SWR/WATT METER
Model TX-101A, TX-102, TX-402, TX-502 User Manual

PRODUCT MAIN FEATURE

This wattmeter series offer many innovative features typically not found at this price level

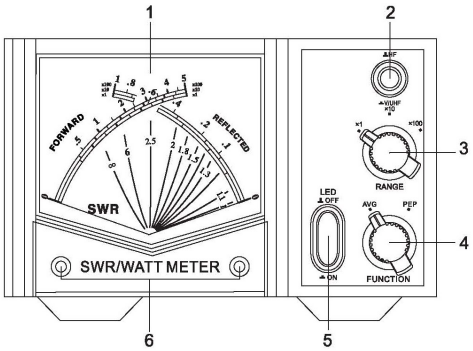
- DC Grounded Antenna connector prevents electrostatic buildup.
- True Directional Coupler for increased accuracy over frequency.
- Low Bias Schottky Diode Detectors for increased linearity.
- Precision, large (104mm) Cross Needle Meter simultaneously displays forward and reflected power with SWR.
- Individual Meter Scales for each power range increase reading accuracy.
- Precision True Active PEP Circuit (TX-101A)
- LED backlighting provides smooth, even illumination.
- Three Color Scale for improved readability.
- Rugged metal cabinet with speckled black finish and designer style grey injection molded front panel aesthetically complements modern transceivers.
- DC Power Cable Included.

SPECIFICATIONS

Model	TX-101A	TX-102	TX-402	TX-502
Frequency Range	1.6~60 MHz (6m/HF)	1.6~200 MHz	125-525 MHz (70cm/UHF)	1.6 - 525 MHz (2 sensors,102, 402)
Center Calibrated	28.5 MHz	1.6-60 MHz (6m/HF) at 28.5MHz 140-150 MHz (2m/VHF) at 145 MHz	140-150 MHz (2m/VHF) at 145 MHz 430-440 MHz (70cm/UHF) at 435 MHz	28.5, 145, 435 MHz
Power Range	0 - 2KW	0 - 200W	0 - 200W	0 - 200W
Power Scale	20/200/2KW	2/20/200W	2/20/200W	2/20/200W
Maximum Power	2KW	200W	200W	200W
Accuracy	± 10% of Full Scale or better			
Insertion loss	Less than 0.1dB			
Min. Power (Forward)	1W			
Testing Function	Forward Power, Reversed Power, SWR, and PEP (TX-101A's active PEP)			
Input/Output Impedance	50 ohm			
Input/Output Connectors	M type		M type (N type optioned)	
Input power	9-14 VDC 200 mA maximum			
Dimension (W/H/D)	184 (W) x 118 (H) x 131 (D) m/m			
Weight (Net)	900 g	910 g	920 g	1,070 g

OPERATION :

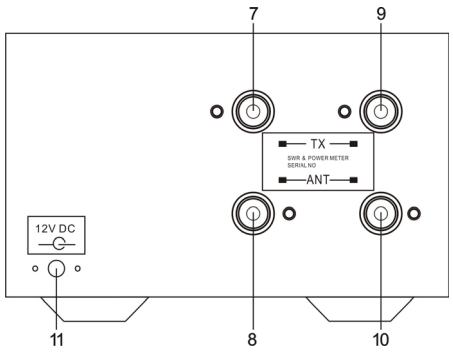
<FRONT PANEL>



<DESCRIPTION>

1. Indicator Display : Indicates FWD/REV power in watts and VSWR ratio
2. HF/VU HF band switch (black, round push button) : Select HF (out) or VUHF (depressed). Available on TX-502 only.
3. Range switch : Selects RF power range 20W, 200W, 2000W
4. AVG/PEP switch : Select Average or SSB PEP
5. Indicator ON/OFF push button (elliptical) : LED backlight ON/OFF
6. Zero adjust screws of analog cross needle meter

<REAR PANEL>

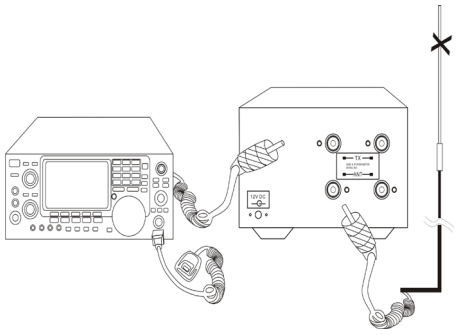


<DESCRIPTION>

7. TX connector : Coax connector to transmitter 50 ohm RF output
8. ANT connector : Coax connector to 50 ohm antenna system
9 & 10. : 2nd pair of TX/ANT connector : Available on TX-502 only
11. 12V DC connection (via power supply) for meter LED illumination

Note : DC power is only required to run the meter backlight or active circuitry in TX-101A. Except TX-101A, this meter will function without DC power in the AVG mode, even when switch off.

<INSTALLATION>



<FORWARD, REVERSE PWR, SWR MEASUREMENT>

A. Set the RANGE switch to the expected power level of the intended measurement
B. In TX-101A, it corrosponds to 20/200/2000 watts forward and 5/50/500 watts reflected full scale (Fwd : Ref = 4 : 1)
In TX-102, 402, 502, it corrosponds to 2/20/200 watts forward and 0.5/5/50 watts reflected full scale (Fwd : Ref = 4 : 1)
C. (Push or release) the HF/VUHF band push knob (black, round button) to the frequency of the itended measurement (corresponds to TX-502 only)
D. Set the radio transceiver to transmit mode and read the scale corresponding to the RANGE selected
E. When switch to 'AVG', the meter reads average RF power.
When switch to 'PEP', the meter reads Peak Envelope Power for use with SSB and AM transmissions. In this mode, there will be a slow rise and decay time.
F. Push LED ON/OFF button when LED light is needed (in TX-101A, it also activate PEP active mode)

[CAUTION]

1. Since the meter movement is very sensitive, avoid excessive vibration or mechanical shock to the meter.
2. Watch the absolute maximum power could be applied to the meter by different models you bought.
3. The meter must never be reverse connected. Always observe the correct connections to transmitter and antenna as indicated on the rear sockets.
4. Do not expose the meter to excessive temperatures, high humidity, or strong magnetic fields.
5. Contact your local dealer for service. Dealer information is in the back of user manual.

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