

### DEVICES DESCRIPTION

#### ❑ A3LA-R

The A3LA-R is an Iridium satellite modem comprising a 9523 L-band transceiver (LBT) with an extended input voltage range and is designed to operate with the Iridium network. Services supported include Dial-up data switch, Direct internet connection (or NIPRNET connection), Direct internet connection using Apollo Emulator (only for DoD EMSS Gateway), SMS, SBD, RUDICS, and voice when combined with the DPL audio handset. The A3LA-R can be controlled by any data terminal equipment (DTE) capable of sending standard AT commands via a serial port.

#### ❑ A3LA-R-MIL

The A3LA-R-MIL is a variation of the original A3LA-R. It functions the same as the A3LA-R but is also certified to MIL-STD-810G standards and is IP67 rated.

#### ❑ A3LA-R-MOD

The A3LA-R-MOD is a variation of the A3LA-R that has been modified to satisfy UK requirements. It functions the same as the A3LA-R, except the mounting holes specifications for the A3LA-R-MOD are different from the A3LA-R.

**IMPORTANT:** The antenna must have a clear view of the sky during transmission.



## DEVICE DESCRIPTION (continued)

❑ **DB25 Multi-Interface Connector:** The multi-interface connector is a male 25-pin miniature D-sub type that includes five interfaces—RS232, DC input power, ON/OFF control line, analog audio, and Digital Peripheral Link (DPL).

❑ **Antenna:** NAL Research recommends the SYN7391-C antenna.

**CAUTION:** Do not connect or disconnect the antenna while device is powered. Never feed supply voltage into the active antenna.

❑ **LED:** P for power indicator.

❑ **RS232 Data Interface:** This interface allows a connected DTE to utilize the A3LA-R's modem functionality through standard AT and extended sets of AT commands.

❑ **POWER:** The A3LA-RG accepts either 4.0 V – 5.4 V or 5.0 V – 32.0 V input through pin #4 and pin #16. Note that two pins are provided for the external DC input and two pins are provided for the associated external ground input (pin# 3 and pin#17). The A3LA-R is shipped with hardware set for +5.0 V to +32 V input. It can be changed to +4.0 V to +5.4 V input through an internal jumper. The modem will automatically be ON/OFF when DC power is applied/removed.

❑ **Change Voltage Input to +4.0 V to +5.4 V**

❑ **CAUTION:** DISCONNECT POWER BEFORE RESETTING THE JUMPER

1. With the device turned off, remove the modem's bottom plate to find the jumper.
2. Set the red jumper onto the middle and left pins.  
NOTE: To reset the input voltage range back to 3.6 V to +5.3 V, set the red jumper onto the middle and right pins.

SYNC7391-C



Red jumper used to set input voltage range

## DEVICE DESCRIPTION (continued)

### ❑ Audio Interface

With the DPL audio handset model DPLS0401-X and DB25 data kit model HRC-24-8R, the A3LA-RG can be used both as a data modem and a satellite phone. Both models can be purchased separately from NAL Research. The modem's status can be displayed on the handset LCD. The red power button on the DPL handset can be used to power reset the A3LA-R.



## CONFIGURE DEVICE TO OPERATE

1. With the device turned off, remove the SIM cover located on top of the modem.
2. Insert the SIM chip (facing down) into the SIM chip reader bracket, ensure SIM chip cut-off aligns with the SIM reader, and then lower and lock the SIM chip reader's bracket.
3. Connect the HRC-24-8R Data Kit to the DB25 multi-interface connector on the device.
4. Connect the DPL Handset phone to the HRC-24-8R Data Kit.
5. Connect the antenna connector to the Iridium connector port on the device.
6. Verify the antenna has full view of the sky and the cable loss between the modem and antenna is <3 dB.
7. Supply DC power to the power input of the HRC-24-8R data kit.
8. Verify Power LED is illuminated.
9. Wait for about 15 seconds for the modem to register with the Iridium satellite network. The A3LA-R is basically a "black box" with one Power LED indicator (power-on status).
10. Verify the LCD screen on the DPL handset is ON with the word "Iridium" written across the LCD screen.
11. Dial desired phone number using Iridium's dialing format. Refer to the Iridium DPL Handset user guide.