

CONDENSED OPERATING INSTRUCTIONS  
AND  
REVISED TUBE CHART

TUBE CHECKER

MODEL TC-3A

EBI-7001C

ELECTRONICS DIVISION  
GENERAL ELECTRIC COMPANY  
ELECTRONICS PARK, SYRACUSE, N. Y.

OPERATING INSTRUCTIONS  
AND  
REVISED TUBE CHART

TUBE CHECKER

MODEL TC-3A

## GENERAL

The General Electric Tube Checker, Model TC-3A, is an emission type tube checker. Tubes are tested for quality by a test wherein the grid is placed at cathode potential while the screen is placed at a lower potential than the plate. Cathode emission, as well as ability of other elements to control the plate current, are thus tested simultaneously.

## OPERATION

## TUBE TESTING

1. Place the slide switch in the TUBE TEST position.
2. Set FIL VOLTS switch, KEYS, and INDEX to settings shown on the chart for the tube under test.
3. Turn the TEST switch to the 5th or LINE TEST position and turn the LINE ADJUSTER until the meter reads on the line point (tube in its proper socket).
4. Rotate the TEST switch through the short positions 4,3,2,1, tapping the tube in each position while watching the neon bulb for glow. The meter will also indicate slightly on a shorted tube.
5. If the tube is free of shorts, turn the TEST switch to the 1st OUTPUT position to read meter (a "2" following the INDEX setting on the chart indicates that the 2nd OUTPUT position is to be used to obtain the readings).
6. Follow the same procedure in making the second or third tests, but only make short tests when the keys are shown in capital letters. When setting the keys to the position shown for the second and third tests, always return the red keys to the vertical position, set the black keys, then reset the red keys. Read the meter for condition of the tube section under test.

#### BATTERY TESTING

1. Place the slide switch in the BATTERY TEST position.
2. Refer to the manufacturer's data for voltages.
3. Plug test leads in the appropriate pin jacks.
4. Always check portable batteries with the set turned on. This checks the battery under load.

#### MODIFICATION FOR NEW TYPE TUBES

The addition of many new types of tubes with base connections differing from those in existence at the time the TC-3A Tube Checker was designed makes it necessary either to modify the unit or use adaptors. The following adaptors are available from the General Electric Co., Component Parts Section, Commercial Equipment Department, Electronics Park, Syracuse, N. Y.

- (A) SJA-004 (Fig. 1), for other than 19-volt tubes as indicated.
- (C) SJA-006 (Fig. 2), for other than 19-volt tubes as indicated.
- (D) SJA-007 (Fig. 3), for 19-volt tubes.
- (E) SJA-009 (Fig. 4), for acorn tubes.

It will be necessary to modify the unit or construct an additional adaptor as below:

(Y) Some 7-pin miniature tubes have base connections requiring an adaptor as shown in Fig. 5.

The adaptors can be made by using parts similar to Amphenol Type 50-85G. Connections should be made as shown in Figs. 1 through 5. If it is desired to mount sockets in the TC-3A panel, standard sockets may be used and connections made exactly as shown in the adaptors diagrams. In addition, a pin jack should be mounted on the panel to serve the same purpose as the side stud on the special octal adaptor plug.

## REVISED TUBE CHART FOR TUBE CHECKER, MODEL TC-3A

## NOTE

The following symbols are used uniformly to indicate footnotes as shown:

- \* Do not connect side stud.
- \*\* Shows short on positions 1, 2 and 3.
- / Shows short on position 2.
- ø Do not connect side stud. Side stud connected to pin 3 of 5-pin socket.
- # Test for glow only.
- ## Side stud connected to pin 2 of 5-pin socket.
- / Connect side stud of adaptor to pin 2 of 5-pin socket.
- / Shows short on position 1.
- \* Connect side stud of adaptor to any pin #1.

Adaptor is indicated in parentheses following tube type.

<u>TUBE</u>	<u>FIL</u>	<u>KEYS</u>	<u>INDEX</u>	<u>TUBE</u>	<u>FIL</u>	<u>KEYS</u>	<u>INDEX</u>
00A	F	ORJ	54	1E4	C	OGI	58
01-A	F	ORJ	54	1E5	D	AO	48
0A4	E	AOS	88-2	1E7	D	MOGI	65
OY4	C	3-S	92-2	"	D	GI	50
OZ4	A	ORJ	86-2	1F4	D	MOHI	55
"	A	QS	86-2	1F5	D	AOGI	55
1A3	C	LN	36	1F6	D	AO	40
1A4	D	OFJ	50	"	D	GT	36
1A5	C	AOFT	56	"	D	HT	36
1A6	D	AOGT	43	1F7	D	OHT	40
1A7	C	AOQJ	25	"	D	GT	36
1AB5	C	BN	12	"	D	AO	36
1B3/8016	C	2, <sup>1</sup> 1	62	1G4	C	OGI	66
1B4	D	OHI	46	1G5	D	KOGI	68
1B5/25S	D	OFJ	89	1G6	C	AO	89
"	D	BD	36	"	C	RI	89
"	D	GJ	36	1H4	D	OGI	64
1C5	C	KOGI	74	1H5	C	OHI	54-2
1C6	D	AOGT	45	"	C	HI	36-2
1C7	D	AOHT	45	1H6	D	ORT	89
1D5	D	AO	50	"	D	MN	36
1D7	D	AOHT	45	"	D	GT	36
1D8	C	5-AO	68	1J5	D	KOGI	70
"	C	GI	45	1J6	D	AO	91
"	C	PT	36	1J6	D	HI	91

<u>TUBE</u>	<u>FIL</u>	<u>KEYS</u>	<u>INDEX</u>	<u>TUBE</u>	<u>FIL</u>	<u>KEYS</u>	<u>INDEX</u>
1L4	C	5-AOQS	35	2E5	E	LOQI	64-2
1L6	C	AOPS	80	2E24	G	S	92-2
1LA4	C	LNFJ	56	2E26	G	8-0	91
1LA6	C	BNPJ	29	2E30	G	1248-OEPS	68
1LB4	C	BNGJ	81	2G5	E	LOQI	64-2
1LC5	C	BNI	97	2S/4S	E	OPT	94
1LC6	C	BNPJ	40	2V3	E	8	53
1LD5	C	6-LN	61-2	2W3	E	27-E	98
"	C	LD	23	2X2	E	8	75
1LE3	C	NPT	50	3A4	C	356-LD	10
1LG5	C	5-ANHT	35	3A5	C	LO	56
1LH4	C	NHT	83	"	C	GI	56
"	C	AO	36	3A8	C	28-AO	96
1LN5	C	6-LN	55-2	"	C	18-GI	40
1N5	C	AO	54-2	3B5	C	7-AOHT	79
1N6	C	AOFT	53	3B7/1291	C	3-NHJ	40
"	C	HT	36	"	C	JP	40
1P5	C	AO	10	3B26*	E	8	50
1Q5	C	KOGI	74	3C6	E	I	35
1R4/1294	C	7-CN	34	3D6/1299	C	6-LN	45
1R5	C	5-AO	40	3E6	E	6-BN	20
1S4	C	LO	78	3LF4	D	6-LN	74
1S5	C	LOQS	10	3Q4	C	356-LD	45
"	C	3ao	34	3Q5	D	7-AOHT	60
1SA6	C	BNQJ	46	3S4	C	356-LD	45
1SB6	C	AOPS	70	3V4	E	6-AOJ	65
1T4	C	5-AOQS	46	4A6	D	7-LO	10
1T5	C	KOGI	74	"	F	5-I	10
1U4	C	5-AOQS	53-2	5AX4	F	27-E	95
1U5	C	AOQS	55-2	"	F	27-I	95
"	C	BD	34-2	5AZ4	F	18-E	98
1V	G	OQI	98	5AZ4	F	18-I	98
1V6	C	8-I	40	5R4GY	F	27-0	98
1W4	C	AOQS	87-2	"	F	27-I	98
1X2(C)	C	8	55	5T4	F	27-E	98
1Z2	C	8	71	"	F	27-I	98
2A3	E	BOFT	93	5U4	F	27-E	97
2A4	E	OGI	98	"	F	27-I	97
2A5	E	KOPT	76	5V4	F	27-E	98
2A6	E	OPT	42-2	"	F	27-I	98
"	E	RT	36	5W4	F	27-E	97
"	E	5MN	36	"	F	27-I	97
2A7	E	KOQS	68	5X3	F	0	97
2B6	E	OGT	75	"	F	S	97
"	E	7-ERJ	60	5X4	F	7-0	97
2B7	E	7-AO	56	"	F	7-S	97
"	E	GT	36	5Y3	F	27-E	97
"	E	HT	36	"	F	27-I	97
2C21	G	LE	76	5Y4	F	7-0	97
"	G	7H1	93	"	F	7-S	97

\*Do not connect side stud.

<u>TUBE</u>	<u>FIL</u>	<u>KEYS</u>	<u>INDEX</u>	<u>TUBE</u>	<u>FIL</u>	<u>KEYS</u>	<u>INDEX</u>
5Z3	F	O	97	6AQ6	G	12348-FJ	36
"	F	S	97	"	G	12348-QJ	36
5Z4	F	27-E	98	6AQ7	G	67-BDGT	43
"	F	27-I	98	"	G	47-AEJ	38
6A3	G	BOFT	93	"	G	7-ADJ	38
6A4/LA	G	MOGT	70	6AR5	G	1248-MNPS	76
6A5	G	OS	98	6AR6	G	1267-MOPI	67
6A6	G	HJ	45	6AS5	G	248-HI	96
"	G	5-MO	45	6AS6	G	1248-MNPS	45
6A7	G	KOQS	68	6AS7	G	17-KN	99
6A8	G	KOPI	68	"	G	17-EGS	99
6AB4	G	1248-GJ	39	6AT6	G	1248-AET	30
6AB5/6N5	G	MOQI	32	"	G	12348-FJ	36
6AB6	G	EGT	92	"	G	12348-QJ	36
"	G	OGT	85	6AU5	G	JAEF	91
6AB7/1853	G	ADGJ	62	6AU6	G	1248-LNPS	55
6AC5	G	ORI	87	6AV5	G	AEFJ	94
6AC6	G	ORI	88	6AV6	G	1248-AET	50-2
6AC7	G	LOGJ	66	6AV6	G	12348-FJ	36
6AD6	G	KOFS	10	6AV6	G	12348-QJ	36
6AD7	G	CDIP	85	6AX4	G	7-BDS	98
"	G	AOGT	80	6AX5	G	OPI	96
6AE5	G	OPI	92	"	G	FS	96
6AE6	G	OHT	58-2	6B4	G	OGI	93
6AF4	G	7-HI	95-2	6B5	G	EGJ	92
6AF5	G	OPI	88	"	G	OGJ	85
6AF6	G	KOFS	10	6B6	G	OPI	42-2
6AG5	G	1248-MNPS	64	"	G	7-MN	36
6AG7	G	ADGJ	75	"	G	GT	36
6AH4	G	7-KOPS	95	6B7	G	7-AO	56
6AH6	G	1248-MNPS	64	"	G	GT	36
6AH7	G	7-MO	63	"	G	HT	36
6AH7	G	47-GI	63	6B8	G	OHT	56
6AJ4(A)	G	7-FI	95-2	"	G	GT	36
6AJ5	G	1248-MNPS	72	"	G	7-BD	36
6AK5	G	1248-MNPS	64	6BA6	G	1248-CEPS	71
6AK6	G	1248-LNPS	72	6BA7(c)	G	3KOIJ	75
6AK7	G	ADGJ	75	6BC5	G	1248-MNPS	55
6AL5	G	248-IF	41	6BC7(c)	G	RJ	96-2
"	G	248-HJ	41	"	G	PJ	96-2
6AL7	G	AOHT	60-2	"	G	6-HJ	96-2
6AM4(A)	G	7-FI	95-2	"	G	6J	96-2
6AM4(A)	G	7-FI	95-2	6BD5	G	KN	96-2
6AN4(Y)	G	7-HI	95-2	6BD6	G	1248-MNPS	61
6AQ5	G	1248-AEFS	85ø	6BE6	G	1248-MNFS	50
6AQ6	G	1248-AET	54-2	6BF5	G	1248-AEFS	90ø

øShows short on position 2.

<u>TUBE</u>	<u>FIL</u>	<u>KEYS</u>	<u>INDEX</u>	<u>TUBE</u>	<u>FIL</u>	<u>KEYS</u>	<u>INDEX</u>
6BF6	G	1248-AET	62	6E5	G	LOQI	64-2
6BF6	G	12348-FJ	35	6E6	G	5-KO	94
6BF6	G	12348-QJ	35	"	G	GJ	94
6BG6	G	8-AEFJ	96	6E7	G	AOHT	64
6BH6	G	1248-MNPS	54	6F4(E)	G	57-OQS	94
6BJ6	G	1248-MNPS	62	6F5	G	EPI	44-2
6BK5(c)	G	7-PS	88	6F6	G	KOPI	78
6BK6	G	1248-AET	25-2	6F7	G	7-KO	60
"	G	12348-FJ	37	"	G	QS	44
"	G	12348-QJ	32	6F8	G	PI	76
6BK7(c)	G	CE	89	"	G	BO	76
6BK7(c)	G	JG	89	6G6	G	KOPI	72
6BL7	G	17-CDGS	93	6H4	G	KOPI	45
"	G	17-BDGS	93	6H5	G	MOPT	55-2
6BN6	G	248HI	58-2	"	G	bnqi	100-2#
6BQ6	G	8-KOPI	95	6H6	G	BO	98
6BQ7*(c)	G	CE	92	"	G	FS	98
" (c)	G	JG	92	6J4	G	1248-MNT	84
6BT6	G	1248-AET	54-2	6J5	G	OPI	72
"	G	12348-FJ	38	6J6	G	1248-DFJ	84
"	G	12348-QJ	38	"	G	1248-OQJ	84
6BU6	G	1248-AET	67	6J7	G	KORI	54
"	G	12348-FJ	36	6J8	G	KOPI	80
"	G	12348-QJ	36	6J8	G	KOHT	50
6BX7	G	17-KN	95-2	6J8	G	HT	20
6BX7	G	17-EGS	95-2	6K5	G	OGT	10
6BZ7(c)	G	CE	90	6K6	G	KOPI	80
6BZ7(c)	G	JG	90	6K7	G	KOPI	60
6C4	G	1248-RS	75	6K8	G	KOPI	79
6C5	G	OPI	60	"	G	PI	64
6C6	G	KOCJ	54	6L5	G	OPI	72
6C7	G	7-O	54	6L6	G	KOPI	90
"	G	GT	36	6L7	G	KOPI	52
"	G	HT	36	6N6	G	EGT	92
6C8	G	BO	40	"	G	OGT	85
"	G	PI	40	6N7	G	PI	45
6CB6	G	1248-MNPS	61	"	G	7-MO	45
6CD6	G	8-AEFJ	96	6P5	G	OPI	72
6CL6(c)	G	4-AD	65-2	6Q4##(c)	G	8-O	99
6CL6*(c)	G	CO	96	6Q7	G	OPI	50-2
6D4	G	1248-FI	35	"	G	RI	36
6D6	G	KOPT	62	"	G	7-BD	36
6D7	G	AOHT	65	6R7	G	OPI	65
6D8	G	KOPI	65	"	G	RI	36

\*Do not connect side stud.

#Test for glow only.

##Side stud connected to pin 2 of 5-pin socket.

<u>TUBE</u>	<u>FIL</u>	<u>KEYS</u>	<u>INDEX</u>	<u>TUBE</u>	<u>FIL</u>	<u>KEYS</u>	<u>INDEX</u>
6R7	G	7-BD	36	6T7	G	OPI	48-2
6R8(c)	G	QT	38	"	G	RI	22
"	G	46-FT	38	"	G	7BD	24
"	G	AD	38	6T8(c)	G	QT	44
"	G	6-LD	38	"	G	46FT	44
6S4(c)**	G	CNJ	95-2	"	G	AD	44
6S7	G	AORI	68	"	G	6LD	44
6S8	G	7-DM	30	6U4	G	7-BDS	95-2
"	G	7BD	30	6U5	G	LOFI	48
"	G	57-AD	30	6U6	G	AOPI	92
"	G	7-FI	34-2	6U7	G	KOPI	64
6SA7	G	KOFT	50	6U8(C)	G	FOT	95-2
6SB7Y	G	KOFT	53	" (C)	G	IQE	85-2
6SC7	G	167-AD	87	6U8(C)	G	FOT	98
"	G	17-MNHS	87	6U8(C)	G	6-FOJ	98
6SD7	G	CDGJ	65	6V3*(C)	G	OI	96-2**
6SE7	G	BNGJ	68	6V6	G	KOPI	83
6SF5	G	17-KES	40-2	6V7	G	OPI	76
6SF7	G	17-MNI	69	"	G	RI	36
"	G	37-QT	10	"	G	MN	36
6SG7	G	KNGJ	56	6V8(C)	G	GJ	39
6SH7	G	KNGJ	53	"	G	HT	39
6SJ7	G	BNGJ	64	"	G	RT	39
6SK7	G	BNGJ	74	"	G	QJ	39
6SL7	G	17-CDGS	87	6W4	G	7BDS	97
6SL7	G	17-BDGS	87	6W5	G	FS	98
6SN7	G	17-CDGS	92	"	G	OPI	98
"	G	17-BDGS	92	6W6	G	KOPI	90
6SQ7	G	17-KNI	85	6W7	G	KOPI	54
"	G	378-MN	36	6X4	G	DRS	98
"	G	378-GT	36	"	G	HI	98
6SR7	G	17-KNI	90	6X5	G	FS	98
6SR7	G	378-MN	36	"	G	OPI	98
"	G	378-GT	36	6X8(C)	G	7NO	98
6SS7	G	BNGJ	68	" (C) /	G	7EFS	86
6ST7	G	17-KNI	90	6Y5	G	6-E	98
6SU7	G	17-CDGS	85	"	G	HS	98
"	G	17-BDGS	85	6Y6	G	KOPI	93
6SV7	G	7-BDRI	48	6Y7	G	PI	48-2
6SV7	G	378-jf	44	"	G	7-MO	48-2
6SZ7	G	17-KNI	86	6Z3/1V	G	OQI	98
"	G	378-MN	31	6Z4/84	G	OHJ	98
"	G	378-GT	31	"	G	EHJ	98
6T6	G	bnqi	100-2#	6ZY5	G	OHT	98

\*Do not connect side stud.

\*\*Shows short on positions 1, 2 and 3.

#Test for glow only.

/Connect side stud of adaptor to pin 2 of 5-pin socket.

<u>TUBE</u>	<u>FIL</u>	<u>KEYS</u>	<u>INDEX</u>	<u>TUBE</u>	<u>FIL</u>	<u>KEYS</u>	<u>INDEX</u>
6ZY5	G	FS	98	7K7	G	HT	36
7A4	G	NQS	72	7L7	G	BNGT	55
7A5	G	LNQS	90	7N7	G	MO	75
7A6	G	MO	98	"	G	PI	75
"	G	RI	98	7Q7	G	CNRI	70
7A7	G	LNGT	64	7R7	G	NGT	50
7A8	G	MOGT	50	"	G	7-AD	36
7AD7	G	LNGT	72	"	G	7-LD	36
7AF7	G	PI	72	7S7	G	MOGT	68
"	G	MO	72	"	G	ngt	45
7AG7	G	LNGT	44	7T7	G	MOGT	68
7AH7	G	LNGT	47	7V7	G	CNFS	72-2
7AJ7	G	LNGT	55	7W7	G	7-LNGT	65
7AK7	G	LNGT	79	7X6	G	8-RI	97
7B4	G	NHT	83	"	G	8-O	97
7B5	G	LNGT	77	7X7	G	LN	81
7B6	G	LN	81	"	G	4-GT	40
"	G	GT	36	"	G	HT	40
"	G	HT	36	7Y4	G	7-O	98
7B7	G	LNGT	63	"	G	RI	98
7B8	G	BNGT	50	7Z4	G	7-O	98
7C4/1203	G	KOGT	45	"	G	RI	98
7C5	G	LNGT	84	10	H	OQJ	57
7C6	G	LN	80	12A	F	OQJ	75
"	G	GT	36	12A4(C)	I	48-KD	40
"	G	HT	36	12A5	I	56-KO	86
7C7	G	LNGT	50	12A6	I	AOHT	75
7E5/1201	G	18-BO	72	12A7	I	FI	98
7E6	G	AN	70	"	I	7-AO	73
"	G	GT	36	12A8	I	KOPI	64
"	G	HT	36	12AH7	I	7-MO	63
7E7	G	NGT	58	"	I	47-GI	63
"	G	7-AD	36	"	I	7-N	95-2
"	G	7-LD	36	12AL5	I	248-IF	41
7F7	G	PI	51-2	"	I	248-HJ	41
"	G	MO	51-2	12AT6	I	1248-AET	30
7F8	G	1278-QI	56	"	I	12348-FJ	36
"	G	1278-BO	56	"	I	12348-QJ	36
7G7/1232	G	BNGT	72	12AT7(C)	I	CE	89*
7G8/1206	G	6-LNFI	53	"	I	JG	89*
7G8/1206	G	6-ADGJ	53	12AU6	I	1248-LNPS	55
7H7	G	LNGT	58	12AU7(C)	I	CE	89*
7J7	G	7-LO	53	"	I	JG	89*
"	G	BNGT	48	12AV6	I	1248-AET	50-2
7K7	G	KO	85	"	I	12348-FJ	36
"	G	GT	36	"	I	12348-QJ	36

\*Do not connect side stud.

<u>TUBE</u>	<u>FIL</u>	<u>KEYS</u>	<u>INDEX</u>	<u>TUBE</u>	<u>FIL</u>	<u>KEYS</u>	<u>INDEX</u>
12AV7(C)	I	CE	86*	12SC7	I	167-AD	87
" (C)	I	JG	86*	"	I	17-MNHS	87
12AW6	I	1248-MNPS	56	12SF5	I	17-KES	40-2
12AX4	I	BDS	95-2	12SF7	I	17-MNI	69
12AX7(C)	I	CE	89*	"	I	37-QT	10
"	I	JG	89*	12SG7	I	KNGJ	56
12AY7(C)	I	CE	85*	12SH7	I	5-KNGJ	53
"	I	JG	85*	12SJ7	I	BNGJ	64
12AZ7(C)	I	CE	84	12SK7	I	BNGJ	74
"	I	JG	84	12SL7	I	17-CDGS	87
12B4(C)	I	48-KD	40	"	I	17-BDGS	87
12B7	I	LNGT	64	12SN7	I	17-CDGS	92
12B8	I	KO	65	"	I	17-BDGS	92
"	I	GS	50-2	12SQ7	I	17-KNI	85
12BA6	I	1248-CEPS	71	"	I	378-MN	36
12BA7(C)	I	3-KOIJ	74	"	I	378-GT	36
12BD6	I	1248-MNPS	60	12SR7	I	17-KNI	90
12BE6	I	1248-MNFS	50	"	I	378-MN	36
12BF6	I	1248-AET	62	"	I	378-GT	36
"	I	12348-FU	35	12SW7	I	17-KNI	90
"	I	12348-QJ	35	"	I	378-MN	36
12BH7(C)	I	CE	92*	"	I	378-GT	36
" (C)	I	JG	92*	12SY7	I	KOFT	50
12BK6	I	1248-AET	25-2	12X4(Y)	I	5-BEFT	95-2
"	I	12348-FJ	37	12V6	I	GT	38
"	I	12348-QJ	32	12Z3	I	OQI	98
12BY7(C)	I	BO	95-2	14A4	I	NQS	72
12BZ7(C)	I	CE	80	14A5	I	LNQS	90
"	I	JG	80	14A7	I	LNGT	64
12C8	I	OHT	55	14AF7	I	PI	72
"	I	GT	36	"	I	MO	72
"	I	7-BD	36	14B6	I	LN	81
12E5	I	OPI	72	"	I	GT	36
12F5	I	EPI	48-2	"	I	HT	36
12H6	I	BO	98	14B8	I	BNGT	50
"	I	FS	98	14C5	I	LNGT	84
12J5	I	OPI	75	14C7	I	LNGT	50
12J7	I	KORI	54	14E6	I	AN	70
12K7	I	KOPI	60	"	I	GT	36
12K8	I	KOPI	79	"	I	HT	36
"	I	PI	64	14E7	I	NGT	58
12L8	I	6-CEIR	74	"	I	7-AD	36
"	I	6-CDJP	74	"	I	7-LD	36
12Q7	I	OPI	50-2	14F7	I	PI	51-2
"	I	RI	36	"	I	MO	51-2
"	I	7-BD	36	14F8	I	1278-QI	56
12SA7	I	KOFT	50	"	I	1278-BO	56

\*Do not connect side stud.

TUBE	FIL	KEYS	INDEX	TUBE	FIL	KEYS	INDEX
14H7	I	LNGT	58	25AC5	J	ORI	90
14J7	I	7-LO	75	25B5	J	EGJ	94
"	I	BNGT	48	25B6	J	KOPI	94
14N7	I	MO	75	25B8	J	KO	66
"	I	PI	75	"	J	HS	89
14Q7	I	CNRI	70	25BQ6	J	8-KOPI	90
14R7	I	NGT	50	25C6	J	KOPI	94
"	I	7-AD	36	25L6	J	KOPI	92
"	I	LD	36	25N6	J	ERI	94
14S7	I	MOGT	68	"	J	ORI	88
"	I	ngt	45	25W4	J	7-BDS	100
14V7	I	LNGT	54	25W6GT	JV	KOQI	92
14W7	I	7-LNGT	65	25Y5	J	BO	98
14X7	I	LN	81	"	J	FS	98
"	I	4-GT	40	25Z5	J	BO	98
"	I	HT	40	"	J	GS	98
14Y4	I	7-O	98	25Z6	J	BO	98
"	I	RI	98	"	J	GS	98
15	D	KOQI	50	26	C	OFT	70
18	I	AOPT	74	26A6	J	1248-CEPS	72
19	D	LO	30	26C6	J	1248-AET	60
"	D	RS	30	"	J	12348-FJ	32
19BG6	J	7-AEFJ	96	"	J	12348-QJ	32
19C8(D)	J	QT	38	26D6	J	1248-MNFS	46
"	J	46-FT	38	27	E	MOQI	72
"	J	AD	38	28D7	J	6-KE	90
"	J	6-LD	38	"	J	AS	90
19J6(D)	J	1248-DFJ	88	30	D	OFT	64
"	J	1248-0QJ	84	31	D	OFT	86
19J6	I	1248-DFJ	67	32	D	OHI	46
"	I	1248-0QJ	60	32L7	K	8-I	98
19T8(D)	J	QT	44	"	K	57-KO	92
"	J	46FT	44	33	D	MOHI	74
"	J	AD	44	34	D	OHI	50
"	J	6LD	44	35/51	E	KOQI	60
19V8	J	GJ	38	35A5	K	LNQS	90
"	J	HT	38	35B5	K	1248-AEFS	90
"	J	RT	38	35C5	K	248-GJ	32
"	J	QJ	38	35L6	K	KOPI	92
20	E	OHT	40	35W4	K	1248-RS	98 <del>44</del>
22	E	OHI	42	35Y4	K	NQS	98
24-A	E	KOQI	53	35Z3	K	NFS	98
25A6	J	KOPI	86	35Z4	K	FS	98
25A7	J	8-PI	98	35Z5	K	FS	98
"	J	57-KO	85	35Z6	K	BO	98

Shows short on position 2.

~~44~~ Shows short on position 1.

<u>TUBE</u>	<u>FIL</u>	<u>KEYS</u>	<u>INDEX</u>	<u>TUBE</u>	<u>FIL</u>	<u>KEYS</u>	<u>INDEX</u>
35Z6	K	FS	98	75	G	RT	36
36	G	KOQI	53	"	G	5-MN	36
37	G	MOQI	73	"	G	OPT	42-2
38	G	KOQI	74	76	G	MOQI	70
39/44	G	KOQI	55	77	G	KOGJ	54
40	F	OFT	45-2	78	G	KOGJ	64
40Z5	M	FS	98	79	G	GS	42-2
41	G	KOPT	85	"	G	6-LO	42-2
42	G	KOPT	74	80	F	O	97
43	J	KOPT	86	"	F	S	97
45	E	OFT	90	81	H	O	96
45Z3	M	MO	98	82	E	O	98
45Z5	M	FS	98	"	E	S	98
46	E	MOHI	80	83	F	O	98
47	E	MOHI	70	"	F	S	98
48	K	KOPT	90	83V	F	O	98
49	D	MOHI	81	"	F	S	98
50	H	OFT	86	84/6Z4	G	OHJ	98
50A5	M	LNQS	92	"	G	EHJ	98
50B5φ	M	1248-AEFSφ	94	85	G	OHJ	76
50C5	M	248-HI	97	"	G	5-BD	36
50C6	M	KOPI	94	"	G	GJ	36
50L6	M	KOPI	92	85AS	G	MOHJ	52
50X6	M	8-AO	99	"	G	356kogi	30
"	M	7-FI	99	"	G	gj	30
50Y6	M	BO	98	89	G	AOPT	85
"	M	FS	98	99	E	OPI	45
50Y7	M	BO	99	117L7	Q	8-I	98
"	M	FS	99	"	Q	MOGT	90
50Z7	M	BO	98	117M7	Q	8-I	98
52	G	7-S	98	"	Q	MOGT	90
53	E	HJ	45	117N7	Q	56-AO	75
"	E	5-MO	45	117P7	Q	56-AO	75
55	E	OHJ	76	117Z3	Q	1248-GS	98
"	E	5-BD	36	117Z4	Q	FS	98
"	E	GJ	36	117Z6	Q	BO	98
56	E	MOQI	70	182-482B	F	OFT	86
56AS	G	MOQI	70	183-483	F	OFT	91
57	E	KOGJ	54	485	E	KOPI	85
57AS	G	KOGJ	54	585	E	OFT	86
58	E	KOGJ	72	807	G	8-ADGJ	93-2
58AS	G	KOGJ	72	864	C	BOFT	51
59	E	KOHT	82	879/2X2A	E	8	75
70L7	O	8-J	98	950	D	MOHI	74
"	O	56-KO	93	951-1B4	D	OHI	46
71A	F	OFT	90	954(E)	G	ADPI	54

φShows short on position 2.

TUBE	FIL	KEYS	INDEX	TUBE	FIL	KEYS	INDEX
955(B)	G	MOHT	63	5670(C)*	G	24IQ	95-2
956(B)	G	ADPI	57	" (C)*	G	24KN	95-2
957(B)	B	MO	62-2	5686(C)	G	8-0	98
958(B)	B	MO	56	5687(C)	G	57-CEHI	95-2
959(B)	B	ADPI	39	5687(G)	G	25-CEH	94-2
1201-7E5	G	18-BO	72	5691	G	17-CDGS	87
1203-7C4	G	KOGT	45	"	G	17-BDGS	87
1221	G	KOGJ	54	5692	G	17-CDGS	92*
1223	G	KOGT	54	"	G	17-KNI	92
1229	E	OHI	51	5693	G	BNGJ	64
1231	G	BNGT	74	5719	G	236-AEPT	38
1232-7G7	G	BNGT	72	5725	G	1248-MNPS	46
1273	G	TNGL	50	5726	G	248-IF	42
1280	I	TNGL	50	"	G	248-HJ	42
1291-3B7	G	3-NHJ	40	5749	G	1248-CEPS	67
"	G	JP	15	5750	G	1248-MNFS	37
1299-3D6	C	6-LN	45	5751(G)*	I	CE	83
1603	G	KOGJ	50	" (G)*	I	JG	83
1609	C	MOHI	77	5814(G)*	I	CE	90
1611	G	KOPI	78	" (G)*	I	JG	90
1612	G	KOPI	52	5844	G	1248-DFJ	82
1613	G	KOPI	78	"	G	1248-OQJ	82
1614	G	KOPI	90	5879	G	JOKS	87
1620	G	KORI	54	5899	G	236-AT	53
1621	G	KOPI	73	5915	G	1248-MNFS	44
1622	G	KOPI	90	5963(G)*	I	CE	92
1625	I	78-KOHI	91	" (C)*	I	JG	92
1626	I	OPI	90	5964	G	1248-DFJ	80
1629	I	LOQI	64-2	"	G	1248-OQJ	80
"	I	bnqi	100-2#	6005	G	1248-LITE	97
1631	I	KOPI	90	6080	G	17-KN	98
1632	I	KOPI	92	"	G	17-EGS	98
1633	J	17-CDGS	92	6082	J	17-KN	97
"	J	17-BDGS	92	"	J	17-EGS	98
1634	J	167-AD	87	7000	G	KORI	54
"	J	17-MNHS	87	7700	G	KOGT	54
1635	G	7-AO	81	8016	C	8	47
"	G	8-RI	81	9001	G	1248-MNPS	48
1644	I	6-CEIR	74	9002	G	1248-RS	68
"	I	6-CDJP	74	9003	G	1248-MNPS	51
1851	G	KOPI	60	9004(G)	G	4MO	100
1852	G	LOGJ	66	9006	G	1248-CD	97
1853	G	ADGJ	62	CE220	E	8	88
2051	G	OHT	98	FM1000	G	3-BEGT	50
5654	G	1248-MNPS	60	XXB	E	I	35

#Test for glow only.

\*Connect side stud of adaptor to any pin #1.

\*Do not connect side stud.

øShows short on position 2.

<u>TUBE</u>	<u>FIL</u>	<u>KEYS</u>	<u>INDEX</u>
XXB	E	O	35
XXD	I	MO	54
"	I	PI	54
XXL	G	NQS	74
XXFM	G	AN	25-2
"	G	4-GT	36
"	G	HT	36

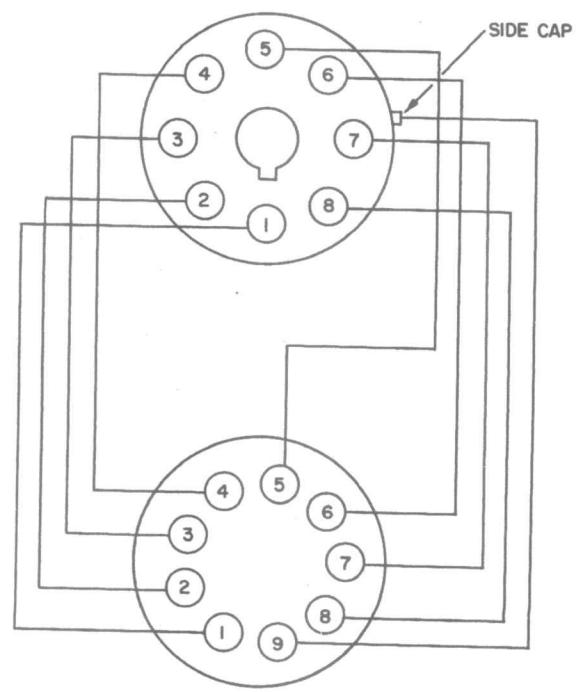


Fig. 1 (A) SJA-004 9-Pin Miniature Tube Adaptor

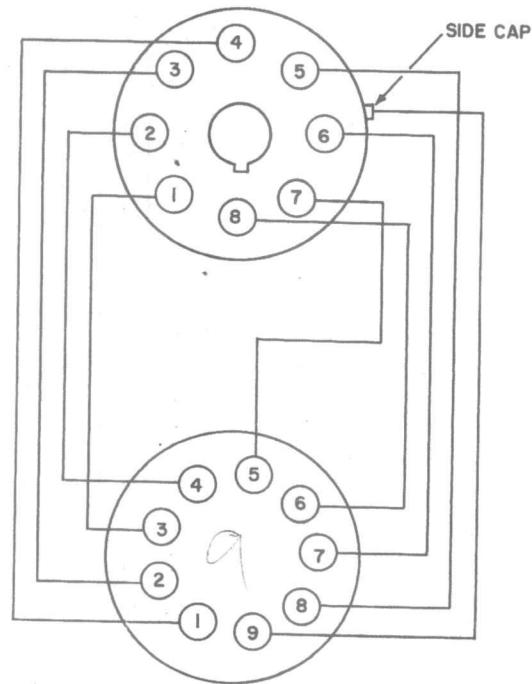


Fig. 2 (C) SJA-006 9-Pin Miniature Tube Adaptor

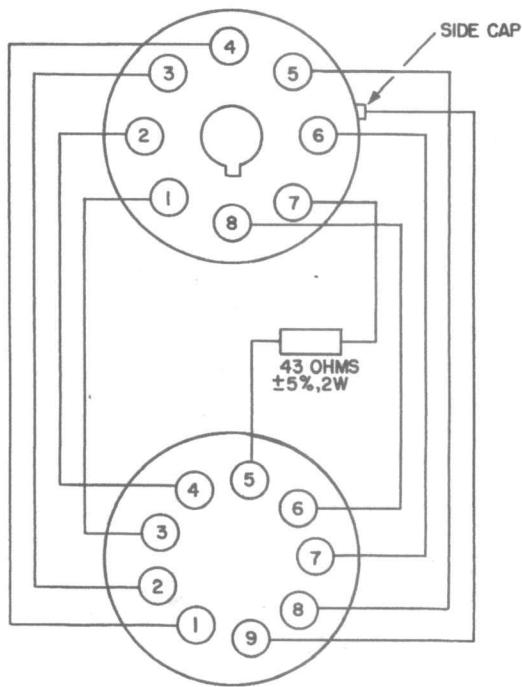


Fig. 3 (D) SJA-007 9-Pin Miniature Tube Adaptor

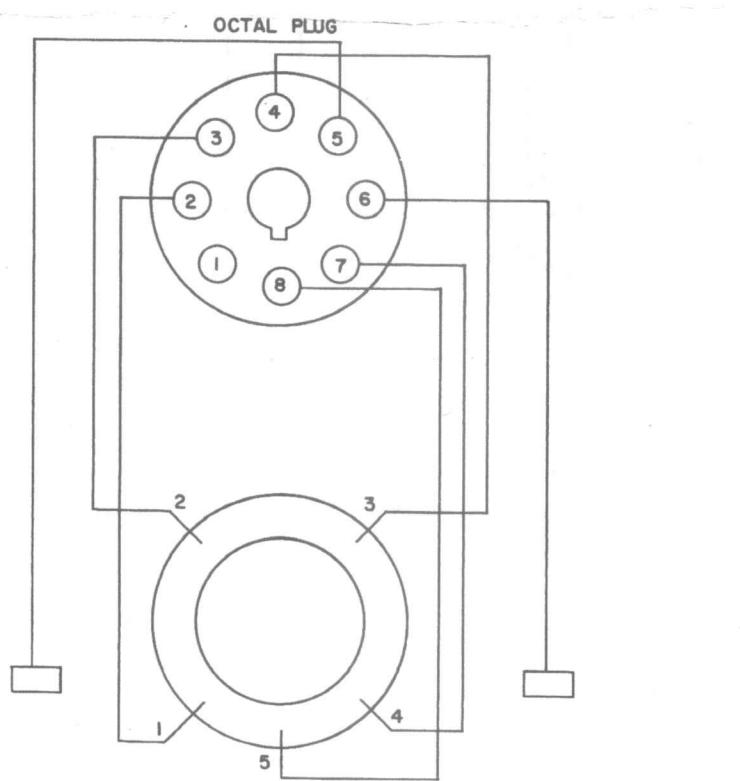


Fig. 4 (E) SJA-009 Acorn Tube Adaptor

OCTAL PLUG

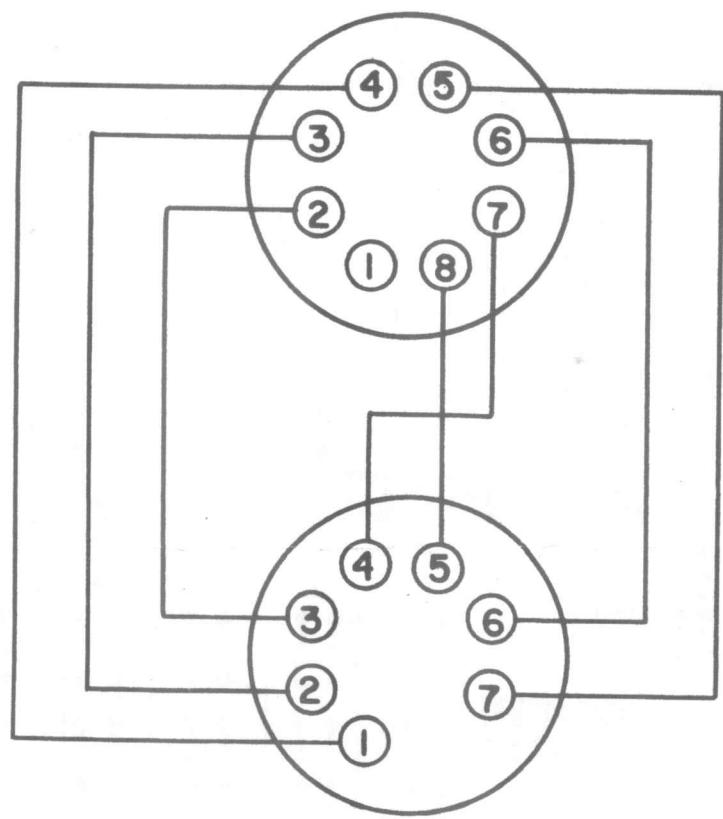


Fig. 5 (Y) 7-Pin Miniature Tube Adaptor

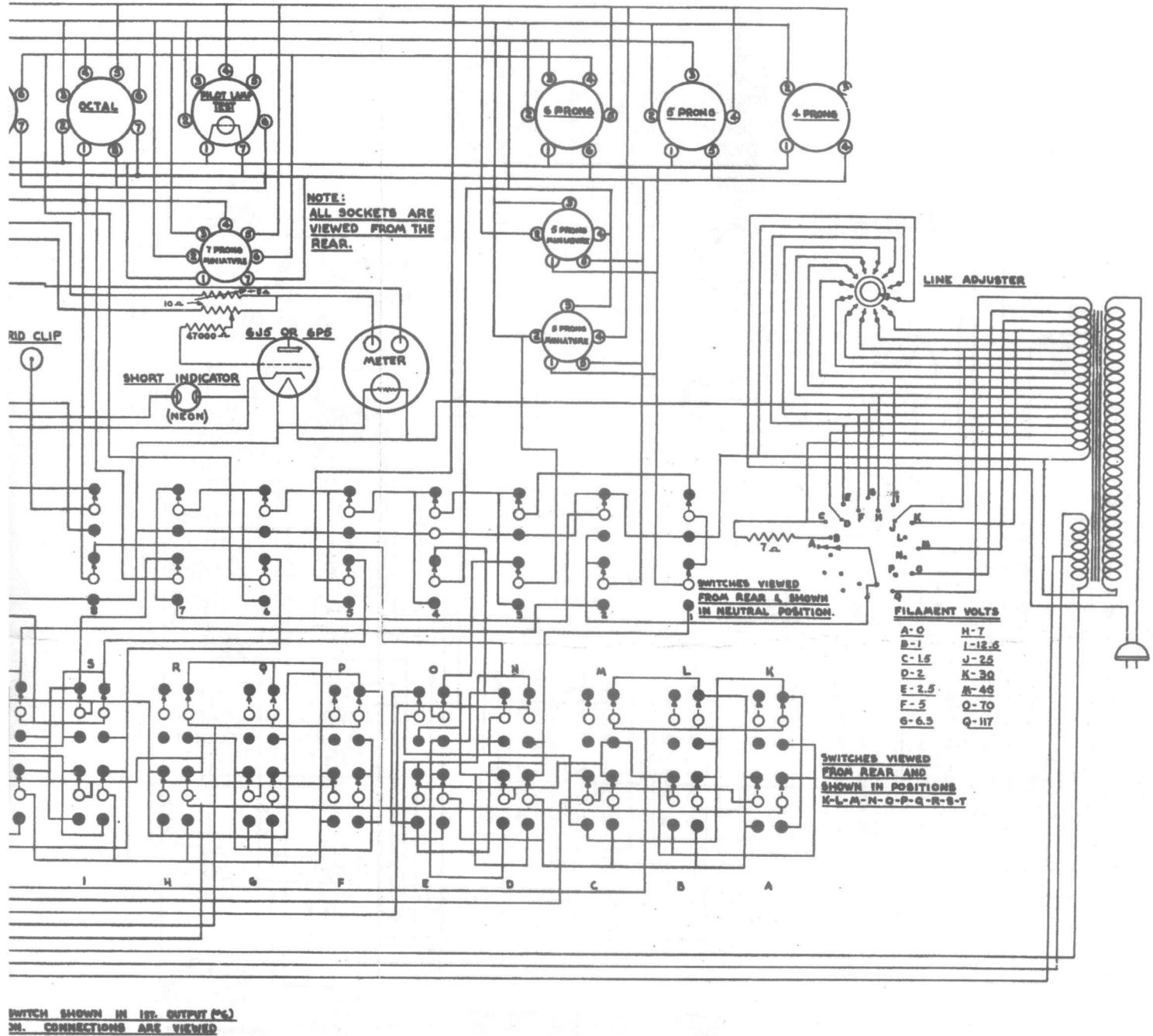


Fig. 6 Elementary Diagram, Tube Checker,  
Model TC-3A

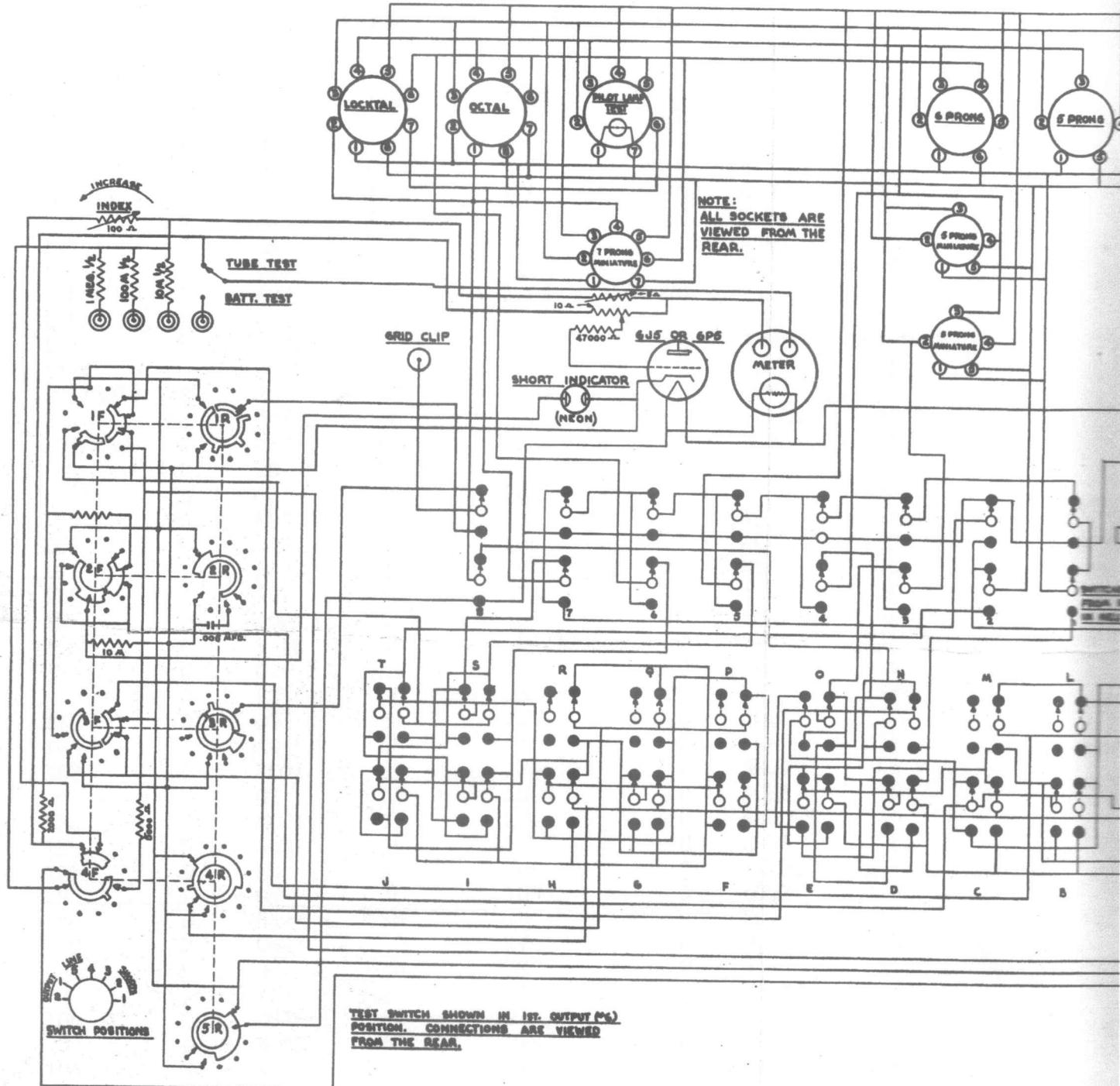


Fig. 6 El

July 1, 1948

REVISED TUBE CHART FOR TC-3A

Sheet 1

TUBE	FIL	KEYS	INDEX	TUBE	FIL	KEYS	INDEX
OOA	F	ORJ	54	1J5	D	KOGI	70
O1-A	F	ORJ	54	1J6	D	AO	91
OA4	E	AOS	88-2	"	D	HI	91
OZ4	A	ORJ	86-2	1L4	C	5-AOQS	35
"	A	QS	86-2	1LA4	C	LNFJ	56
1A3	C	LN	36	1LA6	C	BNPJ	29
1A4	D	OFJ	50	1LB4	C	BNGJ	81
1A5	C	AOFT	56	1LC5	C	BNI	97
1A6	D	ACGT	43	1LC6	C	BNPJ	40
1A7	C	AOQJ	25	1LD5	C	6-LN	61-2
1AB5	C	BN	12	"	C	LD	23
1B3/8016	C	8	47	1LE3	C	NPT	50
1B4	D	OHI	46	1LG5	C	5-ANHT	35
1B5/25S	D	OFJ	89	1LH4	C	NHT	83
"	D	BD	36	"	C	AO	36
"	D	GJ	36	1LN5	C	6-LN	55-2
1C5	C	KOGI	74	1N5	C	AO	54-2
1C6	D	AOGT	45	1N6	C	AOFT	53
1C7	P	AOHT	45	"	C	HT	36
1D5		AO	50	1P5	C	AO	10
1D7		AOHT	45	1Q5	C	KOGI	74
1D8	C	5-AO	68	1R4/1294	C	7-CN	34
"	C	GI	45	1R5	C	5-AO	40
"	C	PT	36	1S4	C	LO	78
1E4	C	CGI	58	1S5	C	LOQS	10
1E5	D	AO	48	"	C	3ao	34
1E7	D	MOGI	65	1SA6	C	BNQJ	46
"	D	GI	50	1SB6	C	AOPS	70
1F4	D	MOHI	55	1T4	C	5-AOQS	46
1F5	D	AOGI	55	1T5	C	KOGI	74
1F6	D	AO	40	1U4	C	5-AOQS	53-2
"	D	GT	36	1U5	C	AOQS	15
"	D	HT	36	"	C	BD	40
1F7	D	OHT	40	1V	G	OQI	98
"	D	GT	36	1Z2	C	8	71
"	D	AO	36	2A3	E	BOFT	93
1G4	C	OGI	66	2A4	E	OGI	98
1G5	D	KOGI	68	2A5	E	KOPT	76
1G6	C	AO	89	2A6	E	OPT	42-2
"	C	RI	89	"	E	RT	36
1H4	D	OGI	64	"	E	5MN	36
1H5	C	OHI	54-2	2A7	E	KOQS	68
"	C	HI	36-2	2B6	E	OGT	75
1H6		ORT	89	"	E	7-ERJ	60
"	D	MN	36	2B7	E	7-AO	56
"	D	GT	36	"	E	GT	36
					E	HT	36

**July 1, 1948**

**Revised Tube Chart for TC-3A**

**Sheet 2**

**Missing Page**

July 1, 1948

REVISED TUBE CHART FOR TC-3A

Sheet 3

TUBE	FIL	KEYS	INDEX	TUBE	FIL	KEYS	INDEX
6AT6	G	1248-AET	30	6F6	G	KOPI	78
"	G	12348-FJ	36	6F7	G	7-KO	60
"	G	12348-QJ	36	"	G	QS	44
6AU6	G	1248-LNPS	55	6F8	G	PI	76
6AV6	G	1248-AET	50-2	"	G	BO	76
6AV6	G	12348-FJ	36	6G6	G	KOPI	72
6AV6	G	12348-QJ	36	6H4	G	KOPI	45
6B4	G	OGI	93	6H5	G	MOPT	55-2
6B5	G	EGJ	92	"	G	bnqi	100-2*
"	G	OGJ	85	6H6	G	BO	98
6B6	G	OPI	42-2	"	G	FS	98
"	G	7-MN	36	6J5	G	OPI	72
"	G	GT	36	6J6	G	1248-DFJ	84
6B7	G	7-AO	56	"	G	1248-0QJ	84
"	G	GT	36	6J7	G	KORI	54
"	G	HT	36	6J8	G	KOPI	80
6B8	G	OHT	56	6J8	G	KOHT	50
"	G	GT	36	6J8	G	HT	20
"	G	7-BD	36	6K5	G	CGT	10
6BA6	G	1248-CEPS	71	6K6	G	KOPI	80
6BD6	G	1248-MNPS	61	6K7	G	KOPI	60
6BE6	G	1248-MNFS	50	6K8	G	KOPI	79
6BF6	G	1248-AET	62	"	G	PI	64
6BF6	G	12348-FJ	35	6L5	G	OPI	72
6BF6	G	12348-QJ	35	6L6	G	KOPI	90
6BG6	G	8-AEFJ	96	6L7	G	KOPI	52
6BH6	G	1248-MNPS	54	6N6	G	EGT	92
6BJ6	G	1248-MNPS	62	"	G	CGT	85
6C4	G	1248-RS	75	6N7	G	PI	45
6C5	G	OPI	60	"	G	7-MO	45
6C6	G	KOCJ	54	6P5	G	OPI	72
6C7	G	7-O	54	6Q7	G	OPI	50-2
"	G	GT	36	"	G	RI	36
"	G	HT	36	"	G	7-BD	36
6C8	G	BO	40	6R7	G	OPI	65
"	G	PI	40	"	G	RI	36
6D4	G	1248-FI	35	"	G	7-BD	36
6D6	G	KOPT	62	6S7	G	AORI	68
6D7	G	AOHT	65	6S8	G	7-DM	30
6D8	G	KOPI	65	"	G	7BD	30
6E5	G	LOQI	64-2	"	G	57-AD	30
6E6	G	5-KO	94	"	G	7-FI	34-2
"	G	GJ	94	6SA7	G	KOFT	50
6E7	G	AOHT	64	6SB7Y	G	KOFT	53
6F5	G	EPI	44-2	6SC7	G	167-AD	87
				"	G	17-MNHS	87

\*Test for glow only.

July 1, 1948

REVISED TUBE CHART FOR TC-3A

Sheet 4

TUBE	FIL	KEYS	INDEX	TUBE	FIL	KEYS	INDEX
6SD7	G	CDGJ	65	6Z4/84	G	OHJ	98
6SE7	G	BNGJ	68	"	G	EHJ	98
6SF5	G	17-KES	40-2	6ZY5	G	OHT	98
6SF7	G	17-MNI	69	"	G	FS	98
"	G	37-QT	10	7A4	G	NQS	72
6SG7	G	KNGJ	56	7A5	G	LNQS	90
6SH7	G	KNGJ	53	7A6	G	MO	98
6SJ7	G	BNGJ	64	"	G	RI	98
6SK7	G	BNGJ	74	7A7	G	LNGT	64
6SL7	G	17-CDGS	87	7A8	G	MOGT	50
6SL7	G	17-BDGS	87	7AF7	G	PI	72
6SN7	G	17-CDGS	92	"	G	MO	72
"	G	17-BDGS	92	7AG7	G	LNGT	44
6SQ7	G	17-KNI	85	7B4	G	NHT	83
"	G	378-MN	36	7B5	G	LNGT	77
"	G	378-GT	36	7B6	G	LN	81
6SR7	G	17-KNI	90	"	G	GT	36
6SR7	G	378-MN	36	"	G	HT	36
"	G	378-GT	36	7B7	G	LNGT	63
6SS7	G	BNGJ	68	7B8	G	BNGT	50
6SU7	G	17-CDGS	85	7C4/1203	G	KOGT	45
"	G	17-BDGS	85	7C5	G	LNGT	84
6SV7	G	7-BDRI	48	7C6	G	LN	80
"	G	378-jf	44	"	G	GT	36
6T6	G	bnqi	100-2*	"	G	HT	36
6U5	G	LOFI	48	7C7	G	LNGT	50
6U6	G	AOPi	92	7E5/1201	G	18-BO	72
6U7	G	KOPI	64	7E6	G	AN	70
6V6	G	KOPI	83	"	G	GT	36
6V7	G	OPI	76	"	G	HT	36
"	G	RI	36	7E7	G	NGT	58
"	G	MN	36	"	G	7-AD	36
6W5	G	FS	98	"	G	7-LD	36
"	G	OPI	98	7F7	G	PI	51-2
6W7	G	KOPI	54	"	G	MO	51-2
6X4	G	DRS	98	7F8	G	1278-QI	56
"	G	HI	98	"	G	1278-BO	56
6X5	G	FS	98	7G7/1232	G	BNGT	72
"	G	OPI	98	7G8/1206	G	6-LNFI	53
6Y5	G	6-E	98	7G8/1206	G	6-ADGJ	53
"	G	HS	98	7H7	G	LNGT	58
6Y6	G	KOPI	93	7J7	G	7-LO	53
6Y7	G	PI	48-2	"	G	BNGT	48
"	G	7-MO	48-2	7K7	G	KO	85
6Z3/1V	G	OQI	98	"	G	GT	36
				"	G	HT	36

\*Test for glow only.

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Sheet 5

TUBE	FIL	KEYS	INDEX	TUBE	FIL	KEYS	INDEX
7L7	G	BNGT	55	12H6	I	BO	98
7N7	G	MO	75	"	I	FS	98
"	G	PI	75	12J5	I	OPI	75
7Q7	G	CNRI	70	12J7	I	KORI	54
7R7	G	NGT	50	12K7	I	KOPI	60
"	G	7-AD	36	12K8	I	KOPI	79
"	G	7-LD	36	"	I	PI	64
7S7	G	MOGT	68	12L8	I	6-CEIR	74
"	G	ngt	45	"	I	6-CDJP	74
7T7	G	MOGT	68	12Q7	I	OPI	50-2
7V7	G	CNFS	72-2	"	I	RI	36
7W7	G	7-LNGT	65	"	I	7-BD	36
7X7	G	LN	81	12SA7	I	KOFT	50
"	G	4-GT	40	12SC7	I	167-AD	87
"	G	HT	40	"	I	17-MNHS	87
7Y4	G	7-0	98	12SF5	I	17-KES	40-2
"	G	RI	98	12SF7	I	17-MNI	69
7Z4	G	7-0	98	"	I	37-QT	10
"	G	RI	98	12SG7	I	KNGJ	56
10	H	OQJ	57	12SH7	I	5-KNGJ	53
12A	F	OQJ	75	12SJ7	I	BNGJ	64
12A5	I	56-KO	86	12SK7	I	BNGJ	74
12A6	I	AOHT	75	12SL7	I	17-CDGS	87
12A7	I	FI	98	"	I	17-BDGS	87
"	I	7-AO	73	12SN7	I	17-CDGS	92
12A8	I	KOPI	64	"	I	17-BDGS	92
12AH7	I	7-MO	63	12SQ7	I	17-KNI	85
"	I	47-GI	63	"	I	378-MN	36
12AL5	I	248-IF	41	"	I	378-GT	36
"	I	248-HJ	41	12SR7	I	17-KNI	90
12AT6	I	1248-AET	30	"	I	378-MN	36
"	I	12348-FJ	36	"	I	378-GT	36
"	I	12348-QJ	36	12SW7	I	17-KNI	90
12AU6	I	1248-LNPS	55	"	I	378-MN	36
12AW6	I	1248-MNPS	56	"	I	378-GT	36
12B7	I	LNGT	64	12SY7	I	KOFT	50
12B8	I	KO	65	12Z3	I	OQI	98
"	I	GS	50-2	14A4	I	NQS	72
12BA6	I	1248-CEPS	71	14A5	I	LNQS	90
12BE6	I	1248-MNFS	50	14A7	I	LNGT	64
12C8	I	OHT	55	14AF7	I	PI	72
"	I	GT	36	"	I	MO	72
"	I	7-BD	36	14B6	I	LN	81
12E5	I	OPI	72	"	I	GT	36
12F5	I	EPI	48-2	"	I	HT	36

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Sheet 6

TUBE	FIL	KEYS	INDEX	TUBE	FIL	KEYS	INDEX
14B8	I	BNGT	50	25C6	J	KOPI	94
14C5	I	LNGT	84	25L6	J	KOPI	92
14C7	I	LNGT	50	25N6	J	ERI	94
14E6	I	AN	70	"	J	ORI	88
"	I	GT	36	25Y5	J	BO	98
"	I	HT	36	"	J	FS	98
14E7	I	NGT	58	25Z5	J	BO	98
"	I	7-AD	36	"	J	GS	98
"	I	7-LD	36	25Z6	J	BO	98
14F7	I	PI	51-2	"	J	GS	98
"	I	MO	51-2	26	C	OFT	70
14F8	I	1278-QI	56	26A6	J	1248-CEPS	72
"	I	1278-BO	56	26C6	J	1248-AET	60
14H7	I	LNGT	58	"	J	12348-FJ	32
14J7	I	7-LQ	75	"	J	12348-QJ	32
"	I	BNGT	48	26D6	J	1248-MNFS	46
14N7	I	MO	75	27	E	MOQI	72
"	I	PI	75	28D7	J	6-KE	90
14Q7	I	CNRI	70	"	J	AS	90
14R7	I	NGT	50	30	D	OFT	64
"	I	7-AD	36	31	D	OFT	86
"	I	LD	36	32	D	OHI	46
14S7	I	MOGT	68	32L7	K	8-I	98
"	I	ngt	45	"	K	57-KO	92
14V7	I	LNGT	54	33	D	MOHI	74
14W7	I	7-LNGT	65	34	D	OHI	50
14X7	I	LN	81	35/51	E	KOQI	60
"	I	4-GT	40	35A5	K	LNQS	90
"	I	HT	40	35B5	K	1248-AEFS*90	
14Y4	I	7-O	98	35L6	K	KOPI	92
"	I	RI	98	35W4	K	1248RS	98**
15	D	KOQI	50	35Y4	K	NQS	98
18	I	AOPT	74	35Z3	K	NFS	98
19	D	LO	30	35Z4	K	FS	98
"	D	RS	30	35Z5	K	FS	98
20	E	OHT	40	35Z6	K	BO	98
22	E	OHI	42	"	K	FS	98
24-A	E	KOQI	53	36	G	KOQI	53
25A6	J	KOPI	86	37	G	MOQI	73
25A7	J	8-PI	98	38	G	KOQI	74
"	J	57-KO	85	39/44	G	KOQI	55
25AC5	J	ORI	90	40	F	OFT	45-2
25B5	J	EGJ	94	40Z5	M	FS	98
25B6	J	KOPI	94	41	G	KOPT	85
25B8	J	KO	66	42	G	KOPT	74
"	J	HS	89	43	J	KOPT	86

\*Shows short on #2 switch position.

\*\*Shows short on #1 switch position.

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Sheet 7

TUBE	FIL	KEYS	INDEX	TUBE	FIL	KEYS	INDEX
45	E	OFT	90	82	E	O	98
45Z3	M	MO	98	"	E	S	98
45Z5	M	FS	98	83	F	O	98
46	E	MOHI	80	"	F	S	98
47	E	MOHI	70	83V	F	O	98
48	K	KOPT	90	"	F	S	98
49	D	MOHI	81	84/6Z4	G	OHJ	98
50	H	OFT	86	"	G	EHJ	98
50A5	M	LNQS	92	85	G	OHJ	76
50B5*	M	1248-AEFS*	94	"	G	5-BD	36
50C6	M	KQPI	94	"	G	GJ	36
50L6	M	KOPI	92	85AS	G	MOHJ	52
50X6	M	8-AO	99	"	G	356 kogi	30
"	M	7-FI	99	"	G	gj	30
50Y6	M	BO	98	89	G	AOPT	85
"	M	FS	98	99	E	OPI	45
50Z7	M	BO	98	117L7	Q	8-I	98
52	G	7-S	98	"	Q	MOGT	90
53	E	HJ	45	117M7	Q	8-I	98
"	E	5-MO	45	"	Q	MOGT	90
55	E	OHJ	76	117N7	Q	56-AO	75
"	E	5-BD	336	117P7	Q	56-AO	75
"	E	GJ	36	117Z3	Q	1248-GS	98
56	E	MOQI	70	117Z4	Q	FS	98
56AS	G	MOQI	70	117Z6	Q	BO	98
57	E	KOGJ	54	182-482B	F	OFT	86
57AS	G	KOGJ	54	183-483	F	OFT	91
58	E	KOGJ	72	485	E	KOPI	85
58AS	G	KOGJ	72	585	E	OFT	86
59	E	KOHT	82	864	C	BOFT	51
70L7	O	8-J	98	879/2X2A	E	8	75
"	O	56-KO	93	950	D	MOHI	74
71A	F	OFT	90	951-1B4	D	OHI	46
75	G	RT	36	1201-7E5	G	18-BO	72
"	G	5-MN	36	1203-7C4	G	KOGT	45
"	G	OPT	42-2	1221	G	KOGJ	54
76	G	MOQI	70	1223	G	KOGT	54
77	G	KOGJ	54	1231	G	BNGT	74
78	G	KOGJ	64	1232-7G7	G	BNGT	72
79	G	GS	42-2	1291-3B7	G	3-NHJ	40
"	G	6-LO	42-2	"	C	JP	15
80	F	O	97	1299-3D6	C	6-LN	45
"	F	S	97	1603	G	KOGJ	50
81	H	O	96	1609	C	MOHI	77

\*Shows short on #2 switch position.

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Sheet 8

TUBE	FIL	KEYS	INDEX	TUBE	FIL	KEYS	INDEX
1611	G	KOPI	78	7000	G	KORI	54
1612	G	KOPI	52	7700	G	KOGJ	54
1613	G	KOPI	78	8016	C	8	47
1614	G	KOPI	90	9001	G	1248-MNPS	48
1620	G	KORI	54	9002	G	1248-RS	68
1621	G	KOPI	73	9003	G	1248-MNPS	51
1622	G	KOPI	90	9006	G	1248-CD	97
1626	I	OPI	90	CE 220	E	8	88
"	I	LOQI	64-2	FM 1000	G	3-BEGT	50
"	I	bnqi	100-2*	XXB	E	I	35
1631	I	KOPI	90	"	E	O	35
1632	I	KOPI	92	XXD	I	MO	54
1633	J	17-CDGS	92	"	I	PI	54
"	J	17-BDGS	92	XXL	G	NQS	74
1634	J	167-AD	87	XXFM	G	AN	25-2
"	J	17-MNHS	87	"	G	4-GT	36
1635	G	7-AO	81	"	G	HT	36
"	G	8-RI	81				
1644	I	6-CEIR	74				
"	I	6-CDJP	74				
1851	G	KOPI	60				
1852	G	LCGJ	66				
1853	G	ADGJ	62				
2051	G	OHT	98				

\*Test for glow only.

<u>TUBE</u>	<u>FIL</u>	<u>KEYS</u>	<u>INDEX</u>
5915	G	1248-MNFS	44
5963 (c)*	I	CE	92
" (c)*	I	JG	92
5964	G	1248-DFJ	80
"	G	1248-OQJ	80
6005	G	1248-LITE	97**
7000	G	KORI	54
7700	G	KOGT	54
8016	C	8	47
9001	G	1248-MNPS	48
9002	G	1248-RS	68
9003	G	1248-MNPS	51
9004 (e)	G	4MO	100
9006	G	1248-CD	97
CE220	E	8	88
FM1000	G	3-BEGT	50
XXB	E	I	35
"	E	O	35
XXD	I	MO	54
"	I	PI	54
XXL	G	NQS	74
XXFM	G	AN	25-2
"	G	4-GT	36
"	G	HT	36

\*Do not use side stud

\*\*Shows short on position 2.