

# Instruction for RipMax Radio Control List No. RC 87

## MAJOR SPECIAL TEST METER

<b>Ranges:</b>	DC Voltage :	5-25 50 250 500 & 2.5K (20,000 Ohms per Volt)
	AC Voltage :	10 50 100 500 1000 Volts (10,000 Ohms per Volt)
	DC Current :	0-50 $\mu$ A, 0-2.5MA, 0-250MA
	Resistance :	0-6K, 0-6M (300 Ohm and 30K at center scale)
	Capacitance :	10 $\mu$ F to .001 $\mu$ F .001 $\mu$ F to .1 $\mu$ F
	Decibels :	-20 to +22 DB

### How to use the instrument

#### 1. DC Voltage and Current :

1. Insert the Black test lead into the “-COM” jack and the Red test lead into the “V-OHM-A” jack.
  2. Set Range SW to the position of a proper range presumed higher than the voltage or the current to be measured.
  3. For voltage measurements, the test leads are connected across the load under test. Current measurements, DC only, are made with the test leads connected in series with the circuit under test. Observe the proper polarities of the test leads.
  4. Reset Range SW to a lower position so as the Meter Hand comes near to full scale.
- Note:** Be careful not to let the Meter Hand go over the full scale, or the Meter Hand may be distracted.
5. Read the Voltage or Current in comparison with the selected range.
  6. To measure, DC Voltage in the 2500V range, insert the black lead in the “-COM” jack and the red lead in the “2.5KV” jack.

#### 2. AC Voltage and Decibels:

1. Set Range SW to position “ACV” section and follow the same way as done on DC measurements.
2. It will be noted that there are two AC Voltage scales. One is used for the 10 and 50V AC range, and the other for range over 100V AC.
3. The Decibel measurements for audio circuit are made with the test leads in the same position. The Decibel scale on the inner, graduated from -20 db +22 db, for 10V AC range, and calibrated for 0 db level of 1 milliwatt in a 600 ohm line.

#### 3. Resistance:

1. Set the RANGE SW to position “OHM” section.
2. Check the ZERO ohm setting by shorting the test leads and adjusting the “OHM ADJ” knob at the lower left. The pointer is set on the “0” on OHM scale.
3. Connect the leads across the resistor under test and read outer scale, applying the proper multiplier.
4. When making resistance measurements of components wired in circuit, be certain that the power is turned off, and also that one end is free.
5. Renew the internal battery when the shorting test fails to bring the pointer to “0” on the ohms scale.

#### 4. Capacitance:

1. An external source of AC voltage is required, preferably supplied from a small transformer whose primary is controlled by varicon rheostat.
2.  $10\mu\text{F}$  to  $.001\mu\text{F}$ , Set the range SW to 100V AC, insert the test leads into the "V-OHM-A" and the "-COM" jacks. Connect a 100V AC source the condenser and test leads in series. Read the capacitance on the " $\mu\text{F}$ " scale and divide by 10. Do not touch the AC supply.
3.  $.001\mu\text{F}$  to  $0.1\mu\text{F}$ , Set the range SW to 10V AC. Connect a 10V AC Source, the condenser and the test leads in series, read the capacitance on the " $\mu\text{F}$ " scale direct.

#### 5. Output:

1. Audio output measurements can be made on circuits where there the DC component is present, as in the out put transformer circuits. The instruments contains a blocking capacitor in series with the "Out Put" jack.
2. Insert the test leads into the "Out Put" and the "-COM".
3. The out put voltage are read on the AC voltage ranges.

