



RC2000 Embedded

Commercial Satellite Antenna Controller for Dual Axis Antennas



FEATURES

- **Familiar Operation**
Uses the same user interface as the standard rack mount RC2000 ACU via keypad & LCD
- **Remote Control Options**
Can be controlled remotely via standard RS-422 or through an internal serial-to-Ethernet adapter
- **Convenient installation**
Optional "quick disconnect" allows all antenna & user connections to be routed to weather-proof connectors on the enclosure bottom panel
- **24V Rotating Feed Drive**
Optional drive for a 24V polarization feed drive with potentiometer feedback.
- **Weatherproof Enclosure**
Utilizes a NEMA 4 rated outdoor enclosure
- **Inclined Orbit Tracking**
Optionally includes a beacon tracking receiver to allow for an all-in-one tracking controller
- **Safe Operation**
Emergency STOP switch cuts all power to the ACU for emergencies or maintenance
- **Retrofit Oriented**
Easily replaces other antenna controllers for retrofit applications
- **Handheld Remote Front Panel**
Optional handheld remote control with LCD display and keypad. Communicates using RS-422 serial interface to outdoor box

Research Concepts, Inc.

9501 Dice Lane
Lenexa, Kansas 66215 USA
Phone: 913.422.0210
Fax: 913.422.0211

E-mail: sales@researchconcepts.com

www.researchconcepts.com

OPERATIONAL OVERVIEW

The RC2000 is 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 and Ethernet communication ports for PC control and a very user-friendly menu scheme make the RC2000 a unique and highly adaptable piece of equipment.

MODES

The RC2000 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 controller 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

Size: 16" W x 20" H x 8" D

Weight: 55 lbs.

Temperature: -30 to +60°C

Drive Output: 12 – 36 VDC, 10 Amps

Sensor Input: Reed, Hall Effect, Optical

Polarization: Standard Polarotor™ interface

PC Interface: RS-422, 4 wire
Ethernet optional
