

TRIPLET

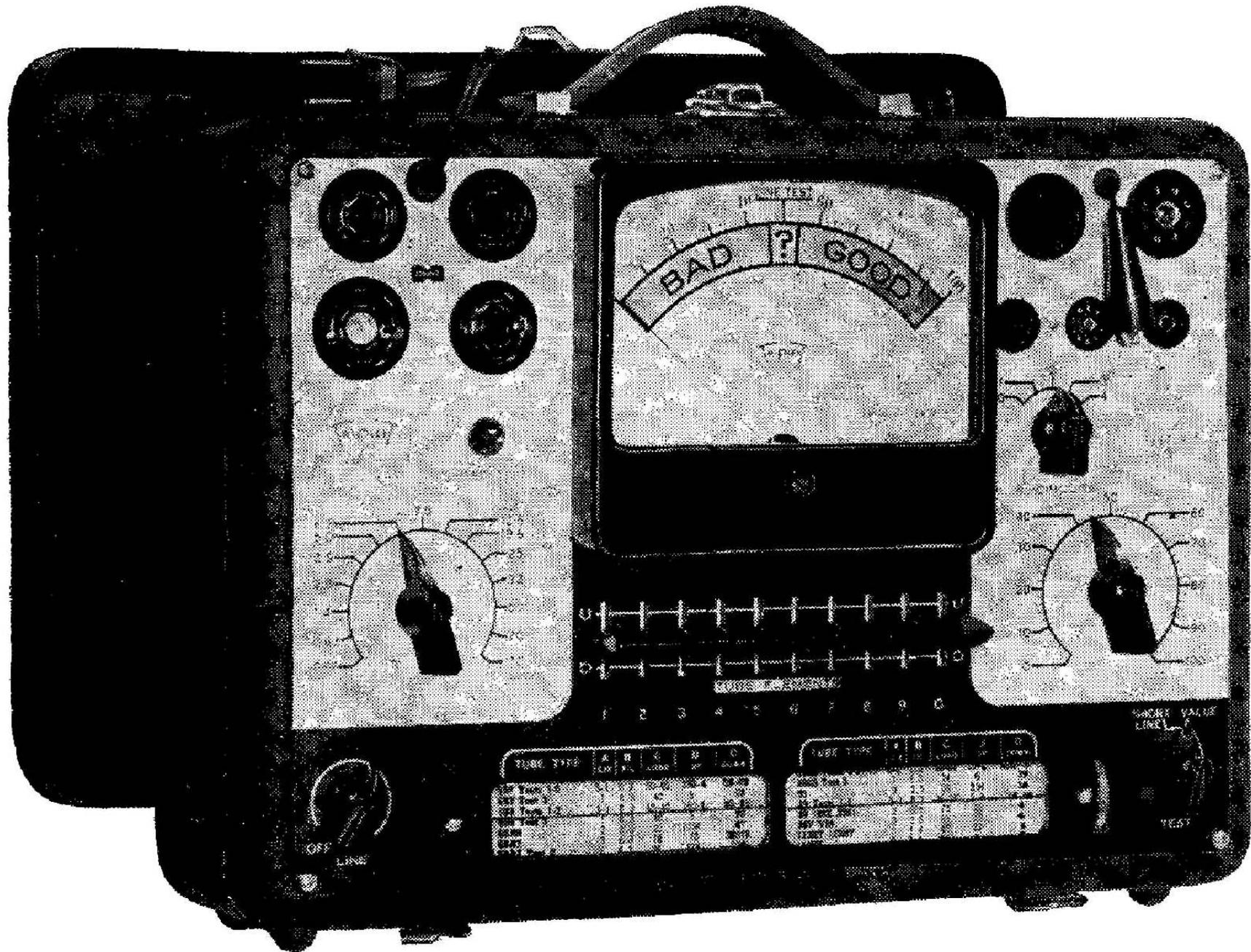


INSTRUCTION MANUAL

MODEL 3413-A

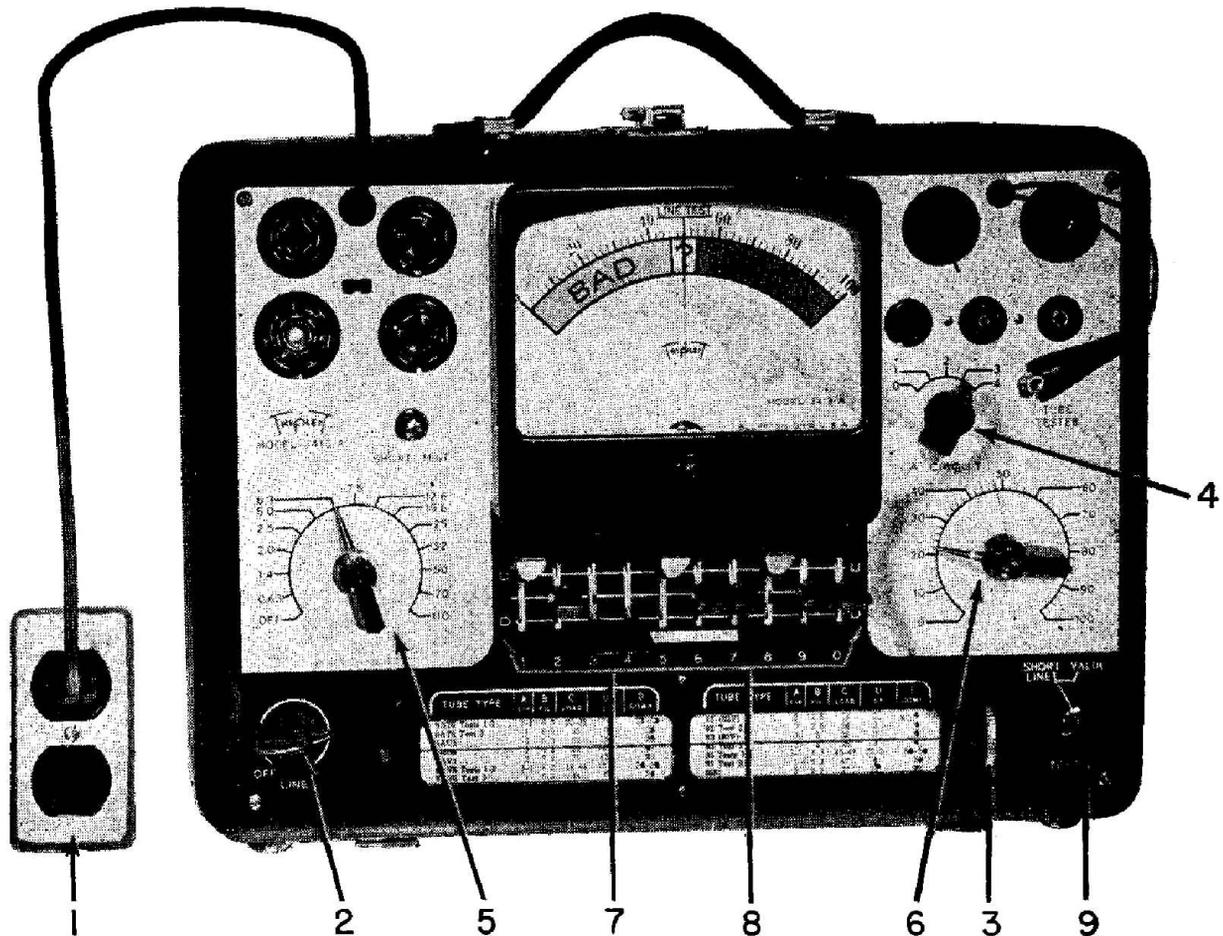
TUBE TESTER

MANUAL ONLY - \$.75



Model 3413A

Operating Instructions



SETTING CONTROLS

1. Insert power cord into a 110 volt AC 60 cycle outlet.
2. Turn "LINE" control clockwise until pointer of meter rests over "line Test" mark.
3. Set roll chart to type tube to be tested.

Example

Type Tube	A CIR.	B FIL.	C LOAD	U UP	D DOWN
6AU5	3	6.3	22	158	37

4. Set "A Circuit" switch to position number 3.
5. Set "B Filament" switch according to chart 6.3.
6. Set "C Load" to position 22 as shown.
7. Levers 1, 5 & 8 should be placed in the up position.
8. Levers 3 and 7 should be placed in the down position.
Levers not listed in either column must be left in the center position.
NOW insert tube in tester socket. After tube has had sufficient time to heat up check line voltage setting again. If necessary then reset control No. 2 so meter pointer reads at "LINE TEST" mark.
9. To test tube hold control No. 9 in "Value" position and read meter.

SHORT TEST

With all controls set according to the roll chart, one at a time, move each lever to the opposite position and return, this applies only to settings in light face type. If pin corresponding to lever number is shorted to an-

other pin or element the neon lamp "SHORT TEST" will have a bright red glow.

The above should be carried out on all levers listed in the light face type. Levers in the center position are not used for this type tube.

TUBES WITH INTERNAL PINS CONNECTED

LEVERS IN "UP" POSITION

All tubes which have internal connections, (as noted by dark face type in "Up" position) should be checked by moving these levers to the down position simultaneously. These elements should not indicate a short if this procedure is used.

LEVERS IN "DOWN" POSITION

The following tubes with dark face type levers in the "down" position should be checked by moving all levers listed below to the "Up" position simultaneously. These elements should not indicate short if this procedure is followed.

2E26	pins	1-4-6	1204	pins	4-6-8
6AK5	"	2-7	5636	"	2-8
6AN5	"	2-7	5651	"	2-7
6BC5	"	2-7	5654	"	2-7
6BE7	"	3-8	5662	"	2-5
6BV7	"	7-9	5686	"	1-3-8
6N4	"	2-6	5840	"	2-4-8
7B6	"	4-7	5899	"	2-4-8
7E6	"	4-7	5905	"	2-4-8
7W7	"	4-7	5908	"	2-8
			6028	"	2-7
12BY7	"	3-9	6146	"	1-4-6
12SG7	"	3-5	6169	"	4-5
12SH7	"	3-5	9001	"	2-7
14B6	"	4-7	9002	"	2-7
14E6	"	4-7	9003	"	2-7
14W7	"	4-7	9006	"	2-7
713A	"	3-5			
717A	"	3-5			
2729	"	2-7			

OPEN ELEMENT TEST

Set all controls and levers according to the roll chart for tube under test. With "TEST" knob control No. 9 in "Value" position, one at a time move each lever which is in the up position shown in light face type to the down position and return to correct setting. Continuity between tube pins or elements being tested is indicated by a change in pointer deflection. A small change denotes a satisfactory plate or screen connection. A large change will indicate a satisfactory grid connection. When there is only one lever in up position, no open element test need be made.

FILAMENT AND TAP CONTINUITY TEST

* Asterisk shown after tube type.

Set all controls and levers according to the roll chart EXCEPT "B Filament" switch which must be set at 0.63 position for this test.

the same line on the roll chart. A dash is used to separate information used in "Test 1" from information used in "Test 2." Using test information for a type 6H6 in the following example, all information not used in "Test 1" is ignored.

Chart Reads:	A	B	C	U	D
6H6 Tests 1-2	1-1	6.3	25-25	3-5	47-78
For Test 1 use:	1	6.3	25	3	47
For Test 2 use:	1	6.3	25	5	78

When information for two tests is given on a single line, this information is separated by a dash. Information for "Test 1" is found to the left of this dash, and information for "Test 2" is found to the right of this dash.

Notice that the "B-Filament" setting will always be the same though a tube may have one, two, three or more separate tests.

Refer to information given for a type 6SQ7. This tube requires three separate tests. Space permits giving information for only "Tests 1 and 2" on the first line. Information for "Test 3" is given on a second line.

SPECIAL NOTES APPEARING ON ROLL CHART

Special notes on the chart refer only to the type tube preceding the notation. For example, notice the note which follows a type 35B5. Also, notice the note which follows Test 2 for a type 117N7. This note applies only to Test 2 for this tube.

A note appearing on roll chart such as: "(Good=40)", etc., indicates that a reading of 40 or higher is satisfactory. (See type 2Y2 as an example. Another example is a type VR-75. A reading of 10 or better is satisfactory for this tube.)

Some tubes, such as VR-75 have more than one type designation. The preferred type number is given first, followed by the less common type number in parenthesis. In the case of a type VR-75, this tube is sometimes referred to as a type OA3 and is therefore listed as VR75 (OA3).

For information a cross reference listing of these tubes with two type numbers is given:

Tube Type	Listed Under	Tube Type	Listed Under
0A3	VR-75	CK568AX	CK5677
0B3	VR-90	CK569AX	CK5678
0C3	VR-105	CK605CX	CK5702
0D3	VR-150	CK608CX	CK5703
1F7GV	1F7	CK619CX	CK5744
4S	2S/4S	CK1006	1006/CK1006
6A4	6A4/LA	1201	7E5
6AB5	6N5	1203-A	7C4/1203A
6Q5	884	1232	7G7
6U5	6G5	1291	3B7
12B7	14A7	1294	1R4
12Z5	6Z5/12Z5	1299	3D6
25S	1B5	1642	2C21/1642
44	39	1852	6AC7
45Z5	40Z5	1853	6AB7
51	35	2051	2050
82V	82	2523NI	128A/2523NI
83V	83	5654	6BC5
84	6Z4	8016	1B3
G84	2Z2	A	866
V99	99V/V99	AS	57A
99X	99	ECL-80	6AB8
X99	99	EF-80	6BX6
117M7	117L7	G-2	2S/4S
123HY	113HY/123HY	G-84	2Z2
145HY	115HY/145HY	KR-1	1V
482-B	182-B	KR-5	6A4/LA
483	183	KR-25	2A5
485	484	KR-98	6Z4
GL-502-A	502-A/GL502-A	PL-83	15A6
585	50	V99	99V
879	2X2	XXB	3C6
951	1B4P	XXD	14AF7
CK556AX	CK5676	XXL	7A4

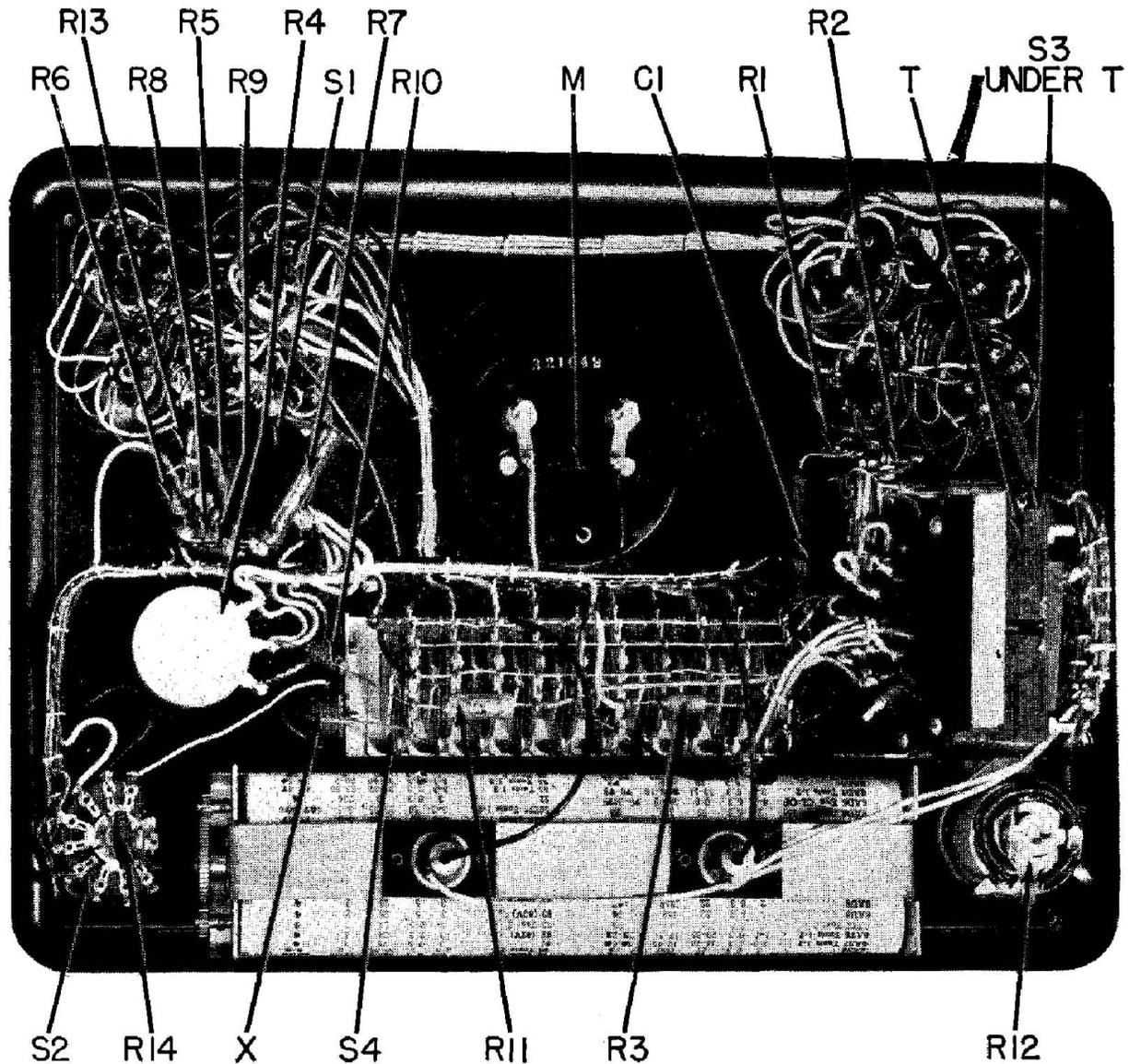
The letters "CL" appearing under Test 2 for tuning eye tubes indicate that the tuning eye shadow should be closed during this test (No meter reading will be observed). The letters "OP" under Test 3 for tuning eye tubes indicate that the eye shadow should be open during this test. (Tube type 6E5 is an example.)

A few special tubes have more than one top cap. A type 615HY is an example. When testing this tube, a wire jumper is connected between the two top caps, and the top cap test lead is clipped onto one of the tube's top caps.

Notes such as "(Adapt BR)" mean that a special adapter "BR" must be used in testing these tubes. Since these adapters are seldom, if ever, used in Radio and TV work, they are not included with your instrument. They may be obtained from your distributor on special order.

An asterisk (*) following a tube type indicates that filament and tap continuity test should be made for this tube.

Parts Location



Maintenance

A Triplet 3413-A Tube Tester will require very little or no maintenance.

From time to time there will be a new roll chart to install. This will only be a few minutes work if you follow these instructions.

- A. Remove the four screws in the corners of the front panel. Remove back case.
- B. Lay tester face down on bench.
- C. Roll chart to the extreme end on top roller.
Remove tape holding chart to bottom roller.
Pull out old chart and remove tape from top roller.
- D. Thread new chart under bottom roller up to top roller and tape chart to roller. Take special care that the chart is taped straight on the roller. Roll chart on top roller very loosely. Now tape bottom of chart to the bottom roller. If the chart has not been rolled loosely on the rolls it will bind when rolled to the extreme ends.

The chart lamps sockets may be removed from the bracket to replace lamps.

Wiring Diagram, Model 3413-A

