

OPERATING INSTRUCTIONS FOR MODEL 202

GENERAL

Model 202 is a flexible emission type tube tester with resistance and capacity features. It is normally designed for 105-130 volt AC 60 cycle operation.

The instrument contains a selenium type rectifier, a type NE51 neon bulb, and a type 47 pilot light.

The slide switches should normally be kept at the "K" position.

The "Hi-Lo" switch should be kept at "Hi" position for resistance and capacity measurements.

Unless tube chart indicates otherwise, all tubes are checked for quality in the "REG." position.

TUBE TESTING OPERATION

I. Before inserting a tube into its socket the following procedure should be followed:

1. Set "Filament Selector" to number indicated on tube chart.
2. Set "Hi-Lo" switch to position indicated on tube chart.
3. Press the slide switch in the "F" column of the tube chart to the "F" position. All the other slide switches should be in the "K" position.
4. Set "shunt control" to value indicated on tube chart.

II. LINE VOLTAGE TEST

1. Insert tube into proper socket
2. Turn "Circuit Selector" to "LV" position
3. Plug line cord into AC outlet.
4. Set "ON-OFF" switch to "ON" position.
5. Set meter pointer to arrow in center of scale with the "LV" control.

III. SHORT TEST

1. Turn "Circuit Selector" to "SH" position
2. Press slide switches up, one at a time, to "P" position, and return them to "K" position.
3. The single switch in the "F" position is not touched, but is left in the "F" position.
4. Unless the tube chart indicates otherwise it is normal for the neon lamp to glow when only one of the slide switches is pressed to "P" position. This simply indicates filament or heater continuity. However, unless the tube chart indicates otherwise, if the neon lamp glows when more than one slide switch is pressed to "P" position, the tube is defective and should be discarded without further test. A momentary flash of the neon bulb should be disregarded.
5. A shorted tube should not be checked for quality since it might overload the meter or transformer.
6. Tubes having a filament or heater voltage of 25 volts or higher sometimes show a steady leakage at the rated heater voltage, although they are satisfactory to use. In such cases reduce the "Filament Selector" setting by 1 position. If the glow

still persists at the reduced heater voltage, the tube is actually defective. If it dies down at the lower voltage, disregard the glow; reset the filament switch to the rated value, and continue with the quality test.

IV. QUALITY TEST

1. Make sure that the "Shunt Control" is correctly set to the value indicated on the tube chart.
2. Unless the tube chart indicates otherwise, turn "Circuit Selector" to "REG" position. Otherwise set the switch to either "DIO," "BAT TYPE," or "COLD K" positions as indicated in the "notations" column on the tube chart.
3. Press the switch or switches in the "P" column to the "P" position.
4. Read the tube quality on the "Reject-Good" scale.
5. If the tube has more than one section, return all the switches in the "P" position to the "K" position after completing the test on one section. Then reset switches and shunt control for the other section or sections.

V. BALLAST TUBES (Refer to ballast tube chart for listings)

1. Turn "ON-OFF" switch to "ON" position.
2. Set "Filament Selector" to "Bal" position.
3. All slide switches except those listed should be in "K" position.
4. Turn "Circuit Selector" to "SH" position.
5. Press slide switches listed, one at a time to "P" position. If the tube is good, neon lamp will glow each time a slide switch is pressed up to "P" position.
6. After pressing a slide switch to "P" position and noting whether or not the neon lamp glows, it should be returned to "K" position before another switch is thrown to "P" position.

VI. VOLTAGE REGULATOR TUBES, VR75, VR90, VR105, and VR150

1. Turn "Shunt Control" to "0" position.
2. Set "HI-LO" switch to "HI" position.
3. Press #2 switch to "P" position.
4. If tube is good it will glow.

CONDENSER LEAKAGE TEST

1. Set "ON-OFF" Switch to "ON" position.
2. Set "HI-LO" switch to "HI" position
3. Plug line cord into an AC outlet.
4. Turn "LV Control" to extreme clockwise position.
5. Turn "Circuit Selector" switch to "CL" position.
6. Connect condenser to be measured (not electrolytics) to the 2 jacks below "circuit selector" switch.
7. A permanent glow on the neon bulb indicates a leaky condenser. a temporary flash that dies down indicates a good condenser.

CAPACITY MEASUREMENTS

1. Set "ON-OFF" switch to "ON" position.
2. Set "HI-LO" switch to "HI" position.
3. Plug line cord into an AC outlet.
4. Turn "Circuit Selector" to "CAP" position
5. Insert a pair of test leads into the 2 jacks below "Circuit Selector" switch.
6. Short the free ends of the test leads and adjust meter to full scale deflection (50 on the 0-50 scale) with the "LV control."
7. Separate test leads and connect condenser to be measured between them.
8. Reading in microfarads is given directly on the "MFD" meter scale. The range covered is .01 to 1 mfd.

RESISTANCE MEASUREMENTS

1. Set "ON-OFF" switch to "ON" position.
2. Set "HI-LO" switch to "HI" position.
3. Plug line cord into an AC outlet.
4. Turn "Circuit Selector" to "RES" position.
5. Insert a pair of test leads (not supplied) into the 2 jacks below "Circuit Selector" switch.
6. Short the free ends of the test leads and adjust meter to full scale deflection (50 on the 0-50 scale) with the "LV control."
7. Separate test leads and connect resistor to be measured between them.
8. Reading in ohms is given directly on the "OHMS" meter scale. The letter K stands for 1000. The range covered is 0 to 4 megohms.

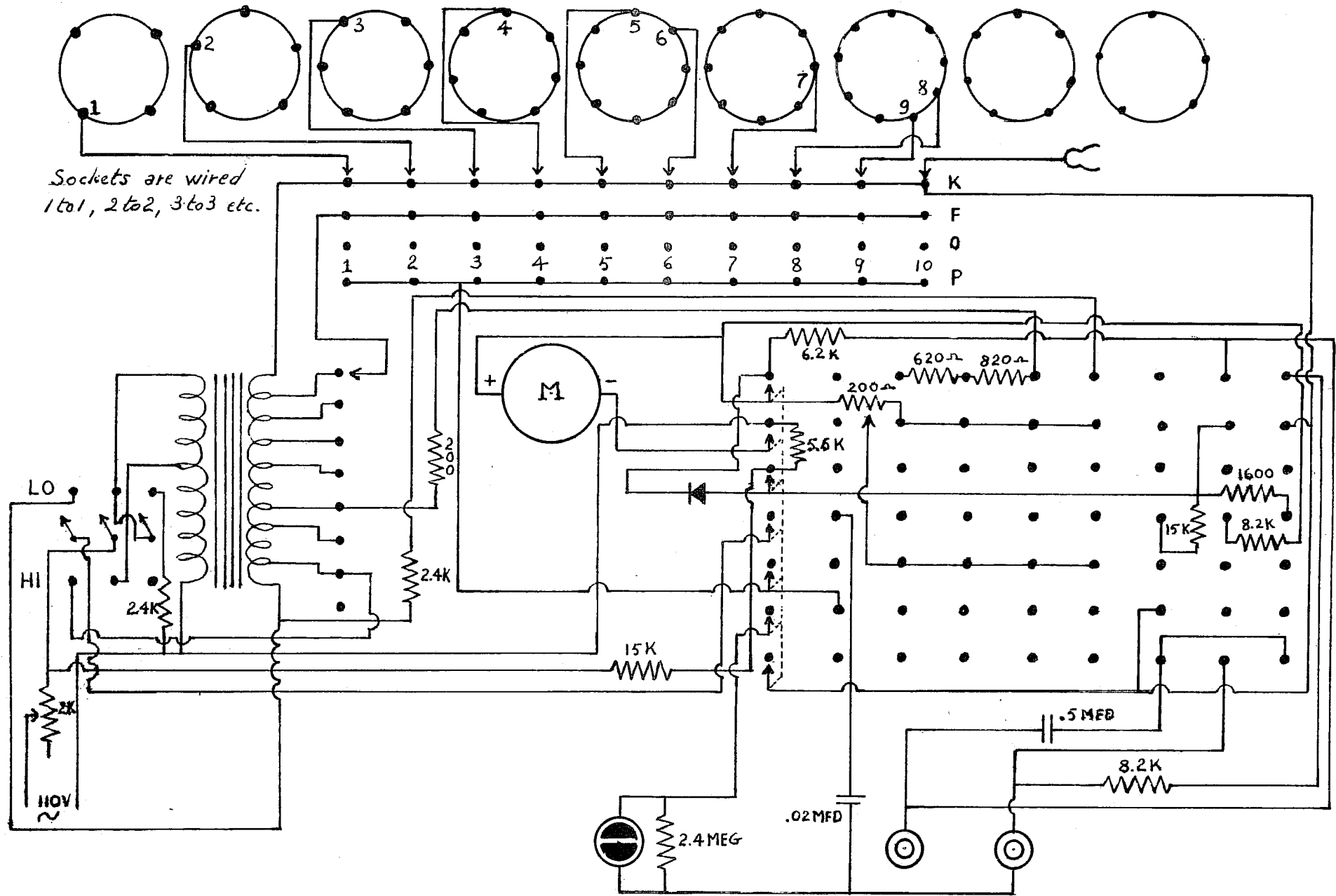
GUARANTEE

This instrument is guaranteed for 90 days from date of purchase to be free from any defect in workmanship or material. ELECTRONIC MEASUREMENTS CORPORATION will replace any defective part or parts within this period without charge, if tests at our factory show that the defect was not caused by abuse or tampering.

ELECTRONIC MEASUREMENTS CORPORATION reserves the right to make changes in design or add improvements to equipment manufactured by them without incurring any obligation to incorporate such changes or improvements in equipment previously sold by them.

MODEL 204-205-207-209 ADDITIONS

3A3	LO	4	2	10	40	Cold K. Glows at 3,7,8 OK over diode line
3DT6	LO	4	3	1-5-6	38	
5DH8	HI	3	4	1-2	18	
5DH8	HI	3	4	6-7-9	17	
6BK4	HI	4	2	5-10	100	Cold K
6BS8	HI	4	4	1-2	18	
6BS8	HI	4	4	6-7	18	
6CB5	HI	4	2	1-4-5-8-10	18	Glows at 1,3,4,5,6,7,8
6CE5	HI	4	3	1-5-6	16	
6CG8	HI	4	4	1-2	17	
6CG8	HI	4	4	6-7-9	16	
6CH8	HI	4	4	8-9	17	
6CH8	HI	4	4	2-3-7	15	
6CM7	HI	4	4	6-7	22	
6CM7	HI	4	4	1-8	17	
6CX8	HI	4	4	2-3	21	
6CX8	HI	4	4	7-8-9	17	
6DT6	HI	4	3	1-5-6	17	
10C8	LO	6	4	1-2	38	
10C8	LO	6	4	6-7-8	34	
12AB5	LO	6	4	1-3-6-8-9	52	Glows at 1,3,5,6,8
12AD6	LO	6	3	1-6-7	33	
12AE6	LO	6	3	1-5-6-7	65	
12AF6	LO	6	3	1-2-5-6	33	
12AJ6	LO	6	3	1-5-6-7	40	
12BL6	LO	6	3	1-2-5-6	37	
12C5	LO	6	3	2-5-6-7	60	Glows at 2,4,5
12CR6	LO	6	3	2-5-6-7	55	
12CT8	LO	6	4	1-2	45	
12CU5	LO	6	3	2-5-6-7	55	Glows at 2,4,5
12F8	LO	6	4	1	95	diode
12F8	LO	6	4	6	95	diode
12F8	LO	6	4	2-3-8	56	
12K5	LO	6	3	2-5-6-7	42	Glows at 4,5,6
17H3	HI	6	4	3-8	30	Glows at 3,5,8-Diode
18A5	HI	6	2	1-5	20	
25EC6	HI	6	2	5-8-10	20	
6386	HI	4	9	3-4	18	
6386	HI	4	9	6-7	18	



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