

Daiwa CN-901HP

cross-needle SWR and power meter

An SWR and power meter is a must-have in almost every shack, whether your interest lies in the HF or VHF bands.

The Daiwa CN-901HP cross-needle SWR and power meter is described in its literature as a “high-quality instrument with unique features which make tedious measurement of SWR and Power during antenna tests, matching and tuning of transmitters a very easy task”. It certainly looks the part, being dark blue in colour with a 9cm-wide cream meter face.

Out of the box

The Japanese-made unit is quite large, measuring 17cm wide x 12cm high x 12.5cm deep. It weighs in at one kilogram and has removable black rubber bumpers on its ends to protect it from bumps and scrapes.

Its frequency range is 1.8-220MHz, so covers everything from Top Band to two metres in one box. It is designed for 50Ω systems and, if connected to a suitably-designed antenna, will read the SWR at the point the meter needles cross.

On the right are four push-buttons, which allow you to select (from top to bottom) a two-kilowatt range, 200-watt range and 20-watt range. The bottom button allows you to select average or PEP readings.

The meter's tolerance is quoted as being $\pm 10\%$ and the instructions say that the power rating on 144MHz is 1kW and to “add 15% of full scale at 160-200MHz”.

The meter, therefore, appeals to everyone, from Foundation licence holders to high-power DXers. One point to note is that the meter dials are logarithmic. That is, on the 20-watt range, the 10-watt position reads a little higher than the halfway point. This means that it is very easy to read powers of five watts or less for QRP fans.

On the back are SO-239 sockets for both input and output, along with switches for the PEP hold function and a light, which can be powered by a 13.8V (70mA) supply. A one-metre-long cable with an



The meter reads the SWR at the point the meter needles cross.

appropriate connector is provided with the meter. Note that this isn't fused.

The light comprises two blue LEDs at the bottom of the meter and is quite pleasant.

Note that a power supply is required to make PEP meter readings. You also have to switch it on at the back of the meter, which confused me at first!

In use

In use then, once the meter is connected to your antenna and the radio it is just a case of selecting the appropriate power range button and pressing the PTT, or keying the radio with a Morse key.

The meter proved accurate and has a nice dampened movement. This means that it takes a fraction of a second to settle.

One quick tip – make sure you have selected a range that can accommodate the power you are running. That is, it is not a good idea to run 200W into it when you have selected the 20W range. This would almost certainly damage the meter.

Conclusion

In conclusion, the Daiwa meter makes a delightful addition to your shack. It is both stylish and effective with large clear readings of power and SWR. The CN-901HP costs £139.95 plus P&P and there is also a CN901HP3 variant, which can handle up to 3kW, for £179.95. My thanks to Mike Devereux at Nevada in Portsmouth for the loan of the meter (www.nevada.co.uk).

Further information

On the RSGB website is a very useful section on setting up your station (<https://rs.gb.org/main/get-started-in-amateur-radio/setting-up-your-shack/>). Here you will find descriptions of commonly-used equipment, its function and uses.

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