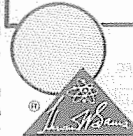
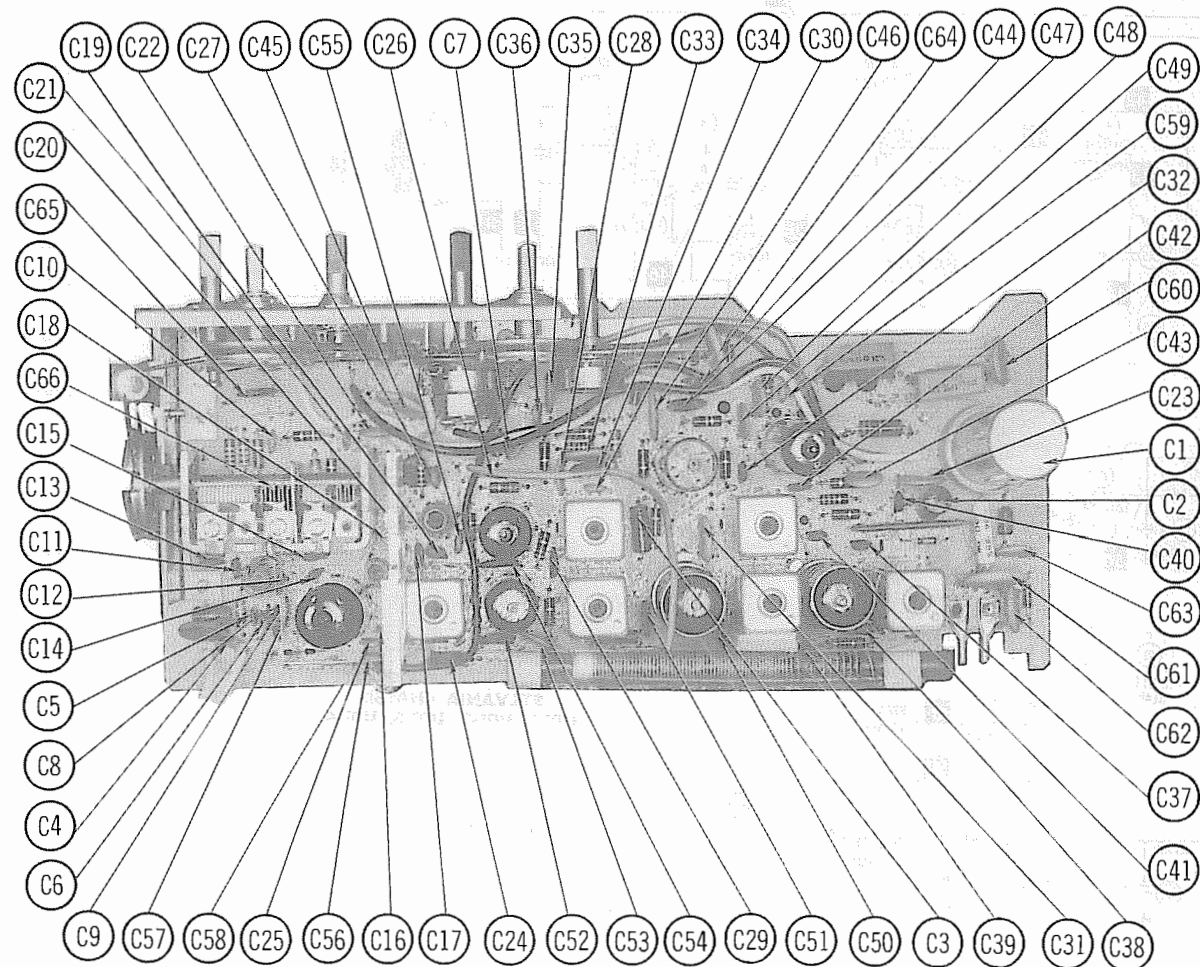
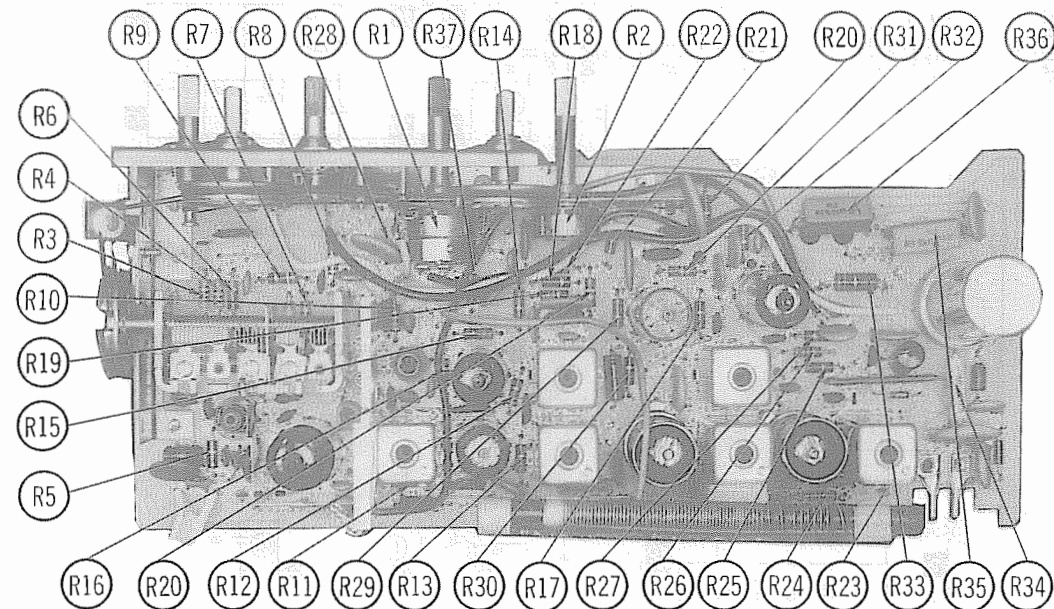


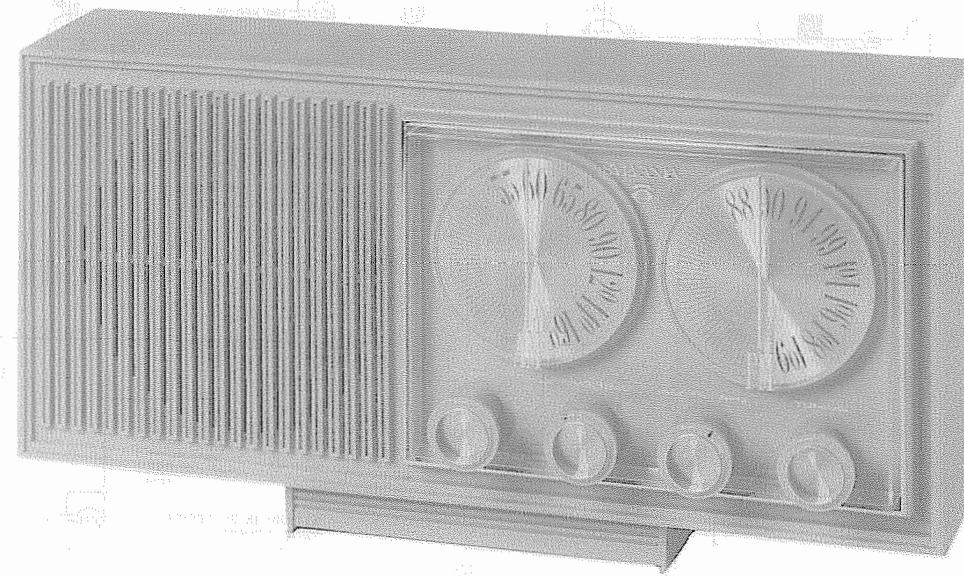
8 430101
HOWARD W. SAMS & CO., INC.
INDIANAPOLIS, INDIANA 46206



PHOTOFACT® Folder

with CIRCUITRACE

SYLVANIA CHASSIS
U01-1, U01-2, U01-3, U01-4



TRADE NAME: Sylvania Models: BK10BG/BL, BK10W-1 .. Chassis U01-4
BT1GN, BT1GN-1, BT2BG U01-1
BT3W, BT3W-1 U01-3
BT4W, BT4W-1 U01-2

SUPPLIER: For Current Address, See Annual Index.

TYPE SET: 7 Tube AM-FM Receiver

POWER SUPPLY: 110-120 Volts AC, 60 Cycles RATING: 12 Watts, .22 Amp. @ 117 Volts AC

TUNING RANGE: BROADCAST: 550-1600KC FREQ. MOD.: 88-109MC

RESISTANCE MEASUREMENTS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	12DT8	2400Ω †	470K	100Ω	85Ω	70Ω	4400Ω †	33K	0Ω	0Ω
V2	12AU6	1Ω	0Ω	42Ω	55Ω	2200Ω †	2200Ω †	68Ω		
V3	12BE6	22K	.8Ω	70Ω	55Ω	3600Ω †Δ	3600Ω †Δ	2.4meg		
V4	12BA6	3meg	0Ω	42Ω	30Ω	2400Ω †	2400Ω †	0Ω		
V5	12AU6	250K	0Ω	30Ω	16Ω	18K †	18K †	0Ω		
V6	12AV6	1meg	1.5K	0Ω	16Ω	0Ω	0Ω	100K †		
V7	50C5	68Ω	1meg	150Ω	85Ω	1meg	1400Ω †	440Ω †		
ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9

† MEASURED FROM OUTPUT OF X1.

Δ MEASURED IN "AM" POSITION.

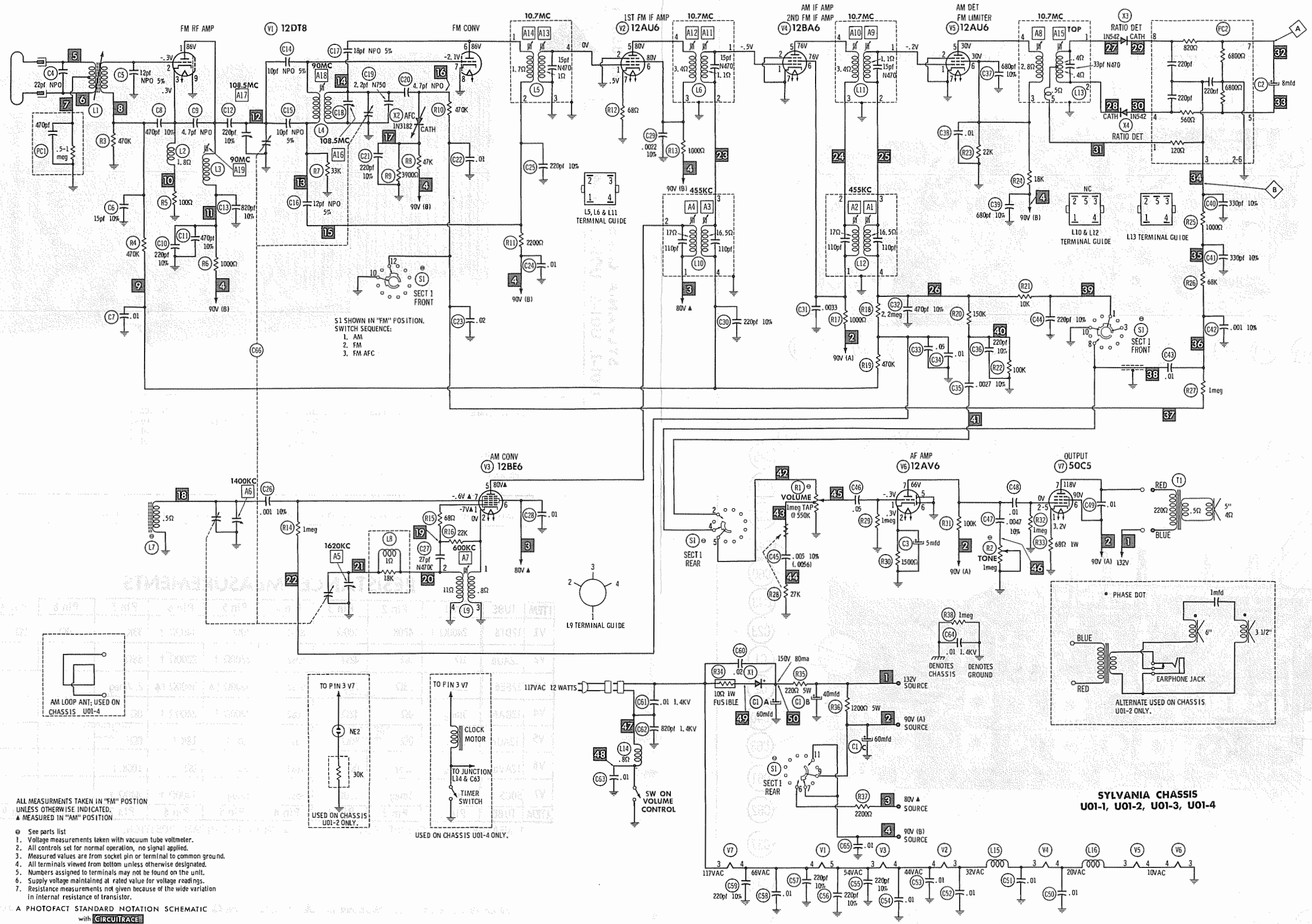
HOWARD W. SAMS & CO., INC. Indianapolis, Indiana 46206



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. NK880

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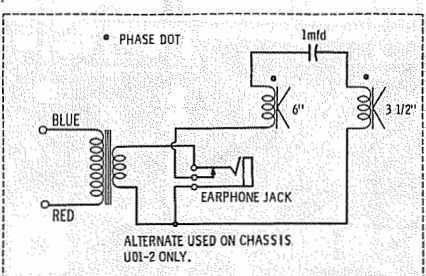
DATE 11 -66 SET 850 FOLDER 8



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

See parts list
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.
7. Resistance measurements not given because of the wide variation in internal resistance of transistor.

A PHOTOFAC STANDARD NOTATION SCHEMATIC
with CIRCUITRACE
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SYLVANIA CHASSIS
U01-1, U01-2, U01-3, U01-4

ALIGNMENT INSTRUCTIONS

Maintain line voltage at 117 volts. Use only enough generator output to obtain a suitable indication. Allow a 15 minute warmup for receiver and equipment.
CAUTION: Use isolation transformer, if available. If not, observe polarity when connecting test equipment.
Suggested Alignment Tools:
A1 thru A4, A7 thru A15, A18, A19... GENERAL CEMENT #8606, 8606L, 8869 ... WALSCO #2543, 2544, 2588
A5, A6, A16, A17 GENERAL CEMENT #8868, 8987, 9089 WALSCO #2531-X, 2541, 2587

AM ALIGNMENT — SELECTOR IN AM POSITION

Fashion loop of several turns of wire and connect generator across loop. Set volume control at maximum.

GENERATOR FREQUENCY	DIAL SETTING	INDICATOR	ADJUST	REMARKS
1. 455KC (400 Mod.)	Tuning gang fully open.	Output Meter across Voice coil.	A1, A2, A3, A4	Adjust for maximum. Repeat until no further improvement can be made.
2. 1620KC	"	"	A5	Adjust for maximum.
3. 1400KC	Tune to signal.	"	A6	"
4. 600KC	"	"	A7	Rock tuning gang and adjust for maximum. Repeat steps 2 thru 4 until no further improvement can be made.

FM ALIGNMENT USING AM SIGNAL GENERATOR — SELECTOR IN FM POSITION

High side to ungrounded shield over FM converter tube, low side to ground.

GENERATOR FREQUENCY	DIAL SETTING	INDICATOR	ADJUST	REMARKS
5. 10.7MC (Unmod.)	Point of non-interference.	DC probe of VTVM to point A; common to ground.	A8, A9, A10, A11, A12, A13, A14	Adjust for maximum.
6. "	"	DC probe to point B; common to ground.	A15	Adjust for zero reading. A positive or negative reading will be obtained on either side of the correct setting.

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

High side to ungrounded shield over FM converter, low side to ground. Use only enough marker signal to obtain indication. Use 80v frequency modulated signal with 450KC sweep. Use 120v sawtooth voltage in scope for horizontal deflection.

GENERATOR FREQUENCY	DIAL SETTING	INDICATOR	ADJUST	REMARKS
5. 10.7MC (450KC Swp.)	Point of non-interference	Vert. amp. of Scope to point A; low side to ground.	A8, A9, A10, A11, A12, A13, A14	Disconnect stabilizing capacitor C2. Adjust for maximum gain and symmetry of response similar to Fig. 1 with marker as shown. Reconnect C2.
6. "	"	Vert. amp. to point B; low side to ground.	A15	Adjust A15 (Secondary) to place marker at center of crossover lines similar to Fig. 2. Adjust A8 (Primary) for maximum amplitude and straightness of crossover lines.

FM RF ALIGNMENT

Connect generator across antenna terminals with 120Ω carbon resistors in series with each lead.

GENERATOR FREQUENCY	DIAL SETTING	INDICATOR	ADJUST	REMARKS
7. 108.5MC	Set at high end.	DC probe of VTVM to point A; common to ground.	A16, A17	Adjust for maximum.
8. 90MC	Tune to signal.	"	A18, A19	Rock tuning and adjust for maximum. Repeat steps 7 and 8 until no further improvement can be made.

DIAL CORD STRINGING

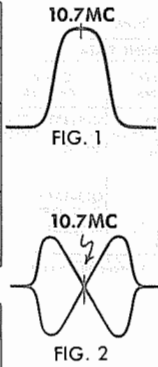
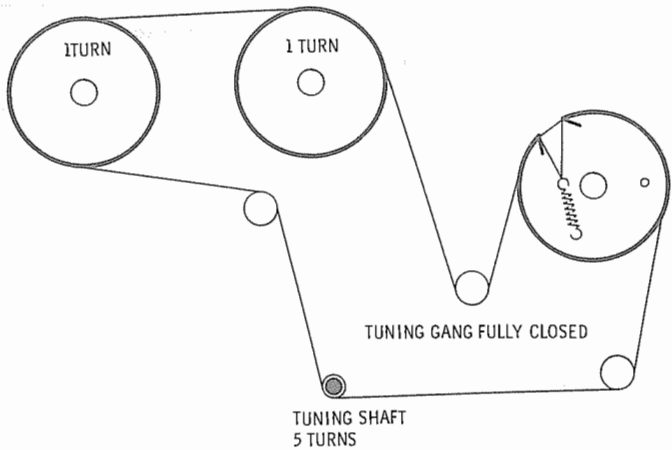
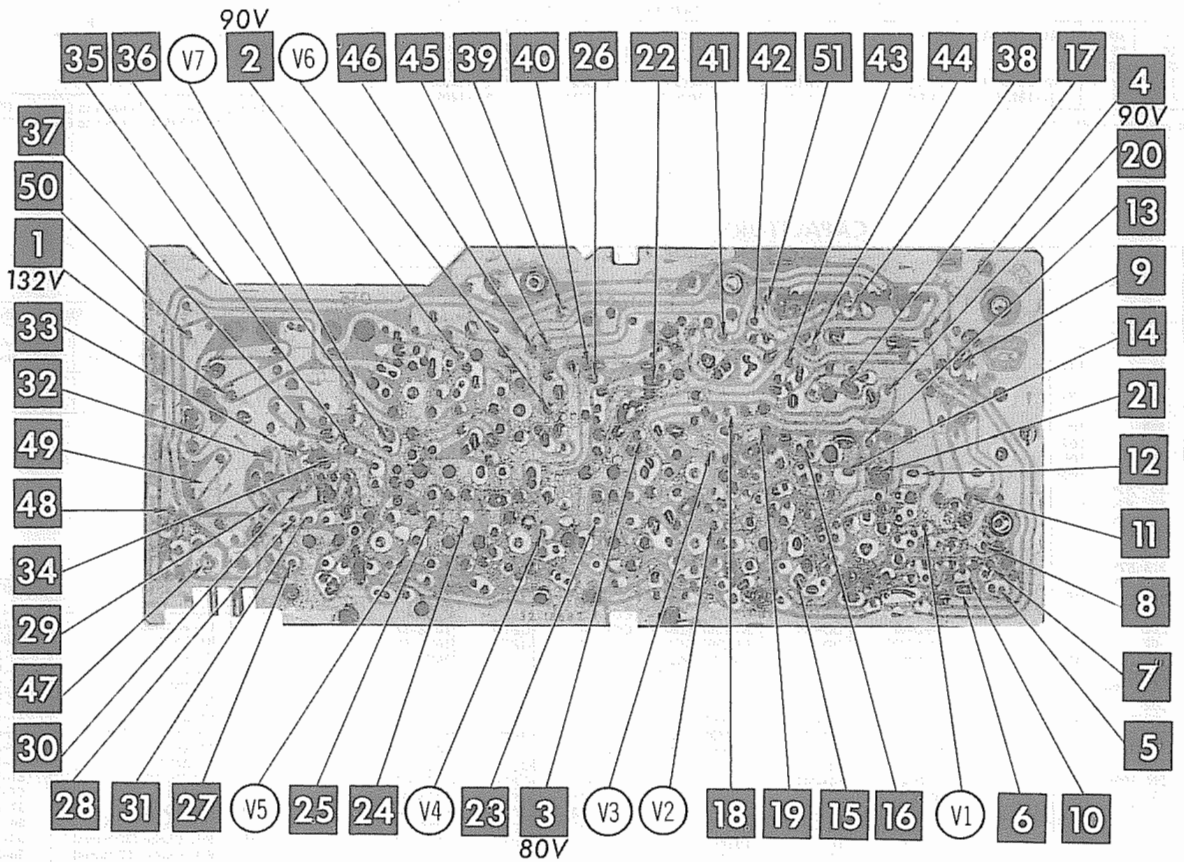
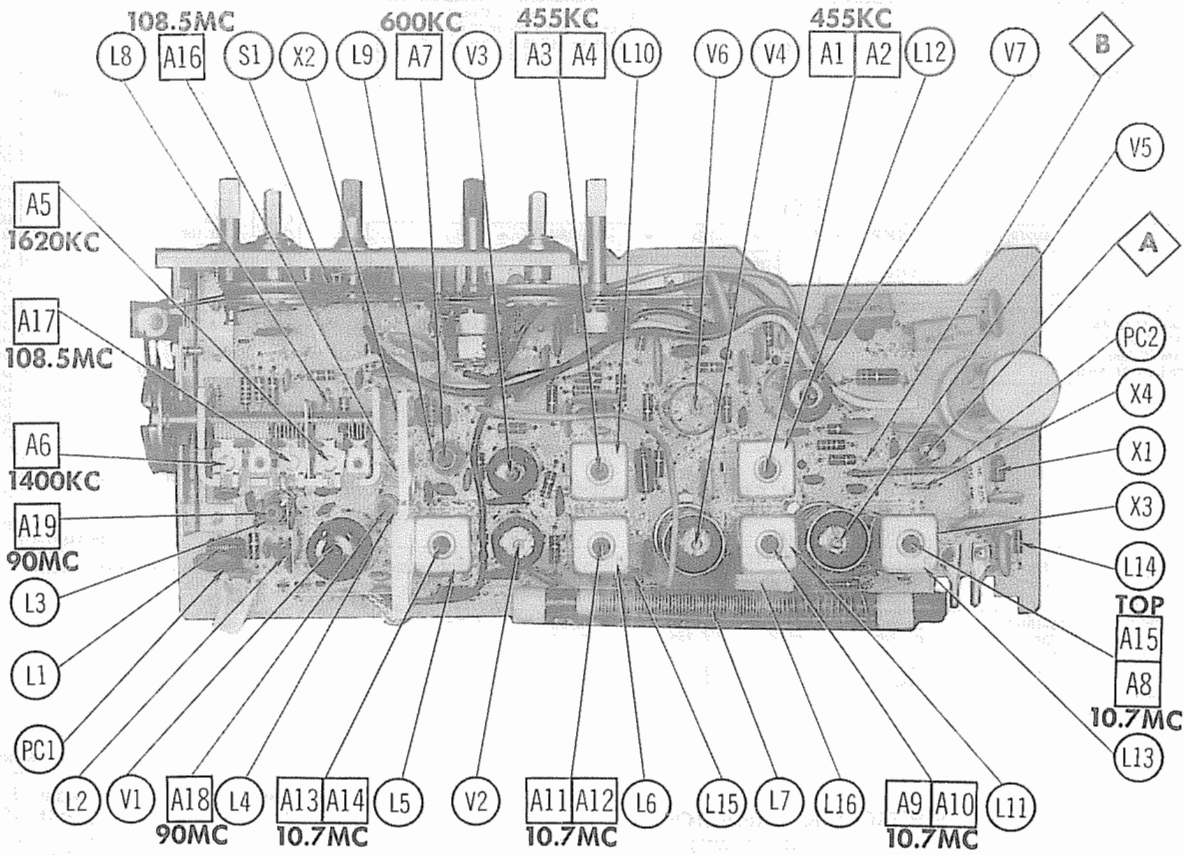


FIG. 1

FIG. 2



A Howard W. Sams CIRCUITRACE Photo

PARTS LIST AND DESCRIPTION

(When ordering parts, state Model, Part Number, and Description.)

WIRING DATA

General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in 12 Colors 8524 (Stranded) Available in 12 Colors
Power Cord	Use BELDEN No. 1706 (Plastic) or 17126 (Rubber) - 6 Ft. 1709 (Plastic) or 17128 (Rubber) - 9 Ft.
Power Cord (Interlock Type)	Use BELDEN No. 6874 (Rubber) or 8895 (Plastic)

TUBES

• AMPEREX •		• GENERAL ELECTRIC •		• RCA •		• SYLVANIA •	
ITEM No.	USE	TYPE	ITEM No.	USE	TYPE		
V1	FM RF Amp. - FM Converter	12DT8	V5	FM Limiter - AM Detector	12AU6		
V2	1st FM IF Amp.	12AU6	V6	AF Amp.	12AV6		
V3	AM Converter	12BE6	V7	Audio Output	50C5		
V4	2nd FM IF Amp.	12BA6					

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MEASURED CURRENT	ORIGINAL Part or Type No.	RECTIFIERS & DIODES		RECTIFIERS		
			GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	MALLORY PART No.	RCA PART No.	SARKES TARZIAN PART No.
X1	.080A	13-10102-1 (SR2121)	GE-504A or GE-505	5A4-D or SD500	1N2070 or 1N540	SK-3016 or SK-3017	F-4 or 40C
X2		1N3182					
X3		1N542 ①	1N80	1N542 ①			
X4			1N60				

① Matched Pair of 1N541's.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA				
	CAP.	VOLT.	SYLVANIA PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.
C1A	60	200	41-18498-1	AFH3-29-25	CPC048	XC3-45	WP318.77
B	40	150					
C	60	150					
C2	8	25	41-10004-12	PTT78	NLW8-25	MT1-5	TT25X8
C3	5	25	41-18223-4	CRE604A	NLW6-25	MT1-5	TT25X5

* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA						
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.	
C4	22 NPO		NPO-DI22	DTZ-22	CY801CG220K	CCTO-220	CNO422	10TCC-Q22	
C5	12 NPO	5%		TCZ-12	C2801CG120J	CCTO-120	CNO412	10TCC-Q12	
C6	15	10%		DTZ-15	C2801CG150J	CCTO-150	CNO415	10TCC-Q15	
C7	.01		NPO-DI 15	DD-103	BYX801ZU103M	CCD-103	GP110	10TS-S10	
C8	470	10%	DI-10000	DD-471	JBZ601YP471K	CCD-471	GP347	10TS-T47	
C9	4.7 NPO		NPO-DI 4.7	DTZ-4.7		CCTO-4.7	CNO547	10TCC-V47	
C10	220	10%		DD-221	JBZ601YP221K	CCD-221	GP322	10TS-T22	
C11	470	10%		DD-471	JBZ601YP471K	CCD-471	GP347	10TS-T47	
C12	220	10%		DD-221	JBZ601YP221K	CCD-221	GP322	10TS-T22	
C13	820	10%		DD-821	JBZ601YP821K	CCD-821	GP382	10TS-T82	
C14	10 NPO	5%	NPO-DI 10	DTZ-10	C2801CG100J	CCTO-100	CNO410	10TCC-Q10	
C15	10 NPO	5%		DTZ-10	C2801CG100J	CCTO-100	CNO410	10TCC-Q10	
C16	12 NPO	5%	NPO-DI 10	DTZ-12	C2801CG120J	CCTO-120	CNO412	10TCC-Q12	
C17	18 NPO	5%		TCZ-18	CY801CG180J	CCTO-180	CNO418	10TCC-Q18	
C18			#42-18146-1						
C19	2.2 N750					CNT522	10TCU-V22		
C20	4.7 NPO					CNO547	10TCC-V47		
C21	220	10%	NPO-DI 4.7	DTZ-4.7		CCTO-4.7	CNO547	10TCC-V47	
C22	.01			DD-221	JBZ601YP221K	CCD-221	GP322	10TS-T22	
C23	.02		DI-10000	DD-103	BYX801ZU103M	CCD-103	GP110	10TS-S10	
C24	.01		BPD-02	DD-203	BYT601YP203Z	CCD-203	GP120	10TS-S20	
C25	220	10%	DI-10000	DD-103	BYX801ZU103M	CCD-103	GP110	10TS-S10	
C26	.001	10%	DI-220	DD-221	JBZ601YP221K	CCD-221	GP322	10TS-T22	
C27	27 N4700		DI-1000	DD-182	JBZ601YP102K	CCD-102	GP210	10TS-D10	
C28	.01								
C29	.0022	10%	DI-10000	DD-103	BYX801ZU103M	CCD-103	GP110	10TS-S10	
C30	220	10%	DI-2200	DD-221	JBZ601YP221K	CCD-221	GP322	10TS-T22	
C31	.0033	10%	DI-3300	DD-332	JBZ601YP332K	CCD-332	GP233	10TS-D33	
C32	470	10%	DI-470	DD-471	JBZ601YP471K	CCD-471	GP347	10TS-T47	
C33	.05 100V		BPD-05	DD-503		CCD-503	GP150	5HK-S50	
C34	.01		DI-10000	DD-103	BYX801ZU103M	CCD-103	GP110	10TS-S10	
C35	.0027	10%	DI-2700	DD-272		CCD-272	GP227	10TS-D27	
C36	220	10%	DI-220	DD-221	JBZ601YP221K	CCD-221	GP322	10TS-T22	
C37	680	10%	DI-680	DD-681	JBZ601YP681K	CCD-681	GP368	10TS-T68	
C38	.01		DI-10000	DD-103	BYX801ZU103M	CCD-103	GP110	10TS-S10	
C39	680	10%	DI-680	DD-681	JBZ601YP681K	CCD-681	GP368	10TS-T68	

CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA						
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.	
C40	330	10%	DI-330	DD-331	JBZ601YP331K	CCD-331	GP331	10TS-T33	
C41	330	10%	DI-330	DD-331	JBZ601YP331K	CCD-331	GP331	10TS-T33	
C42	.001	10%	DI-1000	DD-102	JBZ601YP102K	CCD-102	GP210	10TS-D10	
C43	.01		DI-10000	DD-103	BYX801ZU103M	CCD-103	GP110	10TS-S10	
C44	220	10%	DI-220	DD-221	JBZ601YP221K	CCD-221	GP322	10TS-T22	
C45	.005	10%	DI-5000	DD-502	JBZ601YP502K	CCD-502	GP250	10TS-D50	
C46	.05 100V		BPD-05	DD-503		CCD-503	GP150	5HK-S50	
C47	.0047	10%	DI-4700	DD-472	JBZ601YP472K	CCD-472	GP247	10TS-D47	
C48	.01		DI-10000	DD-103	BYX801ZU103M	CCD-103	GP110	10TS-S10	
C49	.01		DI-10000	DD-103	BYX801ZU103M	CCD-103	GP110	10TS-S10	
C50	.01		DI-10000	DD-103	BYX801ZU103M	CCD-103	GP110	10TS-S10	
C51	.01		DI-10000	DD-103	BYX801ZU103M	CCD-103	GP110	10TS-S10	
C52	.01		DI-10000	DD-103	BYX801ZU103M	CCD-103	GP110	10TS-S10	
C53	.01		DI-10000	DD-103	BYX801ZU103M	CCD-103	GP110	10TS-S10	
C54	.01		DI-10000	DD-103	BYX801ZU103M	CCD-103	GP110	10TS-S10	
C55	220	10%	DI-220	DD-221	JBZ601YP221K	CCD-221	GP322	10TS-T22	
C56	220	10%	DI-220	DD-221	JBZ601YP221K	CCD-221	GP322	10TS-T22	
C57	220	10%	DI-220	DD-221	JBZ601YP221K	CCD-221	GP322	10TS-T22	
C58	.01		DI-10000	DD-103	BYX801ZU103M	CCD-103	GP110	10TS-S10	
C59	220	10%	DI-220	DD-221	JBZ601YP221K	CCD-221	GP322	10TS-T22	
C60	.02		BPD-02	DD-203	BYT601ZU203Z	CCD-203	GP120	10TS-S20	
C61	.01 1.4KV			CI-103	ACT142ZU103P		UAC110	125L-S10	
C62	820 1.4KV								
C63	.01		DI-10000	DD-103	BYX801ZU103M	CCD-103	GP110	10TS-S10	
C64	.01 1.4KV			CI-103	ACT142ZU103P		UAC110	125L-S10	
C65	.01		DI-10000	DD-103	BYX801ZU103M	CCD-103	GP110	10TS-S10	
C66									

* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

Sylvania Part Number

① Part #42-14531-2 used in Chassis U01-2.

CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA				
			SYLVANIA PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1	Volume/Switch	1meg, 550K Tap	37-18538-1 ①	F18-1meg, SF110, KR-1	A47F5-1meg, FS-3, SWE-12 or (NPP-1meg, UP-B-400, NWE-12)	Q19-137X, 76-1 or (BU1, CF47T, SS1, GC) *	UA16T454, SL3500, US41 or (RU16T55, SL38, SL3500, US41) or (UT443, US26)
R2	Tone	1meg	37-18489-4 ②	F2-1meg, SF110	A47-1meg-Z, FS-3 or (NP-1meg-Z, UP-B-400)	Q13-137 or (BU1, CF26, SS1, DC1) *	UA16A, SL3500 or (RU16A, SL38, SL3500) or (U53)

① Part #37-18537-2 is used in Chassis U01-2.
Part #37-18536-2 is used in Chassis U01-4.② Part #37-18537-1 is used in Chassis U01-2.
* "SNAPTROL"

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA			ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN PART No.	SYLVANIA PART No.			IRC PART No.	WORKMAN PART No.	SYLVANIA PART No.
R34	10Ω 1W Fusible			36-92898-36	R35	220Ω 5W	PW5-200	5W-SQ-225	36-62454-57
					R36	1200Ω 5W	PW5-1200	5W-SQ-1.2K	36-62454-75

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA				
		SYLVANIA PART No.	MEISSNER Part No.	MERIT PART No.	MILLER PART No.	WORKMAN PART No.
L1	FM Antenna	50-14565-1				
L2	RF Choke (11uh)	118-0010	19-2016	BC-566	4612	TA823
L3	FM RF	50-14566-1				
L4	FM Oscillator	50-14587-1				
L5	1st FM IF	57-14559-1	16-3490	FM-256	1483-PC	T854
L6	2nd FM IF	57-14559-1	16-3490	FM-256	1483-PC	T854
L7	Loopstick	27-18841-1 ①	14-9003 *		7782	TC577
L8	RF Choke (2.2uh)	50-10260-3 ②	19-2011 †	BC-583 †	74F226A P †	T813 †
L9	AM Oscillator	50-14581-1				
L10	1st AM IF	57-14557-1	16-0788	BC-356	16-PC9	T646
L11	3rd FM IF	57-14558-1	16-3490	FM-256	1483-PC	T854
L12	2nd AM IF	57-24557-1	16-0787	BC-357	16-PC10	T647
L13	Ratio Detector	57-14560-2	17-3492	FM-257	1485-PC	T659
L14	Line Choke (2.2uh)	50-10260-4	19-2011	BC-503	74F226A P	T813
L15	FLI. Choke (22 turns)	50-10261-2				
L16	FLI. Choke (22 turns)	50-10261-2				

① Loop antenna #27-18782-1 used in Chassis U01-4.

② Wound on 18K resistor.

* Disregard Secondary.

† Shunt with 18K resistor.

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PR1	SEC.	SYLVANIA PART No.	MERIT PART No.	STANCOR PART No.	THORNDARSON PART No.	TRIAD PART No.	
T1	2200Ω	3-4Ω	Part of SP1	A-2928	A-3876	22545	S-1X	

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		SYLVANIA PART No.	QUAM PART No.	
SP1	5" PM 3-4Ω 3 1/2" PM 3-4Ω 6" PM 3-4Ω	12-18149-1 12-14963-1 12-18499-1	5A05 35A05	Used in Models: BT4W, BT4W-1. Used in Models: BT4W, BT4W-1.

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	SYLVANIA PART NO.	REPLACEMENT DATA
PC1	Antenna Isolation	.5-1meg, 470pf	32-11488-5	Aerovox PA-824 Centralab RC-471 Sprague AC1-1
PC2	Ratio Detector Network	120Ω, 560Ω, 820Ω, 6800Ω, 6800Ω, 220pf, 220pf, 220pf	32-14722-2	

MISCELLANEOUS

ITEM No.	PART NAME	SYLVANIA PART No.	NOTES
S1	Switch Switch	33-18497-1 33-18497-2	Function - Chassis U01-1/3/4 Function - Chassis U01-2

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	MODEL	PART No.	ITEM	MODEL	PART No.	
Cabinet-Back	BT1-CN	10-18418-1	Knob-Tuning	BT4	74-14620-3	
	BT2-BG	10-18418-3		Knob-Off/Volume	BT1-1	74-18534-7
	BK10-BG	10-18418-4			BT3-1	74-18534-6
	BK10BL	10-18418-2	BT4-1		74-18538-1	
	BT1GN-1	10-18418-5	Knob-Selector	BK10-1	74-18534-5	
	BK10W-1	10-18418-7		BT1-1	74-18534-7	
	BT1	10-18428-1		BK10-1, BT3-1	74-18534-6	
	BT2	10-18428-4		BT4-1	74-18538-1	
	BT3	10-18428-3	Knob-Tone	BT1-1	74-18534-8	
	BK10	10-18428-2		BT3-1, BK10-1	74-18534-5	
Cabinet-Front	BT1GN-1	10-18428-5	Knob-Tuning	BT4-1	74-18538-1	
	BT3W-1	10-18428-3		BT1-1	74-18534-8	
	BK10W-1	10-18428-7		BT3-1, BK10-1	74-18534-5	
	BT4	10-18701-1	Dial-AM Tuning	BT4-1	74-14629-3	
	BT3	10-18367-1		BT1	74-18544-1	
	BT3-1	10-18701-2		BT2	74-18544-6	
	BT4-1	10-18367-3	BT3, BT3-1	74-18544-4		
	Knob-Clock	BK10, BK10-1	74-18464-1	Dial-FM Tuning	BT1-1	74-18544-9
		Knob-Off/Volume, Selector, BT1	74-18534-2		BT2	74-18544-2
	Knob-Off/Volume, Tuning, Tone	BT2, BK10	74-18534-4	Dial-AM-FM Tuning	BT3, BT3-1	74-18544-7
BT3		74-18534-6	BT1-1		74-18544-10	
BT4		74-18538-1	BG Series		74-18544-9	
Knob-Off/Volume, Selector	BK10	74-18534-3	BK10-1		74-18544-3	74-18544-3
	BT1	74-18534-1				
	BT2	74-18534-3				
	BT3	74-18534-5				