

## APPENDIX A - MOUNT SPECIFIC DATA For AVL TECHNOLOGIES 1278K-11

**Date: 6 June 2011**

**Software Version: 1.24**

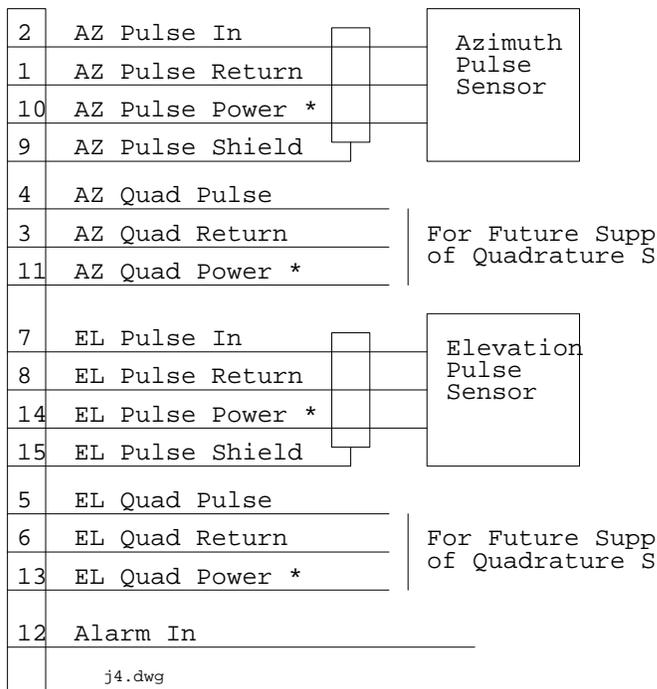
### Mount Description

This appendix describes unique RC3050 functions for an AVL 1278K-11 mount. This mount variation will be designated **UE**.

### 2.2 Electrical Connections

The UE version requires the standard wiring described in the baseline 3050 manual plus additional pulse sensing.

In order to sense the activation of the Elevation Stow switch, the UE version requires the use of single phase pulse type sensors. The pulse signals are input on connector J4.



### 2.2.4 Limit Switches

On the UE mount, the activation of the elevation UP, DOWN and STOW limit switches are staggered and happen every 54 degrees of elevation movement. Recognition of the elevation limit switch states are therefore a combination of switch input sensing and sensed elevation axis position.

The UP limit will be declared when the UP limit switch is sensed and the inclinometer derived elevation angle is above 54 degrees.

The DOWN limit will be declared when the DOWN limit switch is sensed and the inclinometer derived elevation angle is below 10 degrees. Once activated, software "hysteresis" will prevent the DOWN state from going inactive until an inclinometer derived elevation angle above 10.5 degrees is sensed.

The elevation STOW limit will be declared when the STOW switch is sensed and the elevation pulse count is indicative of an elevation angle less than -36 degrees.

**WARNING: since elevation limit conditions are a function of both switch input and sensed elevation position, the displayed elevation limits may not be correct until the elevation axis is calibrated as described in 3.3.3 below. Elevation movement should be monitored with caution until calibration has been performed.**

### 3.3.3 Elevation Reference Voltage

To calibrate elevation, the front of the dish should be placed in the vertical position. The resulting RF boresight angle from this position is 17.4 degrees. For the UE version, a target inclinometer voltage of 1.69 VDC should be achieved.

Also at the elevation reference position, the elevation pulse count will be reset to 33133 in order to correctly sense the elevation STOW position.

### 3.3.6 Polarization Limits

A second line has been added to this screen to aid in maintenance of the new pulse inputs.

```
PL CW:0 CC:1 S:0
<F/S>ANG S:258 L
```

#### <F/S>ANG

Pressing the Fast/Slow key will switch the azimuth and elevation data shown in MANUAL mode between ANG(le) display (derived from the azimuth potentiometer and elevation inclinometer) and PUL(se) display. When in pulse mode, the user should see the appropriate pulse count increase when azimuth is driven CW and when elevation is driven UP. The appropriate count should decrease when azimuth is driven CCW and elevation is driven DOWN.