

MOUNT SPECIFIC DATA
for
AVL Technologies
Model 1050 Tripod
Portable Auto-Acquisition Antenna

Revision: 10 March 2011

This appendix describes RC4000 operations unique for several AVL mounts. These mounts are denoted as U6 and U7. Differences between these versions and the operation described in the "baseline" RC4000 manual are noted on a paragraph by paragraph basis.

1.1 Manual Organization

This appendix is provided as a supplement to the baseline RC4000 manual.

1.2 RC4000 Features

The features provided include:

- Automatic azimuth and elevation pointing solution calculation
- Automatic stow and satellite acquisition functions
- GPS receiver for determination of antenna latitude and longitude
- Automatic polarization control of rotating feeds
- FLASH based non-volatile memory for storing satellite locations and configuration data
- Continuous monitoring of antenna drive status
- 3 axes jog operation
- Simultaneous azimuth, elevation and polarization angle display
- Dual speed operation
- Dynamic braking and active IR compensation
- Support for multiple band satellite operations
- Integrated board set
- Fluxgate Compass Heading Sensor
- Remote control user interface

4.1.2 Elevation Calibration

The U6 and U7 mount types require special software-based auxiliary down limits to avoid contact with the legs on the tripod base. These limits and the antenna offset angles are shown in the following table.

MOUNT TYPE	AVL MODEL	ANTENNA SIZE	AUX DOWN LIMIT	LIMIT WIDTH
U6	1214	1.2m / 1.4m	28 deg	+/- 30 deg
U7	1460	1.4m / 1.6m	40 deg	+/- 25 deg

3.3.1.3.1 Reset Defaults

The following table supplies the default configuration item values for this model of the RC4000. Most default values are the same for both versions.

Space has also been provided to record installation specific changes to the configuration items. Note: recording of installation specific changes to defaults may prove valuable when trying to restore system configuration.

CONFIGURATION ITEM	U6	U7						INSTALL VALUE
SYSTEM DEFINITION								
GPS Present	1	1						
Compass Present	2	2						
Initial Mode	2	2						
Serial Number	0	0						
Antenna Size	120	140						
Waveguide Switch Present	0	0						
AZIMUTH CALIBRATION								
Reference Voltage	2.50	2.50						
Offset	0.0	0.0						
CCW Limit	-200.0	-200.0						
CW Limit	200.0	200.0						
Scale Factor	110.2	110.2						
Initial Display	1	1						
ELEVATION CALIBRATION								
Reference Voltage	3.1	3.1						
Offset	0.0	0.0						
Up Limit	103.0	103.0						
Down Limit	14.0	14.0						
Scale Factor	51.29	51.29						
Look Configuration	1	1						
POLARIZATION CALIBRATION								
Reference Voltage	2.50	2.50						
Offset	0.0	0.0						
CW Limit	95.0	95.0						
CCW Limit	-95.0	-95.0						
Scale Factor	63.31	63.31						
Type	0	1						
H/V Reference	1	1						
Band	4	1						
LNB LO Frequency	6300	10750						
Locate Automove	1	1						
RF SIG FACTORS								
Lock Type	0	0						
Delay Time	1.0	1.0						
SS1 SIG FACTORS								
Lock Type	0	0						
Delay Time	1.0	1.0						
Threshold	100	100						
Polarity	1	1						
SS2 SIG FACTORS								
Lock Type	1	1						
Delay Time	0.2	0.2						
Threshold	400	400						
Polarity	1	1						
AUTOPEAK								
Autopeak Enabled	1	1						
Signal Source	1	1						
Spiral Search AZ Limit	3	3						
Spiral Search EL Limit	3	3						
Spiral Search Signal Threshold	200	200						

Scan Range Limit	8	8						
Scan Signal Threshold	400	400						
Pol Tilt Compensation	1	1						
AZIMUTH POT DRIVE								
Fast/Slow Threshold	2.5	2.5						
Maximum Position Error	0.20	0.20						
Coast Threshold	0.1	0.1						
Maximum Try Count	3	3						
AZIMUTH PULSE DRIVE								
Pulse Scale Factor	1191	1191						
Divide Ratio	8	8						
CW Pulse Limit	64000	64000						
CCW Pulse Limit	100	100						
Fast/Slow Threshold	50	50						
Maximum Position Error	1	1						
Coast Threshold	3	3						
Maximum Try Count	3	3						
AZIMUTH DRIVE PARAMETERS								
Fast Voltage	92	92						
Slow Voltage	46	46						
Current Limit	100	100						
Acceleration	50	50						
Deceleration	50	50						
IR Compensation	0	0						
Jam Slop	4	4						
Runaway Slop	200	200						
Fast Deadband	1000	1000						
Slow Deadband	500	500						
ELEVATION POT DRIVE								
Fast/Slow Threshold	3.0	3.0						
Maximum Position Error	0.20	0.20						
Coast Threshold	0.4	0.4						
Maximum Try Count	3	3						
ELEVATION PULSE DRIVE								
Pulse Scale Factor	2176	2176						
Divide Ratio	8	8						
Up Pulse Limit	64000	64000						
Down Pulse Limit	100	100						
Fast/Slow Threshold	50	50						
Maximum Position Error	1	1						
Coast Threshold	3	3						
Maximum Try Count	3	3						
ELEVATION DRIVE PARAMETERS								
Fast Voltage	100	100						
Slow Voltage	50	50						
Current Limit	100	100						
Acceleration	50	50						
Deceleration	50	50						
IR Compensation	0	0						
Jam Slop	4	4						
Runaway Slop	200	200						
Fast Deadband	1000	1000						
Slow Deadband	500	500						
POLARIZATION POT DRIVE								

Fast/Slow Threshold	2.0	2.0						
Maximum Position Error	0.5	0.5						
Coast Threshold	0.3	0.3						
Maximum Try Count	3	3						
POLARIZATION PULSE DRIVE								
Pulse Scale Factor	1646	1646						
Divide Ratio	10	10						
CW Pulse Limit	64000	64000						
CCW Pulse Limit	100	100						
Fast/Slow Threshold	50	50						
Maximum Position Error	0	0						
Coast Threshold	3	3						
Maximum Try Count	3	3						
POLARIZATION DRIVE PARAMETERS								
Fast Voltage	100	100						
Slow Voltage	35	35						
Current Limit	100	100						
Acceleration	50	50						
Deceleration	0	0						
IR Compensation	5	5						
Jam Slop	4	4						
Runaway Slop	200	200						
Fast Deadband	1000	1000						
Slow Deadband	500	500						
STOW / DEPLOY								
Az Stow	0.0	0.0						
EI Stow	105.0	105.0						
Pol Stow	0.0	0.0						
Az Deploy	0.0	0.0						
EI Deploy	30.0	30.0						
Pol Deploy	0.0	0.0						
Pol Move	0	0						
Stow Timer	0	0						
TRACK FACTORS								
Search Width	0	0						
Maximum Error	3	3						
Peakup Holdoff Time	120	120						
Signal Source	3	3						
Sample Time	2	2						
Log Data	0	0						
Mode	1	1						
Az/EI Delta Factor	1.0	1.0						
REMOTE CONTROL								
Enabled		1						
Address		50						
Baud Rate		6						
Mode		0						
Jog Hold Value		40						