



## 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.



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



### 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)



# 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 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 (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 Everywhere –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