

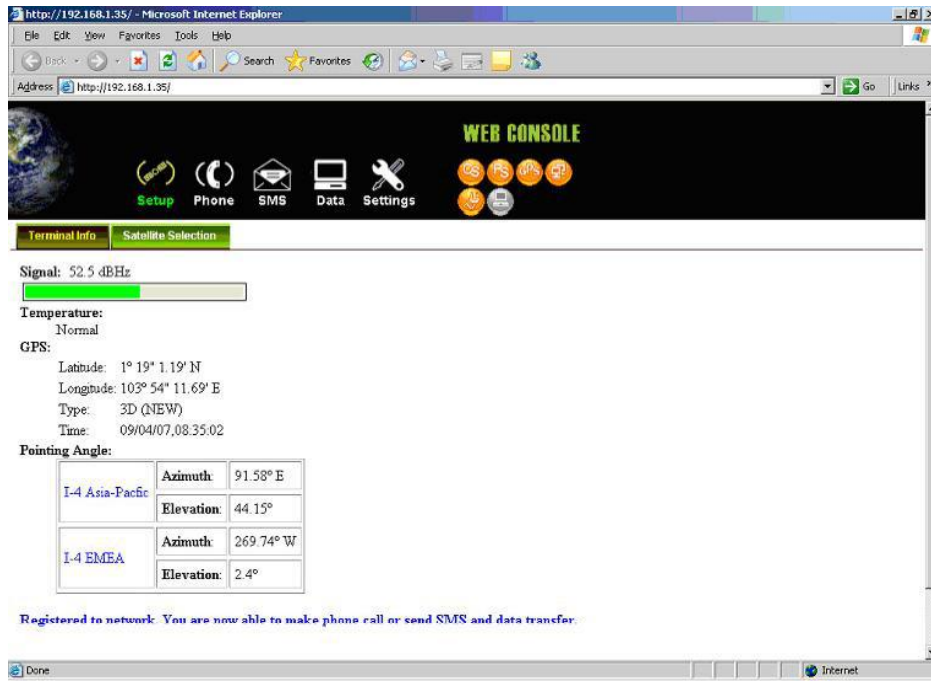


Setup Menu

Viewing Terminal Information



1. Click **Setup**
2. Click **Terminal Info** to view the FB150 UE terminal information.  
The terminal information is displayed according to the Satellite Tracking mode.



<b>Signal</b>	Indicates the received signal strength.
<b>Temperature</b>	Indicates the UE's BDU current operating temperature status.
<b>GPS</b>	Indicates the latitude, longitude, type and time of the GPS acquisition.
<b>Pointing Angle</b>	Indicates the azimuth and elevation angle of the ADU antenna with the corresponding satellite in view.


### Satellite Selection

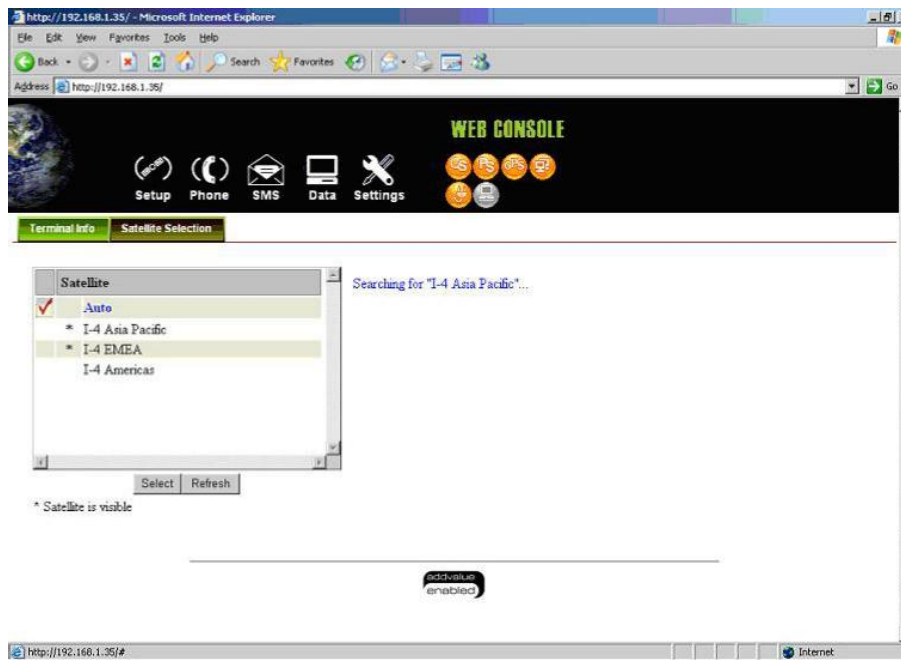
The default Satellite Selection is in **Auto** mode. In **Auto** mode, the UE will scan all the visible satellites and track the satellite with the most optimum elevation angle or the last used satellite.

#### Note:

Changing the satellite selection will terminate any existing active voice/fax call or data connections.

Follow these steps to change your satellite selection:

1. Click  Setup
2. Click **Satellite Selection** to view the visible satellites.  
The visible satellites will be displayed for your selection.  
It also displays the satellite information that your ADU antenna is locked on to.



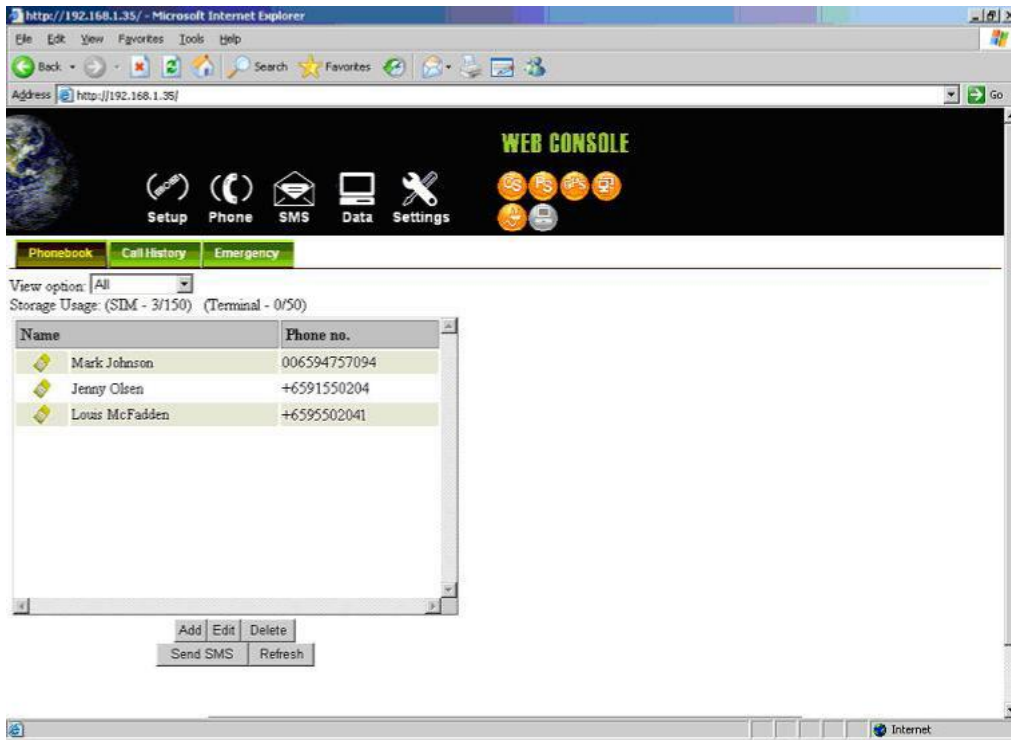
3. Click on your choice of visible satellites.
  4. Click **Select** to point the antenna to the selected satellite in exclusive mode.  
The satellite selection will be saved and each time you power up the UE, the satellite selection choice will remain until you make the next selection change.  
The UE will track the newly selected satellite even if the elevation angle is not optimum.
- Click **Refresh** to refresh the Satellite list.



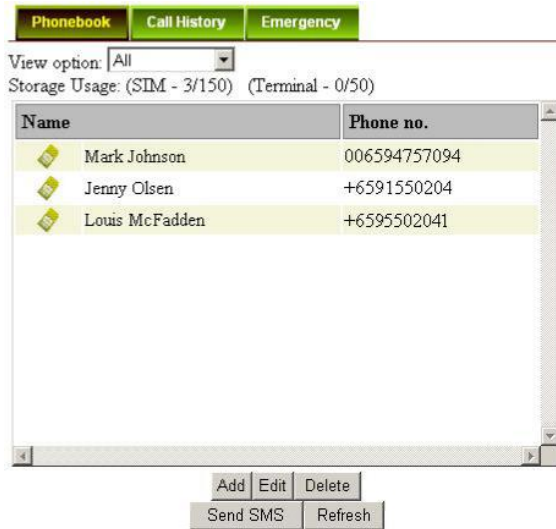
## Phone Menu

Phone menu provide the following options:

- **Phonebook**  
Allow you to view, add, edit and delete entries on your Phonebook list. You can make send SMS directly from your Phonebook entries. The Phonebook entries can be stored on the SIM card or the FB150 UE.
- **Call History**  
To check on the history log of calls made and received.



Phonebook



- **View option**

The View option allows you to view the Phonebook entries from the different storage locations.

From the drop-down menu, select:

<b>All</b>	To view the entries stored in the SIM card and FB150 UE.
<b>SIM only</b>	To view the entries stored in the SIM card.
<b>Terminal only</b>	To view the entries stored in the FB150 UE.

- **Storage Usage**

Shows the number for Phonebook entries used in the SIM card and UE locations.

For example: **(SIM – 3/150)** indicates:  
 Storage location – **SIM** card  
 Total number of entries used = **3**  
 Total number of entries available = **150**

**Adding a new Phonebook entry**

Follow these steps to add a new Phonebook entry:

1. Click **Add**.
2. Enter the Name and Phone number.
3. Select the storage location and click **Save**.



## FB150 System User's Guide

### Editing a Phonebook entry

Follow these steps to edit a Phonebook entry:

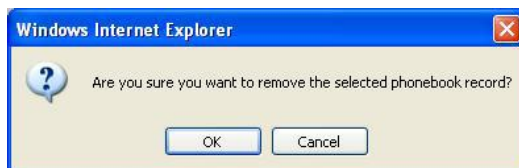
1. Select the entry from the Phonebook list.
2. Click **Edit**.
3. Proceed to change the Name and/or Phone number.
4. Click **Apply**.



### Deleting a Phonebook entry

Follow these steps to delete a Phonebook entry:

1. Select the entry from the Phonebook list.
2. Click **Delete**.
3. Click **Ok** to confirm to delete the entry. Click **Cancel** to abort delete.



## FB150 System User's Guide

### Sending SMS from the Phonebook

Follow these steps to send SMS from the Phonebook:

1. Select the entry from the Phonebook list.
2. Click **Send SMS**.  
The Phonebook console switches over to the Compose SMS console.

Compose    Inbox    Sent    Draft

Phone no.: +6563425447 0 / 160

Please check if the operating system is working fine.

Send    Save    Clear

Store a sent copy in SIM

3. Type in the text message and click **Send**.
  - Click **Refresh** to refresh the Phonebook list.

### Call History

Phonebook    Call History    Emergency

View option: All

Phone no.	Time
006563425447	09/04/06 09:29:52
006563425447	09/04/03 09:11:40
+870772103786	09/04/03 09:11:03
006563425447	09/04/03 09:08:26
006563425447	09/04/03 08:41:30
+6563425447	09/04/03 05:29:19
+6563425447	09/04/03 05:26:56
+6563425447	09/04/03 05:20:03
+870772103786	09/04/03 04:27:30
+6563425447	09/04/03 04:00:03
+6563425447	09/04/03 05:28:49

Call    Send SMS    Delete

Refresh

## FB150 System User's Guide

- **View option**

The View option allows you to view the Call History entries.

From the drop-down menu, select:

<b>All</b>	To view the list of the dialled, received and missed calls.
<b>Dialled Call</b>	To view the list of dialled calls only.
<b>Received Call</b>	To view the list of received calls only.
<b>Missed Call</b>	To view the list of missed calls only.

### Sending SMS from the Call History list

Follow these steps to send SMS from the Call History list:

1. Select the entry from the list.
2. Click **Send SMS**.  
The Call History console switches over to the Compose SMS console.



The screenshot shows the 'Compose' screen of a mobile phone. At the top, there are four tabs: 'Compose', 'Inbox', 'Sent', and 'Draft'. Below the tabs, the 'Phone no.' field contains '+6563425447' and a character count '0 / 160'. The main text area contains the message 'Please check if the operating system is working fine.'. At the bottom, there are three buttons: 'Send', 'Save', and 'Clear'. Below the buttons, there is a checkbox labeled 'Store a sent copy in SIM' which is checked.

3. Type in the text message and click **Send**.

### Deleting a Call History entry

Follow these steps to delete a Call History entry:

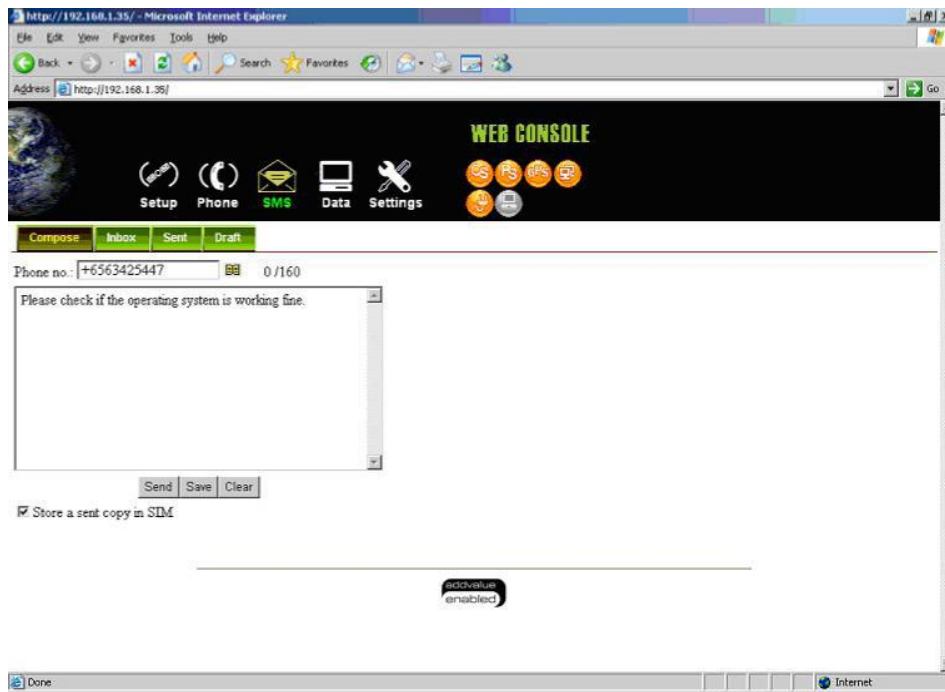
1. Select the entry from the Call History list.
  2. Click **Delete**.
  3. Click **Ok** to confirm or click **Cancel** to abort deleting the entry.
- Click **Refresh** to refresh the Call History list.



### SMS Menu

SMS menu provide the following options:

- **Compose**  
To compose and send text messages. Simply enter a mobile number, type your message and click Send.
- **Inbox**  
Shows the details (Sender information, Message, Date and Time stamp) of all SMS received.
- **Sent**  
Shows the details (Receiver information, Message, Date and Time stamp) of all SMS sent.
- **Draft**  
Stores unsent messages for retrieval later.






## FB150 System User's Guide

### Composing A New Message



Follow these steps to compose a new SMS:

1. Enter the receiver's phone number in the **Phone no.** field or click the Phonebook icon  if the receiver's number is listed in the Phonebook
2. Type the message in the text editor box.

**Note:**

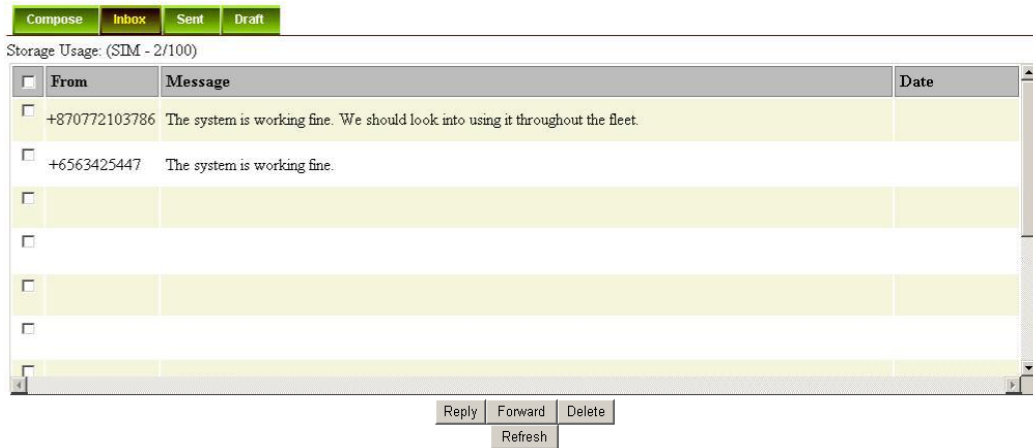
Message is limited to 160 characters including spacing between words.  
For sending SMS to another BGAN terminal, the message is limited to 608 characters including spacing between words.

3. Uncheck **Store a copy in SIM** checkbox if you do not wish to store a copy of the sent SMS into SIM card.
  4. Click **Send** to send the SMS.
- To save an unsent SMS, click **Save** and the unsent SMS will be saved in **Draft**.
  - To clear the typed message on the text editor, click **Clear**.

## FB150 System User's Guide

### Inbox

Shows the details (Sender information, Message, Date and Time stamp) of all SMS received.



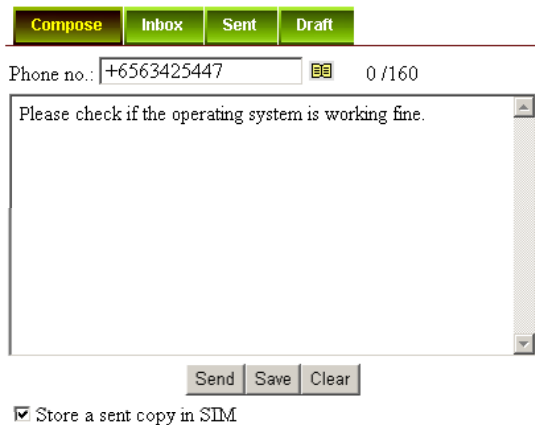
### Replying to a SMS

Follow these steps to reply a SMS:

1. Click on a SMS to select it.  
The selected SMS will be highlighted in light blue.
2. Click **Reply**.
3. Click **OK** to reply with the original contents or **Cancel** to reply without the original content.



The Inbox console switches over to the Compose console.



4. Enter your reply in the text editor.
5. Click **Send** to send your reply SMS.  
The reply SMS will be sent to the recipient.

### Forwarding an SMS

Follow these steps to forward an SMS:

1. Click on a SMS to select it.  
The selected SMS will be highlighted in light blue.
2. Click **Forward**.  
The Inbox console switches over to the Compose console.

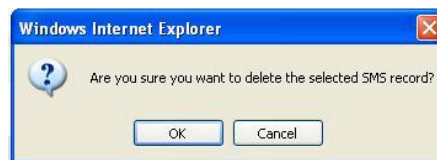


3. Enter the receiver's number in the **Phone No.** field.
4. Click **Send** to forward the SMS.  
The SMS will be sent to the recipient.

### Deleting a single SMS from the Inbox list

Follow these steps to delete a single SMS from the Inbox list:

1. Click on a SMS to select it.
2. Click **Delete**.
3. Click **OK** to confirm or click **Cancel** to abort deleting the SMS.



### Deleting multiple SMS from the Inbox list

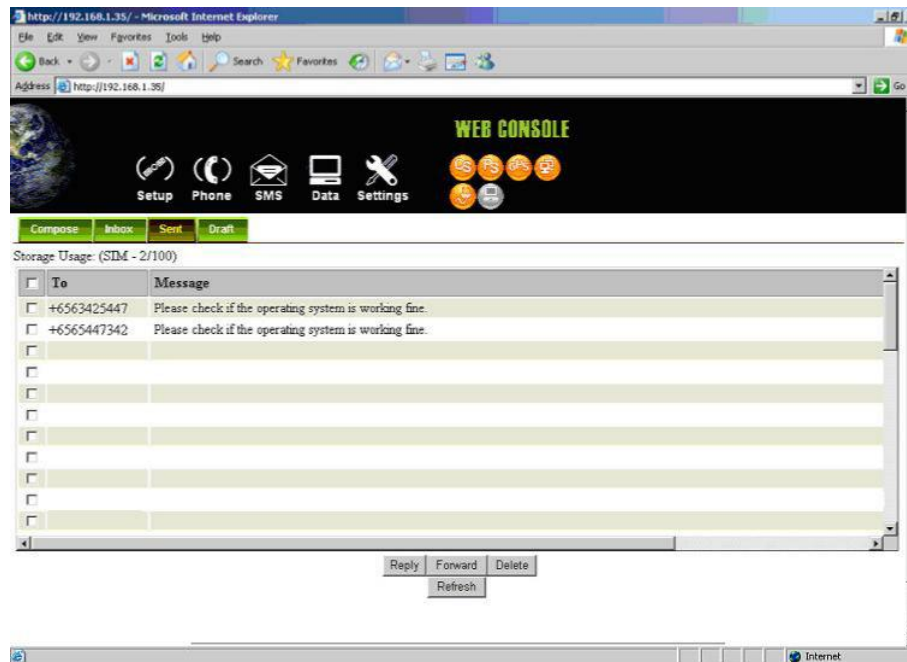
Follow these steps to delete multiple SMS from the Inbox list:

1. Select the message by checking the checkboxes beside each SMS.
  2. Click **Delete**.
  3. Click **OK** to confirm the delete, or **Cancel** to abort the delete.
- Click **Refresh** to refresh the Inbox list.

## FB150 System User's Guide

### Sent

Shows the details (Receiver information, Message, Date and Time stamp) of all SMS sent.



### Resending a sent SMS

Follow these steps to resend a sent SMS (sending the same SMS to the same receiver):

1. Click on a SMS to select it.
2. Click **Resend**.  
The SMS will be sent to the recipient.

## FB150 System User's Guide

### Forwarding a sent SMS

Follow these steps to forward a sent SMS to another recipient:

1. Click on a SMS to select it.
2. Click **Forward**.  
The Sent console switches over to the Compose console.



Compose    Inbox    Sent    Draft

Phone no.: +6563425447 0 / 160

Please check if the operating system is working fine.

Send    Save    Clear

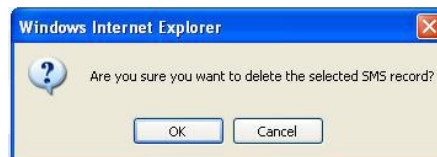
Store a sent copy in SIM

3. Enter the receiver's number in the **Phone No.** field.
4. Click **Send**.  
The SMS will be sent to the recipient.

### Deleting a SMS from the Sent list

Follow these steps to delete a single SMS from the Sent list:

1. Click on a SMS to select it.
2. Click **Delete**.
3. Click **OK** to confirm or click **Cancel** to abort deleting the SMS.



### Deleting multiple SMS from the Sent list

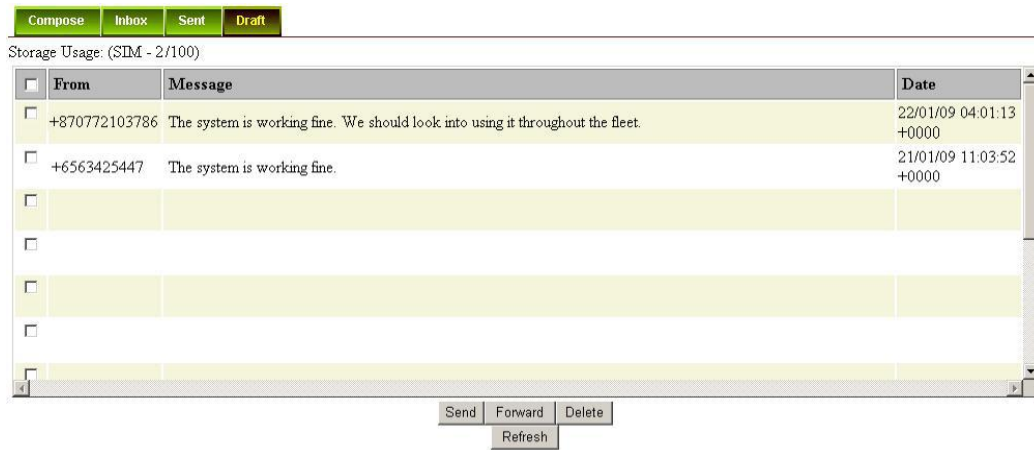
Follow these steps to delete multiple SMS from the from the Sent list:

1. Select the message by checking the checkboxes beside each SMS.
  2. Click **Delete**.
  3. Click **OK** to confirm the delete, or **Cancel** to abort the delete.
- Click **Refresh** to refresh the Sent list.

## FB150 System User's Guide

### Draft

Stores SMS saved from the Compose console.



Follow these steps to send a draft SMS:

1. Click on a SMS to select it.
2. Click **Send**.  
The SMS will be sent to the recipient.



### Forwarding a draft SMS to another recipient

Follow these steps to forward a draft SMS to another recipient:

1. Click on a SMS to select it.
2. Click **Forward**.  
The Draft console switches over to the Compose console.

Compose    Inbox    Sent    Draft

Phone no.: +6563425447 0 / 160

Please check if the operating system is working fine..

Send    Save    Clear

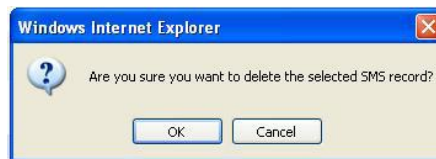
Store a sent copy in SIM

3. Enter the receiver's number in the **Phone No.** field.
4. Click **Send** to forward the SMS.  
The SMS will be forwarded to the recipient.

### Deleting a SMS from the Draft list

Follow these steps to delete a SMS from the Draft list:

1. Click on a SMS to select it.
2. Click **Delete**.
3. Click **OK** to confirm or click **Cancel** to abort deleting the SMS.



### Deleting multiple SMS from the Draft list

Follow these steps to delete multiple SMS from the Draft list:

1. Select the message by checking the checkboxes beside each SMS.
  2. Click **Delete**.
  3. Click **OK** to confirm the delete, or **Cancel** to abort the delete.
- Click **Refresh** to refresh the Draft list.

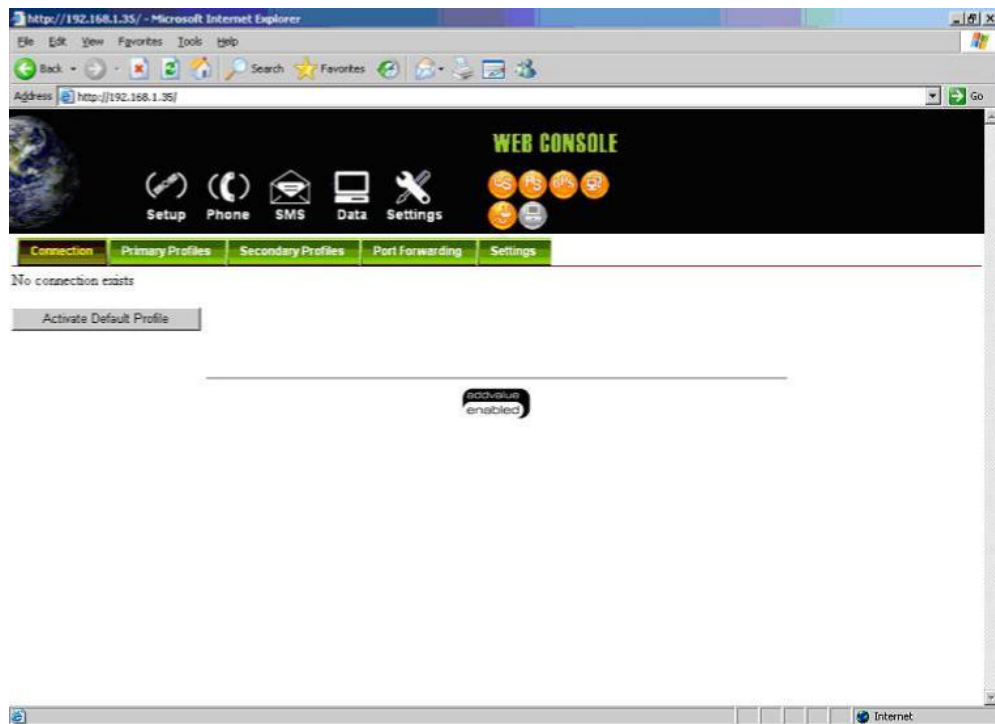




### Data Menu

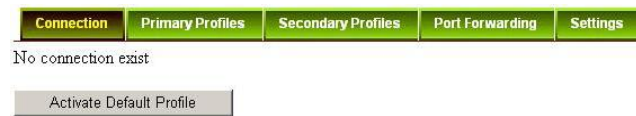
Data menu provide the following options:

- **Connection**
- **Primary Profiles**
- **Secondary Profiles**
- **Port Forwarding**
- **Settings**



### Connection

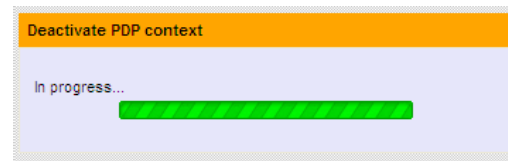
To activate the default profile, click **Activate Default Profile**.  
The PDP context will be activated.



When connected, APN and the assigned public IP Address details will be displayed.  
You can proceed to access the Internet and use the related features.



To disconnect the data connection, click **Disconnect**.  
The PDP context will be deactivated.



### Primary Profiles

Primary profiles define the connection type. You can select from a list of profiles to be the default primary profile and connection type. From Profile 4 to Profile 10, you can create your own customized primary profile.

Connection	Primary Profiles	Secondary Profiles	Port Forwarding	Settings
	<ul style="list-style-type: none"><li>*Standard</li><li>Streaming32</li><li>Streaming64</li><li>Streaming128</li><li>Profile 5</li><li>Profile 6</li><li>Profile 7</li><li>Profile 8</li><li>Profile 9</li><li>Profile 10</li></ul> <input type="button" value="Refresh"/>	<input checked="" type="checkbox"/> Set as default <b>Profile Name:</b> <input type="text" value="Standard"/> <b>Connection Type:</b> <input checked="" type="radio"/> Standard <input type="radio"/> Streaming <hr/> <b>Access Point Name (APN):</b> <input checked="" type="radio"/> SIM <input type="text" value="bgan.inmarsat.com"/> <input type="radio"/> User Defined <input type="text"/> <b>Username:</b> <input type="text"/> <b>Password:</b> <input type="text"/> <b>IP Configuration</b> <input checked="" type="radio"/> Dynamic IP Address <input type="radio"/> Static IP Address <input type="text"/> . <input type="text"/> . <input type="text"/> . <input type="text"/> <input checked="" type="checkbox"/> Use Header Compression <input type="button" value="Update Settings"/> <input type="button" value="Cancel"/> <input type="button" value="Activate Profile"/>		<b>Standard</b> <p>Using this connection type you will be charged for the <b>VOLUME</b> (kilobytes) of data used. Use this connection type for TCP/IP applications, data exchange and transfer such as Email, Internet Browsing, FTP, etc.</p>

#### Note:

The Standard profile is set as the default primary profile and the default connection type is standard (this is charged by the volume [in kilobytes] of data used).

- **Profile Name**

Change the profile name as desired.

- **Connection Type**

Select the connection type to be used during the connection:

- **Standard** – Charged by the volume (in kilobytes) of data used.
- **Streaming** – Charged by the time (per minute) used during the connection.

- **Access Point Name (APN)**

By default, the APN from the SIM will be selected.

Follow these steps to change the **Access Point Name (APN)**:

1. Select **User Defined**.
2. Enter the new APN in the field space provided (e.g. bgan.inmarsat.com).
3. Enter the username and password if required.

## FB150 System User's Guide

- **IP Configuration**

By default, the **Dynamic IP Address** is selected.

Follow these steps to use **Static IP Address**:

1. Select **Static IP Address** and enter the IP Address in the space provided.
2. Check the **Header Compression** checkbox if it is required to use Header Compression.

Connection	Primary Profiles	Secondary Profiles	Port Forwarding	Settings
*Standard Streaming32 Streaming64 Streaming128 Profile 5 Profile 6 Profile 7 Profile 8 Profile 9 Profile 10	<input checked="" type="checkbox"/> Set as default <b>Profile Name:</b> <input type="text" value="Standard"/> <b>Connection Type:</b> <input checked="" type="radio"/> Standard <input type="radio"/> Streaming			<b>Standard</b> Using this connection type you will be charged for the <b>VOLUME</b> (kilobytes) of data used. Use this connection type for TCP/IP applications, data exchange and transfer such as Email, Internet Browsing, FTP, etc.
<input type="button" value="Refresh"/>	<b>Access Point Name (APN):</b> <input checked="" type="radio"/> SIM <input type="text" value="bgan.inmarsat.com"/> <input type="radio"/> User Defined <input type="text"/> <b>Username:</b> <input type="text"/> <b>Password:</b> <input type="text"/>			
	<b>IP Configuration</b> <input checked="" type="radio"/> Dynamic IP Address <input type="radio"/> Static IP Address <input type="text"/> . <input type="text"/> . <input type="text"/> . <input type="text"/> <input checked="" type="checkbox"/> Use Header Compression			
	<input type="button" value="Update Settings"/> <input type="button" value="Cancel"/> <input type="button" value="Activate Profile"/>			

Follow these steps to set **Streaming Parameters**:

1. Select the Desired Rate: 32k, 64k or 128k.
  2. Select the Minimum Rate: 32k, 64k or 128k.
  3. Check the **Error Correction** checkbox if it is required to use Error Correction.
- Click **Update Settings** when all updates on the profile settings are done.
  - Click **Activate Profile** to activate a PDP context as per the selected profile.

## Secondary Profiles

Secondary Profiles setting is used mainly for (but not limited to) Streaming connection. You can select from a list of secondary profiles to be used during streaming connection. From Profile 7 to Profile 10, you can create your own customized secondary profile and you may also edit the pre-defined profiles in the list.

- **Profile Name**

You may change the profile name from the text box.

- **Streaming Parameters**

Follow these steps to set the **Streaming Parameters**:

1. Select the **Desired Rate**: **32k**, **64k** or **128k**.
2. Select the **Minimum Rate**: **32k**, **64k** or **128k**.

**Note:**

Set the same rate for both the Desired and Minimum rates.

3. Check the **Error Correction** checkbox if it is required to use Error Correction.

- **Destination Port Ranges**

Default destination port ranges and protocol type for each profile are listed.

To add a new destination port range:

1. Enter the port range in the space provided and choose **TCP** or **UDP** as the protocol type; **or** click **Add from Templates** to select the port ranges from other profiles.

**Note:**

To determine the port number for the type of service you wish to use, you may search them from the Internet. An example of port numbers: for Real Audio and Video streaming, you may use Port 554, 7070 and 7071 for protocol type TCP or Port 6770 to 7070 for protocol type UDP.

- Click **Update Settings** when all updates on the profile settings are done.
- Click **Activate Profile** to activate the selected profile.

## Port Forwarding

Port Forwarding is a feature for Router (multiple-user) mode. This feature sets the FB150 UE to direct incoming traffic on certain TCP/UDP port to a specific port on a local PC (IP Address).

Connection	Primary Profiles	Secondary Profiles	Port Forwarding	Settings	
Incoming Port	Protocol	Destination IP Address	Destination Port	Enabled	
0	-	0.0.0.0	0	<input type="checkbox"/>	<a href="#">Add</a>
0	-	0.0.0.0	0	<input type="checkbox"/>	<a href="#">Add</a>
0	-	0.0.0.0	0	<input type="checkbox"/>	<a href="#">Add</a>
0	-	0.0.0.0	0	<input type="checkbox"/>	<a href="#">Add</a>
0	-	0.0.0.0	0	<input type="checkbox"/>	<a href="#">Add</a>
0	-	0.0.0.0	0	<input type="checkbox"/>	<a href="#">Add</a>
0	-	0.0.0.0	0	<input type="checkbox"/>	<a href="#">Add</a>
0	-	0.0.0.0	0	<input type="checkbox"/>	<a href="#">Add</a>
0	-	0.0.0.0	0	<input type="checkbox"/>	<a href="#">Add</a>
0	-	0.0.0.0	0	<input type="checkbox"/>	<a href="#">Add</a>

Refresh

Follow these steps to add a new forwarding rule:

1. Click **Add**.

2. Enter the **Incoming Port** number in the space provided.  
(For example, the user expecting HTTP traffic, the port is 80).
3. Enter the **Destination IP Address**.  
(For example, the IP Address of the PC that is connected to the FB150 UE).
4. Select the **Protocol** type:
  - **TCP** (e.g. for HTTP, it will be TCP)
  - **UDP**
5. Enter the **Destination Port** number in the space provided (For example: listening port of the particular service (for example TCP port 80 for web server) on the PC that is connected to the FB150 UE).
6. Click **Apply** to allow the settings to take effect.

### Settings

You can select the Ethernet mode to be used for data connection.



Connection Primary Profiles Secondary Profiles Port Forwarding Settings

**Ethernet mode:**

- Router Mode (Single User)
- Router Mode (Multi-User)
- Auto Connect (Last Successfully Activated PDP Context)

Update Refresh

Follow these steps to select the Ethernet mode:

1. Select the desired mode to be used during the data connection:
  - Router (Single User) is with NAT/PAT disabled
  - Router (Multi-User) is with NAT/PAT enabled for multi-user.

**Note:**

**If Router (Single User) mode is selected, it is recommended to use data port -1 (first RJ45 port from the left) to be connected to the PC/Laptop.**

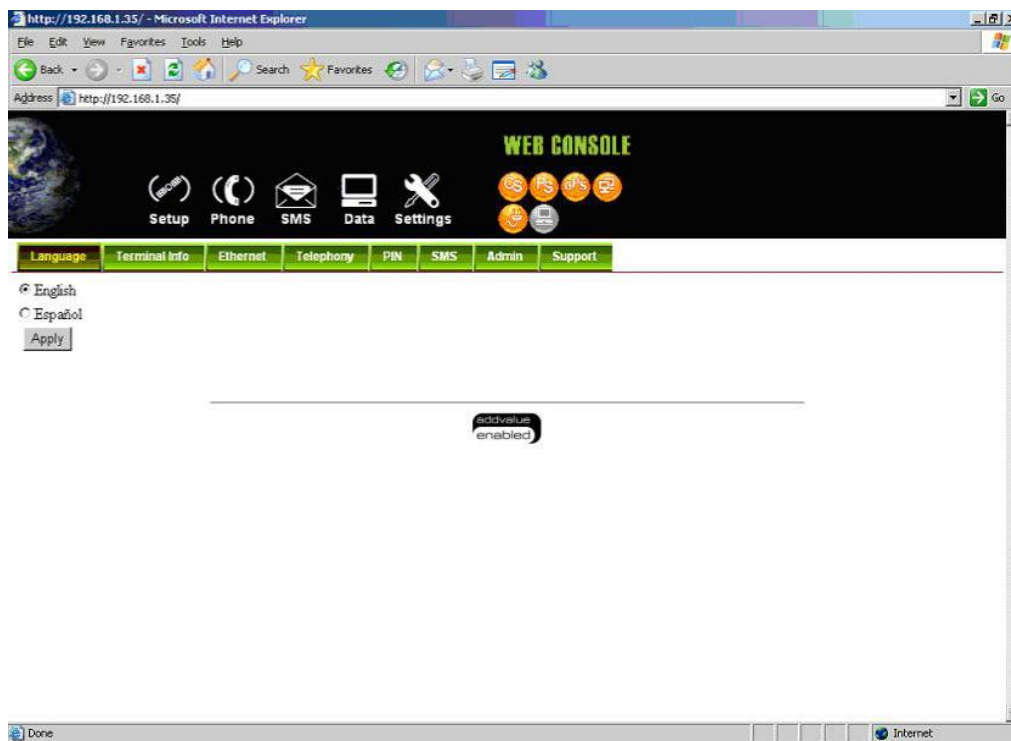
2. Check the **Auto Reconnect** checkbox if it is required to get the standard IP primary connection to be reconnected automatically in the event the connection is disconnected without user intervention.
3. Click **Update** to allow the selection to take effect.
  - Click **Refresh** to query the current mode.



### Settings Menu

Click the following tabs to view and edit the configuration settings for the FB150 UE:

- **Language**
- **Terminal Info**
- **Terminal**
- **Ethernet**
- **Telephony**
- **PIN**
- **SMS**
- **Misc**
- **Support**





## Language

Select the desired language for the Web Console to be displayed.



## Terminal Info

This tab shows general information about the UE, Error/Event Logs and Call Logs.

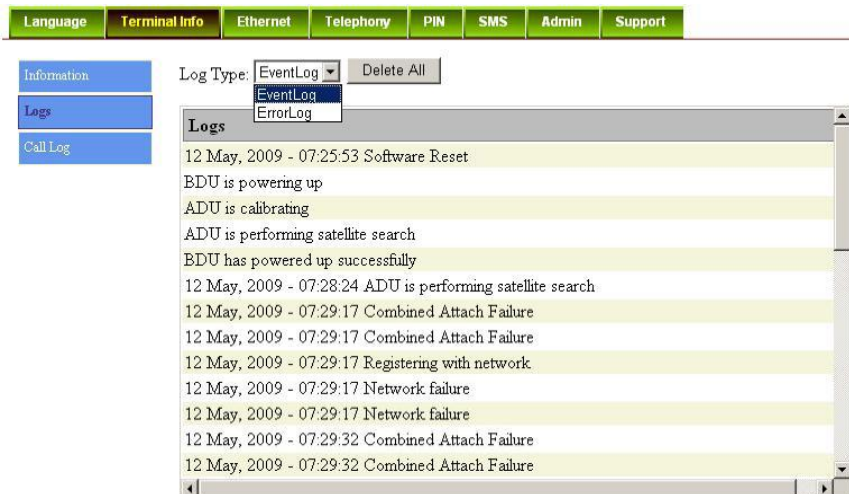
- **Information**

Displays information about the Manufacture ID, Software version, Model ID, IMEI number, IMSI number (only when a SIM card is inserted), Subscriber number and ADU serial Number.



- **Logs**

Displays event and error logs of the UE.



## FB150 System User's Guide

- **Call Logs**

Displays the call history including standard voice calls, high-quality/fax calls, standard data sessions and streaming data sessions.

Language	Terminal Info	Ethernet	Telephony	PIN	SMS	Admin	Support
Information							
Logs							
Call Log							

PIN

## Ethernet

- **Ethernet**

1. Click **Ethernet** to view and edit the Ethernet settings.
2. Click **Update** to allow the settings to take effect.

Language	Terminal Info	Ethernet	Telephony	PIN	SMS	Admin	Support
Ethernet							
DHCP							
Mac Filtering							

Ethernet Interface:  Enabled  Disabled

Terminal IP Address:  .  .  .

Terminal Subnet Mask:  .  .  .

- **DHCP**

1. Click **DHCP** to view and edit the DHCP settings.
2. Click **Update** to allow the settings to take effect.

Language	Terminal Info	Ethernet	Telephony	PIN	SMS	Admin	Support
Ethernet							
DHCP							
Mac Filtering							

DHCP:  Enabled  Disabled

Primary DNS:  .  .  .

Secondary DNS:  .  .  .

DHCP IP Pool Start:  .  .  .

DHCP IP Pool End:  .  .  .

IP Lease Time:  second(s)

- **Mac Filtering**

1. Click **Mac Filtering** to view and edit the Mac Filtering settings.
2. Click **Update** to allow the settings to take effect.

The screenshot shows the 'Mac Filtering' configuration page. At the top, there is a navigation bar with tabs for Language, Terminal Info, Ethernet, Telephony, PIN, SMS, Admin, and Support. Below this, there are three blue buttons: Ethernet, DHCP, and Mac Filtering. The 'Mac Filtering' section is active, showing 'Mac Filtering' set to 'Enabled' (radio button selected) and 'Use' set to 'Reject List' (radio button selected). There is an 'Update' button below these settings. Below the 'Update' button, there are two columns: 'Reject List' and 'Allow List'. Each column has an input field with an 'Add' link next to it and a 'Delete All' button below it. At the bottom, there is a note: '\*Your Mac Address: 00:06:1B:C1:B5:91'.

- **Reject List**

All PCs/Laptops will be allowed to access the UE except for those (MAC addresses) listed in the Reject List.

- **Allow List**

All PCs/Laptops will be denied access to the UE except for those (MAC addresses) listed in the Allow List. When selecting this list, at least one entry should be there to access the UE.

## Telephony

### • Interface

1. Select **Enabled** to use the Telephone Interface.
2. Select **Disabled** if you do not need to use the Telephone Interface.
3. Select **European Caller Line ID Phone connected** or **US Caller Line ID Phone connected** from the **Telephone Interface Configuration** drop-down menu.
4. Click **Update** to allow the settings to take effect.



### • Port Configuration

PHONE port can be used either for standard voice call or for fax. Fax calls use 3.1 kHz high quality voice (64kbps, A-Law PCM) and standard telephony uses standard quality voice call (4kbps, AMBE+2). FB150 is default configured as shown below.

**Note:**


**FAX port is exclusively for connecting to FAX machine.**

The screenshot shows the 'Port Configuration' page with a table of settings. The navigation bar is the same as in the previous image. The table has four columns: Port, Call Type, Service Type, and an Update button.

Port	Call Type	Service Type	
Primary Handset	Incoming Call	Standard voice and 3.1kHz high quality voice/fax call	<a href="#">Update</a>
	Outgoing Call	Standard voice call	<a href="#">Update</a>
RJ11 PHONE Port	Incoming Call	None	<a href="#">Update</a>
	Outgoing Call	None	<a href="#">Update</a>
RJ11 FAX Port	Incoming Call	3.1kHz high quality voice/fax call	<a href="#">Update</a>
	Outgoing Call	3.1kHz high quality voice/fax call	<a href="#">Update</a>
RJ11 EXPANSION Port	Incoming Call	None	<a href="#">Update</a>
	Outgoing Call	None	<a href="#">Update</a>

## FB150 System User's Guide

Follow these steps to configure the ports using the Web Console:

1. Start the **Web Console**.
2. Click on **Settings**  icon.
3. Click on **Telephony** submenu.
4. Click on port configuration on submenu information area.

Language	Terminal Info	Terminal	Ethernet	Telephony	PIN	SMS	Audio	Network	ATCmd	Misc	Support	About
Interface												
Port Configuration												
Port	Call Type	Service Type										
Primary Handset	Incoming Call	Standard voice call	<a href="#">Update</a>									
	Outgoing Call	Standard voice call	<a href="#">Update</a>									
RJ11 Port 1	Incoming Call	Standard voice call	<a href="#">Update</a>									
	Outgoing Call	Standard voice call	<a href="#">Update</a>									
RJ11 Port 2	Incoming Call	3.1kHz high quality voice/fax call										
	Outgoing Call	3.1kHz high quality voice/fax call										
RJ11 Port 3	Incoming Call	None	<a href="#">Update</a>									
	Outgoing Call	None	<a href="#">Update</a>									

5. Click on the **Service Type** list of the port you want to modify.
6. Click on **Update**.
7. To perform additional changes, repeat steps 5 and 6.

### Note:

If you configure 'Incoming Call' port as 3.1 kHz high quality voice/fax call then incoming fax will make that telephone ring.

Satlink recommends using 3.1 kHz high quality voice/fax call option only for FAX communications.

### PIN

#### • Terminal PIN

1. Click **Terminal PIN** to configure the Terminal PIN settings.
2. Select **Disabled** if you do not need to set the Terminal PIN.
3. Select **Enabled** to set the terminal PIN.
4. Enter the PIN number in the Enter PIN field and click **Update PIN**.

The screenshot shows a web interface with a navigation bar at the top containing tabs: Language, Terminal Info, Ethernet, Telephony, PIN (highlighted), SMS, Admin, and Support. On the left side, there is a vertical menu with buttons for Terminal PIN, SIM PIN, SIM PIN2, SIM Lock, Service Provider PIN, and Corporate PIN. The main content area is titled "Terminal PIN" and contains two radio buttons: "Enabled" (unselected) and "Disabled" (selected). Below the radio buttons is a text input field labeled "Enter PIN:" and a button labeled "Update PIN".

#### • SIM PIN

1. Click **SIM PIN** to configure the SIM PIN settings.
2. Select **Disabled** if you do not need to set the SIM PIN.
3. Select **Enabled** to set the SIM PIN.
4. Enter the PIN number in the space provided and click **Update PIN**.

The screenshot shows a web interface with a navigation bar at the top containing tabs: Language, Terminal Info, Ethernet, Telephony, PIN (highlighted), SMS, Admin, and Support. On the left side, there is a vertical menu with buttons for Terminal PIN, SIM PIN (highlighted), SIM PIN2, SIM Lock, Service Provider PIN, and Corporate PIN. The main content area is titled "SIM PIN" and contains two radio buttons: "Enabled" (unselected) and "Disabled" (selected). Below the radio buttons is a text input field labeled "Enter PIN:" and a button labeled "Update PIN".

### • SIM PIN2

1. Click **SIM PIN2** to configure the SIM PIN2 settings.
2. Select **Disabled** if you do not need to set the SIM PIN2.
3. Select **Enabled** to set the SIM PIN2.
4. Enter the PIN number in the space provided and click **Update PIN**.

Follow these steps to change the **PIN Password**:

1. Enter the old PIN number in the **Enter Old PIN** field.
2. Enter the new PIN number in the **Enter New PIN** field.
3. Re-enter the new PIN number in the **Re-enter New PIN** field.
4. Click **Change PIN Password**.  
The Terminal PIN is now changed.

#### Note:

The factory default PIN password is "000000"

Language	Terminal Info	Ethernet	Telephony	<b>PIN</b>	SMS	Admin	Support
Terminal PIN	<b>SIM PIN2</b>						
SIM PIN	<input checked="" type="radio"/> Enabled <input type="radio"/> Disabled						
<b>SIM PIN2</b>	Enter PIN: <input type="text"/>						
SIM Lock	<input type="button" value="Update PIN"/>						
Service Provider PIN	<b>Change PIN Password:</b>						
Corporate PIN	Enter Old PIN: <input type="text"/>						
	Enter New PIN: <input type="text"/>						
	Re-enter New PIN: <input type="text"/>						
	<input type="button" value="Change PIN Password"/>						

## FB150 System User's Guide

### • SIM Lock

1. Click **SIM Lock** to configure the SIM Lock settings.
2. Select **Disabled** if you do not need to set the SIM Lock.
3. Select **Enabled** to set the SIM Lock.
4. Enter the PIN number in the space provided and click **Update PIN**.

The screenshot shows a web interface with a top navigation bar containing tabs: Language, Terminal Info, Ethernet, Telephony, PIN (highlighted), SMS, Admin, and Support. On the left, a vertical menu lists: Terminal PIN, SIM PIN, SIM PIN2, SIM Lock (highlighted), Service Provider PIN, and Corporate PIN. The main content area is titled "SIM Lock" and features two radio buttons: "Enabled" (unselected) and "Disabled" (selected). Below the radio buttons is a text input field labeled "Enter PIN:" and a button labeled "Update PIN".

### • Service Provider PIN

1. Click **Service Provider PIN** to configure the Service Provider PIN settings.
2. Select **Disabled** if you do not need to set the Service Provider PIN.
3. Select **Enabled** to set the Service Provider PIN.
4. Enter the PIN number in the space provided and click **Update PIN**.

The screenshot shows a web interface with a top navigation bar containing tabs: Language, Terminal Info, Ethernet, Telephony, PIN (highlighted), SMS, Admin, and Support. On the left, a vertical menu lists: Terminal PIN, SIM PIN, SIM PIN2, SIM Lock, Service Provider PIN (highlighted), and Corporate PIN. The main content area is titled "Service Provider PIN" and features two radio buttons: "Enabled" (unselected) and "Disabled" (selected). Below the radio buttons is a text input field labeled "Enter PIN:" and a button labeled "Update PIN".



## FB150 System User's Guide

### • Corporate PIN

1. Click **Corporate PIN** to configure the Corporate PIN settings.
2. Select **Disabled** if you do not need to set the Corporate PIN.
3. Select **Enabled** to set the Corporate PIN.
4. Enter the PIN number in the space provided and click **Update PIN**.

The screenshot shows a navigation bar at the top with tabs: Language, Terminal Info, Ethernet, Telephony, PIN, SMS, Admin, and Support. The 'PIN' tab is selected. On the left, a vertical menu lists: Terminal PIN, SIM PIN, SIM PIN2, SIM Lock, Service Provider PIN, and Corporate PIN. The 'Corporate PIN' option is highlighted. The main content area is titled 'Corporate PIN' and contains two radio buttons: 'Enabled' (unselected) and 'Disabled' (selected). Below the radio buttons is a text input field labeled 'Enter PIN:' with an empty field. A 'Update PIN' button is positioned below the input field.

### SMS

To change the **SMS service Center Address** number, enter the new number in the space provided and click **Update**.

The screenshot shows a navigation bar at the top with tabs: Language, Terminal Info, Ethernet, Telephony, PIN, SMS, Admin, and Support. The 'SMS' tab is selected. The main content area is titled 'SMS' and contains a text input field labeled 'Service Center Address:' with the value '+870772001799' entered. An 'Update' button is positioned below the input field.

#### Note:

**Please contact your distributor or service provider if you do not know the Service Center Address.**

### Admin

#### • Change Password

Follow these steps to change the Web Console login Password:

1. Enter the old password in the **Old Password** field.
2. Enter the new password in the **New Password** field.
3. Re-enter the new password in the **Re-type Password** field.
4. Click **Update**.  
The Web Console login password is now changed.



The screenshot shows the Web Console Admin interface. At the top, there is a navigation bar with tabs: Language, Terminal Info, Ethernet, Telephony, PIN, SMS, Admin (highlighted), and Support. Below the navigation bar, there is a sidebar with buttons: Change Password (highlighted), Firmware Upgrade, Reboot Terminal, Factory Reset, and Save. The main content area displays the 'Change Password' form with three input fields: 'Old Password:', 'New Password:', and 'Re-type Password:'. An 'Update' button is located below the 'Re-type Password' field.

#### • Firmware Upgrade

Firmware upgrade is to update your FB150 UE with the latest firmware. Please refer to your respective distributor for your firmware download.

#### Warning:

**DO NOT abort the upgrading process or unplug the power of the FB150 UE during the firmware upgrade process at any time. Doing so will corrupt the existing firmware loaded onto the FB150 UE.**

#### Note:

**Before upgrading the SABRE™ Ranger terminal with the new firmware, please read through the release notes that is provided with the new firmware.**

Follow these steps to upgrade the firmware for your FB150 UE:

1. Download or acquire the new firmware from your respective distributor and save it in your computer's hard drive.

#### Note:

**Make sure the FB150 UE is switched on and connected to the desktop/laptop computer using the LAN cable.**

## FB150 System User's Guide

2. Select **Firmware Upgrade**.

Read the **Disclaimer** message carefully before proceeding with the Firmware Upgrade.

The screenshot shows the web console interface with a navigation bar at the top containing: Language, Terminal Info, Ethernet, Telephony, PIN, SMS, Admin, and Support. On the left, a vertical menu includes: Change Password, Firmware Upgrade, Reboot Terminal, Factory Reset, and Save. The main content area displays the text: "Need to reboot in the Firmware Upgrade Mode (Safe Mode). Please do it manually if reboot failed." Below this text is a "Firmware Upgrade" button. A red "Disclaimer" section follows, stating: "Please be informed that firmware upgrading is done at your own risk and the equipment manufacturer or the designer will not be held responsible for any possible malfunction or damage to the system due to upgrading the firmware to your Satlink FB150 FleetBroadband system." At the bottom of the disclaimer, it says: "If you encounter any problems or have any questions, please contact Satlink for technical support."

3. Click **Firmware Upgrade**.

The FB150 UE will reboot into Safe mode.

**Waiting for Terminal to reboot into safe mode.**

4. Select the downloaded new firmware and click **Start**.

Firmware upgrade will take approximately 10 to 12 minutes to complete.

You will be prompted with the **Result: Firmware Upgrade Completed** message.

The screenshot shows the web console interface in "Safe Mode". The browser address bar shows "http://192.168.1.35/". The page title is "WEB CONSOLE" and the subtitle is "Safe Mode". On the left, a vertical menu includes: Home, Factory Reset, Save, Terminal Info, and About. The main content area displays two progress bars. The first bar is labeled "File 3 (4/10)" and shows a progress of 64% for the file "768000/1182056". The second bar shows a progress of 87% for the file "13635892/15524864". The status bar at the bottom shows "Done" and "Internet".

## FB150 System User's Guide

5. Click **Reboot Terminal** to reboot the FB150 UE.



### • Reboot Terminal

If you wish to reboot the FB150 UE, click **Reboot Terminal**. Click **Reboot** and wait for a few minutes to allow the UE to reboot. Refresh your browser to update the Web Console page after reboot.



## FB150 System User's Guide

### • Factory Reset

To perform a Factory Reset, enter the Security code **0000** and click **Factory Reset**.

#### Warning:

**All the settings and user data (e.g., Phone Book, GPS, etc.) of the FB150 UE will be cleared and reset to the default settings. If you do not wish to lose critical user data such as Phone Book, please use limited reset option available via Primary Handset**

Language	Terminal Info	Ethernet	Telephony	PIN	SMS	Admin	Support
----------	---------------	----------	-----------	-----	-----	-------	---------

Change Password	Security code: <input type="text"/>
Firmware Upgrade	<input type="button" value="Factory Reset"/>
Reboot Terminal	
<b>Factory Reset</b>	
Save	

### • Save

To power down the FB150 UE BDU using the main power switch, it is recommended to save the recent setting changes. To save the recent changes, click **Save Now**.

Language	Terminal Info	Ethernet	Telephony	PIN	SMS	Admin	Support
----------	---------------	----------	-----------	-----	-----	-------	---------

Change Password	<input type="button" value="Save Now"/>
Firmware Upgrade	<b>NOTE:</b>
Reboot Terminal	If you intend to power off the BDU using the main power switch, it is recommended to save the recent changes in settings by clicking on this button. Otherwise, changes made in last 15 minutes might not be saved in persistent storage memory. If you use the Primary Handset to power off the BDU, this action is not required.
Factory Reset	
Save	

## Support

Display information of the support telephone number, support email address, Support URL and Services URL. (The information shown are for sample purpose only.)

Language	Terminal Info	Ethernet	Telephony	PIN	SMS	Admin	Support
----------	---------------	----------	-----------	-----	-----	-------	---------

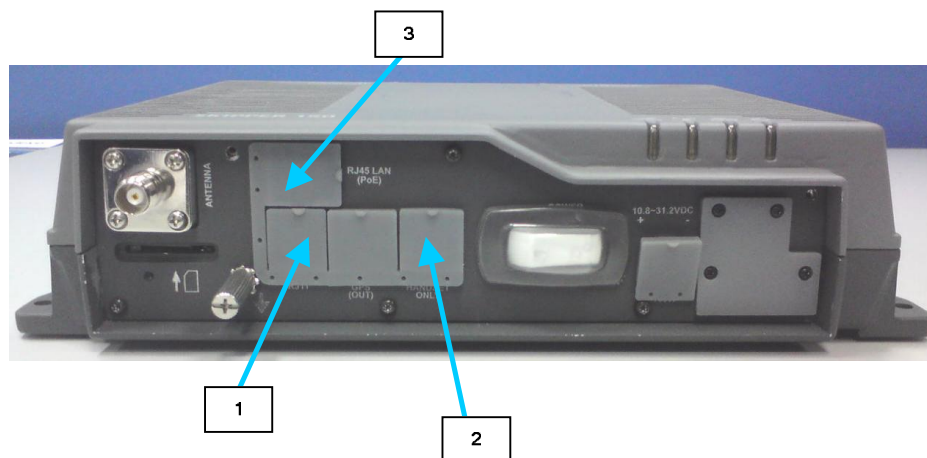
  

Inmarsat Distribution Partner Name:	Fleet Test Cards
Phone Number For Support:	<a href="tel:+442077281653">+442077281653</a>
Support E-Mail Address:	<a href="mailto:bgantest1@inmarsat.com">bgantest1@inmarsat.com</a>
Support URL:	<a href="http://support.inmarsat.com/mmi1.aspx">http://support.inmarsat.com/mmi1.aspx</a>
Services URL:	<a href="http://support.inmarsat.com/mmi2.aspx">http://support.inmarsat.com/mmi2.aspx</a>

## Chapter 5 – Connecting Devices with FB150 UE

### Available interfaces

There are multiple connectors available in the FB150 UE, meant for connecting to three different types of devices :(Standard Analog Phone and Primary Handset for voice calls and PC for data connection)



#### (1) Standard analog phone

The BDU has a dedicated connector (RJ11) for connecting to a standard analog phone.

#### (2) Primary Handset

The BDU has a dedicated handset connector (RJ45) for connecting the Primary Handset.

#### Note:

**The Primary Handset must only be connected to the dedicated HANDSET (Model Name: FB150-PH) connector on the BDU.**

#### (3) RJ45 Ethernet LAN (PoE) Port for DATA

The BDU has one Ethernet (LAN) connector (RJ45) supporting the Power over Ethernet (PoE).

## Connecting A Computer

To connect a computer to the FB150 BDU you need a LAN (Cat.5) cable.

1. Plug one end of the LAN cable to any of the four RJ-45 ports meant for DATA and the other end to your computer network card.
2. Use the Web Console as listed in the **Data Menu** section of *Chapter 4 - Using the Web Console*, to configure the FB150 BDU and activate a data connection.

## Configuring RJ-11 Voice Ports

PHONE port is to support for standard circuit-switch voice telephony services by connecting to a standard analog PSTN corded telephone . The voice call over BGAN satellite network is coded in 4kbps, AMBE+2 format. FB150 is default configured as shown below.

**Note:**


Language	Terminal Info	Ethernet	Telephony	PIN	SMS	Admin	Support
----------	---------------	----------	-----------	-----	-----	-------	---------

Interface
Port Configuration

Port	Call Type	Service Type	
Primary Handset	Incoming Call	Standard voice and 3.1kHz high quality voice/fax call	<a href="#">Update</a>
	Outgoing Call	Standard voice call	<a href="#">Update</a>
RJ11 PHONE Port	Incoming Call	None	<a href="#">Update</a>
	Outgoing Call	None	<a href="#">Update</a>
RJ11 FAX Port	Incoming Call	3.1kHz high quality voice/fax call	<a href="#">Update</a>
	Outgoing Call	3.1kHz high quality voice/fax call	<a href="#">Update</a>
RJ11 EXPANSION Port	Incoming Call	None	<a href="#">Update</a>
	Outgoing Call	None	<a href="#">Update</a>

Follow these steps to configure the ports using the Web Console:

1. Start the **Web Console**.
2. Click on **Settings**  icon.
3. Click on **Telephony** submenu.
4. Click on port configuration on submenu information area.

Language Terminal Info Ethernet **Telephony** PIN SMS Admin Support

Interface  
Port Configuration

Port	Call Type	Service Type	
Primary Handset	Incoming Call	Standard voice and 3.1kHz high quality voice/fax call	<a href="#">Update</a>
	Outgoing Call	Standard voice call	<a href="#">Update</a>
RJ11 PHONE Port	Incoming Call	None	<a href="#">Update</a>
	Outgoing Call	None	<a href="#">Update</a>
RJ11 FAX Port	Incoming Call	3.1kHz high quality voice/fax call	<a href="#">Update</a>
	Outgoing Call	3.1kHz high quality voice/fax call	<a href="#">Update</a>
RJ11 EXPANSION Port	Incoming Call	None	<a href="#">Update</a>
	Outgoing Call	None	<a href="#">Update</a>

5. Click on the **Service Type** list of the port you want to modify.
6. Click on **Update**.
7. To perform additional changes, repeat steps 5 and 6.



## Using An Standard Phone

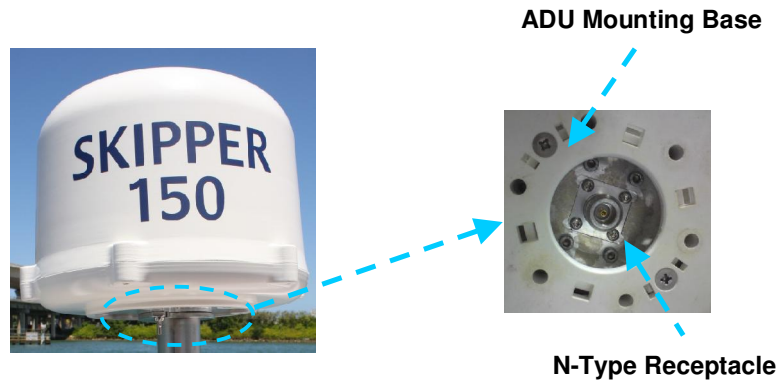
You can connect a standard analog phone to the **PHONE** port to make and receive voice calls.

When there is an incoming standard voice call, all the phones connected to those ports configured as standard voice call for 'Incoming call' will ring. Once one of them answers the call, all other phones will stop ringing.

## Chapter 6 – Installation of ADU

### Installation of ADU with antenna cable

The position of the ADU has to be kept away from the beam width of any search or tracking radar, which transmits radiating power, as well as from the radiations of HF/ VHF antennas. In addition, a safety compass distance is also to be taken into account



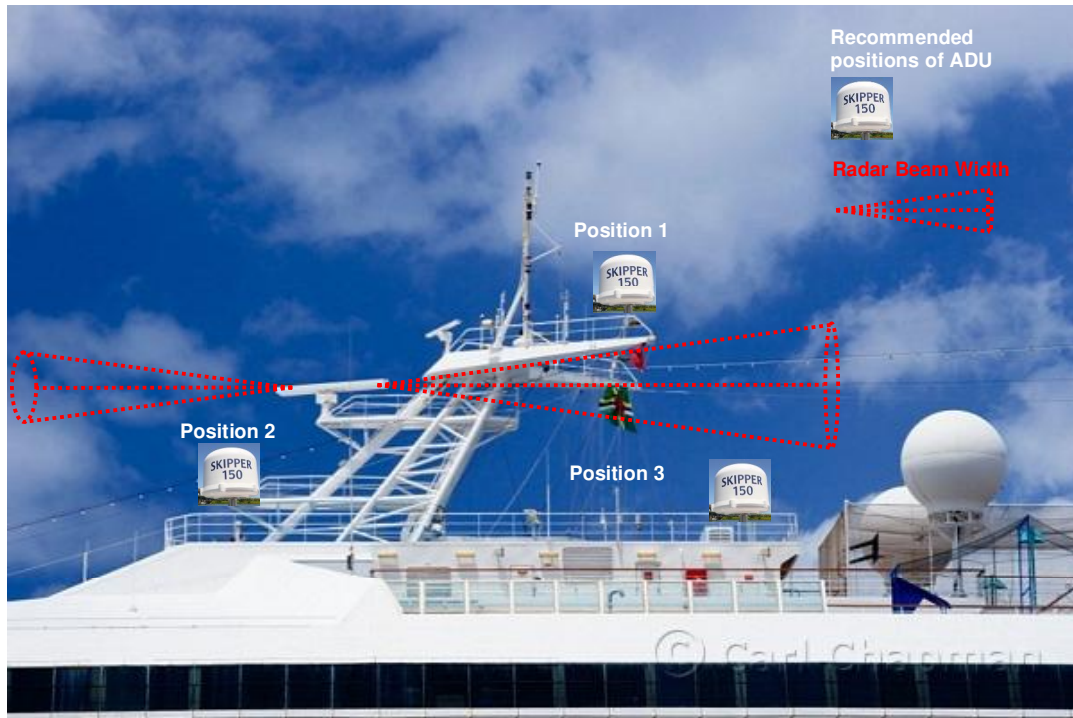
### Important notes to be followed before installing ADU

The following notes shall be observed:

1. The position of the ADU has to be kept away from the beam width of any search or tracking radar, which transmits radiating power.

With reference to the illustration, there are recommended mounting positions of the ADU where they are kept away from the red region area of the beam width. This way, the ADU will not be interfered by any transmitting radar. The angle of radar beam width normally ranges from 10° to 25° degrees with respect to the centre of the radar arm. However, it is worthwhile to check its manufacture's technical specification.

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2. The position of the ADU especially its line of sight to a satellite shall not be obstructed by any large obstacle in a vessel or ship. This will result in the degradation of the satellite signal. Examples of the large obstacles are as follow:
  - Upper deck and funnel of ship



- VSAT with its radome



## FB150 System User's Guide

- large mechanical structure mounting of any radar



3. For the safety reason, all personnel has to keep away at least 1-meter from the ADU.

### Connecting Antenna Cable

There is a coaxial connector at the base centre of the ADU where it is a N-type receptacle connector. The antenna cable terminated with N-type plug connector is to be inserted into the ADU first before proceeding to the installation of the ADU.

It is highly recommended to protect the coaxial connector by applying water-proof insulation tape to protect it due to any humidity conditions.

### Mounting of ADU

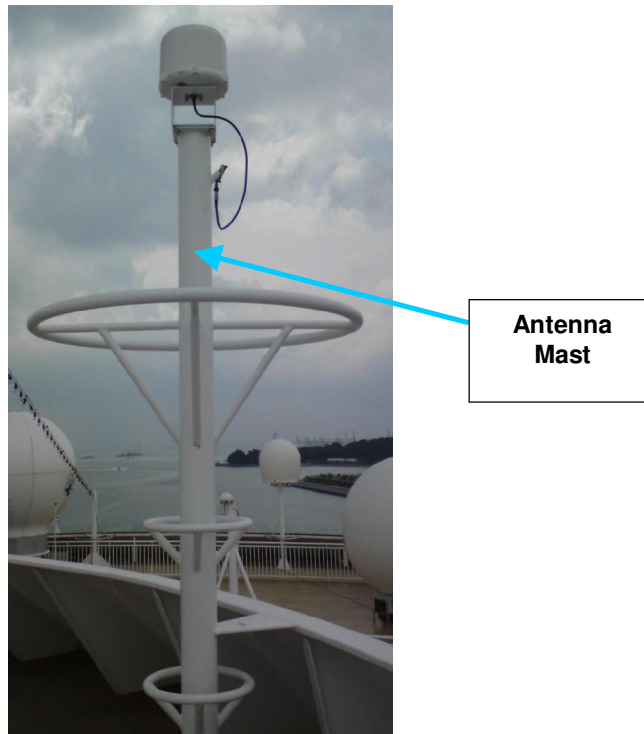
The mounting of the ADU depends on the structure of the vessel or ship. It can be mounted on either on long post or antenna mast (if available on the ship) as long as it is free of any shock or vibration.

### Mounting of ADU on Antenna Mast

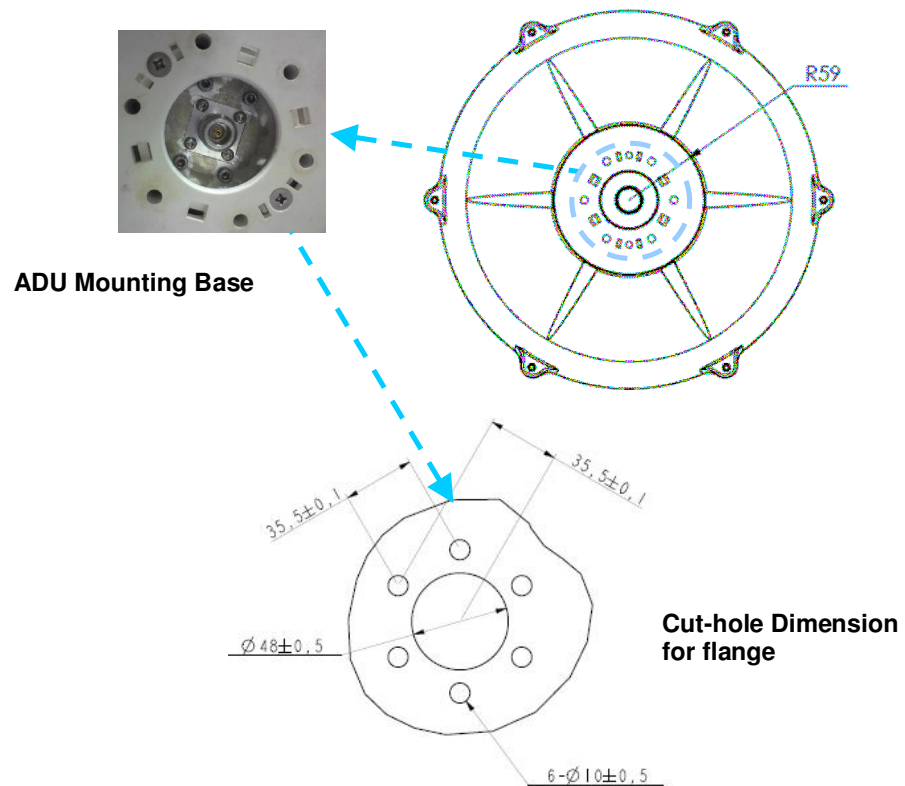
The requirements of the antenna mast are as follow:

- The physical size of the mast shall support the weight of ADU at 2.5kg and the physical dimension of  $\text{Ø}278\text{mm}$  with height of 228mm. An example of the antenna mast is illustrated as below.

## FB150 System User's Guide



- The mast should provide the internal hole for the installation of the antenna cable
- The flange (known as the top plate) of the mast shall meet the dimensions of the ADU's mounting base, where there are 6 holes.



## FB150 System User's Guide

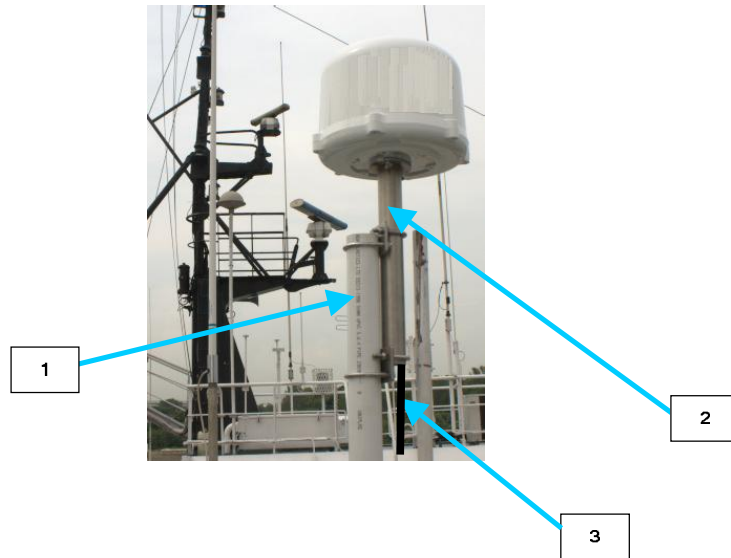
Note: In case of the existing mast's flange in a vessel or ship does not fit the ADU's mounting base's holes, a custom-made mechanical adaptation flange is to be designed and plate, which acts as an interface between the existing mast and the ADU.



## FB150 System User's Guide

### Mounting of ADU on Long Pole

The physical dimension of a long pole shall be preferably at 2 meter height with its diameter ranges from Ø35 to Ø 50mm. In addition, the standard pole mount kit must be used for the installation of the ADU onto the long post.



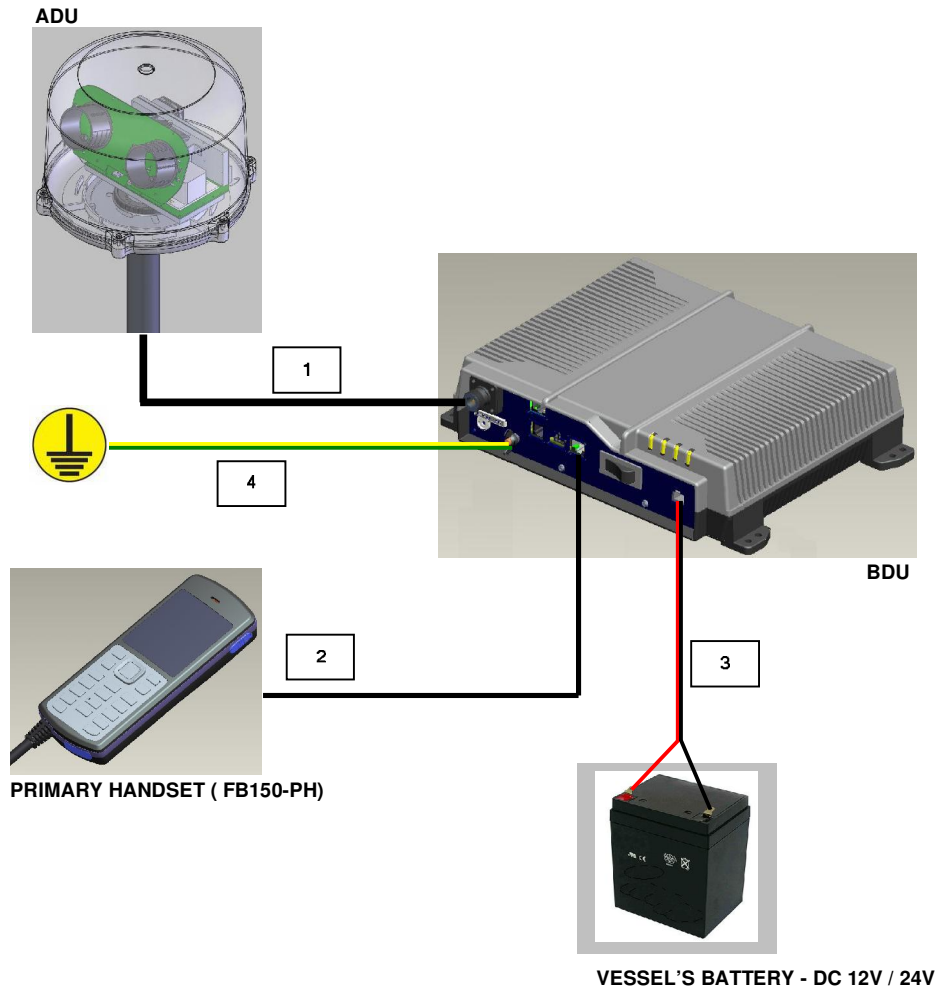
- (1) Long Post
- (2) Pole Mount
- (3) Coaxial Antenna Cable

The standard pole mount kit includes the detailed installation guide.

## Chapter 7 – Installation of BDU

### Installation of BDU

An overview of BDU's connections with primary handset cable, power cable and antenna cable is illustrated as below.



- (1) Antenna Cable
- (2) Primary Handset Cable
- (3) Power Cable
- (4) Grounding Cable \*

*\* Note: The grounding cable shall be connected to a vessel's hull as the earth / grounding point.*

### Important notes to be followed before installing BDU

The following notes shall be noted:



## SKIPPER 150 System User Guide

1. The BDU shall be placed in any room, mostly a bridge of a vessel, where its ambient temperature ranges from  $-25^{\circ}\text{C}$  to  $+50^{\circ}\text{C}$ .
2. The desktop or the wall surface shall support the dimension and weight of 287 x 229.6 x 69.7mm and 2.8kg respectively.
3. The BDU shall be placed away from a high-vibrated engine as far as possible.

### Mounting of BDU

The BDU is designed for the desktop, wall surface or top ceiling installation.

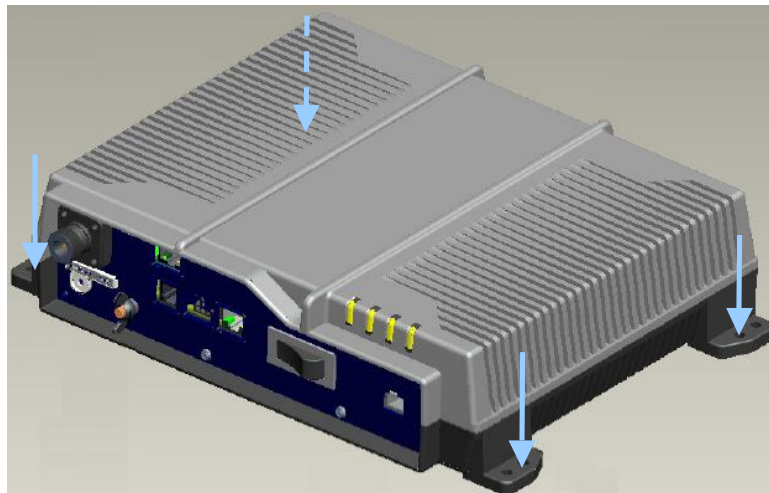
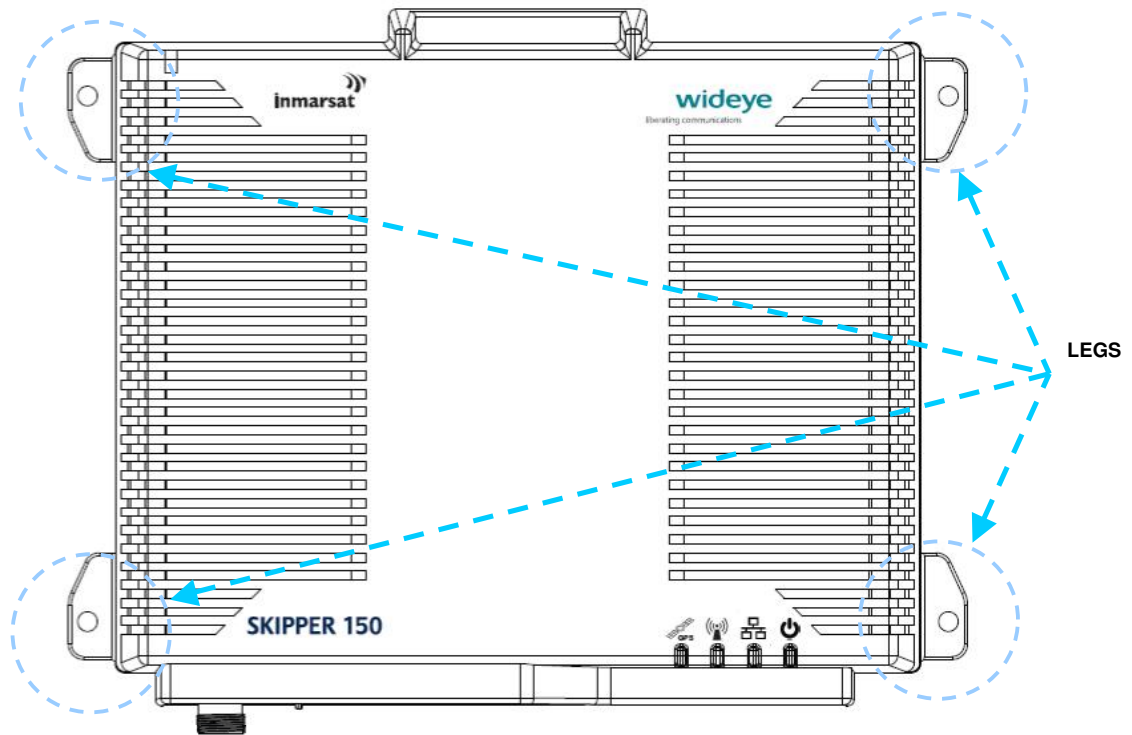
### BDU in Desktop Installation

1. The BDU can be placed on the table or desktop.
2. The BDU has its rubber feet which rest on the desktop in a way that they can prevent it from being shaken or moveable. In addition, it is not necessary to use M5 x 16 self-tapping screws to lock the legs of BDU.



## BDU on Wall Installation

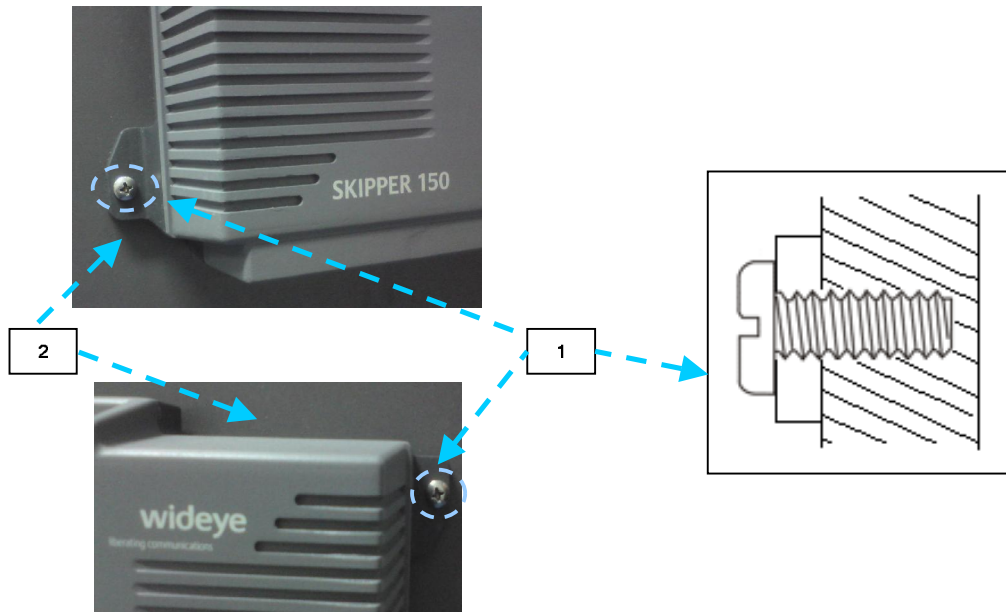
1. The BDU can be mounted on the wall surface by means of using M5 x 16 Pan Head Self Tapping screws tightening on the legs.



The above illustration shows the arrows where M5 x16 Pan Head Self tapping screws shall be applied to tighten the BDU on the wall surface via its legs

## SKIPPER 150 System User Guide

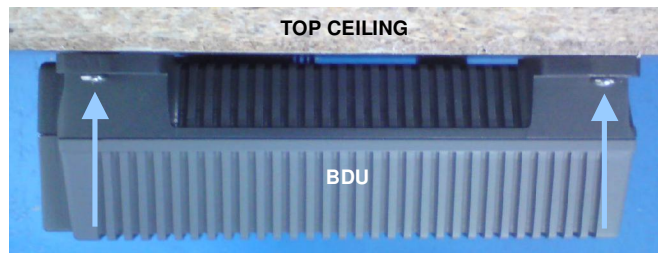
2. Place the BDU on the wall surface with the desired location. Insert and tighten a M5 x 16 Self Tapping screw on one of the BDU legs.



1. M5 Pan Head Self tapping screw on BDU's legs
2. Wall Surface

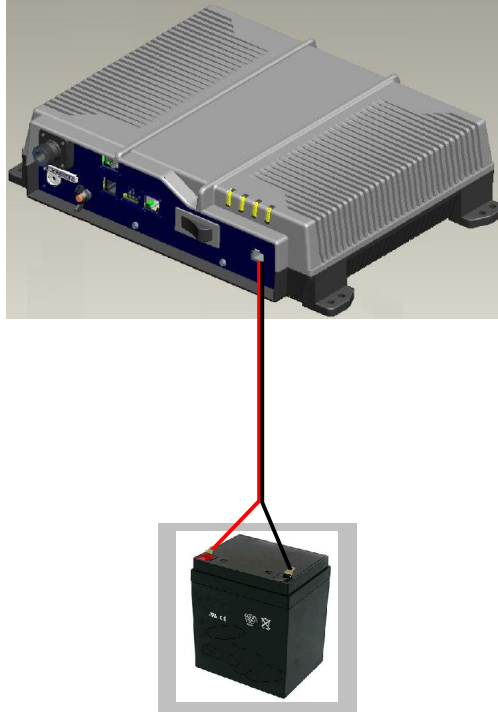
## BDU on Top Ceiling Installation

The top ceiling installation is similar as the wall installation.



The above illustration shows the arrows where M5 x16 Pan Head Self tapping screws shall be applied to tighten the BDU on the top ceiling via its legs

### Connecting power cable to BDU



1. It is important that the first step is to connect the power cable to the vessel's source of 12 V / 24 VDC with the color code of wiring:
  - Red Wire shall connect to (+)
  - Black Wire shall connect to (-)
2. Insert the power connector into the BDU's power connector.

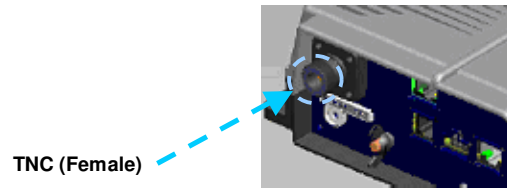
### Connecting antenna cable to BDU

1. The antenna has 2 different type of connectors which are both terminated at each end; TNC (Male) and N-type (Male) respectively.
2. The N-type terminated at the end of antenna cable is catered for its connection to the ADU. Please refer to Chapter 6 for more information on the installation of ADU.



## SKIPPER 150 System User Guide

3. Plug the TNC(Male) at the other end of the antenna cable into the BDU's antenna connector, which is TNC (Female).



4. If an user wants to use the existing antenna cable terminated with both N-type connectors on the vessel, then TNC(Male)-to-N(Female) adaptor is required on the BDU's connector.



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## **Warranty**

Addvalue Communications Pte Ltd has made every effort to ensure the correctness and completeness of the material in this document. Addvalue Communications Pte Ltd shall not be liable for errors contained herein. The information in this document is subject to change without notice. Addvalue Communications Pte Ltd makes no warranty of any kind with regard to this material, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose.

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**FB150 System User's Guide [June 2009]**

## Safety Information

For your safety and protection, read this entire user manual before you attempt to use the FB150 FleetBroadband System. In particular, read this safety section carefully. Keep this safety information where you can refer to it if necessary.

The following general safety precautions must be observed during all phases of operation, service and repair of this equipment. Failure to comply with these precautions or with specific warnings elsewhere in this manual violates safety standards of design, manufacture and intended use of the equipment.

Addvalue Communications Pte Ltd assumes no liability for the customer's failure to comply with these requirements.

### Observe marked areas

Under extreme heat conditions do not touch areas of the terminal or antenna that are marked with this symbol, as it may result in injury.



### Microwave radiation hazards

During transmission the antenna in this system radiates Microwave Power. This radiation may be hazardous to humans close to the antenna. During transmission, make sure that nobody gets closer than the recommended minimum safety distance.

On the FB150 FleetBroadband System, the minimum safety distance on the focal line to the antenna panel is 0.6m, based on a radiation level of 10 W/m<sup>2</sup>. The radiation level is 100 W/m<sup>2</sup> at a distance of 0.2m from the antenna panel.

### Distance to other equipment

Do not move the antenna closer to radars than the minimum safe distance specified in the installation manual - it may cause damage to the antenna. The equipment must be installed with the following minimum safe distances to magnetic steering compass:

FB150 FleetBroadband antenna: min. 1.1m

FB150 FleetBroadband terminal: min. 0.3m.



User access to the interior of the terminal is prohibited. Only a technician authorized by Addvalue Communications Pte Ltd may perform service - failure to comply with this rule will void the warranty. Access to the interior of the antenna is allowed, but only for replacement of certain modules - as described in the Installation manual. General antenna service must be performed only by a qualified technician authorized by either Addvalue Communications Pte. Ltd or SpaceCom A/S.

### Do not service or adjust alone

Do not attempt internal service or adjustments unless another person, capable of rendering first aid resuscitation, is present.

### Grounding, cables and connections

To minimize shock hazard, the equipment chassis and cabinet must be connected to an electrical ground. Both terminal and antenna must be grounded to the ship. For further grounding information refer to the Installation manual.

Do not extend the cables beyond the lengths specified for the equipment.

The cable between the terminal and antenna can be extended if it complies with the specified data concerning cable losses etc.

All cables for the FB150 FleetBroadband system are shielded and should not be affected by magnetic fields. However, try to avoid running cables parallel to AC wiring as it might cause malfunction of the equipment.

### Power supply

The voltage range is 10.5 - 32 VDC; 9.5A - 3.1A. It is recommended that the voltage is provided by the 24 VDC power bus on the ship. Be aware of high start-up peak current: 12A @ 24V, 5ms.

If a 24 VDC power bus is not available, an external 115/230 VAC to 24 VDC power supply can be used.

**Equipment ventilation**

To ensure adequate cooling of the terminal, 5cm of unobstructed space must be maintained around all sides of the unit (except the bottom side).

The ambient temperature range of the terminal is: -25°C to +55°C.

Do not operate in an explosive atmosphere.

Do not operate the equipment in the presence of flammable gases or fumes.

Operation of any electrical equipment in such an environment constitutes a definite safety hazard.

**Keep away from live circuits**

Operating personnel must not remove equipment covers. Component replacement and internal adjustment must be made by qualified maintenance personnel. Do not replace components with the power cable connected. Under certain conditions, dangerous voltages may exist even with the power cable removed. To avoid injuries, always disconnect power and discharge circuits before touching them.

**Obtaining Licensing For Inmarsat Terminals**

Under rights given under ITU Radio Regulations, local telecommunications administrations establish and enforce national rules and regulations governing types of emissions, power levels, and other parameters that affect the purity of signal, which may be radiated in the various frequency bands of the radio spectrum.

To legally operate Inmarsat equipment, it is necessary to obtain permission from the local telecommunications regulatory authorities of the country you are operating from. Using your equipment in any country without permission causes you to run the risk of confiscation of the equipment by the local authorities. The normal procedure to bring such equipment into another country is to apply for a license before travel. If a license has not been obtained before travel, the equipment may be put in to storage by local authorities until such time license is obtained.

**Failure to comply with the rules above will void the warranty!**



**FB150 System User's Guide**

Release date: **XX** June 2009

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## **Regulatory Information**

### **Federal Communication Commission Notice**

**FCC Identifier: QY9-SKIPPER150WE**

**USE CONDITIONS:**

This device complies with part 15 of the FCC Rules. Operation is subject to the following two Conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

**NOTE:**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

**IMPORTANT NOTE: EXPOSURE TO RADIO FREQUENCY RADIATION**

This Device complies with FCC & IC radiation exposure limits set forth for an uncontrolled environment. The Antenna used for this transmitter must be installed to provide a separation distance of at least 100cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter

**FCC CAUTION:**

Any Changes or modifications not expressly approved by the manufacturer could void the user's authority, which is granted by FCC, to operate this satellite FleetBroadband SKIPPER150 terminal.

## **SKIPPER150 System User Guide – Regulatory Information**

### **Industry Canada Statement:**

#### **IC Identifier:5023A-SKIPPER150WE**

This device complies with Radio standard specification RSS -170 of Industry Canada Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

#### **IMPORTANT NOTE: Radiation Exposure Statement**

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. This antenna used for this transmitter must be installed to provide a separation distance of at least 100cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

### **Declaration of Conformity:**

Addvalue Communications Pte Ltd, 190 Changi Road, #02-02 MDIS Building, Singapore 419974 declares under our sole responsibility that the Product, brand name as Wideye and model: SKIPPER 150 Fleetbroadband satellite communication system, to which this declaration relates, is in conformity with the following standards and/or other normative documents:

ETSI EN 301 444, IEC60945 / EN 60945, IEC 60950-1 AND EN 60950-1, ITU-R M.1480

We hereby declare that all essential radio test suite have been carried out and that the above named product is in conformity to all the essential requirements of Directive 1999/5/EC.

The Conformity Assessment procedure referred to Article 10 and detailed in Annex [III] or [IV] of Directive 1999/5/EC has been followed with involvement of the following notified body(ies): TIMCO ENGINEERING, INC., P.O BOX 370,NEW BERRY, FLORIDA 32669.

Identification mark: 1177 (Notified Body number)

The technical documentation relevant to the above equipment are held at:

- Addvalue Communications Pte Ltd, 190 Changi Road, #02-02 MDIS Building, Singapore 419974.
- Signed by Mr. Tan Khai Pang (Chief Technology Officer, 17July, 2009) and Mr. Prabakar Kuttaniseeri (Manager-Quality Engineering, 17 July, 2009).