

APPENDIX B - MOUNT SPECIFIC DATA

For

HOLKIRK 1.2m.

This appendix describes RC3000 operations unique for the Holkirk 1.2 mount.

Revision History. Date: 21 December 2004 - Software Version: 1.46

1.1 Manual Organization

This appendix is provided as a supplement to the baseline RC3000 manual. Differences between this version and the operation described in the baseline RC3000 manual are noted on a paragraph by paragraph basis.

1.2 RC3000 Features

All features described in the baseline manual are supported.

Hardware Configuration.

"90K" ???

Software Configuration.

H2

1.3.1 Controller Description

3 board set

1.3.2 System Interface Requirements

???

1.3.3 Operational Overview

-- same as RC3000 but via remote control

1.3.7 Drive System

Position Sensing and Limits.

-- no AZ STOW, no EL STOW

Jam and Runaway Sensing.

2.0 INSTALLATION

2.1.1 RC3000 Antenna Controller

-- no chasis, ** drawing ??

2.1.4 Electronic Clinometer

The inclinometer should be rigged with the face vertical. With the face vertical, the inclinometer should be mounted so that it is 0 degrees from vertical (20 deg. RF look angle). This orientation will allow linear output from the inclinometer to a RF angle of 90 degrees.

2.2 Electrical Connections.

-- no backpanel,

2.2.1 Power Entry

-- fuse requirements,

-- how supplied ??

2.2.2 Motor Drive

2.2.3 Drive Sense 2.2.4 Limit Switches

- 26 pin connector

2.2.7 Accessories

2.2.10 Pulse Sensors

2.2.5 Signal Strength

NOTE: The gain and offset potentiometers associated with the signal strength connector are--- The lid of the RC3000 will have to be removed in order to calibrate these pots. This connector is designated --

2.3 Initial Configuration

2.3.1 Software Initialization

Reset Defaults. The table at the end of the document supplies the default configuration item values for the H2 ---

NOTE: All configuration item values should be examined to determine if they are appropriate for your specific installation.

2.3.2 Elevation Calibration

Elevation calibration will be as described in the baseline manual.

Elevation Reference Position. The inclinometer should be calibrated while the antenna's face is vertical (i.e. the elevation reference position).

With the inclinometer oriented as described in 2.1.4 the elevation reference voltage should be approximately 2.5 volts. ????????

2.3.3 Azimuth Calibration.

Ref v, 0 at center of travel

No az stow

2.3.4 Polarization Calibration.

3.2.1 Manual Mode.

3.2.2.2 Stow

3.3.1.3.4 Azimuth Drive Monitoring

3.3.1.3.7 Elevation Drive Monitoring

The items on the Drive Monitoring screens are actually used to tune drive movements based on resolver "counts". The resolver counts are used in the same fashion as pulse counts are used for making precise movements of the mount.

3.3.1.3.10 Stow & Deploy Postions

0, 0

3.3.1.2 Reset Defaults

The following table supplies the default configuration item values for this mount. 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	H2					INSTALL VALUE
SYSTEM DEFINITION						
Antenna_size_cm	240					
GPS	1					
COMP	2					
Compass Type	1					
MODE	2					
WAVE	0					
ELEVATION CALIBRATION						
Zero Voltage	0.81					
Elev_offset	0.0					
Up_elev_limit	90					
Down_elev_limit	5					
Elevation_Scale_Factor	50.00					
Elevation_look_configuration	1					
Res	-164.00					
Rev	0					
AZIMUTH CALIBRATION						
Reference_voltage	N/A					
Azim_Scale_Factor	N/A					
Fluxgate_offset	0.0					
ccw_azim_limit	150					
Cw_azim_limit	150					
Res	-180.00					
Rev	0					
POLARIZATION CAL						
Zero Voltage	2.50					
Polarization_Offset	0.0					
CW Polarization Limit	90.0					
CCW Polarization Limit	90.0					
Pol_Scale_Factor	40.90					
Polarization_type	2					
H/V_Reference	0					
Default Horizontal Position	-45.0					
Default Vertical Position	45.0					
Pol_Automove_Enable	1					
SIGNAL PARAMETERS						
RF_Lock	0					
RF_Time	0.1					
Channel 1 Polarity	1					
Channel 1 Threshold	100					
Channel 1 Delay	0.1					
Channel 1 Lock Type	0					
Channel 2 Polarity	1					
Channel 2 Threshold	100					
Channel 2 Delay	0.1					
Channel 2 Lock Type	0					

CONFIGURATION ITEM	H2					INSTALL VALUE
AUTOPEAK						
Autopeak Enabled	0					
Signal Source	1					
RF Band	1					
Spiral Search AZ Limit	5					
Spiral Search EL Limit	5					
Spiral Signal Threshold	200					
Scan Range Limit	4					
Scan Signal Threshold	200					
AZIMUTH POT DRIVE						
Fast/Slow Threshold	0.5					
Maximum Position Error	0.05					
Coast Threshold	0.2					
Maximum Retry Count	3					
AZIMUTH PULSE DRIVE						
Pulse Scale Factor	10431					
CW Pulse Limit	61000					
CCW Pulse Limit	5000					
Fast/Slow Threshold	100					
Maximum Position Error	2					
Coast Threshold	3					
Maximum Retry Count	2					
AZIM DRIVE MONITORING						
Jam Slop	1					
Runaway Slop	200					
Fast Deadband	1000					
Slow Deadband	500					
ELEV POT DRIVE						
Fast/Slow Threshold	1.0					
Maximum Position Error	0.2					
Coast Threshold	0.4					
Maximum Retry Count	3					
ELEV PULSE DRIVE						
Pulse Scale Factor	10431					
UP Pulse Limit	46000					
Down Pulse Limit	1000					
Fast/Slow Threshold	100					
Maximum Position Error	1					
Coast Threshold	3					
Maximum Retry Count	2					
ELEV DRIVE MONITORING						
Jam Slop	1					
Runaway Slop	200					
Fast Deadband	1000					
Slow Deadband	500					

CONFIGURATION ITEM	H2					INSTALL VALUE
POL POT DRIVE						
Fast/Slow Threshold	2.0					
Maximum Position Error	0.5					
Coast Threshold	0.3					
Maximum Retry Count	3					
POL DRIVE MONITORING						
Jam Slop	1					
Runaway Slop	200					
Fast Deadband	1000					
Slow Deadband	500					
TRACK						
Search Enable	0					
Max Track Error	3					
Search Width	4					
Peakup Holdoff Time	120					
Track Signal Source	2					
Signal Sample Time	2					
REMOTE CONTROL						
Remote Enabled	1					
Bus Address	50					
Baud Rate	6					
Jog	20					
STOW / DEPLOY						
AZ STOW	0.0					
EL STOW	-75.0					
PL STOW	-95.0					
AZ DEPLOY	0.0					
EL DEPLOY	16.0					
PL DEPLOY	0.0					
PL ENABLED	3					
EL_TIME	0					
STW_AMP	N/A					
AUXILIARY DOWN						
AUX DOWN CCW	32768					
AUX DOWN CW	32768					
AUX DOWN	100					

4.2 Schematics

??? 90 K unique