



RST310
9505A IntelliDOCK
Docking Station

Installation and
User Manual



Beam Communications Pty. Ltd.

RST310 9505A IntelliDOCK

Docking Station

Installation and User Manual

Version 7

Beam Communications Pty Ltd

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Victoria, 3170, AUSTRALIA**

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Product name: RST310 Installation & User Manual

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Package Contents

The RST310 package contains:

- 1 x RST310 unit
- 1 x Universal plug-pack power adapter, 110-240V AC
- 1 x 9-pin-to-9-pin RS-232 cable (Male to Female)
- 1 x User manual (Printed)
- 1 x SatDOCK Cradle
- 1 x SatDOCK interface cable
- 1 x RAM Mount Bracket
- 1 x Mounting Screws (packet)
- 1 x CD including; AT command set, installation guide, user guide and intelligent handset manual

Optional Accessories

- *Alert / Monitoring Interface*
- *Battery Backup Sub-System*
- *In-vehicle Hands-free kit*
- *Intelligent handset (uses RJ45 port)*
- *Cable Kit*
- *Antenna*
- *External Ringer*

See your Service Provider for pricing and availability of these optional accessories

User information



Please record your serial number here for future reference:

Model: RST310

Serial no.:

This number can be copied from the white shipping label on the RST310 box
Eg. 100A2800

The following PIN codes may be required to use your RST310, please complete these details for future reference. Your SIM and their PINs are related to the handset. Record them here for easy access.

PIN Name	Function	Symptom	Your PIN
SIM PIN <i>Supplied by your Service Provider</i>	Unlocks SIM card to enable calls to be made	Signal LED flashes Red	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
PUK <i>Supplied by your Service Provider</i>	Unlocks a locked SIM card	Signal LED flashes Red	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
User PIN <i>Supplied here</i>	Allows access to user menu of RST310 via log port	Enter PIN on console	9 8 7 6 <i>Default setting</i>
Supervisor PIN <i>Supplied here</i>	Allows access to supervisor menu of RST310 via log port	Enter PIN on console	3 1 7 0 <i>Default setting</i>

Contents

PACKAGE CONTENTS	3
THE RST310 PACKAGE CONTAINS:	3
OPTIONAL ACCESSORIES.....	3
USER INFORMATION	4
CONTENTS	5
SAFETY INFORMATION	6
ABOUT BEAM COMMUNICATIONS	7
ABOUT THE RST310	8
RST310 OVERVIEW	9
GETTING STARTED	11
WHAT IS A SIM CARD?	11
SIM CARD PROTECTION	11
INSTALLING & REMOVING THE SIM CARD	11
INSTALLATION PROCEDURE	12
1. MOUNTING THE RST310	12
2. CONNECTING THE POWER CABLE.....	15
3. CONNECTING THE SATDOCK INTERFACE CABLE	15
4. CONNECTING AN RJ11 TELEPHONE HANDSET	16
5. CONNECTING THE ANTENNA CABLE & INTERFACE CABLE	17
6. DOCKING / UNDOCKING THE 9505A HANDSET	18
6.1 DECODED ANTENNA ORIENTATION:	19
7. MUTE FUNCTION	20
8. CONNECTING A LAPTOP/PC	21
9. CONNECTING TO THE LOG PORT	21
10. INSTALLING EXTERNAL ANTENNA	21
MAKING A PHONE CALL	22
LOGGING ON TO IRIDIUM NETWORK	22
MAKING A PHONE CALL	22
ACCESSING VMAIL AND SMS ON YOUR RST310.....	23
CONNECTING YOUR RST310 WITH A PABX	24
REMOTE CONFIGURATION.....	27
ACCESSORIES & OPTIONS	28
BEAM RST970: INTELLIGENT HANDSET	28
SPECIFICATION SUMMARY	30
RS232 SPECIFICATION	31
TROUBLESHOOTING	33

Safety Information



IMPORTANT! Please read the following information carefully before installing and using this BEAM equipment. Failing to follow instructions may compromise the safety of the product and may result in personal injury and/or equipment damage. Please consult your supplier if you have any further questions.

Your RST310 is a low power radio transmitter and receiver. When it is ON, it receives and sends out radio frequency (RF) signals.

The design of your RST310 system complies with international safety standards.

Refer to the appropriate section of the *RST310 User Manual* for additional relevant safety information.



Warning:

Do not open equipment. There are no user-serviceable parts inside.

If a DC power supply is to be used, its output must comply with the Safety Extra Low Voltage (SELV) requirements of IEC60950.

All connectors except the Line and Accessory sockets must only be connected to equipment ports which comply with the Safety Extra Low Voltage (SELV) requirements of IEC60950.”

Conventions in this Manual

Warnings, cautions and notes appear throughout this manual and are represented by following conventions.



Warning: This symbol and associated text indicate a warning note providing information to prevent personal injury or damage to equipment.



Note: This symbol and associated text indicate a note providing general operating information.



Interference: All wireless phones may get interference, which could affect performance.



Record: Write details of your unit for easy reference when required. Ideal when troubleshooting.

About BEAM Communications



BEAM Communications, is an authorised manufacturer of Iridium Satellite products.

BEAM develops subscriber products that utilise the Iridium satellite network of Low Earth Orbit satellites, known as LEOs. The Iridium network is extensively used around the world by commercial enterprises and defence agencies.

BEAM products address the needs of individuals, communities, government agencies and the corporate sector, providing voice and data access without the need for traditional wire-line or mobile phone infrastructure.

As the Iridium satellite network is global, BEAM products address global markets, across the spectrum of rural and remote users, including households, motor vehicles, telemetry, maritime and emergency services.

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About the RST310



The RST310 is a Remote Satellite Terminal docking station for the Iridium 9505A Handheld Satellite Telephones. Once the handset is docked in the SatDOCK Cradle it provides a reliable and cost effective telephone or data service connection when a wired connection is not available.

The RST310 uses the Iridium handheld satellite telephone transceiver to gain access to the Iridium network. The RST310 allows the connection of standard telephone handsets and other telecommunications devices.

The RST310 emulates the functionality of the Public Switched Telephone Network (PSTN). It includes two wire voice connections, a Hayes compatible modem, providing a serial socket for a computer, a socket for the connection of a plug-pack type mains power supply and a connection to an external antenna.

The RST310 provides a serial control interface and audio input and outputs by way of the transceiver's control and connection interface.

In addition, the RST310 incorporates a signal strength indication to assist in implementation and in-call performance.

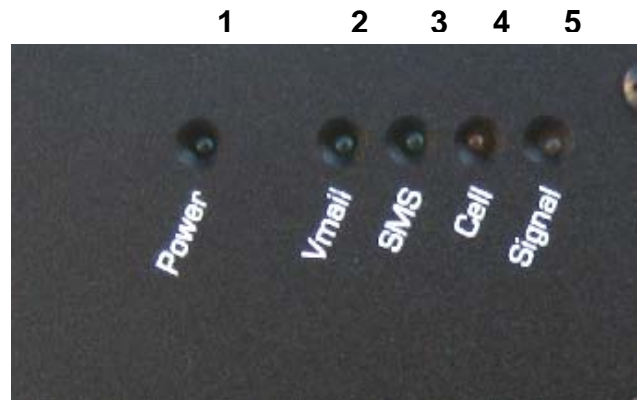
The RST310 from Beam Communications brings you all the convenience and ease of use of a normal wired telephone anywhere in the world using the Iridium Satellite phone system. It also brings you a data connection and SMS access without having to buy a modem. It is all included in the RST310.

RST310 Overview

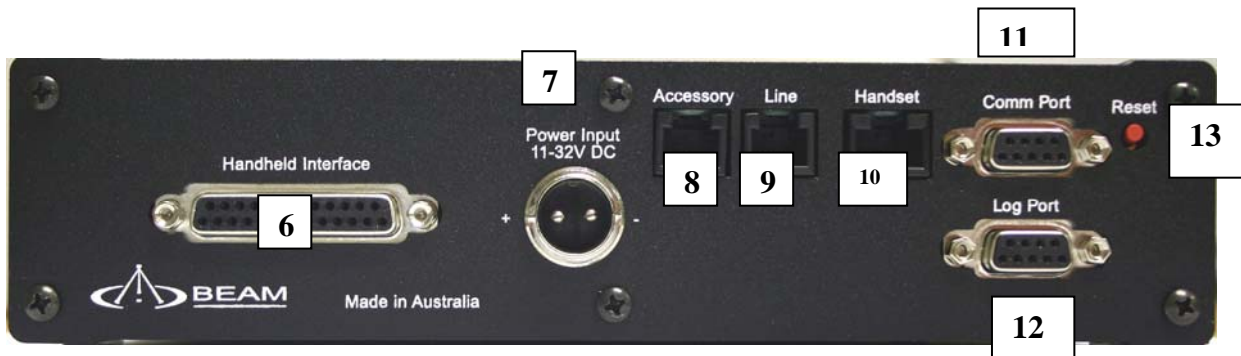
The Front Panel

Status LEDs

1. Power
 2. Voicemail waiting*
 3. SMS waiting
 4. Call status
 5. Signal strength
- * Subject to network availability



The Rear Panel



Rear Connectors

6. SatDOCK Connection
7. 11-32V DC Power Input
8. RJ11 / POTS Output (Accessory / External ringer)
9. RJ11 / POTS Output (Main)
10. Intelligent Handset or In-Vehicle Accessory connection
11. Comm Port for data connectivity
12. Log Port : Beam Terminal Configuration
13. Reset Button: Power Cycles unit

The RST310 Status Indicators

The status indicators are located on the front panel of the RST310. The LED lights on the front panel show the RST310 status.



Note: The LEDs will blink in different combinations to indicate transmission status, signal strength and power.

Power

When powering up the RST310, the Power LED flashes while it carries out internal self-diagnosis, and then illuminates a steady green.

Vmail

The Voicemail LED flashes to indicate message(s) are waiting in your voice mailbox to be retrieved. This service is subject to network support and not available from all providers.

SMS

The SMS LED flashes to indicate an SMS message is waiting.

Call

The Call LED indicates the status of the call, which can be:

- In Call
- Waiting to connect
- Incoming call

Signal

The Signal LED indicates the strength of the signal from the Iridium network at your location. This LED displays different colours to indicate the strength of the RF (Radio Frequency) signal and different on/off conditions to indicate the terminal status.

Signal LED colour	Signal strength
Flashing	RST310 is registering with the network – please wait
Green	Strong
Orange	Acceptable
Red	No signal, problem with installation

For further information about these aspects, refer to the **Troubleshooting** section of this manual.

Getting Started

What is a SIM Card?

A SIM Card is a Subscriber Identity Module (computer chip) that contains identity information for accessing the Iridium network. It functions as the digital memory of the RST310 and also stores your personal information, including received SMS messages.

SIM Card Protection

Handle the SIM card with care, avoid exposing the card to static electricity, water or dirt. Scratching or bending the SIM card will damage the card or its metal contacts.

Installing & Removing the SIM Card

The SIM card is stored in the SIM card compartment of the 9505A Satellite handset. Refer to the 9505A user manual for instructions on inserting the SIM card.



Warning: Make sure the RST310 is switched off before you insert or remove the SIM card. If you do not, the memory on your SIM card and or the SIM card itself may be damaged.



Note: Before you install the RST310, determine if the unit is preconfigured or needs customer configuration.

Installation procedure

1. Mount the RST310
2. Connect AC/DC Power cord
3. Connect SatDOCK cable
4. Fitting antenna adapter/external antenna
5. Connect a Laptop/PC
6. Connect RJ11 telephone handset
7. Power Up & Make/Receive calls

1. Mounting the RST310

The RST310 comes with two (2) standard right angle mounting brackets that allow mounting for mobile and fixed positioning.



Note: To ensure sturdy mount attachment:

1. Mount the RST310 on a clean, even surface.
 2. Clean the mount surface of the RST310.
 3. Use the correct type of screws.
 4. If mounting on a wooden surface, make sure the wood is structurally sound.
 5. Leave enough room around the RST310 to allow unhindered access to the rear panel.
 6. Do not install the unit in a permanently concealed recess. You must be able to access and remove the unit for future servicing.
-

1. The mounting brackets allow two mounting methods: drop-in (inside corner) mount and flush (outside corner) mount.



Option A:

The main terminal can be mounted with the SatDOCK cradle in a separate location or on a separate mounting structure.

1. Attach the two (2) mounting brackets securely to a suitable structure making sure the space between the brackets is wide enough to smoothly slot in the RST310.



2. Secure the RST310 unit to the mounting brackets using supplied screws.



3. Carefully slot the RST310 between the two mounting brackets and secure with the retaining screws.
4. Mount the SatDOCK cradle for the 9505A in the desired location ensuring that there is sufficient cable length for the SatDOCK to connect to the main terminal.



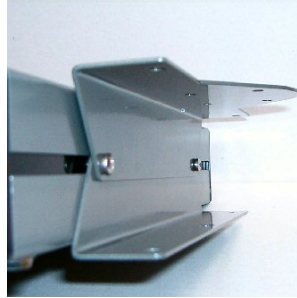
Option B:

Using the brackets supplied the Ram-mount handset holder can be firmly attached to the terminal as pictured below, follow the above instructions for mounting the terminal, however using the longer mounting screws supplied affix the additional ram-mount holding bracket to the side of the unit.

Connect the right angled bracket to the main terminal as pictured below



Ram Mount Connector Bracket



Attach as shown



Attach Ram-Mount base to RST as shown



Attach Ram-Mount base to SatDOCK



2. Connecting the Power Cable

1. Make sure the AC power switch supplying the RST310 power pack is off.
2. Plug in the power cable into the power jack located on the rear panel of the RST310.
3. Secure the cable by tightening the plug retainer.



3. Connecting the SatDOCK Interface Cable

1. Connect the supplied interface cable to the 25pin socket on the rear of the RST310 main terminal.



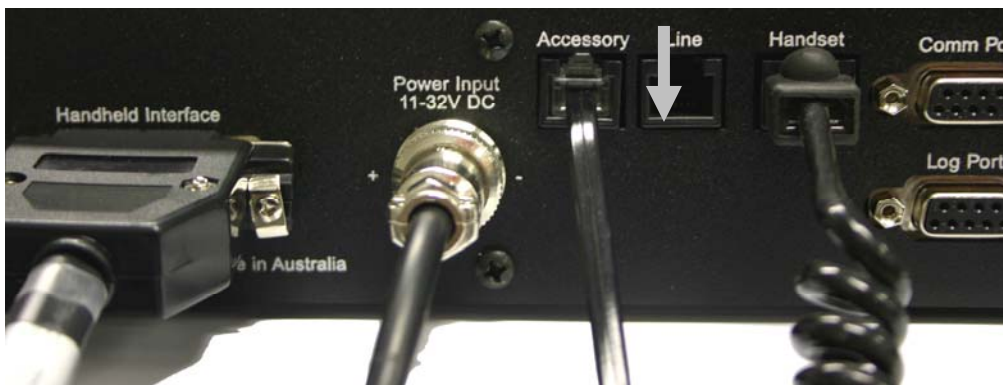
2. Ensure that the cable can reach to be easily connected to the base of the SatDOCK cradle.

4. Connecting an RJ11 telephone handset

1. Plug the telephone, answering machine or corded/cordless phone into the Line and or Accessory Socket RJ11. It is important to note that Facsimile Messaging is not supported on the Iridium Network via a standard RJ11 connection.



2. Plug the optional Intelligent Handset into the Handset Socket, RJ45. Note this is only for the Beam RST970 Intelligent Handset **ONLY**



5. Connecting the Antenna Cable & Interface Cable

The Antenna adaptor is required to be connected to the SatDOCK cradle as the 9505A handset will use the external antenna whilst seated in the SatDOCK cradle.

To attach the antenna adaptor follow these steps:

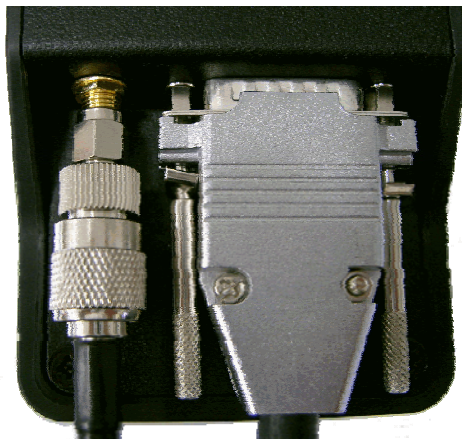
Connect the SMA / TNC adapter to the Antenna Cable.



Fasten the antenna adaptor securely on the TNC socket on the rear of the SatDOCK as pictured below.



Connect the Interface cable to the port on the rear of the SatDOCK and fasten both screws as illustrated below.



6. Docking / Undocking the 9505A handset

To dock the 9505A handset into the SatDOCK cradle, firstly ensure that you remove the rotating antenna from the handset. Refer to your 9505A handsets' user manual if you are unsure on how to do this.



Place the base of the 9505A handset into the seat of the SatDOCK ensuring that the pins on the bottom of the 9505A handset line up with the lugs in the seat of the SatDOCK.



Push downwards on the handset to seat the handset base firmly in the SatDOCK cradle.



To clip the handset into place, press and hold the button on the top of the 9505A handset whilst pushing it rearward into the SatDOCK until it clips into place. Release the button. Gently pull on the handset to confirm that it is docked correctly.



To remove the handset from the SatDOCK cradle, reverse the above steps, ensuring you hold down the button on top of the handset before trying to remove it. Once the antenna adapter has been replaced, the handset can be used for normal mobile operation.

6.1 Decoded antenna orientation:

Some earlier firmware versions of the 9505A handsets may display a message prompting the user to rotate the antenna if it is removed to be placed in the SatDOCK, and the user is unable to do anything further. To Toggle between enabling / disabling this message, refer to the following instructions:

1. With the phone turned ON enter the following code:

*** # 92 #**

2. Power cycle the handset (turn handset OFF then ON to save settings).



Note: Be careful when removing the antenna and ensure that the handset power is turned OFF first. The handset should not be turned on until after the 9505A handset is docked in the SatDOCK Cradle, or the antenna adapter is correctly re-attached.

SatDOCK LED's

State	Charge LED	Mute LED
Handset is fully charged	○ (Off)	
Handset is charging	● (Solid)	
Charging Error	● * (Solid)	
Handset absent	● (Solid)	● (Flashing - Slow)
Mute Mode		● (Solid)
Privacy Mode		● (Flashing - Slow)
Incompatible handset / Connection Error		● (Flashing - Fast)
Normal Handsfree Mode		○ (Off)

*Eg. Unsafe ambient temperature for charging

This unit does not support hot-plugging of the 9505A handset:

- DO NOT remove the phone from the SatDOCK whilst in a call or powered on
- ALWAYS turn the 9505A Handset off before removing or fitting the antenna
- DO NOT attempt to switch from Hands-free mode to handheld mode whilst the unit is ON

Checking Performance after Installation

To confirm that the phone is working properly, follow the instructions in this section.

1. Make a call **from** the handset in the cradle and confirm operation.
2. Make a call **to** the handset and confirm operation.

7. Mute Function



Mute functionality:

The mute function of the SatDOCK, allows the user to mute all audio to the 9505A handset whilst docked in the SatDOCK, by simply pressing the Mute button on the face of the SatDOCK. A red light will illuminate the Mute button to visually confirm that the SatDOCK is muted.

8. Connecting a Laptop/PC

1. Plug the laptop cable into the Comm.'s port of the RST310.
2. Refer to the Beam Data Guide for more information on accessing Iridium data services with your RST310.



9. Connecting to the Log Port

1. Connect the laptop to the Log port. The Log port should only be used for configuration and control of the terminal equipment. The LOG port can not be used for Communications or Data Services
2. The LOG Port can also be used when using a Beam Alert/Monitoring Device, refer to the instruction provided with the accessory device for configuration and installation.



10. Installing external Antenna

Refer to the separate ***"Iridium Antenna Installation Guide"*** for complete instructions.

Making a phone call

Logging on to Iridium Network

With the power turned on, the **RST310** will attempt to register with the Iridium network. The **Signal** LED uses colours to indicate how strong the Iridium signal is at your location.

Signal LED colour	Signal strength definition
Green	Strong
Orange	Acceptable
Red	No signal, no calls possible refer to “ <i>Troubleshooting</i> ” section

In most cases the indicator will show green after a short period of approximately 15 seconds – orange indicates an acceptable but marginal signal strength.



*If the indicator remains red, there is a problem with the installation and/or the SIM card – calls cannot be made or received. To resolve this situation refer to “*Troubleshooting*” section of this manual.*

Making a phone call

To successfully make a call on the Iridium network, you need the following:

- *Dial tone on the telephone handset*
- *Call LED must shine green or orange continuously.*

Continue to make your phone call as you normally use a traditional phone, noting any dialling prefix instructions advised by your service provider.

Once you have entered the phone number you will hear progress pips from the Iridium network. It can take up to 30 seconds for the Iridium network to connect a call, so a pause at this stage is not unusual.

You will shortly hear the called party end ringing, or hear a busy tone and voice message indicating why your call was not possible. When the other party answers the Call LED will change from steady orange to flashing orange, indicating ‘call in progress’. This is a normal operating procedure.

To end the call hang up the handset. The Call LED light will then turn off.

Accessing Vmail and SMS on your RST310

Voicemail

When a Voicemail message has been received by the **RST310** the **Vmail** LED will flash. The LED will stop flashing when the message has been cleared when the user connects to the Voicemail retrieval number programmed in the **RST310**.

SMS - Short Message Service

When an SMS has been sent to the **RST310**, the SMS LED will flash. This means that the SMS is ready to be read. The indicator is cleared when the SMS has been read and cleared from the RST310 memory.



Note: Refer to *Connecting a PC* for details of how to connect a PC to the RST310 to read and send SMS messages.

Connecting your RST310 with a PABX

The **RST310** RJ11 port presents as an FXS line, that is it looks like an exchange or central office line to a standard DTMF telephone attached to the RJ11 analog port.

If instead of a standard telephone, a PABX is connected, then the **RST310** is performing the role of the network trunk as shown below:

Call Progress	FXS
Initiate incoming call	Sends ring to PBX
Call Progress state	Indicated by configured service tones
Detects outgoing call from PBX	Detects off-hook from PBX
Progress state	Sends dial tone to PBX
Signalling in-call	DTMF
Detect disconnect	Detects on-hook from PBX

The **RST310** RJ11 default port setting is set to an “International Default” to operate out-of-the-box with most phones and PABXs available.

Within this International Default the line impedance is set to *600 Ohms* and the levels in the up and downlink directions to suit the expected deployment scenarios.

Specific implementations and terminal equipment may require adjustment of these parameters in association with your Service Provider.

Configuring the RJ11 port parameters

The ability to configure the RJ11 port parameters is one of the major features of the **RST310**. Port parameters can be configured using the BEAM Management System (BMS).

The BMS allows the configuration of:

- Dialed number processing (to support crew calling and specialised applications)
- Line settings such as dial tone frequency and sound (in order to make the **RST310** sound like any other phone in the network)
- Gain settings (to allow optimisation for short and long copper tails up to 500m)
- Impedance (to accommodate a large range of terminals equipment including PBXs)

This ability to adapt the **RST310** to particular applications opens up new areas of use in:

- *crew calling*
- *rural community centres*
- *SOHO use*
- *Universal Service Obligation activities.*

The RST310 is designed to support multiple phones in parallel, and can operate with many common calling card platforms allowing the creation of specific solutions to address specific needs.

The configuration of the RJ11 interface is covered in the RST 100 Configuration Manual, a companion to this document.

Configuring SMS-POTS Feature



Note: The **SMS-POTS** Functionality is only available on RST310 terminals with the following serial number type :

Serial Numbers 100**A**XXXX “ The serial number must contain an “A” to support the SMS-POTS Functionality. Refer to the User Information section to verify your RST310 is SMS capable.

The **RST310** can support the use of an SMS-POTS telephone to provide SMS messaging over the Iridium network without the need to use an Intelligent handset or a Computer to send and receive SMS messages.

Using a POTS-SMS telephone it is possible to initiate an SMS message and send it to another Iridium user or to another cellular user (selected Service Providers only).

Do not use an Intelligent handset in conjunction with an SMS-POTS telephone as the Intelligent handset and the SMS-POTS telephone cannot receive SMS messages sequentially. The SMS-POTS telephone will always have priority.

Using an SMS-POTS telephone connected to an RST310 enables the handset to be run long distances from the RST310 over whilst still supporting SMS. Typically the Intelligent type handsets are limited to less than 10m/30' whereas the SMS-POTS being on the RJ11 line will support 100s metres / 1000s feet.

Connecting an configuring an SMS-POTS telephone

An SMS-POTS telephone is easily connected to the RST310 terminal via the RJ11 connection (as mentioned above in 'Connecting a handset').

Using the BEAM Management System the **RST310** must be configured to enable the SMS-POTS feature. Consult the Configuration Manual, Available on the CD supplied with the terminal, for details on configuring the SMS-POTS service.

Data Settings Auto Answer

To initialise the **RST310** to receive an incoming data call, start a Terminal Program (such as HyperTerminal) with the following settings:

19200* bps, 8, N, 1, Flow Control = None

To enable the **RST310** to Auto Answer, type the following AT commands to the RST310:

ATS0=1 (*This turns on auto-answer*)

AT+IPR=x

where x baud of Terminal Program, according to:

1 = 600 bps

2 = 1200 bps

3 = 2400 bps

4 = 4800 bps

5 = 9600 bps

6 = 19200 bps (*default*)

*Eg. **AT+IPR=5** sets to 9600bps terminal rate*

To store the current (active) settings to Profile0 (zero) on the RST310 enter:

AT&W0

With the Terminal Program connected and running, the **RST310** is ready to answer an incoming data call automatically. During the waiting period, the Activity timeout can expire and Voice calls be made.



Note: The baud rate can be set to whatever baud rate the device answering the call requires. This may not necessarily be 19200 bps. The "RING" string must be decipherable by the target device/program.

Remote Configuration

The Supervisor Menu items are available for remote configuration via a combination of the Iridium Short Burst Data and or SMS services. *Refer to your Service Provider on how to register for this service.*

To configure your RST remotely you will need to know its Phone Number, Supervisor PIN and International Mobile Equipment Identifier (IMEI) number.

Multiple configuration commands can be sent in one SMS and the Supervisor PIN is only required once at the start.

Once the PIN has been entered the top of hierarchy for each subsequent command in the message is the Supervisor menu.

Digits can be entered exactly as you would enter them if you were on a directly connected terminal. All replies to your commands come back in one SBD email attachment and the original entered command is echoed back so you can see what each reply is for.

Eg. To set the Ringer Frequency remotely to 20Hz

Send an SMS to the phone number containing: **RST RMT 3170 4120**.

Where **RST RMT** is the start of command message flag and **3170** is the default Supervisor PIN, **4** selects the tone menu, **1** selects ring frequency and **20** (Hz) is the new ring frequency required. The automatic confirmation reply returned via email will contain:

```

From: <Iridium SBD Service (Tempe, AZ)>
Sent: Tuesday, August 13, 2002 12:49 PM
Subject: SBD Msg From Unit: 304050607080903

MOMSN: 23
Time of Session (UTC): Tue Aug 13 16:51:04 2002
Session Status: TRANSFER OK
Message Size (bytes): 351

Unit Location: Lat = 59.372463 Long = 75.309806
CEPradius = 3

Message is Attached.
```

The attached .sbd file returned will contain:

3170 OK

Confirms PIN OK41 25 OK

Advises content of parameter before the change is effected.

Accessories & Options

BEAM RST970: Intelligent Handset



The **RST310** is capable of supporting voice services on the Iridium network through the use of an *(optional)* Intelligent handset.

This Intelligent Handset enables you to access Voice and SMS services over the Iridium network in conjunction with the **RST310**.

Connecting an Intelligent Handset



































The Intelligent handset is easily connected to the RJ45 socket located on the RST310 Voice Data module.

The unit should be powered off before inserting the connector and then reset once connected.

An extension cable to the Intelligent handset can be sourced and used if required.

Symbols on the Intelligent Handset versus the 9505A

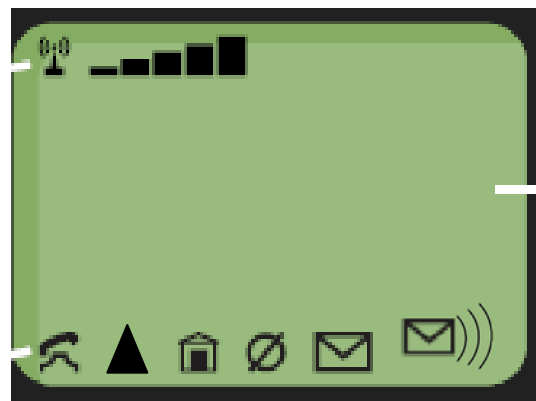
Please note that all the symbols do not correspond, and use the following table to interpret what is being indicated on the Intelligent Handset:

Symbol	9505A	Intelligent Handset
		
		
12:00	12:00	12:00
		
		
		
		
		
		
		
		
		
	Not Used	Not Used

9505A Display



Intelligent Handset (DPL)



Specification Summary

Electrical	
Power	11-32V DC 2.5A
Plug-pack (if provided)	90-250VAC 50/60Hz input
Power Consumption (Average Current)	Input Voltage 12V 24V
Standby Mode	0.35A 0.16A
Talk/Transmit Mode	0.52A 0.26A
Subscriber Line Interface	
Ring Equivalence Number	3 REN
Impedance	600 Ω or TN12 2-wire interface
Open circuit voltage	-48V DC+- 5%
Ring Voltage	> 56V RMS
EMC Compliance	C-Tick and A-Tick, CE mark,
Environmental	
Operating Temperature Range	-15°C to +55°C ambient
Operating Humidity Range	<90-95% RH non-condensing
Storage temperature	-30C to +70C
Weight	2.5 kg
Dimensions	225 x 277 x 53mm

RS232 Specification

The RST-100 is provided with two RS232 serial ports for log and data connection. Both are 9-pin D-type (female) sockets, wired DCE for connection to a standard PC with a 1:1 cable.

Physical Connection

The pin-out of both connectors is described in the following table:

Pin	Signal	Direction	Description
1	DCD	RST→PC	Data Carrier Detect
2	RXD	RST→PC	Received Data
3	TXD	PC→RST	Transmitted Data
4	DTR	PC→RST	Date Terminal Ready
5	GND		Signal Ground (Common)
6	DSR	RST→PC	Data Set Ready (CTS and DCD)
7	RTS	PC→RST	Request to Send
8	CTS	PC←RST	Clear to Send
9	RI	RST→PC	Ring Indicate (7.5V on Log port)

RS232 Port Signal Support and Handshaking

On the data logging port, DCD and DSR output signals are related to DTR input and CTS is tied to RTS as shown.

The Data port supports full software XON/XOFF handshaking on data (AT commands bypass this as standard for Hayes modems) or full hardware handshaking on RTS/CTS with DCD carrier indication.

The Log port has no software handshaking support and hardware handshaking is loop-back only since the command set requires a minimal buffer.

RS232 Port	
LBT Data Port	Data Logging Port
DCD	DCD = DTR
RXD	RXD
TXD	TXD
DTR	DTR
DSR	DSR = DTR
RTS	RTS
CTS	CTS = RTS
RI	RI not connected

RS232 Port Electrical Parameters

The LBT “Comm” Port and Log Ports conform to the RS232 interface specification with the following parameters, however the Log Port communicates only at 9600.

Parameter	Specification
Communication Rate	220 to 115,200 Baud
Protocol	1 start bit, 8 data bits, no parity, 1 stop bit, asynchronous.
Voltage Levels and Sensitivity	RS232 compliant

Troubleshooting

This chapter provides information to help you troubleshoot problems you may encounter while running the **RST310**.

Q No lights on RST310

A Check power is connected and switched on at the wall.

Q Low earpiece volume on handsets

*A Ensure the 9505A handheld volume control is set to maximum using the volume buttons on the side of the handset.
This should be automatically adjusted during a call to maximum volume.*

Q I receive a message on the 9505A handset telling me to rotate the antenna whilst in the SatDOCK Cradle.

*A To toggle between enabling / disabling the Antenna Alert, using the keypad on your 9505A handset, type in the following code: ***#92#***

Q RST310 fails to register with the Iridium service after 30 seconds

A Press reset button, ensure 9505A handheld is powered on and cables connected securely to both the terminal and the SatDOCK Cradle

Q No dial tone

A Check if a data call is in progress and power is connected and equipment is in a normal state. Check the 9505A handheld is registered on its screen.

Q Cannot make call, two tone signal heard

A Phone requires a PIN or PUK, refer to the handbook

Q PC cannot connect to RST310

A Check that the correct cable is used on the correct port, and that the bit rate is set the same for both terminal and RST310

Q You can't make calls.

*A Check that the antenna is properly mounted.
Do you have a clear view of the sky?
Did you enter the number in international format?
All calls made from the Iridium System require a special calling sequence; please refer to your Service Provider for these details.
Check the signal strength meter. If the signal is weak, move the antenna to a more open area.
Check the Network Selection settings.*

*Check your Operator coverage map.
Is Restricted displayed? Check the Call Barring setting.*

Q You can't receive calls

*A Check to see that your phone is powered on.
Check the antenna. Is it properly mounted?
Do you have a clear view of the sky?
Check the signal strength. If the signal is weak, move the vehicle to a more open area.
Check the Call Forwarding and Call Barring settings.
Check the Ringer setting. If it is off, there is no audible ringer.*

Q You can't make international calls.

A Have you included the relevant codes? Press and hold the (+) key to display the international dialling prefix (+), and then enter the appropriate country code, followed by the phone number.

Q Your PIN is blocked

A Enter the PIN unblocking key (PUK1) or contact your service provider

Q Your PIN2 is locked.

A Enter the PIN2 unblocking key (PUK2) or contact our service provider.

Q Your SIM card won't work.

*A Is the card inserted the correct way?
Is the gold chip visibly damaged or scratched? Return the card to your service provider.
Check the SIM and phone contacts. If they are dirty, clean them with an antistatic cloth.*

Q The SMS or VMAIL indicator keeps flashing

A There is not enough memory available to store another message or there is a message waiting. Use the message menu to read, delete messages and free up some space.

Q Your terminal has the SIM card inserted but the display says: Enter PUK

A Enter the PIN unblocking key (PUK1) or contact your service provider

Q Your PIN is blocked

*A Check Card or Insert Card
Check the card is inserted correctly
Check the contacts of the card are clean
Clean the chip with a soft cloth
See your Service Provider if continues*



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4. This warranty does not extend to goods subjected to liquid or particulate ingress, extreme humidity, misuse, neglect, accident or improper installation, or to maintenance or repair of products that have been altered or repaired by anyone except BEAM Communications unless otherwise stated in writing.
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6. A charge of USD150 including return freight will be made for testing returned product which is not defective or is found to be defective as the result of improper use, maintenance or neglect.
7. BEAM Communications will not accept responsibility for any invoiced goods or services that are not covered by a BEAM Communications written purchase order. Under no circumstances does BEAM Communications agree to pay for labour or other related expenses associated with the troubleshooting and/or repair of our product without prior specific written authorization.
8. Information in our descriptive literature is based on product specifications that are current at the time of publication. Product specifications, designs and descriptive literature are subject to change as improvements are introduced. Although we announce changes as they occur, we cannot guarantee notification to every Customer. BEAM Communications warrants delivered product to conform to the most current specifications, designs and descriptive literature.
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