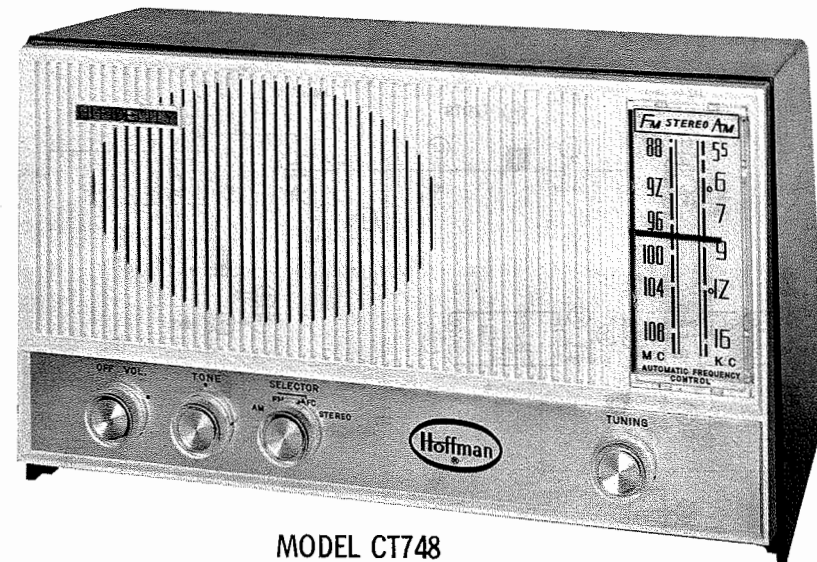
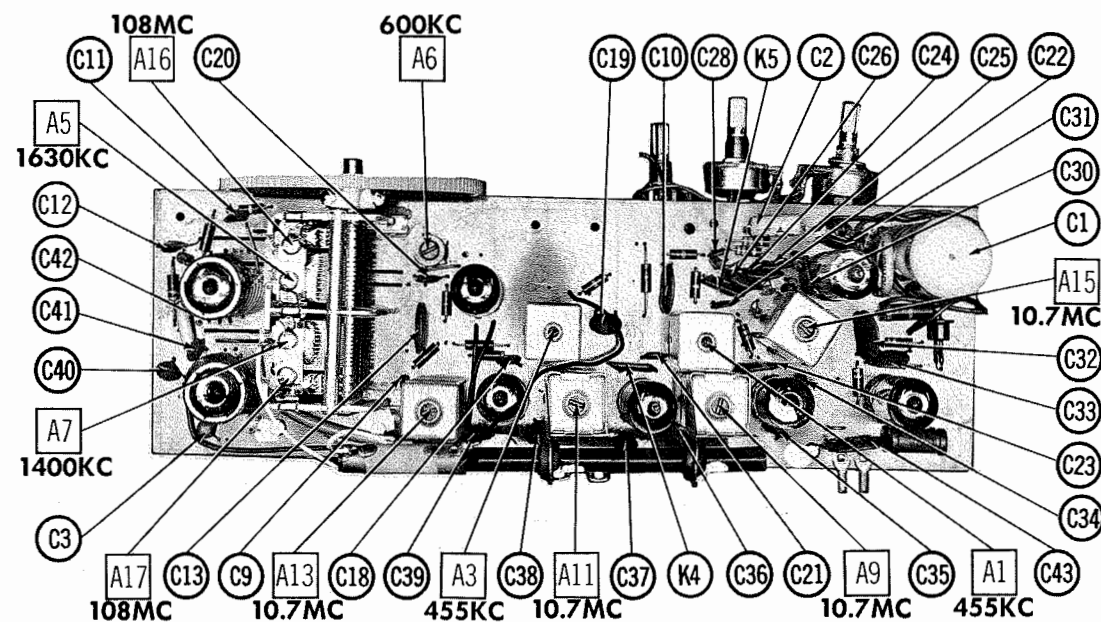


**HOFFMAN  
MODELS BT748, CT748**



MODEL CT748

TRADE NAME	Hoffman Models BT748, CT748		
SUPPLIER	Hoffman Electronics Corp., A Division of Consumer Products, 6200 S. Avalon Blvd., Los Angeles 3, California		
TYPE SET	AC-DC Operated 8 Tube AM-FM Receiver		
POWER SUPPLY	110-120 Volts AC-DC	RATING	28 Watts, .30 Amp. @ 117 Volts AC
TUNING RANGE	BROADCAST 540-1630KC	FREQ MOD	88-108MC

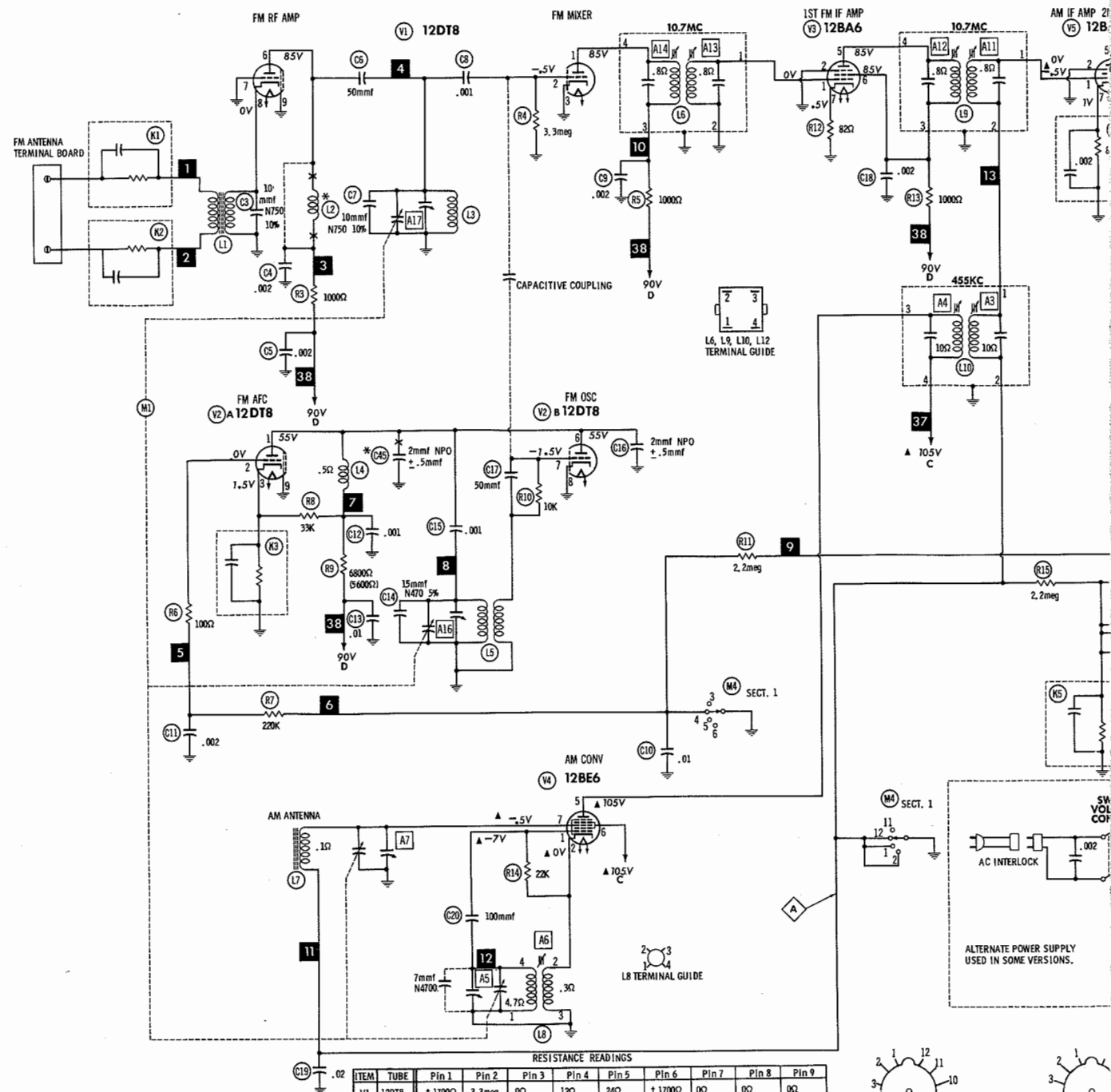


**HOWARD W. SAMS & CO., INC.** Indianapolis 6, Indiana

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. MK589

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DATE 3-64 SET 684 FOLDER 9



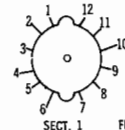
\* NOT USED IN SOME VERSIONS

1. Voltage measurements taken with vacuum tube voltmeter.
2. All controls set for normal operation, no signal applied.
3. Measured values are from socket pin or terminal to common ground.
4. All terminals viewed from bottom unless otherwise designated.
5. Numbers assigned to terminals may not be found on the unit.
6. Supply voltage maintained at rated value for voltage readings.

A PHOTOFACT STANDARD NOTATION SCHEMATIC with CIRCUITRACE

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ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	12DT8	1700Ω	3.3meg	0Ω	12Ω	24Ω	1700Ω	0Ω	0Ω	0Ω
V2	12DT8	17500Ω	220K	800Ω	12Ω	0Ω	17500Ω	10K	0Ω	0Ω
V3	12BA6	.8Ω	0Ω	36Ω	48Ω	1700Ω	1700Ω	82Ω		
V4	12BE6	22K	.3Ω	24Ω	36Ω	1A 700Ω	1A 700Ω	2.4meg		
V5	12BA6	10Ω	0Ω	48Ω	60Ω	1700Ω	1700Ω	82Ω		
V6	12AU6	100K	0Ω	60Ω	72Ω	15.7K	15.7K	0Ω		
V7	12AV6	4.7meg	0Ω	72Ω	84Ω	0Ω	0Ω	140K		
V8	5EH5	68Ω	47K	84Ω	120Ω	NC	1700Ω	1275Ω		



FUNCTION SWITCH M4  
TERMINAL GUIDE  
(REAR VIEW)



ALL MEASUREMENTS TAKEN IN "FM" POSITION UNLESS OTHERWISE  
▲ MEASURED IN "AM" POSITION.

PARTS LIST AND DESCRIPTION

TUBES

• AMPEREX • GENERAL ELECTRIC • RCA • RAYTHEON • SYLVANIA •			
ITEM No.	USE	TYPE	TYPE
V1	FM RF Amp. -FM Mixer	12DT8	12BA6
V2	AF-FC FM Osc.	12DT8	12AU6
V3	1st FM IF Amp.	12BA6	12AV6
V4	AM Conv.	12BE6	35ER5

POWER RECTIFIERS

ITEM No.	MEASURED CURRENT	ORIGINAL Part or Type No.	RECTIFIERS	
			MALLORY PART No.	RCA PART No.
XI	.070A	742009	1N539 or A300 or D900	1N1763 or 1N2861 or 1N3194

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA			
		AEROVOX PART No.	CORNELL DUBILIER PART No.	GENERAL ELECTRIC PART No.	SPRAGUE PART No.
C1A	80 150	AFH3-11-50	XC9-44	TMT-3133	WT458
C2	5 50	CRE754A	NLW5-50	MT1-3	MTLV5-50

FIXED CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA			
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL DUBILIER PART No.	ELWENCO PART No.
C3	10 10% N750		N750-D110	DTN-10	C10Q10	CCTN-100
C4	.002		BPD-002	DD-202	BYA1002	CCD-202
C5	.002		DI-50	DD-202	BYA1002	CCD-202
C6	50		DI-50	DD-202	BYA1002	CCD-202
C7	10 10% N750		N750-D110	DTN-10	C10Q10	CCTN-100
C8	.001		BPD-001	DD-102	BYA1001	CCD-102
C9	.002		BPD-002	DD-202	BYA1002	CCD-202
C10	.01		BPD-01	DD-103	BYA1001	CCD-103
C11	.002		BPD-002	DD-202	BYA1002	CCD-202
C12	.001		BPD-001	DD-102	BYA1001	CCD-102
C13	.01		BPD-01	DD-103	BYA1001	CCD-103
C14	15 N470 5%		BPD-01	DD-103	BYA1001	CCD-103
C15	.001		BPD-001	DD-102	BYA1001	CCD-102
C16	2 NFO ±.5mmf		NFO-D12.2	DTZ-2R2	BYA1002	CCTO-2R2
C17	50		DI-50	DD-202	BYA1002	CCD-202
C18	.002		BPD-002	DD-202	BYA1002	CCD-202
C19	.02		DI-100	DD-203	BYA82	CCD-203
C20	100		DI-100	DD-203	BYA82	CCD-203
C21	.002		BPD-002	DD-202	BYA1002	CCD-202
C22	.01		BPD-01	DD-202	BYA1002	CCD-202
C23	200		DI-200	DD-201	LA10T1-S3	CCD-101
C24	200 10%		DI-200	DD-201	LA10T1-S3	CCD-101
C25	200 10%		DI-200	DD-201	LA10T1-S3	CCD-101
C26	200 10%		DI-200	DD-201	LA10T1-S3	CCD-101
C27	.01 600V		P688N-01	DD-103	P688N-01	CCD-201
C28	.001		BPD-001	DD-102	BYA1001	CCD-102
C29	.005		BPD-005	DD-502	BYA1005	CCD-502
C30	.005		BPD-005	DD-502	BYA1005	CCD-502
C31	200		BPD-0002	DD-201	LA10T1-S3	CCD-201
C32	.01		BPD-01	DD-103	BYA1001	CCD-103
C33	.005		BPD-005	DD-502	BYA1005	CCD-502
C34	.002		BPD-002	DD-202	BYA1002	CCD-202
C35	.002		BPD-002	DD-202	BYA1002	CCD-202
C36	.002		BPD-002	DD-202	BYA1002	CCD-202
C37	.002		BPD-002	DD-202	BYA1002	CCD-202
C38	.002		BPD-002	DD-202	BYA1002	CCD-202
C39	.002		BPD-002	DD-202	BYA1002	CCD-202
C40	.002		BPD-002	DD-202	BYA1002	CCD-202
C41	.002		BPD-002	DD-202	BYA1002	CCD-202
C42	.002		BPD-002	DD-202	BYA1002	CCD-202
C43	.01 1.5KV		DAC-2T10	DD-2103	BYA1001	CCD-2103
C44	.05 400V		NFO-D12.2	DTZ-2R2	BYA1002	CCTO-2R2
C45	2 NFO ±.5mmf		NFO-D12.2	DTZ-2R2	BYA1002	CCTO-2R2

† Alternate Value Note 1 Not used in some versions

CONTROLS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	USE	RESIST-ANCE	REPLACEMENT DATA			
			Hoffman PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.
R1	Volume, Switch	500K		F2-500K, SU204, KR-1 or (B-40-S)	A47-500K-Z KS8-3 SWE-12	Q13-133, 70-1 or (BU1, CF25, SS1, GC)*
R2	Tone	1meg		F2-1meg, SU204, or (B-70)	A47-1meg-Z KS8-3	Q13-137 or (BU1, CF26, SS1, DC1)*

\*"SNAPTROL"

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA			
		Hoffman PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.
L1	FM Ant.	780069			
L2	RF Choke (21 Turns)	780070			
L3	FM RF	780072			
L4	RF Choke (30 Turns)	780073			
L5A	FM Osc., PrL				
L6	FM Osc., Sec.				
L7	1st FM IF	780057	FM-256 BC-419	RTC-8046	T654
L8	Loopstick	924019	2002	RTC-8815	TC503
L9	AM Osc.	780041			
L10	2nd FM IF	780058	FM-256 BC-356	RTC-8046	T654
L11	1st AM IF	780061			
L12	3rd FM IF	780059			
L13	2nd AM IF	780062			
L14	Ratio Detector	780060	BC-357 FM-257	RTC-8864	T647
	FL Choke (19 Turns)	780074	1465-PC	RTC-9053	T659

ALIGNMENT INSTRUCTIONS

Maintain line voltage at rated value. Allow a 15 minute warmup for receiver and equipment. Use only enough generator output to obtain a suitable indication. Suggested Alignment Tools: GENERAL CEMENT: 8868, 9087, 9089 WALLSCO: 2528, 2541, 2587

AM ALIGNMENT - SELECTOR IN AM POSITION

Fashon loop of several turns of wire and connect generator across loop.				
GENERATOR FREQUENCY	DIAL SETTING	INDICATOR	ADJUST	REMARKS
455KC (Unmod.)	Tuning gang fully open.	DC probe of VTVM to point ⬠; common to ground.	A1, A2, A3, A4	Adjust for maximum.
1630KC	"	"	A5	"
800KC	Tune to signal	"	A6	Rock tuning gang and adjust for maximum. Repeat steps 2 and 3.
1400KC	"	"	A7	Adjust for maximum.

FM ALIGNMENT USING AM SIGNAL GENERATOR - SELECTOR IN FM POSITION

High slide to ungrounded shield over FM converter tube. low slide to ground for IF. Across FM antenna terminals with 1200 carbon resistor in series with each lead for IF.				
GENERATOR FREQUENCY	DIAL SETTING	INDICATOR	ADJUST	REMARKS
10.7MC (Unmod.)	Point of non-interference.	DC probe of VTVM to point ⬠; common to ground.	A8, A9 A10, A11 A12, A13 A14	Adjust for maximum.
"	"	DC probe to point ⬠; common to ground.	A15	Adjust for zero reading. A positive or negative reading will be obtained on either side of the correct setting.
106MC (Unmod.)	108MC	DC probe of VTVM to point ⬠; common to ground.	A16 A17	Adjust for maximum.

FM IF ALIGNMENT USING FM SIGNAL GENERATOR - SELECTOR IN FM POSITION

High slide to ungrounded shield over FM converter. low slide to ground. Use 60% frequency modulated signal with 450KC sweep. Use 120% sawtooth voltage in scope for horizontal deflection.				
GENERATOR FREQUENCY	DIAL SETTING	INDICATOR	ADJUST	REMARKS
10.7MC (450KC Swp.)	Point of non-interference.	Vert. amp. of scope to point ⬠; low side to ground.	A8, A9 A10, A11 A12, A13 A14	Disconnect stabilizing capacitor C2. Adjust for maximum gain and symmetry of response for modulation. Fig. 1 with marker as shown.
"	"	Vert. amp. to point ⬠; low side to ground.	A15	Adjust to place marker at center of crossover lines similar to Fig. 2. SLIGHTLY retouch A 8 for maximum amplitude and straightness of crossover lines.

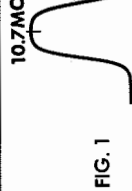


FIG. 1

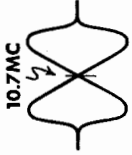


FIG. 2

PARTS LIST AND DESCRIPTION (CONTINUED)

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE	REPLACEMENT DATA				NOTES
		Hoffman PART No.	HERIT PART No.	STANCOR PART No.	THORPSON PART No.	
T1	2700Ω 6-8Ω	724090	A-4103	22588	S-63X	

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		Hoffman PART No.	QUJAM PART No.	
SP1	4 X 6" PM 6-8Ω	708917	46A128	

MISCELLANEOUS

ITEM No.	PART NAME	Hoffman PART No.	NOTES
M1	Tuning Cap		
M2	Diode		
M3	Diode		
M4	Switch		

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	Hoffman PART No.	REPLACEMENT DATA
K1	Antenna Isolation		986013 (K438P)	
K2	Antenna Isolation		986013 (K438P)	
K3	FM AFC Cath Bias		986019 (K438P)	
K4	IF Cath Bias		986018 (K438P)	
K5	AM RF Filter	820, .002mfd	986017 (K438P)	

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM		PART No.		ITEM		PART No.	
Knob, Tuning, Volume, Tone, Function		500074		Cabinet, Back		363077	
Cabinet, Front		363076		Cabinet, Back, Model CT748		363078	

WIRING DATA

General-use Unshielded Hook-up Wire		Use BELDEN No. 8530 (Solid) Available in 12 Colors	
Power Cord		8524 (Stranded) Available in 12 Colors	
Power Cord (Interlock Type)		1700 (Plastic) or 1728 (Rubber) - 6 Ft.	
		Use BELDEN No. 1700 (Plastic) or 1728 (Rubber) - 8 Ft.	
		Use BELDEN No. 8074 (Rubber) or 8605 (Plastic)	

