RT-21 Universal Digital Rotor Controller

Add all these great features using your existing rotor without even climbing the tower.

**BENEFITS**
- Combines all the features you want into one unit that will run virtually any rotor you have, or may get in the future.
- Simple and Intuitive user interface – Single Knob Point & Shoot.
- Breathe new life into that great old HDR or Create Rotor
- Maximize Performance of your Orion, Hy-Gain, TIC, Yaesu, Pro-sis-tel, Alfa-Spid or other Rotor for Stacked Array, Side Mount, or Single Rotor Systems.

**FEATURES**
- Master/Slave for Stacked Arrays
  - Turn together or separately
- Counter Rotation
  - Install rotor above rotating tower
- Fully Versatile Control
  - Point-and-Shoot Preset, computer control through RS-232 and USB, manual push buttons
- PWM Variable Speed Control
  - Start and stop ramping to reduce tower and antenna stresses
- Precision Heading Accuracy
  - Up to 1/10°
- Fully Supports Side Mounted Antennas
  - Soft Limits Prevent Running into Tower
- Allows over travel up to 720° total
- Offset Control
  - Allows center of rotation at any heading
  - Allows N & S center on same mast
  - Compensate for a slipped mast
- High Visibility Display w/Adjustable Backlight
- Fully User Programmable
  - Reversal & Brake Delay
  - Speed, Max & Min
  - Limits, Ramps, etc.
  - Set up from front panel or included SETUP UTILITY software

RT-21 Universal Digital Rotor Controllers running master slave with stacked arrays using different rotor types

DELUXE VERSION

RT-21D
(w/Vacuum Fluorescent Display)

www.greenheronengineering.com  (585) 217-9093

The RT-21 may not be certified or recommended by your specific rotor manufacturer for use with their products. Use of this device may void the warranty of these devices and Green Heron Engineering is not responsible for any damage, direct or incidental, that might occur through such use.
The RT-21 SETUP UTILITY allows you to manage configuration options and optimize other controller settings from your PC. It also enables you to . . .

- Change the “Vanity Boot Message”
- See a graphic representation of the rotors rotation range
- Change the rotors rotation range
- Modify the Security Setting
- Change the NO MOTION Motor Timeout
- Perform Auto Cal on many rotor types
- Save rotor settings to files
- Restore rotor settings from files
- Control the Rotor

**RT-21 SPECIFICATIONS:**

**Size/Weight**
Approx 4” x 8” x 7” HWD (Not including rear terminal strip)
Approx 8 lb – Shipping = 11 lb

**Input Power**
115/230 VAC 50/60 Hz
Standard IEC power connector and GMA fuse

**Display**
High contrast vacuum fluorescent
Eight brightness levels

**Front Panel Controls**
CCW, CW and CANCEL buttons (Operating)
SAVE, CHANGE, SETUP buttons (Setup)
Point and Shoot knob (340º = full rotation)

**Motor Power** (Selectable voltages @ 5A)
18 to 36 VAC
12 to 48 VDC

**External Relay Control**
CCW and CW DC Relay control (12V or 24vdc relays)
Various configurations

**Operating Modes**
Normal, Master/Slave, Master/Counter Rotate, Slave/Counter Rotate, Debug, Alt Offset

**Selectable Options**
POT, Counter, HAMx, T2X, Orion, TIC-PST, SPID

**Position Feedback Mechanisms Supported**
Potentiometer 150 Ohm to 10 KOhm
Variable resistor 500 Ohm (Others accommodated with minor modification)
Proximity/Reed Switch or Hall Effect up to 64 Pulses/degree (Divide Ratio 23,500)
2-Bit rotary relative encoder (special order)
Others possible

**Position Accuracy**
Up to 1/3 degree for potentiometer
Up to 1/10 degree with proximity/reed switch

**Brake and Reversal Delays**
0 to 6 Seconds

**Soft Limits**
+/- 180 degrees from normal stop
Restricts rotation to zero or opens to 720º

**Motor Speed Control (PWM)**
10% to 100% in 10% steps with 10 selectable start/stop ramp settings
100% no ramps

**Computer Control**
Compatible with all DCU 1 Enabled Programs
Expanded Protocol for GH Tracker and SETUP UTILITY (See Manual)

**Configuration**
User changeable in minutes with no soldering

**Protection**
No Motion feedback,
Pot out-of-range (TIC-PST Option
Counter Range Error (Orion, SPID, Counter)
Industrial rated Transient Voltage
Suppressors on all external terminals

**Rear Panel**
8 Position barrier strip #6-32
Ground stud #6
Cable strain relief
USB-B
DB-9 RS-232
Industrial rated Transient Voltage
Suppressors on all external terminals

**Warranty**
Limited Warranty, 1 Year parts and labor

**ADDITIONAL SOFTWARE AVAILABLE:**

GH Everyware – IP Networking for your GH Controllers

- Remotely Control your rotors over the Internet
- Share Rotors on your network

GH Tracker - Satellite Tracking

- Precision 1/10º Automatic Control
- Optimizes your tracking program for the RT-21