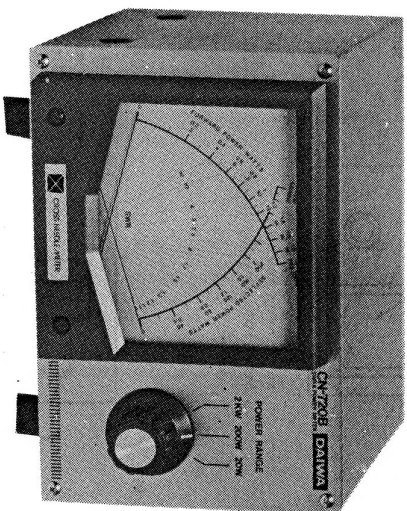
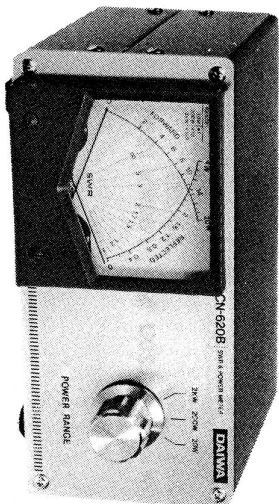


INSTRUCTION MANUAL

SWR & POWER METER

MODEL CN-620B
MODEL CN-720B



Mathematical verification:

$$SWR = \frac{\sqrt{P_f} + \sqrt{P_r}}{\sqrt{P_f} - \sqrt{P_r}}$$

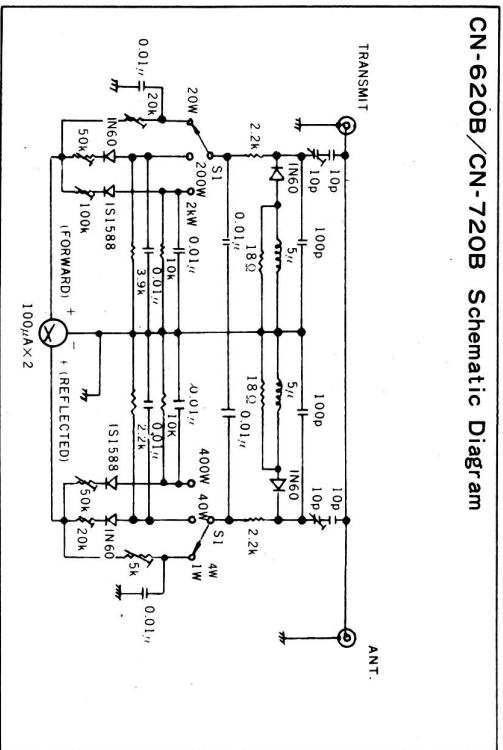
Pf: Forward Power
Pr: Reflected Power

$$SWR = \frac{\sqrt{100} + \sqrt{4}}{\sqrt{100} - \sqrt{4}} = \frac{10+2}{10-2} = \frac{12}{8} = 1.5$$

CAUTION :

- * The meter movements are highly sensitive. Prevent mechanical shock and vibration.
- * When not in use, set the power selector to 2kW position.
- * Measuring power with a poorly matched antenna or disconnecting the output of the bridge while operating may damage the meter.

CN-620B/CN-720B Schematic Diagram



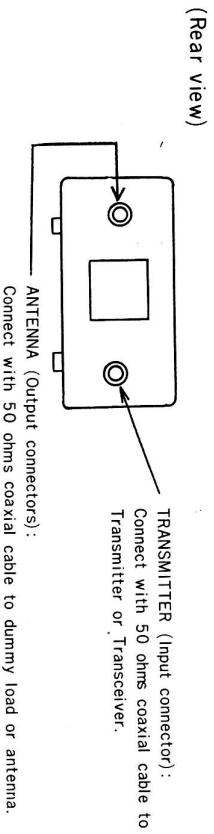
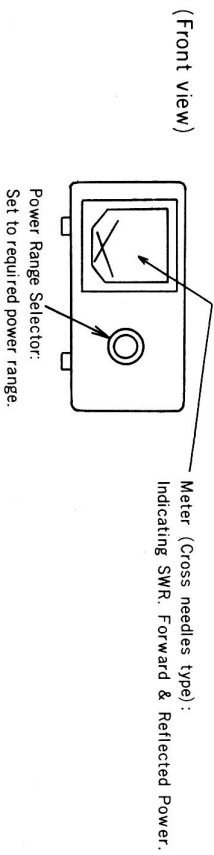
The CN620B/CN720B is a high quality instrument with a unique feature which makes tedious measurements of SWR and power during antenna tests, matching and tuning of transmitters a breeze.

SWR and power indicators are installed in one meter unit. One scale will indicate Forward Power, another scale Reflected Power and SWR is indicated at the crossing point of the 2 needles. This unique feature makes it possible to read Forward Power, Reflected Power and SWR all at the same time.

SPECIFICATIONS :

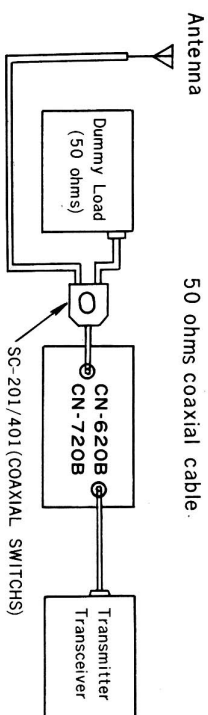
| | CN-620B | CN-720B |
|---------------------------------------|---|-----------------------------|
| Frequency: | 1.8-150 MHz | 1.8-150 MHz |
| Input/output impedance: | 50 ohms | 50 ohms |
| Ratio of Forward vs. Reflected power: | 5 : 1 | 5 : 1 |
| Power range: | Forward 20W/200W/2kW Reflected 4W/40W/400W | 20W/200W/2kW 4W/40W/400W |
| Tolerance: | ±10% at full scale | ±10% at full scale |
| SWR measurement: | 1 : 1-1 : ∞ | 1 : 1-1 : ∞ |
| SWR detection sensitivity: | 4W min. | 4W min. |
| Input/output connectors: | SO-239 | SO-239 |
| Dimensions: | 180W×85H×120D mm | 180W×120H×130D mm |

NOMENCLATURE :

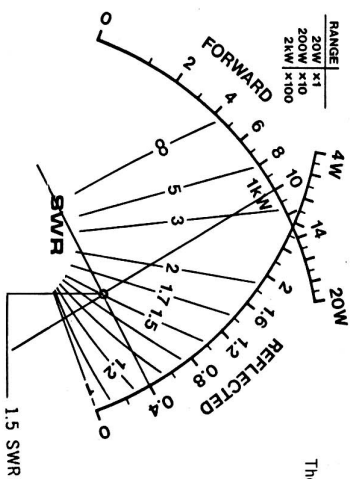


OPERATION :

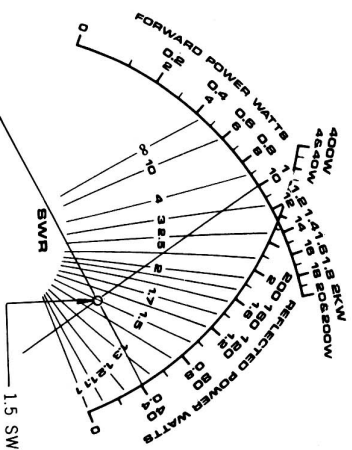
- 1) Do not use CN-620B/CN-720B beyond frequency range of 1.8-150 MHz. Insertion loss will increase beyond these frequencies and accuracy of the meter will be impaired.
- 2) Use only 50 ohm coax line for connections. This will maintain the accuracy of the meter.
- 3) For accurate power measurements, use 50 ohms pure resistance dummy load.



4) SWR



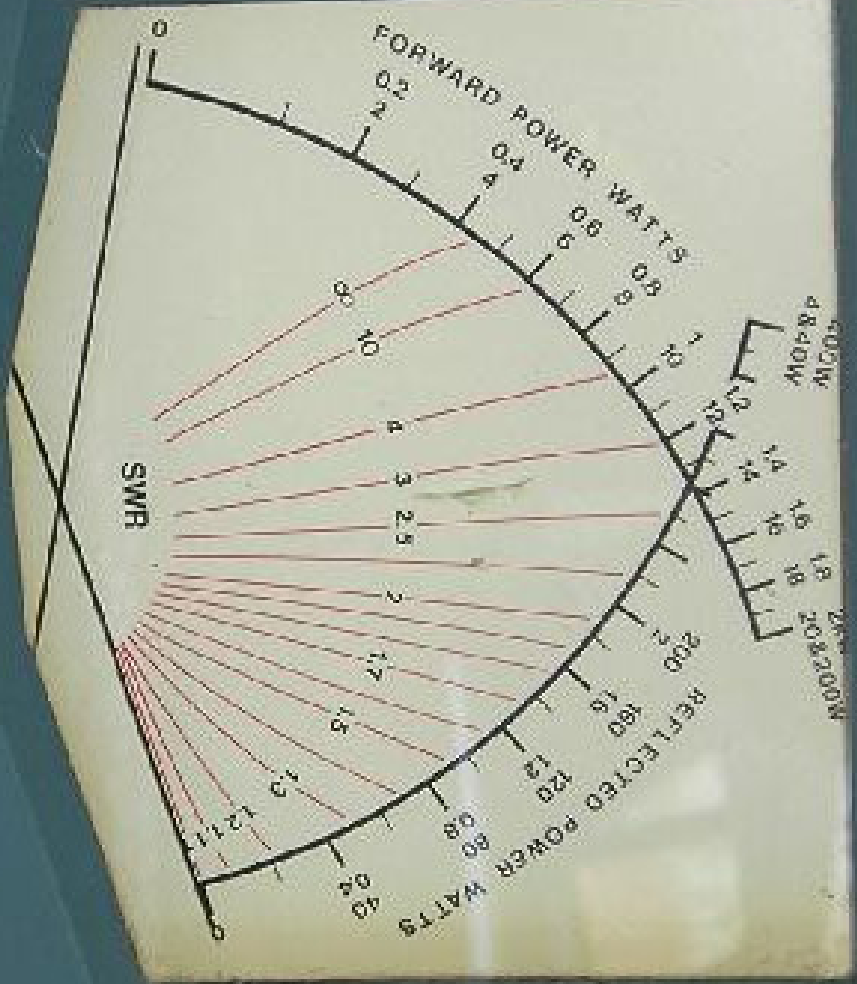
The CN-620B meter scale.
This scale indicates
200W power range.



The CN-720B meter scale.
This scale indicates
200W power range.

See Figure 1. The meter indicates Forward 100W and Reflected Power 4W. At the crossing point of the two meter needles the indication is SWR 1.5.

 CROSS NEEDLE METER



AN-720B
M.F. POWER METER
DAIWA

POWER RANGE

2KW 200W 20W

