

SAMS PHOTOFACT[®]

AUTO RADIO SERIES



AR-32
32
SEPT. 1965



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UNIVERSAL

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Automatic FM-5099
Blaupunkt Derby 94770, Serial No.
V710801
Motorola TM415M, TM5M, TU15A
Phillips PTC-400-MR
Ranger TC-100-M, MD, TC-200-PB
Riverside FJB-6576A, FJB-6577A
Riverside FJB-16563A
Riverside FJB-16607A
Tenna IM-65-M, IM-65-PB
Tenna TC-110-M, MD, TC-210-PB

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

\$2.95

Cat. No. AR-32



SAMS PHOTOFACT[®] AUTO RADIO SERIES



VOLUME

32



by the *Howard W. Sams* ENGINEERING STAFF



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

FIRST EDITION
FIRST PRINTING—SEPTEMBER, 1965

PHOTOFACT®
AUTO RADIO SERIES
VOLUME 32

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REMOVAL INSTRUCTIONS

GENERAL REMOVAL INFORMATION

Most radios and speakers can be removed for service by following the steps shown in this block of information. Check the Make, Model and Year of car listed below. If more specific instructions are required, they are shown.

- Step 1 Disconnect power, speaker and antenna leads.
- Step 2 Remove knobs.
- Step 3 Remove nuts from control bushings and cabinet braces.

- Step 4 Remove radio from under dash.
- Step 5 Remove nuts holding speaker and remove speaker from under dash.

CHEVROLET - 1964/65

See General Removal Information.

CHEVROLET TRUCK - 1964/65

See General Removal Information.

CHEVELLE - 1964/65

- Step 1 Follow steps 1 thru 4 of General Removal Instructions.
- Step 2 Use phillips screw driver and remove glove box.
- Step 3 Remove speaker thru glove box opening.

CHEVY II - 1962 thru 1965

See General Removal Information.

CORVAIR - 1964/65

See General Removal Information.

CHRYSLER - 1965

See General Removal Information

DODGE - 1965

See General Removal Information.

DART - 1965

See General Removal Information.

FORD - 1965

See General Removal Information.

GALAXIE - 1965

- Step 1 Pull off knobs.
- Step 2 Disconnect "A" Speaker and Antenna leads.
- Step 3 Use 7/16" wrench to remove nut from rear brace, and 2 bolts holding radio to rear of instrument panel.
- Step 4 Remove radio from under instrument panel.

SPEAKER REMOVAL:

- Step 1 Use phillips screw driver and remove glove box.
- Step 2 Use 5/16" wrench and remove 4 screws from speaker mounting.
- Step 3 Remove speaker thru glove box opening.

MUSTANG - 1964/65

- Step 1 Follow steps 1 thru 4 of General Removal Information.
- Step 2 Use phillips screw driver and remove speaker grille.
- Step 3 Remove speaker thru top of dash.

MUSTANG (Continued) - 1964/65

Models With Console:

- Step 1 Use phillips screw driver and remove glove box.
- Step 2 Remove radio thru glove box opening.

THUNDERBIRD - 1965

- Step 1 Pry off the right side console molding. Remove the right console molding retainers.
- Step 2 Remove 2 phillips screws from right side instrument panel chrome molding.
- Step 3 Remove 4 phillips screws and 2-7/16" bolts from instrument panel. Remove 3 phillips screws from upper finish panel and remove panel.
- Step 4 Pull off knobs.
- Step 5 Use 9/16" wrench and remove nuts from control bushings.
- Step 6 Remove trim plate.
- Step 7 Repeat step 5.
- Step 8 Use 7/16" wrench and remove bolts from rear braces.
- Step 9 Disconnect "A" Antenna and Speaker leads.
- Step 10 Remove radio thru right side.

SPEAKER REMOVAL:

- Step 1 Remove the 4 knobs and 4 phillips screws from clock housing, and position the clock housing down and out of the way.
- Step 2 Remove the 4 wing nuts from speaker mount.
- Step 3 Remove speaker thru clock opening.

MACK TRUCKS - 1965

See General Removal Information.

MERCURY - 1965

See General Removal Information.

OLDSMOBILE - 1965

See General Removal Information.

PLYMOUTH - 1965

See General Removal Information.

FURY - 1965

See General Removal Information.

VALIANT - 1965

See General Removal Information.

PONTIAC - 1965

See General Removal Information.

RAMBLER - 1965

See General Removal Information.

RAMBLER AMERICAN - 1965

See General Removal Information.



PHOTOFACT[®]

TRADE NAME : Allstate Model 833.500510 (1965 Chevrolet)
SUPPLIER : For Current Address, See Master Index.
TYPE SET : 5 Transistor AM Receiver
POWER SUPPLY : 12 Volt Storage Battery
RATING : .74 Amp. @ 12.6 Volts DC
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:

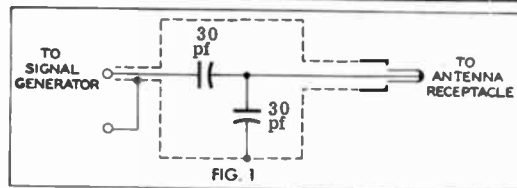
A1 thru A7 GENERAL CEMENT: 9440 WALSCO: 2501

	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.

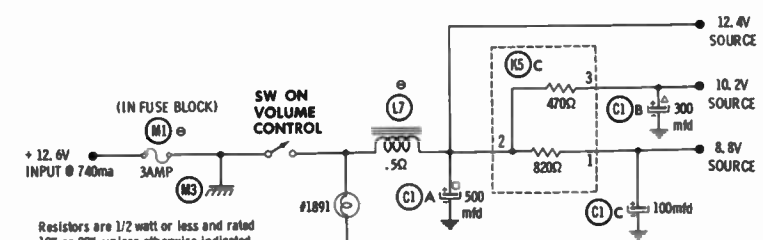
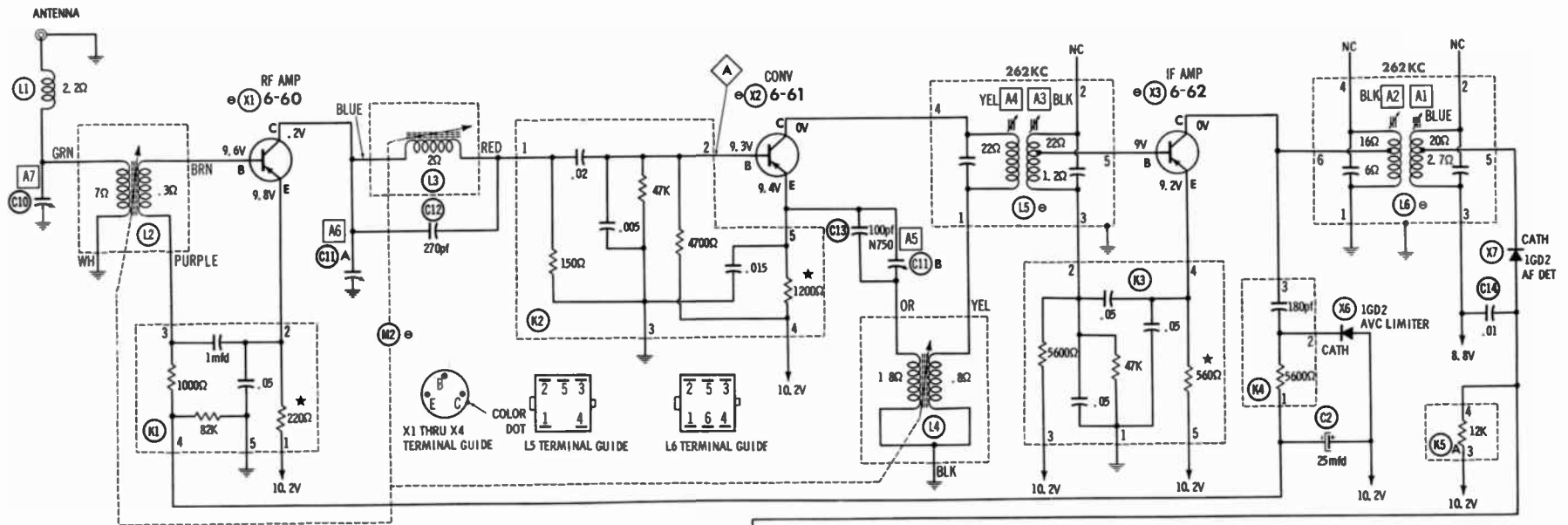


ALLSTATE MODEL 833.500510

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

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World Radio History

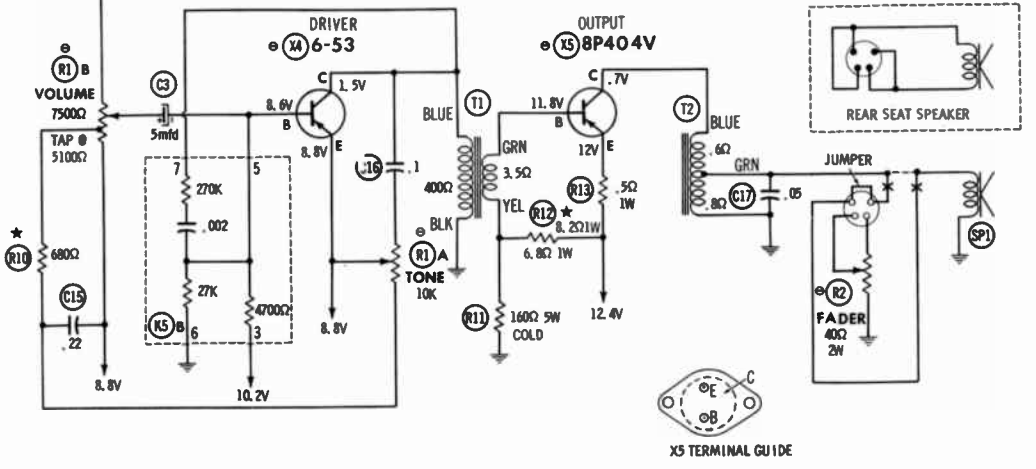


Resistors are 1/2 watt or less and rated 10% or 20% unless otherwise indicated. NOMINAL VALUE, MAY VARY

* NOT USED IN SOME VERSIONS

© See parts list for alternate value or application.

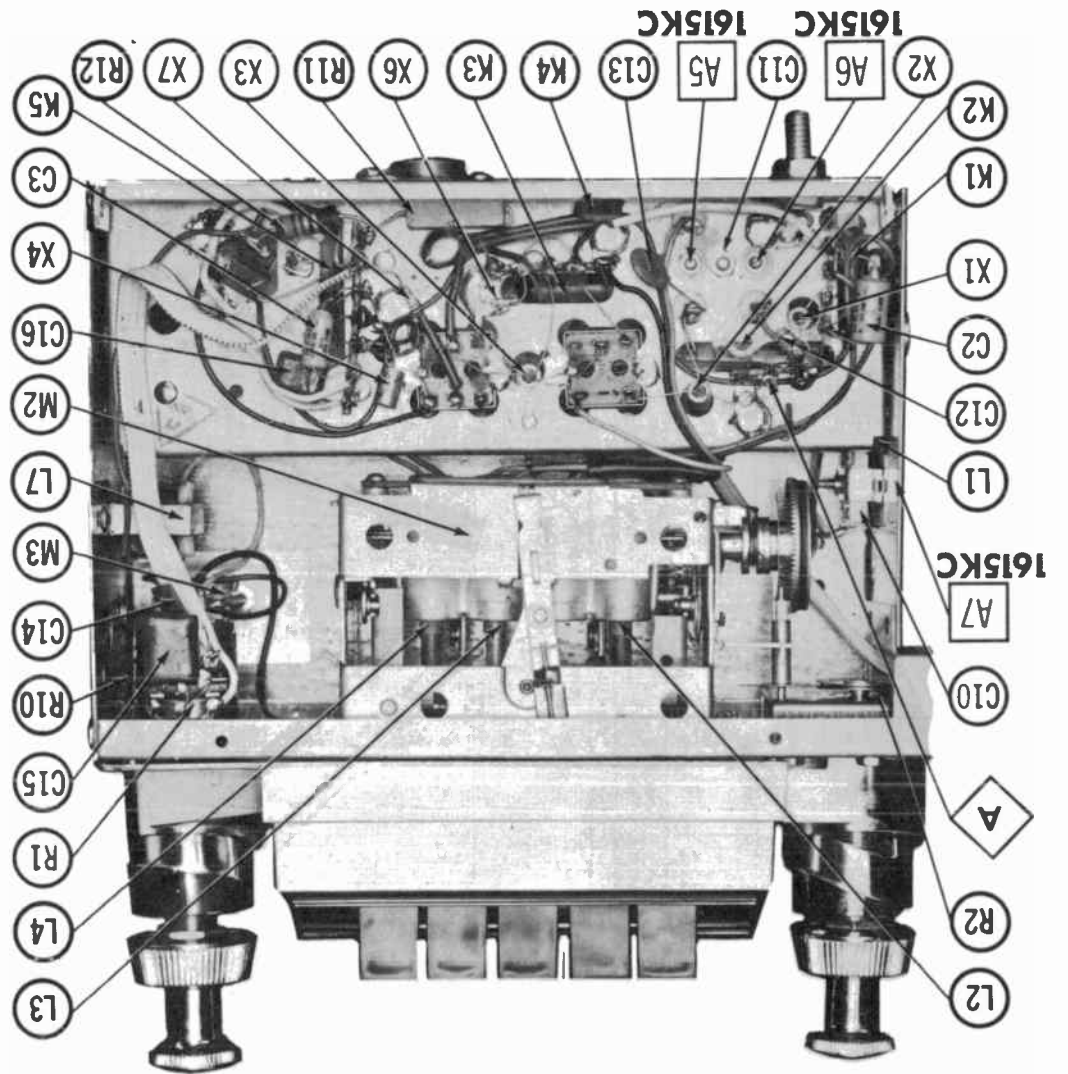
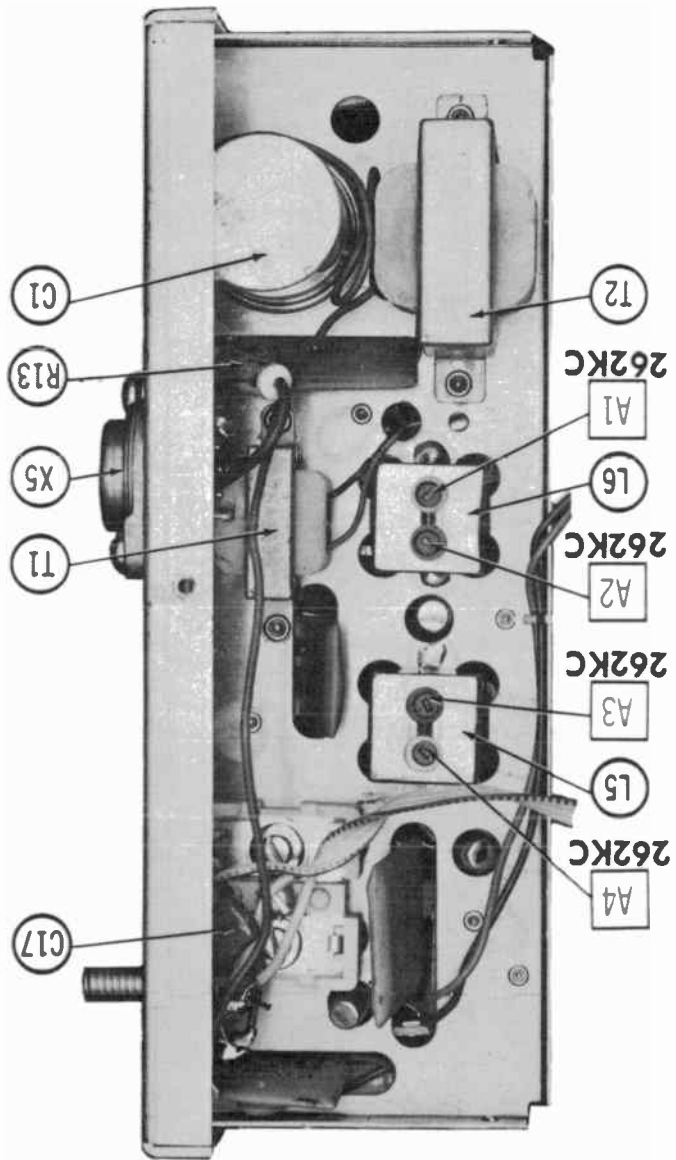
1. Voltage measurements taken with vacuum tube voltmeter.
2. All controls set for normal operation, no signal applied.
3. Measured values are from socket pin or terminal to common ground.
4. All terminals viewed from bottom unless otherwise designated.
5. Numbers assigned to terminals may not be found 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 PHOTOFACIT STANDARD NOTATION SCHEMATIC with CIRCUITRACE

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ALLSTATE MODEL 833.500510



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 Beat 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	6-60 (2N1637)	RF Amp.	D6-25	GE-1	2N1637	PNP
X2	6-81 (2N1639)	Conv.	D6-25	GE-1	2N1639	PNP
X3	6-62 (2N1638)	IF Amp.	D6-25	GE-1	2N1638	PNP
X4	6-53 (2N591)	Driver	D6-28	GE-2	2N591	PNP
X5	8P404V (2N178)	Output	D6-520	GE-3	2N301	PNP*

* When replacing, apply silicon grease to both sides of insulator. Tighten mounting screws securely.

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MEASURED CURRENT	ORIGINAL Part or Type No.	RECTIFIERS				DIODES
			GENERAL ELECTRIC PART No.	MALLORY PART No.	RCA PART No.	SARKES TARZIAN PART No.	GENERAL ELECTRIC PART No.
X6		1GD2					1N34AS
X7		1GD2					1N34AS

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		ALLSTATE 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	20-2563	AFH3-00-04.5	CC0012	XC3-48.1		FP300.83	TVLS-3026.14*
B	300	18							
C	100	18							
C2	25	15	20-258	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.
C10		#28-800-2L						
C11A		#28A1332						
C12	270		DI-270	DD-271	LA10T27-C4	CCD-271	GP327	5GA-T25
C13	100	N750	N750-DI100	DTN-100	C10T1U	CCTN-101	CN7310	10TCU-T10
C14	.01		BPD-01	DD-103	BYA1081	CCD-103	B110	5HK-S10
C15	.22			UK20-204	HCC25224Z			HY-325
C18	.1		TTD-1	CK-104	H6		TA010	TG-P10
C17	.05		TTD-05	CK-503	H5		TA150	TG-S60

Allstate Part Number.

CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA					
			ALLSTATE PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.	
R1	Tone, Volume/Switch	10K 7500Ω Tap @ 5100Ω	80A2772A				† QJ-1821A	■ UE4459B
R2	Fader	40Ω ZW	81A3918				* QJ-1820A	

† "CONCENTRIKT" Equivalent: K8 Kit with Base Elements and Shafts: B11-118, P13-200(Panel)
B21-115X, R26-215(Rear)
89 (Bushing)
76-1 (Switch)

"SNAPTROL" Equivalent: BU8, CF9, CR48T, 8F18, 8R53, GC.

■ "STA-LOC" Equivalent: FG14L, RU752T53, OS2000, BS2437, UB41.

* "CONCENTRIKT" Equivalent: BU9, WF18, 8F18.

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA			ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN PART No.	ALLSTATE PART No.			IRC PART No.	WORKMAN PART No.	ALLSTATE PART No.
R11	180Ω 5W (PTC)			81-161	R13	.5Ω	BWH.51	WT51	
R12	8.8Ω 1W	BWH8.8	WS8.8						

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.

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		ALLSTATE 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. ② Alternate Part Number
L2	Ant.	①					
L3	RF	①					
L4	Osc.	①					
L5	Input IF	14-3233A 14-2654 ②		6570			
L6	Output IF	14-3234A 14-2655 ②		6571			

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA					NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (Ø CURRENT 1000~)	ALLSTATE PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L7	740ma	.5Ø .5Ø	10MH 10MH	75A3082 75A1269 *	C-4095 C-4095	TC-2 TC-2	TR-155 TR-155	TY17XT TY17XT	* Alternate.

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
	PRI.	SEC.	ALLSTATE PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	8:	1	75A2635			TR-184		

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC.	ALLSTATE PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T2	24Ø Tap	@ 8Ø	75A2636			TR-189		

SPEAKER

ITEM No.	TYPE		REPLACEMENT DATA		NOTES
			ALLSTATE PART No.	QUAM PART No.	
SP1	4" X 10" PM	8Ø	73B2737	410A2Z8	

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	ALLSTATE PART NO.	REPLACEMENT DATA
K1	RF Network	220Ø, 1000Ø, 82K, .05mfd, 1mfd	89A2582C	
K2	Conv. Network	150Ø, 1200Ø, 4700Ø, 47K, .005mfd, .015mfd, .02mfd	89A2583	
K3	IF Network	560Ø, 5600Ø, 47K, .05mfd, .05mfd, .05mfd	89A2584B	
K4	AVC Network	5600Ø, 180pf	89A2701	
K5	Audio Network	470Ø, 820Ø, 4700Ø, 12K, 27K, 270K, .002mfd	89A2585A	

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA						
			ALLSTATE PART No.		LITTELFUSE PART No.		BUSS PART No.		
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER	
M1		3A	108-303	In Fuse Block In Fuse Block	3Ø2003 3Ø3004			AGC3 AGW4	

MISCELLANEOUS

ITEM No.	PART NAME	ALLSTATE PART No.	NOTES
M2	Tuner	78B3700 or 73B3800	
M3	Spark Plate	43-216	

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
Escutcheon	54C3858	Knob, Volume or Tuning	48A3921
Dial Glass	55A3872	Knob, Tone or Fader	48A3920
Pushbutton	55A1748A		

ALLSTATE MODEL 833.500510



PHOTOFACT[®]



TRADE NAME : Alistate Model 833.62743
 SUPPLIER : For Current Address, See Master Index.
 TYPE SET : 5 Transistor AM Receiver
 POWER SUPPLY : 12 Volt Storage Battery
 RATING : .680 Amp. @ 12.6 Volts DC
 TUNING RANGE : BROADCAST 540-1615KC

ALLSTATE MODEL 833.62743

ALIGNMENT INSTRUCTIONS

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

Suggested Alignment Tools:

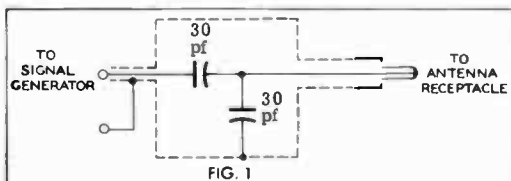
A1 thru A4
A5, A6, A7

GENERAL CEMENT: 8606, 8606L, 8869
GENERAL CEMENT: 8290, 8868, 9087

WALSCO: 2543, 2544, 2588
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.



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.

WIRING DATA

General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in 12 Colors 8534 (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	6-60 (2N640)	RF Amp.	D8-25	GE-1	2N1637	PNP
X2	6-61 (2N642)	Conv.	D8-25	GE-1	2N1639	PNP
X3	6-62 (2N641)	IF Amp.	D8-25	GE-1	2N1638	PNP
X4	6-53 (2N591)	Driver	D8-26	GE-2	2N591	PNP
X5	8P404 (2N176)	Output	D8-520	GE-3	2N301	PNP*

* When replacing, apply silicon grease to both sides of insulator. Tighten mounting screws securely.

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MEASURED CURRENT	ORIGINAL Part or Type No.	RECTIFIERS				DIODES
			GENERAL ELECTRIC PART No.	MALLORY PART No.	RCA PART No.	SARKES TARZIAN PART No.	GENERAL ELECTRIC PART No.
X6		1GD2					1N34AS
X7		1GD2					1N34AS

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		Allstate 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	20-2653	AFH3-00-94.5		XC3-48.1		FP300.83	TVLS-3026.14*
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.	
C9	.47	3V	#28-800-2L ① #28A1332		UK10-404	HCC10474Z			HY-330
C10									
C11A									
C12	270			DE-270	DD-271	LA10T27-C4	CCD-271	GP327	5GA-T25
C13	.0022			BPD-0022	DD-222	LA10D22-C4	CCD-222	B222	10T8-D22
C14	.02			TTD-02	CK-203	H3		TA120	TG-820
C15	.0047		(.005) †	BPD-0047	DD-472	BYA10D47	CCD-472	B247	5HK-D47
C16	100	N750		N750-DI100	DTN-100	C10T1U	CCTN-101	CN7310	10TCU-T10
C17	.01			BPD-01	DD-103	BYA1081	CCD-103	B110	5HK-S10
C18	.05			TTD-05	CK-503	H5		TA150	TG-850
C19	.22				UK20-204	HCC25224Z			HY-325

‡ Allstate Part Number.

† Alternate Value.

① Not used in some versions

CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA					
			Allstate PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.	
R1	Volume	7500Ω	80A2916A (80A2916)	F2-10K, SFB212, AK-31, KR-4			B13-116, TM8, QCB4① 76-1 or (BU14②) CF61, 884, GC)	

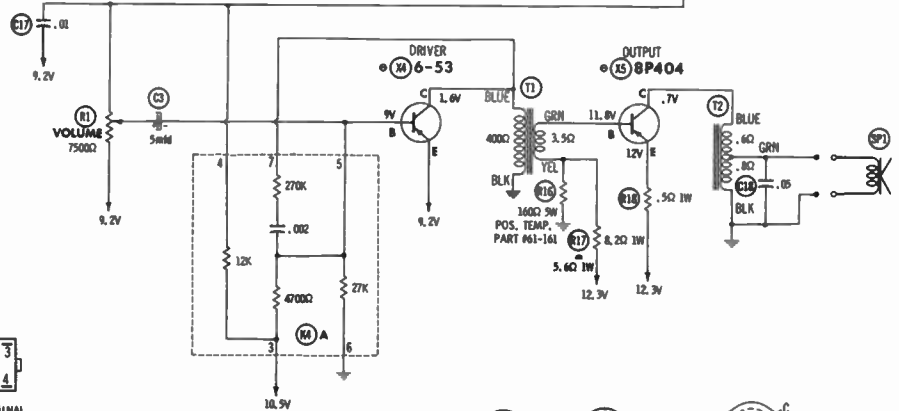
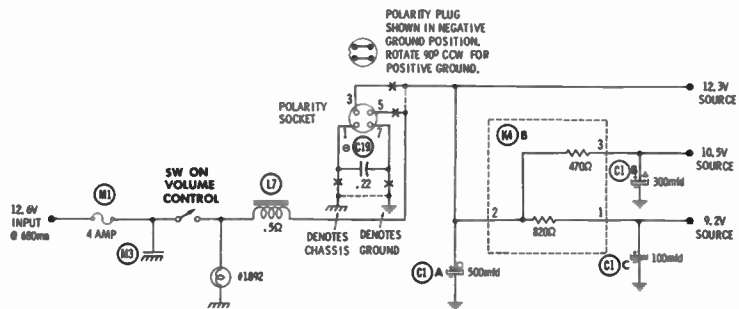
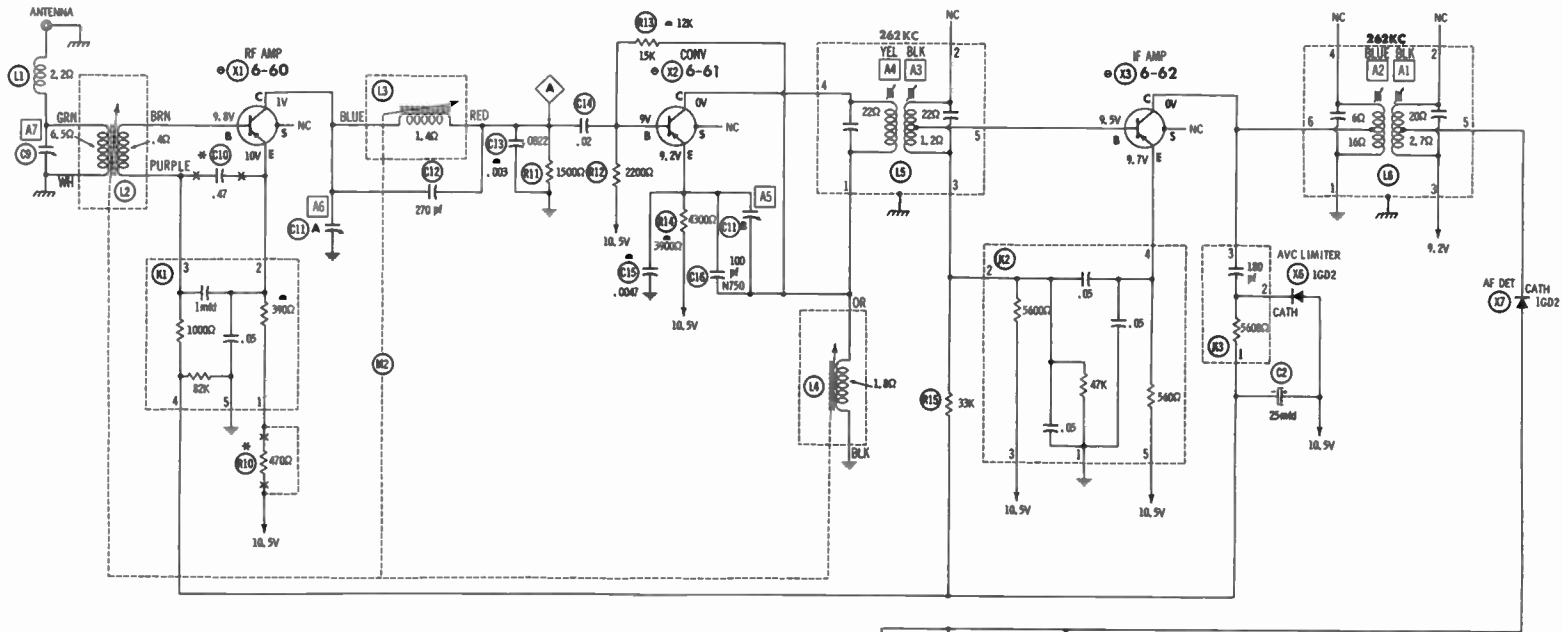
① Use QCB4 instead of Tab Mount Plate in TM8.

② Alter bushing to meet requirements.

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA			ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN PART No.	Allstate Part No.			IRC PART No.	WORKMAN PART No.	Part No.
R16	160Ω 5W PTC			61-161					

ALLSTATE MODEL 833.62743



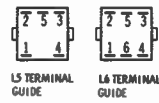
▲ NOMINAL VALUE MAY VARY.

* NOT USED IN SOME VERSIONS.

Resistors are 1/2 watt or less and rated 10% or 20% unless otherwise indicated.

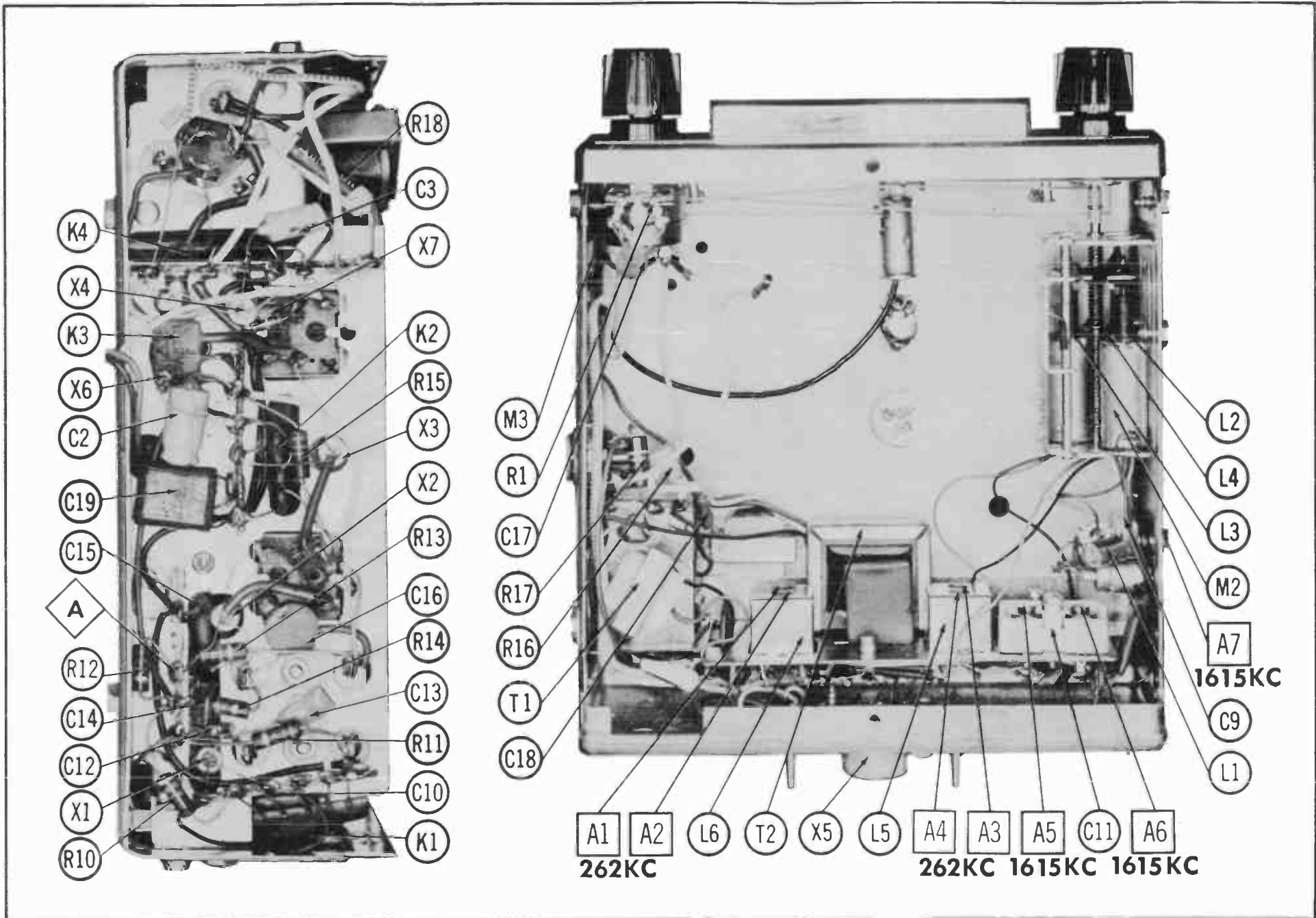
- See parts list for alternate value or application.
- 1. Voltage measurements taken with vacuum tube voltmeter.
- 2. All controls set for normal operation, no signal applied.
- 3. Measured values are from socket pin or terminal to common ground.
- 4. All terminals viewed from bottom unless otherwise 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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ALLSTATE MODEL 833.627420

ALLSTATE MODEL 833.62743



ALLSTATE MODEL 833.62743

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.

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		Allstate PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	RF Choke (6.2uh)	14-6.2	BC-585	4610	RTC-8520	T859	① Part of M2.
L2	Ant.	①					
L3	RF	①					
L4	Osc.	①					
L5	Input IF	14-3233A					
L6	Output IF	14-3234A					

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA					NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (D CURRENT 1000~)	Allstate PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L7	.680	.5Ω	10MH	75A3082	C-4095	TC-2	TR-155	TY17XT	

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
			Allstate PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
	PRI.	SEC.						
T1	8:	1	75A2635			TR-184		

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
			Allstate PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
	PRI.	SEC.						
T2	24Ω Tap	@ 8Ω	75A2638 (75A2636)			TR-189		

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		Allstate PART No.	QUAM PART No.	
SP1	5" PM 8Ω	73A2163	5A0528	

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	Allstate PART NO.	REPLACEMENT DATA
K1	RF Amplifier	390Ω, 1000Ω, 82K, .05mfd, 1mfd	89A2582C	
K2	IF Amplifier	560Ω, 5600Ω, 47K, .05mfd, .05mfd, .05mfd	89A2584B	
K3	AVC	5600Ω, 180pf	89A2701	
K4	AF Amp.	470Ω, 820Ω, 4700Ω, 12K, 27K, 270K, .002mfd	89A2585A	

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			Allstate PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M1	AGW	4A			303004	155004	AGW4	HIDH

MISCELLANEOUS

ITEM No.	PART NAME	Allstate PART No.	NOTES
M2	Tuner	78A3602	
M3	Spark Plate	4S-216	

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
Escutcheon	55C3605	Knob, Tuning or Volume	47A1235
Dial Glass	39-78	Knob, Spacer	47A1249



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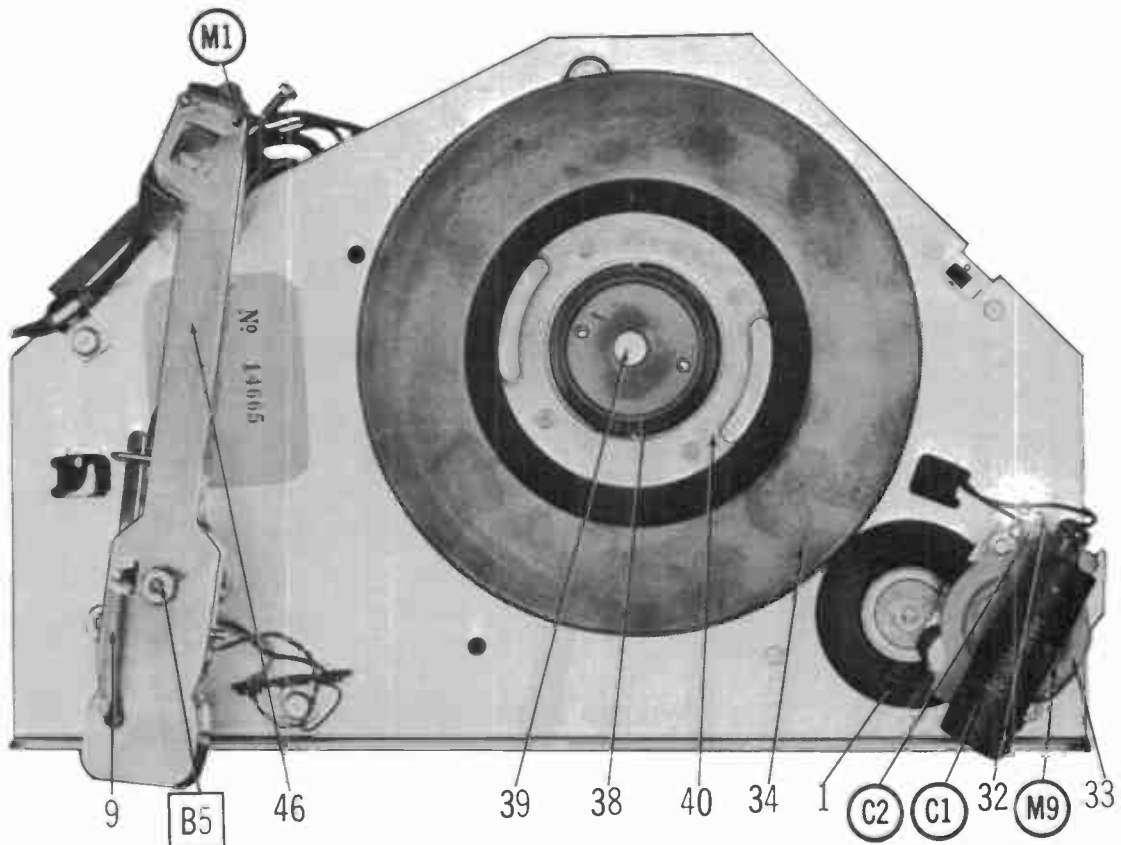


TRADE NAME : Allstate Model 834.50480
 SUPPLIER : For Current Address, See Master Index.
 TYPE SET : Automobile 45 R. P. M. Automatic Record Changer
 POWER SUPPLY : 12 Volt Storage Battery
 RATING : .075 Amp. @ 12.6 Volts DC

The output of this 12-volt DC-operated automatic record changer is fed into the antenna input of the automobile receiver and is regulated by the volume and tone controls of the receiver.

The changer will automatically play and unload up to twelve 7-inch records. Electromagnets are used to initiate the functions of Start, Trip and Reject.

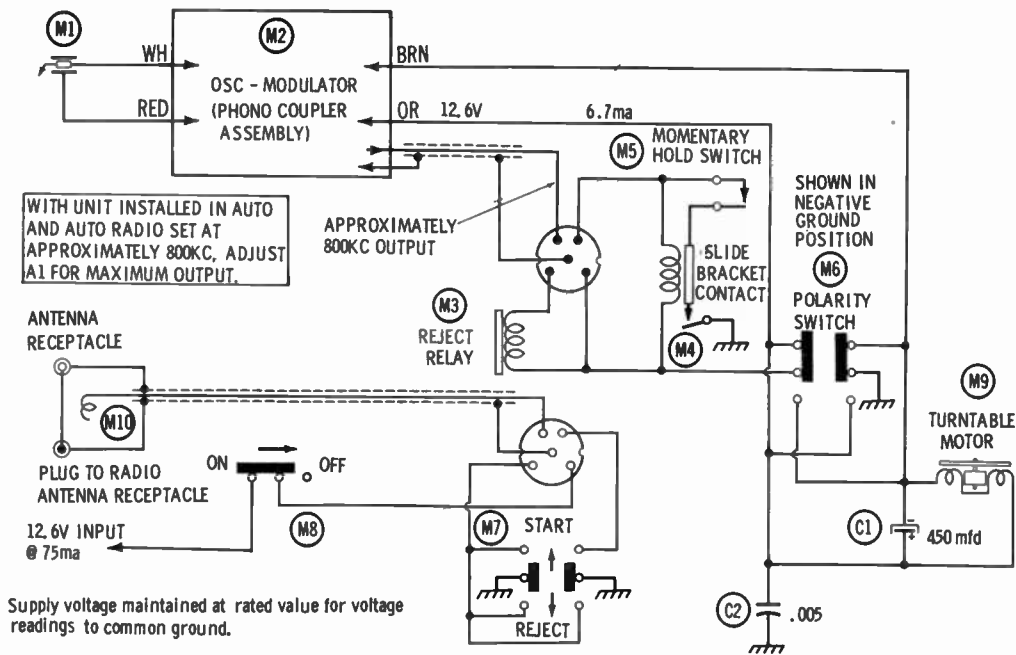
A polarity reversing switch on the turntable base permits the unit to be used with either positive or negative ground electrical systems.



ALLSTATE MODEL 834.50480

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

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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.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA					
	CAP.	VOLT.	ALLSTATE PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	SPRAGUE PART No.
C1	450	20		PRS1290	BR500-25	QT1-31	TC2505	TVA-1209

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.
C2	.005		BPD-005	DD-502	BYX601ZU502P	CCD-502	B250	5HK-D50

PHONO CARTRIDGE & NEEDLES

*NEEDLE LISTINGS SHOWN ARE FOR RESPECTIVE REPLACEMENT CARTRIDGES ONLY.

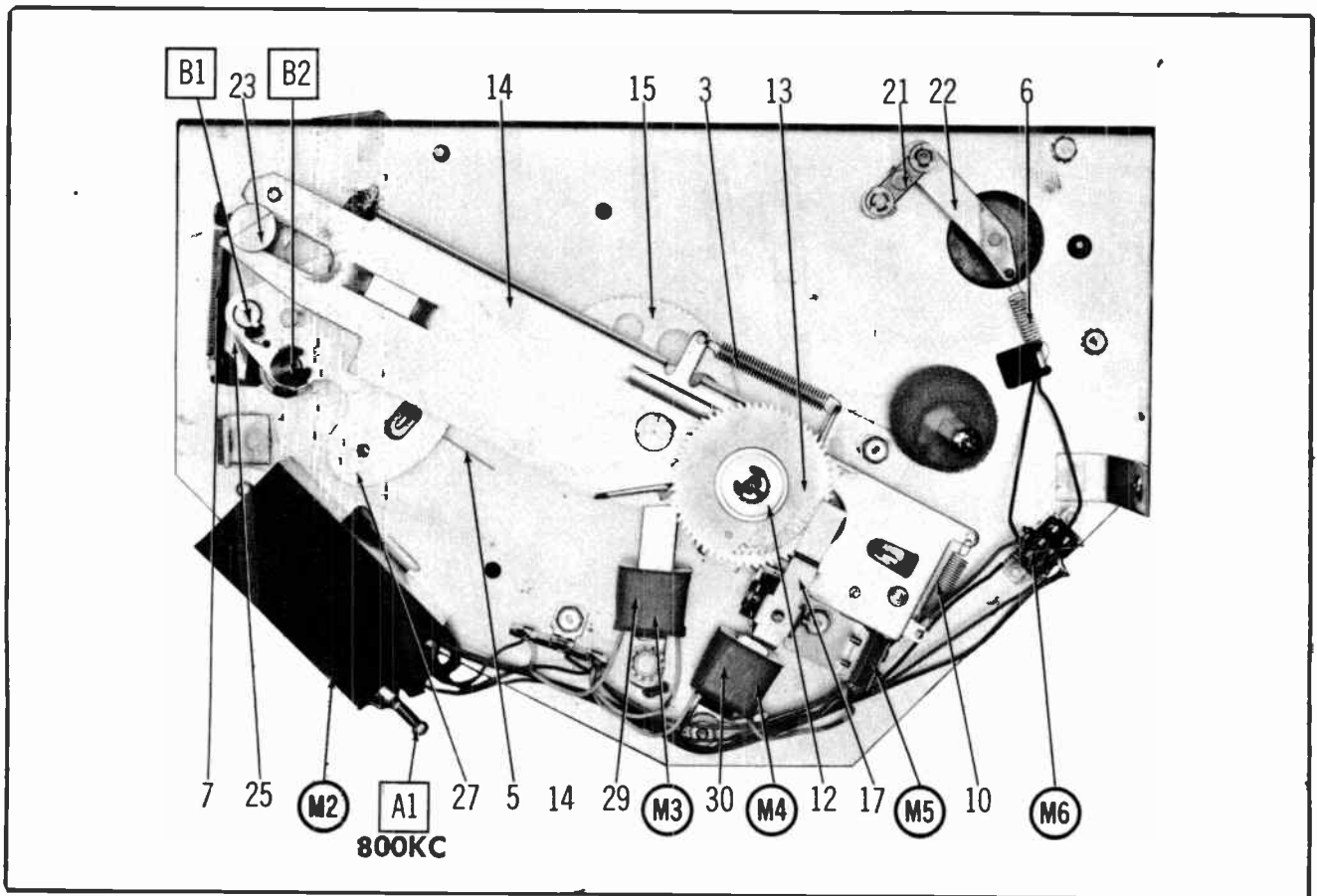
ITEM No.	REPLACEMENT DATA								NOTES
	ALLSTATE PART No.		ASTATIC PART No.		ELECTRO-VOICE PART No.		SONOTONE PART No.		
	CARTRIDGE	NEEDLE*	CARTRIDGE	NEEDLE*	CARTRIDGE	NEEDLE*	CARTRIDGE	NEEDLE*	
M1	89-1D		89-1D	①	89D	①			① Permanent needle Cartridge.

MISCELLANEOUS

ITEM No.	PART NAME	ALLSTATE PART No.	NOTES
M2	Phono Coupler Assembly	1001-102A	
M3	Reject Electromagnet	1000-900	
M4	Play Electromagnet	1000-900	
M5	First Record Hold Switch	25-2332	
M6	Polarity Switch	G126	
M7	Start-Reject Switch	947085-2	
M8	On-Off Switch	G723	
M9	Motor	B45590-6	
M10	Antenna Adapter Plug	801	

WIRING DATA

General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in 12 Colors 8524 (Stranded) Available in 12 Colors
Power Cord	Use BELDEN No. 17106 (Plastic) or 17126 (Rubber) - 6 Ft. 17109 (Plastic) or 17129 (Rubber) - 9 Ft.
Power Cord (Interlock Type)	Use BELDEN No. 8874 (Rubber) or 8895 (Plastic)
Low-Loss Shielded Lead (Interconnecting)	Use BELDEN No. 8401 or 8421
Phono Pick-up Arm Cable	Use BELDEN No. 8430 (Two Conductor-Unshielded) 8429 (Two Conductor-Shielded) 8419 (Three Conductor-Shielded)



OPERATING INSTRUCTIONS

Loading

1. Stack the records with the desired selections facing downward; open the cabinet door and push the records up onto the spindle far enough so the bottom record rests on the separator shelves.
2. Tune the radio to 800KC.

Off-On-Switch

Pushing the switch to On, applies the power.

Start-Reject

Push the Start-Reject switch to Start and hold momentarily. This energizes the First Record Hold Electromagnet which pivots Bracket (17), preventing

the stop dog on Slide (14) from contacting Ratchet Wheel (13) so the spindle will not be actuated.

Pushing the Start-Reject switch to Reject permits the bottom record to drop onto the cabinet shelf and positions the next record for playing.

Repeat

To repeat a record, push the Start-Reject switch to Start and hold momentarily before the record has finished playing.

Manual Unload

Turn Unload knob (39) one-half turn in either direction to remove the remaining records from the spindle.

CHANGE CYCLE

Starting

Pushing the Start-Reject switch to Start energizes the Record Reject Electromagnet which causes the steel armature mounted on Cycling Cam (15) to rotate slightly. The teeth of Cycling Cam (15) will then contact the rubber driving surface on Rubber Roller (18) that is fastened to the turntable. As the turntable rotates, it drives Cycling Cam (15) which pushes Slide (14) outward. As Slide (14) starts its outward travel the First Record Hold Switch is closed allowing First Record Hold Electromagnet (30) to become energized which pivots Bracket (17) so the Stop Dog on Slide (14) will pivot and not engage the teeth in Ratchet Wheel (13).

As Slide (14) continues outward, Pick-up Arm Rod (24) is pushed downward by a lance on Slide (14) thus pushing the pick-up arm down from the record. As Slide (14) continues outward, it contacts the stud on Trip Lever (27) pushing it outward.

As Trip Lever (27) moves outward, it pivots Return Lever (25) so the Pick-up Landing Adjusting Screw (26) will lock in the detent of Return Lever (25) positioning the pick-up arm for setdown on the next record.

During the inward travel of Slide (14) the following happens: Spring (7) pulls Return Lever (25) inward for correct setdown, Pick-up Arm Rod (24) rides off

the lance on the Slide permitting the Stylus to set down, Cycling Cam (15) disengages from Rubber Roller (18), and Slide (14) releases Return Lever (25) so the pick-up arm is free to move across the record.

After the first record is played, another change cycle is initiated; however, because the Start-Reject switch is not moved, First Record Hold Electromagnet

(30) is not energized. Therefore, Bracket (17) does not pivot and the stop dog on Slide (14) engages Ratchet Wheel (13); permitting the turntable to rotate around Separator Shaft (49) which actuates Shelf Separator (54) and Separator Knives (37) causing the record to drop to the cabinet bottom and the next record to drop to playing position.

TROUBLE CHART

SYMPTOM	REMARKS
Fails to Reject.	<ol style="list-style-type: none"> 1. Start-Reject switch defective. 2. Electromagnet (29) defective. 3. Slide Bracket (16) or Electromagnet (29) misadjusted. 4. Rubber Roller (18) oily.
Pick-up skips grooves.	<ol style="list-style-type: none"> 1. Stylus worn or broken. 2. Counterbalance Spring (9) weak, broken, or unhooked. 3. Shaft of Trip Lever (27) binding.
Changer cycles prematurely.	<ol style="list-style-type: none"> 1. Cycling Cam (15) too close to Rubber Roller (18). See Manual Tripping.
Changer fails to trip.	<ol style="list-style-type: none"> 1. Adjust Reject Lever Spring (5) with B2. 2. Trip Lever Shaft (27) binding. 3. Slide (14) misadjusted, placing Cycling Cam (15) too close to Rubber Roller (18). 4. Cycling Cam Shaft (15) binding.
Records fail to separate.	<ol style="list-style-type: none"> 1. Stop Dog Spring (10) weak or unhooked. 2. Separator Shelf Springs (8) weak. 3. Separator Knife (36) and Shelf Separator (54) binding. 4. Insufficient friction between Clutch Plate (12) and Ratchet Wheel (13). 5. Clutch Plate (12) oily.
Changer trips continuously.	<ol style="list-style-type: none"> 1. Electromagnet (29) remains energized. 2. Cycling Cam (15) misadjusted. See "Manual Tripping". 3. Cycling Cam Shaft bent.
Will not complete a change cycle.	<ol style="list-style-type: none"> 1. Cycling Cam (15) bent. 2. Slide Return Spring (3) weak, broken, or unhooked. 3. Rubber Roller (18) oily.
First record drops before playing.	<ol style="list-style-type: none"> 1. Electromagnet (30) not energized.
Pick-up lands improperly.	<ol style="list-style-type: none"> 1. Pick-up misadjusted. See "Pick-up Landing". 2. Return Lever (25) binding. 3. Return Lever Spring (7) weak, broken, or unhooked. 4. Pick-up Arm Clamping Screw (42) loose.
Wow	<ol style="list-style-type: none"> 1. Idler Wheel (1) and/or turntable rim only. 2. Bearing Race (20) worn. 3. Idler Spring (6) weak, broken, or unhooked. 4. Idler Link (21) binding. 5. Shock Mounts (53). Incorrectly positioned.
Records strike pick-up when dropping.	<ol style="list-style-type: none"> 1. Pick-up Arm (46) positioned incorrectly. See "Pick-up Landing".
Distorted or no output.	<ol style="list-style-type: none"> 1. Defective cartridge. 2. Defective stylus. 3. Shorted or open pick-up leads. 4. Stylus holder dirty.

ADJUSTMENTS

Pick-up Landing

1. Loosen Screw (42) and move Trip Lever (27) until Landing Screw (26) moves Return Lever (25) against the turned up lance on the motor-board.
2. Move the pick-up arm so the stylus will be 3 3/4 inch from the side of the spindle and tighten Screw (42).
3. Place a 7-inch record on the spindle, hold Lever Bracket (17) down so the stop dog will not engage Ratchet Wheel (13) and rotate the turntable until the stylus is about to land.
4. Loosen Screw (42) and turn the pick-up arm so the stylus is centered between the outer edge and starting groove of the record. Retighten Screw (42).
5. Turn B1 for final adjustment.

Tripping - Manual

1. Loosen Screws (50) and move Bracket (16) so it is perpendicular to Slide (14) and position Slide (14) so there is a clearance of .06 inch to .078 inch between the cutaway of Cycling Cam (15) and Rubber Roller (18). Retighten Screws (50).
2. Loosen Screw (51) and position Electromagnet

(29) to provide a minimum clearance without touching the armature on Cycling Cam (15). Retighten Screw (51).

Tripping - Automatic

1. Adjust B2 so the mechanism will trip when the stylus is 1 9/32 inch from the side of the spindle.

First Cycle

1. Adjust Stop Ear (B3) so there is a gap of .025 inch between Bracket (17) and Electromagnet (30).

Pick-up Arm Stop Bracket

1. Bend B4 on Pick-up Arm Swivel (41) so the stylus tip will go 1/4 inch below the turntable surface.

Pick-up Arm Height

1. Adjust B5 so the tip of the stylus is 1 3/8 inch below the turntable surface during a change cycle.

Motor Speed

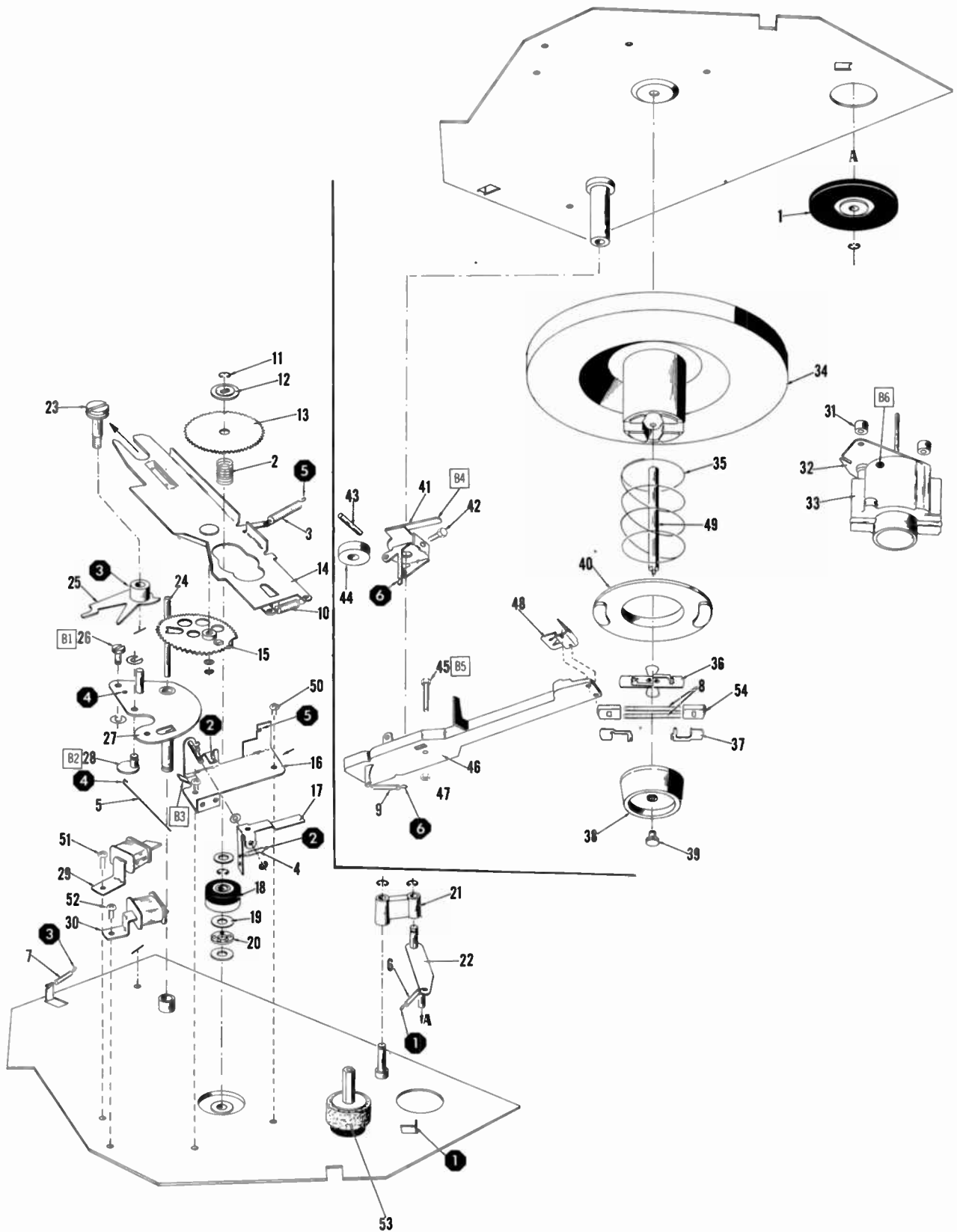
1. An increase of 1/10 turn of B6 represents approximately 1 rpm. Turn clockwise to increase and counterclockwise to decrease.

MECHANICAL PARTS LIST

Ref. No.	Part No.	Description
1	21228	Idler Wheel
2	1000-704-65	Ratchet Wheel Spring
3	1000-700-61	Slide Ass'y. Return Spring
4	1000-702-63	Bracket Spring
5	1000-710-7D	Reject Lever Spring
6	1000-701-62	Idler Tension Spring
7	1000-703-64	Return Lever Spring
8	1000-708-4G	Separator Shelf Return Springs
9	1000-706-3N	Pick-up Arm Counterbalance Spring
10	1000-709-6F	Stop Dog Spring
11	5133-18	"C" Washer
12	1000-516	Clutch Plate
13	1000-504	Ratchet Wheel
14	1000-510	Slide
15	1000-505	Cycling Cam
16	1000-501	Mounting Slide Bracket
17	1000-509	Start Lever Bracket
18	1000-328	Rubber Roller
19	501W	Flat Washer (2)
20	T501	Bearing Race
21	1000-105	Idler Lever Link
22	1000-112	Idler Lever
23	1000-323	Slide Retaining Stud
24	1000-322	Pick-up Arm Rod
25	1000-508	Return Lever
26	1000-307	Pick-up Landing Adjust Screw
27	1000-502	Trip Lever Assembly
28	1000-310	Tripping Adjust Stud

Ref. No.	Part No.	Description
29	1000-900	Reject Electromagnet
30	1000-900	First Record Hold Electromagnet
31	2175	Motor Mounting Grommet
32	1000-519	Motor Mounting Plate
33	B45590-6	Motor
34	1000-400	Turntable
35	1000-705-4A	Separator SFT/Cam Spring
36	1000-517-4E	Separator Knife
37	1000-518-4H	Separator Knife
38	1000-402	Spindle Nose Cap
39	1000-316	Unload Knob
40	1000-104	Record Holder Stabilizer Disc
41	1000-503	Pick-up Arm Swivel
42		6-32 x 1/4" Hex Head Screw
43	1000-327	Swivel Mounting Shaft
44	1000-329	Pick-up Arm Collar
45		#6 x 3/8 Hex Head Height Adjust Screw
46	1000-103	Pick-up Arm Shell
47		6-32 Hex Nut
48	8803-1	Pick-up Holder
49	1000-321	Separator Shaft
50		#8 x 1/4 Screw
51		#8 x 1/4 Screw
52		#8 x 1/4 Screw
53	1000-800A	Shock Mounts (3)
54		Shelf Separator

ALLSTATE MODEL 834-50480



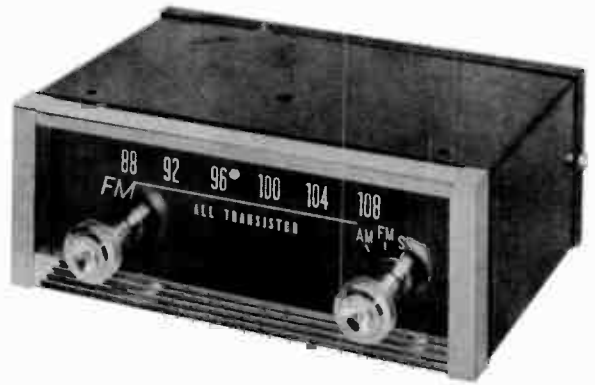
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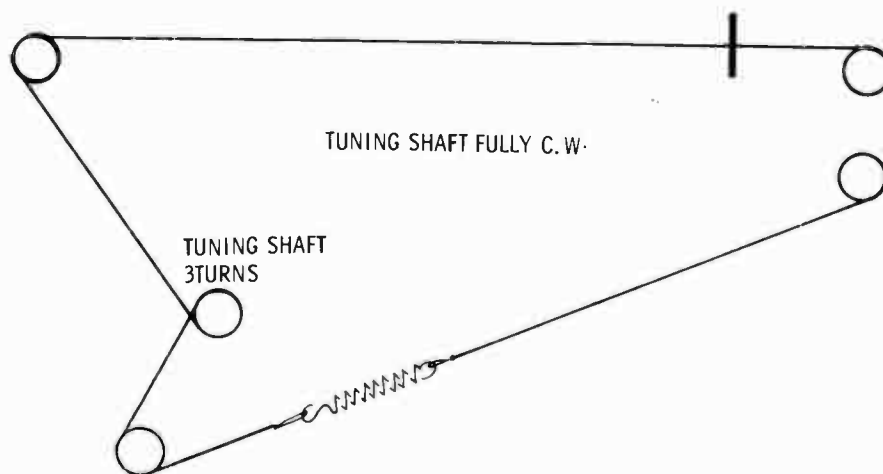
PHOTOFACT[®] with

CIRCUITRACE[®]

TRADE NAME : Automatic Model FM-5099
SUPPLIER : For Current Address, See Master Index.
TYPE SET : 9 Transistor FM Converter
POWER SUPPLY : 12 Volt Storage Battery
RATING : .240 Amp. @ 12.6 Volts DC
TUNING RANGE : FREQ. MOD: 88-108MC



DIAL CORD STRINGING

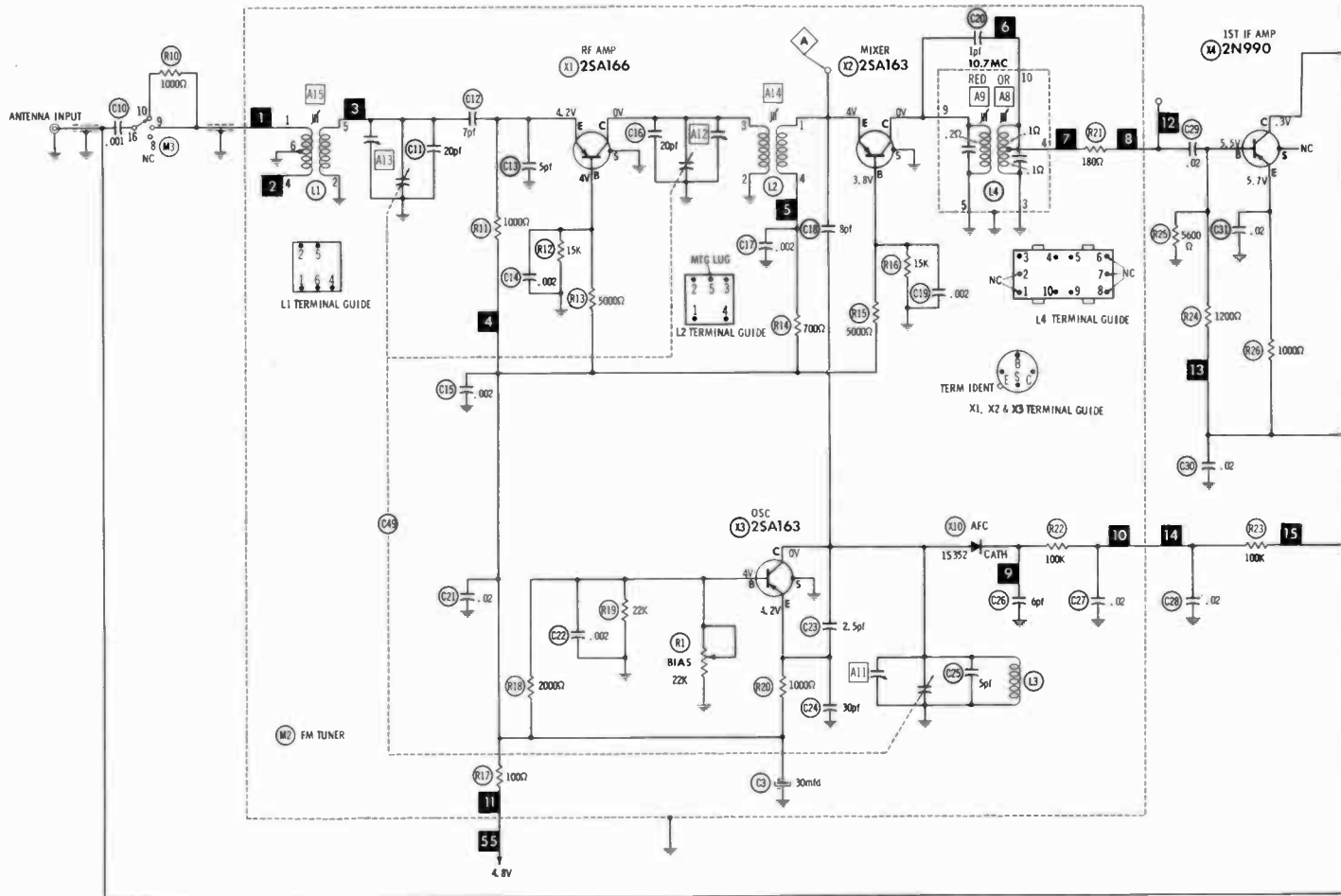


AUTOMATIC MODEL FM-5099

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

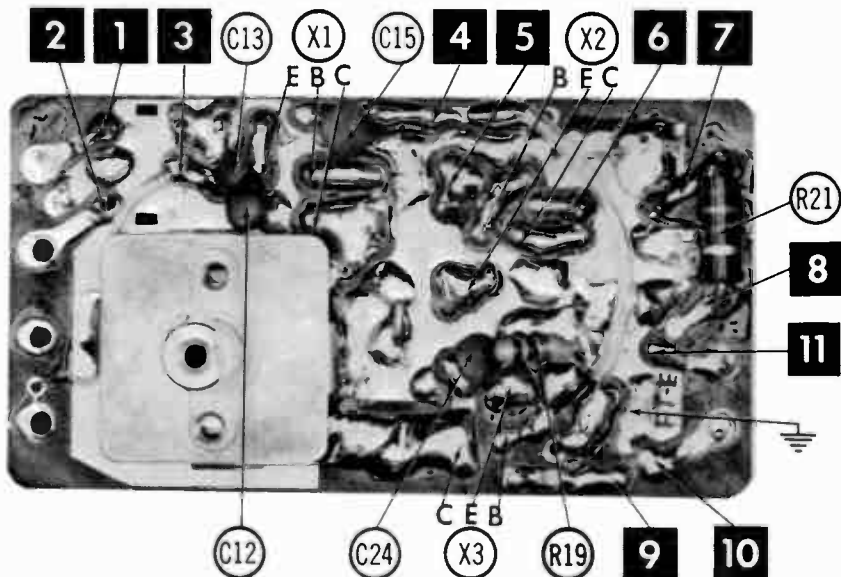
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World Radio History

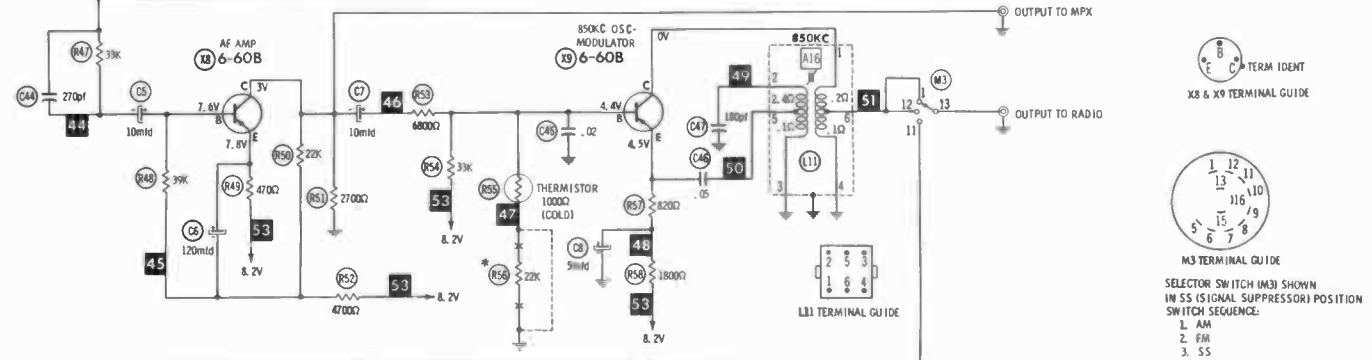
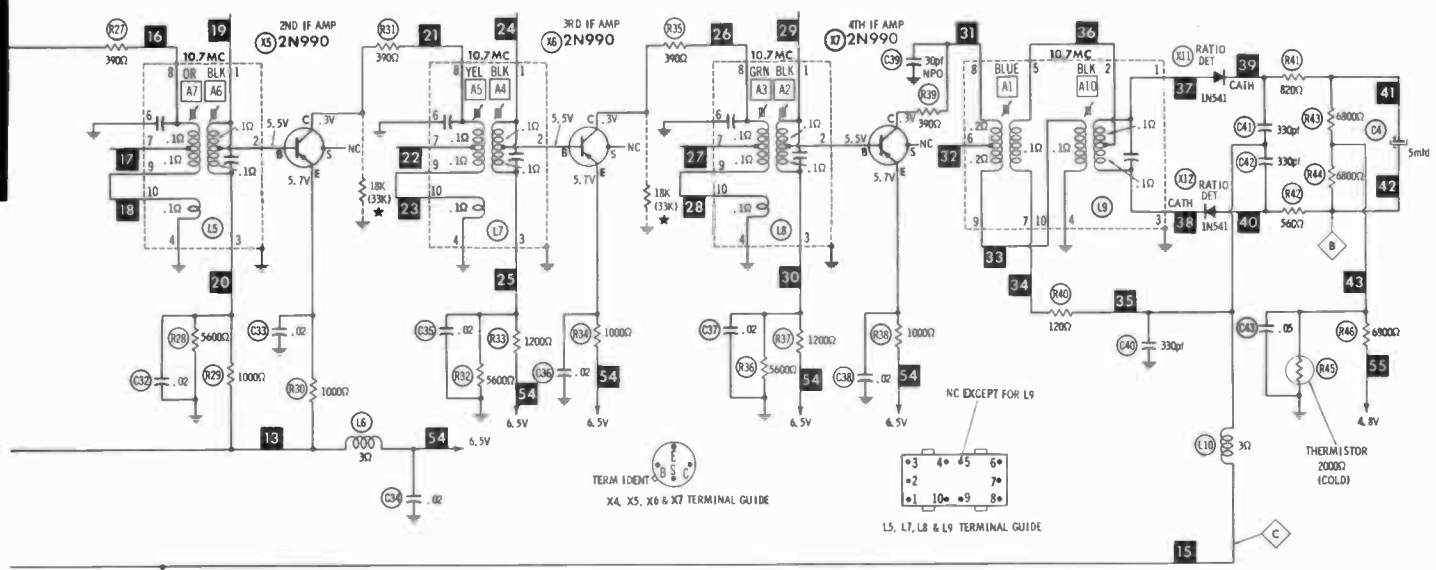


A PHOTOFAC STANDARD NOTATION SCHEMATIC
with **CIRCUITRACE**

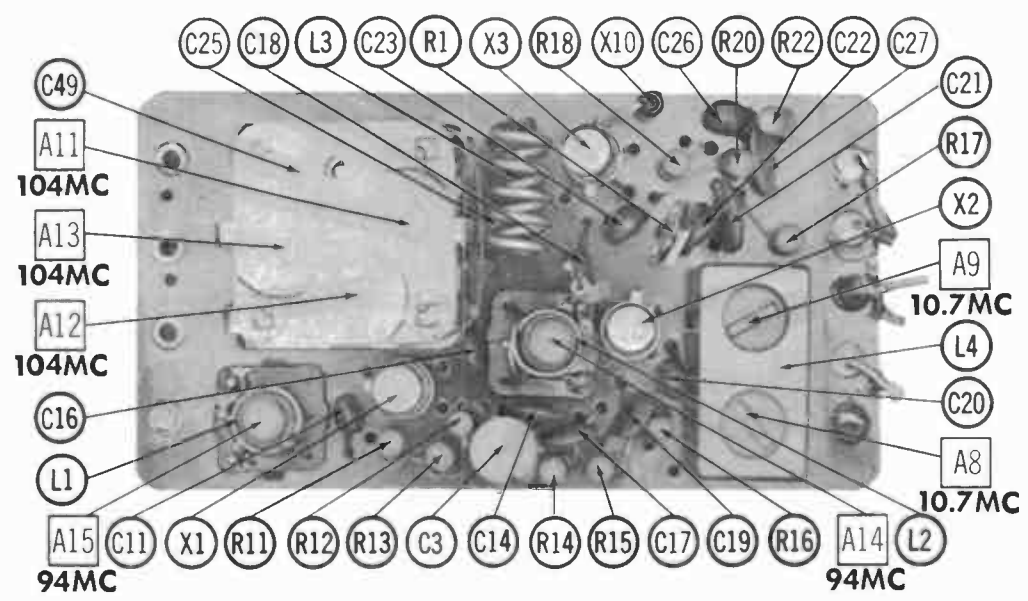
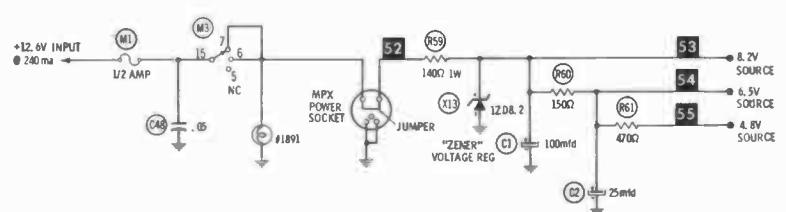
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A Howard W. Sams **CIRCUITRACE** Photo



AUTOMATIC MODEL FM-5099



ALIGNMENT INSTRUCTIONS

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

A1 thru A16

GENERAL CEMENT; 9087
WALSCO: 2528

FM ALIGNMENT USING AM SIGNAL GENERATOR - SELECTOR IN FM POSITION

High side thru .01mfd. to point A, low side to ground.

GENERATOR FREQUENCY	DIAL SETTING	INDICATOR	ADJUST	REMARKS
1. 10.7MC (Unmod.)	Point of non-interference.	DC probe of VTVM to point ⓑ; common to ground.	A1 thru A9.	Adjust for maximum.
2. "	"	DC probe to point ⓒ; common to	A10.	Adjust for zero reading. A positive or negative reading will be obtained on either side of the correct setting.

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

High side thru .01mfd. to point A, low side to ground. Use only enough marker signal to obtain indication. Use 60% frequency modulated signal with 450KC sweep. Use 120v sawtooth voltage in scope for horizontal deflection.

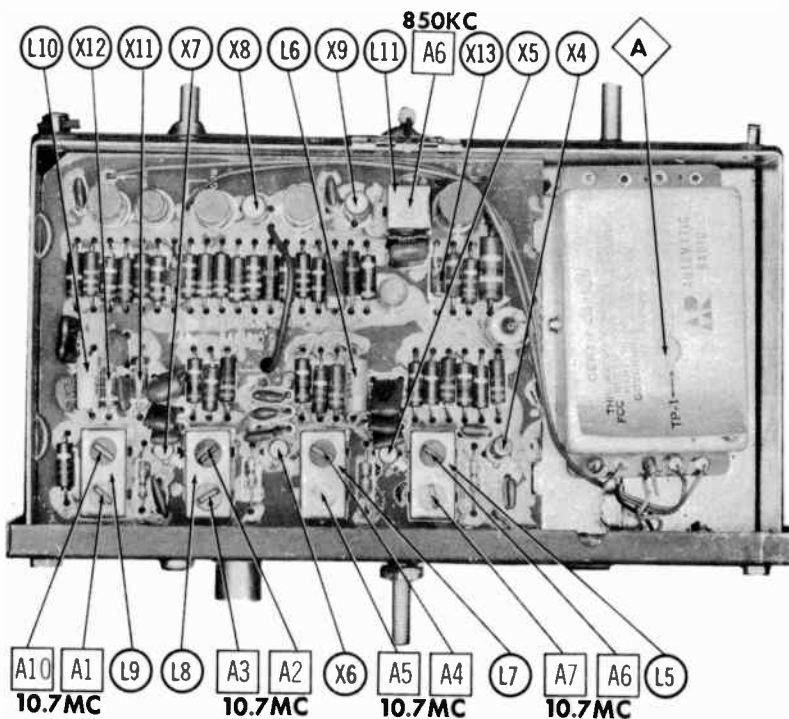
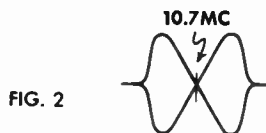
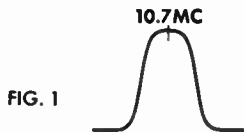
GENERATOR FREQUENCY	DIAL SETTING	INDICATOR	ADJUST	REMARKS
1. 10.7MC (450KC Swp.)	Point of non-interference	Vert. amp. of Scope to point ⓑ; low side to ground.	A1 thru A9.	Disconnect stabilizing capacitor C4. Adjust for maximum gain and symmetry of response similar to Fig. 1 with marker as shown. Reconnect C4.
2. "	"	Vert. amp. to point ⓒ; low side to	A10.	Adjust A10(Secondary) to place marker at center of crossover lines similar to Fig. 2. Adjust A1 (Primary) for maximum amplitude and straightness of crossover lines.

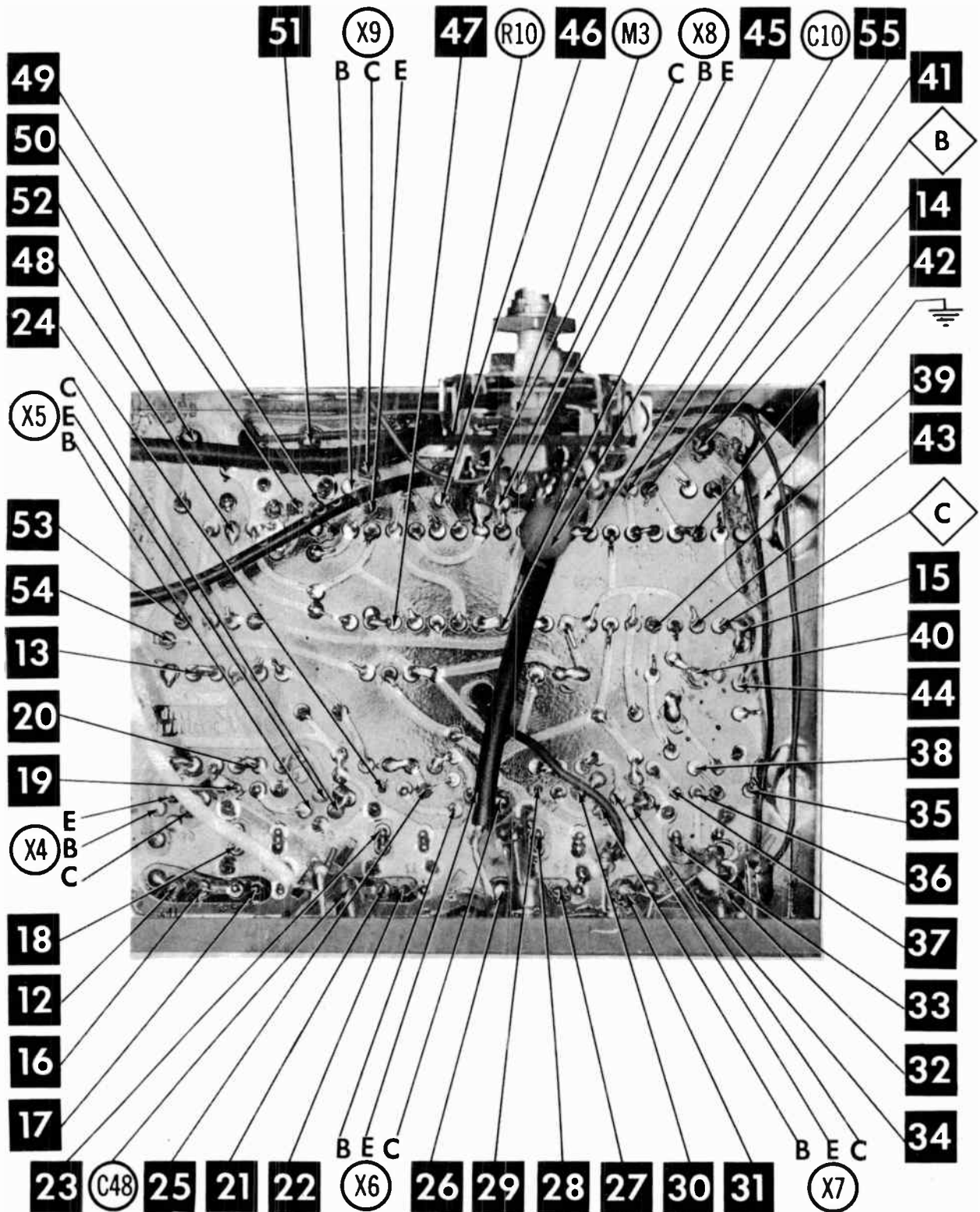
FM RF ALIGNMENT

Connect generator across antenna input with 120Ω carbon resistors in series with each lead.

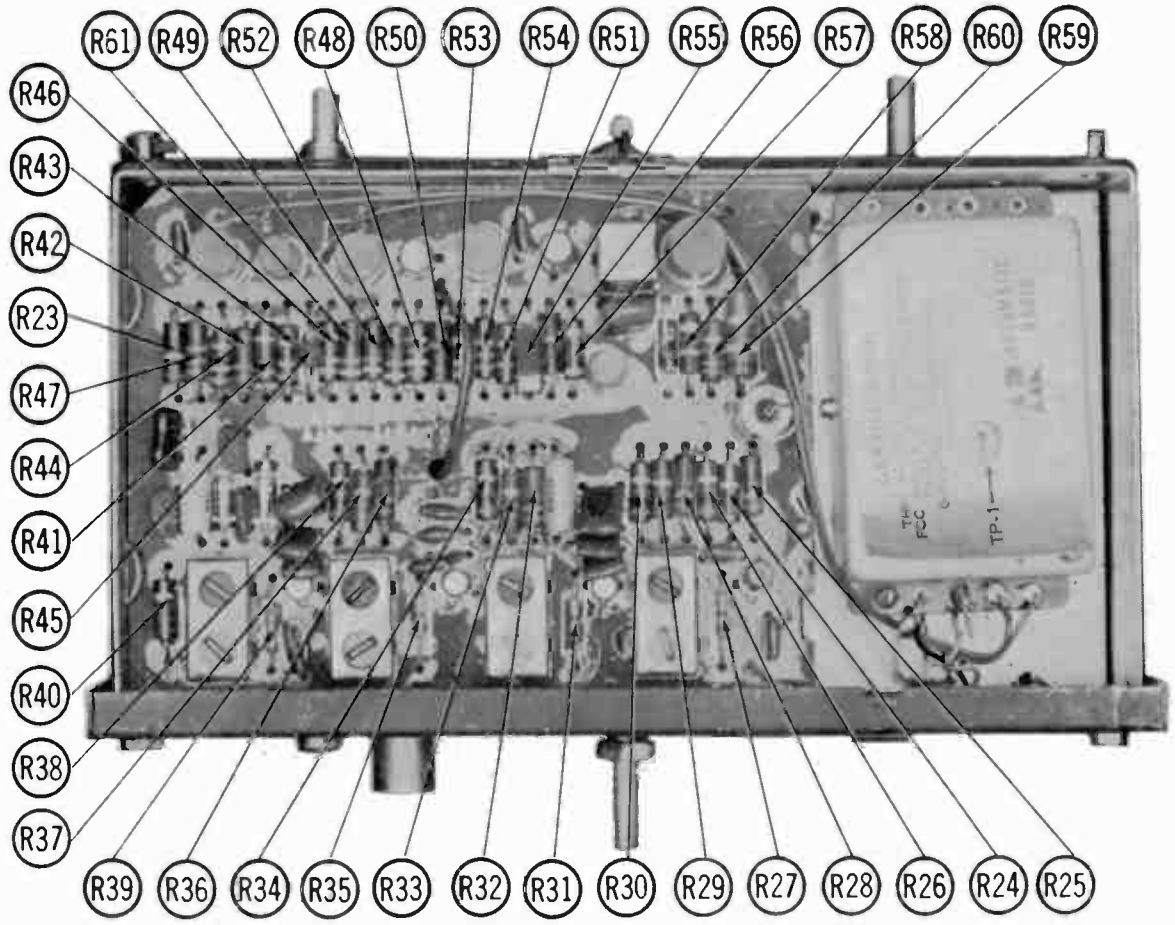
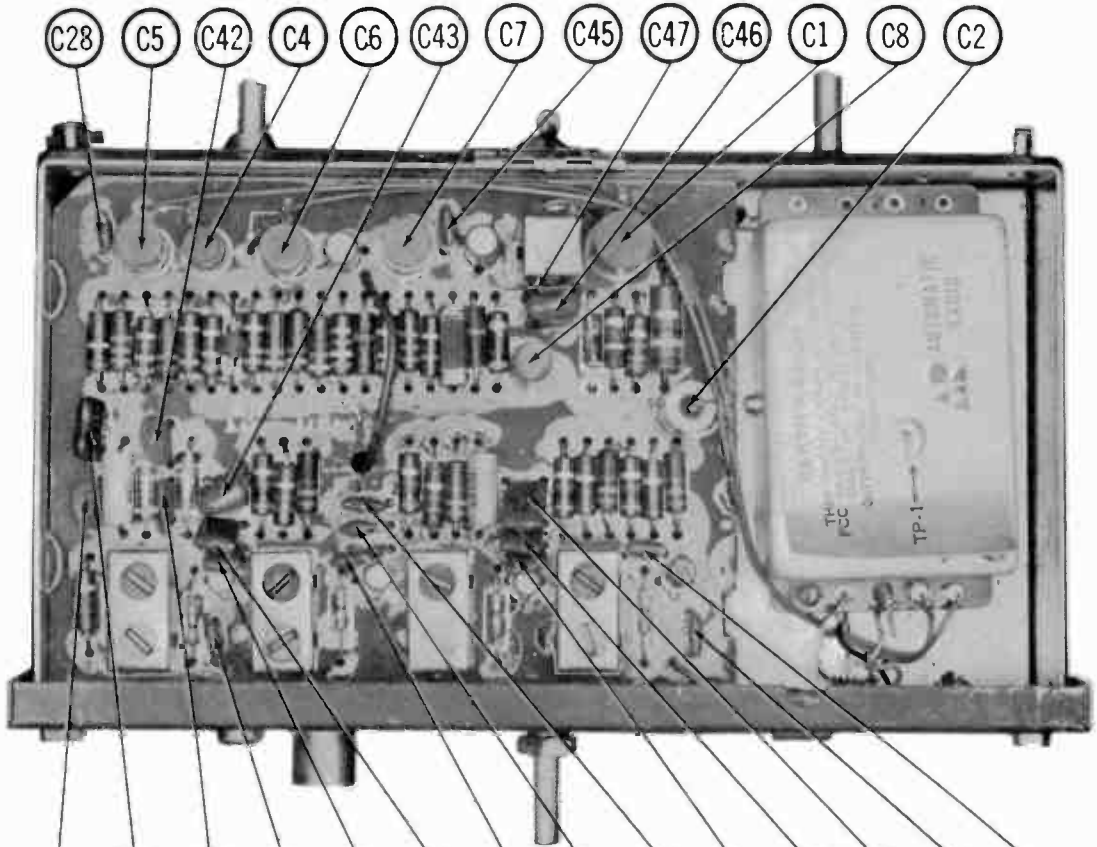
GENERATOR FREQUENCY	DIAL SETTING	INDICATOR	ADJUST	REMARKS
3. 104MC	Set at 104 MC	DC probe of VTVM to point ⓓ; common to ground.	A11, A12, A13.	Adjust for maximum.
4. 90MC	Tune to signal.	"	A14, A15.	Rock tuning and adjust for maximum. Repeat steps and until no further improvement can be made.

After unit is installed in car, tune in the AM receiver to a point of noninterference near 850KC. Tune in an FM signal and adjust A16, for maximum output.





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TRADE NAME :

Bendix Models:
 4TBC2 (1964 Chevy II)
 4TBCC (1964 Corvair)
 4TBCH (1964 Chevrolet)
 4TBCL (1964 Chevelle)
 4TBCT (1964 Chevrolet Truck)
 5TBCT (1965 Chevrolet Truck)

SUPPLIER :

For Current Address, See Master Index.

TYPE SET :

6 Transistor AM Receiver

POWER SUPPLY :

12 Volt Storage Battery

RATING :

.800 Amp. @ 12.6 Volts DC

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.

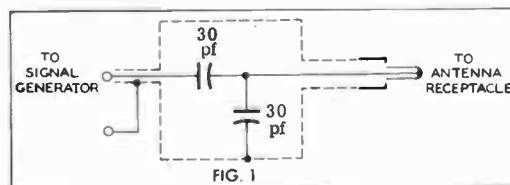
GENERAL CEMENT: 8290, 8868, 9087

WALSCO: 2525, 2528, 2587

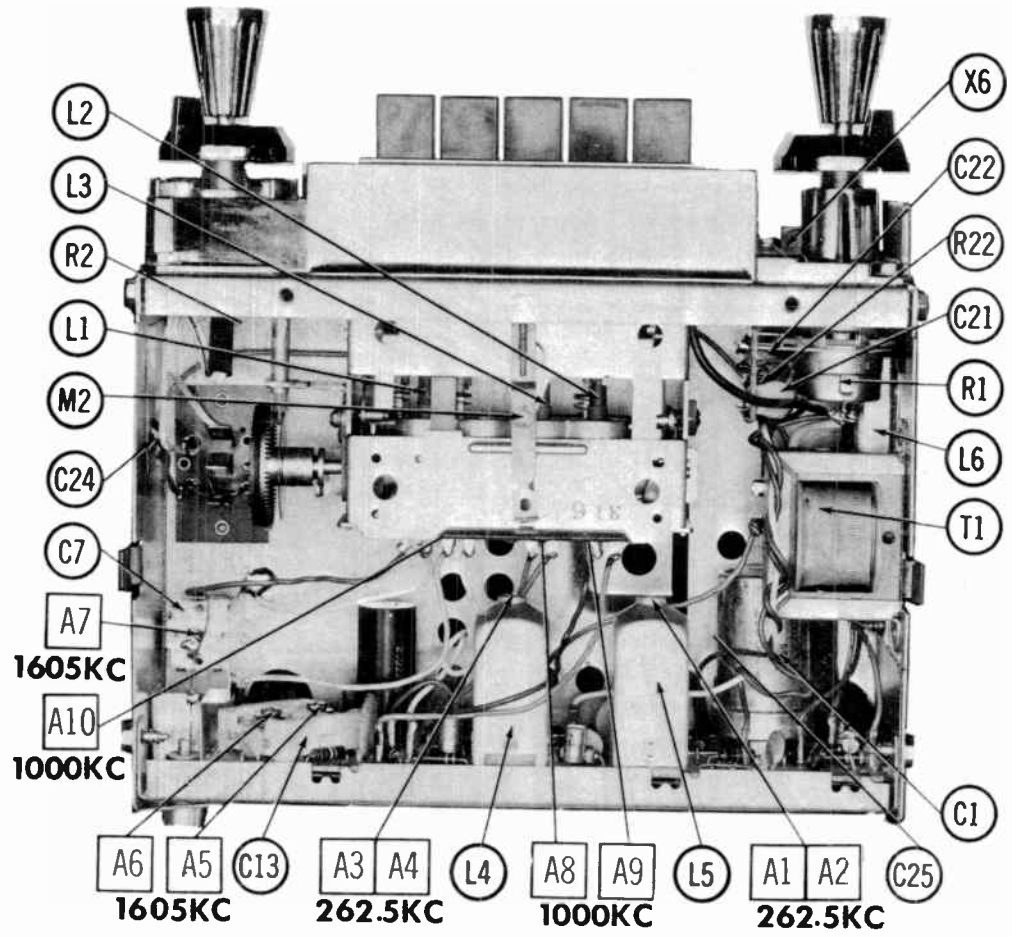
	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST SETTING	REMARKS
1.	High side thru .1mfd to point Δ , low side to ground.	262.5KC (400v Mod.)	High Freq. End Stop.	Output Meter across voice coil.	A1, A2, A3, A4	Adjust for maximum.
2.	Thru dummy (Fig. 1) to antenna 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 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.



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.

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	BENDIX PART No.
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.		
X1		RF Amp	D6-25	GE-9	SK-3008	PNP	2091241-0015
X2		Conv.	D6-25	GE-9	SK-3008	PNP	2091241-0013
X3		IF Amp.	D6-25	GE-9	SK-3008	PNP	2091241-0014
X4		1st. AF Amp	D6-26	GE-2	SK-3004	PNP	2090924-0008
X5		2nd. AF Amp	D6-46	GE-10		NPN	2092609-0002
X6	2N1227	Output	D6-520	GE-3	SK-3009	PNP *	2091859-0008

* When replacing, apply silicon grease to both sides of insulator. Tighten mounting screws securely.

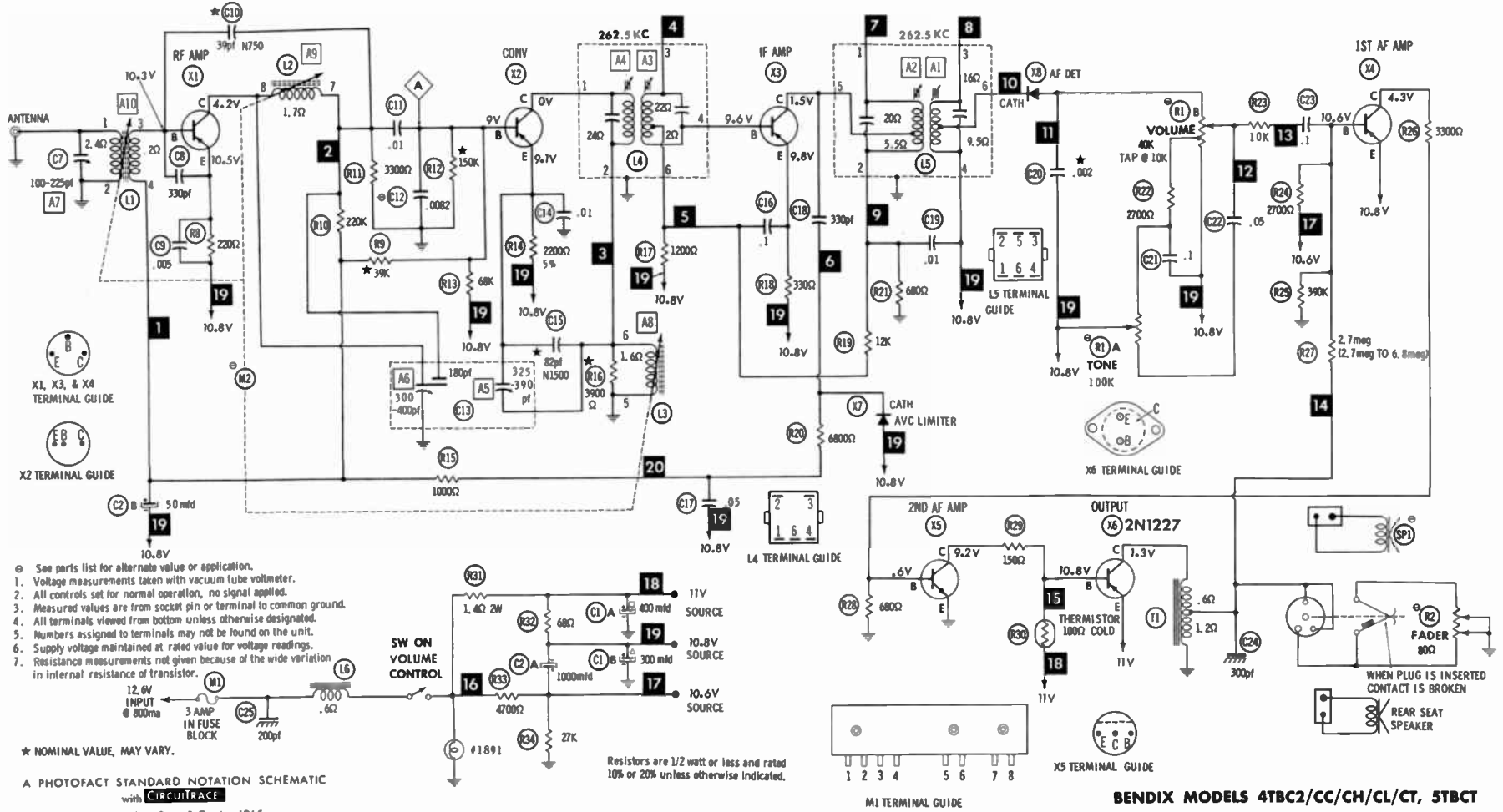
POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MEASURED CURRENT	ORIGINAL Part or Type No.	RECTIFIERS				DIODES
			GENERAL ELECTRIC PART No.	MALLORY PART No.	RCA PART No.	SARKES TARZIAN PART No.	GENERAL ELECTRIC PART No.
X7		2092055-0001					1N34AS
X8		2092055-0001					1N34AS

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA					
	CAP.	VOLT.	BENDIX PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A	400	16	2092983-0001	PWH2-02-08			PWH200.65	PCLS-2174.1*
B	300	16						
C2A	1000	1.5	2092246-0702	BCD1.5-SX100050			PET295	
B	50	3						

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



- ⊖ 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.

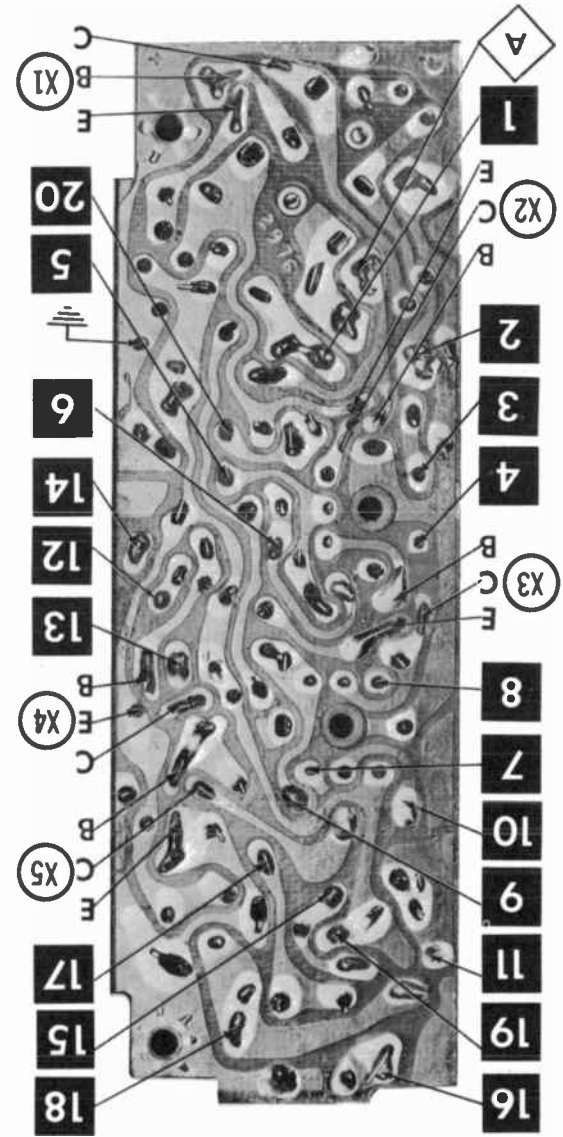
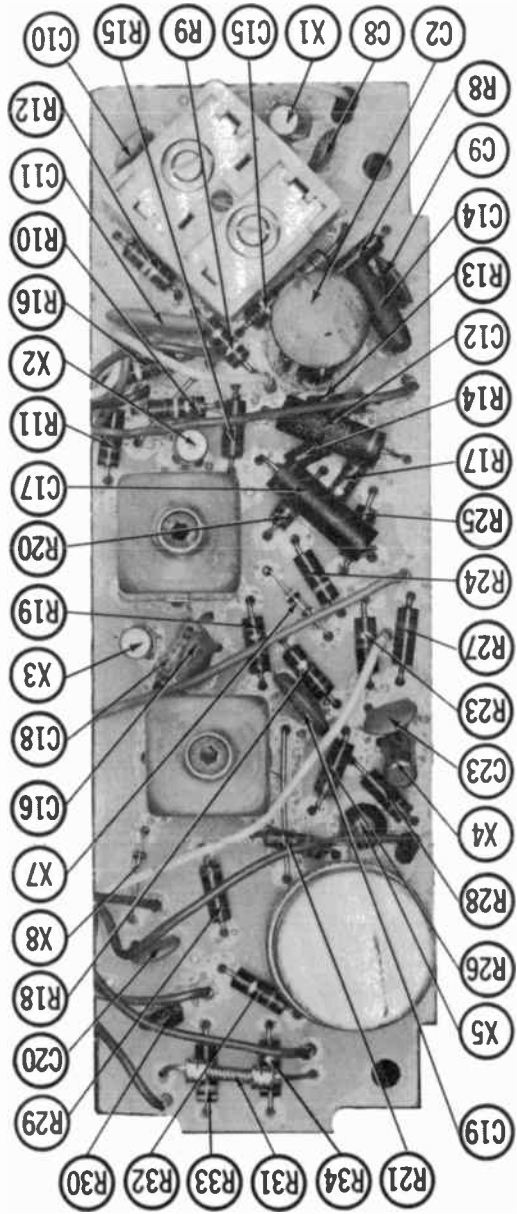
* NOMINAL VALUE, MAY VARY.

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Resistors are 1/2 watt or less and rated 10% or 20% unless otherwise indicated.

BENDIX MODELS 4TBC2/CC/CH/CL/CT, 5TBC



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.	
C7	100-225	#2091853-0002							
C8	330		DI-330	DD-331	LA10T33-C4	CCD-333	GP333	10T8-T33	
C9	.005		BPD-005	DD-502	BYA10D5	CCD-502	B250	5HK-D50	
C10	39	N750		TCN-39	C10Q39U	CCTN-390	CN7439	10TCU-Q39	
C11	.01		BPD-01	DD-103	BYA10E1	CCD-103	B110	5HK-810	
C12	.0082	100V	DBE6D82	CPR-8200J	DPMS6D82	6DP-2-822	PVC682	6P8-D82	
C13A	300-400	#219092-0028							
B	180								
C	325-390								
C14	.01	100V	DBE481	CPR-10000J	WMF181	1DP-1-103	PVC211	4P8-810	
C15	82	N1500							
C16	.1		TTD-1	CK-104	H6		TA010	TG-P10	
C17	.05	100V	DBE685		DPMS285	1DP-2-503	PVC215	2P8-850	
C18	330		DI-330	DD-331	LA10T33-C4	CCD-333	GP333	10T8-T33	
C19	.01		BPD-01	DD-103	BYA10E1	CCD-103	B110	5HK-810	
C20	.002	(.005) †	BPD-002	DD-202	BYA10D2	CCD-202	B220	5HK-D20	
C21	.1		TTD-1	CK-104	H6		TA010	TG-P10	
C22	.05	100V	DBE685		DPMS285	1DP-2-503	PVC215	2P8-850	
C23	.1		TTD-1	CK-104	H6		TA010	TG-P10	
C24	300	#220267-0012							
C25	200	#220267-0021							

* Not normally in distributor's stock. Available thru distributor on order to manufacturer.
Bendix Part Number. † Nominal 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	2092528-0003①	F1-100K④, R14-50K, FFS109, RFS203, KR-4				FA15L④, RU44T14, OS1562, IS2187, US41
B	Volume/Switch	40K Tap @ 10K						
	Tone	100K	2092528-0002②	F1-100K④, R14-50K, FFS203, RFS212, KR-4				FA15L④, RU44T14, OS2187, IS2750, US41
	Volume/Switch	40K Tap @ 10K						
	Tone	100K	2092528-0005③					
	Volume/Switch	40K Tap @ 10K						
R2	Fader	80Ω 2W	219679-0008①②					† QJ-1950A
	Fader	80Ω 2W	219679-0010					

① Used in models: 4TBC2, 4TBCC.
② Used in models: 4TBCH, 4TBCT, 5BCT.
③ Used in models: 4TBCL.
④ Use Original Spring Mounting Clips.
† "CONCENTRIKIT" Equivalent: K11 Kit with Base Elements and Shafts: W11-084, P3-028(Panel) None, None (Rear) QCB6 (Bushing)
"SNAPTROL" Equivalent: BU8, WF19, None, BF3, None.

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
R30	100Ω (Cold)			#20629-0012	R31	1.4Ω 2W	BWH1.5	WS 1.5	#090948-0025

Bendix Part Number.

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					
		BENDIX PART No.	MEISSNER PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.
L1	Antenna	①					
L2	RF	①					
L3	Osc.	①					
L4	Input IF	2093163-0002	16-6712	BC-636	6522	RTC-9397	
L5	Output IF	2093164-0002	16-6713		6523	RTC-9398	

① Part of M2, or (Coil Assembly RCC Part #2096131-66)(GIC Part #209131-58).

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.

FILTER 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.	
L6	800ma	.8Ω	1.5MH	2092050-0015	C-4095①	TC-1①	TR-153①	TY16XT①	①Fabricate mounting

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC.	BENDIX PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	12Ω	Tap @ 8Ω	2092138-0002				TR-184	

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES	
		BENDIX PART No.	QUAM PART No.		
SP1	4" x 10" PM	8Ω	2092887-0002	410A2Z8	Model: 4TBC2
	6" x 9" PM	8Ω	2091773-0001		Model: 4TBCC
	6" x 9" PM	8Ω	2093354-0001	69A1Z8	Models: 4TBCH, 4TBCT, 5BCT
	4" x 10" PM	8Ω	2093359-0701	410A2Z8	Model: 4TBCL

FUSE DEVICES

ITEM No.	TYPE	RATING	REPLACEMENT DATA						
			PART No.		LITTELFUSE PART No.		BUSS PART No.		
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER	
M1	SAG	3A	2091811-0018	In Fuse Block	312003			AGC 3	

MISCELLANEOUS

ITEM No.	PART NAME	BENDIX PART No.	NOTES
M2	Tuner (RCC)	2092871-0003	Models: 4TBC2, 4TBCC. Models: 4TBCH, 4TBCL, 4TBCT, 5TBCT, 5BCT.
	Tuner (RCC)	2092871-0009	
	Tuner Coil Assembly (RCC)	2090131-66	
	Tuner (GIC)	2092871-0010	Models: 4TBCH, 4TBCL, 4TBCT, 5BCT. Models: 4TBC2, 4TBCC.
	Tuner (GIC)	2092871-0004	
	Tuner Coil Assembly (GIC)	2090131-58	

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	MODEL	PART No.	ITEM	MODEL	PART No.
Escutcheon	4TBC2, 4TBCC	2092184-0004	Pushbutton	4TBC2, 4TBCC	2092860-0001
Escutcheon	4TBCH, 4TBCT	2092184-0005	Pushbutton	4TBCH, 4TBCL	2092859-0002
	5BCT			4TBCT, 5BCT	
Escutcheon	4TBCL	2092184-0006	Knob, Tuning or Volume	4TBC2, 4TBCC	2091756-0001
Dial Glass	4TBC2, 4TBCC	2092861-0002	Knob, Tuning or Volume	4TBCH, 4TBCL,	2092846-0501
Dial Glass	4TBCH, 4TBCL	2092863-0002		4TBCT, 5BCT	
	4TBCT, 5BCT		Knob, Tone or Fader		2092857-0001

BENDIX MODELS 4TBC2/CC/CH/CL/CT, 5TBCT



PHOTOFACT[®] with

CIRCUITRACE[®]



TRADE NAME : Blaupunkt Model 94770 (Derby)
Serial #V710001

SUPPLIER : For Current Address, See Master Index.

TYPE SET : 11 Transistor SW I-SW II-BC-FM Auto/
Portable Receiver

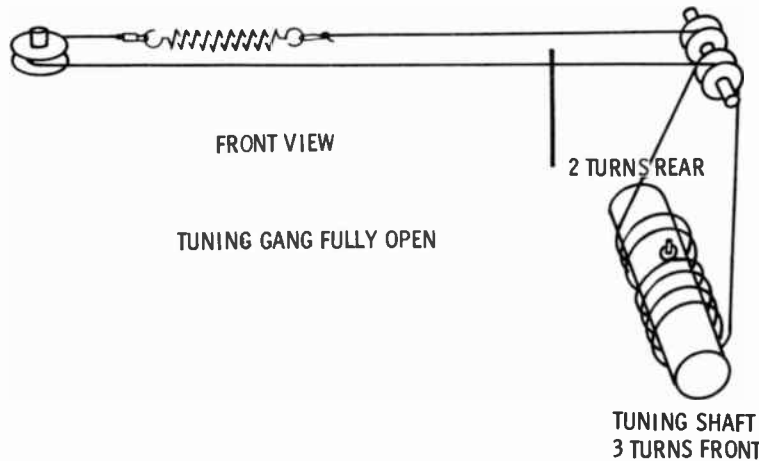
POWER SUPPLY : 12, 9 or 6 Volt Storage Battery and 6 "D"
Cells for Auto Operation. 6 "D" Cells for
Portable Operation -

RATING : 200ma @ 6.3 Volts DC
200ma @ 9 Volts DC
880ma @ 12.6 Volts DC
30ma @ 9 Volts DC (Portable Operation)

TUNING RANGE : BROADCAST 500-1615KC
SHORTWAVE I 5-7.5MC
SHORTWAVE II 2-5MC
FREQ. MOD: 87.5-108MC

BLAUPUNKT MODEL DERBY 94770

DIAL CORD STRINGING



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

ALIGNMENT INSTRUCTIONS

Check for specified source voltage. Set Volume control at maximum.
 Fashion loop of several turns of wire and connect generator across loop.
 Adjust output of generator to radiate only enough signal into receiver to obtain a suitable indication.

GENERATOR FREQUENCY	DIAL SETTING	INDICATOR	ADJUST	REMARKS
AM BUTTON DEPRESSED				
1. 460KC (400v Mod.)	High Freq. end stop.	Output Meter across Voice coll.	A1, A2, A3, A4.	Adjust for Maximum.
2. 1615KC	"	"	A5, A7, A8.	"
3. 600KC	600KC	"	A6, A9.	"
SHORTWAVE II BUTTON DEPRESSED				
4. 5MC	High Freq. end stop.	Output Meter across Voice coll.	A10, A12.	Adjust for Maximum.
5. 2MC	2MC	"	A11, A13.	"
SHORTWAVE I BUTTON DEPRESSED				
6. 7.5MC	High Freq.	Output Meter across Voice coll.	A14, A15.	Adjust for Maximum.

FM ALIGNMENT USING AM SIGNAL GENERATOR – SELECTOR IN FM POSITION

High side thru .001mfd to point **A**, low side to ground.

GENERATOR FREQUENCY	DIAL SETTING	INDICATOR	ADJUST	REMARKS
7. 10.7MC (Unmod.)	Point of non-interference.	Connect VTVM between point B and point C .	A16 thru A21	Adjust for maximum.
8. "	"	Connect VTVM between points D and E.	A22.	Adjust for zero reading. A positive or negative reading will be obtained on either side of the correct setting.
9. "	"	"	R5.	Adjust for MINIMUM.

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

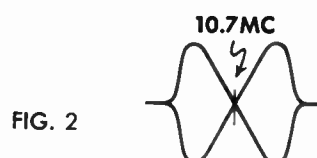
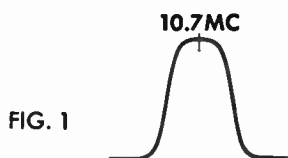
High side thru .001 to point **A**, low side to ground. Use only enough marker signal to obtain indication. Use 60v frequency modulated signal with 450KC sweep. Use 120v sawtooth voltage in scope for horizontal deflection.

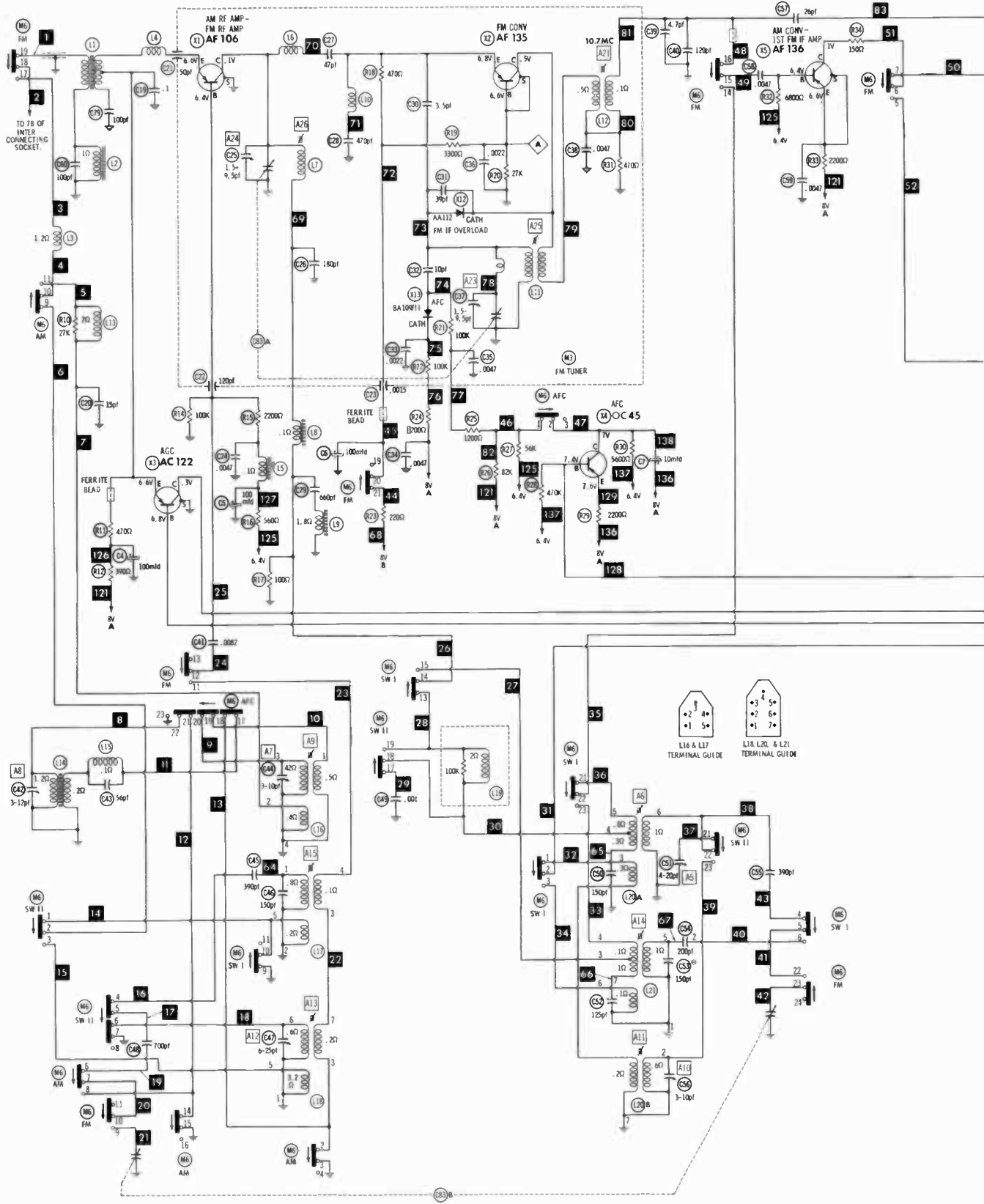
GENERATOR FREQUENCY	DIAL SETTING	INDICATOR	ADJUST	REMARKS
10. 10.7MC (450KC Swp.)	Point of non-interference	Vert. amp. of Scope to point B , low side to point C .	A16 thru A21.	Adjust for maximum gain and symmetry of response similar to Fig. 1 with marker as shown.
11. "	"	Vert. amp. to point D ; low side to point E.	A22.	Adjust A22 (Secondary) to place marker at center of crossover lines similar to Fig. 2. Adjust A16 (Primary) for maximum amplitude and straightness of crossover lines.

FM RF ALIGNMENT

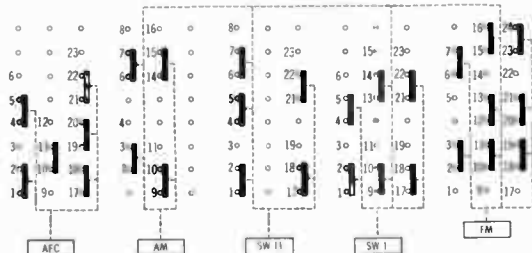
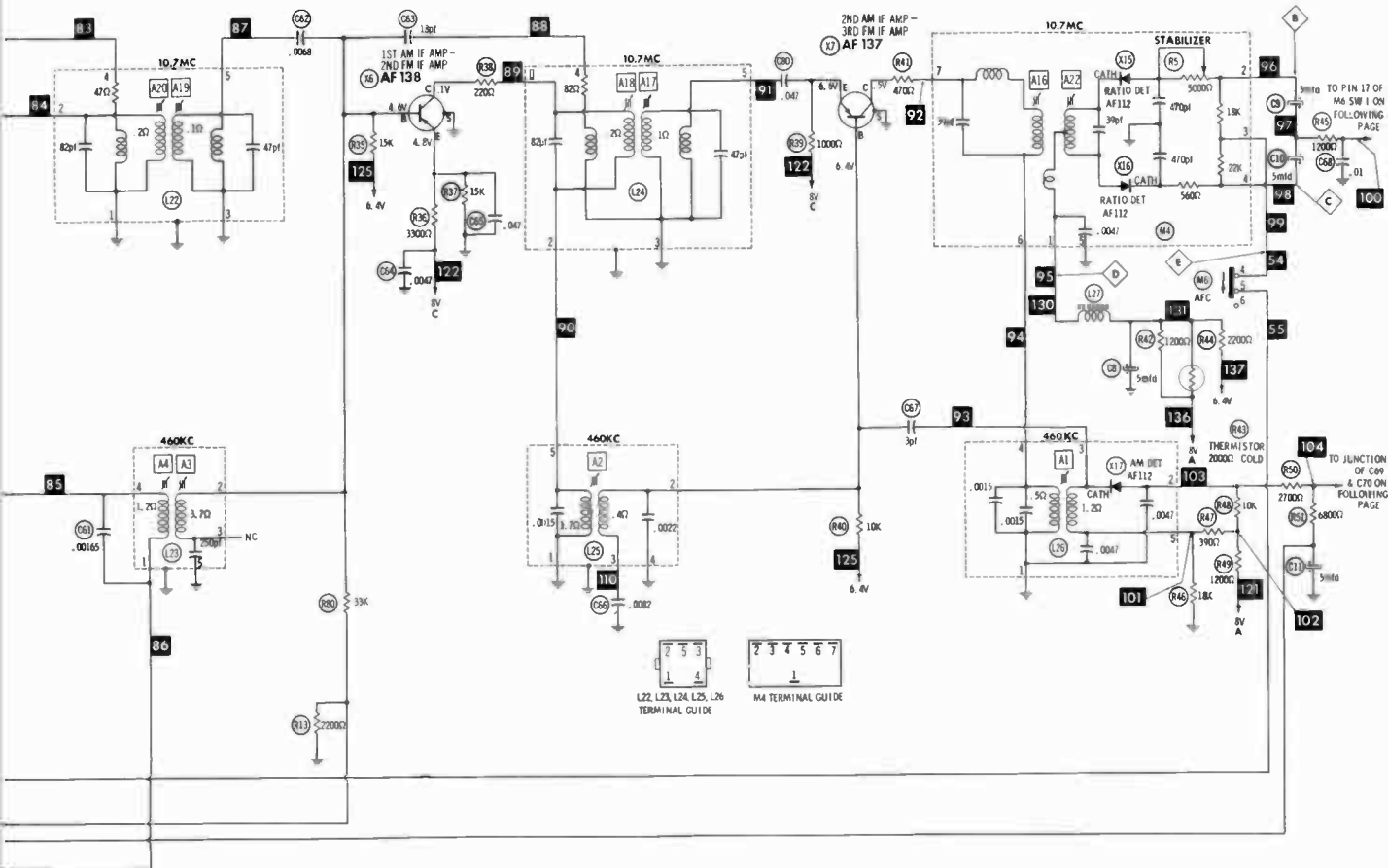
Connect generator across antenna receptacles with 120Ω carbon resistors in series with each lead.

GENERATOR FREQUENCY	DIAL SETTING	INDICATOR	ADJUST	REMARKS
12. 108MC	Set at high end.	Connect VTVM between point B and point C .	A23, A24.	Adjust for maximum.
13. 90MC	Tune to signal.	"	A25, A26.	Rock tuning and adjust for maximum. Repeat steps 12 and 13 until no further improvement can be made.





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with **CIRCUITACE**
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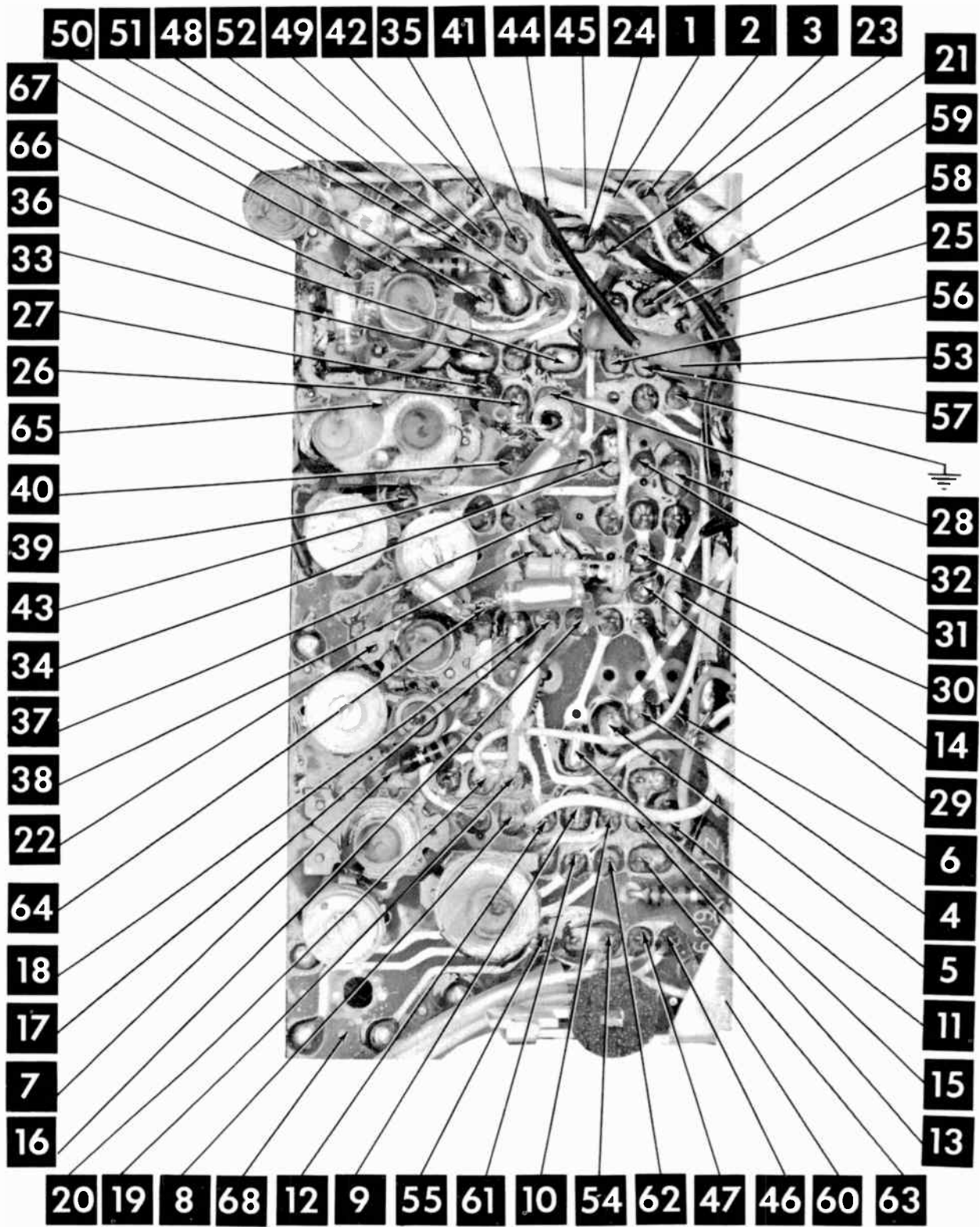
M6 TERMINAL GUIDE
SHOWN WITH FM PUSH BUTTON DEPRESSED
PHONO OR TAPE POSITION
(DEPRESS FM AND SW I PUSH BUTTONS SIMULTANEOUSLY)

VOLTAGES TAKEN USING INTERNAL 9V SUPPLY (M1).

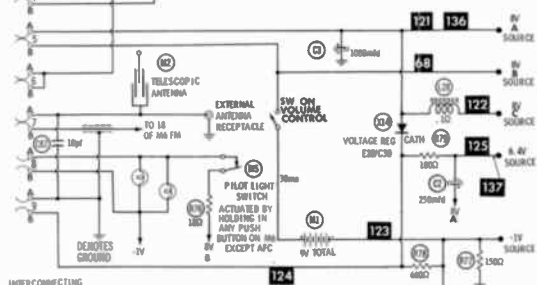
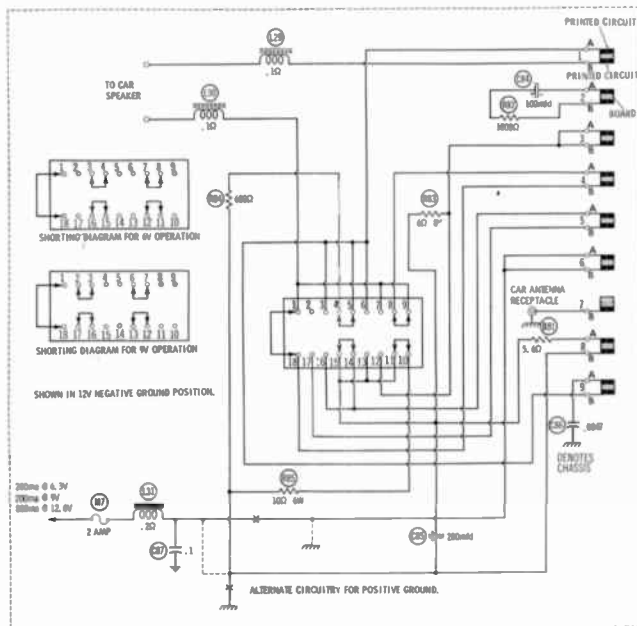
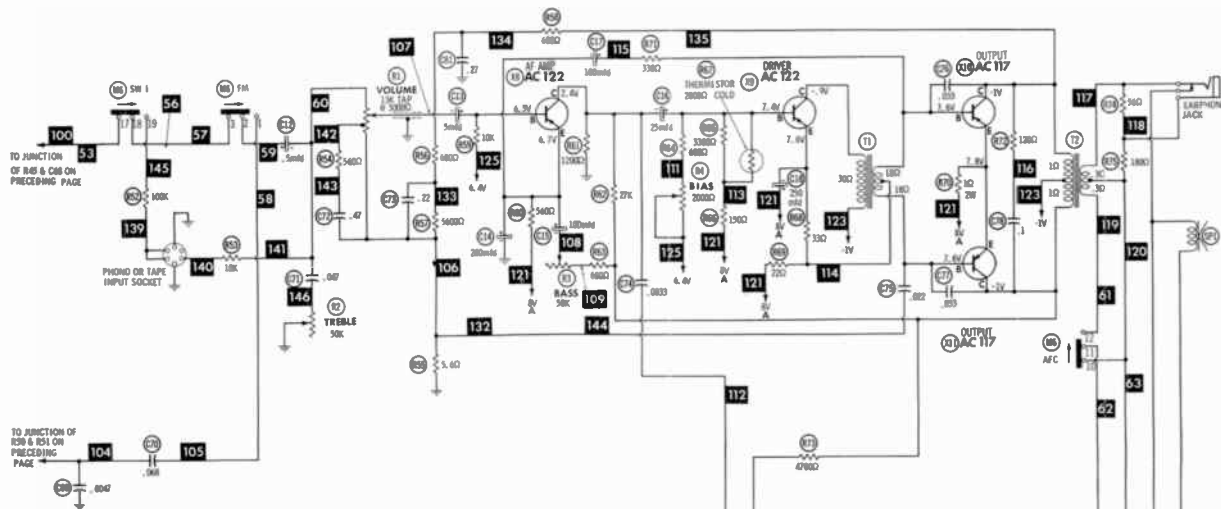
RESISTORS ARE 1/2 WATT OR LESS AND RATED 5% UNLESS OTHERWISE INDICATED.

- 0 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.

M1 ("D" BATTERIES) AND AUTO BATTERY ARE USED FOR AUTO OPERATION.
M1 ("D" BATTERIES) ONLY ARE USED FOR PORTABLE OPERATION.



A Howard W. Sams **CIRCUITRACE** Photo



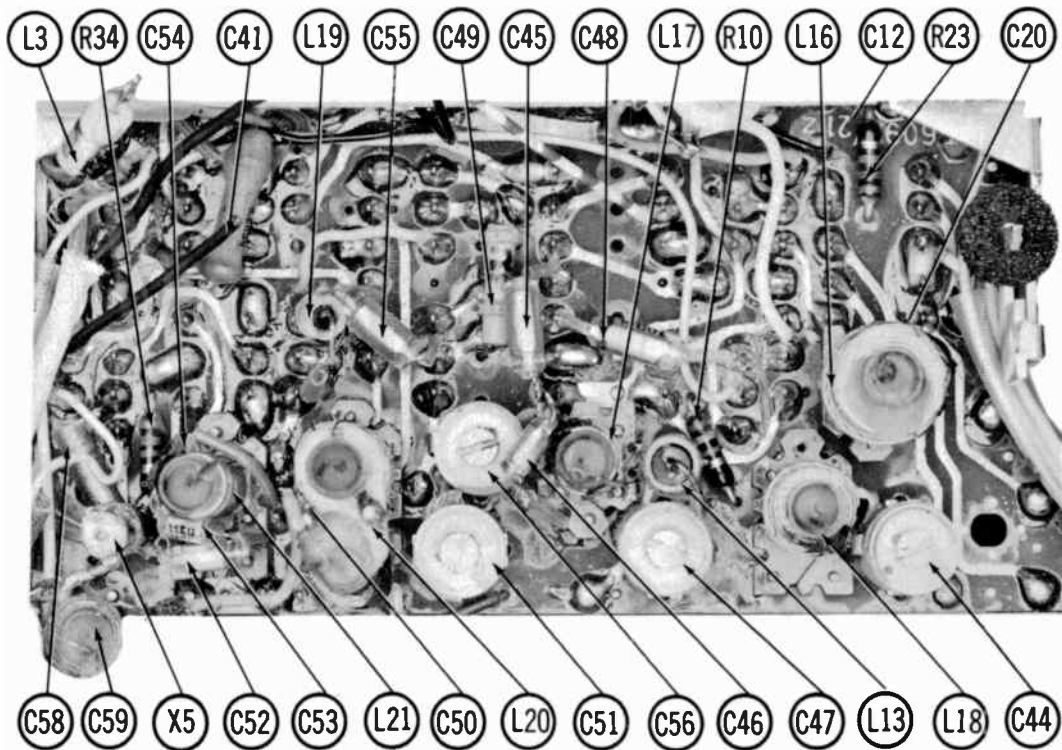
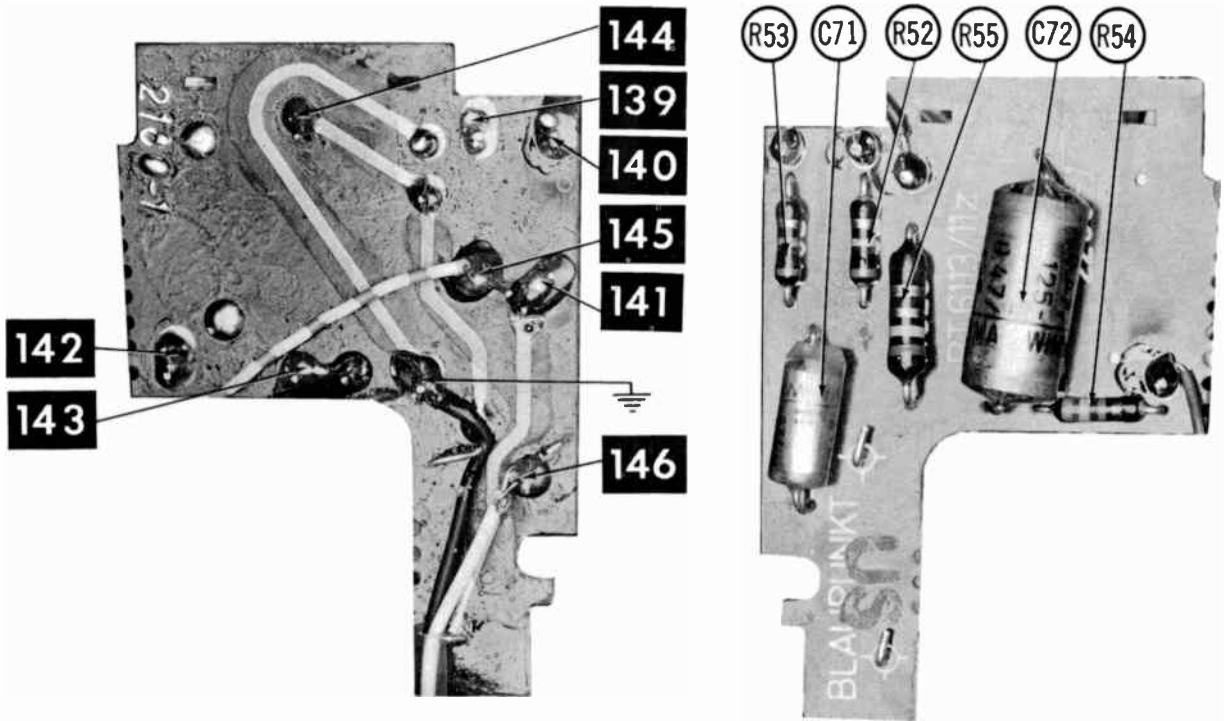
VOLTAGES TAKEN USING INTERNAL 12V SUPPLY (117).

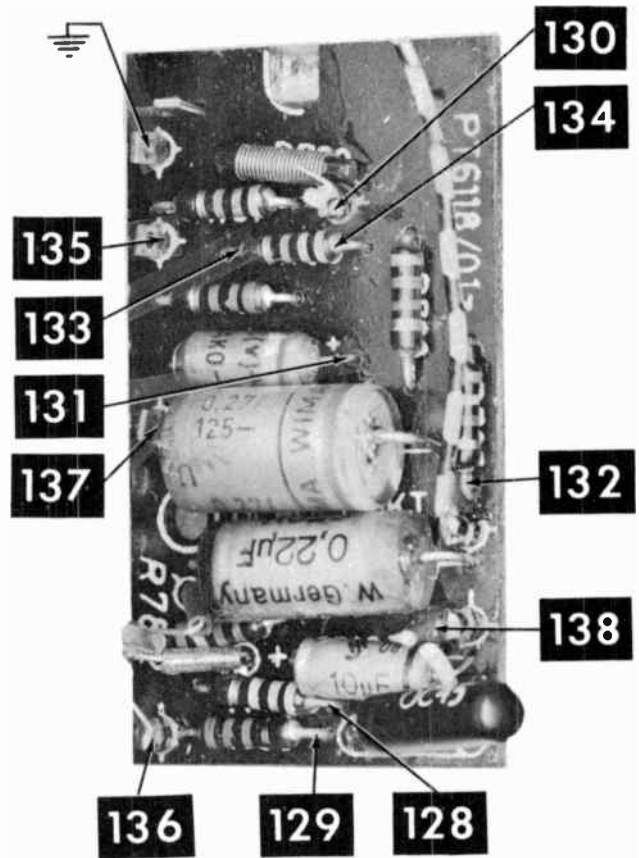
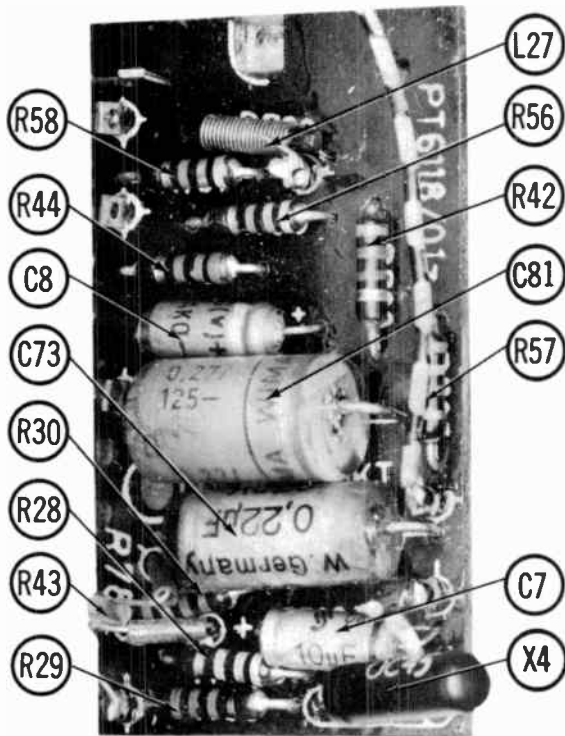
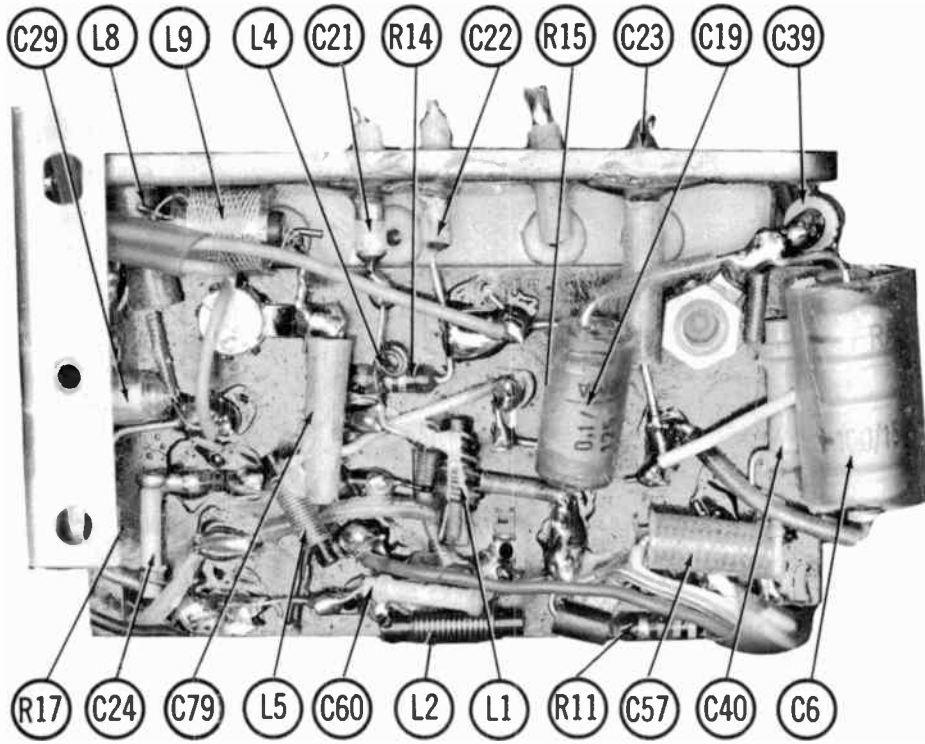
RESISTORS ARE 1/2 WATT OR LESS AND RATED 5% UNLESS OTHERWISE INDICATED.

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

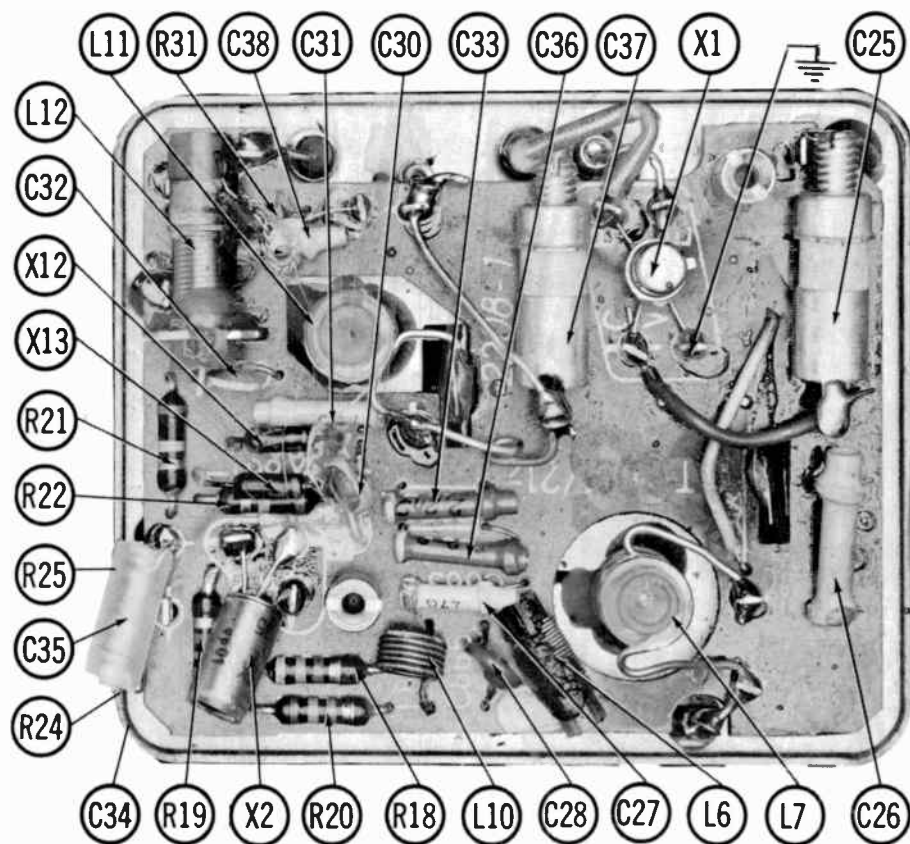
ALL 12V BATTERIES AND AUTO BATTERY ARE USED FOR AUTO OPERATION. ALL 6V BATTERIES ONLY ARE USED FOR PORTABLE OPERATION.

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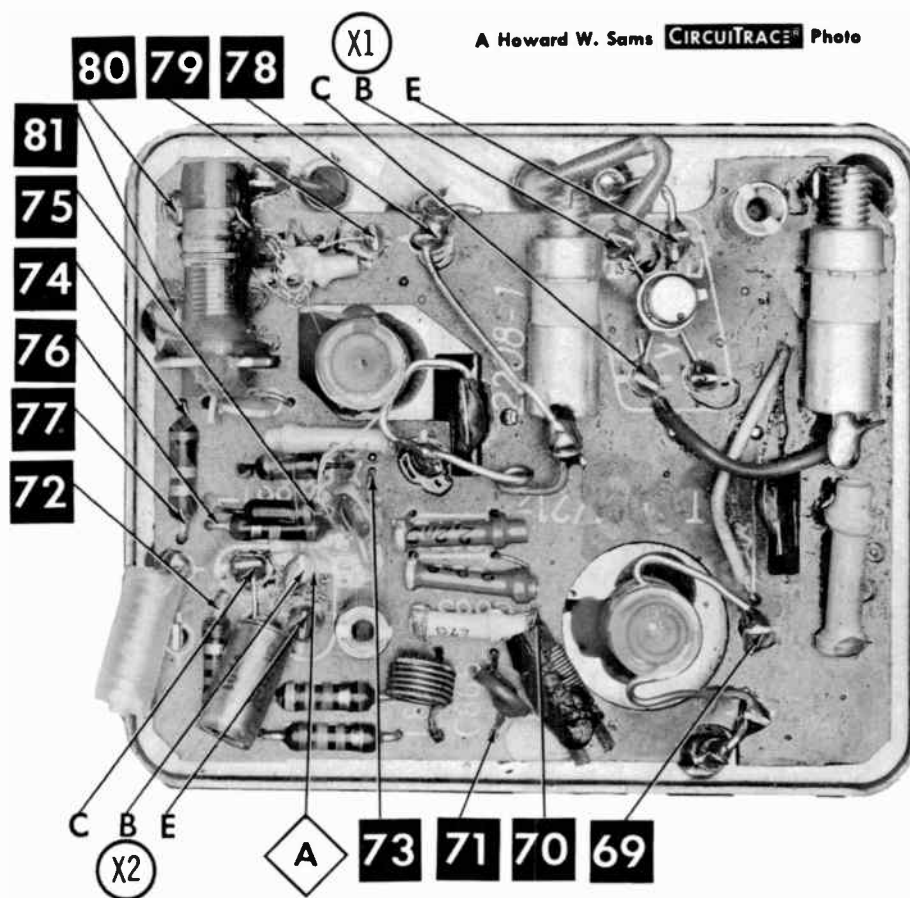


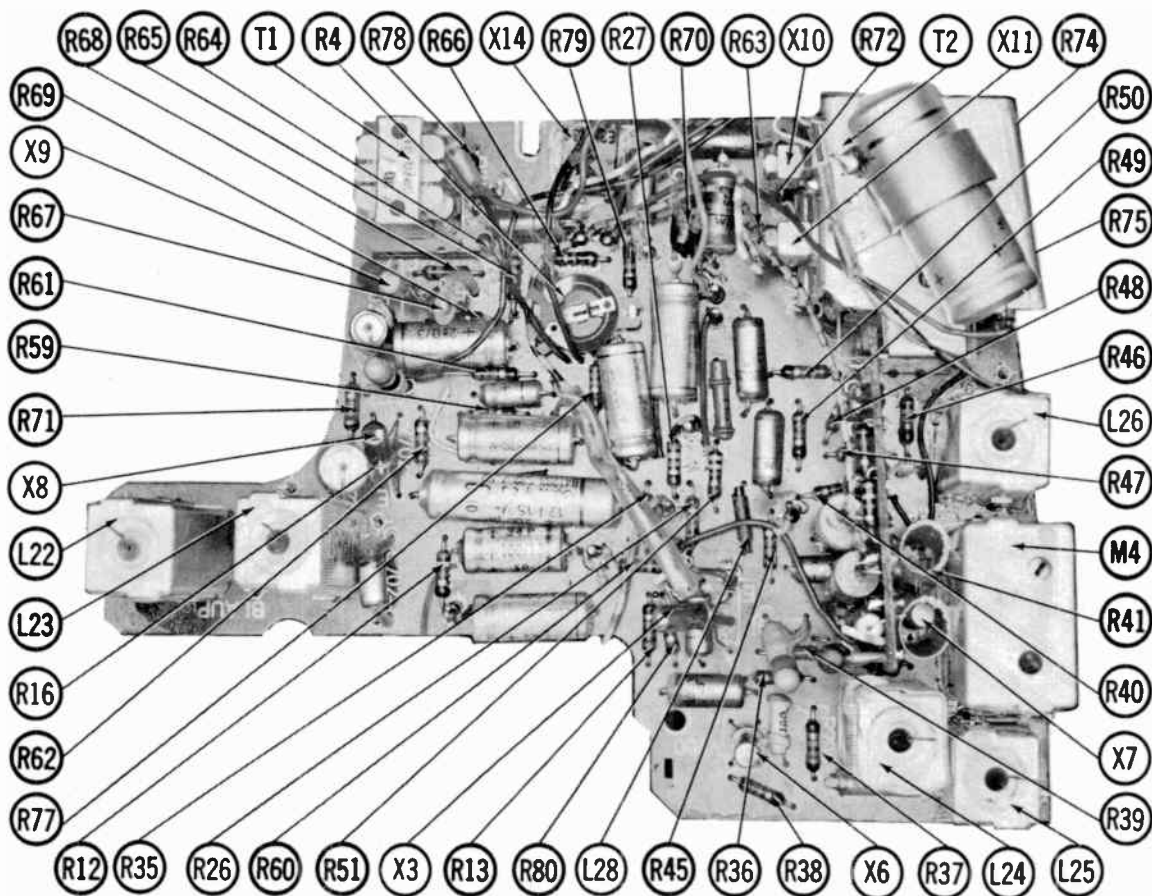
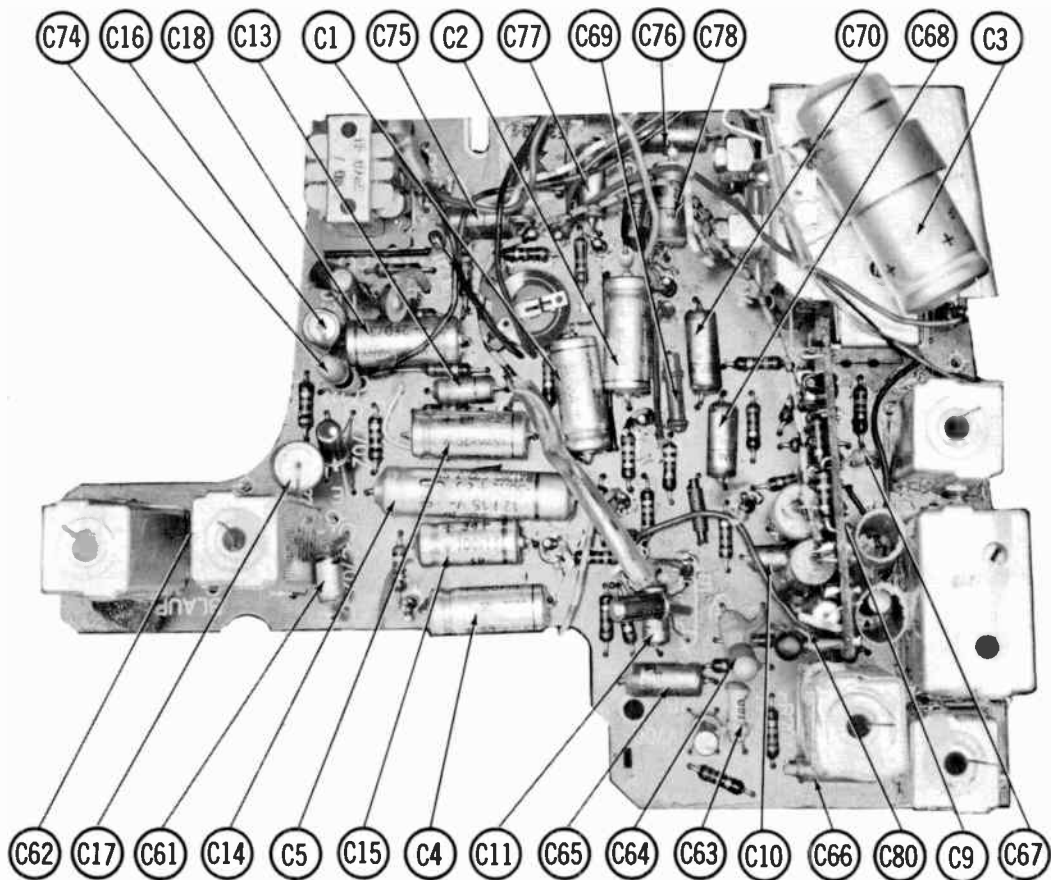


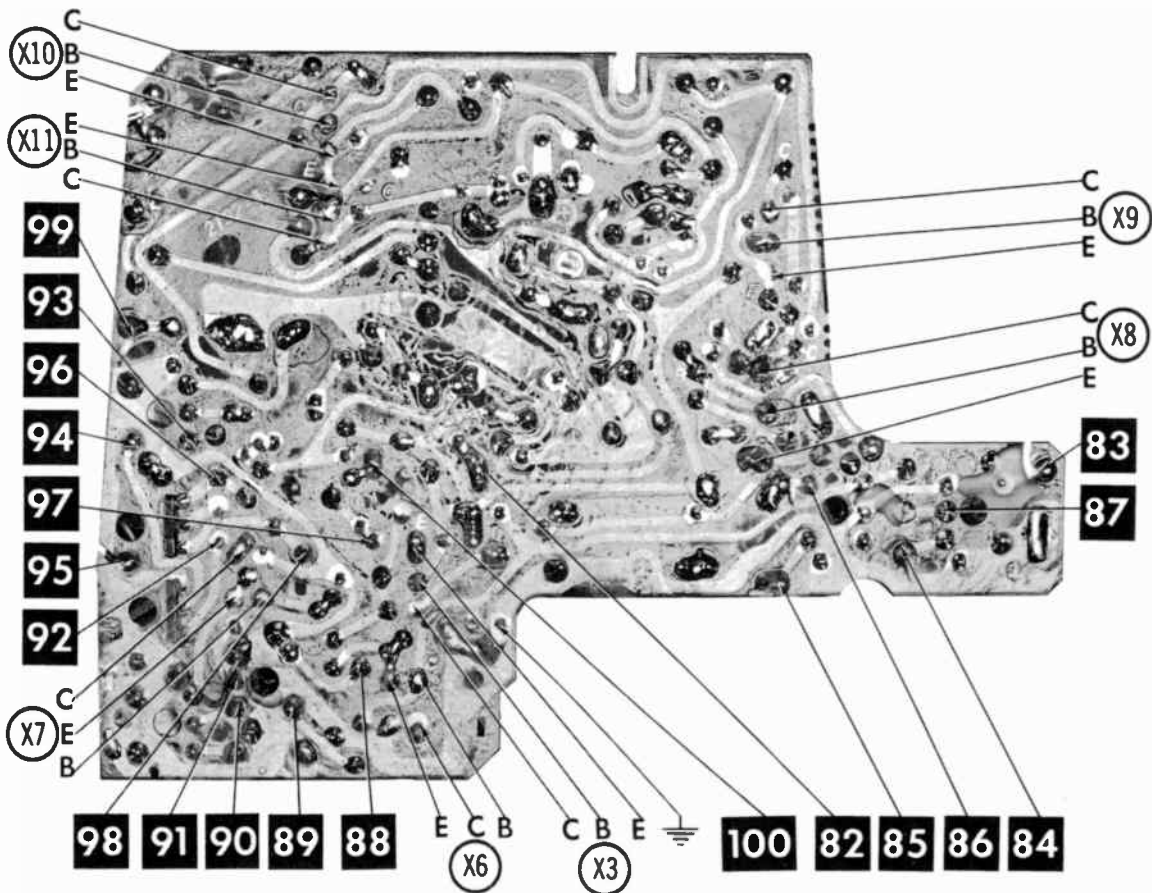
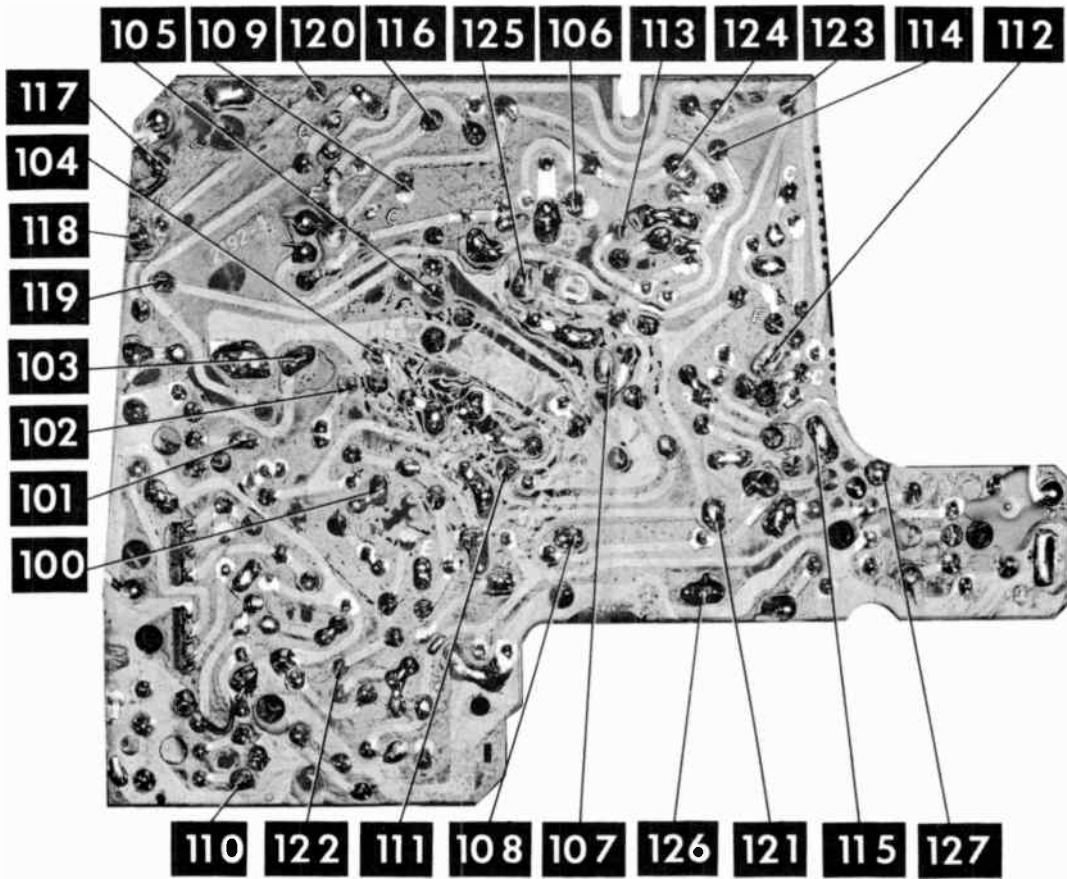
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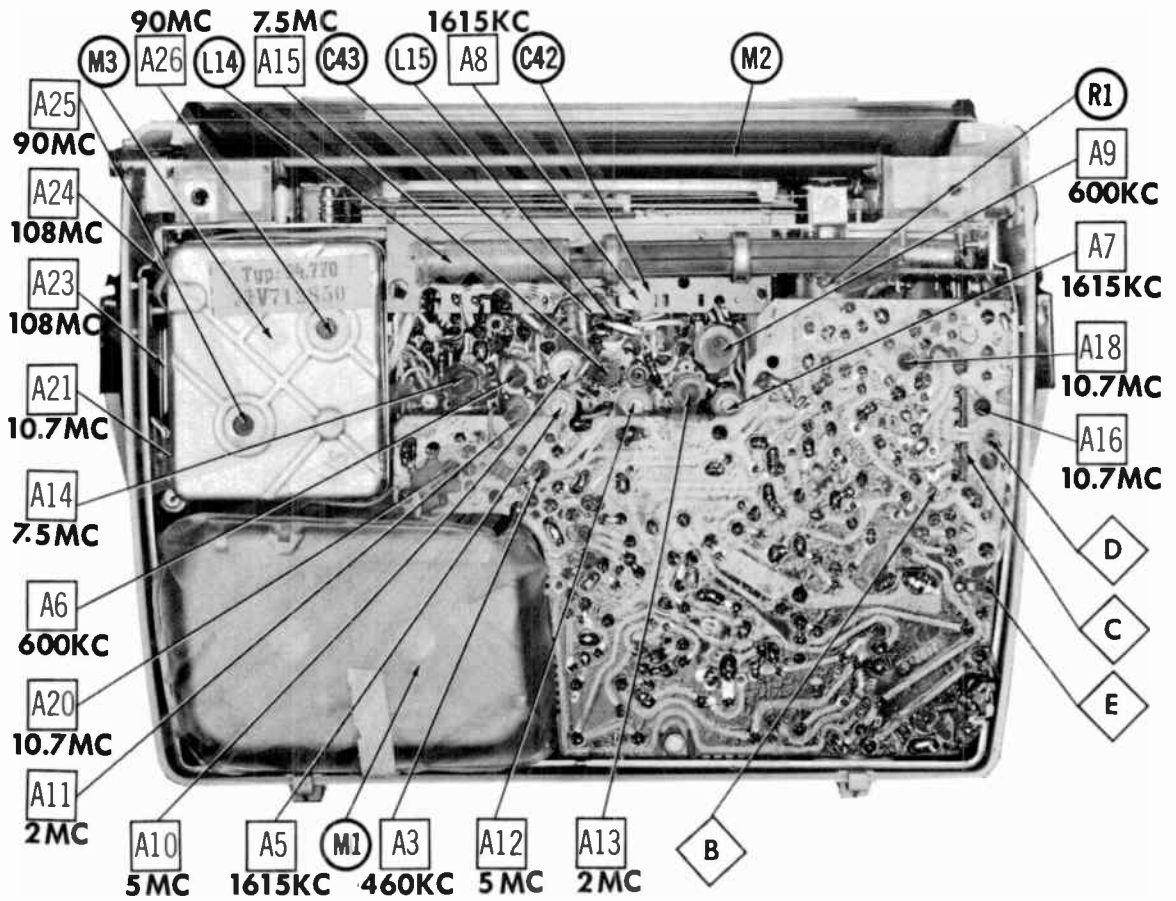
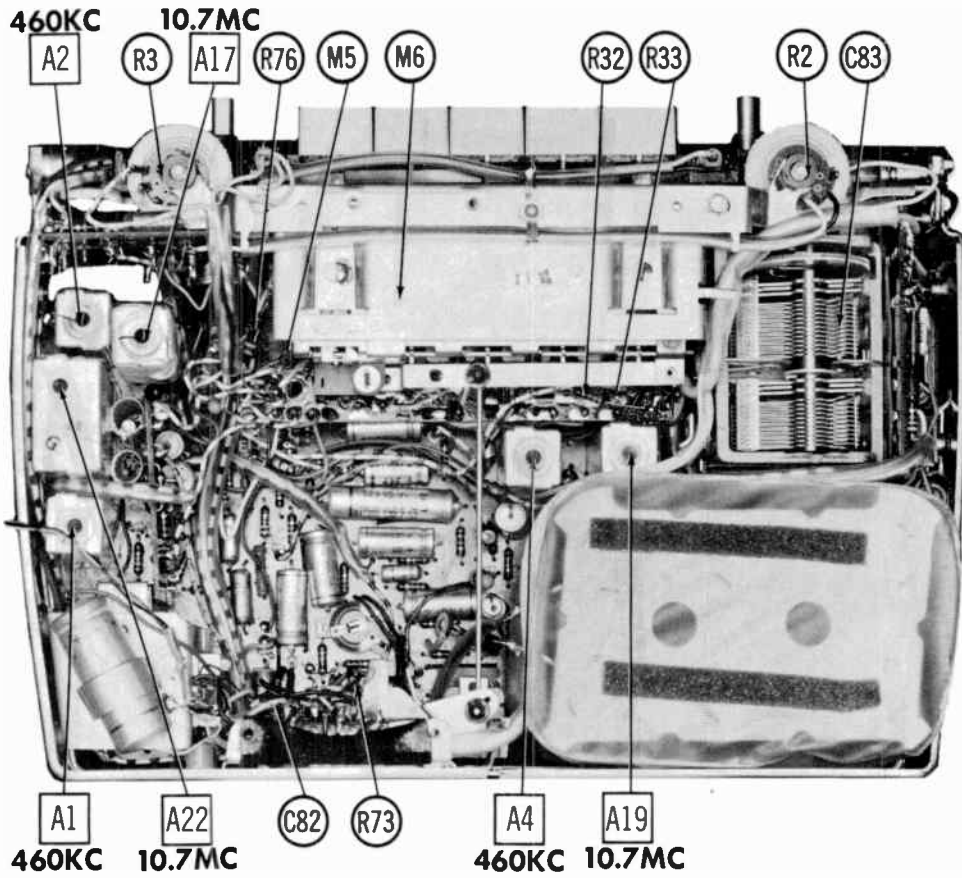
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A Howard W. Sams **CIRCUITRACE** Photo



AUTO POWER SUPPLY PARTS LIST AND DESCRIPTION

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA					
	CAP.	VOLT.	Blaupunkt PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	SPRAGUE PART No.
C84	100	15	28KO0746/37N	CRE437A	NLW100-15	MT1-19	TT15X100	TE-1162
C85	200	15	28KO0746/43N	CRE481A	NLW200-15	MT1-23	TT15X100	TE-1164

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.
C86	.0047		BPD-0047	DD-472	BYX601ZU472P	CCD-472	B247	5HK-D47
C87	.1		P288N-1	DF-104	PM2P1	2DP-3-104	PVC215	2TM-P10

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
R83	6Ω 8W				R85	10Ω 6W			

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					
		Blaupunkt PART No.	MEISSNER PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.
L29	RF Choke						
L30	RF Choke						

FILTER CHOKE

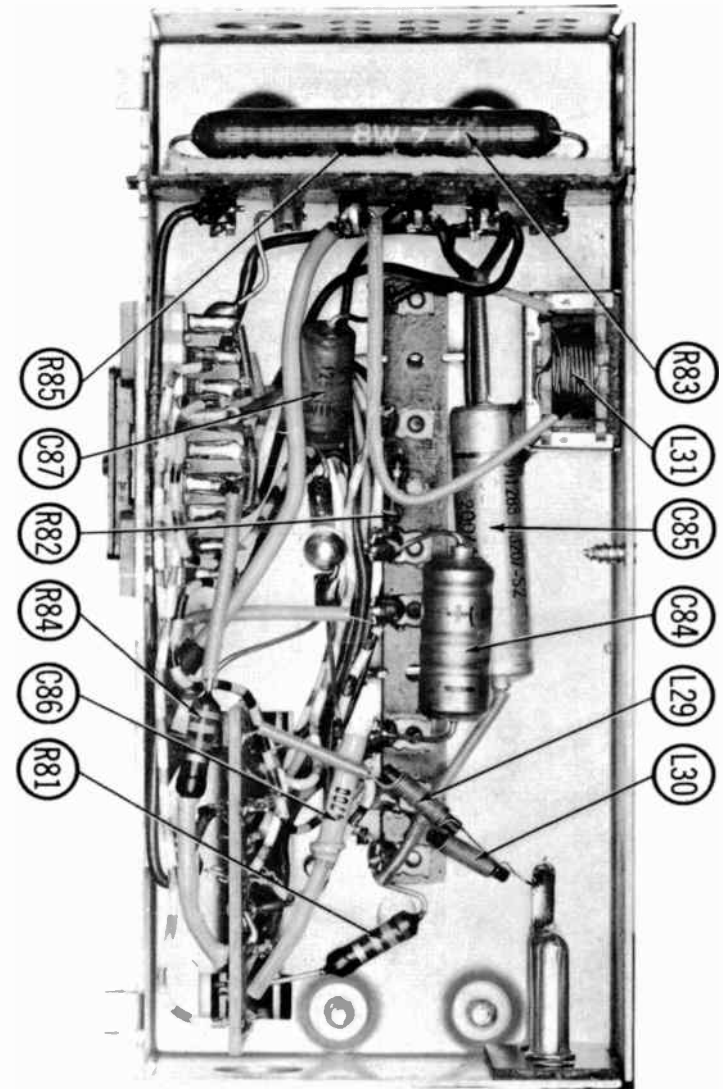
ITEM No.	RATINGS			REPLACEMENT DATA					NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	Blaupunkt PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L31	880ma	.2Ω	1MH						

FUSE DEVICES

ITEM No.	TYPE	RATING	REPLACEMENT DATA						
			PART No.		LITTELFUSE PART No.		BUSS PART No.		
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER	
M7	5mmx20mm	2A 250V			211002			GMA2	

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.)



RECEIVER PARTS LIST AND DESCRIPTION

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	
X1	AF106	AM/FM RF Amp	DS-41		SK-3006	PNP
X2	AF135	FM Conv.	DS-41		SK-3006	PNP
X3	AC122	AGC	DS-26	GE-2	SK-3004	PNP
X4	OC45	AFC	DS-25	GE-1	SK-3005	PNP
X5	AF136	AM Conv. 1st. FM IF	DS-56	GE-9	SK-3006	PNP
X6	AF136	1st. AM/2nd. FM IF	DS-56	GE-9	SK-3006	PNP
X7	AF137	2nd. AM/3rd. FM IF	DS-56	GE-9	SK-3006	PNP
X8	AC122	AF Amp.	DS-26	GE-2	SK-3004	PNP
X9	AC122	Driver	DS-26	GE-2	SK-3004	PNP
X10	AC117	Output	DS-26	GE-2	SK-3004	PNP
X11	AC117	Output	DS-26	GE-2	SK-3004	PNP

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MEASURED CURRENT	ORIGINAL Part or Type No.	RECTIFIERS				DIODES
			GENERAL ELECTRIC PART No.	MALLORY PART No.	RCA PART No.	SARKES TARZIAN PART No.	
X12		AA112					1N295
X13		BA109/II					1N295
X14		E20 C30					
X15		AF112					1N295
X16		AF112					1N295
X17		AF112					1N295

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA					
	CAP.	VOLT.	Blaupunkt PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	SPRAGUE PART No.
C1	100	15	26K00746/37N	CRE473A	NLW100-15	MT1-19	TT15X100	TE-1182
C2	250	3	26K00753/11N	CRE233A	NLW250-3	MT1-24	TT3X250	TE-1065
C3	1000	15	26K00746/14N		BR1000-15			
C4	100	15	26K00746/37N	CRE473A	NLW100-15	MT1-19	TT15X100	TE-1182
C5	100	15	26K00746/37N	CRE473A	NLW100-15	MT1-19	TT15X100	TE-1182
C6	100	15	26K00746/37N	CRE473A	NLW100-15	MT1-19	TT15X100	TE-1182
C7	10	15	26K00747/04N	CRE457A	NLW10-15	MT1-6	TT15X10	TE-1155
C8	5	12	26K00746/03N	CRE404A	NLW5-15A	MT1-3	TT12X5	TE-1127
C9	5	12	26K00746/03N	CRE404A	NLW5-15A	MT1-3	TT12X5	TE-1127
C10	5	12	26K00746/03N	CRE404A	NLW5-15A	MT1-3	TT12X5	TE-1127
C11	5	12	26K00746/03N	CRE404A	NLW5-15A	MT1-3	TT12X5	TE-1127
C12	.5	30	26K00750/41N	CRE750A	NLW1-50A	MT1-1	TT50X1	TE-1300
C13	5	12	26K00746/03N	CRE404A	NLW5-15A	MT1-3	TT12X5	TE-1127
C14	200	15	26K00746/43N	CRE461A	NLW200-15	MT1-23	TT15X200	TE-1184
C15	100	15	26K00746/37N	CRE473A	NLW100-15	MT1-19	TT15X100	TE-1182
C16	25	15	26K00749/55N	CRE462A	NLW25-15	MT1-14	TT15X25	TE-1157.1
C17	100	15	26K00746/66N	CRE473A	NLW100-15	MT1-19	TT15X100	TE-1182
C18	250	3	26K00753/11N	CRE233A	NLW250-3	MT1-3	TT3X250	TE-1065

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.
C19	.1	125V	P266N-1	DF-104	PM2P1	2DP-3-104	PVC201	2TM-P10
C20	15							
C21	50		#26K02213/91N					
C22	120		#26K02210/27N					
C23	.0015			EF-001	MFT-1000		CCF-102	CT260A

CAPACITORS (cont)

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.
C24	.0047		BPD-0047	DD-472	BYX601ZU472P	CCD-472	B247	5HK-D47
C25	1.5-9.5	#81JK6001/01X						
C26	160		DI-160	DD-161	JBZ601YP161K	CCD-161	GP316	5GA-T16
C27	47		DI-47	DD-470	JBZ601YP470K	CCD-470	GP447	5GA-Q47
C28	470		DI-470	DD-471	JB601YP471K	CCD-471	JF347	10TS-T47
C29	680		DI-680	CPR-680J	JB601YP681K	CCD-661	GP368	5GA-T68
C30	3.5		NPO-DI3.0	DTZ-3R3		CCTO-3R3	CNO533	10TCC-V30
C31	39		DI-39	DD-390	CD10E390K500	CCD-390	GP439	5GA-Q39
C32	10		NPO-DI10	DTZ-10	CZ601CG100J	CCTO-100	CNO410	10TCC-Q10
C33	.0022		DI-2200	CF-222	JBX601YP222K	CCD-222	JF222	10TS-D22
C34	.0047		BPD-0047	DD-472	BYX601ZU472P	CCD-472	B247	5HK-D47
C35	.0047		BPD-0047	DD-472	BYX601ZU472P	CCD-472	B247	5HK-D47
C36	.0022		DI-2200	CF-222	JBX601YP222K	CCD-222	JF222	10TS-D22
C37	1.5-9.5	#81TK6001/01X						
C38	.0047		BPD-0047	DD-472	BYX601ZU472P	CCD-472	B247	5HK-D47
C39	4.7		NPO-DI 5.0	DTZ-4R7	CZ601CH5R0D	CCTO-050	CNO547	10TCC-V50
C40	120		NPO-DI 120	DTZ-120	JBZ601YP121K	CCTO-121	CNO-312	10TCC-T12
C41	.0082			DD-622	CD90F622K500	CCD-622	SX262	30GA-D62
C42	3-12	#81TK0714/05X						
C43	56		DI-56	CPR-56J	CD15E560K500	CCD-560	SX456	5GA-Q56
C44	3-10	#81TK0715/03X						
C45	390		DI-390	CPR-390J	CD15F391K500	CCD-391	SX339	5GA-T39
C46	150		DI-150	CPR-150J	CD15F151K500	CCD-151	GP315	5GA-T15
C47	6-25	#81TK0715/05X						
C48	700		DI-680	CPR-680J	JB601YP681K	CCD-661	JF368	10TS-T68
C49	.001		BPD-001	DD-102	BYZ601ZU102M	CCD-102	B210	5HK-D10
C50	150		DI-150	CPR-150J	CD15F151K500	CCD-151	GP315	5GA-T15
C51	4-20	#81TK0715/01X						
C52	125		DI-120	CPR-120J	JBZ601YP121K	CCD-121	SX312	5GA-T12
C53	150	(115pt) †	DI-150	CD15F151K500		CCD-151	GP315	5GA-T15
C54	200		N750-DI 200	CPR-200J	CD15F201K500	CCTN-201	CN7320	10TCU-T20
C55	390		DI-390	CPR-390J	CD15F391K500	CCD-391	SX339	5GA-T39
C56	3-10	#81TK0715/03X						
C57	26		DI-25	DD-250	CD15E270K500	CCD-250	GP425	5GA-Q25
C58	.0047		BPD-0047	DD-472	BYX601ZU472P	CCD-472	B247	5HK-D47
C59	.0047		BPD-0047	CPR-4700J	BYX601ZU472P	CCD-472	B247	5HK-D47
C60	100		DI-100	CPR-100J	JBZ601YP101K	CCD-101	GP310	5GA-T10
C61	.00165		BPD-0015	CPR-1600J		CCD-152	B215	5HK-D15
C62	.0068		DI-6800	CPR-6800J	BYX601ZU682P	CCD-682	SX268	30GA-D68
C63	16				CY601CG160J	CCTO-160	CNO416	10TCC-Q16
C64	.0047		BPD-0047	DD-472	BYX601ZU472P	CCD-472	B247	5HK-D47
C65	.047	125V	P266N-047	DD-503	PM2S47	4DP-3-473	PVC2147	2TM-S47
C66	.0082			DD-622	CD90F622K500	CCD-622	SX262	30GA-D62
C67	3		NPO-DI 3.0	DTZ-3R3		CCTO-3R3	CNO533	10TCC-V30
C68	.01		BPD-01	DD-103	BYV1022U103M	CCD-103	B110	5HK-810
C69	.0047		BPD-0047	DD-472	BYX601ZU472P	CCD-472	B247	5HK-D47
C70	.068		DBE4568		DMF1568	1DP-2-683	PVC1168	4PS-686
C71	.047		P266N-047	DD-503	PM2S47	4DP-3-473	PVC2147	2TM-S47
C72	.47		DBE2P47		DPMS2P47	1DP-4-474	PVC1047	2PS-P47
C73	.22		DBE2P22		DPMS2P22	1DP-3-224	PVC1022	2PS-P22
C74	.0033		BPD-0033	DD-332	BY601ZU332P	CCD-332	B233	5HK-D33
C75	.022		P466N-022	DD-203	PM4S22	4DP-2-223	GEM4122	4TM-S22
C76	.033		DBE4S33		WMF1S33	1DP-1-333	PVC1133	4PS-S33
C77	.033		DBE4S33		WMF1S33	1DP-1-333	PVC1133	4PS-S33
C78	.1		P266N-1	DF-104	PM2P1	2DP-3-104	PVC201	2TM-P10
C79	100		DI-100	CPR-100J	BYZ601YP101K	CCD-101	GP310	5GA-T10
C80	.047		P266N-047	DD-503	PM2S47	4DP-3-473	PVC2147	2TM-S47
C81	.27		BE2P25		WMF1P27	4DP-5-274	PVC1025	2PS-P25
C82	10		NPO-DI 10	DTZ-10	CZ601CG100J	CCTO-100	CNO410	10TCC-Q10
C83A	*	#14DK6040/01X						
B								

‡ Blaupunkt Part Number.

* 4 Gang AM-FM Tuning.

† Alternate Value.

PARTS LIST AND DESCRIPTION (CONTINUED)

CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA				
			Blaupunkt PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1	Volume/Switch Tap @ 3000Ω	13K	89WI6044/01X				
R2	Treble	50K	89WI6043/02X				
R3	Bass	50K	89WI6043/02X				
R4	Bias	2000Ω	89WI2020/57X				
R5	Stabilizer	5000Ω	89WI2030/60X				

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA			ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN PART No.	Blaupunkt PART No.			IRC PART No.	WORKMAN PART No.	Blaupunkt PART No.
R43	2000Ω (Cold)			89WI0759/24N	R70	1Ω 2W	BWH 1	WS 1	
R67	2000Ω (Cold)			89WI0759/24N					

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					
		Blaupunkt PART No.	MEISSNER PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.
L1	FM Antenna						
L2	RF Choke	87WC2076/29Z					
L3	RF Choke						
L4	RF Choke	87WC6051/05X					
L5	RF Choke	87WC2078/01Z					
L6	RF Choke	87WC6088/01Z					
L7	FM RF						
L8	RF Choke	87WC2078/04Z					
L9	RF Choke	87WC6062/04Z					
L10	FM IF Trap (.3uh)	87WC6051/08X					
L11	FM Osc.						
L12	1st. FM IF	87WC6053/02Z					
L13	RF Choke	87WC6062/03Z					
L14	Loopstick	05AT8018/02Z					
L15	RF Choke	87WC2076/01Z					
L16	Ext. AM Antenna	87WC6174/01Z					
L17	SW I Antenna	87WC6172/01Z					
L18	SW II Antenna	87WC6173/01Z					
L19	RF Choke	87WC6163/01Z					
L20A	AM Osc.	87WC6171/01Z					
L21	SW II Osc.						
L22	SW I Osc.						
L23	2nd. FM IF	91ZF0737/13Z					
L24	1st. AM IF	91ZF0738/03Z					
L25	3rd. FM IF	91ZF0737/12Z					
L26	2nd. AM IF	91ZF0735/10Z					
L27	3rd. AM IF	91ZF8002/01Z					
L28	RF Choke	87WC2078/01Z					
L28	RF Choke	87WC2076/01Z					

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
	PRI.	SEC.	Blaupunkt PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	7	1	78TF0760/08Z					

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC.	Blaupunkt PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T2	30Ω CT	4Ω	78TF6002/02Z					

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		Blaupunkt PART No.	QUAM PART No.	
SP1	4" PM	4Ω	56NP3576/03Z 4A05	

BATTERIES

ITEM No.	VOLTAGE	Blaupunkt PART No.	REPLACEMENT DATA			NOTES
			BURGESS	EVEREADY	MALLORY	
M1	9V		230 or AL2	1050 or E95	M13R or Mnl300	8 Required.

MISCELLANEOUS

ITEM No.	PART NAME	Blaupunkt PART No.	NOTES
M2	Telescopic Antenna	05AT8017/02X	Includes: 560Ω, 18K, 22K, Res., 39pf, 39pf, 470pf, 470pf, .0047 Caps, 2-AA-112 Diodes, & 1-5000Ω Control.
M3	FM Tuner	17EV6004/07Z	
M4	Ratio Detector Assembly	91ZF6001/03Z	
M5	Pilot Lamp Switch		
M8	Selector Switch (Wave Band)	70SH6071/04S	

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
Escutcheon	53NF6227/02X	Pushbutton (FM)	28KF0222/09a
Dial Scale	72SQ6167/02X	Knob, Tuning or Volume	26KF6063/02X
Pushbutton (AFC)	28KF0222/01a	Dial Pointer	78SZ6016/01Z
Pushbutton (AM)	26KF0222/03a	Battery Container	08BA6002/05Z
Pushbutton (SW II)	26KF0222/05a	Battery Container Lid	08BA6007/01Z
Pushbutton (SW I)	26KF0222/07a	Carrying Strap	96XZ6088/03X

WIRING DATA

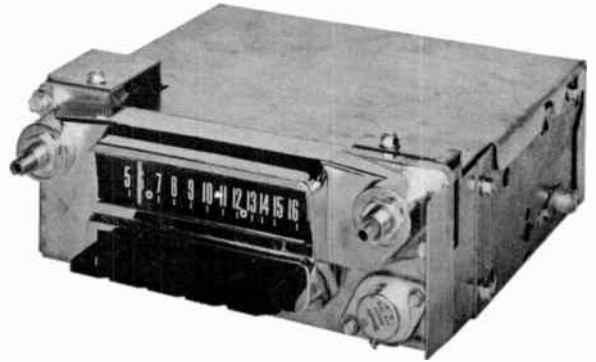
General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in 12 Colors 8524 (Stranded) Available in 12 Colors
Shielded Hook-up Wire	Use BELDEN No. 8885
Rear Seat Speaker Extension Cable	Use BELDEN No. 8782 (Stranded) Coded Parallel Leads
Bonding Strap	Use BELDEN No. 8661 (3/8 In.) or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



PHOTOFACT[®] with

CIRCUITRACE[®]

TRADE NAME : Ford Model 4TBZ (1964/65 Mustang)
 (C5ZZ-18805 or C4ZA-18806)
SUPPLIER : For Current Address, See Master Index.
TYPE SET : 6 Transistor AM Receiver
POWER SUPPLY : 12 Volt Storage Battery
RATING : .68 Amp. @ 12.6 Volts DC
TUNING RANGE : BROADCAST 540-1605KC



FORD MODEL 4TBZ

ALIGNMENT INSTRUCTIONS

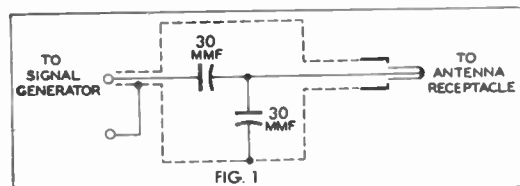
Check for specified source voltage.
 Use only enough generator output to provide a usable indication.
 Suggested Alignment Tools:

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 (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

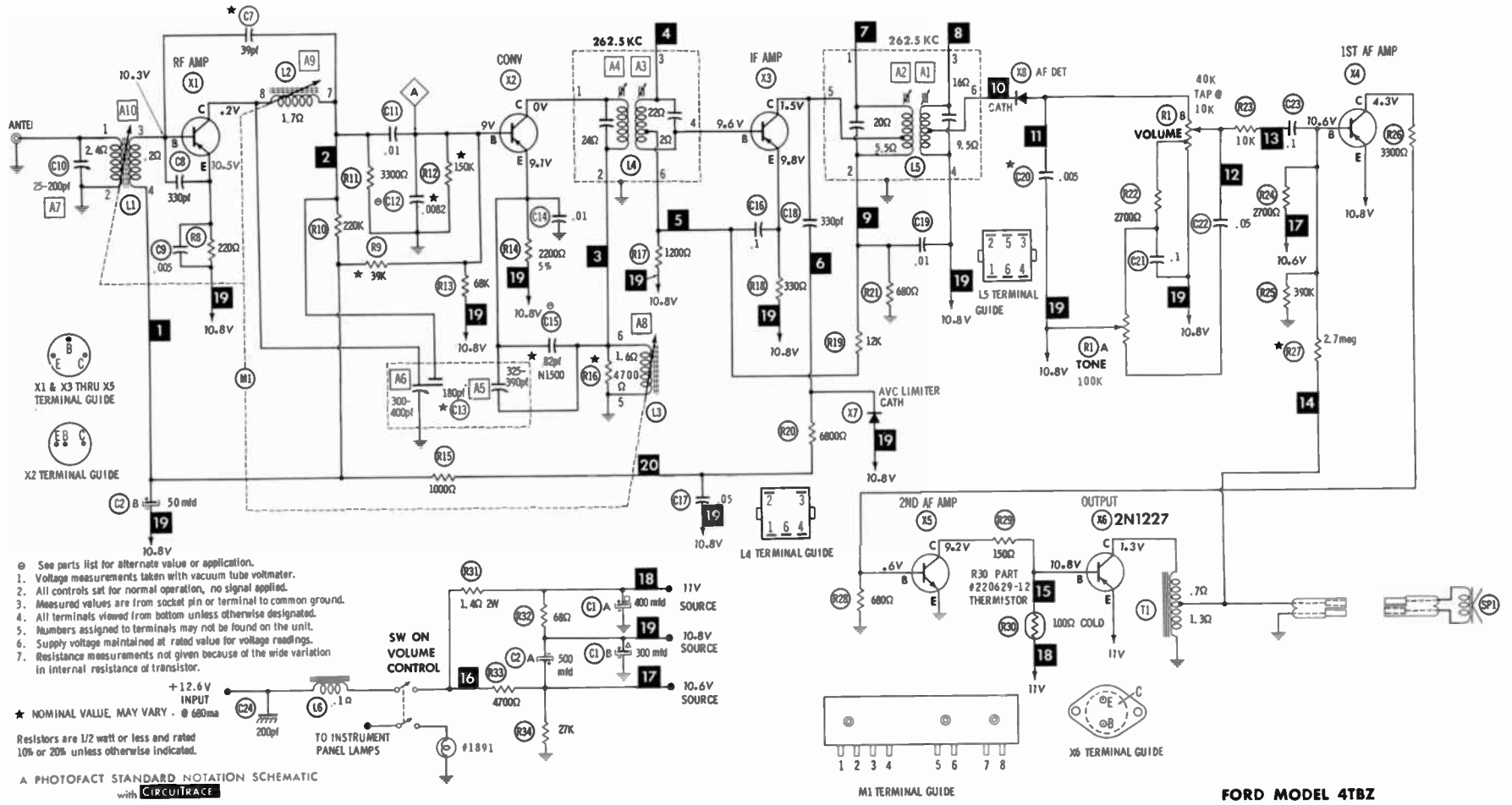
1. Pull button out.
2. Tune manually to desired station.
3. Press button in firmly.
4. Repeat for remaining buttons.



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

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World Radio History

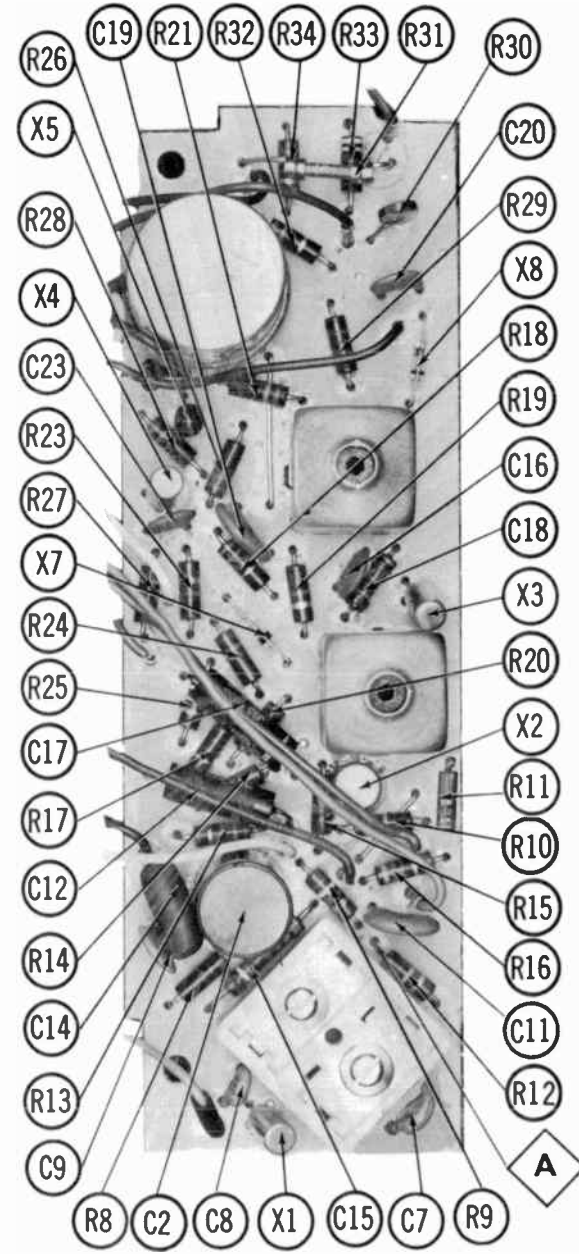
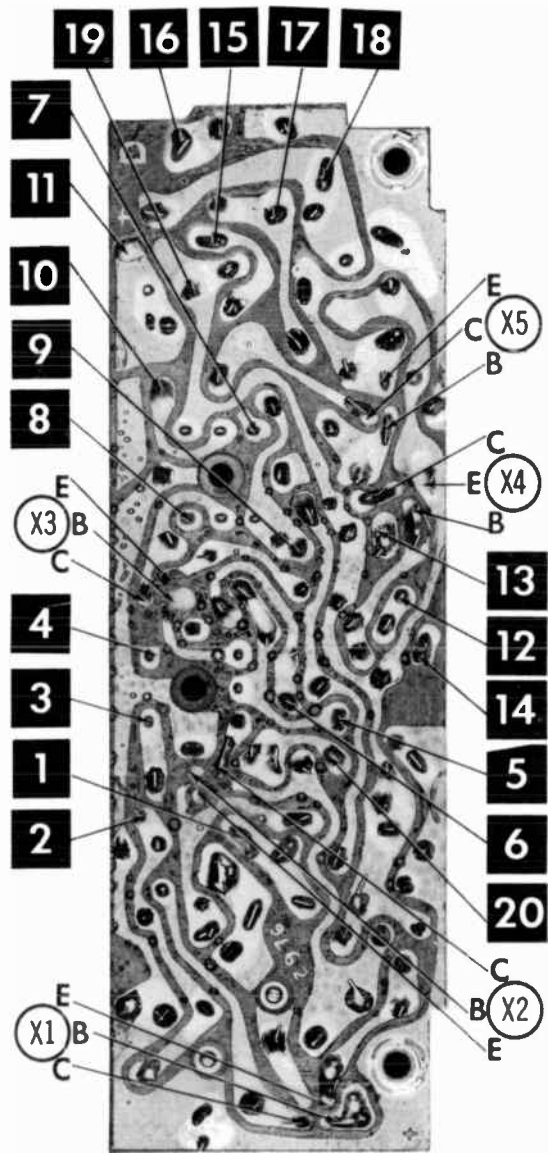


- See parts list for alternate value or application.
 - 1. Voltage measurements taken with vacuum tube voltmeter.
 - 2. All controls set for normal operation, no signal applied.
 - 3. Measured values are from socket pin or terminal to common ground.
 - 4. All terminals viewed from bottom unless otherwise 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.
- ★ NOMINAL VALUE, MAY VARY - @ 680ma
- Resistors are 1/2 watt or less and rated 10% or 20% unless otherwise indicated.

A PHOTOFAC STANDARD NOTATION SCHEMATIC with CIRCUITRACE

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FORD MODEL 4TBZ



A Howard W. Sems **CIRCUITRACE** Photo

FORD MODEL 4TBZ

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

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			NOTES	BENDIX PART NO.
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.		
X1		RF Amp.	D6-25	GE-9		PNP	2091241-0015
X2		Conv.	D6-25	GE-9		PNP	2091241-0013
X3		IF Amp.	D6-25	GE-9		PNP	2091241-0014
X4		1st. AF Amp.	D6-26	GE-2		PNP	2090924-0008
X5		2nd. AF Amp.	D6-46	GE-10		NPN	2092609-0002
X6	2N1227	Output	D6-520	GE-3		PNP *	2091859-0008

* When replacing, apply silicon grease to both sides of insulator. Tighten mounting screws securely.

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MEASURED CURRENT	ORIGINAL Part or Type No.	RECTIFIERS				DIODES
			GENERAL ELECTRIC PART No.	MALLORY PART No.	RCA PART No.	SARKES TARZIAN PART No.	GENERAL ELECTRIC PART No.
X7		2092055-0001					1N295
X8		2092055-0001					1N295

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		BENDIX PART No.	REPLACEMENT DATA				SPRAGUE PART No.
	CAP.	VOLT.		AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	
C1A	400		2092983-0001	PWH2-02-08			PFP300.65	PCL8-2174.1*
B	300							
C2A	500	3V	2092246-0001	BCD8X50050			PET290	VLS-2116*
B	50	3V						

* 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.
C7	39	†	DI-39	DD-390	LA10Q39-83	CCD-390	GP439	5GA-Q39
C8	330		DI-330	DD-331	LA10T33-C4	CCD-333	GP333	10TS-T33
C9	.005		BPD-005	DD-502	BYA10D5	CCD-502	B250	5HK-D50
C10	25-200	#2091504-0006						
C11	.01		BPD-01	DD-103	BYA1081	CCD-103	B110	5HK-810
C12	.0082	†	DBE6D82	CPR-8200J	DPMS6D82	6DF-2-622	PVC628	6PS-D82
C13A	300-400	#219092-0026						
B	160							
C	325-390							
C14	.01		BPD-01	DD-103	BYA1081	CCD-103	B110	5HK-810
C15	82	N1500				*	*	
C16	.1		TTD-1	CK-104	H6		TA010	TG-P10
C17	.05		DBE885		DPMS8255	1DF-2-503	PVC215	2PS-850
C18	330		DI-330	DD-331	LA10T33-C4	CCD-333	GP333	10TS-T33
C19	.01		BPD-01	DD-103	BYA1081	CCD-103	B110	5HK-810
C20	.005		BPD-005	DD-502	BYA10D5	CCD-502	B250	5HK-D50
C21	.1	†	TTD-1	CK-104	H6		TA010	TG-P10
C22	.05		TTD-05	CK-503	H5		TA150	TG-850
C23	.1		TTD-1	CK-104	H6		TA010	TG-P10
C24	200	#220267-0025						

† Nominal Value.

Bendix Part Number.

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

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	2092097-0006				
B	Volume/Switch	40K Tap @ 10K					

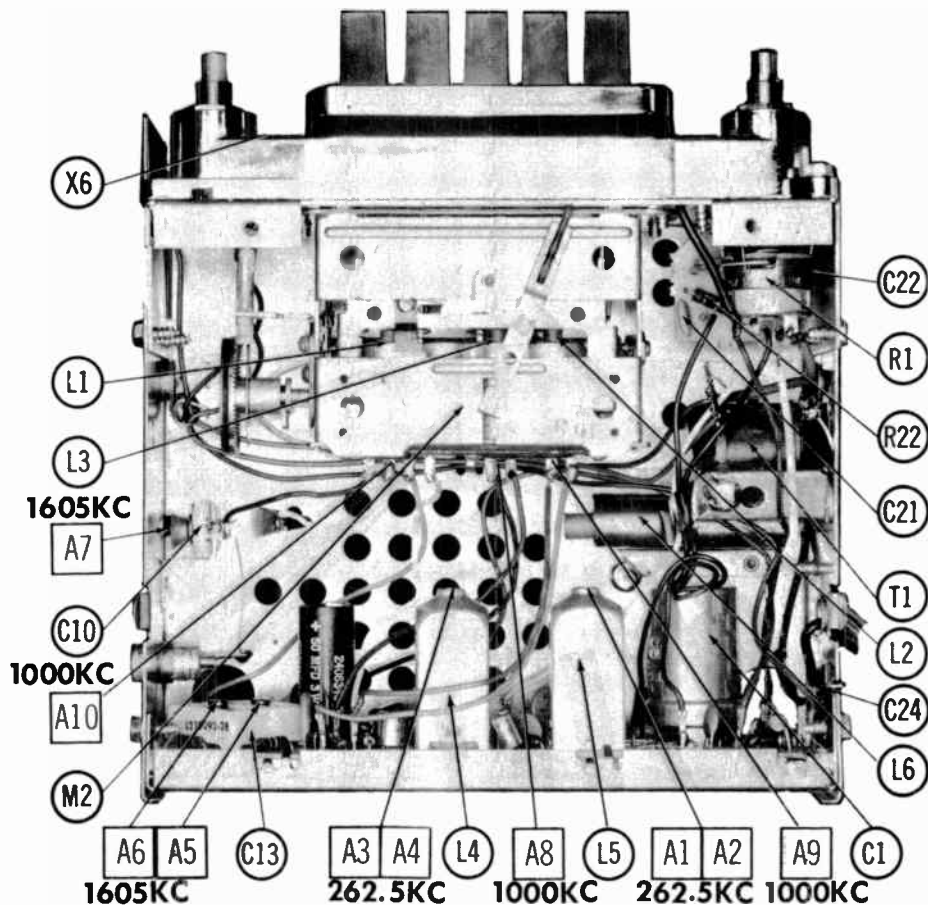
RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA			ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN PART No.	BENDIX PART No.			IRC PART No.	WORKMAN PART No.	BENDIX PART No.
R30	100Ω (Cold)			220629-0012	R31	1.4Ω 2W	BWH 1.5	WS 1.5	2090948-0025

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					
		BENDIX PART No.	MEISSNER PART No.	MÉRIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.
L1	Antenna	①					
L2	RF	①					
L3	Osc.	①					
L4	Input IF	2093163-0002	16-6712	BC-636	6522	RTC-9397	
L5	Output IF	2093164-0003	16-6713		6523	RTC-9396	

① Part of M2.



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.

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA					NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (to CURRENT 1000~)	BENDIX PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L6	680ma	.1Ω	1.2MH	2092050-0008	C-4095①	TC-1①	TR-159①	TY16XT①	① Fabricate Mounting.

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
			BENDIX PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
	PRI.	SEC.						
T1	12Ω Tap @ 8Ω		2092138-0008				TR-164	

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		BENDIX PART No.	QUAM PART No.	
SP1	5" x 8" PM 8Ω	2093294-0701	58A15Z8	

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			BENDIX PART No.		LITELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER		
M1	SFE	14A		In Fuse Block	307014		SFE 14	

MISCELLANEOUS

ITEM No.	PART NAME	BENDIX PART No.	NOTES
M2	Tuner	2093297-0702 2093297-0704	GIC (Coil Assembly Part #2090131-0073) RCC (Coil Assembly Part #2090131-0074)

CABINETS & CABINET PARTS

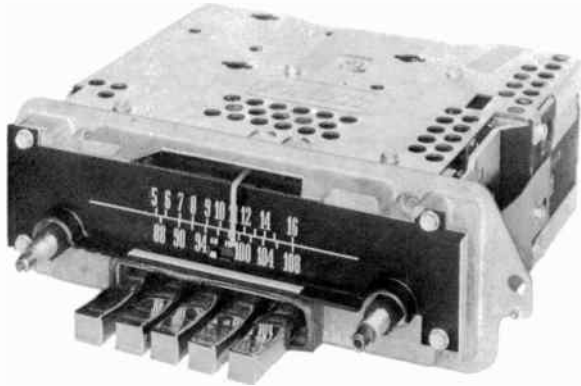
(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
Escutcheon	2092717-0001	Dial Pointer (GIC)	2090129-0053
Dial Glass	2093175-0001	Dial Pointer (RCC)	2090129-0046
Pushbutton	2093176-0001		



PHOTOFACT[®] with

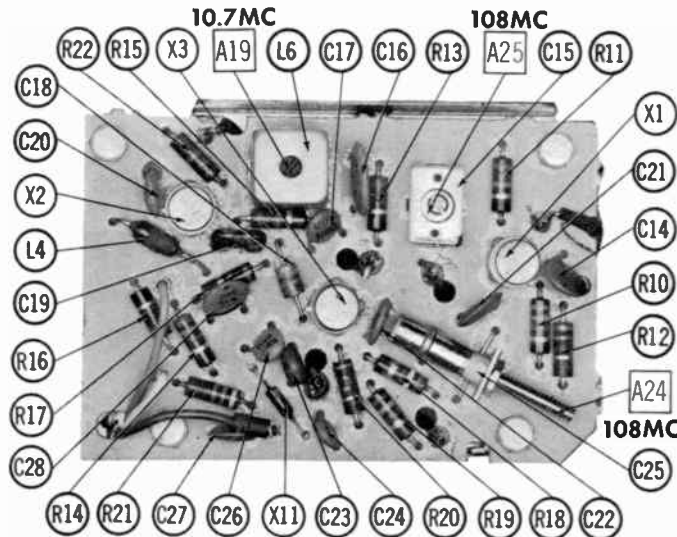
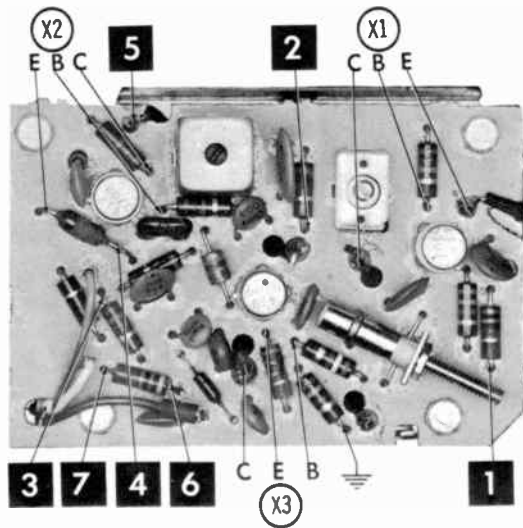
CIRCUITRACE[®]



TRADE NAME : Ford Models F5TBF(1965 Galaxie)
 TOB5TBS(1965 Thunderbird)
SUPPLIER : For Current Address, See Master Index.
TYPE SET : 10- Transistor AM-FM Receiver
POWER SUPPLY : 12 Volt Storage Battery
RATING : .960 Amp. @ 12.6 Volts DC
TUNING RANGE : BROADCAST 540-1615KC
 FREQ. MOD. 88-108MC

FORD MODELS F5TBF, TOB5TBS

A Howard W. Sams **CIRCUITRACE[®]** Photo



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

ALIGNMENT INSTRUCTIONS

Check for specified source voltage.
 Use only enough generator output to provide a usable indication.
 Suggested Alignment Tools:
 A1 thru A10, A12 thru A18, A21 thru A26... GENERAL CEMENT: 8290, 8868, 9087
 WALSCO: 2525, 2528, 2587
 A11, A20..... GENERAL CEMENT: 8282, 8606, 9302
 WALSCO: 2543, 2544, 2588

AM ALIGNMENT — SELECTOR IN AM POSITION

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1.	High side thru .1mfid to point Δ , low side to ground.	282.5KC (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.	1805KC	"	"	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 extended to 30 inches, tune in a weak station near 1400KC and adjust A7 for maximum output.

FM ALIGNMENT USING AM SIGNAL GENERATOR — SELECTOR IN FM POSITION

Thru Dummy (Fig. 2) to Antenna Receptacle.

	GENERATOR FREQUENCY	DIAL SETTING	INDICATOR	ADJUST	REMARKS
4.	10.7MC (Unmod.)	Point of non-interference.	DC probe of VTVM to point Δ ; common to ground.	A11 thru A19.	Adjust for maximum.
5.	"	"	DC probe to point Δ ; common to ground.	A20.	Adjust for zero reading. A positive or negative reading will be obtained on either side of the correct setting.

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

Use only enough marker signal to obtain indication. Use 60v frequency modulated signal with 450KC sweep.
 Use 120v sawtooth voltage in scope for horizontal deflection.

	GENERATOR FREQUENCY	DIAL SETTING	INDICATOR	ADJUST	REMARKS
4.	10.7MC (450KC Swp.)	Point of non-interference	Vert. amp. of Scope to point Δ ; low side to ground.	A11 thru A19.	Adjust for maximum gain and symmetry of response similar to Fig. 3 with marker as shown.
5.	"	"	Vert. amp. to point Δ ; low side to ground.	A20.	Adjust A20 (Secondary) to place marker at center of crossover lines similar to Fig. 4. Adjust A11 (Primary) for maximum amplitude and straightness of crossover lines.

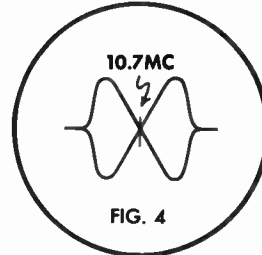
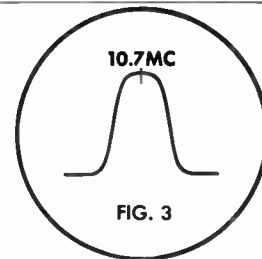
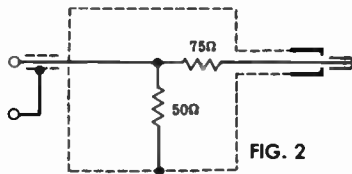
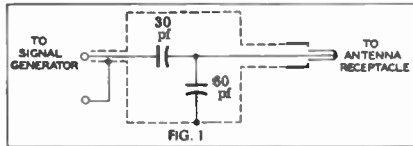
FM RF ALIGNMENT Connect Generator thru dummy (Fig. 2) to antenna receptacle.

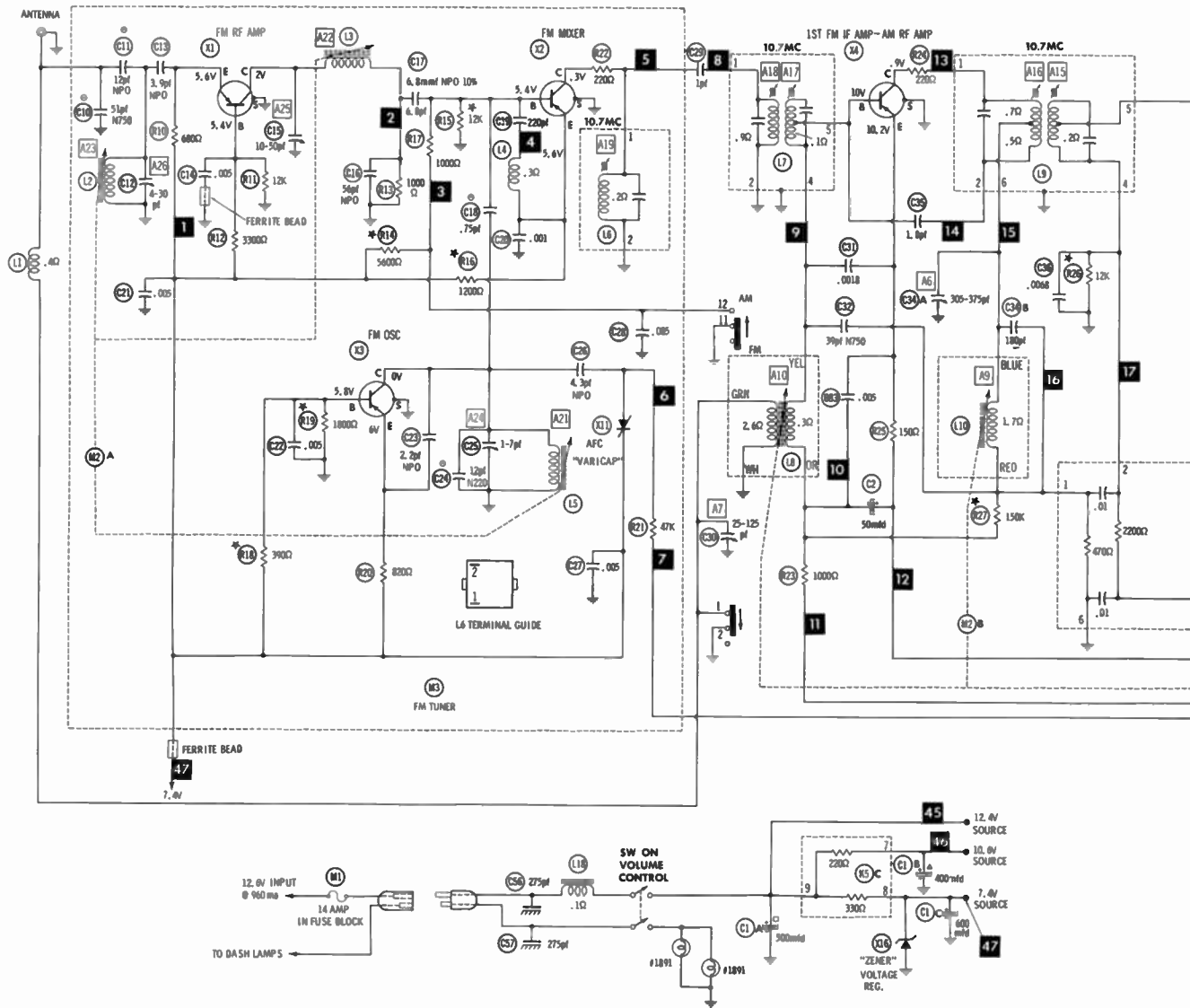
6.	90MC	90MC	DC probe of VTVM to point Δ ; common to ground.	A21, A22, A23.	Adjust for maximum.
7.	104MC	104MC	"	A24, A25, A26.	Rock tuning and adjust for maximum. Repeat steps 6 and 7 until no further improvement can be made.

PUSH-BUTTON ADJUSTMENT

- ① Pull Pushbutton out.
- ② Turn Red Stripe (on button) to top, for AM.
- ③ Turn Red Stripe (on button) to bottom for FM.
- ④ Tune manually to desired station.
- ⑤ Press Button in firmly.
- ⑥ Repeat for remaining Buttons.

Antenna Adjustment: (A7) Right Rear above Antenna Input.





★ NOMINAL VALUE, MAY VARY.

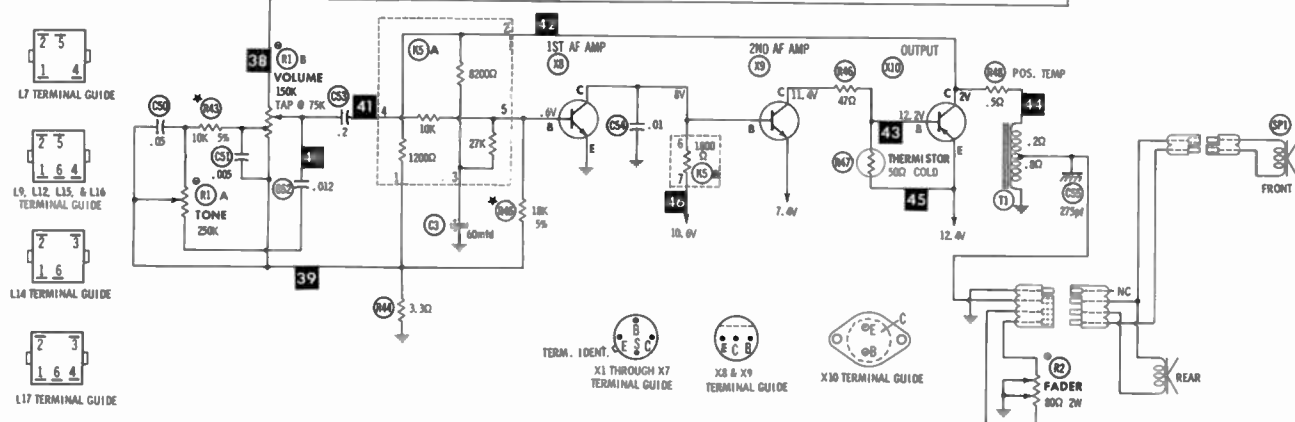
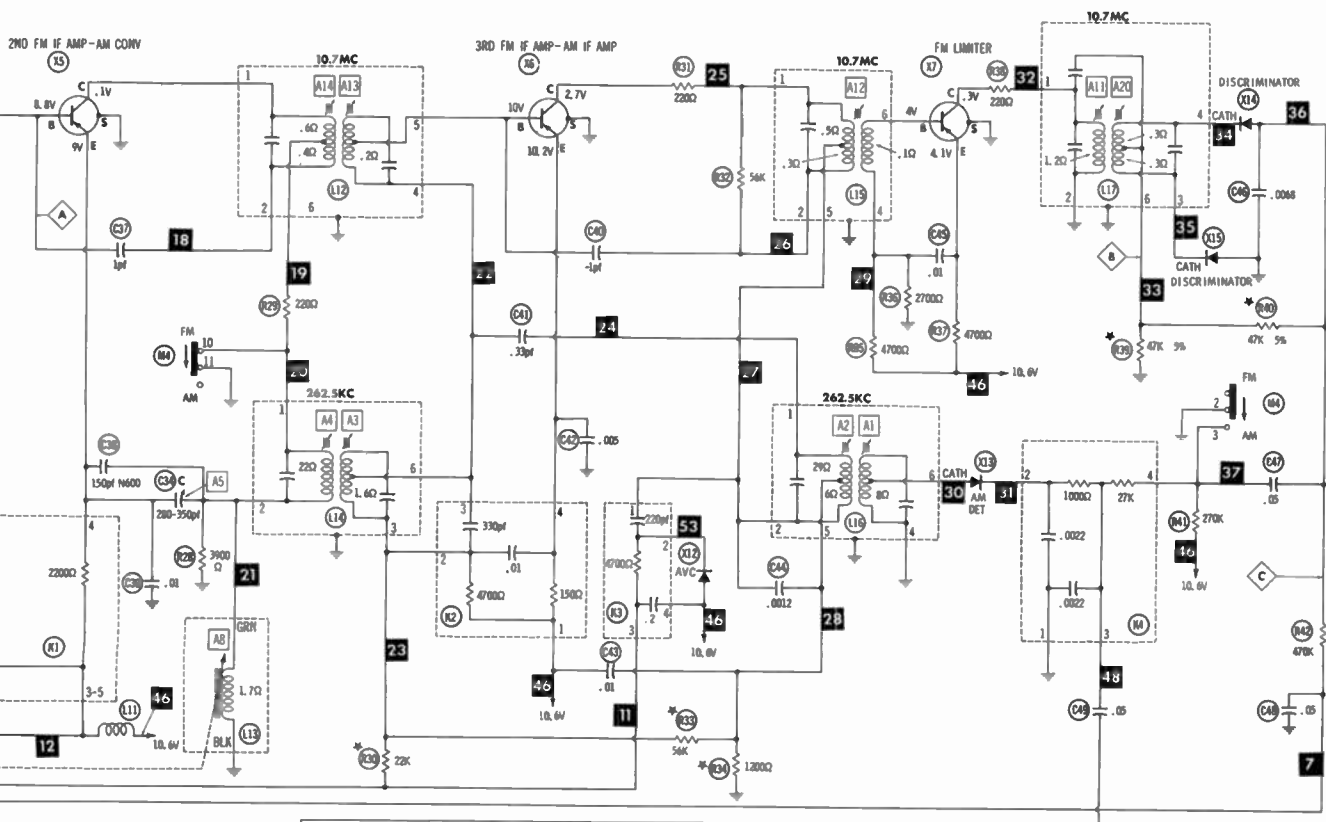
Resistors are 1/2 watt or less and rated 10% or 20% unless otherwise indicated.

ALL VOLTAGES MEASURED IN FM 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 PHOTOFACT STANDARD NOTATION SCHEMATIC with CIRCUITRACE
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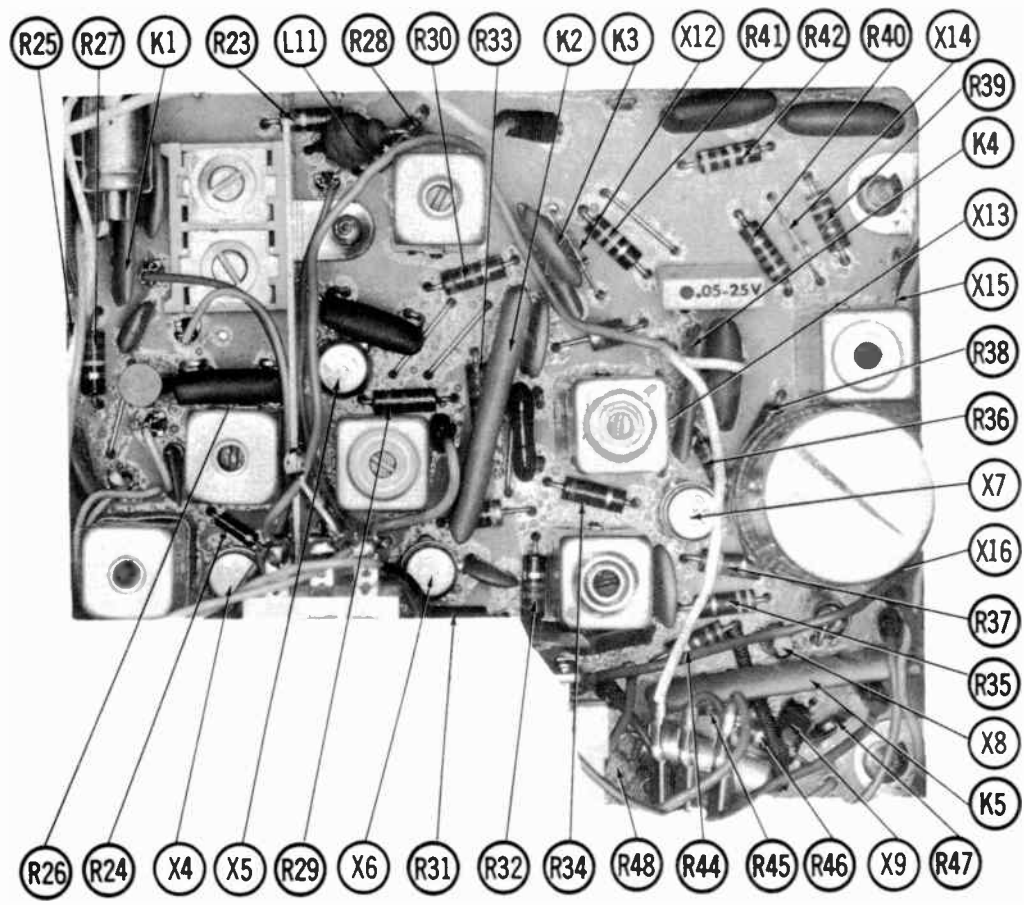
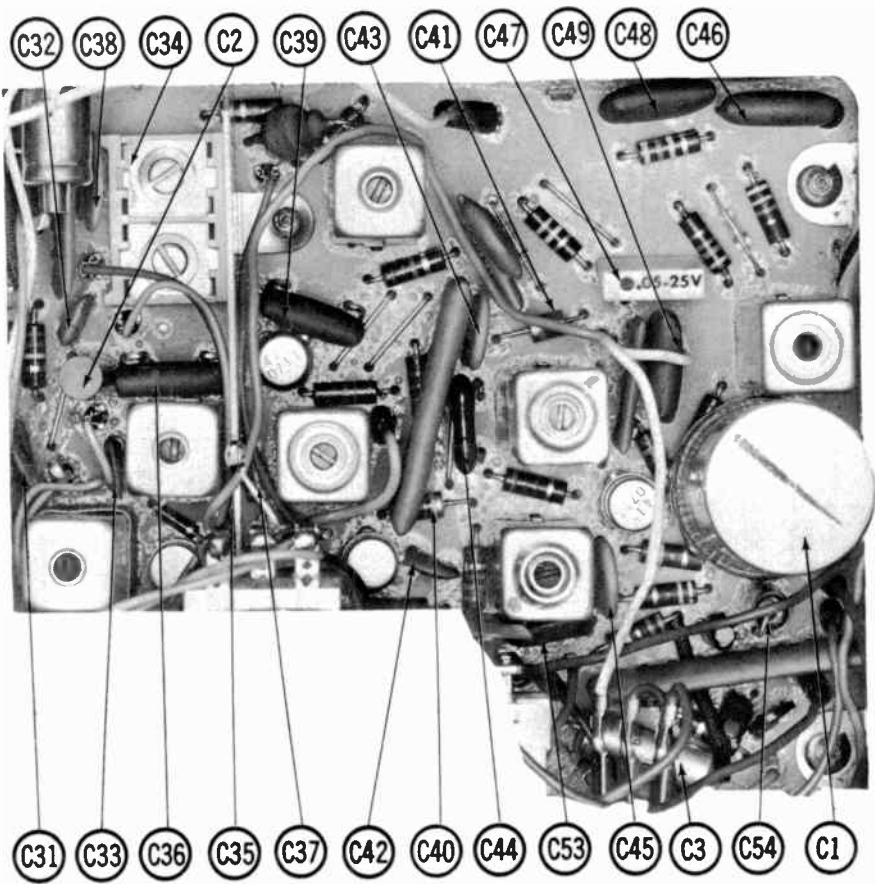


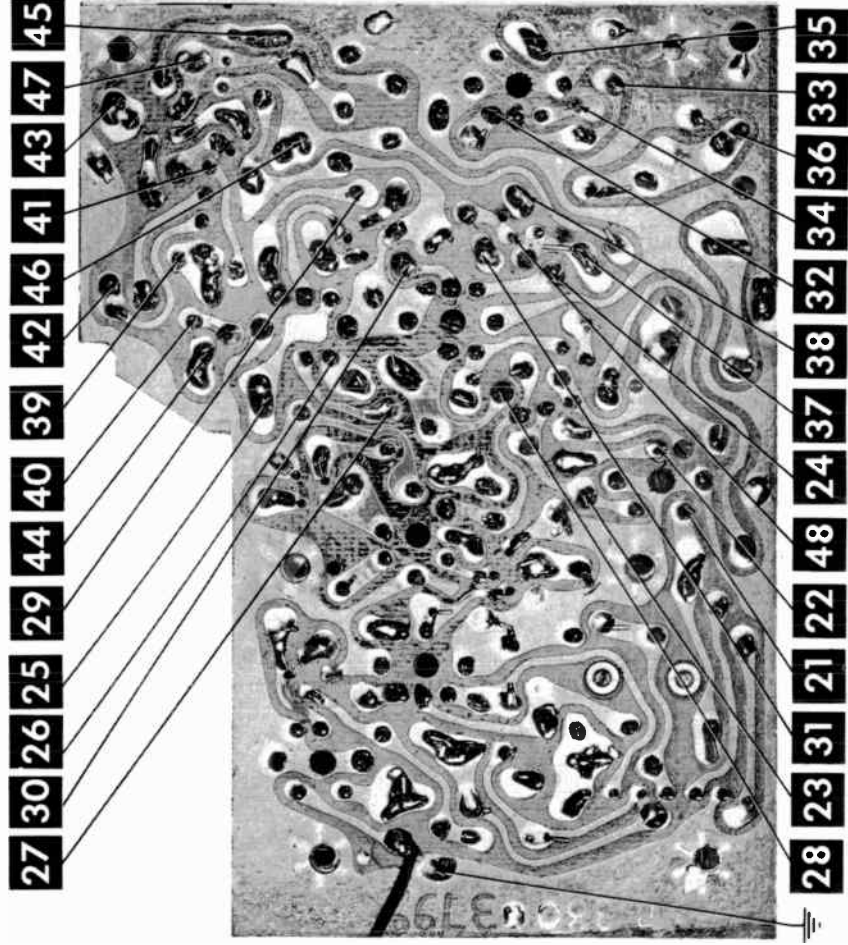
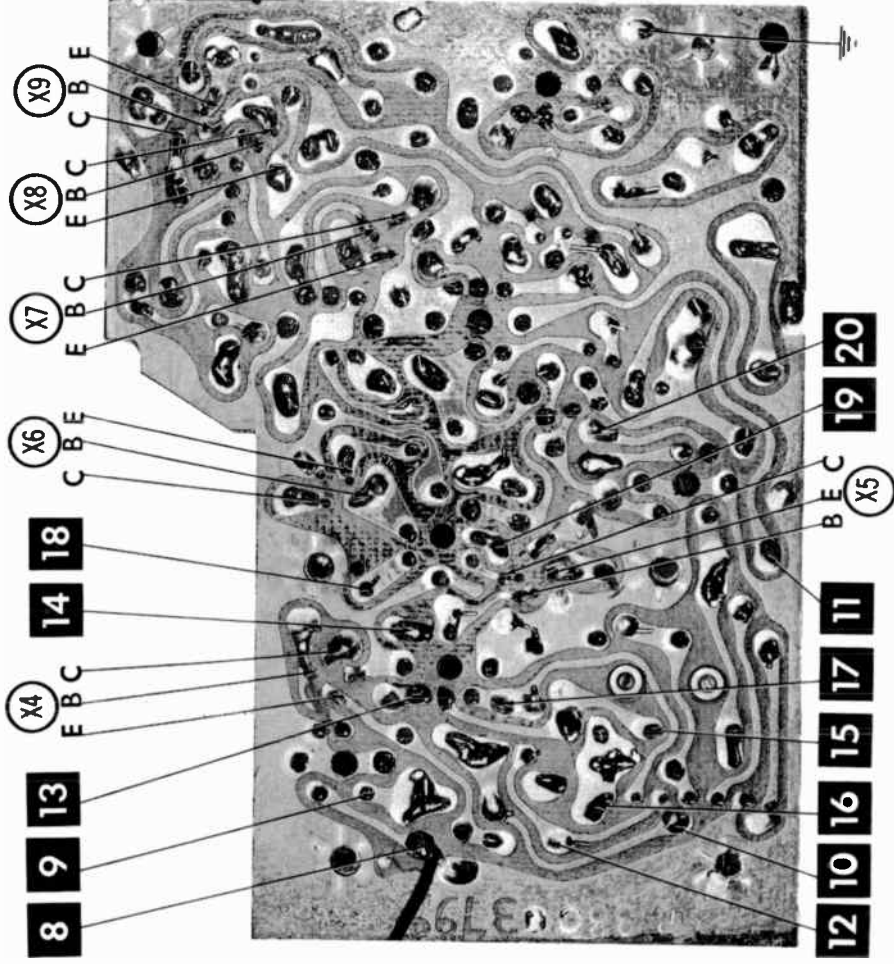


- L7 TERMINAL GUIDE
- L9, L12, L15, & L16 TERMINAL GUIDE
- L14 TERMINAL GUIDE
- L17 TERMINAL GUIDE

- TERM. IDENT. X1 THROUGH X7 TERMINAL GUIDE
- X8 & X9 TERMINAL GUIDE
- X10 TERMINAL GUIDE

FORD MODELS F5TBF, T0B5TBS





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	Bendix Part No.
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.		
X1		FM RF Amp.	DS-41		SK-3006	PNP	2092417-0707
X2		FM Mixer	DS-41		SK-3006	PNP	2092417-0708
X3		FM Osc.	DS-41		SK-3006	PNP	2092417-0709
X4		1st. FM IF/AMRF Amp.	DS-56	GE-9	SK-3006	PNP	2092418-0708
X5		2nd. FM IF/AM Conv.	DS-56	GE-9	SK-3006	PNP	2092418-0711
X6		3rd. FM IF/AMIF	DS-56	GE-9	SK-3006	PNP	2092418-0710
X7		FM Limiter	DS-56	GE-9	SK-3006	PNP	2092418-0711
X8		1st. AF Amp.	DS-46	GE-10		NPN	2092609-0705
X9		2nd. AF Amp.	DS-46	GE-10		NPN	2092609-0001
X10		Output	DS-520	GE-3	SK-3009	PNP	2091859-0011

* When replacing, apply silicon grease to both sides of insulator. Tighten mounting screws securely.

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MEASURED CURRENT	ORIGINAL Part or Type No.	RECTIFIERS				DIODES
			GENERAL ELECTRIC PART No.	MALLORY PART No.	RCA PART No.	SARKES TARZIAN PART No.	GENERAL ELECTRIC PART No.
X11		2092055-0003					1N34A8
X12		2092055-0001					1N34A8
X13		2092055-0001					1N34A8
X14		2092055-0007					1N34A8
X15		2092055-0007					1N34A8
X16		2092055-0710					1N34A8

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		BENDIX PART No.	REPLACEMENT DATA				SPRAGUE PART No.
	CAP.	VOLT.		AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	
C1A	500	16	2091503-0711	PWHS-54-18				TVLS3020.6*
B	400	16						
C	600	8						
C2	50	3	2093386-0702	BCD8050	NLW50-3	MT1-16	PET1575	VL-1045
C3	60	3	2093667-0707	CRE218A	NLW75-3	MT1-16	MTA60D3	TE-1059

① Part Number 2091503-0710 (500-250@16V 500 @ 6V) Used in some versions.
 * Not normally in distributor's stock. Available thru distributor on order to manufacturer.

CAPACITORS

ITEM No.	RATING		REMARKS	REPLACEMENT DATA					
	CAP.	VOLT.		AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C10	51	N750	*		TCN-51		*	*	10TCU-Q50
C11	12	NPO	*		TCZ-12	CZ601CG120J	CCTO-120	CNO412	10TCC-Q12
C12	4-30		093114-0002						
C13	3.9	NPO	*						10TCC-V39
C14	.005			BPD-005	DD-502	BYX601ZU502P	CCD-502	B250	5HK-D50
C15	10-50		093115-0001						
C16	56	NPO	*		TCZ-56		CCTO-560	CNO456	10TCC-Q56
C17	6.8		*	NPO-DI 6.8	DTZ-6R8	CZ601CH6R8D	CCTO-6R8	CNO568	10TCC-V68
C18	.75 pf		*	NPO-DI 1.0	TCZ-1			CNO510	10TCC-V10
C19	220		*	DI-220	DD-221	JB601YP221K	CCD-221	JF220	10TS-T22
C20	.001		*	BPD-001	DD-102	BYZ601ZU102M	CCD-102	B210	5HK-D10
C21	.005		*	BPD-005	DD-502	BYX601ZU502P	CCD-502	B250	5HK-D50
C22	.005		*	BPD-005	DD-502	BYX601ZU502P	CCD-502	B250	5HK-D50
C23	2.2	NPO	*	NPO-DI 2.2	DTZ-2R2	CZ601CJ2R2D	CCTO-2R2	CNO522	10TCC-V22
C24	12	N220	*				*	*	10TCR-Q12
C25	1-7		093105-0001						
C26	4.3	NPO	093135-0706						
C27	.005		*	BPD-005	DD-502	BYX601ZU502P	CCD-502	B250	5HK-D50
C28	.005		*	BPD-005	DD-502	BYX601ZU502P	CCD-502	B250	5HK-D50
C29	1pf		*	NPO-DI 1.0	TCZ-1			CNO510	10TCC-V10
C30	25-125		093114-0705						
C31	.0016		*	DI-1800	CF-182	JBX601YP182K	CCS-182	GP218	10TS-D18
C32	39	N750	*		TCN-39		CCTN-390	CNT439	10TCU-Q39
C33	.005		*	BPD-005	DD-502	BYX601ZU502P	CCD-502	B250	5HK-D50
C34A	305-375		092422-0708						
B	180								
C	260-350								
C35	1.8		*	NPO-DI 2.2	DTZ-2R2	CZ601CJ2R2D	CCTO-2R2	CNO522	10TCC-V22
C36	.0068	100V	*	DBE6D68	CPR-6800J	WMF1D68	6DP-1-682	PVC4268	6PS-D68
C37	1pf		*	NPO-DI 1.0	TCZ-1			CNO510	10TCC-V10
C38	150	N600	*				*	*	
C39	.01	100V	*	DBE4S1	CPR-10000J	WMF1S1	IDP-1-103	PVC211	4PS-810
C40	1pf		*	NPO-DI 1.0	TCZ-1			CNO510	10TCC-V10
C41	.33 pf		093231-2338*						
C42	.005		*	BPD-005	DD-502	BYX601ZU502	CCD-502	B250	5HK-D50
C43	.01		*	BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-810
C44	.0012		*	SI-1200	DD-122	JB601YP122K	CCD-122	GP212	5GA-D12
C45	.01		*	BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-810
C46	.0068	100V	*	DBE6D68	CPR-6800J	WMF1D68	6DP-1-682	PVC4268	6PS-D68
C47	.05		*	TTD-05	HOV101ZV503Z			TA150	TH-850
C48	.05	100V	*	P288N-05	DF-503	PM285	4DP-3-503	PVC215	2TM-850
C49	.05	100V	*	P288N-05	DF-503	PM285	4DP-3-503	PVC215	2TM-850
C50	.05		*	TTD-05	HOV101ZV503Z			TA150	TH-850
C51	.005		*	BPD-005	DD-502	BYX601ZU502P	CCD-502	B250	5HK-D50

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.

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.	
C52	.012	* #093050-0002 #093050-0002 #093050-0002	DBE6812	CPR-10000J	WMF1812	6DP-2-123	PVC6112	6P8-812	
C53	.2		100V	DBE481	UK20-204 CPR-10000J	WMF181	1DP-1-103	MAG25022 PVC211	HY-325 4P8-810
C54	.01								
C55	275								
C56	275								
C57	275								

* Not normally in distributor's stock. Available thru distributor on order to manufacturer.
 ◊ Nominal Value. † Bendix Part Number.

CONTROLS

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

ITEM No.	USE	RESIST-ANCE	REPLACEMENT DATA				
			BENDIX PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1	Tone, Volume/Switch	250K 150K Tap @ 75K	#093812-0702 ①				
	Tone, Volume/Switch	250K 150K Tap @ 75K	#093812-0704 ②				
R2	Fader	50Ω ZW	#093807-0704 ①				
	Fader	50Ω ZW	#093807-0705 ②				

① Used in Model F5TBF.

② Used in Model TOB5TBS.

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
R47	50Ω (Cold) Thermistor			#20629-0018	R48	.5Ω (PTC)			#090948-0027

† Bendix Part Number.

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					
		BENDIX PART No.	MEISSNER PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.
L1	RF Choke (2uh)	2092210-0007	19-1002	BC-563	74F226AP	RTC-8517	TA812
L2	FM Antenna	①					
L3	FM RF	①					
L4	10.7MC Trap (1uh)	2092210-0005	19-1000	BC-561	4602	RTC-8515	T855
L5	FM Osc.	①					
L6	1st. FM IF	2092421-0715					
L7	2nd. FM IF	2092421-0012					
L8	AM Antenna	①					
L9	3rd. FM IF	2092421-0013					
L10	AM RF	①					
L11	RF Choke (9uh)	2092210-0008	19-1005	BC-566	4612	RTC-8522	T860
L12	4th. FM IF	2092421-0014					
L13	AM Osc.	①					
L14	1st. AM IF	2092419-0713					
L15	Limiter	2092421-0010					
L16	2nd. AM IF	2092419-0714					
L17	Discriminator	2093856-0701					

① Part of M2.

FILTER 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.	
L18	960ma	.1Ω	1.2MH	2092050-0717	C-4095 ①	TC-1 ①	TR-159 ①	TY16XT ①	① Fabricate Mounting.

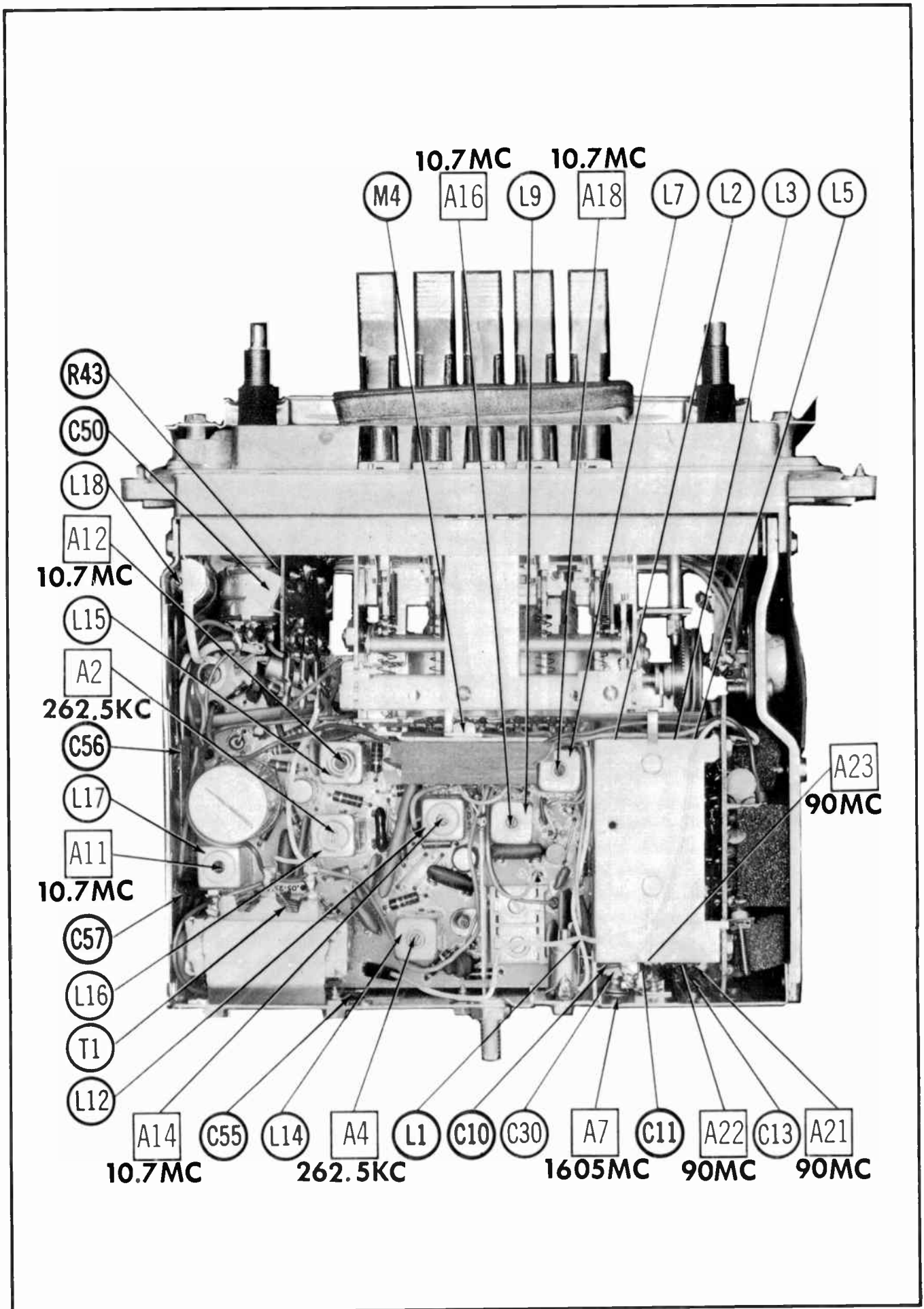
TRANSFORMER (AUDIO OUTPUT)

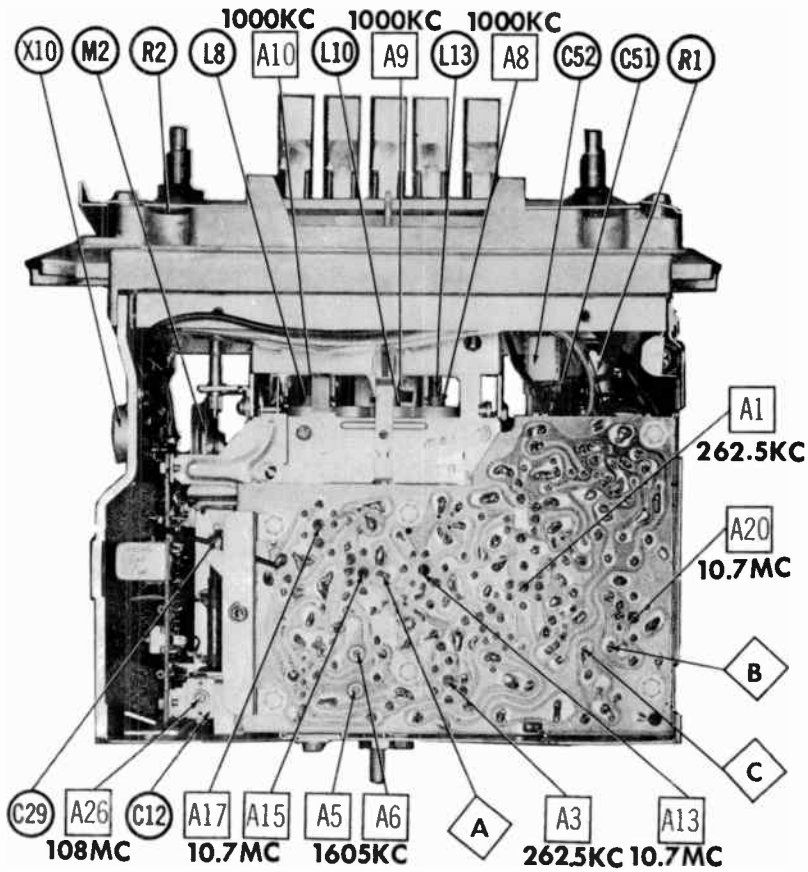
ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC.	BENDIX PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
	T1	12Ω	Tap @ 8Ω	2092599-0703				

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		BENDIX PART No.	QUAM PART No.	
SP1	4" x 10" PM 8Ω	2093949-0701	410A2Z8	

FORD MODELS F5TBF, TOB5TBS





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.

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	BENDIX PART NO.	REPLACEMENT DATA
K1	IF Network	470Ω, 2200Ω, 2200Ω, .01mfd., .01mfd.	2093109-0702	
K2	IF Network	150Ω, 4700Ω, 330pf., .01mfd.	2093110-0702	
K3	AM Det. Network	4700Ω, 220pf., .2mfd.	2093112-0002	
K4	Tone Comp.	1000Ω, 27K, .0022mfd., .0022mfd.	2093852-0701	
K5	Biassing	220Ω, 330Ω, 1200Ω, 1800Ω, 8200Ω, 10K, 27K.	2093855-0701	

FUSE DEVICES

ITEM No.	TYPE	RATING	REPLACEMENT DATA						
			PART No.		LITTELFUSE PART No.		BUSS PART No.		
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER	
M1	SFE	14Amp.		In Fuse Block	307014			SFE 14	

MISCELLANEOUS

ITEM No.	PART NAME	BENDIX PART No.	NOTES
M2	Tuner, Complete	2093778-0702	Model F5TBF
	AM-FM Tuner Coil Assembly	2093775-0702	Model TOB5TBS
	AM Tuner Coil Assembly	2090131-0081	Model F5TBF
	AM Tuner Coil Assembly	2090131-0082	Model TOB5TBS
M3	FM Tuner Assembly	2093394-0704	
M4	Selector Switch	2092719-0701	

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	MODEL	PART No.	ITEM	MODEL	PART No.
Escutcheon	F5TBF	2093777-0001	Dial Pointer	F5TBF	2090129-0062
Escutcheon	TOB5TBS	2093943-0501	Dial Pointer	TOB5TBS	2090129-0049
Dial Glass	TOB5TBS	2093813-0001	Pushbutton Assembly	F5TBF	2093773-0502
Dial Scale	F5TBF	2093779-0001	Pushbutton Assembly	TOB5TBS	2093773-0504
Dial Scale	TOB5TBS	2093850-0501			



PHOTOFACT[®] with

CIRCUITRACE[®]



TRADE NAME: Mack Model U3MMT(204Sx28)
 (Mack Trucks)
 SUPPLIER: For Current Address, See Master Index.
 TYPE SET: 6 Transistor AM Receiver
 POWER SUPPLY: 12 Volt Storage Battery
 RATING: .760 Amp. @ 12.6 Volts DC
 TUNING RANGE: BROADCAST 540-1615KC

MACK MODEL U3MMT

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

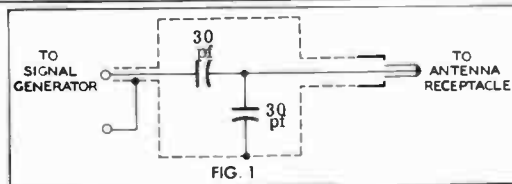
GENERAL CEMENT: 8290, 8868, 9087

WALSCO: 2525, 2528, 2587

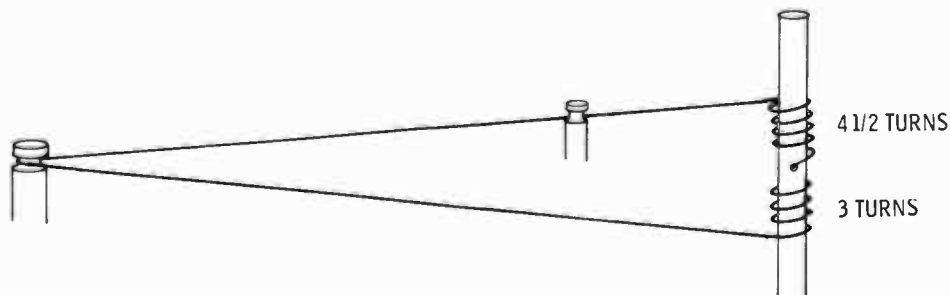
A5, A6, A7.

	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 coll.	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 1400KC and adjust A7 for maximum output.

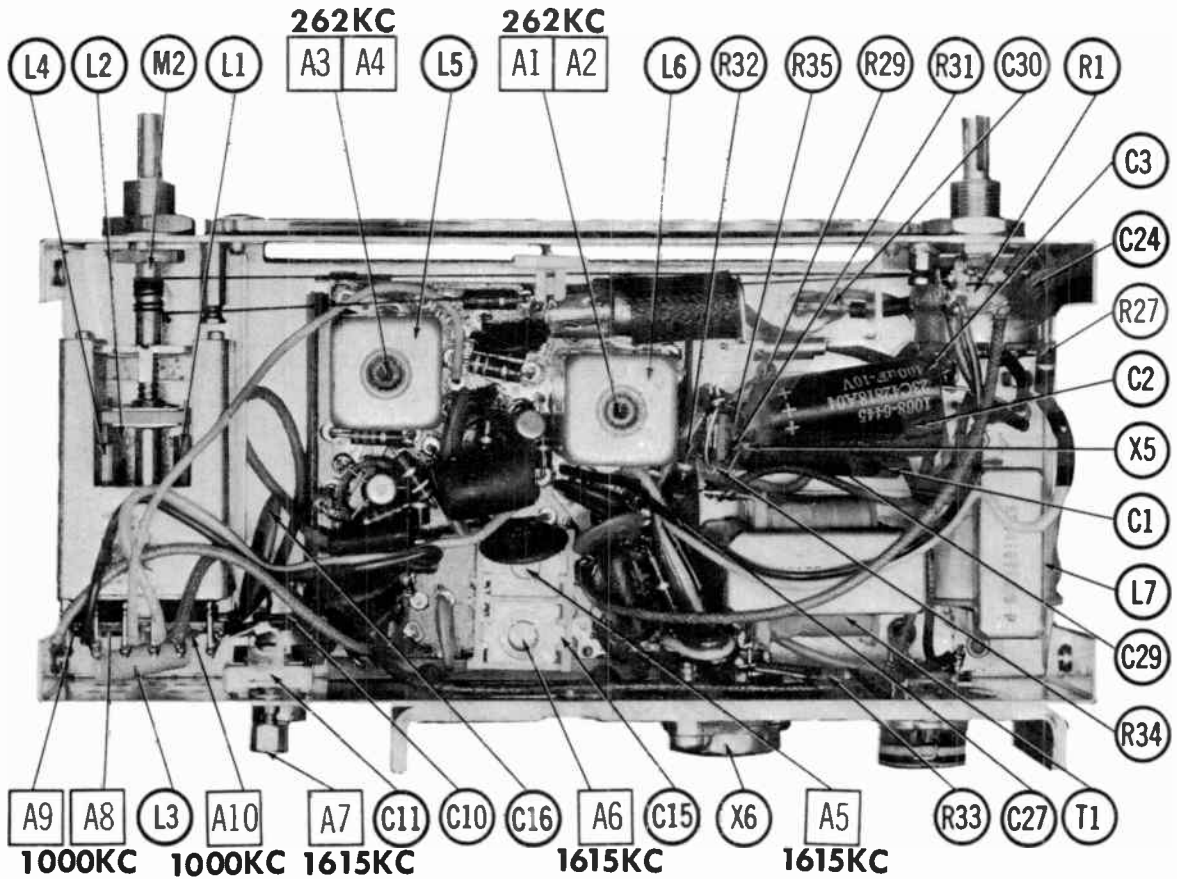


DIAL CORD STRINGING



TUNING SHAFT FULLY COUNTER-CLOCKWISE

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.

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	28A7Z	RF Amp.	D6-25	GE-1	SK-3005	PNP
X2	28A7Z	Conv.	D6-25	GE-1	SK-3005	PNP
X3	28A7Z	IF Amp.	D6-25	GE-1	SK-3005	PNP
X4	M54	1st. AF Amp.	D6-46	GE-10		NPN
X5	M54	2nd. AF Amp.	D6-46	GE-10		NPN
X6	2N17B	Output	D6-520	GE-3	SK-3009	PNP

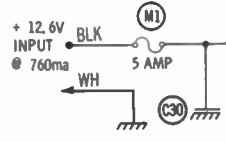
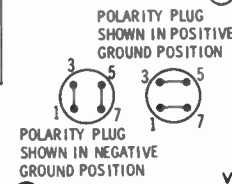
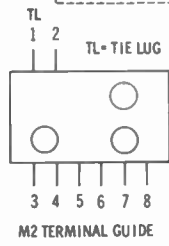
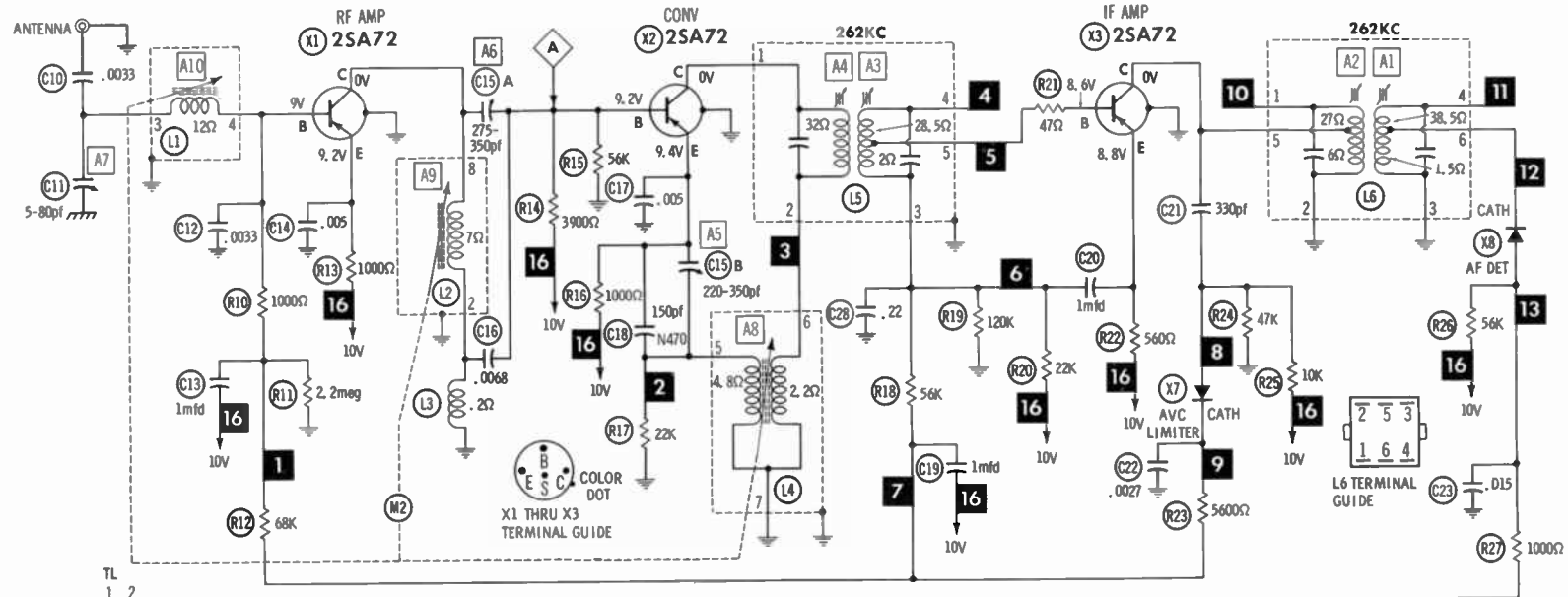
•When replacing, apply silicon grease to both sides of insulator. Tighten mounting screws securely.

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MEASURED CURRENT	ORIGINAL Part or Type No.	RECTIFIERS				DIODES
			GENERAL ELECTRIC PART No.	MALLORY PART No.	RCA PART No.	SARKES TARZIAN PART No.	GENERAL ELECTRIC PART No.
X7		1N139					1N295
X8		1N139					1N295

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		MOTOROLA PART No.	REPLACEMENT DATA				
	CAP.	VOLT.		AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	SPRAGUE PART No.
C1	400	16	23C41928A15	PRS1220	BR500-15	QT1-30	TC1505	TVA-1162
C2	400	16	23C41928A15	PRS1220	BR500-15	QT1-30	TC1505	TVA-1162
C3	400	10	23C42818A04 (23C42818A15) (Alternate)	PRS1220	BR500-15	QT1-30	TC1505	TVA-1162

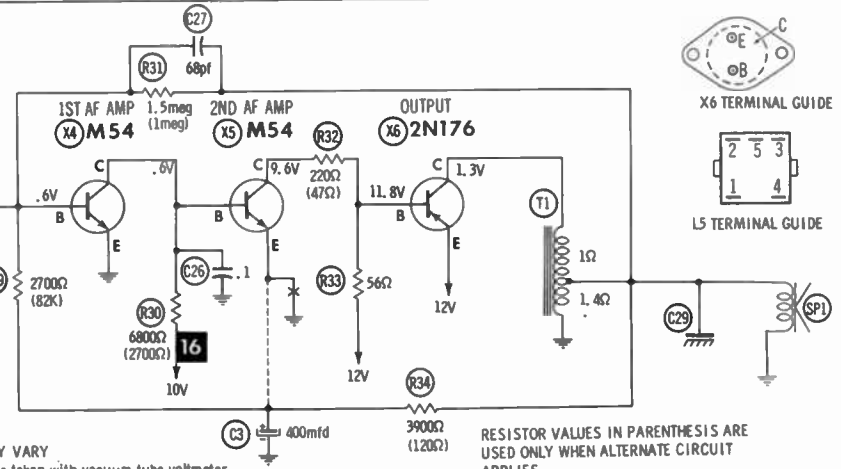


Resistors are 1/2 watt or less and rated 10% or 20% unless otherwise indicated.

A PHOTOFAC STANDARD NOTATION SCHEMATIC with **CIRCUITRACE**

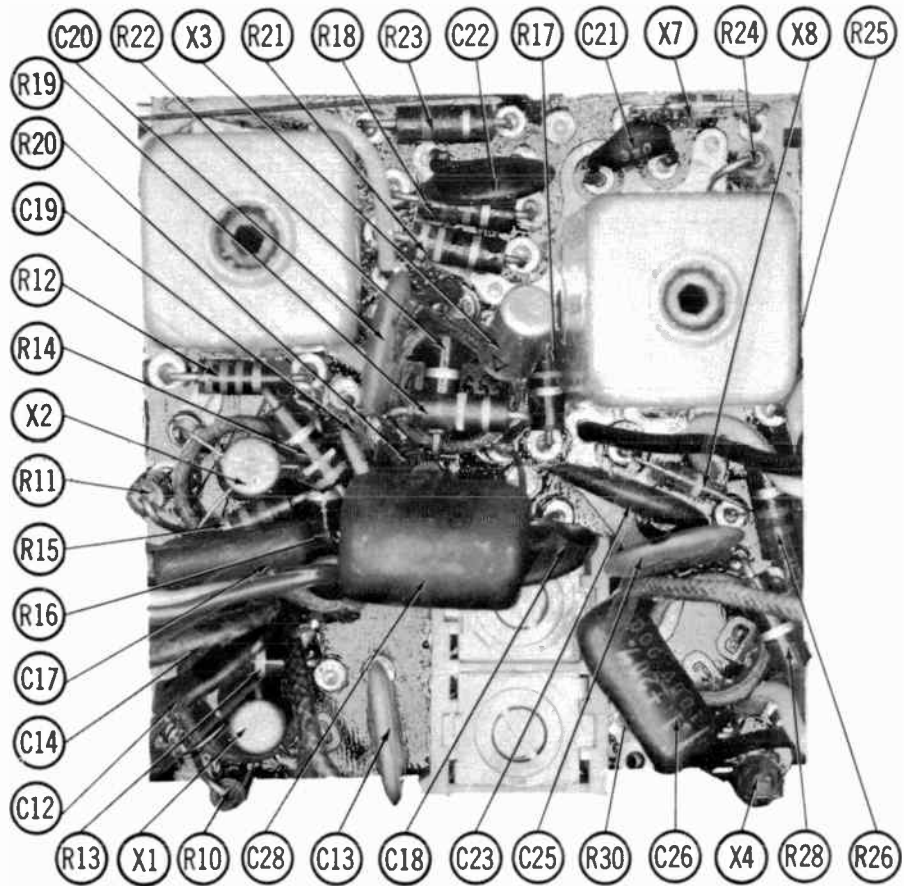
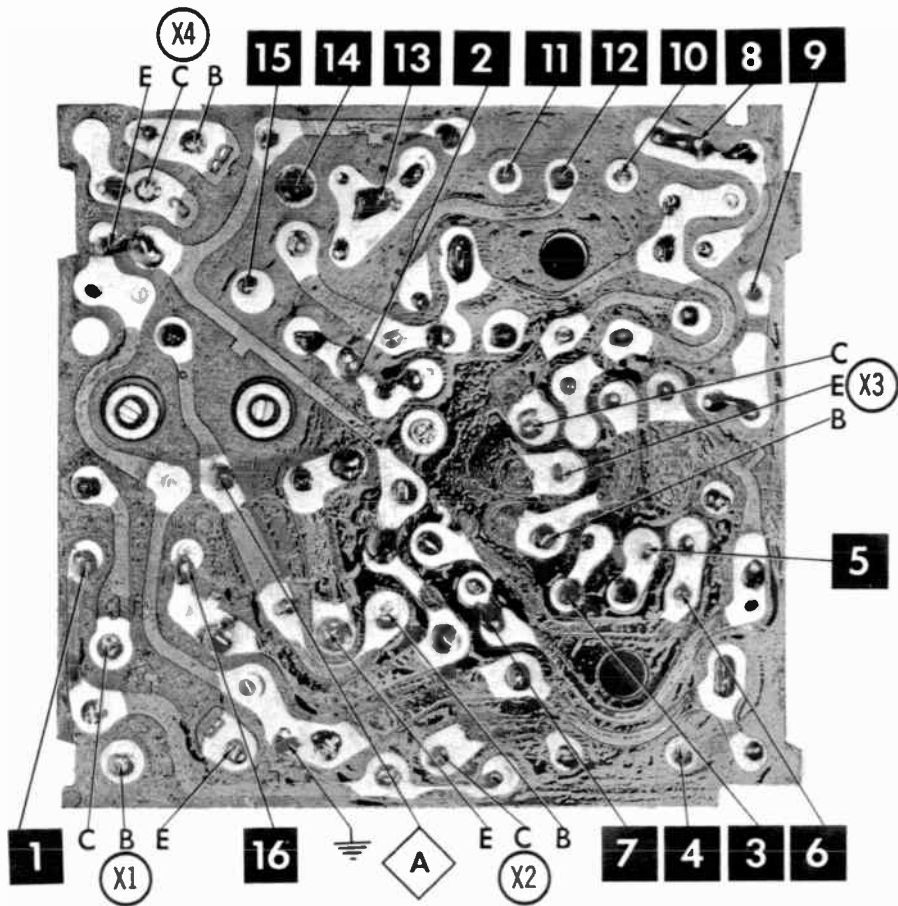
© Howard W. Soms & Co., Inc. 1965

- ★ 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.



RESISTOR VALUES IN PARENTHESES ARE USED ONLY WHEN ALTERNATE CIRCUIT APPLIES.

MACK MODEL U3MMT



MACK MODEL U3MWT

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.

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	.0033	#20K534810	BPD-0033	DD-332	BY8601ZU332P	CCD-332	B233	5HK-D33		
C11	5-80									
C12	.0033			BPD-0033	DD-332	BY8601ZU332P	CCD-332	B233	5HK-D33	
C13	1mfd				UK-105	HXC3ROXR225P		MAG31	HY-135	
C14	.005			BPD-005	DD-502	BYX601ZU502P	CCD-502	B250	5HK-D50	
C15A	275-350		#20C40481A00							
C15B	220-350									
C16	.0068				DI-6800	DD-682	BYX601ZU682P	CCD-682	GP268	10TS-D68
C17	.005			100V	DBE6D5	CPR-5000J	DPMS6D5	1DP-1-502	PVC625	6PS-D50
C18	150			N470				*	*	10TCT-T15
C19	1mfd				UK-105	HXC3ROXR225P		MAG31	HY-135	
C20	1mfd				UK-105	HXC3ROXR225P		MAG31	HY-135	
C21	330			DI-330	DD-331	JBZ601YP331K	CCD-331	JF333	10TS-T33	
C22	.0027			BPD-0022	DD-222	BYX601ZU222P	CCD-222	B222	5HK-D22	
C23	.015			BPD-015	DD-153	MLV501ZV153Z	CCD-153	GP115	10TS-815	
C24	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-810		
C25	1mfd			UK-105	HXC3ROXR225P		MAG31	HY-135		
C26	.1	100V	DBE2P1		DPMS2P1	1DP-2-104	PVC101	2PB-P10		
C27	68		DI-68	DD-680	JBZ601YP680K	CCD-680	GP468	5GA-Q68		
C28	.22	100V	DBE2P22		DPMS2P22	1DP-3-224	PVC1022	2PB-P22		
C29		#64A41668A03								
C30		#64A41668A03								

* Not normally in distributor's stock. Available thru distributor on order to manufacturer.
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.	
R1	Volume, Switch	10K	18C42352A03	F2-10K, SF8212, KR-4, BA008, CA005,			B13-116, TM8, QCB3①, SK-9, 76-1 or (BU3, CF61, 884, GC)	

① Use QCB3 instead of Tab Mount Plate in TM8.

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					
		MOTOROLA PART No.	MEISSNER PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.
L1	Antenna						
L2	RF						
L3	Image Trap (1.5uh)	24C40788A04	19-1001	BC-562	4604	RTC-8516	T856
L4	Osc.						
L5	Input IF	24D41583A02					
L6	Output IF	24D41583A01					

① Part of M2, or Tuning Coil Assembly, Part #1V42200A98.

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.	
L7	760ma	.8Ω	10MH	25C41871A06	C-4095	TC-2	TR-154	TY17XT	

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.	
	T1	12Ω	Tap @ 8Ω	25C41985A03				

SPEAKER

ITEM No.	TYPE	8Ω	REPLACEMENT DATA		NOTES
			MOTOROLA PART No.	QUAM PART No.	
SP1	4" x 8" PM	8Ω	50C41743A01	48A1Z8	

FUSE DEVICES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M1	AGA	5A	65R122345	9C41095A18	301005	155004A	AGA5	HAF

MISCELLANEOUS

ITEM No.	PART NAME	MOTOROLA PART No.	NOTES
M2	Tuner Tuning Coils Assembly	77D42322A01 1V42200A98	(MT-471) Complete

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
Dial Glass Knob, Tuning or Volume	34B42361A01 36B512985	Dial Pointer	52B42386A01



PHOTOFACT[®] with

CIRCUITRACE[®]

TRADE NAME: Motorola Models:
 CE65A (1965 Chevelle)
 CR65A (1965 Corvair)
 CT65A (1965 Chevrolet)
 OE65A (1965 Oldsmobile)
 PC65A (1965 Pontiac)
 TM15A (Universal)

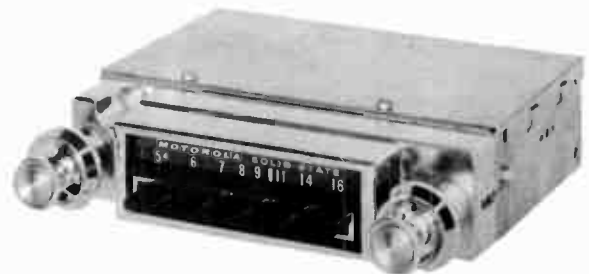
SUPPLIER: For Current Address, See Master Index.

TYPE SET: 6 Transistor AM Receiver

POWER SUPPLY: 12 Volt Storage Battery

RATING: .300 Amp. @ 12.6 Volts DC

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:

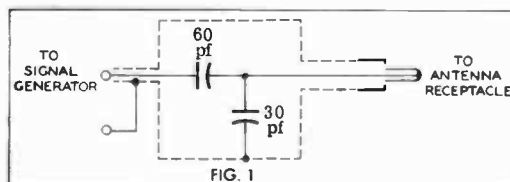
A1 thru A4. GENERAL CEMENT: 8606, 8606L, 8869
 WALSCO: 2543, 2544, 2588

A5 thru 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.	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 1400KC and adjust A8 for maximum output.						

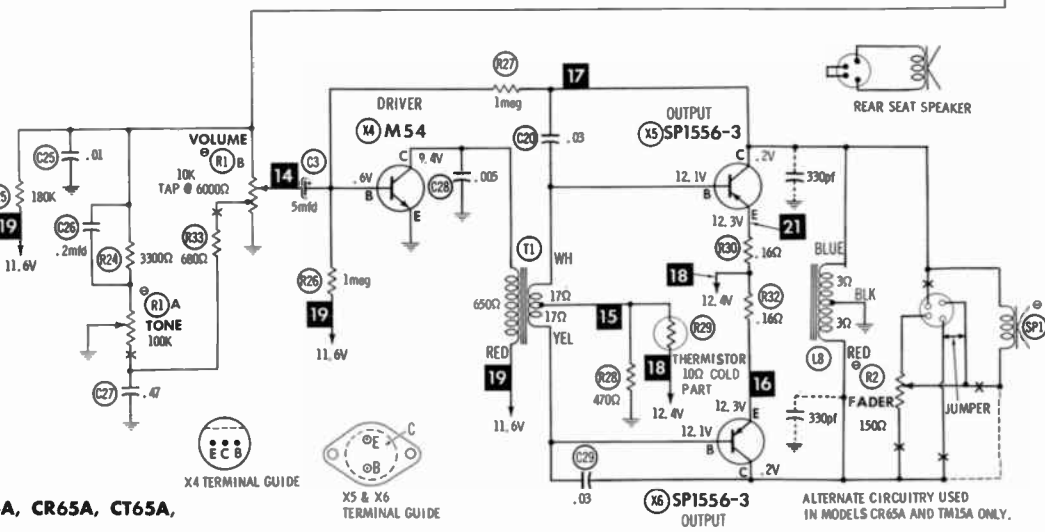
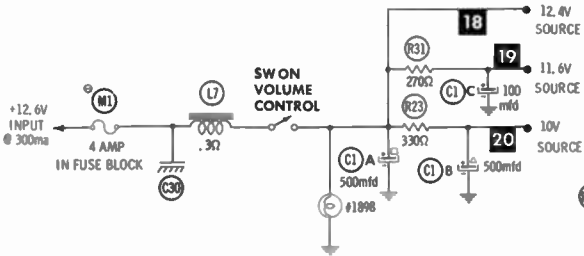
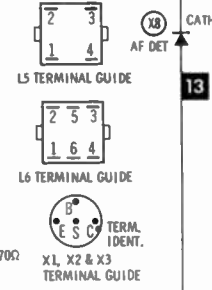
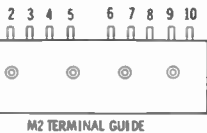
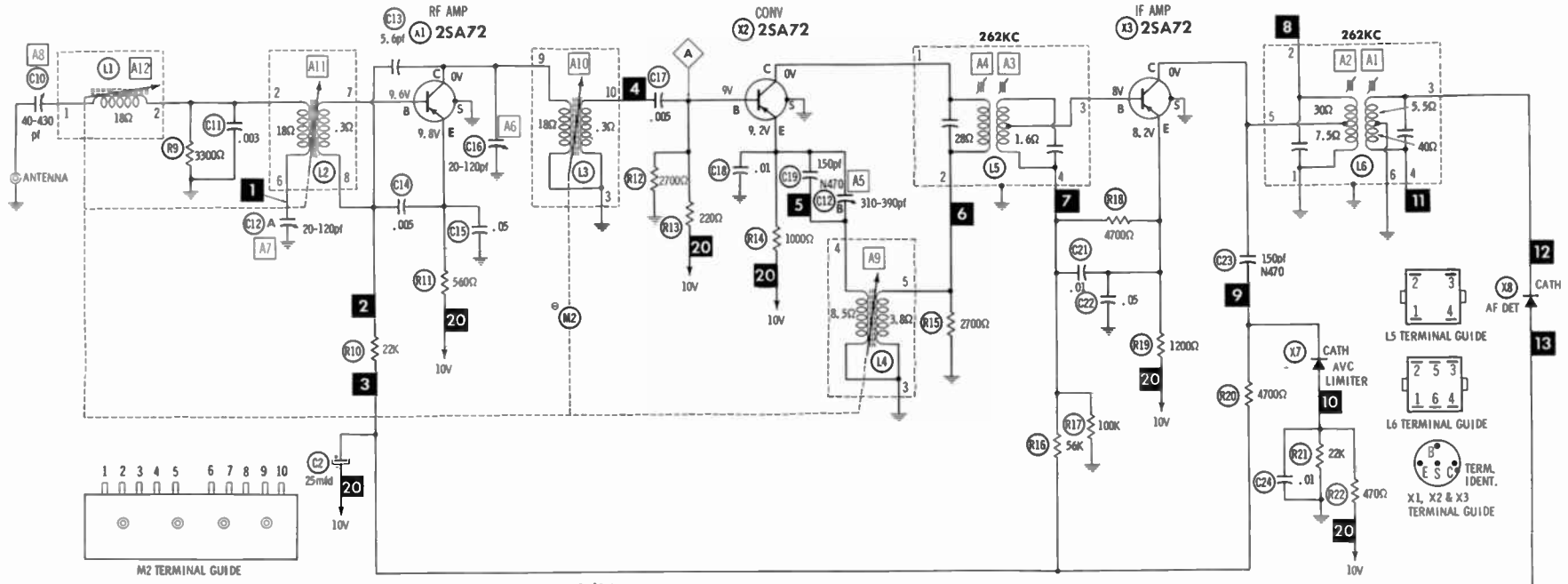
PUSH-BUTTON ADJUSTMENT

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



MOTOROLA MODELS CE65A, CR65A, CT65A, OE65A, PC65A, TM15A

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



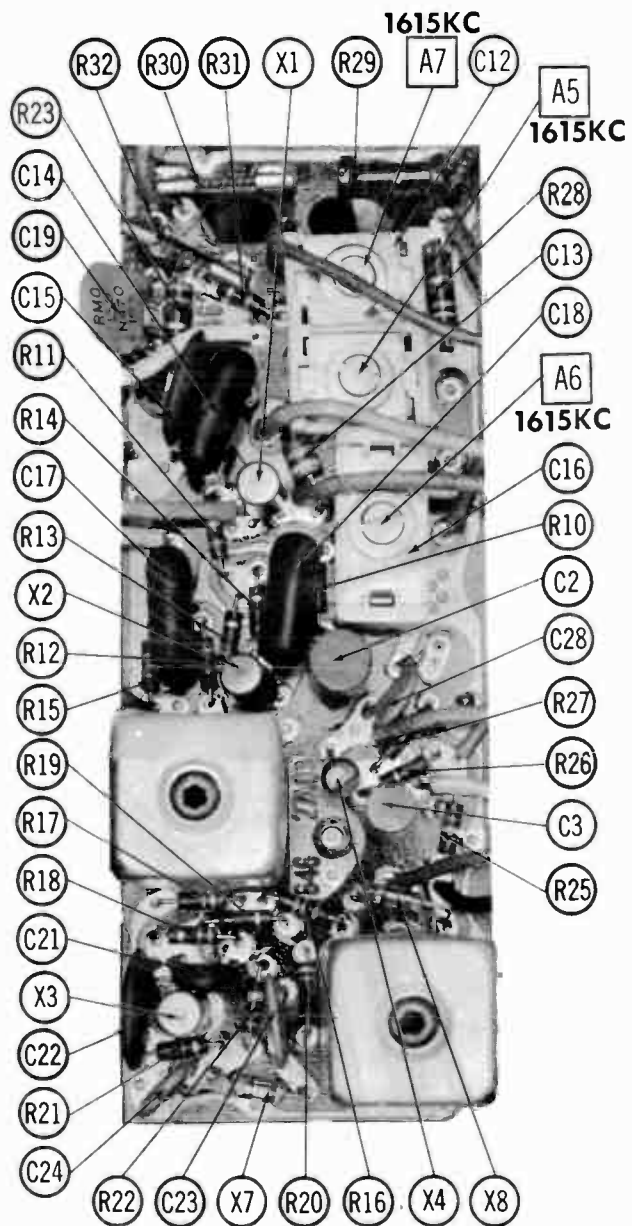
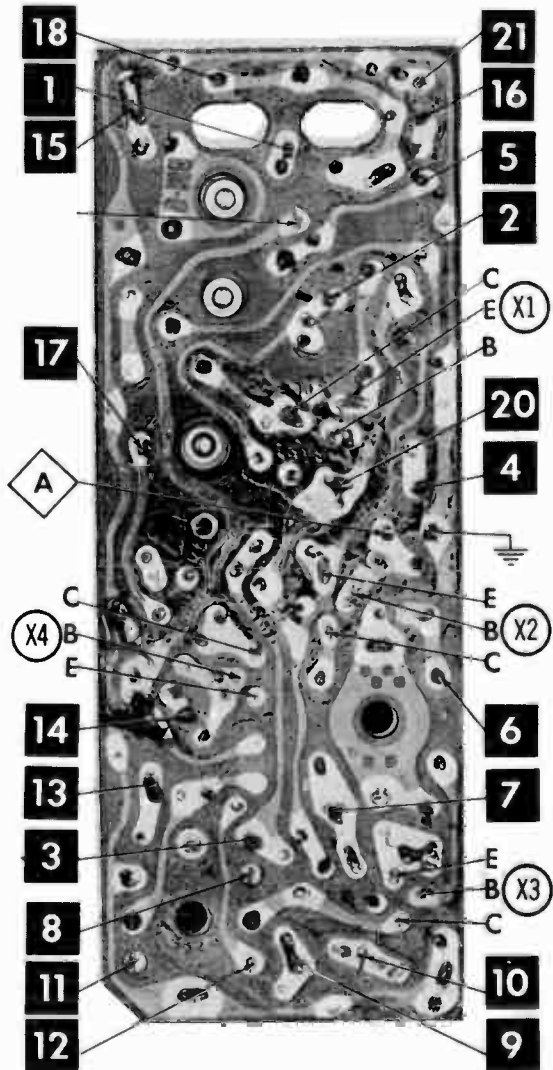
Resistors are 1/2 watt or less and rated 10% or 20% unless otherwise indicated.

- ⊙ 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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MOTOROLA MODELS CE65A, CR65A, CT65A, OE65A, PC65A, TM15A



MOTOROLA MODELS CE65A, CR65A, CT65A, OE65A, PC65A, TM15A

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	2SA72	RF Amp.	D8-25	GE-1	SK-3008	PNP
X2	2SA72	Conv.	D8-25	GE-1	SK-3008	PNP
X3	2SA72	IF Amp.	D8-25	GE-1	SK-3008	PNP
X4	M54	Driver	D8-48	GE-10		NPN
X5	SP1558	Output	D8-520	GE-3		PNP *
X6	SP1558	Output	D8-520	GE-3	SK-3009	PNP *

* When replacing, apply silicon grease to both sides of insulator. Tighten mounting screws securely.

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MEASURED CURRENT	ORIGINAL Part or Type No.	RECTIFIERS				DIODES
			GENERAL ELECTRIC PART No.	MALLORY PART No.	RCA PART No.	SARKES TARZIAN PART No.	
X7		1N139					1N295
X8		1N139					1N295

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		MOTOROLA PART No.	REPLACEMENT DATA				
	CAP.	VOLT.		AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A	500	16	23C64722A02	AFH3-00-94.5	CC0013		PPP300, 18	PCLB-3026, 11*
B	500	16						
C	100	16						
C2	25	3	23C64612A02	BCDS025	NLW25-3	MT1-13	PET1960	VL-1041
C3	5	3	23C64612A01	BCDS005	NLW5-15	MT1-3	PET1210	VL-1055

* 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	40-430	200V	#20B64871A01						
C11	.003		DBE6D3	CPR-3000J	DPMS6D3	6DP-1-302	PVC423	6PS-D30	
C12A	20-120	200V	#20C64618A01						
B	310-390		DBE6D5	CPR-5000J	DPMS6D5	1DP-1-502	PVC625	10TCC-V50	
C13	5.6	200V		TTD-05	CK-503	H5	TA150	6PS-D50	
C14	.005		DBE6D5	CPR-5000J	DPMS6D5	1DP-1-502	PVC625	TG-850	
C15	.05	200V		TTD-05	CK-503	H5	TA150	10TCT-T15	
C16	20-120		#20B64617A01	DBE6D5	CPR-5000J	DPMS6D5	1DP-1-502	PVC625	6PS-D50
C17	.005	200V		DBE481	CPR-10000J	DPMS481	1DP-1-103	PVC211	4PS-810
C18	.01		DBE481	CPR-10000J	DPMS481	1DP-1-103	PVC211	10TCT-T15	
C19	150	N470		TTD-03	CK-303			TG-830	
C20	.03		BPD-01	DD-103	BYA1081	CCD-103	B110	5HK-810	
C21	.01	N470		BPD-01	DD-103	BYA1081	CCD-103	B110	
C22	.05		TTD-05	CK-503	BYA1081	CCD-103	B110	5HK-810	
C23	150	N470		TTD-05	CK-503	H5	TA150	TG-850	
C24	.01		BPD-01	DD-103	BYA1081	CCD-103	B110	10TCT-T15	
C25	.01	N470		BPD-01	DD-103	BYA1081	CCD-103	B110	
C26	.2		UK20-204	HCC25224Z				5HK-810	
C27	.47	①		UK10-404	HCC10474Z			HY-325	
C28	.005		BPD-005	DD-502	BYA10D5	CCD-502	B250	5HK-D50	
C29	.03	①		TTD-03	CK-303			TG-830	
C30			#64A53017.6						

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

Motorola Part Number.

① Not used in Model TM15A.

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.	
R1	Tone Volume/Switch	100K	18C64588A07	F1-100K①, R16-10K, FFS204			† QJ-1923A	FA15L①, RU14T53, OS2250, IS2750, US41
		10K Tap @ 6000Ω	①	RFS212, KR-4				
	Tone Volume/Switch	100K	18C64588A06	F1-100K②, R16-10K, FFS203, RFS212, KR-4			▲ QJ-1925A	FA15L①, RU14T53, OS2187, IS2750, US41
		10K Tap @ 6000Ω	②					
	Tone Volume/Switch	100K	18C64588A05	F1-100K③, R16-10K, FFS202, RFS213, KR-4			• QJ-1926A	FA15L①, RU14T53, OS2125, IS2937, US41
	10K Tap @ 6000Ω	③						
Tone Volume/Switch	100K	18C64588A09	F1-100K④, R16-10K, FFS113, RFS205, KR-4			* QJ-1927A	FA15L①, RU14T53, OS1812A, IS2312, US41.	
	10K Tap @ 6000Ω	④						

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 (cont)

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.
R1 (cont)	Tone Volume/Switch	100K 10K Tap @ 8000Ω	18C64588A08 ⑤	F1-100K ①, R18-10K, FFS108, RFS201, KR-4		♦ QJ-1928A	FA15L ①, RU14T53, OS1500A, IS2062, US41
	Tone Volume/Switch	100K 10K	18C64668A03 ⑥	F2-100KR1-10K FFS114, RFS205, BA106, CA005, KR-4		† QJ-1929A	■ UE4453-S,
R2	Fader	150Ω 2W	18B64588A04 ①			WF1, SF12	
	Fader	150Ω 2W	18B64440A02 ②			WF1, SF11	
	Fader	150Ω 2W	18B64440A05 ④			WF1, SF7	
	Fader	150Ω 2W	18B64440A04 ⑤			WF1, SF5	

① Used in Model: CE65A ③ Used in Model: CT65A ⑤ Used in Model: PC65A
② Used in Model: CR65A ④ Used in Model: OE65A ⑥ Used in Model: TM15A

† Use Original Spring Mounting Clip.

† "CONCENTRIKIT" Equivalent: K8 ①, Kit with Base Elements and Shafts: B11-128, P17-206 (Panel)
B19-116X, R9-222 (Rear) 76-1 (Switch)

▲ "CONCENTRIKIT" Equivalent: K8 ②, Kit with Base Elements and Shafts: B11-128, P14-206 (Panel)
B19-116X, R9-222 (Rear) 76-1 (Switch)

▲ "CONCENTRIKIT" Equivalent: K8 ③, Kit with Base Elements and Shafts: B11-128, P22-203 (Panel)
B19-116X, R1-226 (Rear) 76-1 (Switch)

♦ "CONCENTRIKIT" Equivalent: K8 ④, Kit with Base Elements and Shafts: B11-128, P17-126 (Panel)
B19-116X, R9-208 (Rear) 76-1 (Switch)

♦ "CONCENTRIKIT" Equivalent: K8 ⑤, Kit with Base Elements and Shafts: B11-128, P22-115 (Panel)
B19-116X, R1-200 (Rear) 76-1 (Switch)

‡ "CONCENTRIKIT" Equivalent: K8 ⑥, Kit with Base Element and Shafts: B13-128, P17-118 (Panel) B11-116, R1-130 (Rear)
QCBS (Bushing) 76-1 (Switch)

"SNAPTROL" Equivalent: BU15, CF52, CR5, SF43, SR47, GC.
■ "STA-LOC" Equivalent: FJ15A, RU14L,
OS1437A, IS1937, US41

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
R29	10Ω (Cold) Thermistor			#6K544646	R32	.16Ω			#17B64753A01
R30	.16Ω			#17B64753A01					

Motorola Part Number.

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					
		MOTOROLA PART No.	MEISSNER PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.
L1	1st. Antenna	①					
L2	2nd. Antenna	①					
L3	RF	①					
L4	Osc.	①					
L5	Input IF	24B64614A01	16-8717			RTC-9408	
L6	Output IF	24B64614A03	16-8715	BC-639	6554	RTC-9405	

① Part of M2, or Coil Assembly Part #1V4170095.

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.	
L7	300ma	.3Ω	4MH	25B64747A01 (25B64747A03)	C-4095	TC-1	TR-157	TY18XT	

CHOKE (AUDIO OUTPUT)

ITEM No.	INDUCTANCE	REPLACEMENT DATA					NOTES
		MOTOROLA PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L8	120MH CT	25B64737A03 (25B64737A01)					

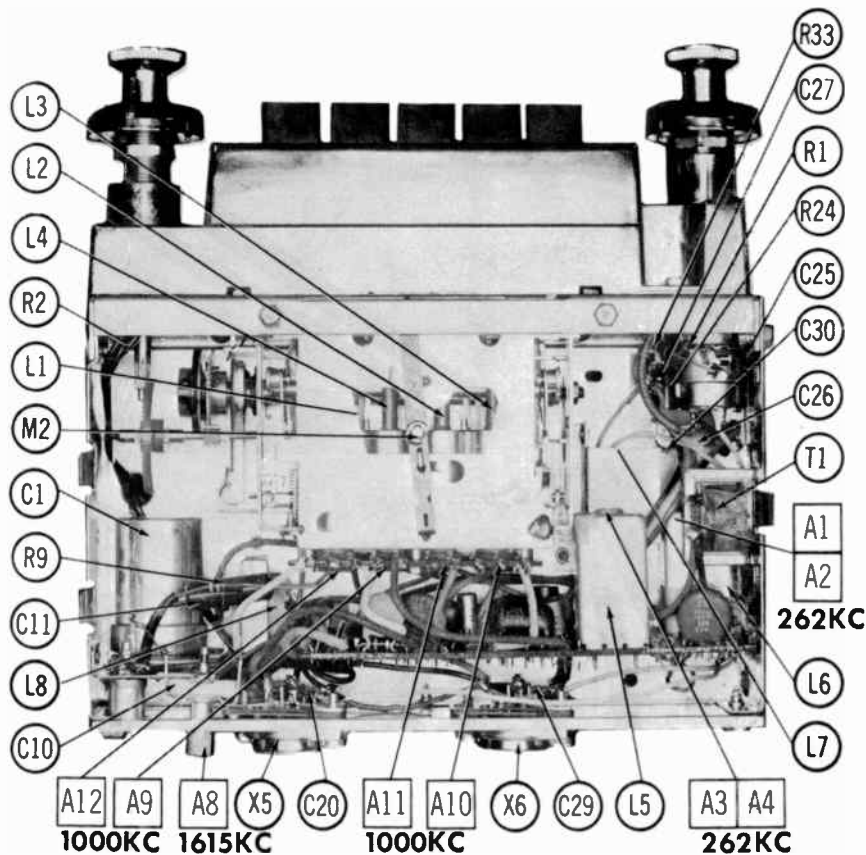
TRANSFORMER (DRIVER)

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	25B64638A02 (25B64638A01)					

SPEAKER

ITEM No.	TYPE		REPLACEMENT DATA		NOTES
			MOTOROLA PART No.	QUAM PART No.	
SP1	4" x 10" PM	40Ω	1C64458A01	410A2Z40	Model: CE65A
	8" x 9" PM	40Ω	1D64324A01	69A2Z40	Model: CR65A
	4" x 10" PM	40Ω	1C64290A01	410A2Z40	Model: CT65A
	4" x 10" PM	40Ω	1V64954A92	410A2Z40	Model: OE65A
	4" x 10" PM	40Ω	50D64373A02	410A2Z40	Model: PC65A
	4" x 10" PM	40Ω	50C64797A01	410A2Z40	Model: TM15A

MOTOROLA MODELS CE65A, CR65A, CT65A, OE65A, PC65A, TM15A



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.

FUSE DEVICES

ITEM No.	TYPE	RATING	REPLACEMENT DATA						
			PART No.		LITTELFUSE PART No.		BUSS PART No.		
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER	
M1	3AG 7AG 1AG	4Amp. 4Amp. 5Amp.	65R61688 ① 65S131812 ② 65R122345 ③	In Fuse Block In Fuse Block 9K543179	312004 303004 301005		155004A	AGC 4 AGW 4 AGA 5	HAF

① Used in Models: CE65A, CR65A, CT65A.

② Used in Models: OE65A, PC65A.

③ Used in Model: TM15A.

MISCELLANEOUS

ITEM No.	PART NAME	MOTOROLA PART No.	NOTES
M2	Tuner	77D41843A03	AT-539 Used in Model: CE65A
	Tuner	77D43039A01	AT-519 Used in Model: CR65A
	Tuner	77D43026A01	AT-517 Used in Model: CT65A
	Tuner	77D43039A02	AT-540 Used in Model: OE65A
	Tuner	77D41925A03	AT-541 Used in Model: PC65A
	Tuner	77D42935A01	AT-507 Used in Model: TM65A

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	MODEL	PART No.	ITEM	MODEL	PART No.
Escutcheon	CE65A	13E64288A01	Knob, Tone	OE65A	36C64275A01
Escutcheon	CR65A	13D64315A01	Knob, Tone	TM65A	36B543398
Escutcheon	CT65A	13D64331A02	Knob, Fader	OE65A	36C64275A02
Escutcheon	OE65A	13D64257A01	Knob, Dummy	TM65A	36K543399
Escutcheon	PC65A	13D64280A01	Pushbutton, 1st, 3rd, 5th.	CE65A	38C41815A02
Escutcheon	TM65A	13C64681A01	Pushbutton, 2nd, 4th.	CE65A	36C41815A01
Dial Scale	CE65A	34B64277A01	Pushbutton, 1st, 3rd, 5th.	CR65A	38C41815A02
Dial Scale	CR65A	34B64307A01	Pushbutton, 2nd, 4th.	CR65A	38C41815A01
Dial Scale	CT65A	34B64305A01	Pushbutton, 1st, 3rd, 5th.	CT65A	38C41815A02
Dial Scale	OE65A	34B64253A01	Pushbutton, 2nd, 4th.	CT65A	38C41815A01
Dial Scale	PC65A	34B64245A01	Pushbutton, 1st, 3rd, 5th.	OE65A	38C41815A02
Dial Scale	TM65A	34B64682A01	Pushbutton, 2nd, 4th.	OE65A	38C41815A01
Knob, Tuning or Volume	CE65A	36B64334A01	Pushbutton, 1st, 3rd, 5th.	PC65A	38C44097A03
Knob, Tuning or Volume	CR65A	36B64334A01	Pushbutton, 2nd, 4th.	PC65A	38C44097A01
Knob, Tuning or Volume	CT65A	36B64334A01	Pushbutton	TM65A	1V64965A20
Knob, Tuning or Volume	OE65A	36C64285A01	Dial Pointer	CE65A	1B40875A15
Knob, Tuning or Volume	PC65A	36B64428A01	Dial Pointer	CR65A	52C42082A17
Knob, Tuning or Volume	TM65A	36B543382	Dial Pointer	CT65A	52C42082A16
Knob, Tone or Fader	CE65A	36B64596A01	Dial Pointer	OE65A	52C42082A21
Knob, Tone or Fader	CR65A	36B64313A01	Dial Pointer	PC65A	1B40875A12
Knob, Tone or Fader	CT65A	36C64333A01	Dial Pointer	TM65A	1B40875A01
Knob, Tone or Fader	PC65A	36B64429A01	Printed Circuit Board		84C64627A03



PHOTOFACT[®] with

CIRCUITRACE[®]

TRADE NAME : Motorola Models;
 CE65M (1965 Chevelle)
 CK65M (1965 Chevrolet Truck)
 CR65M (1965 Corvair)
 CT65M (1965 Chevrolet)
 TM5M

SUPPLIER : For Current Address, See Master Index.

TYPE SET : 6 Transistor AM Receiver

POWER SUPPLY : 12 Volt Storage Battery

RATING : .300Amp. @ 12.6 Volts DC

TUNING RANGE : BROADCAST 540-1615KC

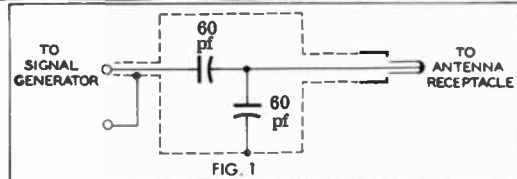


ALIGNMENT INSTRUCTIONS

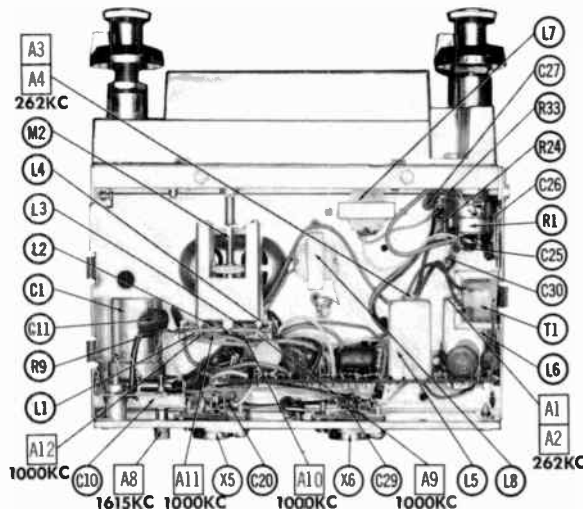
Check for specified source voltage.
 Use only enough generator output to provide a usable indication.
 Suggested Alignment Tools:

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

A5 thru 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 .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, 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 1400KC and adjust A8 for maximum output.						

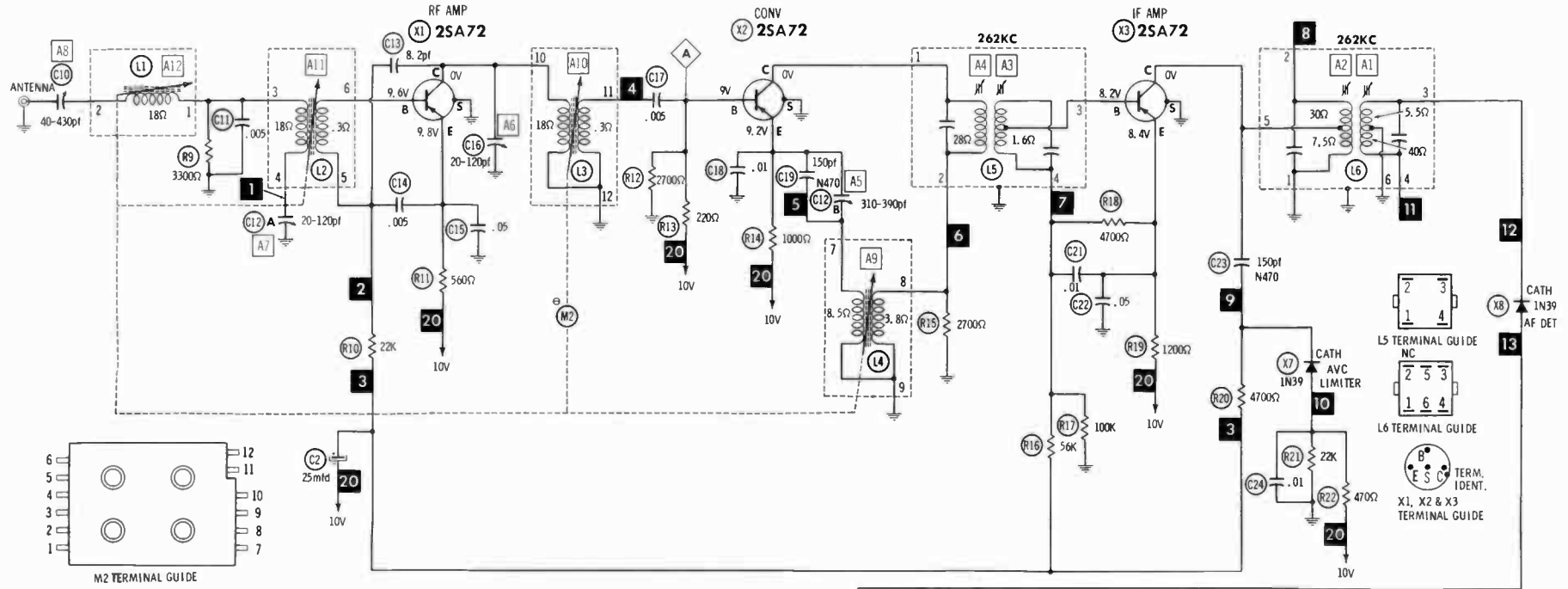


HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana

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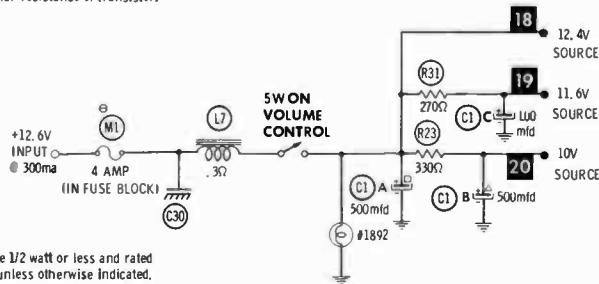
World Radio History

MOTOROLA MODELS CE/CK/CR/CT65M, TM5M



- ⊖ 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.

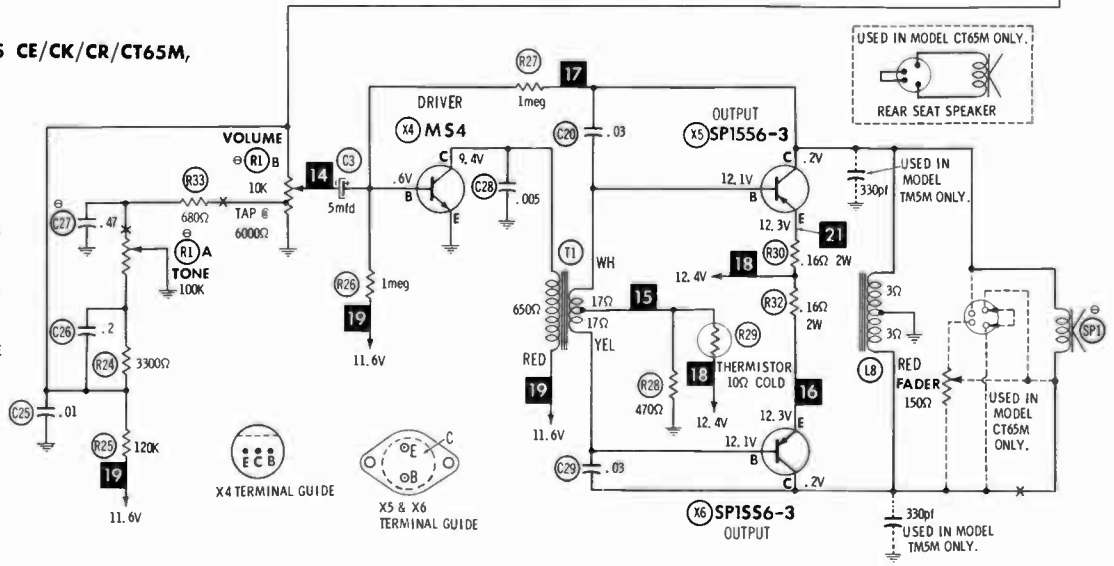
MOTOROLA MODELS CE/CK/CR/CT65M,

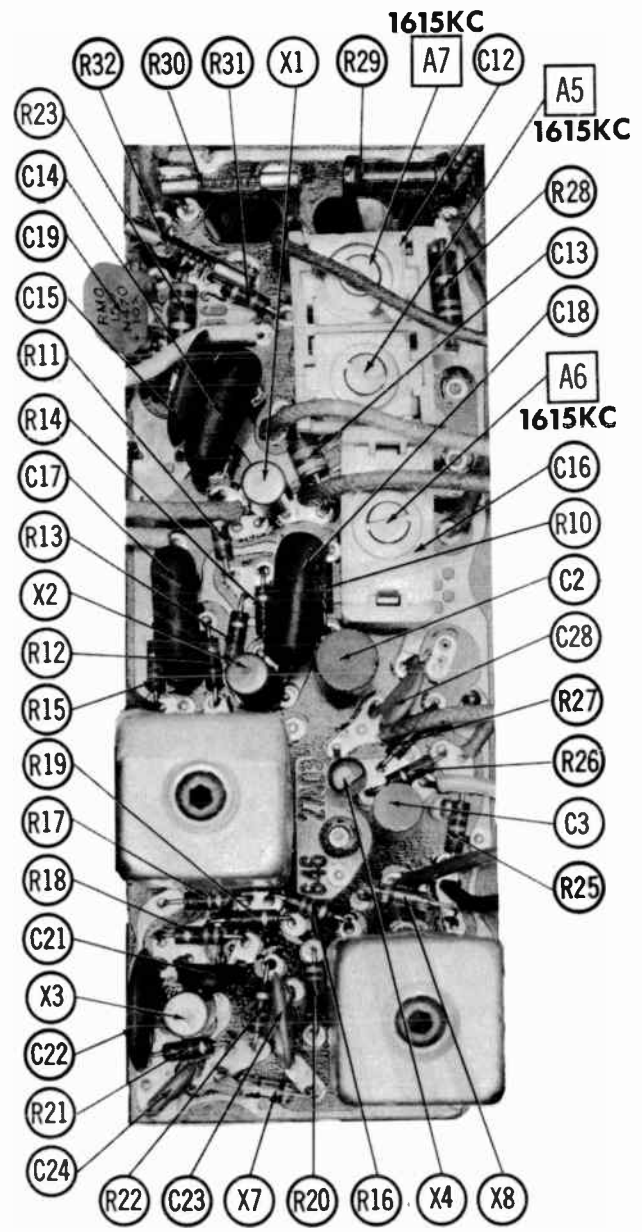
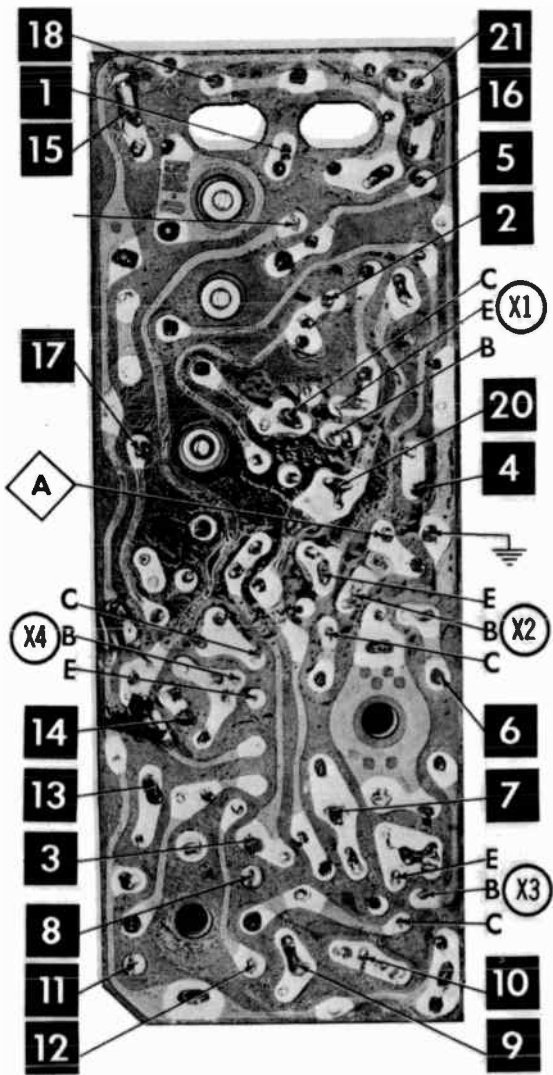


Resistors are 1/2 watt or less and rated 10% or 20% unless otherwise indicated.

A PHOTOFAC STANDARD NOTATION SCHEMATIC with **CIRCUITRACE**

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A Howard W. Sams **CIRCUITRACE** Photo

MOTOROLA MODELS CE/CK/CR/CT65M, T5SM

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.	D8-25	GE-1	SK-3008	PNP
X2	2SA72	Converter	D8-25	GE-1	SK-3008	PNP
X3	2SA72	IF Amp.	D8-25	GE-1	SK-3008	PNP
X4	M54	Driver	D8-46	GE-10		NPN
X5	SP15563	Output	D8-520	GE-3	SK-3009	PNP
X6	SP15563	Output	D8-520	GE-3	SK-3009	PNP

* When replacing, apply silicon grease to both sides of insulator. Tighten mounting screws securely.

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MEASURED CURRENT	ORIGINAL Part or Type No.	RECTIFIERS				DIODES
			GENERAL ELECTRIC PART No.	MALLORY PART No.	RCA PART No.	SARKES TARZIAN PART No.	GENERAL ELECTRIC PART No.
X7		1N139					1N295
X8		1N139					1N295

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA					
	CAP.	VOLT.	MOTOROLA PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A	500	16	23C64722A02	AFH3-00-94.5	CC0013		PFP300.18	PCLS-3026.11*
C1B	500	16						
C1C	100	16						
C2	25	3	23C64612A02	BCD8025	NLW25-3	MT1-13	PET1960	VL-1041
C3	5	3	23C84612A01	BCD8005	NLW5-15	MT1-3	PET1210	VL-1035

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

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	40-430	#20B64871A01						
C11	.005 200V		DBE8D5	CPR-5000J	DPMS8D5	1DP-1-502	PVC625	6PS-D50
C12A	20-120	#20C64618A01						
C13	8.2		NPO-D18.2					10TCC-V82
C14	.005 200V		DBE6D5	CPR-5000J	DPMS8D5	1DP-1-502	PVC625	6PS-D50
C15	.05		TTD-05	CK-503	HOV101ZV503Z		TA150	TG-850
C16	20-120	#20B64617A01						
C17	.005 200V		DBE6D5	CPR-5000J	DPMS8D5	1DP-1-502	PVC625	6PS-D50
C18	.01 200V		DBE4S1	CPR-10000J	DPMS4S1	1DP-1-103	PVC211	4PS-810
C19	150 N470					*		10TCT-T15
C20	.03		TTD-03	CK-303			B110	TG-830
C21	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-810
C22	.05		TTD-05	CK-503	HOV101ZV503Z		TA150	TG-850
C23	150 N470					*		10TCT-T15
C24	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-810
C25	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-810
C26	.2				UK20-204		MAG25022	HY-325
C27	.47	①			UK10-404		MAG12047	HY-330
C28	.005		BPD-005	DD-502		CCD-502	B250	5HK-D50
C29	.03		TTD-03	CK-303	BYX601ZU502P			TG-830
C30		#64A53017.6						

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

Motorola Part Number.

① Not used in Model TM5M.

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.
RIA	Tone Volume/Switch	100K	18C64588A07	F1-100K⑤, R16-10K, FFS204		† QJ-1923A	FA15L①, RU14T53, OS2250, IS2750, US41
		10K Tap @ 6000Ω	①	RFS212, KR-4			
	Tone Volume/Switch	100K	18C64588A01	F1-100K④, R16-10K, FFS201		* QJ-1727A	■ UE4449-S
		10K Tap @ 6000Ω	②	RFS210, KR-4			
	Tone Volume/Switch	100K	18C64588A06	F1-100K④, R16-10K, FFS203		▲ QJ-1925A	FA15L⑥, RU14T53, OS2187, IS2750, US41
		@ 6000Ω	③	RFS212, KR-4			
Tone Volume/Switch	100K	18C64588A05	F1-100K④, R16-10K, FFS202		♦ QJ-1926A	FA15L⑥, RU14T53, OS2125, IS2937, US41	
	@ 6000Ω	④	RFS215, KR-4				
Tone Volume/Switch	100K	18C64668A02	F2-100K, R1-10K, FFS112, RFS203, BA104, CA005, KR-4		†† QJ-1805A	■ UE4453-S	
	10K	⑤					
Fader		150Ω 2W	18B64440A02				

① Used in Model: CE65M.

② Used in Model: CT65M.

③ Used in Model: CK65M.

④ Used in Model: TM5M.

⑤ Used in Model: CR65M.

⑥ Use Original Mounting Clips.

† "CONCENTRIKIT" Equivalent: K8 ⑥ Kit with Base Elements and Shafts: B11-128, P17-208 (Panel) B19-116X, R9-222 (Rear) 76-1 (Switch)

* "CONCENTRIKIT" Equivalent: K8 ⑥ Kit with Base Elements and Shafts: B11-128, P22-203 (Panel) B19-116X, R1-218 (Rear) US41 (Switch)

▲ "STA-LOC" Equivalent: FA15L⑥, RU14T53, OS2062, IS2625, US41

♦ "CONCENTRIKIT" Equivalent: K8 ⑥, Kit with Base Elements and Shafts: B11-128, P14-206 (Panel) B19-116X, R9-222 (Rear) 76-1 (Switch)

†† "CONCENTRIKIT" Equivalent: K8 Kit with Base Elements and Shafts: B11-128, P22-203 (Panel) B19-116X, R1-228 (Rear) 76-1 (Switch)

‡ "SNAPTROL" Equivalent: BU15, CF52, CR5, SF15, SR46, GC.

■ "STA-LOC" Equivalent: FJ15A, RU14L, OS1437A, IS1937, US41.

QCBS (Bushing) 76-1 (Switch)

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
R29	10Ω (Cold Thermistor)			#6K544646	R31	.16Ω 2W			#17B64753A01
R30	.16Ω 2W			#17B64753A01					

Motorola Part Number.

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA				
		MOTOROLA PART No.	MEISSNER PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.
L1	1st. Antenna	①				
L2	2nd. Antenna	①				
L3	RF	①				
L4	Osc.	①				
L5	Input IF	24B64614A01	16-6717			RTC-9408
L6	Output IF	24B64614A03	16-6715	BC-639	6554	RTC-9405 TE638

① Part of M2 or Coil Assembly Part #1V141000A38.

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.

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.	
L7	300ma	.3Ω	4MH	25B64747A01	C-4095	TC-1	TR-157	TY16XT	

CHOKE (AUDIO OUTPUT)

ITEM No.	INDUCTANCE	REPLACEMENT DATA					NOTES
		MOTOROLA PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L8	120ma	25B64737A04					

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA			NOTES
		MOTOROLA PART No.	QUAM PART No.	Model	
SP1	4" x 10" PM	40Ω	1C64456A01	410A2Z40	Model CE65M
	6" x 9" PM	40Ω	1D64329A01	69A2Z40	Model CK65M
	6" x 9" PM	40Ω	1D64324A01	69A2Z40	Model CR65M
	4" x 10" PM	40Ω	1C64290A01	410A2Z40	Model CT65M
	5" x 7" PM	40Ω	50D64729A02	57A1Z40	Model TM5M

FUSE DEVICES

ITEM No.	TYPE	RATING	REPLACEMENT DATA						
			PART No.		LITTELFUSE PART No.		BUSS PART No.		
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER	
M1	SAG	4A	65R61888 ①	In Fuse Block	312004			AGC 4	
	AGA	5A	65R122345 ②	9K543179	301005	155004A		AGA 5	HAF

① Used in Models CE65M, CK65M, CR65M.

② Used in Model TM5M.

MISCELLANEOUS

ITEM No.	PART NAME	MOTOROLA PART No.	NOTES
M2	Tuner Coil Assembly	77D41844A01	MT-438 (Models, CE65M, CK65M, CT65M).
	Tuner Coil Assembly	1V41000A38	
	Tuner Coil Assembly	77D41844A02	MT-521 (Model, CR65M).
	Tuner Coil Assembly	1V41000A38	
	Tuner Coil Assembly	77D41016A02	MT-411 (Model, TM5M).

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
	PRI.	SEC. 1	MOTOROLA PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	7	1	25B64638A02					
		SEC. 2						
		1						

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	MODEL	PART No.	ITEM	MODEL	PART No.
Escutcheon	CE65M	13E64288A02	Knob, Tuning or Volume	TM5M	36B543382
Escutcheon	CK65M	13D64590A01	Knob, Tone or Dummy	CE65M	36B64596A01
Escutcheon	CR65M	13D64315A02	Knob, Tone or Dummy	CK65M	36B64596A01
Escutcheon	CT65M	13D64331A01	Knob, Tone or Dummy	CR65M	36B64313A01
Escutcheon	TM5M	13C64861A02	Knob, Tone or Dummy	CT65M	36B64333A01
Dial Scale	CE65M	34B64276A01	Knob, Tone or Dummy	TM5M	36B543398
Dial Scale	CK65M	34B64276A01	Knob, Dummy	TM5M	36K543399
Dial Scale	CR65M	34B64308A01	Dial Pointer	CE65M	52A64581A02
Dial Scale	CT65M	34B64308A01	Dial Pointer	CK65M	52A64581A02
Dial Scale	TM5M	34B64283A01	Dial Pointer	CR65M	52A64319A01
Knob, Tuning or Volume	CE65M	36B64334A01	Dial Pointer	CT65M	52A64347A01
Knob, Tuning or Volume	CK65M	36B64334A01	Dial Pointer	TM5M	52A64642A01
Knob, Tuning or Volume	CR65M	36B64334A01			
Knob, Tuning or Volume	CT65M	36B64334A01			

WIRING DATA

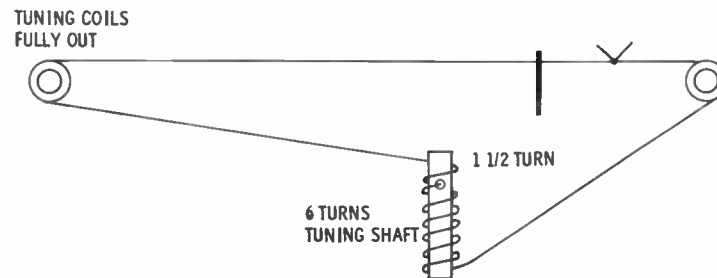
General-use Unshielded Hook-up Wire Use BELDEN No. 8530 (Solid) Available in 12 Colors
8524 (Stranded) Available in 12 Colors

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.)

DIAL CORD STRINGING



MOTOROLA MODELS CE/CK/CR/CT65M, TM5M



PHOTOFACT[®]



TRADE NAME : Motorola Model CY65A (1962-1965 Chevy II)
SUPPLIER : For Current Address, See Master Index.
TYPE SET : 6 Transistor AM Receiver
POWER SUPPLY : 12 Volt Storage Battery
RATING : .300 Amp. @ 12.6 Volts DC

TUNING RANGE : BROADCAST 540-1615KC

MOTOROLA MODEL CY65A

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 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 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.

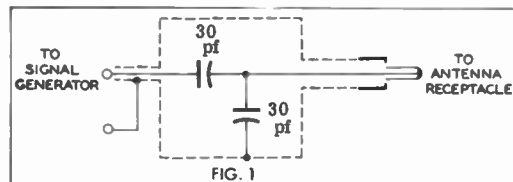
3.	Thru dummy (Fig. 1) to antenna receptacle.	1000KC	Tune to Signal.	Output Meter across voice coil.	A9, A10, A11, A12	Adjust for maximum. Repeat steps 2 & 3 until no further improvement is noted.
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With radio installed in car and antenna fully extended, tune in a weak station near 1400KC and adjust A8 for maximum output.

Antenna Adjustment: (A8) Located on right rear of radio next to Antenna Input.

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.

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	2SA72	RF Amp.	D8-25	GE-1	8K-3008	PNP
X2	2SA72	Conv.	D8-25	GE-1	8K-3008	PNP
X3	2SA72	IF Amp.	D8-25	GE-1	8K-3008	PNP
X4	M54	Driver	D8-48	GE-10		NPN
X5	SP15563	Output	D8-520	GE-3	8K-3009	PNP *
X8	SP15563	Output	D8-520	GE-3	8K-3009	PNP *

* When replacing, apply silicon grease to both sides of insulator. Tighten mounting screws securely.

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MEASURED CURRENT	ORIGINAL Part or Type No.	RECTIFIERS				DIODES
			GENERAL ELECTRIC PART No.	MALLORY PART No.	RCA PART No.	SARKES TARZIAN PART No.	GENERAL ELECTRIC PART No.
X7		1N139					1N295
X8		1N139					1N295

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		MOTOROLA PART No.	REPLACEMENT DATA				SPRAGUE PART No.
	CAP.	VOLT.		AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	
C1A	500	18	23B543279	AFH3-00-95	CC0013	XC3-48	WP300.85	TVL-3026.8
B	100	18						
C	500	18						
C2	25	3	23K544540	PTT9	NLW25-3	MT1-10	T73X25	TE-1055
C3	5	3	23K544541	PTT4	NLW5-15	MT1-3	T76X5	TE-1052.2

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	40-430	#0B64871A01						
C11	.003 200V		DBE8D3	CPR-3000J	DPMS8D33	8DP-1-302	PVC623	6PS-D30
C12	20-120	#0K541014						
C13	8.2		NPO-DI 8.2					10TCC-V82
C14	.005		BPD-005	DD-502	BYX801ZU502P	CCD-502	B250	5HK-D50
C15	.05 200V		DBE8S5		DPMS285	1DP-2-503	PVC215	2PS-850
C18	20-120	#20K541014						
C17	.005 200V		DBE8D5	CPR-5000J	DPMS8D5	1DP-1-502	PVC625	6PS-D50
C18	.01 100V		DBE481	CPR-10000J	WMF181	1DP-1-103	PVC211	4PS-810
C19	100 N750		N750-DI 100	DTN-100		CCTN-101	CN7310	10TCU-T10
C20	310-390	#20K541700						
C21	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-810
C22	.05 200V		DBE8S5		DPMS285	1DP-2-503	PVC215	2PS-850
C23	180 N750						CN7318	10TCU-T18
C24	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-810
C25	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-810
C26	.47			UK10-404			MAG12047	HY-330
C27	.2			UK20-204			MAG25022	HY-325
C28	.005		BPD-005	DD-502	BYX801ZU502P	CCD-502	B250	5HK-D50
C29		#64K530177						

Motorola Part Number.

CONTROLS

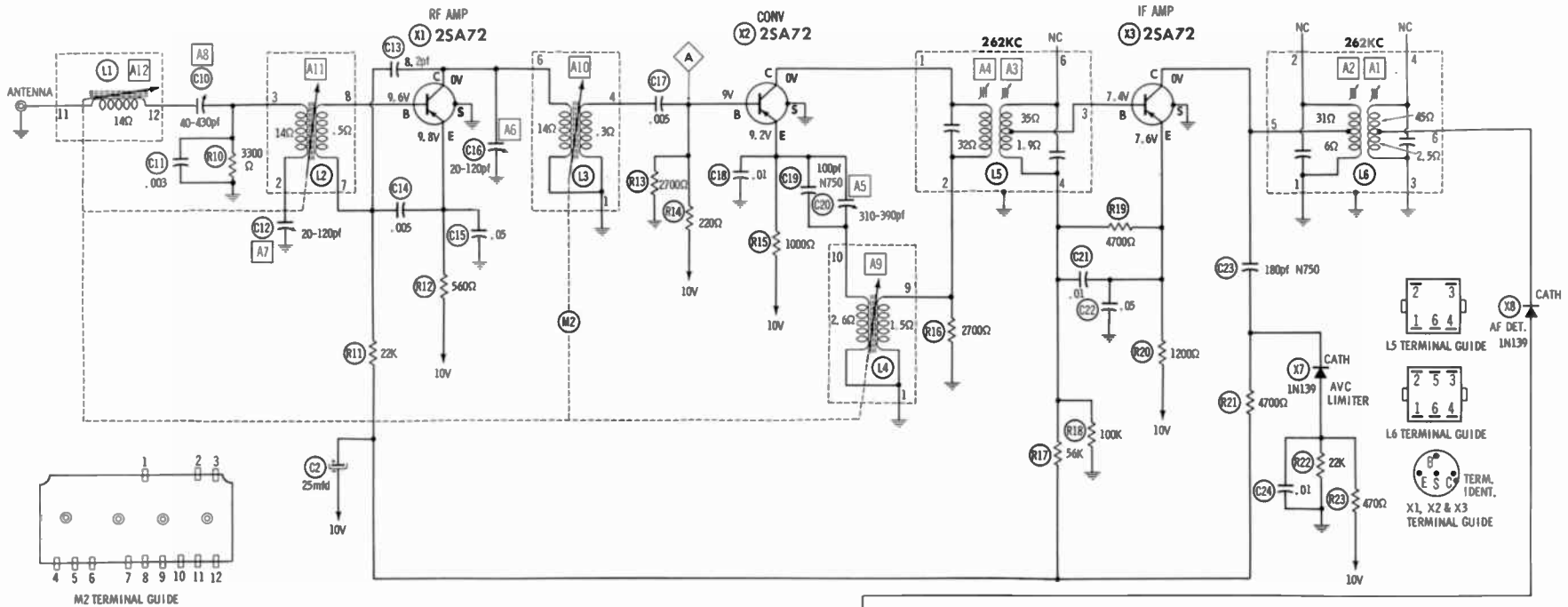
All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	USE	RESIST-ANCE	REPLACEMENT DATA					
			MOTOROLA PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.	
RIA	Tone Volume/Switch	100K 10K Tap @ 5500Ω	18C64779A03	F2-100K①, R16-10K, FFS108, RFS200, KR-4			† QJ-1735A	FA15L①, RU14T53, OS1500A, IS2000, US41

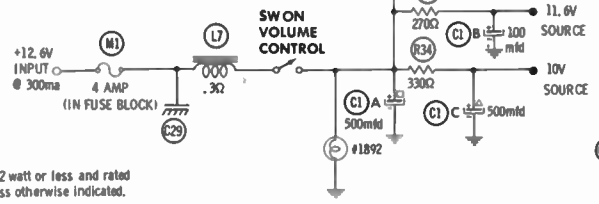
① Use Original Spring Mounting Clips.

† "CONCENTRIKIT" Equivalent: K8①, Kit with Base Elements and Shafts: B13-126, P22-115(Panel), B19-116X, R1-130(Rear) 76-1 (Switch)

MOTOROLA MODEL CY65A

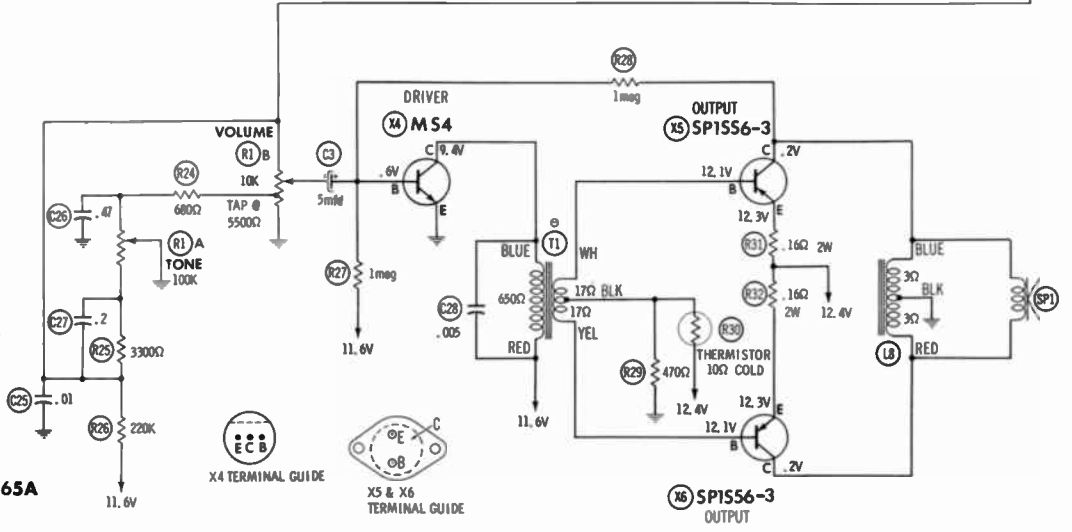


- ⊖ See parts list for alternate value or application.
- 1. Voltage measurements taken with vacuum tube voltmeter.
- 2. All controls set for normal operation, no signal applied.
- 3. Measured values are from socket pin or terminal to common ground.
- 4. All terminals viewed from bottom unless otherwise 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.

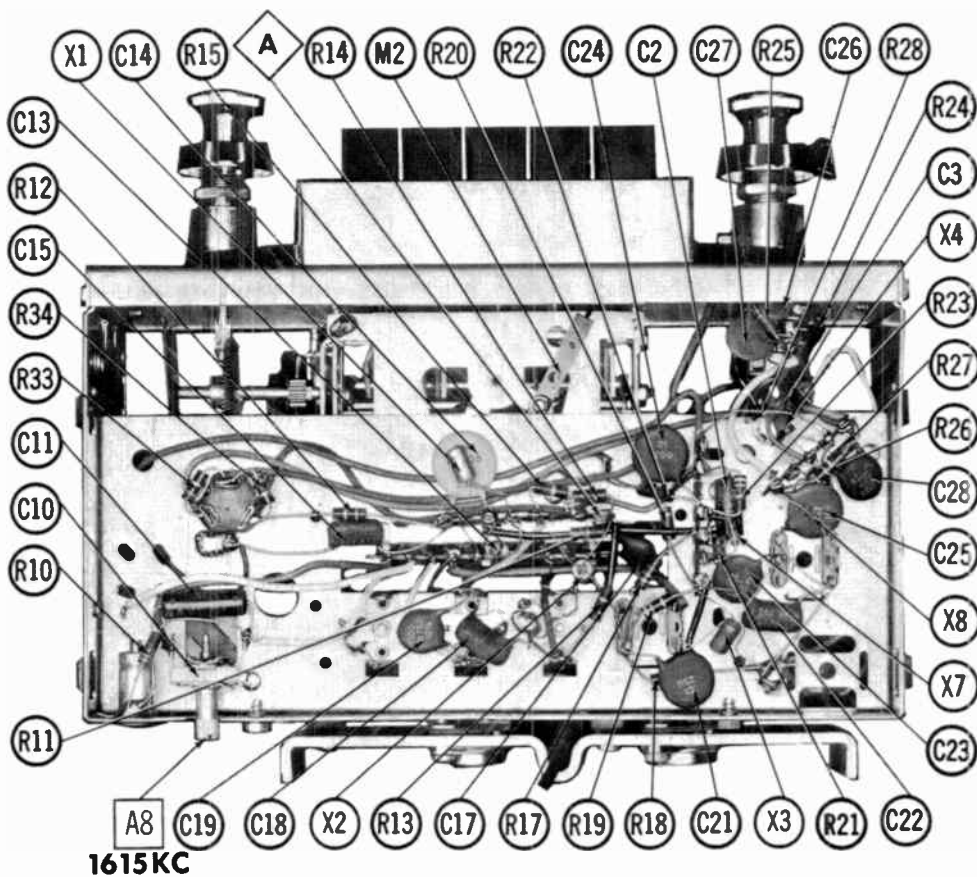
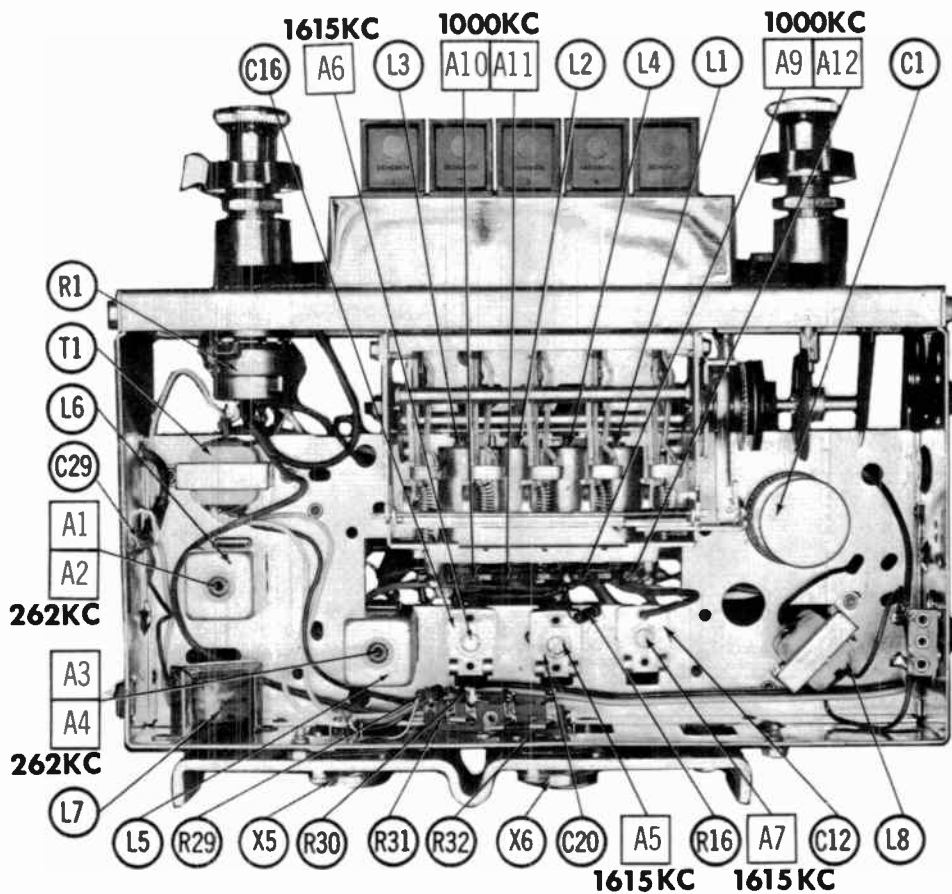


Resistors are 1/2 watt or less and rated 10% or 20% unless otherwise indicated.

MOTOROLA MODEL CY65A



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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.

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
R30	10Ω (Cold)			#6K544646	R32	.16Ω 2W			#7B64753A01
R31	(Thermistor) .16Ω 2W			#7B64753A01					

Motorola Part Number.

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					
		MOTOROLA PART No.	MEISSNER PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.
L1	1st. Antenna	① ② ③ ④ ⑤					
L2	2nd. Antenna						
L3	RF						
L4	Output		24B64861A03	18-6717	BC-690	6557	RTC-9408
L5	Input IF		24B64861A02	18-6717	BC-691	6556	RTC-9407
L6	Output IF						

① Part of M2, or Coil Assembly #1V40800A57.

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.	
L7	300ma	.3Ω	3MH	25B64747A02	C-4095	TC-1	TR-157	TY16XT	

CHOKE (AUDIO OUTPUT)

ITEM No.	INDUCTANCE	REPLACEMENT DATA					NOTES
		MOTOROLA PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L8	120MH	25B64737A02					

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
			MOTOROLA PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
	PRI.	SEC.						
T1	15	1	25B64645A04 25B64638A01					

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MOTOROLA PART No.	QUAM PART No.	
SP1	4" x 10" PM 40Ω	50D64373A02	410A2Z40	

FUSE DEVICES

ITEM No.	TYPE	RATING	REPLACEMENT DATA						
			PART No.		LITTELFUSE PART No.		BUSS PART No.		
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER	
M1	3AG	4A mp.	65R61688	In Fuse Block	312004			AGC 4	

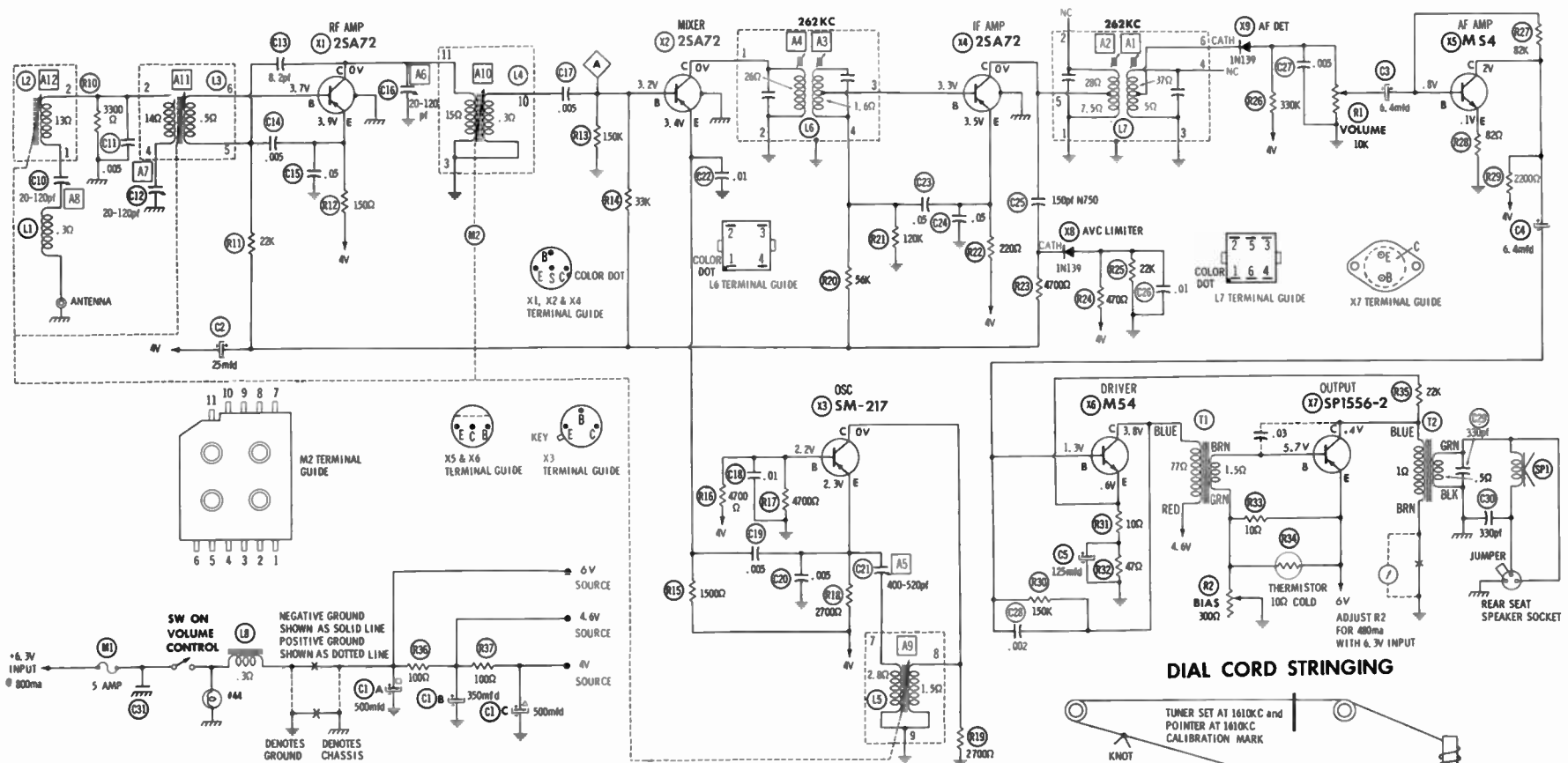
MISCELLANEOUS

ITEM No.	PART NAME	MOTOROLA PART No.	NOTES
M2	Tuner Coil Assembly	77D40553A03 1V40800A57	AT-394

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
Escutcheon	13D64570A01	Pushbutton: 2nd or 4th.	38C40947A01
Dial Scale	34B64282A01	Knob-Tuning or Volume	36B64334A01
Dial Pointer	1B40875A03	Knob-Tone	36B543330
Pushbutton: 1st, 3rd or 5th.	38C40947A03	Knob-Dummy	36B543332

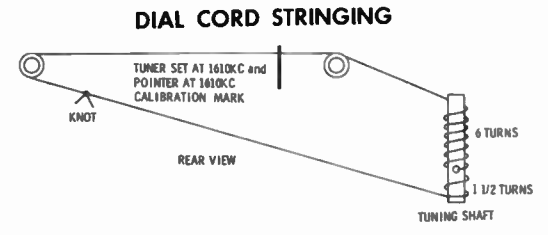


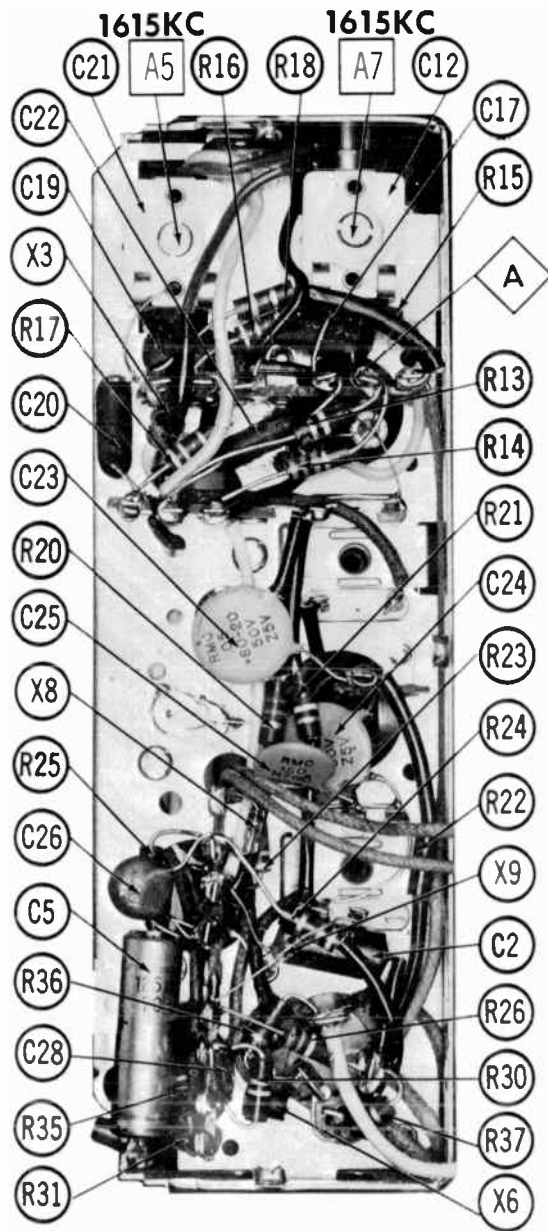
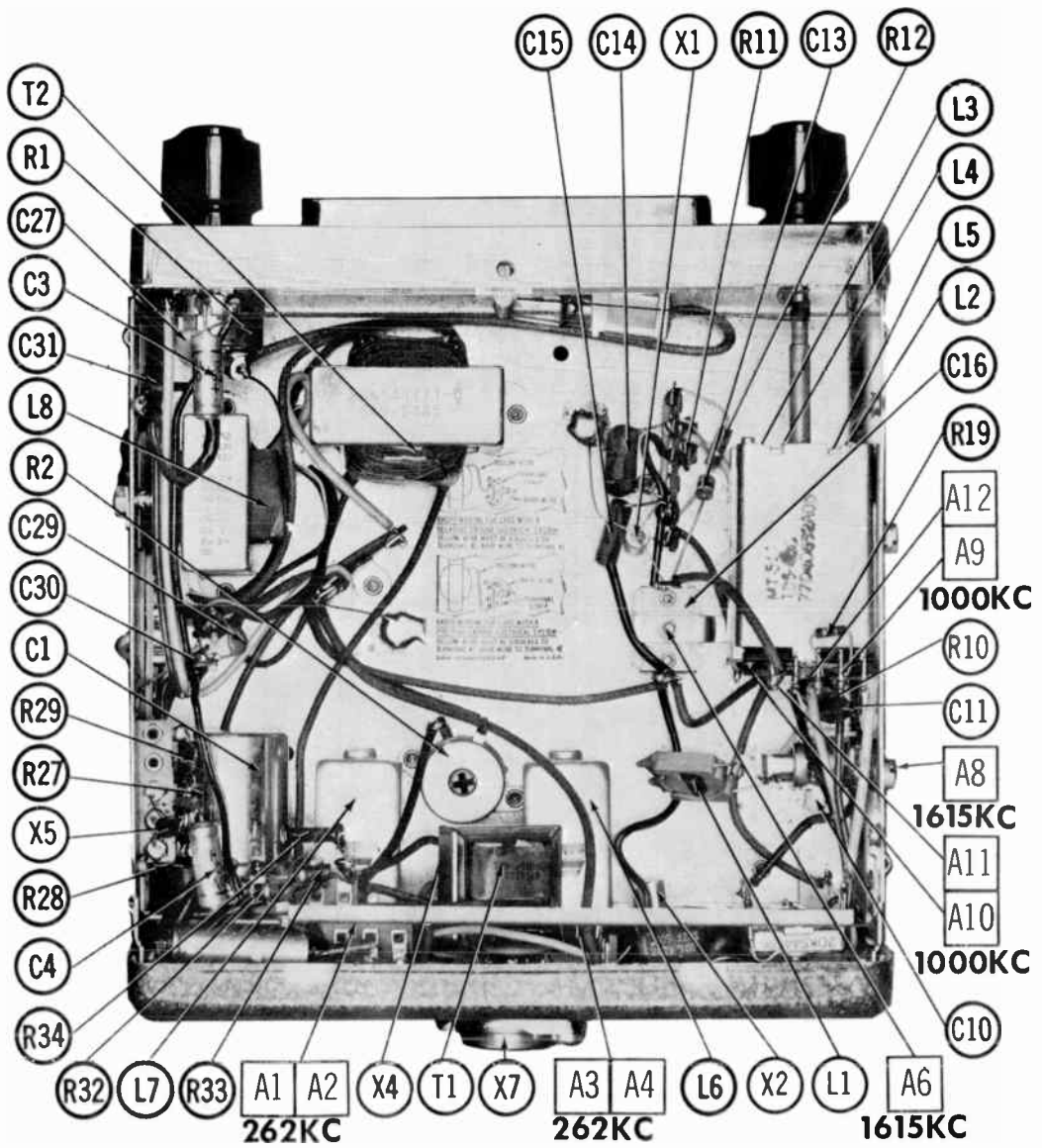
1. Voltage measurements taken with vacuum tube voltmeter.
2. All controls set for normal operation, no signal applied.
3. Measured values are from socket pin or terminal to common ground.
4. All terminals viewed from bottom unless otherwise designated.
5. Numbers assigned to terminals may not be found 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.

Resistors are 1/2 watt or less and rated 10% or 20% unless otherwise indicated.

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MOTOROLA MODEL TM415M





MOTOROLA MODEL TM415M

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.	D8-25	GE-1	8K-3008	PNP
X2	2SA72	Mixer	D8-25	GE-1	8K-3008	PNP
X3	8M-217	Oscillator	D8-25	GE-9	8K-3008	PNP
X4	2SA72	IF Amp.	D8-25	GE-1	8K-3008	PNP
X5	M54	AF Amp.	D8-46	GE-10		NPN
X6	M54	Driver	D8-46	GE-10		NPN
X7	3P15562	Output	D8-520	GE-3	8K-3009	PNP *

* When replacing, apply silicon grease to both sides of insulator. Tighten mounting screws securely. Check bias adjustment.

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MEASURED CURRENT	ORIGINAL Part or Type No.	RECTIFIERS				DIODES
			GENERAL ELECTRIC PART No.	MALLORY PART No.	RCA PART No.	SARKES TARZIAN PART No.	GENERAL ELECTRIC PART No.
X8		1N139					1N295
X9		1N139					1N295

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		MOTOROLA PART No.	REPLACEMENT DATA				
	CAP.	VOLT.		AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A	500	6	23C64722A03	AFH3-00-75				
B	350	8						
C	500	6						
C2	25	3	23K544540	PTT9	NLW25-3	MT1-10	TT3X25	TE-1055
C3	6.4	40	23K544697	CRE755A	NLW6-50	MT1-5	TT50X6	TE-1303.1
C4	6.4	40	23K544697	CRE755A	NLW6-50	MT1-5	TT50X6	TE-1303.1
C5	125	10	23K544707	CRE426A	NLW125-10	MT1-23	TT12X150	TE-1136

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	20-120	#20B64618A01						
C11	.005 200V		DBE6D5	CPR-5000J	DPMS8D5	IDP-1-502	PVC625	6PS-D50
C12	20-120	#20K541014						
C13	6.2		NPO-DI 8.2					10TCC-V82
C14	.005 200V		DBE6D5	CPR-5000J	DPMS8D5	IDP-1-502	PVC625	6PS-D50
C15	.05 200V		DBE685		DPMS285	IDP-2-503	PVC215	2PS-850
C16	20-120	#20K544694						
C17	.005 200V		DBE6D5	CPR-5000J	DPMS8D5	IDP-1-502	PVC625	6PS-D50
C18	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-810
C19	.005 200V		DBE6D5	CPR-5000J	DPMS8D5	IDP-1-502	PVC625	6PS-D50
C20	.005 200V		DBE6D5	CPR-5000J	DPMS8D5	IDP-1-502	PVC625	6PS-D50
C21	400-620	#20K544696						
C22	.01 100V		DBE4S1	CPR-10000J	WMF1S1	IDP-1-1-3	PVC211	4PS-810
C23	.05		TTD-05	CK-503	HOV101ZV503Z		TA150	TC-850
C24	.05		TTD-05	CK-503	HOV101ZV503Z		TA150	TC-850
C25	150 N750		N750-DI 150	DTN-150		CCTN-151	CN7315	10TCU-T15
C26	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-810
C27	.005		BPD-005	DD-502	BYX601ZU502P	CCD-502	B250	5HK-D50
C28	.002		BPD-002	DD-202	BYY601ZU202P	CCD-202	B220	5HK-D20
C29	330		DI-330	DD-331	JBZ601YP331K	CCD-331	JF333	10T8-T33
C30	330		DI-330	DD-331	JBZ601YP331K	CCD-331	JF333	10T8-T33
C31		#64K530177						

Motorola Part Numbers.

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.	
R1	Volume, Switch	10K	16B64629A01	F2-10K, 8F8212, BA008, CA005, KR4			QCB-2, B19-116, TM8, 76-1 or (BUS, CF61, 884, GC)	
R2	Bias	300Ω 2W	18C64735A08	V-300①	U39-300①		117R501A	MR-500F

① Insulate control from chassis and solder original center terminal lead to metal case of control.

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
R34	10Ω (Cold) Thermistor			#6K543600					

Motorola 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.

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					
		MOTOROLA PART No.	MEISSNER PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.
L1	RF Choke (1.8uh)	24B64785A03	19-1001	BC-562	74F186AP	RTC-8516	T810
L2	1st. Antenna	①					
L3	2nd. Antenna	①					
L4	RF	①					
L5	Oscillator	①					
L6	Input IF	24B64613A01	16-6718	BC-600	6570	RTC-9391	
L7	Output IF	24B64613A02	16-6716		6556	RTC-9407	

① Part of M2, or Coil Assembly # 1V40800A77.

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA					NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE TO CURRENT (1000~)	MOTOROLA PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L8	800ma	.3Ω	10MH	25B543338	C-4095	TC-2	TR-154	TY17XT	

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
			MOTOROLA PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
	PRI.	SEC.						
T1	5	1	25B64610A03 25B64610A04	A-4092	TA-48	TR-179	TY1XT	

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
			MOTOROLA PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
	PRI.	SEC.						
T2	25Ω	4Ω	25K544711			TR-30	TY29X	

SPEAKER

ITEM No.	TYPE	RATING	REPLACEMENT DATA		NOTES
			MOTOROLA PART No.	QUAM PART No.	
SP1	5" PM	4Ω	50C64354A01	5A15	

FUSE DEVICES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M1	AGA	5 Amp.	65R122345	9K543179	301005	155004A	AGA 5	HAF

MISCELLANEOUS

ITEM No.	PART NAME	MOTOROLA PART No.	NOTES
M2	Tuner Coil Assembly	77D40632A05 1V40800A77	MT-511

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
Escutcheon	13D64367A01	Knob, Tuning or Volume	36B543382
Dial Scale	34B64358A01	Pointer Assembly	1V64954A07

WIRING DATA

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. 8885
Bonding Strap	Use BELDEN No. 8782 (Stranded) Coded Parallel Leads
	Use BELDEN No. 8661 (3/8 In.) or 8670 (3/4 In.)

MOTOROLA MODEL TM415M

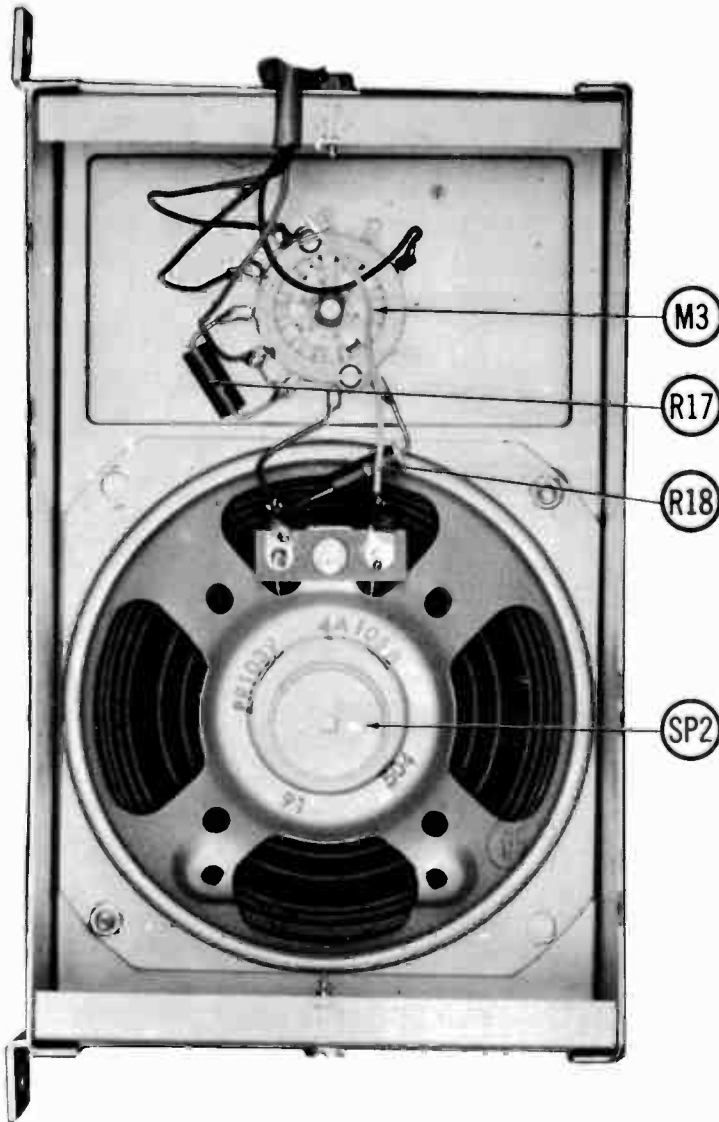


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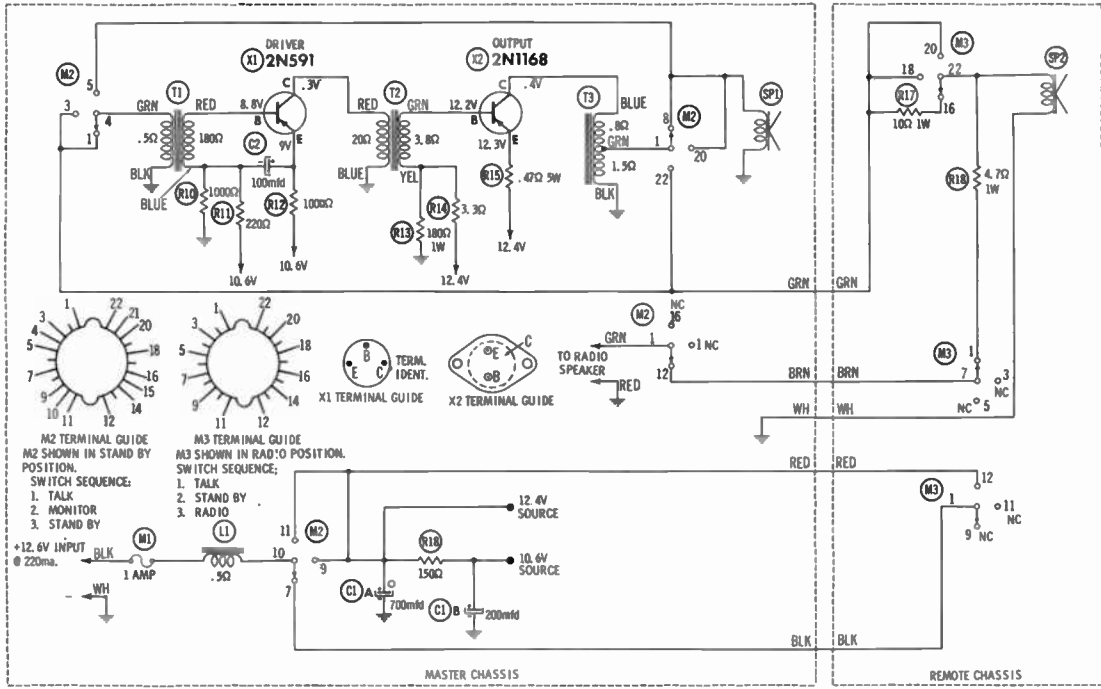


TRADE NAME : Philips Model PTC-400-MR
SUPPLIER : For Current Address, See Master Index.
TYPE SET : 2 Transistor Intercom (Camper)
POWER SUPPLY : 12 Volt Storage Battery
RATING : .220 Amp. @12.6 Volts DC

PHILLIPS MODEL PTC-400-MR



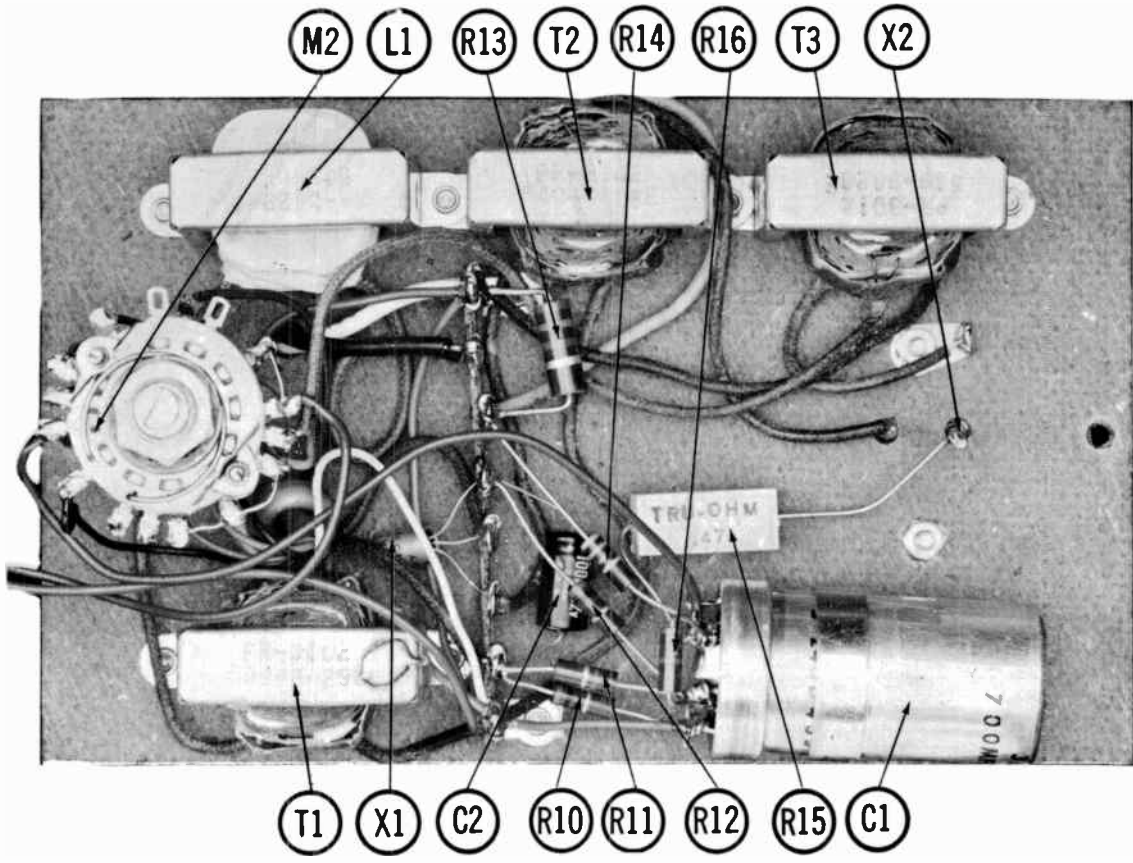
HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana



- 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.

Resistors are 1/2 watt or less and rated 10% or 20% unless otherwise indicated.

A PHOTOFAC STANDARD NOTATION SCHEMATIC
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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	2N591	Driver Output	DS-26	GE-2	8K-3004	PNP
X2	2N1166		DS-520	GE-3	8K-3009	

• When replacing, apply silicon grease to both sides of insulator. Tighten mounting screws securely.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	PHILLIPS PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	GENERAL INSTRUMENT PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A	700	16		AFH2-02-51	BPC020	XC2-43.1	TMTS002.10	PFP200.45	TVL-2179.5
B	200	16							
C2	100	12		CRE423A	NLW100-12	MT1-19	BL1940	TT12X100	TE-1135

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
R15	.47Ω 5W		WT47						

FILTER CHOKE

ITEM No.	RATINGS		REPLACEMENT DATA					NOTES
	CURRENT (Measured)	DC RES.	PHILLIPS PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L1	220ma		10mh		C-4095	TC-2	TR-152	TY17XT

TRANSFORMER (INPUT)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
	PRI.	SEC.	PHILLIPS PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
	T1	1	35		A-3028	A-3328	24S48	
	IMPEDANCE							
	4Ω	4800Ω						

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
	PRI.	SEC.	PHILLIPS PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T2	6	1						

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC.	PHILLIPS PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T3	14Ω Tap	@ 4Ω				TR-184		

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		PHILLIPS PART No.	QUAM PART No.	
SP1	4" PM	4Ω		
SP2	4" PM	4Ω	4A05	

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			PHILLIPS PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M1	3AG	1 Amp			312001	155020	AGC1	HIDJ

MISCELLANEOUS

ITEM No.	PART NAME	PHILLIPS PART No.	NOTES
M2	Master Switch		
M3	Remote Switch		

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 : Ranger Models TC-100-M/MD(1965 Prod)
TC-200-PB(1965 Prod)
Tenna Models TC-110-M/MD,
TC-200-PB

SUPPLIER : For Current Address, See Master Index.

TYPE SET: 5 Transistor AM Receiver

POWER SUPPLY : 12 Volt Storage Battery

RATING : .640 Amp. @12.6 Volts DC

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

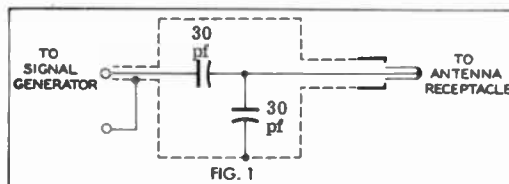
WALSCO: 2525, 2528, 2587

	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.

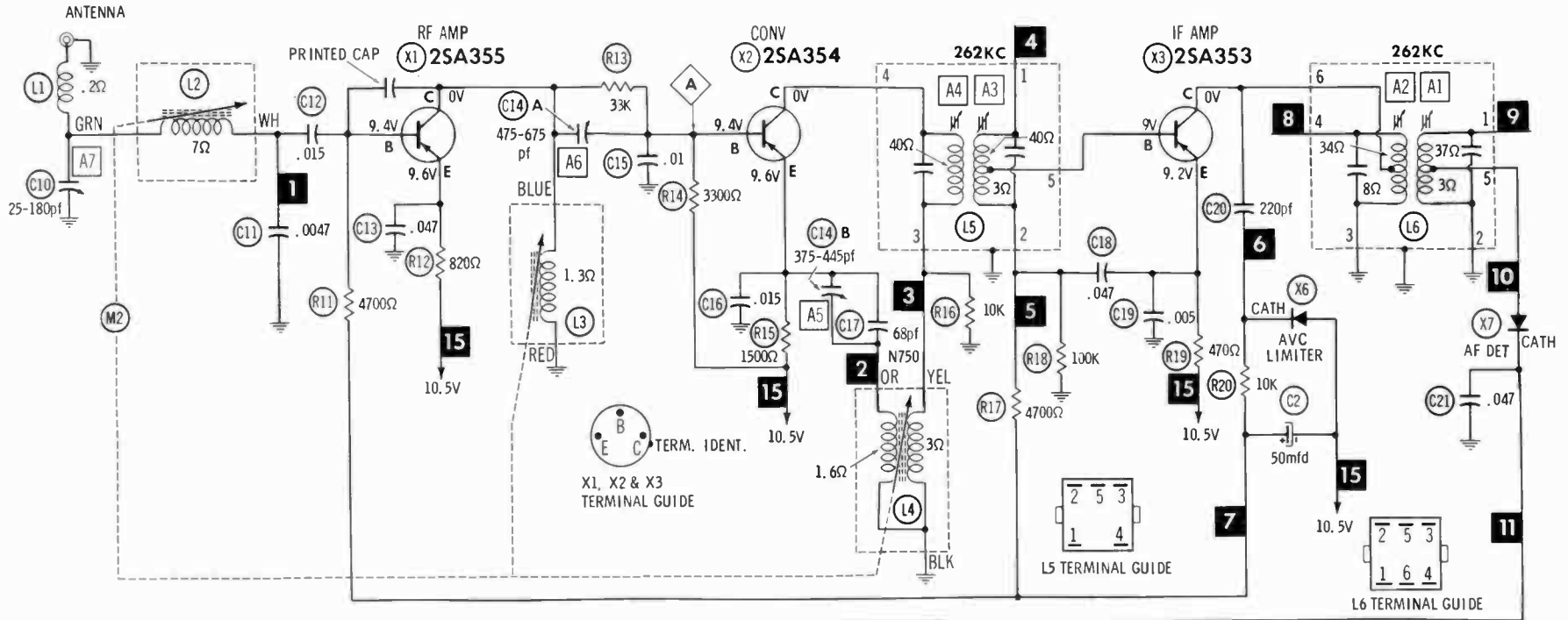
PUSH-BUTTON ADJUSTMENT

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

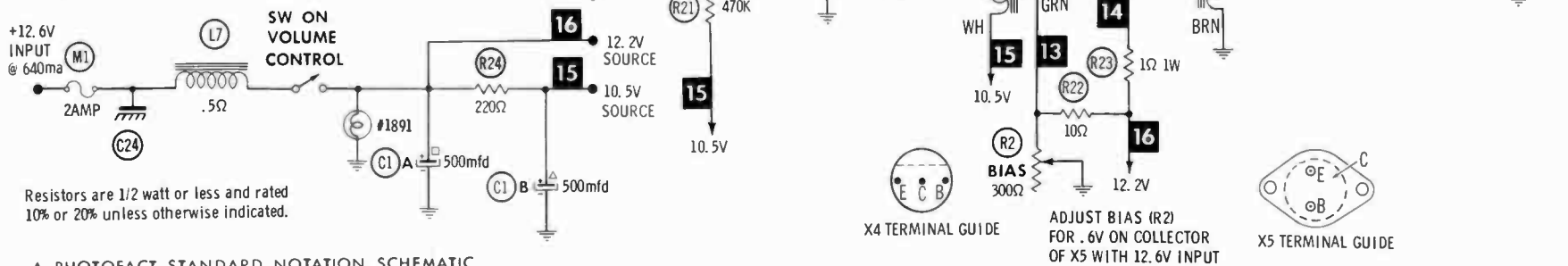


RANGER & TENNA MODELS: Universal Series

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



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.

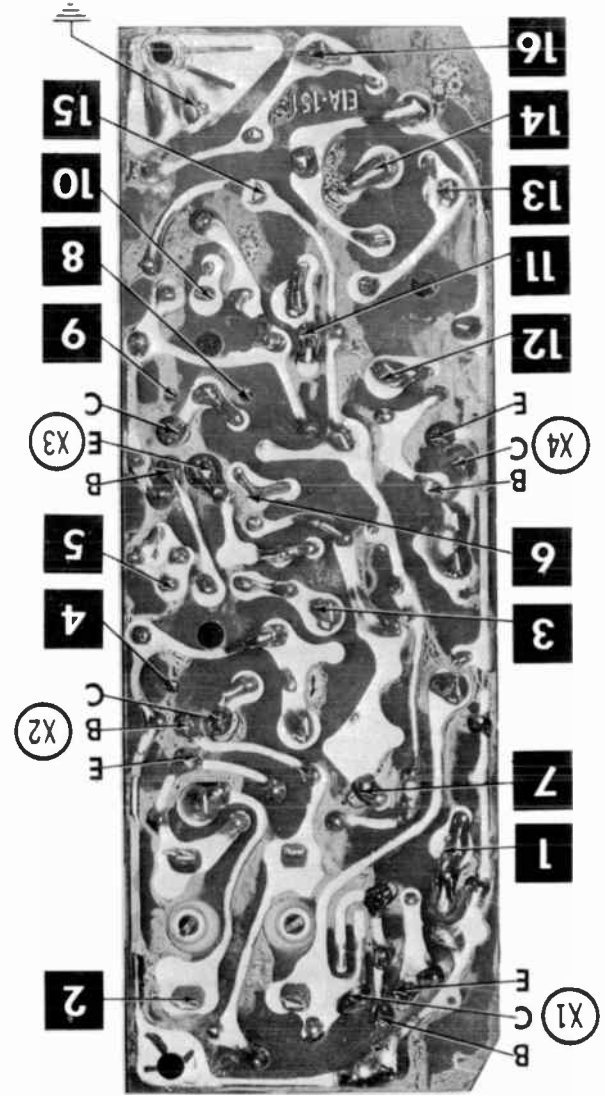
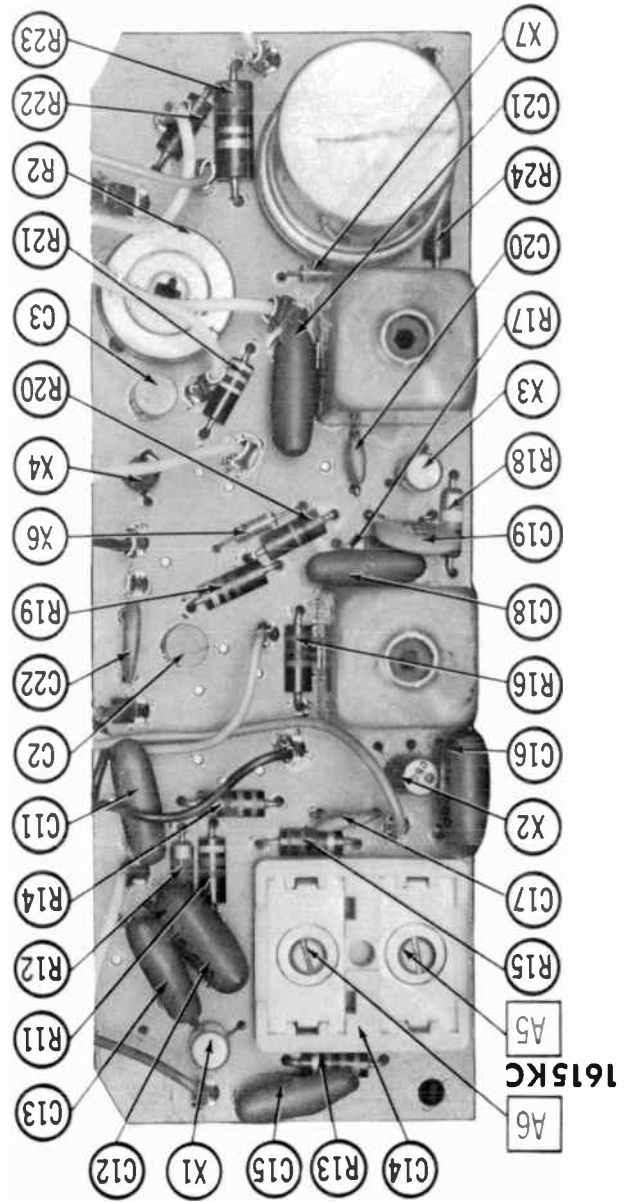


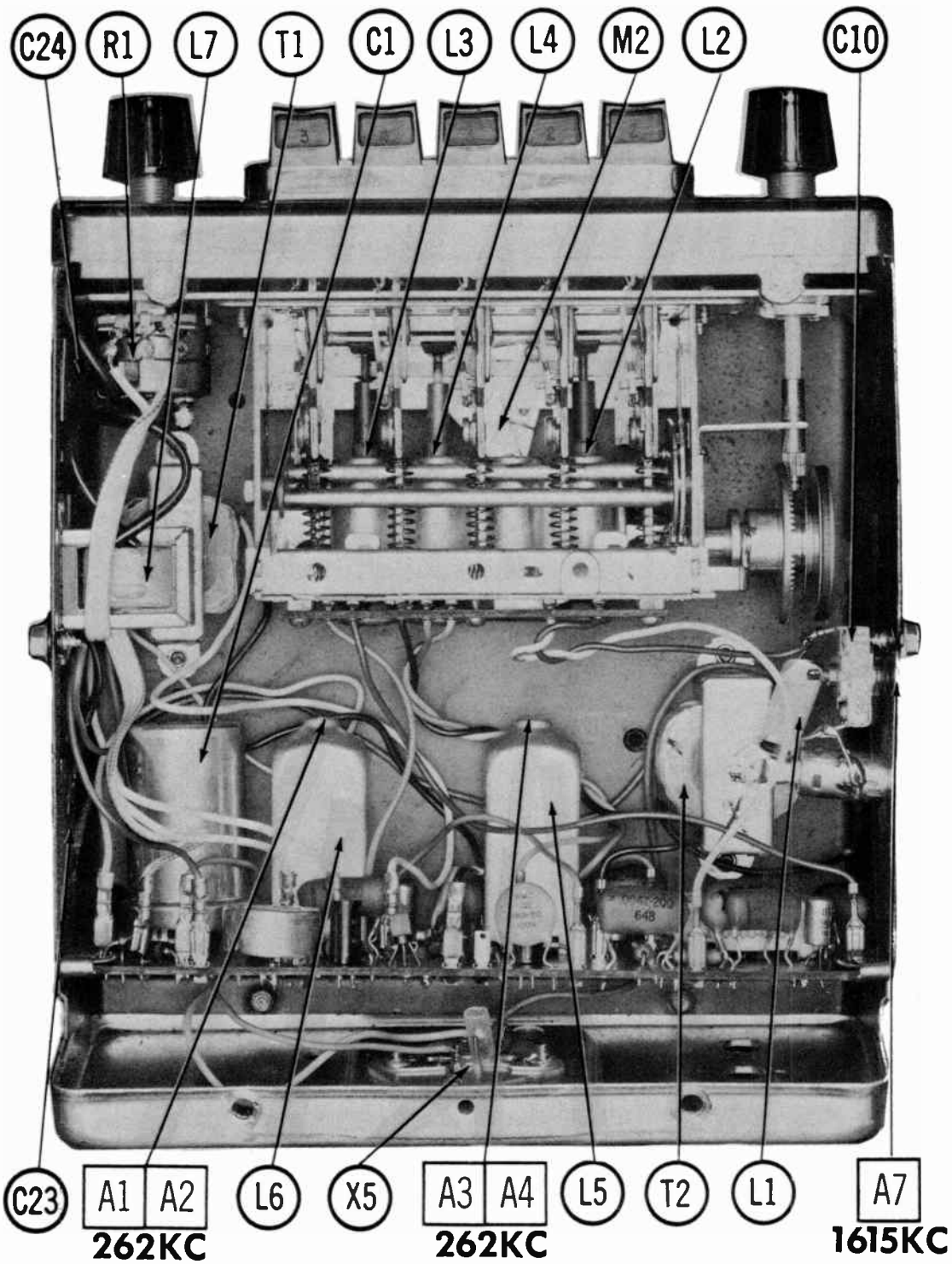
Resistors are 1/2 watt or less and rated 10% or 20% unless otherwise indicated.

A PHOTOFAC STANDARD NOTATION SCHEMATIC with **CIRCUITRACE**

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RANGER & TENNA MODELS: Universal 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.

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	2SA355	RF Amp.	DB-25	GE-9	SK-3008	PNP
X2	2SA354	Conv.	DB-25	GE-9	SK-3008	PNP
X3	2SA353	IF Amp.	DB-25	GE-9	SK-3008	PNP
X4	2N2712	Driver	DB-46	GE-10		NPN
X5		Output	DB-520	GE-3		PNP*

* When replacing, apply silicon grease to both sides of insulator. Tighten mounting screws securely.

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MEASURED CURRENT	ORIGINAL Part or Type No.	RECTIFIERS				DIODES
			GENERAL ELECTRIC PART No.	MALLORY PART No.	RCA PART No.	SARKES TARZIAN PART No.	GENERAL ELECTRIC PART No.
X6		1N295A					1N295
X7		1N295A					1N295

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		TENNA PART No.	REPLACEMENT DATA				
	CAP.	VOLT.		AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A	500	16	111001-512	PWH2-02-40	BPC010	XC2-45	PFP200, 6	PCL8-2177*
B	500	16						
C2	50	3	111002-104	BCD8050	ECSP50-3	MT1-15	PET1575	VL-1045
C3	10	15	111002-103	BCD15010	ECSP10-15	MT1-5	PET1760	VL-1167

* 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	25-180	#110000-086						
C11	.0047 200V		DBE6D47	CPR-4700J	WMF2D47	6DP-1-472	PVC4247	6PB-D47
C12	.015 200V		DBE4815		DPMS4815	1DP-1-153	PVC2115	4PB-815
C13	.047 100V		DBE2847		WMF2847	1DP-2-473	PVC1147	2PB-847
C14A	475-875	#110000-080						
B	375-445							
C15	.01 200V		DBE481	CPR-10000J	WMF181	1DP-1-103	PVC211	4PB-810
C16	.015 200V		DBE4815		DPMS4815	1DP-1-153	PVC2115	4PB-815
C17	68 N750		N750-D1 68	DTN-68	C10Q68U	CCTN-680	CN7468	10TCU-Q68
C18	.047 100V		DBE2847		WMF2847	1DP-2-473	PVC1147	2PB-847
C19	.005		BPD-005	DD-502	BYA10D5	CCD-502	B250	5HK-D50
C20	220		DI-220	DD-221	LA10T22-220	CCD-221	GP322	10TB-T22
C21	.047 100V		DBE2847		WMF2847	1DP-2-473	PVC1147	2PB-847
C22	.02		BPD-02	DD-203	BYA682	CCD-203	B120	5HK-820
C23								
C24								

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			QCB4, B11-114, TM8, 76-1 or (BU11, CF8, 884, GC)	
R2	Bias	300Ω 2W	145000-207				

RANGER & TENNA MODELS: Universal 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.

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
R23	1Ω 1W	BWH1	WS1						

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					
		TENNA PART No.	MEISSNER PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.
L1	RF Choke (5.0uh)	114000-282	19-1008	SW-831	4609	RTC-8519	T959
L2	Antenna	①					
L3	RF	①					
L4	Osc.	①					
L5	Input IF	114000-217	16-8712		6522		
L6	Output IF	114000-218					

① Part of M2.

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	640ma	.5Ω	5MH	161000-143 (161000-141)	C-4095	TC-2	TR-158	TY17XT	

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
	PRI.	SEC.	TENNA PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	8	1	161005-005					

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC.	TENNA PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T2	16Ω	Tap @ 8Ω	161005-006				TR-164	

SPEAKER

ITEM No.	TYPE	RATING	REPLACEMENT DATA		NOTES
			TENNA PART No.	QUAM PART No.	
SP1	5" x 7" PM	8Ω	155009-121	57A1Z8	
	5" x 7" PM	8Ω	155009-145 (Alt.)	57A1Z8	

FUSE DEVICES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M1	AGA	2A			301002	155004A	AGA 2	HAF

MISCELLANEOUS

ITEM No.	PART NAME	TENNA PART No.	NOTES
M2	Tuner Tuner	164000-089 164000-087	Pushbutton Manual



PHOTOFACT®

TRADE NAME : Riverside Models FJB-6576A/77A
SUPPLIER : For Current Address, See Master Index.
TYPE SET : 5 Transistor AM Receiver
POWER SUPPLY : 12 Volt Storage Battery
RATING : .680 Amp. @ 12.6 Volts DC

TUNING RANGE : BROADCAST 540-1615KC



ALIGNMENT INSTRUCTIONS

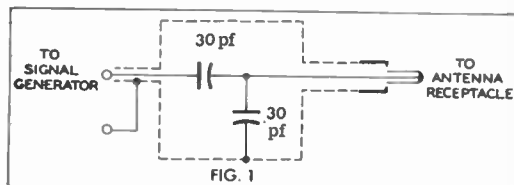
Check for specified source voltage.
 Use only enough generator output to provide a usable indication.

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.

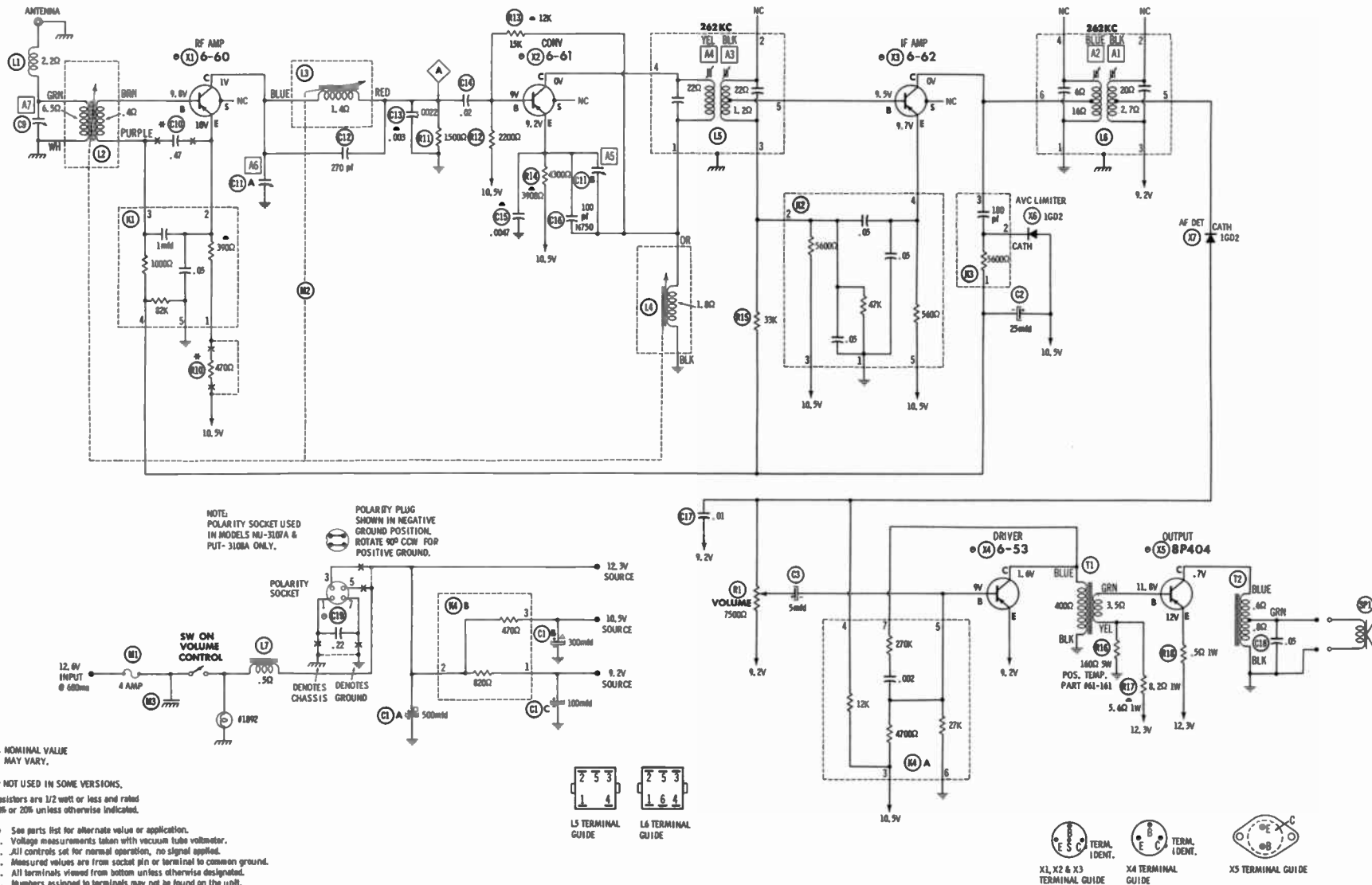


RIVERSIDE MODELS FJB-6576A, FJB-6577A

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

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World Radio History



NOTE:
POLARITY SOCKET USED
IN MODELS NU-3107A &
PUT-3108A ONLY.

POLARITY PLUG
SHOWN IN NEGATIVE
GROUND POSITION.
ROTATE 90° CW FOR
POSITIVE GROUND.

⊕ NOMINAL VALUE
MAY VARY.

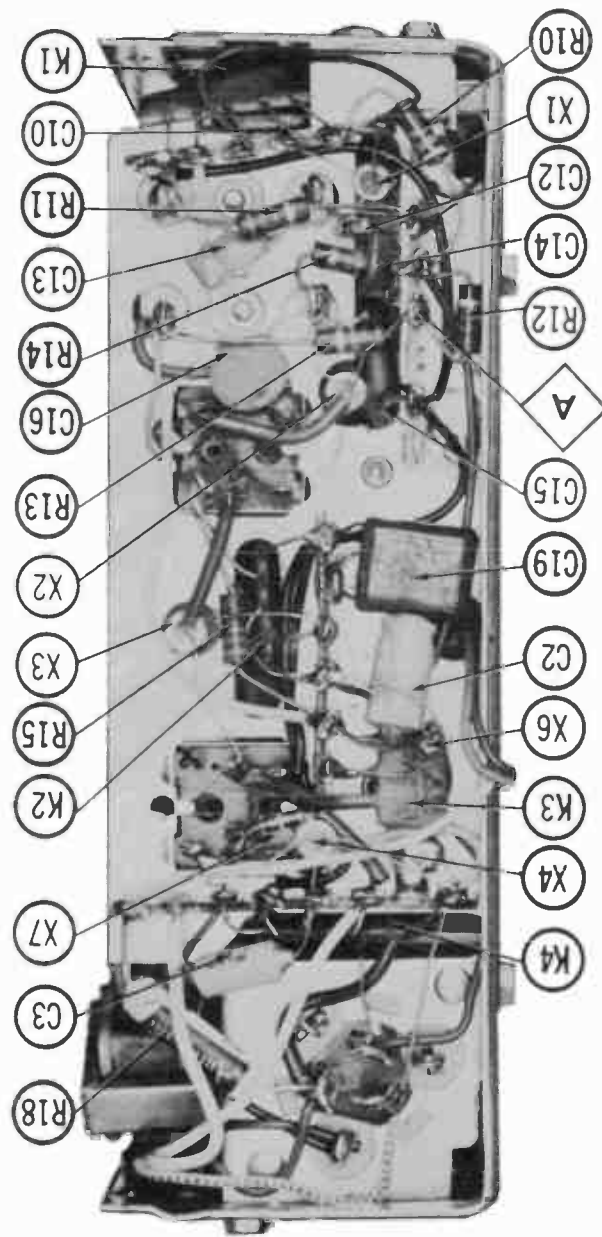
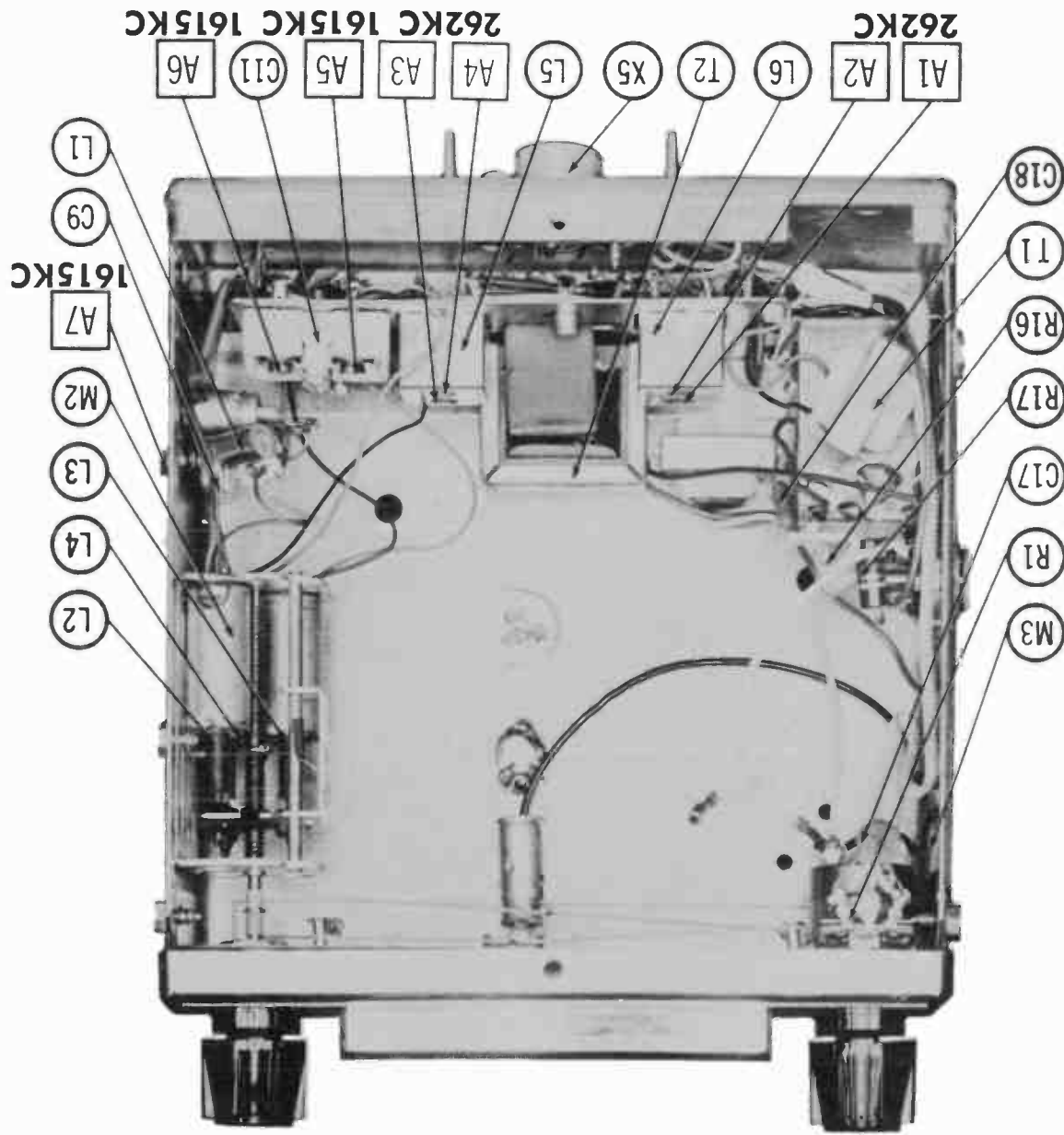
* NOT USED IN SOME VERSIONS.

Resistors are 1/2 watt or less and rated
10% or 20% unless otherwise indicated.

- Ⓢ 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-6576A, FJB-6577A



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
Boarding 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	6-60 (2N640)	RF Amp.	DS-25	GE-1	2N1637	PNP
X2	6-81 (2N642)	Conv.	DS-25	GE-1	2N1639	PNP
X3	6-62 (2N641)	IF Amp.	DS-25	GE-1	2N1638	PNP
X4	6-53 (2N591)	Driver	DS-26	GE-2	2N591	PNP
X5	6P404 (2N176)	Output	DS-520	GE-3	2N301	PNP*

* When replacing, apply silicon grease to both sides of insulator. Tighten mounting screws securely.

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MEASURED CURRENT	ORIGINAL Part or Type No.	RECTIFIERS				DIODES
			GENERAL ELECTRIC PART No.	MALLORY PART No.	RCA PART No.	SARKES TARZIAN PART No.	GENERAL ELECTRIC PART No.
X6		1GD2					1N34AS
X7		1GD2					1N34AS

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	20-2653	AFH3-00-04.5		XC3-46.1		FP300.63	TVLS-3026.1*
B	300	16							
C	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		#28-600-2L							
C10	.47 3V	①		UK10-404	HCC10474Z				HY-330
C11A		#28A1332							
B									
C12	270		DI-270	DD-271	LA10T27-C4	CCD-271	GP327		5GA-T25
C13	.0022		BPD-0022	DD-222	LA10D22-C4	CCD-222	B222		10TS-D22
C14	.02	(.003) †	TTD-02	CK-203	H3		TA120		TG-820
C15	.0047		BPD-0047	DD-472	BYA10D47	CCD-472	B247		5HK-D47
C16	100 N750		N750-D1100	DTN-100	C10T1U	CCTN-101	CN73 10		10TCU-T10
C17	.01		BPD-01	DD-103	BYA10S1	CCD-103	B110		5HK-S10
C18	.05		TTD-05	CK-503	H5		TA150		TG-850
C19	.22	①		UK20-204	HCC25224Z				HY-325

Riverside Part Number.

† Alternate Value.

① Not used in some versions

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	7500Ω	60A2916A (60A2916)	F2-10K,SFS212, AK-31, KR-4			B13-116, TM6, QCB4① 76-1 or (BU14② CF61, 884, GC)	

① Use QCB4 instead of Tab Mount Plate in TM6.

② Alter bushing to meet requirements.

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA			ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN PART No.	RIVERSIDE Part No.			IRC PART No.	WORKMAN PART No.	Part No.
R16	160Ω 5W PTC			61-161					

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.

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-565	4610	RTC-8520	T859	① Part of M2.
L2	Ant.	①					
L3	RF	①					
L4	Osc.	①					
L5	Input IF	14-3233A					
L6	Output IF	14-3234A					

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	.680	.5Ω	10MH	75A3082	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.	
	PRI.	SEC.						
T1	8:	1	75A2635			TR-184		

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 Tap	@ 8Ω	75A2638 (75A2636)			TR-169		

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
				RIVERSIDE PART No.	QUAM PART No.	
SP1	5"	PM	8Ω	75A2163	5A0528	

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	RIVERSIDE PART No.	REPLACEMENT DATA
K1	RF Amplifier	390Ω, 1000Ω, 82K, .05mfd, 1mfd	89A2582C	
K2	IF Amplifier	560Ω, 5600Ω, 47K, .05mfd, .05mfd, .05mfd	89A2584B	
K3	AVC	5600Ω, 180pf	89A2701	
K4	AF Amp.	470Ω, 820Ω, 4700Ω, 12K, 27K, 270K, .002mfd	89A2585A	

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			RIVERSIDE PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M1	AGW	4A ①			303004	155004	AGW4	HDH

① Some versions may use 3A.

MISCELLANEOUS

ITEM No.	PART NAME	RIVERSIDE PART No.	NOTES
M2	Tuner	78A3602	
M3	Spark Plate	43-216	

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
Escutcheon	55C3605	Knob, Tuning or Volume	47A1235
Dial Glass	39-78	Knob, Spacer	47A1249

RIVERSIDE MODELS FJB-6576A, FJB-6577A



PHOTOFACT®



TRADE NAME : Riverside Model FJB-16563A
 SUPPLIER : For Current Address, See Master Index.
 TYPE SET : 2 Tube, 2 Transistor AM Receiver.
 POWER SUPPLY : 12 Volt Storage Battery
 RATING : 1 Amp. @12.6 Volts DC
 TUNING RANGE : BROADCAST 540-2850KC

ALIGNMENT INSTRUCTIONS

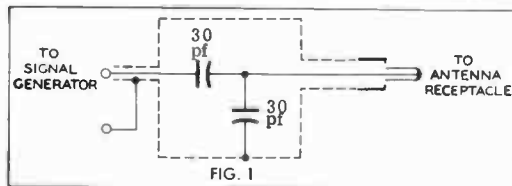
Check for specified source voltage.

Use only enough generator output to provide a usable indication.

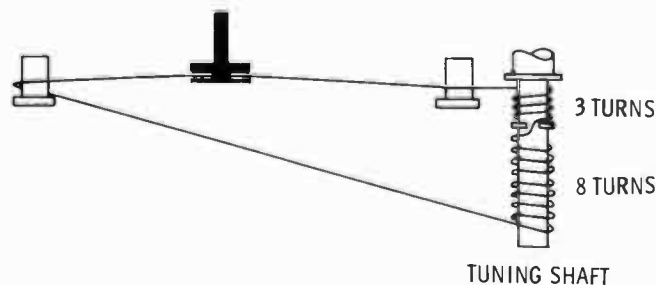
Suggested Alignment Tools: A1 thru A4 GENERAL CEMENT: 8606, 8606L, 8869 WALSCO: 2543, 2544, 2588

	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.	2.8MC	"	"	A5, A6, A7	"

With radio installed in car and antenna fully extended, tune in a weak station near 2.4MC and adjust A7 for maximum output.



DIAL CORD STRINGING



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

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.

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.)

TUBES

ITEM No.	USE	TYPE	REPLACEMENT DATA			
			AMPEREX	GENERAL ELECTRIC	RCA	SYLVANIA
V1	RF Amp.-Conv.	12FK6				
V2	IF Amp.-Det.-AVC-AF Amp.	12FR8				

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	
X1	6-53 (2N591)	Driver	DS-26	GE-2		PNP
X2	8P404T (2N176)	Output	DS-520	GE-3		PNP *

* When replacing, apply silicon 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	AJFH3-00-95.4	CC0008	XC3-48	TMT3002.10	WP300.87	PCLB-3026.10
C1B	300	15							
C1C	100	15							

* 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							
C11	40								
C12	.047	100V	DBE2847	TCN-39	C10Q39U	CCTN-390	CN7439	10TCU-Q39	
C13	12	NPO		TCZ-12	WMF2847	IDP-2-473	PVC1147	2P8-847	
C14						OCTO-120	CN0412	10TCC-Q12	
C15	.01		#28-281						
C16	51		(40pf) †	BPD-01	DD-103	BYA1081	CCD-103	B110	5HK-810
C17			#28-281	DI-50	DD-500	LA10Q5-83	CCD-500	GP450	5GA-Q50
C18	.01			BPD-01	DD-103	BYA1081	CCD-103	B110	5HK-810
C19	100	N750		N750-D1100	DTN-100	C10T1U	CCTN-101	CN7310	10TCU-T10
C20	.01			BPD-01	DD-103	BYA1081	CCD-103	B110	5HK-810
C21	.01			BPD-01	DD-103	BYA1081	CCD-103	B110	5HK-810
C22	.5	200V		BE2P5		DPMB2P5	IDP-4-504	PVC105	2P8-P50
C23			#43-215						

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.	
R1	Volume, Switch	1meg	80A1240	F2-1meg, SF8212, AK31⊙, KR4 or (AB-70, AK33, AK31⊙, KR-4)			QCB4, B13-137, TM8, 76-1 or (BU14⊙, CF26, 884, GC) *	

⊙ Alter bushing to meet requirements.

* "SNAPTROL"

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA			ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN PART No.	RIVERSIDE PART No.			IRC PART No.	WORKMAN PART No.	RIVERSIDE PART No.
R24	1.8Ω 1W	BWH1.8	WBL.8	60-1.8-18	R25	.5Ω 1W	BW.51	WT51	60-.5-18

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA						
		RIVERSIDE PART No.	MEISSNER PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	RF Choke (6.2uh)	14-6.2		19-1004	BC-565	4610	RTC-8520	T859
L2	Antenna							
L3	RF Osc.							
L4	Input IF	14-272		16-6752	BC-350	6584	RTC-8638	TF605
L6	Output IF	14-273		16-6703	BC-424			

⊙ Part of M2.

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	1Amp.	.5Ω	10MH	75A1269	C-4095	TC-2	TR-155	TY1TXT	

TRANSFORMER (DRIVER)

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

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	16Ω	4Ω	75A1272				TR-161	

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			RIVERSIDE PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M1	SFE	7 1/2			30707.6	155009	SFE 7 1/2	HDH

MISCELLANEOUS

ITEM No.	PART NAME	RIVERSIDE PART No.
M2	Tuner	78A2448

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA	
		RIVERSIDE PART No.	QUAM PART No.
SP1	5" PM 4Ω	73A1275	5A05

COMPONENT COMBINATIONS

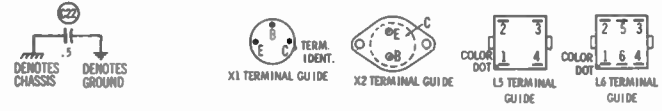
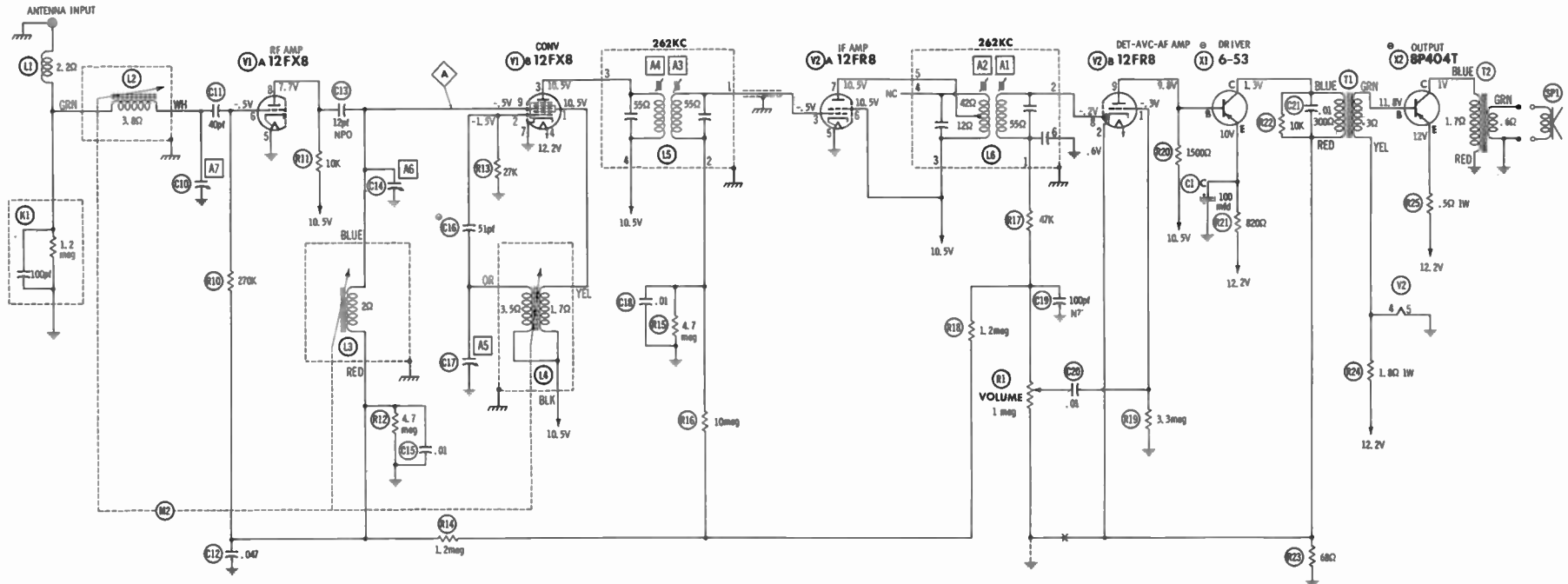
ITEM No.	USE	DESCRIPTION	RIVERSIDE PART No.	REPLACEMENT DATA
K1	Antenna Isolation	1.2meg, 100pf	69-4204	Sprague-PRC-9

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
Knob, Tuning, Volume Knob, Spacer	47A1235 47A1249	Dial Pointer	84A1211

RIVERSIDE MODEL FJB-16563A



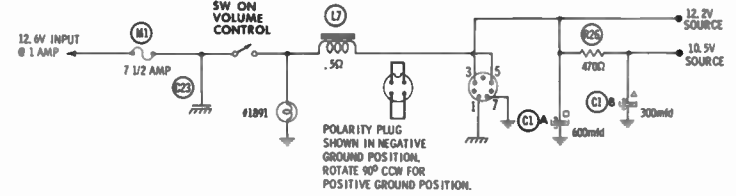
RESISTANCE MEASUREMENTS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	12FX8	470Ω Δ	27K	525Ω Δ	FIL	FIL	2meg	Ω	10K Δ	2meg
V2	12FR8	3.3meg	68Ω	4meg	FIL	FIL	470Ω Δ	485Ω Δ	1meg	1500Ω Δ

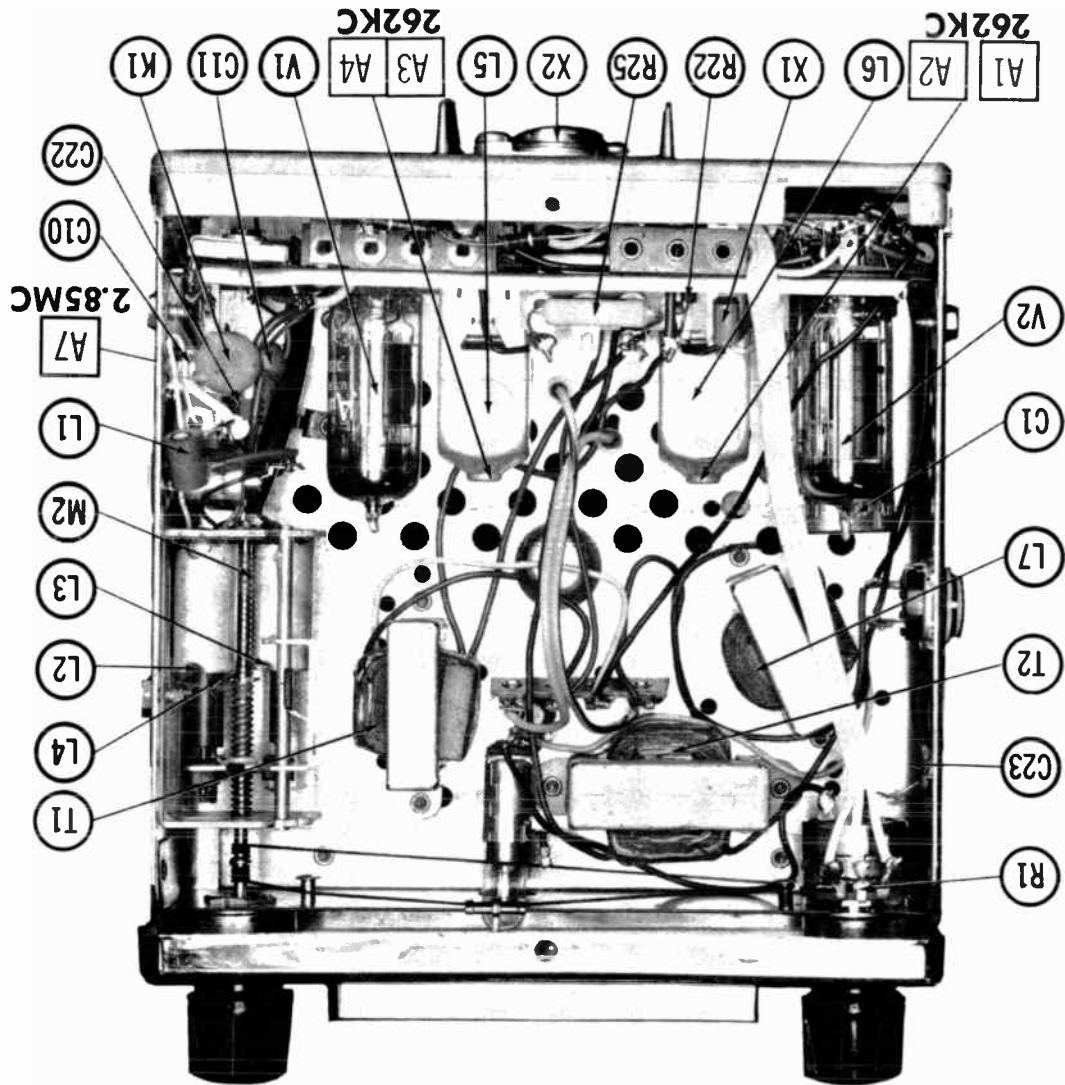
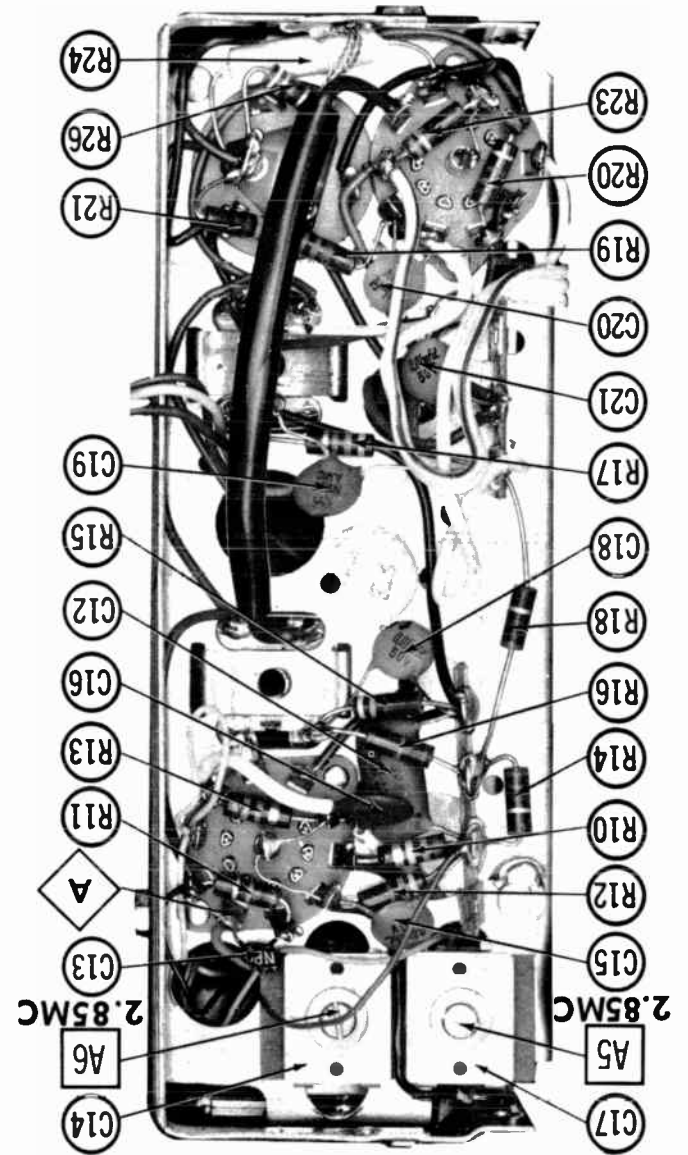
▲ MEASURED FROM CIA.
RESISTANCE MEASUREMENTS NOT GIVEN FOR X1 & X2 BECAUSE OF THE WIDE VARIATION OF INTERNAL RESISTANCE OF THE TRANSISTOR.

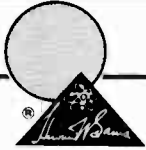
- Resistors are 1/2 watt or less and rated 10% or 20% unless otherwise indicated.
- See parts list for alternate value or application.
1. Voltage measurements taken with vacuum tube voltmeter.
 2. All controls set for normal operation, no signal applied.
 3. Measured values are from socket pin or terminal 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.

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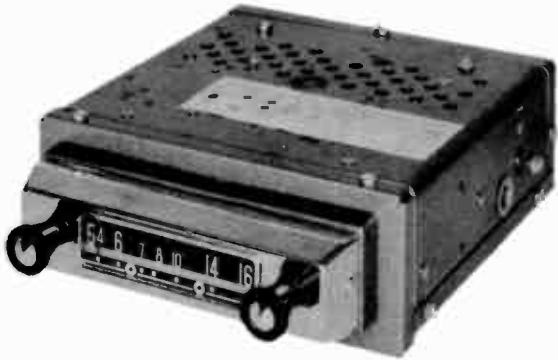


RIVERSIDE MODEL FJB-16563A





PHOTOFACT[®]



TRADE NAME : Riverside Model FJB-16607A

SUPPLIER :

TYPE SET : 4 Tube, 1 Transistor AM Receiver

POWER SUPPLY : 12 Volt Storage Battery

RATING : 1.2 Amp. @ 12.6 VDC

TUNING RANGE : BROADCAST 535 - 1615KC

RIVERSIDE MODEL FJB-16607A

ALIGNMENT INSTRUCTIONS

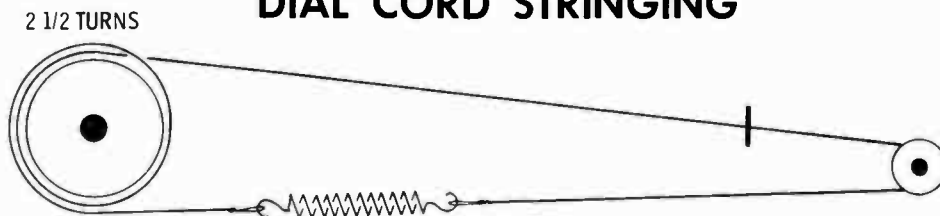
Check for specified source voltage.
Use only enough generator output to provide a usable indication.
Suggested Alignment Tools:

A1 thru A4..... GENERAL CEMENT #8606, 8606L, 8869
WALSCO #2543, 2544, 2588
A5, A6, A7..... GENERAL CEMENT #9087, 8290, 8868
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.	265KC (400v Mod.)	High Freq. End Stop.	Output Meter across voice coll.	A1, A2, A3, A4	Adjust for maximum.
2.	High side thru 82mmf to antenna receptacle, low side to ground.	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

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.

TUBES

♦ AMPEREX ♦		GENERAL ELECTRIC ♦		RCA ♦		RAYTHEON ♦		SYLVANIA ♦	
ITEM No.	USE	TYPE		ITEM No.	USE	TYPE			
V1	RF Amplifier	12BL6		V3	IF Amplifier	12BL6			
V2	Converter	12AD6		V4	Det. - AVC - AF Amp.	12DL8			

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	
X1	2N176	Output	D8-520	GE-3	8K-3000	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	400	15	20-320 ①	AFH2-02-40					
C1B	400	15							
C2	750	3	20-757				BL-2211	TC-310	

① C1 is 500-500mfd in some versions (Part #20-317).

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	40 .047 200V	#28-800-2	NPO-DI 39	TCZ-39	C10Q39C	CC TO-390	CNO-439	10TCC-Q39
C11			P288N-047	DD-503	CUB2847	ADP-3-473	GEM-2147	2TM-847
C12								
C13	5	#28-400-2 (8.5, 12) †	NPO-DI 5.0	DTZ-4R7	C10V47C	CC TO-4R7	CNO-547	10TCC-V50
C14								
C15	40	#28-461	NPO-DI 39	TCZ-39	C10Q39C	CC TO-390	CNO-439	10TCC-Q39
C16								
C17	.01		BPD-01	DD-103	BYA1081	CCD-103	B-110	5HK-810
C18	.27		DI-27	DD-270	LA10Q27	CCD-270	GP427	10T8-Q27
C19	.01		BPD-01	DD-103	BYA1081	CCD-103	B-110	5HK-810
C20	.003		DI-3000	DD-302	LA10D3	CCD-302	GP230	10T8-D30
C21	.47 100V	(.006) †	P288N-47		WMF1P47	IDP-4-474	PVC1047	2P8-P47

‡ 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.	
R1	Volume & Switch	1meg	80A1720	B-70-8, AK-28 ① or (F2-1meg, BU308, KR-4, AK-28 ①)	A47-1meg-2, F8-3, XB-2 ①, SWE-13			UA18A, SL3500, EB158 ①, US41) or (RUI6A, SL38, SL3500, EB158 ①, US-41) or (U53, EB158 ①, US-26)

① Alter Bushing to meet Requirements.

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	RIVERSIDE PART No.	REPLACEMENT DATA	
				Centralab	RC-471
K1	Antenna Isolation	100mmf, 1.2meg	89-4204	Sprague	PRC-9

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		RIVERSIDE PART No.	MERT 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.	⓪					
L3	RF	⓪					
L4	Osc.	⓪					
L5	Input IF	14-268					
L6	Output IF	14-269					

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA				NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	RIVERSIDE PART No.	MERT PART No.	STANCOR PART No.	THORDARSON PART No.	
L7	1.2 Amp.	.3Ω	10MH	75A1269	C-4096	TC-3	TR-155	TY17XT

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
	PRI.	SEC.	RIVERSIDE PART No.	MERT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC.	RIVERSIDE PART No.	MERT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T2	16Ω	3-4Ω	75A1272				TR-161	

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		RIVERSIDE PART No.	QUAM PART No.	
SP1	5" PM 3-4Ω	75A1275	5A05	

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			RIVERSIDE PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M1	8FE	7½			30707.5 (8FE 7½A)	15507.5A	8FE 7½	HMH

MISCELLANEOUS

ITEM No.	PART NAME	RIVERSIDE PART No.
M2	Tuner	78A1721
M3	Spark Plate	43-215

CABINETS & CABINET PARTS

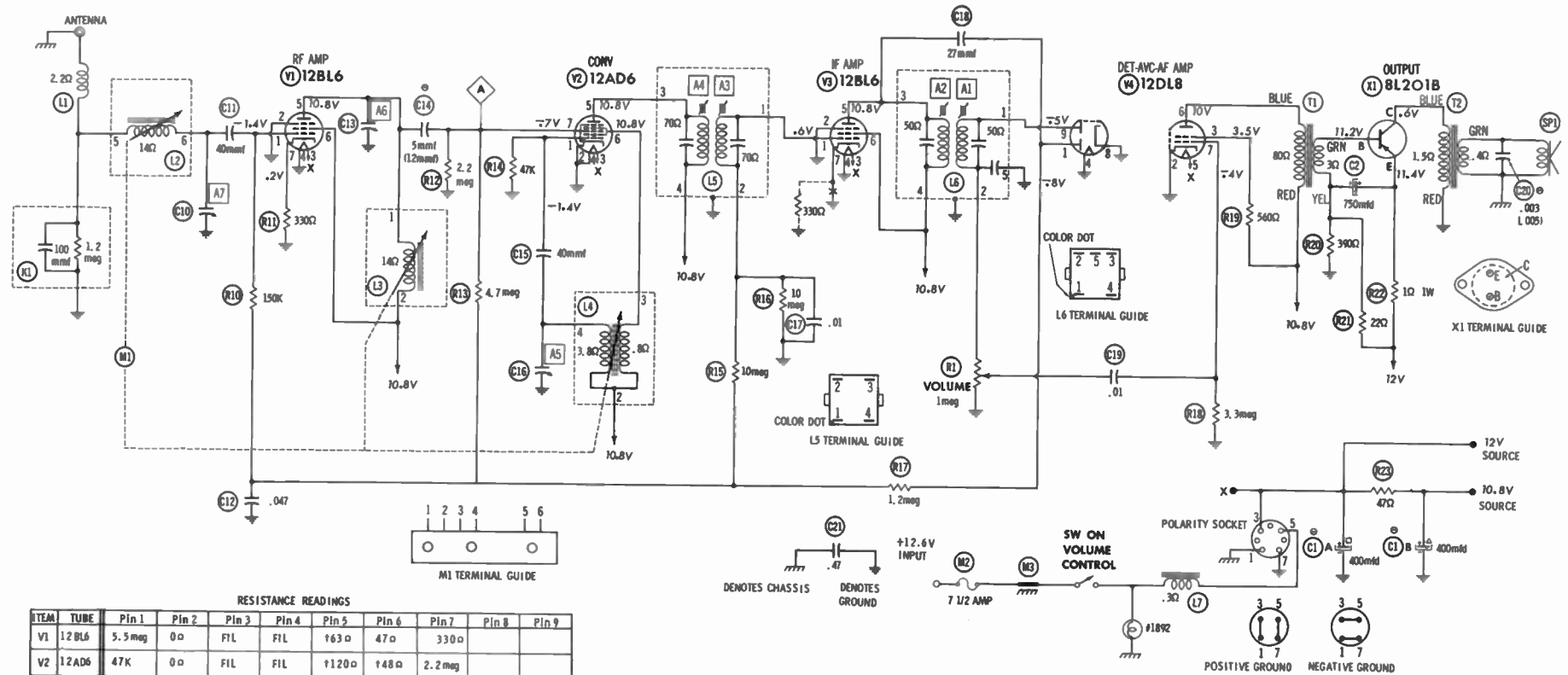
(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.
Knob - Volume, Tuning	47B319-1
Dial Pointer	84A158

WIRING DATA

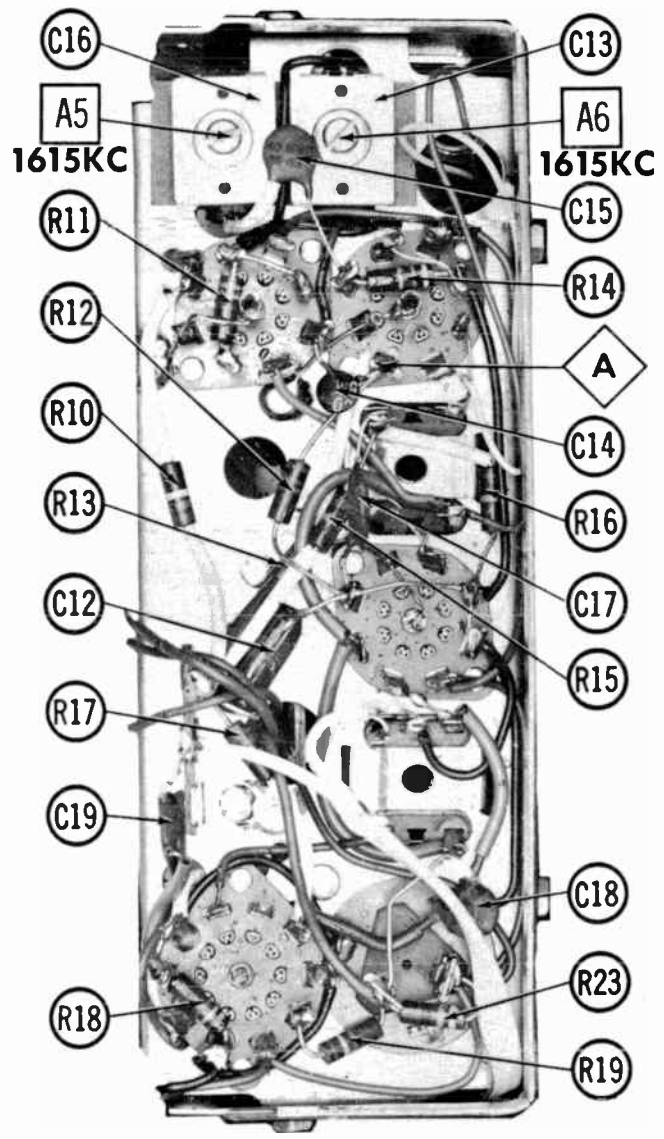
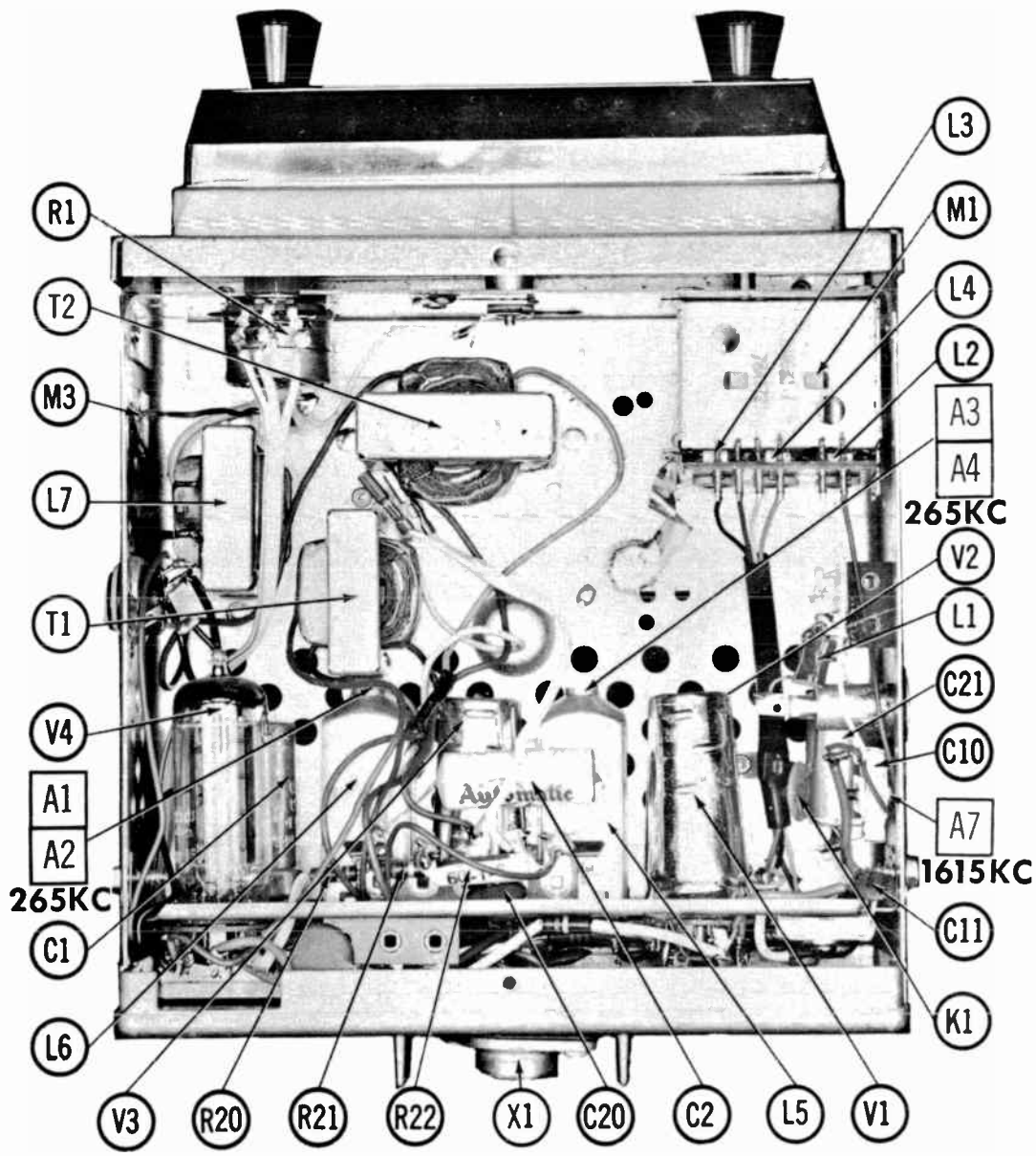
General-use Unshielded Hook-up Wire Use BELDEN No. 8530 (Solid) Available in 12 Colors
8524 (Stranded) Available in 12 Colors
Shielded Hook-up Wire Use BELDEN No. 8885
Rear Seat Speaker Extension Cable Use BELDEN No. 8782 (Stranded) Coded Parallel Leads
Bonding Strap Use BELDEN No. 8661 (3/8 in.) or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

RIVERSIDE MODEL FJB-16607A



A PHOTOFACIT STANDARD NOTATION SCHEMATIC
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RIVERSIDE MODEL FJB-16607A

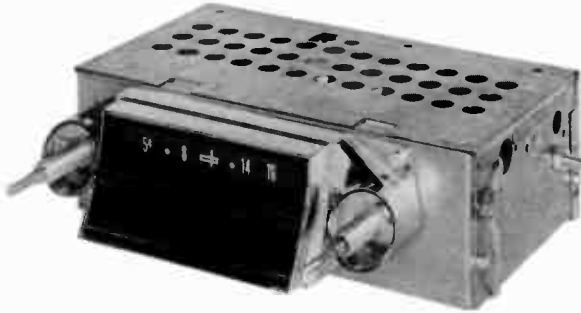


RIVERSIDE MODEL FJB-16607A



PHOTOFACT[®] with

CIRCUITRACE[®]



TRADE NAME : Soundex Model CHP-165T
(1965 Chevrolet)
SUPPLIER : For Current Address, See Master Index.
TYPE SET : 5 Transistor AM Receiver
POWER SUPPLY : 12 Volt Storage Battery
RATING : .500 Amp. @ 12.6 Volts DC
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

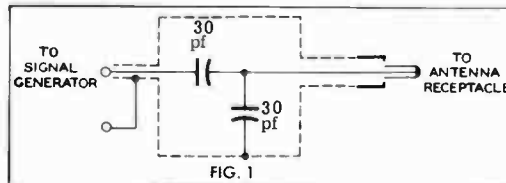
WALSCO: 2525, 2528, 2587

	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 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.	1615KC	"	"	A5, A6, A7	"

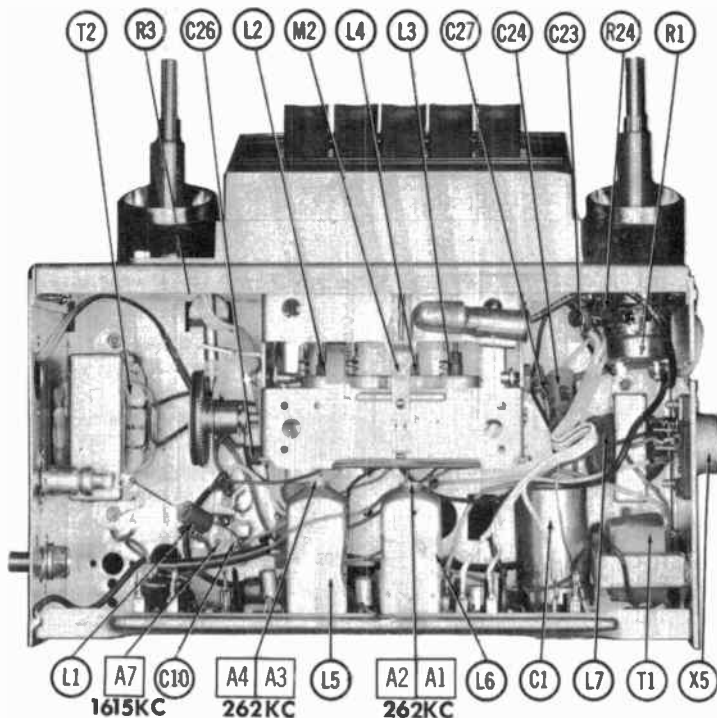
With radio installed in car and antenna fully extended, tune in a weak station near 1400KC and adjust A7 for maximum output.

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	2N1637	RF Amp.	D8-25	GE-1	SK-3008	PNP
X2	2N1639	Conv.	D8-25	GE-1	SK-3008	PNP
X3	2N1638	IF Amp.	D8-25	GE-1	SK-3008	PNP
X4		Driver	D8-46	GE-10		NPN
X5		Output	D8-520	GE-3		PNP *

* When replacing, apply silicon grease to both sides of insulator. Tighten mounting screws securely. Check Bias Adjustment.

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MEASURED CURRENT	ORIGINAL Part or Type No.	RECTIFIERS				DIODES
			GENERAL ELECTRIC PART No.	MALLORY PART No.	RCA PART No.	SARKES TARZI/M PART No.	
X6		1N295					1N295
X7		1N295					1N295
X8		1N295					1N295

ELECTROLYTIC CAPACITORS

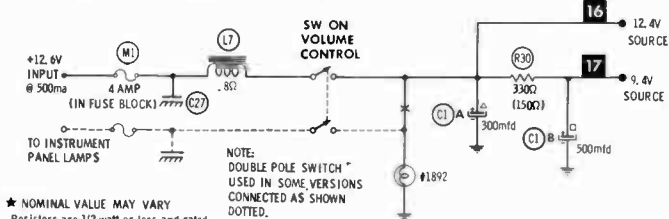
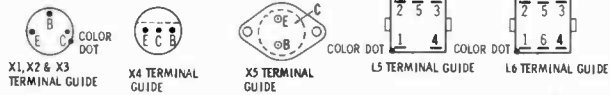
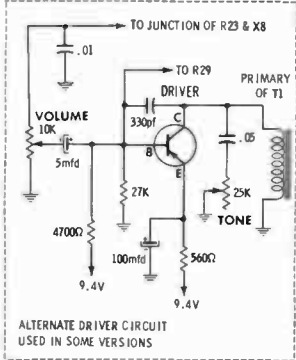
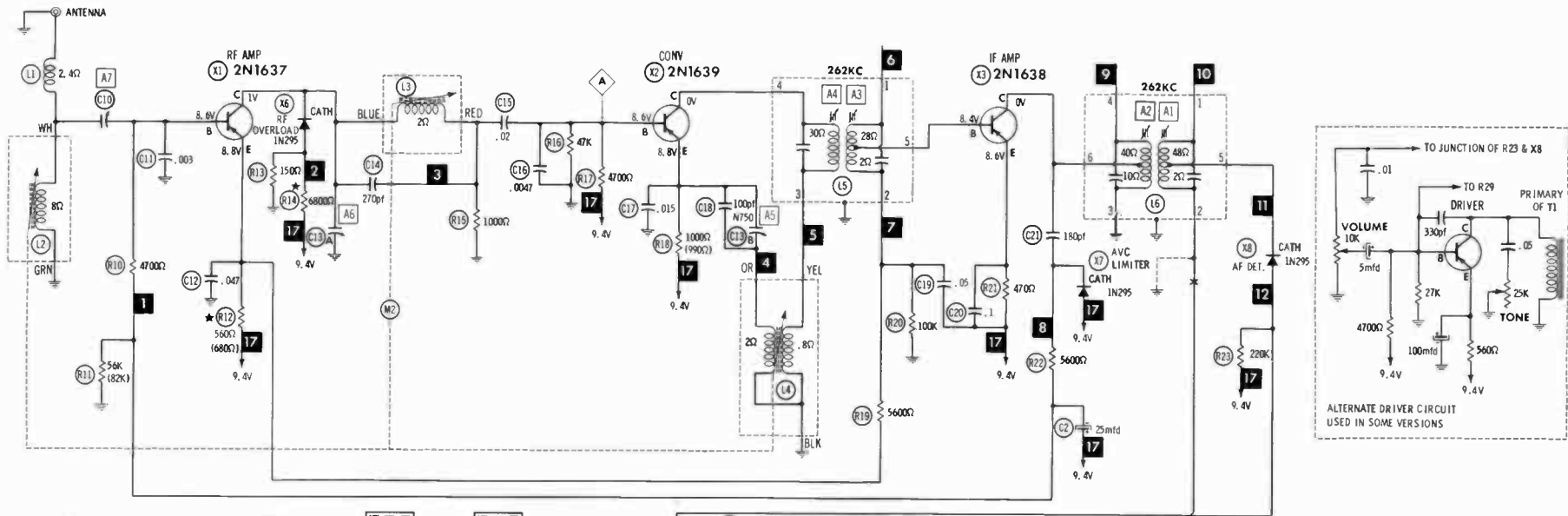
ITEM No.	RATING		REPLACEMENT DATA					
	CAP.	VOLT.	SOUNDEX PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A	▲300	16	C-66	PWH3-00-95	CC0010	XC3-48	PFP300.18	PCL8-3026.12*
	■500	16						
	100	16						
C2	25	15	C-53	BCD15025	NLW25-15	MT1-14	PET1570	VL-1170
C3	5	15	C-54	BCD15005	NLW5-15	MT1-3	PET1535	VL-1164

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

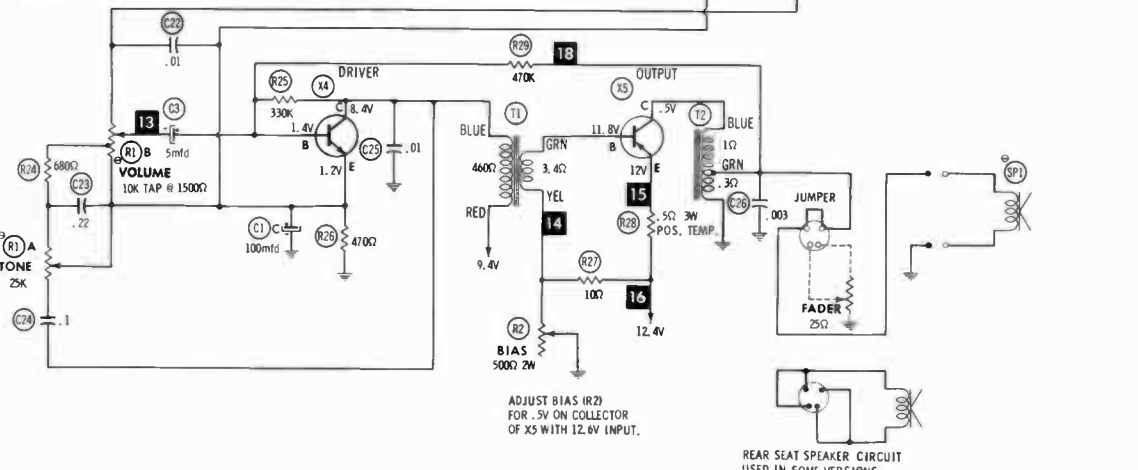
FIXED CAPACITORS

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		#TR-6B						
C11	.003	100V	BPD-0033	DD-332	BYA10D33	CCD-332	B233	5HK-D33
C12	.047		DBE2847		WMF2847	1DP-2-473	PVC1147	2P8-847
C13A			#TR-14A					
C14	270	100V	DD-270	DD-271	LA10T27-C4	CCD-271	GP327	5GA-T25
C15	.02		TTD-02	CK-203	H3		TA120	TG-820
C16	.0047		BPD-0047	DD-472	BYA10D47	CCD-472	B247	5HK-D47
C17	.015		DBE4815		DPMS4815	1DP-1-153	PVC2115	4P8-B15
C18	100		N750-DI 100	DTN-100	C10T1U	CCTN-101	CN7310	10TCU-T10
C19	.05		DBE685		DPMS265	1DP-2-503	PVC215	2P8-850
C20	.1		DBE2P1		WMF1P1	1DP-2-104	PVC101	2P8-P10
C21	180		DI-180	DD-181	LA10T18-83	CCD-181	GP318	5GA-T18
C22	.01		BPD-01	DD-102	BYA1081	CCD-102	B110	5HK-810
C23	.22			UK20-204	HCC25224Z			HY-325
C24	.1	100V	DBE2P1		WMF1P1	1DP-2-104	PVC101	2P8-P10
C25	.01		BPD-01	DD-102	BYA1081	CCD-102	B110	5HK-810
C26	.003		BPD-0033	DD-332	BYA10D33	CCD-332	B233	5HK-D33
C27			# SPK-P-2					

SounDEX Part Number.



- ★ NOMINAL VALUE MAY VARY
Resistors are 1/2 watt or less and rated 10% or 20% unless otherwise indicated.
- 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.

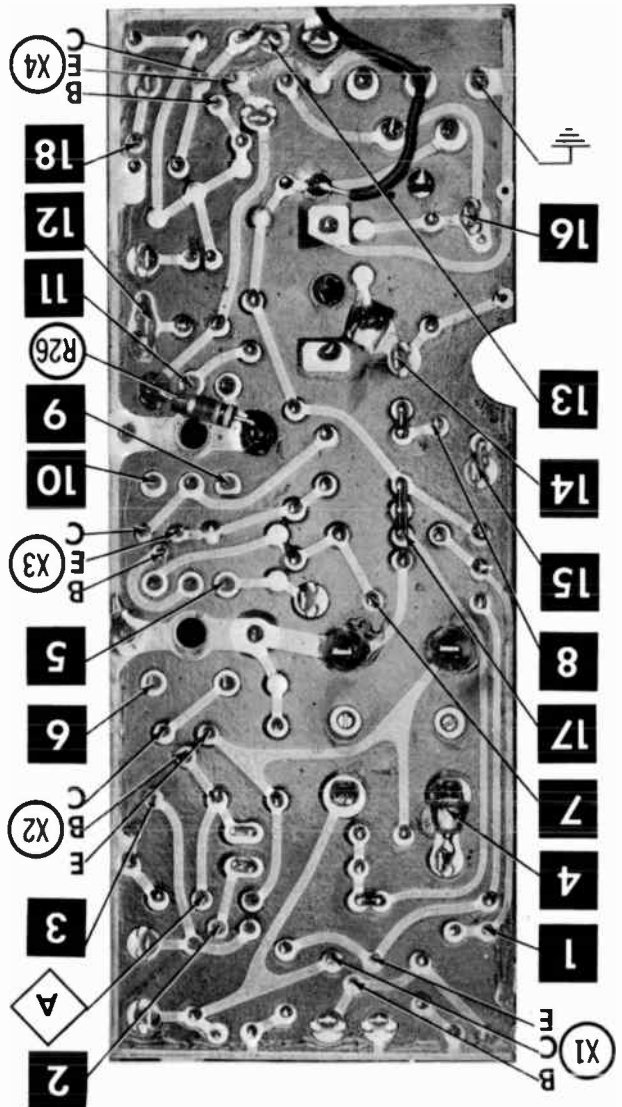
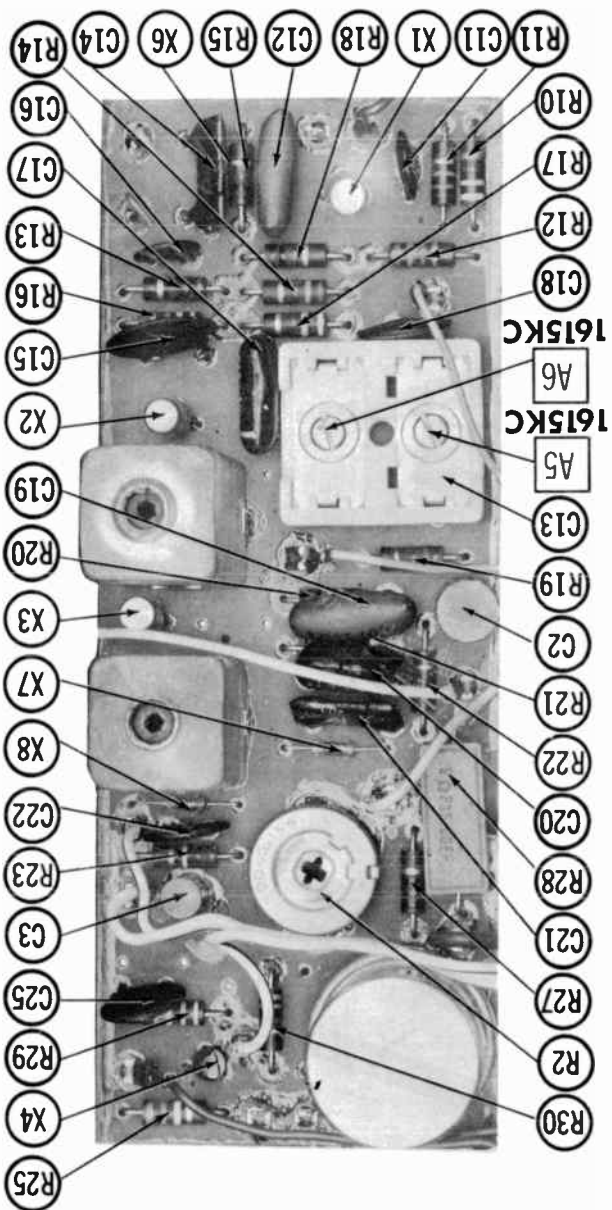


ADJUST BIAS (R2) FOR .5V ON COLLECTOR OF X5 WITH 12.6V INPUT.

A PHOTOFAC STANDARD NOTATION SCHEMATIC with **CIRCUITRACE**
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SOUNDEX MODEL CHP-165T

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.

CONTROLS

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

ITEM No.	USE	RESIST-ANCE	REPLACEMENT DATA				
			SOUNDEX PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLOY PART No.
R1A B	Tone Volume/Switch	25K 10K Tap @ 1500Ω	VC-10TT			† QJ-1911A	
R2 R3	Bias Fader	500Ω 2W 25Ω 2W	PT-2 FC-6	V-500	U39-500	110-600	MR800P

† "CONCENTRIKIT" Equivalent: K8 Kit with Base Elements and Shafts: B11-120, P22-203 (Panel)
B19-116K, R9-222 (Rear)
89 (Bushing)
76-1 (Switch)

"SNAPTROL" Equivalent: BU8, CF11, CR40T, SF18, SR56, GC.

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
R28	.5Ω 3W (PTC)			‡R-2AAA					

‡ Soudex Part Number.

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					
		SOUNDEX PART No.	MEISSNER PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.
L1	RF Choke (6.8uh)	TF-14	19-1004	BC-565	74F886AP	RTC-8520	T859
L2	Antenna						
L3	RF						
L4	Osc.						
L5	Input IF	TF-32	16-8712		6522		
L6	Output IF	TF-33					

① Part of M2.

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA					NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (O CURRENT 1000~)	SOUNDEX PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L7	500ma	.8Ω	15MH	TF-4C	C-4095	TC-2	TR-152	TY17XT	

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
	PRI.	SEC.	SOUNDEX PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	14.4	1	TF-1C					

SPEAKER

ITEM No.	TYPE	RATING	REPLACEMENT DATA		NOTES
			SOUNDEX PART No.	QUAM PART No.	
SP1	4" x 10" PM	4Ω	BK-27W	410A2	

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC.	SOUNDEX PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T2	25Ω Tap @ 4Ω		TF-2P				TR-168	

FUSE DEVICES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M1	AGC	4	FU-3	In Fuse Block	311004		AGC4	

MISCELLANEOUS

ITEM No.	PART NAME	SOUNDEX PART No.	NOTES
M2	Tuner	TUN-23TPC	

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
Bezel	BE-41	Dial Scale	DS-44T

WIRING DATA

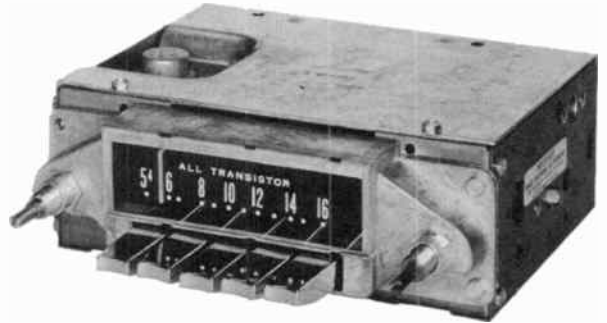
General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in 12 Colors 8524 (Stranded) Available in 12 Colors
Shielded Hook-up Wire	Use BELDEN No. 8885
Rear Seat Speaker Extension Cable	Use BELDEN No. 8782 (Stranded) Coded Parallel Leads
Bonding Strap	Use BELDEN No. 8661 (3/8 In.) or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



PHOTOFACT[®] with

CIRCUITRACE[®]

TRADE NAME : Soundex Model CYP-465T (1965 Chrysler)
SUPPLIER : For Current Address, See Master Index.
TYPE SET : 5 Transistor AM Receiver
POWER SUPPLY : 12 Volt Storage Battery
RATING : .250 Amp. @ 12.6 Volts DC
TUNING RANGE : BROADCAST 540-1615KC



ALIGNMENT INSTRUCTIONS

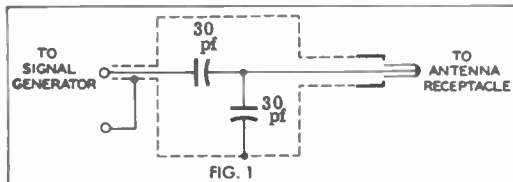
Check for specified source voltage.
 Use only enough generator output to provide a usable indication.
 Suggested Alignment Tools:

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 A , low side to ground.	282KC (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.

Antenna Adjustment: (A7) Located on right side of radio, below Antenna Input.

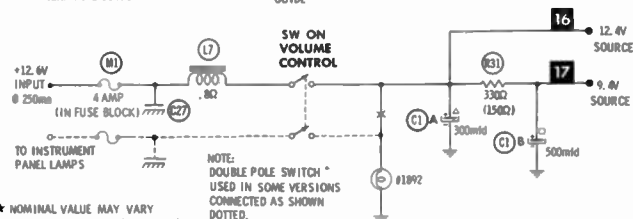
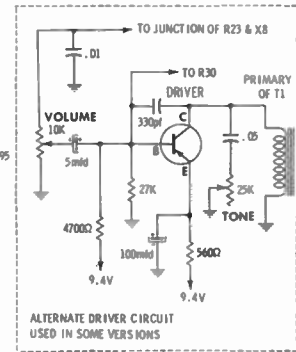
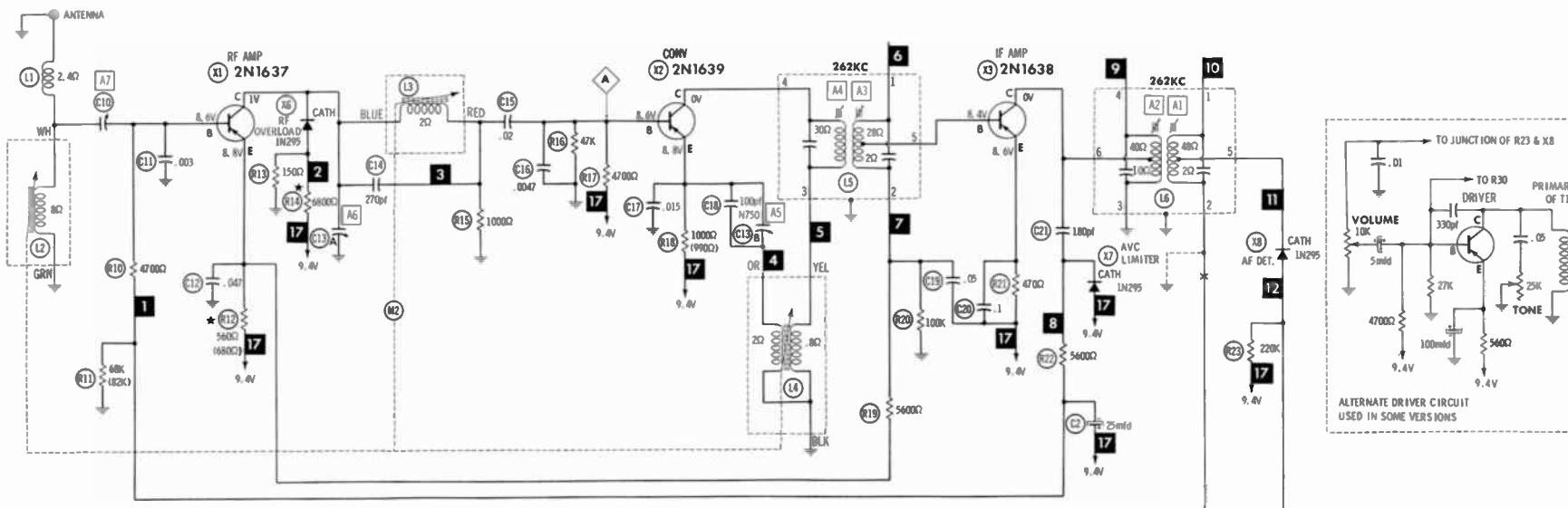


PUSH-BUTTON ADJUSTMENT

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

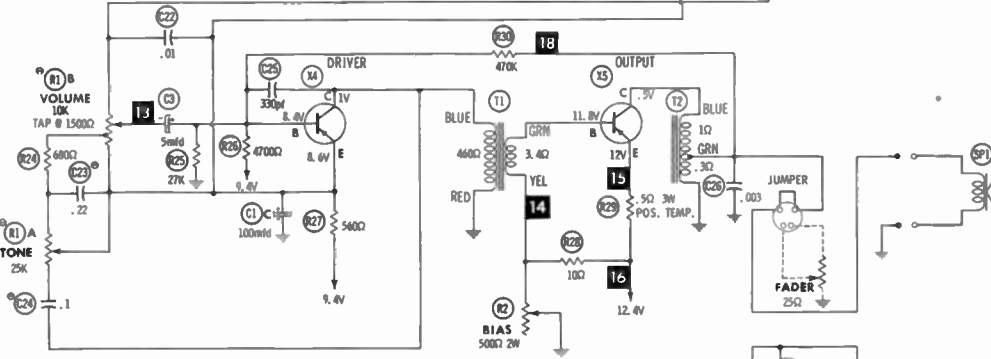
SOUNDEX MODEL CYP-465T

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



★ NOMINAL VALUE MAY VARY
Resistors are 1/2 watt or less and rated 10% or 20% unless otherwise indicated.

- 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 transformer.



ADJUST BIAS (R2) FOR .5V ON COLLECTOR OF X5 WITH 12.4V INPUT.

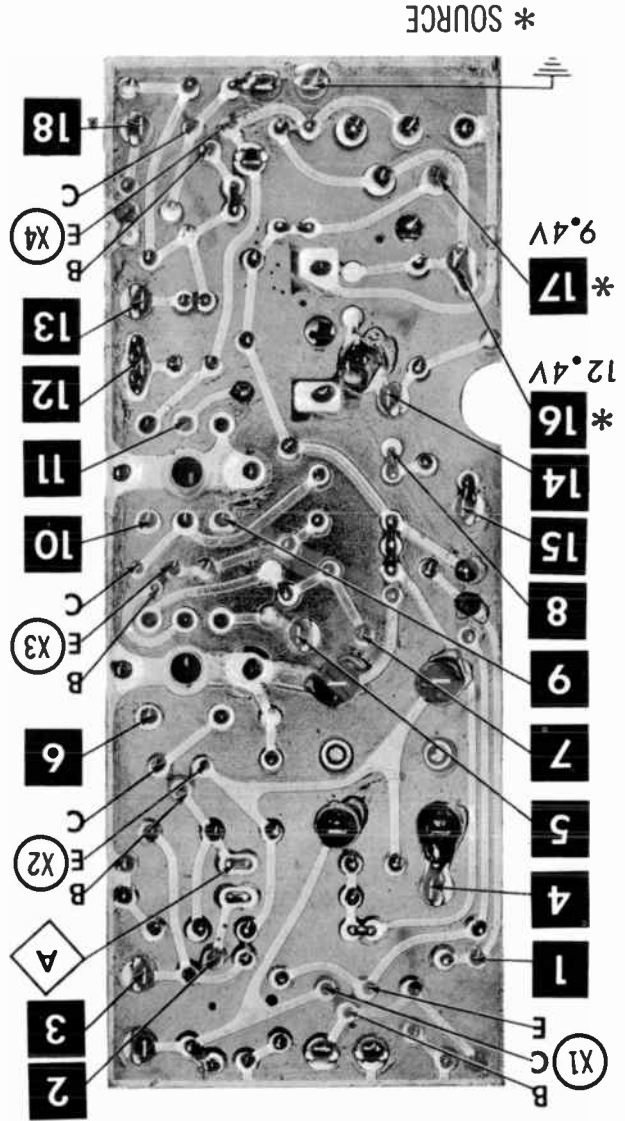
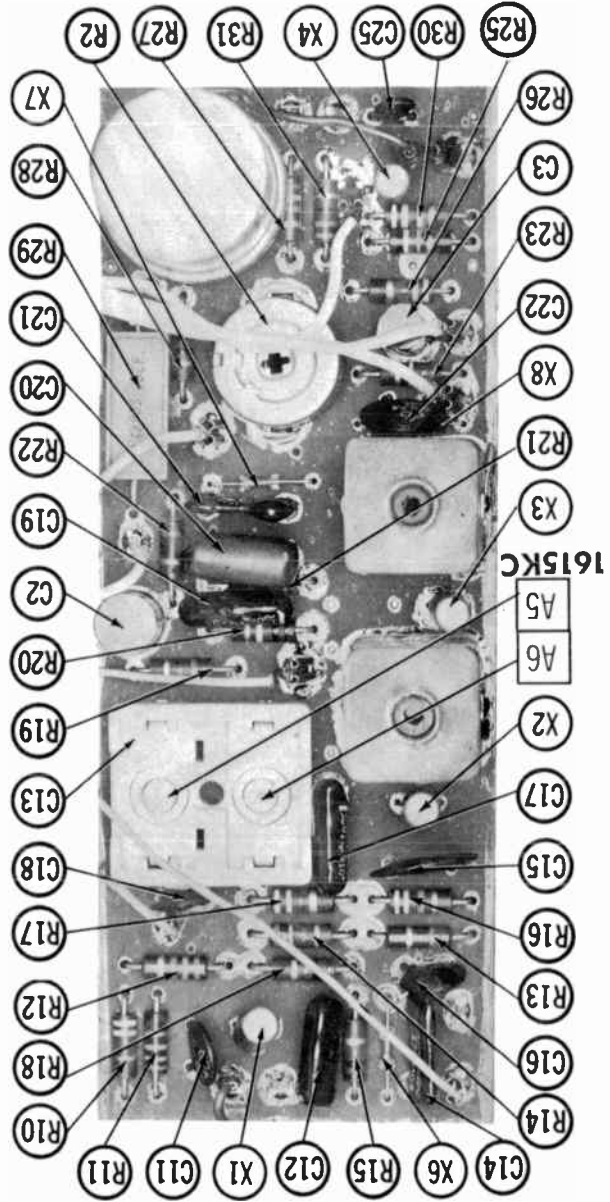
REAR SEAT SPEAKER CIRCUIT USED IN SOME VERSIONS.

SOUNDEX MODEL CYP-465T

A PHOTOFAC STANDARD NOTATION SCHEMATIC
with **CIRCUITRACE**
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SOUNDEX MODEL CYP-465T

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.

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	2N1637	RF Amp.	D8-25	GE-1	SK-3008	PNP
X2	2N1639	Conv.	D8-25	GE-1	SK-3008	PNP
X3	2N1638	IF Amp.	D8-25	GE-1	SK-3008	PNP
X4		Driver	D8-26	GE-2		PNP
X5		Output	D8-520	GE-3		PNP

* When replacing, apply silicon grease to both sides of insulator. Tighten mounting screws securely. Check bias adjustment.

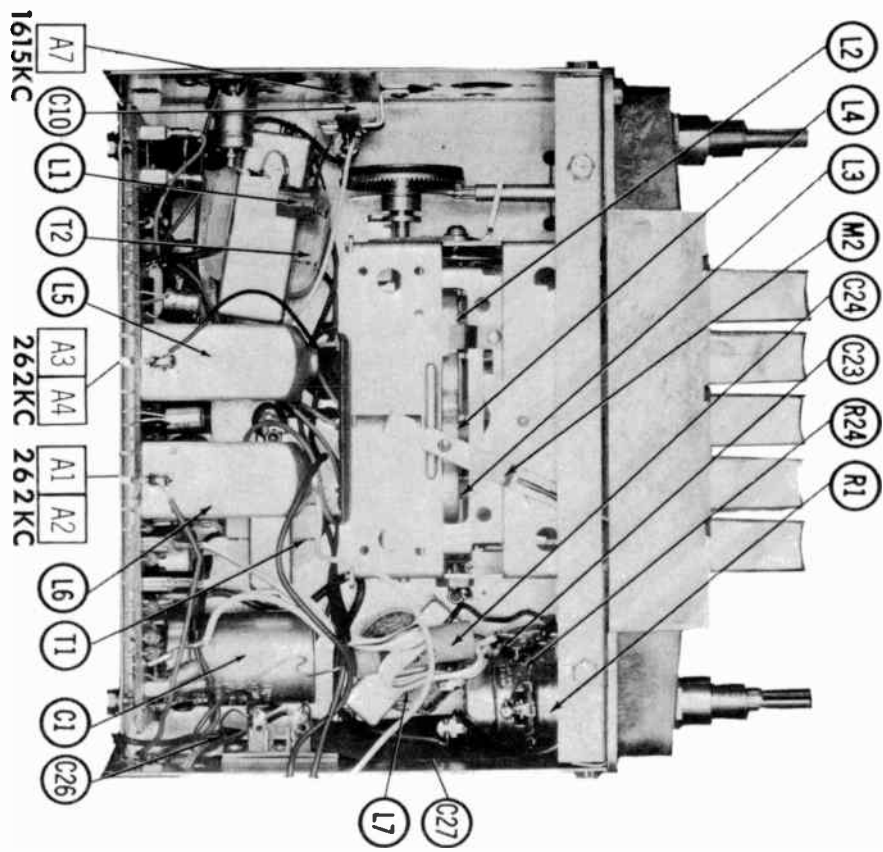
POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MEASURED CURRENT	ORIGINAL Part or Type No.	RECTIFIERS				DIODES
			GENERAL ELECTRIC PART No.	MALLORY PART No.	RCA PART No.	SARKES TARZIAN PART No.	GENERAL ELECTRIC PART No.
X6		1N295					1N295
X7		1N295					1N295
X8		1N295					1N295

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA					
	CAP.	VOLT.	SOUNDEX PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A	▲ 300	16	C-66	PWH3-00-95	CC0010	XC3-48	PFP300.18	PCL33026.10*
B	■ 500	16						
C	□ 100	16						
C2	25	15	C-53	BCD15025	NLW25-15	MT1-14	PET1570	VL-1170
C3	5	15	C-54	BCD15005	NLW5-15	MT1-3	PET1535	VL-1164

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



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.

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		# TR-5B	BPD-003	DD-332	BY8601ZU332P	CCD-332	B233	5HK-D33
C11	.003		P288N-047	DD-503	PM2847	4DP-3-473	PVC2147	2TM-847
C12	.047	100V						
C13A		# TR-14A						
C14	.270		DI-270	DD-271	RRO5CW271K	CCD-271	GP-327	5GA-T27
C15	.02		BPD-02	DD-203	BYT601ZU203Z	CCD-203	B120	5HK-P10
C16	.0047		BPD-0047	DD-472	BYX601ZU472P	CCD-472	B247	5HK-D47
C17	.015	100V	DBE4815		DPMB4815	1DP-1-153	PVC2115	4PB-815
C18	100	N750	N750-DI 100	DTN-100	CX601UJ101K	CCTN-101	CN7310	10TCU-T10
C19	.05	100V	DBE685		DPMB285	1DP-2-503	PVC215	2PB-850
C20	.1	100V	DBE2P1		WMF1P1	1DP-2-104	PVC101	2PB-P10
C21	180		DI-180	DD-181	JBZ601YP181K	CCD-181	GP318	5GA-T18
C22	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-810
C23	.22			UK20-204			MAG25022	HY-325
C24	.1	200V	DBE2P1		WMF1P1	1DP-2-104	PVC101	2PB-P10
C25	330		DI-330	DD-331	JBZ601YP331K	CCD-331	JF333	10TB-T33
C26	.003		BPD-0033	DD-332	BY8601ZU332P	CCD-332	B233	5HK-D33
C27		#8PK-P-2						

Soundex Part Number. ① Not used in some versions. † Alternate Value.

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
	PRI.	SEC.	BOUNDEX PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	14.4	1	TF-1E					

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA				NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	BOUNDEX PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	
L7	250ma	.8Ω	15MH	TF-4C	C-4095	TC-2	TR-183	TY17XT

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		BOUNDEX PART No.	QUAM PART No.	
SP1	8" x 9" PM	4Ω	8K-2AW	89A3

CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA				
			BOUNDEX PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1A	Tone Volume	25K 10K Tap @ 1500Ω	VC-18T①				
R2	Bias	500Ω 2W	P-T-2	V-500	US9-500	110-600	MR600P

① Part Number VC-25TT used in some versions.

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
R29	.5Ω 3W			#R-2AAA					

Soundex Part Number.

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					
		BOUNDEX PART No.	MEISSNER PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.
L1	RF Choke (6.8uh)	TF-14	19-1004	BC-565	74F686AP	RTC-8530	T859
L2	Antenna	①					
L3	RF	①					
L4	Oscillator	①					
L5	Input IF	TF-32	16-8712	BC-636	6522	RTC-9397	
L6	Output IF	TF-33					

① Part of M2.

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC.	BOUNDEX PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T2	25Ω	Tap @ 4Ω	TF-2H				TR-168	

FUSE DEVICES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M1	AGC	4 Amp.	FU-3	In Fuse Block	311004		AGC 4	

MISCELLANEOUS

ITEM No.	PART NAME	BOUNDEX PART No.	NOTES
M2	Tuner	TUN-411PC	

CABINETS & CABINET PARTS

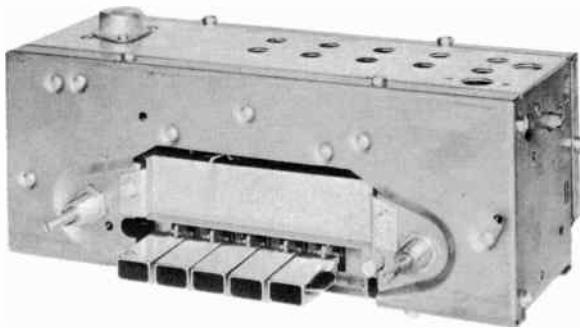
(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
Bezel	BE-47	Trim Plate	TP-13



PHOTOFACT[®] with

CIRCUITRACE[®]



TRADE NAME: Soundex Models:
 DAP-865T (1965 Dodge Dart)
 DOP-865T (1965 Dodge)
 PLP-465T (1965 Plymouth)
 PLPF-465T (1965 Plymouth Fury)

SUPPLIER: For Current Address, See Master Index.

TYPE SET: 5 Transistor AM Receiver

POWER SUPPLY: 12 Volt Storage Battery

RATING: .500 Amp. @ 12.6 Volts DC

TUNING RANGE: BROADCAST 540-1615 KC

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: 8608, 8606L, 8868
 WALSCO: 2543, 2544, 2588
 A5, A6, A7. GENERAL CEMENT: 8290, 8868, 9087
 WALSCO: 2525, 2528, 2587

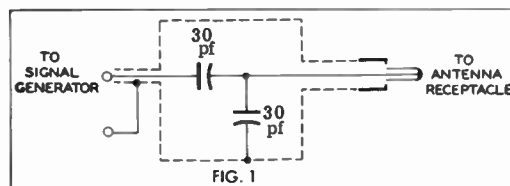
	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1.	High side thru .1mf to point Δ , low side to ground.	262KC (400v Mod.)	High Freq. End Stop.	Output Meter across voice coil.	A1, A2, A3, A4	Adjust for maximum.
2.	High side thru 82mmf to antenna receptacle, low side to ground.	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.

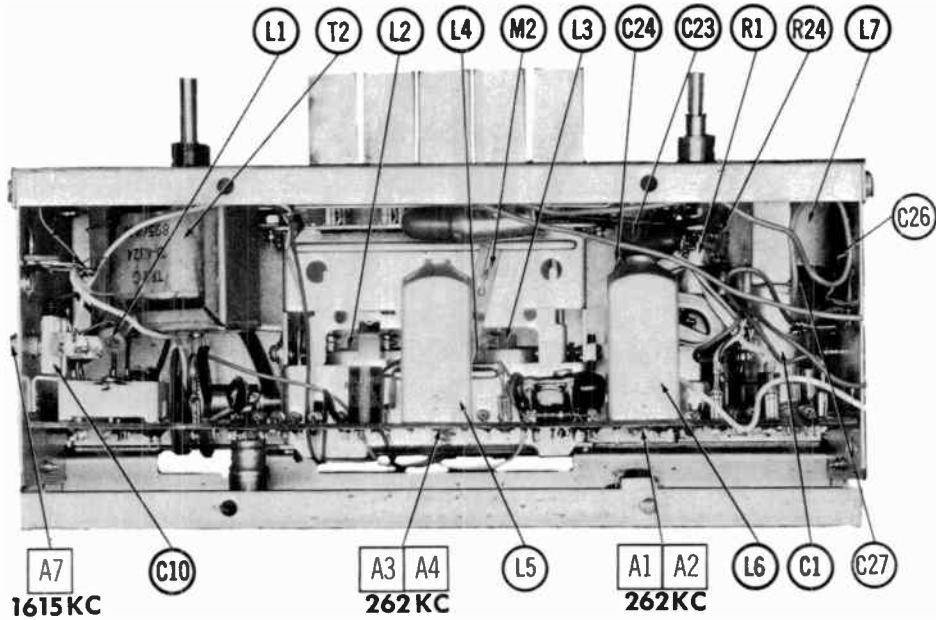
Antenna Adjustment (A8) located on right side of radio.

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	2N1637	RF Amp.	DS-25	GE-1	SK-3008	PNP
X2	2N1639	Conv.	DS-25	GE-1	SK-3008	PNP
X3	2N2838	IF Amp.	DS-25	GE-1	SK-3008	PNP
X4		Driver	DS-28	GE-2		PNP
X5		Output	DS-520	GE-3		PNP

* When replacing, apply silicon grease to both sides of insulator. Tighten mounting screws securely. Check bias adjustment.

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MEASURED CURRENT	ORIGINAL Port or Type No.	RECTIFIERS				DIODES
			GENERAL ELECTRIC PART No.	MALLORY PART No.	RCA PART No.	SARKES TARZIAN PART No.	GENERAL ELECTRIC PART No.
X6		1N295					1N295
X7		1N295					1N295
X8		1N295					1N295

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		SOUNDEX PART No.	REPLACEMENT DATA				
	CAP.	VOLT.		AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A	▲300	16	C-68	PWH3-00-95	CC0010	XC3-48	PPF300.18	PCLS-3026.18*
B	■500	16						
C	100	16						
C2	25	15	C-53	BCD15025	NLW25-15	MT1-14	PET1570	VL-1170
C3	5	15	C-54	BCD15005	NLW5-15	MT1-3	PET1535	VL-1164

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

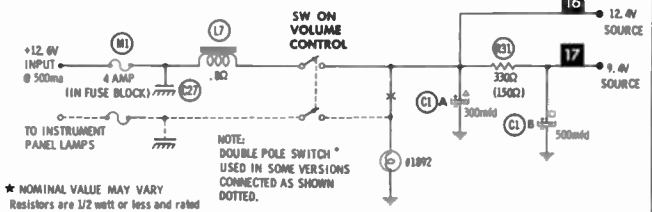
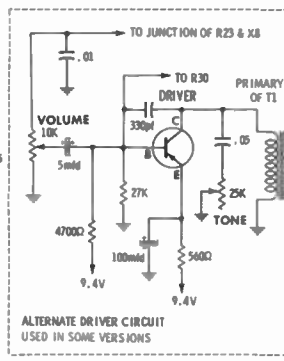
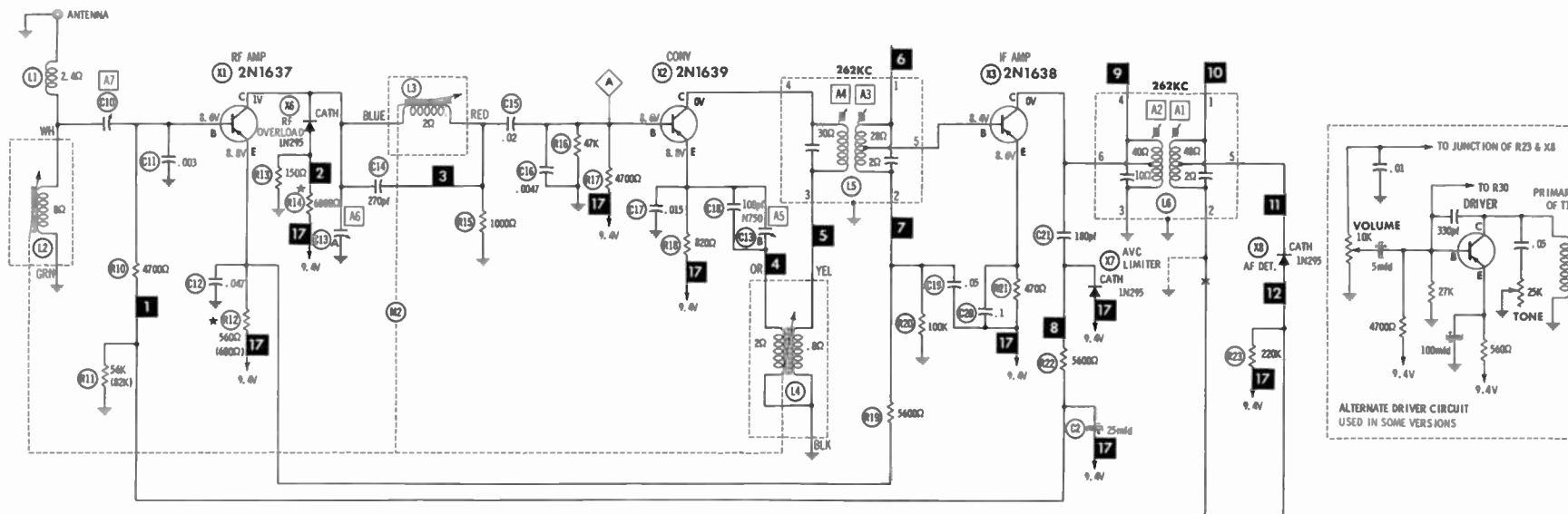
CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALA8 PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C10		#TR-5B						
C11	.003		BPD-0033	DD-332	BYS601ZU332P	CCD-332	B233	5HK-D83
C12	.047	100V	P288N-047	DD-503	PM2847	4DP-3-473	PVC2147	2TM-847
C13A		#TR-14A						
B								
C14	270		DI-270	DD-271	RR05CW271K	CCD-271	GP327	5GA-T27
C15	.02		BPD-02	DD-203	BYT601ZU203Z	CCD-203	B120	5HK-S20
C16	.0047		BPD-0047	DD-472	BYX801ZU472P	CCD-472	B247	5HK-D47
C17	.015	100V	DBE4S15		DPMS4S15	1DP-1-153	PVC2115	4PS-S15
C18	100	N750	N750-DI 100	DTN-100	CX601UJ101K	CCTN-101	CN7310	10TCU-T10
C19	.05	100V	DBE6S5		DPMS2S5	1DP-2-503	PVC215	2PS-850
C20	.1	100V	DBE2P1		WMF1P1	1DP-2-104	PVC101	2PS-P10
C21	180		DI-180	DD-181	JBZ801YP181K	CCD-181	GP318	5GA-T18
C22	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10
C23	.22			UK20-204			MAG25022	HY-325
C24	.1	200V	DBE2P1		WMF1P1	1DP-2-104	PVC101	2PS-P10
C25	330		DI-330	DD-331	JBZ601YP331K	CCD-331	JF333	10TS-T33
C26	.003		BPD-0033	DD-332	BYS601ZU332P	CCD-332	B233	5HK-D83
C27		#SPK-P-2						

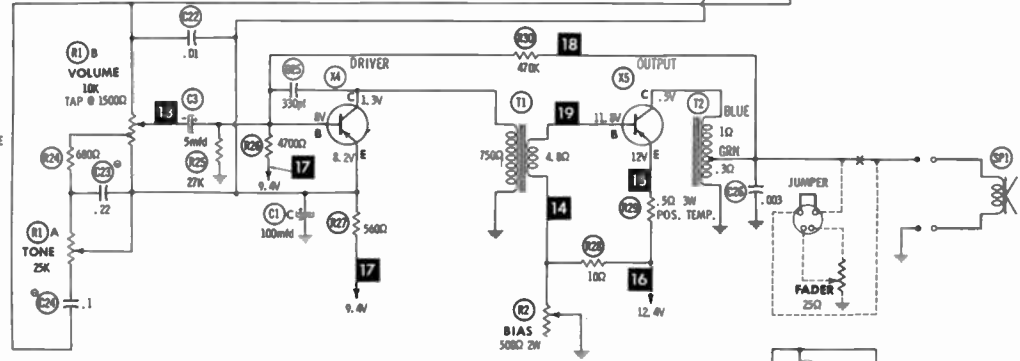
Soudex Part Number.

Ⓛ Not used in some versions.

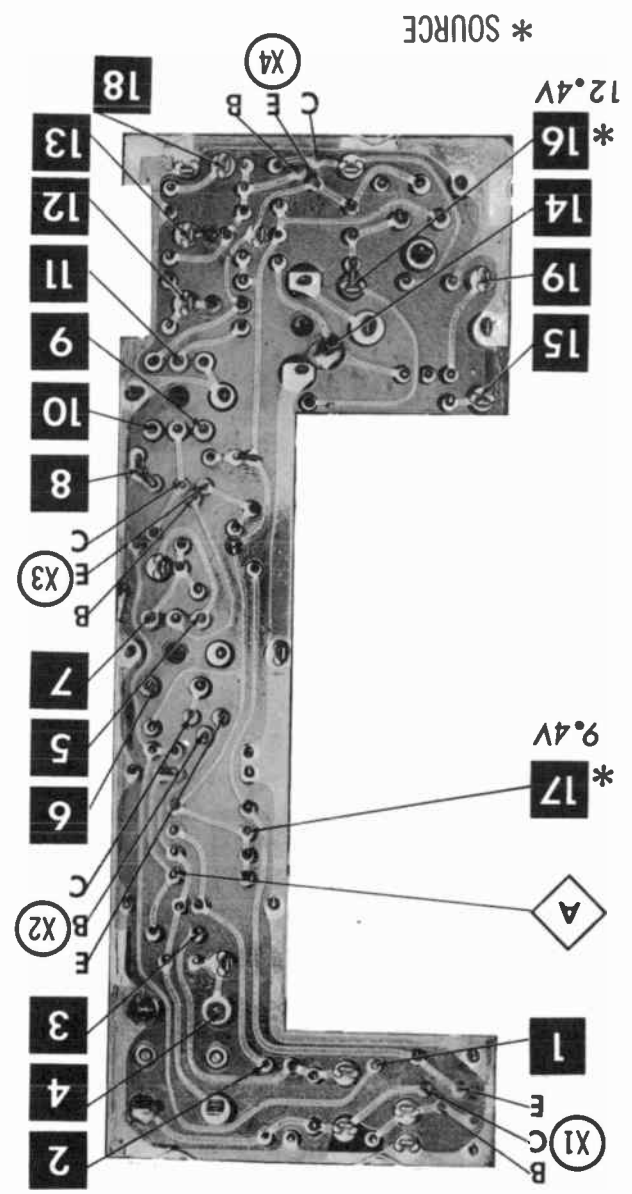
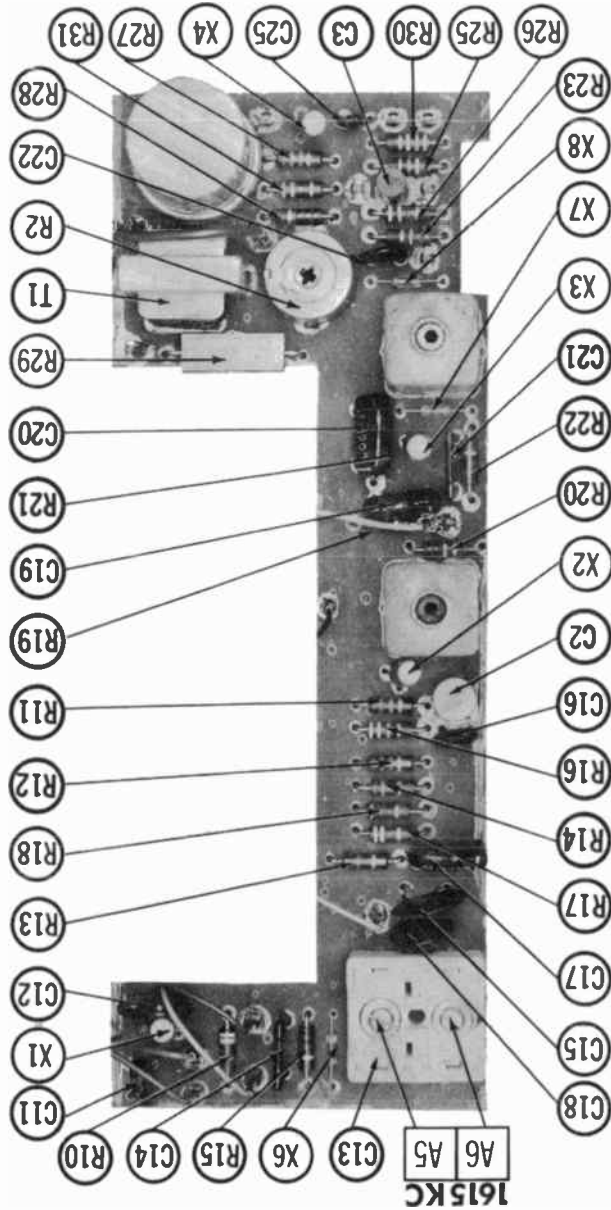
† Alternate Value.



- ★ NOMINAL VALUE MAY VARY
Resistors are 1/2 watt or less and rated 10% or 20% unless otherwise indicated.
- Ⓞ 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 PHOTOFACIT STANDARD 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.

CONTROLS

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

ITEM No.	USE	RESIST-ANCE	REPLACEMENT DATA					
			SOUNDEX PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLOY PART No.	
R1A	Tone	25K	VC-10TT	F2-25K, R14-7500,				
B	Volume/Switch	10K Tap @ 1500Ω		FFS015, RFS107, BB012, KR-4				
R2	Bias	500Ω 2W	PT-2	V-500	U39-500	110-600		MR600P

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
R29	.5Ω 3W (PTC)			# R-2AAA					

Soundex Part Number.

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					
		SOUNDEX PART No.	MEISSNER PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.
L1	RF Choke (6.8uh)	TF-14	19-1004	BC-565	74F686AP	RTC-6520	T659
L2	Antenna	①					
L3	RF	①					
L4	Oscillator	①					
L5	Input IF	TF-32	16-6712	BC-636	6522	RTC-9397	
L6	Output IF	TF-33					

① Part of M2.

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA					NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	SOUNDEX PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L7	500ma	.6Ω	15MH	TF-4C	C-4095	TC-2	TR-152	TY17XT	

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
	PRI.	SEC.	SOUNDEX PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
	T1	13	1	TF-34				

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC.	SOUNDEX PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
	T2	25Ω	Tap @ 4Ω	TF-2F			TR-168	

SPEAKER

ITEM No.	TYPE	RATING	REPLACEMENT DATA		NOTES
			SOUNDEX PART No.	QUAM PART No.	
SP1	6" x 9" PM	4Ω	SK2-AW	69A3	

FUSE DEVICES

ITEM No.	TYPE	RATING	REPLACEMENT DATA						
			PART No.		LITTELFUSE PART No.		BUSS PART No.		
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER	
M1	AGC	4 Amp.	FU3	In Fuse Block	311004			AGC-4	

MISCELLANEOUS

ITEM No.	PART NAME	SOUNDEX PART No.	NOTES
M2	Tuner	TUN-26T	

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
Bezel	BEP-9		

WIRING DATA

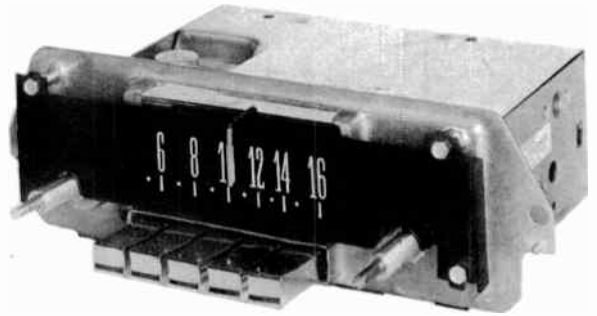
General-use Unshielded Hook-up Wire	Use BELDEN No. 6530 (Solid) Available in 12 Colors 8524 (Stranded) Available in 12 Colors
Shielded Hook-up Wire	Use BELDEN No. 6885
Rear Seat Speaker Extension Cable	Use BELDEN No. 8782 (Stranded) Coded Parallel Leads
Bonding Strap	Use BELDEN No. 6661 (3/8 In.) or 8670 (3/4 In.)



PHOTOFACT[®] with

CIRCUITRACE[®]

TRADE NAME : Soundex Models FOP-265T (1965 Ford)
MFP-265T (1965 Mercury)
SUPPLIER : For Current Address, See Master Index.
TYPE SET : 5 Transistor AM Receiver
POWER SUPPLY : 12 Volt Storage Battery
RATING : .5 Amp. @12.6 Volts DC
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

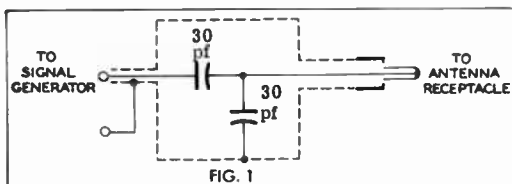
A5, A6, A7

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

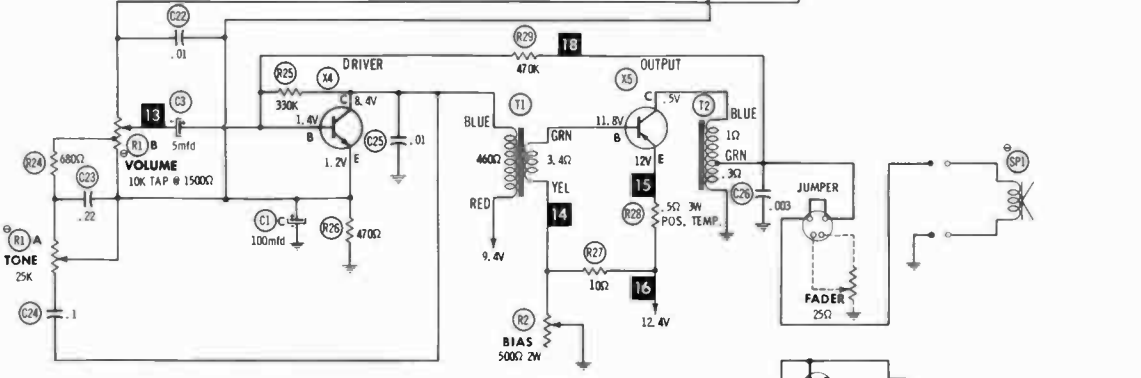
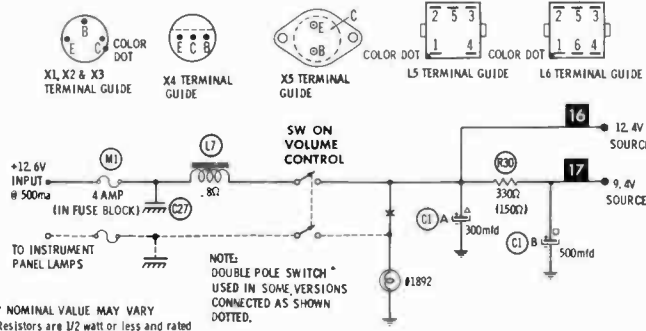
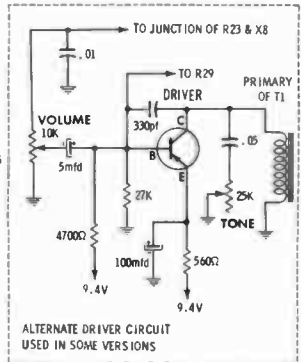
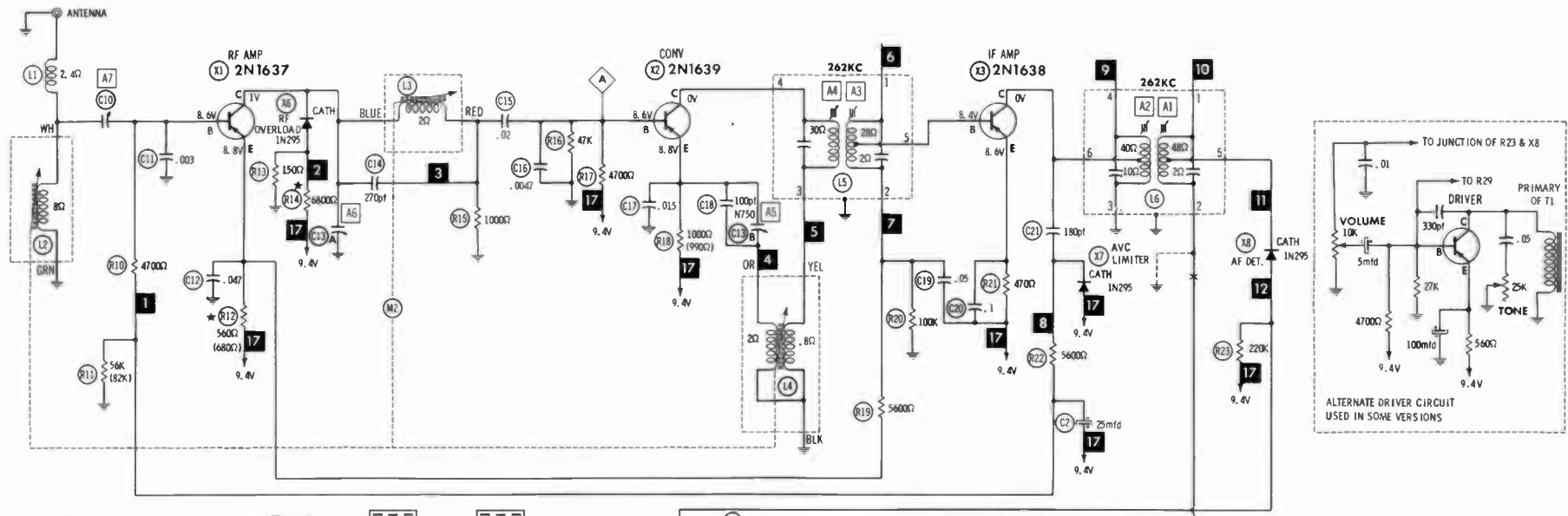
1. Pull button out.
2. Tune manually to desired station.
3. Press button in firmly.
4. Repeat for remaining buttons.

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

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World Radio History

SOUNDEX MODELS FPO-265T, MEP-265T

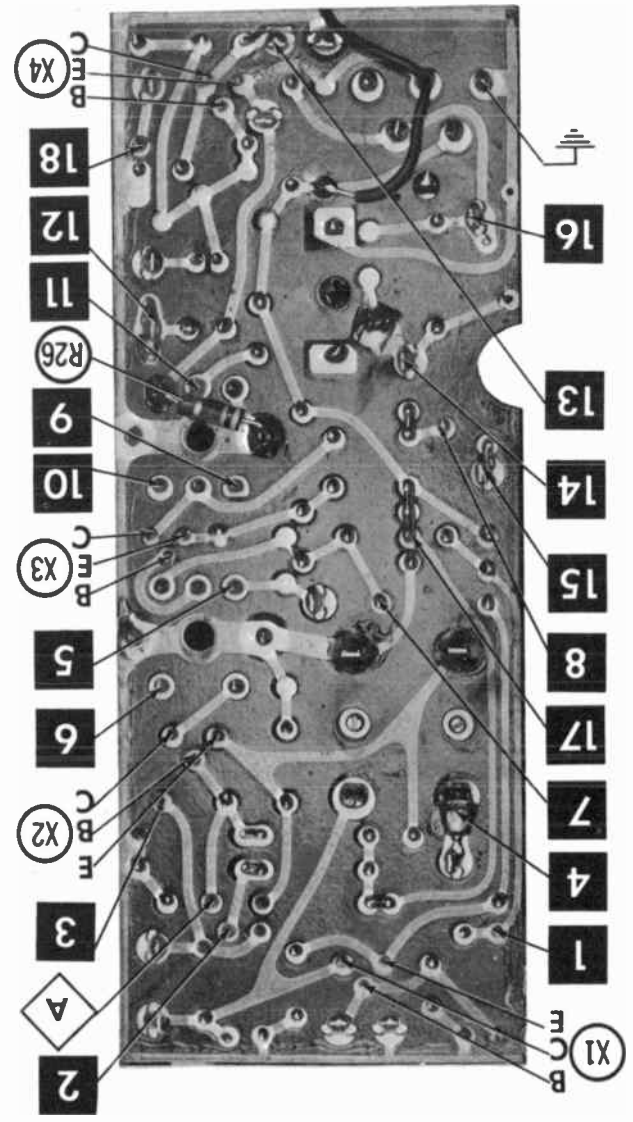
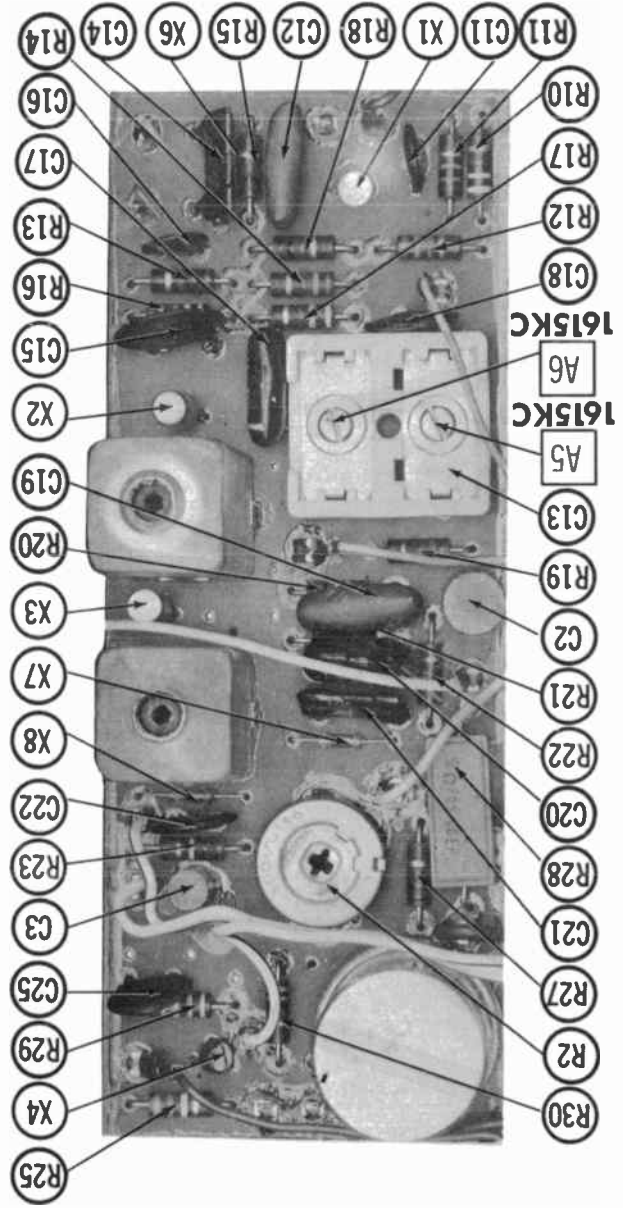


★ NOMINAL VALUE MAY VARY
Resistors are 1/2 watt or less and rated 10% or 20% unless otherwise indicated.
① See parts list for alternate value or application.
1. Voltage measurements taken with vacuum tube voltmeter.
2. All controls set for normal operation, no signal applied.
3. Measured values are from 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.

A PHOTOFAC STANDARD NOTATION SCHEMATIC
with **CIRCUITRACE**
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ADJUST BIAS (R2)
FOR .5V ON COLLECTOR
OF X5 WITH 12.6V INPUT.

REAR SEAT SPEAKER CIRCUIT
USED IN SOME VERSIONS.



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	2N1637	RF Amp.	DS-25	GE-1	SK-3008	PNP
X2	2N1639	Conv.	DS-25	GE-1	SK-3008	PNP
X3	2N1638	IF Amp.	DS-25	GE-1	SK-3008	PNP
X4		Driver	DS-48	GE-10		NPN
X5		Output	DS-520	GE-3		PNP*

* When replacing, apply silicon grease to both sides of insulator. Tighten mounting screws securely. Check bias adjustment.

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MEASURED CURRENT	ORIGINAL Port or Type No.	RECTIFIERS				DIODES GENERAL ELECTRIC PART No.
			GENERAL ELECTRIC PART No.	MALLORY PART No.	RCA PART No.	SARKES TARZIAN PART No.	
X8		1N295					1N295
X7		1N295					1N295
X8		1N295					1N295

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA					
	CAP.	VOLT.	SOUNDEX PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A	▲ 300	16	C-66	PWH3-00-95	CC0010	XCS-48	PFPS00.18	PCLS-3028.12*
B	■ 500	18						
C	100	18						
C2	25	15	C-53	BCD15025	NLW25-15	MT1-14	PET1570	VL-1170
C3	5	15	C-54	BCD15005	NLW5-15	MT1-3	PET1535	VL-1164

* 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		#TR-5B						
C11	.003		BPD-0053	DD-332	BYA10D33	CCD-332	B233	5HK-D33
C12	.047	100V	DBE2847		WMF2847	IDP-2-473	PVC1147	2PS-847
C13A		#TR-14A						
B								
C14	270		DD-270	DD-271	LA10T27-C4	CCD-271	GP327	5GA-T25
C15	.02		TTD-02	CK-203	H3		TA120	TG-820
C18	.0047		BPD-0047	DD-472	BYA10D47	CCD-472	B247	5HK-D47
C17	.015	100V	DBE4815		DPMS4815	IDP-1-153	PVC2115	4PS-B15
C18	100	N750	N750-DI 100	DTN-100	C10T1U	CCTN-101	CN7310	10TCU-T10
C19	.05	100V	DBE685		DPMS285	IDP-2-503	PVC315	2PS-850
C20	.1	100V	DBE2P1		WMF1P1	IDP-2-104	PVC101	2PS-P10
C21	180		DI-180	DD-181	LA10T18-S3	CCD-181	GP318	5GA-T18
C22	.01		BPD-01	DD-103	BYA1061	CCD-103	B110	5HK-810
C23	.22			UK20-204	HCC25224Z			HY-325
C24	.1	100V	DBE2P1		WMF1P1	IDP-2-104	PVC101	2PS-P10
C25	.01		BPD-01	DD-103	BYA1061	CCD-103	B110	5HK-810
C28	.003		BPD-0033	DD-332	BYA10D33	CCD-332	B233	5HK-D33
C27		#SPK-P-2						

Soudex Part Number.

CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA				
			SOUNDEX PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1A	Tone Volume/Switch	25K 10K Tap @ 1500Ω	VC-18T ①				
	Tone Volume/Switch	25K 10K Tap @ 1500Ω	VC-18T-82 (VC-23T)				
R2	Bias	500Ω 2W	PT-2	V-500	U39-500	110-600	MR-600P

① Used in Model: FOP-285T.
 ② Used in Model: MEP-285T

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
R28	.5Ω 3W (PTC)			#R-2AAA					

Soudex Part Number.

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					
		SOUNDEX PART No.	MEISSNER PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.
L1	RF Choke (8.8uh)	TF-14	19-1004	BC-565	74F888AP	RTC-8520	T859
L2	Antenna	①					
L3	RF	①					
L4	Osc.	①					
L5	Input IF	TF-32	16-8712		8522		
L8	Output IF	TF-33					

① Part of M2.

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA				NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	SOUNDEX PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	
L7	500ma	.8Ω	15MH	TF-4C	C-4095	TC-2	TR-152	TY17XT

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
	PRI.	SEC.	SOUNDEX PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
	T1	14.4	1	TF-1E				

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
			SOUNDEX PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
	PRI.	SEC.						
T2	25Ω Tap @ 4Ω		TF-2F (TF-2H)				TR-168	

SPEAKER

ITEM No.	TYPE		REPLACEMENT DATA		NOTES
			SOUNDEX PART No.	QUAM PART No.	
SP1	4" x 10" PM	4Ω	SK-4XW	410A2	Used in Model: FOP-265T, Used in Model: MEP-265T
	4" x 10" PM	4Ω	SK-26W	410A2	

FUSES

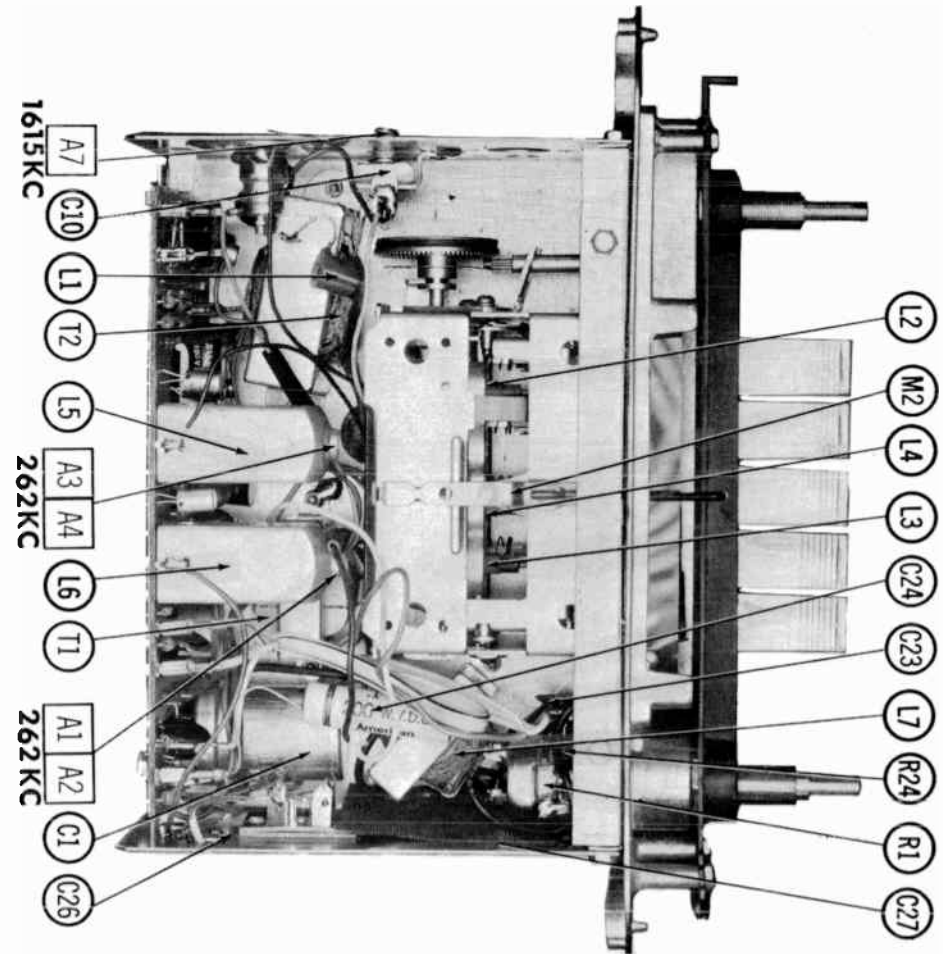
ITEM No.	TYPE	RATING	REPLACEMENT DATA						
			SOUNDEX PART No.		LITTELFUSE PART No.		BUSS PART No.		
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER	
M1	AGC	4	FU-3	In Fuse Block	\$11004			AGC 4	

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
M2	Tuner Tuner	TUN-891PC TUN-321PC	Model: FOP-265T. Model: MEP-265T.

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.)

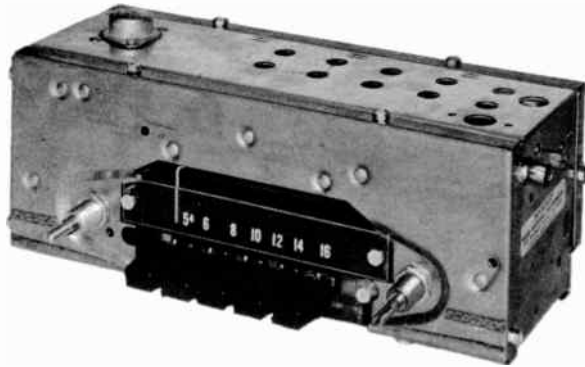


SOUNDEX MODELS FPO-265T, MEP-265T



PHOTOFACT[®] with

CIRCUITRACE[®]



TRADE NAME : Soundex Model RAAP-1065T
 (1965 Rambler American)
 SUPPLIER : For Current Address, See Master Index.
 TYPE SET : 5 Transistor AM Receiver
 POWER SUPPLY : 12 Volt Storage Battery
 RATING : .500 Amp. @12.6 Volts DC
 TUNING RANGE : BROADCAST 540-1615KC

SOUNDEX MODEL RAAP-1065T

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

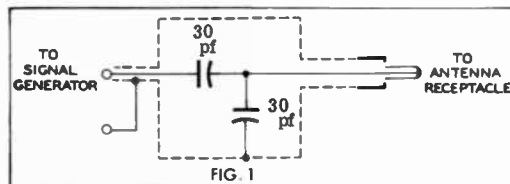
	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1.	High side thru .1mfd to point Δ , low side to ground.	262KC (400v Mod.)	High Freq. End Stop.	Output Meter across voice coil.	A1, A2, A3, A4	Adjust for maximum.
2.	High side thru 82mmf to antenna receptacle, low side to ground.	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.

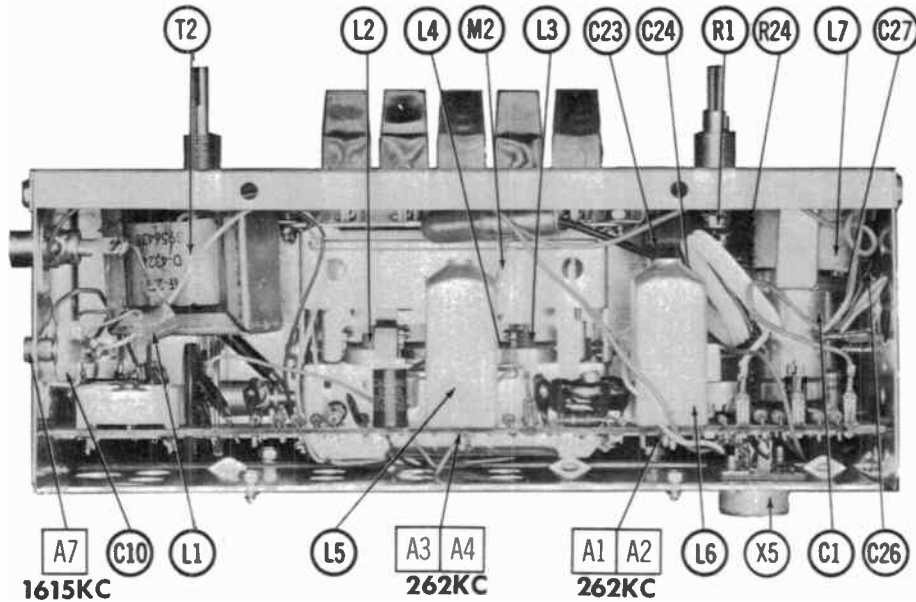
Antenna Adjustment (A7) located on right side of radio.

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	2N1037	RF Amp.	D8-25	GE-1		PNP
X2	2N1039	Conv.	D8-25	GE-1		PNP
X3	2N1038	IF Amp.	D8-25	GE-1		PNP
X4		Driver	D8-26	GE-2		PNP
X5		Output	D8-520	GE-3		PNP *

* When replacing, apply silicon grease to both sides of insulator. Tighten mounting screws securely. Check bias adjustment.

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MEASURED CURRENT	ORIGINAL Part or Type No.	RECTIFIERS				DIODES
			GENERAL ELECTRIC PART No.	MALLORY PART No.	RCA PART No.	SARKES TARZIAN PART No.	GENERAL ELECTRIC PART No.
X6		1N295					1N295
X7		1N295					1N295
X8		1N295					1N295

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		BOUNDEX PART No.	REPLACEMENT DATA				
	CAP.	VOLT.		AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A	▲300	16	C-66	PWHS-00-95	CC0010	KC3-48	PFP300, 18	PCL8-3026, 18*
B	■500	16						
C	100	16						
C2	25	15	C-53	BCD15025	NLW25-15	MT1-14	PET1570	VL-1170
C3	5	15	C-54	BCD15005	NLW5-15	MT1-3	PET1535	VL-1164

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

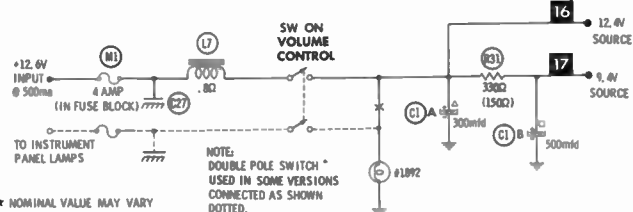
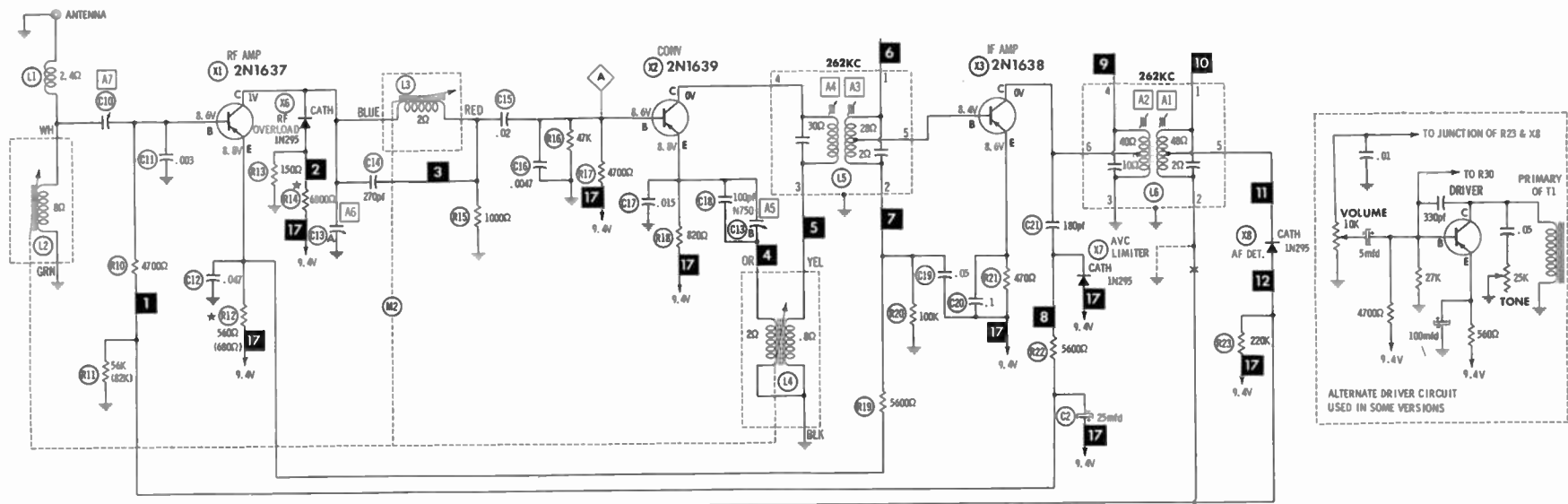
CAPACITORS

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		# TR-5B						
C11	.003		BPD-0033	DD-332	BY8601ZU332P	CCD-332	B233	5HK-D33
C12	.047	100V	P288N-047	DD-503	PM2847	4DP-3-473	PVC2147	2TM-847
C13A		# TR-14A						
B								
C14	270		DE-270	DD-271	RRO5CW271K	CCD-271	GP327	5GA-T27
C15	.02		BPD-02	DD-203	BYT601ZU203Z	CCD-203	B120	5HK-S20
C16	.0047		BPD-0047	DD-472	BYX601ZU472P	CCD-472	B247	5HK-D47
C17	.015	100V	DBE4815		DPMS4815	1DP-1-153	PVC2115	4PB-S15
C18	100	N750	N750-DI 100	DTN-100	CK601UJ101K	CC TN-101	CN7310	10TCU-F10
C19	.06	100V	DBE685		DPMS685	1DP-2-503	PVC215	2PB-S50
C20	.1	100V	DBE2P1		WMF1P1	1DP-2-104	PVC101	2PB-P10
C21	160		DI-180	DD-181	JBZ601YP181K	CCD-181	GP318	5GA-T18
C22	.01		BPD-01	DD-103	BYV103ZU103M	CCD-103	B110	5HK-S10
C23	.22			UK20-204			MAG25022	HY-325
C24	.1	200V	DBE2P1		WMF1P1	1DP-2-104	PVC101	2PB-P10
C25	330		DI-330	DD-331	JBZ601YP331K	CCD-331	JF333	10T8-T33
C26	.003		BPD-0033	DD-332	BY8601ZU332P	CCD-332	B233	5HK-D33
C27		# SPK-P-2						

SounDEX Part Number.

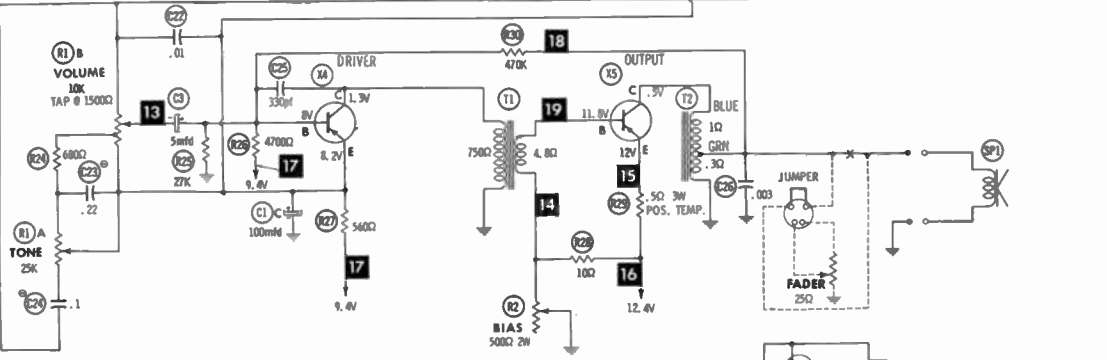
Ⓛ Not used in some versions.

† Alternate Value.



- ★ NOMINAL VALUE MAY VARY
Resistors are 1/2 watt or less and rated 10% or 20% unless otherwise indicated.
- 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.

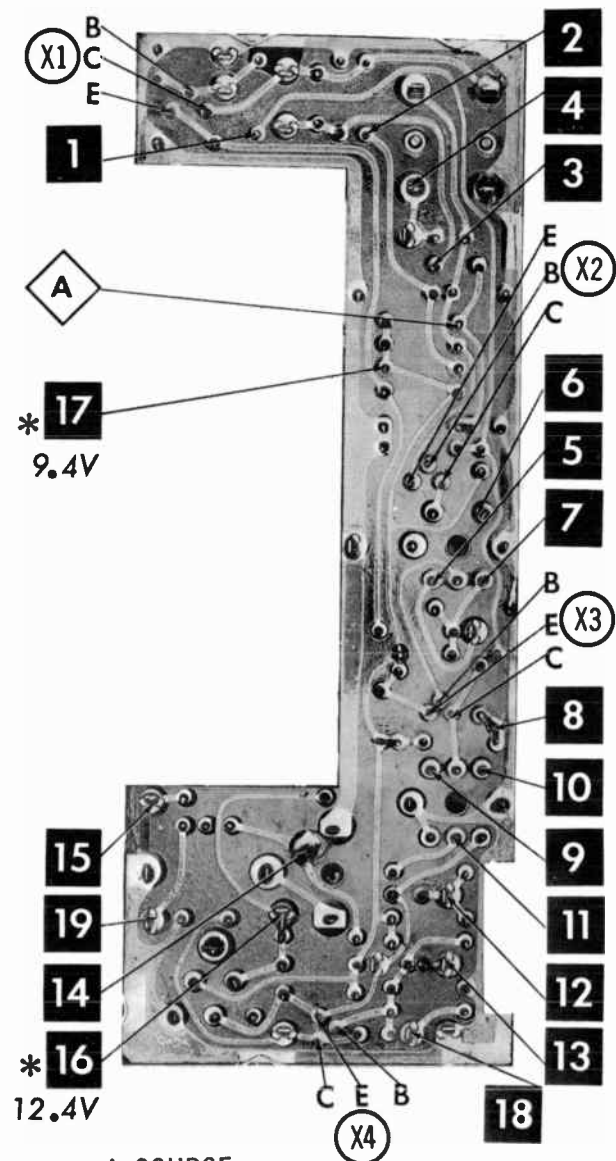
A PHOTOFAC STANDARD NOTATION SCHEMATIC
with CIRCUTRACE
© Howard W. Sams & Co., Inc. 1965



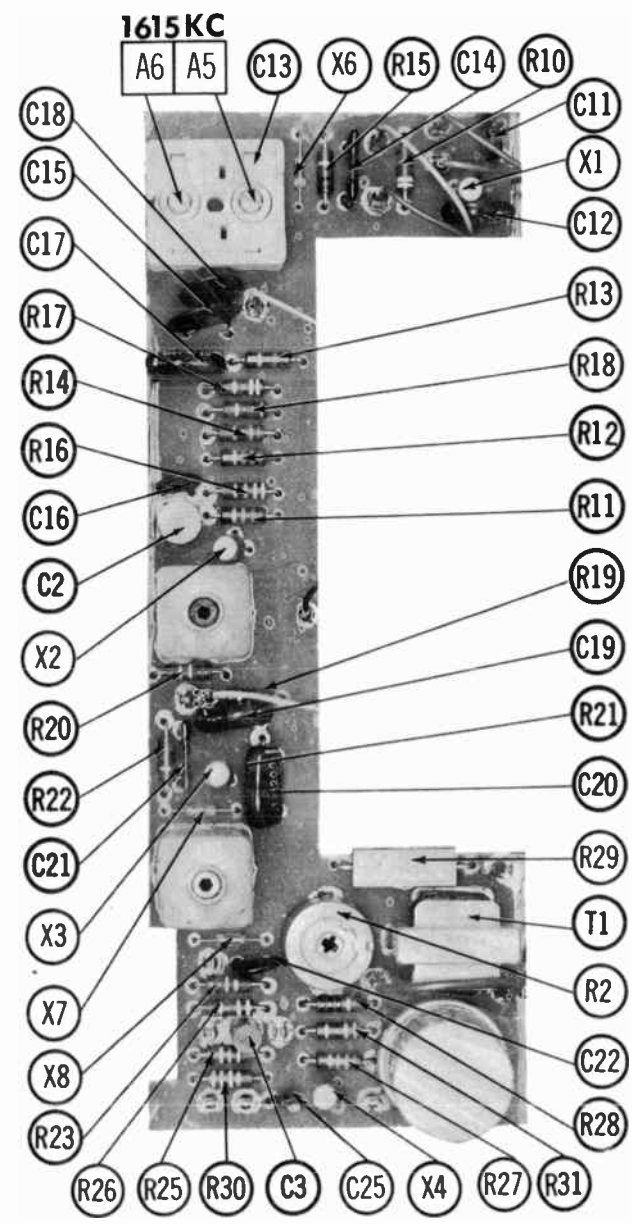
ADJUST BIAS (R29 FOR .5V ON COLLECTOR OF X5 WITH 12.6V INPUT.

REAR SEAT SPEAKER CIRCUIT USED IN SOME VERSIONS.

SOUNDEX MODEL RAAP-1065T



* SOURCE



SOUNDEX MODEL RAAP-1065T

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				
			SOUNDEX PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLOY PART No.
R1A B	Tone Volume/Switch	25K 10K Tap @ 1500Ω	VC-10TT				
R2	Bias	500Ω 2W	PT-2	V-500	U39-500	110-600	MR600P

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
R29	.5Ω 3W (PTC)			#R-2AAA					

† SounDEX Part Number.

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					
		SOUNDEX PART No.	MEISSNER PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.
L1	RF Choke (6.8uh)	TF-14	19-1004	BC-565	74F686AP	RTC-8520	T859
L2	Antenna	①					
L3	RF	①					
L4	Oscillator	①					
L5	Input IF	TF-32	16-6712	BC-636	6522	RTC-9397	
L6	Output IF	TF-33					

① Part of M2.

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		SOUNDEX PART No.	QUAM PART No.	
SP1	6" x 9" PM 4Ω	SK2-AW	69A3	

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC.	SOUNDEX PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA					NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	SOUNDEX PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L7	500ma	.8Ω	15MH	TF-4C	C-4095	TC-2	TR-152	TY17XT	

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
	PRI.	SEC.	SOUNDEX PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	

FUSE DEVICES

ITEM No.	TYPE	RATING	REPLACEMENT DATA						
			PART No.		LITTELFUSE PART No.		BUSS PART No.		
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER	
M1	AGC	4 Amp.	FU3	In Fuse Block	311004			AGC 4	

MISCELLANEOUS

ITEM No.	PART NAME	SOUNDEX PART No.	NOTES
M2	Tuner	TUN-28T	

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

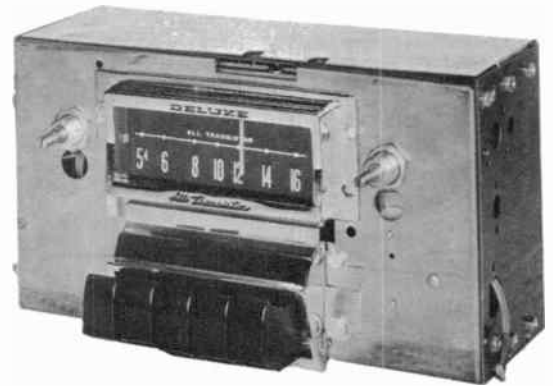
ITEM	PART No.	ITEM	PART No.
Trim Plate	TP-10		



PHOTOFACT[®] with

CIRCUTRACE[®]

TRADE NAME : Soundex Model RAP-365T (1965 Rambler)
 SUPPLIER : For Current Address, See Master Index.
 TYPE SET : 5 Transistor AM Receiver
 POWER SUPPLY : 12 Volt Storage Battery
 RATING : .500 Amp. @ 12.6 Volts DC
 TUNING RANGE : BROADCAST 540-1615 KC



ALIGNMENT INSTRUCTIONS

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

A1 thru A4.

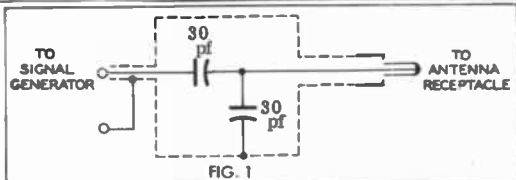
GENERAL CEMENT: 8606, 8606L, 8869

WALSCO: 2543, 2544, 2588

A5, A6, A7.

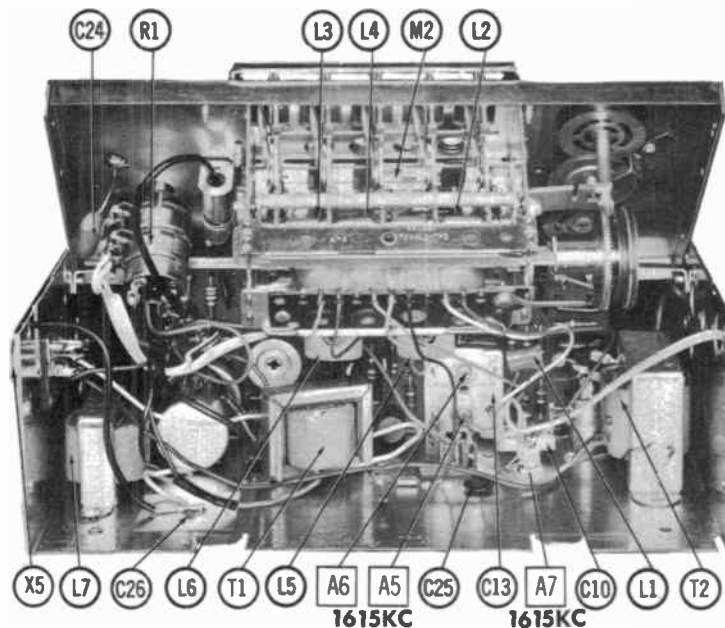
GENERAL CEMENT: 8290, 8868, 9087

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.	282KC (400% Mod.)	High Freq. End Stop.	Output Meter across voice coll.	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.

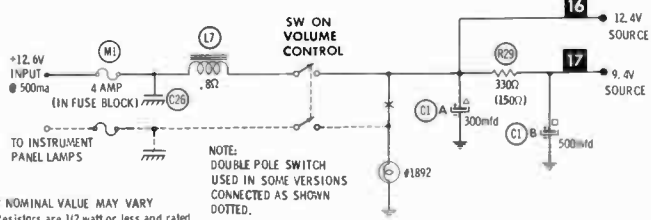
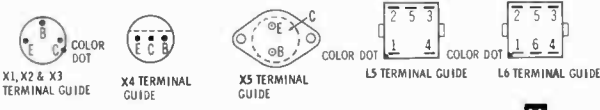
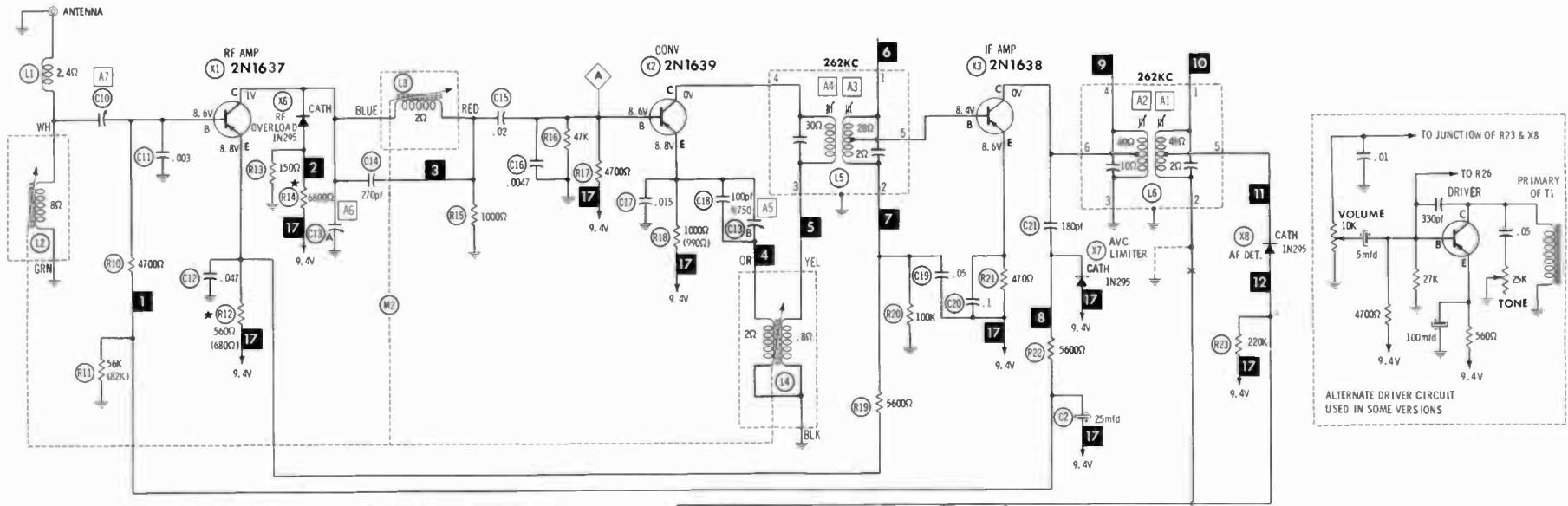


SOUNDEX MODEL RAP-365T

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

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World Radio History

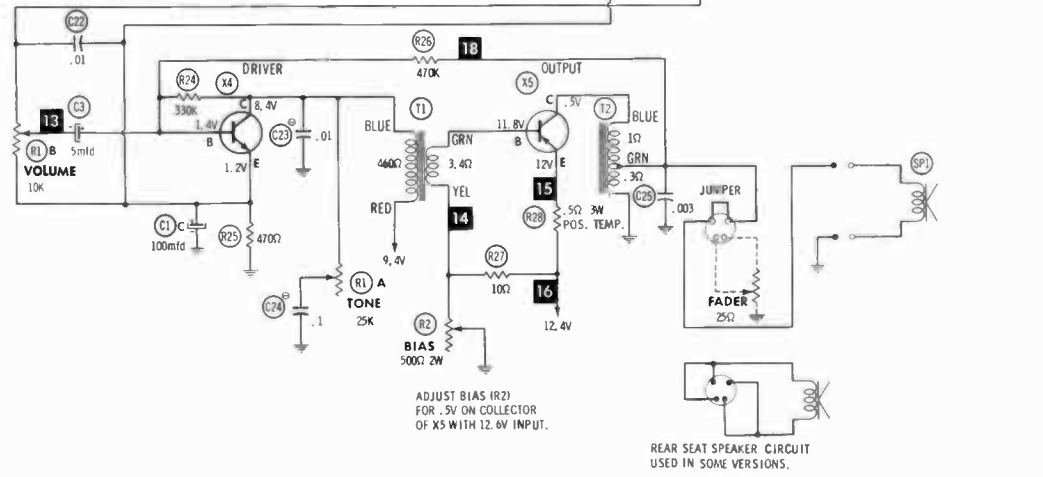


★ NOMINAL VALUE MAY VARY
Resistors are 1/2 watt or less and rated 10% or 20% unless otherwise indicated.

⊖ See parts list for alternate value or application.

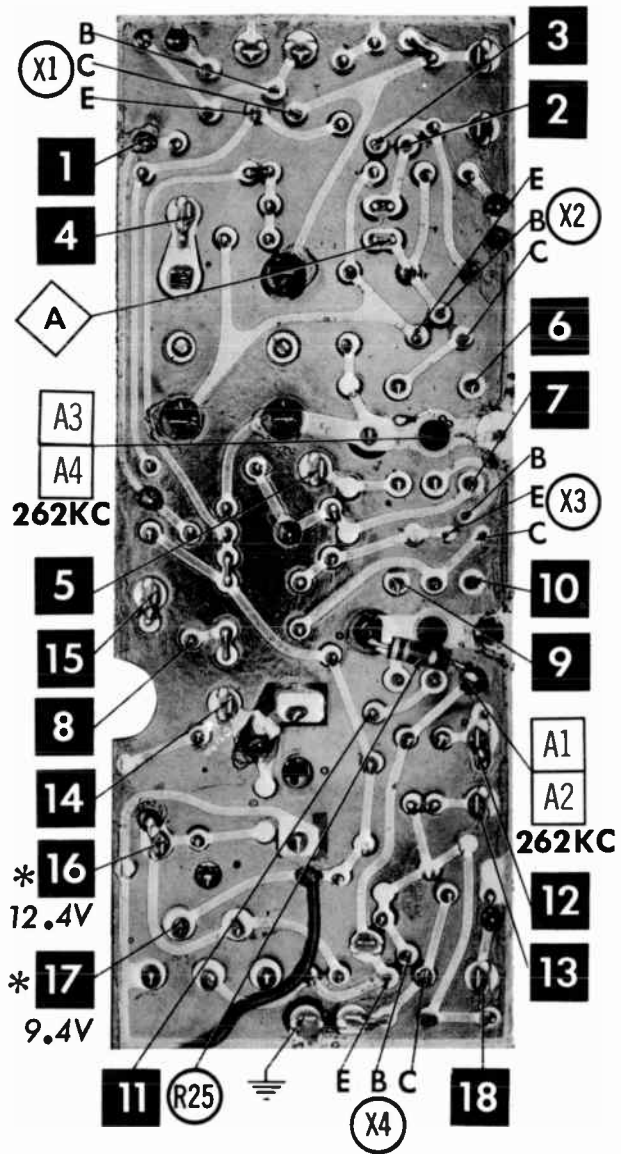
1. Voltage measurements taken with vacuum tube voltmeter.
2. All controls set for normal operation, no signal applied.
3. Measured values are from socket pin or terminal to common ground.
4. All terminals viewed from bottom unless otherwise designated.
5. Numbers assigned to terminals may not be found 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 PHOTOFACIT STANDARD NOTATION SCHEMATIC with **CIRCUITRACE**
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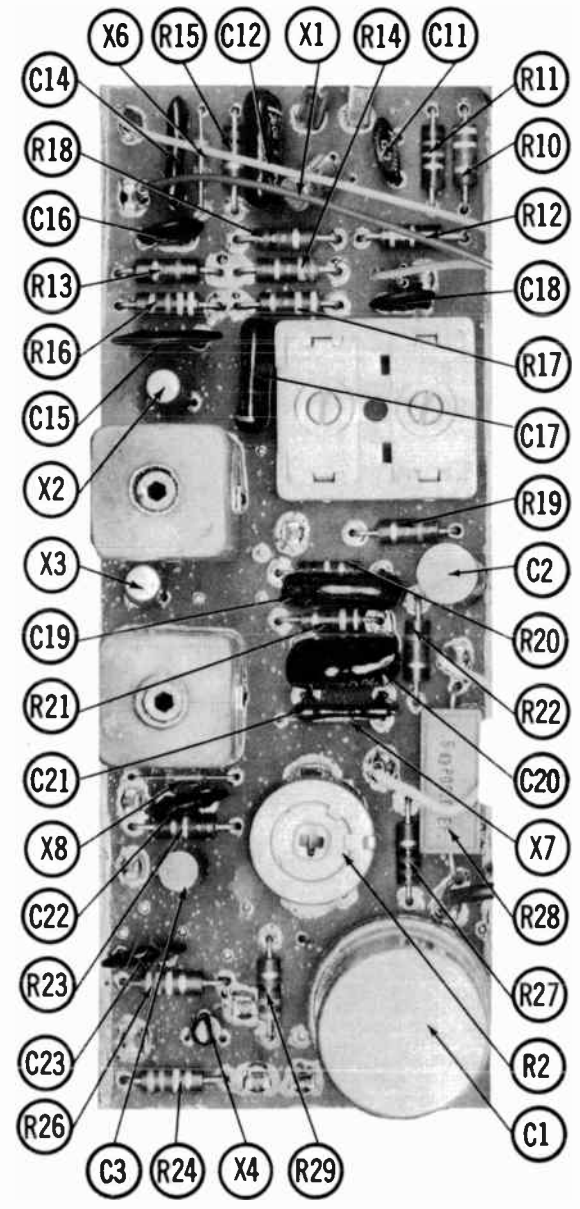


SOUNDEX MODEL RAP-365T

REAR SEAT SPEAKER CIRCUIT USED IN SOME VERSIONS.



* SOURCE



SOUNDEX MODEL RAP-365T

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	2N1637	RF Amp.	DS-25	GE-1	SK-3008	PNP
X2	2N1639	Conv.	DS-25	GE-1	SK-3008	PNP
X3	2N1638	IF Amp.	DS-25	GE-1	SK-3008	PNP
X4		Driver	DS-46	GE-10		NPN
X5		Output	DS-520	GE-3		PNP *

* When replacing, apply silicon grease to both sides of insulator. Tighten mounting screws securely.

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MEASURED CURRENT	ORIGINAL Part or Type No.	RECTIFIERS				DIODES
			GENERAL ELECTRIC PART No.	MALLORY PART No.	RCA PART No.	SARKES TARZIAN PART No.	GENERAL ELECTRIC PART No.
X6		1N295					1N295
X7		1N295					1N295
X8		1N295					1N295

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		SOUNDEX PART No.	REPLACEMENT DATA				
	CAP.	VOLT.		AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A	▲300	16	C-66	PWH3-00-95	CC0010	XC3-48	PPP-300.18	PCL8-3026.18*
B	■500	16						
C	100	16						
C2	25	15	C-53	BCD15025	NLW25-15	MT1-14	PET1570	VL-1170
C3	5	15	C-54	BCD15005	NLW5-15	MT1-3	PET1535	VL-1164

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

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		#TR-5B						
C11	.003		BPD-0033	DD-332	BY8601ZU332P	CCD-332	B233	5HK-D33
C12	.047	100V	P288N-047	DD-503	PM2847	4DP-3-473	PVC2147	2TM-847
C13A		#TR-14A						
B								
C14	270		DI-270	DD-271	RRO5CW271K	CCD-271	GP327	5GA-T27
C15	.02		BPD-02	DD-203	BYT601ZU203Z	CCD-203	B120	5HK-820
C16	.0047		BPD-0047	DD-472	BYX601ZU472P	CCD-472	B247	5HK-D47
C17	.015	100V	DBE4815		DPMS4815	1DP-1-153	PVC2115	4PS-815
C18	100	N750	N750-DI 100	DTN-100	CX601UJ101K	CCTN-101	CN7310	10TCU-T10
C19	.05	100V	DBE685		DPMS285	1DP-2-503	PVC215	2PS-850
C20	.1	100V	DBE2P1		WMF1P1	1DP-2-104	PVC101	2PS-P10
C21	180		DI-180	DD-181	JBZ601YP181K	CCD-181	GP318	5GA-T18
C22	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-810
C23	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-810
C24	.1	200V	DBE2P1		WMF1P1	1DP-2-104	PVC101	2PS-P10
C25	.003		BPD-0033	DD-332	BY8601ZU332P	CCD-332	B233	5HK-D33
C26		#SPK-P-2						

Soudex Part Number.

Ⓛ Not used in some versions.

† Alternate Value.

CONTROLS

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

ITEM No.	USE	RESIST-ANCE	REPLACEMENT DATA					
			SOUNDEX PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.	
R1A	Tone	25K	VC-15T	F1-25K, R2-10K,			† QJ-1763A	■ UE5423-B
B	Volume/Switch	10K		FFS011, RFS102				
R2	Bias	500Ω 2W	PT-2	AK-28, KR-4BC204	V-500	U39-500	110-600	MR600P

† "CONCENTRIKIT" Equivalent: K8, Kit with Base Elements and Shafts: B11-120, P22-021 (Panel)
B13-116, R1-100 (Rear)
S37 (Bushing)
76-1 (Switch)

"SNAPTROL" Equivalent: BU10, CF11, CR49T, SF3, SR-39, GC.
■ "STA-LOC" Equivalent: FL253L, RU14A, OS750A, B1187, US41.

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.

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
R28	.5W 3W (PTC)			#R-2AAA					

Soudex Part Number.

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					
		BOUNDEX PART No.	MEISSNER PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.
L1	RF Choke (6.8uh)	TF-14	19-1004	BC-505	74F686AP	RTC-8520	T859
L2	Antenna	①					
L3	RF	①					
L4	Oscillator	①					
L5	Input IF	TF-32	16-6712	BC-656	6522	RTC-9397	
L6	Output IF	TF-33					

① Part of M2.

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
			BOUNDEX PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	14.4	1	TF-1C					

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA					NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (Ø CURRENT 1000~)	BOUNDEX PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L7	500ma	.8Ω	15MH	TF-4C	C-4095	TC-2	TR-152	TY17XT	

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA			NOTES
		BOUNDEX PART No.	QUAM PART No.		
SP1	6" x 8" PM	4Ω	8K-2AW	69A3	

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
			BOUNDEX PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T2	25Ω	Tap @ 4Ω	TF-2F			TR-168		

FUSE DEVICES

ITEM No.	TYPE	RATING	REPLACEMENT DATA						
			PART No.		LITTELFUSE PART No.		BUSS PART No.		
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER	
M1	AGC	4Amp.	FU3	In Fuse Block	311004			AGC-4	

MISCELLANEOUS

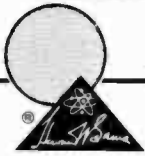
ITEM No.	PART NAME	BOUNDEX PART No.	NOTES
M2	Tuner	TUN-42TPC	

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
Escutcheon	BE-43		

SOUNDEX MODEL RAP-365T



PHOTOFACT[®] with

CIRCUITRACE[®]



TRADE NAME : Tenna Models IM-65-M, MD, IM-65-PB
 SUPPLIER : For Current Address, See Master Index.
 TYPE SET : 6 Transistor AM Receiver
 POWER SUPPLY : 12 Volt Storage Battery
 RATING : .580 Amp. @ 12.6 Volts DC
 TUNING RANGE : BROADCAST 540 - 1615KC

TENNA MODELS IM-65-M, IM-65-PB

ALIGNMENT INSTRUCTIONS

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

Suggested Alignment Tools:

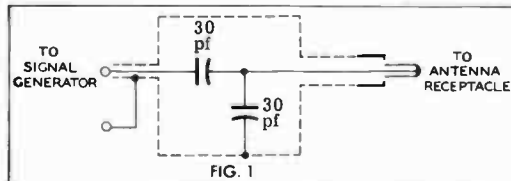
A1 thru A4.	GENERAL CEMENT: 8606, 8606L, 8869 WALSCO: 2543, 2544, 2588
A5, A6, A7.	GENERAL CEMENT: 8290, 8868, 9087 WALSCO: 2525, 2528, 2587

	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	"

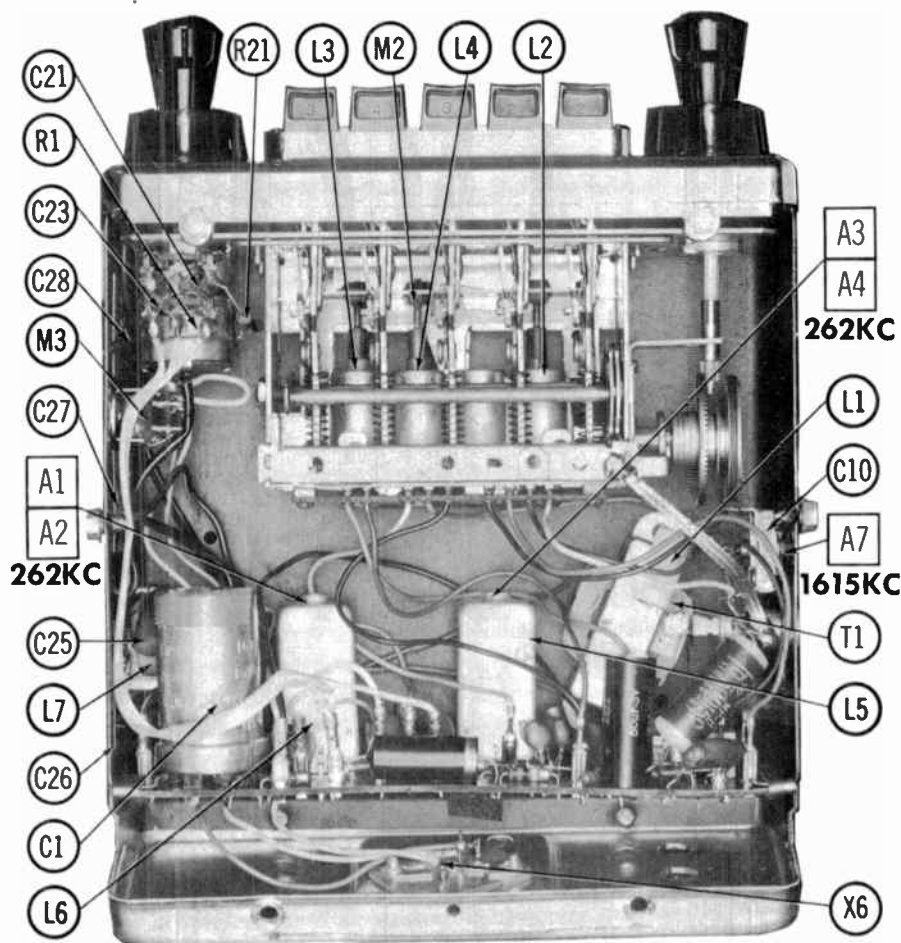
With radio installed in car and antenna fully extended, tune in a weak station near 1400KC and adjust A7 for maximum output.

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.

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	28A355	RF Amp.	DS-25	GE-1		PNP
X2	28A354	Converter	DS-25	GE-1		PNP
X3	28A353	IF Amp.	DS-25	GE-1		PNP
X4	2N2428	1st AF Amp.	DS-28	GE-2		PNP
X5	2N2712	2nd AF Amp.	DS-48	GE-10		NPN
X6		Output	DS-520	GE-3		PNP ♦

♦ When replacing, apply silicon grease to both sides of insulator. Tighten mounting screws securely.

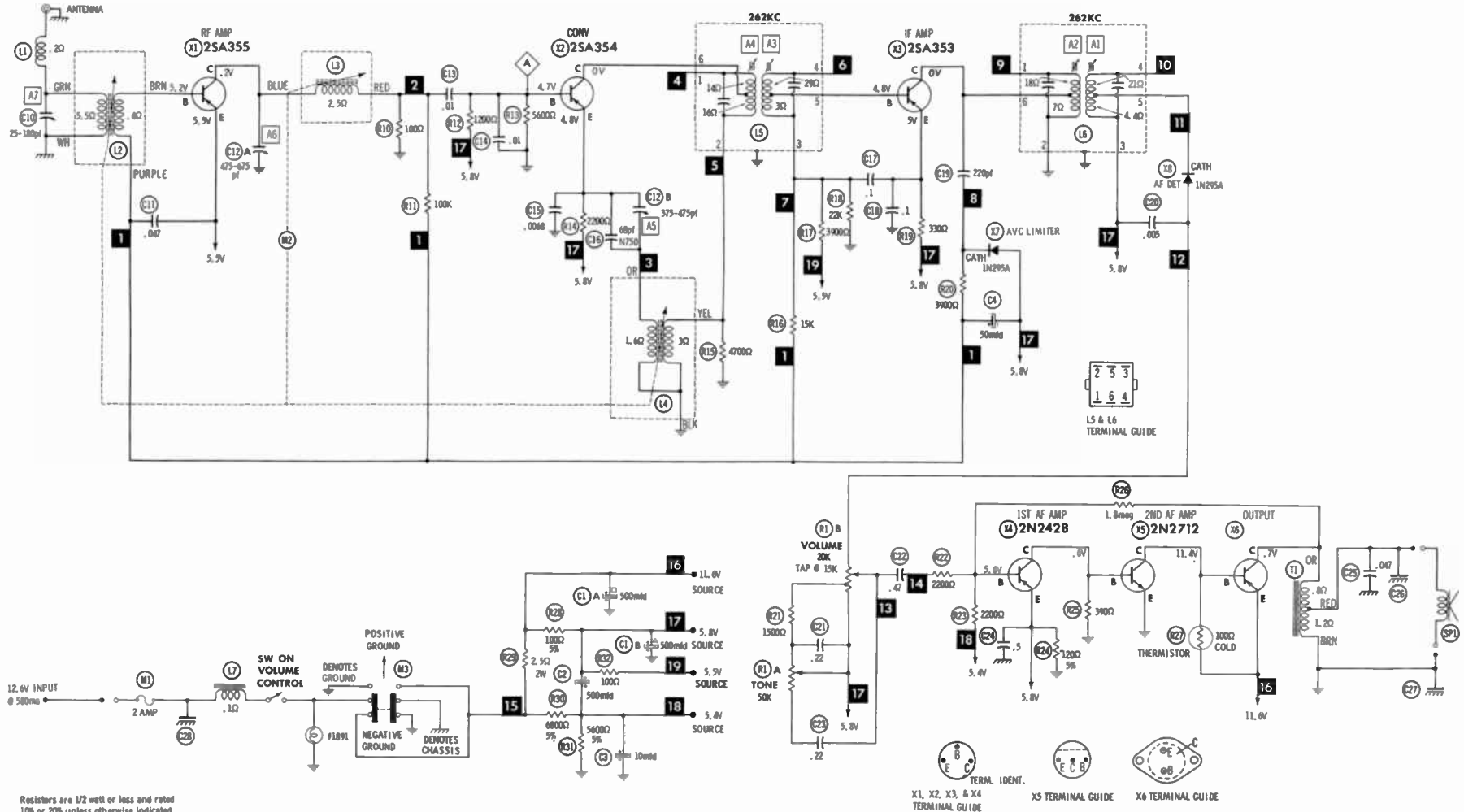
POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MEASURED CURRENT	ORIGINAL Part or Type No.	RECTIFIERS				DIODES
			GENERAL ELECTRIC PART No.	MALLORY PART No.	RCA PART No.	SARKES TARZIAN PART No.	GENERAL ELECTRIC PART No.
X7		1N295A					1N295A
X8		1N295A					1N295A

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA					
	CAP.	VOLT.	TENNA PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A	500	18	111001-512	PWH2-02-40	BPC010	XC2-45	PPF200.8	PCLS-2177*
B	500	16						
C2	500	3		CRE243A	BR500-5	MT1-26	TC305	TE-1068
C3	10	15	111002-103	BCD15010	ECSP10-15	MT1-5	PET1766	VL-1167
C4	50	3	111002-104	BCD3050	ECSP50-3	MT1-15	PET1575	VL-1045

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



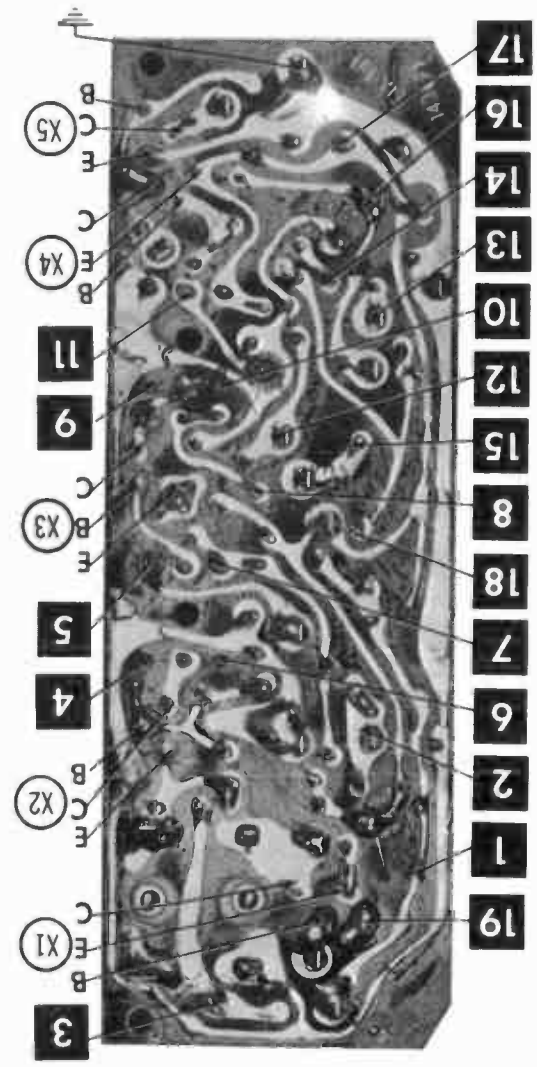
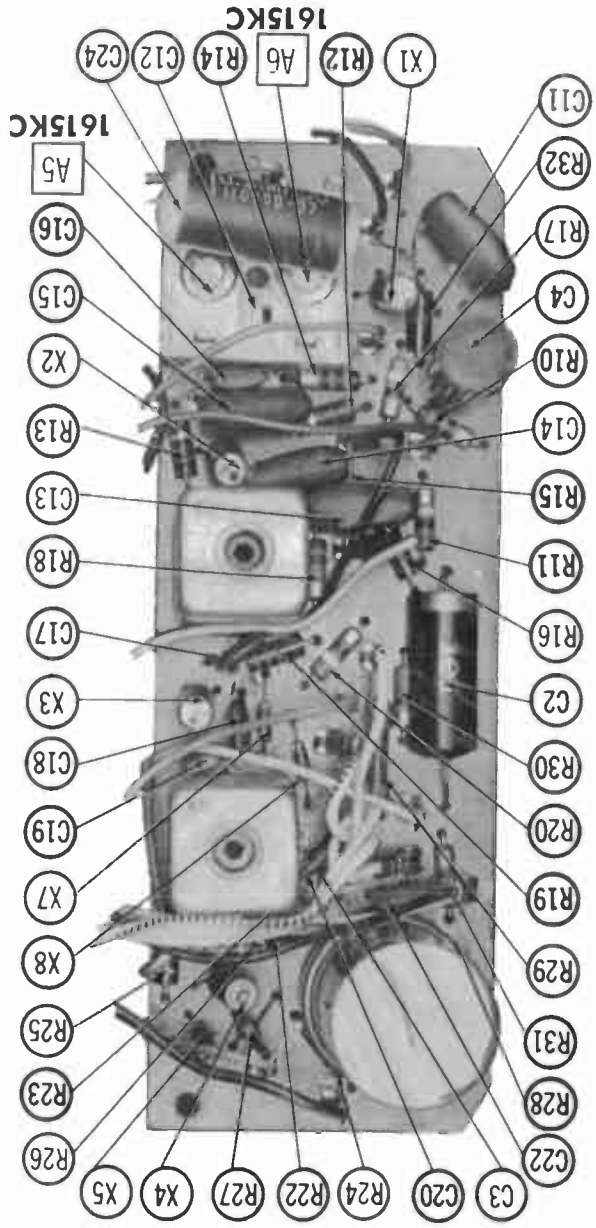
Resistors are 1/2 watt or less and rated 10% or 20% unless otherwise indicated.

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 PHOTOFACIT STANDARD NOTATION SCHEMATIC with CIRCUITRACE

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TENNA MODELS IM-65-M, IM-65-PB



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	25-180	#110000-086	DBE2S47		WMF2S47	1DP-2-473	PVC1147	2PS-847
C11	.047 100V							
C12A	475-875	#110000-080	DBE4S1	CPR-10000J	WMF1S1	1DP-1-103	PVC211	4PS-810
C13	.01 200V							
C14	.01 200V		DBE4S1	CPR-10000J	WMF1S1	1DP-1-103	PVC211	4PS-810
C15	.0068 200V		DBE8D68	CPR-6800J	WMF4D68	1DP-1-682	PVC4268	6PS-D68
C16	68 N7 0		N750-DI 68	DTN-68	C10Q58U	CCTN-680	CN7488	10TCU-Q88
C17	.1		TTD-1	CK-104	H6		TA010	TG-P10
C18	.1		TTD-1	CK-104	H6		TA010	TG-P10
C19	220		DI-220	DD-221	LA10T22-S3	CCD-221	GP322	10TS-T22
C20	.005		BPD-005	DD-502	NYA10D5	CCD-502	B250	5HK-D50
C21	.22			UK20-204	HCC3224P		MAG2522	HY-325
C22	.47			UK10-404	HCC3474P			HY-330
C23	.22			UK20-204	HCC3224P		MAG2522	HY-325
C24	.5 150V		BE2P5		DPMS2P5	1DP-4-504	PVC105	2PS-P50
C25	.047 100V		DBE2S47		WMF2S47	1DP-2-473	PVC1147	2PS-847
C26								
C27								
C28								

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.
R1A	Tone	50K	145004-022				
B	Volume/Switch	20K Tap ① 15K					

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
R27	100Ω (Cold)				R29	2.5Ω 2W	BWH 2.4	WS 2.7	

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					
		TENNA PART No.	MEISSNER PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.
L1	RF Choke (5.6uh)	114000-282	19-1008	SW-831	4609	RTC-8519	T959
L2	Ant.	①					
L3	RF	①					
L4	Osc.	①					
L5	Input IF	114000-283	16-8711		6521		
L6	Output IF	114000-284	16-8711		6521		

① Part of M2.

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA					NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (DC CURRENT 1000~)	TENNA PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L7	580MA	.1Ω	3 MH	161000-141	C-4095	TC-1	TR-159	TY16XT	

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC.	TENNA PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
	T1	16Ω	Tap @ 8Ω	161000-147			TR-164	

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		TENNA PART No.	QUAM PART No.	
SP1	5" x 7" PM 8Ω	155009-121	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	2A			301002	155004A	AGA 2	HAF

MISCELLANEOUS

ITEM No.	PART NAME	TENNA PART No.	NOTES
M2	Tuner	164000-088	



TRADE NAME : Tenna Model RA-65-PB (1965 Rambler)
SUPPLIER : For Current Address, See Master Index.
TYPE SET : 5 Transistor AM Receiver
POWER SUPPLY : 12 Volt Storage Battery
RATING : .620 Amp. @12.6 Volts DC

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:

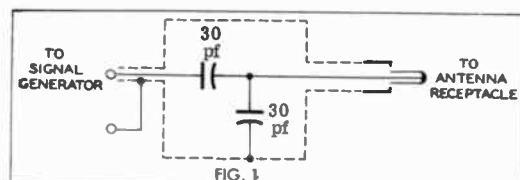
A1 thru A4	GENERAL CEMENT: 8606, 8606L, 8869 WALSCO: 2543, 2544, 2588
A5, A6, A7	GENERAL CEMENT: 8290, 8868, 9087 WALSCO: 2525, 2528, 2587

	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	"

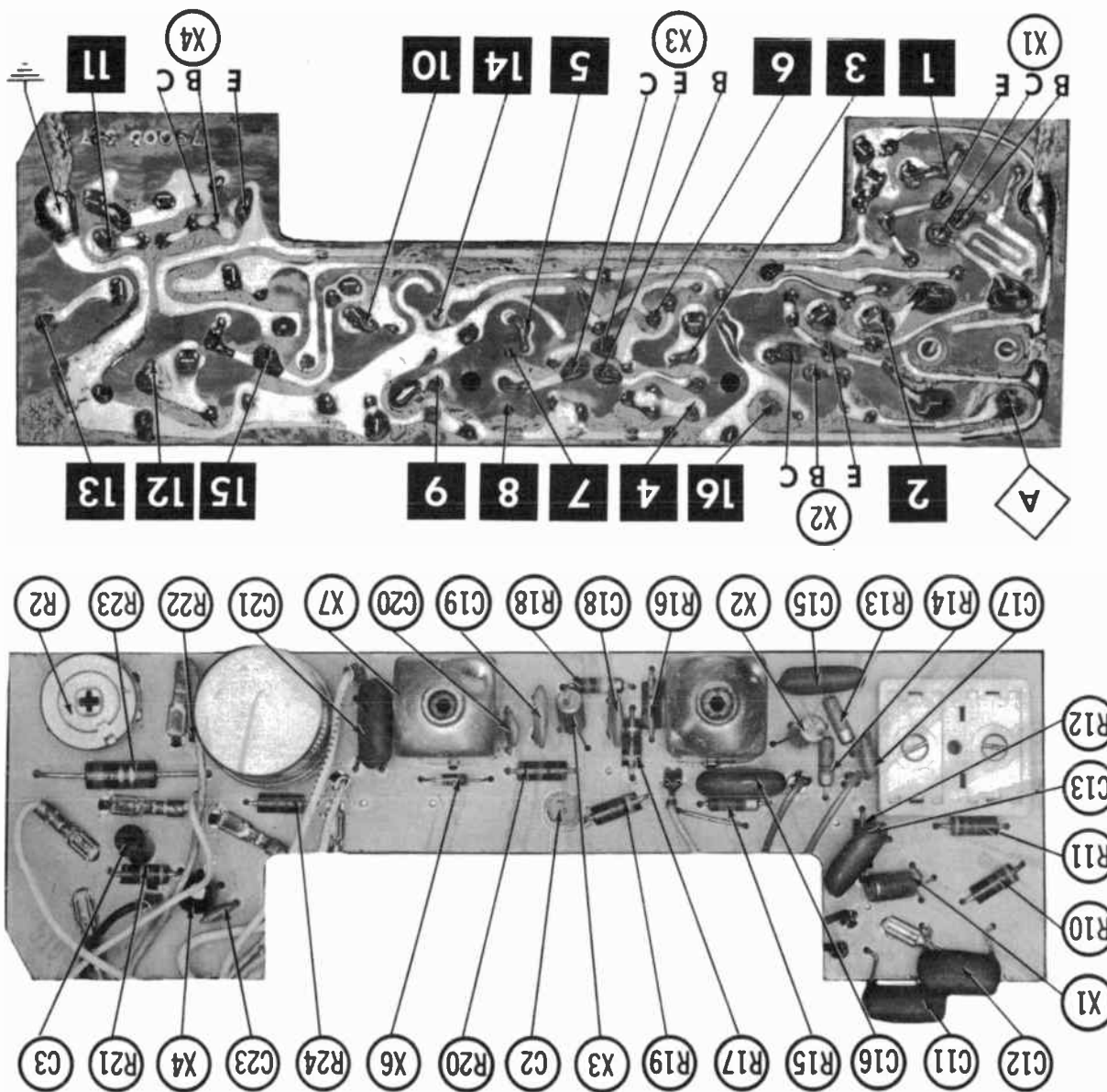
With radio installed in car and antenna fully extended, tune in a weak station near 1400KC and adjust A7 for maximum output.

PUSH-BUTTON ADJUSTMENT

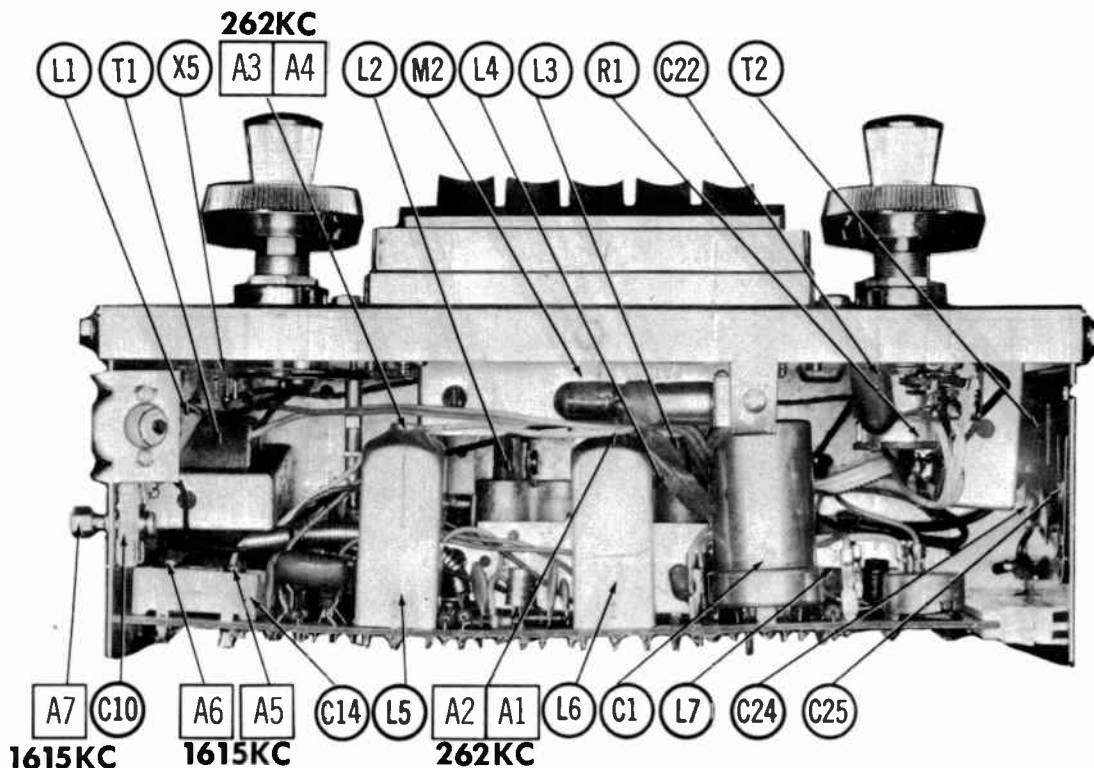
1. Pull button out.
2. Tune manually to desired station.
3. Press button in firmly.
4. Repeat for remaining buttons.



TENNA MODEL RA-65-PB



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	2SA355	RF Amp.	DS-25	GE-1		PNP
X2	2SA354	Conv.	DS-25	GE-1		PNP
X3	2SA353	IF Amp.	DS-25	GE-1		PNP
X4	2N2712	Driver	DS-46	GE-10		NPN
X5	2N257	Output	DS-520	GE-3		PNP *

* When replacing, apply silicon grease to both sides of insulator. Tighten mounting screws securely.

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MEASURED CURRENT	ORIGINAL Part or Type No.	RECTIFIERS				DIODES
			GENERAL ELECTRIC PART No.	MALLORY PART No.	RCA PART No.	SARKES TARZIAN PART No.	GENERAL ELECTRIC PART No.
X6		1N295A					1N295A
X7		1N295A					1N295A

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		TEHNA PART No.	REPLACEMENT DATA				
	CAP.	VOLT.		AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A	500	16	111001-512	PWH3-02-40	BPC010	XC2-45	PFP200.6	PCLS-2177*
B	500	16						
C2	50	3	111002-104	BCD3050	ECSP50-3	MT1-15	PET1575	VL-1045
C3	10	15	111002-103	BCD15010	ECSP10-15	MT1-5	PET1760	VL-1167

* 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	#11D000-013						
C11	.0047 200V		DBE6D47	CPR-4700J	WMF2D47	6DP-1-472	PVC4247	6PS-D47
C12	.015 200V		DBE4S15		WMF2S15	4DP-1-153	PVC2115	4PS-S15
C13	.05 200V		DBE6S5		DPMS2S5	1DP-2-503	PVC215	2PS-S50
C14A	475-675	#110000-080						
B	375-445							
C15	.01 200V		DBE4S1	CPR-10000J	WMF1S1	1DP-1-103	PVC211	4PS-S10
C16	.015 200V		DBE4S15		WMF2S15	4DP-1-153	PVC2115	4PS-S15
C17	.68 N750		N750-DI 68	DTN-68	C10Q68U	CCTN-680	CN7468	10TCU-Q68
C18	.05		TTD-05	CK-503	H5		TA150	TG-S50
C19	.005		BPD-005	DD-502	BYA10D5		B250	5HK-D50
C20	.220		DI-220	DD-221	LA10T22-S3		CCD-221	GP322
C21	.047 100V		DBE2S47		WMF2S47		CCD-221	19TS-T22
C22	.047 100V		DBE2S47		WMF2S47		1DP-2-473	2PS-S47
C23	.005		BPD-005	DD-502	BYA10D5		1DP-2-473	2PS-S47
C24		#110000-021					PVC1147	2PS-S47
C25		#110000-021					B250	5HK-D50

* Tenna 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 COUNTERFACTS[®] for the most up-to-date replacement.

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 B	Tone Volume, Switch	50K 5000Ω	145005-027	F1-50K, R2-5000, FFS104, RFS111, AK-28①, KR-4			† QJ-1907A	
R2	Bias	300Ω	145000-207	V-300	U39-300		110-300	

① Alter Bushing to meet requirements.

† "CONCENTRIKIT" Equivalent: K8 Kit with Base Elements and Shafts: B11-123, P17-105 (Panel)
B13-114, R16-116 (Rear)
S40 (Bushing)
76-1 (Switch)

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
R23	1Ω 1W	BWH 1	WS-1	#551102-100					

Tenna Part Number.

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					
		TENNA PART No.	MEISSNER PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.
L1	RF Choke (5.6uh)	114000-262	19-1008	SW-631	4609	RTC-6519	T959
L2	Antenna	①					
L3	RF	①					
L4	Osc.	①					
L5	Input IF	114000-217	16-8712		6522		
L6	Output IF	114000-216	16-8719		6571		

① Part of M2.

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	620ma	.5Ω	6MH	161000-146	C-4095	TC-2	TR-156	TY17XT	

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
	PRI.	SEC.	TENNA PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
	T1	5.5	1	161000-195				

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC.	TENNA PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
	T2	12Ω	Tap @ 8Ω	161000-194			TR-164	

SPEAKER

ITEM No.	TYPE	RATING	REPLACEMENT DATA		NOTES
			TENNA PART No.	QUAM PART No.	
SP1	8" x 9" PM	8Ω	155009-151	89A126	

FUSES

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			TENNA PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M1	AGA	2	126000-013	120000-145	301002	155004A	AGA 2	HAF

MISCELLANEOUS

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CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

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Dial Glass	122005-020	Knob, Tuning or Volume	134004-011
Pushbutton	107005-017	Knob, Tone or Dummy	134005-048

WIRING DATA

General-use Unshielded Hook-up Wire	Use BELDEN No. 6530 (Solid) Available in 12 Colors 8524 (Stranded) Available in 12 Colors
Shielded Hook-up Wire	Use BELDEN No. 6885
Rear Seat Speaker Extension Cable	Use BELDEN No. 6782 (Stranded) Coded Parallel Leads
Bonding Strap	Use BELDEN No. 6661 (3/8 In.) or 6870 (3/4 In.)

TENNA MODEL RA-65-PB

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