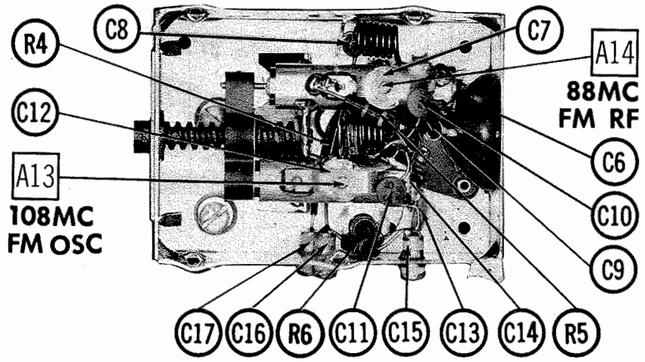
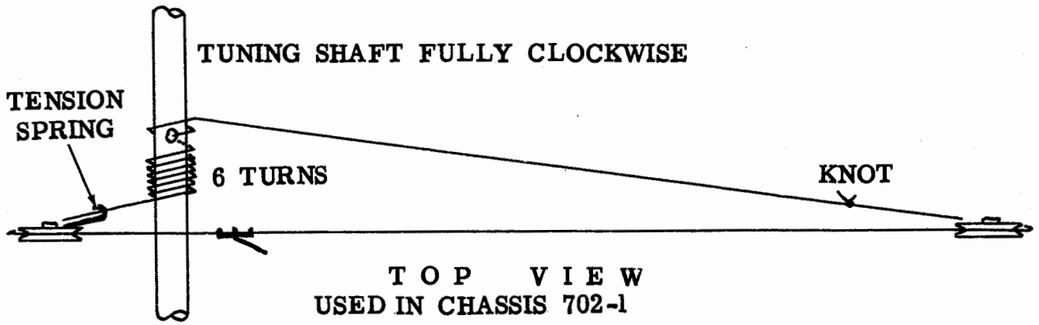
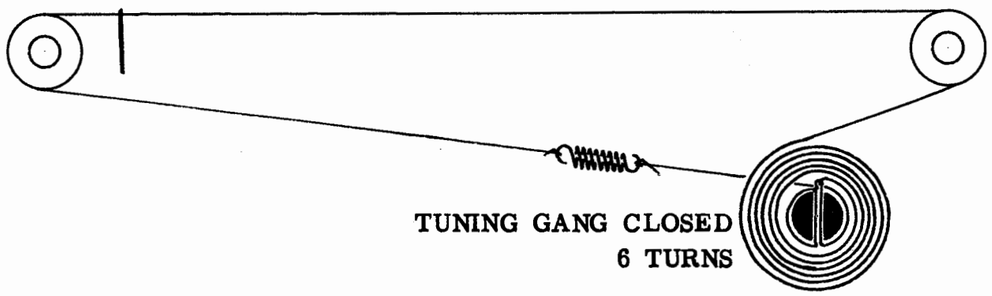


FM RF SUBCHASSIS



TOP VIEW
USED IN CHASSIS 702-1



REAR VIEW
USED IN CHASSIS 692-1

DIAL CORD STRINGING

FOLDER 14
SET 568B

PHOTOFACT® Folder

SYLVANIA MODELS Y55C20, 55C20 (Ch. 692-1, 702-1)

SYLVANIA MODELS Y55C20, 55C20 (Ch. 692-1, 702-1)

MODEL 55C20

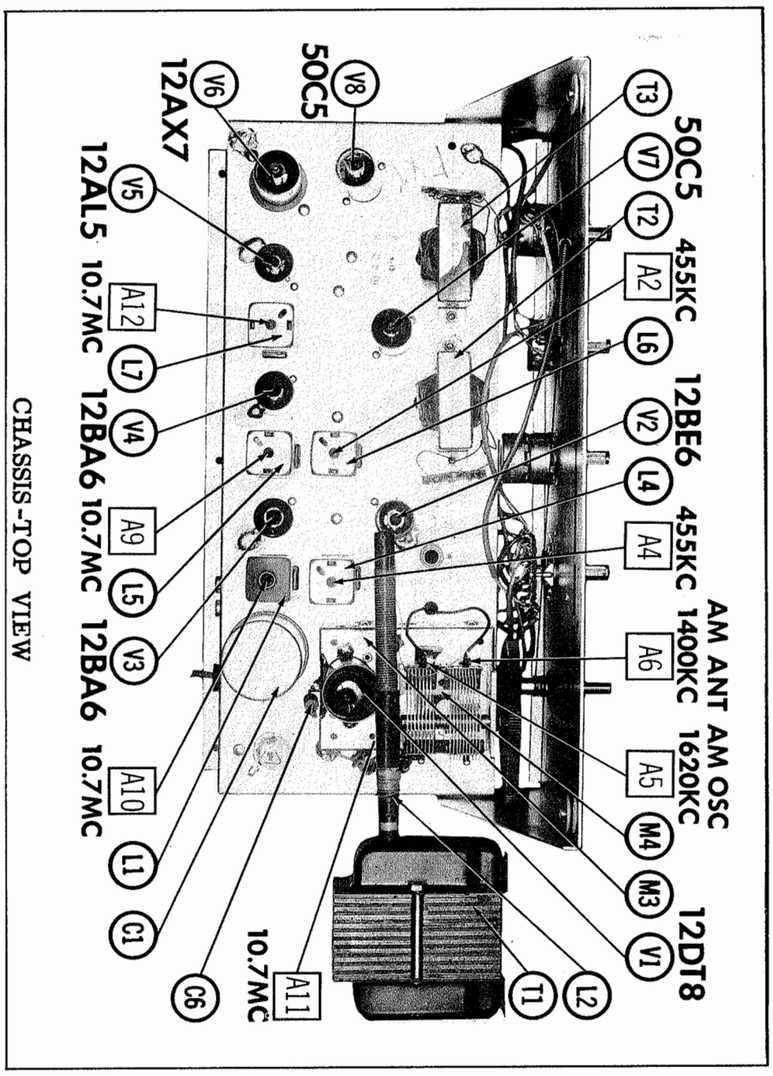
TRADE NAME	Sylvania Models Y55C20 (CH. 702-1), 55C20 (CH. 692-1)
MANUFACTURER	Sylvania Home Electronics, Div. of Sylvania Electric Products, Inc., 700 Ellicott Street, Batavia, N.Y.
TYPE SET	AC Operated 8 Tube FM-AM Receiver With 4 Speed Automatic Record Changer
POWER SUPPLY	110 – 120 Volts AC, 60 Cycles RATING 61 Watts, .64 Amp. @117 Volts AC
TUNING RANGE—BROADCAST	540-1620KC FREQ. MOD. 88 – 108MC

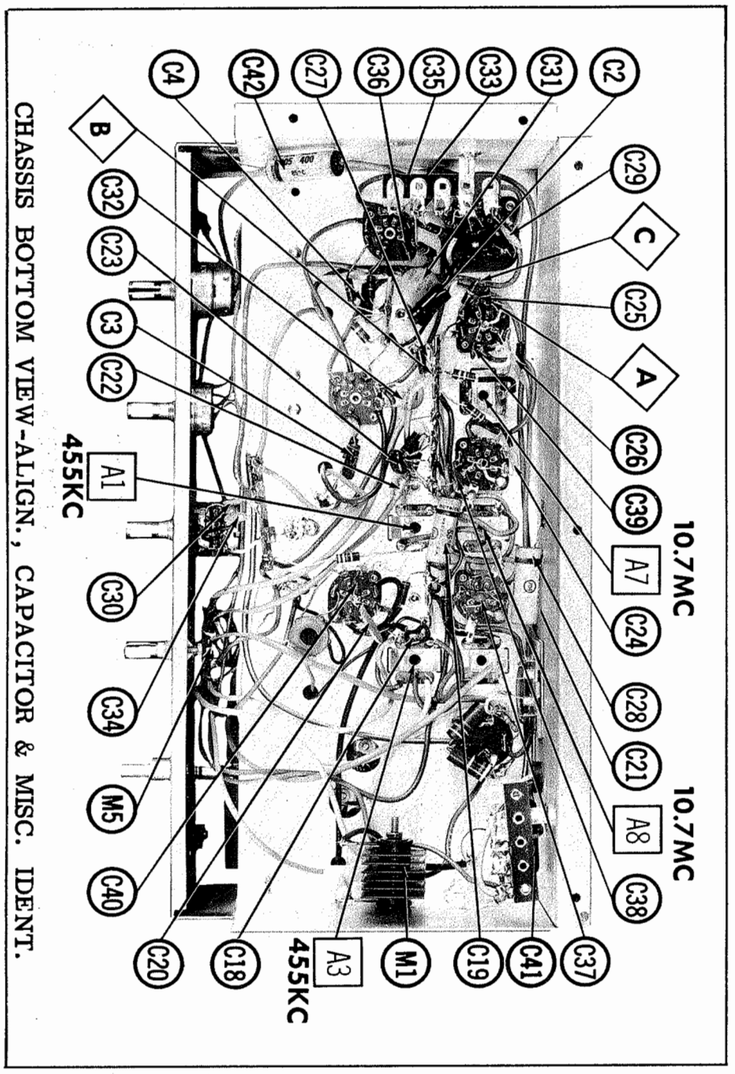
FOR SERVICE INFORMATION ON RECORD CHANGER 320-1 – SEE SIMILAR B.S.R. UA8 – PHOTOFACT SET 381 FOLDER 11 OR RECORD CHANGER MANUAL RC-11

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

DATE 2 – 62 SET 568 FOLDER 14

SET 568 FOLDER 14





PARTS LIST AND DESCRIPTIONS (Continued)

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESISTANCE	WATTS	SYLVANIA PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.	
R1A	2meg	½	153-0267	B-76	A47-2meg-Z	Q13-139	U55	Volume, Channel 1
B	Shaft			Not Req.	KSS-3	Not Req.	Not Req.	
C	Switch			KR-1	SWE-12	76-1	US-26	
R2A	2meg		152-0069	B-76	A47-2meg-Z	Q13-139	U55	Volume, Channel 2
B	Shaft			Not Req.	KSS-3	Not Req.	Not Req.	
R3A	500K		153-0268	B-60	AD47-500K-Z		FA55A	Tone, Channel 1
B	500K			SR-60	Not Req.		RU55A	Tone, Channel 2
C	Shaft			Not Req.	KSS-3		CS3500	

RESISTORS

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

ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN TV PART No.	REMARKS
R4	2200Ω			
R5	47K			
R6	5600Ω			
R7	100K			
R8	1.5meg			(1meg) †
R9	1.5meg			(1meg) †
R10	1.5meg			(2.2meg)*
R11	22K			
R12	1.5meg			
R13	330Ω			
R14	330Ω			
R15	11K			(12K) †
R16	11K			(12K) †
R17	1meg			
R18	56K			
R19	1meg			

ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN TV PART No.	REMARKS
R20	1.5meg			(1.2meg, 2.2meg)*
R21	220K			
R22	1000Ω			
R23	680K			(470K)*
R24	150Ω			
R25	1.5meg			(1.2meg, 2.2meg)*
R26	220K			
R27	1000Ω			
R28	680K			(470K)*
R29	150Ω			
R30	22K			
R31	470Ω 2W			
R32	47Ω 2W			
R33	380Ω 10W	PW10-380	10W-SQ-380	
R34	10Ω			
R35	33Ω			

* Alternate Value.
† Used in Chassis 702-1.

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		SYLVANIA PART No.	Merit PART No.	Miller PART No.	Stancor PART No.	Workman TV PART No.	
L1	2nd FM IF	121-0125					
L2	Loopstick	581-0036	BC-419	705-A		T532	
L3	AM Osc.	113-0096	BC-393	69-OSC	RTC-8646	T503	
L4	1st AM IF	121-0124					
L5	2nd FM IF	122-0126	FM-254	1463	RTC-8599	T633	
L6	2nd AM IF	122-0125	BC-353	12-C10	RTC-8633	T608	
L7	Ratio Detector	128-0023	FM-255	1465	RTC-8600	T635	

TRANSFORMER (POWER)

ITEM No.	RATING			REPLACEMENT DATA					NOTES
	PRI.	SEC. 1	SEC. 2	SYLVANIA PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T1	117V ② .64A	117V ④ .52A		Note 1	P-2871①	P-8410①	23V34①	N-53M①	① Drill New Mounting Hole(s). Note 1. Not used in some versions.

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC.	SYLVANIA PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T2	3100Ω	1.5-2Ω	143-0113					① Drill New Mounting Hole(s).
T3	3100Ω	3-4Ω	143-0012	A-2908①	A-3849①	22S46	S-30X	

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
	SIZE	FIELD	V. C. IMP.	SYLVANIA PART No.	QUAM PART No.	
SP1	6"	PM	3-4Ω	539-0651	6A1	
SP2	4"	PM	3-4Ω	539-0440	4A07	
SP3	4"x 6"	PM	3-4Ω	539-4609	46A1	

POWER RECTIFIERS

ITEM No.	RATING	REPLACEMENT DATA			NOTES
	CURRENT (Measured)	SYLVANIA PART No.	RCA PART No.	SARKES TARZIAN PART No.	
M1	.100A	517-0016 *	1N1763 †	150 *	* Selenium † Silicon

PHONO CARTRIDGE & NEEDLES

*NEEDLE LISTINGS SHOWN ARE FOR RESPECTIVE REPLACEMENT CARTRIDGES ONLY.

ITEM No.	REPLACEMENT DATA								NOTES
	SYLVANIA PART No.		ASTATIC PART No.		ELECTRO-VOICE PART No.		SONOTONE PART No.		
	CARTRIDGE	NEEDLE*	CARTRIDGE	NEEDLE*	CARTRIDGE	NEEDLE*	CARTRIDGE	NEEDLE*	
M2	916-0019	902-0014* (LP)	76TS	N8-7*	26S	2604 *	8TA4-S	N-8TA-S*	
		902-0015* (78RPM)		N8-3*		2605 *			

MISCELLANEOUS

ITEM No.	PART NAME	SYLVANIA PART No.	NOTES
M3	Tuner	170-0064	FM, Complete
M4	Tuning Cap	170-0063	AM, 2 Gang (Ant. 15-258mmf, Osc. 12-130mmf)
M5	Switch	573-0031	Function Selector (Rotary Wafer Type)

CABINETS & CABINET PARTS

(When Ordering Cabinets & Cabinet Parts, Specify Model, Chassis & Color)

NAME	PART NO.	DESCRIPTION
Dial Glass	721-0049	
Dial Pointer	732-0035	
Knob	740-0450	Tuning
Knob	740-0451	Volume, Tone, Selector

WIRING DATA

General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in Ten Colors 8524 (Stranded) Available in Ten Colors
Power Cord (Interlock Type)	Use BELDEN No. 8874
Low-Loss Shielded Lead (Interconnecting)	Use BELDEN No. 8401
Phono Pick-up Arm Cable	Use BELDEN No. 8430 (Two Conductor - Twisted)

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

Use only enough generator output to provide a usable indication.
Suggested Alignment Tools:

A1 thru A4, A7, A12.... GENERAL CEMENT #5097, 8727
WALSCO #2515
A5, A6..... GENERAL CEMENT #5004, 5008, 5009
WALSCO #2520
A8, A9, A10..... GENERAL CEMENT #8282, 8606, 8606-L, 9295, 9440
WALSCO #2526, 2543, 2544, 2545
A11..... GENERAL CEMENT #8282, 8606, 8606-L , 9091
WALSCO #2526, 2541, 2542, 2543, 2544
A13, A14..... GENERAL CEMENT #5000, 5003, 5066, 8276, 8290, 9087, 9089
WALSCO #2512, 2525, 2528

AM ALIGNMENT — SELECTOR IN AM POSITION

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	High side thru .1mfd to pin 7 (grid) of AM Converter. Low side to chassis.	455KC (400~ 30% AM).	(AM) Tuning gang fully open.	Across voice coil.	A1, A2, A3, A4	Adjust for maximum output.
2.	"	1620KC	"	"	A5	"
3.	Fashion loop of several turns of wire and radiate signal into loop of receiver.	1400KC	1400KC Signal.	"	A6	"

FM IF ALIGNMENT USING AM SIGNAL GENERATOR AND VTVM — SELECTOR IN FM POSITION

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
4.	High side thru .005mfd to pin 8 (cathode) of FM RF Amp. Low side to chassis.	10.7MC (Unmod.)	(FM) Point of non-interference.	DC probe to point Ⓐ. Common to chassis.	A7, A8, A9, A10, A11	Adjust for maximum deflection.
5.	"	"	"	DC probe to point Ⓑ. Common to point Ⓒ.	A12	Adjust for zero reading. A positive and negative reading will be obtained on either side of the correct setting.

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

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

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	CONNECT SCOPE	ADJUST	REMARKS
4.	High side thru .005mfd to pin 8 (cathode) of FM RF Amp. Low side to chassis.	10.7MC (450KC Swp)	(FM) Point of non-interference.	Vert. amp. to point Ⓐ. Low side to chassis.	A7, A8, A9, A10, All	Disconnect stabilizing capacitor C2. Adjust for maximum gain and symmetry of response similar to Fig. 1 with markers as shown. Reconnect C2.
5.	"	"	"	Vert. amp. to point Ⓑ. Low side to chassis.	A12	Adjust to place marker at the center of crossover lines similar to Fig. 2. SLIGHTLY retouch A7 for maximum amplitude and straightness of cross-over lines.

FM RF ALIGNMENT — SELECTOR IN FM POSITION

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
6.	High side thru .005mfd to pin 8 (cathode) of FM RF Amp. Low side to chassis.	108MC (Unmod.)	(FM) 108MC	DC probe to point Ⓐ. Common to chassis.	A13	Adjust for maximum deflection.
7.	"	88MC	88MC	"	A14	"

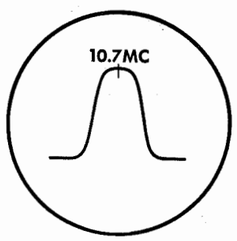


FIG. 1

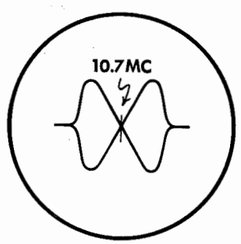
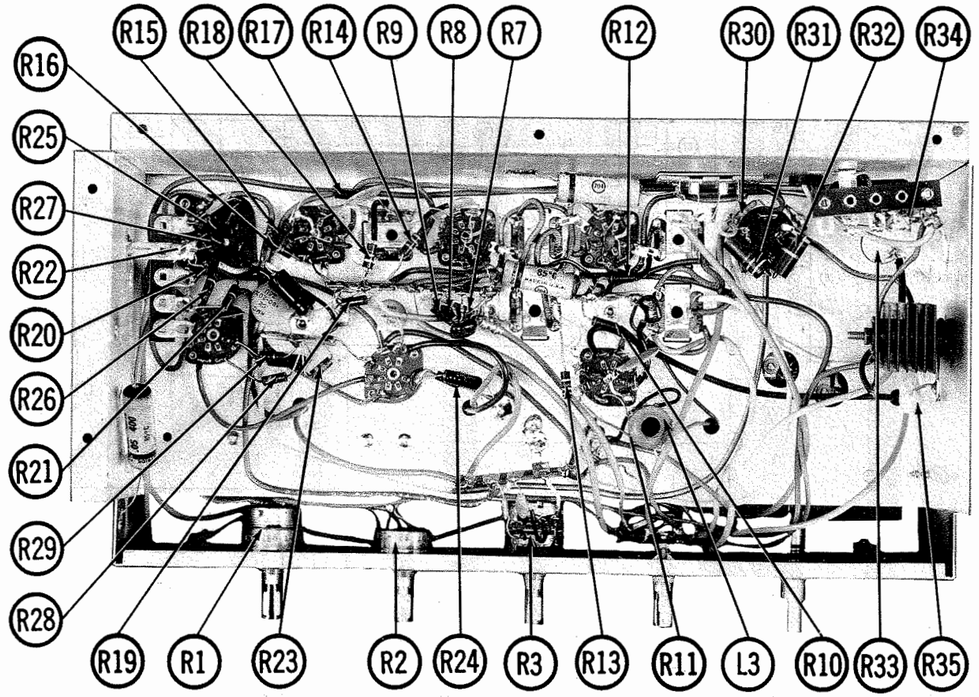


FIG. 2

CHASSIS—BOTTOM VIEW



PARTS LIST AND DESCRIPTIONS

TUBES

ITEM No.	◆ GENERAL ELECTRIC ◆ USE	TYPE	◆ RAYTHEON ◆ ITEM No.	◆ SYLVANIA ◆ USE	TYPE
V1	FM RF Amp.-FM Conv.	12DT8	V6	Channel 1 AF Amp.- Channel 2 AF Amp.	12AX7
V2	AM Converter	12BE6			
V3	1st FM-AM IF Amp.	12BA6	V7	Channel 1 Output	50C5
V4	2nd FM IF Amp.-AM Det.	12BA6	V8	Channel 2 Output	50C5
V5	Ratio Detector	12AL5			

ELECTROLYTIC CAPACITORS

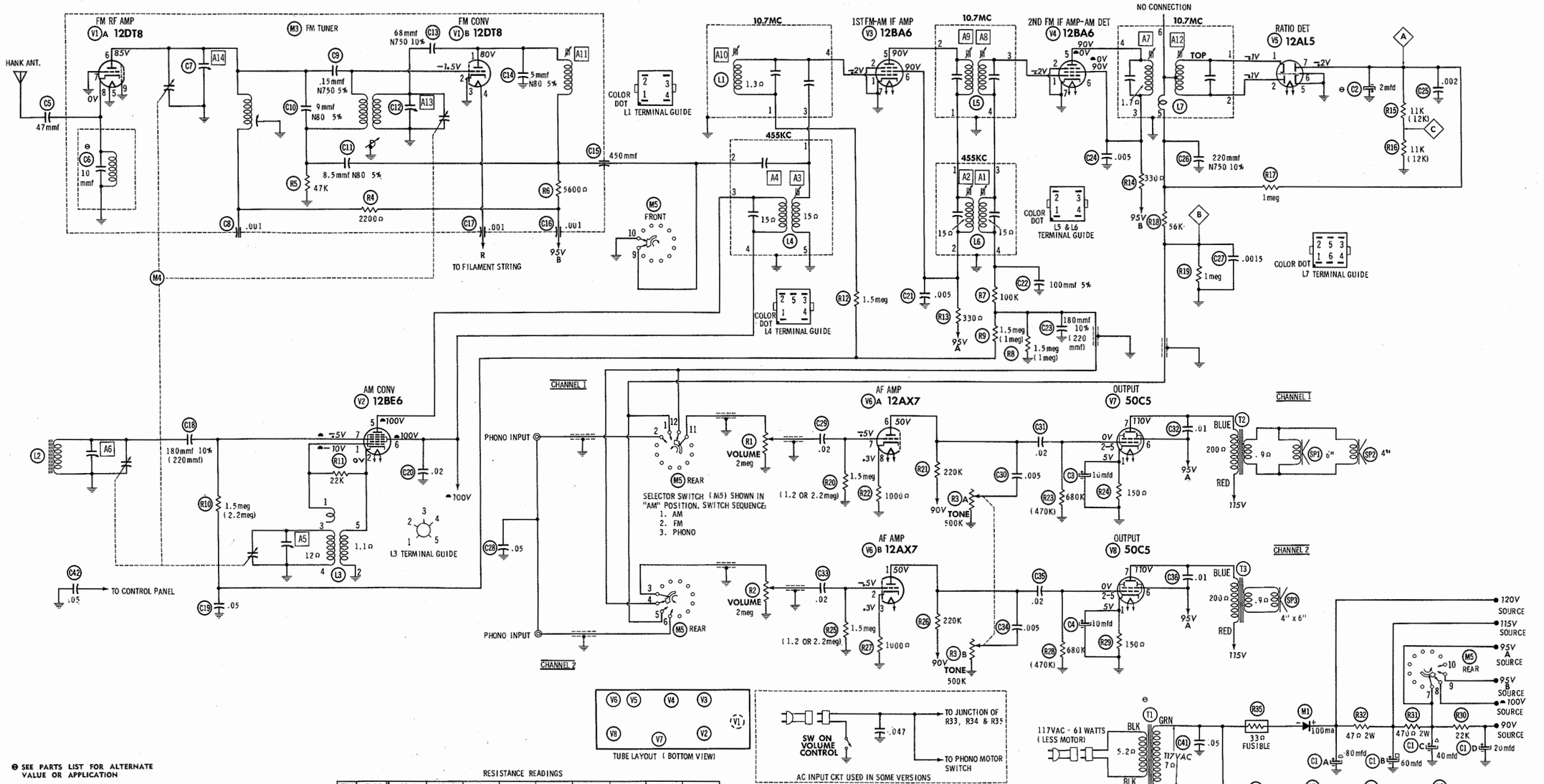
ITEM No.	RATING CAP.	RATING VOLT.	SYLVANIA PART No.	REPLACEMENT DATA AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	PYRAMID PART No.	SPRAGUE PART No.
C1A	▲80	150	161-4035	AFH4-05-55	D0014	XC4-65	FP422. 7	TMQ-4101	TVL-4445
B	▲40	150							
C	▲40	150							
D	20	150							
C2	20	50	161-1067 ①	PTT88	NLW3-50	MT1-1	TC302	MLV3-50	TE-1301
C3	10	10	161-1078	PTT39	NLW10-15	MT1-5	TT12X10	MLV10-10	TE-1114
C4	10	10	161-1078	PTT39	NLW10-15	MT1-5	TT12X10	MLV10-10	TE-1114

① Chassis 702-1 use 5mfd in this application (Part #161-1056).

FIXED 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.
C5	47		SI 47	DK-470	L10Q47	CCD-470	GD447	10TS-Q47
C6	10	Note 1	SI 10	DK-10	L10Q1	CCD-100	GP410	10TS-Q10
C7	.001							
C8	15 N750 5%		EF-001	MFT-1000	C10Q15U	CCF-102	CT280A	10TCU-Q15
C9	9 N80 5%			DTN-15			CN7-415	
C10	8.5 N80 5%					**		
C11						**		
C12	68 N750 10%		N750-DI 68	DTN-68	C10Q68U	CCTN-680	CN70468	10TCU-Q68
C13	5 N80 5%					*		
C14	450							
C15	.001		EF-001	MFT-1000		CCF-102	CT280A	
C16	.001		EF-001	MFT-1000		CCF-102	CT280A	
C17	100 10%		1469-00018	MFT-100	22R5T18	CM-19B-181K	CNO-318	MS-318
C18	15 10% 400V	(220) †	P488N-05	DD-503	CUB45S	4DP-3-503	GEM-415	4TM-S50
C19	.01		BPD-02	DD-203	BYB65Z	CCD-203	B-120	5HK-S20
C20	.005		BPD-005	DD-502	BYA10D5	CCD-502	B-250	5HK-D50
C21	100 5%			TCZ-100	22R5T1	CM-19B-101J	CNO-310	10TCC-T10
C22	180 10%	(220) †	1469-00018	TCZ-180	22R5T18	CM-19B-181K	CNO-318	MS-318
C23	.005		BPD-005	DD-502	BYA10D5	CCD-502	B-250	5HK-D50
C24	.002		BPD-002	DD-202	BYA10D2	CCD-202	B-220	5HK-D20
C25	220 N750 10%		N750-DI 220	DTN-220	C10T22U	CCTN-221	CN7-322	10TCU-T22
C26	.0015		BPD-0015	DD-152	BYA10D15	CCD-152	B-215	5HK-D15
C27	.05 400V		P488N-05	DD-503	CUB45S	4DP-3-503	GEM-415	4TM-S50
C28	.005		BPD-005	DD-502	BYA10D5	CCD-502	B-250	5HK-D50
C29	.02		BPD-02	DD-203	BYB65Z	CCD-203	B-120	5HK-S20
C30	.005		BPD-005	DD-502	BYA10D5	CCD-502	B-250	5HK-D50
C31	.02		BPD-02	DD-203	BYB65Z	CCD-203	B-120	5HK-S20
C32	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C33	.02		BPD-02	DD-203	BYB65Z	CCD-203	B-120	5HK-S20
C34	.005		BPD-005	DD-502	BYA10D5	CCD-502	B-250	5HK-D50
C35	.02		BPD-02	DD-203	BYB65Z	CCD-203	B-120	5HK-S20
C36	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C37	.002		BPD-002	DD-202	BYA10D2	CCD-202	B-220	5HK-D20
C38	.002		BPD-002	DD-202	BYA10D2	CCD-202	B-220	5HK-D20
C39	.002		BPD-002	DD-202	BYA10D2	CCD-202	B-220	5HK-D20
C40	.002		BPD-002	DD-202	BYA10D2	CCD-202	B-220	5HK-D20
C41	.05 400V		P488N-05	DD-503	CUB45S	4DP-3-503	GEM-415	4TM-S50
C42	.05 400V		P488N-05	DD-503	CUB45S	4DP-3-503	GEM-415	4TM-S50

Note 1. Includes coil wound on capacitor.
† Alternate Value.
* Not normally in distributor's stock. Available thru distributor on order to manufacturer.



⊖ SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM

1. DC voltage measurements taken with vacuum tube voltmeter; AC voltages measured with 1000 ohm per volt voltmeter.
2. Socket connections are shown as bottom views.
3. Measured values are from socket pin to common ground.
4. Line voltage maintained at 117 volts for voltage readings.
5. Nominal tolerance on component values makes possible a variation of ±15% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

NUMBERS ASSIGNED TO COILS, SWITCHES, PLUGS, SOCKETS, AND TRANSFORMERS ARE TO FACILITATE CIRCUIT TRACING OR COMPONENT REPLACEMENT AND MAY NOT NECESSARILY BE FOUND ON THE UNIT.

RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	12DT8	†6100Ω	47K	0Ω	0Ω	10Ω	†2700Ω	0Ω	.1Ω	0Ω
V2	12BE6	22K	1.1Ω	20Ω	10Ω	◓ †520Ω	◓†520Ω	◓4.2meg		
V3	12BA6	4.5meg ◓3meg	0Ω	50Ω	40Ω	†850Ω	†850Ω	0Ω		
V4	12BA6	1.6meg ◓650K	0Ω	40Ω	30Ω	†850Ω ◓† INF	†850Ω ◓† INF	0Ω		
V5	12AL5	300K	300K	30Ω	20Ω	0Ω	0Ω	22K		
V6	12AX7	†240K	1.5meg	1000Ω	15Ω	0Ω	†240K	1.5meg	1000Ω	NC
V7	50C5	150Ω	NC	110Ω	65Ω	680K	†520Ω	†247Ω		
V8	50C5	150Ω	680K	65Ω	15Ω	680K	†520Ω	†247Ω		

ALL MEASUREMENTS TAKEN IN "FM" POSITION UNLESS OTHERWISE DESIGNATED.
◓ MEASURED IN "AM" POSITION.
† MEASURED FROM OUTPUT OF M1. NC NO CONNECTION

SYLVANIA MODELS Y55C20, 55C20 (Ch. 692-1, 702-1)