



RC2000A

Commercial Satellite Antenna Controller for Dual Axis Antennas



FEATURES

- **Automatic Positioning**
precisely positions antenna with the press of a single key
- **Auto-Pol Input**
polarity output tracks receiver transponder value
- **High Resolution Sensor Processing**
insures accurate Ku-band positioning
- **Three-wire Polarotor™ Interface**
allows automatic or manual polarizations control
- **Dual Speed**
for fast slewing, fine positioning, user Programmable
- **Non-volatile Memory**
- **Solid-State Drive Circuitry**
provides reliable, quiet operation, rated at 10A
- **Built in Current Limiting**
protects controller from excessive loads
- **Adapti-Drive™**
maintains stable speed with varying load
- **Software Controlled Limits**
provides backup to mechanical limits
- **RS-422 PC Control Interface**
allows scheduling of movements and automated control
- **stores up to 50 preset position and polarization combinations**

Research Concepts, Inc.

OPERATIONAL OVERVIEW

The RC2000A 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 drive output capability is unparalleled in the market and the Adapti-Drive™ digital servo speed control optimizes antenna movement for today's demanding Ku-band applications. Additional features like an RS-422 communication port for PC control and a very user-friendly, menuing scheme make the RC2000A a unique and highly adaptable piece of equipment.

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 antenna azimuth, elevation 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 RC2000A will position the antenna on the selected satellite.
SETUP:	This mode is invoked to store azimuth, elevation and polarization 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.
ELEV SLOW:	Same as for Azim Slow
CONFIG:	Provides a concise point to enter any necessary system constants or enable options. Examples are Auto-Pol sense and status as well as simultaneous movement of axis during an Auto move.
LIMITS:	Software limits are set for both axis in this mode. They provide backups for the mechanical limits and establish an estimate of the antenna range of operation.

SPECIFICATIONS

Power:	115/230 VAC, 48W	Drive Output:	12 – 36 VDC, 10 Amps
Size:	19.0" W x 3.5" H x 9.0" D	Sensor Input:	Reed, Hall Effect, Optical
Weight:	12.5 lbs.	Polarization:	Standard Polarotor™ interface
Temperature:	0 – 50° C	PC Interface:	RS-422, 4 wire