

# SWR/POWER METER

**Model : RS-102, RS-402, RS-502**

## INSTRUCTION MANUAL

### INTRODUCTION

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

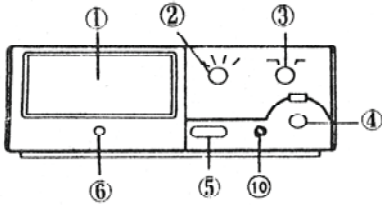
#### Main Features:

1. Large meter display for ease of reading.
2. Forward RF power readings (switchable to indicate either average power or Peak Envelope Power [PEP], for SSB and AM transmitters).
3. Reversed RF power readings.
4. VSWR ratios.
5. Illuminated meter.
6. Convenient control layout for ease operation.

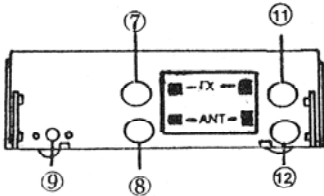
### SPECIFICATIONS

MODEL	RS-102	RS-402	RS-502
Frequency Range	1.8 - 200 MHz	125 - 525 MHz	1.8 - 525 MHz
Power Range	0 - 200W		
Power Scale	5/20/200W		
Maximum Power	200W		
Accuracy 5W Range	(AVG) +/- 10%		
	(PEP) +/- 15%		
Accuracy 20-200W Range	(AVG) +/- 5%		
	(PEP) +/- 10%		
Minimum Power for SWR	1W		
Insertion loss	Less than 0.1 dB		
Input/Output Impedance	50 OHM		
Input/Output Connectors	PL		
Dimension (W/H/D) mm	190 x 85 x 135		
Weight (Net)	790 g	800 g	950 g
Accessories	Operation Manual, 13.8 DC Wire		

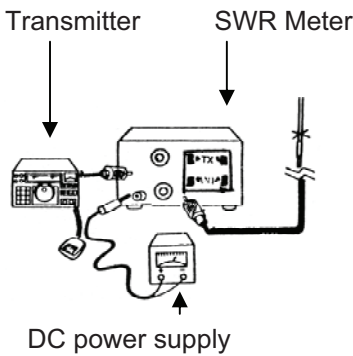
**<FRONT PANEL>**



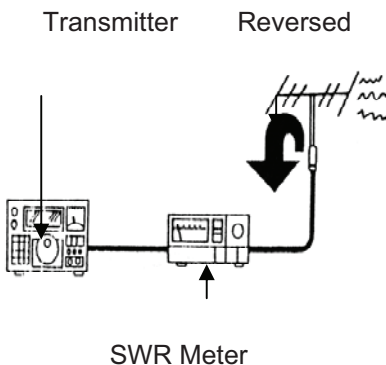
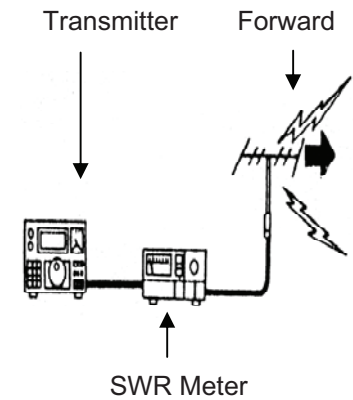
**<REAR PANEL>**



**<INSTALLATION>**



**<OPERATION>**



**<FRONT & REAR PANEL>**

1. Meter Display : Indicates FWD/REV power in watts and VSWR ratio
2. Function switch : Selects FWD/REV power, Calibration, and VSWR
3. Range switch : Selects RF power range of 5/20/200W
4. Calibration control knob : Sets full scale deflection when measuring VSWR
5. AVG/PEP MONI. (elliptical push button) : Selects Average or PEP RF Power readings
6. Meter Zero Adj. : Mechanical zero adjustment for meter needle
7. TX connector : Coax connector to transmitter 50 ohm RF output
8. ANT connector : Coax connector to 50 ohm antenna system
9. 13.8V DC connection for meter illumination
10. HF/VUHF band switch : available on RS-502 only
- 11&12. 2nd pair of TX/ANT connector : available on RS-502 only

**<FORWARD POWER MEASUREMENT>**

1. Set the FUNCTION switch to FWD
2. Set the radio transceiver to transmit mode and read the scale corresponding to the Power Range selected (5W,20W,or 200W)
3. 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.

**<REVERSE POWER MEASUREMENT>**

This measures the reverse power on the coaxial cable between transceiver and antenna. The rest of the settings are the same as that of FORWARD POWER MEASUREMENT>

**<VSWR MEASUREMENT>**

1. Set the radio transceiver to transmit mode and Function Switch to CAL.
2. Slowly turn the CAL. control knob clockwise until the meter pointer is at meter full scale
3. Now set the Function Switch to SWR position whilst still transmitting, the meter will indicate VSWR ratio (Note : handheld and mobile have H/L range, when using 'H' range, read the upper SWR dial. Using 'L' range, read the lower SWR dial)

**[CAUTION]**

1. Since the meter movement is very sensitive, avoid excessive vibration or mechanical shock to the meter.
2. The absolute maximum power should be applied to the meter is 200W. Also observe maximum power inputs of 5W and 20W when using the two lower ranges.
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.