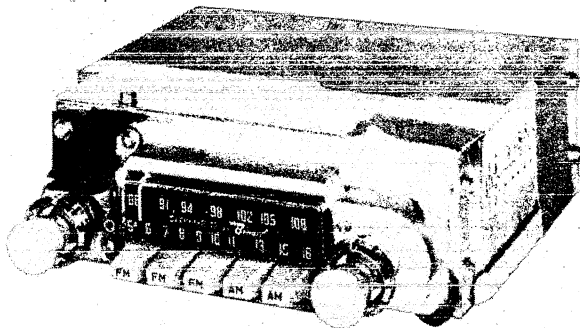




PHOTOFACT[®] with

CIRCUITRACE[®]



TRADE NAME:

SUPPLIER:

TYPE SET:

POWER SUPPLY:

RATING:

Volkswagen Models:

5FMBG (1965 Karmann Ghia)

5FMBT (1965 Transporter)

5FMBV (1965 Sedan)

For Current Address, See Master Index.

11 Transistor AM-FM Receiver

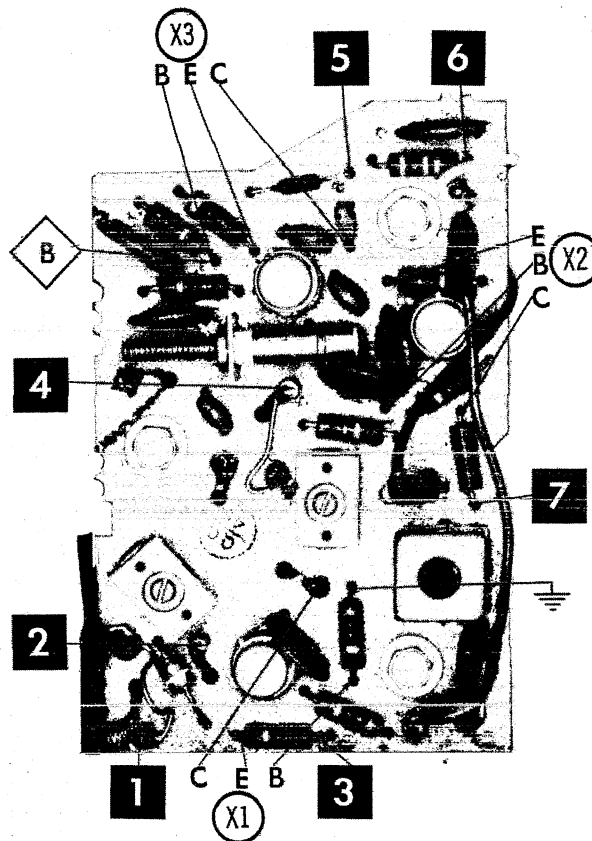
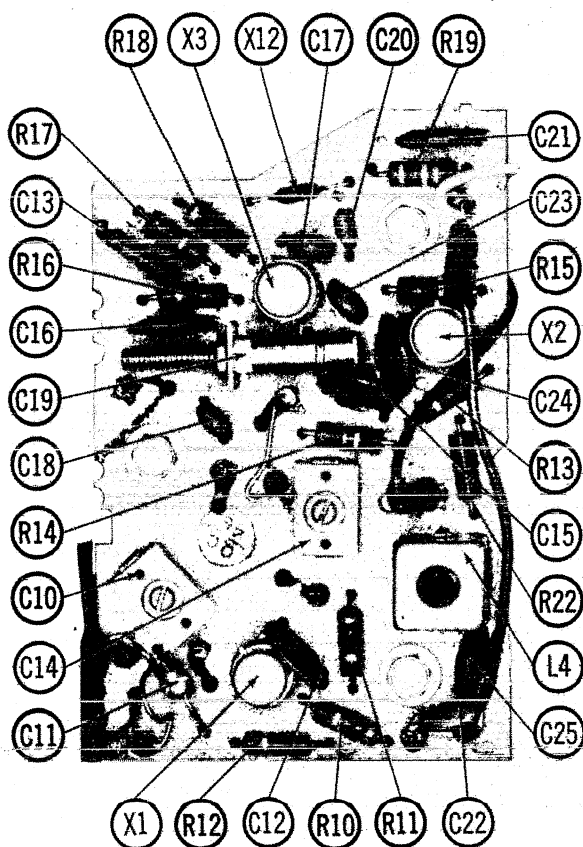
6 Volt Storage Battery

.95 Amp. @ 6.3 Volts DC

TUNING RANGE:

BROADCAST: 540-1605KC

FREQ. MOD. 88-108.5MC



A Howard W. Sams CIRCUITRACE[®] Photo

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

ALIGNMENT INSTRUCTIONS

Check for specified source voltage.

Use only enough generator output to provide a usable indication.

Suggested Alignment Tools:

A1 thru A25 GENERAL CEMENT: 8290, 8868, 9087 WALSCO: 2525, 2528, 2587

PUSH-BUTTON ADJUSTMENT

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

SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1. High side thru .1mfd to point  , low side to ground.	262.5KC (400v Mod.)	High Freq. End Stop.	Output Meter across voice coil.	A1, A2, A3, A4	Adjust for maximum.
2. Thru dummy (Fig. 1) to antenna receptacle.	1605KC	"	"	A5, A6, A7	"
Step 3 is not necessary unless tuner has been tampered with or associated components have been replaced. IF necessary, back tuning cores (A8, A9, A10) out of coils but not out of forms. Repeat step 2.					
3. Thru dummy (Fig. 1) to antenna receptacle.	1000KC	Tune to Signal.	Output Meter across voice coil.	A8, A9, A10	Adjust for maximum. Repeat steps 2 & 3 until no further improvement is noted.
With radio installed in car and antenna extended 38", tune in a weak station near 1400KC and adjust A7 for maximum output.					

FM ALIGNMENT USING AM SIGNAL GENERATOR - SELECTOR IN FM POSITION

High side thru .1mfd to Point , low side to ground.

GENERATOR FREQUENCY	DIAL SETTING	INDICATOR	ADJUST	REMARKS
4. 10.7MC (Unmod.)	Point of non-interference.	DC probe of VTVM to point  ; common to ground.	A11 thru A21	Adjust for maximum.
5. "	"	DC probe to point  ; common to	A22	Adjust for zero reading. A positive or negative reading will be obtained on either side of the correct setting.

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

High side thru .1mfd to Point , low side to ground. Use only enough marker signal to obtain indication. Use 60v frequency modulated signal with 450KC sweep. Use 120v sawtooth voltage in scope for horizontal deflection.

GENERATOR FREQUENCY	DIAL SETTING	INDICATOR	ADJUST	REMARKS
4. 10.7MC (450KC Swp.)	Point of non-interference	Vert. amp. of Scope to point  ; low side to ground.	A11 thru A21	Adjust for maximum gain and symmetry of response similar to Fig. 3 with marker as shown.
5. "	"	Vert. amp. to point  ; low side to	A22	Adjust A 22 (secondary) to place marker at center of crossover lines similar to Fig. 4. Adjust A 11 (Primary) for maximum amplitude and straightness of crossover lines.

FM RF ALIGNMENT

Connect generator thru dummy Ant. Fig. 2.

GENERATOR FREQUENCY	DIAL SETTING	INDICATOR	ADJUST	REMARKS
6. 108.5MC	Set at high end.	DC probe of VTVM to point  ; common to ground.	A23, A24, A25	Adjust for maximum.

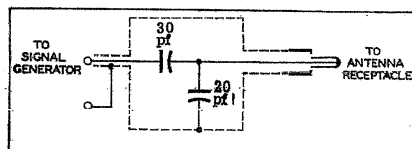


FIG. 1

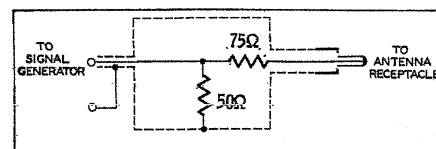


FIG. 2

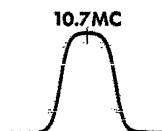


FIG. 3

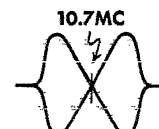
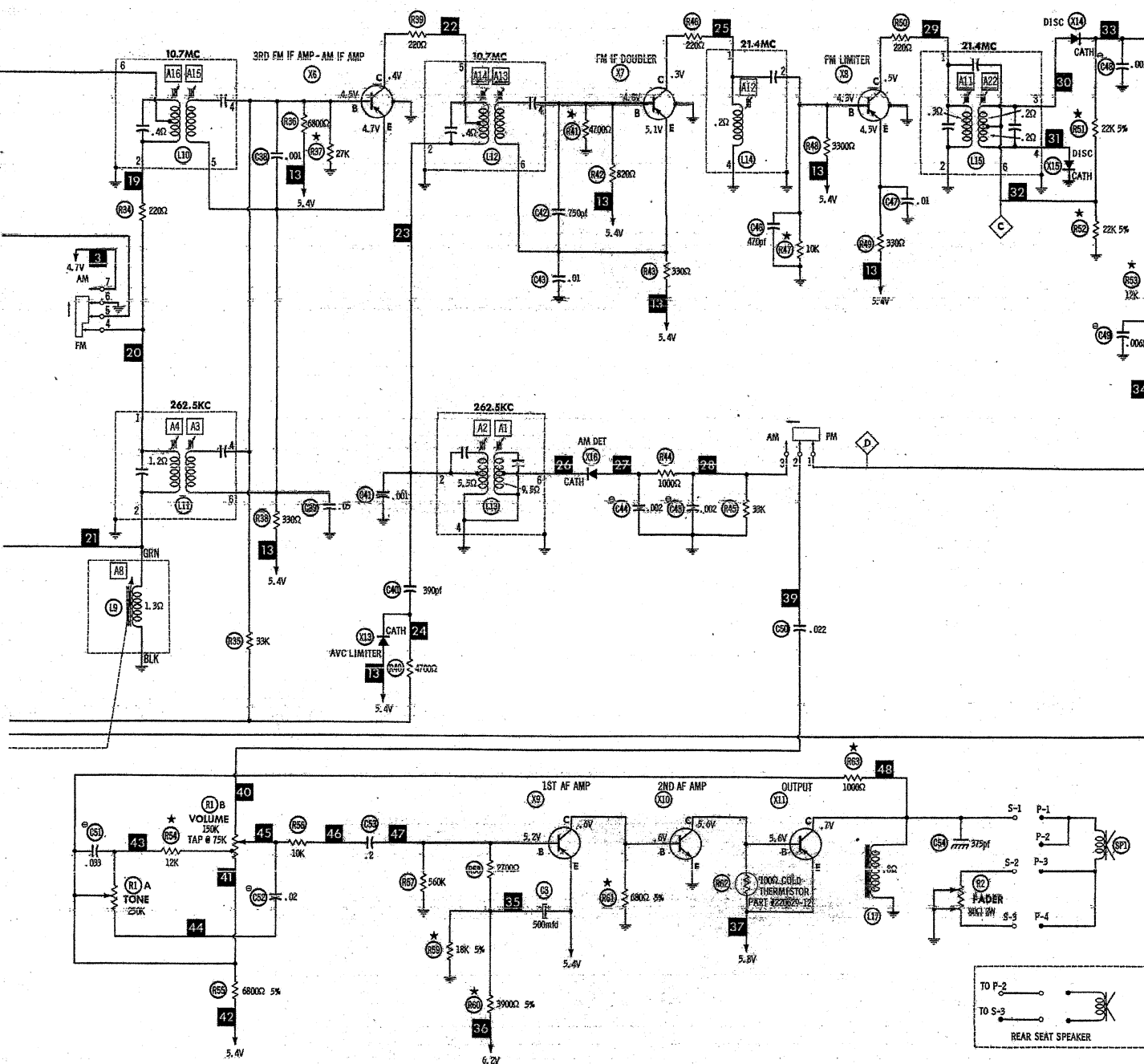
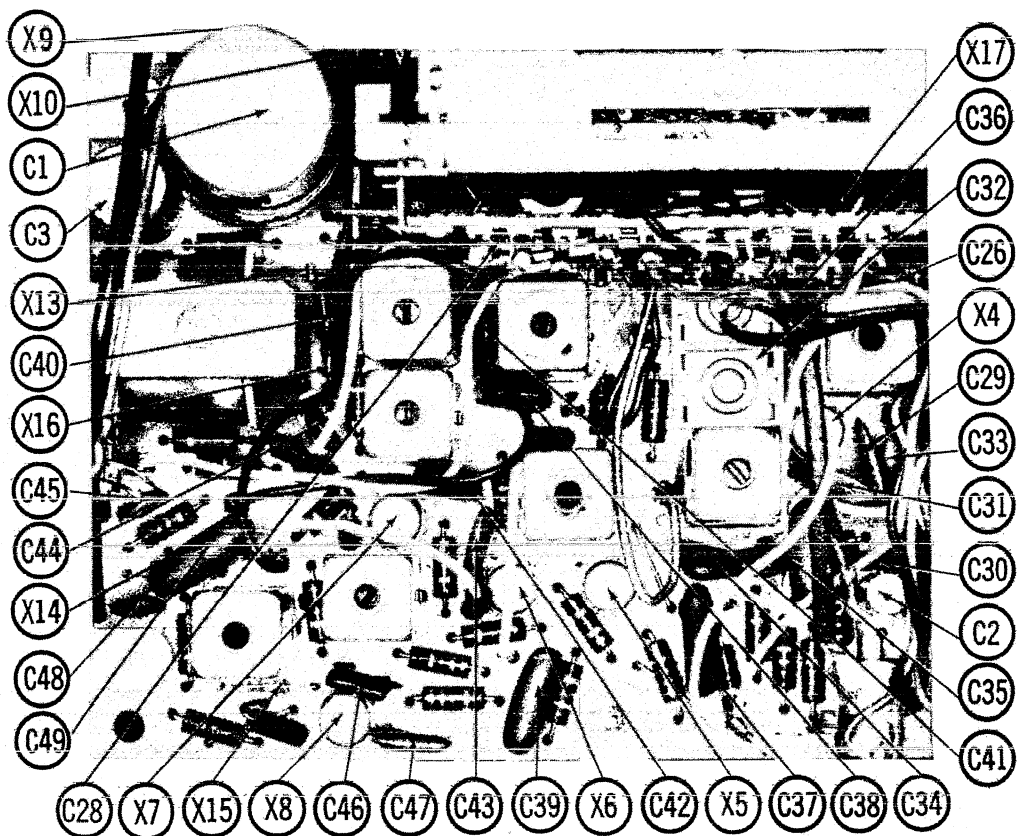
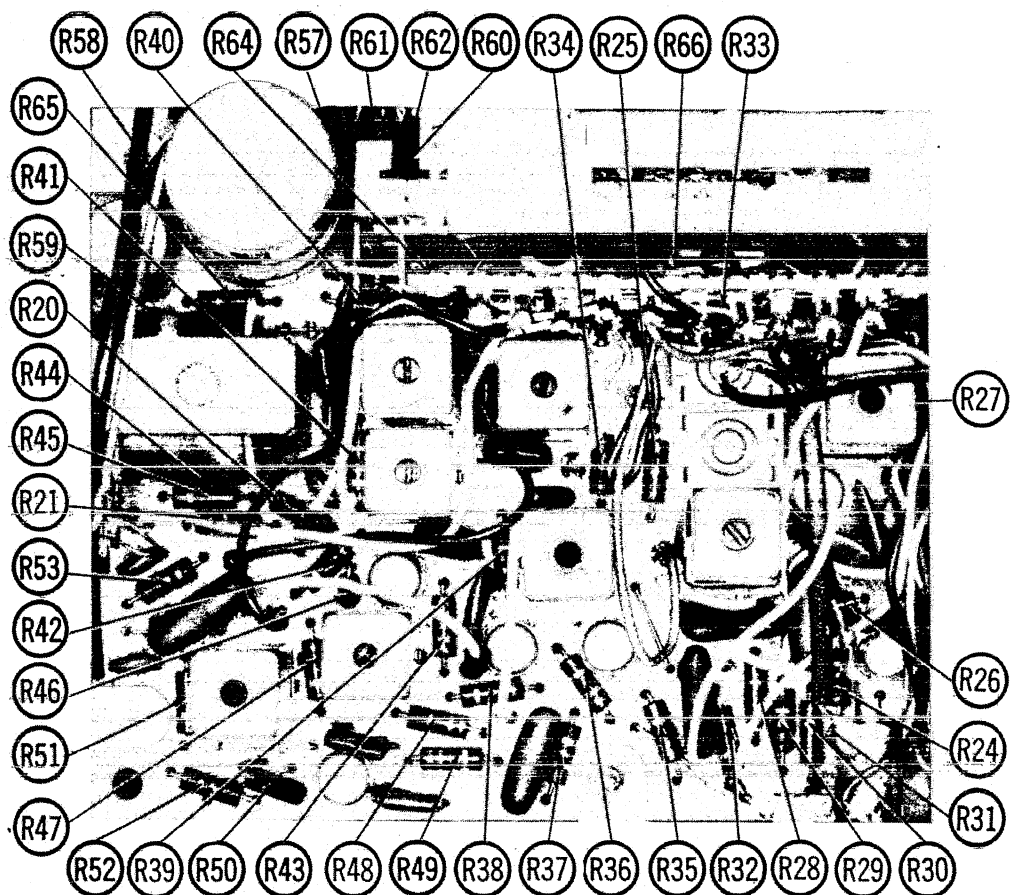
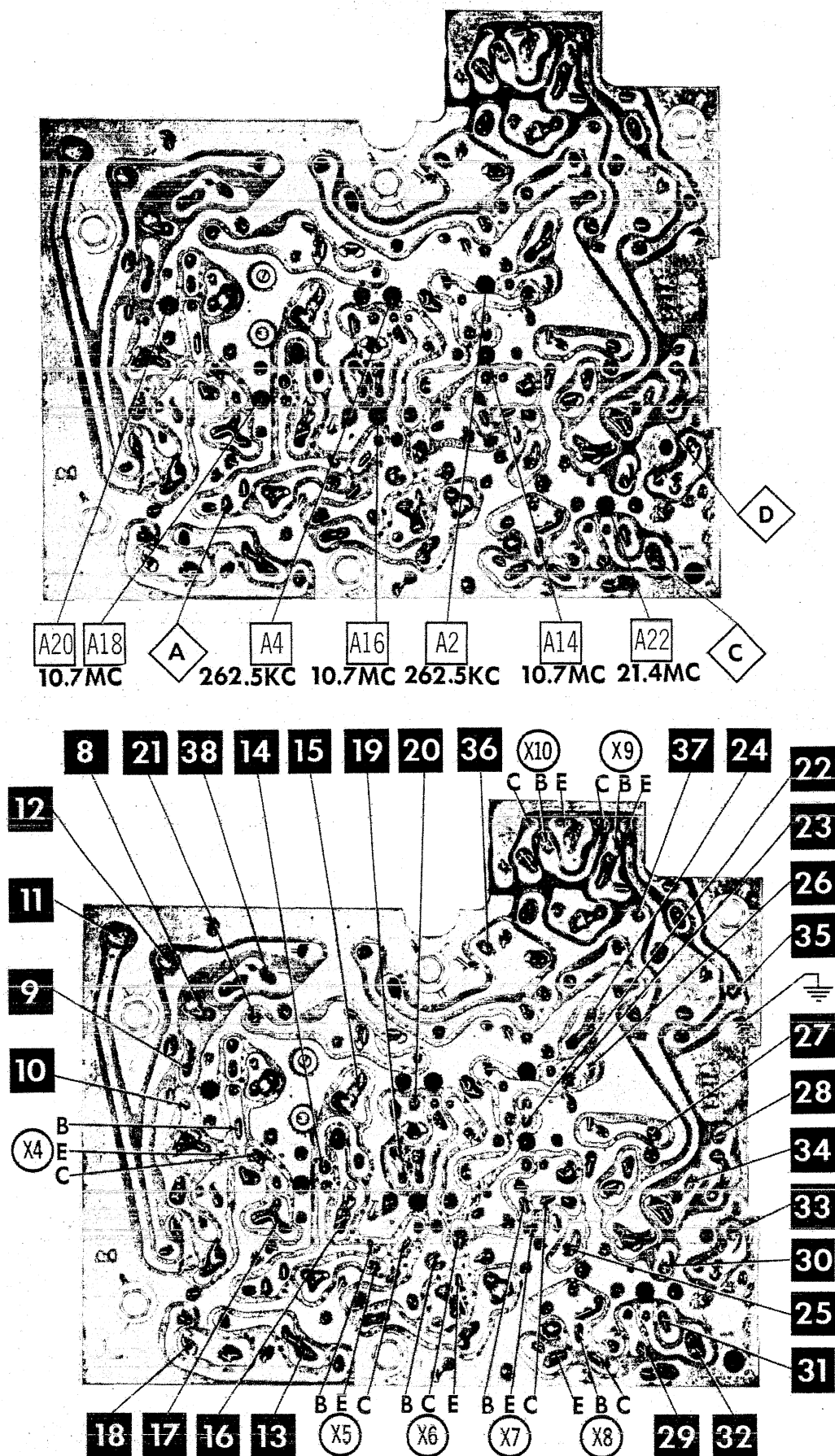


FIG. 4







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			BENDIX PART No.
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	
X1	FM RF Amp.	FM RF Amp.	DS-41			2092417-0707
X2	FM Mixer	FM Mixer	DS-41			2092417-0708
X3	FM Osc.	FM Osc.	DS-56			2092418-0711
X4	1st. FM IF-AM RF Amp.	1st. FM IF-AM RF Amp.	DS-56			2092418-0712
X5	2nd. FM IF-AM RF Amp.	2nd. FM IF-AM RF Amp.	DS-56			2092418-0713
X6	3rd. FM IF-AM RF Amp.	3rd. FM IF-AM RF Amp.	DS-56			2092418-0714
X7	FM IF Detector	FM IF Detector	DS-56			2092418-0715
X8	FM Limiter	FM Limiter	DS-56			2092418-0716
X9	1st. AF Amp.	1st. AF Amp.	DS-28	GE-2		2092418-0717
X10	2nd. AF Amp.	2nd. AF Amp.	DS-48	GE-10		2092418-0718
X11	Output	Output	DS-520	GE-3		2091859-0717

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

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MEASURED CURRENT	ORIGINAL Part or Type No.	RECTIFIERS			DIODES
			GENERAL ELECTRIC PART No.	MALLORY PART No.	RCA PART No.	
X12		2092055-0003 (AFC Vardcap)				GENERAL ELECTRIC PART No.
X13		2092055-0001 (AVC Limiter)				1N94AS
X14		2092055-0711 (Discriminator)				1N94AS
X15		2092055-0711 (Discriminator)				1N94AS
X16		2092055-0001 (AM Detector)				1N94AS
X17		2092055-0004 (Voltage Regulator, Zener Diode 4.8V)				

ELECTROLYTIC CAPACITORS

ITEM No.	RATING CAP.	VOLT.	REPLACEMENT DATA				
			BENDIX PART No.	AEROVOX PART No.	CORNELL DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.
C1A	1000	8	220553-0087	PW83-54-13			SPRAGUE PART No. PCLS-3018-#
C1B	500	8					
C2	50	3	2093386-0702	BCD3050	NLW50-3	MT1-18	VL-1045
C3	500	3	2093386-0701	BCD12500	NLW450-3	MT1-26	TE-1068

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

FIXED CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA				
			AEROVOX PART No.	CORNELL DUBILIER PART No.	ELMENCOR PART No.	MALLORY PART No.	SPRAGUE PART No.
C10	4-50						
C11	1.8						
C12	.02						
C13	.02						
C14	4-50						
C15	.002						
C16	2.2						
C17	8.2						

FIXED CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA				
			AEROVOX PART No.	CORNELL DUBILIER PART No.	ELMENCOR PART No.	MALLORY PART No.	SPRAGUE PART No.
C19	1-7						
C20	4.3						
C21	.02						
C22	.005						
C23	2.2						
C24	.002						
C25	200						
C26	2.7						
C27	10-140						
C28	1						
C29	.0018						
C30	2						
C31	.01						
C32A	90-130						
C33	280-350						
C34	.001						
C35	.01						
C36	150						
C37	.0068						
C38	.001						
C39	.05						
C40	390						
C41	.001						
C42	750						
C43	.01						
C44	.002						
C45	.002						
C46	470						
C47	.01						
C48	.001						
C49	.0068						
C50	.022						
C51	.083						
C52	.02						
C53	.2						
C54	375						
C55	275						
C56	375						

Bendix Part Number.
* Nominal Value.

CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA				
			BENDIX PART No.	CORNELL DUBILIER PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1A	Tone Volume/Switch	250K 150K Tap @ 75K	2091256-0003				
R1B							
R2	Fader	800 2W	2092445-0001				

* "CONCENTRICK" Equivalent: K3 Kit with Base Elements and Shafts: BU-128, P22-121 (22watt)
"SLAP-TOC" Equivalent: BU7, CF15, CR34T, SP13, SP40, W7
"SLA-LOC" Equivalent: RA35-RLQ, RU16T165, CS1657, 13237, US42.
① Use original tab mounting plate.

RESISTORS (Power and Special)

ITEM No.	RATING	REMARKS	REPLACEMENT DATA				
			BENDIX PART No.	CORNELL DUBILIER PART No.	ELMENCOR PART No.	MALLORY PART No.	SPRAGUE PART No.
R82	1000 Cold (Thermistor)						

ITEM No.	USE	REPLACEMENT DATA				WORKMAN PART No.
		BRENDIX PART No.	WEISSNER PART No.	MILLER PART No.	STANCOB PART No.	
L1	FM Antenna	①				
L2	FM RF	①				
L3	FM Osc.	①				
L4	1st. FM IF	2093149-0706				
L5	2nd. FM IF	2093149-0708				
L6	AM Antenna	②				
L7	3rd. FM IF	2093149-0707				
L8	AM RF	②				
L9	AM Osc.	③				
L10	4th. FM IF	2093149-0703				
L11	1st. AM IF	2092419-0709				
L12	5th. FM IF	2093149-0704				
L13	2nd. AM IF	2092419-0710				
L14	FM IF Doubler	2093149-0705				
L15	Discriminator	2093218-0701				

ITEM		RATINGS					REPLACEMENT DATA				NOTES
No.		CURRENT (Measured)	DC RES. (0 CURRENT 1000- Ω)	INDUCTANCE	BERNDX PART No.	MERT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.		
L16	850ma	.10	1M Ω	2092494-0002							

ITEM No.	INDUCTANCE	REPLACEMENT DATA					NOTES
		BENDIX PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L17 14MH		209238-0711	C-409E	TC-2	TR-152	TY17XT	

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			BENDIX PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M1	LAG	5A 32V	20091E1-0009	2091699-0001	3101005	155004	AGA5	HAF

ITEM No.	PART NAME	BENDIX PART No.
M2	FM Tuner	2083394-0707
M3	AM Tuning Coils	2080131-0086
	AM-FM Tuner	2083142-0704
M4	SelectorSW	2082702-0006

ITEM No.	TYPE	REPLACEMENT DATA	
		BENDIX PART No.	QUAM PART No.
SP1	6" PM SS2	2091246-0004	6A21Z38

ITEM	PART No.
Esoteric	2092137-0502
Dial Glass	2092404-0003
Knob, Volume or Tuning	2091244-0503
Knob, Tone or Fader	2092235-0001

General-use Unshielded Hook-up Wire Use BELDEN No. 8530 (Solid) Available in 12 Colors
8534 (Stranded) Available in 12 Colors

Shielded Hook-up Wire Use BELDEN No. 8885

Rear Seat Speaker Extension Cable Use BELDEN No. 8783 (Stranded) Coded Parallel Leads

Roundline Straps Use BELDEN No. 8666 (3/8 in.) or 8670 (3/4 in.)

