

SAMS PHOTOFACT[®]



AUTO RADIO SERIES

AR-23
23
MARCH 1964



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

SAMS PHOTOFACT[®]

AUTO RADIO SERIES

VOLUME

23

by the *Howard W. Sams* ENGINEERING STAFF



HOWARD W. SAMS & CO., INC.
INDIANAPOLIS 6, INDIANA

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PHOTOFACT®
AUTO RADIO SERIES
VOLUME 23

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PHOTOFACT®

TRADE NAME: Automatic Models:
 ACP-3044, CTP-3004 (63 Comet)
 F-3016, FA-3056, FP-3017, FPA-3057 (63 Ford)
 FAN-3058, FAR-3018 (63 Fairlane)
 FNP-3015, FNP-3015A, FPA-3055 (63 Falcon)
 FUP-3080 (63 Falcon Futura)
 MAP-3063, MT-3023 (63 Mercury)

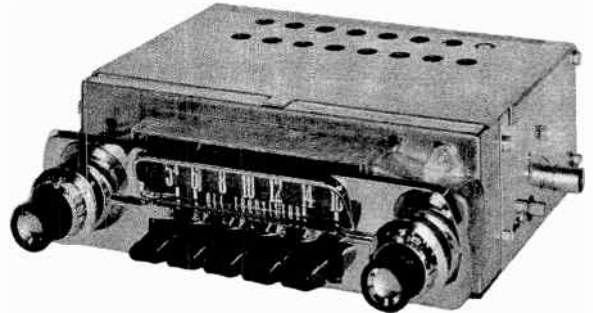
SUPPLIER: Automatic Radio Mfg. Co., Inc.
 122 Brookline Ave., Boston 15, Mass.

TYPE SET: 5 Transistor AM Receiver

POWER SUPPLY: 12 Volt Storage Battery

RATING: .8 Amp. @ 12.6 VDC

TUNING RANGE: BROADCAST 540 — 1615KC



AUTOMATIC FORD CUSTOM SERIES

ALIGNMENT INSTRUCTIONS

Check for specified source voltage.
 Use only enough generator output to provide a usable indication.
 Suggested Alignment Tools:

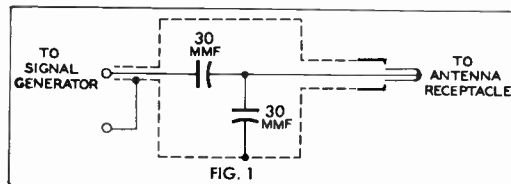
A1 thru A4..... GENERAL CEMENT #8606, 8606L, 8869
 WALSCO #2543, 2544, 2588
 A5, A6, A7..... GENERAL CEMENT #8290, 8868, 9087
 WALSCO #2525, 2528, 2587

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1.	High side thru .1mfd to point Δ , low side to ground.	262KC (400v Mod.)	High Freq. End Stop.	Output Meter across voice coil.	A1, A2, A3, A4	Adjust for maximum.
2.	Thru dummy (Fig. 1) to antenna receptacle.	1615KC	"	"	A5, A6, A7	"

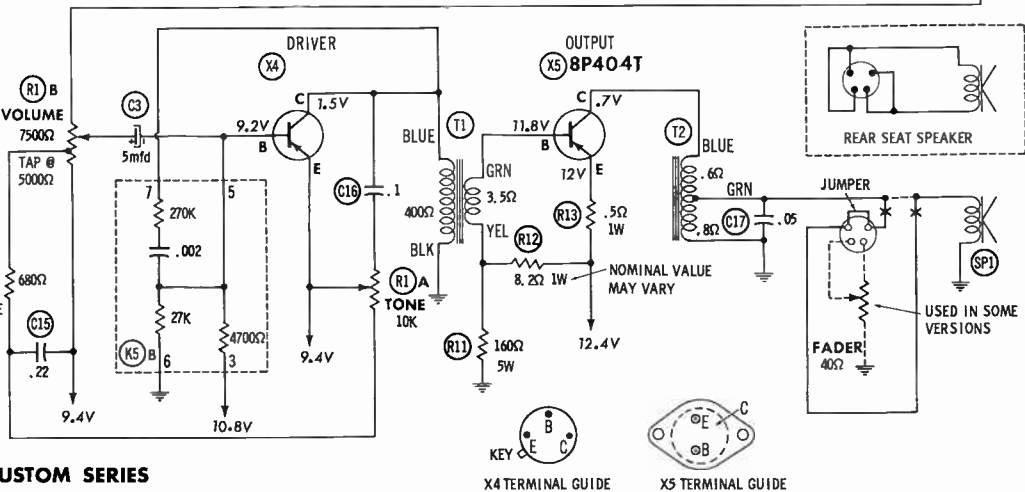
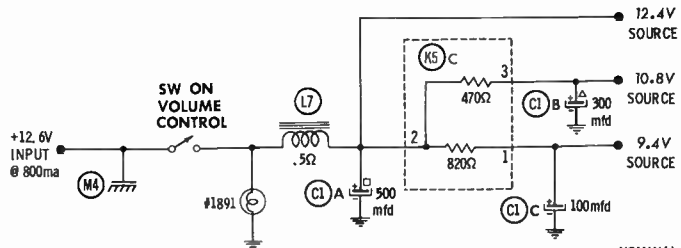
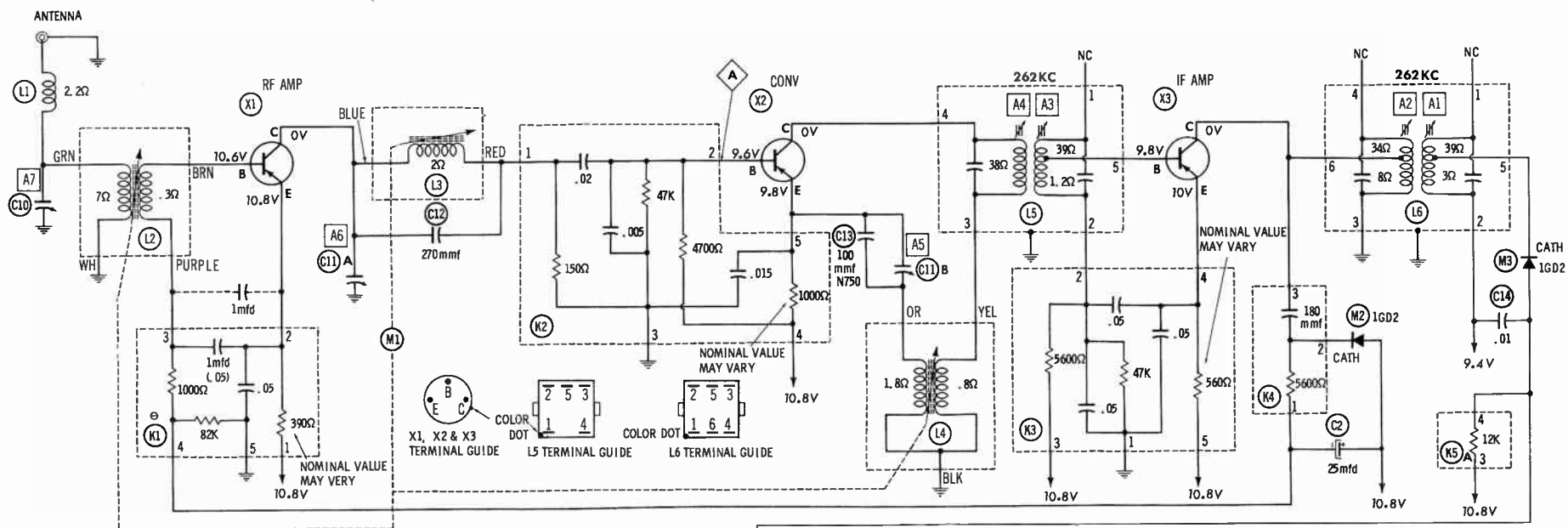
With radio installed in car and antenna fully extended, tune in a weak station near 1400KC and adjust A7 for maximum output.

PUSH-BUTTON ADJUSTMENT

1. Pull button out.
2. Tune manually to desired station.
3. Press button in firmly.
4. Repeat for remaining buttons.



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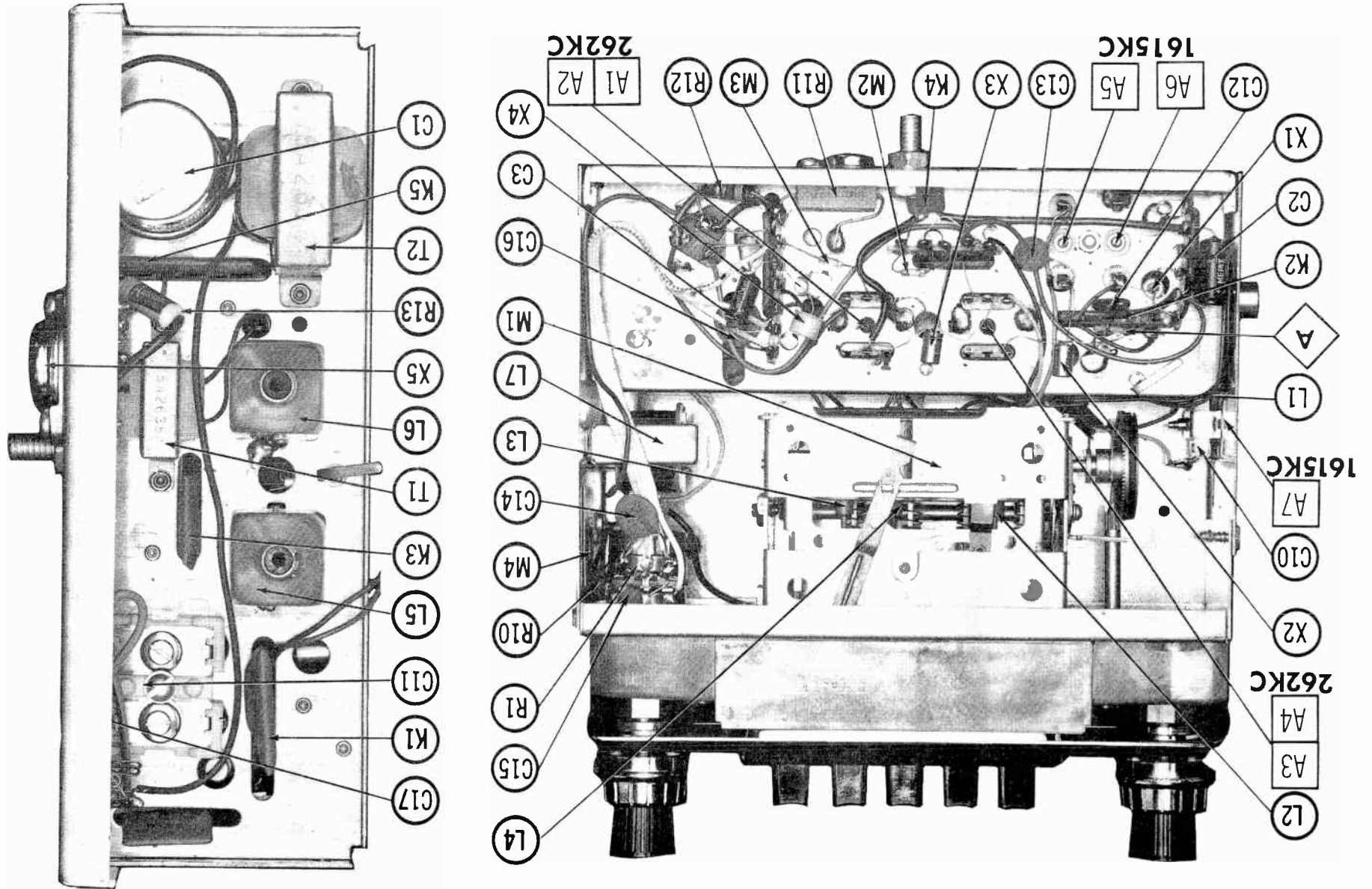


- ⊖ See parts list for alternate value or application.
- 1. Voltage measurements taken with vacuum tube voltmeter.
- 2. All controls set for normal operation, no signal applied.
- 3. Measured values are from socket pin or terminal to common ground.
- 4. All terminals viewed from bottom unless otherwise designated.
- 5. Numbers assigned to terminals may not be found on the unit.
- 6. Supply voltage maintained at rated value for voltage readings.
- 7. Resistance measurements not given because of the wide variation in internal resistance of transistor.

AUTOMATIC FORD CUSTOM SERIES

A PHOTOFAC STANDARD NOTATION SCHEMATIC
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AUTOMATIC FORD CUSTOM SERIES



PARTS LIST AND DESCRIPTION

Replacement parts shown may be superseded by the availability of newly introduced replacements.
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			AUTOMATIC PART No.	NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.		
X1		RF Amp.	DS-25	GE-1	2N1837	6-60	PNP
X2		Converter	DS-25	GE-1	2N1839	6-61	PNP
X3		IF Amp.	DS-25	GE-1	2N1838	6-62	PNP
X4		Driver	DS-26	GE-2	2N591	6-63	PNP
X5	8P404T	Output	DS-520	GE-3	2N301		PNP(Notes 1)

Note 1. When replacing, apply silicone grease to both sides of insulator.
Tighten mounting screws securely.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		AUTOMATIC PART No.	REPLACEMENT DATA				MALLORY PART No.	SPRAGUE PART No.
	CAP.	VOLT.		AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	GENERAL INSTRUMENT PART No.		
C1A	500	16	20-2653	AFH3-00-94.5				FP-300.83	PCL8-3026.11
B	300	16							
C	100	16							
C2	25	15	20-256	PTT69	NLW25-15	MT1-10	MLV25-15	TT15X25	TE-1157.1
C3	5	15	20-505	CRE454A	NLW5-15	MT1-3	MLV5-15	TT25X5	TE-1152

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

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		#28-800-2L							
C11A		#28A-1332							
B									
C12	270		DI-270	DD-271	LA10T27-C4	CCD-271	GP327	5GA-T25	
C13	100 N750		N750-DI 100	DTN-100	C10T1U	CCTN-101	CN7-310	10TCU-T10	
C14	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10	
C15	.22 3V			UK20-204	HCC25224Z			HY-325	
C16	.1 16V		TTD-1	CK-104	H6		TA-010	TG-P10	
C17	.05 50V		TTD-05	CK-503	H5		TA-150	TG-S50	

Automatic Part Number.

CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA					
			AUTOMATIC PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.	
R1A	Tone	10K	80A2239B ③				† QJ-1689A	
B	Volume & Switch	7500Ω Tap ④ 5000Ω 40Ω						
	Fader		80A2621 ④					

† "CONCENTRIKIT" Equivalent: K-8 Kit with base elements and shafts: B11-116, P17-123 (Panel)

"SNAPTROL" Equivalent: BUB ②, CF9, CR48T, SF14, SR50, GC B21-115X, R9-202 (Rear)

① Cut 1/8" from bushing.

② Cut 3/8" from bushing.

③ Fairlane Models. Part #80A2658 used in Ford and Mercury. Part #80A2182C used in Falcon, Futura and Comet.

④ Not used in some versions.

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		AUTOMATIC PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	RF Choke(6, 2uh)	14-6.2	BC-565	4610	RTC-8520	T859	① Part of M1.
L2	Ant.	①					
L3	RF	①					
L4	Osc.	①					
L5	Input IF	14-2654		6570			
L6	Output IF	14-2655		6571			

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA					NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	AUTOMATIC PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L7	800ma	.5Ω	10MH	75A1269	C-4095	TC-2	TR-155	TY17XT	

PARTS LIST AND DESCRIPTION (CONTINUED)

Replacement parts shown may be superseded by the availability of newly introduced replacements.
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
			AUTOMATIC PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
	PRI.	SEC.						
T1	8:	1	75A2635					

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
			AUTOMATIC PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
	PRI.							
T2	24Ω Tap @ 8Ω		75A2636				TR-169	

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		AUTOMATIC PART No.	QUAM PART No.	
SP1	5" x 7" PM 6-8Ω	73B2786		Falcon, Futura, Comet Ford, Mercury Fairlane, Meteor
	6" x 9" PM 6-8Ω	73B2724		
	5" x 7" PM 6-8Ω	73B2660		

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	AUTOMATIC PART No.	REPLACEMENT DATA
K1	X1 Bias	390Ω, 1000Ω, 82K, .05mfd, .05mfd, 1mfd	89A2582C ①	
K2	X2 Bias	150Ω, 1000Ω, 4700Ω, 47K, .005mfd, .015mfd, .02mfd	89A2583	
K3	X3 Bias	560Ω, 5600Ω, 47K, .05mfd, .05mfd, .05mfd	89A2584B	
K4	AVC	5600Ω, 180mfd	89A2701	
K5	Audio Bias	470Ω, 820Ω, 4700Ω, 12K, 27K, 270K, .002mfd	89A2585A	

① Some versions may use Part #89A2582B

MISCELLANEOUS

ITEM No.	PART NAME	AUTOMATIC PART No.	NOTES
M1	Tuner	78B2236	Fairlane; Push-Button Ford; Push-Button (Used in some Mercury Models) Ford; Manual Falcon, Futura, Comet; Push-Button Mercury; Push-Button
	Tuner	78B2618	
	Tuner	78B2708	
	Tuner	78B2175	
	Tuner	78B2670	
M2	AVC (1GD2)		
M3	Det. (1GD2)		
M4	Spark Plate		

CABINETS & CABINET PARTS

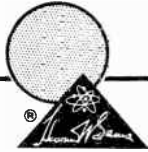
(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
KNOBS		PUSH BUTTON	
Tuning, Volume - Fairlane	47-52B	Fairlane	55A2183
Tuning, Volume - Falcon	47-52W	Ford	55A2183NV
Tuning, Volume - Ford	48B2650	Meteor, Mercury	55A2179NV
Tuning, Volume - Meteor, Mercury	54A1714		
Tuning, Volume - Comet	48A2225		
Tone - All except Mercury	48A1522	DIAL GLASS	
Tone - Mercury	48A2247B	Fairlane, Meteor	39-94
Dummy - All Models when used	48A1522-1	Ford	39-85
		Mercury	39-85A
		Falcon, Comet	39-33

WIRING DATA

General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in 12 Colors 8524 (Stranded) Available in 12 Colors
Shielded Hook-up Wire	Use BELDEN No. 8885
Rear Seat Speaker Extension Cable	Use BELDEN No. 8782 (Stranded) Coded Parallel Leads
Bonding Strap	Use BELDEN No. 8661 (3/8 In.) or 8670 (3/4 In.)

AUTOMATIC FORD CUSTOM SERIES



PHOTOFACT®



TRADE NAME : Automatic Models
 BP-3081 (63 Buick)
 C-3001, CA-3041, CAP-3042, CP-3002 (63 Chevrolet)
 CAE-3064, OE-3024 (63 Oldsmobile)
 CY-3010, CYP-3009, YAM-3050, YP-3049 (63 Chev II)
 PAC-3067, PC-3027 (63 Pontiac)
 SAB-3071, SB-3032, SBP-3033, SPA-3072 (63 Special)
 TA-3073, TAP-3074, TC-3035, TPC-31AT,
 TPC-42AT, TPC-3036 (63 F-85, Tempest)

SUPPLIER : Automatic Radio Mfg. Co., Inc.
 122 Brookline Ave., Boston 15, Mass.

TYPE SET : 5 Transistor AM Receiver

POWER SUPPLY : 12 Volt Storage Battery

RATING : .8 Amp. @ 12.6 VDC

TUNING RANGE : BROADCAST 540 - 1615KC

ALIGNMENT INSTRUCTIONS

Check for specified source voltage.
 Use only enough generator output to provide a usable indication.
 Suggested Alignment Tools:

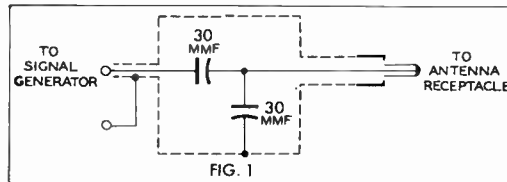
- A1 thru A4.....GENERAL CEMENT #8606, 8606L, 8869
 WALSCO #2543, 2544, 2588
 A5, A6, A7.....GENERAL CEMENT #8290, 8868, 9087
 WALSCO #2525, 2528, 2587

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1.	High side thru .1mfd to point Δ , low side to ground.	262KC (400% Mod.)	High Freq. End Stop.	Output Meter across voice coil.	A1, A2, A3, A4	Adjust for maximum.
2.	Thru dummy (Fig. 1) to antenna receptacle.	1615KC	"	"	A5, A6, A7	"

With radio installed in car and antenna fully extended, tune in a weak station near 1400KC and adjust A7 for maximum output.

PUSH-BUTTON ADJUSTMENT

1. Pull button out.
2. Tune manually to desired station.
3. Press button in firmly.
4. Repeat for remaining buttons.



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

PARTS LIST AND DESCRIPTION

Replacement parts shown may be superseded by the availability of newly introduced replacements.
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			AUTOMATIC PART No.	NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.		
X1		RF Amp.	DS-25	GE-1	2N1837	6-80	PNP
X2		Conv.	DS-25	GE-1	2N1839	6-81	PNP
X3		IF Amp.	DS-25	GE-1	2N1838	6-82	PNP
X4		Driver	DS-28	GE-2	2N591	6-83*	PNP
X5	8P404	Output	DS-520	GE-3	2N301		PNP(Note 1)

Note 1. When replacing, apply silicone grease to both sides of insulator.
Tighten mounting screws securely.

* Alternate Part #6-53.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	AUTOMATIC PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	GENERAL INSTRUMENT PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A	500	16	20-2853	AFH3-00-94.5				FP-300.83	PCLS-3026.11
B	300	16							
C	100	16							
C2	25	15	20-258	PTT69	NLW25-15	MT1-10	MLV25-15	TT15X25	TE-1157.1
C3	5	15	20-505	CRE454A	NLW5-15	MT1-3	MLV5-15	TT25X5	TE-1152

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

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.	
C9	1mfd	#28-800-2L #28A1332		UK-105	HCC3105P				HY-135
C10									
C11A									
C11B									
C12	270		DI-270	DD-271	LA10T27-C4	CCD-271	GP327	5GA-T25	
C13	100 N750		N750-DI 100	DTN-100	C10T1U	CCTN-101	CN7-310	10TCU-T10	
C14	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10	
C15	.22			UK20-204	HCC25224Z			HY-325	
C16	.1 18V		TTD-1	CK-104	H8		TA-010	TG-P10	
C17	.05 50V		TTD-05	CK-503	H5		FA-150	TG-S50	

Automatic Part Number.

CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA				
			AUTOMATIC PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1A	Tone Volume & Switch	10K 7500Ω Tap @ 5100Ω	80A2772 ①			† QJ-1687A	■ UE4459S
B							
R2	Fader	40Ω	80A2879 ②			† QJ-1688A	

① Chevy II Models use Part #80A2736. Tempest, F85 and Special Models use Part #80A2686.

② Some versions may use Part #80A2774. Chevrolet Models use Part #80A2685.

③ Cut 3/32" from bushing.

④ Cut 1 5/32" from bushing.

† "CONCENTRIKIT" Equivalent: K-8 Kit with base elements and shafts: B11-116, P17-129 (Panel)

"SNAPTROL" Equivalent: BU8 ③, CF8, CR48T, SF16, SR51, GC B21-115X, R9-208 (Rear)

† "SNAPTROL" Equivalent: BU8 ④, WF18, SF5 S-9 ⑤ (Bushing)

76-1 (Switch)

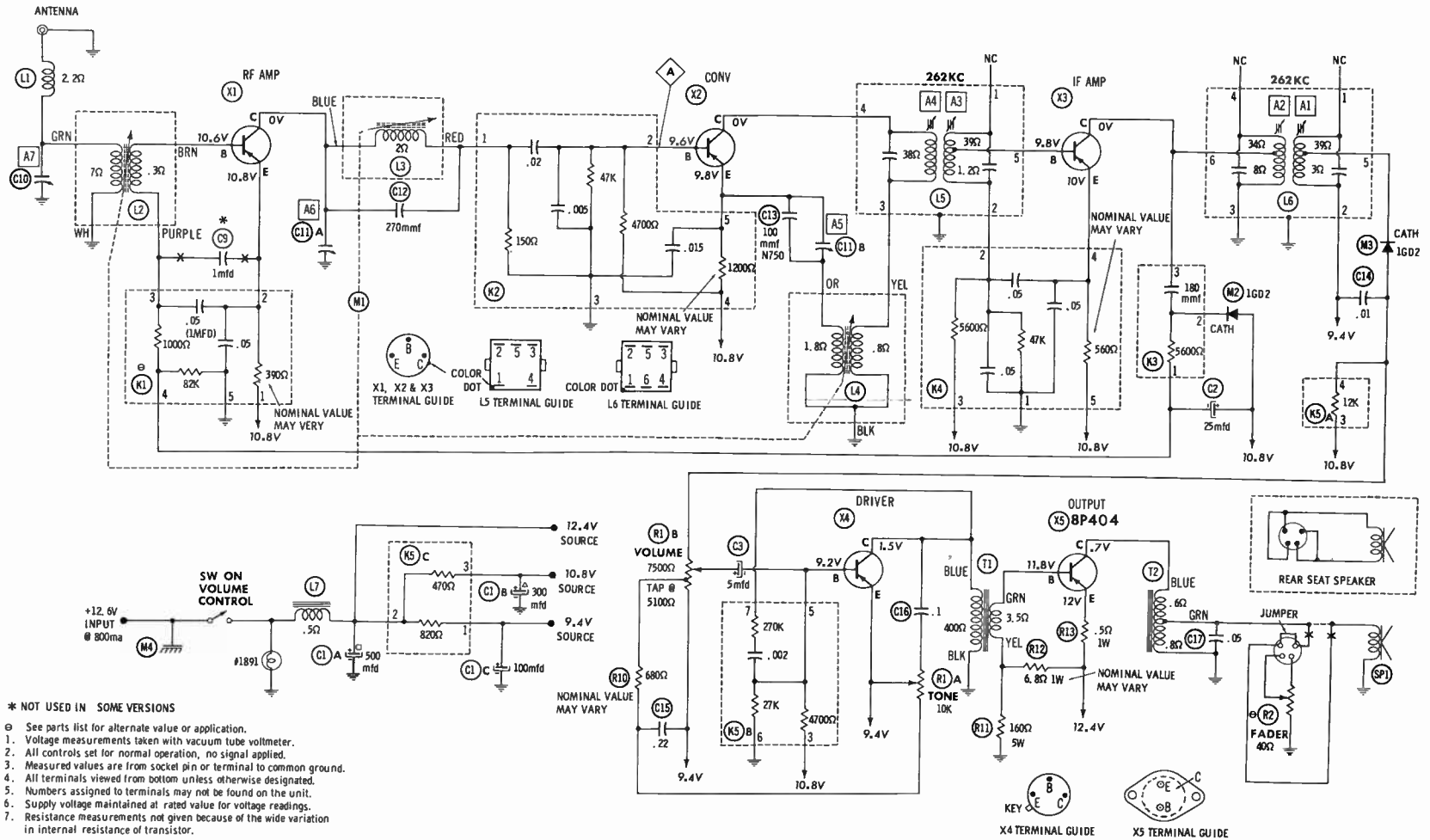
COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		AUTOMATIC PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	RF Choke(8.2uh)	14-8.2	BC-565	4810	RTC-8520	T859	① Part of M1.
L2	Ant.	①					
L3	RF	②					
L4	Osc.	③					
L5	Input IF	14-2854		8570			
L6	Output IF	14-2855		8571			

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA					NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000-)	AUTOMATIC PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L7	600ma	.5Ω	10MH	75A1289	C-4095	TC-2	TR-155	TY1XT	

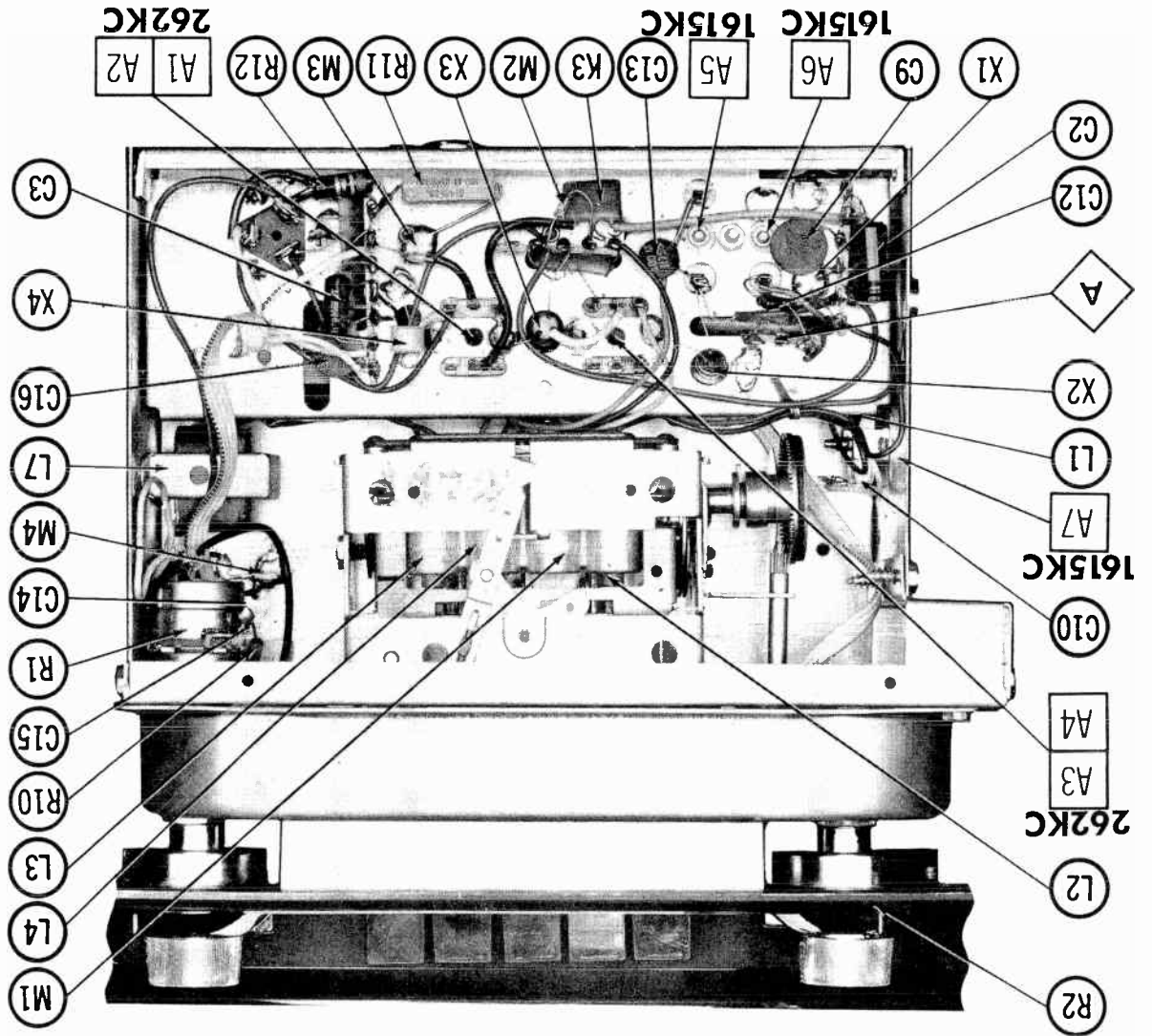
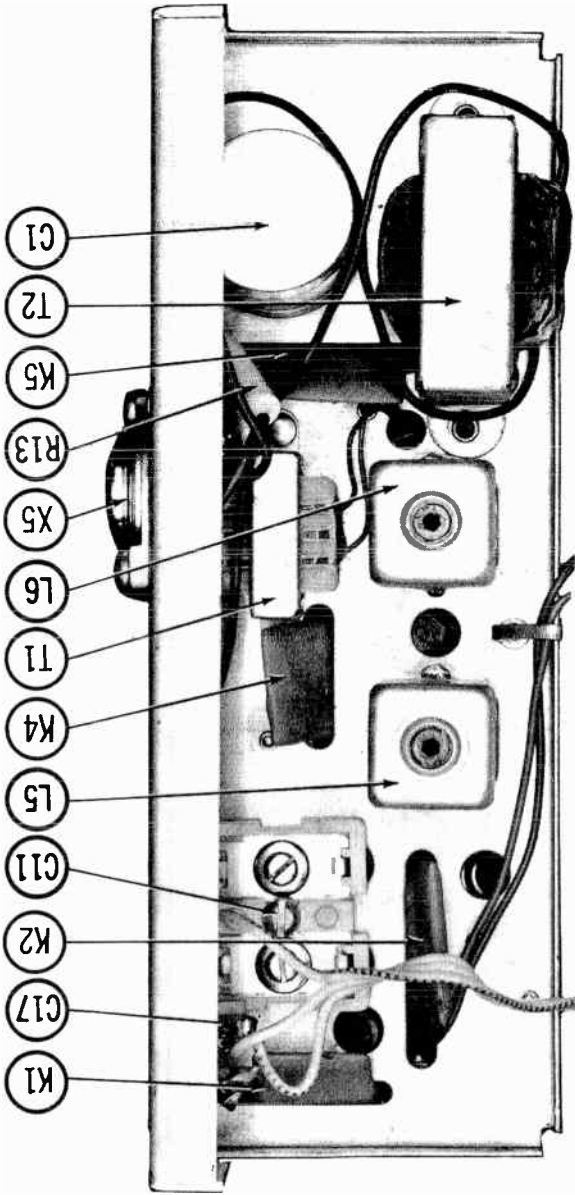
AUTOMATIC GM CUSTOM SERIES



- * NOT USED IN SOME VERSIONS
- ⊖ See parts list for alternate value or application.
 - 1. Voltage measurements taken with vacuum tube voltmeter.
 - 2. All controls set for normal operation, no signal applied.
 - 3. Measured values are from socket pin or terminal to common ground.
 - 4. All terminals viewed from bottom unless otherwise designated.
 - 5. Numbers assigned to terminals may not be found on the unit.
 - 6. Supply voltage maintained at rated value for voltage readings.
 - 7. Resistance measurements not given because of the wide variation in internal resistance of transistor.

A PHOTOFAC STANDARD NOTATION SCHEMATIC
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AUTOMATIC GM CUSTOM SERIES



PARTS LIST AND DESCRIPTION (CONTINUED)

Replacement parts shown may be superseded by the availability of newly introduced replacements.
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
			AUTOMATIC PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
	PRI.	SEC.						
T1	8:	1	75A2635					

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
			AUTOMATIC PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
	PRI.							
T2	24Ω Tap @ 6-8Ω		75A2693				TR-169	

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		AUTOMATIC PART No.	QUAM PART No.	
SP1	4" x 10" PM 6-8Ω	73B2737 ①	410A2Z8	① Part #73B2671 used in Chevrolet Models.

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	AUTOMATIC PART No.	REPLACEMENT DATA
K1	X1 Bias	390Ω, 1000Ω, 82K, .05mfd, .05mfd	89A2582A ①	
K2	X2 Bias	150Ω, 1200Ω, 4700Ω, 47K, .005mfd, .015mfd, .02mfd	89A2583A	
K3	AVC	5800Ω, 180mmf	89A2701	
K4	X3 Bias	560Ω, 5600Ω, 47K, .05mfd, .05mfd, .05mfd	89A2584B	
X5	Audio Bias	470Ω, 820Ω, 4700Ω, 12K, 27K, 270K, .002mfd	89A2585A	

① Chevrolet Models may use Part #89A2582B or C.

MISCELLANEOUS

ITEM No.	PART NAME	AUTOMATIC PART No.	NOTES
M1	Tuner	78B2808	Buick, Push-button Chevrolet, Manual Chevrolet, Push-button Chevy II, Push-button Chevy II, Manual Oldsmobile, Push-button Pontiac, Push-button
	Tuner	78B2712	
	Tuner	78B2689	
	Tuner	78B2290B	
	Tuner	78B2739	
	Tuner	78B2769	
	Tuner	78B2777	
M2	AVC (1GD2)		
M3	AF Det. (1GD2)		
M4	Spark Plate		

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
<u>KNOBS</u>		<u>PUSH BUTTON</u>	
Volume, Tuning - Buick	48A2854	Buick, Chevy II	55A1748
Volume, Tuning - Chevrolet, Chevy II	54A1714	Chevrolet	55A2882
Volume, Tuning - Oldsmobile	48B1841	Oldsmobile, Pontiac	55A2775
Volume, Tuning, - Pontiac	48A2761		
Fader, Tone - Buick	48A2857	<u>DIAL GLASS</u>	
Fader, Tone - Chevrolet	48A2692	Buick	39-86A
Fader, Tone - Chevy II	48A1063-1	Chevrolet	39-86
Fader, Tone - Oldsmobile	48B1872	Oldsmobile	39-96
Fader, Tone - Pontiac	48A2760	Pontiac	39-91
Dummy - Chevy II	48A1063-1A		

WIRING DATA

General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in 12 Colors 6524 (Stranded) Available in 12 Colors
Shielded Hook-up Wire	Use BELDEN No. 6885
Rear Seat Speaker Extension Cable	Use BELDEN No. 8782 (Stranded) Coded Parallel Leads
Bonding Strap	Use BELDEN No. 6661 (3/8 In.) or 6870 (3/4 In.)



PHOTOFACT[®]

Automatic Models CPA-3047, CR-3006,
 CRA-3046, CRP-442A/AT, CRP-3007
 (1963 Corvair). . . CTP-792AT (1962 Comet)
 FNP-452AT (1962 Falcon)

TRADE NAME :

SUPPLIER : Automatic Radio Mfg. Co., Inc.
 122 Brookline Ave., Boston 15, Mass.

TYPE SET : 5 Transistor AM Receiver

POWER SUPPLY : 12 Volt Storage Battery

RATING : 525MA@12.6VDC (Less Lamp)

TUNING RANGE: BROADCAST 540 - 1615KC



ALIGNMENT INSTRUCTIONS

Check for specified source voltage.
 Use only enough generator output to provide a usable indication.
 Suggested Alignment Tools:

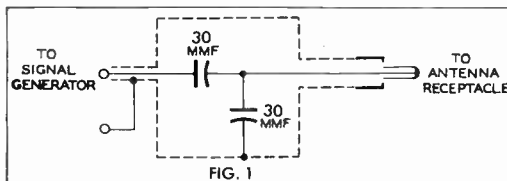
A1 thru A4. . . . GENERAL CEMENT #8606, 8606L, 8869
 WALSCO #2543, 2544, 2588
 A5, A6, A7. . . . GENERAL CEMENT #8290, 8868, 9087
 WALSCO #2525, 2528, 2587

SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
High side thru .1mf to point Δ , low side to ground.	262KC (400v Mod.)	High Freq. End Stop.	Output Meter across voice coil.	A1, A2, A3, A4	Adjust for maximum.
Thru dummy (Fig. 1) to antenna receptacle.	1615KC	"	"	A5, A6, A7	"

With radio installed in car and antenna fully extended, tune in a weak station near 1400KC and adjust A7 for maximum output.

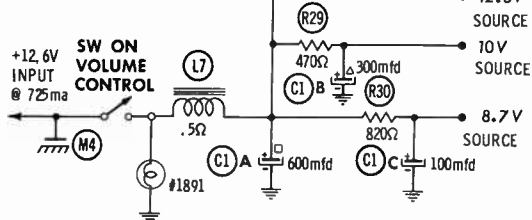
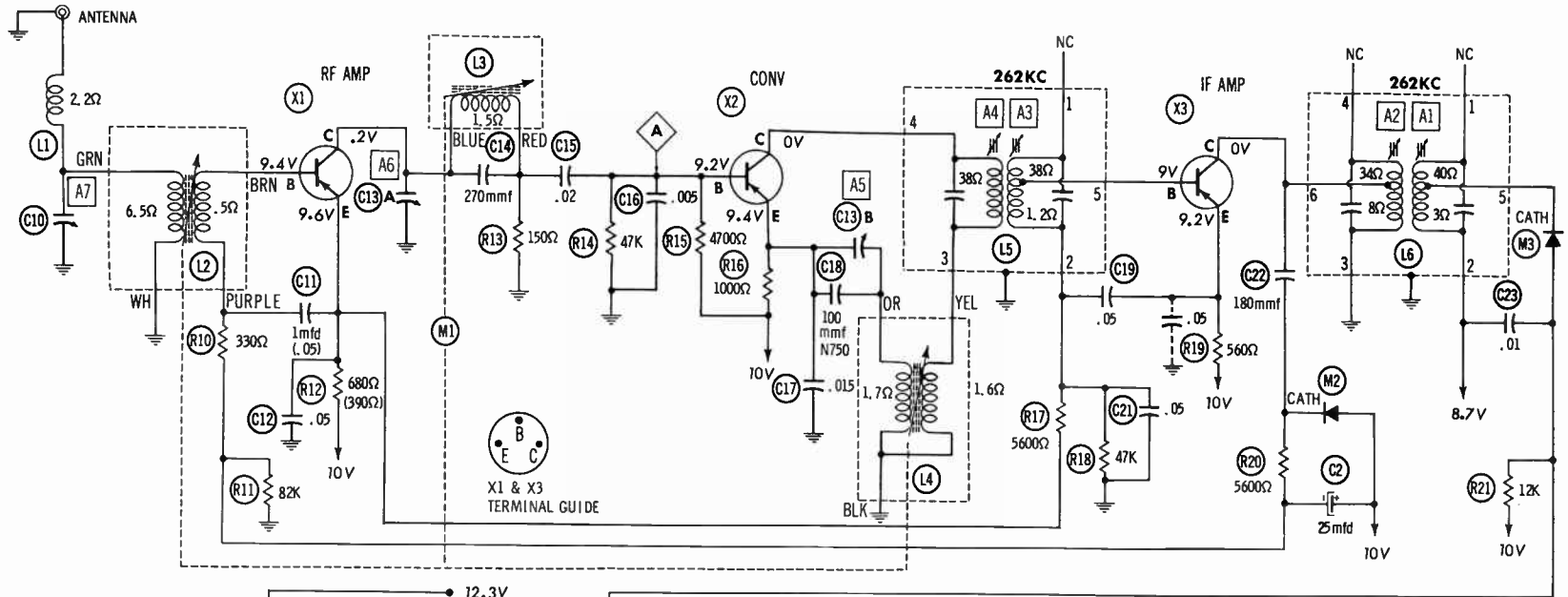
PUSH-BUTTON ADJUSTMENT

1. Pull button out.
2. Tune manually to desired station.
3. Press button in firmly.
4. Repeat for remaining buttons.



AUTOMATIC MODELS CPA-3047, CR-3006, CRA-3046,
 CRP-442A/AT, CRP-3007, CTP-792AT, FNP-452AT

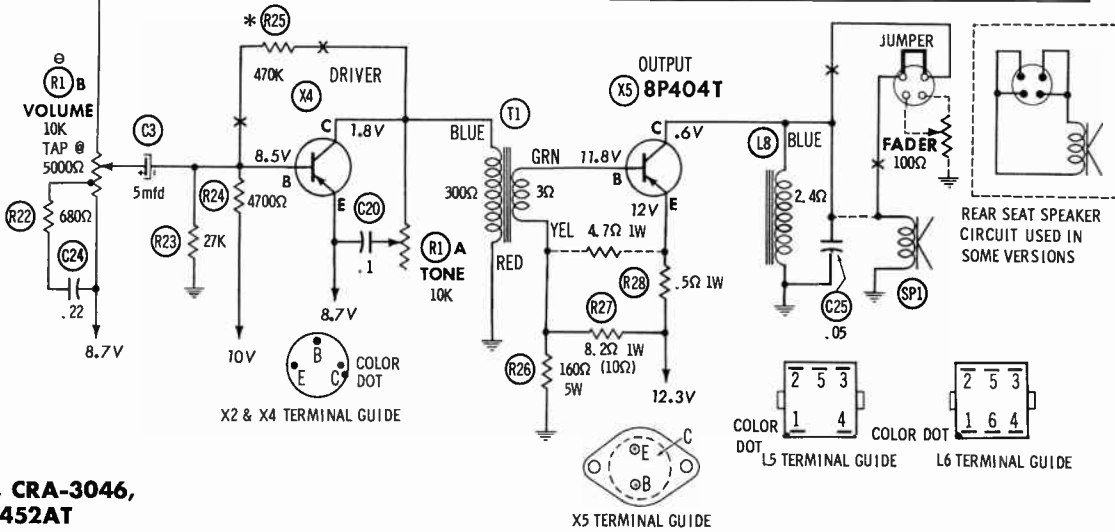
HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana

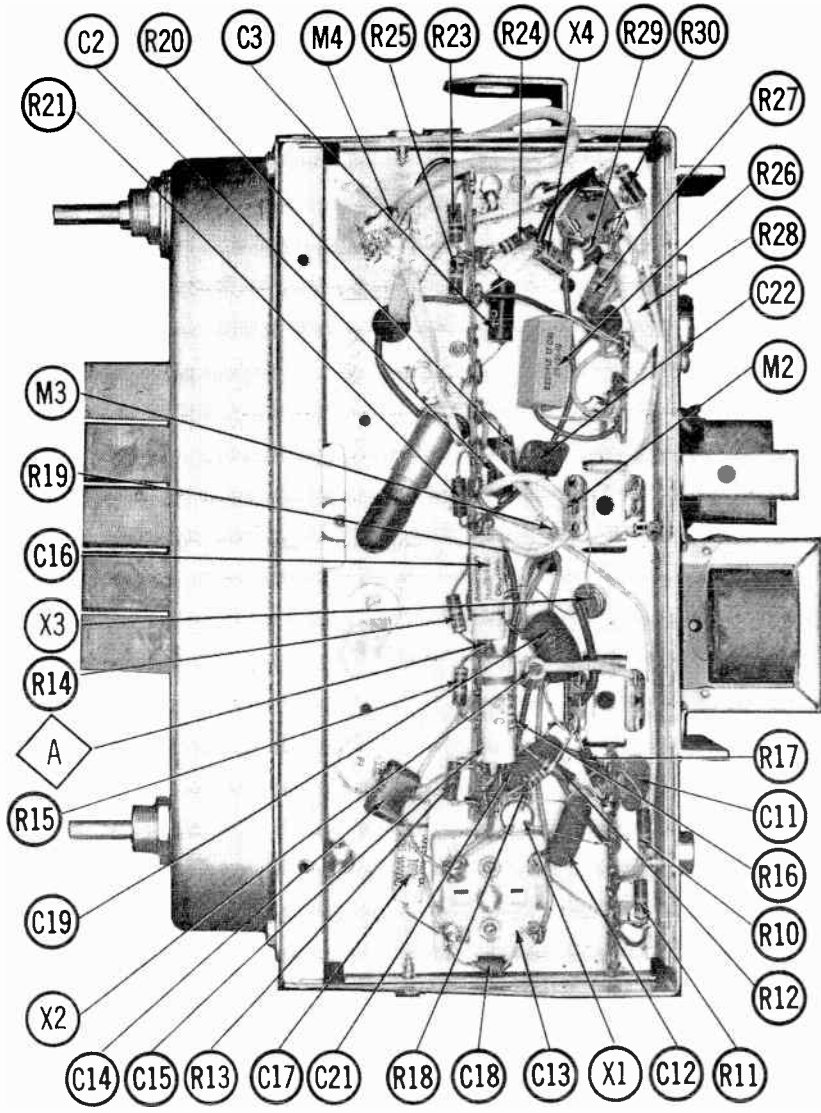
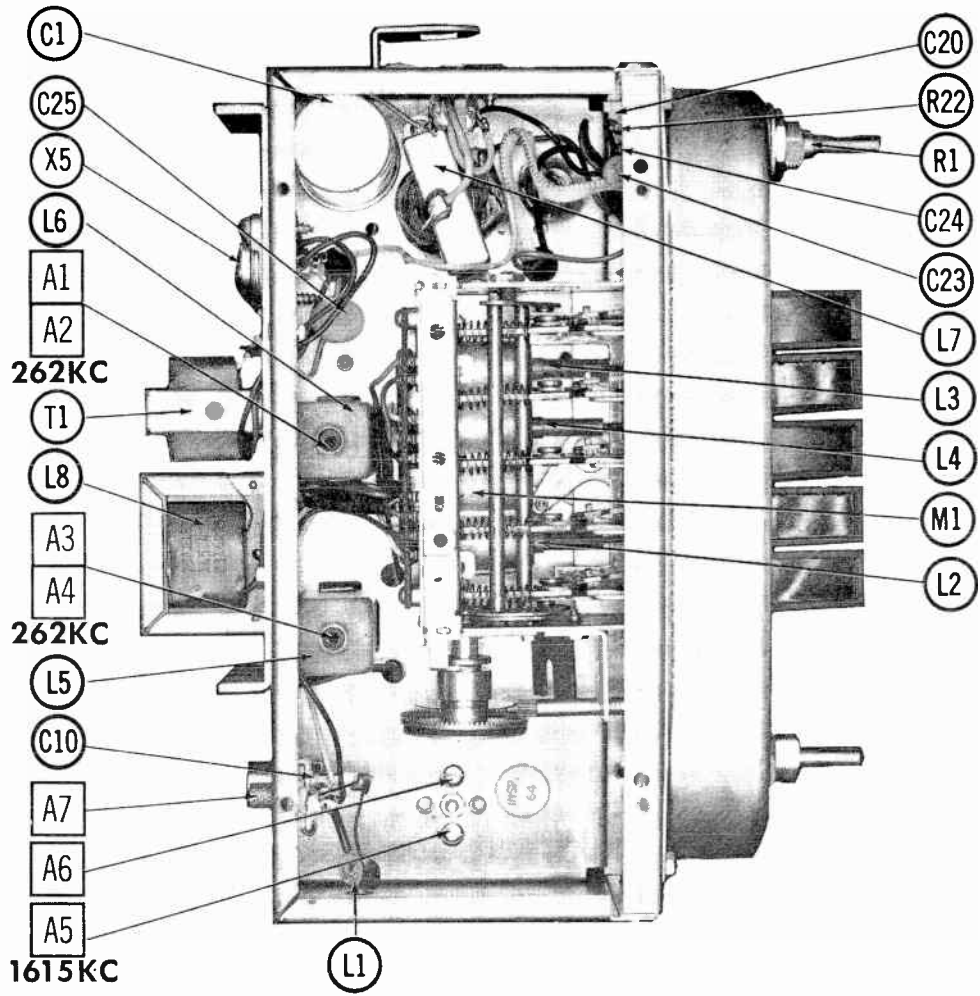


- * NOT USED IN SOME VERSIONS
- ⊖ See parts list for alternate value or application.
- 1. Voltage measurements taken with vacuum tube voltmeter.
- 2. All controls set for normal operation, no signal applied.
- 3. Measured values are from socket pin or terminal to common ground.
- 4. All terminals viewed from bottom unless otherwise designated.
- 5. Numbers assigned to terminals may not be found on the unit.
- 6. Supply voltage maintained at rated value for voltage readings.
- 7. Resistance measurements not given because of the wide variation in internal resistance of transistor.

A PHOTOFAC STANDARD NOTATION SCHEMATIC
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AUTOMATIC MODELS CPA-3047, CR-3006, CRA-3046, CRP-442A/AT, CRP-3007, CTP-792AT, FNP-452AT





AUTOMATIC MODELS CPA-3047 CR-3006, CRA-3046,
 CRP-442A/AT, CRP-3007, CTP-792AT, FNP-452AT

PARTS LIST AND DESCRIPTION

WIRING DATA

Replacement parts shown may be superseded by the availability of newly introduced replacements.

Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

COILS (RF-IF)

General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in 12 Colors 8524 (Stranded) Available in 12 Colors
Shielded Hook-up Wire	Use BELDEN No. 8885
Rear Seat Speaker Extension Cable	Use BELDEN No. 8782 (Stranded) Coded Parallel Leads
Bonding Strap	Use BELDEN No. 8661 (3/8 In.) or 8670 (3/4 In.)

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			AUTOMATIC PART No.	NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.		
X1		RF Amp.	DS-25	GE-1	2N1637	6-80	PNP
X2		Conv.	DS-25	GE-1	2N1639	6-61	PNP
X3		IF Amp.	DS-25	GE-1	2N1638	6-62	PNP
X4		Driver	DS-28	GE-2	2N591	6-53	PNP
X5	8P404T	Output	DS-520	GE-3	2N301		PNP (Note 1)

Note 1. When replacing, apply silicone grease to both sides of insulator. Tighten mounting screws securely.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						NOTES
	CAP.	VOLT.	AUTOMATIC PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	GENERAL INSTRUMENT PART No.	MALLORY PART No.	
C1A	600	15	20-327	AFH3-00-95.4				WP-300.87	PCLS-3026.10
B	300	15	20-256	PTT69	NLW25-15	MT1-10	MLV25-15	TT15X25	TE-1157.1
C	100	15							
C2	25	15	20-505	CRE454A	NLW5-15	MT1-3	MLV5-15	TT25X5	TE-1152
C3	5	15							

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

FIXED CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					NOTES	
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.		SPRAGUE PART No.
C10		#28-800-2L (.05) †							
C11	1mfd	#28A1332	P288N-05	UK-105	HCC3105P	IDP-2-503	PVC-215	HY-135	2PS-S50
C12	.05 100V								
C13A									
B									
C14	270		DI-270	DD-271	LA10T27-C4	CCD-271	GP327	5GA-T25	
C15	.02 200V		BPD-02	DD-203	BYA652	CCD-203	B-120	5HK-S20	
C16	.005 200V		P288N-005	DD-502	DPMS8D5	6DP-1-502	PVC-625	6TM-D50	
C17	.015 200V		P288N-015		WMF2S15	4DP-1-153	PVC-2115	4PS-S15	
C18	100 N750		N750-DI 100	DTN-100	C10T10	CCTN-101	CN7-310	10TCU-T10	
C19	.05 100V		P288N-05		PM2S5	IDP-2-503	PVC-215	2PS-S50	
C20	.1 16V		TTD-1	CK-104	H6		TA-010	TG-P10	
C21	.05 100V		P288N-05		2M2S5	IDP-2-503	PVC-215	2PS-S50	
C22	180		DI-180	DD-181	LA10T18-S3	CCD-181	GP318	5GA-T18	
C23	.01 50V		TTD-01	CK-103	H2		TA-110	TG-S10	
C24	.22 50V			UK20-204	HCC25224Z			HY-325	
C25	.05 50V		TTD-05	CK-503	H5		TA-150	TG-S50	

Automatic Part Number.

† Alternate Value.

CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA				NOTES
			AUTOMATIC PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	
R1A	Tone	10K	80A2204 ①			† QJ-1690A	■ UE4388-S
B	Volume & Switch	10K Tap @ 5000Ω					

① Corvair Models may use Part #80A2291. Falcon, Comet Models use Part #80A2182.
■ "STA-LOC" Equivalent: FE14L, RU14T53, OG825, IS1312, US-42
* Cut 1 3/4" from bushing.

† "CONCENTRIKIT" Equivalent: K8 Kit with base elements and shafts: B11-118, P14-019 (Panel) B19-116X, R16-106 (Rear)
"SNAPTROL" Equivalent: BU10*, CF9, CR49T, SF2, SR40, GC S-37 (Bushing) 76-1 (Switch)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		AUTOMATIC PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	RF Choke (6.2 uH)	14-6.2	BC-565	4610	RTC-8520	T859	① Part of M1.
L2	Ant.	①					
L3	RF	①					
L4	Osc.	①					
L5	Input IF	14-270(B)	BC-690	6570			
L6	Output IF	14-271(B)	BC-691	6571		TF606	

FILTER CHOKE

ITEM No.	RATINGS		REPLACEMENT DATA					NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	AUTOMATIC PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	
L7	525ma	.5Ω	10MH	75A1269	C-4095	TC-2	TR-155	TY17XT

CHOKE (AUDIO OUTPUT)

ITEM No.	INDUCTANCE	REPLACEMENT DATA					NOTES
		AUTOMATIC PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L8	27MH	75A2189					

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
	PRI.	SEC.	AUTOMATIC PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
	T1	8:	1	75A1859			TR-184	

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		AUTOMATIC PART No.	QUAM PART No.	
SP1	6" x 9" PM 20Ω	73B2221 ①	69A3Z20	① Falcon, Comet Models use Part #73B2210

MISCELLANEOUS

ITEM No.	PART NAME	AUTOMATIC PART No.	NOTES
M1	Tuner	78B2290	Corvair Models, Push-button Corvair Models, Manual Falcon, Comet Models
	Tuner	78A2221	
	Tuner	78B2175	
M2	AVC		
M3	AF Det.		
M4	Spark Plate		

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
KNOB			
Volume or Tuning, Corvair	54A1714	Tone, Falcon-Comet	48A1522
Volume or Tuning, Falcon	47-52W	Dummy, Corvair	48A1063-IA
Volume or Tuning, Comet	48A2225	Dummy, Falcon-Comet	48A1522-1
Tone, Corvair	48A1063		



TRADE NAME : Automatic Models N-3028, NA-3068,
 NAP-3069, NP-3029(63 Rambler Amer.)
 SUPPLIER : Automatic Radio Mfg. Co., Inc.
 122 Brookline Ave., Boston 15, Mass.
 TYPE SET : 5 Transistor AM Receiver
 POWER SUPPLY : 12 Volt Storage Battery
 RATING : .6 Amp. @ 12.6 VDC
 TUNING RANGE : BROADCAST 540 — 1615 KC



AUTOMATIC MODELS N-3028, NA-3068, NAP-3069, NP-3029

ALIGNMENT INSTRUCTIONS

Check for specified source voltage.
 Use only enough generator output to provide a usable indication.
 Suggested Alignment Tools:

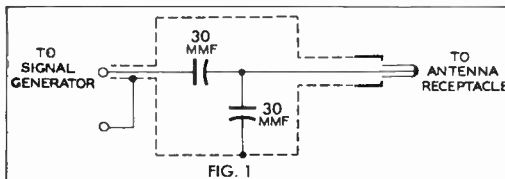
A1 thru A4..... GENERAL CEMENT #8606, 8606L, 8869
 WALSCO #2543, 2544, 2588
 A5, A6, A7..... GENERAL CEMENT #8290, 8868, 9087
 WALSCO #2525, 2528, 2587

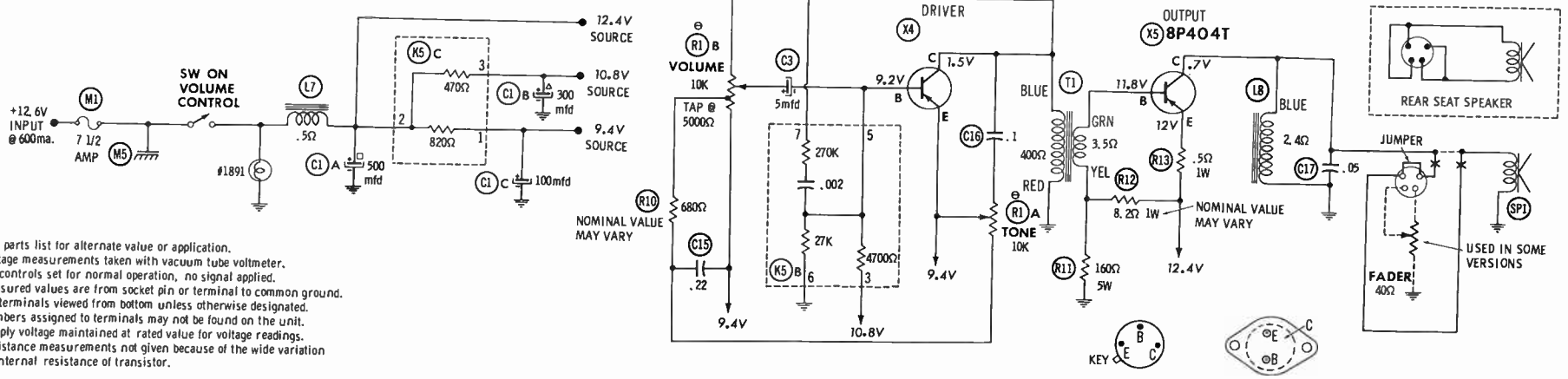
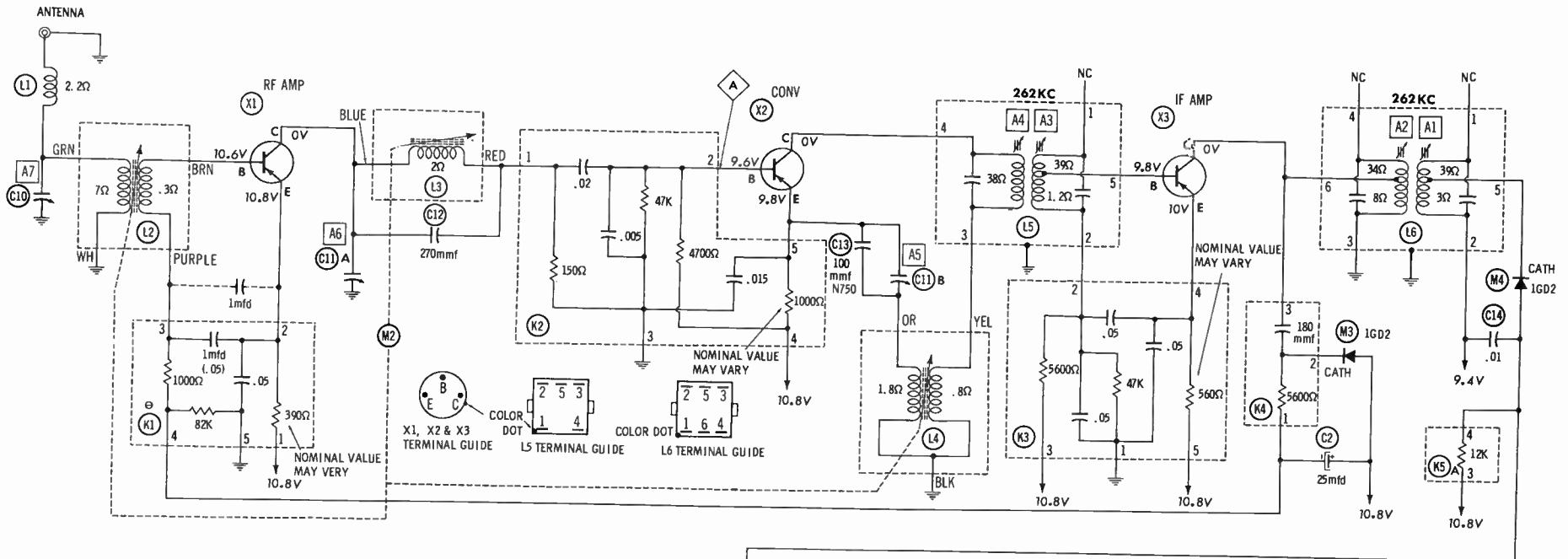
	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1.	High side thru .1mfd to point Δ , low side to ground.	262KC (400v Mod.)	High Freq. End Stop.	Output Meter across voice coil.	A1, A2, A3, A4	Adjust for maximum.
2.	Thru dummy (Fig. 1) to antenna receptacle.	1615KC	"	"	A5, A6, A7	"

With radio installed in car and antenna fully extended, tune in a weak station near 1400KC and adjust A7 for maximum output.

PUSH-BUTTON ADJUSTMENT

1. Pull button out.
2. Tune manually to desired station.
3. Press button in firmly.
4. Repeat for remaining buttons.

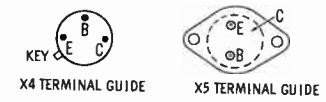


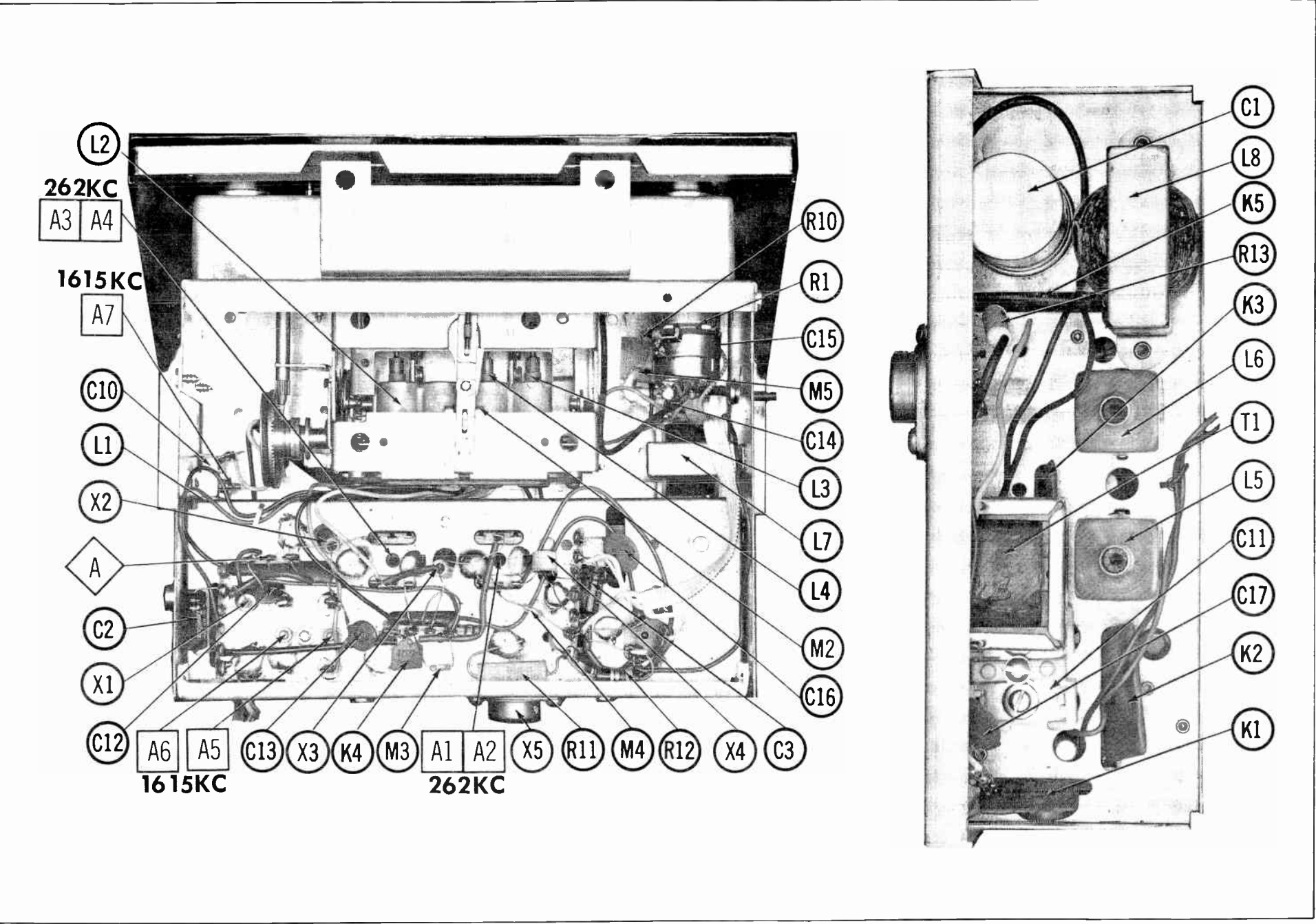


- ⊙ See parts list for alternate value or application.
- 1. Voltage measurements taken with vacuum tube voltmeter.
- 2. All controls set for normal operation, no signal applied.
- 3. Measured values are from socket pin or terminal to common ground.
- 4. All terminals viewed from bottom unless otherwise designated.
- 5. Numbers assigned to terminals may not be found on the unit.
- 6. Supply voltage maintained at rated value for voltage readings.
- 7. Resistance measurements not given because of the wide variation in internal resistance of transistor.

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AUTOMATIC MODELS N-3028, NA-3068, NAP-3069, NP-3029





AUTOMATIC MODELS N-3028, NA-3068, NAP-3069, NP-3029

PARTS LIST AND DESCRIPTION

TRANSISTORS

Replacement parts shown may be superseded by the availability of newly introduced replacements.
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

FILTER CHOKE

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			AUTOMATIC PART No.	NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.		
X1		RF Amp.	DS-25	GE-1	2N1837	6-80	PNP
X2		Conv.	DS-25	GE-1	2N1839	8-61	PNP
X3		IF Amp.	DS-25	GE-1	2N1838	6-82	PNP
X4		Driver	DS-28	GE-2	2N581	6-53	PNP
X5	8P404T	Output	DS-520	GE-3	2N301		PNP (Note 1)

Note 1. When replacing, apply silicone grease to both sides of insulator. Tighten mounting screws securely.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	AUTOMATIC PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	GENERAL INSTRUMENT PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A	500	18	20-2653	AFH3-00-94.5				FP300.83	PCLS-3028.11
B	300	18							
C	100	18							
C2	25	15	20-256	PTT69	NLW25-15	MT1-10	MLV25-15	TT15X25	TE-1157.1
C3	5	15	20-505	CRE454A	NLW5-15	MT1-3	MLV5-15	TT25X5	TE-1152

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

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		#28-800-2L #28A1332							
C11A									
B									
C12	270		DI-270	DD-271	LA10T27-C4	CCD-271	GP327	5GA-T25	
C13	100 N750		N750-DI 100	DDN-100	C10T1U	CCTN-101	CNT-310	10TCU-T10	
C14	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10	
C15	.22 16V			UK20-204	HCC25224Z			HY-325	
C18	.1 16V		TTD-1	CK-104	H8		TA-010	TG-P10	
C17	.05 50V		TTD-05	CK-503	H5		TA-150	TG-S50	

Automatic Part Number.

CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA				
			AUTOMATIC PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1A	Tone	10K	80A2205①	F1-10K, R18-10K, FFS108, RFS115, AK28, KR-4			† QJ-1837A
B	Volume & Switch	10K Tap @ 5000Ω					

① Some versions may use Part #80A2205B (7500Ω Volume).

† "CONCENTRIKIT" Equivalent: K-8 Kit with base elements and shafts: B11-118, P22-115 (Panel)
"SNAPTROL" Equivalent: BU10*, CF9, SF12, CR49T, SR11, GC B19-118X, R16-127 (Rear)
(* Cut to required length) S14 (Bushing) 78-1 (Switch)

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		AUTOMATIC PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	RF Choke (6.2uh)	14-8.2	BC-585	4810	RTC-8520	T859	① Part of M2
L2	Ant.	①					
L3	RF	①					
L4	Osc.	①					
L5	Input IF	14-2854		8570			
L6	Output IF	14-2855		6571			

ITEM No.	RATINGS			REPLACEMENT DATA				NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	AUTOMATIC PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	
L7	450ma	.5Ω	10MH	75A1289	C-4095	TC-2	TR-155	TY17XT

CHOKE (AUDIO OUTPUT)

ITEM No.	INDUCTANCE	REPLACEMENT DATA					NOTES
		AUTOMATIC PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L8	27MH	75A2189					

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO	REPLACEMENT DATA					NOTES
		AUTOMATIC PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	8: 1	75A2635					

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	AUTOMATIC PART No.	REPLACEMENT DATA
K1	X1 Bias	390Ω, 1000Ω, 82K, .05mfd, .05mfd, 1mfd	89A2582C ①	
K2	X2 Bias	150Ω, 1000Ω, 4700Ω, 47K, .005mfd, .015mfd, .02mfd	89A2583	
K3	X3 Bias	580Ω, 5600Ω, 47K, .05mfd, .05mfd, .05mfd	89A2584B	
K4	AVC	5600Ω, 180mmf	89A2701	
K5	Audio Bias	470Ω, 820Ω, 4700Ω, 12K, 27K, 270K, .002mfd	89A2585A	

① Some versions may use Part #89A2582B.

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			AUTOMATIC PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M1	SFE	7 1/2		12A12-1912B	30707.5	15507.5	SFE 7 1/2	HME

MISCELLANEOUS

ITEM No.	PART NAME	AUTOMATIC PART No.
M2	Tuner Push Button	78B2820
	Tuner Manual	78B2896
M3	AVC (1GD2)	
M4	Det. (1GD2)	
M5	Spark Plate	

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.
Knob, Tuning or Volume	47A1514
Knob, Tone	48A1509
Knob, Dummy	48A1510

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		AUTOMATIC PART No.	QUAM PART No.	
SP1	5" x 7" PM 20Ω	73B2210	57A21Z20	

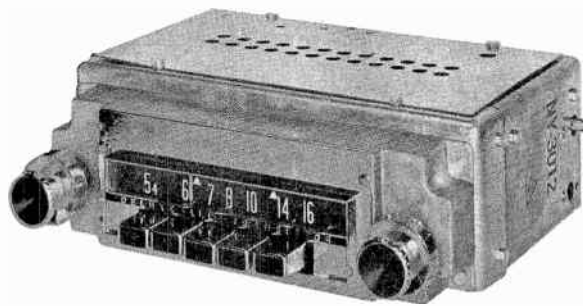
WIRING DATA

General-use Unshielded Hook-up Wire Use BELDEN No. 8530 (Solid) Available in 12 Colors
8524 (Stranded) Available in 12 Colors
Shielded Hook-up Wire Use BELDEN No. 8885
Rear Seat Speaker Extension Cable Use BELDEN No. 8782 (Stranded) Coded Parallel Leads
Bonding Strap Use BELDEN No. 8681 (3/8 In.) or 8670 (3/4 In.)



PHOTOFACT®

TRADE NAME : Automatic Models NAY-3052, NY-3012
(1963 Chrysler)
 SUPPLIER: Automatic Radio Mfg. Co., Inc.
122 Brookline Ave., Boston 15, Mass.
 TYPE SET: 5 Transistor AM Receiver
 POWER SUPPLY: 12 Volt Storage Battery
 RATING: .68 Amp. @ 12.6 VDC
 TUNING RANGE: BROADCAST 540 - 1615KC



AUTOMATIC MODELS NAY-3052, NY-3012

ALIGNMENT INSTRUCTIONS

Check for specified source voltage.

Use only enough generator output to provide a usable indication.

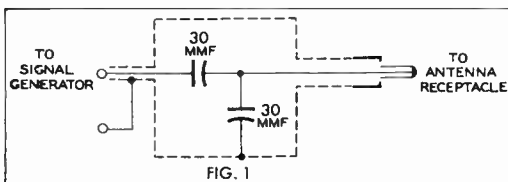
Suggested Alignment Tools: A1 thru A4.....GENERAL CEMENT #8606, 8606L, 8869
 WALSCO #2543, 2544, 2588
 A5, A6, A7.....GENERAL CEMENT #8290, 8868, 9087
 WALSCO #2525, 2528, 2587

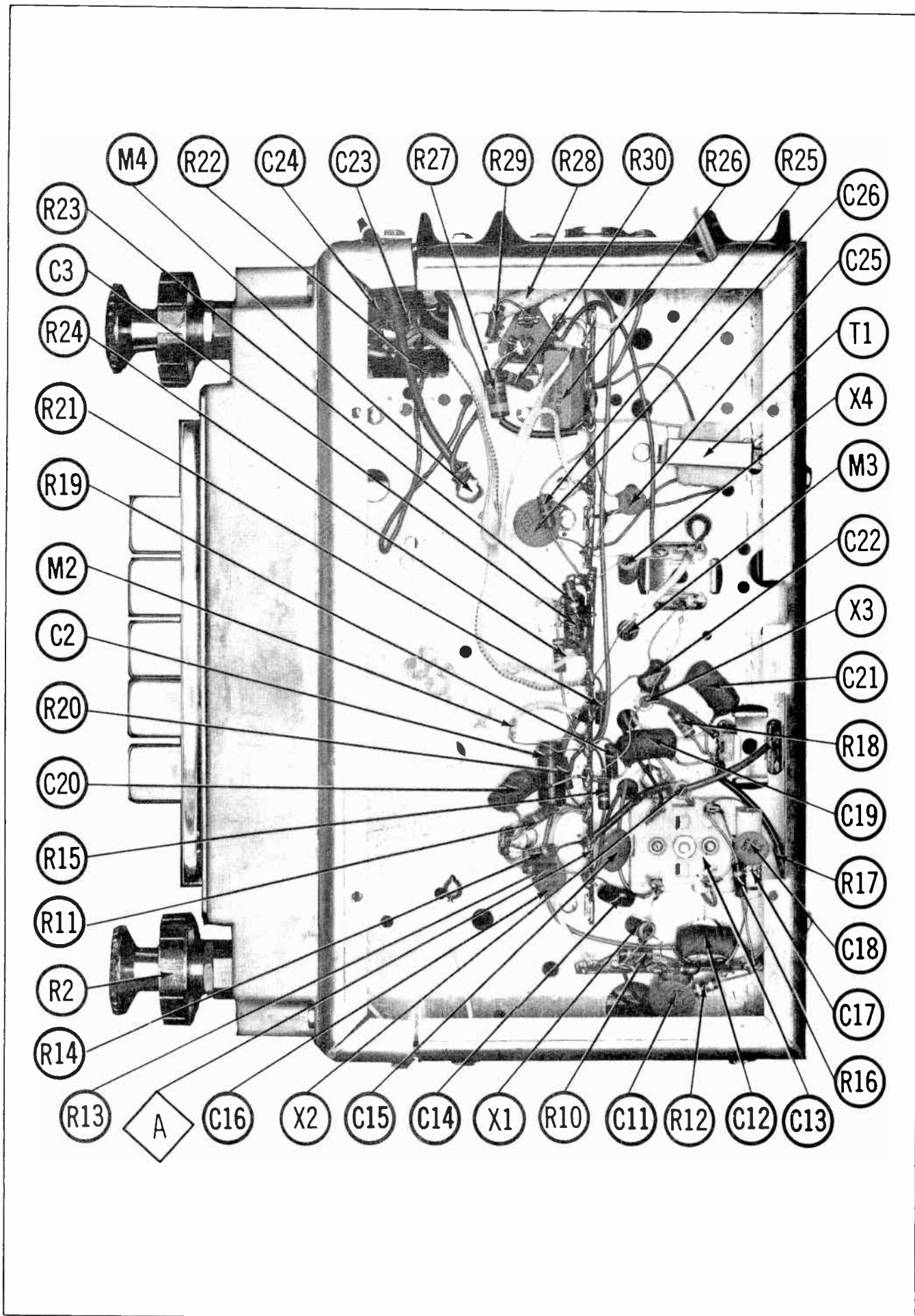
	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1.	High side thru .1mf to point A, low side to ground.	262KC (400 ν Mod.)	High Freq. End Stop.	Output Meter across voice coil.	A1, A2, A3, A4	Adjust for maximum.
2.	Thru dummy (Fig. 1) to antenna receptacle.	1615KC	"	"	A5, A6, A7	"

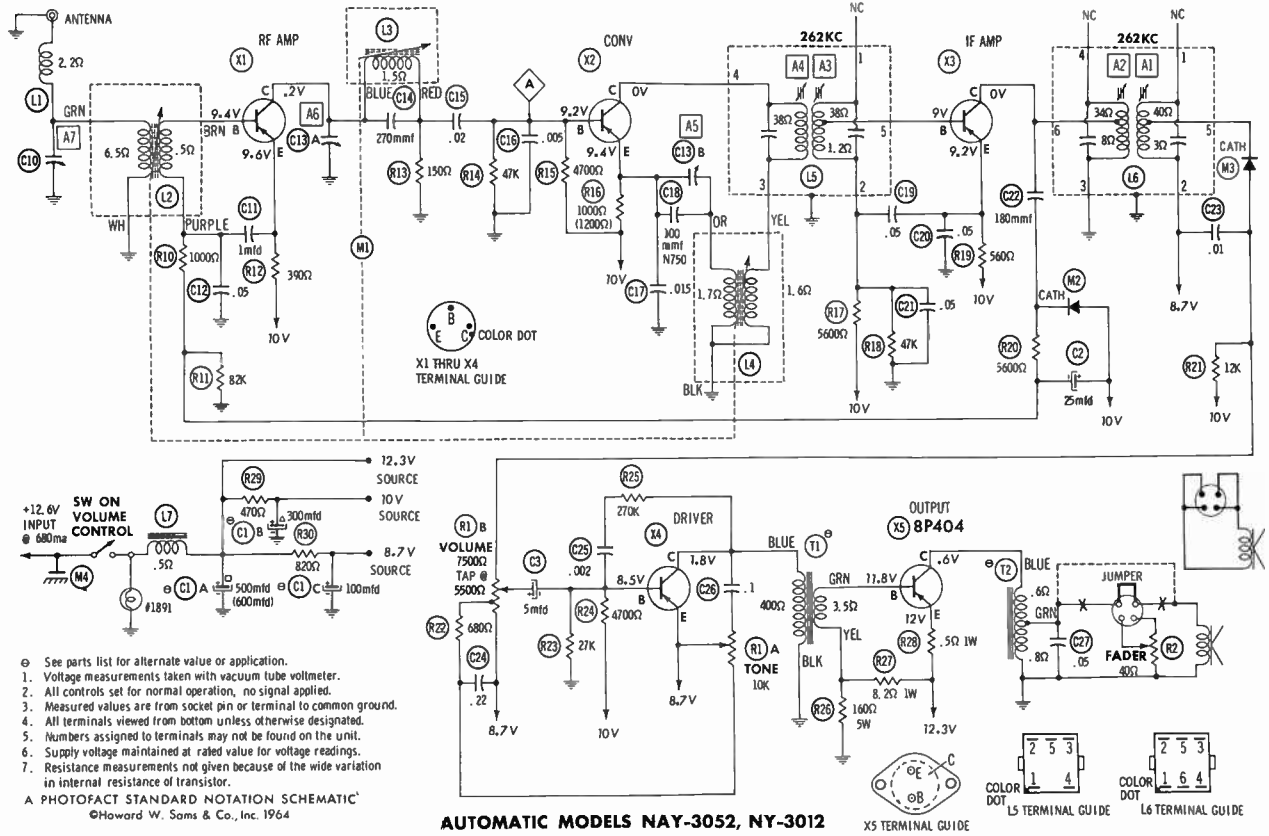
With radio installed in car and antenna fully extended, tune in a weak station near 1000KC and adjust A7 for maximum output.

PUSH-BUTTON ADJUSTMENT

1. Pull button out.
2. Tune manually to desired station.
3. Press button in firmly.
4. Repeat for remaining buttons.



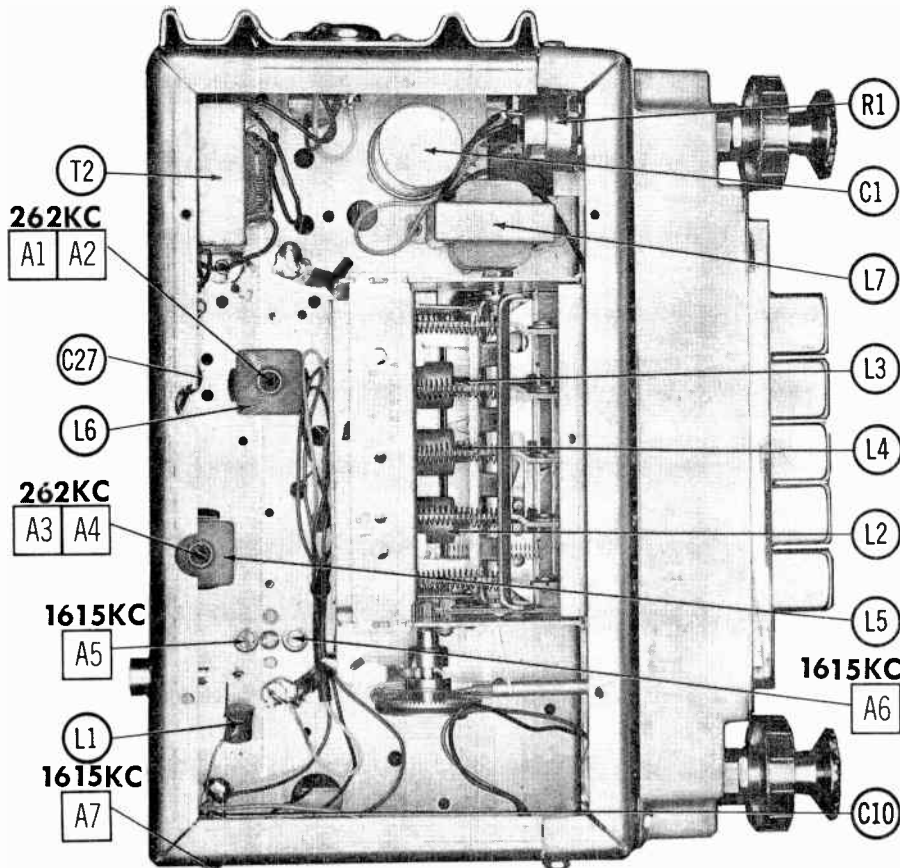




- ⊙ See parts list for alternate value or application.
- 1. Voltage measurements taken with vacuum tube voltmeter.
- 2. All controls set for normal operation, no signal applied.
- 3. Measured values are from socket pin or terminal to common ground.
- 4. All terminals viewed from bottom unless otherwise designated.
- 5. Numbers assigned to terminals may not be found on the unit.
- 6. Supply voltage maintained at rated value for voltage readings.
- 7. Resistance measurements not given because of the wide variation in internal resistance of transistor.

A PHOTOFAC STANDARD NOTATION SCHEMATIC
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AUTOMATIC MODELS NAY-3052, NY-3012



PARTS LIST AND DESCRIPTION

Replacement parts shown may be superseded by the availability of newly introduced replacements.

Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			AUTOMATIC PART No.	NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.		
X1	8P404	RF Amp.	DS-25	GE-1	2N1637	6-60	PNP
X2		Conv.	DS-25	GE-1	2N1639	6-61	PNP
X3		IF Amp.	DS-25	GE-1	2N1638	6-62	PNP
X4		Driver	DS-26	GE-2	2N591	6-53	PNP
X5		Output	DS-520	GE-3	2N301		PNP (Note 1)

Note 1. When replacing, apply silicone grease to both sides of insulator. Tighten mounting screws securely.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		AUTOMATIC PART No.	REPLACEMENT DATA					
	CAP.	VOLT.		AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	GENERAL INSTRUMENT PART No.	MALLORY PART No.	SPRAGUE PART No.
CLA	500	16	20-2653 ①	AFH3-00-94.5				FP-300.83	ECLS-3026.11
CB	300	16							
C	100	16							
C2	25	15	20-256	PTT69	NLW25-15	MT1-10	MLV25-15	TT15X25	TE-1157.1
C3	5	15	20-505	CRE454A	NLW5-15	MT1-3	MLV5-15	TT25X5	TE-1152

① Some versions may use 600-300-100mfd (Part #20-327).

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

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	1mfd	#28-800-2L	P288N-05	UK-105	HCC3105P	IDP-2-503	PVC-215	HY-135	
C11		.05 100V							2PS-S50
C12	} #28A1332		DI-270	DD-271	LA10T27-C4	CCD-271	GP327	5GA-T25	
C13A			BPD-02	DD-203	BYA6S2	CCD-203	B-120	5HK-S20	
B			BPD-005	DD-502	BYA10D5	CCD-502	B-250	5HK-D50	
C14		.270		P288N-015		WFM2S15	4DP-1-153	PVC-2115	4PS-S15
C15		.02		N750-DI 100	DTN-100	C10T1U	CCTN-101	CNT-310	10TCU-T10
C16		.005		P288N-05		PM285	IDP-2-503	PVC-215	2PS-S50
C17		.015 200V		P288N-05		PM285	IDP-2-503	PVC-215	2PS-S50
C18		100 N750		P288N-05		PM285	IDP-2-503	PVC-215	2PS-S50
C19		.05 100V		P288N-05		PM285	IDP-2-503	PVC-215	2PS-S50
C20		.05 100V		P288N-05		PM285	IDP-2-503	PVC-215	2PS-S50
C21		.05 100V		P288N-05		PM285	IDP-2-503	PVC-215	2PS-S50
C22		180		DI-180	DD-181	LA10T18-S3	CCD-181	GP318	5GA-T18
C23		.01 50V		TTD-01	CK-103	H2	CCD-202	TA-110	TG-S10
C24		.22 3V			UK20-204	HCC25224Z		B-220	HY-325
C25		.002		BPD-002	DD-202	BYA10D2		TA-010	5HK-D20
C26		.1 16V		TTD-1	CK-104	H6			TG-P10
C27		.05 100V		P288N-05		PM285	IDP-2-503	PVC-215	2PS-S50

Automatic Part Number.

CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA				
			AUTOMATIC PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1A	Tone Volume & Switch	10K	80A2402C	F1-10K, R14-7500, FFS113, RFS205, KR-7, AK-28		↑ QJ-1686A	
B		7500Ω					
R2	Fader	Tap @ 5500Ω	80A1791C			‡ QJ-1685A	
		40Ω					

† "CONCENTRIKIT" Equivalent: K-8 Kit with base elements and shafts: B11-116, P17-123 (Panel)

"SNAPTROL" Equivalent: BU10②, CF9, CR48T, SF15, SR15, WF B21-115X, R26-206 (Rear)

‡ "SNAPTROL" Equivalent: BU10①, WF18, SF4 S-50 (Bushing)

① Cut 1 13/32" from bushing. ② Cut 9/16" from bushing.

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		AUTOMATIC PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	RF Choke(6.2uh)	14-6.2	BC-565	4610	RTC-8520	T859	① Part of M1
L2	Ant.	①					
L3	RF	①					
L4	Osc.	①					
L5	Input IF	14-270B	BC-690	TF606			
L6	Output IF	14-271B	BC-691				

FILTER CHOKE

ITEM No.	RATINGS		REPLACEMENT DATA						NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	AUTOMATIC PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L7	500ma	.5Ω	10MH	75A1269	C-4095	TC-2	TR-155	TY17XT	

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
	PRI.	SEC.	AUTOMATIC PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	8	1	75A2635 ①					① Some versions may use Part #75A1859

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE	REPLACEMENT DATA					NOTES
		AUTOMATIC PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T2	24Ω Tap @6-8Ω	75A2693 ①			TR-169		① Some versions may use Part #75A1860

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		AUTOMATIC PART No.	QUAM PART No.	
SP1	6" x 9" PM 6-8Ω	73B2671	69A3Z8	

MISCELLANEOUS

ITEM No.	PART NAME	AUTOMATIC PART No.	NOTES
M1	Tuner	78B2403	
M2	AVC		
M3	AF Det.		
M4	Spark Plate		

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
Dial Glass	39-88	Knob - Tone, Fader	48A648
Knob - Tuning, Volume	54B1738		

WIRING DATA

General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in 12 Colors
	8524 (Stranded) Available in 12 Colors
Shielded Hook-up Wire	Use BELDEN No. 8885
Rear Seat Speaker Extension Cable	Use BELDEN No. 8782 (Stranded) Coded Parallel Leads
Bonding Strap	Use BELDEN No. 8661 (3/8 in.) or 8670 (3/4 in.)



PHOTOFACT[®]

TRADE NAME : Automatic Models NU-63-AT, NU-3107,
PUT-3108

SUPPLIER : Automatic Radio Mfg. Co., Inc.
122 Brookline Ave., Boston 15, Mass.

TYPE SET : 5 Transistor AM Receiver

POWER SUPPLY : 12 Volt Storage Battery

RATING : 530 MA @ 12.6 VDC

TUNING RANGE : BROADCAST 540 - 1615KC



ALIGNMENT INSTRUCTIONS

Check for specified source voltage.
Use only enough generator output to provide a usable indication.

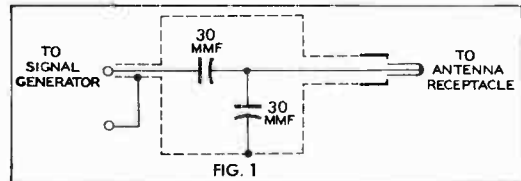
Suggested Alignment Tools:

A1 thru A4..... GENERAL CEMENT #8606, 8606L, 8869
WALSCO #2543, 2544, 2588

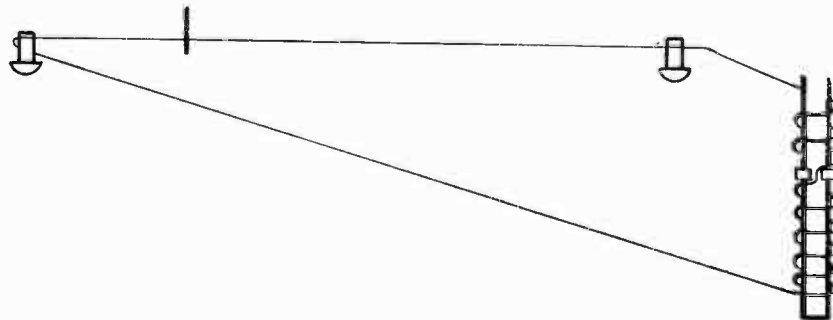
A5, A6, A7..... GENERAL CEMENT #8290, 8868, 9087
WALSCO #2525, 2528, 2587

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1.	High side thru .1mfd to point Δ , low side to ground.	262KC (400% Mod.)	High Freq. End Stop.	Output Meter across voice coil.	A1, A2, A3, A4	Adjust for maximum.
2.	Thru dummy (Fig. 1) to antenna receptacle.	1615KC	"	"	A5, A6, A7	"

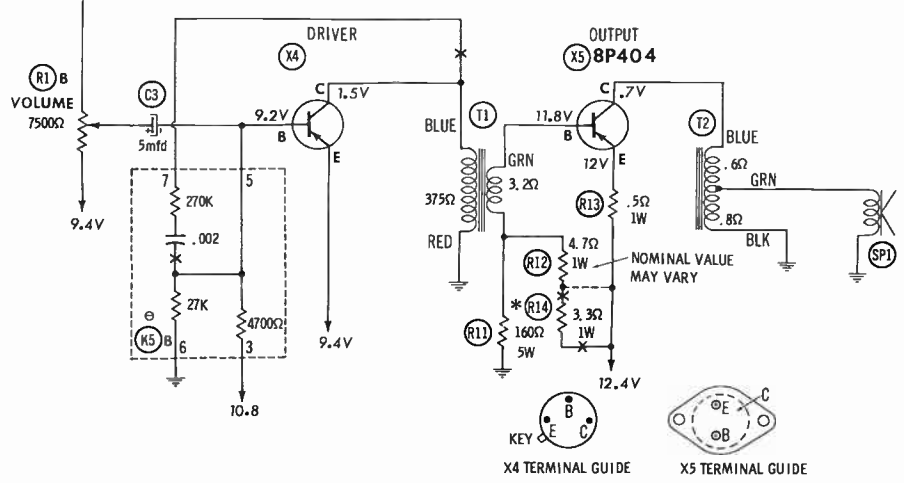
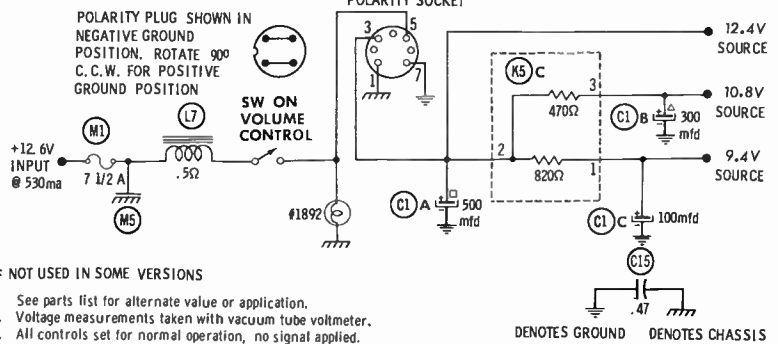
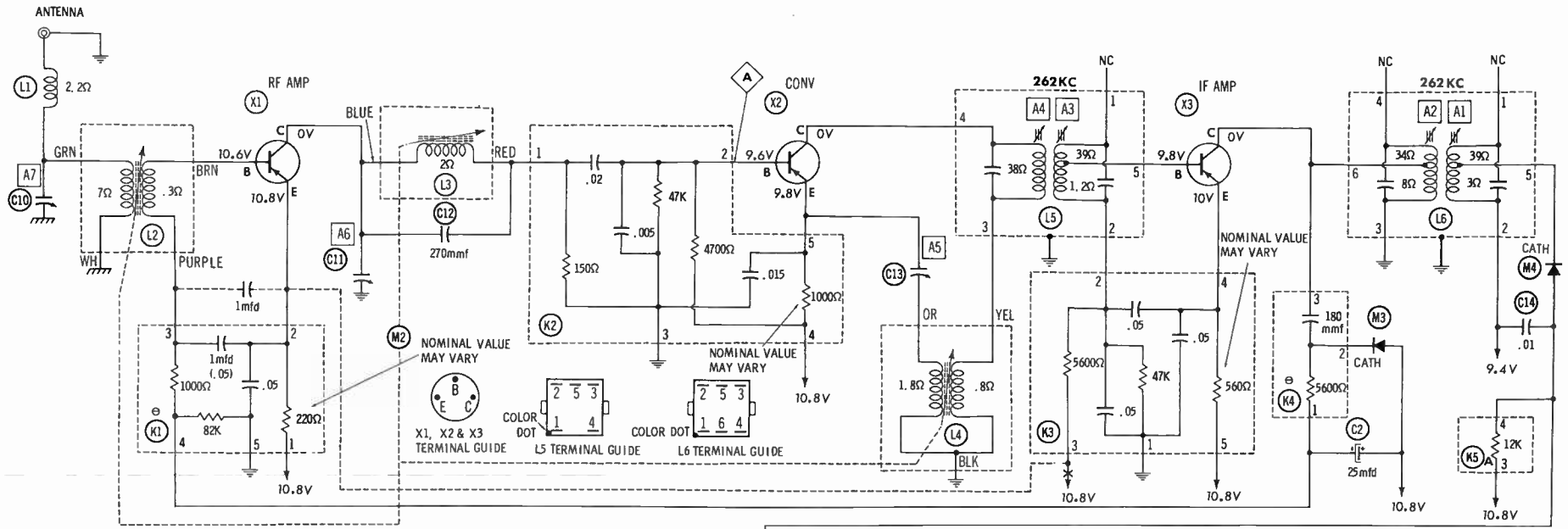
With radio installed in car and antenna fully extended, tune in a weak station near 1000KC and adjust A7 for maximum output.



DIAL CORD STRINGING



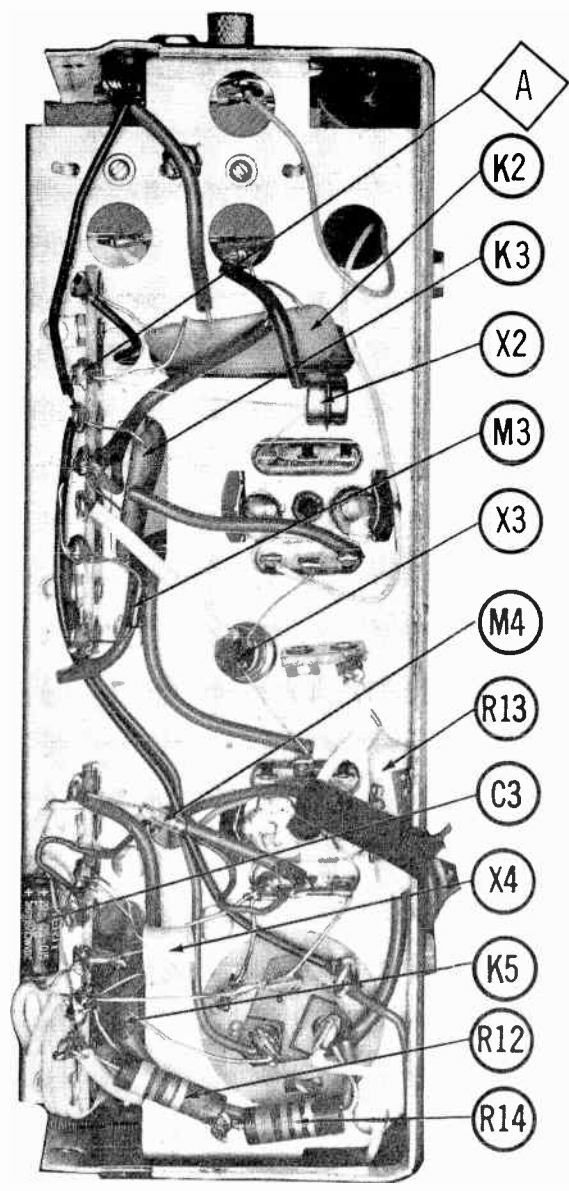
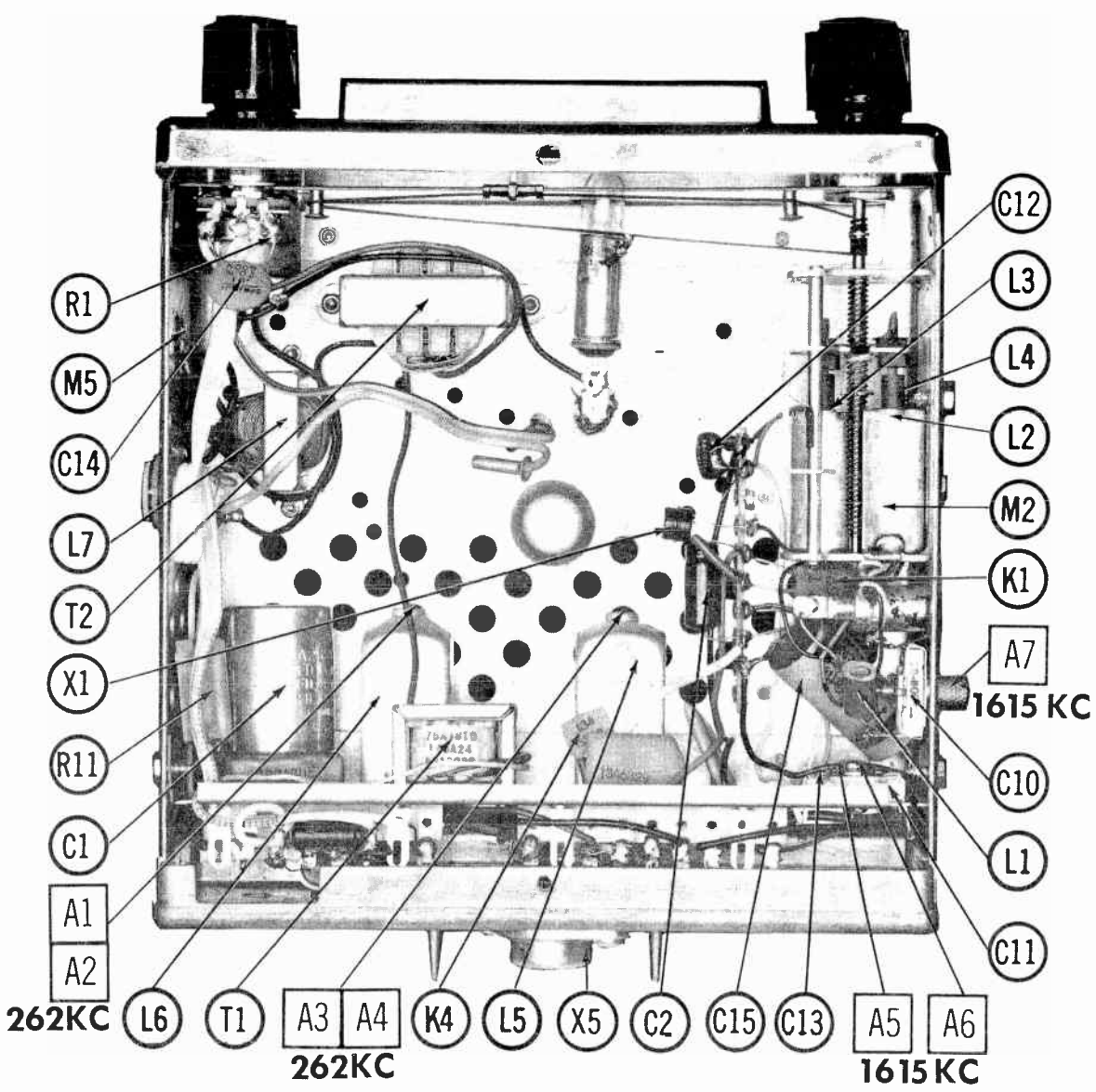
HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana



- * NOT USED IN SOME VERSIONS
- ⊖ See parts list for alternate value or application.
 - 1. Voltage measurements taken with vacuum tube voltmeter.
 - 2. All controls set for normal operation, no signal applied.
 - 3. Measured values are from socket pin or terminal to common ground.
 - 4. All terminals viewed from bottom unless otherwise designated.
 - 5. Numbers assigned to terminals may not be found on the unit.
 - 6. Supply voltage maintained at rated value for voltage readings.
 - 7. Resistance measurements not given because of the wide variation in internal resistance of transistor.

AUTOMATIC MODELS NU-63-AT, NU-3107, PUT-3108

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AUTOMATIC MODELS NU-63-A1, NU-3107, PUT-3108

PARTS LIST AND DESCRIPTION

Replacement parts shown may be superseded by the availability of newly introduced replacements.

TRANSISTORS

Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement. **TRANSFORMER (DRIVER)**

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			AUTOMATIC PART No.	NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.		
X1		RF Amp. Conv.	DS-25	GE-1	2N1637	6-60	PNP
X2			DS-25	GE-1	2N1639	6-61	PNP
X3		IF Amp.	DS-25	GE-1	2N1638	6-62	PNP
X4		Driver	DS-26	GE-2	2N591	6-53	PNP
X5	8P404	Output	DS-520	GE-3	2N301		PNP (Note 1)

Note 1. When replacing, apply silicone grease to both sides of insulator. Tighten mounting screws securely.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	AUTOMATIC PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	GENERAL INSTRUMENT PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A	500	16	20-2653 ①	AFH3-00-94.5				FP-300.83	PCLS-3026.11
C1B	300	16							
C1C	100	16							
C2	25	15	20-256	PTT89	NLW25-15	MT1-10	MLV25-15	TT15X25	TE-1157.1
C3	5	15	20-505	CRE454A	NLW5-15	MT1-3	MLV5-15	TT25X5	TE-1152

① Some versions may use 600-300-100mfd (Part #20-327).

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

FIXED CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA						
			AEROVOX PART No.	CENTRAL8 PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.	
C10		#28-800-2L							
C11		#28-431A							
C12	270	#28-461	DI-271	DD-271	LA10T27-C4	CCD-271	GP827	5GA-T27	
C13									
C14	.01								
C15	.47 200V								
			BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10	
			P288N-47		WMF1P47	IDP-4-474	PVC-1047	2PS-P47	

Automatic Part Number.

CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA				
			AUTOMATIC PART No.	CENTRAL8 PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1	Volume & Switch	7500Ω	80A2918A †	F2-10K, SFS212, AK-31, KR-4		B13-116, TM8, S45(1), 76-1(2), or (BU14(3), CF61, SS4, GC)*	

† Part #80A2056 used in Model NU-63-AT.

① Use instead of TM plate in TM8.

COILS (RF-IF) ② Use switch with metal housing. ③ Cut to proper length. * "SNAPTROL"

ITEM No.	USE	REPLACEMENT DATA					NOTES
		AUTOMATIC PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	RF Choke (6.2uh)	14-8.2					① Part of M2
L2	Ant.	①					
L3	RF	①					
L4	Osc.	①					
L5	Input IF	14-270B	BC-690	6570			
L6	Output IF	14-271B	BC-691	6571		TF806	

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA					NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	AUTOMATIC PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L7	450ma	.5Ω	10MH	75A8001					

ITEM No.	TURNS RATIO	REPLACEMENT DATA					NOTES
		AUTOMATIC PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	6.5: 1	75A1810			TR-183		

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE	REPLACEMENT DATA					NOTES
		AUTOMATIC PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T2	24Ω Tap @ 8Ω	75A2638			TR-169		

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		AUTOMATIC PART No.	QUAM PART No.	
SP1	5" PM 8"	73A2163	5A05Z8	

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	AUTOMATIC PART No.	REPLACEMENT DATA
K1	RF Amp. Bias	220Ω, 1000Ω, 82K, .05mfd, 1mfd	89A2582-C ①	
K2	Converter Bias	150Ω, 1000Ω, 4700Ω, 47K, .005mfd, .015mfd, .02mfd	89A2583B	
K3	IF Amp. Bias	560Ω, 5600Ω, 47K, .05mfd, .05mfd, .05mfd	89A2584B	
K4	AVC	5600Ω, 180mmf	89A2701 ②	
K5	Audio Bias	470Ω, 820Ω, 4700Ω, 12K, 27K, 270K, .002mfd	89A2585A ③	

① Part #89A2582B used in Model PUT-3108; Part #89A2582 used in Model NU-63-AT.

② May be separate items in Model NU-63-AT.

③ Part #89A2585 used in Model NU-63-AT.

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			AUTOMATIC PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M1	SFE	7 1/2			30707.5	15507.5	SFE 7 1/2	HME

MISCELLANEOUS

ITEM No.	PART NAME	AUTOMATIC PART No.	NOTES
M2	Tuner	78A2615	
M3	AVC (1GD2)		
M4	AF Det. (1GD2)		
M5	Spark Plate		

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
Escutcheon	54C1233	Knob, Tuning or Volume	47A1235

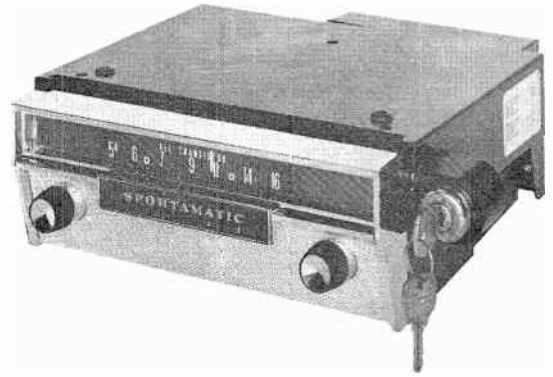
WIRING DATA

General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in 12 Colors
	8524 (Stranded) Available in 12 Colors
Shielded Hook-up Wire	Use BELDEN No. 8885
Rear Seat Speaker Extension Cable	Use BELDEN No. 8782 (Stranded) Coded Parallel Leads
Bonding Strap	Use BELDEN No. 8661 (3/8 In.) or 8670 (3/4 In.)



PHOTOFACT[®]

TRADE NAME : Automatic Models PA-85, PA-3285
SUPPLIER : Automatic Radio Mfg. Co., Inc.
 122 Brookline Ave., Boston 15, Mass.
TYPE SET : 6 Transistor Auto-Portable Receiver
POWER SUPPLY : 12 Volt Storage Battery (Auto)
 9 Volts DC (Portable)
RATING : .27 Amp. @ 12.6VDC (or)
 23MA @ 9VDC
TUNING RANGE : BROADCAST 540 – 1615KC



ALIGNMENT INSTRUCTIONS

Check for specified source voltage.
 Use only enough generator output to provide a usable indication.
 Suggested Alignment Tools:

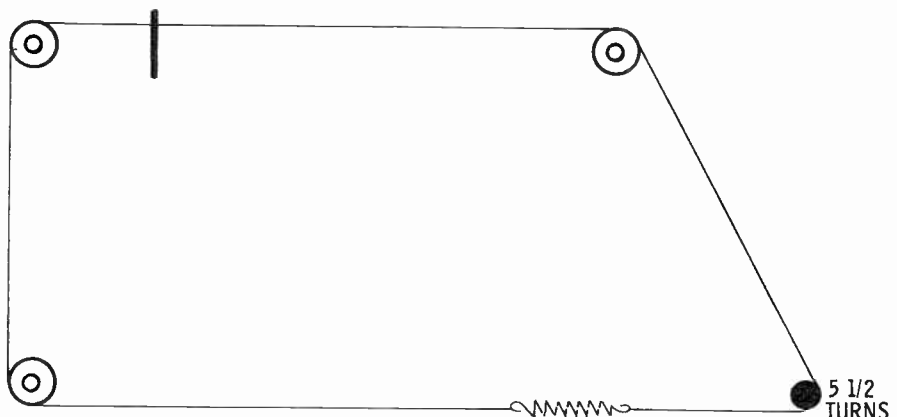
A1 thru A4.....GENERAL CEMENT #8606, 8606L, 8869
 WALSCO #2543, 2544, 2588
 A5, A6, A7, A8.....GENERAL CEMENT #8290, 8868, 9087
 WALSCO #2525, 2528, 2587

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1.	High side thru .1mfd to point A , low side to ground.	262KC (400v Mod.)	High Freq. End Stop.	Output Meter across voice coil.	A1, A2, A3, A4	Adjust for maximum.
2.	Loosely coupled to loopstick.	1615KC	"	"	A5, A6, A7	"

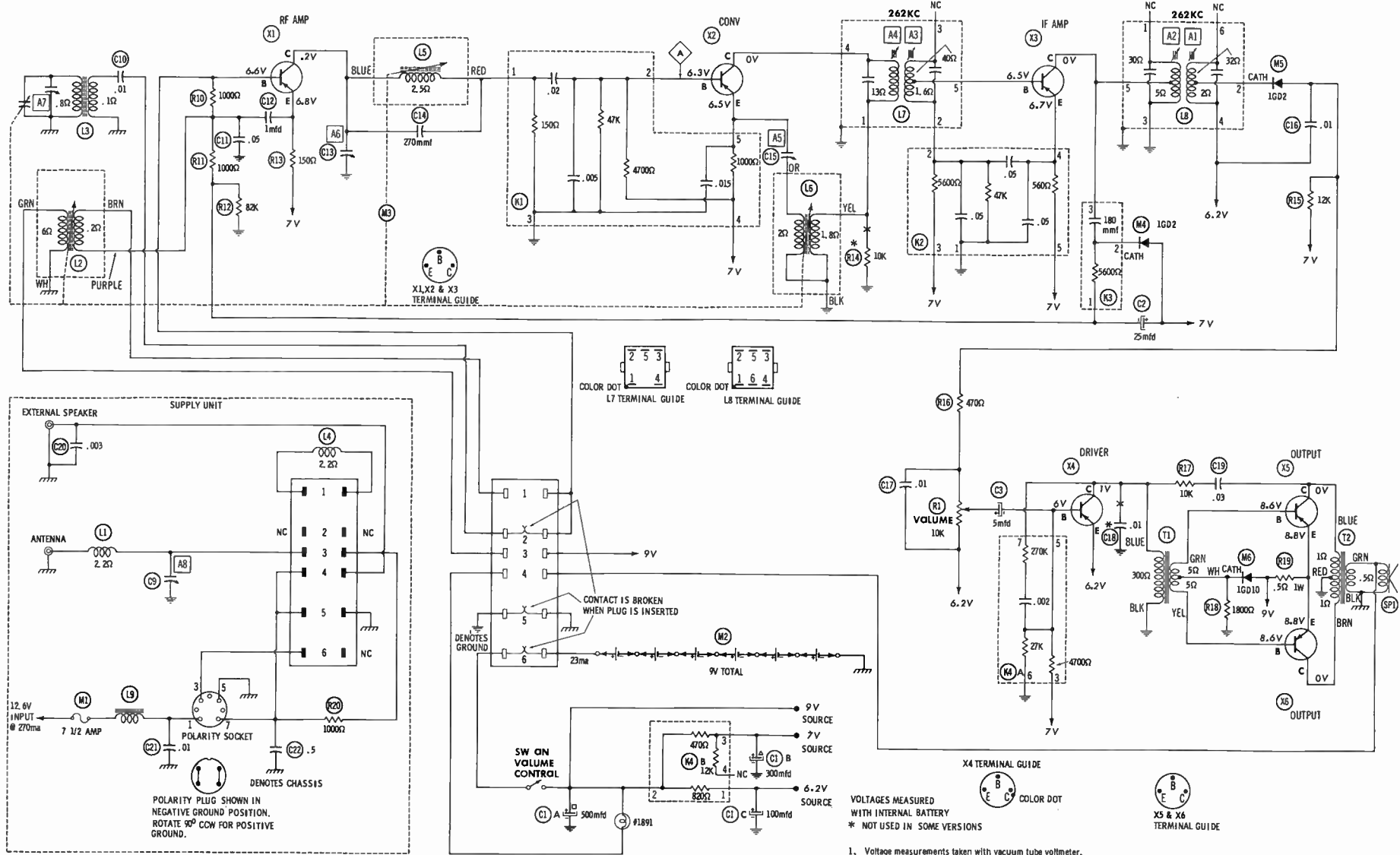
With radio installed in car and antenna fully extended, tune in a weak station near 1400KC and adjust A8 for maximum output.

AUTOMATIC MODELS PA-85, PA-3285

DIAL CORD STRINGING



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

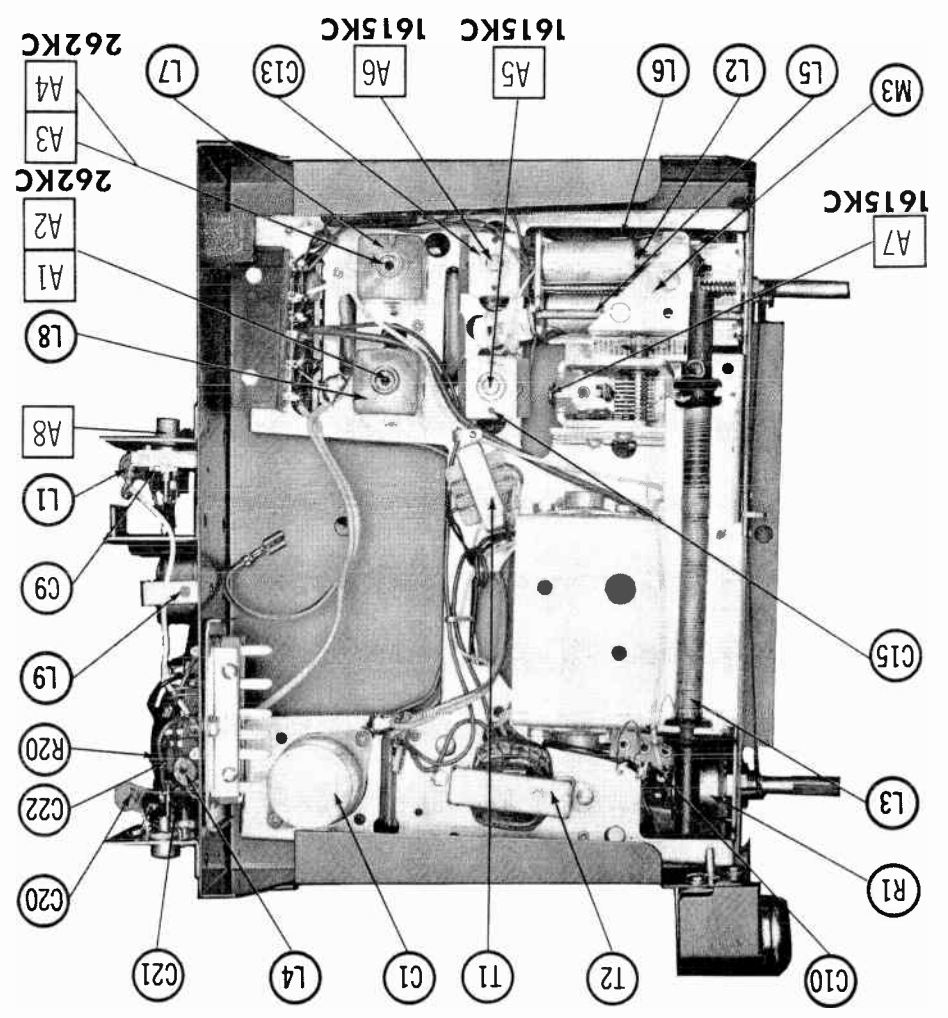
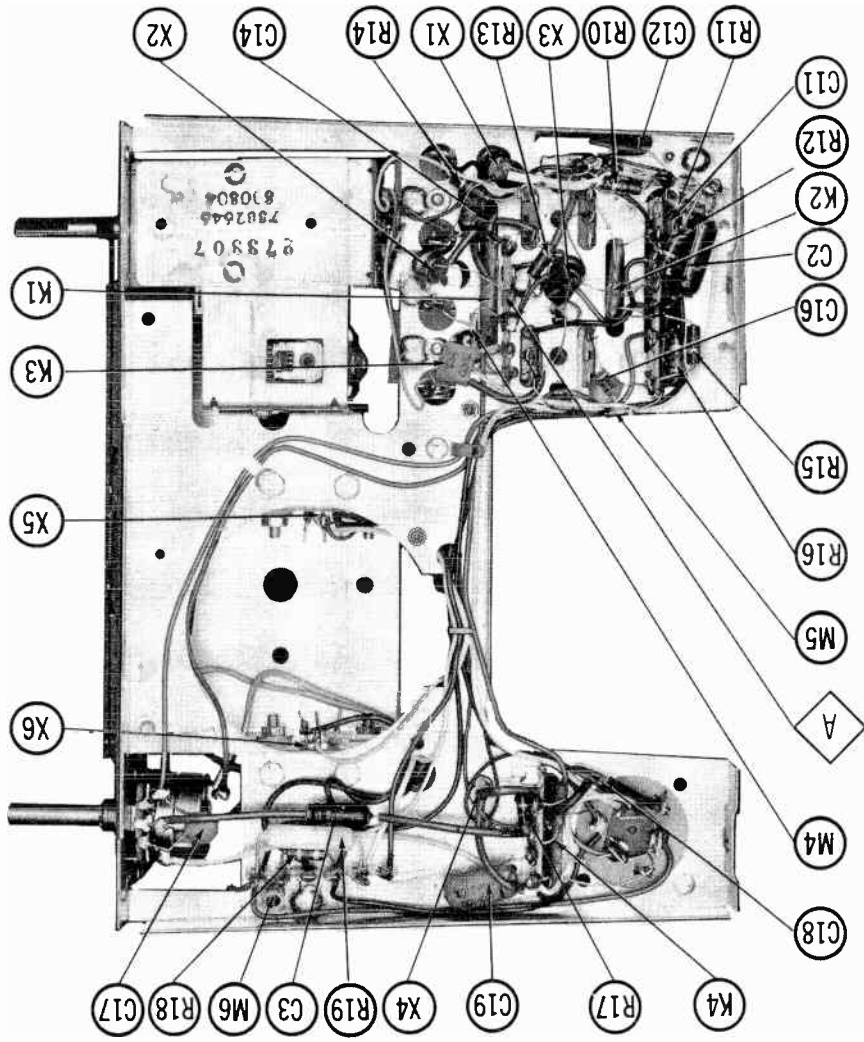


A PHOTOFAC STANDARD NOTATION SCHEMATIC
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- VOLTAGES MEASURED WITH INTERNAL BATTERY * NOT USED IN SOME VERSIONS
1. Voltage measurements taken with vacuum tube voltmeter.
 2. All controls set for normal operation, no signal applied.
 3. Measured values are from socket pin or terminal to common ground.
 4. All terminals viewed from bottom unless otherwise designated.
 5. Numbers assigned to terminals may not be found on the unit.
 6. Supply voltage maintained at rated value for voltage readings.
 7. Resistance measurements not given because of the wide variation in internal resistance of transistor.

AUTOMATIC MODELS PA-85, PA-3285

AUTOMATIC MODELS PA-85, PA-3285



PARTS LIST AND DESCRIPTION

Replacement parts shown may be superseded by the availability of newly introduced replacements.
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			AUTOMATIC PART No.	NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.		
X1		RF Amp.	DS-25	GE-1	2N1637	6-80	PNP
X2		Conv.	DS-25	GE-1	2N1639	6-61	PNP
X3		IF Amp.	DS-25	GE-1	2N1638	6-62	PNP
X4		Driver	DS-26	GE-2	2N591	6-53	PNP
X5		Output				6-88	PNP
X6		Output				6-88	PNP

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	AUTOMATIC PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	GENERAL INSTRUMENT PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A	500	16	20-2653	AFH3-00-94.5				FP-300.83	PCLS-3026.11
C1B	300	16							
C1C	100	16							
C2	25	15	20-256	PTT89	NLW25-15	MT1-10	MLV25-15	TT15X25	TE-1157.1
C3	5	15	20-505	CRE454A	NLW5-15	MT1-3	MLV5-15	TT25X5	TE-1152

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

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.
C9		#28-800-1L	BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C10	.01 50V		TTD-05	CK-503	H5		TA-150	TG-S50
C11	.05			UK-105	HCC3105P			HY-135
C12	1mfd 3V	#28-431A						
C13			DI-270	DD-271	LA10T27-C4	CCD-271	GP327	5GA-T27
C14	270	#28-461						
C15			BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C16	.01 50V		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C17	.01 50V		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C18	.01 50V		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C19	.03 100V		P288N-03	DD-303	DPMS8S3	IDP-1-303	PVC-613	4PS-S30
C20	.003		DI-3000	DD-302	LA10D3-C4	CCD-302	GP230	5GA-D30
C21	.01 50V		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C22	.5 200V		P288N-5		DPMS2P5	2DP-5-504	PVC-105	2TM-P50

Automatic Part Number.

CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA				
			AUTOMATIC PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1	Volume & Switch	10K	80A2647	F2-10K,SFS212, KR-4, or (AB-15, AK-33, KR-4)	A47-10K-Z, RS-3/16, SWE-13	B13-116, SK-9, 78-1 or (BU1, CF61, SS4, GC)*	UA14A, SD3500, US-41 or (RU14A, IS1312, SL35, US41) or (U18, DS-37, US-26)

* "SNAPTROL"

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		AUTOMATIC PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	RF Choke (6.2uh)	14-6.2	BC-565	4610	RTC-8520	T859	① Part of M3
L2	Ant.	⓪					
L3	Loopstick	10A2962					
L4	RF Choke (6.2uh)	14-6.2	BC-565	4610	RTC-8520	T859	
L5	RF	⓪					
L6	Osc.	⓪					
L7	Input IF	14-2874					
L8	Output IF	14-2875					

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA					NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	AUTOMATIC PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L9	270ma	.5Ω	10MH	75A6001	C-4095	TC-2	TR-155	TY17XT	

PARTS LIST AND DESCRIPTION (CONTINUED)

Replacement parts shown may be superseded by the availability of newly introduced replacements.
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
			AUTOMATIC PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	5:	1	75A2796					

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
			AUTOMATIC PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T2	24Ω CT	6-8Ω	25A2797					

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		AUTOMATIC PART No.	QUAM PART No.	
SP1	4" PM 6-8Ω	73A2665		

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	AUTOMATIC PART No.	REPLACEMENT DATA
K1	RF Coupling - Bias	150Ω, 1000Ω, 4700Ω, 47K, .005mfd, .015mfd, .02mfd	89A2583B	
K2	IF Amp. Bias	560Ω, 5600Ω, 47K, (3) .05mfd	89A2584B	
K3	AVC	5600Ω, 180mmf	89A2701	
K4	Audio Bias	470Ω, 820Ω, 4700Ω, 12K, 27K, 270K, .002mfd	89A2585A	

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			AUTOMATIC PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M1	SFE	7 1/2		12A1912B	30707.5	15507.5	SFE 7 1/2	HME

BATTERIES

ITEM No.	VOLTAGE	AUTOMATIC PART No.	REPLACEMENT DATA			NOTES
			BURGESS	EVEREADY	MALLORY	
M2	9V		130 (or AL-1)	635 (or E93)	M-14R (or MN1400)	6 Required

MISCELLANEOUS

ITEM No.	PART NAME	AUTOMATIC PART No.	NOTES
M3 M4 M5 M6	Tuner AVC (IGD2) Det. (IGD2) Bias (IGD10)	78B2646	Includes Tuning Coils and Gang

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
Dial Glass Dial Pointer	39-99 84A2930	Knob - Tuning, Volume	47-50C

WIRING DATA

General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in 12 Colors 8524 (Stranded) Available in 12 Colors
Shielded Hook-up Wire	Use BELDEN No. 8885
Rear Seat Speaker Extension Cable	Use BELDEN No. 8782 (Stranded) Coded Parallel Leads
Bonding Strap	Use BELDEN No. 8661 (3/8 In.) or 8670 (3/4 In.)

AUTOMATIC MODELS PA-85, PA-3285



PHOTOFACT[®]



TRADE NAME : Automatic Model RP-3097
(1963 Rambler)

SUPPLIER : Automatic Radio Mfg. Co., Inc.
122 Brookline Ave., Boston 15, Mass.

TYPE SET : 5 Transistor AM Receiver

POWER SUPPLY : 12 Volt Storage Battery

RATING : .55 Amp. @ 12.6VDC

TUNING RANGE: BROADCAST 540 - 1615KC

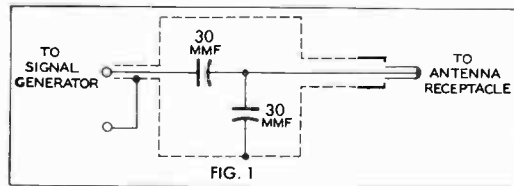
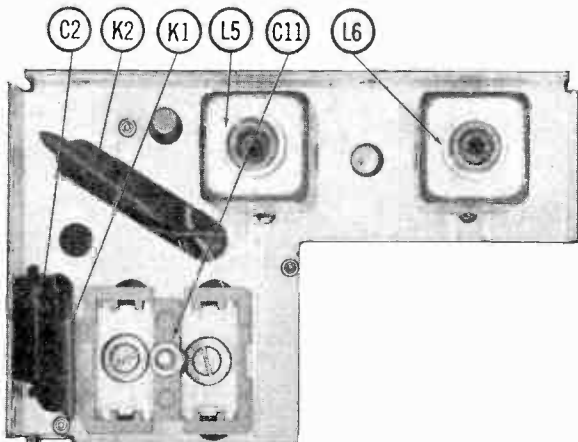
AUTOMATIC MODEL RP-3097

ALIGNMENT INSTRUCTIONS

Check for specified source voltage.
Use only enough generator output to provide a usable indication.
Suggested Alignment Tools:

A1 thru A4.....GENERAL CEMENT #8606, 8606L, 8869
WALSCO #2543, 2544, 2588
A5, A6, A7..... GENERAL CEMENT #8290, 8868, 9087
WALSCO #2525, 2528, 2587

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1.	High side thru .1mfd to point Δ , low side to ground.	262KC (400v Mod.)	High Freq. End Stop.	Output Meter across voice coil.	A1, A2, A3, A4	Adjust for maximum.
2.	Thru dummy (Fig. 1) to antenna receptacle.	1615KC	"	"	A5, A6, A7	"



PUSH-BUTTON ADJUSTMENT

1. Push button up.
2. Tune manually to desired station.
3. Press button down firmly.
4. Repeat for remaining buttons.

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

PARTS LIST AND DESCRIPTION

Replacement parts shown may be superseded by the availability of newly introduced replacements.
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			AUTOMATIC PART No.	NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.		
X1		RF Amp.	DS-25	GE-1	2N1637	6-60	PNP
X2		Conv.	DS-25	GE-1	2N1639	6-61	PNP
X3		IF Amp.	DS-25	GE-1	2N1638	6-62	PNP
X4		Driver	DS-26	GE-2	2N591	6-53	PNP
X5	8P404T	Output	DS-520	GE-3	2N301		PNP (Note 1)

Note 1. When replacing, apply silicone grease to both sides of insulator.
Tighten mounting screws securely.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	AUTOMATIC PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	GENERAL INSTRUMENT PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A	500	16	20-2653	AFB3-00-94.5				FP-300.83	PCL3-3026.11*
C1B	300	16							
C2	100	16							
C3	25	15	20-256	PTT69	NLW25-15	MT1-10	MLV25-15	TT15X25	TE-1157.1
	25	15	20-505	CRE454A	NLW5-15	MT1-3	MLV5-15	TT25X5	TE-1152

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

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		#28-800-2L							
C11A		#28A1332							
C12	270		DI-270	DD-271	LA10T27-C4	CCD-271	GP327	5GA-T25	
C13	100 N750		N750-DI 100	DTN-100	C10T1U	N750-TN-101	CN7-310	10TCU-T10	
C14	.01		BPD-01	DD-103	BYA1081	CCD-103	B-110	5HK-S10	
C15	.22 3V			UK20-204	HCC25224Z			HY-325	
C16	.1 16V		TTD-1	CK-104	H6		TA-010	TG-P10	
C17	.05 50V		TTD-05	CK-503	H5		TA-150	TG-S50	
C18	.047		TTD-05	CK-503	H5		TA-150	TG-S50	

Automatic Part Number.

CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA					
			AUTOMATIC PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.	
R1A	Tone	10K	80A2951	F1-10K,			† QJ-1636A	
B	Volume & Switch	7500Ω Tap@ 5000Ω		R14-7500, FFS011, RFS103, AK-28, KR-4				

† "CONCENTRIT" Equivalent: K-8 Kit with base elements and shafts: B11-116, P22-021 (Panel)
"SNAPTROL" Equivalent: BU10*, CF9, SF3, CR48T, SR3, GC B21-115X, R1-103 (Rear)
(* Cut to required length) S11 (Bushing)
76-1 (Switch)

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		AUTOMATIC PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	RF Choke (6.2uh)	14-6.2	EC-565	4610	RTC-8520	T859	① Part of M2
L2	Ant.	①					
L3	RF	①					
L4	Osc.	①					
L5	Input IF	14-2654		6570			
L6	Output IF	14-2655		6571			

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA					NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000-)	AUTOMATIC PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L7	450ma	.5Ω	10MH	75A1269	C-4095	TC-2	TR-155	TY17XT	

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
	PRI.	SEC.	AUTOMATIC PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	8:	1	75A2635					

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE	REPLACEMENT DATA					NOTES
		AUTOMATIC PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T2	24Ω Tap@ 6-8Ω	75A2636①				TR-169	① Alternate Part #75A2693

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		AUTOMATIC PART No.	QUAM PART No.	
SP1	6" x 9" PM 6-8Ω	73B2671	69A3Z8	

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	AUTOMATIC PART No.	REPLACEMENT DATA
K1	X1 Bias	390Ω, 1000Ω, 82K, .05mfd, .05mfd, 1mfd	89A2582C ①	
K2	X2 Bias	150Ω, 1000Ω, 4700Ω, 47K, .005mfd, .015mfd, .02mfd	89A2583B	
K3	X3 Bias	560Ω, 5600Ω, 47K, .05mfd, .05mfd, .05mfd	89A2584B	
K4	AVC	5600Ω, 180mmf	89A2701	
K5	Audio Bias	470Ω, 820Ω, 4700Ω, 12K, 27K, 270K, .002mfd	9A2585A	

① Some versions may use Part #89A2592B.

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			AUTOMATIC PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M1	SFE	7 1/2	12A2864	30707.5	15507.5		SFE 7 1/2	HME

MISCELLANEOUS

ITEM No.	PART NAME	AUTOMATIC PART No.
M2	Tuner	78B2945
M3	AVC (1GD2)	
M4	Det. (1GD2)	
M5	Spark Plate	

CABINETS & CABINET PARTS

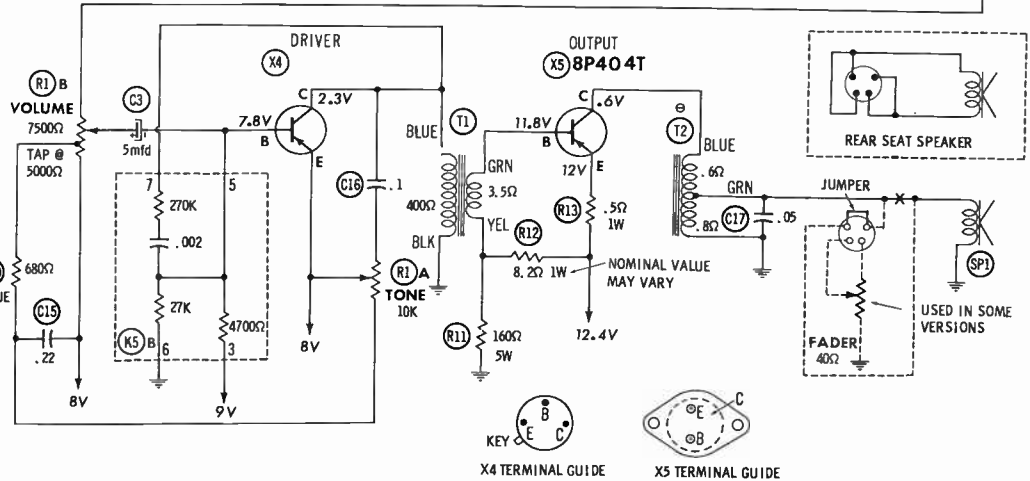
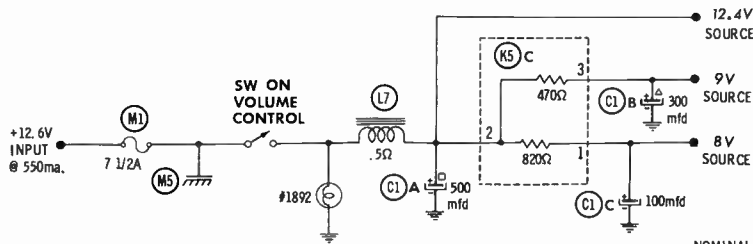
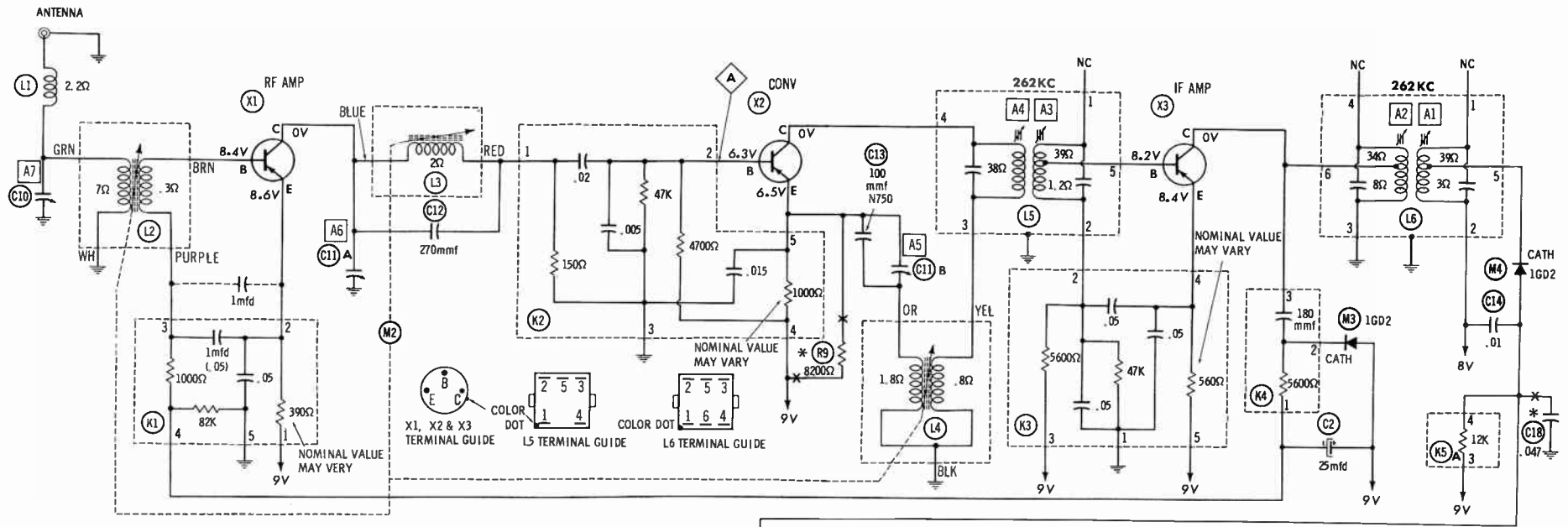
(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.
Dial Glass	39-8
Knob, Tuning or Volume	47A1514
Knob, Tone	47A1509

WIRING DATA

General-use Unshielded Hook-up Wire Use BELDEN No. 8530 (Solid) Available in 12 Colors
8524 (Stranded) Available in 12 Colors
Shielded Hook-up Wire Use BELDEN No. 8885
Rear Seat Speaker Extension Cable Use BELDEN No. 8782 (Stranded) Coded Parallel Leads
Bonding Strap Use BELDEN No. 8661 (3/8 In.) or 8670 (3/4 In.)

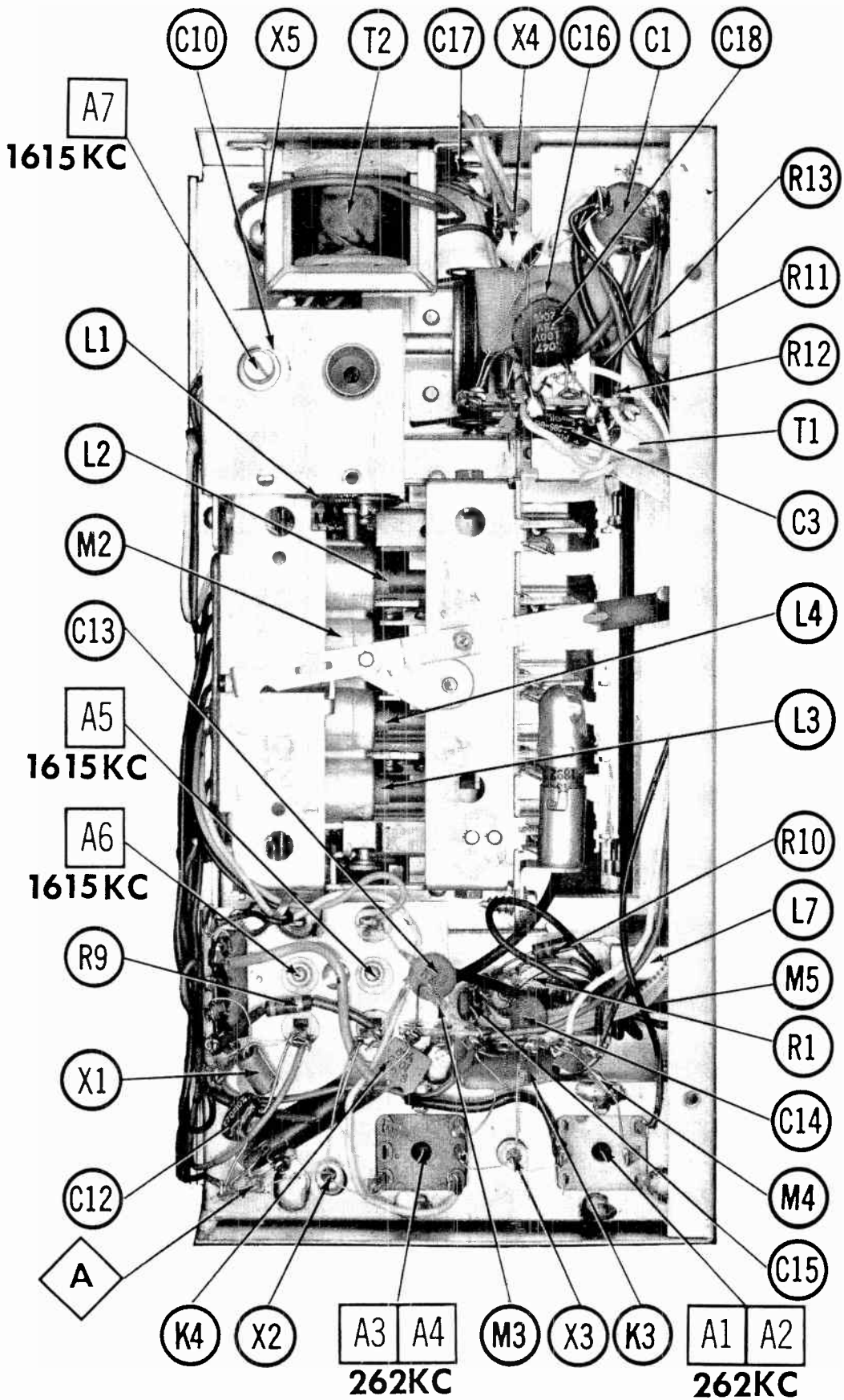
76090 AUTOMATIC MODEL RP-3097



- * NOT USED IN SOME VERSIONS
- ⊖ See parts list for alternate value or application.
 - 1. Voltage measurements taken with vacuum tube voltmeter.
 - 2. All controls set for normal operation, no signal applied.
 - 3. Measured values are from socket pin or terminal to common ground.
 - 4. All terminals viewed from bottom unless otherwise designated.
 - 5. Numbers assigned to terminals may not be found on the unit.
 - 6. Supply voltage maintained at rated value for voltage readings.
 - 7. Resistance measurements not given because of the wide variation in internal resistance of transistor.

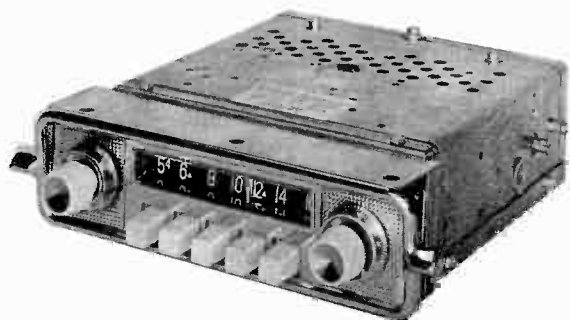
AUTOMATIC MODEL RP-3097

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PHOTOFACT®



TRADE NAME : Automatic Models W-84, W-3040, WP-21, WP-3039 (1958-63 Volkswagens)
 SUPPLIER : Automatic Radio Mfg. Co., Inc.
 122 Brookline Ave., Boston 15, Mass.
 TYPE SET : 6 Transistor AM Receiver
 POWER SUPPLY : 12 Volt Storage Battery
 RATING : 1.2 Amp. @ 12.6 VDC
 TUNING RANGE : BROADCAST 540 - 1615KC

ALIGNMENT INSTRUCTIONS

Check for specified source voltage.
 Use only enough generator output to provide a usable indication.
 Suggested Alignment Tools:

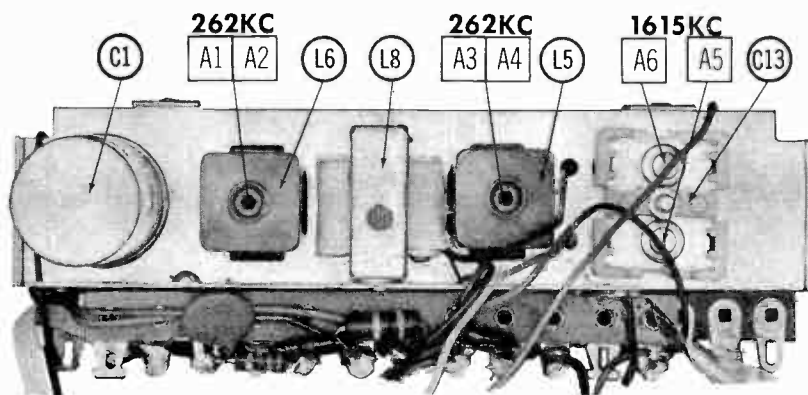
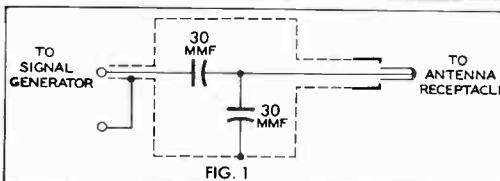
- A1 thru A4..... GENERAL CEMENT #8606, 8606L, 8869
 WALSCO #2543, 2544, 2588
 A5, A6, A7..... GENERAL CEMENT #8290, 8868, 9087
 WALSCO #2525, 2528, 2587

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1.	High side thru .1mfd to point Δ , low side to ground.	262KC (400v Mod.)	High Freq. End Stop.	Output Meter across voice coil.	A1, A2, A3, A4	Adjust for maximum.
2.	Thru dummy (Fig. 1) to antenna receptacle.	1615KC	"	"	A5, A6, A7	"

With radio installed in car and antenna fully extended, tune in a weak station near 1000KC and adjust A7 for maximum output.

PUSH-BUTTON ADJUSTMENT

1. Pull button out.
2. Tune manually to desired station.
3. Press button in firmly.
4. Repeat for remaining buttons.



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

PARTS LIST AND DESCRIPTION

Replacement parts shown may be superseded by the availability of newly introduced replacements.

Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			AUTOMATIC PART No.	NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.		
X1	8P404	RF Amp.	DS-25	GE-1	2N1637	6-60	PNP
X2		Conv.	DS-25	GE-1	2N1639	6-61	PNP
X3		IF Amp.	DS-25	GE-1	2N1638	6-62	PNP
X4		AF Amp.	DS-26	GE-2	2N591	6-53	PNP
X5		Emitter Follower	DS-26	GE-2	2N591	6-53	PNP
X6		Output	DS-520	GE-3	2N301		PNP (Note 1)

Note 1. When replacing, apply silicone grease to both sides of insulator. Tighten mounting screws securely.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						NOTES
	CAP.	VOLT.	AUTOMATIC PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	GENERAL INSTRUMENT PART No.	MALLORY PART No.	
C1A	250	15	20-32B	PWH3-00-94		XC3-48.1		PWP-300.4A	PCL-302B, 6
C1B	250	15							
C2	750	3	20-757	PRS1130	BR1000-6	QTI-32	BL2211	TC-310	TVAS-1097*
C3	25	15	20-256	PTT69	NLW25-15	MTI-10	MLV25-15	TT15X25	TE-1157.1
C4	25	15	20-256	PTT69	NLW25-15	MTI-10	MLV25-15	TT15X25	TE-1157.1

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

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	.05 50V	#28-800-2L	TTD-05	CK-503	H5	HCC3105P		TA-150	TG-S50
C11	1mfd	#28A1332							
C12				UK-105					HY-135
C13A									
C14	270		DI 270	DD-271	LA10T27-C4	CCD-271	GP327	5GA-T27	
C15	.02 50V		BPD-02	DD-203	BYA6S2	CCD-203	B-120	5HK-S20	
C16	.0047		BPD-0047	DD-472	BYA10D47	CCD-472	B-247	5HK-D47	
C17	.01 200V		P288N-01	CPR-10000J	WMF2S1	4DP-1-103	PVC-211	2TM-810	
C18	100 N750		N750-DI 100	DTN-100	C10T1U	CCTN-101	CN7-310	10TCU-T10	
C19	.05 50V		TTD-05	CK-503	H5		TA-150	TG-S50	
C20	.05 50V		TTD-05	CK-503	H5		TA-150	TG-S50	
C21	180		DI 180	DD-181	LA10T18-S3	CCD-181	GP318	5GA-T18	
C22	.05 50V		TTD-05	CK-503	H5		TA-150	TG-S50	
C23	.1 16V		TTD-1	CK-104	H6		TA-010	TG-P10	
C24	.0047		BPD-0047	DD-472	BYA10D47	CCD-472	B-247	5HK-D47	
C25	.47 3V			UK10-404	HCC10474Z			HY-330	
C26	1mfd 3V			UK-105	HCC3105P			HY-135	
C27	1mfd 3V			UK-105	HCC3105P				
C28	.05 50V		TTD-05	CK-503	H5		TA-150	TG-S50	

Automatic Part Number.

CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA				
			AUTOMATIC PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1A	Tone	10K	80A1977	F1-10K, R1-100K, FFS111, RFS202, KR-4, AK-26	P-10K-S, R-100K-S, CP-110, FR-202, SWE-13, XB-2	↑ QJ-1644A	■ UE4458S
B	Volume & Switch	100K					

↑ "CONCENTRIKIT" Equivalent: K-8 Kit with Base elements and shafts: B11-116, P17-118 (Panel)
 "SNAPTROL" Equivalent: BU8*, CF9, CR8, SF13, SR13, GC B11-128, R1-130 (Rear)
 (*Cut to required length) S8* (Bushing)
 76-1 (Switch)

■ "STA-LOC" Equivalent: FF14L, RU15L, OS1687, IS2125, US41

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		AUTOMATIC PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	RF Choke (6, 2uh)	14-6, 2	BC-565	4610	RTC-8520	T859	① Part of M2.
L2	Ant.	①					
L3	RF	①					
L4	Osc.	①					
L5	Input IF	14-274					
L6	Output IF	14-275					

FILTER CHOKE

ITEM No.	RATINGS		REPLACEMENT DATA						NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000-)	AUTOMATIC PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L7	1.2A	.5Ω	10MH	75A1269	C-4095	TC-2	TR-155	TY-17XT	

CHOKE (AUDIO OUTPUT)

ITEM No.	INDUCTANCE	REPLACEMENT DATA					NOTES
		AUTOMATIC PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L8	20MH	75A2043					

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		AUTOMATIC PART No.	QUAM PART No.	
SP1	6 1/2" PM 8Ω	73A1982		

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA							
			AUTOMATIC PART No.		LITTELFUSE PART No.		BUSS PART No.			
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER		
M1	SFE	7 1/2		12A2079		30707.5		15507.5	SFE 7 1/2	HME

MISCELLANEOUS

ITEM No.	PART NAME	AUTOMATIC PART No.	NOTES
M2	Tuner	78B2406	Push Button Manual
	Tuner	75A2512	
M3	AVC (1GD2)		
M4	AF Det. (1GD2)		
M5	Spark Plate		

CABINETS & CABINET PARTS

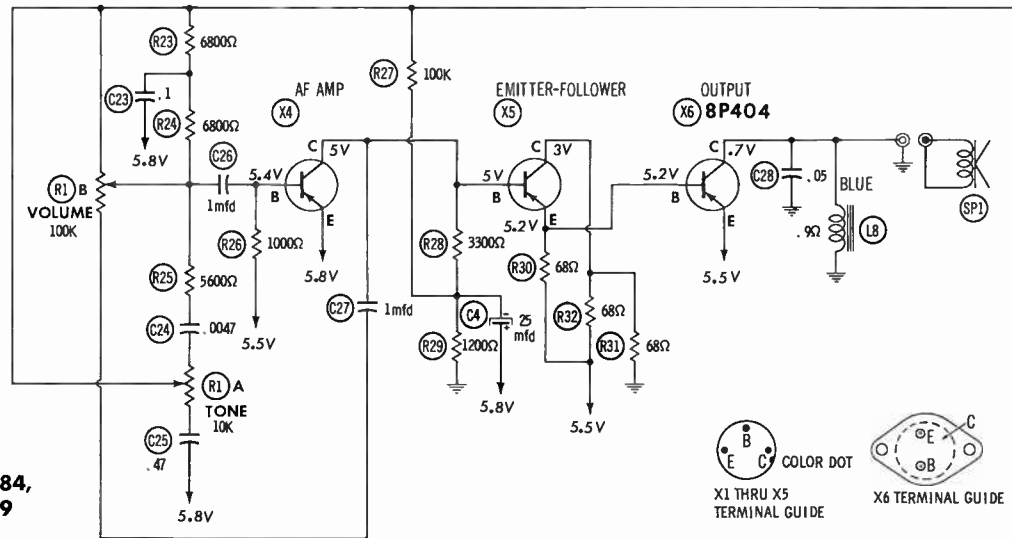
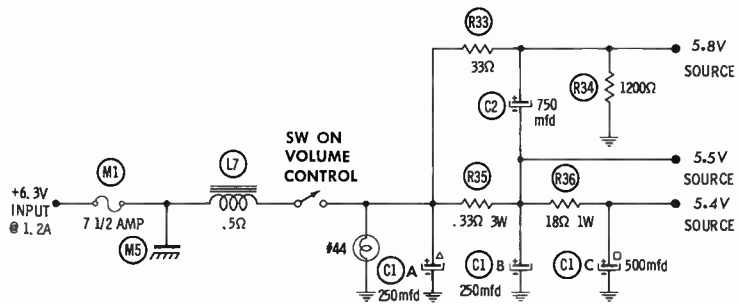
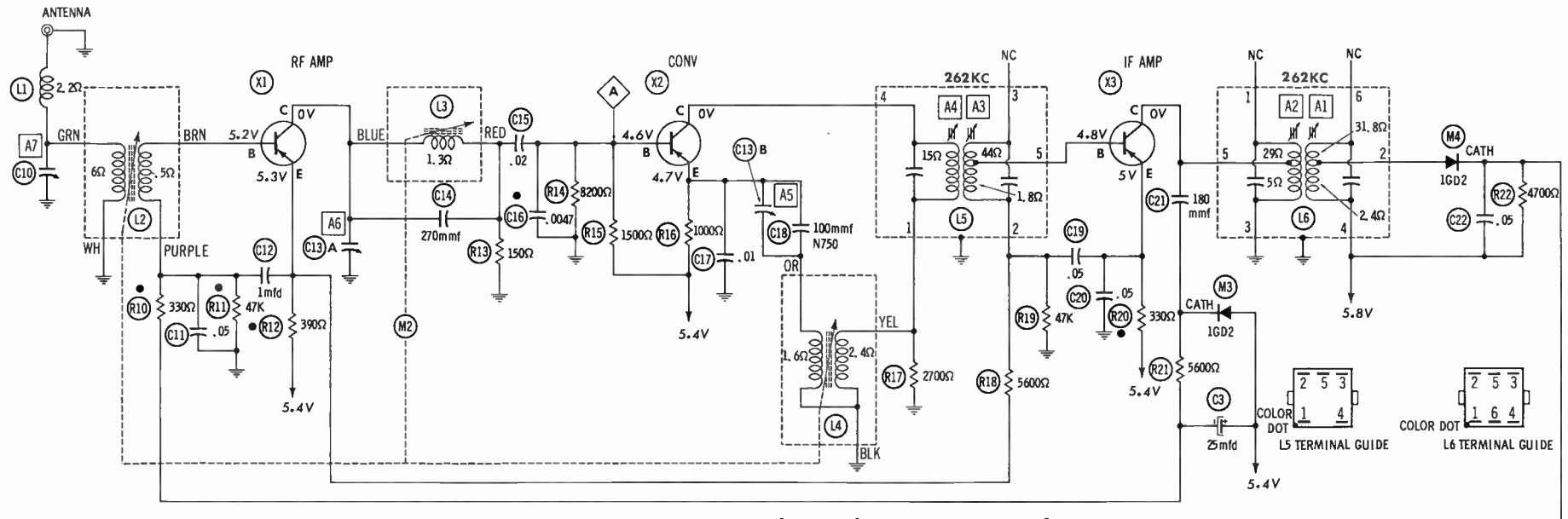
(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
Knob - Tuning, Volume	47-50	Knob - Dummy	48B393-1
Knob - Tone	48B393	Push Button	55A1179

WIRING DATA

General-use Unshielded Hook-up Wire Use BELDEN No. 8530 (Solid) Available in 12 Colors
 8524 (Stranded) Available in 12 Colors
 Shielded Hook-up Wire Use BELDEN No. 8885
 Rear Seat Speaker Extension Cable Use BELDEN No. 8782 (Stranded) Coded Parallel Leads
 Bonding Strap Use BELDEN No. 8661 (3/8 In.) or 8670 (3/4 In.)

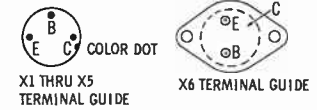
AUTOMATIC MODELS W-84, W-3040, W-P-21, W-P-3039

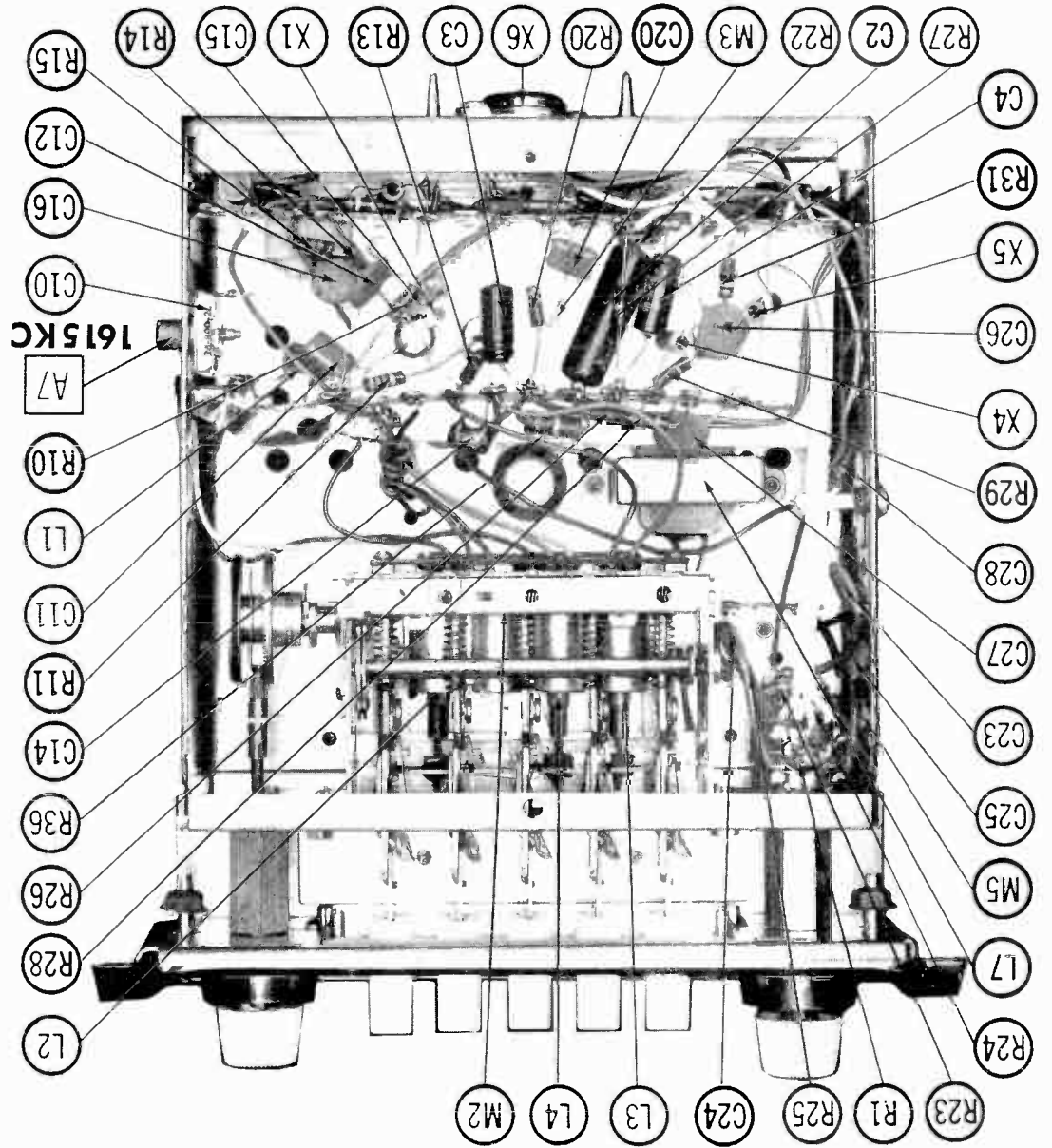
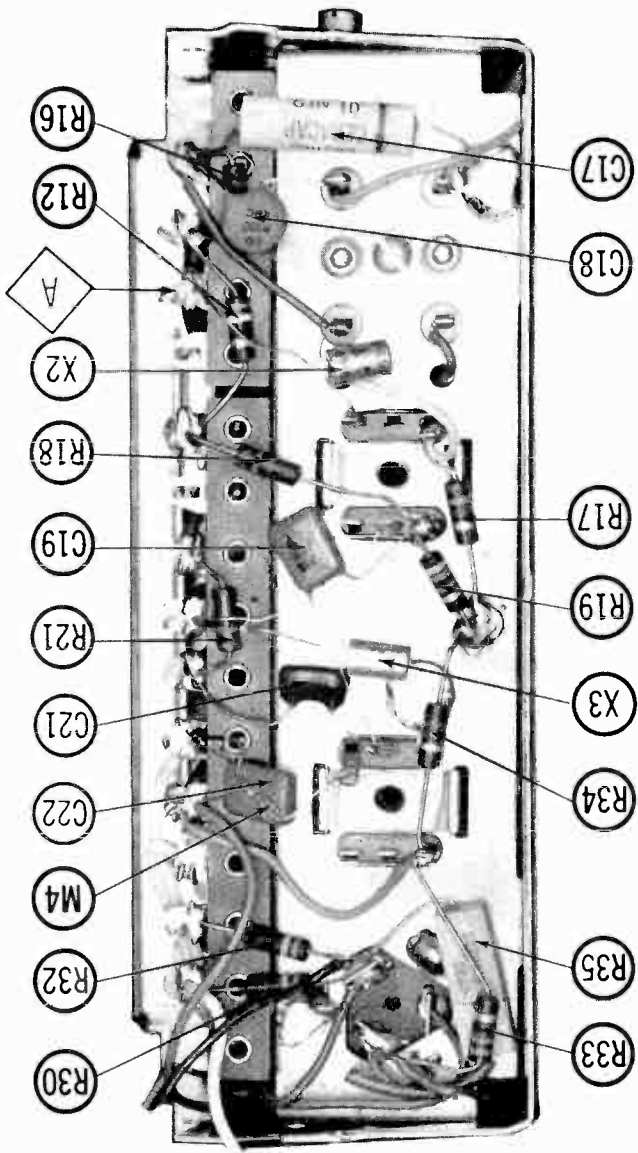


- NOMINAL VALUE MAY VARY
1. Voltage measurements taken with vacuum tube voltmeter.
 2. All controls set for normal operation, no signal applied.
 3. Measured values are from socket pin or terminal to common ground.
 4. All terminals viewed from bottom unless otherwise designated.
 5. Numbers assigned to terminals may not be found on the unit.
 6. Supply voltage maintained at rated value for voltage readings.
 7. Resistance measurements not given because of the wide variation in internal resistance of transistor.

**AUTOMATIC MODELS W-84,
W-3040, WP-21, WP-3039**

A PHOTOFAC STANDARD NOTATION SCHEMATIC
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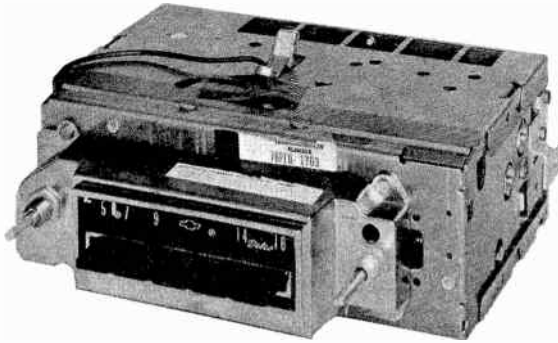






PHOTOFACT[®] with

CIRCUITRACE[®]



TRADE NAME : Chevrolet Models 985776 (1964 Chevelle)
 985832 (1964 Corvair)
 985958 (1964 Chevy II)

SUPPLIER : (Parts) United Delco Distributors

TYPE SET : 6 Transistor AM Receiver

POWER SUPPLY : 12 Volt Storage Battery

RATING : .56 Amp. @ 12.6VDC (Less Lamp)

TUNING RANGE: BROADCAST 540 - 1615KC

ALIGNMENT INSTRUCTIONS

Check for specified source voltage.
 Use only enough generator output to provide a usable indication.
 Suggested Alignment Tools:

A1 thru A5, A9, A10..... GENERAL CEMENT #5009, 8728A, 8987
 WALSCO #2531X, 2536
 A6, A7, A8..... GENERAL CEMENT #9087, 8290, 8868
 WALSCO #2525, 2528, 2587

PUSH-BUTTON ADJUSTMENT

1. Pull button out.
2. Tune manually to desired station.
3. Press button in firmly.
4. Repeat for remaining buttons.

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1.	High side thru .1mfd to point Δ , low side to ground.	262KC (400v Mod.)	High Freq. End Stop.	Output Meter across voice coil.	A1, A2, A3, A4	Adjust for maximum.
Check setting of oscillator coil core (A5). Rear of core should be 1 3/8" from mounting end of coil form.						
2.	High side thru 82mmf to antenna receptacle, low side to ground.	1615KC	High Freq. End Stop.	Output Meter across voice coil.	A6, A7, A8	Adjust for maximum.
3.	"	600KC	600KC Signal	"	A5, A9, A10	Adjust for maximum. Repeat step 2.
With radio installed in car and antenna fully extended, tune in a weak station near 1000KC and adjust A8 for maximum output.						

REMOVAL INSTRUCTIONS

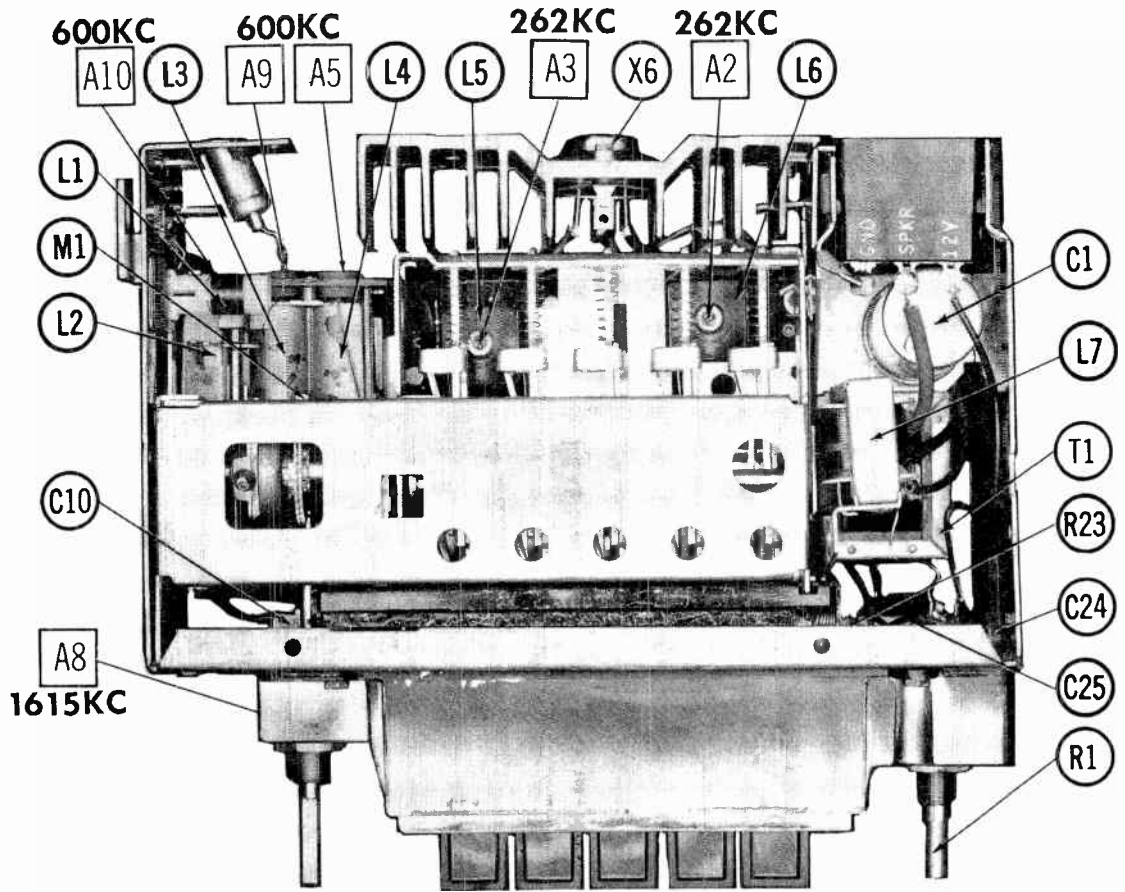
RADIO

1. Pull off knobs.
2. Use 5/8" wrench and remove nuts from control bushings.
3. Disconnect antenna lead and speaker connector.
4. Use 3/8" wrench and remove metal screw from rear brace.
5. Remove radio from under instrument panel.

SPEAKER

1. Disconnect "A" lead from speaker connector.
2. Use 3/8" wrench and remove metal screw from speaker mounting plate.
3. Remove mounting plate and speaker from under instrument panel.

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



PARTS LIST AND DESCRIPTION

Replacement parts shown may be superseded by the availability of newly introduced replacements.
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

TRANSISTORS

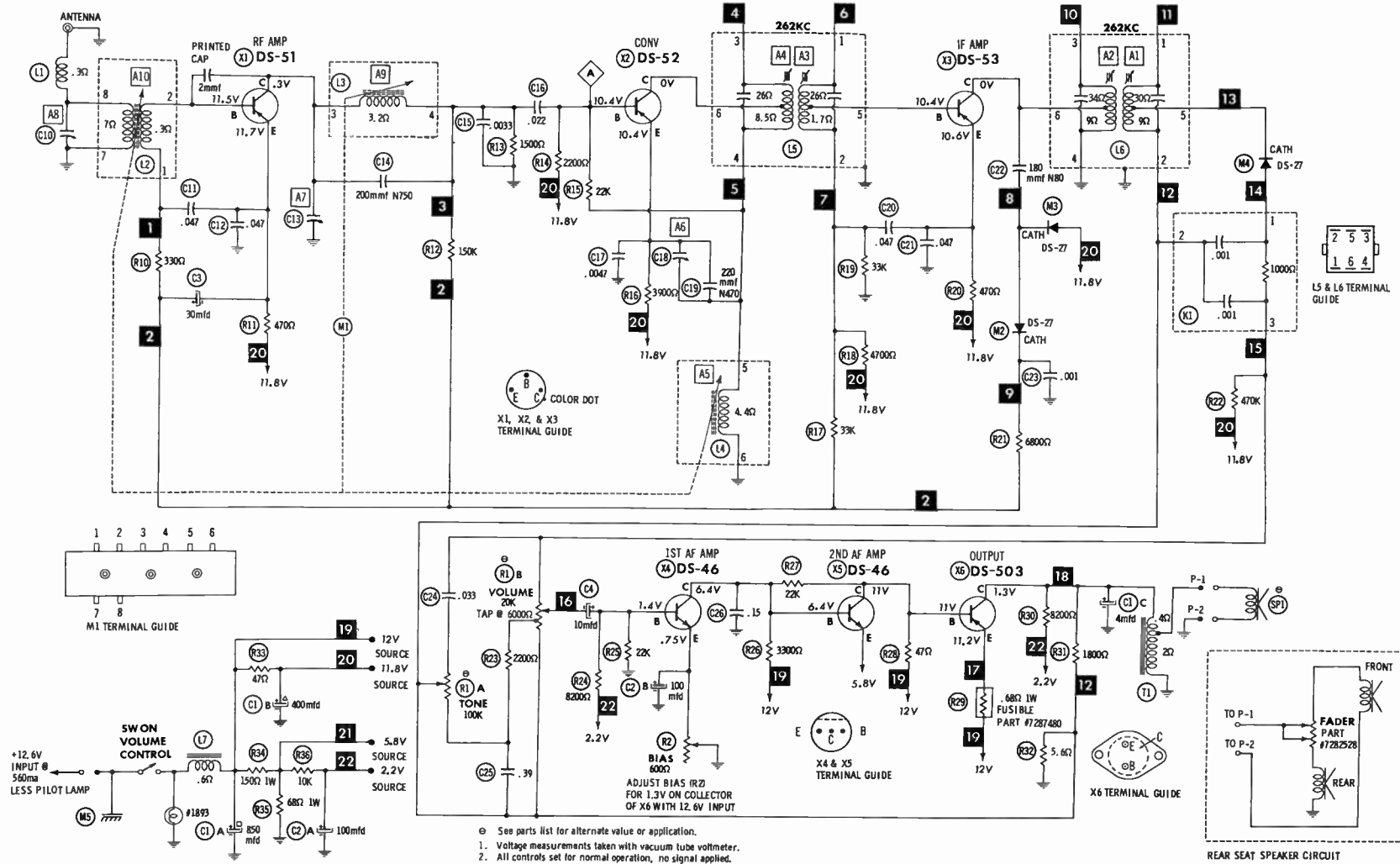
ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	
X1	DS-51	RF Amp.	DS-25	GE-1	2N1637	PNP
X2	DS-52	Conv.	DS-25	GE-1	2N1639	PNP
X3	DS-53	IF Amp.	DS-25	GE-1	2N1638	PNP
X4	DS-46	1st AF Amp.	DS-46	GE-8		NPN
X5	DS-46	2nd AF Amp.	DS-46	GE-8		NPN
X6	DS-503	Output	DS-503	GE-3	2N301	PNP (Note 1)

Note 1. When replacing, apply silicone grease to both sides of insulator. Tighten mounting screws securely. Check bias adjustment.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	DELCO PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	GENERAL INSTRUMENT PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A	850	18	7282272	AFH3-54-30		XC3-6.1		WP-300, 7A	TVL-3021
B	400	18							
C	4	11.5AC							
C2A	100	4	7286539						VLS-2120 *
B	100	4							
C3	30	6	7279896	PTT27	NLW30-15	MT1-13	MLV30-6	TT6X30	TE-1092
C4	10	12	7283834	PTT53	NLW10-15	MT1-5	BL1241	TT12X10	TL-1128

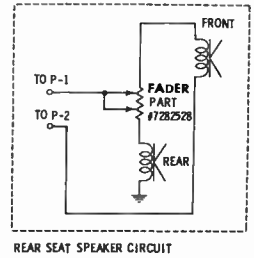
* Not normally in distributors stock. Available thru distributor on order to manufacturer.



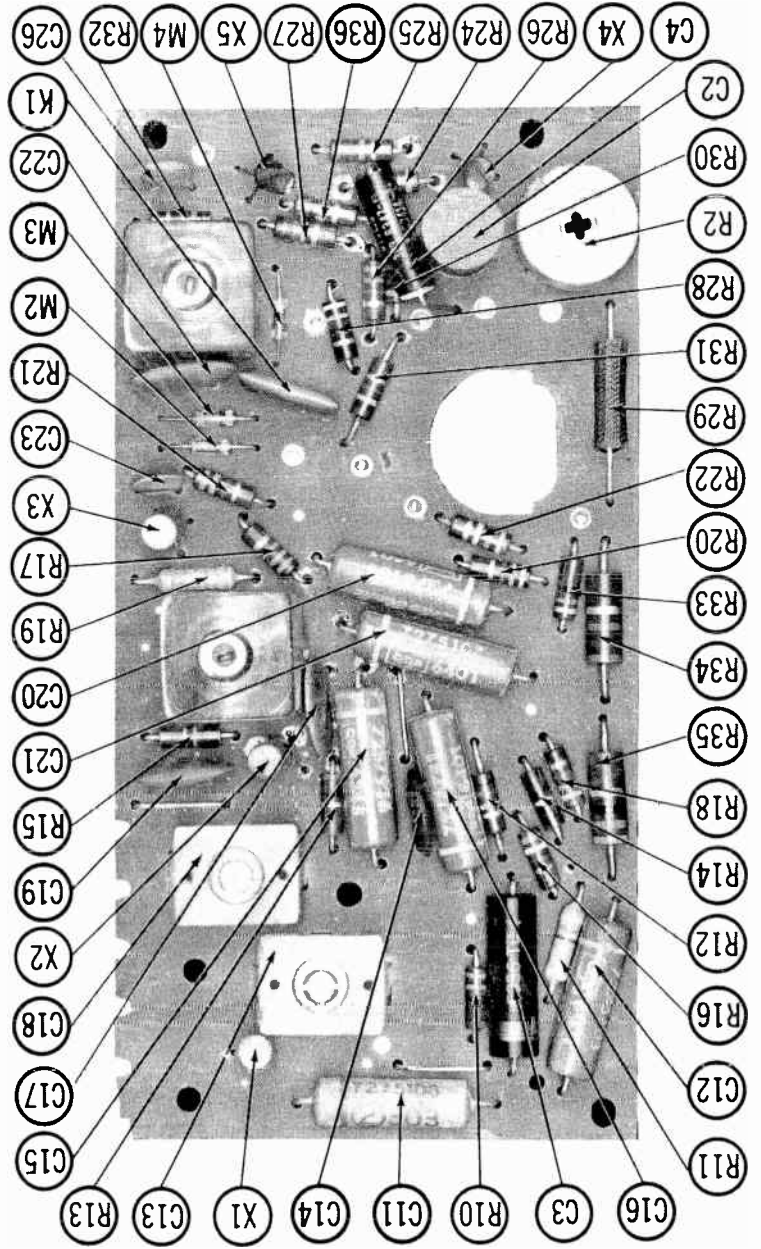
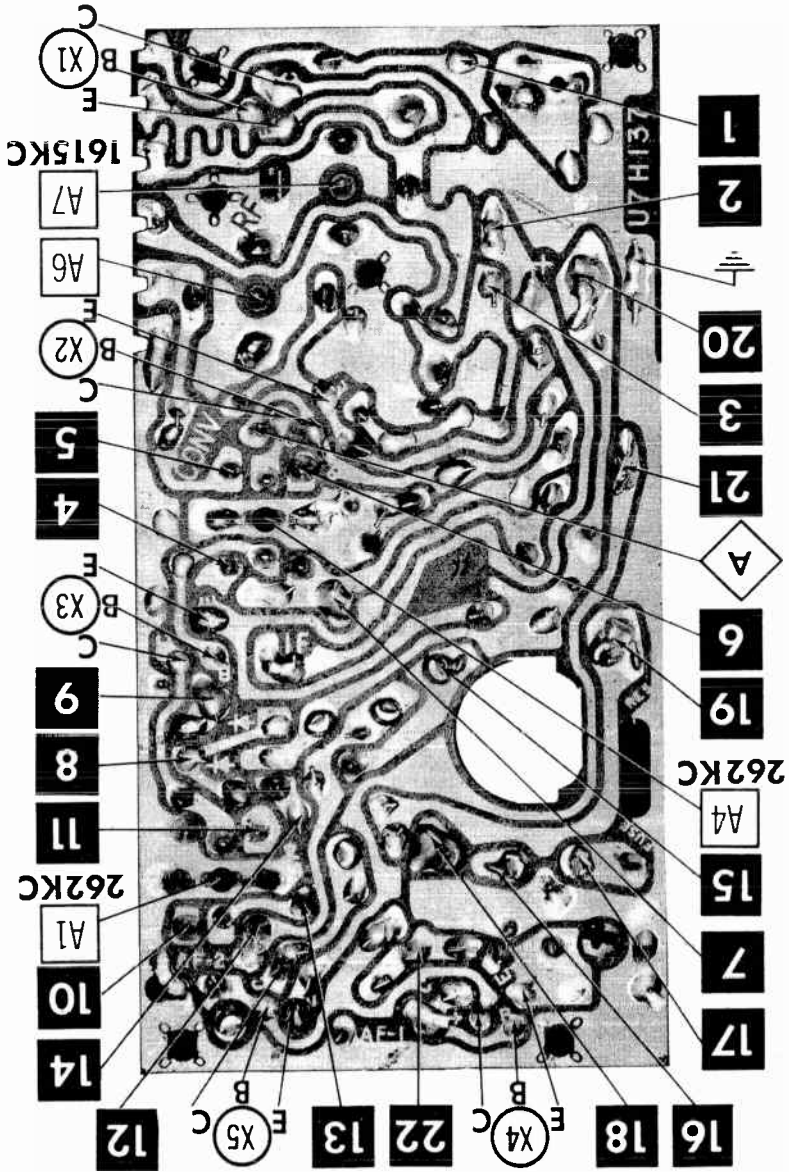
A PHOTOFAC STANDARD NOTATION SCHEMATIC with **CIRCUITRACE**
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- © See parts list for alternate value or application.
- 1. Voltage measurements taken with vacuum tube voltmeter.
- 2. All controls set for normal operation, no signal applied.
- 3. Measured values are from socket pin or terminal to common ground.
- 4. All terminals viewed from bottom unless otherwise designated.
- 5. Numbers assigned to terminals may not be found on the unit.
- 6. Supply voltage maintained at rated value for voltage readings.
- 7. Resistance measurements not given because of the wide variation in internal resistance of transistor.

CHEVROLET MODELS 985776, 985832, 985958



A Howard W. Sams CIRCUITRACE® Photo



PARTS LIST AND DESCRIPTION (CONTINUED)

Replacement parts shown may be superseded by the availability of newly introduced replacements.
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

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		#7281971	P288N-047		WMF2847	IDP-2-473	PVC-1147	2PS-S47
C11	.047 75V		P288N-047		WMF2847	IDP-2-473	PVC-1147	2PS-S47
C12	.047 75V	#7287935						
C13								
C14	200 N750		N750-DI 200	DTN-200	C10T2U	CCTN-201	CN7-320	10TCU-T20
C15	.0033 75V		P288N-0033	CPR-3300J	WMF1D33	6DP-1-332	PVC-4233	6PS-D33
C16	.022 75V		BE2S22		WMF1S22	IDP-1-223	PVC-1122	2PS-S22
C17	.0047		BPD-0047	DD-472	BYA10D47	CCD-472	B-247	5HK-D47
C18		#7281933						
C19	220 N470							10TCT-T22
C20	.047 75V		P288N-047		WMF2847	IDP-2-473	PVC-1147	2PS-S47
C21	.047 75V		P288N-047		WMF2847	IDP-2-473	PVC-1147	2PS-S47
C22	180 N80							
C23	.001		BPD-001	DD-102	BYA10D1	CCD-102	B-210	5HK-D10
C24	.033 75V		P288N-033		WMF1S33	IDP-1-333	PVC-1133	4PS-S33
C25	.39 3V	#7286580						
C26	.15 12V			UK20-104	H05P1		TA-010	HY-320

Delco Part Number.

CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA					
			DELCO PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.	
R1A	Tone Volume & Switch	100K 20K Tap ③ 6000Ω	7285880 ①	FI-100K, R14-25K, FFS011, RFS105, KR-4, AK-26				
B	Tone Volume & Switch	100K 20K Tap ③ 6000Ω	7287453 ②	FI-100K, R14-25K, FFS101, RFSU0, KR-4, AK-26				
	Tone Volume & Switch	100K 20K Tap ③ 6000Ω	7287953 ③	FI-100K, R14-25K, FFS102, RFS111, KR-4, AK-26				
R2	Bias	20K Tap ③ 6000Ω 600Ω	7286601		U39-600	110-600	FL-600	

① Used in Model 985776. ② Used in Model 985832. ③ Used in Model 985958.

COILS (RF-IF)

ITEM No.	USE	DELCO PART No.	REPLACEMENT DATA				NOTES
			MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	RF Choke (6.2uh)	7281946	BC-565	4610	RTC-8520	T859	
L2	Ant.	7287957					
L3	RF						
L4	Osc.						
L5	Input IF	1221856				TA653	
L6	Output IF	1221857				TA653	

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA					NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	DELCO PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L7	560ma	.6Ω	8 MH	1221623	C-4095	TC-2	TR-154	TY17XT	

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	DELCO PART No.	REPLACEMENT DATA
K1	Audio Couplate	1000Ω, .001mfd, .001mfd	7287253	

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE	REPLACEMENT DATA					NOTES
		DELCO PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	20Ω Tap @ 10Ω	7282057					

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		DELCO PART No.	QUAM PART No.	
SP1	4" x 10" PM 10Ω 6" x 9" PM 10Ω 4" x 10" PM 10Ω	7285771 ① 7282158 ② 7282159 ②	410A2Z10 69A2Z10 410A2Z10	① Model 985776 ② Model 985832 ③ Model 985958

MISCELLANEOUS

ITEM No.	PART NAME	DELCO PART No.	NOTES
M1	Tuner	7287957	
M2	AVC Det.		DS-27
M3	AVC Limiter		DS-27
M4	AF Det.		DS-27
M5	Spark Plate	7271564	

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
MODEL 985776		MODELS 985832, 985958	
Knob - Tuning	3839324	Knob - Tone	3793636
Knob - Volume	3839323	Push Button	7270394
Knob - Tone	3850638	Escutcheon	7282218
Push Button	7286625	Knob - Dummy (985832), Tone(985958)	3793635
Pointer Assembly	1221809	Knob - Tuning, Volume	7277055
Escutcheon	7285769		

WIRING DATA

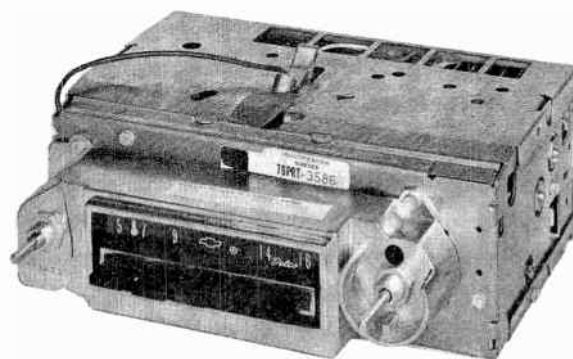
General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in 12 Colors
	8524 (Stranded) Available in 12 Colors
Shielded Hook-up Wire	Use BELDEN No. 8885
Rear Seat Speaker Extension Cable	Use BELDEN No. 8782 (Stranded) Coded Parallel Leads
Bonding Strap	Use BELDEN No. 8661 (3/8 In.) or 8670 (3/4 In.)



PHOTOFACT[®] with

CIRCUITRACE[®]

TRADE NAME : Chevrolet Model 985876 (1964)
 SUPPLIER : United Delco Distributors
 TYPE SET : 6 Transistor AM Receiver
 POWER SUPPLY : 12 Volt Storage Battery
 RATING : 1.2 Amp. @12.6VDC (Less Lamp)
 TUNING RANGE: BROADCAST 540 - 1615KC



ALIGNMENT INSTRUCTIONS

Check for specified source voltage.

Use only enough generator output to provide a usable indication.

Suggested Alignment Tools:

A1 thru A5, A9, A10.....GENERAL CEMENT #5009, 8728A, 8987
 WALSCO #2531X, 2536
 A6, A7, A8.....GENERAL CEMENT #8290, 8868, 9087
 WALSCO #2525, 2528, 2587

PUSH-BUTTON ADJUSTMENT

1. Pull button out.
2. Tune manually to desired station.
3. Press button in firmly.
4. Repeat for remaining buttons.

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1.	High side thru .1mfd to point A , low side to ground.	262KC (400% Mod.)	High Freq. End Stop.	Output Meter across voice coil.	A1, A2, A3, A4	Adjust for maximum.
Check setting of oscillator coil core (A5). Rear of core should be 1 3/8" from mounting end of coil form.						
2.	High side thru 82mmf to antenna receptacle, low side to ground.	1615KC	High Freq. End Stop.	Output Meter across voice coil.	A6, A7, A8	Adjust for maximum.
3.	"	600KC	600KC Signal	"	A5, A9, A10	Adjust for maximum. Repeat step 2.
With radio installed in car and antenna fully extended, tune in a weak station near 1000KC and adjust A8 for maximum output.						

REMOVAL INSTRUCTIONS

RADIO

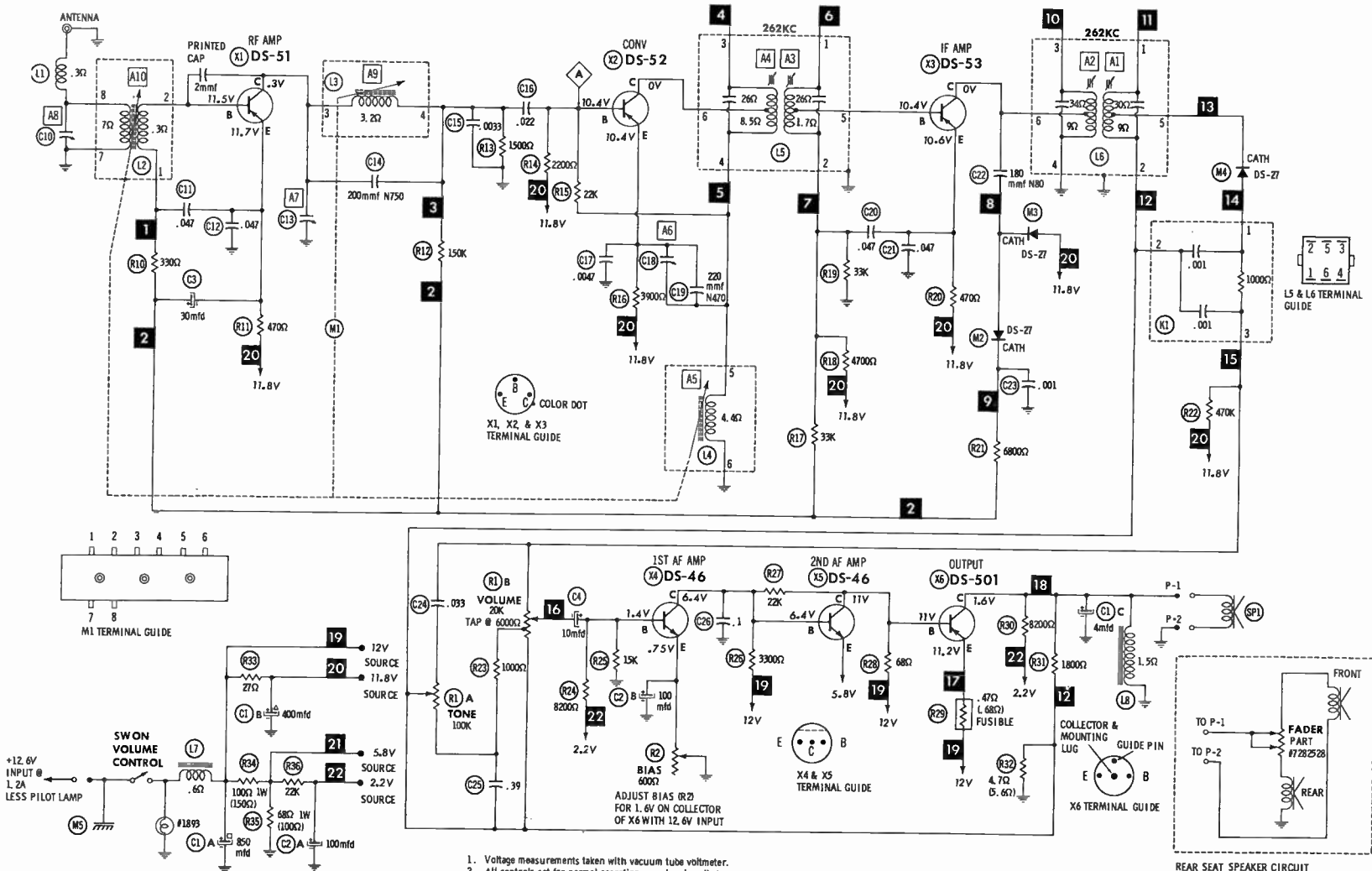
1. Pull off knobs.
2. Use 5/8" wrench and remove nuts from control bushing.
3. Disconnect speaker connector and antenna lead.
4. Use 3/8" wrench and remove metal screw from bottom brace.
5. Remove radio from under instrument panel.

SPEAKER

1. Disconnect "A" lead from speaker connector.
2. Use 3/8" wrench and remove metal screw from rear of speaker mounting plate.
3. Remove mounting plate and speaker from instrument panel.

CHEVROLET MODEL 985876

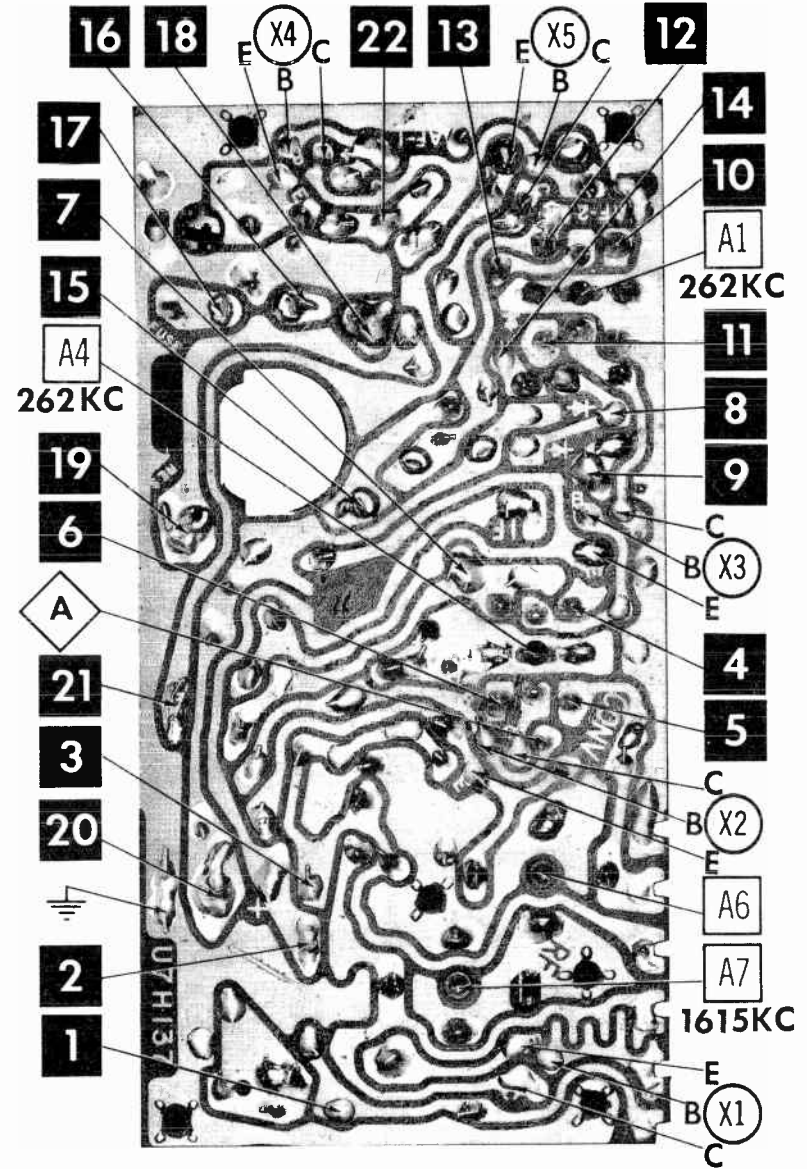
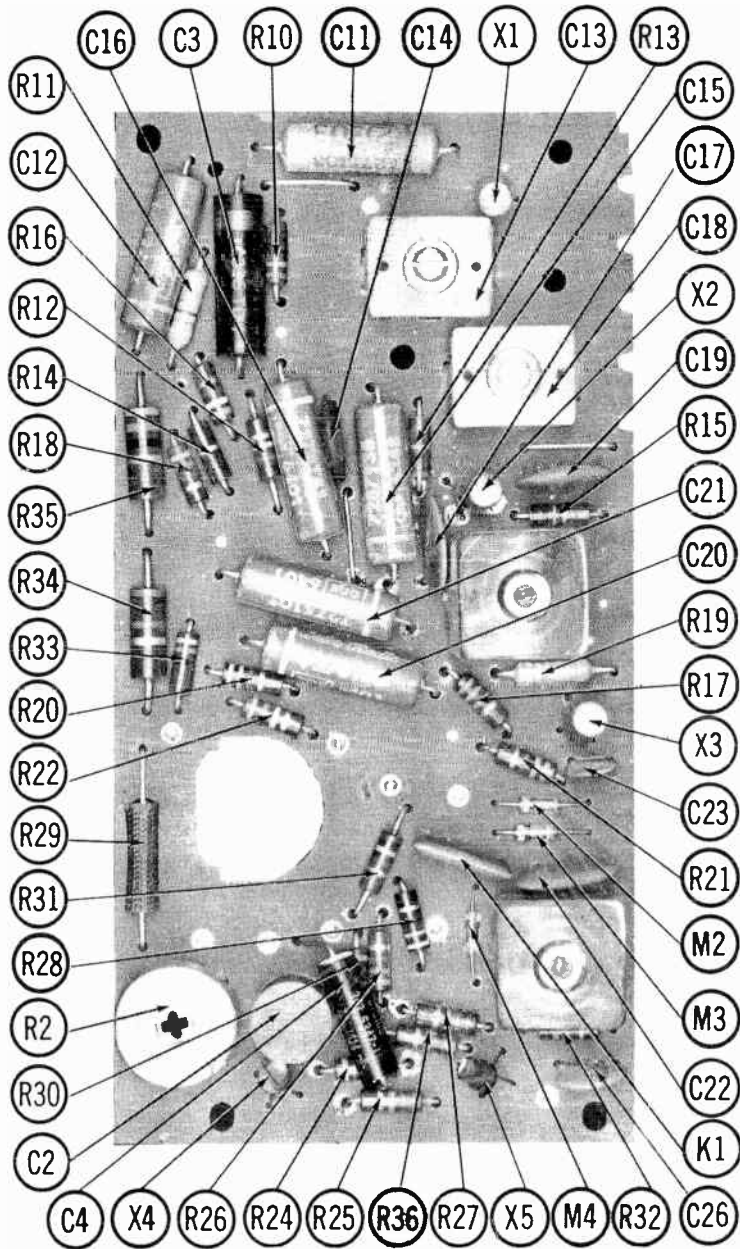
HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana



A PHOTOFAC STANDARD NOTATION SCHEMATIC
with **CIRCUITRACE**
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1. Voltage measurements taken with vacuum tube voltmeter.
2. All controls set for normal operation, no signal applied.
3. Measured values are from socket pin or terminal to common ground.
4. All terminals viewed from bottom unless otherwise designated.
5. Numbers assigned to terminals may not be found on the unit.
6. Supply voltage maintained at rated value for voltage readings.
7. Resistance measurements not given because of the wide variation in internal resistance of transistor.

CHEVROLET MODEL 985876



A Howard W. Sams **CIRCUITRACE** Photo

PARTS LIST AND DESCRIPTION

Replacement parts shown may be superseded by the availability of newly introduced replacements.
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	
X1	DS-51	RF Amp.	DS-25	GE-1	2N1637	PNP
X2	DS-52	Conv.	DS-25	GE-1	2N1639	PNP
X3	DS-53	IF Amp.	DS-25	GE-1	2N1638	PNP
X4	DS-46	1st AF Amp.	DS-46	GE-8		NPN
X5	DS-46	2nd AF Amp.	DS-46	GE-8		NPN
X6	DS-501	Output	DS-501	GE-4		PNP

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		DELCO PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	GENERAL INSTRUMENT PART No.	MALLORY PART No.	SPRAGUE PART No.
	CAP.	VOLT.							
C1A	850	16	7282272	AFH3-54-30		XC3-6.1		WP-300.7A	TVL-3021
B	400	16							
C	4	11.5AC							
C2A	100	4	7286539						VLS-2120*
B	100	4							
C3	30	6	7279896	PTT27	NLW30-15	MT1-13	MLV30-6	TT6X30	TE-1092
C4	10	12	7283834	PTT53	NLW10-15	MT1-5	BL1241	TT12X10	TL-1128

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

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		#7281971							
C11	.047 75V		P288N-047		WMF2847	1DP-2-473	PVC-1147	2PS-S47	
C12	.047 75V		P288N-047		WMF2847	1DP-2-473	PVC-1147	2PS-S47	
C13		#7287935							
C14	200 N750		N750-D1 200	DTN-200	C10T2U	CCTN-201	CN7-320	10TCU-T20	
C15	.0033 75V		P288N-0033	CPR-3300J	WMF1D33	6DP-1-332	PVC-4233	6PS-D33	
C16	.022 75V		BE2S22		WMF1822	1DP-1-223	PVC-1122	2PS-S22	
C17	.0047		BPD-0047	DD-472	BYA10D47	CCD-472	B-247	5HK-D47	
C18		#7281933							
C19	220 N470							10TCT-T22	
C20	.047 75V		P288N-047		WMF2847	1DP-2-473	PVC-1147	2PS-S47	
C21	.047 75V		P288N-047		WMF2847	1DP-2-473	PVC-1147	2PS-S47	
C22	180 N80							10TCN-T80	
C23	.001		BPD-001	DD-102	BYA10D1	CCD-102	B-210	5HK-D10	
C24	.033 75V		P288N-033		WMF1S33	1DP-1-333	PVC-1133	4PS-S33	
C25	.39 3V	#7286580							
C26	.1 12V			UK20-104	H05P1		TA-010	HY-320	

Delco Part Number.

CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA					
			DELCO PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.	
R1A	Tone Volume & Switch	100K	7287414	F1-100K, R14-25K, FFS009, RFS-104, KR-4, AK-26				
B		20K Tap @ 6000Ω						
R2	Bias	600Ω	7286601		U39-600	110-600	FL-600	

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	DELCO PART No.	REPLACEMENT DATA
K1	Audio Couplate	1000Ω, .001mfd, .001mfd	7287253	

COILS (RF-IF)

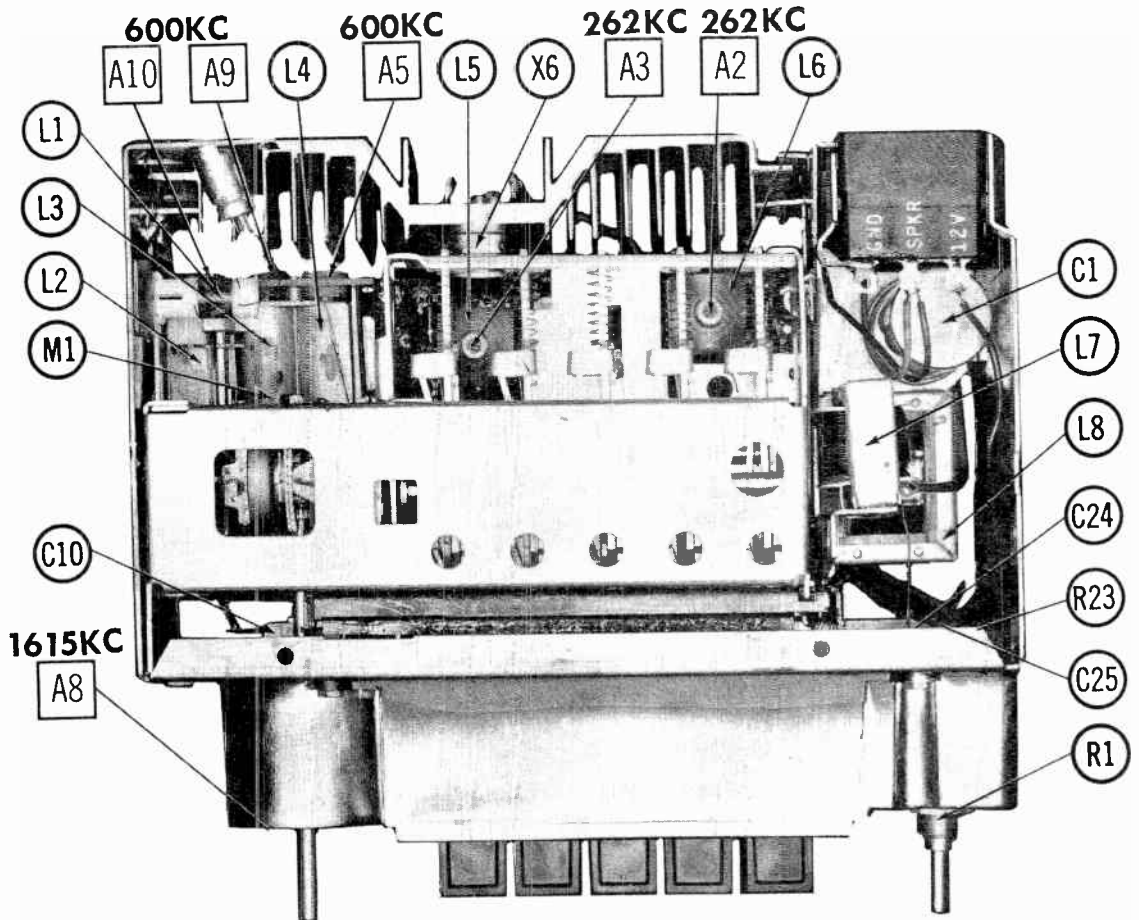
ITEM No.	USE	REPLACEMENT DATA					NOTES
		DELCO PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	Ant. Load (6.2uh)	7281946	BC-565	4610	RTC-8520	T859	
L2	Ant.	7287957					
L3	RF						
L4	Osc.						
L5	Input IF						
L6	Output IF	1221856				TA653	
		1221857				TA653	

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA					NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000-)	DELCO PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L7	1.2 Amp	.6Ω	8MH	1221623	C-4095	TC-2	TR-154	TY17XT	

CHOKE (AUDIO OUTPUT)

ITEM No.	INDUCTANCE	REPLACEMENT DATA					NOTES
		DELCO PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L8	29.5MH	7282278					



CHEVROLET MODEL 985876

PARTS LIST AND DESCRIPTION (CONTINUED)

Replacement parts shown may be superseded by the availability of newly introduced replacements.
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		DELCO PART No.	QUAM PART No.	
SP1	6" x 9" PM 10Ω	1222047	69A18Z10	

MISCELLANEOUS

ITEM No.	PART NAME	DELCO PART No.	NOTES
M1	Tuner	7287957	DS-27
M2	AVC Det.		DS-27
M3	AVC Limiter		DS-27
M4	AF Det.		
M5	Spark Plate	7271564	

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
Knob - Tuning, Volume	3839323	Escutcheon Ass'y.	7282615
Knob - Tone	3823170	Pointer Assembly	1221809
Knob - Dummy	3823169	Push Button	7286625

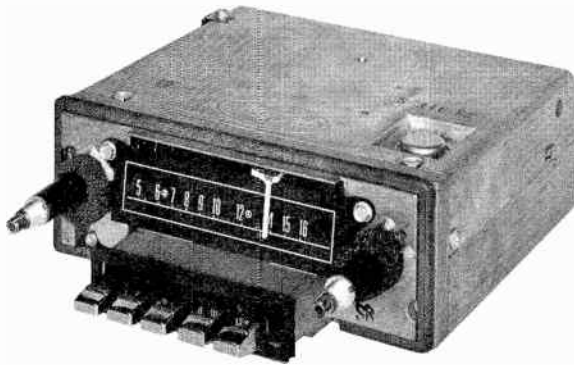
WIRING DATA

General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in 12 Colors 8524 (Stranded) Available in 12 Colors
Shielded Hook-up Wire	Use BELDEN No. 8885
Rear Seat Speaker Extension Cable	Use BELDEN No. 8782 (Stranded) Coded Parallel Leads
Bonding Strap	Use BELDEN No. 8661 (3/8 In.) or 8670 (3/4 In.)



PHOTOFACT[®] with

CIRCUITRACE[®]



TRADE NAME : Continental Model 4TMC (F) (C4VA-18806)
 (1964 Continental)
 SUPPLIER : Motorola Inc.
 9401 W. Grand Ave., Franklin Park, Illinois

TYPE SET : 6 Transistor AM Receiver

POWER SUPPLY : 12 Volt Storage Battery

RATING : 1.2 Amp. @ 12.6 VDC

TUNING RANGE BROADCAST 540 - 1615KC

CONTINENTAL MODEL 4TMC(F)

ALIGNMENT INSTRUCTIONS

Check for specified source voltage.
 Use only enough generator output to provide a usable indication.
 Suggested Alignment Tools:

A1 thru A4.....GENERAL CEMENT #8606, 8606L, 8669
 WALSCO #2543, 2544, 2588
 A5 thru A8..... GENERAL CEMENT #8290, 8868, 9087
 WALSCO #2525, 2528, 2587

PUSH-BUTTON ADJUSTMENT

1. Pull button out.
2. Tune manually to desired station.
3. Press button in firmly.
4. Repeat for remaining buttons.

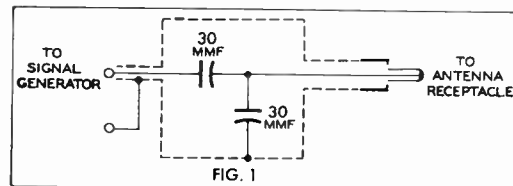
	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1.	High side thru .1mf to point Δ , low side to ground.	262KC (400% Mod.)	High Freq. End Stop.	Output Meter across voice coil.	A1, A2, A3, A4	Adjust for maximum.
2.	Thru dummy (Fig. 1) to antenna receptacle.	1615KC	"	"	A5, A6, A7, A8	"
Step 3 is not necessary unless tuner has been tampered with or associated components have been replaced. IF necessary, back tuning cores (A9, A10, A11, A12) out of coils but not out of forms. Repeat step 2.						
3.	Thru dummy (Fig. 1) to antenna receptacle.	1000KC	Tune to Signal.	Output Meter across voice coil.	A9, A10, A11, A12	Adjust for maximum. Repeat steps 2 & 3 until no further improvement is noted.

With radio installed in car and antenna fully extended, tune in a weak station near 1000KC and adjust A 8 for maximum output.

REMOVAL INSTRUCTIONS

RADIO

1. Pull off radio knobs.
2. Use Allen wrench and remove heater knobs.
3. Use 9/16" wrench and remove nuts from radio control bushings.
4. Remove 3 Phillips screws from each sun visor mounting. Remove visors.
5. Remove 2 Phillips screws from windshield pillar mouldings. Remove mouldings.
6. Remove 7 Phillips screws from upper instrument panel reinforcement bracket. Remove 5 Phillips screws from upper instrument panel bezel mounting. Remove reinforcement bracket. Remove 5 Phillips screws from lower instrument panel bezel mounting. Remove bezel.
7. Remove 4 Phillips screws from upper front instrument panel. Lift panel and disconnect head-light dimmer lead. Remove panel.

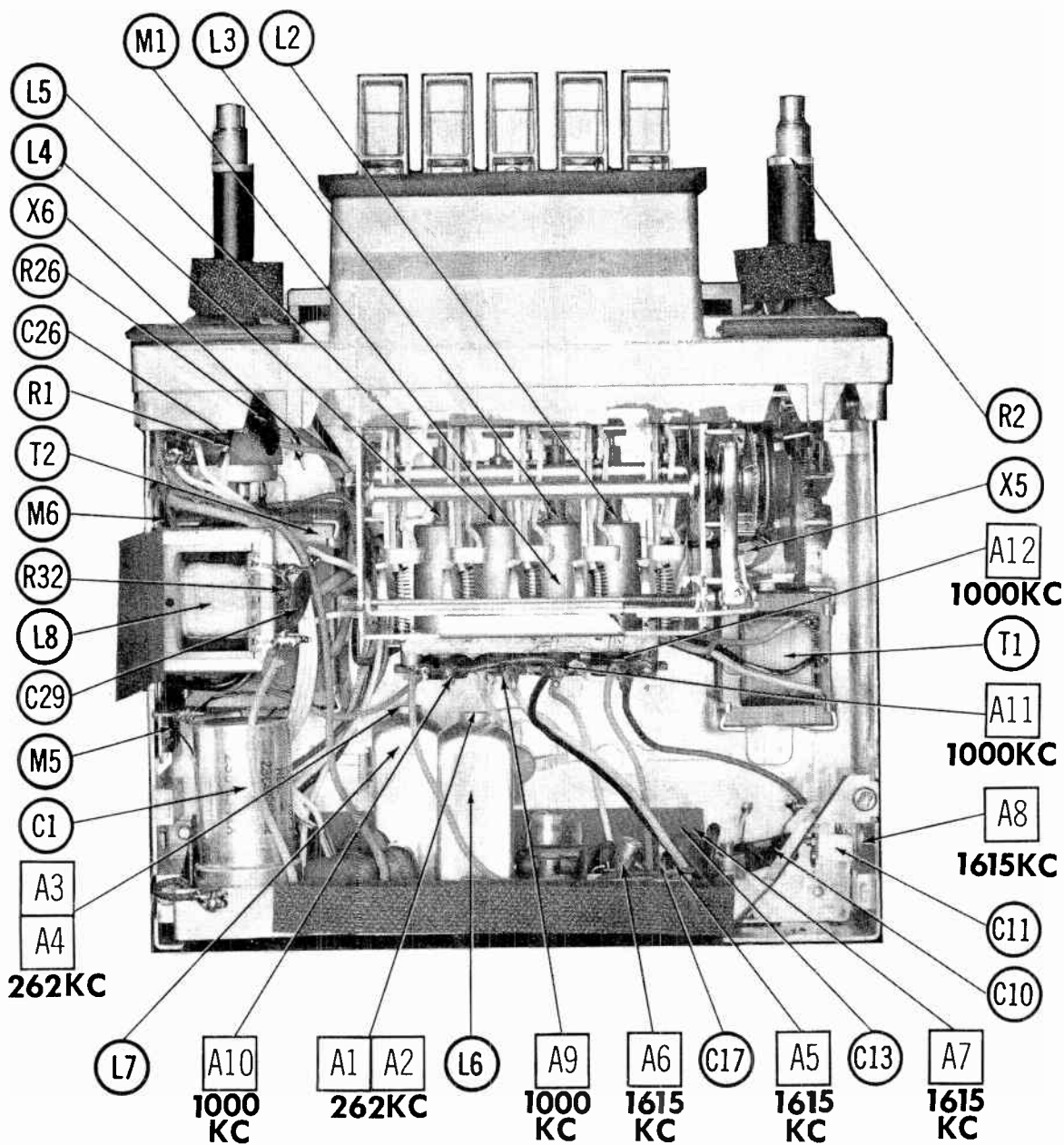


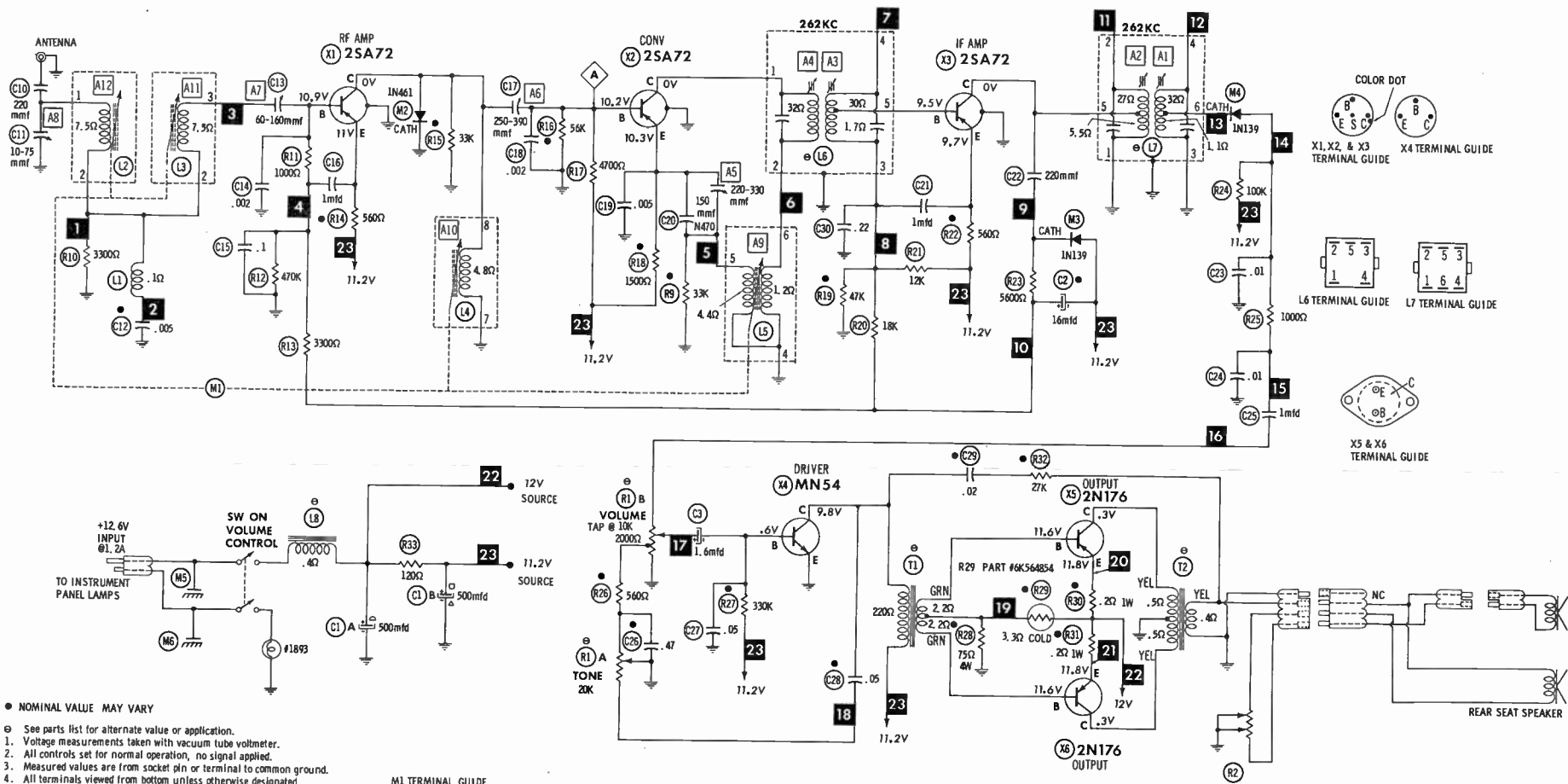
8. Use 7/16" wrench and remove radio support mounting bolt from upper panel area.
9. Remove 4 Phillips screws from face plate mounting. Remove plate.
10. Pull radio out front of instrument panel and disconnect antenna lead, speaker leads, and "A" lead.

SPEAKER

1. Remove radio (See steps 1 thru 10 above.)
2. Remove 4 Phillips screws from speaker mounting. Remove speaker.

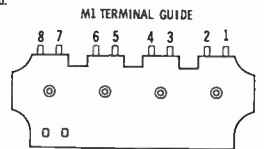
HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana





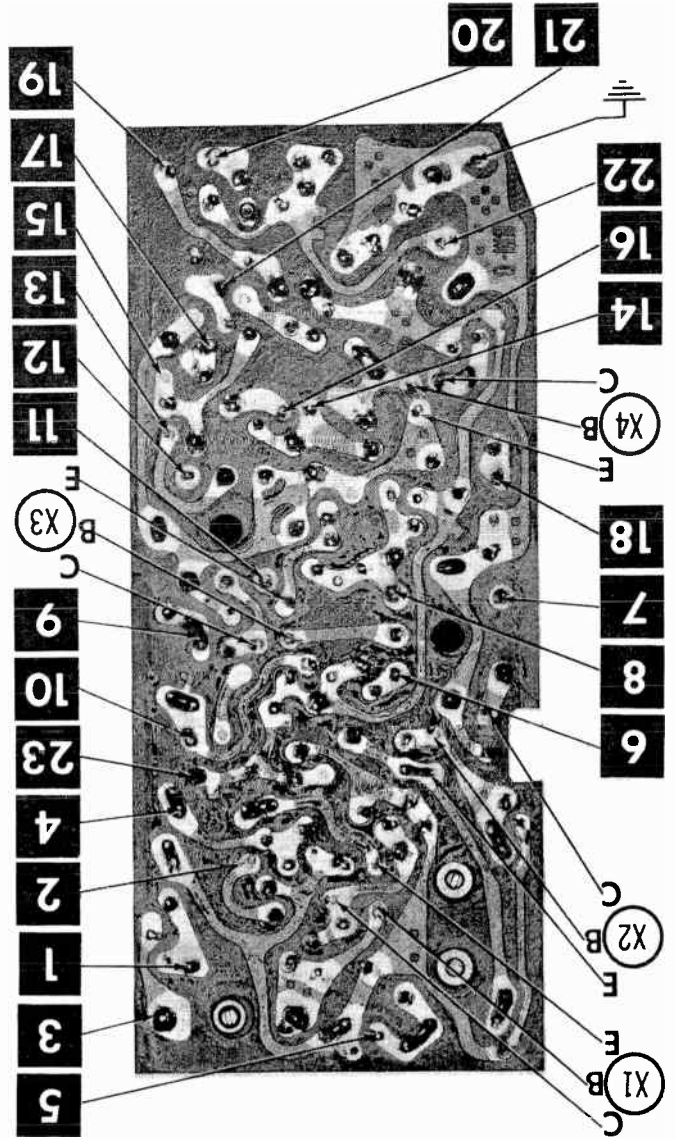
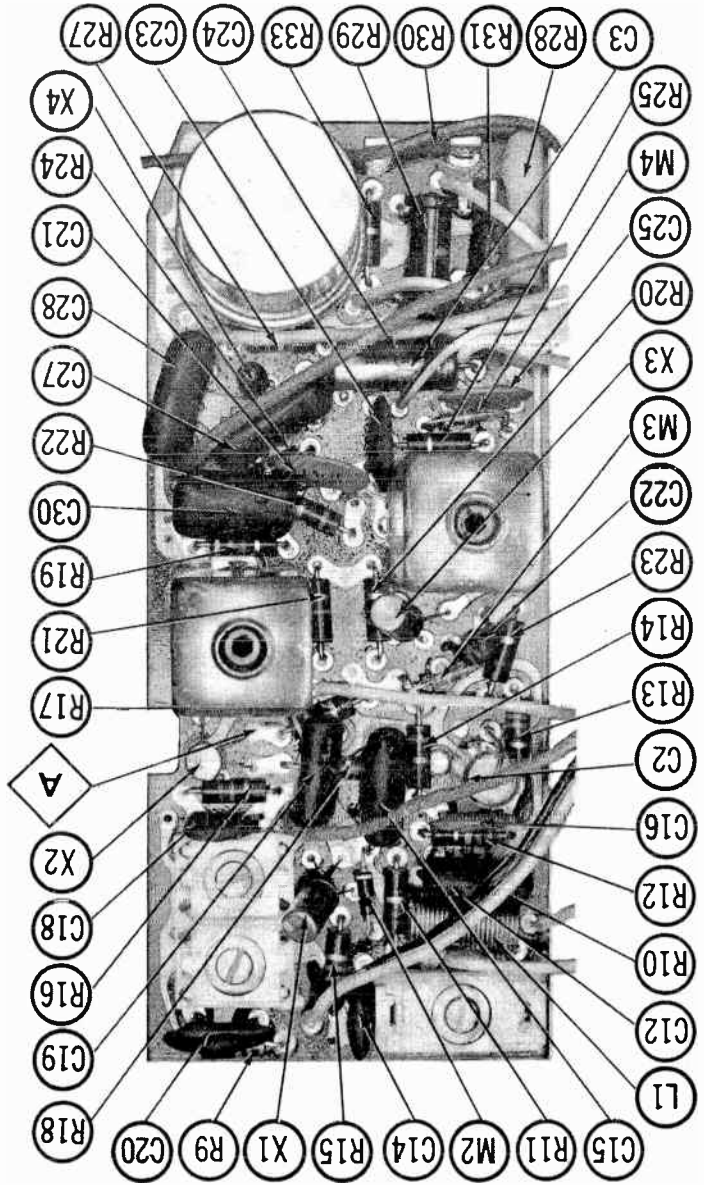
- NOMINAL VALUE MAY VARY
- ⊖ See parts list for alternate value or application.
- 1. Voltage measurements taken with vacuum tube voltmeter.
- 2. All controls set for normal operation, no signal applied.
- 3. Measured values are from socket pin or terminal to common ground.
- 4. All terminals viewed from bottom unless otherwise designated.
- 5. Numbers assigned to terminals may not be found on the unit.
- 6. Supply voltage maintained at rated value for voltage readings.
- 7. Resistance measurements not given because of the wide variation in internal resistance of transistor.

A PHOTOFAC STANDARD NOTATION SCHEMATIC with **CIRCUITRACE**
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CONTINENTAL MODEL 4TMC(F)

CONTINENTAL MODEL 4TMC(F)



A Howard W. Sams CIRCUITRACE Photo

PARTS LIST AND DESCRIPTION

Replacement parts shown may be superseded by the availability of newly introduced replacements.

Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	
X1	2SA72	RF Amp.	DS-25	GE-1	2N1637	PNP
X2	2SA72	Conv.	DS-25	GE-1	2N1639	PNP
X3	2SA72	IF Amp.	DS-25	GE-1	2N1638	PNP
X4	MN54*	Driver	DS-44	GE-8		NPN
X5	2N176	Output	DS-520	GE-3	2N301	PNP (Note 1)
X6	2N176	Output	DS-520	GE-3	2N301	PNP (Note 1)

* Alternate Type M54.

Note 1. When replacing, apply silicone grease to both sides of insulator. Tighten mounting screws securely.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	MOTOROLA PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	GENERAL INSTRUMENT PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A	500	16	23C40988A02						
B	500	16							
C2	16	16	23C41928A06 ①	CRE609A	NLW15-25	MT1-11	MLV15-25	TT25X15	TL-1156
C3	1.6	25	23C41928A05 ①	CRE601A	NLW2-50	MT1-1	BL1160	TT50X2	TL-1201

① Value varies, replace with original value.

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	220	#20B40944A02	DI-220	DD-221	LA10T22-S3	CCD-221	GP322	10TS-T22	
C11	10-75		P288N-005	CPR-5000J	DPMS6D5	1DP-1-502	PVC-625	6PS-D50	
C12	.005 100V		#20B40111A05	BPD-002	DD-202	BYA10D2	CCD-202	B-220	5HK-D20
C13	60-160			P288N-1	UK-105	WMPF1P1	1DP-2-104	PVC-101	2PS-P10
C14	.002		#20C40254A07			HCC3105P			HY-135
C15	.1 100V			BPD-002	DD-202	BYA10D2	CCD-202	B-220	5HK-D20
C16	1mfd 3V			P288N-005	CPR-5000J	DPMS6D5	1DP-1-502	PVC-625	6PS-D50
C17A	250-390								10TCT-T15
B	220-330								HY-135
C18	.002			BPD-002	DD-202	BYA10D2	CCD-202	B-220	5HK-D20
C19	.005 100V	P288N-005		CPR-5000J	DPMS6D5	1DP-1-502	PVC-625	6PS-D50	
C20	150 N470							10TCT-T15	
C21	1mfd 3V						HY-135		
C22	220	DI-220	DD-221	LA10T22-S3	CCE-221	GP322	10TS-T22		
C23	.01	BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10		
C24	.01	BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10		
C25	1mfd 3V						HY-135		
C26	.47 3V						HY-330		
C27	.05 100V	P288N-05			DPMS2S5	1DP-2-503	PV-215	2PS-S50	
C28	.05 100V	P288N-05			DPMS2S5	1DP-2-503	PV-215	2PS-S50	
C29	.02	BPD-02	DD-203	BYA6S2	CCD-203	B-120	5HK-S20		
C30	.22 100V	P288N-22			DPMS2P22	1DP-3-224	PVC-1022	2PS-P22	

Motorola Part Number.

CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA				
			MOTOROLA PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1A	Tone	20K	18C41958A01				
B	Volume & Switch	10K Tap @ 2000Ω	18C42001A01 ①				
R2	Fader	100Ω 2W	18C42001A01				

① Alternate Part #18C41957A01 (5000Ω tap).

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		MOTOROLA PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	Image Trap(1.3uh)	24C40788A05					① Part of M1.
L2	1st Antenna		BC-562	4804	RTC-8516	T856	
L3	2nd Antenna	1V42000A63 ①					
L4	RF						② Alt. Part #24D40074A15
L5	Osc.						
L6	Input IF	24D40074A17 ②	BC-638				
L7	Output IF	24D40075A17 ②	BC-639				③ Alt. Part #24D40075A15

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA					NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	MOTOROLA PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L8	1.2 Amp.	.4Ω	10MH	25D42143A02 ①	C-4095	TC-2	TR-154	TY17XT	① Alt. Part # 25D42032A04

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
	PRI.	SEC.	MOTOROLA PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	7:	1	25D42236A02 ①					① Alt. Part #25D42045A03

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC.	MOTOROLA PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T2	6Ω CT	3-4Ω	25D42235A02 ①					① Alt. Part #25D42101A03

MISCELLANEOUS

ITEM No.	PART NAME	MOTOROLA PART No.	NOTES
M1	Tuner (AT-442)	77D42148A01	
M2	Limiter (1N461)	48C40524A02	
M3	AVC (1N139)	48C134587	
M4	AF Det. (1N139)	48C134587	
M5	Spark Plate	64A41668A03	
M6	Spark Plate	64A41668A03	

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

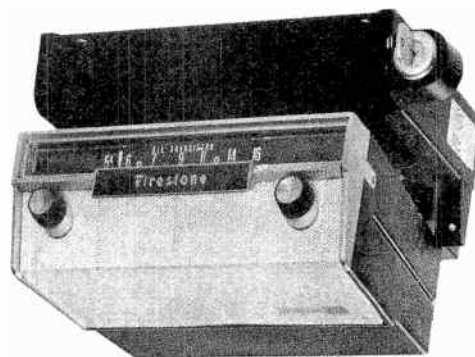
ITEM	PART No.	ITEM	PART No.
Dial Scale	34C41977A01	Push Buttons	38C41994A01
Dial Pointer	52C42219A01		

WIRING DATA

General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in 12 Colors
	8524 (Stranded) Available in 12 Colors
Shielded Hook-up Wire	Use BELDEN No. 8885
Rear Seat Speaker Extension Cable	Use BELDEN No. 8782 (Stranded) Coded Parallel Leads
Bonding Strap	Use BELDEN No. 8661 (3/8 In.) or 8670 (3/4 In.)



TRADE NAME : Firestone Model 3-D-8
SUPPLIER : Firestone Tire & Rubber Company
 1200 Firestone Parkway, Akron, Ohio
TYPE SET : 6 Transistor Auto-Portable AM Receiver
POWER SUPPLY : 12 Volt Storage Battery (Auto)
 9 Volt DC (Portable)
RATING : .27 Amp. @ 12.6VDC (or)
 23MA @ 9VDC
TUNING RANGE : BROADCAST 540 - 1615KC



ALIGNMENT INSTRUCTIONS

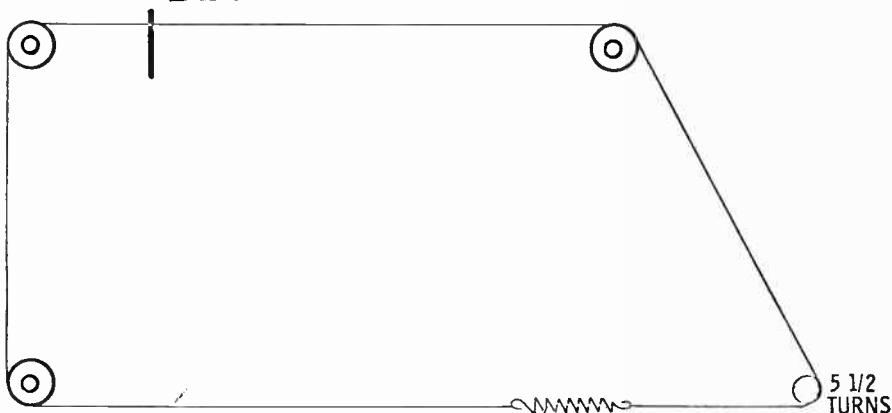
Check for specified source voltage.
 Use only enough generator output to provide a usable indication.
 Suggested Alignment Tools:

A1 thru A4.....GENERAL CEMENT #8606, 8606L, 8869
 WALSCO #2543, 2544, 2588
 A5, A6, A7, A8.....GENERAL CEMENT #8290, 8868, 9087
 WALSCO #2525, 2528, 2587

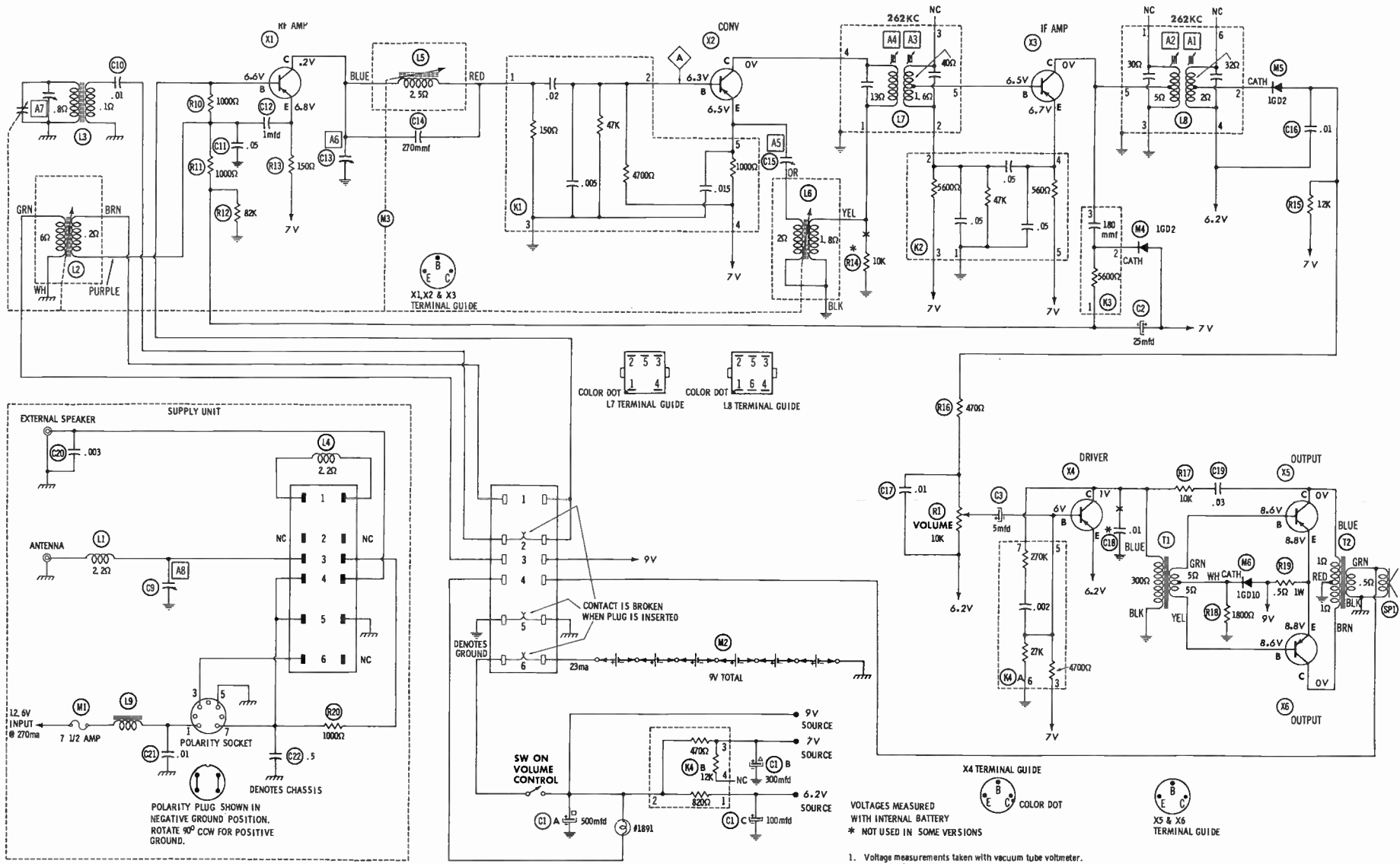
	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1.	High side thru .1mfid to point A, low side to ground.	262KC (400v Mod.)	High Freq. End Stop.	Output Meter across voice coil.	A1, A2, A3, A4	Adjust for maximum.
2.	Loosely coupled to Loopstick.	1615KC	"	"	A5, A6, A7	"

With radio installed in car and antenna fully extended, tune in a weak station near 1400KC and adjust A8 for maximum output.

DIAL CORD STRINGING



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

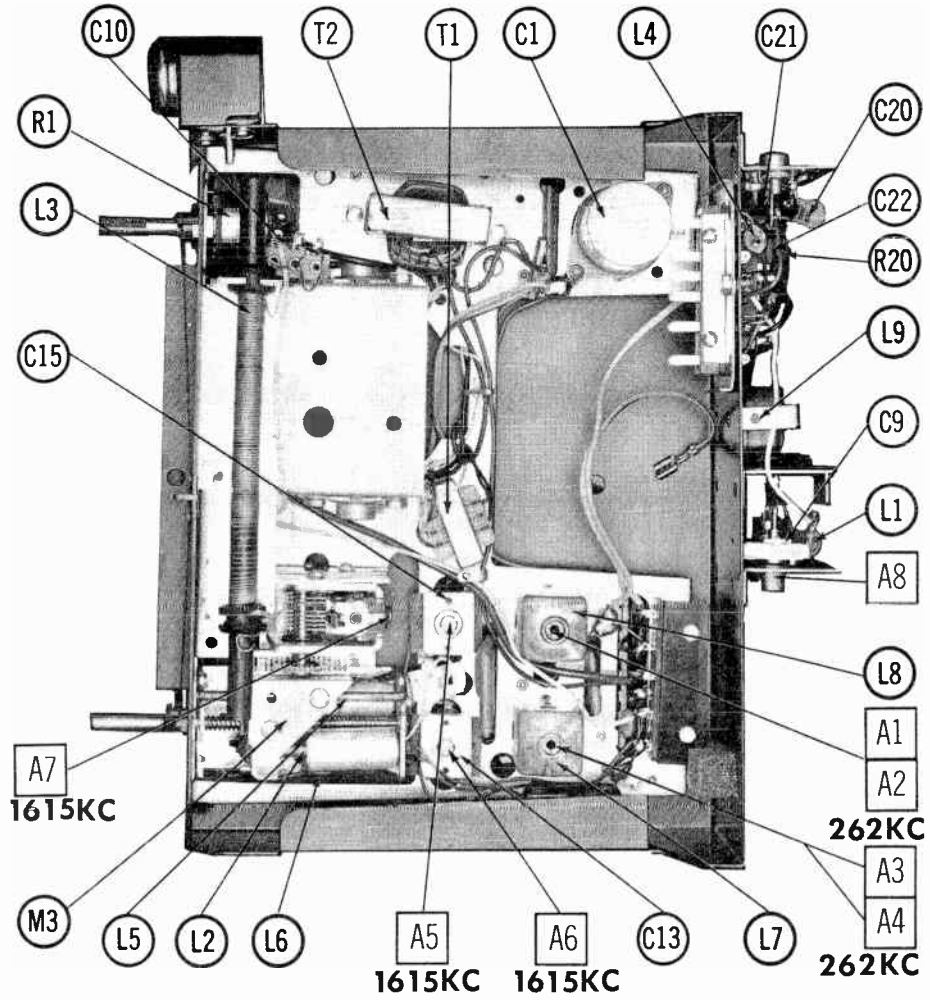
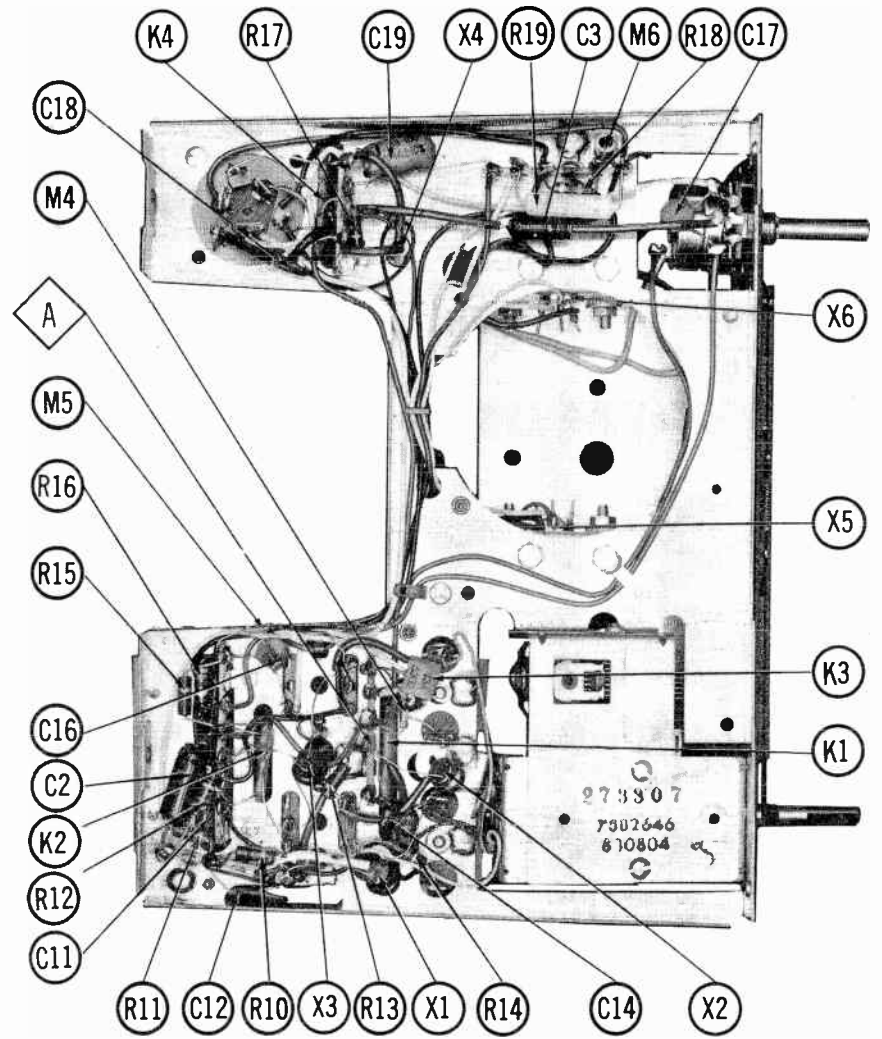


A PHOTOFAC STANDARD NOTATION SCHEMATIC
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- VOLTAGES MEASURED WITH INTERNAL BATTERY
* NOT USED IN SOME VERSIONS
1. Voltage measurements taken with vacuum tube voltmeter.
 2. All controls set for normal operation, no signal applied.
 3. Measured values are from socket pin or terminal to common ground.
 4. All terminals viewed from bottom unless otherwise designated.
 5. Numbers assigned to terminals may not be found on the unit.
 6. Supply voltage maintained at rated value for voltage readings.
 7. Resistance measurements not given because of the wide variation in internal resistance of transistor.

FIRESTONE MODEL 3-D-8

FIRESTONE MODEL 3-D-8



PARTS LIST AND DESCRIPTION

Replacement parts shown may be superseded by the availability of newly introduced replacements.
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	
X1	2N640	RF Amp.	DS-25	GE-1	2N1637	PNP
X2	2N642	Conv.	DS-25	GE-1	2N1639	PNP
X3	2N641	IF Amp.	DS-25	GE-1	2N1638	PNP
X4	2N591	Driver	DS-26	GE-2	2N591	PNP
X5	2N1184	Output				PNP
X6	2N1184	Output				PNP

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	FIRESTONE PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	GENERAL INSTRUMENT PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A	500	18	20-2653	AFH3-00-94.5				FP-300.83	PCLS-3026.11*
C1B	300	18							
C1C	100	18							
C2	25	15	20-256	PJT89	NLW25-15	MT1-10	MLV25-15	TT15X25	TE-1157.1
C3	5	15	20-505	CRE454A	NLW5-15	MT1-3	MLV5-15	TT25X5	TE-1152

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

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.	
C9		#28-800-1L							
C10	.01 50V		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-810	
C11	.05		TTD-05	CK-503	H5		TA-150	TG-850	
C12	1mf 3V	#28-431A		UK-105	HCC3105P			HY-135	
C13									
C14	270		DI-270	DD-271	LA10T27-C4	CCD-271	GP327	5GA-T27	
C15		#28-461							
C16	.01 50V		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-810	
C17	.01 50V		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-810	
C18	.01 50V		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-810	
C19	.03 100V		P288N-03	DD-303	DFMS6S3	IDP-1-303	PVC-613	4PS-S30	
C20	.003		DI-3000	DD-302	LA10D3-C4	CCD-302	GP230	5GA-D30	
C21	.01 50V		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-810	
C22	.5 200V		P288N-5		DPMS2P5	2DP-5-504	PVC-105	2TM-P50	

Firestone Part Number.

CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA				
			FIRESTONE PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1	Volume & Switch	.10K	80A2647	F2-10K,SFS212, KR-4, or (AB-15, AK-33, KR-4)	A47-10K-Z, RS-3/16, SWE-13	B13-116, SK-9, 76-1 or (BU1, CF61, SS4, GC)*	UA14A, SD3500, US-41 or (RU14A, IS1312, SL35, US41) or (U18, DS-37, US-26)

* "SNAPTROL"

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		FIRESTONE PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	RF Choke (6, 2uh)	14-6.2	BC-565	4610	RTC-8520	T859	(1) Part of M3
L2	Ant.	Ⓢ					
L3	Loopstick	10A2982					
L4	RF Choke (6, 2uh)	14-6.2	BC-565	4610	RTC-8520	T859	
L5	RF	Ⓢ					
L6	Osc.	Ⓢ					
L7	Input IF	14-2874					
L8	Output IF	14-2875					

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA					NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	FIRESTONE PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L9	270ma	.5Ω	10MH	75A8001	C-4095	TC-2	TR-155	TY17XT	

PARTS LIST AND DESCRIPTION (CONTINUED)

Replacement parts shown may be superseded by the availability of newly introduced replacements.
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
			FIRESTONE PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
	PRI.	SEC.						
T1	5:	1	75A2796					

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
			FIRESTONE PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
	PRI.	SEC.						
T2	24Ω CT	6-8Ω	25A2797					

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		FIRESTONE PART No.	QUAM PART No.	
SP1	4" PM 6-8Ω	73A2665		

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	FIRESTONE PART No.	REPLACEMENT DATA
K1	RF Coupling - Bias	150Ω, 1000Ω, 4700Ω, 47K, .005mfd, .015mfd, .02mfd	89A2583B	
K2	IF Amp. Bias	560Ω, 5600Ω, 47K, (3) .05mfd	89A2584B	
K3	AVC	5800Ω, 180mmf	89A2701	
K4	Audio Bias	470Ω, 820Ω, 4700Ω, 12K, 27K, 270K, .002mfd	89A2585A	

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			FIRESTONE PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M1	SFE	7 1/2		12A1912B	30707.5	15507.5	SFE 7 1/2	HME

BATTERIES

ITEM No.	VOLTAGE	FIRESTONE PART No.	REPLACEMENT DATA			NOTES
			BURGESS	EVEREADY	MALLORY	
M2	9V		130 (or AL-1)	635 (or E93)	M-14R (or MN1400)	6 Required

MISCELLANEOUS

ITEM No.	PART NAME	FIRESTONE PART No.	NOTES
M3 M4 M5 M6	Tuner AVC (1GD2) Det. (1GD2) Bias (1GD10)	78B2646	Includes Tuning Coils and Gang

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
Dial Glass Dial Pointer	39-99 84A2930	Knob - Tuning, Volume	47-50C

WIRING DATA

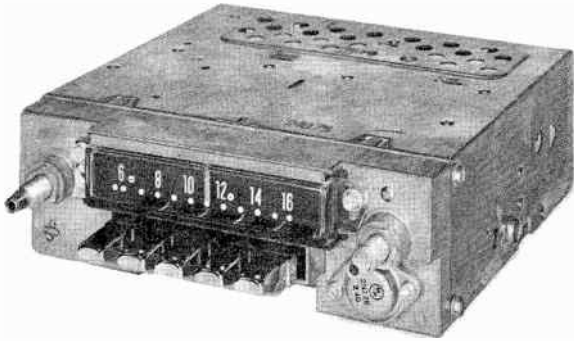
General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in 12 Colors 8524 (Stranded) Available in 12 Colors
Shielded Hook-up Wire	Use BELDEN No. 8885
Rear Seat Speaker Extension Cable	Use BELDEN No. 8782 (Stranded) Coded Parallel Leads
Bonding Strap	Use BELDEN No. 8661 (3/8 In.) or 8670 (3/4 In.)

FIRESTONE MODEL 3-D-8



PHOTOFACT[®] with

CIRCUTRACE[®]



TRADE NAME : Ford Model 3TMF (C3AA-18806)
(1963 Galaxie)
SUPPLIER : Motorola Inc.
9401 W. Grand Ave., Franklin Park, Ill.
TYPE SET : 5 Transistor AM Receiver
POWER SUPPLY : 12 Volt Storage Battery
RATING : .6 Amp. @ 12.6 VDC
TUNING RANGE : BROADCAST 540 - 1615KC

ALIGNMENT INSTRUCTIONS

Check for specified source voltage.
Use only enough generator output to provide a usable indication.
Suggested Alignment Tools:

A1 thru A4..... GENERAL CEMENT #8606, 8606L, 8869
WALSCO #2543, 2544, 2588
A5, A6, A7..... GENERAL CEMENT #8290, 8868, 9087
WALSCO #2525, 2528, 2587

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1.	High side thru .1mf to point Δ , low side to ground.	262KC (400v Mod.)	High Freq. End Stop.	Output Meter across voice coil.	A1, A2, A3, A4	Adjust for maximum.
2.	Thru dummy (Fig. 1) to antenna receptacle.	1615KC	"	"	A5, A6, A7	"
Step 3 is not necessary unless tuner has been tampered with or associated components have been replaced. IF necessary, back tuning cores (A8, A9, A10) out of coils but not out of forms. Repeat step 2.						
3.	Thru dummy (Fig. 1) to antenna receptacle.	1000KC	Tune to Signal.	Output Meter across voice coil.	A8, A9, A10	Adjust for maximum. Repeat steps 2 & 3 until no further improvement is noted.

With radio installed in car and antenna fully extended, tune in a weak station near 1000KC and adjust A7 for maximum output.

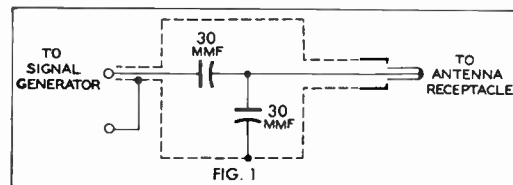
REMOVAL INSTRUCTIONS

RADIO

1. Pull off knobs.
2. Use 9/16" wrench and remove 2 nuts from control bushings. Remove bezel. Use 9/16" wrench and remove 2 nuts from control bushings.
3. Disconnect "A" lead, antenna lead, and speaker leads.
4. Use 7/16" wrench and remove nut from back brace.
5. Remove radio from under instrument panel.

SPEAKER

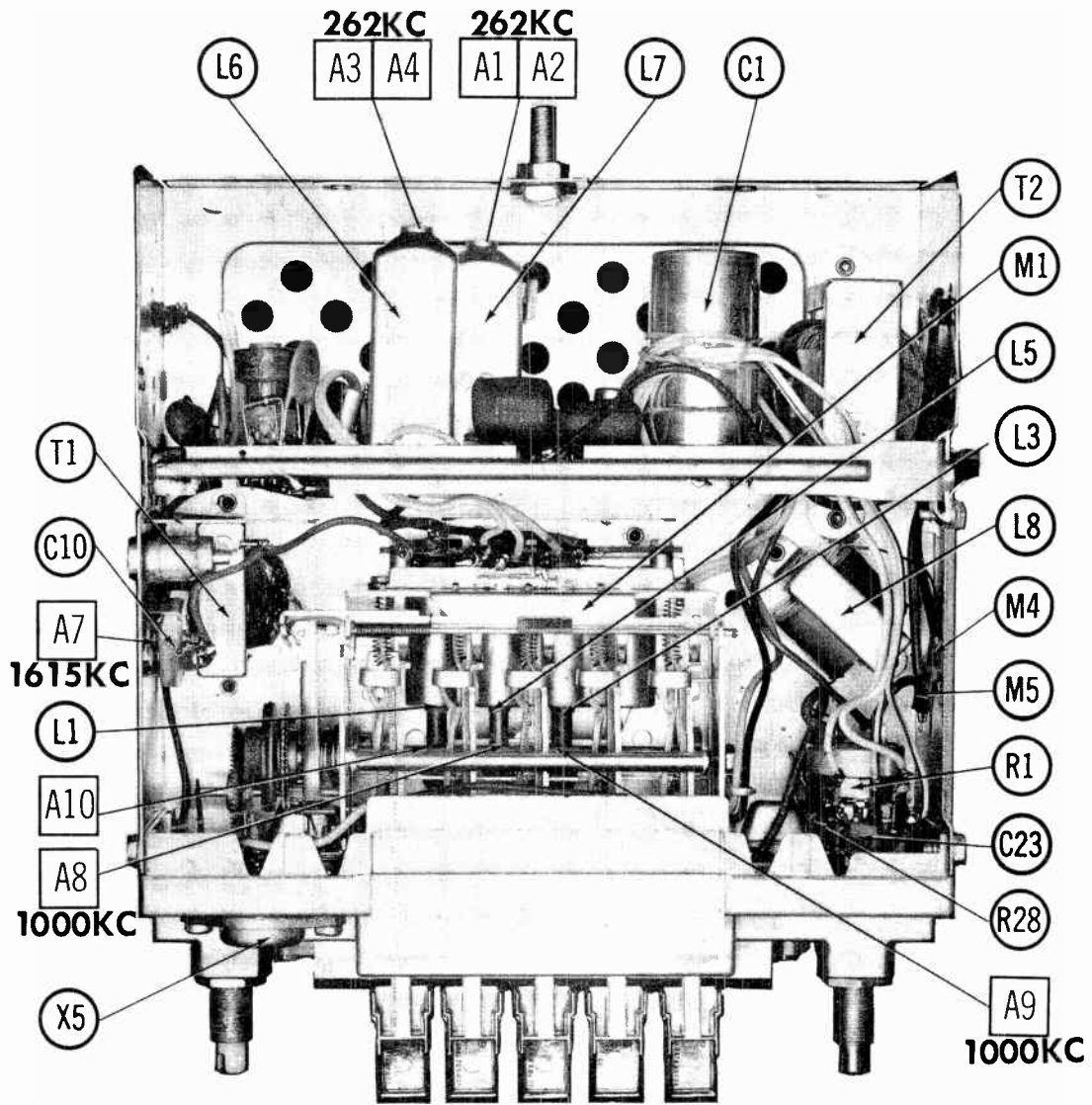
1. Remove 4 wing nuts from each corner of speaker.
2. Remove speaker from under instrument panel.

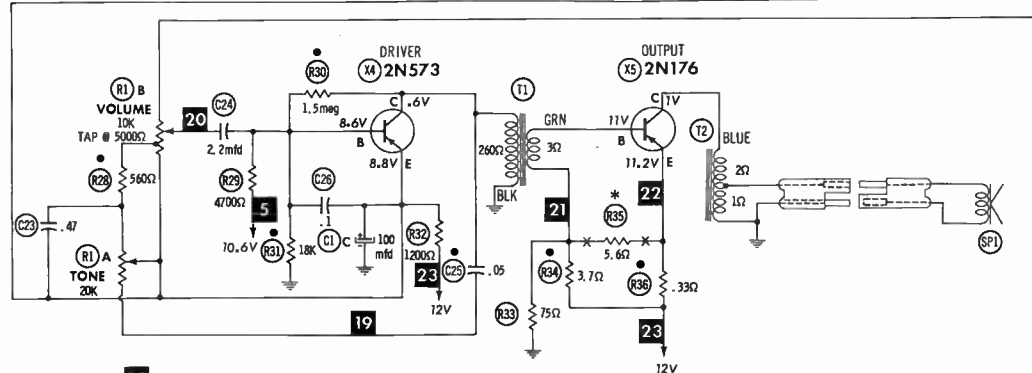
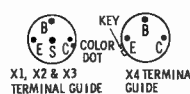
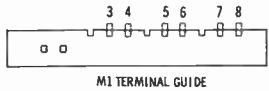
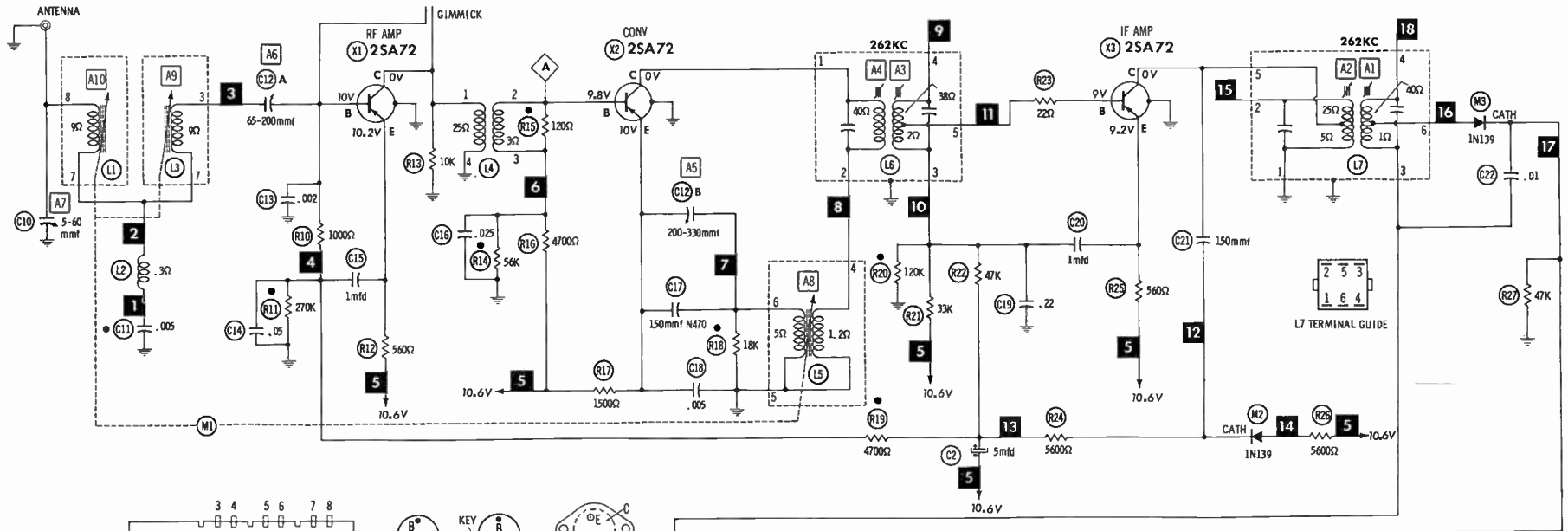


PUSH-BUTTON ADJUSTMENT

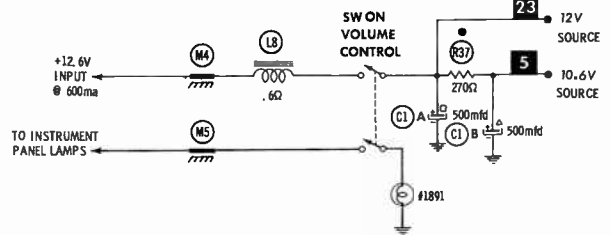
1. Pull button out.
2. Tune manually to desired station.
3. Press button in firmly.
4. Repeat for remaining buttons.

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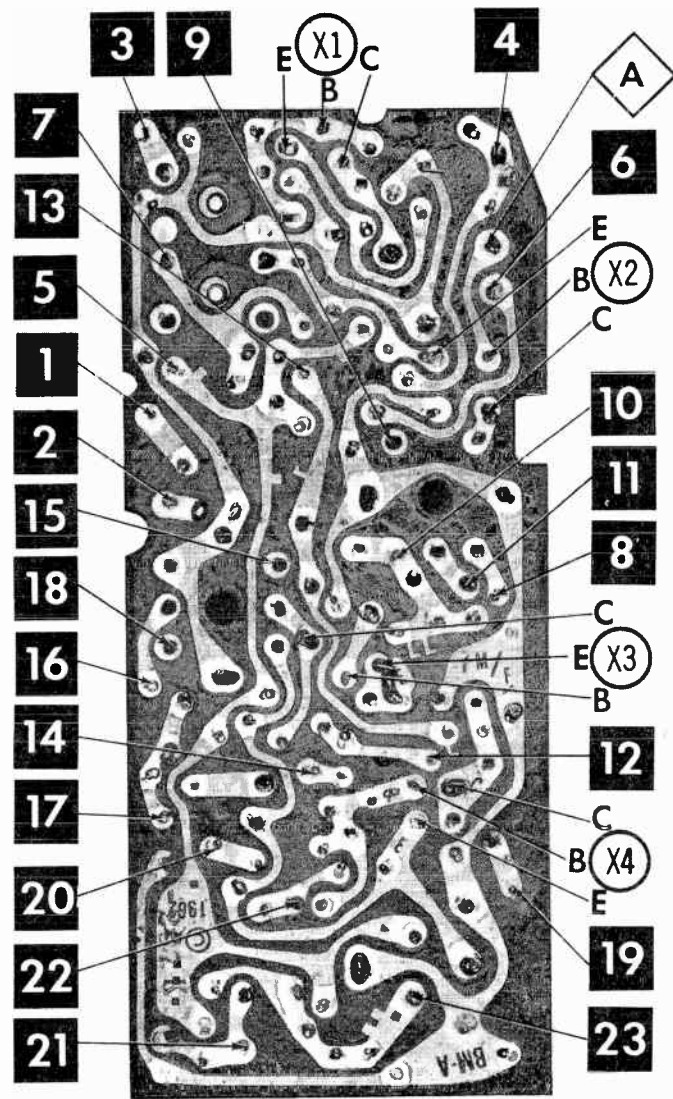
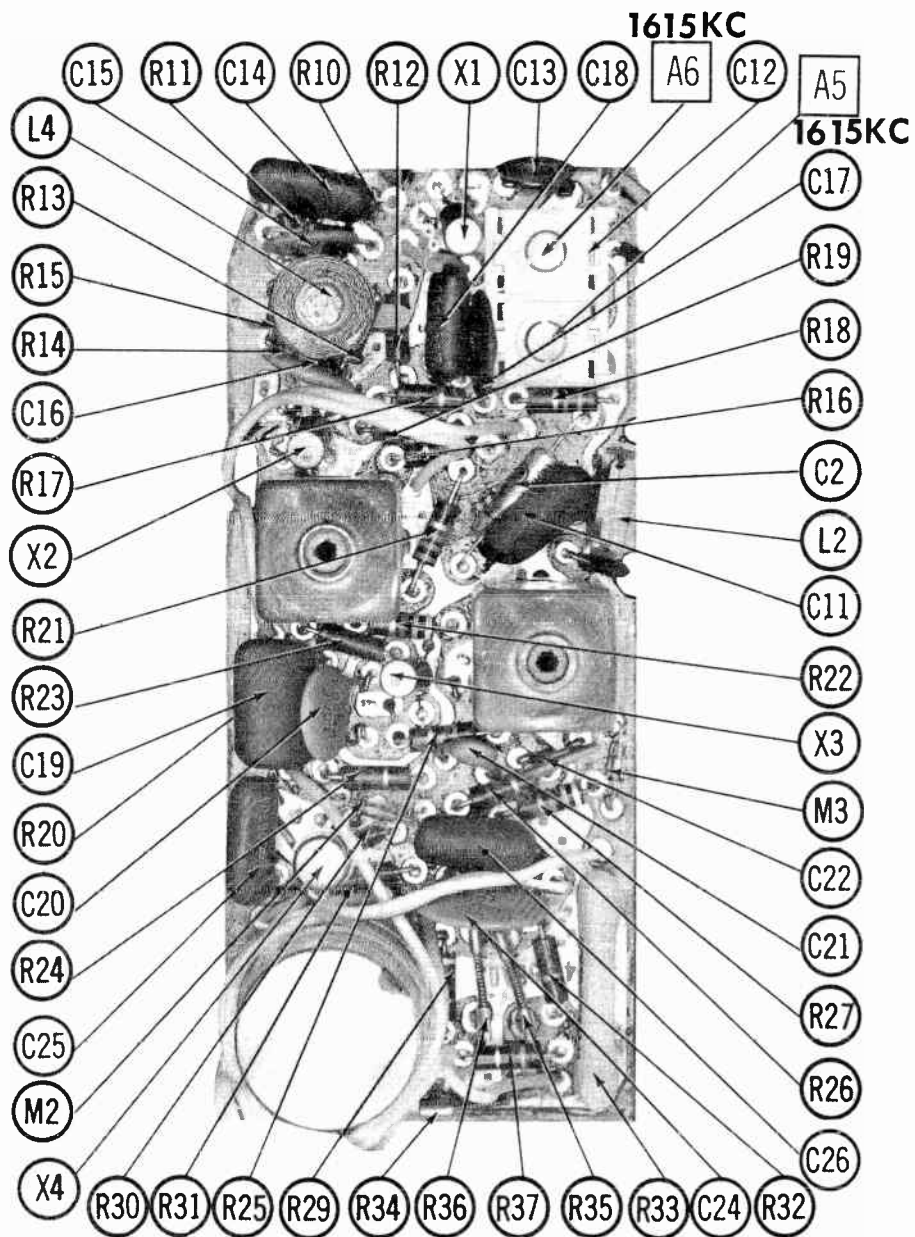
FORD MODEL 3TMF



- NOMINAL VALUE MAY VARY
- * NOT USED IN SOME VERSIONS
- 1. Voltage measurements taken with vacuum tube voltmeter.
- 2. All controls set for normal operation, no signal applied.
- 3. Measured values are from socket pin or terminal to common ground.
- 4. All terminals viewed from bottom unless otherwise designated.
- 5. Numbers assigned to terminals may not be found on the unit.
- 6. Supply voltage maintained at rated value for voltage readings.
- 7. Resistance measurements not given because of the wide variation in internal resistance of transistor.

A PHOTOFAC STANDARD NOTATION SCHEMATIC
with **CIRCUITRACE**

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A Howard W. Sams **CIRCUITRACE™** Photo

FORD MODEL 3TME

PARTS LIST AND DESCRIPTION

Replacement parts shown may be superseded by the availability of newly introduced replacements.

WIRING DATA

Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement. **COILS (RF-IF)**

General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in 12 Colors 8524 (Stranded) Available in 12 Colors
Shielded Hook-up Wire	Use BELDEN No. 8885
Rear Seat Speaker Extension Cable	Use BELDEN No. 8782 (Stranded) Coded Parallel Leads
Bonding Strap	Use BELDEN No. 8661 (3/8 in.) or 8670 (3/4 in.)

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	
X1	2SA72	RF Amp.	DS-25	GE-1	2N1637	PNP
X2	2SA72	Conv.	DS-25	GE-1	2N1639	PNP
X3	2SA72	IF Amp.	DS-25	GE-1	2N1638	PNP
X4	2N573	Driver	DS-26	GE-2	2N591	PNP
X5	2N176	Output	DS-520	GE-3	2N301	PNP (Note 1)

Note 1. When replacing, apply silicone grease to both sides of insulator. Tighten mounting screws securely.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	MOTOROLA PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	GENERAL INSTRUMENT PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A	500	16	23C40516A01	PWH3-00-95				FPF-300.18	PCLS-3026.11
B	500	16							
C	100	16							
C2	5	6	23K585201	PTT4	NLW5-15	MT1-3	MLV5-12	TT6X5	TE-1084

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

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	5-80	#20B40748A03	P288N-005	CPR-5000J	DPMS8D5	IDP-1-502	PVC-825	6PS-D50
C11	.005 100V							
C12A	65-200	#20C40254A05						
B	200-330							
C13	.002		BPD-002	DD-202	BYA10D2	CCD-202	B-220	5HK-D20
C14	.05 100V		P288N-05		DPMS2S5	IDP-2-503	PVC-215	2PS-S50
C15	1mfd 3V			UK-105	HCC3105P			HY-135
C16	.025		TTD-025	CK-253	H4		TA-125	TG-825
C17	150 N470							10TCS-T15
C18	.005 100V		P288N-005	CPR-5000J	DPMS8D5	IDP-1-502	PVC-825	6PS-D50
C19	.22 100V		P288N-22		DPMS2P22	IDP-3-224	PVC-1022	2PS-P22
C20	1mfd 3V			UK-105	HCC3105P			HY-135
C21	150		DI-150	DD-151	LA10T15-S3	CCD-151	GP315	5GA-T15
C22	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C23	.47 3V			UK10-404	HCC10474Z			HY-330
C24	2.2mfd 3V			UK-225	HCC3225P			HY-150
C25	.05 100V		P288N-05		DPMS2S5	IDP-2-503	PVC-215	2PS-S50
C26	.1 100V		P488N-1	DF-104	PM4P1	4DP-3-104	GEM-401	4TM-P10

Motorola Part Number.

CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA				
			MOTOROLA PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1A	Tone	20K	18C41449A03				
B	Volume & Switch	10K Tap @ 5000Ω					

ITEM No.	USE	REPLACEMENT DATA					NOTES
		MOTOROLA PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	1st Ant.						
L2	Image Trap	24K565153	BC-561	4602	RTC-8515	T855	
L3	2nd Ant.						
L4	RF	24C41077A04					
L5	Osc.						
L6	Input IF	24D40074A09	BC-638				
L7	Output IF	24D40075A01	BC-639				

① Part of M1 or Coil Assembly Part #1V41000A96.

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA					NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~1)	MOTOROLA PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L8	600ma	.6Ω	13MH	25C40474A02	C-4095	TC-2	TR-154	TY17XT	

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
	PRI.	SEC.	MOTOROLA PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	18:	1	25C40473A07			TR-188		

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE	REPLACEMENT DATA					NOTES
		MOTOROLA PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T2	50Ω Tap @ 8Ω	25C41238A01					

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MOTOROLA PART No.	QUAM PART No.	
SP1	6" x 9" PM 8Ω	50D41723A01		

MISCELLANEOUS

ITEM No.	PART NAME	MOTOROLA PART No.	NOTES
M1	Tuner (AT-392)	77D41295A01	
M2	AVC (1N139)	48C134587	
M3	AF Det. (1N139)	48C134587	
M4	Spark Plate	64A41668A02	
M5	Spark Plate	64A41668A02	
	Printed Board	84D41358A03	Less all Components

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

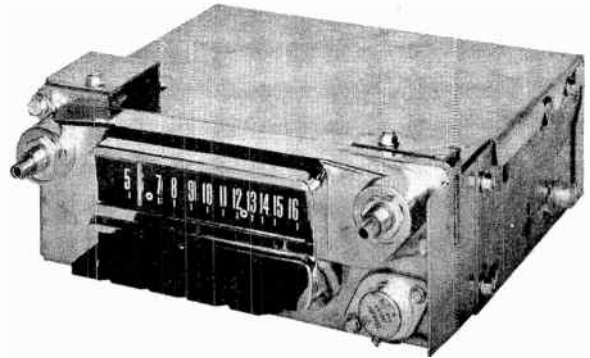
ITEM	PART No.	ITEM	PART No.
Dial Scale	34C41227A01	Push Buttons	38B41229A01
Knob - Tuning, Volume	1B41722A01	Pointer Assembly	1B40939A02
Knob - Tone, Dummy	36C41719A01		



PHOTOFACT[®] with

CIRCUITRACE[®]

FORD MODELS
TRADE NAME : 4TBD (C4DA-18805) 1964 Falcon
 4TBO (C40A-18805) 1964 Fairlane
SUPPLIER : The Bendix Corp., Bendix Radio Div.
 Baltimore 4, Maryland
TYPE SET : 6 Transistor AM Receiver
POWER SUPPLY : 12 Volt Storage Battery
RATING : .68 Amp. @ 12.6 VDC
TUNING RANGE : BROADCAST 540 - 1605KC



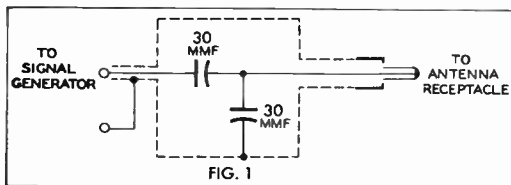
ALIGNMENT INSTRUCTIONS

Check for specified source voltage.
 Use only enough generator output to provide a usable indication.

Suggested Alignment Tools:

A1 thru A4.....GENERAL CEMENT #8606, 8606L, 8869
 WALSCO #2543, 2544, 2588
 A5, A6, A7.....GENERAL CEMENT #8290, 8868, 9087
 WALSCO #2525, 2528, 2587

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1.	High side thru .1mfd to point Δ , low side to ground.	262.5KC (400v Mod.)	High Freq. End Stop.	Output Meter across voice coil.	A1, A2, A3, A4	Adjust for maximum.
2.	Thru dummy (Fig. 1) to antenna receptacle.	1605KC	"	"	A5, A6, A7	"
Step 3 is not necessary unless tuner has been tampered with or associated components have been replaced. IF necessary, back tuning cores (A8, A9, A10) out of coils but not out of forms. Repeat step 2.						
3.	Thru dummy (Fig. 1) to antenna receptacle.	1000KC	Tune to Signal.	Output Meter across voice coil.	A8, A9, A10	Adjust for maximum. Repeat steps 2 & 3 until no further improvement is noted.
With radio installed in car and antenna fully extended, tune in a weak station near 1000KC and adjust A7 for maximum output.						



PUSH-BUTTON ADJUSTMENT

1. Pull button out.
2. Tune manually to desired station.
3. Press button in firmly.
4. Repeat for remaining buttons.

REMOVAL INSTRUCTIONS

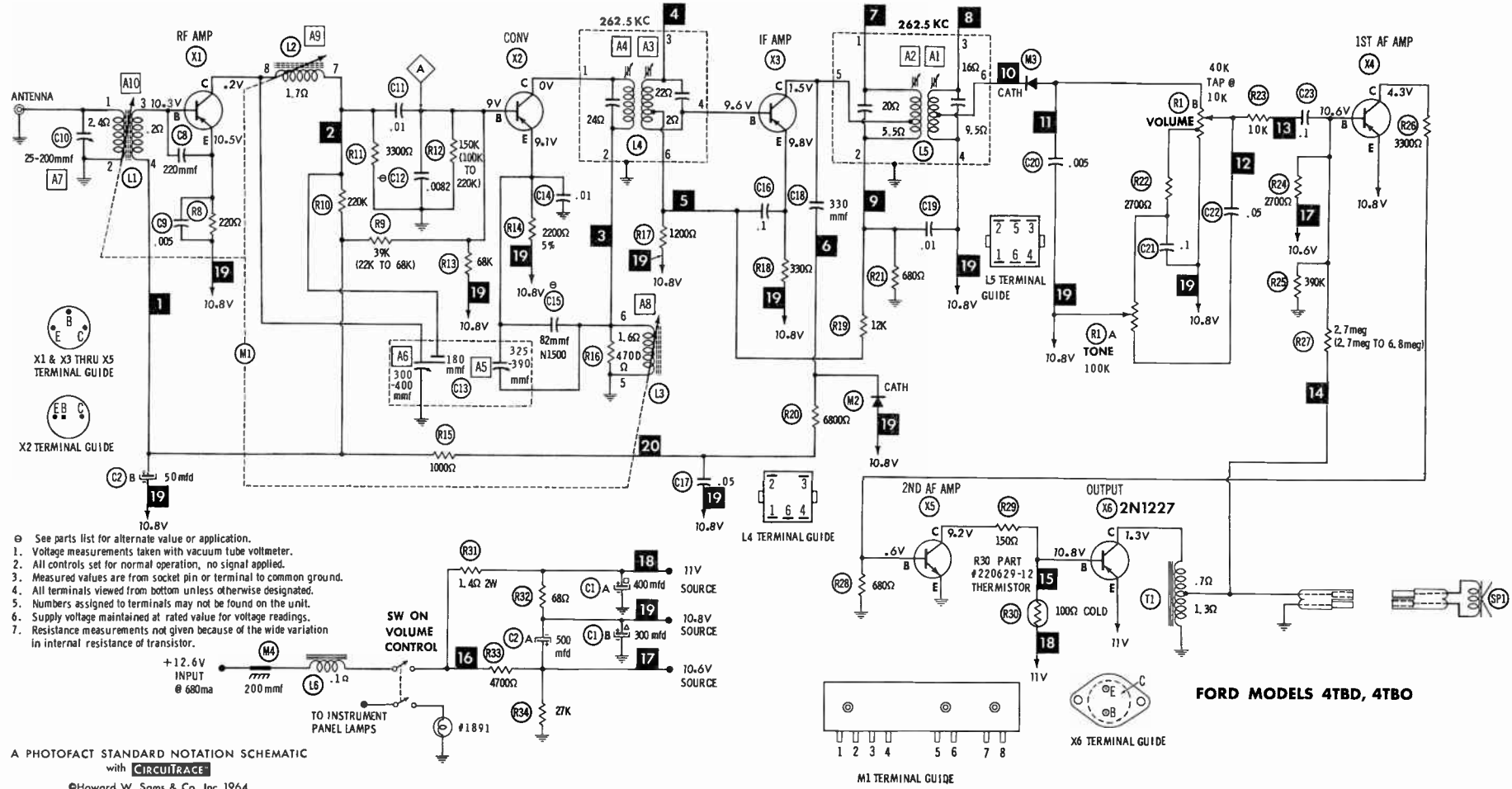
RADIO

1. Pull off knobs.
2. Use 9/16" wrench and remove 2 nuts from control bushings. Remove bezel. Use 9/16" wrench and remove 2 nuts from control bushings.
3. Disconnect "A" lead, antenna lead, and speaker leads.
4. Use 7/16" wrench and remove nut from rear brace.
5. Remove radio from under instrument panel.

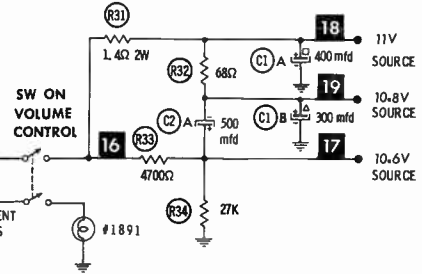
SPEAKER

1. Remove 4 Phillips screws from speaker grille.
2. Lift off speaker grille.
3. Use 3/8" wrench and remove 2 metal screws from each end of speaker.
4. Remove speaker from top of instrument panel.

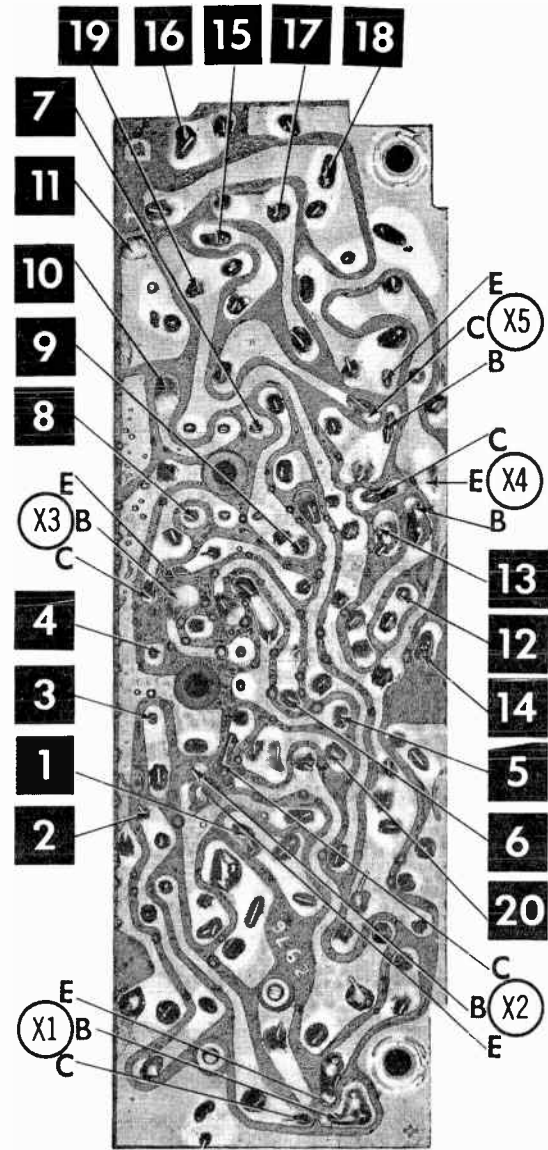
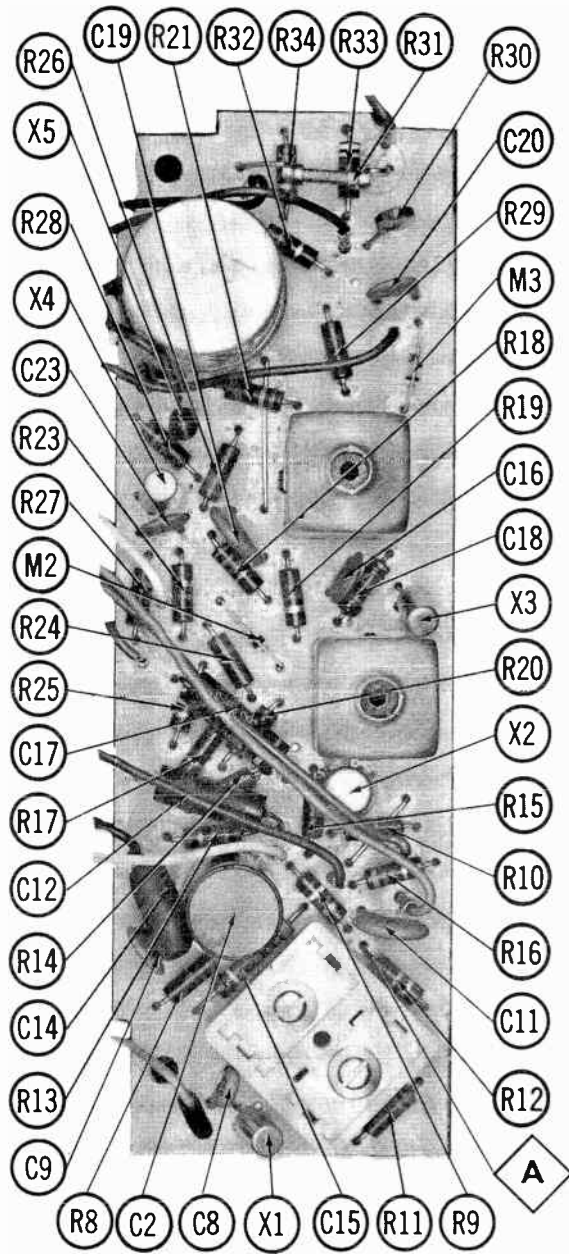
HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana



- ⊖ See parts list for alternate value or application.
- 1. Voltage measurements taken with vacuum tube voltmeter.
- 2. All controls set for normal operation, no signal applied.
- 3. Measured values are from socket pin or terminal to common ground.
- 4. All terminals viewed from bottom unless otherwise designated.
- 5. Numbers assigned to terminals may not be found on the unit.
- 6. Supply voltage maintained at rated value for voltage readings.
- 7. Resistance measurements not given because of the wide variation in internal resistance of transistor.



A PHOTOFACT STANDARD NOTATION SCHEMATIC
with **CIRCUITRACE**
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FORD MODELS 4TBD, 4TBO

PARTS LIST AND DESCRIPTION

Replacement parts shown may be superseded by the availability of newly introduced replacements.
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

WIRING DATA

General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in 12 Colors 8524 (Stranded) Available in 12 Colors
Shielded Hook-up Wire	Use BELDEN No. 8885
Rear Seat Speaker Extension Cable	Use BELDEN No. 8782 (Stranded) Coded Parallel Leads
Bonding Strap	Use BELDEN No. 8661 (3/8 In.) or 8670 (3/4 In.)

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			BENDIX PART No.	NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.		
X1		RF Amp. Conv.	DS-25	GE-1	2N1637	2091241-15A	PNP
X2			DS-25	GE 1	2N1639	2091241-13	PNP
X3		IF Amp.	DS-25	GE-1	2N1638	2091241-14	PNP
X4		1st AF Amp.	DS-26	GE-3	2N591	2090924-6A	PNP
X5		2nd AF Amp.	DS-44	GE 8		2092609-2	PNP
X6	2N1227	Output	DS-520	GE 3	2N301	2091859-6	PNP (Note 1)

Note 1. When replacing, apply silicone grease to both sides of insulator. Tighten mounting screws securely.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	BENDIX PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	GENERAL INSTRUMENT PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A	400	16	2092983-1	PWH2-02-08				PFP 300.65	TVLS-2174*
C2A	300	16	2092246 1	BCD3X50050				PET-290	VLS-2116*
C1B	500	3							
C1C	50	3							

* Not normally in distributor's stock.

Available thru distributor on order to manufacturer.

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.
C8	220		DI-220	DD-221	LA10T22-S3	CCD-221	GP322	10TS-T22
C9	.005		BPD-005	DD-502	BYA10D5	CCD-502	B-250	5HK-D50
C10	25-200	#2091504-6						
C11	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C12	.0082 100V	①	P288N-008	CPR-6200J	DPMS8D82	6DP-2-822	PVC-628	6PS-D62
C13A	300-400	#219092-28						
C13B	180							
C13C	325-390							
C14	.01 100V		BE2S1	CPR-10000J	WMF1S1	1DP-1-103	PV-211	4PS-S10
C15	62 N1500	#2091700-33①						
C16	.1 10V		TTD-1	CK-104	H6		TA-010	TG-P10
C17	.05 100V		P288N-05		H6		PV-215	2PS-S50
C18	330		DI-330	DD-331	LA10T33-C4	CCD-331	GP333	10TS-T33
C19	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C20	.005		BPD-005	DD-502	BYA10D5	CCD-502	B-250	5HK-D50
C21	.1 10V		TTD-1	CK-104	H6		TA-010	TG-P10
C22	.05 100V		P288N-05		H6		PV-215	2PS-S50
C23	.1 10V		TTD-1	CK 104	H6	1DP-2-503	TA-010	TG-P10

Bendix Part Number. ① Exact Value Determined by Production. Replace with original value.

CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA				
			BENDIX PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1A	Tone	100K	2092097-6①				
B	Volume & Switch	40K Tap ② 10K					

① Part #2092097-4 used in Model 4TBO.

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		BENDIX PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	Ant.						
L2	RF	2090131-66①					
L3	Osc.						
L4	Input IF	2093163-2					
L5	Output IF	2093164-2					

① RCC Tuner. GIC Tuners use Part #2090131-64.

CHOKE

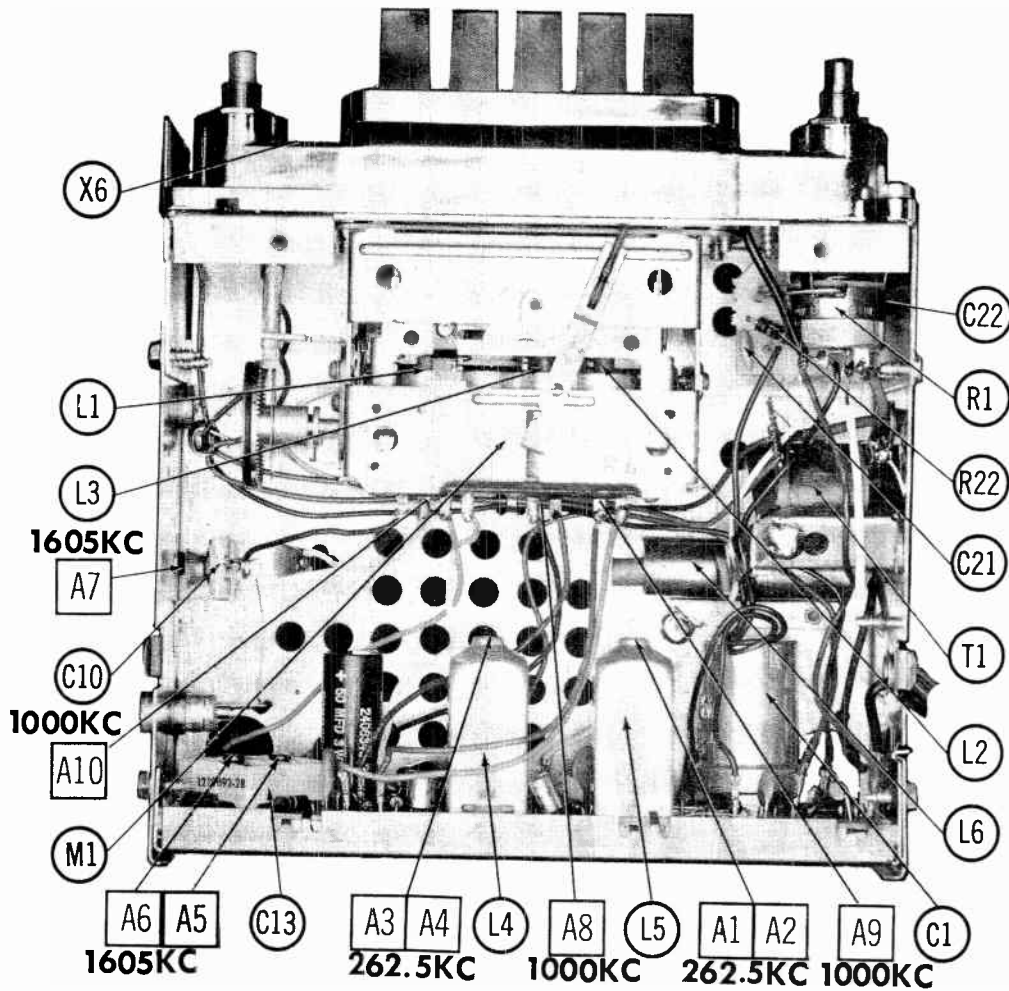
ITEM No.	RATINGS			REPLACEMENT DATA					NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (10 CURRENT 1000-)	BENDIX PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L6	680ma	.1Ω	1.2MH	2092050-8	C-4095①	TC-1 ①	TR-159 ①	TY16XT①	① Fabricate Mtg.

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE	REPLACEMENT DATA					NOTES
		BENDIX PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	12Ω Tap② 8Ω	2092138-6				TR-164	

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		BENDIX PART No.	QUAM PART No.	
SP1	5" x 7" PM 8Ω	2092968-0701 ①		① Part #2092051-1 used in Model 4TBO



PARTS LIST AND DESCRIPTION (CONTINUED)

Replacement parts shown may be superseded by the availability of newly introduced replacements.
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

MISCELLANEOUS

ITEM No.	PART NAME	BENDIX PART No.	NOTES
M1	Tuner (RCC) Tuner (GIC) Tuner (RCC) Tuner (GIC)	2093177-4 2093177-2 2092753-12 2092753-10	Complete, Model 4TBD Complete, Model 4TBD Complete, Model 4TBO Complete, Model 4TBO
M2	AVC	2092055-1	
M3	AF Det.	2092055-1	
M4	Spark Plate	220267-25	200mmf

CABINETS & CABINET PARTS

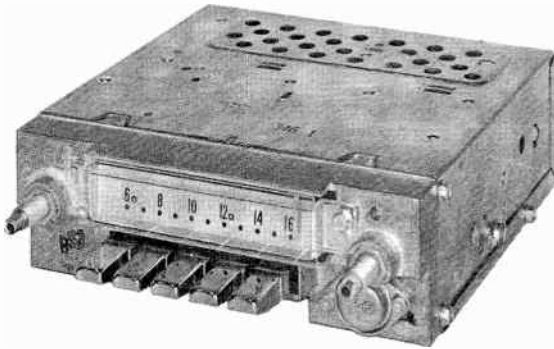
(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
MODEL 4TBD		MODEL 4TBO	
Escutcheon & Dial Glass	2092717-1	Escutcheon & Dial Glass	2092716-1
Dial Glass	2093175-1	Dial Glass	2093203-1
Knob - Tuning, Volume	2092989-0501	Knob - Tuning, Volume	2092034-2
Knob - Tone, Dummy	2092990-0001	Knob - Tone, Dummy	2092986-1
Push Button	2093178-1	Push Button	2092045-2



PHOTOFACT[®] with

CIRCUITRACE[®]



TRADE NAME : Ford Model 4TMF (C4GA-18806)
(1964 Galaxie)
SUPPLIER : Motorola Inc.
9401 W. Grand Ave., Franklin Park, Ill.
TYPE SET : 5 Transistor AM Receiver
POWER SUPPLY : 12 Volt Storage Battery
RATING : .40 Amp. @12.6VDC
TUNING RANGE : BROADCAST 540 - 1615KC

ALIGNMENT INSTRUCTIONS

Check for specified source voltage.
Use only enough generator output to provide a usable indication.
Suggested Alignment Tools:

A1 thru A4.....GENERAL CEMENT #8606, 8606L, 8869
WALSCO #2543, 2544, 2588
A5, A6, A7.....GENERAL CEMENT #8290, 8868, 9087
WALSCO #2525, 2528, 2587

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1.	High side thru .1mfid to point Δ , low side to ground.	262KC (400v Mod.)	High Freq. End Stop.	Output Meter across voice coil.	A1, A2, A3, A4	Adjust for maximum.
2.	Thru dummy (Fig. 1) to antenna receptacle.	1615KC	"	"	A5, A6, A7	"
Step 3 is not necessary unless tuner has been tampered with or associated components have been replaced. IF necessary, back tuning cores (A8, A9, A10) out of coils but not out of forms. Repeat step 2.						
3.	Thru dummy (Fig. 1) to antenna receptacle.	1000KC	Tune to Signal.	Output Meter across voice coil.	A8, A9, A10	Adjust for maximum. Repeat steps 2 & 3 until no further improvement is noted.
With radio installed in car and antenna fully extended, tune in a weak station near 1600KC and adjust A7 for maximum output.						

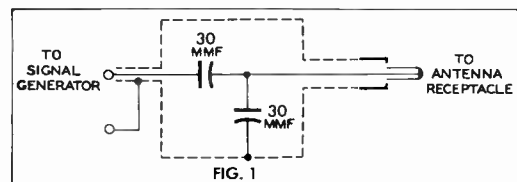
REMOVAL INSTRUCTIONS

RADIO

1. Pull off knobs.
2. Use 9/16" wrench and remove 2 nuts from control bushings. Remove bezel. Use 9/16" wrench and remove 2 nuts from control bushings.
3. Disconnect "A" lead, antenna lead, and speaker leads.
4. Use 7/16" wrench and remove nut from back brace.
5. Remove radio from under instrument panel.

SPEAKER

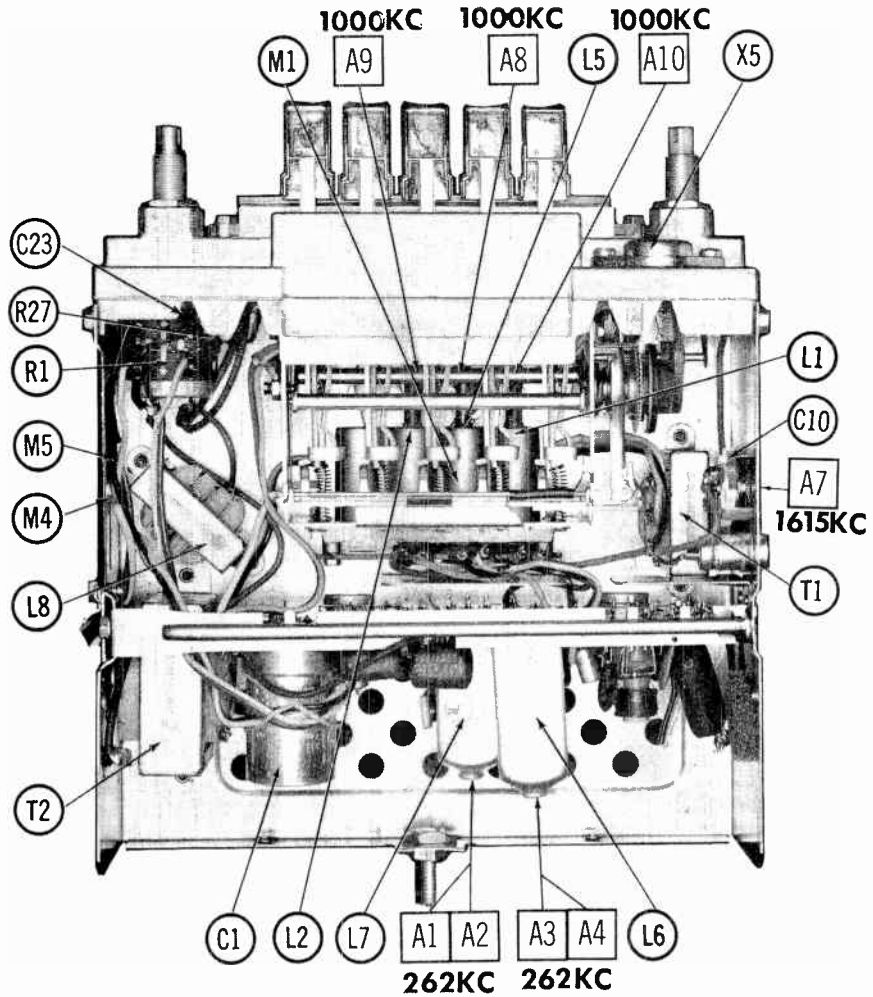
1. Remove 4 wing nuts from each corner of speaker.
2. Remove speaker from under instrument panel.



PUSH-BUTTON ADJUSTMENT

1. Pull button out.
2. Tune manually to desired station.
3. Press button in firmly.
4. Repeat for remaining buttons.

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



PARTS LIST AND DESCRIPTION

Replacement parts shown may be superseded by the availability of newly introduced replacements. Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	
X1	2SA72	RF Amp.	DS-25	GE-1	2N1637	PNP
X2	2SA72	Conv.	DS-25	GE-1	2N1639	PNP
X3	2SA72	1F Amp.	DS-25	GE 1	2N1638	PNP
X4	M54	Driver	DS-44	GE-8		NPN
X5	2N176	Output	DS-520	GE-3	2N301	PNP (Note 1)

Note 1. When replacing, apply silicone grease to both sides of insulator. Tighten mounting screws securely.

ELECTROLYTIC CAPACITORS

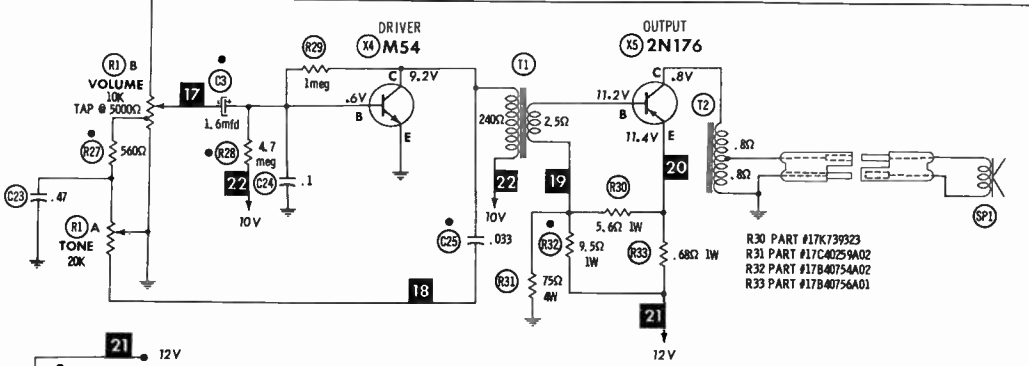
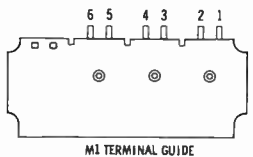
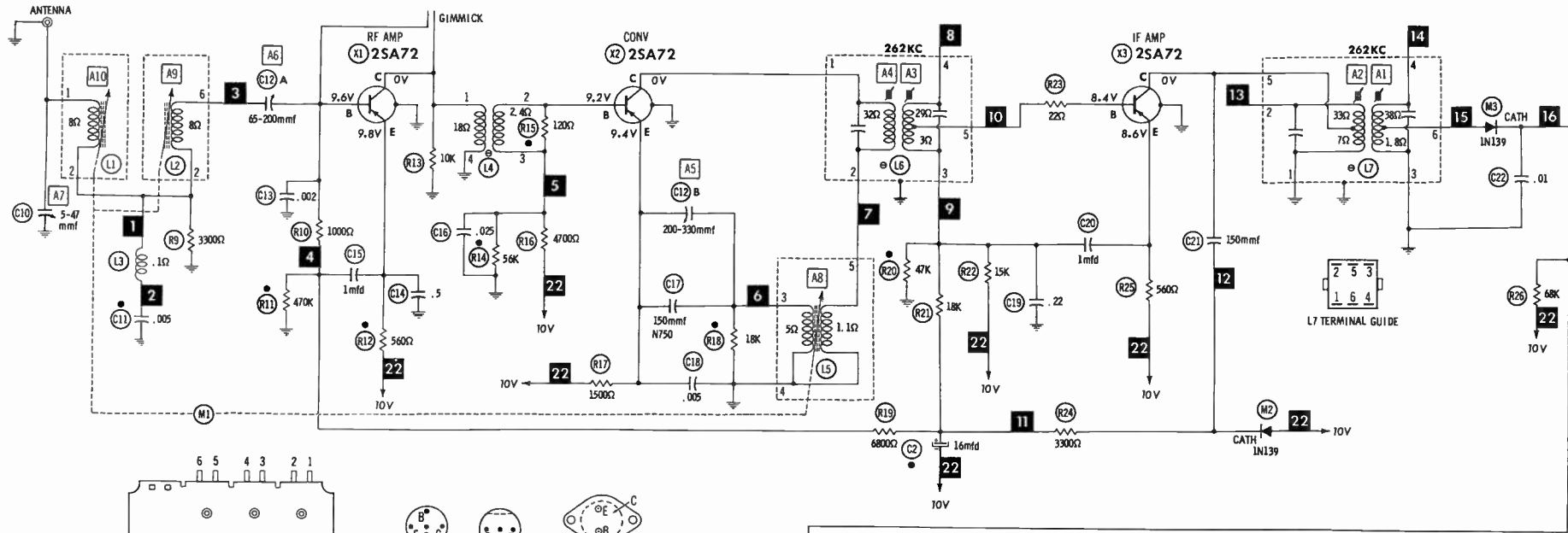
ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	MOTOROLA PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	GENERAL INSTRUMENT PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A	500	16	23C41979A01	PWH2-.02-40				PFP200.65	PCLS-2177 *
B	500	16							
C2	16	16	23C41928A06	CRE609A	NLW15-25	MT1-11	MLV15-25	TT25X15	TL-1156
C3	1.6	25	23C41928A05 ①	CRE601A	NLW2.50	MT1-1	BL1160	TT50X2	TL-1201

① Value Varies. Replace with original Value.

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

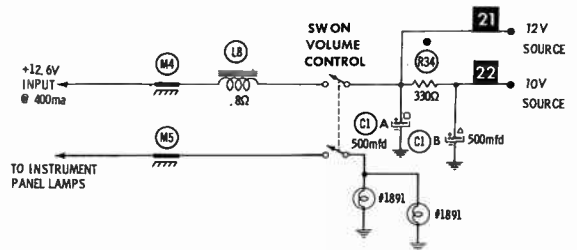
FIXED CAPACITORS

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	5-47	#20B40746A05							
C11	.005 100V		P288N-005	CPR-5000J	DPMS6D5	IDP-1-502	PVC-625	6PS-D50	
C12A	65-200	#20C40254A05							
B	200-330								
C13	.002		BPD-.002	DD-202	BYA10D2	CCD-202	B-220	5HK-D20	
C14	.5 100V		BE2P5		DPMS2P5	IDP-4-504	PVC-105	2PS-P50	
C15	1mfd 3V			UK-105	HCC3105P			HY-135	
C16	.025		TTD-.025	CK-253	H4			TA-125	TG-S25
C17	150 N750		N750-DI 150	DTN-150	C10T15U	CCTN-151	CN7-315	10TCU-T15	



- R30 PART #17K739323
- R31 PART #17C40259A02
- R32 PART #17B40754A02
- R33 PART #17B40756A01

- NOMINAL VALUE MAY VARY
- ⊖ See parts list for alternate value or application.
- 1. Voltage measurements taken with vacuum tube voltmeter.
- 2. All controls set for normal operation, no signal applied.
- 3. Measured values are from socket pin or terminal to common ground.
- 4. All terminals viewed from bottom unless otherwise designated.
- 5. Numbers assigned to terminals may not be found on the unit.
- 6. Supply voltage maintained at rated value for voltage readings.
- 7. Resistance measurements not given because of the wide variation in internal resistance of transistor.

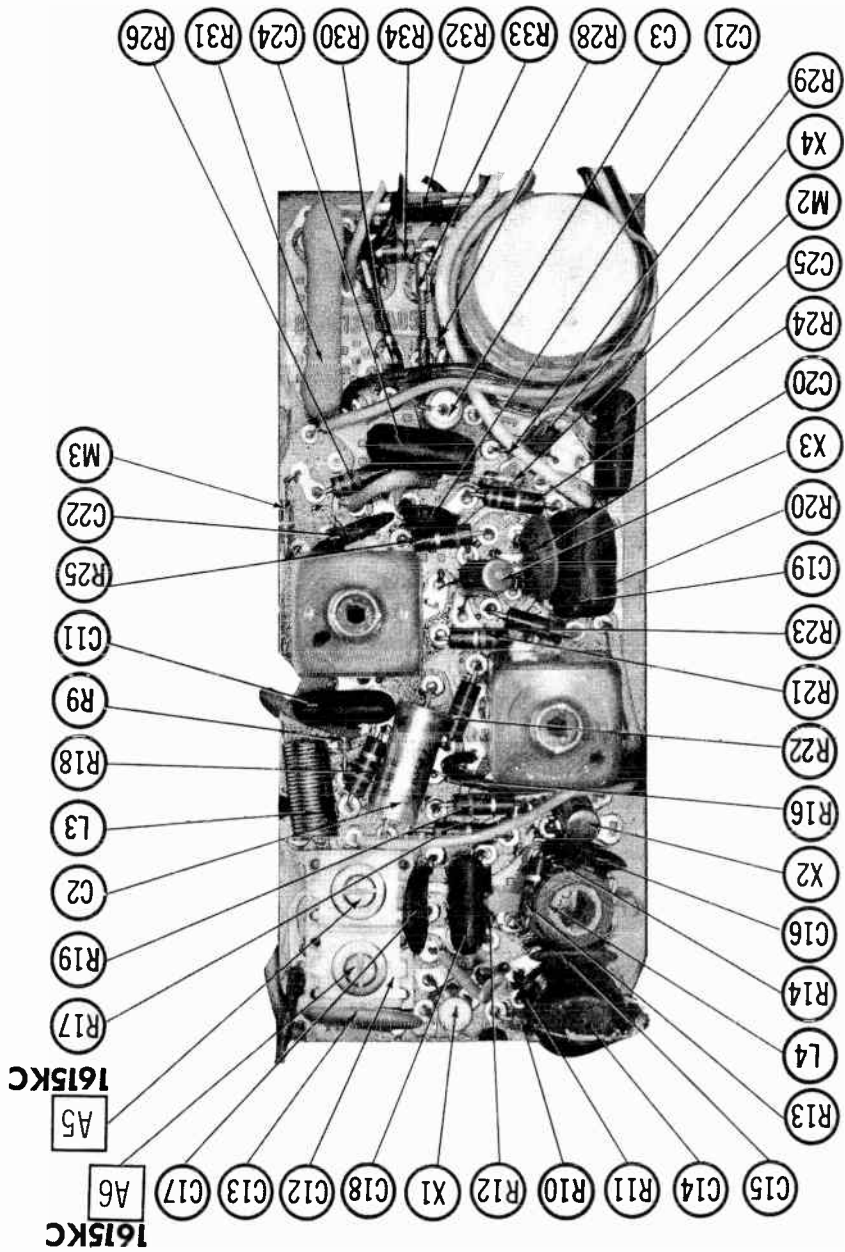
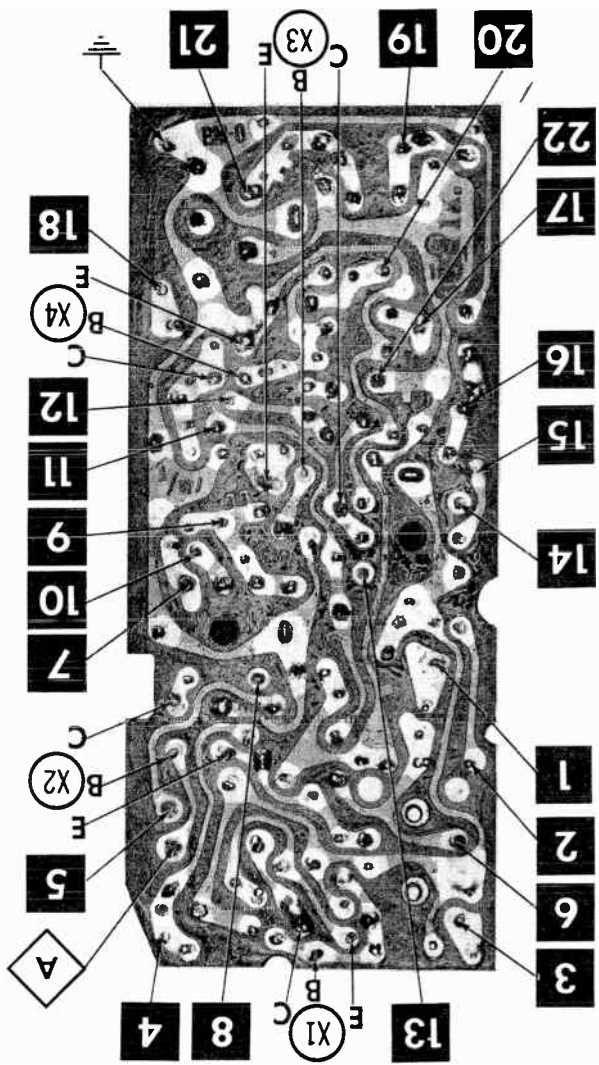


FORD MODEL 4TMF

A PHOTOFAC STANDARD NOTATION SCHEMATIC
with **CIRCUITRACE**
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FORD MODEL 4TMF

A Howard W. Sams CIRCUITRACE Photo



PARTS LIST AND DESCRIPTION (CONTINUED)

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.
C18	.005 100V		P288N-005	CPR-5000J	DPMS8D5	IDP-1-502	PVC-625	6PS-D50
C19	.22 100V		P288N-22		DPM62P22	IDP-3-224	PVC-1022	2PS-P22
C20	1mfd 3V			UK-105	HCC3106P			HY-135
C21	150		DI-150	DD-151	LA10T15-S3	CCD-151	GP315	5GA-T15
C22	.01		BPD-01	DD-103	BYA1061	CCD-103	B-110	5HK-S10
C23	.47 3V			UK10-404	HCC10474Z			HY-330
C24	.1 100V		P288N-1		WMF1P1	IDP-2-104	PVC-101	2PS-P10
C25	.033 100V		BE4833		WMF1S33	IDP-1-333	PVC-1133	4PS-S33

Motorola Part Number.

CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA				
			MOTOROLA PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1A B	Tone Volume & Switch	20K 10K Tap ① 5000Ω	18C41449A03				

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
R31	75Ω 4W	PW5-75	5W-SQ-75						

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		MOTOROLA PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	1st Ant.						① Part of M1 or Coil Ass'y. Part #1V41000A96 ② Includes C16, R13, R14, R15. ③ Alternate Part #24D40074A15. ④ Alternate Part #24D40075A15.
L2	2nd Ant.	①					
L3	Image Trap (1.3uh)	24C40788A05	BC-562	4604	RTC-8516	T856	
L4	RF	24C41077A05 ②					
L5	Osc.	①					
L6	Input IF	24D40074A16 ③	BC-638				
L7	Output IF	24D40075A16 ④	BC-639				

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA					NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	MOTOROLA PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L8	400ma	.8Ω	11MH	25D42032A01	C-4095	TC-2	TR-154	TY17XT	

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
	PRI.	SEC.	MOTOROLA PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
	T1	15	1	25D42045A06			TR-187	

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE	REPLACEMENT DATA					NOTES
		MOTOROLA PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T2	40Ω Tap @ 8Ω	25C41878A01					

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MOTOROLA PART No.	QUAM PART No.	
SP1	6" x 9" PM 8Ω	50D41723A01		

MISCELLANEOUS

ITEM No.	PART NAME	MOTOROLA PART No.	NOTES
M1	Tuner (AT-456)	77D41295A03	
M2	AVC (1N139)	48C134587	
M3	Det. (1N139)	48C134587	
M4	Spark Plate	64A41668A02	
M5	Spark Plate	64A41668A02	

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

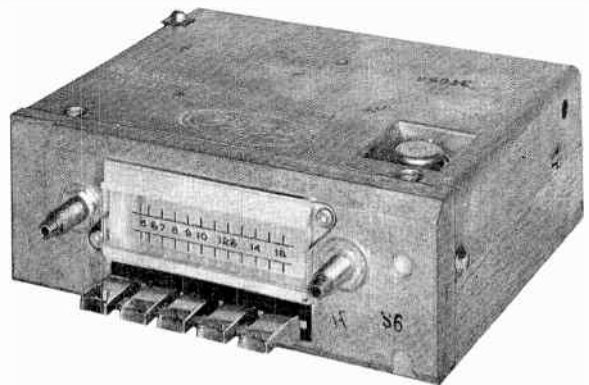
ITEM	PART No.	ITEM	PART No.
Dial Scale	34C41776A01	Push Buttons	38B41229A01
Knob - Tuning, Volume	1B42286A01	Pointer Assembly	52C42062A05
Knob - Tone, Dummy	36C41719A01		

WIRING DATA

General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in 12 Colors 8524 (Stranded) Available in 12 Colors
Shielded Hook-up Wire	Use BELDEN No. 8885
Rear Seat Speaker Extension Cable	Use BELDEN No. 8782 (Stranded) Coded Parallel Leads
Bonding Strap	Use BELDEN No. 8661 (3/8 In.) or 8670 (3/4 In.)



TRADE NAME : Ford Models:
 4TMS(C4SA-18806-J),
 4TMS (F) (C4SA-18806-H)
 (1964 Thunderbird)
 SUPPLIER: Motorola Inc.
 9401 W. Grand Ave., Franklin Park, Ill.
 TYPE SET: 5 Transistor AM Receiver
 POWER SUPPLY: 12 Volt Storage Battery
 RATING: .44 Amp. @ 12.6 VDC
 TUNING RANGE: BROADCAST 540 — 1615KC



ALIGNMENT INSTRUCTIONS

Check for specified source voltage.
 Use only enough generator output to provide a usable indication.
 Suggested Alignment Tools:

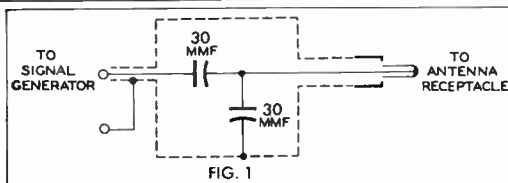
A1 thru A4..... GENERAL CEMENT #8606, 8606L, 8869
 WALSCO #2543, 2544, 2588
 A5, A6, A7..... GENERAL CEMENT #8290, 8868, 9087
 WALSCO #2525, 2528, 2587

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1.	High side thru .1mf to point Δ , low side to ground.	262KC (400% Mod.)	High Freq. End Stop.	Output Meter across voice coil.	A1, A2, A3, A4	Adjust for maximum.
2.	Thru dummy (Fig. 1) to antenna receptacle.	1615KC	"	"	A5, A6, A7	"
Step 3 is not necessary unless tuner has been tampered with or associated components have been replaced. IF necessary, back tuning cores (A8, A9, A10) out of coils but not out of forms. Repeat step 2.						
3.	Thru dummy (Fig. 1) to antenna receptacle.	1000KC	Tune to Signal.	Output Meter across voice coil.	A8, A9, A10	Adjust for maximum. Repeat steps 2 & 3 until no further improvement is noted.

With radio installed in car and antenna fully extended, tune in a weak station near 1600KC and adjust A7 for maximum output.

PUSH-BUTTON ADJUSTMENT

1. Pull button out.
2. Tune manually to desired station.
3. Press button in firmly.
4. Repeat for remaining buttons.



REMOVAL INSTRUCTIONS

RADIO

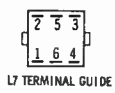
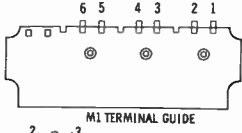
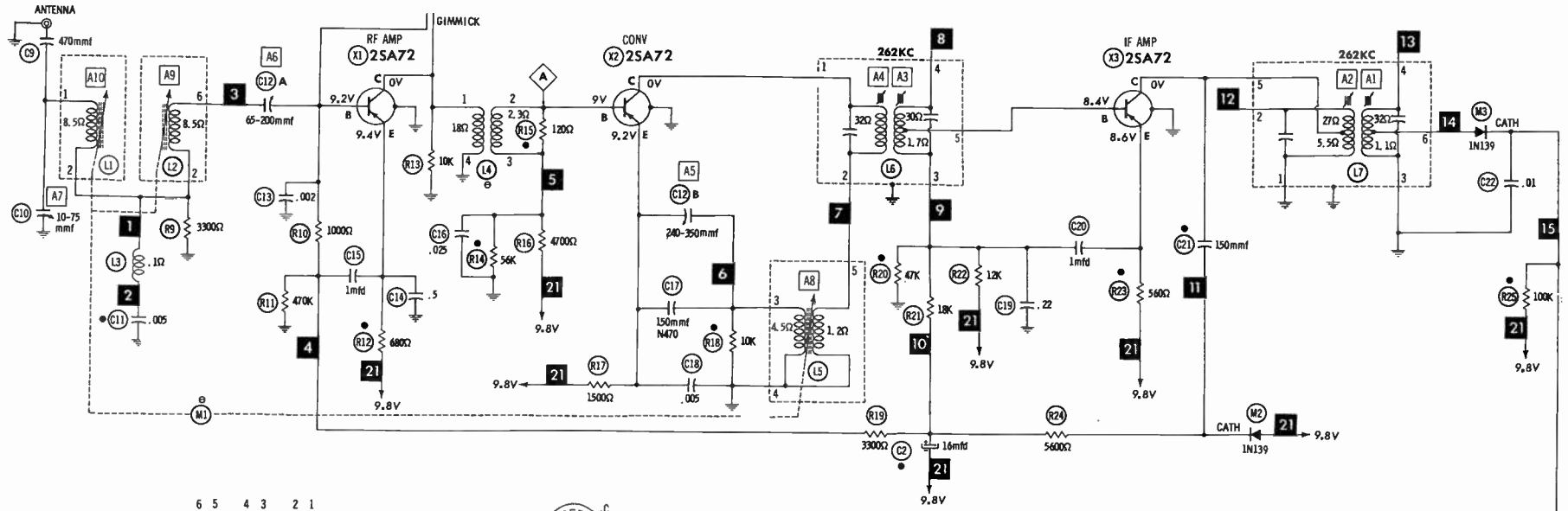
1. Pry off the right side console molding. Remove the right console molding retainers.
2. Remove 2 Phillips screws from right side instrument panel chrome molding.
3. Remove 4 Phillips screws and 2-7/16" bolts from lower finish panel. Pull finish panel away from instrument panel. Remove 3 Phillips screws from upper finish panel and remove panel.
4. Pull off knobs.
5. Use 9/16" wrench and remove nuts from control bushings.

6. Remove trim plate.
7. Repeat step 5.
8. Use 7/16" wrench and remove bolts from rear braces.
9. Disconnect "A" lead, antenna lead and speaker leads.
10. Remove radio through right side.

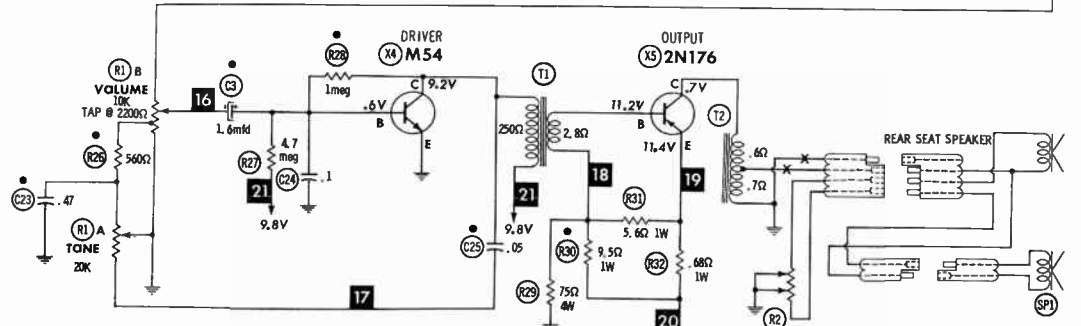
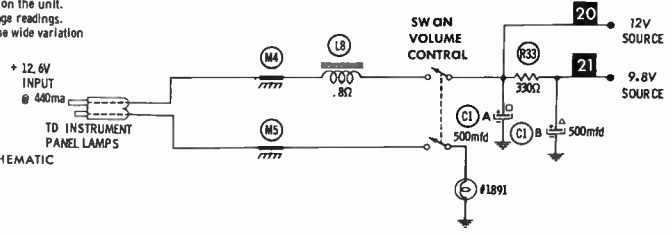
SPEAKER

1. Remove the 4 knobs and 4 Phillips screws from clock housing and position the clock housing down and out of the way.
2. Remove 4 wing nuts from speaker mount.
3. Remove speaker through clock opening.

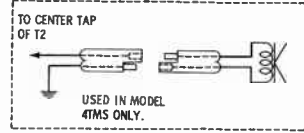
HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana



- NOMINAL VALUE MAY VARY
- ① See parts list for alternate value or application.
- 1. Voltage measurements taken with vacuum tube voltmeter.
- 2. All controls set for normal operation, no signal applied.
- 3. Measured values are from socket pin or terminal to common ground.
- 4. All terminals viewed from bottom unless otherwise designated.
- 5. Numbers assigned to terminals may not be found on the unit.
- 6. Supply voltage maintained at rated value for voltage readings.
- 7. Resistance measurements not given because of the wide variation in internal resistance of transistor.



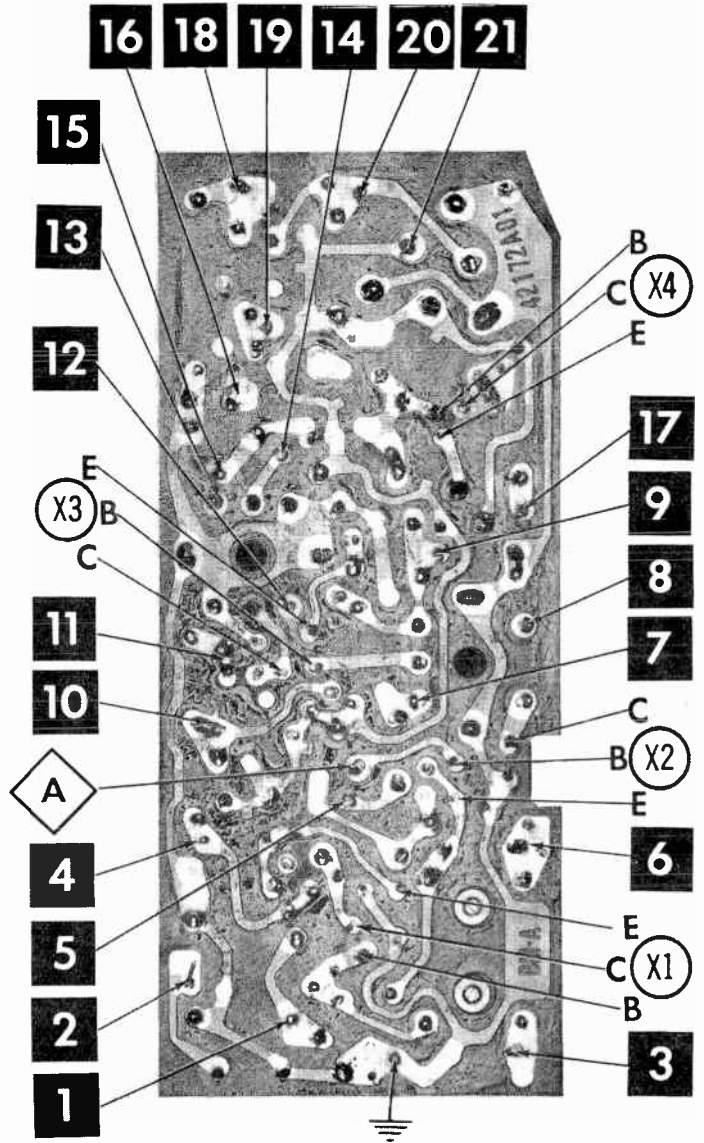
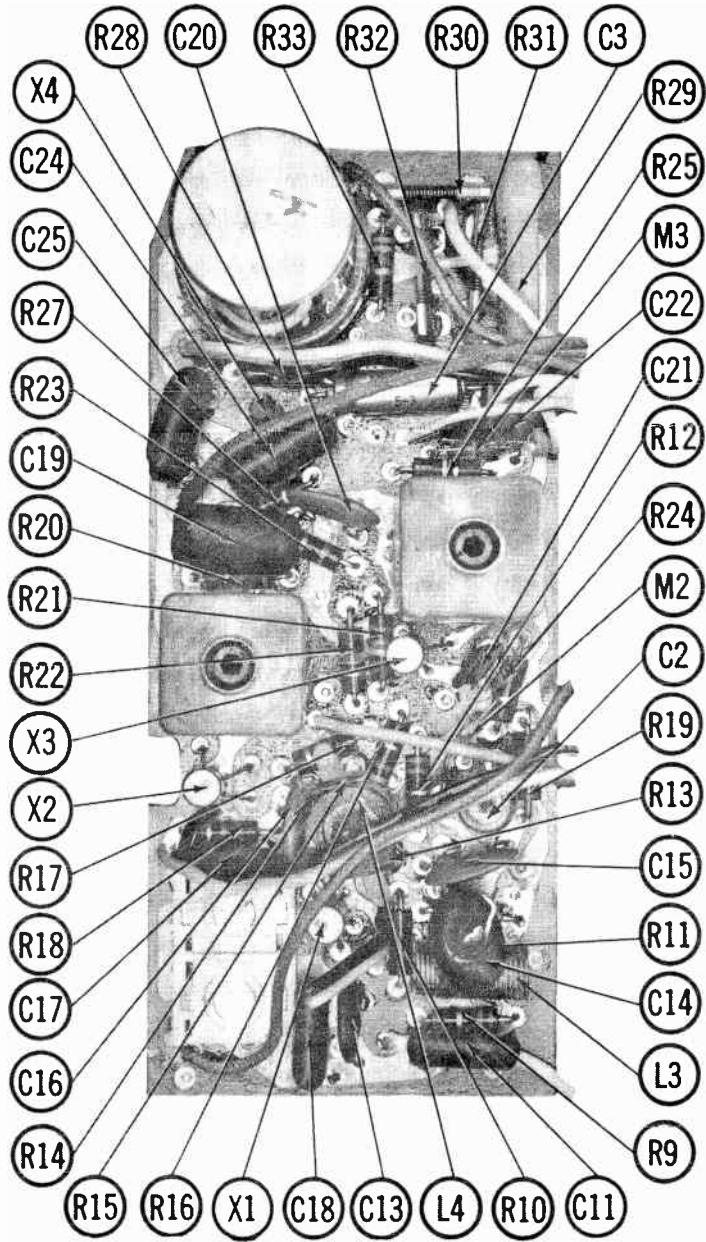
- R29 PART #17C40259A02
- R30 PART #17B40754A02
- R31 PART #17K739323
- R32 PART #17B40756A01



A PHOTOFAC STANDARD NOTATION SCHEMATIC with CIRCUITRACE

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FORD MODEL 4TMS(F)



A Howard W. Sams **CIRCUITRACE** Photo

FORD MODEL 4TWS (F)

PARTS LIST AND DESCRIPTION

Replacement parts shown may be superseded by the availability of newly introduced replacements.
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			NOTES	
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.		
X1		RF Amp. Conv. IF Amp. Driver Output	DS-25	GE-1	2N1637	2SA72	PNP
X2			DS-25	GE-1	2N1639	2SA72	PNP
X3			DS-25	GE-1	2N1638	2SA72	PNP
X4			DS-44	GE-8		M54	NPN
X5			DS-520	GE-3	2N301	2N176	PNP (Note 1)

Note 1. When replacing, apply silicone grease to both sides of insulator.
Tighten mounting screws securely.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		MOTOROLA PART No.	REPLACEMENT DATA					
	CAP.	VOLT.		AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	GENERAL INSTRUMENT PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A	500	16	23C41979A01	PWH2-02-04	NLW15-25	MT1-11	MLV15-25	PFP-200.65	PCLS-2177*
B	500	18							
C2	16	18							
C3	1.6	25	23C41928A06 ①	CRE609A	NLW2-50	MT1-1	BL1180	TT25X15	TL-1156
			23C41928A05 ①	CRE601A				TT50X2	TL-1201

* Not normally in distributor's stock. Available thru distrib.
① Value varies. Replace with original value.

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.	
C9	470	#20B40746A04	BPD-00047	DD-471	BYA10T47	CCD-471	B-347	10TS-T47	
C10	10-75		#20C40254A06	P288N-005	CPR-5000J	DPMS6D5	1DP-1-502	PVC-625	6PS-D50
C11	.005 100V			BPD-002	DD-202	BYA10D2	CCD-202	B-220	5HK-D20
C12A	65-200			BE2P5		DPMS2P5	1DP-504	PVC-105	2PS-P50
B	240-350			UK-105	UK-105	HCC3105P			HY-135
C13	.002			CK-253	CK-253	H4		TA-125	TG-S25
C14	.5 100V								10TCT-T15
C15	1mfd 3V								6PS-D50
C16	.025								2PS-P22
C17	150 N470								HY-135
C18	.005 100V							5GA-T15	
C19	.22 100V	Note 1	P288N-005	CPR-5000J	DPMS6D5	1DP-1-502	PVC-625	5HK-S10	
C20	1mfd 3V	Note 1	P288N-22		DPMS2P22	1DP-3-224	PVC-1022	HY-330	
C21	150	Note 1	UK-105	UK-105	HCC3105P			2PS-P10	
C22	.01	Note 1	DI-150	DD-151	LA10T15-S3	CCD-151	GP315	2PS-S50	
C23	.47 3V	Note 1	BPD-01	DD-103	BYA10S1	CCD-103	B-110		
C24	.1 100V	Note 1	P288N-1	UK10-404	HCC10474Z				
C25	.05 100V	Note 1	P288N-05		WMF1P1	1DP-2-104	PVC-101		
					DPMS2S5	1DP-2-503	PVC-215		

Note 1. Value varies. Replace with original value.
Motorola Part Number.

CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA				
			MOTOROLA PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1A	Tone Volume & Switch	20K	18C41989A01				
B		10K Tap ② 2200Ω					
R2	Fader	100Ω 2W	18B41999A01				

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		MOTOROLA PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	1st Ant.	①					① Part of M1 or Coil Ass'y, #1V4100A96 ② Includes C16, R13, R14, R15. ③ Alt. Part #24D40074A15 ④ Alt. Part #24D40075A15
L2	2nd Ant.	①					
L3	Image Trap(1.3uh)	24C40788A07	BC-561	4602	RTC-8515	T855	
L4	RF	24C41077A05 ②					
L5	Osc.	①					
L6	Input IF	24D40074 A17 ③	BC-638				
L7	Output IF	24D40075 A17 ④	BC-639			T8638	

CHOKE

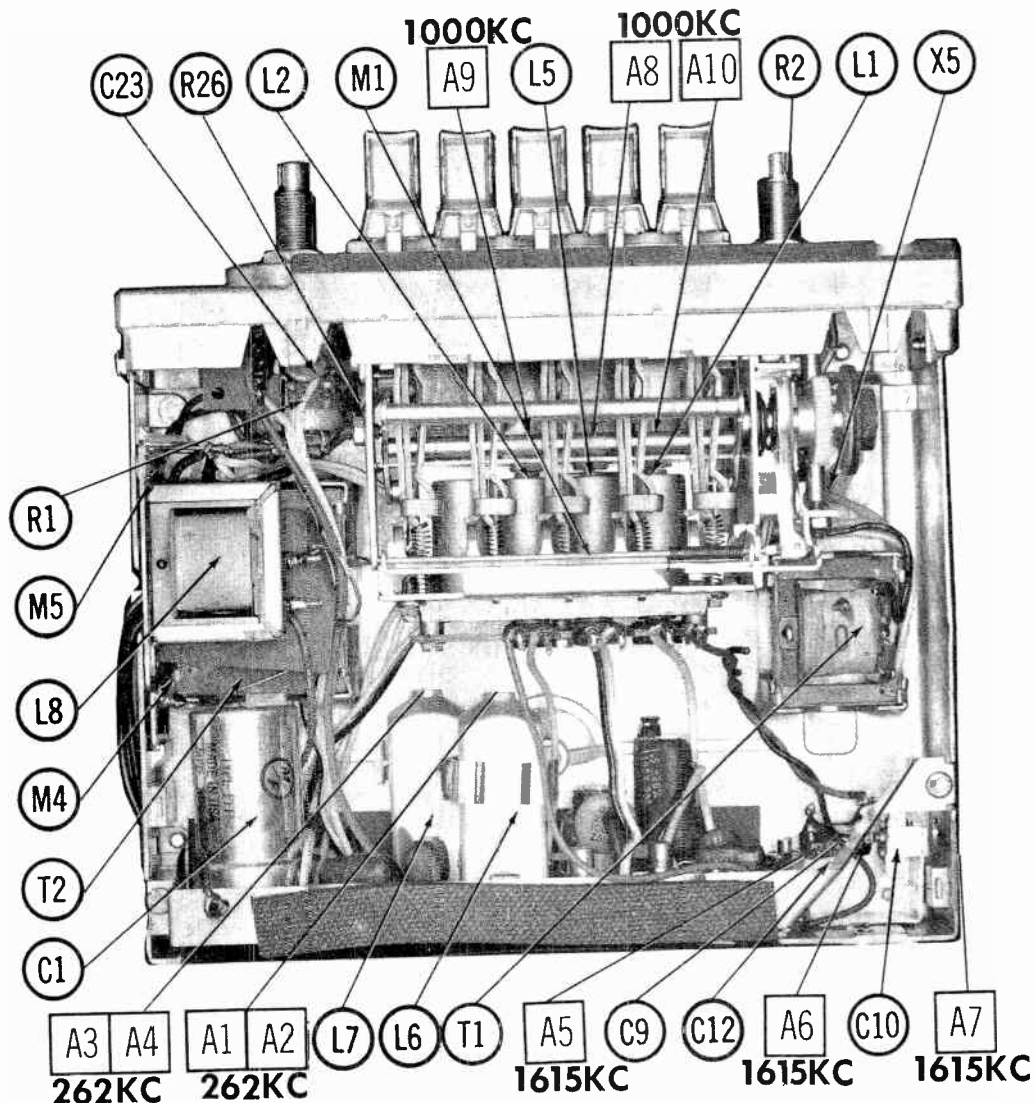
ITEM No.	RATINGS			REPLACEMENT DATA					NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	MOTOROLA PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L8	.44 Amp.	.8Ω	11MH	25D42032A02	C-4095	TC-2	TR-155	TY17XT	

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
	PRI.	SEC.	MOTOROLA PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
	T1	15	1	25D42045A02				

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC.	MOTOROLA PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T2	40Ω Tap	8Ω	25D42101A02					



PARTS LIST AND DESCRIPTION (CONTINUED)

Replacement parts shown may be superseded by the availability of newly introduced replacements.
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MOTOROLA PART No.	QUAM PART No.	
SP1	4" x 10" PM 8Ω	50D42472A01	410A2Z8	

MISCELLANEOUS

ITEM No.	PART NAME	MOTOROLA PART No.	NOTES
M1	Tuner	77D42095A01	AT-441 Model 4TMS(F) AT-463 Model 4TMS 1N139 1N139
M2	Tuner	77D42095A02	
M3	AVC	48C134587	
M4	AF Det.	48C134587	
M5	Spark Plate	64A41668A03	
	Spark Plate	64A41668A03	

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
Knob - Tuning, Volume	36B42471A01	Dial Glass	61C41954A01
Knob - Tone, Fader	36C41992A01	Dial Scale	34C41970A01
Push Button	38B41993A01	Pointer Assembly	52C42062A04

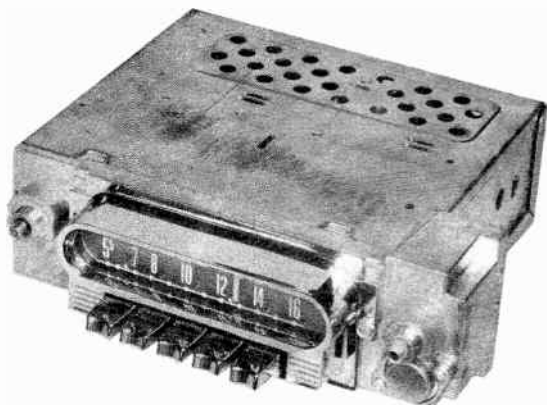
WIRING DATA

General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in 12 Colors 8524 (Stranded) Available in 12 Colors
Shielded Hook-up Wire	Use BELDEN No. 8885
Rear Seat Speaker Extension Cable	Use BELDEN No. 8782 (Stranded) Coded Parallel Leads
Bonding Strap	Use BELDEN No. 8661 (3/8 In.) or 8670 (3/4 In.)



PHOTOFACT[®] with

CIRCUITRACE[®]



TRADE NAME: Mercury Models:
 3TME (C3GA-18806) (1963 Comet)
 3TMY (C3YA-18806) (1963 Meteor)

SUPPLIER: Motorola Inc.
 9401 W. Grand Ave., Franklin Park, Ill.

TYPE SET: 5 Transistor AM Receiver

POWER SUPPLY: 12 Volt Storage Battery

RATING: .6 Amp. @ 12.6VDC

TUNING RANGE: BROADCAST 540 - 1615KC

MERCURY MODELS 3TME, 3TMY

ALIGNMENT INSTRUCTIONS

Check for specified source voltage.
 Use only enough generator output to provide a usable indication.
 Suggested Alignment Tools:

- A1 thru A4.....GENERAL CEMENT #8606, 8606L, 8869
 WALSCO #2543, 2544, 2588
- A5, A6, A7.....GENERAL CEMENT #8290, 8868, 9087
 WALSCO #2525, 2528, 2587

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1.	High side thru .1mfd to point Δ , low side to ground.	262KC (400% Mod.)	High Freq. End Stop.	Output Meter across voice coil.	A1, A2, A3, A4	Adjust for maximum.
2.	Thru dummy (Fig. 1) to antenna receptacle.	1615KC	"	"	A5, A6, A7	"
Step 3 is not necessary unless tuner has been tampered with or associated components have been replaced. IF necessary, back tuning cores (A8, A9, A10) out of coils but not out of forms. Repeat step 2.						
3.	Thru dummy (Fig. 1) to antenna receptacle.	1000KC	Tune to Signal.	Output Meter across voice coil.	A8, A9, A10	Adjust for maximum. Repeat steps 2 & 3 until no further improvement is noted.

With radio installed in car and antenna fully extended, tune in a weak station near 1000KC and adjust A7 for maximum output.

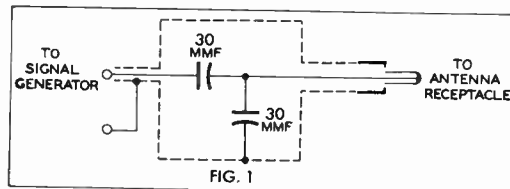
REMOVAL INSTRUCTIONS

RADIO

1. Pull off knobs.
2. Use 9/16" wrench and remove nuts from control bushings.
- 2A. Remove radio trim plate.
- 2B. Use 9/16" wrench and remove nuts from control bushing.
3. Disconnect "A" lead, antenna lead and speaker leads.
4. Use 7/16" wrench and remove nut from rear bracket.
5. Remove radio from under instrument panel.

SPEAKER

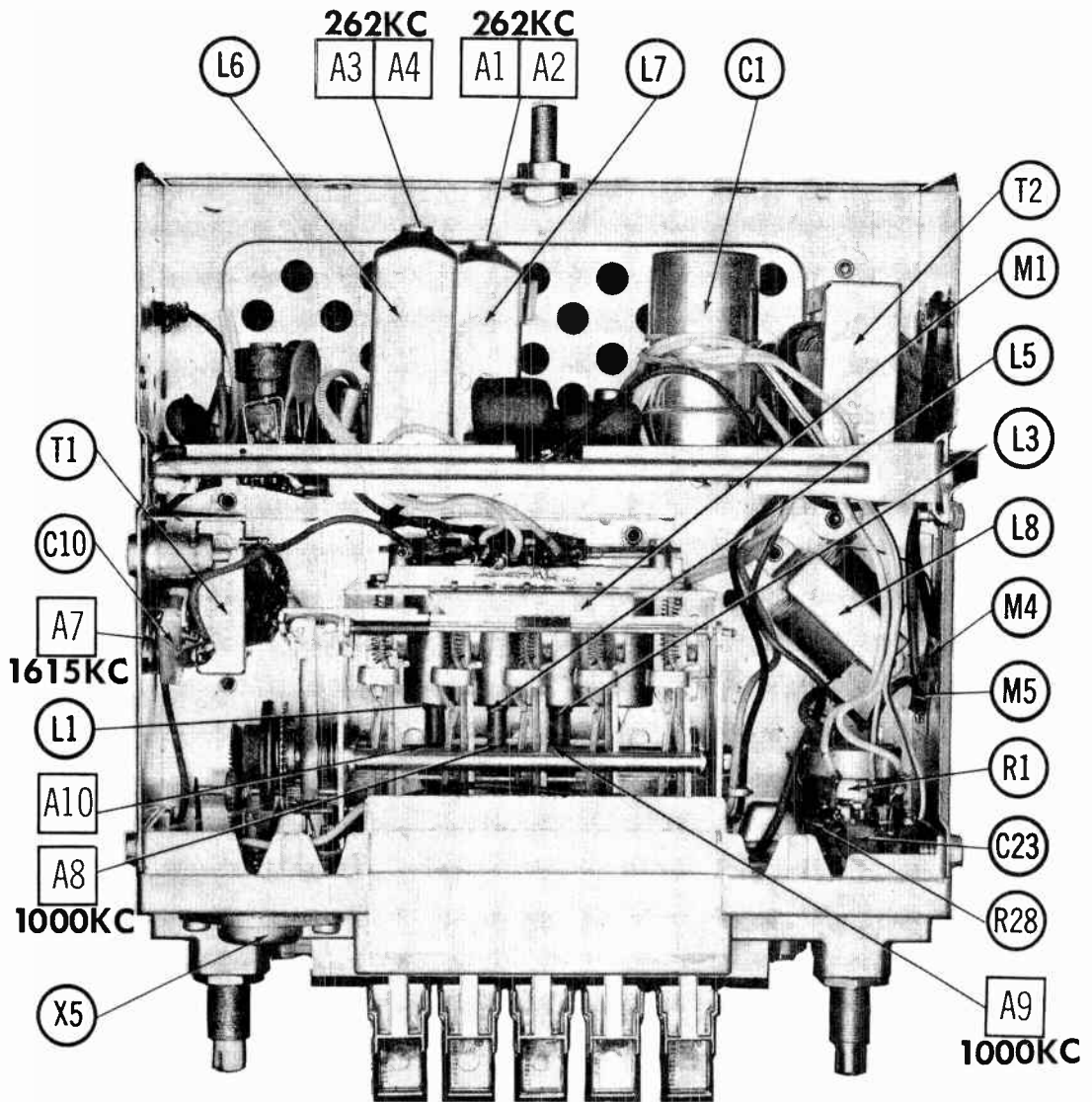
1. Remove 4 Phillips screws holding speaker grille.
2. Lift speaker grille up.
3. Use 3/8" wrench and remove metal screws from speaker mounting.
4. Lift speaker out top of instrument panel.
5. Disconnect speaker leads.

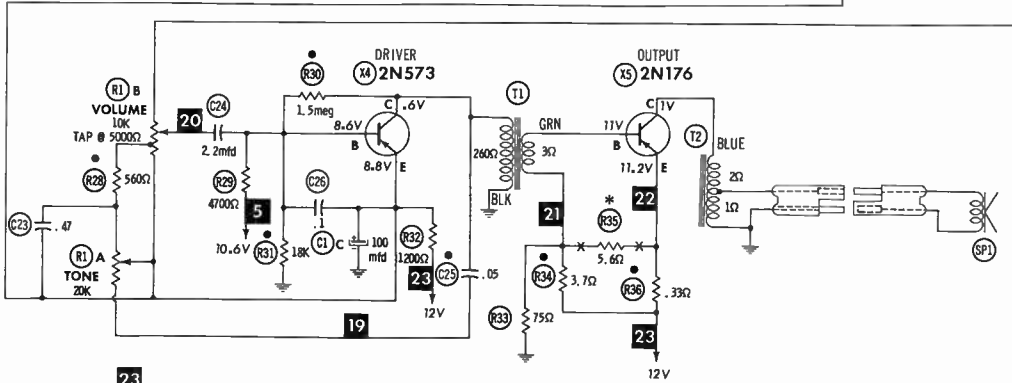
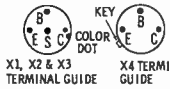
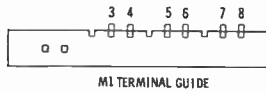
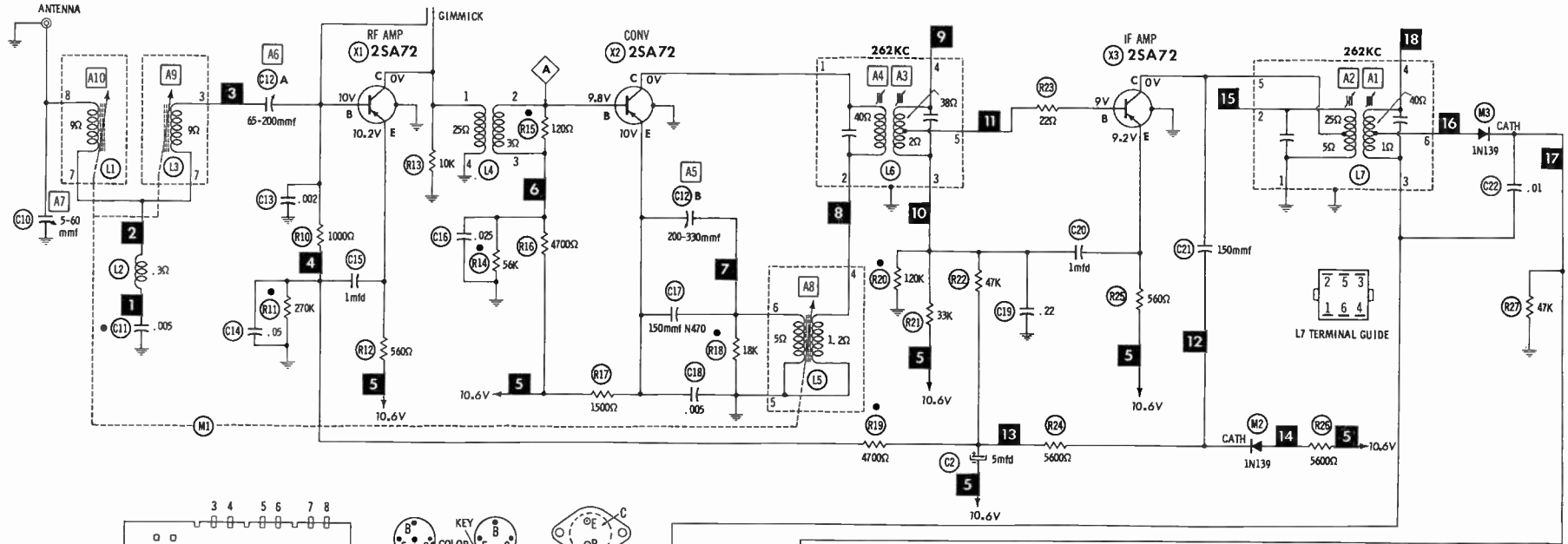


PUSH-BUTTON ADJUSTMENT

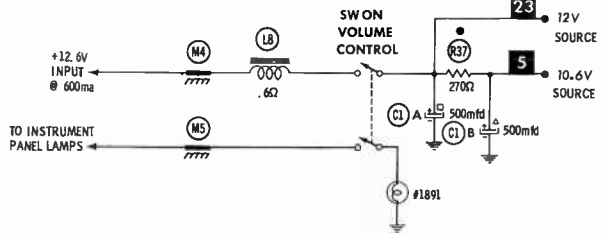
1. Pull button out.
2. Tune manually to desired station.
3. Press button in firmly.
4. Repeat for remaining buttons.

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



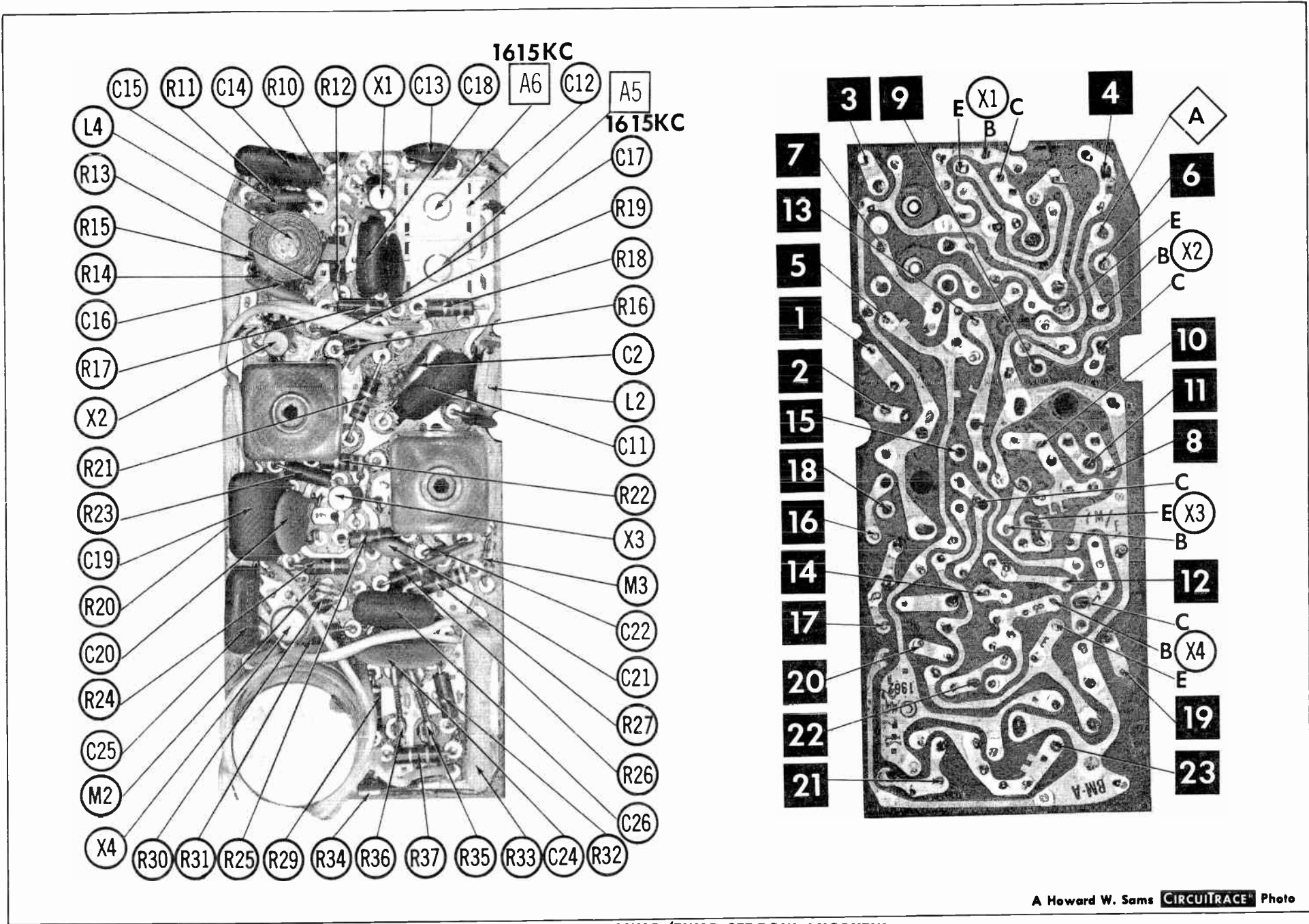


- NOMINAL VALUE MAY VARY
- * NOT USED IN SOME VERSIONS
- 1. Voltage measurements taken with vacuum tube voltmeter.
- 2. All controls set for normal operation, no signal applied.
- 3. Measured values are from socket pin or terminal to common ground.
- 4. All terminals viewed from bottom unless otherwise designated.
- 5. Numbers assigned to terminals may not be found on the unit.
- 6. Supply voltage maintained at rated value for voltage readings.
- 7. Resistance measurements not given because of the wide variation in internal resistance of transistor.



MERCURY MODELS 3TME, 3TMY

A PHOTOFACIT STANDARD NOTATION SCHEMATIC
with **CIRCUITRACE**
©Howard W. Sams & Co., Inc., 1964



A Howard W. Sams **CIRCUITRACE** Photo

PARTS LIST AND DESCRIPTION

Replacement parts shown may be superseded by the availability of newly introduced replacements.

WIRING DATA

Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement. **COILS (RF-IF)**

General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in 12 Colors
Shielded Hook-up Wire	8524 (Stranded) Available in 12 Colors
Rear Seat Speaker Extension Cable	Use BELDEN No. 8782 (Stranded) Coded Parallel Leads
Bonding Strap	Use BELDEN No. 8661 (3/8 In.) or 8670 (3/4 In.)

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	
X1	2SA72	RF Amp.	DS-25	GE-1	2N1637	PNP
X2	2SA72	Conv.	DS-25	GE-1	2N1639	PNP
X3	2SA72	IF Amp.	DS-25	GE-1	2N1638	PNP
X4	2N573	Driver	DS-26	GE-2	2N591	PNP
X5	2N176	Output	DS-520	GE-3	2N301	PNP (Note 1)

Note 1. When replacing, apply silicone grease to both sides of insulator. Tighten mounting screws securely.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	MOTOROLA PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	GENERAL INSTRUMENT PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A	500	16	23C40516A01	PWH3-00-95				PPF-300.18	PCLS-3026.11
B	500	18							
C	100	16							
C2	5	6	23K565201	PTT4	NLW5-15	MT1-3	MLV5-12	TT6X5	TE-1084

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

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	5-80	#20B40746A03 ①							
C11	.005 100V		P288N-005	CPR-5000J	DPMS8D5	IDP-1-502	PVC-625	8PS-D50	
C12A	65-200	#20C40254A05							
B	200-330								
C13	.002		BPD-002	DD-202	BYA10D2	CCD-202	B-220	5HK-D20	
C14	.05 100V		P288N-05		DPMS2S5	IDP-2-503	PVC-215	2PS-S50	
C15	1mfd 3V			UK-105	HCC3105P			HY-135	
C16	.025		TTD-025	CK-253	H4		TA-125	TG-S25	
C17	150 N470							10TCS-T15	
C18	.005 100V		P288N-005	CPR-5000J	DPMS8D5	IDP-1-502	PVC-625	6PS-D50	
C19	.22 100V		P288N-22		DPMS2P22	IDP-3-224	PVC-1022	2PS-P22	
C20	1mfd 3V				HCC3105P			HY-135	
C21	150		DI-150	UK-105	LA10T15-S3	CCD-151	GP315	5GA-T15	
C22	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10	
C23	.47 3V			UK10-404	HCC10474Z			HY-330	
C24	2.2mfd 3V			UK-225	HCC3225P			HY-150	
C25	.05 100V		P288N-05		DPMS2S5	IDP-2-503	PVC-215	2PS-S50	
C28	.1 100V		P488N-1	DF-104	PM4P1	4DP-3-104	GEM-401	4TM-P10	

① Model 3TME uses 10-75mmf (Part #20B40747A02) **CONTROLS**

Motorola Part Number.

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA				
			MOTOROLA PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1A	Tone	20K	18C41341A01				
B	Volume & Switch	10K Tap @5K					

① Model 3TME. Part #18C41449A01 used in Model 3TMY.

ITEM No.	USE	REPLACEMENT DATA					NOTES
		MOTOROLA PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	1st Ant.						
L2	Image Trap	24K565153	BC-561	4602	RTC-8515	T855	
L3	2nd Ant.						
L4	RF	24C41077A04					
L5	Osc.						
L6	Input IF	24D40074A09	BC-638				
L7	Output IF	24D40075A01	BC-639				

① Part of M1 or Coil Assembly Part #1V41000A96.

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA				NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	MOTOROLA PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	
L8	600ma	.6Ω	13MH	25C40474A02	C-4095	TC-2	TR-154	TY17XT

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
	PRI.	SEC.	MOTOROLA PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	18	1	25C40473A06			TR-188		

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE	REPLACEMENT DATA					NOTES
		MOTOROLA PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T2	50Ω Tap@ 8Ω	25C41238A01					

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MOTOROLA PART No.	QUAM PART No.	
SP1	5" x 7" PM 8-8Ω 5" x 7" PM 8-8Ω	50D40952A02 50D40952A01		Model 3TME Model 3TMY

MISCELLANEOUS

ITEM No.	PART NAME	MOTOROLA PART No.	NOTES
M1	Tuner (AT-421)	77D40710A06	Model 3TME
M2	Tuner (AT-422)	77D40785A03	Model 3TMY
M3	AVC (1N139)	48C134587	
M4	Detector (1N139)	48C134587	
M5	Spark Plate	64A41668A02	
	Spark Plate	64A41868A02	
	Printed Board	84D41358A03	Less all Components

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
KNOB			
Volume, Tuning - Model 3TME	36B40072A01	Dial Scale - Model 3TME	34C40708A03
Volume, Tuning - Model 3TMY	1B40948A01	Dial Scale - Model 3TMY	34C40709A03
Tone, Dummy - Model 3TME	36B562974	Push Button - Model 3TME	36B40827A02
Tone, Dummy - Model 3TMY	36C40950A01	Push Button - Model 3TMY	36B40743A01



TRADE NAME : Mercury Model 4TBM (C4MA-18805)
(1964 Mercury)

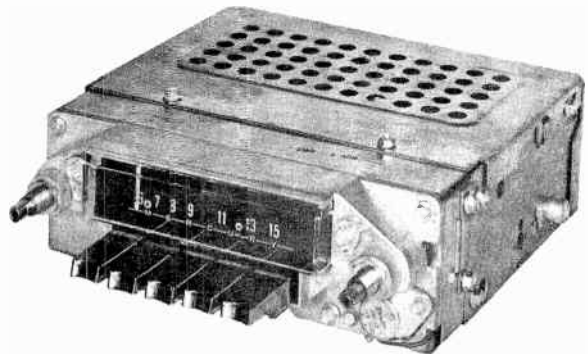
SUPPLIER : The Bendix Corp., Bendix Radio Div.
Baltimore 4, Maryland

TYPE SET : 6 Transistor AM Receiver

POWER SUPPLY : 12 Volt Storage Battery

RATING : .68 Amp. @ 12.6VDC

TUNING RANGE : BROADCAST 540 - 1605KC



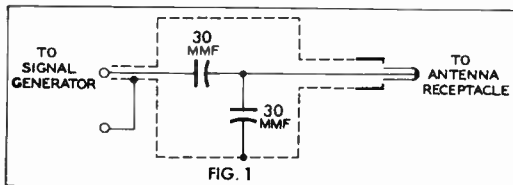
MERCURY MODEL 4TBM

ALIGNMENT INSTRUCTIONS

Check for specified source voltage.
Use only enough generator output to provide a usable indication.
Suggested Alignment Tools:

A1 thru A4.....GENERAL CEMENT #8606, 8606L, 8869
WALSCO #2543, 2544, 2588
A5, A6, A7..... GENERAL CEMENT #8290, 8868, 9087
WALSCO #2525, 2528, 2587

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1.	High side thru .1mf to point Δ , low side to ground.	262.5KC (400 ω Mod.)	High Freq. End Stop.	Output Meter across voice coil.	A1, A2, A3, A4	Adjust for maximum.
2.	Thru dummy (Fig. 1) to antenna receptacle.	1605KC	"	"	A5, A6, A7	"
Step 3 is not necessary unless tuner has been tampered with or associated components have been replaced. IF necessary, back tuning cores (A8, A9, A10) out of coils but not out of forms. Repeat step 2.						
3.	Thru dummy (Fig. 1) to antenna receptacle.	1000KC	Tune to Signal.	Output Meter across voice coil.	A8, A9, A10	Adjust for maximum. Repeat steps 2 & 3 until no further improvement is noted.
With radio installed in car and antenna fully extended, tune in a weak station near 1000KC and adjust A7 for maximum output.						



PUSH-BUTTON ADJUSTMENT

1. Pull button out.
2. Tune manually to desired station.
3. Press button in firmly.
4. Repeat for remaining buttons.

REMOVAL INSTRUCTIONS

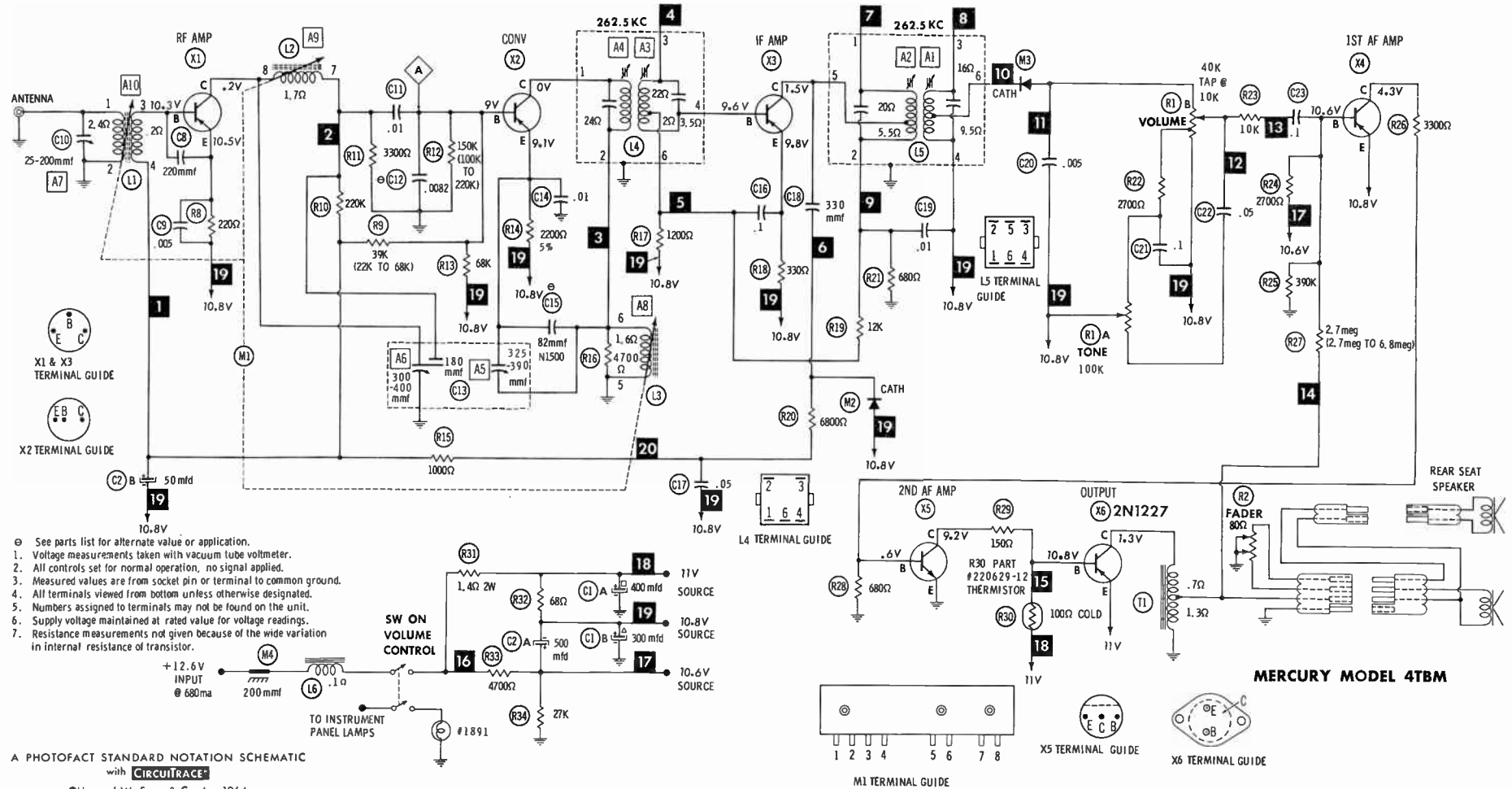
NOTE: To replace transistors, remove radio.

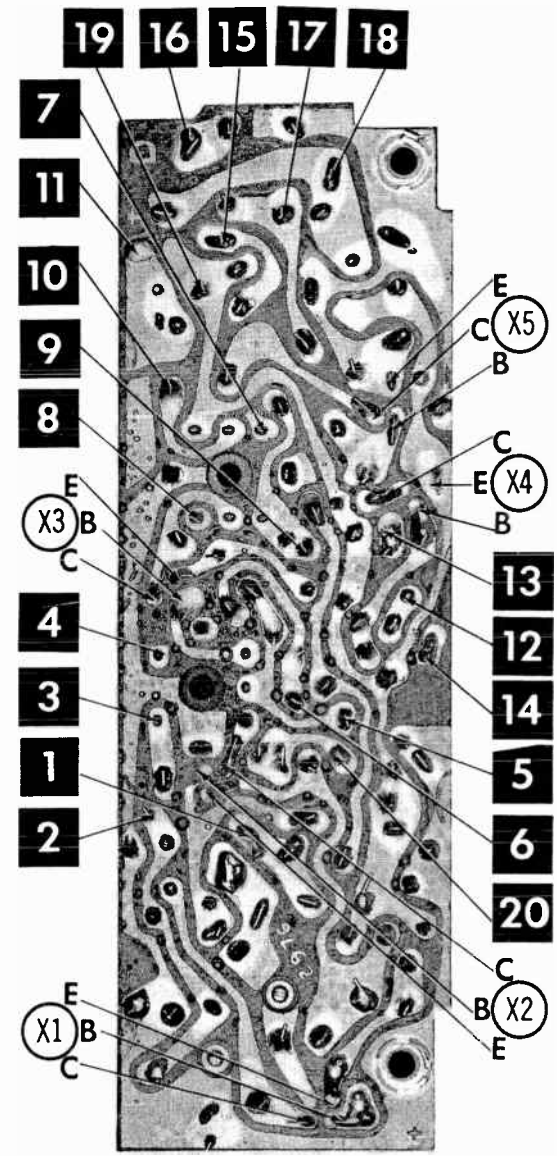
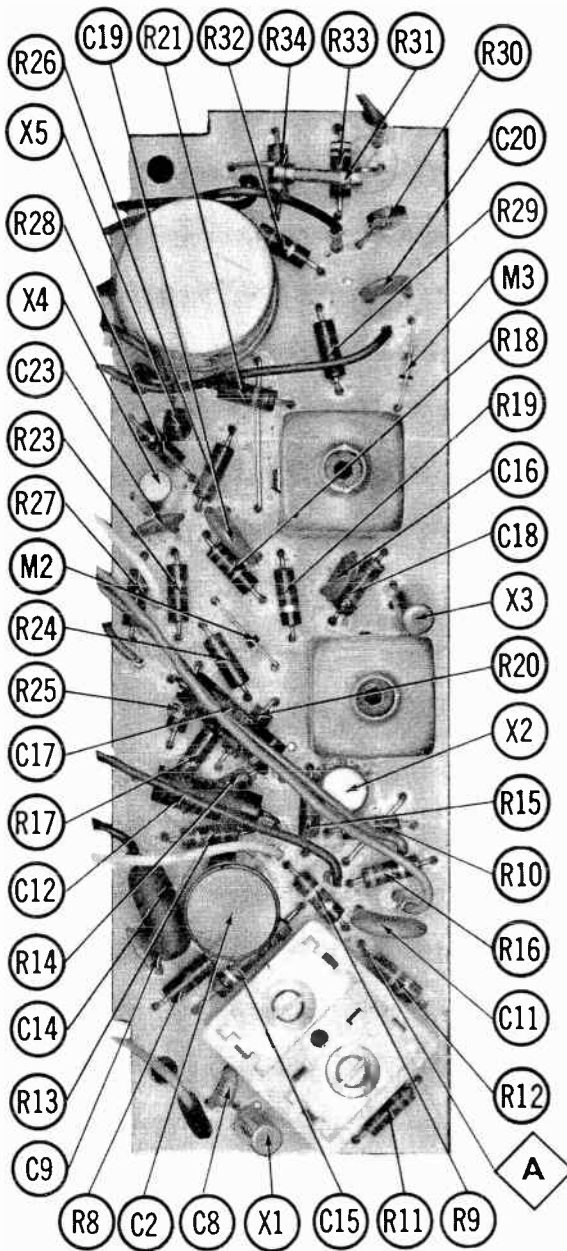
RADIO

1. Pull off knobs.
2. Use 9/16" wrench and remove nuts from control bushings.
3. Disconnect "A" lead, dial lamp lead & ant. lead.
4. Use 7/16" wrench and remove nut from rear of radio. Dislodge brace bracket.
5. Remove radio from under instrument panel.

SPEAKER

1. Remove wing nuts from under instrument panel holding front of speaker grill.
2. Lift front of speaker grill and slide back and remove.
3. Use 3/8" wrench and remove metal screws at each end of speaker.
4. Lift speaker out top of instrument panel.





MERCURY MODEL 4TBM

A Howard W. Sems **CIRCUITRACE** Photo

PARTS LIST AND DESCRIPTION

Replacement parts shown may be superseded by the availability of newly introduced replacements.

Have your local distributor check Soms COUNTER FACTS for the most up-to-date replacement.

WIRING DATA

General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in 12 Colors 8524 (Stranded) Available in 12 Colors
Shielded Hook-up Wire	Use BELDEN No. 8885
Rear Seat Speaker Extension Cable	Use BELDEN No. 8782 (Stranded) Coded Parallel Leads
Bonding Strap	Use BELDEN No. 8681 (3/8 In.) or 8670 (3/4 In.)

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			BENDIX PART No.	NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.		
X1		RF Amp.	DS-25	GE-1	2N1637	2091241-15A	PNP
X2		Conv.	DS-25	GE-1	2N1639	2091241-13	PNP
X3		IF Amp.	DS-25	GE-1	2N1638	2091241-14	PNP
X4		1st AF Amp.	DS-26	GE-3	2N591	2090924-8A	PNP
X5		2nd AF Amp.	DS-44	GE-8		2092809-2	PNP
X6	2N1227	Output	DS-520	GE-3	2N301	2091859-8	PNP (Note 1)

Note 1. When replacing, apply silicone grease to both sides of insulator. Tighten mounting screws securely.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	BENDIX PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	GENERAL INSTRUMENT PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A	400	18	2092983-1	PWH2-02-08				PFP-300,65	PCLS-2174.1*
B	300	16							
C2A	500	3	2092248-1	BCD3X50050				PET-290	VLS-2118*
B	50	3							

* Not normally in distributor's stock.

Available thru distributor on order to manufacturer.

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.
C8	220		DI-220	DD-221	LA10T22-S3	CCD-221	GP322	10TS-T22
C9	.005		BPD-005	DD-502	BYA10D5	CCD-502	B-250	5HK-D50
C10	25-200	#2091504-8						
C11	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C12	.0082 100V	①	P288N-008	CPR-8200J	DPMS8D82	6DP-2-822	PVC-828	6PS-D82
C13A	300-400	#219092-28						
B	180							
C	325-390							
C14	.01 100V		BE2S1	CPR-10000J	WMF1S1	1DP-1-103	PV-211	4PS-S10
C15	82 N1500	#2091700-33①						
C16	.1 10V		TTD-1	CK-104	H6		TA-010	TG-P10
C17	.05 100V		P288N-05		DPMS2S5	1DP-2-503	PV-215	2PS-S50
C18	330		DI-330	DD-331	LA10T33-C4	CCD-331	GP333	10TS-T33
C19	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C20	.005		BPD-005	DD-502	BYA10D5	CCD-502	B-250	5HK-D50
C21	.1 10V		TTD-1	CK-104	H6		TA-010	TG-P10
C22	.05 100V		P288N-05		DPMS2S5	1DP-2-503	PV-215	2PS-S50
C23	.1 10V		TTD-1	CK-104	H8		TA-010	TG-P10

Bendix Part Number. ① Exact Value Determined by Production. Replace with original value.

CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA				
			BENDIX PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1A	Tone	100K	2092097-5				
B	Volume & Switch	40K Tap @ 10K					
R2	Fader	80Ω 2W	2093287-0701				

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		BENDIX PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	Ant.						
L2	RF	2090131-66①					
L3	Osc.						
L4	Input IF	2093163-2					
L5	Output IF	2093164-2					

① RCC Tuner. GIC Tuners use Part #2090131-64.

CHOKE

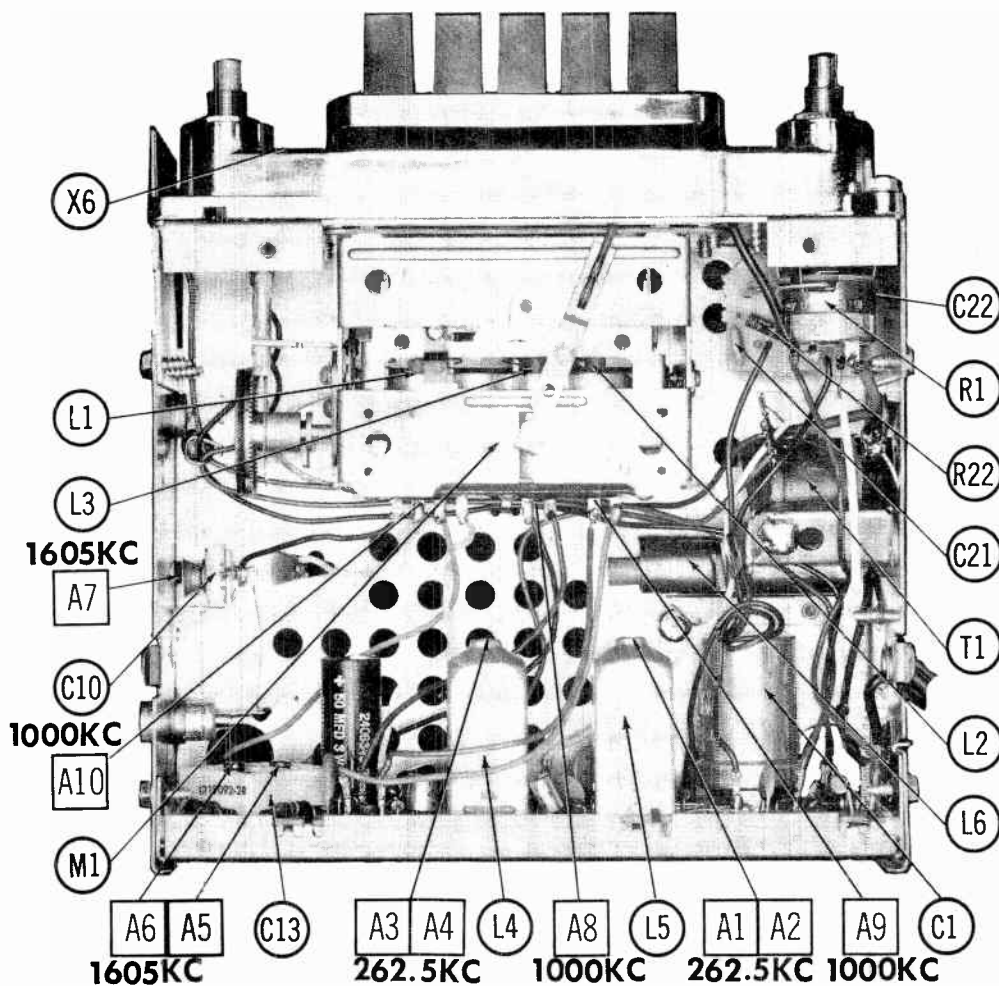
ITEM No.	RATINGS			REPLACEMENT DATA					NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000-)	BENDIX PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L8	880ma	.1Ω	1.2MH	2092050-8	C-4095①	TC-1①	TR-159①	TY16XT①	① Fabricate Mtg.

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE	REPLACEMENT DATA					NOTES
		BENDIX PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	12Ω Tap @ 8Ω	2092138-6				TR-164	

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		BENDIX PART No.	QUAM PART No.	
SP1	6" x 9" PM 6-8Ω	2092521-1		



PARTS LIST AND DESCRIPTION (CONTINUED)

Replacement parts shown may be superseded by the availability of newly introduced replacements.
 Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

MISCELLANEOUS

ITEM No.	PART NAME	BENDIX PART No.	NOTES
M1	Tuner	2092511-8	
M2	AVC	2092055-1	
M3	Detector	2092055-1	
M4	Spark Plate	220265-25	200mmf

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
Knob - Tuning, Volume	2092041-1	Push Button	2092026-1
Knob - Tone, Dummy	2092522-1	Dial Glass	2092513-1



PHOTOFACT[®] with

CIRCUITRACE[®]



TRADE NAME : Mercury Model 4TME (C4AA-18806)
(1964 Comet)

SUPPLIER : Motorola Inc.
9401 W. Grand Ave., Franklin Park, Ill.

TYPE SET : 5 Transistor AM Receiver

POWER SUPPLY : 12 Volt Storage Battery

RATING : .40 Amp. @ 12.6VDC

TUNING RANGE : BROADCAST 540 - 1615KC

MERCURY MODEL 4TME

ALIGNMENT INSTRUCTIONS

Check for specified source voltage.
Use only enough generator output to provide a usable indication.
Suggested Alignment Tools:

- A1 thru A4.....GENERAL CEMENT #8606, 8606L, 8869
WALSCO #2543, 2544, 2588
- A5, A6, A7.....GENERAL CEMENT #8290, 8868, 9087
WALSCO #2525, 2528, 2587

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1.	High side thru .1mfd to point $\text{\textcircled{A}}$, low side to ground.	262KC (400% Mod.)	High Freq. End Stop.	Output Meter across voice coil.	A1, A2, A3, A4	Adjust for maximum.
2.	Thru dummy (Fig. 1) to antenna receptacle.	1615KC	"	"	A5, A6, A7	"
Step 3 is not necessary unless tuner has been tampered with or associated components have been replaced. IF necessary, back tuning cores (A8, A9, A10) out of coils but not out of forms. Repeat step 2.						
3.	Thru dummy (Fig. 1) to antenna receptacle.	1000KC	Tune to Signal.	Output Meter across voice coil.	A8, A9, A10	Adjust for maximum. Repeat steps 2 & 3 until no further improvement is noted.
With radio installed in car and antenna fully extended, tune in a weak station near 1600KC and adjust A7 for maximum output.						

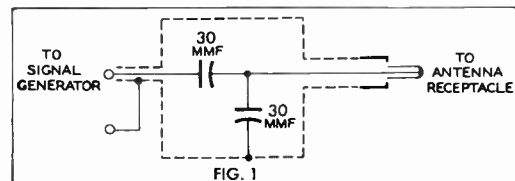
REMOVAL INSTRUCTIONS

RADIO

1. Pull off knobs.
2. Use 9/16" wrench and remove nuts from control bushings.
3. Disconnect "A" lead, antenna lead and speaker leads.
4. Use 7/16" wrench and remove nut from rear bracket.
5. Remove radio from under instrument panel.

SPEAKER

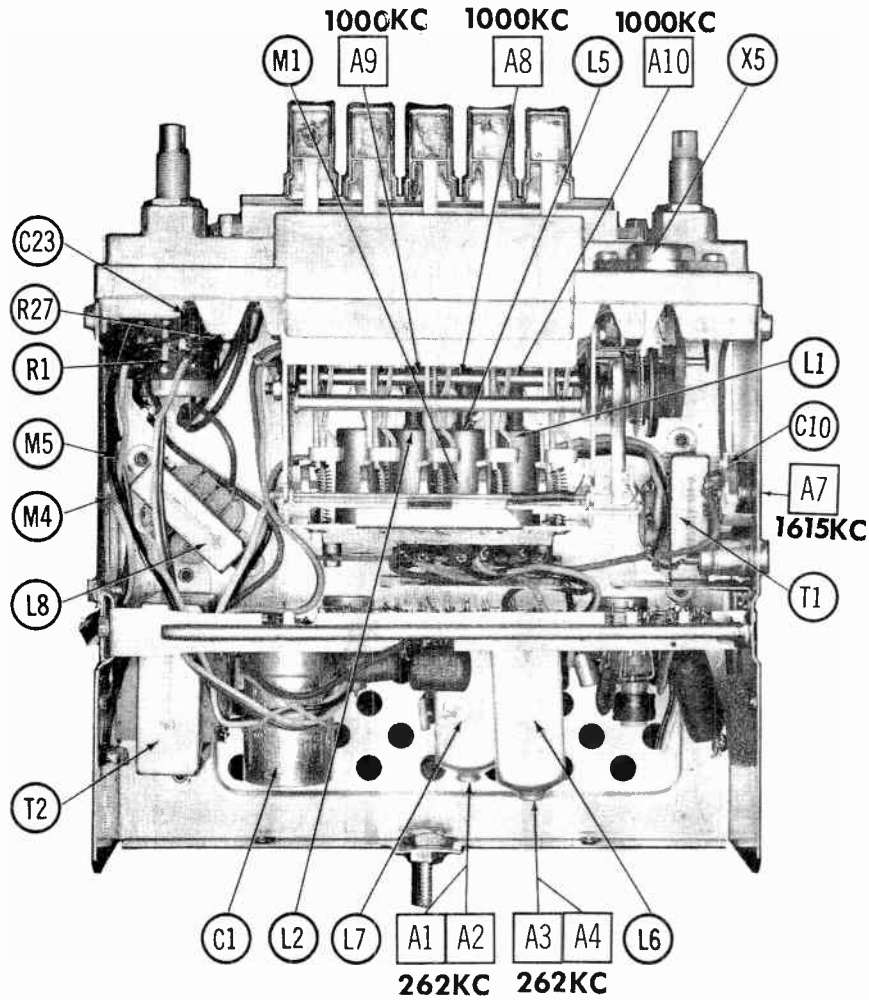
1. Remove 4 Phillips screws holding speaker grille.
2. Lift speaker grille up.
3. Use 3/8" wrench and remove metal screws from speaker mounting.
4. Lift speaker out top of instrument panel.
5. Disconnect speaker leads.



PUSH-BUTTON ADJUSTMENT

1. Pull button out.
2. Tune manually to desired station.
3. Press button in firmly.
4. Repeat for remaining buttons.

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



PARTS LIST AND DESCRIPTION

Replacement parts shown may be superseded by the availability of newly introduced replacements. Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	
X1	2SA72	RF Amp.	DS-25	GE-1	2N1637	PNP
X2	2SA72	Conv.	DS-25	GE-1	2N1639	PNP
X3	2SA72	1F Amp.	DS-25	GE-1	2N1638	PNP
X4	M54	Driver	DS-44	GE-8		PNP
X5	2N176	Output	DS-520	GE-3	2N301	PNP (Note 1)

Note 1. When replacing, apply silicone grease to both sides of insulator. Tighten mounting screws securely.

ELECTROLYTIC CAPACITORS

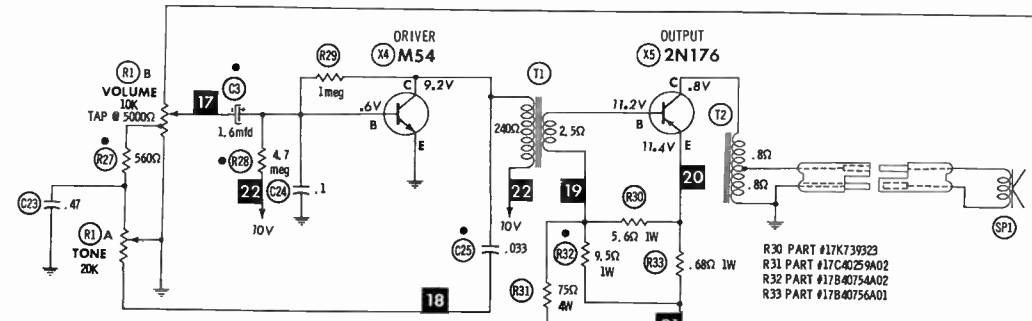
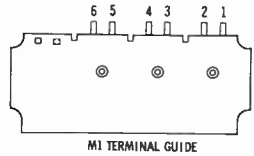
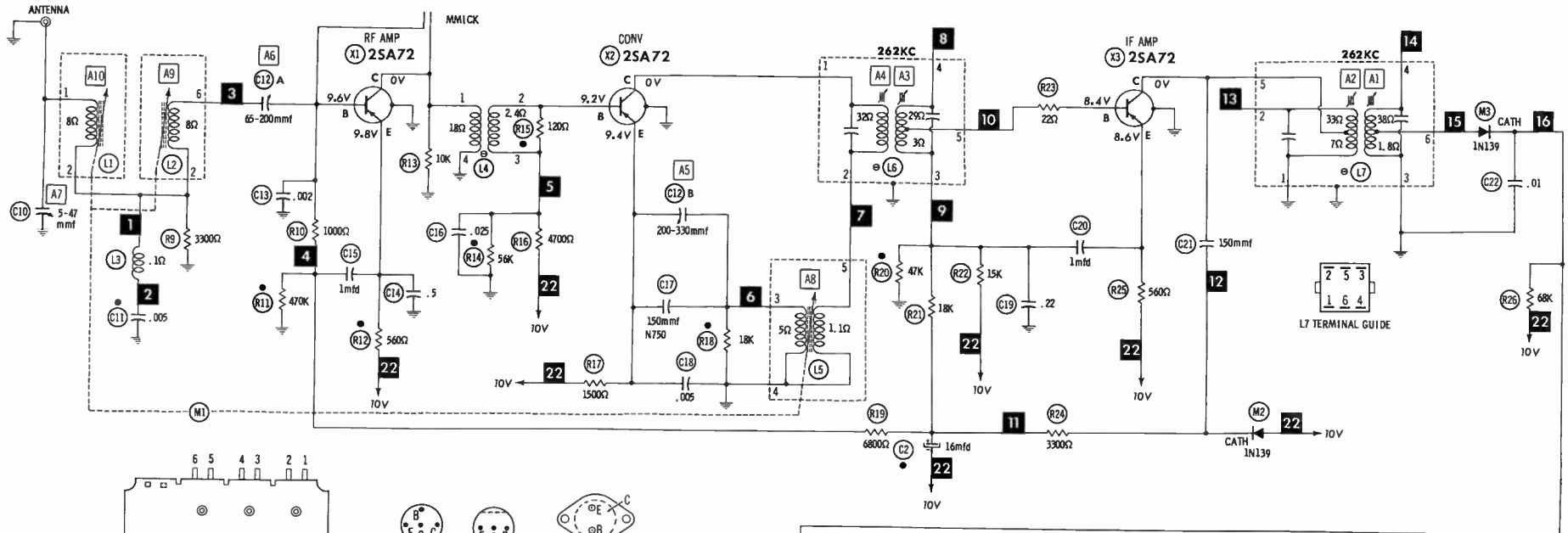
ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	MOTOROLA PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	GENERAL INSTRUMENT PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A	500	16	23C41979A01	PWH2-02-40				PFP200.65	PCLS-2177 *
C1B	500	18							
C2	16	16	23C41928A06	CRE609A	NLW15-25	MT1-11	MLV15-25	TT25X15	TL-1156
C3	1.6	25	23C41928A05 ①	CRE601A	NLW2-50	MT1-1	BL1160	TT50X2	TL-1201

① Value Varies. Replace with original Value.

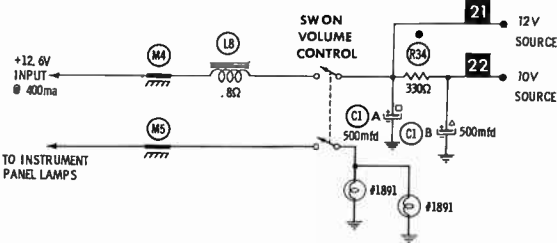
* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

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	5-47	#20B40748A05	P288N-005	CPR-5000J	DPMS6D5	IDP-1-502	PVC-625	6PS-D50
C11	.005 100V							
C12A	65-200	#20C40254A05	BPD-002	DD-202	BYA10D2	CCD-202	E-220	5HK-D20
C12B	200-330							
C13	.002		BE2P5		DPMS2P5	IDP-4-504	PVC-105	2PS-P50
C14	.5 100V			UK-105	HCC3105P			HY-135
C15	1mfd 3V		TTD-025		CK-253		TA-125	TG-S25
C16	.025		N750-DI 150	DTN-150	H4		CN7-315	
C17	150 N750				C10T15U	CCTN-151		10TCU-T15



- R30 PART #17K739323
- R31 PART #17C40259A02
- R32 PART #17B40754A02
- R33 PART #17B40756A01



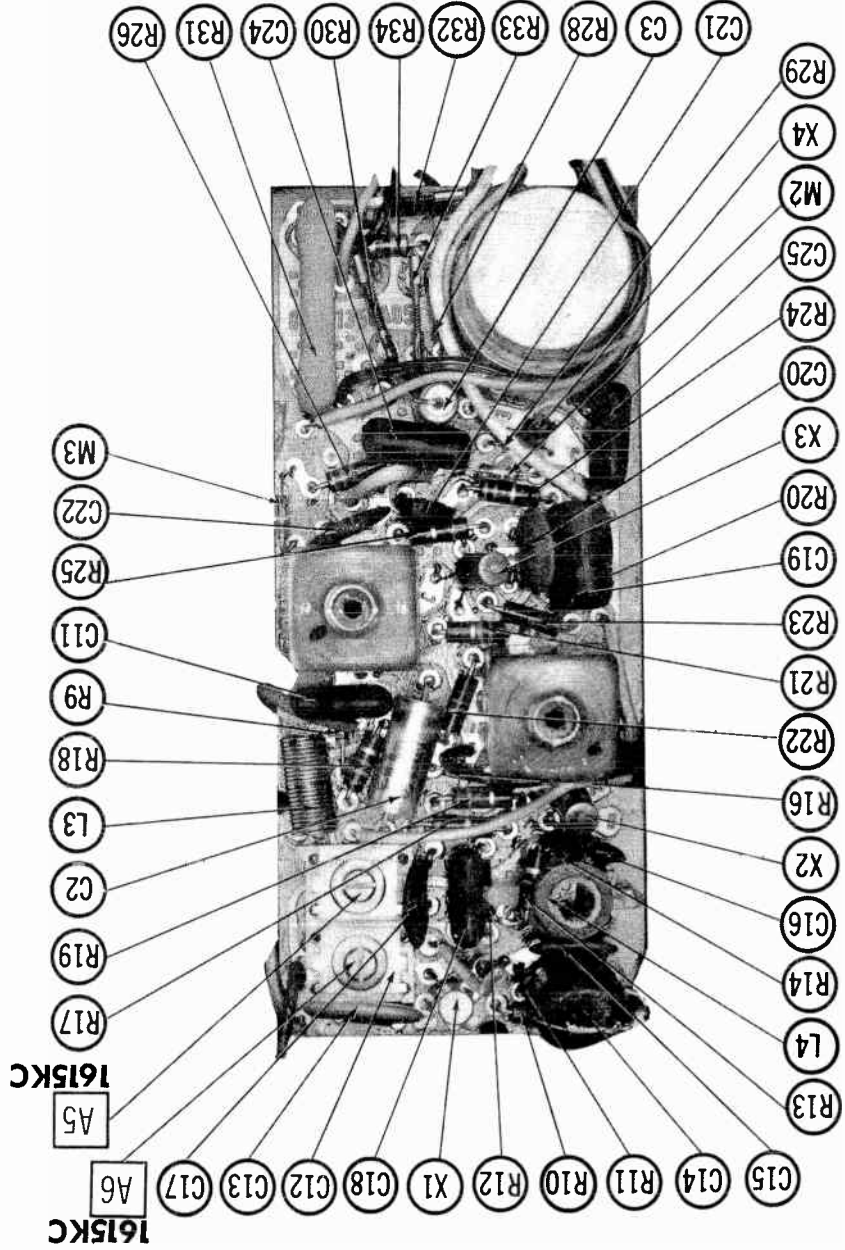
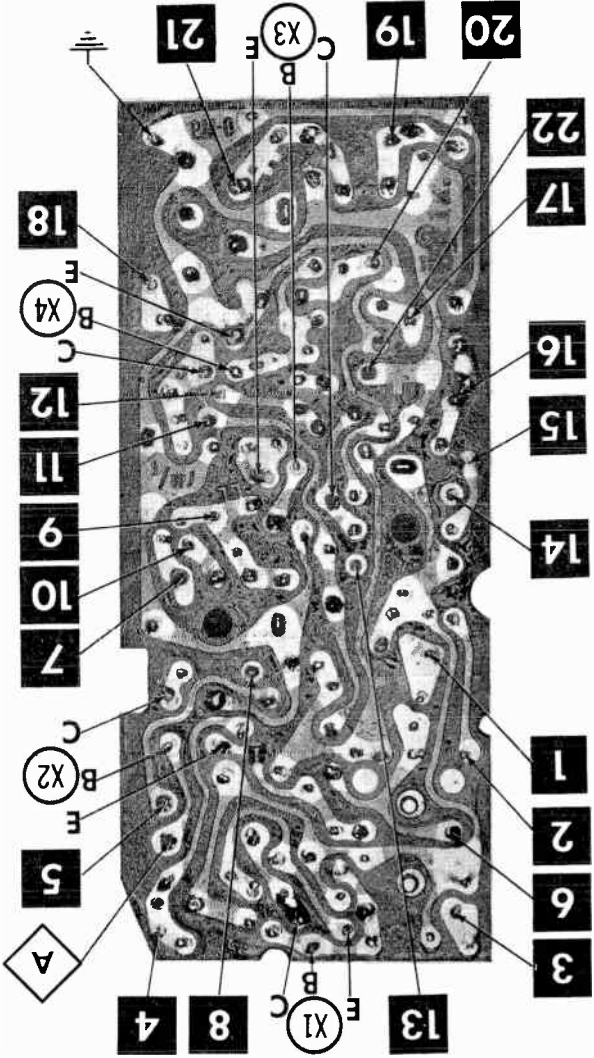
- NOMINAL VALUE MAY VARY
- ⊙ See parts list for alternate value or application.
- 1. Voltage measurements taken with vacuum tube voltmeter.
- 2. All controls set for normal operation, no signal applied.
- 3. Measured values are from socket pin or terminal to common ground.
- 4. All terminals viewed from bottom unless otherwise designated.
- 5. Numbers assigned to terminals may not be found on the unit.
- 6. Supply voltage maintained at rated value for voltage readings.
- 7. Resistance measurements not given because of the wide variation in internal resistance of transistor.

A PHOTOFAC STANDARD NOTATION SCHEMATIC
 with CIRCUITRACE
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MERCURY MODEL 4TME

MERCURY MODEL 4TME

A Howard W. Sams CIRCUITRACE[®] Photo



PARTS LIST AND DESCRIPTION (CONTINUED)

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.
C18	.005 100V		P288N-005	CPR-5000J	DPMS8D5	IDP-1-502	PVC-625	6PS-D50
C19	.22 100V		P288N-22		DPMS2P22	IDP-3-224	PVC-1022	2PS-P22
C20	1mf 3V			UK-105	HCC3105P			HY-135
C21	150		DI-150	DD-151	LA10T15-S3	CCD-151	GP315	5GA-T15
C22	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C23	.47 3V			UK10-404	HCC10474Z			HY-330
C24	.1 100V		P288N-1		WMF1P1	IDP-2-104	PVC-101	2PS-P10
C25	.033 100V		BE4S33		WMF1S33	IDP-1-333	PVC-1133	4PS-S33

Motorola Part Number.

CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA				
			MOTOROLA PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1A B	Tone Volume & Switch	20K 10K Tap @ 5K	18C41449A04				

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
R31	75Ω 4W	PW5-75	5W-SQ-75						

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		MOTOROLA PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	1st Ant.	①					① Part of M1 or Coil Ass'y. Part #1V41000A96 ② Includes C16, R13, R14, R15. ③ Alternate Part #24D40074A15. ④ Alternate Part #24D40075A15.
L2	2nd Ant.	①					
L3	Image Trap (1.3uh)	24C40788A05	BC-562	4604	RTC-8516	T856	
L4	RF	24C41077A05 ②					
L5	Osc.	①					
L6	Input IF	24D40074A16 ③	BC-638				
L7	Output IF	24D40075A16 ④	BC-639				

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA					NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	MOTOROLA PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L8	400ma	.8Ω	11MH	25D42032A01	C-4095	TC-2	TR-154	TY17XT	

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
	PRI.	SEC.	MOTOROLA PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
	T1	15	1	25D42045A06			TR-187	

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC.	MOTOROLA PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T2	40Ω Tap	8Ω	25C41878A01					

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MOTOROLA PART No.	QUAM PART No.	
SP1	5" x 7" PM 6-8Ω	50D41685A03		

MISCELLANEOUS

ITEM No.	PART NAME	MOTOROLA PART No.	NOTES
M1	Tuner (AT-456)	77D41295A03	
M2	AVC (1N139)	48C134587	
M3	Det. (1N139)	48C134587	
M4	Spark Plate	64A41668A02	
M5	Spark Plate	64A41668A02	

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
Knob - Tuning, Volume	1E40948A01	Dial Scale	34B42072A01
Knob - Tone, Dummy	36C42355A01	Dial Glass	61C42073A01
Push Button	38C42185A01	Dial Pointer	52C42062A03

WIRING DATA

General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in 12 Colors 8524 (Stranded) Available in 12 Colors
Shielded Hook-up Wire	Use BELDEN No. 8885
Rear Seat Speaker Extension Cable	Use BELDEN No. 8782 (Stranded) Coded Parallel Leads
Bonding Strap	Use BELDEN No. 8661 (3/8 In.) or 8670 (3/4 In.)



PHOTOFACT[®] with

CIRCUITRACE[®]

TRADE NAME : MoPar Model 219 (1964 Dodge VD1, VD2)
 220 (1964 Plymouth VP1, VP2)

SUPPLIER : Motorola, Inc.
 9401 W. Grand Ave., Franklin Park, Ill.

TYPE SET : 5 Transistor AM Receiver

POWER SUPPLY : 12 Volt Storage Battery

RATING : .56 Amp. @ 12.6VDC

TUNING RANGE: BROADCAST 540 – 1615KC



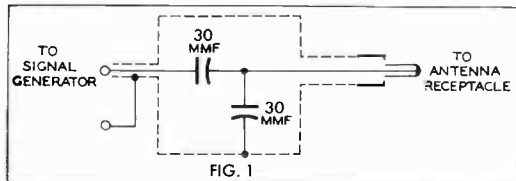
ALIGNMENT INSTRUCTIONS

Check for specified source voltage.
 Use only enough generator output to provide a usable indication.
 Suggested Alignment Tools:

- A1 thru A4.....GENERAL CEMENT #8606, 8606L, 8869
 WALSCO #2543, 2544, 2588
- A5, thru A7..... GENERAL CEMENT #8290, 8868, 9087
 WALSCO #2525, 2528, 2587

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1.	High side thru .1mf to point Δ , low side to ground.	262KC (400% Mod.)	High Freq. End Stop.	Output Meter across voice coil.	A1, A2, A3, A4	Adjust for maximum.
2.	Thru dummy (Fig. 1) to antenna receptacle.	1615KC	"	"	A5, A6, A7	"

With radio installed in car and antenna fully extended, tune in a weak station near 1400KC and adjust A7 for maximum output.



PUSH-BUTTON ADJUSTMENT

1. Pull button out.
2. Tune manually to desired station.
3. Press button in firmly.
4. Repeat for remaining buttons.

REMOVAL INSTRUCTIONS

RADIO

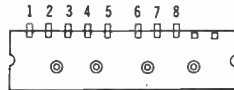
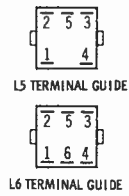
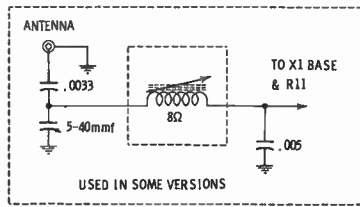
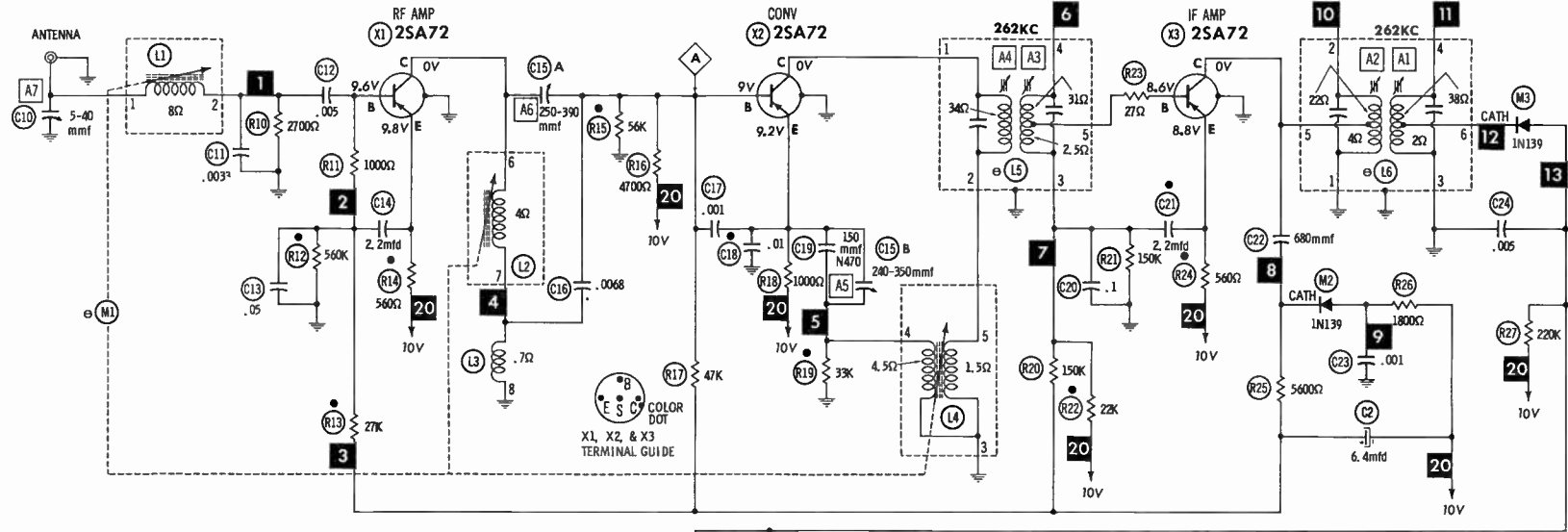
1. Pull off knobs.
2. Use 5/8" wrench and remove nuts from control bushings.
3. Disconnect ant., "A", and speaker leads.
4. Use 3/8" wrench and remove bolt from rear brace.
5. Remove radio from under instrument panel.

SPEAKER

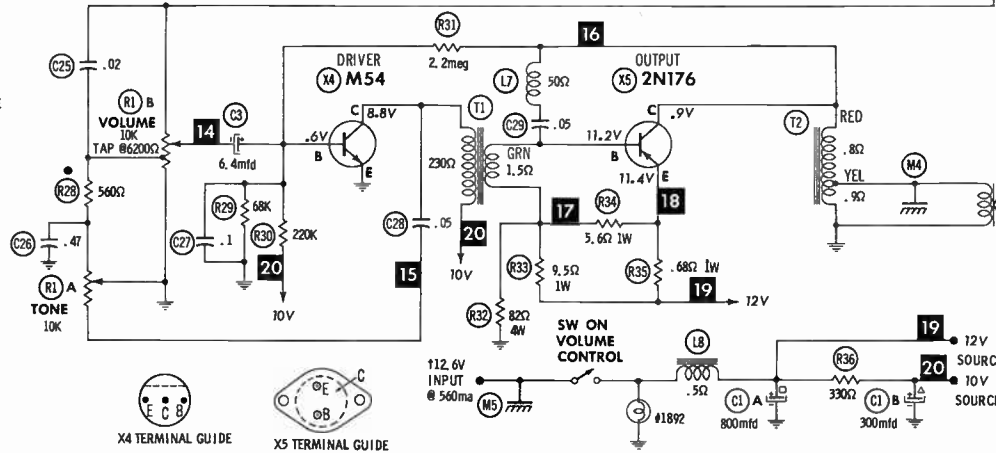
1. Use 3/8" wrench and remove 4 nuts from speaker mounting.
2. Remove speaker from under instrument panel.

MOPAR MODELS 219, 220

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



M1 TERMINAL GUIDE



X4 TERMINAL GUIDE

X5 TERMINAL GUIDE

- R32 PART #17C40259A03
- R33 PART #17B4075-4A07
- R34 PART #17B4075-4A06
- R35 PART #17B40756A05

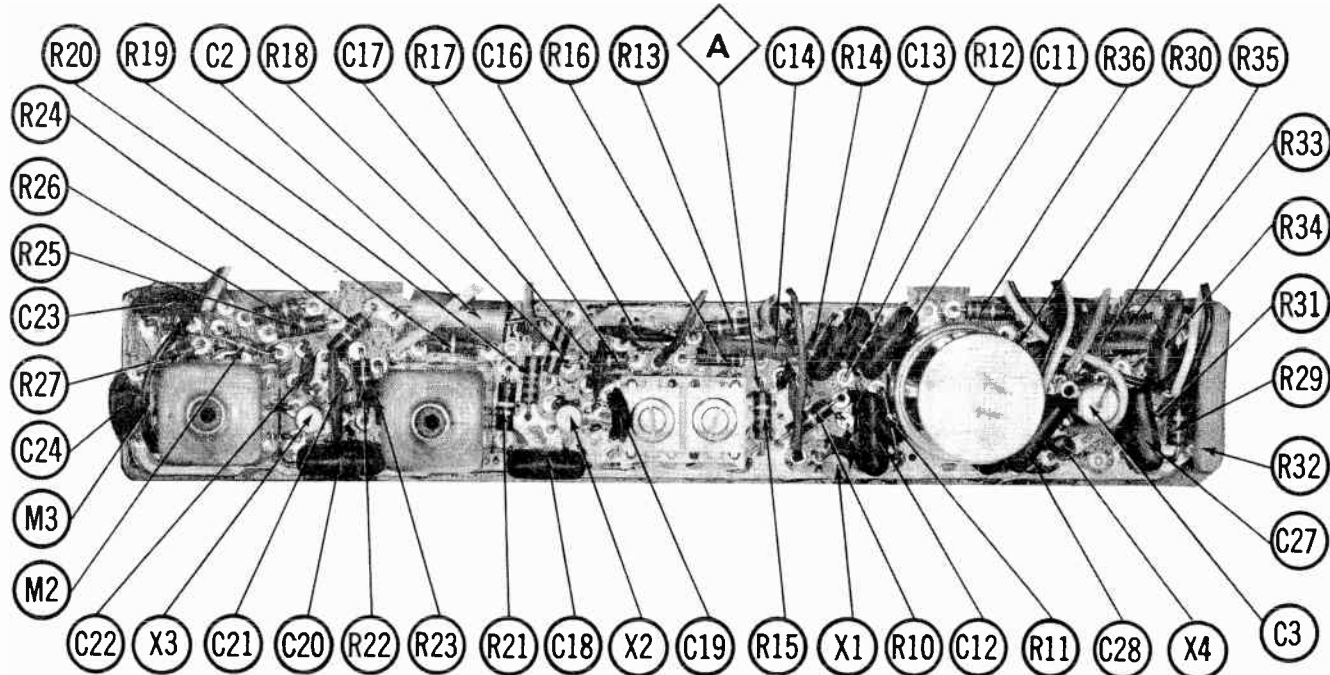
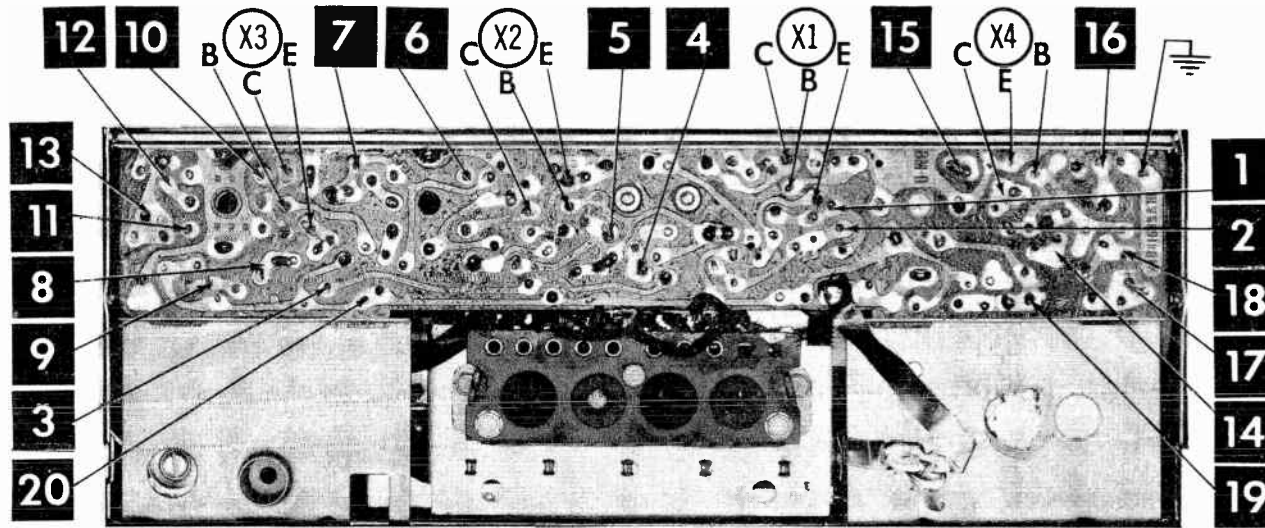
● NOMINAL VALUE MAY VARY

- See parts list for alternate value or application.
- 1. Voltage measurements taken with vacuum tube voltmeter.
- 2. All controls set for normal operation, no signal applied.
- 3. Measured values are from socket pin or terminal to common ground.
- 4. All terminals viewed from bottom unless otherwise designated.
- 5. Numbers assigned to terminals may not be found on the unit.
- 6. Supply voltage maintained at rated value for voltage readings.
- 7. Resistance measurements not given because of the wide variation in internal resistance of transistor.

A PHOTOFAC STANDARD NOTATION SCHEMATIC
with CIRCUITRACE

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MOPAR MODELS 219, 220



MoPAR MODELS 219, 220

PARTS LIST AND DESCRIPTION

Replacement parts shown may be superseded by the availability of newly introduced replacements.
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	
X1	2SA72	RF Amp.	DS-25	GE-1	2N1637	PNP
X2	2SA72	Conv.	DS-25	GE-1	2N1639	PNP
X3	2SA72	IF Amp.	DS-25	GE-1	2N1638	PNP
X4	M54	Driver	DS-44	GE-8		NPN
X5	2N176	Output	DS-520	GE-3	2N301	PNP (Note 1)

Note 1. When replacing, apply silicone grease to both side of insulator. Tighten mounting screws securely.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	Motorola PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	GENERAL INSTRUMENT PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A	#800	16	23C40302A05	PW2-02-60				PEP200.45	PCLS-2181*
B	A 300	16							
C2	6.4	40							
C3	6.4	40	23C41928A07	CRE755A	NLW6-50	MT1-5	BL1471	TT100X6	TE-1303.1

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

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	5-40	#20B40903A02							
C11	.0033 100V	#20C40481A07	P288N-003	CPR-3000J	DPMS8D3	6DP-1-302	PVC-423	6PS-D30	
C12	.005 100V		P288N-005	CPR-5000J	DPMS8D5	IDP-1-502	PVC-625	6PS-D50	
C13	.05 100V		P288N-05		DPMS2S5	IDP-2-503	PVC-215	2PS-S50	
C14	2.2mfd 3V			UK-225	HCC3225P			HY-150	
C15A	250-390								
B	240-350								
C16	.0068			DI-6800	DD-682	BYA10D68	CCD-682	GP268	10TS-D68
C17	.001			BPD-001	DD-102	BYA10D1	CCD-102	B-210	5HK-D10
C18	.01 100V			BE2S1	CPR-10000J	WMF1S1	IDP-1-103	PVC-211	4PS-S10
C19	150 N470								10TCT-T15
C20	.1 100V			P288N-1		WMF1P1	IDP-2-104	PVC-101	2PS-P10
C21	2.2mfd 3V				UK-225	HCC3225P			HY-150
C22	680			BPD-00068	DD-681	BYA10T68	CCD-681	B-368	10TS-T68
C23	.001			BPD-001	DD-102	BYA10D1	CCD-102	B-110	5HK-D10
C24	.005		BPD-005	DD-502	BYA10D5	CCD-502	B-250	5HK-D50	
C25	.02		BPD-02	DD-203	BYA6S2	CCD-203	B-120	5HK-S20	
C26	.47 3V			UK10-404	HCC10474Z			HY-330	
C27	.1 100V		P288N-1		WMF1P1	IDP-2-104	PVC-101	2PS-P10	
C28	.05 100V		P288N-05		DPMS2S5	IDP-2-503	PVC-215	2PS-S50	
C29	.05 100V		P288N-05		DPMS2S5	IDP-2-503	PVC-215	2PS-S50	

Motorola Part Number.

CONTROLS

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

ITEM No.	USE	RESIST-ANCE	REPLACEMENT DATA				
			Motorola PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1A	Tone	10K	18C41524A02	F1-10K①, R16-10K, FFS014, RFS106, KR-4			† QJ-1648A
B	Volume & Switch	10K Tap @6200Ω					

① Use original spring mounting clip.

† "CONCENTRIKIT" Equivalent: K-8, with base elements and shafts:
B11-116, P21-029 (Panel)
B19-116X, R9-110 (Rear)
76-1 (Switch)

COILS (RF-IF)

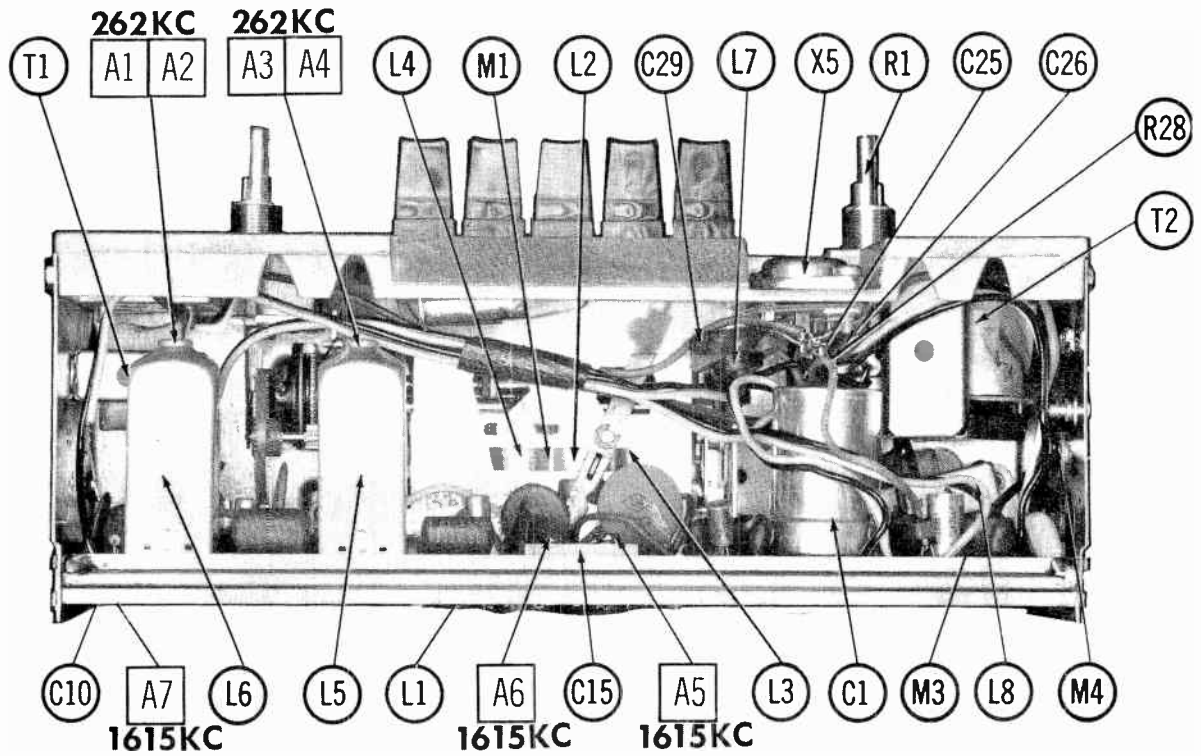
ITEM No.	USE	REPLACEMENT DATA					NOTES	
		Motorola PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.		
L1	Ant.	1V41300A31 ①					① Part of M1	
L2	RF							
L3	Image Trap							
L4	Osc.							
L5	Input IF		24D40074A14 ②	BC-638				② Alt. Part #24D40074A13
L6	Output IF		24D40075A12 ③	BC-639				
L7	10KC Filter (5MH)		24K565244	BC-552	6304	RTC-9253		

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA					NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000-)	Motorola PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L8	480ma	.5Ω	10MH	25C41871A04	C-4095	TC-2	TR-154	TY17XT	

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
	PRI.	SEC.	Motorola PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
	T1	10	1	25D40933A03	A-4094 ①	TA-51 ①	TR-185	



PARTS LIST AND DESCRIPTION (CONTINUED)

Replacement parts shown may be superseded by the availability of newly introduced replacements.
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE	REPLACEMENT DATA					NOTES
		Motorola PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T2	40Ω Tap @ 8Ω	25C41878A02					

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		Motorola PART No.	QUAM PART No.	
	5" x 7" PM 8Ω	50D42224A02		

MISCELLANEOUS

ITEM No.	PART NAME	Motorola PART No.	NOTES
M1	Tuner (AT-460)	77D42113A01	Model 220 Model 219
	Tuner (AT-462)	77D42113A03	
M2	AVC (1N139)	48C134587	
M3	Det. (1N139)	48C134587	
M4	Spark Plate	64K530177	
M5	Spark Plate	64K530177	

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
Dial Glass	61B42098A01	Knob - Tuning, Volume, Model 219	36D41517A03
Dial Pointer Assembly, Model 219	1B40514A04	Knob - Tuning, Volume, Model 220	36D41516A01
Dial Pointer Assembly, Model 220	1B40514A07	Knob - Tone, Dummy, Model 219	36C42222A01
Escutcheon, Model 219	13C42116A02	Knob - Tone, Dummy, Model 220	36C42221A01
Escutcheon, Model 220	13C42116A01		

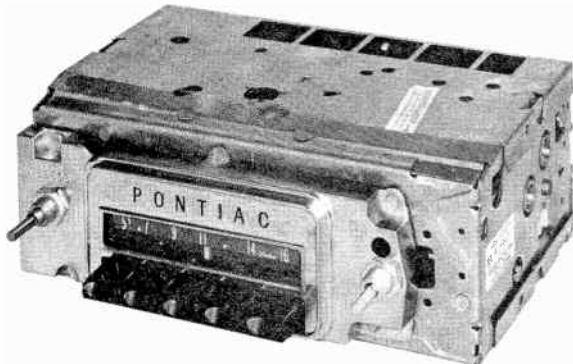
WIRING DATA

General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in 12 Colors 8524 (Stranded) Available in 12 Colors
Shielded Hook-up Wire	Use BELDEN No. 8885
Rear Seat Speaker Extension Cable	Use BELDEN No. 8782 (Stranded) Coded Parallel Leads
Bonding Strap	Use BELDEN No. 8661 (3/8 in.) or 8870 (3/4 in.)



PHOTOFACT[®] with

CIRCUITRACE[®]



TRADE NAME : Pontiac Model 984076 (1964)
 SUPPLIER : (Parts) United Delco Distributors
 TYPE SET : 6 Transistor AM Receiver
 POWER SUPPLY : 12 Volt Storage Battery
 RATING : .56 Amp. @12.6VDC
 TUNING RANGE : BROADCAST 540 -- 1615KC

ALIGNMENT INSTRUCTIONS

Check for specified source voltage.

Use only enough generator output to provide a usable indication.

Suggested Alignment Tools:

A1 thru A5, A9, A10.....GENERAL CEMENT #5009, 8728A, 8987
 WALSCO #2531X, 2536
 A6, A7, A8.....GENERAL CEMENT #9087, 8290, 8868
 WALSCO #2525, 2528, 2587

PUSH-BUTTON ADJUSTMENT

1. Pull button out.
2. Tune manually to desired station.
3. Press button in firmly.
4. Repeat for remaining buttons.

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1.	High side thru .1mfd to point Δ , low side to ground.	262KC (400% Mod.)	High Freq. End Stop.	Output Meter across voice coil.	A1, A2, A3, A4	Adjust for maximum.
Check setting of oscillator coil core (A5). Rear of core should be 1 3/8" from mounting end of coil form.						
2.	High side thru 82mmf to antenna receptacle, low side to ground.	1615KC	High Freq. End Stop.	Output Meter across voice coil.	A6, A7, A8	Adjust for maximum.
3.	"	600KC	600KC Signal	"	A5, A9, A10	Adjust for maximum. Repeat step 2.
With radio installed in car and antenna fully extended, tune in a weak station near 1000KC and adjust A8 for maximum output.						

REMOVAL INSTRUCTIONS

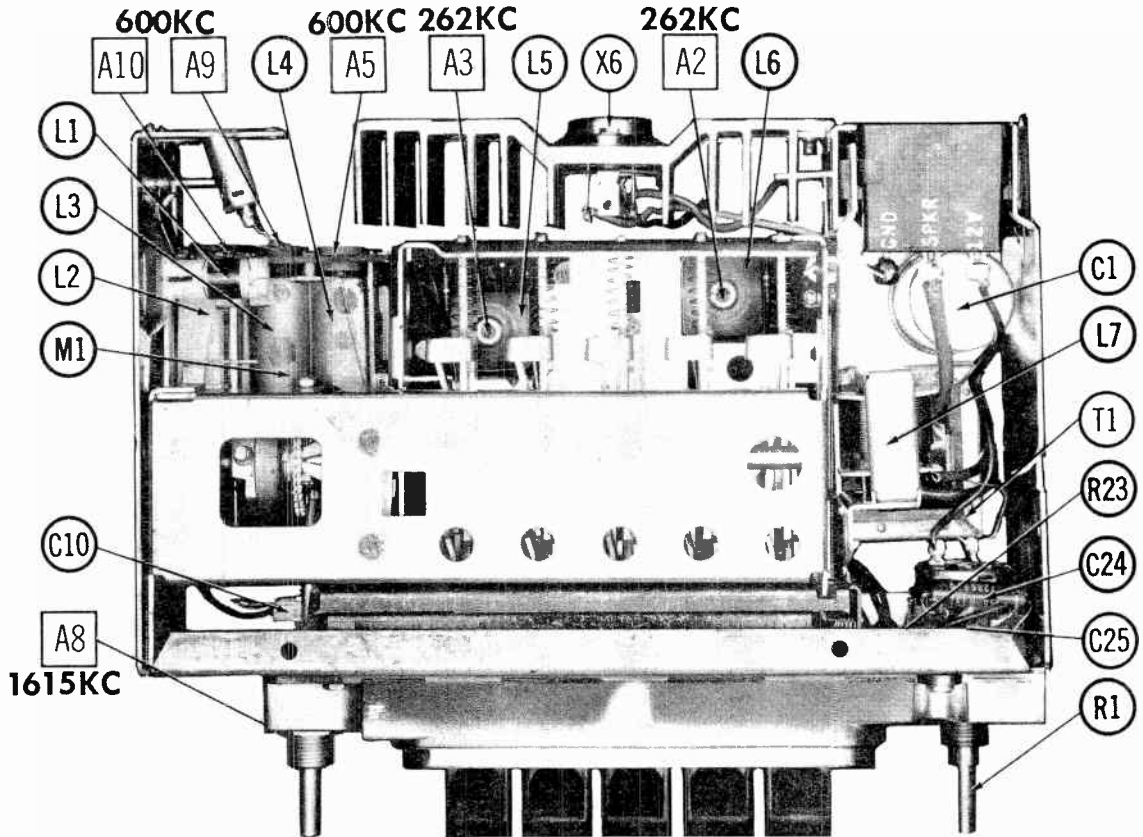
RADIO

1. Pull off Volume, Tone and Tuning knobs.
2. Use Spanner wrench and remove nuts from control bushings. Remove dummy knob.
3. Use Spanner wrench and remove nut from tuning bushing.
4. Disconnect antenna lead, speaker connector and pilot lamp.
5. Use 3/8" wrench and remove metal screw from bottom brace.
6. Remove radio from under instrument panel.

SPEAKER

1. Disconnect "A" lead from speaker connector.
2. Use 5/16" wrench and remove metal screws from speaker mounting brackets.
3. Remove speaker from under instrument panel.

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



PONTIAC MODEL 984076

PARTS LIST AND DESCRIPTION

Replacement parts shown may be superseded by the availability of newly introduced replacements.
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

WIRING DATA

General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in 12 Colors 8524 (Stranded) Available in 12 Colors
Shielded Hook-up Wire	Use BELDEN No. 8885
Rear Seat Speaker Extension Cable	Use BELDEN No. 8782 (Stranded) Coded Parallel Leads
Bonding Strap	Use BELDEN No. 8661 (3/8 in.) or 8670 (3/4 in.)

TRANSISTORS

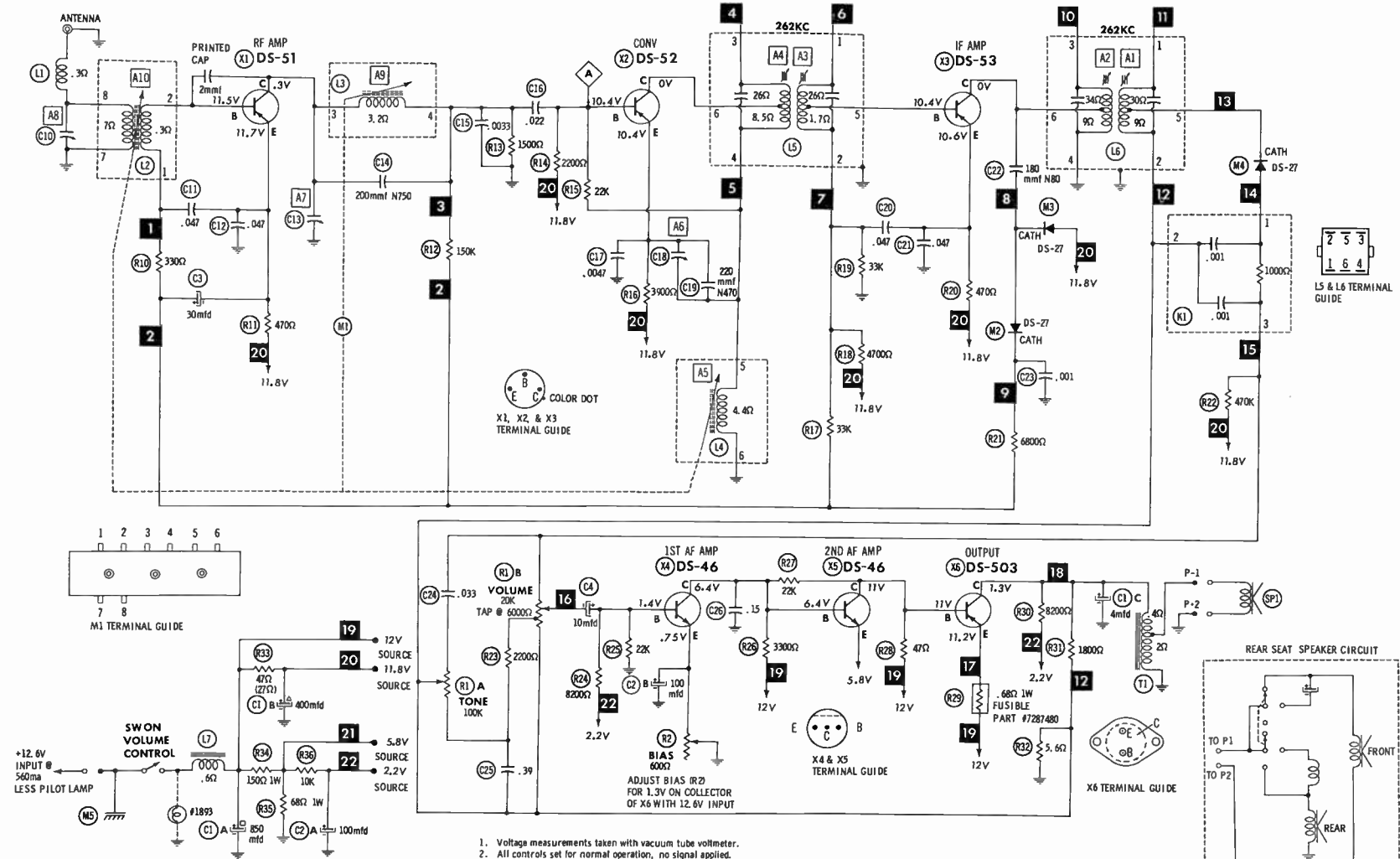
ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	
X1	DS-51	RF Amp.	DS-25	GE-1	2N1637	PNP
X2	DS-52	Conv.	DS-25	GE-1	2N1639	PNP
X3	DS-53	IF Amp.	DS-25	GE-1	2N1638	PNP
X4	DS-46	1st AF Amp.	DS-46	GE-8		NPN
X5	DS-46	2nd AF Amp.	DS-46	GE-8		NPN
X6	DS-503	Output	DS-503	GE-3	2N301	PNP (Note 1)

Note 1. When replacing apply silicone grease to both sides of insulator. Tighten mounting screws securely. Check bias adjustment.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	DELCO PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	GENERAL INSTRUMENT PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A	850	16	7282272	AFH3-54-30					
B	400	16							
C	4	11.5AC							
C2A	100	4	7286539						VLS-2120*
B	100	4							
C3	30	6	7279896	PTT27	NLW30-15	MT1-13	MLV30-6	TTBX30	TE-1082
C4	10	12	7283894	PTT53	NLW10-15	MT1-5	BL1241	TT12X10	TL-1128

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

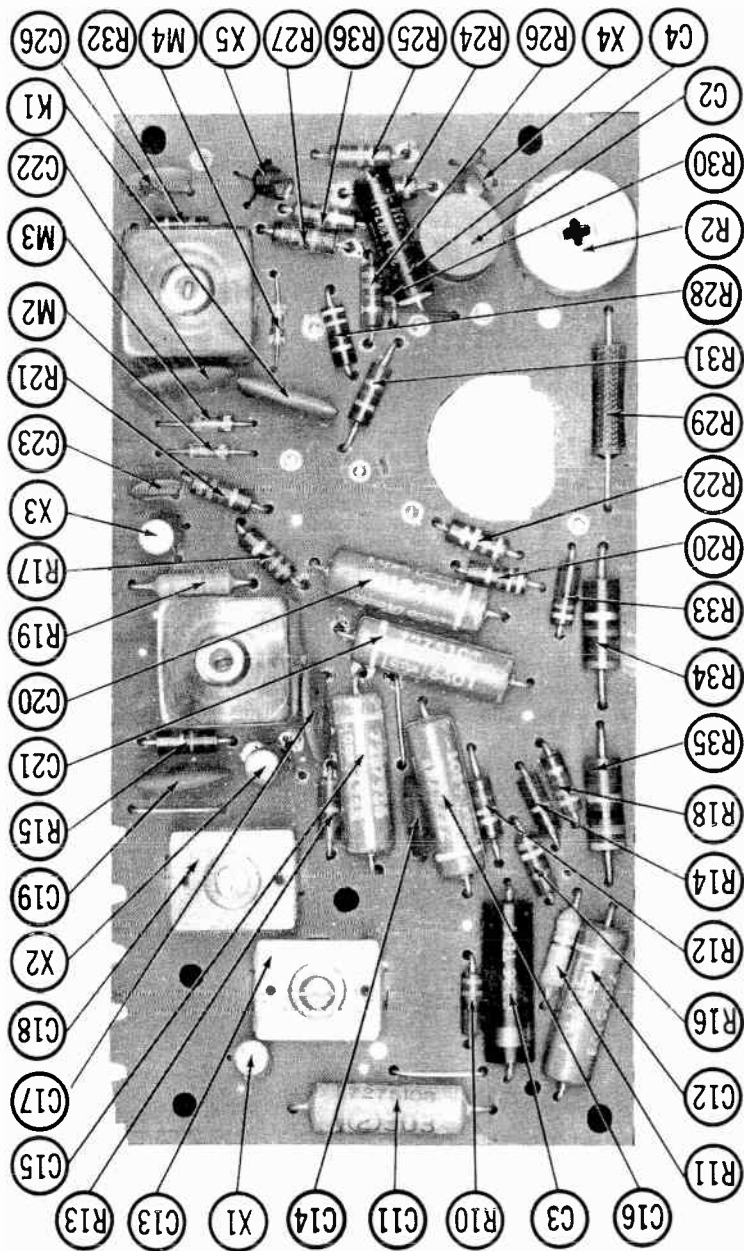
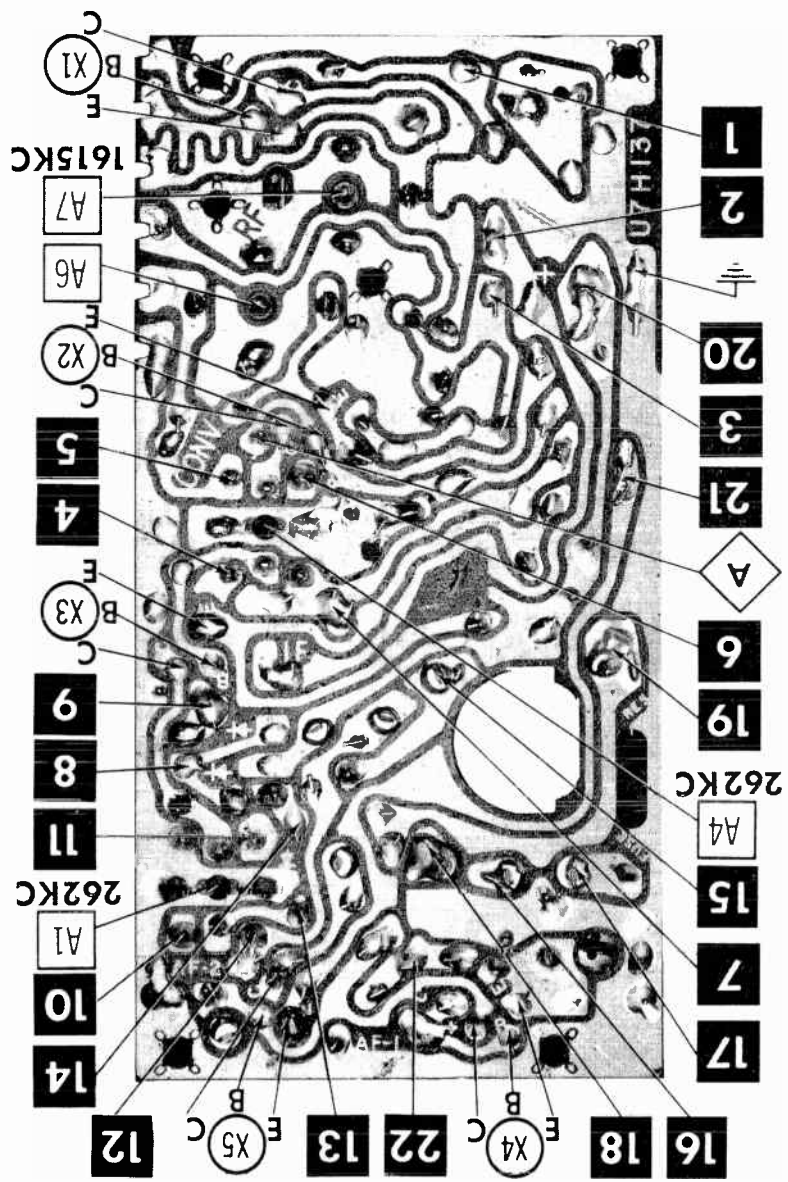


1. Voltage measurements taken with vacuum tube voltmeter.
2. All controls set for normal operation, no signal applied.
3. Measured values are from socket pin or terminal to common ground.
4. All terminals viewed from bottom unless otherwise designated.
5. Numbers assigned to terminals may not be found on the unit.
6. Supply voltage maintained at rated value for voltage readings.
7. Resistance measurements not given because of the wide variation in internal resistance of transistor.

PONTIAC MODEL 984076

A PHOTOFAC TANDARD NOTATION SCHEMATIC
with **CIRCUITRACE**

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PARTS LIST AND DESCRIPTION (CONTINUED)

Replacement parts shown may be superseded by the availability of newly introduced replacements.

Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

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	.047 75V	#7281971	P288N-047		WMF2S47	IDP-2-473	PVC-1147	2PS-847
C11	.047 75V		P288N-047		WMF2S47	IDP-2-473	PVC-1147	2PS-847
C12	.047 75V	#7287935						
C13	200 N750		N750-DI 200	DTN-200	C10T2U	CCTN-201	CN7-320	10TCU-T20
C14	.0033 75V		P288N-0033	CPR-3300J	WMF1D33	6DP-1-332	PVC-4233	6PS-D33
C15	.022 75V		BE2S22		WMF1S22	IDP-1-223	PVC-1122	2PS-S22
C16	.022 75V		BPD-0047	DD-472	BYA10D47	CCD-472	B-247	5HK-D47
C17	.0047	#7281933						
C18								
C19	220 N470							10TCT-T22
C20	.047 75V		P288N-047		WMF2S47	IDP-2-473	PVC-1147	2PS-847
C21	.047 75V		P288N-047		WMF2S47	IDP-2-473	PVC-1147	2PS-847
C22	180 N80							
C23	.001		BPD-001	DD-102	BYA10D1	CCD-102	B-210	5HK-D10
C24	.033 75V		P288N-033		WMF1S33	IDP-1-333	PVC-1133	4PS-S33
C25	.39 3V	#7286580						
C26	.15 12V			UK20-104	H05P1		TA-010	HY-320

Delco Part Number.

CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA					
			DELCO PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.	
R1A	Tone	100K	7286115	F1-100K,				
B	Volume	20K Tap@ 6000Ω		R14-22K, RFS010, RFS105, KR-4, AK-26				
R2	Bias	600Ω	7286601		U39-600	110-600	FL-600	

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		DELCO PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	RF Choke (6.2uh)	7281946	BC-565	4610	RTC-8520	T859	
L2	Ant.	7287957					
L3	RF						
L4	Osc.						
L5	Input IF		1221856				TA653
L6	Output IF	1221857				TA653	

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA					NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	DELCO PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L7	560ma	.6Ω	8MH	1221623	C-4095	TC 2	TR-154	TY17XT	

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE	REPLACEMENT DATA					NOTES
		DELCO PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	20Ω Tap@ 10Ω	7282057					

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		DELCO PART No.	QUAM PART No.	
SP1	4" x 10" PM 10Ω	7286462	410A2Z10	

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	DELCO PART No.	REPLACEMENT DATA
K1	Audio Couplate	1000Ω, .001mfd, .001mfd	7287253	

MISCELLANEOUS

ITEM No.	PART NAME	DELCO PART No.	NOTES
M1	Tuner	7287957	
M2	AVC Det.		DS-27
M3	AVC Limiter		DS-27
M4	AF Det.		DS-27
M5	Spark Plate	7271564	

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
Knob, Tuning or Volume	9775398	Escutcheon Assembly	7286124
Knob, Tone	9773918	Push Buttons	7276507
Knob, Dummy	9773915	Pointer Assembly	1221848



PHOTOFACT[®] with

CIRCUITRACE[®]

TRADE NAME: **Riverside Models:**
 FJB-16520A (1963 Chrysler)
 FJB-16521A (1963 Chevrolet)
 FJB-16522A (1963 Dodge)
 FJB-16523A (1963 Ford)
 FJB-16524A (1963 Mercury)
 FJB-16525A (1963 Oldsmobile)
 FJB-16526A (1963 Plymouth)
 FJB-16527A (1963 Pontiac)

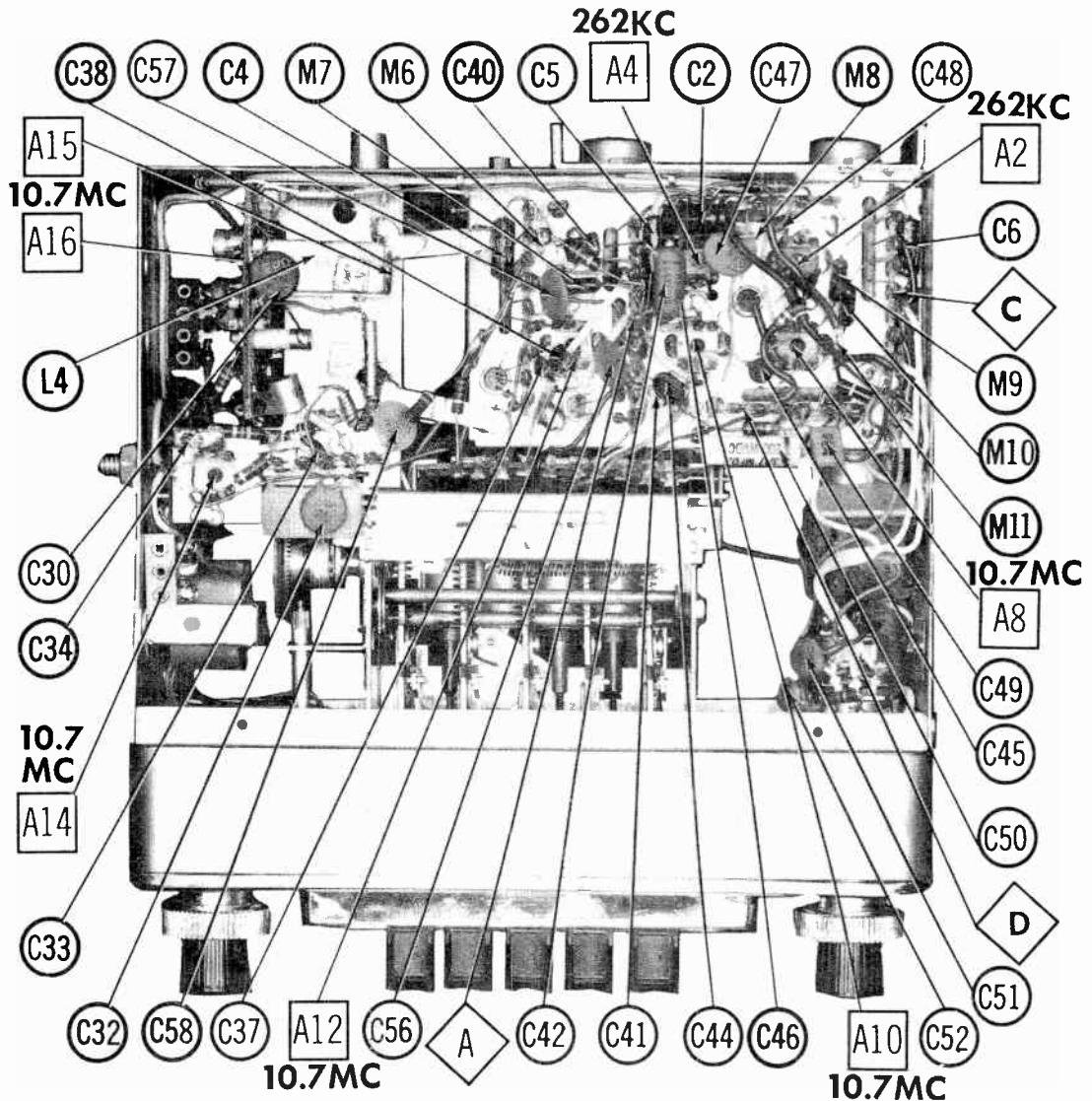
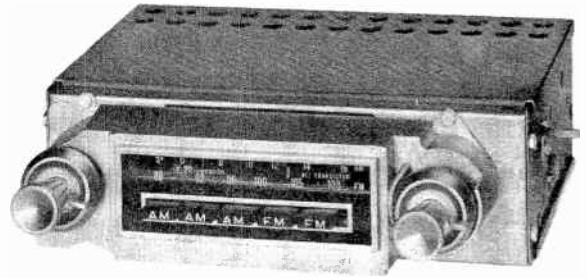
SUPPLIER: **Montgomery Ward & Company**
 619 Chicago Ave., Chicago 7, Ill.

TYPE SET: **10 Transistor AM-FM Receiver**

POWER SUPPLY: **12 Volt Storage Battery**

RATING: **.43 Amp. @ 12.6VDC**

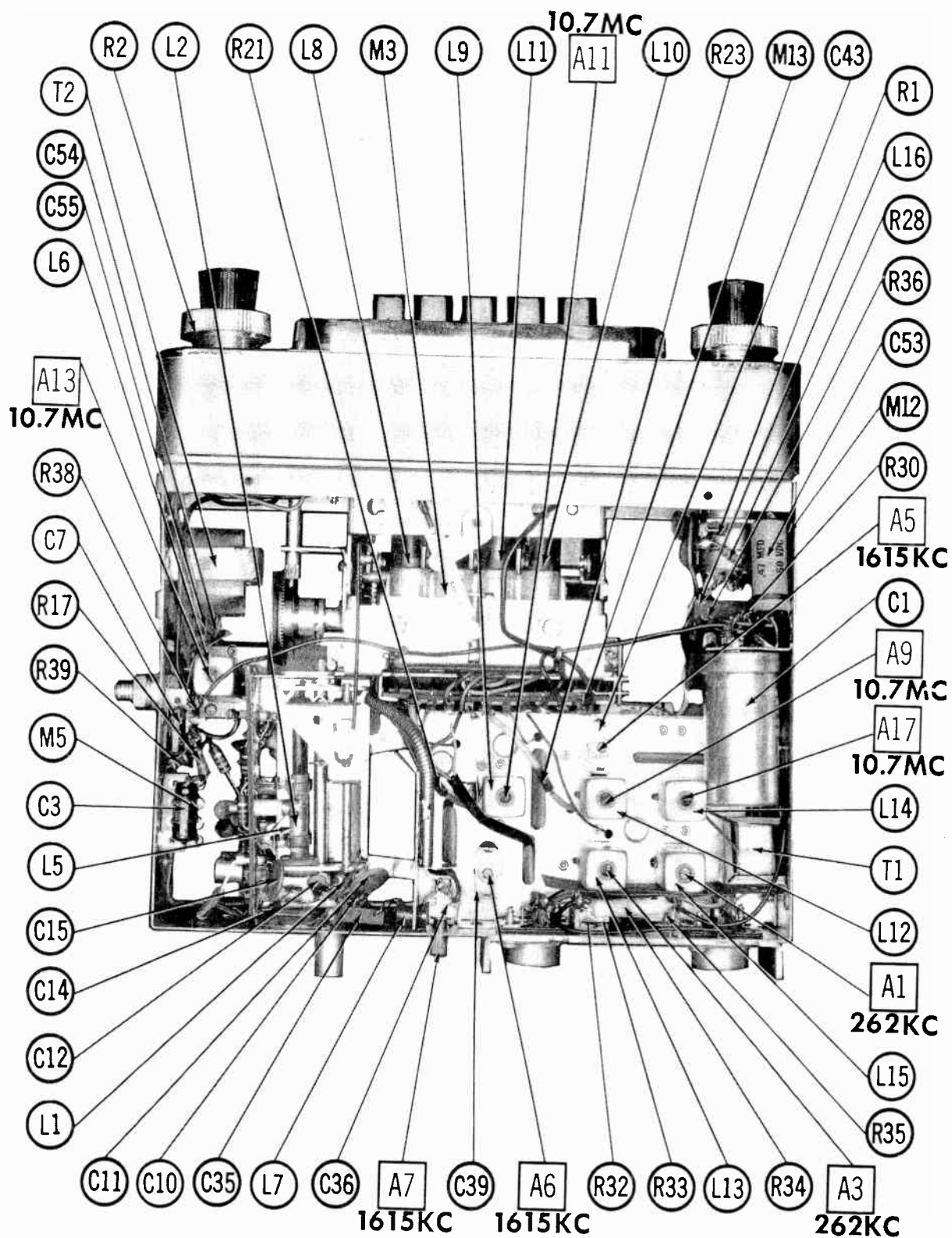
TUNING RANGE: **BROADCAST 540 - 1615KC**
FREQ. MOD. 88 - 108MC



RIVERSIDE MODELS FJB-16520A thru / 527A

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

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ALIGNMENT INSTRUCTIONS

Check for specified source voltage.
 Use only enough generator output to provide a usable indication.
 Suggested Alignment Tools:
 A1 thru A20.....GENERAL CEMENT #5009, 8728A, 8987
 WALSCO #2531X, 2536

AM ALIGNMENT — SELECTOR IN AM POSITION

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1.	High side thru .1mfd to point Ⓢ , low side to ground.	262KC (400v Mod.)	High Freq. End Stop.	Output Meter across voice coil.	A1, A2, A3, A4	Adjust for maximum.
2.	Thru dummy (Fig. 1) to antenna receptacle.	1615KC	"	"	A5, A6, A7	"

With radio installed in car and antenna fully extended, tune in a weak station near 1000KC and adjust A7 for maximum output.

FM ALIGNMENT USING AM SIGNAL GENERATOR - SELECTOR IN FM POSITION

High side of generator thru .1mfd to point Ⓢ , low side to ground for IF.
 Across antenna input with 120 Ω carbon resistors in series with each lead for RF.

GENERATOR FREQUENCY	DIAL SETTING	INDICATOR	ADJUST	REMARKS
10.7MC (Unmod.)	Point of non-interference.	DC probe of VTVM to point Ⓢ ; common to ground.	A8 thru A16	Adjust for maximum.
"	"	DC probe to point Ⓢ ; common to ground.	A17	Adjust for zero reading. A positive or negative reading will be obtained on either side of the correct setting.
108MC	108MC	DC probe of VTVM to point Ⓢ ; common to ground.	A18, A19, A20	Adjust for maximum.

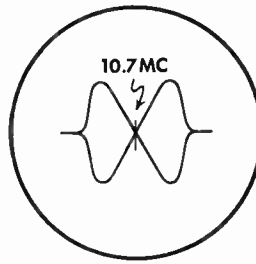
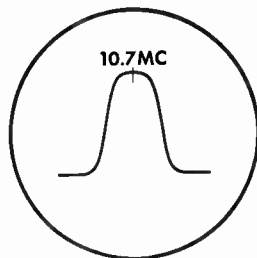
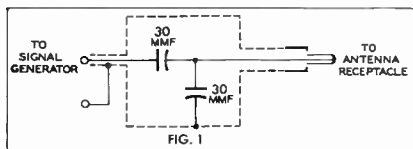
FM IF ALIGNMENT USING FM SIGNAL GENERATOR - SELECTOR IN FM POSITION

High side thru .1mfd to point Ⓢ , low side to ground.
 Use 60v frequency modulated signal with 450KC sweep. Use 120v sawtooth voltage in scope for horizontal deflection.

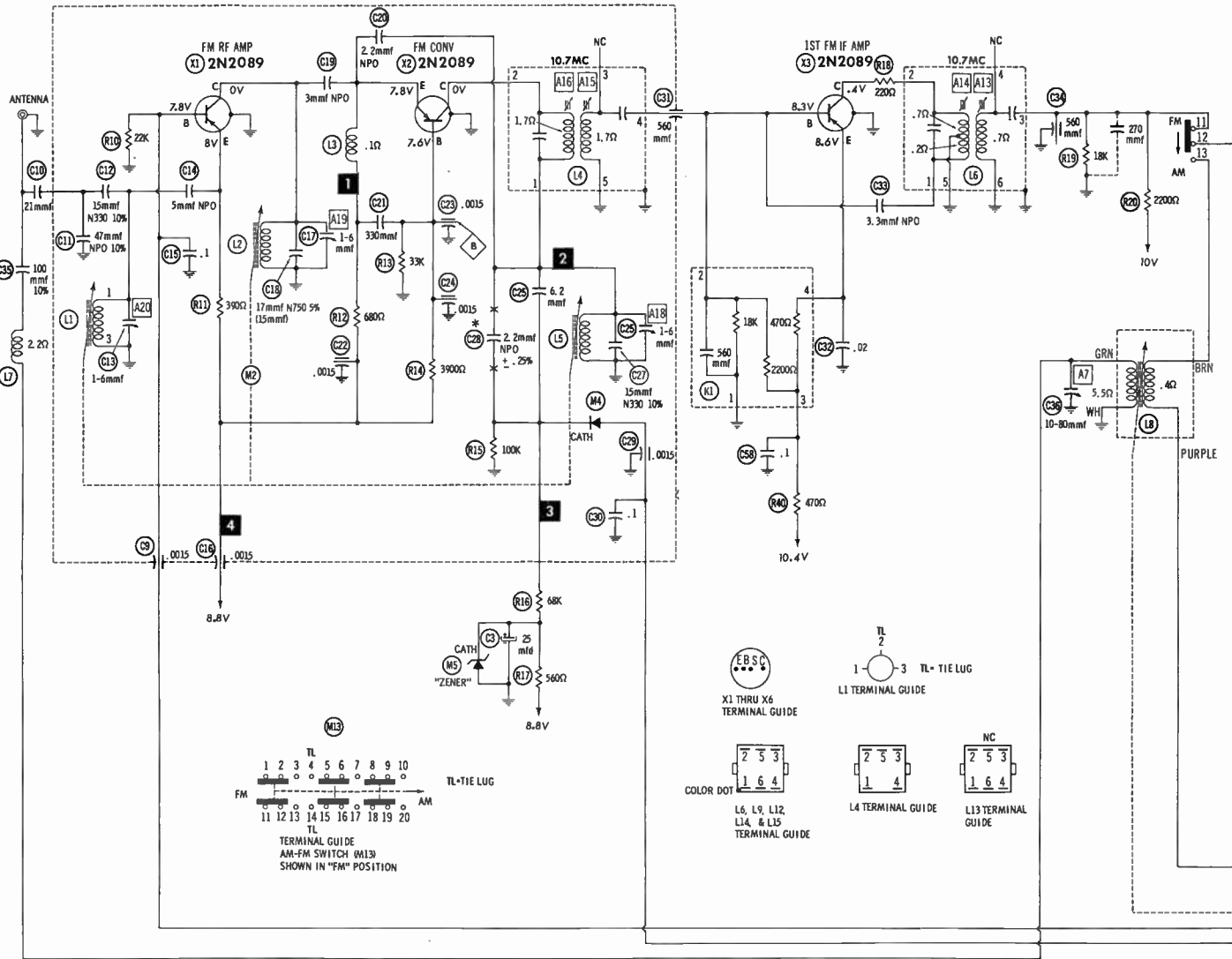
GENERATOR FREQUENCY	DIAL SETTING	INDICATOR	ADJUST	REMARKS
10.7MC (450KC Swp.)	Point of non-interference.	Vert. amp. of scope to point Ⓢ ; low side to ground.	A8 thru A16	Disconnect stabilizing capacitor C6. Adjust for maximum gain and symmetry of response similar to Fig. 2 with marker as shown. Reconnect C6.
"	"	Vert. amp. to point Ⓢ ; low side to ground.	A17	Adjust to place marker at center of crossover lines similar to Fig. 3. SLIGHTLY retouch A8 for maximum amplitude and straightness of crossover lines.

PUSH-BUTTON ADJUSTMENT

1. Pull button out.
2. Tune manually to desired station.
3. Press button in firmly.
4. Repeat for remaining buttons.

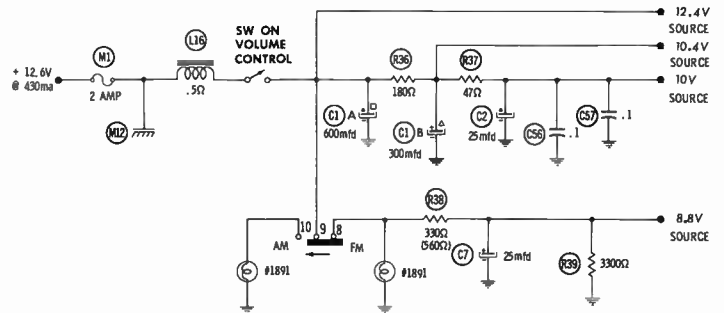


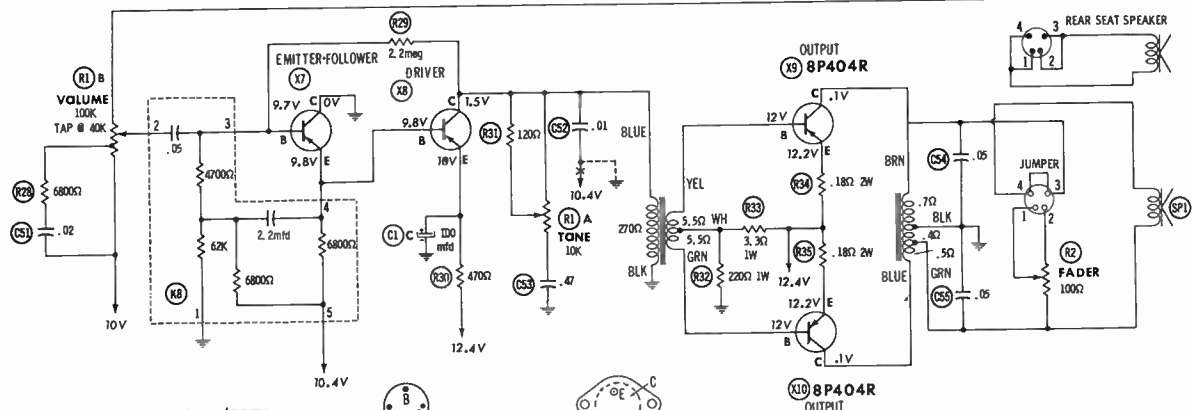
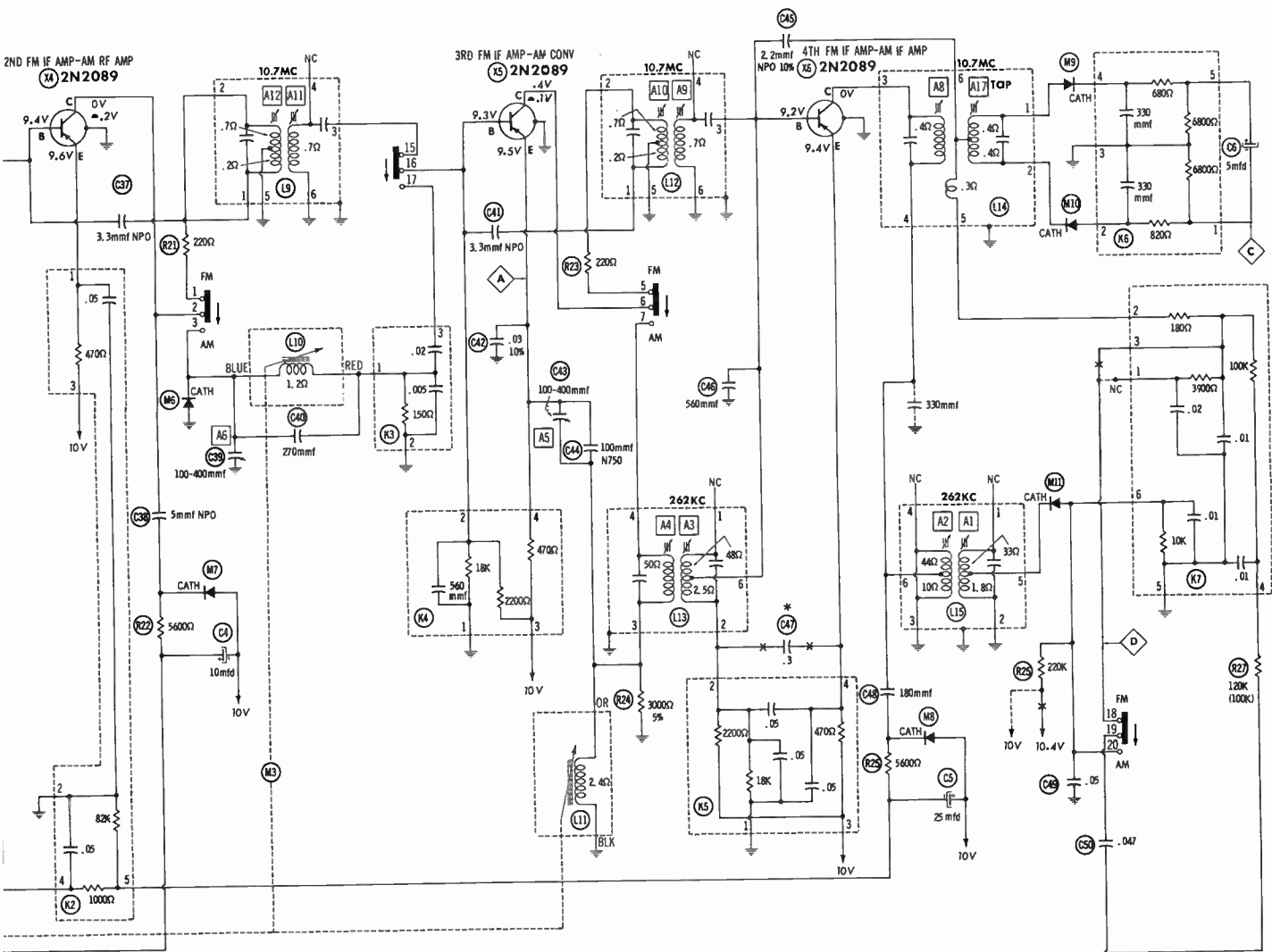
RIVERSIDE MODELS FJB-16520A thru / 527A



ALL VOLTAGES MEASURED IN "FM" POSITION UNLESS OTHERWISE DESIGNATED
 ▲ MEASURED IN "AM" POSITION
 * NOT USED IN SOME VERSIONS
 1. Voltage measurements taken with vacuum tube voltmeter.
 2. All controls set for normal operation, no signal applied.
 3. Measured values are from socket pin or terminal to common ground.
 4. All terminals viewed from bottom unless otherwise designated.
 5. Numbers assigned to terminals may not be found on the unit.
 6. Supply voltage maintained at rated value for voltage readings.
 7. Resistance measurements not given because of the wide variation in internal resistance of transistor.

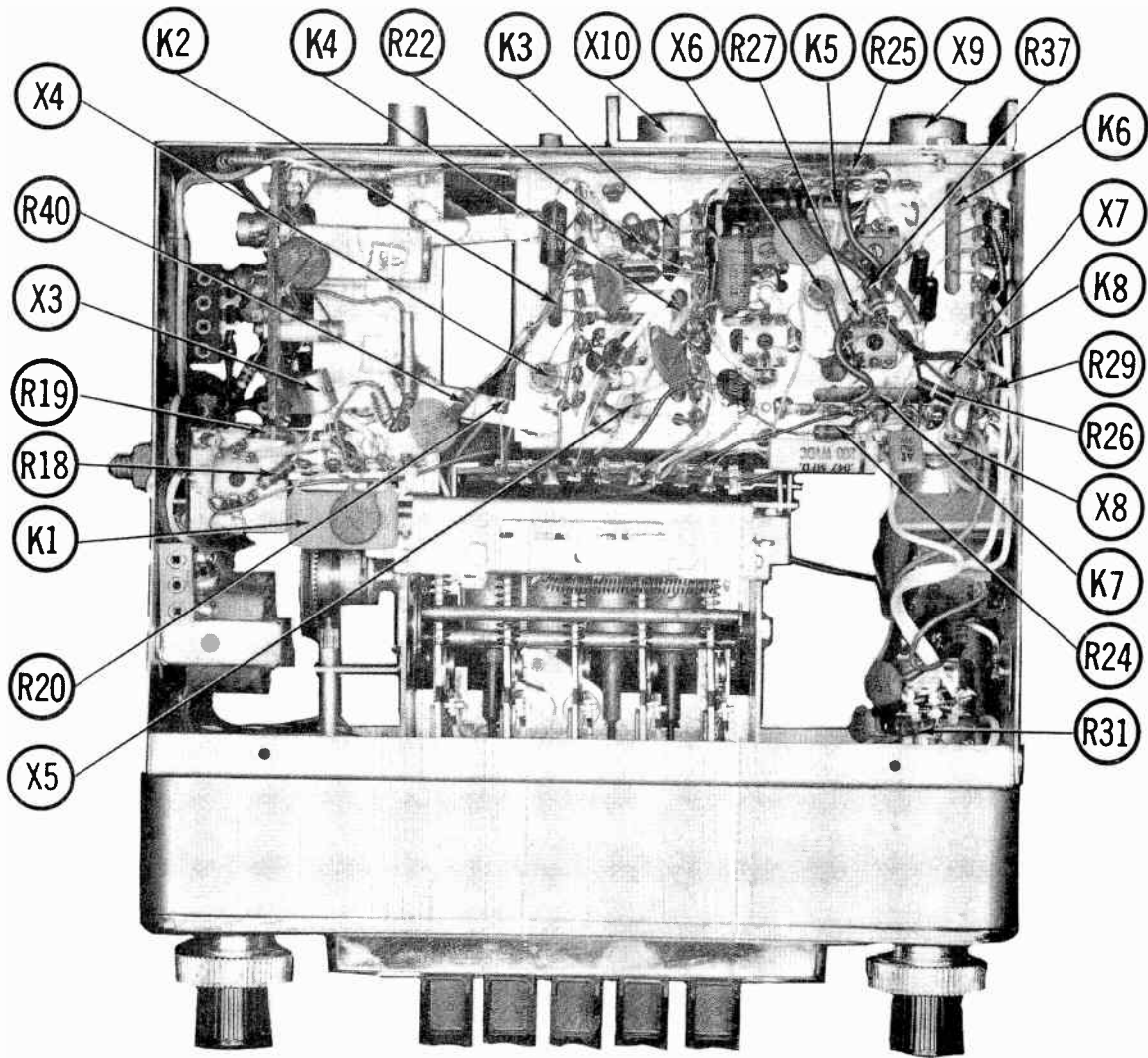
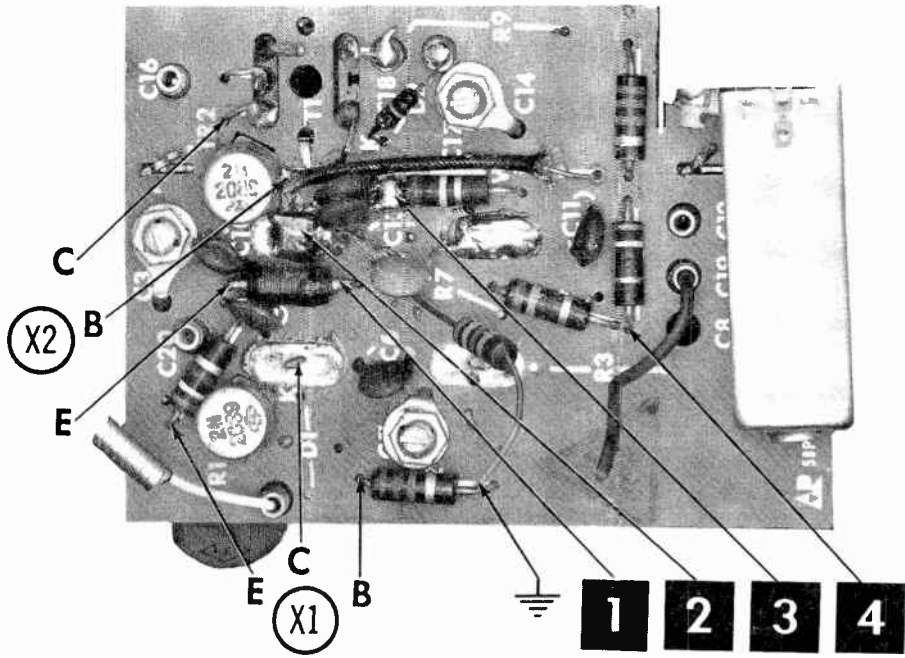
A PHOTOFAC STANDARD NOTATION SCHEMATIC
 with CIRCUITRACE
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RIVERSIDE MODELS FJB-16520A thru /527A





PARTS LIST AND DESCRIPTION

Replacement parts shown may be superseded by the availability of newly introduced replacements.
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

WIRING DATA

General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in 12 Colors 8524 (Stranded) Available in 12 Colors
Shielded Hook-up Wire	Use BELDEN No. 8885
Rear Seat Speaker Extension Cable	Use BELDEN No. 8782 (Stranded) Coded Parallel Leads
Bonding Strap	Use BELDEN No. 8661 (3/8 In.) or 8670 (3/4 In.)

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	
X1	2N2089	FM RF Amp.	DS-41		2N1177	PNP
X2	2N2089	FM Converter	DS-42		2N1179	PNP
X3	2N2089	1st FM IF	DS-34		2N1180	PNP
X4	2N2089	2nd FM IF Amp. - AM RF Amp.	DS-34		2N1180	PNP
X5	2N2089	3rd FM IF Amp. -AM Conv.	DS-35		2N1180	PNP
X6	2N2089	4th FM IF Amp. - AM IF Amp.	DS-34		2N1180	PNP
X7		Emitter Follower	DS-26	GE-2	2N591	PNP
X8		Driver	DS-26	GE-2	2N591	PNP
X9	8P404R	Output	DS-520	GE-3	2N301	PNP (Note 1)
X10	8P404R	Output	DS-520	GE-3	2N301	PNP (Note 1)

Note 1. When replacing, apply silicone grease to both sides of insulator, Tighten mounting screws securely.

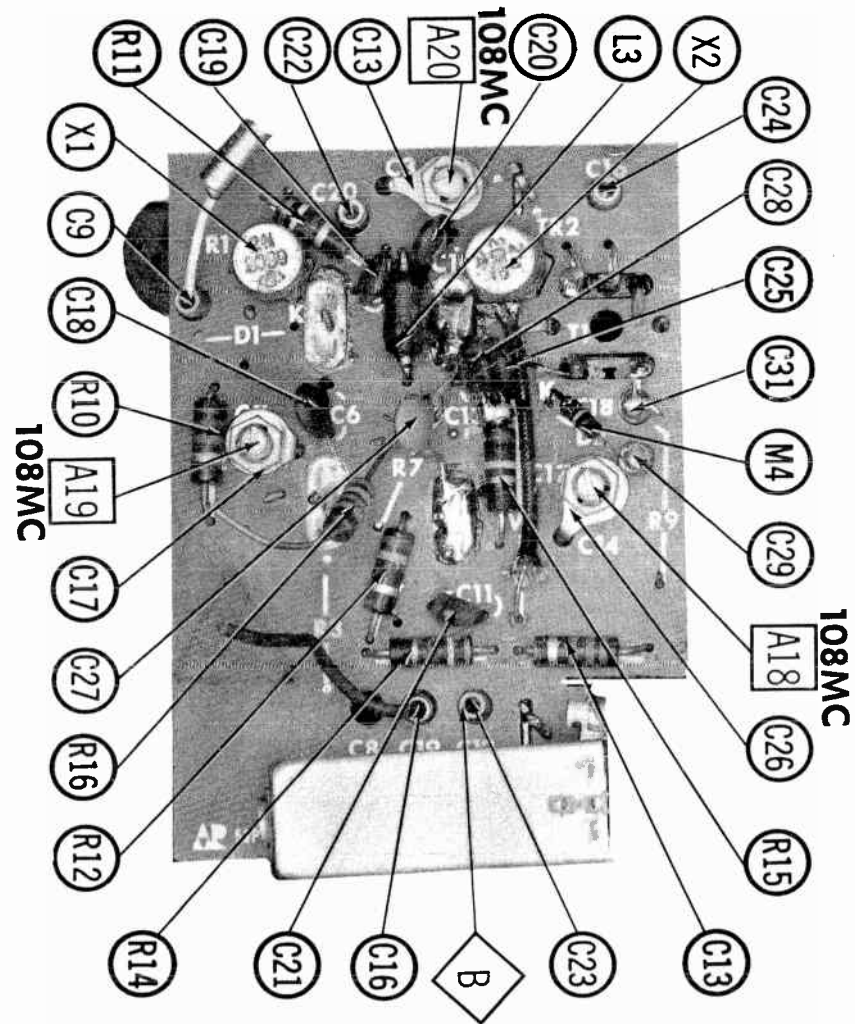
ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	RIVERSIDE PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	GENERAL INSTRUMENT PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A	600	15	20-327	AFH3-00-85.4	CCO008			WP300.87	PCLS-3026.10*
B	300	15							
C	100	15							
C2	25	15	20-256	PTT69	NLW25-15	MT1-10	MLV25-15	TT15X25	TE-1157.1
C3	25	15	20-256	PTT69	NLW25-15	MT1-10	MLV25-15	TT15X25	TE-1157.1
C4	10	15	20-106	CRE457A	NLW10-15	MT1-5	MLV10-15	TT15X10	TE-1155
C5	25	15	20-256	PTT69	NLW25-15	MT1-10	MLV25-15	TT15X25	TE-1157.1
C6	5	15	20-505	CRE454A	NLW5-15	MT1-3	MLV5-15	TT25X5	TE-1152
C7	25	15	20-256	PTT69	NLW25-15	MT1-10	MLV25-15	TT15X25	TE-1157.1

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

FIXED CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALLAB PART No.	CORNELL-DUBILIER PART No.	ELMENDO PART No.	MALLORY PART No.	SPRAGUE PART No.
C8	.0015		EF-001	MFT-1000	LA10Q22-SL	CCF-102	CT280A	5GA-Q22
C10	21		DI 22	DD-220	C10Q47C	CCD-220	GP422	10TCC-Q47
C11	47 NPO 10%		NPO-DI 47	DTZ-47		CCTO-470	CNO-447	10TCS-Q15
C12	15 N330 10%							
C13	1-6		NPO-DI 5	829-6		CV-3	CT552	
C14	5 NPO		TTD-1	DTZ-4R7	C10V47C	CCO-050	CNO-5 47	10TCC-V50
C15	.1		EF-001	CK-104	H6	CCF-102	TA-010	TG-P10
C16	.0015			MFT-1000		CV-3	CT280A	
C17	1-6			829-6		CV-3	CT552	
C18	17 N750 5%	(15) †	N750-DI 15	DTN-15	C10Q15U	CCTN-150	CN7-415	10TCC-Q15
C19	3 NPO		NPO-DI 3	DTZ-3R3	C10V33C	CCTO-3R3	CNO-533	10TCC-V30
C20	2.2 NPO		NPO-DI 2.2	DTZ-2R2	C10V22C	CCTO-2R2	CNO-522	10TCC-V22
.21	330		DI-330	DD-331	LA10T33-C4	CCD-331	GP333	10TS-T33
C22	.0015		EF-001	MFT-1000		CCF-102	CT280A	
C23	.0015		EF-001	MFT-1000		CCF-102	CT280A	
C24	.0015		EF-001	MFT-1000		CCF-102	CT280A	
C25	6.2		DI-6.8	DD-6R8	LA10V68-SL	3CCD-150	GP568	10TCC-V68
C26	1-6			829-6		CV-3	CT552	



RIVERSIDE MODELS FJB-16520A thru /527A

PARTS LIST AND DESCRIPTION (CONTINUED)

Replacement parts shown may be superseded by the availability of newly introduced replacements.
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

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.
C27	15 N330 10%							10TCS-Q15
C28	2.2 NPO ±.25%							10TCC-V22
C29	.0015		EF-001	MFT-1000		CCF-102	CT280A	
C30	.1		TTD-1	CK-104	H6		TA-010	TG-P10
C31	560							
C32	.02		TTD-02	CK-203	H3		TA-120	TG-S20
C33	3.3 NPO		NPO-DI 3,3	DTZ-3R3	C10V33C	CCTO-3R3	CNO-533	10TCC-V33
C34	560							
C35	100 10%		1459-100		CD10F101J	DM-19-101	MC235	MS-31
C36	10-80							
C37	3.3 NPO		NPO-DI 3,3	DTZ-3R3	C10V33C	CCTO-3R3	CNO-533	10TCC-V33
C38	5 NPO		NPO-DI 5	DTZ-4R7	C10V47C	CCTO-050	CNO-547	10TCC-V50
C39	100-400							
C40	270		1459-270		CD10F271J	DM-19-271	MCB-240.5	MS-327
C41	3.3 NPO		NPO-DI 3.3	DTZ-3R3	C10V33C	CCTO-3R3	CNO-533	10TCC-V33
C42	.03 100V 10%		TTD-03	CK-303				TG-S30
C43	100-400							
C44	100 N750		N750-DI 100	DTN-100	C10T1U	CCTN-101	CN7-310	10TCU-T10
C45	2.2 NPO 10%		NPO-DI 2.2	DTZ-2R2	C10V22C	CCTO-2R2	CNO-522	10TCC-V22
C46	560		DI-560	DD-561	LA10T56-C4	CCD-561	GP356	5HK-T56
C47	.3							
C48	180		1459-180		C10DF181J	DM-19-181		MS-318
C49	.05 50V		TTD-05	CK-503	H5		TA-150	TG-S50
C50	.047 200V		P288N-047	DD-503	PM2S47	4DP-3-473	GEM-2147	2TM-S47
C51	.02		TTD-02	CK-203	H3		TA-120	TG-S20
C52	.01		TTD-01	CK-103	H2		TA-110	TG-S10
C53	.47 50V		P288N-047	DD-503	PM2S47	4DP-3-473	GEM-2147	2TM-S47
C54	.05		TTD-05	CK-503	H5		TA-150	TG-S50
C55	.05		TTD-05	CK-503	H5		TA-150	TG-S50
C56	.1		TTD-1	CK-104	H6		TA-010	TG-P10
C57	.1		TTD-1	CK-104	H6		TA-010	TG-P10
C58	.1		TTD-1	CK-104	H6		TA-010	TG-P10

† Alternate Value.

CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA				
			RIVERSIDE PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1A	Tone	10K	80A2530				
B	Volume & Switch	100K Tap@ 40K					
R2	Fader	100Ω	80A2215				

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		RIVERSIDE PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	FM Ant.	①					① Part of M2
L2	FM RF	①					
L3	RF Choke (1uh)		BC-561	4602	RTC-8515	T855	② Part of M3
L4	1st FM IF	14-2520					
L5	FM Osc.	①					
L6	2nd FM IF	14-2521					
L7	RF Choke (6.2uh)	14-6.2	BC-565	4610	RTC-8520	T859	
L8	AM Ant.	②					
L9	3rd FM IF	14-2521					
L10	AM RF	②					
L11	AM Osc.	②					
L12	4th FM IF	14-2521					
L13	1st AM IF	14-2523					
L14	Ratio Det.	14-2522					
L15	2nd AM IF	14-2524					

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA					NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	RIVERSIDE PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L16	300MA	.5Ω	10MH	75A1269	C-4095	TC-2	TR-155	TY17XT	

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO	REPLACEMENT DATA					NOTES
		RIVERSIDE PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	5	1	75A2500				

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE	REPLACEMENT DATA					NOTES
		RIVERSIDE PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T2	16Ω Taps@ 12Ω, 8Ω	75A2501					

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		RIVERSIDE PART No.	QUAM PART No.	
SP1	6" x 9" PM 18Ω	73B2574	69A3216	

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	RIVERSIDE PART No.	REPLACEMENT DATA
K1	X3 Bias	470Ω, 2200Ω, 18K, 560mmf	89A2533	
K2	X4 Bias-AVC	470Ω, 1000Ω, 82K, (2) .05mfd	89A2532	
K3	AM RF Coupling	150Ω, .005mfd, .02mfd	89A2535	
K4	X5 Bias	470Ω, 2200Ω, 18K, 560mmf	89A2533	
K5	X6 Bias	470Ω, 2200Ω, 18K, (3) .05mfd	89A2534	
K6	Ratio Det. Balance	680Ω, 820Ω, (2) 6800Ω, (2) 330mmf	89A2538	
K7	De-emphasis	180Ω, 3900Ω, 10K, 100K, (3) .01mfd, .02mfd	89A2536	

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			RIVERSIDE PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M1	AGA	2A	108-301	12-1912B	301002	155004	AGA 2	HMF

MISCELLANEOUS

ITEM No.	PART NAME	RIVERSIDE PART No.	NOTES
M2	FM Tuner		
M3	AM Tuner		
M4	AFC Det.		
M5	Zener Diode		
M6	Limiter		
M7	AFC Det.		
M8	AVC Det.		
M9	Ratio Det.		
M10	Ratio Det.		
M11	AM Det.		
M12	Spark Plate		
M13	Selector Switch		



PHOTOFACT[®]

TRADE NAME : Riverside Models:
 FJB-16574A (1963 Buick)
 FJB-16580A (1963 F-85)
 FJB-16583A (1963 Tempest)
 FJB-16585A (1963 Chevrolet)

SUPPLIER : Montgomery Ward & Company
 619 Chicago Ave., Chicago 7, Illinois

TYPE SET : 5 Transistor AM Receiver

POWER SUPPLY : 12 Volt Storage Battery

RATING : .8 Amp. @ 12.6 VDC

TUNING RANGE: BROADCAST 540 - 1615KC



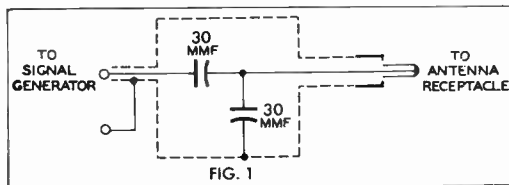
ALIGNMENT INSTRUCTIONS

Check for specified source voltage.
 Use only enough generator output to provide a usable indication.
 Suggested Alignment Tools:

A1 thru A4.....GENERAL CEMENT #8606, 8606L, 8869
 WALSCO #2543, 2544, 2588
 A5, A6, A7.....GENERAL CEMENT #8290, 8868, 9087
 WALSCO #2525, 2528, 2587

SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
High side thru .1mf to point Δ , low side to ground.	262KC (400 ν Mod.)	High Freq. End Stop.	Output Meter across voice coil.	A1, A2, A3, A4	Adjust for maximum.
Thru dummy (Fig. 1) to antenna receptacle.	1615KC	"	"	A5, A6, A7	"

With radio installed in car and antenna fully extended, tune in a weak station near 1400KC and adjust A7 for maximum output.



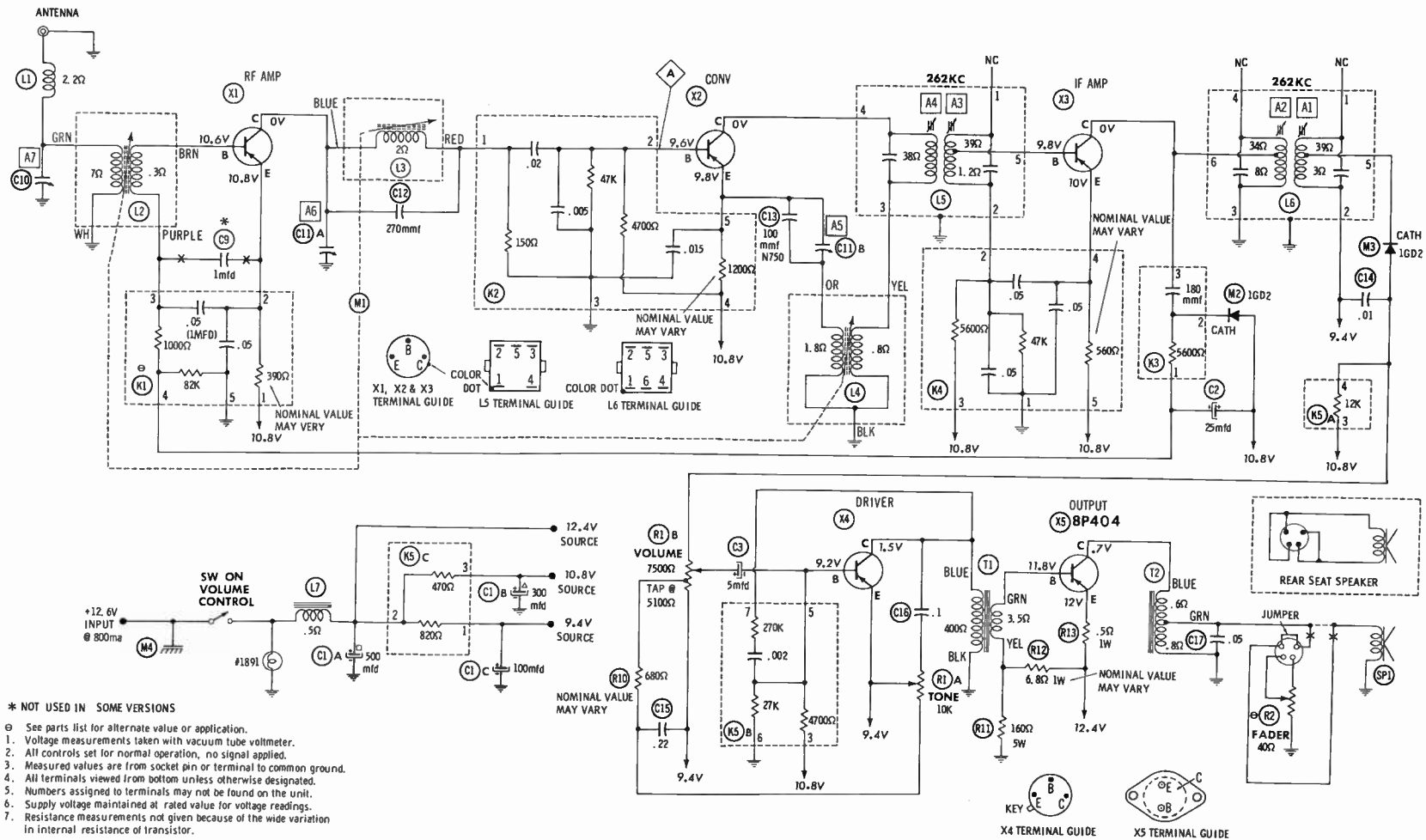
PUSH-BUTTON ADJUSTMENT

1. Pull button out.
2. Tune manually to desired station.
3. Press button in firmly.
4. Repeat for remaining buttons.

RIVERSIDE MODELS FJB-16574A/80A/83A/85A

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

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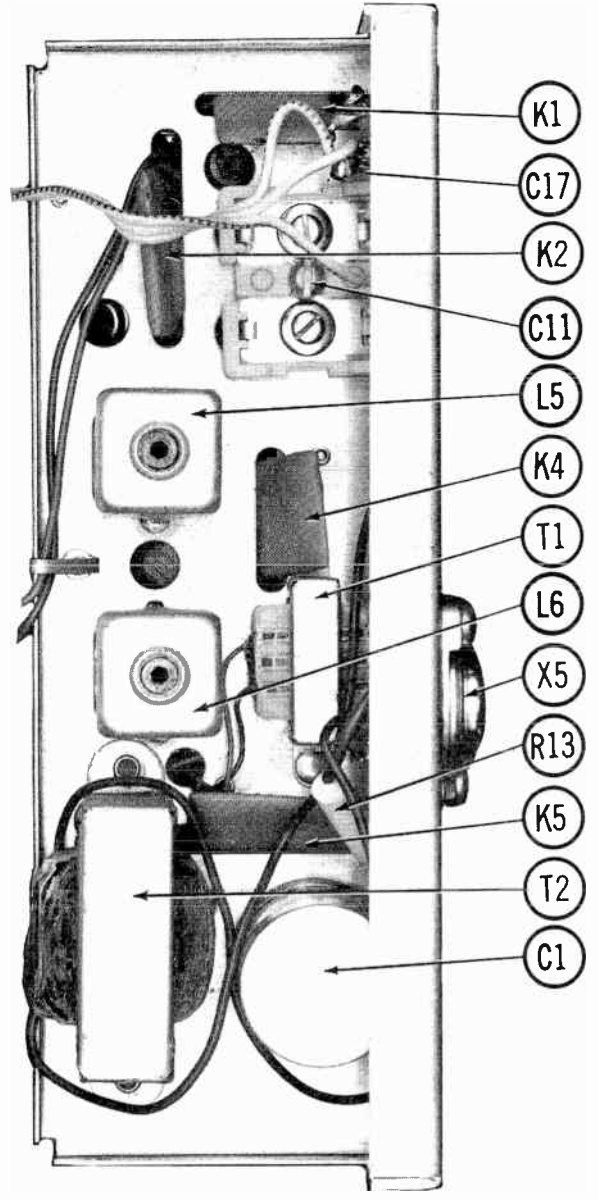
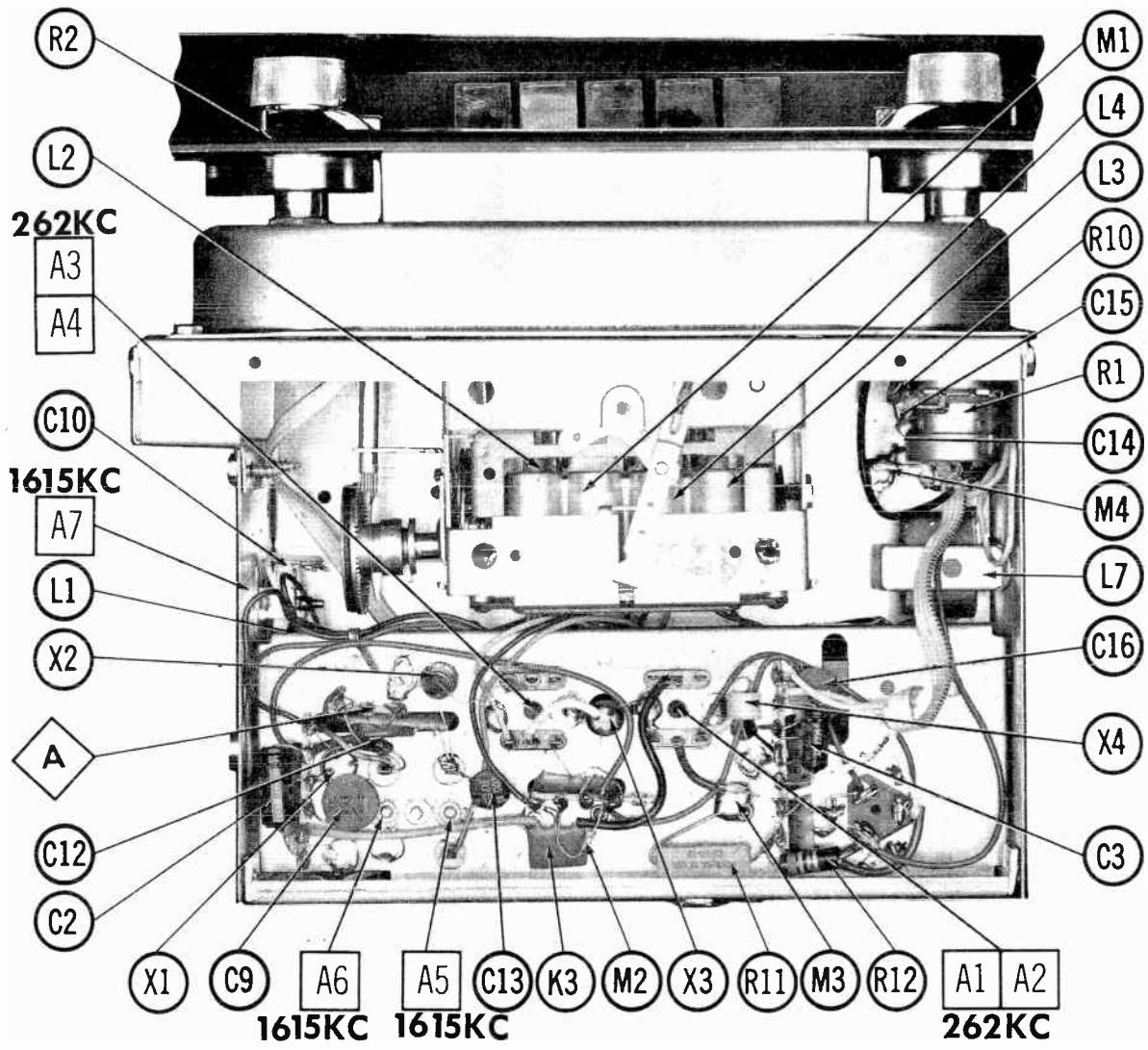


*** NOT USED IN SOME VERSIONS**

- ⊖ See parts list for alternate value or application.
- 1. Voltage measurements taken with vacuum tube voltmeter.
- 2. All controls set for normal operation, no signal applied.
- 3. Measured values are from socket pin or terminal to common ground.
- 4. All terminals viewed from bottom unless otherwise designated.
- 5. Numbers assigned to terminals may not be found on the unit.
- 6. Supply voltage maintained at rated value for voltage readings.
- 7. Resistance measurements not given because of the wide variation in internal resistance of transistor.

A PHOTOFAC STANDARD NOTATION SCHEMATIC
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RIVERSIDE MODELS FJB-16574A/80A/83A/85A



PARTS LIST AND DESCRIPTION

Replacement parts shown may be superseded by the availability of newly introduced replacements.
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	
X1	2N840	RF Amp.	DS-25	GE-1	2N1837	PNP
X2	2N842	Conv.	DS-25	GE-1	2N1639	PNP
X3	2N841	IF Amp.	DS-25	GE-1	2N1838	PNP
X4	2N591	Driver	DS-28	GE-2	2N591	PNP
X5	2N178	Output	DS-520	GE-3	2N301	PNP(Note 1)

Note 1. When replacing, apply silicone grease to both sides of insulator. Tighten mounting screws securely.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		RIVERSIDE PART No.	REPLACEMENT DATA					SPRAGUE PART No.
	CAP.	VOLT.		AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	GENERAL INSTRUMENT PART No.	MALLORY PART No.	
C1A	500	18	20-2853	AFH3-00-94.5				FP-300, 83	PCL5-3028, 11
B	300	18							
C	100	16							
C2	25	15	15025	PTT69	NLW25-15	MT1-10	MLV25-15	TT15X25	TE-1157, 1
C3	5	15	15015	CRE454A	NLW5-15	MT1-3	MLV5-15	TT25X5	TE-1152

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

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.	
C9	1mfd	#28-800-2L #28A1332		UK-105	HCC3105P				HY-135
C10									
C11A									
C11B									
C12									
C13	270	DI-270	DD-271	LA10T27-C4	CCD-271	GP327	5GA-T25		
C14	100 N750	N750-DI 100	DTN-100	C10T1U	CCTN-101	CN7-310	10TCU-T10		
C15	.01	BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-510		
C16	.22		UK20-204	HCC25224Z			HY-325		
C17	.1 18V		TTD-1	CK-104	H8	TA-010	TG-P10		
C18	.05 50V		TTD-05	CK-503	H5	TA-150	TG-850		

Riverside Part Number.

CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA				
			RIVERSIDE PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1A	Tone	10K	80A2772				
B	Volume & Switch	7500Ω Tap @ 5100Ω 40Ω				† QJ-1887A	■ UE44598
R2	Fader		80A2885 ①				

† "CONCENTRIKIT" Equivalent: K-8 Kit with base elements and shafts: B11-118, P17-129 (Panel)
"SNAPTROL" Equivalent: BU8②, CF9, CR48T, SF16, SR51, GC B21-115X, R9-208 (Rear)

■ "STA-LOC" Equivalent: FG14L, RU752T53, OS2000, IS2437, US41
S9② (Bushing)
78-1 (Switch)

① Not used in some versions.

② Cut 3/32" from bushing.

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		RIVERSIDE PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	RF Choke(6, 2uh)	14-8.2	BC-585	4810	RTC-8520	T859	① Part of M1.
L2	Ant.	①					
L3	RF	①					
L4	Osc.	①					
L5	Input IF	14-2854		8570			
L6	Output IF	14-2855		8571			

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA					NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	RIVERSIDE PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L7	800ma	.5Ω	10MH	75A1269	C-4095	TC-2	TR-155	TY11XT	

PARTS LIST AND DESCRIPTION (CONTINUED)

Replacement parts shown may be superseded by the availability of newly introduced replacements.
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
			RIVERSIDE PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
	PRI.	SEC.						
T1	8:	1	75A2635					

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE	REPLACEMENT DATA					NOTES
		RIVERSIDE PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
	PRI.						
T2	24Ω Tap@6-8Ω	75A2636 ①				TR-169	① Part #75A2693 used in Buick and Chevrolet.

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		RIVERSIDE PART No.	QUAM PART No.	
SP1	4" x 10" PM 6-8Ω	73B2737 ①	410A2Z8	① Part #73B2671 used in Chevrolet.

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	RIVERSIDE PART No.	REPLACEMENT DATA
K1	X1 Bias	390Ω, 1000Ω, 82K, .05mfd, .05mfd	89A2582A ①	
K2	X2 Bias	150Ω, 1200Ω, 4700Ω, 47K, .005mfd, .015mfd, .02mfd	89A2583A	
K3	AVC	5600Ω, 180mmf	89A2701	
K4	X3 Bias	560Ω, 5600Ω, 47K, .05mfd, .05mfd, .05mfd	89A2584B	
X5	Audio Bias	470Ω, 820Ω, 4700Ω, 12K, 27K, 270K, .002mfd	89A2585A	

① Some versions may use Part #89A2582B or C

MISCELLANEOUS

ITEM No.	PART NAME	RIVERSIDE PART No.	NOTES
M1	Tuner	78B2777	Push Button
M2	Tuner	78B2712	Manual
M3	AVC		1GD2
M4	Detector		1GD2
	Spark Plate	43-215	

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
BUICK		F-85	
Knob - Volume, Tuning	48A2761	Knob - Volume, Tuning	48A1833
Knob - Tone	48A1830	Knob - Tone	48A1837
Knob - Dummy	48A1830-1	Knob - Dummy	48A1838
Push Button	55A1827	Push Button	55A1827
Dial Glass	39-97	Dial Glass	39-97
TEMPEST		CHEVROLET	
Knob - Volume	73B2737	Knob - Volume, Tuning	54A1714
Knob - Tuning, Dummy	48A2761	Knob - Tone, Fader	48A2692
Knob - Tone	48A1830	Dial Glass	39-86
Push Button	55A1827		
Dial Glass	39-97		

WIRING DATA

General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in 12 Colors 8524 (Stranded) Available in 12 Colors
Shielded Hook-up Wire	Use BELDEN No. 8885
Rear Seat Speaker Extension Cable	Use BELDEN No. 8782 (Stranded) Coded Parallel Leads
Bonding Strap	Use BELDEN No. 8661 (3/8 In.) or 8670 (3/4 In.)

RIVERSIDE MODELS FJB-16574A/80A/83A/85A



TRADE NAME : Riverside Models FJB-16576A, FJB-16586A
 (1963 Corvairs)
 SUPPLIER : Montgomery Ward & Company
 619 Chicago Ave., Chicago 7, Illinois
 TYPE SET : 5 Transistor AM Receiver
 POWER SUPPLY : 12 Volt Storage Battery
 RATING : 525MA @ 12.6VDC (Less Lamp)
 TUNING RANGE : BROADCAST 540 - 1615KC

ALIGNMENT INSTRUCTIONS

Check for specified source voltage.
 Use only enough generator output to provide a usable indication.
 Suggested Alignment Tools:

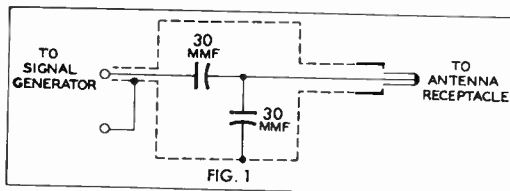
A1 thru A4.....GENERAL CEMENT #8606, 8606L, 8869
 WALSCO #2543, 2544, 2588
 A5, A6, A7.....GENERAL CEMENT #8290, 8868, 9087
 WALSCO #2525, 2528, 2587

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1.	High side thru .1mf to point Δ , low side to ground.	262KC (400 ν Mod.)	High Freq. End Stop.	Output Meter across voice coil.	A1, A2, A3, A4	Adjust for maximum.
2.	Thru dummy (Fig. 1) to antenna receptacle.	1615KC	"	"	A5, A6, A7	"

With radio installed in car and antenna fully extended, tune in a weak station near 1400KC and adjust A7 for maximum output.

PUSH-BUTTON ADJUSTMENT

1. Pull button out.
2. Tune manually to desired station.
3. Press button in firmly.
4. Repeat for remaining buttons.



PARTS LIST AND DESCRIPTION

Replacement parts shown may be superseded by the availability of newly introduced replacements.

WIRING DATA

Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in 12 Colors 8524 (Stranded) Available in 12 Colors
Shielded Hook-up Wire	Use BELDEN No. 8885
Rear Seat Speaker Extension Cable	Use BELDEN No. 8782 (Stranded) Coded Parallel Leads
Bonding Strap	Use BELDEN No. 8661 (3/8 In.) or 8670 (3/4 In.)

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	
X1	2N640	RF Amp.	DS-25	GE-1	2N1637	PNP
X2	2N642	Conv.	DS-25	GE-1	2N1639	PNP
X3	2N641	IF Amp.	DS-25	GE-1	2N1638	PNP
X4	2N591	Driver	DS-26	GE-2	2N591	PNP
X5	2N176	Output	DS-520	GE-3	2N301	PNP (Note 1)

Note 1. When replacing, apply silicone grease to both sides of insulator.
Tighten mounting screws securely.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						NOTES
	CAP.	VOLT.	RIVERSIDE PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	GENERAL INSTRUMENT PART No.	MALLORY PART No.	
C1A	600	15	20-327	AFH3-00-95.4				WP-300.87	PCLS-3026.10*
B	300	15							
C	100	15							
C2	25	15	15025	PTT69	NLW25-15	MT1-10	MLV25-15	TT15X25	TE-1157.1
C3	5	15	15015	CRE454A	NLW5-15	MT1-3	MLV5-15	TT25X5	TE 1152

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

FIXED CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA						
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCOR PART No.	MALLORY PART No.	SPRAGUE PART No.	
C10	1mfd	#28-800-2L (.05) †	P288N-05	UK-105	HCC3105P	1DP-2-503	PVC-215	HY-135	
C11	.05 100V								2PS-S50
C12	.05 100V								
C13A	270	#28A1332	DI-270	DD-271	LA10T27-C4	CCD-271	GP327	5GA-T25	
B									
C14	.02 200V		BPD-02	DD-203	BYA6S2	CCD-203	B-120	5HK-S20	
C15	.005 200V		P288N-005	DD-502	DPMS8D5	6DP-1-502	PVC-825	6TM-D50	
C16	.015 200V		P288N-015		WMF2S15	4DP-1-153	PVC-2115	4PS-S15	
C17	100 N750		N750-DI 100	DTN-100	C10T1U	CCTN-101	CN7-310	10TCU-T10	
C18	.05 100V		P288N-05		PM2S5	IDP-2-503	PVC-215	2PS-S50	
C19	.1 16V		TTD-1	CK-104	H6		TA-010	TG-P10	
C20	.05 100V		P288N-05		PM2S5	1DP-2-503	PVC-215	2PS-S50	
C21	180		DI-180	DD-181	LA10T18-S3	CCD-181	GP318	5GA-T18	
C22	.01 50V		TTD-01	CK-103	H2		TG-S10		
C23	.22 50V			UK20-204	HCC25224Z		TA-110	HY-325	
C24	.05 50V		TTD-05	CK-503	H5		TA-150	TG-S50	

Riverside Part Number.

† Alternate Value.

CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA				
			RIVERSIDE PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1A	Tone	10K	80A2291				
B	Volume & Switch	10K Tap @ 5K					

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		RIVERSIDE PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	RF Choke(6.2uh)	14-6, 2	BC-565	4610	RTC-8520	T859	① Part of M1.
L2	Ant.	①					
L3	RF	①					
L4	Osc.	①					
L5	Input IF	14-270(B)	BC-690	6570			
L6	Output IF	14-271(B)	BC-691	6571		TF606	

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA				NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	RIVERSIDE PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	
L7	525ma	.5Ω	10MH	75A1269	C-4095	TC-2	TR-155	TY17XT

CHOKE (AUDIO OUTPUT)

ITEM No.	INDUCTANCE	REPLACEMENT DATA					NOTES
		RIVERSIDE PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L8	27MH	75A2189					

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
	PRI.	SEC.	RIVERSIDE PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
	T1	8:	1	75A1859			TR-184	

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		RIVERSIDE PART No.	QUAM PART No.	
SP1	6" x 9" PM 20Ω	73B2221	69A3Z20	

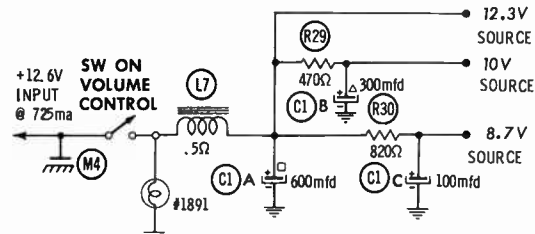
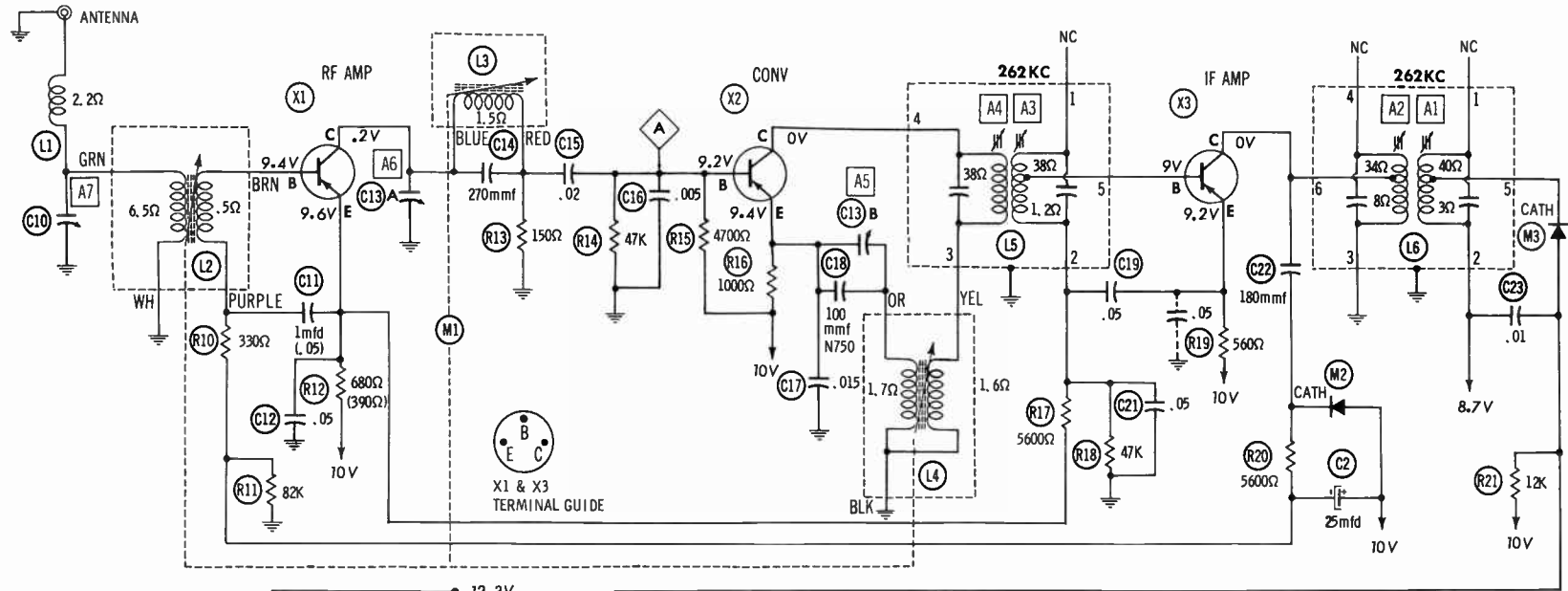
MISCELLANEOUS

ITEM No.	PART NAME	RIVERSIDE PART No.	NOTES
M1	Tuner	78B2290	Push Button Manual
	Tuner	78B2234	
M2	A VC		IGD2
M3	Detector		IGD2
M4	Spark Plate		

CABINETS & CABINET PARTS

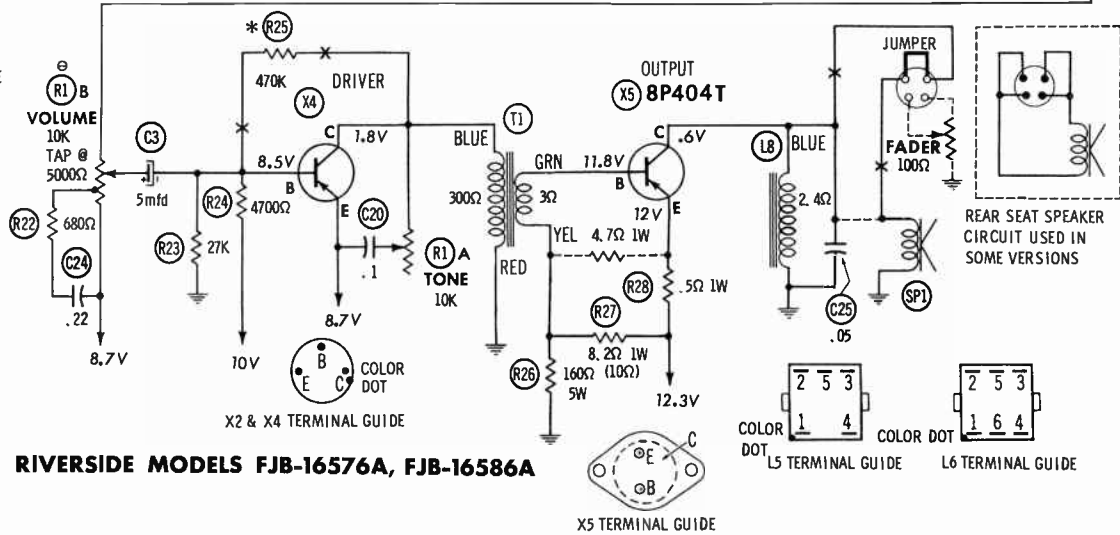
(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
Knob - Volume, Tuning	54A1714	Knob - Dummy	48A1063-1A
Knob - Tone	48A1063	Push Button	55A1748

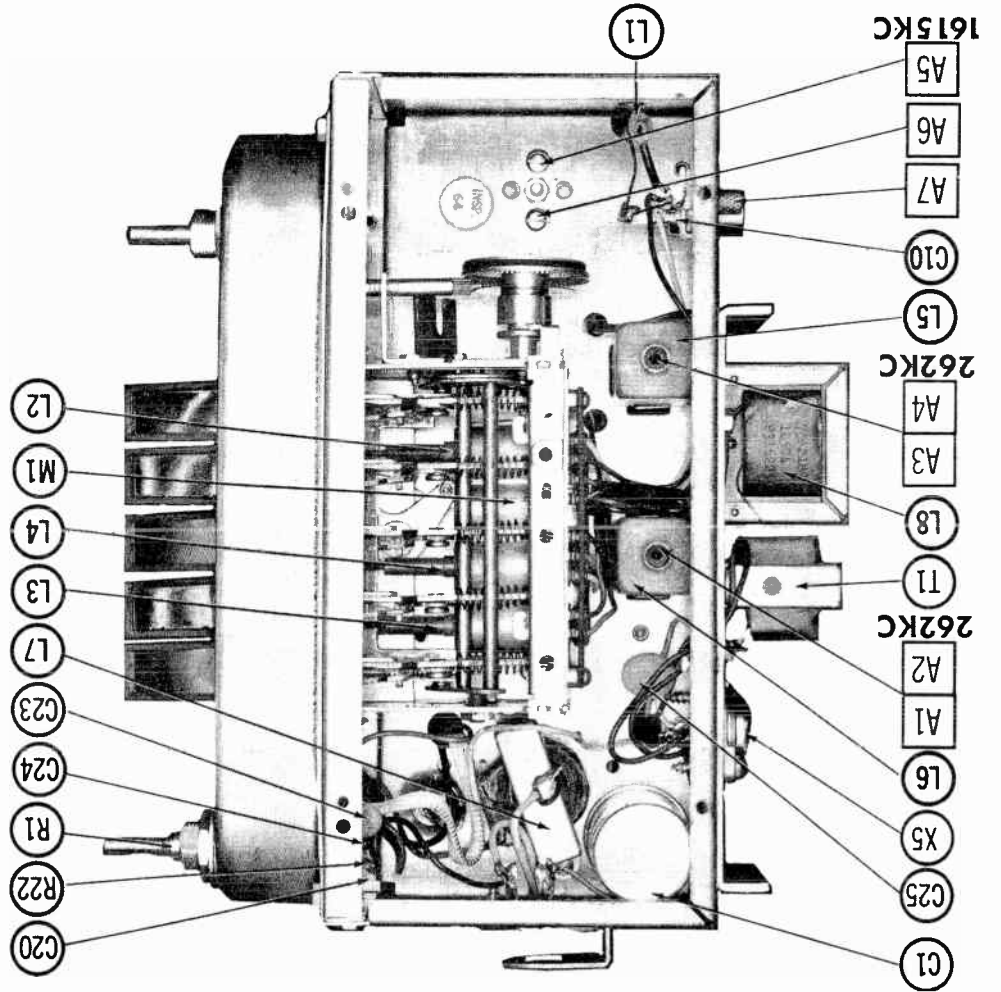
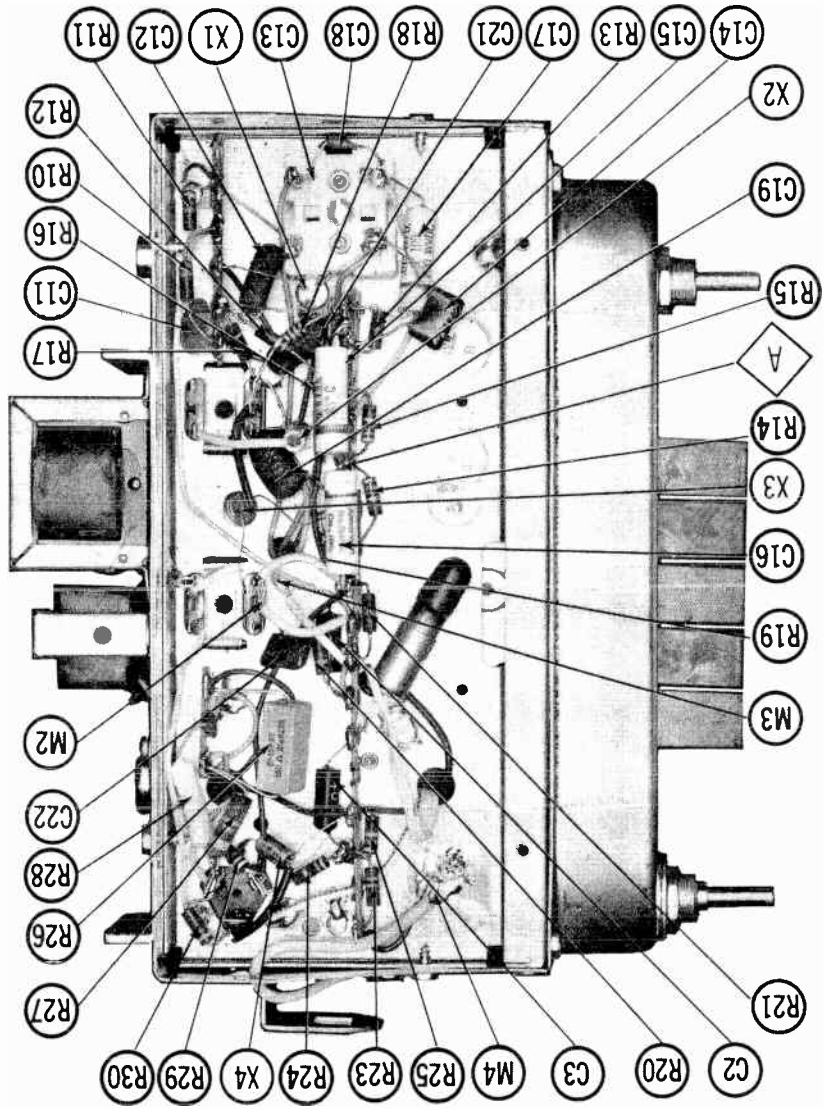


- * NOT USED IN SOME VERSIONS
- ⊖ See parts list for alternate value or application.
- 1. Voltage measurements taken with vacuum tube voltmeter.
- 2. All controls set for normal operation, no signal applied.
- 3. Measured values are from socket pin or terminal to common ground.
- 4. All terminals viewed from bottom unless otherwise designated.
- 5. Numbers assigned to terminals may not be found on the unit.
- 6. Supply voltage maintained at rated value for voltage readings.
- 7. Resistance measurements not given because of the wide variation in internal resistance of transistor.

A PHOTOFAC STANDARD NOTATION SCHEMATIC
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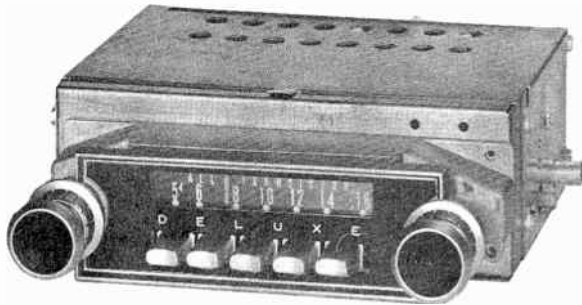


RIVERSIDE MODELS FJB-16576A, FJB-16586A





PHOTOFACT[®]



TRADE NAME : Riverside Models:
 FJB-16578A (1963 Ford)
 FJB-16579A (1963 Falcon)
 FJB-16581A (1963 Mercury)
 FJB-16587A (1963 Falcon)
 FJB-16588A (1963 Ford)

SUPPLIER : Montgomery Ward & Company
 619 Chicago Ave., Chicago 7, Ill.

TYPE SET : 5 Transistor AM Receiver

POWER SUPPLY : 12 Volt Storage Battery

RATING : .8 Amp. @12.6 VDC

TUNING RANGE : BROADCAST 540 — 1615KC

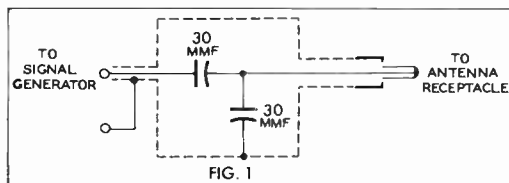
ALIGNMENT INSTRUCTIONS

Check for specified source voltage.
 Use only enough generator output to provide a usable indication.
 Suggested Alignment Tools:

- A1 thru A4..... GENERAL CEMENT #8606, 8606L, 8869
 WALSCO #2543, 2544, 2588
- A5, A6, A7..... GENERAL CEMENT #8290, 8868, 9087
 WALSCO #2525, 2528, 2587

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1.	High side thru .1mf to point Δ , low side to ground.	282KC (400v Mod.)	High Freq. End Stop.	Output Meter across voice coil.	A1, A2, A3, A4	Adjust for maximum.
2.	Thru dummy (Fig. 1) to antenna receptacle.	1615KC	"	"	A5, A6, A7	"

With radio installed in car and antenna fully extended, tune in a weak station near 1400KC and adjust A7 for maximum output.



PUSH-BUTTON ADJUSTMENT

1. Pull button out.
2. Tune manually to desired station.
3. Press button in firmly.
4. Repeat for remaining buttons.

RIVERSIDE MODELS FJB-16578A/79A/81A/87A/88A

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

PARTS LIST AND DESCRIPTION

Replacement parts shown may be superseded by the availability of newly introduced replacements.
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	
X1	2N640	RF Amp.	DS-25	GE-1	2N1637	PNP
X2	2N642	Converter	DS-25	GE-1	2N1639	PNP
X3	2N641	IF Amp.	DS-25	GE-1	2N1638	PNP
X4	2N591	Driver	DS-26	GE-2	2N591	PNP
X5	2N176	Output	DS-520	GE-3	2N301	PNP(Note 1)

Note 1. When replacing, apply silicone grease to both sides of insulator.
Tighten mounting screws securely.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		RIVERSIDE PART No.	REPLACEMENT DATA				MALLORY PART No.	SPRAGUE PART No.
	CAP.	VOLT.		AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	GENERAL INSTRUMENT PART No.		
C1A	500	16	20-2653	AFH3-00-94.5				FP-300, 83	PCLS-3026.11*
B	300	16							
C	100	16							
C2	25	15	15025	PTT69	NLW25-15	MT1-10	MLV25-15	TT15X25	TE-1157.1
C3	5	15	15005	CRE454A	NLW5-15	MT1-3	MLV5-15	TT25X5	TE-1152

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

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		#28-800-2L							
C11A		#28A-1332							
B									
C12	270		DI-270	DD-271	LA10T27-C4	CCD-271	GP327	5GA-T25	
C13	100 N750		N750-DI100	DTN-100	C10T1U	CCTN-101	CN7-310	10TCU-T10	
C14	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10	
C15	.22 3V			UK20-204	HCC2522AZ			HY-325	
C16	.1 16V		TTD-1	CK-104	H6		TA-010	TG-P10	
C17	.05 50V		TTD-05	CK-503	H5		TA-150	TG-S50	

Riverside Part Number.

CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA				
			RIVERSIDE PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1	Tone Volume & Switch	10K 7500Ω Tap @ 5K 40Ω	80A2658①				
	Fader		80A2621②				

① Falcon Models use Part #80A2182C
② Not used in some versions.

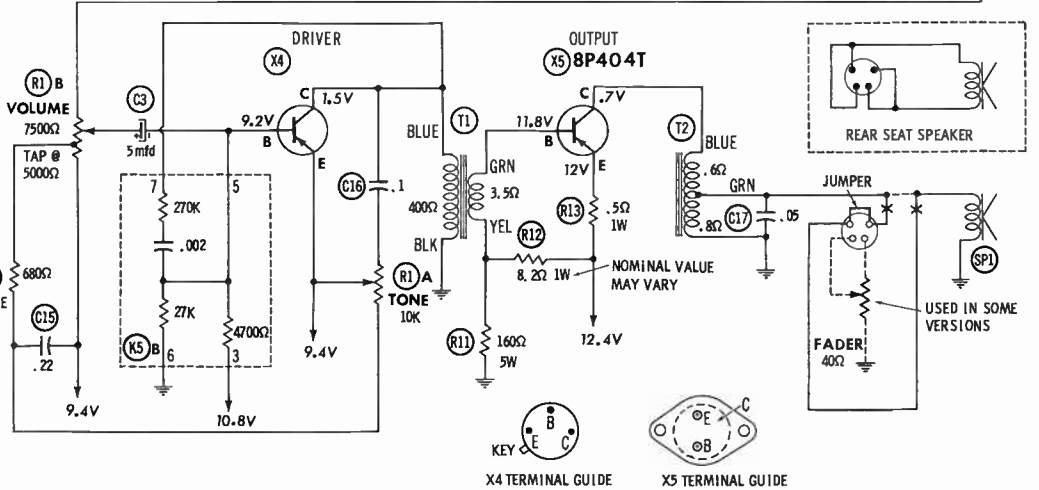
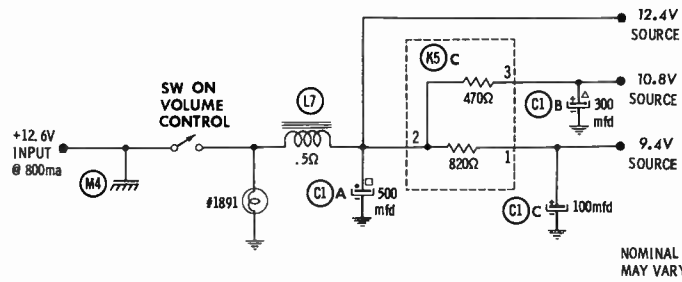
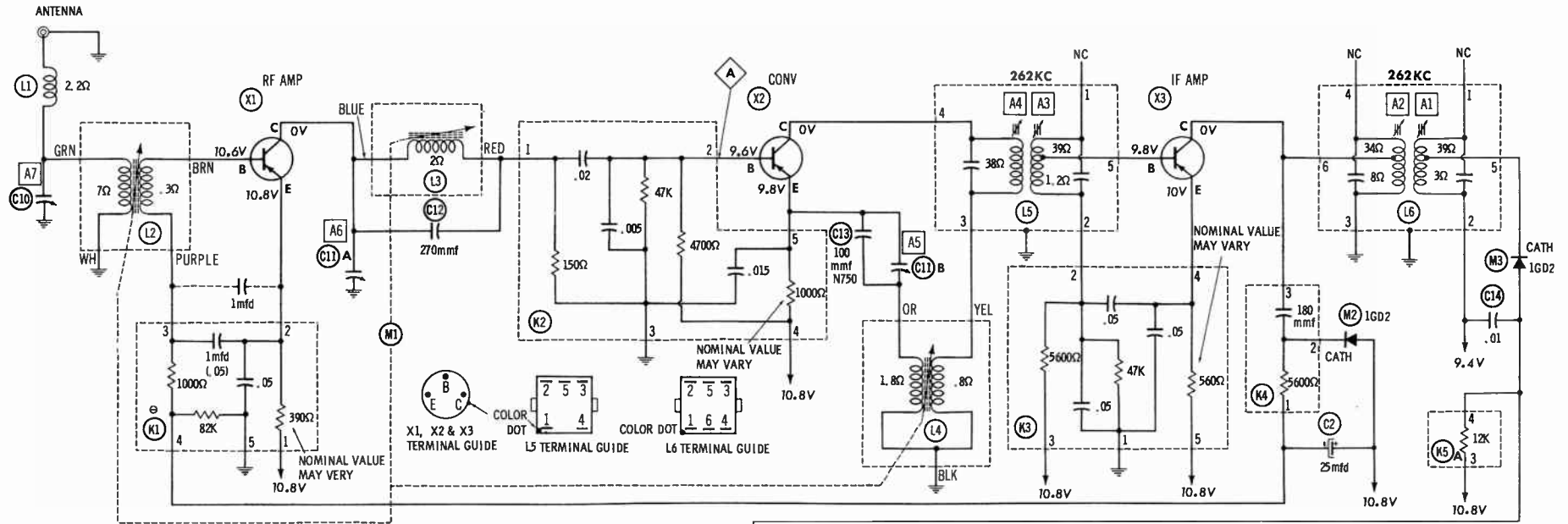
COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		RIVERSIDE PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	RF Choke(6.2uh)	14-6.2	BC-565	4610	RTC-8520	T859	① Part of M1.
L2	Ant.	①					
L3	RF	①					
L4	Osc.	①					
L5	Input IF	14-2654	6570				
L6	Output IF	14-2655	6571				

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA					NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	RIVERSIDE PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L7	600ma	.5Ω	10MH	75A1269	C-4095	TC-2	TR-155	TY17XT	

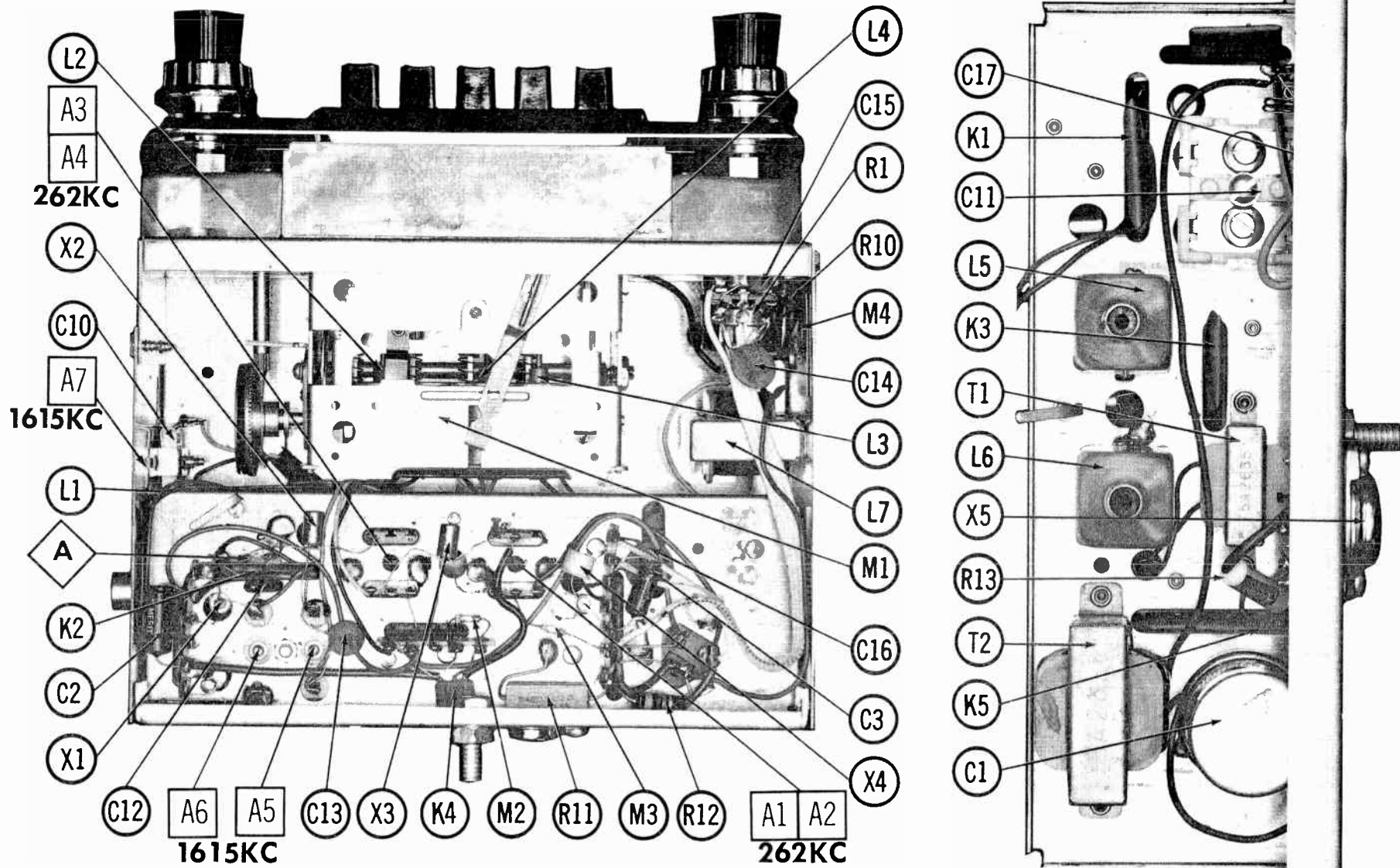
RIVERSIDE MODELS FJB-16578A/79A/81A/87A/88A



- ⊙ See parts list for alternate value or application.
- 1. Voltage measurements taken with vacuum tube voltmeter.
- 2. All controls set for normal operation, no signal applied.
- 3. Measured values are from socket pin or terminal to common ground.
- 4. All terminals viewed from bottom unless otherwise designated.
- 5. Numbers assigned to terminals may not be found on the unit.
- 6. Supply voltage maintained at rated value for voltage readings.
- 7. Resistance measurements not given because of the wide variation in internal resistance of transistor.

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RIVERSIDE MODELS FJB-16578A/79A/81A/87A/88A



PARTS LIST AND DESCRIPTION (CONTINUED)

Replacement parts shown may be superseded by the availability of newly introduced replacements.
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
	PRI.	SEC.	RIVERSIDE PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	8:	1	75A2635					

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC.	RIVERSIDE PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T2	24Ω Tap @	8Ω	75A2699				TR-189	

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		RIVERSIDE PART No.	QUAM PART No.	
SP1	6" x 9" PM 6-8Ω 5" x 7" PM 6-8Ω	73B2724 73B2786		Ford, Mercury Falcon

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	RIVERSIDE PART No.	REPLACEMENT DATA
K1	X1 Bias	390Ω, 1000Ω, 82K, .05mfd, .05mfd, 1mfd	89A2582C ①	
K2	X2 Bias	150Ω, 1000Ω, 4700Ω, 47K, .005mfd, .015mfd, .02mfd	89A2583	
K3	X3 Bias	560Ω, 5600Ω, 47K, .05mfd, .05mfd, .05mfd	89A2584B	
K4	AVC	5600Ω, 180mmf	89A2701	
K5	Audio Bias	470Ω, 820Ω, 4700Ω, 12K, 27K, 270K, .002mfd	89A2585A	

① Some versions may use Part #89A2582B

MISCELLANEOUS

ITEM No.	PART NAME	RIVERSIDE PART No.	NOTES
M1	Tuner	78B2618	Push Button, Ford
	Tuner	78B2708	Manual, Ford
	Tuner	78B2175	Push Button, Falcon
	Tuner	78B2715	Manual, Falcon
	Tuner	78B2818/78B2870	Push Button, Mercury
M2	AVC (1GD2)		
M3	Det. (1GD2)		
M4	Spark Plate	43-215	

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
KNOBS			
Tuning, Volume - Ford	48B2850	Push Button - Ford	55A2183NV
Tuning, Volume - Falcon	47-52W	Push Button - Mercury	55A2179NV
Tuning, Volume - Mercury	54A1714	Dial Glass - Ford	39-85
Tone - Ford, Falcon	48A1522	Dial Glass - Falcon	39-83
Tone - Mercury	48A2247B	Dial Glass - Mercury	39-85A
Dummy - Ford, Falcon	48A1522-1		
Dummy - Mercury	48A2247-1		

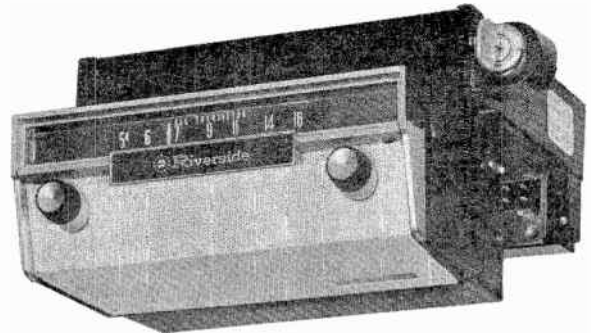
WIRING DATA

General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in 12 Colors 8524 (Stranded) Available in 12 Colors
Shielded Hook-up Wire	Use BELDEN No. 8885
Rear Seat Speaker Extension Cable	Use BELDEN No. 8782 (Stranded) Coded Parallel Leads
Bonding Strap	Use BELDEN No. 8681 (3/8 In.) or 8870 (3/4 In.)



PHOTOFACT[®]

TRADE NAME : Riverside Model FJB-16589A
SUPPLIER : Montgomery Ward & Company
 619 Chicago Ave., Chicago 7, Illinois
TYPE SET : 6 Transistor Auto-Portable AM Receiver
POWER SUPPLY : 12 Volt Storage Battery (Auto)
 9 Volts DC (Portable)
RATING : .27 Amp. @ 12.6VDC (or)
 23MA @ 9VDC
TUNING RANGE : BROADCAST 540 - 1615KC



ALIGNMENT INSTRUCTIONS

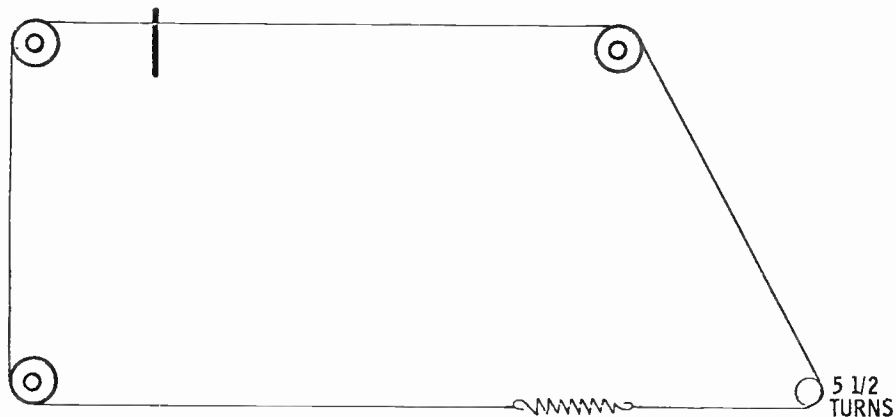
Check for specified source voltage.
 Use only enough generator output to provide a usable indication.
 Suggested Alignment Tools:

A1 thru A4..... GENERAL CEMENT #8606, 8606L, 8869
 WALSCO #2543, 2544, 2588
 A5, A6, A7, A8..... GENERAL CEMENT #8290, 8868, 9087
 WALSCO #2525, 2528, 2587

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1.	High side thru .1mfd to point A , low side to ground.	262KC (400v Mod.)	High Freq. End Stop.	Output Meter across voice coil.	A1, A2, A3, A4	Adjust for maximum.
2.	Loosely coupled to Loopstick.	1615KC	"	"	A5, A6, A7	"

With radio installed in car and antenna fully extended, tune in a weak station near 1400KC and adjust A7 for maximum output.

DIAL CORD STRINGING

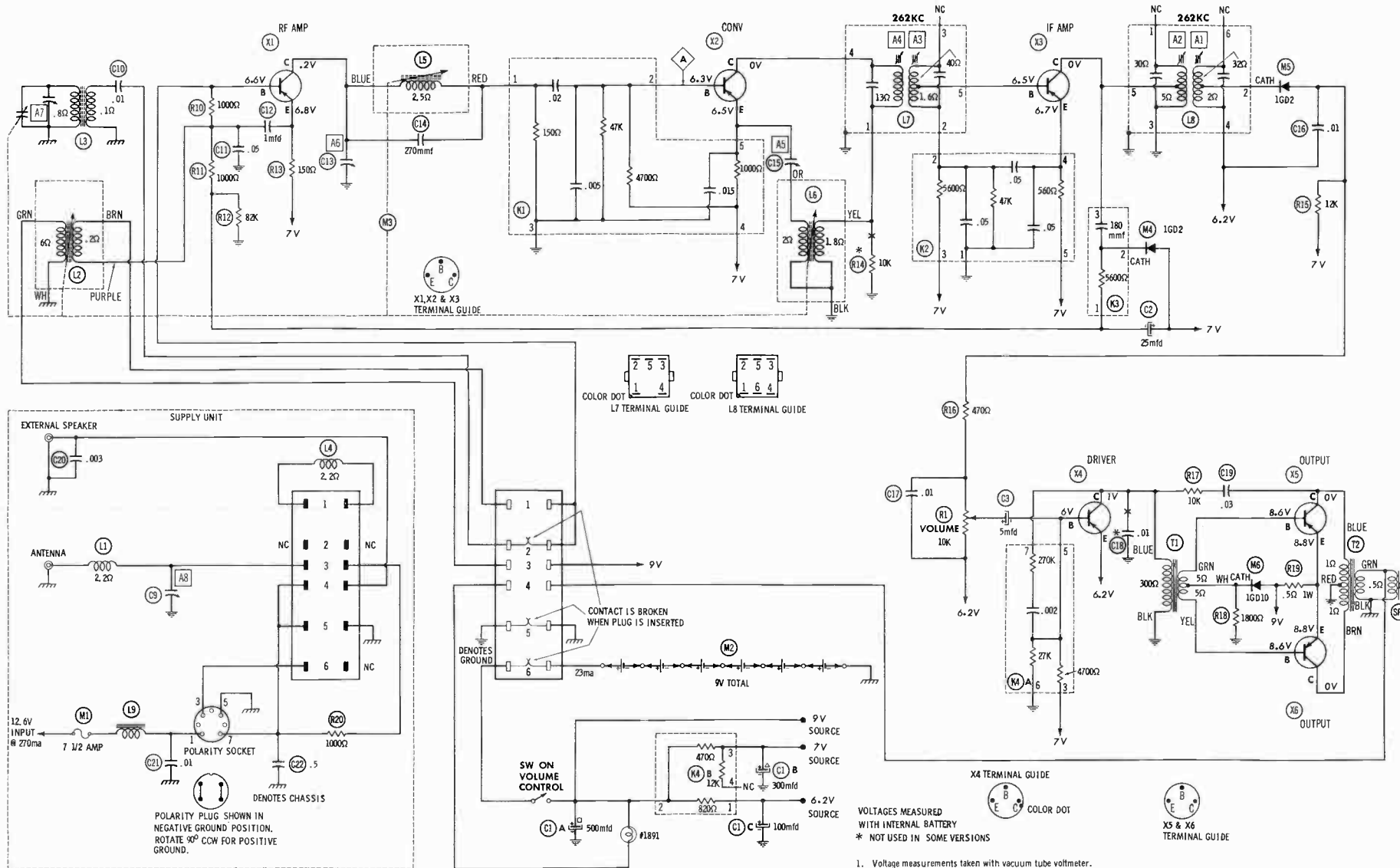


HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana

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World Radio History

RIVERSIDE MODEL FJB-16589A

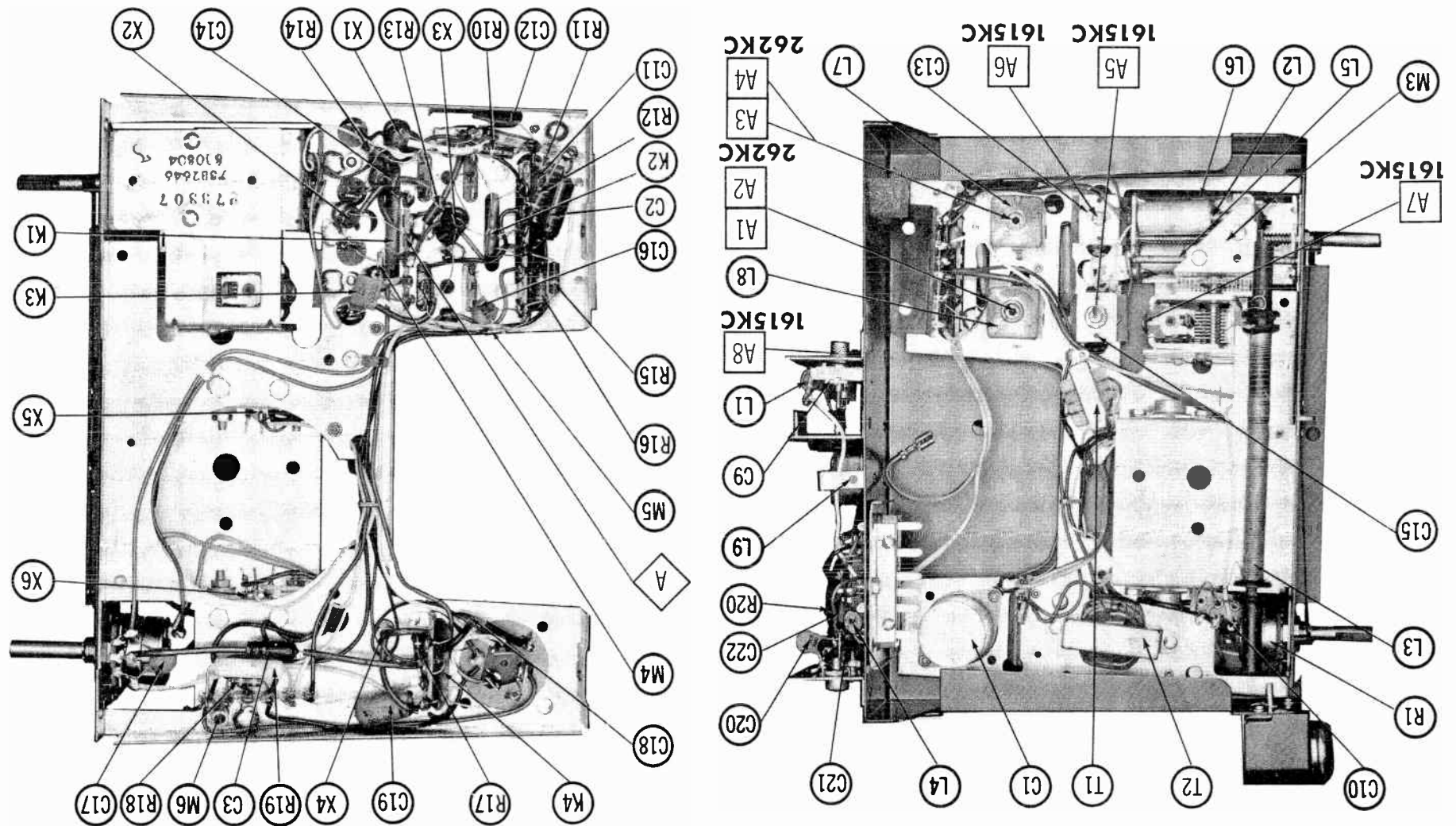


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RIVERSIDE MODEL FJB-16589A

1. Voltage measurements taken with vacuum tube voltmeter.
2. All controls set for normal operation, no signal applied.
3. Measured values are from socket pin or terminal to common ground.
4. All terminals viewed from bottom unless otherwise designated.
5. Numbers assigned to terminals may not be found on the unit.
6. Supply voltage maintained at rated value for voltage readings.
7. Resistance measurements not given because of the wide variation in internal resistance of transistor.

RIVERSIDE MODEL FJB-16589A



PARTS LIST AND DESCRIPTION

Replacement parts shown may be superseded by the availability of newly introduced replacements.
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	
X1	2N840	RF Amp.	DS-25	GE-1	2N1837	PNP
X2	2N842	Conv.	DS-25	GE-1	2N1839	
X3	2N641	IF Amp.	DS-25	GE-1	2N1838	
X4	2N591	Driver	DS-28	GE-2	2N591	
X5	2N1184	Output				
X6	2N1184	Output				

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	RIVERSIDE PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	GENERAL INSTRUMENT PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A	500	16	20-2853	AFH3-00-94.5				FP-300.83	PCLS-3028.11
C1B	300	16							
C1C	100	16							
C2	25	15	20-258	PTT69	NLW25-15	MT1-10	MLV25-15	TT15X25	TE-1157.1
C3	5	15	20-505	CRE454A	NLW5-15	MT1-3	MLV5-15	TT25X5	TE-1152

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

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.
C9		#28-800-1L	BPD-01 TTD-05	DD-103 CK-503 UK-105	BYA10S1 H5 HCC3105P	CCD-103	B-110 TA-150	5HK-S10 TG-850 HY-135
C10	.01 50V	#28-431A						
C11	.05							
C12	1mfd 3V							
C13		#28-431A	DI-270	DD-271	LA10T27-C4	CCD-271	GP327	5GA-T27
C14	270	#28-461						
C15								
C16	.01 50V		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C17	.01 50V	BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10	
C18	.01 50V	BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10	
C19	.03 100V	P288N-03	DD-303	DPM5853	IDP-1-303	PVC-613	4PS-S30	
C20	.003	DI-3000	DD-302	LA10D3-C4	CCD-302	GP230	5GA-D30	
C21	.01 50V	BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10	
C22	.5 200V	P288N-5	DD-103	DPM52P5	2DP-5-504	PVC-105	2TM-P50	

Riverside Part Number.

CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA				
			RIVERSIDE PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1	Volume & Switch	.10K	80A2847	F2-10K, SFS212, KR-4, or (AB-15, AK-33, KR-4)	A47-10K-Z, RS-3/18, SWE-13	B13-118, SK-9, 78-1 or BU1, CF81, SS4, GC)*	UA14A, SD3500, US-41 or (RU14A, IS1312, SL35, US41) or (U18, DS-37, US-28)

* 'SNAPTROL'

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		RIVERSIDE PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	RF Choke (8.2uh)	14-8.2	BC-585	4810	RTC-8520	T859	() Part of M3
L2	Ant.	⊕					
L3	Loopstick	10A2982					
L4	RF Choke (8.2uh)	14-8.2	BC-585	4810	RTC-8520	T859	
L5	RF	⊕					
L6	Osc.	⊕					
L7	Input IF	14-2874					
L8	Output IF	14-2875					

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA					NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	RIVERSIDE PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L9	270ma	.5Ω	10MH	75A8001	C-4085	TC-2	TR-155	TY17XT	

PARTS LIST AND DESCRIPTION (CONTINUED)

Replacement parts shown may be superseded by the availability of newly introduced replacements.
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
			RIVERSIDE PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
	PRI.	SEC.						
T1	5:	1	75A2796					

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
			RIVERSIDE PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
	PRI.	SEC.						
T2	24Ω CT	6-8Ω	25A2797					

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		RIVERSIDE PART No.	QUAM PART No.	
SP1	4" PM 6-8Ω	73A2665		

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	RIVERSIDE PART No.	REPLACEMENT DATA
K1	RF Coupling - Bias	150Ω, 1000Ω, 4700Ω, 47K, .005mfd, .015mfd, .02mfd	89A2583B	
K2	IF Amp. Bias	580Ω, 5600Ω, 47K, (3) .05mfd	89A2584B	
K3	AVC	5600Ω, 180mmf	89A2701	
K4	Audio Bias	470Ω, 820Ω, 4700Ω, 12K, 27K, 270K, .002mfd	89A2585A	

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			RIVERSIDE PART No.		LITELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M1	SFE	7 1/2		12A1912B	30707.5	15507.5	SFE 7 1/2	HME

BATTERIES

ITEM No.	VOLTAGE	RIVERSIDE PART No.	REPLACEMENT DATA			NOTES
			BURGESS	EVEREADY	MALLORY	
M2	9V		130 (or AL-1)	635 (or E93)	M-14R (or MN1400)	6 Required

MISCELLANEOUS

ITEM No.	PART NAME	RIVERSIDE PART No.	NOTES
M3	Tuner	78B2646	Includes Tuning Coils and Gang
M4	AVC (1GD2)		
M5	Det. (1GD2)		
M6	Bias (1GD10)		

CABINETS & CABINET PARTS

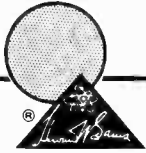
(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
Dial Glass	39-99	Knob - Tuning, Volume	47-50C
Dial Pointer	84A2930		

WIRING DATA

General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in 12 Colors 8524 (Stranded) Available in 12 Colors
Shielded Hook-up Wire	Use BELDEN No. 8885
Rear Seat Speaker Extension Cable	Use BELDEN No. 8782 (Stranded) Coded Parallel Leads
Bonding Strap	Use BELDEN No. 8661 (3/8 In.) or 8670 (3/4 In.)

RIVERSIDE MODEL FJB-16589A



PHOTOFACT[®] with

CIRCUITRACE[®]



TRADE NAME: Tenna Models

AM-64PB	64 American	FL-64PB	64 Fairlane
BU-64PB	63-64 Buick	FO-64PB	64 Ford
CH-64PB/RS	63-64 Chevrolet	ME-64PB	63-64 Mercury
CL-64PB	64 Chevelle	OF-64PB	64 F-85
CO-64PB	60-64 Corvair	OL-64PB	63-64 Olds
CM-64PB	64 Comet	PL-64PB	64 Plymouth
CR-64PB	63-64 Chrysler	PO-64PB	63-64 Pontiac
CII-64PB	62-64 Chevy II	RA-64PB	64 Rambler
DA-64PB	64 Dart	TE-64PB	64 Tempest
DO-64PB	64 Dodge	VA-64PB	64 Valiant
FA-64PB, M	64 Falcon	880-64PB	63-64 Dodge 880

SUPPLIER: The Tenna Corporation
19201 Cranwood Parkway
Warrensville Hts. 28, Ohio

TYPE SET: 5 Transistor AM Receiver

POWER SUPPLY: 12 Volt Storage Battery

RATING: .62 Amp. @ 12.6 VDC

TUNING RANGE: BROADCAST 540 - 1615KC

ALIGNMENT INSTRUCTIONS

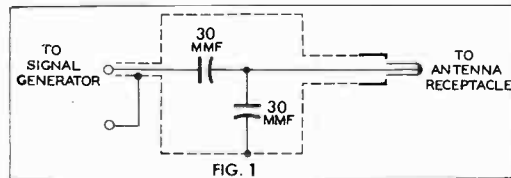
Check for specified source voltage.

Use only enough generator output to provide a usable indication.

Suggested Alignment Tools: A1 thru A4..... GENERAL CEMENT #8606, 8606L, 8869
WALSCO #2543, 2544, 2588
A5, A6, A7..... GENERAL CEMENT #8290, 8868, 9087
WALSCO #2525, 2528, 2587

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1.	High side thru .1mfd to point Δ , low side to ground.	262KC (400v Mod.)	High Freq. End Stop.	Output Meter across voice coil.	A1, A2, A3, A4	Adjust for maximum.
2.	Thru dummy (Fig. 1) to antenna receptacle.	1615KC	"	"	A5, A6, A7	"

With radio installed in car and antenna fully extended, tune in a weak station near 1400KC and adjust A7 for maximum output.

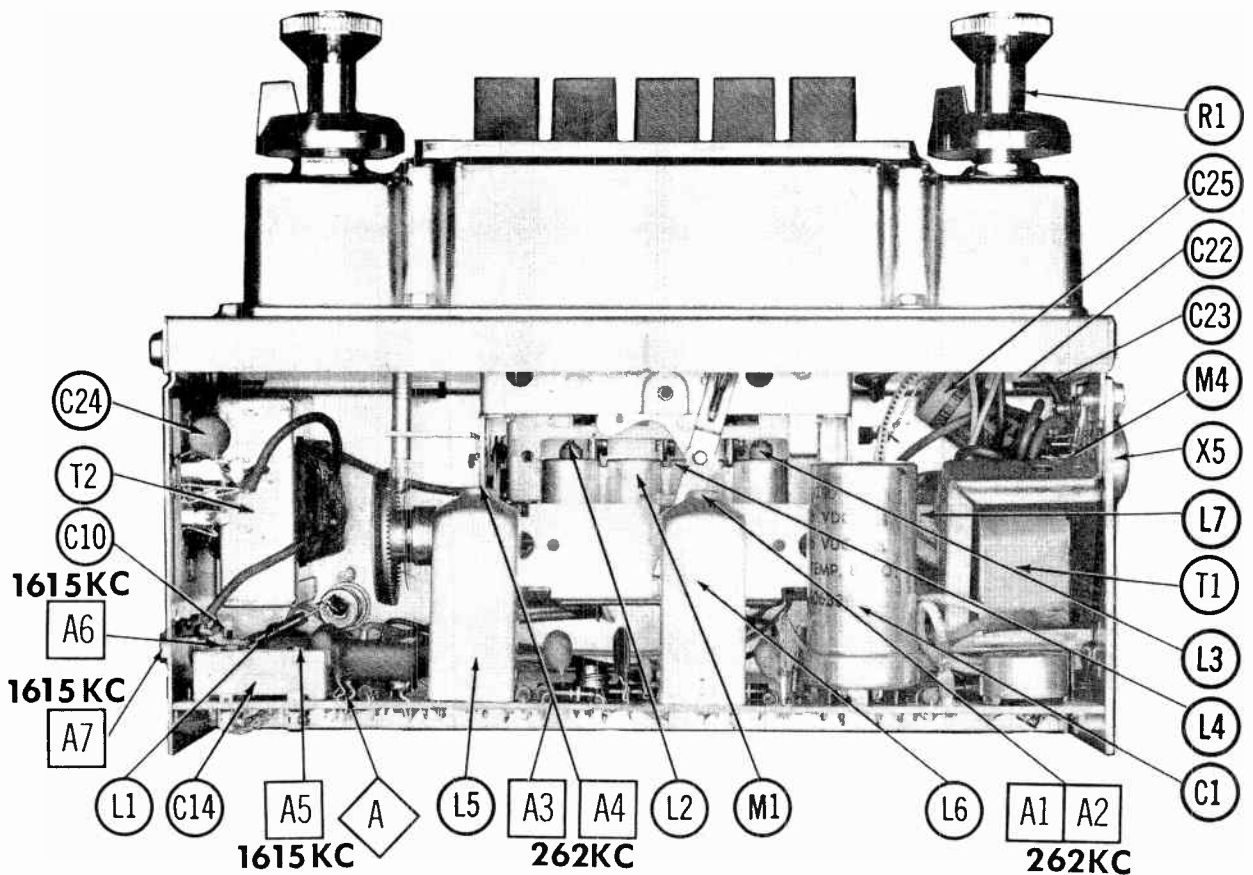
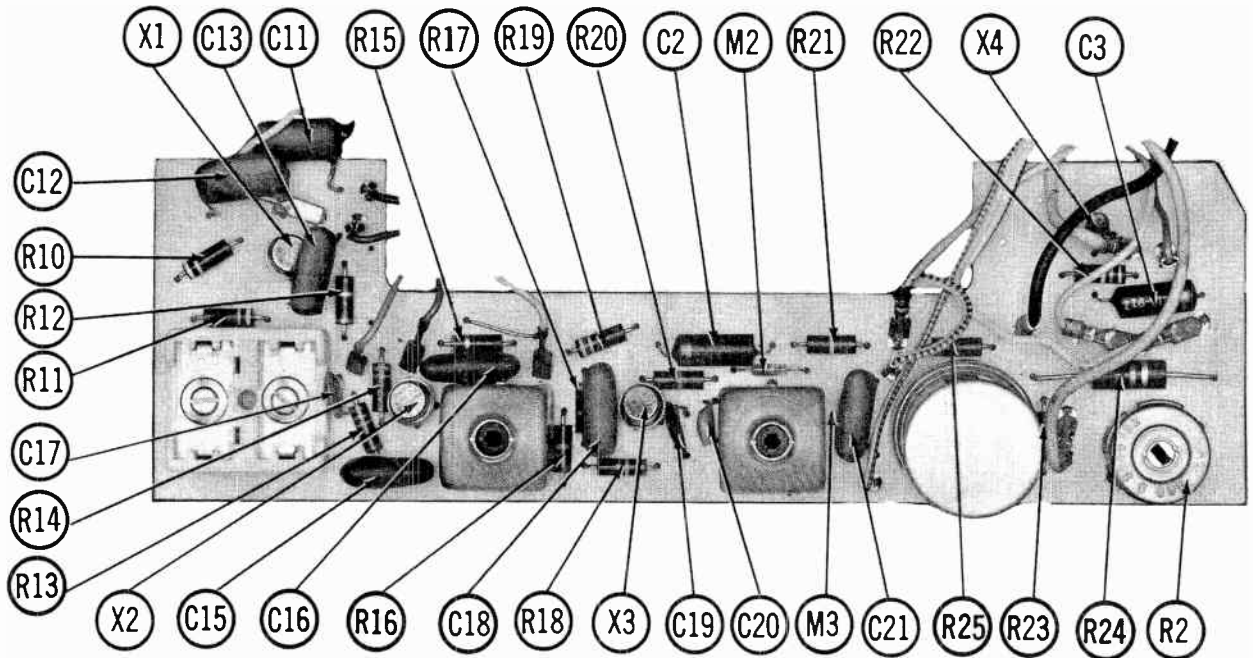


PUSH-BUTTON ADJUSTMENT

1. Pull button out.
2. Tune manually to desired station.
3. Press button in firmly.
4. Repeat for remaining buttons.

TENNA MODELS 1964 CUSTOM SERIES

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



PARTS LIST AND DESCRIPTION

Replacement parts shown may be superseded by the availability of newly introduced replacements.
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	
X1	T2322	RF Amp.	DS-25	GE-1	2N1637	PNP (2N1788 or 2N1637) PNP (2N1789 or 2N1639) PNP (2N1790 or 2N1638) NPN PNP (2N257) (Note 1)
X2	T2323	Conv.	DS-25	GE-1	2N1639	
X3	T2324	IF Amp.	DS-25	GE-1	2N1638	
X4	2N2712	Driver	DS-44	GE-8		
X5	SP834	Output	DS-520	GE-3	2N301	

Note 1. When replacing, apply silicone grease to both sides of insulator. Tighten mounting screws securely. Check bias adjustment.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						NOTES
	CAP.	VOLT.	TENNA PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	GENERAL INSTRUMENT PART No.	MALLORY PART No.	
C1A	500	16	111001-097	PWH2-02-40	BB0040	XC2-45		FP200.6	TVL-2157
B	500	16							
C2	10	15	111002-001	CRE457A	NLW10-15	MT1-5	MLV10-15	TT15X10	TE-1155
C3	10	15	111002-001	CRE457A	NLW10-15	MT1-5	MLV10-15	TT15X10	TE-1155

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	5-80	#110000-013						
C11	.0047 200V	(.015) †	P288N-0047	CPR-4700J	WMF2D47	6DP-1-472	PVC-4247	6PS-D47
C12	.047 100V		P288N-047	DD-503	PM2S47	4DP-3-473	GEM-2147	2TM-S47
C13	.047 100V	#110000-080	P288N-047	DD-503	PM2S47	4DP-3-473	GEM-2147	2TM-S47
C14A	475-875							
B	375-445							
C15	.01 200V		P288N-01		WMF2S1	4DP-1-103	PVC-211	4PS-S10
C16	.015 200V		P288N-015		WMF2S15	4DP-1-153	PVC-2115	4PS-S15
C17	88 N750		N750-DI 88	DTN-88	C10Q68U	CC TN-680	CN7-468	10TCU-Q68
C18	.047 100V		P288N-047	DD-503	PM2S47	4DP-3-473	GEM-2147	2TM-S47
C19	.005		BPD-005	DD-502	BYA10D5	CCD-502	B-250	5HK-D50
C20	220		DI-220	DD-221	LA10T22-S3	CCD-221	GP322	10TS-T22
C21	.047 100V		P288N-047	DD-503	PM2S47	4DP-3-473	GEM-2147	2TM-S47
C22	.047 100V		P288N-047	DD-503	PM2S47	4DP-3-473	GEM-2147	2TM-S47
C23	.003		DI-3000	DD-302	LA10D3-C4	CCD-302	GP230	30GA-D30
C24	.003		DI-3000	DD-302	LA10D3-C4	CCD-302	GP230	30GA-D30
C25	.5 50V		P288N-5	DD-302	PM2P5	IDP-4-504	PVC-105	2PS-P50

Tenna Part Number.
† Alternate Value.

CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA				
			TENNA PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1A	Tone Volume & Switch	50K 5000Ω	145000-194	F1-50K, R2-5000, FFS010, RFS102, KR-4, AK-26			† QJ-1642A
B							
R2	Bias Fader	300Ω 40Ω	145000-207				110-300
R3							* QJ-1691A

† "CONCENTRIKIT" Equivalent; K8 Kit with Base Elements and Shafts: B11-123, P22-021 (Panel) B13-114, R1-100 (Rear) S-47 (Bushing) 76-1 (Switch)

* "SNAPTROL" Equivalent: BU8*, WF18, SF2
* Cut 1 7/16" from bushing.

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		TENNA PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	RF Choke(5.6uh) Ant. RF Osc. Input IF Output IF	114199-000 ① ① ① 114000-217 114000-218	SW-631	4609	RTC-8519	T959	① Part of M1
L2							
L3							
L4							
L5							
L6							

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA				NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	TENNA PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	
L7	620ma	.5Ω	8MH	161000-001	C-4095	TC-2	TR-155	TY17XT

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO	REPLACEMENT DATA					NOTES
		TENNA PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	5.5:1	161000-171					

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE	REPLACEMENT DATA					NOTES
		TENNA PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T2	30Ω Tap(a) 6-8Ω	161000-185					

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		TENNA PART No.	QUAM PART No.	
SP1	6" x 9" PM 6-8Ω 5" x 7" PM 6-8Ω 4" x 10" PM 6-8Ω	155009-147	69A2Z8	

MISCELLANEOUS

ITEM No.	PART NAME	TENNA PART No.	NOTES
M1	Tuner		
M2	AVC (1N295A)	162002-039	
M3	Det. (1N295A)	162002-039	
M4	Spark Plate		

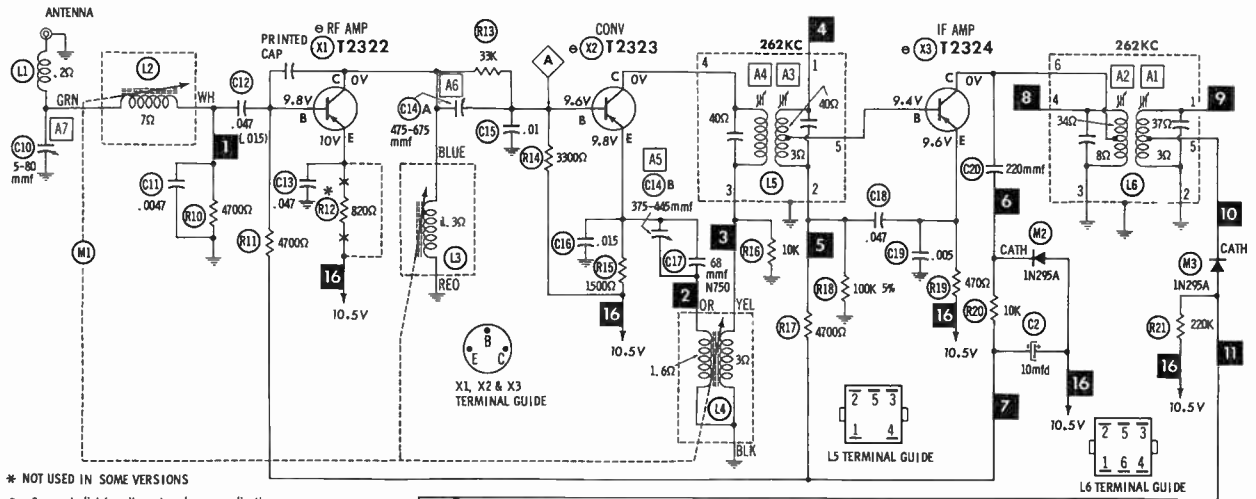
WIRING DATA

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

Shielded Hook-up Wire Use BELDEN No. 8885

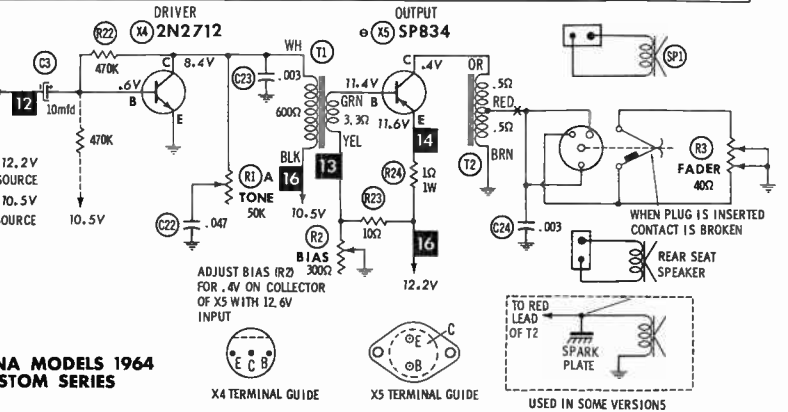
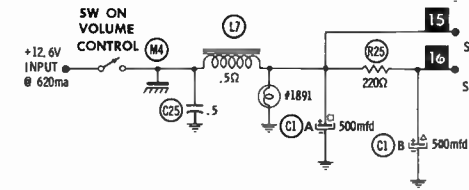
Rear Seat Speaker Extension Cable Use BELDEN No. 8782 (Stranded) Coded Parallel Leads

Bonding Strap Use BELDEN No. 8661 (3/8 In.) or 8670 (3/4 In.)



* NOT USED IN SOME VERSIONS

- ⊖ See parts list for alternate value or application.
- 1. Voltage measurements taken with vacuum tube voltmeter.
- 2. All controls set for normal operation, no signal applied.
- 3. Measured values are from socket pin or terminal to common ground.
- 4. All terminals viewed from bottom unless otherwise designated.
- 5. Numbers assigned to terminals may not be found on the unit.
- 6. Supply voltage maintained at rated value for voltage readings.
- 7. Resistance measurements not given because of the wide variation in internal resistance of transistor.



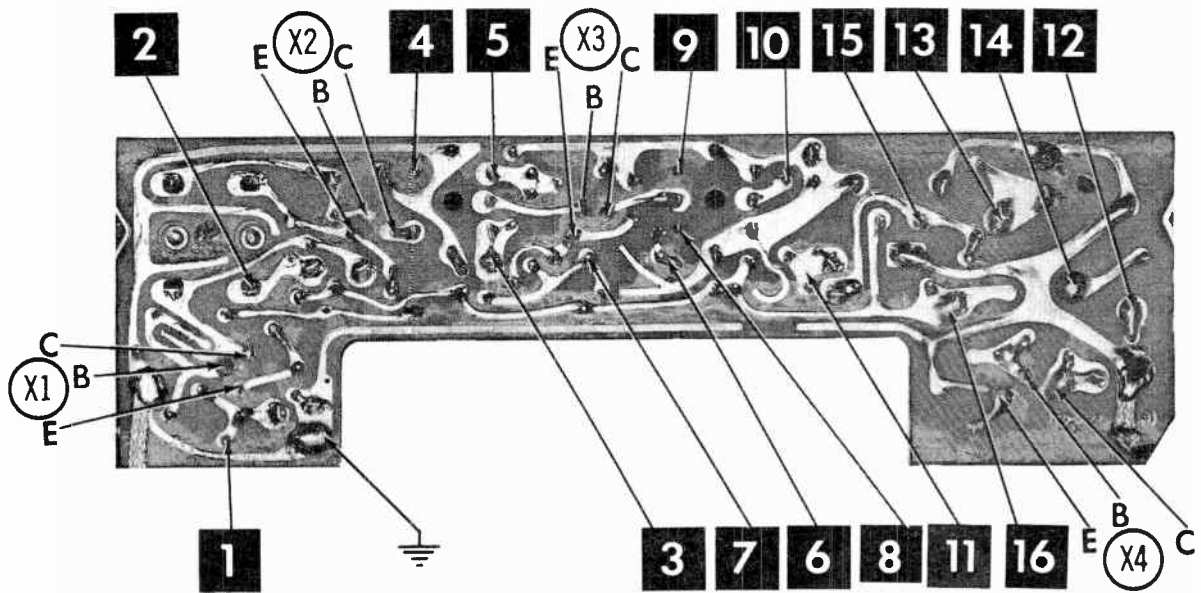
A PHOTOFAC STANDARD NOTATION SCHEMATIC with CIRCUITRACE
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TENNA MODELS 1964 CUSTOM SERIES

X4 TERMINAL GUIDE

X5 TERMINAL GUIDE

USED IN SOME VERSIONS

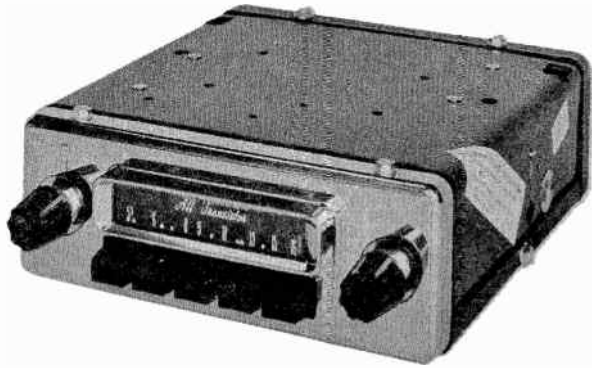


A Howard W. Sams CIRCUITRACE® Photo



PHOTOFACT[®] with

CIRCUITRACE[®]



TRADE NAME : Tenna Models TC-100-M, TC-200-PB, TRM-64M

SUPPLIER : The Tenna Corp.
19201 Cranswood Parkway
Warrensville Hts. 28, Ohio

TYPE SET : 5 Transistor AM Receiver

POWER SUPPLY : 12 Volt Storage Battery

RATING : .7 Amp. @ 12.6VDC

TUNING RANGE : BROADCAST 540 - 1615KC

ALIGNMENT INSTRUCTIONS

Check for specified source voltage.
Use only enough generator output to provide a usable indication.

Suggested Alignment Tools:

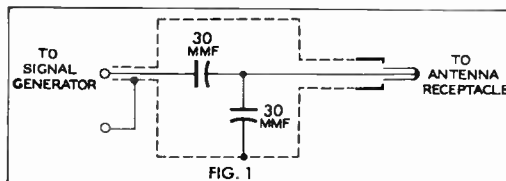
- A1 thru A4..... GENERAL CEMENT #8806, 8806L, 8869
WALSCO #2543, 2544, 2588
A5, A6, A7..... GENERAL CEMENT #8290, 8868, 9087
WALSCO #2525, 2528, 2587

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1.	High side thru .1mf to point Δ , low side to ground.	262KC (400% Mod.)	High Freq. End Stop.	Output Meter across voice coil.	A1, A2, A3, A4	Adjust for maximum.
2.	Thru dummy (Fig. 1) to antenna receptacle.	1615KC	"	"	A5, A6, A7	"

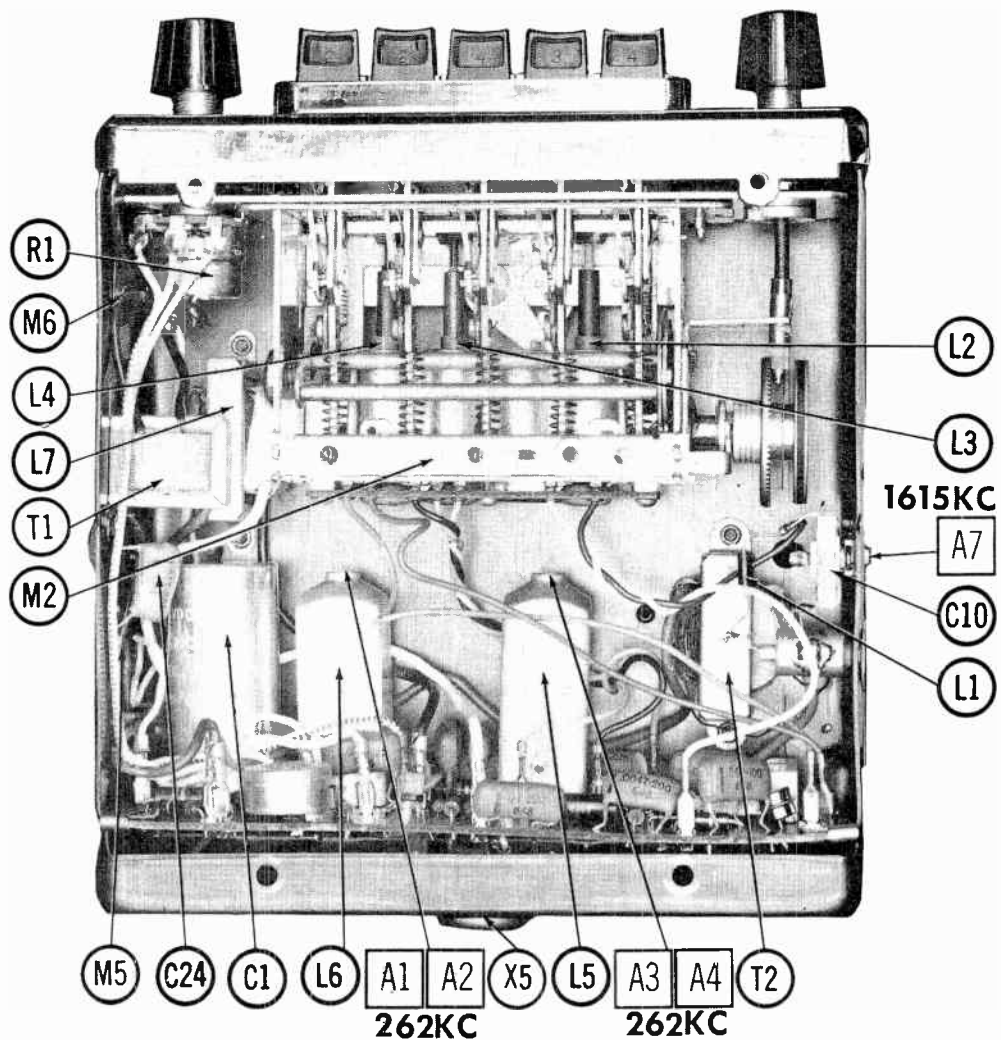
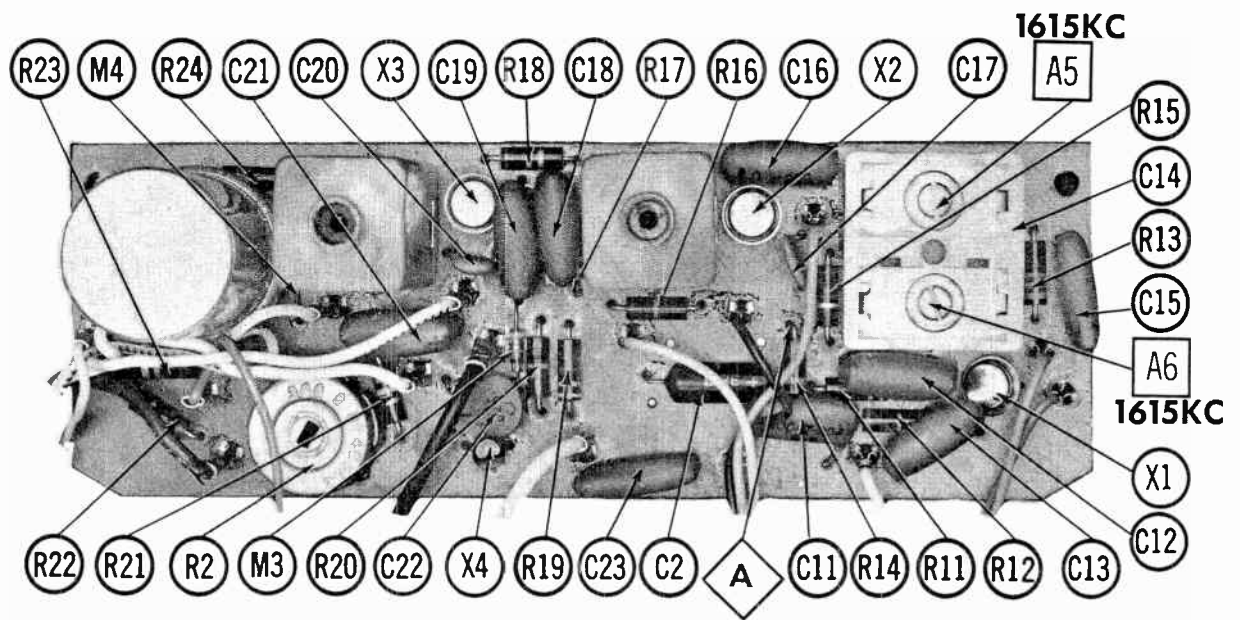
With radio installed in car and antenna fully extended, tune in a weak station near 1400KC and adjust A 7 for maximum output.

PUSH-BUTTON ADJUSTMENT

1. Pull button out.
2. Tune manually to desired station.
3. Press button in firmly.
4. Repeat for remaining buttons.



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



TENNA MODELS TC-100M, TC-200PB, TRM-64M

PARTS LIST AND DESCRIPTION

Replacement parts shown may be superseded by the availability of newly introduced replacements.
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	
X1	T2322	RF Amp.	DS-25	GE-1	2N1637	PNP
X2	T2323	Conv.	DS-25	GE-1	2N1639	PNP
X3	T2324	IF Amp.	DS-25	GE-1	2N1638	PNP
X4	2N2712	Driver	DS-44	GE-8		NPN
X5	SP834	Output	DS-520	GE-3	2N301	PNP (Note 1)

Note 1. When replacing, apply silicone grease to both sides of insulator.
Tighten mounting screws securely. Check bias adjustment.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	TENNA PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	GENERAL INSTRUMENT PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A	500	16	111001-097	PWH2-02-40	BB0040	XC2-45		WP200.6	TVL-2157
C1B	500	16							
C2	10	15	111002-001	CRE457A	NLW10-15	MT1-5	MLV10-15	TT15X10	TE-1155

FIXED CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA						
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENDO PART No.	MALLORY PART No.	SPRAGUE PART No.	
C10	25-180	#110000-005	P288N-0047	CPR4700J	WMF2D47	6DP-1-472	PVC-4247	6PS-D47	
C11	.0047 200V		P288N-047	DD-503	PM2S47	4DP-3-473	GEM-2147	2TM-S47	
C12	.047 100V	#110000-080	P288N-047	DD-503	PM2S47	4DP-3-473	GEM-2147	2TM-S47	
C13	.047 100V								
C14A	475-875								
C14B	375-445								
C15	.02 200V		P488N-022	DD-203	PM4S22	4DP-2-223	GEM-4122	4TM-S22	
C16	.015 200V		P288N-015		WMF2S15	4DP-1-153	PVC-2115	4PS-S15	
C17	68 N750		N750-DI 68	DTN-68	C10Q68U	CC TN-680	CN7-468	10TCU-Q68	
C18	.047 100V		P288N-047	DD-503	PM2S47	4DP-3-473	GEM-2147	2TM-S47	
C19	.047 100V		P288N-047	DD-503	PM2S47	4DP-3-473	GEM-2147	2TM-S47	
C20	220		DI-220	DD-221	LA10T22-S3	CCD-221	GP322	10TS-T22	
C21	.047 100V	P288N-047	DD-503	PM2S47	4DP-3-473	GEM-2147	2TM-S47		
C22	.47 3V	UK10-404	DD-503	HCC10474Z	4DP-3-473	GEM-2147	HY-330		
C23	.02 200V	P488N-022	DD-203	PM4S22	4DP-2-223	GEM-4122	4TM-S22		
C24	.047 100V	P288N-047	DD-503	PM2S47	4DP-3-473	GEM-2147	2TM-S47		

Tenna Part Number.

CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA				
			TENNA PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1	Volume & Switch	5000Ω	145004-026				B13-114, TM8①, 76-1②, or (BU14③), CF60 SS4, GC)* 110-300
R2	Bias	300Ω	145000-207				

① Use QCB4 instead of TM plate in TM8 and cut 1/8" from bushing.

② Use switch with metal housing.

③ Cut 1/8" from bushing.

* "SNAPTROL"

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		TENNA PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	RF Choke(5.6uh)	114199-000	SW-631	4609	RTC-8519	T959	① Part of M2
L2	Ant.	①					
L3	RF	①					
L4	Osc.	①					
L5	Input IF	114000-217					
L6	Output IF	114000-218					

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA					NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	TENNA PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L7	700ma	.5Ω	5MH	161000-143	C-4095	TC-2	TR-158	TY17XT	

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO	REPLACEMENT DATA					NOTES
		TENNA PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	9: 1	161000-140					

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE	REPLACEMENT DATA					NOTES
		TENNA PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T2	16Ω Tap @ 6-8Ω	161000-139				TR-164	

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			TENNA PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M1	1AG	2A 32V			301002	155004	AGA 2	HMF

MISCELLANEOUS

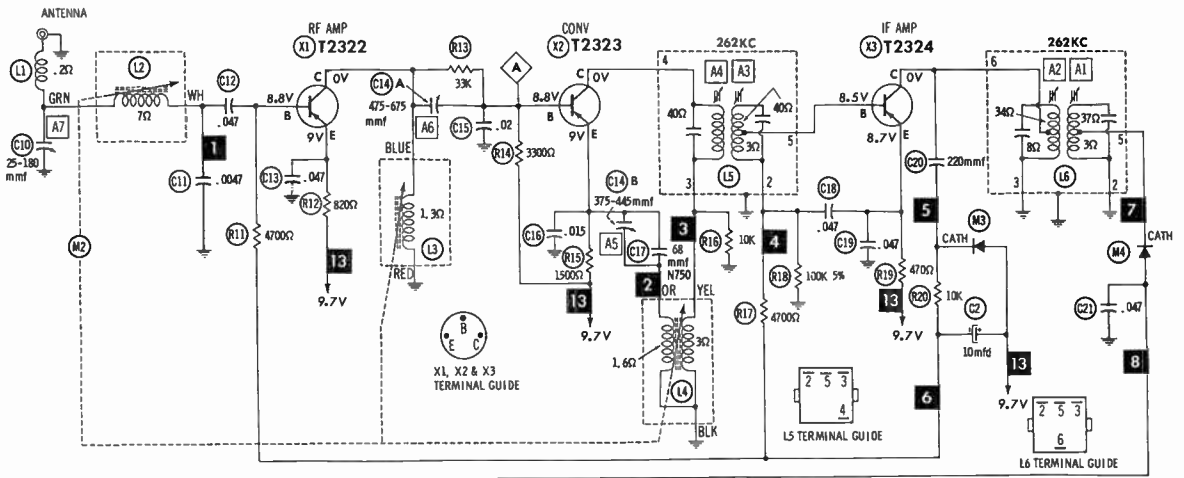
ITEM No.	PART NAME	TENNA PART No.
M2	Tuner	
M3	AVC Limiter	
M4	AF Det.	
M5	Spark Plate	
M6	Spark Plate	

SPEAKER

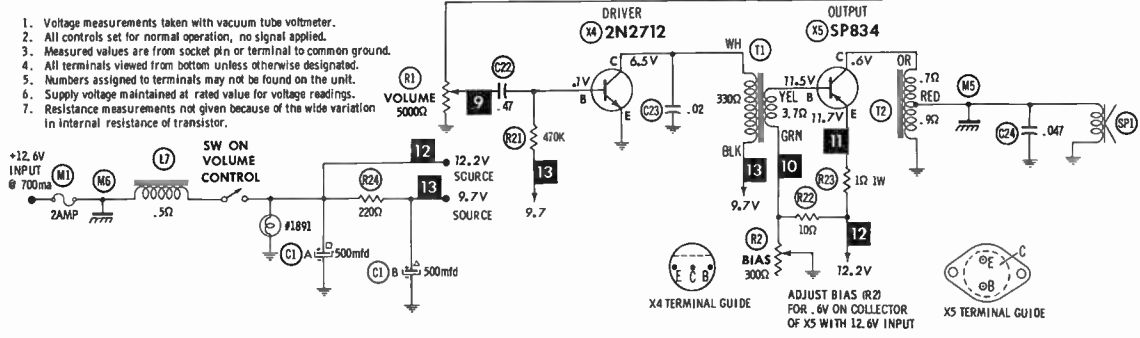
ITEM No.	TYPE	REPLACEMENT DATA	
		TENNA PART No.	QUAM PART No.
SP1	5" x 7" PM 6-8Ω	155009-145	57A1Z8

WIRING DATA

General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in 12 Colors 8524 (Stranded) Available in 12 Colors
Shielded Hook-up Wire	Use BELDEN No. 8885
Rear Seat Speaker Extension Cable	Use BELDEN No. 8782 (Stranded) Coded Parallel Leads
Bonding Strap	Use BELDEN No. 8661 (3/8 In.) or 8870 (3/4 In.)

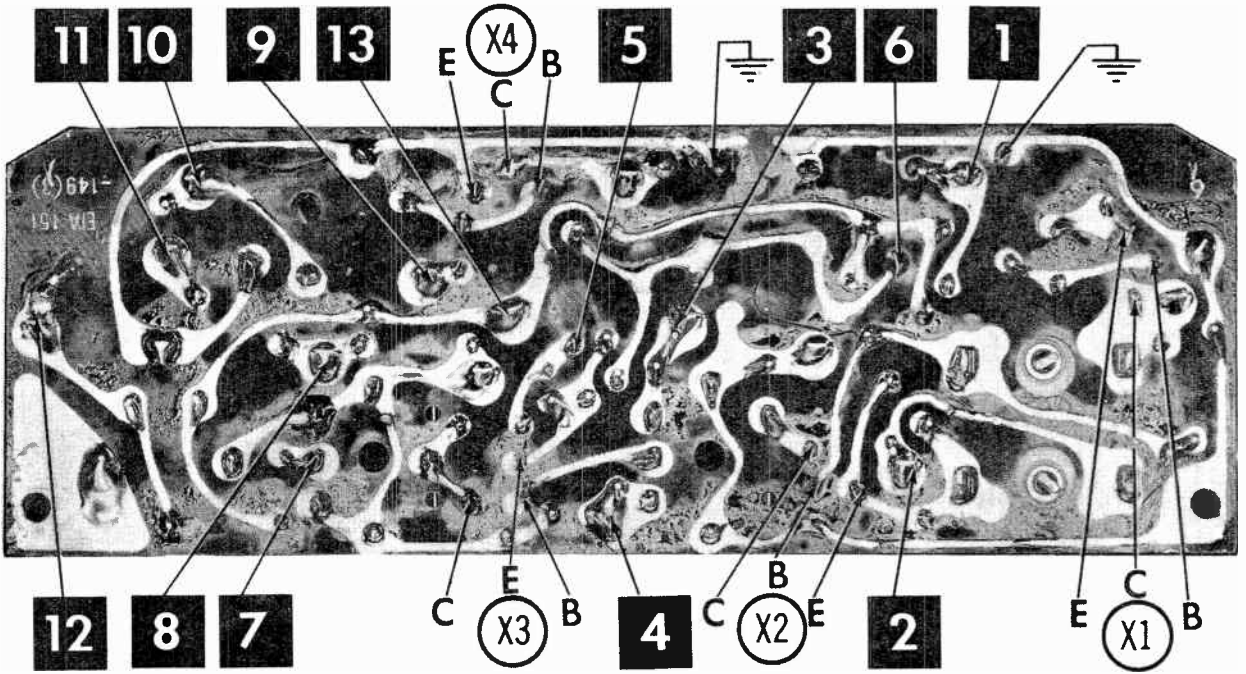


1. Voltage measurements taken with vacuum tube voltmeter.
2. All controls set for normal operation, no signal applied.
3. Measured values are from socket pin or terminal to common ground.
4. All terminals viewed from bottom unless otherwise designated.
5. Numbers assigned to terminals may not be found on the unit.
6. Supply voltage maintained at rated value for voltage readings.
7. Resistance measurements not given because of the wide variation in internal resistance of transistor.



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TENNA MODELS TC-100M, TC-200PB, TRM-64M



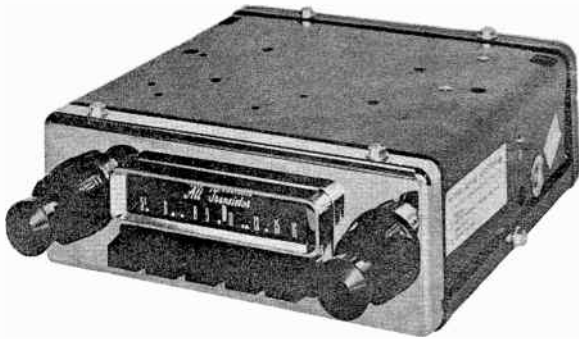
A Howard W. Sams **CIRCUITRACE** Photo

TENNA MODELS TC-100M, TC-200PB, TRM-64M



PHOTOFACT[®] with

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TRADE NAME : Tenna Models TC-300M, TC-400PB
 VW-64-PB (1964 Volkswagen)
 SUPPLIER : The Tenna Corp.
 19201 Cranwood Parkway
 Warrensville Heights 28, Ohio
 TYPE SET : 6 Transistor AM Receiver
 POWER SUPPLY : 6 (or) 12 Volt Storage Battery
 RATING : 1.2 Amp. @ 12.6VDC (or)
 1.2 Amp. @ 6.3VDC
 TUNING RANGE : BROADCAST 540 - 1615KC

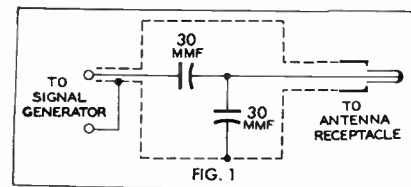
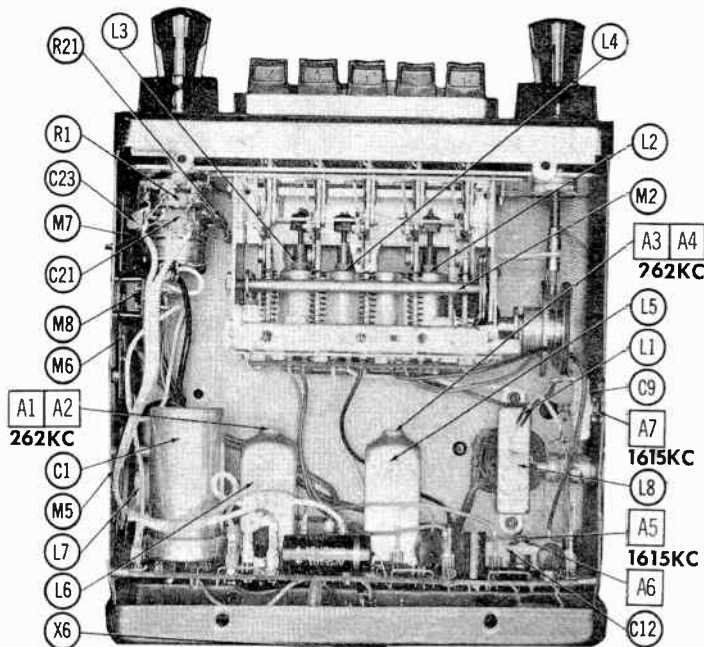
ALIGNMENT INSTRUCTIONS

Check for specified source voltage.
 Use only enough generator output to provide a usable indication.
 Suggested Alignment Tools:

A1 thru A4..... GENERAL CEMENT #8806, 8606L, 8869
 WALSCO #2543, 2544, 2588
 A5 thru A7..... GENERAL CEMENT #8290, 8868, 9087
 WALSCO #2525, 2528, 2587

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1.	High side thru .1mf to point Δ , low side to ground.	262KC (400% Mod.)	High Freq. End Stop.	Output Meter across voice coil.	A1, A2, A3, A4	Adjust for maximum.
2.	Thru dummy (Fig. 1) to antenna receptacle.	1615KC	"	"	A5, A6, A7	"

With radio installed in car and antenna fully extended, tune in a weak station near 1400KC and adjust A7 for maximum output.



PUSH-BUTTON ADJUSTMENT

1. Pull button out.
2. Tune manually to desired station.
3. Press button in firmly.
4. Repeat for remaining buttons.

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

PARTS LIST AND DESCRIPTION

Replacement parts shown may be superseded by the availability of newly introduced replacements.
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	
X1	T2322	RF Amp.	DS-25	GE-1	2N1637	PNP
X2	T2323	Conv.	DS-25	GE-1	2N1639	PNP
X3	T2324	IF Amp.	DS-25	GE-1	2N1638	PNP
X4	OC75	1st AF Amp.	DS-26	GE-2	2N406	PNP
X5	2N2712	2nd AF Amp.	DS-44	GE-8		PNP
X6	SP834	Output	DS-520	GE-3	2N301	PNP (Note 1)

Note 1. When replacing, apply silicone grease to both sides of insulator. Tighten mounting screws securely.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	TENNA PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	GENERAL INSTRUMENT PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A	500	16	111001-097	PWH2-02-40				PF200-65	PCL5-2177*
B	500	16							
C2	500	3		CRE243A	BR500-6	MT1-26	BL2111	TC-305	TE-1068
C3	10	15		BCD15010	NLP10-15	MT1-5	BL1241	PET-1760	VL-1167
C4	50	3		BCD3050	NLP50-3	MT1 18	BL1410	PET-1260	VL-1045

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

FIXED CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA						
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCOPART PART No.	MALLORY PART No.	SPRAGUE PART No.	
C9	25-180	#110000-005							
C10	.003	†	DI-3000	DD-302	LA10D3-C4	CCD-302	GP230	30GA-D30	
C11	.047 100V		P288N-047		WMF2S47	IDP-2-473	PVC-1147	2PS-S47	
C12A	475-675	#110000-080							
B	375-445								
C13	.01 200V		P288N-01	CPR-10000J	WMF2S1	4DP-1-103	PVC-211	4PS-S10	
C14	.0047 200V		P288N-0047	CPR-4700J	WMF2D47	6DP-1-472	PVC-4247	6PS-D47	
C15	.0068 200V		P288N-0068	CPR-6800J	WMF2D68	6DP-1-682	PVC-4268	6PS-D68	
C16	68 N750		N750-D1 68	DTN-88	C10Q68U	CC-TN-680	CN7-468	10TCU-Q68	
C17	.1 10V		TTD-1	CK-104	H6		TA-010	TG-P10	
C18	.1 10V		TTD-1	CK-104	H6		TA-010	TG-P10	
C19	220		DI-220	DD-221	LA10T22-S3	CCD-221	GP322	10TS-T22	
C20	.005		BPD-005	DD-502	BYA10D5	CCD-502	B-250	5HK-D50	
C21	.22 3V			UK20-204	HCC25224Z			HY-325	
C22	.47 3V			UK10-404	HCC10474Z			HY-330	
C23	.22 3V			UK20-204	HCC25224Z			HY-325	

Tenna Part Number
† Not used in Model VW-64-PB

CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA				
			TENNA PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-JRC PART No.	MALLORY PART No.
R1A	Tone	50K	145004-022				
B	Volume & Switch	20K Tap@ 15K					

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		TENNA PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	RF Choke (5.6uh)	114199-000	SW-631	4609	RTC-8519	T959	① Part of M2
L2	Ant.	①					
L3	RF	①					
L4	Osc.	①					
L5	Input 1F	114000-283					
L6	Output 1F	114000-284					

FILTER CHOKE

ITEM No.	RATINGS		REPLACEMENT DATA						NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (O CURRENT 1000-)	TENNA PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L7	1.2 Amp.	.1Ω	3MH	161000-141	C-4095	TC-1	TR-159	TY16XT	

CHOKE (AUDIO OUTPUT)

ITEM No.	INDUCTANCE	REPLACEMENT DATA					NOTES
		TENNA PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L8	6MH	161000-142	C-4095	TC-2	TR-155	TY17XT	

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		TENNA PART No.	QUAM PART No.	
SP1	5" x 7" PM 8Ω	155009-145	57A1Z8	

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			TENNA PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M1	AGA	5A			30I005	155004A	AGA 5	HMF

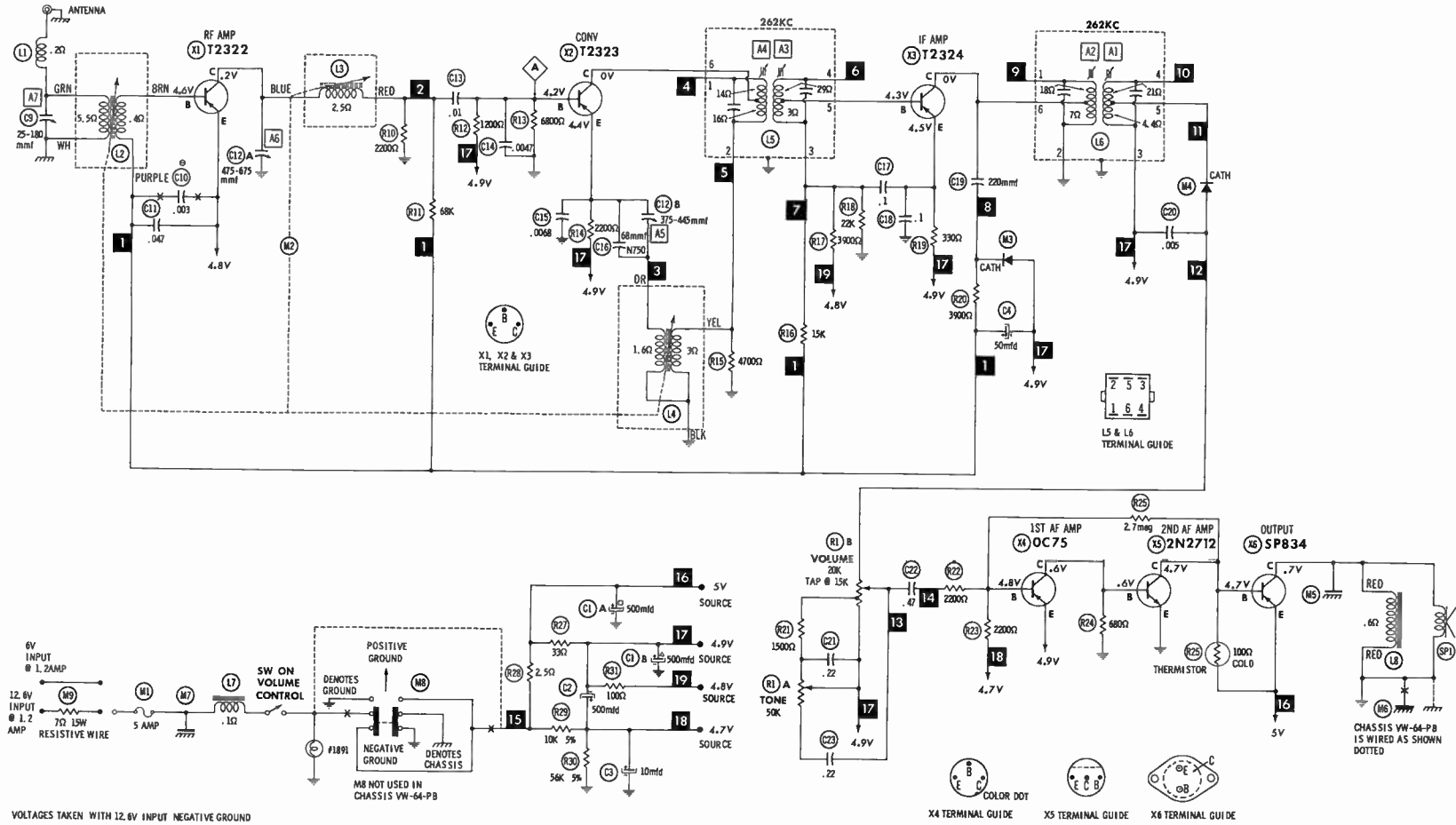
MISCELLANEOUS

ITEM No.	PART NAME	TENNA PART No.	NOTES
M2	Tuner	164000-088	
M3	AVC Limiter		
M4	AF Det.		
M5	Spark Plate		
M6	Spark Plate		
M7	Spark Plate		
M8	Polarity Switch		
M9	"A" Lead Resistive wire for 12 volts		

WIRING DATA

General-use Unshielded Hook-up Wire Use BELDEN No. 8530 (Solid) Available in 12 Colors
8524 (Stranded) Available in 12 Colors
Shielded Hook-up Wire Use BELDEN No. 8885
Rear Seat Speaker Extension Cable Use BELDEN No. 8782 (Stranded) Coded Parallel Leads
Bonding Strap Use BELDEN No. 8661 (3/8 In.) or 8670 (3/4 In.)

TENNA MODELS TC-300M, TC-400PB, VW-64PB



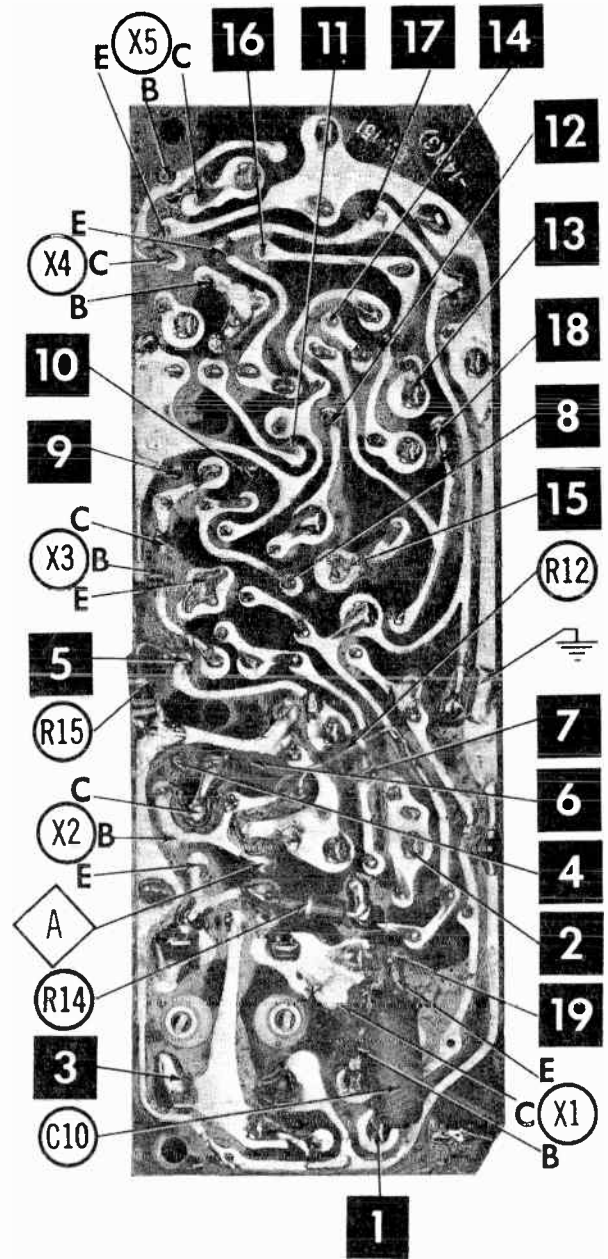
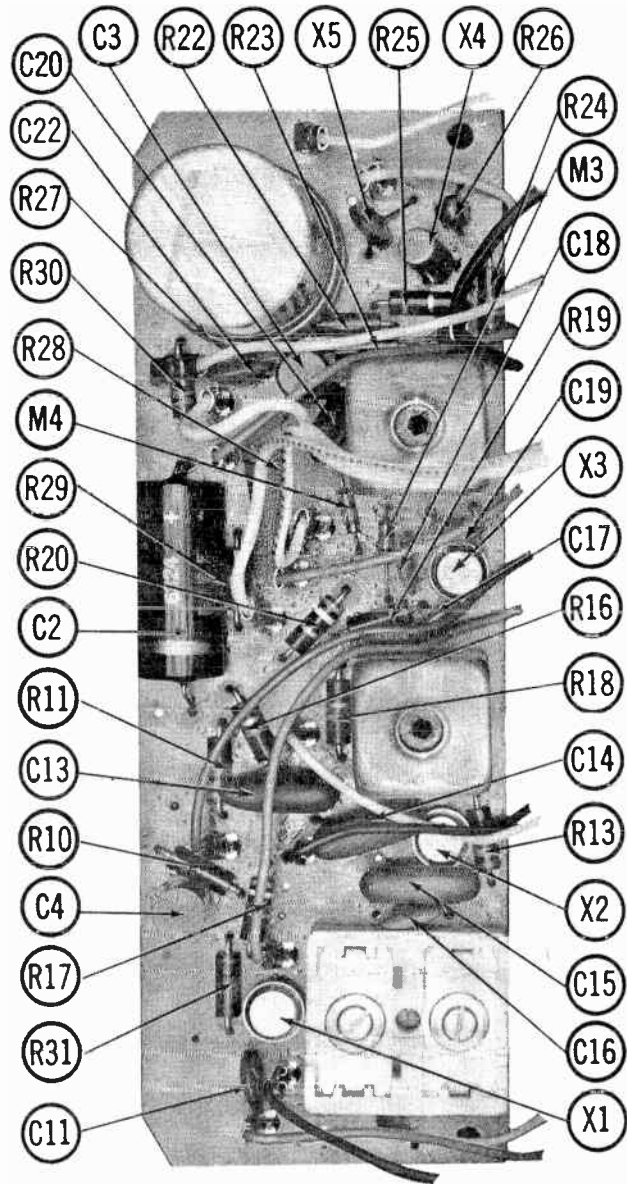
VOLTAGES TAKEN WITH 12.6V INPUT NEGATIVE GROUND

- ⊖ See parts list for alternate value or application.
- 1. Voltage measurements taken with vacuum tube voltmeter.
- 2. All controls set for normal operation, no signal applied.
- 3. Measured values are from socket pin or terminal to common ground.
- 4. All terminals viewed from bottom unless otherwise designated.
- 5. Numbers assigned to terminals may not be found on the unit.
- 6. Supply voltage maintained at rated value for voltage readings.
- 7. Resistance measurements not given because of the wide variation in internal resistance of transistor.

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TENNA MODELS TC-300M, TC-400PB, VW-64PB



TENNA MODELS TC-300M, TC-400PB, VW-64PB



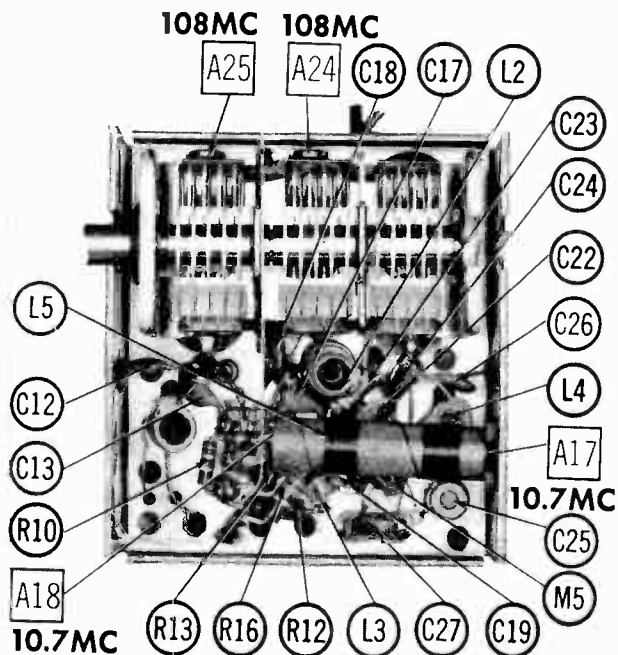
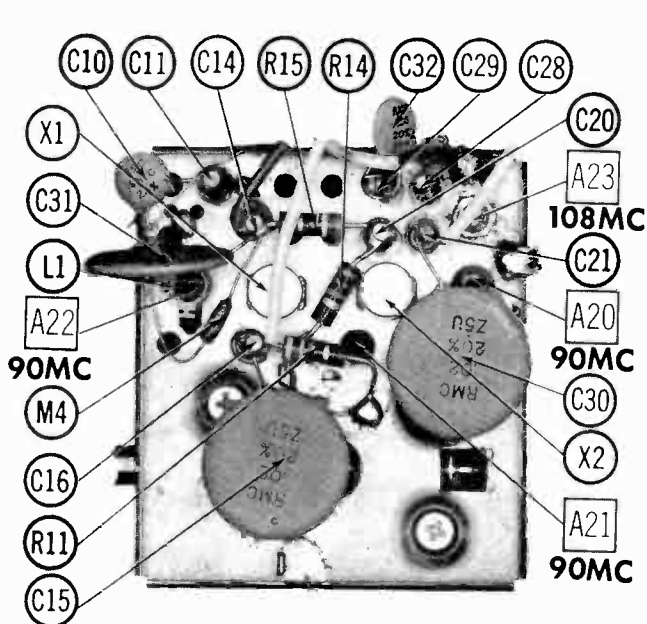
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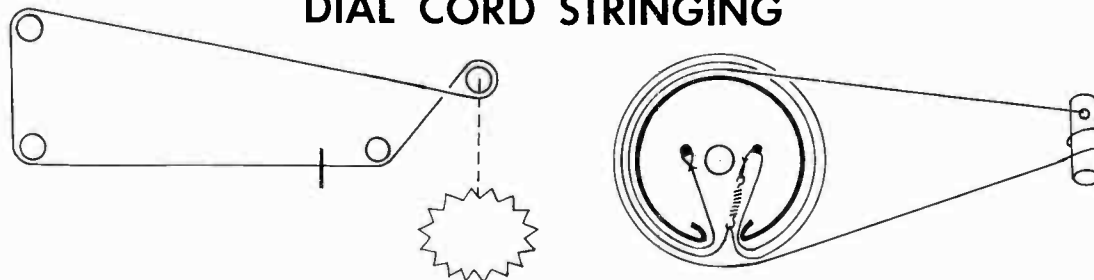


TRADE NAME : Truetone Model DC4208
 SUPPLIER : Western Auto Supply Company
 2107 Grand Ave., Kansas City 8, Mo.
 TYPE SET : 11 Transistor AM-FM Receiver
 POWER SUPPLY : 12 Volt Storage Battery
 RATING : .2 Amp. @ 12.6VDC
 TUNING RANGE: BROADCAST 535 - 1615KC
 FREQ. MOD. 88 - 108MC

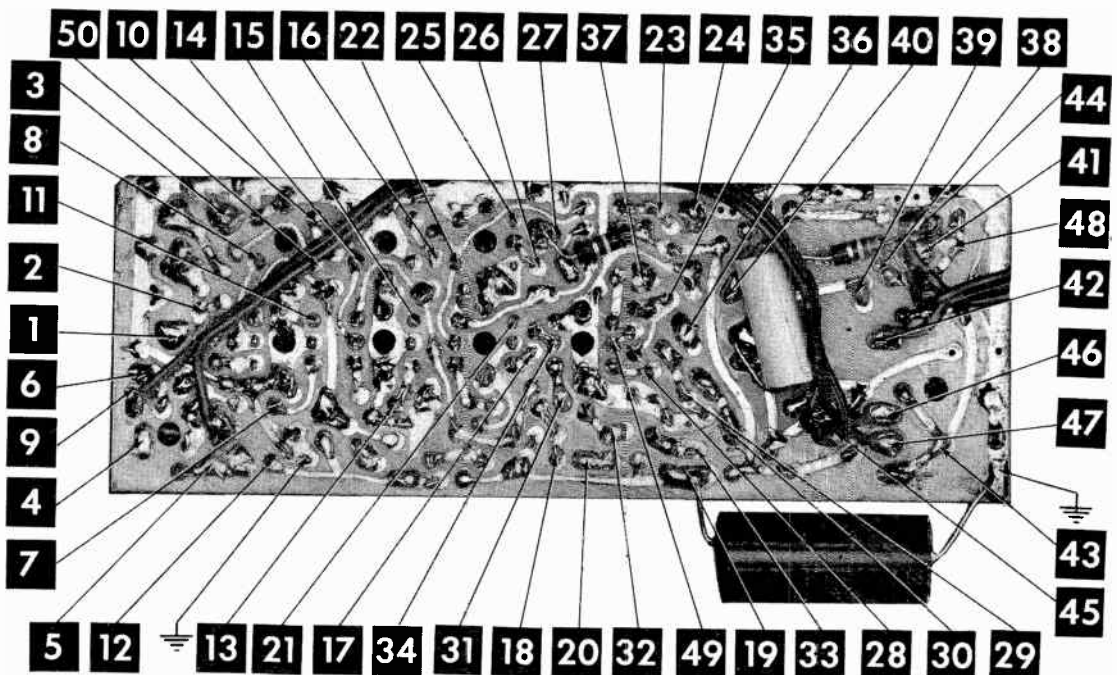
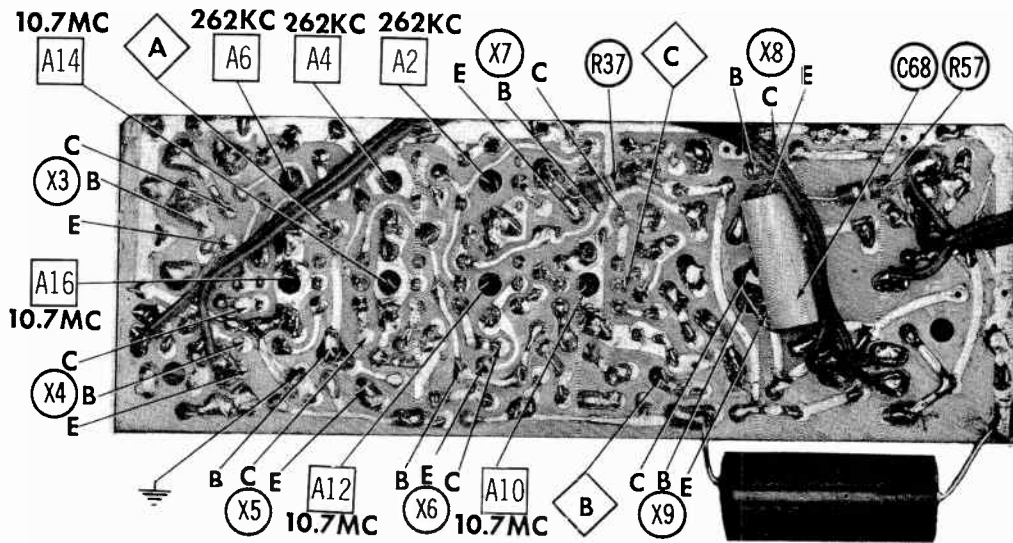
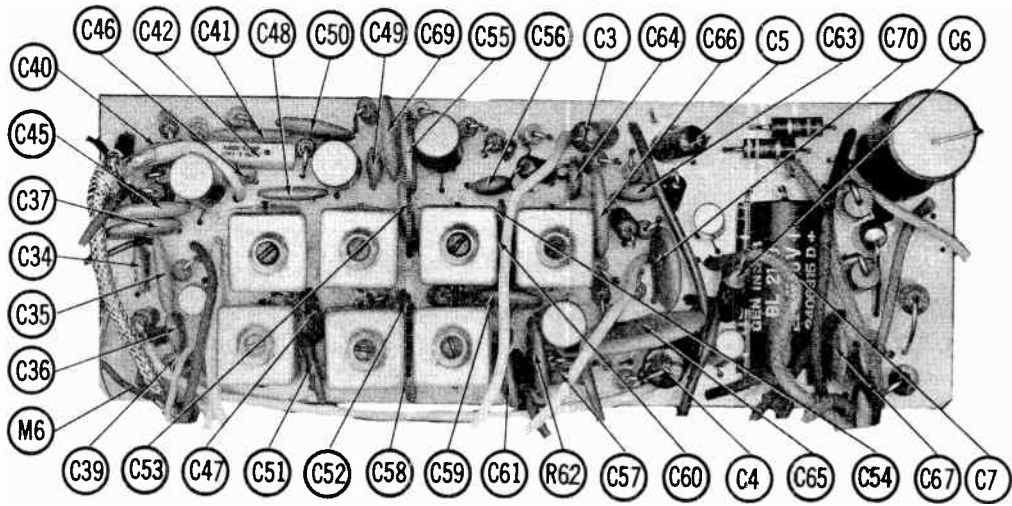
TRUETONE MODEL DC4208



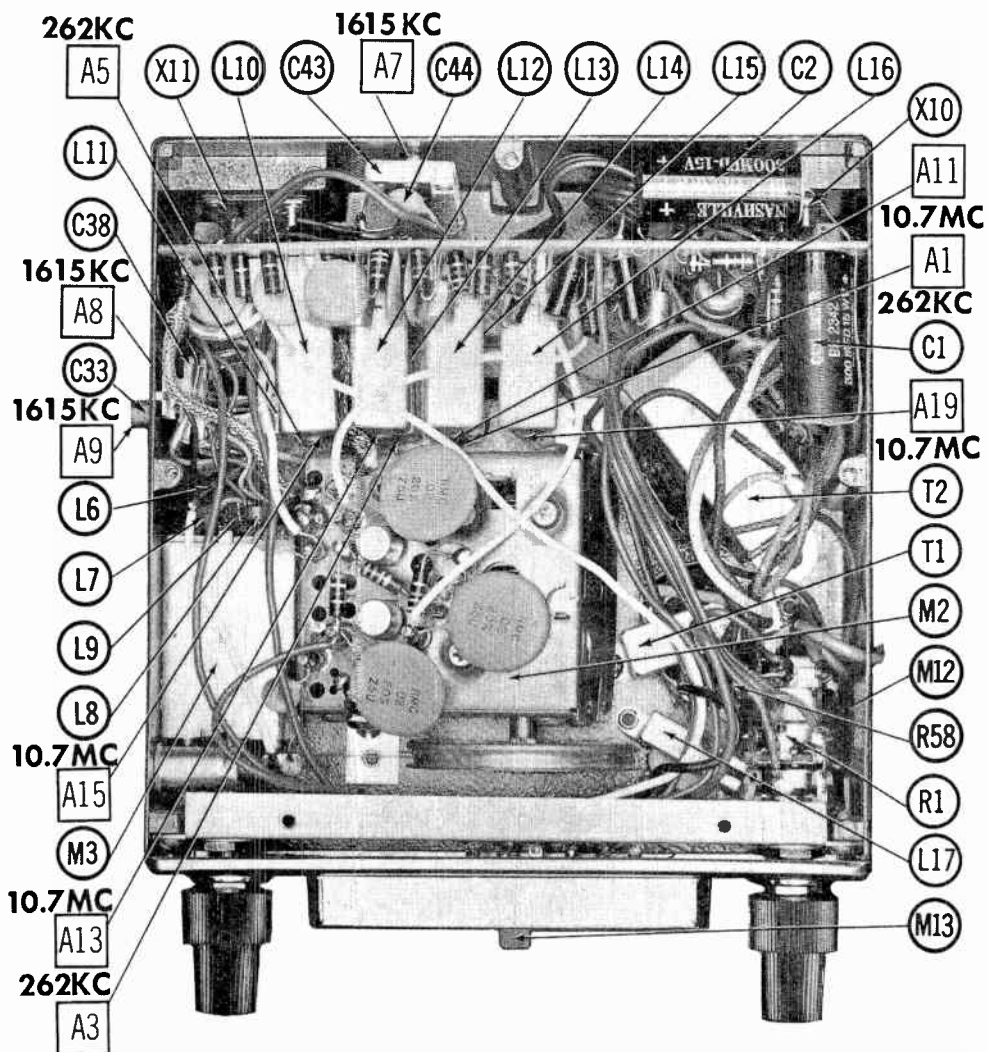
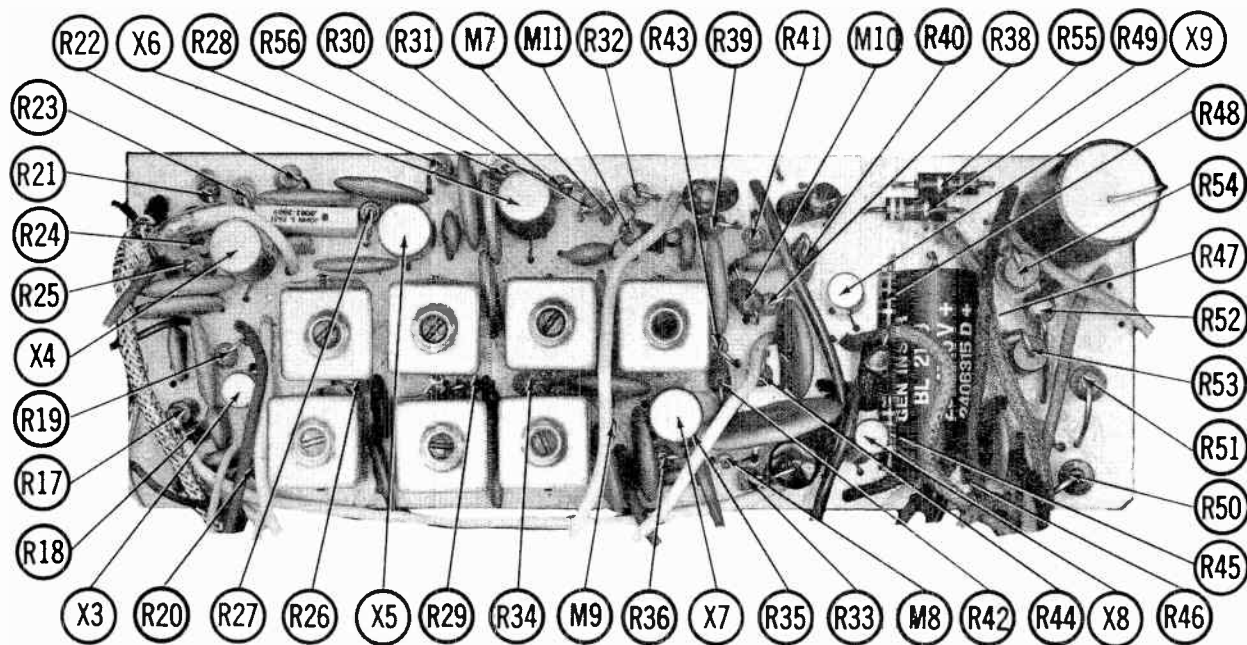
DIAL CORD STRINGING

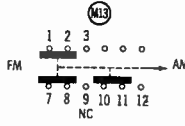
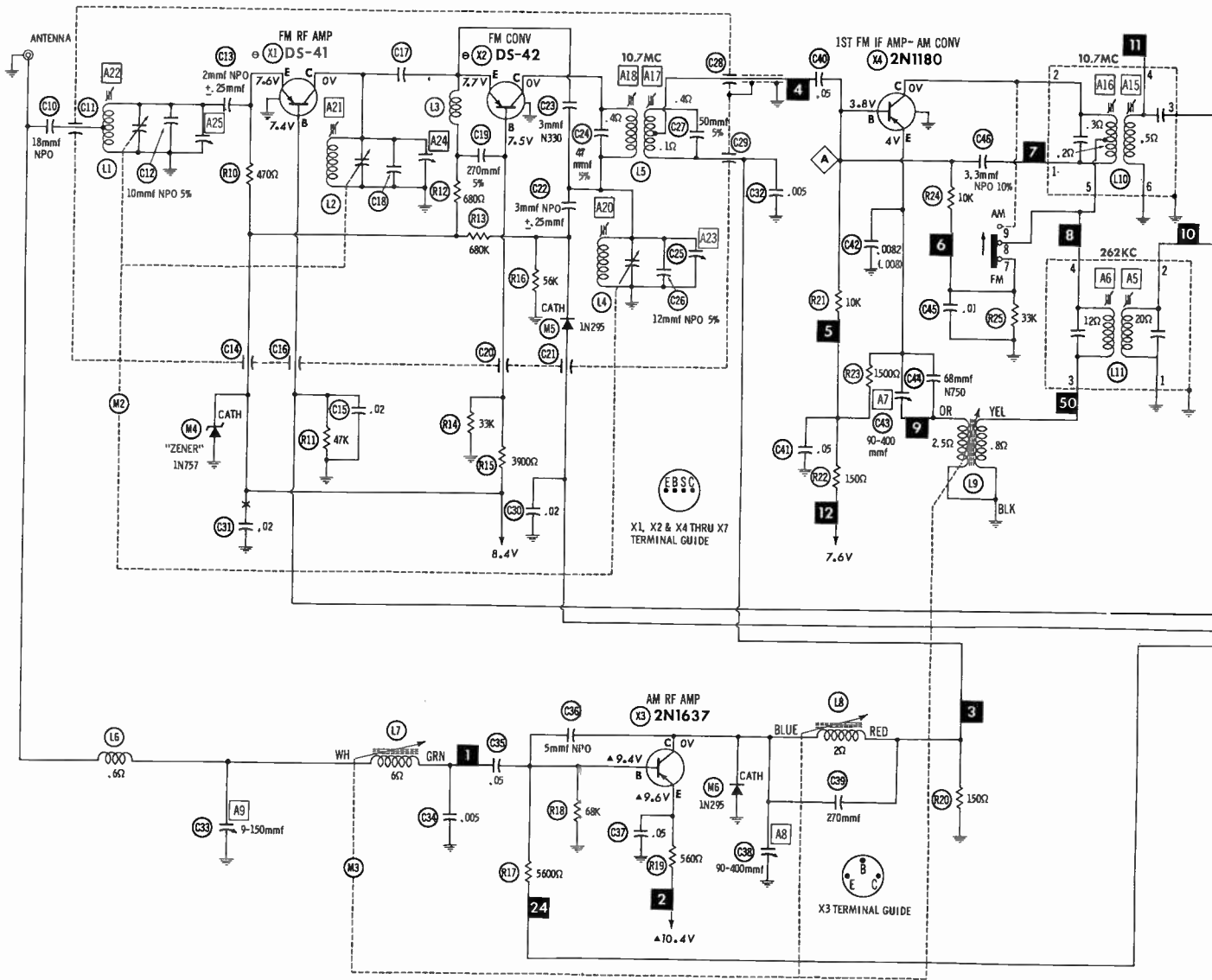


HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana



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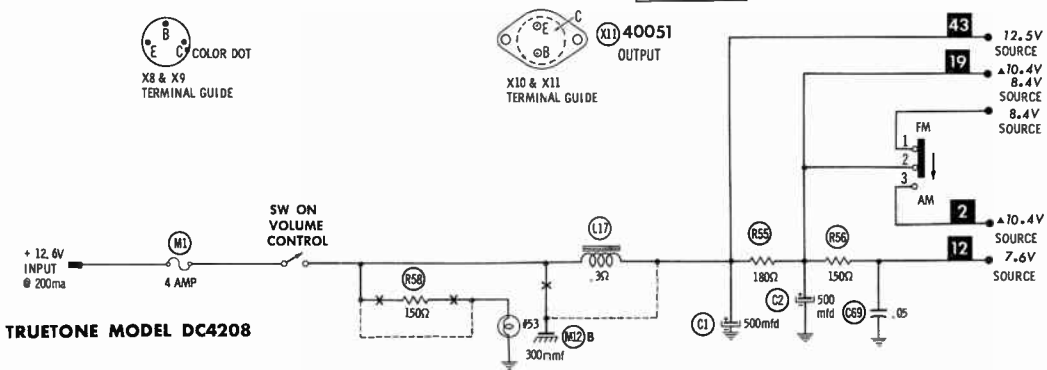
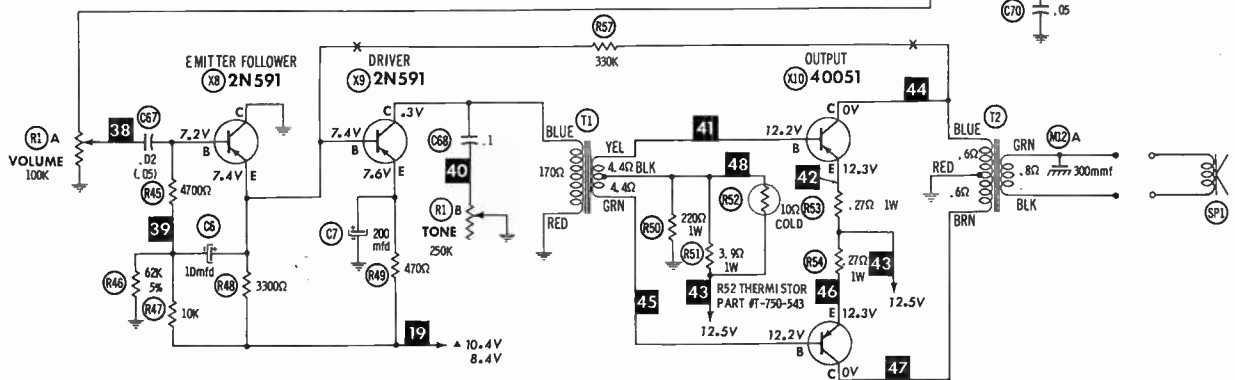
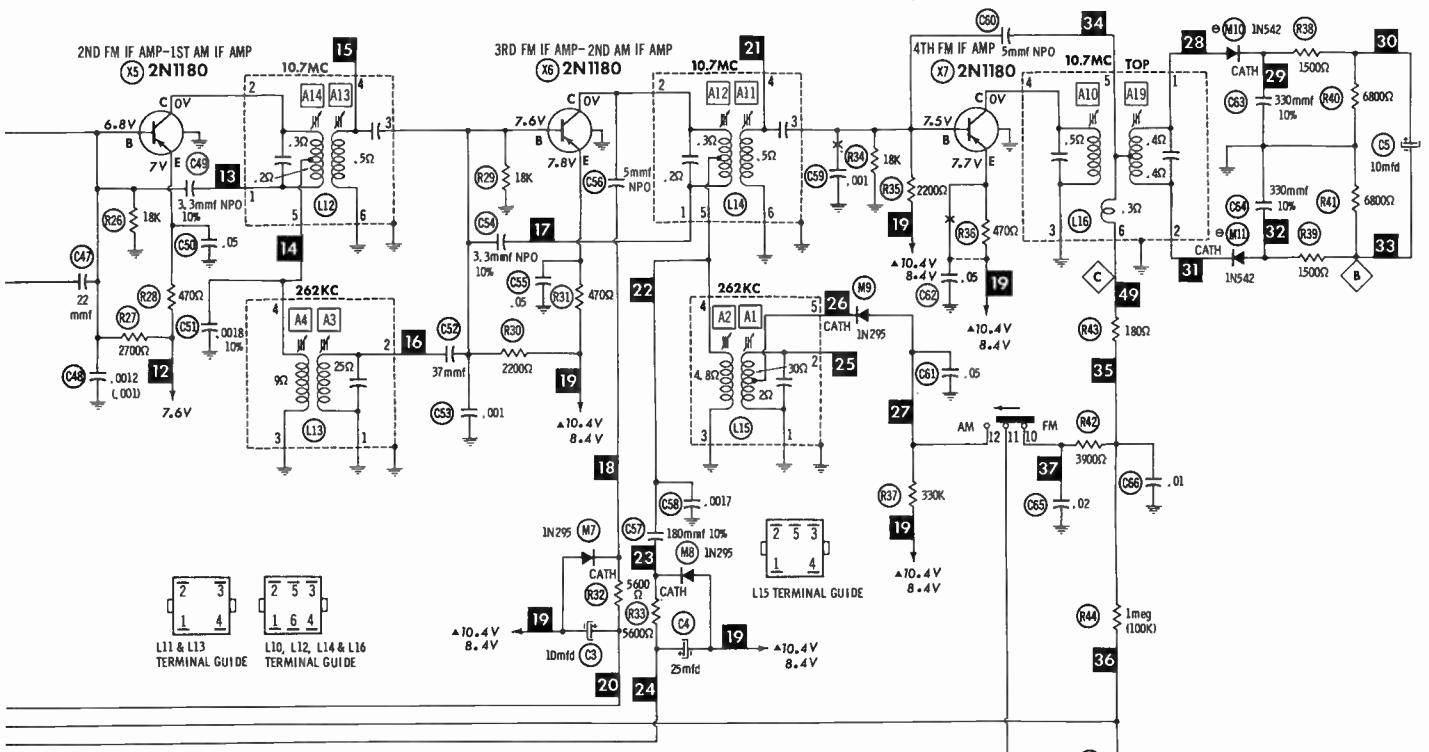
ALL VOLTAGES TAKEN IN "FM" POSITION UNLESS OTHERWISE DESIGNATED

▲ TAKEN IN "AM" POSITION

- ⊙ See parts list for alternate value or application.
- 1. Voltage measurements taken with vacuum tube voltmeter.
- 2. All controls set for normal operation, no signal applied.
- 3. Measured values are from socket pin or terminal to common ground.
- 4. All terminals viewed from bottom unless otherwise designated.
- 5. Numbers assigned to terminals may not be found on the unit.
- 6. Supply voltage maintained at rated value for voltage readings.
- 7. Resistance measurements not given because of the wide variation in internal resistance of transistor.

A PHOTOFAC STANDARD NOTATION SCHEMATIC with CIRCUITRACE

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TRUETONE MODEL DC4208

PARTS LIST AND DESCRIPTION

Replacement parts shown may be superseded by the availability of newly introduced replacements.

Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	
X1	DS-41*	FM RF Amplifier	DS-41	GE-1	2N1177	PNP
X2	DS-42†	FM Converter	DS-41		2N1179	PNP
X3	2N1637	AM RF Amp.	DS-25		2N1637	PNP
X4	2N1180	1st FM IF Amp. -AM Conv.	DS-35		2N1180	PNP
X5	2N1180	2nd FM IF Amp. -1st AM IF Amp.	DS-34		2N1180	PNP
X6	2N1180	3rd FM IF Amp. -2nd AM IF Amp.	DS-34	2N1180	PNP	
X7	2N1180	4th FM IF Amp.	DS-34	2N1180	PNP	
X8	2N591	Emitter Follower	DS-26	GE-2	2N591	PNP
X9	2N591	Driver	DS-26	GE-2	2N591	PNP
X10	40051	Output	DS-520	GE-3	2N301	PNP (Note 1)
X11	40051	Output	DS-520	GE-3	2N301	PNP (Note 1)

* Alternate Type 2N1177.

† Alternate Type TA1990

Note 1. When replacing, apply silicone grease to both sides of insulator. Tighten mtg. screws securely.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	TRUETONE PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	GENERAL INSTRUMENT PART No.	MALLORY PART No.	SPRAGUE PART No.
C1	500	15	T-700-417	PRS1220	BR500-15	QT1-30	BL2342		
C2	500	15	T-700-417	PRS1220	BR500-15	QT1-30	BL2342		
C3	10	6	T-700-435	CRE307A	NLW10-6	MT1-5	BL1220	TT6X10	TE-1087
C4	25	15	T-700-414	CRE412A	NLW25-10	MT1-14	BL1331	TT10X25	TE-1118
C5	10	6	T-700-435	CRE307A	NLW10-6	MT1-5	BL1220	TT6X10	TE-1087
C6	10	6	T-700-435	CRE307A	NLW10-6	MT1-5	BL1220	TT6X10	TE-1087
C7	200	15	T-700-411	CRE481A	NLW200-15	MT1-25	BL2140	TT15X200	TE-1164

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	18 NPO		NPO-DI 20	TCZ-18	C10Q2C	CCTO-180	CNO-418	10TCC-Q18
C11								
C12	10 NPO 5%		NPO-DI 10	DTZ-10	C10Q1C		CNO-410	10TCC-Q10
C13	2 NPO ±.25mmf			TCZ-2R2			CNO-522	10TCC-V22
C14								
C15	.02		BPD-02	DD-203	BYA6S2	CCD-203	B-120	5HK-S20
C16								
C17								
C18								
C19	270 5%			CPR-270J	CD10F271J	DM-15-271J	CNO-327	10TCC-T27
C20								
C21								
C22	3 NPO ±.25mmf			TCZ-3R3			CNO-533	10TCC-V30
C23	3 N330					*		10TCC-V30
C24	47 5%			CPR-47J	CD10E470J	DM-15-470J	CNO-447	10TCC-Q47
C25								
C26	12 NPO 5%			TCZ-12			CNO-412	10TCC-Q12
C27	50 5%				CD10E510J	DM-15-500J	CNO-450	10TCC-Q50
C28								
C29								
C30	.02		BPD-02	DD-203	BYA6S2	CCD-203	B-120	5HK-S20
C31	.02	Note 1	BPD-02	DD-203	BYA6S2	CCD-203	B-120	5HK-S20
C32	.005		BPD-005	DD-502	BYA10D5	CCD-502	B-250	5HK-D50
C33	9-150	#T-700-401						
C34	.005		BPD-005	DD-502	BYA10D5	CCD-502	B-250	5HK-D50
C35	.05 100V		TTD-05				TA-150	TH-S50
C36	5mmf NPO		NPO-DI 5.0	DTZ-4R7	C10V47C	CCTO-050	CNO-547	10TCC-V50
C37	.05 100V		TTD-05				TA-150	TH-S50
C38	90-400	#T-700-422						
C39	270		BPD-00027	DD-271	LA10T27-C4	CCD-271	GP327	10TS-T27
C40	.05 100V		TTD-05				TA-150	TH-S50
C41	.05 100V		TTD-05				TA-150	TH-S50
C42	.0082			DD-822		CCD-822	B-282	
C43	90-400	#T-700-422						
C44	68 N750		N750-DI 68	DTN-68	C10Q68U	CCTN-680	CN7-468	10TCU-Q68
C45	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C46	3.3 NPO 10%			TCZ-3R3			CNO-533	10TCC-V33
C47	22		BPD-000022	DD-220	LA10Q22-SL	CCD-220	GP422	10TS-Q22
C48	.0012		DI-1200	DD-822	LA10D12-C4	CCD-122	GP212	10TS-D12
C49	3.3 NPO 10%			TCZ-3R3			CNO-533	10TCC-V33
C50	.05 100V		TTD-05				TA-150	TH-S50
C51	.0018 10%		DI-1800	DD-182	JB6D18	CCD-182	GP218	10TS-D18
C52	37		DI-39	DD-390	LA10Q39-S3	CCD-390	GP439	10TS-Q39
C53	.001		BPD-001	DD-102	BYA10D1	CCD-102	B-210	5HK-D10
C54	3.3 NPO 10%			TCZ-3R3			CNO-533	10TCC-V33
C55	.05 100V		TTD-05				TA-150	TH-S50
C56	5 NPO		NPO-DI 5.0	DTZ-4R7	C10V47C	CCTO-050	CNO-547	10TCC-V50
C57	180 10%		DI-180	DD-181	LA10T18-S3	CCD-181	GP318	10TS-T18
C58	.0017		DI-1800	DD-182	LA10D18-C4	CCD-152	GP218	10TS-D18
C59	.001	Note 1	BPD-001	DD-102	BYA10D1	CCD-102	B-210	5HK-D10
C60	5 NPO		NPO-DI 5.0	DTZ-4R7	C10V47C	CCTO-050	CNO-547	10TCC-V50
C61	.05 100V		TTD-05				TA-150	TH-S50
C62	.05 100V		TTD-05				TA-150	TH-S50
C63	330 10%		DI-330	DD-331	LA10T33-C4	CCD-331	GP333	10TS-T33
C64	330		DI-330	DD-331	LA10T33-C4	CCD-331	GP333	10TS-T33
C65	.02		BPD-02	DD-203	BYA6S2	CCD-203	B-120	5HK-S20
C66	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C67	.02 100V	(.05) †	TTD-02	DDM-203	H3		TA-120	TH-S20
C68	.1 200V		P288N-1	DF-104	PKM2P1	2DP-3-104	GEM-201	2TM-P10
C69	.05 100V		TTD-05				TA-150	TH-S50
C70	.05 100V		TTD-05				TA-150	TH-S50

* Not normally in distributor's stock. Available thru distributor on order to manufacturer.
 Note 1. Not used in some versions. # Truetone Part Number.

PARTS LIST AND DESCRIPTION (CONTINUED)

Replacement parts shown may be superseded by the availability of newly introduced replacements.
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

CONTROLS

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

ITEM No.	USE	RESIST-ANCE	REPLACEMENT DATA				
			TRUETONE PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1A B	Tone Volume & Switch	250K 100K	T-750-525-1	F2-250K, R3-100K, F FS100, R FS108, KR-4, AK-31			

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		TRUETONE PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1 L2 L3 L4 L5 L6 L7 L8 L9 L10 L11 L12 L13 L14 L15 L16	FM Ant. FM RF RF Choke FM Osc. 1st FM IF RF Choke(6, 5uh) AM Ant. AM RF AM Osc. 2nd FM IF 1st AM IF 3rd FM IF 2nd AM IF 4th FM IF 3rd AM IF Ratio Detector	T-700-306	BC-585	4610	RTC-8520	T859	① Part of M2 ② Part of M3

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA					NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	TRUETONE PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L17	200ma	.3Ω	3MH	T-750-307	C-4095	TC-1	TR-158	TY16XT	

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
	PRI.	SEC.	TRUETONE PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
			T1	3.5	1	T-750-319		

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC.	TRUETONE PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
			T2	30Ω CT	6-8Ω	T-750-320	A-2745	

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		TRUETONE PART No.	QUAM PART No.	
SP1	6" x 9" PM 6-8Ω	T-750-139	89A3Z8	

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			TRUETONE PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M1	SFE	4A	T-700-85	T-700-84	307004 (SFE 4A)	155004	SFE 4	HMF

MISCELLANEOUS

ITEM No.	PART NAME	TRUETONE PART No.	NOTES
M2	FM Tuner	T-750-80	
M3	AM Tuner	T-700-80C	
M4	Zener Diode	T-750-714	1N757
M5	FM AFC	T-700-709	1N295
M6	AM Overload	T-700-709	1N295
M7	FM AVC	T-700-709	1N295
M8	AM AVC	T-700-709	1N295
M9	AM Det.	T-700-709	1N295
M10	Ratio Det.	T-750-713	1N542
M11	Ratio Det.	T-750-713	1N542
M12A	Spark Plate	T-700-418	300mmf
B	Spark Plate		300mmf
M13	Selector Switch		

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.
Dial Assembly	T-750-10A
Knob, Tuning or Volume	T-700-35
Knob, Tone	T-700-37
Knob, Dummy	T-700-36

WIRING DATA

General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in 12 Colors 8524 (Stranded) Available in 12 Colors
Shielded Hook-up Wire	Use BELDEN No. 8885
Rear Seat Speaker Extension Cable	Use BELDEN No. 8782 (Stranded) Coded Parallel Leads
Bonding Strap	Use BELDEN No. 8661 (3/8 In.) or 8670 (3/4 In.)

TRUETONE MODEL DC4208

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BLAUPUNKT

Table with columns for model name, year, and reference code. Includes models like Bremen, Export Super, Frankfurt, Hamburg, Koln, Manhattan, Wolfsburg, 3598, 9180.

BUICK

Table with columns for model name, year, and reference code. Includes models like 980051, 980052, 980132, 980134, 980135, 980296, 980297, 980318, 980462, 980463, 980464, 980464A, 980626, 980635, 980655, 981320, 981321, 981323, 981550, 981551, 981651, 981652, 981707, 981708, 981813, 981814, 981902, 981903, 981968, 981969, 981970.

CADILLAC

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Table listing Motorola car models and their corresponding radio model numbers. Includes models like 555, 555-12, 556, etc., with radio models ranging from AR-5 to AR-17. Also includes sections for Chassis, NASH, NORDIC, OLDSMOBILE, OPEL-REKORD, and PHILCO.

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