

CONFIDENCE

TUBE TESTERS

GENERAL INSTRUCTIONS: Use this instrument only on Alternating Current supply lines of 100-130 volts, 50-60 cycles.
 The "Off" position of the Line Adjust Switch disconnects the power supply to the instrument.
 Spare Sockets: Three are provided and are marked "Spare". All four prong tubes are inserted in the four prong socket--all five in the five, etc.

TUBE TESTING PROCEDURE

1. **Line Adjustment:** Turn upper right hand switch to "Line Test" position, ("Line Cond" position on Analyzer Models). Turn Line Adjust Switch (upper left switch) until meter pointer is at "adjust arrow" position on meter dial. Note--(On Analyzer Models, AC-DC switch should be in "DC" position).

2. **Shorts Test:** Set Controls 1, 2 and 3 as per tube chart. (On Analyzer Models set upper right switch to "Tube Test" position). Place tube in socket and allow to heat. Turn lower right hand switch (shorts test switch) slowly starting at position #1 and continuing to position 6. Any Flash of Neon Tube Indicates the tube is shorted and it should be replaced.

3. **Quality Test:** Turn lower left hand switch to "Normal Test" position. Some Tubes require two or more tests. If chart indicates 2nd test, adjust Control III if necessary and turn switch to "2nd test" position. If two sets of Control positions are shown for that type tube, set controls as indicated and make normal test and second test if indicated.

EXPLANATION

Shorts Test: This is an important test and instructions should be followed very carefully. Any steady or intermittent glow on the Neon Lamp indicates leakage or a short between the elements of the tube being tested. Move the Shorts Test Switch Slowly between positions and tap the tube on each of the numbered positions from 1 to 6. This is important in locating "floating" or "intermittant" shorts. Positions 7 to 11 of the Shorts Test Switch are for future tube types.

QUALITY TEST

Where the same quality control settings are given for Normal and 2nd test under Control III the quality readings of both sections should be within 20% of each other even though both readings be in the good portion of the dial. This applies to both plates of full wave rectifiers, both plates of diode type tubes and double triode types such as 6A6, 6E6, etc.

MAGIC EYE TUBES

Have a round conical plate or "Target" which fluoresces during operation. It is very important that the target be watched to note proper fluorescence when the normal test is made. Failure of the target to fluoresce would indicate defective target and tube should be replaced even though triode section shows good on meter dial.

GASEOUS RECTIFIERS

Gaseous Rectifiers such as the OZ3 and OZ4 types are tested in the same manner as other tubes, however in many cases the defects do not show up until the tube has been in operation for several minutes. To locate such defects, it is necessary to hold the lower left knob in the NORMAL and 2ND TEST positions for a longer time than for other tubes. The most common troubles are indicated by violent fluctuations of the meter pointer. In some cases the tube will actually stop working. Such tubes should be replaced as they are bound to give trouble in the radio set.

LOOSE WELDS

Cause noise, fading of signals and other disturbances. They can be located by tapping the tube as each quality reading is made (Normal and 2nd test), and are indicated on the meter dial by the meter pointer fluctuating as the tube is tapped. These tubes should be replaced.

TUBE	CONTROLS			NOR.	2ND
	I	II	III		
OZ3	1	T	16	16	
OZ4	1	T	16	16	
O1A	5	B	53		
KR1	6	C	10		
1V	6	C	10		
1A4	2	A	54		
1A6	2	C	56	56	
1B4	2	A	54		
1B5	2	B	66		
	2	U	86	86	
1C6	2	C	54	54	
1C7	2	E	50	50	
1D6	2	A	53		
1D7	2	E	52	52	
1E5	2	A	54		
1E7	2	G	46	46	
1F4	2	C	49		
1F5	2	A	49		
1F6	2	A	57		
	2	U	86	86	
1F7	2	B	56		
	2	U	86	86	
1G5	2	A	44		
G2	3	B	28	28	
1H4	2	A	52		
1H6	2	D	62		
	2	U	86	86	
1J6	2	D	58	58	
2A3	3	B	20		
2A5	3	A	38		
2A6	3	B	60		
	3	U	86	86	
2A7	3	A	48	48	
2B6	3	N	52	58	
2B7	3	A	53		
	3	U	86	86	
2E5	3	V	82		
2G5	3	V	56		
2Z2	3	B	20		
G4	3	B	38	38	
5T4	5	I	10	10	
5U4	5	I	12	12	
5V4	5	I	10	10	
5W4	5	I	16	16	
5X4	5	I	12	12	
5Y3	5	I	14	14	
5Y4	5	I	18	18	
5Z3	5	B	12	12	
5Z4	5	I	14	14	
6A3	6	B	20		
6A4	6	C	46		
6A5	6	L	22		
6A6	6	M	53	53	
6A7	6	A	48	48	
6A8	6	E	44	44	
6AB5	6	V	100		
6AB6	6	N	66	58	
6AC5	6	A	58		
6AC6	6	N	56	52	
6B4	6	A	20		
6B5	6	N	62	58	
6B6	6	B	58		
	6	U	86	86	
6B7	6	A	52		
	6	U	86	86	
6B8	6	B	52		
	6	U	86	86	
6C5	6	A	50		
6C6	6	A	50		
6C7	6	A	52		
	6	U	86	86	
6C8	6	F	54	54	
6D5	6	A	47		
6D6	6	A	49		
6D7	6	A	49		
6D8	6	E	49	49	

TUBE	CONTROLS			NOR.	2ND
	I	II	III		
6E5	6	V	82		
6E6	6	M	47	47	
6E7	6	A	49		
6F5	6	A	56		
6F6	6	A	46		
6F7	6	A	50	50	
6F8	6	F	49	49	
6G5	6	V	56		
6G5-6H5	6	V	90		
6G7S	6	R	36		
	6	Q	12	12	
6H5	6	V	90		
6H6	6	H	10	10	
6H7S	6	E	46	48	
6J5	6	A	48		
6J7	6	A	50		
6K5	6	A	51		
6K6	6	A	42		
6K7	6	A	49		
6L5	6	A	52		
6L6	6	A	22		
6L7	6	A	46		
6N5	6	V	86		
6N6	6	N	62	58	
6N7	6	D	54	54	
6P7	6	J	52	52	
6Q6	6	B	58		
	6	U	86		
6Q7	6	B	58	86	
	6	U	86		
6R7	6	U	86	86	
6S7	6	A	49		
6T5	6	V	80		
6T7	6	B	56		
	6	U	86	86	
6U5	6	V	84		
6U7	6	A	48		
6V6	6	A	34		
6V7	6	B	50		
	6	U	86	86	
6W5	6	A	10	10	
6X5	6	A	10	10	
6Y5	6	P	58	58	
6Y6	6	A	6		
6Y7	6	D	56	56	
6Z3	6	C	10		
6Z4	6	B	10	10	
6Z5	6	K	10		
6Z6MG	6	H	12		
6Z7	6	D	56		
6ZY5	6	A	12		
10	7	B	50		
12A	8	B	46		
12A5	8	L	24		
12A7	8	D	72	10	
12Z3	8	C	10		
12Z5	8	O	10	10	
14	8	A	53		
15	2	A	62		
17	8	B	51		
18	8	A	40		
19	2	G	58		
20	4	B	51		
22	4	A	56		
24A	3	A	53		
25	2	M	66		
25B	2	U	86	86	
25A6	9	A	16		
25A7	9	E	18	4	
25B5	9	N	58	50	
25B6	9	A	6		
25L6	9	A	6		
25N6	9	N	56	48	
25Y5	9	M	12	12	

TUBE	CONTROLS			NOR.	2ND
	I	II	III		
25Z5	9	M	10	10	
25Z5MG	9	H	8	8	
25Z6	9	H	8	8	
26	1	B	51		
27	3	B	51		
30	2	B	53		
31	2	B	48		
32	2	A	56		
33	2	C	44		
34	2	A	52		
35	3	A	54		
36	6	A	53		
37	6	B	51		
38	6	A	50		
39	6	A	50		
38MG	6	A	50		
41M	6	A	42		
41	6	A	42		
42	6	A	48		
43	9	A	10		
43MG	9	A	14		
44	6	A	50		
45	3	B	30		
46	3	C	38		
47	3	C	46		
48	9	A	5		
49	2	C	46		
50	7	B	46		
51	3	A	50		
52	6	C	34		
53	3	M	52		
55	3	B	48		
	3	U	86	86	
56	3	B	51		
G56AS	6	B	50		
57	3	A	50		
G57AS	6	A	52		
58	3	A	48		
G58AS	6	A	48		
59	3	A	44		
64	6	A	56		
65	6	A	51		
67	6	B	49		
68	6	A	38		
69	6	B	52		
70	6	B	66		
71A	5	B	34		
75	6	B	60		
	6	U	86	86	
76	6	B	51		
77	6	A	52		
78	6	A	50		
79	6	M	56	56	
80	5	B	16	16	
80M	5	B	8	8	
81	7	B	18		
81M	7	B	5		
82	3	B	8	8	
83	5	B	5	5	
83V	5	B	5	5	
84	6	B	10	10	
G84	3	B	16		
85	6	B	50		
	6	U	86	86	
89	6	A	38		
98	6	B	8		
99	4	B	58		
182A	5	B	38		
182B	5	B	38		
183	5	B	53		
482A	5	B	38		
482B	5	B	38		
483	5	B	53		
484	4	B	53		
484A	4	B	53		
485	4	B	51		

TUBE	CONTROLS			NOR.	2ND
	I	II	III		
486	4	B	60		
686	4	B	60		
P861	6	B	10	10	
950	2	C	44		
951	2	A	56		
AD	6	C	10		
AF	3	B	8	8	
AG	5	B	5	5	
BR	1	S	26		
GA	5	C	47		
LA	6	C	46		
PZ	3	C	46		
PZH	3	A	46		
Wunderlich					
2.5	3	B	51		
6.3	6	B	51		

Special Canadian Types

6A7M	6	E	44	44	
6B6M	6	B	58		
	6	U	86	86	
6B7M	6	A	52		
	6	U	86	86	
6F5M	6	A	56		
6F6M	6	A	46		
6F7M	6	A	50	50	
6G7S	6	R	36		
	6	Q	12	12	
6H7M	6	E	46	48	
6H7S	6	E	46	48	
6K7M	6	A	49		
41M	6	A	42		
75M	6	B	60		
	6	U	86	86	
77M	6	A	52		
85M	6	B	50		
	6	U	86	86	
89RS	6	R	36		
	6	Q	12		

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