



INNOVATIVE COMMUNICATION SOLUTIONS



BDA INSTALLATION PROCEDURE

DO NOT APPLY A.C. POWER TO THE RHBDA UNTIL CABLES ARE CONNECTED TO BOTH PORTS OF THE RHBDA AND THE ANTENNAS.

1. Side the RHBDA into the 19" accessible rack. Mount the RHBDA to the rack. Using appropriate screws, attach the RHBDA to the rack at the four mounting holes on the Front panel.
2. Ensure that the isolation between the donor antenna and the service antenna is at least 12 dB greater than the RHBDA gain. (Use the higher of the Uplink and Downlink gains reported on the RHBDA test data sheet).
3. Connect the cable from the service antennas to the RHBDA connector labeled "MOBILE" and connect the cable going to the Base RF Signal Source to the RHBDA connector labeled "UL OUT", and the cable coming from the Base RF Signal Source to the RHBDA connector labeled "DL IN".
4. Verify that all attenuation settings are positioned at 30 dB.
5. Connect the AC power cord to the Rack Unit. Turn the power switch to the "ON" position. Verify that each **Green** "Power ON" lamp, Laser alarms LED's are illuminated.

Installation of the Rack RHBDA's is now complete. To adjust the gain controls to suit the specific signal environment, refer to the next section of the manual.

Note: For repeat installations of existing equipment, make sure the attenuation is positioned to its maximum setting (30 dB). After verification of the attenuation, follow the above steps starting with step 1.

RHBDA OPERATION

Refer to figure 1 for adjustment access location and label.

Variable Step Attenuator

The RHBDA's gain can be reduced on the Rack Unit by up to 30 dB on the Uplink and Downlink, in 2 dB steps using the variable step attenuators. Gain adjustment is made with rotary switches accessible via the Front panel on the RHBDA enclosure. Arrows on the shafts of these switches point to the value of attenuation selected. RHBDA gain can be determined by subtracting the attenuation value from the gain reported on the RHBDA Test Data Sheet for that side of the unit. The attenuators are labeled for Uplink and Downlink.

ALC (Automatic Level Control)

To minimize intermodulation products, each amplifier in the RHBDA contains an ALC feedback loop. The ALC circuit senses the output power and limits it to the factory preset level of +5 dBm for the Uplink and +36 dBm for the Downlink. Two red indicator lamps are located on the Front panel which illuminate when the output power exceeds the ALC set point.

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To establish proper operating gain on the Rack Unit, start with the Downlink. Observe the red indicator lamp on the front panel. Units are shipping with maximum attenuation. Decrease attenuation one step at a time until the lamp is lit. Then, using the Downlink step attenuator, increase the attenuation until the lamp goes off. The Uplink ALC function is to avoid overloading the fiber optic transceiver. Setting the attenuation of the Uplink will depend on minimum and maximum distance from the mobile to sever antennas. The level indicator is accurate to +/- 0.4 dB of the ALC set point.

Operation of the RHBDA-PS8-0.1/25W-55-A at maximum gain (Minimum Attenuation) with greater than -10 dBm average power incident on the MOBILE port may cause damage to the RHBDA.

Figure 1
Rack Front Panel Adjustment

