

YAESU YS-2000

PEP/RMS SWR & POWER METER INSTRUCTIONS

GENERAL

The YS-2000 is a peak reading SWR and power meter for your Yaesu station. Most other SWR meters generally provide only an indication of the RMS power level. This measurement is calibrated on the basis of a continuous sine wave signal; however, an actual voice signal is never a pure sine wave, so measurement of the true peak power value is seldom obtained.

With the YS-2000, you may choose between RMS indication (perfectly satisfactory for accurate CW power measurement) or PEP indication of the output power. The YS-2000 is accurate over the frequency range 1.8 to 60 MHz, making it satisfactory for use on the 160 through 6 meter amateur bands. The meter is calibrated in power scales reading up to 2000 watts.

SPECIFICATIONS

Sampling Method:	Directional coupler
Input/Output Impedance:	50 ohms unbalanced
Frequency Range:	1.8 – 60 MHz
Power Indication:	RMS and PEP
Power Measurement Range:	0 – 200, 0 – 1000, 0 – 2000 watts
SWR measuring range:	1:1 to 1:3
Accuracy:	±10% at full scale
Meter Movement:	50uA for full scale
Connectors:	SO-239
Power Source (PEP mode):	100/117/220, VAC, 4VA maximum
Case Size:	100(H) x 205(W) x 130(D) mm
Weight:	2.2kg.

INSTALLATION

Before connecting the YS-2000 to the wall outlet or station equipment, be absolutely certain that the voltage specification on the rear apron of the YS-2000 matches your local supply voltage. If not, please change the power transformer primary connections as shown in the drawing. When replacing fuses, use only a 0.5 amp fuse. Our warranty does not cover damage caused by improper power connections or use of an improper fuse.

When the above inspection has been completed, connect your antenna feedline to the rear panel ANTENNA jack. Connect a 50 ohm coaxial cable between your transmitter RF output jack and the YS-2000 TRANSMITTER jack. Plug the AC line cord into the wall outlet.

OPERATION:

Power Measurement

- (1) Choose the scale of the power meter appropriate for the power level you are using. Set the power mode switch to the desired mode, PEP or RMS.
- (2) Activate the transmitter. The power output may be read directly from the meter scale.
- (3) The power meter is accurate at reasonable SWR levels. However, always attempt to keep the SWR as close to 1:1 as possible for accurate power readings.

SWR Measurement

- (1) To protect the meter movement, set the SWR SET control to the fully counter-clockwise position.
- (2) Set the selector switch to the FWD position, and activate your transmitter in the CW mode. Advance the SWR SET control until a full scale deflection of the meter needle is achieved. Align the meter needle precisely with the SET marking on the meter scale.
- (3) Now set the selector switch to REF to read the SWR directly.
- (4) The SWR meter is highly sensitive, providing full scale deflection with as little as three watts at 1.8 MHz. However, best linearity is achieved at a power level of 100 watts. SWR readout at lower power levels may result in lower meter readings than the actual value of SWR. However, for adjustment of an antenna coupler, the relative reflected power reading is extremely useful at any power level when tuning for minimum SWR. The power level may then be adjusted to 100 watts for most accurate SWR indication.

Notes

- (1) Always be certain that cable connections are tight. Use only 50 ohm coax, and be sure that your coax will handle the power level being used.
- (2) Never disconnect the coaxial cables while transmitting.
- (3) When the SWR exceeds 3:1, always transmit at low power levels. Once adequate impedance adjustment has been made, full power may be applied.
- (4) AC power on/off switching is performed by the PEP/RMS switch. Always set this switch to the RMS position when the YS-2000 is not in use.

SCHEMATIC DIAGRAM

