



SAMS PHOTOFAC[®] AUTO RADIO SERIES



VOLUME

19



by the *Howard W. Sams* ENGINEERING STAFF



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

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PHOTOFACT®
AUTO RADIO SERIES
VOLUME 19

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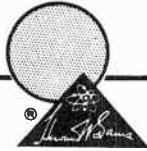


AUTO RADIO SERIES

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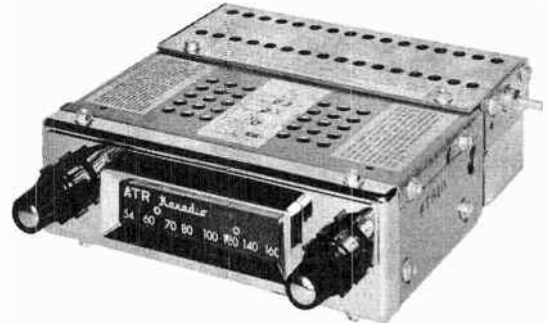
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PHOTOFACT[®]

TRADE NAME : ATR Karadio Models 606, 612
 SUPPLIER : ATR Electronics Inc.,
 300 E. Fourth St., St. Paul 1, Minn.
 TYPE SET : Battery Operated 6 Tube Automobile
 AM Receiver
 POWER SUPPLY : 6 (or) 12 Volt Storage Battery
 RATING : 1.6 Amp. @ 12.6 VDC (Model 612)
 3.2 Amp. @ 6.3 VDC (Model 606)
 TUNING RANGE : BROADCAST 540 - 1610KC



ALIGNMENT INSTRUCTIONS

Check for specified source voltage.

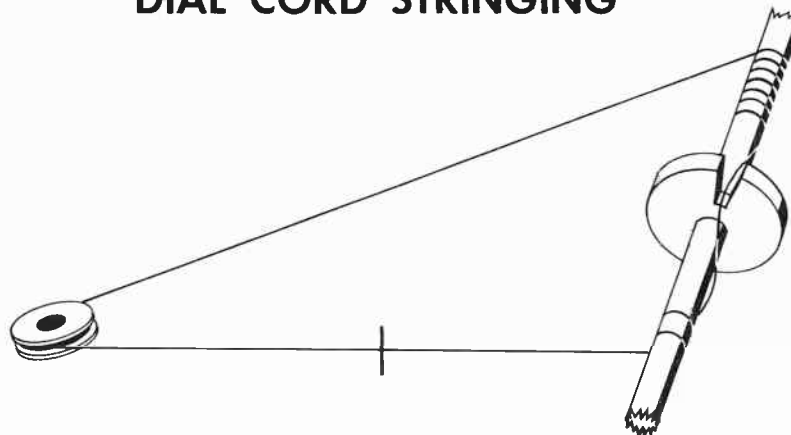
Use only enough generator output to provide a usable indication.

Suggested Alignment Tools: A1, A2, A3, A4..... GENERAL CEMENT #8606, 8606L, 8869
 WALSCO #2543, 2544, 2588
 A5, A6, A7..... GENERAL CEMENT #9087, 8290, 8868
 WALSCO #2525, 2528, 2587
 A8, A9..... GENERAL CEMENT #5009, 8987, 8728A
 WALSCO #2531X, 2536

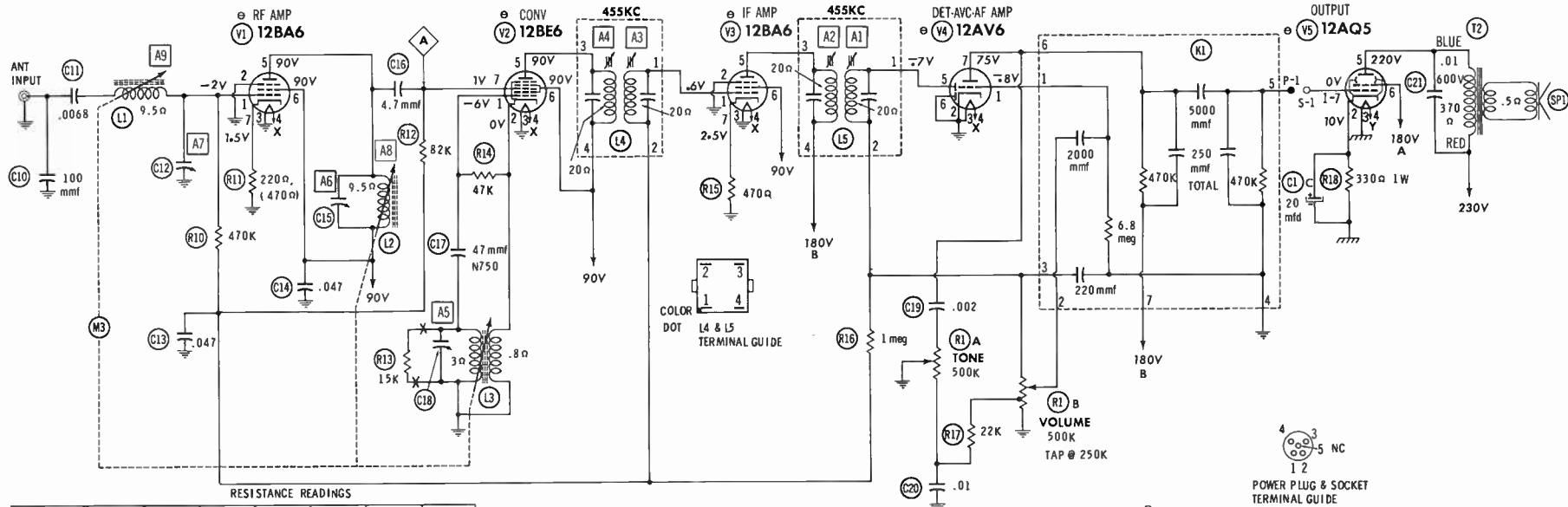
	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1.	High side thru .1mfd to point Δ , low side to ground.	455KC (400v Mod.)	High Freq. End Stop.	Output Meter across voice coil.	A1, A2, A3, A4	Adjust for maximum.
2.	High side thru 82mmf to antenna receptacle, low side to ground.	1615KC	"	"	A5, A6, A7	"
3.	High side thru 82mmf to antenna receptacle, low side to ground.	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.

DIAL CORD STRINGING



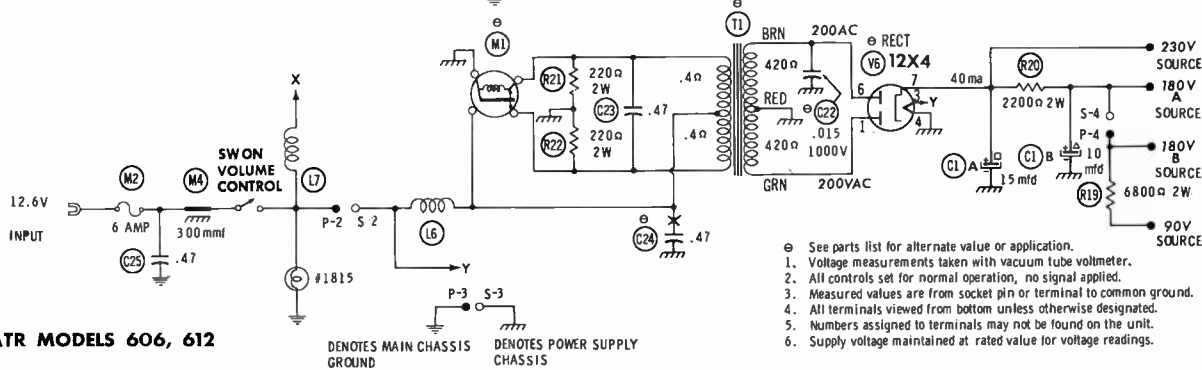
HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana



RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7
V1	12BA6	2 meg	0Ω	FIL	FIL	†9000Ω	†9000Ω	220Ω
V2	12BE6	47K	.8Ω	FIL	FIL	†9000Ω	†9000Ω	1.6 meg
V3	12BA6	1.5 meg	0Ω	FIL	FIL	†2200Ω	†9000Ω	470Ω
V4	12AV6	6.8 meg	0Ω	FIL	FIL	500K	0Ω	†470K
V5	12AQ5	470K	330Ω	FIL	FIL	†370Ω	†2200Ω	470K
V6	12X4	420Ω	TP	FIL	FIL	TP	420Ω	†

† THIS READING WILL VARY DEPENDING UPON THE CONDITION OF THE ELECTROLYTIC IN THE CIRCUIT.
 TP TIE POINT
 † MEASURED FROM PIN 7 OF V6



⊖ DENOTES MAIN CHASSIS GROUND
 ⊕ DENOTES POWER SUPPLY CHASSIS

A PHOTOFACIT STANDARD NOTATION SCHEMATIC
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ATR MODELS 606, 612

- ⊖ 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.

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. 8861 (3/8 In.) or 8870 (3/4 In.)

TUBES

♦ AMPEREX ♦		GENERAL ELECTRIC ♦		RCA ♦		RAYTHEON ♦		SYLVANIA ♦	
ITEM No.	USE	TYPE		ITEM No.	USE	TYPE			
V1	RF Amplifier	12BA6 (8BA6)*		V4	Det.-AVC-AF Amp.	12AV6 (6AV6)*			
V2	Converter	12BE6 (8BE6)*		V5	Output	12AQ5 (6AQ5)*			
V3	IF Amplifier	12BA6 (8BA6)*		V6	Rectifier	12X4 (6X4)*			

* Used in 6 Volt Models.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	ATR PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	GENERAL INSTRUMENT PART No.	MALLORY PART No.	SPRAGUE PART No.
CLA	15	350		AFH3-104	C0770	XC3-23.1	TMT-3343	FP328A	TVL-3630
B	10	350							
C	20	25							

FIXED CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA						
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCOPART No.	MALLORY PART No.	SPRAGUE PART No.	
C10	100			DD-101		DM-10-101	GP310		
C11	.0068 200V		P288N-0068	CPR-8800J	PM6D68	IDP-1-682	GEM-6268	6TM-D68	
C12									
C13	.047 400V		P488N-047	DD-503	CUB4S47	4DP-3-473	GEM-4147	4TM-S47	
C14	.047 400V		P488N-047	DD-503	CUB4S47	4DP-3-473	GEM-4147	4TM-S47	
C15									
C16	4.7			DTZ-4R7		CCTO-4R7	CNO-547		
C17	47 N750			DTN-47		CCTN-470	CN7-447		
C18									
C19	.002		BPD-002	DD-202	BYA10D2	CCD-202	B-220	5HK-D20	
C20	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10	
C21	.01 600V		P688N-01		PM6S1	6DP-2-103	GEM-611	6TM-S10	
C22	.015 1000V	Note 1	P1088N-015		PKM16S15	16DD-4-153	GEM-10115	10TM-S15	
C23	.47 150V	Note 2	P288N-47		PM2P47	2DP-5-474	GEM-2047	2TM-P47	
C24	.47 150V		P288N-47		PM2P47	2DP-5-474	GEM-2047	2TM-P47	
C25	.47 150V		P288N-47		PM2P47	2DP-5-474	GEM-2047	2TM-P47	

Note 1. Model 606 uses .033 mfd.
Note 2. Not used in Model 606.

CONTROLS

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

ITEM No.	USE	RESIST-ANCE	REPLACEMENT DATA				
			ATR PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
RLA	Tone Volume & Switch	500K 500K Tap @ 250K					
B							

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		ATR PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	Antenna						① Part of M3
L2	RF						
L3	Oscillator						
L4	Input IF		BC-352	12-C9	RTC-8636	T607	
L5	Output IF		BC-353	12-C10	RTC-8637	T608	
L6	Hash Choke (2, 8uh)		BC-537	5218	RTC-9180	T963	
L7	Fl. Choke						

PARTS LIST AND DESCRIPTION

TRANSFORMER (POWER)

ITEM No.	RATING			REPLACEMENT DATA					NOTES
	PRI.	SEC. 1	SEC. 2	ATR PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	

TRANSFORMER (AUDIO OUTPUT)

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

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		ATR PART No.	QUAM PART No.	
SPL	5" x 7" PM 3-4Ω		57A21	

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	ATR PART No.	REPLACEMENT DATA
X1	Audio Coupling	470K, 470K, 6.8meg, 220mfd, 250mfd, .002mfd, .005mfd		Aerovox Centralab Mallory Sprague
				PA-113-1 PC-150 MS-106 DT-1

VIBRATOR

ITEM No.	TYPE	INPUT VOLTS	FRE-QUENCY	REPLACEMENT DATA			NOTES
				ATR PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	
M1	Interrupter Interrupter	12VDC 6V	115% 115%	1840 1400	6301 5301	G-1601 1601	Model 612 Model 606

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			ATR PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M2	AGC	6 Amp.	①	H-818-44-8	312006 (AGC 6A)	155020A	AGC 6	HDJ
	AGC	10Amp.	②		311010 (AGC 10A)	155020A	AGC 10	HDJ

① Model 612. ② Model 606.

MISCELLANEOUS

ITEM No.	PART NAME	ATR PART No.	NOTES
M3 M4	Tuner Spark Plate (300mmf)		

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
Dial Glass	P-2010	Knobs	WK-3



PHOTOFACT[®]

TRADE NAME : AUTOMATIC Models C382AT, CP522AT
(1962 Chevrolet)

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

TYPE SET : 5 Transistor Custom Built AM Receiver

POWER SUPPLY : 12 Volt Storage Battery

RATING : .52 Amp. @12.6VDC

TUNING RANGE: BROADCAST 540 — 1610KC



ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

Use only enough generator output to provide a usable indication.

Suggested Alignment Tools:

A1 thru A4..... GENERAL CEMENT #8282, 8606, 9295
WALSCO #2526, 2543, 2544, 2545

A5 thru A7..... GENERAL CEMENT #8271, 8272, 8290
WALSCO #2515, 2516, 2518, 2519, 2525, 2541

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1.	High side thru .1mf to base of converter, low side to ground.	262KC (Unmod.)	High Freq. End Stop.	DC VTVM across volume control.	A1, A2, A3, A4	Adjust for maximum deflection.
2.	"	1610KC	1610KC	"	A5	"
3.	Thru dummy (Fig. 1) to antenna receptacle.	1400KC	1400KC	"	A6	"
4.	With radio installed in car and antenna fully extended, tune in a weak station near 1400KC and adjust A7 for maximum output.					

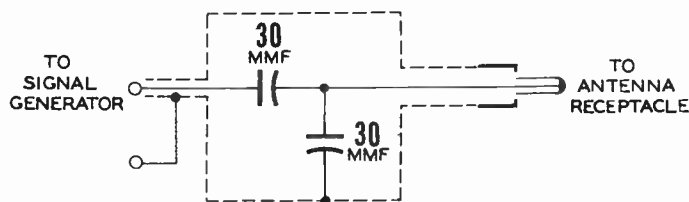
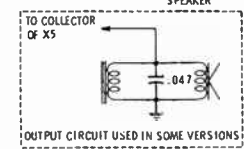
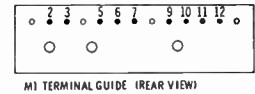
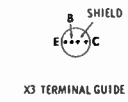
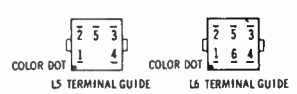
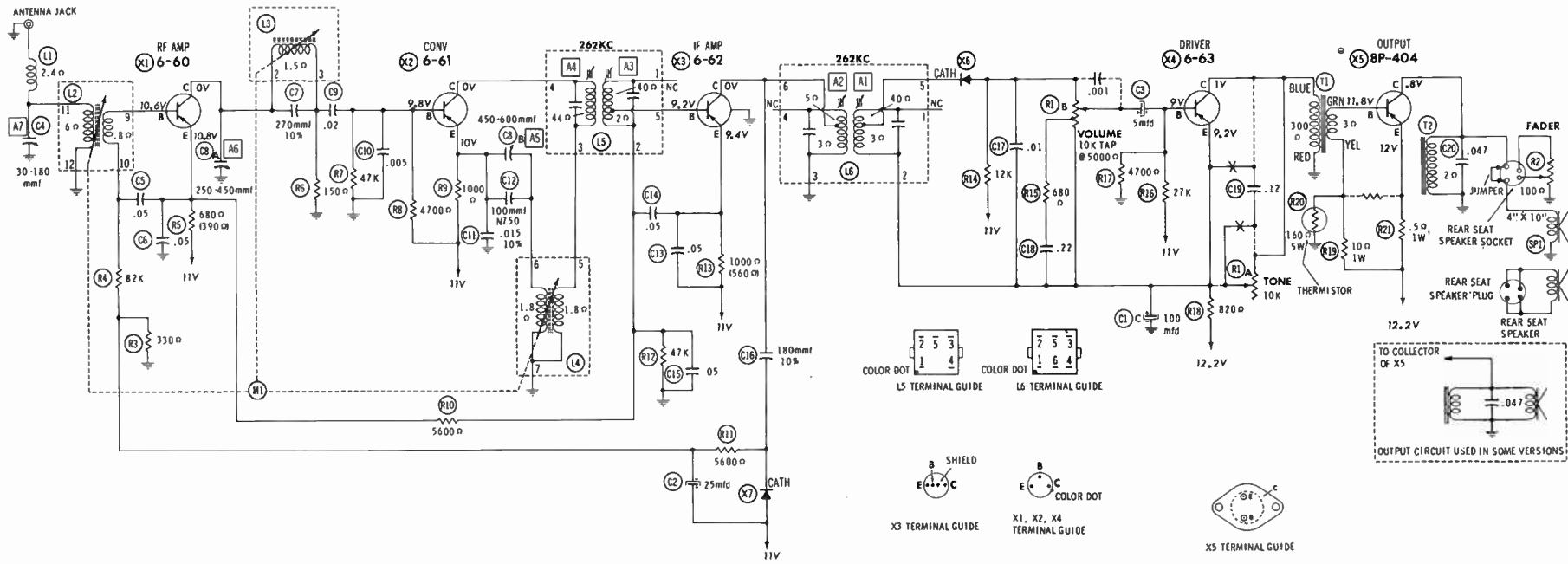


FIG. 1

AUTOMATIC MODELS C382AT, CP522AT

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



SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

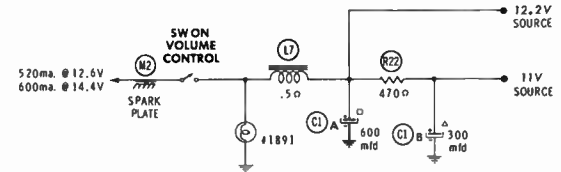
NUMBERS ASSIGNED TO COILS, SWITCHES, PLUGS, SOCKETS, AND TRANSFORMERS ARE TO FACILITATE CIRCUIT TRACING OR COMPONENT REPLACEMENT AND MAY NOT NECESSARILY BE FOUND ON THE UNIT.

RESISTANCE MEASUREMENTS NOT GIVEN BECAUSE OF THE WIDE VARIATION IN INTERNAL TRANSISTOR RESISTANCE.

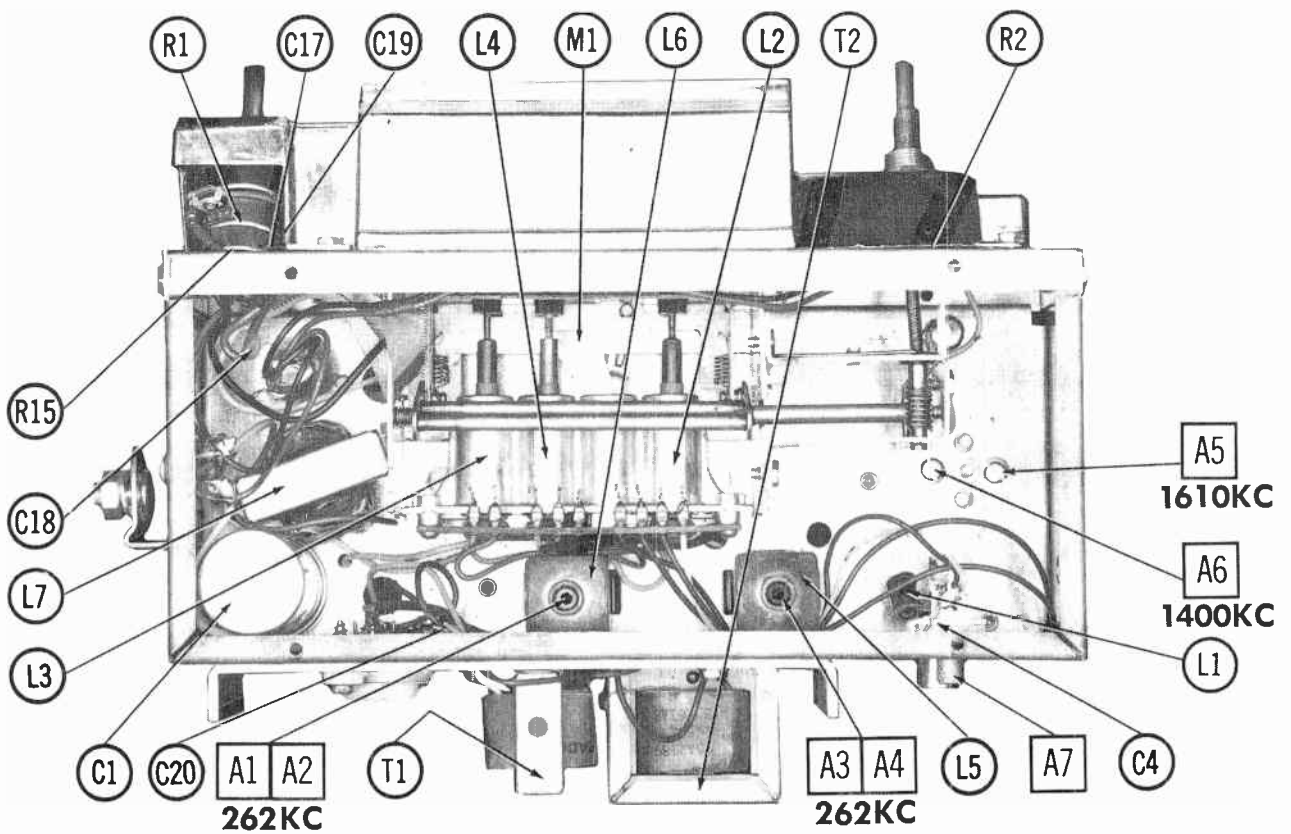
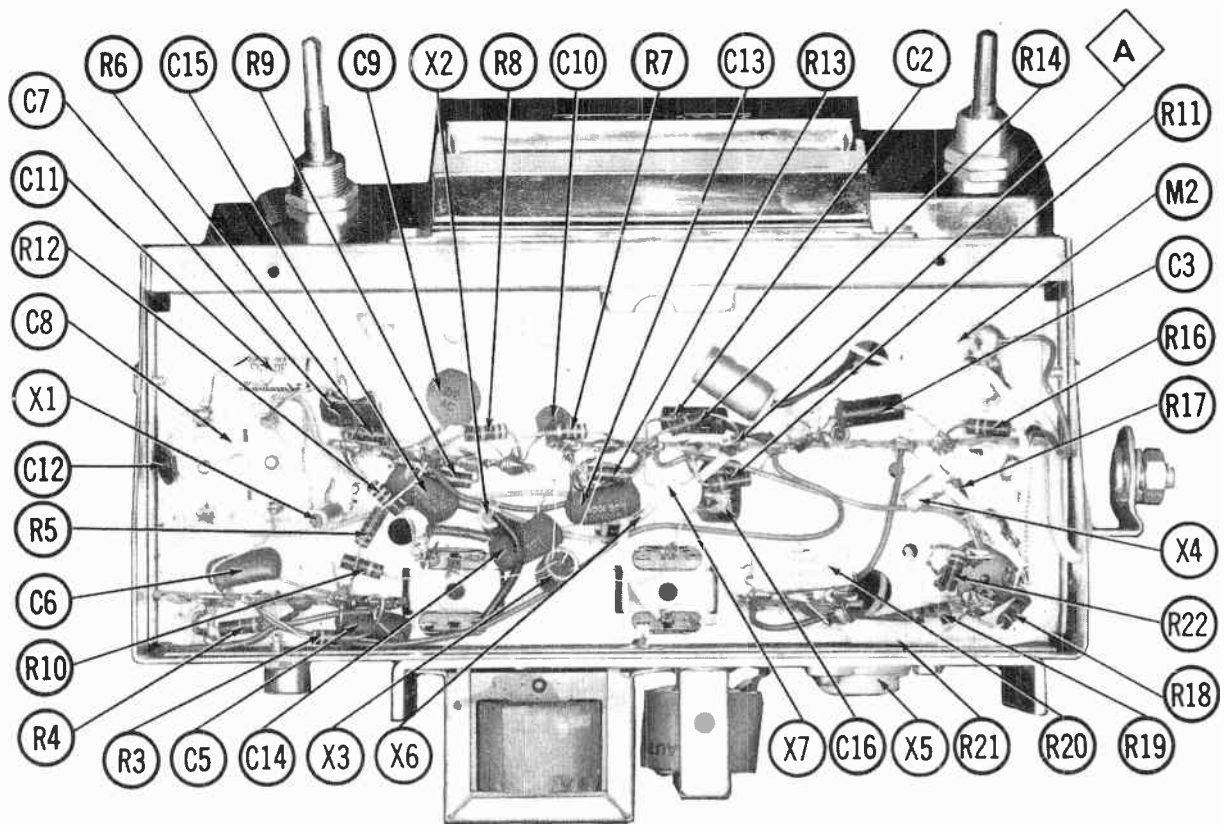
- DC voltage measurements taken with vacuum tube voltmeter.
- Socket connections or transistor terminals are shown as bottom views.
- Measured values are from socket pin or terminal to common ground.
- Nominal tolerance on component values makes possible a variation of $\pm 15\%$ in voltage and resistance readings.

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**AUTOMATIC MODELS
C382AT, CP522AT**



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.	MFG. PART No.	USE	REPLACEMENT DATA			NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	
X1	6-60	RF Amplifier	DS-25	GE-1		PNP
X2	6-61	Converter	DS-25	GE-1		PNP
X3	6-62	IF Amplifier	DS-25	GE-1		PNP
X4	6-63	Driver	DS-26	GE-2	2N591	PNP
X5	8P-404	Output	DS503	GE-3	2N301	PNP (Note 1)

Note 1. When replacing, apply silicone grease between transistor and heat sink. Tighten mounting screws securely.

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	CURRENT RATING (Measured)	ORIGINAL Part or Type No.	RECTIFIERS		DIODES	NOTES
			RCA PART No.	SARKES TARZIAN PART No.		
X6						Detector AVC
X7						

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						NOTES
	CAP.	VOLT.	AUTOMATIC PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	PYRAMID PART No.	
C1A	600	15	20-327	AFH3-00-95.4					TVLS-3026.7*
C1B	300	15							
C1C	100	15							
C2	25	15	PTT69	NLW25-15	MT1-10	TT15X25	MLV25-15	TE-1157.1	
C3	5	15	PTT64	NLW5-15	MT1-3	TT15X5	MLV5-15	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.
C4	30-180	#28-800-2L						
C5	.05 100V		C 80V503AM	DD-503	CUB2S5	S-425	GP-150	TH-S50
C6	.05 100V		C 80V503AM	DD-503	CUB2S5	IDP-2-503	GP-150	TH-S50
C7	270 10%		ADM-15-271	DTZ-270	LI0T27	CCD-271	GP-327	10TS-T27
C8A	250-450	#28A1332						
C8B	450-600							
C9	.02		TTD-02	DD-203	BYB6S2	CCD-203	GP-120	TH-S20
C10	.005		TTD-005	DD-502	BYA10D5	CCD-502	GP-250	TH-D50
C11	.015 10% 200V		BE2S15	DD-153	CUB6S15	4DP-1-153	GEM-4115	4PS-S15
C12	100 N750		N750-D1 100	DTN-100	C10T1U	CCTN-101	CN7-310	10TC-U-T10
C13	.05 100V		C 80V503AM	DD-503	CUB2S5	IDP-2-503	GP-150	TH-S50
C14	.05 100V		C 80V503AM	DD-503	CUB2S5	IDP-2-503	GP-150	TH-S50
C15	.05 100V		C 80V503AM	DD-503	CUB2S5	IDP-2-503	GP-150	TH-S50
C16	180 10%		ADM-15-181	DD-181	LI0T18	CCD-181	GP-318	10TS-T18
C17	.01	TTD-01	DD-103	BYA10S1	CCD-103	GP-110	TH-S10	
C18	.22 3V	UK-224	DD-103	BYA10S1	CCD-103	GP-110	TH-S10	
C19	.12 10V	UK10-104	DD-503	CUB2S5	IDP-2-503	GP-150	TH-P10	
C20	.047		TTD-05	DD-503	CUB2S5	IDP-2-503	GP-150	TH-S50

Automatic Part Number.

CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA				
			AUTOMATIC PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
RLA B	Tone Volume & Switch	10K 10K 5000Ω Tap 100Ω	80A2204				
R2	Fader		80A2214				

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
R20	160Ω 5W			Temp. Comp.					

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		AUTOMATIC PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	Choke (6.2uh)						↓ Part of M1
L2	Ant. Coil						
L3	RF Coil						
L4	Osc. Coil						
L5	Input IF	14-270A					
L6	Output IF	14-271A					

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA				NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	AUTOMATIC PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	
L7	.520A	.5Ω	10MH	75A1269				

TRANSFORMER (DRIVER)

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

CHOKE AUDIO

ITEM No.	INDUCTANCE	REPLACEMENT DATA					NOTES
		AUTOMATIC PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T2	40MH	75A2189					

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
	SIZE	FIELD	V. C. IMP.	AUTOMATIC PART No.	QUAM PART No.	
SP1	4"x 10"	PM	20Ω	73B2260	410A2220	

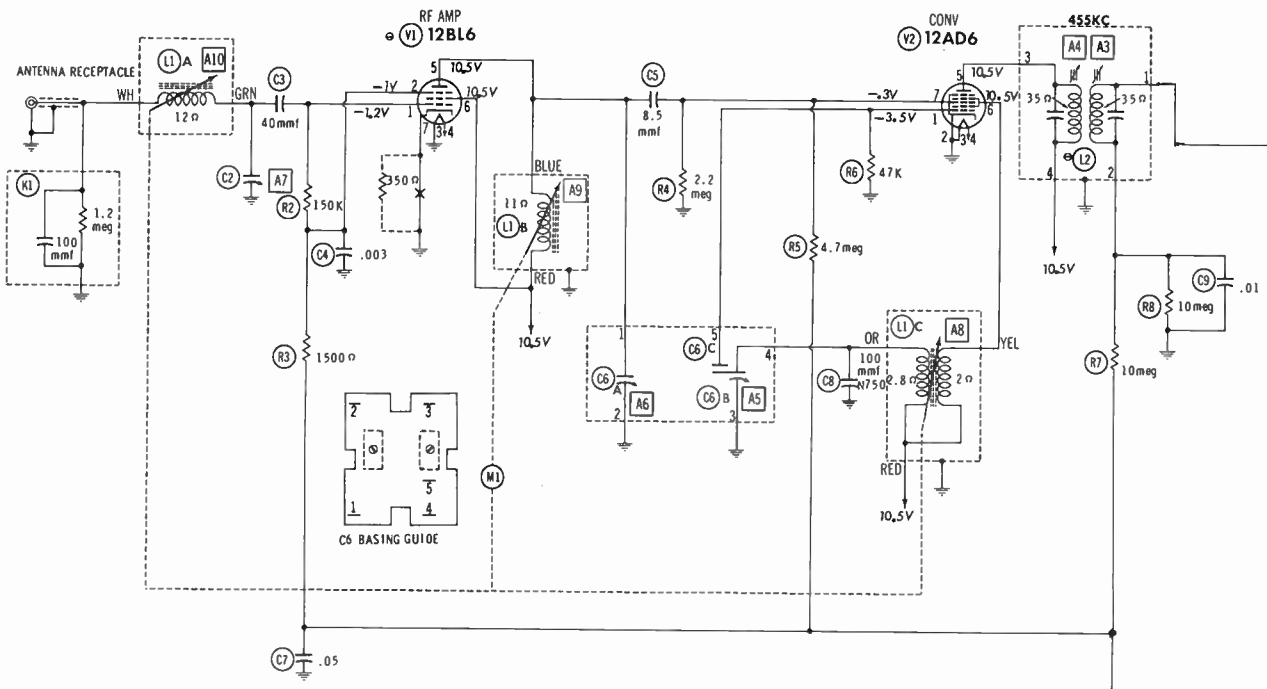
MISCELLANEOUS

ITEM No.	PART NAME	AUTOMATIC PART No.	NOTES
M1	Tuner	78B2223	Manual Push Button
	Tuner	78B2174	
M2	Spark Plate		

CABINETS & CABINET PARTS

(When Ordering, Specify Model, Chassis & Color)

NAME		PART NO.
Knob	Tuning	54A1714
Knob	Volume	54A1735



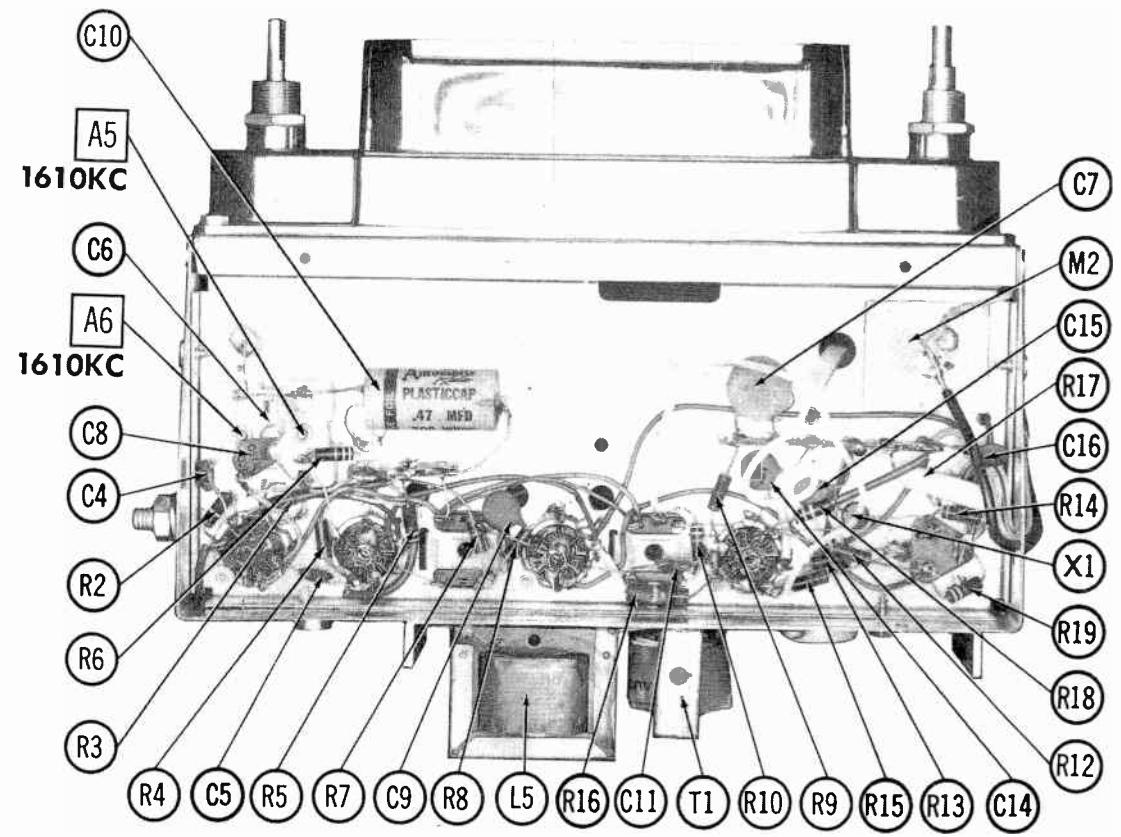
RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7
V1	12BL6	5 meg	5 meg	FIL	FIL	1470 Ω	1470 Ω	0 Ω
V2	12AD6	47K	0 Ω	FIL	FIL	1500 Ω	1470 Ω	1.9 meg
V3	12BL6	6.2 meg	0 Ω	FIL	FIL	1520 Ω	1470 Ω	0 Ω
V4	12EA6 A	2.2 meg	175 Ω	FIL	FIL	6 meg	1.1 meg	12700 Ω

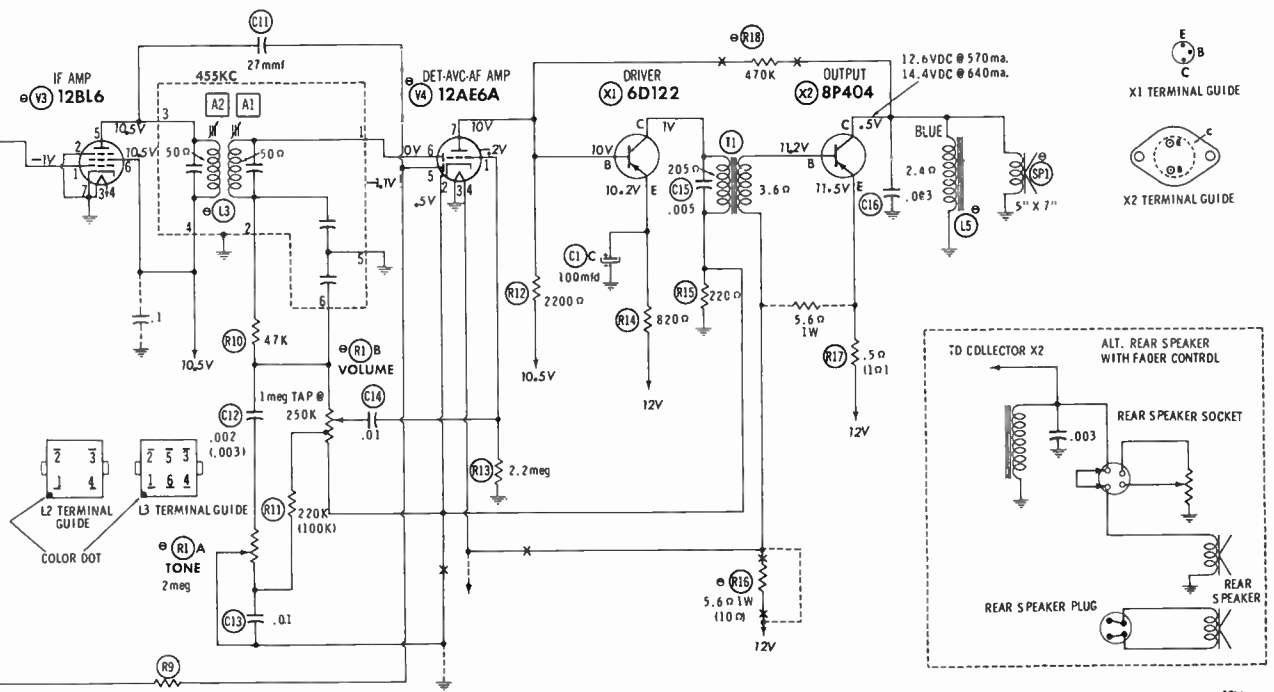
NUMBERS ASSIGNED TO COILS, SWITCHES, PLUGS, SOCKETS, AND TRANSFORMERS ARE TO FACILITATE CIRCUIT TRACING OR COMPONENT REPLACEMENT AND MAY NOT NECESSARILY BE FOUND ON THE UNIT.

† MEASURED FROM 12.6VDC SOURCE
RESISTANCE MEASUREMENTS NOT GIVEN FOR X1, X2 BECAUSE OF THE WIDE VARIATION IN INTERNAL TRANSISTOR RESISTANCE.

A PHOTOFAC STANDARD NOTATION SCHEMATIC
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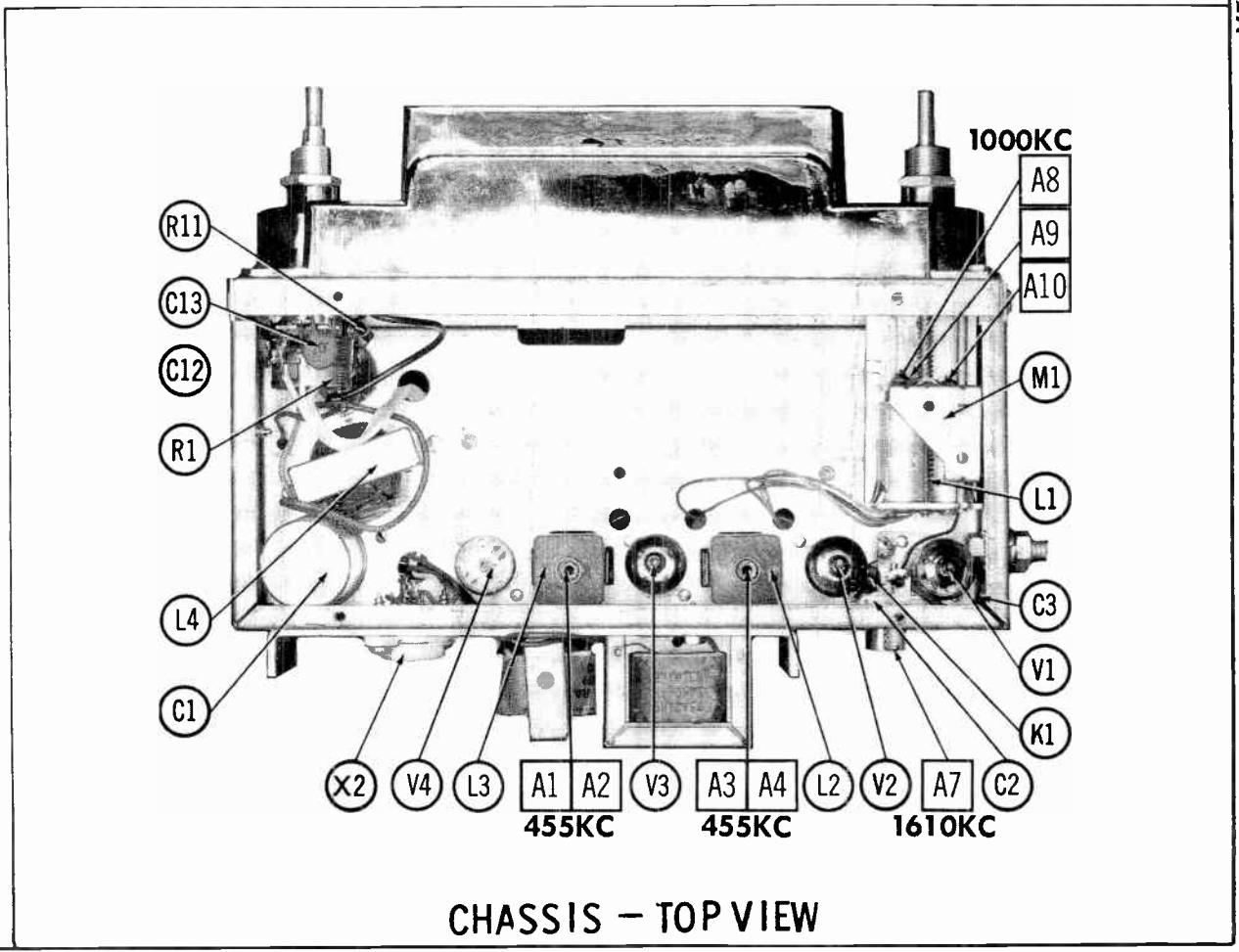
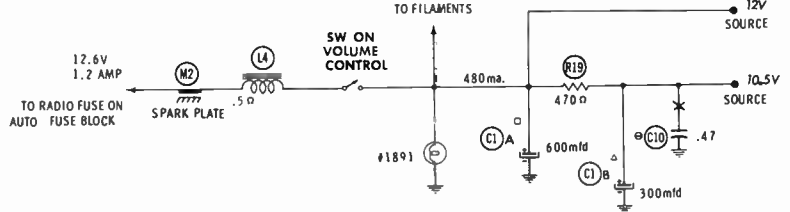


CHASSIS - BOTTOM VIEW



SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

1. DC voltage measurements taken with vacuum tube voltmeter
2. Socket connections shown as bottom views.
3. Measured values are from socket pin to common ground.
4. Battery voltage maintained at 12.6 volts for voltage readings.
5. Nominal tolerance on component values makes possible a variation of 15% in voltage and resistance readings.
6. Volume control at maximum; no signal applied for voltage measurements.



CHASSIS - TOP VIEW

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.)

TUBES

ITEM No.	USE	TYPE	ITEM No.	USE	TYPE
V1	RF Amplifier	12BL6 (12AF6)*	V3	IF Amplifier	12BL6 (12EK6, 12AF6)*
V2	Converter	12AD6	V4	Det. -AVC-AF Amp.	12AE6A (12FM6)*

* Alternate.

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	
X1	6DI22	Driver	DS26	GE-2	2N591	PNP
X2	8P404	Output	DS503	GE-3	2N301	PNP (Note 1)

Note 1. When replacing, apply silicone grease between transistor and heat sink.
Tighten mounting screws securely.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	AUTOMATIC PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	PYRAMID PART No.	SPRAGUE PART No.
C1A	600	15	20-327						PCL5-3026, 10*
B	300	15							
C	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.	
C2		#28-800-2L							
C3	40	#28-4046	DI-39	DD-390	110Q39	CCD-390	GP439	10TS-Q39	
C4	.003		DI-3000	DD-302	BYA10D3	CCD-302	GP230	10TS-D30	
C5	8.5								
C6A		Note 1							
B									
C									
C7	.05		TTD-05	DDA-503	CUB255	6CP-4-503	BT-150	TH-S50	
C8	100 N750		N750-D1 100	DDN-100	C10T1U	CCTN-101	CN7-310	10TCU-T10	
C9	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10	
C10	.47 200V		P288N-47		CUB2P47	2CP-6-474	GEM-2047	2TM-P47	
C11	27		DI-27	DD-270	L10Q27	CCD-270	GP427	10TS-Q27	

FIXED CAPACITORS (cont)

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C12	.002	(.003) †	BPD-002	DD-202	BYA10D2	CCD-202	B-220	5HK-D20
C13	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C14	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C15	.005		BPD-005	DD-502	BYA10D5	CCD-502	B-250	5HK-D50
C16	.003		DI-3000	DD-302	BYA10D3	CCD-302	GP230	10TS-D30

Automatic Part Number.

† Alternate Value.

Note 1. Not used in some versions.

CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA					
			AUTOMATIC PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.	
RIA	Tone	2meg	80A2268 ①	F2-2meg,	P-2meg-Z,			
B	Volume & Switch	1meg, 250K Tap		FFS113, R14-1meg, RFS204, AK-28, KR-4	CPI13, RFI-1meg, CSR-205, XB-1, SWE-13	† QJ-1566A		

① Part #80A1420 used in some versions.

† "CONCENTRIKIT" Equivalent: K-8 Kit with Base Elements and Shafts: B13-139, P17-123 (Panel), B13-137X, R8-202, 76-1, S42 (Rear)

"SNAPTROL" Equivalent: BU10*, CF27, SF15, CR32T, SR50, GC(*Cut 11/16" from bushing)

RESISTORS

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

ITEM No.	RATING	REPLACEMENT DATA			ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN PART No.	REMARKS			IRC PART No.	WORKMAN PART No.	REMARKS
R2	150K				R11	220K			(100K) †
R3	1500Ω				R12	2200Ω			
R4	2.2meg				R13	2.2meg			
R5	4.7meg				R14	820Ω			
R6	47K				R15	220Ω			
R7	10meg				R16	5.6Ω 1W			(10Ω) † ①
R8	10meg				R17	.5Ω			(1Ω) †
R9	1.2meg				R18	470K			Note 1
R10	47K				R19	470Ω			

① Not used in some versions. † Alternate Value.

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		AUTOMATIC PART No.	Merit PART No.	Miller PART No.	Stancor PART No.	Workman PART No.	
L1A	Ant. RF Osc.						
B							
C							
L2	Input IF	14-265 ①	BC-350	6584	RTC-8638	T604	
L3	Output IF	14-267 ①	BC-354	6585	RTC-8640	T606	

① Part #14-1655-6 used in some versions.

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~)	AUTOMATIC PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L4	.48A	.5Ω	.0014 HY	75A1269					

MISCELLANEOUS

ITEM No.	PART NAME	AUTOMATIC PART No.	NOTES
M1	Tuner, Manual	78A2298	Alternate
M2	Tuner, Manual Spark Plate	78A1471	

CHOKE (AUDIO)

ITEM No.	RATINGS			REPLACEMENT DATA					NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	AUTOMATIC PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L5	.56A	2.4Ω	.027MH	75A2189 ①					① Used in some versions.

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
	PRI.	SEC.	AUTOMATIC PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	8	1	75A1859			TR-185		

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC.	AUTOMATIC PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
	14Ω Tap @	3-4Ω	75A1860 ①					① Alternate.

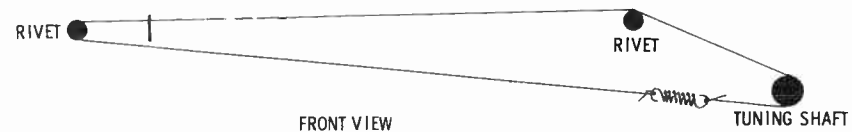
SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
	SIZE	FIELD	V. C. IMP.	AUTOMATIC PART No.	QUAM PART No.	
SPI	5"x 7" 5"x 7"	PM PM	20Ω 3-4Ω	73B2210 73B654	57A21Z20	Alternate

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	AUTOMATIC PART No.	REPLACEMENT DATA
K1	Ant. Network	100mmf, 1.2 meg	89-4204	Sprague PRC-9

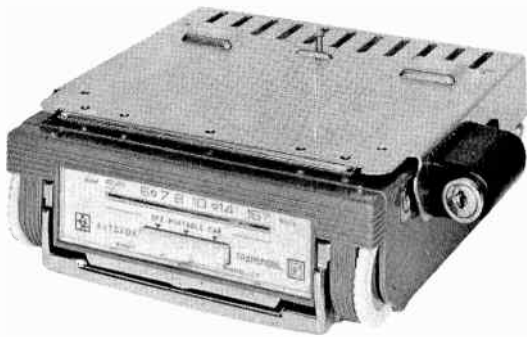
DIAL CORD STRINGING





PHOTOFACT[®] with

CIRCUITRACE[®]



TRADE NAME : Autovox Model TR-231 (Transmobil 3)
 SUPPLIER : Inland Trading Corp.,
 1355 Market St., San Francisco, Calif.
 TYPE SET : 7 Transistor Portable-Auto Receiver
 POWER SUPPLY : 6 or 12 Volt Storage Battery (Auto)
 6 Volts DC (Portable)
 RATING : .17 Amp. @12.6 VDC (Auto)
 27 MA @6 VDC (Portable)
 TUNING RANGE : BROADCAST 540 - 1615KC

AUTOVOX MODEL TR-231 (Transmobil 3)

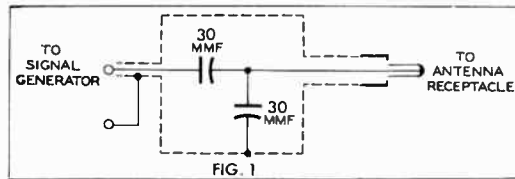
ALIGNMENT INSTRUCTIONS

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

A1, A2, A3, A4, A7, A8. GENERAL CEMENT #8606
 A5, A6, A9, A10. GENERAL CEMENT #5000, 5066, 8290
 WALSCO #2525

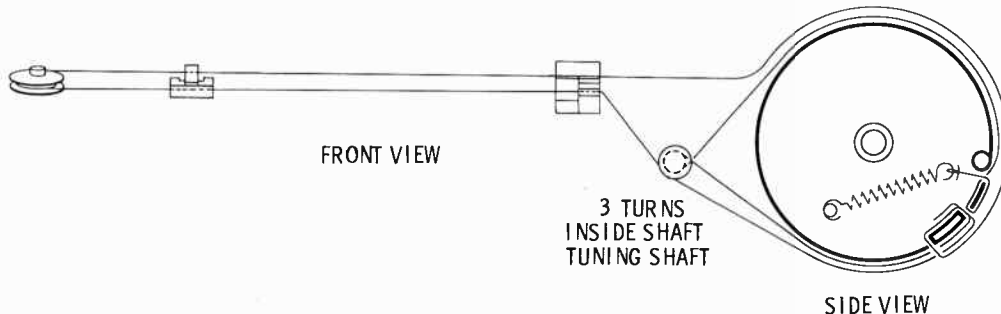
	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1.	High side thru .1mfd to point Δ , low side to ground.	262KC (400v Mod.)	High Freq. End Stop.	Output Meter across voice coil.	A1, A2, A3, A4	Adjust for maximum.
2.	Fashion loop of several turns of wire and radiate signal into loop of receiver.	1615KC	"	"	A5, A6	Adjust for maximum.
3.	"	600KC	600KC Signal.	"	A7, A8	Adjust for maximum. Repeat step 2.
4.	Thru dummy (Fig. 1) to antenna receptacle.	1615KC	High Freq. End Stop.	"	A9, A10	Adjust for maximum.

With radio installed in car and antenna fully extended, tune in a weak station near 1400KC and adjust A10 for maximum output.

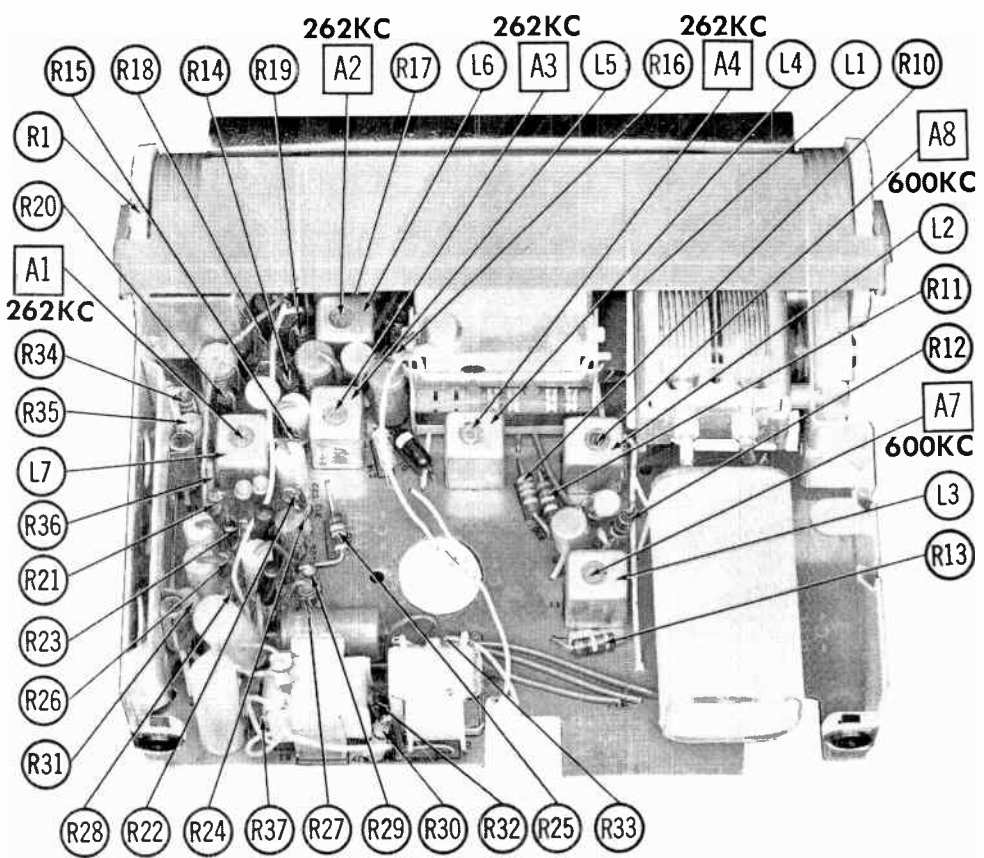
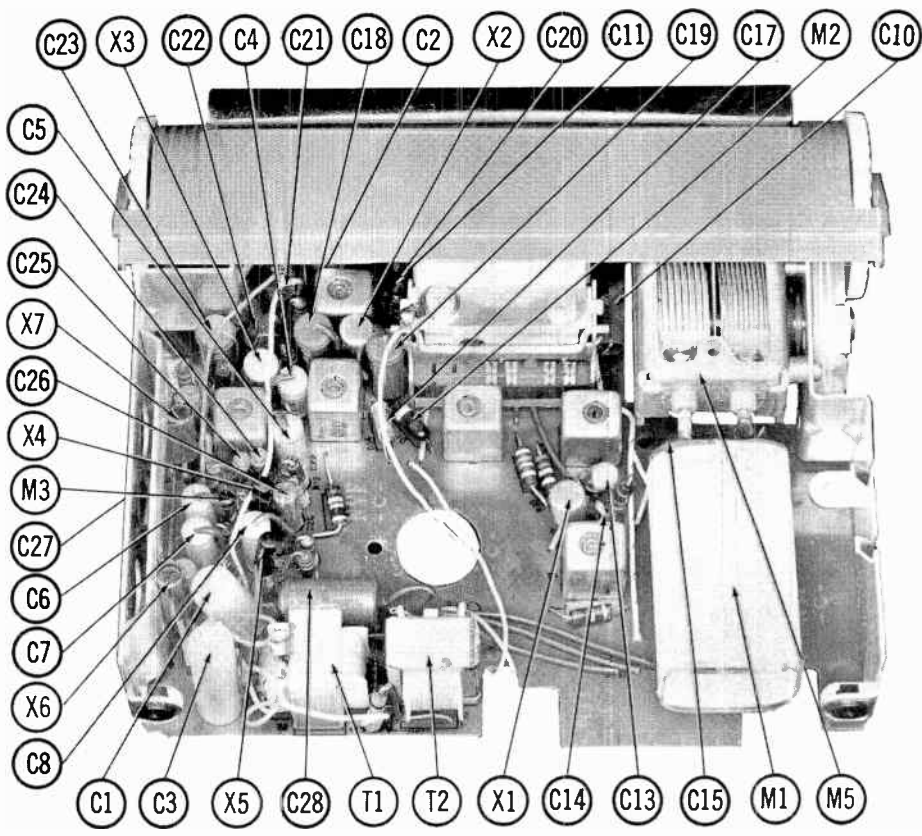


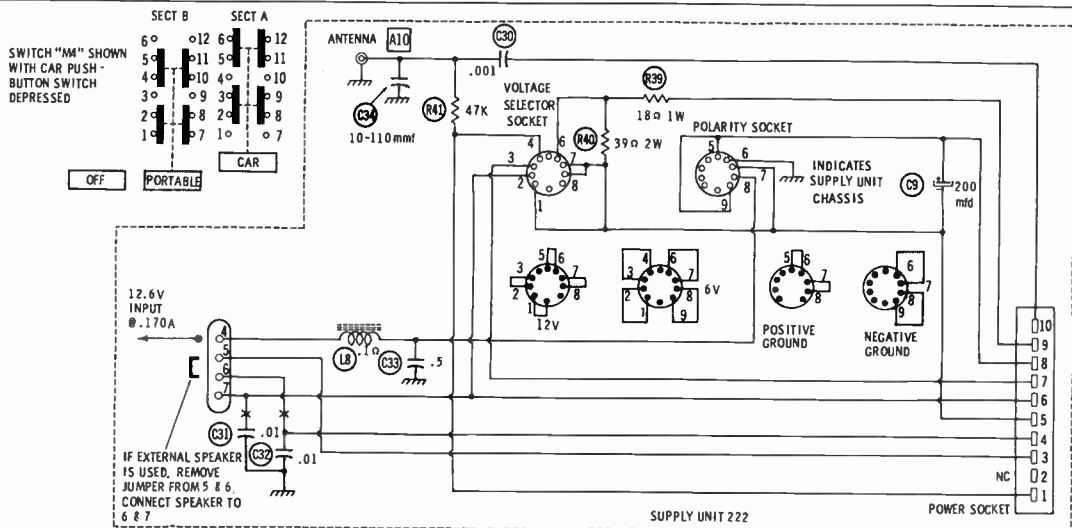
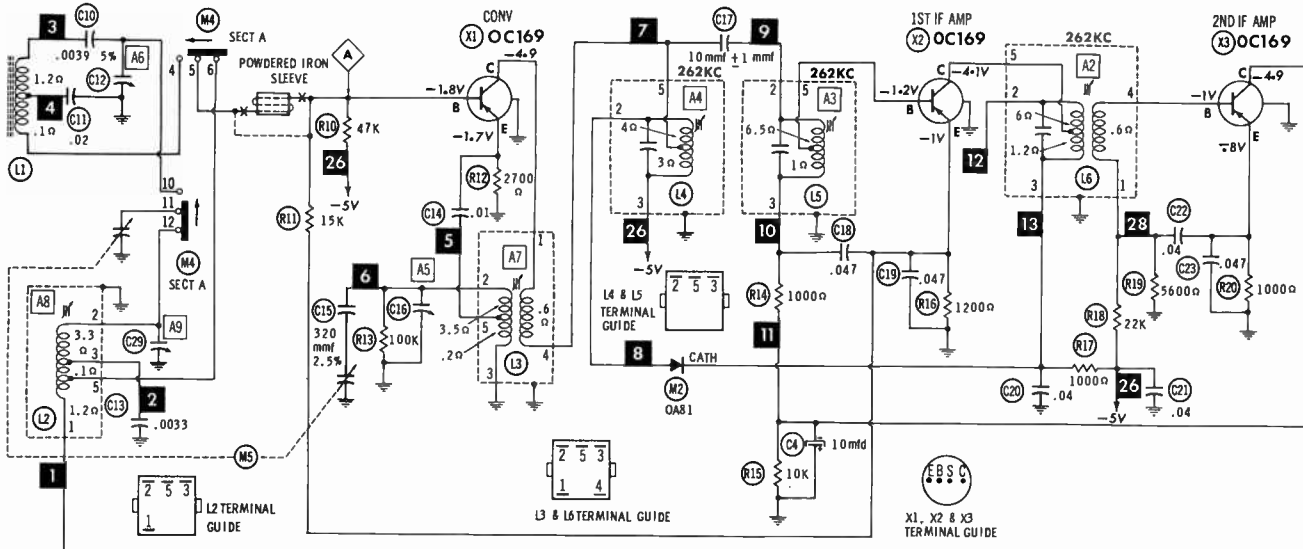
DIAL CORD STRINGING

TUNING GANG OPEN



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

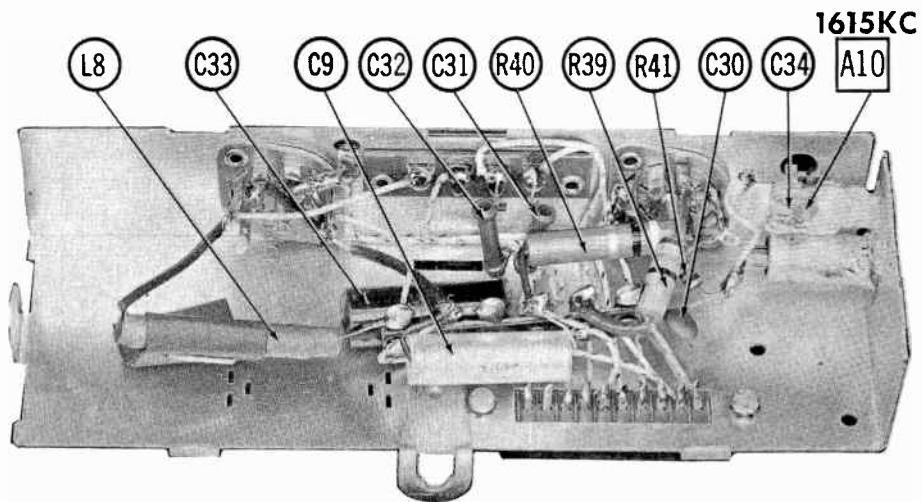




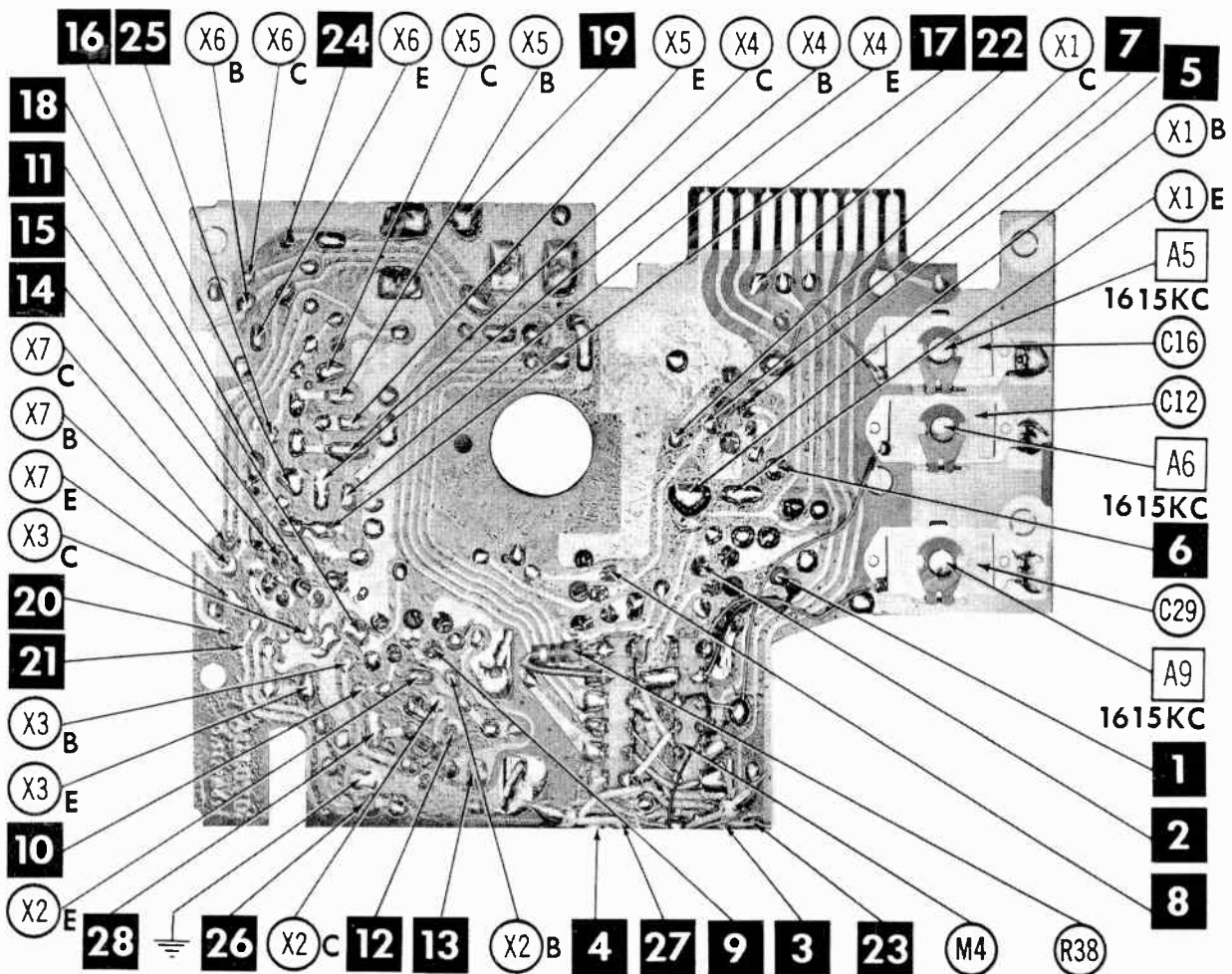
1. Voltage measurements taken with vacuum tube voltmeter.
2. All controls set for normal operation, no signal applied.
3. Measured values are from socket pin or terminal to common ground.
4. All terminals viewed from bottom unless otherwise designated.
5. Numbers assigned to terminals may not be found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

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with **CIRCUITRACE**

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POWER CHASSIS



E-EMITTER B-BASE C-COLLECTOR
PRINTED BOARD

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	OC169	Converter	DS-25	GE-1	2N1639	PNP
X2	OC169	1st IF Amplifier	DS-25	GE-1	2N1639	PNP
X3	OC169	2nd IF Amplifier	DS-25	GE-1	2N1639	PNP
X4	OC75	AF Amplifier	DS-26	GE-2	2N406	PNP
X5	OC75	Driver	DS-26	GE-2	2N406	PNP
X6	OC74	Output	DS-26	GE-2	2N408	PNP
X7	OC74	Output	DS-26	GE-2	2N408	PNP

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		AUTOVOX PART No.	REPLACEMENT DATA					MALLORY PART No.	SPRAGUE PART No.
	CAP.	VOLT.		AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	GENERAL INSTRUMENT PART No.			
C1	200	12		CRE431	NLW200-12	MT1-25	MLV200-12	TT15X200	TE-1137	
C2	100	6		CRE323	NLW100-12	MT1-21	MLV100-10	TT6X100	TE-1102	
C3	200	12		CRE431	NLW200-12	MT1-25	MLV200-12	TT15X200	TE-1137	
C4	10	3		CRE207	NLW10-3	MT1-5	MLV10-3	TT3X10	TE-1053	
C5	25	6		CRE312	NLW25-10	MT1-13	MLV25-10	TT6X25	TE-1091	
C6	25	6		CRE312	NLW25-10	MT1-13	MLV25-10	TT6X25	TE-1091	
C7	2	12		CRE401	NLW3-15	MT1-1	MLV2-50	TT12X2	TE-1121	
C8	4	3		CRE203	NLW4-15	MT1-3	MLV5-3	TT6X4	TE-1052.1	
C9	200	15		CRE481	NLW200-15	MT1-23	BL2140	TT15X200	TE-1164	

FIXED CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C10	.0039 5%		1464-0039	CPR-3900J	IR5D39	CM-20B-392J	MCJ462.5	MS-239
C11	.02		TTD-02	CK-203	H05S2		TA-120	TG-S20
C12	.0033		BPD-0033	DD-332	BYA10D33	CCD-332	B-233	5HK-D33
C13	.01		TTD-01	CK-103	H05S1		TA-110	TG-S10
C14	320 2.5%							
C15								
C16	10 + 1mmf		NPO-S1 10	DTZ-10	C10Q1C	CC TO-100	CNO-410	10TCC-Q10
C17	.047		TTD-005	CK-502	H05D5		TA-250	TG-D50
C18	.047		TTD-005	CK-502	H05D5		TA-250	TG-D50
C19	.04		TTD-05	CK-503	H05S5		TA-150	TG-S50
C20	.04		TTD-05	CK-503	H05S5		TA-150	TG-S50
C21	.04		TTD-05	CK-503	H05S5		TA-150	TG-S50
C22	.04		TTD-05	CK-503	H05S5		TA-150	TG-S50
C23	.047		TTD-005	CK-502	H05D5		TA-250	TG-D50
C24	.001			DM-102	H05D1			
C25	.001			DM-102	H05D1			
C26	.001			DM-102	H05D1			
C27	.04		TTD-05	CK-503	H05S5		TA-150	TG-S50
C28	.22			UK20-204	HCC25224Z			HY-325
C29								
C30	.001			DM-102	H05D1			
C31	.01		TTD-01	CK-103	H05S1		TA-110	TG-S10
C32	.01		TTD-01	CK-103	H05S1		TA-110	TG-S10
C33	.5			UK10-404	HCC10474Z			HY-330
C34	10-110							

CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA				
			AUTOVOX PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1	Volume	50K					

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		AUTOVOX PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	Loopstick						
L2	Ant. Matching						
L3	Oscillator						
L4	1st IF						
L5	2nd IF						
L6	3rd IF						
L7	4th IF						
L8	"A" Lead Choke						

AUTOVOX MODEL TR-231 (Transmobil 3)

PARTS LIST AND DESCRIPTION (CONTINUED)

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

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
			AUTOVOX PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	1.6:	1						
		SEC. 2						
		1						

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
			AUTOVOX PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T2	PRI.	SEC.						

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		AUTOVOX PART No.	QUAM PART No.	
SP1	3 1/2" PM 3-4Ω			

BATTERIES

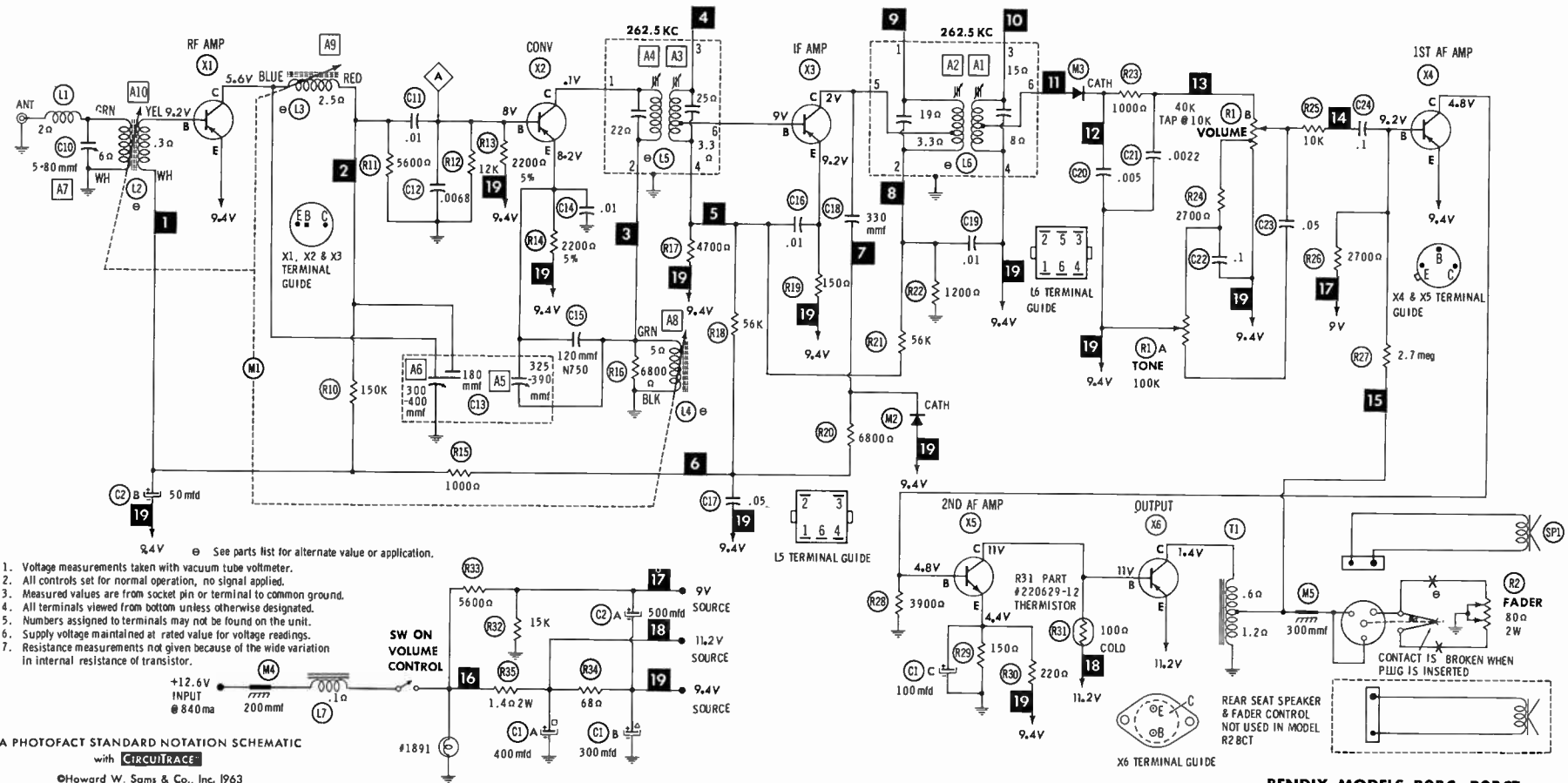
ITEM No.	VOLTAGE	AUTOVOX PART No.	REPLACEMENT DATA			NOTES
			BURGESS	EVEREADY	MALLORY	
M1	6		930 (or AL9, Hg9)	1015 (or E91, E9)	M-15R (or MNI500, ZM-9)	4 Required

MISCELLANEOUS

ITEM No.	PART NAME	AUTOVOX PART No.	NOTES
M2	AVC Det. AF Det. Switch (Off-Portable-Car) Tuning Gang	OAB1	
M3		OA79	
M4			
M5			

WIRING DATA

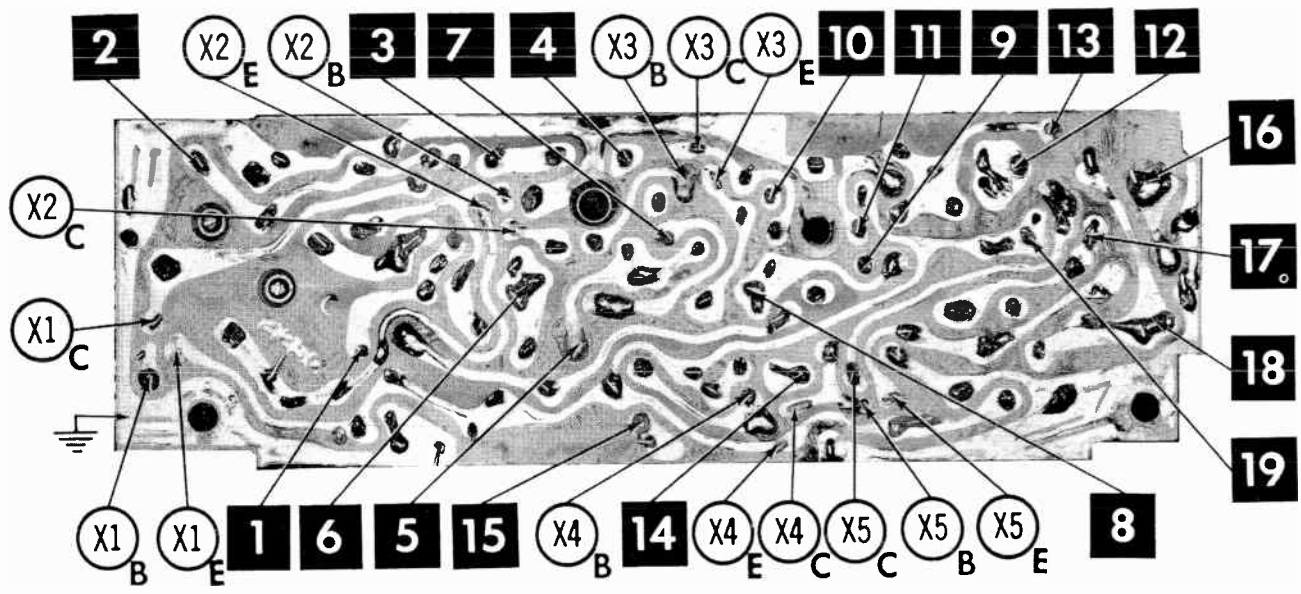
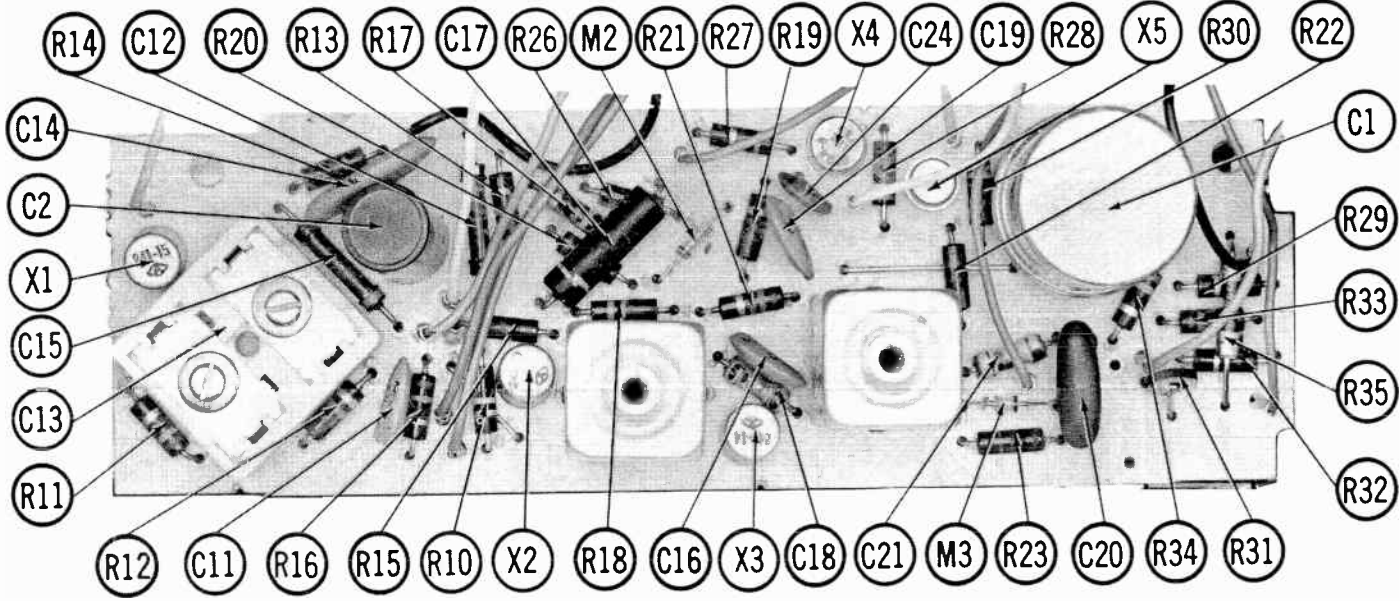
General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in 12 Colors 8524 (Stranded) Available in 12 Colors
Shielded Hook-up Wire	Use BELDEN No. 8885
Rear Seat Speaker Extension Cable	Use BELDEN No. 8782 (Stranded) Coded Parallel Leads
Bonding Strap	Use BELDEN No. 8661 (3/8 In.) or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



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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BENDIX MODELS R2BC, R2BT



PRINTED BOARD
 B - BASE
 E - EMITTER
 C - COLLECTOR

A Howard W. Sams
 CIRCUITRACE® Photo

BENDIX MODELS R2BC, R2BCT

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.	BENDIX PART No.	USE	REPLACEMENT DATA			NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	
X1	2091241-15	RF Amplifier Converter IF Amp. AF Amp. AF Amp. Output	DS-25	GE-1	2N1637	PNP
X2	2091241-13		DS-25	GE-1	2N1639	PNP
X3	2091241-14		DS-25	GE-1	2N1638	PNP
X4	2090924-8		DS-26	GE-2	2N591	PNP
X5	2091260-3			GE-8		NPN
X6	2091859-8			DS-503	GE-3	2N301

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

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		BENDIX 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	400	16	2091503-5								
B	300	16				XC3-48,1					
C	100	8									
C2A	500	3		2092246-1	BCD3X50500						
B	50	3									PCLS-3020,5*

* 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	#219083-4							
C11	.01		TTD-01	CK-103	H05S1		TA-110	TG-S10	
C12	.0068	#219092-25	SI 6800	D6-682	DPMS6D68	IDP-1-682	GEM-6268	30GA-D68	
C13A	300-400								
B	180								
C	325-380								
C14	.01		TTD-01	CK-103	H05S1		TA-110	TG-S10	
C15	120 N850		N750-SI 120	TCN-120	C10T12U		CCTN-121	CN7-312	10TCU-T12
C16	.01		T1D-01	CK-103	H05S1			TA-110	TG-S10
C17	.05		T1D-05	CK-503	H05S5			TA-150	TG-S50
C18	330		DI-330	DD-331	L10T33		CCD-331	GP333	10TS-T33
C19	.01		T1D-01	CK-103	H05S1			TA-110	TG-S10
C20	.005		TTD-005	CK-502	H05D5			TA-250	TG-D50
C21	.0022			DM-202					
C22	.1		TTD-1	CK-104	H05P1			TA-010	TG-P10
C23	.05		TTD-05	CK-503	H05S5			TA-150	TG-S50
C24	.1	TTD-1	CK-104	H05P1			TA-010	TG-P10	

Bendix Part Number.

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	2091737-3				
B	Volume & Switch	40K					
R2	Fader	Tap @ 10K 80Ω 2W	219679-5①				

① Alternate Part #219679-6.

COILS (RF-IF)

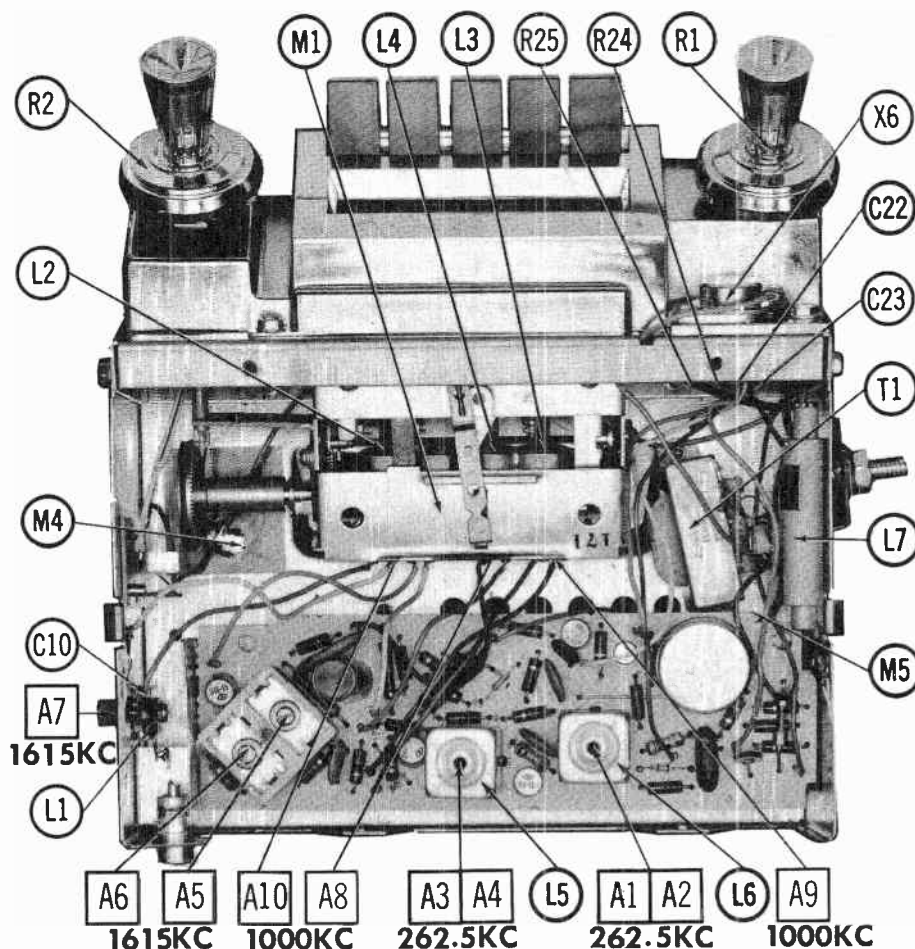
ITEM No.	USE	REPLACEMENT DATA					NOTES
		BENDIX PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	RF Choke (9uh)	2092210-4 ① ① 2092202-2(or -3) 2092203-2(or -3) 2092050-9	BC-566	4612	RTC-8522	T860	① Part of M1.
L2	Ant.						
L3	RF						
L4	Osc.						
L5	Input IF						
L6	Output IF						
L7	"A" Lead Choke (1.2MH)						

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE	REPLACEMENT DATA					NOTES
		BENDIX PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	12Ω Tap @ 8Ω	2092138-2			TR-164		

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		BENDIX PART No.	QUAM PART No.	
SP1	4" x 10" PM 6-8Ω	2091755-1 ①	410A228	① Part #2091773-1 (6" x 9") used in Model 2BCT



CHASSIS—TOP VIEW

PARTS LIST AND DESCRIPTION (CONTINUED)

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

MISCELLANEOUS

ITEM No.	PART NAME	BENDIX PART No.	NOTES
M1	Tuner (RCC)	2092308-15	
	Tuner (GIC)	2092308-16	
M2	AVC Detector	2092055-1	
M3	AF Detector	2092055-1	
M4	Spark Plate	220267-21	200mmf
M5	Spark Plate	220267-12	300mmf
	Printed Board	2092452-5	Includes Transistors

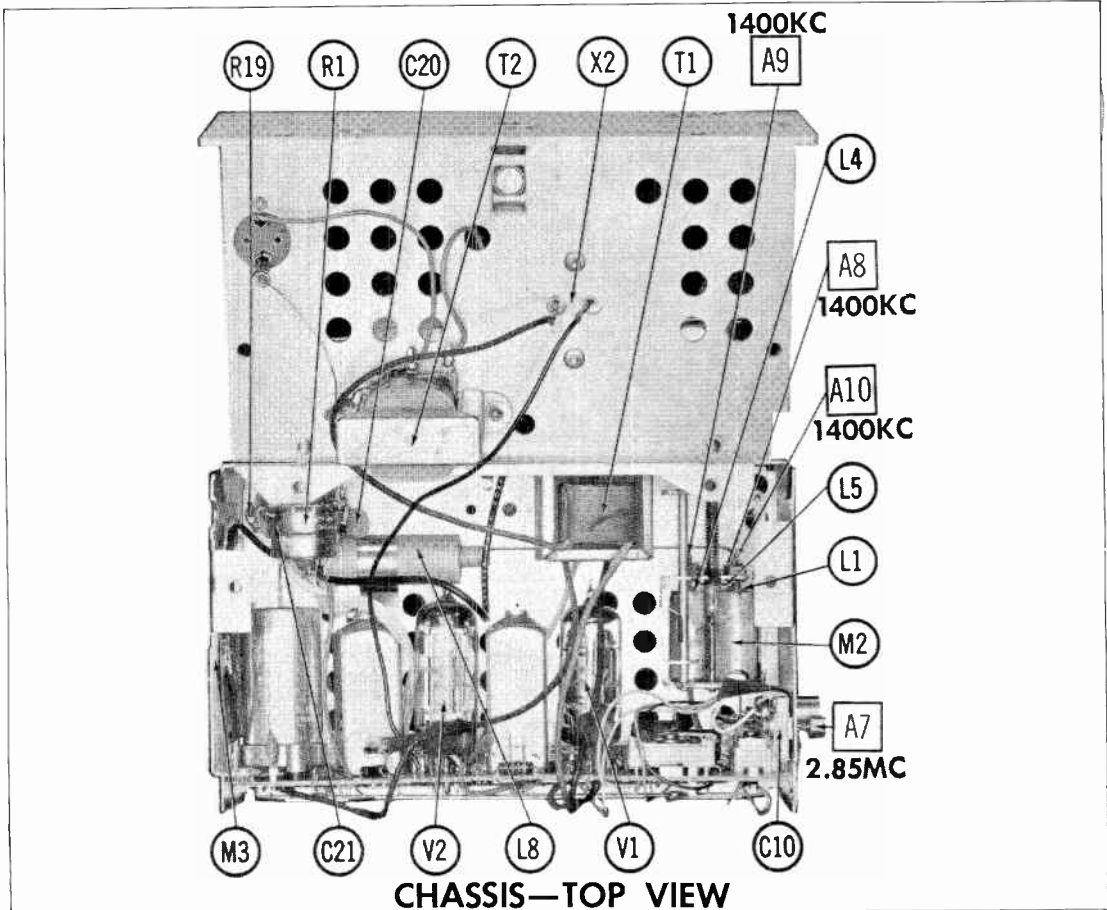
CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
Dial Glass	2091722-3	Knob - Tone, Fader	2091735-1
Knob - Tuning, Volume	2091756-1		

WIRING DATA

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



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.)

TUBES

◆ AMPEREX ◆		GENERAL ELECTRIC ◆		RCA ◆		RAYTHEON ◆		SYLVANIA ◆	
ITEM No.	USE	TYPE		ITEM No.	USE	TYPE			
V1	RF Amp. -Conv.	12FX8A		V2	IF Amp. -Det. -AF Amp.	12FR8			

TRANSISTORS

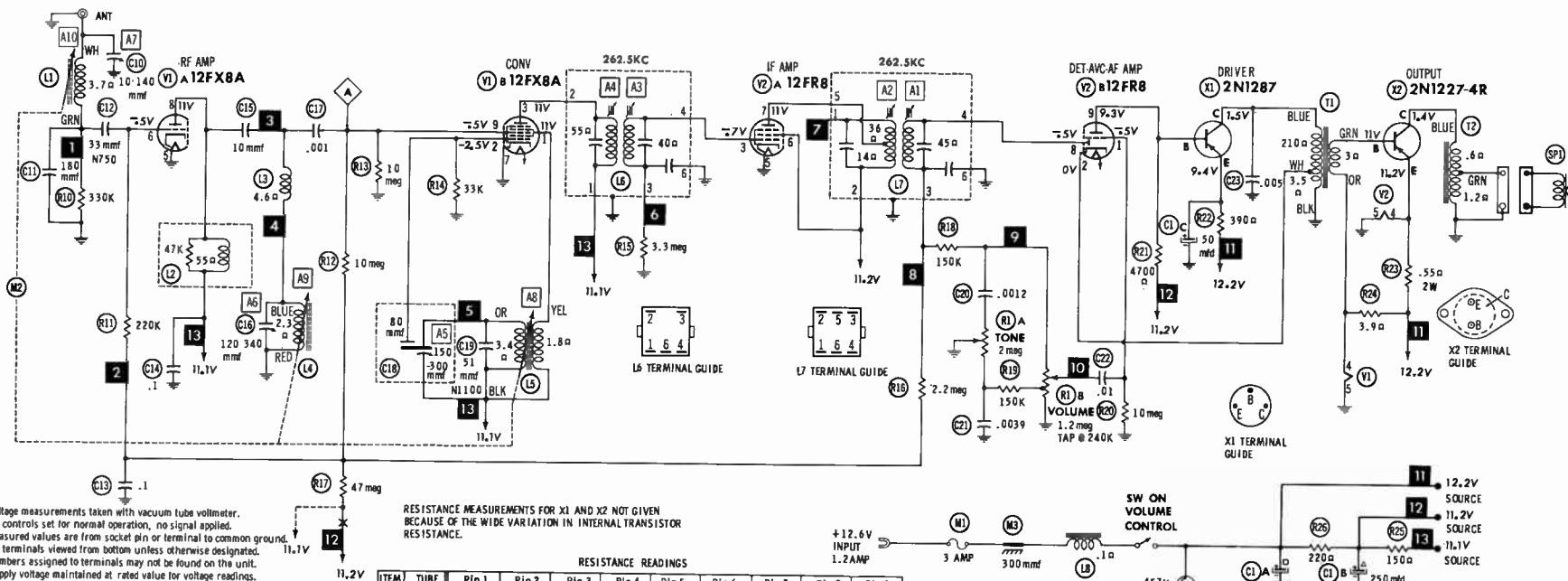
ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	
X1	2N1287	Driver	DS-26	GE-2	2N591	PNP
X2	2N1227-4R	Output	DS 503	GE-3	2N301	PNP (Note 1)

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

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	BENDIX PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	GENERAL INSTRUMENT PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A	500	16	220353-20	PWH3-00-93		XC3-48			PCL-3026, 5
B	250	16							
C	50	16							

(PARTS LIST CONTINUED)



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.

A PHOTOFAC STANDARD NOTATION SCHEMATIC
with CIRCUITRACE

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RESISTANCE MEASUREMENTS FOR X1 AND X2 NOT GIVEN
BECAUSE OF THE WIDE VARIATION IN INTERNAL TRANSISTOR
RESISTANCE.

RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	12FX8A	†220Ω	33K	†275Ω	FIL	FIL	4.2 meg	0Ω	†275Ω	4.5 meg
V2	12FR8	10 meg	3.5Ω	3.3 meg	FIL	FIL	†220Ω	235Ω	1.3 meg	†5000Ω

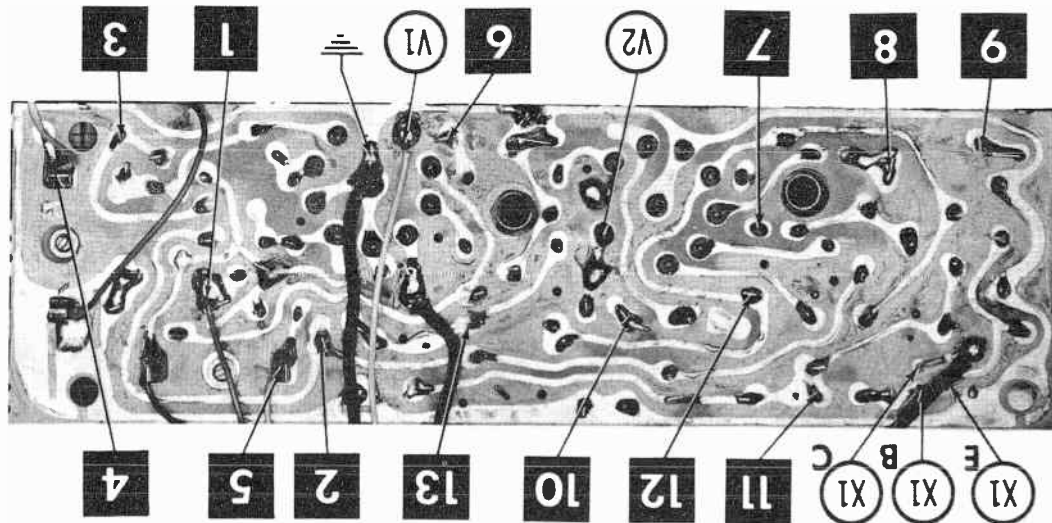
† MEASURED FROM 12.2V SOURCE

BENDIX X2BB (Shipmate III)

BENDIX MODEL X2BB (Shipmate III)

CIRCUITRACE® Photo

A Howard W. Sams

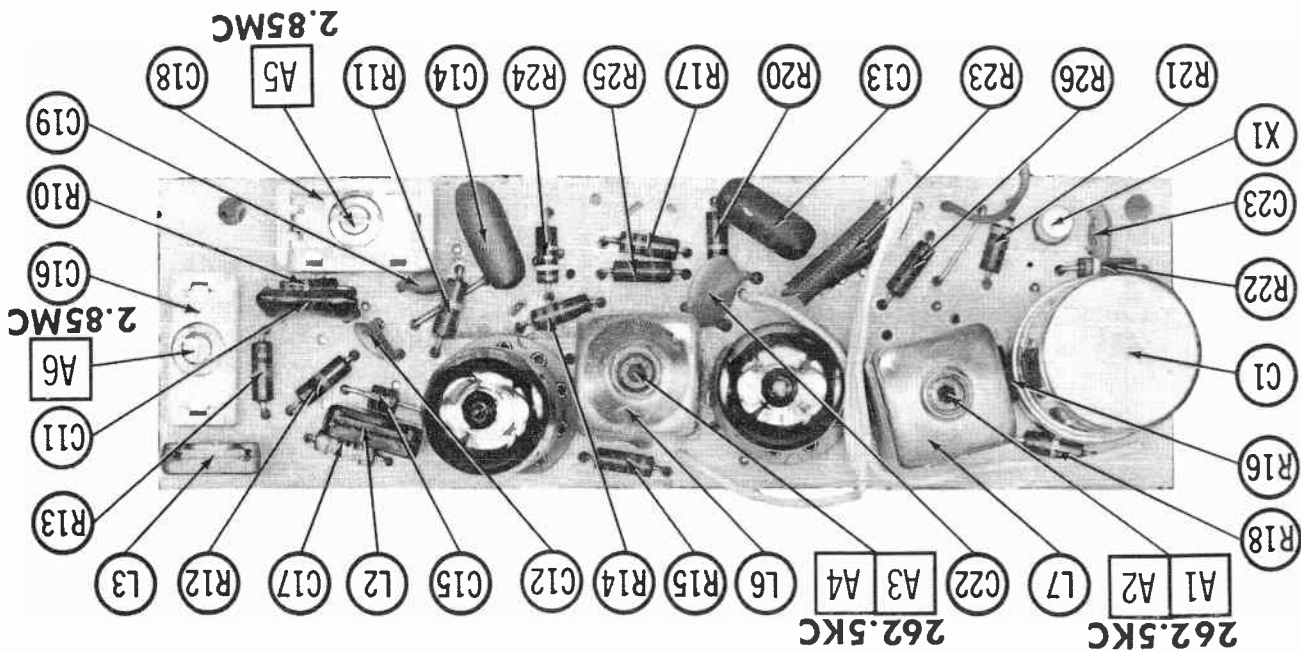


C - COLLECTOR

E - EMITTER

B - BASE

PRINTED BOARD



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	10-140	#219083-7	DI-180	DD-181	L10T18	DM-10-181	GP318	5GA-T18
C11	180		N750-DI 33	D'TN-33	C10Q33U	CCTN-330	CN7-433	10TCS-Q33
C12	33 N750		TTD-1	CK-104	H05P1		TA-010	TG-P10
C13	.1		TTD-1	CK-104	H05P1		TA-010	TG-P10
C14	.1		NPO-SI 10	DTZ-10	C10Q1C	CCTO-100	CNO-410	10TCC-Q10
C15	10							
C16	120-340		#2091418-6		DM-102	H05D1		
C17	.001							
C18A	150-300							
B	80		#2091418-7					
C19	51 N1100			DM-102	H05D1			
C20	.0012			DD-392	L10D39	DM-19-392	GP239	5GA-D39
C21	.0039			TTD-01	CK-103	H05S1	TA-110	TG-S10
C22	.01			TTD-005	CK-502	H05D5	TA-250	TG-D50
C23	.005							

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.
RIA	Tone	2meg 1.2meg Tap @ 240K	2091419-3				
B	Volume & Switch						

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		BENDIX PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	Ant.						① Part of M2 ② Includes 47K * Shunt with 47K
L2	RF Choke (3.3MH)	2090088-17 ②		70F333A1* 6110	RTC-8573	T302	
L3	Image Trap (65uh)	2090088-16	BC-667				
L4	RF						
L5	Osc.						
L6	Input IF	2090907-17	BC-596				
L7	Output IF	2090908-15	BC-597				
L8	"A" Lead Choke (1.1MH)	2092050-5					

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
			BENDIX PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
	PRI.	SEC.						
T1			2090815-10					

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.				TR-164		
T2			2092138-3					

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			BENDIX PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M1	SFE	6A	SFE-6	221633-19	307006 (SFE 6A)	155006A	SFE 6	HAG

MISCELLANEOUS

ITEM No.	PART NAME	BENDIX PART No.	NOTES
M2	Tuner	2091839-1	300mmf Complete Less Tubes
M3	Spark Plate	220267-12	
	Printed Board	2091595-2	

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

SPEAKER

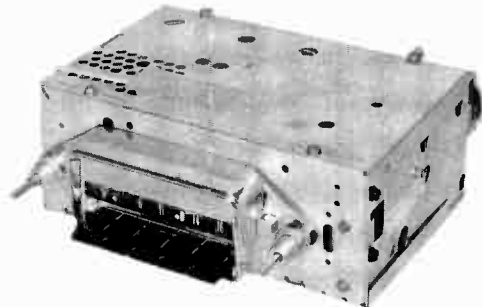
ITEM No.	TYPE	REPLACEMENT DATA		ITEM	PART No.
		BENDIX PART No.	QUAM PART No.		
SP1	5" PM 8Ω	2091223-4	5A1Z8	Dial Glass Knob - Tuning, Volume Knob - Tone, Dummy	2091454-1 2091420-1 2091209-1



PHOTOFACT[®] with

CIRCUITRACE[®]

TRADE NAME : Buick Model 980316 (1962 Special)
 SUPPLIER : (Parts) United Delco Distributors
 TYPE SET : 5 Transistor AM Receiver
 POWER SUPPLY : 12 Volt Storage Battery
 RATING : .78 Amp. @12.6 VDC
 TUNING RANGE : BROADCAST 540 - 1615KC



ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT					
Volume control should be at maximum position. Output of signal generator should be no higher than necessary to obtain an output reading.					
Suggested Alignment Tools:			PUSH-BUTTON ADJUSTMENT		
A1, A2, A3, A4..... GENERAL CEMENT #8282, 8606, 8606-L, 9091			1. Tune manually to desired station.		
WALSICO #2526, 2541, 2542, 2543, 2544			2. Pull button out, then press in firmly.		
A6, A7, A8..... GENERAL CEMENT #5097, 8727			3. Repeat for remaining buttons.		
WALSICO #2515					
SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1. High side thru .1 mfd to Converter base, low side to chassis.	262KC	High freq. end stop.	Across Volume control.	A1, A2, A3, A4	Adjust for maximum deflection.
Check setting of Oscillator core (A5). Rear of core should be 1 5/8" from mounting end of coil form.					
2. High side thru 82mmf to antenna receptacle, low side to chassis.	1615KC	"	"	A6, A7, A8	"
3. "	600KC	600KC	"	A9, A10	"
4. "	1615KC	1615KC	"	A7, A8	"
5. "	900KC	900KC	"		Adjust pointer adjustment until pointer coincides with 900 on dial.
6. With radio installed in car and antenna fully extended, tune in a weak station near 1000KC and adjust A8 for maximum output.					

REMOVAL INSTRUCTIONS

NOTE: To replace transistors, remove radio.

RADIO

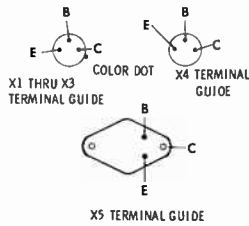
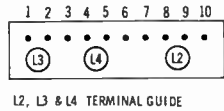
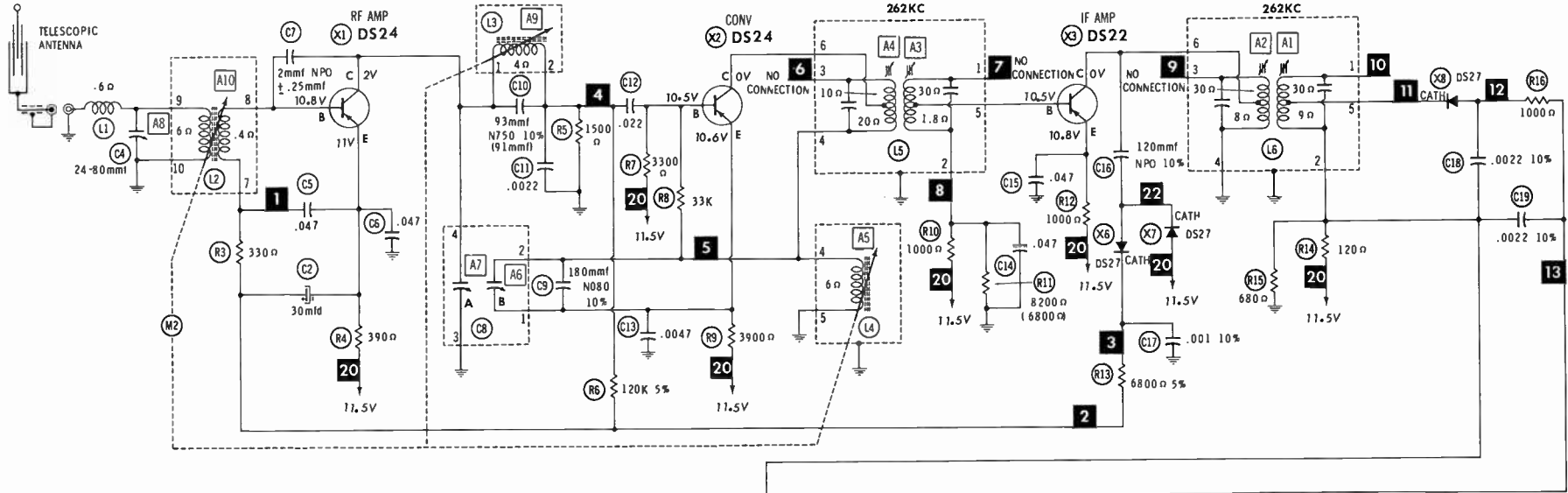
1. Pull off knobs.
2. Disconnect speaker leads, "A" lead clip and antenna plug.
3. Remove two 1/2" hex nuts from control bushings. Remove escutcheon.
4. Remove 3/8" hex bolt holding radio to right mounting support.

5. Remove radio from rear of instrument panel.

SPEAKER

1. Remove two hex nuts holding speaker mounting under top of instrument panel.
2. Remove speaker assembly from under instrument panel.

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



RESISTANCE MEASUREMENTS NOT GIVEN BECAUSE OF THE WIDE VARIATION IN INTERNAL TRANSISTOR RESISTANCE.

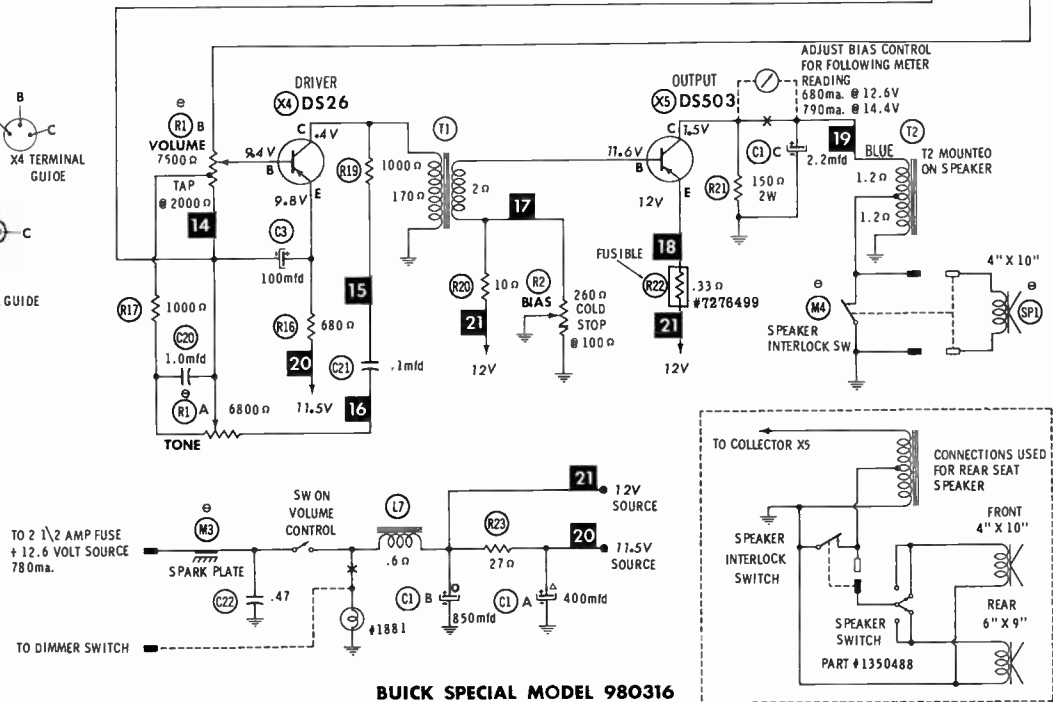
1. DC voltage measurements taken with vacuum tube voltmeter.
2. Socket connections shown as bottom views.
3. Measured values are from socket pin to common ground.
4. Battery voltage maintained at 12.6 volts for voltage readings.
5. Nominal tolerance on component values makes possible a variation of ±15% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

1. DC voltage measurements taken with vacuum tube voltmeter.
2. Socket connections shown as bottom views.
3. Measured values are from socket pin to common ground.
4. Battery voltage maintained at 12.6 volts for voltage readings.
5. Nominal tolerance on component values makes possible a variation of ±15% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

A PHOTOFAC STANDARD NOTATION SCHEMATIC with CIRCUITRACE

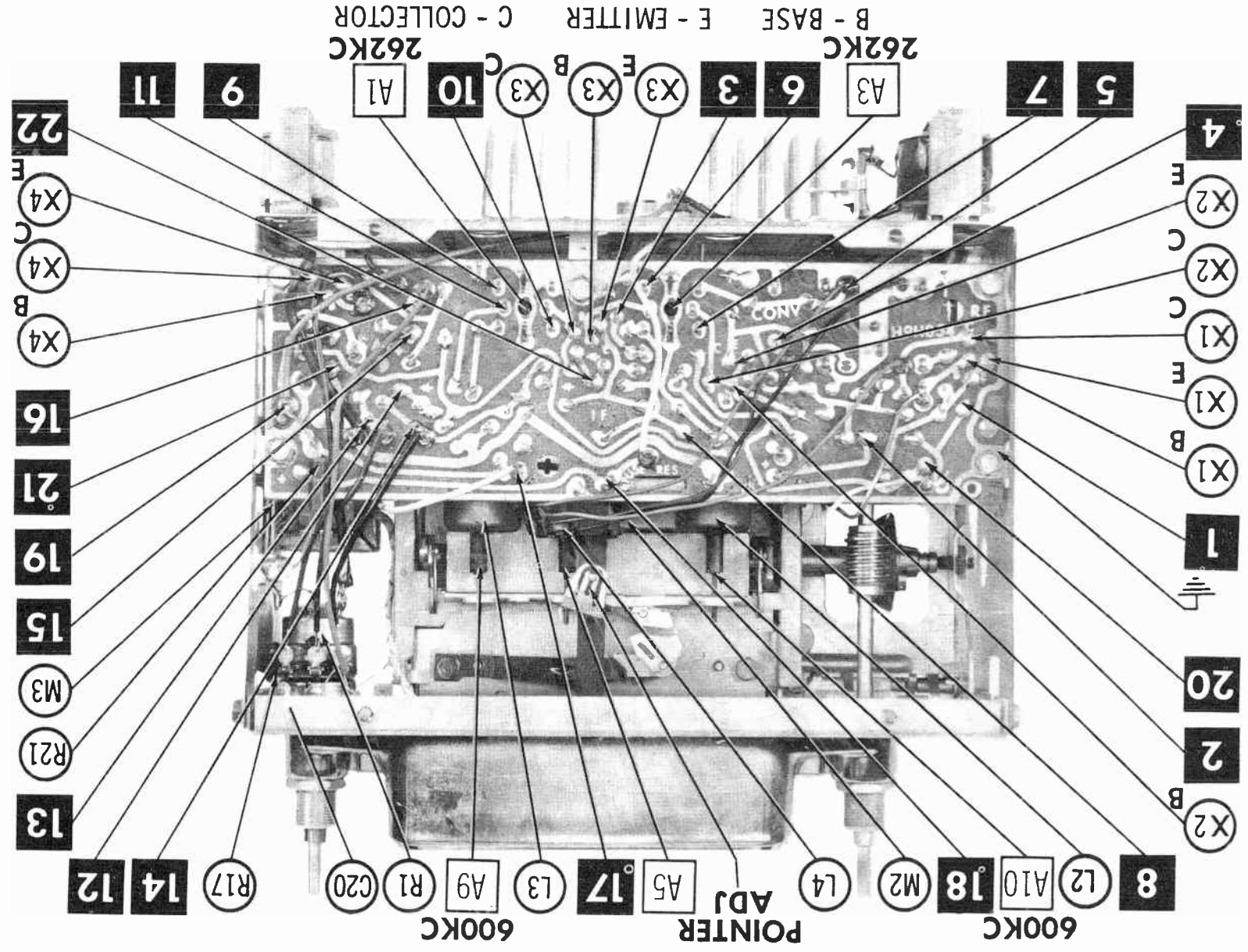
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BUICK SPECIAL MODEL 980316

CHASSIS BOTTOM VIEW

A Howard W. Sams CIRCUITRAGE® Photo



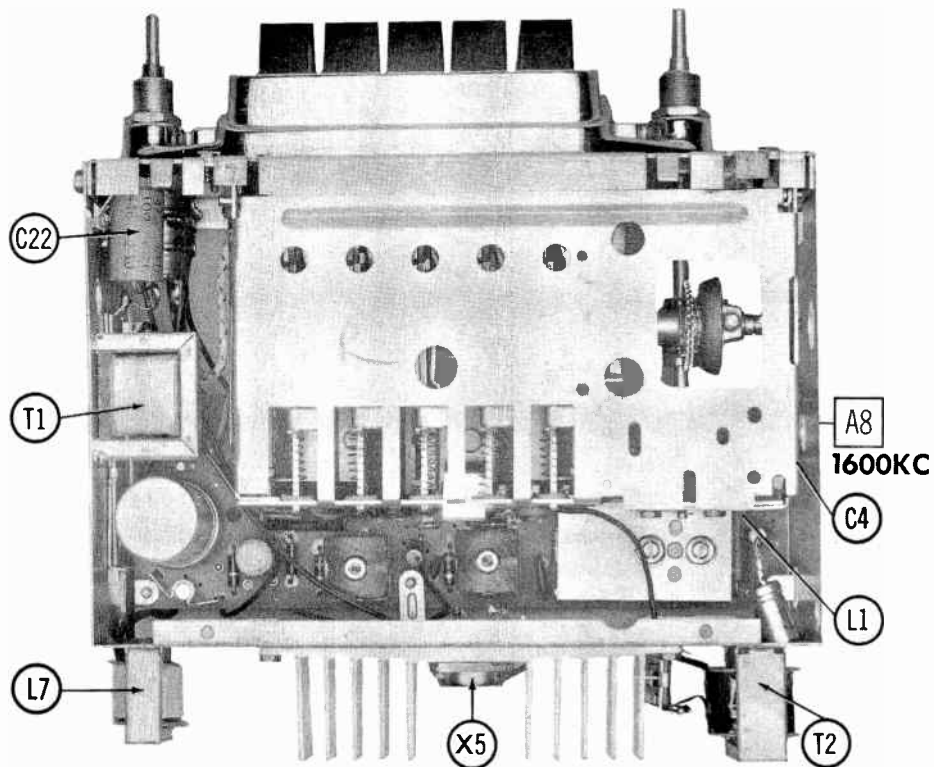
262KC
 B - BASE
 E - EMITTER
 C - COLLECTOR

- 22
- X4
- X4
- X4
- 16
- 21
- 19
- 15
- M3
- R21
- 13

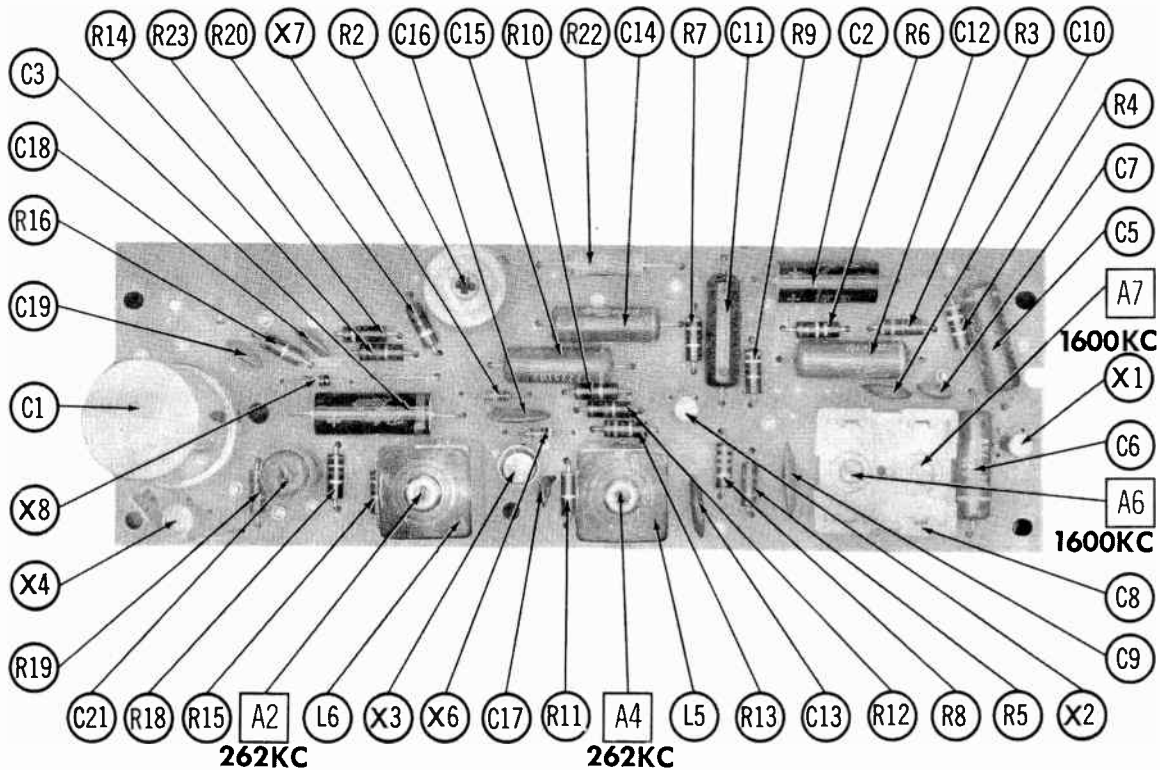
- 12
- 14
- 17

- 600KC
- A1
- 10
- X3
- X3
- X3
- 3
- 6
- A3
- 262KC
- 7
- 5
- 4
- X2
- X2
- X1
- X1
- X1
- 1
- 20
- 2
- X2
- 8
- L2
- A10
- 18
- M2
- L4
- ADJ
- PTR
- A5
- 17
- L3
- A9
- R1
- C20
- 600KC

- 4
- X2
- X2
- X1
- X1
- X1
- 1
- 20
- 2
- X2



CHASSIS – TOP VIEW



PRINTED BOARD – TOP VIEW

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
			GENERAL ELECTRIC PART No.	RCA PART No.	RAYTHEON PART No.	
X1	DS24	RF Amplifier	GE-1	2N1637	2N418	PNP
X2	DS25	Converter	GE-1	2N1639	2N486	PNP
X3	DS22	IF Amplifier	GE-1	2N1638	2N483	PNP
X4	DS28	Driver	GE-2	2N591	2N362	PNP
X5	DS503	Output	GE-3	2N301		PNP Note 1

Note 1. When replacing, check to see if heat sink is insulated from chassis. If not, install insulator Part #1221643 between transistor and heat sink. Check bias adjustment.

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	CURRENT RATING (Measured)	ORIGINAL Part or Type No.	RECTIFIERS		DIODES	NOTES
			RCA PART No.	SARKES TARZIAN PART No.	RAYTHEON PART No.	
X6		DS27			1N60	AVC
X7		DS27			1N60	Overload
X8		DS27			1N60	Detector

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		DELCO PART No.	REPLACEMENT DATA					
	CAP.	VOLT.		AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	PYRAMID PART No.	SPRAGUE PART No.
CLA	400	16	7279775						
B	850	16					FPS300.75		PC LS3021.2*
C	2.2	11.5AC							
C2	30	8	7279896	PTT27	NLW30-15	MT1-13	TT6X30	MLV30-6	TE-1092
C3	100	3	7279888	PTT13	NLW100-3	MT1-18	TT6X100	MLV100-3	TE-1059.5

* 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.
C4	24-80	#7280095				462		
C5	.047 75V		P288N-047	DDA-503	CUB2S47	IDP-2-473	GEM-4147	2TM-S47
C6	.047 75V		P288N-047	DDA-503	CUB2S47	IDP-2-473	GEM-4147	2TM-S47
C7	2 NPO +/- .25mmf		NPO-DI 2.2	DTZ-2R2	C10V2C	CCTO-2R2	CNO-522	10TCC-V22
C8A		#7279801						
B								
C9	180 N080 10%	#7279821 (91) †				*		
C10	93 N750 10%							
C11	.0022		P288N-0022	TCN-91	C10Q91U			
C12	.022 75V		P288N-022	DD-222		6DP-1-222	GEM-6222	6TM-D22
C13	.0047		DI-4700	DDM-203	CUB4S22	IDP-1-223	GEM-4122	2TM-S22
C14	.047 75V		P288N-047	DD-472		CCD-472		10TS-D47
C15	.047 75V		P288N-047	DDA-503	CUB2S47	IDP-2-473	GEM-4147	2TM-S47
C16	120 NPO 10%		P288N-047	DDA-503	CUB2S47	IDP-2-473	GEM-4147	2TM-S47
C17	.001 10%		NPO-DI 120	DTZ-120			CNO-312	10TCC-T12
C18	.0022 10%		DI-1000	DD-102	L10D1	CCD-102	GP210	10TS-D10
C19	.0022 10%		DI-2200	DD-222	L10D22	CCD-222	GP222	10TS-D22
C20	1.0mfd 3V		DI-2200	DD-222	L10D22	CCD-222	GP222	10TS-D22
C21	.1mfd 75V			UK-105				HY-135
C22	.47 100V			DDA-104	BC2P1J	IDP-2-104	ACE-401	2SE-P10
				P288N-47	CUB2P47	IDP-4-474	GEM-2047	2TM-P47

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

Delco Part Number.

† Alternate Value.

CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA				
			DELCO PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
RLA	Tone	6800Ω	7280042				
B	Volume & Switch	7600Ω					
		2000Ω Tap					
R2	Bias Adjustment	260Ω	7275474				
		100Ω Stop					

■ "STA-LOC" Equivalent: FH682L, RU752T222, OS1375, IS1937, US41

BUICK MODEL 980316

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
		DELCO PART No.	Merit PART No.	Miller PART No.	Stancor PART No.	Warkman PART No.	
L1	Ant. Loading	7295736					
L2	Ant.	1221614					
L3	RF	1221615					
L4	Osc.	1221616					
L5	1st IF	1221617					
L6	2nd IF	1221618					

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA					NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000 \sim)	DELCO PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
L7	.7A @12VDC	.6 Ω	8 MH	1221623					

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
	PRI.	SEC.	DELCO PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T1	6, 8	1	1221590					

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC.	DELCO PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T2	8 Ω Tap @	3-4 Ω	1221535					

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
	SIZE	FIELD	V. C. IMP.	DELCO PART No.	QUAM PART No.	
SP1	4"x 10" 6"x 9"	PM PM	3-4 Ω 3-4 Ω	7281003 7274236	410A2	Buick Special, Alternate Part #7276434 Rear Seat, Buick

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA						
			DELCO		LITTELFUSE		BUSS		
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER	
M1	AGW	2 $\frac{1}{2}$ A			30302, 5 (AGW 2 $\frac{1}{2}$ A)			AGW 2 $\frac{1}{2}$	

MISCELLANEOUS

ITEM No.	PART NAME	DELCO PART No.	NOTES
M2	Push-Button Tuner		Series P2
M3	Spark Plate	1221503	
M4	Switch	7271425	Speaker Interlock
	Switch	1350488	Front Seat Speaker - Rear Seat Speaker

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
Dial	7276519	Knob - Tone	1192589
Pointer Assembly	1221506	Knob - Dummy	1192588
Push Button (5 Required)	7276507	Knob - Rear Seat Speaker Control	1350488
Knob - Volume, Tuning	1192976		



PHOTOFACT[®] with

CIRCUITRACE[®]

TRADE NAME : Buick Model 980462(1963 Buicks)
 SUPPLIER : (Parts) United Delco Distributors
 TYPE SET : 5 Transistor Custom Built AM Receiver
 POWER SUPPLY : 12 Volt Storage Battery
 RATING : 1.4 Amp. @12.6 Volts DC
 TUNING RANGE: BROADCAST 535 - 1620KC



ALIGNMENT INSTRUCTIONS

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

A1, A2, A3, A4, A5, A9, A10... GENERAL CEMENT #5009, 8728A, 8987
 WALSCO #2531X, 2536
 A6, A7, A8..... GENERAL CEMENT #9087, 8290, 8868
 WALSCO #2525, 2528, 2587

PUSH-BUTTON ADJUSTMENT

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

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1.	High side thru .1mf to point Δ , low side to ground.	262KC (40% Mod.)	High Freq. End Stop.	Output Meter across voice coil.	A1, A2, A3, A4	Adjust for maximum.
Check setting of oscillator coil core (A5). Rear of core should be 1 3/8" from mounting end of coil form.						
2.	High side thru 82mmf to antenna receptacle, low side to ground.	1615KC	High Freq. End Stop.	Output Meter across voice coil.	A6, A7, A8	Adjust for maximum.
3.	"	600KC	600KC Signal	"	A9, A10	Adjust for maximum. Repeat step 2.
With radio installed in car and antenna fully extended, tune in a weak station near 1000KC and adjust A8 for maximum output.						

REMOVAL INSTRUCTIONS

NOTE: To replace transistors, remove radio.

RADIO

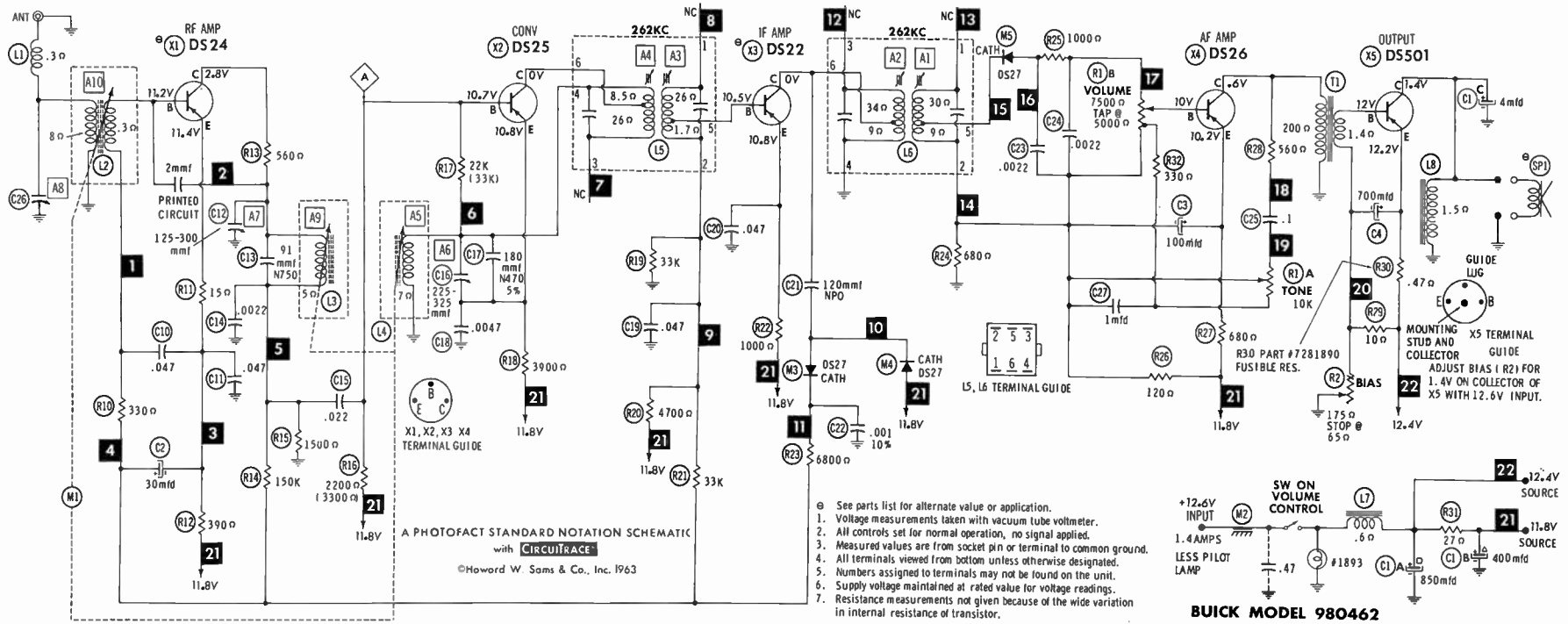
1. Remove ash tray.
2. Using 3/8" wrench, remove 2 screws from bottom of radio and 2 nuts from rear of trim plate.
3. Using 5/8" wrench, remove 2 nuts from control bushings. Remove trim plate.

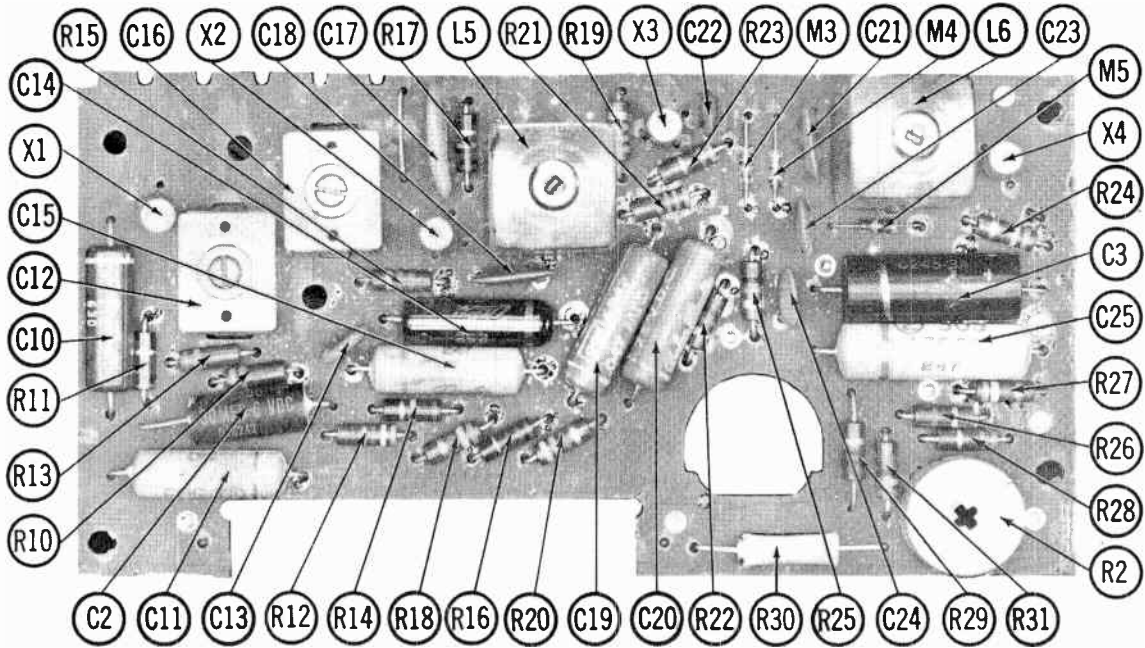
4. Slide radio out front of instrument panel.
5. Disconnect speaker connector and antenna lead.

SPEAKER

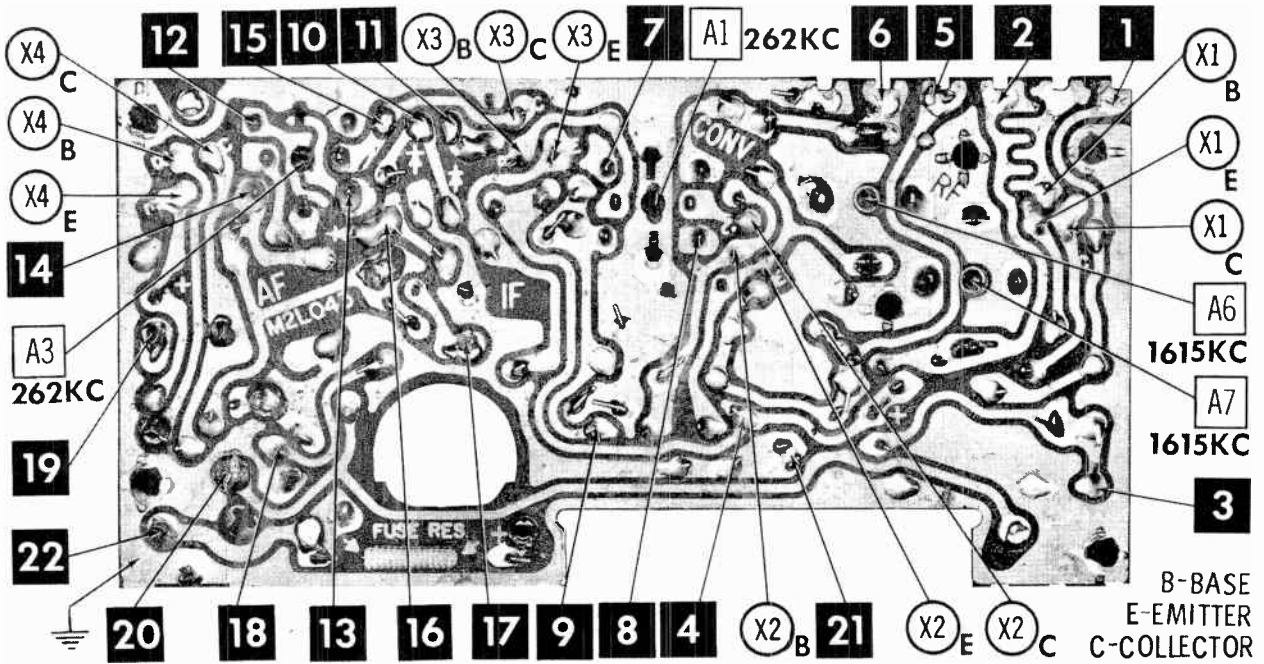
1. Use 3/8" wrench and remove 4 nuts. Remove speaker.

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





PRINTED BOARD – TOP VIEW



PRINTED BOARD – BOTTOM VIEW

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	DS24 †	RF Amplifier	DS-25	GE-1	2N1637	PNP
X2	DS25	Converter	DS-25	GE-1	2N1639	PNP
X3	DS22 †	IF Amplifier	DS-25	GE-1	2N1638	PNP
X4	DS26	AF Amplifier	DS-26	GE-2	2N591	PNP
X5	DS501	Output	DS-501	GE-4		PNP

† Manufacturer suggests replacing with DS-25.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		DELCO 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	850	16	7282272							
C B	400	16						WP300.7A	TVL-3021	
C C	4	11.5AC								
C2	30	6	7279896	PTT27	NLW30-15	MT1-13	MLV30-6	TT6X30	TE1092	
C3	100	3	7279888	PTT13	NLW100-3	MT1-18	MLV100-3	TT6X100	TE1059.5	
C4	700	1	7284518	PRSI130	BR-1000-6		BL2211	PETA190	TVAS-1097*	

* 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	.047	#7281932	P288N-047	DD-503	CUB2S47	IDP-2-473	GEM-4147	4TM-S47
C11	.047		P288N-047	DD-503	CUB2S47	IDP-2-473	GEM-4147	4TM-S47
C12	125-300							
C13	91 N750							
C14	.0022							
C15	.022	#7281933	P288N-0022	TCN-91	C10Q91U	6DP-1-222	GEM-6222	6TM-D22
C16	225-325		P288N-022	DDM-203	CUB6D22	IDP-1-223	GEM-4122	2TM-S22
C17	180 N470 5%	#7284768						
C18	.0047							
C19	.047		DI-4700	DD-472		CCD-472		10TS-D47
C20	.047		P288N-047	DD-503	CUB2S47	IDP-2-473	GEM-4147	4TM-S47
C21	120 NPO		P288N-047	DD-503	CUB2S47	IDP-2-473	GEM-4147	4TM-S47
C22	.001 10%		NPO-DI 120	DTZ-120			CNO-312	10TCC-T12
C23	.0022		DI-1000	DD-102	L10D1	CCD-102	GP210	10TS-D10
C24	.0022		DI-2200	DD-222	L10D22	CCD-222	GP222	10TS-D22
C25	.1		DI-2200	DD-222	L10D22	CCD-222	GP222	10TS-D22
C26	lmfd		P2151N-1	DDA-104	BC2PLJ	IDP-2-104	ACE-401	2SE-P10
C27		#7281971		UK10-404	HCC10474Z		HY-135	

Delco Part Number.

CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA				
			DELCO PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1A	Tone	10K	7282527				# UB4410-S
B	Volume & Switch	7500Ω Tap @ 5000Ω					
R2	Bias	175Ω Stop @ 65Ω	1221422 (7275554)				

"STA-LOC" Equivalent: FG14A, RU752T53, OS625, IS1312, 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
R30	.47Ω			#7281890					

Delco Part Number (Fuse Type)

COILS (RF-IF)

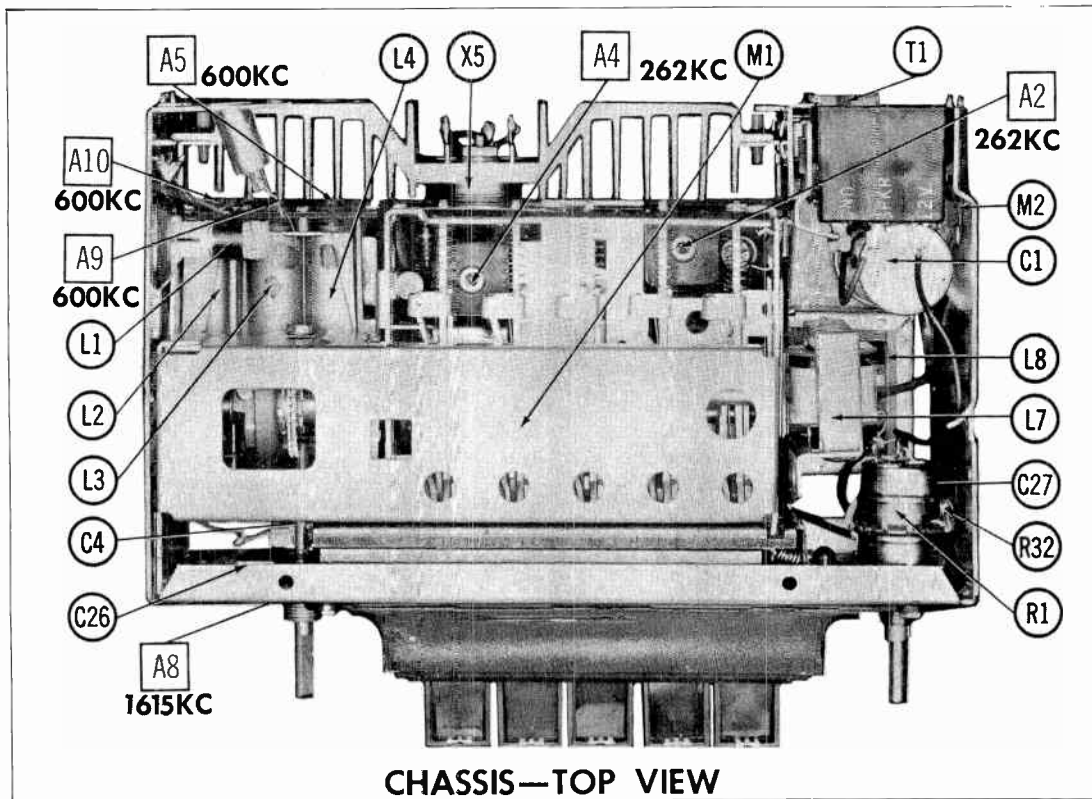
ITEM No.	USE	REPLACEMENT DATA					NOTES
		DELCO PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	RF Choke (6.2uh)	7281946	BC-565	4610	RTC-8520	T859	① Part of M1.
L2	Antenna	7281716 ①					
L3	RF Coil	7282042 ①					
L4	Oscillator	7281717 ①					
L5	Input IF	1221856					
L6	Output IF	1221857					

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA					NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000-)	DELCO PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L7	1.4A	.6Ω	8MH	1221623				TR-154	

CHOKE (AUDIO OUTPUT)

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



CHASSIS—TOP VIEW

BUICK MODEL 980462

PARTS LIST AND DESCRIPTION (CONTINUED)

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
			DELCO PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
			PRI.	SEC.				
T1	10	1	7280915					

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		DELCO PART No.	QUAM PART No.	
SP1	4" x 10" PM 10Ω	7282594		Part #7282774 (6" x 9") used in Riviera Cars.

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA							
			DELCO PART No.		LITTELFUSE PART No.		BUSS PART No.			
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER		
	AGW	2½A								

MISCELLANEOUS

ITEM No.	PART NAME	DELCO PART No.
M1	Tuner Assembly	728697
M2	Spark Plate	7271564
M3	AGC	DS27
M4	AGC	DS27
M5	Detector Printed Board	1221882

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
Dial Scale	7280012	Push Button "B"	7283755
Pointer Assembly	7282557	Push Button "U"	7283756
Drive Shaft Assembly	7282556	Push Button "T"	7283757
Knob - Tuning, Volume	1355480	Push Button "C"	7283758
Knob - Dummy, Tone	1355481	Push Button "K"	7283759

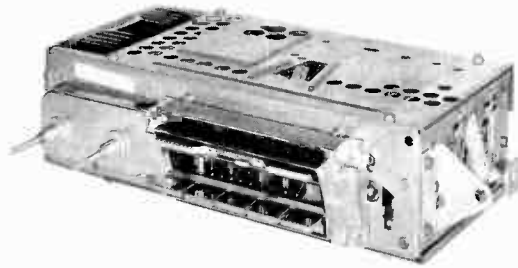
WIRING DATA

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



PHOTOFACT[®] with

CIRCUITRACE[®]



TRADE NAME : Cadillac Model 7282315
(For 1963 Cadillac Passenger Cars)

SUPPLIER : (Parts) United Delco Distributors

TYPE SET : 5 Transistor Custom Built AM Receiver

POWER SUPPLY : 12 Volt Storage Battery

RATING : 1.8 Amp @ 12.6 Volts DC

TUNING RANGE : BROADCAST 535 - 1620KC

ALIGNMENT INSTRUCTIONS

Check for specified source voltage.

Use only enough generator output to provide a usable indication.

Suggested Alignment Tools:

A1, A2, A3, A4, A5, A9, A10... GENERAL CEMENT #5009, 8728A, 8987
WALSCO #2531X, 2536

A6, A7, A8..... GENERAL CEMENT #9087, 8290, 8868
WALSCO #2525, 2528, 2587

PUSH-BUTTON ADJUSTMENT

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

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1.	High side thru .1mf to point Δ , low side to ground.	262KC (400 ν Mod.)	High Freq. End Stop.	Output Meter across voice coil.	A1, A2, A3, A4	Adjust for maximum.
Check setting of oscillator coil core (A5). Rear of core should be 1 5/8" from mounting end of coil form.						
2.	High side thru 82mmf to antenna receptacle, low side to ground.	1615KC	High Freq. End Stop.	Output Meter across voice coil.	A6, A7, A8	Adjust for maximum.
3.	"	600KC	600KC Signal	"	A9, A10	Adjust for maximum. Repeat step 2.

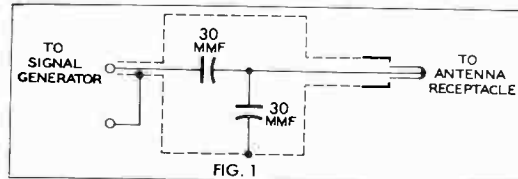
With radio installed in car and antenna fully extended, tune in a weak station near 1000KC and adjust A8 for maximum output.

REMOVAL INSTRUCTIONS

NOTE: To replace tubes or transistors, remove radio.

RADIO

1. Remove one large and 3 smaller screws from top of lower steering column cover.
2. Convertibles only: Disconnect electrical connector from rear of top control switch.
3. Remove 5 screws from bottom of lower steering column cover. Remove cover.
4. Disconnect left cigar lighter connector.
5. Loosen radio knob set screws with Allen wrench and remove knobs.
6. Use 1/2" spanner wrench and remove control shaft nuts.
7. Disconnect antenna, foot control unit, and 4-way connector.
8. Remove 7 Phillips head screws from glove box bottom front. Remove box.
9. Remove screw holding radio to rear support bracket.
10. If equipped, remove air conditioner center flange and duct boot.
11. Lower radio, disconnect dial lamp, and remove radio thru glove box opening.



SPEAKER

1. Remove 3 screws in each windshield molding and remove moldings.
2. If equipped, remove press fit On-Off button of Cruise Control. Remove 2 screws holding Control escutcheon to upper instrument panel cover. Remove escutcheon.
3. Remove 5 screws holding upper panel cover to lower panel cover. (3 above instrument cluster and 2 inside top of glove box.)
4. Raise upper panel and disconnect map lamp and Guide-Matic connectors.
5. Remove cover by pulling toward rear to disengage 4 hooks at front of cover.
6. Remove four 3/8" nuts holding speaker to cowl bracket.
7. Perform step 1 thru 4 under Radio above.
8. Disconnect speaker lead and remove speaker and support.

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

ITEM No.	USE	REPLACEMENT DATA	
		DELCO PART No.	GENERAL ELECTRIC PART No.
V1	Trigger	12AL8	

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	
X1	DS24*	RF Amplifier	DS-25	GE-1	2N1637	PNP
X2	DS25	Conv.	DS-25	GE-1	2N1639	PNP
X3	DS22*	IF Amplifier	DS-25	GE-1	2N1638	PNP
X4	DS26	AF Amplifier	DS-26	GE-2	2N591	PNP
X5	DS501	Output	DS-501	GE-4		PNP

* Manufacturer suggests replacing with DS-25.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	DELCO PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	GENERAL INSTRUMENT PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A	850	16	7279775	AFH3-54-30				FPS300.75	PCLS-3021.2*
C1B	400	16							
C1C	4	11.4AC							
C2	3	12	7282359	PTT50	NLW3-15	MTI-3	BL1140	TT12X3	TE-1122
C3	100	3	7279888	PTT13	NLW100-3	MTI-18	MLV100-3	TT8X100	TE-1059.5
C4	1000	2	7282789	PRS1130	BR-1000-6		BL2310	PETA130	TVA-1104
C5	30	8	7279898	PTT27	NLW30-15	MTI-13	MLV30-6	TT8X30	TE-1092

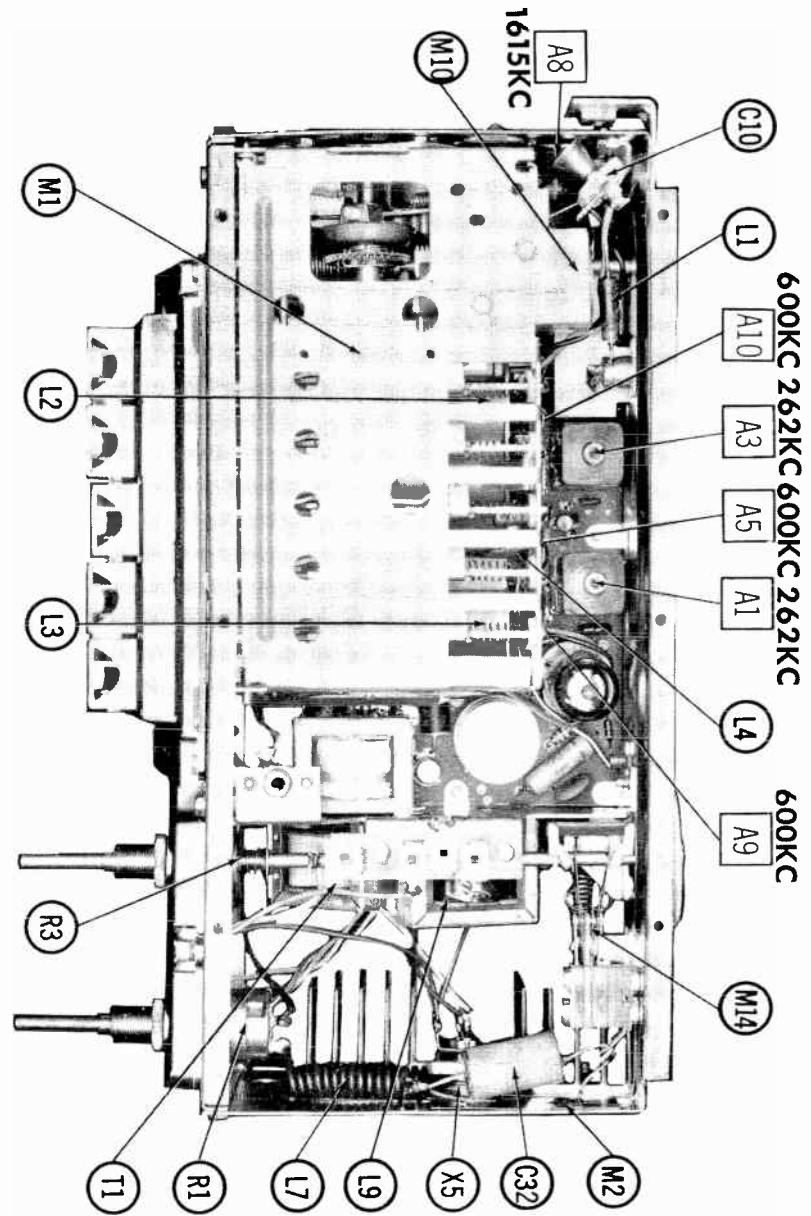
* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

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		#7282376	P288N-047	DD-503	CUB2S47	IDP-2-473	GEM-4147	4TM-S47
C11	.047		P288N-047	DD-503	CUB2S47	IDP-2-473	GEM-4147	4TM-S47
C12	.047	#7281932						
C13	125-300	#7280995	TCN-91		C10Q91U			
C14	91 N750		P288N-0022	DD-222	CUB6D22	6DP-1-222	GEM-6222	8TM-D22
C15	.0022		P288N-022	DDM-203	CUB4S22	IDP-1-223	GEM-4122	2TM-S22
C16	.022	#7282185						
C17	30-160	#7279821						
C18	180 N080 5%		DI-4700	DD-472		CCD-472	GEM-4147	10TS-D47
C19	.0047		P288N-047	DD-503	CUB2S47	IDP-2-473	GEM-4147	4TM-S47
C20	.047		P288N-047	DD-503	CUB2S47	IDP-2-473	GEM-4147	4TM-S47
C21	.047		NPO-DI 120	D'TZ-120			CNO-312	10TCC-T12
C22	120 NPO		DI-1000	DD-102	L10D1	CCD-102	GP210	10TS-D10
C23	.001		1469-100	22R5 T1		CM-15E-101	MCE235	MS-31
C24	100 5%		DI-2200	DD-222	L10D22	CCD-222	GP222	10TS-D22
C25	.0022		DI-2200	DD-222	L10D22	CCD-222	GP222	10TS-D22
C26	.0022			UK-105	HCC10474Z		GP222	HY-135
C27	1mf				CUB2P15	2CP-4-154	GEM-2015	2TM-P15
C28	.15		P288N-15			CM-15E-101	MCE235	MS-31
C29	100 5%		1469-100	22R5 T1		CCD-101	GP310	5GA-T10
C30	100		DI-100	DD-101	L10T1	IDP-2-473	GEM-4147	4TM-S47
C31	.047		P288N-047	DD-503	CUB2S47	IDP-2-473	GEM-4147	4TM-S47
C32	.47		P288N-47		CUB2P47	IDP-4-474	GEM-2047	2TM-P47

Delco Part Number.

CHASSIS—TOP VIEW



CADILLAC MODEL 7282315

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				
			DELCO PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1A B	Tone Volume & Switch	10K 7500K Tap@ 5K	7282408				■ UE4415S
R2	Bias	175Ω (Stop@ 65Ω)	1221422				
R3	Fader	100Ω	7282410				

■ "STA-LOC" Equivalent: FL14A, RU752T53, OS875A, IS1937, US41.

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		DELCO PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	RF Choke (8uh)	7255738	BC-566	4611	RTC-8521	T822	① Part of M1
L2	Antenna	7282586					
L3	RF Coil	7282585					
L4	Oscillator	1221616					
L5	Input IF	1221856					
L6	Output IF	1221857					
L7	"A" Lead (5uh)	1217846					

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA					NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	DELCO PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L8	1.1A	.6Ω	8MH	1221623			TR-154		

CHOKE (AUDIO OUTPUT)

ITEM No.	INDUCTANCE	REPLACEMENT DATA					NOTES
		DELCO PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L9	29.5MH	7282278					

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
	PRI.	SEC.	DELCO PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1			7280915					

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		DELCO PART No.	QUAM PART No.	
SP1	4" x 10" PM 10Ω 6" x 9" PM 10Ω 6" PM 10Ω	7282500 7282501 7282375	410A2Z10	Rear Speaker for Sedans Rear Speaker for Convertibles

MISCELLANEOUS

ITEM No.	PART NAME	DELCO PART No.	NOTES
M1	Tuner Assembly	7282309	450mmf
M2	Spark Plate	7282370	
M3	Sensitivity	DS-32	
M4	AVC	DS-27	
M5	AVC	DS-27	
M6	Detector	DS-33 (DS-27)	
M7	Search	DS-32	
M8	Trigger Bias	DS-31	
M9	Search Tuning Relay	7282263	
M10	Solenoid & Plunger Assembly	1221409	
M11	Recycle Switch	7268030	
M12	Pushbar Switch	7280670	
M13	Sensitivity Switch	7282396	
M14	Antenna Switch	7271223	
M15	Foot Control Switch	7280776	

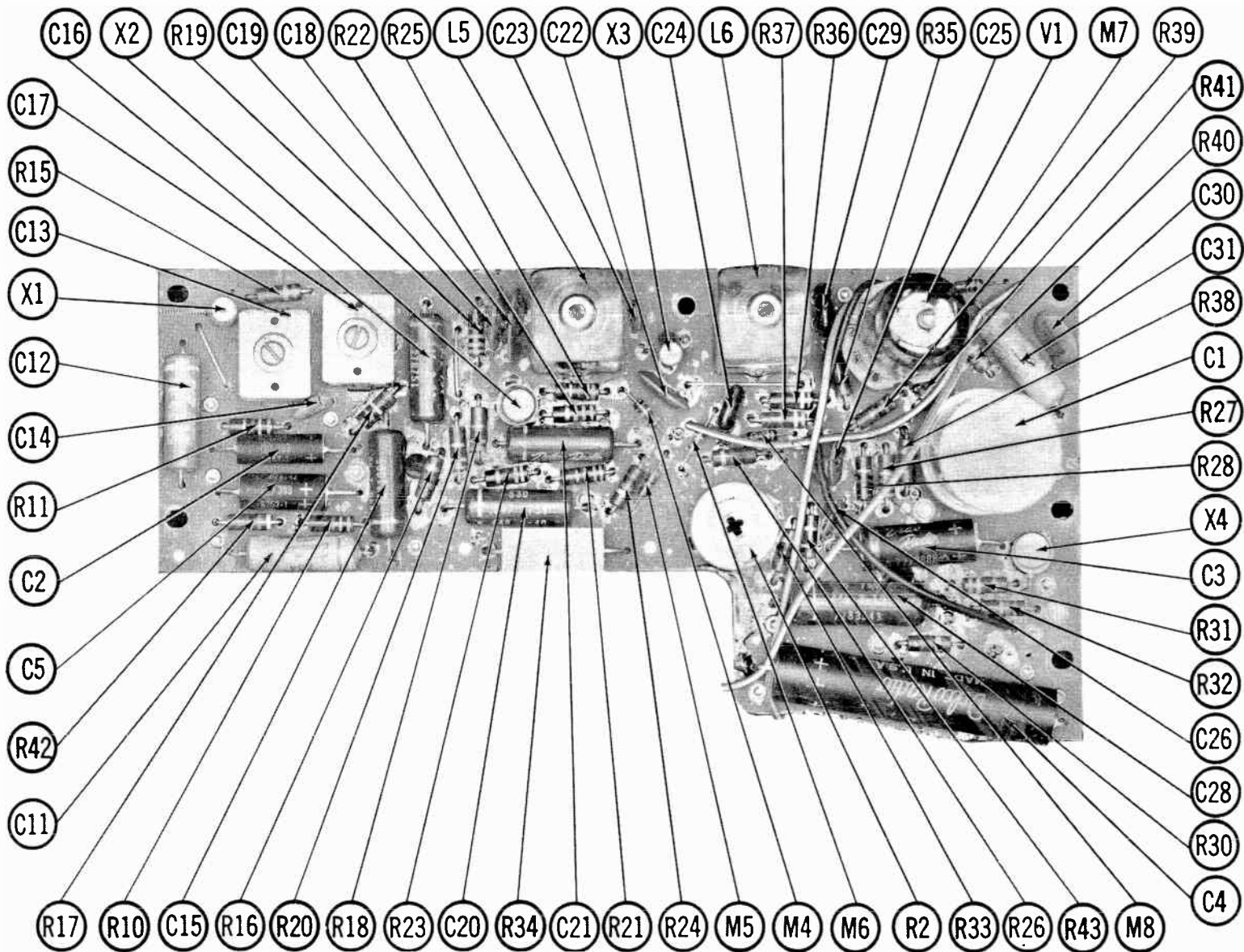
CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
Dial Glass	7282406	Pointer Assembly	1221801
Knob - Tuning, Volume	1480138	Belt, Tuning Drive	7269454
Knob - Tone, Speaker	1480179	Push Button (Set of 5)	1221802

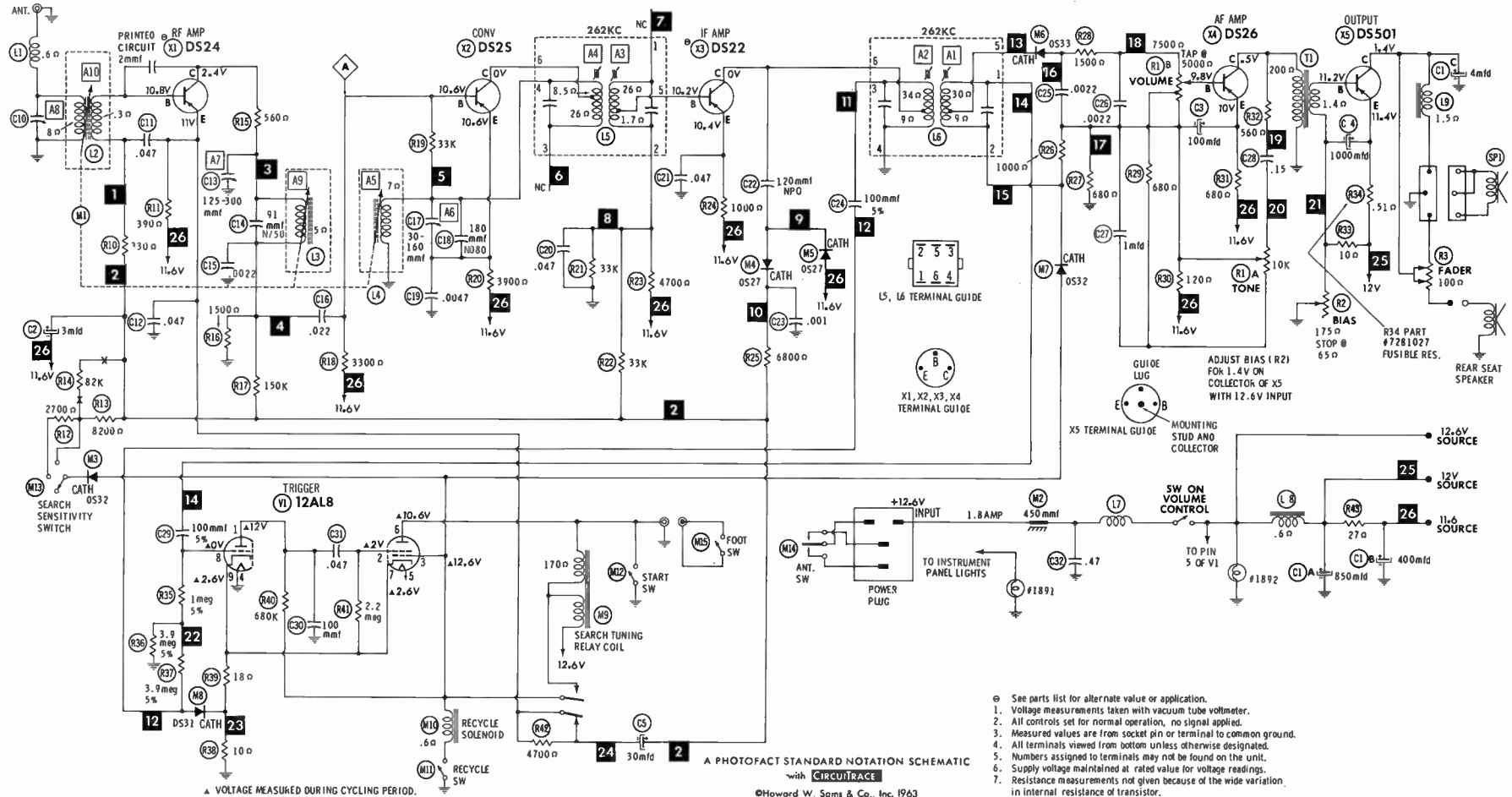
WIRING DATA

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.)



PRINTED BOARD - TOP VIEW

CADILLAC MODEL 7282315

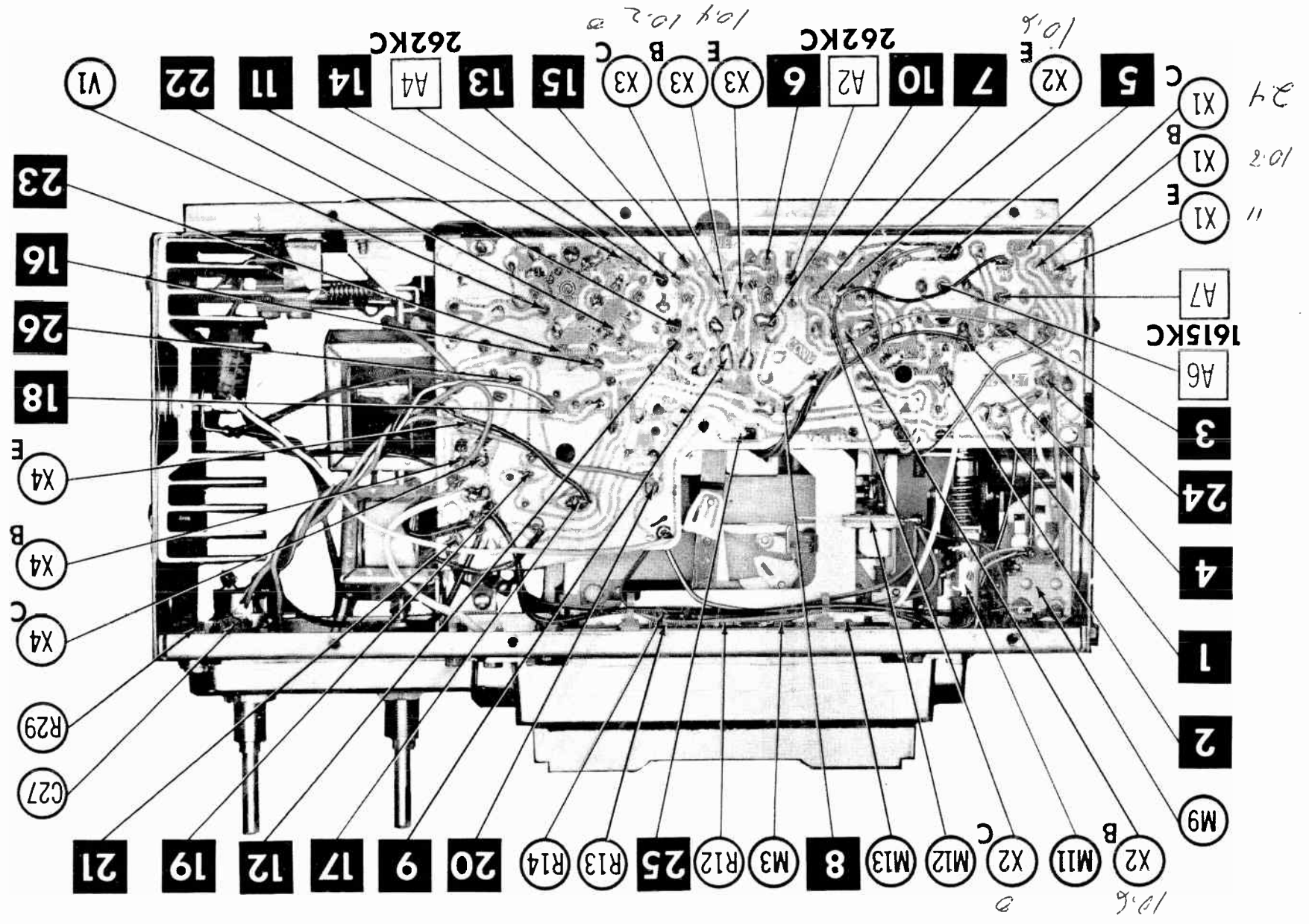


- ⊖ See parts list for alternate value or application.
- 1. Voltage measurements taken with vacuum tube voltmeter.
- 2. All controls set for normal operation, no signal applied.
- 3. Measured values are from socket pin or terminal to common ground.
- 4. All terminals viewed from bottom unless otherwise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

PRINTED BOARD

B - BASE E - EMITTER C - COLLECTOR

CADILLAC MODEL 7282315





PHOTOFACT[®] with

CIRCUITRACE[®]



1963 CHEVROLET MODEL
 TRADE NAME : 985431(Chev. Cars),985443(Corvaair Trucks),
 985447 (Corvaair Cars),985453(Chevy II)
 SUPPLIER : (Parts) United Delco Distributors
 TYPE SET : 5 Transistor Custom-Built AM Receiver
 POWER SUPPLY : 12 Volt Storage Battery
 RATING : .54 Amp. @12.6 VDC(Less Lamp)
 TUNING RANGE: BROADCAST 535 - 1620KC

CHEVROLET MODELS 985431/443/447/453

ALIGNMENT INSTRUCTIONS

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

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

PUSH-BUTTON ADJUSTMENT

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

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1.	High side thru .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	"
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.	High side thru 82mmf to antenna receptacle, low side to ground.	1000KC	Tune to Signal.	Output Meter across voice coil.	A8, A9, A10	Adjust for maximum. Repeat steps 2 & 3 until no further improvement is noted.
With radio installed in car and antenna fully extended, tune in a weak station near 1000KC and adjust A7 for maximum output.						

REMOVAL INSTRUCTIONS

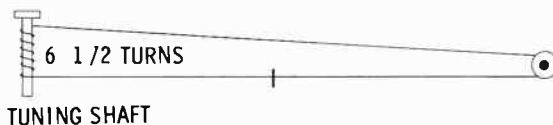
NOTE: To replace transistors, remove radio.

RADIO

1. Pull off knobs.
2. Remove speaker connector and antenna lead.
3. CORVAIR: Use 7/16" wrench and remove nut on rear of radio.
 CHEVY II: Use 7/16" wrench and loosen nut on rear brace on inside of firewall.
 CHEVROLET: Use 7/16" wrench and remove screw holding mounting bracket to instrument panel.
4. CORVAIR, CHEVROLET: Use 5/8" wrench and remove 2 nuts from control bushing.
 CHEVY II: Use 7/16" wrench and remove nut on rear of radio.
5. CHEVY II: Use 5/8" wrench and remove nuts from control bushings.
6. Remove radio from under instrument panel.

DIAL CORD STRINGING

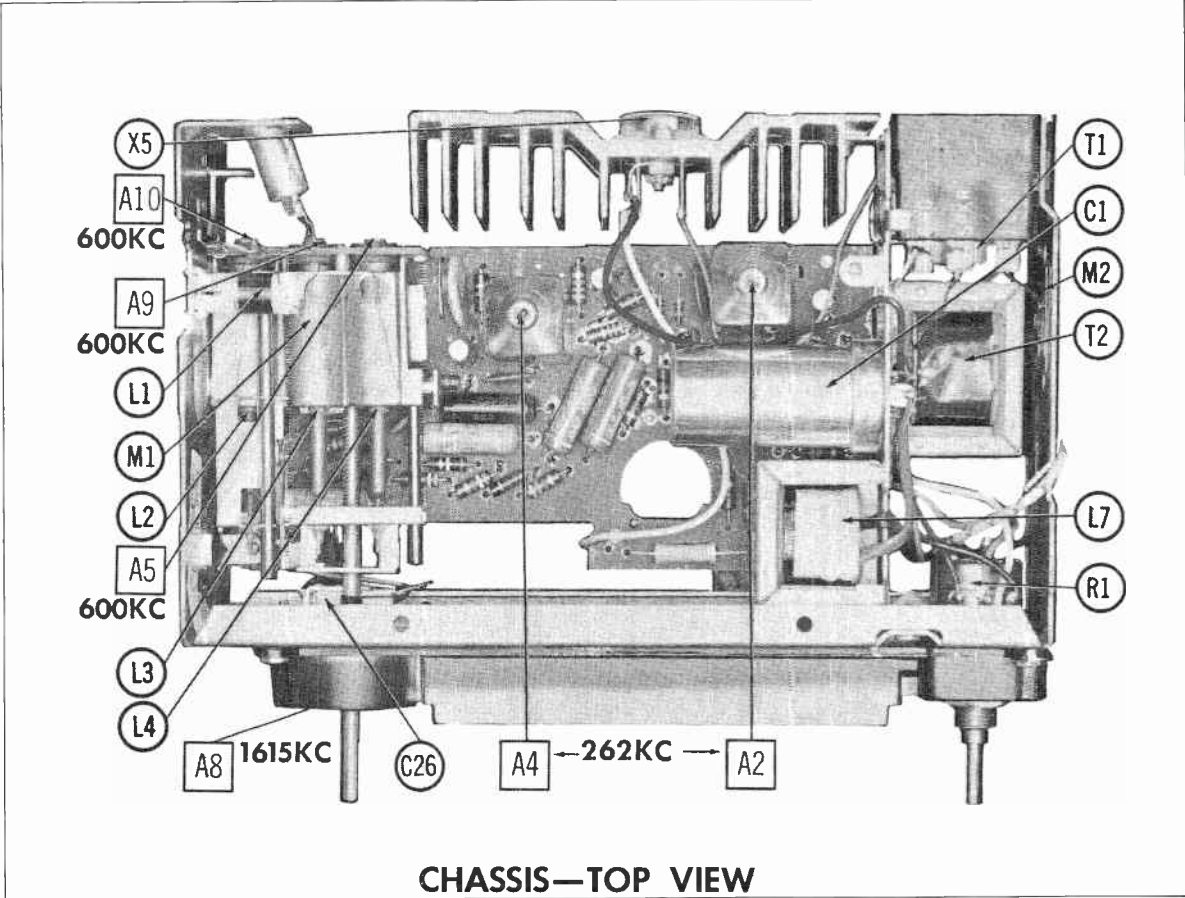
TUNING COILS FULLY OUT



SPEAKER

1. CHEVROLET: Remove glove box.
2. Remove "A" lead from speaker connector.
3. Use 3/8" wrench and remove screw from speaker bracket. (2 screws on Corvaairs)
4. Remove bracket (or mounting plate) and speaker.

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



CHASSIS—TOP VIEW

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. 8895
Rear Seat Speaker Extension Cable	Use BELDEN No. 8792 (Stranded) Coded Parallel Leads
Bonding Strap	Use BELDEN No. 8861 (3/8 in.) or 8870 (3/4 in.)

TRANSISTORS

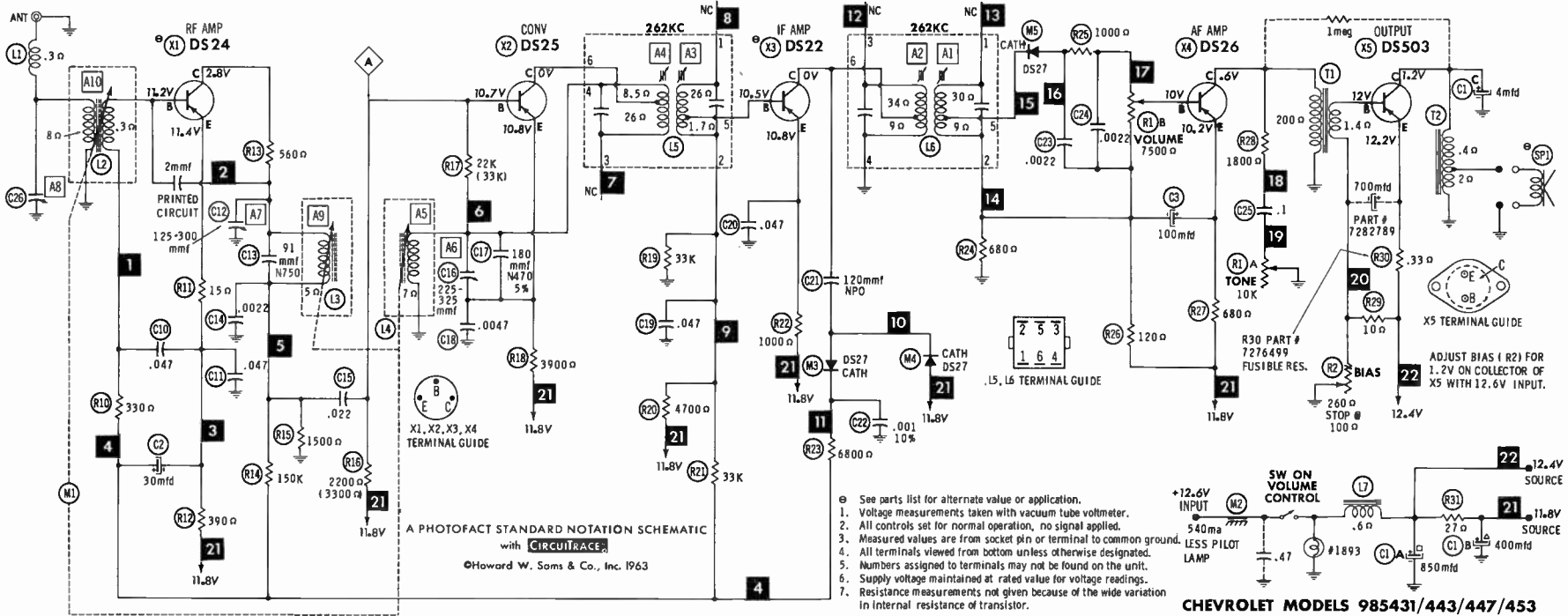
ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	
X1	DS-24 †	RF Amplifier	DS-25	GE-1	2N1637	PNP
X2	DS-25	Converter	DS-25	GE-1	2N1639	PNP
X3	DS-22 †	IF Amplifier	DS-25	GE-1	2N1638	PNP
X4	DS-26	AF Amplifier	DS-26	GE-2	2N591	PNP
X5	DS-503	Output	DS-503	GE-3	2N301	PNP (Note 1)

† Manufacturer suggests replacing with DS-25.
 Note 1. When replacing, apply silicone grease to both sides of insulator. Tighten mounting screws securely. Check bias adjustment.

ELECTROLYTIC CAPACITORS

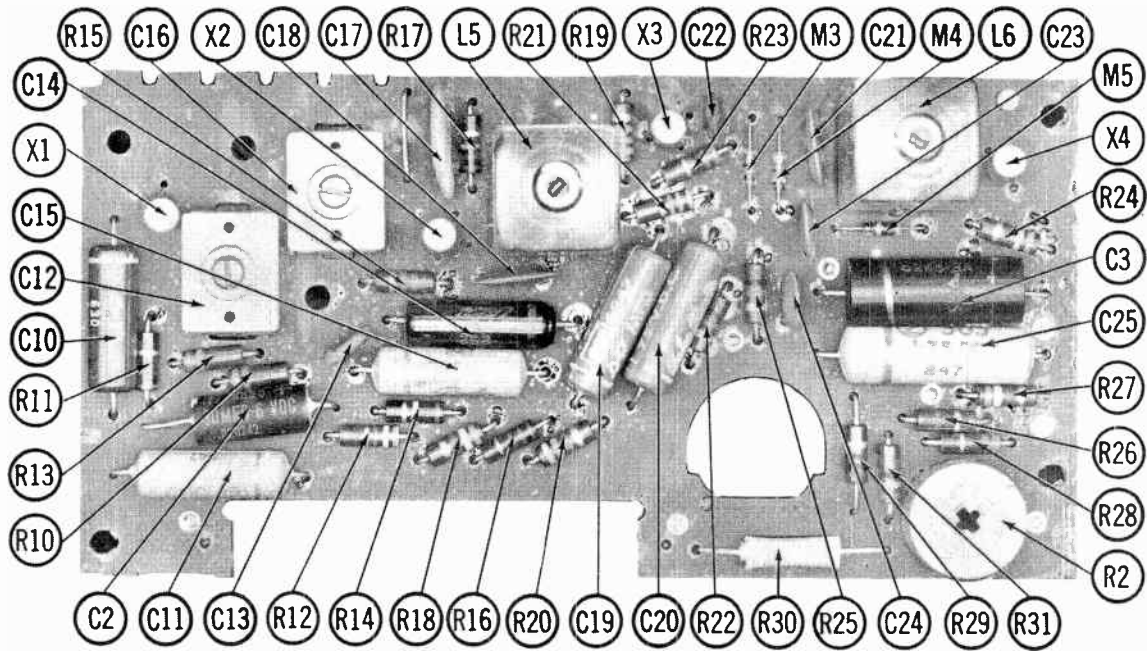
ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	DELCO PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	GENERAL INSTRUMENT PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A	850	16	7282272	AFH-3-54-30				WF300, 7A	TVL-3021
B	400	16							
C	4	11, 5AC							
C2	30	8	7279896	PTT27	NLW30-15	MTI-13	MLV30-8	TT6X30	TE1092
C3	100	3	7279888	PTT13	NLW100-3	MTI-18	MLV100-3	TT6X100	TE1059, 5

(PARTS LIST CONTINUED)

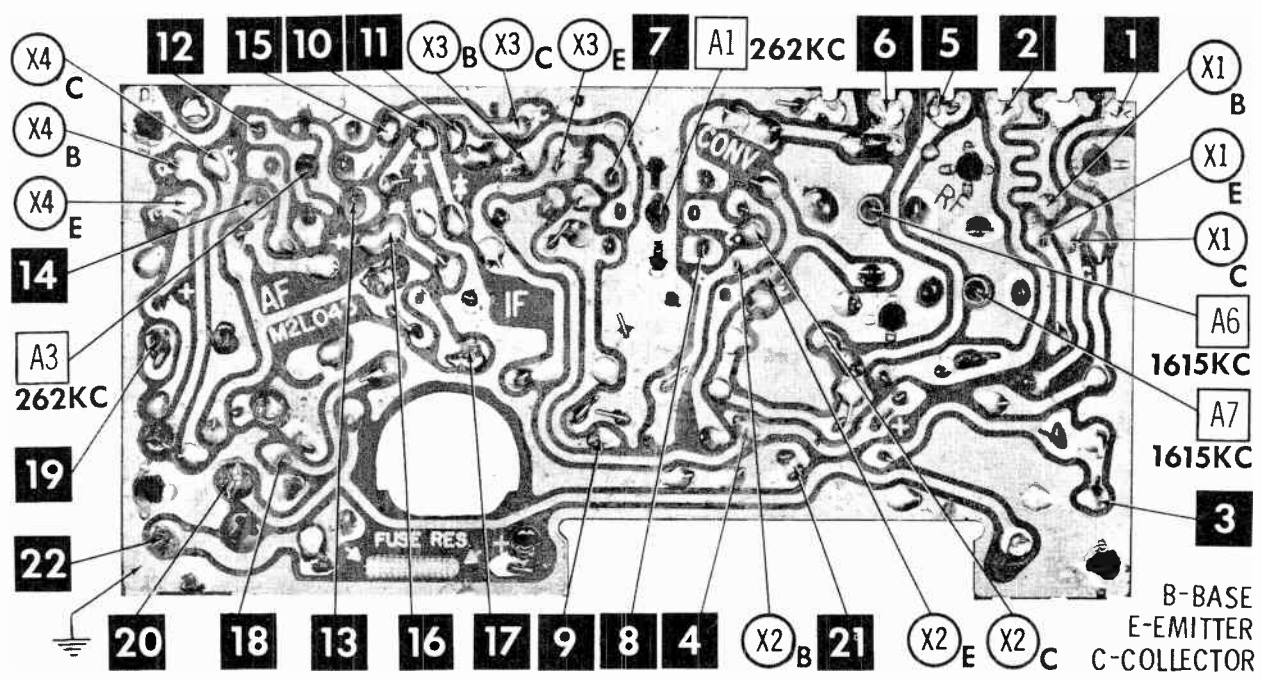


- ⊖ See parts list for alternate value or application.
- 1. Voltage measurements taken with vacuum tube voltmeter.
- 2. All controls set for normal operation, no signal applied.
- 3. Measured values are from socket pin or terminal to common ground.
- 4. All terminals viewed from bottom unless otherwise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

CHEVROLET MODELS 985431/443/447/453



CHASSIS - TOP VIEW



PRINTED BOARD - TOP VIEW

A Howard W. Sams CIRCUITRACE Photo

PARTS LIST AND DESCRIPTION (CONTINUED)

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

FIXED CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA												
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.							
C10	.047	#7281932	P288N-047	DD-503	CUB2S47	IDP-2-473	GEM-4147	4TM-S47							
C11	.047		P288N-047	DD-503	CUB2S47	IDP-2-473	GEM-4147	4TM-S47							
C12	125-300		#7281933	P288N-0022	DD-222	CUB6D22	6DP-1-222	GEM-6222	6TM-D22						
C13	91 N750									DDM-203	TCN-91	C10Q91U	IDP-1-223	GEM-4122	2TM-S22
C14	.0022										DI-4700	DD-472			
C15	.022	#7284768	P288N-047	DD-503	CUB2S47	IDP-2-473	GEM-4147	4TM-S47							
C16	225-325		P288N-047	DD-503	CUB2S47	IDP-2-473	GEM-4147	4TM-S47							
C17	180 N470 5%	#7281971	NPO-D1 120	DTZ-120	L10D1	CCD-102	GP210	10TS-D10							
C18	.0047		DI-1000	DD-102	L10D22	CCD-222	GP222	10TS-D22							
C19	.047	#7281971	DI-2200	DD-222	L10D22	CCD-222	GP222	10TS-D22							
C20	.047		DI-2200	DD-222	L10D22	CCD-222	GP222	10TS-D22							
C21	120 NPO		P215N-1	DDA-104	BC2PJ	IDP-2-104	ACE-401	2SE-P10							
C22	.001 10%														
C23	.0022														
C24	.0022														
C25	.1														
C26															

Delco Part Number.

CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA					
			DELCO PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.	
RIA	Tone	10K	7282088①					■ UE 4406-S
B	Volume & Switch	7500Ω						
R2	Bias	260Ω	7275474					
		Stop@						
		100Ω						

① Part #7282148 used in Models 985443, 985447. Part #7282232 used in Model 985453.
■ "STA-LOC" Equivalent: FG14A, RU73A, OS562A, IS1187, 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
R30	.33Ω			#7276499					

Delco Part Number. Fuse Type.

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA						NOTES
		DELCO PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.		
L1	RF Choke (6.2uh)	7281946	BC-565	4610	RTC-8520	T859	Note 1 Note 1 Note 1	
L2	Ant.	7281716						
L3	RF	7282042						
L4	Osc.	7281717						
L5	Input IF	1221856						
L6	Output IF	1221857						

Note 1. Part of M1 or coil assembly Part #7281697.

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA					NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	DELCO PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L7	.540A	.6Ω	8MH	1221623			TR-154		

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
			DELCO PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
	PRI.	SEC.						
T1	10	1	7280915					

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
			DELCO PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T2			7282057					

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		DELCO PART No.	QUAM PART No.	
SP1	6" x 9" PM 10Ω	7282157		Model 985431 Model 985447 Model 985453 Model 985443
	6" x 9" PM 10Ω	7282158		
	4" x 10" PM 10Ω	7282159		
	6" x 10" PM 10Ω	7282160		

MISCELLANEOUS

ITEM No.	PART NAME	DELCO PART No.	NOTES
M1	Tuner Assembly	7281697	
M2	Spark Plate	7271564	
M3	AGC	DS-27	
M4	AGC	DS-27	
M5	Detector Printed Board	DS-27 1221882	

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA						
			DELCO PART No.		LITTELFUSE PART No.		BUSS PART No.		
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER	
	AGW	2½						AGW 2½	

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
Dial Scale, Model 985431	7282077	Knob - Dummy, Model 985431	3823169
Dial Scale, Models 985443/447/453	7279493	Knob - Dummy, Models 985443/447/453	3793635
Pointer Assembly, Model 985431	7282086	Knob - Tone, Model 985431	3823170
Pointer Assembly, Models 985443/447/453	7284556	Knob - Tone, Models 985443/447/453	3793636
Knob, Tuning & Volume	7277055		



PHOTOFACT[®] with

CIRCUITRACE[®]

TRADE NAME: 1963 CHEVROLET
 Model 985432 (Chev.),
 Model 985449 (Corvairs)
 Model 985455 (Chevy II)

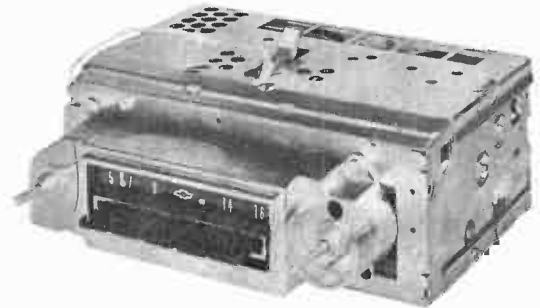
SUPPLIER: (Parts) United Delco Distributors

TYPE SET: 5 Transistor Custom-Built AM Receiver

POWER SUPPLY: 12 Volt Storage Battery

RATING: 1.4 Amp. @12.6 Volts DC (Model 985432)
 540MA @12.6VDC (Models 985449, 985455)

TUNING RANGE: BROADCAST 535 - 1620KC



SCHROEDER

ALIGNMENT INSTRUCTIONS

Check for specified source voltage. Use only enough generator output to provide a usable indication. Suggested Alignment Tools:				PUSH-BUTTON ADJUSTMENT	
A1 thru A5, A9, A10... GENERAL CEMENT #5009, 8728A, 8987 WALSCO #2531X, 2536				<ol style="list-style-type: none"> 1. Pull button out. 2. Tune manually to desired station. 3. Press button in firmly. 4. Repeat for remaining buttons. 	
A6, A7, A8..... 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.	262KC (400v Mod.)	High Freq. End Stop.	Output Meter across voice coil.	A1, A2, A3, A4	Adjust for maximum.
Check setting of oscillator coil core (A5). Rear of core should be 1 3/8" from mounting end of coil form.					
2. High side thru 82mmf to antenna receptacle, low side to ground.	1615KC	High Freq. End Stop.	Output Meter across voice coil.	A6, A7, A8	Adjust for maximum.
3. " "	600KC	600KC Signal	" "	A9, A10	Adjust for maximum. Repeat step 2.
With radio installed in car and antenna fully extended, tune in a weak station near 1000KC and adjust A8 for maximum output.					

REMOVAL INSTRUCTIONS

NOTE: To replace transistors, remove radio.

RADIO

1. Pull off knobs.
2. Remove speaker connector and antenna lead.
3. CORVAIR: Use 7/16" wrench and remove nut on rear of radio.
 CHEVY II: Use 7/16" wrench and loosen nut on rear brace on inside of firewall.
 CHEVROLET: Use 3/8" wrench and remove screw holding mounting bracket to instrument panel.
4. CORVAIR, CHEVROLET: Use 5/8" wrench and remove 2 nuts from control bushing.
 CHEVY II: Use 7/16" wrench and remove nut on rear of radio.

5. CHEVY II: Use 5/8" wrench and remove nuts from control bushings.
6. Remove radio from under instrument panel.

SPEAKER

1. CHEVROLET: Remove glove box.
2. Remove "A" lead from speaker connector.
3. Use 3/8" wrench and remove screw from speaker bracket (2 screws on Corvairs).
4. Remove bracket (or mounting plate) and speaker.

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

FITZPATRICK ELECTRIC SUPPLY COMPANY

Muskegon
722-6621

Grand Haven
842-3610

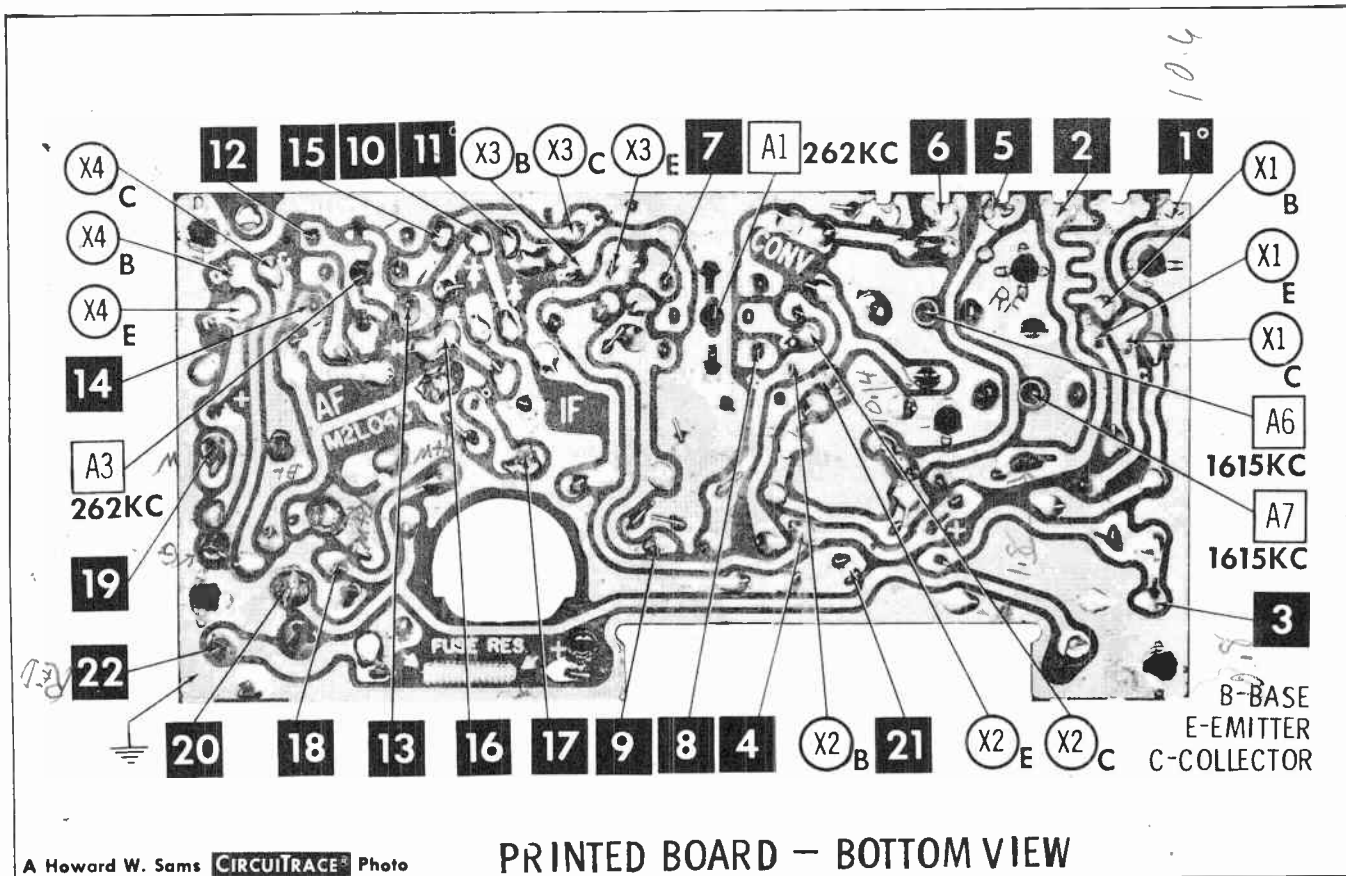
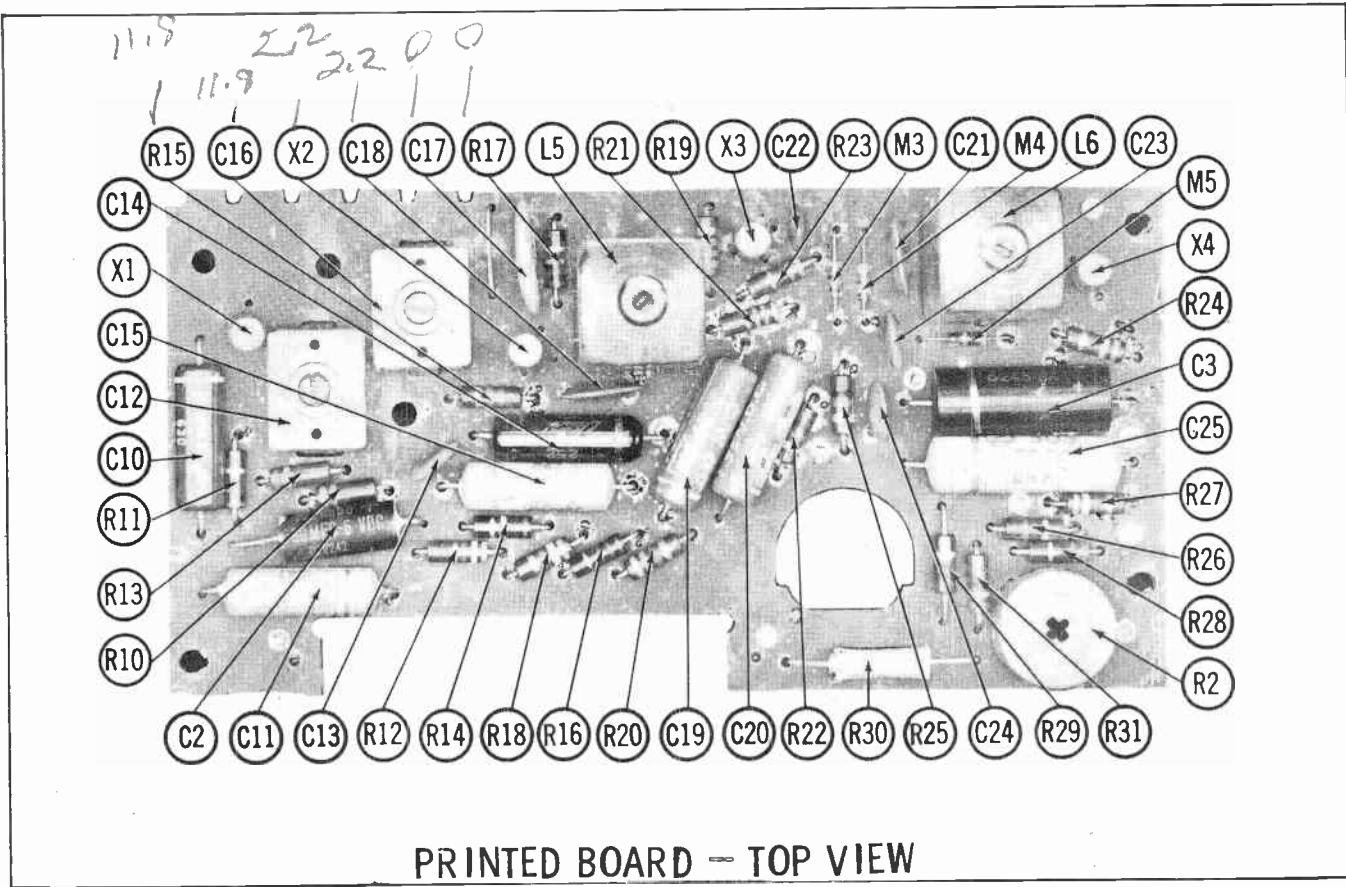
Traverse City
946-7262

Holland
396-4626

Car Radio Voltages

- M5- Cathode 9.6
Anode 9.6
- M4- Cathode 11.2
Anode 11.3
- M3- Cathode 11.
Anode 11.3
- ~~Collector - Audio output 1.32~~
- X5- Base 11.2 - yellow wire
~~Collector 10.8 green wire~~
~~emitter~~
- X5 ~~Collector - 10.8 yellow wire~~
~~emitter 11.2 yellow wire~~
- X5 Collector - 1.4 blue
Emitter - 11 yellow
Base - 10.6 green
- X4 Base 9.4
Emitter - 9.6
Collector - .5
- X2- Base - 10.2
Emitter 10.2
Collector 0
- X3. Base 9.8
Emitter 10.1
Collector 0
- X1 Base - 10.4
Emitter - 10.6
Collector - 2.8

Complete Electrical Supplies



A Howard W. Sams **CIRCUITRACE** Photo

PRINTED BOARD - BOTTOM VIEW

PARTS LIST AND DESCRIPTION

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

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	
X1	DS-24*	RF Amplifier	DS-25	GE-1	2N1637	PNP PNP PNP PNP PNP Model 985432 PNP Models 985449, 985455 ①
X2	DS-25	Converter	DS-25	GE-1	2N1639	
X3	DS-22*	IF Amplifier	DS-25	GE-1	2N1638	
X4	DS-26	AF Amplifier	DS-26	GE-2	2N591	
X5	DS-501 DS-503	Output	DS-501 DS-503	GE-4 GE-3		

* Manufacturer suggests replacing with DS-25

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

CONTROLS

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

ITEM No.	USE	RESIST-ANCE	REPLACEMENT DATA				
			DELCO PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
RIA	Tone	10K					
B	Volume & Switch	7500Ω	7282598 ①				■ UE4407-S
R2	Bias (Temp. Comp.)	Tap ② 5K 175Ω Stop ③ 65Ω	1221422 ②				

① Model 985432. Part #7283208 used in Model 985455. Part #7282223 used in Model 985449.

② Model 985432. Part #7275474 (260Ω, 100Ω Stop) used in Models 985449, 985455.

③ "STA-LOC" Equivalent: FG14A, RU752, FJ14A, RU752T53, OS1125, IS1687, US41 (Model 985455)

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	DELCO PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	GENERAL INSTRUMENT PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A	850	16	7282272					WP 300, 7A	TVL-3021
B	400	16							
C	4	11.5AC							
C2	30	6	7279896	PTT27	NLW30-15	MT1-13	MLV30-6	TT6X30	TEJ092
C3	100	3	7279888	PTT13	NLW100-3	MT1-18	MLV100-3	TT6X100	TEJ059.5
C4	700	1	7284518 ①	PRSL130	BR-1000-6		BL2211	PETA190	TVAS-1097*

① Model 985432 Only.

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

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		DELCO PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	RF Choke (6.2uh)	7281946	BC-565	4610	RTC-8520	T859	① Part of M1.
L2	Ant.	7281716 ①					
L3	RF Coil	7282042 ①					
L4	Osc.	7281717 ①					
L5	Input IF	1221858					
L6	Output IF	1221857					

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA					NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	DELCO PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L7	1.4A ①	.6Ω	8MH	1221623				TR-154	

① Models 985449 and 985455 draw 540MA.

FIXED CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C10	.047	#7281932	P288N-047	DD-503	CUB2S47	IDP-2-473	GEM-4147	4TM-S47
C11	.047		P288N-047	DD-503	CUB2S47	IDP-2-473	GEM-4147	4TM-S47
C12	125-300							
C13	91 N750	#7291933		TCN-91	C10Q91U			
C14	.0022		P288N-0022	DD-222	CUB8D22	6DP-1-222	GEM-6222	6TM-D22
C15	.022		P288N-022	DDM-203	CUB4S22	IDP-1-223	GEM-4122	2TM-S22
C16	225-325	#7284768						
C17	180 N470 5%							
C18	.0047		DI-4700	DD-472		CCD-472		10TS-D47
C19	.047	P288N-047	DD-503	CUB2S47	IDP-2-473	GEM-4147	4TM-S47	
C20	.047	P288N-047	DD-503	CUB2S47	IDP-2-473	GEM-4147	4TM-S47	
C21	120 NPO	#7281971	NPO-DI 120	DTZ-120		CNO-312	10TCC-T12	
C22	.001 10%		DI-1000	DD-102	L10D1	CCD-102	GP210	10TS-D10
C23	.0022		DI-2200	DD-222	L10D22	CCD-222	GP222	10TS-D22
C24	.0022	DI-2200	DD-222	L10D22	CCD-222	GP222	10TS-D22	
C25	.1	P2151N-1	DDA-104	BC2PJ	IDP-2-104	ACE-401	2SE-P10	
C26								
C27	1mfd		UK10-404	HCC10474Z			HY-135	

Delco Part Number.

CHOKE (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC.	DELCO PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L8	25.9MH		7282278					Model 728432

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
	PRI.	SEC.	DELCO PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	10	1	7280915					

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
			DELCO PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
	PRI.	SEC.						
T2			7282057					Models 728449, 728455

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		DELCO PART No.	QUAM PART No.	
SP1	6" x 9" PM 10Ω	7282157		Model 985432
	4" x 10" PM 10Ω	7282159		Model 985455
	6" x 9" PM 10Ω	7282158		Model 985449

MISCELLANEOUS

ITEM No.	PART NAME	DELCO PART No.	NOTES
M1	Tuner Assembly	7281697	
M2	Spark Plate	7271564	
M3	AGC	DS-27	
M4	AGC	DS-27	
M5	Audio Detector Printed Board	1221882	

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA						
			DELCO PART No.		LITTELFUSE PART No.		BUSS PART No.		
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER	
	AGC	4	①		311004 (AGC 4A)			AGC 4	

① Some versions may use 2½ Amp.

CABINETS & CABINET PARTS

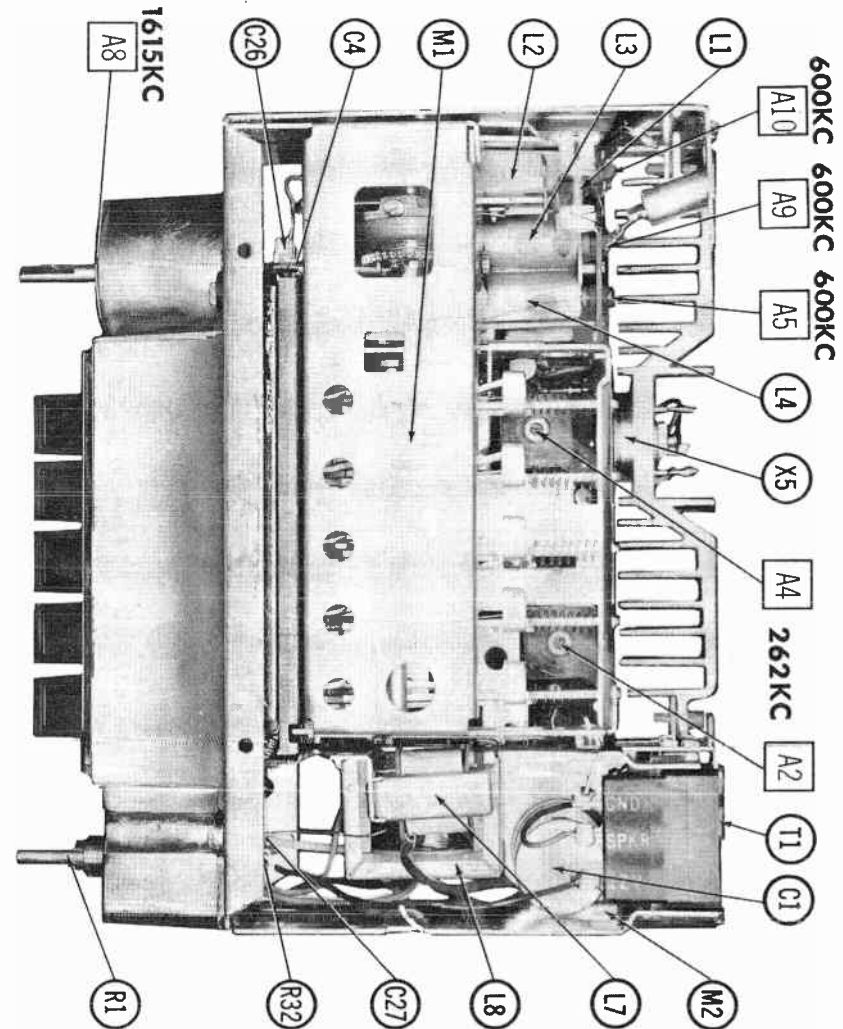
(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
Dial Scale, Model 985432	7282887	Knob - Tuning & Volume	7277055
Dial Scale, Models 985449, 985455	7279495	Knob - Dummy, Model 985432	3823169
Pointer Assembly, Model 985432	1221809	Knob - Dummy, Models 985449, 985455	3793635
Pointer Assembly, Models 985449, 985455	1221818	Knob - Tone, Model 985432	3823170
Tuner Drive Shaft, Model 985432	7282597	Knob - Tone, Models 985449, 985455	3793636
Tuner Drive Shaft, Model 985449	7282221	Push Button (Set of 5) Model 985432	1221810
Tuner Drive Shaft, Model 985455	7283218	Push Button (Set of 5) Models 985449, 985455	1221817

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.)

CHASSIS—TOP VIEW





PHOTOFACT[®]



TRADE NAME : FIRESTONE MODEL 3-D-5
(Code 120-1-MU60)

SUPPLIER : Firestone Tire & Rubber Co.,
1200 Firestone Parkway, Akron 17, Ohio

TYPE SET : 6 Transistor AM Receiver

POWER SUPPLY : 6 Volt Storage Battery

RATING : 1.1 Amp. @ 6.3 VDC

TUNING RANGE : BROADCAST 540 -- 1615KC

FIRESTONE MODEL 3-D-5

ALIGNMENT INSTRUCTIONS

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

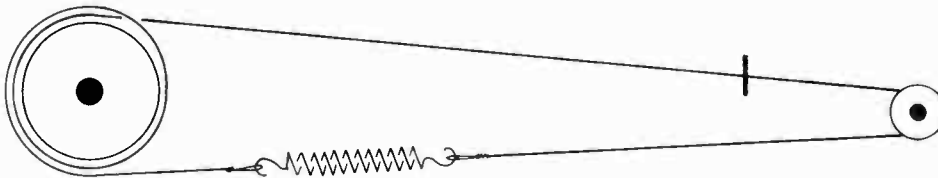
Suggested Alignment Tools:

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

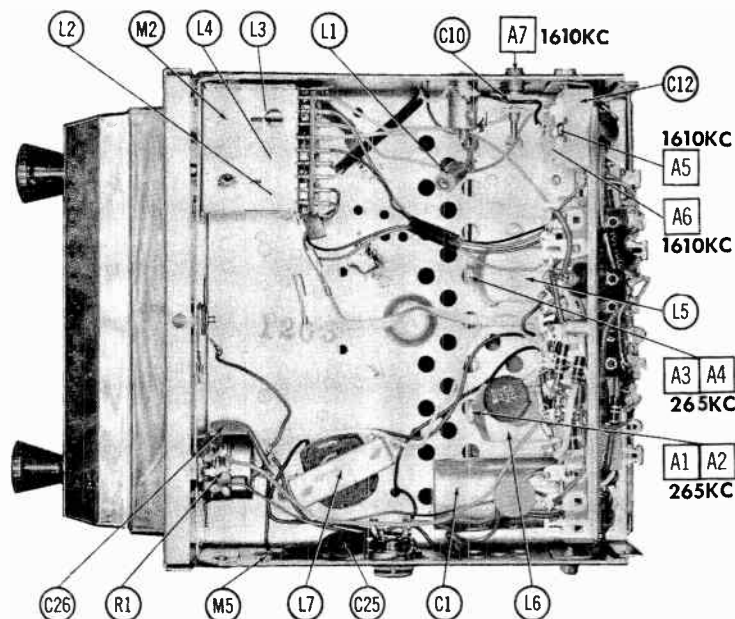
	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1.	High side thru .1mf to point Δ , low side to ground.	265KC (400v Mod.)	High Freq. End Stop.	Output Meter across voice coil.	A1, A2, A3, A4	Adjust for maximum.
2.	High side thru 82mmf to antenna receptacle, 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.

DIAL CORD STRINGING



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



CHASSIS—TOP VIEW

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	6-60	RF Amp.	DS-25	GE-1	2N1637	PNP
X2	6-61	Converter	DS-25	GE-1	2N1639	PNP
X3	6-62	IF Amp.	DS-25	GE-1	2N1638	PNP
X4	6-63	AF Amp.	DS-26	GE-2	2N591	PNP
X5	6-63	Emitter Follower	DS-26	GE-2	2N591	PNP
X6	8P404	Output	DS-503	GE-3	2N176	PNP (Note 1)

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

ELECTROLYTIC CAPACITORS

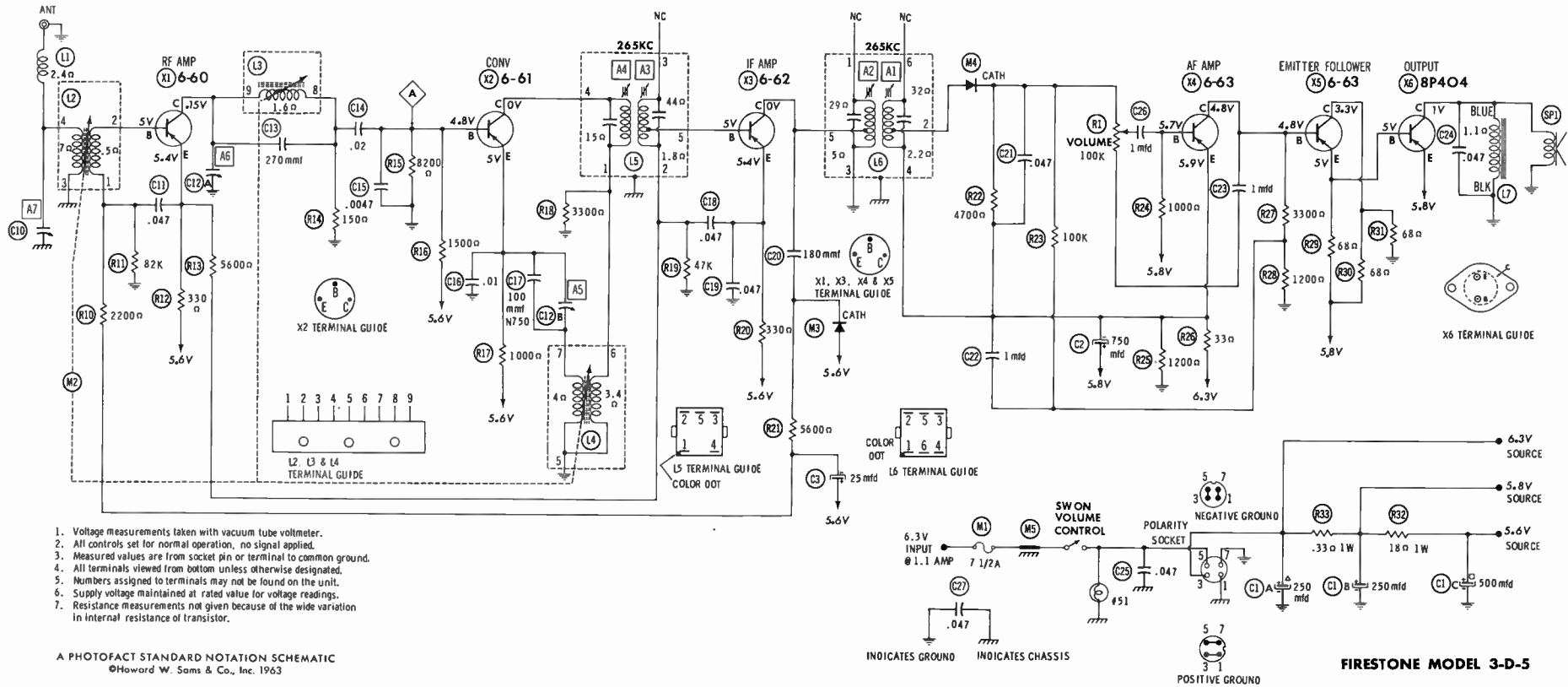
ITEM No.	RATING		FIRESTONE PART No.	REPLACEMENT DATA					
	CAP.	VOLT.		AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	GENERAL INSTRUMENT PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A	250	15	20-328	PWH3-00-94		XC3-48.1		PWP300.4A	PCL-3026.6
C1B	250	15							
C1C	500	15							
C2	750	3				BL2211			
C3	25	15		PTT69	NLW25-15	MT1-14	TD-25-25	TT15X25	TE-1157.1

FIXED CAPACITORS

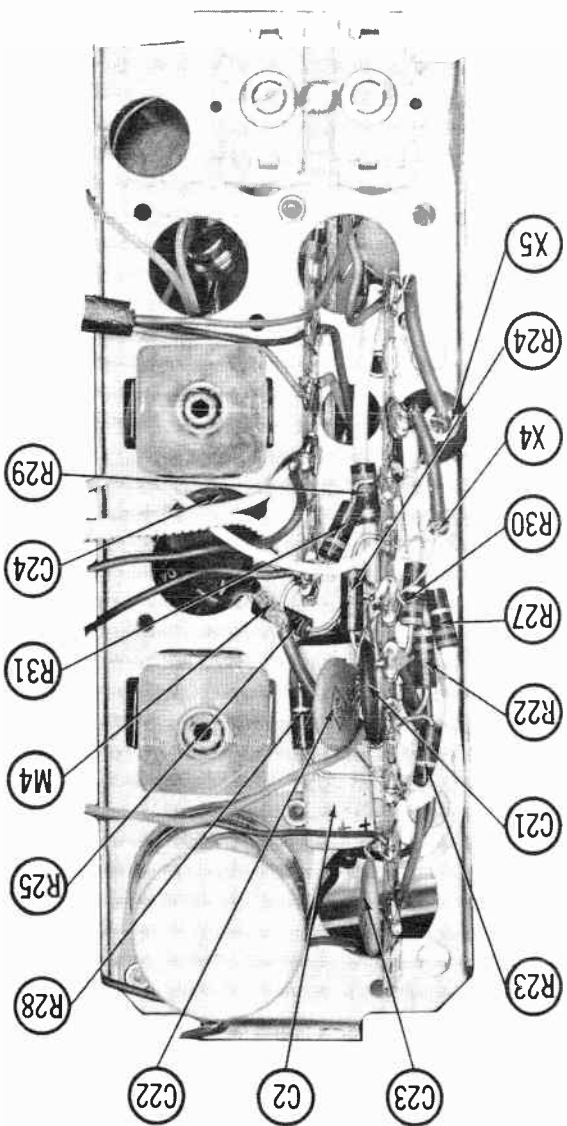
ITEM No.	RATING	REMARKS	REPLACEMENT DATA						
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.	
C10		#20-800-2L							
C11	.047	#28A1332							HY-310
C12A									
C13	270		1459-00027	DD-271	5R5T27	CCD-271	GP327	5GA-T27	
C14	.02		TTD-02	CK-203	H05S2		TA-120	TG-S20	
C15	.0047		BPD-0047	DD-472	BYA10D47	CCD-472	B-247	5HK-D47	
C16	.01		TTD-01	CK-103	H05S1		TA-110	TG-S10	
C17	100 N750		N750-D1 100	DTN-100	C10TIU	CC TN-101	CN7-310	10TCU-T10	
C18	.047							HY-310	
C19	.047							HY-310	
C20	180		1459-00018	DD-181	22R5T18	CCD-181	GP318	5GA-T18	
C21	.047							HY-310	
C22	1mfd			UK-105	HCC3105P			HY-135	
C23	1mfd			UK-105	HCC3105P			HY-135	
C24	.047							HY-310	
C25	.047							HY-310	
C26	1mfd			UK-105	HCC3105P			HY-135	
C27	.047							HY-310	

Firestone Part Number.

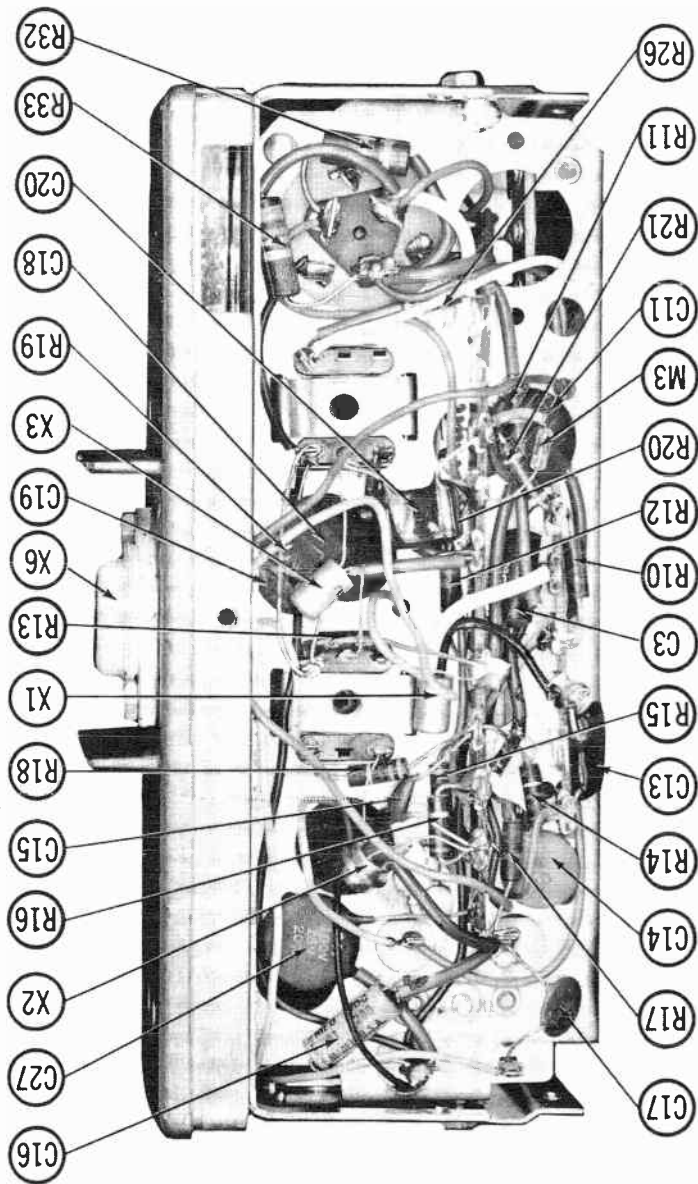
(PARTS LIST CONTINUED)



SUBCHASSIS-TOP VIEW



CHASSIS-END VIEW



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				
			FIRESTONE PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1	Volume & Switch	100K	80A2161				

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		FIRESTONE PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	RF Choke (6.2uh)	14-6, 2	BC-565	4610	RTC-852	T859	① Part of M2
L2	Ant.	①					
L3	RF	①					
L4	Osc.	①					
L5	Input IF	14-274					
L6	Output IF	14-275					

CHOKE (AUDIO OUTPUT)

ITEM No.	INDUCTANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC.	FIRESTONE PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L7	13MH		75A2057					

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		FIRESTONE PART No.	QUAM PART No.	
SP1	5" PM 6-8Ω	73A2163	5A0527.4	

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			FIRESTONE PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M1	SFE	7½A		12-1921B	30707.5 (SFE 7½A)	15507.5A	SFE 7½	HDH

MISCELLANEOUS

ITEM No.	PART NAME	FIRESTONE PART No.	NOTES
M2	Tuner	78A2160	
M3	AVC Det.		
M4	Audio Det.		
M5	Spark Plate		

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
Knob - Tuning, Volume	47B319-1		

WIRING DATA

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



PHOTOFACT®

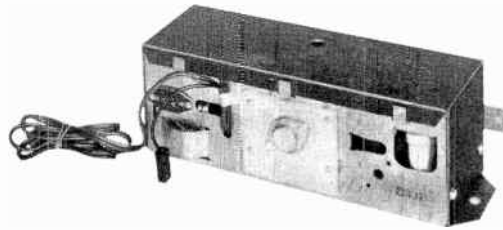
TRADE NAME : Ford (or) Mercury Model RV2F
(C20Z-18875-C) 1962 Fords or Mercurys

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

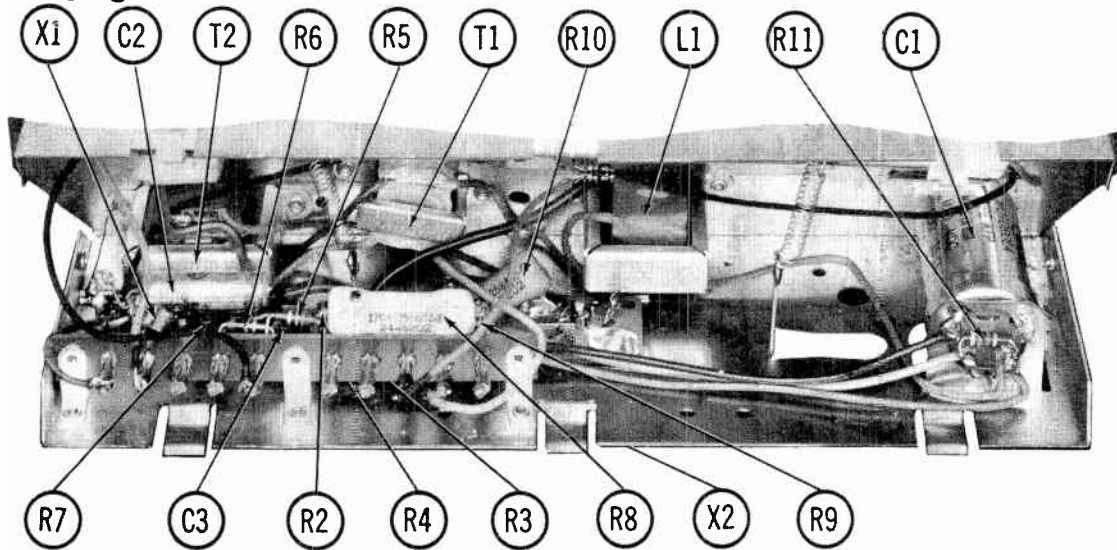
TYPE SET : 2 Transistor Automobile Reverb. Unit.

POWER SUPPLY : 12 Volt Storage Battery

RATING : .4 Amp. @12.6 Volts DC



2N573



2N176

FORD or MERCURY MODEL RV2F

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 X2	2N573 2N176	Driver Output	DS-26 DS-520	GE-2 GE-3	2N591 2N301	PNP PNP (Note 1)

Note 1. When replacing, apply silicone grease (Part #11M490487) to both sides of insulator. Tighten mounting screws securely.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	MOTOROLA PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	PYRAMID PART No.	SPRAGUE PART No.
C1A B C2	500 500 100	16 16 16	23C41361A01	PWH2-02-40		XC3-48	WP200, 6		TVLS-2157*
			23K565157 ①	PTT86	NLW100-25	MT1-20	TT25X100	TD-100-25	TE-1211

① C2 may be part of C1 in some versions.

* 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.
C3	.1 100V		P488N-1	DD-104	CUB4P1	4DP-3-104	GEM-401	4TM-P10

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	100Ω	18C41269A02				

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
R2 R3 R8	10Ω 1W 1800Ω 75Ω 10%			Note 1 Note 1 Note 2	R9 R10	3, 3Ω .5Ω 5%			Note 1 Note 3

Note 1. Value may vary. Replace with same value as original.
Note 2. Positive Temp. Comp. Motorola Part #17C40259A02.
Note 3. Positive Temp. Comp. Motorola Part #17C40258A03.

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.	
L1	.400A	1Ω	10MH	25C40474A03					

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO	REPLACEMENT DATA					NOTES
		MOTOROLA PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	11	1	25C41272A01				

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
			MOTOROLA PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T2	18Ω	6-8Ω	25C41271A01					

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MOTOROLA PART No.	QUAM PART No.	
SP1	6" x 9" PM 6-8Ω	1D41298A01	69A1S28	

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			MOTOROLA PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M1	SFE	7½A	65R122346	9C41095A03	30707.5 (SFE 7½A)	155009	SFE 7½	HRE

MISCELLANEOUS

ITEM No.	PART NAME	MOTOROLA PART No.	NOTES
M2	Reverberation Unit	1C41208A01	Complete, Less Suspension Springs & Cushion Pads

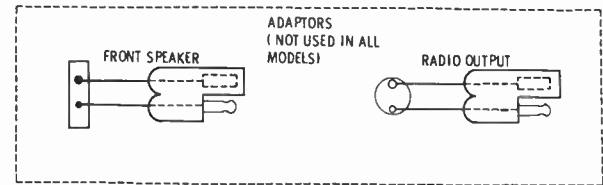
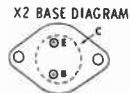
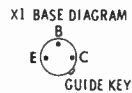
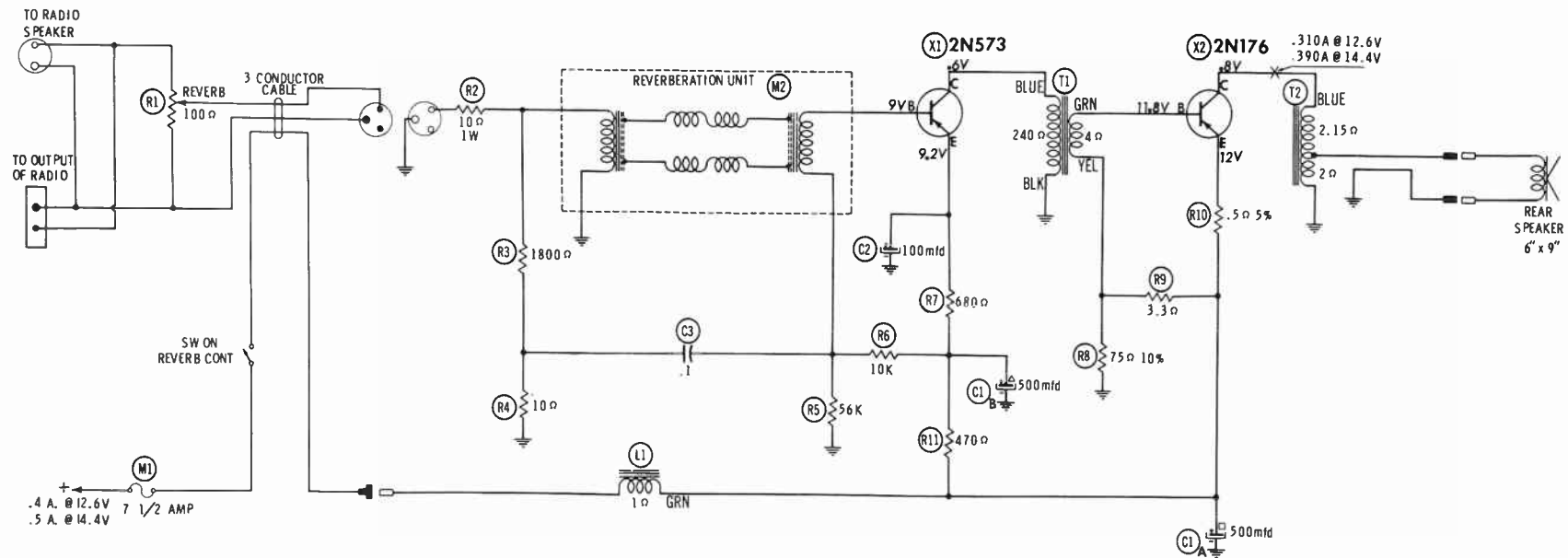
CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
Knob, Reverb	36B40072A01		

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.)



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
 ©Howard W. Soms & Co., Inc. 1963

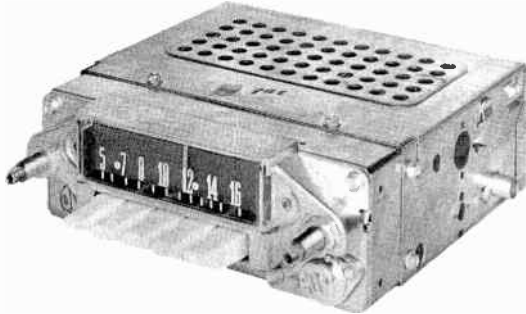
FORD or MERCURY MODEL RV2F

FORD or MERCURY MODEL RV2F



PHOTOFACT[®] with

CIRCUITRACE[®]



TRADE NAME : 1962 FORD MODEL
2TBO (C20Z-18805B) for Fairlanes

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

TYPE SET : 6 Transistor Custom-Built AM Receiver

POWER SUPPLY : 12 Volt Storage Battery

RATING : .68 Amp. @12.6 Volts DC

TUNING RANGE : BROADCAST 540 - 1615KC

FORD MODEL 2TBO

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
A8, A9, A10.....GENERAL CEMENT #5009, 8987, 8728A
WALSCO #2531X, 2536

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1.	High side thru .1mfd to point Δ , low side to ground.	262.5KC (400% Mod.)	High Freq. End Stop.	Output Meter across voice coil.	A1, A2, A3, A4	Adjust for maximum.
2.	Thru dummy (Fig. 1) to antenna receptacle.	1615KC	"	"	A5, A6, A7	"
Step 3 is not necessary unless tuner has been tampered with or associated components have been replaced. IF necessary, back tuning cores (A8, A9, A10) out of coils but not out of forms. Repeat step 2.						
3.	Thru dummy (Fig. 1) to antenna receptacle.	1000KC	Tune to Signal.	Output Meter across voice coil.	A8, A9, A10	Adjust for maximum. Repeat steps 2 & 3 until no further improvement is noted.
With radio installed in car and antenna fully extended, tune in a weak station near 1000KC and adjust A7 for maximum output.						

REMOVAL INSTRUCTIONS

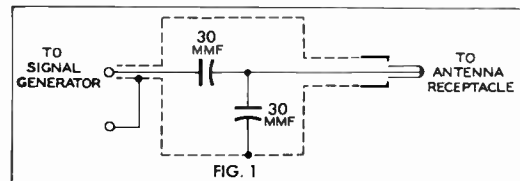
NOTE To replace transistors, remove radio.

RADIO

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

SPEAKER

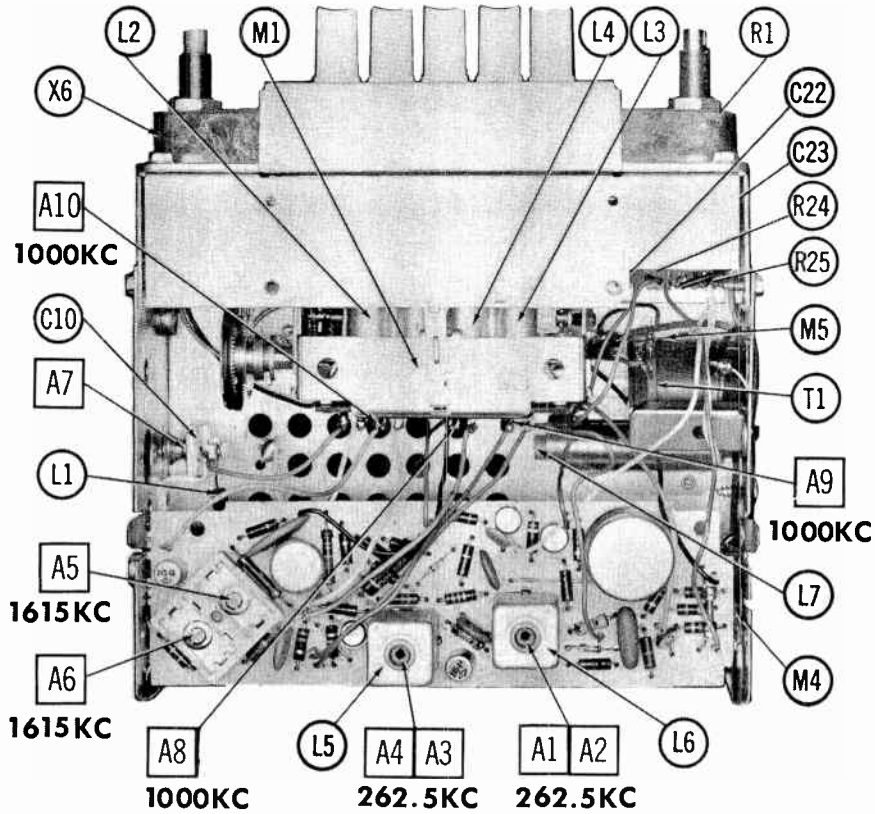
1. Remove 2 Phillips screws on defroster & speaker cover on top of instrument panel.
2. Use 3/8" wrench and remove 2 metal screws. Lift speaker out the top of the instrument panel.



PUSH-BUTTON ADJUSTMENT

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

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



CHASSIS—TOP VIEW

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. 8681 (3/8 In.) or 8670 (3/4 In.)

TRANSISTORS

ITEM No.	BENDIX PART No.	USE	REPLACEMENT DATA			NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	
X1	2091241-15	RF Amplifier	DS-25	GE-1	2N1837	PNP
X2	2091241-13	Converter	DS-25	GE-1	2N1839	PNP
X3	2091241-14	IF Amplifier	DS-25	GE-1	2N1838	PNP
X4	2090924-8	AF Amplifier	DS-26	GE-2	2N591	PNP
X5	2091280-3	AF Amplifier		GE-8		PNP
X8	2091859-8	Output	DS-503	GE-3	2N301	PNP (Note 1)

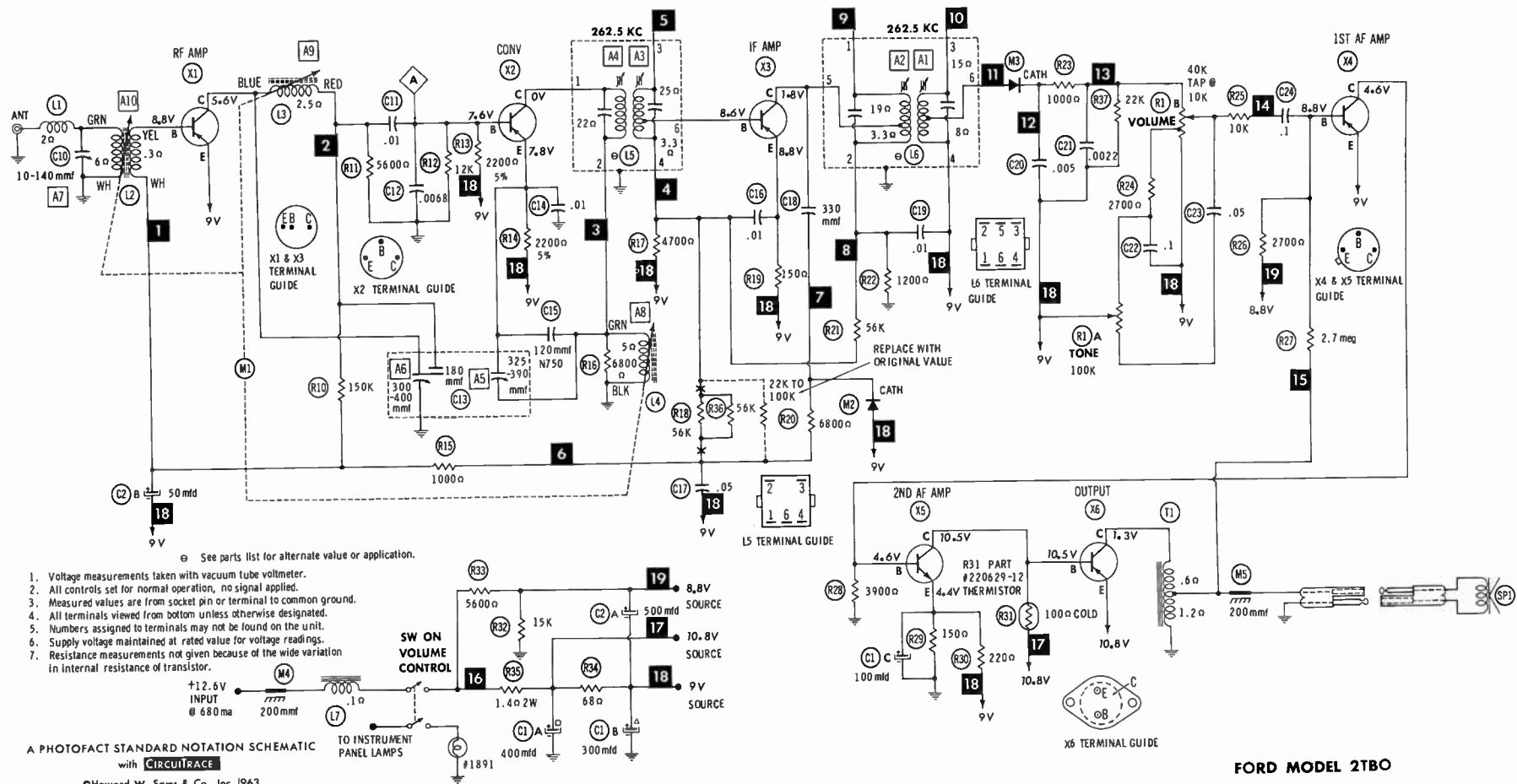
Note 1. When replacing, apply silicone grease to both sides of insulator. Tighten mounting screws securely.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	BENDIX PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	GENERAL INSTRUMENT PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A	400	16	2091503-5	BCD3X50500		XC3-48.1			PCL5-3020.5*
B	300	16							
C	100	8							
C2A	500	3	2092246-1						
B	50	3							

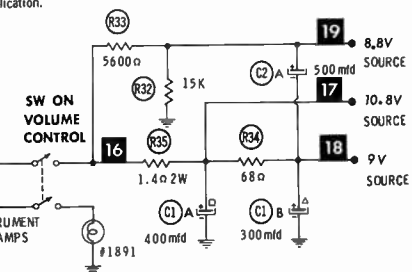
* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

(PARTS LIST CONTINUED)



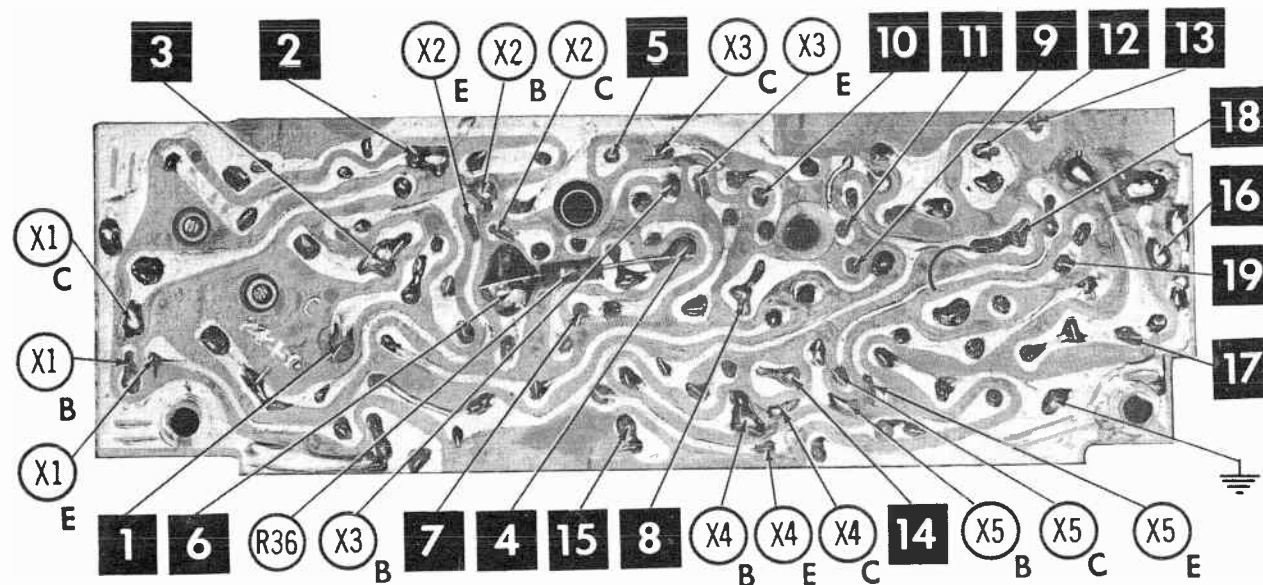
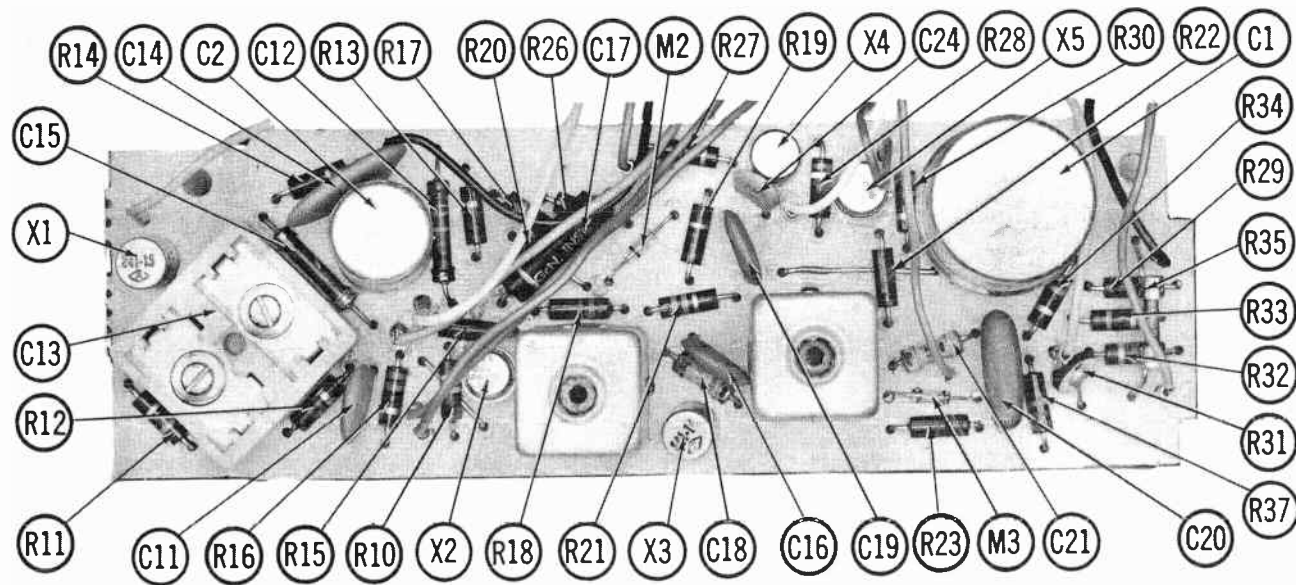
See parts list for alternate value or application.

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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FORD MODEL 2TBO



PRINTED BOARD

B-BASE
E-EMITTER
C-COLLECTOR

A Howard W. Sams
CIRCUITRACE™ Photo

PARTS LIST AND DESCRIPTION (CONTINUED)

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

FIXED CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA						
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.	
C10	10-140	#2091504-4							
C11	.01	} #219092-25	TTD-01	CK-103	H05S1		TA-110	TG-S10	
C12	.0068		SI 6800	D6-682	DFMS6D68	1DP-1-682	GEM-6268	30GA-D68	
C13A	300-400								
C13B	180								
C13C	325-390								
C14	.01			TTD-01	CK-103	H05S1		TA-110	TG-S10
C15	120 N750			N750-S1 120	TCN-120	C10T12U	CCTN-121	CN7-312	10TCU-T12
C16	.01			TTD-01	CK-103	H05S1		TA-110	TG-S10
C17	.05			TTD-05	CK-503	H05S5		TA-150	TG-S50
C18	330			DI-330	DD-331	L10T33	CCD-331	GP333	10TS-T33
C19	.01			TTD-01	CK-103	H05S1		TA-110	TG-S10
C20	.005			TTD-005	CK-502	H05D5		TA-250	TG-D50
C21	.0022				DM-202				
C22	.1			TTD-1	CK-104	H05P1		TA-010	TG-P10
C23	.05			TTD-05	CK-503	H05S5		TA-150	TG-S50
C24	.1		TTD-1	CK-104	H05P1		TA-010	TG-P10	

Bendix Part Number.

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.
RIA B	Tone Volume & Switch	100K 40K Tap @ 10K	2092097-2				

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		BENDIX PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	RF Choke (9uh)	2092210-4	BC-566	4612	RTC-8522	T860	
L2	Ant.	⓪					
L3	RF	⓪					
L4	Osc.	⓪					
L5	Input IF	2092202-2(or -3)					
L6	Output IF	2092203-2(or -3)					
L7	"A" Lead Choke (1.2MH)	2092050-8					

⓪ Part of M1 or tuner coil assembly Part #2090131-44 (RCC) or Part #2090131-45 (GIC).

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			2092138-2				TR-164	

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		BENDIX PART No.	QUAM PART No.	
SP1	5" x 7" PM 6-8Ω	2092051-1		

MISCELLANEOUS

ITEM No.	PART NAME	BENDIX PART No.	NOTES
M1	Tuner (RCC)	2092453-7	
	Tuner (GIC)	2092453-3	
M2	AVC Detector	2092055-1	
M3	AF Detector	2092055-1	
M4	Spark Plate	220267-25	(185mmf)
M5	Spark Plate	220267-21	(200mmf)
	Printed Board	2092452-1 (or -4)	Includes Transistors
	Printed Board	2092451-2	Volume-Tone

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA						
			BENDIX PART No.		LITTELFUSE PART No.		BUSS PART No.		
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER	
	SFE	7½			30707.5 (SFE 7½A)			SFE 7½	

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
Dial Glass	2092002-2	Knob - Tone, Dummy	2092036-1
Knob - Tuning, Volume	2092034-1		



PHOTOFACT[®] with

CIRCUITRACE[®]

TRADE NAME : 1963 FORD MODELS
 3TBD (C3DZ-18805) Falcons
 3TBO (C3OZ-18805) Fairlanes

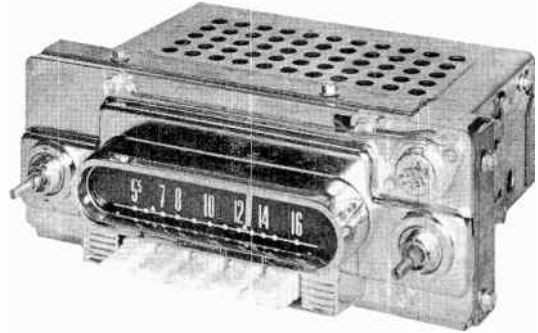
SUPPLIER : The Bendix Corp., Bendix Radio Div.,
 Baltimore 4, Maryland

TYPE SET : 6 Transistor Custom-Built AM Receiver

POWER SUPPLY : 12 Volt Storage Battery

RATING : .68 Amp. @ 12.6 Volts DC

TUNING RANGE: BROADCAST 540 — 1620KC



ALIGNMENT INSTRUCTIONS

Check for specified source voltage.

Use only enough generator output to provide a usable indication.

Suggested Alignment Tools: A1, A2, A3, A4... GENERAL CEMENT #8606, 8606L, 8869
 WALSCO #2543, 2544, 2588
 A6, A7... GENERAL CEMENT #9087, 8290, 8868
 WALSCO #2525, 2528, 2587
 A8, A9, A10... GENERAL CEMENT #5009, 8987, 8728A
 WALSCO #2531X, 2536

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1.	High side thru .1mf to point A , low side to ground.	262.5KC (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.	1615KC	"	"	A5, A6, A7	"
Step 3 is not necessary unless tuner has been tampered with or associated components have been replaced. IF necessary, back tuning cores (A8, A9, A10) out of coils but not out of forms. Repeat step 2.						
3.	Thru dummy (Fig. 1) to antenna receptacle.	1000KC	Tune to Signal.	Output Meter across voice coil.	A8, A9, A10	Adjust for maximum. Repeat steps 2 & 3 until no further improvement is noted.

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

REMOVAL INSTRUCTIONS

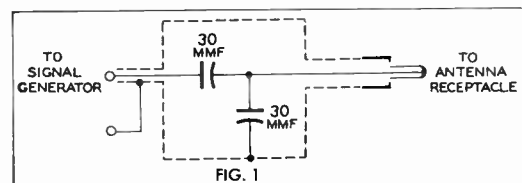
NOTE: To replace transistors, remove radio.

RADIO

1. Remove knobs.
2. Use 9/16" wrench and remove 2 nuts from control bushings.
3. Disconnect "A" lead from fuse block, Speaker Leads, Panel Lamp Lead, and Antenna Lead.
4. Use 7/16" wrench and remove nut from rear of radio.
5. Remove radio from under instrument panel.

SPEAKER

1. Remove 2 Phillips screws on defroster & speaker cover on top of instrument panel.
2. Use 3/8" wrench and remove 2 metal screws. Lift speaker out the top of the instrument panel.

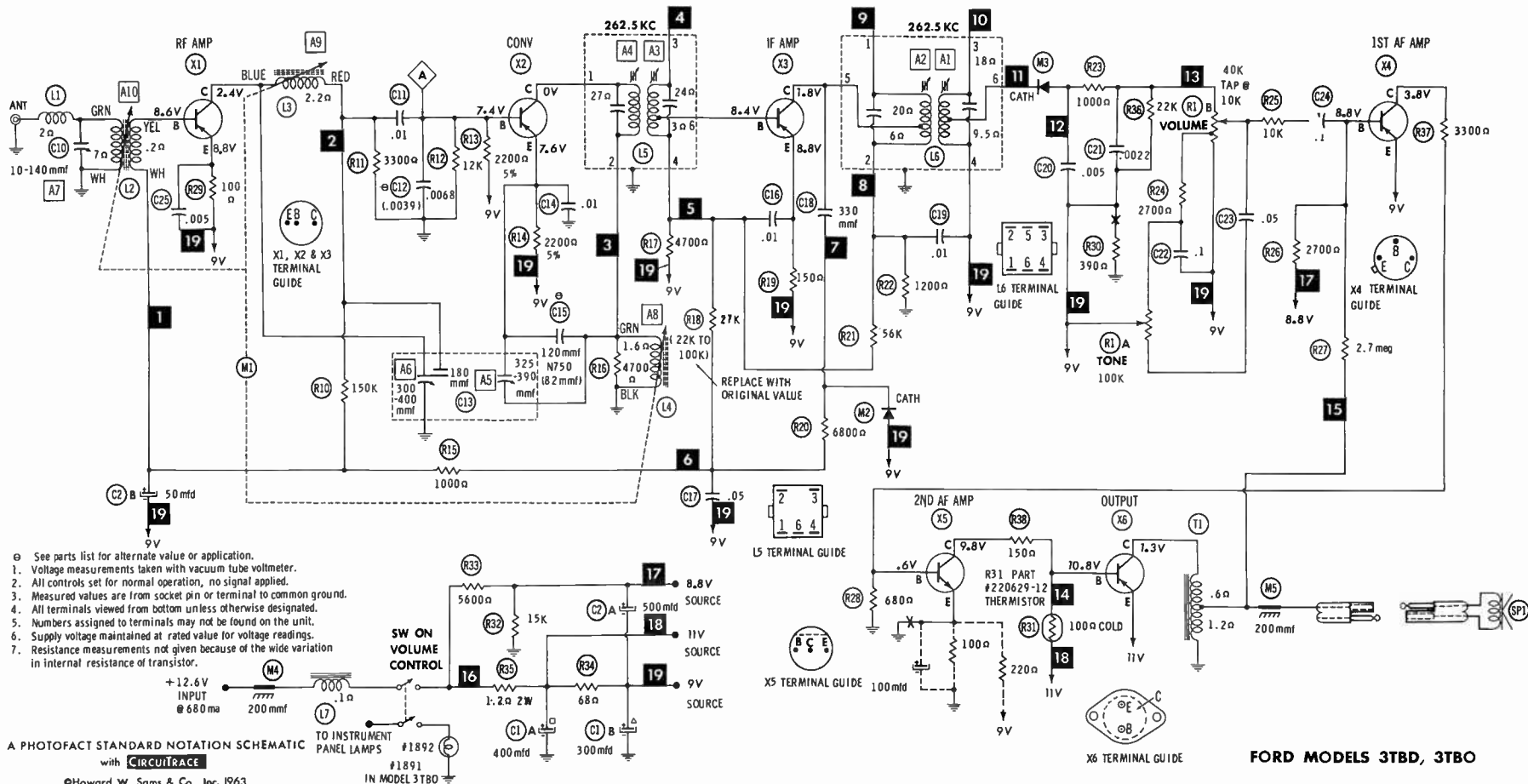


PUSH-BUTTON ADJUSTMENT

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

FORD MODELS 3TBD, 3TBO

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



A PHOTOFAC STANDARD NOTATION SCHEMATIC with CIRCUITRACE

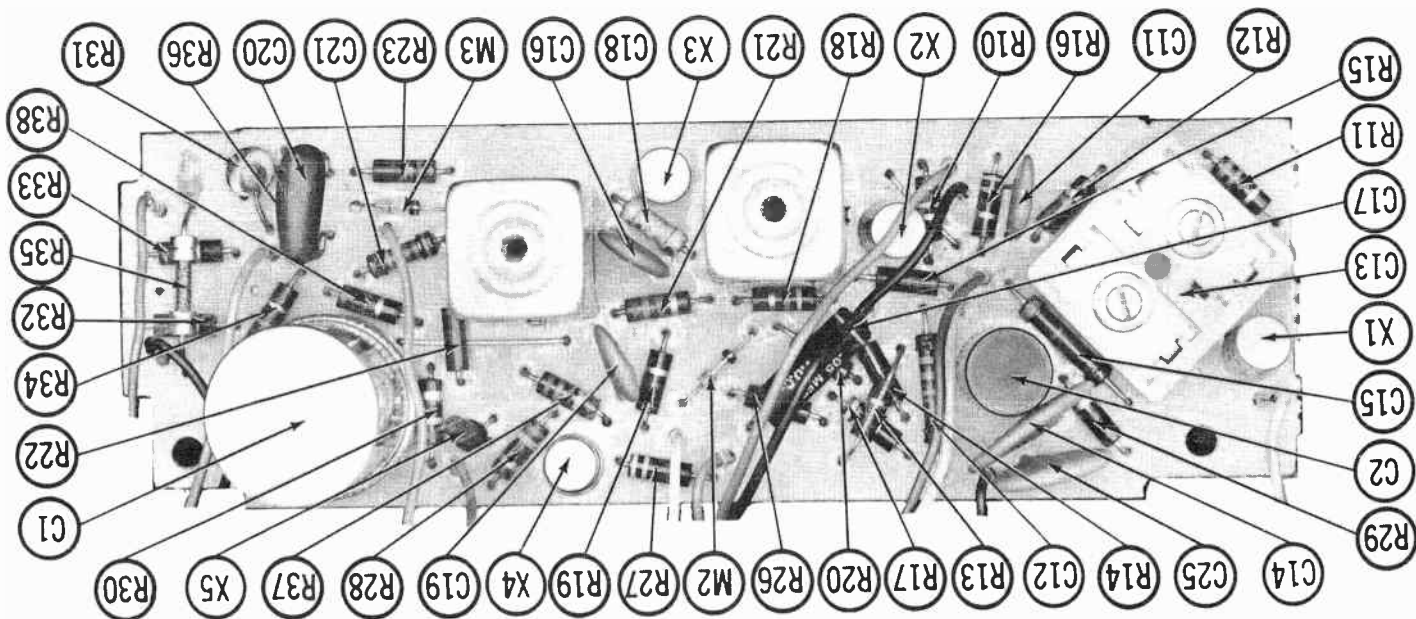
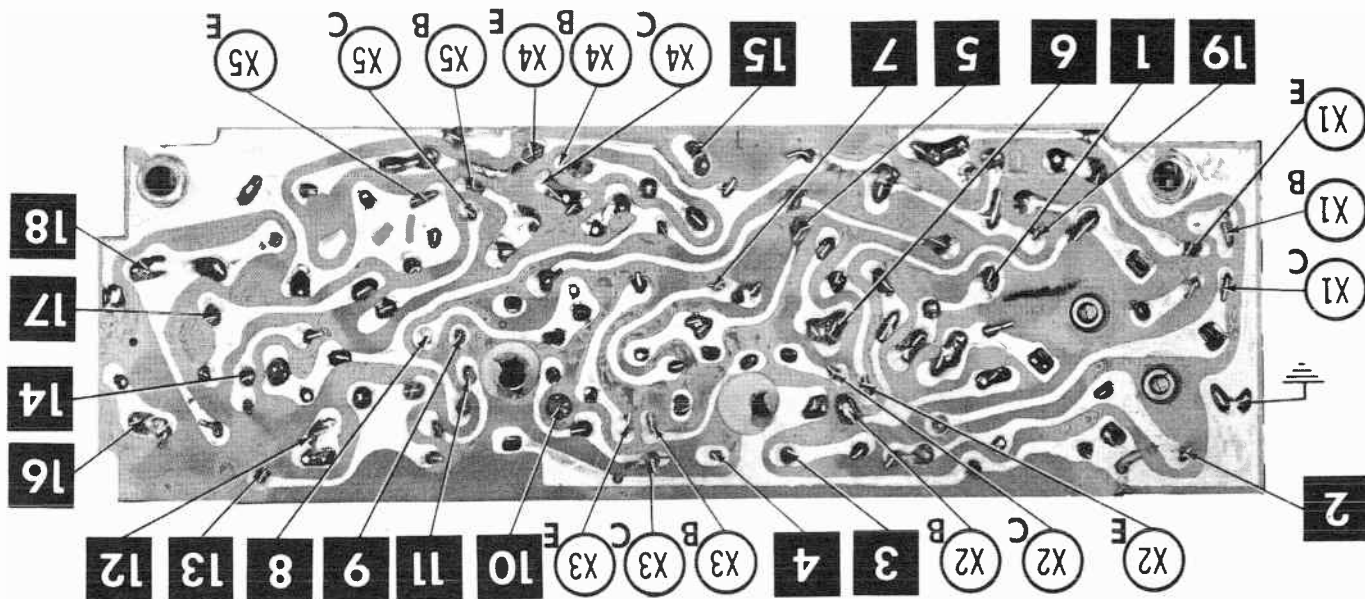
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FORD MODELS 3TBD, 3TBO

FORD MODELS 3TBD, 3TBO

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CIRCUITRACE® Photo

PRINTED BOARD
B - BASE
E - EMITTER
C - COLLECTOR



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.	BENDIX PART No.	USE	REPLACEMENT DATA			NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	
X1	2091241-5A	RF Amplifier	DS-25	GE-1	2N1837	PNP
X2	2091241-13	Conv.	DS-25	GE-1	2N1839	PNP
X3	2091241-14	IF Amplifier	DS-25	GE-1	2N1838	PNP
X4	2090924-8A	AF Amplifier	DS-26	GE-2	2N591	PNP
X5	2091260-3	AF Amplifier		GE-8		NPN
X6	2091859-8	Output	DS-503	GE-3	2N301	PNP (Note 1)

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

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.	GENERAL INSTRUMENT PART No.	MALLORY PART No.	
C1A	400	16	2091503-7 ①						TVLS-2174 *
B	300	16							
C2A	500	3		2092246-1	BCD3X50500				
B	50	3							

* Not normally in distributor's stock. Available thru distributor on order to manufacturer.
① Some versions may use Part #2091503-5 (400-300-100mmf, 16-16-8V).

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	10-140	#219083-9①							
C11	.01		TTD-01	CK-103	H05S1		TA-110	TG-S10	
C12	.0068	(.0039) †	SI 6800	D6-682	DPMS6D68	IDP-1-682	GEM-6268	30GA-D68	
C13A	300-400	#219092-25②							
B	180								
C	325-390								
C14	.01		TTD-01	CK-103	H05S1		TA-110	TG-S10	
C15	120 N750	(82) †	N750-SI 120	TCN-120	C10T12U	CCTN-121	CN7-312	10TCU-T12	
C16	.01		TTD-01	CK-103	H05S1		TA-110	TG-S10	
C17	.05		TTD-05	CK-503	H05S5		TA-150	TG-S50	
C18	330		DI-330	DD-331	L10T33	CCD-331	GP333	10TS-T33	
C19	.01		TTD-01	CK-103	H05S1		TA-110	TG-S10	
C20	.005		TTD-005	CK-502	H05D5		TA-250	TG-D50	
C21	.0022			DM-202					
C22	.1		TTD-1	CK-104	H05P1		TA-010	TG-P10	
C23	.05		TTD-05	CK-503	H05S5		TA-150	TG-S50	
C24	.1		TTD-1	CK-104	H05P1		TA-010	TG-P10	
C25	.005		TTD-005	CK-502	H05D5		TA-250	TG-D50	

① Part #2091504-2 (5-80) used in Model 3TBO. # Bendix Part Number.
② Part #219092-28 used in Model 3TBO. † Alternate 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.
RIA	Tone	100K	2091619-3①				
B	Volume & Switch	40K Tap @ 10K					

① Part #2092097-4 used in Model 3TBO.

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		BENDIX PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	RF Choke (9uh)	2092210-4	BC-566	4612	RTC-8522	T860	
L2	Ant.	①					
L3	RF	①					
L4	Osc.	①					
L5	Input IF	2092202-4 ②					
L6	Output IF	2092203-4 ③					
L7	"A" Lead Choke (1.2 MH)	2092050-8					

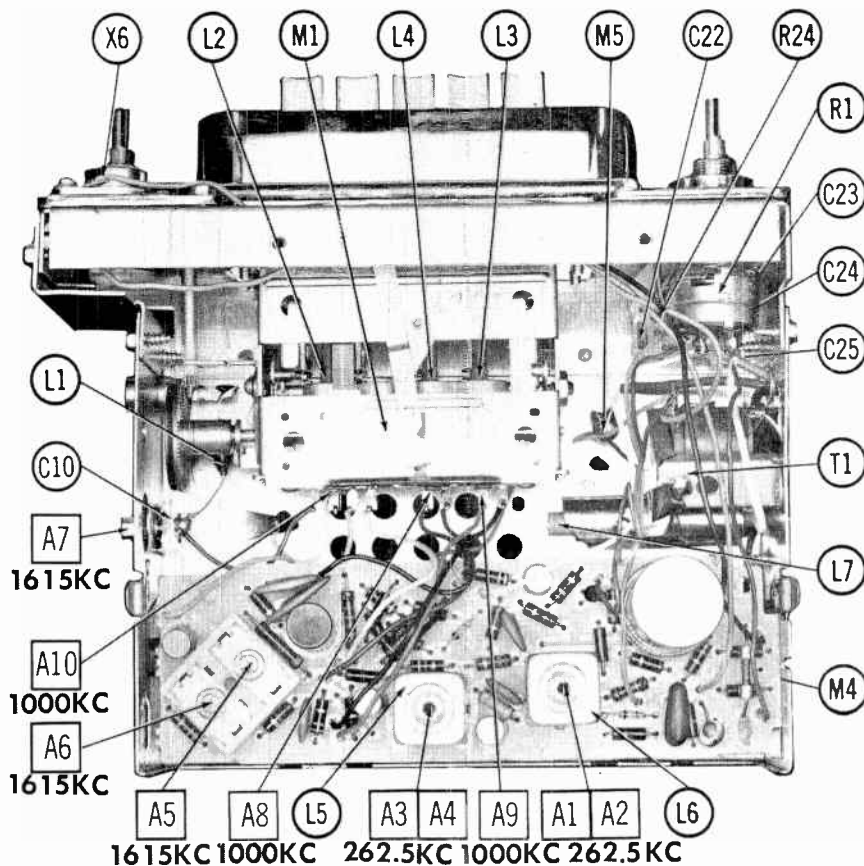
① Part of M1 or coil assembly Part #2090131-49 (RCC) or Part #2090131-50 (GIC)
② Part #2092202-5 used in Model 3TBO.
③ Part #2092203-5 used in Model 3TBO.

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE	REPLACEMENT DATA					NOTES
		BENDIX PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	12Ω Tap @ 8Ω	2092138-2			TR-164		

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		BENDIX PART No.	QUAM PART No.	
SP1	5" x 7" PM 8Ω	2091856-1		Part #2092051-1 used in Model 3TBO.



CHASSIS—TOP VIEW

PARTS LIST AND DESCRIPTION (CONTINUED)

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

MISCELLANEOUS

ITEM No.	PART NAME	BENDIX PART No.	NOTES
M1	Tuner (RCC) Tuner (GIC) Tuner (RCC) Tuner (GIC)	2092453-20 2092453-18 2092453-18 2092453-14	Model 3TBD Model 3TBD Model 3TBO Model 3TBO
M2	AVC Det.	2092055-1	
M3	AF Det.	2092055-1	
M4	Spark Plate	220267-25	185mmf
M5	Spark Plate	220267-21	200mmf
	Printed Board	2092496-5	Model 3TBD. Includes Transistors
	Printed Board	2092451-2	Model 3TBD. Volume-Tone
	Printed Board	2092496-1	Model 3TBO. Includes Transistors
	Printed Board	2092451-2	Model 3TBO. Volume-Tone

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			BENDIX PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
	SFE	7½A			30707.5 (SFE 7½A)		SFE 7½	

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
Dial Glass, Model 3TBD	2092#08-2	Knob - Tuning, Volume, Model 3TBO	2092034-2
Dial Glass, Model 3TBO	2092#02-2	Knob - Tone, Model 3TBD	2090411-1
Knob - Tuning, Volume, Model 3TBD	2090413-4	Knob - Tone, Model 3TBO	2092036-1

WIRING DATA

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



PHOTOFACT[®] with

CIRCUITRACE[®]



TRADE NAME : MoPar Models 214 (3BVE), 215 (3BLE)
 SUPPLIER : The Bendix Corp., Bendix Radio Div.,
 Baltimore 4, Maryland
 TYPE SET : 6 Transistor Receiver
 POWER SUPPLY : 12 Volt Storage Battery
 RATING : .8 Amp. @12.6 VDC
 TUNING RANGE : BROADCAST 540 - 1615KC

ALIGNMENT INSTRUCTIONS

Check for specified source voltage.

Use only enough generator output to provide a usable indication.

Suggested Alignment Tools: A1 thru A4...GENERAL CEMENT #8606, 8606L, 8869
 WALSCO #2543, 2544, 2588
 A5, A6, A7...GENERAL CEMENT #8290, 8868, 9087
 WALSCO #2525, 2528, 2587
 A8, A9, A10.GENERAL CEMENT #5009, 8728A, 8987
 WALSCO #2531X, 2536

	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.	1615KC	"	"	A5, A6, A7	"
Step 3 is not necessary unless tuner has been tampered with or associated components have been replaced. IF necessary, back tuning cores (A8, A9, A10) out of coils but not out of forms. Repeat step 2.						
3.	Thru dummy (Fig. 1) to antenna receptacle.	1000KC	Tune to Signal.	Output Meter across voice coil.	A8, A9, A10	Adjust for maximum. Repeat steps 2 & 3 until no further improvement is noted.
With radio installed in car and antenna fully extended, tune in a weak station near 1000KC and adjust A7 for maximum output.						

REMOVAL INSTRUCTIONS

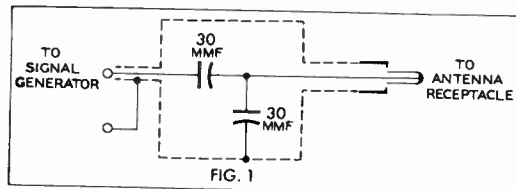
NOTE: To replace transistors, remove radio.

RADIO

1. Remove knobs.
2. Use 5/8" wrench and remove 2 nuts from control bushing. Remove bezel.
3. Disconnect "A" lead from fuse block, speaker leads, and antenna lead.
4. Remove fuse block.
5. Remove screw from rear mounting bracket.
6. Remove radio from under instrument panel.

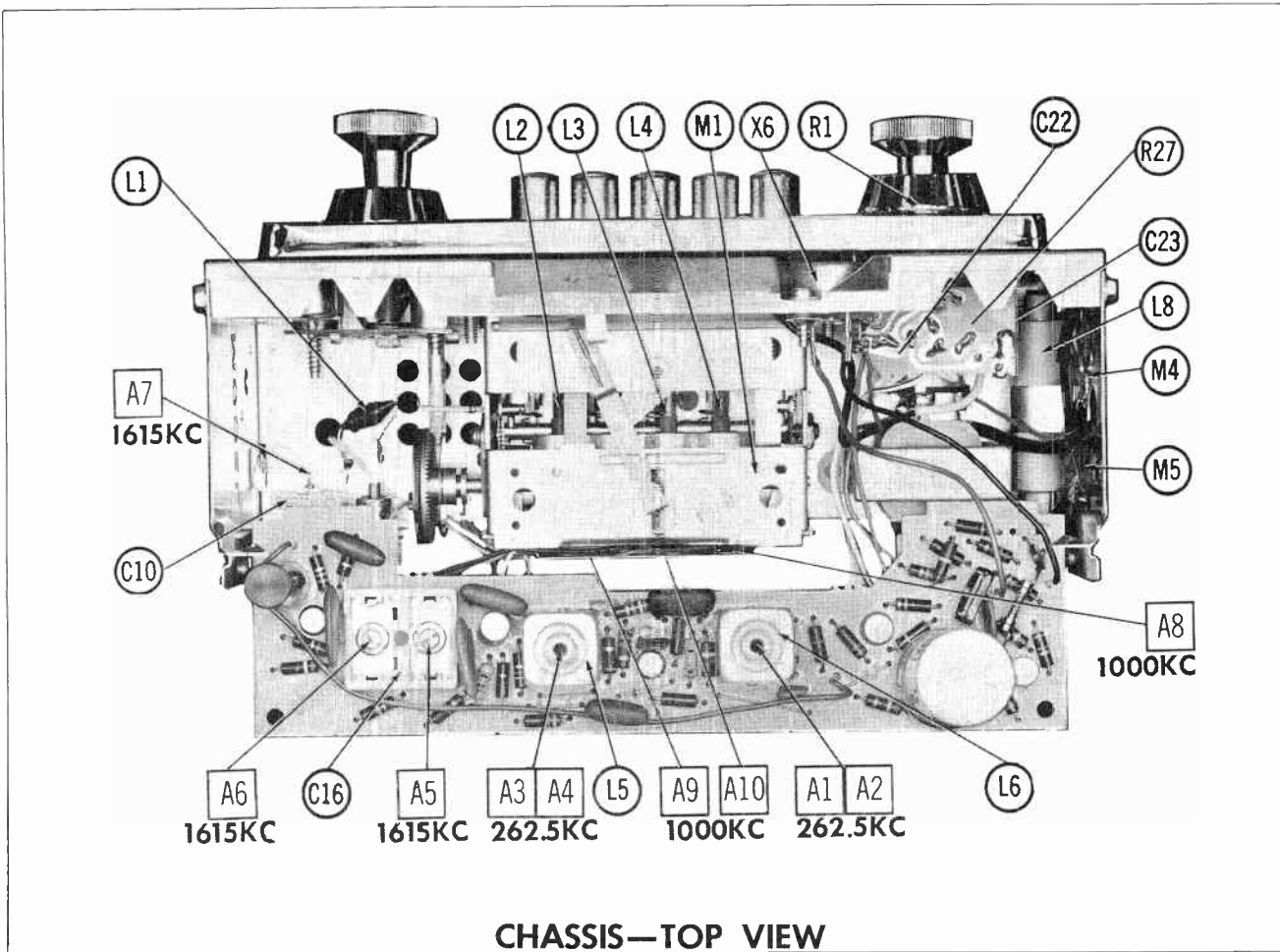
SPEAKER

1. Use 3/8" wrench and remove 2 nuts from end of mounting bracket.
2. Remove bracket and speaker.



PUSH-BUTTON ADJUSTMENT

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



CHASSIS—TOP VIEW 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.	BENDIX PART No.	USE	REPLACEMENT DATA			NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	
X1	2091241-15	RF Amplifier	DS-25	GE-1	2N1637	PNP
X2	2091241-13	Converter	DS-25	GE-1	2N1639	PNP
X3	2091241-14	IF Amplifier	DS-25	GE-1	2N1638	PNP
X4	2090924-8A	AF Amplifier	DS-26	GE-2	2N591	PNP
X5	2091260-3	AF Amplifier	DS-44	GE-8		NPN
X8	2091859-6	Output (2N1227-4)	DS-503	GE-3	2N301	PNP (Note 1)

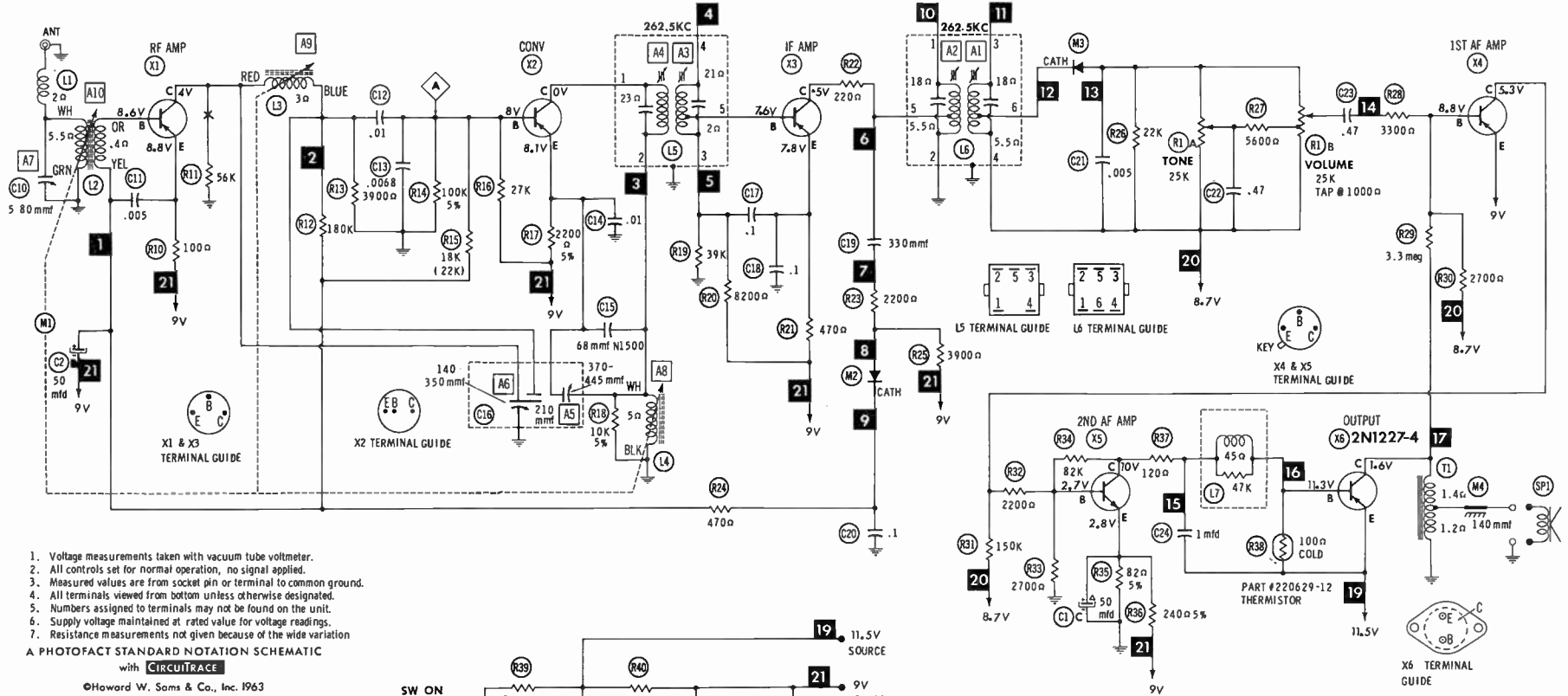
Note 1. When replacing, apply silicone grease to both sides of insulator. Tighten mounting screws securely.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	BENDIX PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	GENERAL INSTRUMENT PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A	1000	16	220353-33	BCD3X50500				WP200.18 TC29 FPA	PCLS-3026.9*
B	200	16							
C	50	16							
C2A	500	3	2092246-1						
B	50	3							

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

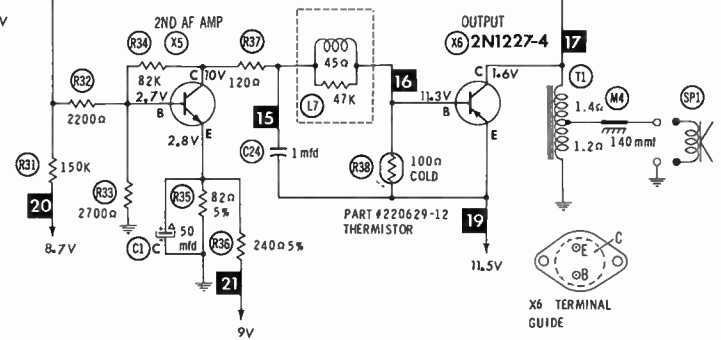
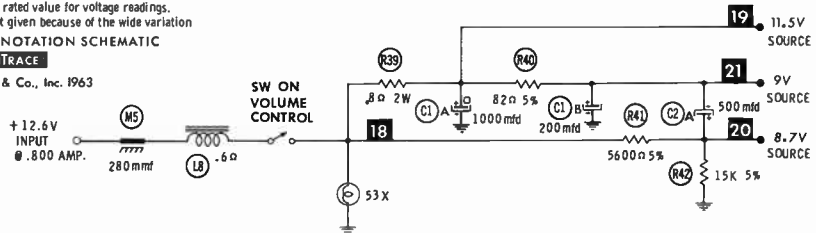
(PARTS LIST CONTINUED)



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

A PHOTOFACIT STANDARD NOTATION SCHEMATIC
with **CIRCUITRACE**

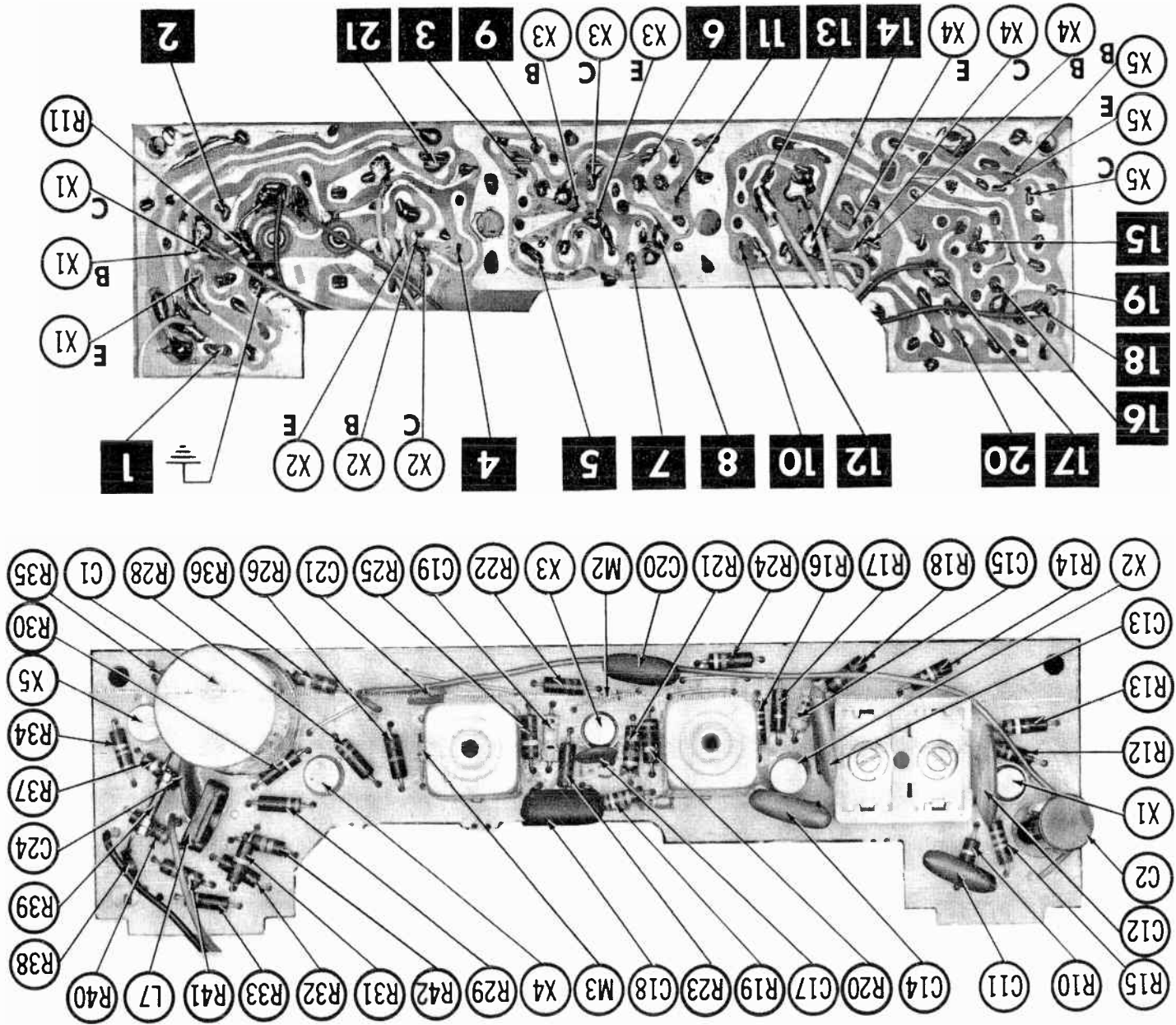
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MOPAR MODELS 214, 215

A Howard W. Sams
CIRCUITRACE® Photo

PRINTED BOARD
B - BASE
E - EMITTER
C - COLLECTOR



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	5-.80	#2091221-5	TTD-005	CK-502	H05D5	CCD-682	TA-250	TG-D50	
C11	.005		TTD-01	CK-103	H05S1		TA-110	TG-S10	
C12	.01		BPD-0068	DD-682	BYA10D68		GP268	10TS-D68	
C13	.0068		TTD-01	CK-103	H05S1		TA-110	TG-S10	
C14	.01		#2091700-30 #219092-27	TTD-1	CK-104		H05P1	TA-010	TG-P10
C15	68 N1500			TTD-1	CK-104		H05P1	TA-010	TG-P10
C16A	140-350			DI-330	DD-331		L10T33	GP333	10TS-T33
B	210			TTD-1	CK-104		H05P1	TA-010	TG-P10
C	370-445			TTD-005	CK-502		H05D5	TA-250	TG-D50
C17	.1		UK10-404	UK10-404	HCC10474Z		CCD-331	HY-330	
C18	.1	UK10-404	UK10-404	HCC10474Z	HY-330				
C19	330	UK-105	UK-105	HCC3105P	HY-135				
C20	.1								
C21	.005								
C22	.47								
C23	.47								
C24	1mfd								

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.
RIA B	Tone Volume & Switch	25K 25K Tap @ 100Ω	2091339-13				

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		BENDIX PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	RF Choke (5uh)	2092210-3	SW-631	4609	RTC-8915	T819	② Includes 47K
L2	Ant.						
L3	RF						
L4	Osc.						
L5	Input IF						
L6	Output IF						
L7	RF Choke (2MH)						
L8	"A" Lead Choke (1.9MH)						

① Part of M1 or Coil Assembly Part #2090131-53 (RCC) or #2090131 (GIC)

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE	REPLACEMENT DATA					NOTES
		BENDIX PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	12.8Ω Tap @ 3-4Ω	2092138-4					

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		BENDIX PART No.	QUAM PART No.	
SP1	6" x 9" PM 3-4Ω	2092128-1	69A2	

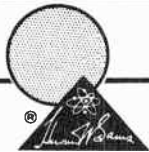
MISCELLANEOUS

ITEM No.	PART NAME	BENDIX PART No.	NOTES
M1	Tuner Assembly	2092365-6	(RCC) Complete (GIC) Complete
M2	Tuner Assembly	2092364-6	
M3	AVC Det.	2092055-1	
M4	Audio Det.	2092055-1	
M5	Spark Plate	220267-11	140mmf
	Spark Plate	220267-3	280mmf
	Printed Board	2092374-1	Includes Transistors
	Printed Board	2092208-4	Volume - Tone

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
Knob - Tuning, Volume, Model 215	2091923-1	Knob - Tone	2091934-1
Knob - Tuning, Volume, Model 214	2092115-1	Push-Button Assembly	2092712-1



PHOTOFACT[®] with

CIRCUITRACE[®]

TRADE NAME : MoPar Models 343 (R3BC) 1963 Chrysler
350 (R3BD) 1963 Dodge 880

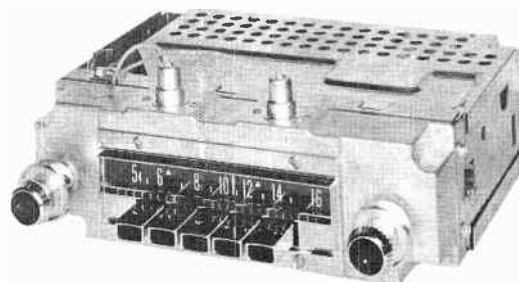
SUPPLIER : The Bendix Corp., Bendix Radio Div.,
Baltimore 4, Maryland

TYPE SET : 7 Transistor AM Receiver

POWER SUPPLY : 12 Volt Storage Battery

RATING : .12 Amp. @12.6 VDC

TUNING RANGE: BROADCAST 540 — 1615KC



ALIGNMENT INSTRUCTIONS

Check for specified source voltage.

Use only enough generator output to provide a usable indication.

Suggested Alignment Tools: A1 thru A4.... GENERAL CEMENT #8606, 8606L, 8869

WALSCO #2543, 2544, 2588

A5, A6, A7.... GENERAL CEMENT #8290, 8868, 9087

WALSCO #2525, 2528, 2587

A8, A9, A10.... GENERAL CEMENT #5009, 8228A, 8987

WALSCO #2531X, 2536

	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.	1615KC	"	"	A5, A6, A7	"
Step 3 is not necessary unless tuner has been tampered with or associated components have been replaced. IF necessary, back tuning cores (A8, A9, A10) out of coils but not out of forms. Repeat step 2.						
3.	Thru dummy (Fig. 1) to antenna receptacle.	1000KC	Tune to Signal.	Output Meter across voice coil.	A8, A9, A10	Adjust for maximum. Repeat steps 2 & 3 until no further improvement is noted.

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

REMOVAL INSTRUCTIONS

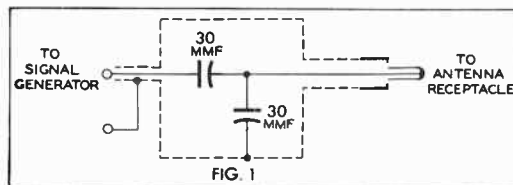
NOTE: To replace transistors, remove radio.

RADIO

1. Pull off knobs.
2. Disconnect speaker leads, "A" lead at connector, antenna plug and pilot-light lead at wiring harness.
3. Remove two 1/2" hex nuts from control bushings.
4. Remove 3/8" hex nut washer assembly from rear mount.
5. Remove receiver from rear of instrument panel.

SPEAKER

1. Remove four Phillips screws holding speaker to adapter mounted under top of instrument panel and remove speaker.

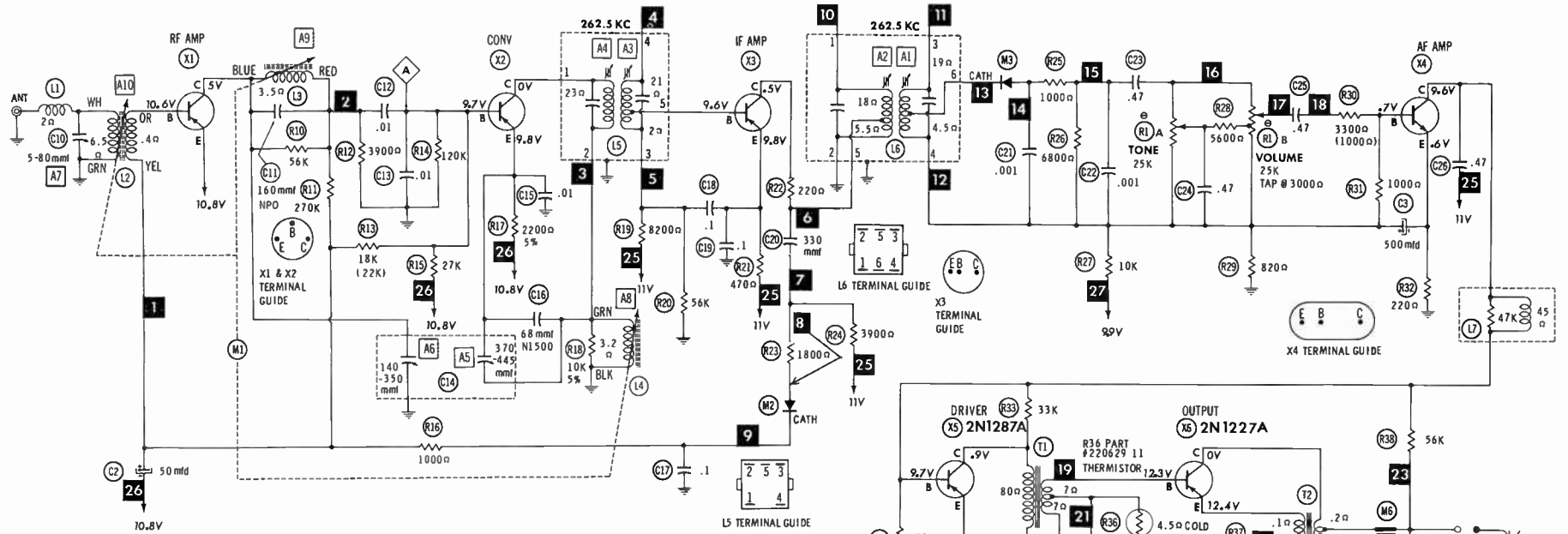


PUSH-BUTTON ADJUSTMENT

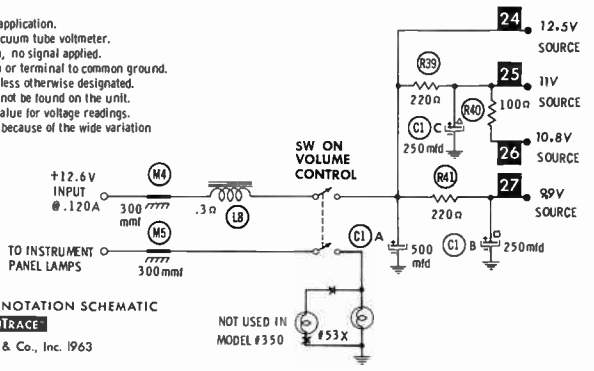
1. Pull button out.
2. Tune manually to desired station.
3. Press button in firmly.
4. Repeat for remaining buttons.

MOPAR MODELS 343, 350

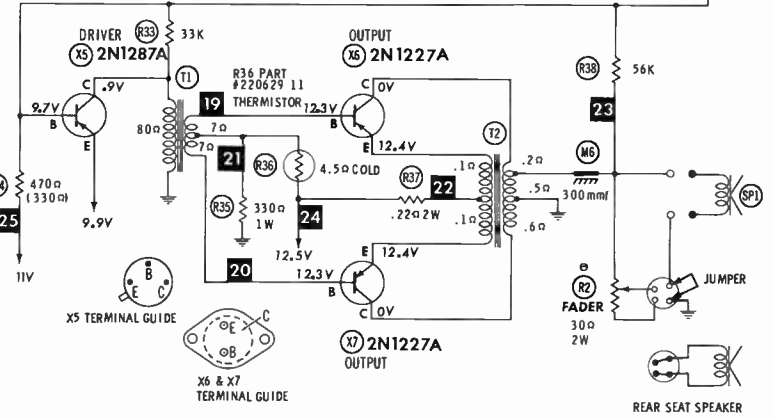
HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana



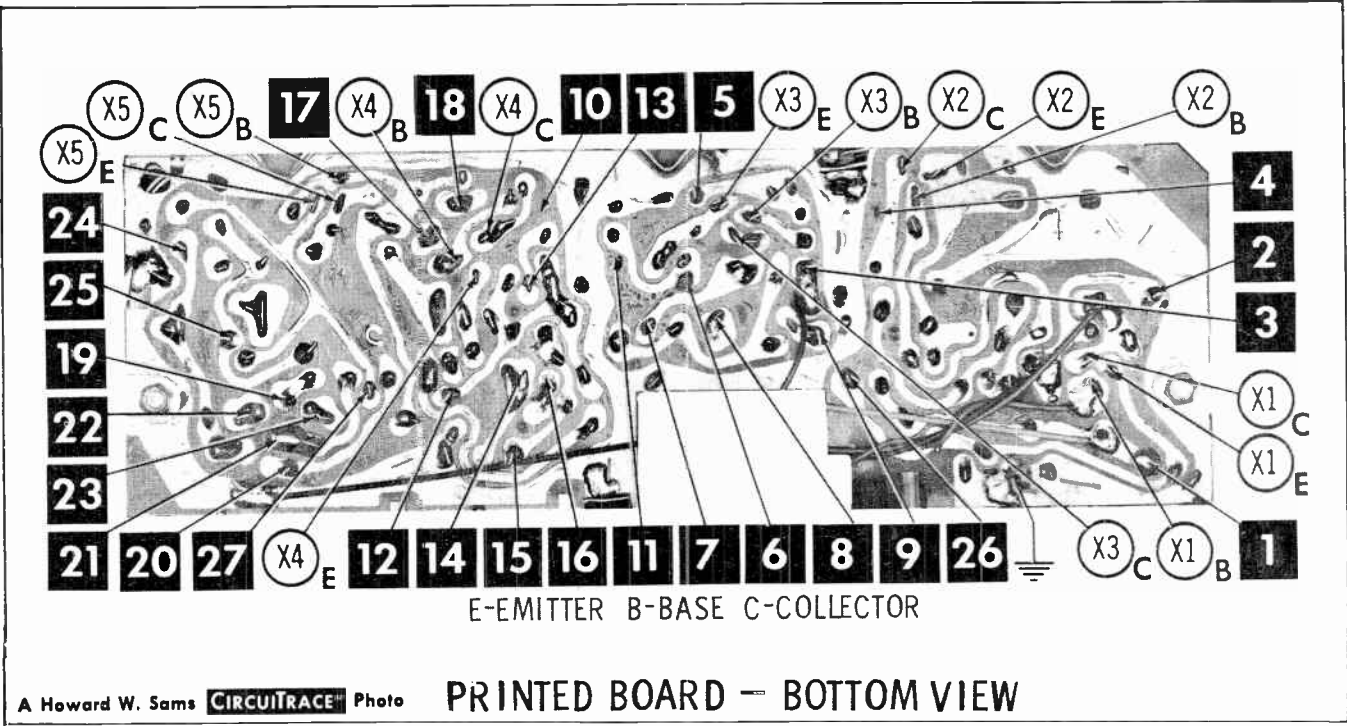
- ⊖ See parts list for alternate value or application.
- 1. Voltage measurements taken with vacuum tube voltmeter.
- 2. All controls set for normal operation, no signal applied.
- 3. Measured values are from socket pin or terminal to common ground.
- 4. All terminals viewed from bottom unless otherwise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



A PHOTOFAC STANDARD NOTATION SCHEMATIC
with **CIRCUITRACE**
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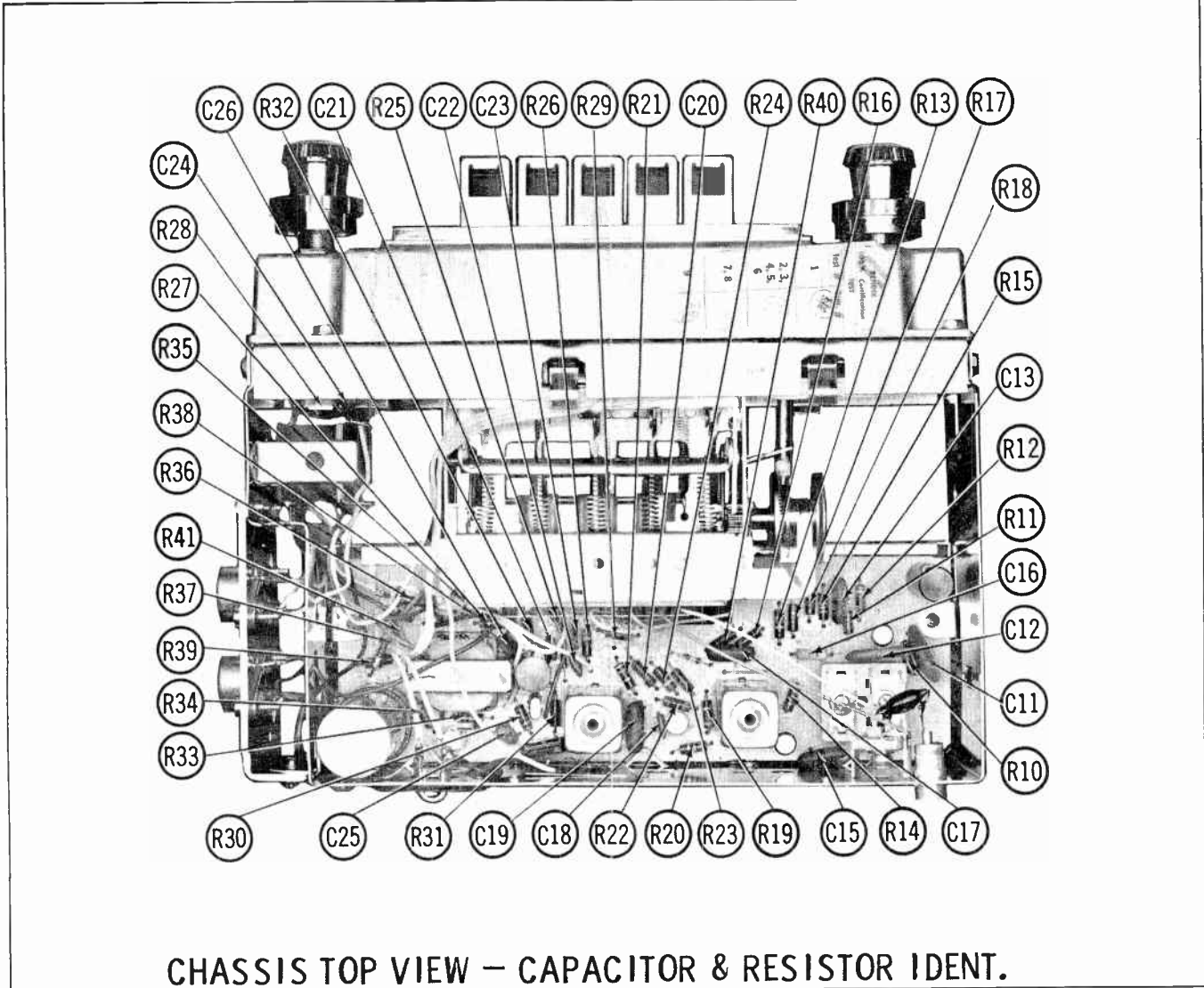


MOPAR MODELS 343, 350



PRINTED BOARD – BOTTOM VIEW

MOPAR MODELS 343, 350



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.	BENDIX PART No.	USE	REPLACEMENT DATA			NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	
X1	2091241-15	RF Amplifier	DS-25	GE-1	2N1637	PNP
X2	2091241-13	Converter	DS-25	GE-1	2N1639	PNP
X3	2091241-14	IF Amplifier	DS-25	GE-1	2N1638	PNP
X4	2091260-3	AF Amplifier	DS-44	GE-8		NPN
X5	2091578-1	Driver (2N1287A)	DS-26	GE-2	2N591	PNP (Note 1)
X6	2091859-2	Output (2N1227A)	DS-503	GE-3	2N301	PNP (Note 1)
X7	2091859-2	Output (2N1227A)	DS-503	GE-3	2N301	PNP (Note 1)

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

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						NOTES
	CAP.	VOLT.	BENDIX PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	GENERAL INSTRUMENT PART No.	MALLORY PART No.	
C1A	500	16	220353-13	PWH3-00-94		KC3-48-1 PMAl Kit		PWP300, 4	PCL-3026, 6
B	250	16							
C	250	16							
C2	50	3	2090480-11	BCD3050	ECSP-50-3	MT1-18	TD-50-6	TT3X50	TE-1058
C3	500	3							

FIXED CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					NOTES
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	
C10	5-80	#2091853-1						
C11	160 NPO	#2090926-12	NPO-SI 160	TCZ-160				
C12	.01		TTD-01	CK-103	H05S1		TA-110	TG-S10
C13	.01		TTD-01	CK-103	H05S1		TA-110	TG-S10
C14A	140-350	#219092-26						
B	370-445							
C15	.01		TTD-01	CK-103	H05S1		TA-110	TG-S10
C16	68 N1500	#2091700-30		TCL-68				
C17	.1		TTD-1	CK-104	H05P1		TA-010	TG-P10
C18	.1		TTD-1	CK-104	H05P1		TA-010	TG-P10
C19	.1		TTD-1	CK-104	H05P1		TA-010	TG-P10
C20	330		DI-330	DD-331	L10T33	CCD-331	G P333	10TS-T33
C21	.001			DM-102	H05D1			
C22	.001			DM-102	H05D1			
C23	.47			UK10-404	HCC10474Z			HY-330
C24	.47			UK10-404	HCC10474Z			HY-330
C25	.47			UK10-404	HCC10474Z			HY-330
C28	.47			UK10-404	HCC10474Z			HY-330

Bendix Part Number.

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.
R1A	Tone	25K	2092186-3 ①			
B	Volume & Switch	25K Tap ③ 3000Ω				
R2	Fader	30Ω 2W	2090627-4 ②			

① Part #2091339-16 used in Model 350.
② Part #2091087-1 used in Model 350.

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		BENDIX PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	RF Choke (5uh)	2092210-3	SW-631	4609	RTC-8519	T819	① Part of M1 or coil assembly Part # 2090131-51
L2	Ant.	①					
L3	RF	①					
L4	Osc.	①					
L5	Input IF	2092202-1					
L6	Output IF	2092203-1					
L7	RF Choke (2MH)	2090088-15 ②					

② Includes 47K

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.	
L8	.120A	.3Ω	1.9MH	2090520-9 ①				

① Part #2092050-13 used in Model 350

TRANSFORMER (DRIVER)

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

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	RATIO	BENDIX PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
	PRI.	EMITTER WINDING						
	60.	1						

PARTS LIST AND DESCRIPTION (CONTINUED)

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

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		BENDIX PART No.	QUAM PART No.	
SP1	6" x 9" PM 8-4Ω	2091000-2①	69A2	① Part #2091000-1 used in Model 350

MISCELLANEOUS

ITEM No.	PART NAME	BENDIX PART No.	NOTES
M1	Tuner Assembly	2091577-6	Model 343
M2	Tuner Assembly	2091576-7	Model 350
M3	AVC Det.	2092055-1	
M4	Audio Det.	2092055-1	
M4	Spark Plate	220267-12	300mmf, Model 343
M5	Spark Plate	220267-17	200mmf, Model 350
M5	Spark Plate	220267-12	300mmf, Model 343
M6	Spark Plate	220267-12	280mmf, Model 350
M6	Spark Plate	220267-12	300mmf

FUSES

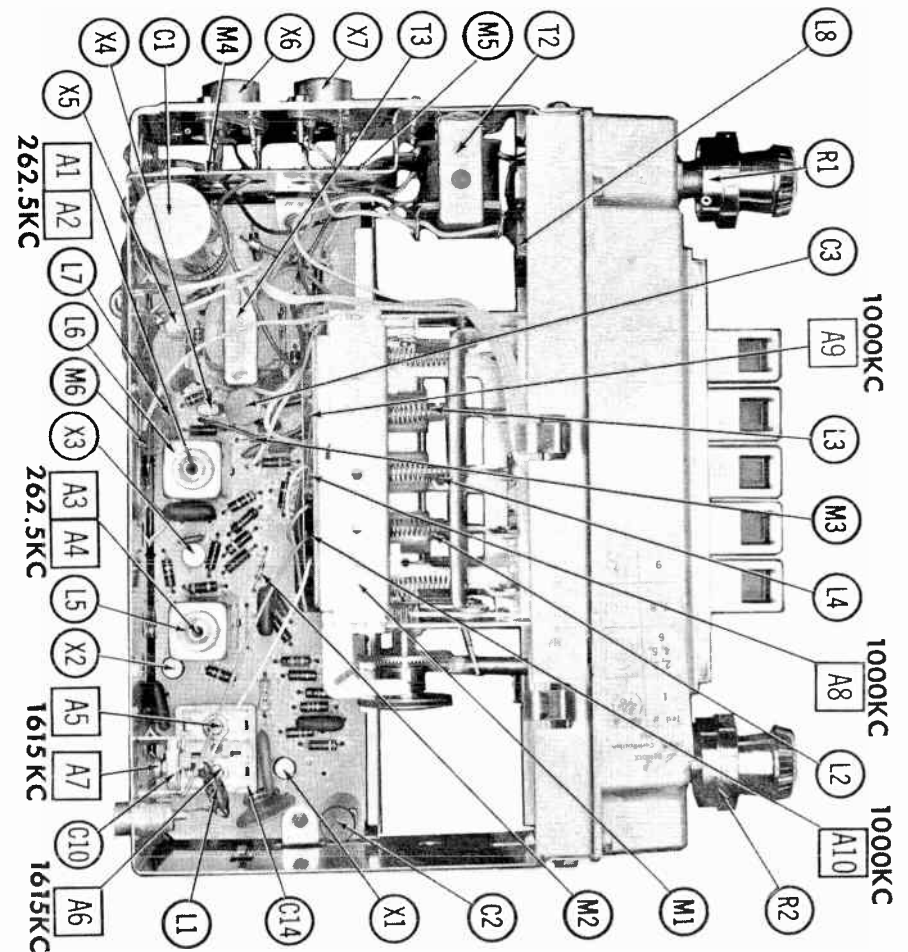
ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			BENDIX PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
	3AG	7½A	AGC 7½		31107.5 (3AG 7½A)		AGC 7½	

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
Dial Glass (Model 343)	2090999-1	Knob - Tuning, Volume (Model 350)	2091923-1
Dial Glass (Model 350)	2091337-2	Knob - Tone, Fader (Model 343)	2092372-1
Knob - Tuning, Volume (Model 343)	2091142-1	Knob - Tone, Fader (Model 350)	2091135-3

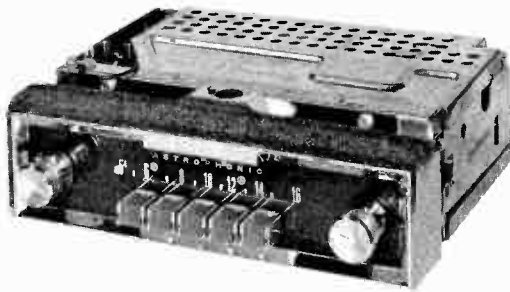
CHASSIS—TOP VIEW





PHOTOFACT[®] with

CIRCUITRACE[®]



TRADE NAME : MoPar Model 347 (R23BDQ)
 For 1962 Dodge 880-SD3

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

TYPE SET : 3 Tube - 3 Transistor Custom Built
 AM Receiver

POWER SUPPLY : 12 Volt Storage Battery

RATING : .8 Amp. @12.6 Volts DC

TUNING RANGE : BROADCAST 535 - 1620KC

MOPAR MODEL 347

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
 A8, A9, A10... GENERAL CEMENT #9150, 9050L, 8271
 WALSCO #2521, 2524

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1.	High side thru .1mf to point Δ , low side to ground.	262.5 KC (400v Mod.)	High Freq. End Stop.	Output Meter across voice coil.	A1, A2, A3, A4	Adjust for maximum.
2.	Thru dummy (Fig. 1) to antenna receptacle.	1615KC	"	"	A5, A6, A7	"
Step 3 is not necessary unless tuner has been tampered with or associated components have been replaced. IF necessary, back tuning cores (A8, A9, A10) out of coils but not out of forms. Repeat step 2.						
3.	Thru dummy (Fig. 1) to antenna receptacle.	1000KC	Tune to Signal.	Output Meter across voice coil.	A8, A9, A10	Adjust for maximum. Repeat steps 2 & 3 until no further improvement is noted.

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

REMOVAL INSTRUCTIONS

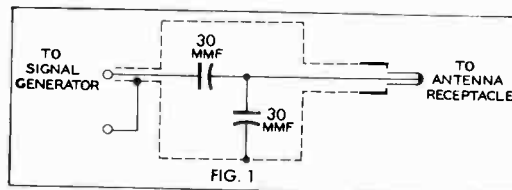
NOTE: To replace tubes or transistors, remove radio.

RADIO

1. Disconnect speaker leads, "A" lead, and antenna lead.
2. Remove ash tray.
3. Remove 2 screws from front of radio thru ash tray opening.
4. Use 5/16" wrench and remove nut from bottom brace.
5. Remove radio from under instrument panel.

SPEAKER

1. Use 3/8" wrench and remove 4 nuts holding speaker to instrument panel.
2. Remove speaker.



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.

TUBES

♦ AMPEREX ♦		GENERAL ELECTRIC ♦		RAYTHEON ♦		SYLVANIA ♦	
ITEM No.	USE	TYPE		ITEM No.	USE	TYPE	
V1	RF Amp. -Converter	12FX8A		V3	Det. -AVC-AF Amp.	12FK6 (12FM6) †	
V2	IF Amplifier	12EK6					

† Alternate

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	
X1	2N1287A	Driver	DS-26	GE-2	29591	PNP
X2	2N1227A	Output	DS-520	GE-3		PNP (Note 1)
X3	2N1227A	Output	DS-520	GE-3		PNP (Note 1)

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

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	BENDIX PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	PYRAMID PART No.	SPRAGUE PART No.
C1A	500	16	220353-13	PWH3-00-94		XC3-48.1 PMA1	PWP300.4		PCL-3026.6
B	250	16							
C	250	16							

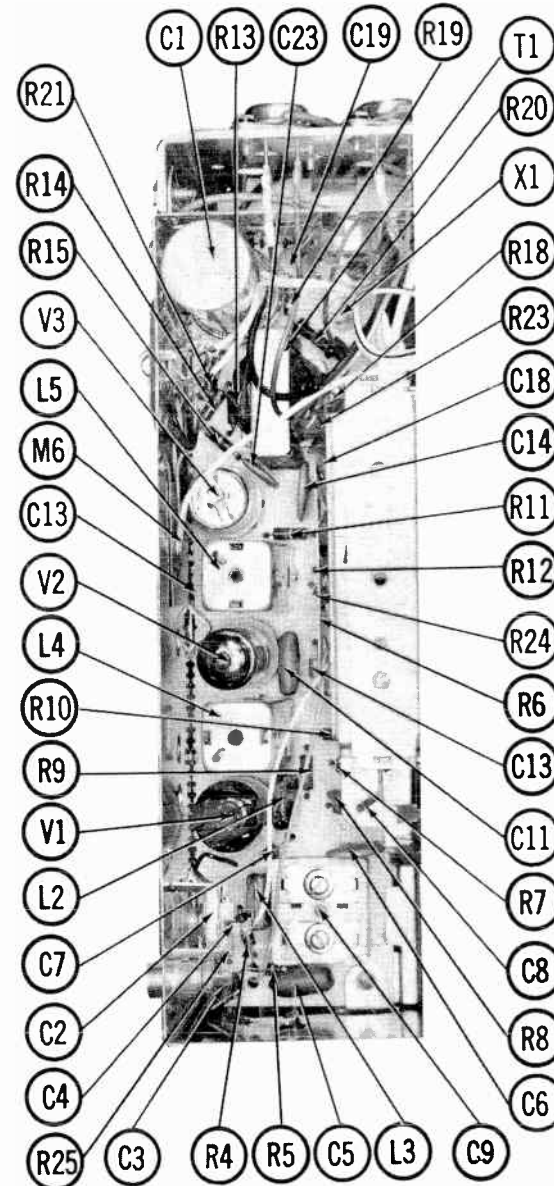
FIXED CAPACITORS

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.	
C2	5-80	#209058J-680K	1469-180	DTZ-180	22R5T18	462		MS-318	
C3	180 5%		NPO-SI 33	DTZ-33	C10Q33C	CM-20B-181J	CNO-433	10TCC-Q33	
C4	33		P288N-1		CUB2P1	CCTO-330	GEM-201	2TM-P10	
C5	.1 100V		BPD-05	DD-503		IDP-2-104	BT-150	5HK-S50	
C6	.05		NPO-SI 10	DTZ-10	C10Q1C		CNO-410	10TCC-Q10	
C7	10		BPD-05	DD-503			BT-150	5HK-S50	
C8	.05								
C9A	120-480		#219092-16						
B	370-445								
C	80								
C10	68 N750 10%			P288N-005	DD-502	CUB6D5	IDP-1-502	GEM-425	6TM-D50
C11	.005 100V				DTZ-3R3	C10V33C	CCTO-3R3	CNO-533	10TCC-V33
C12	3.3 10%				DTZ-47	C10Q47C	CCTO-470	CNO-447	10TCC-Q47
C13	47								
C14	.05				DD-503			BT-150	5HK-S50
C15	33 N750				DTN-33	C10Q33U	CCTN-330	CN7-433	10TCU-Q33
C16	.0022				BPD-0022	DD-222	BYA10D22	CCD-222	5HK-D22
C17	.0018				BPD-0018	DD-182	BYA10D18	CCD-218	5HK-D18
C18	.02				BPD-02	DD-203	BYB6S2	CCD-203	5HK-S20
C19	.005			BPD-005	DD-502	BYA10D5	CCD-502	5HK-D50	

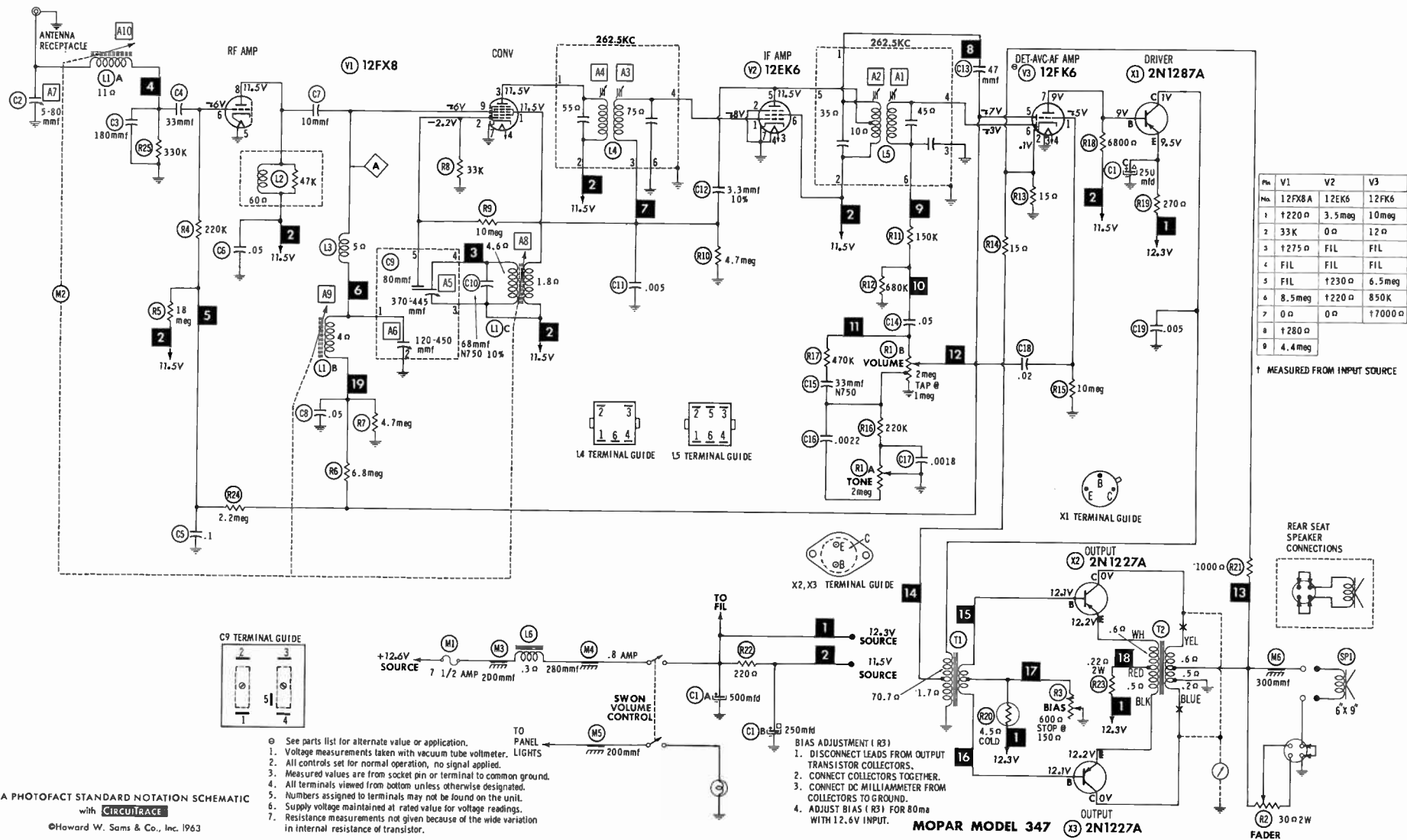
Bendix Part Number.

(PARTS LIST CONTINUED)

PRINTED BOARD—TOP VIEW



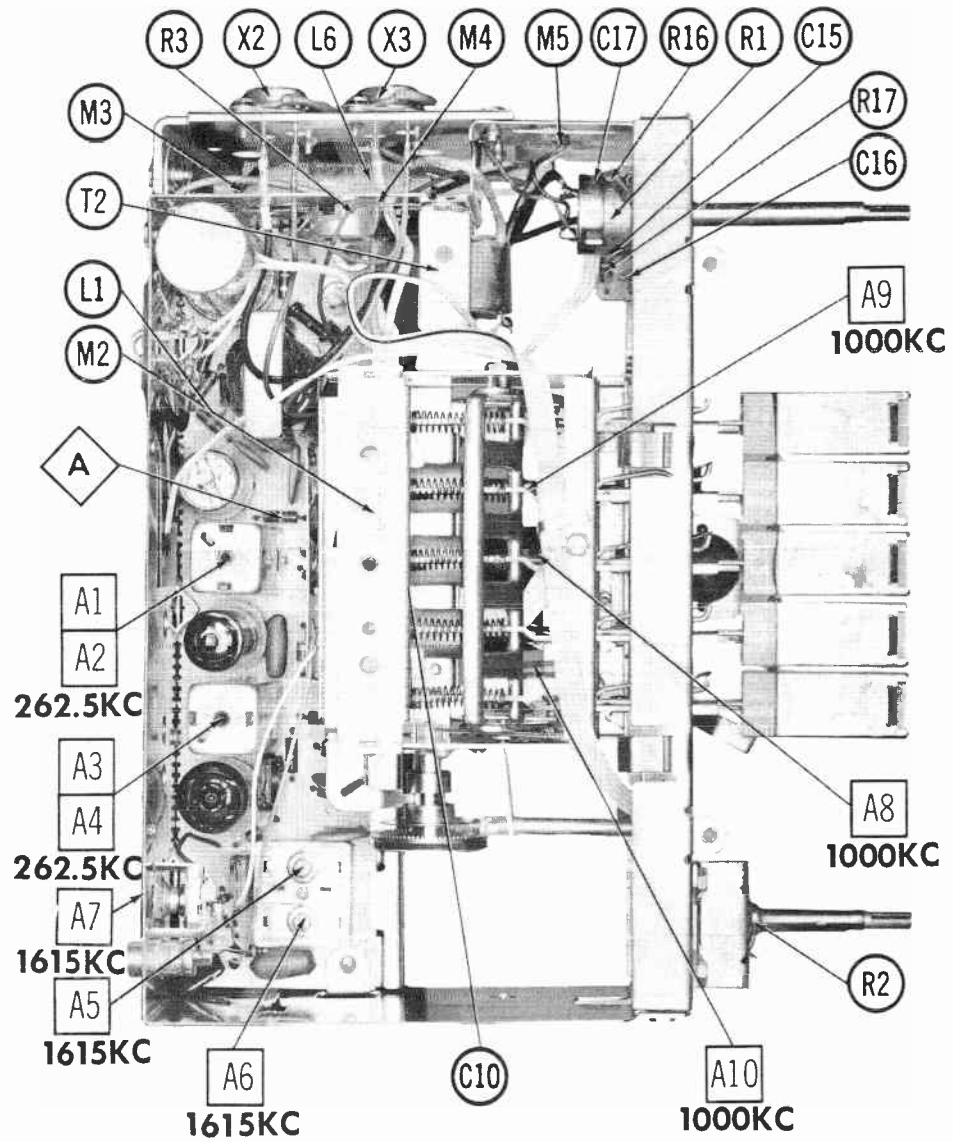
MOPAR MODEL 347



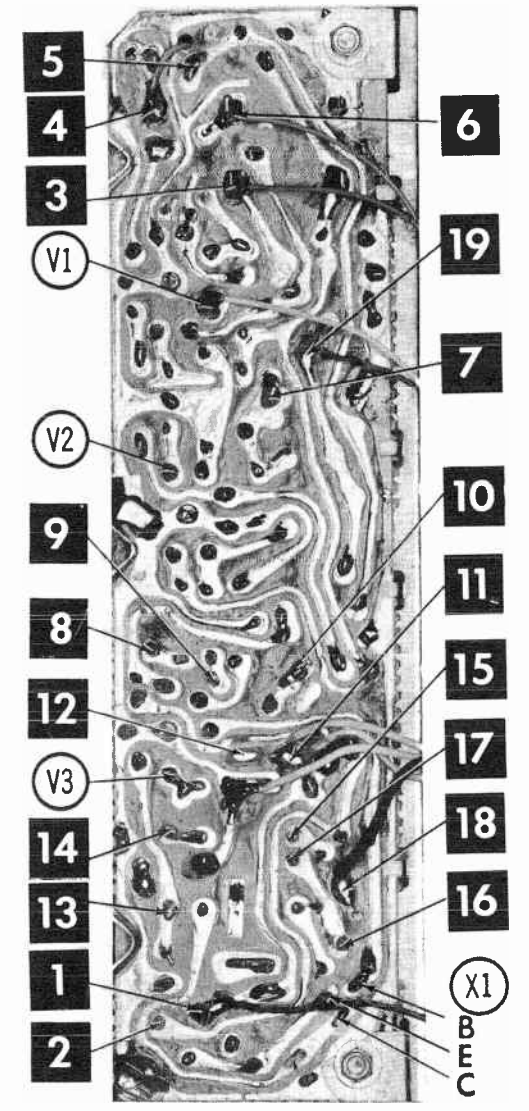
- ⊙ See parts list for alternate value or application.
- 1. Voltage measurements taken with vacuum tube voltmeter.
- 2. All controls set for normal operation, no signal applied.
- 3. Measured values are from socket pin or terminal to common ground.
- 4. All terminals viewed from bottom unless otherwise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



E-EMITTER B-BASE C-COLLECTOR

A Howard W. Sams
CIRCUITRACE® Photo

PRINTED BOARD

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	RESISTANCE	REPLACEMENT DATA					NOTES
			BENDIX PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.	
R1A B	Tone Volume & Switch	2meg 2meg 1meg Tap	2091339-3				† QJ-1577A	
R2 R3	Fader Bias	30Ω 2W 600Ω 2W Stop Ⓢ 150Ω	2091087-1 219555-14		39-700-200		112-500 *	FL-800S

* Use 150Ω Series Resistor.
† "CONCENTRIKIT" Equivalent: K-6 Kit with Base Elements and Shafts: B13-139, P13-200 (Panel)
"SNAPTROL" Equivalent: BU5, CF27, SF17, CR37T, SR53, WF B18-139X, R1-214 (Rear)
76-2 (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
R20	4.5Ω Cold			#220629-11	R23	0.22Ω 2W			#2090948-20

Bendix Part Number.

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		BENDIX PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1A B C	Ant. RF Osc.	2090131-26					
L2	RF Choke (3MH)	2090088-17 Ⓢ	BC-552 ▲	4537 ▲	RTC-9166 ▲	T828 ▲	
L3	Image Trap (65uh)	2090088-18	BC-867	6110	RTC-8573	T338	
L4	Input IF	2090876-8	BC-598			TF609	
L5	Output IF	2090877-9	BC-594				Ⓢ Wound on 47K. ▲ Shunt with 47K.

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	.8A	.35Ω	1150 uh	2092050-2					

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
	PRI.	SEC.	BENDIX PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	2.5	1	2090433-8					

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.	
T2	25Ω Tap Ⓢ 40%	3-4Ω	2091880-1					

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		BENDIX PART No.	QUAM PART No.	
SP1	6" x 9" PM 3-4Ω	2091000-1	69A3	

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA						
			BENDIX PART No.		LITTELFUSE PART No.		BUSS PART No.		
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER	
M1	SFE	7½	SFE 7½	221633-12 221633-3 (Cap)		307007.5 (SFE 7½A)	155075	SFE 7½	HDH

MISCELLANEOUS

ITEM No.	PART NAME	BENDIX PART No.	NOTES
M2	Tuner Assembly	2091576-3	Less Pointer
M3	Spark Plate	220267-17	200mmf
M4	Spark Plate	220267-18	280mmf
M5	Spark Plate	220267-17	200mmf
M6	Spark Plate	220267-12	300mmf
	Insulator	2090882-3	Output Transistor
	Printed Board Ass'y.	2091322-4	Less Tubes
	Printed Board	2091321-2	Small

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
Pointer Assembly	2091077-1	Push-Button Assembly	2091654-1
Dial Glass	2091337-1		

WIRING DATA

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



PHOTOFACT[®]

MOTOROLA MODELS
TRADE NAME: CRM62 (For 1960, 1961, 1962 Corvairs)
 CYM62 (For 1962 Chevrolet II)
SUPPLIER: Motorola Inc., 9401 W. Grande Ave.,
 Franklin Park, Illinois
TYPE SET: 6 Transistor Custom Built AM Receiver
POWER SUPPLY: 12 Volt Storage Battery
RATING: .42 Amp. @ 12.6 Volts DC
TUNING RANGE: BROADCAST 535 - 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 #8728, 8275, 8195
 WALSCO #2531X, 2541, 2526
 A9 thru A12... GENERAL CEMENT #9087, 8290, 8868
 WALSCO #2525, 2528, 2587

PUSH-BUTTON ADJUSTMENT

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

SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
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.
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 (A8, A9, A10) out of coils but not out of forms. Repeat step 2.					
Thru dummy (Fig. 1) to antenna receptacle.	1000KC	Tune to Signal.	Output Meter across voice coil.	A9, A10, A11, A12	Adjust for maximum. Repeat steps 2 & 3 until no further improvement is noted.

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

REMOVAL INSTRUCTIONS

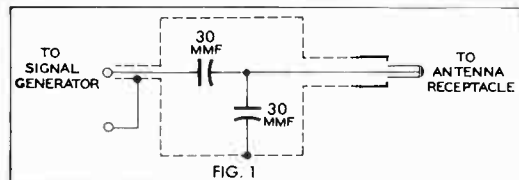
NOTE: All transistorized unit. To replace transistors, remove radio.

RADIO

1. Remove glove box.
2. Pull off knobs and washers.
3. Disconnect speaker leads at speaker, "A" lead at connector plug and remove antenna plug.
4. Remove two 1/2" hex nuts from control bushings and spacer from right bushing.
5. Remove 3/8" hex nut holding radio at left support arm.
6. Remove radio through glove box.

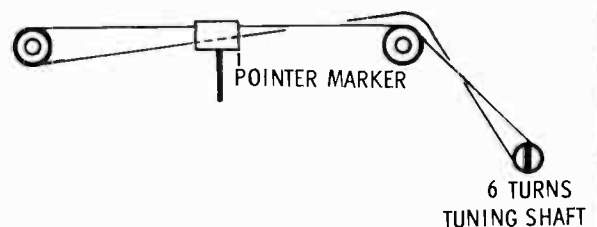
SPEAKER

1. Remove 1/4" hex screw from back side of speaker mounting plate.
2. Remove speaker mounting plate tab from slot and bring both speaker and mounting plate out through glove box opening.

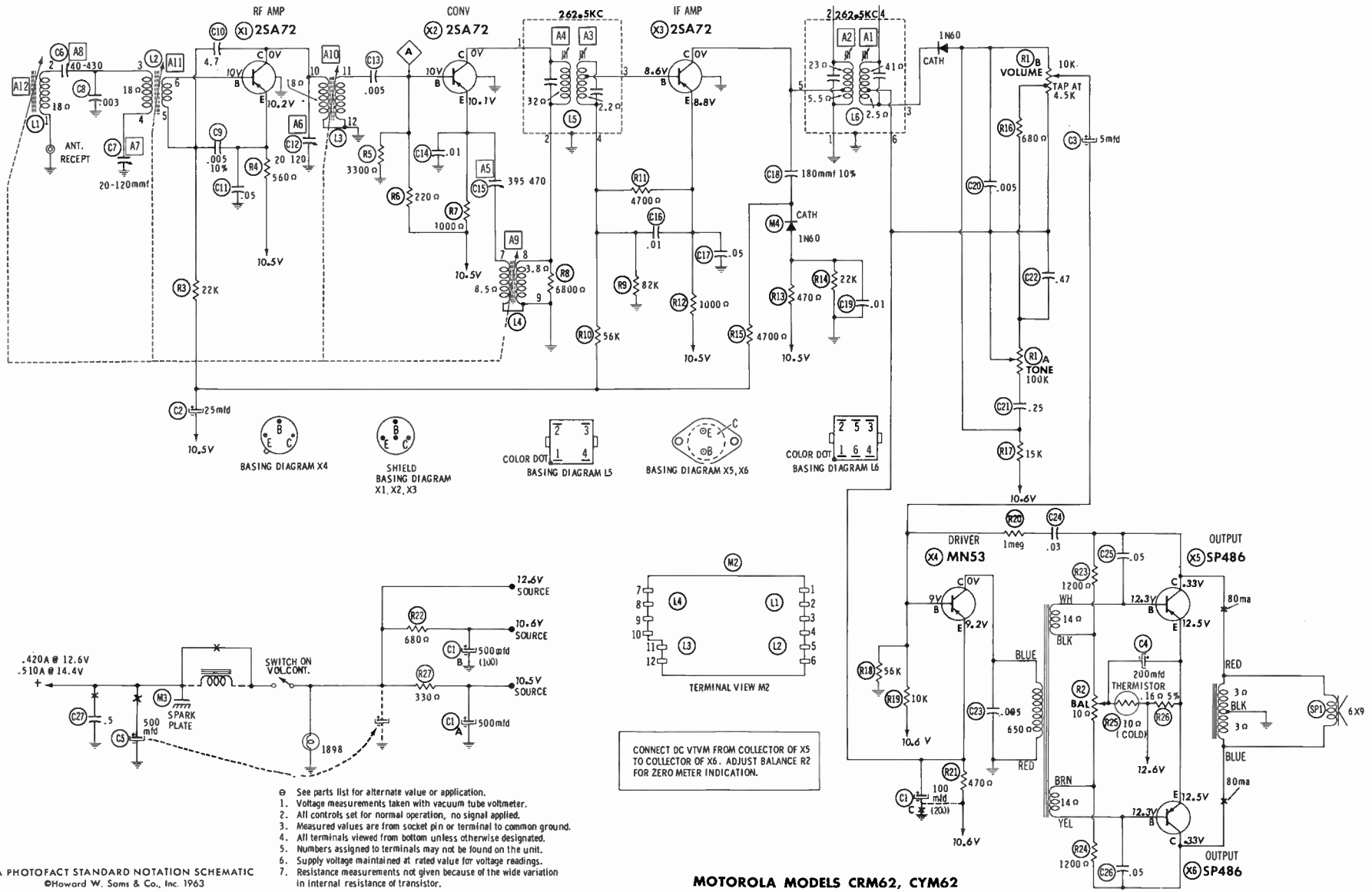


DIAL CORD STRINGING

FRONT VIEW



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.

CONNECT DC VTVM FROM COLLECTOR OF X5 TO COLLECTOR OF X6. ADJUST BALANCE R2 FOR ZERO METER INDICATION.

MOTOROLA MODELS CRM62, CYM62

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	2SA72	RF Amplifier	DS-25	GE-1		PNP
X2	2SA72	Converter	DS-25	GE-1		PNP
X3	2SA72	IF Amplifier	DS-25	GE-1		PNP
X4	MN53 4450*	Driver	DS-26	GE-2	2N591	PNP
		Driver	DS-28	GE-2	2N591	PNP
X5	SP486	Output	DS-503	GE-3	2N301	PNP (Note 1)
X6	SP486	Output	DS-503	GE-3	2N301	PNP (Note 1)

Note 1. When replacing, apply silicone grease (Part #11M490487) to both sides of insulator. Tighten mounting screws securely. Check balance adjustment.

* Alternate.

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.	PYRAMID PART No.	SPRAGUE PART No.
ClA	500	16	23B543279	AFH3-00-95		XC3-48	WP300.85		TVL-3026.8
B	100	16							
C	500	16							
C2	25	3	23K544540	PTT9	NLW25-3	MT1-10	TT3X25	MLV25-3	TE1055
C3	5	3	24K543078	PTT4	NLW5-15	MT1-3	TT6X5	MLV5-12	TE1052.2
C4	200	3	23K544617	PTT4	NLW200-3	MT1-22	TT3X200	MLV200-3	TE1064
C5	500	15	23C85282A04	PRS1220	BR500-15	QT1-30	TC-1505	TD-500-15	TVA-1162

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.	
C6	40-430	#20A542758							
C7	20-120	#20K542018							
C8	.003 200V		P288N-003	D6-302	CUB6D3	6DP-1-302	GEM-623	6TM-D30	
C9	.005 10%		DI-5000	CPR5000		CCD-502	PVC625	10TS-D50	
C10	4.7		NPO-SI 4.7	TCZ-4.7	C10V47C	CC TO-4R7	CNO-547	10TCC-V47	
C11	.05 200V		P288N-05	DD-503	CUB2S5	4DP-3-503	GEM-415	2TM-S50	
C12	20-120	#20K541014							
C13	.005 200V		P288N-005	D6-502	CUB6D5	6DP-1-502	GEM-425	6TM-D50	
C14	.01 100V		P288N-01	D6-103	CUB4S1	IDP-1-103	GEM-411	4TM-S10	
C15	395-470	#20A485708							
C16	.01 100V		P288N-01	D6-103	CUB4S1	IDP-1-103	GEM-411	4TM-S10	
C17	.05 200V		P288N-05	DD-503	CUB2S5	IDP-2-503	GEM-415	2TM-S50	
C18	180 N750 10%								
C19	.01 50V		TTD-01	CK-103	H05S1		CN7-318	10TCU-T18	
C20	.005		DI-5000	DD-502	L10D5	CCD-502	TA-110	TG-S10	
C21	.25 100V		P288N-25		CUB2P25	IDP-3-254	GEM-2025	10TS-D50	
C22	.47 3V				HCC3474P	IDP-4-474	GEM-2047	2TM-P25	
C23	.005				UK474	CCD-502	GP250	10TS-D50	
C24	.03 100V		DI-5000	DD-502	L10D5	CCD-502	GP130	5HK-S50	
C25	.05 100V		TTD-03	DD-303	BYB6S3	CCD-303	GP150	5HK-S50	
C26	.05 100V		TTD-05	DD-503	CUB2S5	IDP-2-503	GP150	5HK-S50	
C27	.5 100V		TTD-05	DD-503	CUB2S5	IDP-2-503	GP150	5HK-S50	
			P288N-5		CUB2P5	IDP-4-504	GEM-205	2PS-P50	

Motorola Part Number.

CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA				
			MOTOROLA PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1A	Tone	100K	18C64779A02				
B	Volume & Switch	10K Tap @4500Ω	①				
R2	Balance	10Ω	18C64735A09				

① Part #18C64779A05 used in Model CYM62. **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
R25	10Ω Cold			#6K544646	R26	.16Ω 5%			#17A64858A01

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		MOTOROLA PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	Ant. Load	24B40644A01	①				
L2	Ant. Coil	24B40895A02	①				
L3	RF Coil	24B40895A01	①				
L4	Oscillator	24B40896A01	①				
L5	Input IF	24B64861A03					
L6	Output IF	24B64861A02					

① Part of M2 or Coil and Mounting Plate Assembly Part #1V41000A38.

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO	REPLACEMENT DATA					NOTES
		MOTOROLA PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	8	25B64668A01	①				① Alternate Part #25B64738A02.

TRANSFORMER (AUDIO CHOKE)

ITEM No.	INDUCTANCE	REPLACEMENT DATA					NOTES
		MOTOROLA PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T2	85MA CT	25B64665A01	①				① Alternate Part #25B64737A02

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MOTOROLA PART No.	QUAM PART No.	
SP1	6" x 9" PM 40Ω 4" x 10" PM 40Ω	50C64697A01 50C64797A01	89A2240 410A2240	Model CRM62 Model CYM62

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA						
			MOTOROLA PART No.	LITTELFUSE PART No.	BUSS PART No.				
M1	3AG	4A	85R61888	312004 (3AG 4A)	FUSE	HOLDER	FUSE	HOLDER	AGC 4

MISCELLANEOUS

ITEM No.	PART NAME	MOTOROLA PART No.	NOTES
M2	Tuner	77D40987A01	(MT-390) Complete
M3	Rear Spark Plate	64K530177	
M4	AVC Rectifier	48K544539	IN60
M5	Signal Detector	48K544539	IN60

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
Knob, Dummy	36B543332	Dial Pointer, Model CRM62	52A541314
Knob, Tone	36B543330	Dial Escutcheon, Model CYM62	13D64678A01
Dial Pointer, Model CYM62	52A64677A01	Radio Escutcheon, Model CRM62	15E544297

WIRING DATA

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



PHOTOFACT[®]

TRADE NAME : Motorola Model CTM62
(For 1961, 1962 Chevrolets)

SUPPLIER : Motorola Inc., 9401 W. Grande Ave.,
Franklin Park, Illinois

TYPE SET : 6 Transistor Custom Built AM Receiver

POWER SUPPLY : 12 Volt Storage Battery

RATING : .42 Amp. @ 12.6 Volts DC

TUNING RANGE : BROADCAST 535 - 1610KC



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 #8728, 8275, 8195
WALSCO #2531X, 2541, 2528
A9 thru A12.... GENERAL CEMENT #9087, 8290, 8868
WALSCO #2525, 2528, 2587

PUSH-BUTTON ADJUSTMENT

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

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1.	High side thru .1mfd to point Δ , low side to ground.	262.5KC (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.	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 (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.	A9, A10, A11, A12	Adjust for maximum. Repeat steps 2 & 3 until no further improvement is noted.
With radio installed in car and antenna fully extended, tune in a weak station near 1000KC and adjust A7 for maximum output.						

REMOVAL INSTRUCTIONS

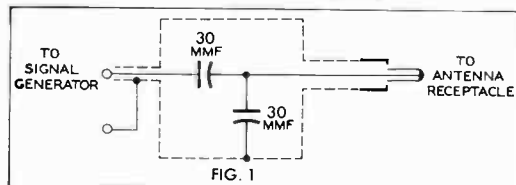
NOTE: All transistorized unit. To replace transistors, remove radio.

RADIO

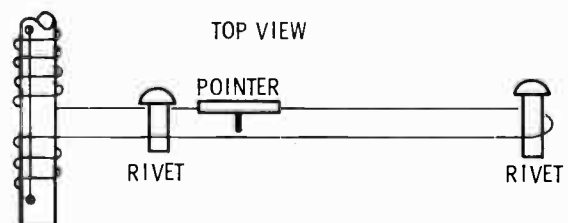
1. Remove glove box.
2. Pull off knobs and washers.
3. Disconnect speaker leads at speaker, "A" lead at connector plug and remove antenna plug.
4. Remove two 1/2" hex nuts from control bushings and spacer from right bushing.
5. Remove 3/8" hex nut holding radio at left support arm.
6. Remove radio through glove box.

SPEAKER

1. Remove 1/4" hex screw from back side of speaker mounting plate.
2. Remove speaker mounting plate tab from slot and bring both speaker and mounting plate out through glove box opening.

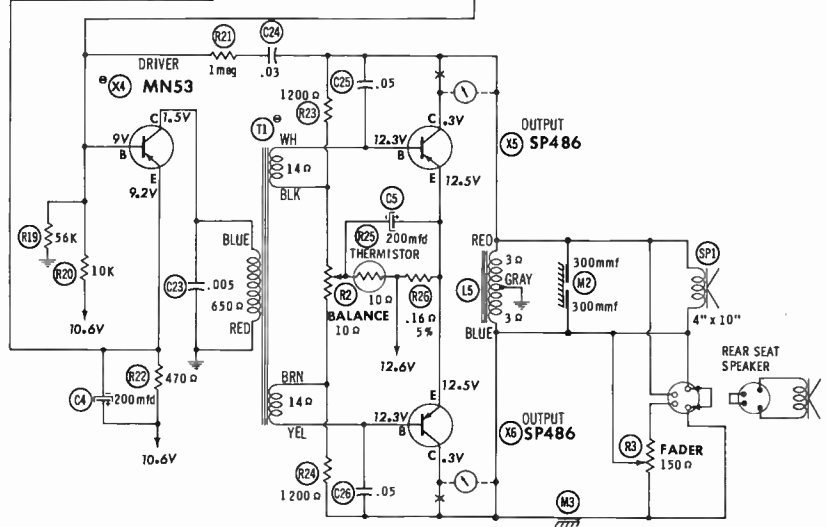
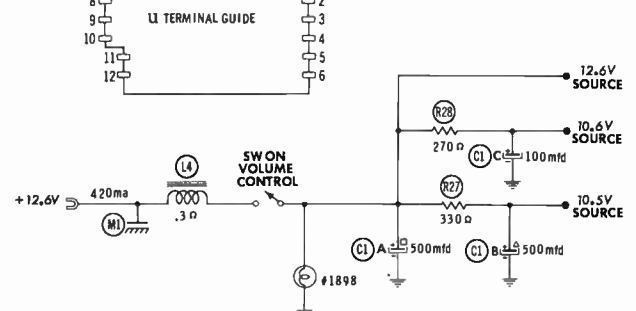
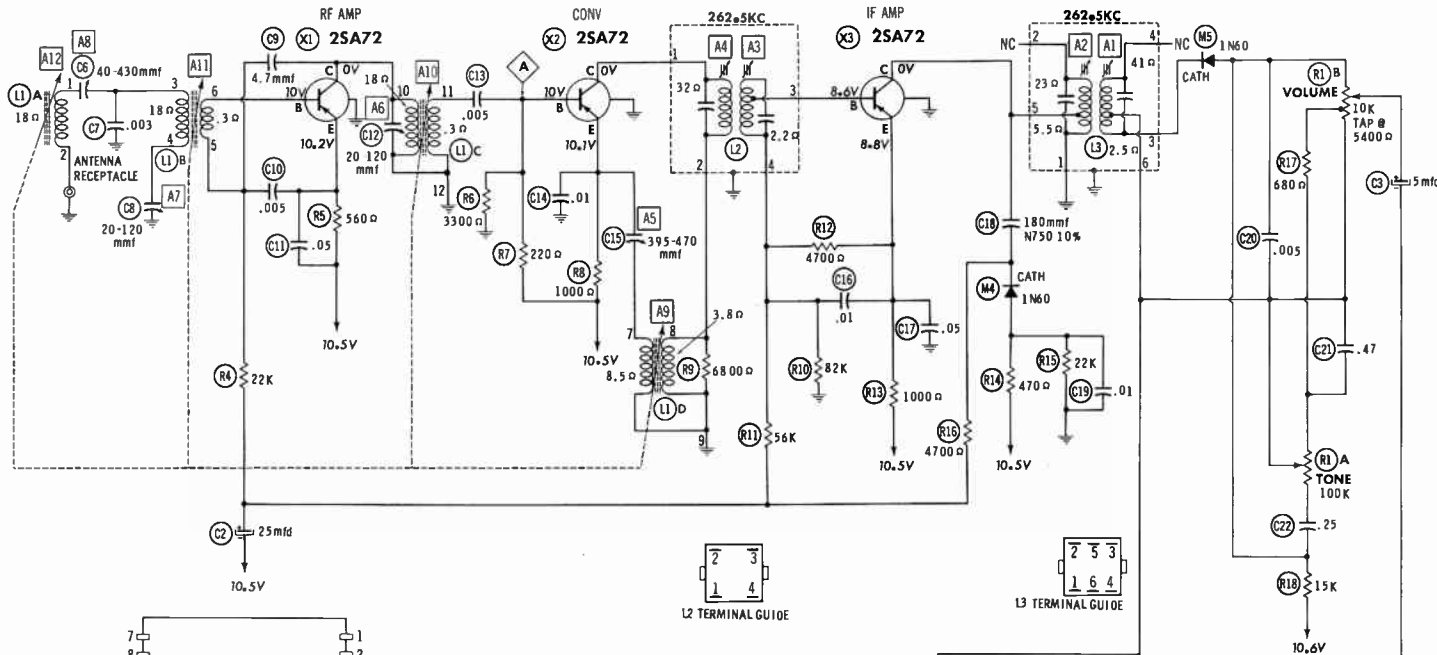


DIAL CORD STRINGING



TUNING SHAFT FULLY CLOCKWISE

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.

ADJUST BALANCE (R2) FOR EQUAL COLLECTOR CURRENT IN OUTPUT TRANSISTORS. (APPROX. 80ma EACH WITH 12.6V INPUT.)

A PHOTOFACIT STANDARD NOTATION SCHEMATIC
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MOTOROLA MODEL CTM62

PARTS LIST AND DESCRIPTION

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

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	
X1	2SA72	RF Amp.	DS-25	GE-1		PNP
X2	2SA72	Converter	DS-25	GE-1		PNP
X3	2SA72	IF Amp.	DS-25	GE-1		PNP
X4	MN53 4450*	Driver	DS-26	GE-2	2N591	PNP
		Driver	DS-28	GE-2	2N591	PNP
X5	SP488	Output	DS-520	GE-3	2N301	PNP (Note 1)
X6	SP488	Output	DS-520	GE-3	2N301	PNP (Note 1)

Note 1. When replacing, apply silicone grease (Part #11M490487) to both sides of insulator. Tighten mounting screws securely. Check balance adjustment.
* Alternate.

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.	PYRAMID PART No.	SPRAGUE PART No.
C1A	500	18	23B543279	AFH3-00-95		XC3-48	WP300, 85		TVL-3026, 8
C B	500	16							
C C	100	18							
C2	25	3	23K544540	PTT9	NLW25-3	MTI-10	TT3X25	MLV25-3	TE1055
C3	5	3	24K543076	PTT4	NLW5-15	MTI-3	TT6X5	MLV5-12	TE1052, 2
C4	200	3	23K544817	PTT14	NLW200-3	MTI-22	TT3X200	MLV200-3	TE1064
C5	200	3	23K544617	PTT14	NLW200-3	MTI-22	TT3X200	MLV200-3	TE1084

FIXED CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA						
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENDO PART No.	MALLORY PART No.	SPRAGUE PART No.	
C8	40-430	#20A542758	P288N-003	D6-302	CUB6D3	8DP-1-302	GEM-623	6TM-D30	
C7	.003 200V	#20K542018							
C8	20-120								
C9	4.7	#20K541014	NPO-SI 4.7	TCZ-4.7	C10V47C	CCTO-4R2	CNO-547	10TCC-V47	
C10	.005 10%		DI-5000	CPR5000			CCD-502	PVC625	10TS-D50
C11	.05 200V		P288N-05	DD-503	CUB285		4DP-3-503	GEM-415	2TM-S50
C12	20-120	#20A485708	P288N-005	D6-502	CUB6D5	6DP-P-1-503	GEM-425	6TM-D50	
C13	.005 200V								
C14	.01 100V								
C15	395-470	P288N-01	D6-103	CUR4S1	IDP-1-103	GEM-411	4TM-S10		
C18	.01 100V								
C17	.05 200V								
C18	180 N750 10%	P288N-05	DD-503	CUB285	IDP-2-503	GEM-415	2TM-S50		
C19	.01	TTD-01	CK-103	H05S1		CN7-318	10TCU-T18		
C20	.005	DI-5000	DD-502	L10D5	CCD-502	GP250	10TS-D50		
C21	.47 3V	P288N-25	DD-502	UK474	HCC3474P	IDP-4-474	GEM-2047	HY-130	
C22	.25 100V								
C23	.005								
C24	.03	DI-5000	DD-502	L10D5	CCD-502	GP250	10TS-D50		
C25	.05	TTD-03	DD-303	BVB6S3	CCD-303	GP130	5HK-S30		
C26	.05	TTD-05	DD-503	CUB285	IDP-2-503	GP150	5HK-S50		
	.05	TTD-05	DD-503	CUB285	IDP-2-503	GP150	5HK-S50		

Motorola Part Number.

CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA				
			MOTOROLA PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1A	Tone	100K	18C64780A01				UE4348
B	Volume & Switch	10K Tap @ 5400Ω					
R2	Balance	10Ω	18C64735A09				
R3	Fader	150Ω	18B64889A02				

"STA-LOC" Equivalent: FA15A, RU14T53, OS812, IS1312, US41.

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		ITEM No.	RATING	REPLACEMENT DATA		
		MOTOROLA PART No.	QUAM PART No.			IRC PART No.	WORKMAN PART No.	REMARKS
SP1	4" x 10" PM 40Ω	50C8479A01	410AZ40	R25 R26	10Ω Cold .16Ω 5%			#8K544646 #17A84856A01

COILS (RF-IF)

Motorola Part Number.

ITEM No.	USE	REPLACEMENT DATA					NOTES
		MOTOROLA PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1A	Antenna	24B40844A01	⓪				
B	Antenna	24B40895A02	⓪				
C	RF	24B40895A01	⓪				
D	Oscillator	24B40896A01	⓪				
L2	Input IF	24B84881A03					
L3	Output IF	24B84861A02					

⓪ Part of Tuner M6 or Coil and Mounting Plate Assembly Part #1V41000A36.

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.	
L4	420MA	.3Ω	3MH	25B84747A02				

TRANSFORMER (AUDIO CHOKE)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRL.	SEC.	MOTOROLA PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L5			25B84737A02					

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	25B64666A01				
		SEC.2	⓪					
		1						

⓪ Alternate Part #25B84738A02

MISCELLANEOUS

ITEM No.	PART NAME	MOTOROLA PART No.	NOTES
M1	Spark Plate	64K530177	
M2A	Spark Plate	21A522033	300mmf
B	Spark Plate		
M3	Spark Plate	84K561877	300mmf
M4	Detector	48K640675	1N60,
M5	AVC Rectifier	48K640675	1N80
M6	Tuner	77D40977A01	(MT-382) Complete

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.
Knob - Volume, Tuning	36B64859A01
Knob - Tone, Rear Speaker	38B64866A01
Dial Scale	38B64899A01
Dial Pointer	52A84849A01

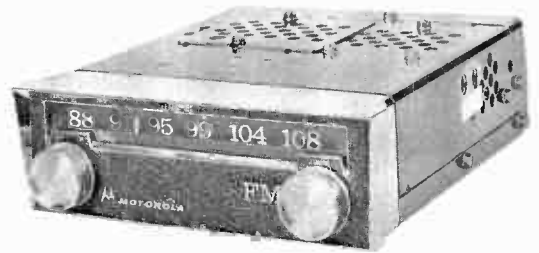
WIRING DATA

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



PHOTOFACT[®]

TRADE NAME : Motorola Model FMC62
SUPPLIER : Motorola, Inc., 9401 W. Grande Ave.,
 Franklin Park, Illinois
TYPE SET : 7 Tube FM Tuner-Converter
POWER SUPPLY : 12 Volt Storage Battery
RATING : 1.4 Amp. @12.6 VDC
TUNING RANGE : FREQ. MOD. 88 - 108MC



ALIGNMENT INSTRUCTIONS

Use only enough generator output to provide a usable indication.

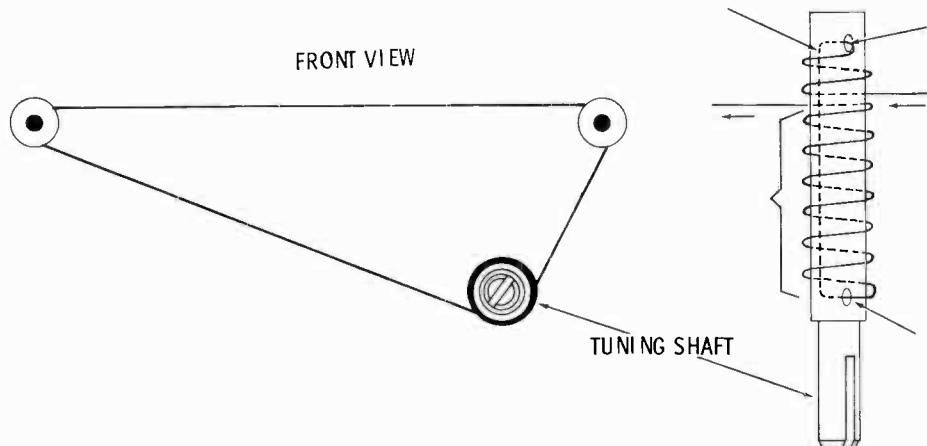
Suggested Alignment Tools:

A1, A10.....GENERAL CEMENT #5097, 8727..... WALSCO #2515
 A2 thru A9.....GENERAL CEMENT #8606, 8606L, 8869..... WALSCO #2543, 2544, 2588
 A11, A12.....GENERAL CEMENT #8290, 8868, 9087..... WALSCO #2525, 2528, 2587

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1.	High side to antenna input, low side to ground.	10.7MC (Unmod.)	High Freq. End Stop.	DC probe of VTVM to point A, common to ground.	A1, A2, A3, A4, A5, A6, A7, A8, A9	Adjust for maximum.
2.	"	"	"	DC probe to point B, common to ground.	A10	Adjust for zero reading. A positive and negative reading will be obtained on either side of the correct setting.
3.	"	108MC	108MC	DC probe to point A, common to ground.	A11, A12	Adjust for maximum.

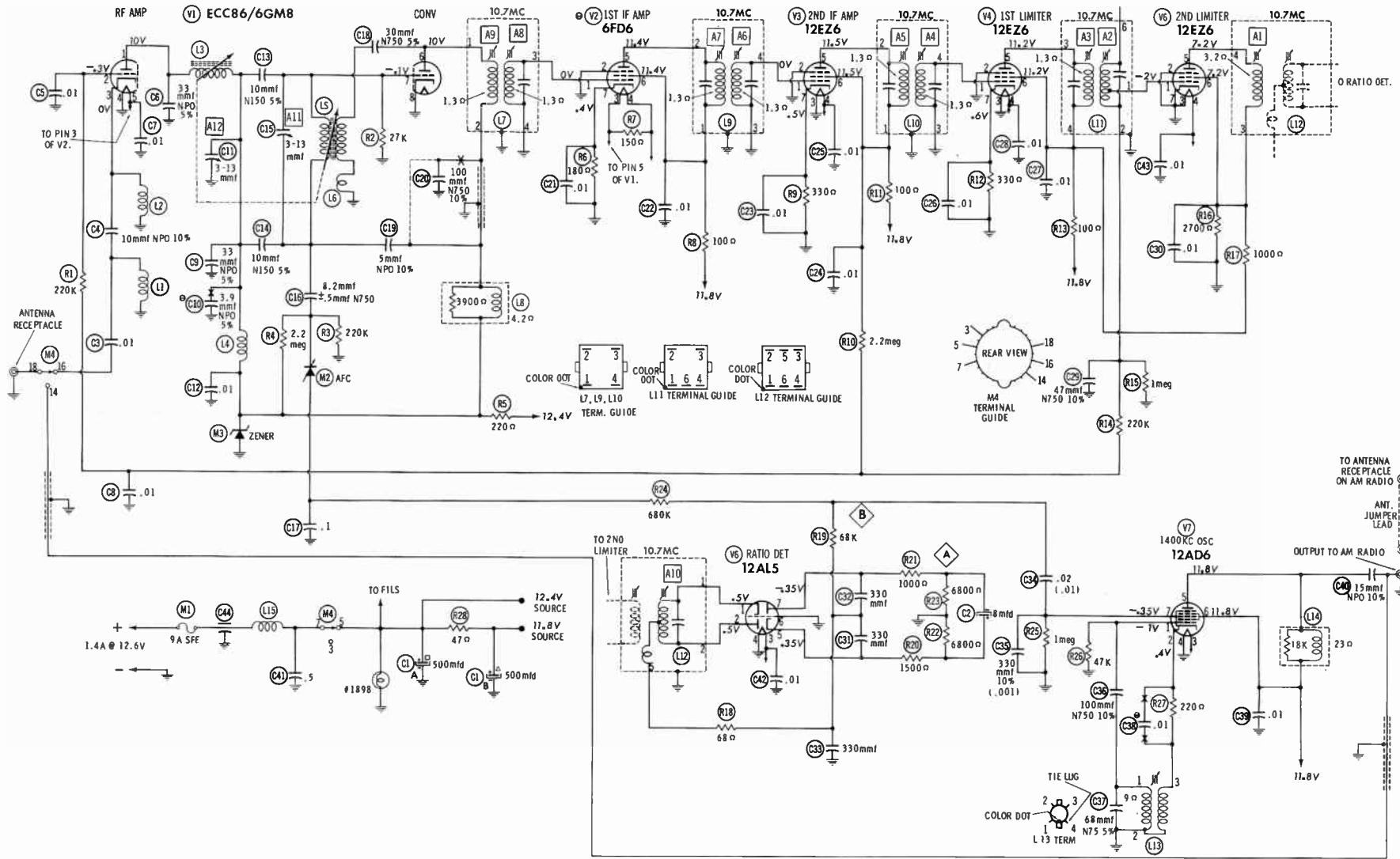
After unit is installed, tune AM receiver to 1400KC. Tune in an FM station and if interference is encountered, move output frequency of FM tuner slightly by adjusting the 1400KC oscillator coil A13. Retune AM receiver.

DIAL CORD STRINGING



MOTOROLA MODEL FMC62

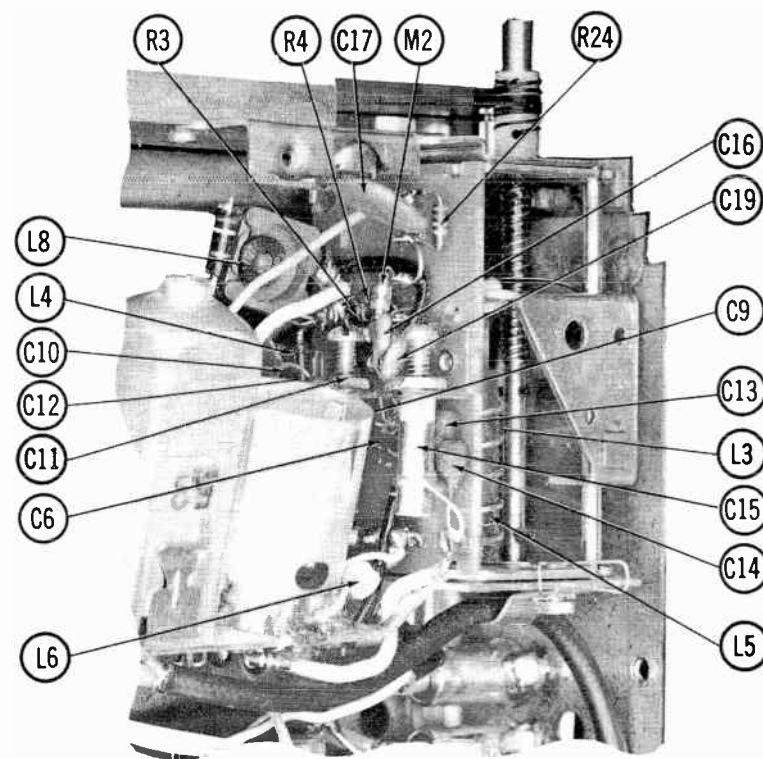
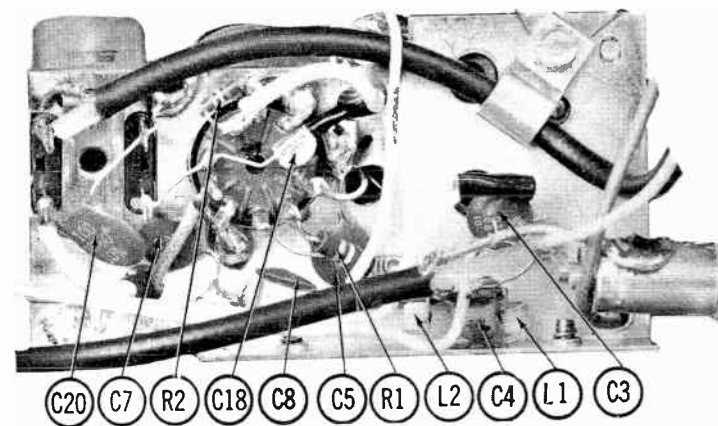
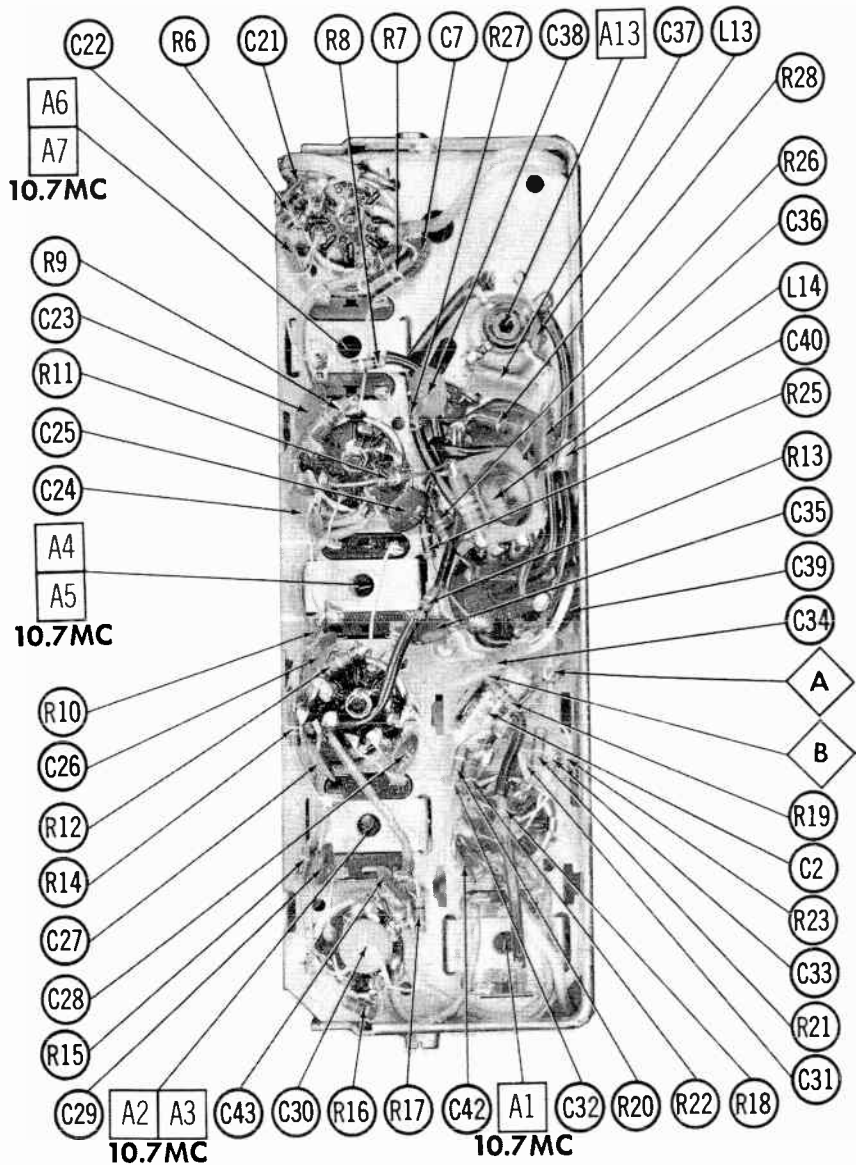
HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana



- ⊙ 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.

MOTOROLA MODEL FMC62

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CHASSIS PHOTOS

MOTOROLA MODEL FM62

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

ITEM No.	USE	REPLACEMENT DATA		ITEM No.	USE	TYPE
		MOTOROLA PART No.	AEROVOX PART No.			
V1	RF Amp. -Conv.	ECC86/6GM8		V5	2nd Limiter	12E26
V2	1st IF Amplifier	6FD6 (6E26)*		V6	Ratio Detector	12AL5
V3	2nd IF Amplifier	12E26		V7	1400KC Oscillator	12AD6
V4	1st Limiter	12E26				

* Alternate

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.	PYRAMID PART No.	SPRAGUE PART No.
C1A	500	16	23K562581	AFH3-00-95		XC3-48	WP200.6		TVLS-2157*
B	500	16		23B544392	PTT78	NLW8-25	MT1-5	TT25X8	MLV10-25
C2	8	25							

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

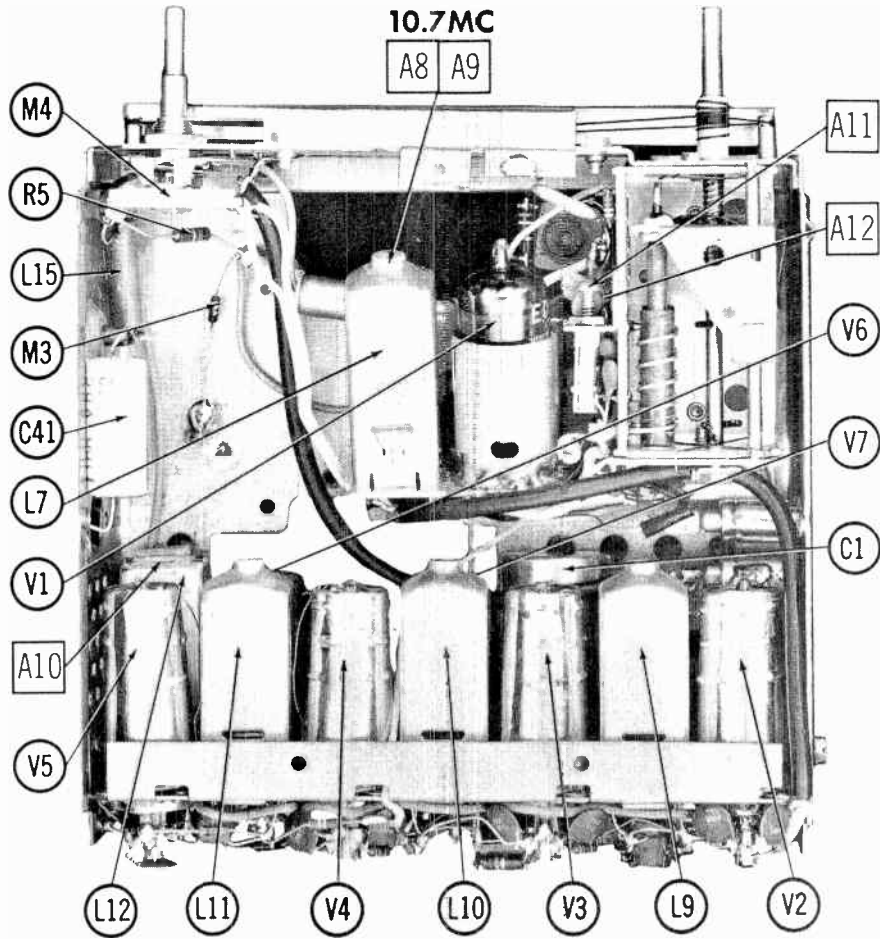
FIXED CAPACITORS

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.	
C3	.01		TTD-01	CK-103	H05S1		TA-110	TG-S10	
C4	10 NPO 10%		NPO-D1 10	DTZ-10	C10Q1C	CCTO-100	CNO-410	10TCC-Q10	
C5	.01		TTD-01	CK-103	H05S1		TA-110	TG-S10	
C6	33 NPO 5%			DTZ-33	C10Q33C		CNO-433	10TCC-Q33	
C7	.01		TTD-01	CK-103	H05S1		TA-110	TG-S10	
C8	.01		TTD-01	CK-103	H05S1		TA-110	TG-S10	
C9	33 NPO 5%			DTZ-33	C10Q33C		CNO-433	10TCC-Q33	
C10	3.9 NPO 5%	Note 1							
C11	3-13	#21K792590							
C12	.01		TTD-01	CK-103	H05S1		TA-110	TG-S10	
C13	10 N150 5%	#21R125698						10TCP-Q10	
C14	10 N150 5%	#21R125698						10TCP-Q10	
C15	3-13	#21K792590							
C16	8.2 ±.5mmf N750	#21R128940			C10V82U				
C17	.1		TTD-1	H-05P1			BT-010	TH-P10	
C18	30 N750 5%			DTN-30	C10Q3U		CN7-430	10TCU-Q30	
C19	5 NPO 10%				C10V5C	CCTO-050		10TCC-V50	
C20	100 N750 10%				C10T1U	CCTN-101	CN7-310	10TCU-T10	
C21	.01		N750-D1 100	DTN-100					
C22	.01		TTD-01	CK-103	H05S1		TA-110	TG-S10	
C23	.01		TTD-01	CK-103	H05S1		TA-110	TG-S10	
C24	.01		TTD-01	CK-103	H05S1		TA-110	TG-S10	
C25	.01		TTD-01	CK-103	H05S1		TA-110	TG-S10	
C26	.01		TTD-01	CK-103	H05S1		TA-110	TG-S10	
C27	.01		TTD-01	CK-103	H05S1		TA-110	TG-S10	
C28	.01		TTD-01	CK-103	H05S1		TA-110	TG-S10	
C29	47 N750 10%		N750-D1 47	DTN-47	C10Q47U	CCTN-470	CN7-447	10TCU-Q47	
C30	.01		TTD-01	CK-103	H05S1		TA-110	TG-S10	
C31	330		DI-330	DD-331	L10T33	CCD-331	GP333	10TS-T33	
C32	330		DI-330	DD-331	L10T33	CCD-331	GP333	10TS-T33	
C33	330		DI-330	DD-331	L10T33	CCD-331	GP333	10TS-T33	
C34	.02		TTD-02	H-05S2	DDM-203	CCD-203	GP120	TH-S20	
C35	330 10%	(.01) †	DI-330	DD-331	L10T33	CCD-331	GP333	10TS-T33	
C36	100 N750 10%	(.001) †	N750-D1 100	DTN-100	C10T1U	CCTN-101	CN7-310	10TCU-T10	
C37	68 N75 5%	#21R132145							
C38	.01	Note 1	TTD-01	CK-103	H05S1		TA-110	TG-S10	
C39	.01		TTD-01	CK-103	H05S1		TA-110	TG-S10	
C40	15 NPO 10%		NPO-D1 15	DTZ-15	C10Q15C	CCTO-150	CNO-415	10TCC-Q15	
C41	.5		P288N-.5		CUB2P5	IDP-4-504	GEM-205	2TM-P50	
C42	.01		TTD-01	CK-103	H05S1		TA-110	TG-S10	
C43	.01		TTD-01	CK-103	H05S1		TA-110	TG-S10	
C44		#21A560232							

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

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		MOTOROLA PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	Antenna	24K544398					① Includes 3900Ω
L2	Antenna	24K544398					
L3	RF	24B544375					② Includes 18K
L4	RF Choke	25A544400					
L5	Oscillator	24B64776A01					
L6	Oscillator Padder	24K544399					
L7	1st IF	24K544395	FM-254	1463	RTC-8599	TF658	* Shunt with 3900Ω
L8	RF Choke (200uh)	24B64785A02①	BC-673*	6154*	RTC-8586*	T312*	
L9	2nd IF	24C544393	FM-254	1463	RTC-8599	T633	
L10	3rd IF	24C544393	FM-254	1463	RTC-8599	T633	
L11	4th IF	24K544394					
L12	Ratio Detector	24C838488	FM-255	1465	RTC-8600	T635	
L13	1400KC Osc.	24B64774A01					
L14	RF Choke (1MH)	24B64785A01②	BC-681▲	4652▲	RTC-8532▲	T841▲	▲ Shunt with 18K
L15	Hash Choke (10uh)	24A538914	BC-537	5220	RTC-9182		



CHASSIS—TOP VIEW

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.

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			MOTOROLA PART No.		JITELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M1	SFE	9	65K16248	9K451619*	30700* (SFE 9A)	155009	SFE 9	HDH

* Includes Leads, Lugs, and Fuse.

MISCELLANEOUS

ITEM No.	PART NAME	MOTOROLA PART No.	NOTES
M2	AFC	21A544085	"Varicap"
M3	Regulator	48R10051A01	Zener Diode
M4	Power Switch	40B64745A01	(MT-374) Complete
M5	Tuner	77K544581	

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

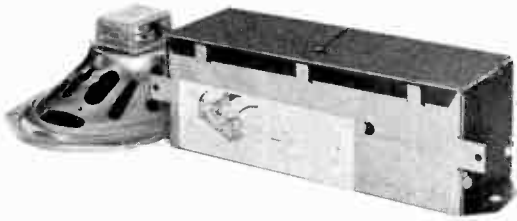
ITEM	PART No.	ITEM	PART No.
Knob - Tuning, Switch Dial Pointer	36B543847 52A64744A01	Dial Scale	36B64794A01

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.)

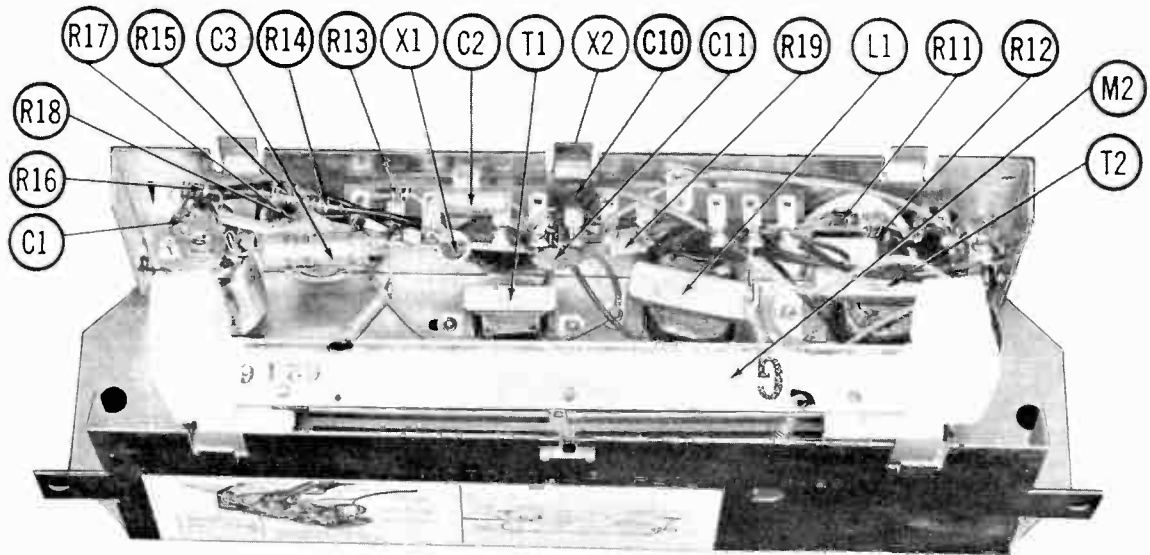


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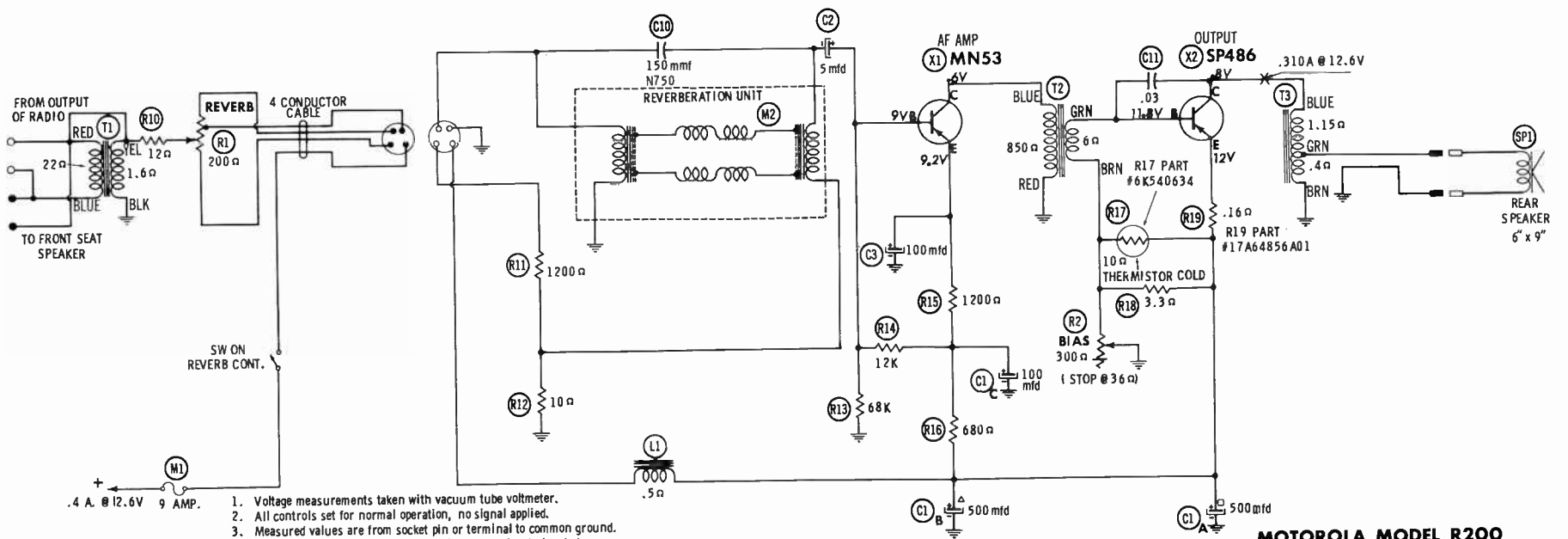


TRADE NAME : Motorola Model R200
 SUPPLIER : Motorola Inc., 9401 W. Grand Ave.,
 Franklin Park, Illinois
 TYPE SET : 2 Transistor Automobile Reverb. Unit.
 POWER SUPPLY : 12 Volts DC
 RATING : .5 Amp. @12.6 Volts DC

MOTOROLA MODEL R200

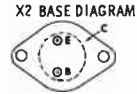
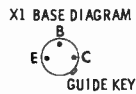


HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana



.4 A. @ 12.6V 9 AMP.

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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MOTOROLA MODEL R200

PARTS LIST AND DESCRIPTION

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

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	
X1	MN53	AF Amp. Output	DS-26	GE-2	2N591	PNP PNP (Note 1)
X2	SP486		DS-503	GE-3	2N376	

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

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						NOTES
	CAP.	VOLT.	MOTOROLA PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	GENERAL INSTRUMENT PART No.	MALLORY PART No.	
C1A	500	16	23B543279	AFH3-00-25		XC3-48		WP300, 85	TVL-3026, 8
	100	16							
C2	5	15	23K543076	PTT64	NLW5-15	MT1-5	BL1141	TT25X5	TE-1152
C3	100	15	23B543074	PTT73	NLW100-15	MT1-19	BL1940	TT15X100	TE-1162

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	150 N750			DTN-150		CCTN-151	CNT-315	10TCU-T15	
C11	.03			CK-303		CCS-302	GP230	5GA-D30	

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	Reverb & Switch Bias	200Ω	18C84657A01		39-300*	112-300*	FL-500*
R2		300Ω 36Ω Stop	18K543493				

* Use 39Ω 2W Series Resistor.

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.
L1	.5Amp.	.6Ω	8.8MH	25K540681		TC-2①			① Use Original Mtg. Frame

TRANSFORMER (INPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC.	MOTOROLA PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	40Ω	2.6Ω	25B64652A01					

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.	
T2	19:	1	25K544671①					① Replace with 25B543386

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.	
T3	30Ω	3.3Ω	25C543443					

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MOTOROLA PART No.	QUAM PART No.	
SP1	6" x 9" PM 3-4Ω	50C541101	69A3	Use Part #50K541105

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			MOTOROLA PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M1	SFE	9A	65R16248	9K541619	307009 (SFE 9A)	155009A	SFE 9	HR4

MISCELLANEOUS

ITEM No.	PART NAME	MOTOROLA PART No.	NOTES
M2	Reverb Unit.	IC41208A01	Complete, Less Springs and Rubber Pads

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
Knob, Reverb.	36K544598		

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.)



PHOTOFACT[®] with

CIRCUITRACE[®]

TRADE NAME : Oldsmobile Model 982136
(For 1963 Oldsmobiles)
SUPPLIER : (Parts) United Delco Distributors
TYPE SET : 5 Transistor Custom-Built AM Receiver
POWER SUPPLY : 12 Volt Storage Battery
RATING : 1.4 Amp. @12.6 VDC
TUNING RANGE: BROADCAST 535 — 1620KC



ALIGNMENT INSTRUCTIONS

Check for specified source voltage.

Use only enough generator output to provide a usable indication.

Suggested Alignment Tools:

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

PUSH-BUTTON ADJUSTMENT

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

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

REMOVAL INSTRUCTIONS

NOTE: To replace transistors, remove radio.

RADIO

1. Loosen set screws in knobs and remove knobs.
2. Use 5/8" wrench and remove 2 nuts from control bushings.
3. Disconnect speaker connector & antenna lead. (And rear seat speaker lead if used).
4. Use 7/16" wrench and remove screws from both ends of rear mounting bracket and remove bracket.

5. Remove radio from under instrument panel.

SPEAKER

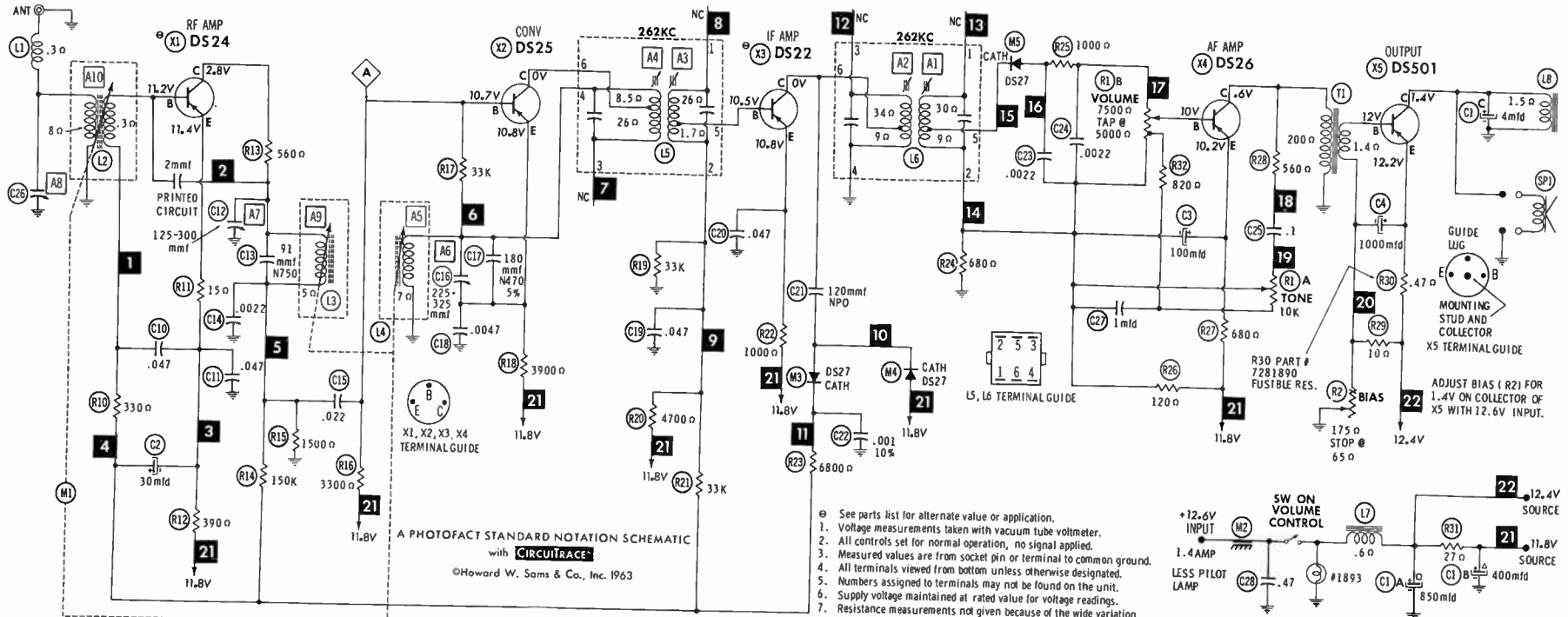
1. Remove "A" lead from speaker connector.
2. Use 3/8" wrench and remove 2 nuts holding speaker mounting plate. Remove speaker and mounting plate.

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

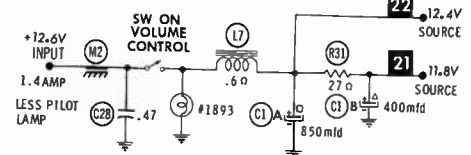
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World Radio History

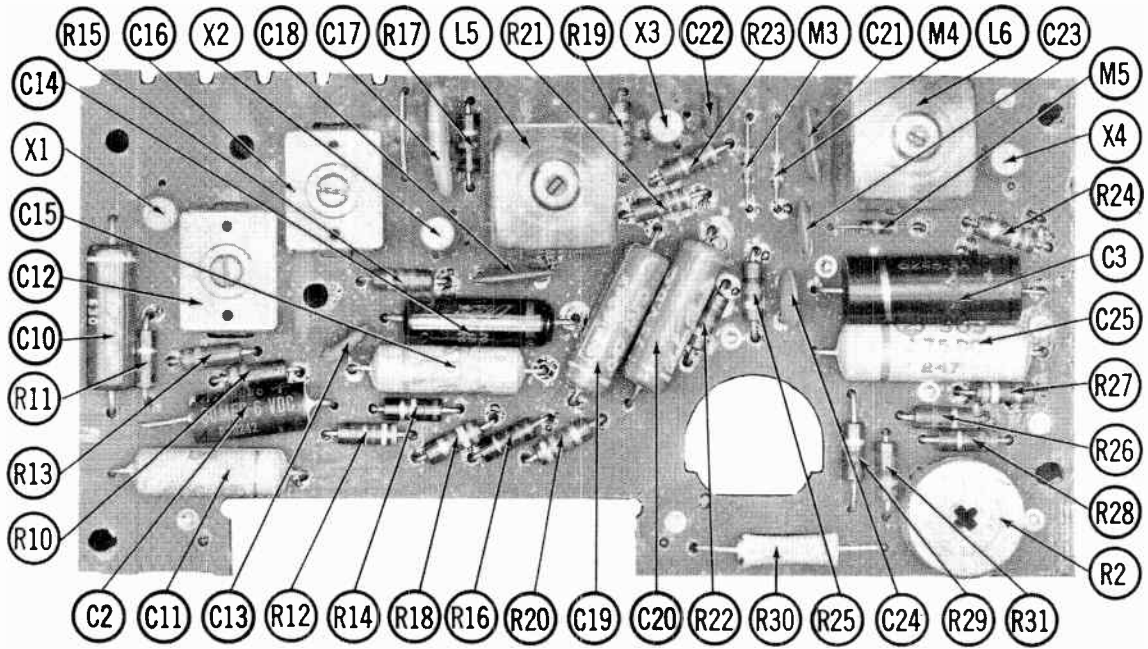
OLDSMOBILE MODEL 982136



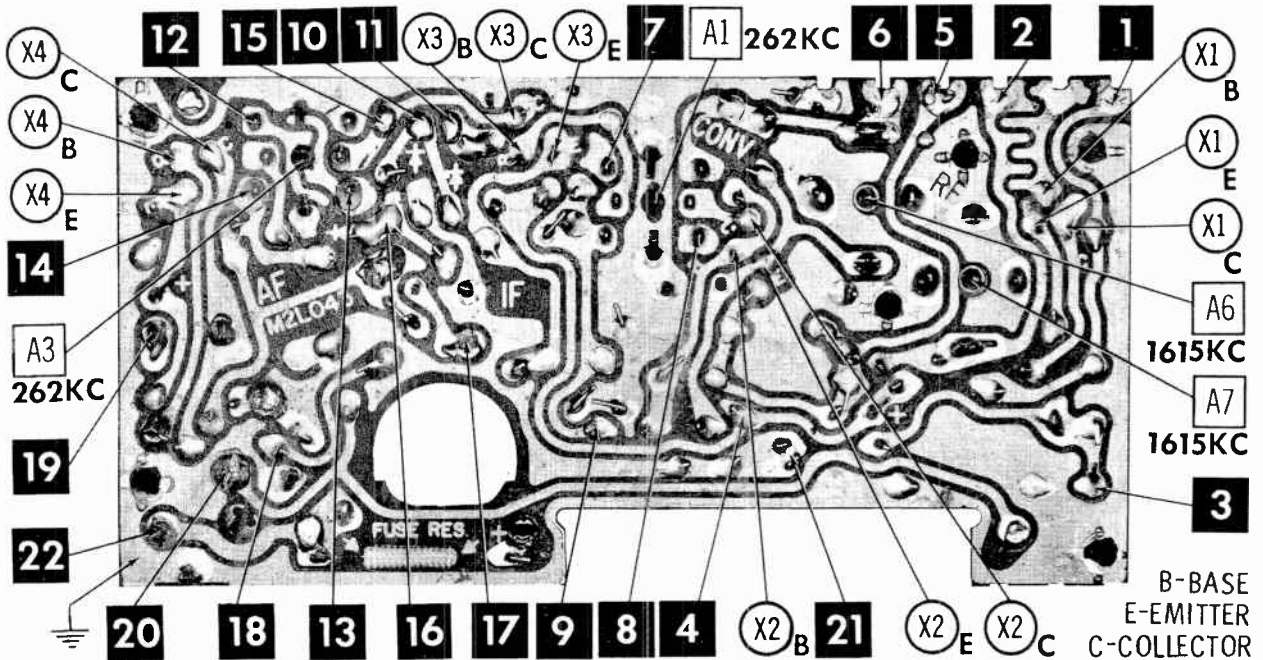
- ⊖ See parts list for alternate value or application.
- 1. Voltage measurements taken with vacuum tube voltmeter.
- 2. All controls set for normal operation, no signal applied.
- 3. Measured values are from socket pin or terminal to common ground.
- 4. All terminals viewed from bottom unless otherwise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



OLDSMOBILE MODEL 982136



PRINTED BOARD – TOP VIEW



PRINTED BOARD – BOTTOM VIEW

PARTS LIST AND DESCRIPTION

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

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	
X1	DS-24†	RF Amplifier	DS-25	GE-1	2N1637	PNP
X2	DS-25	Converter	DS-25	GE-1	2N1639	PNP
X3	DS-22†	IF Amplifier	DS-25	GE-1	2N1638	PNP
X4	DS-26	AF Amplifier	DS-26	GE-2	2N591	PNP
X5	DS-501	Output	DS-501	GE-4		

† Manufacturer suggests replacing with DS-25.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		DELCO PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	GENERAL INSTRUMENT PART No.	MALLORY PART No.	SPRAGUE PART No.
	CAP.	VOLT.							
C1A	850	16	7282272					WP300.7A	TVL-3021
C1B	400	16							
C1C	4	11.5AC							
C2	30	6	7279886	PTT27	NLW30-15	MT1-13	MLV30-6	TT6X30	TE-1092
C3	100	3	7279888	PTT13	NLW100-3	MT1-18	MLV100-3	TT6X100	TE1059.5
C4	1000	1	7283514①	PRS1130	BR-1000-6		BL2310	PE TA120	TVA-1104

① Some versions may use 700mfd in this application.

FIXED CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C10	.047	#7281932	P288N-047	DD-503	CUB2S47	IDP-2-473	GEM-4147	4TM-S47
C11	.047		P288N-047	DD-503	CUB2S47	IDP-2-473	GEM-4147	4TM-S47
C12	125-300							
C13	91 N750	#7281933	P288N-0022	TCN-91	C10Q91U	6DP-1-222	GEM-6222	6TM-D22
C14	.0022		P288N-022	DD-222	CUB6D22	IDP-1-223	GEM-4122	2TM-S22
C15	.022		P288N-022	DDM-203	CUB4S22			
C16	225-325	#7284768	DI-4700	DD-472		CCD-472		10TS-D47
C17	180 N470 5%		P288N-047	DD-503	CUB2S47	IDP-2-473	GEM-4147	4TM-S47
C18	.0047		P288N-047	DD-503	CUB2S47	IDP-2-473	GEM-4147	4TM-S47
C19	.047	#7281933	P288N-047	DD-503	CUB2S47	IDP-2-473	GEM-4147	4TM-S47
C20	.047		NPO-D1 120	DTZ-120			CNO-312	10TCC-T12
C21	120 NPO		DI-1000	DD-102	L10D1	CCD-102	GP210	10TS-D10
C22	.001 10%	DI-2200	DD-222	L10D22	CCD-222	GP222	10TS-D22	
C23	.0022	DI-2200	DD-222	L10D22	CCD-222	GP222	10TS-D22	
C24	.0022	P215IN-1	DDA-104	BC2PIJ	IDP-2-104	ACE-401	2SE-P10	
C25	.1							
C26								
C27	1mfd		UK10-404	HCC10474Z			HY-135	
C28	.47		P288N-47	CUB2P47	IDP-4-474	GEM-2047	2TM-P47	

Delco Part Number.

CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA				
			DELCO PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1A	Tone	10K	7282515				# UE 4411-S
B	Volume & Switch	7500Ω Tap @ 5K 175Ω					
R2	Bias	Tap @ 65Ω	1221422				

"STA-LOC" Equivalent: FK14A, RU752T53, OS1000A, IS1500, US41.

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		DELCO PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	RF Choke (6, 2uh)	7281946	BC-565	4610	RTC-8520	T859	① Part of M1
L2	Antenna	7281716 ①					
L3	RF Coil	7282042 ①					
L4	Oscillator	7281717 ①					
L5	Input IF	1221856					
L6	Output IF	1221857					

FILTER CHOKE

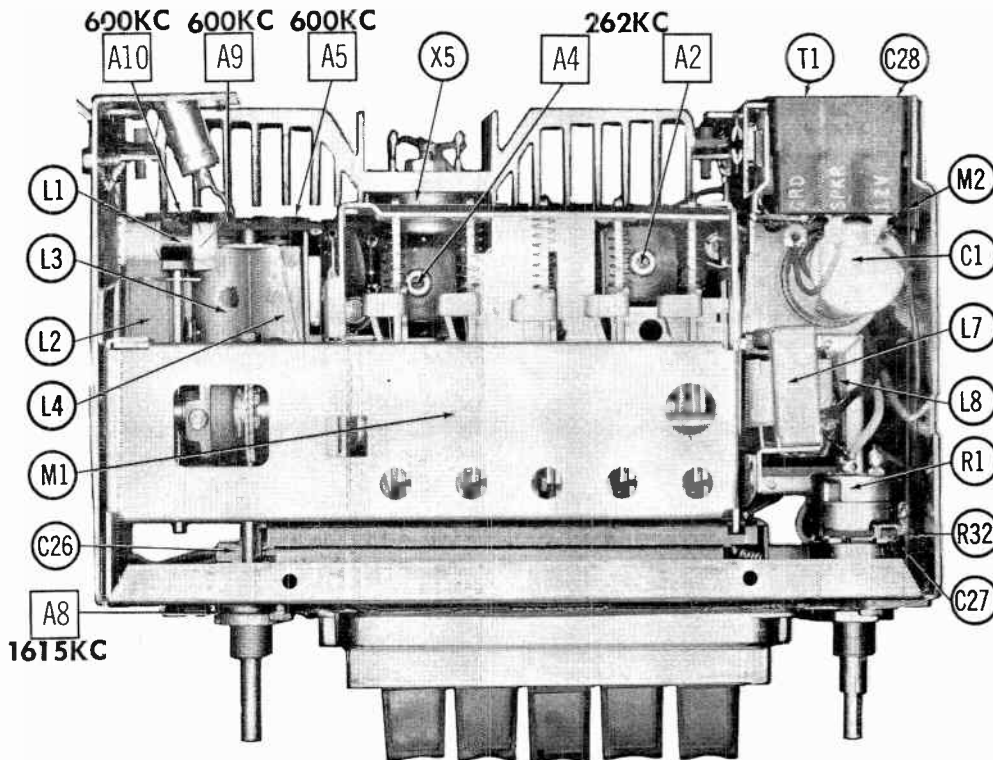
ITEM No.	RATINGS			REPLACEMENT DATA					NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	DELCO PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L7	1.4A	.6Ω	8MH	1221823				TR-154	

CHOKE (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC.	DELCO PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L8	28.5MH		7282278					

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
	PRI.	SEC.	DELCO PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	10	1	7280915					



PARTS LIST AND DESCRIPTION (CONTINUED)

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

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		DELCO PART No.	QUAM PART No.	
SPI	4" x 10" PM 10Ω	7282423	410A2Z10	

MISCELLANEOUS

ITEM No.	PART NAME	DELCO PART No.	NOTES
M1	Tuner Assembly	7281697	
M2	Spark Plate	7271564	
M3	AGC	DS-27	
M4	AGC	DS-27	
M5	Detector	DS-27	

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA						
			DELCO PART No.		LITTELFUSE PART No.		BUSS PART No.		
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER	
	AGW	2½A	AGW 2½					AGW 2½	

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
Dial Scale	7281960	Knob - Tone	587074
Pointer Assembly	7282120	Knob - Dummy	587075
Drive Shaft Ass'y.	7281964	Push Button	7281904
Knob - Tuning, Volume	587467		

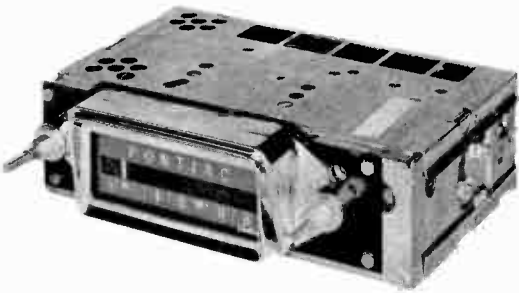
WIRING DATA

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 : Pontiac Tempest Model 983874
(For 1963 Pontiac Tempests)

SUPPLIER : (Parts) United Delco Distributors

TYPE SET : 5 Transistor Custom-Built AM Receiver

POWER SUPPLY : 12 Volt Storage Battery

RATING : .54 Amp. @ 12.6 Volts DC

TUNING RANGE : BROADCAST 535 — 1620KC

ALIGNMENT INSTRUCTIONS

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

A1 thru A5, A9, A10. GENERAL CEMENT #5009, 8728A, 8987
WALSCO #2531X, 2536

A6, A7, A8. GENERAL CEMENT #8290, 8868, 9087
WALSCO #2525, 2528, 2587

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1.	High side thru .1mf to point A , low side to ground.	262KC (400v Mod.)	High Freq. End Stop.	Output Meter across voice coil.	A1, A2, A3, A4	Adjust for maximum.
Check setting of oscillator coil core (A5). Rear of core should be 1 3/8" from mounting end of coil form.						
2.	High side thru 82mmf to antenna receptacle, low side to ground.	1615KC	High Freq. End Stop.	Output Meter across voice coil.	A6, A7, A8	Adjust for maximum.
3.	"	600KC	600KC Signal	"	A9, A10	Adjust for maximum. Repeat step 2.

With radio installed in car and antenna fully extended, tune in a weak station near 1000KC and adjust A8 for maximum output.

REMOVAL INSTRUCTIONS

NOTE: To replace transistors, remove radio.

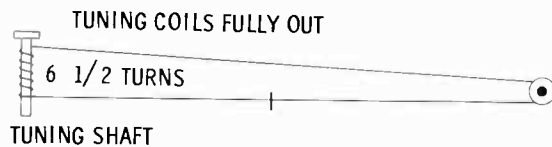
RADIO

1. Use Allen wrench and remove 3 control knobs.
2. Use 1/2" Spanner wrench and remove nut from tuning shaft bushing. Remove dummy knob.
3. Use 5/8" wrench and remove control bushing nuts. Remove 2 escutcheons.
4. Disconnect speaker connector & antenna lead.
5. Use 7/16" wrench and remove bolt from bottom of radio.
6. Remove radio from under instrument panel.

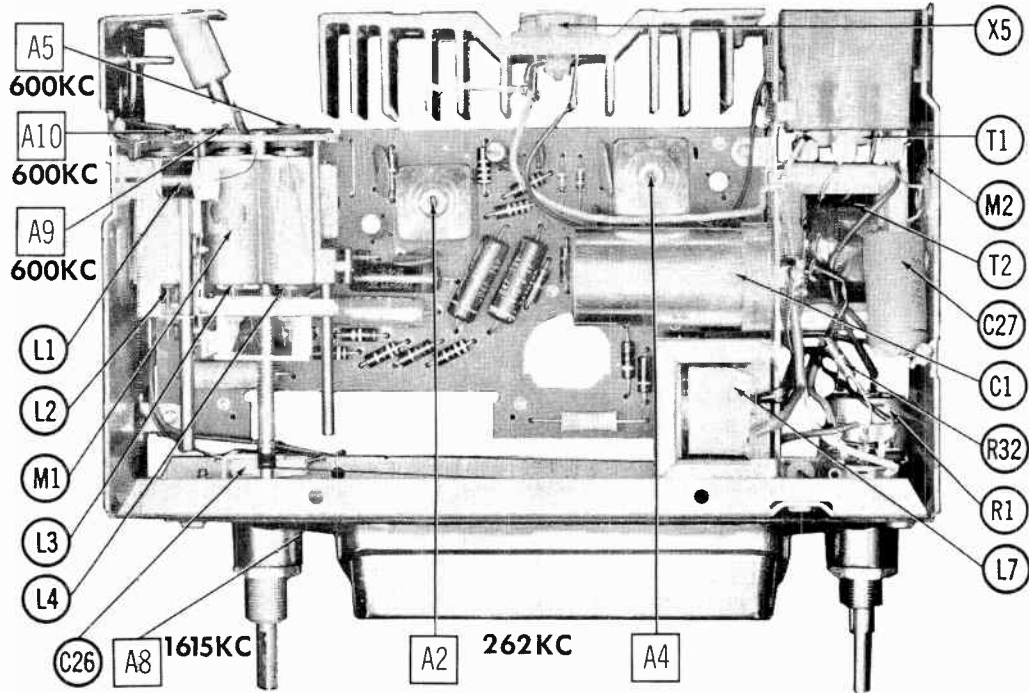
SPEAKER

1. Disconnect "A" lead from speaker connector.
2. Use 7/16" wrench and remove 2 nuts from speaker bracket.
3. Remove speaker bracket and speaker.

DIAL CORD STRINGING



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



CHASSIS—TOP VIEW PARTS LIST AND DESCRIPTION

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

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	
X1	DS-24*	RF Amplifier	DS-25	GE-1	2N1637	PNP
X2	DS-25	Converter	DS-25	GE-1	2N1639	PNP
X3	DS-22*	IF Amplifier	DS-25	GE-1	2N1638	PNP
X4	DS-26	AF Amplifier	DS-26	GE-2	2N591	PNP
X5	DS-503	Output	DS-503	GE-4		PNP (Note 1)

* Manufacturer suggests replacing with DS-25.
Note 1. When replacing, apply silicone grease to both sides of insulator. Tighten mounting screws securely. Check bias adjustment.

ELECTROLYTIC CAPACITORS

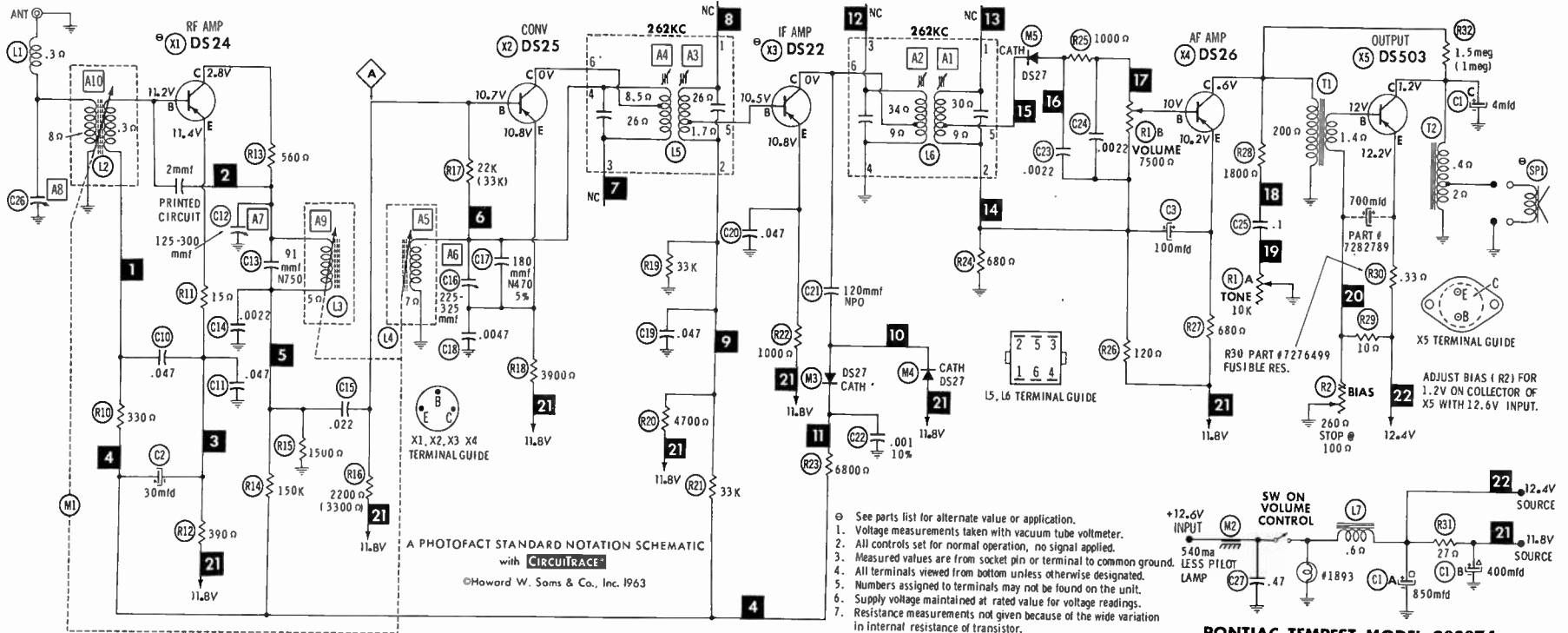
ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	DELCO PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	GENERAL INSTRUMENT PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A	850	16	7282272	AFH-3-54-30				WP300, 7A	TVL-3021
C1B	400	16							
C1C	4	11.5AC							
C2	30	6	7279896	PTT27	NLW30-15	MT1-13	MLV30-6	TT6X30	TE-1092
C3	100	3	7279898	PTT13	NLW100-3	MT1-18	MLV100-3	TT6X100	TE-1059.5

FIXED CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMenco PART No.	MALLORY PART No.	SPRAGUE PART No.
C10	.047	#7281932	P288N-047	DD-503	CUB2S47	IDP-2-473	GEM-4147	4TM-S47
C11	.047		P288N-047	DD-503	CUB2S47	IDP-2-473	GEM-4147	4TM-S47
C12	125-300	#7281933	P288N-0022	TCN-91	C10Q91U	6DP-1-222	GEM-6222	6TM-D22
C13	91 N750							
C14	.0022	#7281933	P288N-022	DDM-203	CUB4S22			
C15	.022							
C16	225-325	#7284768	DI-4700	DD-472	CUB2S47	CCD-472	GEM-4147	10TS-D47
C17	180 N470 5%							
C18	.0047	#7281971	P288N-047	DD-503	CUB2S47	IDP-2-473	GEM-4147	4TM-S47
C19	.047							
C20	.047		DI-1000	DD-102	L10D1	CCD-102	GEM-4147	10TS-D10
C21	120 NPO							
C22	.001 10%		DI-2200	DD-222	L10D22	CCD-222	GEM-4147	10TS-D22
C23	.0022							
C24	.0022		P2151N-1	DDA-104	BC2P1J	IDP-2-104	ACE-401	2SE-P10
C25	.1							
C26	.47		P288N-47		CUB2P47	IDP-4-474	GEM-2047	2TM-P47
C27	.47 100V							

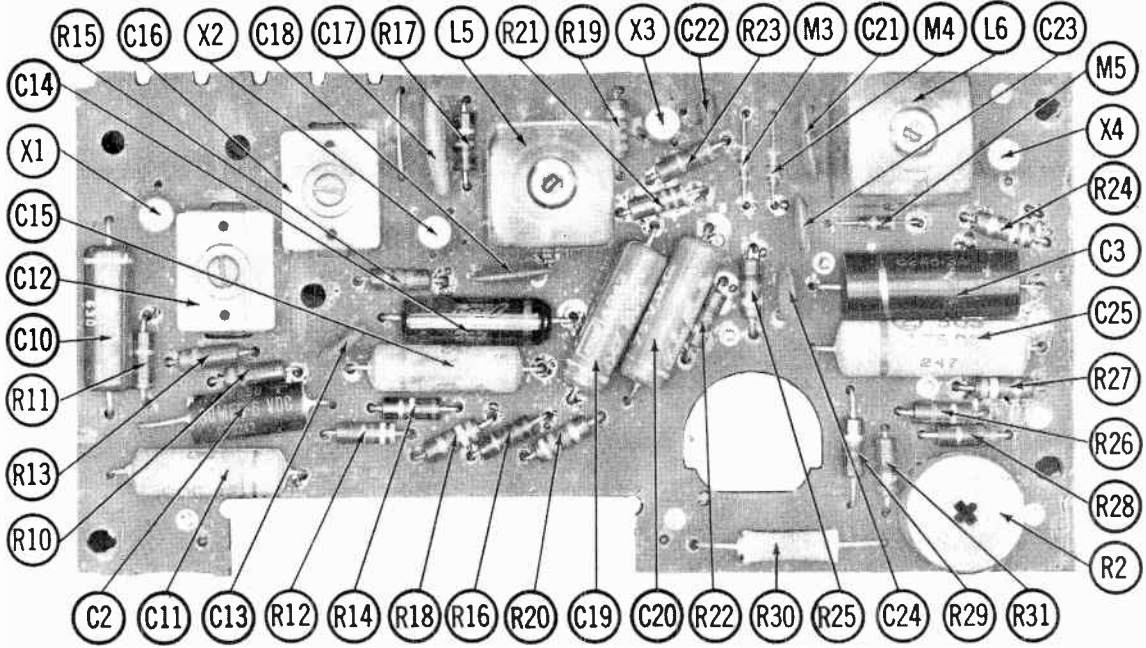
Delco Part Number.

(PARTS LIST CONTINUED)

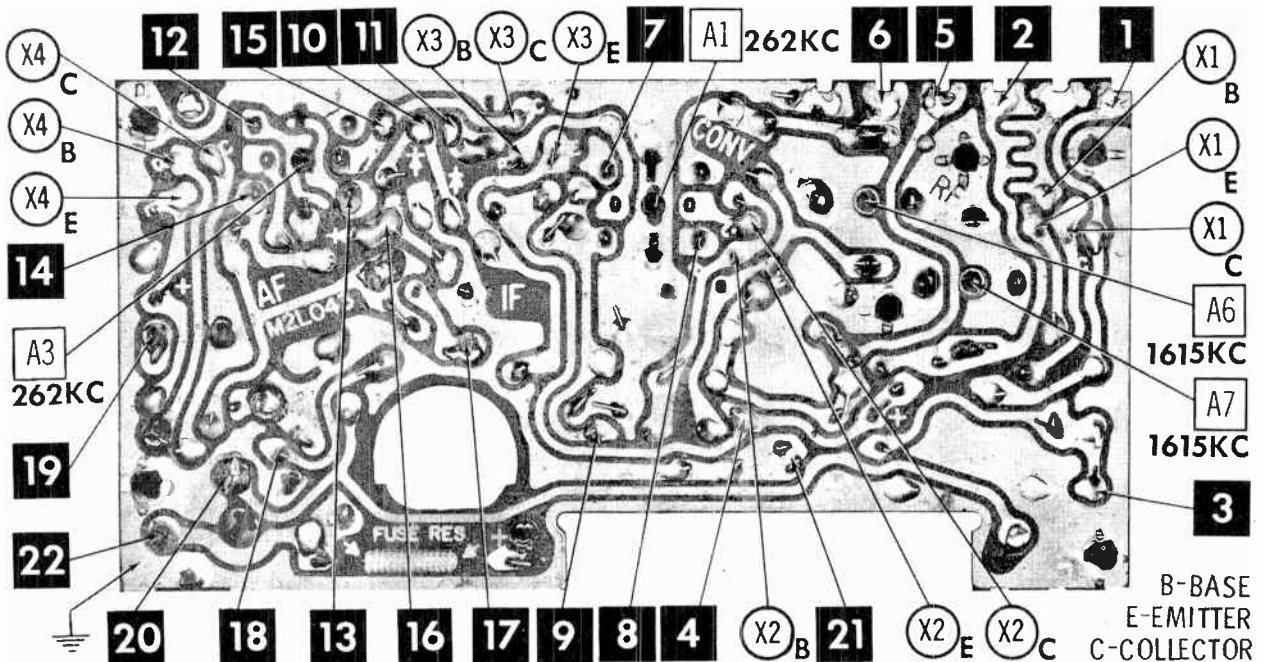


- ⊖ See parts list for alternate value or application.
- 1. Voltage measurements taken with vacuum tube voltmeter.
- 2. All controls set for normal operation, no signal applied.
- 3. Measured values are from socket pin or terminal to common ground.
- 4. All terminals viewed from bottom unless otherwise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

PONTIAC TEMPEST MODEL 983874



PRINTED BOARD - TOP VIEW



PRINTED BOARD - BOTTOM VIEW

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	RESISTANCE	REPLACEMENT DATA					
			DELCO PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.	
RIA B R2	Tone Volume & Switch Bias	10K 7500Ω 260Ω Stop@ 100Ω	7282682 7275474					■ UE4412-S

■ "STA-LOC" Equivalent: FH14A, RU73A, OS1312, IS1937, US41.

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA						NOTES
		DELCO PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.		
L1	RF Choke (6.2uh)	7281946	BC-565	4610	RTC-8520	T859	① Part of M1.	
L2	Antenna	7281716 ①						
L3	RF Coil	7282042 ①						
L4	Oscillator	7281717 ①						
L5	Input IF	1221856						
L6	Output IF	1221857						

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA					NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	DELCO PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L7	.540A	.6Ω	8MH	1221623				TR-154	

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
	PRI.	SEC.	DELCO PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1			7280915					

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC.	DELCO PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T2			7282057					

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		DELCO PART No.	QUAM PART No.	
SP1	4" x 10" PM 10Ω	7281652		

MISCELLANEOUS

ITEM No.	PART NAME	DELCO PART No.	NOTES
M1	Tuner Ass'y.	7281697	
M2	Spark Plate	7271564	
M3	AVC Det.	DS-27	
M4	AVC Det.	DS-27	
M5	AF Det.	DS-27	

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA						
			DELCO PART No.		LITTELFUSE PART No.		BUSS PART No.		
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER	
	AGW	2½	AGW 2½					AGW 2½	

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
Dial Scale	7280187	Knob - Tuning & Volume	544207
Pointer Ass'y.	7272125	Knob - Tone	539611
Drive Shaft Ass'y.	1221829	Knob - Dummy	539610

WIRING DATA

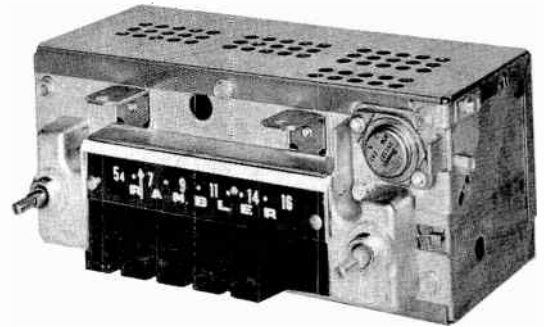
General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in 12 Colors 8524 (Stranded) Available in 12 Colors
Shielded Hook-up Wire	Use BELDEN No. 8885
Rear Seat Speaker Extension Cable	Use BELDEN No. 8782 (Stranded) Coded Parallel Leads
Bonding Strap	Use BELDEN No. 8661 (3/8 In.) or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



PHOTOFACT[®] with

CIRCUITRACE[®]

TRADE NAME : Rambler Models 3TBA, 3TBAM, 3TBAX
 SUPPLIER : The Bendix Corp., Bendix Radio Div.,
 Baltimore 4, Maryland
 TYPE SET : 6 Transistor AM Receiver
 POWER SUPPLY : 12 Volt Storage Battery
 RATING : 1 Amp. @12.6 VDC
 TUNING RANGE : BROADCAST 540 — 1615KC



ALIGNMENT INSTRUCTIONS

Check for specified source voltage.

Use only enough generator output to provide a usable indication.

Suggested Alignment Tools: A1 thru A4... GENERAL CEMENT #8608, 8606L, 8869
 WALSCO #2543, 2544, 2588
 A5, A6, A7... GENERAL CEMENT #8290, 8868, 9087
 WALSCO #2525, 2528, 2587
 A8, A9, A10... GENERAL CEMENT #5009, 8728A, 8987
 WALSCO #2531X, 2536

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1.	High side thru .1mf to point Δ , low side to ground.	262.5KC (400% Mod.)	High Freq. End Stop.	Output Meter across voice coil.	A1, A2, A3, A4	Adjust for maximum.
2.	Thru dummy (Fig. 1) to antenna receptacle.	1615KC	"	"	A5, A6, A7	"
Step 3 is not necessary unless tuner has been tampered with or associated components have been replaced. IF necessary, back tuning cores (A8, A9, A10) out of coils but not out of forms. Repeat step 2.						
3.	Thru dummy (Fig. 1) to antenna receptacle.	1000KC	Tune to Signal.	Output Meter across voice coil.	A8, A9, A10	Adjust for maximum. Repeat steps 2 & 3 until no further improvement is noted.
With radio installed in car and antenna fully extended, tune in a weak station near 1000KC and adjust A7 for maximum output.						

REMOVAL INSTRUCTIONS

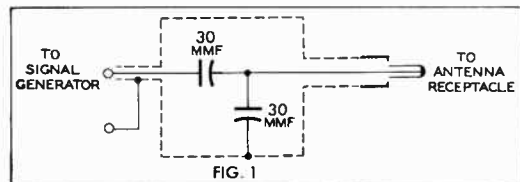
NOTE: To replace transistors, remove radio.

RADIO

1. Remove knobs.
2. Use 5/8" wrench and remove 2 nuts from control bushings.
3. Remove 2 Phillips head screws holding bezel to instrument panel. Remove bezel.
4. Remove 2 Phillips head screws at top front of radio and one Phillip head screw in middle rear.
5. Disconnect speaker lead "A" at fuse holder and antenna lead.
6. Remove radio thru instrument panel.

SPEAKER

1. Remove Phillip head screw from rear of bracket and Phillip head screw from front of bracket. Remove speaker and bracket.

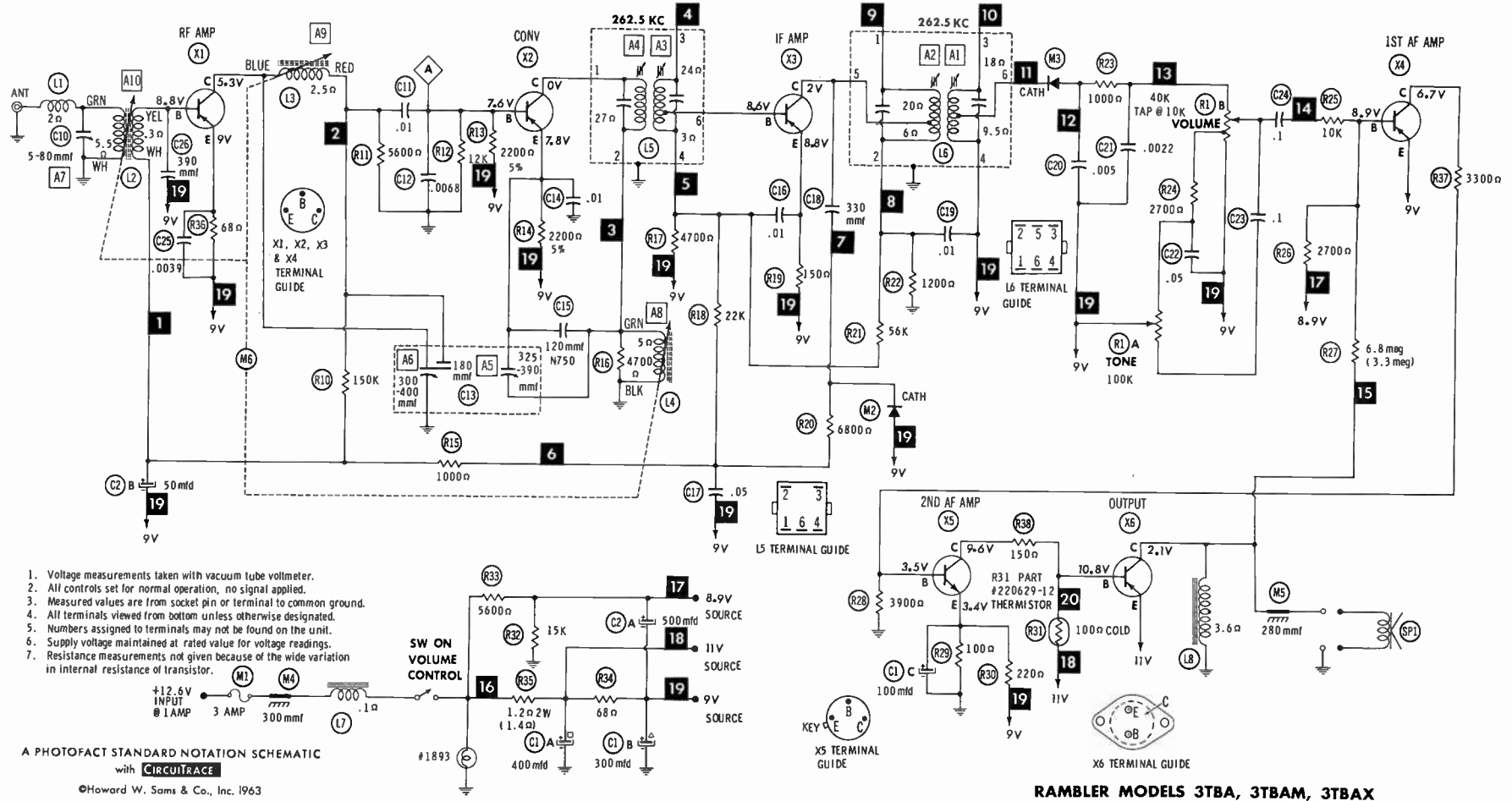


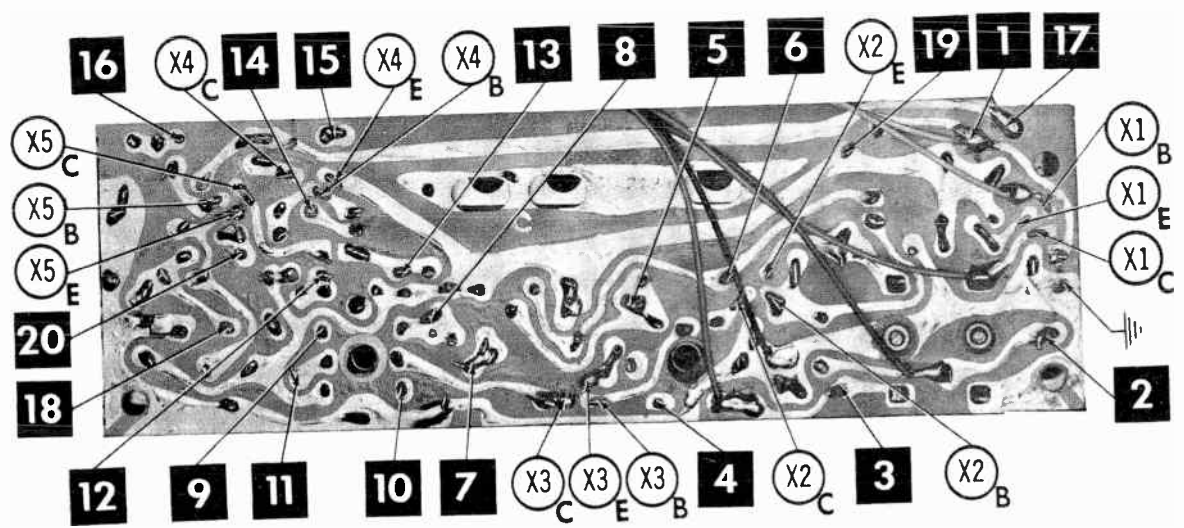
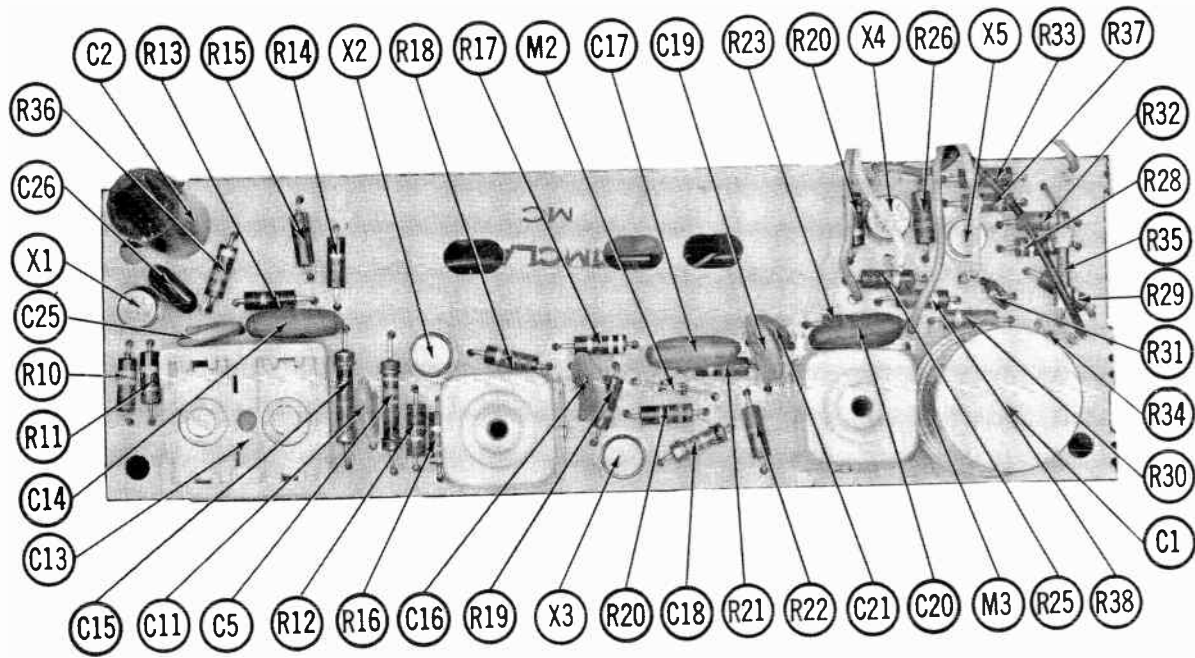
PUSH-BUTTON ADJUSTMENT

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

RAMBLER MODELS 3TBA, 3TBAM, 3TBAX

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





PRINTED BOARD
 B - BASE
 E - EMITTER
 C - COLLECTOR

A Howard W. Sams
 CIRCUITRACE® Photo

RAMBLER MODELS 31BA, 31BAM, 31BAX

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.	BENDIX PART No.	USE	REPLACEMENT DATA			NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	
X1	2091241-15	RF Amp.	DS-25	GE-1	2N1637	PNP PNP PNP PNP PNP PNP (Note 1)
X2	2091241-13	Conv.	DS-25	GE-1	2N1639	
X3	2091241-14	IF Amp.	DS-25	GE-1	2N1638	
X4	2090924-8	AF Amp.	DS-26	GE-2	2N591	
X5	2091260-3	AF Amp.		GE-8		
X6	2091859-8	Output	DS-503	GE-3	2N301	

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

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		BENDIX PART No.	REPLACEMENT DATA				
	CAP.	VOLT.		AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	GENERAL INSTRUMENT PART No.	MALLORY PART No.
C1A	400	16	2091503-5			XC3-48.1		PCL5-3020.5*
B	300	16						
C	100	8						
C2A	500	3	2092246-1	BCD3X50500				
B	50	3						

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

FIXED CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA									
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.				
C10	5-80	#219083-1	TTD-01	CK-103	H05S1	IDP-1-682	TA-110	TG-S10				
C11	.01		SI 6800	D6-682	DPMS6D68				GEM-6266	30GA-D68		
C12	.0068											
C13A	300-400		#219092-25	TTD-01	CK-103	H05S1	CCTN-121	TA-110	TG-S10			
B	180			N750-SI 120	TCN-120	C10T12U				CN7-312	10TCU-T10	
C	325-390			TTD-01	CK-103	H05S1				TA-110	TG-S10	
C14	.01			DI-330	DD-331	H05S5				TA-150	TG-S50	
C15	120 N750			TTD-05	CK-503	H05D5				CCD-331	GP333	10TS-T33
C16	.01			TTD-01	CK-103	H05S1				TA-110	TG-S10	
C17	.05		TTD-05	CK-503	H05D5	TA-250	TG-D50					
C18	330		DI-330	DD-331	L10T33							
C19	.01		TTD-01	CK-103	H05S1							
C20	.005		TTD-05	CK-502	H05D5							
C21	.0022	DM-202										
C22	.05	TTD-05	CK-503	H05S5								
C23	.1	TTD-1	CK-104	H05P1								
C24	.1	TTD-1	CK-104	H05P1								
C25	.0039	DI-390	DD-392	L10D39	DM-19-392	GP239	5GA-D39					
C26	390	DI-330	DD-331	L10T33	CCD-331	GP333	10TS-T33					

Bendix Part Number.

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 Volume & Switch	100K 40K Tap @ 10K	2092528-1				
B							

COILS (RF-IF)

ITEM No.	USE	BENDIX PART No.	REPLACEMENT DATA				NOTES
			MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	RF Choke (9uh)	2092210-4	BC-566	4612	RTC 8522	T860	
L2	Ant.						
L3	RF						
L4	Osc.						
L5	Input IF	2092202-4					
L6	Output IF	2092203-4					
L7	"A" Lead Choke (1.2MH)	2092050-10					

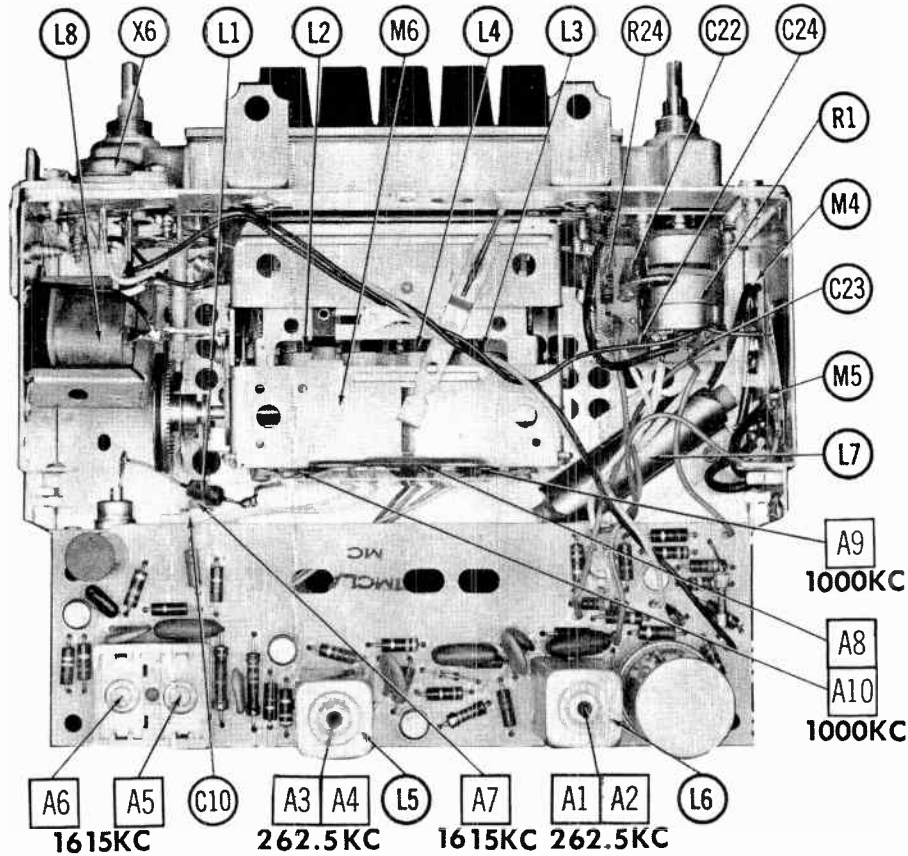
① Part of M6 or Coil Assembly Part #2090131-47 (Push button) or #2090131 (Manual)

CHOKE (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.	
L8			2092245-2					

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		BENDIX PART No.	QUAM PART No.	
SP1	5" x 7" PM 20Ω	2091992-2	57A1Z20	



**CHASSIS—TOP VIEW
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.

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			BENDIX PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M1	IAG	3A	AGA-3	221633-21	301003 (IAG 3A)	155004A	AGA 3	HAF

MISCELLANEOUS

ITEM No.	PART NAME	BENDIX PART No.	NOTES
M2	AVC Det.	2092055-1	
M3	Audio Det.	2092055-1	
M4	Spark Plate	220267-12	300mmf
M5	Spark Plate	220267-16	280mmf
M6	Tuner	2091970-6	Complete with Push Buttons
	Tuner	2091969-5	Complete, Manual
	Printed Board	2092529-1	Includes Transistors
	Printed Board	2092526-2	Volume - Tone

CABINETS & CABINET PARTS
(When Ordering Specify Model, Chassis & Color)

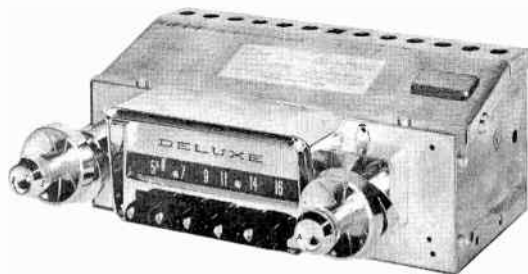
ITEM	PART No.	ITEM	PART No.
Dial Glass	2091965-1	Knob - Tone, Dummy	2091984-1
Knob - Tuning, Volume	2091987-1		

WIRING DATA

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



PHOTOFACT®



TRADE NAME : Riverside Models FJB-6471A, FJB-6472A (1962 Chevy II)
 FJB-6562A (1961-62 Chevrolet)
 FJB-6572A, FJB-6579A, FJB-6580A (1961-62 Tempest, F-85, Special)
 FJB-6581, FJB-6604B (1960-62 Corvair)
 FJB-6612A (1961-62 Chevrolet)

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

TYPE SET: 5 Transistor Custom-Built AM Receiver

POWER SUPPLY: 12 Volt Storage Battery

RATING: .7 Amp. @12.6 VDC

TUNING RANGE: BROADCAST 535 - 1615KC

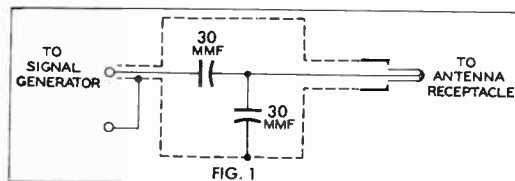
ALIGNMENT INSTRUCTIONS

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, 8728A
 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 Δ , low side to ground.	265KC (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 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.

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	2N640	RF Amplifier	DS-25	GE-1	2N1637	PNP
X2	2N642	Converter	DS-25	GE-1	2N1639	PNP
X3	2N641	IF Amplifier	DS-25	GE-1	2N1638	PNP
X4	2N217	Driver	DS-26	GE-2	2N591	PNP
X5	2N176	Output	DS-503	GE-3	2N176	PNP (Note 1)

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

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	RIVERSIDE PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	GENERAL INSTRUMENT PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A	#600	15	20-327	AFH3-00-95.4				WP300.87	PCLS-3026.10*
B	300	15							
C	100	15	20-256 20-505	PTT69 PTT64	NLW25-15 NLW5-15	MT1-14 MT1-10	TD-25-25 MLV5-15	TT15X25 TT25X5	TE-1207 TE-1152
C2	25	15							
C3	5	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.
C4	.05	#28-800-2L	TTD-05	CK-503	H05S5	CCD-271	TA-150	TG-S50
C5	.05		TTD-05	CK-503	H05S5		TA-150	TG-S50
C6	.05		1459-00027	DD-271	5R5T27		GP327	5GA-727
C7	270	#28A1332Ⓢ				CCTN-101		
C8			TTD-02	CK-203	H05S2		TA-120	TG-S20
C9	.02		TTD-005	CK-502	H05D5		TA-250	TG-D50
C10	.005		TTD-01	CK-103	H05S1	TA-110	TG-S10	
C11	.015		N750-D1 100	DTN-100	C10T1U	CN7-310	10TCU-T10	
C12	100 N750		TTD-05	CK-503	H05S5	TA-150	TG-S50	
C13	.05		TTD-05	CK-503	H05S5	TA-150	TG-S50	
C14	.05		TTD-05	CK-503	H05S5	TA-150	TG-S50	
C15	.05		TTD-05	CK-503	H05S5	TA-150	TG-S50	
C16	180		1459-00018	DD-181	22R5T18	GP318	5GA-T18	
C17	.01		TTD-01	CK-103	H05S1	TA-110	TG-S10	
C18	.22		UK20-204	HCC25224Z			HY-325	
C19	.1		TTD-1	CK-104	H05P1	TA-010	TG-P10	

Riverside Part Number.

Ⓢ Part #28A1337 used in Models FJB-6572A/79A/80A

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.
RLA	Tone	10K	80A2291C Ⓢ				
B	Volume & Switch	10K Tap @ 500Ω					

Ⓢ Part #80A2204 used in Models FJB-6562A, FJB-6612A

Part #80A2220 used in Models FJB-6561, FJB-6604B

RIVERSIDE MODELS FJB-6471A/6572A/6579A/6580A/6581/6604B/6612A

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)	Ⓢ Ⓢ Ⓢ Ⓢ Ⓢ Ⓢ					Ⓢ Part of M1
L2	Ant.						
L3	RF						
L4	Osc.						
L5	Input IF						
L6	Output IF						

CHOKE (AUDIO OUTPUT)

ITEM No.	INDUCTANCE	REPLACEMENT DATA					NOTES
		RIVERSIDE PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L7	27MH	75A2189					

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.	
L8	.6A	.5Ω	10MH	75A1269					

TRANSFORMER (DRIVER)

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

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		RIVERSIDE PART No.	QUAM PART No.	
SPI	4" x 10" PM 2Ω	73B2260 Ⓢ	410A2220	Ⓢ Part #73B2221 used in Models FJB-6581, FJB-6604B Part #SP410E used in Models FJB-6572A/79A/80A

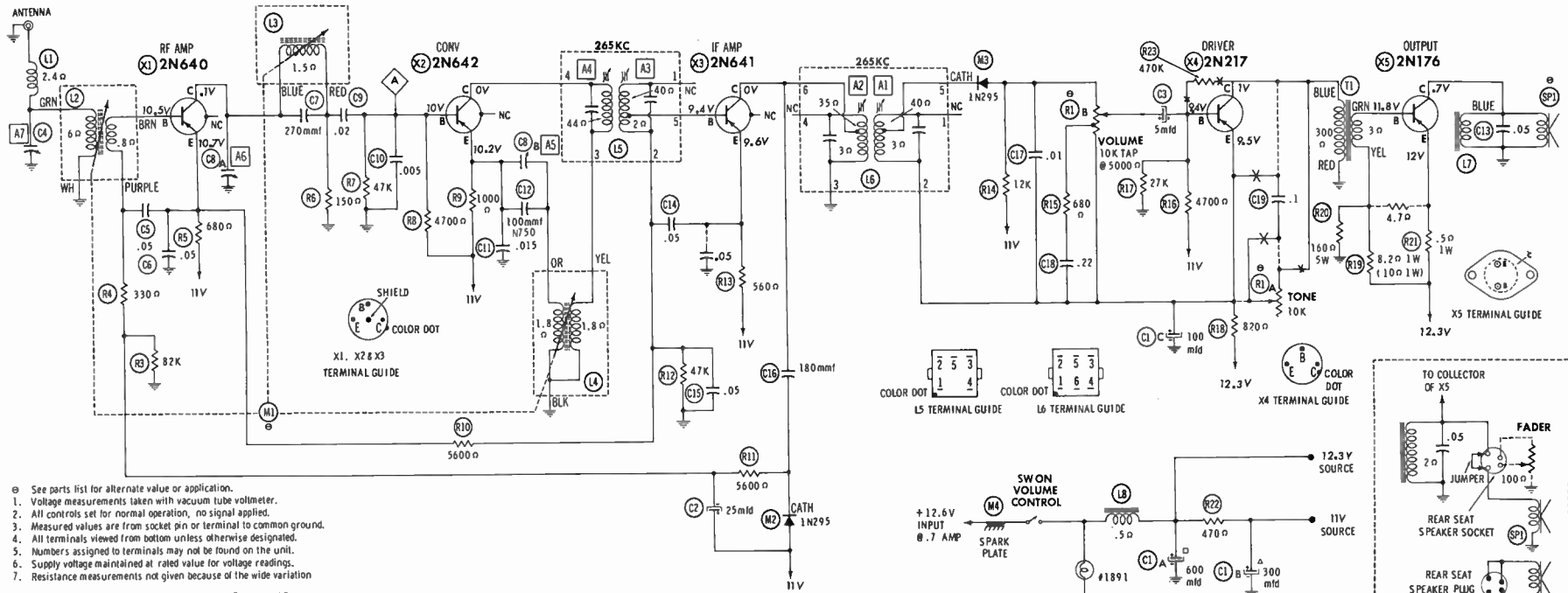
MISCELLANEOUS

ITEM No.	PART NAME	RIVERSIDE PART No.	NOTES
M1	Tuner	78B2296 78B2219 78B2290 78A2334 78B2174 78B2223	Models FJB-6572A, FJB-6579A, FJB-6580A Models FJB-6581, FJB-6604B Model FJB-6471A (Push-Button) Model FJB-6472A (Manual) Model FJB6562A (Push-Button) Model FJB-6612A (Manual)
M2	AVC Det.	1N295	
M3	Audio Det.	1N295	
M4	Spark Plate	43-215	

CABINETS & CABINET PARTS

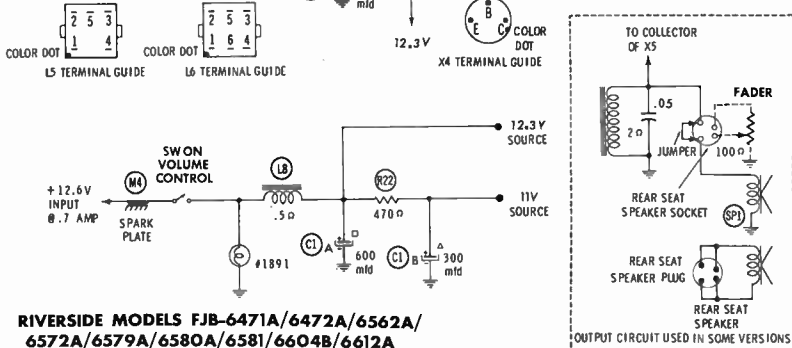
(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
KNOBS			
Tuning (Corvaire, Chevy II, Chevrolet)	54A1714	Tone (Chevrolet)	54A1735
Tuning (Special)	48A1477	Tone (Tempest, Special)	54A1830
Tuning (Tempest)	54A1786	Tone (F-85)	48B1837
Tuning (F-85)	48A1833	Dummy (Corvaire, Chevy II)	48A1063-1A
Tone (Corvaire)	48A1063	Dummy (Tempest, Special)	54A1830-1
Tone (Chevy II)	48A1063-1	Dummy (F-85)	48B1838

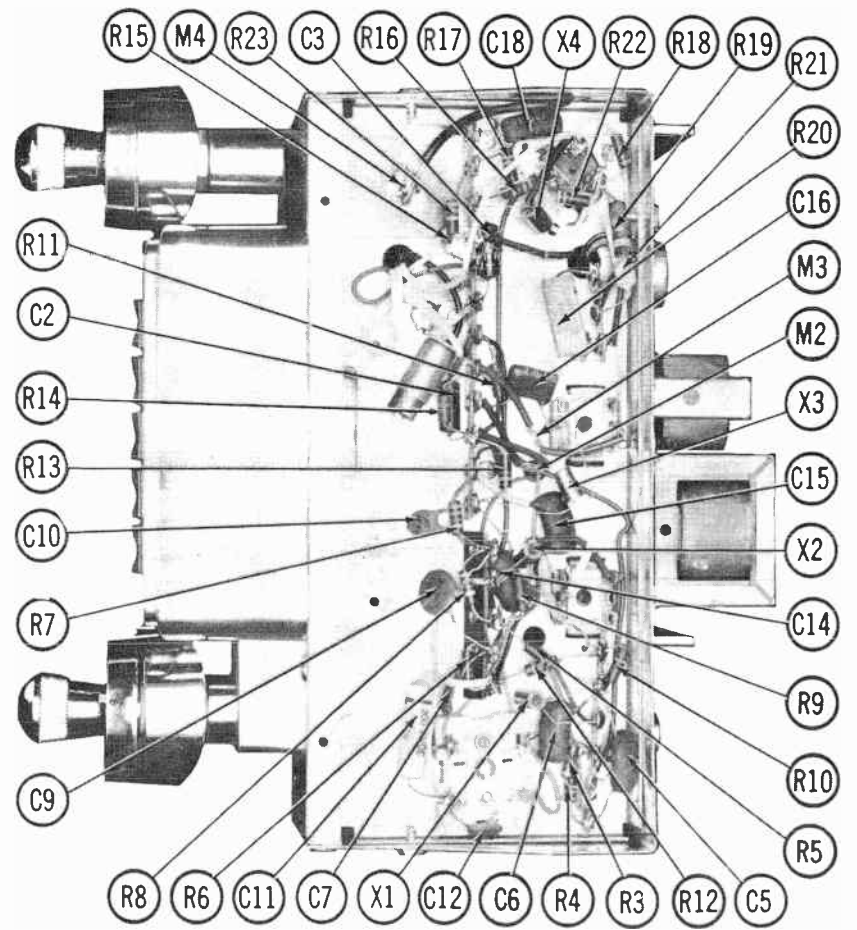
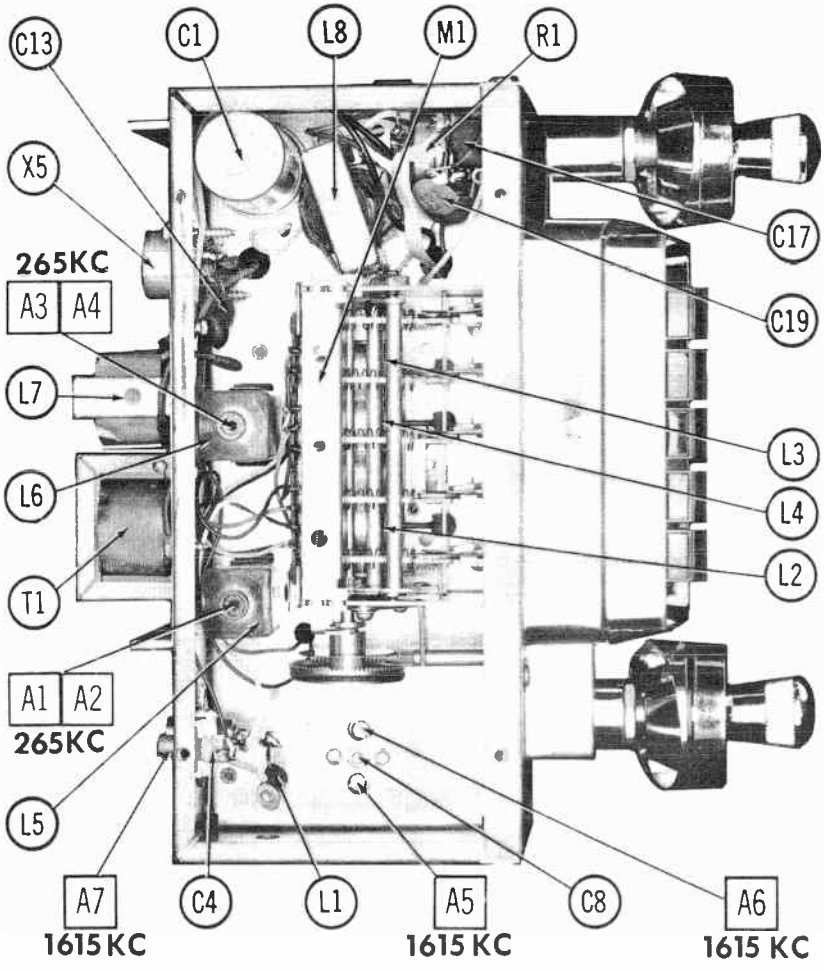


- ⊙ See parts list for alternate value or application.
- 1. Voltage measurements taken with vacuum tube voltmeter.
- 2. All controls set for normal operation, no signal applied.
- 3. Measured values are from socket pin or terminal to common ground.
- 4. All terminals viewed from bottom unless otherwise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

A PHOTOFAC STANDARD NOTATION SCHEMATIC
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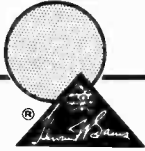


**RIVERSIDE MODELS FJB-6471A/6472A/6562A/
 6572A/6579A/6580A/6581/6604B/6612A**



CHASSIS PHOTOS

RIVERSIDE MODELS FJB-6471A/6472A/6562A/6572A/6579A/6580A/6581/6604B/6612A



PHOTOFACT[®]



TRADE NAME : Riverside Model FJB-6540A
SUPPLIER : Montgomery Ward & Co.,
 619 Chicago Ave., Chicago 7, Illinois
TYPE SET : 6 Transistor AM Receiver
POWER SUPPLY : 6 or 12 Volt Storage Battery
RATING : 1.2 Amp. @12.6 VDC
TUNING RANGE : BROADCAST 540 - 1615KC

RIVERSIDE MODEL FJB-6540A

ALIGNMENT INSTRUCTIONS

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

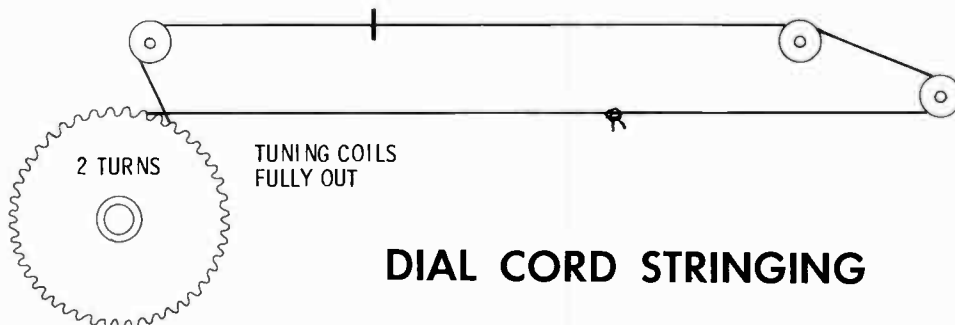
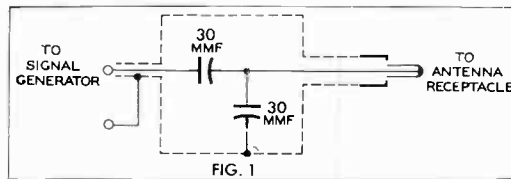
A1, A2, A3, A4... GENERAL CEMENT #8606, 8606L, 8869
 WALSCO #2543, 2544, 2588
 A5, A6, A7..... GENERAL CEMENT #9087, 8290, 8868
 WALSCO #2525, 2528, 2587

PUSH-BUTTON ADJUSTMENT

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

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1.	High side thru .1mf to point Δ , low side to ground.	265KC (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 A8 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.

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	
X1	2N840	RF Amplifier	DS-25	GE-1	2N1637	PNP
X2	2N842	Converter	DS-25	GE-1	2N1639	PNP
X3	2N841	IF Amplifier	DS-25	GE-1	2N1638	PNP
X4	2N217	AF Amplifier	DS-26	GE-2	2N591	PNP
X5	2N217	Emitter Follower	DS-26	GE-2	2N591	PNP
X6	8P404T*	Output	DS-503	GE-3	2N176	PNP (Note 1)

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

* Alternate Type 2N176.

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	250	15	20-328	PWH3-00-94		XC3-48.1			PCL-3026, 6
B	250	15							
C	500	15							
C2	25	15	25-256	PTT89	NLW25-15	MT1-14	TD-25-25	TT15X25	TE-1207
C3	750	3							
C4	25	15							

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		#20-800-2L							
C11	.047	}	#28A1332						HY-310
C12A									
B									
C13	270		1459-00027	DD-271	5R5T27	CCD-271	GP327	5GA-T27	
C14	.02		TTD-02	CK-203	H05S2		TA-120	TG-S20	
C15	.0047		BPD-0047	DD-472	BYA10D47	CCD-472	E-247	5HK-D47	
C16	.01		TTD-01	CK-103	H05SI		TA-110	TG-S10	
C17	100 N750		N750-DI 100	DTN-100	C10TIU	CC TN-101	CN7-310	10TCU-T10	
C18	.047							HY-310	
C19	.047							HY-310	
C20	180		1459-00018	DD-181	22R5T18	CCD-181	GP318	5GA-T18	
C21	.01		TTD-01	CK-103	H05SI		TA-110	TG-S10	
C22	1mfd			UK-105	HCC3105P			HY-135	
C23	.1	Note 1	TTD-1	CK-104	H05PI		TA-010	TG-P10	
C24	.047							HY-310	
C25	.05		TTD-05	CK-503	H05S5		TA-150	TG-S50	

Riverside Part Number.

Note 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 & Switch	7500Ω	80A2364				

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	5Ω 10W		10W-SQ-5						

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		RIVERSIDE PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	RF Choke (6.2uh)	14-6.2	BC-565	4610	RTC-8520	7859	Ⓛ Part of M2
L2	Ant.						
L3	RF						
L4	Osc.						
L5	Input IF	14-274					
L6	Output IF	14-275					

CHOKE (AUDIO OUTPUT)

ITEM No.	INDUCTANCE	REPLACEMENT DATA					NOTES
		RIVERSIDE PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L7	13MH	75A2057					

FILTER CHOKE

ITEM No.	RATINGS		REPLACEMENT DATA					NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	FIRESTONE PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	
L8	.8A	.5Ω	10MH	75A1269				

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		RIVERSIDE PART No.	QUAM PART No.	
SP1	5" PM 6-8Ω	73A2163	5A0527.4	

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			RIVERSIDE PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER		
M1	SFE	7½A		12-1921B	30707.5 (SFE 7½A)	15507.5A	SFE 7½	HDH

MISCELLANEOUS

ITEM No.	PART NAME	RIVERSIDE PART No.	NOTES
M2	Tuner	78A2380	
M3	AVC Det.	1N295	
M4	Audio Det.	1N295	
M5	Spark Plate	43-215	

CABINETS & CABINET PARTS

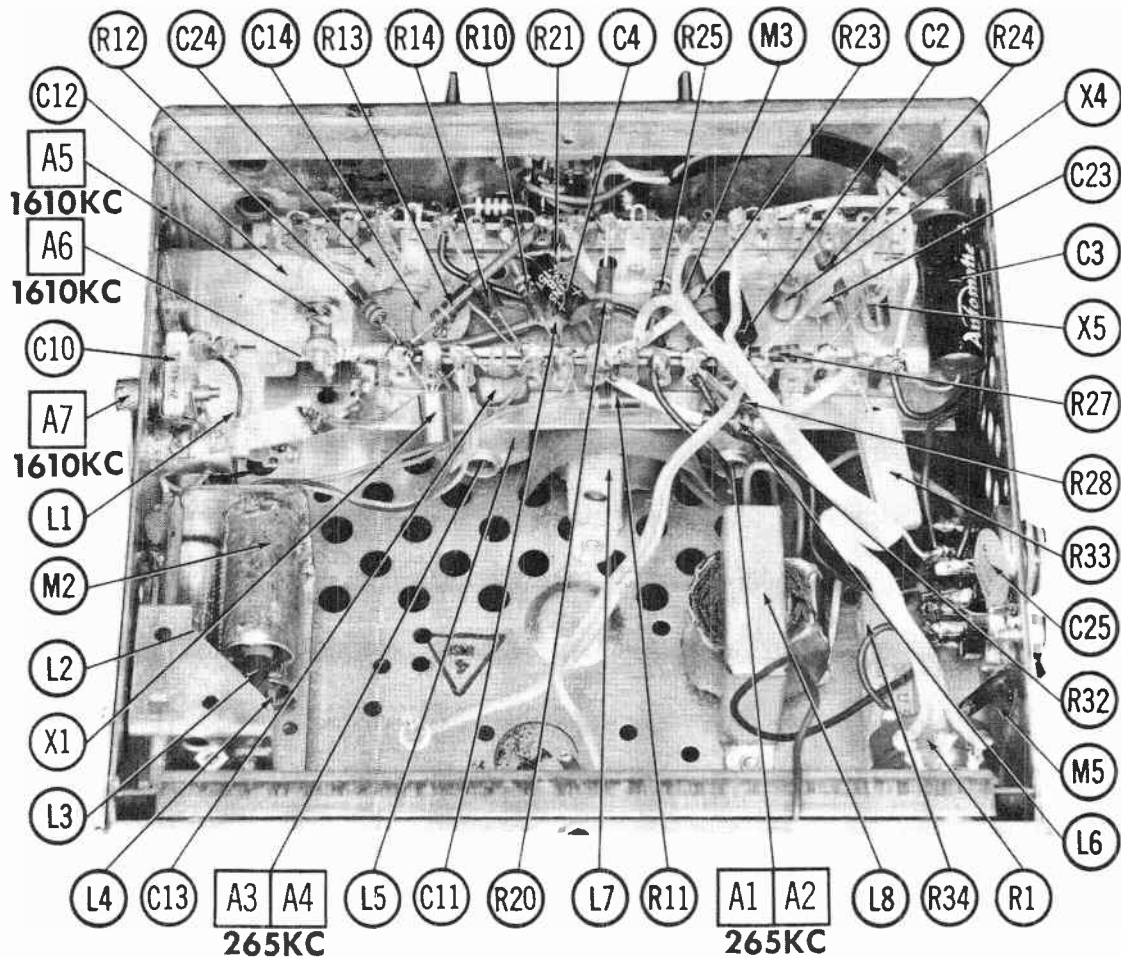
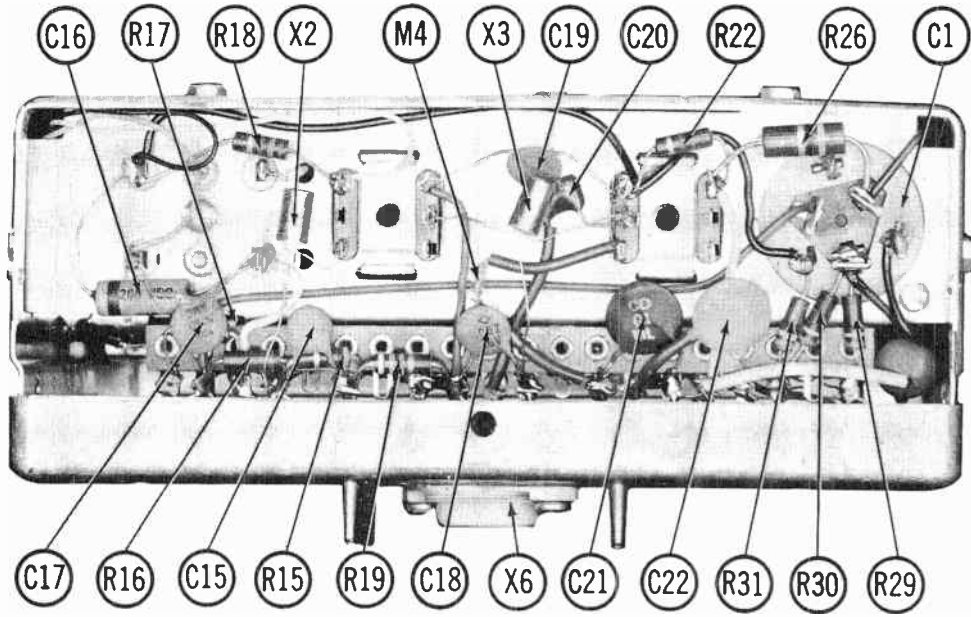
(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
Knob - Tuning, Volume	47-52B	Knob - Dummy	47A1249

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.)

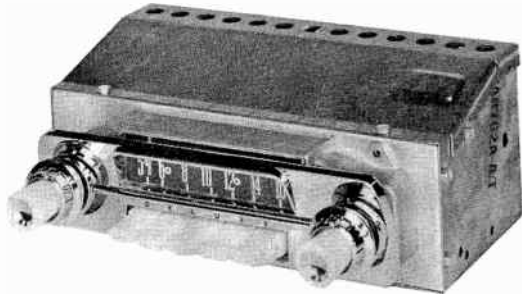
RIVERSIDE MODEL FJB-6540A



CHASSIS PHOTOS



PHOTOFACT[®]



TRADE NAME: RIVERSIDE MODELS
 FJB-6560A (1962 Mercury)
 FJB-6561A (1962 Fairlane)
 FJB-6583A (1960-62 Ford)
 FJB-6643A (1960-62 Falcon, Comet)

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

TYPE SET: 5 Transistor Custom-Built AM Receiver

POWER SUPPLY: 12 Volt Storage Battery

RATING: .7 Amp. @12.6 VDC

TUNING RANGE: BROADCAST 538 — 1615KC

RIVERSIDE MODELS FJB-6560A/61A/83A FJB-6643A

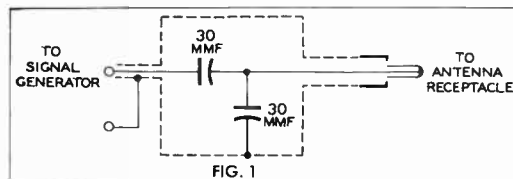
ALIGNMENT INSTRUCTIONS

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 .1mf to point Δ , low side to ground.	265KC (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 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.

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 Soms COUNTER FACTS for the most up-to-date replacement.

WIRING DATA

General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in 12 Colors
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
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	
X1	2N640	RF Amp.	DS-25	GE-1	2N1637	PNP
X2	2N642	Converter	DS-25	GE-1	2N1639	PNP
X3	2N641	IF Amp.	DS-25	GE-1	2N1638	PNP
X4	2N217	Driver	DS-26	GE-2	2N591	PNP
X5	2N176	Output	DS-26	GE-3	2N176	PNP (Note 1)

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

FIXED CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCOR PART No.	MALLORY PART No.	SPRAGUE PART No.
C4		#28-800-2L						
C5	.05		TTD-05	CK-503	H05S5		TA-150	TG-S50
C6	.05		TTD-05	CK-503	H05S5		TA-150	TG-S50
C7	270		1459-00027	DD-271	5R5T27	CCD-271		5GA-T27
C8A		#28A1332						
C9	.02		TTD-02	CK-203	H05S2		TA-120	TG-S20
C10	.005		TTD-005	CK-502	H05D5		TA-250	TG-D50
C11	.015		TTD-01	CK-103	H05S1		TA-110	TG-S10
C12	100 N750		N750-D1100	DTN-100	CI0TIU	CCTN-101	CN7-310	10TCU-T10
C13	.05		TTD-05	CK-503	H05S5		TA-150	TG-S50
C14	.05		TTD-05	CK-503	H05S5		TA-150	TG-S50
C15	.05		TTD-05	CK-503	H05S5		TA-150	TG-S50
C16	180		1459-00018	DD-181	22R5T18	CCD-181		5GA-T18
C17	.01		TTD-01	CK-103	H05S1		TA-110	TG-S10
C18	.22			UK20-204	HCC25224Z			HY-325
C19	.1		TTD-1	CK-104	H05P1		TA-010	TG-P10
C20	.05		TTD-05	CK-503	H05S5		TA-150	TG-S50

Riverside Part Number.

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	800	15							
B	300	15	20-327	AFH3-00-95.4				WP300, 87	PCLS-3028, 10*
C	100	15							
C2	25	15	20-256	PTT69	NLW25-15	MTI-14	TD-25-25	TT15X25	TE-1207
C3	5	15	20-505	PTT64	NLW5-15	MTI-10	MLV5-15	TT25X5	TE-1152

* 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					
			RIVERSIDE PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.	
RIA	Tone	10K	80A2239 ①					
B	Volume & Switch	10K Tap @5000Ω						

① Part #80A2182 used in Models FJB-6560A, FJB-6643A.
Part #80A2204 used in Model FJB-6583A.

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		RIVERSIDE PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	RF Choke(6.2uh)	14-6.2	BC-565	4610	RTC-852	T859	① Part of M2
L2	Ant.						
L3	RF						
L4	Osc.						
L5	Input IF	14-270					
L6	Output IF	14-271					

CHOKE (AUDIO OUTPUT)

ITEM No.	INDUCTANCE	REPLACEMENT DATA					NOTES
		RIVERSIDE PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L7	27MH	75A2189					

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.	
L8	.5A	.5Ω	10MH	75A1269					

TRANSFORMER (DRIVER)

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

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		RIVERSIDE PART No.	QUAM PART No.	
SP1	5" x 7" PM 20Ω 5" x 7" PM 20Ω 6" x 9" PM 20Ω	73B2266 73B2210 73B2221		Model FJB-6561A Model FJB-6643A Models FJB-6560A, FJB-6583A

MISCELLANEOUS

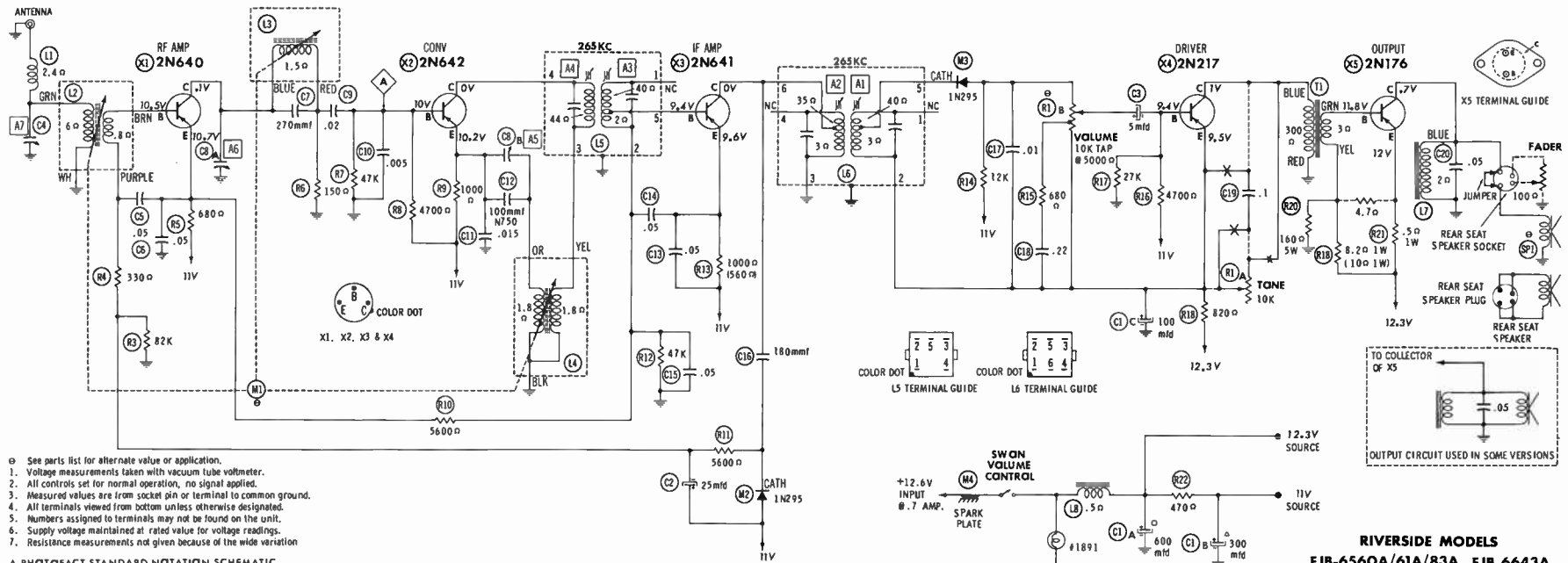
ITEM No.	PART NAME	RIVERSIDE PART No.	NOTES
M1	Tuner	78B2236 ①	① 78B2175 used in Models FJB-6560A, FJB-6643A, FJB-6583A
M2	AVC Det.	1N295	
M3	Audio Det.	1N295	
M4	Spark Plate	43-215	

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
KNOBS		KNOBS	
Tuning (Ford)	47-52B	Tone (Fairlane)	48A2272
Tuning (Falcon, Fairlane)	47-52W	Tone (Mercury)	48A2247
Tuning (Mercury)	48A1714	Dummy (Ford, Falcon, Comet)	48A1522-1
Tuning (Comet)	48A2225	Dummy (Fairlane)	48A2272-1
Tone (Ford, Falcon, Comet)	48A1522		

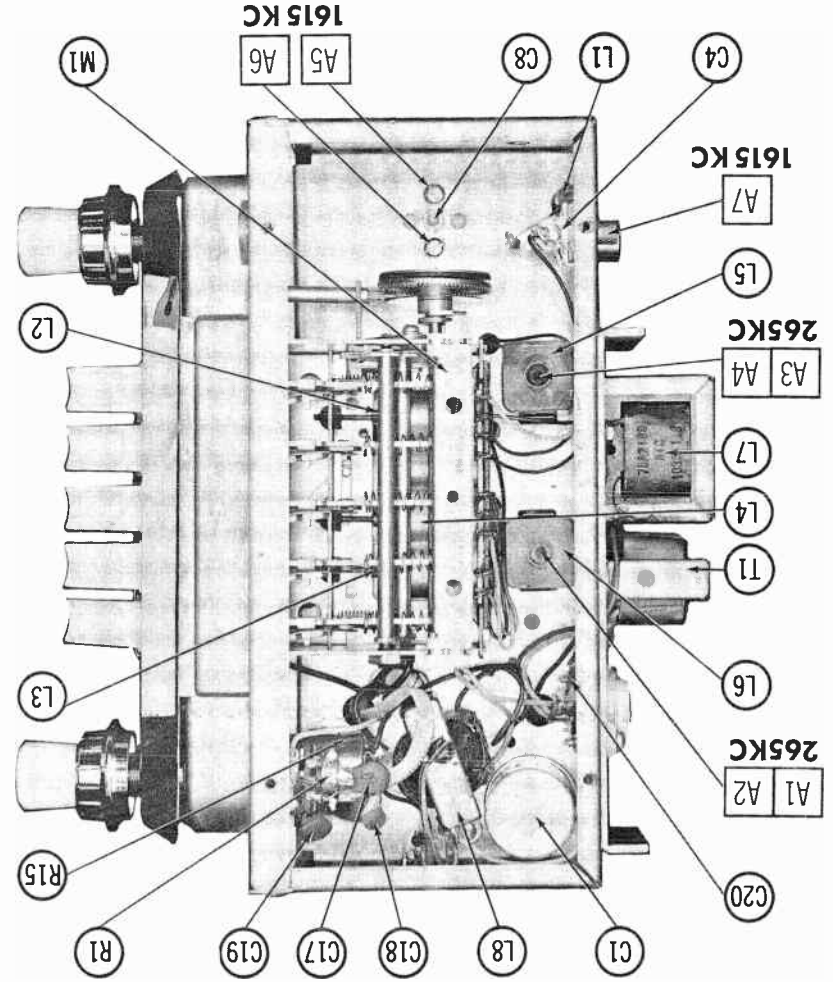
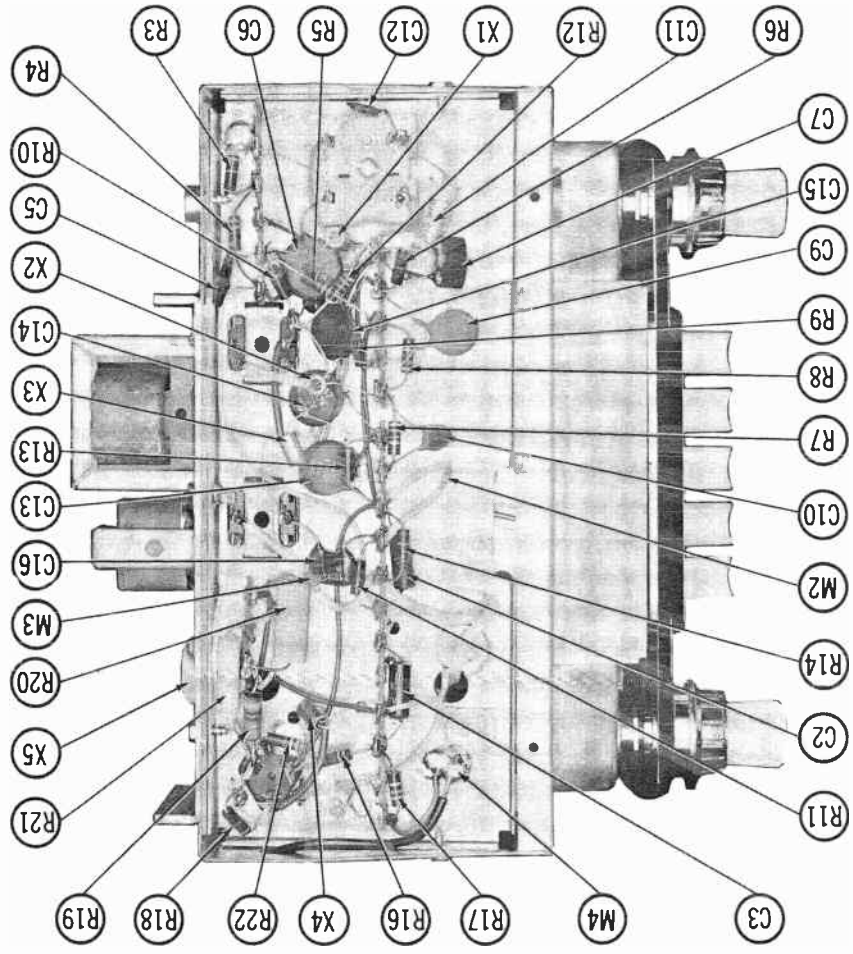
RIVERSIDE MODELS FJB-6560A/61A/83A FJB-6643A



- ⊕ 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

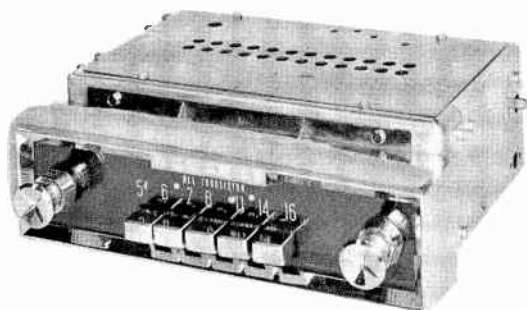
A PHOTODUPLICATION STANDARD NOTATION SCHEMATIC
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CHASSIS PHOTOS





PHOTOFACT®



TRADE NAME : Riverside Model FJB-6571
(1960-1961 Dodge Dart)

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

TYPE SET : 5 Transistor AM Receiver

POWER SUPPLY : 12 Volt Storage Battery

RATING : .32 Amp. @ 12.6 VDC

TUNING RANGE: BROADCAST 538 - 1615KC

RIVERSIDE MODEL FJB-6571

ALIGNMENT INSTRUCTIONS

Check for specified source voltage.

Use only enough generator output to provide a usable indication.

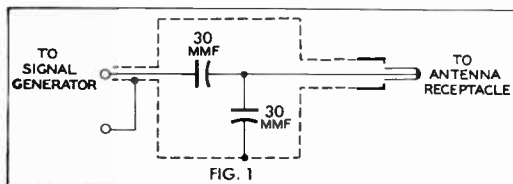
Suggested Alignment Tools:

A1 thru A4..... GENERAL CEMENT #8606, 8606L, 8728A
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 .1mf to point Δ , low side to ground.	265KC (400 ν Mod.)	High Freq. End Stop.	Output Meter across voice coil.	A1, A2, A3, A4	Adjust for maximum.
2.	Thru dummy (Fig. 1) to antenna receptacle.	1615KC	"	"	A5, A6, A7	"

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



PUSH-BUTTON ADJUSTMENT

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

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	6-60	RF Amp.	DS-25	GE-1	2N1637	PNP
X2	6-61	Conv.	DS-25	GE-1	2N1639	PNP
X3	6-62	IF Amp.	DS-25	GE-1	2N1638	PNP
X4	6-63	Driver	DS-26	GE-2	2N591	PNP
X5	8H303	Output	DS-503	GE-3	2N176	PNP (Note 1)

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

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		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	700	15	20-322A	AFH3-00-95.5		X3-47.1		WP300, 87	
B	200	15							
C	100	15							
C2	25	20		PTT82	NLW25-25	MTI-14	TD-25-25	TT25X25	TE-1207
C3	5	15		PTT84	NLW5-15	MTI-5	TD-5-25	TT25X5	TE-1152

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	.820		DI-820	DD-821	L10T82	CCD-821	B-382	10TS-T82	
C12	.05		TTD-05	CK-503	H05S5		TA-150	TG-S50	
C13A		#28A1332							
C14	270		1468-00027	DD-271	L10T27	CCD-271	GP327	5GA-T27	
C15	.02		TTD-02	CK-203	H05S2		TA-120	TG-S20	
C16	.005		TTD-005	CK-502	H05D5		TA-250	TG-D50	
C17	100 N750		N750-DI 100	DTN-100	C10TLU	CCTN-101	CN7-310	10TCU-T10	
C18	.015		TTD-01	CK-103	H05S1		TA-110	TG-S10	
C19	.05		TTD-05	CK-503	H05S5		TA-150	TG-S50	
C20	.1		TTD-1	CK-104	H05P1		TA-010	TG-P10	
C21	180		1468-00018	DD-181	L10T18	CCD-181	GP318	5GA-T18	
C22	.01		TTD-01	CK-103	H05S1		TA-110	TG-S10	
C23	.1		TTD-1	CK-104	H05P1		TA-010	TG-P10	
C24	.005		TTD-005	CK-502	H05D5		TA-250	TG-D50	
C25	.003			DM-302					
C26	.003			DM-302					

Riverside Part Number.

CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA				
			RIVERSIDE PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
RLA	Tone	400K	80A1670			† QJ-1598A	
B	Volume & Switch	10K					

† "CONCENTRIKIT" Equivalent: K-8 Kit with base elements & Shafts: B13-133, P14-202 (Panel) B13-116, R26-215 (Rear) 76-2 (Switch) S43 (Bushing)

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		RIVERSIDE PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	RF Choke (6.2uh)	14-6.2	BC-565	4610	RTC-8520	T859	① Part of M2
L2	Ant.						
L3	RF Choke						
L4	RF						
L5	Osc.						
L6	Input IF	14-270					
L7	Output IF	14-271					

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.	
L8	.32A	.5Ω	10MH	75A1269				

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO	REPLACEMENT DATA					NOTES
		RIVERSIDE PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	16:1	75A1672					

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE	REPLACEMENT DATA				NOTES
		RIVERSIDE PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	
T2	9Ω Tap @ 3-4Ω	75A1673				

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		RIVERSIDE PART No.	QUAM PART No.	
SP1	6" x 9" PM 3-4Ω	73-902	69A3	

FUSES

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

MISCELLANEOUS

ITEM No.	PART NAME	RIVERSIDE PART No.	NOTES
M2	Tuner	78B1702	
M3	Overload Limiter		
M4	AVC Det.		
M5	Audio Det.		
M6	Spark Plate		

CABINETS & CABINET PARTS

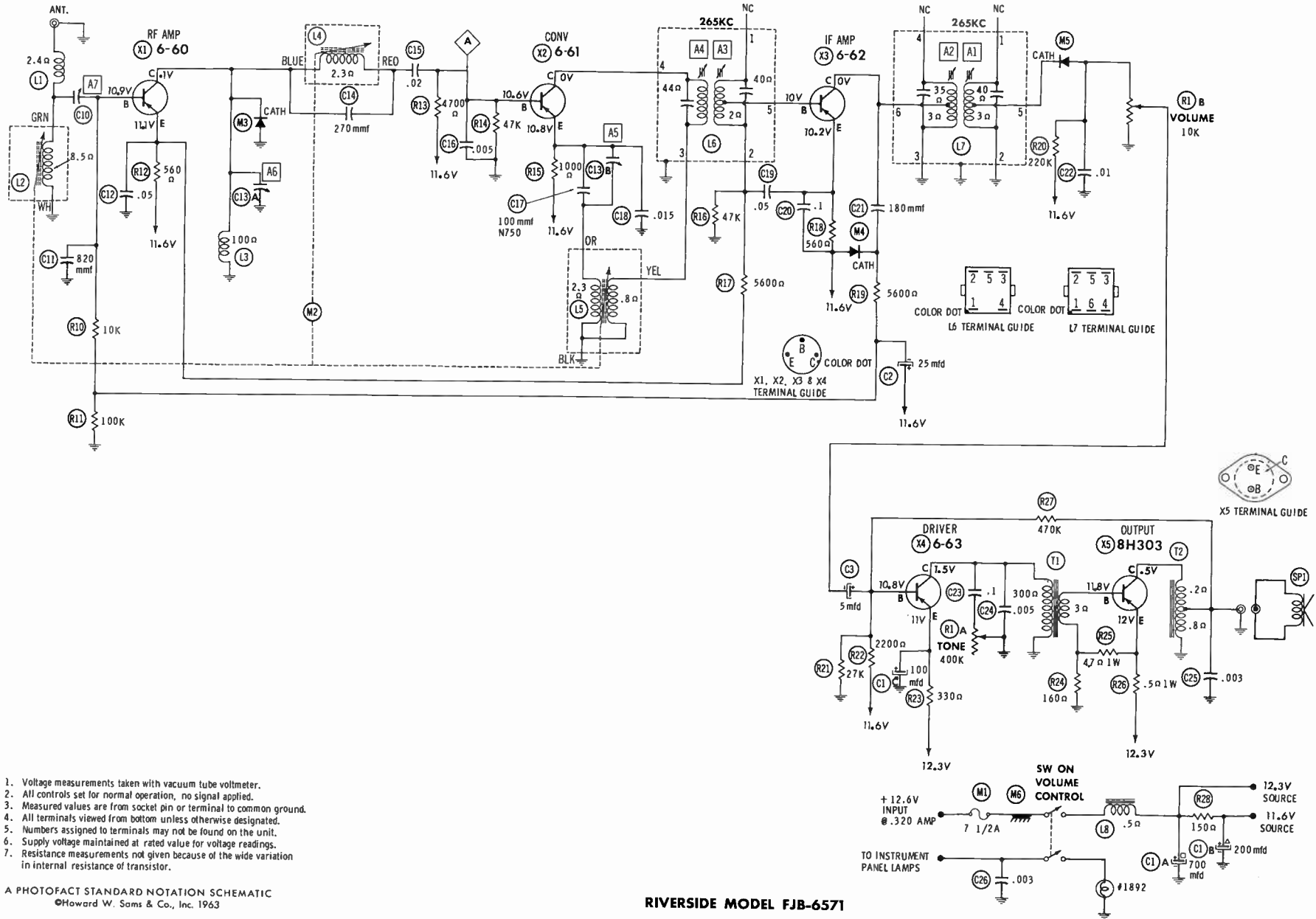
(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
Knob - Tone, Dummy	48A1450	Knob - Tuning, Volume (1961 Darts)	48A1411
Knob - Tuning, Volume (1960 Darts)	48A1452		

WIRING DATA

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

RIVERSIDE MODEL FJ8-6571

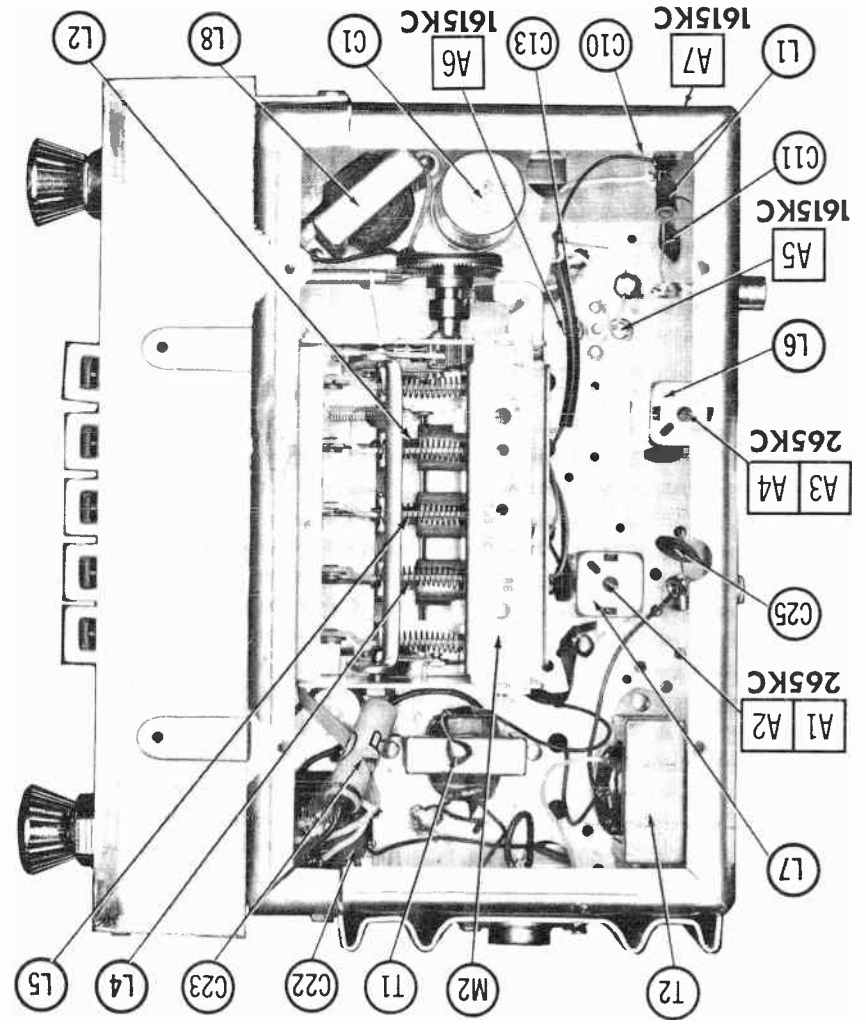
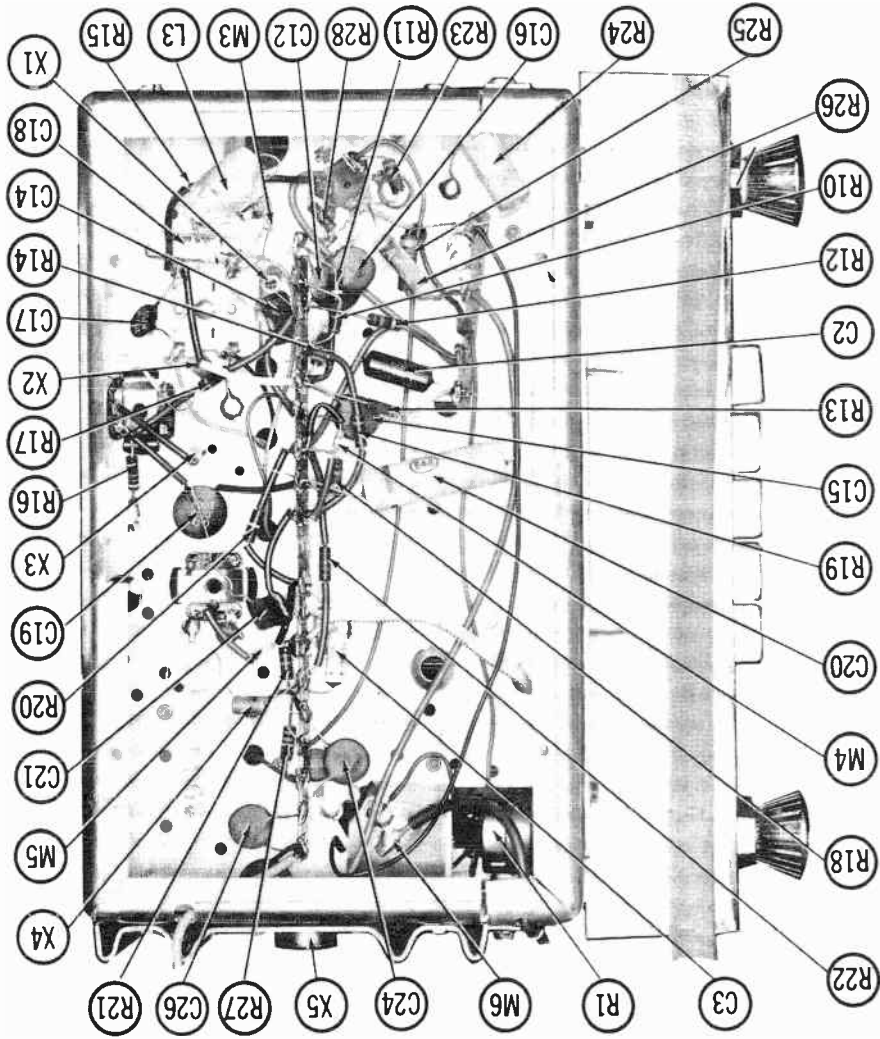


1. Voltage measurements taken with vacuum tube voltmeter.
2. All controls set for normal operation, no signal applied.
3. Measured values are from socket pin or terminal to common ground.
4. All terminals viewed from bottom unless otherwise designated.
5. Numbers assigned to terminals may not be found 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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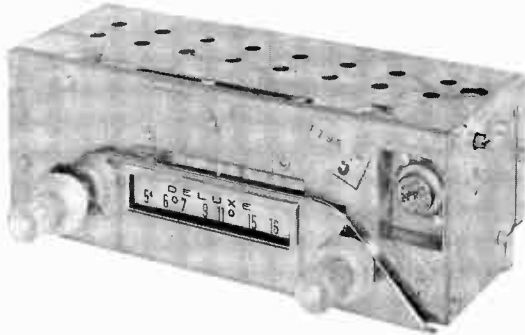
RIVERSIDE MODEL FJB-6571

RIVERSIDE MODEL FJB-6571





PHOTOFACT®



TRADE NAME: RIVERSIDE Models FJB-6609, FJB-6609A (For 1961 Valiants)
SUPPLIER: Montgomery Ward & Co., 619 Chicago Ave. Chicago 7, Illinois
TYPE SET: 3 Tube 2 Transistor Custom-Built AM Receiver
POWER SUPPLY: 12 Volt Storage Battery
RATING: 1 Amp. @ 12.6 VDC
TUNING RANGE: BROADCAST 535 - 1610KC

ALIGNMENT INSTRUCTIONS

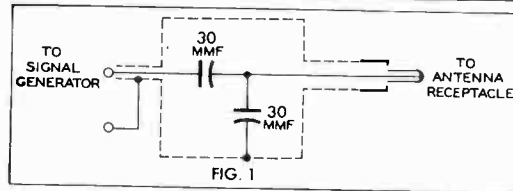
ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

Use only enough generator output to provide a usable indication.

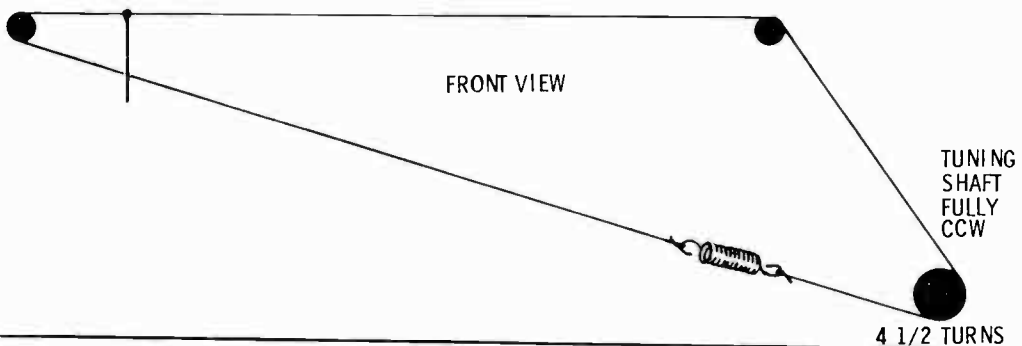
Suggested Alignment Tools: GENERAL CEMENT 8282, 8606, 9302 WALSCO #2543, 2544, 2588

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1.	High side thru .1mfd to pin 7, V2, low side to chassis.	265KC (Unmod.)	High Freq. End Stop.	DC VTVM across volume control.	A1, A2, A3, A4	Adjust for maximum deflection.
2.	Thru dummy (Fig. 1) to antenna receptacle.	1610KC	1610KC	"	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) cut of coils but not out of forms. Repeat Step 2.						
3.	Thru dummy (Fig. 1) to antenna receptacle.	1000KC	1000KC	"	A8, A9, A10	Adjust for maximum deflection. Repeat step 2.

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.

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.)

TUBES

ITEM No.	USE	TYPE	REPLACEMENT DATA					
			AMPEREX	GENERAL ELECTRIC	RCA	RAYTHEON	SYLVANIA	
V1	RF Amplifier	12BL6						
V2	Converter	12AD6						
V3	IF Amp. -Det. -AF Amp.	12FR8						

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	
X1	6DI22R	Driver	DS-26	GE-2	2N591	PNP Note 1
X2	8L201B	Output	DS-503	GE-3	2N301	PNP Note 1

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

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	RIVERSIDE PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLYORY PART No.	PYRAMID PART No.	SPRAGUE PART No.
C1A	500	15	20-322 ①	AFH3-00-95		XC3-48	WP300, 85		TVL-3026, 8
C1B	400	15							
C1C	100	15							

① Model FJB-6609A uses 600/300/100mfd (Part #20-327) in this application.

FIXED CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLYORY PART No.	SPRAGUE PART No.
C2	40	#28-800L	DI-40	DD-390	L10Q39	CCD-390	GP439	10TS-Q39
C3	.047	200V	P288N-047	DD-503	CUB2S47	4CP-4-473	GEM-2147	2TM-S47
C4		#28-431						
C5		Note 1						
C6	5 NPO 5%		NPO-SI 5.0	TCZ-4R7	C10V5C	CCTO-050	CNO-547	10TCC-V5
C7	40		DI-40	DD-390	L10Q39	CCD-390	GP439	10TS-Q39
C8		28-400-2						
C9	100 N750		N750-DI 100	DTN-100	C10TIU	CCTN-101	CN7-310	10TCU-T10
C10	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C11	100 N750	Note 2	N750-DI 100	DTN-100	C10TIU	CCTN-101	CN7-310	10TCU-T10
C12	.002		BPD-002	DD-202	BYA10D2	CCD-202	B-220	5HK-D20
C13	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C14	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C15	.01	Note 3	BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C16	.003		DI-3000	DD-302	BYA10D3	CCD-302	GP230	10TS-D30
C17	.0047 100V	Note 4	P288N-0047	DD-472	CUB2D47	4DP-1-472	GEM-4247	4TM-D47

Note 1. Model FJB-6609A uses 8.5mmf in this application.

Note 2. Model FJB-6609A uses 220mmf in this application.

Note 3. Not used in some versions.

Note 4. Not used in Model FJB-6609A.

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.	MALLYORY PART No.
RIA	Tone	2meg	80A1540				
B	Volume & Switch	1meg, 200K Tap					

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		RIVERSIDE PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1A	Ant. RF Osc.	Note 1					Note 1. Part of M2
L3	Input IF	14-272	BC-350	6584	RTC-8638	T604	
L3	Output IF	14-273					

FILTER CHOKE

ITEM No.	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	REPLACEMENT DATA				NOTES
				RIVERSIDE PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	
L4	1A	.6Ω	.009HY	75A6001*			TR-157	* Part #75A1269A used in Model FJB-6609A

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO	REPLACEMENT DATA					NOTES
		RIVERSIDE PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	6, 5	1	75A1436*				* Alternate Part #75A1538. Part #75A1810 used in Model FJB-6609A.

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE	REPLACEMENT DATA					NOTES
		RIVERSIDE PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T2	24Ω Tap @ 3-4Ω	75A1437 *				TR-168 ①	① Drill new mtg. hole(s). * Alternate Part #75A1539. Part #75A1860P used in Model FJB-6609A.

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
	SIZE	FIELD	V. C. IMP.	RIVERSIDE PART No.	QUAM PART No.	
SPI	6"x 9"	PM	3-4Ω	73-903*	69A3	* Alternate Part #73-908/5. Part #73-905 used in Model FJB-6609A.

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	RIVERSIDE PART No.	REPLACEMENT DATA
K1	Antenna Isolation	100mmf, 1.2meg	88-4204	Sprague PRC-9

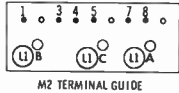
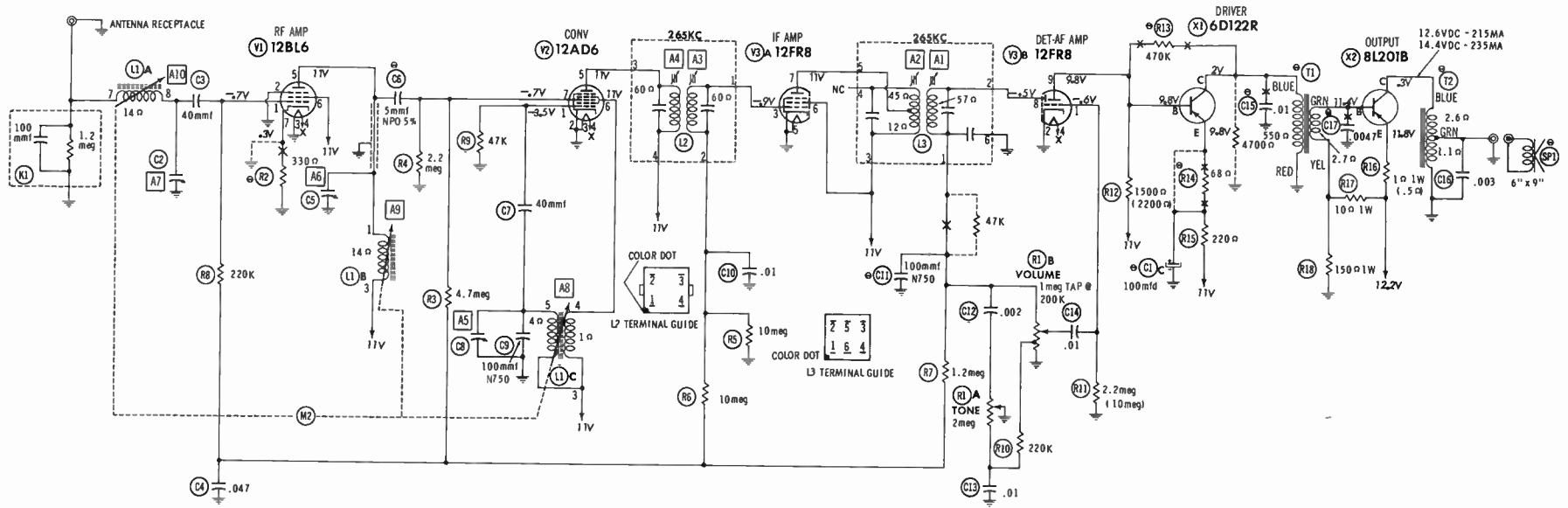
FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			RIVERSIDE PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M1	SFE	7½ Amp. 32V			307007.5 (7½ Amp. 32V)	15507.5	AGW 7½	HDH

MISCELLANEOUS

ITEM No.	PART NAME	RIVERSIDE PART No.	NOTES
M2	Tuner	78A1641	Manual
M3	Spark Plate	43-215	

RIVERSIDE MODELS FJB-6609, FJB-6609A



NUMBERS ASSIGNED TO COILS, SWITCHES, PLUGS, SOCKETS, AND TRANSFORMERS ARE TO FACILITATE CIRCUIT TRACING OR COMPONENT REPLACEMENT AND MAY NOT NECESSARILY BE FOUND ON THE UNIT.

RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	12BL6	1.9 meg	0 Ω	FIL	FIL	†165 Ω	†150 Ω	330 Ω		
V2	12AD6	47K	0 Ω	FIL	FIL	†210 Ω	†150 Ω	1.8 meg		
V3	12FR8	2.2 meg	0 Ω	5.5 meg	FIL	FIL	†150 Ω	†162 Ω	1.2 meg	†1650 Ω

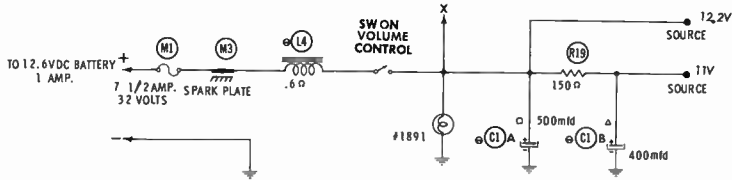
† MEASURED FROM JUNCTION OF C1 A, PILOT LAMP AND ON-OFF SWITCH.

RESISTANCE MEASUREMENTS NOT GIVEN FOR X1, X2 BECAUSE OF THE WIDE VARIATION IN INTERNAL TRANSISTOR RESISTANCE.

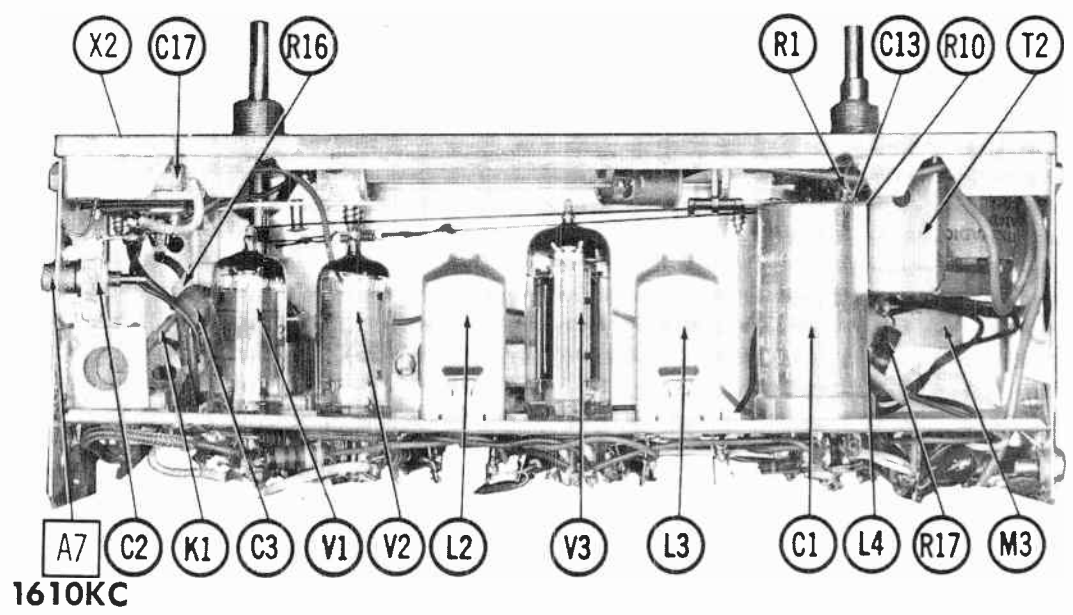
SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

- DC voltage measurements taken with vacuum tube voltmeter.
- Socket connections shown as bottom views.
- Measured values are from socket pin to common ground.
- Battery voltage maintained at 12.6 volts for voltage readings.
- Nominal tolerance on component values makes possible a variation of ±15% in voltage and resistance readings.

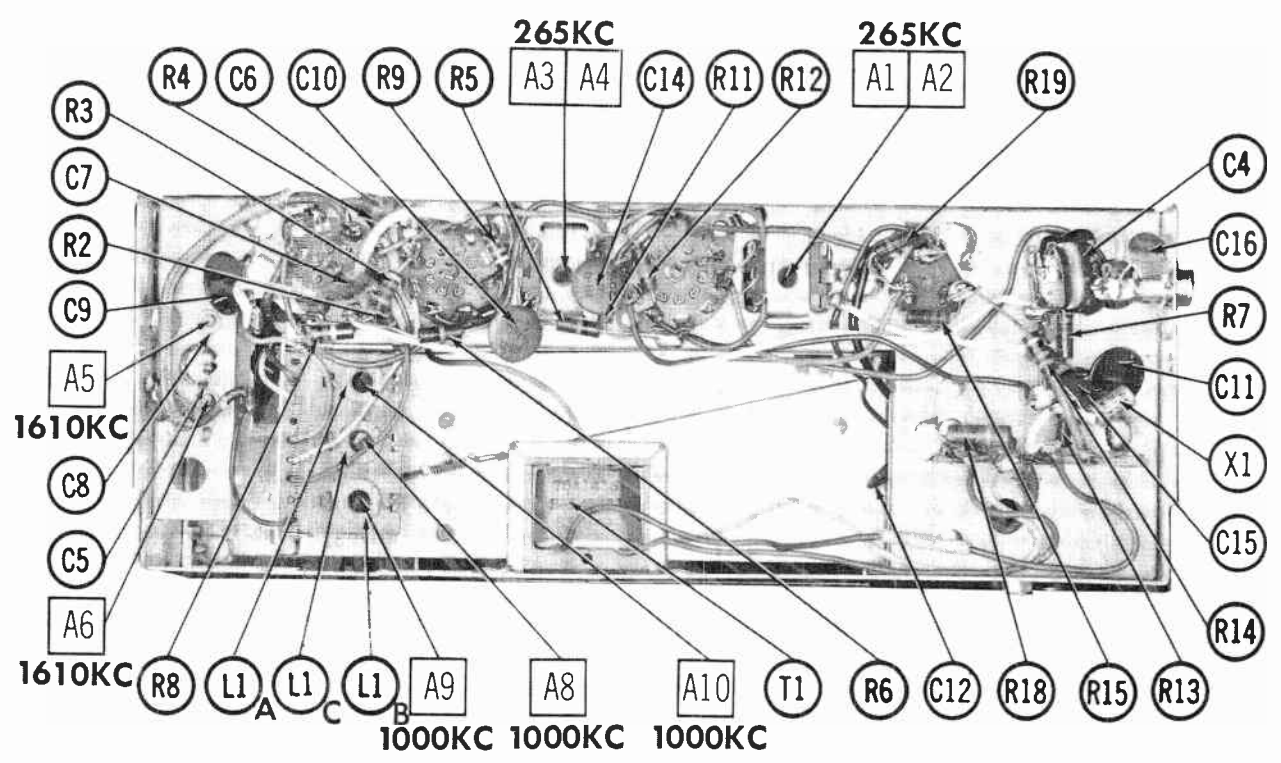
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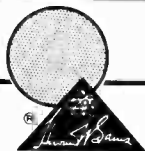
RIVERSIDE MODELS FJB-6609, FJB-6609A



CHASSIS — TOP VIEW

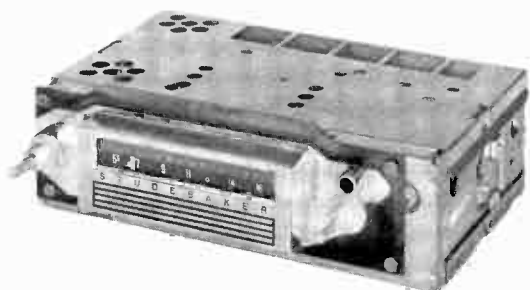


CHASSIS — END VIEW



PHOTOFACT[®] with

CIRCUITRACE[®]



TRADE NAME : Studebaker Models AC-3351, AC-3353
 SUPPLIER : (Parts) United Delco Distributors
 TYPE SET : 5 Transistor Custom Built AM Receiver
 POWER SUPPLY : 12 Volts DC
 RATING : .54 Amp. @12.6 Volts DC
 TUNING RANGE : BROADCAST 535 - 1620KC

STUDEBAKER MODELS AC-3351, AC-3353

ALIGNMENT INSTRUCTIONS

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

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

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

With radio installed in car and antenna fully extended, tune in a weak station near 1000KC and adjust A8 for maximum output.

REMOVAL INSTRUCTIONS

NOTE: To replace transistors remove radio.

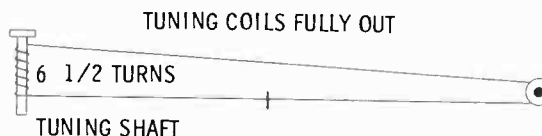
RADIO

1. Remove knobs.
2. Use 5/8" wrench and remove 2 nuts from control bushings.
3. Disconnect speaker connector and antenna lead.
4. Remove Phillips head screw from bottom of radio.
5. Remove radio from under instrument panel.

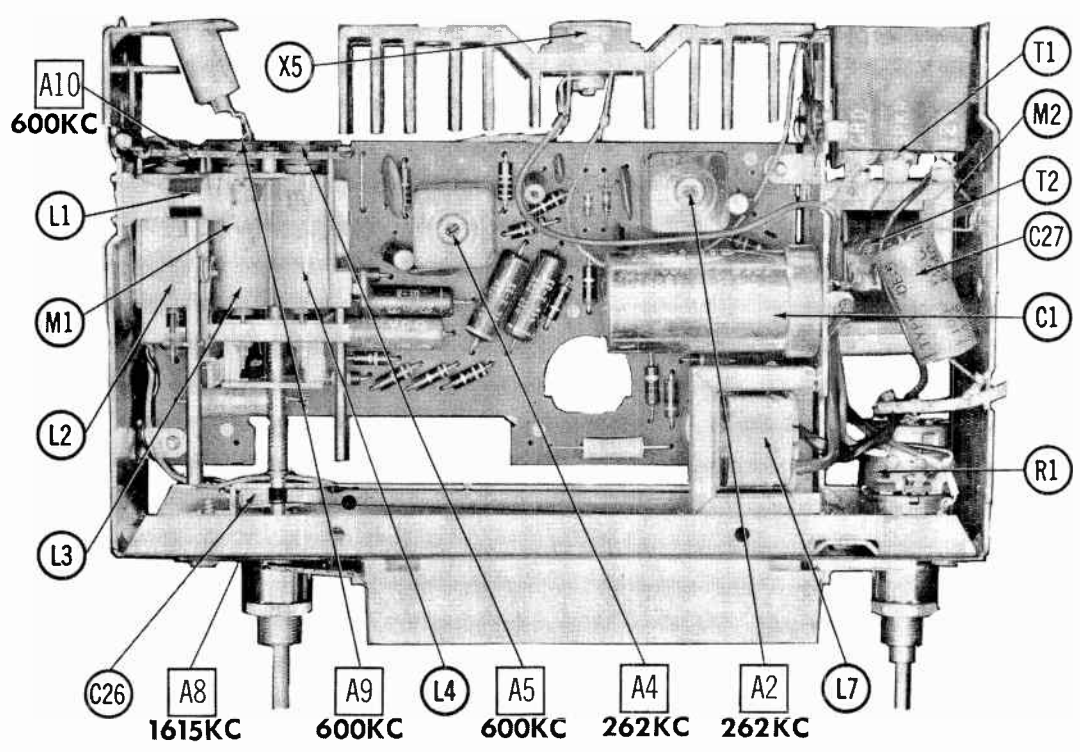
SPEAKER

1. Disconnect fuse holder.
2. Use 3/8" wrench and remove 4 nuts from speaker mounting bolts.
3. Remove speaker.

DIAL CORD STRINGING



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



CHASSIS—TOP VIEW PARTS LIST AND DESCRIPTION

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

WIRING DATA

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

TRANSISTORS

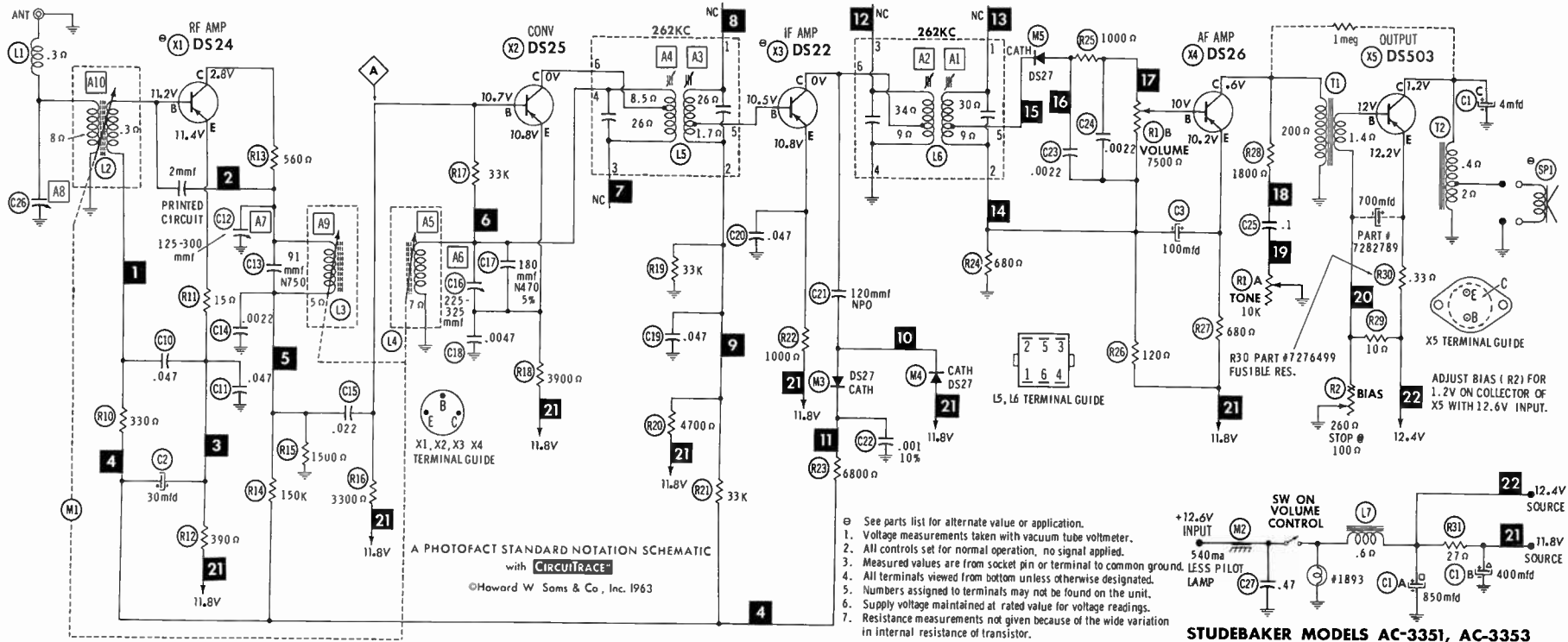
ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	
X1	DS-24 †	RF Amplifier	DS-25	GE-1	2N1637	PNP
X2	DS-25	Converter	DS-25	GE-1	2N1639	PNP
X3	DS-22 †	IF Amplifier	DS-25	GE-1	2N1638	PNP
X4	DS-26	AF Amplifier	DS-26	GE-2	2N591	PNP
X5	DS-503	Output	DS-503	GE-4		PNP (Note 1)

† Manufacturer suggests replacing with DS-25.
Note 1. When replacing, apply silicone grease to both sides of insulator. Tighten mounting screws securely. Check bias adjustment.

ELECTROLYTIC CAPACITORS

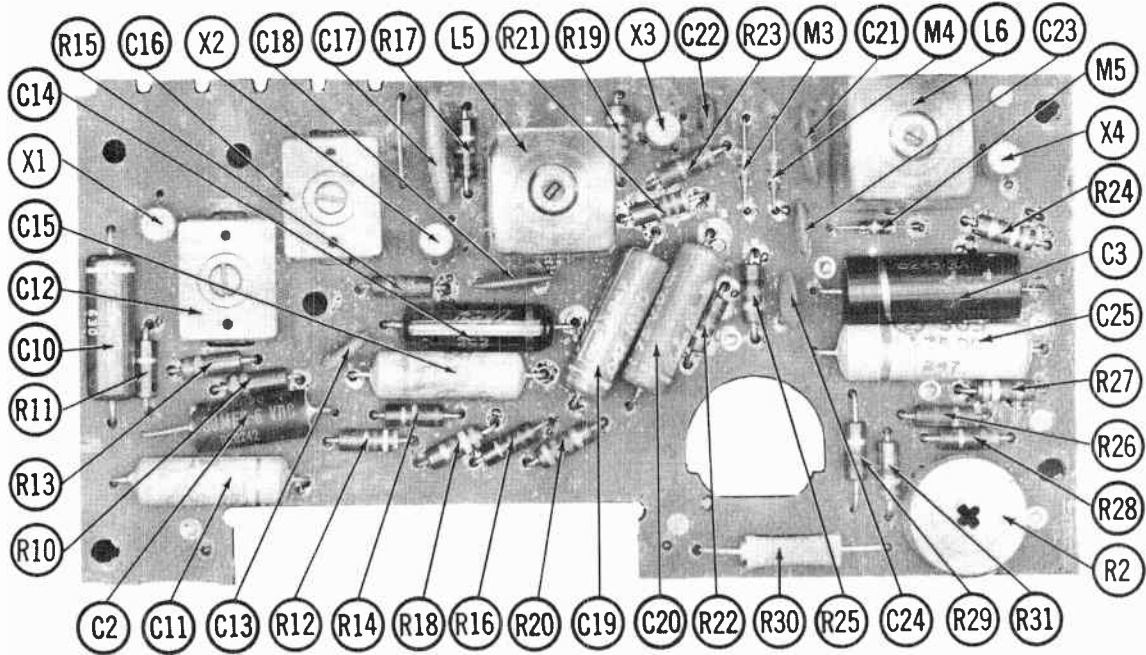
ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	DELCO PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	GENERAL INSTRUMENT PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A	850	16	7282272	AFH-3-54-30				WP 300. 7A	TVL-3021
B	400	16							
C	4	11.5AC							
C2	30	6	7279896	PTT27	NLW30-15	MT1-13	MLV30-6	TT6X30	TE-1092
C3	100	3	7279888	PTT13	NLW100-3	MT1-18	MLV100-3	TT6X100	TE-1059.5

(PARTS LIST CONTINUED)

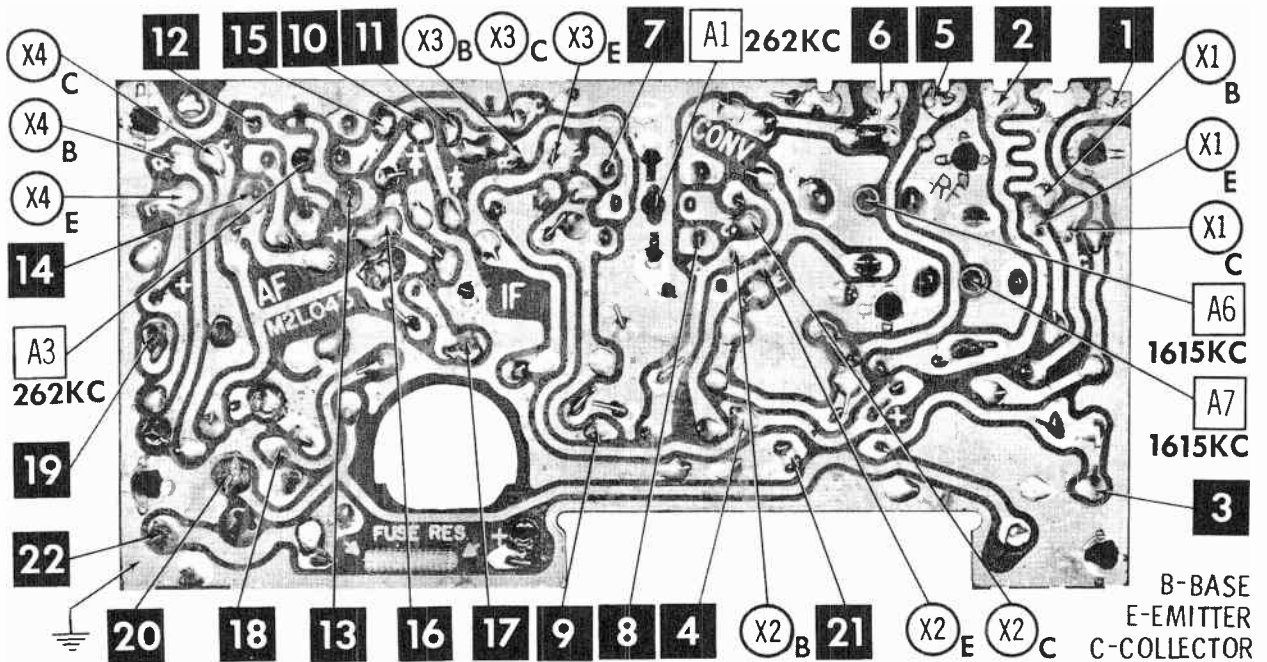


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STUDEBAKER MODELS AC-3351, AC-3353



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PRINTED BOARD

A Howard W. Sams CIRCUITRACE Photo

PARTS LIST AND DESCRIPTION (CONTINUED)

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

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

FIXED CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILLIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C10	.047	#7281932	P288N-047	DD-503	CUB2S47	IDP-2-473	GEM-4147	4TM-S47
C11	.047		P288N-047	DD-503	CUB2S47	IDP-2-473	GEM-4147	4TM-S47
C12	125-300							
C13	91 N750	#7281933		TCN-91	C10Q91U			
C14	.0022		P288N-0022	DD-222	CUB6D22	6DP-1-222	GEM-6222	6TM-D22
C15	.022		P288N-022	DDM-203	CUB4S22	IDP-1-223	GEM-4122	2TM-S22
C16	225-325							
C17	180 N470 5%							
C18	.0047		DI-4700	DD-472		CCD-472		10TS-D47
C19	.047		P288N-047	DD-503	CUB2S47	IDP-2-473	GEM-4147	4TM-S47
C20	.047		P288N-047	DD-503	CUB2S47	IDP-2-473	GEM-4147	4TM-S47
C21	120 NPO		NPO-DI 120	DTZ-120			CNO-312	10TCC-T12
C22	.001 10%		DI-1000	DD-102	L10D1	CCD-102	GP210	10TS-D10
C23	.0022	DI-2200	DD-222	L10D22	CCD-222	GP222	10TS-D22	
C24	.0022	DI-2200	DD-222	L10D22	CCD-222	GP222	10TS-D22	
C25	.1	P2151N-1	DDA-104	BC2P1J	IDP-2-104	ACE-401	2SE-P10	
C26		#728197						
C27	.47 100V		P288N-47		CUB2P47	IDP-4-474	GEM-2047	2TM-P47

Delco Part Number.

CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA				
			DELCO PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
RIA B R2	Tone Volume & Switch Bias	10K 7500Ω 260Ω Stop @ 100Ω	7283844				UE4408S

■ "STA-LOC" Equivalent: FH14A, RU73A, OS1250A, IS1750, US41.

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		DELCO PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	RF Choke (6.2uh)	7281948	BC-585	4610	RTC-8520	T859	① Part of M1.
L2	Antenna	7281716 ①					
L3	RF Coil	7282042 ①					
L4	Oscillator	7281717 ①					
L5	Input IF	1221856					
L6	Output IF	1221857					

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA					NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	DELCO PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L7	.540A	.6Ω	8MH	1221823			TR-154		

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
	PRI.	SEC.	DELCO PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1			7280915					

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC.	DELCO PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T2			7282057					

MISCELLANEOUS

ITEM No.	PART NAME	DELCO PART No.
M1	Tuner Ass'y.	7281897
M2	Spark Plate	7271584
M3	AGC Det.	DS-27
M4	AGC Det.	DS-27
M5	Audio Det.	DS-27

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA	
		DELCO PART No.	QUAM PART No.
SP1	4" x 10" PM 10Ω 5" x 7" PM 10Ω Model 3353	7284300	7284380

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			DELCO PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER		
	AGW	2½A	AGW 2½A	7284532		155009A	AGW 2½	HDH

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
Dial Scale	7284209	Knob - Tuning, Volume	7282934
Pointer Assembly	7281019	Knob - Tone	7282936
Drive Shaft Ass'y.	1221870	Knob - Dummy	7282937



PHOTOFACT[®] with

CIRCUITRACE[®]

TRADE NAME : Triumph Model 0-01000 (R2BT4)
 SUPPLIER : Bendix Corp., Bendix Radio Div.,
 Baltimore 4, Maryland
 TYPE SET : 2 Tube - 2 Transistor Auto Receiver
 POWER SUPPLY : 12 Volt Storage Battery
 RATING : 1.4 Amp. @ 12.6 Volts DC
 TUNING RANGE : BROADCAST 540 - 1620KC



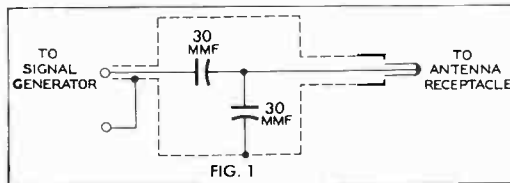
ALIGNMENT INSTRUCTIONS

Check for specified source voltage.

Use only enough generator output to provide a usable indication.

Suggested Alignment Tools: A1 thru A4... GENERAL CEMENT #8606, 8606-L, 8869
 WALSCO #2543, 2544, 2588
 A5, A6, A7... GENERAL CEMENT #5009, 8987, 8728A
 WALSCO #2531X, 2536
 A8, A9, A10... 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.	262KC (400% Mod.)	High Freq. End Stop.	Output Meter across voice coil.	A1, A2, A3, A4	Adjust for maximum.
2.	Thru dummy (Fig. 1) to antenna receptacle.	1615KC	"	"	A5, A6, A7	"
Step 3 is not necessary unless tuner has been tampered with or associated components have been replaced. IF necessary, back tuning cores (A8, A9, A10) out of coils but not out of forms. Repeat step 2.						
3.	Thru dummy (Fig. 1) to antenna receptacle.	1000KC	Tune to Signal.	Output Meter across voice coil.	A8, A9, A10	Adjust for maximum. Repeat steps 2 & 3 until no further improvement is noted.
With radio installed in car and antenna fully extended, tune in a weak station near 1000KC and adjust A7 for maximum output.						

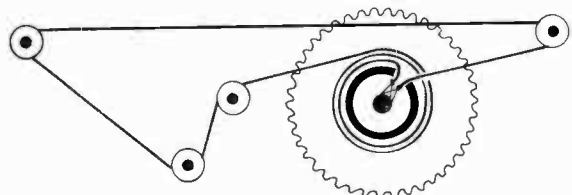


REMOVAL INSTRUCTIONS

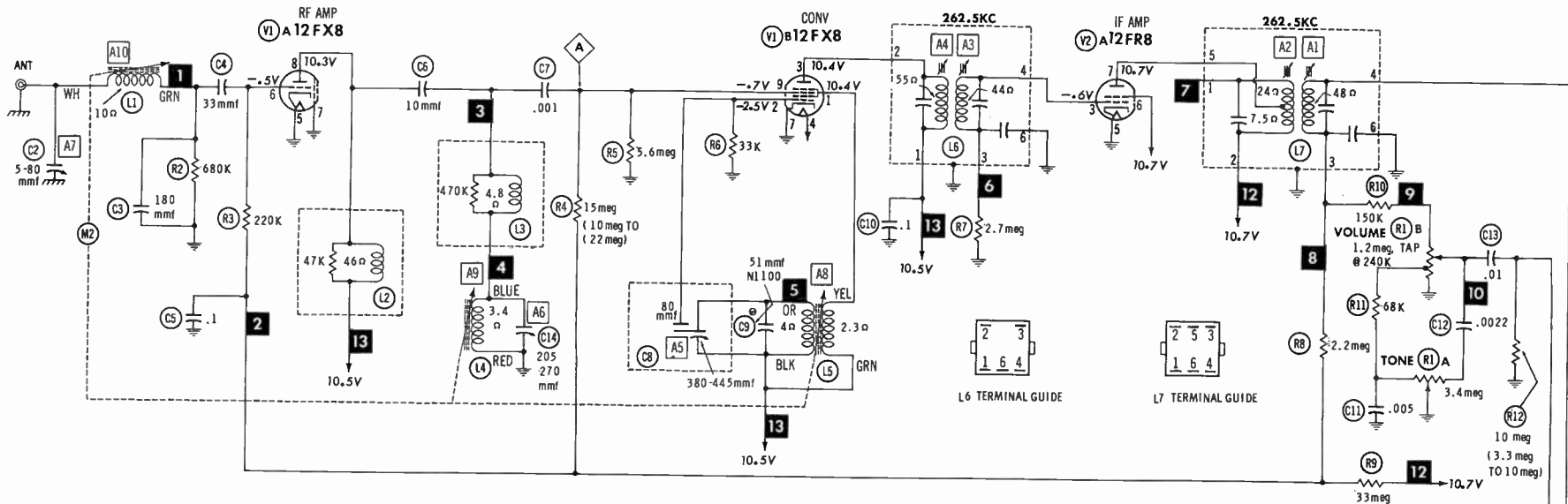
RADIO

1. Remove knobs.
2. Use 1/2" wrench and remove 2 nuts from control bushings.
3. Disconnect antenna lead, and "A" lead.
4. Remove radio from under instrument panel.

DIAL CORD STRINGING



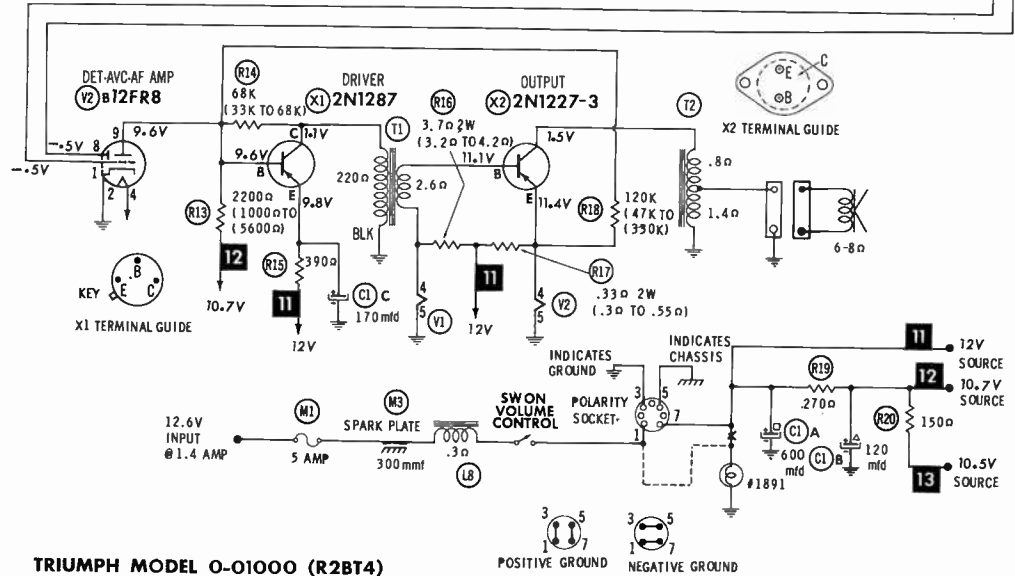
HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana



RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	12FX8	†420 Ω	33K	†465 Ω	2 Ω	0 Ω	3.5 meg	0 Ω	†450 Ω	4.5 meg
V2	12FR8	10 meg	0 Ω	2.7 meg	3.5 Ω	0 Ω	†270 Ω	†270 Ω	1.9 meg	†2500 Ω

† MEASURED FROM OFF-ON SWITCH.
 TRANSISTOR CIRCUIT RESISTANCE FOR X1 AND X2 NOT GIVEN BECAUSE OF THE WIDE VARIATION IN INTERNAL TRANSISTOR RESISTANCE.

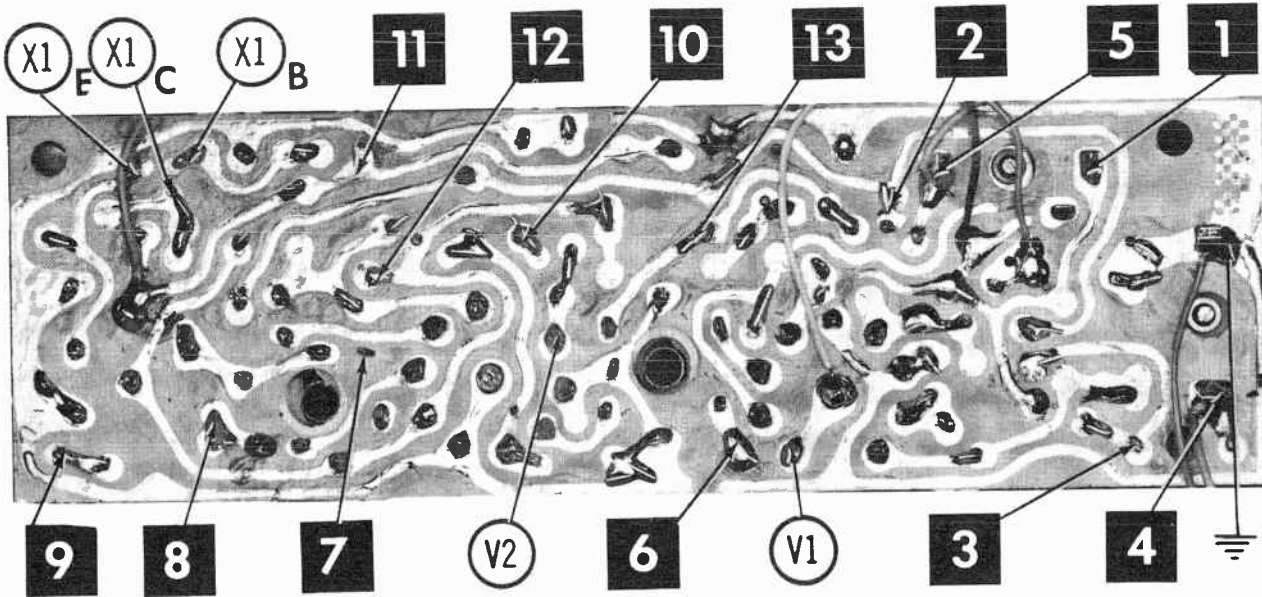
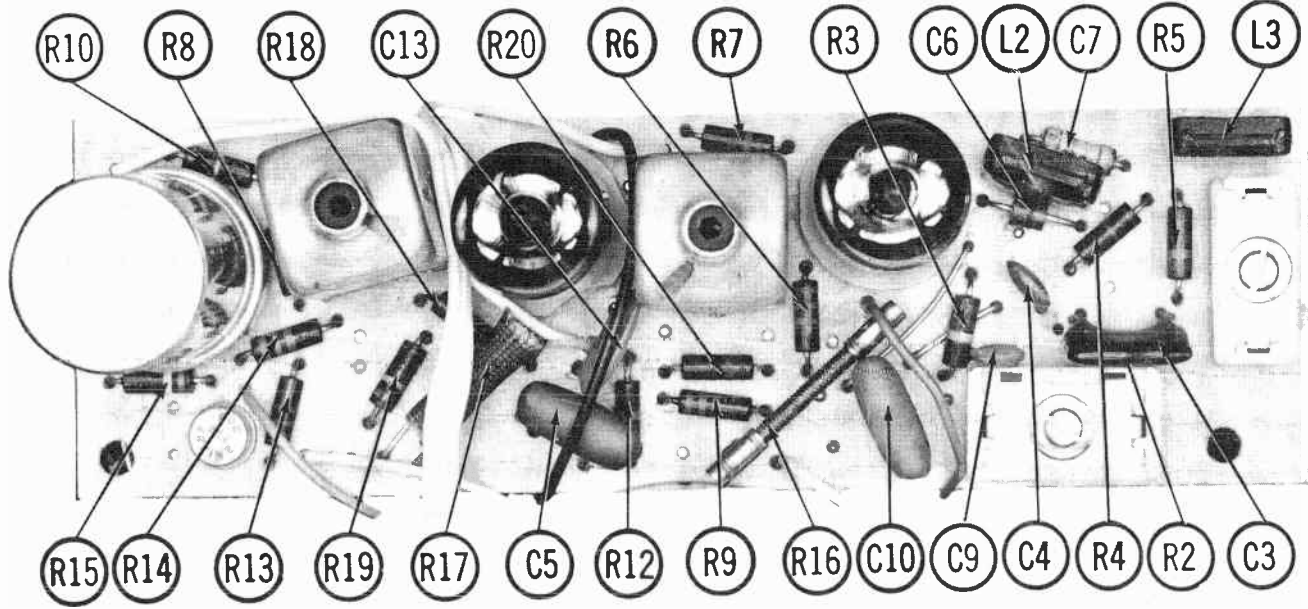


TRIUMPH MODEL O-01000 (R2BT4)

- ⊖ 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.

A PHOTOFAC STANDARD NOTATION SCHEMATIC
 with CIRCUITRACE

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PRINTED BOARD
 B - BASE
 E - EMITTER
 C - COLLECTOR

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.

TUBES

♦ AMPEREX ♦		GENERAL ELECTRIC ♦		RCA ♦		RAYTHEON ♦		SYLVANIA ♦	
ITEM No.	USE	TYPE		ITEM No.	USE	TYPE			
V1	RF Amp. -Conv.	12FX8		V2	IF Amp. -Det. -AF Amp.	12FR8			

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	
X1	2N1287	AF Amp. Output	DS-26	GE-2	2N591	PNP
X2	2N1227-3		DS-503	GE-3	2N301	PNP (Note 1)

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

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	BENDIX PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	GENERAL INSTRUMENT PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A B C	#600 120 170	16 16 16	2091503-4			XC3-48.1		PFP300.45	PCLS-3026.4*

* 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.
C2 C3 C4 C5 C6 C7 C8A B C9 C10 C11 C12 C13 C14	5-80 180 33 .1 10 .001 380-445 80 51 N1100 .1 .005 .0022 .01 205-270	#219083-4 #2091418-4 Note 1 #2091418-5	ADM-15-181 SI 33 TTD-1 SI 10 TTD-1 TTD-005 TTD-01	TCZ-180 D6-330 CK-104 D6-100 DM-102 CK-104 CK-502 DM-202 CK-103	22R5T18 L10Q33 H05P1 L10Q1 H05D1 H05P1 H05D5 H05S1	CM-20B-181K CCD-330 CCD-100	GP433 TA-010 GP410 TA-010 TA-250 TA-110	MS-318 10TS-Q33 TG-P10 10TS-Q10 TG-P10 TG-D50 TG-S10

Bendix Part Number.

Note 1. Value may vary between 33-100mmf depending on production. Replace with original value.

CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA				
			BENDIX PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
RIA B	Tone Volume & Switch	3.4meg 1.2meg Tap @ 240K	2091419-2			† QJ-1551A	

† "CONCENTRIKIT" Equivalent: K-8 Kit with base elements & shafts: B11-139, P14-112 (Panel)
"SNAPTROL" Equivalent: BU5, CF10, SF10, CR32T, SR45, GC B13-137X, R1-126 (Rear)
76-1 (Switch)
S44 (Bushing)

COILS (RF-IF)

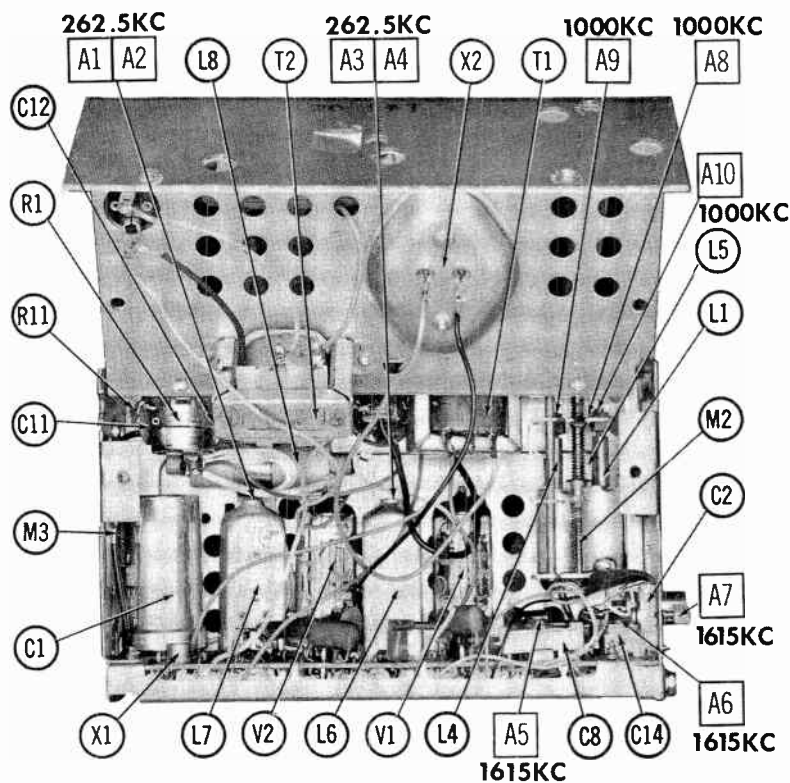
ITEM No.	USE	REPLACEMENT DATA					NOTES
		BENDIX PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	Ant.						① Part of M2
L2	RF Choke (2.5MH)	2090088-15	BC-549 ▲	70F253A1▲	RTC-9175 ▲	T836 ▲	
L3	Image Trap (63uh)	2090088-14	BC-867†	6110 †	RTC-8573 †	T302 †	② Includes 47K
L4	RF						③ Includes 470K
L5	Osc.						
L6	Input IF	2090907-14					▲ Shunt with 47K
L7	Output IF	2090908-12					† Shunt with 470K
L8	"A" Lead Choke (1.1MH)	2092050-2					

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
	PRI.	SEC.	BENDIX PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1			2090815-12					

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.		BENDIX PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T2	12Ω	Tap @ 8Ω	2092138-2					



CHASSIS—TOP VIEW

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.

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			BENDIX PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M1	LAG	5A		221833-25	301005 (1AG 5A)	155004A	AGA 5	HAF

MISCELLANEOUS

ITEM No.	PART NAME	BENDIX PART No.	NOTES
M2	Tuner Assembly	2091464-3	
M3	Spark Plate (300mmf)	220267-12	

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
Dial Glass	2092353-1	Knob - Tone, Dummy	2091209-1
Knob - Tuning, Volume	2091244-2		

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. 8861 (3/8 In.) or 8670 (3/4 In.)

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