RC1500A

Antenna Controller
for Single Axis Antennas

FEATURES

- **Polarization Control Interface**
  Automatic or manual polarization control for three-wire Polarotor™ or optional control for 24V rotating feeds with potentiometer feed-back
- **High-Resolution Pulse Sensor Interface**
  Ensures accurate Ku-band positioning
- **Software Controlled Limits**
  Provides backup to mechanical limits
- **Dual Speed**
  For fast slewing, fine positioning, user programmable
- **RS-422 PC Control Interface**
  Automated control with many popular packages; basic PC-control software is Included
- **Adapti-Drive™**
  Maintains stable speed with varying load
- **Solid-State Drive Circuitry**
  Provides reliable, quiet operation, rated for 36V at 10A with over-current protection
- **Multi-Band Operation**
  Supports C, Ku and L-band satellites

Research Concepts, Inc.

5420 Martindale Road
Shawnee, Kansas 66218 USA
Phone: 913.422.0210
Fax: 913.422.0211
E-mail: sales@researchconcepts.com

www.researchconcepts.com

OPERATIONAL OVERVIEW

The RC1500 was designed to provide years of reliable operation through the use of a heavy duty solid-state drive network coupled with a novel microcontroller-based fault monitoring system. The 10 amp rated drive output capability is adequate for either moving feed trackers or full-size linear actuators and the Adapti-Drive digital servo speed control optimizes antenna movement for today's demanding Ku-band applications. Additional features like an RS-422 communications port for PC control and a very user-friendly, menu scheme make the RC1500 a unique and highly adaptable piece of equipment. Overall, the RC1500 is well equipped to handle the demanding requirements for cost sensitive domestic and optionally international inclined-orbit satellite tracking.

MODES

The RC2000A operates in a mode architecture whereby the controller's operational status is governed by the selected mode. An explanation of these modes are listed below.

MANUAL:	Allows for manual jogging of the azimuth and polarization axis. The fast/slow speed toggle is active in this mode.
AUTO:	A satellite, previously saved in memory, can be recalled and the RC1500A will position the antenna on the selected satellite.
SETUP:	This mode stores values memory for a selected satellite.
RESET:	Used to reset the drive over-current protection circuits after the load error has been corrected.
DELETE:	Allows the user to delete a satellite from the list of stored values.
FIX:	Used to restore the proper position counters in the event of a memory error or sensor failure.
AZIM SLOW:	This mode allows the user to select an appropriate drive slow speed value to optimize system performance.
CONFIG:	Provides a concise point to enter any necessary system constants or enable options.
LIMITS:	Software limits are set for the main axis. This is used as a backup for mechanical limits.

SPECIFICATIONS

PHYSICAL	
Size:	19.0″ x 3.5″ x 9.0″ (rack)
Weight:	8.5 lbs.
Temperature:	0° – 50° C
Input Power:	115/230 VAC, 50/60 Hz., 40 W

DRIVE	
Output:	36 VDC, 10.0 Amps; 360VA
Sensor Input:	Pulse-type: Reed, Hall Effect, Optical
Polarization:	Standard Polarotor™ Interface, optional rotating Feed-drive at voltages from 5 – 36 VDC @ 1A max