

**BizcomUSA**  
**ASY-0600-13 RS-232 Data PCB**  
**Installation and Operation**  
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This document explains the installation and operation of the ASY-0600-13 RS-232 Data Board.

**I. Installation Procedure**

- A. Unplug the ESP604 power cable from any power source before performing the following installation.
- B. Unscrew the four (4) screws securing the plastic top cover of the ESP604 radio, then remove the cover by gently lifting on the sides.
- C. Remove the metal shield by prying up one corner using a small blade screwdriver or knife.
- D. If it is present, remove the adhesive-backed metal foil from the rear data connector slot.

**CAUTION: Damage to the radio and/or the Data PCB may result if the cable and PCB are not installed properly.**

- E. Plug the free end of the Data PCB cable into J103 located near the right rear of the exposed radio circuit board. NOTE: J103 has a key slot on its left edge. The corresponding tab on the Data cable should slide into this slot with the cable extending to the right. The red stripe on the Data cable will be facing the rear of the radio.
- F. Move the ASY-0600-13 PCB into position so that the 9-pin connector extends out the rear of the radio through the data connector slot. The bottom of the ASY-0600 Data PCB will be facing up when installed correctly. Secure the PCB in place with the supplied screws.
- G. Strip approximately ¼” of the insulation from both ends of two 5” pieces of 28 or 30 gauge single-stranded wire. Solder the two wires between JU3 and the Data PCB as shown in the accompanying picture. The connections are:

<u>ESP604 PCB</u>	<u>Data PCB</u>
JU3-A . . . . .	P1-2
JU3-B . . . . .	JU1-A

- H. Replace the metal shield and the top cover.

## II. Operation

### A. Physical Connection

Refer to the ESP604 Instruction Manual, Section 6.5, for information regarding physical connection to a Data Terminal.

### B. System Configuration

The following parameters must be set for proper system operation:

1. The ESP1000/1100 repeater must be set for Trunked or Conventional operation – not Basestation.
2. The ID chosen for Data operation must be activated in the repeater controller.
3. The ESP604 must be programmed for Asynchronous Data operation, and a Data ID programmed for the mode.
4. The transmitting Data Terminal plugged into the rear Data connector must observe proper data handshake protocol. The sequence is as follows:
  - a. The Data Terminal waits for a low level on DSR before initiating a transmission.
  - b. The Data Terminal pulls DPTT low to signal its intent to send a data packet.
  - c. The Data Terminal waits for a low level on CTS before sending the data packet.
  - d. The Data Terminal returns DPTT high following data transmission.
5. The CTS Delay must be set between 4 (~.5 second delay) and 8 (~1 second delay) for reliable operation. The actual delay required varies from system to system, and is normally determined empirically.

