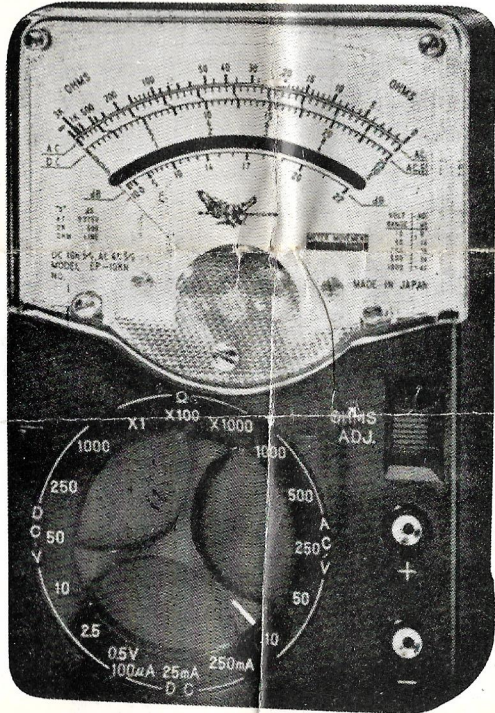




**EAGLE PRODUCTS**

# **MULTIMETER MODEL EP-10KN WITH OVERLOAD PROTECTION CIRCUIT**



- \*Overload-protected by dual silicon diodes
- \*Mirror scale
- \*Double-jewelled  $\pm 2\%$  meter
- \* $\pm 1\%$  temperature-stabilized film resistors

## SPECIFICATIONS

DC Volts:	0.5, 2.5, 10, 50, 250, 500, 1000V (10,000 $\Omega$ /V)
AC Volts:	10, 50, 250, 500, 1000V (4,000 $\Omega$ /V)
DC Current:	100 $\mu$ A, 25mA, 250mA
Resistance:	3k $\Omega$ , 300k $\Omega$ , 7M $\Omega$
Decibels:	-10~+22 db
Accuracy:	DC $\pm$ 3%, AC $\pm$ 4% (of full scale)
Batteries:	Two 1.5V dry cells, Size AA, "Eveready" 915

## OPERATION

- 1. DC Volts** Turn the rotary switch to a suitable DC V range. Insert shorter tips of test leads into (+), (-) terminals on the right, and apply longer tips across the voltage to be measured. The voltage will then be shown on the third scale down.
- 2. AC Volts** Turn the rotary switch to a suitable AC V range. The longer tips of the test leads should be applied across the voltage to be measured. The voltage will then be shown on the fourth scale down on the 10V range, and on the third scale down on the 50V range and up.
- 3. DC Current** Turn the rotary switch to a suitable DC mA range. The longer tips of the test leads should be connected in series with the current to be measured. Read the third scale down.
- 4. Resistance** Turn the rotary switch to a suitable OHMS range. Short together the longer tips of the test leads, and by adjusting the OHMS ADJ. control, set the meter pointer to indicate "0" on the OHMS scale (first scale). Then, unshort the test leads and apply across the resistance to be measured. Read the indication on the meter and multiply by the selected OHMS range multiplier to obtain the value in ohms.

**5. Decibels** Unless input-output comparison is being made on a device presenting both a  $600\Omega$  input impedance and a  $600\Omega$  output impedance, only differences in db scale readings are significant, and then only for voltage levels comparison. Across  $600\Omega$ , the readings are in dbm, which are actual power values. (The zero reference level used for the db scales is 1mw or 0.775 volt across  $600\Omega$ ).

## NOTES IN HANDLING

1. Avoid severe mechanical shock/vibration, sustained high temperature, moisture, or a strong magnetic field.
2. Do not rub or apply cleaning fluid to meter window.
3. When measuring DC voltages or current, observe correct polarity of test lead connections. Wrong connections will deflect the meter to the left.
4. When the approximate value of a voltage is unknown, start with the highest range for safety; then proceed to the lowest range on which the voltage can be measured for best reading accuracy.
5. Battery replacement is immediately necessary when the zero ohms control can no longer be adjusted so that the meter pointer swings up to "0" on the ohms scale with the test leads shorted together. Exhausted batteries might leak electrolyte and corrode the internal components.
6. Never check resistance in a circuit while power is on, or before circuit capacitors are discharged.
7. Never store unit as it would be set up for resistance measurement. Test leads might accidentally short together, resulting in battery exhaustion.
8. Battery removal is the safest procedure before storing for an extended time.

# MODEL EP-10KN CIRCUIT DIAGRAM

