

APPENDIX A - MOUNT SPECIFIC DATA

For AVL TECHNOLOGIES' 1.5m. ERA w/o polarization

Mount Description

This appendix describes unique RC3050 functions for an AVL mount mated with a 1.5m. ERA reflector with no polarization motor. This mount variation will be designated **A8**. All AVL mobile mounts supported by the RC3050 use 36 VDC motors thus requiring the RC3050A hardware configuration.

System Interfaces

All AVL mounts provide the basic RC3050 interface requirements. Azimuth stow and elevation UP, DOWN and STOW limit switches are provided. The A8 version does not require polarization interfaces.

Sensor Rigging and Calibration

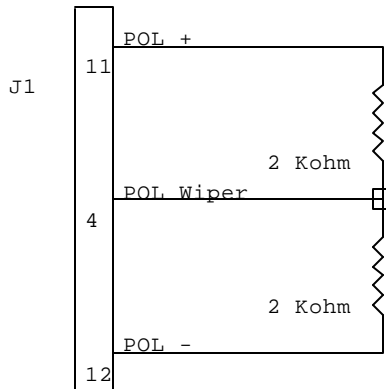
To calibrate elevation, the front of the dish should be placed in the vertical position. The resulting RF boresight angle from this position is 20.0 degrees. For the A8 version, a target inclinometer voltage of 1.69 VDC should be achieved.

Electrical Connections

The A8 version requires the standard wiring described in the baseline manual with the exception of wiring for the polarization axis.

Motor drive lines for the polarization axis do not have to be supplied on connector J7.

Polarization drive sense lines must be shunted to make it appear to the RC3050 that a polarization potentiometer is positioned at its center of travel. The circuit shown below describes how to achieve this result.



NOTE: failure to implement the above circuit at the J1 connector will result in the RC3050 electrically sensing that the polarization axis is beyond its limit of travel. Backup hardware circuitry in the RC3050 may prevent other antenna movement if this is the case.

Operation Overview

The A8 version of software will function as described in the baseline manual with the exception that polarization functions have been deleted. The following lists the functions deleted due to the lack of polarization motorization:

- In MANUAL, DEPLOY and STOW modes, no polarization angle or limit information will be displayed.
- In DEPLOY mode the RC3050 will move the antenna to an elevation target of 20.0 degrees and an azimuth target of 0.0 degrees.
- In STOW mode, the RC3050 will move the antenna to an azimuth target of 0.0 degrees and then move the elevation axis down until it reaches the elevation stow switch.
- No POLARIZATION REFERENCE VOLTAGE or POLARIZATION LIMIT maintenance screens will be displayed.