

CROSS NEEDLE TYPE SWR&POWER METER

AV20/AV40

OPERATION INSTRUCTION

GENERAL

AV20/AV40 CROSS NEEDLE SWR&POWER METER WITH A COUPLE OF METERS INDICATING FORWARD AND REFLECTED

POWER RESPECTIVELY. IT PROVIDES THE DIRECT READ OUT OF THE SWR AND OUTPUT POWER VALUE FROM THE CROSSING OF TWO POINTERS.

SETUP

CONNECT THE OUTPUT OF TRANSCEIVER TO THE "TX" CONNECTOR AND ANTENNA TO THE "ANT" CONNECTOR BOTH LOCATED ON THE REAR PANEL OF THE UNIT.

OPERATION

SELECT THE PROPER RANGE LO/HIGT ACCORDING TO YOUR TRANSCEIVER OUTPUT POWER USUALLY SELECT THE "HIGH" RANG FIRST IS STRONGLY SUGGEST.

* FORWARD POWER

FOLLOW THE FORWARD SCALE AND READ IT OUT.

*REFLECTED POWER

FOLLOW THE REFLECTED SCALE NAD READ IT OUT.

*STANDING WAVE RATIO(SWR)

FOLLOW THE SWR CORRESPONDING SCALE FROM THE POINT OF POINTER CROSSING READ IT OUT REFER TO FIG.1

CAUTION

*NO MECHANICAL SHOCK TO BE GIVEN THE UNIT AS IT EMPLOYS PRECISION METERS

*DO NOT TRANSMIT WITH AN ANTENNA OUT OF TUNED OR OPEN CONDITION AS IT MAY BURN OUT THE METER BY HIGH VOLTAGE .

SPECIFICATION

FREQUENCY RANGY :1.8~200 MHZ AV20 ;140~525 MHZ AV40

INPUT IMPEDANCE :50 ohms

POWER RANGE :30W OR 300W AV20 ;15W~150W AV40 SWITCHABLE

POWER ACCURACY :10% AT FULL SCALE

MINI INPUT POWER:2W AV20 ;1W AV40

CONNECTOR : UHF (M TYPE)

DIMENSION : 85Wx87Hx95D

WEIGHT : 290g AV20 ; 280g AV40

INPUT POWER : DC12V

NOTE:

IN CASE OF 220MHZ BAND MEASUREMENT BOTH FORWARD AND REFLECT POWER TO BE CONVERTED WITH THE FOLLOWING FORMULA .

DIRECT READ OUT IN THE SCALEx0.7=ACTUAL POWER

EX. WHEN DIRECT READ OUT SHOWS 10W, IT SHOULD BE 10Wx0.7=7W

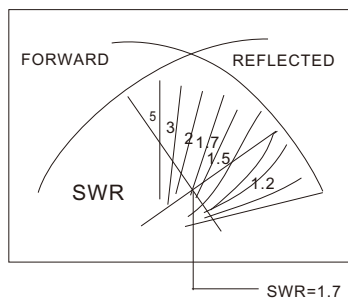
$$SWR = \frac{\sqrt{P_f} + \sqrt{P_r}}{\sqrt{P_f} - \sqrt{P_r}}$$

P_f= FORWARD POWER
P_r= REFLECTED POWER

ACCESSORY: DC POWER INPUT CABLE ONE PIECE

FIG.1

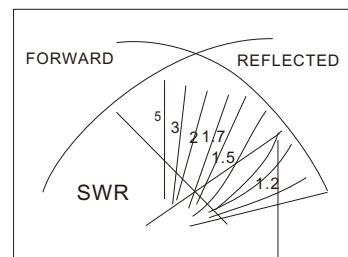
CORRECT READ IN SWR IS 1.7



The CORRECT READING IS READ THE CROSSING POINTER

FIG.2

FIG.2 SHOW A WRONG READ IN SWR SCALE



WRONG READ GET SWR=1.3 NOT TO READ THE END POINT