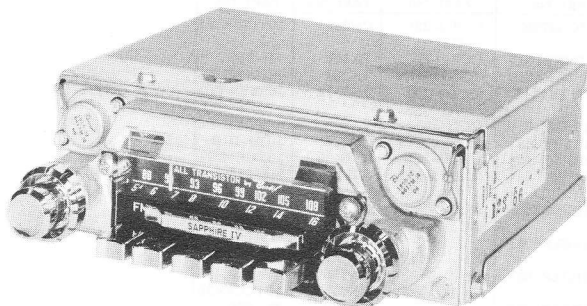




PHOTOFACT<sup>®</sup> with

CIRCUITRACE<sup>®</sup>



TRADE NAME : Volkswagen Models  
 6FBVG (1966 Karmann Ghia)  
 6FBVT (1966 Transporter)  
 6FBVW (1966 Sedan)  
 6FBV3 (1966 Volkswagen Type 3)  
 For Current Address, See Annual Index.

SUPPLIER :

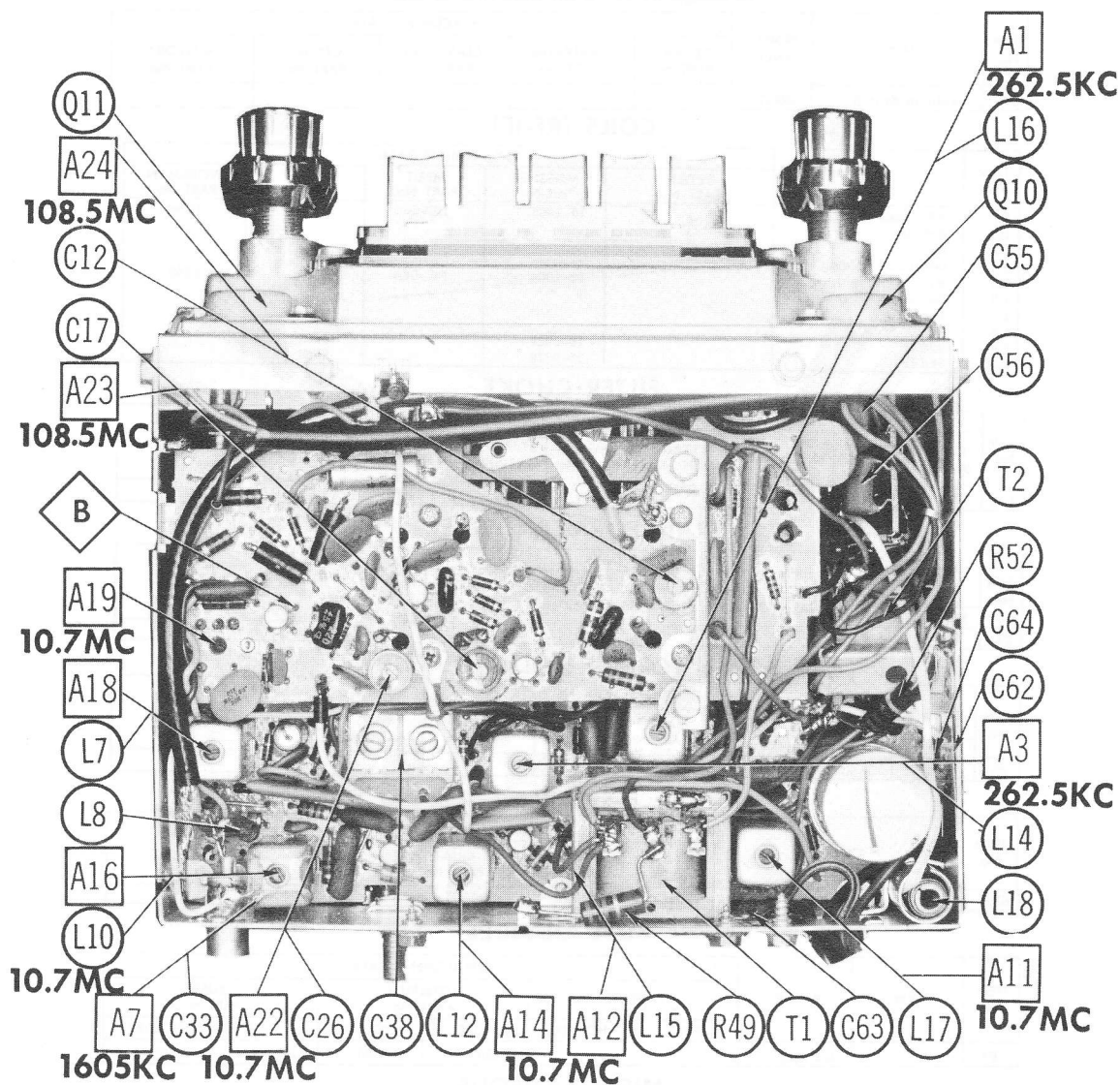
TYPE SET : 11 Transistor AM-FM Receiver

POWER SUPPLY : 6 Volt Storage Battery

RATING : .15 Amp. @ 6 Volts DC

TUNING RANGE: BROADCAST 540-1605KC  
 FREQ. MOD: 88-108MC

VOLKSWAGEN MODELS 6FBVG, 6FBVT, 6FBVW, 6FBV3



HOWARD W. SAM'S & CO., INC. Indianapolis, Indiana 46206

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# ALIGNMENT INSTRUCTIONS

Check for specified source voltage.  
Use only enough generator output to provide a usable indication.  
Suggested Alignment Tools:  
  
A1 thru A23. GENERAL CEMENT: 9440  
WALSCO: 2501

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1.	High side thru .1mfd to point $\diamond$ , 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.	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 30', 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 .01mfd to point  $\diamond$ , 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 $\diamond$ ; common to ground.	A11, A12, A13, A14, A15, A16, A17, A18, A19, A20.	Adjust for maximum.
5.	"	"	DC probe to point $\diamond$ ; common to ground.	A21.	Adjust for zero reading. A positive or negative reading will be obtained on either side of the correct setting.

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

High side thru .01mfd to point  $\diamond$ , low side to ground. Use only enough marker signal to obtain indication. Use 60% frequency modulated signal with 450KC sweep. Use 120% 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 $\diamond$ ; low side to ground.	A11, A12, A13, A14, A15, A16, A17, A18, A19, A20.	Adjust for maximum gain and symmetry of response similar to Fig. 2 with marker as shown.
5.	"	"	Vert. amp. to point $\diamond$ ; low side to ground.	A21.	Adjust A21 (Secondary) to place marker at center of crossover lines similar to Fig. 3. Adjust A11 (Primary) for maximum amplitude and straightness of crossover lines.

### FM RF ALIGNMENT

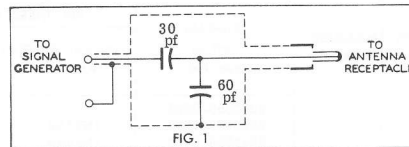
Connect generator across antenna terminals with 120Ω carbon resistors in series with each lead.

	GENERATOR FREQUENCY	DIAL SETTING	INDICATOR	ADJUST	REMARKS
6.	98MC	98MC	DC probe of VTVM to point $\diamond$ ; common to ground.	A22, A23, A24.	Adjust for maximum.

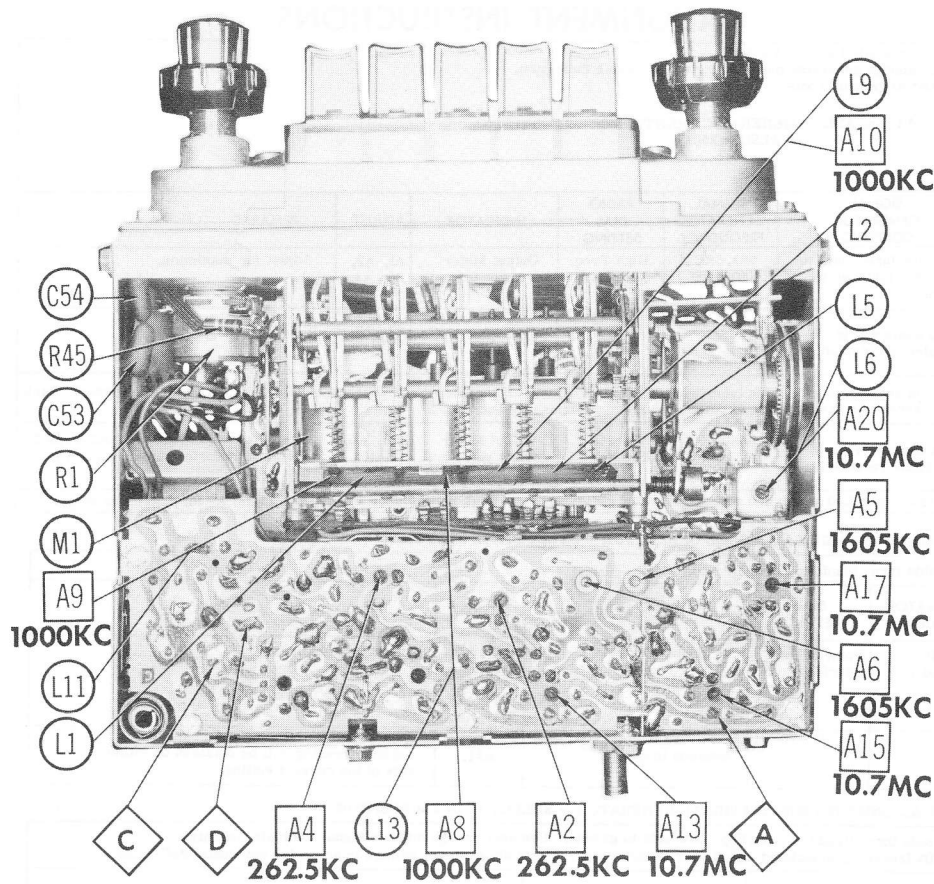
Antenna Adjustment (A7) located right rear.

**PUSH-BUTTON ADJUSTMENT**

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



VOLKSWAGEN MODELS 6FBVG, 6FBVT, 6FBVW, 6FBV3



## PARTS LIST AND DESCRIPTION

(When ordering parts, state Model, Part Number, 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	BENDIX PART No.
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.		
Q1		FM RF Amp.				NPN	2092417-0711
Q2		FM Mixer				NPN	2092417-0712
Q3		FM Oscillator				NPN	2092417-0713
Q4		AM RF /1st FM IF				NPN	2092418-0715
Q5		AM Conv. /2nd FM IF				NPN	2092418-0716
Q6		AM IF/3rd FM IF				NPN	2092418-0717
Q7		Limiter				NPN	2092418-0716
Q8		Driver	DS-66	GE-10	SK-3020	NPN	2092609-0707 (2092609-0715)
Q9		AF Amp.	DS-66	GE-10	SK-3020	NPN	2092609-0002
Q10		Output	DS-520	GE-3	SK-3009	PNP ♦	2091859-0722
Q11		Output	DS-520	GE-3	SK-3009	PNP ♦	2091859-0722

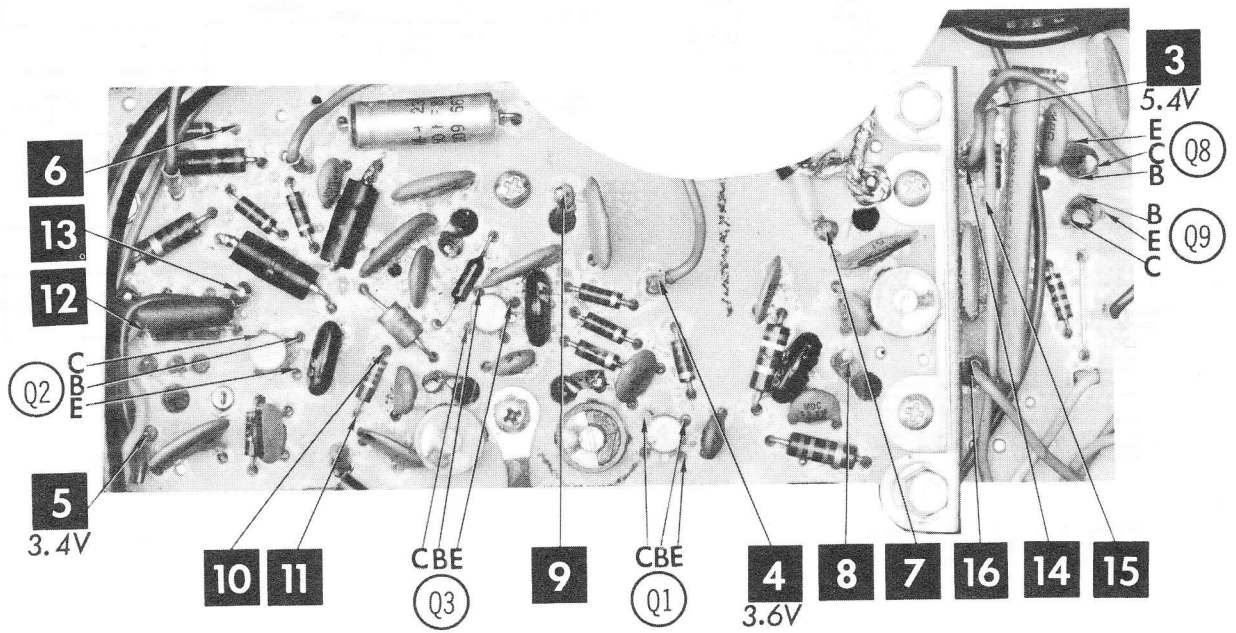
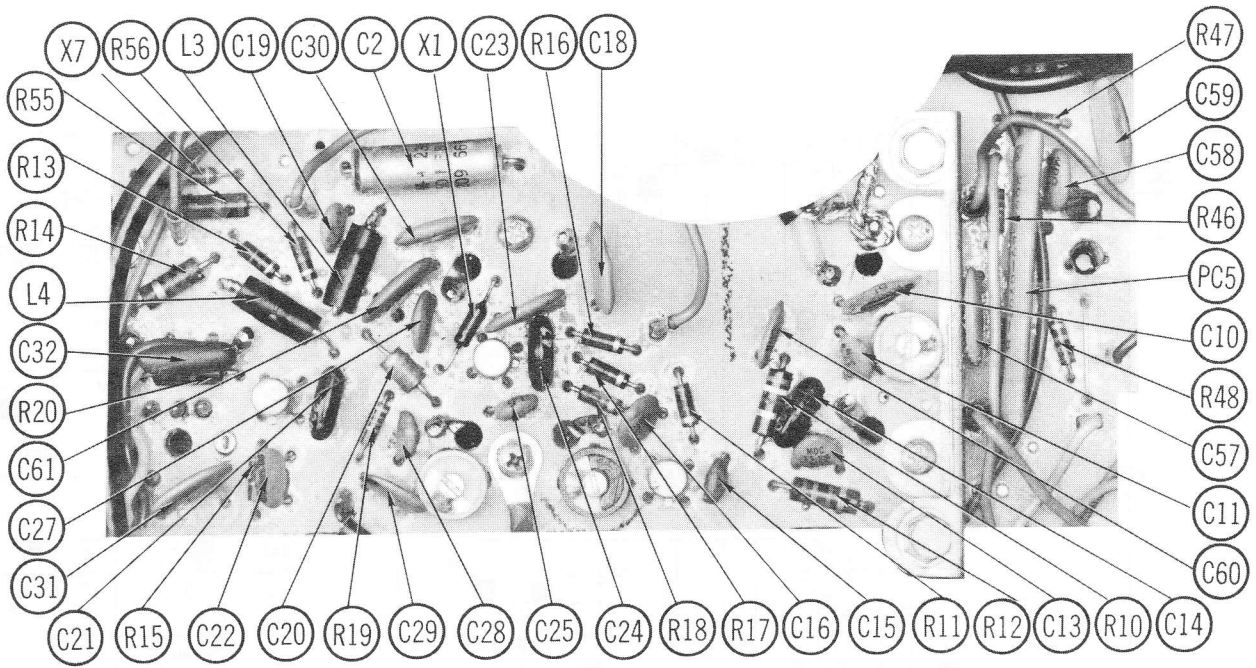
♦ When replacing, apply silicone grease to both sides of insulator. Tighten mounting screws securely.

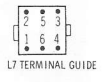
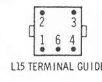
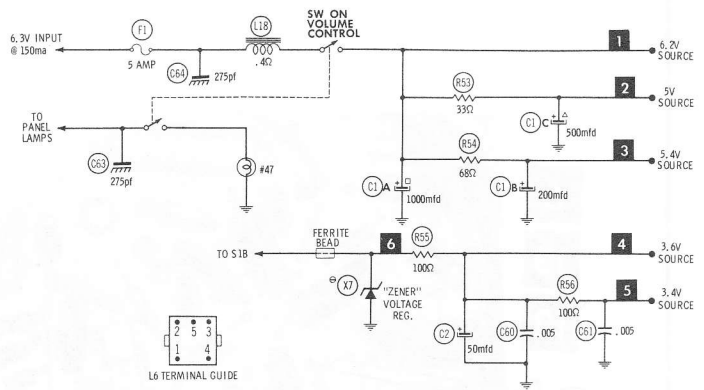
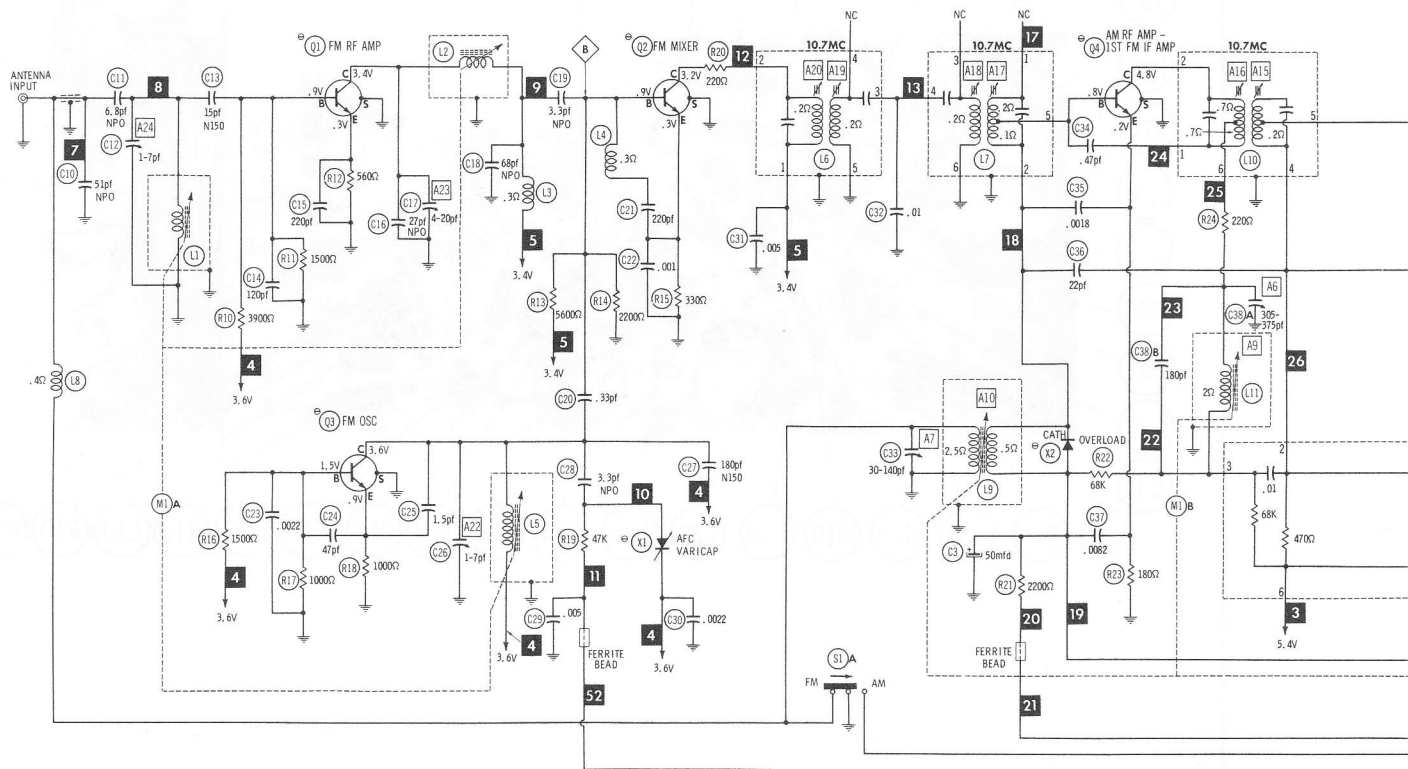
### POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MEASURED CURRENT	ORIGINAL Part or Type No.	RECTIFIERS & DIODES		RECTIFIERS		
			GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	MALLORY PART No.	RCA PART No.	SARKES TARZIAN PART No.
X1		2092055-0003					
X2		2092055-0708	1N34AS	1N34A			
X3		2092055-0708	1N34AS	1N34A			
X4		2092055-0001	1N34AS	1N34A			
X5		2092055-0007	1N34AS	1N34A			
X6		2092055-0007	1N34AS	1N34A			
X7		2092055-0004					

### ELECTROLYTIC CAPACITORS

ITEM No.	RATING		BENDIX PART No.	REPLACEMENT DATA				
	CAP.	VOLT.		AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A	1000	8	220353-0040	PWH3-54-13				PCL-3016.4
B	200	8						
C	500	8						
C2	50	8	2093667-0712	CRE417A	NLW50-10	MT1-16	TT10X50	TE-1119
C3	50	8	2093667-0711	CRE417A	NLW50-10	MT1-16	TT10X50	TE-1119





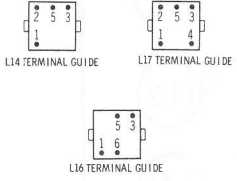
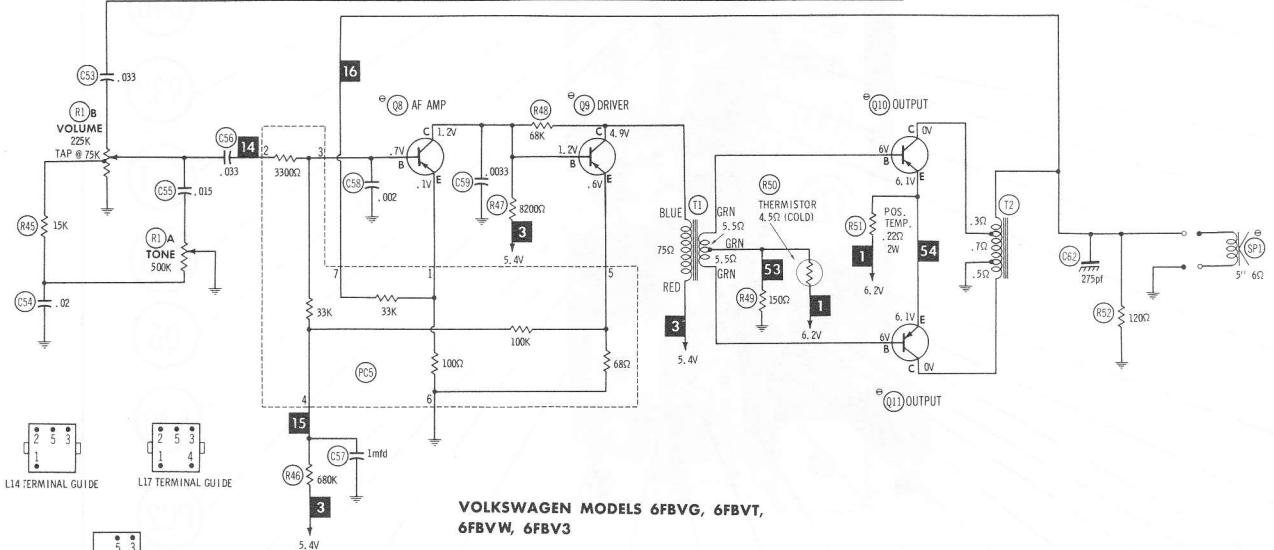
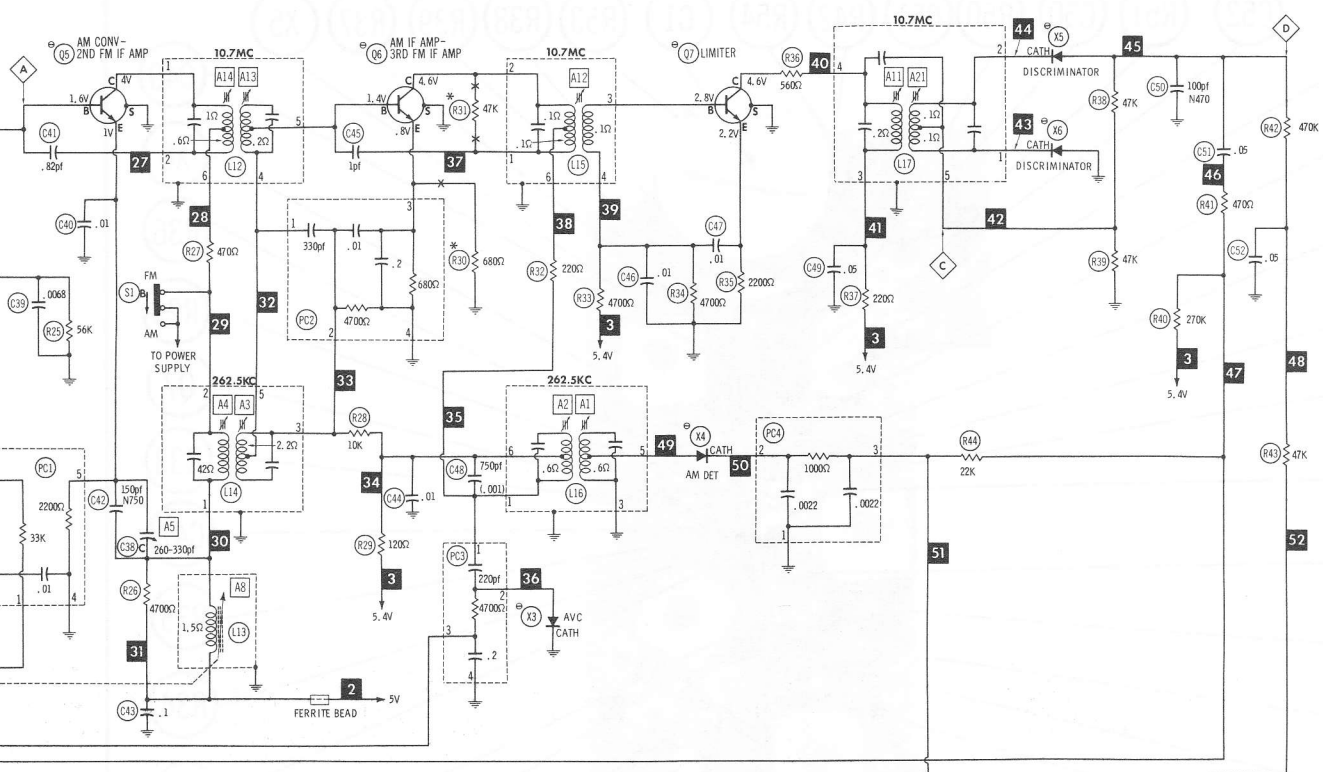
\* Not used in some versions.

NC No Connection  
All measurements taken in "FM" position unless otherwise designated.

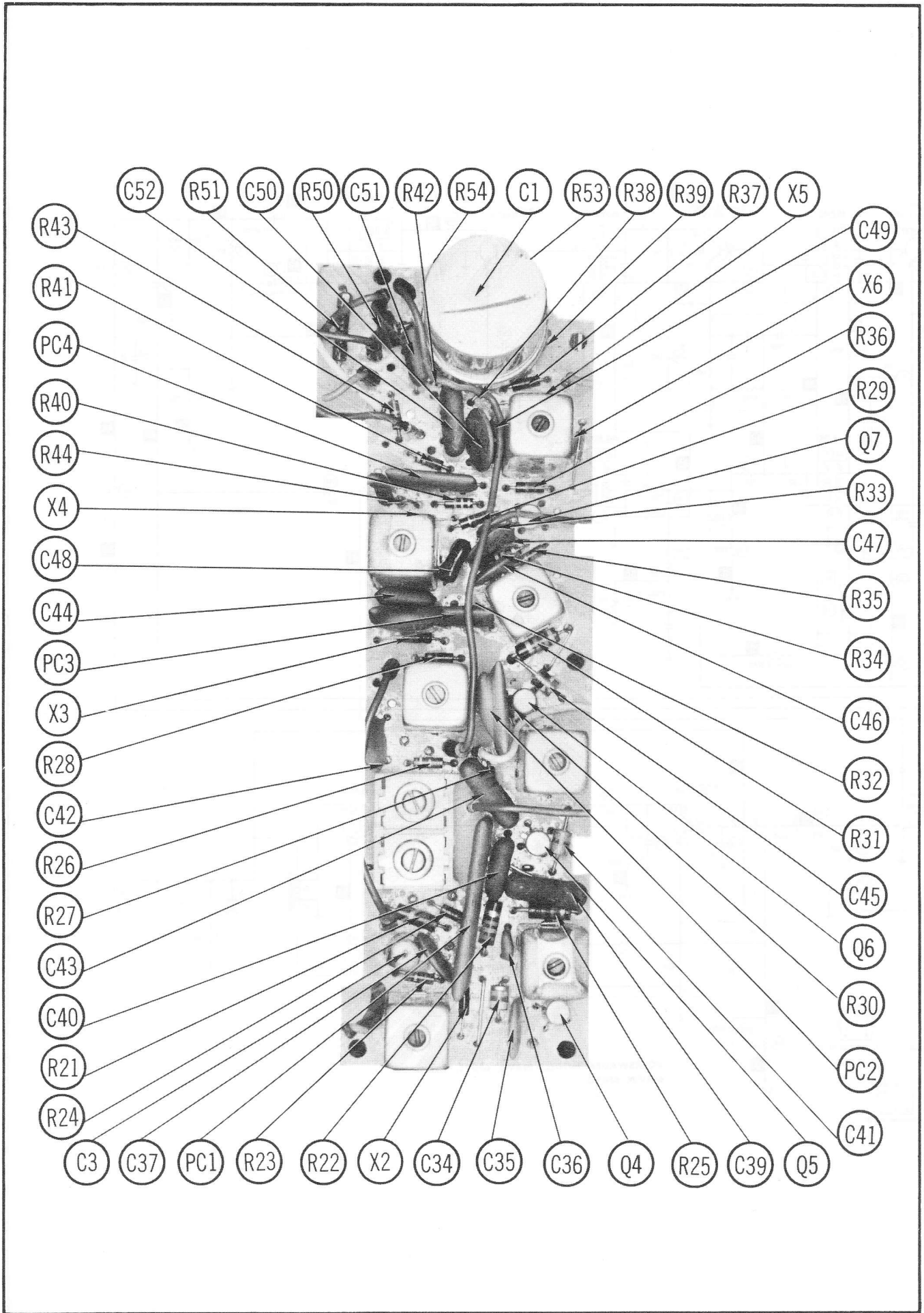
Resistors are 1/2 watt or less and rated 10% or 20% unless otherwise indicated.

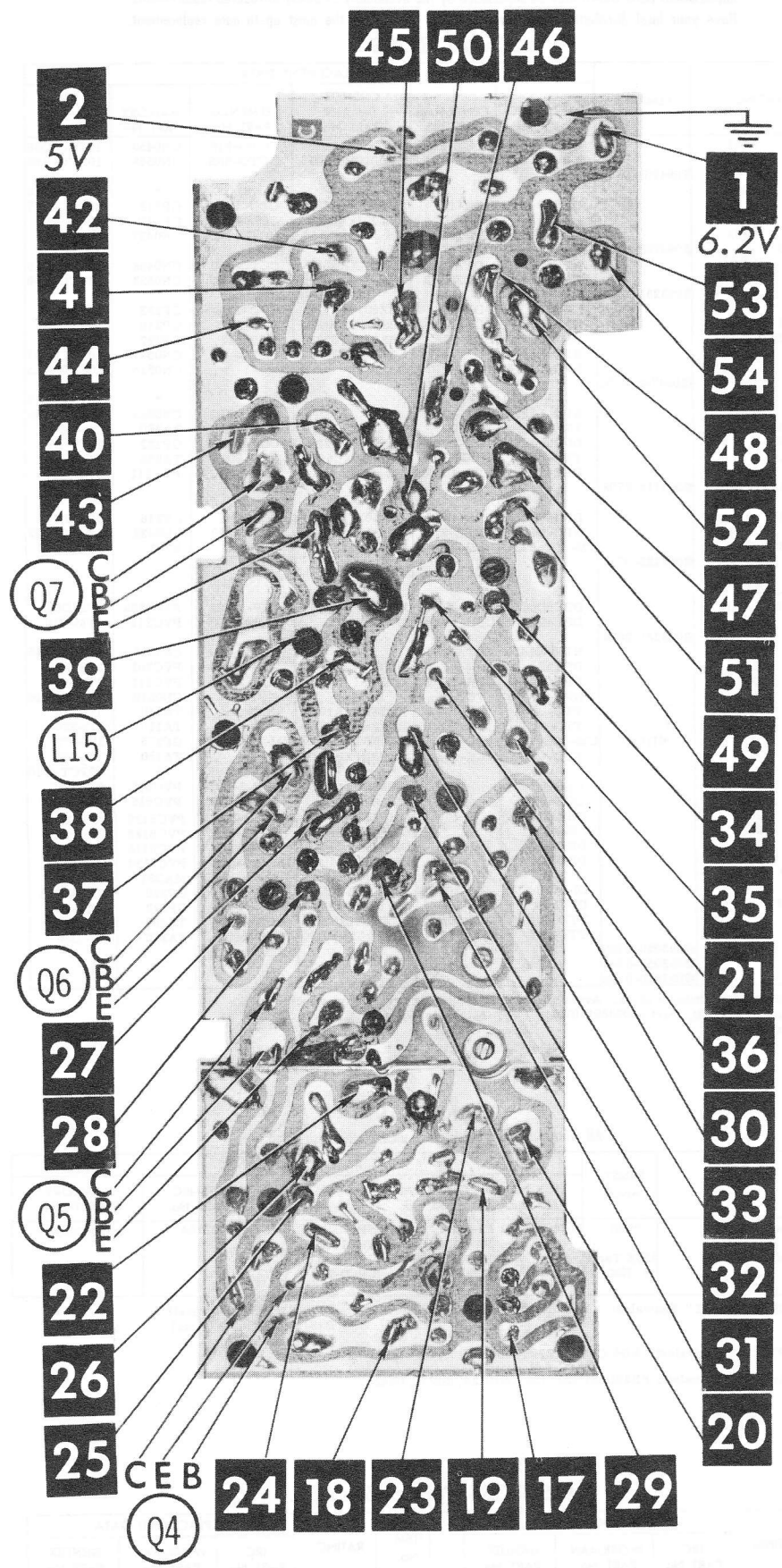
- See parts list.
- 1. Voltage measurements taken with vacuum tube voltmeter.
- 2. All controls set for normal operation, no signal applied.
- 3. Measured values are from socket pin or terminal to common ground.
- 4. All terminals viewed from bottom unless otherwise designated.
- 5. Numbers assigned 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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VOLKSWAGEN MODELS 6FBVG, 6FBVT, 6FBVM, 6FBV3





VOLKSWAGEN MODELS 6FBVG, 6FBVT, 6FBVW, 6FBV3



# PARTS LIST AND DESCRIPTION (CONTINUED)

(When ordering parts, state Model, Part Number, and Description.)

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

## CAPACITORS

ITEM No.	RATING		REMARKS	REPLACEMENT DATA						
				AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.	
C10	51	NPO		NPO-DI 50	TCZ-51		CCTO-510	CN0450	10TCC-Q50	
C11	6.8	NPO		NPO-DI 6.8	DTZ-6R8	CZ601CH6R8D	CCTO-6R8	CN0568	10TCC-V68	
C12	1-7		#2094703-0701							
C13	15	N150					*	*	10TCP-Q15	
C14	120			DI-120	DD-121	JBZ601YP121K	CCD-121	GP312	10TCC-Q27	
C15	220			DI-220	DD-221	JBZ601YP221K	CCD-221	GP322	10TS-T22	
C16	27	NPO		NPO-DI 25	TCZ-27		CCTO-270	CN0427	5GA-T12	
C17	4-20		#2094703-0703							
C18	68	NPO		NPO-DI 68	DTZ-68	CX601CG680K	CCTO-680	CN0468	10TCC-Q68	
C19	3.3	NPO		NPO-DI 3.0	DTZ-3R3		CCTO-3R3	CN0533	10TCC-V30	
C20	.33		#2093231-2338							
C21	220			DI-220	DD-221	JBZ601YP221K	CCD-221	GP322	10TS-T22	
C22	.001			DI-1000	DD-102	JBS601YP102K	CCD-102	GP210	10TS-D10	
C23	.0022			DI-2200	DD-222	JBX601YP222K	CCD-222	GP222	10TS-D22	
C24	47			NPO-DI 47	DTZ-47	CX601CG470K	CCTO-470	CN0547	10TCC-Q47	
C25	1.5		#2094703-0701	NPO-DI 1.5	DTZ-1R5			CN0515	10TCC-V15	
C26	1-7						*	*	10TCP-T18	
C27	180	N150							10TCC-V30	
C28	3.3	NPO		NPO-DI 3.0	DTZ-3R3		CCTO-3R3	CN0533	10TCC-V30	
C29	.005			TTD-005	CK-502	HCZ3R0XR502P	CCD-502	TA250	TG-D50	
C30	.0022			DI-2200	DD-222	JBX601YP222K	CCD-222	GP222	10TS-D22	
C31	.005			TTD-005	CK-502	HCZ3R0XR502P	CCD-502	TA250	TG-D50	
C32	.01	25V		DBE4S1	CPR-10000J	DMF2S1	4DP-1-103	PVC211	2TM-S10	
C33	30-140		#2093114-0708				424			
C34	.47									
C35	.0018			DI-1800	DD-182	JBX601YP182K	CCS-182	GP218	5GA-D18	
C36	22			NPO-DI 22	DTZ-22	CY601CG220K	CCTO-220	CN0422	10TCC-Q22	
C37	.0082			CM-30D-822	DD-822	CD30F822K500	CCD-822	B282	30GA-D82	
C38A	305-375		#2092422-0715							
B	180									
C	260-330									
C39	.0068	100V		DBE6D68	CPR-6800J	WMF1D68	1DP-1-682	PVC4268	6PS-D68	
C40	.01	25V		DBE4S1	CPR-10000J	DMF2S1	4DP-1-103	PVC211	2TM-S10	
C41	.82		#2093231-2828							
C42	150	N750		N750-DI 150	DTN-150		CCTN-151	CN7315	10TCU-T15	
C43	.1	25V		DBE2P1		DMF2P1	2DP-3-104	PVC201	2PS-P10	
C44	.01	25V		DBE4S1	CPR-10000J	DMF2S1	4DP-1-103	PVC211	2TM-S10	
C45	1			NPO-DI 1.0	TCZ-1			CN0510	10TCC-V10	
C46	.01		①	TTD-01	CK-103	HCZ3R0XR103P	CCD-103	TA110	TG-S10	
C47	.01		①	TTD-01	CK-103	HCZ3R0XR103P	CCD-103	TA110	TG-S10	
C48	750		(.001)†	CM-20D-751	DD-751	CD19F751J500	CM-15-E-751	GP375	MS-375	
C49	.05			TTD-05	CK-503	HCZ3R0XR503P		TA150	TG-S50	
C50	100	N470					*	*	10TCT-T10	
C51	.05	25V		DBE6S5		DPMS6S5	6DP-3-503	PVC615	6PS-S50	
C52	.05	25V		DBE6S5		DPMS6S5	6DP-3-503	PVC615	6PS-S50	
C53	.033	25V		DBE4S33		DMF4S33	4DP-2-333	PVC6133	4PS-S33	
C54	.02	25V		DBE4S22		DMF4S22	4DP-2-223	PVC6122	4PS-S22	
C55	.015	25V		DBE4S15		DMF4S15	4DP-1-153	PVC6115	4PS-S15	
C56	.033	25V		DBE4S33		DMF4S33	4DP-2-333	PVC6133	4PS-S33	
C57	1mfd				UK-105	HXC3R0XR105P		MAG31	HY-135	
C58	.002			DI-2000	DM-202	JBX601YP202K	CCD-202	GP220	5GAB-D22	
C59	.0033			DI-3300	DD-332	JBV601YP332K	CCD-332	GP233	10TS-D33	
C60	.005			TTD-005	CK-502	HCZ3R0XR502P	CCD-502	TA250	TG-D50	
C61	.005			TTD-005	CK-502	HCZ3R0XR502P	CCD-502	TA250	TG-D50	
C62	275		#2093050-0705							
C63	275		#2093050-0705							
C64	275		#2093050-0705							

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

① May be part of PC Unit, Part #2094691-0701. † Alternate Value.

# 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	Tone	500K	2094685-0701	F1-500K, R14-250K, RFS113, RFS206, KR-7	NP-500K-S, NRF1-250K, UPC-B-113, UP-D-206, NWE-23	†QJ-2276A	■ UE4629S
B	Volume/Switch	225K Tap @ 75K					

† "CONCENTRIKIT" Equivalent: K15 Kit, with Base Elements and Shafts: B11-133, P17-126 (Panel) B18-130X, R9-208 (Rear) 76-2 (Switch)

"SNAPTROL" Equivalent: BU4, CF16, CR29T, SF15, SR51, WF.

■ "STA-LOC" Equivalent: FB55L, RU254T753, OS1812A, IS2375, US42.

## RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA			ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN PART No.	BENDIX PART No.			IRC PART No.	WORKMAN PART No.	BENDIX PART No.
R50	4.5Ω (Cold) Thermistor			220629-0017	R51	.22Ω 2W (PTC)			2090948-0007

# PARTS LIST AND DESCRIPTION (CONTINUED)

(When ordering parts, state Model, Part Number, 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.

## COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA				
		BENDIX PART No.	MEISSNER Part No.	MERIT PART No.	MILLER PART No.	WORKMAN PART No.
L1	FM Antenna	2056765-0001①				
L2	FM RF	2056767-0001①				
L3	RF Choke (1uh)	2092210-0005	19-1000	BC-561	4602	T855
L4	FM IF Trap (1uh)	2094901-0701	19-1000	BC-561	4602	T855
L5	FM Oscillator	2056766-0001①				
L6	1st FM IF	2093587-0706				
L7	2nd FM IF	2093587-0707				
L8	RF Choke (2uh)	2092210-0007	19-1002	BC-563	74F226AP	TA812
L9	AM Antenna	①				
L10	3rd FM IF	2092421-0717				
L11	AM RF	①				
L12	4th FM IF	2092421-0719				
L13	AM Oscillator	①				
L14	1st AM IF	2092419-0720				
L15	5th FM IF	2092421-0718				
L16	2nd AM IF	2092419-0719				
L17	Discriminator	2093856-0702				

① Part of M1.

## FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA					NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	BENDIX PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L18	150ma	.4Ω	240uh	2094209-0703					

## 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	2.2	1	2092192-0706					

## 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	22Ω Tap	@ 6Ω	2094696-0701					

## SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA			NOTES
				BENDIX PART No.	JENSEN PART No.	QUAM PART No.	
SP1	5"	PM	6Ω	2093455-0701	C525T8	5A15Z6	Model: 6FBVG. Models: 6FBVT, 6FBVW, Model: 6FBV3.
	6"	PM	6Ω	2093006-0701	C6T8	6A15Z6	
	4" x 8"	PM	6Ω	2094561-0701	P4X8V8	48A2Z6	

## FUSE DEVICES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
F1	AGA	5 Amp.	2091811-0009	2094348-0507	301005	155004	AGA	HAF

## COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	BENDIX PART No.	REPLACEMENT DATA
PC1	IF Network	470Ω, 2200Ω, 33K, 68K, .01mfd, .01mfd.	2094687-0701	
PC2	IF Network	680Ω, 4700Ω, 330pf, .01mfd, .2mfd.	2094688-0702	
PC3	AVC Network	4700Ω, 220pf, .2mfd	2094690-0701	
PC4	AM Det Network	1000Ω, .0022mfd, .0022mfd	2094692-0701	
PC5	Biasing Network	68Ω, 100Ω, 3300Ω, 33K, 33K, 100K	2094689-0701	

## MISCELLANEOUS

ITEM No.	PART NAME	BENDIX PART No.	NOTES
M1	Tuner (AM Tuning Coil Assy)	2094066-0507	(Complete with Pushbuttons)
S1	AM-FM Selector Sw.	2096131-0097 2092719-0707	

## CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
Escutcheon	2094551-0501	Dial Pointer Assembly	2090129-0085
Dial Glass	2094516-0002	Knob- Tuning of Volume	2091420-0502
Pushbutton	2094440-0002	Knob- Tone or Dummy	2094480-0001

## 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
Bonding Strap	Use BELDEN No. 8661 (3/8 In.) or 8670 (3/4 In.)

VOLKSWAGEN MODELS 6FBVG, 6FBVT, 6FBVW, 6FBV3

