

TEST OF SWR POWER METER COMET CMX-2300 TWIN

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List of equipments and instruments:

- Icom IC 775 DSP – HF TX/RX;
- Icom IC 910H – Dual band TX/RX VHF/UHF;
- Power meter HP model 436A digital;
- Power sensor HP model 8482A – 100KHz/8GHz;
- Attenuator 50DB 50 Ohm HP – DC/24GHz;
- Dummy load Bird Termaline Coaxial Resistor model 8251 – 50 Ohm 1000 Watts – DC/10GHz;
- Interconnection coaxial cables Suhner-Sucoflex 100 microwave;
- Coaxial connectors and adaptors Radiall – Amphenol.

All the above mentioned instrument have been passed to the Standard calibration process and are in validity period.

Test procedure:

- HF Band:
Coupler M1: ICOM IC 775 freq. 1.850MHz power out 242 Watts on CMX-2300 scale 300 Watts displays approx. 160 Watts, freq. 3.650MHz power out 238 Watts displays 180 Watts, from 7 to 30 MHz become enough linear;
SWR real on dummy load 1:1.1 but on freq.s 1.850 and 3.650MHz the Comet displays 1:1.5, from 7 to 30MHz is correct 1:1.1;

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- VHF Band:
Coupler M2: ICOM IC 910H frq. 145MHz power out 100 Watts Comet displays the correct value but the power out from the coupler is 83 Watts it means the insertion loss is more of 0.7 DB against the 0.2 DB declared;
SWR 1:1.1;
- UHF Band:
Coupler M2: ICOM IC 910H freq. 435MHz power out 75 Watts Comet displays 90 Watts but the real power out from the coupler is 58 Watts in this case the insertion loss is more than 1 DB against the 0.3 DB declared.
SWR 1:1.1;

The final consideration is that notwithstanding the item is very good looking the normal use is seriously compromise by the very bad technical performance probably, due to the following reasons:

1. the use of very low cost components non linear
2. not enough accurate calibration
3. no Quality Control and CE stamps have been applied.

The above CMX-2300 have been purchased in UK (since in Italy is not available) and has been returned to the seller as not accepted and passed to the test and refunded.

It appears really strange that a brand like Comet could make available a such poor instruments...

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