

🇬🇧 Digital Milliwattmeter Software info and download 🇬🇧

This page is about software version 1.04 [Download here](#)
Software date: 28 Okt 2008. this version is made for the new 16F876A by Paul Wilton M1CNK
(thanks alot mate)
Use a [PIC16F876 programmer](#) to copy the unpacked HEX file into the PIC.

Software info / user guide for version 1.04

The main startup screen shows:



dBm, status, RF-voltage

Bar-graf, RF-powerwatts

If no attenuator is used, the dBm readout goes from -63 (noicefloor) to +30 dBm (1W)

The status readout show the selected frequency band, and attenuator mode

Use the band dial to change between LF, HF, VHF, UHF and SHF calibration memories

I have calibrated my wattmeter 0 dBm at: LF=3.5MHz, HF=14MHz, VHF=145MHz, UHF=430MHz,
SHF=440MHz

But you can calibrate at your own favorite frequencies for best performance.

In the RF-powermeter screen, use the **SELECT** button the enter **RELATIVE** mode.

In this mode dBm and bar-graf is shown, when entering this mode the dB read out for Channel A is zero'ed and all subsequent readings are relative to this reference value.



The menu:

To enter the menu / settings use the **MENU** button
when in menu, use the band dial (or Up/Down) to get the desired setting,
at the right setting use **SELECT** to activate, this is also shown in the display.

Here is all the menu points:

- 0: Set attenuator value from -1 to -59dB. Use Up/Down to set the value, **SELECT** to set it
- 1: Toggle the attenuator ON/OFF using **SELECT**
- 2: DC Voltmeter, actual and min. and max.
- 3: RF Powermeter, the default startup screen.
- 4: SSB PEP Wattmeter, with peak hold and variable decay
- 5: Return loss with SWR readout for a single channel. Press **SELECT** to set the reference value on Channel A
- 6: Dual Channel Ratio Measurement with SWR
- 7: Calibrate 0 dBm at the selected band for Channel A
- 8: Calibrate 0 dBm at the selected band for Channel B
- 9: Read all calibration values
- 10: Zero all calibration memories
- 11: Display update delay 2-80mS, and Peak hold and decay speed
- 12: About Info, shows software version and so on.

DC voltmeter:

The DC voltmeter can measure from 0 to 20 volt only positive, with a resolution of 20mV.

Nothing is burned if input is reversed, it just can not measure !

Calibration is done in hardware: use one or two 10meg resistors to parallel R28 or R18 until correct voltage is shown.

In the DC voltmeter screen, actual voltage, minimum and maximum is displayed. To reset min and max press select button

The voltmeter can be used to monitor the battery voltage if a battery supply is used, or what ever you want to measure,
but remember the input impedance is about 80 kOhm.

Dual Channel Mode:

The system now uses Channel B in the Dual Channel mode.

Connect the reference value to Channel B and the varying value to Channel A.
The system will then return the difference between A and B in dB (ie the ratio of A/B).

If a return loss bridge is used, connected the reference (forward) port to Channel B
and the reflected port to Channel A.

Note – in the Dual Channel Mode, there is no check to see if either Channel is at the noise floor.
Also, there could be cross talk between the channels – again, check basic levels before taking
measurements.