



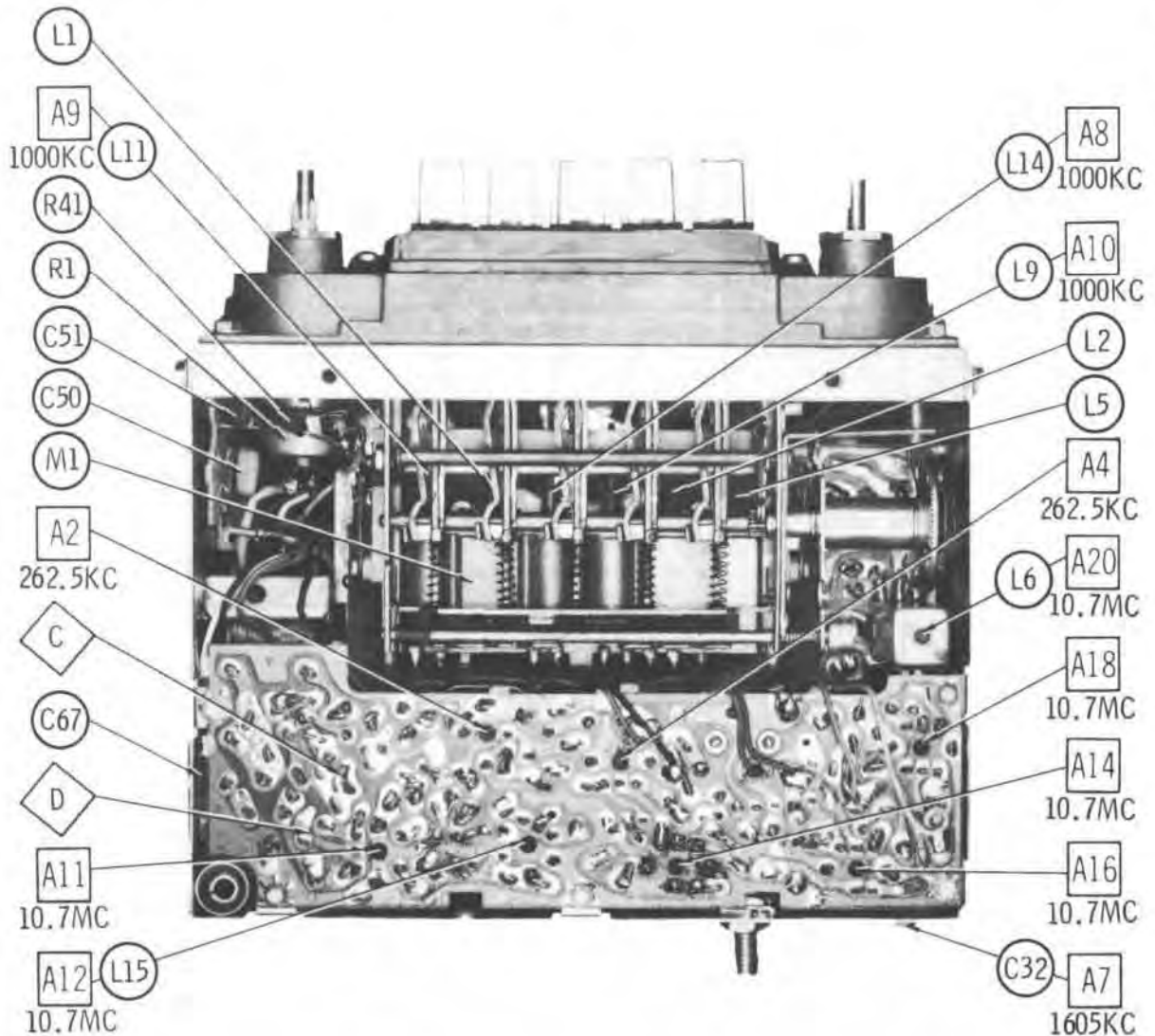
PHOTOFACT[®] with CIRCUITRACE[®]

For Supplier Address See PHOTOFACT Index

NOTE: Manufacturer Part Numbers Shown Are BENDIX



MODELS 9FBV0 (69 Volvo)
 9FBV0C (69 Volvo Coupe 140)
 9FBV0D (69 Volvo Coupe 1800)



VOLVO MODELS 9FBV0/V0C/V0D

HOWARD W. SAMS & 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:

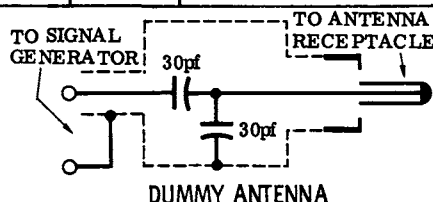
A1 thru A4, A11 thru A21....GENERAL CEMENT #9440
A5,A6,A7,A22,A23,A24GENERAL CEMENT #8290,8868,9087

PUSH-BUTTON ADJUSTMENT

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

GENERATOR COUPLING	GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1. High side thru .1mfd to point \diamond A, low side to ground.	262.5KC 400 cycle modulation	High freq. end stop.	Output meter across voice coil.	A1,A2, A3,A4	Adjust for maximum.
2. Thru dummy antenna to antenna input.	1605KC	"	"	A5,A6, A7	"
Step 3 is not necessary unless tuner or associated components have been disturbed. If necessary, back tuning cores (A8,A9,A10) out of coils but not out of forms. Repeat Step 2.					
3. Thru dummy antenna to antenna input.	1000KC	Tune to signal	Output meter across voice coil	A8,A9, A10	Adjust for maximum. Repeat Steps 2 and 3 until no further improvement is noted

With radio installed in car and antenna extended 31", tune in a weak station near 1400KC and adjust A7 for maximum output. Antenna adjustment (A7) is located on right rear corner under antenna input.



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

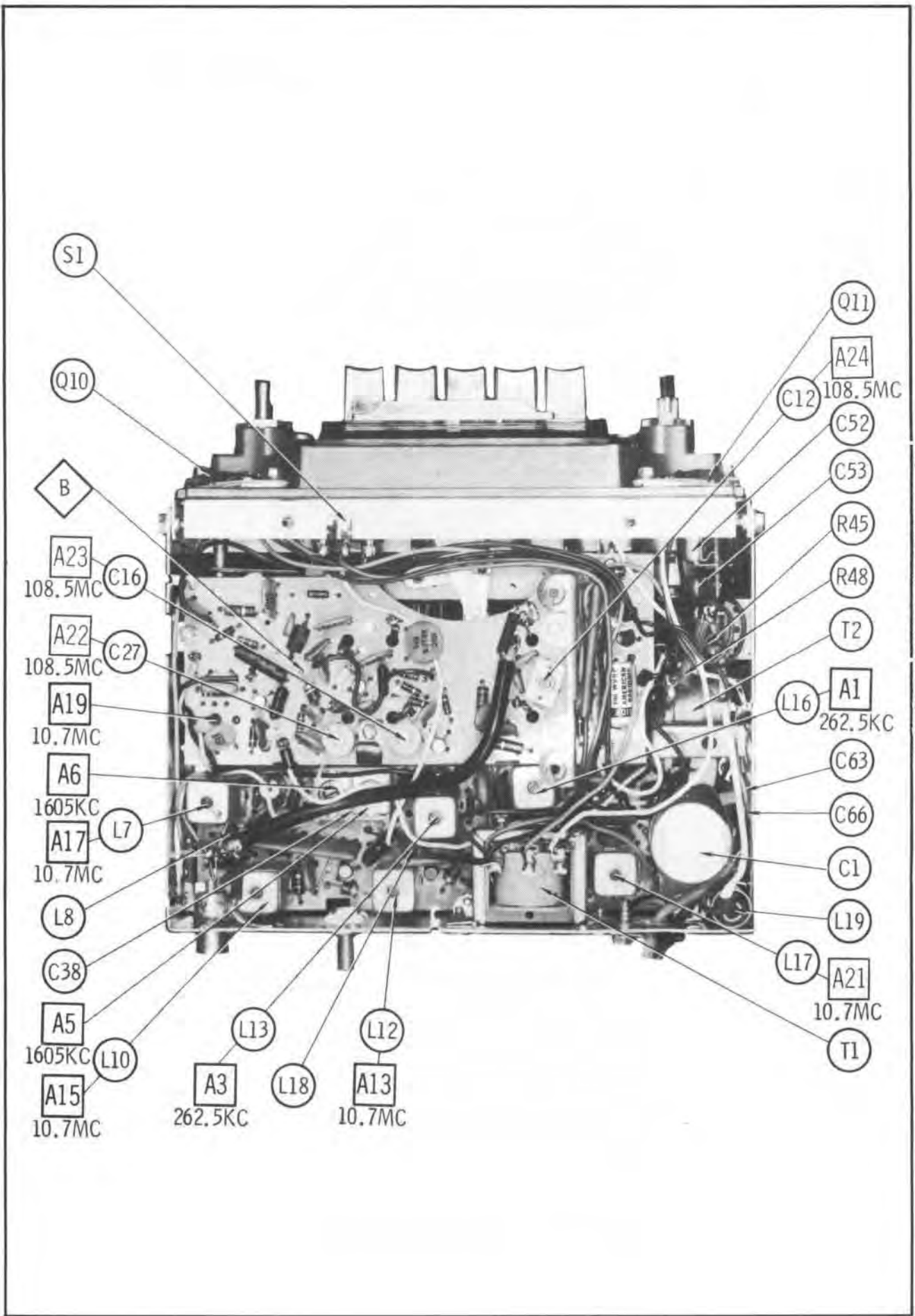
High side of generator thru .001mfd to point \diamond B, low side to ground.					
GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS	
4. 10.7MC Unmodulated	Point of non-interference	DC probe of VTVM to point \diamond C, common to ground.	A11 thru A20	Adjust for maximum.	
5. "	"	DC probe of VTVM to point \diamond D, 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

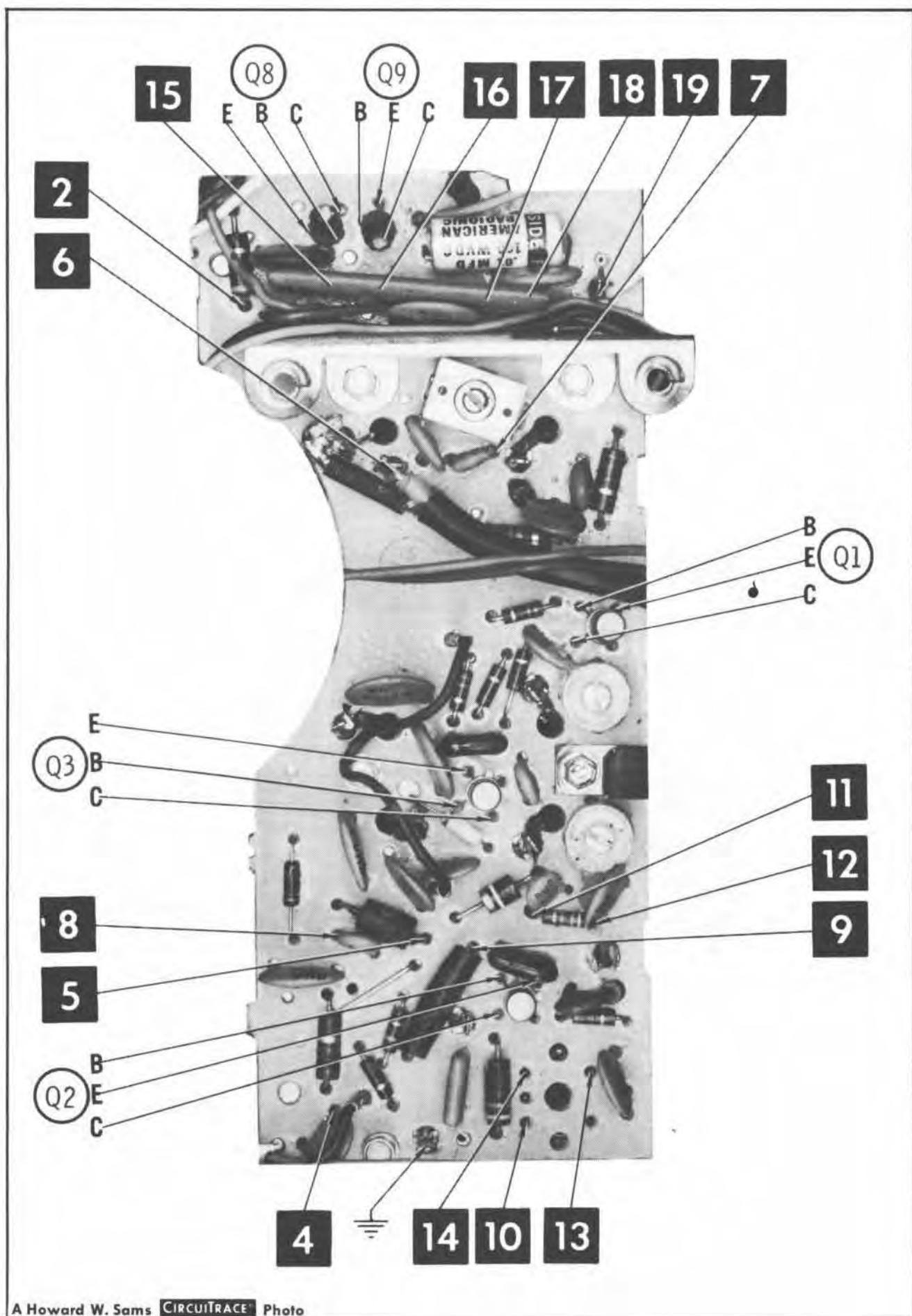
High side of generator thru .001mfd to point \diamond B, low side to ground. Use only enough marker signal for indication. Use 60 cycle frequency modulated signal with 450KC sweep. Use 60 cycle sawtooth voltage in scope for horizontal deflection.					
GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS	
4. 10.7MC 450KC Sweep	Point of non-interference	Vert. amp of scope to point \diamond C, low side to ground.	A11 thru A20	Adjust for maximum gain and symmetry of response similar to Fig. 1 with marker as shown.	
5. "	"	Vert. amp of scope to point \diamond D, low side to ground.	A21	Adjust A21 (secondary) to place marker at center of "S" curve similar to Fig. 2. Readjust A11 (primary) for maximum amplitude and straightness of line.	

FM RF ALIGNMENT—SELECTOR IN FM POSITION

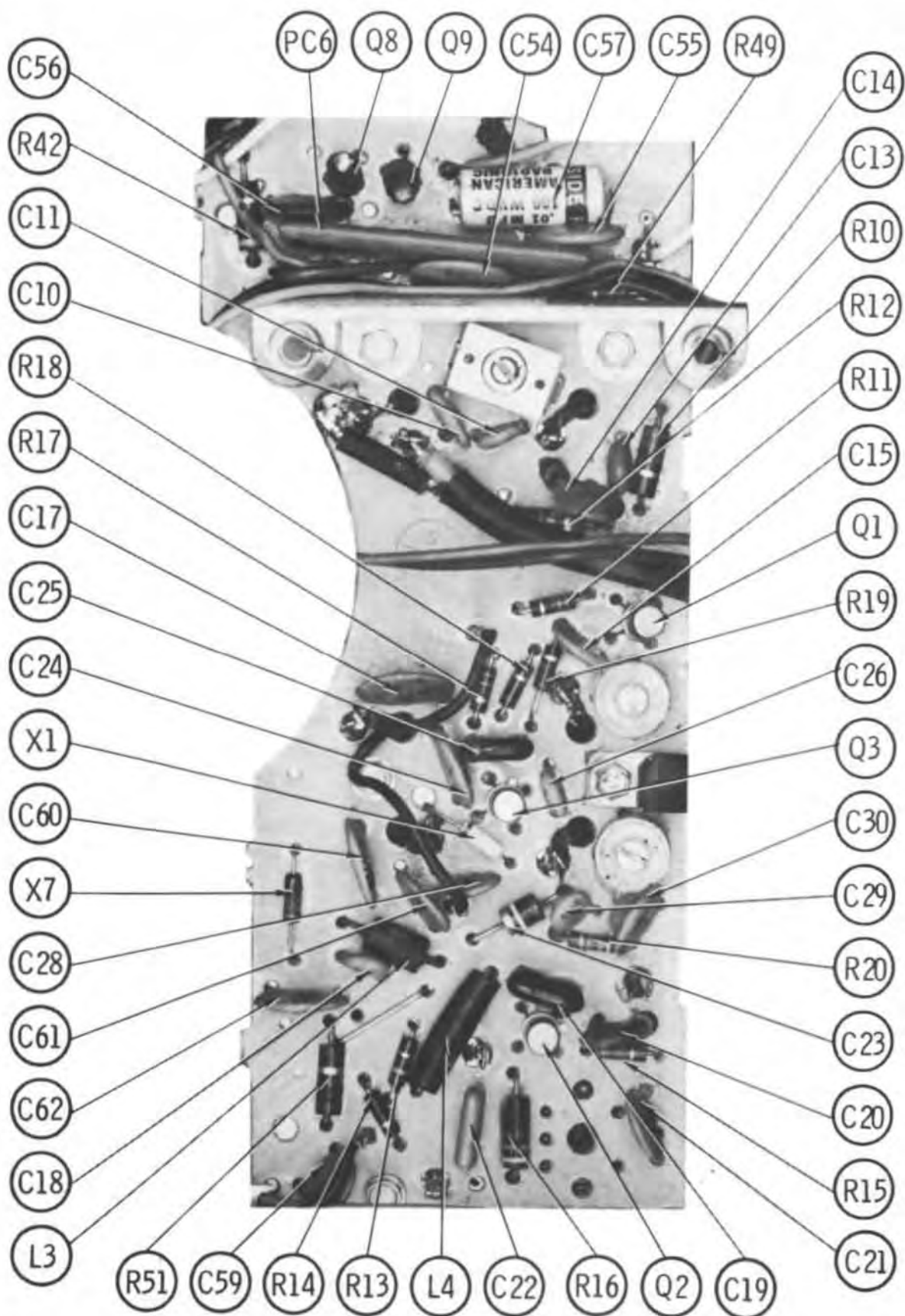
Connect generator across antenna terminals with 120-ohm carbon resistor in series with each lead.					
GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS	
6. 108.5MC	High freq. end	DC probe of VTVM to point \diamond C, common to ground.	A22, A23,A24	Adjust for maximum.	

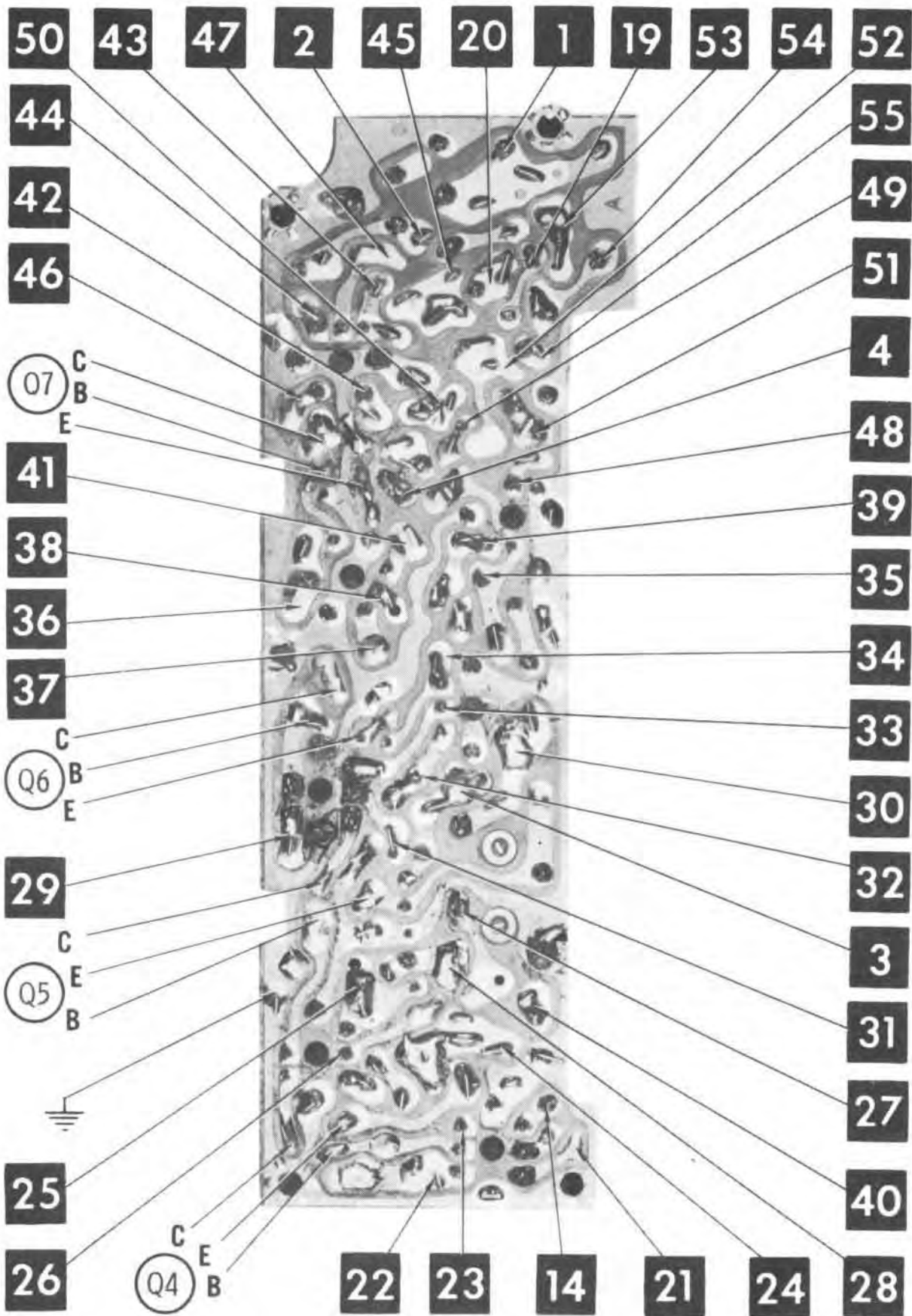


VOLVO MODELS 9FBVO/VOC/VOD

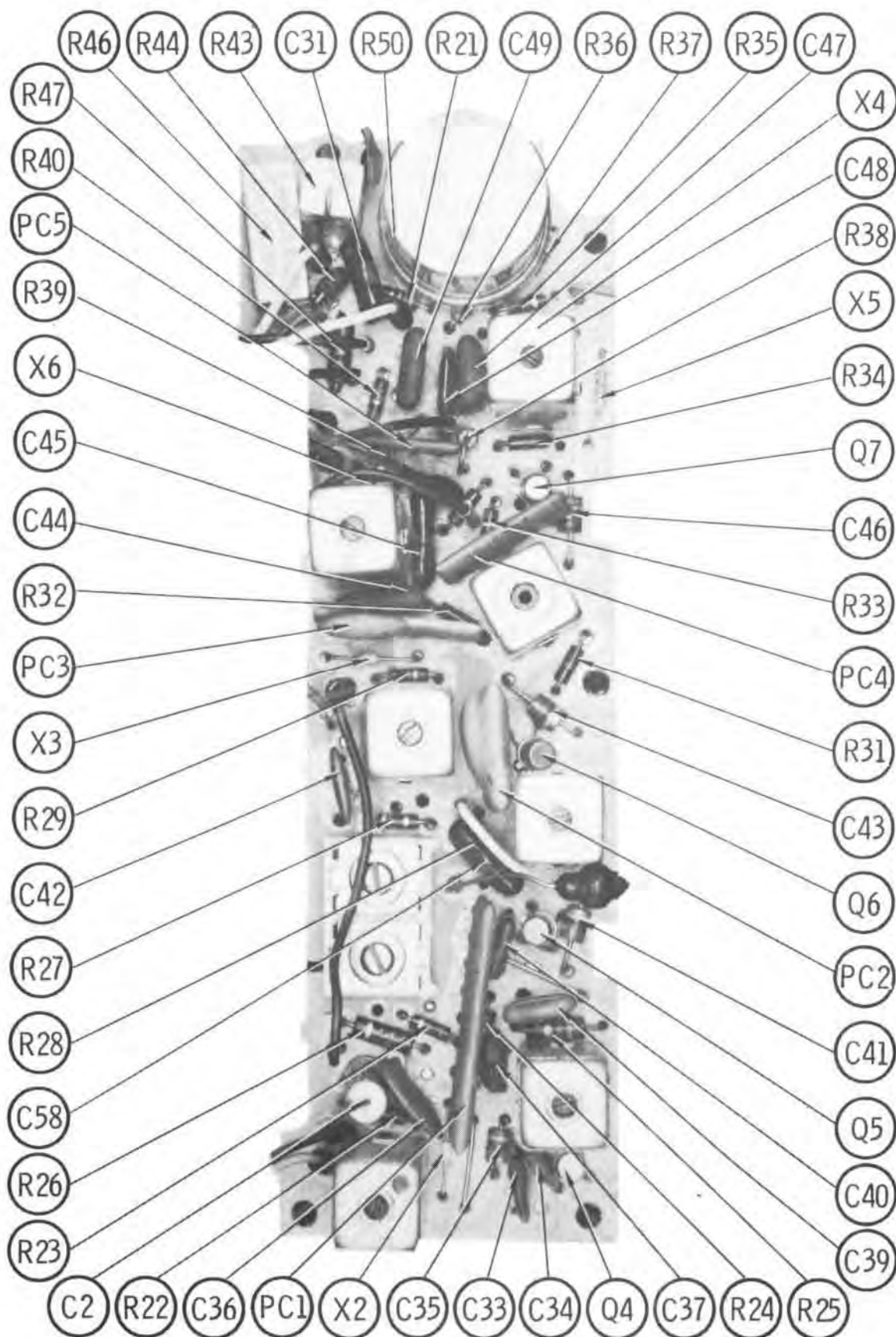


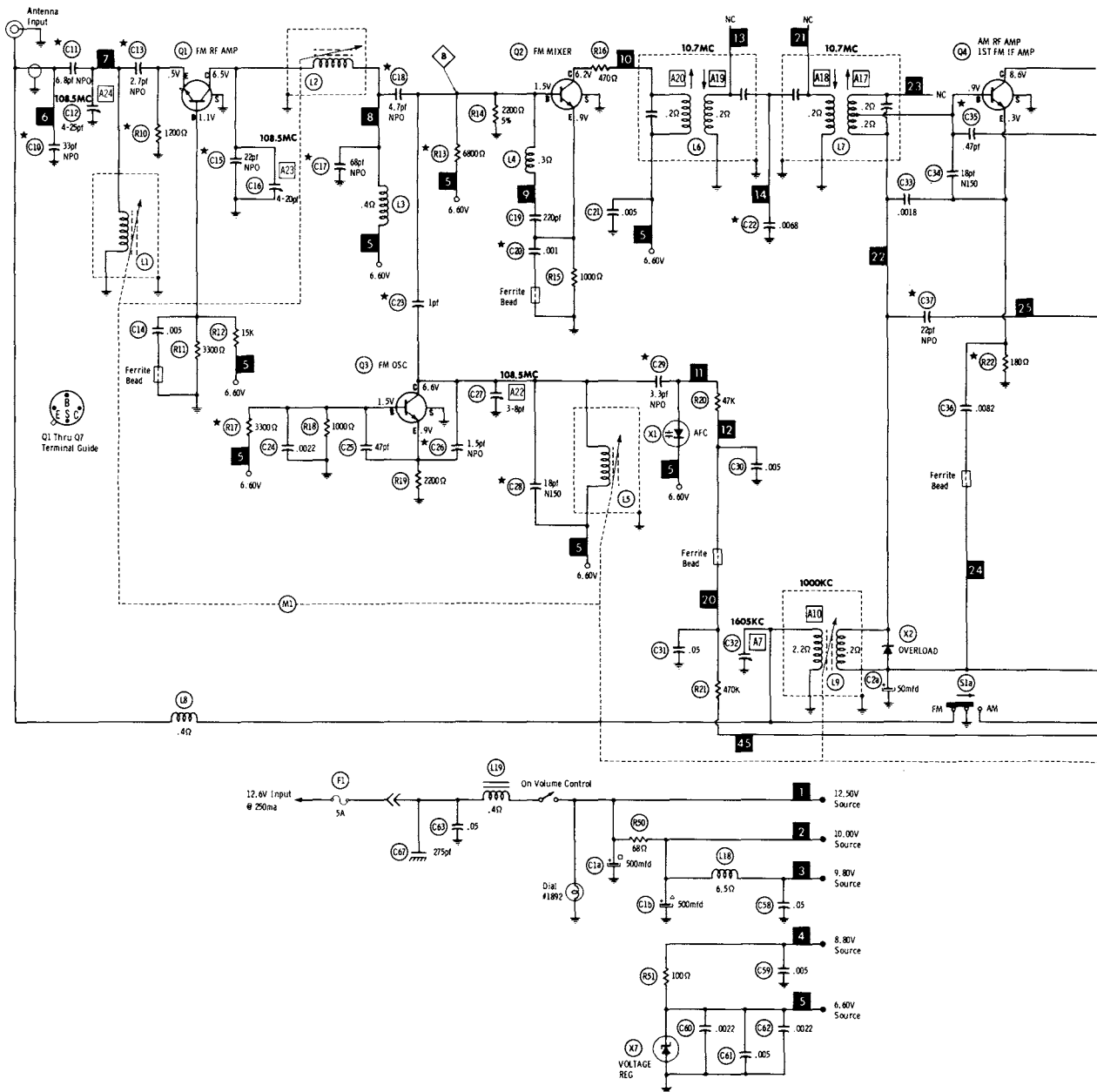
A Howard W. Sams CIRCUITRACE Photo





A Howard W. Sams **CIRCUITRACE** Photo

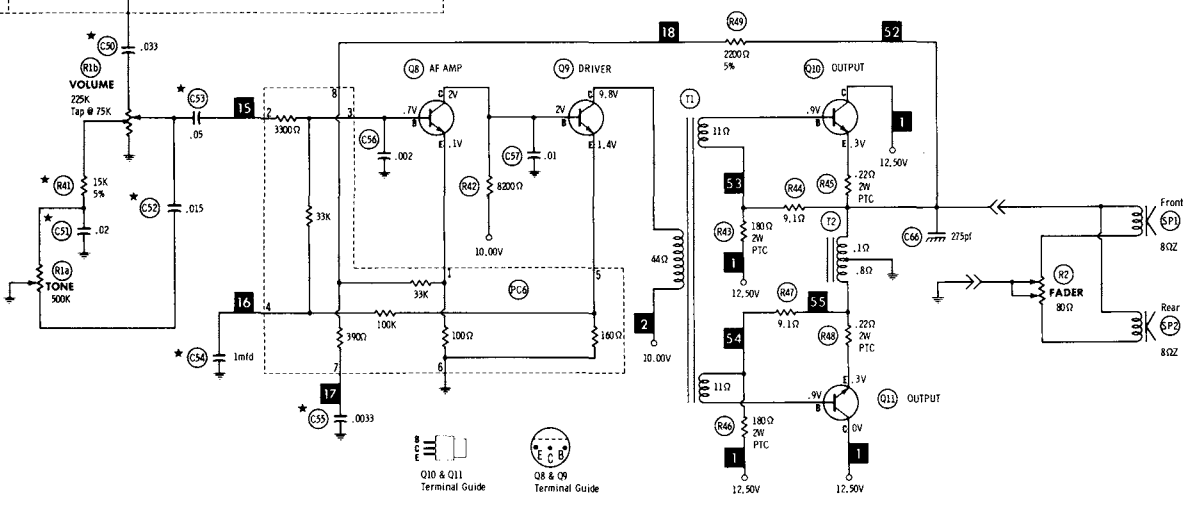
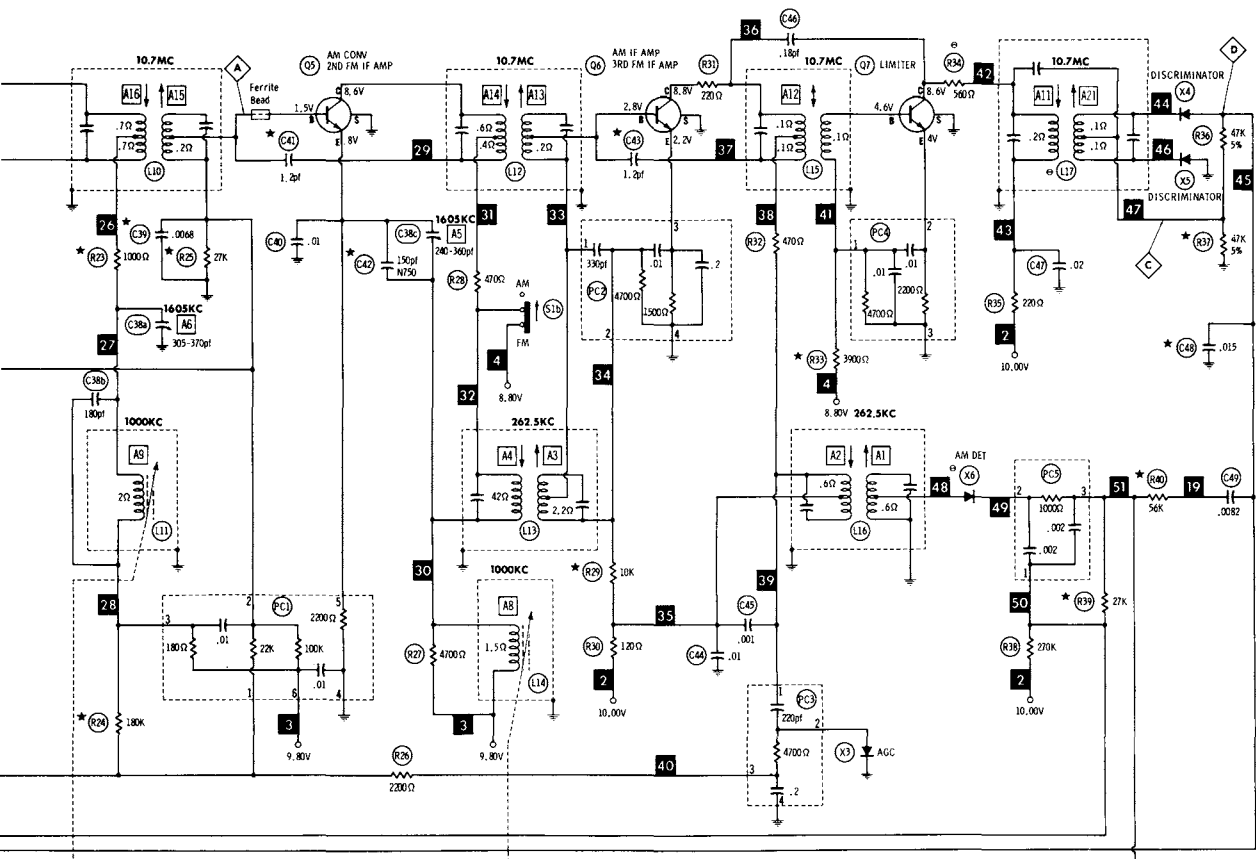




* Value varies; replace with original value.
 Measurements taken with switching in position shown unless otherwise indicated.
 Values shown in Ω are used in some applications.
 Resistors are 1/2W or less, 10% or 20%, unless otherwise indicated.
 Supply voltage maintained at rated value for measurements.
 Voltage and resistance measured with VTVM or equivalent meter.
 no signal applied and controls adjusted for normal operation.
 Controls viewed from actuator end. Arrow indicates clockwise rotation.
 Numbers assigned to terminals may not be found on the unit.
 Transistor resistances vary widely. No resistance measurements taken.

--- Denotes chassis.
 --- Denotes ground.

A PHOTOFAC STANDARD NOTATION SCHEMATIC
 with **CIRCUITRACE**
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VOLVO MODELS 9FBVO/VOC/VOD

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.

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.	TYPE No.	FUNCTION	REPLACEMENT DATA					
			MFR. PART No.	GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	MOTOROLA PART No.	RCA PART No.	SYLVANIA PART No.
Q1		FM RF Amp	2092417-0711	GE-17	TR-22	HEP55	SK3018	ECG 161
Q2		FM Mixer	2092417-0712	GE-17	TR-22	HEP55	SK3018	ECG 161
Q3		FM Osc	2092417-0713	GE-17	TR-22	HEP55	SK3018	ECG 161
Q4		AM RF Amp-1st FM IF Amp	2092418-0715	GE-17	TR-21	HEP55	SK3018	ECG 108
Q5		AM Conv.-2nd FM IF Amp	2092418-0716	GE-17	TR-21	HEP55	SK3018	ECG 161
Q6		AM IF -3rd FM IF Amp	2092418-0717	GE-17	TR-21	HEP55	SK3018	ECG 161
Q7		FM Limiter	2092418-0716	GE-17	TR-21	HEP55	SK3018	ECG 161
Q8		AF Amp	2092609-0707	GE-20	TR-22	HEP54	SK3020	ECG 123A
Q9		Driver	2092609-0002	GE-20	TR-21	HEP54	SK3020	ECG 123A
Q10		Output (1)	4080879-0001	GE-28	IRTR55	HEP245	SK3041	ECG 152
Q11		Output (1)	4080879-0001	GE-28	IRTR55	HEP245	SK3041	ECG 152

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

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MFR. PART OR TYPE No.	REPLACEMENT DATA				NOTES
		GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	RCA PART No.	SYLVANIA PART No.	
X1	2092055-0003					
X2	2092055-0708	GE-300			ECG 177	
X3	2092055-0708	GE-300			ECG 177	
X4	2092055-0007	1N34AS	1N34A	SK3087	ECG 110 (1)	(1) Matched Pair
X5	2092055-0007	1N34AS	1N34A	SK3087		
X6	2092055-0001	1N34AS	1N34A	SK3087	ECG 109	
X7	2092055-0710	GE-ZD6.2	Z1008	SK3058	ECG 5071	Zener

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA						
		PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	SPRAGUE PART No.
C1a	500 16V	2091503-0712	PWH2-02-40	EA15-500	BB0045A	XC2-43.05	PPF200.65	PCL-2177
b	500 16V			EA15-500				
C2	50 8	2093667-0711	MCD-130	EP15-50	WBR50-25	MT1-16	MTV50CB15	TE-1133

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.

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	33 NPO		NPO-DI 33	DTZ-33	NP033	CCT0-330	CN0433	10TCC-Q33
C11	6.8 NPO		NPO-DI 6.8	DTZ-6R8	NP06P8		CN0568	10TCC-V68
C12	4-25	#209315-0704						
C13	2.7 NPO		NPO-DI 3.0					10TCC-V30
C14	.005		TTP-005	CK-502	MGPO05	CCD-502	TA250	TG-D50
C15	22 NPO		NPO-DI 22	DTZ-22	NP022	CCT0-220	CN0422	10TCC-Q22
C16	4-20	#2094703-0702						
C17	68 NPO			DTZ-68			CN0468	10TCC-Q68
C18	4.7 NPO		NPO-DI 4.7	DTZ-4R7	NP04P7		CN0547	10TCC-V47
C19	220		ADM-15-221	CPR-220J	CD15F221J500	DM-15-221J	SX322	MS-322
C20	.001		GPD X5F102K	DM-102	GP1000	CCD-102	SM210	2SS-D10
C21	.005		TTP-005	CK-502	MGPO05	CCD-502	TA250	TG-D50
C22	.0068 100V		V1612D68	CPR-6800J	DPMS6D68	6DP-1-692J	PVC6268	6PS-D68
C23	1		NPO-DI 1.0	TCZ-1			CN0510	10TCC-V10
C24	.0022		GPD X5F222K	DD-222	GP2200	CCD-222	GP222	10TS-D22
C25	47		ADM-15-470	CPR-47J	CD15F470J500	DM-15-470J	SX447	MS-447
C26	1.5 NPO		NPO-DI 1.5	DTZ-1R5	NP01P5		CN0515	10TCC-V15
C27	1-7	#2094703-0701						
C28	18 N150							10TCP-Q18
C29	3.3 NPO		NPO-DI 3.3	DTZ-3R3	NP03P3		CN0533	10TCC-V33
C30	.005		TTP-005	CK-502	MGPO05	CCD-502	TA250	TG-D50
C31	.05		DBE6S5		DPMS6S5	6DP-3-503 424	PVC615	6PS-S50
C32	30-140	#2093114-0712						
C33	.0018		GPD X5F152K	DD-152		CCD-152	GP215	10TS-D15
C34	18 N150							10TCP-Q18
C35	.47pf	#2093231-2978						
C36	.0082		GPD X5R822K	DD-822		CCD-822		10TS-D82
C37	22 NPO		NPO-DI 22	DTZ-22	NP022	CCT0-220	CN0422	10TCC-Q22
C38a	305-375							
b	180							
c	290-360							
C39	.0068 100V		V1612D68	CPR-6800J	DPMS6D68	6DP-1-692	PVC6268	6PS-D68
C40	.01 100V		V1612S1	CPR-10000J	DPMS6S1	1DP-1-103	PVC211	225P10391WD3
C41	1.2		NPO-DI 1.0	TCZ-1			CN0510	10TCC-V10
C42	150 N750			DTN-150	N150	CCTN-151	CN7315	10TCU-T15
C43	1.2		NPO-DI 1.0	TCZ-1			CN0510	10TCC-V10
C44	.01 100V		V1612S1	CPR-10000J	DPMS6S1	1DP-1-103	PVC211	225P10391WD3
C45	.001			CPR-1000J	CD19F102J500	DM-19-102J	SX210	424ME1001J501
C46	.18pf	#2093231-2188						
C47	.02 100V		V1614S2		DPMS2S2	1DP-1-203	PVC212	2PS-S20
C48	.015 100V		V1612S15	DD-153	DPMS6S15	1DP-1-153	PVC2115	225P15391WD3
C49	.0082 100V		DBE6D82	CPR-8200J	DPMS6D82	6DP-2-822	PVC6282	6PS-D82
C50	.033 100V		DBE6S33		DPMS6S33	4DP-2-333	PVC6133	4PS-S33
C51	.02 100V		V1614S2		DPMS2S2	1DP-1-203	PVC212	2PS-S20
C52	.015 100V		V1612S15	DD-153	DPMS6S15	1DP-1-153	PVC2115	225P15391WD3
C53	.05 100V		DBE6S5		DPMS6S5	6DP-3-503	PVC615	6PS-S50
C54	1mfd		UK-105				MAG121	HY-135
C55	.0033		GPD X5R332K	DD-332	GP3300	CCD-332	JF233	2SS-D33
C56	.002		GPD X5F202K	DM-202	GP2000	CCD-202	GP220	2SS-D20
C57	.01 100V		V1612S1	CPR-10000J	DPMS6S1	1DP-1-103	PVC211	225P10391WD3
C58	.05 100V		DBE6S5		DPMS6S5	6DP-3-503	PVC615	6PS-S50
C59	.005		TTP-005	CK-502	MGPO05	CCD-502	TA250	TG-D50
C60	.0022		GPD X5F222K	DD-222	GP2200	CCD-222	GP222	10TS-D22
C61	.005		TTP-005	CK-502	MGPO05	CCD-502	TA250	TG-D50
C62	.0022		GPD X5F222K	DD-222	GP2200	CCD-222	GP222	10TS-D22
C63	.05		TTP-05	CK-503	MGPO5	CCD-503	TA150	TGL-S50
C66	275	#2093050-0002						
C67	275	#2093050-0002						

Bendix Part Number

VOLVO MODELS 9FBVO/VOC/VOD

CONTROLS (All wattages 1/2 watt, or less, unless listed)

ITEM No.	FUNCTION	RESISTANCE	REPLACEMENT DATA				
			MFRG. PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1a	Tone	500K	2094685-0004	F1-500K, R14-250K, FFS109, RFS114, KR-4	NP-500K-S, NRF1-250K, UPC-B-111, UR-D-200, NWE-12	* QJ-2740A	P55L, 3014, RU254T753, OX1500A, IS1812, US41
b	Volume/Switch	225K Tap @ 75K					
R2	Fader	80 2 Watt	2094135-0704				

* "CONCENTRIKIT" Equivalent: K-15 Kit with Base Elements & Shafts: B11-133, P22-115(Pane1), B18-130X,R26-121(Rear),76-1(Switch)
"SNAPTROL" Equivalent: BU4, CF25, CR29T, SF42, SR45, GC

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.

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA	
		WORKMAN PART No.	MFGR. PART No.
R43	180 2W (PTC)		2093141-2181
R44	9.1		2093232-1919
R45	.22 2W (PTC)		2090948-0020

ITEM No.	RATING	REPLACEMENT DATA	
		WORKMAN PART No.	MFGR. PART No.
R46	180 2W (PTC)		2093141-2181
R47	9.1		2093232-1919
R48	.22 2W (PTC)		2090948-0020

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA			
		PART No.	MEISSNER PART No.	MILLER PART No.	WORKMAN PART No.
L1	FM Antenna	2056765-0001 (1)			
L2	FM RF	2056766-0001 (1)			
L3	RF Choke (2uh)	2092210-0007	19-1002	74F226AP	TAB12
L4	10.7MC Trap (1uh)	2092210-0005	19-1000	4602	T855
L5	FM Osc.	2056767-0001 (1)			
L6	FM Input IF	2093587-0706		8609	
L7	FM Interstage IF	2093587-0708		8600	
L8	RF Choke (2uh)	2092210-0007	19-1002	74F226AP	TAB12
L9	AM Antenna				
L10	FM Interstage IF	2092421-0717		8606	
L11	AM RF				
L12	FM Interstage IF	2093587-0703		8606	
L13	AM Input IF	2092419-0720			
L14	AM Osc				
L15	FM Interstage IF	2092421-0718			
L16	AM Output IF	2092419-0719			
L17	Discriminator	2093856-0703			
L18	RF Choke (85uh)	2092210-0711	19-3100	6122	T305

(1) Part of MI.

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA				NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	MFGR. PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L19	250ma	.4	470uh	2094209-0703				

TRANSFORMER (Driver)

ITEM No.	TURNS RATIO			REPLACEMENT DATA				NOTES
	PRI.	SEC. 1	SEC. 2	MFGR. PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD Part No.	
T1	5.5	1	1	2092192-0514				

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.
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TRANSFORMER (Audio Output)

ITEM No.	IMPEDANCE		REPLACEMENT DATA				NOTES
	PRI.	SEC.	MFR. PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T2	40 Tap @	8	2094696-0704				

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MFR. PART No.	QUAM PART No.	
SP1	5" x 7" PM, 8 ohms	2094859-0701	57A15Z8	Front
SP2	5" x 7" PM, 8 ohms	2057765-0701		

FUSE DEVICES

ITEM No.	DESCRIPTION	REPLACEMENT DATA						
		PART No.		BUSS PART No.		LITTELFUSE PART No.		WORKMAN PART No.
		DEVICE	HOLDER	DEVICE	HOLDER	DEVICE	HOLDER	DEVICE
F1	AGA 5	2091811-0009	In Fuse Block	AGA5		301005		

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
M1	Tuner	2094066-0511	
	AM Coil Assembly	2090131-0097	
PC1	Bias Network	2094687-0702	
PC2	IF Bias Network	2094688-0701	
PC3	AM AGC Network	2094690-0701	
PC4	IF Bias Network	2094691-0701	
PC5	AM Detector Network	2094692-0701	
PC6	AF Amp Network	2056721-0003	
SW1	Switch, Selector	2056700-0701	

CABINETS & CABINET PARTS (When ordering specify model, chassis & color)

ITEM	PART No.	ITEM	PART No.
Escutcheon	2094551-0507	Push Button	2056519-0001
Dial Glass	2094184-0509	Knob, Tuning or Volume or Fader	4080232-0501
Dial Pointer	2090129-0085	Knob, Tone	4080233-0001

VOLVO MODELS 9FBVO/VOC/VOD