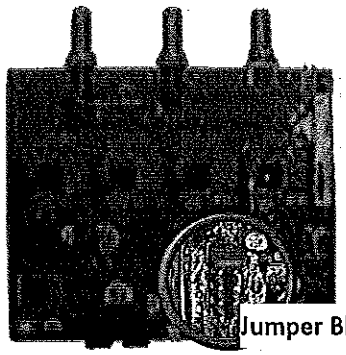
7.2.9. Observe Antenna Initialization

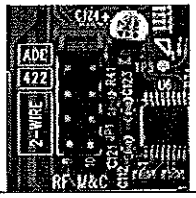
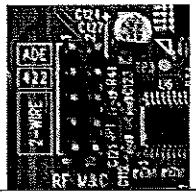
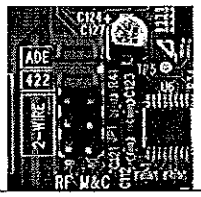
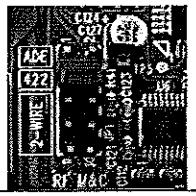
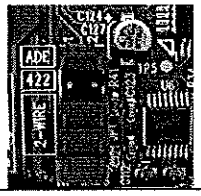
Observe the Antenna Initialization as described in the Troubleshooting section below.

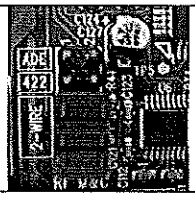
7.3. 400MHz Modem Configuration

The 400MHz FSK modem PCB has a jumper block (located component side of PCB) that is used to configure it for Above Decks or Below Decks operation as well as to configure its' serial communications protocol (RS232, RS422, or RS485). Based on the desired mode of operation, the appropriate jumper(s) will be installed at the factory, prior to shipment of a completed system. In general, no field modifications to these jumper settings are required, except when it is required to re-configure a modem to operate in a different mode of operation (i.e. converting a spares kit below decks modem to operate as an above decks modem ***or*** re-configuring an ADE Modem for M&C integration with a newly installed RF package change that requires RS485 communications instead of RS422). Refer to the table below for the proper jumper settings.



Jumper Block Location

Assembly Dash Number	Modem Mounting Location	Serial Communication Protocol	Jumper Settings	Visual Jumper Reference
-1	Above Decks	RS232	1-2	
-2	Below Decks	RS232	None	
-3	Above Decks	RS422	1-2 3-4	
-4	Below Decks	RS422	3-4	
-5	Above Decks	2 Wire RS485 (Half Duplex)	1-2 5-6 7-8 9-10	

-6	Below Decks	2 Wire RS485 (Half Duplex)	5-6 7-8 9-10	

7.4. 400 MHz LED Indicators

For diagnostic purposes, the 400MHz FSK Modem Assemblies have an LED Indicator (located to the on the bottom left hand side of the Enclosure for BDE modems and directly underneath the Rotary Joint port on the 09 Series PCU). By observing the amount of amber colored flashes during power up, the modems configuration may be established. You can also verify the communications link between above decks and below decks modems themselves. Refer to the below list for an explanation of the different LED states.

- Upon power up, the modems' LED will flash amber. The number of flashes indicates the dash number configuration of the modem. Refer to the configuration chart above for the appropriate dash configuration for your modem assembly.
- A flashing Red LED indicates no communication between modems (2 failed channels).
- An LED alternating Red and Green indicates a single channel failure.
- Solid green indicate dual channel communications lock between modems (i.e. there is enough signal being received to establish communications).

Below Decks Modem Assembly	Above Decks Modem (Located in PCU Assembly)

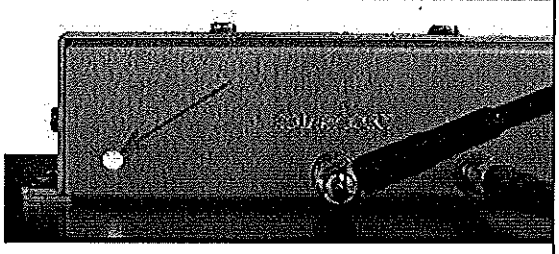
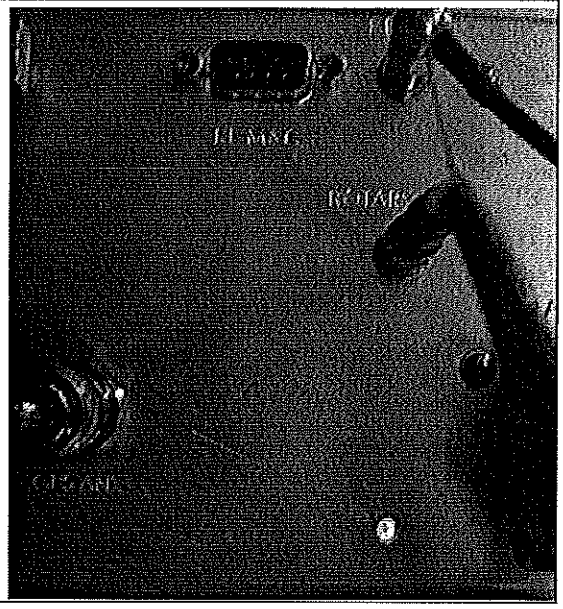

	

Figure 8 LED Illuminated Green	

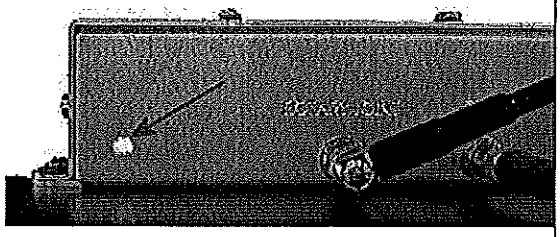



Figure 9 LED Illuminated Red	

7.5. 400 MHz Modem Signals

7.5.1. Pedestal M&C

RS-422 Antenna Monitor and Control signals pass from the ACU's J4 Antenna Port, through the PED M&C port of the 400MHz base modem and are modulated and demodulated. The modulated signal(s) are then diplexed with the RxIF signal. This modulated signal travels on the Rx IF cable, between the MUX Rack Panel and then into 400 MHz pedestal modem. The Pedestal modem then converts the RF Signal back to RS-422, before routing to the M&C port of the Pedestal Control Unit via an interface cable.