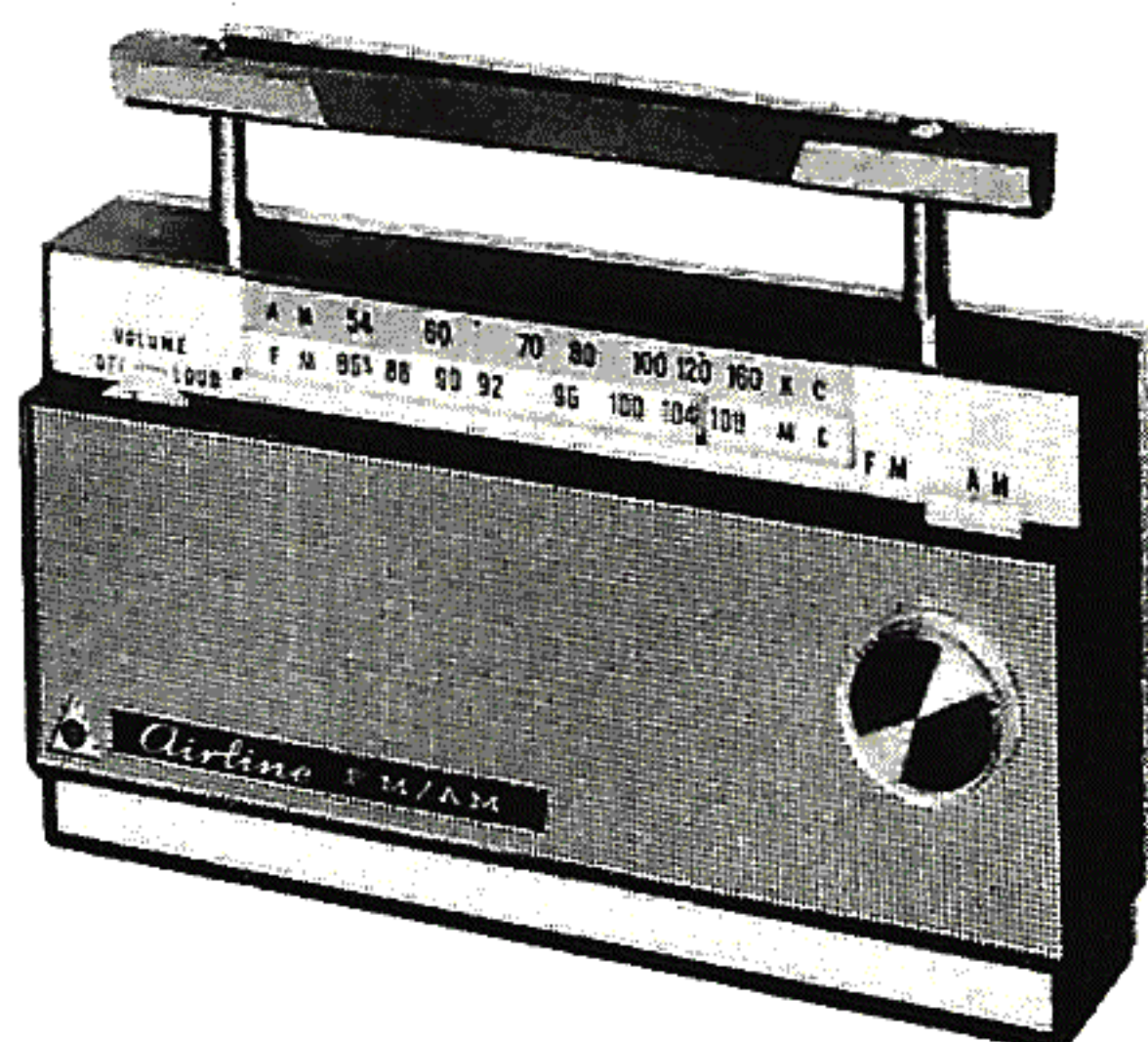




PHOTOFACT[®] with

CIRCUITRACE[®]

Met dank aan Jef Bos



TRADE NAME: Airline Model GEN-1222A
SUPPLIER: Montgomery Ward & Co.,
 619 Chicago Ave., Chicago, Illinois
TYPE SET: 9 Transistor AM-FM Receiver
POWER SUPPLY: 6 Volts DC
RATING: (FM) 20MA@6VDC (No Sig., Min. Vol.)
 30MA@6VDC (Signal, Normal Vol.)
TUNING RANGE: BROADCAST 540 - 1640KC
 FREQ. MOD. 88 - 108MC

Ver. v. Historie v/d Radio



ALIGNMENT INSTRUCTIONS

Use only enough generator output to provide a usable indication.
 Suggested Alignment Tools: A1 thru A12, A14, A15... GENERAL CEMENT #5066, 9089, 9087
 A13..... GENERAL CEMENT #8606, 8606L, 8869 .. WALSCO #2543, 2544, 2588

AM ALIGNMENT - SELECTOR IN AM POSITION

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1.	Fashion loop of several turns of wire and radiate signal into loop of receiver.	455KC (Unmod.)	(AM) Tuning gang fully open.	DC VTVM across volume control.	A1, A2, A3	Adjust for maximum.
2.	"	1620KC	"	"	A4	"
3.	"	600KC	600KC	"	A5	Adjust for maximum while rocking gang. Repeat Step 2.
4.	"	1400KC	1400KC	"	A6	Adjust for maximum.

FM ALIGNMENT USING AM SIGNAL GENERATOR AND VTVM - SELECTOR IN FM POSITION

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
5.	High side to rod antenna, common to ground.	10.7MC (Unmod.)	(FM) Tuning gang fully open.	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 and negative reading will be obtained on either side of the correct setting.
7.	"	108MC	"	DC probe to point A, common to ground.	A12	Adjust for maximum.
8.	"	90MC	90MC	"	A13, A14	"
9.	"	104MC	104MC	"	A15	"

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

TRANSISTORS

ITEM No	ORIG. TYPE	USE	REPLACEMENT DATA			NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	
X1	2SA235	FM RF Amplifier	DS25	GE-1		PNP
X2	2SA235	FM Converter	DS25	GE-1		PNP
X3	2SA80	AM Conv. -1st FM IF Amp.	DS25	GE-1		PNP
X4	2SA80	2nd FM-1st AM IF Amp.	DS25	GE-1		PNP
X5	2SA80	3rd FM-2nd AM IF Amp.	DS25	GE-1		PNP
X6	2SB75	AF Amplifier	DS26	GE-2	2N406	PNP
X7	2SB75	Driver	DS26	GE-2	2N406	PNP
X8	2SB156	Output	DS26	GE-2	2N408	PNP
X9	2SB156	Output	DS26	GE-2	2N408	PNP

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MEASURED CURRENT	ORIGINAL Part or Type No.	RECTIFIERS			NOTES
			MALLORY PART No.	RCA PART No.	SARKES TARZIAN PART No.	
X10		J242				FM AFC (1N34A) Part of L4 AM AVC (1N34A) Ratio Detector (1N34A) AM Detector (1N34A)
X11		J242				
X12		J242				
X13		J242				
X14		J242				

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	AIRLINE PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	PYRAMID PART No.	SPRAGUE PART No.
C1	60	6	J3238						
C2	30	3	J3236	BCD3025	ECPB412	MT1-10	PET130	MLV25-3	VL-1041
C3	50	3	J3237	BCD3050	ECPB15	MT1-15	PET140	MLV50-3	VL-1045
C4	5	3	J3234	PTT4	NLW5-15	MT1-3	TT6X5	MLV5-3	TE-1052.2
C5	10	3	J3235	PTT6	NLW10-6	MT1-5	TT3X10	MLV10-3	TE-1053
C6	5	6	J3240	PTT21	NLW5-15	MT1-3	TT6X5	MLV5-6	TE-1084
C7	10	3	J3235	PTT6	NLW10-6	MT1-5	TT3X10	MLV10-3	TE-1053
C8	100	6	J3239	PTT30	NLW100-12	MT1-18	TT6X100	MLV100-6	TE-1102
C9	60	6	J3238	CRE318	ECPB115	MT1-15	PET1260	MLV50-6	VL-1094

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.
C10	30	Note 1	CI-30	DD-300	L10Q3	CCD-300	GP430	10TS-Q30
C11	.001		DI-1000	DD-102	H05D1	CCD-102	GP210	10TS-D10
C12	.001		DI-1000	DD-102	H05D1	CCD-102	GP210	10TS-D10
C13	70		CI-68	DD-680	L10Q68	CCD-680	GP468	10TS-Q68
C14	.005		TTD-005	CK-502	H05D5	CCD-502	TA-250	TG-D50
C15	4		DI-3.3	DD-3R3	L10V33	CCTO-3R3	GP533	10TS-V33
C16	500		CI-500	DD-501	L10T5	CCD-501	GP350	10TS-T50
C17	6		DI-6.8	DD-060	L10V68	CCTO-6R8	GP568	10TS-V60
C18	4.5		DI-5	DD-050	L10V5	CCTO-4R7	GP550	10TCC-V47
C19	.005		TTD-005	CK-502	H05D5	CCD-502	TA-250	TG-D50
C20	.001		DI-1000	DD-102	H05D1	CCD-102	GP210	10TS-D10
C21	100		CI-100	DD-101	L10T1	CCD-101	GP310	10TS-T10
C22	.005		TTD-005	CK-502	H05D5	CCD-502	TA-250	TG-D50
C23	4.5		DI-5	DD-050	L10V5	CCTO-4R7	GP550	10TCC-V47
C24	.01		TTD-01	CK-103	H05S1		TA-110	TG-S10

DESCRIPTION

FIXED CAPACITORS (cont)

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.	
C25	.01	Note 2	TTD-01	CK-103	H05S1		TA-110	TG-S10	
C26	.04		TTD-05	CK-503	H05S5			TG-S50	
C27	1.5		NPO-DI 1.5	DTZ-1R5	C10V15C		CNO-515	10TCC-V15	
C28	500 5%			CPR-510J				MS-35	
C29	.04			TTD-05	CK-503	H05S5		TG-S50	
C30	.04			TTD-05	CK-503	H05S5		TG-S50	
C31	1.5			NPO-DI 1.5	DTZ-1R5	C10V15C		CNO-515	10TCC-V15
C32	.04			TTD-05	CK-503	H05S5		TG-S50	
C33	500 5%				CPR-510J			MS-35	
C34	.04			TTD-05	CK-503	H05S5		TG-S50	
C35	4.5			DI-5	DD-050	L10V5	CCTO-4R7	GP550	10TCC-V47
C36	.04			TTD-05	CK-503	H05S5		TG-S50	
C37	.04			TTD-05	CK-503	H05S5		TG-S50	
C38	.04			TTD-05	CK-503	H05S5		TG-S50	
C39	2			NPO-DI 2.2	DTZ-2R2	C10V2C	CCTO-2R2	CNO-522	10TCC-V22
C40	3			NPO-DI 3	DD-3R3	C10V3C	CCTO-3R3	CNO-533	10TCC-V33
C41	500 5%				CPR-510J			MS-35	
C42	300			CI-300	DD-301	L10T3	CCD-301	GP330	10TS-T30
C43	300			CI-300	DD-301	L10T3	CCD-301	GP330	10TS-T30
C44	.001			CI-1000	DD-102	H05D1	CCD-102	GP210	10TS-D10
C45	.05			TTD-05	CK-503	H05S5		TG-S50	
C46	.01			TTD-01	CK-103	H05S1		TA-110	TG-S10
C47	.1			TTD-1	CK-104	H05P1			TG-P10
C48	.02			TTD-02	CK-203	H05S2		TA-120	TG-S20

Note 1. Not used in some versions.

Note 2. Value varies, replace with original value.

CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA				
			AIRLINE PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
RI	Volume & Switch	5000Ω	J2511				

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		AIRLINE PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	FM Ant.	J6013					* Includes Diode
L2	FM RF	J6128					
L3	FM RF	J6130					
L4	FM Osc.	J6127 *					
L5	FM RF Choke(10uh)	J6129	BC-566	4622	RTC-8522	T860	
L6	1st FM IF	J6229					
L7	Loopstick	J6012					
L8	AM Osc.	J6126					
L9	2nd FM IF	J6225					
L10	1st AM IF	J6226					
L11	3rd FM IF	J6225					
L12	2nd AM IF	J6227	BC-575				
L13	Ratio Detector	J6230					
L14	3rd AM IF	J6228	BC-576				

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	AIRLINE PART No.	REPLACEMENT DATA
K1	AM Diode RF Filter	500Ω, (2) .02mfd	J3230	

PARTS LIST AND DESCRIPTION (CONTINUED)

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		AIRLINE PART No.	REPLACEMENT DATA				NOTES
	PRI.	SEC.		MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	1.2	1	J1119					

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		AIRLINE PART No.	REPLACEMENT DATA				NOTES
	PRI.	SEC.		MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T2	325Ω CT	12-14Ω	J1120					

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		AIRLINE PART No.	QUAM PART No.	
SP1	3 3/4" PM 12-14Ω	J1012	3A05HZ12	

BATTERIES

ITEM No.	VOLTAGE	AIRLINE PART No.	REPLACEMENT DATA			NOTES
			BURGESS	EVEREADY	MALLORY	
M1	1½V		130	635	M-14R	4 Required

MISCELLANEOUS

ITEM No.	PART NAME	AIRLINE PART No.	NOTES
M2	Tuning Cap.	J3516	4 Gang (PVC-2F) AM-FM (Slide Type) Telescoping (FM)
M3	Switch	J128	
	Antenna	J6131	

CABINETS & CABINET PARTS

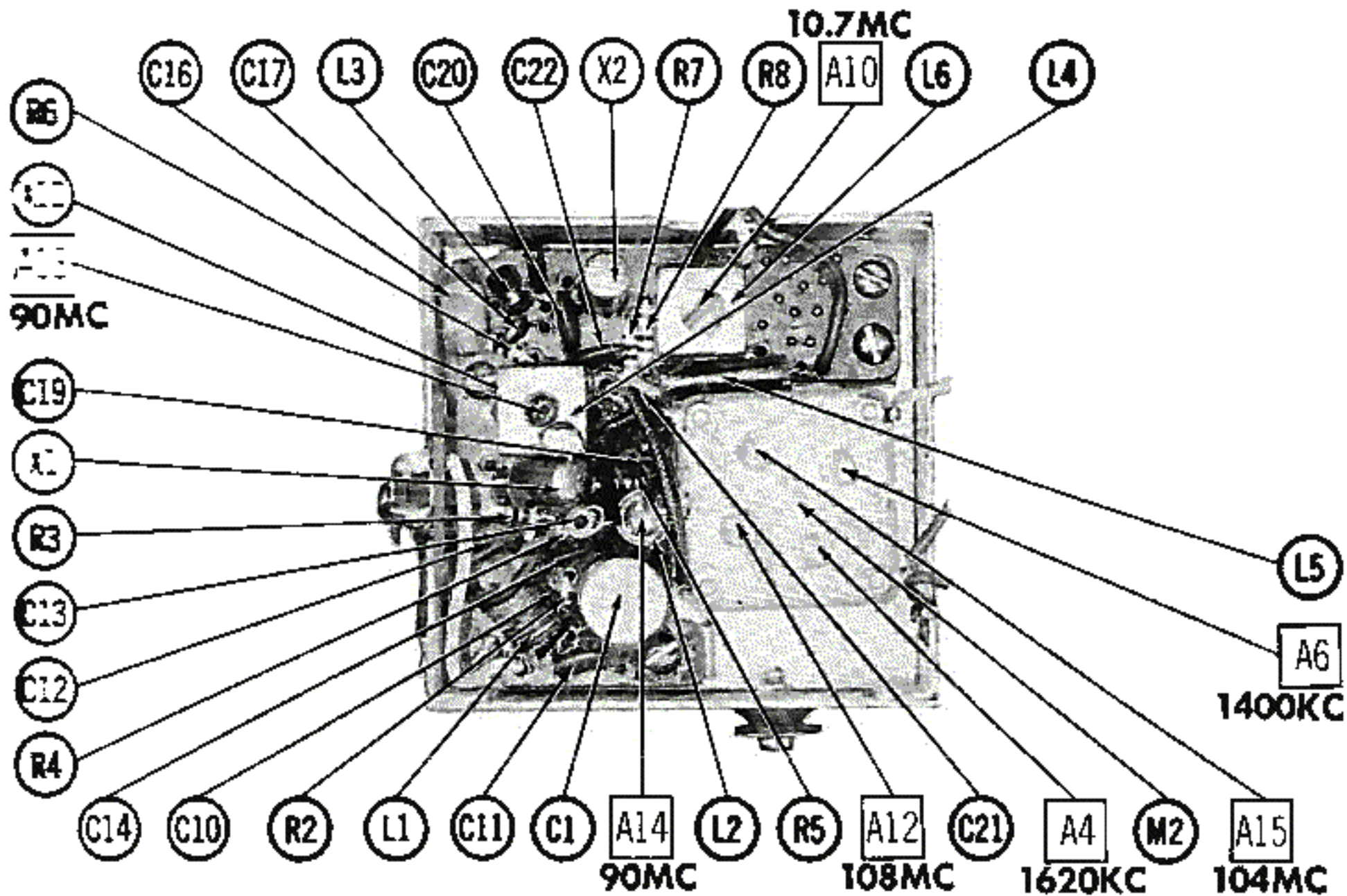
(When Ordering Cabinets & Cabinet Parts, Specify Model, Chassis & Color)

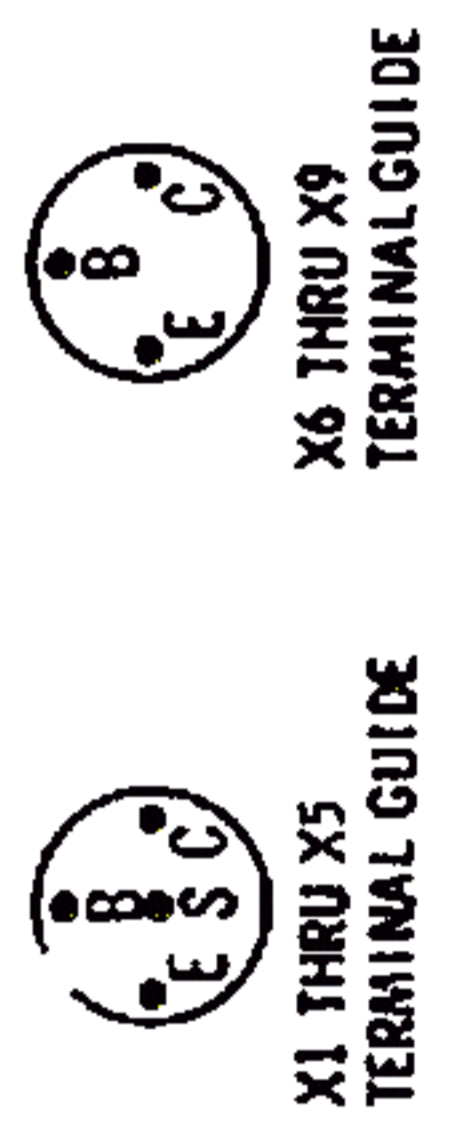
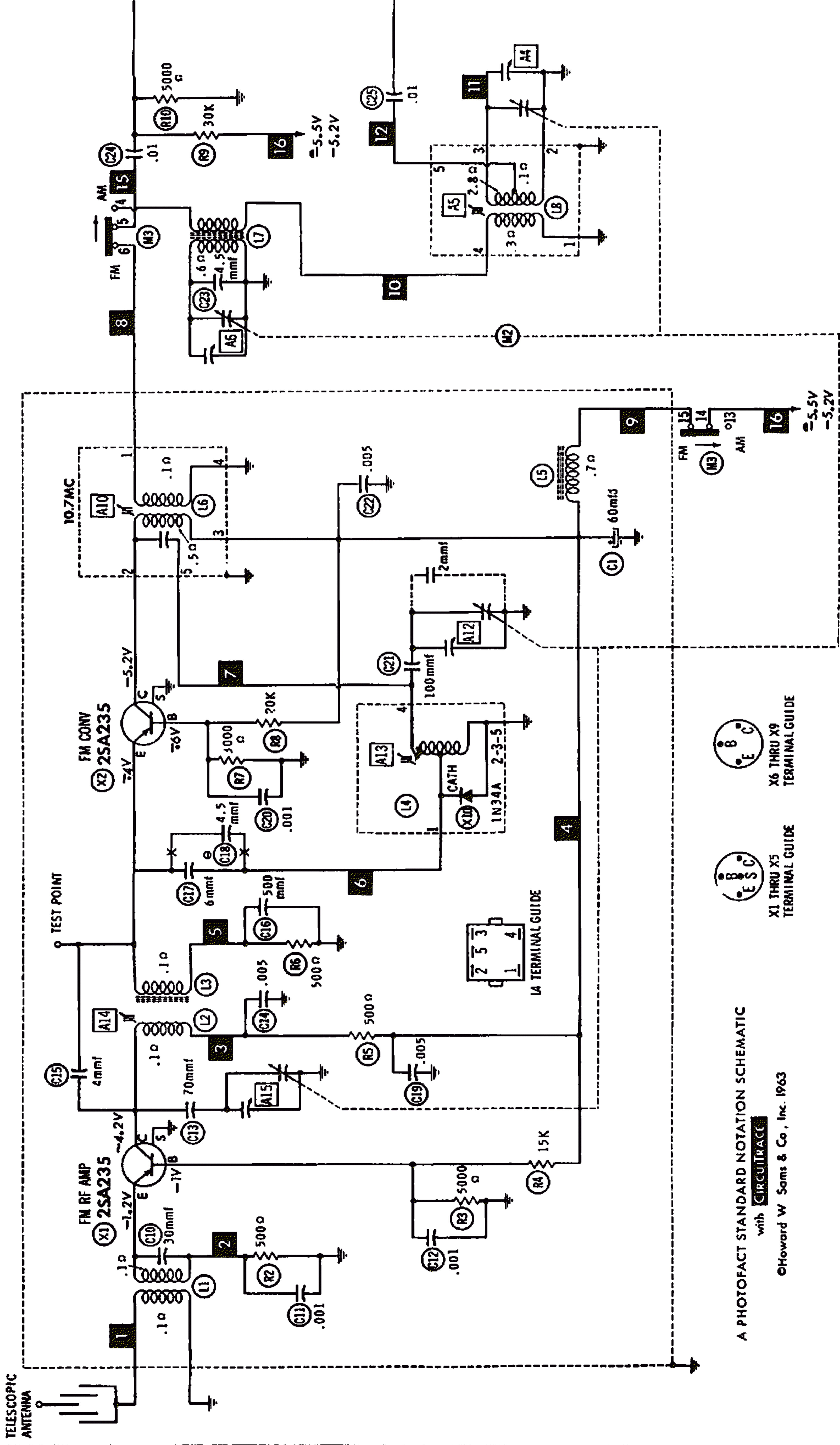
NAME	PART NO.	DESCRIPTION
Dial Plate	J4021	Window
Dial Plate	J4020	Metal
Dial Pointer	J452	
Knob	J5029	Tuning
Knob	J5030	Volume
Knob	J5031	AM-FM Switch
Handle	J7043	With Posts and Trim
Cabinet	J983	Complete
Cabinet	J7041	Front
Cabinet	J7042	Back

WIRING DATA

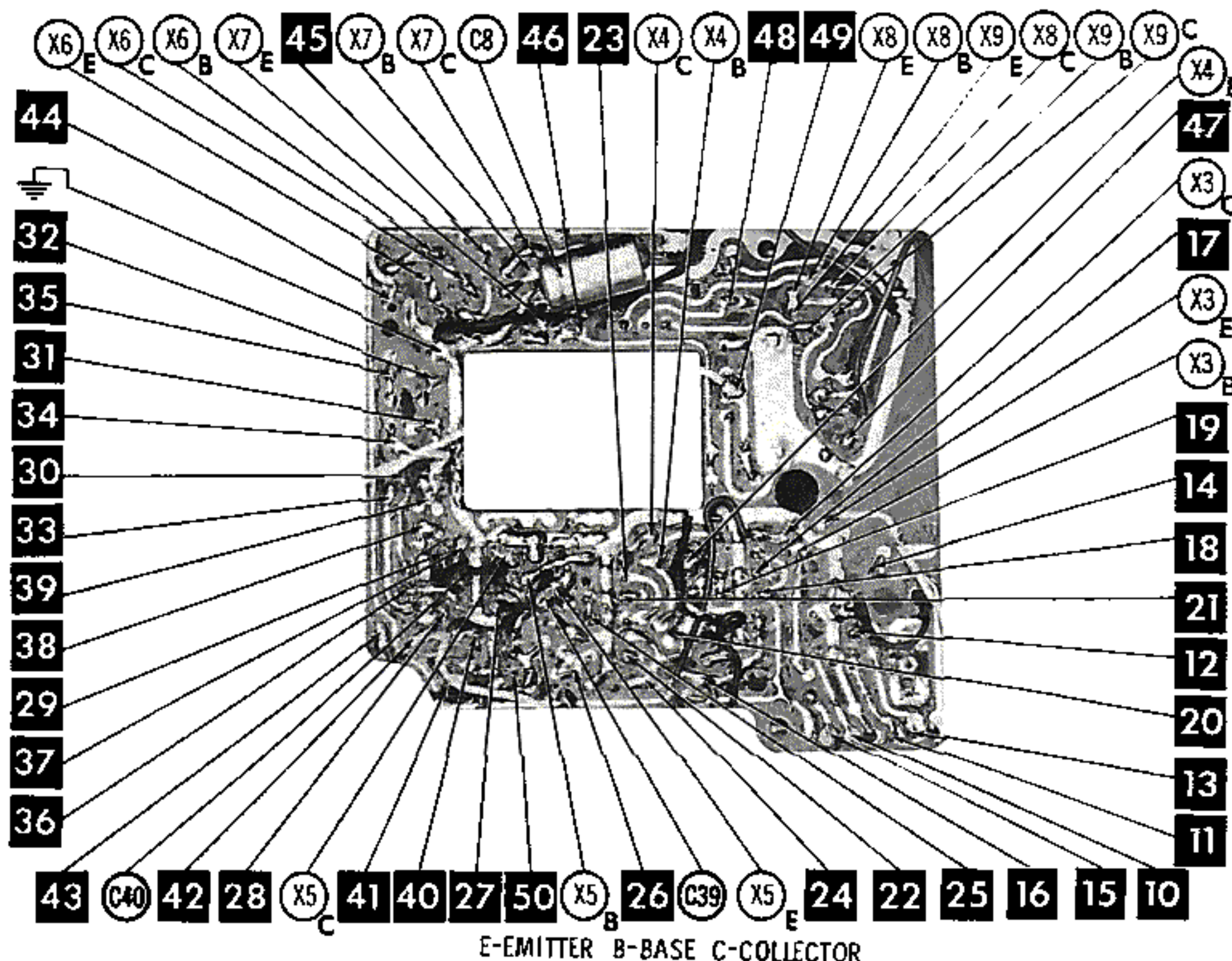
General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid 22AWG)	Available
	8524 (Stranded 22AWG)	in
	8570 (Stranded 26AWG)	12 Colors

FM RP SUBCHASSIS





A PHOTOFACT STANDARD NOTATION SCHEMATIC
with CIRCUITRACE
©Howard W Sams & Co., Inc. 1963



E-EMITTER B-BASE C-COLLECTOR

CHASSIS - PRINTED BOARD

