

HOFFMAN 7M112B

TRADE NAME	Hoffman Models 7M112B, 7B113B, 7P114B (Ch. 212, 212M) 21M121, 21B122, 21P123, 21M305B, 21B306B, 21P307B, 21M506, 21B507, 21P508 (Ch. 211, 211M)		
MANUFACTURER	Hoffman Radio Corp., Corp., 3761 Hill St., Los Angeles, California.		
TYPE SET	Television Receiver		
TUBES	Eighteen		
POWER SUPPLY	110-120 Volts AC-60 Cycle	RATING	1.2 Amp. @ 117 Volts AC
TUNING RANGE	Channels 2 thru 13, Video IF 26.25MC, Sound IF 21.75MC (Intercarrier).		

INDEX	
Alignment Instructions .....	6, 7      Photographs (Cont)
Disassembly Instructions .....	13      Resistor and Inductor Identification ..... 12, 17
Horizontal Sweep Circuit Adjustments .....	11      Resistance Measurements ..... 8
Parts List and Descriptions .....	14, 15, 16      Schematic ..... 2
Photographs	Servicing in the Field ..... 13
Cabinet - Rear View .....	11      Tube Failure Check Chart ..... 5
Capacitor and Alignment Identification .....	4, 9      Tube Placement Chart (Bottom View) ..... 8
Chassis - Top View .....	3      Tube Placement Chart (Top View) ..... 5
RF Tuner .....	10, 18

HOFFMAN MODELS 7M112B, 7B113B, 7B114B (Ch. 212, 212M), 21B122, 21B306B, 21B507, 21M121, 21M305B, 21M506, 21P123, 21P307B, 21P508 (Ch. 211, 211M)

HOWARD W. SAMS & CO., INC. • Indianapolis 5, Indiana

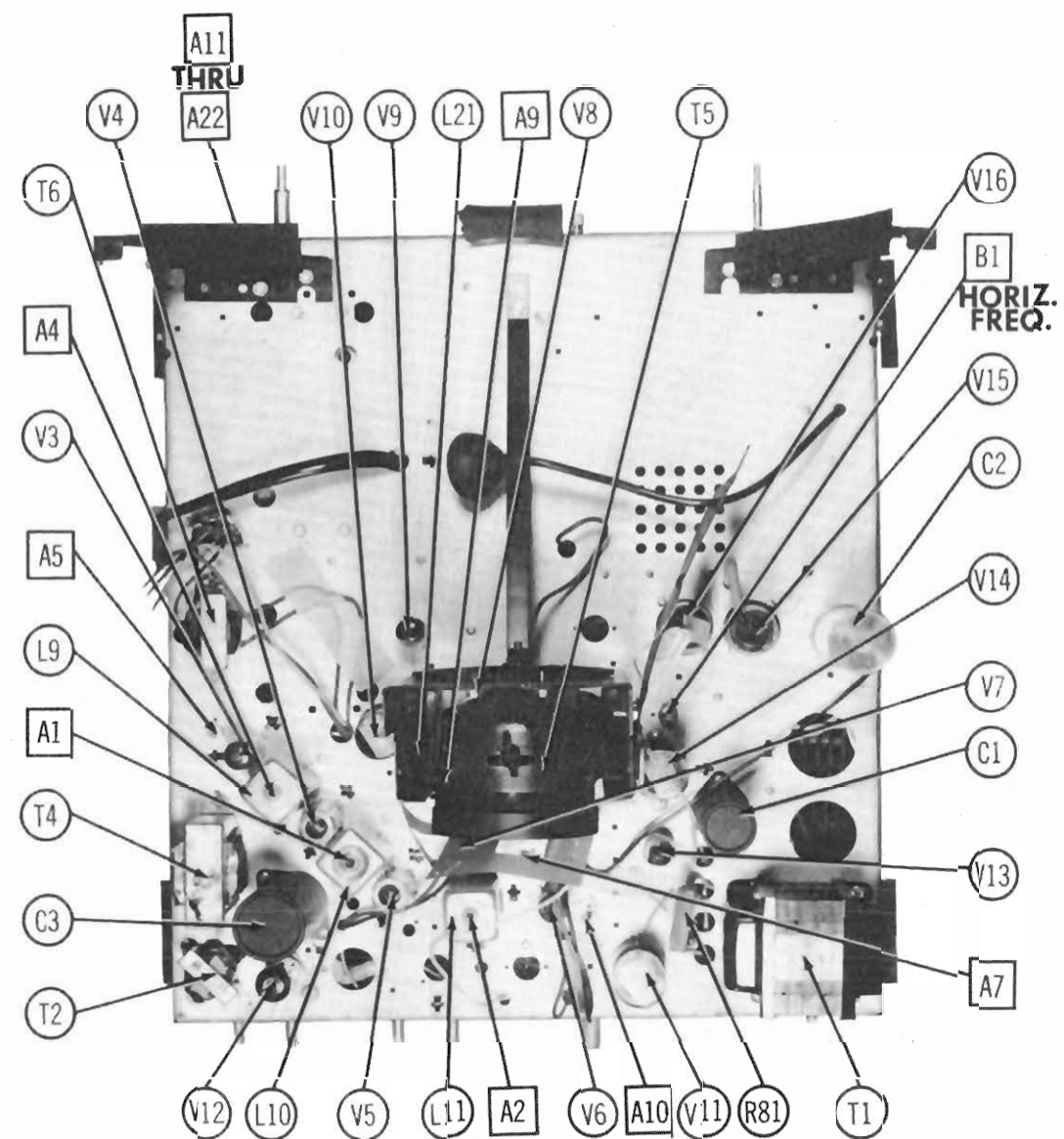
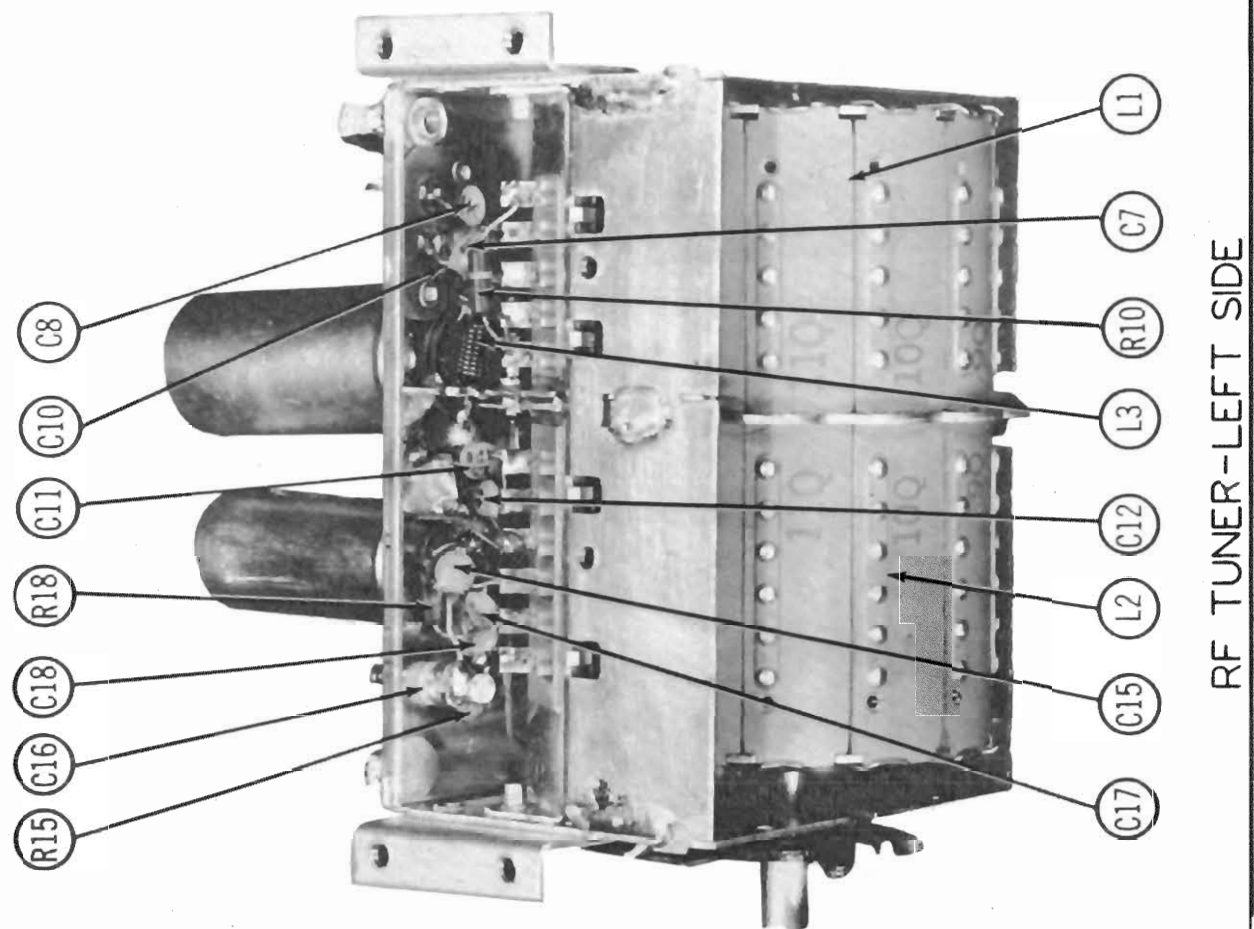
"The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W. Sams & Co., Inc., by the manufacturers of the particular type of replacement part listed."

"Reproduction or use, without express permission, of editorial or pictorial con-

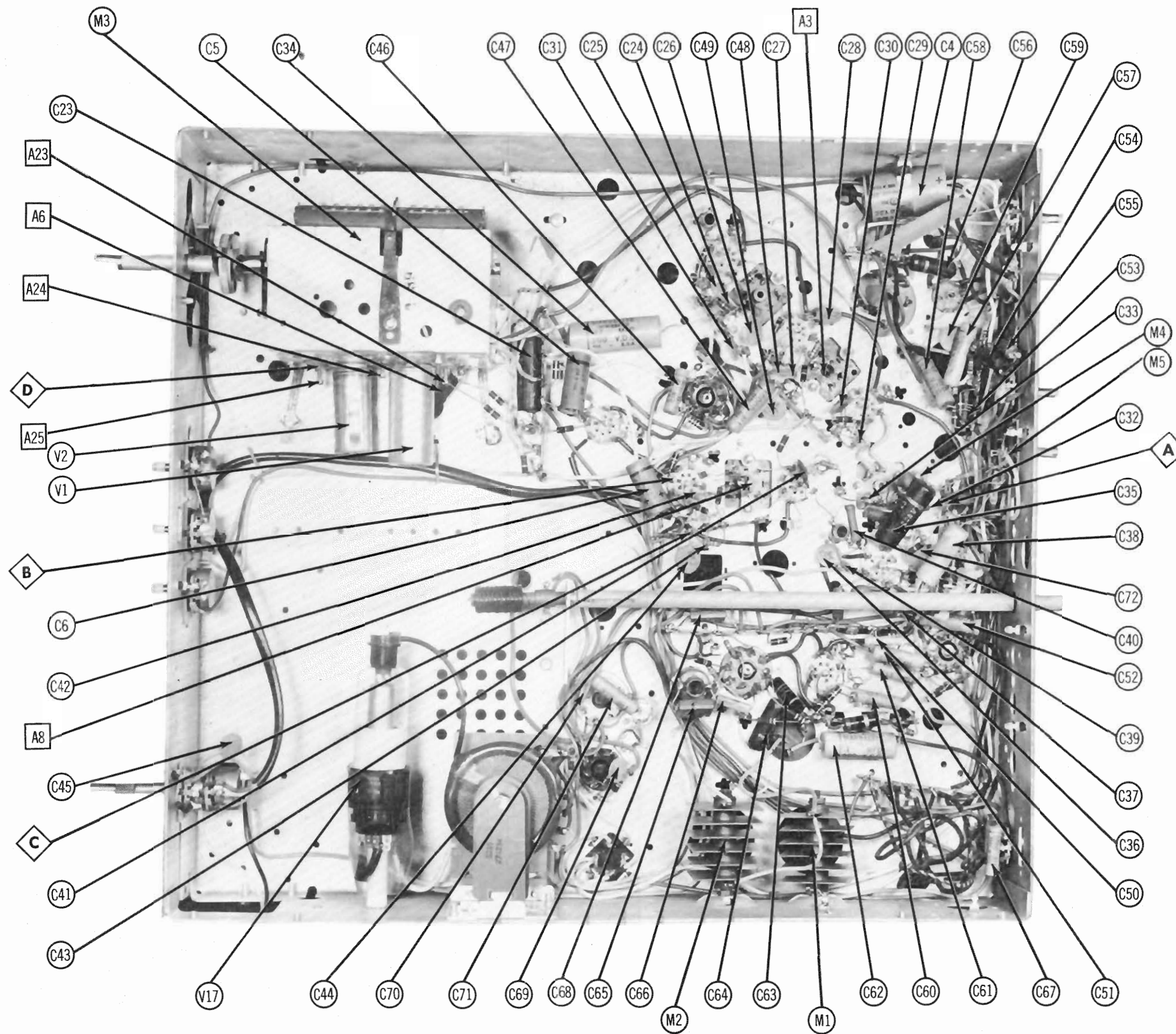
tent, in any manner, is prohibited. No patent liability is assumed with respect to the use of the information contained herein. Copyright 1953 by Howard W. Sams & Co., Inc., Indianapolis 5, Indiana, U. S. of America. Copyright under International Copyright Union. All rights reserved under Inter-American Copyright Union (1910) by Howard W. Sams & Co., Inc." Printed in U. S. of America







HOFFMAN MODELS 7M112B, 7B113B, 7B114B (Ch. 212, 212M, 21B122, 21B306B, 21B507, 21M121, 21M305B, 21M506, 21P123, 21P307B, 21P508 (Ch. 211, 211M)



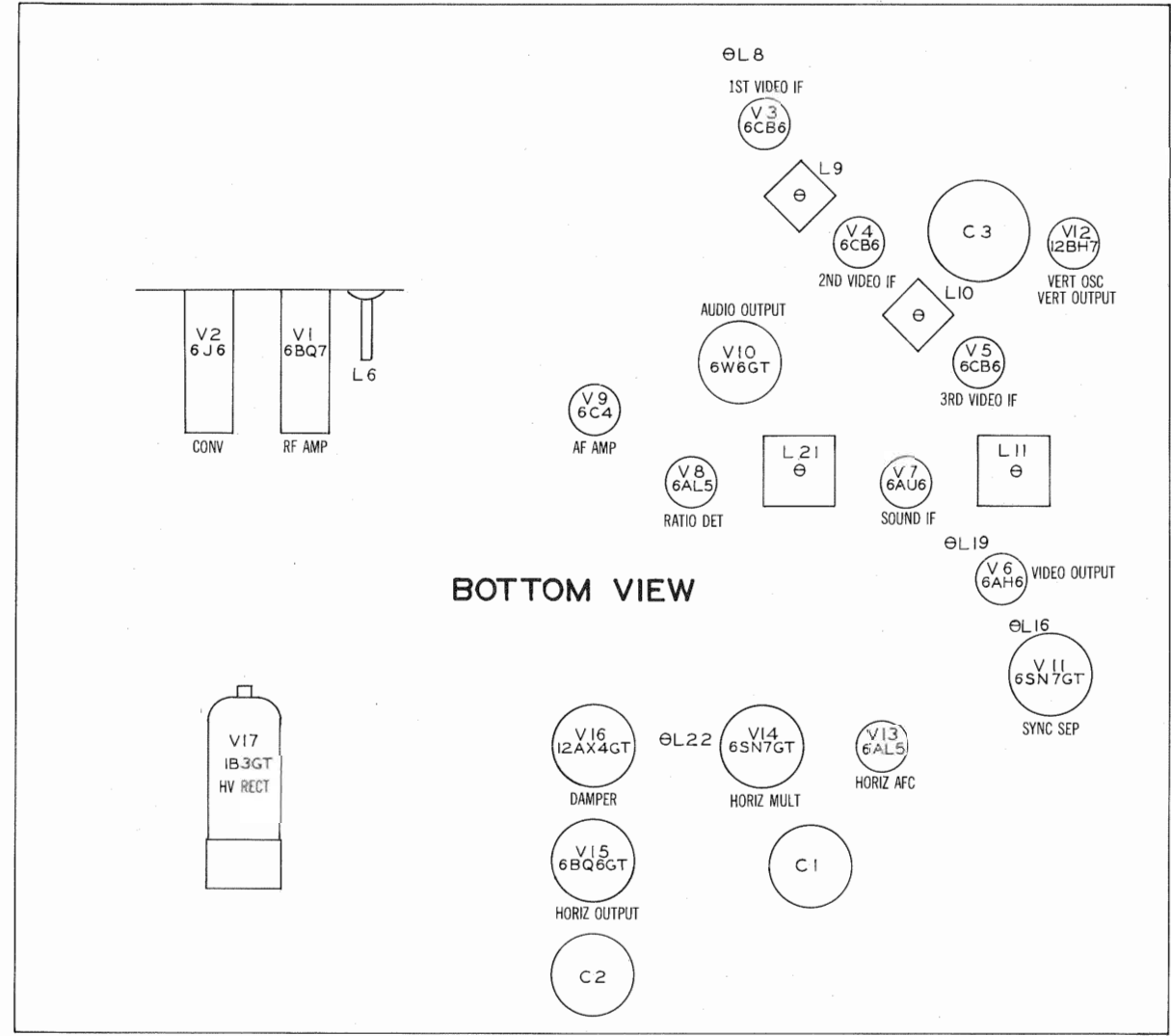
CHASSIS BOTTOM VIEW-CAPACITOR AND ALIGNMENT IDENTIFICATION

HOFFMAN MODELS 7M112B, 7B113B, 7B114B (Ch. 212, 212M), 21B122, 21B306B, 21B507, 21M121, 21M305B, 21M506, 21P123, 21P307B, 21P508 (Ch. 211, 211M)

RESISTANCE MEASUREMENTS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V 1	6BC7	INF	1.7Meg	0Ω	.1Ω	0Ω	#690Ω	145KΩ	INF	0Ω
V 2	6J6	115KΩ	14KΩ	.1Ω	0Ω	230KΩ	10KΩ	0Ω		
V 3	6CB6	1.5Meg	47Ω	0Ω	.1Ω	#1KΩ	#1KΩ	0Ω		
V 4	6CB6	1.5Meg	47Ω	.1Ω	0Ω	#1KΩ	#1KΩ	0Ω		
V 5	6CB6	.2Ω	150Ω	.1Ω	0Ω	#1KΩ	#1KΩ	0Ω		
V 6	6AH6	1.1Meg	430Ω	0Ω	.1Ω	†4.7KΩ	†33KΩ	430Ω		
V 7	6AU6	1.1Ω	150Ω	.1Ω	0Ω	#2.2KΩ	#2.2KΩ	150Ω		
V 8	6AL5	10KΩ	10KΩ	.1Ω	0Ω	INF	0Ω	INF		
V 9	6C4	†33KΩ	INF	0Ω	.1Ω	†33K	18Ω	1.5KΩ		
V 10	6W6GT	INF	#.1Ω	†283Ω	†57Ω	†33KΩ	INF	#0Ω	80KΩ	
V 11	6SN7GT	22KΩ	†6.6KΩ	2.2KΩ	2.2KΩ	†690KΩ	0Ω	0Ω	.1Ω	
V 12	12BH7	#2.1Meg	640KΩ	70Ω	.1Ω	.1Ω	#75Ω	#2.1Meg	9.5KΩ	0Ω
V 13	6AL5	15Ω	15Ω	.1Ω	0Ω	4.8Meg	0Ω	4.8Meg		
V 14	6SN7GT	5.2Meg	†9.3KΩ	1.5KΩ	100KΩ	†121KΩ	1.5KΩ	0Ω	.1Ω	
V 15	6BQ7GT	INF	.1Ω	INF	#0Ω	470KΩ	†122KΩ	0Ω	0Ω	Top Cap #18Ω
V 16	12AX4GT	INF	#17Ω	120KΩ	INF	†57Ω	INF	0Ω	.2Ω	Top Cap #489Ω
V 17	1B3GT	PINS 1 - 8 HAVE INF RESISTANCE								
V 18	17HP4	0Ω	1.8KΩ	45Ω	#141Ω	1.4Meg	.1Ω			

† MEASURED FROM OUTPUT OF M2  
# MEASURED FROM 140 VOLT LINE  
■ MEASURED FROM PIN 3 OF V16



# ALIGNMENT INSTRUCTIONS

## ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

The high voltage lead should be securely taped and kept away from the chassis. Do not remove the horizontal multivibrator tube to disable the high voltage.  
Use an isolation transformer to protect the test equipment.

### VIDEO IF ALIGNMENT

Remove the converter tube (V2) and replace with a 6J6 which has pin 1 removed. This will disable the local oscillator and reduce the possibility of erroneous indications.  
Connect the negative lead of a 3 Volt battery to the ungrounded side of C34. Connect the positive lead of chassis.

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS
1. Direct	High side to an ungrounded tube shield floating over dummy converter tube. Low side to chassis.	21.75MC (Unmod)	Any	DC probe to point (A) Common to chassis.	A1	Adjust for MINIMUM deflection.
2. "	"	24.25MC	"	"	A2	Adjust for maximum deflection.
3. "	"	23.25MC	"	"	A3	"
4. "	"	25.60MC	"	"	A4	"
5. "	"	23.80MC	"	"	A5	"
6. "	"	25.80MC	"	"	A6	"

(Repeat above alignment, steps 1 thru 6, for optimum results).

### OVERALL VIDEO IF RESPONSE CHECK

Connect the synchronized sweep voltage from the signal generator to the horizontal input of the oscilloscope for horizontal deflection.

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS
7. Direct	High side to an ungrounded tube shield floating over dummy converter tube. Low side to chassis.	24MC (10MC SWP)	21.75MC 23.25MC 25.25MC 26.25MC	Any	Vert. amp. to point (A). Low side to chassis.	Check for response similar to Fig. 1 within limits as shown. If necessary, retouch A2 thru A6 for desired response.

### SOUND IF ALIGNMENT USING AM SIGNAL GENERATOR AND VTVM

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS
8. .005MFD	High side to point (A) Low side to chassis.	4.5MC (Unmod)	Any	DC probe to point (B) Common to chassis.	A7, A8	Adjust for maximum deflection.
9. "	"	"	"	DC probe to point (C) Common to chassis.	A9	Adjust for zero reading. A positive and negative reading will be obtained on either side to the correct setting.

### SOUND IF ALIGNMENT USING FM SIGNAL GENERATOR AND OSCILLOSCOPE

Use frequency modulated signal with 60% modulation and 450KC sweep. Use 120Ω sawtooth voltage in scope for horizontal deflection.

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS
8. .005MFD	High side to point (A) Low side to chassis.	4.5MC (450KC SWP)	4.5MC	Any	Vert. amp. to point (B). Low side to chassis.	Disconnect stabilizer capacitor C6. Adjust for curve of maximum amplitude and symmetry as in Fig. 2.
9. "	"	"	"	Vert. amp. to point (C). Low side to chassis.	A9	Reconnect capacitor C6. Adjust so that 4.5MC occurs at center of crossover lines as in Fig. 3. SLIGHTLY retouch A8 for maximum amplitude and straightness of crossover lines.

### 4.5MC TRAP ALIGNMENT

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS
10. .005MFD	High side to point (A) Low side to chassis.	4.5MC (Unmod)	Any	DC probe thru detector (Fig. 4) to pin 11 of picture tube. Common to chassis.	A10	Adjust for MINIMUM deflection.

### OSCILLATOR ALIGNMENT

Remove the dummy converter tube and replace the original 6J6 in its socket.  
Connect the synchronized sweep voltage from the signal generator to the horizontal input of the oscilloscope for horizontal deflection.  
The sweep generator output lead should be terminated with its characteristic impedance, usually 50 ohms.  
Set the fine tuning control to the mid-position of its range.

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS
11. Two 120Ω carbon resistors	Across antenna terminals with 120Ω in each lead.	213MC (10MC SWP)	211.25MC 215.75MC	13	Vert. amp. to point (A). Low side to chassis.	Adjust to place sound marker in trap notch as in Fig. 5.
		207MC (10MC SWP)	205.25MC 209.75MC	12		
		201MC (10MC SWP)	199.25MC 203.75MC	11		
		195MC (10MC SWP)	193.25MC 197.75MC	10		
		189MC (10MC SWP)	187.25MC 191.75MC	9		
		183MC (10MC SWP)	181.25MC 185.75MC	8		
		177MC (10MC SWP)	175.25MC 179.75MC	7		
		171MC (10MC SWP)	169.25MC 173.75MC	6		
		165MC (10MC SWP)	163.25MC 167.75MC	5		
		159MC (10MC SWP)	157.25MC 161.75MC	4		
		153MC (10MC SWP)	151.25MC 155.75MC	3		
		147MC (10MC SWP)	145.25MC 149.75MC	2		

# ALIGNMENT INSTRUCTIONS (CONT.)

## RF ALIGNMENT

Connect the synchronized sweep voltage from the signal generator to the horizontal input of the oscilloscope for horizontal deflection.  
The sweep generator output lead should be terminated with its characteristic impedance usually 50 ohms.

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
12. Two 120Ω carbon resistors	Across antenna terminals with 120Ω in each lead.	207MC (10MC SWP)	205.25MC 209.75MC	12	Vert. amp. to point (D). Low side to chassis.	Adjust for response curve similar to Fig. 6.
13. "	"	213MC (10MC SWP)	211.25MC 215.75MC	13		Check for response similar to Fig. 6. If markers fall below 70% on any channel, make compromise adjustments of A23, A24 and A25 with receiver tuned to that channel. Then check other channels to see that they have not been seriously affected.
		201MC (10MC SWP)	199.25MC 203.75MC	11		
		195MC (10MC SWP)	193.25MC 197.75MC	10		
		189MC (10MC SWP)	187.25MC 191.75MC	9		
		183MC (10MC SWP)	181.25MC 185.75MC	8		
		177MC (10MC SWP)	175.25MC 179.75MC	7		
		171MC (10MC SWP)	169.25MC 173.75MC	6		
		165MC (10MC SWP)	163.25MC 167.75MC	5		
		159MC (10MC SWP)	157.25MC 161.75MC	4		
		153MC (10MC SWP)	151.25MC 155.75MC	3		
		147MC (10MC SWP)	145.25MC 149.75MC	2		
		141MC (10MC SWP)	139.25MC 143.75MC			
		135MC (10MC SWP)	133.25MC 137.75MC			
		129MC (10MC SWP)	127.25MC 131.75MC			

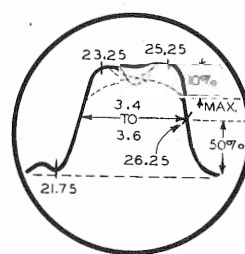


FIG. 1

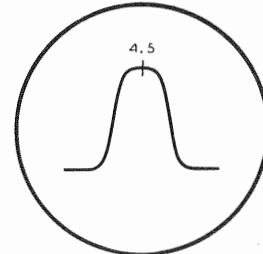


FIG. 2

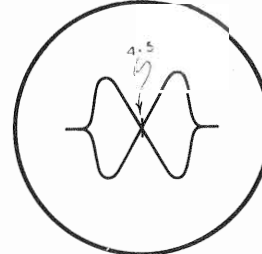


FIG. 3

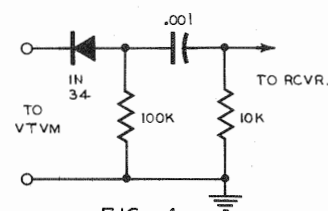


FIG. 4

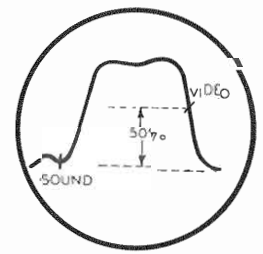


FIG. 5

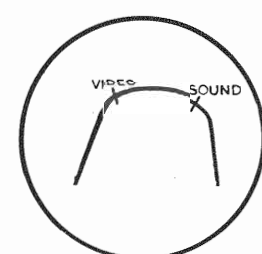
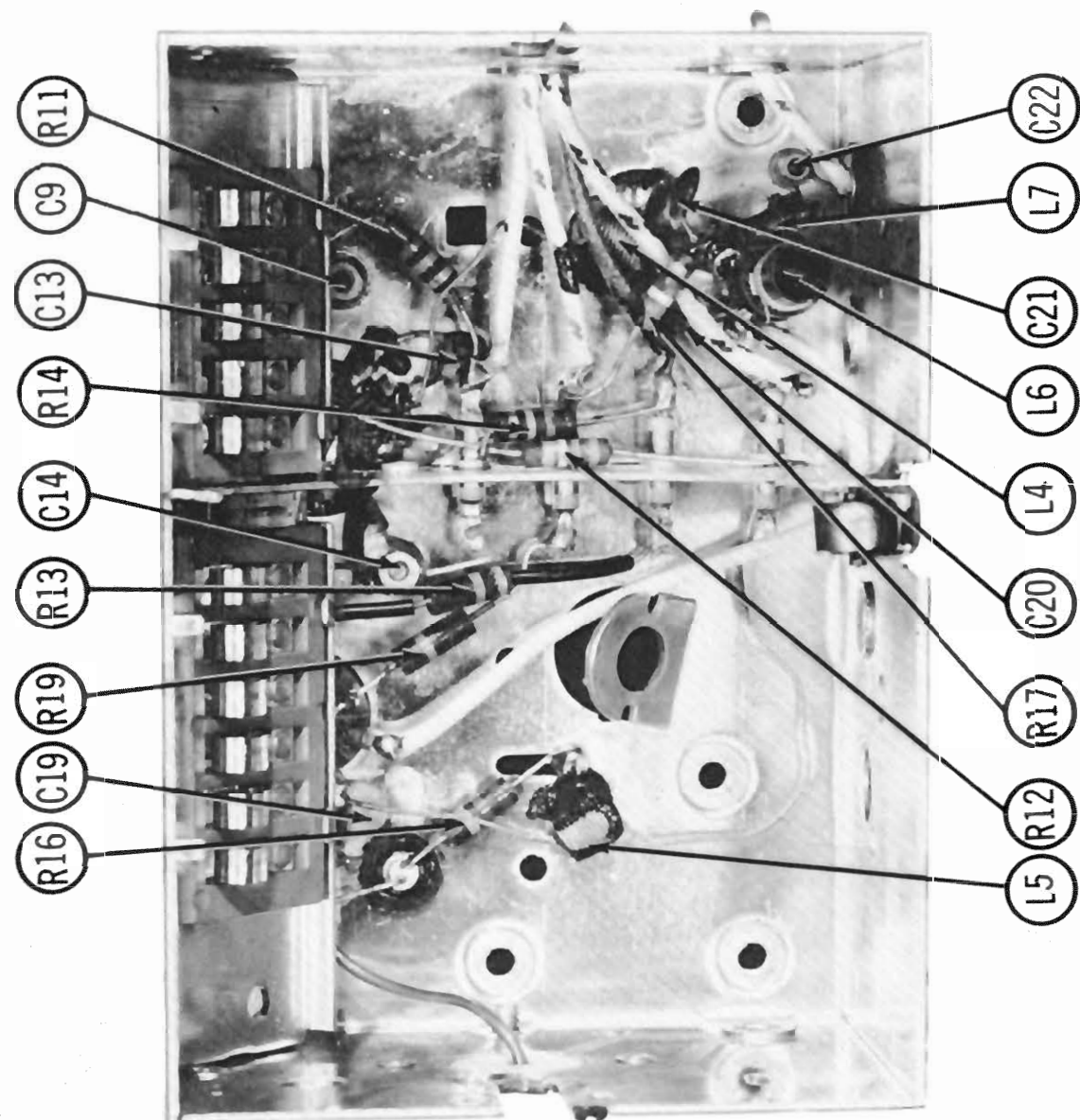
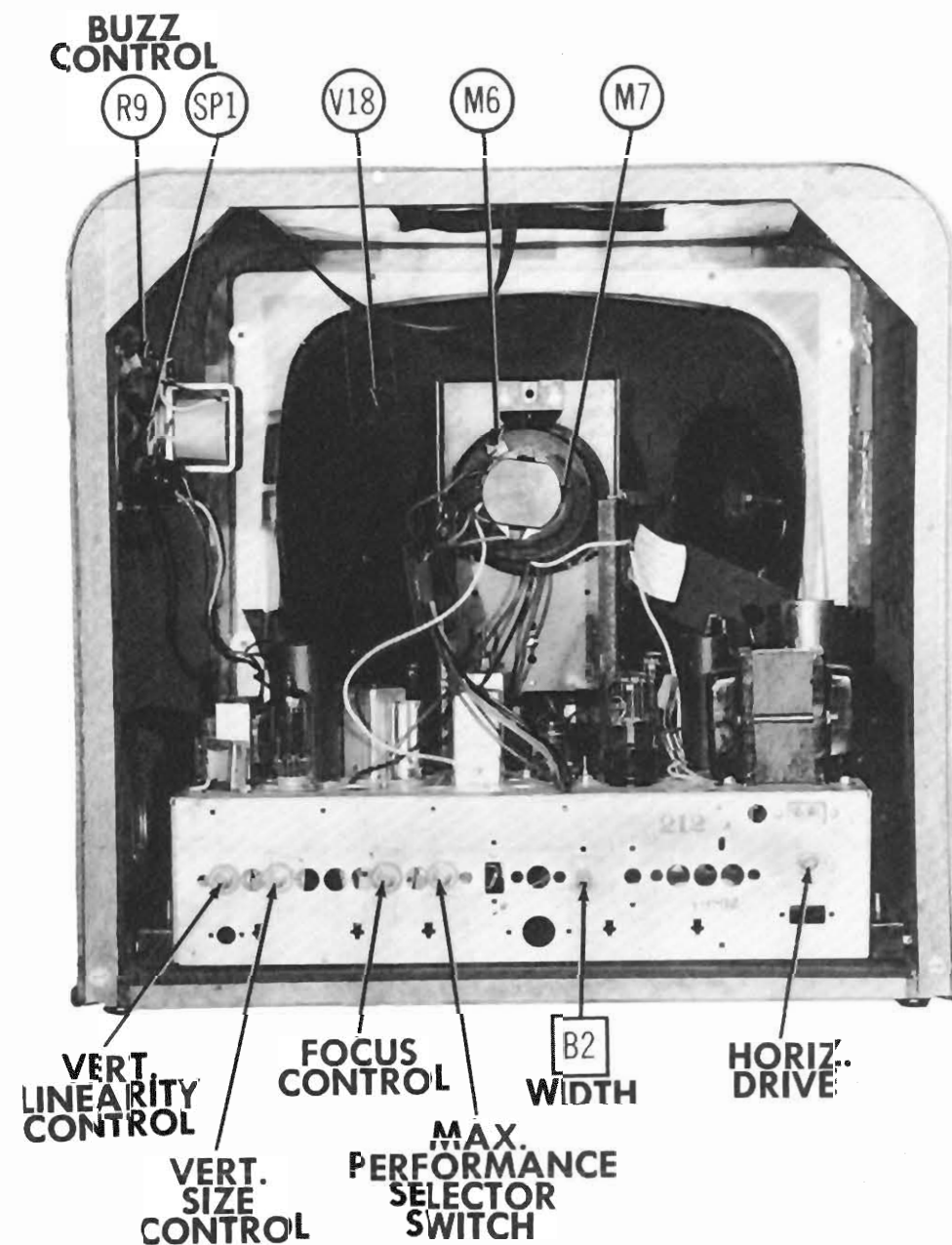


FIG. 6

HOFFMAN MODELS 7M112B, 7B113B, 7B114B (Ch. 212, 212M), 21B122, 21B306B, 21B507, 21M121, 21M305B, 21M5106, 21P123, 21P307B, 21P508 (Ch. 211, 211M)



RF TUNER-BOTTOM VIEW



CABINET-REAR VIEW

### HORIZONTAL SWEEP CIRCUIT ADJUSTMENTS

Turn the set on and tune in a TV station, preferably a test pattern.

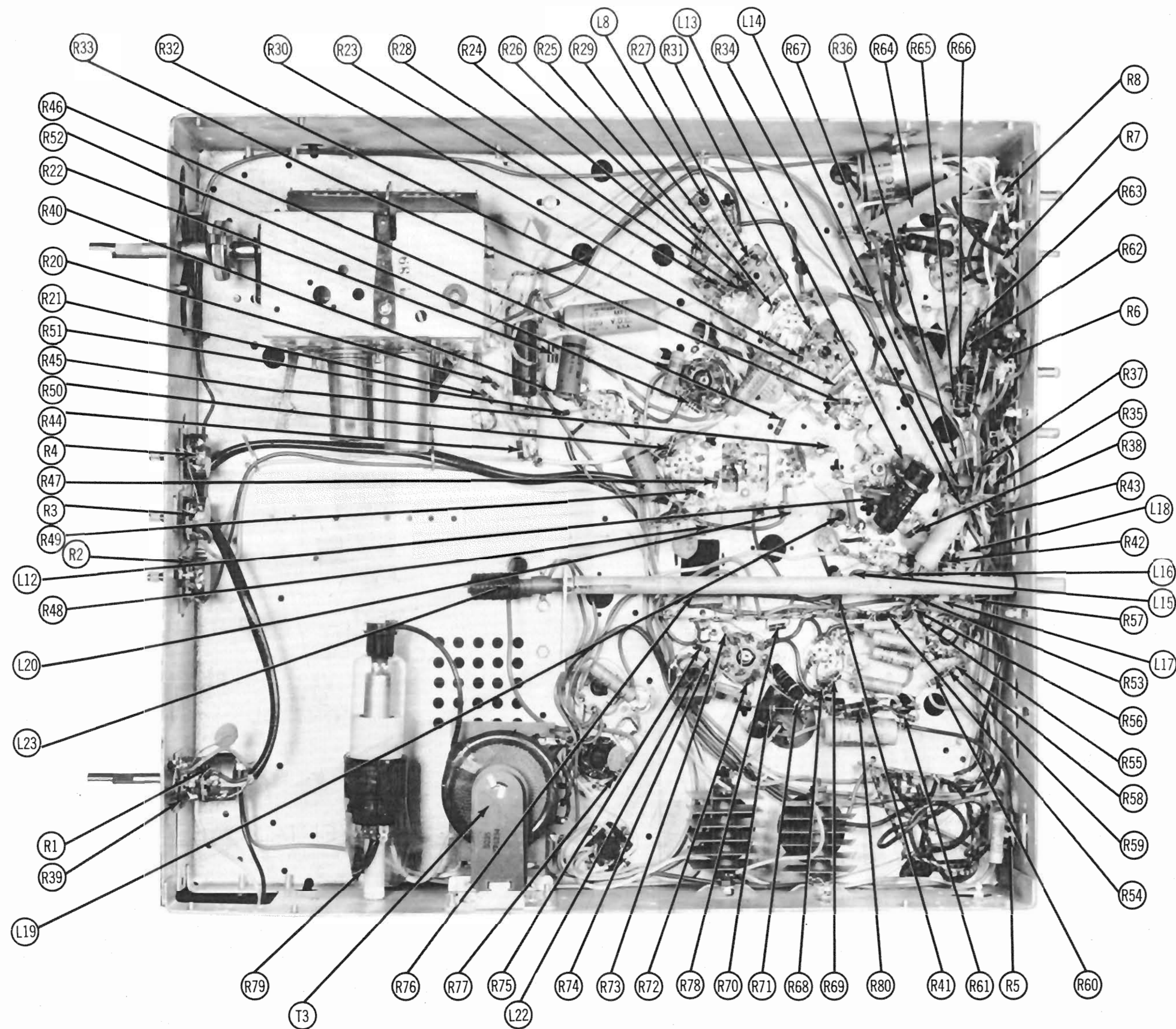
Adjust the horizontal hold control for horizontal synchronization without bending of vertical lines near the top of the picture.

If unable to obtain satisfactory horizontal synchronization by means of the horizontal hold control, adjust the horizontal frequency slug (B1). Turn B1 counter clockwise while turning the channel selector on and off channel until sync is lost. Turn B1 clockwise and note number of diagonal bars just before sync pull in. There should be not less than 2 bars. Continue turning B1 clockwise until sync is lost again, then turn B1 counter-clockwise and note the point where sync pull in occurs. Turn B1 an additional  $\frac{1}{2}$  turn counter clockwise.

Adjust the width slug (B2) for a picture slightly wider than necessary to fill the picture mask horizontally.

Adjust the horizontal drive control for the best compromise between brightness and horizontal linearity.

HOFFMAN MODELS 7M112B, 7B113B, 7B114B (Ch. 212, 212M), 21B122, 21B306B, 21B507, 21M121, 21M305B, 21M506, 21P123, 21P307B, 21P508 (Ch. 211, 211M)



CHASSIS BOTTOM VIEW-RESISTOR AND INDUCTOR IDENTIFICATION

HOFFMAN MODELS 7M112B, 7B113B, 7B114B (Ch. 212, 212M), 21B122, 21B306B, 21B507, 21M121, 21M305B, 21M506, 21P123, 21P307B, 21P508 (Ch. 211, 211M)

PARTS LIST AND DESCRIPTIONS (Continued)

SELENIUM RECTIFIER

ITEM No.	RATING	REPLACEMENT DATA					
	CURRENT	HOFFMAN PART No.	SYLVANIA PART No.	SELETRON PART No.	FEDERAL PART No.	MALLORY PART No.	SARKES TARZIAN PART No.
M1	.200A	9735	NK5	6Q4	1090A	6S300	300
M2	.200A	9735	NK5	6Q4	1090A	6S300	300

MISCELLANEOUS

ITEM No.	PART NAME	HOFFMAN PART No.	NOTES
M3	RF Tuner	9755	Video Detector (1N60)
M4	Crystal Diode	9075	
M5	Switch	6035	Maximum Performance Selector
M6	Centering Magnet	9722	
M7	Ion Trap	9702	
	Cabinet	7685	Model 7M112B (Mahogany)
	Cabinet	7686	Model 7B113B (Oak)
	Cabinet	7687	Model 7P114B (Cherry)
	Cabinet	7676	Model 21M121
	Cabinet	7677	Model 21B122
	Cabinet	7678	Model 21P123
	Cabinet	7682	Model 21M305B (Mahogany)
	Cabinet	7683	Model 21B306B (Oak)
	Cabinet	7684	Model 21P307B (Cherry)
	Cabinet	7697	Model 21M506 (Mahogany)
	Cabinet	7698	Model 21B507 (Oak)
	Cabinet	7699	Model 21P508 (Cherry)
	Back Cover	33587	Models 7M112B, 7B113B, 7P114B
	Back Cover	33582	Models 21M121, 21B122, 21P123
	Back Cover	33581	Models 21M305B, 21B306B, 21P307B
	Back Cover	33593	Models 21M506, 21B507, 21P508
	Safety Glass	772	Models 7M112B, 7B113B, 7P114B
	Safety Glass	769	Models 21M121, 21B122, 21P123, 21M305B, 21B306B, 21P307B, 21M506, 21B507, and 21P508.
	Mask	3848	Models 7M112B, 7B113B, 7P114B
	Mask	3816	Models 21M121, 21B122, 21P123, 21M305B, 21B306B, 21P307B, 21M506, 21B507, and 21P508.
	Antenna Assembly	99663	Models 7M112B, 7B113B, 7P114B
	Cover, Front Control	33583	
	Cover, Front Control	33584C	Models 21M121, 21B122, 21P123
	Cover, Front Control	33584	Models 21M305B, 21B306B, 21P307B, 21M506, 21B507, 21P508
	Knob	3866	Channel Selector, Models 7M112B, 7B113B, 7P114B, 21M121, 21B122, 21P123, 21M506, 21B507, 21P508.
	Knob	3866C	Channel Selector, Models 21M305B, 21B306B, 21P307B
	Knob	3867	Fine Tuning, Models 7M112B, 7B113B, 7P114B, 21M506, 21B507, 21P508.
	Knob	3867C	Fine Tuning, Models 21M305B, 21B306B, 21P307B.
	Knob	3864	Off-On Volume, Models 7M112B, 7B113B, 7P114B, 21M121, 21B122, 21P123, 21M506, 21B507, 21P508.
	Knob	3864C	Off-On Volume, Models 21M305B, 21B306B, 21P307B.
	Knob	3865	Contrast, Models 7M112B, 7B113B, 7P114B, 21M121, 21B122, 21P123, 21M506, 21B507, 21P508.
	Knob	3865C	Contrast, Models 21M305B, 21B306B, 21P307B.
	Knob	3813	Brightness
	Knob	3814	Vertical Hold
	Knob	3815	Horizontal Hold

SERVICING IN THE FIELD

TUNER OSCILLATOR ADJUSTMENTS

Touch-up adjustments of the RF tuner oscillator circuit may be accomplished by removal of the channel selector and fine tuning knobs. The adjustments are accessible, one at a time, through the small hole in the cabinet to the right of the channel selector shaft.

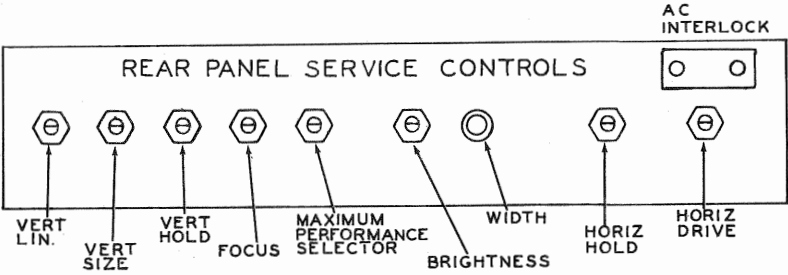
PICTURE TUBE SAFETY GLASS CLEANING

For picture tube safety glass cleaning it is necessary to remove chassis. (See disassembly instructions).

PICTURE TUBE REMOVAL

For picture tube removal it is necessary to remove chassis. (See disassembly instructions).

SERVICE ADJUSTMENT LOCATION



HORIZONTAL OSCILLATOR FIELD ADJUSTMENT

For the adjustment of the Horiz. oscillator slug, it is necessary to remove the rear cover, and supply power to set with a cheater cord. Adjustment is located on top of chassis. (See tube placement chart).

SOUND IF DETECTOR BUZZ ADJUSTMENT

To eliminate detector buzz, adjust the ratio det. secondary (L21) located on top of chassis. (See tube placement chart).

CENTERING

Horizontal and vertical centering is accomplished by mechanical means. Rotate centering magnet around the neck of picture tube until centering of picture is accomplished.

DISASSEMBLY INSTRUCTIONS

① Chassis Removal.

- Remove 4 push on type control knobs from front panel.
- Disconnect built-in antenna and transmission line from rear cover.
- Remove 6 wood screws. Remove rear cover.
- Disconnect speaker. Remove 4 speaker nuts. Remove speaker.
- Remove 4 chassis bolts. Remove chassis.

② Picture Tube Removal

- Removal of chassis is necessary.

③ Picture Tube Cleaning

- Removal of chassis is necessary.

HOFFMAN MODELS 7M112B, 7B113B, 7P114B (Ch. 212, 212M), 21B122, 21B306B, 21B507, 21M121, 21M305B, 21M506, 21P123, 21P307B, 21P508 (Ch. 211, 211M)

## PARTS LIST AND DESCRIPTIONS

## CAPACITORS (CONT.)

ITEM No.	RATING		REPLACEMENT DATA							NOTES
	CAP.	VOLT	HOFFMAN PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	MALLOY PART No.	SPRAGUE PART No.	
C62	.1	600	9449	P688-1	DF-104	PTE6D1		PT601	6TM-P1	Note 1
C63	.0047	400	4128	P688-0047	D6-472	PTE6D47	GP2-333-472	PT6247	6TM-D47	
C64	.047	400	4147	P488-047	DF-503	PTE4S47		PT4147	4TM-S47	
C65	3900	500	1085	I464-004		IDR5D4		MCB463	MS-24	
C66	470	500	14009	I469-0005		2R5T5		MCB245	MS-35	
C67	.001	400	4174	P688-001	D6-102	PTE6D1	GP2L-102	PT621	6TM-D1	
C68	470	500	14009	I469-0005		2R5T5		MCB245	MS-35	
C69	5000	4029		BPD-005	DD-502	TM5D5	811-005	DC-525	5HK-D5	
C70	68	3000	14042							
C71	.0047	600	4127	P688-0047	D6-472	PTE6D47	GP2-333-472	PT6247	6TM-D47	
C72	5000	4029		BPD-005	DD-502	TM5D5	811-005	DC-525	5HK-D5	

Note 1. Not used in all Models.

## CONTROLS

ITEM No.	RATING	REPLACEMENT DATA					INSTALLATION NOTES
		HOFFMAN PART No.	IRC PART No.	CLAROSTAR PART No.	CENTRALAB PART No.	MALLOY PART No.	
R1A	2500Ω	4892	QJ-405*	RTV-379		UF252L	Contrast-Panel Volume - Tapped @ 300KΩ - Rear
B	1Meg					UR16-T35	Attach to R1B
C	Switch					US-26	Horiz. Hold
R2A	50KΩ	4894	QJ-123	AG-49-S		U-35	Attach to R2A
B	Shaft	Not Req.	Not Req.	KSS-3		U-67	Brightness
R3A	5Meg	4895	QJ-141	AG-85-S	AB-87	U-67	Attach to R3A
B	Shaft	Not Req.	Not Req.	KSS-3	AK-4	U-50	Vert. Hold - See Note 1
R4A	850KΩ	4893	QJ-133	AG-58-S		U-50	Attach to R4A
B	Shaft	Not Req.	Not Req.	KSS-3		U-29	Horiz. Drive
R5A	25KΩ	4859	QJ-120	AG-40-S	AB-26	U-16	Attach to R5A
B	Shaft	Not Req.	Not Req.	FES-1/4	AK-1	U-16	Focus
R6A	1.5Meg	4871	QJ-138	AG-83-S	AK-75	U-16	Attach to R6A
B	Shaft	Not Req.	Not Req.	KSS-3	AK-1	U-67	Vert. Size - See Note 2
R7A	5Meg	4875	QJ-141	AG-95-S		U-67	Attach to R7A
B	Shaft	Not Req.	Not Req.	KSS-3		U-4	Vert. Linearity
R8A	750Ω	4875	QJ-105	AG-8-S	AB-5	U-4	Attach to R8A
B	Shaft	Not Req.	Not Req.	KSS-3	AK-1	Not Req.	Buzz - See Note 3
R9	6Ω						

Note 1. Connect a 330KΩ resistor in series with clockwise terminal &amp; ground.

Note 2. Connect a 1Meg resistor in series with clockwise terminal &amp; positive side of C4.

Note 3. Not used in all Models.

\* Universal replacement (Malloy exact duplicate - part #UE3825)

† CONCENTRIK EQUIVALENT - KIT K-2, BASE ELEMENTS &amp; SHAFTS BIT-III &amp; PI-14 (Panel)

B13-137X &amp; R1-202 (Rear) &amp; SWITCH 76-1.

## RESISTORS

ITEM No.	RATING	REPLACEMENT DATA			NOTES	ITEM No.	RATING	REPLACEMENT DATA			NOTES
		HOFFMAN PART No.	IRC PART No.	NOTES				HOFFMAN PART No.	IRC PART No.	NOTES	
R10	15KΩ			Not 1		R46	2200Ω	4650	BTS-2200		
R11	47KΩ			Not 2		R47	270Ω	4663	BTS-270		
R12	330KΩ			Not 3		R48	33KΩ	4586	BTS-33K		
R13	470Ω					R49	10KΩ-5%	4624	BTS-10K-5%		
R14	180KΩ					R50	10KΩ-5%	4624	BTS-10K-5%		
R15	10KΩ					R51	1500Ω	4630	BTS-1500		
R16	220KΩ					R52	33KΩ	4586	BTS-33K		
R17	3900Ω					R53	10KΩ	4597	BTS-10K		
R18	10KΩ					R54	470KΩ	4506	BTS-470K		
R19	15KΩ					R55	2.2Meg	4606	BTS-2.2Meg		
R20	100KΩ					R56	680KΩ	4548	BTS-680K		
R21	100KΩ					R57	560KΩ	4590	BTS-560K		
R22	100KΩ					R58	22KΩ	4628	BTS-22K		
R23	1000Ω					R59	2200Ω	4560	BTS-2200		
R24	4700Ω					R60	3900Ω	4527	BTS-3900		
R25	47Ω					R61	2700Ω	4579	BTS-2700		
R26	1000Ω					R62	47KΩ	4559	BTS-47K		
R27	10KΩ					R63	10KΩ	4597	BTS-10K		
R28	1000Ω					R64	875Ω	4760	1/3/4A-9000		
R29	47Ω					R65	3300Ω	4607	BTS-3300		
R30	1000Ω					R66	1800Ω	4640	BTS-1800		
R31	8200Ω					R67	120Ω	4546	BTS-120		
R32	150Ω					R68	100KΩ	4571	BTS-100K		
R33	1000Ω					R69	100KΩ	4571	BTS-100K		
R34	5000Ω					R70	4.7Meg	4544	BTS-4.7Meg		
R35	1.5Meg					R71	470KΩ	4506	BTS-470K		
R36	1.5Meg					R72	8200Ω	4651	BTS-8200		
R37	470KΩ					R73	1500Ω	4630	BTS-1500		
R38	1 Meg					R74	68KΩ	4600	BTS-68K		
R39	150Ω					R75	120KΩ	4548	BTS-120K		
R40	100KΩ					R76	5600Ω	4629	BTS-5600		
R41	33KΩ					R77	470KΩ	4622	BTS-470K		
R42	4700Ω					R78	1000Ω	4659	BTS-1000		
R43	150KΩ					R79	2.2Ω	4735			
R44	220Ω					R80	15Ω	14509			
R45	150Ω					R81	7.5Ω	4762			

Note 1. Some models use a 22KΩ resistor in this application.

Note 2. Some models use a 220KΩ resistor in this application.

Note 3. Some models use a 1000Ω resistor in this application.

## TRANSFORMER (FILAMENT)

ITEM No.	RATING	REPLACEMENT DATA					
		HOFFMAN PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.	TRIAD PART No.	
T1	117VAC @ .56A tap @ 12.6V @ .64A tap @ 6.3V @ 6.8A	6.3VAC @ 1.2A					2034

## TUBES (SYLVANIA or Equivalent)

ITEM No.	USE	REPLACEMENT DATA		RTMA BASE TYPE	NOTES
		HOFFMAN PART No.	STANDARD REPLACEMENT		
V1A	RF Amplifier	6BQ7	6BQ7	9AJ	
B	RF Amplifier	6BK7	6BK7	9AJ	
V2	Converter	6J6	6J6	7BF	
V3	1st. Video IF Amp.	6CB6	6CB6	7CM	
V4	2nd. Video IF Amp.	6CB6	6CB6	7CM	
V5	3rd. Video IF Amp.	6CB6	6CB6	7CM	
V6	Video Output	6AH6	6AH6	7BK	
V7	Sound IF Amp.	6AU6	6AU6	7BK	
V8	Ratio Detector	6AL5	6AL5	6BT	
V9	Audio Output	6C4	6C4	6BT	
V10	Sync Separator	6W6GT	6W6GT	7S	
V11	Sync Phase Inv.	6SN7GT	6SN7GT	8BD	
V12	Vert. Oscillator	12BH7	12BH7	9A	
V13	Vert. Output	6AL5	6AL5	6BT	
V14	Horiz. AFC	6SN7GT	6SN7GT	8BD	
V15	Horiz. Mult.	6BQ6GT	6BQ6GT	6AM	
V16	Horiz. Output	12AX4GT	12AX4GT	4CG	
V17	Damper	1B3GT	1B3GT	3C	
V17	RV Rectifier	1B3GT	1B3GT	3C	

## CATHODE-RAY TUBE

ITEM No.	HOFFMAN PART No.	SYLVANIA PART No.	RTMA BASE TYPE	NOTES
V18A	17HP4	17HP4	12C	① Circuit changes necessary
B	17TP4		12C	
C	21FP4A		12C	
D	21MP4		12C	

## CAPACITORS

Capacity values given in the rating column are in mfd. for Electrolytic and Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING	REPLACEMENT DATA						NOTES
		HOFFMAN PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	MALLOY PART No.	
C1	140	4245	E3A249		XA004		FP17	R1267
C2A	100	4246	E4D491		D109		FM419.4	TVL-4561
B	200							
C	30							
D	10							
C3A	200	4243	E4B257		XB006		FP216.1	TVL-2444
B	150				BR415			
C4	20	4233	PRS450/20		BR2045A			
C5	10	4244	PRS50/10		BR105			
C6	5	4209	PRS150/4		BR550			
C7	1000		BPD-001	DD-102	TM5D1	801-001	DC-521	5HK-D1
C8	1000		BPD-001	DD-102	TM5D1	801-001	DC-521	5HK-D1
C9	8-8			829-10				
C10	2.2			TCZ-2.2				
C11	1.5			TCZ-1.5				
C12	47			TCZ-1.5				
C13	1000			DD-470	TM5Q5	801-001	UC-5447	5GA-Q47
C14	5-3			DD-102	TM5D1	801-001	DC-521	5HK-D1
C15	47			DD-470	TM5Q5	801-001	UC-5447	5GA-Q47
C16	1.5-3			829-3				
C17	10			TCZ-10				
C18	5			TCN-5				
C19	1000			DD-102	TM5D1	801-001	DC-521	5HK-D1
C20	6.8			TCZ-6.8				
C21	1000			DD-102	TM5D1	801-001	DC-521	5HK-D1
C22	300			DD-102	TM5D1	801-001	DC-521	5HK-D1
C23	1	4150		DD-102	TM5D1	801-001	DC-521	5HK-D1
C24	5000	4029		DD-102	TM5D1	801-001	DC-521	5HK-D1
C25	1000	4031		DD-102	TM5D1	801-001	DC-521	5HK-D1
C26	5000	4029		DD-102	TM5D1	801-001	DC-521	5HK-D1
C27	1000	4031		DD-102	TM5D1	801-001	DC-521	5HK-D1
C28	5000	4029		DD-102	TM5D1	801-001	DC-521	5HK-D1
C29	1000	4031		DD-102	TM5D1	801-001	DC-521	5HK-D1
C30	5000	4029		DD-102	TM5D1	801-001	DC-521	5HK-D1
C31	5000	4029		DD-102	TM5D1	801-001	DC-521	5HK-D1
C32	10	4036		DD-102	TM5D1	801-001	DC-521	5HK-D1
C33	5	4093		DD-102	TM5D1	801-001	DC-521	5HK-D1
C34	.47	4172		DD-102	TM5D1	801-001	DC-521	5HK-D1
C35	.1	4193		DD-102	TM5D1	801-001	DC-521	5HK-D1
C36	5000	4029		DD-102	TM5D1	801-001	DC-521	5HK-D1
C37	30	4043		DD-102	TM5D1	801-001	DC-521	5HK-D1
C38	.1	4150		DD-102	TM5D1	801-001	DC-521	5HK-D1
C39	2.2	4069		DD-102	TM5D1	801-001	DC-521	5HK-D1
C40	68	4046		DD-102	TM5D1	801-001	DC-521	5HK-D1
C41A	4000	4036		DD-102	TM5D1	801-001	DC-521	5HK-D1
B	4000			DD-102	TM5D1	801-001	DC-521	5HK-D1
C42	330	4065		DD-102	TM5D1	801-001	DC-521	5HK-D1
C43	1000	4031		DD-102	TM5D1	801-001	DC-521	5HK-D1
C44	5000	4029		DD-102	TM5D1	801-001	DC-521	5HK-D1
C45	5000	4029		DD-102	TM5D1	801-001	DC-521	5HK