

WX/ASR Basic Operation and Baseline Configuration

Annex D: RCP8 Connector Panel Wiring

Prepared by: SIGMET, Inc.
2 Park Drive, Unit 1
Westford, MA 01886
TEL (978) 692-9234
FAX (978) 692-9575
support@sigmet.com

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Document Scope

The RCP8 Connector Panel provides the I/O to/from the radar system. This annex provides the detailed pin assignments for interconnection of the to the radar system. The wiring is described in a set of attached tables for the following:

- Orbit Pedestal Signals
- Wave Guide Switch Wiring
- Miscellaneous Wiring
- Transmitter Wiring
- Rx Plate Wiring

In addition, special aspects of the interface to the Orbit pedestal tachometer and drive signals are provided in the sections below.

Orbit Tachometer Input Pot Adjustment

The azimuth and elevation tachometers are input into the RCP connector panel. There are potentiometers on the back of the panel that are used to adjust the voltage span to the A/D convertors that digitize the tach signals. The potentiometers were adjusted during the stabilization such that a 9V (battery) input yields the following “T” values as viewed using the antx “monitor” command:

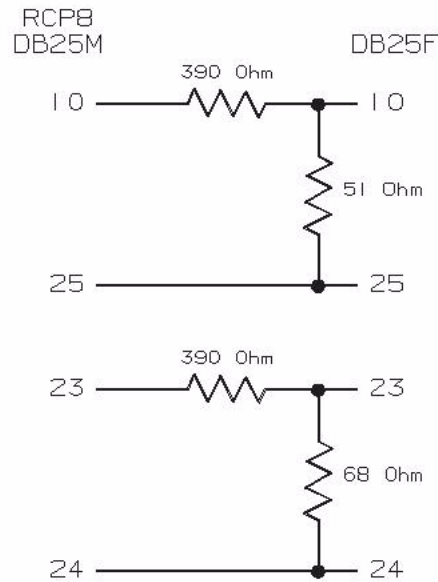
- AZ Tach 9VDC on J9: Pins 8 (+) and 21 (-) produces 73.4 “T” units
- EL Tach 9VDC on J9: Pins 9 (+) and 22 (-) produces 99.7 “T” units

Note that when installing a spare connector panel on either Radar A or Radar B, a 9-volt battery should be used to input a test voltage into the AZ and then the EL tach input and then the potentiometers on the connector panel adjusted such that the “T” values as viewed in the monitor command match the values above.

IMPORTANT: A SPARE CONNECTOR PANEL WILL NOT FUNCTION PROPERLY UNTIL THE TACHOMETER POTENTIOMETERS ARE PROPERLY ADJUSTED AND MAY CAUSE DAMAGE TO THE ANTENNA SYSTEM. THE SINGLE SUPPLIED CONNECTOR PANEL HAS BEEN ADJUSTED PER PRIOR AS-BUILT DOCUMENTATION.

Orbit Antenna Controller External Resistor Divider

Because of the un-expected high-gain response of the Orbit Antenna Servo Amplifiers, an external resistor divider needed to be fabricated for the Orbit antenna controller. This resistor divider, is packaged in a DB25 shell with M-F connectors (similar to a null modem), which is connected to the RCP8 output panel on connector J9



NOTE: ALL OTHER SIGNALS ARE WIRED PIN FOR PIN STRAIGHT THRU