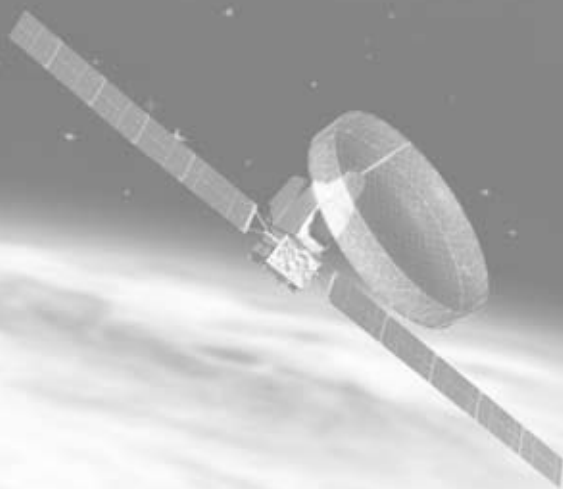




FDU-3500
USER GUIDE



Intermatica

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1. Introduction

FDU-3500 provides additional flexibility and convenience when using your Thuraya SO-2510 and Thuraya SG-2520 handsets.

FDU-3500 supports connections of Thuraya SO-2510 and Thuraya SG-2520 handsets in an indoor environment. In addition, FDU-3500 and its accessories are designed to meet Thuraya's superior specifications and world-class quality standards.

This indoor enabler enhances the capabilities of your Thuraya handset to meet your communication requirements, both in the home and in the office.

When a Thuraya handset is used with FDU-3500, the handset becomes a communication center providing voice, fax and data communication.

The FDU-3500's built-in battery charger allows users to charge your Thuraya handset while using FDU.

(Please note that Thuraya handsets are available and sold separately from your local Service Provider)

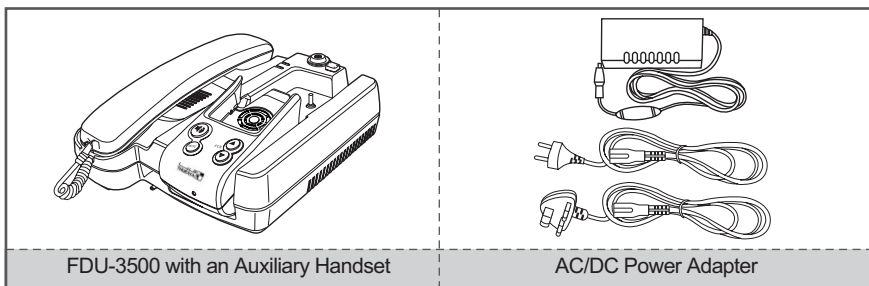


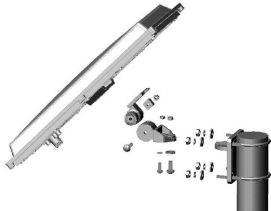
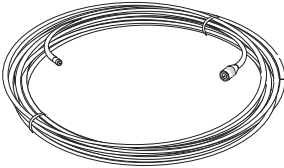
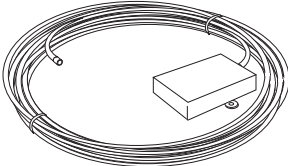
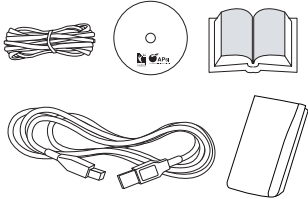
Attention

1. Do not connect FDU-3500 with other products such as PSTN or a general telephone line.
2. Please check the software version of the Thuraya handset. If the version is old, you may not be able to dock your handset with FDU-3500. In this case, you must first upgrade the Handset software by using the software provided on the CDROM included in the product gift box.
For more details on how to check the software version, please refer to the user's guide of the Handset product.
3. For a better performance of FDU-3500, it is recommended to replace with the provided battery.

2. Package Contents

FDU-3500 package consists of the following items:



	
Satellite Antenna and Mounting Adapter	Satellite Antenna Cable (25m)
	
GPS Antenna with Cable (25m)	Utility CD, USB Cable, RJ-11 Cable, FDU-3500 User's Manual and Additional Battery

3. Installation Instructions

After unpacking, please make sure that FDU-3500 and all its accessories are fully ready for installation. Please read the instructions carefully. If you encounter any difficulty in installation, contact your Service Provider for assistance.

● 3.1. Antenna Installation

The FDU-3500 antenna set consists of the following components:

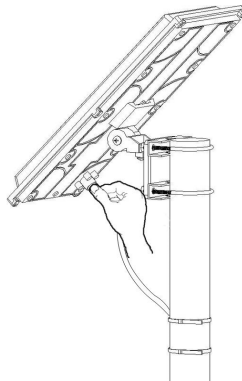
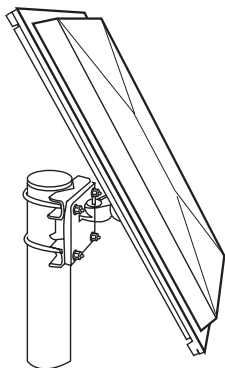
1. Satellite antenna with mounting adapter.
2. Satellite antenna cable to connect satellite antenna to FDU-3500 (25m).
3. GPS antenna with attached coaxial cable to connect to FDU-3500 (25m).

● 3.2. Installing Satellite Antenna

The satellite antenna is a rectangular patch antenna, and is supplied with a mounting adapter.

The mounting adapter also has a function to adjust the elevation angle.

1. Mount the antenna onto any suitable fixture (mounting pole or wall) on the rooftop using the mounting brackets and bolts provided.
The antenna should be facing skywards in the direction of the Thuraya satellite at the correct angle.
The angle can be adjusted using the angular information provided on the mounting adapter.
(Details are provided in the antenna installation guide book.)
2. Fix the antenna in such a way that the connector at the base is accessible when mounted.
3. Connect the coaxial cable (marked "Satellite Antenna Cable") to the antenna connector located at the base of the satellite antenna and tighten it properly by turning it clockwise. Leave enough length for a small loop and secure the rest of the cable using the cable ties.
4. Connect the other end of the satellite antenna cable to the satellite antenna connector marked "SAT" on FDU-3500 at the side of the connectors.
5. Adjust the azimuth and the elevation angle of the antenna according to your location so that the highest reception quality is achieved as indicated on the LCD display. (Details are provided in the antenna in satellite guide book.)



● 3.3. Installing GPS Antenna

The GPS antenna comes with attached coaxial cable to connect to the FDU-3500 unit.

1. Find an appropriate location on the rooftop to mount the antenna. Make sure the antenna has a clear view of the sky.
2. Mark locations of the "screw holders" on the surface/rooftop for fixing the antenna.
3. Drill holes of adequate depth on the surface.
4. Keep the antenna in place so that the drilled holes and the screw holders line up.
5. Fix the antenna securely using the screws provided.
6. Connect the free end of the attached cable to the GPS antenna connector marked "GPS" on FDU-3500.

Note

Maintain a distance of between 0.5 and 1 meter between GPS and satellite antenna.

● 3.4. External Accessories

FDU-3500 needs to have external accessories for full functionality. Please make sure that you have the following components:

1. Thuraya handset with an active SIM card.
2. Extension phone.
3. Group 3 Fax machine for sending/receiving fax.
4. Personal Computer (PC) for data transfer and PC fax.
5. Fax software for PC fax.

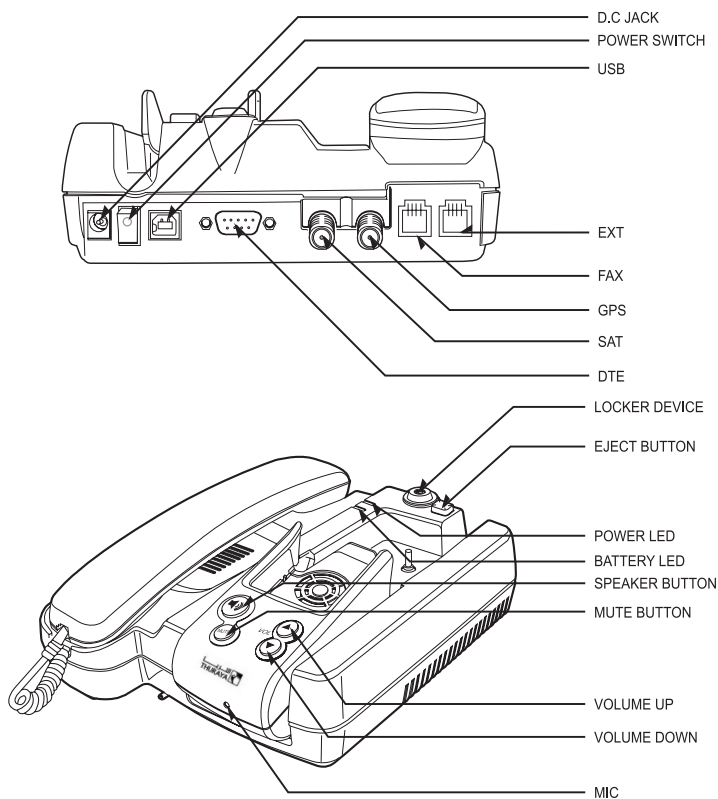
Note

The RJ-11 cable should be 2-wire inner at both ends.

4. Getting Started

FDU-3500 is intended to be used as a desktop or wall-mounted phone while the Thuraya handset is docked. Slots are provided at the base of the unit to allow FDU-3500 to be hooked securely to a wall. Interfaces for connecting external equipments such as Group 3 Fax machine and PC are provided at the back side of the unit.

● 4.1. Connection Interface



● 4.2. Setting up FDU-3500

4.2.1. Fixing Docking part of FDU-3500

FDU-3500 supports docking with the two types of Thuraya handset (SO-2510 and SG-2520).

Please check the type of Thuraya handset and then fix the docking position for your FDU-3500.

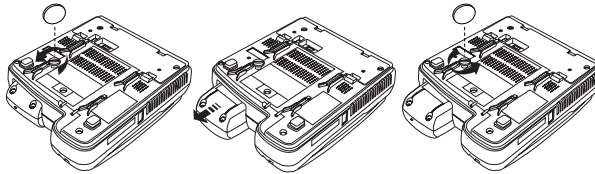
Switching from SO-2510 to SG-2520

When FDU-3500 is released by the manufacturer, its docking area is set for SO-2510. If you want to use SG-2520, you must follow the procedure below to change the position of the docking area.

1. Release the fixing screw using Coin from the fixing hole of the docking area located on the bottom of FDU-3500.
2. Place FDU-3500 in the correct orientation and then press the upper part of the docking area slightly. Keep pushing it downward until it won't move anymore.
3. Fasten the fixing screw using Coin again.

Note

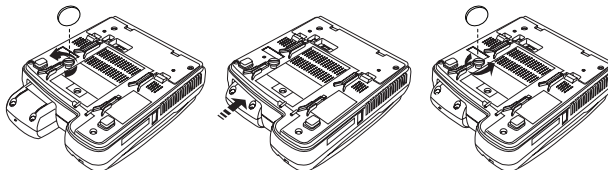
Please be careful as the product may get damaged or broken if you use excessive force on it.



Switching from SG-2520 to SO-2510

If you want to use SO-2510 instead of SG-2520, you must follow the procedure below to change the position of the docking area:

1. Release the fixing screw using Coin from the fixing hole of the docking area located on the bottom of FDU-3500.
2. Place FDU-3500 in the correct orientation and then press the lower part of the docking area slightly. Keep pushing it upward until it won't move anymore.
3. Fasten the fixing screw using Coin again.



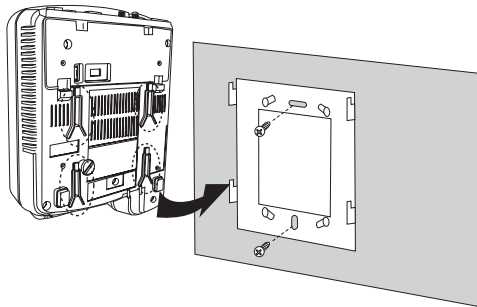
4.2.2. Using FDU-3500 as a desktop item

To use FDU-3500 as a desktop item, find an appropriate location on your desktop where you can easily access the unit. Make sure that you have a socket outlet nearby for powering up FDU-3500.

4.2.3. Using FDU-3500 as a wall mounted unit

FDU-3500 can be fixed on the wall by using the brackets. Slots for brackets are provided on the back of FDU-3500.

1. Find an appropriate location on the wall for placing FDU-3500 as a mounted unit.
2. Place the bracket on the fixing location and mark the location of screw hole.
3. Place a suitable-length screw on the wall for mounting FDU-3500.
4. Change the direction of Handset holder to a wall-mounted unit.
5. Hook FDU-3500 to the bracket on the wall.



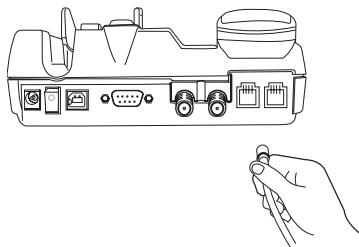
Note

This product contains a fan. To ensure the fan's normal operation, do not install the unit in a dusty area.

4.2.4. Connecting Satellite Antenna

1. Connect the coupler at the free end of the coaxial satellite antenna cable with the connector marked "SAT" on FDU-3500.

2. Tighten the connector by turning it clockwise.



4.2.5. Connecting GPS Antenna

1. Connect the coupler at the free end of the coaxial GPS antenna cable to the connector marked "GPS" on FDU-3500.
2. Tighten the connector by turning it clockwise.

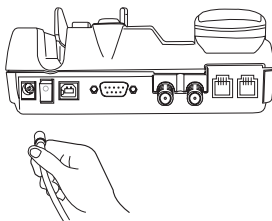
Note

The GPS antenna is an active antenna supplied with electrical power through the GPS connector. If you connect a SAT antenna or a separate antenna to the connector of the GPS antenna, it may affect the performance of FDU-3500. Therefore, when connecting an antenna to it, you should check the connection handset carefully before connecting it to the antenna connector.

4.2.6. Connecting FDU-3500 to Power Supply Adapter

Plug the Power Supply Adapter connector into the DC IN connector on FDU-3500. Use the other end of the Power Supply Adapter to connect FDU-3500 to the main power source.

1. Connect the DC plug of AC/DC power adapter to FDU-3500, and AC power cord to AC/DC adapter.
2. Connect AC power to the external power source.
3. Switch on the power switch on FDU-3500. The power LED on FDU-3500 glows red indicating that the unit is powered and ready for use.



4.2.7. Connecting Extension phone to FDU-3500

An extension phone can be connected to FDU-3500 at RJ-11 interface using an RJ-11 cable.

FDU-3500 includes two RJ-11 interfaces. Extension phone should be connected to the RJ-11 interface marked "EXT".

1. Plug one end of the RJ-11 cable to the RJ-11 interface marked "EXT" on FDU-3500.
2. Connect the other end of the RJ-11 cable to the RJ-11 interface of the phone.

Note

You must have a phone unit and 2-wire RJ-11 cable to use this feature.

4.2.8. Connecting Group 3 Fax Machine to FDU-3500

FDU-3500 can be used for sending and receiving fax messages when connected to a Group 3 Fax machine at the RJ-11 interface.

FDU-3500 includes two RJ-11 interfaces. Group 3 Fax machine should be connected to the RJ-11 interface marked "FAX".

1. Plug one end of the RJ-11 cable to the RJ-11 interface marked "FAX" on FDU-3500.
2. Connect the other end of the RJ-11 cable to the Group 3 Fax machine.

Note

Contact your Service Provider to check for fax service on the SIM card.

4.2.9. Connecting a PC to FDU-3500 through USB port or DTE port

You can use your FDU-3500 for connecting to a PC through the USB interface or DTE interface on FDU-3500.

1. Plug in one end of the USB cable (or Serial cable) to the USB port (or COM port) of your PC.
2. Connect the other end of the USB cable (or Serial cable) to the USB interface (or DTE interface) of FDU-3500.

Note

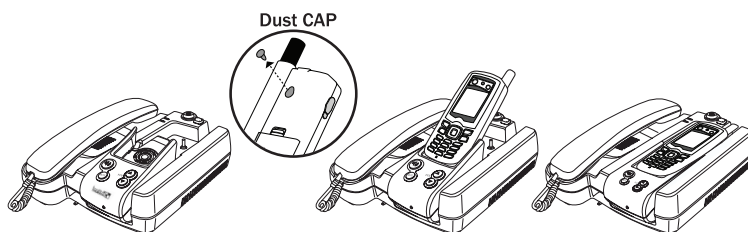
To use USB interface, install the USB driver for FDU-3500 in the PC. USB driver is included on the Utility CD which is provided with the product.
Contact your Service Provider to check for Data service on the SIM card.

4.2.10. Docking Thuraya Handset in FDU-3500

1. Place Thuraya handset with the display facing up.
2. Gently lower the Thuraya handset into the docking cradle provided on FDU-3500 coupling the antenna hole with the antenna connector.
3. Thuraya handset display will show "Fixed Adapter" for a couple of seconds if the handset has been docked successfully.
4. Ensure full signal strength on the display. (There should be maximum signal strength in the display. If not, please inform the Service Provider.)

Note

Ensure that the dust cap behind the Thuraya handset is removed before attempting to dock.

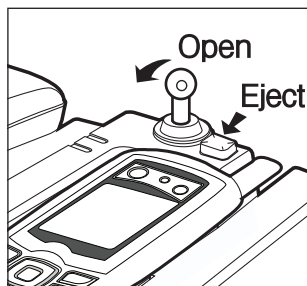
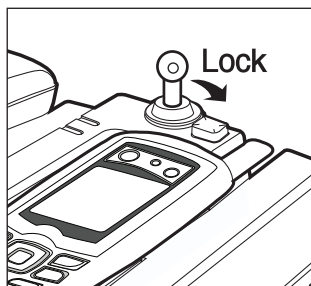


4.2.11. Undocking Thuraya Handset from FDU-3500

In FDU-3500, a locker device is installed for mechanical locking. Thuraya handset will be undocked only when the locker is released.

First, find the status of FDU-3500 locker device. If the locker is locked, unlock it and carry out the next step:

1. Allow the Thuraya handset to complete all the ongoing functions.
2. Press the Eject button to release Thuraya handset.





5. Receiving/Making Voice Calls

You can receive and make Voice calls using FDU-3500. Make sure all these conditions are met before making or receiving a Voice call.

1. FDU-3500 is switched ON.
2. Thuraya handset is switched ON.
3. SIM card is valid.
4. The connections are fitted properly as shown in this manual.
5. Thuraya handset is docked in FDU-3500 and “Fixed Adapter” is shown in the handset for a few seconds.
6. Adequate satellite signal strength is shown in the Thuraya handset display.
7. Adequate GPS location information is shown in the Thuraya handset display.



Important

When FDU-3500 is switched on, it will take up to ten seconds to reach the normal working condition. FDU-3500 is functional only when Thuraya handset is docked. For all operations Thuraya handset should be docked into FDU-3500.

5.1. Receiving Voice Calls

Incoming calls to FDU-3500 are indicated by:

1. Ringing tone in the speakerphone and extension phone.
2. Flashing of the speakerphone LED on the top of FDU-3500.

You can accept incoming calls at the speakerphone, auxiliary handset, or extension phone.

Note

The speakerphone LED will remain ON if the call was not answered.

Accepting Calls from the Auxiliary Handset

⇒ Pick up the Auxiliary handset.

Accepting Calls from the Speakerphone

⇒ Press the Speakerphone button.

Accepting Calls from Extension Phone

⇒ Pick up the handset of the Extension phone.

● 5.2. Making Calls

You can use FDU-3500 to make outgoing calls. Make sure FDU-3500 is activated before proceeding with the call.

Calling from the Speakerphone

Calls from Speakerphone can be made by:

1. Dial the destination number using Thuraya handset keypad.
2. Press Call button on Thuraya handset.

Calling from the Auxiliary Handset

Calls from auxiliary handset can be made by any of the following methods:

Method 1

1. Pick up the auxiliary handset.
2. Wait for the dial tone.
3. Dial the destination number using the Thuraya handset keypad.
4. Press call button on Thuraya handset.

Method 2

1. Dial the destination number using Thuraya handset keypad while the auxiliary handset is on the cradle.
2. Pick up the auxiliary handset.

Calling from the Extension Phone

1. Pick up the handset of the Extension phone.
2. Wait for the dial tone.
3. Dial the destination number on the Extension phone keypad.
4. Press * (or #) on the Extension phone keypad as the last digit.

Note

To make a call from the Extension phone, you must dial * (or #) as the last digit after the destination number.

● 5.3. Ending Calls

Ending a Speakerphone Call

⇒ Press the Speakerphone button.

Ending Calls from Extension Phone

- ⇒ Place the Extension phone handset.

Ending a Private Call

- ⇒ Place the Auxiliary handset on FDU-3500.

● 5.4. Transferring Calls

Speakerphone to Auxiliary Handset (Conference call to privacy mode)

1. Pick up the Auxiliary handset. The call will be routed to the auxiliary handset.

Auxiliary Handset to Speakerphone (Privacy mode to conference call)

1. Press the Speakerphone button on FDU-3500.
2. Ensure speakerphone LED is blinking then place the Auxiliary handset on the cradle.

Speakerphone to Extension Phone

1. Pick up the Extension phone handset.

Extension Phone to Speakerphone

1. Press the Speakerphone button on FDU-3500.
2. Ensure Speakerphone LED is blinking, then place the extension phone on the cradle.

● 5.5. Volume Control

You can control the volume of the speakerphone, auxiliary handset and ringer tone using the Volume Up and Volume Down button on FDU-3500. You can also control the volume of the extension phone using the * and # button on the extension phone.

Adjusting auxiliary handset volume

1. Pick up the auxiliary handset.
2. Press the Volume 'Up'/Volume 'Down' button repeatedly to increase/decrease the auxiliary handset volume as required.

Adjusting speakerphone volume

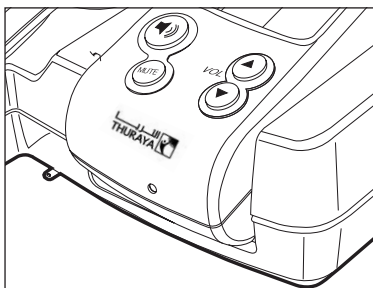
1. Switch 'ON' the speakerphone.
2. Press the Volume 'Up'/Volume 'Down' button repeatedly to increase/decrease the speakerphone volume as required.

Adjusting ringer tone volume

1. Select the ringer tone of Thuraya handset using MMI(Only SO-2510)
2. Switch 'ON' the speakerphone.
3. Press the Volume 'Up'/Volume 'Down' button repeatedly to increase/decrease the ringer tone volume as required.

Adjusting extension phone volume

1. Press the * / # button repeatedly to increase/decrease the extension phone volume as required.



● 5.6. Muting Microphone during Speakerphone Call

You can mute the microphone during a speakerphone call by pressing the Mute button. You will be able to hear the caller at the other end, but he/she will not be able to hear you.

Note

Whenever a call is muted, the mute LED on FDU-3500 will glow steadily.

Muting a speakerphone call

⇒ Press the Mute button on FDU-3500 once.

Note

If you pick up the auxiliary handset now, the call will be automatically unmuted and routed to the auxiliary handset.

To Un-mute the call

⇒ Press the mute button again.

6. Receiving/Sending Fax Message

You can use FDU-3500 for receiving and sending fax messages. This can be done either by a group 3 Fax machine connected to the RJ-11 interface or through a PC connected at the USB or DTE interface of FDU-3500. For sending a fax through PC, your PC should have appropriate PC Fax software installed.

6.1. Receiving/Sending Fax through Fax machine

6.1.1. Receiving Fax

1. Dock Thuraya handset in FDU-3500.
2. Switch 'ON' FDU-3500.
3. Switch on the group 3 Fax machine that is connected to the RJ-11 interface marked 'FAX' on FDU-3500.

Note

A ring tone in the fax machine indicates an incoming fax call.

6.1.2. Sending Fax

1. Dock the Thuraya handset in FDU-3500.
2. Switch on the group 3 Fax machine connected at the RJ-11 interface of FDU-3500 and place the fax sheet on the fax machine.
3. Switch ON FDU-3500.
4. Dial the destination number followed by “*” (or “#”).
5. Press Fax start button.

Note

To make a fax call from a Group 3 Fax machine, you must dial * (or #) as the last digit after the destination number.

● 6.2. Receiving/Sending Fax through PC

You can send/receive a fax through a PC connected to the USB or DTE interface of FDU-3500.

Note

While sending a fax through PC connected at the USB or DTE interface, the fax software should be configured in the class 2.0 mode. When sending a fax through Quick Link or Hot Fax, select "Thuraya Mobile Phone" or "Standard 19200 Modem" as a modem.

6.2.1. Receiving Fax

1. Dock Thuraya handset in FDU-3500.
2. Connect the PC to the USB or DTE interface of FDU-3500.
3. Switch ON FDU-3500.
4. Activate the fax software.
5. If there is no group 3 fax machine present at the RJ-11 interface of FDU, incoming fax calls will be received by the PC connected at the USB or DTE interface.

6.2.2. Sending Fax

1. Dock Thuraya handset in FDU-3500.
2. Connect the PC to the USB or DTE interface of FDU-3500.
3. Switch ON FDU-3500.
4. Invoke the PC fax software.
5. While configuring the fax software, select 'fine' as a resolution.
6. Enter the destination number. (e.g. 12345678)
7. Select the document/file to be sent.
8. Use the appropriate option in the fax software to send the fax.

Note

No need to dial "#" after the destination number while using fax on the PC.

7. Receiving/Sending Data Calls

You can use FDU-3500 to receive and make data calls. You can do this through a PC connected at the USB or DTE interface. To receive/make data calls by a PC, appropriate data communication software should be installed on the PC.

Note

The baud rate of PC data communication software should be set up at 19200bps (Baud rate of PC data communication software should be set to 19200bps both in sender and recipient's PC).

7.1.1. Receiving Data Calls

The PC should be connected to FDU-3500 through USB or DTE interface. To receive a data call on the PC appropriate data communication software should be running, e.g. Hyper handset (default program available on Windows OS).

1. Dock Thuraya handset in FDU-3500.
2. Connect PC through USB or DTE interface.
3. Switch ON FDU-3500.
4. Invoke the data communication software.
5. You will hear a special signal tone in Thuraya handset when a data call is coming through.
6. The data will be received by the communication software (Look up the S/W guide book for the specific explanation).

7.1.2. Sending Data from PC

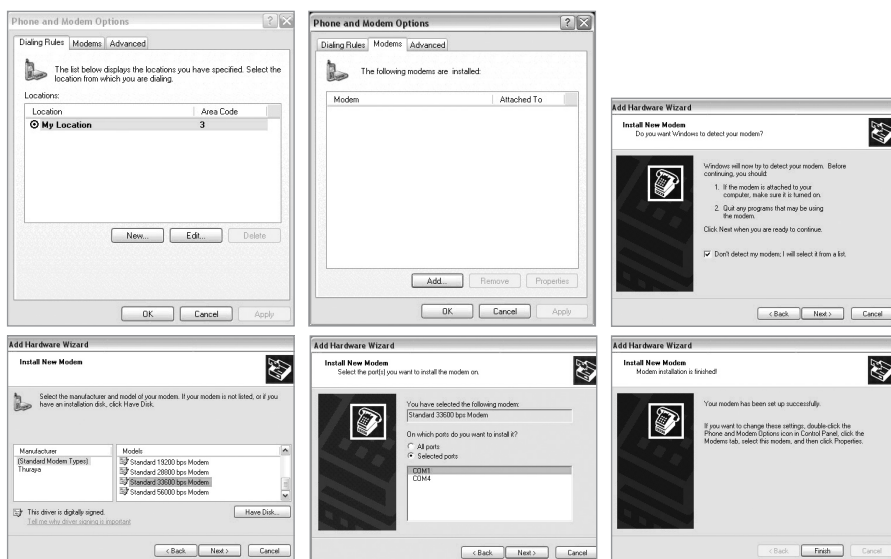
1. Dock Thuraya handset in FDU-3500.
2. Switch ON FDU-3500.
3. Invoke the data communication software in your PC.
4. Dial the destination number (e.g. ATDT 12345678)
5. Select the data file to be sent after call connection.
6. Use appropriate options in the data communication software to send the file now. (Look up the S/W guide book for the specific explanation.)

8. GmPRS Connection

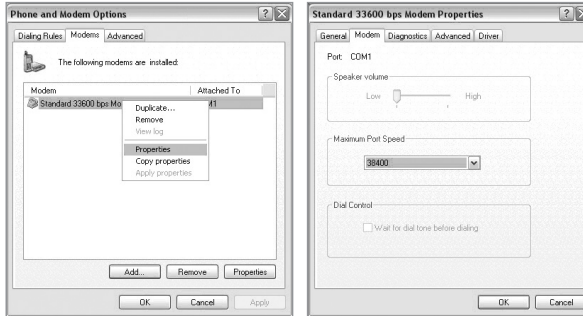
With FDU-3500, you can access Thuraya's GmPRS network. Use the USB port or DTE port to connect FDU-3500 to your PC.

Setting a phone connection modem to access Thuraya's GmPRS network

1. Select "Control Panel→Phone and Modem Option→Modems" and then set a port by adding the "Standard 33600bps Modem" according to the following procedures.

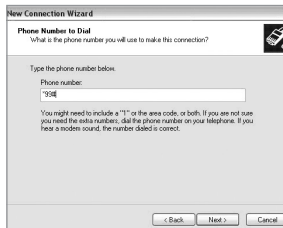


2. Right-click the mouse on the "Standard 33600bps Modem" which is newly created in the Modems window. Right-click the mouse to select "Properties" and then select "38400" for "Maximum Port Speed".



Control panel → network connections → create a new connection

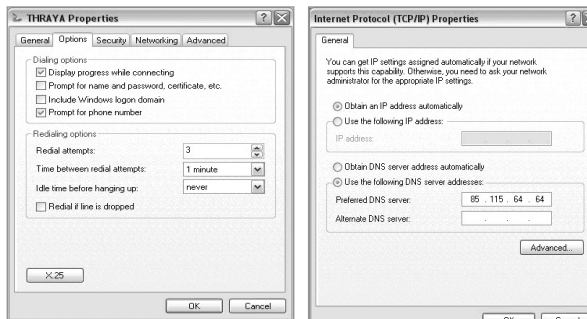
3. Select “Control Panel → Network Connections → Create a new connection” to automatically execute the “New Connection Wizard”. Follow the procedures below to create a phone connection. (Make sure to enter “*99#” for “Phone Number to Dial”)



4. Once all the settings are complete, a new phone connection icon will be generated on the main screen.
5. Double-click the newly generated phone connection icon to execute phone connection.
Select "Properties → General → Configure" and then set "38400" for "Maximum Modem Speed".



6. Select "Internet Protocol Properties" again and then select "Obtain an IP address automatically". Enter "85.115.64.64" for DNS Server Address.



Procedures to access Thuraya's GmPRS network

1. Click the phone connection icon on the main screen or from the program.
2. See if the dial number is set as “*99#” and then click “Dial”.



3. Then, the “Phone Connection Network” icon will be created on Windows’ task bar and you can see “G” mark on the LCD which indicates Thuraya User handset.

Procedures to disconnect from Thuraya's GmPRS network

1. Click the “Phone Connection Network” on Windows’ task bar and then select “End”.

9. Charging Thuraya Handset Battery

FDU-3500 comes with a built-in battery charger for charging the Thuraya handset. When the Thuraya handset is docked and the FDU 3500 is switched ON, FDU_3500 will start charging the battery.

The charging status will be blinking by the red LED on top of FDU-3500. Once the Thuraya handset is fully charged, the BATT LED will turn to “always on”.

10. Code Locking Function

Extension phone is used for code locking function which is supported by FDU-3500. This code locking function is operated by entering passwords. This function is not for Thuraya handset connection but for FDU-3500 which has a code-locking function.

● 10.1. How to set up the code-locking function

The PIN code of FDU-3500 is set to "0000" as a default.

How to enter the PIN Code

1. Connect the extension phone to RJ-11 interface marked "EXT" on FDU-3500.
Pick up the extension phone handset.
2. Press "# * → 0000 → * → New code (4 digit) * " (e.g. # * 0000 * 1234 *)
3. Hang up the phone after hearing the beep which indicates that the PIN code is successfully changed.

Enable PIN Code locking function

1. Connect the extension phone to RJ-11 interface marked "EXT" on FDU-3500.
Pick up the extension phone handset.
2. Press " * * → User code → * " (e.g. * * 1234 *)
3. Hang up the phone after hearing the beep which indicates that PIN code is successfully enabled.

Disable PIN Code locking function

1. Connect the extension phone to RJ-11 interface marked "EXT" on FDU-3500.
Pick up the extension phone handset.
2. Press " * # → User code → * " (e.g. * # 1234 *)
3. Hang up the phone after hearing the beep which indicates that the PIN code is successfully enabled.

How to change the PIN Code

1. Connect the extension phone to RJ-11 interface marked "EXT" on FDU-3500.
Pick up the extension phone handset.
2. Press "# * → Old code → * → New code (4 digit) → * " (e.g. # * 1234 * 5678 *)
3. Hang up the phone after hearing the beep which indicates that the PIN code is successfully enabled.



● 10.2. How to make a call

Calling Methods with PIN Code disabled		
Voice Call	EXT Interface	Telephone Number → * or #
Fax Call	Fax Interface	Fax Number → * or # → Start Button of Fax machine
	PC Fax S/W	Fax Number
Data Call	USB Interface	Running PC S/W → Data Call Number
	DTE Interface	Running PC S/W → Data Call Number

Calling Methods with PIN Code enabled		
Voice Call	EXT Interface	PIN Code → * → Telephone Number → * or #
Fax Call	Fax Interface	PIN Code → * → Fax Number * or # Start Button of Fax machine
	PC Fax S/W	Fax Number
Data Call	USB Interface	Running PC S/W Data Call Number
	DTE Interface	Running PC S/W Data Call Number

● 10.3. In the case of Forgetting the PIN Code

If you forget the PIN Code that have you set up, you should reset FDU-3500 by visiting the service center. In order to avoid forgetting the PIN Code, it is recommended to write it down in a diary/notebook.

11. Supplementary Services

There are a host of supplementary services supported by the Thuraya handset, which are also supported by FDU-3500. Set these functions using the Thuraya handset.

12. Troubleshooting

● 12.1. Warnings

Servicing

FDU-3500 does not contain consumer serviceable components. You are advised not to carry out any kind of troubleshooting. In case you face any problems, contact the nearest service center. Only authorized service personnel can repair the equipment.

Antenna

Use only the antenna and cable that have been specifically designed for your FDU-3500.

Unauthorized antennas, cables and cable length modifications, or attachments could damage FDU-3500 and may violate the relevant regulations, causing loss of performance and radio frequency (RF) energy above the recommended limits. If your FDU-3500's antenna gets damaged, please take it to an authorized Service Provider.

General

- Do not place FDU-3500 in a wet area.
- Do not expose FDU-3500 to temperatures greater than +55°C Celsius or less than 0°C Celsius.
- Do not expose FDU-3500 to moisture, dust etc.
- Avoid placing FDU-3500 close to open flames or any source of heat.
- Do not expose FDU-3500 to direct sunlight.
- Do not disassemble FDU-3500; this will void your warranty.

● 12.2. Care and Maintenance

FDU-3500 is a product of superior design and craftsmanship and should be treated with care.

The following suggestions will help you to fulfill any warranty obligations and allow you to enjoy this product for many years.

- Do not store it in hot areas. High temperatures can shorten the life of electronic devices, damage batteries, and warp or melt certain plastics.
- Do not attempt to open it. Mishandling of the device may damage it.
- Do not drop, apply pressure or shake it. Rough handling can break internal circuit boards.
- Do not use chemicals, cleaning solvents, or strong detergents to clean it. Wipe it smoothly with a soft cloth.
- Do not paint it. Paint can clog the device's moving parts and prevent proper operation.
- Use only the supplied or approved replacement antenna. Unauthorized antennas, modifications or attachments could damage the phone and may violate regulations regarding radio devices.

If the phone, battery, charger, or any accessory does not function properly, take it to your nearest authorized service center. The personnel there will assist you, and if necessary, arrange for service.

● 12.3. Common Problems

- Thuraya handset is undocked properly.
- Thuraya handset is switched OFF.
- There is not enough satellite signal strength (indicated in Thuraya handset display).
- There should be a minimum two bars present. Otherwise, adjust the antenna properly).
- FDU-3500 should be switched ON. (Indicated by "Fixed Adapter" Message on Thuraya handset for few seconds and power/charging LED on FDU-3500.)
- Connections are not proper and firm.
- Old versions of HANDSET software.

Problem	Solution
Unable to make/receive calls	Check the PIN Code.
	Dial through Thuraya handset if the PIN is OK, and then check the RJ-11 connection.
	If Extension phone is not working, try the Auxiliary handset of FDU-3500 and confirm if its working. If you can make a call with the auxiliary handset of FDU-3500, then check Extension phone.
The auxiliary handset not working	Check whether the auxiliary handset is connected properly.
Speakerphone not working	Make sure that the speakerphone is "ON".
	Select appropriate volume level.
Unable to send/receive fax through RJ-11	Check the PIN Code.
	Check and make sure that the RJ-11 interface is connected properly.
	Check whether the fax machine is switched "ON".
	Check whether the fax machine is functional.
	Make sure that the group 3 Fax machine is in the auto response mode.
	Check that the SAT signal level of Thuraya handset is full.
Unable to send/receive fax through PC	Make sure that you have appropriate PC Fax software installed in your system for sending/receiving fax through PC.
	Check parameters on the fax software that you are using.
Unable to Initialization	Up grade the Thuraya handset S/W.

13. LED Indications

LED Status	Indication
The power LED on top middle of FDU-3500 is Red.	FDU-3500 is powered "ON".
The BATT LED on top middle of FDU-3500 is Red.	HANDSET battery is full charged.
The BATT LED on top middle of FDU-3500 is blinking.	HANDSET battery is charging.
Speakerphone LED is flashing	Incoming call indication.
The RED LED on the speaker button is illuminated.	The speakerphone is "ON".
The RED LED on the Mute button is illuminated.	The microphone is "OFF".

14. Warranty

Limited Warranty FDU-3500

This Limited Warranty is provided to the original purchaser of FDU-3500. This Limited Warranty is non-transferable in nature.

Warranty Coverage and Service

Thuraya warrants all new FDU-3500 handsets to be free from defects in material and workmanship under normal use and wear, for a period of one year (1 year) from the date of purchase.

If under normal use the product becomes defective in materials or workmanship and is returned to a Thuraya Authorized Service Center during the warranty period, the product will be repaired or replaced at no charge to the purchaser. The purchaser shall be required to provide reasonable proof of the date of purchase of the product.

Repair or replacement of the Product is subject to Thuraya System Design's sole and exclusive option. Reconditioned replacement components, parts, units, or materials may be used if the Product is repaired or replaced. Cost incurred in the removal, de-installation or reinstallation of the Product are not covered.

This Limited Warranty will be void in its entirety if the Product is serviced by anyone other than Thuraya or a Thuraya Authorized Service Center.

The User's sole and exclusive solution will be repair or replacement of the product. Thuraya neither assumes nor authorizes any Authorized Service Center or any other person or entity to assume any other obligation or liability beyond that which has been specified in this Limited Warranty.

Limitation of Liability

All liability and obligations of Thuraya under this Limited Warranty shall terminate on the completion of the warranty period of one year, calculated from the date of purchase of the product by the original purchaser. The purchaser shall fill in the warranty card attached in the User's manual and get it duly stamped and signed by the Dealer as proof of purchase.

This limited warranty sets forth the entire responsibility of Thuraya with respect to the product.

There are no other liabilities of Thuraya arising from the sale of the Product whether based on warranty, contract, negligence or any other theories of liability.

This Warranty does not cover the following

Thuraya will not be responsible for products or accessories not manufactured or provided by Thuraya. Thuraya will not take responsibility for the failures caused by misuse, accident, alteration or neglect, removal or repair, neglect or failure to follow instructions as to installation and maintenance, fire, flood or other natural calamities. Thuraya will not guarantee the performance of the Product when used in combination with other products or equipment.

15. Specifications

NO	Items	Spec.
1	Power	AC/DC adapter: 110 ~ 240V free voltage input Input power DC 12V/24V/34V
2	Interfaces	3 x RJ11: - External telephone connection (voice call) - External FAX machine connection (FAX call) - Auxiliary handset connection (voice call) 1 x USB: PC connection (data call, FAX call) 1 x D-SUB (9 Pin): External device connection 2 x SMA - Satellite antenna connection for Thuraya handset - GPS antenna connection for Thuraya handset
3	Control Keys	Speakerphone: Speakerphone function on/off Mute: Mute function on/off Vol +: Volume up Vol -: Volume down
4	Displays	POWER LED: Display power on/off status BATT LED: Display HANDSET battery charging status SPEAKER LED: Display speakerphone on/off status MUTE LED: Display sound on/off
5	Case	Size: 170mm x 215mm Plastic case



Intermatica S.p.A.

00198 - Roma
Via G. Donizetti, 7

Servizio Clienti
02 89721
