

Improved Cooling for the MFJ-267 Dummy Load/Wattmeter Phil Salas – AD5X

The MFJ-267 Dummy Load/Wattmeter is a nice station accessory that provides in-line SWR, and average and peak power readings up to 3000 watts in two ranges – PLUS it includes a legal limit dummy load that can be switched in -line. While the dummy load is rated at 100 watts for 30 minutes and 1500 watts for 10 seconds, it can take a long time for the dummy load to cool off. This means you must wait quite awhile between tests – especially at higher power levels. For example, while recently running tests with my ALS-600 amplifier at 600 watts into the dummy load, the MFJ-267 would get very hot after just a few repetitive 10-15 second tests. I would then have to wait a good five minutes for the unit to cool down enough for me to feel comfortable applying full power again.

I solved the heat problem by simply adding an inexpensive surplus fan to the dummy load. I chose the All Electronics (www.allelectronics.com) CF-252 40mm fan. I removed one of the #6 sheet metal screws on the dummy load shield and tapped this hole for a #6 machine screw. I used a single 1.25" long #6 screw, two nuts and two lockwashers to mount the fan to the dummy load shield as you can see in Photo A. Orient the fan so that it blows air into the dummy load.

The MFJ-267 SWR/Wattmeter is active whenever 12VDC is applied. The on/off switch just turns the meter lamps on and off. So you can meter SWR and peak and average power regardless of the on/off switch position. Therefore, I wired the fan's DC input to the on/off switch such that the fan comes on only when the switch is turned on. This eliminates the fan noise during normal use of the metering functions, but lets you turn on the fan if desired when using the dummy load. The correct place to connect the fan's plus (+) wire is to the lower center terminal on the power switch as seen in Photo B.

The impact of this fan is dramatic! With the fan running, I have no problem running my ALS-600 at full output for testing (usually 10-20 seconds at a time), and I no longer have to wait at all between transmissions for the dummy load to cool off!



Photo A: Fan mounting details

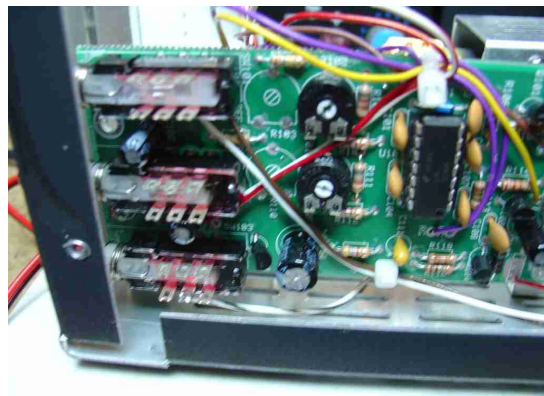


Photo B: Fan +12V striped wire (bottom) soldered to bottom center switch terminal