

## INSTRUCTION

THE RS-200/400 and RS-600 or RS-1000 POWER&SWR meter is the most efficient tool in wide range of semi-professional Measuring And control instruments. the measured values can be easily read in the large scale instruments.

The RS-200/400 and RS-600 or RS-1000 is an insertion type RF wattmeter and can be permanently fitted into a transmission System for continuous monitoring of station working condition .

The unit can be work without external power supply . but with 13.8DC power which permits to light up the Meter and shows the active led corresponding to the selected RF coaxial line ( for RS-600 and RS-1000)

## DESCRIPTION OF CONTROL

**1** POWER/SWR reading meter

**14** led sensor 1

**2** Indicator adjustment

**15** led sensor 2 (BANK2 ,BANK3 ,BANK4)

**3** Power range switch

**16** sensor1/sensor2 switch

**4** Function switch

**5** FWD /REFLECT POWER/OFF SWITCH

**REMARK :FIG1/FIG2 FOR RS-200/400**

**6** SWR calibration potential-meter

**:FIG3/FIG4 FOR RS-600/1000**

**7** Average pep to pep switch

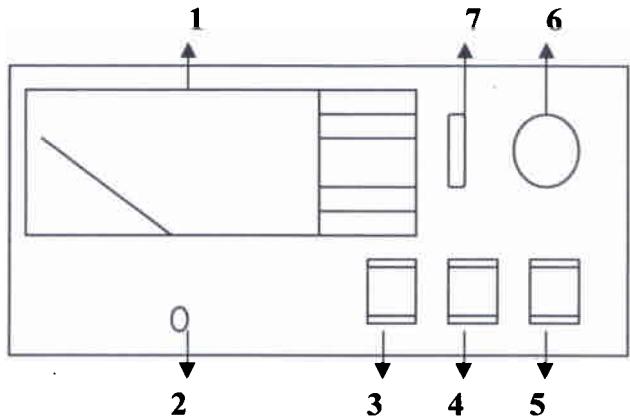
**8** 200W/400W select switch

**9-12** Antenna connector(connect to the antenna with 50 ohm coaxial cable)

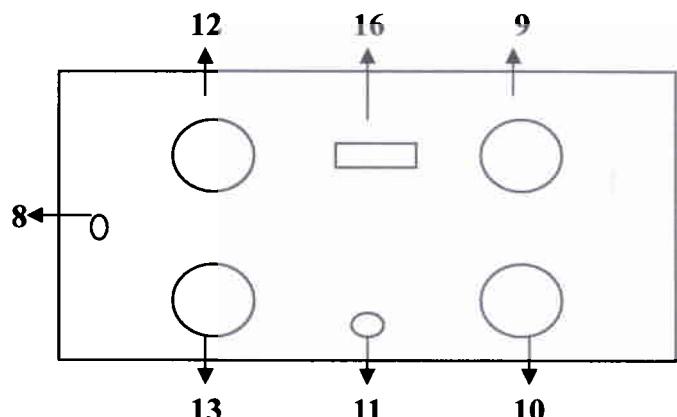
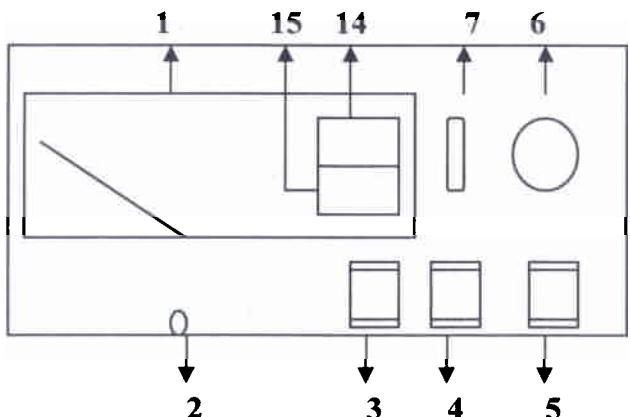
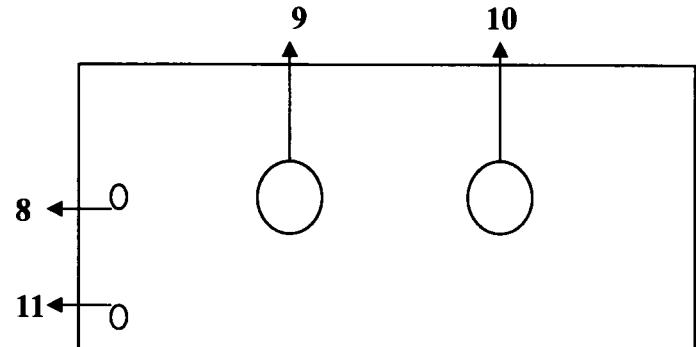
**10-13** TX connector (connect to the radio with 50 ohm coaxial cable)

**11** Power jack (13.8VDC) light up the meter and sensor 1 / sensor 2 led

**FIG1**



**FIG2**



**FIG3**

**FIG4**

## INSTALLATION

To install the RS-200/400 and RS-600 or RS-1000 simply connect coaxial cable directed to the antenna connector marked "ANT", and the cable coming from the transmitter or from the linear amplifier to the connector marked "TX". RS-200/400 and RS-600 or RS-1000 is ready to operate.

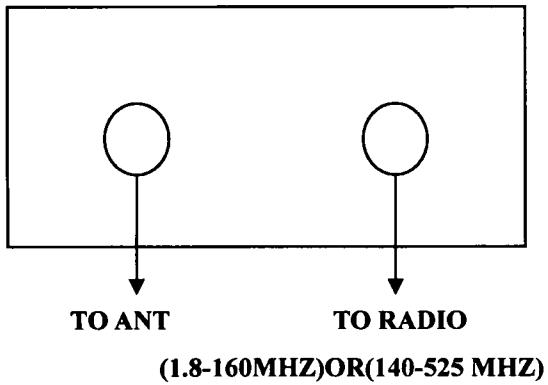
## POWER MEASUREMENTS

- 1 Select the RANGE (3) switch on the end-scale position value as to the power of the unit
- 2 Select the FUNCTION (4) switch in the power position
- 3 Select the POWER switch the FWD position to measure the direct power (from the radio to antenna) or REF position to measure the reflected power (from antenna to the radio)
- 4 Select the power value can be read on the corresponding scale.

## SWR MEASUREMENTS

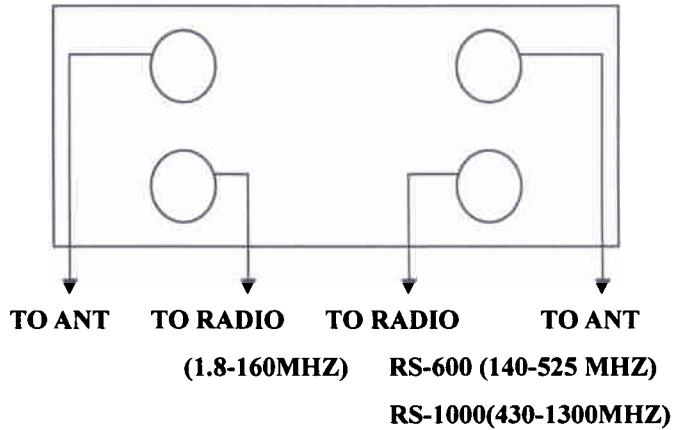
- 1 Select the RANGE (3) switch on the end-scale position value as to the power of the unit.
- 2 Select the FUNCTION (4) switch in the CAL position.
- 3 Let the radio transmit and adjust the instrument by turning the CAL knob, position the end-scale index in the CAL position.
- 4 Select the FUNCTION (4) switch in the SWR position
- 5 Read the SWR value in the above scale.

FIG5 (FOR RS-200 OR RS-400)



(1.8-160MHZ) OR (140-525 MHZ)

FIG6 (FOR RS-600 or RS-1000)



(1.8-160MHZ) RS-600 (140-525 MHZ)

RS-1000(430-1300MHZ)

## REMARK: SWR VS. REFLECT POWER

SWR (STANDING WAVE RATIO)=

$$\frac{\sqrt{P_{fwd}} + \sqrt{P_{ref}}}{\sqrt{P_{fwd}} - \sqrt{P_{ref}}}$$

SWR	1.0	1.1	1.2	1.5	2.0	2.5	3.0
Prev%	0	0.22	0.8	4	11.1	8.4	25.0

## SPECIFICATION

FREQUENCE RANGE: .....1.8~160 MHZ(RS-200,RS-600,RS-1000), 140~525 MHZ (RS-400,RS-600),  
430~13000MHZ(RS-1000)

POWER MEASURE RANGE :....0.5~400W(5W/20W/200W/400W), RS-1000(430-1300MHZ) only 200W 200/400W

### SWITCH DISABLE

MINIMUN POWER INPUT :.....0.5W

PRECISION:.....5W RANGE  $\pm 5\%$ , 20W RANGE  $\pm 7.5\%$ , 200W RANGE  $\pm 10\%$ , 400W RANGE  $\pm 12.5\%$

SWR:.....1~INFINITY

IMPDANCE:.....50ohm

INPUT LOSS:.....0.2db (1.8~160 MHZ), (140~525MHZ), 0.3db(430-1300MHZ)

DEMISION:.....15X6.5X10CM

WEIGHT:.....720gr.(RS-600), 630gr.(RS-200/400), 730gr.(RS-1000)