# **INSTRUCTION**

THE AV-CN200/400 and AV-CN600 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 AV-CN200/400 and AV-CN600 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 AV-CN600 only)

#### **DESCRIPTION OF CONTROL**

1 POWER/SWR reading meter

2 Indicator adjustment

3 Power range switch

4 Function switch (lamp on/off, peak/average power)

10 led sensor 1

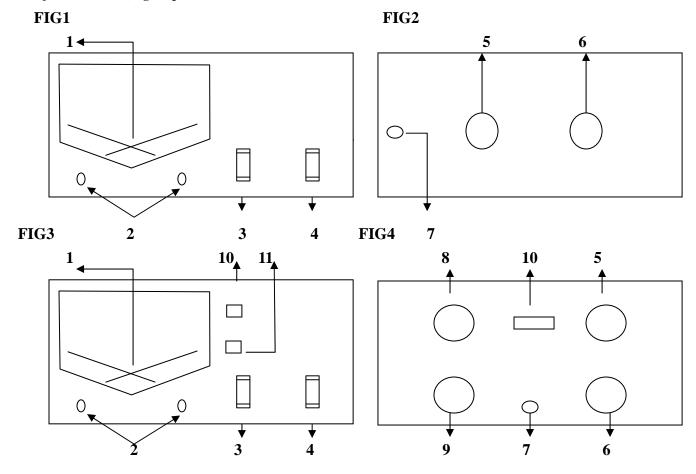
11 led sensor 2

12 sensor1/sensor2 switch

REMARK :FIG1/FIG2 FOR AV-CN200/400

FIG3/FIG4 FOR AV-CN600

- 5, 8 Antenna connector(connect to the antenna with 50 ohm coaxial cable)
- 6, 9 TX connector (connect to the radio with 50 ohm coaxial cable)
- 7 Power jack (13.8VDC) light up the meter and sensor 1 / sensor 2 led



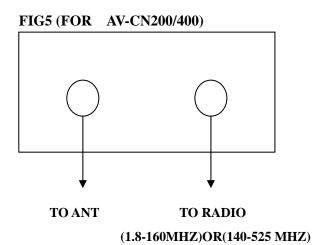
## **INSTALLATION**

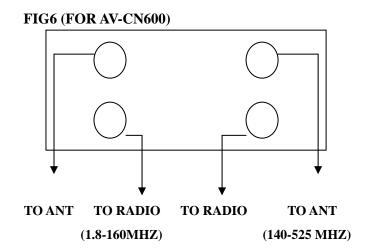
To install the AV-CN200/400 and AV-CN600 simply connect coaxial cable directed to the antenna connector marked "ANT", and

The cable coming from the transmitter or from the linear amplifier to the connector marked "TX" AV-CN200/400 and AV-CN600 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.





## REMARK: SWR VS. REFLECT POWER

SWR (STANDING WAVE RATIO)=

$$\frac{\sqrt{Pfwd} + \sqrt{Prev}}{\sqrt{Pfwd} - \sqrt{Prev}}$$

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(AV-CN200, AV-CN600), 140~525 MHZ (AV-CN400, AV-CN600)

POWER MEASURE RANGE :.....0.5~3KW(30W/300W/3KW) FOR AV-CN200 and AV-CN600 HF BAND

:.....0.5W~600W(30W/300W/600W ) FOR AV-CN400 and AV-CN600 UHF BAND

:....300W

Continuous power rating :.... CW/SSB for 1.2-200MHz 300W

Continuous power rating :.... CW/SSB for 140-525MHz 300W

Maximum power handling:..... 3Kw 15 seconds / 2Kw 30 seconds / 1Kw 60 seconds

MINIMUN POWER INPUT :......0.5W FOR AV-CN200, AV-CN400 and AV-CN600

PRECISION:......30W RANGE ±5%, 300W RANGE ±5%, 600W±7.5%, 3KW RANGE ±7.5%

IMPDANCE:.....50ohm

INPUT LOSS:.................0.2db (1.8~160 MHZ),(140~525MHZ)

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

WEIGHT:.....720gr.(AV-CN600), 630gr.(AV-CN200/400)