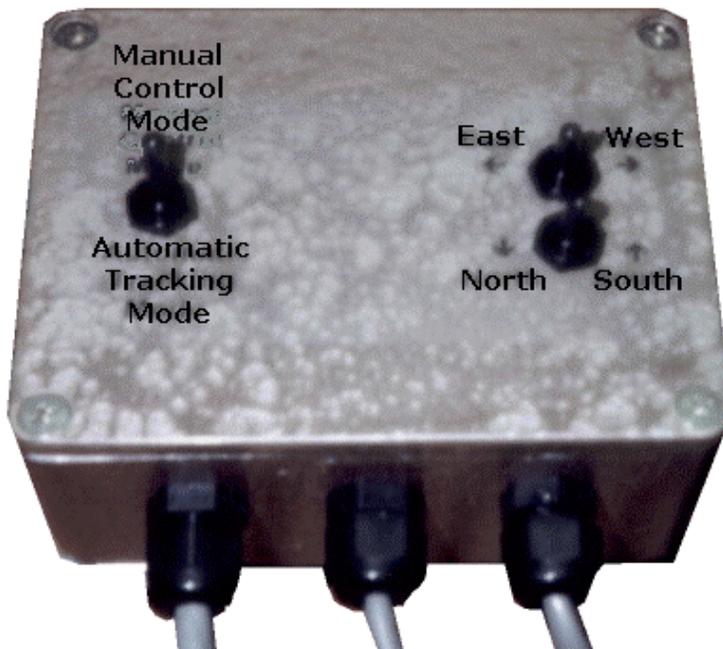




Field Installation Instructions for Manual Tracker Controls

FUNCTION:

Most manual controls are installed on Wattsun Dual-Axis Trackers rather than on Single-Axis Units. The Manual Control Option allows the user to bypass automatic tracking and to move the tracker East, West, North, or South. If the tracker is run to a full North position, the array lays flat in a horizontal stow position. This is especially useful if you experience very strong winds or storms and you want to reduce the wind loading on your tracker.



Each field kit contains: 1 manual control board - mounted to a replacement cover, 3 rubber switch boots and 4 cover screws.

STEP BY STEP INSTRUCTIONS FOR DUAL-AXIS MANUAL CONTROLS:

- 1) **DISCONNECT POWER TO CONTROLLER.**
- 2) Remove the four cover screws of controller chassis.
- 3) Loosen the first and last black Heyco fittings on the controller chassis. These are the wire strain-relief's on the controller chassis for the motor cable and power input cable. Leave the center Heyco fitting tight.
- 4) Using a small screwdriver press on the first small button on the 5 position orange terminal

strip (upper left corner of controller board) and pull out the motor output wire that is directly underneath the button. There are five buttons and each button releases a wire directly underneath. Remove all five wires (Bare drain wire; White; Green; Black; Red).

- 5) Now release the last two wires on the seven position terminal strip (lower center). These are the larger red and black power-input wires on right side of the terminal strip.
- 6) Remove the rubber boots from the switches on the manual control kit.
- 7) Detach the manual control board from the cover.
- 8) Insert the motor output wires (5 wire cable you removed in step 4) into the 5 position gray connector of the manual control board. The color code is written on the board (DR; W; G; B; R). To insert these wires you must release the cage inside the connector with a small straight blade screwdriver. The wire goes into the lowest port of the connector and the screwdriver must be inserted in the middle rectangular opening of the connector. Insert all five wires into connector and pull on them to make sure they are secure.
- 9) Insert the wires from the manual control board into the orange five position connector on the tracker control board. These wires will replace the wires you removed in step 4. These wires can be pushed into place with needle nose pliers. The color code is as follows from left to right: Bare drain wire; White; Green; Black; & Red. Gently tug on each wire to make sure they are secure.
- 8) Now connect the red and black wires coming from the manual control board to the tracker controller board. These wires go into the last two positions on the 7 position orange terminal strip. (This will replace the wires you removed in step 5). Red goes into position 6 and black into position 7.
- 9) Insert the remaining two wires from the power input cable into the gray two position connector of the manual control board. From left to right the color code is Red; Black.
- 10) Secure the manual control board to the controller cover plate using the rubber switch boots. Tighten these boots to secure the cover to the switches.
- 11) Gently tug on the wires coming through the Heyco terminals to position the cover over the controller chassis.
- 12) You will need to gently fold the small 5 wire cable behind the black capacitor on control board. Take the time to neatly arrange the wires so that they will not be pinched between the cover and the controller chassis. Also make sure they are not shorting anything out on the control board.
- 13) Tighten cover screws of chassis so that metal corners of cover are touching metal edge of controller to insure an water-tight seal. Also, hand tighten the two black Heyco fittings which were loosened in step 3.
- 14) Re-connect power to controller and Test.

GENERAL WIRING DIAGRAM FOR WATTSUN MANUAL CONTROLS

