



# PHOTOFACT<sup>®</sup> with

# CIRCUITRACE<sup>®</sup>

TRADE NAME : Volkswagen Models 4TMVG(Karmann Ghia)  
 4TMVT(Volkswagen-Transporter)  
 4TMVW(Volkswagen-Sedan)

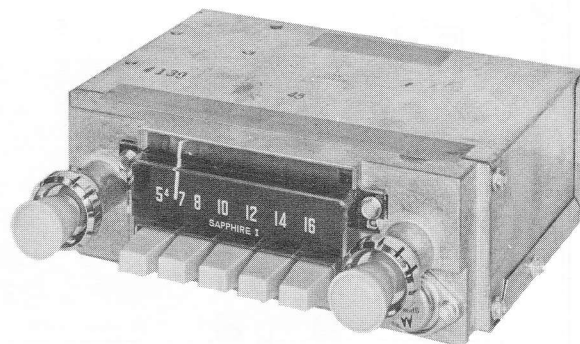
SUPPLIER : For Current Address, See Master Index.

TYPE SET : 6 Transistor AM Receiver

POWER SUPPLY : 6 Volt Storage Battery

RATING : .570 Amp. @6.3 Volts DC

TUNING RANGE: BROADCAST 540-1615KC



## ALIGNMENT INSTRUCTIONS

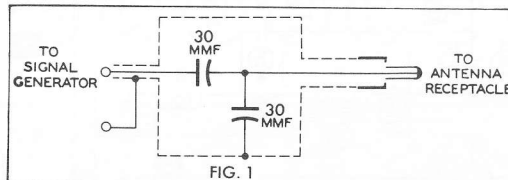
Check for specified source voltage.  
 Use only enough generator output to provide a usable indication.  
 Suggested Alignment Tools: A1 thru A10 GENERAL CEMENT: 5009, 8987, 8728A WALSCO: 2531X, 2536

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1.	High side thru .1mf to point $\Delta$ , low side to ground.	262KC (400v Mod.)	High Freq. End Stop.	Output Meter across voice coil.	A1, A2, A3, A4	Adjust for maximum.
2.	Thru dummy (Fig. 1) to antenna receptacle.	1615KC	"	"	A5, A6, A7	"
Step 3 is not necessary unless tuner has been tampered with or associated components have been replaced. IF necessary, back tuning cores (A8, A9, A10) out of coils but not out of forms. Repeat step 2.						
3.	Thru dummy (Fig. 1) to antenna receptacle.	1000KC	Tune to Signal.	Output Meter across voice coil.	A8, A9, A10	Adjust for maximum. Repeat steps 2 & 3 until no further improvement is noted.

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

### PUSH-BUTTON ADJUSTMENT

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



## REMOVAL INSTRUCTIONS

Models 4TMVG, 4TMVW

### RADIO REMOVAL

1. Pull off knobs.
2. Use 11/16" wrench and remove nuts from control bushings.
3. Remove trim plate.
4. Thru trunk opening, use 7/16" wrench and remove nut from rear brace.
5. Disconnect Ant., "A", and Speaker leads.
6. Remove radio thru trunk opening.

### SPEAKER

1. Use 5/16" wrench and remove 4 metal screws from speaker mounting.
2. Remove speaker thru trunk opening.

Model 4TMVT

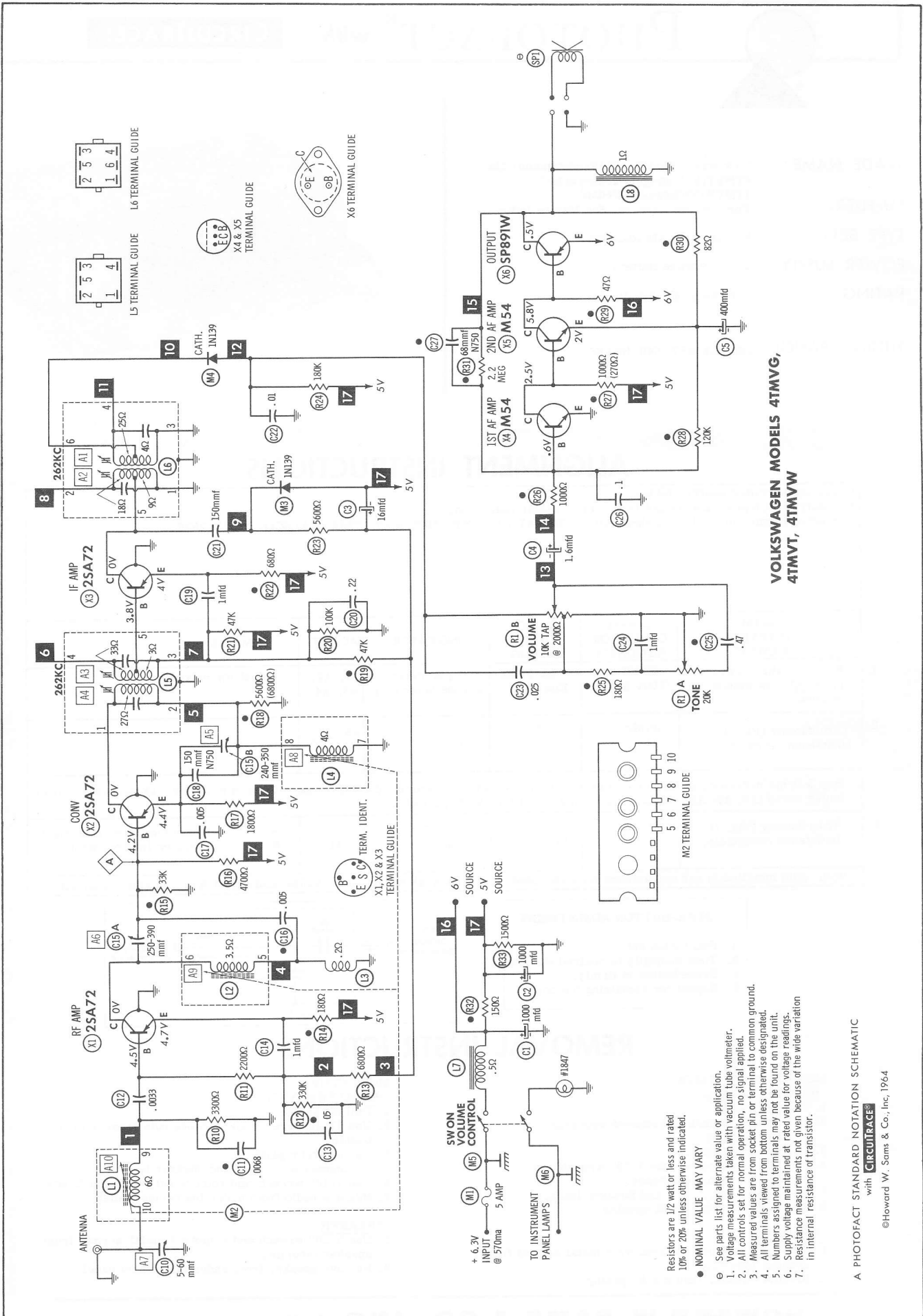
### RADIO REMOVAL

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2. Use 11/16" wrench and remove nuts from control bushing.
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4. Disconnect Ant., "A" and Speaker leads.
5. Use 7/16" wrench and remove nut from rear brace.
6. Remove radio from under instrument panel.

### SPEAKER

1. Use 5/16" wrench and remove 4 metal screws from speaker mounting.
2. Remove speaker from under instrument panel.

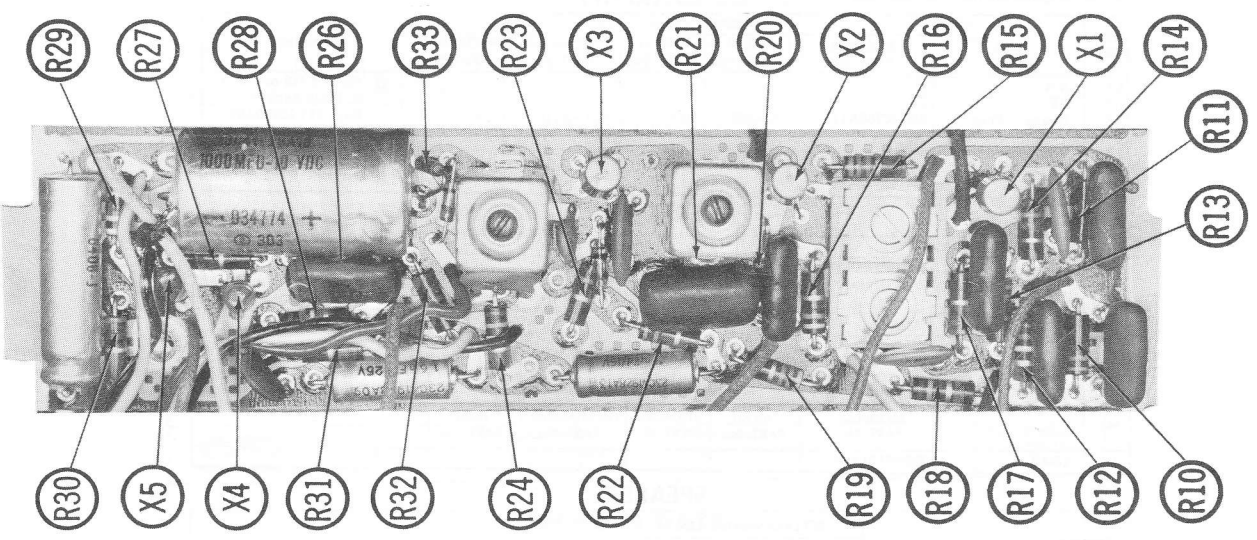
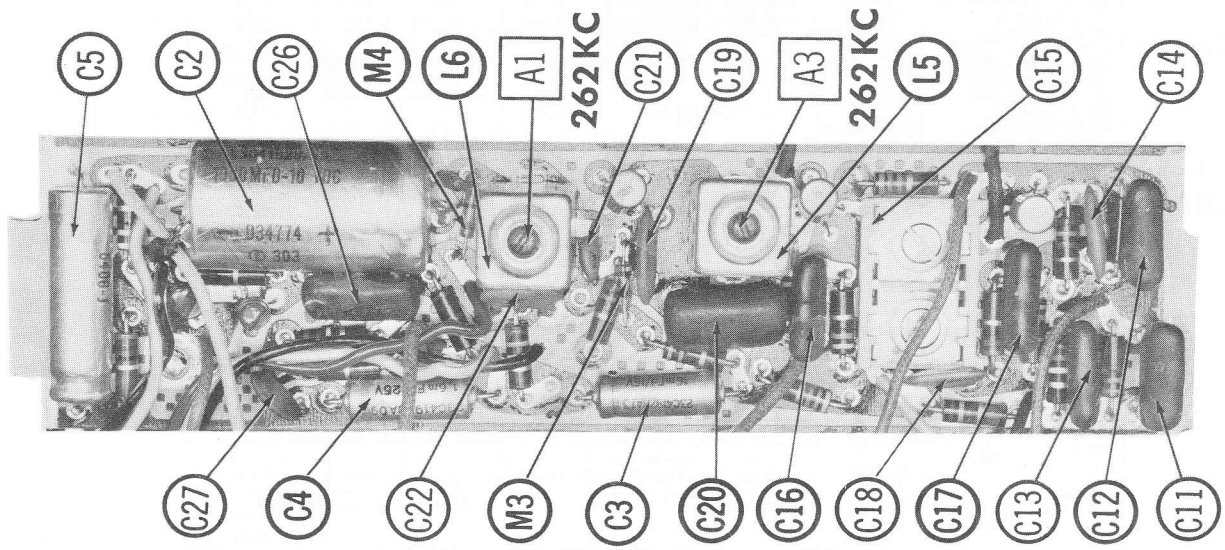
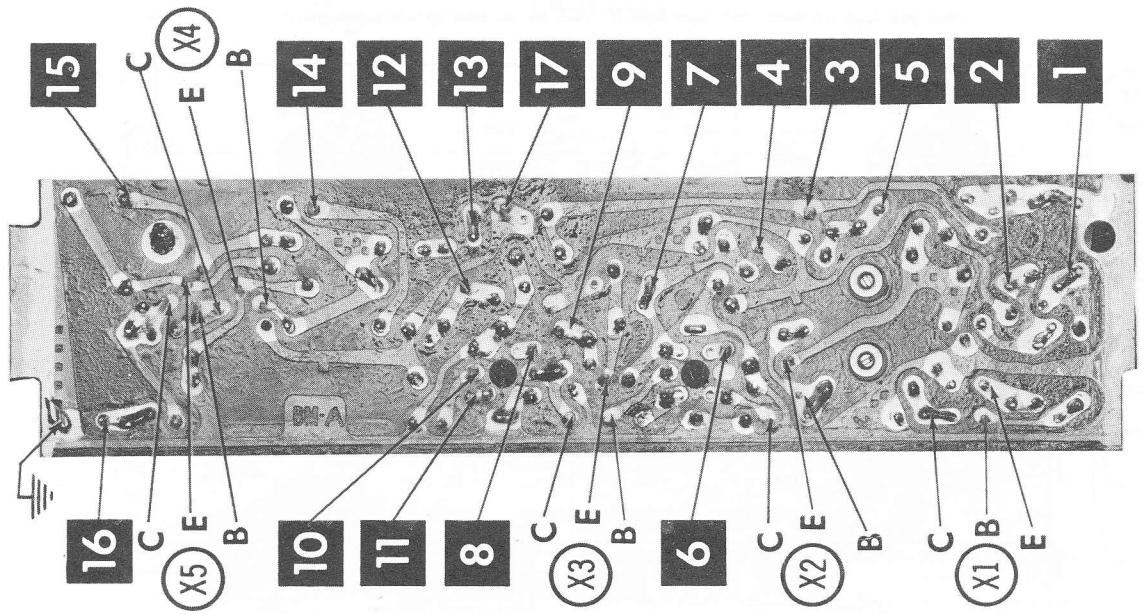
**HOWARD W. SAMs & CO., INC.** Indianapolis 6, Indiana



**VOLKSWAGEN MODELS 4TMVG,  
4TMVW, 4TMVW**

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

A PHOTOFAC STANDARD NOTATION SCHEMATIC  
with **CIRCUITACE**  
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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	2N1637	PNP
X2	2SA72	Converter	DS-25	GE-1	2N1639	PNP
X3	2SA72	IF Amplifier	DS-25	GE-1	2N1638	PNP
X4	M54	1st AF Amplifier	DS-46	GE-10	2N649	NPN
X5	M54	2nd AF Amplifier	DS-46	GE-10	2N649	NPN
X6	SP891W	Output	DS-520	GE-3	2N301	PNP*

\*When replacing, apply silicon grease 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.	INSTRUMENT PART No.	MALLORY PART No.	SPRAGUE PART No.
C1	1000	10	23C41928A10	PRS1180	BR1000-12	QT1-32	BL-2430		TVAS-1128*
C2	1000		23C41928A10	PRS1180	BR1000-12	QT1-32	BL-2430		
C3	16	16	23C41928A13 (23C41928A06)	CRE609A	NLW15-25	MT1-11	MLV15-25	TT25X15	TL-1156
C4	1.6	25	23C41928A09 (23C41928A05)	CRE601A	NLW2-50	MT1-1	BL-1180	TT50X2	TL-1201
C5	400	10	23C41928A16 (23C41928A15)	PRS1170	BR500-15	QT1-30	BL-2340	TC1505	TVA-1162

\* 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	5-60	#20B40944A06							
C11	.0068 100V		P288N-0068	CPR-6800J	WMF2D68	6DP-1-682	PVC4268	6PS-D68	
C12	.0033 100V		P288N-0033	CPR-3300J	WMF1D33	6DP-1-332	PVC4233	6PS-D33	
C13	.05 100V		P288N-05		DPMS2S5	1DP-2-503	PVC215	2PS-S50	
C14	1mfd 3V			UK-105	HCC3105P			HY-135	
C15A	250-390	#20C40481A07							
C15B	240-350								
C16	.005 100V		P288N-005	CPR-5000J	DPMS6D5	1DP-1-502	PVC625	6PS-D50	
C17	.005 100V		P288N-005	CPR-5000J	DPMS6D5	1DP-1-502	PVC625	6PS-D50	
C18	150 N750		N750-DI150	DTN-150	C10T15U	CCTN-151	CN7315	10TCU-T15	
C19	1mfd 3V			UK-105	HCC3105P			HY-135	
C20	.22 100V		P288N-22		DFMS2P22	1DP-3-244	PVC1022	2PS-P22	
C21	150		DI-150	DD-151	LA10T15-S3	CCD-151	GP315	5GA-T15	
C22	.01		BPD-01	DD-103	BYA10S1	CCD-103	B110	5HK-S10	
C23	.025		TTD-025	CK-253	H4		TA125	TC-S25	
C24	1mfd 3V			UK-105	HCC3105P			HY-135	
C25	.47 10V			UK10-404	HCC10474Z			HY-330	
C26	.1 100V		P288N-1		WMF1P1	1DP-2-104	PVC101	2QS-P10	
C27	.68 N750		N750-DI68	DTN-68	C10Q68U	CCTN-680	CN7468	10TCU-Q68	

# 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.	
RIA	Tone	20K	18C4234A01					FA24L ①
B	Volume, Switch	10K Tap @2000Ω						RUI14T53, OS1437A, IS2000, US42

① Use original spring mounting clip.

## COILS (RF-IF)

ITEM No.	USE	REMARKS	REPLACEMENT DATA					NOTES
			Motorola PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	Ant	①						① Part of M2 or coils & Plate assembly Part #1V42300A95.
L2	RF	①						
L3	Image Trap (1.5uh)	①	24C40788A11	BC-562	4604	RTC-8516	T856	
L4	Osc.	①						
L5	Input IF	①	24D42517A01					
L6	Output IF	①	24D42517A02					

## FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA					NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	Motorola PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L7	.570A	.5Ω	11MH	25D42032A07	C-4095	TC-2	TR-154	TY17XT	

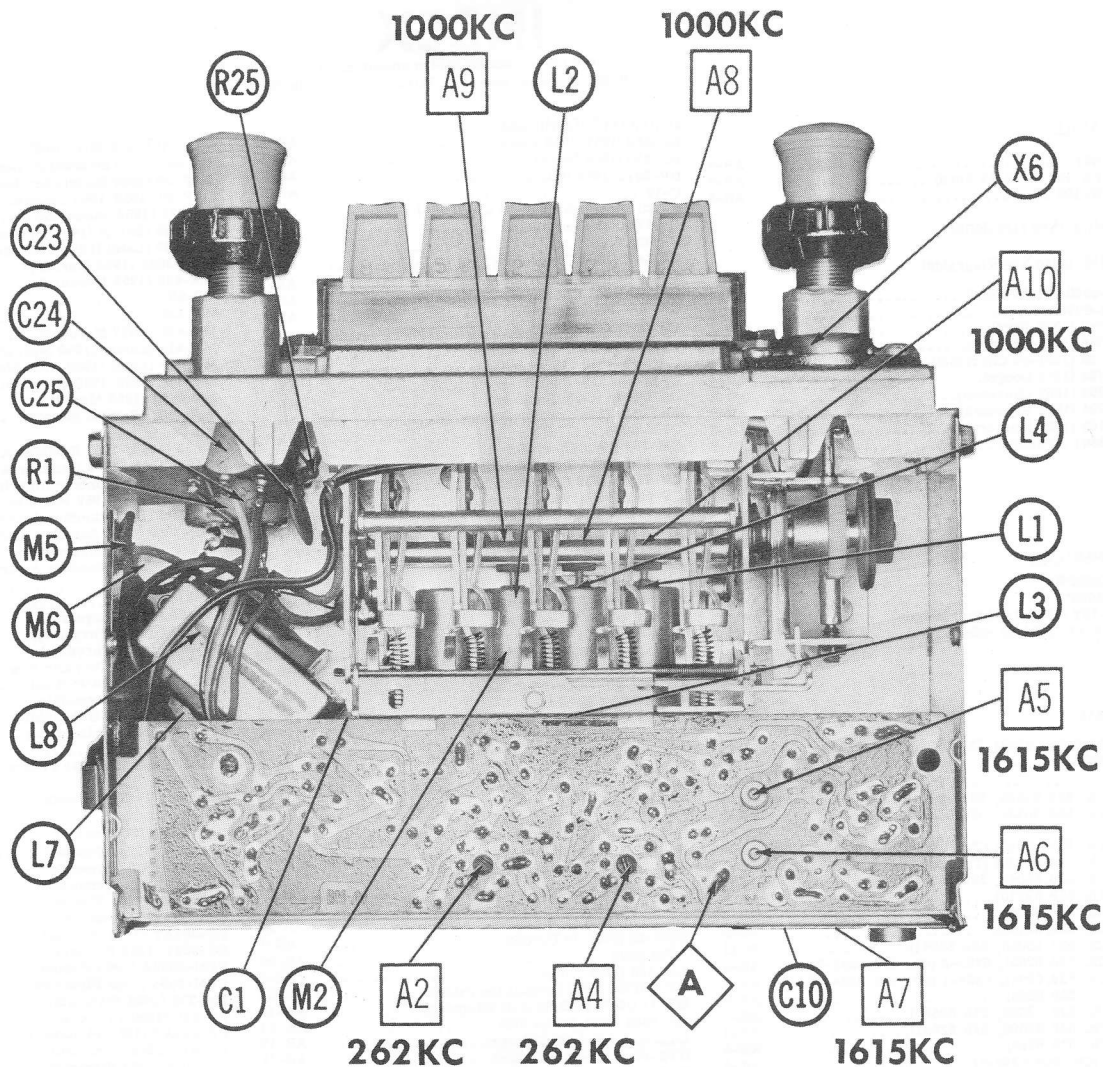
## CHOKE (AUDIO OUTPUT)

ITEM No.	INDUCTANCE	REPLACEMENT DATA					NOTES
		Motorola PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L8	18MH	25D42101A06					

## SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		Motorola PART No.	QUAM PART No.	
SP1	5" PM 6Ω 6" PM 6Ω	50C42526A01 50C42529A01	5A15Z6	Models 4TMVG/W Model 4TMVT





VOLKSWAGEN MODELS 41MVG, 41MVT, 41MWV

### PARTS LIST AND DESCRIPTION (CONTINUED)

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#### FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			Motorola PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M1	AGA	5	65R122345	9C41095A14	801005	155004A	AGA5	HAF

#### MISCELLANEOUS

ITEM No.	PART NAME	Motorola PART No.	NOTES
M2	Tuner Coils & Plate Assy.	77D42372A01 1V42300A95	AT-468
M3	AVC Diode	48C134587	1N139
M4	AF Det. Diode	48C134587	1N139
M5	Spark Plate	64A41668A01	
M6	Spark Plate	64A41668A01	

#### CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
Dial Scale	34C42349A01	Push Button	38B42343A01
Knob, Tuning or Volume	36B42400A01	Pointer Assembly	52B42600A01
Knob, Tone or Dummy	36B42396A01		

#### 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.)