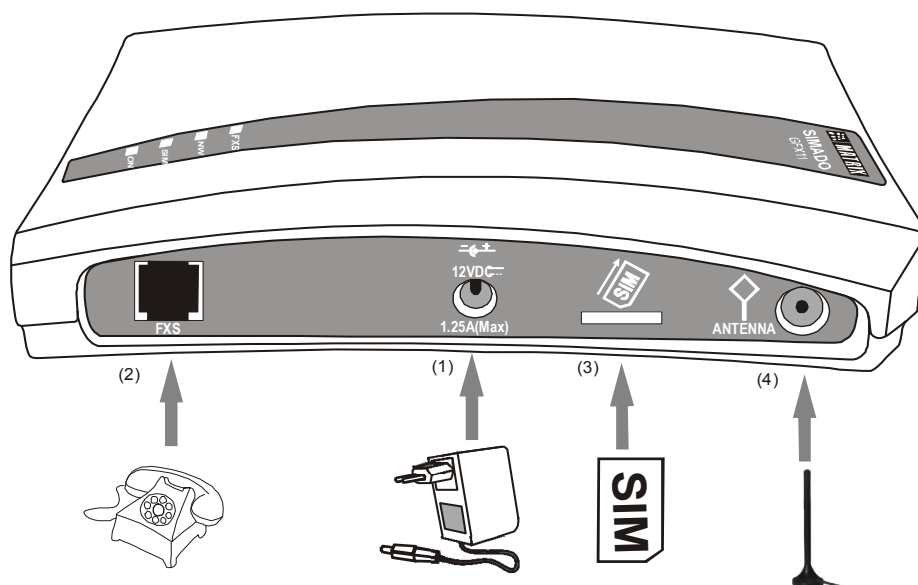
Using this System Manual, we hope you will be able to install, operate and make optimum use of SIMADO GFX11. However, if you encounter any technical problems, please contact your dealer/reseller or the Matrix Support team.

Overview of SIMADO GFX11

SIMADO GFX11 finds its application in the corporate offices, factories, call centers, hotels, residences and such other establishments. In an Organization, when SIMADO GFX11 is interfaced with the PBX, all the incoming calls on the Mobile Port of SIMADO GFX11 can be routed to the desired extension of the PBX. Similarly, all the outgoing calls made to the mobile phones can be routed through the Mobile Port of SIMADO GFX11, reducing the telecommunication cost of the organization.

SIMADO GFX11 is available in two configurations:

- SIMADO GFX11-2G
- SIMADO GFX11-3G

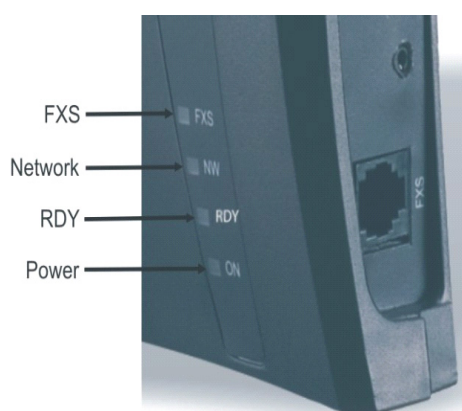


Ports and Connectors

Port Name	Connector	Description
ANTENNA	TNC (Female)	To connect the Antenna for the Mobile Ports.
SIM Card	Slot	To insert a SIM Card for mobile connectivity.
12VDC-1.25A(Max)	DC Jack	To connect 12VDC, 1.25A power adapter.
FXS	RJ11	FXS Port to connect a standard telephone instrument or a PBX.

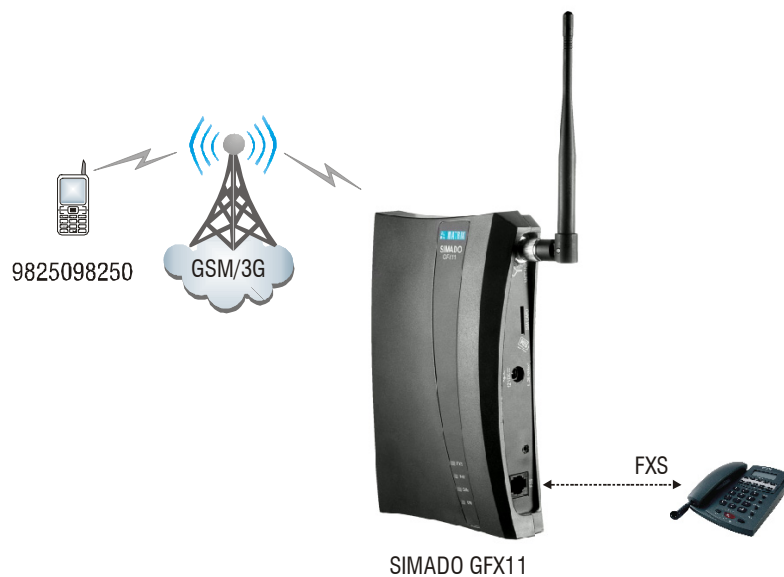
LEDs

SIMADO GFX11 has 4 LEDs, labeled as FXS, NW, RDY and ON as shown in the figure below. These LEDs indicate the status of the ports and various events occurring on the ports, including errors.

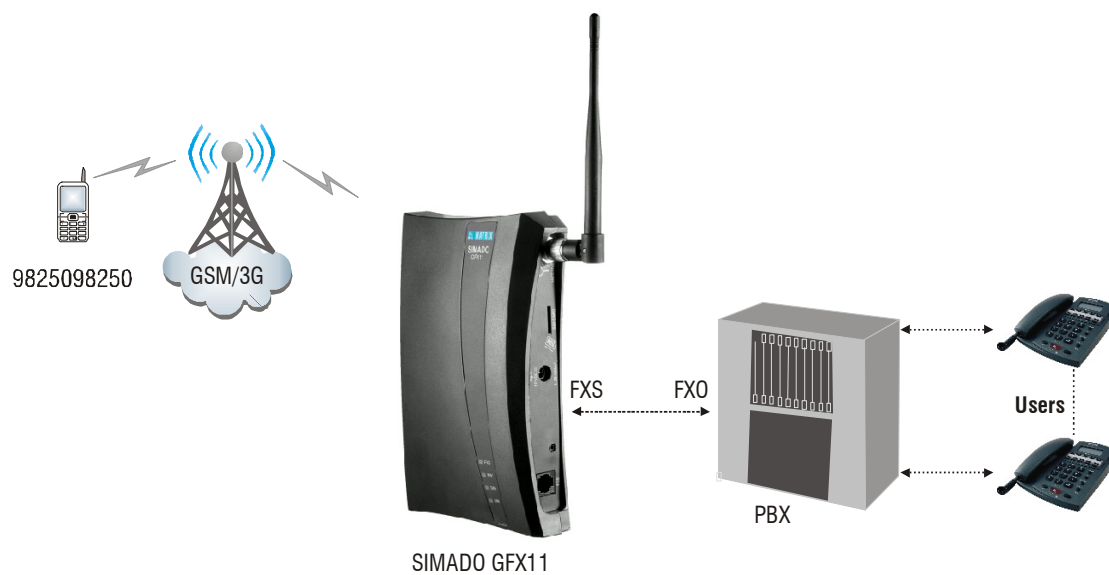


Applications of SIMADO GFX11

Case 1: Standalone



Case 2: SIMADO GFX11 interfaced with a PBX



Before You Start

Before you begin to install and set up the hardware of SIMADO GFX11, make sure you have following ready:

- A suitable location to install SIMADO GFX11.
- Standard, good quality, twisted pair telephone cable with 0.5mm conductor diameter and RJ11 plugs for the FXS Port.
- A standard telephone instrument to connect to the FXS Port. You can also connect the FXS Port of SIMADO GFX11 to a PBX.
- A SIM Card to test Mobile connectivity.

Protect SIMADO GFX11 and Yourself

For safe and efficient operation of this product, read and observe the safety guidelines given in this document. When installing and using this product, take every safety precaution to reduce the risk of fire, electric shock and injury to yourself and others.

- Do not install the system at any of the locations listed below:
 - in any area where it is directly exposed to sunlight, excessive cold, humidity, corrosive fumes.
 - at the place where shocks or vibrations are frequent or strong.
 - at the place where it comes in contact with dust and oil.
 - near any water source or water body like a wash bowl, kitchen sink, bath tub or near a swimming pool, sprinkler.
 - on movable or unstable surfaces, which may cause the product to fall and get damaged.
- Always wear an electrostatic discharge preventive wrist strap or belt and use a grounding mat when handling the system with its cover open.
- Unplug the system from the power outlet before cleaning. Do not use liquid cleaners, use only a dry and soft cloth.
- Do not turn on the power supply until the installation is complete.
- Never open SIMADO GFX11 in power ON condition.
- Operate the system within the recommended power supply voltage range.

- Do not overload wall outlets and extension cords to prevent electric shock and fire.
- Take the system to a qualified technician for service and repair.
- Unplug the system from the power outlet and contact a qualified technician under the following conditions:
 - If liquid has been spilled on it.
 - If it has been exposed to rain or water.
 - If it was dropped or the cabinet is damaged.
 - If it does not operate normally.

Warning for RF Safety

This product complies with the RF exposure guidelines as per standard FCC 47 CFR part 2. We recommend that you take the following safety measures:

- Keep the RF Antenna at least 20cm away from other electronic and radio transmission devices.
- Keep the RF antenna at a place at least 20cm away from people's vicinity.
- Do not place the magnetic storage media near the system.
- People carrying medical implants like cardiac pacemakers are advised to maintain appropriate distance from the system. They are also advised to avoid being in the vicinity of the product for a long time.

Getting Started

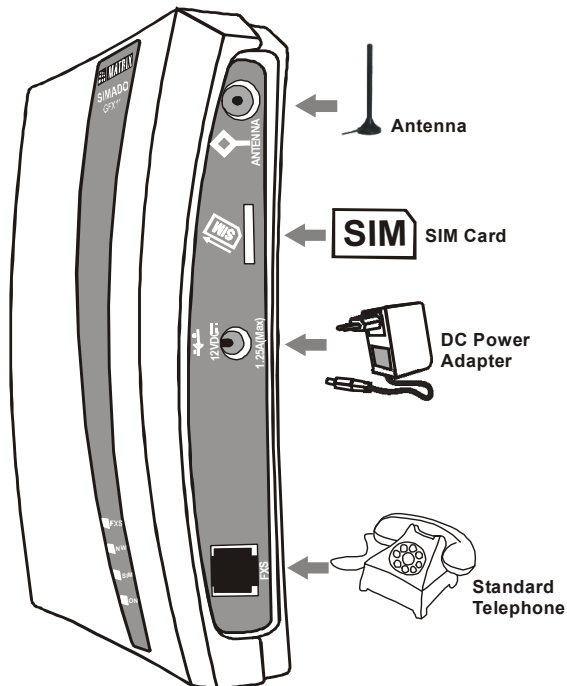
- Select an appropriate site to install the SIMADO GFX11, considering the safety precautions listed earlier in this chapter.
- Unpack SIMADO GFX11 and verify the package contents. Make sure the package contains the items listed in the table below. In case any of these is missing or damaged, contact the dealer/distributor from whom you have purchased it.

Sr. No.	Item Name	Quantity
01	SIMADO GFX11 unit	1
02	GSM Antenna with TNC Male Connector	1
03	Power Adapter (12V - 1.25A)	1
04	Line Cord (RJ11)	1
05	Wall Mounting Template	1
06	M7/30 Screw	2
07	Screw Grip	2
08	Warranty Card Set	1
09	SIMADO GFX11 CD (System Manual, Quick Start)	1
10	SIMADO GFX11 Quick Start (printed copy)	1

- Place the system at the selected location.

If you want to mount the system on a wall, use the mounting template for drilling the holes on the wall.

Connecting SIMADO GFX11



Select an appropriate site to install SIMADO GFX11. Make sure that the site you select has proper power supply source and sufficient network signal strength.

- To the **FXS Port**, connect a standard single line telephone using a standard telephone cable with RJ11 plugs.

You may also connect the FXS Port of SIMADO GFX11 to a PBX.

- Insert SIM Card of the service provider in the SIM Card Slot of SIMADO GFX11.

To enable SIM PIN protection,

- Get a mobile handset. Insert the SIM into the mobile handset.
- From the mobile handset, enable PIN Protection on the SIM.
- Change the SIM PIN to **1234**. This is the default SIM PIN of SIMADO GFX11.
- If your SIMADO GFX11 has a 3G module, you must also disable Call Waiting on the SIM Card. This will prevent current calls from being disconnected whenever there is a waiting call on the Mobile Port.
- Remove the SIM from the mobile handset and insert it in the SIM Card Slot of SIMADO GFX11.



- If you do not want to use PIN Protection, insert the SIM in the mobile handset and disable PIN protection. Remove the SIM Card from the mobile handset and insert it in the Mobile Port's SIM holder.
- You can change the SIM PIN to the desired value while configuring the system. For instructions on changing the SIM PIN, refer ["Mobile Port Parameters"](#).
- Screw the antenna on to the **Antenna Connector** of SIMADO GFX11.

Powering ON SIMADO GFX11

- Connect the power adapter into the **Power Jack**, and plug it into a power outlet.
- Switch ON power supply and observe the reset cycle.

LED Indication at Power ON:

- LED labeled as **ON** will glow green continuously.
- LED labeled as **FXS** and **RDY** will blink (RED) four times (500ms On, 500ms Off) and then turns Off.
- LED labeled as **NW** will start blinking (RED) after few seconds of Power On. It indicates the network availability.
- LED labeled as **RDY** will start blinking (RED) slowly (1 sec On- 1 sec Off) till successful network registration. After that, it will glow RED continuously.
- LED labeled as **RDY** will blink (RED) fast (100 ms On- 100 ms Off) when SIM Card is absent or deactivated or SIM PIN is faulty or SIM PUK is required.

LED Indication during Normal Functioning:

LED	Activity		Indication
ON	ON		SIMADO GFX11 is power On.
	Off		SIMADO GFX11 is power Off.
RDY	ON		SIM Card is present and active.
	Off		SIMADO GFX11 is powered On but SIM Card is not detected.
	Blinking	Fast	SIM Card is absent or de-activated or SIM PIN is faulty or SIM PUK is required.
		Slow	SIM Card is detected but is not registered with the network.
NW (controlled by Module)	Off		GSM module is Off.
	Blinking	Fast	GSM module is On but is not registered with the network. (Network not available)
		Slow	GSM module is On and is registered with the network. (Network is available)
FXS	ON		FXS Port is Off-Hook.
	Off		FXS Port is On-Hook.
	Blinking		FXS Port is ringing.

When the Reset Cycle is over you can start configuring the system. For detailed instructions, refer ["Configuring SIMADO GFX11"](#)

Test Calls

Making a Call

- Lift the receiver of the telephone connected to the FXS Port of SIMADO GFX11. You will get the dial tone.
- Dial the desired number. You will hear the Ring Back Tone.
- Talk when the called party answers the call.
- Replace the handset to disconnect the call.

Receiving a Call

- Dial the number of the SIM Card inserted in the Mobile Port of SIMADO GFX11.
- When the telephone connected to the FXS Port of SIMADO GFX11 rings, lift the receiver to talk.
- You will be in speech.
- Replace the handset to disconnect the call.

You can configure SIMADO GFX11 by dialing command strings from the telephone connected to the FXS Port of SIMADO GFX11. You can configure SIMADO GFX11 from two modes namely: System Engineer Mode and System Administrator Mode.

System Engineer (SE) Mode

In System Engineer (SE) mode, you have full access to the system and you can configure and use all the features of the system.

The System Engineer mode is protected by a password referred to as **SE password**.

To configure SIMADO GFX11 from SE mode:

- Lift the receiver of the telephone connected to SIMADO GFX11.
- To enter SE mode, dial **#*-19-SE Password**. The default SE Password is **1234**.
- Dial the command string.
- To exit SE mode, dial **00-#***.
- Replace the receiver of the telephone.



*While dialing command strings, you must dial the digits and characters in a continuous sequence. For example, to enter SE Mode you must dial the command string as #*191234.*

System Administrator (SA) Mode

In System Administrator (SA) mode, you have limited access to the system.

You can configure and access only following features:

- SA Password Change
- Software Version-Revision Display
- Call Duration Display

- Call Divert

The System Administrator mode is also protected by a password referred to as **SA password**.

To configure SIMADO GFX11 from SA mode:

- Lift the receiver of the telephone connected to SIMADO GFX11.
- To enter SA mode, dial **#*-18-SA Password**. The default SA Password is **1111**.
- Dial the command string.
- To exit SA mode, dial **00-#***.
- Replace the receiver of the telephone.



*While dialing command strings, you must dial the digits and characters in a continuous sequence. For example, to enter SE Mode you must dial the command string as #*191234.*



While configuring the system, if there is an incoming call on the FXS Port, you will get an error tone.

FXS Port Parameters

To configure the FXS Port Parameters, **enter the SE Mode**.

CLI Type

Configure the appropriate **CLI Type**, according to the CLI Type supported by the telephone instrument/PBX connected to the FXS Port.

- To configure the CLI Type, dial:
222-CLI Type-#*
Where,
CLI Type is
1 for None
2 for DTMF (Number, Ring)
3 for FSK V.23
4 for FSK BellCore
5 for DTMF ('D', Number, 'C', Ring)

Default: **FSK V.23**



- You may select 'None' as CLI Type, if the telephone instrument connected to the FXS Port does not have a display.*

First Digit Wait Timer

The First Digit Wait Timer is the time for which the system will wait for the user to dial the destination number.

- To configure the First Digit Wait Timer, dial:
225-First Digit Wait Timer-#*
Where,
First Digit Wait Timer is from 01 to 99 seconds.

Default: **15 seconds**

Inter Digit Wait Timer

The Inter Digit Wait Timer is the time for which the system will wait while receiving the digits dialed by the user, to consider it as end of dialing.

- To configure the Inter Digit Wait Timer, dial:
226-Inter Digit Wait Timer-#*
Where,
Inter Digit Wait Timer is from 01 to 99 seconds.

Default: **05 seconds**

End of Dialing

End of Dialing is a single digit on receipt of which, the system interprets end of the dialed string and the received digits are further processed to reach the dialed destination number. SIMADO GFX11 supports only # as end of dialing digit.

- To configure # as End of Dialing digit, dial:
110-1-#*
- To remove # as End of Dialing digit, dial:
110-0-#*

Default: **# is used as end of dialing digit**

Replacing + by DTMF digits in CLI

The GSM network presents the calling party number with the prefix '+' to the called party. However, not all equipments can present the calling party number containing '+'. SIMADO GFX11 enables you to remove the prefix '+' and replace it with an appropriate number string, if required.

- To configure the replacement digit for the '+' sign in the CLI, dial:
301-Number String-#*
Where,
Number string can be of maximum four digits.

Default: **00**

- To clear the replacement digit configured for the '+' sign in the CLI, dial:
301-#*

Answer Signaling on FXS Port

Answer Signaling is a signal generated on the FXS Port to indicate that the called party has answered the call (call maturity). You can configure either None or Polarity Reversal as Answer Signal on the FXS Port. 'None' is configured when no answer signaling is to be generated and 'Polarity Reversal' is configured when it is to be generated in the form of Polarity Reversal.

- To configure answer signaling on FXS Port, dial:
221-Answer Signal-#*
Where,
Answer Signal is
0 for None
1 for Polarity Reversal

Default: **Polarity Reversal**

Disconnect Signaling on FXS Port

Disconnect Signaling is a signal generated on the FXS Port to indicate that the other party has disconnected the call. When the called party disconnects the call, SIMADO GFX11 will play error tone to the user. You can configure one of the following options as Disconnect Signal on the FXS Port:

- **None:** This option is used when no disconnect signaling is to be generated on the FXS Port.
- **Polarity Reversal:** This option is used when disconnect signaling is to be generated in the form of Polarity Reversal.
- **Open Loop Disconnect:** This option is used when call disconnection is to be generated in the form of Open Loop Disconnect pulse. In Open Loop Disconnect, the battery voltage on the FXS Port is removed for the duration of the *Open Loop Disconnect Timer* and then it is restored after the FXS Port goes On-Hook.
- To configure disconnect signaling on the FXS Port, dial:
248-Disconnect Signal-#*
 Where,
 Disconnect Signal is
 0 for None
 1 for Polarity Reversal
 2 for Open Loop Disconnect

 Default: **Polarity Reversal**
- To configure Open Loop Disconnect Timer on FXS Port, dial:
249-Open Loop Disconnect Timer-#*
 Where,
 Open Loop Disconnect Timer is from 001 to 999 ms.

 Default: **500 ms**

You may **exit the SE Mode** or continue with the system configuration.

Mobile Port Parameters

To configure the Mobile Port Parameters, enter the **SE Mode**.

Enable/Disable Mobile Port

You may disable the Mobile Port, if you want to block making of outgoing calls using SIMADO GFX11. You will receive incoming calls even when the Mobile Port is disabled.

- To enable or disable the Mobile Port, dial:

201-Code-#*

Where,

Code is

0 for Disable

1 for Enable

Default: **Enable**

SIM PIN

SIM PIN is a security feature used by the GSM network to prevent unauthorized use of the SIM Card. If you have enabled SIM protection on the SIM Card, you must change the SIM PIN to the desired value. To know more about enabling PIN protection on the SIM Card, see [“Connecting SIMADO GFX11”](#).

- To change the current SIM PIN, dial:

113-New SIM PIN-#*

Where,

New SIM PIN can be of minimum 4 and maximum 6 digits. Accepted digits are 0 to 9.

Default: **1234**

Your SIM Card is Locked?

If you have enabled PIN protection on your SIM Card, your SIM Card may get blocked, if you enter the wrong SIM PIN thrice. To unblock your SIM Card, you will need the Personal Unlock Key (PUK). This is the unique number assigned to the SIM Card by your service provider to unlock your SIM Card. If your SIM Card gets blocked, you must get the PUK number from your service provider, register this PUK number with the network, and then assign new SIM PIN. To the register PUK, follow these steps:

- Enter SE Mode.
- Dial **114-PUK Number-New SIM PIN-#***
Where,
PUK number is unique 8-digit number assigned to the SIM Card.
New SIM PIN can be of minimum 4 and maximum 6 digits. Accepted digits are 0 to 9.
- Exit SE Mode.



The SIM PIN is not set to default or changed, when you [“Reinstate the Default Settings”](#).

Receive Gain

You can adjust receive gain of the Mobile Port to increase/decrease the audibility of incoming speech.

- To configure the receive gain, dial:
271-Receive Gain-#*
Where,
Receive Gain is
1 for Very Low
2 for Low
3 for Normal
4 for High
5 for Very High

Default: **Normal**
- To set the receive gain of the Mobile Port to the default value, dial:
271-0-#*

Transmit Gain

You can adjust the transmit gain of the Mobile Port to increase/decrease the audibility of the outgoing speech.

- To configure the transmit gain, dial:
272-Transmit Gain-#*
Where,
Transmit Gain is
1 for Very low
2 for Low
3 for Normal
4 for High
5 for Very High

Default: **Normal**
- To set the transmit gain of the Mobile Port to the default value, dial:
272-0-#*

Pause Timer

Pause timer is the time for which SIMADO GFX11 will wait while dialing out DTMF digits on the Mobile Port when the character P is detected in the DTMF number string. The Pause Timer is used for [“Multi-Stage Dialing”](#) feature.

- To configure Pause Timer for the Mobile Port, dial:
275-Pause Timer-#*
Where,
Pause Timer is from 1 to 9 seconds.

Default: **2 seconds**

Example: If the number string to be dialed out on the Mobile Port is PPP234 and the pause timer is set to 3 seconds, SIMADO GFX11 will dial out the digit 2 after P+P+P seconds, that is, 3+3+3=9 seconds.

DTMF Out Dial ON Time

DTMF Out Dial ON Time signifies the time for which the DTMF digit will remain ON, while being outdialed by the system. This parameter finds its application in [“Multi-Stage Dialing”](#).

- To configure DTMF Out Dial ON Time for dialing out the DTMF digits on the Mobile Port, dial:
241-DTMF ON Count-#*
Where,
DTMF ON Count is from 000 to 255 ms.
000 means default ON time of the module (70 ms) and 001 to 255 means <DTMF On Count> * 100 ms i.e. from 100ms to 25.5 ms.

Default: **100 ms**

You may **exit the SE Mode** or continue with the system configuration.

Registered Network Display

You can view the network with which the GSM module is currently registered with, on the display of the telephone connected to the FXS Port. Make sure that the telephone has a display and the CLI Type, DTMF or FSK is configured on the FXS Port. For instructions on configuring CLI Type, see [“FXS Port Parameters”](#).

- To know the network with which the mobile module is currently registered, follow the steps given below:
Go Off-Hook
Dial **#*14**
During the confirmation tone, go On-Hook.

The telephone connected to the FXS Port will ring and the Registration Status would be displayed on your telephone as under:

When CLI Type is set to DTMF, it will display:

```
0001 for GSM
0002 for GSM Compact
0003 for UTMS
0004 for Not Registered
```

When CLI Type is set as FSK, the Registration Status display format would be as follows:

```
0001
GSM
```

Mobile Network Selection

At each power ON, the Mobile Port will automatically locate and register with the network that supports the SIM Card installed in it.

However, if the Mobile Port fails to register, it will restart the process of network selection on the expiry of the *Network Registration Retry Timer*¹.

If SIMADO GFX11 is located in an area where more than one Network Operator is available, it is possible that the SIM Card may register with another available network and result in 'Roaming' charges. To avoid this, you must disable Automatic Network Selection and configure Manual Network Selection.

When you enable manual network selection, you must configure the *Network Operator Priority Table*. This table requires you to configure the Network Operator Codes (MCC-MNC)² in order of priority for a Mobile Port. So, whenever the SIM Card tries to register with the network manually, the Mobile Port will send a query to the available GSM Network Operators. The network operators will respond to the query with their Network Operator Codes. The Mobile Port will then match the Network Operator Codes it receives with those configured in the Network Operator Priority Table and select the Network Operator that matches in order of priority. If the Mobile Port fails to register, it will restart the process of network selection on the expiry of the *Network Registration Retry Timer*.

If no match is found, the Mobile Port (SIM) will not get registered with any of the available network operators and no calls can be made or received on this port.

- Enter SE Mode
- To configure network selection mode for the Mobile Port, dial:
331-Network Selection Mode-#*
Where,
Network Selection Mode is
1 for Automatic
2 for Manual

Default: **Automatic**
- To configure network operator's code in the priority table, dial:
332-Priority-Code-#*
Where,
Priority is from 1 to 3.
Code is MCC-MNC of the Network Operator. The MCC-MNC code must not exceed 6 digits.

Default: **00000**

1. The Network Registration Retry Timer defines the time for which the Mobile Port, which has failed to register with the network, should wait before attempting to re-register with the network. Network registration retry timer is 2 minutes and is non-programmable.

2. The Network Operator Code comprises of the Mobile Country Code (MCC) appended by the Mobile Network Code (MNC). The MCC is usually a 3-digit code that identifies a country. For example the MCC assigned to India is 404 and it applies to all network operators in the country. MCC for other countries are: USA-310; Canada-302; Australia: 505; Italy: 222.

The MNC is usually a 2/3-digit code. The MCC-MNC combination uniquely identifies the home network of the mobile terminal or the mobile user. For example, Airtel, a GSM network operator in India, has different MNC assigned to its networks in various states. The MNC for Airtel in the state of Maharashtra is 90, while the same for the state of Gujarat is 98.

The default priority table configured in the system is as shown below:

Priority	Network Operator Code
1	00000
2	00000
3	00000

- To clear network operator code in the priority table, dial:
332-Priority-#*

The Frequency Band supported by GSM Network varies from country to country. Configure the Frequency Band supported by your GSM service provider(s) for the Mobile Port.

- To select Mobile Frequency Band, dial:
333-Mobile Frequency Band-#*
Where,
Mobile Frequency Band is
1 for 900 MHz
2 for 1800 MHz
3 for 1900 MHz
4 for 850+1900 MHz
5 for 900+1800 MHz
6 for All Bands

Default: **All Bands**



- *Frequency Band selection is not required if 3G module is installed in SIMADO GFX11.*
- *If SIMCOM300/340 or WAVECOM engine is installed and you select the Frequency Bands as All Bands, the system will automatically set the frequency to 900+1800MHz.*
- Exit SE Mode or continue with the system configuration.

Preferred Network Mode

When 3G Mobile Port is used in the SIMADO GFX11, the SIM gets registered with either GSM (2G) or UMTS (3G) network, whichever is available. You can select the Network with which the SIM should be registered by setting the Preferred Network Mode.

If the SIM you have installed in the 3G Mobile Port supports both GSM and UMTS services, but you want it to be registered with any one of these networks, you may restrict the SIM registration with a particular network by setting the Preferred Network Mode. You may select the Preferred Network Mode from the following options:

ANY (GSM/UMTS): The SIM gets registered with the UMTS (3G) network. When the UMTS network is unreachable, the SIM gets registered with the GSM (2G) network automatically.

GSM Only: The SIM gets registered with GSM (2G) network only.

UMTS Only: The SIM gets registered with UMTS (3G) network only.



- *This parameter is applicable only for SIMADO GFX11 with 3G GSM engine.*

- Enter SE Mode
- To configure Preferred Network Mode for the Mobile Port, dial:
334-Preferred Network Mode-#*
Where,
Preferred Network Mode is
1 for Any (GSM/UMTS)
2 for GSM only
3 for UMTS only

Default: **Any (GSM/UMTS)**

- Exit SE Mode or continue with the system configuration.

Signal Strength

SIMADO GFX11 enables you to check the signal strength of the network with which the Mobile Port is registered. To be able to check the Signal Strength, make sure that the telephone connected to the FXS Port has a display and the CLI Type, DTMF or FSK, is configured on the FXS Port. For instructions on configuring CLI Type, see [“FXS Port Parameters”](#)



- *SIMADO GFX11 will route outgoing calls through Mobile Port only when the available network strength is high or maximum.*

How to check Signal Strength

To check the Signal Strength, follow the steps given below:

- Go Off-Hook
- Dial **#*11**
- You will get confirmation tone.
- Go On-Hook
- Signal strength will be displayed on the LCD of your telephone.
- Go Off-Hook again, you will get dial tone.

When **FSK CLI** is set on the FXS Port of SIMADO GFX11, the signal strength will be displayed as under:

```
111111111111
Strength: -xxxdBm
```

The numbers indicate the strength of the network.

When network signal strength is high, the display would be as under:

```
111111111111
Strength: -063dBm
```

When network signal strength is low, the display would be as under:

```
11111
Strength: -101dBm
```

When network signal strength is absent, the display would be as under:

```
11111
```

When **DTMF CLI** is set on the FXS Port of SIMADO GFX11, only the numbers will be displayed as follow:

```
111111111111
```


Passwords

It is possible to configure SIMADO GFX11 and access the system in two modes: System Engineer (SE) Mode and System Administrator (SA) Mode. Both these modes are protected by Passwords. To know more about the SE Mode and the SA Mode, see [“Configuring SIMADO GFX11”](#)

System Engineer (SE) Password

System Engineer mode is protected by the password referred to as SE password. SE password prevents unauthorized alterations in SIMADO GFX11 and misuse of its features and facilities. The default SE password is **1234**. You can change the default SE password to the desired value.

- Enter SE Mode
- To change SE password, dial:
107-New SE Password-#*
Where,
The New SE Password can be of maximum four digits. Allowed digits are from 0 to 9.

Default: **1234**

Forgot SE Password?

If you forget the SE password, you can reset it to its default value by changing the position of jumper **J2**.

To set the SE password to its default value (**1234**), follow the steps given below:

- Switch Off SIMADO GFX11.
- Open the cover and locate jumper J2. The jumper is in BC position.
- Change the jumper position to AB.
- Switch On the system.
- Switch Off the system after 5 minutes.
- Restore jumper to its original BC position
- Replace the cover and switch On the system again.
- SE password is set to its default value.

- Exit SE Mode or continue with the system configuration.

System Administrator (SA) Password

The System Administrator level is protected by the password called SA password. The default SA password is **1111**. You can change the default SA password to the desired value.

- Enter SE/SA Mode
- To change SA Password, dial:
108-New SA Password-#*
Where,
New SA Password can be of maximum four digits. Accepted digits are from 0 to 9.

Default: **1111**

- Exit SE/SA Mode or continue with the system configuration.



- *If you forget the SA password, you can change it to the desired value by entering SE Mode and dialing the same command string: **108-New SA Password-#***. Exit SE Mode after changing the SA password.*

Reinstate the Default Settings

All the configurable parameters of SIMADO GFX11 are assigned preset values, referred to as factory defaults or default settings. Default settings can be altered and customized to match the user's requirement and preferences.

You may also reinstate the default settings in the system, if needed. When you reinstate the default settings, all parameters, except the following will be set to factory defaults.

- Call Divert
- Call Progress Tones
- Ring Type
- SIM PIN value

Restoring Default Settings

- Enter SE Mode.
- To default SIMADO GFX11, dial:
106-Reverse SE Password-#*
Reverse SE password is a number string of maximum 4 digits.

For example, if your SE Password is 1234, you need to dial 4321as Reverse of SE Password.

- Exit SE Mode.



SIMADO GFX11 will restart as soon you dial the command to load default settings.

Restart the System

You can restart SIMADO GFX11 by dialing a command from the phone connected to its FXS Port, instead of switching off and switching on the system.

- Enter SE Mode
- To restart SIMADO GFX11,dial:
105-SE Password-#*
Where,
SE Password is a number string of four digits and acceptable digits are 0 to 9.
- Exit SE Mode.

Software Version and Revision Display

You can view the version-revision of the software, currently installed in SIMADO GFX11, on the LCD display of the telephone connected to the FXS Port. To be able to view the current firmware version-revision, the telephone connected to the FXS Port must have a display. The CLI Type configured on the FXS Port should be either DTMF or FSK. For instructions on configuring the CLI Type, see [“FXS Port Parameters”](#).

How to view Software Version-Revision

- Enter SE Mode
- To view current software version/revision of SIMADO GFX11, dial:
109-#*
You will get confirmation tone
Go On-Hook
Version-Revision of the software will be displayed on the LCD of your telephone.

When the CLI type set on the FXS Port is **FSK**, the format of display would be as under:



VVRR
VXXRYY

Where,
VV/XX= Software Version and RR/YY= Software Revision

Example:

If software version is 03 and software revision is 02 the display would be as under:



0302
V03R02

When CLI type set on the FXS Port is **DTMF**, the format of display would be as under:



0302

- Exit SE Mode.

Allowed-Denied Numbers

With the Allowed-Denied Numbers feature, you can permit and restrict the dialing of particular numbers from the FXS Port.

Allowed-Denied Numbers feature makes use of two number lists:

- **Allowed Number List:** This is the list of numbers that can be dialed out from the FXS Port.
- **Denied Number List:** This list contains the numbers that are to be restricted from being dialed out from the FXS Port.

You can configure up to five numbers in each list.

When you configure the Allowed and Denied Number Lists, for each number dialed from the FXS Port, SIMADO GFX11 will use the best-match-found logic to compare the dialed number string with the numbers configured in the Allowed Number List and the Denied Number List. The system will allow the number to be dialed, if the dialed number:

- matches with both lists.
- matches with Allowed Number list.
- matches with neither the Allowed List nor the Denied List.

The dialed number will be denied, if it matches with the Denied Number list.



- *If the number dialed from the FXS port matches with an Emergency number, SIMADO GFX11 will not compare the dialed number string with Allowed- Denied Number lists.*
- *If you have configured Security Code in the SIMADO GFX11, and the user does not dial the Security Code before dialing a number, the system will play error tone to the user. For more information, see [“Security Code”](#).*

How to configure

- Enter SE Mode
- To configure numbers in the allowed number list, dial:
261-Location Index-Number-#*
Where,
Location index is from 1 to 5.
Number can be of maximum 16 digits. Only digits 0 to 9 are allowed.

Default: **Blank**
- To clear an entry from allowed number list, dial:
261-Location Index-#*
Where,
Location Index is from 1 to 5.
- To clear all the entries from allowed number list, dial:
261-0-#*
- To configure numbers in the denied number list, dial:
262-Location Index-Number-#*
Where,
Location index is from 1 to 5.
Number can be of maximum 16 digits and only digits 0 to 9 are allowed.

Default: **Blank**
- To clear an entry from denied number list, dial:
262-Location Index-#*
Where,
Location Index is from 1 to 5.
- To clear all the entries from denied number list, dial:
262-0-#*
- Exit SE Mode.

Automatic Number Translation

Automatic Number Translation (ANT) can be used to modify the numbers dialed by users into a different number string before dialing out the number.

ANT can be used to modify the dialed destination numbers to match the specific route number plan of the destination networks or when the network requires adding or stripping off of the prefix of the destination number strings.

ANT can be used for Speed Dialing. It is also the basis of the feature [“Multi-Stage Dialing”](#), used from the Mobile Port of SIMADO GFX11.

Automatic Number Translation makes use of a table in which two types of number strings are configured:

- **Dialed Number Strings:** These are numbers that need to be modified when dialed out from the system.
- **Substitute Number List:** These are numbers which the system should dial out in place of the dialed number strings.

You can configure up to 8 Dialed number strings and their corresponding Substitute number strings in the ANT table. The Dialed numbers and their corresponding Substitute numbers are stored in the ANT table at an Index, from 1 to 8.

Whenever an outgoing call is made from the FXS Port, SIMADO GFX11 matches the dialed number with the entries of this table using the best-match-found logic. If a match is found, SIMADO GFX11 will dial out the Substitute number string configured for the dialed number string in the ANT table.

Let us understand this feature with the help of an example.

A user dials 952668263172 from the telephone connected to the FXS Port, out of habit. SIMADO GFX11 routes this call through the Mobile Port to the desired destination. However, the GSM network does not understand the dialed number string, because it expects the user to dial +912668263712. The call is rejected.

You can avoid this by configuring the Automatic Number Translation table with the prefix of the mobile numbers that you expect users to dial as Dialed number strings and the prefix expected by the GSM network in the Substitute Number list. In this case,

- **95**, which is the prefix of the number 952668263172 is configured as the Dialed Number String.
- **+91** which is the prefix understood by the GSM Network is configured as the Substitute Number String.

With the ANT Table configured thus, whenever a number is dialed from the FXS Port, the system matches the number string with the ANT Table. If a match is found, the system dials the Substitute Number string configured for that number in the table.

Similarly, you can use ANT for Speed Dialing. You can configure short codes for number strings that you frequently dial as Dialed Number Strings and the complete number strings that should be dialed out in place of the short code as the Substitute Number Strings. For example, you want to use 11 as the Speed Dial code for the number +912668263712. Configure 11 as Dialed Number String and +912668263712 as Substitute Number string. When you dial 11, the system will dial out the complete number string +912668263712.

The ANT Table the you must configure for these examples, would look like this:

Index	Dialed Number String	Substitute Number String	Calling Card Service Number Index (A)	Calling Card Password Index (B)
1	95	+91	0	0
2	11	+912668263712	0	0
3	Blank	Blank	0	0
:	Blank	Blank	0	0
:	Blank	Blank	0	0
8	Blank	Blank	0	0

In addition to the Dialed and Substitute Number strings, the ANT table also includes the following entries:

- Calling Card Service Index Number
- Calling Card Password Index

These entries are used specifically for applications that require Multi-stage Dialing, such as use of virtual Calling Cards, interfacing SIMADO GFX11 with a PBX. For more information, see ["Multi-Stage Dialing"](#).

How to configure

- Enter SE Mode.
- To configure the Dialed Number String, dial:
291-Number Index-Dialed Number String-#*
Where,
Number Index is from 1 to 8.
Dialed Number String can be of maximum 8 characters. Acceptable digits and characters are 0-9, #, *, A, B, C, D, F, P and +

Default: **Blank**

If you are configuring DTMF digits and characters in the number string, dial the codes given in the table below of each DTMF digit:

DTMF Digits	Codes
+	#1
F (Flash)	#2
P (Pause)	#3
A	#4
B	#5
C	#6
D	#7
#	##
End of programming command	#*



- While configuring DTMF Digits in the number string, if you dial any code other than those given in the table, the system will play error tone.
- The maximum number of digits you can configure in the Number string is 16. The system considers each DTMF character (see above table) that you include in the Number string as two digits. So, DTMF characters you include in the Number String will use up more digit length than the numeric DTMF digits.

- To clear the Dialed Number String, dial:

291-Number Index-#*

- To configure the Substitute Number String, dial:

292-Number Index-Substitute Number String-#*

Where,

Number Index is from 1 to 8.

Substitute Number String can be of maximum 8 characters. Acceptable digits and characters are 0-9, #, *, A, B, C, D, F, P and +

If you are configuring DTMF Digits and characters, refer the table given in the previous command for the codes for each DTMF digit.

Default: **Blank**

- To clear the Dialed Number String, dial:

292-Number Index-#*

- To configure the Calling Card Service Number Index, dial:

293-Number Index-Calling Card Service Number Index-#*

Where,

Number Index is from 1 to 8.

Calling Card Service Number Index is from 0 to 2.

Default: **0**

- To configure the Calling Card Password Index, dial:

294-Number Index-Calling Card Password Index-#*

Where,

Number Index is from 1 to 8.

Calling Card Password Index is from 0 to 2.

Default: **0**

- To clear all the entries from Automatic Number Translation table, dial:

290-0-#*



*If you are **not** using the ANT table for “Multi-Stage Dialing”, configure ‘0’ as the **Calling Card Service Number Index** and the **Calling Card Password Index** in the ANT table.*

- Exit SE Mode.

Call Divert

The Call Divert feature of SIMADO GFX11 enables you to divert your calls to another destination number of your choice.

Call divert is a service provider dependent feature. To use this feature, it should be activated by your GSM service provider on the SIM Card inserted in SIMADO GFX11.

SIMADO GFX11 supports four types of Call Divert:

- **Call Divert-Unconditional:** All incoming calls on the Mobile Ports are diverted unconditionally to the desired destination number.
- **Call Divert-When busy:** All incoming calls on the Mobile Ports are diverted to the desired destination number, if the FXS Port is busy.
- **Call Divert-When No Reply:** All incoming calls on the Mobile Port are diverted to the desired destination number, if the FXS Port does not answer the call.
- **Call Divert-When SIMADO GFX11 is Off or there is no coverage:** All incoming calls on the Mobile Port are diverted to the desired destination number, if SIMADO GFX11 is switched off or there is no network coverage.

You can select the type of Call Divert you want to use and configure the desired destination number.

How to configure

Call Divert feature can be configured from the SE mode as well as from the SA mode.

- Enter SE/SA Mode
- To set call divert, dial:
620-Option-Code-Destination Number-#*
Where,
Destination Number is the number to which the calls are to be diverted. Destination number can be of maximum 16 digits.

Option is:
1 for All Calls - Unconditional
2 for When Busy
3 for when No Reply
4 for When SIMADO GFX11 is Off or No Network Coverage

Code is:
0 for Disable
1 for Enable

Default: **Disabled**

To cancel call divert, dial:
620-Option-Code-#*

- Exit SE/SA Mode.



You cannot set more than one type of call divert at a time.

Call Duration Display

Using the Call Duration Display feature, you can check the duration of calls made from and received on the FXS Port. You can check the duration of following types of calls:

- Last Call
- All Received Calls
- All Dialed Calls
- All Calls

To be able to view the duration of calls, the telephone connected to the FXS Port must have a display. The CLI Type configured on the FXS Port should be either DTMF or FSK. For instructions on configuring the CLI Type, see [“FXS Port Parameters”](#).

How to view Call Duration

You can view Call Duration from the SE mode as well as from the SA mode.

- Enter SE/SA Mode
- To view the duration of the desired call type, dial:

610-Call Type-#*

Where,

Call Type is:

1 for Last Call

2 for All Received Calls

3 for All Dialed Calls

4 for All Calls

If CLI type set on the FXS Port is **FSK**, the format of call display would be as under:

N HHMMSS

XX DUR:HH:MM:SS

Where,

N is the Type of Call.

N	Meaning
1	Last Call
2	All Received Calls
3	All Dialed Calls
4	All Calls

XX represents the following:

XX	Meaning
IC	Incoming Call
OG	Outgoing Call
RC	Received Calls
DC	Dialed Calls
AC	All Calls

DUR stands for Duration

HH stands for Hours (Range: 00 to 99)

MM stands for Minutes (Range: 00 to 59)

SS stands for Seconds (Range: 00 to 59)

For Example:

Call duration of the last incoming call of 30 seconds will be displayed as shown below:

1 000030
IC DUR:00:00:30

If CLI type set on the FXS Port is **DTMF**, the format of call display would be as under:

N HHMMSS

Where,

N is the Type of Call.

N	Meaning
1	Last Call (may be an incoming or an outgoing call)
2	All Received Calls
3	All Dialed Calls
4	All Calls

HHMMSS stands for Hours: Minutes: Seconds

For Example:

Call duration display of last incoming call of 30 seconds will be displayed as shown below:

1 000030

- To clear all call-duration display, dial:
610-0-#*
- Exit SE/SA Mode.



If the total call duration exceeds 99:59:59, call duration will reset to 00:00:00.

Call Progress Tones

Call Progress Tones (CPT) are audible tones sent to the calling parties to show the status of phone calls, like dial tone, error tone, busy tone. Each tone has a distinctive tone frequency and cadence assigned to it.

SIMADO GFX11 supports the following types of Call Progress Tones:

- Dial Tone
- Busy Tone
- Error Tone
- Programming Tone
- Confirmation Tone
- Ring Back Tone

Call Progress Tones are country specific. Tone standards vary from country to country. SIMADO GFX11 enables you to select the Call Progress Tones to match the tone standards of your country.

How to configure

Call Progress Tones can be configured from SE mode only.

- Enter SE Mode
- To configure CPT for a country, dial:
104-CPT Code-#*

Refer the table below for CPT Codes assigned to different countries.

CPT Code	Country	Dial Tone		Busy Tone		Error Tone		Ring Back Tone	
		Freq.	Cadence	Freq.	Cadence	Freq.	Cadence	Freq.	Cadence
		Hz	second	Hz	second	Hz	second	Hz	second
1	Australia	425*25	cont.	425	0.375on 0.375off	425	0.375on 0.375off	425	1.0 on 4.0off
2	Argentina	425	cont.	425	0.3on 0.2off	425	0.3on 0.4off	425	1.0 on 4.0off
3	Belgium	425	cont.	425	0.5on 0.5off	425	0.167on 0.167off	425	1.0 on 4.0off
4	Brazil	425	cont.	425	0.25on 0.25off	425	0.25on 0.25 off	425	1.0 on 4.0off
5	China	450	cont.	450	0.35 on 0.36off	450	0.7on 0.7off	450	1.0 on 4.0off
6	Egypt	425*50	cont.	425*50	1.0on 4.0off	450	0.5on 0.5off	425*50	1.0 on 4.0off
7	France	440	cont.	440	0.5on 0.5off	440	0.25on 0.25off	440	1.0 on 4.0off
8	Germany	425	cont.	425	0.48on 0.48off	425	0.24on 0.24off	425	1.0 on 4.0off
9	Greece	425	0.2on 0.3off 0.7on 0.8off	425	0.3on 0.3off	425	0.15on 0.15off	425	1.0 on 4.0off
10	India	400*25	cont.	400	0.75on 0.75off	400	0.25on 0.25off	400	1.0 on 4.0off
11	Indonesia	425	cont.	425	0.5on 0.5off	425	0.25on 0.25off	425	1.0 on 4.0off

CPT Code	Country	Dial Tone		Busy Tone		Error Tone		Ring Back Tone	
		Freq.	Cadence	Freq.	Cadence	Freq.	Cadence	Freq.	Cadence
		Hz	second	Hz	second	Hz	second	Hz	second
12	Iran	425	cont.	425	0.5on 0.5off	425	0.25on 0.25off	425	1.0 on 4.0off
13	Israel	400	cont.	400	0.5on 0.5off	400	0.25on 0.25off	400	1.0 on 4.0off
14	Italy	425	cont.	425	0.5on 0.5off	425	0.2on 0.2off	425	1.0 on 4.0off
15	Japan	400	cont.	400	0.5on 0.5off	400	0.25on 0.25off	400	1.0 on 4.0off
16	Kenya	425	cont.	425	0.2on 0.6off 0.2on 0.6off	425	0.2on 0.6off	425	1.0 on 4.0off
17	Korea	350+440	cont.	480+620	0.5on 0.5off	480+620	0.3on 0.2off	480+620	1.0 on 4.0off
18	Malaysia	425	cont.	425	0.5on 0.5off	425	0.5on 0.25off	425	1.0 on 4.0off
19	Mexico	425	cont.	425	0.25on 0.25off	425	0.25on 0.25off	425	1.0 on 4.0off
20	New Zealand	400	cont.	400	0.5on 0.5off	400	0.25on 0.25off	400	1.0 on 4.0off
21	Philippines	425	cont.	480+620	0.5on 0.5off	480+620	0.25on 0.25off	480+620	1.0 on 4.0off
22	Poland	425	cont.	425	0.5on 0.5off	425	0.5on 0.5off	425	1.0 on 4.0off
23	Portugal	425	cont.	425	0.5on 0.5off	450	0.33on 1.0off	450	1.0 on 4.0off
24	Russia	425	cont.	425	0.4on 0.4off	425	0.25on 0.25off	425	1.0 on 4.0off
25	Saudi Arabia	425	cont.	425	0.5on 0.5off	425	0.25on 0.25off	425	1.0 on 4.0off
26	Singapore	425	cont.	425	0.75on 0.75off	425	0.25on 0.25off	425	1.0 on 4.0off
27	South Africa	400*33	cont.	400	0.5on 0.5off	400	0.25on 0.25off	400	1.0 on 4.0off
28	Spain	425	cont.	425	0.2on 0.2off	425	0.25on 0.25off	425	1.0 on 4.0off
29	Thailand	400*50	cont.	400	0.5on 0.5off	400	0.3on 0.3off	400	1.0 on 4.0off
30	Turkey	450	cont.	450	0.5on 0.5off	450	0.2on 0.2off 0.6on 0.2off	450	1.0 on 4.0off
31	UAE	350+440	cont.	400	0.375on 0.375off	400	0.4on 0.35off 0.225on 0.525off	400	1.0 on 4.0off
32	UK	350+440	cont.	400	0.375on 0.375off	400	0.4on 0.35off 0.225on 0.525off	400	1.0 on 4.0off
33	USA/ Canada	350+440	cont.	480+620	0.5on 0.5off	480+620	0.25on 0.25off	480+620	1.0 on 4.0off

Default: **10 (India)**

For example, to configure CPT for Belgium, dial: **104-3-#***

- Exit SE Mode.



- *In above table, * refers to modulation of two frequencies (f1 and f2) and + refers to addition of two frequencies. Cont. is abbreviation for continuous.*
- *Confirmation tone for all countries is: 400Hz, 0.1 on 0.1 off*
- *Programming tone for all countries is: 400Hz, 0.1 on 0.9 off*

Calling Line Identification Restriction (CLIR)

You can use Calling Line Identification Restriction (CLIR) feature to suppress your number and name in the outgoing calls you make from SIMADO GFX11. You can make anonymous calls using CLIR.

This is Service Provider dependant feature. To use this feature, you must get CLIR facility activated by your service provider.

How to configure

Only SE can configure CLIR.

- Enter SE Mode
- To enable/disable CLIR on the Mobile Port, dial:
202-Code-#*
Where,
Code is
0 for Disable
1 for Enable

Default: **Disabled**
- Exit SE Mode.



Some networks do not allow outgoing calls when CLIR is activated. So, check with your service provider before activating and using CLIR.

Emergency Number Dialing

The Emergency Number Dialing feature enables users to call emergency services such as Ambulance, Fire Brigade, Police from the Mobile Port of SIMADO GFX11.

To use this feature, make sure that the Mobile Port is enabled and configure the Emergency Number Table in the system.

The Emergency Number Table stores up to 5 numbers against Index 1 to 5. By default, certain emergency numbers are pre-configured in this table, which you cannot change. However, you may add numbers, according to your requirement to this table.

This is how Emergency Number Dialing works:

- A user dials a number.
- SIMADO GFX11 first checks the Emergency Number Table.
- If the dialed number matches with any of the numbers in the table, SIMADO GFX11 dials out the number, even in the following situations.
 - When SIM is absent
 - When SIM is invalid
 - When wrong SIM PIN is entered
 - When SIM is blocked
 - When GSM module is not registered



Emergency number Dialing will not work if Mains power to SIMADO GFX11 fails.



When the dialed number matches with an Emergency Number in the table, SIMADO GFX11 will not check the Allowed and Denied Number Lists or the Automatic Number Translation Table. It will dial out the number.

In **System Firmware Version V4** and earlier, the GSM module supports certain fixed Emergency Numbers. You can configure only the number supported by the module in the Emergency Number Table. If you configure a number that is not supported by the module in the table, the system will not recognize this number as an emergency number and will not dial out this number.

In **System Firmware Version V5R1 and later**, if your system has SIMCOM-2G engine (SIM340-B01 and later) or SIMCOM-3G engine (Version V1.18 and later) installed, you can configure any number in the in the Emergency Number Table. The system will store the same number on the GSM module and will dial out only the numbers configured in Emergency Number Table.

How to configure



You are recommended to configure the numbers prevalent as Emergency Numbers in your region, in the Emergency Number Table.

As mentioned earlier, the Emergency Number Table stores up to 5 numbers. Each number is stored against an Index, 1 to 5. Also, by default, certain emergency numbers are pre-configured in this table, which you cannot change.

The default Emergency Number Table for all countries except Italy is configured as follows:

Index	Emergency Number
1	Blank (Editable)
2	Blank (Editable)
3	112 (Un-editable)
4	911 (Un-editable)
5	000 (Un-editable)

The default Emergency Number Table for Italy is configured as shown as follows:

Index	Emergency Number
1	Blank (Editable)
2	Blank (Editable)
3	112 (Un-editable)
4	113 (Un-editable)
5	Blank (Un-editable)

The Emergency Number you want to add to the table must be stored at Index that is editable. You can add numbers at Index 1 and 2 only.

How to configure

To configure the Emergency Number Table,

- Enter SE Mode.
- To add an emergency number, dial:
151-Index-Emergency Number-#*
Where,
Index is 1 and 2.
Emergency number can be of maximum 3 digits. Acceptable digits are 0 to 9.

The number will be stored at the Index you dialed.

- To clear the emergency number at an index, dial:
151-Index-#*
Where,
Index is 1 and 2.

The number stored at the Index you dialed will be cleared.

- Exit SE Mode.

Hotline

The Hotline feature connects you to a particular number as soon as you go Off-Hook on the telephone connected to the FXS Port of SIMADO GFX11. You can use Hotline to connect immediately to a number that you dial most frequently. The Hotline feature eliminates the repeated dialing of this number.

To use Hotline, you must first enable this feature, configure the *Hotline Delay Timer* and the desired number which you want to be dialed out when you go Off-Hook on the telephone connected to the FXS Port.

Here is an example of how Hotline works:

- You dial the number 2654227 frequently.
- You set Hotline for this number and set the Hotline Delay Timer to 3 seconds.
- Whenever you go Off-Hook, SIMADO GFX11 will play dial tone and wait for 3 seconds
- If you do not dial any digit during the Hotline Delay Timer, SIMADO GFX11 dials the hotline number 2654227.
- When the called person answers the call, you get connected.

However, if you dial a number before the Hotline Delay Timer expires, SIMADO GFX11 will outdial the number you dialed.

How to configure

- Enter SE Mode.
- To enable/disable hotline, dial:
281-Flag-#*
Where,
Flag is:
0 for Disable
1 for Enable

Default: **Disabled**
- To configure the Hotline destination number, dial:
282-Destination Number-#*
Where,
Destination number is the number string of maximum 16 digits.
- To set the Hotline Delay Timer, dial:
283-Timer-#*
Where,
Timer is from 1 to 9 seconds.

Default: **3 seconds**
- Exit SE Mode.

International Mobile Equipment Identity (IMEI)

Just like mobile handsets, each GSM module has an IMEI (International Mobile Equipment Identity) number printed on its GSM engine. International Mobile Equipment Identity number is a unique 15 or 17 digit code used to identify an individual GSM module to a GSM network. When SIMADO GFX11 is switched on, the IMEI code is transmitted and is verified in the network database called Equipment Identity Register (EIR).

The EIR consists of three lists: White list, Grey list and Black list.

- The White list consists of equipment identities that are fully permitted to access and use the network.
- The Black list contains all the equipment identities that are barred from using the network.
- The Grey list contains those equipment identities that are not barred from using the network services but are tracked by the network for evaluation purpose.

The Network will allow the GSM module to access the GSM network only if the IMEI code is registered in the White list of EIR. This number is useful in case SIMADO GFX11 is lost or stolen. The network operator can block the IMEI number of the GSM module installed in the system. Thus the important information stored in the system can be protected from misuse.

- The currently used Structure of IMEI number is as follows:

AA-BBBBBB-CCCCC-D

Where,

AA is Reporting Body Identifier, indicating the GSMA approved group that allocated the Type Allocation Code (TAC).

BBBBBB is the remainder of the TAC.

CCCCC is serial sequence of the configuration.

D is Luhn check digit of the entire configuration or 0. (This is an algorithm that validates the ID number)



You can view the IMEI on the telephone connected to the FXS Port of SIMADO GFX11 irrespective of the CLI type (DTMF/ V.23 FSK/ FSK Bellcore) set on the FXS Port.

How to check IMEI code

To check IMEI code of the GSM module, follow the steps given below:

- Go Off-Hook
- Dial **#*-13**
- You will get confirmation tone.
- Go On-Hook
- IMEI Code of the GSM module will be displayed on the LCD of your telephone.

For Example:

IMEI Code of the GSM module will be displayed as shown below:

353451041494822

- Go Off-Hook again, you will get dial tone.

Location Information Indication

Whenever you change the location of SIMADO GFX11, the network updates the current location of SIMADO GFX11. Using the Location Information Indication feature, you can find out the current location of SIMADO GFX11 on the display of the phone connected to the FXS port.

Location Information Indication is a service provider-dependent feature. To be able to use this feature, you must do the following:

- Get this feature enabled by your service provider.
- Configure the **CLI Type** on the FXS Port as **FSK**.

How to configure

- Enter SE Mode.
- To enable/disable location information indication on the Mobile Port, dial:
205-Flag-#*
Where,
Flag is
0 for OFF
1 for ON

Default: **OFF**
- Exit SE Mode.

How to view Location Information

To view the Location Information on your telephone, follow the steps given below:

- Go Off-Hook
- Dial **#*12**
- You will get confirmation tone.
- Go On-Hook
- The Location Information will be displayed on the LCD of your telephone as shown below.

MAKARPURA-GIDC

- Go Off-Hook again, you will get dial tone.



If no information is available from the network, the message 'NO LOCATION' will be displayed.

Multi-Stage Dialing

The Multi-stage Dialing feature is used where numbers dialed by users need to be modified, broken into parts, and dialed out in various stages of the call. This feature is typically used in applications like Calling Card, where users are required to dial digits in stages when making a call using a calling card.

Another application where Multi-stage Dialing is used is when SIMADO GFX11 is used as a gateway to connect a PCO and a PBX for GSM-Fixed line network connectivity.

Let us understand how this feature works in such applications with the help of examples.

Example 1: Multi-stage Dialing in Virtual Calling Card application

A typical example of Multi-Stage Dialing is the use of prepaid Calling Cards. Here, the person using a calling card must dial a fixed number string before dialing the actual number. When using a calling card,

- Users must first dial the number of the Calling Card server, for example: **1602233** (7 digits).
- After the call is answered by the Calling Card server, users must dial the PIN provided by the calling card service provider, for example **1132121234**.

Some service providers also prompt the users to select a language before navigating further in the menu.

- After dialing the PIN number, users can dial the number they want to call, for example **0014125126508**.

Thus, when using a calling card, users must dial a very lengthy number string, each time they need to make a call using the calling card.

The use of Multi-Stage Dialing saves the time and effort of dialing out lengthy digits in stages. Here the user dials only the end destination number, the system dials out the calling card number, password and any other prefixes that need to be dialed.

To use this feature for the Calling Card application, you must first do the following:

- Configure the Calling Card Server Number string at an Index in the **Calling Card Services Number table**. In this example, it is the 7-digit number 1602233.

If required, program **Pause** after the calling card server number string. After the calling card server has answered the call, the system may have to wait for some time before dialing out the next number string. In which case you must program Pause. The Calling Card Service Number table, would be configured as follows:

Number Index	Calling Card Number Services Number String
1	1602233P
2	

- Configure the Calling Card Password provided by the service provider at an Index in **the Calling Card Password table**. In this example, it is 1132121234. The Calling Card Password table would be configured as follows:

Number Index	Calling Card Password String
1	1132121234
2	

- Configure the **Automatic Number Translation table**. The Automatic Number table consists of the Dialed Number strings and the Substitute Number strings, the Calling Card Services Number Index and the Calling Card Password Index.
- You must configure the prefix that you expect users to dial when they use this Calling Card as **Dialed Number** string.
- As **Substitute Number** string, you must configure number string that the system should dial out in place of the Dialed string. In this case, the dialed number string and substitute number string are the same: the prefix '00'.
- You must configure the Index number you assigned to the calling card in the Calling Card Services Number Index of the ANT Table. In this example, **1**.
- You must configure the Index number you assigned to the password of the calling card in the Calling Card Password Index of the ANT Table. In this example, **1**.

The ANT Table you configure would be as shown below:

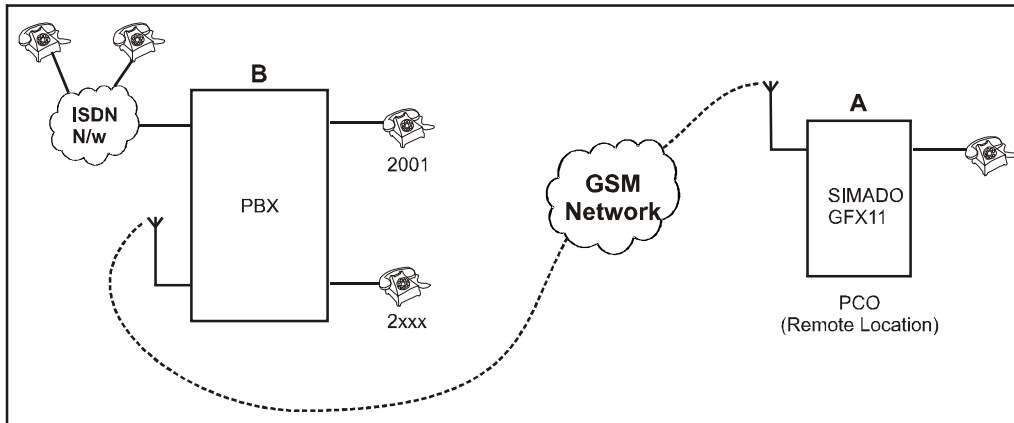
Index	Dialed Number String	Substitute Number String	Calling Card Services Number Index	Calling Card Password Index
1	00	00	1	1
2				
3				
4				
5				
6				
7				
8				

- With the relevant tables configured, now, when the user dials the end destination number, 0014125126508, the system will check the ANT Table.
- If the number dialed by the user matches with the Dialed Number String in the table, the system checks the Calling Card Number Services Number Index. It fetches the number configured for this index in the Calling Card Services Number Table. The system dials out this number.
- When the call is answered, the system waits for the programmed Pause Timer.
- After the expiry of the Pause Timer, the system checks the Calling Card Password Index in the ANT table. It fetches the number configured for this index in the Calling Card Password table, and dials out this number.
- The system then dials out the string configured as the Substitute number in the ANT table, and finally the end destination number dialed by the user.

Example 2: Multi-stage Dialing in PCO application

A PCO owner at a remote rural, hilly area wants to provide telephony services to the residents of this area using SIMADO GFX11 and a PBX located in an urban area where fixed lines CO and ISDN networks are available.

The following illustration shows how SIMADO GFX11 is connected with the PBX. Here, SIMADO GFX11 is located at the PCO in the remote area. The PBX is located in the urban area and has a GSM card installed. The PCO and the PBX have Closed User Group (CUG) services of the GSM service provider. The SIM Cards installed in SIMADO GFX11 at the PCO and the GSM Card in the PBX are provisioned under CUG for free calling. The fixed lines providers of the PBX offer fixed lines at low rates.



SIMADO GFX11 at the PCO is so configured that whenever a customer makes a call, the call is first made to the GSM Port of the PBX. Using DISA³ services of the PBX, the final destination number dialed by the customer is dialed, and the call is made to the final destination. However, the customer needs to dial only the destination number.

To use Multi-stage dialing for this application,

- the GSM Port of the PBX at location B should be configured for DID/DISA mode.
- you must configure the following parameters in SIMADO GFX11 at location A (the PCO):
 - Calling Card Service Number table
 - Calling Card Password table
 - Automatic Number Translation table
 - Call Proceeding Tone
- a. The mobile number of GSM Port of PBX at location B should be configured at an index in the 'Calling Card Service Number' table.

Number Index	Calling Card Number Services Number String
1	Mobile Number of GSM Port of PBX at location B
2	Blank

The 'DISA login code + Extension Number + Extension Password' should be configured at an index in the 'Calling Card Password' table. If required you may configure also the Pause Timer. In this example, SIMADO GFX11 must wait for some time after dialing the DISA login code + Extension Number + Extension Password.

3. Direct Inward System Access.

Before dialing the destination number, it must also wait for the Outgoing trunk selected by the PBX to be grabbed, so that the destination number dialed by SIMADO GFX11 reaches the PSTN correctly. The Pause Timer accomplishes this. The Calling Card Password String table would be configured like this:

Number Index	Calling Card Password String
1	107920015656P
2	Blank

Here, 1079 is the DISA login code, 2001 is the extension number and 5656 is the extension password, and **P** is Pause.

- b. The 'Automatic Number Translation' table should be configured as given below:

Index	Dialed Number String	Substitute Number String	Calling Card Services Number Index	Calling Card Password Index
1	0044	0044	1	1
2				
3				
4				
5				
6				
7				
8				

- c. The call proceeding tone option should be configured as **Network** tone. SIMADO GFX11 supports the following The different Call Proceeding tones,
- **Network Tone:** The system connects the caller to the network after dialing the Calling Card Number. The tones played by the Network are heard by the caller till the destination answers the call.
 - **Pseudo Network Tone:** The system plays a tone by itself after dialing the Calling Card Number till all the digits are dialed out.
 - **Silence:** The system plays silence after dialing the Calling Card Number till all the digits are dialed out.
 - **Silence + Ring Back Tone:** The system plays silence after dialing the Calling Card Number for some time and then plays Ring Back tone till all the digits are dialed out.

With the above configuration in place, whenever a customer at the PCO dials the number 00449652324256, the call will be processed as follows:

- SIMADO GFX11 plays Call Proceeding Tone to the caller (customer). You can set the type of call proceeding tone you want to be played to callers. Here, Network Tone is set.
- SIMADO GFX11 will check the ANT table. Since Substitute Number String is same as Dialed Number String, no number translation will take place.
- Next, the system will check the Calling Card Services Number Index and fetch the mobile number of the GSM Port of the PBX at location which is configured in the Calling Card services Number table. The system will make a call to this mobile number.

- When the call lands on the GSM Port of the PBX at location B, the PBX will answer the call, as the GSM Port is configured in DID/DISA mode.
- SIMADO GFX11 will check the Calling Card Password index configured in the ANT table, and will fetch the DISA Login code, the extension number and password string. It will dial this number string.
- The system will wait for the programmed Pause Timer.
- After the expiry of the Pause Timer, the system dials out the string configured as the Substitute number in the ANT table, and finally the destination number dialed by the customer.
- The call is made to the destination number.



If the 'Calling Card Services Number string' in the ANT table is configured as '0' then only ANT logic shall be applied and the multi-stage dialing will not work. Also, the Calling card password shall not be dialed as it shall not be applicable in this case.

How to configure

- Enter SE Mode.
- To configure the 'Calling Card Service Number' table, dial:
341-Number Index-Calling Card Services Number String-#*
Where,
Number Index is 1 and 2.
Calling Card Services Number String is the number of the calling card server. This number may contain up to 16 digits. You can configure DTMF digits 0-9, #, *, A, B, C, D and the characters F, P and + in this number.
Default: Table is **blank**

If you are configuring DTMF digits and characters in the number string, dial the codes given in the table below of each DTMF digit:

DTMF Digits	Codes
+	#1
F (Flash)	#2
P (Pause)	#3
A	#4
B	#5
C	#6
D	#7
#	##
End of programming command	#*



- *While configuring DTMF Digits in the number string, if you dial any code other than those given in the table, the system will play error tone.*
- *The maximum number of digits you can configure in the Number string is 16. The system considers each DTMF character (see above table) that you include in the Number string as two digits. So, DTMF characters you include in the Number String will use up more digit length than the numeric DTMF digits.*
- To clear the Calling Card Number Services Number String from the table, dial:
341-Number Index-#*

- To configure the Calling Card Password, dial:

342-Number Index- Calling Card Password-#*

Where,

Number Index is from 1 to 2.

Calling Card Password is a number string of a maximum of 16 digits. You can configure DTMF digits 0-9, #, *, A, B, C, D and characters F, P and + in this number string.

Default: **Blank**

If you are configuring DTMF digits and characters in the number string, dial the codes given in the table for the previous command.

- To clear the Calling Card Password, dial:

342-Number Index-#*

- To configure Call Proceeding Tone, dial:

122-Call Proceeding Tone-#*

Where,

Call Proceeding Tone is

1 for Network Tone

2 for Pseudo Network Tone

3 for Silence

4 for Silence + Ring Back Tone

Default: **Network Tone**

- To configure the Pause Timer, dial:

275-Pause Timer-#*

Where,

Pause Timer is from 1 to 9 seconds.

Default: **2 seconds**

You can configure as many 'P' digits (Pause) as you want in the Calling Card Number Services Number String and Calling Card Password String. For each digit 'P' that you configure, SIMADO GFX11 will wait for 2 seconds before dialing the subsequent digit.

- To configure the DTMF Outdial ON Timer, dial:

241-DTMF Outdial ON Timer-#*

Where,

DTMF Outdial ON Timer is in fact a count, from 000 to 255.

1 count = 100ms.

Hence, when you configure count as 5, DTMF tone remains ON for 500ms.

Default: **1 (i.e. 100ms)**

The DTMF Outdial ON Timer signifies the time for which the DTMF digit should be outdialed on the Mobile Port.



As the detection of DTMF digits received over GSM network is not perfect, the performance of this feature is likely to be affected.

- Exit SE Mode.

Ring Type

SIMADO GFX11 enables you to select country-specific Ring Type for the system. You can select the Ring Type that matches the frequency and cadences of the rings supported by the local exchange in the country where SIMADO GFX11 is installed.

How to configure

- Enter SE mode.
- To select a matching ring type, dial:
311-Code-#*
Where,
Code is the Ring Type code from 01 to 25. For Ring Type codes, see the table below. The values in this table are as per ETSI Standard.

Ring Type Code	Country	Frequency (Hz)	CADENCE (In Seconds)			
			ON 1	OFF 1	ON 2	OFF 2
01	Australia	25	0.4	0.2	0.4	2.0
02	Brazil	25	1.0	4.0		
03	China	25	1.0	3.0		
04	Egypt	25	2.0	4.0		
05	France	25	1.5	3.5		
06	Germany	25	3.5	5.5	0.79	1.1
07	Greece	25	1.0	4.0		
08	India	25	0.4	0.2	0.4	2.0
09	Israel	25	2.0	3.0		
10	Italy	25	1.0	4.0		
11	Japan	25	1.0	2.0		
12	Korea	25	1.0	3.0		
13	Malaysia	25	2.0	3.0		
14	New Zealand	25	2.0	3.0		
15	Poland	25	2.0	3.0		
16	Portugal	25	1.0	5.0		
17	Russia	25	1.0	3.0		
18	Singapore	25	0.4	0.2	0.4	2.0
19	South Africa	25	0.4	0.2	0.4	2.0
20	Spain	25	1.5	3.0		
21	Thailand	25	2.0	3.0		
22	UAE	25	2.0	3.0		
23	UK	25	0.4	0.2	0.4	2.0
24	USA/Canada	25	2.0	4.0		
25	Belgium	25	1.0	3.0		

Default: 08 (INDIA)

For Example: To configure Ring Type for China, dial: **311-03-#***

- Exit SE mode or continue with the system configuration.

Security Code

Using Security Code, you can restrict the usage of SIMADO GFX11 to certain applications and restrict users's access to the system.

For example, in a PCO application, you may want to use SIMADO GFX11 with a particular PCO machine only. You can do this by configuring the Security Code.

When you configure Security Code, users must dial Security Code to be allowed to dial numbers from the FXS Port of SIMADO GFX11. If a user fails to dial the Security Code, the system will play error tone.

Thus, you can prevent the system from being used with other devices and by unauthorized persons.



If you do not want the Security Code dialed from the FXS port to be routed through the Mobile Port, use Automatic Number Translation (ANT). Configure the Security Code as Dialed Number String in the ANT table, and keep the corresponding Substitute Number String blank. For instructions, see ["Automatic Number Translation"](#).

How to configure

- To configure the security code, dial:
121-Security Code-#*
Where,
Security Code number can be of maximum 8 digits.
Allowed digits are 0 to 9, A, B, C, and D.

Default: **Blank**

If you are configuring DTMF digits and characters in the number string, dial the codes given in the table below of each DTMF digit:

Special Digits	Code for Programming
A	#4
B	#5
C	#6
D	#7
End of Programming Command	#*



- While configuring DTMF Digits in the number string, if you dial any code other than those given in the table, the system will play error tone.*
- The maximum number of digits you can configure in the Number string is 16. The system considers each DTMF character (see above table) that you include in the Number string as two digits. So, DTMF characters you include in the Number String will use up more digit length than the numeric DTMF digits.*
- To clear the security code, dial:
121-#*

Service Provider Lock

Service Provider Lock feature enables mobile service providers to lock SIMADO GFX11 to work with their own network only. For example, if SIMADO GFX11 is locked to work with 'Airtel', it will not work with any other service provider.

To lock SIMADO GFX11 to work with a specific service provider, follow the steps given below:

- Insert the SIM Card of the service provider with which SIMADO GFX11 is to be locked in the SIM Card slot.
- When the SIM gets registered with the network, dial the command to change Default Service Provider Password and configure the New Service Provider Password.
- Dial the command to lock SIMADO GFX11 with the service provider.
- Restart the system.
- Now SIMADO GFX11 will work only with the service provider whose SIM Card is inserted in the system.

How to configure

- Enter SE Mode.
- To change service provider password, dial:
702-Old Service Provider Password-New Service Provider Password-#*
Where,
Old Service Provider Password is of four digits. Acceptable digits are 0 to 9.
New Service Provider Password is of four digits. Acceptable digits are 0 to 9.

Default Service Provider Password: **1234**

- To Lock/Unlock the system with the service provider, dial:
701-Service Provider Password-Code-#*
Where,
Service Provider password is of four digits.
Code is
0 for Unlock
1 for Lock

Default: '0' (Unlock)



- *If the SIM Card is absent or not registered with the network and you have dialed the command to Lock/Unlock the system with the service provider, SIMADO GFX11 will accept the command you dialed, but will not lock/unlock the system.*
- *The Service Provider Password is not set to default or changed, when you ["Reinstate the Default Settings"](#).*



If Service Provider password is forgotten, contact Matrix Technical Support team.

- Exit SE Mode.

Short Messaging Services (SMS)

Using Short Message Service (SMS), you can receive text messages on SIMADO GFX11. Short Messaging Service of SIMADO GFX11 notifies you of the receipt of a new message in the form of a signal or alert on the telephone connected to the FXS Port.

The received messages are stored at various locations in the memory of the SIM Card. The locations where the messages are stored are referred to as indexes. You can read the received messages if your telephone supports FSK CLI Type. After reading the messages, you can also delete them.

How to configure

- Enter SE Mode
- To enable/disable the notification of SMS, dial:
203-Flag-#*
Where,
Flag is
0 for Disable
1 for Enable

Default: **Disabled**
- Exit SE Mode or continue with system configuration.

How to Read the message

- Lift the receiver of telephone connected to SIMADO GFX11.
- Dial **#*-21-Index**. Index is the location where the SMS is stored. Index is from 001 to xxx, where, xxx is the maximum SMS capacity of the SIM Card.

For example, if the SIM Card can store maximum 100 messages then range of index will be 001 to 100.
- Go On-Hook.
- You will get ring followed by first 16 characters of the message received.
- Again you will get ring followed by next 16 characters of the message received. This will continue till the whole message is completed.
- If you go Off-Hook during SMS retrieving process SMS retrieval is aborted and you will get dial tone.

How to Delete the message

- Lift the receiver of telephone connected to SIMADO GFX11.
- Dial **#*22-Index**.
- You will get Confirmation Tone.
- Go On-Hook.

- Message at the indicated index will be deleted.



Read messages are deleted one by one index- wise.

Appendix

Acronyms

ANT	Automatic Number Translation
CLIR	Calling Line Identification Restriction
CPT	Call Progress Tones
DTMF	Dual Tone Multi-Frequency
FXS	Foreign Exchange Subscriber
GSM	Global System for Mobile (Communication)
IMEI	International Mobile Equipment Identity
ITU	International Telecommunication Union
LED	Light Emitting Diodes
MCC	Mobile Country Code
MNC	Mobile Network Code
ms	milliseconds
PBX	Private Branch Exchange
PIN	Personal Identification Number
PSTN	Public Switched Telephone Network
SA	System Administrator
SE	System Engineer
SIM	Subscriber Identification Module
SMS	Short Messaging Services

Features at Glance

Sr. No.	Description	Feature Commands
01	To know the Signal Strength	#*-11
02	To know the Location Information	#*-12
03	To know the IMEI code	#*-13
04	To know the current network with which the GSM Module is registered	#*-14
05	To enter into SA mode	#*-18-SA Password
06	To enter into SE mode	#*-19-SE Password
07	To exit SE/SA mode	00-#*
08	Reading SMS using telephone instrument	#*-21-Index
09	Deleting SMS using telephone instrument	#*-22-Index

Product Specifications

System Capacity

SIM Connection	:	1
Extension Port (FXS)	:	1
Control Architecture	:	CMOS Micro-Controller with Stored Program Control

Mobile Port

GSM Frequency Band	:	Quad Band: GSM 850, EGSM900, DCS1800, PCS1900 Tri Band: WCDMA 850/1900/2100 MHz
Compliant	:	ETSI GSM Phase2/2+
SIM Card	:	One SIM per GSM Channel
SIM Interface	:	1.8V, 3V
RF Transmission Power	:	Class 4 (2W) at GSM850/EGSM900 MHz band, Class 1 (1W) at DCS1800/PCS1900 MHz band, Class 3 (0.25W) at WCDMA 850/1900/2100
RF Sensitivity	:	Better than -102dBm at GSM 850/EGSM900/PCS1900, Better than -106dBm at WCDMA850, Better than -108dBm at WCDMA1900/2100
Speech Gain (Transmit and Receive)	:	Configurable

Antenna

Antenna Type	:	Fixed Omni Directional Swivel Antenna
Antenna Gain	:	Dipole = 1.8/2.5 dBi
Antenna Connector	:	TNC (Male), 50Ω

FXS Port

Connection	:	RJ11
Pulse Dialing	:	10 PPS +/- 10%, Make/Break = 33:67ms
DTMF Dialing and Reception	:	ITU-T Q.23 and Q.24
Off Hook AC Impedance	:	600Ω
Loop Feed	:	40mA (Max.)
Loop Limit	:	270Ω (Excluding telephone)
On-Hook voltage (Tip-Ring)	:	-48V nominal

Return Loss	:	>18dB
Longitudinal Balance	:	>40dB
Ringing Voltage:	:	Trapezoidal: 55Vrms@25Hz
Caller ID Presentation	:	DTMF, FSK ITU-T V.23 and FSK Bellcore 202A
Answer Signaling	:	None, Polarity Reversal
Disconnect Signaling	:	None, Polarity Reversal and Open Loop Disconnect
Disconnect Signaling time	:	500ms/Programmable Timer
Protection	:	Solid-state over voltage Secondary protection

Power Supply

Supply Input	:	12VDC@1.25A, External adaptor (90-265VAC, 47-65HZ) supplied with Matrix SIMADO GFX11
Power Consumption	:	5W (Typical)
Connector	:	Casio DC power Jack

LED

LED Indications	:	Power Supply, Network, RDY, FXS
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Mechanical Parameters

Dimensions (WxHxD)	:	13.35 x 19.8 x 4.46 cm (5.26" x 7.80" x 1.76")
Unit Weight	:	0.45 kg. (1.0 lbs) Approx.
Shipping Weight	:	1.1 kg. (2.4 lbs) Approx.
Mounting	:	Wall Mounting or Table-Top

Operational Conditions

Temperature	:	0°C to +55°C (34°F to 131°F)
Humidity	:	5-95% RH, non-condensing

Storage Conditions

Temperature	:	-40°C to +85°C (-40°F to 185°F)
Humidity	:	0-95% RH, non-condensing

System Commands

Description	System Commands
To select the country for tone type	104-Code-#*
To restart the System	105-SE Password-#*
To load Default Configuration	106-Reverse SE Password-#*
To change SE Password	107-New SE Password-#*
To change SA Password	108-New SA Password-#*
To know the software version and revision	109-#*
To configure the end of dialing digit	110-Code-#*
To change the SIM PIN	113-New SIM PIN-#*
To register the PUK number	114-PUK Number-New SIM PIN-#*
To configure Security Code Number	121-Security Code Number-#*
To clear Security Code Number	121-#*
To configure Call Proceeding Tone	122-Call Proceeding Tone-#*
To configure Emergency Number at an index	151-Index-Emergency Number-#*
To clear the Emergency Number at an Index	151-Index-#*
To Enable/Disable Mobile Port	201-Code-#*
To Enable/Disable CLIR on Mobile Port	202-Mode-#*
To Enable/Disable Incoming SMS notification on Mobile Port	203-Flag-#*
To Enable/Disable the Location Information Indication	205-Flag-#*
To configure the answer signal to be generated on FXS Port	221-Answer Signal-#*
To configure FXS Port CLI Type	222-CLI Type-#*
To configure First Digit Wait Timer	225-First Digit Wait Timer
To configure Inter Digit Wait Timer	226-Inter Digit Wait Timer-#*
To configure DTMF Out Dial ON Time for out dialing	241-DTMF ON Count-#*
To configure the signal to be generated on disconnect signal on FXS Port	248-Disconnect Signal-#*
To configure the open loop disconnect timer of FXS Port	249-Open Loop Disconnect Timer-#*
To configure the Allowed Numbers List	261-Location Index-Number-#*
To clear all numbers from an allowed list	261-0-#*
To clear particular number from an allowed list	261-Location Index-#*
To configure the Denied Numbers List	262-Location Index-Number-#*
To clear all numbers from a denied list	262-0-#*
To clear particular number from a denied list	262-Location Index-#*
To default the Receive Gain	271-0-#*
To configure the Receive Gain	271-Receive Gain-#*
To default the Transmit Gain	272-0-#*
To configure the Transmit Gain	272-Transmit Gain-#*
To configure Pause Timer for Mobile Port	275-Pause Timer-#*
To Enable/Disable the Hotline	281-Flag-#*
To configure the Hotline Destination Number	282-Destination Number-#*
To set the Hotline Delay Timer	283-Timer-#*
To clear the Automatic Number Translation table	290-0-#*

Description	System Commands
To configure dialed number string/substring	291-Number Index-Dialed Number String/Substring-#*
To clear dialed number string/substring at a given number index	291-Number Index-#*
To configure the substitute string	292-Number Index-Substitute Number String-#*
To clear the substitute string at a given number index	292-Number Index-#*
To configure the Calling Card Services Number index for ANT table	293-Number Index-Calling Card Services Number index-#*
To configure the Calling Card Password index for ANT table	294-Number Index-Calling Card Password Index-#*
To configure the Calling Card Services Number table	341-Number Index-Calling Card Services Number String-#*
To clear the particular Calling Card Services Number index	341-Number Index-#*
To configure the Calling Card Password table	342-Number Index-Calling Card Password Number String-#*
To clear the particular Calling Card Password index	342-Number Index-#*
To configure the digit which will be replaced with '+' in the CLI	301-Number String-#*
To clear the digit configured	301-#*
To select the country for ring type of incoming call	311-Code-#*
To configure Mobile Network Selection Mode	331-Network Selection Mode-#*
To configure Network Operator Code with Priority	332-Priority-Code-#*
To clear Network Operator Code	332-Priority-#*
To select GSM Frequency Band	333-Mobile Band Selection-#*
To select Preferred Network Mode	334-Preferred Network Mode-#*
To view the duration of the call type	610-Call Type-#*
To clear All Call Duration	610-0-#*
To set Call Divert	620-Option-Code-Destination Number-#*
To cancel Call Divert	620-Option-Code-#*
To Lock/Unlock the system with the service provider	701-Service Provider Password-Code-#*
To change service provider password	702-Old Service Provider Password-New Service Provider Password-#*

Warranty Statement

Matrix Comsec 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 configuration 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.

Regulatory Information

DECLARATION OF CONFORMITY

Manufacturer's Name: Matrix Telecom Pvt. Ltd

Manufacturer's Address: 38-39, GIDC, Waghodia,
Dist Vadodara 391 760

Declares that the products

Product : GSM Fixed Cellular Terminal for Voice Application

Model Type: Simado GFX11

Trade Name: MATRIX

Product Options This declaration covers all options of the
above products

Conforms to the following product specification.

EMI/EMC:

Standard

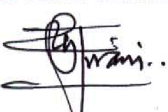
CISPR 22 Edition 5/ 5.2 2006-03 (Edition 5:2005 consolidated with amendment 1:2005 & 2:2006)
IEC 61000-3-2 Edition 2.2 2004-11 (Edition 2:200 consolidated with amendment 1:2001 and 2:2004)
IEC 61000-3-3 Edition 1.1 2002-03 (Edition 1:1994 consolidated with amendment 1:2001)
IEC 61000-4-2 Edition 1.2 2001-04 (Edition 1:1995 consolidated with amendment 1:1998 and 2:2000)
IEC 61000-4-3 Edition Third 2006-02
IEC 61000-4-4 Edition Second 2004-07
IEC 61000-4-5 Edition 1.1 2001-04 (Edition 1:1995 consolidated with amendment 1:2000)
IEC 61000-4-6 Edition 2.1 2004-11 (Edition 2:2003 consolidated with amendment 1:2004)
IEC 61000-4-8 Edition 1.1 2001-03 (Edition 1:1993 consolidated with amendment 1:2000)
IEC 61000-4-11 Edition Second 2004-03

SAFETY

IEC 60950 -1: 2001 first Edition.

Supplementary Information:

The Product herewith comply with the requirement of the Low Voltage Directive 73/23/EEC and the EMC Directive 89/336/EEC and carry the CE-marking accordingly.


Mr. Ganesh Jivani
Director

Date: 18th Oct 2008



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 : GSM FCT (Fixed Cellular Terminal)
Equipment Name : Simado
Equipment Models : GFX11

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 : 15th May 2007
Place : Vadodara, India



Ganesh Jivani
(Director)
Matrix Telecom Private Limited



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