

PROSISTEL 'D' WITH 3 TURN 500 OHM POT

This Modification to the PST rotators provide superior lightning protection, noise immunity, and is less susceptible to water ingress causing rotator pot problems.

SETUP/OPTION = TIC-PST

DC Motor Transformer Taps

Jumper	Position
J10	2-3
J14	2-3
J12	2-3

Transformer	J9 Connection	VDC	MODEL
Brown	J9-3		
Yellow	J9-4 **	18 V	61D/2051
Orange	J9-4 **	28V	Newer 71D
Violet	J9-4 **	42V	Older 71D

Position Feedback Connections

Jumper	Position
J5	1-2
J6	1-2
J16	1-2

Rotor

Function	PST	RT-21
MOT CW	1	1
MOT CCW	2	2
POS	3	4
REF	4	5
GND	5	3

** Use only 1 wire on J9-4 for your rotor type

** 61D/2051 - if you desire to run as low as 12 VDC, connect J9-3 to Yellow and J9-4 to Orange instead of what's listed in the Transformer Taps above.

WARNINGS – These rotators do NOT have internal limit switches to prevent over-rotation. Be careful not to exceed your coax loop limit while performing the calibration. Do not use the preset knob or trust the LCD display until the unit is calibrated. Use a helper to watch the antenna during calibration if it is installed on the mast.

Calibration Procedure – New Systems or where antenna is easily repositioned on the mast.

- Using the CW and CCW buttons, run the rotator until the DC voltage on terminal 4 is exactly **3.90** VDC. This voltage indicates the exact center of rotation. The Heading display will not yet indicate correctly however.
- Use the CCW button and run the motor CCW until the voltage on terminal 4 is exactly **2.60** VDC. This is the CCW endpoint. Perform the CAL CCW by pressing and holding CANCEL and CCW at the same time until the display reads "CAL CCW = xxx". The CAL CCW number should be very close to **320**. (You may find it works easier if you press the CANCEL perceptively before the CCW button.)
- Use the CW button and run the motor CW until the voltage on terminal 4 is exactly **5.20** VDC. Perform the CAL CW as in #2 above except use the CANCEL and CW buttons. The CAL CW number should be very close to **640**.
- Using the CCW button, run the rotator until the heading display read 000 (or 180 if you have a South Center) and mechanically attach or position the antenna to exact North (or South if South Center)

Calibration Procedure – Existing systems where antenna is already positioned on mast.

- Using the CW and CCW buttons, run the rotator until the antenna is at the exact center of rotation. Usually, this is North. (see section 1.2) Measure the exact DCV on terminal 4 on the rear panel and record this value as X.XX VDC. It MUST be between **2.0 and 5.9** VDC, if it isn't, you MUST loosen the antenna and perform the New System calibration instead.
- Use the CCW button and run the motor CCW until the voltage on terminal 4 is exactly **(X.XX MINUS 1.30)** VDC. This is the CCW endpoint. Perform the CAL CCW by pressing and holding CANCEL and CCW at the same time until the display reads "CAL CCW = xxx".
- Use the CW button and run the motor CW until the voltage on terminal 4 is exactly **(X.XX PLUS 1.30)** VDC. Perform the CAL CW as in #2 above except use the CANCEL and CW buttons.

Additional notes and hints on Calibration

- The voltage coming back from the PST rotator's position potentiometer on terminal 4 MUST remain between **0.5 and 7.2 VDC** at all times. If the voltage goes outside of this range, the controller will shut down and indicate "POT OUT-OF-RANGE) In order to manually turn the rotator back into range, you should use MODE=DEBUG. Return the controller to MODE=NORMAL to maintain the out-of-range protection.
- The voltage from the pot on terminal 4 MUST go lower with CCW rotation, and higher with CW rotation. If it doesn't, STOP and carefully verify your wiring. Rotation direction of CCW or CW as it would be looking DOWN on the antenna from above.
- These calibration procedures should yield satisfactory results in most applications and be accurate to within a few degrees. If you require more accurate calibration, instead of not relying completely on the endpoint voltages, visually sight your antenna or top plate to the CCW and CW endpoints prior to pressing the calibration buttons in steps 2 and 3.