

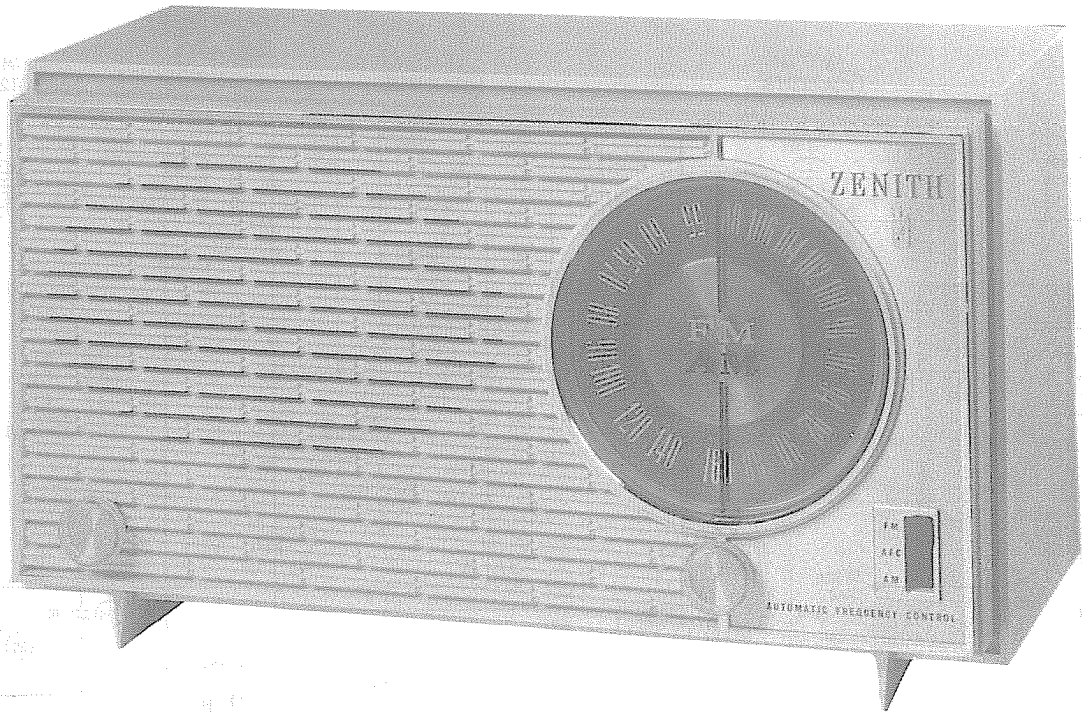
SET 908 FOLDER 9

ZENITH
CHASSIS 7N04, 7N09

PHOTOFACT® Folder



ZENITH
CHASSIS 7N04, 7N09



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TRADE NAME: Zenith Models N723B/J/W, X316B/J/W (Ch. 7N04) N730M/W, X323M/W (Ch. 7N09)
 SUPPLIER: For Current Address, See Annual Index
 TYPE SET: 7 Tube AM-FM Receiver
 POWER SUPPLY: 110-120 Volts AC, 60 Cycles RATING: 27 Watts, .2 Amp. @ 117 Volts AC

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

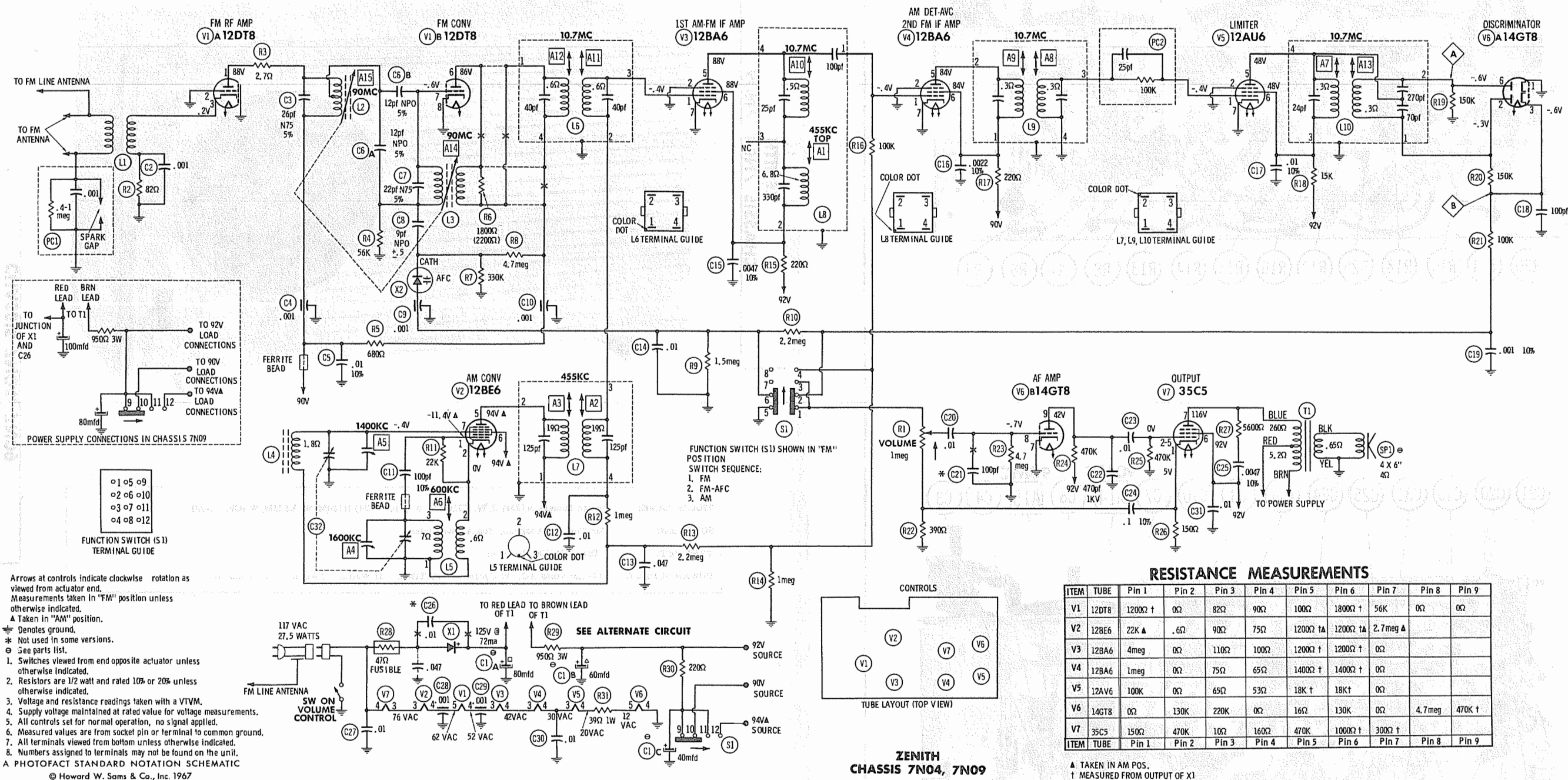


The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W. Sams & Co., Inc., by the manufacturers of the particular type of replacement part listed. SK374

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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 A13. GENERAL CEMENT: 8606, 8606L, 8869 WALSCO: 2543, 2544, 2588
A14, A15. NONE

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 (400v Mod.)	Tuning gang fully open.	Output Meter across Voice coil.	A1, A2, A3	Adjust for maximum. Repeat until no further improvement can be made.
2. 1600KC	"	"	A4	Adjust for maximum.
3. 1400KC	Tune to signal.	"	A5	"
4. 600KC	"	"	A6	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.	A7, A8, A9, A10, A11, A12	Adjust for maximum.
6. "	"	DC probe to point B; common to ground.	A13	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

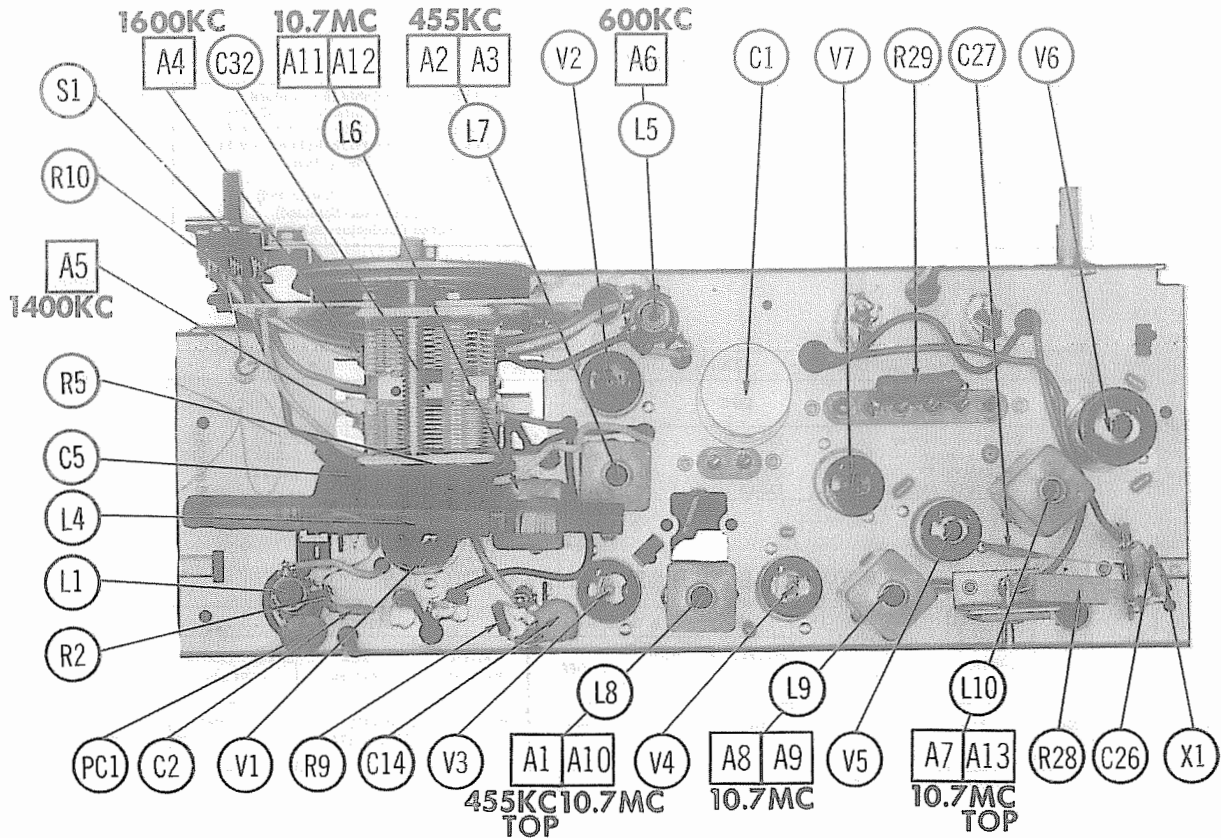
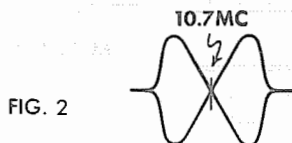
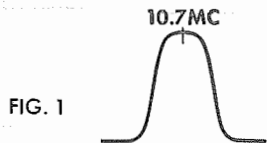
High side to ungrounded shield over FM converter, low side to ground. Use only enough marker signal to obtain indication. Use 60v frequency modulated signal with 450KC sweep. Use 120v sawtooth voltage in scope for horizontal deflection.

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.	A7, A8, A9, A10, A11, A12	Adjust for maximum gain and symmetry of response similar to Fig. 1 with marker as shown.
6. "	"	Vert. amp. to point B; low side to ground.	A13	Adjust A13 (Secondary) to place marker at center of crossover lines similar to Fig. 2. Adjust A7 (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
90MC	Tune to signal.	"	A14, A15	Adjust for maximum.



DIAL CORD STRINGING

TUNING GANG FULLY CLOSED

TUNING SHAFT
5 TURNS

ZENITH
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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. 17106 (Plastic) or 17126 (Rubber) - 6 Ft. 17109 (Plastic) or 17129 (Rubber) - 9 Ft.
Power Cord (Interlock Type)	Use Belden No. 8874 (Rubber) or 8895 (Plastic)
Low-Loss Shielded Lead (Interconnecting)	Use Belden No. 8401 or 8421
Phono Pick-up Arm Cable	Use Belden No. 8430 (Two Conductor-Unshielded) 8428 (Two Conductor-Shielded) 8419 (Three Conductor-Shielded)

TUBES

• AMPEREX •			• GENERAL ELECTRIC •			• RCA •			• SYLVANIA •		
ITEM No.	USE	TYPE		ITEM No.	USE	TYPE					
V1	FM RF-Converter	12DT8		V5	Limiter	12AU6					
V2	AM Converter	12BE6		V6	Discriminator-AF Amp	14GT8					
V3	1st AM-FM IF	12BA6		V7	Output	35C5					
V4	2nd FM IF-AM Det-AVC	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	.072	212-58 ①	GE-504A	8D4 or 5A4-D	1N2071 or 1N2096	SK-3016 or SK-3017A	F-4 or 40C
X2		103-47					

① Part Number 212-71 or 212-27 used in chassis 7N09

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA				
	CAP.	VOLT.	Zenith PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.
C1A	80	150	22-3717 ①	PWH3-13-70	CC0120 & BR40-150	XC3-45.1	FP318.78
B	60	150					
C	40	150					

① Part Number 22-4659, 80mfd and 100mfd used in chassis 7N09

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.
C2	.001			DI-1000	DD-102	JBS601YP102K	CCD-102	GP210	10TS-D10
C3	26	N75 5%	#22-3939	EF-001	MFT-1000		CCF-102	CT280A	
C4	.001			DI-1000	DD-103	BYX601ZU103M	CCD-103	GP110	10TS-S10
C5	.01	10%		DI-10000	DD-103	CZ601CG120J	CCTO-120	CNO412	10TCC-Q12
C6A	12	NPO 5%		DBE2S47	DD-103	CZ601CG120J	CCTO-120	CNO412	10TCC-Q12
B	12	NPO 5%							
C7	22	N75 5%	#22-3621						
C8	9	NPO ±.5	#22-2514						
C9	.001			EF-001	MFT-1000		CCF-102	CT280A	
C10	.001			EF-001	MFT-1000		CCF-102	CT280A	
C11	100	10%		DI-100	DD-101	JBZ601YP101K	CCD-101	GP310	10TS-T10
C12	.01			DI-10000	DD-103	BYX601ZU103M	CCD-103	GP110	10TS-S10
C13	.047	100V		DBE2S47	DD-103	BYX601ZU103M	4DP-3-473	PVC2147	2PS-S47
C14	.01			DI-10000	DD-103	BYX601ZU103M	CCD-103	GP110	10TS-S10
C15	.0047	10%		DI-4700	DD-472	JBT601YP472K	CCD-472	GP247	10TS-D47
C16	.0022	10%		DI-2200	DD-222	JBX601YP222K	CCD-222	GP222	10TS-D22
C17	.01	10%		DI-10000	DD-103	BYX601ZU103M	CCD-103	GP110	10TS-S10
C18	100			DI-100	DD-101	JBZ601YP101K	CCD-101	GP310	10TS-T10
C19	.001	10%		DI-1000	DD-102	JBS601YP102K	CCD-102	GP210	10TS-D10
C20	.01			DI-10000	DD-103	BYX601ZU103M	CCD-103	GP110	10TS-S10
C21	100			DI-100	DD-101	JBZ601YP101K	CCD-101	GP310	10TS-T10
C22	470	1KV	①	DI-470	DD-471	JBZ601YP471K	CCD-471	GP347	10TS-T47
C23	.01	200V		DBE4S1	CPR-10000J	DMF2S1	4DP-1-103	PVC211	2TM-S10
C24	.1	100V		DBE2P1		DMF2P1	2DP-3-104	PVC201	2PS-P10
C25	.0047	10%		DI-4700	DD-472	JBT601YP472K	CCD-472	GP247	10TS-D47
C26	.01	10%	①	DI-10000	DD-103	BYX601ZU103M	CCD-103	GP110	10TS-S10
C27	.01			DI-10000	DD-103	BYX601ZU103M	CCD-103	GP110	10TS-S10
C28	.001			EF-001	MFT-1000		CCF-102	CT280A	
C29	.001			EF-001	MFT-1000		CCF-102	CT280A	
C30	.01			DI-10000	DD-103	BYX601ZU103M	CCD-103	GP110	10TS-S10
C31	.01			DI-10000	DD-103	BYX601ZU103M	CCD-103	GP110	10TS-S10
C32			#22-5244						

① Not used in some versions # Zenith Part Number

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

PARTS LIST AND DESCRIPTION (CONTINUED)

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

CONTROLS

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

ITEM No.	USE	RESIST-ANCE	REPLACEMENT DATA				
			Zenith PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1	Volume/Switch	1meg	63-6470	F2-1meg, SN200, KR-1	A47-1meg-Z, RN-3 ①, SWE-12, TT-2 or (NP-1meg-Z, NML-A-300 ①, NWE-12, TT-2)	BU11, CF25, SS6 ①, GC *	RU16A, SL37, SN1125 ①, US41 or (UA16A, SN1125 ①, US41)

* "SNAPTROL"

① File flat

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA			ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN PART No.	Zenith PART No.			IRC PART No.	WORKMAN PART No.	Zenith PART No.
R28	47Ω Fusible			63-6447	R29	950Ω 3W	PW5-1000	36-1K	63-4819

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA				
		Zenith PART No.	MEISSNER Part No.	MERIT PART No.	MILLER PART No.	WORKMAN PART No.
L1	FM Antenna	S-52362				
L2	FM RF	S-62887				
L3	FM Oscillator	S-62889				
L4	Loopstick	S-71061				
L5	AM Oscillator	S-60127				
L6	1st FM IF	95-2120	14-1055	BC-394	7781	TB-539
L7	1st AM IF	95-1718	16-3490 *	FM-256 *	70-Osc	T-654 *
L8	2nd FM-AM IF	95-2351	16-6786 *	BC-356 *	1463-PC *	TC-631 *
L9	3rd FM IF	95-1919			16-PC9 *	
L10	Discriminator	95-1866	16-3490 *	FM-256 *	7706 *	T-654 *
					1463-PC *	
					7712 *	

* Solder to Chassis

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC.	Zenith PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	1000Ω Tapped at 2%	3-4Ω	95-2375					

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA			NOTES
				Zenith PART No.	JENSEN PART No.	QUAM PART No.	
SP1	4" X 6"	PM	3-4Ω	49-1086 ①	P4X5X3	46A1	① Used in Models X316B/J/W, N723B/J/W ② Used in Models X323M/W, N730M/W
	4" X 6"	PM		49-1095 ②			

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	Zenith PART NO.	REPLACEMENT DATA
PC1	Antenna Isolation	.4-1meg .001 (Includes Spark Gap)	105-79 (DA662)	Sprague PRC-11
PC2	Limiter grid bias	100K 25pf	105-42	

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
S1	Switch	85-829	Part of Switch and Bracket Assembly (Part Number S-72998)

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	MODEL	PART No.	ITEM	MODEL	PART No.
Cabinet Back	X316	2-2346	Knob, Volume	X323	46-5027
Cabinet Back	X323	2-2479	Cabinet	X316W	S-71788
Knob, Tuning	X316J/W	46-4677	Cabinet	X316J	S-71790
Knob, Tuning	X316B	46-4679	Cabinet	X316B	S-71791
Knob, Tuning	X323	46-5000	Cabinet	X323W	14-7571
Knob, Volume	X316J/W	46-5078	Knob, Volume	X323M	14-7572
Knob, Volume	X316B	46-5079	Cabinet		

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