



EQUIPMENT REVIEW

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THE TRIO FUNCTION POWER METER PF-810

THE PF-810 CONCLUSIONS

Within its specifications, the PF-810 performed in a flawless manner. It's a pity that a 1500 watt range is not included as this would widen the appeal of this excellent instrument.

The instruction booklet is well written and contains all information needed to get the full results from the meter. A schematic diagram and Smith chart are included.

The TRIO Function Power Meter, PF-810 serial 4040187 used in our review was supplied by William Willis and Co Pty Ltd of 98 Canterbury Road, Canterbury, Victoria to whom all inquiries should be directed.

PHILIPS TMC DIVISION HOSTS NINE PERSON DELEGATION

Philips TMC, Clayton, Victoria (The Radio Communications Division of Philips Industries Holdings Ltd) recently hosted a nine member delegation from The People's Republic of China.

The delegation is comprised of commercial representatives from the China Electronics Import and Export Corporation (CEIEC) and technical experts from the Nanjing Radio Factory.

They are in Australia inspecting the design and production capabilities of Philips TMC, in particular the FM95 series of mobile automatic telephone systems (MATS) with the end view of local manufacture in The People's Republic of China.

A special get-together was held at the Noah's motel on Monday 25th June, which was attended by the WIA President Dr D Wardlaw VK3ADW.



Power readings were compared with both terminating watt meters and also the through line meter terminated in 50 ohms. Full scale readings on the 810 were within 1% of the comparison meters. Half scale readings on the 810 were within 5% of the comparison meters.

I was unable to verify the rated insertion loss of less than 1.0 dB up to 200 MHz but it appeared that the specification would be conservative.

Regular readers of Amateur Radio have probably noted the advertisement from William Willis and Co featuring the Trio PF-810 Function Power Meter. I have often seen it and wondered just what the device really looked like and how it worked.

The PF-810 is a through line power meter with three forward ranges of 5, 25 and 150 watts full scale. These can be used to measure either forward power, reflected power or radiated power which is actually forward minus reflected power. A normal SWR scale is also provided. Input to the meter can be selected from two sources via a front panel selector. The meter is self contained and requires no external power source. Trio claim that this is a professional instrument of laboratory quality.

The instrument is well constructed and rather larger than expected. It measures 200 mm high including buffers, 127 mm wide and 140 mm deep including knobs and coax connectors.

The PF-810 has a rated frequency range of 1.8 to 200 MHz and a minimum power for SWR measurement of 1 watt.

Connectors are of the SO-239 type which perhaps seems a strange choice for a laboratory quality instrument. 'N' type connectors could have been better especially at the higher frequencies.

THE PF-810 ON TEST

The following equipment was used to evaluate the PF-810. Marconi ZDA/0568 terminating watt meter. Drake W-4 HF through line watt meter. Heath Cantenna 50 ohm load and a Horwood VHF terminating watt meter.

SWR measurement sensitivity was measured on all amateur bands from 1.8 to 146 MHz. On the lower bands a minimum power of 0.8 of a watt was needed going down to 0.6 watt on 28 MHz and above. SWR reading was checked by firstly feeding power through the PF-810 to a 50 ohm load. The meter indicated 1.1 to 1. That is just above a zero reading. Next two 50 ohm loads were connected in parallel. The PF-810 read exactly 2 to 1.