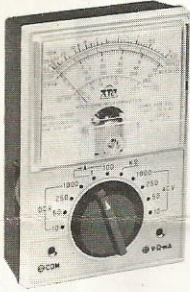


OPERATING INSTRUCTIONS

1,000Ω MINITESTER

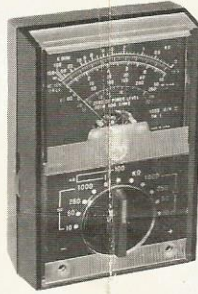


C1000

C1000M WITH MIRROR

DC Volt : 0-10-50-250-1000
 AC Volt : 0-10-50-250-1000
 DC Current : 0-100 mA
 Resistance : 0-150 K (3000-ohm center)
 Dimensions : 2-1/4" x 3-9/16" x 1-1/16"
 Weight : 0.37 lbs.

1,000Ω MINITESTER



C1090

DC Volt : 0-10-50-250-1000
 AC Volt : 0-10-50-250-1000
 DC Current : 0-100 mA
 Resistance : 0-150 K (3000-ohm center)
 Dimensions : 2-1/4" x 3-9/16" x 1-1/16"
 Weight : 0.37 lbs.

4,000Ω MINITESTER



C2000

DC Volt : 0-5-25-250-500
 AC Volt : 0-10-50-500-1000
 DC Current : 0-250 μA, 250 mA
 Resistance : 0-600K (7000-ohm center)
 Dimensions : 2-1/4" x 3-9/16" x 1-1/16"
 Weight : 0.37 lbs.

AC VOLTS:

Plug in the test leads, black lead in " -com" jack and red lead into " +V mA" jack. Select the proper AC voltage range with the range selector switch and read directly on the corresponding AC voltage on the meter scale.

DC VOLT AND CURRENT:

Plug in the test leads, black lead in " -com" jack and red lead into " +V mA" jack. Select the proper DC voltage on current range with the range selector switch and read directly on the corresponding meter scale.

OHMS:

Plug in the test leads, black lead in " -com" jack and red lead into " + com" jack. Before measuring, check zero ohms indication by shorting the tips of test leads together. If needle does not indicate zero ohms, adjust the zero adjust control on the left side of the meter cabinet.

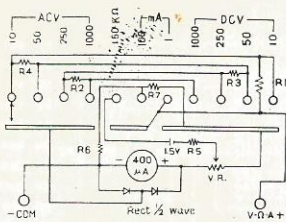
INSTALLING BATTERY:

Remove the back cover and insert the equivalent 1.5V penlight battery. Carefully observe polarity and make certain that the battery is firmly seated.

SPECIAL NOTES:

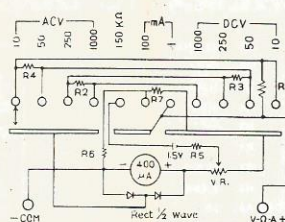
1. TTC model employs a highly precision meter movement and extreme mechanical shock should be avoided.
2. Carefully observe polarity of test leads when measuring voltage or current.
3. When measuring an unknown voltage or current, select the highest range first then work down to a suitable range for best reading.
4. The control on the left side of the cabinet is the zero adjust control for ohms measurement.
5. When using the ohms range and needle will not zero properly by shorting tips of test leads together, replace the battery.

SCHEMATIC DIAGRAMS



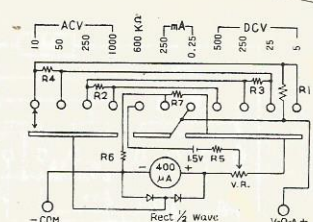
R 1 9.55K	R 5 2.1K
R 2 750K	R 6 5.46Ω
R 3 200K	R 7 536Ω
R 4 40K	V.R. 700Ω

C1000



R 1 9.55K	R 5 2.1K
R 2 750K	R 6 5.46Ω
R 3 200K	R 7 536Ω
R 4 40K	V.R. 700Ω

C1090

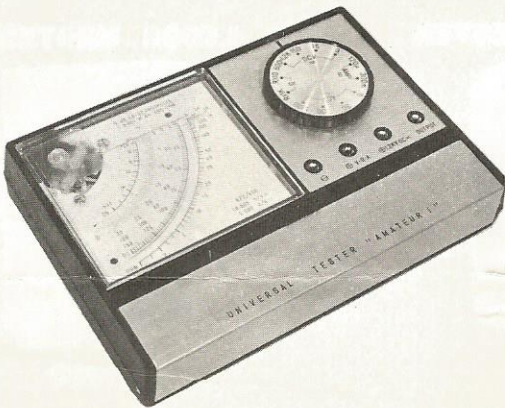


R 1 18.4K	R 5 5.6K
R 2 1M	R 6 12Ω
R 3 900K	R 7 12K
R 4 80K	V.R. 1.68K

C2000

10,000 OHMS/VOLT MULTITESTER

with test leads compartment



C1050

DC Volt	: 0-3-15-150-600-1200
AC Volt	: 0-6-30-300-1200
DC Current	: 0-120uA, 0-300mA
Resistance	: 0-50K, 0-0.5Meg (R × 10) (R × 1K)
Decibels	: -20 to +17 dB

BATTERY INSTALLATION:

Remove the back cover from your multimeter and insert "AA" size battery into the bracket provided. Carefully observe polarity and be sure that the battery is firmly seated with proper contact on each end.

NOTE for C1050:

Remove the red wire (being set on a printed circuit board on the zero ohm adjust knob) which is shorted directly across the two terminal screws on the back of the meter movement. This wire is placed here at the time of manufacture to prevent damage in transportation. This wire must be removed before your test will operate.

DC VOLTAGE AND CURRENT:

- Insert the black test lead into the (-)COM jack and the red test lead into the (+) jack.
- Select the desired range by turning the range selector knob.
- For voltage measurements, the test leads are connected across the load under test. DC current measurements are made with the test leads connected in series with the circuit under test. Observe proper polarities of the test leads carefully.
- If the voltage or the current of the circuit under test is not known, the selector knob should be set at a high range and lowered scale at a time to obtain satisfactory readings. To measure DC voltage in the 1200V range, insert the black lead into the (-) jack and the red lead in the (+) 1.2KV DC jack setting the selector to 600 +1.2K position.

AC VOLTAGE AND DECIBELS:

- Insert the black test lead into the (-) jack the red test lead into

20,000 OHMS/VOLT MULTITESTER

with leather case



C2050

DC Volt	: 5-25-125-500-1000
AC Volt	: 10-50-250-1000
DC Current	: 50uA-2.5mA-250mA
Resistance	: R × 10, R × 100, R × 1000
Decibels	: -20 dB to +22 dB

- the (+) jack.
- Select the range by turning the knob to the "ACV" section.
- Decibel measurements for audio circuits are made with the test leads in the same position. The inner decibel scale is graduated from -20 to +17 dB for 6V AC range and calibrated for 0 dB level of 1 milli-watt on a 600 ohm line.
- The polarity of the leads is not important.

RESISTANCE MEASUREMENTS:

- Insert the test leads into the (-) and the (+) jacks.
- Select the range by turning the knob to ×10 or ×1K.
- Make SHORTING TEST before making measurements. Check the ZERO ohm setting by shorting the test leads and adjusting the 0 ohm adjust knob. The pointer is to be adjusted to "0" on the OHM scale.
- Connect the leads across the resistor under test and read the top scale by applying the proper multiplier, 10 or 1000.
- When making resistance measurements of components wired in circuit, be certain that the circuit power is turned off and also that one end of the resistor or device under test is disconnected from the circuit.
- Renew the internal battery when the SHORTING TEST fails to bring the pointer to "0" on the OHMS scale.

OUTPUT MEASUREMENTS:

- Audio output measurements can be made on circuits where DC is present as in the output transformer circuits. This instrument contains a blocking capacitor in series with OUTPUT jack.
- Insert the test leads into the OUTPUT and the (-) jacks.
- The output voltages are reads on the AC voltage ranges.

SCHEMATIC DIAGRAMS

