

SWR/POWER METER USER MANUAL

Model : RX-503N

INTRODUCTION

This SWR & POWER meter is a highly accurate RF meter for measuring Forward Power, Reversed Power, & VSWR.

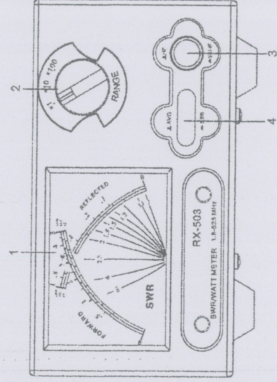
Main Features:

1. Large cross needle meter display simultaneously Forward and Reversed power with SWR
2. Forward RF power readings (switchable to indicate either average power or Peak Envelope Power [PEP], for SSB and AM transmitters), reversed RF power readings, and VSWR ratio.
3. True Directional Coupler for increased accuracy over frequency
4. LED Backlighting provides smooth, even illumination for ease of reading
5. Three Color Scale for improved readability

SPECIFICATIONS

MODEL	RX-503N
Frequency Range	1.8 - 525 MHz
Power Range	0 - 200W
Power Scale	2/20/200W
Maximum Power	200W
Accuracy : LOW power	(AVG) +/- 10%, (PEP) +/- 15%
Accuracy : HIGH (2) power	(AVG) +/- 5%, (PEP) +/- 10%
Input/Output Impedance	50 OHM
Input / Output Connectors	"N-type" connector
Insertion Loss	Less than 0.1 dB
Testing Function	Fwd/Rev Power, PEP, SWR
Weight (Net)	950 g
Dimension (W/H/D) mm	140 x 84 x 122
Accessories	Operation Manual, 13.8 DC Wire

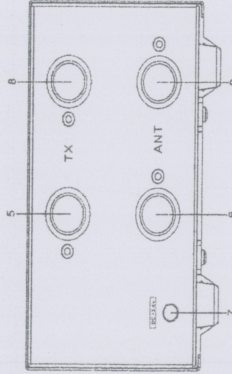
<FRONT PANEL>



<FRONT & REAR PANEL>

1. Meter Display : Indicates FWD/REV power in watts and VSWR ratio
2. Range switch : Selects RF power range multiplier x 1, x 10, x 100
3. HF/VUHF band switch (round push button) : Select HF (out) or VUHF (depressed).
4. AVG/SSB (elliptical push button) : Selects Average (out) or SSB (depressed) PEP RF Power readings

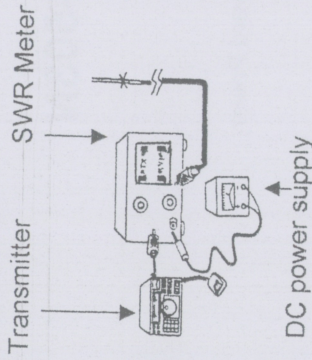
<REAR PANEL>



<REAR PANEL>

5. TX connector : Coax connector to transmitter 50 ohm RF output
6. ANT connector : Coax connector to 50 ohm antenna system
7. 13.8V DC connection (via power supply) for meter LED illumination (watch out the LED wire must be correctly connected, Red to '+', Black to '-'. Wrong connection will cause LED burn-out)
- 8 & 9. 2nd pair of TX/ANT connector.

<INSTALLATION>



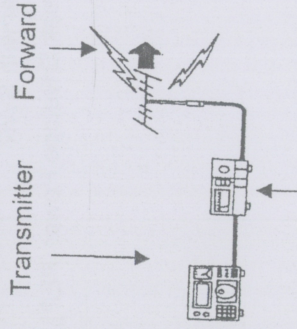
<FORWARD POWER MEASUREMENT>

<REVERSE POWER MEASUREMENT>

<VSWR MEASUREMENT>

1. Set the RANGE switch to the proper meter multiplier (X1, X10, X100) for the expected power level of the intended measurement.
On 503N this corresponds to 2/20/200 watts forward and 0.5/5/50W watts reflected full scale.
2. Set the HF/VUHF band switch (round push button) to the frequency of the intended measurement.
3. Set the radio transceiver to transmit mode and read the scale corresponding to the RANGE selected
4. When the AVG/PEP button is 'out', the meter reads average RF power. When the button is 'depressed', 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.
5. The beauty of cross needle meter is Forward, Reversed, and SWR can be read simultaneously.

<OPERATION>

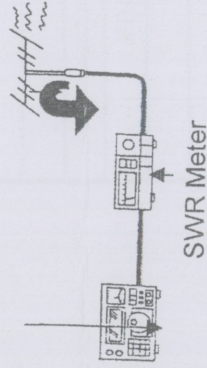


[CAUTION]

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.

SWR Meter

Transmitter Reversed



SWR Meter