

## **FD-SWM-HF LCD HF SWR/Wattmeter Calibration Procedure**

1. Complete Assembly and any preliminary tests before proceeding with this calibration Procedure.
2. Attach a dummy load to the “Ant” SO-239 connector on the RF sensor board. Try to keep this connection as short as possible (ie: double male UHF adapter if possible). The better the quality dummy load, the more accurate your calibration will be.
3. Connect the “TX In” SO-239 to your radio with a coax jumper.
4. Apply power (+12vdc) to the wattmeter.
5. Connect a DVM between the junction of C11 & R6 and ground on the sensor circuit board.
6. Adjust RV1 on the RF Sensor board for a reading of 0.65vdc. (Diode Bias)
7. Press pushbutton SW1, on the display board, several times until the Fwd V = 0,00 / Rev V = 0,00 Screen is displayed.
8. Set your transceiver to 10 Meters (28.400 MHz).
9. Key your transmitter (~100W Carrier), and note the voltage readings on the wattmeter display.
10. Adjust trimmer capacitor “CV” for a “Ref V” reading of 0,00 V. The forward voltage reading is not critical for this adjustment. This adjustment balances the RF Bridge.
11. Press SW1 several times, until you see the Main Wattmeter Screen; displaying Fwd, Ref, and SWR.
12. Substitute a known power meter with the RF sensor board and set the output power of your transceiver to 100W.
13. Reinstall the RF sensor board between the transceiver and dummy load.
14. Adjust RV2 on the Sensor board for a FWD reading of 100,0 watts if you are planning on using the wattmeter WITHOUT a linear amplifier, and 10,0 watts if you are going to use it with an amplifier.
15. Swap the dummy load with the TX coax jumper on the RF sensor board.
16. Key your transmitter and adjust RV3 for a Ref power reading equal to that in Step 13 above. (100W). NOTE: The red & yellow LEDs will light up when power is applied during this step – this is normal).
17. You may wish to go over these steps a second time to make sure no interaction has occurred.
18. Congratulations! You’re Done! Have Fun...

NOTE: Per other documentation, the Yellow LED should light if the SWR >2:1 but <3:1  
The Red LED will light if the SWR is >3:1

73s

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