NISSEI SWR/WATT METER

Model : NS-2104A User Manual

1. FEATURES

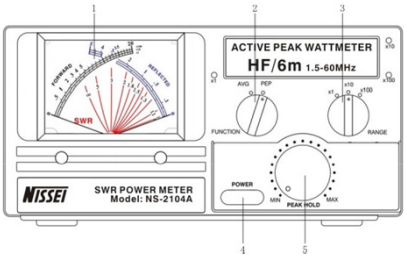
This wattmeter offer many innovative features typically not found at this price level

- DC Grounded Antenna connector prevents electrostatic buildup.
- True Directional Coupler for increased accuracy over frequency.
- Low Bias Schottky Diode Detectors for increased linearity.
- Precision, 2.5” (64mm) Cross Needle Meter simultaneously display.
- Individual Meter Scales for each power range increase reading accuracy.
- Triple LED Backlighting provides smooth, even illumination.
- Three Color Scale for improved readability.
- LED Range Indicator.
- High performance Active Peak Detectors* accurately captures a single “dit”.
- Single knob Variable Peak Hold Time* for both Forward and Reflected axis.
- Mounting Bracket and DC Power Cable Included.

2. SPECIFICATION :

Model	NS-2104A
Frequency Range	1.5-60 MHz (HF/6m cal)
	1.5-30 MHz (HF cal)
Power Range/Scale	20/200/2000W
Max. Power	2000W
Duty Cycle:	100% Continuous Duty at 1500W at 1:1 SWR
	Derate above 25° C ambient temperature.
Insertion SWR:	Less than 1.2 : 1
Accuracy:	± 5% of Full Scale or better (HF cal).
	± 10% of Full Scale or better (HF/6m cal)
Input Power:	9-14 VDC 200 mA maximum
Power Connector :	"M" type
Dimensions:	100 H x 210 W x 110 D (mm)
Weight:	2.2 lbs (1 Kg)

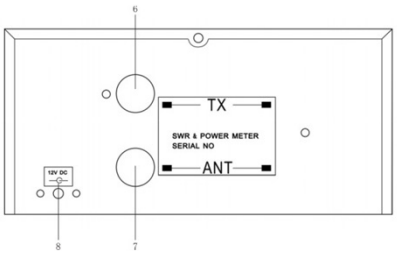
2. Front Panel:



<DESCRIPTION>

1.Meter Display: Indicates FWD/REV power in watts and VSWR ratio.
2.Function "AVG"/"PEP" switch: Select average power (AVG) or SSB PEP.
3.Range Switch: Select the proper meter multiplier (x1,x10,x100)
4.Power Switch: This switch supplies DC power from the back panel power connector to the meter backlight and active PEP measurement.
5.Peak Hold Knob: Controls the amount of time the maximum detected displayed on meter movements.

3. Rear Panel:



<DESCRIPTION>

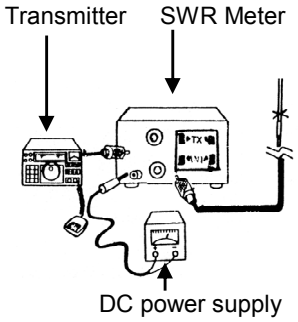
6.TX connector: Coax connector to transmitter 50 ohm RF output.

7.ANT connector: coax connector to 50 ohm antenna system.

8.DC connector: via power supply for meter LED illumination.

Note: DC power is only required to run the " backlight" and "active circuitry". The meter will function without DC power in the AVG mode, even when switched off.

4. 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. It corresponds to 20/200/2K Watts forward and 5/50/500 watts reflected full scale.
2. Set the radio transceiver to transmit mode and read the scale corresponding to the RANGE selected
3. When switch to "AVG", the meter reads average RF power. switch to "PEP", 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.
4. The beauty of cross needle meter is Forward,Reversed, and VSWR ratio can be read simultaneously.

5. 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.