

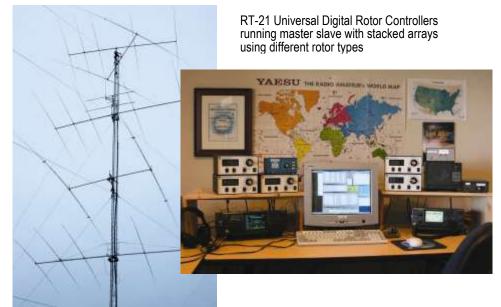
# RT-21 Universal Digital Rotor Controller



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

# **DELUXE VERSION**

**RT-21D** 

(w/Vacuum Fluorescent Display)



<u>www.greenheronengineering.com (585) 217-9093</u>

# RT-21 Universal Digital Rotor Controller

# RT-21 SETUP UTILITY:



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 strin)

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 (340° = 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 720°

#### 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 1/10°
   Automatic Control
  - Optimizes your tracking program for the RT-21