CONDENSED OPERATING INSTRUCTIONS
AND
REVISED TUBE CHART

TUBE CHECKER

MODEL TC-3A

EBI-7001B

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

2/52 (3M)

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These instructions do not purport to cover all details or variations in equipment nor to provide for every possible contingency to be met in connection with installation, operation, or maintenance. Should further information be desired or should particular problems arise which are not covered sufficiently for the purchaser's purposes, the matter should be referred to the General Electric Company.

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 then the plate. Cathode emission, as well as ability of other elements to control the plate current, are thus tested simultaneously.

OPERATION

1. TUBE TESTING

A. Place the slide switch in the TUBE TEST position.

B. Set FIL VOLTS switch, KEYS, and INDEX to settings shown on the chart for the tube under test.

C. 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).

D. Rotate the TEST swtich 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.

E. 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).

F. 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.

2. BATTERY TESTING

A. Place the slide switch in the BATTERY TEST position.

B. Refer to the manufacturer's data for voltages.

C. Plug test leads in the appropriate pin jacks.

D. Always check portable batteries with the set turned on. This checks the battery under load.

MODIFICATION FOR NEW TYPE TUBES

1. 9-PIN MINIATURE TUBES

There are two methods of modifying the TC-3A for this purpose. We recommend the purchase of two 9-pin adaptor units which are available from the General Electric Co., Component Parts Sales Section, Commercial and Government Equipment Department, Electronics Park, Syracuse, N. Y. These are as follows:

SJA-006 - 9 pin adaptor for all except 19-volt filament tubes.
SJA-007 - 9 pin adaptor for 19-volt filament tubes.

Tubes marked on the chart as follows indicate that an adaptor is necessary:

(c) Indicates 9 pin adaptor SJA-006 (see Fig. 1)
(d) Indicates 9 pin adaptor SJA-007 for 19-volt filaments
(e) Indicates special acorn adaptor (see Fig. 2)

Many customers may prefer to mount the 9 pin tube sockets on the TC-3A panel. This modification is not made at the General Electric repair shop because it would result in an excessive cost to the customer. For those who wish to perform the modification themselves the following directions are given:

A. Mount two 9 pin miniature sockets in the blank spots of the panel Drill a suitable hole between them and mount a pin jack.

B. Connect the pins of the first socket to the octal socket.

Pin Numbers 9 pin Socket		Pin Numbers Octal Socket
1	to	4
2	to	3
3	to	1
4	to	2
5	to	7

Pin Numbers 9 pin Socket		Pin Numbers Octal Socket
6	to	8
7	to	6
8	to	5
9	to	pin jack

C. The second socket is wired in parallel with the first socket, except for pin 5. Between pin 5 of socket 1 and pin 5 of socket 2, connect a 43-ohm, 2-watt, 5% resistor. The socket with the series resistor should be identified by a label, or by painting a ring on the edge with red nail polish.

D. Connect pin 9 of the two sockets to the pin jack, so that in case pin 9 is used, it can be connected to the correct circuit with a flexible wire lead.

2. ACORN TYPE TUBES

To check acorn tubes the customer should make a plug in adaptor wired as shown in Fig. 1.

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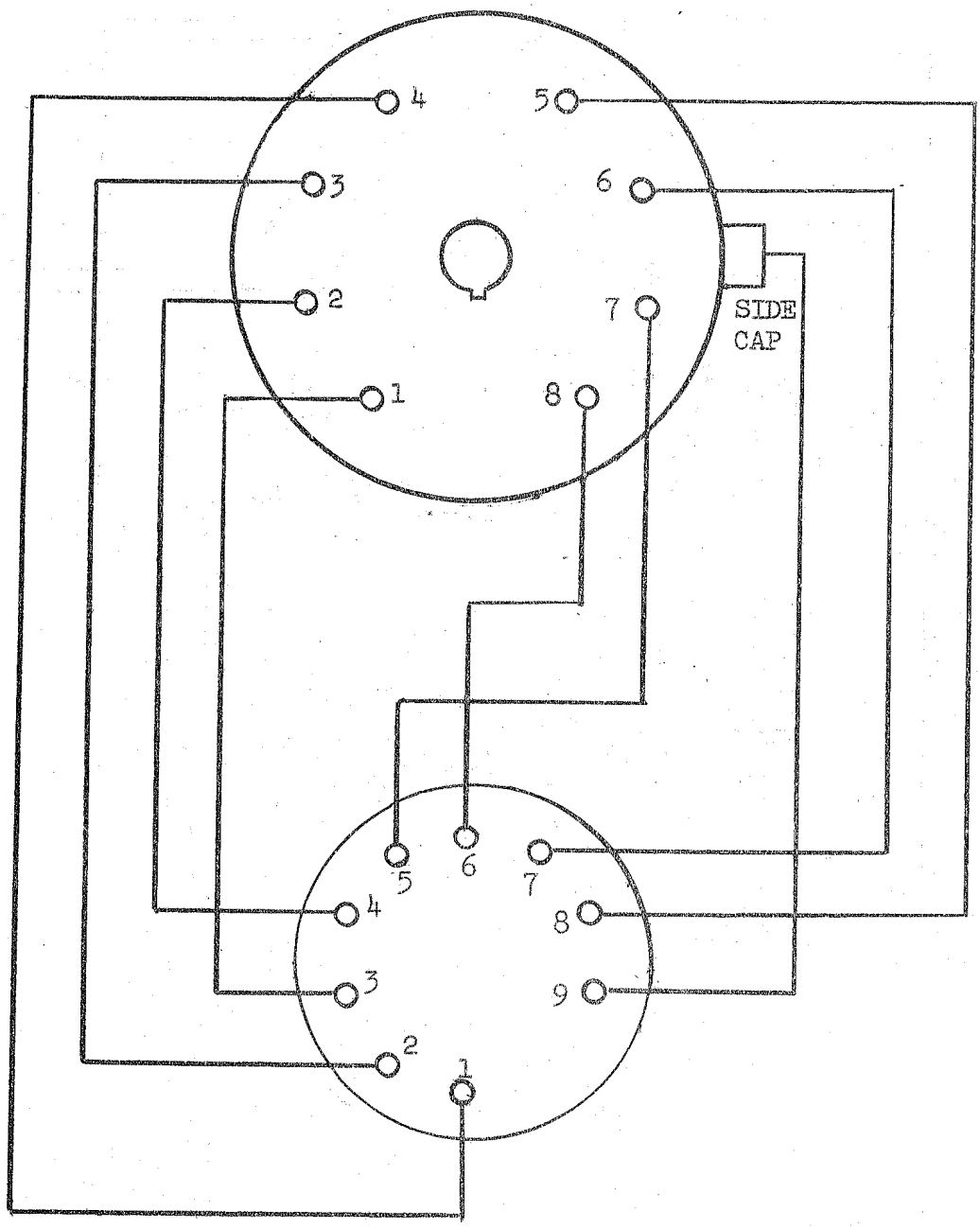
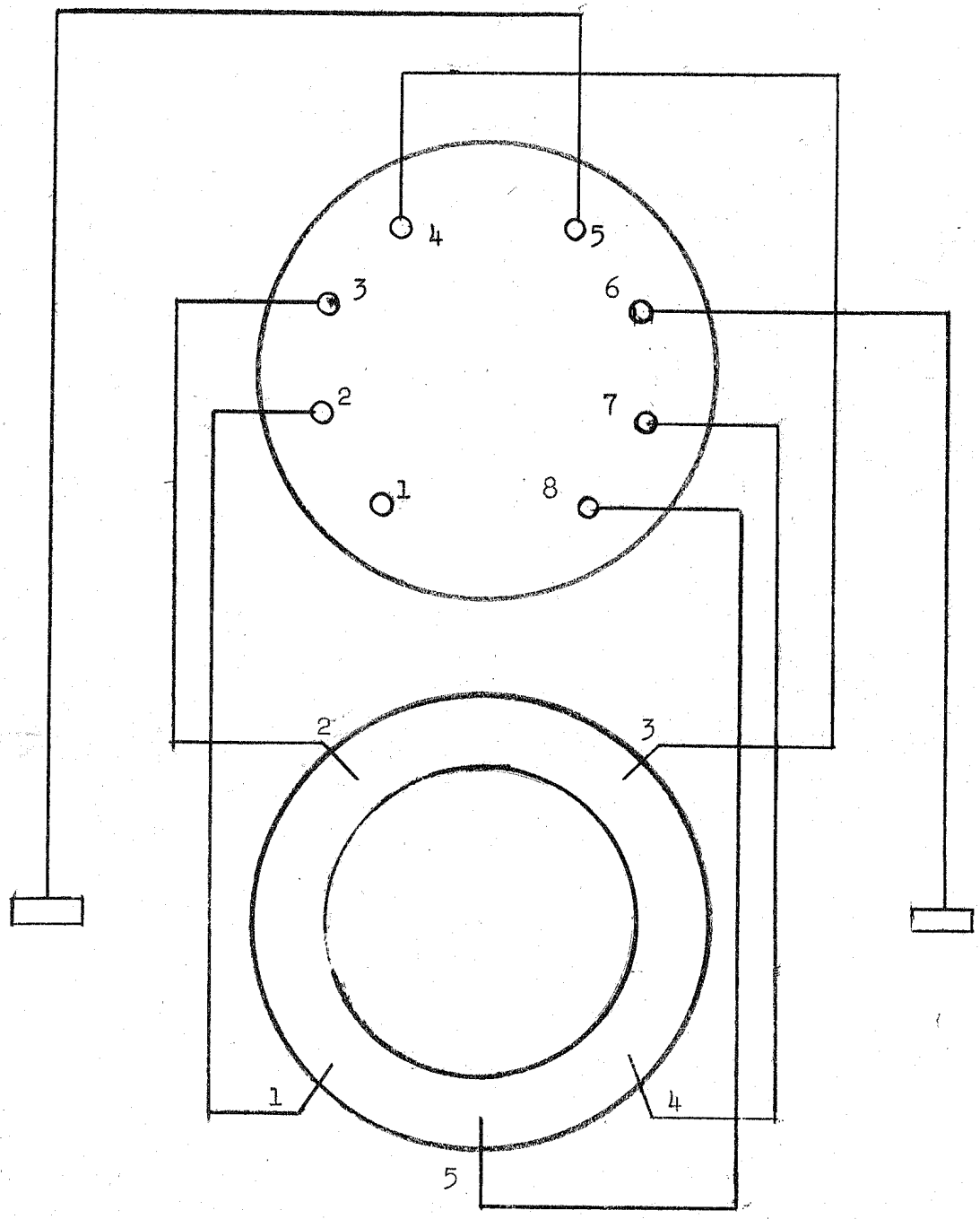
OCTAL BASE
(bottom view)



9 PIN MINIATURE SOCKET
(bottom view)

Fig. 1

OCTAL PLUG



ACORN SOCKET

Fig. 2

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

TUBE	FIL	KEYS	INDEX	TUBE	FIL	KEYS	INDEX
00A	F	ORJ	54	1J6	D	HI	91
01-A	F	ORJ	54	1L4	C	5-AOQS	35
0A4	E	AOS	88-2	1L6	C	AOFS	80
0Z4	A	ORJ ORI	86-2	1LA4	C	LNFJ	56
"	A	QS	86-2	1LA6	C	BNPJ	29
1A3	C	LN	36	1LB4	C	BNGJ	81
1A4	D	OFJ	50	1LC5	C	BNI	97
1A5	C	AOFT	56	1LC6	C	BNPJ	40
1A6	D	AOGT	43	1LD5	C	6-LN	61-2
1A7	C	AOQJ	25	"	C	LD	23
1AB5	C	BN	12	1LE3	C	NPT	50
1B3/8016	C	2,8	62	1LG5	C	5-ANHT	35
1B4	D	OHI	46	1LH4	C	NHT	83
1B5/25S	D	OFJ	89	"	C	AO	36
"	D	BD	36	1LN5	C	6-LN	55-2
"	D	GJ	36	1N5	C	AO	54-2
1C5	C	KOGI	74	1N6	C	AOFT	53
1C6	D	AOGT	45	"	C	HT	36
1C7	D	AOHT	45	1P5	C	AO	10
1D5	D	AO	50	1Q5	C	KOGI	74
1D7	D	AOHT	45	1R4/1294	C	7-CN	34
1D8	C	5-AO	68	1R5	C	5-AO	40
"	C	GI	45	1S4	C	LO	78
"	C	PT	36	1S5	C	LOQS	10
1E4	C	OGI	58	"	C	3ao	34
1E5	D	AO	48	1SA6	C	BNQJ	46
1E7	D	MOGI	65	1SB6	C	AOFS	70
"	D	GI	50	1T4	C	5-AOQS	46
1F4	D	MOHI	55	1T5	C	KOGI	74
1F5	D	AOGI	55	1U4	C	5-AOQS	53-2
1F6	D	AO	40	1U5	C	AOQS	55-2
"	D	GT	36	"	C	BD	34-2
"	D	HT	36	1V	G	OQI	98
1F7	D	OHT	40	1W4	C	AOQS	87-2
"	D	GT	36	1X2 (c)	C	8	55
"	D	AO	36	1Z2	C	8	71
1G4	C	OGI	66	2A3	E	BOFT	93
1G5	D	KOGI	68	2A4	E	OGI	98
1G6	C	AO	89	2A5	E	KOPT	76
"	C	RI	89	2A6	E	OPT	42-2
1H4	D	OGI	64	"	E	RT	36
1H5	C	OHI	54-2	"	E	5MN	36
"	C	HI	36-2	2A7	E	KOQS	68
1H6	D	ORT	89	2B6	E	OGT	75
"	D	MN	36	"	E	7-ERJ	60
"	D	GT	36	2B7	E	7-AO	56
1J5	D	KOGI	70	"	E	GT	36
1J6	D	AO	91	"	E	HT	36

TUBE	FIL	KEYS	INDEX
2C21	G	LE	76
"	G	7H1	93
2E5	E	LOQI	64-2
2E24	G	S	92-2
2E26	G	8-O	91
2E30	G	1248-OEPS	68
2G5	E	LOQI	64-2
2S/4S	E	OPT	94
2V3	E	8	53
2W3	E	27-E	98
2X2	E	8	75
3A4	C	356-LD	10
3A5	C	LO	56
"	C	GI	56
3A8	C	28-AO	96
"	C	18-GI	40
3B5	C	7-AOHT	79
3B7/1291	C	3-NHJ	40
"	C	JP	40
3C6	E	I	35
3D6/1299	C	6-LN	45
3E6	E	6-BN	20
3LF4	D	6-LN	74
3Q4	C	356-LD	45
3Q5	D	7-AOHT	60
3S4	C	356-LD	45
3V4	E	6-AOJ	65
4A6	D	7-LO	10
"	F	5-1	10
5AX4	F	27-E	95
"	F	27-I	95
5AZ4	F	18-E	98
5AZ4	F	18-I	98
5R4GY	F	27-O	98
"	F	27-I	98
5T4	F	27-E	98
"	F	27-I	98
5U4	F	27-E	97
"	F	27-I	97
5V4	F	27-E	98
"	F	27-I	98
5W4	F	27-E	97
"	F	27-I	97
5X3	F	O	97
"	F	S	97
5X4	F	7-O	97
"	F	7-S	97
5Y3	F	27-E	97
"	F	27-I	97
5Y4	F	7-O	97
"	F	7-S	97

TUBE	FIL	KEYS	INDEX
5Z3	F	O	97
"	F	S	97
5Z4	F	27-E	98
"	F	27-I	98
6A3	G	BOFT	93
6A4/LA	G	MOGT	70
6A5	G	OS	98
6A6	G	HJ	45
"	G	5-MO	45
6A7	G	KOQS	68
6A8	G	KOPI	68
6AB4	G	1248-GJ	39
6AB5/6N5	G	MOQI	32
6AB6	G	EGT	92
"	G	OGT	85
6AB7/1853	G	ADGJ	62
6AC5	G	ORI	87
6AC6	G	ORI	88
6AC7	G	LOGJ	66
6AD6	G	KOFS	10
6AD7	G	CDIP	85
"	G	AOGT	80
6AE5	G	OPI	92
6AE6	G	OHT	58-2
6AF5	G	OPI	88
6AF6	G	KOFS	10
6AG5	G	1248-MNPS	64
6AG7	G	ADGJ	75
6AH6	G	1248-MNPS	64
6AH7	G	7-MO	63
6AH7	G	47-GI	63
6AJ5	G	1248-MNPS	72
6AK5	G	1248-MNPS	64
6AK6	G	1248-LNPS	72
6AK7	G	ADGJ	75
6AL5	G	248-IF	41
"	G	248-HJ	41
6AL7	G	AOHT	60-2
6AQ5	G	1248-AEFS	85*
6AQ6	G	1248-AET	54-2
"	G	12348-FJ	36
"	G	12348-QJ	36
6AQ7	G	67-BDGT	43
"	G	47-AEJ	38
"	G	7-ADJ	38
6AR5	G	1248-MNPS	76
6AR6	G	1267-MOPI	67
6AS5	G	248-HI	96
6AS6	G	1248-MNPS	45

*Shows short on #2 switch position

TUBE	FIL	KEYS	INDEX
6AS7	G	17-KN	99
"	G	17-EGS	99
6AT6	G	1248-AET	30
"	G	12348-FJ	36
"	G	12348-QJ	36
6AU5	G	JAEF	91
6AU6	G	1248-LNPS	55
6AV5	G	AEFJ	94
6AV6	G	1248-AET	50-2
6AV6	G	12348-FJ	36
6AV6	G	12348-QJ	36
6AX5	G	OPI	96
"	G	FS	96
6B4	G	OGI	93
6B5	G	EGJ	92
"	G	OGJ	85
6B6	G	OPI	42-2
"	G	7-MN	36
"	G	GT	36
6B7	G	7-AO	56
"	G	GT	36
"	G	HT	36
6B8	G	OHT	56
"	G	GT	36
"	G	7-BD	36
6BA6	G	1248-CEPS	71
6BA7 (a)	G	3KOIJ	75
6BC5	G	1248-MNPS	55
6BD6	G	1248-MNPS	61
6BE6	G	1248-MNFS	50
6BF5	G	1248-AEFS	90*
6BF6	G	1248-AET	62
6BF6	G	12348-FJ	35
6BF6	G	12348-QJ	35
6BG6	G	8-AEFJ	96
6BH6	G	1248-MNPS	54
6BJ6	G	1248-MNPS	62
6BK6	G	1248-AET	25-2
"	G	12348-FJ	37
"	G	12348-QJ	32
6BL7	G	17-CDGS	93
"	G	17-BDGS	93
6BN6	G	248HI	58-2
6BQ6	G	8-KOPI	95
6BQ7**(c)	G	CE	92
" (c)	G	JG	92
6BT6	G	1248-AET	54-2
"	G	12348-FJ	38
"	G	12348-QJ	38
6BU6	G	1248-AET	67
"	G	12348-FJ	36
"	G	12348-QJ	36
6C4	G	1248-RS	75
6C5	G	OPI	60
6C6	G	KOCJ	54
6C7	G	7-O	54
"	G	GT	36
"	G	HT	36
6C8	G	BO	40
"	G	PI	40
6CB6	G	1248-MNPS	61
6CD6	G	8-AEFJ	96
6D4	G	1248-FI	35
6D6	G	KOPT	62
6D7	G	AOHT	65
6D8	G	KOPI	65
6E5	G	LOQI	64-2
6E6	G	5-KO	94
"	G	GJ	94
6E7	G	AOHT	64
6F4 (e)	G	57-OQS	94
6F5	G	EPI	44-2
6F6	G	KOPI	78
6F7	G	7-KO	60
"	G	QS	44
6F8	G	PI	76
"	G	BO	76
6G6	G	KOPI	72
6H4	G	KOPI	45
6H5	G	MOPT	55-2
"	G	bnqi	100-2'
6H6	G	BO	98
"	G	FS	98
6J4	G	1248-MNT	84
6J5	G	OPI	72
6J6	G	1248-DFJ	84
"	G	1248-OQJ	84
6J7	G	KORI	54
6J8	G	KOPI	80
6J8	G	KOHT	50
6J8	G	HT	20
6K5	G	OGT	10
6K6	G	KOPI	80
6K7	G	KOPI	60
6K8	G	KOPI	79
"	G	PI	64
6L5	G	OPI	72

* Shows short on position 2

** Do not connect side stud. Side stud connected to pin 3 of 5 pin socket.

' Test for glow only

TUBE	FIL	KEYS	INDEX
6L6	G	KOPI	90
6L7	G	KOPI	52
6N6	G	EGT	92
"	G	OGT	85
6N7	G	PI	45
"	G	7-MO	45
6P5	G	OPI	72
6Q4 (c)*	G	8-O	99
6Q7	G	OPI	50-2
"	G	RI	36
"	G	7-BD	36
6R7	G	OPI	65
"	G	RI	36
"	G	7-BD	36
6S4 (c)**	G	CNJ	95-2
6S7	G	AORI	68
6S8	G	7-DM	30
"	G	7BD	30
"	G	57-AD	30
"	G	7-FI	34-2
6SA7	G	KOFT	50
6SB7Y	G	KOFT	53
6SC7	G	167-AD	87
"	G	17-MNHS	87
6SD7	G	CDGJ	65
6SE7	G	BNGJ	68
6SF5	G	17-KES	40-2
6SF7	G	17-MNI	69
"	G	37-QT	10
6SG7	G	KNGJ	56
6SH7	G	KNGJ	53
6SJ7	G	BNGJ	64
6SK7	G	BNGJ	74
6SL7	G	17-CDGS	87
6SL7	G	17-BDGS	87
6SN7	G	17-CDGS	92
"	G	17-BDGS	92
6SQ7	G	17-KNI	85
"	G	378-MN	36
"	G	378-GT	36
6SR7	G	17-KNI	90
6SR7	G	378-MN	36
"	G	378-GT	36
6SS7	G	BNGJ	68
6ST7	G	17-KNI	90
6SU7	G	17-CDGS	85
"	G	17-BDGS	85
6SV7	G	7-BDRI	48
6SV7	G	378-jf	44
6SZ7	G	17-KNI	86
"	G	378-MN	31
"	G	378-GT	31
6T6	G	bnqi	100-2'
6T7	G	OPI	48-2
"	G	RI	22
"	G	7BD	24
6T8 (c)	G	QT	44
"	G	46FT	44
"	G	AD	44
"	G	6LD	44
6U4	G	7-BDS	95-2
6U5	G	LOFI	48
6U6	G	AOPI	92
6U7	G	KOPI	64
6U8 (c)	G	FOT	95-2
" (c)	G	IQE	85-2
6V6	G	KOPI	83
6V7	G	OPI	76
"	G	RI	36
"	G	MN	36
6W4	G	7BDS	97
6W5	G	FS	98
"	G	OPI	98
6W6	G	KOPI	90
6W7	G	KOPI	54
6X4	G	DRS	98
"	G	HI	98
6X5	G	FS	98
"	G	OPI	98
6X8 (c)	G	7NO	98
" (c)ø	G	7EFS	86
6Y5	G	6-E	98
"	G	HS	98
6Y6	G	KOPI	93
6Y7	G	PI	48-2
"	G	7-MO	48-2
6Z3/1V	G	OQI	98
6Z4/84	G	OHJ	98
"	G	EHJ	98
6ZY5	G	OHT	98
"	G	FS	98
7A4	G	NQS	72
7A5	G	LNQS	90
7A6	G	MO	98
"	G	RI	98
7A7	G	LNGT	64

* Side stud connected to pin 2 of 5 pin socket
** Shows short on position 1,2,3
' Test for glow only
ø Connect side stud of adaptor to pin 2 of 5 pin socket

TUBE	FIL	KEYS	INDEX
7A8	G	MOGT	50
7AF7	G	PI	72
"	G	MO	72
7AG7	G	LNGT	44
7AH7	G	LNGT	47
7AJ7	G	LNGT	55
7AK7	G	LNGT	79
7B4	G	NHT	83
7B5	G	LNGT	77
7B6	G	LN	81
"	G	GT	36
"	G	HT	36
7B7	G	LNGT	63
7B8	G	BNGT	50
7C4/1203	G	KOGT	45
7C5	G	LNGT	84
7C6	G	LN	80
"	G	GT	36
"	G	HT	36
7C7	G	LNGT	50
7E5/1201	G	18-BO	72
7E6	G	AN	70
"	G	GT	36
"	G	HT	36
7E7	G	NGT	58
"	G	7-AD	36
"	G	7-LD	36
7F7	G	PI	51-2
"	G	MO	51-2
7F8	G	1278-QI	56
"	G	1278-BO	56
7G7/1232	G	BNGT	72
7G8/1206	G	6-LNFI	53
7G8/1206	G	6-ADGJ	53
7H7	G	LNGT	58
7J7	G	7-LO	53
"	G	BNGT	48
7K7	G	KO	85
"	G	GT	36
"	G	HT	36
7L7	G	BNGT	55
7N7	G	MO	75
"	G	PI	75
7Q7	G	CNRI	70
7R7	G	NGT	50
"	G	7-AD	36
"	G	7-LD	36
7S7	G	MOGT	68
"	G	ngt	45
7T7	G	MOGT	68
7V7	G	CNFS	72-2
7W7	G	7-LNGT	65
7X6	G	8-RI	97
"	G	8-O	97
7X7	G	LN	81
"	G	4-GT	40
"	G	HT	40
7Y4	G	7-O	98
"	G	RI	98
7Z4	G	7-O	98
"	G	RI	98
10	H	OQJ	57
12A	F	OQJ	75
12A5	I	56-KO	86
12A6	I	AOHT	75
12A7	I	FI	98
"	I	7-AO	73
12A8	I	KOPI	64
12AH7	I	7-MO	63
"	I	47-GI	63
12AL5	I	248-IF	41
"	I	248-HJ	41
12AT6	I	1248-AET	30
"	I	12348-FJ	36
"	I	12348-QJ	36
12AT7 (c)	I	CE	89 *
"	I	JG	*
12AU6	I	1248-LNPS	55
12AU7 (c)	I	CE	89*
"	I	JG	89*
12AV6	I	1248-AET	50-2
"	I	12348-FJ	36
"	I	12348-QJ	36
12AV7 (c)	I	CE	86
" (c)	I	JG	86
12AW6	I	1248-MNPS	56
12AX7 (c)	I	LD	20-2
"	I	PT	20-2
12AY7 (c)	I	CE	85*
"	I	JG	85
12B7	I	LNGT	64
12B8	I	KO	65
"	I	GS	50-2
12BA6	I	1248-CEPS	71
12BA7 (c)	I	3-KOIJ	74
12BD6	I	1248-MNPS	60
12BE6	I	1248-MNFS	50
12BF6	I	1248-AET	62
"	I	12348-FU	35
"	I	12348-QJ	35
12BH7 (c)	I	CE	92
" (c)	I	JG	92

* Do not use side stud

TUBE	FIL	KEYS	INDEX
12BK6	I	1248-AET	25-2
"	I	12348-FJ	37
"	I	12348-QJ	32
12C8	I	OHT	55
"	I	GT	36
"	I	7-BD	36
12E5	I	OPI	72
12F5	I	EPI	48-2
12H6	I	BO	98
"	I	FS	98
12J5	I	OPI	75
12J7	I	KORI	54
12K7	I	KOPI	60
12K8	I	KOPI	79
"	I	PI	64
12L8	I	6-CEIR	74
"	I	6-CDJP	74
12Q7	I	OPI	50-2
"	I	RI	36
"	I	7-BD	36
12SA7	I	KOFT	50
12SC7	I	167-AD	87
"	I	17-MNHS	87
12SF5	I	17-KES	40-2
12SF7	I	17-MNI	69
"	I	37-QT	10
12SG7	I	KNGJ	56
12SH7	I	5-KNGJ	53
12SJ7	I	BNGJ	64
12SK7	I	BNGJ	74
12SL7	I	17-CDGS	87
"	I	17-BDGS	87
12SN7	I	17-CDGS	92
"	I	17-BDGS	92
12SQ7	I	17-KNI	85
"	I	378-MN	36
"	I	378-GT	36
12SR7	I	17-KNI	90
"	I	378-MN	36
"	I	378-GT	36
12SW7	I	17-KNI	90
"	I	378-MN	36
"	I	378-GT	36
12SY7	I	KOFT	50
12Z3	I	OQI	98
14A4	I	NQS	72
14A5	I	LNQS	90
14A7	I	LNGT	64
14AF7	I	PI	72
"	I	MO	72
14B6	I	LN	81
"	I	GT	36

TUBE	FIL	KEYS	INDEX
14B6	I	HT	36
14B8	I	BNGT	50
14C5	I	LNGT	84
14C7	I	LNGT	50
14E6	I	AN	70
"	I	GT	36
"	I	HT	36
14E7	I	NGT	58
"	I	7-AD	36
"	I	7-LD	36
14F7	I	PI	51-2
"	I	MO	51-2
14F8	I	1278-QI	56
"	I	1278-BO	56
14H7	I	LNGT	58
14J7	I	7-LO	75
"	I	BNGT	48
14N7	I	MO	75
"	I	PI	75
14Q7	I	CNRI	70
14R7	I	NGT	50
"	I	7-AD	36
"	I	LD	36
14S7	I	MOGT	68
"	I	ngt	45
14V7	I	LNGT	54
14W7	I	7-LNGT	65
14X7	I	LN	81
"	I	4-GT	40
"	I	HT	40
14Y4	I	7-O	98
"	I	RI	98
15	D	KOQI	50
18	I	AOPT	74
19	D	LO	30
"	D	RS	30
19BG6	J	7-AEFJ	96
19J6 (d)	J	1248-DFJ	88
"	J	1248-OQJ	84
19T8 (d)	J	QT	44
"	J	46FT	44
"	J	AD	44
"	J	6LD	44
20	E	OHT	40
22	E	OHI	42
24-A	E	KOQI	53
25A6	J	KOPI	86
25A7	J	8-PI	98
"	J	57-KO	85
25AC5	J	ORI	90
25B5	J	EGJ	94
25B6	J	KOPI	94

TUBE	FIL	KEYS	INDEX
25B8	J	KO	66
"	J	HS	89
25BQ6	J	8-KOPI	90
25C6	J	KOPI	94
25L6	J	KOPI	92
25N6	J	ERI	94
"	J	ORI	88
25W4	J	7-BDS	100
25Y5	J	BO	98
"	J	FS	98
25Z5	J	BO	98
"	J	GS	98
25Z6	J	BO	98
"	J	GS	98
26	C	OFT	70
26A6	J	1248-CEPS	72
26C6	J	1248-AET	60
"	J	12348-FJ	32
"	J	12348-QJ	32
26D6	J	1248-MNFS	46
27	E	MOQI	72
28D7	J	6-KE	90
"	J	AS	90
30	D	OFT	64
31	D	OFT	86
32	D	OHI	46
32L7	K	8-I	98
"	K	57-KO	92
33	D	MOHI	74
34	D	OHI	50
35/51	E	KOQI	60
35A5	K	LNQS	90
35B5	K	1248-AEFS*	90
35C5	K	248-GJ	32
35L6	K	KOPI	92
35W4	K	1248-RS	98**
35Y4	K	NQS	98
35Z3	K	NFS	98
35Z4	K	FS	98
35Z5	K	FS	98
35Z6	K	BO	98
"	K	FS	98
36	G	KOQI	53
37	G	MOQI	73
38	G	KOQI	74
39/44	G	KOQI	55
40	F	OFT	45-2
40Z5	M	FS	98
41	G	KOPT	85
42	G	KOPT	74
43	J	KOPT	86

TUBE	FIL	KEYS	INDEX
45	E	OFT	90
45Z3	M	MO	98
45Z5	M	FS	98
46	E	MOHI	80
47	E	MOHI	70
48	K	KOPT	90
49	D	MOHI	81
50	H	OFT	86
50A5	M	LNQS	92
50B5*	M	1248-AEFS*	94
50C5	M	248-HI	97
50C6	M	KOPI	94
50L6	M	KOPI	92
50X6	M	8-AO	99
"	M	7-FI	99
50Y6	M	BO	98
"	M	FS	98
50Y7	M	BO	99
"	M	FS	99
50Z7	M	BO	98
52	G	7-S	98
53	E	HJ	45
"	E	5-MO	45
55	E	OHJ	76
"	E	5-BD	36
"	E	GJ	36
56	E	MOQI	70
56AS	G	MOQI	70
57	E	KOGJ	54
57AS	G	KOGJ	54
58	E	KOGJ	72
58AS	G	KOGJ	72
59	E	KOHT	82
70L7	O	8-J	98
"	O	56-KO	93
71A	F	OFT	90
75	G	RT	36
"	G	5-MN	36
"	G	OPT	42-2
76	G	MOQI	70
77	G	KOGJ	54
78	G	KOGJ	64
79	G	GS	42-2
"	G	6-LO	42-2
80	F	O	97
"	F	S	97
81	H	O	96
82	E	O	98
"	E	S	98
83	F	O	98
"	F	S	98

* Shows short on #2 switch position
** Shows short on #1 switch position

TUBE	FIL	KEYS	INDEX
83V	F	O	98
"	F	S	98
84/6Z4	G	OHJ	98
"	G	EHJ	98
85	G	OHJ	76
"	G	5-BD	36
"	G	GJ	36
85AS	G	MOHJ	52
"	G	356kogi	30
"	G	gj	30
89	G	AOPT	85
99	E	OPI	45
117L7	Q	8-I	98
"	Q	MOGT	90
117M7	Q	8-I	98
"	Q	MOGT	90
117N7	Q	56-AO	75
117P7	Q	56-AO	75
117Z3	Q	1248-GS	98
117Z4	Q	FS	98
117Z6	Q	BO	98
182-482B	F	OFT	86
183-483	F	OFT	91
485	E	KOPI	85
585	E	OFT	86
807	G	8-ADGJ	93-2
864	C	BOFT	51
879/2X2A	E	8	75
950	D	MOHI	74
951-1B4	D	OHI	46
954 (e)	G	ADPI	54
955 (e)	G	MOHT	63
956 (e)	G	ADPI	57
957 (e)	B	MO	62-2
958 (e)	B	MO	56
959 (e)	B	ADPI	39
1201-7E5	G	18-BO	72
1203-7C4	G	KOGT	45
1221	G	KOGJ	54
1223	G	KOGT	54
1229	E	OHI	51
1231	G	BNGT	74
1232-7G7	G	BNGT	72
1273	G	TNGL	50
1280	I	TNGL	50
1291-3B7	G	3-NHJ	40
"	C	JP	15
1299-3D6	C	6-LN	45
1603	G	KOGJ	50
1609	C	MOHI	77
1611	G	KOPI	78
1612	G	KOPI	52
1613	G	KOPI	78
1614	G	KOPI	90
1620	G	KORI	54
1621	G	KOPI	73
1622	G	KOPI	90
1625	I	78-KOHI	91
1626	I	OPI	90
1629	I	LOQI	64-2
"	I	bnqi	100-2'
1631	I	KOPI	90
1632	I	KOPI	92
1633	J	17-CDGS	92
"	J	17-BDGS	92
1634	J	167-AD	87
"	J	17-MNHS	87
1635	G	7-AO	81
"	G	8-RI	81
1644	I	6-CEIR	74
"	I	6-CDJP	74
1851	G	KOPI	60
1852	G	LOGJ	66
1853	G	ADGJ	62
2051	G	OHT	98
5654	G	1248-MNPS	60
5670 (c)*	G	24IQ	95-2
" (c)*	G	24KN	95-2
5686 (c)	G	8-O	98
5691	G	17-CDGS	87
"	G	17-BDGS	87
5692	G	17-CDGS	92**
"	G	17-KNI	92
5693	G	BNGJ	64
5725	G	1248-MNPS	46
5726	G	248-IF	42
"	G	248-HJ	42
5749	G	1248-CEPS	67
5750	G	1248-MNFS	37
5751(c)**	I	CE	83
" (c)**	I	JG	83
5814(c)**	I	CE	90
" (c)**	I	JG	90
5844	G	1248-DFJ	82
"	G	1248-OQJ	82
5879	G	JOKS	87

' Test for glow only
* Side stud of adaptor to any pin #1
** Do not use side stud
ø Shows short on position 2

TUBE	FIL	KEYS	INDEX
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

SHORT TEST SENSITIVITY

The Model TC-3 tube checker was originally engineered for high sensitivity on the four short test positions. Because of this high sensitivity, tubes with very slight base or interelectrode leakage will, at times, indicate a direct "shorted" condition. For all practical purposes, however, these same tubes will perform satisfactorily in the average radio receiver.

If it is desired to reduce the sensitivity of the short test in the MODEL TC-3, the following simple modification can be made:

Withdraw the equipment from the case by removing the nickel plated screws from the edges of the panel. Solder a one megohm ½ watt resistor directly across the tubular paper capacitor which is wired to the test switch. The capacity of this capacitor varies in different production models from .01 to .005 mfd. but it should be easily located because it is the only tubular capacitor on the test switch. Replace the equipment in the case.

This modification will cause the Neon short indicator to glow with a resistance of approximately 250,000 ohms or less. Key positions and index settings will not be affected by this change.

RECALIBRATION OF LINE VOLTAGE ADJUSTMENT

a. By the use of a variable transformer (variac) and AC voltmeter apply a voltage of 117V AC to the instrument.

b. Place "Line Adjuster" switch to center position, "TEST SWITCH" to " 5-LINE" and "FILAMENT VOLTS" switch to position "M" (50V).

c. By using an AC voltmeter of known accuracy measure the voltage between pin connections 2 and 7 of the octal socket which should read 50 volts. This may be slightly higher or lower, but should be corrected by placing the "Line Adjuster" switch one position to the left or right.

d. With the correct heater voltage at the tube socket (50V above) adjust the 1000 ohm (fine wire) pot located on the positive terminal of the meter so that the pointer of the meter is directly over the "line" marking.

EMISSION ADJUSTMENT

a. Recheck the "line voltage adjustment" above.

b. Set all controls for a 50L6 as covered in the instructions.

c. Test several 50L6 tubes that are known to be good.

d. Adjust the 100 ohm (coarse wire) pot located on the positive terminal of the meter so that the average of several tubes will read approximately 68 in the good region.