

INSTRUCTIONS SWR/POWER METERS

SX-201, SX-400, SX-601, SX-1000



The SX-201/400 and SX-601 or SX-1000 POWER & SWR meter is the most efficient tool in wide range of semi-professional measuring and control instruments. Measured values can be easily read in the large scale instruments.

The SX-201/400 and SX-601 or SX-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 13.8VDC power allows to light up the meter and shows the active led corresponding to the selected RF coaxial line (for SX-601 and SX-1000)

SX-201 & SX-400



SX-601 & SX-1000



DESCRIPTION OF CONTROLS

1. POWER/SWR reading meter
2. Indicator adjustment
3. Power range switch
4. Function switch
5. FWD/Reflected Power/OFF switch
6. SWR calibration potential-meter
7. Average PEP to PEP switch
8. 200W/400W select switch
9. Antenna connector (PL) 1,8-160 MHz.
10. TX connector (PL) 1.8-160 MHz.
11. Power jack (13.8VDC) light up the meter and sensor 1/sensor 2 leds.
12. Antenna connector (N) 140-525 MHz. (SX-601) / 430-1300 MHz. (SX-1000)
13. TX connector (N) 140-525 MHz. (SX-601) / 430-1300 MHz. (SX-1000)
14. Led sensor 1.
15. Led sensor 2.
16. Sensor 1/Sensor 2 switch

INSTALLATION

To install the SX-201/400 or SX-601/1000 simply connect coaxial cable direct to the antenna connector marked **ANT** and the cable coming from the transmitter or from the linear amplifier to the connector marked **TX**.

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.

SPECIFICATIONS

	SX-201	SX-400	SX-601	SX-1000
Frequency range	1.8 – 160 Mhz.	140 – 525 Mhz.	1.8 – 160 Mhz. 140 – 525 Mhz.	1.8 – 160 Mhz. 430 – 1300 Mhz.
Power measurement range	0.5 ~400 W (5/20/200/400 W)	0.5 ~400 W (5/20/200/400 W)	0.5 ~400 W (5/20/200/400 W)	0.5 ~400 W 430- 1300 Mhz. 200 W only
Minimum power input	0.5 W	0.5 W	0.5 W	0.5 W
Precision	5W Range ± 5%; 20 W Range ±7.5%; 200 W Range ±10%; 400W range ±12.5%			
SWR	1 ~ ∞			
Impedance	50 Ω	50 Ω	50 Ω	50 Ω
Input loss	0.2 dB 1.8~160 Mhz. / 0.2 dB 140~525 Mhz. / 0.3 dB 430~1300 MHz.			
Dimensions	15 x 6.5 x 10 cm.			
Weight	630 gr.	630 gr.	720 gr.	730 gr.

SWR vs. REFLECTED POWER

$$SWR = \frac{\sqrt{PFwd} + \sqrt{PRev}}{\sqrt{PFwd} - \sqrt{PRev}}$$

SWR	1.0	1.1	1.2	1.5	2.0	2.5	3.0
P.Rev. (%)	0	0.22	0.8	4.0	11.1	18.4	25.0