

PHOTOFACT® Folder

with CIRCUITRACE™

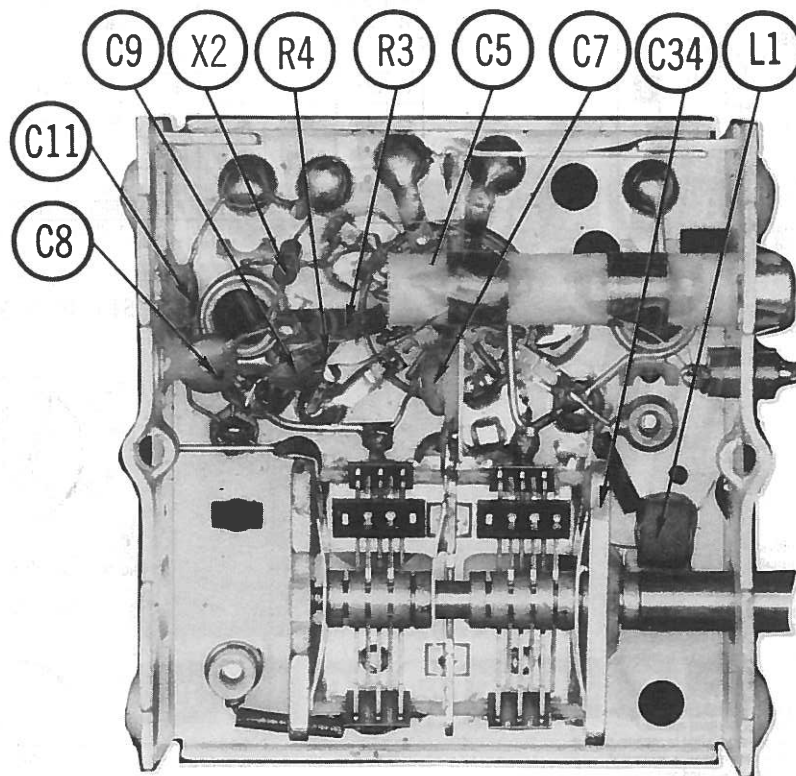
WESTINGHOUSE
CHASSIS V-2458-7WESTINGHOUSE
CHASSIS V-2458-7

TRADE NAME: Westinghouse Models CR-540, CR-541, CR-545, CR-550, CR-551, CR-555 (Ch. V-2458-7)

SUPPLIER: For Current Address, See Annual Index.

TYPE SET: 6 Tube AM-FM Receiver

POWER SUPPLY: 110-120 Volts AC, 60 Cycles RATING: 30 Watts, .3 Amp. @ 117 Volts AC (Less Clock)



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

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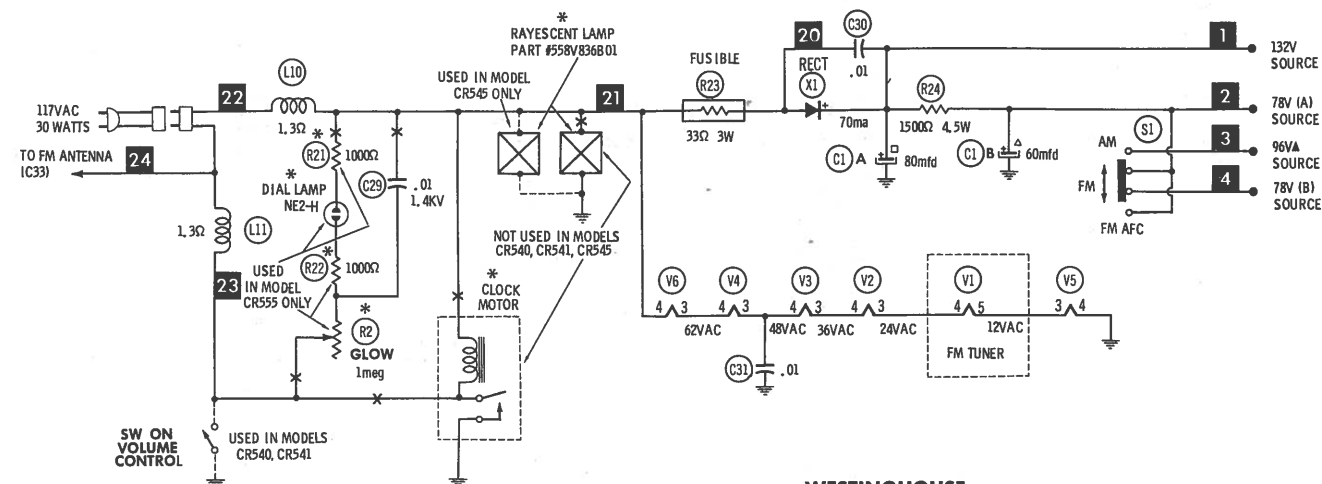


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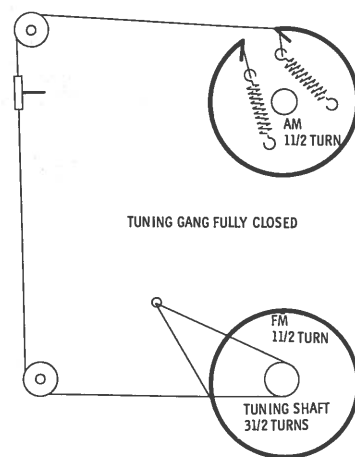
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SET 878 FOLDER 10

WESTINGHOUSE
CHASSIS V-2458-7



DIAL CORD STRINGING



A PHOTOFACT STANDARD NOTATION SCHEMATIC
with **CIRCUITRACE™**
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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, A2, A3, A6 thru A11, A14, A15. GENERAL CEMENT: 8606, 8606L, 8869 WALSCO: 2543, 2544, 2588
A4, A5, A12, A13. 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 (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. 1625KC	"	"	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.	Adjust for maximum.
6. "	"	DC probe to point B; common to ground.	A11.	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.	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.	A11.	Adjust A11 (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
7. 108.5MC	Set at high end.	DC probe of VTVM to point A; common to ground.	A12, A13.	Adjust for maximum.
8. 90MC	Tune to signal.	"	A14, A15.	Rock tuning and adjust for maximum. Repeat steps 7 and 8 until no further improvement can be made.

10.7MC

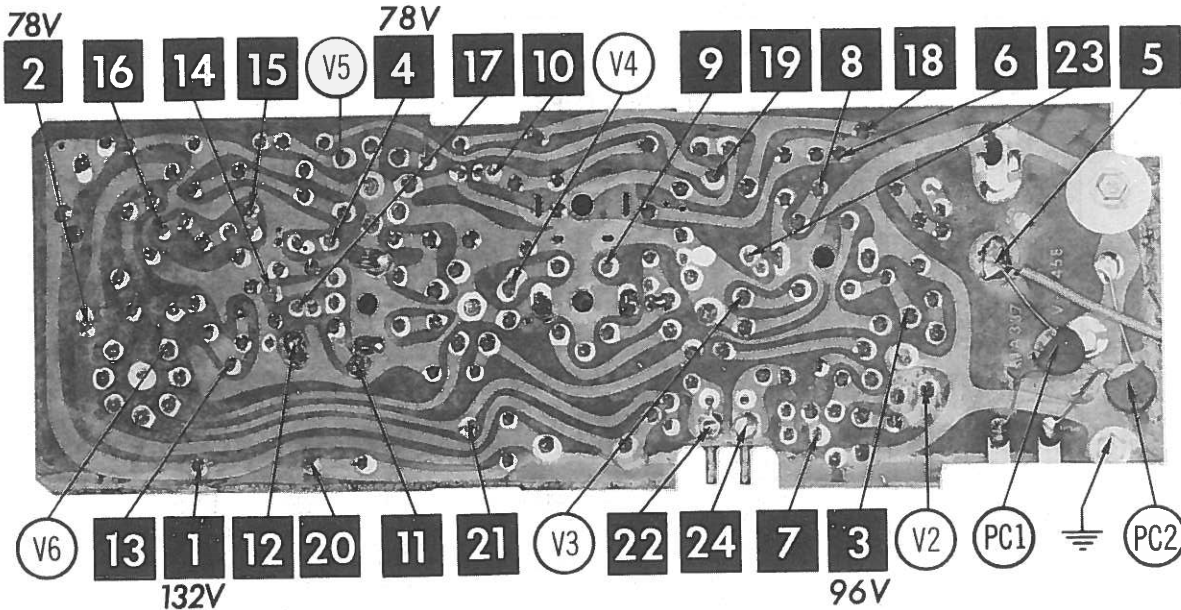
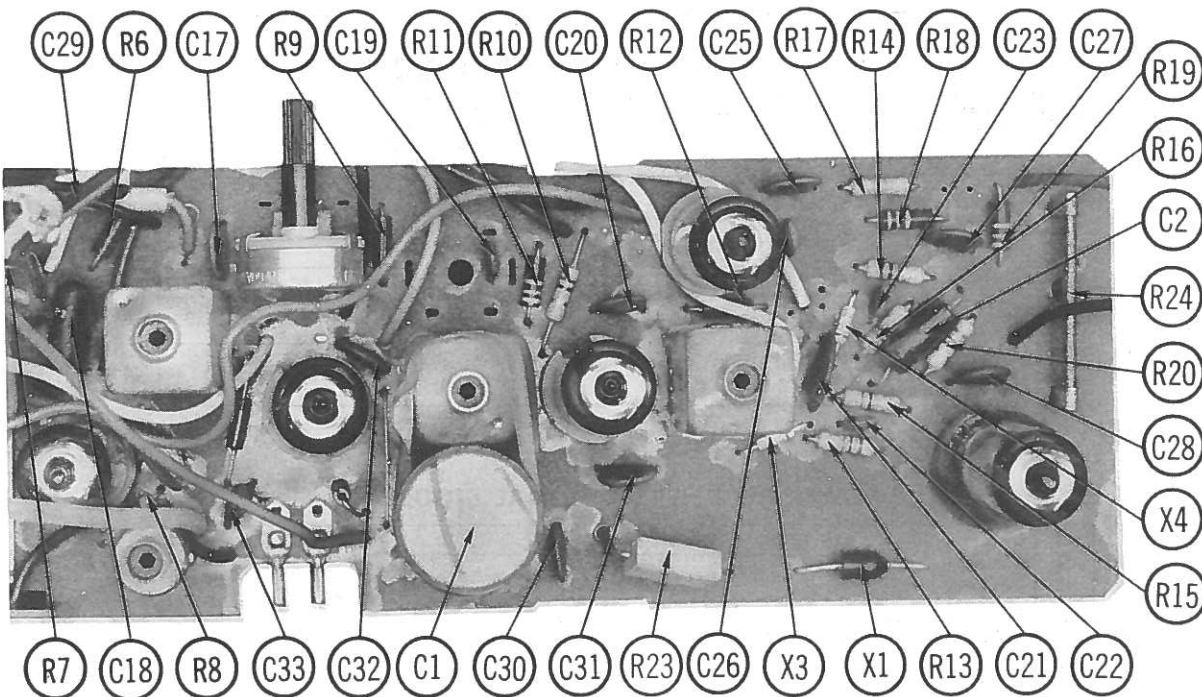


FIG. 1

10.7MC



FIG. 2



ARROWS INDICATING TUBE LOCATIONS ARE POINTING TO PIN 1 UNLESS OTHERWISE INDICATED

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. 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) 8429 (Two Conductor-Shielded) 8419 (Three Conductor-Shielded)

TUBES

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

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MEASURED CURRENT	ORIGINAL Part or Type No.	RECTIFIERS & DIODES		RECTIFIERS		
			GENERAL ELECTRIC	INTERNATIONAL RECTIFIER	MALLORY	RCA	SARKES TARZIAN
			Part No.	Part No.	Part No.	Part No.	Part No.
X1	.070A	295V006H03	GE-504A or GE-505	8D4 or 5A4-D	1N2070 or 1N540	SK-3016 or SK-3017A	F-4 or 40C
X2		690V028H76①					
X3		296V006H02 (1N60)	1N60	1N60			
X4		296V006H02 (1N60)	1N60	1N60			

① Variable Capacitor Diode.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA				
	CAP.	VOLT.	Westinghouse Part No.	AEROVOX Part No.	CORNELL-DUBILIER Part No.	GENERAL ELECTRIC Part No.	MALLORY Part No.
C1A	80	150	218V052H05	PR2-045	ESS-7515	QT2-10	PWD252
B	60	150					
C2	4	50	218V012H13	CRE753A	NLW4-50	MT1-3	TT50X4

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.
C3	36							
C4	3-9							
C5	15	5%	#690V028H74					
C6	5.5		#690V028H77					
C7	5	N470						
C8	5.6	N470						
C9	8.2	NPO						
C10	15							
C11	8.4	5%	(10)†					
C12	60							
C13	.001							
C14	.001							
C15	.001							
C16	.001							
C17	.01							
C18	.047	200V						
C19	220							
C20	.0022							
C21	.02							
C22	.0015							
C23	.0015							
C24	.01							
C25	.01							
C26	680							
C27	.01							
C28	.01							
C29	.01	1.4KV						
C30	.01							
C31	.01							
C32	.01							
C33	100	1.4KV	#215V314H41					
C34								
C35			#330V0114H07					

* Not normally in distributor's stock. Available thru distributor on order to manufacturer.
Westinghouse Part Number. † Alternate Value.

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				
			Westinghouse Part No.	CENTRALAB Part No.	CLAROSTAT Part No.	CTS-IRC Part No.	MALLORY Part No.
R1	Volume	500K	270V094H14 ③	F2-500K①, SNK104	B47-500K-Z ① or (NP-500K-Z①, NML-A-300) SS6)*	B13-133, TM4① or (CF25①, SS6)*	RU55A, SL37①, SN2000 or (UA55A①, SN2000)
R2	Glow	1meg	270V094D14 ④	F3-1meg,SN200	NP-1meg-V, NML-A-300②, TT-2	B17-137, TM4② or (BU11,CF65, SS6②)*	RU16R, SL37, SN2000②or (UA16R,SN2000②)

* "SNAPTROL" ① Use original mounting bracket. ② File flat.
③ Part #270V094H13 (Volume/Switch) used in Models CR540, CR541, CR545. ④ Used in Model CR-555 only.

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA			ITEM No.	RATING	REPLACEMENT DATA		
		IRC Part No.	WORKMAN Part No.	Westinghouse Part No.			IRC Part No.	WORKMAN Part No.	Westinghouse Part No.
R23	33Ω 3W Fusible			251V035H02	R24	1500Ω 4.5W	PW5-1500Ω	5W-SQ-1500	251V031H06

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA				
		Westinghouse Part No.	MEISSNER Part No.	MERIT Part No.	MILLER Part No.	WORKMAN Part No.
L1	FM Antenna					
L2	FM RF	690V028H78				
L3	FM Oscillator	690V028H73				
L4	1st FM IF	690V028H75				
L5	Loopstick	317V006H38				
L6	AM Oscillator	230V136H02				
L7	1st AM IF	235V023H11	16-6786	BC-357	16-PC10	TG619
L8	2nd AM-FM IF	235V131H01				
L9	Ratio Detector	235V127H01				
L10	Line Choke (3.9uh)	230V028H07			4608	
L11	Line Choke (3.9uh)	230V028H07			4608	

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC.	Westinghouse Part No.	MERIT Part No.	STANCOR Part No.	THORDARSON Part No.	TRIAD Part No.	
T1	2000Ω	3-4Ω	570V086A01 (Includes Speaker) 570V086A03① (Includes Speaker)	A-3025	A-3332	24S53	S-12X	① Alternate
				A-3025	A-3332	24S53	S-12X	

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA			NOTES
				Westinghouse Part No.	JENSEN Part No.	QUAM Part No.	
SP1	4"	PM	3-4Ω	570V086A03	P4W3	4A05	① Includes Output Transformer (T1).
	4"	PM	3-4Ω	570V086A01①			

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	Westinghouse Part No.	REPLACEMENT DATA
PC1	Antenna Isolation	.6-2.2meg, 130pf	219V032A03	Centralab RC-471
PC2	Antenna Isolation	.6-2.2meg, 130pf	219V032A03	Centralab RC-471

MISCELLANEOUS

ITEM No.	PART NAME	Westinghouse Part No.	NOTES
M1	FM Tuner	787V566H04	
S1	Switch	756V088H03	AM-FM-AFC

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	MODELS	PART No.	ITEM	MODELS	PART No.
Cabinet-Back	CR-540	513V180H24	Pointer	CR-555	558V840A02
	CR-541	513V180H25		CR-545	558V840A04
	CR-550	513V180H26	Knob-Function	CR-550, CR-551, CR-555	550V322H01
	CR-551	513V180H27		CR-555	
Cabinet-Wood	CR-555	513V180H28	Knob-Glow Control	CR-555	550V281H17
	CR-545	516V754R01	Knob-Tuning	CR-540, CR-541, CR-550, CR-551	550V322H16
	CR-540, CR-541	513V226R01		CR-545, CR-555	
	CR-545	513V226R02	Knob-Tuning	CR-545, CR-555	550V322H18
Cabinet-Front	CR-550, CR-551	513V226R03	Knob-Volume	CR-540, CR-541, CR-550, CR-551	550V322H15
	CR-555	513V226R04		CR-550, CR-551	
	CR-550, CR-551	558V840A01	Knob-Volume	CR-545, CR-555	550V322H17
	CR-540, CR-541	558V840A03			

