

## OPERATING INSTRUCTIONS FOR THE DIAMOND POINT JR. 34 TUBE TESTER

1. Unless otherwise specified is for operation only on 110 volt, 60 cycle supply current.
2. The switch located on right of tester marked "Off-On" is for turning the tester on. When not in use always leave in "Off" position.
3. The small bulb located adjacent to the "Off-On" switch operates as a fuse. Should this burn out, replace only with  $\frac{1}{4}$ " 64 Auto Bulb.
4. After turning the tester on, adjust the Line Test Meter to the center line by means of the rheostat knob located on right of tester. Should the indication of the Line Test Meter change after the tube is inserted, re-adjust by means of the rheostat knob.
5. Proper setting should be made before inserting tube. To make this setting, proceed as follows:
  - a. First, insert filament plug in center of tester in jack over type tube marked on chart, such as 01A in 5 volt jack and 224 in 2.5 volt jack, etc.
  - b. Set right-hand potentiometer at approximately 50.
  - c. Set left-hand potentiometer over the tube number to be tested.
  - d. Insert tube in the tube socket as given in markers adjacent to the sockets.
6. After inserting the tube in socket and making settings as given above, note adjustment of Line Test Meter and press blue button. If large meter does not indicate over the diamond, adjust the right-hand potentiometer until pointer rests over diamond.
7. Release blue button and press green button. If tube is satisfactory, pointer will move within the green segment. If pointer does not indicate over green segment, the tube should be rejected.
8. All cathode type tubes such as 24, 35, 57, etc., are tested for Cathode to Heater Shorts by pressing button marked "Press this button for Cathode Leakage". If tube is OK large meter will remain on Zero. If large meter reads even as small an amount as 1 division, tube should be rejected.
9. Before proceeding with testing another type of tube, re-adjust the right-hand potentiometer to 50.
10. To test Rectifier tubes, proceed as for other tubes except it is not necessary to make setting of the right-hand potentiometer. Press  $\frac{1}{4}$ " #1 and  $\frac{1}{4}$ " #2 buttons consecutively for tubes with 2 plates such as 80, 82, and 83. Press  $\frac{1}{4}$ " #1 button only for single plate rectifier tubes such as 81. All type Rectifier tubes will read within the green segment if satisfactory and the two plates should read alike within one scale division on the meter.

Operating Instructions for the Diamond Point Jr. 34 Tube Tester

11. Double tubes, or tubes having two sections, such as the 53, 2A7, 1A6, etc., are tested in the upper row of sockets marked A to G inclusive. On the chart of tube values these tubes are listed twice.  
Example: 2A7-1 TRIOD SECTION, Socket C, Fil. Volts 2.5, left Pot. 35, right Pot. 20.  
2A7-2 OSCIL. SECTION, Socket C, Fil. Volts 2.5, left Pot. 20, right Pot. 32.
12. To test No. 1 section, press No. 1 Rectifier button and adjust to DIAMOND by means of the right-hand potentiometer knob. HOLD DOWN the Rectifier button and press Test No. 2 section in the same way except hold down No. 2 Rectifier button.
13. The 79 tube contains two triode elements which may be tested separately as follows: Insert the tube in the G socket for element No. 1. Do not connect control grid cap. Set left potentiometer on proper point. Press No. 1 Rectifier button and adjust right potentiometer to bring pointer of meter over diamond. Hold down No. 1 Rectifier button and press green button for element performance. To test element No. 2, insert the tube in the F socket. Connect the control grid cap. Press No. 2 Rectifier button and adjust right potentiometer for diamond. Hold down No. 2 Rectifier button and press green button for element performance.
14. To test the DIODES of the 55, 75, 85, 2A6, 2B7, 6B7 and 6C7 tubes proceed as follows:
  - a. Throw the switch, located near socket O to the right.
  - b. Set the left potentiometer knob at 100.
  - c. Set the right potentiometer knob at 80.
  - d. Press No. 1 Rectifier button for diode performance. Pointer of meter should rise above line marked Diodes OK.
  - e. After completing diode test, throw switch to left **as all other tests** require switch in left position.

CHART OF TUBE SETTINGS FOR DIAMOND POINT JR. 34 TUBE TESTER

Tube Type	Socket	Fil. Volts	Left Pot.	Approx. Right Pot.	Tube Type	Socket	Fil. Volts	Left Pot.	Approx. Right Pot.
01A	K	5.	40.	36	80	G	5.	75.	--
1	E	6.3	77.3	--	81	G	7.5	75.	--
1V	E	6.3	77.3	--	82	G	2.5	77.3	--
10	K	7.5	46.	36	83	G	5.	77.3	--
WX12	K	1.1	18.	45	84	G	6.3	77.3	--
12A	K	5.	65.	28	85	K	6.3	54.	32
14	L	12.6	35.	12	87	M	6.3	53.	10
15	L	2.	20.	17	88	M	6.3	53.	32
17	H	12.6	50.	35	89	M	6.3	55.	57
18	L	12.6	56.	20	90	H	2.5	48.	34
19-1	A	2.	25.	23	92	H	6.3	48.	34
19-2	A	2.	25.	23	95	L	2.5	56.	20
20	K	3.	33.	78	96	E	12.6	77.3	--
22	L	3.	10.	32	98	G	6.3	77.3	--
24	L	2.5	35.	12	99	K	3.	18.	45
26	K	1.5	50.	37	215A	972K	1.1	18.	53
27	H	2.5	50.	33	257	N	5.	68.	82
29	H	2.5	48.	9	401	K	3.	37.	45
30	K	2.	40.	34	482A	K	5 2.	62.	83
31	K	2.	45.	70	482B	K	5 2.	62.	55
32	L	2.	16.	21	484-5	H	3.	55.	25
33	N	2.	60.	53	486	H	3.	24.	46
34	L	2.	20.	24	586	K	7.5	66.	59
35	L	2.5	43.	18	841	K	7.5	22.	10
36	L	6.3	41.	8	842	K	7.5	55.	72
37	H	6.3	45.	36	864	K	1.1	18.	50
38	L	6.3	42.	31	1A6-1	TRI E	2.	100.	65
39	L	6.3	34.	21	1A6-2	OSC E	2.	100.	65
41	L	6.3	56.	20	2A3	K	2.5	77.3	50
42	L	6.3	56.	20	2A5	L	2.5	55.	23
43	L	30.	63.	39	2A6	K	2.5	10.	5
44	L	6.3	34.	21	2A7-1	TRI C	2.5	35.	20
45	K	2.5	68.	66	2A7-2	OSC C	2.5	20.	32
46	N	2.5	67.	44	2B7	P	2.5	35.	17
47	N	2.5	62.	35	6A4	N	6.3	65.	36
48	N	30.	74.	50	6A7-1	TRI C	6.3	35.	20
49	N	2.	53.	57	6A7-2	OSC C	6.3	20.	32
50	K	7.5	66.	59	12A5	O	12.6	65.	78
51	L	2.5	43.	16	6B7	O	6.3	35.	17
52	N	6.3	66.	49	6C6	M	6.3	53.	10
53-1	B	2.5	36.	15	6C7	P	6.3	53.	14
53-2	B	2.5	36.	15	6D6	M	6.3	53.	32
55	K	2.5	54.	32	6D7	P	6.3	46.	8
56	H	2.5	62.	11	6E7	P	6.3	51.	12
57	M	2.5	53.	10	6F7-1	PEN C	6.3	36.	23
58	M	2.5	53.	32	6F7-2	TRI C	6.3	100.	50
59	N	2.5	60.	39	5Z3	G	5.	76.	--
64	L	6.3	33.	15	6Y5	D	6.3	77.3	--
65	L	6.3	34.	21	6Z5	D	6.3	76.	--
67	H	6.3	50.	33	12Z3	F	12.6	77.3	--
68	L	6.3	51.	62	12Z5	F	12.6	76.	--
69	H	6.3	48.	9	25Z5	F	30.	77.3	--
70	H	6.3	15.	20	4D	F	6.3	77.3	--
71A	K	5.	67.	75	4F	G	2.5	77.3	--
75	K	6.3	15 10.	5	4G	G	5.	77.3	--
77	M	6.3	53.	11	GA	N	5.	58.	35
78	M	6.3	53.	32	G2-4-S	N	2.5	70.	--
79-1	G	6.3	25.	100	LA	N	6.3	65.	36
79-2	F	6.3	25.	100	PZH	N	2.5	67.	35
					PZ	N	2.5	62.	35
					WUN	H	2.5	48.	39

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