

RADIO CHASSIS BOTTOM VIEW - RESISTOR IDENT.

OLYMPIC MODELS
1920, 1922 (Ch. 192 or 192-1)

SET 667 FOLDER 7

PHOTOFACT® Folder

with CIRCUITRACE™

OLYMPIC MODELS
1920, 1922 (Ch. 192 or 192-1)



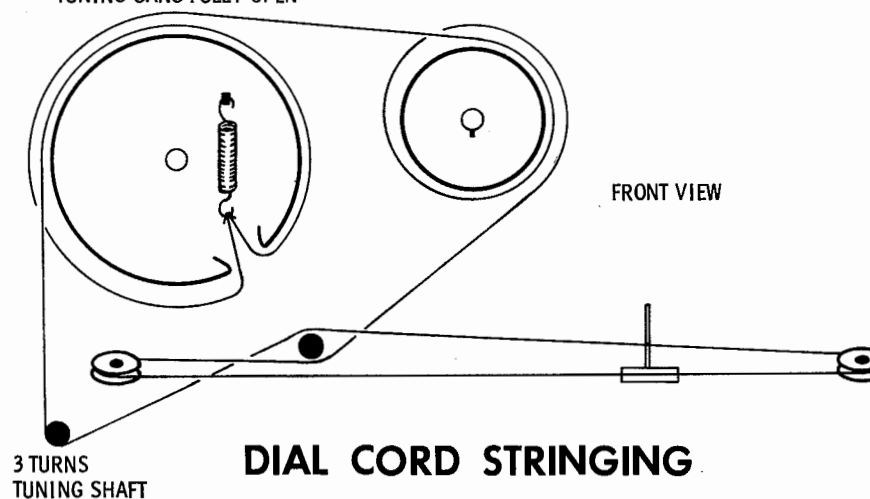
MODEL 1920

TRADE NAME	Olympic Models 1920, 1922 (Ch 192 or 192-1)
MANUFACTURER	Olympic Radio & Television Div., Lear Siegler Inc., Long Island City 1, N. Y.
TYPE SET	AC Operated 7 Tube AM-FM Receiver with 2 Tube FM Multiplex and 4 Speed Automatic Record Changer
POWER SUPPLY	105-120 Volts Ac, 60Cycles RATING 75 Watts, .7Amp. @ 117 Volts AC
TUNING RANGE - BROADCAST	525-1625KC
FREQ MOD	88-108MC

FOR SERVICE INFORMATION ON RECORD CHANGER-SEE SIMILAR B.S.R., UA16-PHOTOFACT SET 604 FOLDER 5

DIAL CORD STRINGING

TUNING GANG FULLY OPEN



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



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MN307

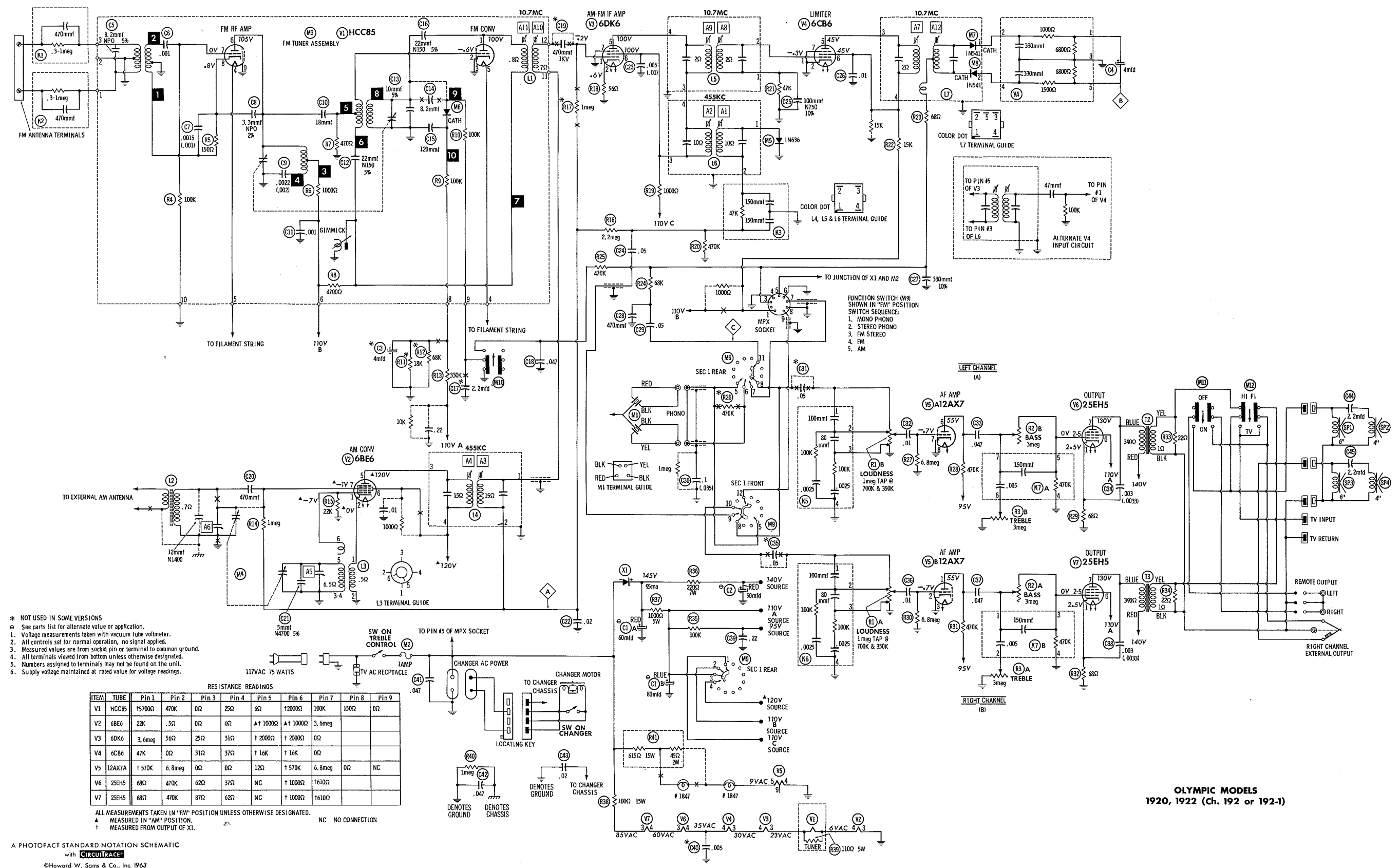
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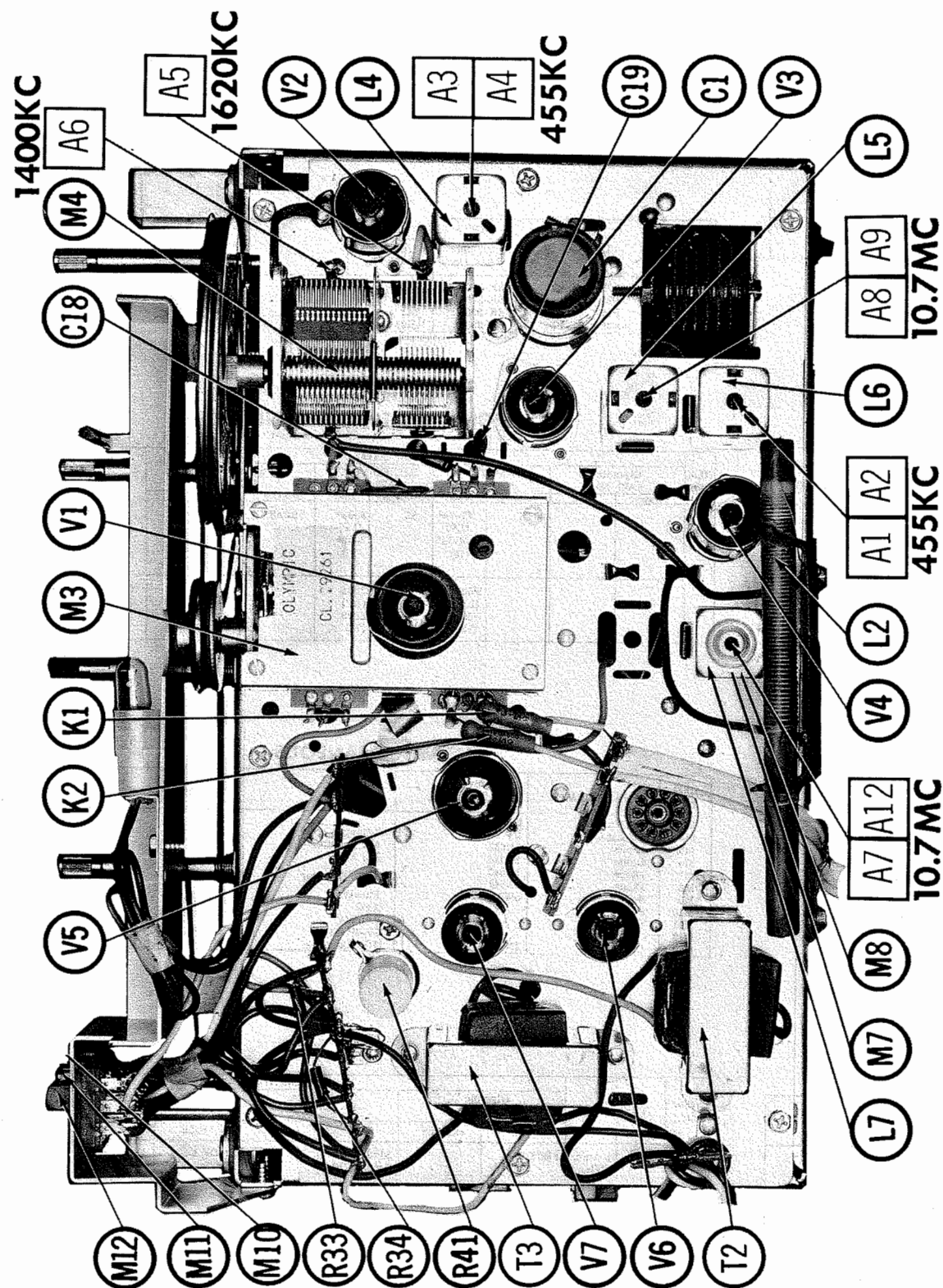
SET 667 FOLDER 7

OLYMPIC MODELS
1920, 1922 (Ch. 192 or 192-1)

SET 667 FOLDER 7



A PHOTOFACT STANDARD NOTATION SCHEMATIC
with CIRCUITRACE
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RADIO CHASSIS - TOP VIEW

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: A1 Thru A4, GENERAL CEMENT 5097, 8727, WALSCO 2515
A5 Thru A16, GENERAL CEMENT 8282, 8606, 9302 WALSCO 254-, 2544, 2588

AM ALIGNMENT - SELECTOR IN AM POSITION

Fashion loop of several turns of wire and connect generator across loop.

GENERATOR FREQUENCY	DIAL SETTING	INDICATOR	ADJUST	REMARKS
1. 455KC (Unmod.)	Tuning gang fully open.	DC probe of VTVM to point \diamond ; common to ground.	A1, A2, A3, A4	Adjust for maximum.
2. 1620KC	Tune to signal	"	A5	"
3. 1400KC	"	"	A6	Adjust for maximum.

FM ALIGNMENT USING AM SIGNAL GENERATOR - SELECTOR IN FM POSITION

High side to ungrounded shield over FM converter tube, low side to ground; OR across FM antenna terminals with 1200 Ω carbon resistor in series with each lead.

GENERATOR FREQUENCY	DIAL SETTING	INDICATOR	ADJUST	REMARKS
4. 10.7MC (Unmod.)	Point of non-interference.	DC probe of VTVM to point \diamond ; common to ground.	A7, A8, A9, A10, A11	Adjust for maximum.
5. "	"	DC probe to point \diamond ; common to ground.	A12	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 60v frequency modulated signal with 450KC sweep. Use 120v sawtooth voltage in scope for horizontal deflection.

GENERATOR FREQUENCY	DIAL SETTING	INDICATOR	ADJUST	REMARKS
4. 10.7MC (450KC Swp.)	Point of non-interference.	Vert. amp. of scope to point \diamond ; low side to ground.	A7, A8, A9, A10, A11	Disconnect stabilizing capacitor C 4. Adjust for maximum gain and symmetry of response similar to Fig. 1 with marker as shown. Reconnect C 4.
5. "	"	Vert. amp. to point \diamond ; low side to ground.	A12	Adjust to place marker at center of crossover lines similar to Fig. 2. SLIGHTLY retouch A 7 for maximum amplitude and straightness of crossover lines.

FM STEREO MULTIPLEX ALIGNMENT USING FM STEREO SIGNAL GENERATOR ($\pm .0001\%$ ACCURACY)

High side to point \diamond , low side to ground.
Suggested Alignment Tools:

GENERATOR FREQUENCY	INDICATOR	ADJUST	REMARKS
6. 19KC	Vert. Amp. to point \diamond , low side to ground.	A13	Adjust for maximum. Set scope to lock in 2 cycles of 19KC waveform.
7. "	Vert. Amp. to point \diamond , low side to ground.	A14	Adjust for maximum 4-cycle waveform.
8. 67KC	"	A15	Use Audio Oscillator if necessary. Adjust for MINIMUM
9. 23KC	"	A16	Adjust for Maximum
10. Modulated Left channel	Vert. Amp. to point \diamond , low side to ground.	R42	Adjust for MINIMUM
11. Modulated Right channel	Vert. Amp. to point \diamond , low side to ground.	R42	Check for MINIMUM. Make compromise adjustment if necessary.

To align multiplex section using an air signal, first make sure FM section is properly aligned. Tune in a strong FM stereo signal. Follow steps 6 thru 8 above-except in step 8 adjust to eliminate whistle or interference.

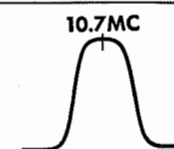


FIG. 1

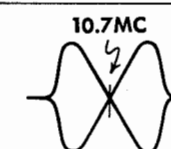


FIG. 2

OLYMPIC MODELS
1920, 1922 (Ch. 192 or 192-1)

FOLDER 7

PARTS LIST AND DESCRIPTION

TUBES

• AMPEREX •		• GENERAL ELECTRIC •		• RCA •		• RAYTHEON •		• SYLVANIA •	
ITEM No.	USE	TYPE			ITEM No.	USE	TYPE		
V1	FM RF Amp-FM Conv.	HCC85			V5	AF Amp.	12AX7		
V2	AM Conv.	6BE6			V6	Output	25EH5		
V3	AM-FM IF Amp.	6DK6			V7	Output	25EH5		
V4	Limiter	6CB6							

POWER RECTIFIERS

ITEM No.	MEASURED CURRENT	ORIGINAL Part or Type No.	RECTIFIERS		
			MALLORY PART No.	RCA PART No.	SARKES TARZIAN PART No.
X1	.095A	RF3160	A300 or D300	1N1763 or 1N2862 or 1N3194	Model 100A

When replacing selenium rectifier with silicon type, add series resistance to obtain original output voltage.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	Olympic PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	GENERAL INSTRUMENT PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A	80	150	CO 25744 ①	PRS2240	BBRD8515	Q72-10	TDL-12	TCDA98	TVA-2462
B	80	150							
C2	50	250	CO 2068-3A ①	PRS1585	BR50-250	Q71-18	TD-50-450	TC59	TVA1512
C3	4	50	CO 2756 ②	PRS1400	BBR4-50	Q71-3	TD-4-50	TT50X4	TVA-1402
C4	4	50	CO 2756	PRS1400	BBR4-50	Q71-3	TD-4-50	TT50X4	TVA-1402

① Some versions may combine C1 & C2 in a single unit Part #CO29241

② Not used in some versions.

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	8.2	NPO 5%		BPD-001	DD-102	BYA10D1	CCD-102	B-210	10TCC-V82	
C6	.001			BPD-0016	DD-152	LA10D15-C4	CCD-152	B-215	5HK-D10	
C7	.0015		(.001) ↑						10TS-D15	
C8	3.3	NPO 2%		S12200	D6-222	JB6D22	CCD-222	GP222	5HK-D22	
C9	.0022		(.002) ↑		TCZ-18		CCTO-180	CNO-418	10TCC-Q18	
C10	18			BPD-001	DD-102	BYA10D1	CCD-102	B-210	5HK-D10	
C11	.001				TCZ-10	C10Q1C		CNO-410	10TCP-Q22	
C12	22	N150 5%							10TCC-Q10	
C13	10	5%							10TCC-V82	
C14	8.2								10TS-T12	
C15	120			DI-120	DD-121	LA10T12-S3	CCD-121	GP312	10TCP-Q22	
C16	22	N150 5%							HY150	
C17	2.2mfd	3V	Note 1	P488N-047	UK-225	HCC3225P	4DP-3-473	GEM-4147	4TM-847	
C18	.047	400V		DD-503	CUB4S47			B-347	10TS-T47	
C19	470	1KV	Note 1	BPD-00047	DD-471	BYA10T47	CCD-471	B-347	10TS-T47	
C20	470			BPD-00047	DD-471	BYA10T47	CCD-471			
C21	5mmf	N4700 5%	#CCRZ050K							
C22	.02	400V		P488N-02	DD-203	PM4S22	4DP-2-203	GEM-415	4TM-820	
C23	.005	1KV	(.01) ↑	BPD-005	DD-502	BYA10D5	CCD-502	B-250	5HK-D50	
C24	05	50V		P288N-05	CK-503	PM2S5	1DP-2-503	PVC215	2TM-850	
C25	100	N750 10%		N750-D1100	DTN-100	C10T1U	CCTN-101	CN7-310	10TCU-T10	
C26	.01			BPD-01	DD-103	BUA10S1	CCD-103	B-110	5HK-S10	
C27	330	10%		DI-330	DD-331	LA10T33-C4	CCD-331	GP333	10TS-T33	
C28	470			BPD-00047	DD-471	BYA10T47	CCD-471	B-347	10TS-T47	
C29	.05	50V		P288N-05	CK-503	PM2S5	1DP-2-503	PVC215	2TM-850	
C30	.1	400V	(.035) ↑	P488N-1	DF-104	CUB4P1	4DP-3-104	GEM-401	4TM-P10	
C31	.05	50V	Note 1	P288N-05	CK-503	PM2S5	1DP-2-503	PVC215	2TM-850	
C32	.01	600V		P688N-01	DD-103	PM6S1	6DP-2-103	GEM-611	6TM-S10	
C33	.047	400V		P488N-047	DD-503	CUB4S47	4DP-3-473	GEM-4147	4TM-847	
C34	.003	600V	(.0033) ↑	P688N-003	DD-302	PM6D33	6DP-1-302	GEM-623	6TM-D30	
C35	.05	50V	Note 1	P288N-05	CK-503	PM2S5	1DP-2-503	PVC215	2TM-850	
C36	.01	600V		P688N-01	DD-103	PM6S1	6DP-2-103	GEM-611	6TM-S10	
C37	.047	400V		P488N-047	DD-503	CUB4S47	4DP-3-473	GEM-4147	4TM-847	
C38	.003	600V	(.0033) ↑	P688N-003	DD-302	PM6D33	6DP-1-302	GEM-623	6TM-D30	
C39	.22	400V		P488N-22	DD-502	PM4P22	4DP-5-224	GEM-4022	4TM-P22	
C40	.005		Note 1	BPD-005	DD-502	BYA10D5	CCD-502	B-250	5HK-D50	
C41	.047	400V		P488N-047	DD-503	CUB4S47	4DP-3-473	GEM-4147	4TM-847	
C42	.047	400V		P488N-047	DD-503	CUB4S47	4DP-3-473	GEM-4147	4TM-847	
C43	.02	400V		P488N-02	DD-203	PM4S22	4DP-2-203	GEM-412	4TM-S20	
C44	2.2mfd	3V			UK-225	HCC3225P			HY 150	
C45	2.2mfd	3V			UK-225	HCC3225P			HY 150	

↑ Alternate Value Note 1 Not used in some versions
Olympic Part Number

CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA				
			Olympic PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1A	Loudness, B	1meg	PT-2593				
		350K & 700K Tap					
B	Loudness, A	1meg					
		350K & 700K Tap					
R2	Bass, B	3meg	PT-28007	B-85, SR-85 or (F2-3meg, R2-3meg, TU304)		MB13-340, SK1, QCM or (BU2, SC17, SS1, DC1)*	FA36A RU36A CS3500
	Bass, A	3meg					
R3A	Treble, B	3meg	PT-26208	B-85, SR-85, KR-2, or (F2-3meg, R2-3meg, TU304, KR-2)		MB13-340, SK1, QCM, 76-2 or (BU2, SC17, SS1, WF)*	FA36A RU36A CS3500 US-42
B	Treble, A, Switch	3meg					

*"SNAPTROL"

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA			ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN PART No.	REMARKS			IRC PART No.	WORKMAN PART No.	REMARKS
R36	220Ω 7W	PWT-220	7W-SQ-220		R39	110Ω 5W	PW5-110	5W-SQ-110	
R37	1000Ω 5W	PW5-1000	5W-SQ-1000		R41A	815Ω 15W			
R38	100Ω 15W	PW15-100	15W-SQ-100		B	45Ω 2W			

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		Olympic PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	1st FM IF	LP29258	BC-419	705-A	RTC-8915	T582	*Drill Mtg. Hole *Add Diodes Externally
L2	Loopstick	CL2709	BC-393*	69-Osc *	RTC-8946 *	T503 *	
L3	AM Osc.	TR1844	BC-352	12-C1	RTC-8632	T607	
L4	1st AM IF	TR26714	FM-254	1457	RTC-8599	T633	
L5	2nd FM IF	TR1645	BC-353	12-C2	RTC-8633	T608	
L6	2nd AM IF	TR26982	FM-255 *	1459 *	RTC-8600 *	T635 *	
L7	Ratio Detector						

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	Olympic PART No.	REPLACEMENT DATA
K1	Antenna Isolation	.3-1meg, 470mmf	PC27016	Centralab RC-471 Sprague AC1-1
K2	Antenna Isolation	.3-1meg, 470mmf	PC27016	Centralab RC-471 Sprague AC1-1
K3	AM RF Filter	47K, 150mmf, 150mmf	PC2478-1	Aerovox PA-98 Centralab PC-51 Sprague D-2
K4	Ratio Detector Network	1000Ω, 1500Ω, 8900Ω, 6800Ω, 330mmf, 330mmf	PC27753-B	
K5	Tone Comp	100K, 100K, 80mmf, 100mmf .0025mfd, .0025mfd	PC25420	Aerovox PA-683 Centralab PC-325 Sprague TC-5
K6	Tone Comp	100K, 100K, 80mmf, 100mmf, .0025mfd, .0025mfd	PC25420	Aerovox PA-683 Centralab PC-325 Sprague TC-5
K7	Tone Comp	470K, 470K, 150mmf, 150mmf, .005mfd, .005mfd	PC27768	

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC.	Olympic PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T2	1300Ω	1-2Ω	TR-25922-1	A-3018	A-3849	26S50	S-60X	
T3	1300Ω	1-2Ω	TR-25922-1	A-3018	A-3849	26S50	S-60X	

SPEAKER

ITEM No.	TYPE		REPLACEMENT DATA		NOTES
			Olympic PART No.	QUAM PART No.	
SP1	6"	PM 3-4Ω	SK-29057	6A1	
SP2	4"	PM 3-4Ω	SK-29090	4A05	
SP3	6"	PM 3-4Ω	SK-29057	6A1	
SP4	4"	PM 3-4Ω	SK-29090	4A05	

PHONO CARTRIDGE & NEEDLES

*NEEDLE LISTINGS SHOWN ARE FOR RESPECTIVE REPLACEMENT CARTRIDGES ONLY.

ITEM No.	REPLACEMENT DATA								NOTES
	Olympic PART No.		ASTATIC PART No.		ELECTRO-VOICE PART No.		SONOTONE PART No.		
	CARTIDGE	NEEDLE*	CARTIDGE	NEEDLE*	CARTIDGE	NEEDLE*	CARTIDGE	NEEDLE*	
M1			80TS	N7-7s* (LP) N8-3s* (78)	95	3005* (LP) 3008* (78)	18TAS	N-18TS*	
				N601-Ts (LP) N801-3s (78)		3005 (LP) 3008 (78)			Original Needle Replacement

MISCELLANEOUS

ITEM No.	PART NAME	Olympic PART No.	NOTES
M3	FM Tuner	CL 29261	
M4	Tuning Cap	CV 29084	
M5	Diode	1N636	2 Gang
M6	Diode	BA101	AM Detector
M7	Diode	1N541	FM AFC
M8	Diode	1N541	Ratio Detector
M9	Switch	SW29216	Function
M10	Switch		AFC
M11	Switch		Remote
M12	Switch		TV-HI-FI
M13	Diode	1N636	MPX Detector

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			Olympic PART No.	LITTELFUSE PART No.		BUSS PART No.		
				FUSE	HOLDER	FUSE	HOLDER	
M2	3AG	1 Amp. S/B	FU26367			315001 (Amp. S/B)		MDV 1

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)

OLYMPIC MODELS
1920, 1922 (Ch. 192 or 192-1)

FOLDER 7

TUBES

• AMPEREX • GENERAL ELECTRIC • RCA • RAYTHEON • SYLVANIA •			
ITEM No.	USE	ITEM No.	TYPE
V8	19KC Amp- 19KC Osc. - Doubler	12A77	
V9	L-R Amp- L-R Phase Inverter	12AX7	

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	Olympic Part No.	REPLACEMENT DATA
K8	38KC Filter	47K, 150mmf, 150mmf	PC2478	Aerovox Centralab Sprague PC-51 D-2
K9	38KC Filter	47K, 150mmf, 150mmf	PC2478	Aerovox Centralab PC-51 Sprague D-2

ELECTROLYTIC CAPACITORS

REPLACEMENT DATA					
ITEM No.	RATING	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	GENERAL INSTRUMENT PART No.	SPRAGUE PART No.
C46A	40 150	PR52196	BBD4415	Q72-9	TVA-2445
B	40 150			TDL-7	TCD48

COILS (RF-IF)

REPLACEMENT DATA					
ITEM No.	USE	Olympic Part No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.
L8A	67KC Trap	TR28306			
L8B	23KC Trap				
L9	19KC Osc.	CL28397①			
L10	19KC Doubler	CL28398			

FIXED CAPACITORS

REPLACEMENT DATA					
ITEM No.	RATING	REMARKS	CORNELL-DUBILIER PART No.	ELIMCO PART No.	SPRAGUE PART No.
C47	.01		DD-103	CCD-103	5HK-S10
C48	.05		CK-503	1DP-2-503	2TM-S80
C49	.02		DD-103	CCD-103	5HK-S20
C50	.001		DD-103	CCD-103	5HK-S20
C51	.001		DD-103	CCD-103	5HK-S20
C52	.001		DD-103	CCD-103	5HK-S20
C53	.001		DD-103	CCD-103	5HK-S20
C54	.001		DD-103	CCD-103	5HK-S20
C55	.001		DD-103	CCD-103	5HK-S20
C56	.001		DD-103	CCD-103	5HK-S20
C57	.001		DD-103	CCD-103	5HK-S20
C58	.001		DD-103	CCD-103	5HK-S20
C59	.001		DD-103	CCD-103	5HK-S20
C60	.001		DD-103	CCD-103	5HK-S20
C61	.001		DD-103	CCD-103	5HK-S20
C62	.001		DD-103	CCD-103	5HK-S20
C63	.0025		DD-103	CCD-103	5HK-S20
C64	.002		DD-103	CCD-103	5HK-S20
C65	.001		DD-103	CCD-103	5HK-S20
C66	.0025		DD-103	CCD-103	5HK-S20
C67	.002		DD-103	CCD-103	5HK-S20

† Alternate Value

CONTROLS

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

REPLACEMENT DATA					
ITEM No.	USE	RESISTANCE	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.
R42	Separation	1.00K	TT-40 or (FI-100K, SN010, AK-38)	B47-100K-S	B11-128, TM4 or (BU11, CF13, SS0*)

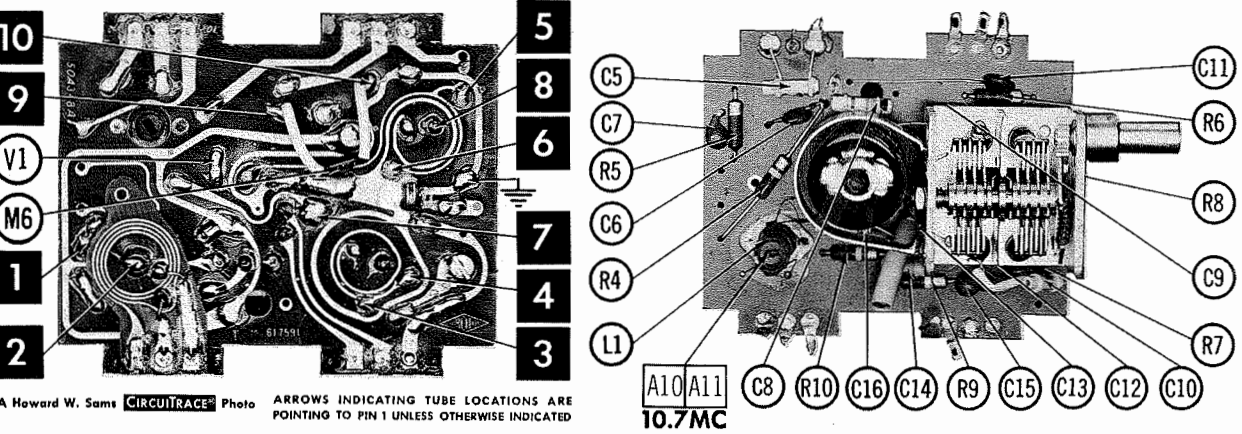
**"SNAPTROL."

TRANSFORMER (FILAMENT)

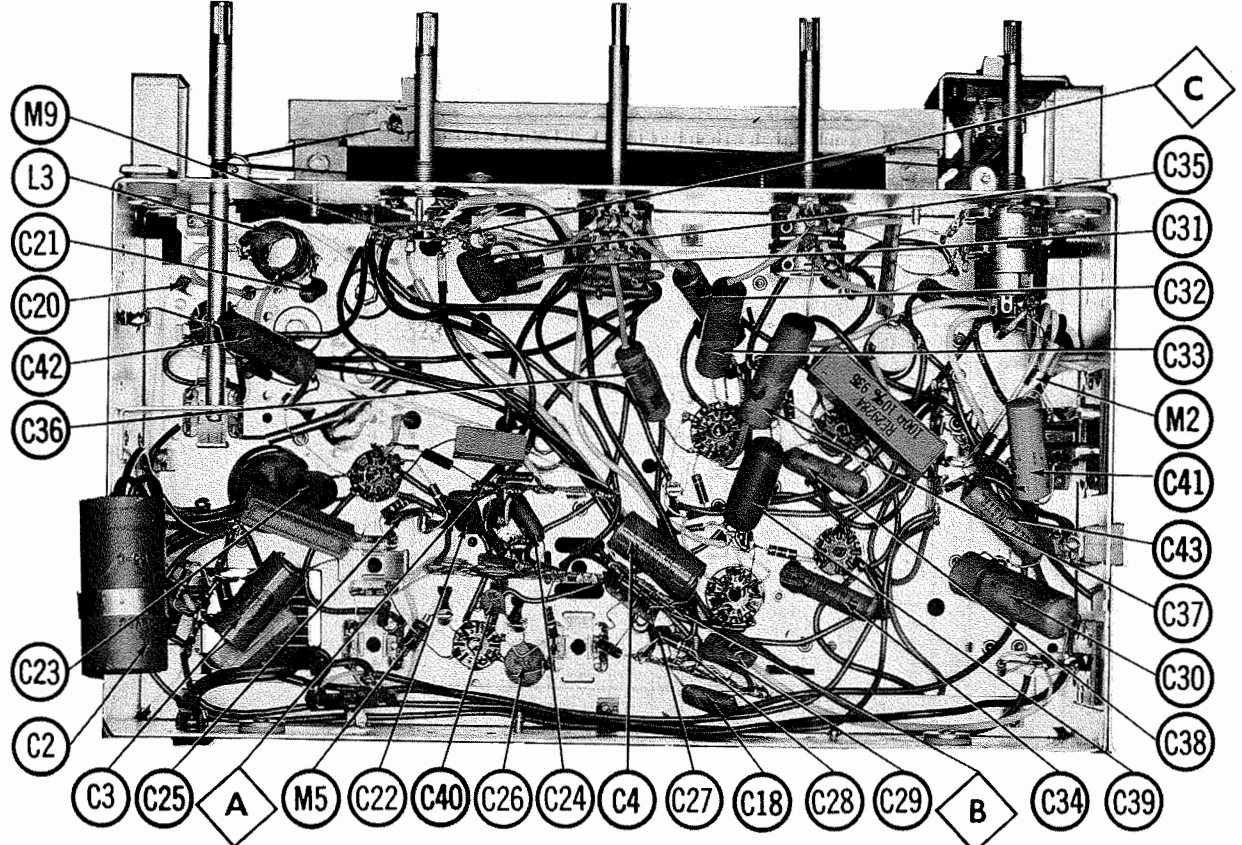
REPLACEMENT DATA					
ITEM No.	RATING	Olympic Part No.	MERIT PART No.	STANCOR PART No.	THORNDARSON PART No.
T1	117VAC 6.3VAC .6A	TR-28314	P-2888	P-6134①	21F09 ①

WIRING DATA

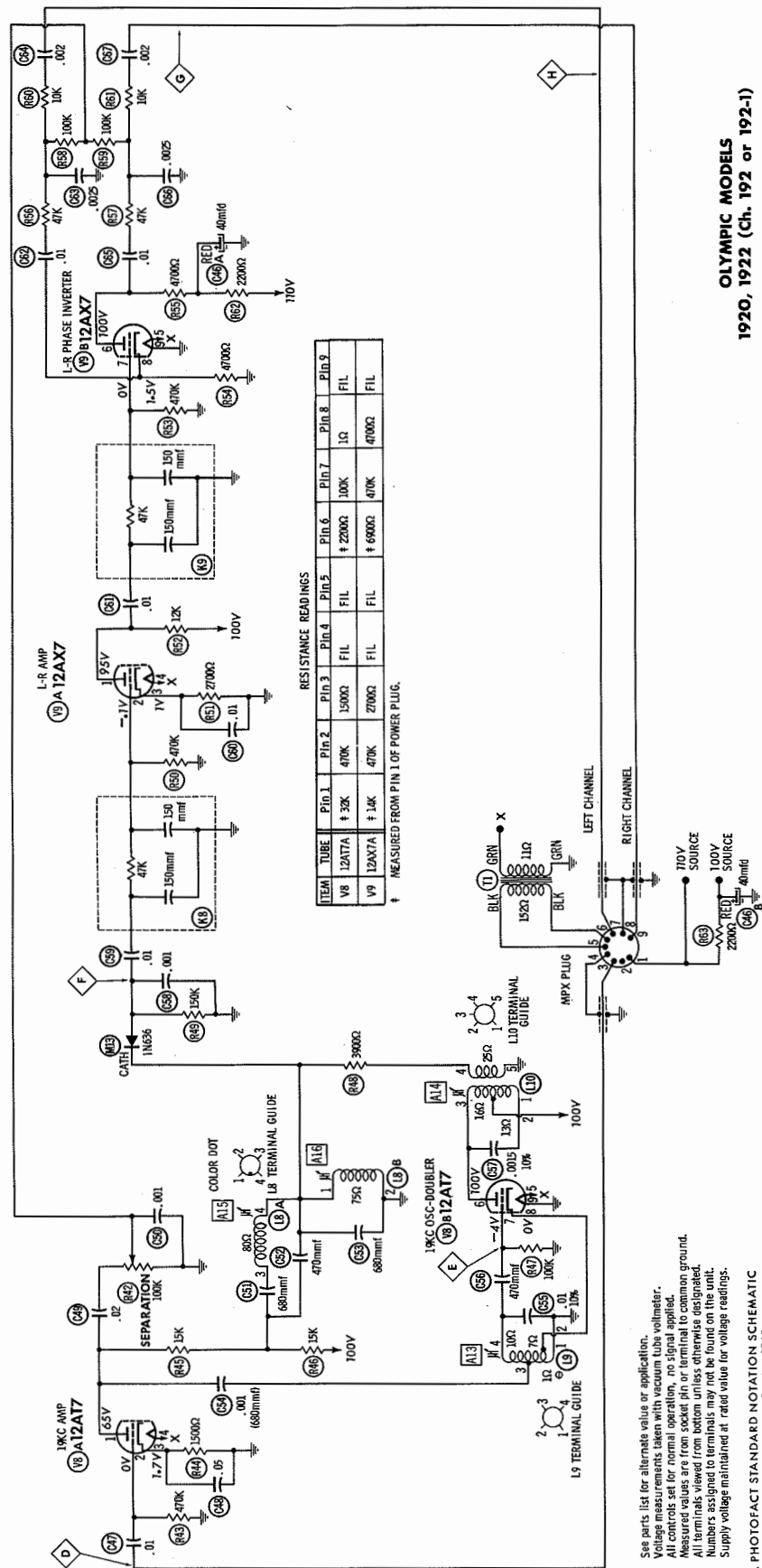
General-use Unshielded Hook-up Wire Use BELDEN No. 8530 (Solid) Available in 12 Colors
Power Cord Use BELDEN No. 8524 (Stranded) Available in 12 Colors
Power Cord (Interlock Type) Use BELDEN No. 17096 (Plastic) or 17126 (Rubber) - 6 Ft.
Low-Loss Shielded Lead (Interconnecting) Use BELDEN No. 17096 (Plastic) or 17126 (Rubber) - 8 Ft.
Photo Pick-up Arm Cable Use BELDEN No. 8974 (Rubber) or 8896 (Plastic)
..... Use BELDEN No. 8403 or 8421
..... Use BELDEN No. 8430 (Two Conductor-Unshielded)
..... Use BELDEN No. 8429 (Two Conductor-Shielded)
..... 8419 (Three Conductor-Shielded)



FM RF SUBCHASSIS

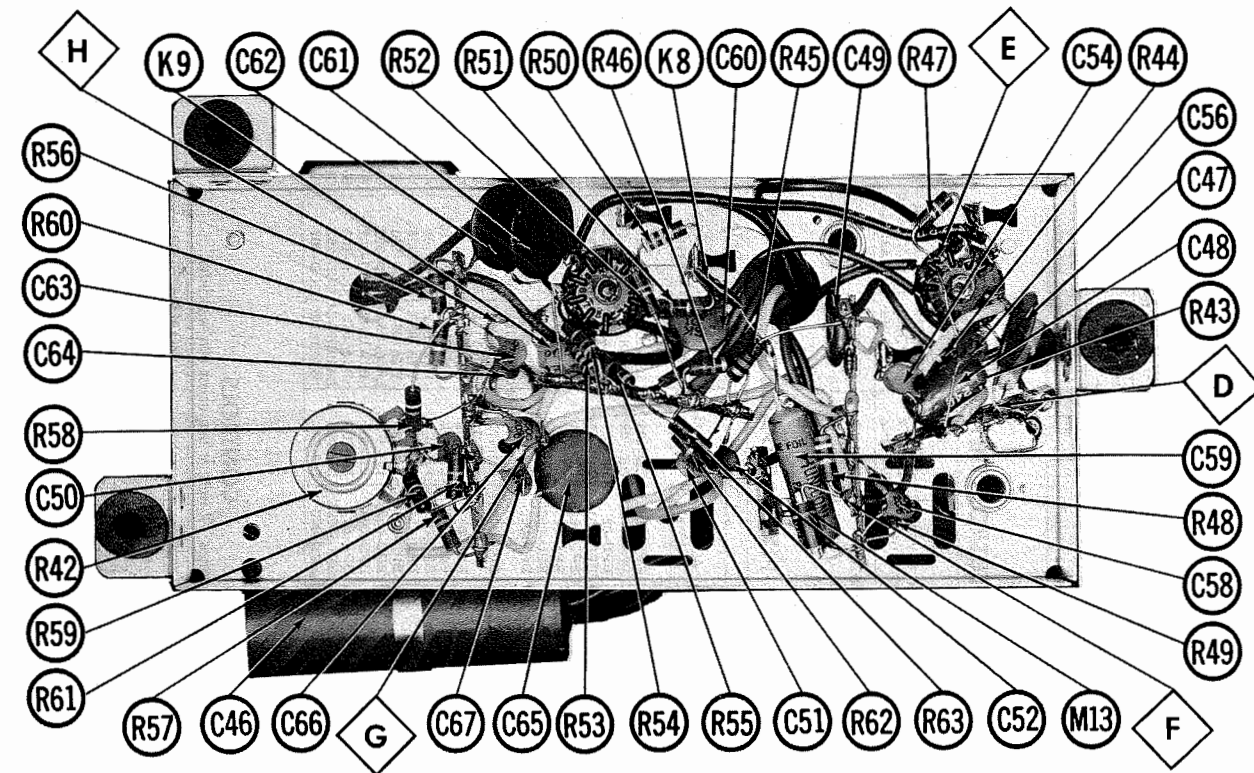


RADIO CHASSIS BOTTOM VIEW - CAPACITOR & MISC. IDENT.



OLYMPIC MODELS
 1920, 1922 (Ch. 192 or 192-1)

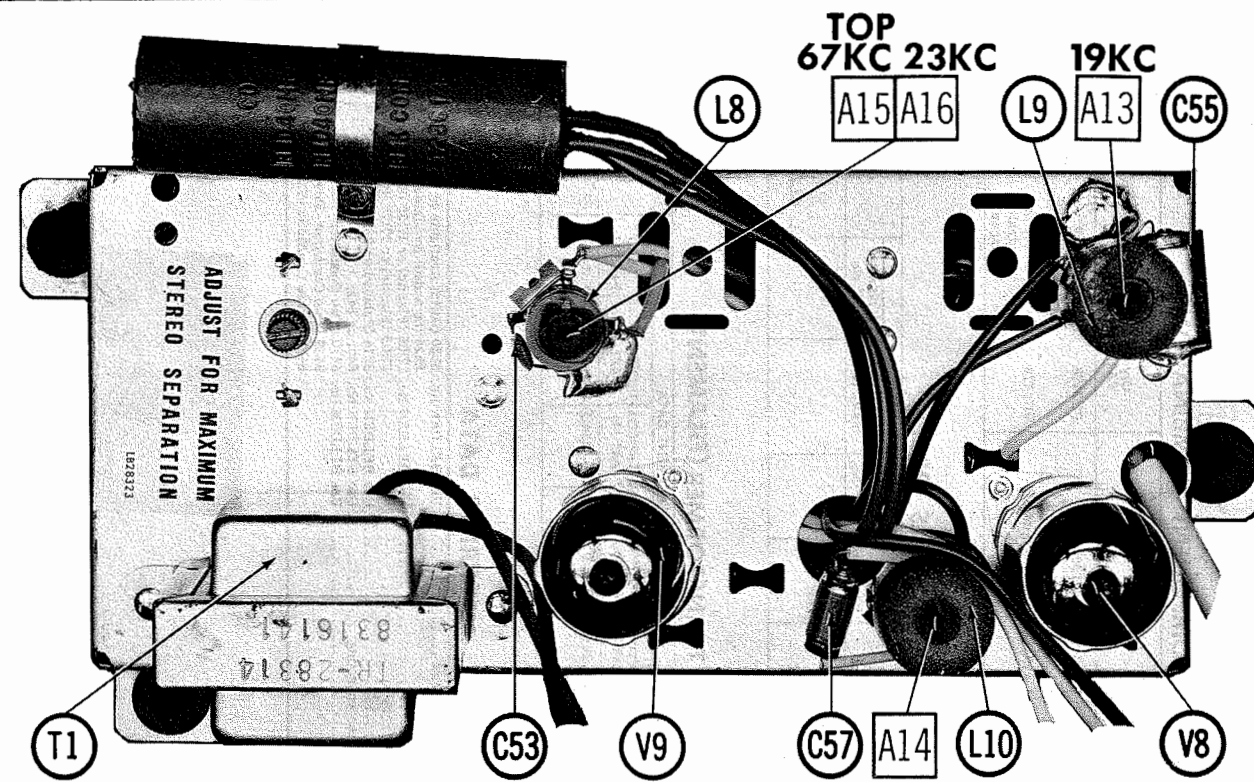
MPX SCHEMATIC



MPX CHASSIS - BOTTOM VIEW

OLYMPIC MODELS
 1920, 1922 (Ch. 192 or 192-1)

FOLDER 7



MPX CHASSIS - TOP VIEW