"EMC GIVES MORE MEASUREMENT VALUE PER DOLLAR"

OPERATING MANUAL

E M C Model 211

WARNING: Do not misplace this book. It contains complete instructions necessary for the operation of this instrument. DO NOT plug instrument into a DC POWER LINE! Unless otherwise indicated, this instrument is designed for 105-135 volt, 60 cycle, AC power.

ELECTRONIC MEASUREMENTS
CORPORATION

OPERATING INSTRUCTIONS FOR MODEL 211

GENERAL

Model 211 is a compact, completely flexible tube checker. It is normally designed for 105-130 volt AC 60 cycle operation.

It uses an NE2 neon bulb for a "snort" indicator.

All slide switches at the bottom of the panel should normally be kept in "K" position.

The N-S slide switch is normally kept in the "N" position unless the tube chart indicates otherwise.

If a tube being tested has a cap coming out at the top of the tube such as the 1B3, the grid cap connector should be pressed over it before checking the tube.

TUBE TESTING OPERATION

I. Before inserting a tube intoits socket the following procedure should be followed:-

1. Refer to tube chart and set the "Filament Volts" and "Filament Selector" switches to the positionsindicated.
2. Set "Shunt" control to value indicated on tube chart.

II. SHORT TEST

1. Set "SHORT-QUALITY" switch to "SHORT" position.

2. Press the slide switches up, one at a time to "P" position, and return them to "K" position.
3. The slide switch corresponding to the number in the "FILAMENT SELECTOR" column is not touched but is left in the "K" position. For example, on the 1S5 tube, slide switch #1 is kept in the "K" position at all times.
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 18 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 Volts" switch by 1 position. If the glow still persists at the reduced heater voltage, the heater is actually defective. If it dies down at the lower voltage, disregard the glow, reset the "Filament Volts" switch to the rated value, and continue with the quality test.
7. Tubes with a filament or heater voltage of 50V or higher must be checked for shorts with the "Filament Volts" switch at position "d". After the short test, the "Filament Volts" switch is set to the position indicated on the tube chart and

the tube checked for quality.

III. QUALITY TEST

1. Make sure that the "SHUNT" control is correctly set to the value indicated on the tube chart and set "SHORT-QUALITY" switch to QUALITY" position.
2. Press the switch or switches in the "P" column to "P" position.
3. Allow about 1/2 minute or so for the tube to heat up. Power tubes require more time to heat up.
4. Read the tube quality on the "REJECT-GOOD" scale. If the meter doesn't move, try tapping the meter lightly with a finger before rejecting the tube. If the tube chart says "OK over diode" in the "Notation" column, the pointer need go only past the "Diodes OK" mark (about 3 meter divisions) to be considered good.
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 the switches and shunt control for the other section or sections.

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

1. Set "SHORT-QUALITY" switch to SHORT" position.
2. Set "FILAMENT VOLTS" switch to "h" position.
3. All slide switches except those listed should be in "K" position.
4. 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.

5. 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 ispressed to "P" position.

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

1. Set "SHORT-QUALITY" switch to "QUALITY" Position.
2. Set "SHUNT" control to "0" position.
3. Press #2 and #10 switches to"P" position.
4. If tube is good, it will glow.

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 211

N-S Switch is kept in N position unless tube chart indicates otherwise

TUBE	FILAMENT VOLTS	FILAMENT SELECT.	SLIDE SWITCH IN P POSITION	SHUNT	NOTATION
0A2	-	1	1-5-10	0	Glows at 1,2,4,5,7 Tube Glows
0A4	-	1	5-7-10	75	
0B2	-	1	1-5-10	0	Glows at 1,2,4,5,7 Tube Glows
0Y4	-	1	3-5-10	21	
1A5	b	2	3-4-5	56	
1A7	b	2	5-6	60	
1A7	b	2	3-4-10	68	
1AF4	b	7	2-3-6	35	Glows at 1,5
1AX2	b	10	1-4-6-9-10	83	Glows at 1,2,4,5 6,8,9. Press to "S" for quality check.OK over diode
1B3	a	10	2-10	82	Glows at 2,7. Press to "S". OK over 18
1B7	b	2	3-5-6	58	
1C5	b	2	3-5	47	
1D8	b	2	3-4-5	40	
1D8	b	2	6	56	
1DN5	b	1	3-4-6	51	
1E7	b	2	3-4-8-10	62	
1E7	b	2	5-6-8-10	62	
1G4	b	2	3-5	46	
1G6	b	2	3-4	49	
1G6	b	2	5-6	49	
1H4	b	2	3-5	54	
1H5	b	2	3	52	
[illegible]3	b	10	2-10	82	Glows at 2,7. Press to "S".OK over diode
1J5	b	2	3-4-5	51	
1J6	b	2	3-4	58	
1J6	b	2	5-6	58	
1K3	a	10	2-10	82	Glows at 2,7. Press to "S".OK over diode
1L6	b	1	2-3-4-5-6	53	
1LA6	b	1	3-4	57	
1LA6	b	1	2-5-6-10	60	
1LC6	b	1	3-4	58	
1LC6	b	1	2-5-6-10	55	
1LE3	b	1	2-6	52	
1LG5	b	1	2-3-6	52	
1LH4	b	1	2-6	50	
1LH5	b	1	2-3-6	50	
1N5	b	2	3-4	56	
1P5	b	2	3-4	50	
1Q5	b	2	3-4-5	29	

MODEL 211

N-S Switch is kept in N position unless tube chart indicates otherwise

TUBE	FILAMENT VOLTS	FILAMENT SELECT.	SLIDE SWITCH IN P POSITION	SHUNT	NOTATION
1R5	b	7	3-4	50	Glows at 1,5
1R5	b	7	2-3-6-10	59	
1S5	b	1	4-5-6	51	
1S5	b	1	3	70	OK over diode
1T4	b	7	2-3-6	42	Glows at 1,5
1T5	b	2	3-4-5	52	
1U4	b	7	2-3-6	46	Glows at 1,5
1U5	b	1	2-3-6	50	
1U5	b	1	4	60	OK over diode
1V2	a	4	1-9-10	62	Glows at 1,5,9. OK over diode
1X2	b	10	1-4-6-9-10	80	Glows at 1,2,4,5,6, 8,9. Press to "S" for quality check. OK over diode
2A4	c	2	3-5-10	22	Tube Glows
2AF4	c	3	1-2-6-7	20	Glows at 1,2,4,6,7
2B3	b	10	2-10	80	Press to "S". OK over 20
2BN4	c	3	2-5-7	20	Glows at 1,2,4,6,7
2CY5	c	3	1-5	25	Glows at 2,4,7
2D21	d	3	1-5-7	22	Glows at 4,5,7
2EN5	c	3	2	22	
2EN5	c	3	7	22	
2Y2	b	10	5-10	60	Press to "S". OK over diode. Glows at 2,5,6,7,8
3A2	c	10	2-5-8-10	70	Glows at 1,2,4,5,6, 8,9. Press to "S". OK over 20
3A3	c	10	2-10	80	Glows at 2,3,7,8. Press to "S". OK over 18.
3A4	b	5	2-3-4-6	48	Glows at 1,2,6,7
3A5	b	4	5-6	33	Glows at 1,7
3A5	b	4	2-3	33	
3A8	b	1	3-4	46	Glows at 2,7
3[illegible]5	c	3	2	26	
3AB5	c	3	7	26	
3AU6	c	3	1-2-5-6	20	
3AV6	c	3	1-7	30	
3AV6	c	3	5	55	OK over diode
3AV6	c	3	6	55	OK over diode
3B5	c	8	3-4-5	33	Glows at 2,7
3BA6	c	3	1-5-6	30	
3BC5	c	3	1-5-6	21	Glows at 2,4,7
3BE6	c	3	5-6-7-10	56	
3BE6	c	3	1-5-7	23	
3BN4	c	3	2-5-7	22	Glows at 1,2,4,6,7
3BN6	c	3	2-5-6-7-10	80	OK over 20
3BU8	c	4	2-3-7	30	
3BU8	c	4	2-7-8	30	
3BY6	c	3	1-5-6-7	25	
3BZ6	c	3	5-6-7-10	53	

MODEL 211

M-S Switch is kept in N position unless tube chart indicates otherwise

TUBE	FILAMENT VOLTS	FILAMENT SELECT.	SLIDE SWITCH IN P POSITION	SHUNT	NOTATION
3C2	b	10	5-10	65	Glows at 2,4,5,6, 7,8. Press to "S"
3CB6	c	3	1-5-6-7	20	
3CS6	c	3	1-5-6-7	22	
3CY5	c	3	1-5-6	20	Glows at 2,4,7
3DK6	c	3	1-5-6-7	20	
3DK6	c	3	1-6	19	
3DT6	c	3	1-5-6-7	22	
3LF4	b	7	2-3-10	80	Glows at 1,8
3Q4	b	5	2-3-4-6	38	Glows at 1,2,6,7
3Q5	b	8	3-4-5	33	Glows at 2,7
3S4	b	5	2-3-4-6	35	Glows at 1,2,6,7
3V4	b	5	2-3-6	30	Glows at 1,7
4AU6	d	3	1-2-5-6	20	
4BC8	d	4	1-6-10	49	
4BN6	d	3	2-5-6-7-10	80	
4BQ7A	d	4	1-6-10	52	
4BS8	d	4	1-6-10	49	
4BU8	d	4	2-7-9	22	
4BU8	c	4	2-3-7	22	
4BZ7	d	4	1-6-10	50	
4CB6	d	3	1-5-6-7	20	
4CS6	d	3	1-6-7	21	
4CY5	d	3	5-6-10	50	Glows at 2,4,7
4DE6	d	3	1-5-6	20	
4DT6	d	3	1-5-6-7	22	
5AM8	d	4	2-3	20	
5AM8	d	4	8	25	
5AN8	d	4	1-2	22	
5AN8	d	4	6-7-8	20	
5AQ5	d	3	1-5-6-7	28	Glows at 1,4,7
5AR4	d	2	4	21	
5AR4	d	2	6	21	
5AS4	d	2	4	60	
5AS4	d	2	6	60	
5AS8	d	4	6	25	
5AS8	d	4	1-2-9	20	
5AT8	d	4	1-2	21	
5AT8	d	4	7-8-10	66	
5AU4	d	2	4-10	75	
5AU4	d	2	6-10	55	
5AV8	d	4	2-3	24	
5AV8	d	4	6-8-9	23	
5AW4	d	2	4	62	
5AW4	d	2	6	62	
5AZ4	d	2	4	60	
5AZ4	d	2	6	60	
5B8	d	4	2-3-6-8	20	
5BE8	d	4	1-2	21	
5BK8	d	4	7-9	21	
5BK7A	d	4	1-2	20	
5BK7A	d	4	6-7	20	
5BQ7	d	4	1-2	21	
5BQ7	d	4	6-7	21	

MODEL 211

N-S Switch is kept in N position unless tube chart indicates otherwise

TUBE	FILAMENT VOLTS	FILAMENT SELECT.	SLIDE SWITCH IN P POSITION	SHUNT NOTATION	
5BR8	d	4	1-2	20	
5BR8	d	4	6-7-9	21	
5BT8	d	4	1-2	36	
5BT8	d	4	7-8	21	
5CG8	d	4	1-2	23	Glows at 3, 5, 8
5CG8	d	4	6-7-9	20	
5CL8	d	4	1-2	19	
5CL8	d	4	7-9	20	
5CM8	d	4	1-9	28	
5CM8	d	4	2-7	22	
5CQ8	d	4	2-3	21	
5CQ8	d	4	1-9	21	
5CZ5	d	4	1-3-6-9	28	Glows at 3,5,6
5DH8	d	4	1-2	23	
5DH8	d	4	6-7-9	20	
5J6	d	3	2-5	23	
5J6	d	3	1-6	23	
5R4	d	2	4	52	
5R4	d	2	6	52	
5T4	d	2	4	50	
5T4	d	2	6	50	
5T8	d	4	1	25	
5T8	d	4	2	25	
5T8	d	4	6	25	
5T8	d	4	8-9	36	
5U4	d	2	4	50	
5U4	d	2	6	50	
5U8	d	4	2-3	20	
5U8	d	4	1-9	20	
5V3	d	2	4	55	OK over diode
5V3	d	2	6	55	OK over diode
5V4	d	2	4	26	
5V4	d	2	6	28	
5V6	d	2	3-4-5	31	
5W4	d	2	4	55	
5W4	d	2	6	51	
5X4	d	7	3	58	
5X4	d	7	5	60	
5X8	d	4	2-3	23	
5X8	d	4	7-8-9	21	
5Y3	d	2	4	60	
5Y3	d	2	6	60	
5Y4	d	7	3	56	
5Y4	d	7	5	56	
5Z4	d	2	4	38	
5Z4	d	2	6	38	
6A5	d	2	3-5	48	
6A8	d	2	5-6	50	
6A8	d	2	3-4-10	62	
6AB4	d	3	1-6	20	
6AB7	d	2	4-6-8	30	
6AC5	d	2	3-5	38	
6AC7	d	2	4-6-8	26	
6AD6	d	2	3-5-10	0	Eye 1 open. Eye 2 closed.

MODEL 211

N-S Switch is kept in N position unless tube chart indicates otherwise

TUBE	FILAMENT VOLTS	FILAMENT SELECT.	SLIDE SWITCH IN P POSITION	SHUNT	NOTATION
6AD6	d	2	4-5-10	0	Eye 2 open. Eye 1 closed.
6AD7	d	2	3-4-5	52	
6AD7	d	2	1-6	73	
6AE5	d	2	3-5	33	
6AE6	d	2	3-5	36	
6AE6	d	2	4-5	36	
6AE7	d	2	3-4-6	20	
6AF3	d	4	2-9-10	20	Glows at 2,5,9
6AF4	d	3	1-2-6-7	20	Glows at 1,2,4,6,7
6AF6	d	2	3-5-10	0	Eye 1 open. Eye 2 closed.
6AF6	d	2	4-5-10	0	Eye 2 open. Eye 1 closed.
6AG5	d	3	1-5-6	21	Glows at 2,4,7
6AG7	d	2	4-6-8	20	
6AH4	d	2	1-5	28	
6AH6	d	3	1-5-6	20	
6AH7	d	7	1-3	35	
6AH7	d	7	5-6	35	
6AJ4	d	7	1-3-4-5-6-9	20	Glows at 1,3,4,6,8,9
6AJ5	d	3	1-5-6	23	Glows at 2,4,7
6AJ8	d	4	1-2-7-9	22	
6AK5	d	3	1-5-6	22	Glows at 2,4,7
6AK6	d	3	1-5-6	32	
6AK8	d	4	2	25	
6AK8	d	4	1-6-8-9	22	
6AL5	d	3	2	22	
6AL5	d	3	7	22	
6AL7	d	2	3-10	0	
6AM4	d	7	1-3-4-5-6-9	19	Glows at 1,3,4,6,8,9
6AM8	d	4	2-3	20	
6AM8	d	4	8	25	
6AN5	d	3	1-5-6	22	Glows at 2,4,7
6AN6	d	1	2	49	
6AN6	d	1	3	51	
6AN6	d	1	4	49	
6AN6	d	1	5	49	
6AN8	d	4	1-2	22	
6AN8	d	4	6-7-8	20	
6AQ5	d	3	1-5-6-7	32	Glows at 1,4,7
6AQ6	d	3	1-7	32	
6AQ6	d	3	5	65	OK over 10
6AQ6	d	3	6	65	OK over 10
6AQ7	d	7	1	80	
6AQ7	d	7	3	80	
6AQ8	d	4	1-2	22	
6AQ8	d	4	6-7	22	
6AR5	d	3	1-5-6	28	
6AR8	d	4	2-3-6	22	
6AS5	d	3	2-5-6-7	27	Glows at 2,4,5
6AS6	d	3	1-5-6	25	

MODEL 211

N-S Switch is kept in N position unless tube chart indicates otherwise

TUBE	FILAMENT VOLTS	FILAMENT SELECT.	SLIDE SWITCH IN P POSITION	SHUNT	NOTATION
6AS8	d	4	6	25	
6AS8	d	4	1-2-9	20	
6AT6	d	4	1-7	30	
6AT6	d	4	5	80	OK over 20
6AT6	d	4	6	80	OK over 20
6AT8	d	4	1-2	21	
6AT8	d	4	7-8-10	66	
6AU4	d	7	5	30	
6AU5	d	2	5-8	75	
6AU6	d	3	1-5-6	23	
6AU8	d	4	2-3	22	
6AU8	d	4	7-8-9	22	
6AV5	d	2	1-5-8	28	
6AV6	d	3	5	80	
6AV6	d	3	6	82	
6AV6	d	3	1-7	32	
6AV8	d	4	2-3	24	
6AV8	d	4	6-8-9	23	
6AW8	d	4	2-3	27	
6AW8	d	4	7-8	20	
6AX4	d	7	5	35	
6AX5	d	2	3	50	
6AX5	d	2	5	50	
6AX8	d	4	2-3	22	
6AX8	d	4	1-9	22	
6AZ8	d	4	6-8-9	20	
6B4	d	2	3-5	22	
6B6	d	2	3	35	
6B6	d	2	4	60	
6B6	d	2	5	60	
6B8	d	2	3-6	60	
6B8	d	2	4	60	
6B8	d	2	5	60	
6BA6	d	3	1-5-6	23	
6BA7	d	4	1-2	20	
6BA7	d	4	1-7-9	55	OK over diode
6BA8	d	4	2-3	27	
6BA8	d	4	7-8	20	
6BC5	d	3	1-5-6	22	Glows at 2,4,7
6BC7	d	4	8	21	
6BC7	d	4	6	20	
6BC7	d	4	2	22	
6BC8	d	4	1-2	22	
6BC8	d	4	6-7	22	
6BD5	d	2	1-5-8	27	
6BD6	d	3	1-5-6	28	
6BE6	d	3	5-6-7	55	OK over diode
6BE6	d	3	1-5-7	22	
6BF5	d	3	1-5-6-7	32	Glows at 1,4,7
6BF6	d	3	5	60	OK over diode
6BF6	d	3	6	60	OK over 10
6BF6	d	3	1-7	37	
6BG6	d	2	5-8-10	22	
6BH6	d	3	1-5-6	23	

MODEL 211

N-S Switch is kept in N position unless tube chart indicates otherwise

TUBE	FILAMENT VOLTS	FILAMENT SELECT.	SLIDE SWITCH IN P POSITION	SHUNT	NOTATION
6BH8	d	4	2-3	22	
6BH8	d	4	7-8-9	22	
6BJ6	d	3	1-5-6	23	
6BJ7	d	4	2	25	
6BJ7	d	4	6	25	
6BJ7	d	4	8	25	
6BJ8	d	4	1	27	
6BJ8	d	4	6	28	
6BJ8	d	4	7-8	28	
6BK5	d	4	1-3-7-8	25	Glows at 3,5,7
6BK7	d	4	1-2	20	
6BK7	d	4	6-7	20	
6BL7	d	7	1-2	27	
6BL7	d	7	4-5	27	
6BM8	d	4	3-6-7	21	
6BM8	d	4	1-9	30	
6BN4	d	3	2-5-7	21	Glows at 1,2,4, 6,7
6BN6	d	3	2-5-6-7-10	68	
6BN8	d	4	1	30	
6BN8	d	4	6	30	
6BN8	d	4	7-8	23	
6BN8	d	4	1-7-8	20	
6BN8	d	4	6-7	28	
6BQ5	d	4	1-2-9	22	Glows at 1,2,5
6BQ6	d	2	4-5-10	22	
6BQ7	d	4	6-7	21	
6BQ7	d	4	1-2	21	
6BR8	d	4	1-2	20	
6BR8	d	4	6-7-9	21	
6BS8	d	4	1-2	25	
6BS8	d	4	6-7	25	
6BU8	d	4	2-3-7	22	
6BU8	d	4	2-7-8	22	
6BV8	d	4	2-3	21	
6BV8	d	4	6	23	
6BV8	d	4	9	23	
6BW8	d	4	1	25	
6BW8	d	4	3	25	
6BW8	d	4	6-8-9	23	
6BX7	d	7	1-2	32	
6BY5	d	2	4	40	
6BY5	d	2	5	40	
6BY6	d	3	1-5-6-7	22	
6BY8	d	4	1-8	24	
6BY8	d	4	6	27	
6BZ6	d	3	1-5-6	20	
6BZ7	d	4	1-2	21	
6BZ7	d	4	6-7	21	
6BZ8	d	4	1-2	20	
6BZ8	d	4	6-7	20	
6C4	d	3	1-5-6	28	Glows at 1,4,5
6C5	d	2	3-5	40	
6C8	d	2	5-6-10	23	

MODEL 211

N-S Switch is kept in N position unless tube chart indicates otherwise

TUBE	FILAMENT VOLTS	FILAMENT SELECT.	SLIDE SWITCH IN P POSITION	SHUNT	NOTATION
6CA5	d	3	2-5-6-7	28	Glows at 2,4,5
6CB5	d	2	1-4-5-8-10	27	Glows at 1,3,4, 5,6,7,8. Allow 1 minute to heat
6CB6	d	3	1-5-6-7	21	
6CD6	d	2	5-8-10	25	Allow 1 minute to heat
6CE5	d	3	1-5-6	20	Glows at 2,4,7
6CF6	d	3	1-5-6-7	20	
6CG7	d	4	1-2	32	
6CG7	d	4	6-7	32	
6CG8	d	4	1-2	23	Glows at 3,5,8
6CG8	d	4	6-7-9	20	
6CH7	d	4	1-2	22	
6CH7	d	4	6-7	22	
6CH8	d	4	8-9	24	
6CH8	d	4	2-3-7	21	
6CK4	d	2	1-3-5	23	Glows at 1,3,7
6CL6	d	4	2-3-6-8-9	23	Glows at 2,3,5,8, 9
6CL8	d	4	7-9	20	
6CL8	d	4	1-2	20	
6CM6	d	4	1-3-6	30	
6CM7	d	4	6-7	33	
6CM7	d	4	1-8	28	
6CM8	d	4	2-7	20	
6CM8	d	4	1-9	22	
6CN7	d	9	7-8	38	Glows at 4,5
6CN7	d	9	1	25	
6CN7	d	9	2	25	
6CQ8	d	4	2-3	22	
6CQ8	d	4	1-9	22	
6CR6	d	3	2-6-7	34	
6CS6	d	3	1-6-7	24	
6CS7	d	4	1-3	27	
6CS7	d	4	6-7	36	
6CU5	d	3	2-5-6-7	26	Glows at 2,4,5
6CU6	d	2	4-5-10	23	
6CU8	d	4	8-9	25	
6CU8	d	4	2-3-7	20	
6CW4	d	1	2 -10	53	
6CX8	d	4	2-3	30	
6CX8	d	4	7-8-9	22	
6CY5	d	3	1-5-6	20	Glows at 2,4,7
6CY7	d	4	1-2-3	20	Glows at 1,2,5
6CY7	d	4	6-7	38	
6CZ5	d	4	1-3-6-9	30	Glows at 3,5,6
6D4	d	3	1-7	25	Glows at 2,4,6
6D8	d	2	3-4-10	54	
6DA4	d	7	5	20	
6DA5	d	4	1-7	50	
6DA5	d	4	3-7-8-9-10	80	OK over diode. Tube glows
6DB5	d	4	1-3-6	34	Glows at 2,3,5,6, 7

MODEL 211

M-S Switch is kept in M position unless tube chart indicates otherwise

TUBE	FILAMENT VOLTS	FILAMENT SELECT.	SLIDE SWITCH IN P POSITION	SHUNT	NOTATION
6DC6	d	3	1-6-7	20	
6DH4	d	7	5	32	
6DE6	d	3	1-5-6	20	
6DK7	d	4	1-2-3	22	Glows at 2,3,5
6EK7	d	4	6-7	35	
6DG6	d	2	4-5	25	
6DK6	d	3	1-6-7	19	
6DN6	d	2	5-8-10	25	Allow 1 minute to heat
6DM7	d	7	1-2	27	
6DM7	d	7	4-5	38	
6DM7	d	7	1-2	20	
6DM7	d	7	4-5	46	
6DQ5	d	2	1-4-5-8	30	Glows at 1,3,4, 5,6,7,8
6DQ6	d	2	4-5-10	22	
6DK7	d	4	1-2-3	23	
6DR7	d	4	6-7	35	
6DS5	d	3	1-6-7	29	Glows at 1,4,7
6DT5	d	4	1-3-6-9	24	Glows at 3,5,6
6DT6	d	3	1-5-6	22	
6DW5	d	4	1-3-6	22	Glows at 3,5,6
6DZ7	d	2	1-3-4	32	
6EA7	d	2	4-5-6	32	
6EA7	d	7	1-2	25	
6EA7	d	7	4-5	35	
6EA8	d	4	1-9	26	
6EA8	d	4	2-3-6	20	
6EB8	d	4	2-3	27	
6EB8	d	4	7-8	23	
6EH8	d	4	2-3	20	
6EH8	d	4	7-8-9	20	
6EM5	d	4	1-3-6-9	27	
6EM7	d	7	1-4	20	
6EM7	d	7	2	20	OK over diode
6ER5	d	3	2-5-6	20	Glows at 1,4,7
6ES5	d	3	2-5-6	20	Glows at 1,4,7
6EU8	d	4	2-3	21	
6EU8	d	4	7-9	20	
6EV5	d	3	1-6	18	Glows at 2,4,7
6EW6	d	3	1-6	20	
6EY6	d	2	3-4-5	25	
6EZ8	d	4	2-3	24	
6EZ8	d	4	6-7	28	
6EZ8	d	5	8-9	28	
6F5	d	2	4	29	
6F6	d	2	3-4-5	38	
6F8	d	2	3	37	
6F8	d	2	5-6-10	24	
6FH5	d	3	2-5-6	18	Glows at 1,4,7
6FM8	d	4	2	25	
6FM8	d	4	6	23	
6FM8	d	4	8-9	37	
6FQ5	d	3	2-6	19	Glows at 1,4,7
6FY6	d	3	1-6	19	

MODEL 211

M-S Switch is kept in M position unless tube chart indicates otherwise

TUBE	FILAMENT VOLTS	FILAMENT SELECT.	SLIDE SWITCH IN P POSITION	SHUNT	NOTATION
6G6	d	2	3-4-5	35	
6GH8	d	4	1-9	21	
6GH8	d	4	2-3-6	20	
6GY8	d	4	1-2	25	
6GY8	d	4	3-9	32	
6H6	d	2	3	39	
6H6	d	2	5	39	
6HS8	d	4	2-7	20	
6J4	d	3	1-5-6-7	20	Glows at 1,4,5,6
6J5	d	2	3-5	29	
6J6	d	3	2-5	23	
6J6	d	3	1-6	23	
6J7	d	2	3-4	35	
6J8	d	2	5-6	25	
6J8	d	2	3-4-10	75	
6K5	d	2	3	28	
6K6	d	2	3-4-5	35	
6K7	d	2	3-4	35	
6K8	d	2	5-6	25	
6K8	d	2	3-4-10	58	
6L5	d	2	3-5	36	
6L6	d	2	3-4-5	31	
6L7	d	2	4	30	
6L7	d	2	3-4-5	28	
6N4	d	3	1-5-7	22	
6N6	d	2	3-4-5	50	
6N7	d	2	3-4	40	
6N7	d	2	5-6	40	
6P5	d	2	3-5	36	
6P7	d	2	6-7	36	
6P7	d	2	4-5	50	
6Q7	d	2	3	33	
6Q7	d	2	4	34	
6Q7	d	2	5	34	
6R7	d	2	3	38	
6R7	d	2	4-10	15	OK over diode
6R7	d	2	5-10	15	OK over diode
6S4	d	4	3-6-9	30	Glows at 3,5,6
6S7	d	2	3-4	35	
6S8	d	7	1-10	25	OK over diode
6S8	d	7	4	18	OK over diode
6S8	d	7	6	34	
6SA7	d	2	4-5	28	
6SA7	d	2	3-4-8-10	57	
6SB7Y	d	2	4-5	22	
6SB7Y	d	2	3-4-8	48	OK over diode
6SC7	d	7	2-3	39	
6SC7	d	7	4-5	39	
6SD7	d	2	4-6-8	23	
6SF5	d	7	3-5	32	
6SF7	d	7	2-4-6	39	
6SF7	d	7	5	50	OK over diode
6SG7	d	2	4-6-8	23	Glows at 3,5,7
6SH7	d	2	4-6-8	23	Glows at 3,5,7
6SJ7	d	2	4-6-8	33	
6SK7	d	2	4-6-8	31	

MODEL 211

N-S Switch is kept in N position unless tube chart indicates otherwise

TUBE	FILAMENT VOLTS	FILAMENT SELECT.	SLIDE SWITCH IN P POSITION	SHUNT	NOTATION
6SL7	d	7	1-2	34	
6SL7	d	7	4-5	34	
6SN7	d	7	1-2	34	
6SN7	d	7	4-5	34	
6SQ7	d	7	2-6	50	
6SQ7	d	7	4	57	OK over diode
6SQ7	d	7	5	57	OK over diode
6SR7	d	7	2-6	38	
6SR7	d	7	4	35	OK over diode
6SR7	d	7	5	35	OK over diode
6SS7	d	2	4-6-8	35	
6ST7	d	7	2-6	37	
6ST7	d	7	4-10	50	
6ST7	d	7	5	52	
6SU7	d	7	4-5	32	
6SU7	d	7	1-2	32	
6SV7	d	7	5	40	
6SV7	d	7	2-4-6	26	
6T4	d	3	1-2-6-7	20	Glows at 1,2,4, 6,7
6T7	d	2	3	59	
6T7	d	2	4	48	
6T7	d	2	5	48	
6T8	d	4	1	25	
6T8	d	4	2	25	
6T8	d	4	6	25	
6T8	d	4	8-9	36	
6U4	d	7	5	25	
6U6	d	2	3-4-5	26	
6U7	d	2	3-4	38	
6U8	d	4	2-3	20	
6U8	d	4	1-9	20	
6V3	d	4	2-7-9-10	22	Glows at 2,5,7, 9
6V4	d	4	1	37	
6V4	d	4	7	37	
6V6	d	2	3-4-5	31	
6V7	d	2	3	38	
6V7	d	2	4	40	
6V7	d	2	5	45	
6V8	d	4	2-6	32	
6V8	d	4	2	20	
6V8	d	4	9	22	
6V8	d	4	9	40	OK over diode
6W4	d	7	5	26	
6W6	d	2	3-4-5	26	
6W7	d	2	3-4	28	
6X4	d	3	1	35	
6X4	d	3	6	35	
6X5	d	2	3	35	
6X5	d	2	5	35	
6X8	d	4	2-3	21	
6X8	d	4	7-8	20	
6Y6	d	2	3-4-5	28	

MODEL 211

N-S Switch is kept in N position unless tube chart indicates otherwise

TUBE	FILAMENT VOLTS	FILAMENT SELECT.	SLIDE SWITCH IN P POSITION	SHUNT	NOTATION
6Y7	d	2	3-4	35	
6Z7	d	2	5-6	33	
6ZY5	d	2	3	35	
6ZY5	d	2	5	35	
7A4	d	1	2-6	29	
7A5	d	1	2-3-6	25	
7A6	d	1	3	45	
7A6	d	1	6	45	
7A7	d	1	2-3-6	31	
7A8	d	1	3-4	35	
7A8	d	1	2-5-6	65	OK over diode
7AF7	d	1	3-4	30	
7AF7	d	1	5-6	30	
7AG7	d	1	2-3-6	22	
7AH7	d	1	2-3-6	20	
7AU7	o	9	1-2	31	Glows at 4,5
7AU7	o	9	6-7	31	
7B4	d	1	2-6	28	
7B5	d	1	2-3-6	36	
7B6	d	1	2-3	35	Glows at 4,7,8
7B6	d	1	5	50	OK over diode
7B6	d	1	6	50	OK over diode
7B7	d	1	2-3-6	32	
7B8	d	1	2-4-5	49	
7B8	d	1	2-5-6	70	OK over diode
7C4	d	1	4	70	OK over diode
7C5	d	1	2-3-6	28	
7C6	d	1	2-3	42	Glows at 4,7,8
7C6	d	1	5	42	OK over diode
7C6	d	1	6	42	OK over diode
7C7	d	1	2-3-6	30	
7E5	d	2	1-3-5-7	20	Glows at 1,3,5,6,8
7E6	d	1	2-3	35	Glows at 4,7,8
7E6	d	1	5	50	OK over diode
7E6	d	1	6	50	OK over diode
7E7	d	1	2-5-6	42	
7E7	d	1	4	50	OK over diode
7E7	d	1	3	50	OK over diode
7F7	d	1	3-4	33	
7F7	d	1	5-6	33	
7F8	d	2	6-8	22	
7G7	d	1	2-3-6	22	
7G8	d	1	2-3-4	27	
7G8	d	1	3-5-7	30	
7H7	d	1	2-3-6	20	
7J7	d	1	2-5-6	25	
7J7	d	1	3-4	36	
7K7	d	1	3-4	36	
7K7	d	1	5	55	OK over diode
7K7	d	1	6	55	OK over diode
7L7	d	1	2-3-6	25	

MODEL 211

N-S Switch is Kept in N position unless tube chart indicates otherwise

TUBE	FILAMENT VOLTS	FILAMENT SELECT.	SLIDE SWITCH IN P POSITION	SHUNT	NOTATION
7N7	d	1	3-4	35	
7N7	d	1	5-6	34	
7Q7	d	1	3-4	23	
7Q7	d	1	2-3-6	55	OK over diode
7R7	d	1	2-5-6	25	
7R7	d	1	3	80	OK over diode
7R7	d	1	4	80	OK over diode
7S7	d	1	2-5-6	26	
7S7	d	1	3-4	35	
7W7	d	1	2-3-6	22	
7W7	d	1	2-3-6	23	
7X6	d	1	3	28	
7X6	d	1	6	28	
7X7	d	1	2-3	48	
7X7	d	1	5	32	
7Y4	d	1	6	35	
7Y4	d	1	3	35	
7Z4	d	1	6	50	
8AW8	d	4	2-3	27	
8AW8	d	4	7-8	22	
8BH8	d	4	2-3	21	
8BH8	d	4	7-8	21	
8CG7	d	4	1-2	33	
8CG7	d	4	6-7	34	
9AU7	d	9	1-2	28	Glows at 4,5
9AU7	d	9	6-7	30	
9BR7	d	9	1-2	22	Glows at 4,5
9BR7	d	9	6	27	
9BR7	d	9	7	30	
10C8	e	4	1-2	24	
10C8	e	4	6-7-8	20	
10DE7	e	4	1-2-3	28	Glows at 2,3,5
11CY7	e	4	1-2-3	23	Glows at 1,2,5
11CY7	e	4	6-7	35	
12A4	e	3	2-7-9	23	Glows at 2,4,5,7
12A5	e	6	2-3-4	34	Glows at 1,7
12A6	e	2	3-4-5	34	
12A8	e	2	5-6-10	23	
12A8	e	2	3-4	60	OK over diode
12AB5	e	4	1-3-6-8	30	Glows at 1,3,5,6,8
12AC6	e	3	1-6	30	
12AD6	e	3	1-6-7	22	
12AD6	e	3	1-6-7	23	
12AE6	e	3	1-5-6-7	36	
12AF3	e	4	2-9-10	22	Glows at 2,5,9
12AF6	e	3	1-5-6	22	
12AH7	e	7	1-3	38	
12AH7	e	7	5-6	38	
12AJ6	e	3	1-5-6-7	27	
12AL5	e	3	2	26	
12AL5	e	3	7	26	
12AQ5	e	3	1-5-6-7	32	Glows at 1,4,7

N-S Switch is kept in N position unless tube chart indicates otherwise

TUBE	FILAMENT VOLTS	FILAMENT SELECT.	SLIDE SWITCH IN P POSITION	SHUNT	NOTATION
12AT6	e	4	1-7	32	
12AT6	e	4	5	50	OK over diode
12AT6	e	4	6	50	OK over diode
12AT7	d	9	1-2	20	Glows at 4,5
12AT7	d	9	6-7	20	
12AU6	e	3	1-5-6	23	
12AU7	d	9	1-2	28	Glows at 4,5
12AU7	d	9	6-7	28	
12AV5	e	2	1-5-8	26	
12AV6	e	3	1-7	32	
12AV6	e	3	5	80	
12AV6	e	3	6	82	
12AV7	d	9	1-2	20	
12AV7	d	9	6-7	20	
12AW6	e	3	1-5-6	22	
12AX4	e	7	5	32	
12AX7	d	9	1-2	30	Glows at 4,5
12AX7	d	9	6-7	30	
12AY7	d	9	1-2	32	Glows at 4,5
12AY7	d	9	6-7	32	
12AZ7	e	4	1-2	20	Glows at 5,9
12B4	d	3	2-7-9	20	Glows at 2,4,5,7
12BA6	e	3	1-5-6	23	
12BA7	e	4	1-2	20	
12BA7	e	4	1-6-7-9	52	OK over diode
12BD6	e	3	1-5-6	28	
12BE6	e	3	1-5-7	22	
12BE6	e	3	5-6-7	55	OK over diode
12BF6	e	3	5	60	OK over diode
12BF6	e	3	6	60	OK over diode
12BF6	e	3	1-7	37	
12BH7	e	9	1-2	37	Glows at 4,5
12BH7	e	9	6-7	37	
12BK5	e	4	1-3-7-8	25	Glows at 3,5,7
12BL6	e	3	1-2-5-6	23	
12BQ6	e	2	4-5	25	
12BR7	d	9	1-2	21	
12BR7	d	9	6	30	
12BR7	d	9	7	30	
12BT6	e	3	1-7	32	
12BT6	e	3	5	50	OK over diode
12BT6	e	3	6	50	OK over diode
12BV7	d	6	2-7-8	21	Glows at 3,4,5,9
12BY7	d	6	2-8	20	Glows at 3,4,5,9
12BZ7	d	9	1-2	20	Glows at 4,5
12BZ7	d	9	6-7	20	
12C5	e	3	2-5-6-7	28	
12C8	e	2	5-6-10	23	
12CA5	e	3	2-5-6-7	23	Glows at 2,4,5
I2CN5	e	3	2-5-6	23	Glows at 2,4,5
12CR6	e	3	2-5-6-7	30	
12CT8	e	4	1-2	27	
12CU5	e	3	2-5-6-7	27	Glows at 2,4,5
12CU6	e	2	4-5-10	23	
12CX6	e	3	1-6	20	
12D4	e	7	5	28	
12D5	e	3	2-5-6	25	Glows at 2,4,5

N-S Switch is kept in N position unless tube chart indicates otherwise

TUBE	FILAMENT VOLTS	FILAMENT SELECT.	SLIDE SWITCH IN P POSITION	SHUNT	NOTATION
12DB5	e	4	1-3-6-9	27	Glows at 2,3,5, 6,7
12DQ6	e	2	4-5	28	
12DS7	e	4	1-3-6-7	24	
12DT5	e	4	1-3-6	20	Glows at 3,5,6
12DT8	e	4	1-2	20	
12DT8	e	4	6-7	20	
12DV8	e	4	1	60	OK over diode
12DV8	e	4	9	60	OK over diode
12DV8	e	4	3-6-7	26	
12DZ6	e	3	1-5-6	22	
12DZ6	e	3	1-2-5-6	19	
12EA6	e	3	1-5-6	21	
12ED5	e	3	2-5-6-7	24	Glows at 2,4,5
12EG6	e	3	1-6	22	
12EK6	e	3	1-2-5-6	19	
12EM6	e	4	1-3-6-9	22	
12EN6	e	2	3-4-5	25	
12F5	e	2	4	29	
12F8	e	4	1	50	OK over diode
12F8	e	4	6	50	OK over diode
12F8	e	4	2-3-8	30	
12FM6	e	3	1-5-6-7	22	
12FQ8	e	4	1-2-3	30	
12FQ8	e	4	6-7-8	30	
12H6	e	2	3	39	
12H6	e	2	5	39	
12J5	e	2	3-5	30	
12J7	e	2	3-4-10	35	
12J8	e	4	1-3-6	20	
12J8	e	4	8-9	22	
12K5	e	3	2-5-6-7	22	Glows at 4,5,6
12K7	e	2	3-4	48	
12K8	e	2	3-4	60	OK over diode
12K8	e	2	5-6	23	
12L6	e	2	3-4-5	27	
12L8	e	7	3-4-5	32	
12L8	e	7	1-5-8	32	
12Q7	e	2	3	33	
12Q7	e	2	5	34	
12R5	e	3	2-5-6-7	38	Glows at 2,4,5
12S8	e	7	3-10	50	
12S8	e	7	1-4	32	
12SA7	e	2	4-5	27	
12SA7	e	2	3-4-8	60	OK over diode
12SC7	e	7	2-3	39	
12SC7	e	7	4-5	39	
12SF5	e	7	3-5	29	
12SF7	e	7	2-4-6	38	
12SF7	e	7	5	55	OK over diode
12SG7	e	2	4-6-8	22	Glows at 3,5,7
12SH7	e	2	4-6-8	22	Glows at 3,5,7
12SJ7	e	2	4-6-8	28	
12SK7	e	2	4-6-8	33	
12SL7	e	7	4-5	33	
12SL7	e	7	1-2	33	

N-S Switch is kept in N position unless tube chart indicates otherwise

TUBE	FILAMENT VOLTS	FILAMENT SELECT.	SLIDE SWITCH IN P POSITION	SHUNT	NOTATION
12SN7	e	7	1-2	33	
12SN7	e	7	4-5	33	
12SQ7	e	7	2-6	35	
12SQ7	e	7	4	65	OK over diode
12SQ7	e	7	5	65	OK over diode
12SR7	e	7	2-6	27	
12SR7	e	7	4	60	OK over diode
12SR7	e	7	5	60	OK over diode
12SY7	e	2	4-5	27	
12SY7	e	2	3-4-8	60	OK over diode
12V6	e	2	3-4-5	31	
12W6	e	2	3-4-5	24	
12X4	e	3	1	39	
12X4	e	3	6	39	
12Z5	e	7	6	32	
12Z5	e	7	2	32	
13DE7	e	4	6-7	35	Glows at 2,3,5
13DR7	e	4	1-2-3	24	Glows at 2,3,5
13DR7	e	4	6-7	35	
14A4	e	1	2-6	29	
14A5	e	1	2-3-6	37	
14A7	e	1	2-3-6	30	
14AF7	e	1	3-4	32	
14AF7	e	1	5-6	32	
14B6	e	1	2-3	33	Glows at 4,7,8
14B6	e	1	5	50	OK over diode
14B6	e	1	6	60	OK over diode
14B8	e	1	2-5-6	60	OK over diode
14B8	e	1	2-4-5	30	
14C5	e	1	2-3-6	28	
14C7	e	1	2-3-6	32	
14E6	e	1	2-3	35	
14E6	e	1	5	50	OK over diode
14E6	e	1	6	50	OK over diode
14E7	e	1	2-5-6	42	Glows at 4,7,8
14E7	e	1	4	50	OK over diode
14E7	e	1	5	50	OK over diode
14F7	e	1	3-4	33	
14F7	e	1	5-6	33	
14F8	e	2	1-3	21	
14F8	e	2	6-8	21	
14H7	e	1	2-3-6	20	
14J7	e	1	3-4	36	
14N7	e	1	3-4	35	
14N7	e	1	5-6	34	
14Q7	e	1	3-4	23	
14Q7	e	1	2-3-6	55	OK over diode
14R7	e	1	2-5-6	25	
14R7	e	1	3	80	OK over diode
14R7	e	1	4	80	OK over diode
14S7	e	1	2-5-6	26	
14S7	e	1	3-4	35	
14W7	e	1	2-3-6	26	
14Y4	e	1	3	35	
14Y4	e	1	6	35	
14Z3	e	1	2	33	
17AX4	f	7	5	30	
17D4	e	7	5	25	

M-S Switch is kept in M position unless tube chart indicates otherwise

TUBE	FILAMENT VOLTS	FILAMENT SELECT.	SLIDE SWITCH IN P POSITION	SHUNT	NOTATION
17DE4	f	7	5-10	30	
17DQ6	f	2	4-5	28	
17H3	e	4	3-8	27	
18A5	f	2	1-5	25	
18FW6	f	3	1-6	21	
18FX6	f	3	1-6-7	23	
18FY6	f	3	1-5-6-7	27	
19AU4	f	7	5	50	
19BG6	f	2	5-8	32	
19CL8	e	4	1	21	
19CL8	e	4	9	21	
19EA8	e	4	1-9	25	
19EA8	e	4	2-3	26	
19J6	f	3	1-6	25	
19J6	f	3	2-5	25	
19T8	f	4	1	25	
19T8	f	4	6	25	
19T8	f	4	2	25	
19T8	f	4	8-9	36	
25A6	f	2	3-4-5	52	
25A7	f	2	3-4-5	42	
25A7	f	2	6	42	
25AV5	f	2	1-5-8	27	
25AX4	f	7	5	35	
25B6	f	2	3-4-5	27	
25BK5	f	4	1-3-7-8	23	Glows at 3,5,7
25BQ6	f	2	3-4-5	33	
25C5	f	3	2-5-6-7	23	
25C6	f	2	3-4-5	33	
25CA5	f	3	2-5-6-7	30	
25CD6	f	2	5-8	39	
25DN6	f	2	5-8	50	
25EC6	f	2	5-8	37	
25EH5	f	3	2-5-6-7	23	Glows at 2,4,5
25L6	f	2	3-4-5	23	
25W4	f	7	5	29	
25Z6	f	2	3	31	
25Z6	f	2	5	31	
26A6	f	3	1-5-6	22	
28D7	f	1	2-3-4	34	
28D7	f	1	3-5-7	34	
32ET5	f	3	2-5-6	25	Glows at 2,4,5
32L7	f	2	3-4-5	30	
35A5	f	1	2-3-6	26	
35B5	f	3	1-5-6-7	25	Glows at 1,4,7
35C5	f	3	2-5-6-7	30	Glows at 2,4,5
35EH5	f	3	2-5-6-7	20	Glows at 2,4,5
35L6	f	2	3-4-5	24	
35W4	b	3	short test only		Glows at 4,6
35W4	f	3	5	22	
35Y4	f	1	2	25	
35Z3	f	1	2	21	
35Z4	f	2	5	21	
35Z5	f	7	5	21	Glows at 2,3
35Z6	f	2	3	21	
35Z6	f	2	5	21	

N-S Switch is kept in N position unless tube chart indicates otherwise

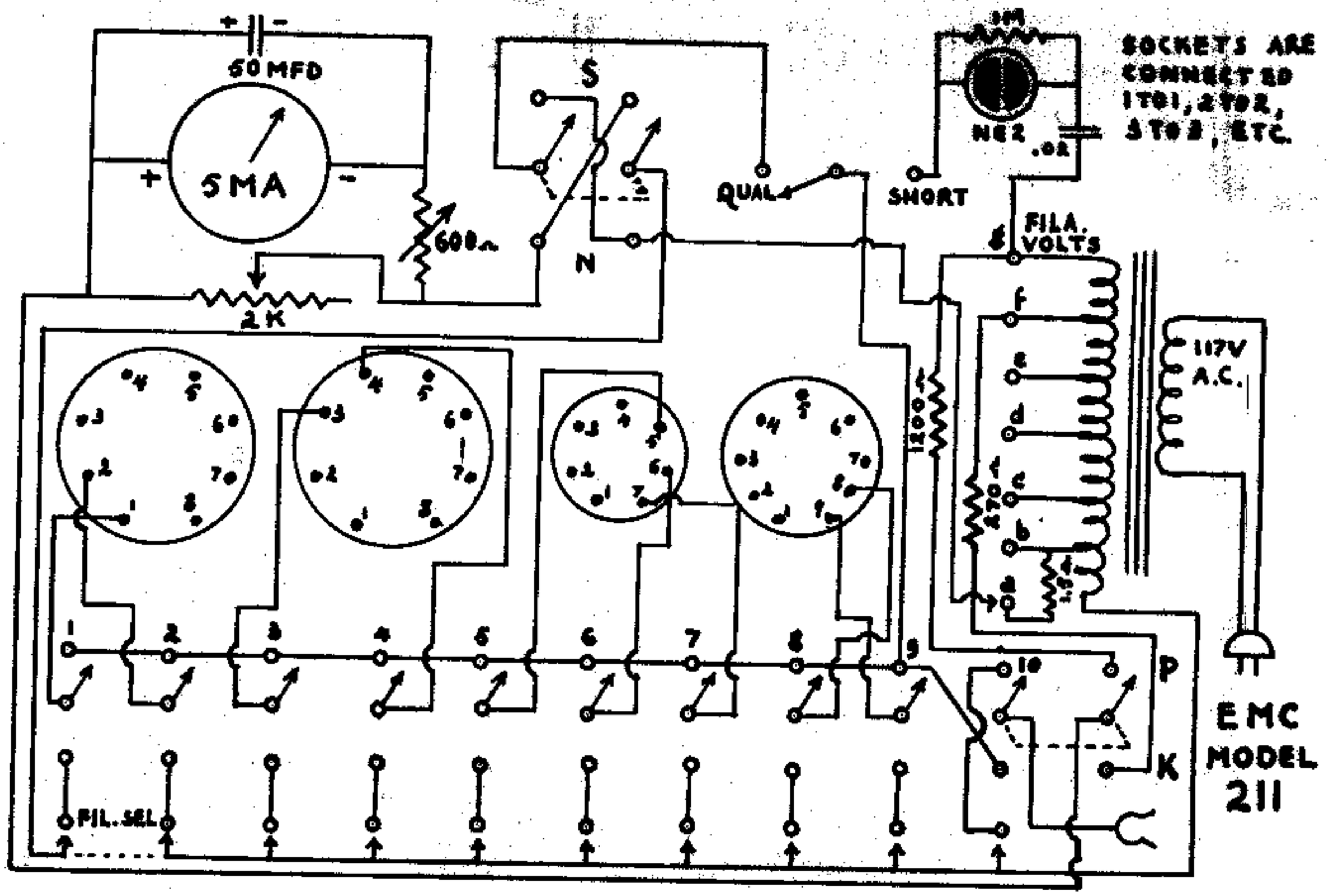
TUBE	FILAMENT VOLTS	FILAMENT SELECT.	SLIDE SWITCH IN P POSITION	SHUNT	NOTATION
36AM3	e	6	5	25	Glows at 3,4
50A1	f	4	-	-	Glows at 1,2, 7,9
50A5	f	1	2-3-6	27	
50B5	f	3	1-5-6-7	22	Glows at 1,4,7
50C5	f	3	2-5-6-7	24	Glows at 2,4,5
50C6	f	2	3-4-5	27	
50DC4	f	6	5-10	28	Glows at 3,4
50EH5	f	3	2-5-6-7	23	Glows at 2,4,5
50L6	f	2	3-4-5	23	
50X6	f	1	3	26	
50X6	f	1	6	26	
50Y6	f	2	3	28	
50Y6	f	2	5	28	
50Y7	f	2	3	24	Glows at 6,7
50Y7	f	2	5	24	
117L7	g	2	3-4-5	29	
117L7	g	2	6	21	
117M7	g	2	3-4-5	29	
117M7	g	2	6	21	
117N7	g	2	3-4-5	25	
117P7	g	2	3-4-5	28	
117Z3	g	3	1-5	24	Glows at 1,4,5
117Z4	g	2	5	23	
117Z6	g	2	3	25	
117Z6	g	2	5	25	
502A	d	2	3-5	21	
884	d	2	3-5	33	
2050	d	2	3-5-6	21	
2051	d	2	3-5-6	21	
5751	d	9	1-2	48	
5751	d	9	6-7	48	
5814A	d	9	1-2	48	
5814A	d	9	6-7	48	
5879	d	4	1-7-8	34	
5881	d	2	3-4-5	27	
5963	d	9	1-2	28	Glows at 4,5
5963	d	9	6-7		
5915	d	3	1-6-7	24	
6201	d	9	1-2	24	
6201	d	9	6-7	24	
6550	d	2	3-4-5	27	
6973	d	4	1-2-3-6-8-9	27	Glows at 1,3, 5,6,8
7025	d	9	1-2	26	Glows at 4,5
7025	d	9	6-7	26	
7189	d	4	1-2-9	21	Glows at 1,2,5
7199	d	4	1-9	20	
7199	d	4	3-7	20	
7233	d	4	1-2-3-6-7-9	21	Glows at 1,2,3, 5,6,7,9
7408	d	2	3-4-5	28	
7586	d	1	2 -10	53	
EF86	d	4	2-7-8-9	30	Glows at 2,5,7
EF89	d	4	2-7-8-9	24	Glows at 1,5,6
E134	d	2	3-4-5	51	

N-S Switch is kept in N position unless tube chart indicates otherwise

TUBE	FILAMENT VOLTS	FILAMENT SELECT.	SLIDE SWITCH IN P POSITION	SHUNT	NOTATION
EL84	d	4	1-2-7-9	25	Glows at 1,2,5
EL86	d	4	1-2-7-8-9	21	Glows at 1,2,5, 7,8
EM84	d	4	1-7-10	0	Glows at 2,5,6, 8
EZ81	d	4	1	27	
EZ81	d	4	7	27	
GZ34	d	2	4	27	
GZ34	d	2	6	27	
KT66	d	2	3-4-5	30	

SUPPLEMENTARY TUBE LISTINGS

2CW4	c	1	2-10	53	
3DG4	d	1	5	50	Allow 1 minute to heat. OK over diode
3DG4	d	1	7	50	OK over diode
5BW8	d	4	6-8-9	20	
5BW8	d	4	1	25	
5BW8	d	4	3	25	
6AF3	d	4	2-9-10	23	Glows at 2,5,9
6AN4	d	3	1-2-6-7	18	Glows at 1,2,4, 6,7
6BL8	d	4	2-3-6	18	
6BL8	d	4	1-9	22	
6DC8/EBF89	d	4	1-2	24	
6DC8/EBF89	d	4	7	50	OK over diode
6DC8/EBF89	d	4	8	50	OK over diode
6DT8	d	4	1-2	19	
6DT8	d	4	6-7	19	
6ES8	d	4	1-2	18	
6ES8	d	4	6-7	18	
6FY5	d	3	2-5-6	18	Glows at 1,4,7
6FY6	d	3	1-6	19	
6GM6	d	3	1-5-6-7	16	
6GN8	d	4	2-3	28	
6GN8	d	4	7-8-9	20	
6HS8	d	4	2-3-7	19	
6HS8	d	4	2-7-8	19	
8ET7	d	4	7-8	22	
8ET7	d	4	2-3	45	OK over diode
12FK6	e	3	1-7	21	
12FK6	e	3	5	45	OK over diode
12FK6	e	3	6	45	OK over diode
13EM7	e	7	1-4	20	
13EM7	e	7	2	20	OK over diode
17EW8	f	4	1-2	22	
17EW8	f	4	6-7	22	
7591	d	2	4-6-8	20	Glows at 4,7,8
DAF96	b	1	4-5-6	55	
DAF96	b	1	3	50	OK over diode
DK92	b	1	2-3-4-5-6	39	
DL94/3V4	b	5	2-3-6	30	Glows at 1,7
DF96/1AS4	b	7	2-3-6	40	Glows at 1,5


50 MFD
5 MA
2K
600Ω
S
N
QUAL
SHORT
NE2
.02
SOCKETS ARE CONNECTED 1 TO 1, 2 TO 2, 3 TO 3, ETC.
FILA. VOLTS
f
e
d
c
b
a
117V A.C.
P
K
EMC MODEL 211
FIL. SEL

BALLAST TUBE CHART

TUBE TYPE	SLIDE SWITCHES IN "P" POSITION
1A1	1
1B1	1
1C1	1
1D1	1
1E1	1
1F1	1
1G1	1
1K1	2
1R1	2
1T1G	2
1X1	1
1Y1	1
1Z1	1
2	1
2UR224	3-8
2UR212	1-2-4
3	1
030	3
4	1
5	1
6	1
7	1
8	1
9	1
10A	3
10AB	3-8
K17B	3-8
M17C	3-8
K23B	3-8
30A	3
K30D	2-3-8
33A	3
K34B	3-8
36A	3
K36B	3-8
KK36A	2
36D	2-3-8
L36DJ	2-3-4-8
K36H	1-2-8
L4081	1-3-5
42A	3
42A1	4
42A2	1-4
K42B	3-8
KB42D	2-3-8
LK42D	1-2-3
K42E	3-8
KK42C	3-8
L4281	2-3-5
49A	3
KK49A	3-8
49A1	4
49A2	1-4
K49B	3-8
KZ49B	2-5
K49BJ	3-4-8
L4982	2-3-5
49AJ	3
KK49B	3-8
L49DJ	2-3-4-8
L4983	2-3-5
50A2	2-3
50B2	2-5
50K3	2
K52H	1-2-8
K54B	3-8
55A	3
55A1	4
KK55A	2
55B	3-8
55A2	1-4
K55C	2-3
K55D	2-3-8
L55E	3-8
L5581	2-3-5-8
60R30G	2-3
64.23	3
67A	3
K67B	3-8
L73B	3-8
80A	3
K79B	3-8
K80F	3-8
92A	3
L92B	3-8
L99D	2-3-8
100R8	3-8
120R	2
120R8	3-8
135KLA	3-4-8
140L4	1-2-3
165L4	2-3
165R	2
165L44	1-2-3
185L4	2-3
185R	2
185L44	1-2-3
200R	2
250R8	3-8
300R4	3-8
340	2
808-1	3-4-8
K14980	3-8
3334	2-3-8
8593	3-8
3HR248	2-3-4-8
3CR241	2-3-8

EMC MODEL #211 TUBE TESTER

The accompanying GIF files represent the entire operating manual and tube listings for model EMC 211 tube tester. Manufactured by the Electronic Measurements Corporation (EMC), the manual is dated 1960.

It should be noted that I have come across errors in the tube listings.
For example the 6V8

TUBE	FIL V	FIL SEL	SWITH "P" POS	SHUNT	
6v8	D	4	1-6	32	
6v8	D	4	2	20	
6v8	D	4	9	22	
6v8	D	4	**9**	40	OK OVER DIODE

The **9** shown in bold should be a **7.**

The good news is that the EMC Model #213-215 listings are newer and more up to date and will work on the Model #211. The exception being for tubes that require sockets not included on the #211.

Model 211
The schematic shows only 4 sockets, 8pin octal, 8pin loctal, 7pin mini and 9pin mini, however it is also equipped with a 5pin nuvistor socket.

Model 213
The schematic appears to be identical to the model 211 except for the addition of a newer 9pin and 12pin tube socket and the associated slide switches 11 and 12.

Model 215
The schematic appears to be very similar to the model 211 and 213 with the addition of one more 10pin socket and an ac power on/off switch. The main difference in the 215 is the additional circuitry for testing transistors.

Service Note:
The meter damping capacitor 50uf at 6v will eventually go open and require replacement. Vibration evident in the meter pointer indicates an open capacitor.

K4XL's  BAMA

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