

SatTerm User Guide

Version A

March 28, 2022



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REVISION HISTORY

Revision	Date	Description
8.8.6	03/27/2017	Initial Version
8.9.5	06/01/2020	Revised
A	03/28/2022	Formal release; updated to new template; updated to SatTerm 8.9.7

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GLOSSARY

ASCII	American Standard Code for Information Interchange
AT	Attention
COM	Communication
DoD	Department of Defense
GPS	Global Positioning System
GUI	Graphical User Interface
IMEI	International Mobile Equipment Identification
ISO	International Organization for Standardization
MIME.....	Multipurpose Internet Mail Extensions
NOC	Network Operation Center
RFC	Request for Comments
RVPV.....	Relative VP Value
SatTerm.....	<u>S</u> atellite <u>T</u> erminal Emulator Software
SBD	Short Burst Data
SIM	Subscriber Identification Module
SMS	Short Message Service
SSF	SatTerm session file
USB	Universal Serial Bus
VP	Validity Period

1 INTRODUCTION

SatTerm is a satellite terminal emulator software package developed by NAL Research Corporation to communicate with and configure NAL’s Iridium modems and tracker products. SatTerm 8.9.7 added support for SHOUT ns 1.1.0, and support for pairing a Bluetooth device without entering a pin. Use SatTerm 8.6.3 for 9601 series, A3LA-D series, and A3LA-X series products. * Navigation Device Only

below lists the supported products.

Table 1: Status Bar Icons

Modems	Trackers	Handhelds
9602-I/N	9602-LP/A	SHOUT nano
9603-I	9602-AB	SHOUT ts
A3LA-R/RS/RM/RG	9602-GSM	SHOUT gsm
	9602-SD	SARLink
	9603-RTL	SHOUT-TS1S
	9603-3G	SHOUT ts1
	* Sand Dollar	SHOUT 3G
		SHOUT ns
		SHOUT tssA
		SHOUT tsMA

* Navigation Device Only

NAL Research recommends the use of SatTerm software with all NAL Research’s Iridium modems and trackers because it provides a complete reference manual of AT, extended AT, and AT Global Positioning System (GPS) commands specific to the Iridium satellite network. However, you can use any terminal emulator you are accustomed to, such as Microsoft® HyperTerminal or Symantec® Procomm. Carefully read and accept the terms and conditions of the NAL Research’s Limited License Agreement document listed in **Appendix A: NAL Research Limited License Agreement** before installing SatTerm software.

Note: Refer to **Appendix C: Software Version Description** for a listing and description of the current SatTerm software version release and all previous version releases.

2 INSTALLING SATTERM

2.1 SYSTEM REQUIREMENTS

Before installing SatTerm software, verify your computer meets the following requirements:

- Windows© operating system
- Compatible with Microsoft .NET 3.5
- Minimum of 50 MB available on hard drive
- 800 x 600 screen resolution (looks best with a screen resolution of at least 1024 x 768)
- Any of NAL Research's modems and trackers

2.2 INSTALL

1. Close all application programs.
2. Insert the CD provided with the modem/tracker package. SatTerm software can also be downloaded from NAL Research's website.
[\(https://www.nalresearch.com/support/documentation-downloads/\)](https://www.nalresearch.com/support/documentation-downloads/)
3. Double-click the setup SatTerm program.

Note: You can click Cancel at any time without affecting your system.

4. Click Next to continue, as shown in **Figure 1**.



Figure 1: Initial Installation Screen

5. Click Next on the *Welcome* screen, as shown in **Figure 2**.

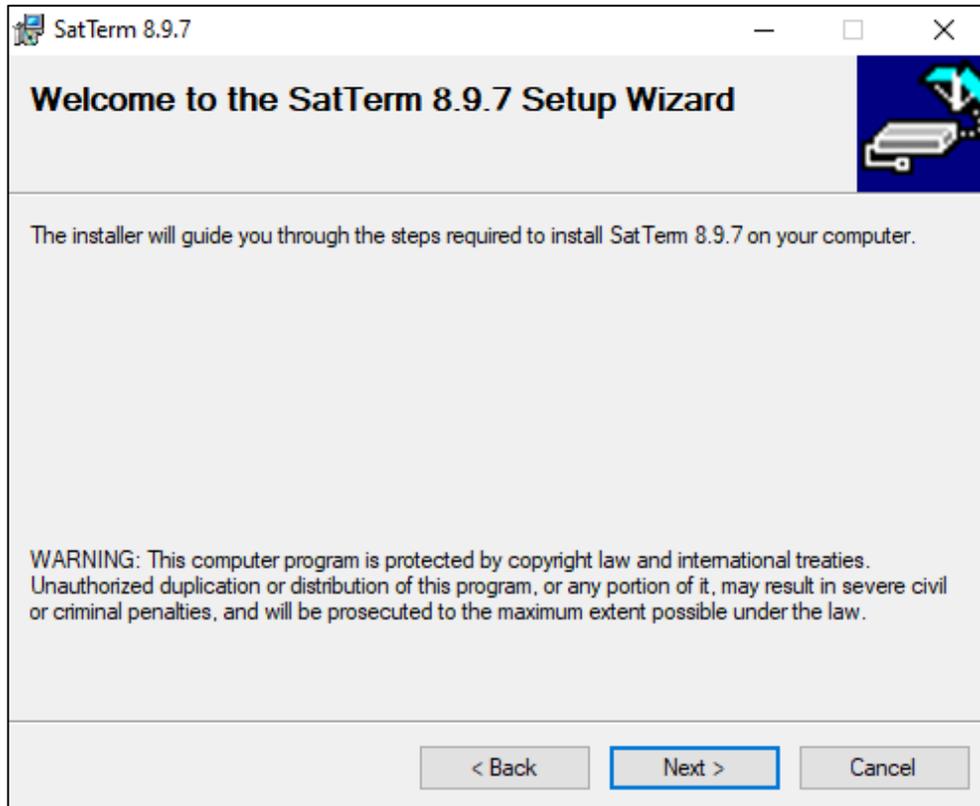


Figure 2: Welcome Screen

6. Click Next on the *Confirmation Installation* screen, as shown in **Figure 3**.

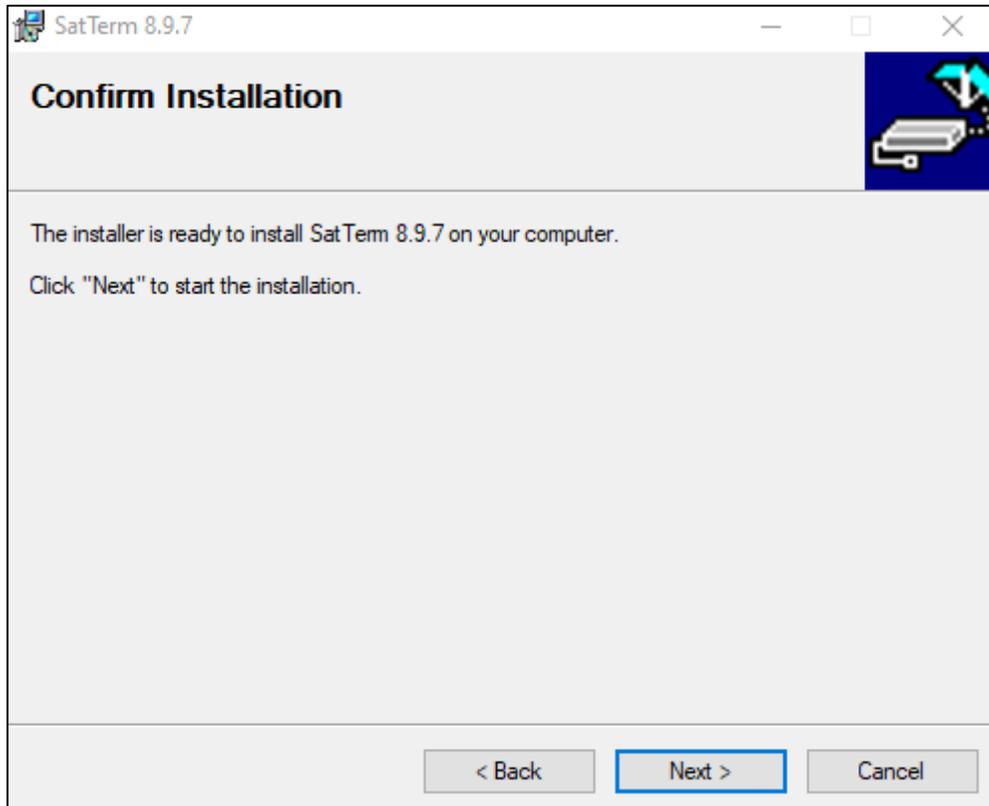


Figure 3: Confirmation Installation Screen

7. Read the License Agreement. If you agree to the terms in the License Agreement, then click Next to continue, as shown in **Figure 4**.



Figure 4: License Agreement

8. The *Installing* screen appears, as shown in **Figure 5**. Wait for the installation to complete.

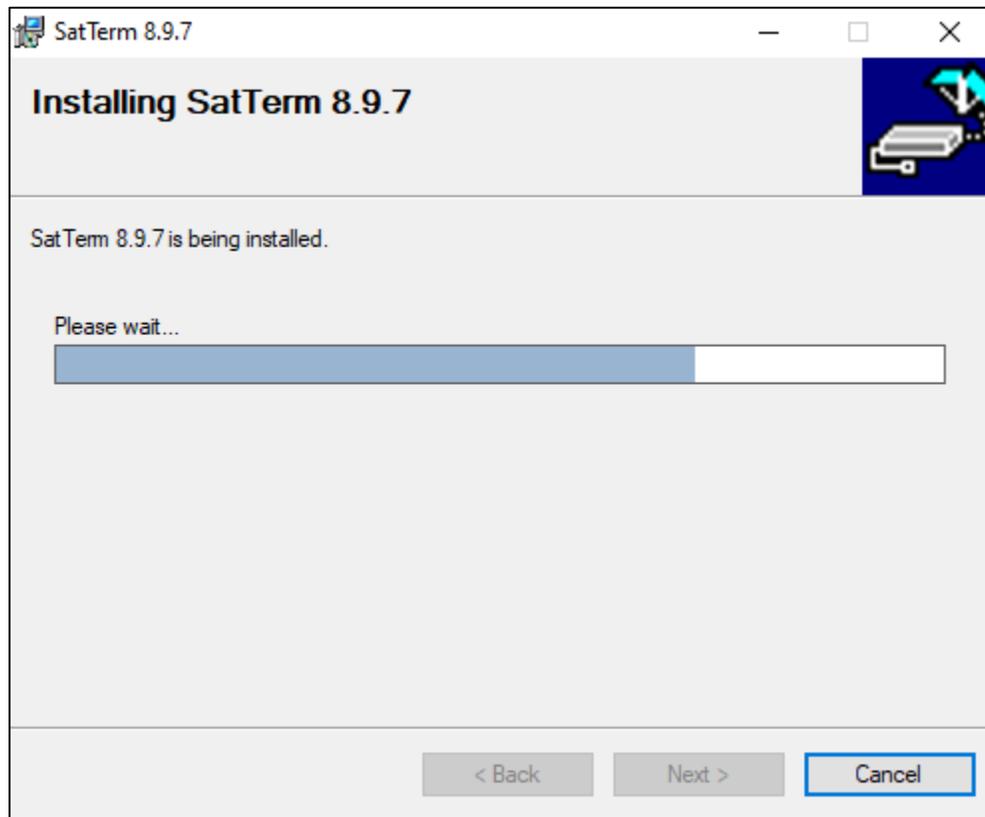


Figure 5: Installing Screen

- When the *Installation Complete* screen appears, click Close (see **Figure 6**). The SatTerm software is now successfully installed.

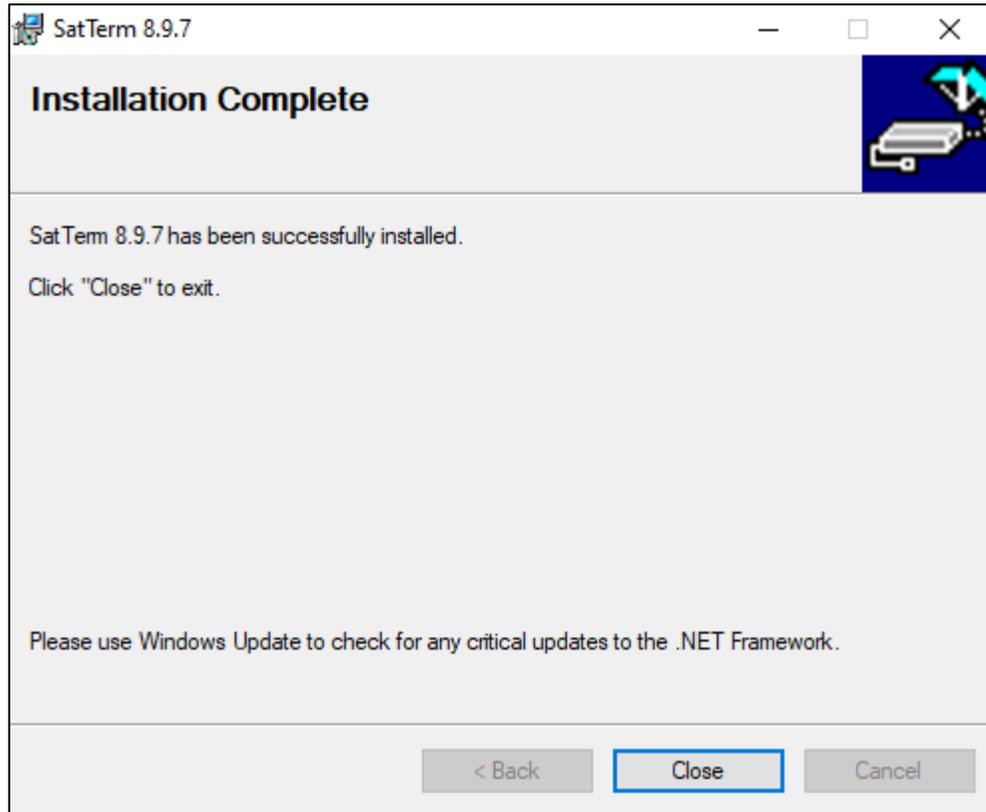


Figure 6: Installation Complete Screen

2.3 UNINSTALL

To Uninstall:

- Click the Start menu.
- Select Control Panel.
- From the *Control Panel* screen, click Add or Remove Programs.

From the *Add or Remove Programs* screen, find *SatTerm 8.9.7* in the list and click Change/Remove.

All files and libraries associated with the SatTerm software will be removed from your computer.

3 SETTING UP SATTERM

Access SatTerm from the Windows® *Start* button under the *All Programs/NAL Research* folder or by clicking the NAL Research logo on the desktop. The modem/tracker may be either turned ON or OFF before starting SatTerm software. By default, SatTerm 8.9.7 loads settings associated with the SHOUT nano handheld tracker.

3.1 SET SATTERM SOFTWARE PROPERTIES

After SatTerm is loaded, you can change its properties to reflect your hardware setup and preferences. However, keep *Data bits*, *Parity*, and *Stop bits* at their default settings unless the program is being used with a custom-designed modem. There are four types of properties that can be set—*Device Type*, *Port Properties*, *Dialing Properties*, and general preferences. In order to set the Port Properties and the Dialing Properties, disconnect the program from the COM port by clicking the disconnect  icon.

3.1.1 DEVICE TYPE

The SatTerm software is designed to support a number of different NAL Research modems, trackers, and handhelds. When you select a specific Device Type, the corresponding AT commands, help menu, and properties available for that particular device are appropriately adjusted. **Figure 7** is an example. Some Device Types also allow selecting a specific version of the firmware for the GUI configuration.

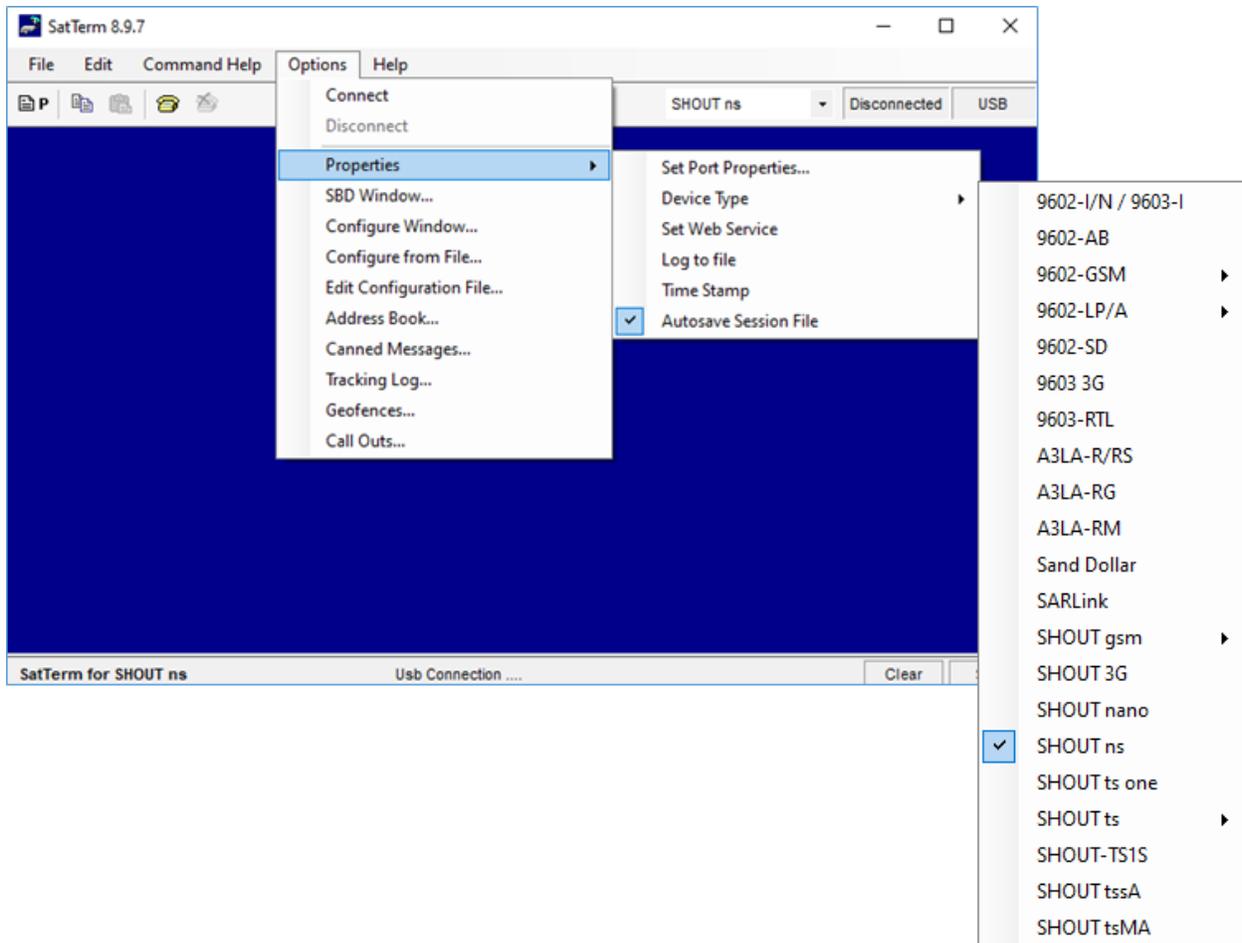


Figure 7: Steps to Select the Device Type

3.1.2 PORT PROPERTIES

 To set the port properties:

1. Open the Options > Properties menu or click the P icon.
2. Select Set Port Properties.

The following table describes the port properties.

Table 2: Port Properties

Property	Default	Description
COM Port (Connect Using)	COM1	The COM/USB the modem/tracker is connected to
Bits per Second	19200	The baud rate setting of the COM port
Data Bits	8	The data bits setting of the COM port—DO NOT CHANGE THIS VALUE
Parity	None	The parity setting of the COM port—DO NOT CHANGE THIS VALUE
Stop Bits	1	The stop bits setting of the COM port—DO NOT CHANGE THIS VALUE
Flow Control	None	The flow control setting of the COM port—This should always be None for the 960x series trackers

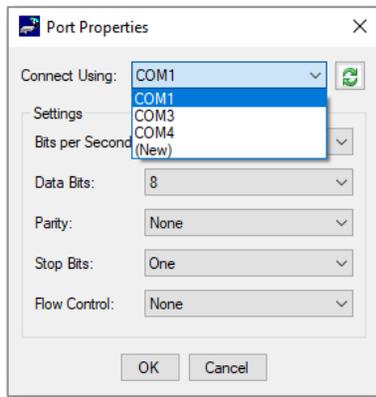


Figure 8: COM Port Setting

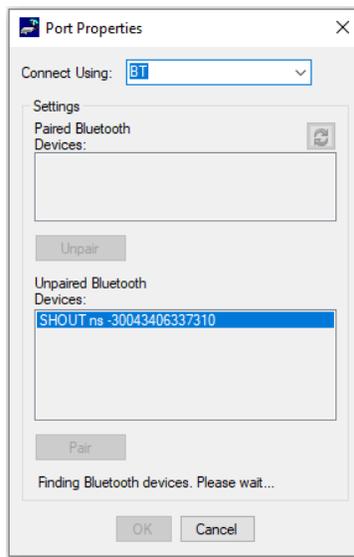


Figure 9: Bluetooth Setting

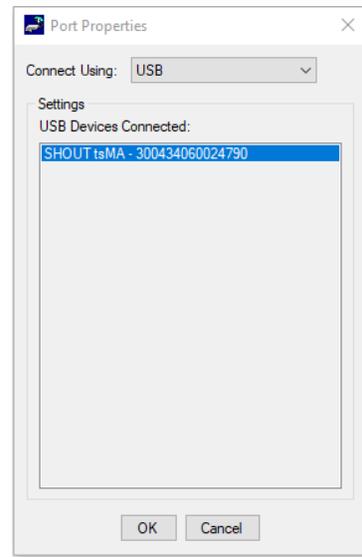


Figure 10: USB Setting

Table 3: Modems

Port	Modems
COM Port	9602-GSM, 9602-LP/A, 9602-I/N / 9603-I, 9602-SD, 9603-RTL, A3LA-RG, A3LA-RM, A3LA-R/RS, Sand Dollar, SHOUT tssA, SHOUT tsMA, SHOUT gsm Note: You can manually enter <i>COM Port Number</i> in place of (New)
BT	SHOUT ns, Sand Dollar
USB	9602-AB, 9602-GSM, 9603-3G, 9603-RTL, SARLink, SHOUT 3G, SHOUT nano, SHOUT ns, SHOUT ts, SHOUT ts one, SHOUT TS1S, SHOUT tssA, SHOUT tsMA, SHOUT gsm

3.1.3 DIALING PROPERTIES

 To set the dialing properties:

1. Open the Options > Properties menu or click the D icon.
2. Select **Set Dialing Properties**.

This option is only available for the A3LA series.

Table 4: Dialing Properties

Property	Default	Description
SIM card type	Commercial	Type of SIM inside the A3LA—either Commercial or DoD. SatTerm uses this information to provide the correct help settings. This does not affect the Service Center used when sending Short Message Service (SMS) messages.
Phone number	(000) 000-0000	SatTerm uses this information to set up the ATD command
Country/region	1	This field appears only when the Short Message Service (SIM) card type is Commercial. SatTerm uses this information to set up the ATD command.
Landline or Satellite	Landline	This field appears only when the SIM card type is Commercial. SatTerm uses this information to set up the ATD command.
Call type	N/A	This field appears only when the SIM card type is Department of Defense D(oD). SatTerm uses this information to set up the ATD command.

3.1.4 PREFERENCE PROPERTIES

To set the preference properties, click the appropriate item from the *Options/Properties* menu or click the appropriate icon on the main menu. The following table describes the preference properties.

Table 5: Preference Properties

Property	Default	Description
ECHO	Selected	If selected, characters typed locally appear on the screen. This feature is only valid for A3LA modems.
Answer incoming calls immediately	Selected	If selected, incoming calls are answered immediately. This feature is only for A3LA modems.
Display SMS immediately	Not Selected	If selected, the unit automatically displays SMS windows and alerts for SMS messages. Feature for A3LA modems.
SMS	Selected	If selected, SMS messages are displayed unless the storage is full.
Set Web Service	Not Selected	User can add Web service address. Feature used for SHOUT devices.
Log to File	Not Selected	User can log to file contents on the screen.
Time Stamp	Not Selected	User can enable and disable time stamp. Setting can be saved.
Autosave Session File	Selected	Use Windows 3.1 open/save dialog style instead of the Windows XP open/save dialog style.

3.1.5 SESSION FILE

Save the properties of SatTerm software as a session file for later retrieval by selecting Save Session from the *File* menu. All session files have an ssf extension, which stands for SatTerm session file. The information stored in an ssf file includes the Device Type, all of the port properties, dialing properties, and preference properties. The default session file is stored as “Default.ssf” in the *Session* subfolder of the installation directory. You can either click any ssf file to start SatTerm with the properties set to the values in that particular session file, or you can open an ssf file from the *File* menu. You can also overwrite the session file to load different values at startup.

3.2 FIND HELP FOR AT COMMANDS

To get help with AT commands:

1. Choose an AT command using one of the following method, as shown in **Figure 11** :
 - a. Choose the command from the *Command Help* menu.
 - b. Choose Search from the *Command Help* menu or press the F1 key.

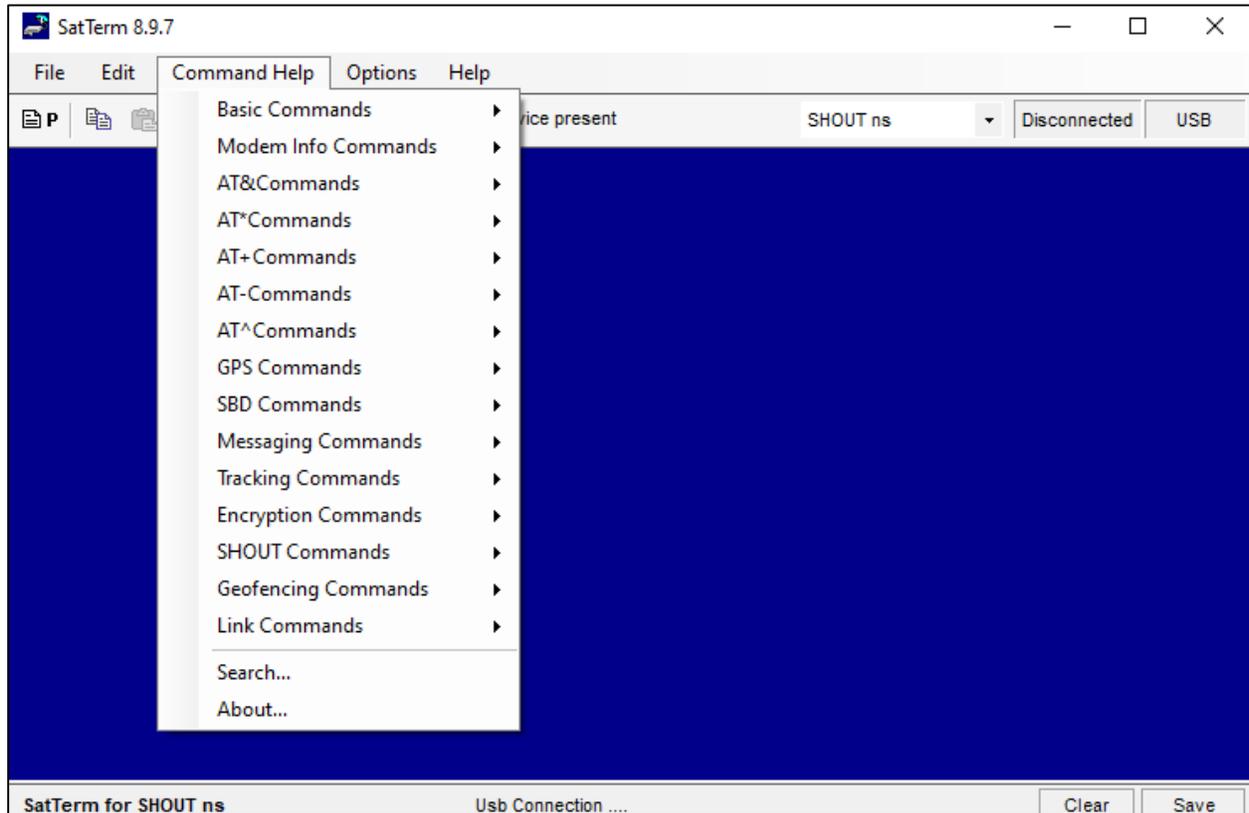


Figure 11: Selecting/Choosing AT Commands

Note: The *AT Command Table* window opens. Unless flashed with the most recent firmware, some AT commands may not work with the A3LA-I/IG/D/DG.

3.2.1 AT COMMAND TABLE

The *AT Command Table* is a window, as shown in **Figure 12**, that provides detailed usage information of a particular command. This window pops up whenever an AT command is chosen. If a command is applicable to multiple modems/trackers, then all options will be listed.

The *Send* button  is used to send the selected command to the modem/tracker without entering it directly.

If an AT command requires additional parameters, the AT Command Table provides the appropriate Graphical User Interface (GUI) to set the values for the parameters.

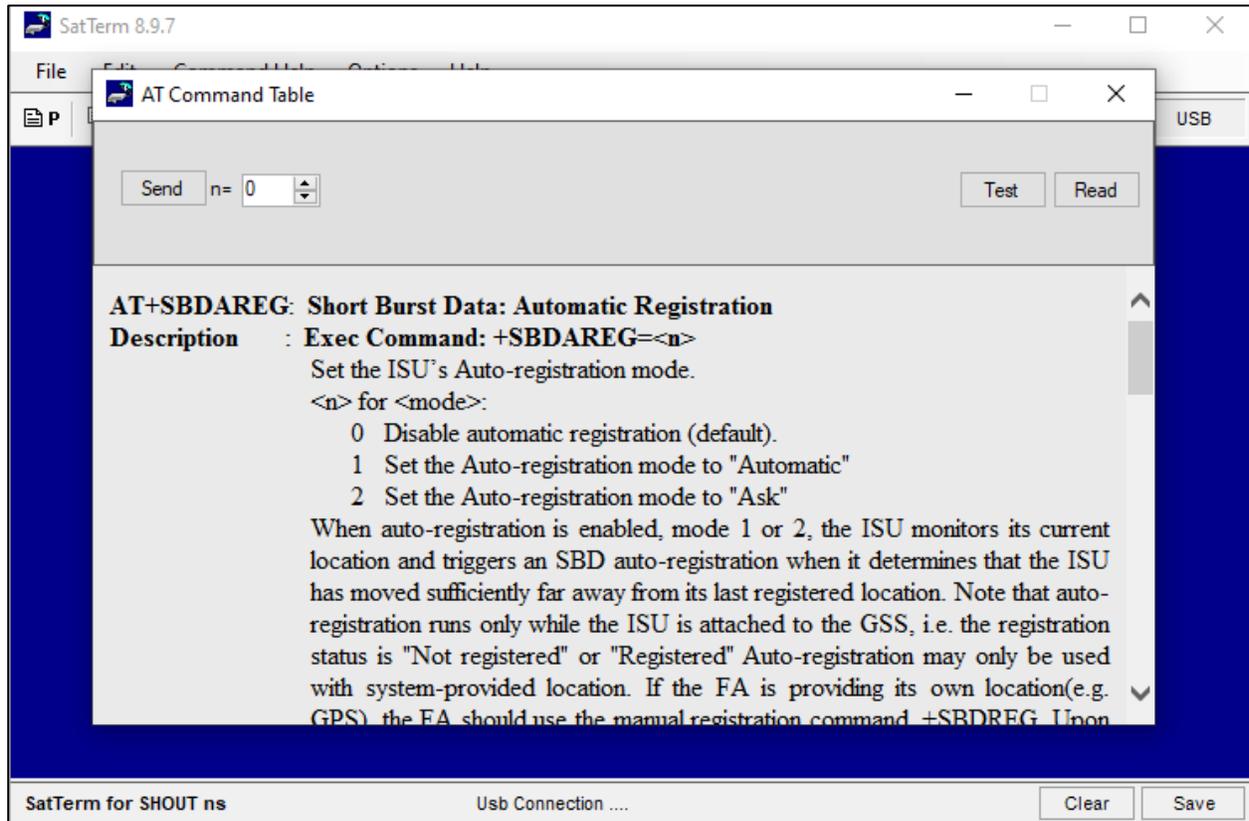


Figure 12: AT Command Table Window

The *Read* button  and the *Test* button , as shown in **Figure 12**, display whenever applicable. The *Read* button is the same as typing a command followed by a “?” and returns the current setting of the command. The *Test* button is the same as typing a command followed by a “=?” and returns all supported values for that command.

4 USING SATTERM WITH SBD

4.1 USE SBD MESSAGE WINDOW

The *SBD Message Window* is a GUI for composing, sending, and receiving Short Burst Data (SBD) messages. Open the window by selecting Options > SBD Window (**Figure 13**). From the SBD Message Window's Hex Editor, draft or load a message; then send and/or save it to the mobile originated buffer of an Iridium modem. Retrieve queued messages from the Iridium gateway with the click of one button. The SBD Message Window offers all of the essential SBD AT commands and options in one convenient and easy-to-use interface.

The main window of the interface shown below includes buttons to:

- Create a new message.
- Retrieve a queued message at the Iridium gateway.
- Read the mobile terminated buffer of an Iridium modem.
- Initiate an SBD session with the Iridium gateway.
- Load an existing message.

The radio buttons on the main window control:

- Whether a message is written to the mobile originated buffer using Write Binary(+SBDWB) or Write Text(+SBDWT).
- Whether a message is read from the mobile terminated buffer using Read Binary(+SBD RB) or Read Text(+SBD RT).
- Whether a session is initiated using Standard SBD(+SBD I), SBD Extended(+SBD IX), or SBD with GPS(+PSIX).

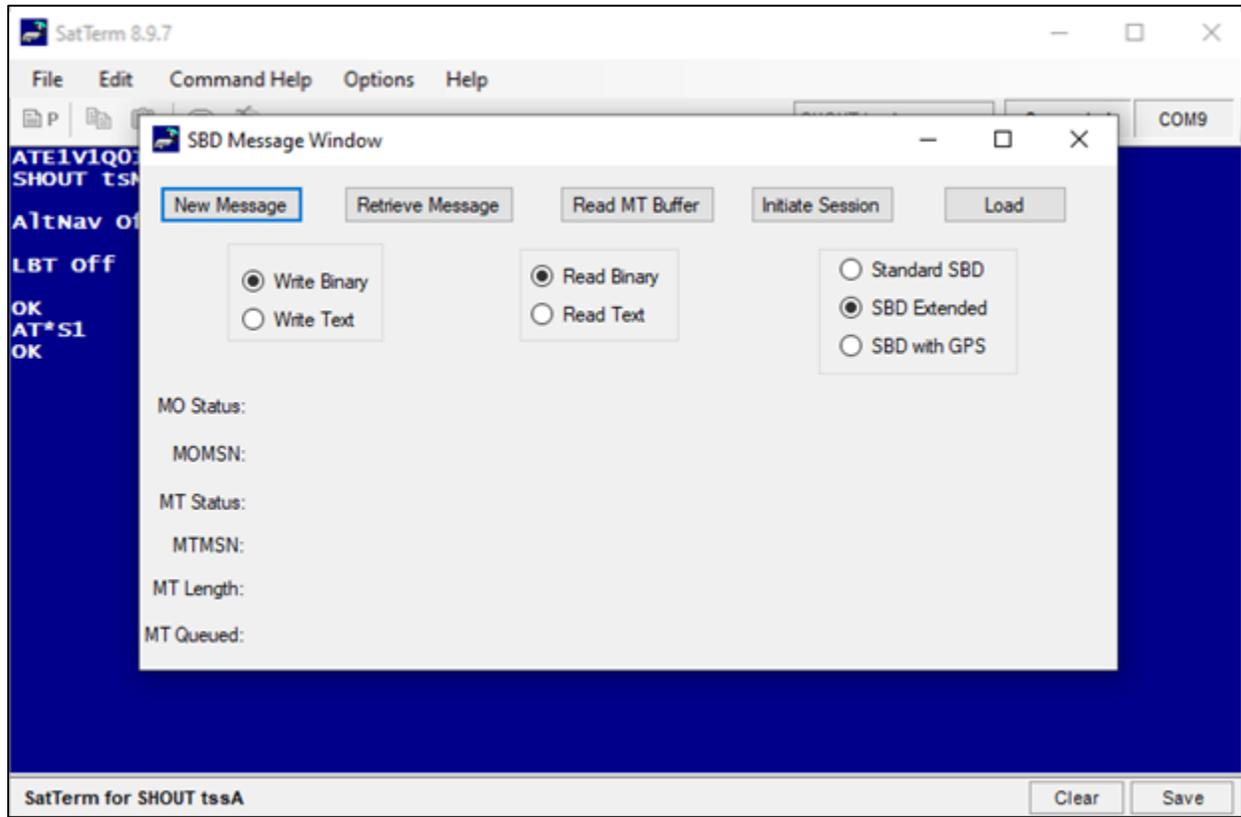


Figure 13: SBD Message Window

Below the buttons and the options, a series of labels control their functionality. These labels are the names of the parameters included in the response from an SBD session with the gateway. After a session ends, a numeric response and its textual description, where applicable, appears to the right of each label.

SBD Message Window buttons:

- **New Message:** Launches the Hex Editor to draft a new message (**Figure 14**).
- **Retrieve Message:** Combines the functionality of the *Initiate Session* and *Read MT Buffer* buttons to provide a fast and convenient way of retrieving queued messages from the Iridium Gateway.
- **Read MT Buffer:** Reads the contents of the mobile terminated buffer into the Hex Editor. The AT command utilized for the read process is determined by the user-selected option.

- **Initiate Session:** Initiates a session with the Iridium Gateway. The type of session is determined by the currently selected option. View an explanation of all commands and options in either the AT command reference or the help menu of SatTerm.
- **Load:** Launches a dialog to open a file. The chosen file is loaded into the Hex Editor.

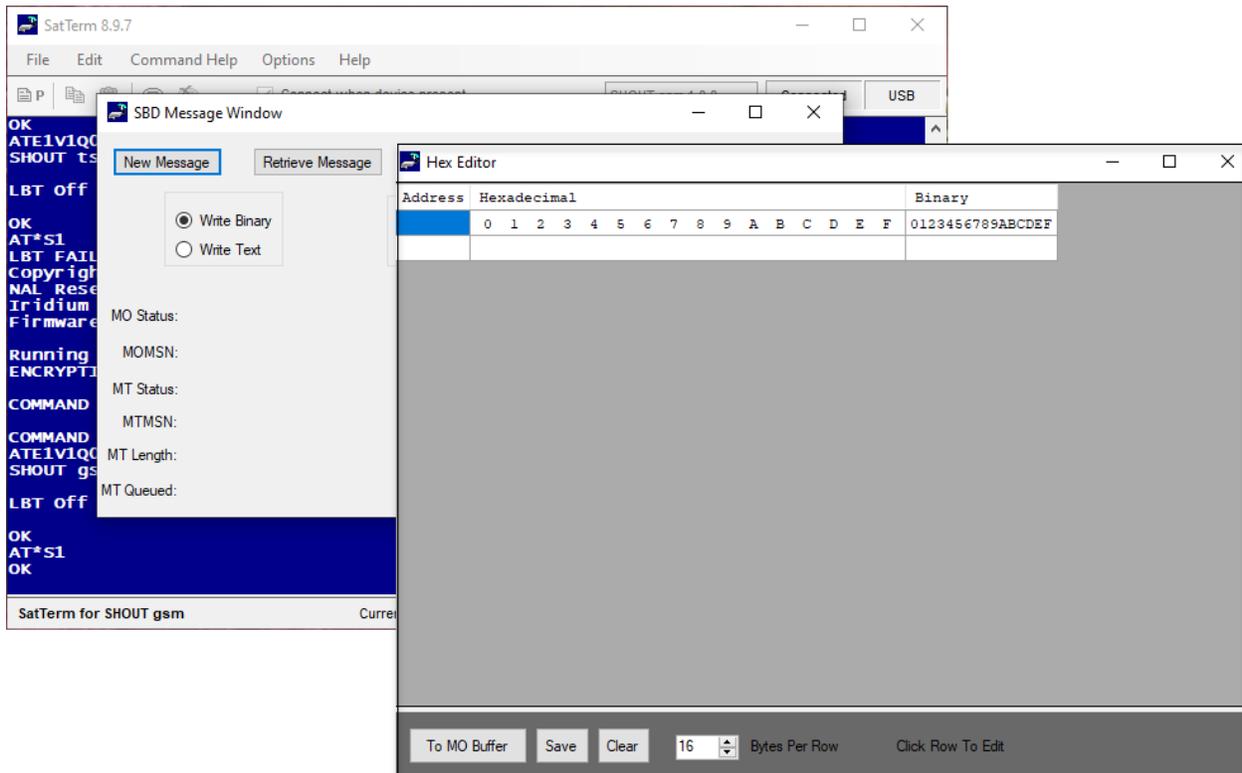


Figure 14: Hex Editor Window

The Hex Editor shown in **Figure 14** is the window where messages can be drafted, loaded, edited, sent to the mobile originated buffer, and saved. The panel on the left-hand side of the window displays American Standard Code for Information Interchange (ASCII) data; the panel on the right displays hexadecimal values. The leftmost numbers in the window are row numbers in decimal form; to the immediate right are their equivalents in hexadecimal. The numbers lining the top of the editing windows are column numbers. Row numbers range from 0 to 1973; however, messages are limited to 1960 bytes. The column numbers range from 0 to 32. Adjust the number of visible columns by changing the value in the numeric panel labeled *Bytes Per Row*.

The *Insert-Modify-Delete* popup window of the Hex Editor is the only method available to enter data into the ASCII and hexadecimal panels. Selecting the last row from the Hex Editor window displays the *Insert-Modify-Delete* popup window (**Figure 15**). This popup window accepts either ASCII or hexadecimal values. When entering values in one format, the data is also converted to and displayed in the alternate format.

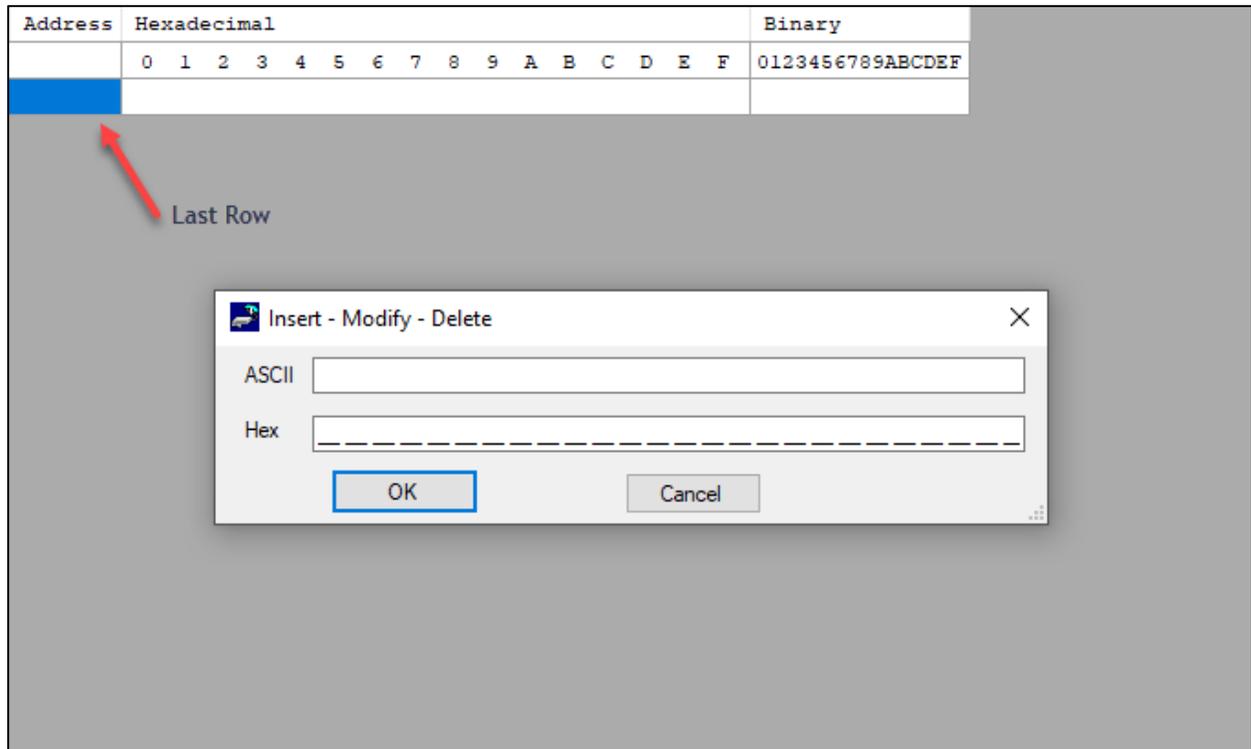


Figure 15: Insert - Modify - Delete Window

Select OK in the *Insert-Modify-Delete* popup window to transfer the content of the text boxes to the Hex Editor's ASCII and hexadecimal panels. Select Cancel to have the data in the text boxes of the *Insert* window ignored. Although data may not be entered directly into either of the Hex Editor's panels, data may be removed directly from those panels. To remove characters, use the backspace key or highlight some ASCII text and press the delete key.

The *To MO Buffer* button of the Hex Editor window sends the contents of the Hex Editor to the mobile originated buffer of the currently connected Iridium modem. Once the message has been sent to the buffer, the *Initiate Session* button sends its contents to the Iridium Gateway. The *Save* and *Clear* buttons function as expected. Those who have sent and received SBD

messages at the command line of SatTerm will appreciate the convenience offered by this SBD graphical interface.

4.2 SEND SBD MESSAGES USING EMAIL

You can send messages to an Iridium modem from almost any email program (Outlook, Outlook Express, etc.). The email program must use the standard Multipurpose Internet Mail Extensions (MIME) Base64 encoding as defined in RFC 2045 (<https://datatracker.ietf.org/doc/html/rfc2045>).

To set up MIME Base64 for Outlook Express:

1. Select Tools/Options.
2. Select the Send tab.
3. Under *Mail Sending Format*, click HTML Settings.
4. Click MIME.
5. Select Base 64 for using Encode text.
6. Click OK.
7. Under *Mail Sending Format*, click Plain Text Settings.

To send a message to an Iridium modem, send to the email address Data@SBD.Iridium.com and enter its International Mobile Equipment Identification (IMEI) number in the subject line. The content of the attachment with an “.sbd” extension is forwarded to the modem. **Figure 16** is an example of an email message with an attachment “SBMmessage.sbd” sent to an Iridium modem with IMEI number 300025010004000.

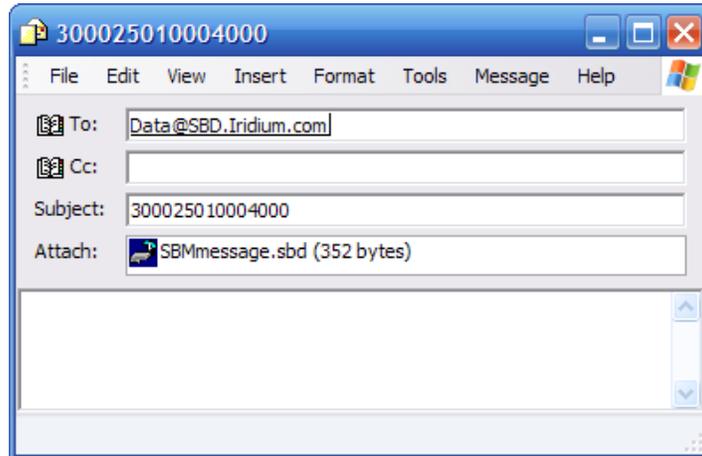


Figure 16: Outlook Express SBD Email Window

5 USING SATTERM WITH SMS

5.1 SET SMS INDICATIONS

There are several ways that the A3LA modem handles received SMS messages. SMS indications determine how SMS messages are managed. SatTerm makes it easy to set the SMS indications to two useful settings by providing a *Display SMS Immediately* property. When this property is set, the modem displays SMS messages immediately without buffering them in the SMS storage of the modem. When this property is not set, the modem buffers SMS messages in the SMS storage of the modem without displaying them. To set the *Display SMS Immediately* property, select Options > Properties > Display SMS Immediately (**Figure 17**). By default, the modem is set to buffer SMS messages without displaying them.

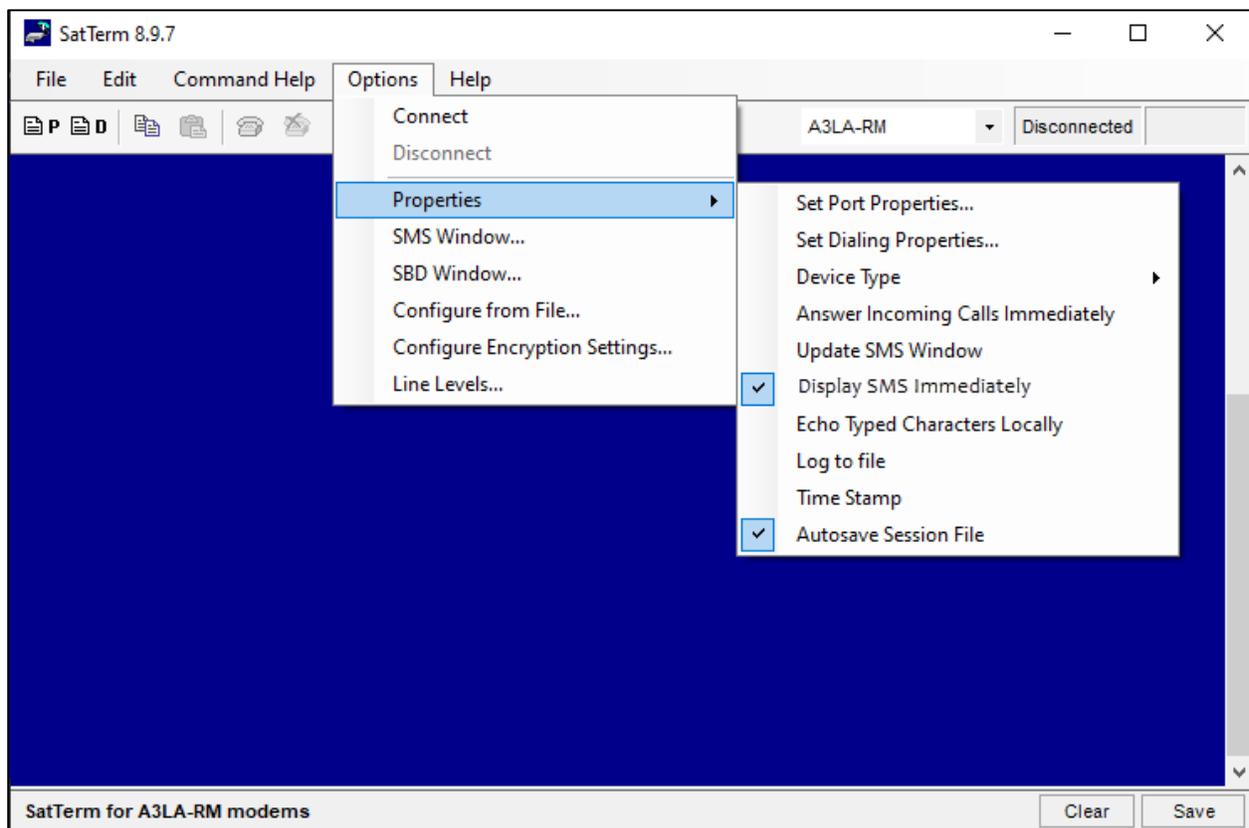


Figure 17: Steps in Select SMS Options

You can set the *Display SMS Immediately* property at any time except for the following cases:

- No SIM card installed or an invalid SIM card is used

- SMS storage of the modem is full
- While modem is connected in data mode
- While modem is executing a command

Note: If the SMS storage is full, SMS messages cannot be received, displayed immediately, or stored until at least one message is deleted from the storage. To see the capacity of the SMS storage of the modem, execute the “AT+CPMS?” command.

Note: In order for SatTerm to recognize the modem, it must be left off for at least 20 seconds in between power cycles.

When an SMS message is received by the modem, it is packaged in an unreadable format (non-text format). If the *Display SMS Immediately* property is set, the unreadable message appears on the main screen with a leading “+CMT:” string. SatTerm automatically translates it, logs it in the “SMSLog.txt” log file, and displays it in the *Short Message Service* window (see **Figure 18**). Otherwise, if the *Display SMS Immediately* property is not set, the message is stored in the SMS buffer of the modem and you can use the *Short Message Service* window at any time to view or delete the message.

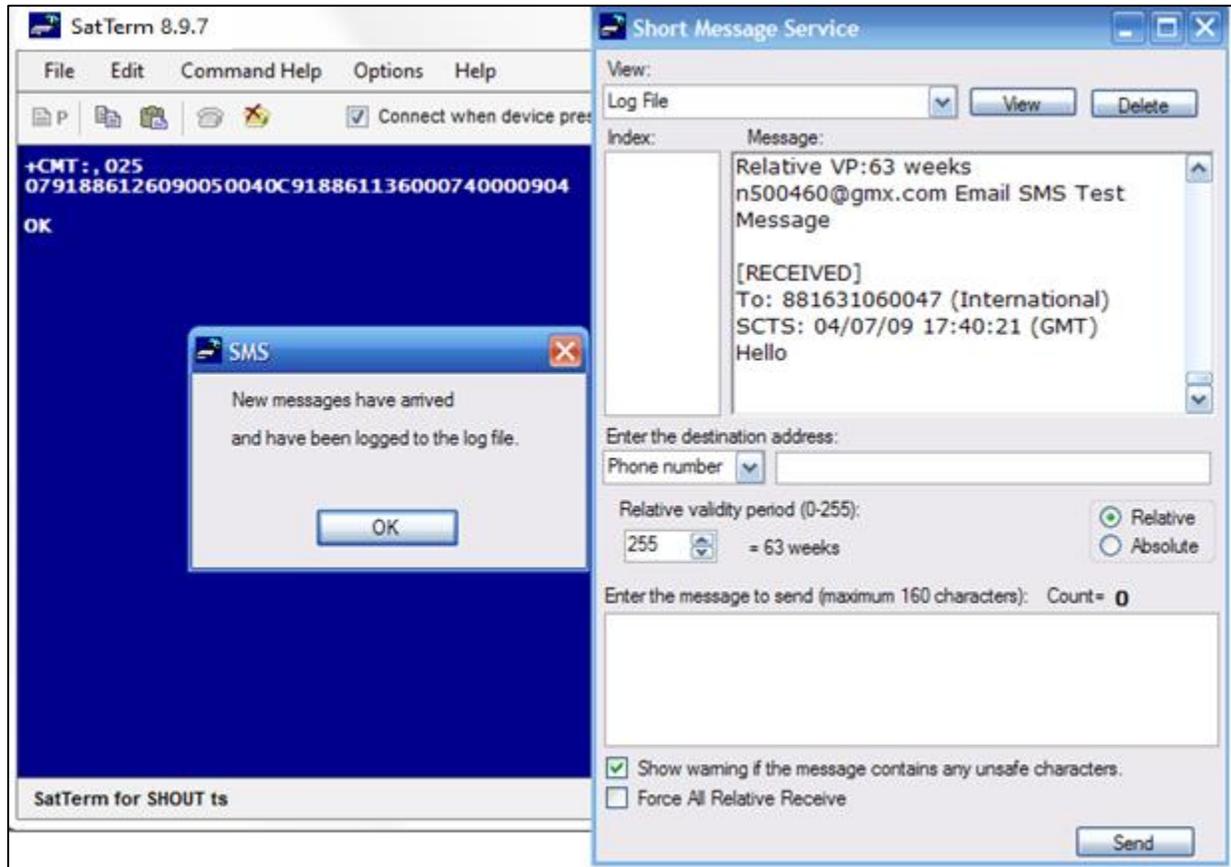


Figure 18: Short Message Service Window Unreadable Message

5.2 USE SHORT MESSAGE SERVICE WINDOW

Use the *Short Message Service* window shown in **Figure 19** to view, delete, or send SMS messages at any time, if the modem is not busy and if the *Display SMS Immediately* property is set, regardless of the SMS indications. If *Display SMS Immediately* is not set, the *Short Message Service* window can be used only to view the log file. Use the *View* button to view any of the following messages:

- Received Unread Messages: Messages stored in the SMS memory of the modem that have not been viewed. Received Unread (i.e., new) Messages are logged in the log file, "SMSLog.txt".
- Received Read Messages: Messages stored in the SMS storage of the modem that have been viewed.

- **Stored Unsent Messages:** Messages written by using AT+CMGW command and stored in the SMS storage of the modem that have not been sent. Currently, there is no command to send unsent messages in the SMS storage.
- **Stored Sent Messages:** Messages stored in the SMS storage of the modem that have been sent. Currently, it is not supported to send unsent messages in the SMS storage.
- **All Stored Messages:** All of messages in the SMS storage. If there are unread (i.e., new) messages in the storage, they are logged in the log file, "SMSLog.txt".
- **Log File:** The sent and received SMS messages are logged in the "SMSLog.txt" file, which is in the same directory as the SatTerm software.

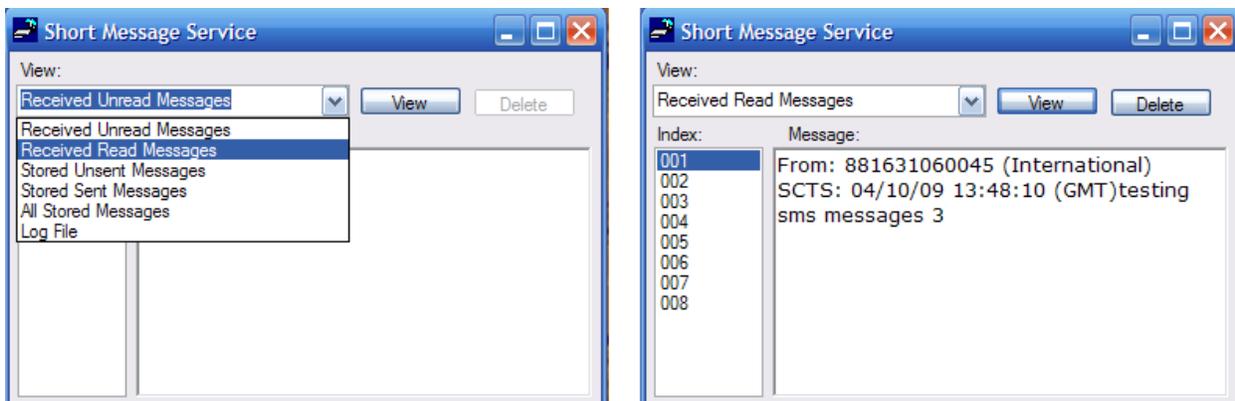


Figure 19: Short Message Service Window View Options

Use the *Delete* button to delete messages in the SMS storage of the modem. The *Delete* button is enabled when there is at least one viewed message in the list.

Use the *Send* button to send an SMS message to a phone number or email address. Follow the steps below to send an SMS message:

Step 1: Enter the Destination Address: Choose the type of destination address (phone number or email address) and then enter the destination address.

Step 2: Set the Validity Period (VP): The validity period determines how long the SMS service center will try to deliver the SMS message. The SMS service center discards the message after the validity period expires if it has not been delivered. The validity period can either be absolute, meaning the SMS message expires after a certain date and time, or relative, meaning the SMS message expires after a certain amount of time passes once the SMS service center

receives the message. The table below shows how the relative validity period is determined from the Relative VP Value.

Relative VP Value (RVPV)	Relative Validity Period
0 – 143	$(RVPV + 1) * 5 \text{ minutes}$
144 – 167	$((RVPV - 143) * 30 \text{ minutes}) + 12 \text{ hours}$
168 – 196	$(RVPV - 166) * 1 \text{ day}$
197 – 255	$(RVPV - 192) * 1 \text{ week}$

Step 3: Write the Message: An SMS message may be up to 160 characters. However, note the following:

- The following characters are counted as two characters in SMS: ^, {, }, [, ~,], and |
- If sending the SMS message to an email address, the length of the message includes the length of the email address plus 1 for a space between the email address and the message.
- If the SMS message contains any unsafe characters that might arrive or be converted differently, the software sends out a warning message if the box showing below is checked.

A screenshot of a dialog box with a light gray background and a blue border. It contains two checkboxes: the first is checked and labeled "Show warning if the message contains any unsafe characters.", and the second is unchecked and labeled "Force All Relative Receive". A "Send" button is located in the bottom right corner of the dialog box.

Step 4: Send: Select Send to send the SMS message. The button is disabled if the modem is busy or not available.

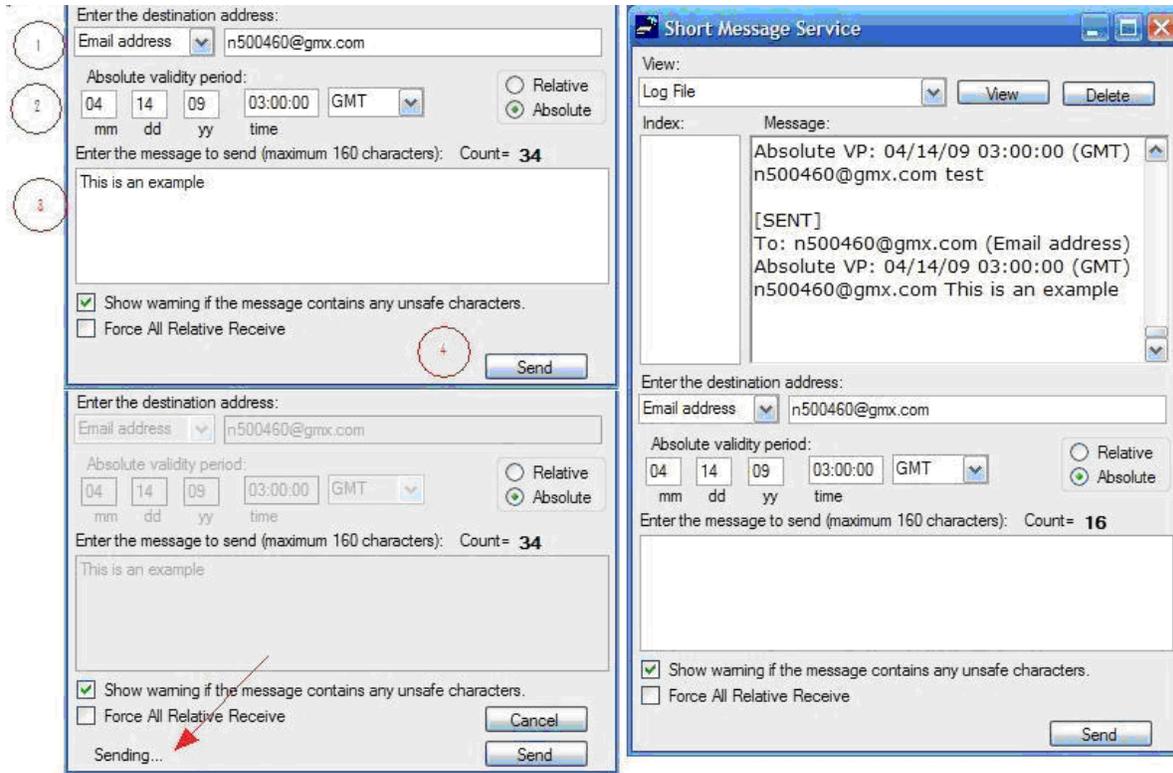


Figure 20: SatTerm Sending an SMS Message (Email Address, Absolute)

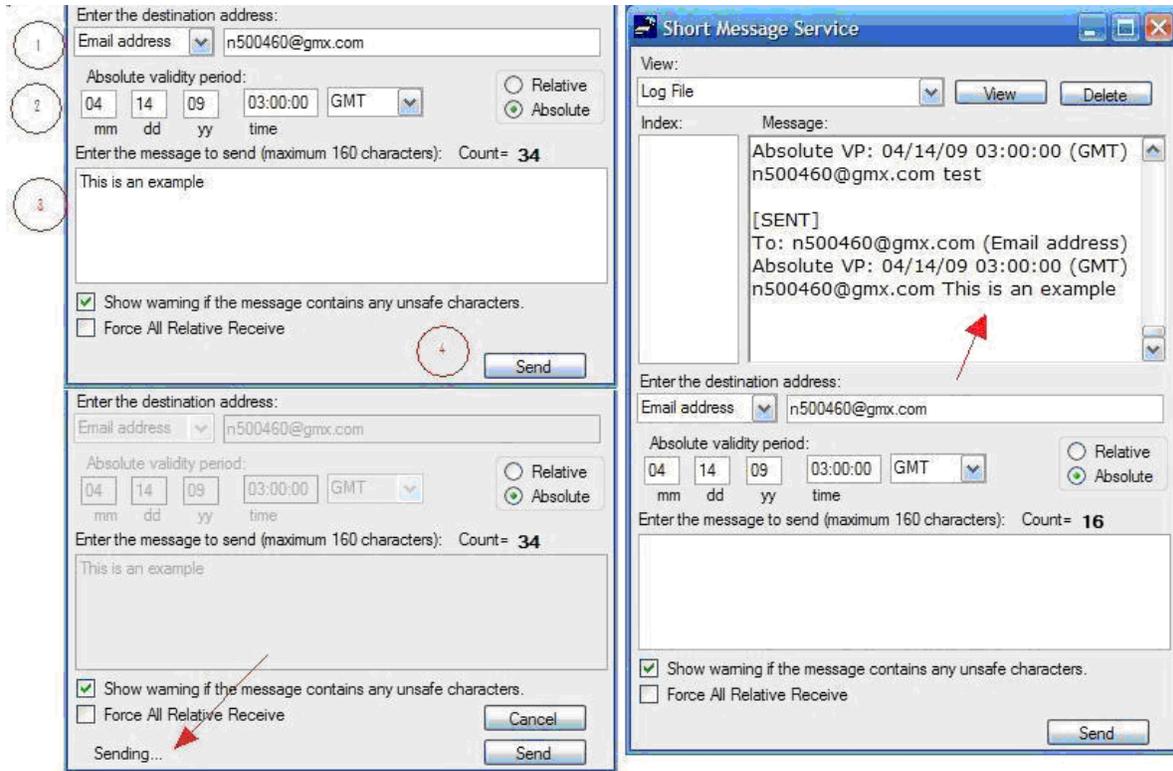


Figure 21: SatTerm Sending an SMS Message (International Phone Number, Relative)

5.3 SEND SMS MESSAGES USING EMAIL

You can also send SMS messages to an Iridium modem using a standard email account (Figure 22). To send an SMS message:

- Select None under *Mail Sending Format*.
Note: If using Outlook Express, the *None* option is under Tools > Options.
- Enter the phone number of the Iridium modem followed by “@msg.iridium.com” in the destination email address line. For example: 881612345678@msg.iridium.com.
- The sender’s email address is included in the user data field of the SMS message automatically. It is placed before the user’s message starts and any data in the subject line is ignored. To exclude the sender’s email address from the SMS message, enter NO in the subject line.
- Enter the actual message in the text box. The maximum length of the user data of the SMS message is 160. Note that the length of the user data includes the length of the sender’s email address plus one for a space unless *NO* is entered in the subject line.
- Select Send.

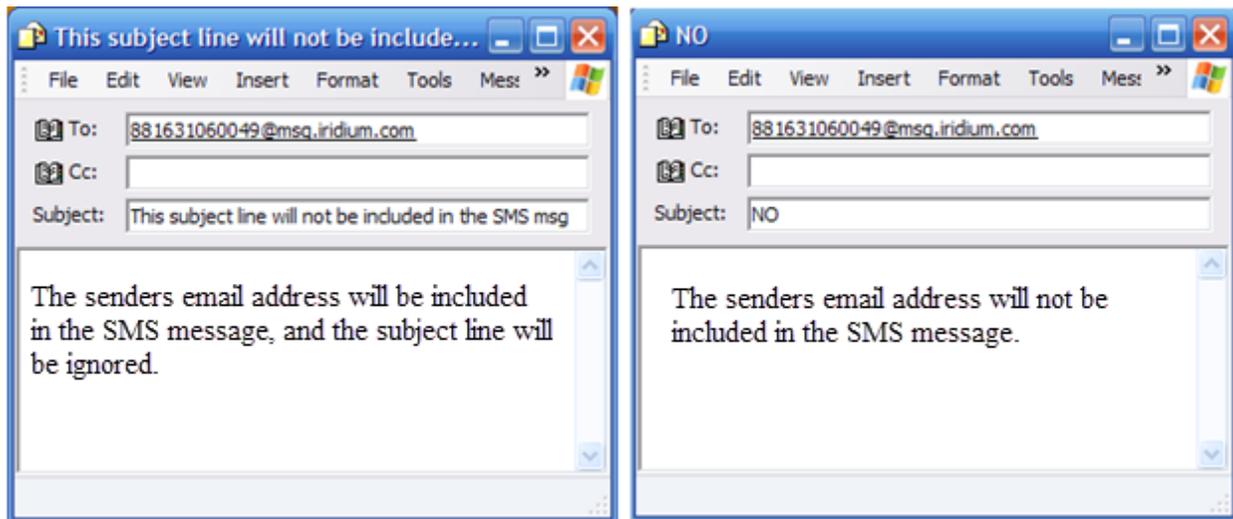


Figure 22: Example of Sending an SMS Message Using Outlook

Note: When sending an SMS to an Iridium modem by email account, some characters in the user data field of the SMS message may arrive differently in the modem. This happens because

most email servers use standard ASCII characters (ISO-8859-1 decimal codes), while SMS uses 7-bit character format. Therefore, some of the SMS characters might not be supported by the email server, or some of the ASCII characters might not be supported by SMS.

5.4 SEND SMS MESSAGES USING THE IRIDIUM WEBSITE

SMS messages can also be sent via the Iridium website, <https://messaging.iridium.com/>.

To send an SMS message to the Iridium modem:

- Sign in to the website, <https://www.iridium.com/support/> using any internet browser.
- Click Send a Satellite Message option box on the *Support* screen and this will take you to the Iridium Messaging screen as shown in Figure 23.
- Enter the phone number of the modem.
- Type the message.
- Click Send Message.

Important: Due to certain restrictions at the U.S. DoD gateway (applied ONLY to the U.S. DoD gateway and NOT commercial gateways), you cannot send outgoing SMS messages by email. Furthermore, incoming SMS messages are limited to 120 characters.

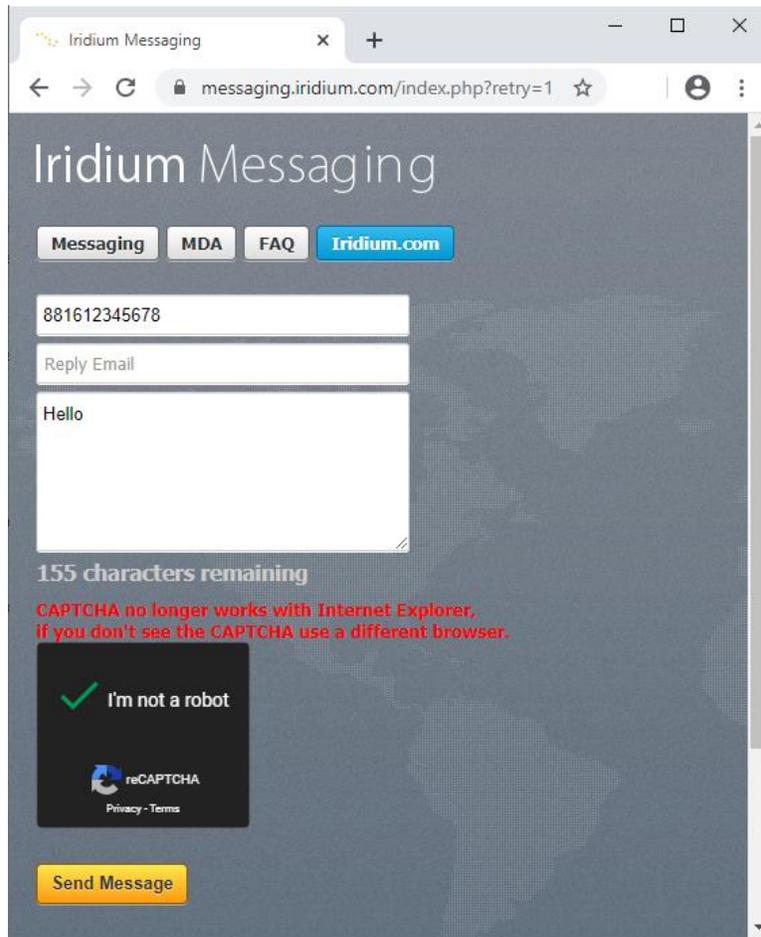


Figure 23: Example of Sending an SMS Message Using the Iridium Website

6 ADDITIONAL FEATURES OF SATTERM

6.1 SET WEB SERVICE

Web service is only used by SHOUT trackers. This address is used to synchronize data in the modem to data on the server. The data that gets synchronized are Address Book and Canned Messages.

To set Web Service:

1. Select Options > Properties > Set Web Service (see **Figure 24**).

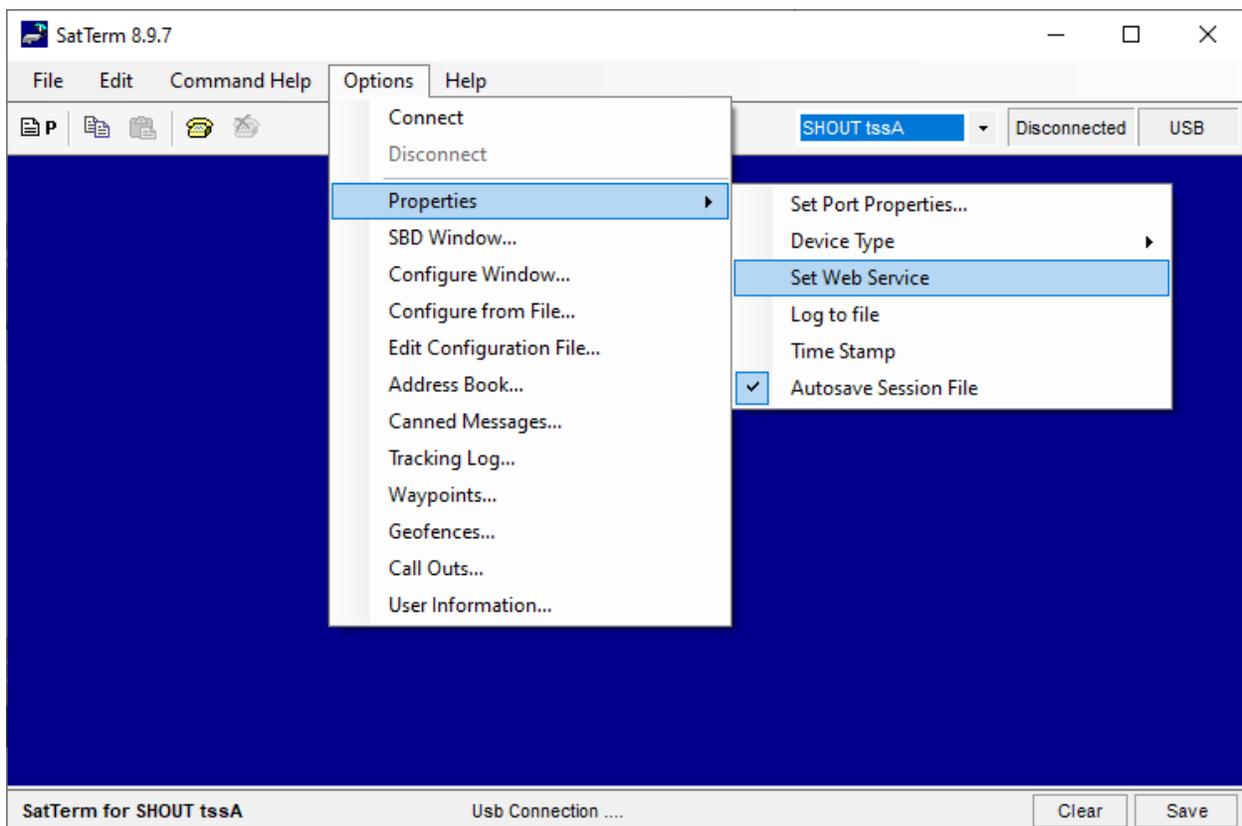


Figure 24: Set Web Service

2. Enter the web address in the *Web Service* window, as shown in **Figure 25**.

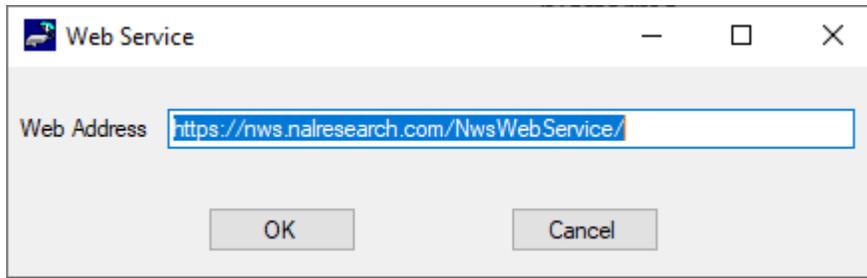


Figure 25: Web Service Window

3. Click **OK**.

6.2 LOG TO FILE

The Log to file saves all that appears on screen to a text file. Select Options > Properties > Log to file, as shown in **Figure 26**.

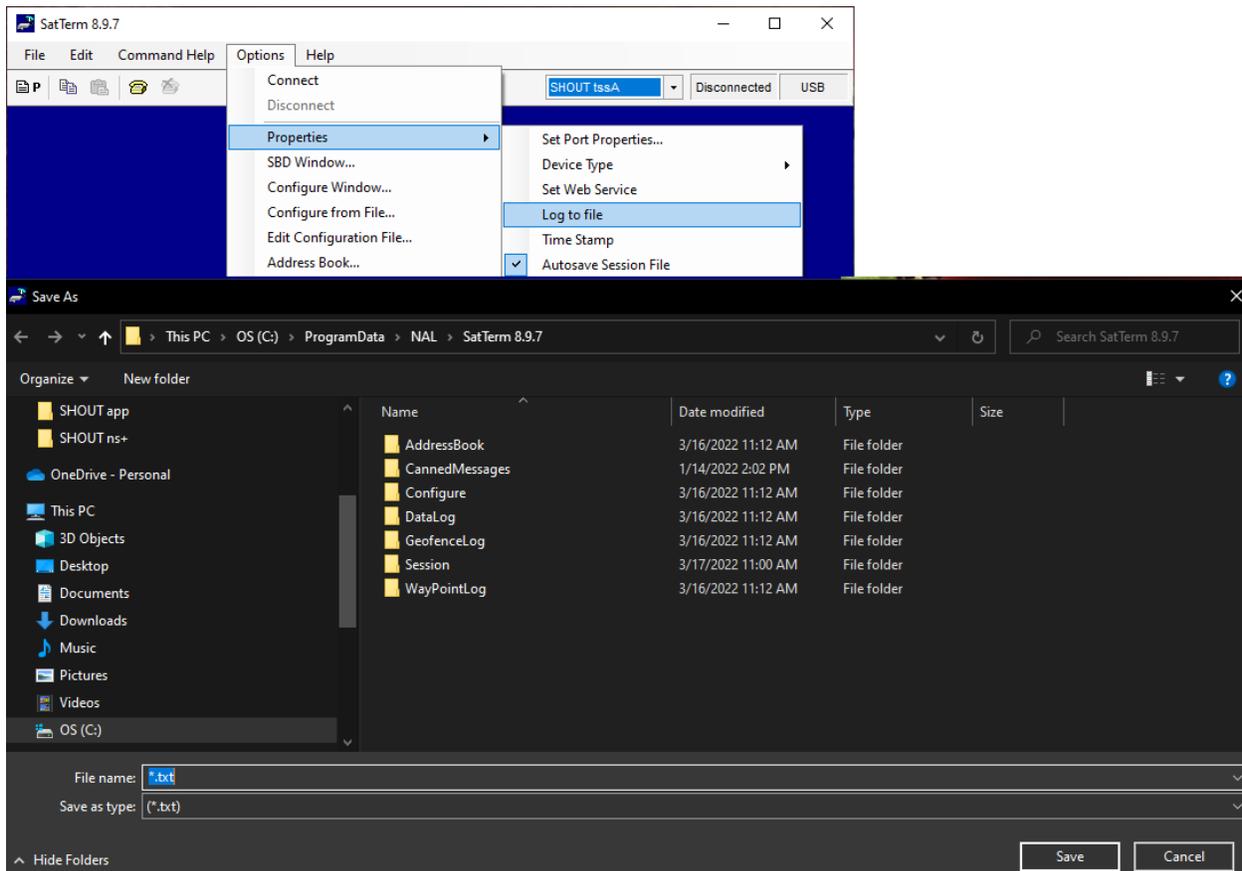


Figure 26: Set Log to File

6.3 TIME STAMP

The *Time Stamp* option displays the exact time a message is sent or received. Select Options > Properties > Time Stamp, as shown in **Figure 27**.

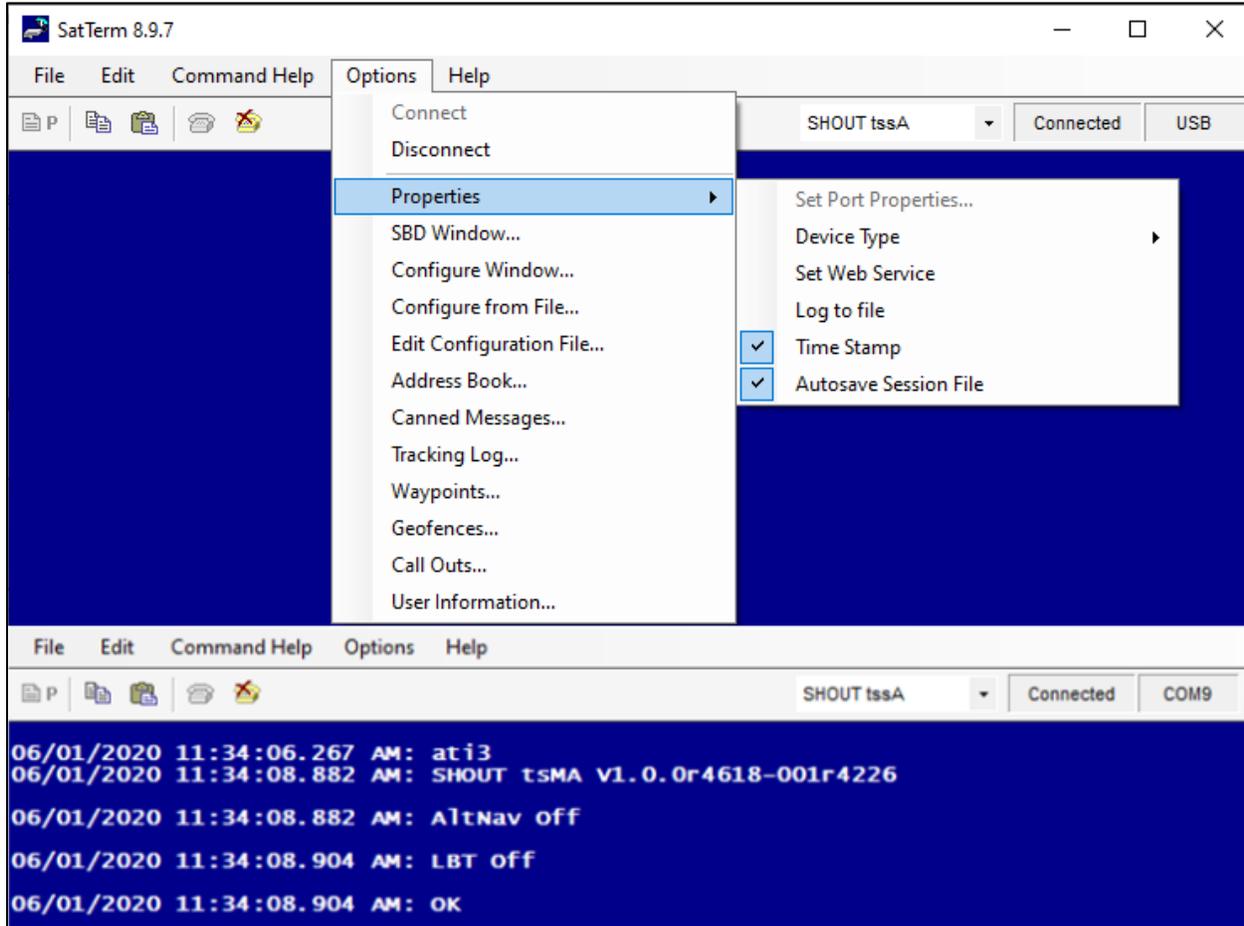


Figure 27: Time Stamp

6.4 AUTOSAVE SESSION FILE

The Autosave Session File for SatTerm saves selected features, such as *Port Properties*, *Device Type*, *Web Service*, and *Time Stamp*. Select Options > Properties > Autosave Session File, as shown in **Figure 28**.

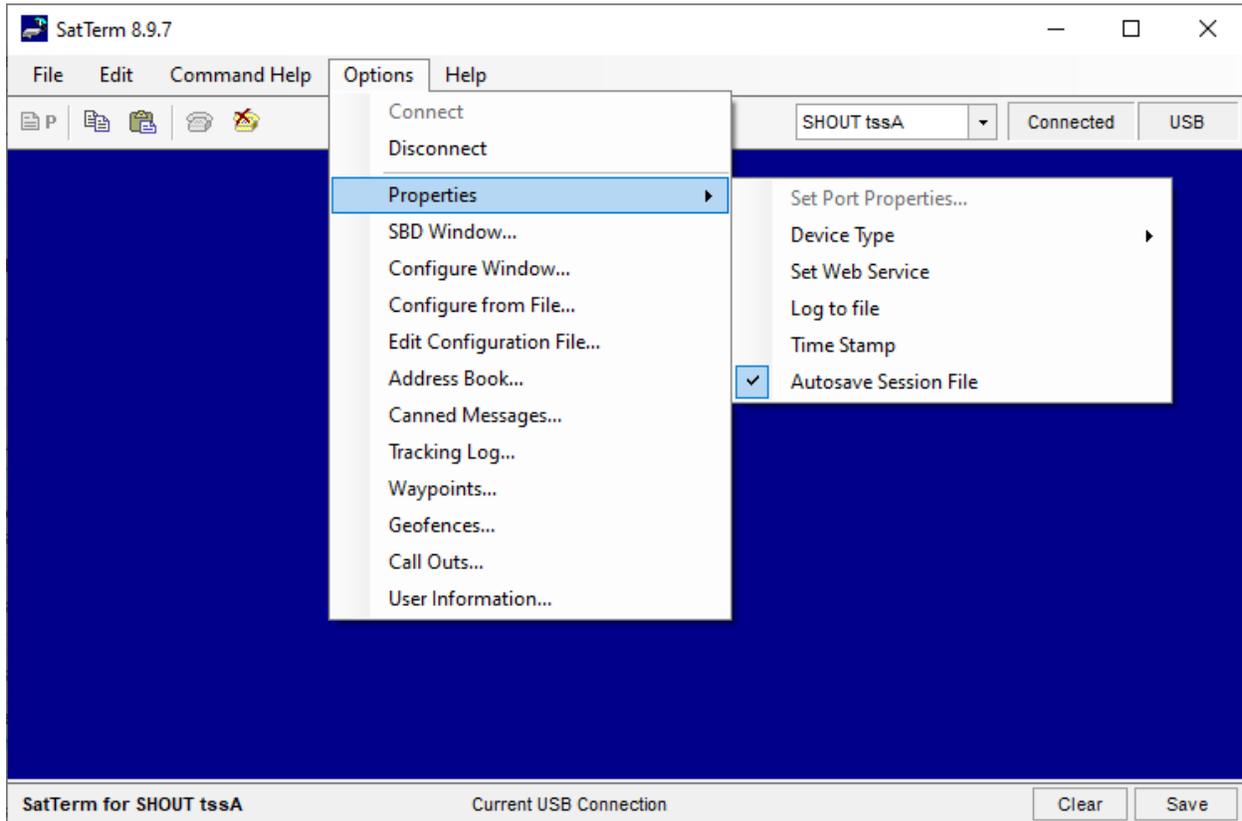


Figure 28: Autosave Session File

7 CONFIGURING TRACKERS

Each NAL Research tracker has a set of configurable parameters that determine how the device operates in its automated tracking mode. SatTerm has an interface, called the *Configure Window*, which provides easy access to all of these settings. Because each product is different, refer to the “User Guide” document of the model for details on the available configuration parameters.

To access the Configure Window to configure the tracker, first follow the steps in section 3.1 for setting up the **Device Type** and **Port Properties**. If the Device Type selected has a configure window available, open it by selecting Options > Configure Window, as shown in **Figure 29**.

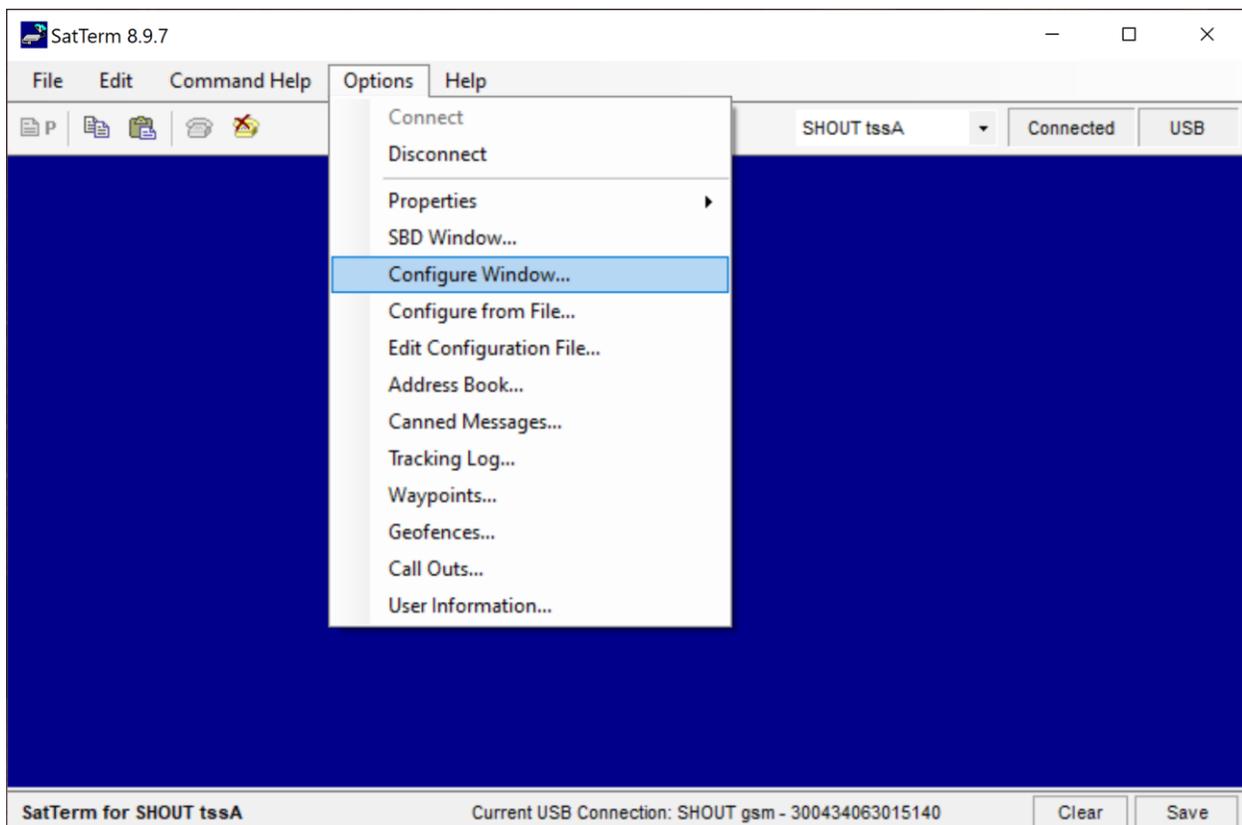


Figure 29: Configure Window Option for SatTerm Software

Some trackers have additional menus for configuring features. When different Device Types are selected, the Options menu displays a different list of available menus based on the features for that product. For example, the 9602-GSM has menus for Geofences and Call Outs; the SHOUT

has menus for Address Book and Canned Messages. Refer to the documentation for those products for details on using the menus.

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APPENDIX B: TECHNICAL SUPPORT

For technical support, please contact us at:

Phone: 703-392-1136

Email: contact@nalresearch.com

Technical documents are also available to download on NAL Research's website www.nalresearch.com in the Support > Documentation & Downloads section.

APPENDIX C: SOFTWARE VERSION DESCRIPTION

Error! Reference source not found. below lists and describes each SatTerm version release starting with the current and all previous version releases.

Table 6: SatTerm SVD

Version Number	Description
8.9.7	- Added support for SHOUT ns 1.1.0 - Added support for pairing a Bluetooth device without entering a pin
8.9.6	- Changed tracking log to identify connected device automatically - Miscellaneous bug fixes
8.9.5	- Added support for SHOUT tsA - Miscellaneous bug fixes
8.9.6	- Changed tracking log to identify connected device automatically - Miscellaneous bug fixes
8.9.5	- Added support for SHOUT tsA - Miscellaneous bug fixes
8.9.4	- Added support for SHOUT tsMA
8.9.3	- Added support for SHOUT tssA - Added support for Sand Dollar
8.8.9	- Added support for SHOUT ns Bluetooth interface
8.8.8	- Added support for SHOUT ns
8.8.7	- Added support for SHOUT ts v2.1.5
8.8.6	- Added Support for SHOUT-TS1S and SHOUT 3G
8.8.5	- Miscellaneous UI changes and bug fixes
8.8.4	- Miscellaneous UI changes and bug fixes
8.8.3	- Added support for 9603-RTL - Miscellaneous bug fixes
8.8.2	- Added support for SHOUT ts one and 9603-3G
8.8.1	- Added encryption options to SARLINK
8.8.0	- Added support for 9602-SD - Added support for configuring multiple USB devices from the configure from file interface - Added diagnostic interface for SHOUT gsm and 9602 gsm products

Table 6: SatTerm SVD

Version Number	Description
	- Added setting to auto save options when they are changed
8.7.6	- Added support for SARLINK - Some bug fixes for serial ports and minor UI updates
8.7.5	- Fixed settings saving for settings in Other tab
8.7.4	- Added support for SHOUT nano 1.5 and SHOUT ts 1.3
8.6.3 - 8.7.3	<ul style="list-style-type: none"> - Removed manuals from installer - Changed the start-up splash screen and look of the terminal interface - Removed support for obsolete products (9601, A3LA-D, and A3LA-X series) - Configuration Interface supports the following tracking products <ul style="list-style-type: none"> - SHOUT nano - SHOUT ts 1.0.0 - SHOUT ts 2.0.0 - SHOUT gsm 1.1 - 9602-GSM 1.3 - 9602-LP 1.4 - Miscellaneous UI changes and bug fixes