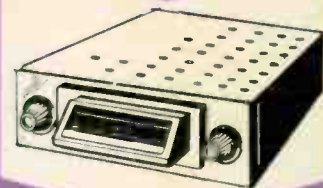


SAMS PHOTOFACT[®]

AUTO RADIO SERIES



AR-222

222

AUG., 1976



CONTENTS

AUDIOVOX

1975 Series

FORD

Ford, Econoline,
Granada, Mustang,
Torino (76)
1FD4505

Maverick (76)
1FD4511

MERCURY

Mercury, Cougar,
Monarch (76)
1FD4505

Comet (76)
1FD4511

UNIVERSAL

AFCO
AG-52

UNIVERSAL (Cont.)

Automatic
IDC-3224

Boman Astrosonix
402-FM

Pioneer
TP-200

\$3.50

\$4.40 IN CANADA

Cat. No. AR-222



SAMS PHOTOFACT[®] AUTO RADIO SERIES



VOLUME
222



by the *Howard W. Sams.* ENGINEERING STAFF



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

**FIRST EDITION
FIRST PRINTING—AUGUST, 1976**

**PHOTOFACT®
AUTO RADIO SERIES
VOLUME 222**

Copyright © 1976 by Howard W. Sams & Co., Inc.
Indianapolis, Indiana 46206. Printed in the United States of America.

All rights reserved. Reproduction or use, without express permission, of editorial or pictorial content, in any manner, is prohibited. No patent liability is assumed with respect to the use of the information contained herein.

The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W. Sams & Co., Inc., by the manufacturers of the particular type of replacement part listed.

Library of Congress Catalog Card Number: 49-11493



AUTO RADIO SERIES

TABLE OF CONTENTS

TRADE NAME AND MODEL	PAGE
AFCO Model AG-52	5
Audiovox 1975 Series	25
Automatic Model IDC-3224	43
Boman Astrosonic Model 402-FM	65
Ford/Mercury Models 1FD4505, 1FD4511	81
Pioneer Model TP-200	101

Cumulative Index to Prior Volumes	117
--	------------

GENERAL SERVICING INFORMATION

The following information applies to all tape units in this volume, and should be followed before any adjustments are made or trouble diagnosis is attempted. Any exceptions or additions will be found in the detailed servicing procedures for each tape unit.

POWER SOURCES

Many tape units require full supply voltage for proper operation. Be sure the supply voltage is maintained at the rated value under load while making adjustments.

CLEANING

All head faces should be cleaned with head cleaner or methyl alcohol to remove dust and accumulated oxide. (An applicator may be fashioned from absorbent cotton.) Do not use a screwdriver or any metallic object near the head faces.

CAUTION: Avoid getting head cleaner on any plastic surface.

Clean capstans, pressure rollers, and tape guides with alcohol using a soft lint-free cloth. Also use alcohol to remove oil and grease from drive belts and other driving surfaces.

LUBRICATING

Clean all surfaces before lubricating. Apply a few drops of #20 machine oil to all bearings and rotating bushings. Apply a thin film of light, nonhardening grease to all cam surfaces and pawls, if they have been factory lubricated. Always wipe excess oil or grease from parts that have been lubricated.

CAUTION: Oil and grease must be kept off all driving surfaces as well as any parts which may transfer oil or grease to them.

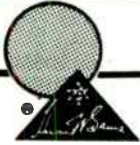
DEMAGNETIZING

Heads require demagnetizing at regular intervals to maintain high-frequency response, dynamic range, and low distortion. (Follow instructions included with the demagnetizing unit.) After demagnetizing the heads, keep all screwdrivers and other metallic objects away from the head faces. Tape guides may also require occasional demagnetizing.

IMPORTANT: Be sure to demagnetize the heads after making resistance measurements in the head circuits.

CARTRIDGES

Many problems associated with tape units result from defective cartridges. Always try a cartridge known to be good before attempting repairs.



PHOTOFACT[®] with

CIRCUITRACE[®]

For Supplier Address See PHOTOFACT Index



MODEL AG-52

AFCO MODEL AG-52

ADJUSTMENTS

ADJUST	REMARKS
Head Azimuth	Play a test cartridge and adjust B1 for maximum on an AC VTVM across output.
Head Height	Play a test cartridge, follow instructions with cartridge, and adjust B2 for proper response.

TROUBLE CHART

SYMPTOM	REMARKS
Capstan does not rotate.	Belt (1) dirty, worn, or broken. Assembly (10) binding. Motor defective or not supplied with power.
Track-shift mechanism inoperative	Switch (S7) dirty. Cam (3) binding or worn. Pawl (4) worn. Assembly (6) binding. Solenoid (M3) defective or not supplied with power. Cartridge defective.
Wow or flutter	Belt (1) dirty or worn. Capstan dirty or binding. Cartridge defective. Motor defective.
Sound weak or distorted	Head dirty, misaligned, or defective. Cartridge defective, Amplifiers defective.
Tape is pulled from cartridge.	Cartridge defective. Capstan dirty or scored.

HOWARD W. SAMS & CO., INC. Indianapolis, Indiana 46206

© 1976 Howard W. Sams & Co., Inc.

Printed in U. S. of America

6AL884

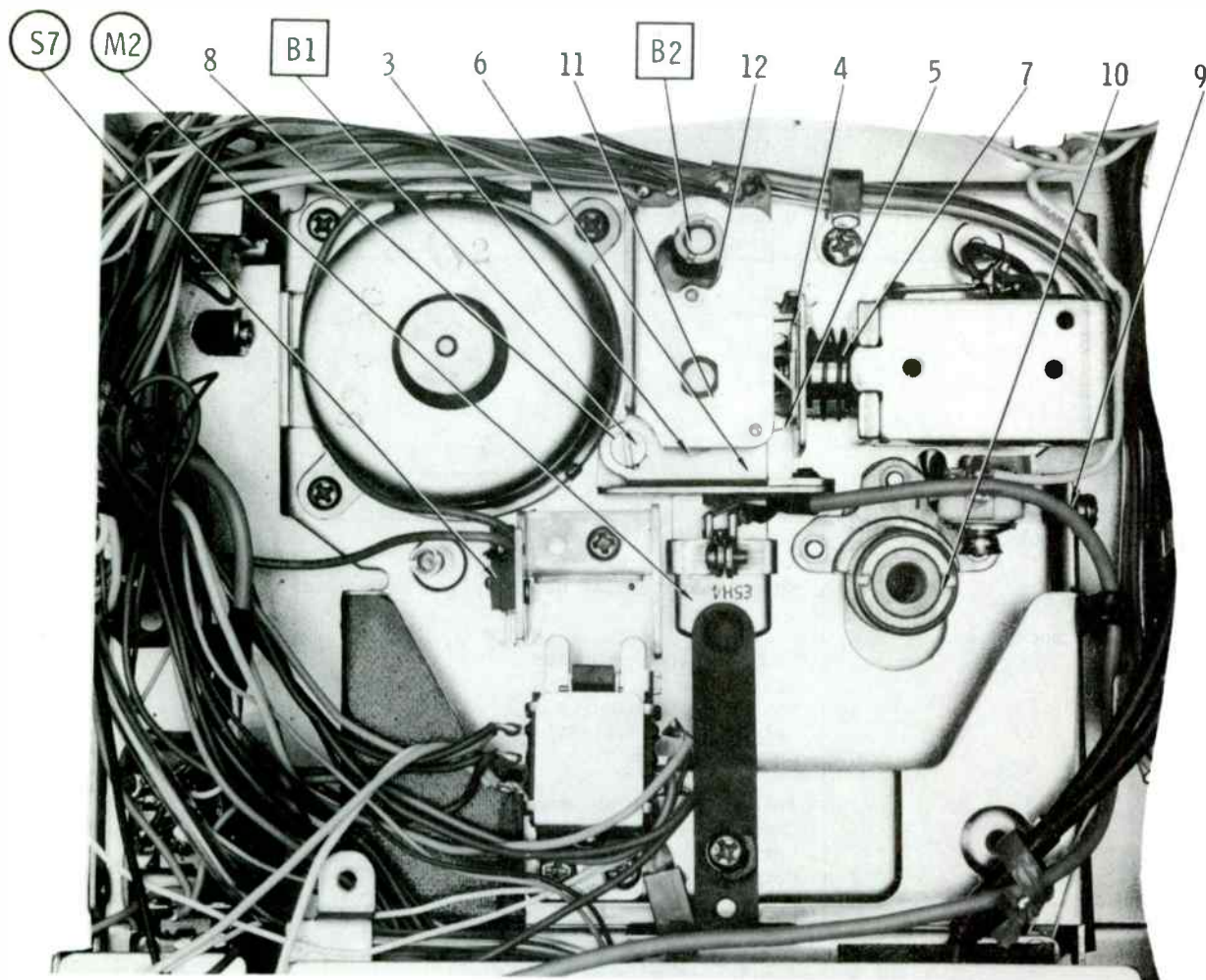
MECHANICAL PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
1*		Flywheel Drive Belt*	7		Solenoid Spring
2		Flywheel	8		Azimuth Adjustment Spring
3		Track Changing Cam	9		Cartridge Detent Arm
4		Push Pawl	10		Flywheel Housing Assembly
5		Pull Pawl	11		Head Lifting Spring
6		Head Shift Assembly	12		Height Arm Tension Spring

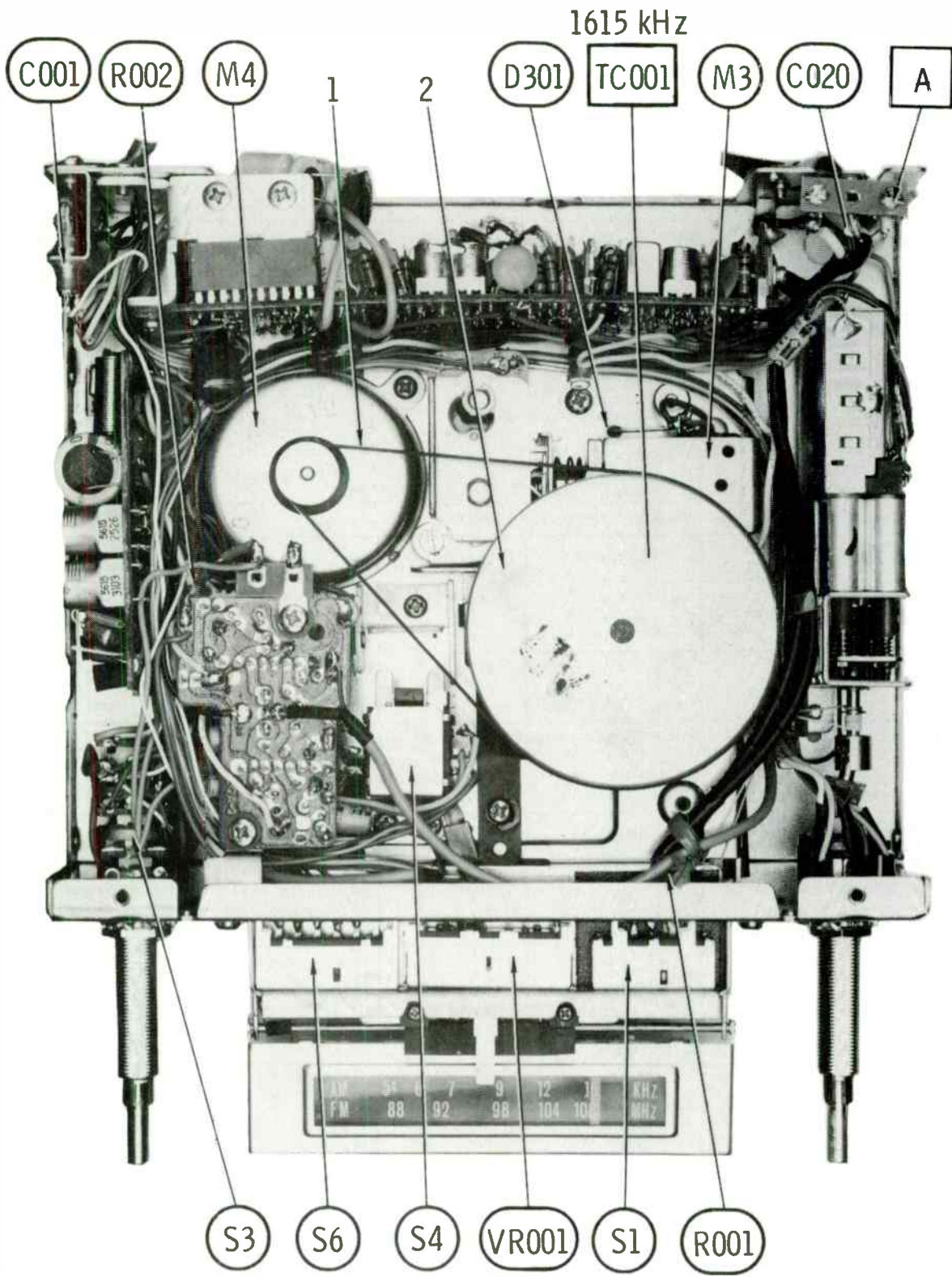
* Flywheel Drive Belt: E-V/GAME Replacement Number 1424-15.
WALSCO Replacement Number 1424-15.

CLEANING LUBRICATING HEAD DEMAGNETIZING

Refer to
"General Servicing Information"
on page 4.



TAPE DECK

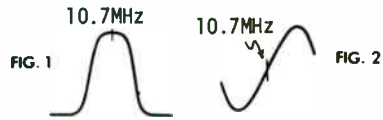


CHASSIS-TOP VIEW

ALIGNMENT INSTRUCTIONS

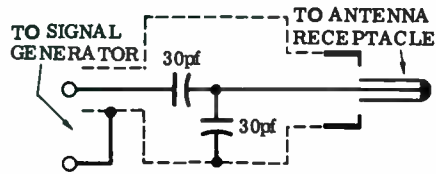
Check for specified source voltage.
Use only enough generator output to provide a usable indication.
Suggested Alignment Tools:

GC ELECTRONICS
ALL 8296, 8868, 9027



GENERATOR COUPLING	GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
High side thru .1uF to point A, low side to ground.	455kHz 400-Hz mod.	High freq. end stop.	Output meter across voice coil.	T402, CF401	Adjust for maximum.
Thru dummy antenna to antenna input.	1615kHz	"	"	TC402, TC401, TC001	"
Thru dummy antenna to antenna input.	600kHz	Tune to signal	Output meter across voice coil.	T401	Adjust for maximum. Repeat alignment until no further improvement is noted.

With radio installed in car and antenna extended 36", tune in a weak station near 1400kHz and adjust TC001 for maximum output. Antenna adjustment TC001 is located inside tape door, right rear corner.



DUMMY ANTENNA

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

High side of generator thru .001uF to A, low side to ground.

GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
10.7MHz Unmodulated	Point of non-interference	DC probe of VTVM to point B, common to ground.	T202, T201, IFT	Adjust for maximum.
"	"	DC probe of VTVM to point C, common to ground.	T203	Adjust for zero reading. A positive or negative reading will be obtained on either side of correct setting.

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

High side of generator thru .001uF to point A, low side to ground.
Use only enough marker signal for indication. Use 60-hertz, frequency-modulated signal, 450kHz sweep. Use 60-hertz sawtooth voltage in scope for horizontal deflection.

GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
10.7MHz 450kHz Sweep	Point of non-interference	Vert input of scope to point B, low side to ground.	T202, T201, IFT	Disconnect stabilizing capacitor C213. Adjust for maximum gain and symmetry of response similar to Fig. 1 with markers as shown. Reconnect C213.
"	"	Vert input of scope to point C, low side to ground.	T203	Adjust T203 to place marker at center of S curve similar to Fig. 2. Readjust T201 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. Adjustment of coils by bending should not be attempted unless the coil is deformed or replaced.

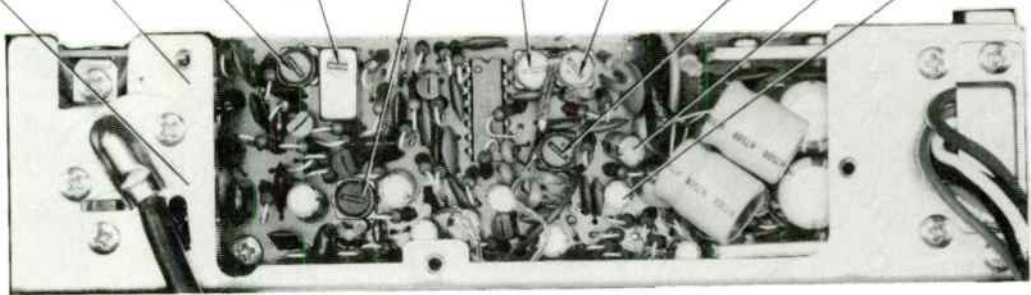
GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
108MHz Unmodulated	Tune to signal	DC probe of VTVM to point B, common to ground.	OT	Adjust for maximum. Repeat FM RF steps until no further improvement is noted.

FM STEREO MULTIPLEX ALIGNMENT USING FM STEREO SIGNAL GENERATOR (± .0001% ACCURACY)

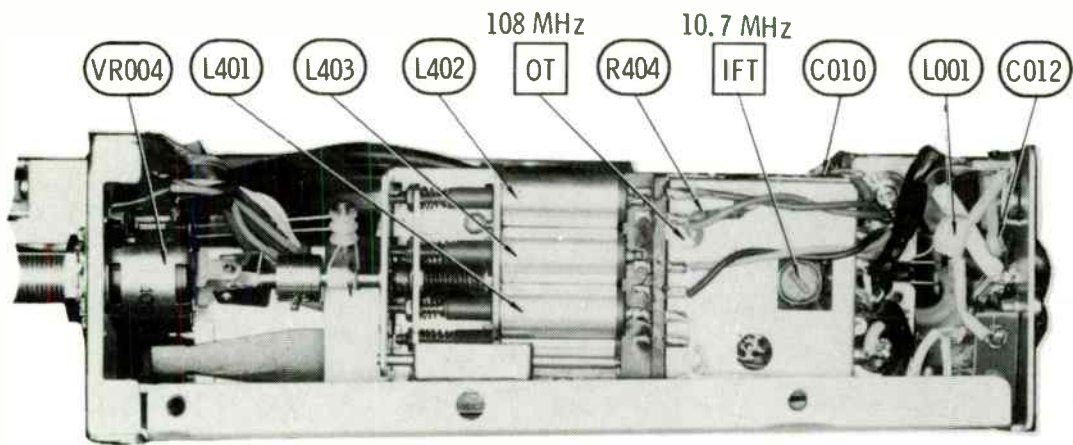
High side of generator thru 47K to point A, low side to ground.

GENERATOR FREQUENCY	INDICATOR	ADJUST	REMARKS
Modulated Left Channel	Vert input of scope to point D, low side to ground.	L301, L302, VR301	Adjust for MINIMUM. This step should require only slight adjustment.
Modulated Right Channel	Vert input of scope to point E, low side to ground.		Check for MINIMUM. If necessary, make compromise adjustment of L301, L302, VR301.

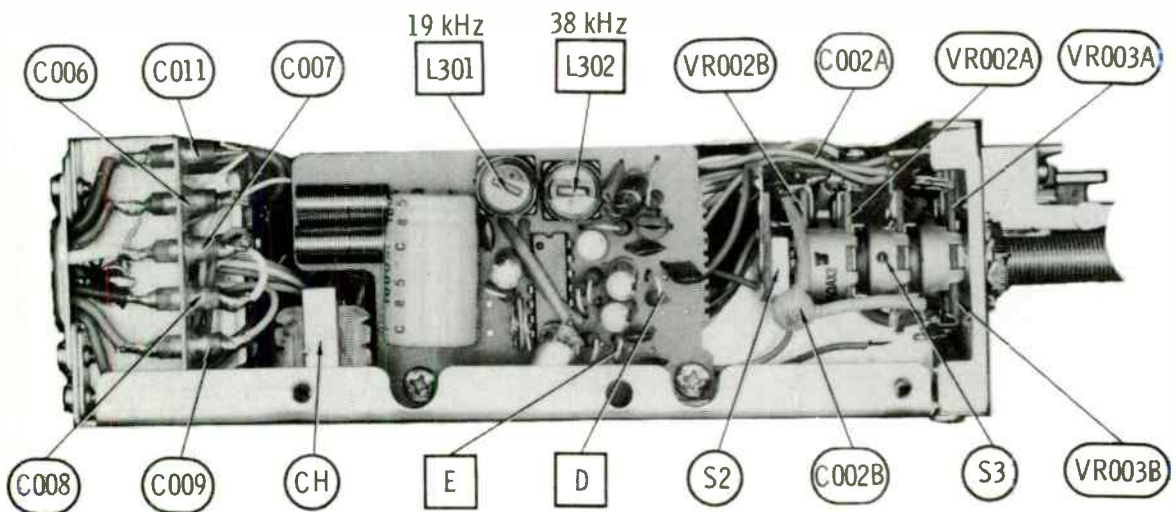
1615 kHz 1615 kHz 600kHz 455kHz 455 kHz 10.7 MHz 10.7 MHz 10.7 MHz
 TC401 TC402 T401 CF401 T402 T202 T203 T201 B C



CHASSIS-REAR

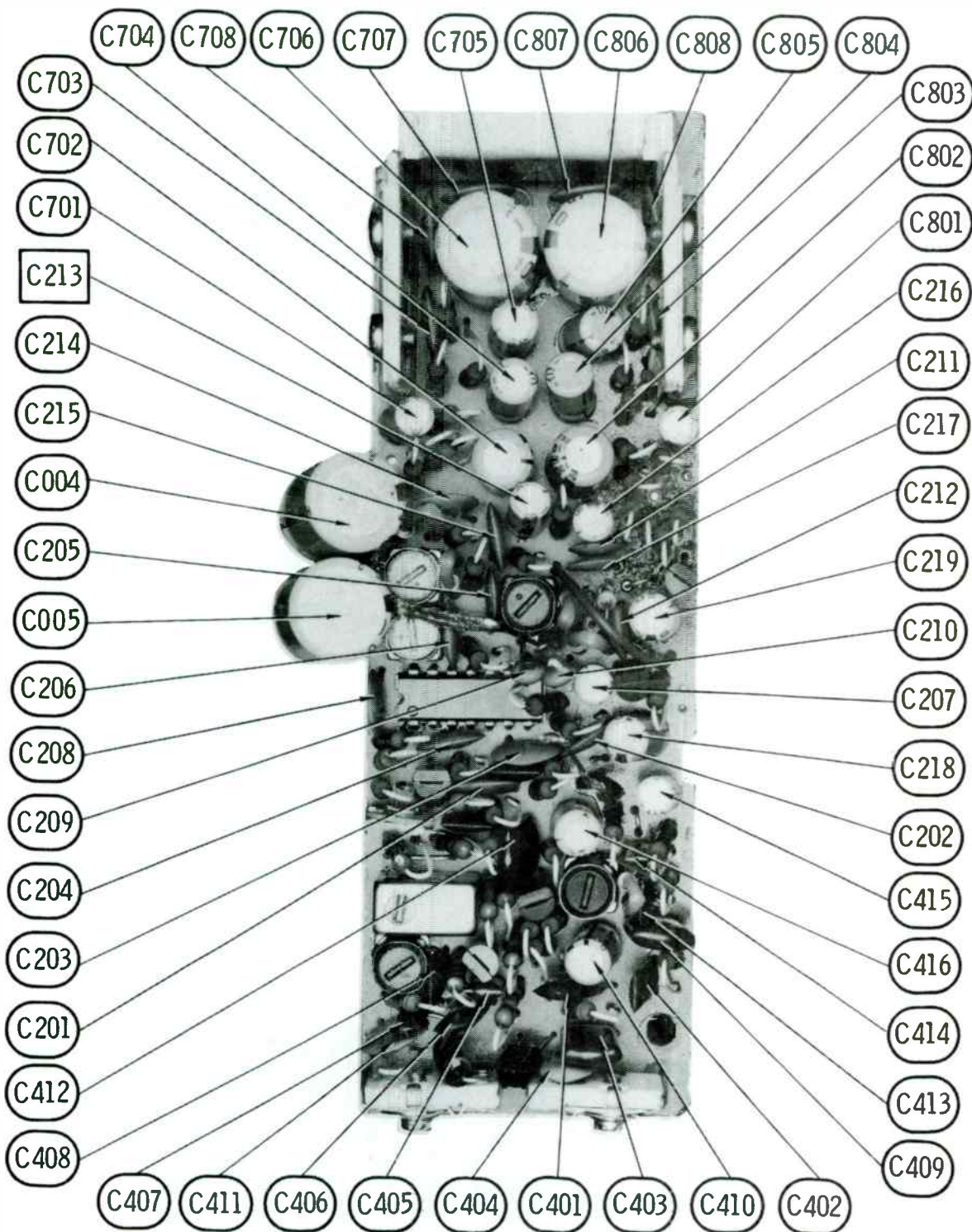


CHASSIS-RIGHT SIDE

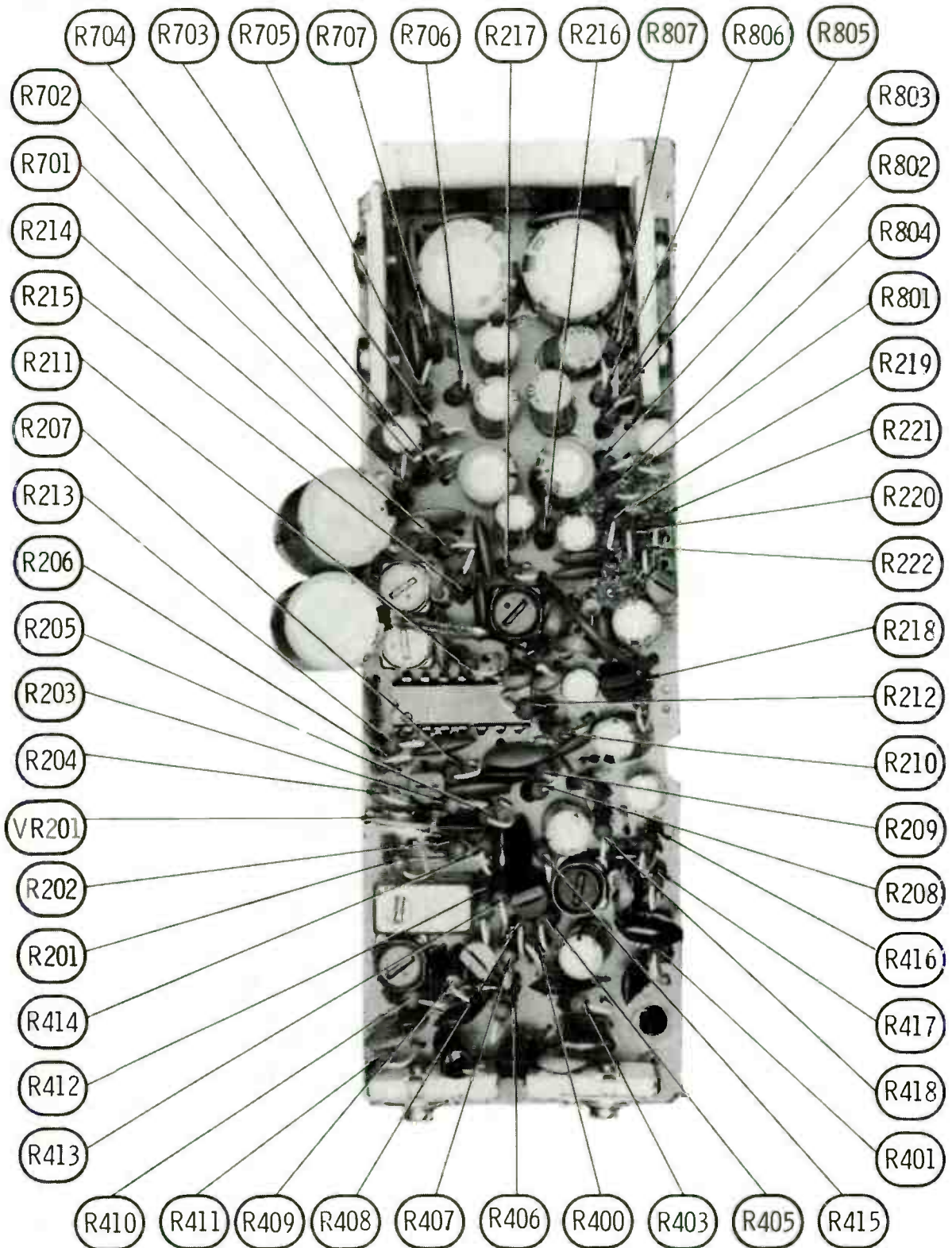


CHASSIS-LEFT SIDE

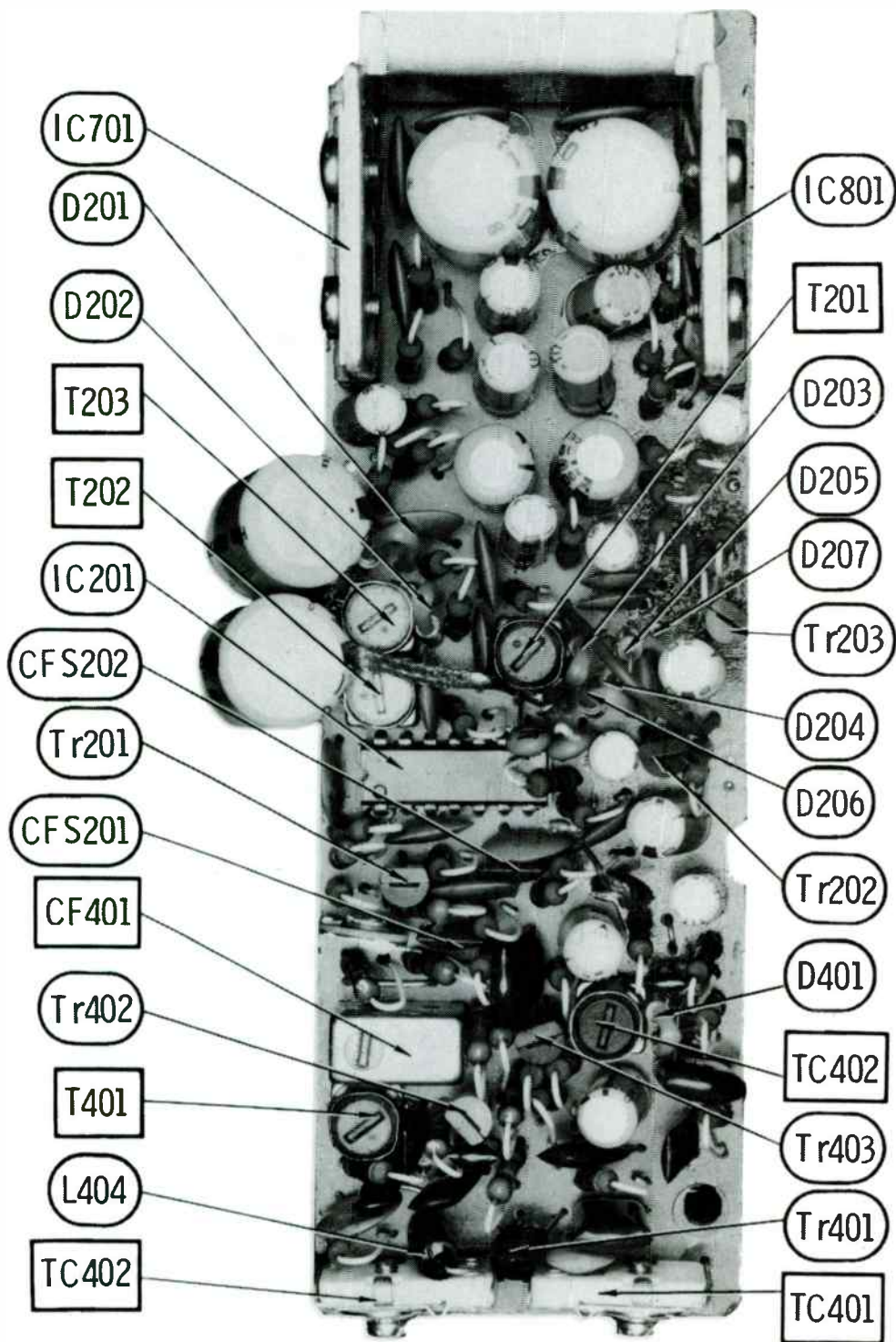
AFCO MODEL AG-52



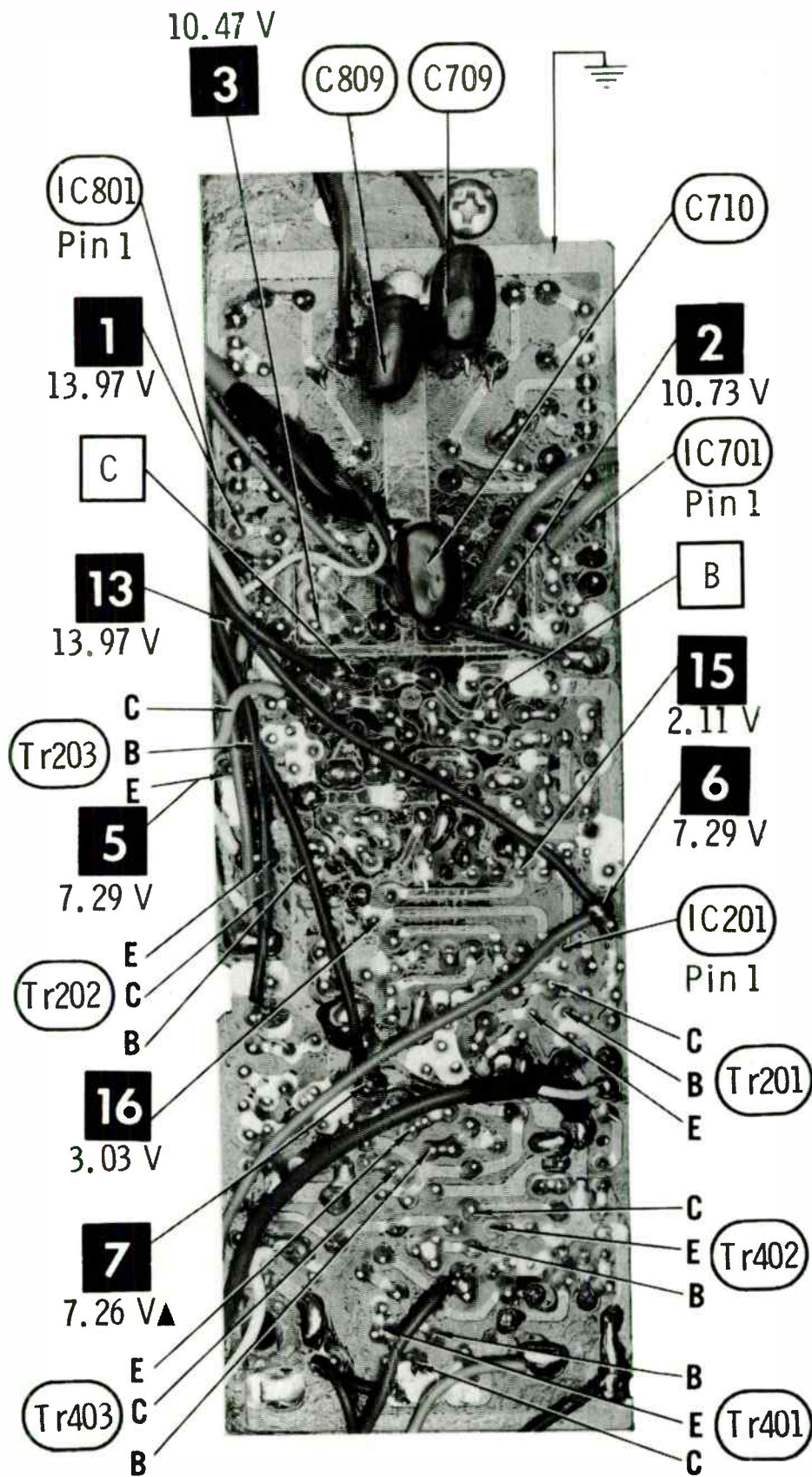
AM/FM IF/AUDIO BOARD-TOP VIEW



AM/FM IF/AUDIO BOARD-TOP VIEW

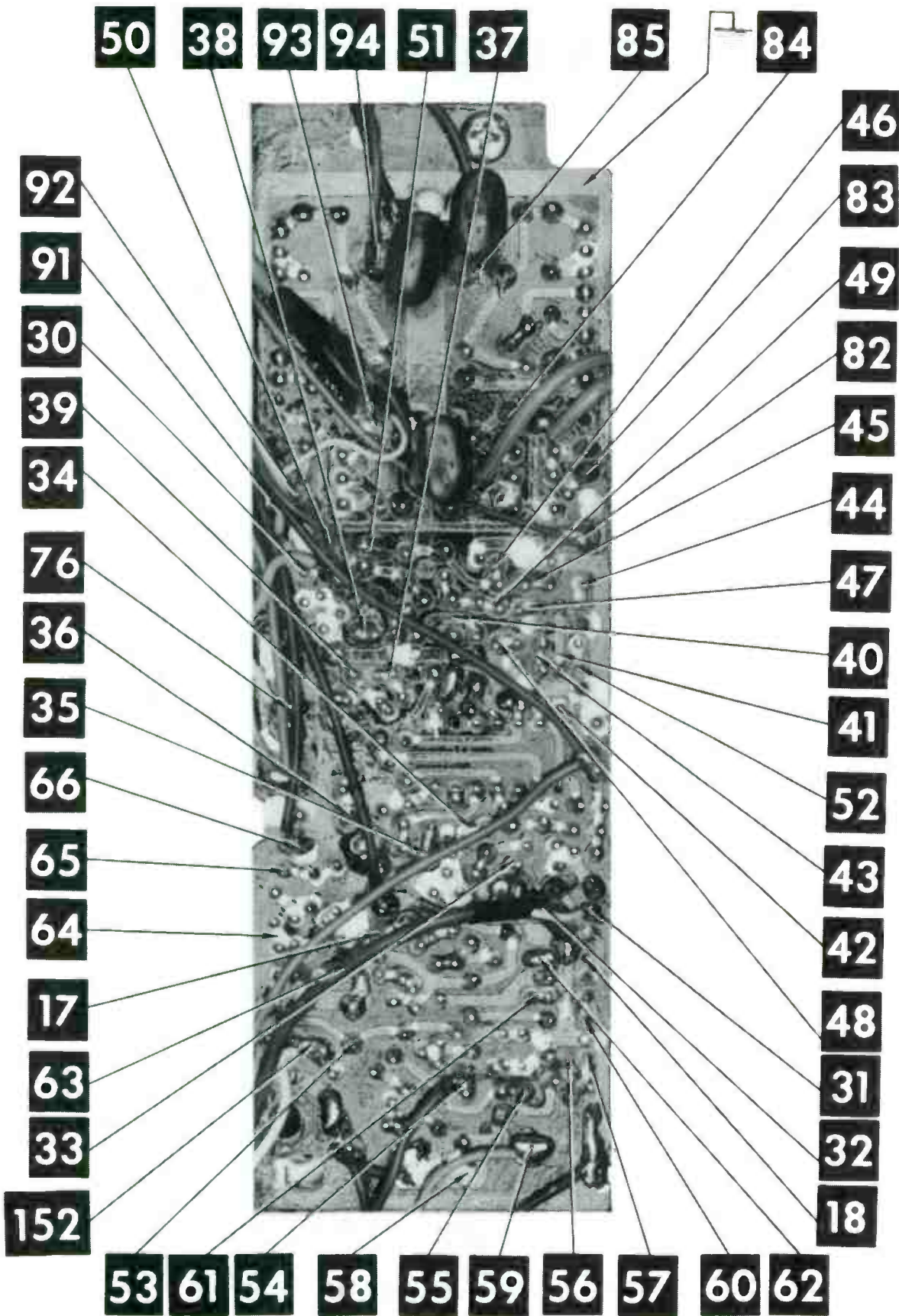


AM/FM IF/AUDIO BOARD-TOP VIEW

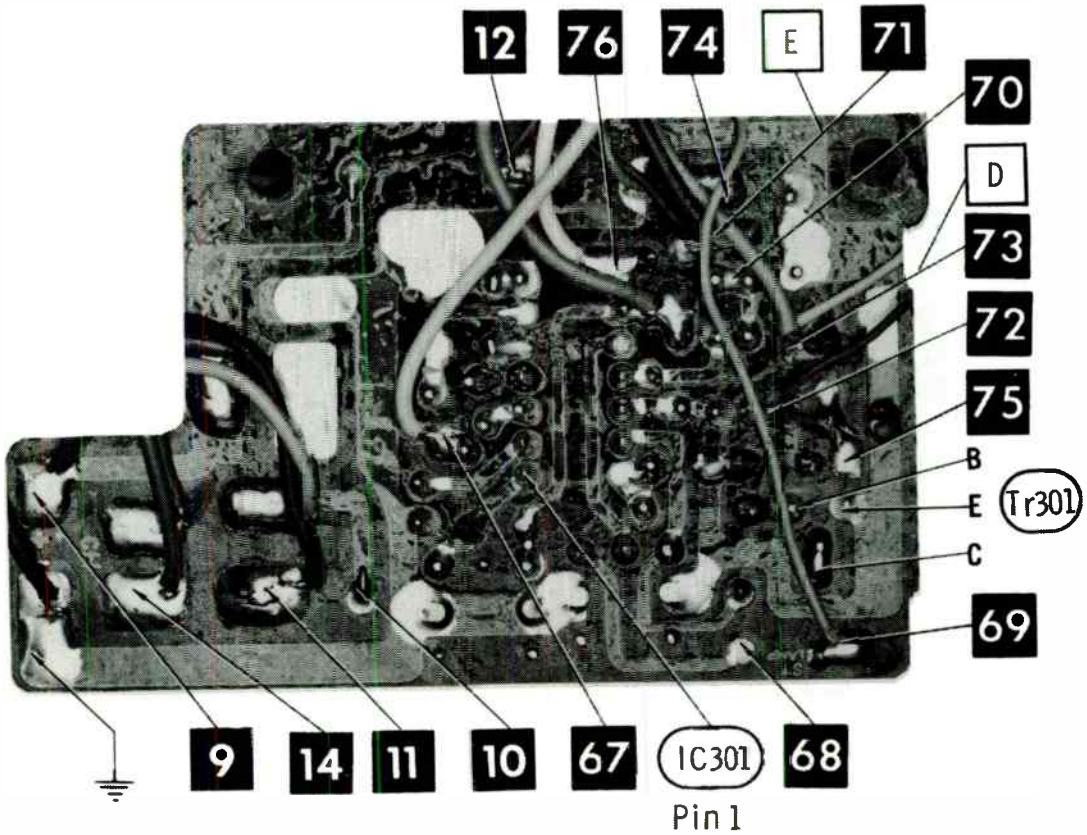


AFCCO MODEL AG-52

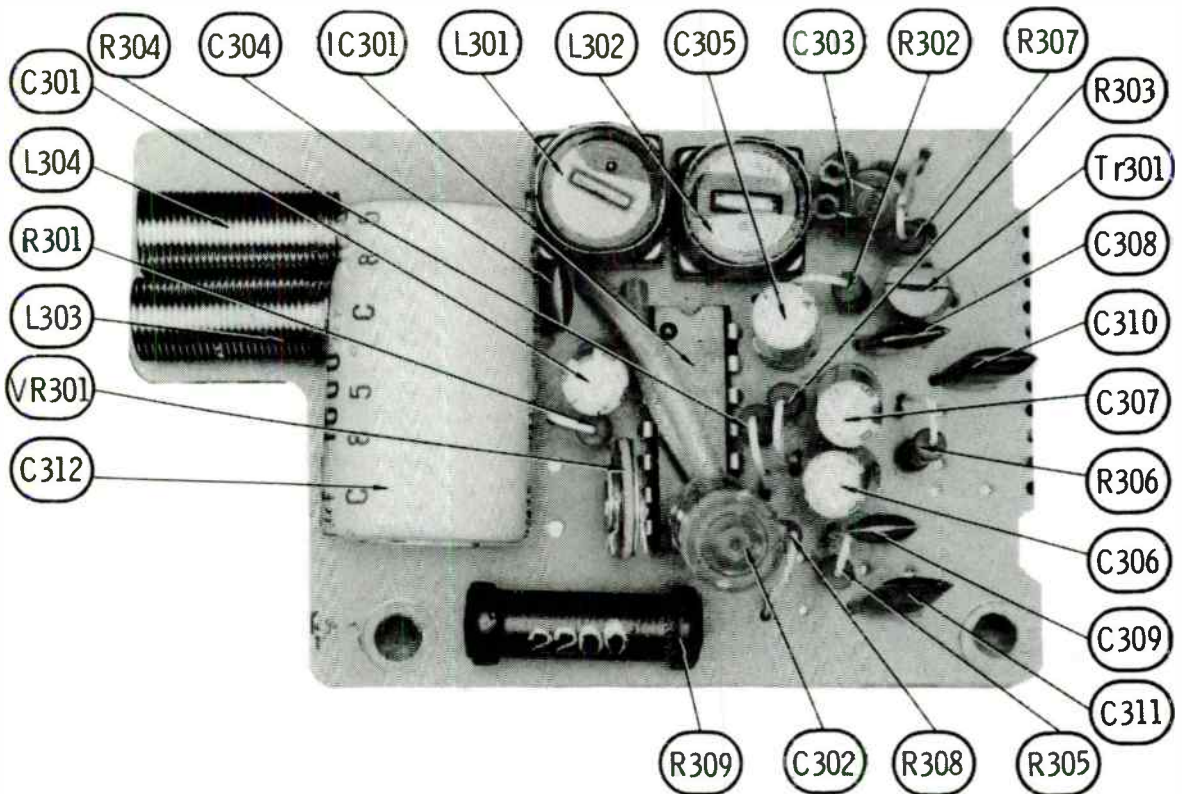
AM/FM IF/AUDIO BOARD-BOTTOM VIEW



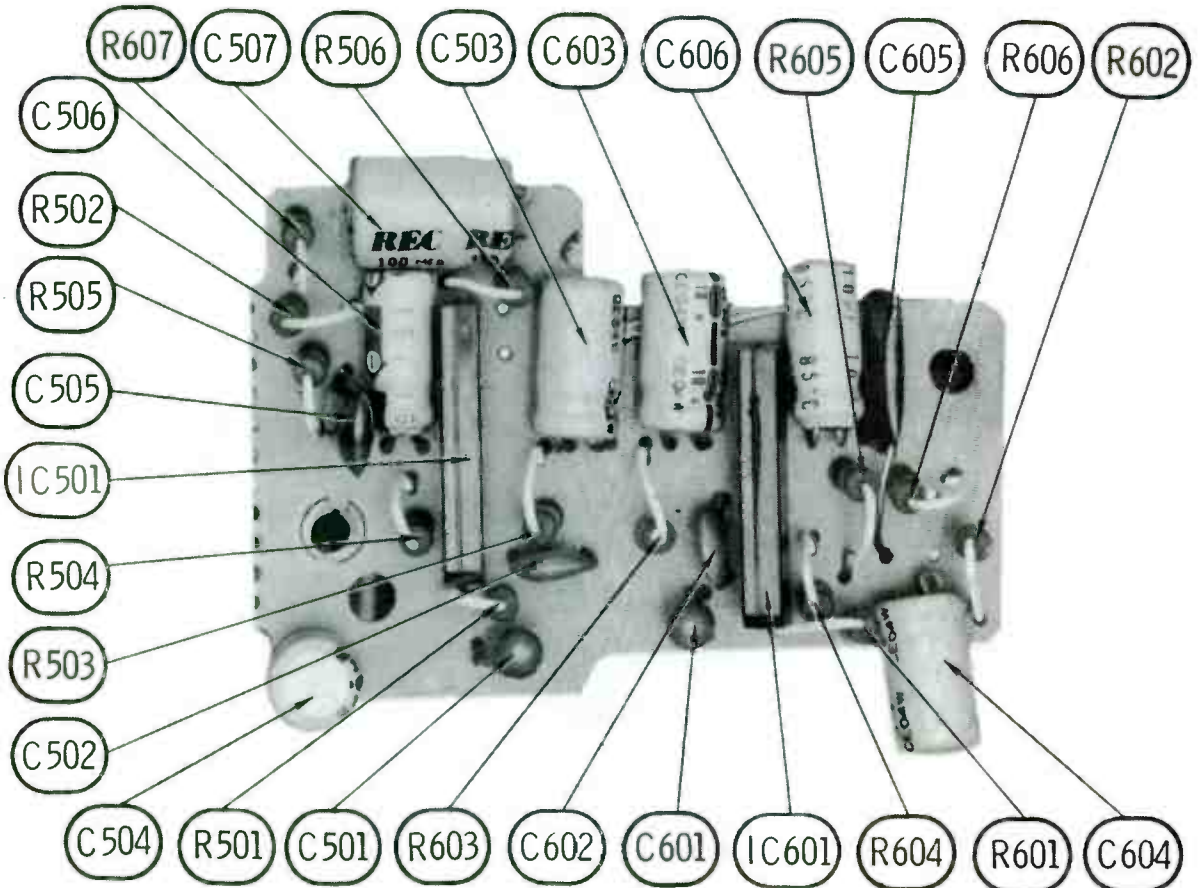
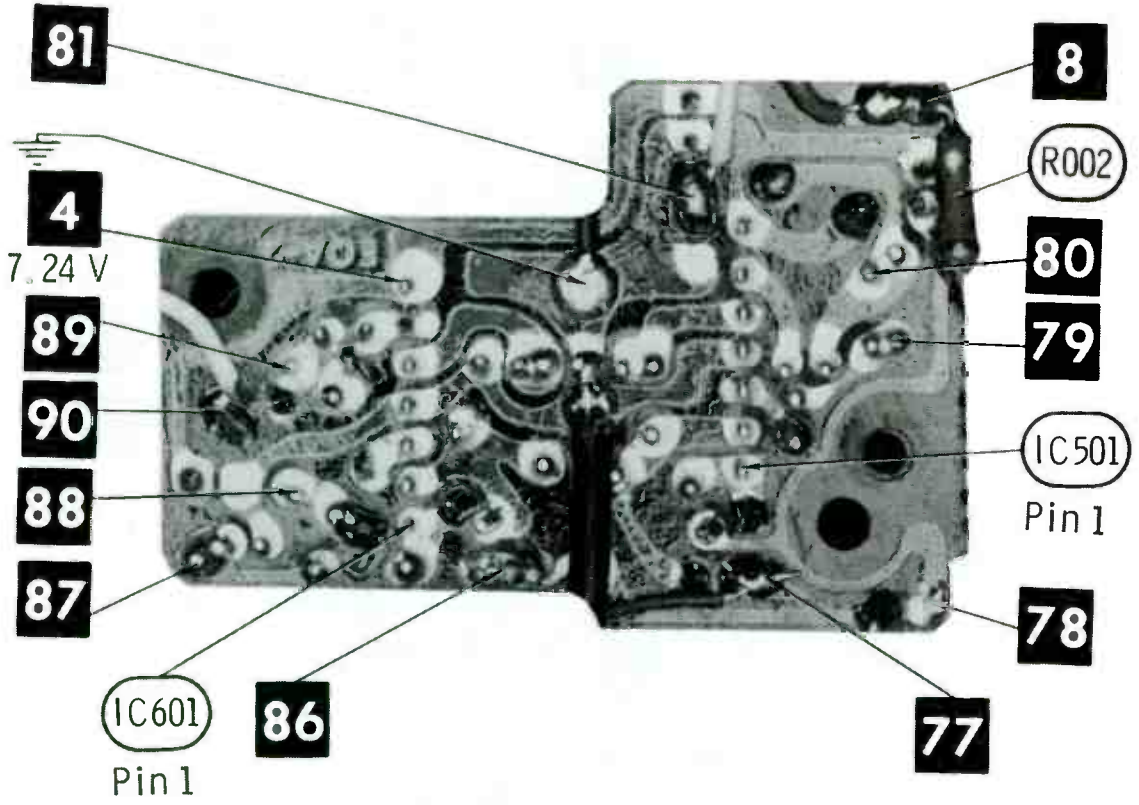
AM/FM IF/AUDIO BOARD-BOTTOM VIEW



AFCO MODEL AG-52

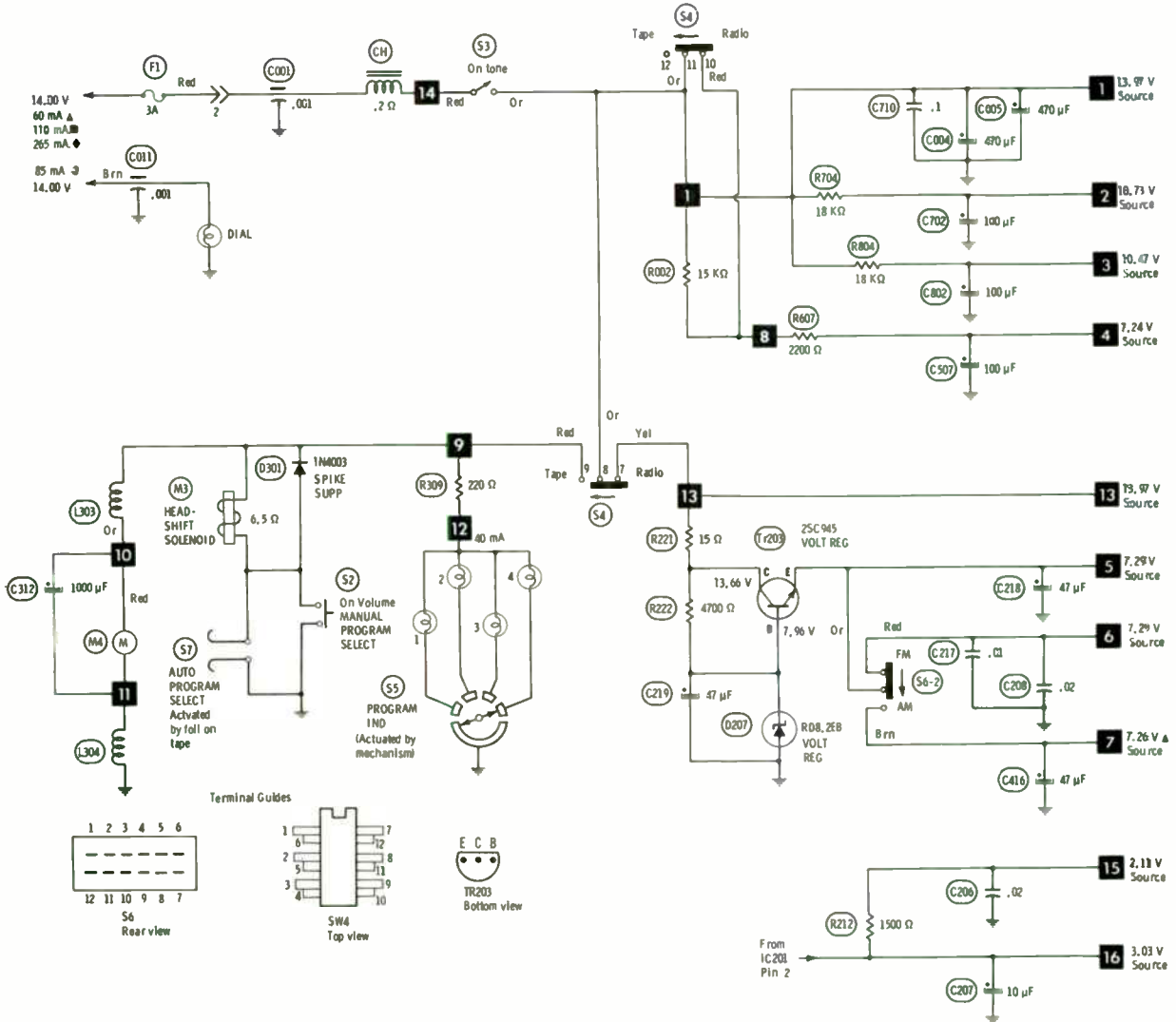


MPX BOARD



TAPE PREAMP BOARD

NOTE: DEMAGNETIZE HEADS AFTER SERVICING



AFCO MODEL AG-52

- /— Circuitry not used in some versions
- - - Circuitry used in some versions
- ⊕ See parts list
- ⊛ Nominal value
- ⊕ Ground
- ⌚ Chassis
- ▽ Common tie point

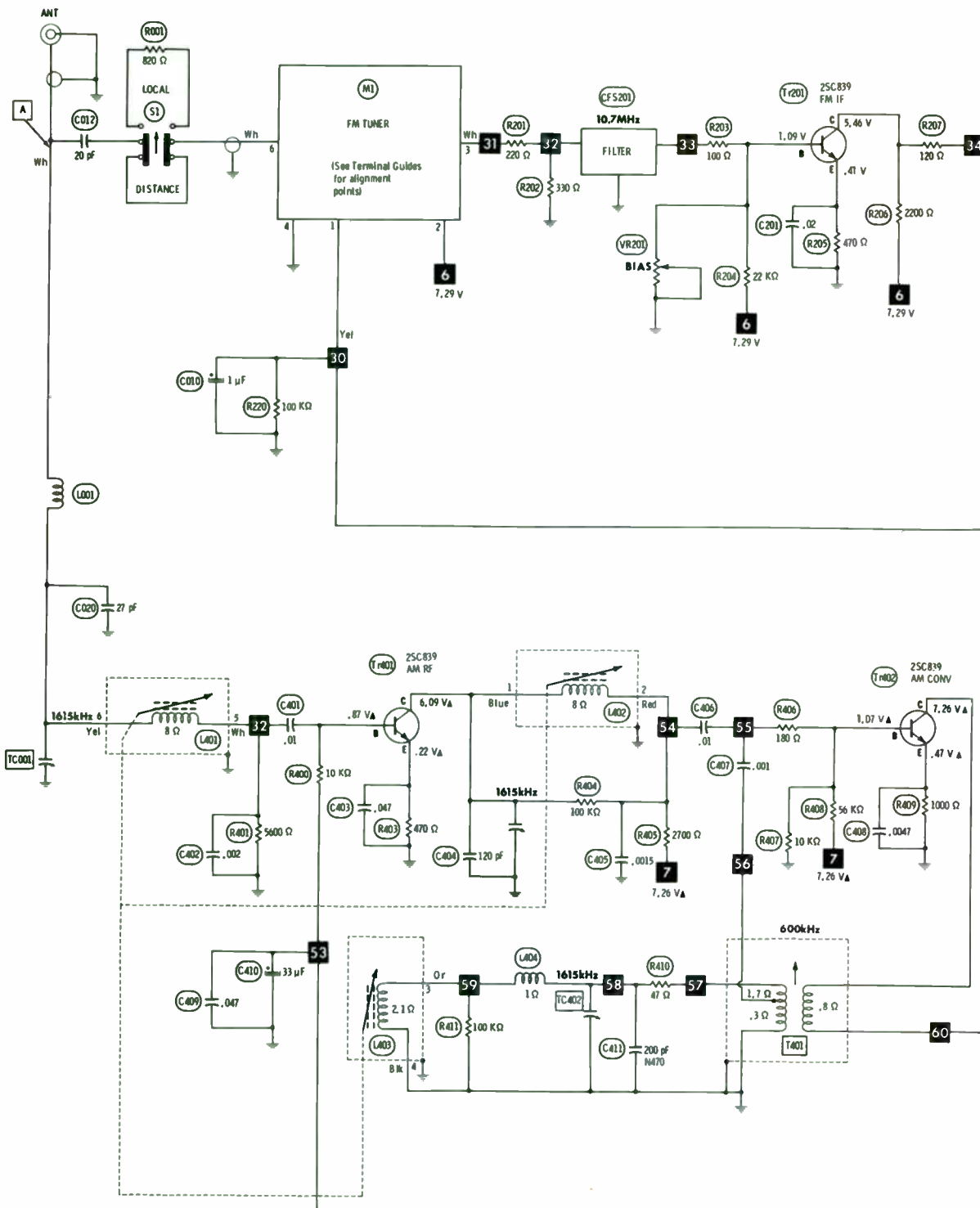
Measurements with switching as shown unless noted:
 ■ FM Stereo signal ▲ AM
 ◆ Tape play

Supply voltage maintained as shown at input.
 Voltages measured with digital meter, no signal.
 Controls adjusted for normal operation.
 Arrow of control indicates direction of advance.
 Terminal identification may not be found on unit.
 Resistors are 1/2W or less, 5% unless noted.
 Value in () used in some versions.

A PHOTOFACT STANDARD NOTATION SCHEMATIC
 WITH **CIRCUITRACE**

© Howard W. Sams & Co., Inc. 1976

NOTE: DEMAGNETIZE HEADS AFTER SERVICING



- /— Circuitry not used in some versions
- - - Circuitry used in some versions
- ⊙ See parts list
- ⊛ Nominal value
- ⊕ Ground
- ⊞ Chassis
- ∇ Common tie point

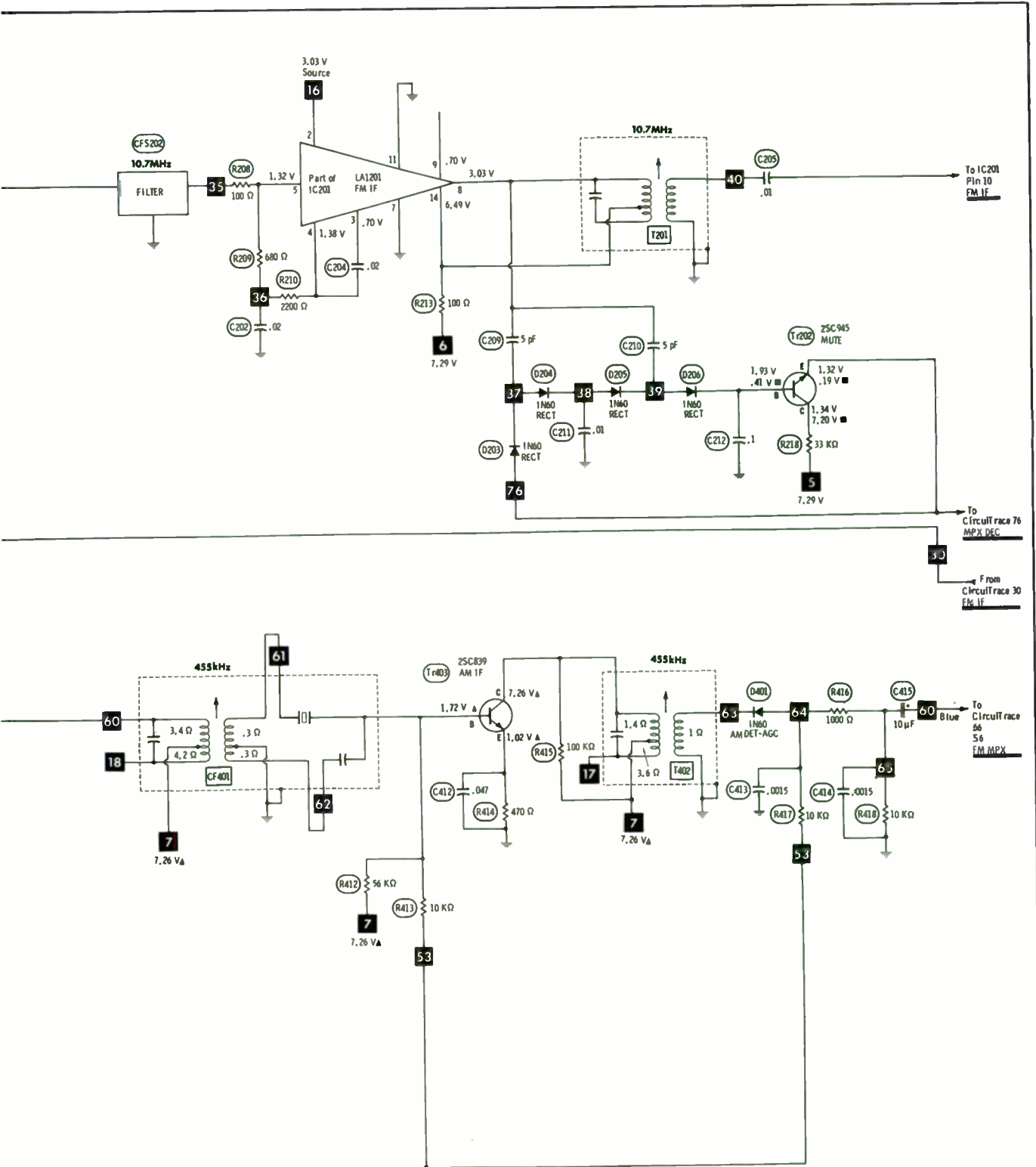
A PHOTOFACT STANDARD NOTATION SCHEMATIC WITH CIRCUITRACE™

© Howard W. Sams & Co., Inc. 1976

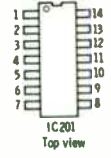
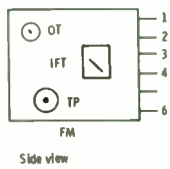
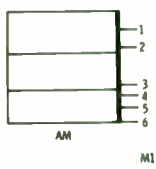
Measurements with switching as shown unless noted:

- FM Stereo signal ▲ AM
- ◆ Tape play

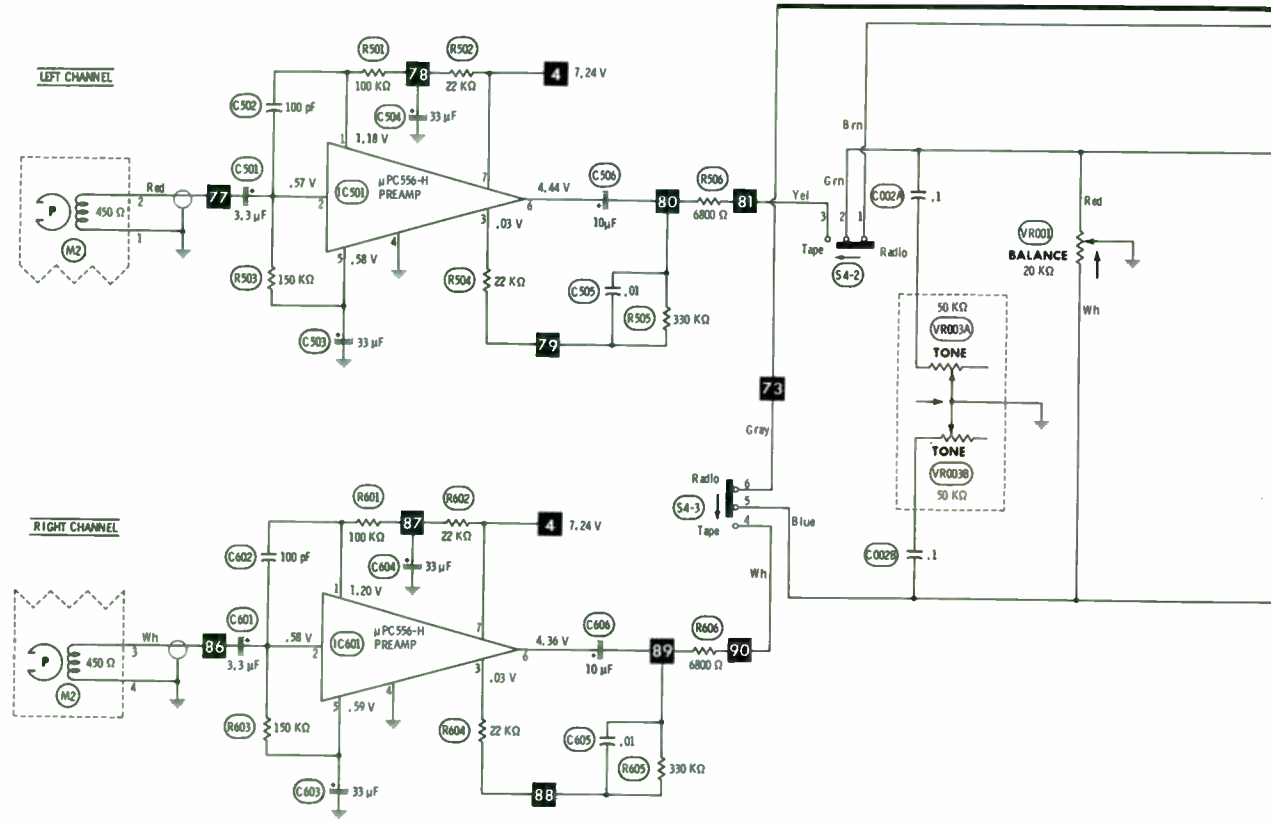
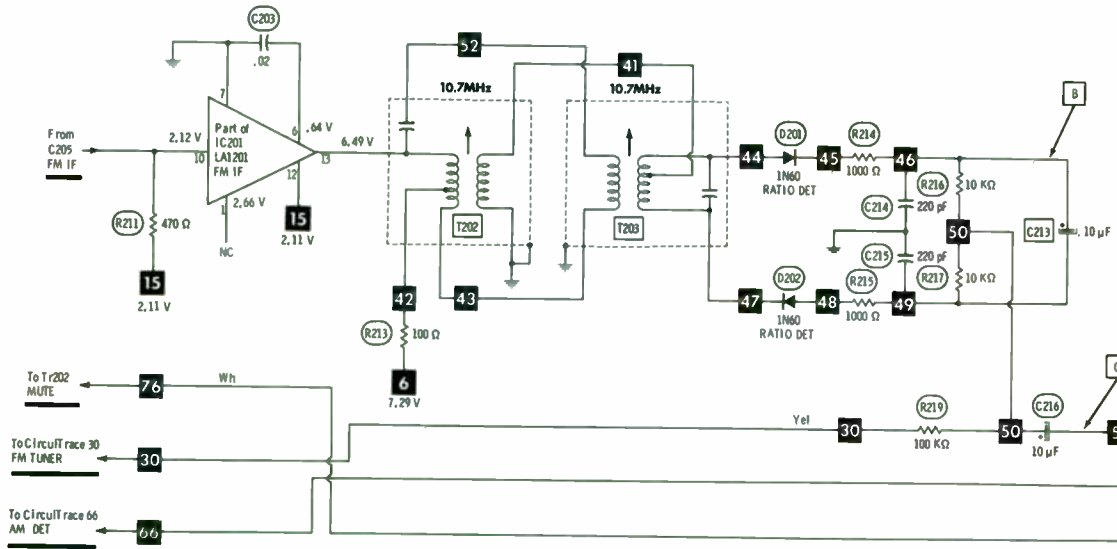
Supply voltage maintained as shown at input.
 Voltages measured with digital meter, no signal.
 Controls adjusted for normal operation.
 Arrow at control indicates direction of advance.
 Terminal identification may not be found on unit.
 Resistors are 1/2W or less, 5% unless noted.
 Value in () used in some versions.



Terminal Guides



NOTE: DEMAGNETIZE HEADS AFTER SERVICING

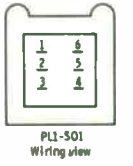
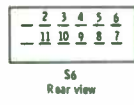
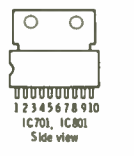
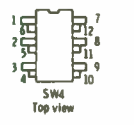
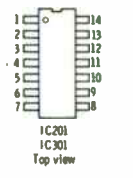
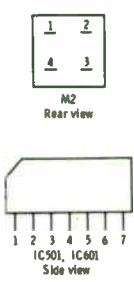
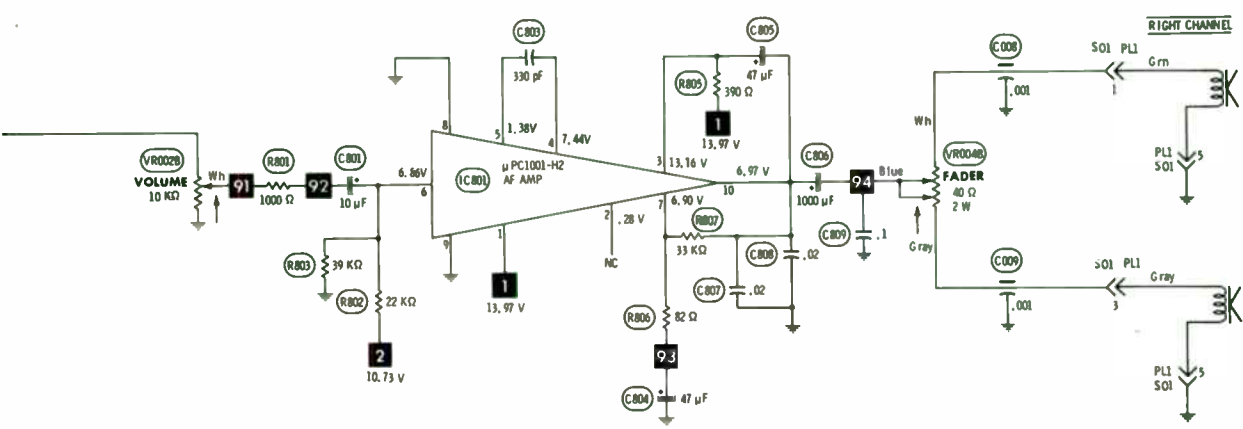
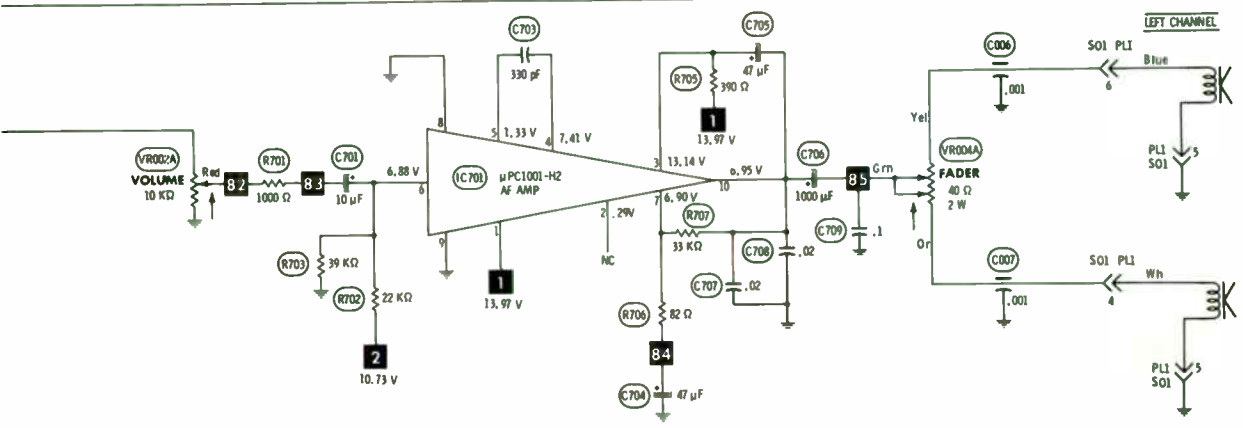
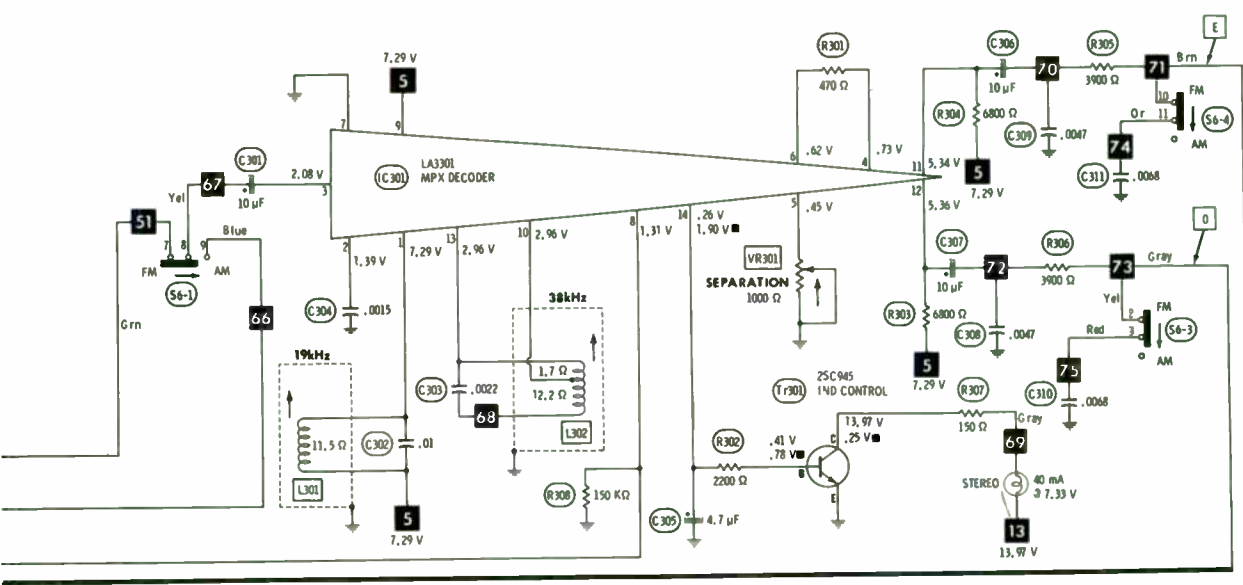


- ✗ Circuitry not used in some versions
- Circuitry used in some versions
- ⊙ See parts list
- ⊛ Nominal value
- ⊕ Ground
- ⊞ Chassis
- ∇ Common tie point

Measurements with switching as shown unless noted:
 ■ FM Stereo signal ▲ AM
 ◆ Tape play

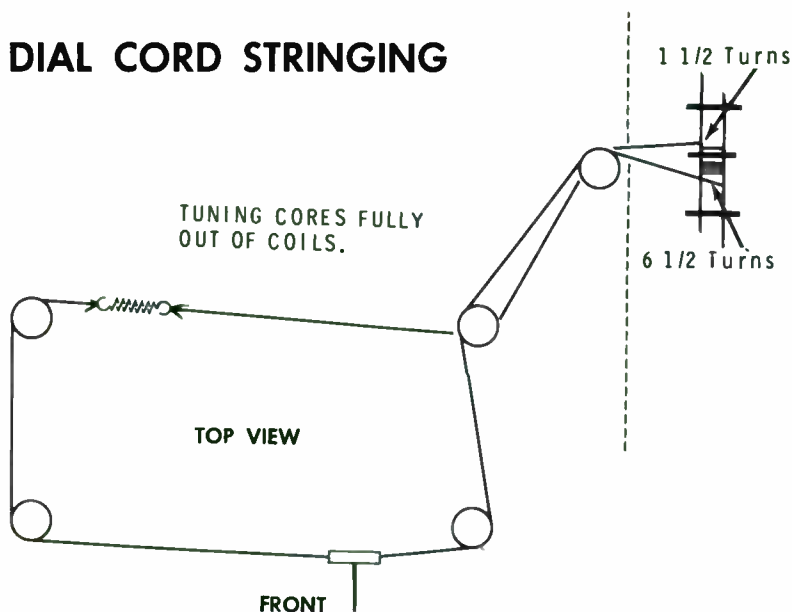
Supply voltage maintained as shown at input.
 Voltages measured with digital meter, no signal.
 Controls adjusted for normal operation.
 Arrow at control indicates direction of advance.
 Terminal identification may not be found on unit.
 Resistors are 1/2W or less, 5% unless noted.
 Value in () used in some versions.

A PHOTOFAC STANDARD NOTATION SCHEMATIC
 WITH **CIRCUITRACE**
 © Howard W. Sams & Co., Inc. 1976



Terminal Guides

DIAL CORD STRINGING



PARTS LIST AND DESCRIPTION

(When ordering parts, state Model, Port Number, 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 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.)
Ignition Noise Suppression	Use BELDEN No. 7300-Series Spark-Plug Sets

SEMICONDUCTORS (Select replacement transistor for best results)

ITEM No.	TYPE No.	MFR. PART No.	REPLACEMENT DATA								
			GENERAL ELECTRIC PART No.	IR WORKMAN PART No.	MALLORY PART No.	MOTOROLA PART No.	RAYTHEON PART No.	RCA PART No.	SPRAGUE PART No.	SYLVANIA PART No.	
D201	1N60		1N60(7)	1N60 (7)	PTC206(6)	HEPR9135(7)	RE 86(6)	SK3088(7)	RT-263(7)	ECG110(6)	
D202	1N60										
D203	1N60										
D204	1N60										
D205	1N60										
D206	1N60										
D207	RDB.2EB										
D301	1N4003			GEZD-8.2	5A4D	1N4003	HEPR0052	RE 49	SK3031	RT-213	ECG116
D401	1N60			GE-504A	1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
IC201	LA1201			GEIC-43							ECG109
IC301	LA3301		GEIC-38		PTC721	HEPC6094P			TVCM-6	ECG1003	
IC501	uPC556-H									ECG1006	
IC601	uPC556-H										
IC701	uPC1001-H2									ECG1127	
IC801	uPC1001-H2									ECG1127	
TR201	2SC839		GE-61	(IR)2SC644	PTC132	HEPS0015	RE 13	SK3018	RT-107A	ECG123A	
TR202	2SC945		GE-210	(IR)2SC945	PTC121	HEPS0015	RE 192	SK3124	RT-107A	ECG199	
TR203	2SC945		GE-210	(IR)2SC945	PTC121	HEPS0015	RE 192	SK3124	RT-107A	ECG199	
TR301	2SC945		GE-210	(IR)2SC945	PTC121	HEPS0015	RE 192	SK3124	RT-107A	ECG199	
TR401	2SC839		GE-61	(IR)2SC644	PTC132	HEPS0015	RE 13	SK3018	RT-107A	ECG123A	
TR402	2SC839		GE-61	(IR)2SC644	PTC132	HEPS0015	RE 13	SK3018	RT-107A	ECG123A	
TR403	2SC839		GE-61	(IR)2SC644	PTC132	HEPS0015	RE 13	SK3018	RT-107A	ECG123A	

(6) Matched pair.

(7) Two required - select matched pair.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA			
		MFR. PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.
C004	470 16V		PC500-16	VTT470J16	EV-1250
C005	470 16V		PC500-16	VTT470J16	EV-1250
C010	1 50V		PC1-50	MTV1C850	EV-1615
C207	10 16V		PC10-25	VTT10A25	EV-1222
C213	10 16V		PC10-25	VTT10A25	EV-1222
C216	10 16V		PC10-25	VTT10A25	EV-1222
C218	47 10V		PC50-16	VTT47D16	EV-1226
C219	47 10V		PC50-16	VTT47D16	EV-1226
C301	10 16V		PC10-25	VTT10A25	EV-1222

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.

ELECTROLYTIC CAPACITORS (cont)

ITEM No.	RATING	REPLACEMENT DATA			
		MFGR. PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.
C305	4.7 25V		PC5-50	VTT4R7A50	EV-1319
C306	10 16V		PC10-25	VTT10A25	EV-1222
C307	10 16V		PC10-25	VTT10A25	EV-1222
C312	1000 16V		PC1000-16	VTT1000L16	EV-1260
C410	33 10V		PC30-25	VTT33A10	EV-1125
C415	10 16V		PC10-25	VTT10A25	EV-1222
C416	47 10V		PC50-16	VTT47D16	EV-1226
C501	3.3 16V			TDC335M035FL	SD35-3R39
C503	33 10V		PC30-25	VTT33A10	EV-1125
C504	33 10V		PC30-25	VTT33A10	EV-1125
C506	10 16V		PC10-25	VTT10A25	EV-1222
C507	100 16V		PC100-16	VTT100F16	EV-1230
C601	3.3 16V			TDC335M035FL	SD35-3R39
C603	33 10V		PC30-25	VTT33A10	EV-1125
C604	33 10V		PC30-25	VTT33A10	EV-1125
C606	10 16V		PC10-25	VTT10A25	EV-1222
C701	10 16V		PC10-25	VTT10A25	EV-1222
C702	100 10V		PC100-10	VTT100E10	EV-1130
C704	47 10V		PC50-16	VTT47D16	EV-1226
C705	47 10V		PC50-25	VTT47E25	EV-1326
C706	1000 10V		PC1000-16	TC12100	EV-1160
C801	10 16V		PC10-25	VTT10A25	EV-1222
C802	100 10V		PC100-10	VTT100E10	EV-1130
C804	47 10V		PC50-16	VTT47D16	EV-1226
C805	47 10V		PC50-16	VTT47D16	EV-1226
C806	1000 10V		PC1000-16	TC12100	EV-1160

CAPACITORS

ITEM No.	RATING	MFGR. PART No.	REPLACEMENT DATA			
			CENTRALLAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.
C001	.001					
C002A	.1 12V		DC-104	MGP1	MAG5001	TG-P10
C002B	.1 12V		DC-104	MGP1	MAG5001	TG-P10
C006	.001					
C007	.001					
C008	.001					
C009	.001					
C011	.001					
C012	20		DTZ-20	NP020	CN0420	10TCC-Q20
C020	27				CN0427	10TCC-Q27
C201	.02		DC-203		MAG5012	2SS-S20
C202	.02		DC-203		MAG5012	2SS-S20
C203	.02		DC-203		MAG5012	2SS-S20
C204	.02		DC-203		MAG5012	2SS-S20
C205	.01		DC-103	GP10000	MAG5011	2SS-S10
C206	.02		DC-203		MAG5012	2SS-S20
C208	.02		DC-203		MAG5012	2SS-S20
C209	5					10TCC-V50
C210	5					10TCC-V50
C211	.01		DC-103	GP10000	MAG5011	2SS-S10
C212	.1 12V		DC-104	MGP1	MAG5001	TG-P10
C214	220 10%		DD-221		GP322	10TS-T22
C215	220 10%		DD-221		GP322	10TS-T22
C217	.01		DC-103	GP10000	MAG5011	2SS-S10
C302	.01			CD20FD103J03	SX110	424ME2201J501
C303	.0022			CD19FD222J03	SX222	
C304	.0015		DD-152		GP215	2SS-D15
C308	.0047		DD-472	GP4700	GP247	2SS-D47
C309	.0047		DD-472	GP4700	GP247	2SS-D47
C310	.0068		DD-682	GP6800	GP268	10TS-D68
C311	.0068		DD-682	GP6800	GP268	10TS-D68
C401	.01 10%					10TS-S10
C402	.002 10%				GP220	10TS-D20
C403	.047 10%			DPMS2S47	EWF1A147	1PB-S47
C404	120 10%		DTZ-120		CN0312	10TCC-T12
C405	.0015 10%		DD-152		GP215	10TS-D15
C406	.01 10%					10TS-S10
C407	.001 10%		DD-102		GP210	10TS-D10
C408	.0047 10%			DPMS2S47	EWF1A147	10TS-D47
C409	.047 10%				*	1PB-S47
C411	200 N470 5%			DPMS2S47	EWF1A147	10TCT-T20
C412	.047 10%		DD-152		EWF1A147	1PB-S47
C413	.0015 10%		DD-152		GP215	10TS-D15
C414	.0015 10%		DD-152		GP215	10TS-D15
C502	100 10%		DTZ-100	NP0100	CN0310	10TCC-T10
C505	.01		DC-103	GP10000	MAG5011	2SS-S10
C602	100 10%		DTZ-100	NP0100	CN0310	10TCC-T10
C605	.01		DC-103	GP10000	MAG5011	2SS-S10
C703	330 10%		DD-331	GP330	GP333	10TS-T33
C707	.02 12V		DC-203		MAG5012	2SS-S20
C708	.02 12V		DC-203		MAG5012	2SS-S20
C709	.1		DC-104	MGP1	MAG5001	TG-P10
C710	.1		DC-104	MGP1	MAG5001	TG-P10
C803	330 10%		DD-331	GP330	GP333	10TS-T33
C807	.02 12V		DC-203		MAG5012	2SS-S20
C808	.02 12V		DC-203		MAG5012	2SS-S20
C809	.1		DC-104	MGP1	MAG5001	TG-P10
TC001						
TC401						
TC402						

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

AFCO MODEL AG-52

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.

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

ITEM No.	FUNCTION	RESIST-ANCE	REPLACEMENT DATA				
			MFGR. PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	MALLORY PART No.	TRW PART No.
VR001	Balance	20K					
VR002A	Volume-Left	10K					
VR002B	Volume-Right/Manual Program Switch	10K					
VR003A	Tone-Left	50K					
VR003B	Tone-Right/Power Switch	50K					
VR004A	Fader-Left	40 2W					
VR004B	Fader-Right	40 2W					
VR301	Separation	1000					

COILS (RF-IF)

ITEM No.	FUNCTION	REPLACEMENT DATA			REMARKS
		PART No.	OTHER IDENTIFICATION	MILLER PART No.	
CF401	IF (455kHz)				(1) Part of M1 (Tuner).
L001	AM Ant Choke (8.2uH)			70F826AI	
L301	19kHz		56152526		
L302	38kHz		56153103		
L303	RF Choke (1.5uH)			70F156AI	
L304	RF Choke (1.5uH)			70F156AI	
L401	AM Antenna	(1)			
L402	AM RF	(1)			
L403	AM Osc Tuning	(1)			
L404	Image Trap (4.7uH)			74F476AP	
T201	IF (10.7MHz)		L470053N		
T202	Ratio Det (Pri.)				
T203	Ratio Det (Sec.)				
T401	AM Oscillator				
T402	IF (455kHz)		M222162N		

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA			NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	MFGR. PART No.	THORDARSON PART No.	TRIAD PART No.	
CH	265mA	.2	.2mH				

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
3A				AGC3	HDJ	312003	150145	FG3-2

MISCELLANEOUS

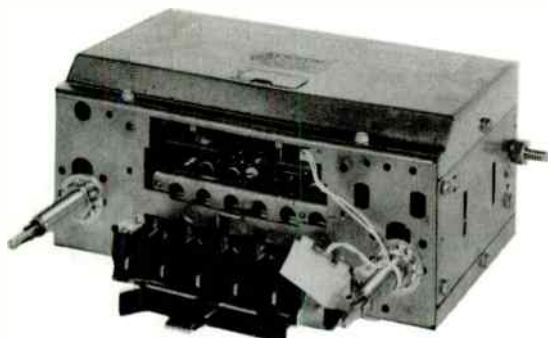
ITEM No.	PART NAME	PART No.	NOTES
CFS201	Filter		10.7MHz, Ceramic
CFS202	Filter		10.7MHz, Ceramic
M1	Tuner Assembly		AM/FM
M2	Tape Head		8-Track Stereo Play
M3	Solenoid		Head Shift
M4	Motor		Tape Transport (2000 rpm @ 13.80V)
S1	Switch		Local/Distant
S2	Switch		Manual Program (Part of Volume Control)
S3	Switch		Power (Part of Tone Control)
S4	Switch		Tape/Radio
S5	Switch		Program Indicator
S6	Switch		AM/FM
S7	Switch		Automatic Program



PHOTOFACT[®] with

CIRCUITRACE[®]

For Supplier Address See PHOTOFACT Index



NOTE - Model 136-1012 Basic unit for models listed below

FGA-75-FDX (Ford, Mercury)

FMK-75-FDX (Ford, Mercury)

FO-75-FDX (Ford, Mercury)

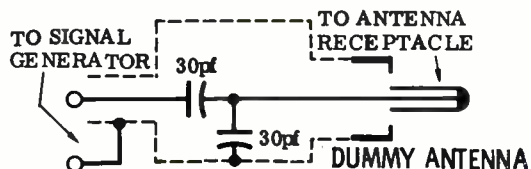
FTR-75-FDX (Ford, Mercury)

LCO-75-FDX (Ford, Lincoln)

ALIGNMENT INSTRUCTIONS

Check for specified source voltage. Use only enough generator output to provide a usable indication. Suggested Alignment Tools:				PUSH-BUTTON ADJUSTMENT 1. Pull button out. 2. Tune manually to desired station. 3. Press button in firmly. 4. Repeat for remaining buttons.	
ALL GC ELECTRONICS 8290,8868,9087					
GENERATOR COUPLING	GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
High side thru .1 uF to point A low side to ground.	262 kHz 400-Hz mod.	High freq. end stop.	Output meter across voice coil.	T301, T302	Adjust for maximum.
Thru dummy antenna to antenna input.	1615kHz	"	"	C2, C304, C310	"
Thru dummy antenna to antenna input.	600 kHz	Tune to signal	Output meter across voice coil.	L301	Adjust for maximum. Repeat alignment until no further improvement is noted.
With radio installed in car and antenna extended 33', tune in a weak station near 1400kHz and adjust C2 for maximum output. Antenna adjustment C2 is located on bottom right rear corner.					

AUDIOVOX 1975 SERIES



HOWARD W. SAMS & CO., INC. Indianapolis, Indiana 46206

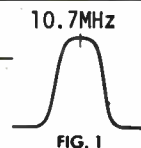
© 1976 Howard W. Sams & Co., Inc.

Printed in U. S. of America

6AN865

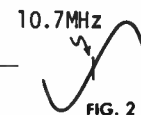
FM IF ALIGNMENT USING AM SIGNAL GENERATOR—SELECTOR IN FM POSITION

High side of generator thru .001 uF to point B				low side to ground.
GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
10.7MHz Unmodulated	Point of non-interference	DC probe of VTVM to point C common to ground.	T101 L102 T202	Adjust for maximum.
"	"	DC probe of VTVM to point D common to ground.	T203	Adjust for zero reading. A positive or negative reading will be obtained on either side of correct setting.



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

High side of generator thru .001 uf to point B				low side to ground.
Use only enough marker signal for indication. Use 60-hertz frequency modulated signal with 450kHz sweep. Use 60-hertz sawtooth voltage in scope for horizontal deflection.				10.7MHz
GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
10.7MHz 450kHz Sweep	Point of non-interference	Vert input of scope to point C low side to ground.	T101 L102 T202	Disconnect stabilizing capacitor C220 Adjust for maximum gain and symmetry of response similar to Fig. 1 with markers as shown. Reconnect C220.
"	"	Vert input of scope to point D low side to ground.	T203	Adjust T203 to place marker at center of S curve similar to Fig. 2. Readjust T202 for maximum amplitude and straightness of line.

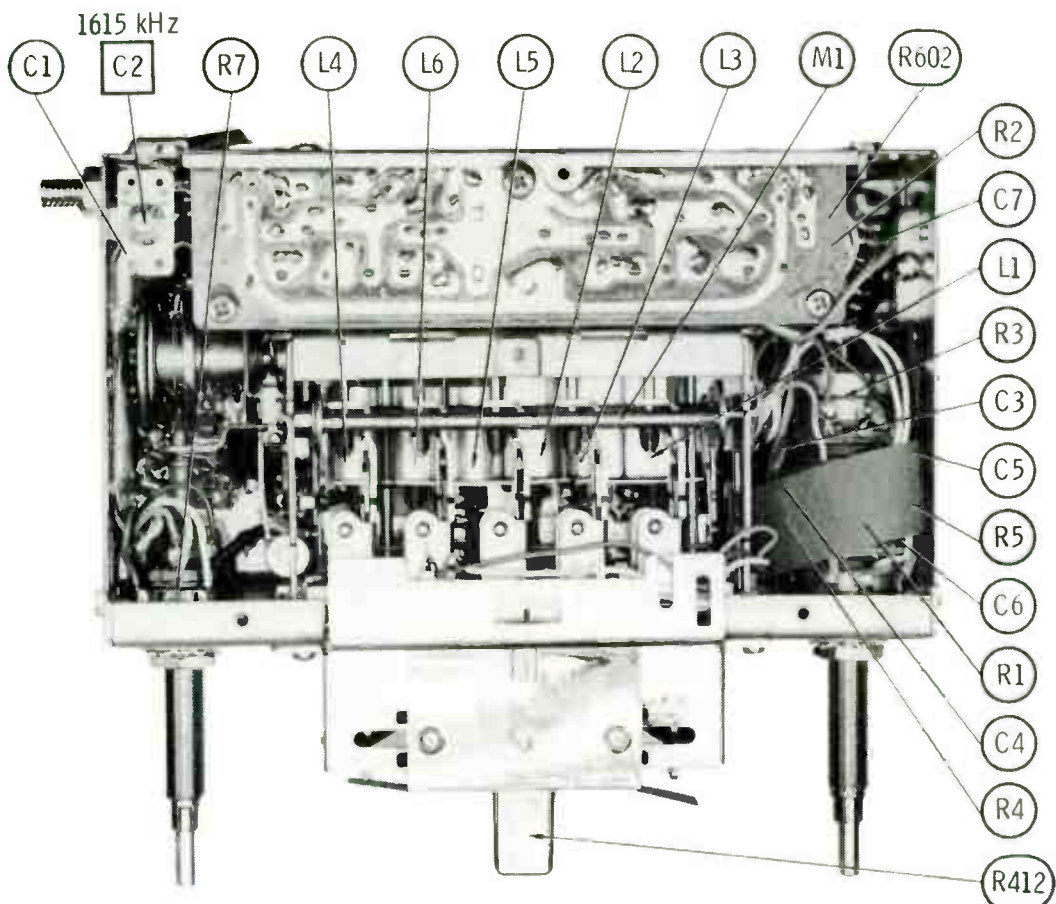
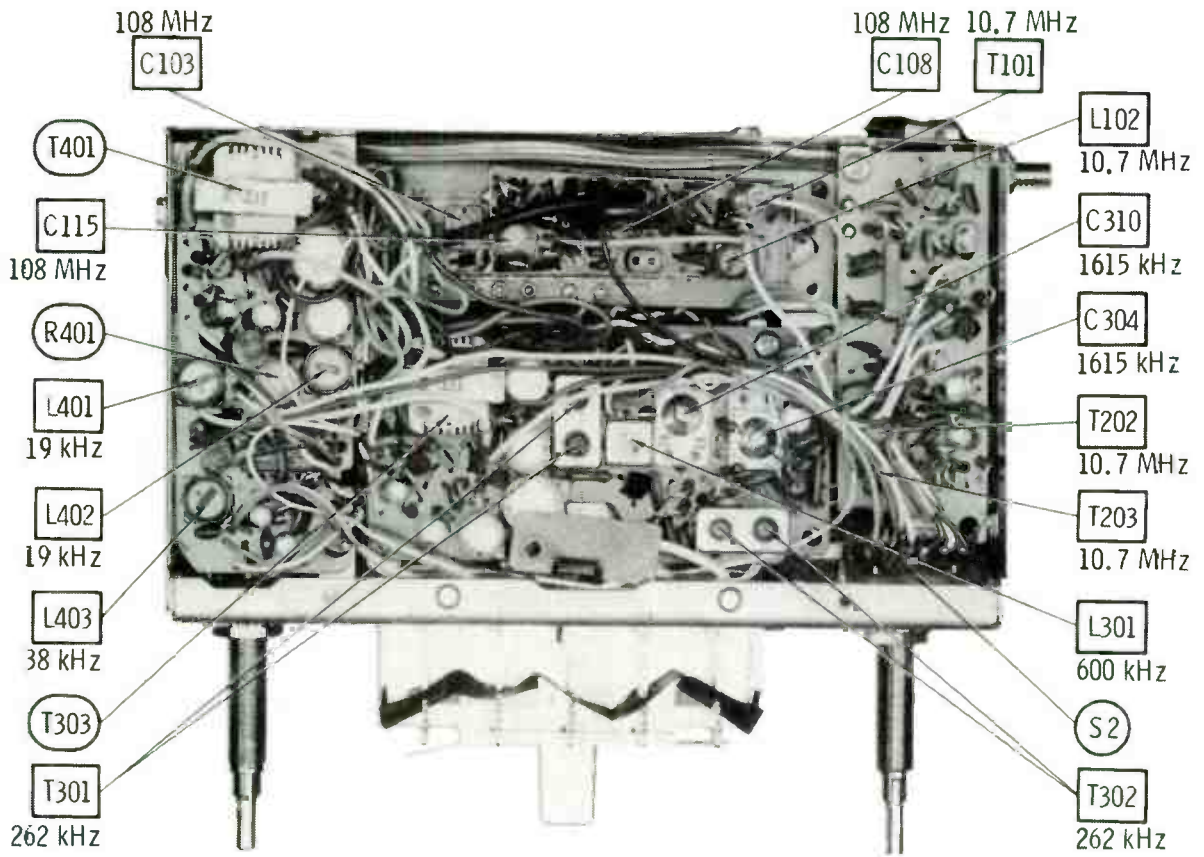


FM RF ALIGNMENT—SELECTOR IN FM POSITION

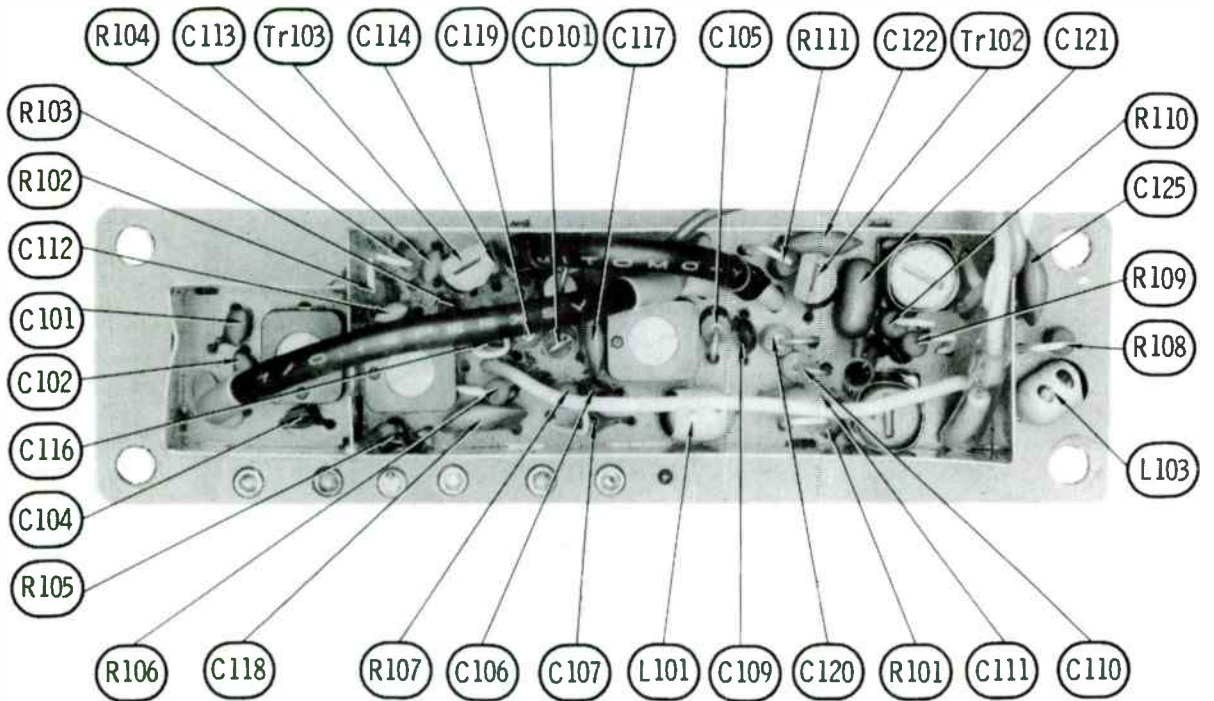
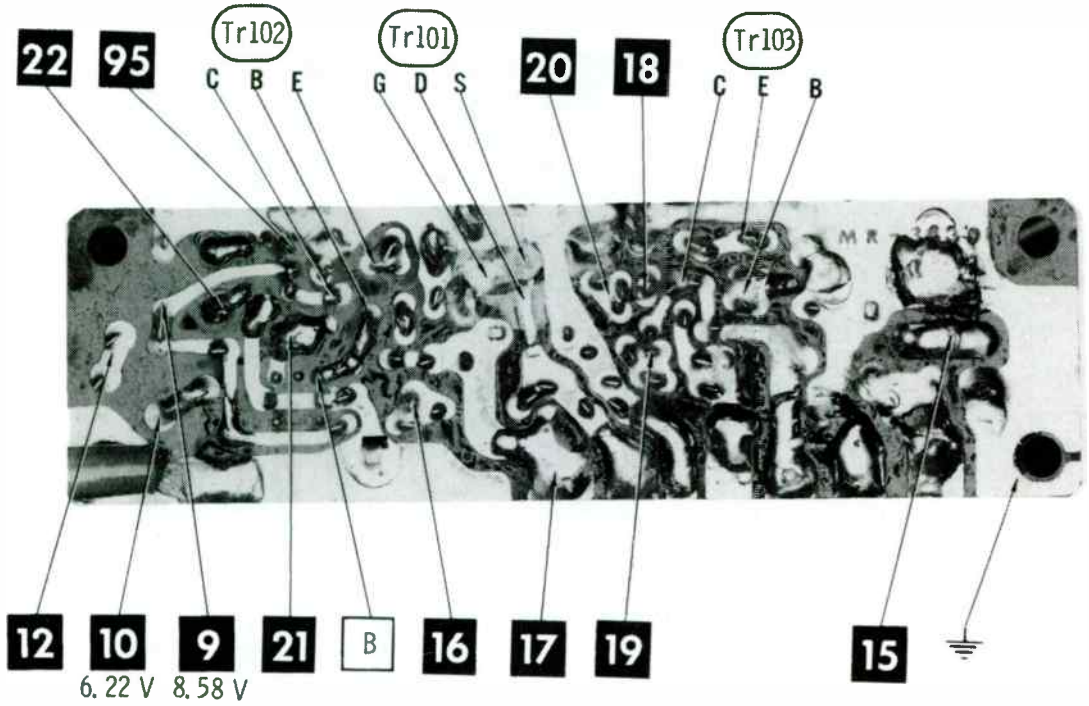
Connect generator across antenna terminals with 120-ohm carbon resistor in series with each lead. Adjustment of coils by bending should not be attempted unless the coil is deformed or replaced.				
GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
108MHz Unmodulated	Tune to signal	DC probe of VTVM to point B common to ground.	C103,C108, C115	Adjust for maximum. Repeat FM RF steps until no further improvement is noted.

FM STEREO MULTIPLEX ALIGNMENT USING FM STEREO SIGNAL GENERATOR (± .0001% ACCURACY)

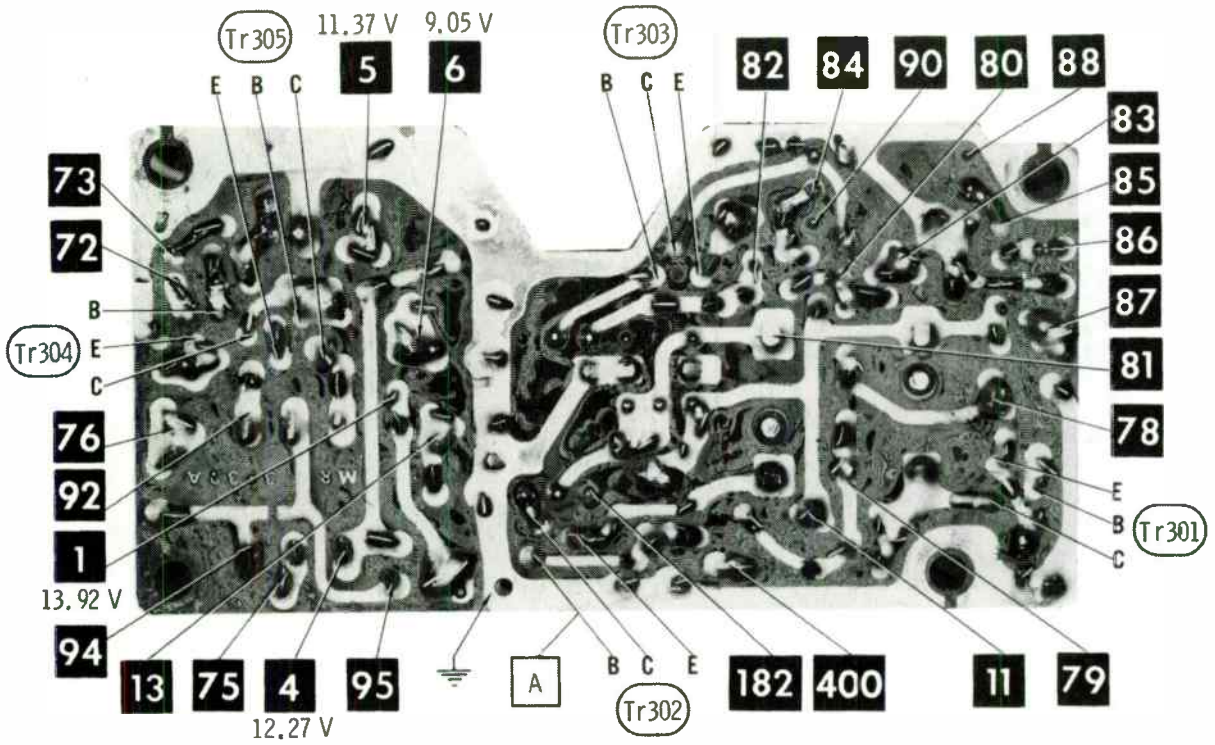
High side of generator thru 47K to point D				low side to ground.
19kHz	Vert input of scope thru 47K to point E low side to ground.	L401 L402	Adjust for maximum.	
19kHz	Vert input of scope thru 47K to point F low side to ground.	L403	Adjust for maximum 38kHz response.	
Modulated Left Channel	Vert input of scope to point G low side to ground.	L403 R401	Adjust for MINIMUM. This step should require only slight adjustment.	
Modulated Right Channel	Vert input of scope to point H low side to ground.		Check for MINIMUM. If necessary, make compromise adjustment of L403,R401.	



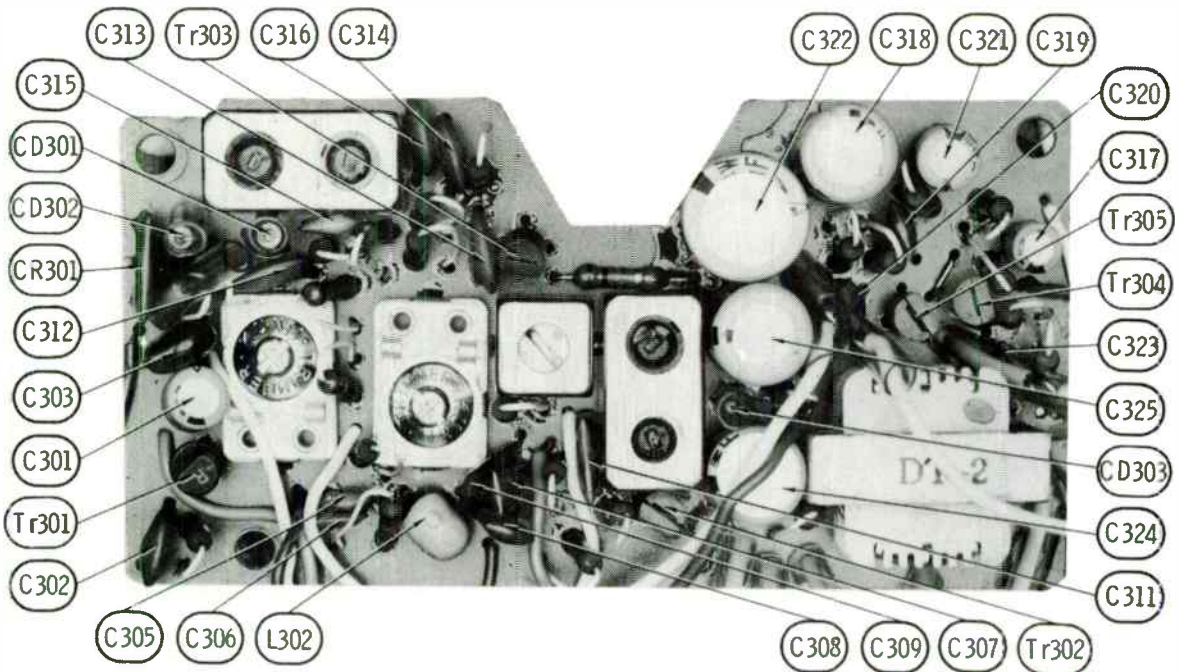
CHASSIS



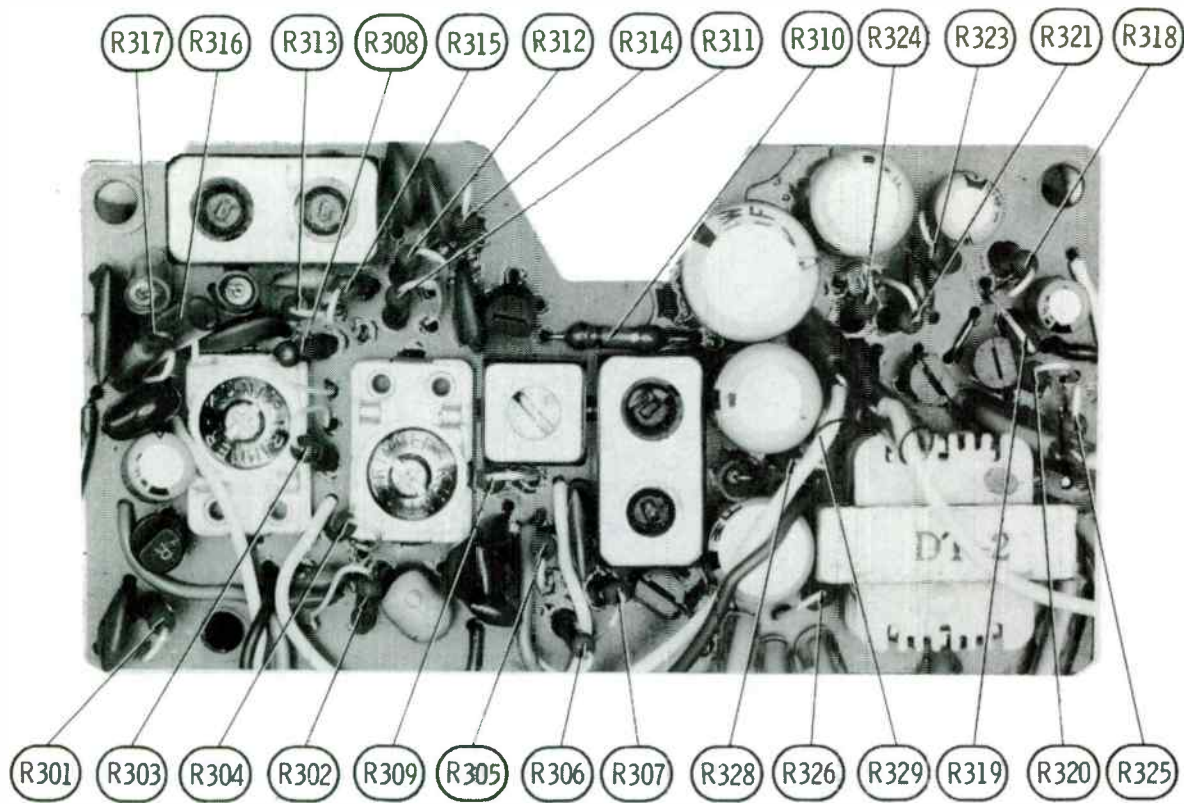
FM RF BOARD



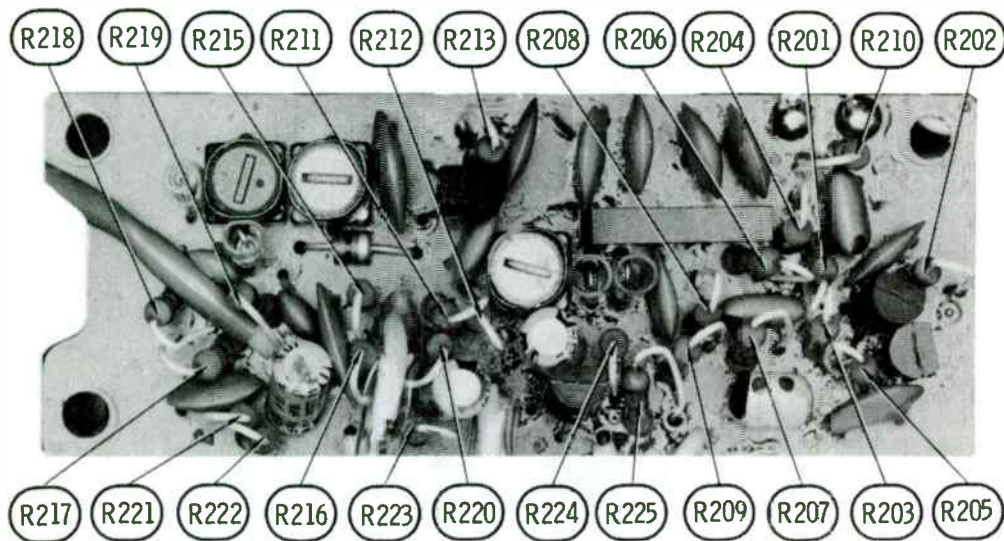
AUDIOVOX 1975 SERIES



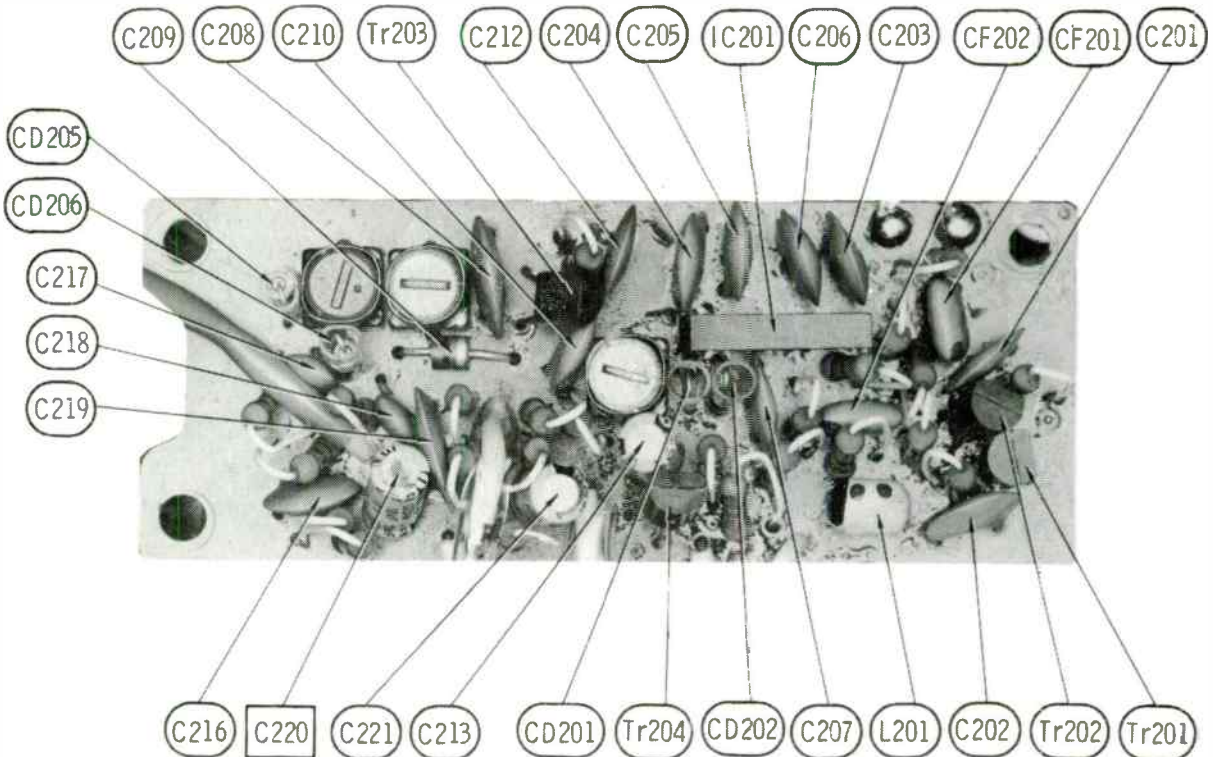
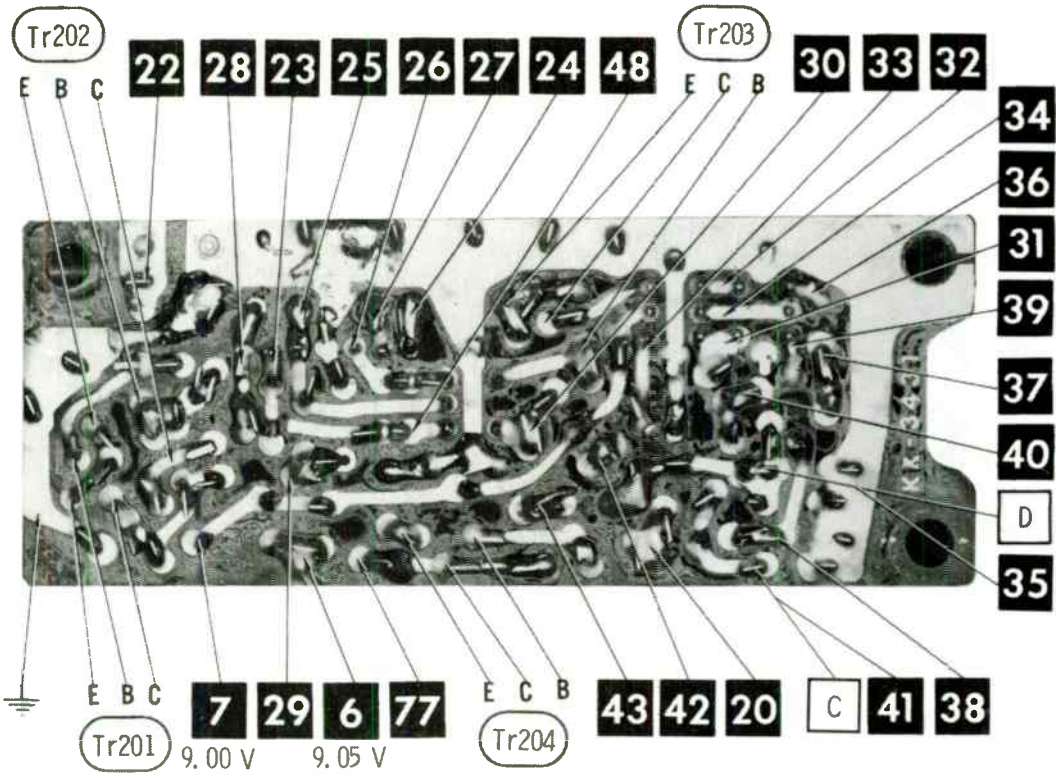
AM/LEFT AUDIO BOARD



AM/LEFT AUDIO BOARD-TOP VIEW

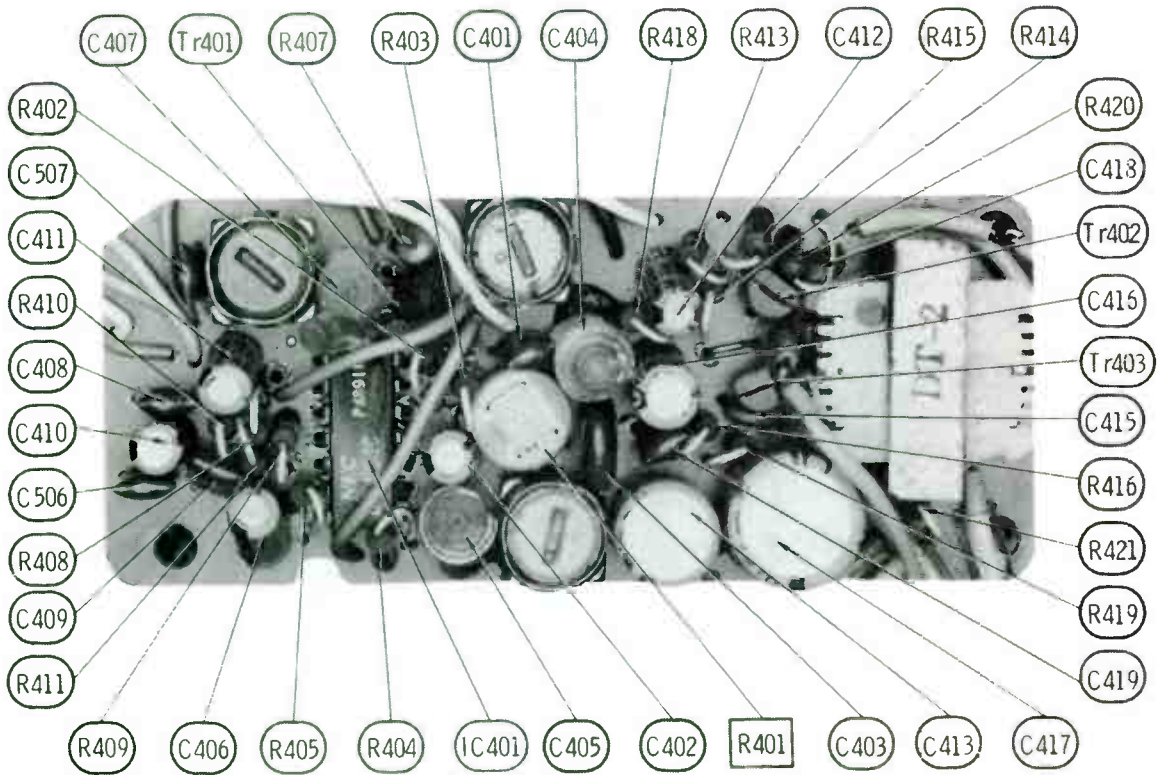
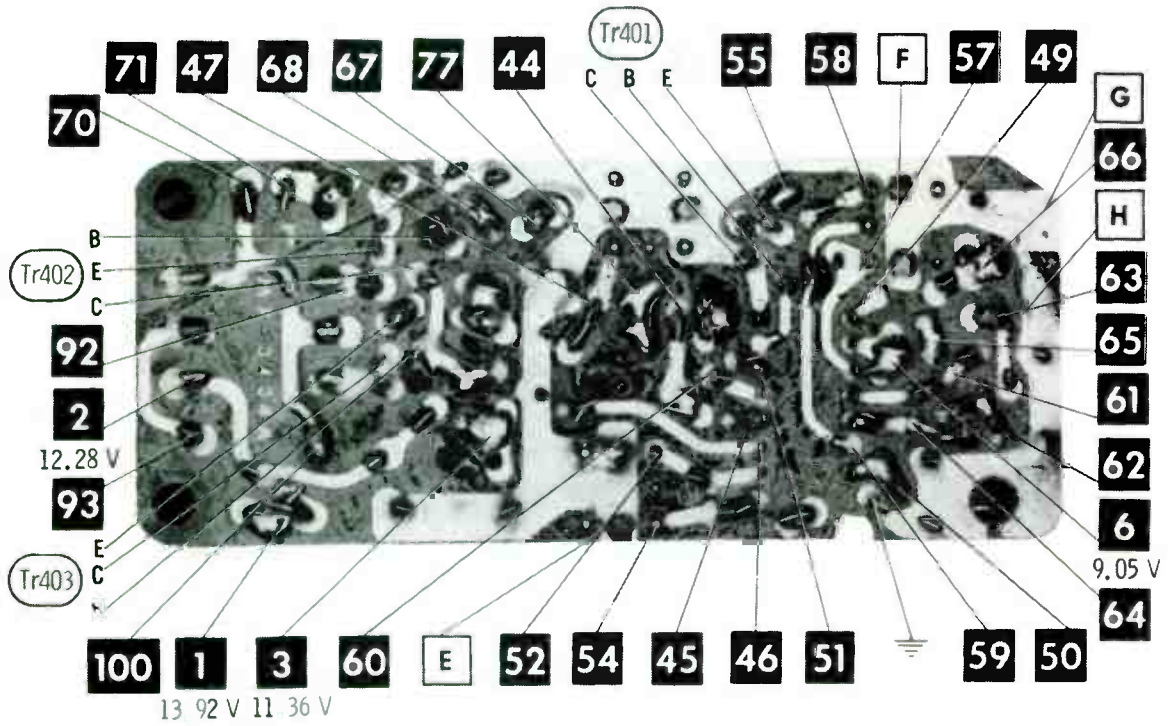


FM IF BOARD-TOP VIEW

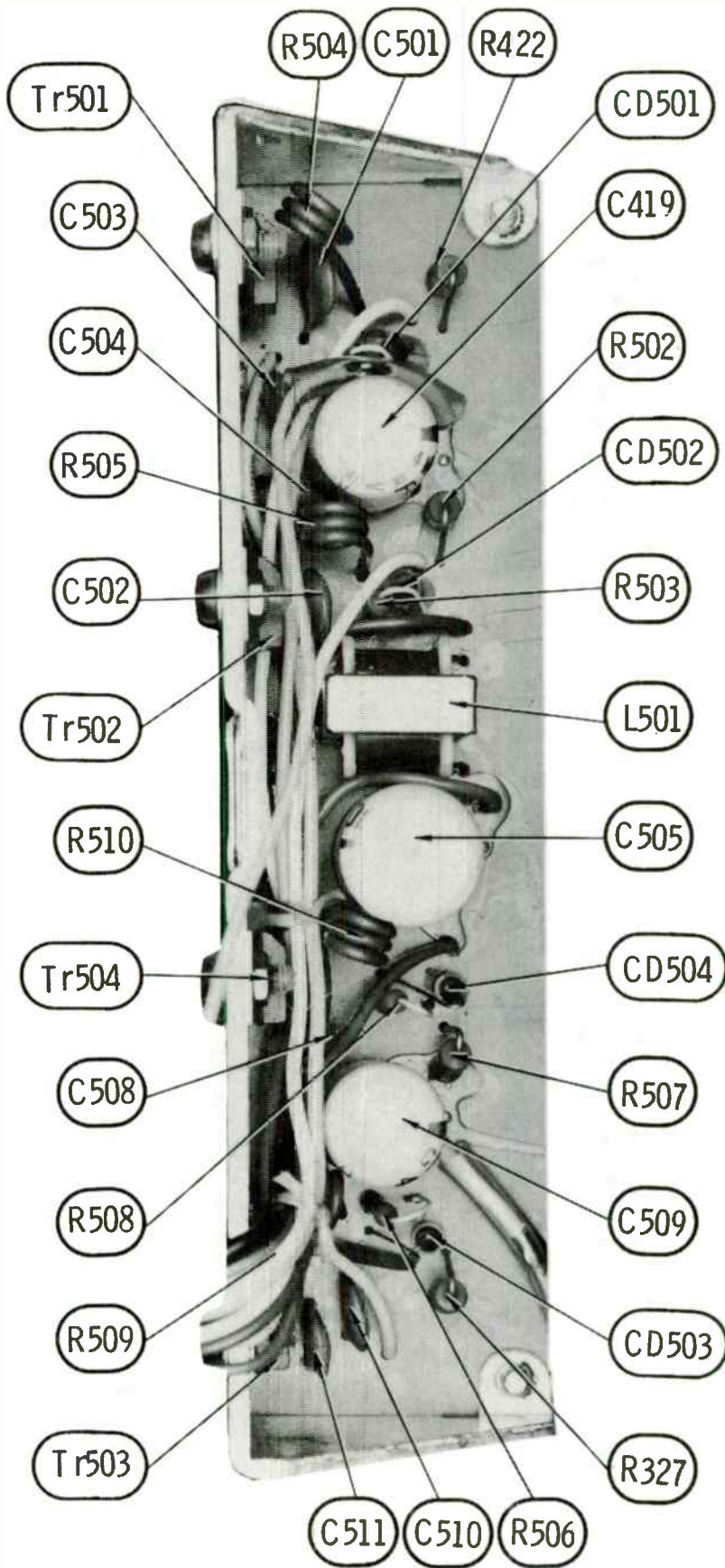


FM IF BOARD

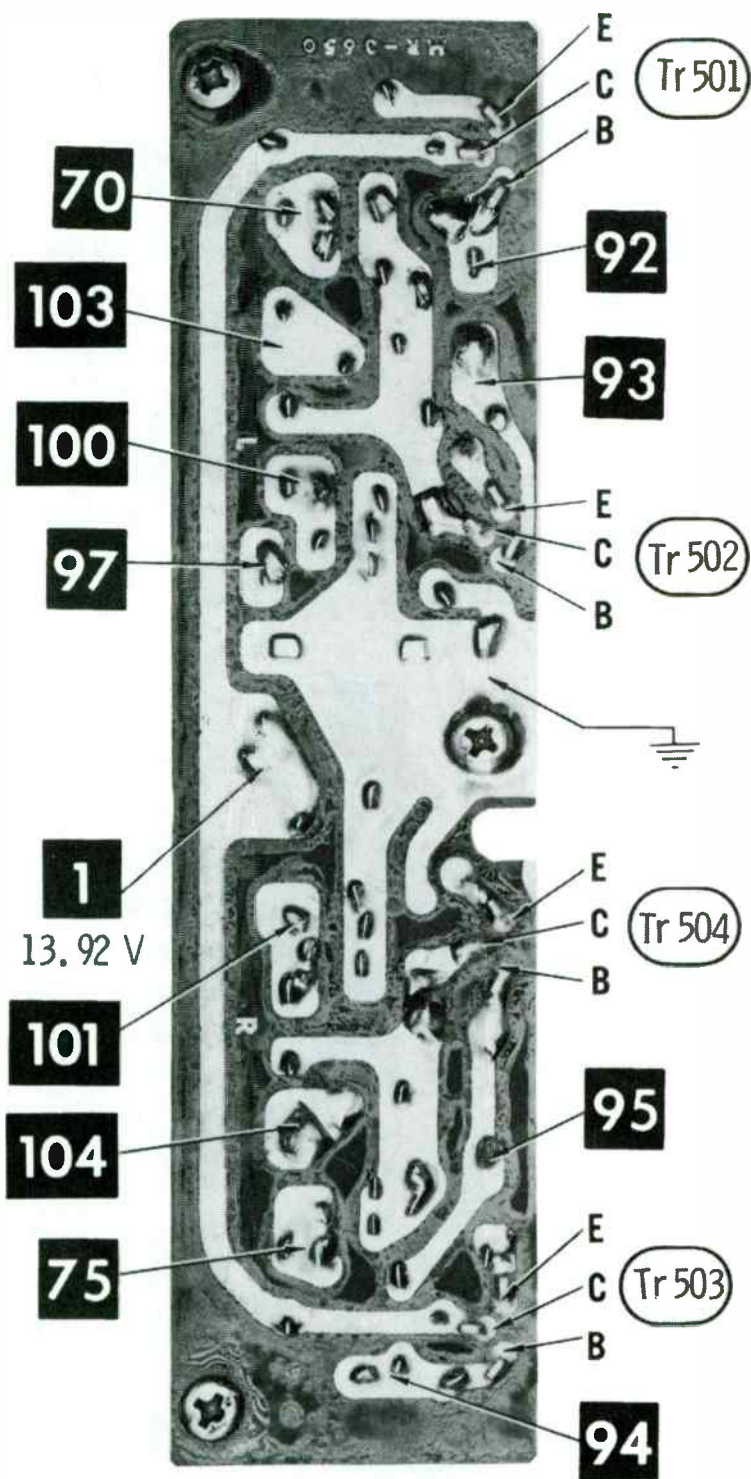
AUDIOVOX 1975 SERIES



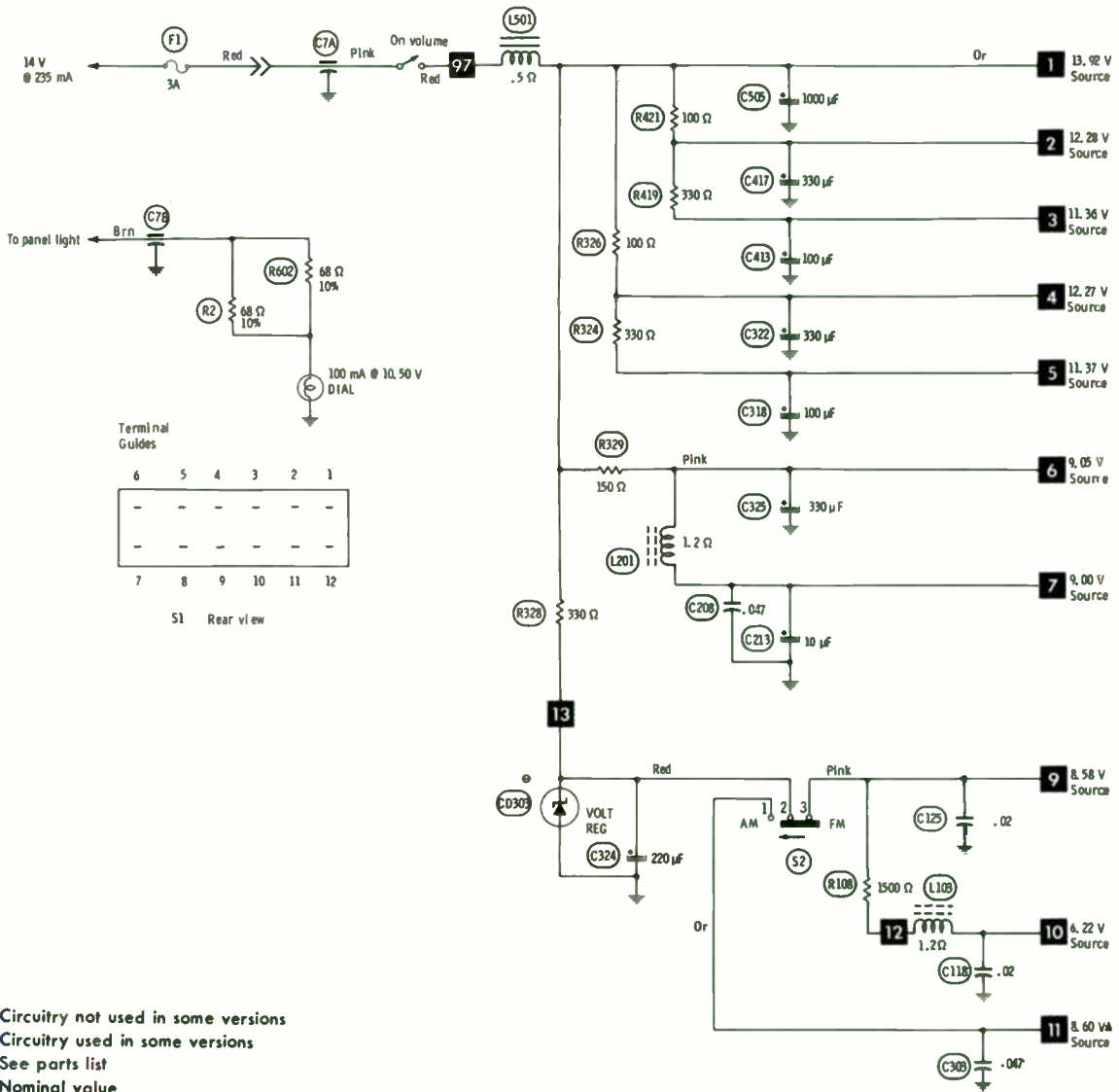
MPX/RIGHT AUDIO BOARD



AUDIO BOARD-TOP VIEW



AUDIO BOARD-BOTTOM VIEW

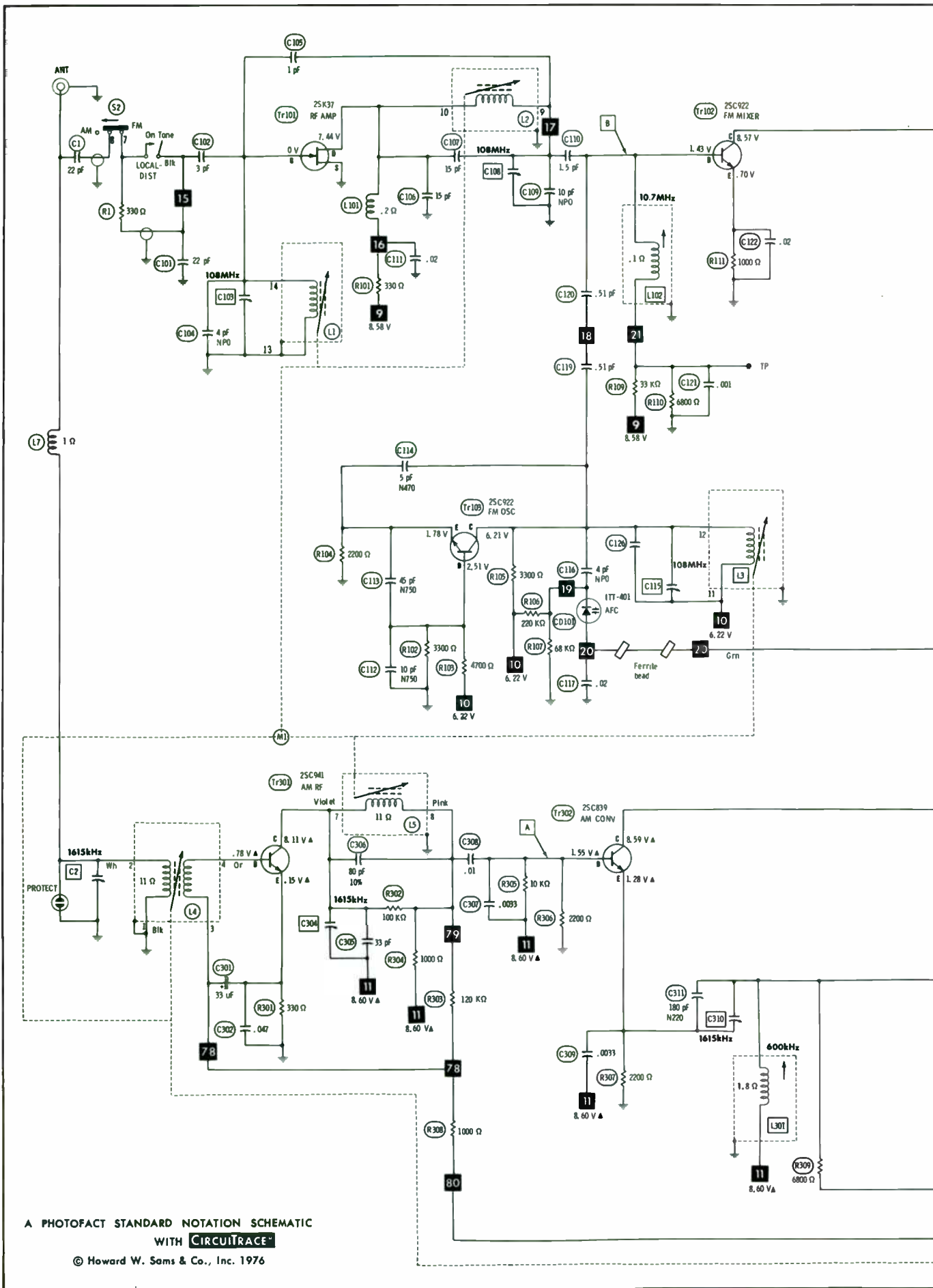


- ⊗ Circuitry not used in some versions
 - Circuitry used in some versions
 - ⊕ See parts list
 - ⊛ Nominal value
 - ⊕ Ground
 - ⊕ Chassis
 - ▽ Common tie point
- Measurements with switching as shown unless noted:
 ■ FM Stereo signal ▲ AM

Supply voltage maintained as shown of input.
 Voltages measured with digital meter, no signal.
 Controls adjusted for normal operation.
 Arrow at control indicates direction of advance.
 Terminal identification may not be found on unit.
 Resistors are 1/2W or less, 5% unless noted.
 Value in () used in some versions.

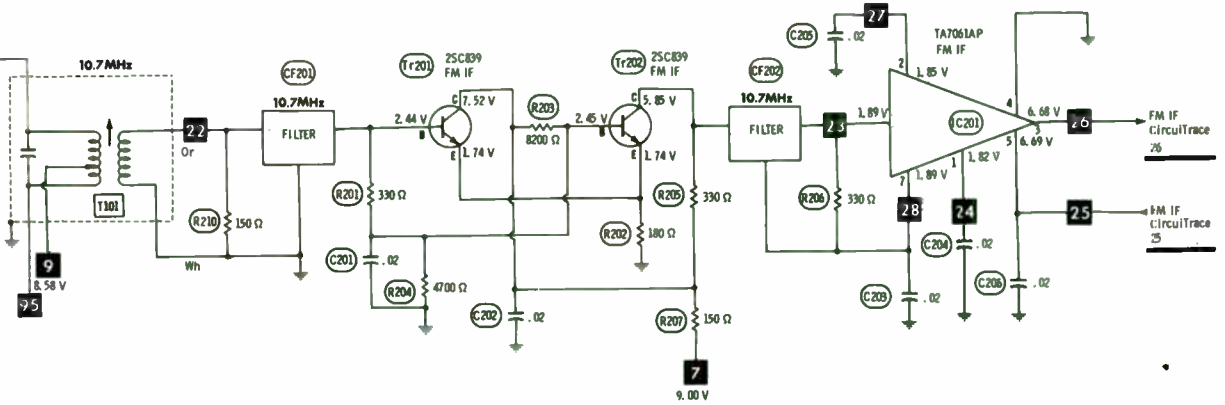
A PHOTOFAC STANDARD NOTATION SCHEMATIC
 WITH CIRCUITRACE™

© Howard W. Sams & Co., Inc. 1976

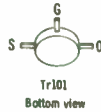
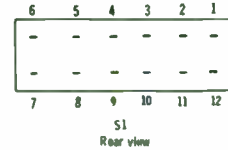
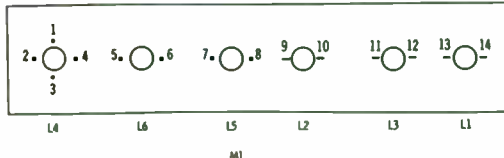
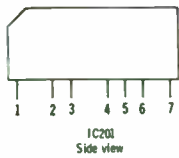


A PHOTOFACIT STANDARD NOTATION SCHEMATIC WITH CIRCUITRACE

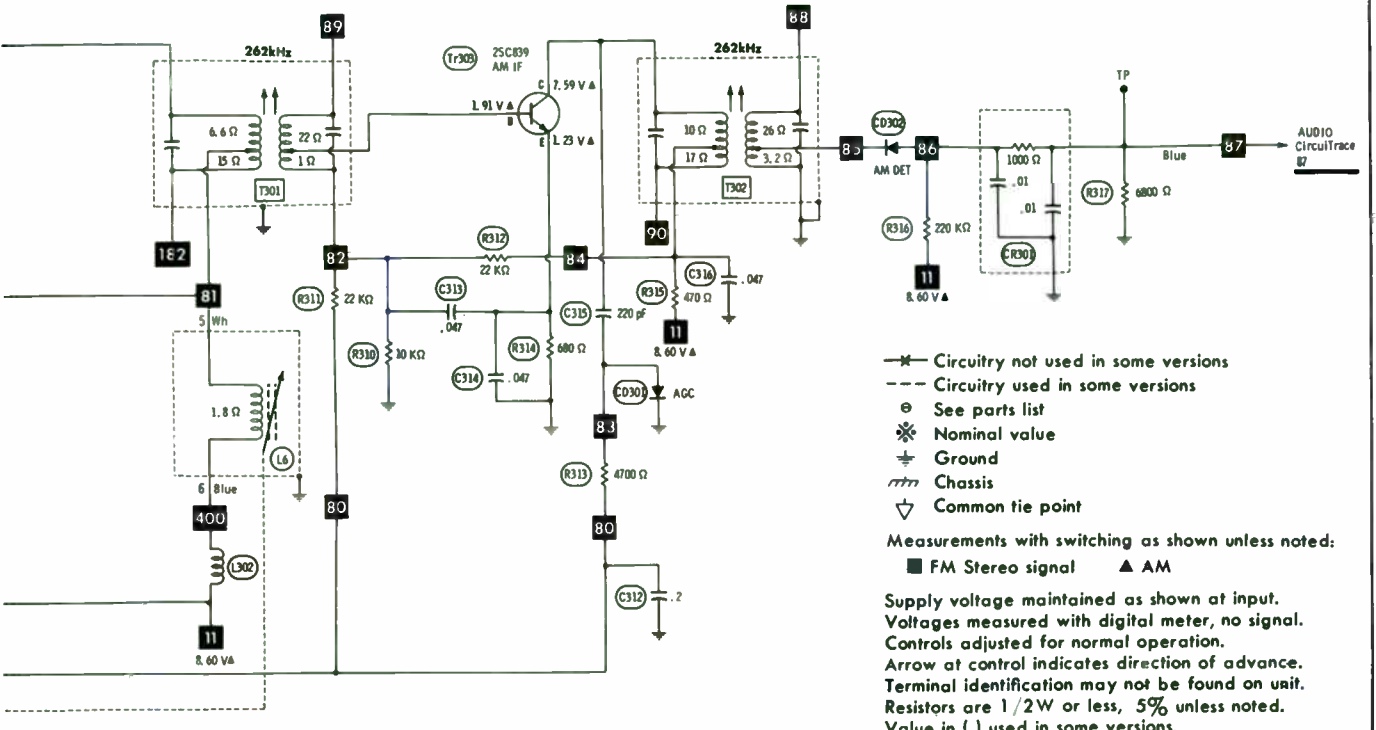
© Howard W. Sams & Co., Inc. 1976



Terminal Guides



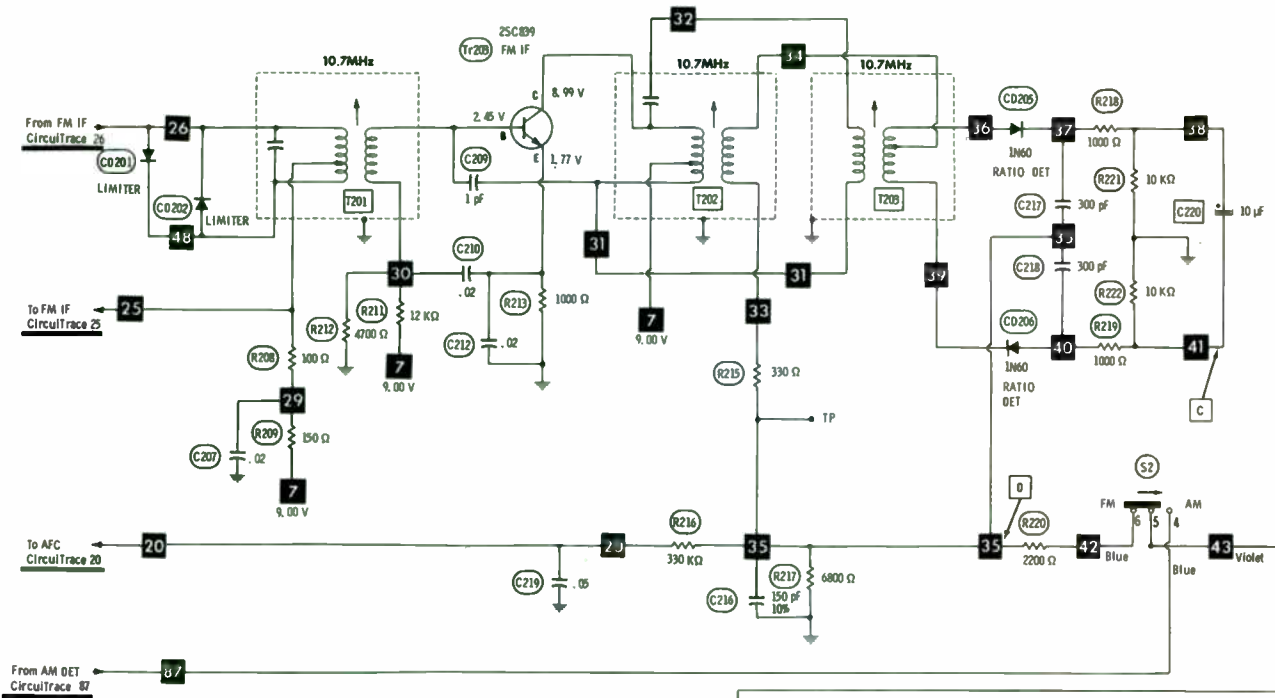
20 RATIO DET CircuitTrace 20



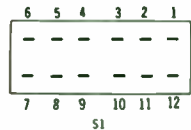
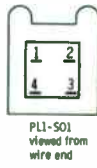
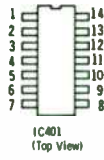
- ✖ Circuitry not used in some versions
- Circuitry used in some versions
- ⊙ See parts list
- ⊛ Nominal value
- ⊥ Ground
- ⏏ Chassis
- ⏏ Common tie point

Measurements with switching as shown unless noted:
 ■ FM Stereo signal ▲ AM

Supply voltage maintained as shown at input.
 Voltages measured with digital meter, no signal.
 Controls adjusted for normal operation.
 Arrow at control indicates direction of advance.
 Terminal identification may not be found on unit.
 Resistors are 1/2W or less, 5% unless noted.
 Value in () used in some versions.



Terminal Guides



X Circuitry not used in some versions

--- Circuitry used in some versions

- ⊙ See parts list
- * Nominal value
- ⊕ Ground
- ⌚ Chassis
- ▽ Common tie point

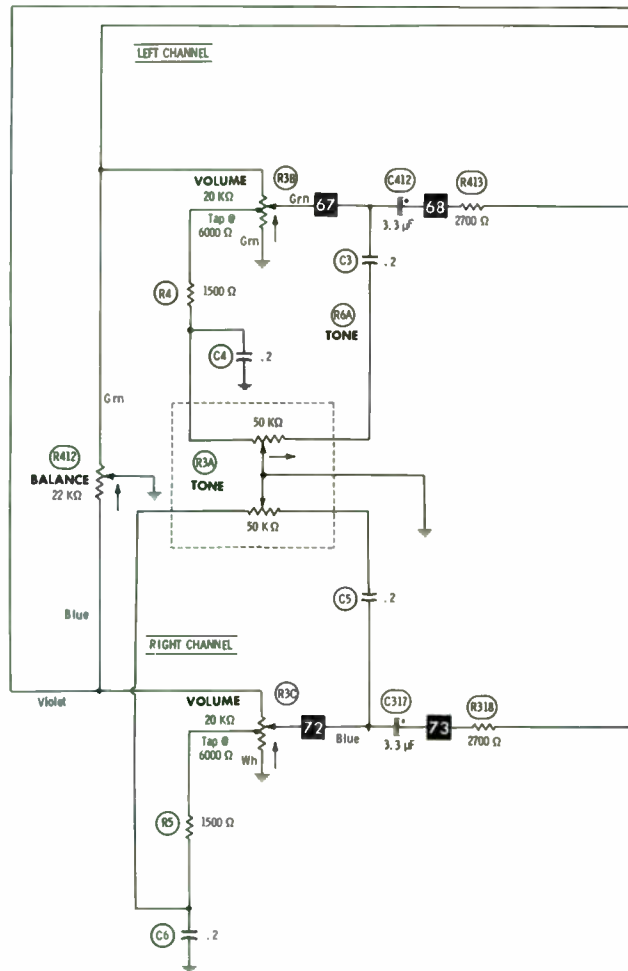
Measurements with switching as shown unless noted:

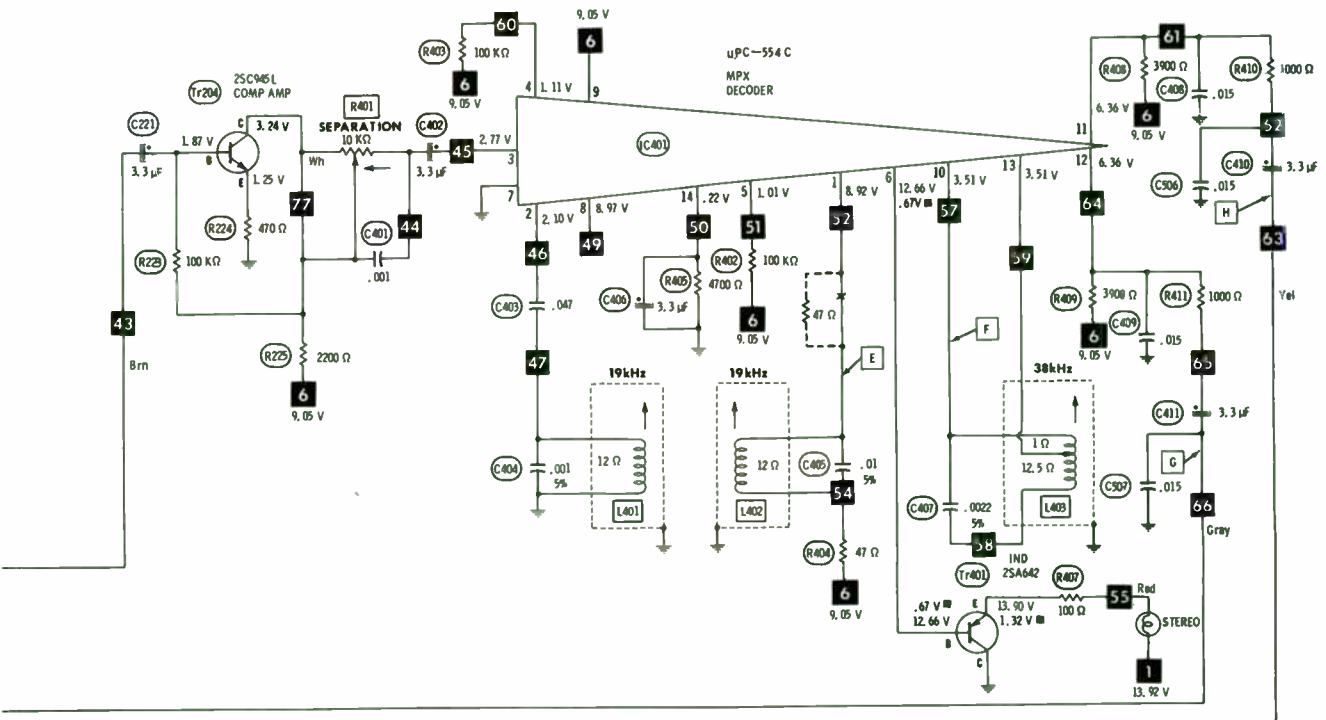
■ FM Stereo signal ▲ AM

Supply voltage maintained as shown at input.
 Voltages measured with digital meter, no signal.
 Controls adjusted for normal operation.
 Arrow at control indicates direction of advance.
 Terminal identification may not be found on unit.
 Resistors are 1/2W or less, 5% unless noted.
 Value in () used in some versions.

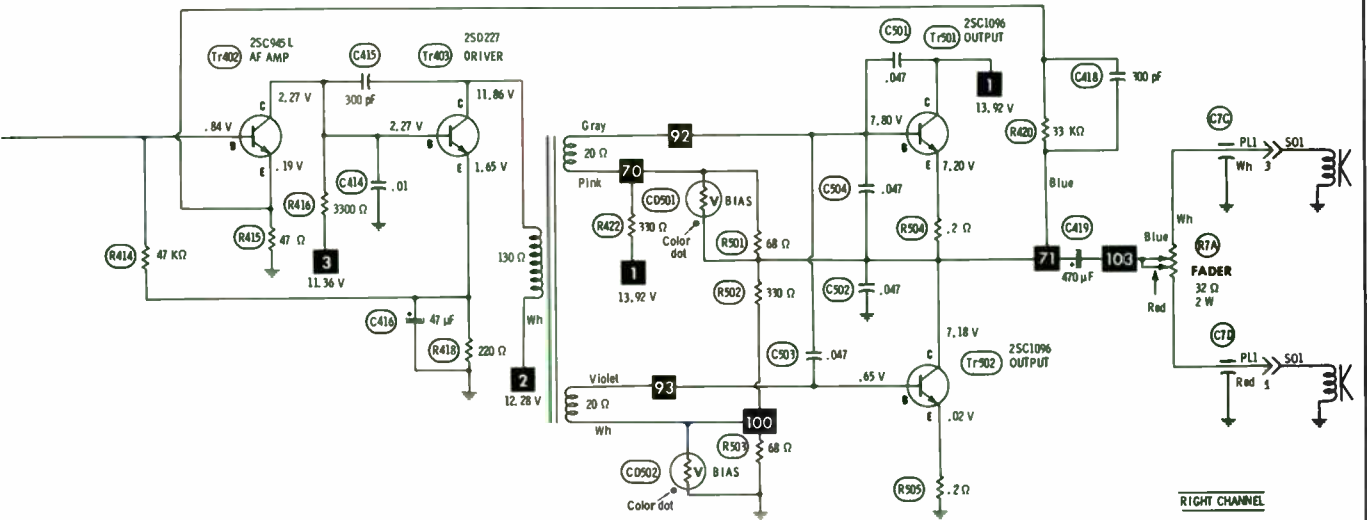
A PHOTOFAC STANDARD NOTATION SCHEMATIC
 WITH **CIRCUITRACE™**

© Howard W. Sams & Co., Inc. 1976

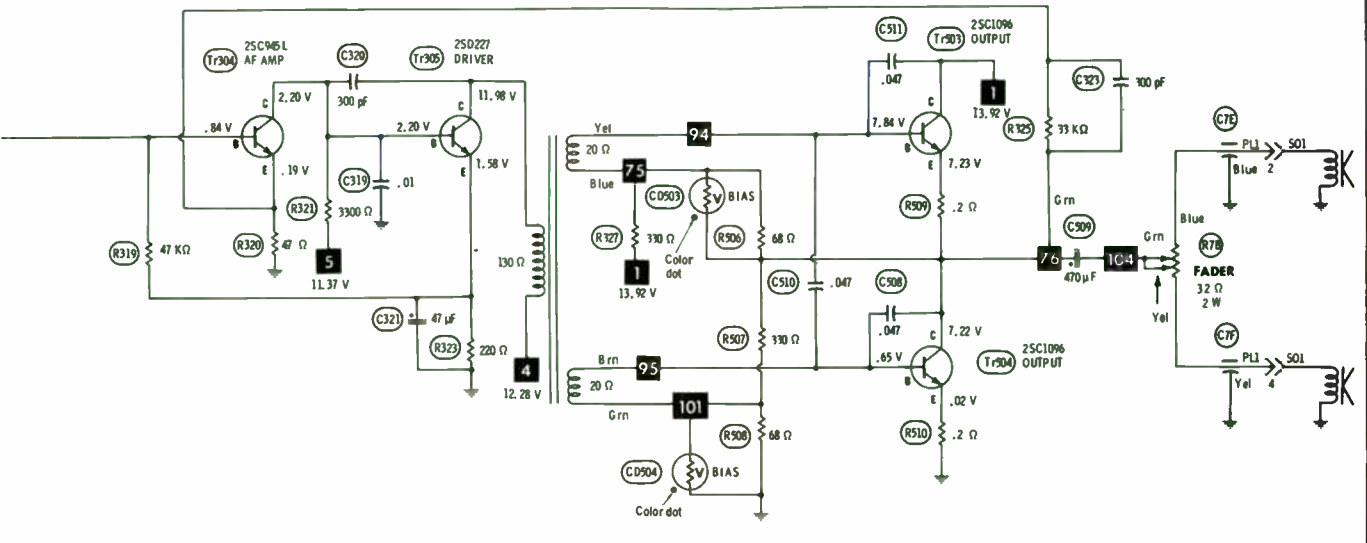




LEFT CHANNEL



RIGHT CHANNEL



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.)
Ignition Noise Suppression	Use BELDEN No. 7300-Series Spark-Plug Sets

SEMICONDUCTORS (Select replacement transistor for best results)

ITEM No.	TYPE No.	MFR. PART No.	REPLACEMENT DATA								
			GENERAL ELECTRIC PART No.	MALLORY PART No.	MOTOROLA PART No.	RAYTHEON PART No.	RCA PART No.	SPRAGUE PART No.	SYLVANIA PART No.	WORKMAN PART No.	
CD101	1TT410	(8.75 Volt Zener)	GE-90		HEPR2503	RE 195	SK3126	RT-262		D201	
CD201	1S1555		GE-300	PTC214	HEPRO602	RE 52	SK3100	RT-218	ECG177	D200	
CD202	1S1555		GE-300	PTC214	HEPRO602	RE 52	SK3100	RT-218	ECG177	D200	
CD205	1N60		1N60(7)	PTC206M(6)	HEPR9135(7)	RE 86(6)	SK3088(7)	RT-263(7)	ECG110(6)	1N60(7)	
CD206	1N60										
CD301	1N60			1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109	1N60
CD302	1N60			1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109	1N60
CD303	RD-9A			GEZD-9.1	PTC505	HEPZ0412	RE 114	SK3060	RT-240	ECG139	Z1209
CD501	1S1209										
	(Varistor)										
CD502	1S1209										
	(Varistor)										
CD503	1S1209										
	(Varistor)										
CD504	1S1209										
	(Varistor)										
IC201	TA7061AP									ECG1100	
IC401	UPc554c									ECG1142	
Tr101	2SK37			GE-FET-2	PTC152	HEPF0021	RE 45	SK3116	RT-175	ECG132	FE-100
Tr102	2SC922M			GE-17	PTC115	HEPS0020	RE 9	SK3018	RT-107A	ECG107	TR-24
Tr103	2SC922M			GE-17	PTC115	HEPS0020	RE 9	SK3018	RT-107A	ECG107	TR-24
Tr201	2SC839H			GE-61	PTC121	HEPS0015	RE 13	SK3018	RT-107A	ECG123A	TR-24
Tr202	2SC839H			GE-61	PTC121	HEPS0015	RE 13	SK3018	RT-107A	ECG123A	TR-24
Tr203	2SC839H			GE-61	PTC121	HEPS0015	RE 13	SK3018	RT-107A	ECG123A	TR-24
Tr204	2SC945R			GE-210	PTC121	HEPS0015	RE 192	SK3124	RT-107A	ECG123A	TR-24
Tr301	2SC941R			GE-210	PTC139	HEPS0016	RE 192	SK3122	RT-107A	ECG199	TR-21
Tr302	2SC839H			GE-61	PTC121	HEPS0015	RE 13	SK3018	RT-107A	ECG123A	TR-24
Tr303	2SC839H			GE-61	PTC121	HEPS0015	RE 13	SK3018	RT-107A	ECG123A	TR-24
Tr304	2SC945R			GE-210	PTC121	HEPS0015	RE 192	SK3124	RT-107A	ECG199	TR-21
Tr305	2SD227W			GE-81	PTC123	HEPS0011	RE 13	SK3124	RT-172	ECG123A	TR-21
Tr401	2SA642W		GE-82	PTC103	HEPS0019	RE 26	SK3118	RT-126A	ECG159	TR-20	
Tr402	2SC945R		GE-210	PTC121	HEPS0015	RE 192	SK3124	RT-107A	ECG199	(IR) 2SC945	
Tr403	2SD227W		GE-81	PTC123	HEPS0011	RE 13	SK3124	RT-172	ECG123A	TR-21	
Tr501	2SC1096L	(10)	GE-28	PTC110	HEPS5027	RE 42	SK3054	RT-197	ECG186A	TR-55	
Tr502	2SC1096L	(10)	GE-28	PTC110	HEPS5027	RE 42	SK3054	RT-197	ECG186A	TR-55	
Tr503	2SC1096L	(10)	GE-28	PTC110	HEPS5027	RE 42	SK3054	RT-197	ECG186A	TR-55	
Tr504	2SC1096L	(10)	GE-28	PTC110	HEPS5027	RE 42	SK3054	RT-197	ECG186A	TR-55	

- (6) Matched pair.
- (7) Two required - select matched pair.
- (10) Rating, 10 watt @ 2.0 amp.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA			
		MFR. PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.
C213	10 16V		PC10-25	VTT10A25	EV-1222
C220	10 16V		PC10-25	VTT10A25	EV-1222
C221	3.3 35V		PC5-50	VTT3R3A50	EV-1618
C301	33 6.3V		PC30-25	VTT33A10	EV-1125
C317	3.3 35V		PC5-50	VTT3R3A50	EV-1618
C318	100 16V		PC100-16	VTT100F16	EV-1230
C321	47 10V		PC50-16	VTT47D16	EV-1226
C322	330 16V		WBR300-35	VTT330H16	EV-1245
C324	220 16V		PC250-25	VTT220G16	EV-1240
C325	330 10V		WBR300-35	VTT330G10	EV-1145
C402	3.3 35V		PC5-50	VTT3R3A50	EV-1618
C406	3.3 35V		PC5-50	VTT3R3A50	EV-1618
C410	3.3 35V		PC5-50	VTT3R3A50	EV-1618
C411	3.3 35V		PC5-50	VTT3R3A50	EV-1618
C412	3.3 35V		PC5-50	VTT3R3A50	EV-1618
C413	100 16V		PC100-16	VTT100F16	EV-1230
C416	47 10V		PC50-16	VTT47D16	EV-1226
C417	330 16V		WBR300-35	VTT330H16	EV-1245
C419	470 16V		PC500-16	VTT470J16	EV-1250
C505	1000 16V		PC1000-16	VTT1000L16	EV-1260
C509	470 16V		PC500-16	VTT470J16	EV-1250

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	MFR. PART No.	REPLACEMENT DATA			
			CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.
C1	20		DTZ-20	NP020	CN0420	10TCC-Q20
C2						
C3	.2			DPMS2P2	PVC602	2PS-P20
C4	.2			DPMS2P2	PVC602	2PS-P20
C5	.2			DPMS2P2	PVC602	2PS-P20
C6	.2			DPMS2P2	PVC602	2PS-P20
C7A						
C7B						
C7C						
C7D						
C7E						
C7F						
C101	22		DTZ-22	NP022	CN0422	10TCC-Q22
C102	3		DTZ-3R3	NP03P3	CN0533	10TCC-V33
C103						
C104	4 NPO		DTZ-4R7	NP04P7	CN0537	10TCC-V47
C105	1					
C106	15		DTZ-15	NP015	CN0415	10TCC-Q15
C107	15		DTZ-15	NP015	CN0415	10TCC-Q15
C108						
C109	10 NPO		DTZ-10	NP010	CN0410	10TCC-Q10
C110	1.5					
C111	.02		DC-203		MAG5012	2SS-S20
C112	10 N470				*	10TCT-Q10
C113	45 N470				*	10TCT-Q47
C114	5 N470				*	10LCT-V50
C115						
C116	4 NPO		DTZ-4R7	NP04P7	CN0537	10TCC-V47
C117	.02		DC-203		MAG5012	2SS-S20
C118	.02		DC-203		MAG5012	2SS-S20
C119	.51pF					
C120	.51pF					
C121	.001		DD-102	GP1000	GP210	2SS-D10
C122	.02		DC-203		MAG5012	2SS-S20
C125	.02		DC-203		MAG5012	2SS-S20
C201	.02		DC-203		MAG5012	2SS-S20
C202	.02		DC-203		MAG5012	2SS-S20
C203	.02		DC-203		MAG5012	2SS-S20
C204	.02		DC-203		MAG5012	2SS-S20
C205	.02		DC-203		MAG5012	2SS-S20
C206	.02		DC-203		MAG5012	2SS-S20
C207	.02		DC-203		MAG5012	2SS-S20
C208	.047		DC-503	MGP05	MAG5015	TGL-S50
C209	1					
C210	.02		DC-203		MAG5012	2SS-S20
C212	.02		DC-203		MAG5012	2SS-S20
C216	150 10%		DTZ-150		CN0315	10TCC-T15
C217	300		DD-301	GP300	GP330	10TS-T30
C218	300		DD-301	GP300	GP330	10TS-T30
C219	.05		DC-503	MGP05	MAG5015	TGL-S50
C302	.047		DC-503	MGP05	MAG5015	TGL-S50
C303	.02		DC-203		MAG5012	2SS-S20
C304						
C305	33		DTZ-33	NP033	CN0433	10TCC-Q33
C306	80 10%		DTZ-82	NP082	CN0482	10TCC-Q82
C307	.0033		DD-332	GP3300	GP233	2SS-D33
C308	.01		DC-103	GP10000	MAG5011	2SS-S10
C309	.0033		DD-332	GP3300	GP233	2SS-D33
C310						
C311	200 N470				*	10LCT-T20
C312	.2					
C313	.047		DC-503	MGP05	PVC602	2PS-P20
C314	.047		DC-503	MGP05	MAG5015	TGL-S50
C315	220		DD-221		GP322	10TS-T22
C316	.047		DC-503	MGP05	MAG5015	TGL-S50
C319	.01		DC-103	GP10000	MAG5011	2SS-S10
C320	300		DD-301	GP300	GP330	10TS-T30
C323	300		DD-301	GP300	GP330	10TS-T30
C401	.001		DD-102	GP1000	GP210	2SS-D10
C403	.047		DC-503	MGP05	MAG5015	TGL-S50
C404	.001 5%			CD19FD102J03	SX210	424ME1001J501
C405	.01 5%			CD20FD103J03	SX110	
C407	.0022 5%			CD19FD222J03	SX222	424ME2201J501
C408	.015		DC-203		MAG5012	2SS-S20
C409	.015		DC-203		MAG5012	2SS-S20
C414	.01		DC-103	GP10000	MAG5011	2SS-S10
C415	300		DD-301	GP300	GP330	10TS-T30
C418	300		DD-301	GP300	GP330	10TS-T30
C501	.047		DC-503	MGP05	MAG5015	TGL-S50
C502	.047		DC-503	MGP05	MAG5015	TGL-S50
C503	.047		DC-503	MGP05	MAG5015	TGL-S50
C504	.047		DC-503	MGP05	MAG5015	TGL-S50
C506	.015		DC-203		MAG5012	2SS-S20
C507	.015		DC-203		MAG5012	2SS-S20
C508	.047		DC-503	MGP05	MAG5015	TGL-S50
C510	.047		DC-503	MGP05	MAG5015	TGL-S50
C511	.047		DC-503	MGP05	MAG5015	TGL-S50

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

AUDIOVOX 1975 SERIES

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.

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

ITEM No.	FUNCTION	RESISTANCE	REPLACEMENT DATA				
			MFGR. PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	MALLORY PART No.	TRW PART No.
R3A B	Tone/L0-DX Switch Volume-Left	50K 20K Tap 10K	VR-61 (5)				
C	Volume-Right/ Power Switch	20K Tap 10K					
R7A B	Fader-Left Fader-Right	32 2W 32 2W	VR-63B (5)				
R401	19kHz	10K					
R412	Balance	20K	VR-119				

(5) Number on unit.

COILS (RF-IF)

ITEM No.	FUNCTION	REPLACEMENT DATA			REMARKS
		PART No.	OTHER IDENTIFICATION	MILLER PART No.	
L1	FM Ant	(1)			(1) Part of M1 (Tuner)
L2	FM RF	(1)			
L3	FM Osc	(1)			
L4	AM Ant	(1)			
L5	AM RF	(1)			
L6	AM Osc Tuning	(1)			
L7	AM Ant Choke				
L101	RF Choke (2.2uH)			70F226A1	
L102	10.7MHz Trap				
L103	RF Choke (22uH)				
L201	RF Choke (22uH)				
L301	AM Osc		0L809		
L302	Image Trap (4.7uH)			70F476A1	
L401	19kHz		ML554B		
L402	19kHz		ML554B		
L403	38kHz		ML554C		
T101	IF (10.7MHz)		T830B		
T201	IF (10.7MHz)		T830B		
T202	Ratio Det (Pri)				
T203	Ratio Det (Sec)				
T301	IF (262kHz)				
T302	IF (262kHz)		IT-218B-1		

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA			NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (O CURRENT 1000~)	MFGR. PART No.	THORDARSON PART No.	TRIAD PART No.	
L501	235mA	.5	5.5mH				

TRANSFORMER (Driver)

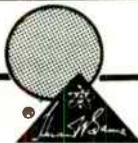
ITEM No.	TURNS RATIO			REPLACEMENT DATA			NOTES
	PRI.	SEC. 1	SEC. 2	MFGR. PART No.	THORDARSON PART No.	TRIAD PART No.	
T401	2.6	1	1				(1) Number on unit.
T303	2.6	1	1	DT-2 (1) DT-2 (1)			

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	3 A			AGC3	HDJ	312003	150145	FG3-2

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
CF201	Filter		Ceramic, (10.7MHz) Ceramic, (10.7MHz) AM Detector AM/FM (Number on unit) AM/FM
CF202	Filter		
CR301	Network		
M1	Tuning Coil Assembly	PT-298 (1)	
S2	Switch		



PHOTOFACT[®] with

CIRCUITRACE[®]

For Supplier Address See PHOTOFACT Index



MODEL IDC-3224

SEQUENCE OF OPERATION

AUTOMATIC MODEL IDC-3224

PLAY

Pressing a cassette into Holder (14) pivots Lever (43) to release Roller (15) permitting Spring (57) to pull Holder (14) down. Holder (14) actuates Switch (SW4) and moves cassette onto Fins (31) and the capstan. Holder (14) also pivots Lever (60) to actuate Switch (SW3).

The motor -- through Pulley (8B), Belt (40), Flywheel (39), Belt (41), Pulley (33), Felt (34), and Spindle (30) -- drive Fins (31).

Holder (14) also moves Lever (16) against Lever (50) to slide Lever (16), moving head against tape. Lever (16) also moves Support (21) along Lever (48) until a notch in Lever (48) permits Spring (24) to press Roller (20) against the capstan.

FAST FORWARD (FROM PLAY)

Pressing the Fast Forward button slides Lever (50) to allow Springs (25) to slide Lever (16), moving head from tape and Roller (20) from the capstan.

Lever (50) also pivots Spring (35) to increase pressure on Pulley (33).

The motor -- through Pulley (8B), Belt (40), Flywheel (39), Belt (41), Pulley (33), Felt (34), and Spindle (30) -- drive Fins (31).

EJECT/STOP

Pressing the Eject button moves Lever (53) to pivot Arm (52). Arm (52) raises Holder (14) to actuate Switch (SW4) to move Lever (16), and to cause Spring (59) to pivot Plate (60), actuating Switch (SW3). Lever (16) causes Support (21) to pivot Lever (48) moving Roller (20) from the capstan. Lever (16) also moves head from tape.

Holder (14) raises the cassette from Fins (31) and causes Roller (15) to pivot Lever (43) until a notch in Lever (43) permits Spring (45) to move Lever (43), ejecting cassette.

HOWARD W. SAMS & CO., INC. Indianapolis, Indiana 46206

© 1976 Howard W. Sams & Co., Inc.

Printed in U. S. of America

6AL-900

TROUBLE CHART

IMPORTANT: Before consulting this chart, refer to "General Servicing Information" on page 4.

SYMPTOM	REMARKS
Take-up erratic or inoperative in Play or Fast Forward.	Belt (41) dirty, worn, or binding. Pulley (33) binding, dirty, or worn. Felt (34) dirty or worn. Spring (35) weak or worn.
Fast Forward erratic or inoperative.	Belt (41) dirty, worn, or binding. Pulley (33) binding, dirty, or worn. Felt (34) dirty or worn. Spring (35) weak or worn. Lever (16) binding. Spring (25) weak.
Eject inoperative	Spring (45) weak or out of place. Roller (15) damaged, worn, or binding. Lever (53) damaged, worn, or binding. Lever (43) binding.

CLEANING

LUBRICATING

HEAD DEMAGNETIZING

Refer to "General Servicing Information" on page 4.

MECHANICAL PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
88	705-0164	Motor Pulley	39	702-0024	Flywheel (Assembly)
10	702-0025	Flywheel Bearing	40*	704-0031*	Flywheel Belt*
11	716-0054	Fast Forward Return Spring	41*	704-0032*	Take-up Belt*
14	703-0193	Cassette Holder	43	701-0399	Cassette Holder Stop Lever
15	705-0132	Cassette Holder Guide Roller	45	716-0068	Stop Lever Return Spring
16	701-0395	Pick-up Support Lever		716-0050 (1)	
20*	704-0033*	Pinch Roller*	48	703-0195 (2)	Tape Protection Lever
21	701-0461	Pinch Roller Support	49	716-0060-001	Tape Protection Spring
24	716-0051	Pinch Roller Spring		(2)	
25	716-0048	Pick-up Support Lever Spring (2 used)	50	701-0475	Fast Forward Lever
27	701-0396	Clutch Support Plate	52	701-0440	Reject Arm
30	703-0139	Friction Mechanism (Spindle)	53	701-0441	Reject Lever
31	703-0141	Clutch Plate (Fins)	56	716-0059	Reject Spring
32	716-0047	Hand Brake Spring	57	716-0067	Cassette Holder Return Spring
33	703-0140	Friction Pulley		716-0072 (1)	
34	720-0022	Felt	59	716-0066	Activating Spring
35	701-0397	Leaf Spring		716-0069 (1)	
38	703-0112	Flywheel Stopper	60	701-0344	Switch Activating Plate
			78	716-0065	Head Spring

(1) May be used in some units.

(2) Part of Tape Protection Assembly Number 754-0011.

* Pinch Roller - E-V/GAME Replacement Number 1407-94.

WALSCO Replacement Number 1499-70.

* Flywheel Belt - E-V/GAME Replacement Number 1425-28.

WALSCO Replacement Number 1425-28.

* Take-up Belt - E-V/GAME Replacement Number 1425-08.

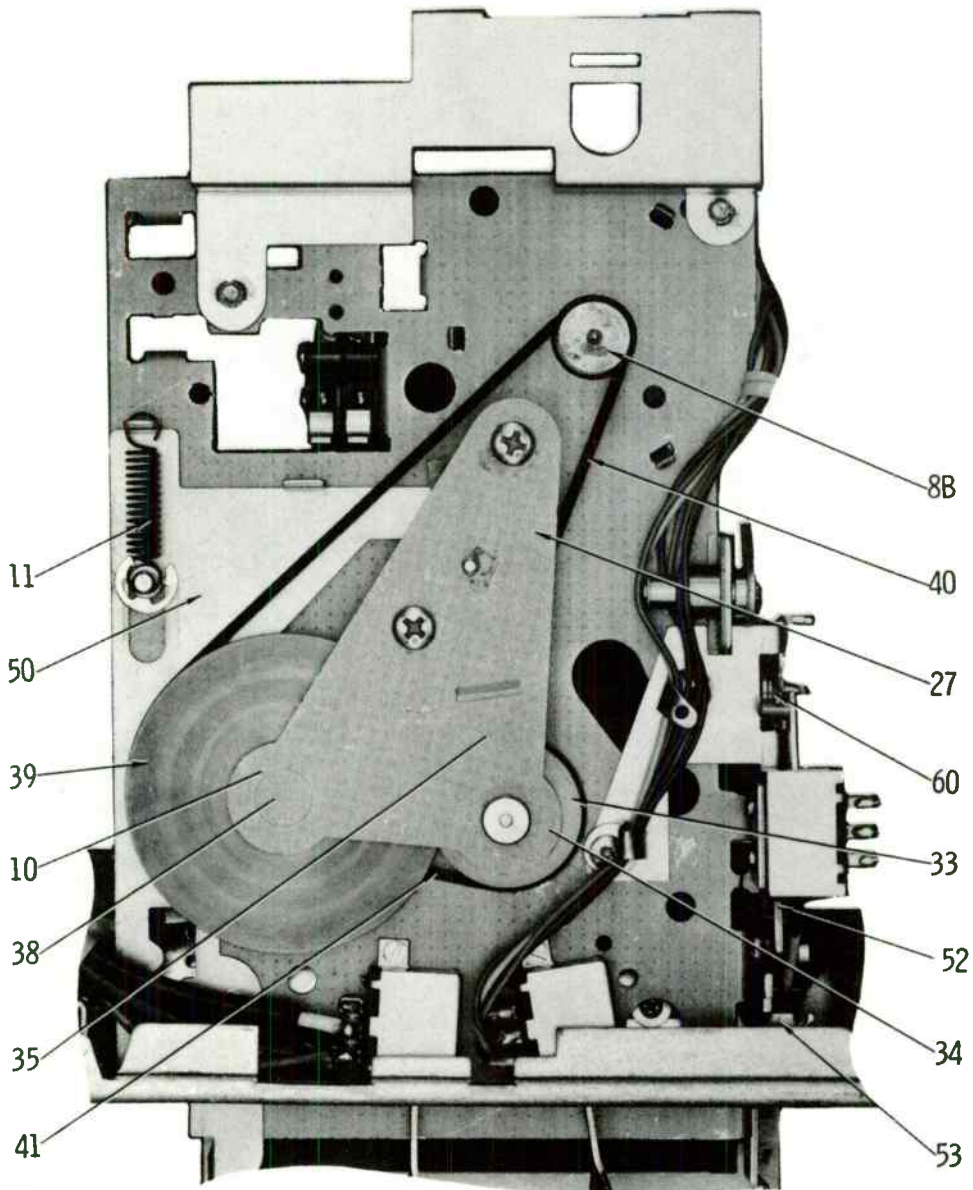
WALSCO Replacement Number 1425-08.

ADJUSTMENTS

IMPORTANT: Before making any adjustments, refer to "General Servicing Information" on page 4.

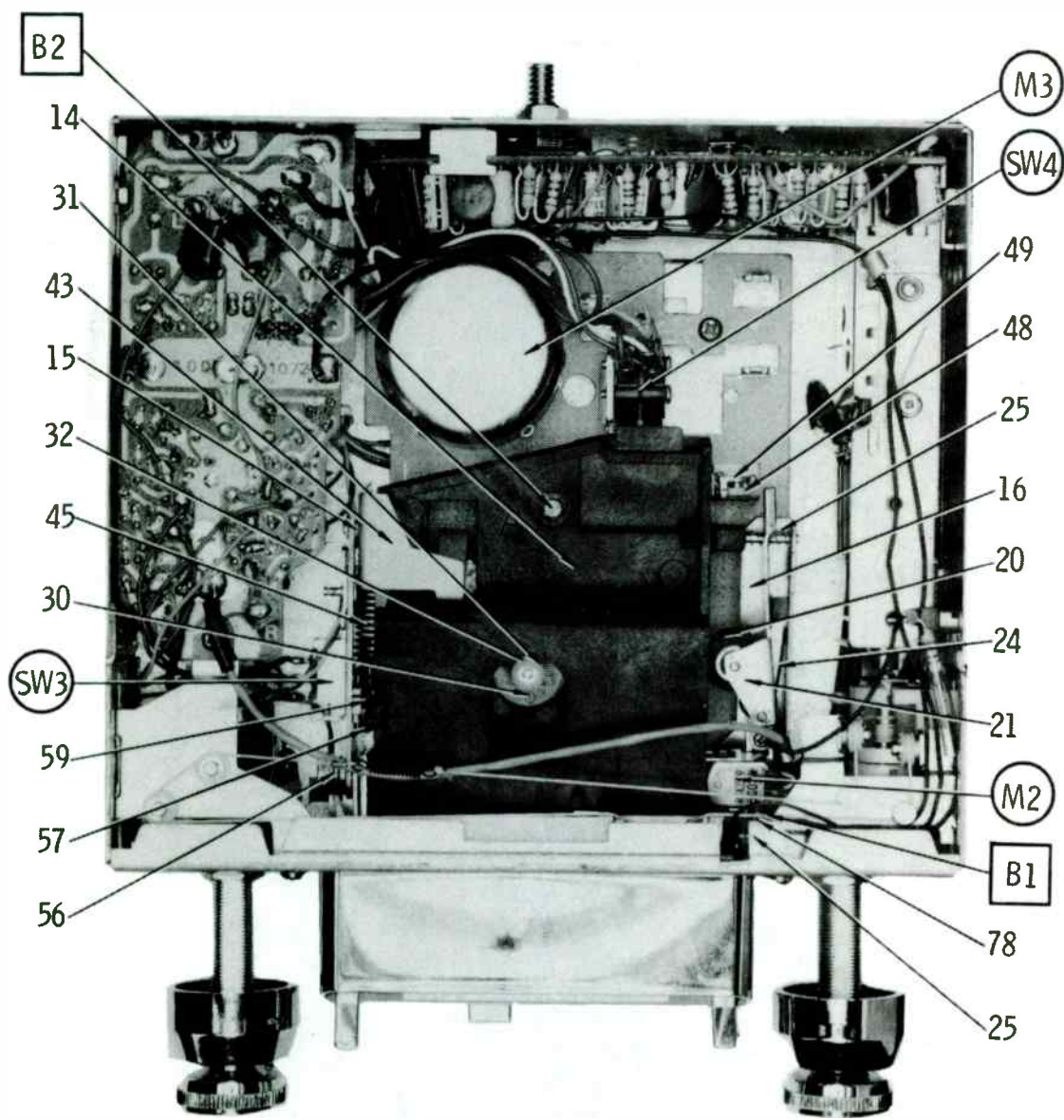
1. All voltage measurements referred to in this chart are made at a tape speed of $1\frac{7}{8}$ ips with an AC-DC VTVM.
2. All torque measurements are made at a tape speed of $1\frac{7}{8}$ ips with a spring scale applied to a point 1 inch from spindle center.
3. All pressure measurements are made by using a spring scale to determine that point at which pressure is just removed.

ADJUST	REMARKS
Play Take-up Torque	Nominal value 1/2 oz. Adjust B2.
Fast Forward Torque	Nominal value 1/2 oz. No adjustment provided. NOTE: Play Take-up Torque adjustment directly affects Fast Forward torque.
Pressure Roller Pressure	Nominal value 5 oz. No adjustment provided.

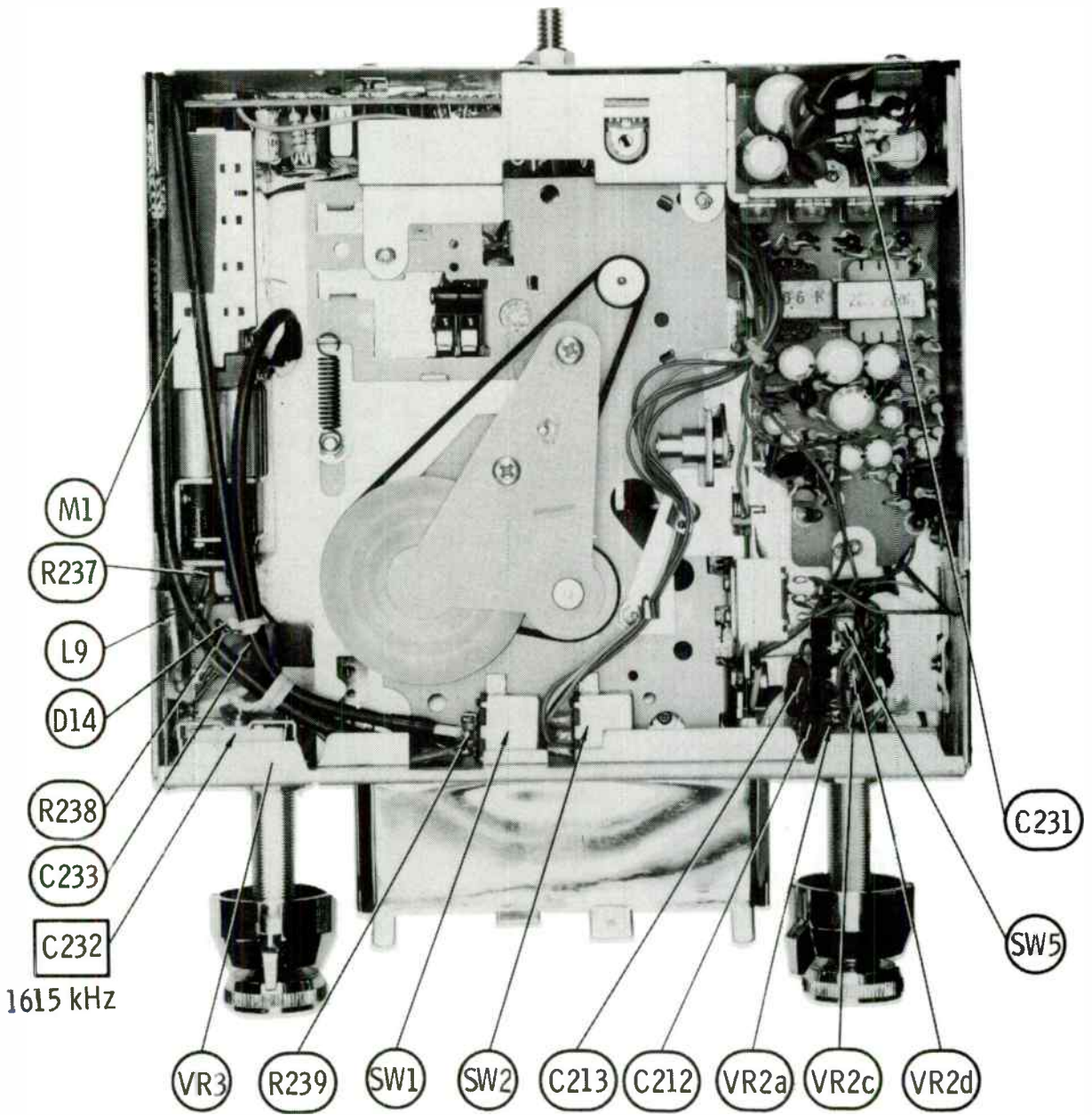


AUTOMATIC MODEL IDC-3224

TAPE DECK-BOTTOM VIEW



CHASSIS-TOP VIEW

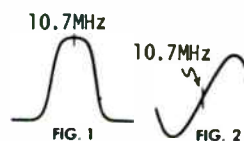


CHASSIS-BOTTOM VIEW

ALIGNMENT INSTRUCTIONS

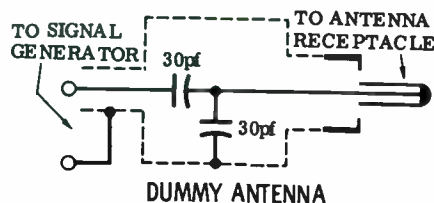
Check for specified source voltage.
Use only enough generator output
to provide a usable indication.
Suggested Alignment Tools:

GC ELECTRONICS
ALL8290, 8868, 9087



GENERATOR COUPLING	GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
High side thru .1uF to point low side to ground.	455kHz 400-Hz mod.	High freq. end stop.	Output meter across voice coil.	T1, AM IFT	Adjust for maximum.
Thru dummy antenna to antenna input.	1615kHz	"	"	AM OT, AM RT, C232	"
Thru dummy antenna to antenna input.	600kHz	Tune to signal	Output meter across voice coil.	AM OSC	Adjust for maximum. Repeat alignment until no further improvement is noted.

With radio installed in car and antenna extended 33", tune in a weak station near 1400kHz and adjust C232 for maximum output. Antenna adjustment C232 is located behind balance & tuning knobs.



DUMMY ANTENNA

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

High side of generator thru .001uF to point A, low side to ground.

GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
10.7MHz Unmodulated	Point of non-interference	DC probe of VTVM to point B common to ground.	T3, FM IFT	Adjust for maximum.
"	"	DC probe of VTVM to point C, common to ground.	T4	Adjust for zero reading. A positive or negative reading will be obtained on either side of correct setting.

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

High side of generator thru .001uF to point A, low side to ground.

Use only enough marker signal for indication. Use 60-hertz, frequency-modulated signal, 450kHz sweep. Use 60-hertz sawtooth voltage in scope for horizontal deflection.

GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
10.7MHz 450kHz Sweep	Point of non-interference	Vert input of scope to point B, low side to ground.	T3 FM IFT	Disconnect stabilizing capacitor C127. Adjust for maximum gain and symmetry of response similar to Fig. 1 with markers as shown. Reconnect C127.
"	"	Vert input of scope to point C, low side to ground.	T4	Adjust T4 to place marker at center of S curve similar to Fig. 2. Readjust T3 for maximum amplitude and straightness of line.

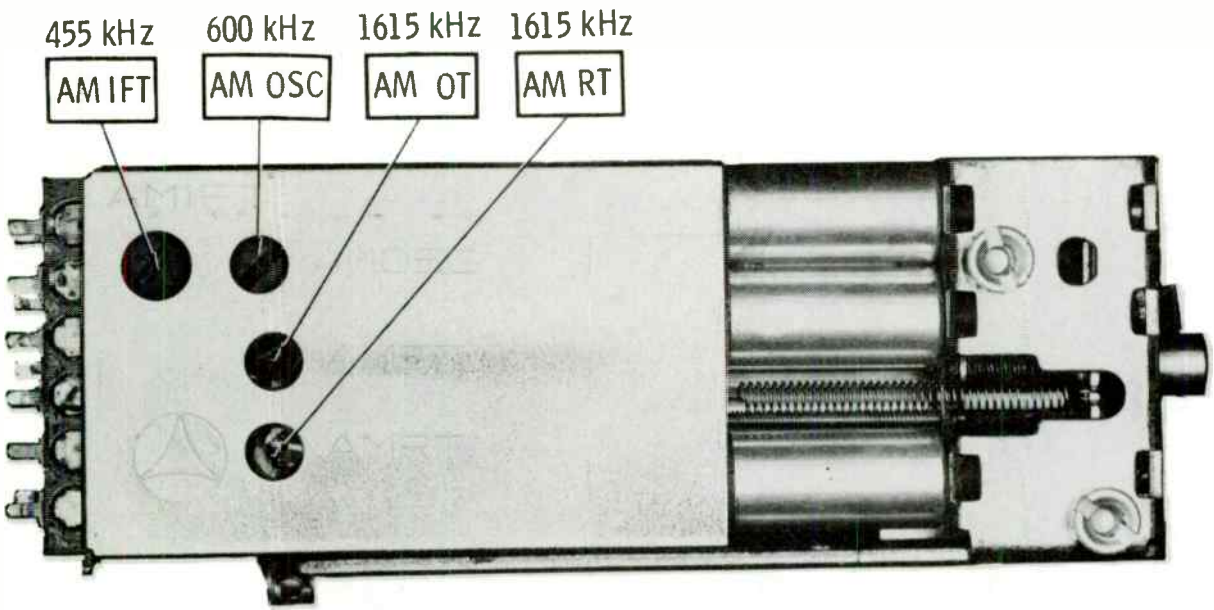
FM RF ALIGNMENT—SELECTOR IN FM POSITION

Connect generator across antenna terminals with 120-ohm carbon resistor in series with each lead. Adjustment of coils by bending should not be attempted unless the coil is deformed or replaced.

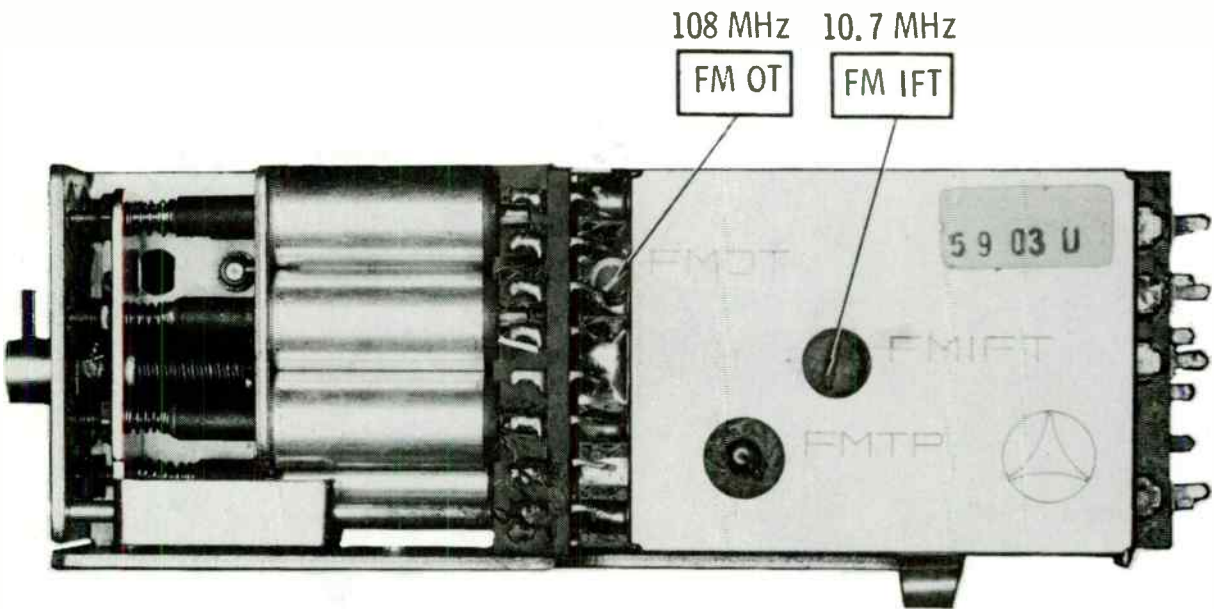
GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
108MHz Unmodulated	Tune to signal	DC probe of VTVM to point B, common to ground.	FM OT	Adjust for maximum. Repeat FM RF steps until no further improvement is noted.

FM STEREO MULTIPLEX ALIGNMENT

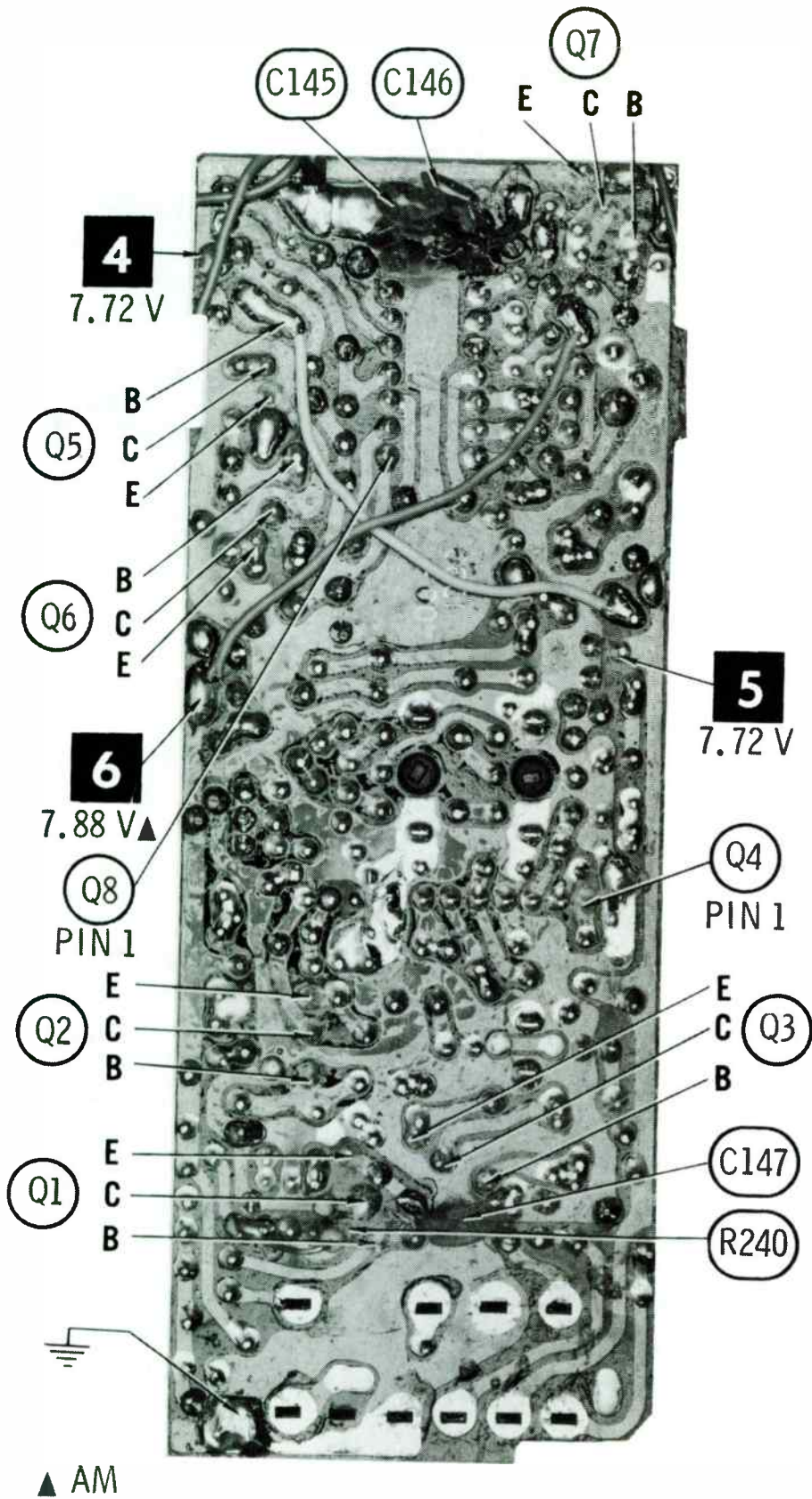
Connect Frequency thru 100K Res. to Pin 10 of Q8 (D). Adjust VR1 for 19kHz + 20Hz.



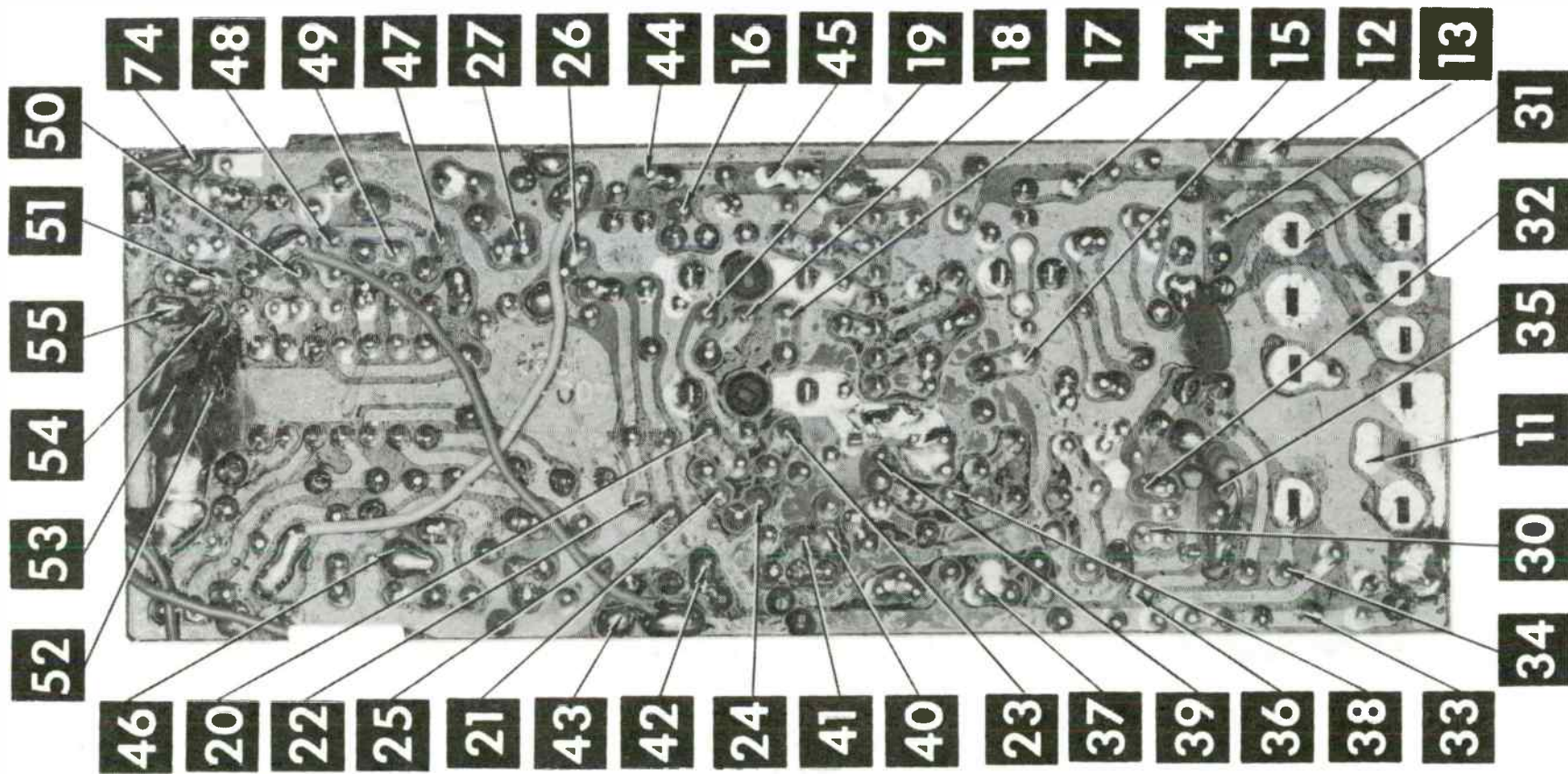
CHASSIS-FM ALIGNMENT



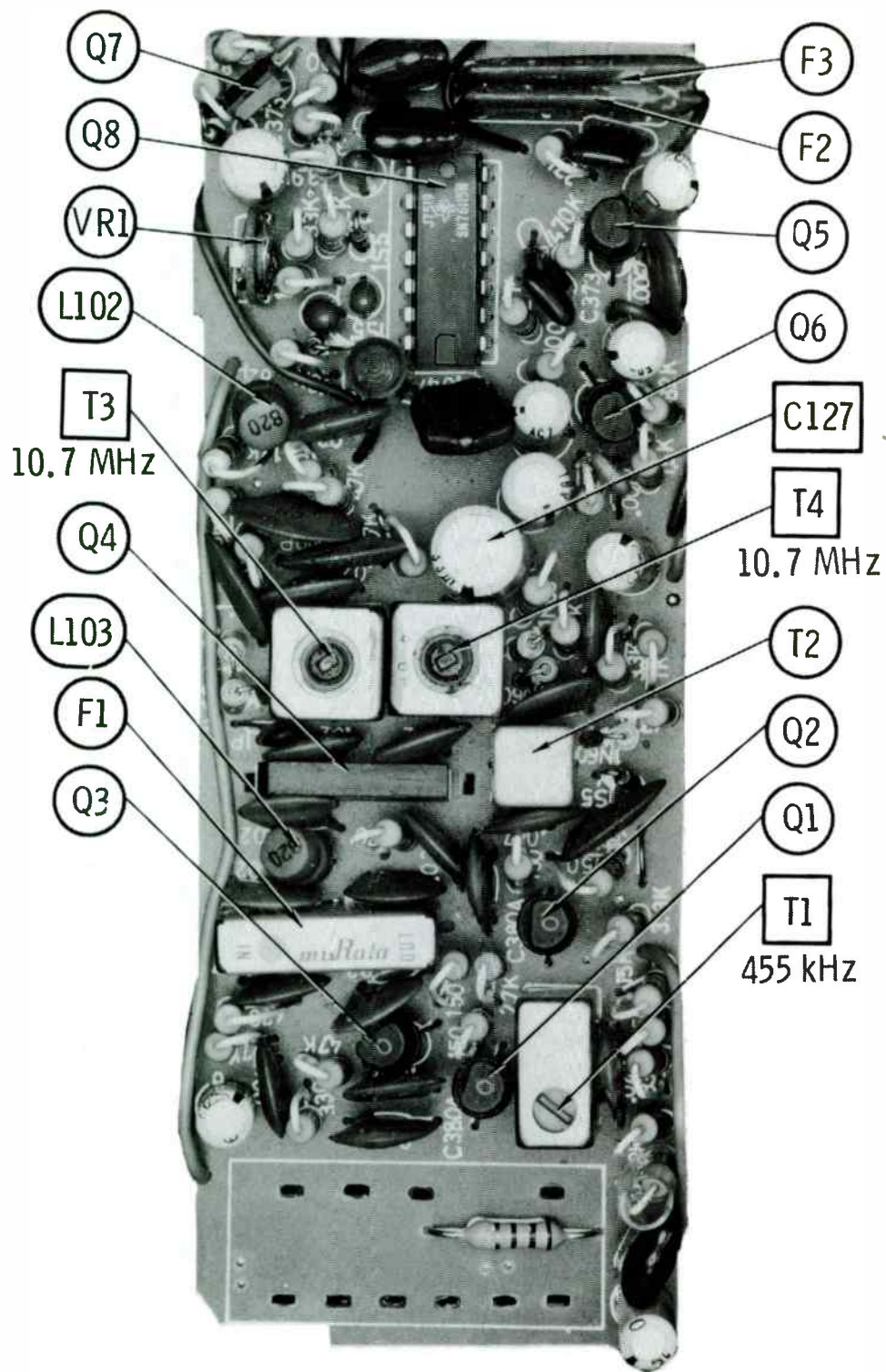
CHASSIS-AM ALIGNMENT



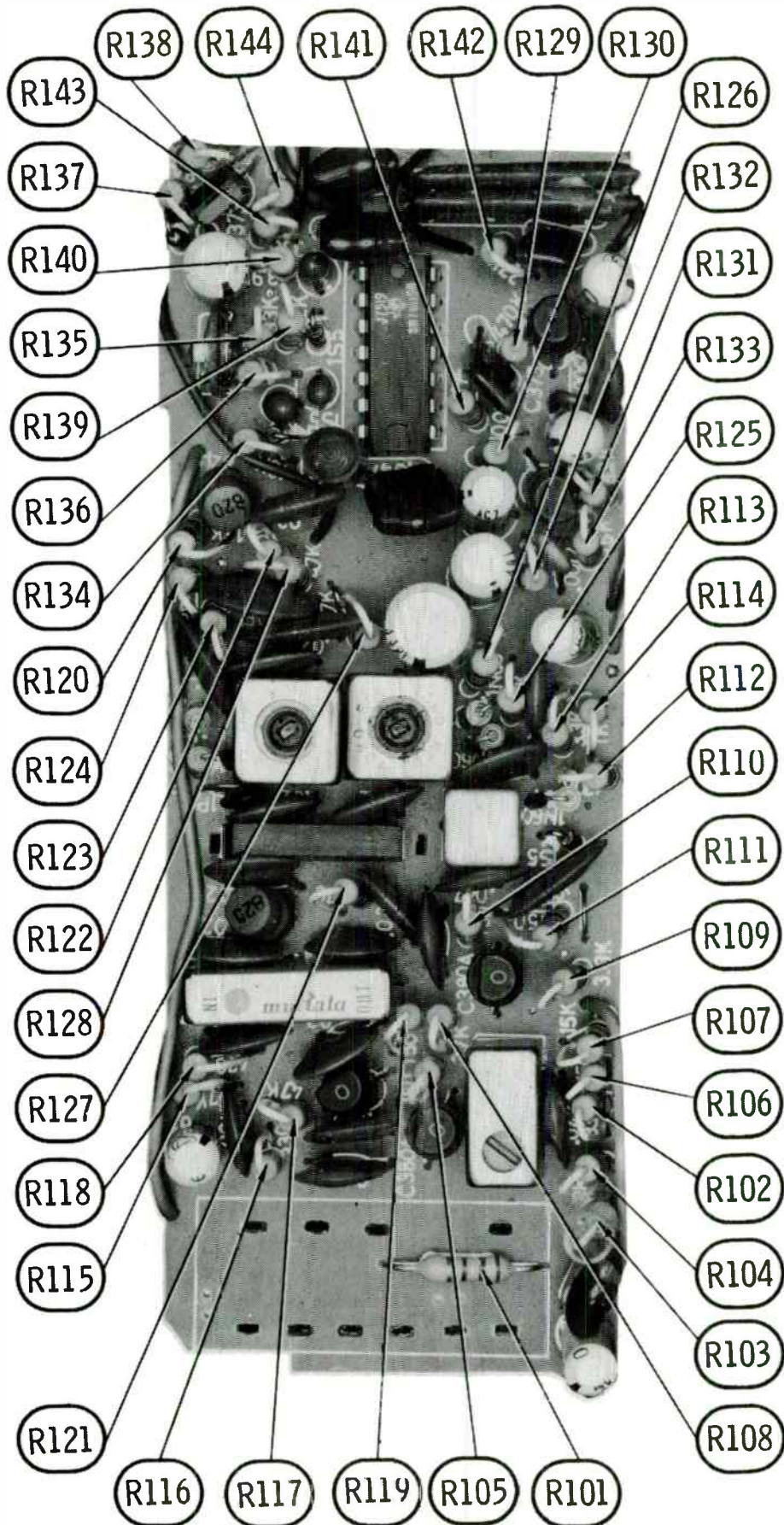
AM/FM/MPX BOARD-BOTTOM VIEW



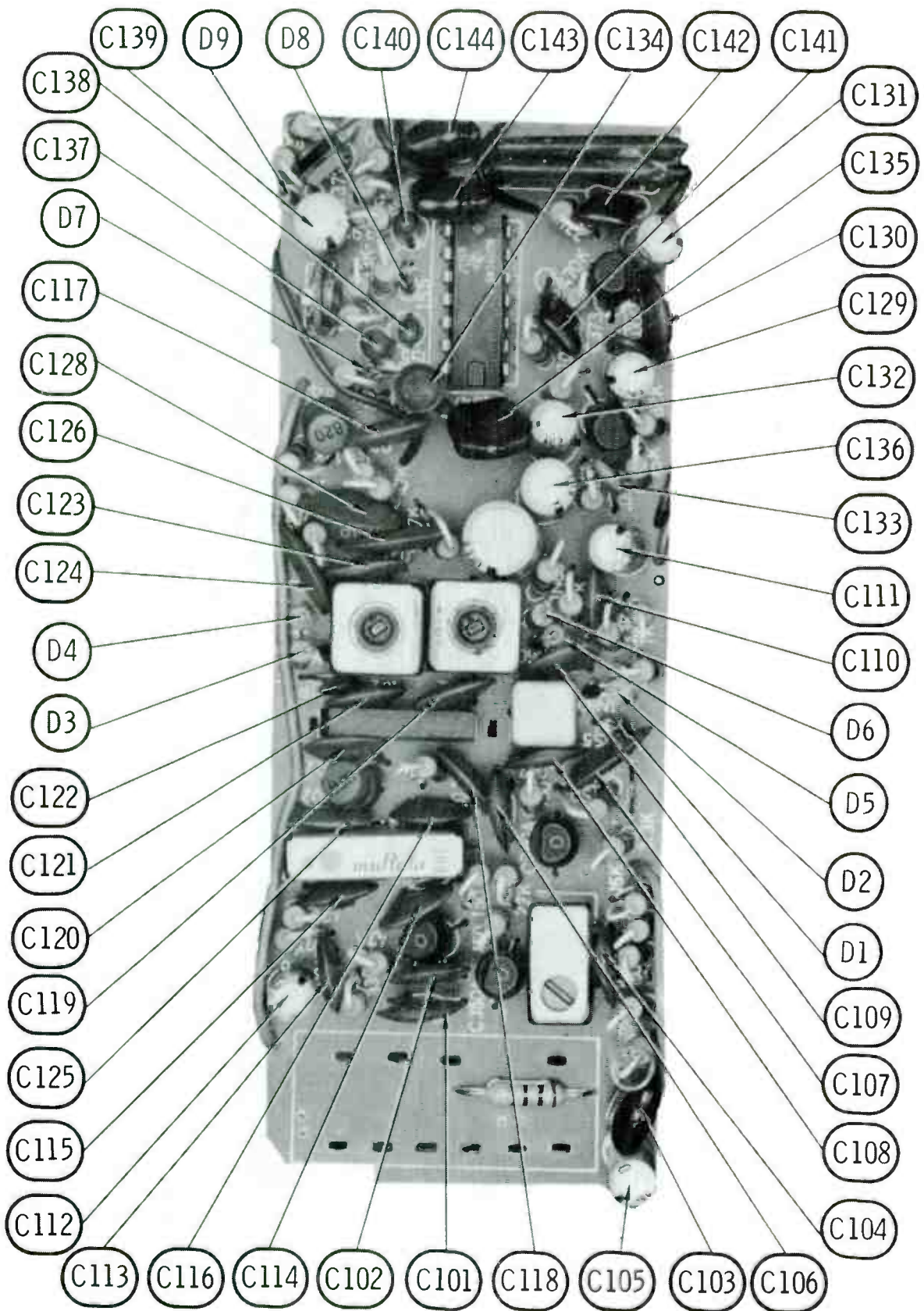
AM/FM/MPX BOARD - BOTTOM VIEW



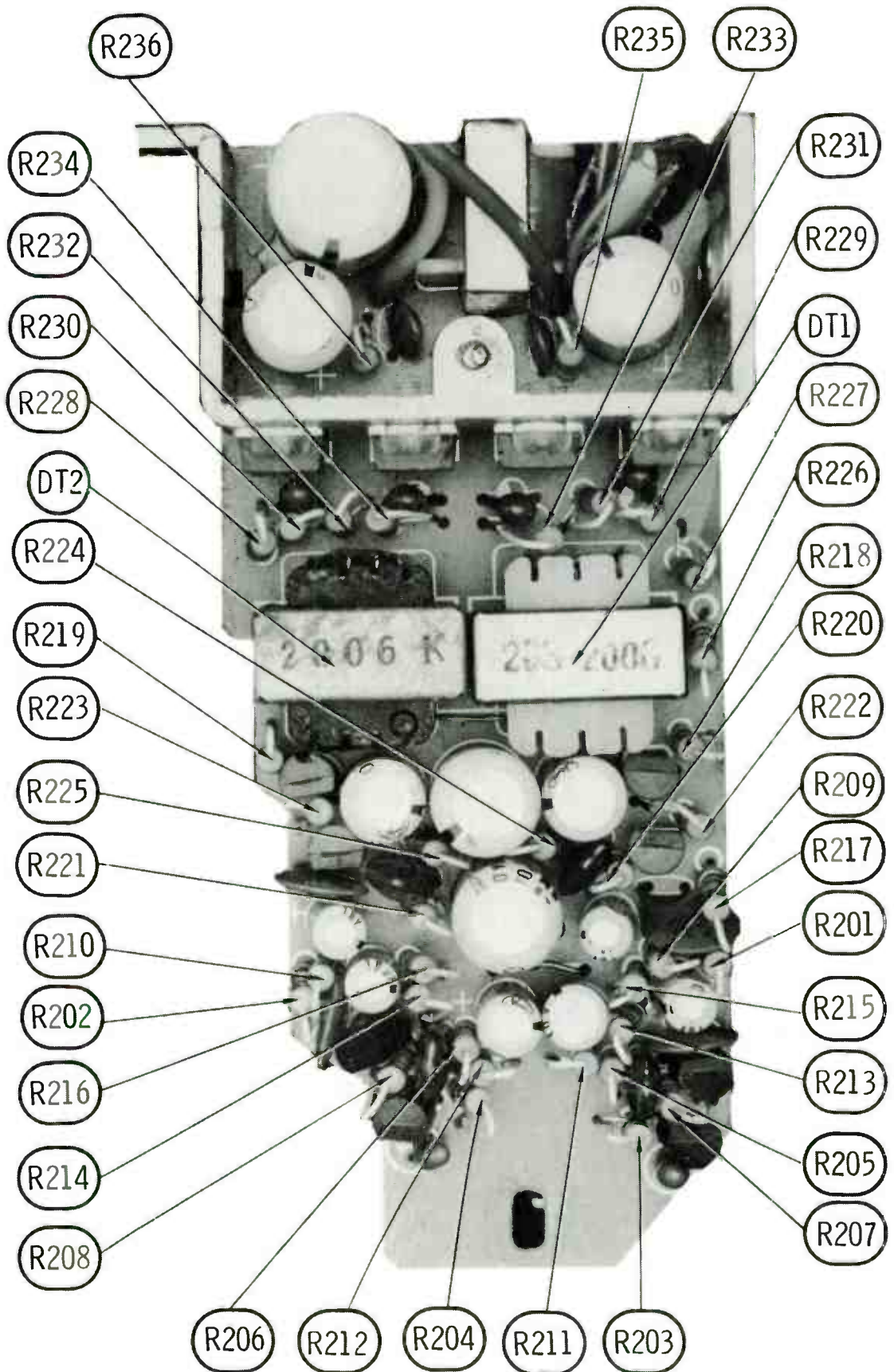
AM/FM/MPX BOARD-TOP VIEW



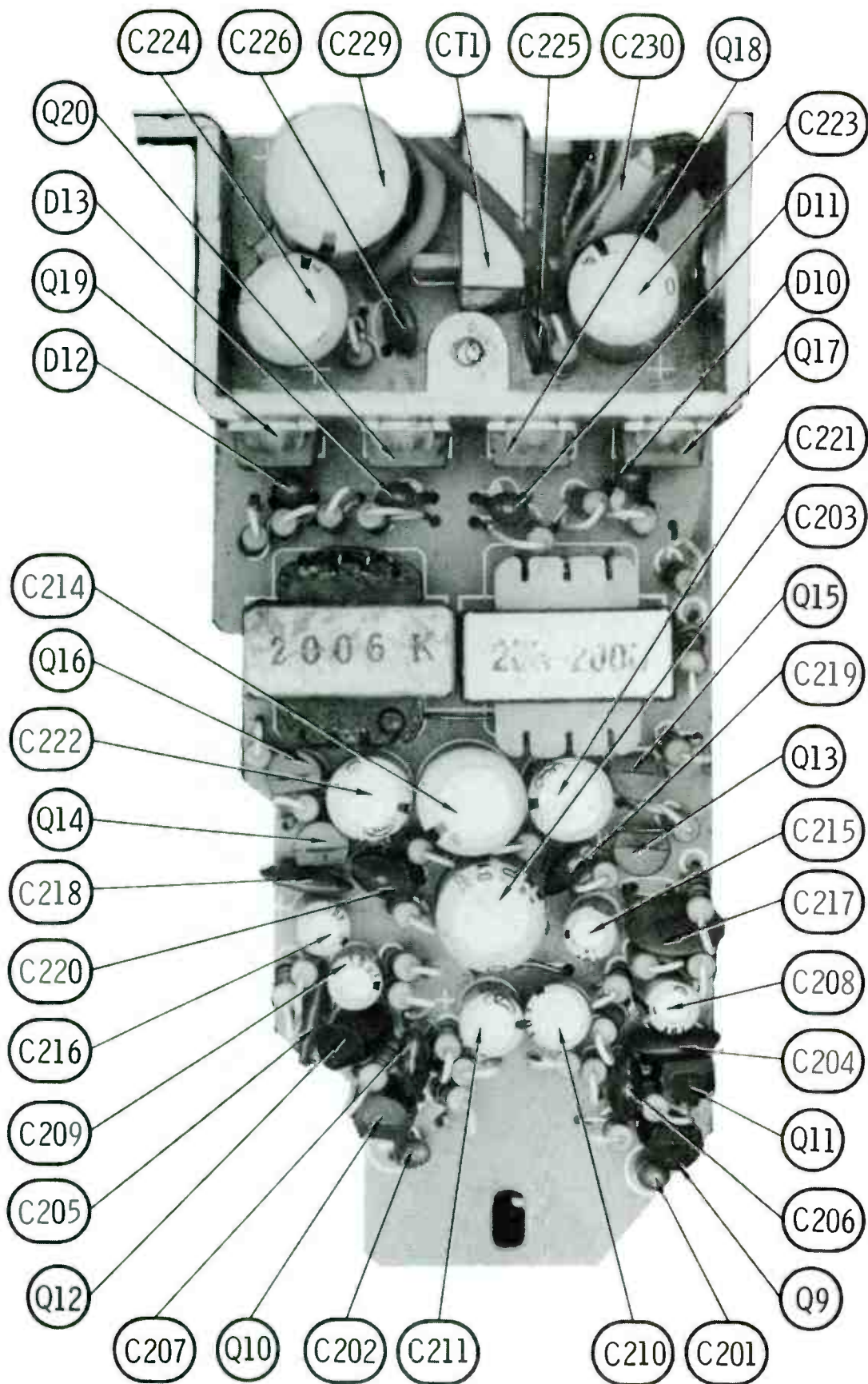
AM/FM/MPX BOARD-TOP VIEW



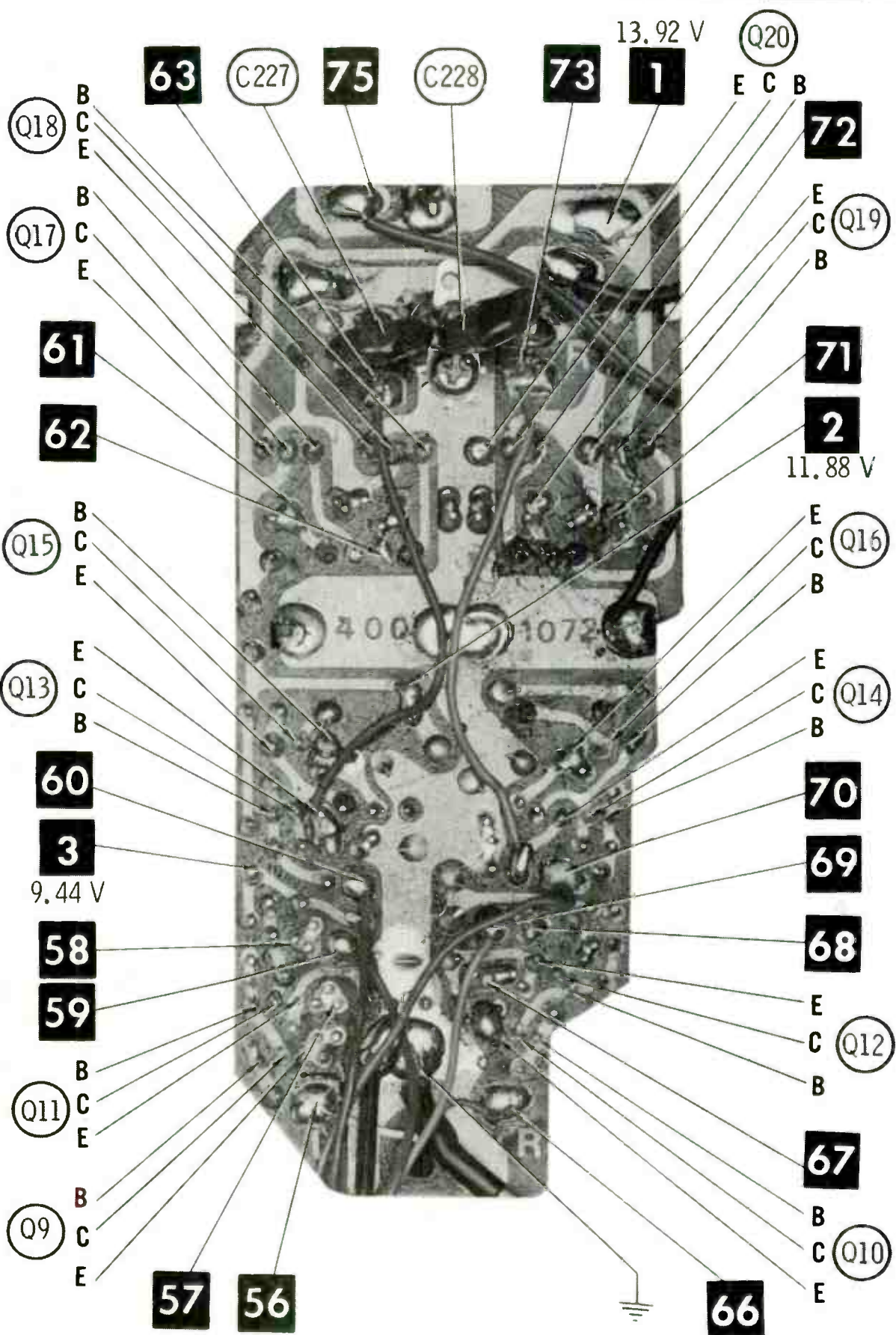
AM/FM/MPX BOARD-TOP VIEW



AUDIO BOARD-TOP VIEW



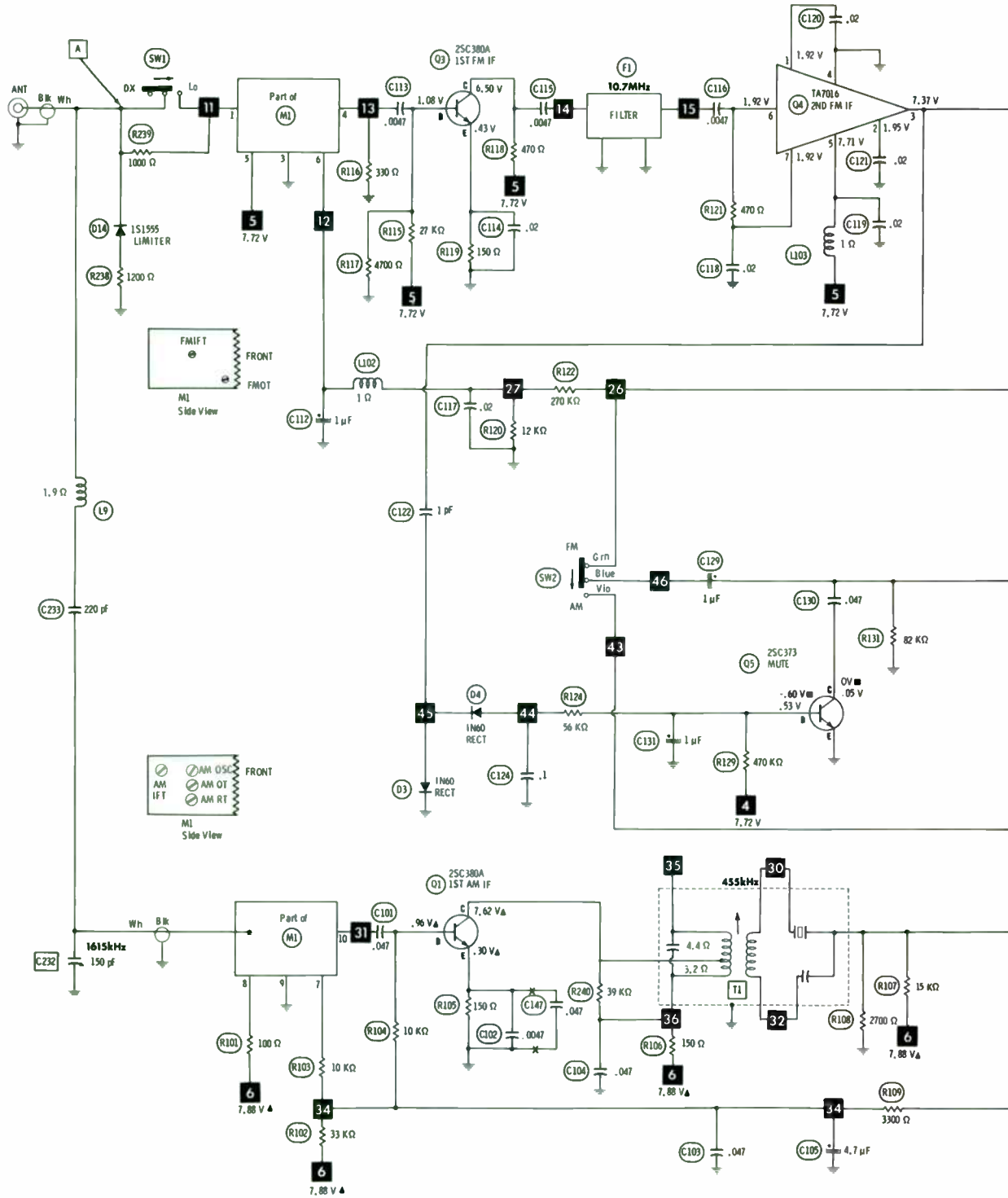
AUDIO BOARD-TOP VIEW



AUTOMATIC MODEL IDC-3224

AUDIO BOARD-BOTTOM VIEW

NOTE: DEMAGNETIZE HEADS AFTER SERVICING



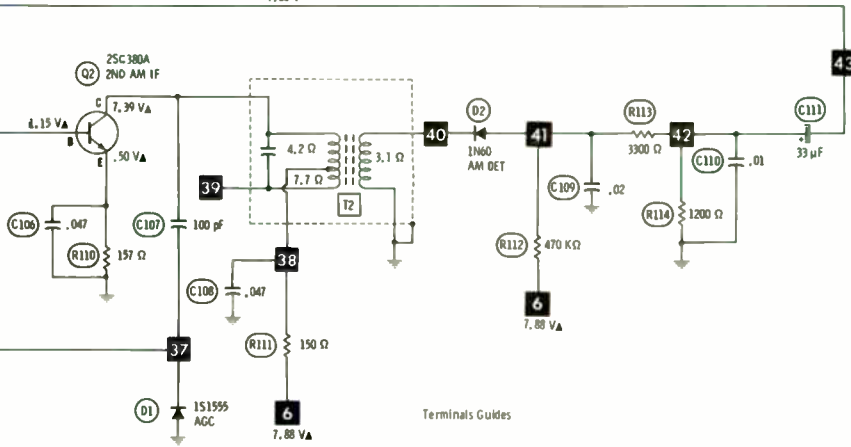
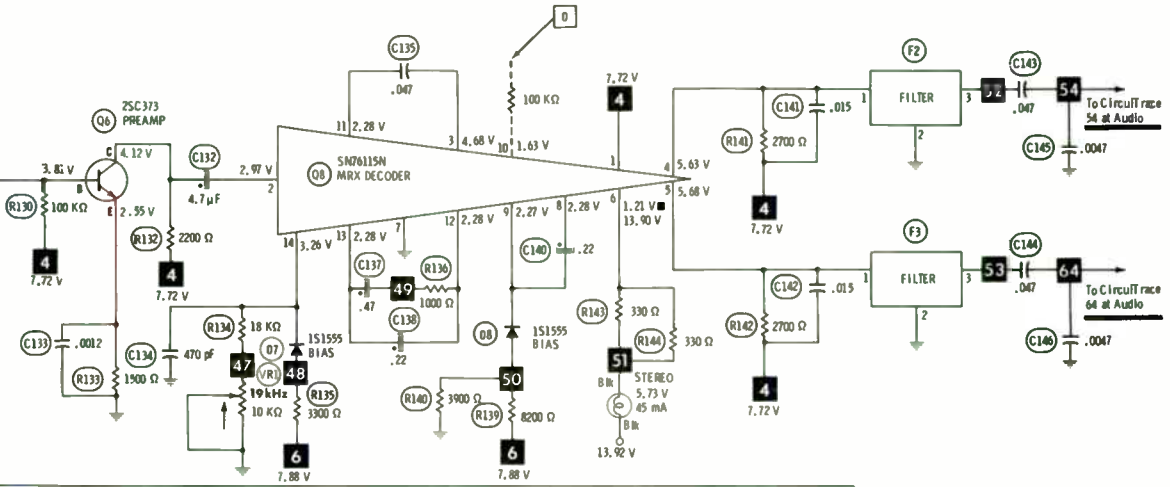
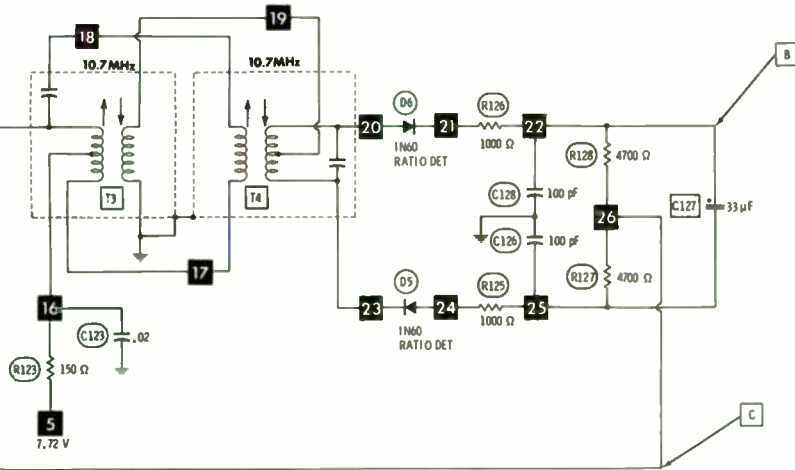
- X — Circuitry not used in some versions
- - - Circuitry used in some versions
- ⊙ See parts list
- ⊛ Nominal value
- ⊕ Ground
- ⊞ Chassis
- ▽ Common tie point

Measurements with switching as shown unless noted:

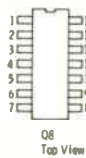
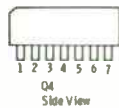
- FM Stereo signal
 - ▲ AM
 - ◆ Tape play
- Supply voltage maintained as shown at input.
 Voltages measured with digital meter, no signal.
 Controls adjusted for normal operation.
 Arrow at control indicates direction of advance.
 Terminal identification may not be found on unit.
 Resistors are 1/2W or less, 5% unless noted.
 Value in () used in some versions.

A PHOTOFAC STANDARD NOTATION SCHEMATIC
 WITH **CIRCUITRACE**

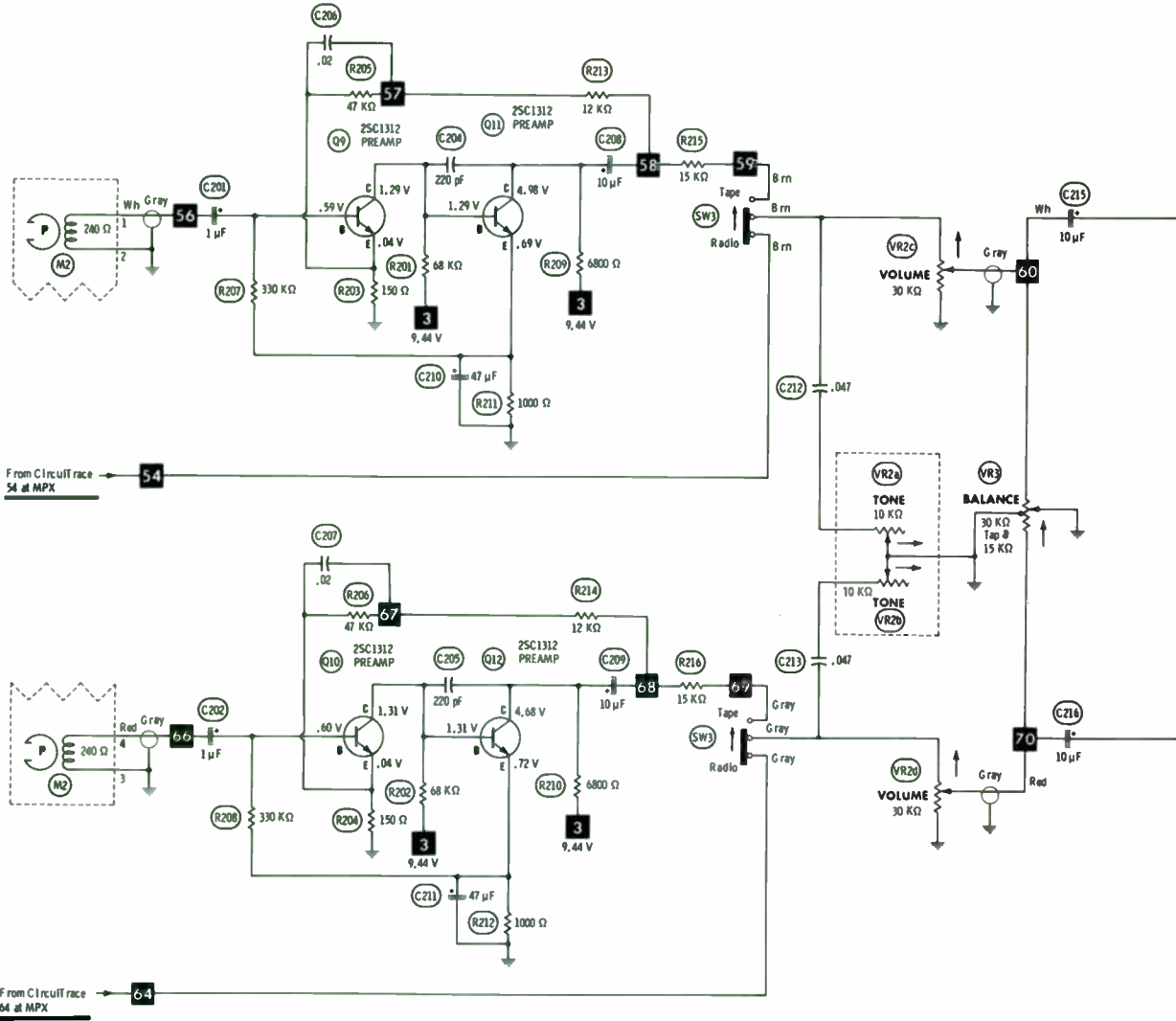
© Howard W. Sams & Co., Inc. 1976



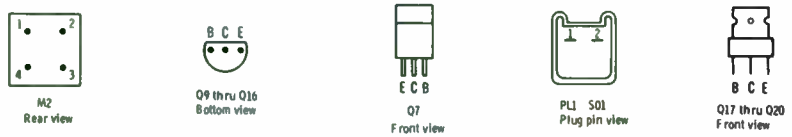
Terminals Guides



NOTE: DEMAGNETIZE HEADS AFTER SERVICING

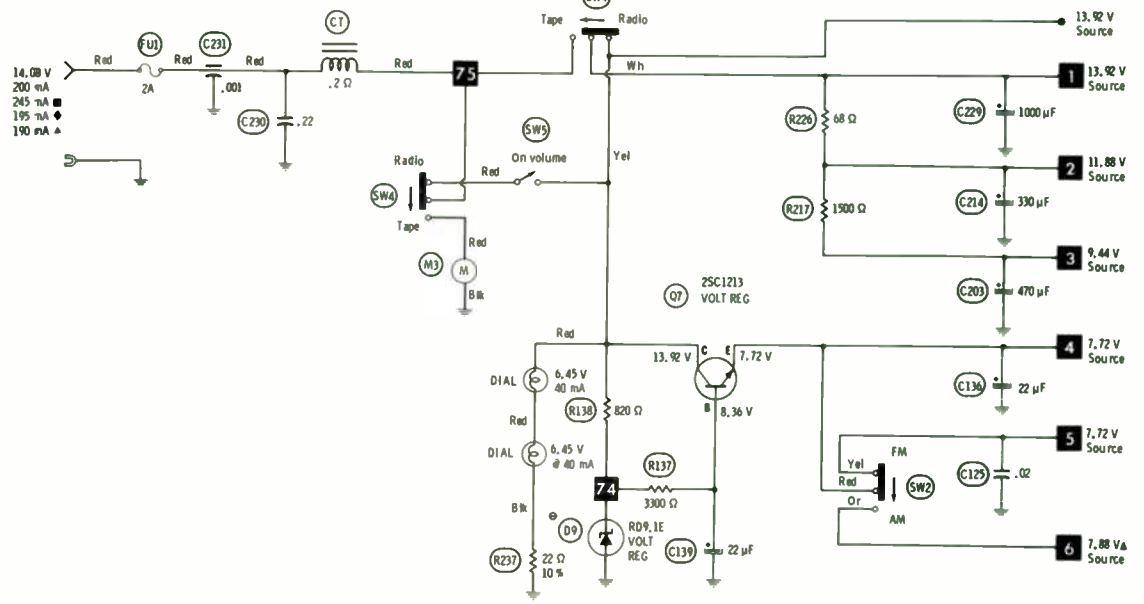
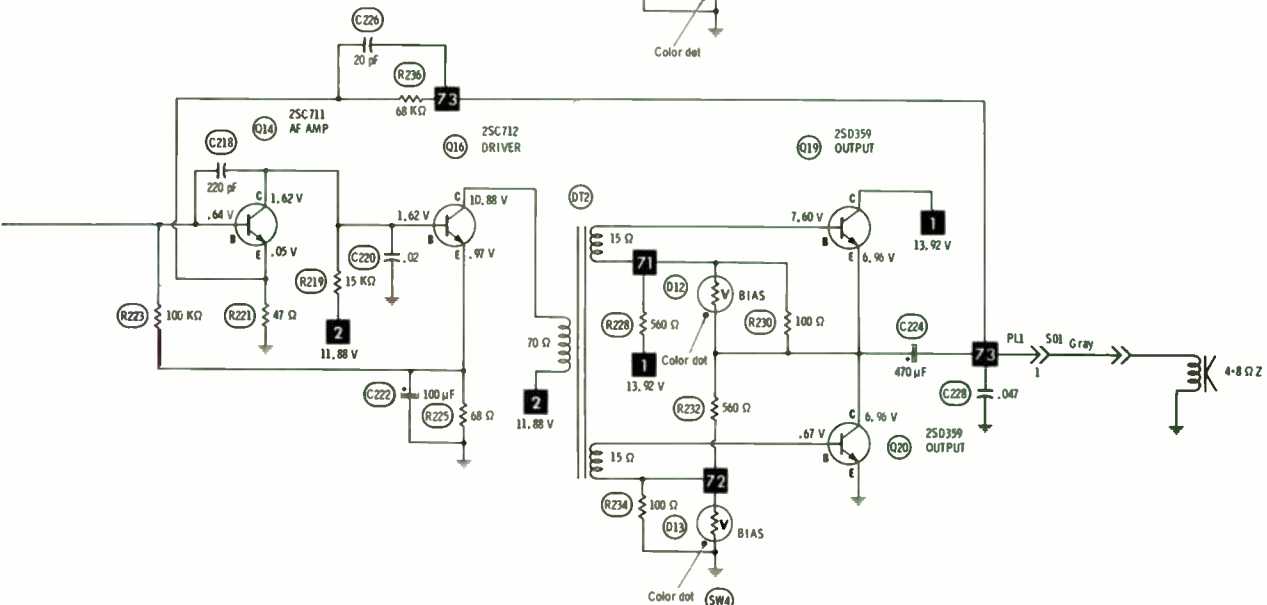
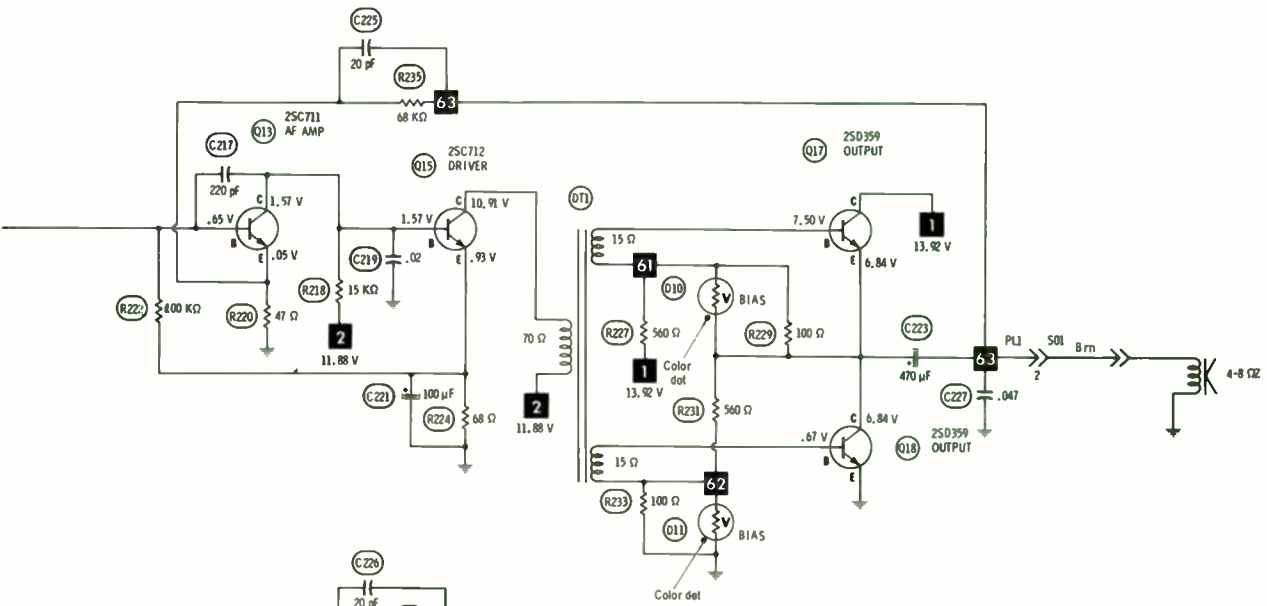


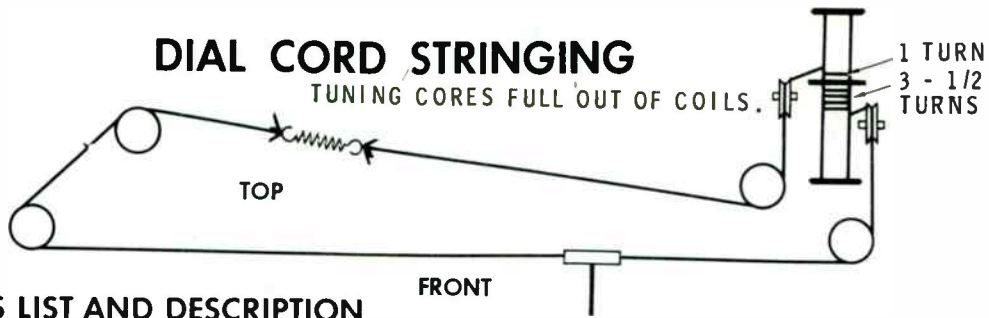
Terminal Guides



-x- Circuitry not used in some versions
 --- Circuitry used in some versions
 ○ See parts list
 * Nominal value
 ⊕ Ground
 m Chassis
 ▽ Common tie point
A PHOTOFAC T STANDARD NOTATION SCHEMATIC
WITH CIRCUITRACE™
 © Howard W. Sams & Co., Inc. 1976

Measurements with switching as shown unless noted:
 ■ FM Stereo signal ▲ AM ◆ Tape play
 Supply voltage maintained as shown at input.
 Voltages measured with digital meter, no signal.
 Controls adjusted for normal operation.
 Arrow at control indicates direction of advance.
 Terminal identification may not be found on unit.
 Resistors are 1/2W or less, 5% unless noted.
 Value in () used in some versions.





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.

SEMICONDUCTORS (Select replacement transistor for best results)

ITEM No.	TYPE No.	MFR. PART No.	REPLACEMENT DATA							
			GENERAL ELECTRIC PART No.	MALLORY PART No.	MOTOROLA PART No.	RAYTHEON PART No.	RCA PART No.	SPRAGUE PART No.	SYLVANIA PART No.	WORKMAN PART No.
D1	1S1555	230-0014	GE-300	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177	D200
D2	1N60	230-0006	1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109	1N60
D3	1N60	230-0006	1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109	1N60
D4	1N60	230-0006	1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109	1N60
D5	1N60	230-0006	1N60(7)	PTC206M(6)	HEPR9135(7)	RE 86(6)	SK3088(7)	RT-263(7)	ECG110(6)	1N60(7)
D6	1N60	230-0006								
D7	1S1555	230-0014	GE-300	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177	0200
D8	1S1555	230-0014	GE-300	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177	0200
D9	RD9.1E (9.1 Volt Zener)	230-0023	GEZO-9.1	Z89.1A	HEPZ0412	RE 114	SK3060	RT-240	ECG139	Z1209
010	VD1121 (Varistor)	1290-1003								
D11	V01121 (Varistor)	1290-1003								
012	V01121 (Varistor)	1290-1003								
013	V01121 (Varistor)	1290-1003								
D14	1S1555	230-0014	GE-300	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177	D200
Q1	2SC380A-0	250-0380	GE-211	PTC136	HEPS0016	RE 9	SK3018	RT-109	ECG107	(IR)2SC380A0
Q2	2SC380A-0	250-0380	GE-211	PTC136	HEPS0016	RE 9	SK3018	RT-109	ECG107	(IR)2SC380A0
Q3	2SC380A-0	250-0380	GE-211	PTC136	HEPS0016	RE 9	SK3018	RT-109	ECG107	(IR)2SC380A0
Q4	TA7061AP	280-0001							ECG1100	
Q5	2SC373	250-0373	GE-212	PTC136	HEPS0015	RE 192	SK3122	RT-105	ECG199	(IR)2SC373
Q6	2SC373	250-0373	GE-212	PTC136	HEPS0015	RE 192	SK3122	RT-105	ECG199	(IR)2SC373
Q7	2SC1213C	250-1213	GE-210	PTC123	HEPS0025	RE 17	SK3122	RT-114	ECG289	TR-87
Q8	SN76115N	280-0002	GEIC-35	PTC735			SK3160		ECG801	
Q9	2SC1312G	250-1312	GE-212	PTC139	HEPS0020	RE 192	SK3122	RT-108A	ECG199	TR-21
Q10	2SC1312G	250-1312	GE-212	PTC139	HEPS0020	RE 192	SK3122	RT-108A	ECG199	TR-21
Q11	2SC1312G	250-1312	GE-212	PTC139	HEPS0020	RE 192	SK3122	RT-108A	ECG199	TR-21
Q12	2SC1312G	250-1312	GE-212	PTC139	HEPS0020	RE 192	SK3122	RT-108A	ECG199	TR-21
Q13	2SC711E,F	250-0711	GE-62	PTC139	HEPS0024	RE 192	SK3124	RT-107A	ECG199	(IR)2SC372
Q14	2SC711E,F	250-0711	GE-62	PTC139	HEPS0024	RE 192	SK3124	RT-107A	ECG199	(IR)2SC372
Q15	2SC712E,D	250-0712	GE-20	PTC139	HEPS0011	RE 13	SK3124	RT-172	ECG123A	(IR)2SC372
Q16	2SC712E,D	250-0712	GE-20	PTC139	HEPS0011	RE 13	SK3124	RT-172	ECG123A	(IR)2SC372
Q17	2SD3590	250-0359(10)	GE-66	PTC110	HEPS5027	RE 21	SK3041	RT-197	ECG152	TR-76
Q18	2SD3590	250-0359(10)	GE-66	PTC110	HEPS5027	RE 21	SK3041	RT-197	ECG152	TR-76
Q19	2SD3590	250-0359(10)	GE-66	PTC110	HEPS5027	RE 21	SK3041	RT-197	ECG152	TR-76
Q20	2SD3590	250-0359(10)	GE-66	PTC110	HEPS5027	RE 21	SK3041	RT-197	ECG152	TR-76

(6) Matched pair.
 (7) Two required - select matched pair.
 (10) Rating, 10 watt @ 800 mA.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA			
		MFR. PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.
C105	4.7 16V	293-4751-160	PC5-50	VTT4R7A50	EV-1319
C111	3.3 16V	293-3350-160	PC5-50	VTT3R3A50	EV-1318
C112	1 25V	293-1050-250	PC1-50	TT25X1	EV-1315
C127	33 10V	293-3360-100	PC30-25	VTT33A10	EV-1125
C129	1 25V	293-1050-250	PC1-50	TT25X1	EV-1315
C131	1 25V	293-1050-250	PC1-50	TT25X1	EV-1315
C132	4.7 16V	293-4751-160	PC5-50	VTT4R7A50	EV-1319
C136	22 16V	293-2260-160	PC25-25	VTT22A16	EV-1224
C137	.47 35V	297-4740		TDC474M050EL	S050-R479
C138	.22 35V	297-2240		TDC224M050EL	S050-R229
C139	22 16V	293-2260-160	PC25-25	VTT22A16	EV-1224
C140	.22 35V	297-2240		TDC224M050EL	SD50-R229
C201	1 25V	297-1050-250		TDC105M035EL	SD35-19
C202	1 25V	297-1050-250		TDC105M035EL	SD35-19
C203	470 10V	293-4770-100	PC500-16	VTT470J16	EV-1150
C208	10 16V	293-1060-160	PC10-25	VTT10A25	EV-1222
C209	10 16V	293-1060-160	PC10-25	VTT10A25	EV-1222
C210	47 6.3V	293-4760-163	PC50-10	VTT47A6	EV-1026

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.

ELECTROLYTIC CAPACITORS(cont)

ITEM No.	RATING	REPLACEMENT DATA			
		MFGR. PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.
C211	47 6.3V	293-4760-163	PC50-10	VTT47A6	EV-1026
C214	330 16V	293-3370-160	WBR300-35	VTT330H16	EV-1245
C215	10 16V	293-1060-160	PC10-25	VTT10A25	EV-1222
C216	10 16V	293-1060-160	PC10-25	VTT10A25	EV-1222
C221	100 6.3V	293-1070-063	PC100-10	MTV100CB6	EV-1030
C222	100 6.3V	293-1070-063	PC100-10	MTV100CB6	EV-1030
C223	470 10V	293-4770-100	PC500-16	VTT470J16	EV-1150
C224	470 10V	293-4770-100	PC500-16	VTT470J16	EV-1150
C229	1000 16V	293-1080-160	PC1000-16	VTT1000L16	EV-1260

CAPACITORS

ITEM No.	RATING	MFGR. PART No.	REPLACEMENT DATA			
			CENTRALLAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.
C101	.047	291-0101-501	DC-503	MGP05	MAG5015	TGL-S50
C102	.0047		DD-472	GP4700	GP247	2SS-D47
C103	.047		DC-503	MGP05	MAG5015	TGL-S50
C104	.047		DC-503	MGP05	MAG5015	TGL-S50
C106	.047		DC-503	MGP05	MAG5015	TGL-S50
C107	100 NPO		DTZ-100	NP0100	CN0310	10TCC-T10
C108	.047		DC-503	MGP05	MAG5015	TGL-S50
C109	.02		DC-203		MAG5012	2SS-S20
C110	.01		DC-103	GP10000	MAG5011	2SS-S10
C113	.0047		DD-472	GP4700	GP247	2SS-D47
C114	.02		DC-203		MAG5012	2SS-S20
C115	.0047		DD-472	GP4700	GP247	2SS-D47
C116	.0047		DD-472	GP4700	GP247	2SS-D47
C117	.02		DC-203		MAG5012	2SS-S20
C118	.02		DC-203		MAG5012	2SS-S20
C119	.02		DC-203		MAG5012	2SS-S20
C120	.02		DC-203		MAG5012	2SS-S20
C121	.02		DC-203		MAG5012	2SS-S20
C122	1 NPO				CN0510	10TCC-V10
C123	.02			DC-203	MAG5012	2SS-S20
C124	.1			DC-104	MGP1	TG-P10
C125	.02			DC-203	MAG5012	2SS-S20
C126	100 NPO			DTZ-100	NP0100	10TCC-T10
C128	100 NPO			DTZ-100	NP0100	10TCC-T10
C130	.047			DC-503	MGP05	TGL-S50
C133	.0012			DD-122		2SS-D12
C134	470				CD15FD471J03	424ME4700J501
C135	.047			DC-503	MGP05	TGL-S50
C141	.015			DC-203		2SS-S20
C142	.015			DC-203		2SS-S20
C143	.047			DC-503	MGP05	TGL-S50
C144	.047			DC-503	MGP05	TGL-S50
C145	.0047			DD-472	GP4700	2SS-D47
C146	.0047			DD-472	GP4700	2SS-D47
C147	.047			DC-503	MGP05	TGL-S50
C204	220			DD-221		10TS-T22
C205	220			DD-221		10TS-T22
C206	.02			DC-203		2SS-S20
C207	.02			DC-203		2SS-S20
C212	.047			DC-503	MGP05	TGL-S50
C213	.047			DC-503	MGP05	TGL-S50
C217	220			DD-122		2SS-D12
C218	220			DD-122		2SS-D12
C219	.02			DC-203		2SS-S20
C220	.02			DC-203		2SS-S20
C225	20			DTZ-20	NP020	10TCC-Q20
C226	20			DTZ-20	NP020	10TCC-Q20
C227	.047		DC-503	MGP05	TGL-S50	
C228	.047		DC-503	MGP05	TGL-S50	
C230	.22		DC-503	DPMS2P22	1PB-P22	
C231	.001					
C232	150					
C233	220		DD-122		2SS-D12	

AUTOMATIC MODEL IDC-3224

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

ITEM No.	FUNCTION	RESISTANCE	REPLACEMENT DATA			
			MFGR. PART No.	CENTRALLAB PART No.	CLAROSTAT PART No.	TRW PART No.
VR1	19kHz	10K	813-1031			
VR2a	Tone - Left	10K	205-3006			
b	Tone - Right	10K				
c	Volume - Left	30K				
d	Volume - Right/ Power Switch	30K				
VR3	Balance	30K Tap@15K	205-1032			

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.	FUNCTION	REPLACEMENT DATA			REMARKS
		PART No.	OTHER IDENTIFICATION	MILLER PART No.	
L9	AM Ant Choke (6.8uH)	204-1010			
L102	RF Choke (82uH)	213-8201			
L103	RF Choke (82uH)	213-8201			
T1	IF (455kHz)	210-1019	CFZ-455C		
T2	IF (455kHz)	210-1018	210-1018		
T3	Ratio Detector (Pri)	210-1105			
T4	Ratio Detector (Sec)	210-1106			

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA			NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	MFGR. PART No.	THORDARSON PART No.	TRIAD PART No.	
CT	245mA	.3	1.5mH	203-3006			

TRANSFORMER (Driver)

ITEM No.	TURNS RATIO			REPLACEMENT DATA			NOTES
	PRI.	SEC. 1	SEC. 2	MFGR. PART No.	THORDARSON PART No.	TRIAD PART No.	
DT1	2.8	1	1	203-2006			
DT2	2.8	1	1	203-2006			

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	HOLDER
FU1	2A			AGC2	HDJ	312002	150145		FG2-2

MISCELLANEOUS

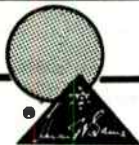
ITEM No.	PART NAME	PART No.	NOTES
F1	Filter	201-0205	10.7MHz, Ceramic (SFW 10.7mA on unit)
F2	Filter	201-0108	EXA-0605, Low Pass (MPX) (6FC605 on unit)
F3	Filter	201-0108	EXA-0605, Low Pass (MPX) (6FC605 on unit)
M1	Tuner Assembly	600-1020	AM/FM, Front End
M2	Tape Head	212-1010	Cassette 4-Track Stereo Play
M3	Motor Assembly	211-1015	Tape Transport (2200 rpm @ 13.92V)
SW1	Switch	206-1019	Lo-DX
SW2	Switch	206-1019	AM/FM, Band Selector
SW3	Switch	206-1306	Radio/Tape
SW4	Switch		Radio/Tape (Part of SW3)
	Printed Circuit Board	400-1090	IF/MPX
	Printed Circuit Board	400-1072	Audio Amp

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

ITEM	PART No.	ITEM	PART No.
Escutcheon	703-0170	Button, Fast Forward	703-0145
Glass, Dial	703-0162	Button, Eject	703-0145
Pointer, Dial	701-0474	Button, AM-FM	703-0161
Door, Tape	701-0491	Button, Lo-DX	703-0161
Door Spring, Tape	716-0070	Knob, Tone/Balance	703-0172
Door Shaft, Tape	705-0168	Knob, Volume/Tuning	703-0173

WIRING DATA

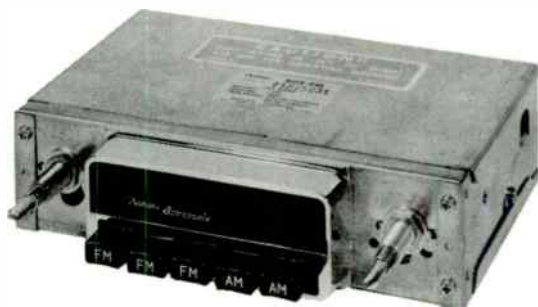
General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in 12 Colors 8524 (Stranded) Available in 12 Colors
Shielded Hook-up Wire	Use BELDEN No. 8885
Rear Seat Speaker Extension Cable	Use BELDEN No. 8782 (Stranded) Coded Parallel Leads
Bonding Strap	Use BELDEN No. 8661 (3/8 In.) or 8670 (3/4 In.)
Ignition Noise Suppression	Use BELDEN No. 7300-Series Spark-Plug Sets



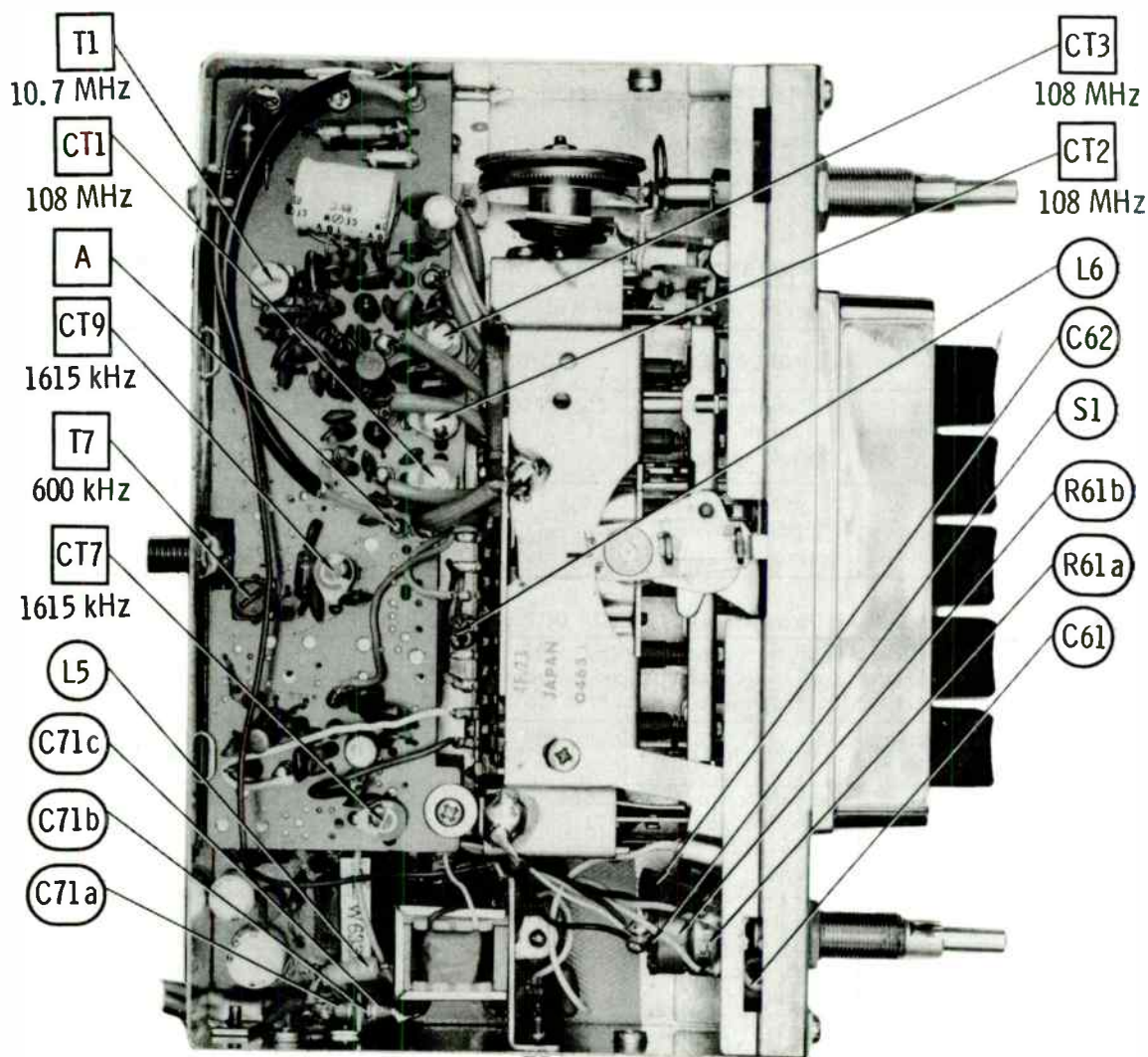
PHOTOFACT[®] with

CIRCUITRACE[®]

For Supplier Address See PHOTOFACT Index



MODEL 402-FM



BOMAN ASTROSONIX MODEL 402-FM

CHASSIS-TOP VIEW

HOWARD W. SAMS & CO., INC. Indianapolis, Indiana 46206

© 1976 Howard W. Sams & Co., Inc.

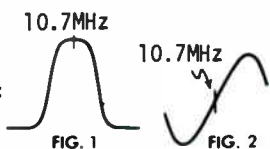
Printed in U. S. of America

6AK901

ALIGNMENT INSTRUCTIONS

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

ALL..... GC Electronics: 8290,8868,9087

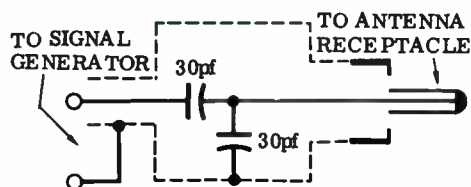


PUSH-BUTTON ADJUSTMENT

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
High side thru .1uF to point A, low side to ground.	455kHz 400-Hz mod.	High freq. end stop.	Output meter across voice coil.	T507, T506, T505, T504	Adjust for maximum.
Thru dummy antenna to antenna input.	1615kHz	"	"	CT9, CT7, CT4	"
Thru dummy antenna to antenna input.	600kHz	Tune to signal	Output meter across voice coil.	T7	Adjust for maximum. Repeat alignment until no further improvement is noted.

With radio installed in car and antenna extended 36', tune in a weak station near 1400kHz and adjust CT4 for maximum output. Antenna adjustment CT4 is located on bottom right rear corner.



DUMMY ANTENNA

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

High side of generator thru .001uF to point A, low side to ground.

GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
10.7MHz Unmodulated	Point of non-interference	DC probe of VTVM to point B common to ground.	T502, T501 T1	Adjust for maximum.
"	"	DC probe of VTVM to point C common to ground.	T503	Adjust for zero reading. A positive or negative reading will be obtained on either side of correct setting.

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

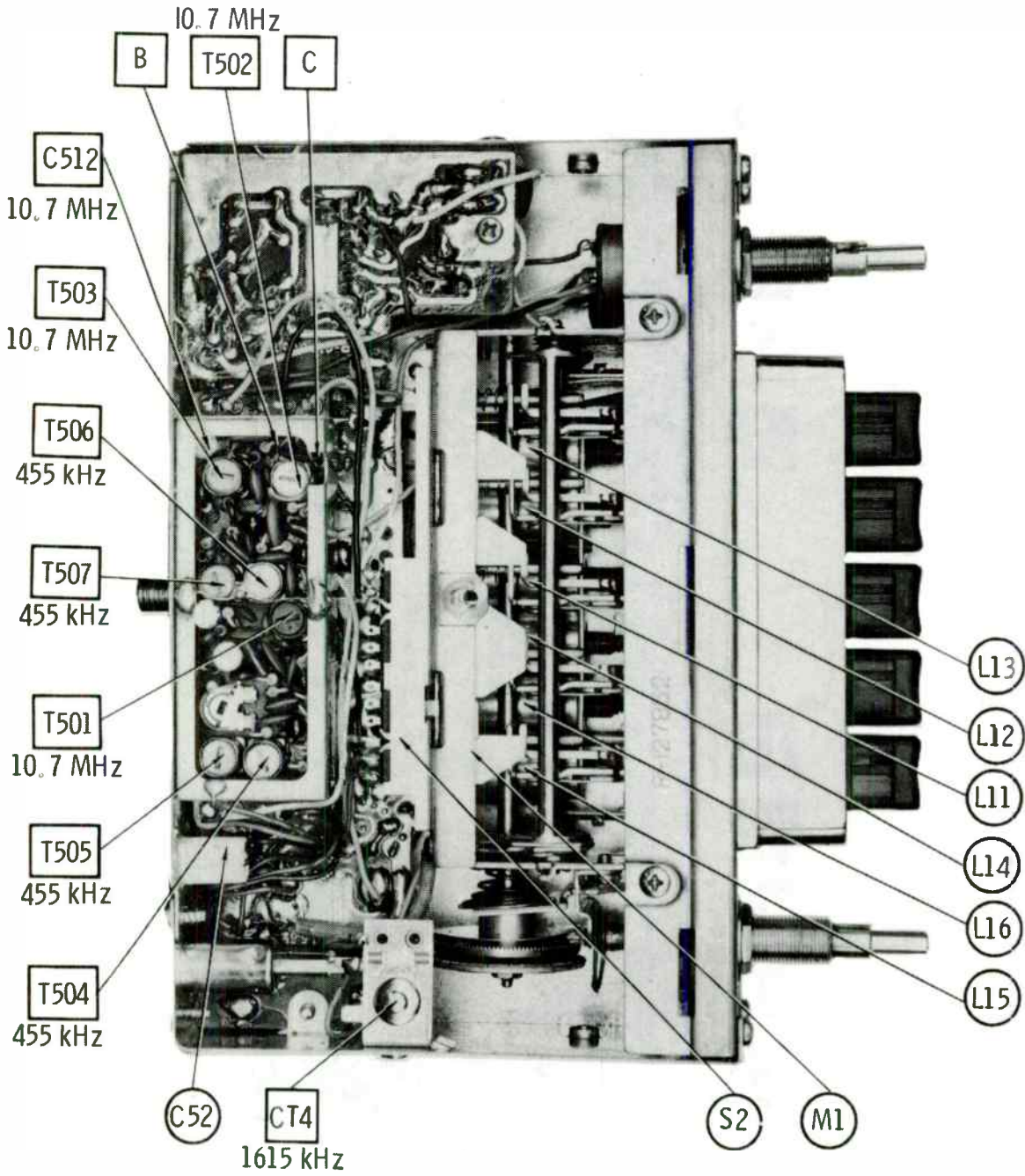
High side of generator thru .001uF to point A, low side to ground.
Use only enough marker signal for indication. Use 60-hertz, frequency-modulated signal, 450kHz sweep.
Use 60-hertz sawtooth voltage in scope for horizontal deflection.

GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
10.7MHz 450kHz Sweep	Point of non-interference	Vert input of scope to point B low side to ground.	T502, T501 T1	Disconnect stabilizing capacitor C512. Adjust for maximum gain and symmetry of response similar to Fig. 1 with markers as shown. Reconnect C512.
"	"	Vert input of scope to point C low side to ground.	T503	Adjust T503 to place marker at center of S curve similar to Fig. 2. Readjust T502 for maximum amplitude and straightness of line.

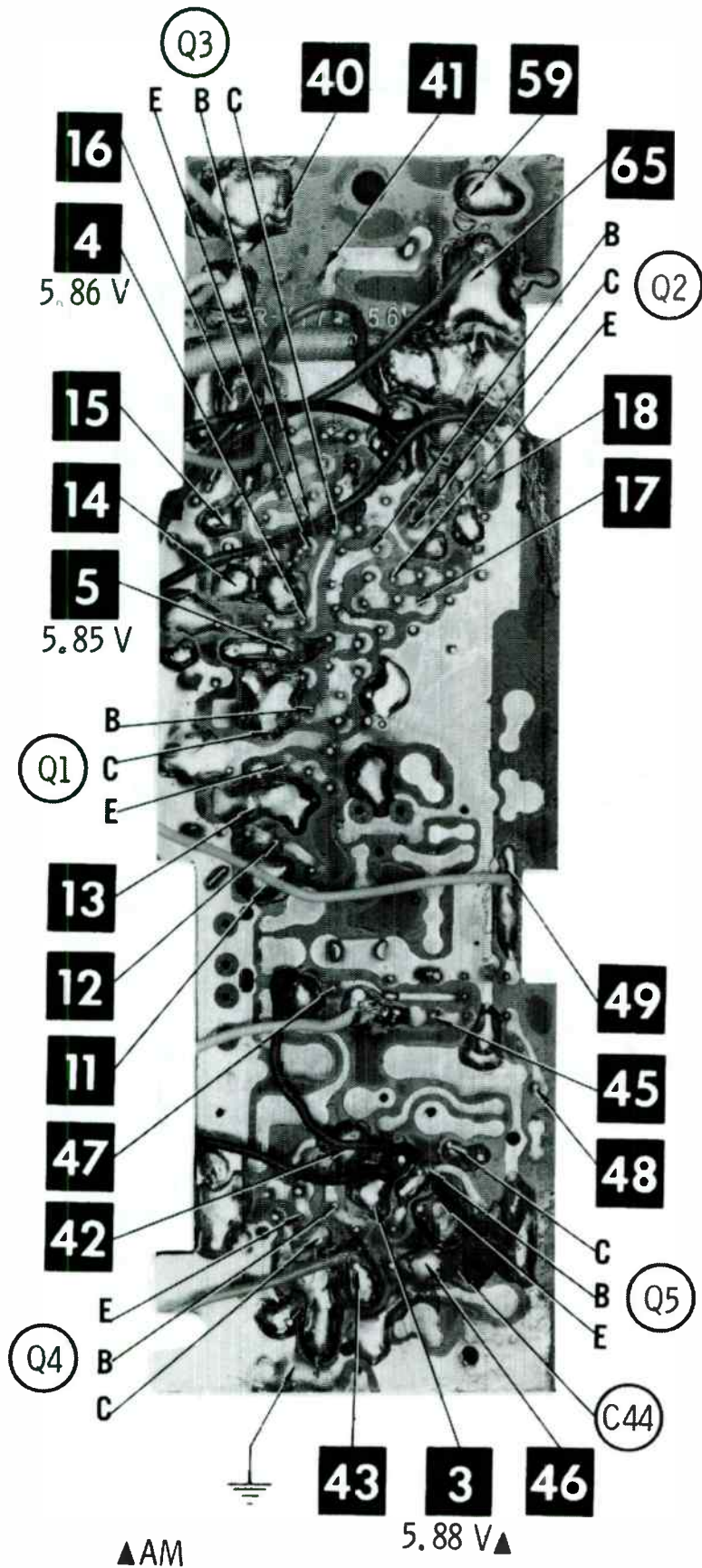
FM RF ALIGNMENT—SELECTOR IN FM POSITION

Connect generator across antenna terminals with 120-ohm carbon resistor in series with each lead. Adjustment of coils by bending should not be attempted unless the coil is deformed or replaced.

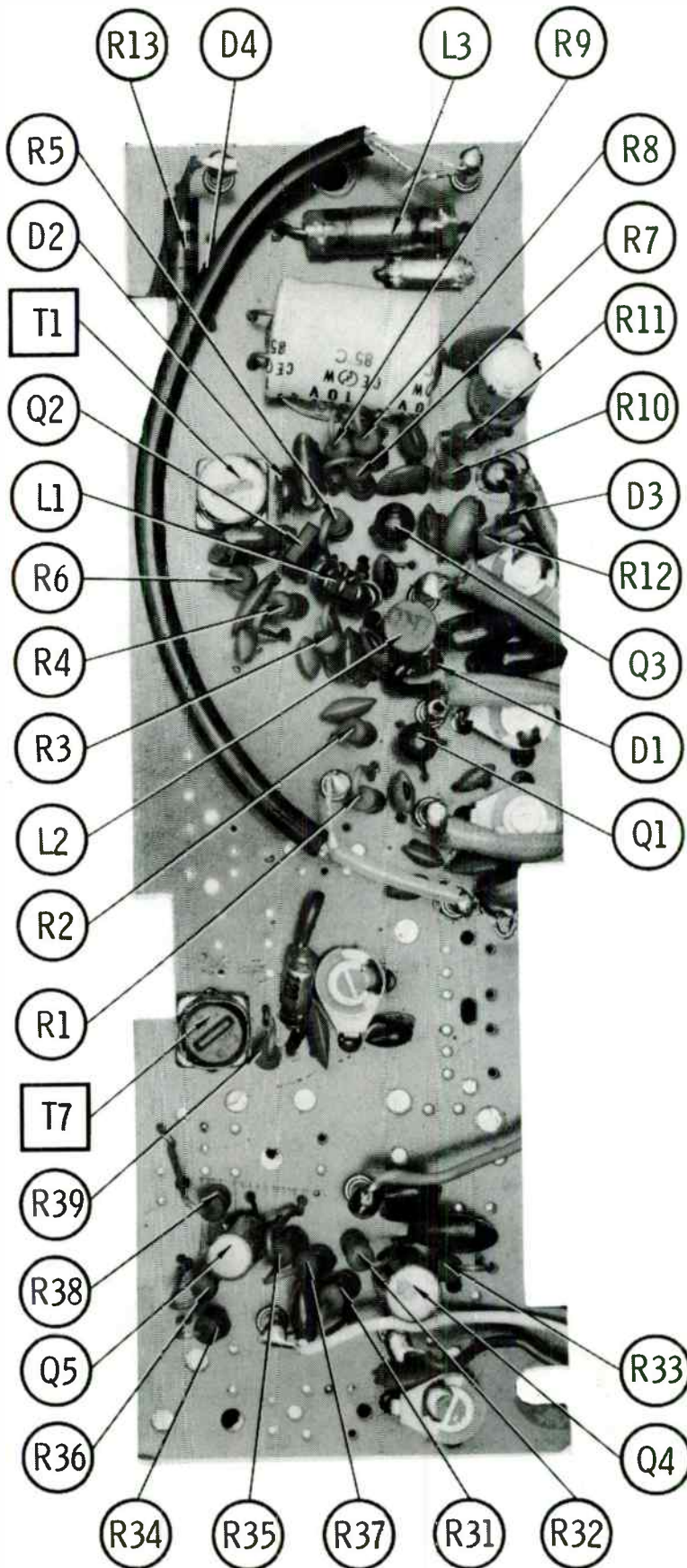
GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
108MHz Unmodulated	Tune to signal	DC probe of VTVM to point B common to ground.	CT3, CT2, CT1	Adjust for maximum. Repeat FM RF steps until no further improvement is noted.



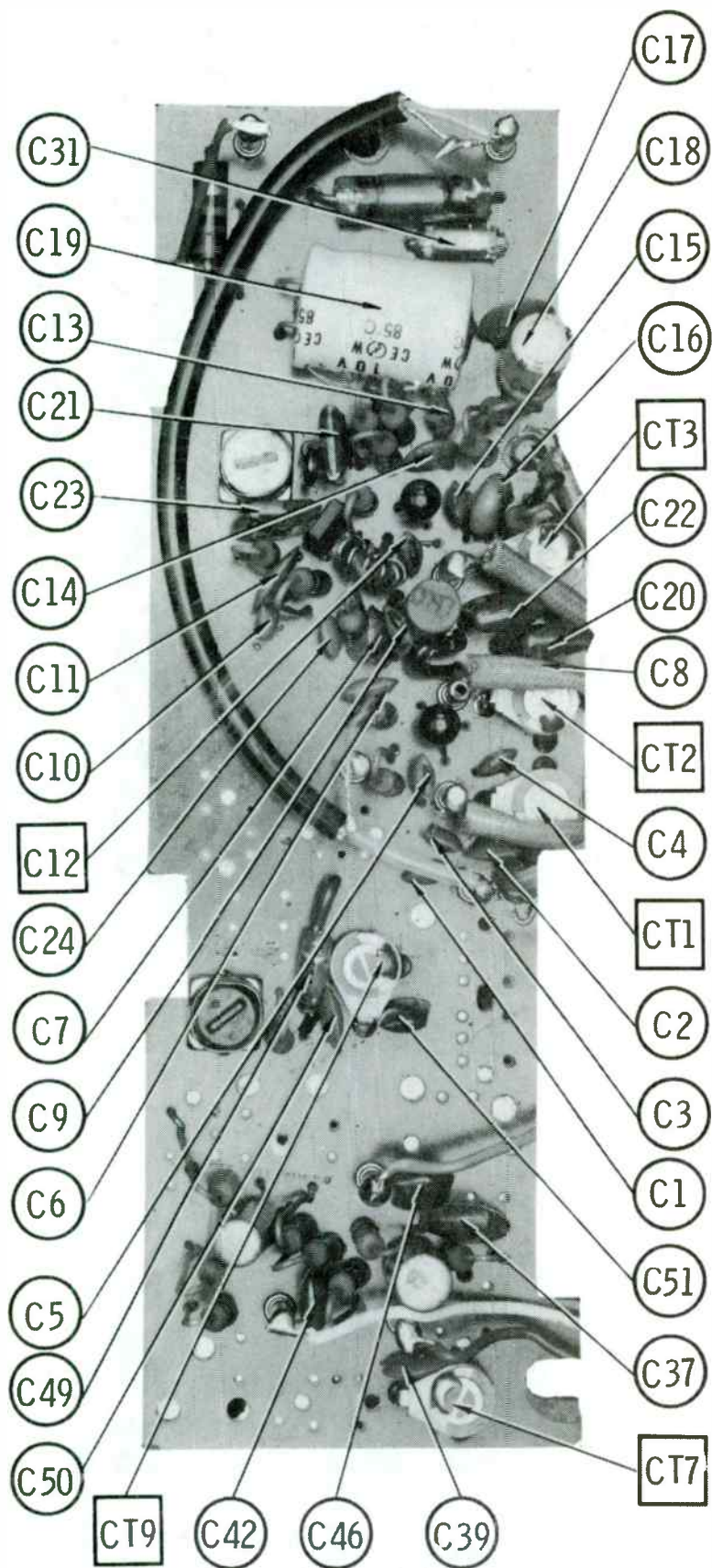
CHASSIS-BOTTOM VIEW



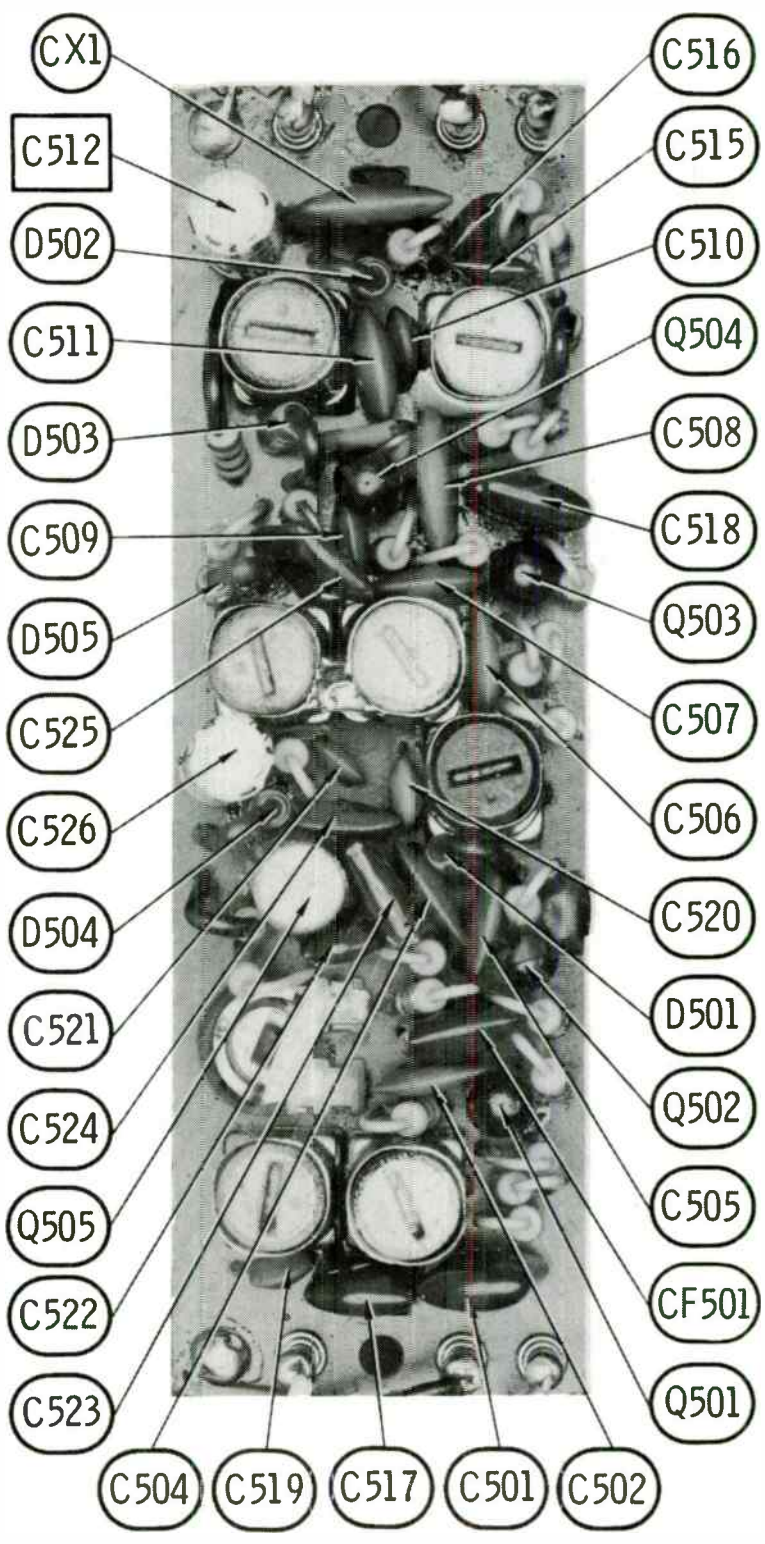
AM/FM RF BOARD-BOTTOM VIEW



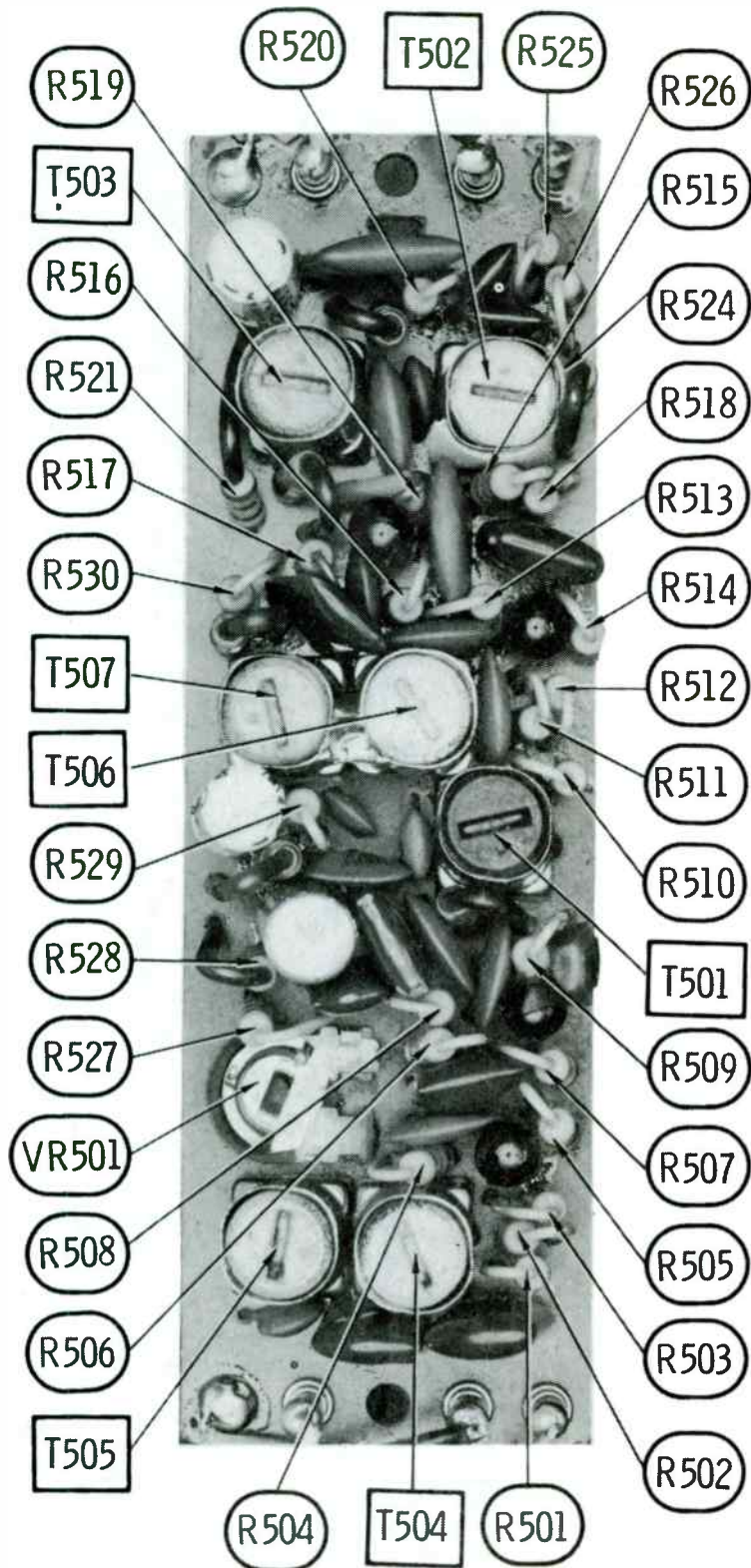
AM/FM RF BOARD-TOP VIEW



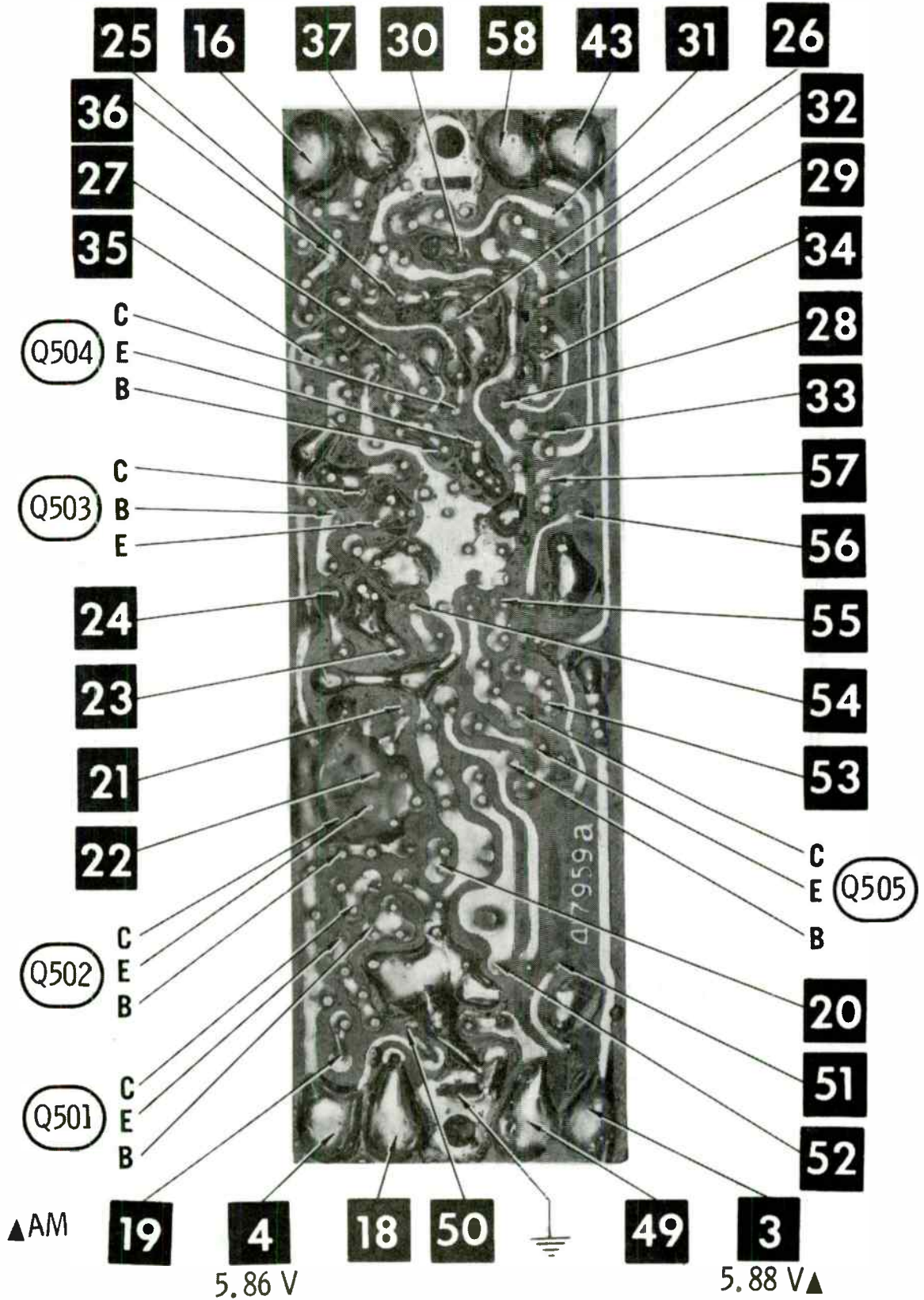
AM/FM RF BOARD-TOP VIEW



AM/FM IF BOARD-TOP VIEW

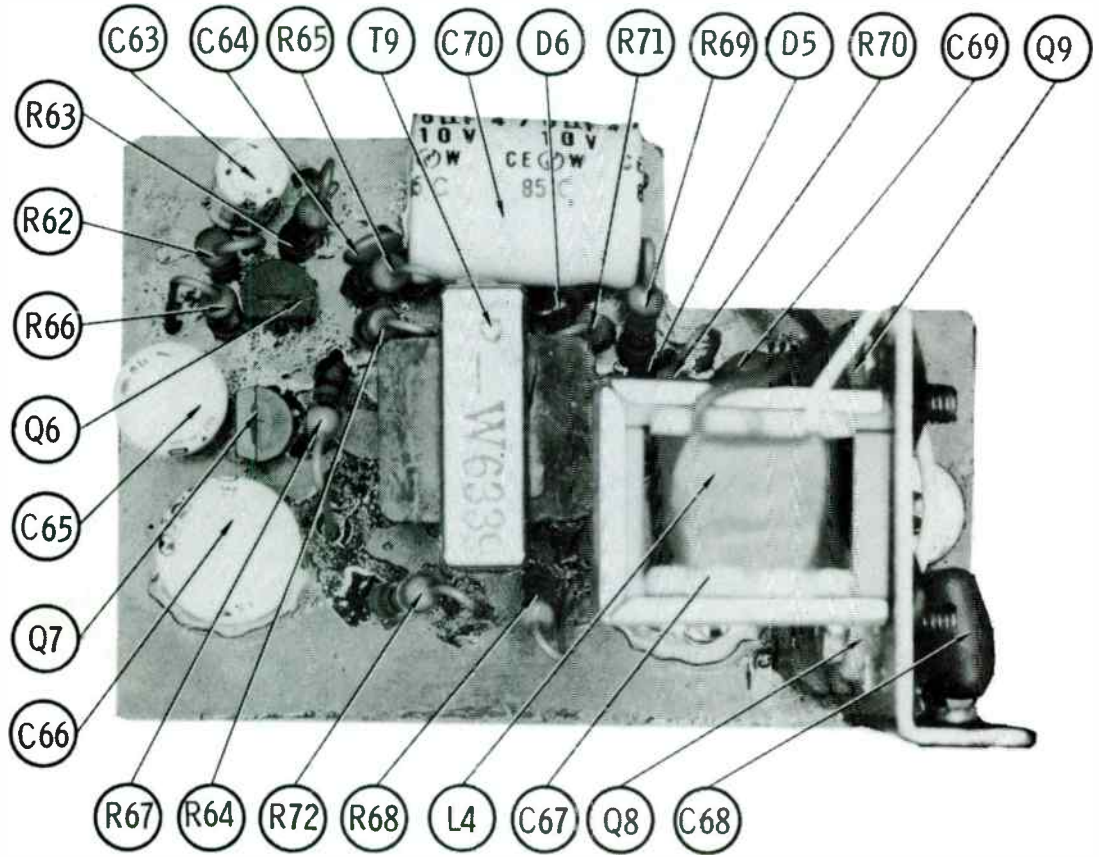
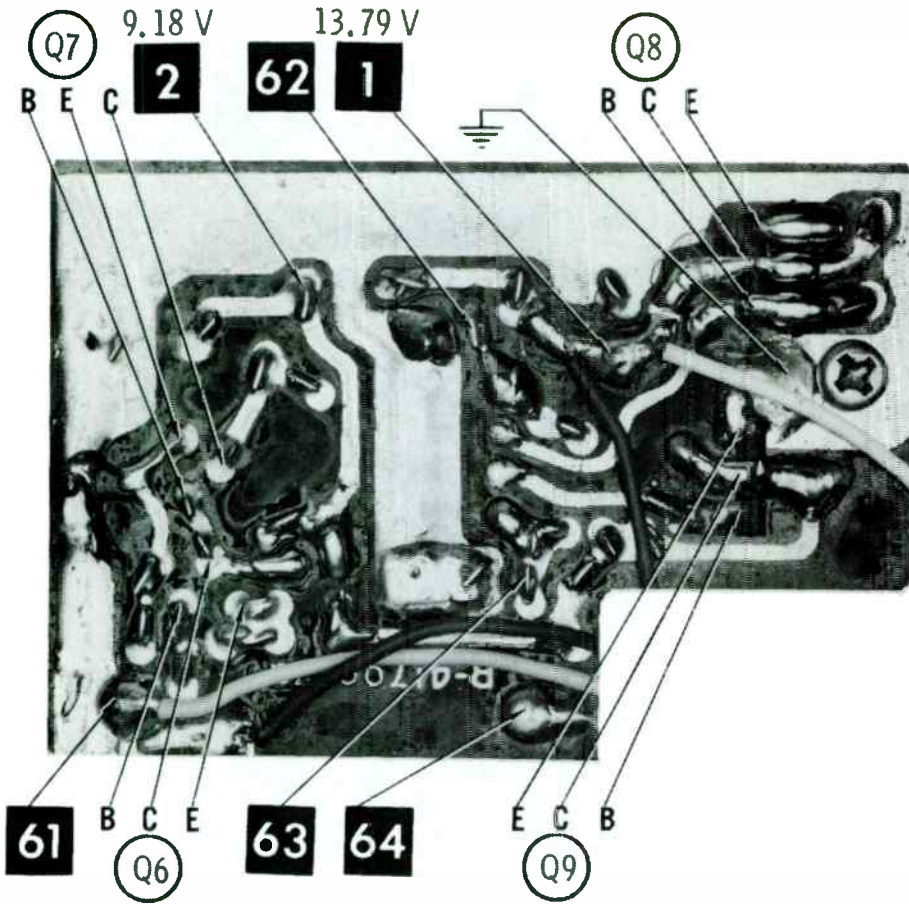


AM/FM IF BOARD-TOP VIEW

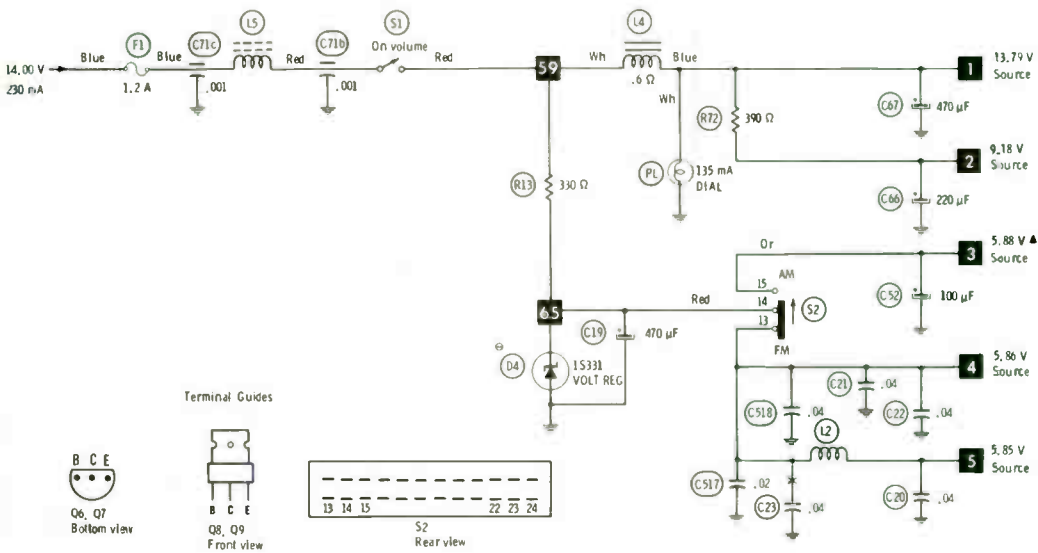
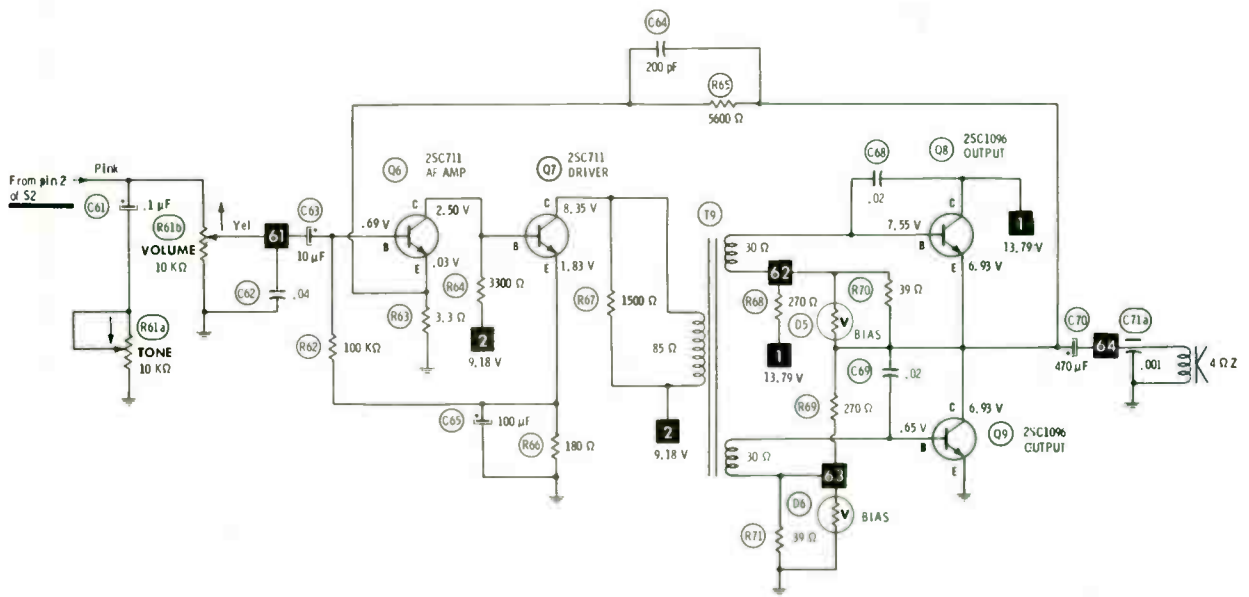


BOMAN ASTROSONIX MODEL 402-FM

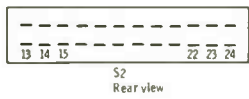
AM/FM IF BOARD-BOTTOM VIEW



AUDIO BOARD



Terminal Guides



- * Circuitry not used in some versions
- Circuitry used in some versions
- ⊙ See parts list
- ⊛ Nominal value
- ⊥ Ground
- ⌋ Chassis
- ∇ Common tie point

A PHOTOFACIT STANDARD NOTATION SCHEMATIC

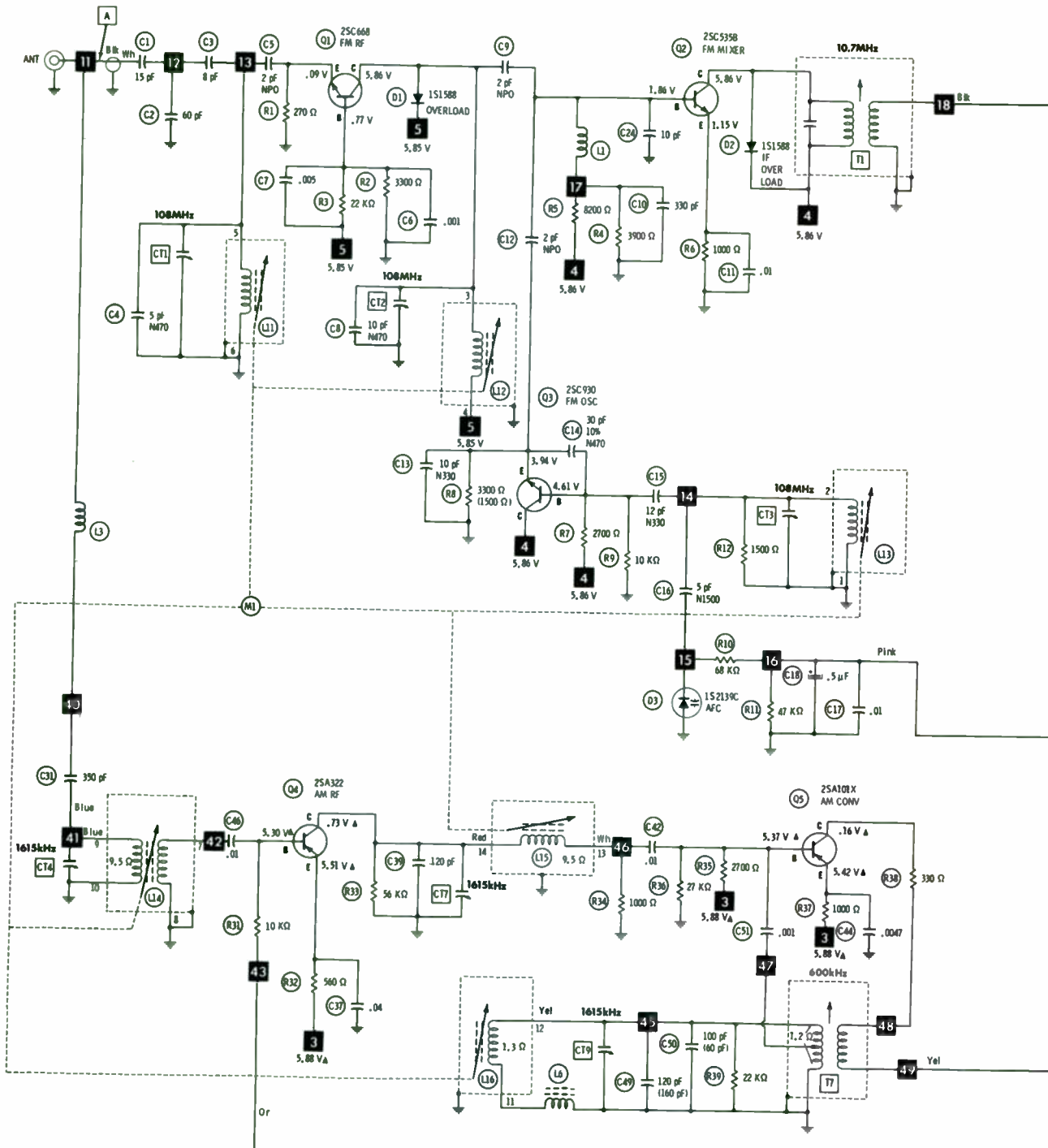
WITH **CIRCUITRACE**

© Howard W. Sams & Co., Inc. 1976

Measurements with switching as shown unless noted:

▲ AM

Supply voltage maintained as shown at input.
 Voltages measured with digital meter, no signal.
 Controls adjusted for normal operation.
 Arrow at control indicates direction of advance.
 Terminal identification may not be found on unit.
 Resistors are 1/2W or less, 5% unless noted.
 Value in () used in some versions.



- ✖ Circuitry not used in some versions
- Circuitry used in some versions
- ⊕ See parts list
- ✱ Nominal value
- ⊕ Ground
- ⏏ Chassis
- ▽ Common tie point

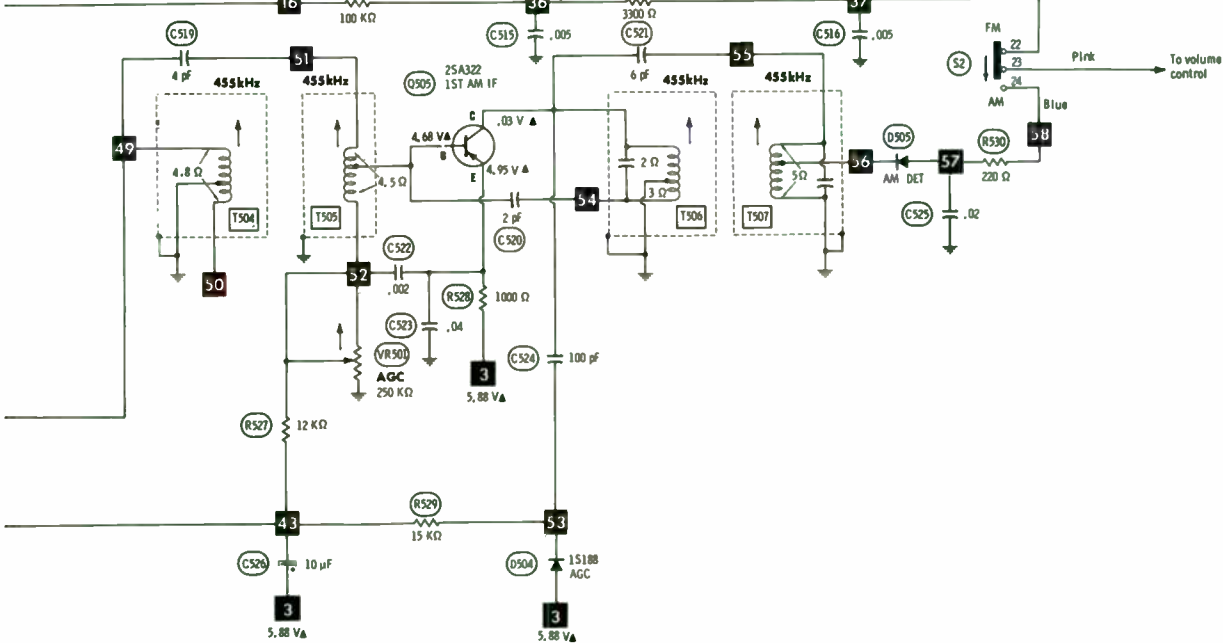
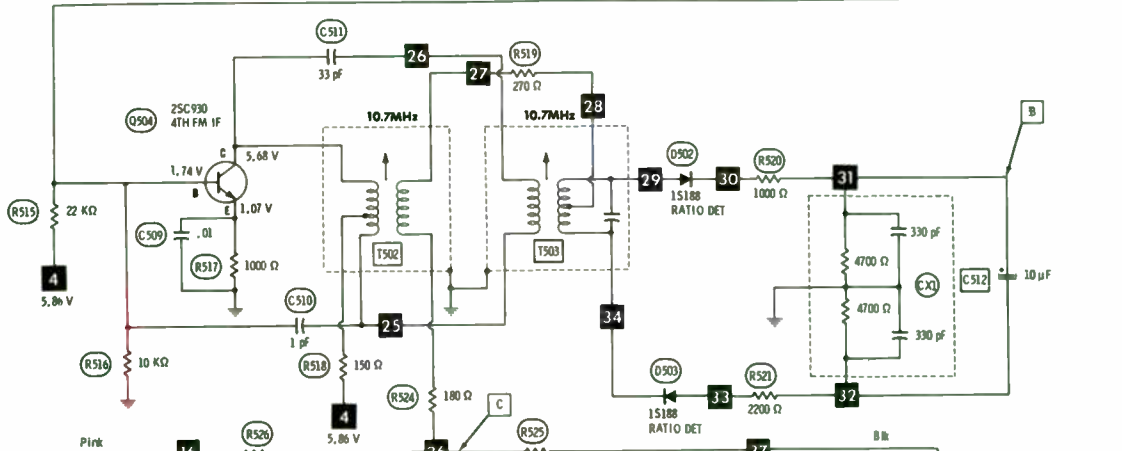
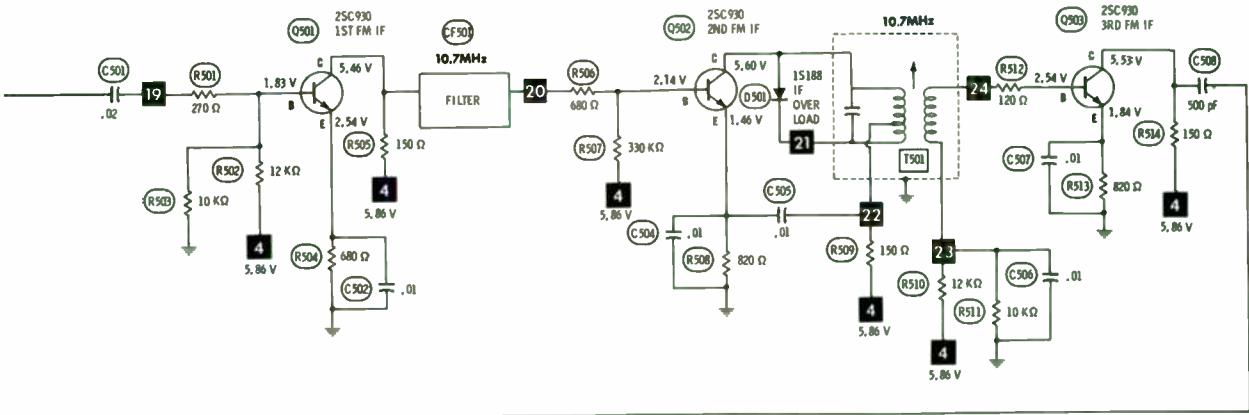
A PHOTOFAC STANDARD NOTATION SCHEMATIC
WITH **CIRCUITRACE**

© Howard W. Sams & Co., Inc. 1976

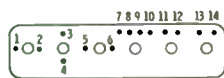
Measurements with switching as shown unless noted:

▲ AM

Supply voltage maintained as shown at input.
 Voltages measured with digital meter, no signal.
 Controls adjusted for normal operation.
 Arrow at control indicates direction of advance.
 Terminal identification may not be found on unit.
 Resistors are 1/2W or less, 5% unless noted.
 Value in () used in some versions.



Terminal Guides



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 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 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.)
Ignition Noise Suppression	Use BELDEN No. 7300-Series Spark-Plug Sets

SEMICONDUCTORS (Select replacement transistor for best results)

ITEM No.	TYPE No.	MFR. PART No.	REPLACEMENT DATA							
			GENERAL ELECTRIC PART No.	IR WORKMAN PART No.	MALLORY PART No.	MOTOROLA PART No.	RAYTHEON PART No.	RCA PART No.	SPRAGUE PART No.	SYLVANIA PART No.
D1	1S1588	(1)	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
D2	1S1588		GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
O3	1S2139C		GE-90	D201		HEPR2503	RE 195	SK3126	RT-262	
O4	WZ058						RE 108			ECG5070
D5	1S1209	(1)								
D6	1S1209									
D501	1S188		1N34AS	1N34A	PTC207	HEPR9134	RE 47	SK3087	RT-200	ECG109
D502	1S188		1N34AS	1N34A	PTC207	HEPR9134	RE 47	SK3087	RT-200	ECG109
D503	1S188		1N34AS	1N34A	PTC207	HEPR9134	RE 47	SK3087	RT-200	ECG109
D504	1S188		1N34AS	1N34A	PTC207	HEPR9134	RE 47	SK3087	RT-200	ECG109
D505	1S188		1N34AS	1N34A	PTC207	HEPR9134	RE 47	SK3087	RT-200	ECG109
Q1	2SC668E		GE-20	(IR)2SC536	PTC136	HEPS0020	RE 9	SK3018	RT-108A	ECG107
Q2	2SC5358		GE-86	(IR)2SC5358	PTC136	HEPS0016	RE 9	SK3018	RT-108A	ECG229
	2SC668E		GE-20	(IR)2SC536	PTC136	HEPS0020	RE 9	SK3018	RT-108A	ECG107
Q3	2SC930E	GE-60	(IR)2SC772	PTC132	HEPS0016	RE 9	SK3018	RT-107A	ECG229	
Q4	2SA322	GE-50	TR-17	PTC107	HEPG0009	RE 27	SK3008	RT-188	ECG160	
Q5	2SA101X	GE-51	TR-17	PTC107	HEPG0009	RE 15	SK3008	RT-188	ECG126	
	2SA322	GE-50	TR-17	PTC107	HEPG0009	RE 27	SK3008	RT-188	ECG160	
Q6	2SC711D	GE-62	(IR)2SC644	PTC121	HEPS0024	RE 192	SK3124	RT-108A	ECG199	
Q7	2SC711D	GE-62	(IR)2SC644	PTC121	HEPS0024	RE 192	SK3124	RT-108A	ECG199	
Q8	2SC1096L	GE-28	TR-55	PTC110	HEPS5027	RE 42	SK3054	RT-197	ECG186A	
Q9	2SC1096L	GE-28	TR-55	PTC110	HEPS5027	RE 42	SK3054	RT-197	ECG186A	
Q501	2SC930E	GE-60	(IR)2SC772	PTC132	HEPS0016	RE 9	SK3018	RT-107A	ECG229	
Q502	2SC930E	GE-60	(IR)2SC772	PTC132	HEPS0016	RE 9	SK3018	RT-107A	ECG229	
Q503	2SC930E	GE-60	(IR)2SC772	PTC132	HEPS0016	RE 9	SK3018	RT-107A	ECG229	
Q504	2SC930E	GE-60	(IR)2SC772	PTC132	HEPS0016	RE 9	SK3018	RT-107A	ECG229	
Q505	2SA322	GE-50	TR-17	PTC107	HEPG0009	RE 27	SK3008	RT-188	ECG160	

(1) Used in some versions.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA			
		MFR. PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.
C18	.5 25V		PC1-50	VTR47863	EV-1310
C19	470 10V		PC500-16	VTT470J16	EV-1150
C52	100 10V		PC100-10	VTT100E10	EV-1130
C61	.1 25V			TDC104M050EL	SD50-R109
C63	10 10V		PC10-25	VTT10A25	EV-1222
C65	100 10V		PC100-10	VTT100E10	EV-1130
C66	220 10V		PC250-10	VTT220F10	EV-1140
C67	470 16V		PC500-16	VTT470J16	EV-1250
C70	470 10V		PC500-16	VTT470J16	EV-1150
C512	10 10V		PC10-25	VTT10A25	EV-1222
C526	10 10V		PC10-25	VTT10A25	EV-1222

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	MFR. PART No.	REPLACEMENT DATA			
			CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.
C1	15		DTZ-15	NP015	CN0415	10TCC-Q15
C2	60		DTZ-68	NP068	CN0468	10TCC-Q68
C3	8					
C4	5 N470				*	10TCT-V50
C5	2 NPO		DTZ-2R2	NP02P2	CN0522	10TCC-V22
C6	.001		DD-102	GP1000	GP210	2SS-D10
C7	.005		DC-502	GP5000	TA250	2SS-D50
C8	10 N470				*	10TCT-Q10
C9	2 NPO		DTZ-2R2	NP02P2	CN0522	10TCC-V22
C10	330		DD-331	GP330	GP333	10TS-T33
C11	.01		DC-103	GP10000	MAG5011	2SS-S10
C12	2 NPO		DTZ-2R2	NP02P2	CN0522	10TCC-V22
C13	10 N330				*	10TCS-Q10
C14	30 N470 10%				*	10TCT-Q30
C15	12 N330				*	10TCS-Q12
C16	5 N1500					
C17	.01		DC-103	GP10000	MAG5011	2SS-S10
C20	.04				GP140	5GA-S40
C21	.04				GP140	5GA-S40
C22	.04				GP140	5GA-S40
C23	.04				GP140	5GA-S40
C24	10		DTZ-10	NP010	CN0410	10TCC-Q10
C31	350			CD15FD361J03	SX336	424ME3600J501
C37	.04				GP140	5GA-S40
C39	120		DTZ-120		CN0312	10TCC-T12
C42	.01		DC-103	GP10000	MAG5011	2SS-S10
C44	.0047		DD-472	GP4700	GP247	2SS-D47
C46	.01		DC-103	GP10000	MAG5011	2SS-S10
C49	120			CD10FD121J03	SX312	424MC1200J501
	160			CD7FD161J03	SX316	424MC1600J501
C50	100		DTZ-100	NP0100	CN0310	10TCC-T10
	60		DTZ-68	NP068	CN0468	10TCC-Q68
C51	.001		DD-102	GP1000	GP210	2SS-D10
C62	.04				GP140	5GA-S40
C64	200		DD-201	GP200	GP320	10TS-T20
C68	.02		DC-203		MAG5012	2SS-S20
C69	.02		DC-203		MAG5012	2SS-S20
C71a	.001					
C71b	.001					
C71c	.001					
C501	.02		DC-203		MAG5012	2SS-S20
C502	.01		DC-103	GP10000	MAG5011	2SS-S10
C504	.01		DC-103	GP10000	MAG5011	2SS-S10
C505	.01		DC-103	GP10000	MAG5011	2SS-S10
C506	.01		DC-103	GP10000	MAG5011	2SS-S10
C507	.01		DC-103	GP10000	MAG5011	2SS-S10
C508	500		DD-501	GP500	GP350	10TS-T50
C509	.01		DC-103	GP10000	MAG5011	2SS-S10
C510	1				CN0510	10TCC-V10
C511	33		DTZ-33	NP033	CN0433	10TCC-Q33
C515	.005		DC-502	GP5000	TA250	2SS-D50
C516	.005		DC-502	GP5000	TA250	2SS-D50
C517	.02		DC-203	GP5000	TA250	2SS-D50
C518	.04				MAG5012	2SS-S20
C519	4		DTZ-4R7	NP04P7	GP140	5GA-S40
C520	2		DTZ-2R2	NP02P2	CN0537	10TCC-V47
C521	6		DTZ-6R8	NP06P8	CN0522	10TCC-V22
C522	.002				CN0568	10TCC-V68
C523	.04				GP220	10TS-D20
C524	100				GP140	5GA-S40
C525	.02		DTZ-100	NP0100	CN0310	10TCC-T10
CT1CT			DC-203		MAG5012	2SS-S20
CT2						
CT3						
CT7						
CT9						

BOWAN ASTROSONIX MODEL 402-FM

(1) Used in some versions.

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

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

ITEM No.	FUNCTION	RESISTANCE	REPLACEMENT DATA				
			MFR. PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	MALLORY PART No.	TRW PART No.
R61a	Tone	10K	R-R1167015				
b	Volume/Power Switch AGC	10K	(5)				
VR501		250K					

(5) Number on unit.

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.	FUNCTION	REPLACEMENT DATA			REMARKS
		PART No.	OTHER IDENTIFICATION	MILLER PART No.	
L1	10.7MHz Trap			74F106AP	(1) Part of M1 (Tuner)
L2	RF Choke (1uH)				
L3	AM Ant Choke				
L5	RF Choke				
L6	Image Trap (5uH)				
L11	FM Ant	(1)			
L12	FM RF	(1)			
L13	FM Osc	(1)			
L14	AM Ant	(1)			
L15	AM RF	(1)			
L16	AM Osc Tuning	(1)			
T1	IF (10.7MHz)		5T766P		
T7	AM Oscillator		8189P		
T501	IF (10.7MHz)				
T502	Ratio Det (Pri)				
T503	Ratio Det (Sec)				
T504	IF (455kHz)				
T505	IF (455kHz)				
T506	IF (455kHz)				
T507	IF (455kHz)				

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA			NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	MFG. PART No.	THORDARSON PART No.	TRIAD PART No.	
L4	230mA	.6	3.4mH	R-W6723 (1)			(1) Number on unit.

TRANSFORMER (Driver)

ITEM No.	TURNS RATIO			REPLACEMENT DATA			NOTES
	PRI.	SEC. 1	SEC. 2	MFG. PART No.	THORDARSON PART No.	TRIAD PART No.	
T9	2.4	1	1	R-W6339 (1)			(1) Number on unit.

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	1.2A			AGC1 1/4	HDJ	3121.25	150145		

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
CF501	Filter	B3S00118 (1)	10.7MHz Ceramic Ratio Detector AM/FM AM/FM Selector
CX1	Network		
M1	Tuning Coil Assembly		
S2	Switch		



PHOTOFACT[®] with

CIRCUITRACE[®]

For Supplier Address See PHOTOFACT Index

NOTE: Manufacturer Part Numbers Shown Are MOTOROLA



1FD4505 (D5AA-19A168-BD)
 (76 Ford, Econoline, Granada,
 Mustang, Torino)
 (76 Mercury, Cougar, Monarch,
 Montego)
 1FD4511 (D6BA-19A168-AA)
 (76 Ford Maverick)
 (76 Mercury Comet)

ADJUSTMENTS

ADJUST	REMARKS
Head Azimuth	Play a test cartridge and adjust B1 for maximum on an AC VTVM across output.
Head Height	Play a test cartridge, follow instructions with cartridge, and adjust B2 for proper response.

TROUBLE CHART

SYMPTOM	REMARKS
Capstan does not rotate.	Belt (38) dirty, worn, or broken. Assembly (38A) binding. Motor defective or not supplied with power.
Track-shift mechanism inoperative	Switch (E17) dirty. Cam (46) binding or worn. Pawls (54A) and (54B) worn. Spring (62) weak or broken. Arms (42A) and (42B) binding. Solenoid (E19) defective or not supplied with power. Cartridge defective.
Wow or flutter	Belt (38) dirty or worn. Capstan dirty or binding. Cartridge defective. Motor defective.
Sound weak or distorted	Head dirty, misaligned, or defective. Cartridge defective. Amplifiers defective.
Tape is pulled from cartridge.	Cartridge defective. Capstan dirty or scored.

FORD/MERCURY MODELS 1FD4505/1FD4511

HOWARD W. SAMS & CO., INC. Indianapolis, Indiana 46206

© 1976 Howard W. Sams & Co., Inc.

Printed in U. S. of America

6AL903

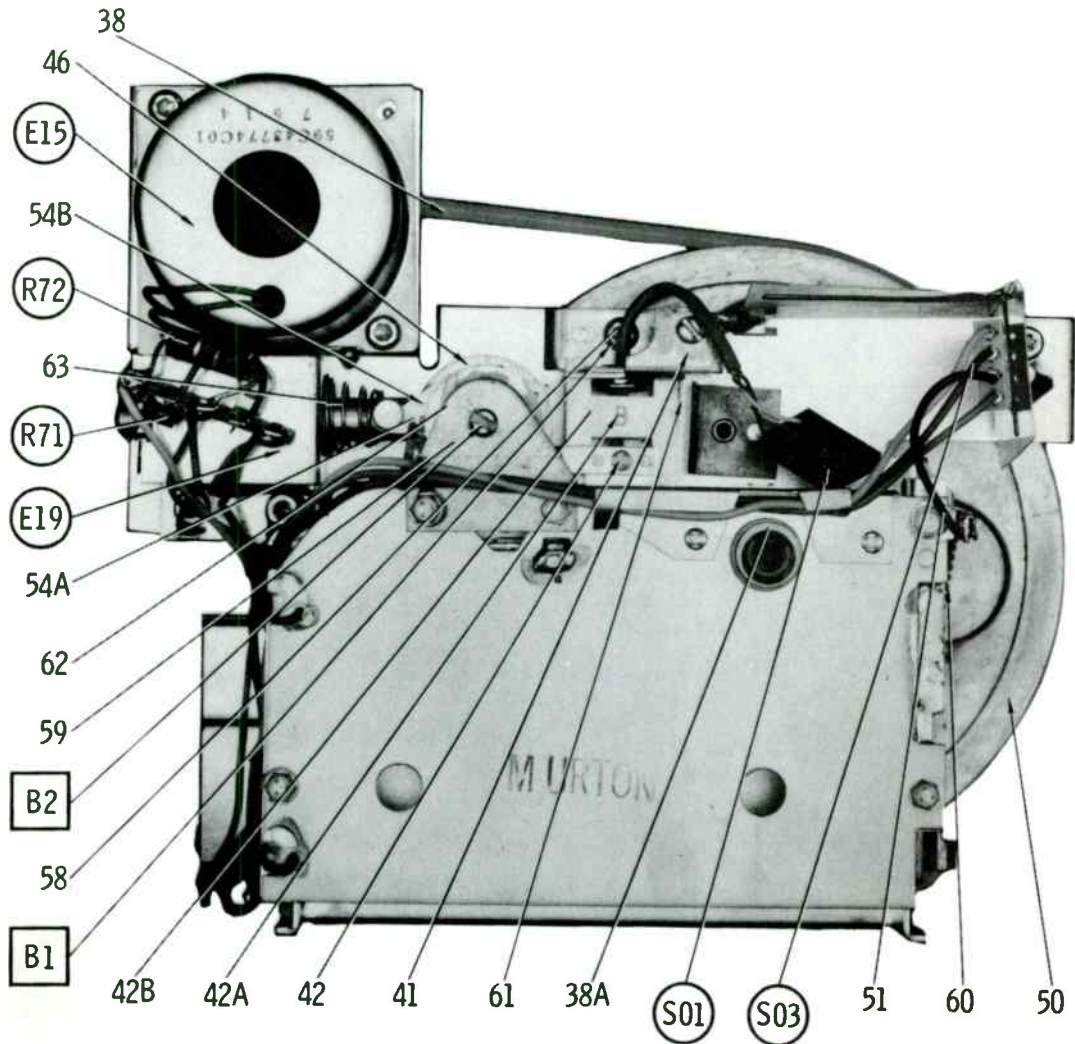
MECHANICAL PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
38	42-42561C02	Flywheel Drive Belt	51	41-40280F01	Detent Bracket
38A	43-40411B02	Flywheel Housing Assembly	54A	55-41723C04	Push Pawl
40	45-42099C88	Cartridge Detent Arm	54B	55-41722C04	Pull Pawl
41	1-43800C45	Head Shift Assembly	58	41-41251B18	Azimuth Adjustment Spring
42	1-40150E65	Head Clamp	59	41-41251B17	Cam Tension Spring
42A		Upper Radius Arm	60	41-40293F02	Detent Spring
42B		Lower Radius Arm	61	41-40442E01	Head Tension Spring
46	45-41147C04	Track Changing Cam	62	41-40681B04	Pawl Spring
50	49-40260F03	Flywheel	63	41-40445B04	Solenoid Spring
50A	46-43818C01	Tape Stripper			

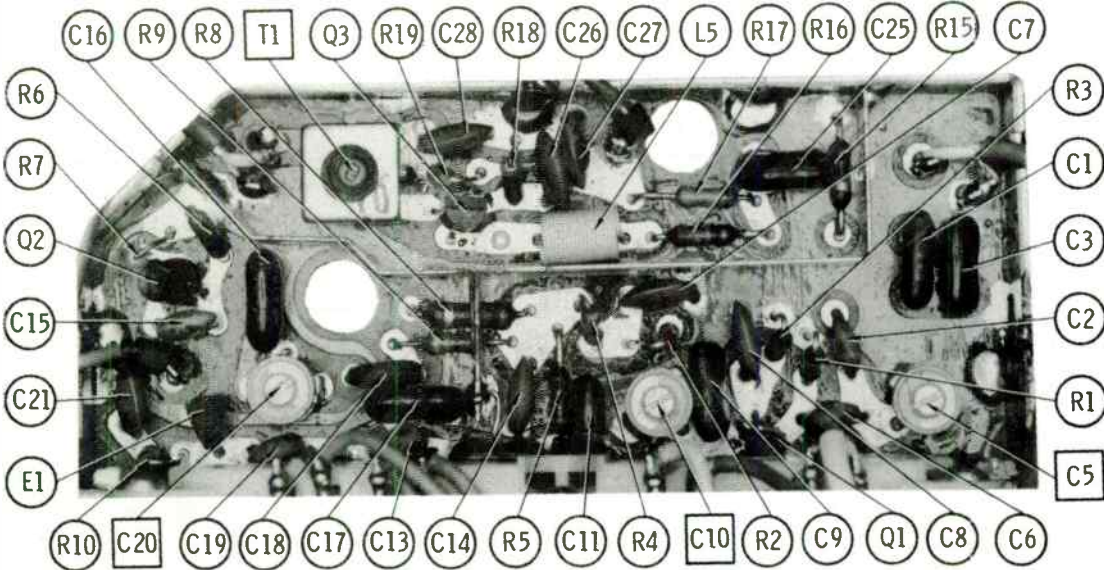
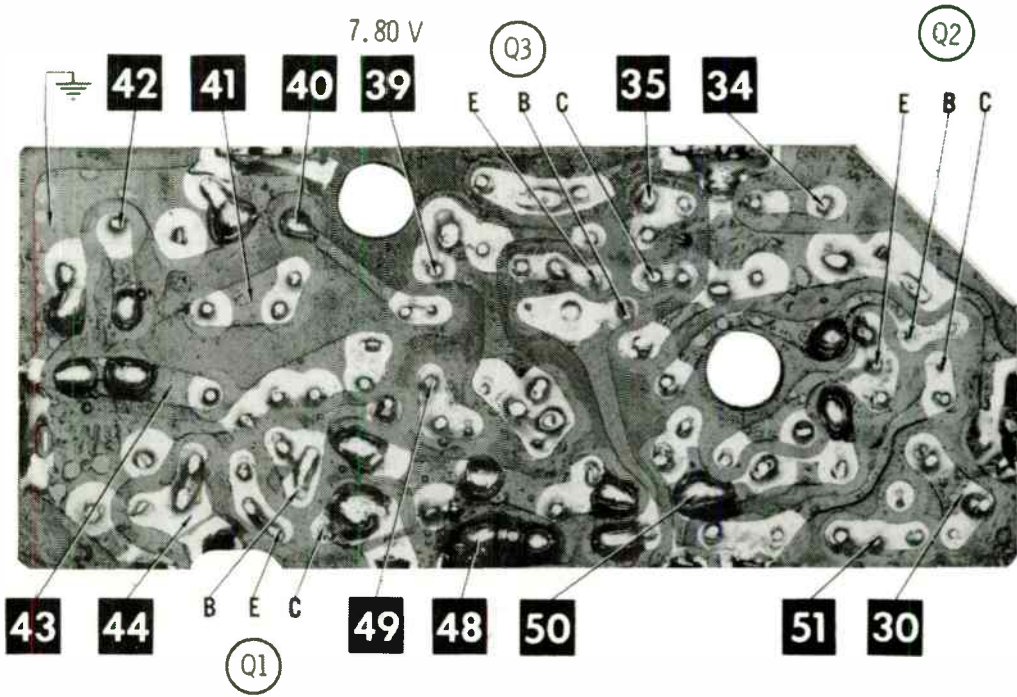
* Flywheel Drive Belt: E-V/GAME Replacement Number
WALSCO Replacement Number

CLEANING LUBRICATING HEAD DEMAGNETIZING

Refer to
"General Servicing Information"
on page 4.



TAPE DECK



FORD/MERCURY MODELS 1FD4505/1FD4511

FM RF BOARD

ALIGNMENT INSTRUCTIONS

Check for specified source voltage.

Use only enough generator output to provide a usable indication.

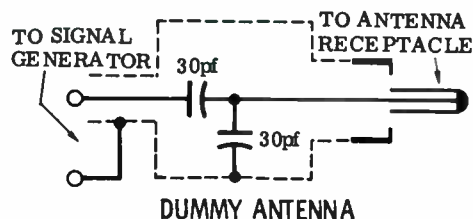
Suggested Alignment Tools: GC ELECTRONICS
 C5, C10, C20,
 C59, C63, C70, L7, T1 8290, 8868, 9087
 T1, T2 9296, 9297, 9300

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
High side thru .1uF to point A, low side to ground.	262kHz 400-Hz mod.	High freq. end stop.	Output meter across voice coil.	T3,T2	Adjust for maximum.
Thru dummy antenna to antenna input.	1615kHz	"	"	C70,C63, C59	"
Tuner alignment is not necessary unless associated components have been disturbed. If necessary, back tuning cores L8, L9, L10 out of coils but not out of forms. Repeat step 2.					
Thru dummy antenna to antenna input.	1000kHz	Tune to signal	Output meter across voice coil.	L10,L9, L8	Adjust for maximum. Repeat alignment until no further improvement is noted.

With radio installed in car and antenna extended 36", tune in a weak station near 1400kHz and adjust C59 for maximum output. Antenna adjustment C59 is located on rear, right hand bottom corner.



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

High side of generator thru .001uF to point A, low side to ground.

GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
10.7MHz Unmodulated	Point of non-interference	DC probe of VTVM to point B, common to ground.	L7,T1	Adjust for maximum.

FM RF ALIGNMENT—SELECTOR IN FM POSITION

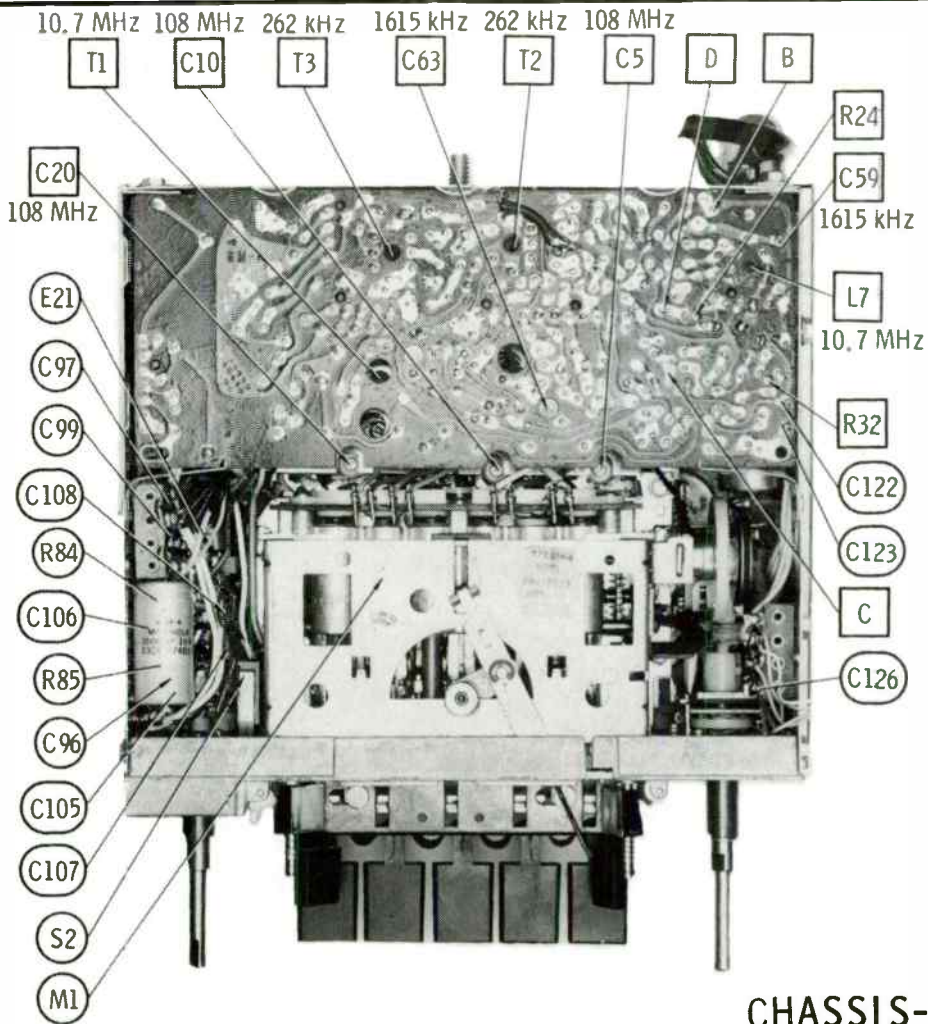
Connect generator across antenna terminals with 120-ohm carbon resistor in series with each lead. Adjustment of coils by bending should not be attempted unless the coil is deformed or replaced.

GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
88MHz Unmodulated	Low freq end	DC probe of VTVM to point B, common to ground.	L4,L3,L2	Adjust for maximum.
108MHz Unmodulated	Tune to signal	"	C20,C10,C5	Adjust for maximum. Repeat FM RF steps until no further improvement is noted.

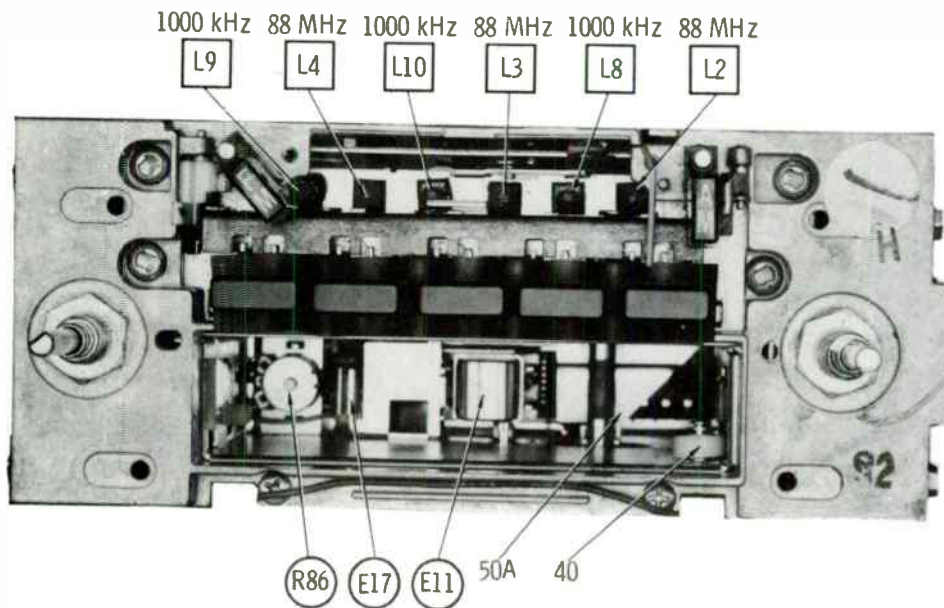
FM STEREO MULTIPLEX ALIGNMENT

Ground point B. Connect freq counter thru 100K ohm resistor point C to pin 11 of IC3. Adjust R32 for 19kHz \pm 20Hz.

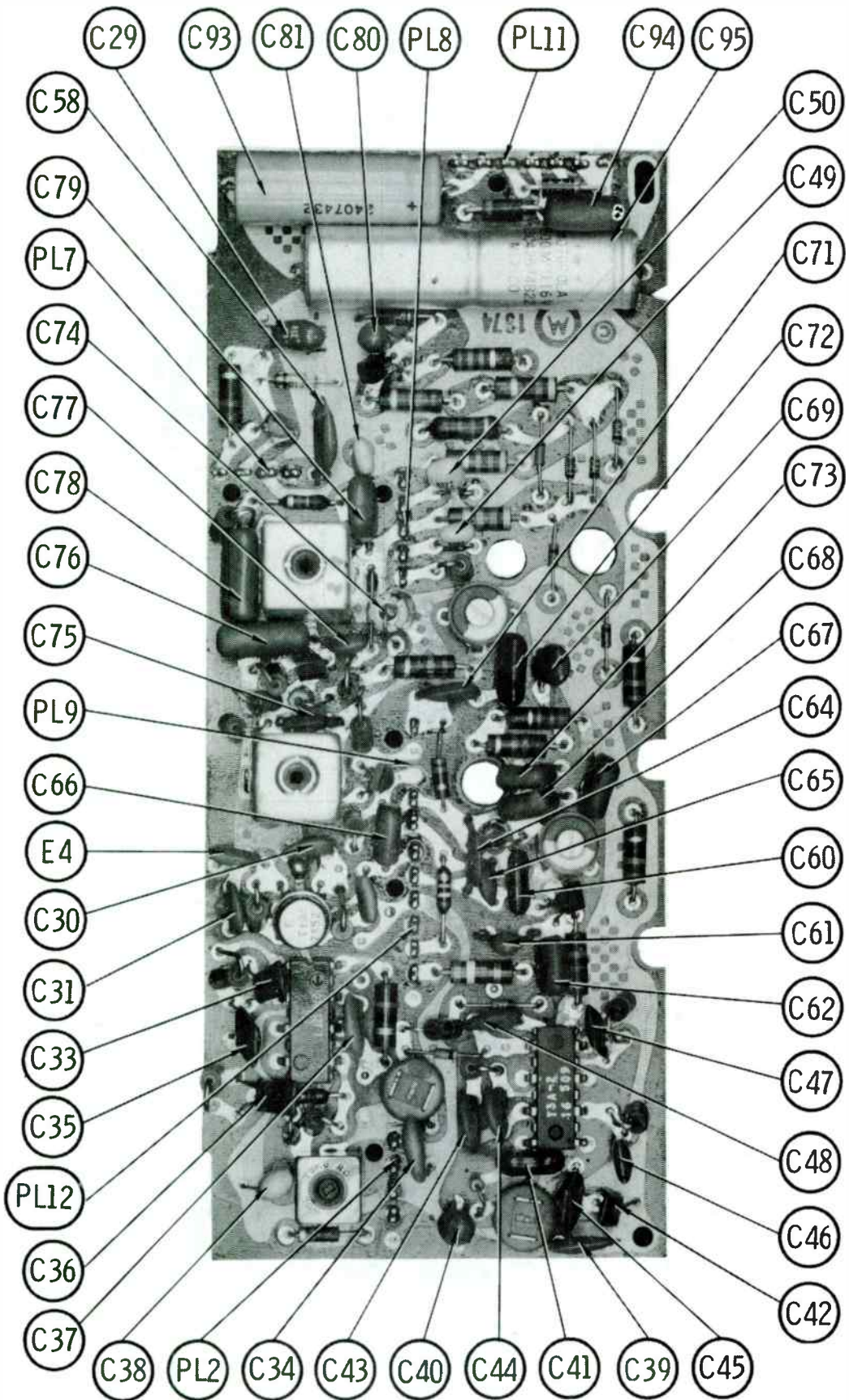
Connect VTVM to point D. Adjust R24 for 3.4V.



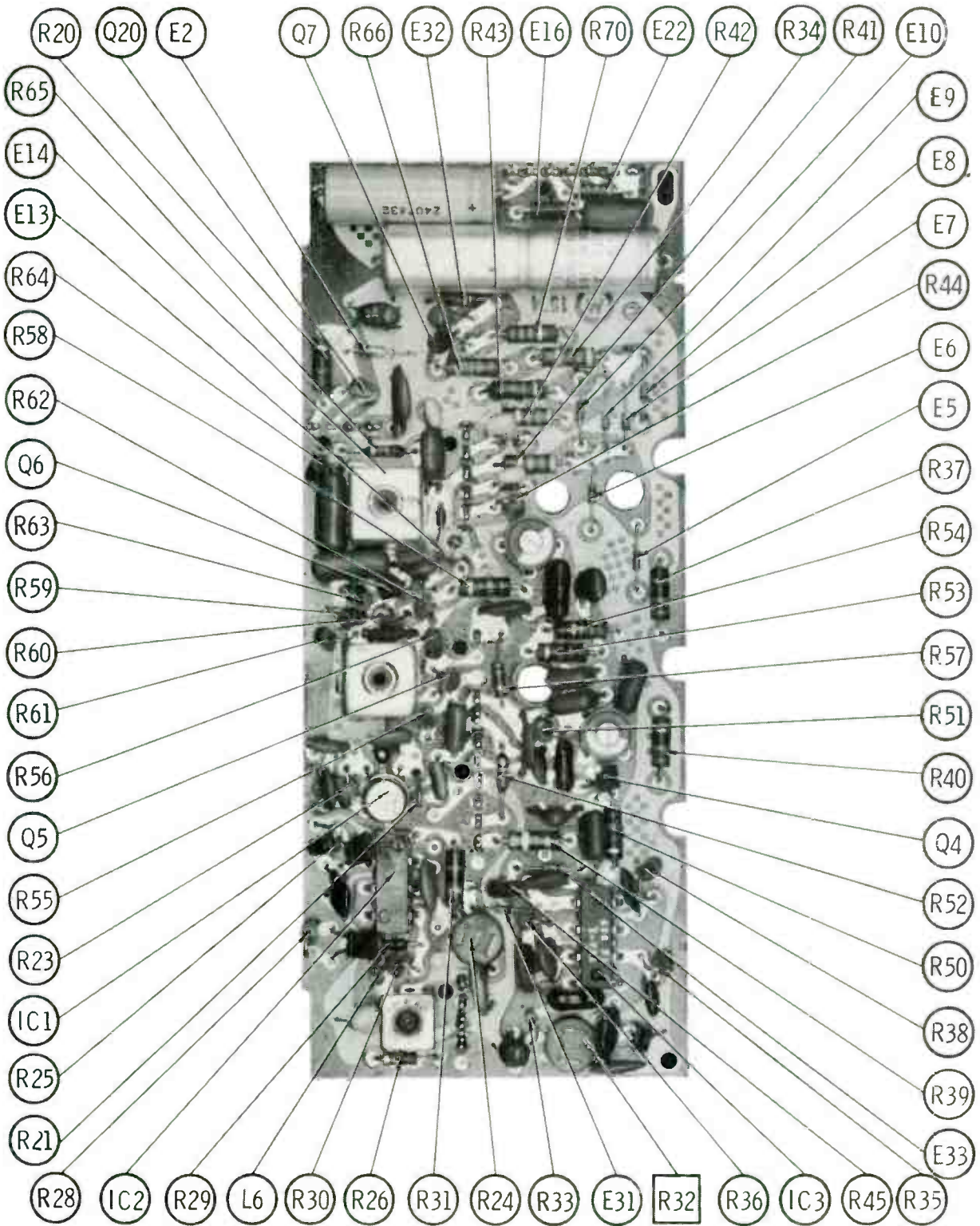
CHASSIS-TOP VIEW



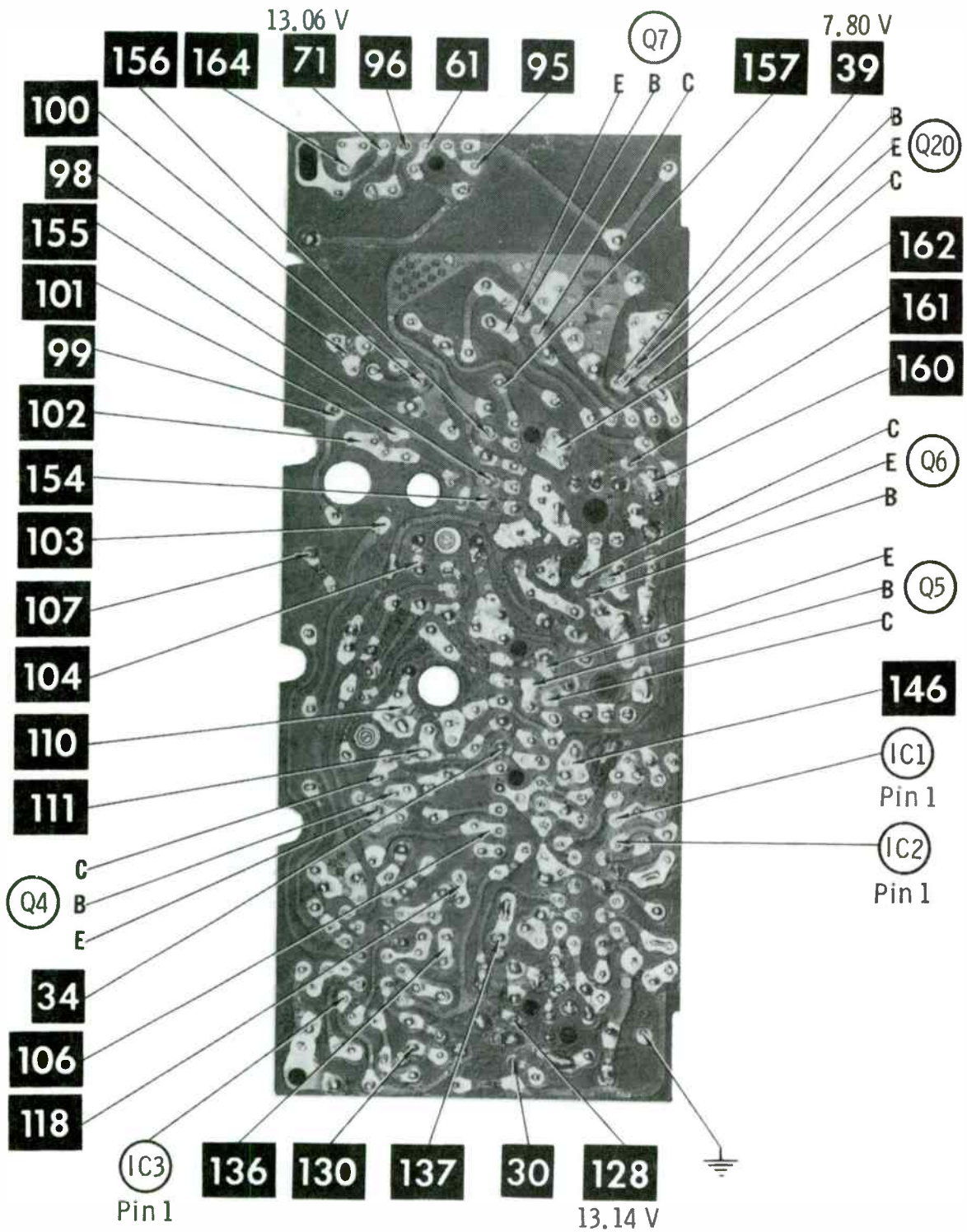
CHASSIS-FRONT VIEW



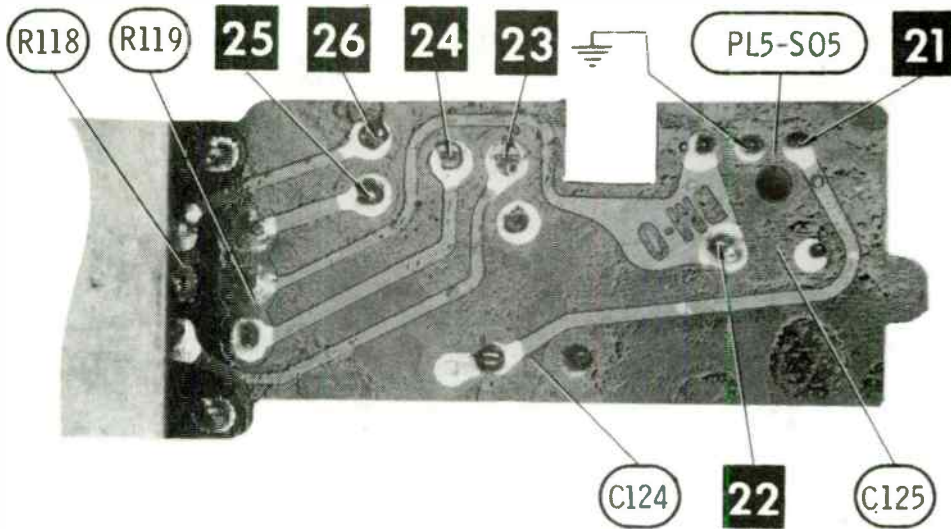
AM/FM IF BOARD-TOP VIEW



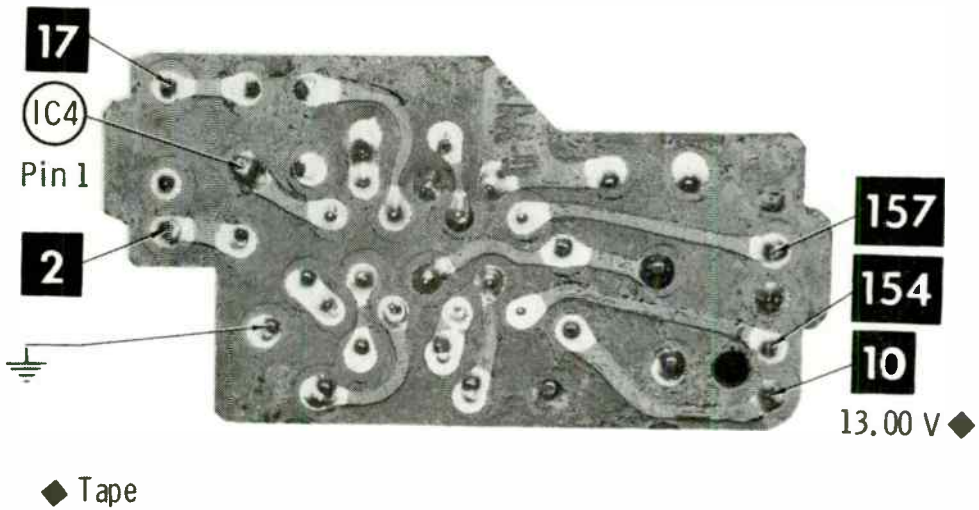
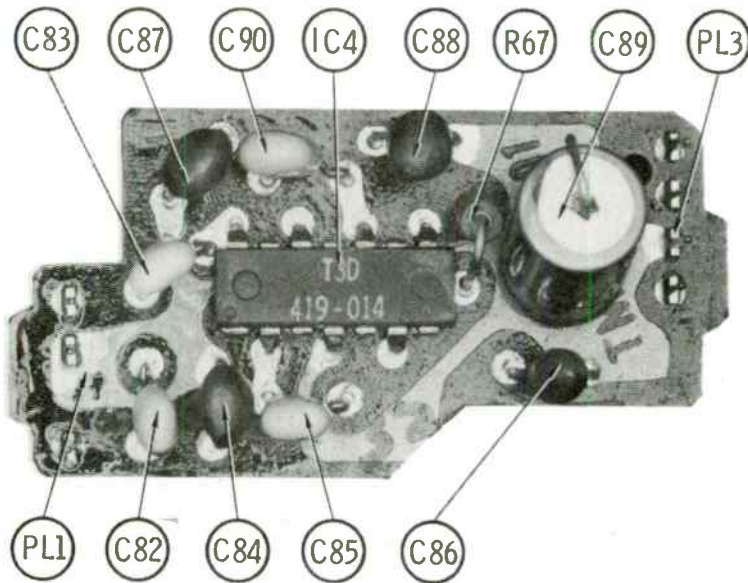
AM/FM IF BOARD-TOP VIEW



AM/FM IF BOARD-BOTTOM VIEW

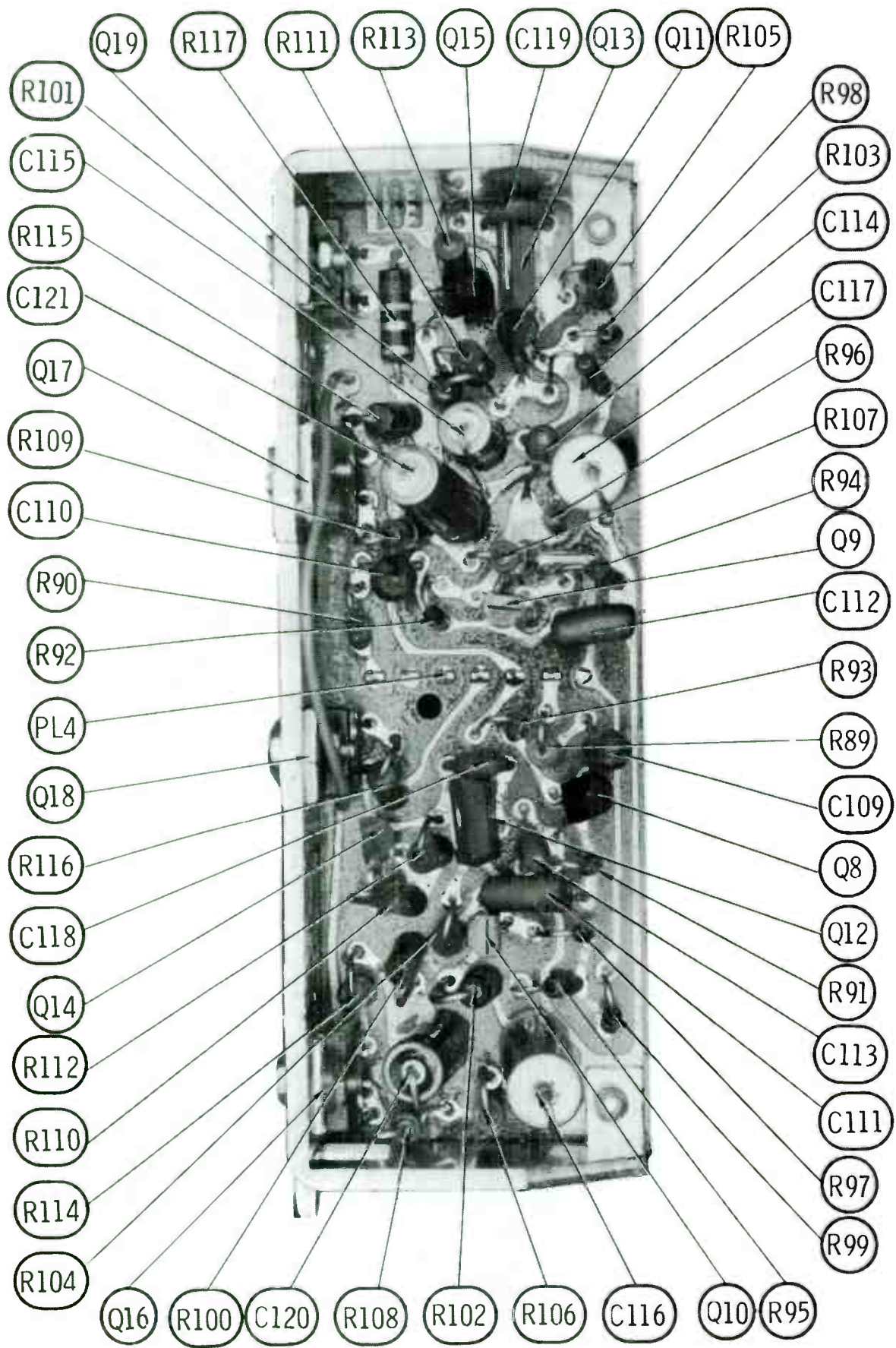


FADER BOARD-BOTTOM VIEW

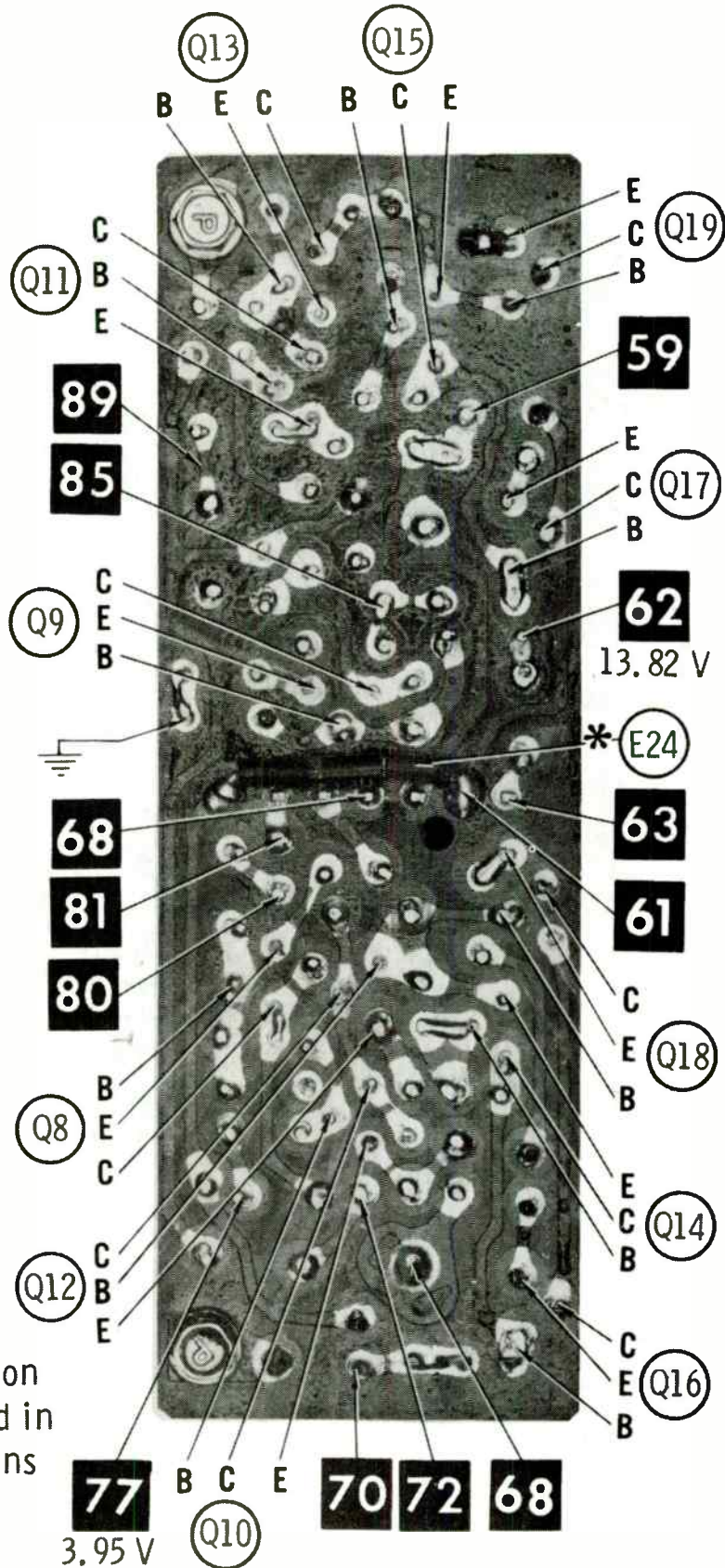


TAPE PREAMP BOARD

FORD/MERCURY MODELS 1FD4505/1FD4511



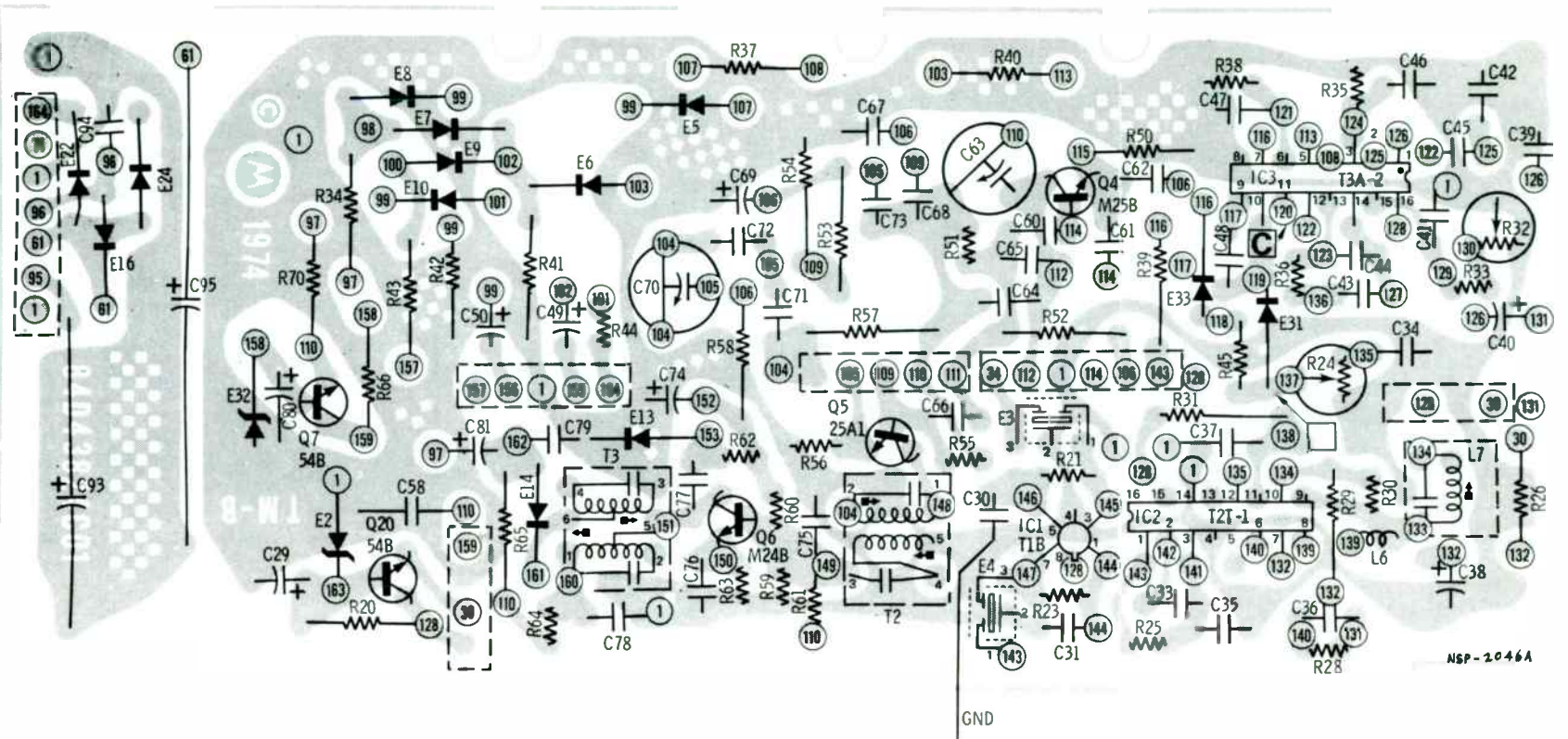
AUDIO BOARD-TOP VIEW



*E24 located on AM-FM Board in some versions

FORD/MERCURY MODELS 1FD4505/1FD4511

AUDIO BOARD-BOTTOM VIEW

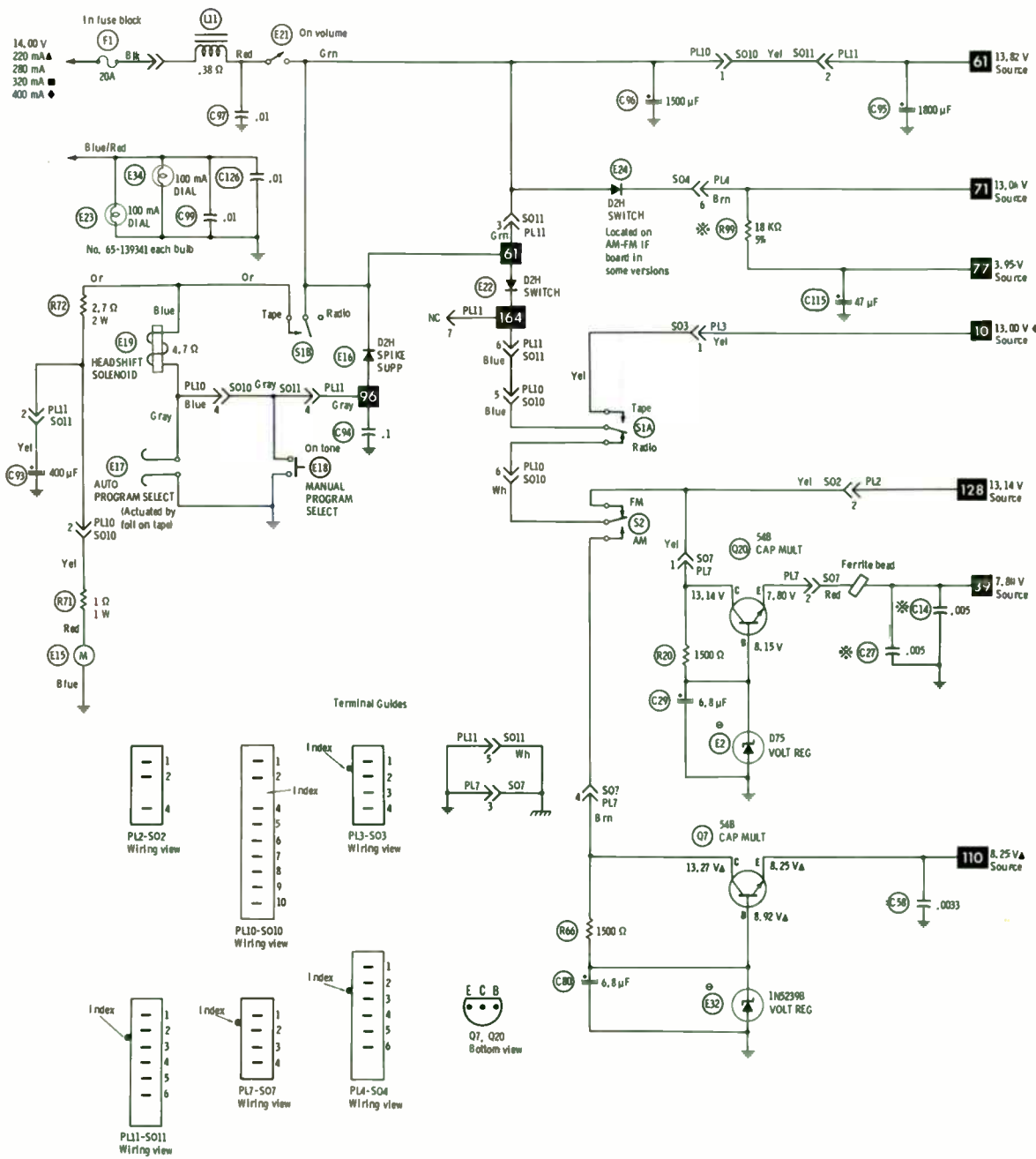


NSP-2046A

TOP VIEW - COMPONENT SIDE - VERSION 1 (SOME SETS)

Courtesy of the Manufacturer

NOTE: DEMAGNETIZE HEADS AFTER SERVICING



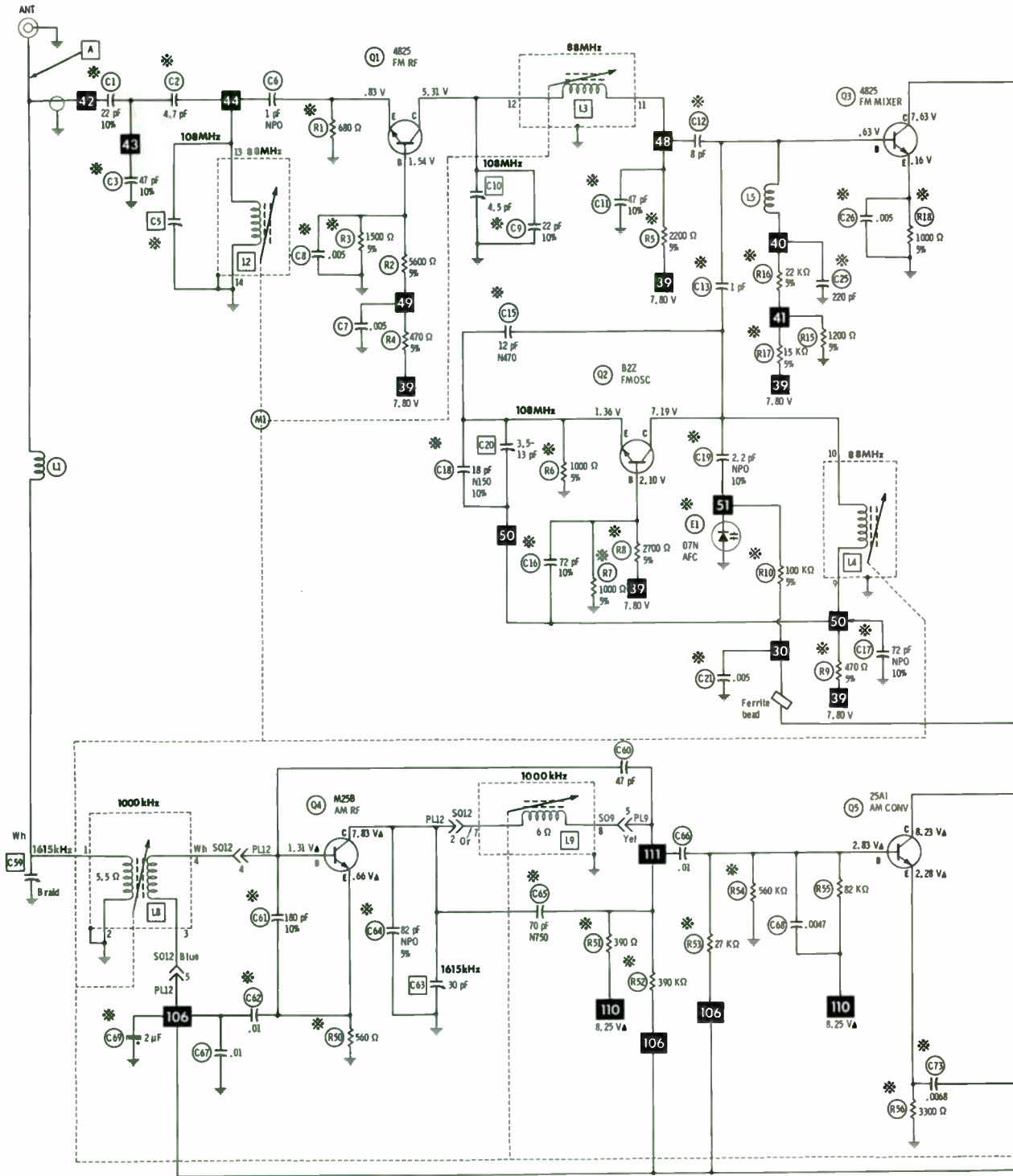
- Circuitry not used in some versions
- - - Circuitry used in some versions
- ⊙ See parts list
- * Nominal value
- ⊕ Ground
- ⊞ Chassis
- ▽ Common tie point

Measurements with switching as shown unless noted:
 ■ FM Stereo signal ♦ Tape play ▲ AM
 Supply voltage maintained as shown at input.
 Voltages measured with digital meter, no signal.
 Controls adjusted for normal operation.
 Arrow at control indicates direction of advance.
 Terminal identification may not be found on unit.
 Resistors are 1/2W or less, 5% unless noted.
 Value in () used in some versions.

A PHOTOFAC STANDARD NOTATION SCHEMATIC
 WITH **CIRCUITRACE**
 © Howard W. Sams & Co., Inc. 1976

FORD/MERCURY MODELS 1FD4S05/1FD4S11

NOTE: DEMAGNETIZE HEADS AFTER SERVICING



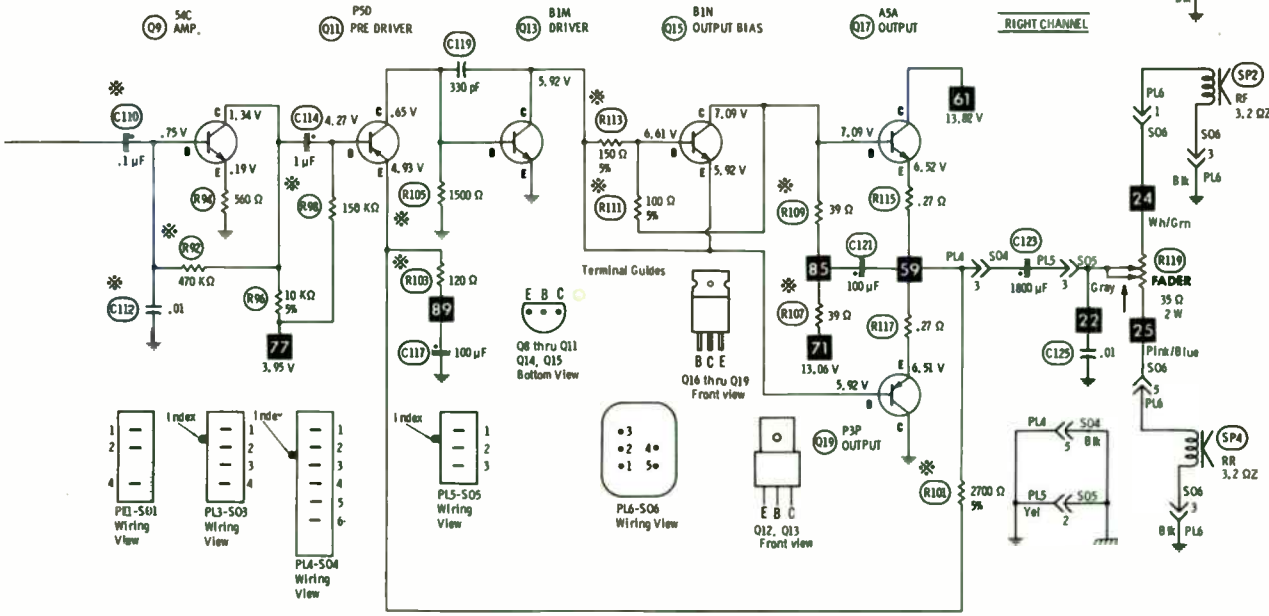
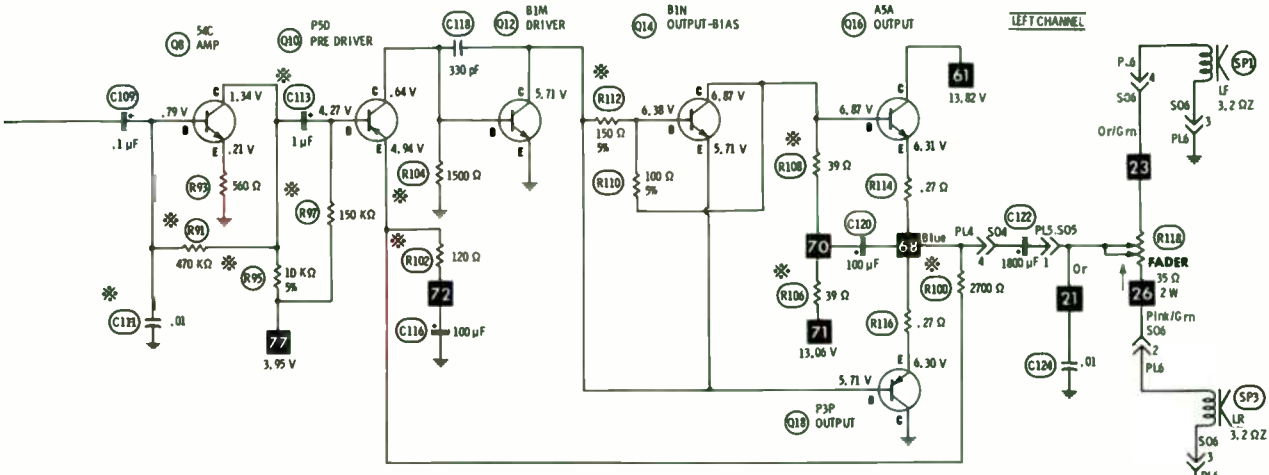
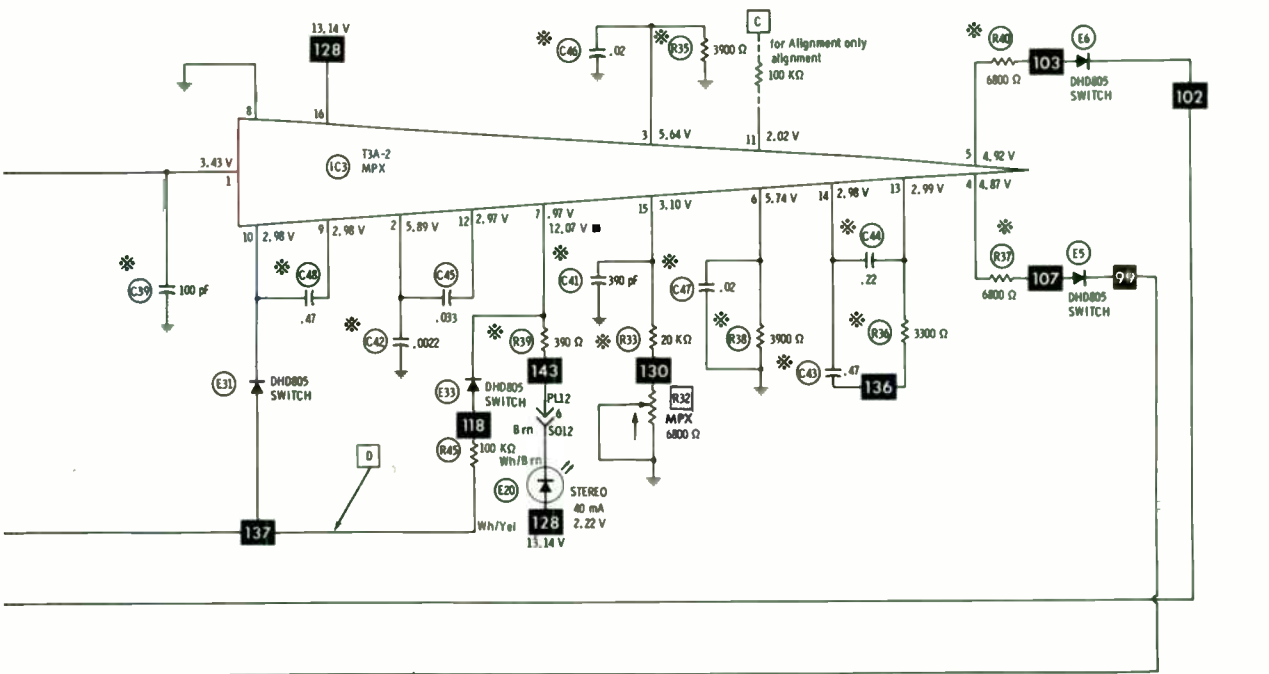
- ×— Circuitry not used in some versions
- Circuitry used in some versions
- ⊙ See parts list
- * Nominal value
- ⊕ Ground
- ⊞ Chassis
- ▽ Common tie point

Measurements with switching as shown unless noted:
 ■ FM Stereo signal ▲ AM ◆ Tape play

Supply voltage maintained as shown at input.
 Voltages measured with digital meter, no signal.
 Controls adjusted for normal operation.
 Arrow at control indicates direction of advance.
 Terminal identification may not be found on unit.
 Resistors are 1/2W or less, 5% unless noted.
 Value in () used in some versions.

A PHOTOFAC TANDARD NOTATION SCHEMATIC
 WITH **CIRCUITRACE**

© Howard W. Sams & Co., Inc. 1976



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.

SEMICONDUCTORS (Select replacement transistor for best results)

ITEM No.	TYPE No.	MFR. PART No.	REPLACEMENT DATA							
			GENERAL ELECTRIC PART No.	IR WORKMAN PART No.	MALLORY PART No.	MOTOROLA PART No.	RAYTHEON PART No.	RCA PART No.	SPRAGUE PART No.	SYLVANIA PART No.
E1	D7N	48-137487	GE-90	D201		HEPR2503	RE 195	SK3126	RT-262	
E2	D7S									
	D9M	48-137621 (1)			Z89.18					
E5	DHD805	48-137573	GE-300	D200	PTC214	HEPRO602	RE 52	SK3100	RT-218	ECG177
E6	DHD805	48-137573	GE-300	D200	PTC214	HEPRO602	RE 52	SK3100	RT-218	ECG177
E7	DHD805	48-137573	GE-300	D200	PTC214	HEPRO602	RE 52	SK3100	RT-218	ECG177
E8	DHD805	48-137573	GE-300	D200	PTC214	HEPRO602	RE 52	SK3100	RT-218	ECG177
E9	DHD805	48-137573	GE-300	D200	PTC214	HEPRO602	RE 52	SK3100	RT-218	ECG177
E10	DHD805	48-137573	GE-300	D200	PTC214	HEPRO602	RE 52	SK3100	RT-218	ECG177
E13	DHD800	48-134816	GE-300	D200	PTC214	HEPRO602	RE 52	SK3100	RT-218	ECG177
E14	DHD800	48-134816	GE-300	D200	PTC214	HEPRO602	RE 52	SK3100	RT-218	ECG177
E16	D2H	48-137029	GE-504A	5A4D	PTC201	HEPRO052	RE 49	SK3030	RT-213	ECG116
E20		48-43789C01								
E22	D2H	48-137029	GE-504A	5A4D	PTC201	HEPRO052	RE 49	SK3030	RT-213	ECG116
E24	D2H	48-137029	GE-504A	5A4D	PTC201	HEPRO052	RE 49	SK3030	RT-213	ECG116
E31	DHD805	48-137573	GE-300	D200	PTC214	HEPRO602	RE 52	SK3100	RT-218	ECG177
E32	1N5239B		GEZD-9.1		Z89.18				RT-240	ECG139
	D9M	48-137621 (1)			Z89.18					
E33	DHD805	48-137573	GE-300	D200	PTC214	HEPRO602	RE 52	SK3100	RT-218	ECG177
IC1	T1B	51-10302A01	GE1C-12	IC500	PTC743	HEPC6001	RE 300-IC	SK3157	TVCM-44	ECG703A
IC2	T2T-1	51-10658A02			PTC767			SK3147	TVCM-39	ECG788
IC3	T3A-2	51-10711A02			PTC729					ECG743
IC4	T3D	51-10726A01			PTC762					
Q1	4825	48-134825	GE-17	TR-21	PTC136	HEPS0033	RE 9	SK3018	RT-108A	ECG107
Q2	822	48-137612	GE-17	TR-24	PTC136	HEPS0025	RE 9	SK3018	RT-107	ECG107
Q3	4825	48-134825	GE-17	TR-21	PTC136	HEPS0033	RE 9	SK3018	RT-108A	ECG107
Q4	M25B	48-134805	GE-20	TR-21	PTC136	HEPS0025	RE 10	SK3018	RT-107A	ECG229
Q5	25A1	48-137354	GE-20	TR-95	PTC136	HEPS0015	RE 10	SK3018	RT-172	ECG108
Q6	M24B	48-134807	GE-20	TR-24	PTC136	HEPS0014	RE 10	SK3018	RT-107	ECG108
Q7	54B	48-134809	GE-20	TR-21	PTC136	HEPS0015	RE 13	SK3124	RT-172	ECG123A
Q8	54C	48-134810	GE-20	TR-21	PTC136	HEPS0016	RE 13	SK3124	RT-172	ECG123A
Q9	54C	48-134810	GE-20	TR-21	PTC136	HEPS0016	RE 13	SK3124	RT-172	ECG123A
Q10	P5D	48-137504	GE-65	TR-52	PTC103		RE 26	SK3118	RT-120	ECG159
Q11	P5D	48-137504	GE-65	TR-52	PTC103		RE 26	SK3118	RT-120	ECG159
Q12	81M	48-137505	GE-217	TR-72	PTC144	HEPS3020	RE 75	SK3054	RT-186	ECG188
Q13	81M	48-137505	GE-217	TR-72	PTC144	HEPS3020	RE 75	SK3054	RT-186	ECG188
Q14	81N	48-137509	GE-20	TR-51	PTC139	HEPS0024	RE 192	SK3122	RT-172	ECG199
Q15	81N	48-137509	GE-20	TR-51	PTC139	HEPS0024	RE 192	SK3122	RT-172	ECG199
Q16	A5A	48-137080(5)	GE-66	TR-76	PTC110		RE 21	SK3054	RT-152	ECG152
Q17	A5A	48-137080(5)	GE-66	TR-76	PTC110		RE 21	SK3054	RT-152	ECG152
Q18	P3P	48-137259(5)	GE-69	TR-77	PTC111		RE 22	SK3083	RT-153	ECG153
Q19	P3P	48-137259(5)	GE-69	TR-77	PTC111		RE 22	SK3083	RT-153	ECG153
Q20	54B	48-134809	GE-20	TR-21	PTC136	HEPS0015	RE 13	SK3124	RT-172	ECG123A

- (1) Used in some versions.
 (5) Half of complementary pair.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA			
		MFR. PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.
C29	6.8 35V	23-42582B10		TDC685M035FL	SD35-6R89
C38	.5 10V	23-43280A25		TDC474M050EL	SD50-R479
C40	.5 6V	23-43280A26		TDC475M010EL	SD10-4R79
C49	.2 15V	23-43280A19		TDC224M050EL	SD50-R229
C50	.2 15V	23-43280A19		TDC224M050EL	SD50-R229
C69	2 10V	23-43280B01		TDC225M020EL	SD25-2R29
C74	10 25V			TC22A	TVA-1204
	10 6V	23-43280A34		TDC106M025FL	SD20-109
C80	6.8 35V	23-42582B10		TDC685M035FL	SD35-6R89
C81	.5 10V	23-43280A25		TDC474M050EL	SD50-R479
C82	.1 15V	23-43280A20		TDC104M050EL	SD50-R109
C83	.1 15V	23-43280A20		TDC104M050EL	SD50-R109
C84	10 6V	23-43280A34		TDC106M025FL	SD20-109
C85	.1 15V	23-43280A20		TDC104M050EL	SD50-R109
C86	5 6V	23-43280A26		TDC475M010EL	SD10-4R79
C87	10 6V	23-43280A34		TDC106M025FL	SD20-109
C88	5 6V	23-43280A26		TDC475M010EL	SD10-4R79
C89	250 16V	23-41928A39		TC15025A	TVA-1161
C90	.1 15V	23-43280A20		TDC104M050EL	SD50-R109
C93	400 16V	23-42674810		TT15X400	TVA-1161.5
C95	1800 16V	23-42674822		MTA2000G15	TVA-1170
C96	1500 16V	23-42674813		TT15X1500A	TVA-1175.2
C105	.5 15V	23-43280A25		TDC474M050EL	SD50-R479
C106	.5 15V	23-43280A25		TDC474M050EL	SD50-R479
C109	.1 15V	23-43280A15		TDC104M050EL	SD50-R109
C110	.1 15V	23-43280A15		TDC104M050EL	SD50-R109
C113	1 25V	23-42582B03		TDC105M035EL	SD35-19
C114	1 25V	23-42582B03		TDC105M035EL	SD35-19
C115	47 10V	23-42674823		VTT47D16	EV-1226
C116	100 10V	23-42674838		MTA100E10	TVA-1130
C117	100 10V	23-42674838		WBR100-16	TVA-1130
C120	100 10V	23-42674844		WBR100-16	TVA-1130
C121	100 10V	23-42674844		WBR100-16	TVA-1130
C122	1800 16V	23-42674821		WBR2000-16	TVA-1170
C123	1800 16V	23-42674821		WBR2000-16	TVA-1170

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	MFR. PART No.	REPLACEMENT DATA			
			CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.
C1	22 10%		DTZ-22	NP022	CN0422	10TCC-Q22
C2	4.7 NPO ±.25	21-43539A74				
C3	47 10%		DTZ-47	NP047	CN0447	10TCC-Q47
C5	4.5-20	20-40429B05				
C6	1 NPO ±.25	21-43539A16				
C7	.005		DC-502	GP5000	TA250	2SS-D50
C8	.005		DC-502	GP5000	TA250	2SS-D50
C9	22 10%		DTZ-22	NP022	CN0422	10TCC-Q22
C10	4.5-20	20-40429B05				
C11	47 10%		DTZ-47	NP047	CN0447	10TCC-Q47
C12	8 10%	21-40367A18				
C13	1 NPO ±.25	21-43539A16				
C14	.005		DC-502	GP5000	TA250	2SS-D50
C15	12 N470 5%	21-43539A84			*	10TCT-Q12
C16	72 10%		DTZ-75	NP075	CN0475	10TCC-Q75
C17	72 10%		DTZ-75	NP075	CN0475	10TCC-Q75
C18	18 N150 10%	21-43539A88			*	10TCN-Q18
C19	18 N750 5%		OTN-20	N20	CN7420	10TCU-Q20
C20	2.2 NPO 10%		DTZ-2R2	NP02P2	CN0522	10TCC-V22
C21	3.6-13	20-40429B06				
C22	.005		DC-502	GP5000	TA250	2SS-D50
C25	220 5%			CD10FD221J03	SX322	424ME2200J501
C26	.005		DC-502	GP5000	TA250	2SS-D50
C27	.005		DC-502	GP5000	TA250	2SS-D50
C28	.005		DC-502	GP5000	TA250	2SS-D50
C30	.005		DC-502	GP5000	TA250	2SS-D50
C31	.005		DC-502	GP5000	TA250	2SS-D50
C33	.01 10%	8-42208B15				10TS-S10
C34	.1 12V		DC-104	MGP1	MAG5001	TG-P10
C35	.022 10%			DPMS2S22	EW1A122	1PB-S22
C36	.0022 10%			GP222	GP222	10TS-D22
C37	.01		OC-103	GP10000	MAG5011	2SS-S10
C39	100 N220 10%	21-43539A23			*	10TCR-T10
C41	390 5%			CD15FD391J03	SX339	424ME3900J501
C42	.0022 10%			OPMS2P47	GP222	10TS-D22
C43	.47 3V			OPMS2P22	EW1A047	1PB-P47
C44	.22 3V				EW1A022	1PB-P22
C45	.033		OC-303		GP130	TG-S30
C46	.02		DC-203		MAG5012	2SS-S20
C47	.02		DC-203		MAG5012	2SS-S20
C48	.47 3V			OPMS2P47	EW1A047	1PB-P47
C58	.0033 10%	21-43538A44				10TS-Q33
C59	25-150	20-40746A25				
C60	47 10%		OTZ-47	NP047	CN0447	10TCC-Q47
C61	180 10%		DD-181		GP318	10TS-T18
C62	.01		OC-103	GP10000	MAG5011	2SS-S10
C63	10-60	20-43646B01				
C64	82 NPO 5%		OTZ-82	NP082	CN0482	10TCC-Q82
C65	70 N750 5%		OTN-68	N68	CN7468	10TCU-Q68
C66	.01		OC-103	GP10000	MAG5011	2SS-S10
C67	.01		DC-103	GP10000	MAG5011	2SS-S10
C68	.0047 10%	8-41719B09				10TS-D47
C70	10-60	20-43646B01				
C71	150 N750 5%		OTN-150	N150	CN7315	10TCU-T15
C72	220 5%	21-43842B02				10TCC-T22
C73	.0068 10%			DPMS6268	EW1A268	1PB-D68
C75	.0015 10%		DD-152		GP215	10TS-O15
C76	.1		DC-104	MGP1	MAG5001	TG-P10
C77	150 10%		OTZ-150		CN0315	10TCC-T15
C78	.1		OC-104	MGP1	MAG5001	TG-P10
C79	.01		DC-103	GP10000	MAG5011	2SS-S10
C94	.1 10%			DPMS2P1	EW1A010	1PB-PT0
C97	.01		DC-103	GP10000	MAG5011	2SS-S10
C99	.01		OC-103	GP10000	MAG5011	2SS-S10
C107	.047 10%			OPMS2S47	EW1A147	1PB-S47
C108	.047 10%			DPMS2S47	EW1A147	1PB-S47
C111	.01		OC-103	GP10000	MAG5011	2SS-S10
C112	.01		DC-103	GP10000	MAG5011	2SS-S10
C118	330 10%		DD-331	GP330	GP333	10TS-T33
C119	330 10%		DD-331	GP330	GP333	10TS-T33
C124	.01		DC-103	GP10000	MAG5011	2SS-S10
C125	.01		DC-103	GP10000	MAG5011	2SS-S10
C126	.01		OC-103	GP10000	MAG5011	2SS-S10

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

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

ITEM No.	FUNCTION	RESISTANCE	REPLACEMENT DATA				
			MFR. PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	MALLORY PART No.	TRW PART No.
R24	MPX Inhibit	220K	18-43556C01				
R32	MPX	6800	18-43556C04				
R86	Balance	32K	18-43701C01				
R87A	Tone-Left	50K	18-4365802(18)				
R87B	Tone-Right/Manual	50K	18C43658C02(5)				
	Program Switch						
R88A	Volume-Left	30K Tap 20K					
R88B	Volume-Right/On-Off	30K Tap 20K					
	Switch						
R118	Fader-Left	35 2W	18-43683C01				
R119	Fader-Right	35 2W	(19)				

(5) Number on unit.

(18) Includes R87A, R87B, R88A and R88B.

(19) Includes R118 and R119.

FORD/MERCURY MODELS 1FD4505/1FD4511

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.	FUNCTION	REPLACEMENT DATA			REMARKS
		PART No.	OTHER IDENTIFICATION	MILLER PART No.	
L1	AM Ant. Choke (1.5uH)	24-40788A04		4604	(1) Part of M1 (Tuner), (2) Use 24-40310B17. (3) Use 24-40310B18.
L2	FM Ant.	(1)			
L3	FM RF	(1)			
L4	FM Osc.	(1)			
L5	10.7MHz Trap	24-40788A08		4602	
L6	RF Choke	24-40206E01			
L7	Quadrature	24-42147C03	42147C03		
L8	AM Ant.	(1)			
L9	AM RF	(1)			
L10	AM Osc.	(1)			
T1	IF (10.7MHz)	24-42147C01	24C42147C01		
T2	IF (262kHz)	24-40310B15 (2)	24D40310B15		
T3	IF (262kHz)	24-40310B16 (3)	24D40310B16		

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA			NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	MFG. PART No.	THORDARSON PART No.	TRIAD PART No.	
L11	400mA	.38	1.8mH	30-40125E01			

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	20A	SFE20	Fuse Block	AGC20		307020		

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
E3	Filter	91-43353A53	10.7MHz, Ceramic
E4	Filter	91-43353A53	10.7MHz, Ceramic
E11	Head	59-43641A02	8-Track Stereo Play
E15	Motor	59-43774C01	Tape Transport (3000 rpm @ 13.10V)
E17	Switch	1-43803C02	Auto Program Selector (Contact)
E18	Switch		Manual Program Selector
E19	Solenoid	21-42064B06	Head Shift
M1	Tuning Coil Assembly	77-43645C01	AM/FM
S1A	Switch	40-43711C01	Radio/Tape
S1B	Switch	40-43710C01	Motor
S2	Switch	1-40099E53	AM/FM
	Printed Circuit Board	84-43818C03	FM Tuner
	Printed Circuit Board		IF/MPX
	Printed Circuit Board	1-43999C07	Preamp
	Printed Circuit Board	1-40150E39	Audio Amp
	Printed Circuit Board	1-43800C94	Fader

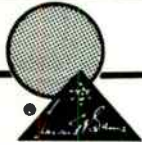
CABINETS & CABINET PARTS (When ordering specify model, chassis & color)

ITEM	PART No.	ITEM	PART No.
Escutcheon Assembly	13-43725C01	Scale, Dial	(1)
Door, Tape	(1)	Push-buttons, AM	38-43670C02
Door Shaft, Tape	(1)	Push-buttons, FM	38-43670C01
Door Spring, Tape	(1)		

(1) Part of Escutcheon Assembly.

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.)
Ignition Noise Suppression	Use BELDEN No. 7300-Series Spark-Plug Sets



PHOTOFACT[®] with

CIRCUITRACE[™]

For Supplier Address See PHOTOFACT Index



MODEL TP-200

ADJUSTMENTS

ADJUST	REMARKS
Head Azimuth	Play a test cartridge and adjust B1 for maximum on an AC VTVM across output.
Head Height	Play a test cartridge, follow instructions with cartridge, and adjust B2 for proper response.

PIONEER MODEL TP-200

TROUBLE CHART

SYMPTOM	REMARKS
Capstan does not rotate.	Belt (4) dirty, worn, or broken. Assembly (7) binding. Motor defective or not supplied with power.
Track-shift mechanism inoperative	Switch (S5) dirty. Cam (11) binding or worn. Pawl (38) worn. Assembly (12) binding. Solenoid (M2) defective or not supplied with power. Cartridge defective.
Wow or flutter	Belt (4) dirty or worn. Capstan dirty or binding. Cartridge defective. Motor defective.
Sound weak or distorted	Head dirty, misaligned, or defective. Cartridge defective. Amplifiers defective.
Tape is pulled from cartridge.	Cartridge defective. Capstan dirty or scored.

HOWARD W. SAMS & CO., INC. Indianapolis, Indiana 46206

© 1976 Howard W. Sams & Co., Inc.

Printed in U. S. of America

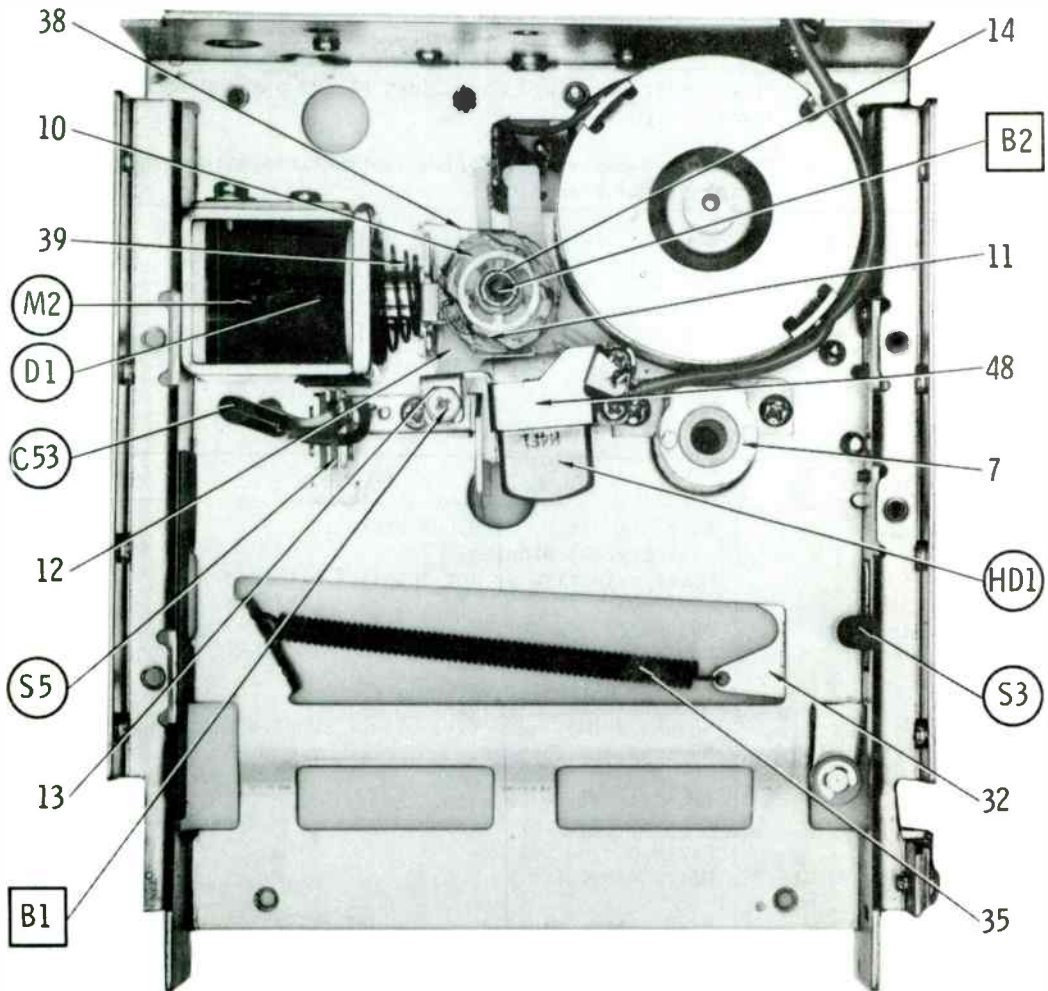
6AH905

MECHANICAL PARTS LIST

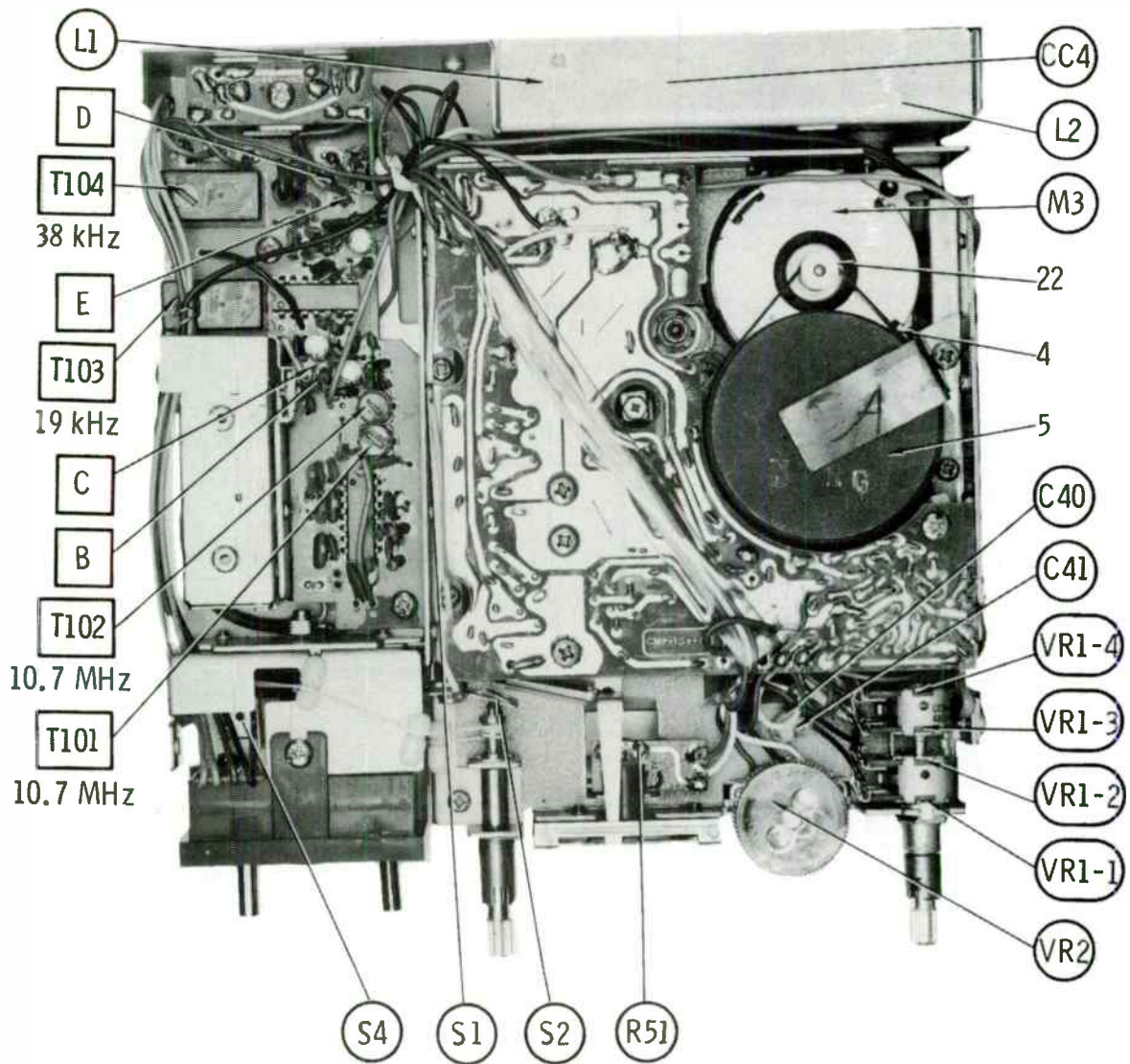
REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
4	CNT-006-C	Flywheel Drive Belt	14	CBH-008-A	Head Lifting Spring
5	CNR-002-0	Flywheel	22	CLA-188-0	Motor Pulley
7	CNR-003-A	Flywheel Housing Assembly	32	CXA-023-0	Cartridge Detent Arm
10	CNT-005-A	Program Indicator Dam	35	CBH-007-A	Detent Spring
11	CNT-007-0	Track Changing Cam	38	CXA-028-D	Pawl
12	CNV-002-0	Head Shifting Assembly	39	B33-736-0	Solenoid Spring
13	CBH-010-B	Azimuth Adjustment Spring	48	CNC-030-D	Head Clamp

CLEANING LUBRICATING HEAD DEMAGNETIZING

Refer to
"General Servicing Information"
on page 4.



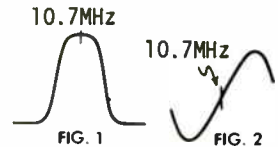
TAPE DECK



CHASSIS-TOP VIEW

ALIGNMENT INSTRUCTIONS

Check for specified source voltage.
 Use only enough generator output
 to provide a usable indication.
 Suggested Alignment Tools: GC ELECTRONICS:
 ALL8290, 8868, 9087



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

High side of generator thru .001uF to point A, low side to ground.

GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
10.7MHz Unmodulated	Point of non-interference	DC probe of VTVM to point B, common to ground.	T101, IF	Adjust for maximum.
"	"	DC probe of VTVM to point C, common to ground.	T102	Adjust for zero reading. A positive or negative reading will be obtained on either side of correct setting.

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

High side of generator thru .001uF to point A, low side to ground.
 Use only enough marker signal for indication. Use 60-hertz, frequency-modulated signal, 450kHz sweep.
 Use 60-hertz sawtooth voltage in scope for horizontal deflection.

GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
10.7MHz 450kHz Sweep	Point of non-interference	Vert input of scope to point B, low side to ground.	T101, IF	Disconnect stabilizing capacitor C110. Adjust for maximum gain and symmetry of response similar to Fig. 1 with markers as shown. Reconnect C110.
"	"	Vert input of scope to point C, low side to ground.	T102	Adjust T102 to place marker at center of S curve similar to Fig. 2. Readjust T101 for maximum amplitude and straightness of line.

FM RF ALIGNMENT—SELECTOR IN FM POSITION

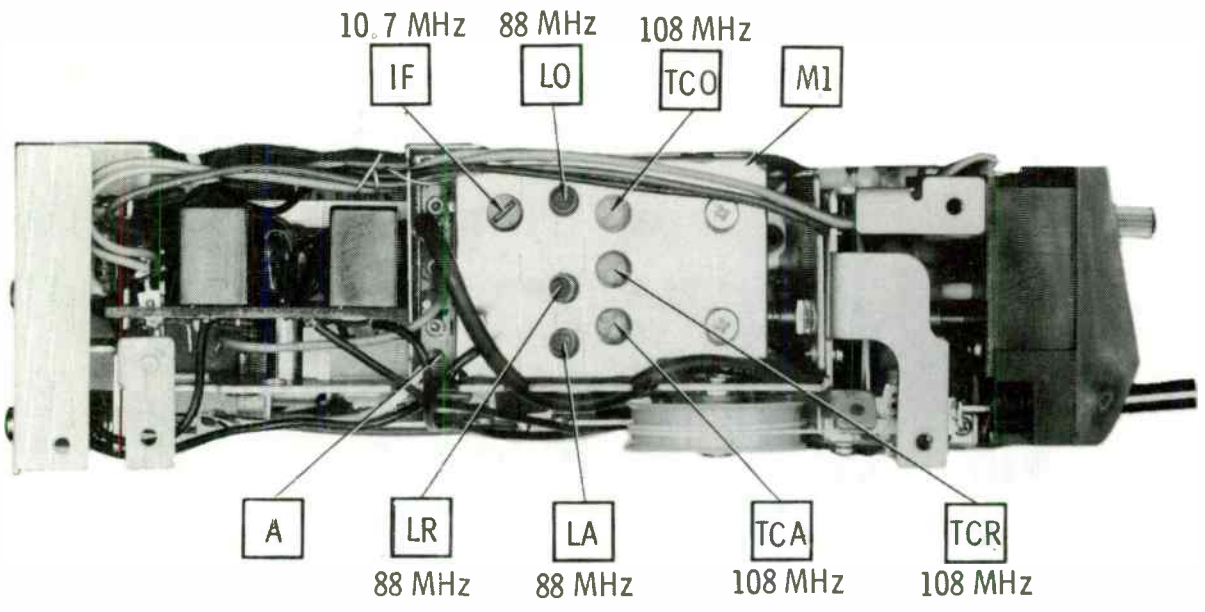
Connect generator across antenna terminals with 120-ohm carbon resistor in series with each lead.
 Adjustment of coils by bending should not be attempted unless the coil is deformed or replaced.

GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
88MHz Unmodulated	Low freq end	DC probe of VTVM to point B, common to ground.	LO, LR, LA	Adjust for maximum.
108MHz Unmodulated	Tune to signal	"	TCO, TCR, TCA	Adjust for maximum. Repeat FM RF steps until no further improvement is noted.

FM STEREO MULTIPLEX ALIGNMENT USING FM STEREO SIGNAL GENERATOR (± .0001% ACCURACY)

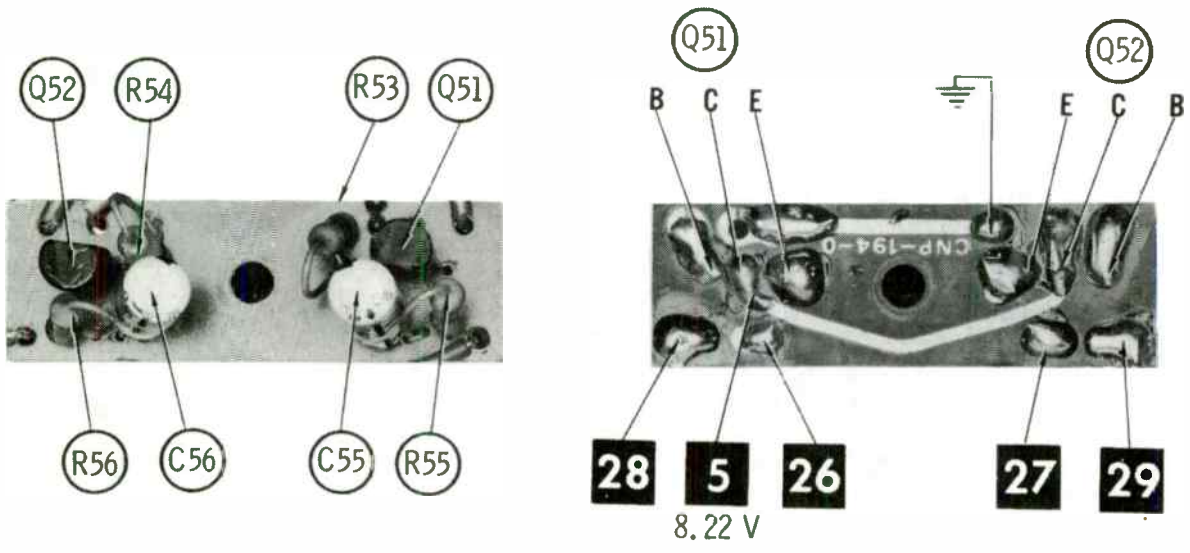
High side of generator thru 47K to point A, low side to ground.

GENERATOR FREQUENCY	INDICATOR	ADJUST	REMARKS
Modulated Left Channel	Vert input of scope to point D, low side to ground.	T103, T104	Adjust for MINIMUM. This step should require only slight adjustment.
Modulated Right Channel	Vert input of scope to point E, low side to ground.		Check for MINIMUM. If necessary, make compromise adjustment of T103, T104.

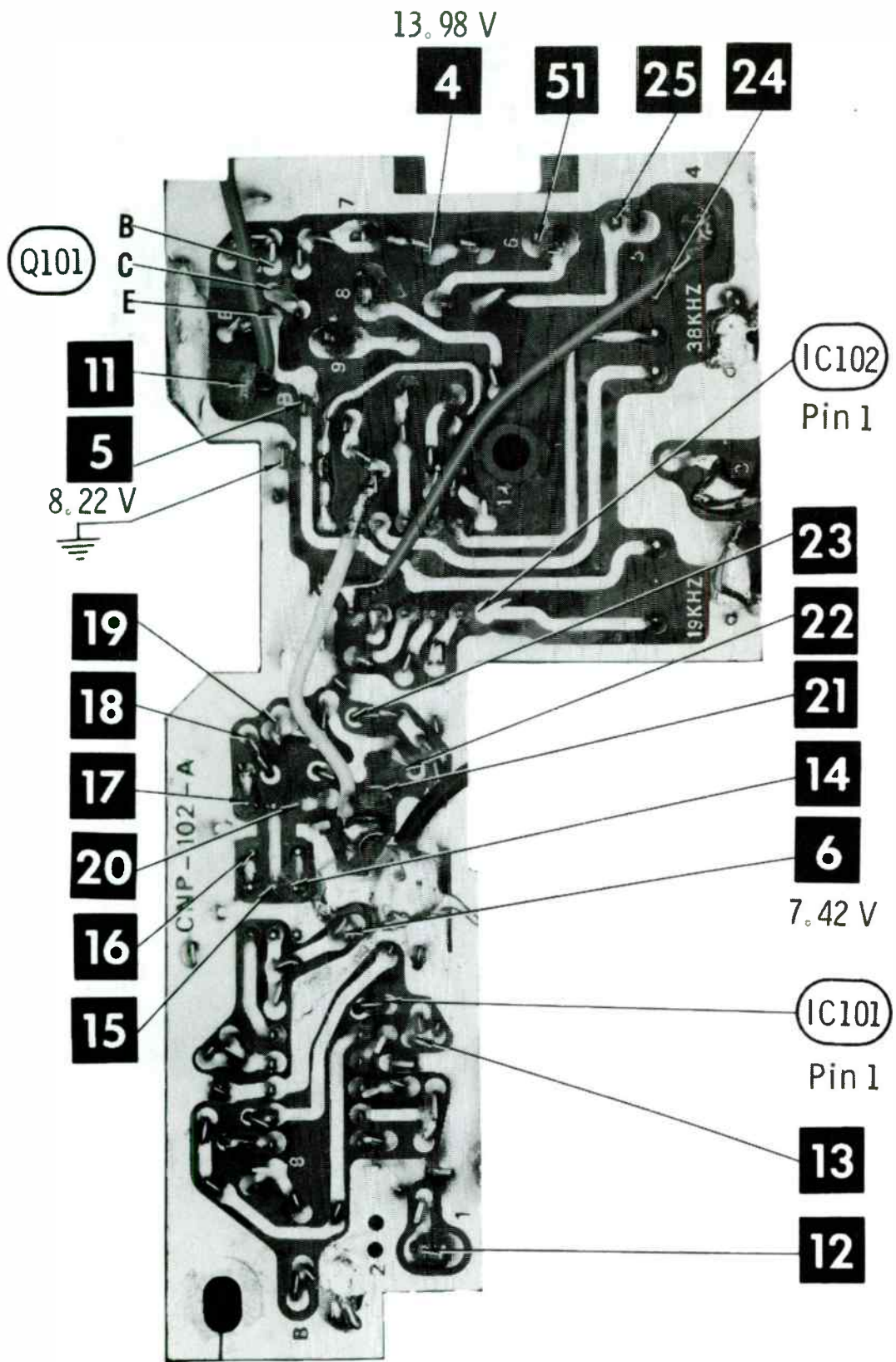


CHASSIS-SIDE VIEW

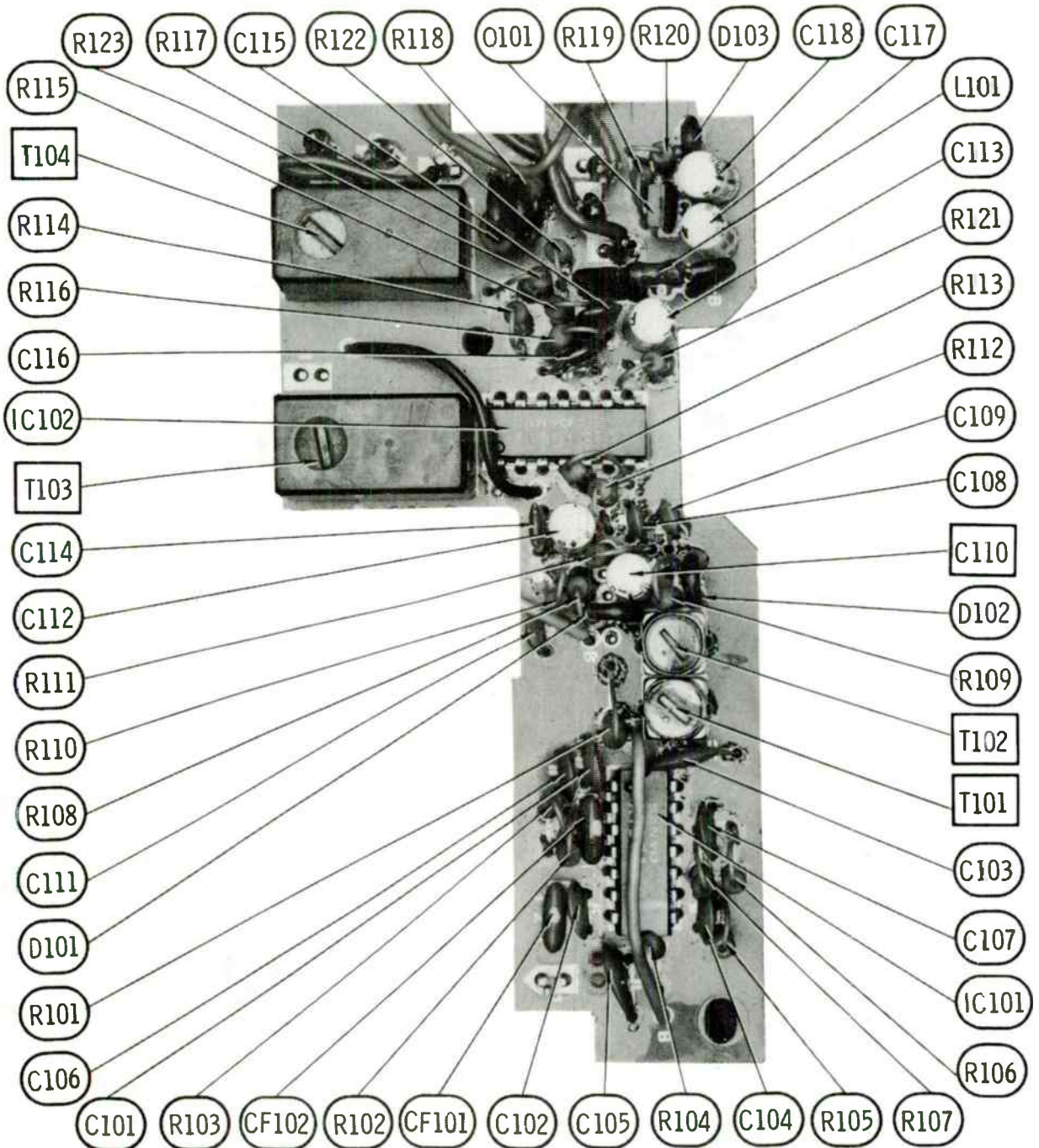
A Howard W. Sams CIRCUITRACE® Photo



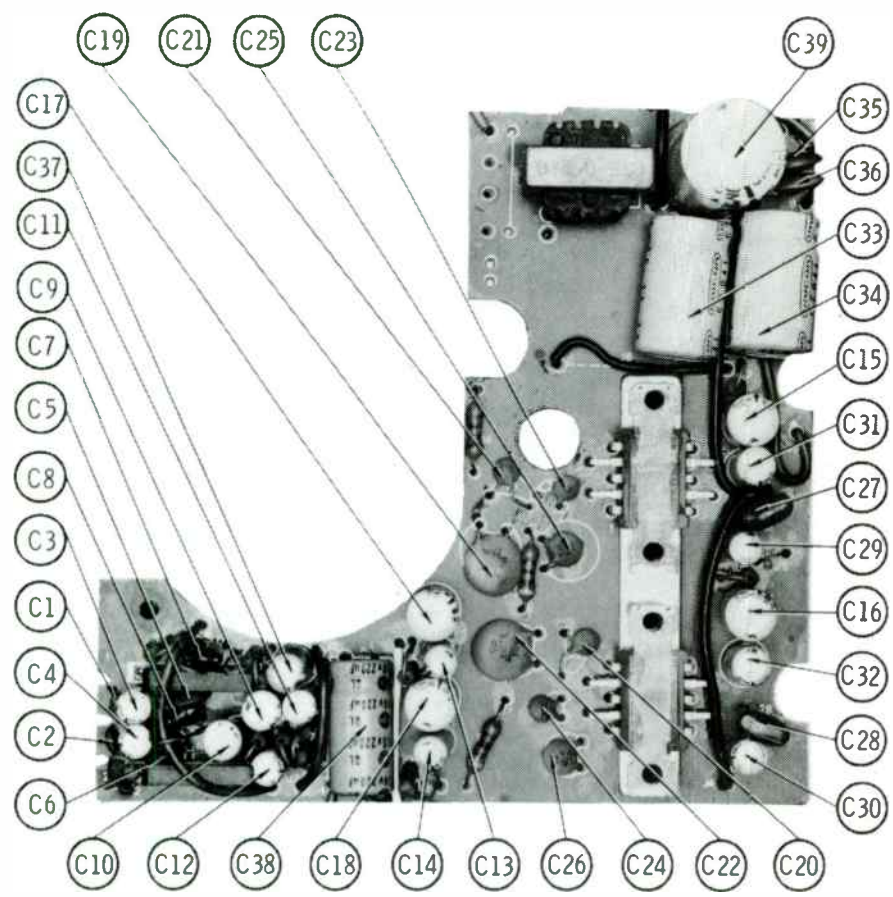
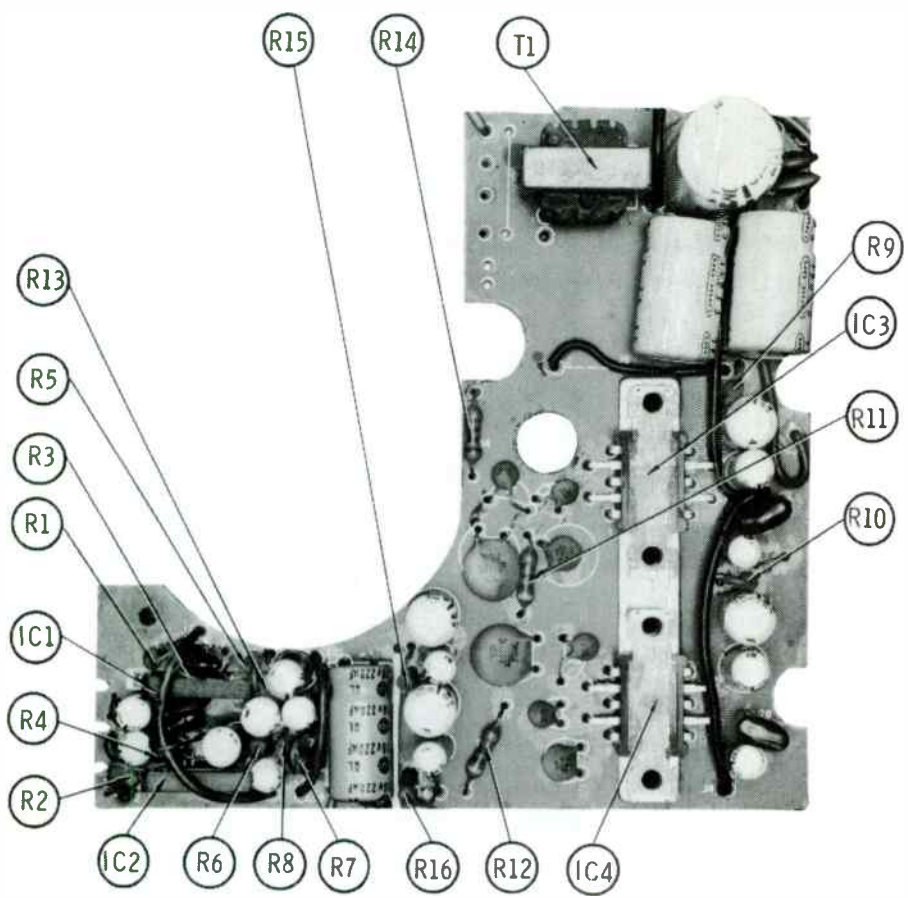
PREAMP BOARD



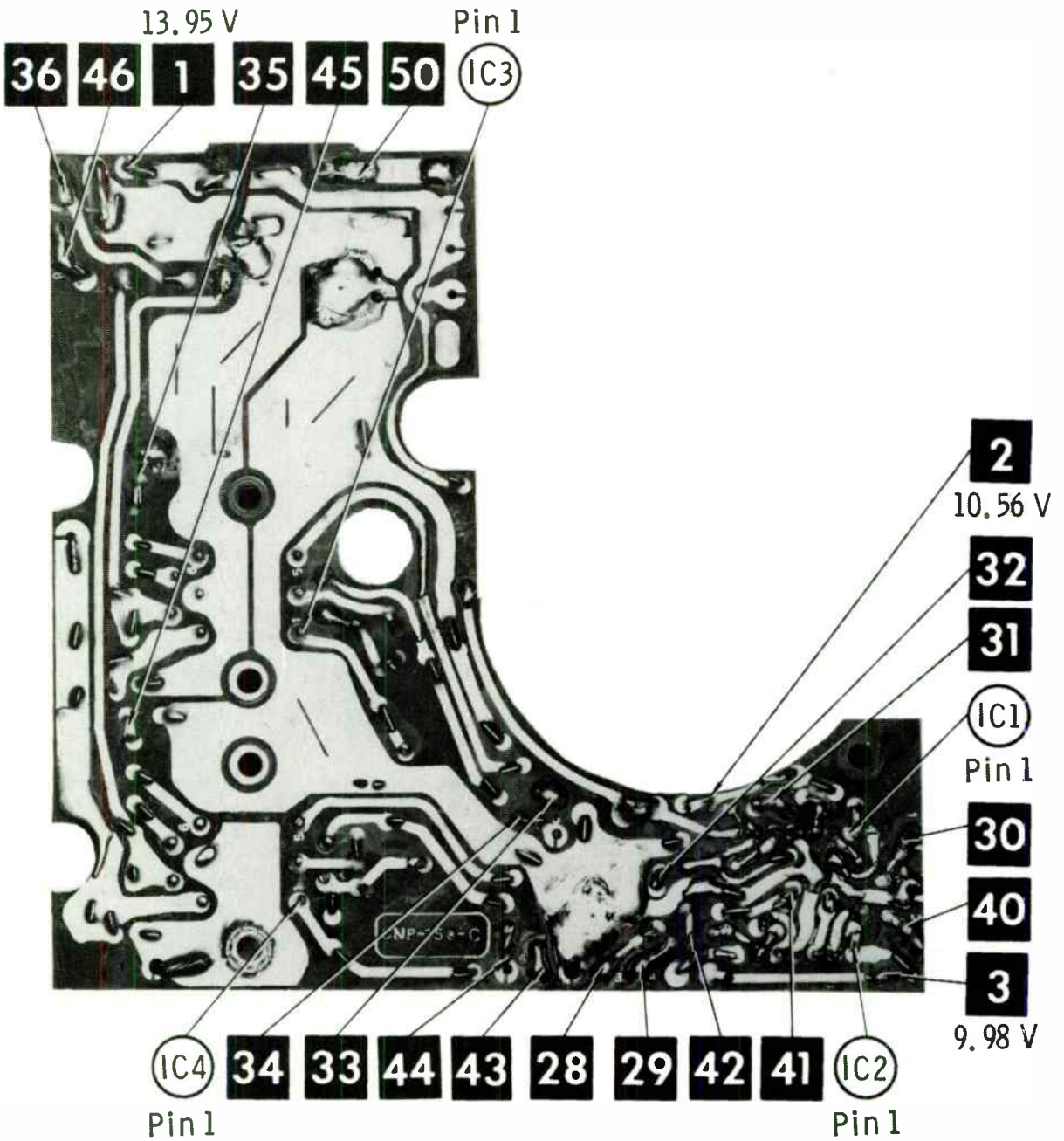
FM/MPX BOARD-BOTTOM VIEW



FM/MPX BOARD-TOP VIEW



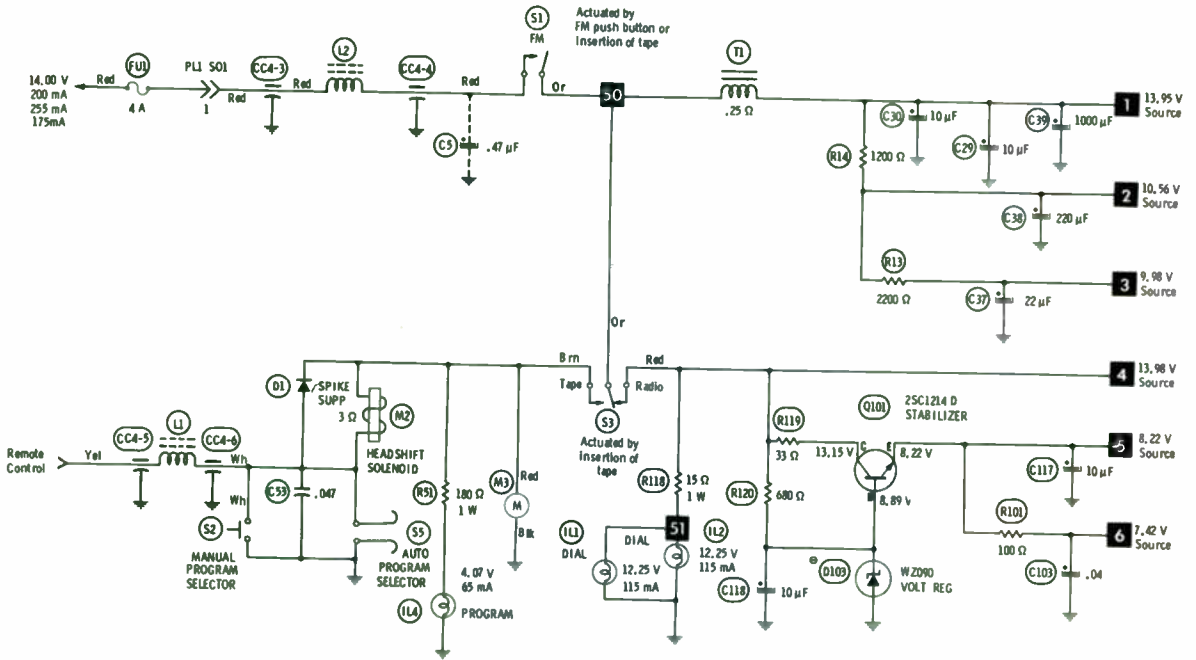
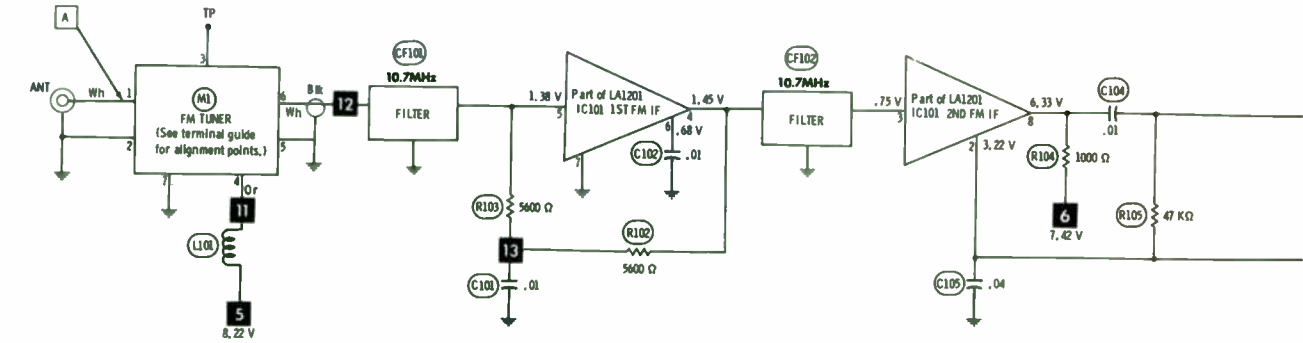
AUDIO BOARD-TOP VIEW



PIONEER MODEL TP-200

AUDIO BOARD-BOTTOM VIEW

NOTE: DEMAGNETIZE HEADS AFTER SERVICING

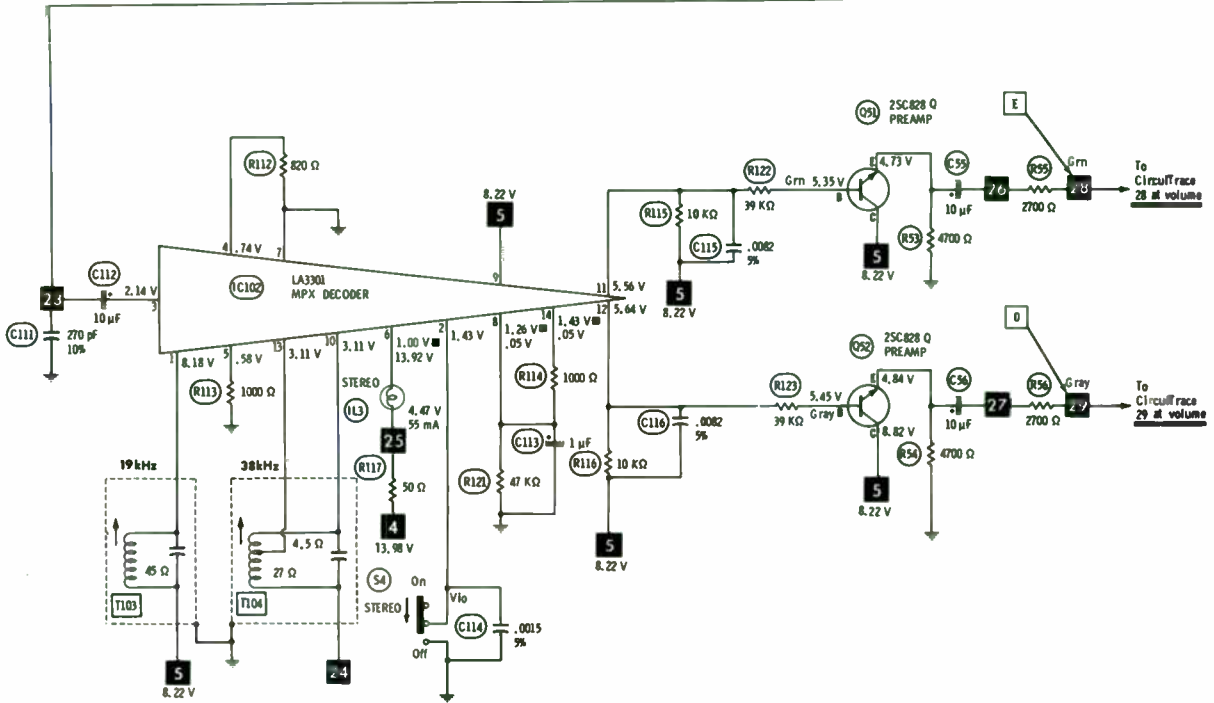
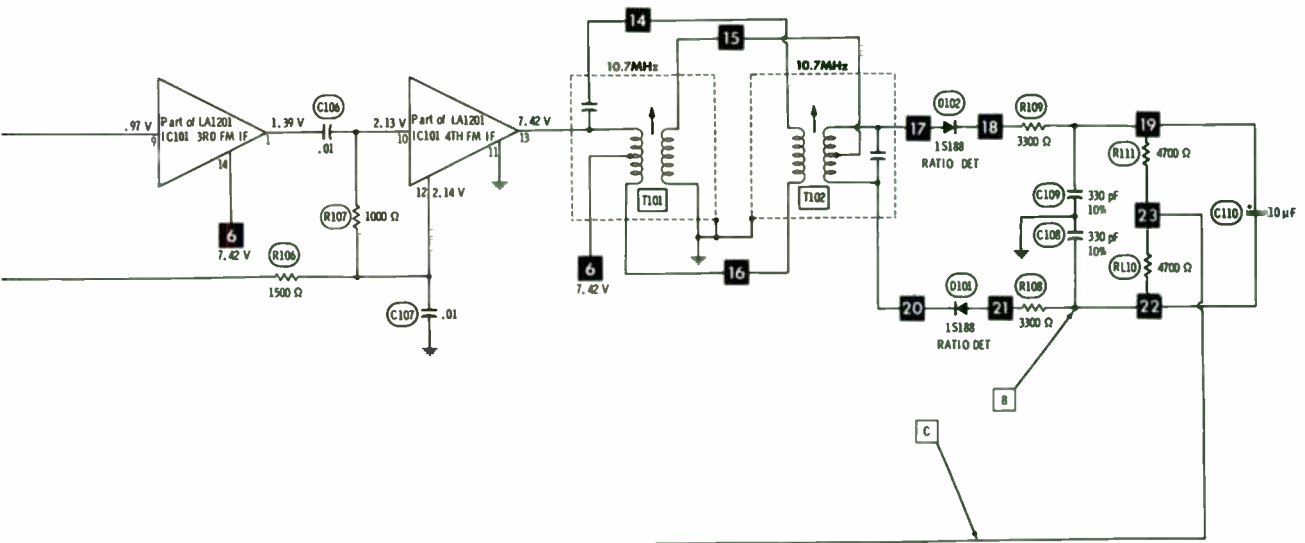


- * Circuitry not used in some versions
- C Circuitry used in some versions
- ⊙ See parts list
- * Nominal value
- ⊕ Ground
- ⏏ Chassis
- ▽ Common tie point

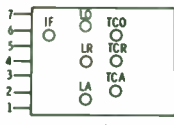
Measurements with switching as shown unless noted:
 ■ FM Stereo signal
 Supply voltage maintained as shown at input.
 Voltages measured with digital meter, no signal.
 Controls adjusted for normal operation.
 Arrow of control indicates direction of advance.
 Terminal identification may not be found on unit.
 Resistors are 1/2W or less, 5% unless noted.
 Value in () used in some versions.

A PHOTOFAC STANDARD NOTATION SCHEMATIC
 WITH CIRCUITRACE

© Howard W. Sams & Co., Inc. 1976



Terminal Guides



Side view



Top view

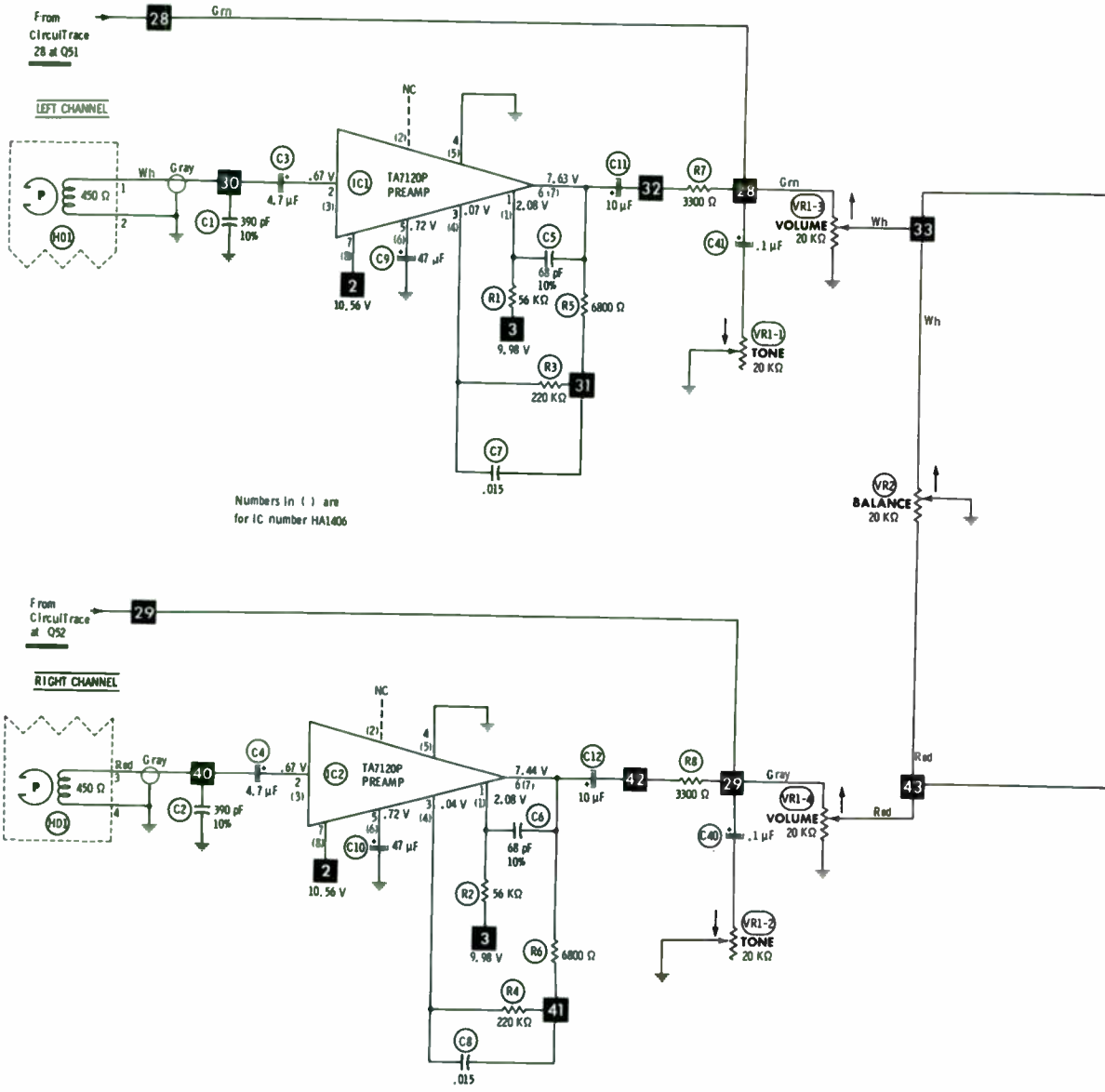


Front view



Bottom view

NOTE: DEMAGNETIZE HEADS AFTER SERVICING



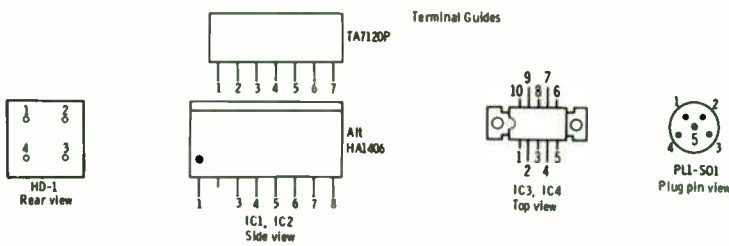
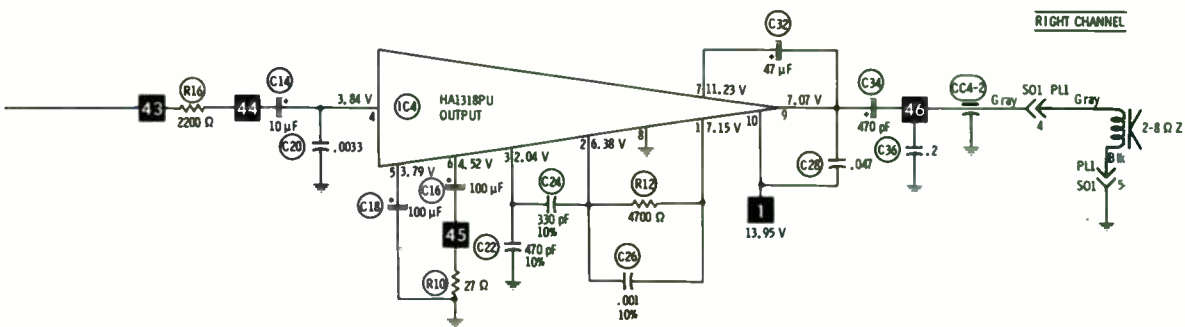
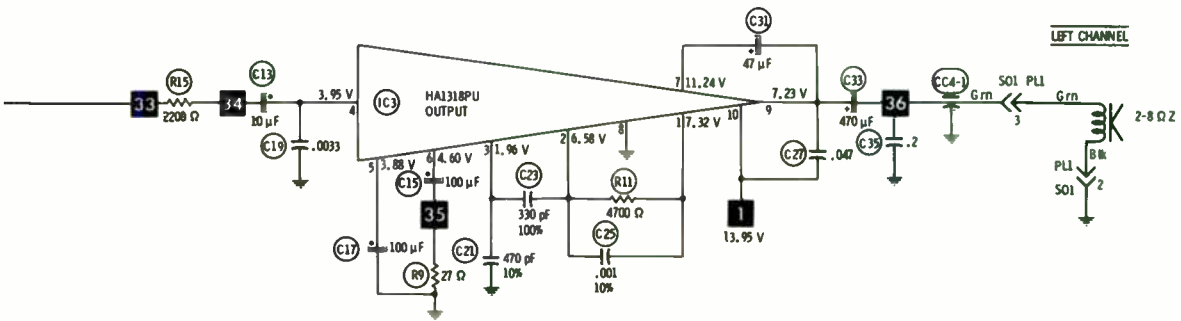
- /— Circuitry not used in some versions
- Circuitry used in some versions
- ⊙ See ports list
- * Nominal value
- ⬇ Ground
- ⬆ Chassis
- ⬇ Common tie point

Measurements with switching as shown unless noted:

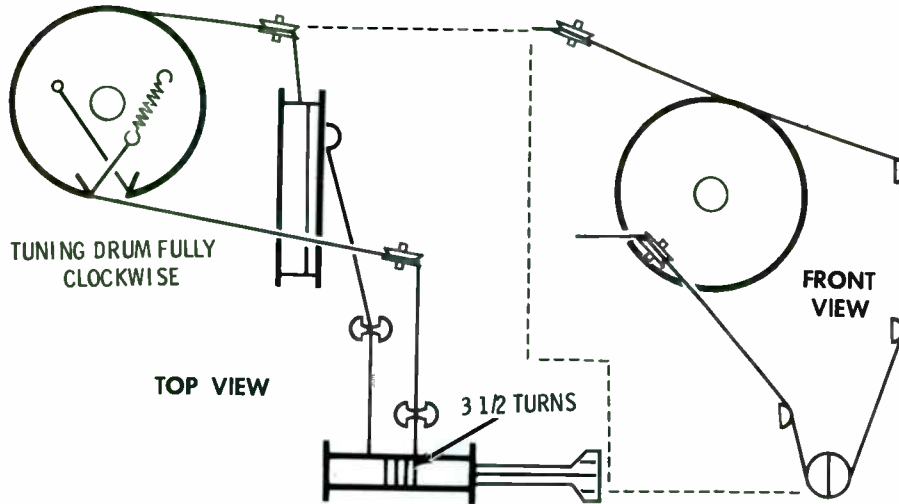
- FM Stereo signal
- Supply voltage maintained as shown at input.
- Voltages measured with digital meter, no signal.
- Controls adjusted for normal operation.
- Arrow of control indicates direction of advance.
- Terminal identification may not be found on unit.
- Resistors are 1/2W or less, 5% unless noted.
- Value in () used in some versions.

A PHOTOFAC STANDARD NOTATION SCHEMATIC
WITH **CIRCUITRACE**

© Howard W. Sams & Co., Inc. 1976



DIAL CORD STRINGING



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.)
Ignition Noise Suppression	Use BELDEN No. 7300-Series Spark-Plug Sets

SEMICONDUCTORS (Select replacement transistor for best results)

ITEM No.	TYPE No.	MFR. PART No.	REPLACEMENT DATA							
			GENERAL ELECTRIC PART No.	MALLORY PART No.	MOTOROLA PART No.	RAYTHEON PART No.	RCA PART No.	SPRAGUE PART No.	SYLVANIA PART No.	WORKMAN PART No.
D1	FR2-02	G00-535-B	GE-5D4A	PTC201	HEPRO052	RE 49	SK3030	RT-213	ECCG116	8D4
D101	1S188FM-1	G00-004-A	1N34AS(7)	PTC207M(6)	HEPR9134(7)	RE 86(6)	SK3087(7)	RT-200(7)	ECCG110(6)	1N34A (7)
D102	1S188FM-1	G00-004-A								
D103	WZ-090	G01-036-G	GEZD-9.1	Z89.1B				RT-240	ECCG139	
IC1	TA7120P	G09-008-C							ECCG1087	
IC2	HA1406	G09-017-B(1)							ECCG1087	
IC3	HA1318PU	G09-012-A							ECCG1038	
IC4	HA1318PU	G09-012-A							ECCG1038	
IC101	LA1201	G09-015-B	GEIC-43						ECCG1003	
IC102	LA3301	G09-009-A	GEIC-38	PTC721	HEPC6094P			TVCM-6	ECCG1006	
Q51	2SC828Q,R	G05-036-C,D	GE-62	PTC139	HEPS0015	RE 192	SK3124	RT-172	ECCG199	TR-51
Q52	2SC828Q,R	G05-036-C,D	GE-62	PTC139	HEPS0015	RE 192	SK3124	RT-172	ECCG199	TR-51
Q101	2SC1214B, A,C,D	G05-413B,A,C,D	GE-18	PTC125	HEPS0015	RE 17	SK3020	RT-102	ECCG128	TR-21

(1) Used in some versions.

(6) Matched pair.

(7) Two required - select matched pair.

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.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA			
		MFR. PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.
C3	4.7 35V	C00-813-P	PC5-50	VTT4R7A50	EV-1519
C4	4.7 35V	C00-813-P	PC5-50	VTT4R7A50	EV-1519
C5	.47 16V	C02-313-M	PC1-50	VTR47B63	EV-1310
C9	47 10V	C00-233-P	PC50-16	VTT47D16	EV-1226
C10	47 10V	C00-233-P	PC50-16	VTT47D16	EV-1226
C11	10 16V	C00-522-P	PC10-25	VTT10A25	EV-1222
C12	10 16V	C00-522-P	PC10-25	VTT10A25	EV-1222
C13	10 16V	C00-522-P	PC10-25	VTT10A25	EV-1222
C14	10 16V	C00-522-P	PC10-25	VTT10A25	EV-1222
C15	100 10V	C00-242-P	PC100-10	VTT100E10	EV-1130
C16	100 10V	C00-242-P	PC100-10	VTT100E10	EV-1130
C17	100 10V	C00-242-P	PC100-10	VTT100E10	EV-1130
C18	100 10V	C00-242-P	PC100-10	VTT100E10	EV-1130
C29	10 16V	C00-522-P	PC10-25	VTT10A25	EV-1222
C30	10 16V	C00-522-P	PC10-25	VTT10A25	EV-1222
C31	47 10V	C00-233-P	PC50-16	VTT47D16	EV-1226
C32	47 10V	C00-233-P	PC50-16	VTT47D16	EV-1226
C33	470 16V	C00-553-P	PC500-16	VTT470J16	EV-1250
C34	470 16V	C00-553-P	PC500-16	VTT470J16	EV-1250
C37	22 16V	C00-527-P	PC25-25	VTT22A16	EV-1224
C38	220 16V	C00-547-P	PC250-25	VTT220G16	EV-1240
C39	1000 16V	C00-562-P	PC1000-16	VTT1000L16	EV-1260
C40	.1 12V	CC6-005-0		TDC104M050EL	SD50-R109
C41	.1 12V	CC6-005-0		TDC104M050EL	SD50-R109
C55	10 16V	C00-522-P	PC10-25	VTT10A25	EV-1222
C56	10 16V	C00-522-P	PC10-25	VTT10A25	EV-1222
C110	10 16V	C00-522-P	PC10-25	VTT10A25	EV-1222
C112	10 16V	C00-522-P	PC10-25	VTT10A25	EV-1222
C113	1 50V	C00-902-P	PC1-50	MTV1C850	EV-1615
C117	10 16V	C00-522-P	PC10-25	VTT10A25	EV-1222
C118	10 16V	C00-522-P	PC10-25	VTT10A25	EV-1222

PIONEER MODEL TP-200

CAPACITORS

ITEM No.	RATING	MFR. PART No.	REPLACEMENT DATA			
			CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.
C1	390 10%		DD-391	GP390	GP339	1DTS-T39
C2	390 10%		DD-391	GP390	GP339	1DTS-T39
C5	68 10%		DTZ-68	NP068	CN0468	10TCC-Q68
C6	68 10%		DTZ-68	NP068	CN0468	10TCC-Q68
C7	.015		DC-203		MAG5012	2SS-S20
C8	.015		DC-203		MAG5012	2SS-S20
C19	.0033 10%	C06-533-M				10TS-D33
C20	470 10%		DD-471	GP470	GP347	10TS-T47
C21	470 10%		DD-471	GP470	GP347	10TS-T47
C22	.0033 10%	C06-533-M				10TS-D33
C23	330 10%		DD-331	GP330	GP333	10TS-T33
C24	330 10%		DD-331	GP330	GP333	10TS-T33
C25	.001 10%		DD-102		GP210	10TS-D10
C26	.001 10%		DD-102		GP210	10TS-D10
C27	.047		DC-503	MGP05	MAG5015	TGL-S50
C28	.047		DC-503	MGP05	MAG5015	TGL-S50
C35	.22 16V			DPMS2P22	EFW1A022	TPB-P22
C36	.22 16V			DPMS2P22	EFW1A022	TPB-P22
C53	.047		DC-503	MGP05	MAG5015	TGL-S50
C101	.01 25V		DC-103	GP10000	MAG5011	2SS-S10
C102	.01 25V		DC-103	GP10000	MAG5011	2SS-S10
C103	.04 25V	C07-061-Z			GP140	5GA-S40
C104	.01 25V		DC-103	GP10000	MAG5011	2SS-S10
C105	.04 25V	C07-061-Z			GP140	5GA-S40
C106	.01 25V		DC-103	GP10000	MAG5011	2SS-S10
C107	.01 25V		DC-103	GP10000	MAG5011	2SS-S10
C108	330 10%		DD-331	GP330	GP333	10TS-T33
C109	330 10%		DD-331	GP330	GP333	10TS-T33
C111	270 10%		DD-271	GP270	GP327	10TS-T27
C114	.0015 5%			CD19FD152J03	SX215	424ME1501J501
C115	.0082 5%	C03-228-J		CD20FD822J03	SX282	
C116	.0082 5%	C03-228-J		CD20FD822J03	SX282	
CC4-1		CCL-013-0(1)				
CC4-2		CCL-013-0(1)				
CCD-3		CCL-013-0(1)				
CC4-4		CCL-013-0(1)				

(1) Part of Filter Assembly Part Number CWX-104-A.

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.

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

ITEM No.	FUNCTION	RESIST-ANCE	REPLACEMENT DATA				
			MFGR. PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	MALLORY PART No.	TRW PART No.
VR1-1	Tone - Left	20K	CCS-061-0(18)				
VR1-2	Tone - Right	20K	(18)				
VR1-3	Volume - Left	20K	(18)				
VR1-4	Volume - Right	20K	(18)				
VR2	Balance	10K	CCS-005-0				
	Balance	20K	CCS-066-0(6)				

(6) Alternate part, may be used in some versions.

(18) Includes VR1-1, VR1-2, VR1-3 & VR1-4.

COILS (RF-IF)

ITEM No.	FUNCTION	REPLACEMENT DATA			REMARKS
		PART No.	OTHER IDENTIFICATION	MILLER PART No.	
L1	RF Choke	CTF-003-0			
L2	RF Choke	CTF-003-0			
L101	RF Choke (15uH)	CTF-016-0			
T101	Ratio Detector (Pri)	CTC-015-0			
T102	Ratio Detector (Sec)	CTC-012-0			
T103	19kHz	CTM-003-A			
T104	38kHz	CTM-004-A			

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA			NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	MFGR. PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	200mA	.25	.5mH	CTF-002-0			

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
FU1	4 Amp	E21-603-0	CDE-019-A (1)	ACG4	HDJ	312004	150145	

(1) Cable Assembly.

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
CF101	Filter	CTF-027-0	Ceramic (10.7MHz)
CF102	Filter	CTF-027-0	Ceramic (10.7MHz)
HD1	Head	P52-601-B	8-Track Stereo Play
M1	Tuner Assembly	CWB-014-0	
M2	Solenoid	CXP-002-0	Head Shift
M3	Motor	CXM-001-A	Tape Transport (3000 rpm @ 13.95V)
S1	Switch	S48-645-B	Power
S2	Switch	CBL-059-0	Manual Program Contact
S3	Switch	CSN-025-0	Radio/Tape
S4	Switch	S31-610-0	MPX
S5	Switch	CXA-004-0	Auto Program (Part of Tape Guide Assembly)
	Printed Circuit Board Assembly	CWE-063-0	FM CNP-102-A (1)
	Printed Circuit Board Assembly	CWX-102-0	Preamp CNP-194-0 (1)
	Printed Circuit Board Assembly	CWK-054-0	Audio Amp CNP-158-A (1)

(1) Number on unit.

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

ITEM	PART No.	ITEM	PART No.
Escutcheon (Front Grill)	CXA-623-0	Scale, Dial	CAG-032-0
Door, Tape	CAT-006-B	Knob, Volume/Manual Program	CAA-059-0
Door Shaft, Tape	CLA-018-A	Knob, Tuning/Tone	CAA-060-0
Door Spring, Tape	CBH-150-0	Knob, Balance	CAB-002-B
Pointer, Dial	CAF-007-0	Push-button, FM/MPX	CAC-068-0

AUDIOVOX (CONT.)	VOL.	AUDIOVOX (CONT.)	VOL.	AUTOMATIC (CONT.)	VOL.	AUTOMATIC (CONT.)	VOL.	AUTOMATIC (CONT.)	VOL.	AUTOMATIC (CONT.)	VOL.
DTN-1200-PB	155	OLF-75-MXD	216	BAP-9 59 Buick	13	CPV-7154 67-68 Chev.	71	F-5058N 65 Ford	36	IDC-3224	222
DTR-75-FM (Pg. 5)	137	OLF-75-TPX/A	219	BAP-20 60 Buick	14	CPV-8256 68 Chev.	60	F-6105P 65/66 Ford	40	IPP-3732 73 Chev.	171
DTR-75-MPX	137	OM-73-FM (Pg. 21)	133	BAP-4530 64 Buick	28	CPX-4440 74 Chev.	174	FA-219 59 Ford	11	IXP-3445 73 Chev.	167
DTR-74-FM (Pg. 5)	138	OM-73-MPX (Pg. 45)	136	BAR-8209 68 Ply.	60	CR-3006 63 Chev.	23	FA-3056 63 Ford	23	KXP-3445B 73 Chev.	170
DTR-74-MPX	137	OM-74-FM (Pg. 21)	133	BFP-2256 72 Buick	131	CR-4034 64 Chev.	23	FA-4555 64 Ford	27	K-700 51 Henry J	6
DTR-74-PB (Pg. 5)	138	OM-74-MPX (Pg. 45)	136	BP-340 60 Buick	14	CR-4534 64 Chev.	23	FAL-4554	27	KGK-4231 74 V.W.	172
DTR-75-CXP	218	OM-74-PB (Pg. 21)	137	BP-668 57-58 Buick	12	CRP-442A/AT 63 Chev.	23	FAN-3058 63 Ford	23	KGK-4087 (Sim. to Pg. 5)	159
DTR-75-TPX/A	219	OP-11-FM (Sim. to Pg. 5)	136	BP-679 59 Buick	13	CRP-3007 63 Chev.	23	FAP-70 60 Ford	14	KGK-4418 74 V.W.	174
DVA-73-FM (Pg. 5)	137	OP-11-FM (Sim. to Pg. 5)	93	BP-3081 65 Buick	23	CRP-4033 64 Chev.	28	FAP-4556 64 Ford	27	L-590 59-60 Stude. (EP)	14
DVA-73-PB (Pg. 5)	138	OP-11-FM (Sim. to Pg. 5)	93	BP-3095 (BP-2094D)	72 Buick	CRP-5009 65 Chev.	29	FAP-6066P 65/66 Ford	40	L-559 59-60 Stude. (LP)	14
DVA-74-FM (Pg. 5)	137	OP-11-FM (Sim. to Pg. 5)	93	BP-4030 64 Buick	28	CRP-6056 65-66 Chev.	62	FAR-762AT 62 Ford	24	LA-449 59 Stude.	11
DVA-74-MPX	177	OTN-73-TPX/A	219	BP-7160 66-67 Buick	62	CRP-7156 65-66 Chev.	62	FAR-3018 63 Ford	23	LAP-29 59 Stude.	11
DVA-74-PB (Pg. 5)	136	OTN-73-FM	173	BUJ-4539 74 Buick	62	CRS-9440	103	FAR-4054 64 Ford	27	LAP-40 59-60 Stude.	14
DVA-75-CXP	218	OTN-74-FM-MPX	181	BUJ-4280 74 Buick	169	CSA-9934	103	FAR-7205 67 Ford	20	LM-4127 74 Pont.	176
DVA-75-TPX/A	219	OTN-74-PB	174	BUL-4095 (Pg. 5)	159	CSF-4525 74 Oids.	168	FAR-4054 64 Ford	27	LME-4273 74 Pont.	169
ECO-73-FM (Pg. 5)	138	PAC-75-CXP	218	BUX-4485 74 Buick	170	CSF-4285 74 Oids.	169	FAR-7205 67 Ford	20	LME-4527 74 Pont.	168
ECO-73-MPX	177	PAF-75-TPX/A	219	BUX-4682 74 Buick	177	CSL-4289 74 Oids.	169	FAR-7205 67 Ford	20	LME-4527 74 Pont.	168
ECO-73-PB (Pg. 5)	138	PF-73-FM (Pg. 21)	133	BXP-3485 73 Buick	167	CSL-4024 74 Oids.	159	FEB-3525 73 Oids.	168	LME-4527 74 Pont.	168
ECO-74-MPX	177	PF-73-MPX (Pg. 45)	136	BXP-3671 73 Buick	165	CSP-4726 74 Oids.	171	FEO-3536 73 Oids.	168	LME-4527 74 Pont.	168
ECO-75-CXP	218	PF-74-FM (Pg. 21)	133	C-12	11	CT-356 55-56 Chev.	13	FEP-3503 73 Ford	168	LML-4028 74 Pont.	159
ECO-75-TPX/A	219	PF-74-MPX (Pg. 45)	136	C-300	2	CT-387 57 Chev.	12	FEP-3514 73 Ford	168	LML-4028 74 Pont.	159
FCC-73-FM (Pg. 5)	137	PF-74-PB (Pg. 21)	136	C-300 40-50 (Rev.)	2	CT-4058 64 Merc.	27	FFB-1470 71 Pont.	131	LML-4028 74 Pont.	159
FCC-73-MPX	177	PG-75-TPX/A	219	C-338-C 58 Chev.	12	CTL-4001 (Sim. to Pg. 5)	159	FFB-2213 71-72 Ford	131	LML-4028 74 Pont.	159
FCC-74-FM (Pg. 5)	137	PGP-73-FM	181	C-349 59 Chev.	19	CTP-4001 (Sim. to Pg. 5)	159	FFM-1632 71 Ford	131	LML-4028 74 Pont.	159
FCC-74-MPX	177	PGP-73-MPX	174	C-382AT 62 Chev. (LP)	23	CTP-792AT 62 Merc.	23	FFM-2231 71-72 Ford	131	MAP-99 60 Merc. (EP)	11
FDT-73-FM-MPX	181	PGP-74-FM-MPX	181	C-382AT 62 Chev. (LP)	23	CTP-3004 63 Merc.	23	FFM-2311 71-72 Ford	131	MAP-3063 63 Merc.	23
FDT-73-PB	174	PGP-75-CXP	218	C-3001 63 Chev.	24	CTP-5071 65 Merc.	29	FFM-4561 64 Merc.	27	MAP-4561 64 Merc.	27
FDT-74-FM-MPX	181	PGP-75-MXD	216	C-4049 64 Chev.	28	CTP-7211A 67 Merc.	62	FFM-3288 73 Ford	169	MB-72	30
FDT-74-PB	174	PGP-75-TPX/A	219	C-5003 65 Chev.	29	CTR-6A 55-56 Chev.	12	FFM-4293 74 Ford	169	MCD-5046 73 Ford, Merc.	159
FDT-75-CXP	218	PO-73-FM-MPX	181	C-5003N 65 Chev.	37	CTR-77A 57 Chev.	9	FFM-4293 74 Ford	169	MCD-816 74 Merc.	163
FDT-75-TPX/A	219	PO-74-FM-MPX	181	C-6051 66 Chev.	39	CU-39	12	FM-3083	22	MCD-816 74 Merc.	163
FGA-75-CXP	218	PO-74-PB	174	CA-109 59 Chev.	11	CU-39	12	FM-3083A	22	MCD-816 74 Merc.	163
FGA-75-FDX	222	PO-75-CXP	218	CA-3041 63 Chev.	23	CV-4298 74 Chev.	168	FM-5099	22	MCD-816 74 Merc.	163
FGA-75-TPX/A	219	PO-75-MXD	216	CA-4549 64 Chev.	28	CVF-4513 74 Chev.	168	FM-5099B	22	MES-1454	119
FMK-73-FM-MPX	181	PVN-75-TPX/A	219	CA-4549N 64 Chev.	28	CVL-4013 74 Chev.	159	FM-7880	22	MEX-4497 74 Merc.	170
FMK-73-PB	174	PVN-73-FM (Pg. 21)	133	CA-5503N 65 Chev.	37	CVX-4714 74 Chev.	159	FMM-3354 73 Ford	175	MFX-3281 73 Ford, Merc.	169
FMK-74-FM-MPX	181	PVN-73-MPX (Pg. 45)	136	CAE-3064 63 Oids.	23	CYX-4481 74 Chev.	170	FM-4051 64 Ford	27	MFX-3281 73 Ford, Merc.	169
FMK-74-PB	174	PVN-74-FM (Pg. 21)	133	CAP-49 59 Chev.	14	CYX-4653 74 Chev.	170	FMP-430 60 Ford	14	MFM-1858 71 Merc.	131
FMK-75-CXP	218	PVN-74-MPX (Pg. 45)	136	CAP-60 59-60 Chev.	14	CYX-4653 74 Chev.	170	FMP-452AT 62 Ford	23	MFM-2239 71-72 Merc.	131
FMK-75-FDX	222	TM-2000	219	CAP-3042 63 Chev.	23	CYP-3013 63 Chev.	23	FMP-3015 63 Ford	23	MFM-3283	169
FMK-75-FFX	223	TM-2500	219	CAP-4550 64 Chev.	28	CYP-3015 63 Chev.	23	FMP-3015 63 Ford	23	MFM-3283 73 Ford	163
FMK-75-TPX/A	219	TO-71-MPX	156	CAP-4550N 65 Chev.	37	CYP-3009 63 Chev.	23	FMP-3015A 63 Ford	23	MFM-3283 73 Ford	163
FMU-73-FM-MPX	181	TO-71-PB	174	CAP-5504N 65 Chev.	37	CYP-3009 63 Chev.	23	FMP-3015A 63 Ford	23	MFM-3283 73 Ford	163
FMU-73-PB	174	TO-74-FM-MPX	190	CAP-6552 66 Chev.	39	CYP-3015 69-73 Chev.	159	FMP-3015A 63 Ford	23	MFM-3283 73 Ford	163
FMU-74-FM-MPX	181	TO-75-MPX	190	CAP-6552 66 Chev.	39	CYP-4025 64 Chev.	28	FMP-3015A 63 Ford	23	MFM-3283 73 Ford	163
FMU-74-PB	174	TO-75-PB	194	CAP-6552 66 Chev.	39	CYP-5006 65 Chev.	29	FMP-3015A 63 Ford	23	MFM-3283 73 Ford	163
FMU-75-CXP	218	TO-75-TPX/A	219	CAP-6552 66 Chev.	39	CYP-5006 65 Chev.	29	FMP-3015A 63 Ford	23	MFM-3283 73 Ford	163
FMU-75-TPX/A	219	TO-75-FM	211	CAP-6552 66 Chev.	39	CYP-5006 65 Chev.	29	FMP-3015A 63 Ford	23	MFM-3283 73 Ford	163
FMX-20	196	TO-75-FM (Pg. 21)	133	CAP-6552 66 Chev.	39	CYP-5006 65 Chev.	29	FMP-3015A 63 Ford	23	MFM-3283 73 Ford	163
FO-73-FM-MPX	181	VA-73-MPX (Pg. 45)	136	CAP-6552 66 Chev.	39	CYP-5006 65 Chev.	29	FMP-3015A 63 Ford	23	MFM-3283 73 Ford	163
FO-74-FM-MPX	181	VA-73-PB (Pg. 21)	136	CAP-6552 66 Chev.	39	CYP-5006 65 Chev.	29	FMP-3015A 63 Ford	23	MFM-3283 73 Ford	163
FO-75-CXP	218	VA-74-FM (Pg. 21)	133	CAP-6552 66 Chev.	39	CYP-5006 65 Chev.	29	FMP-3015A 63 Ford	23	MFM-3283 73 Ford	163
FO-75-FDX	223	VA-74-MPX (Pg. 45)	136	CAP-6552 66 Chev.	39	CYP-5006 65 Chev.	29	FMP-3015A 63 Ford	23	MFM-3283 73 Ford	163
FO-75-FFX	223	VA-74-PB (Pg. 21)	136	CAP-6552 66 Chev.	39	CYP-5006 65 Chev.	29	FMP-3015A 63 Ford	23	MFM-3283 73 Ford	163
FO-75-TPX/A	219	VE-73-FM-MPX	181	CAP-6552 66 Chev.	39	CYP-5006 65 Chev.	29	FMP-3015A 63 Ford	23	MFM-3283 73 Ford	163
FPT-73-FM-MPX	181	VE-74-FM-MPX	181	CAP-6552 66 Chev.	39	CYP-5006 65 Chev.	29	FMP-3015A 63 Ford	23	MFM-3283 73 Ford	163
FPT-73-PB	174	VE-74-PB	174	CAP-6552 66 Chev.	39	CYP-5006 65 Chev.	29	FMP-3015A 63 Ford	23	MFM-3283 73 Ford	163
FPT-74-FM-MPX	181	VE-75-CXP	216	CAP-6552 66 Chev.	39	CYP-5006 65 Chev.	29	FMP-3015A 63 Ford	23	MFM-3283 73 Ford	163
FPT-74-PB	174	VE-75-MPX	216	CAP-6552 66 Chev.	39	CYP-5006 65 Chev.	29	FMP-3015A 63 Ford	23	MFM-3283 73 Ford	163
FPT-75-CXP	218	VE-75-TPX/A	219	CAP-6552 66 Chev.	39	CYP-5006 65 Chev.	29	FMP-3015A 63 Ford	23	MFM-3283 73 Ford	163
FPT-75-TPX/A	219	VV-71-FM (Sim. to Pg. 5)	137	CAP-6552 66 Chev.	39	CYP-5006 65 Chev.	29	FMP-3015A 63 Ford	23	MFM-3283 73 Ford	163
FTR-73-FM-MPX	181	VV-71-PB (Sim. to Pg. 5)	93	CAP-6552 66 Chev.	39	CYP-5006 65 Chev.	29	FMP-3015A 63 Ford	23	MFM-3283 73 Ford	163
FTR-73-PB	174	VW-71-MPX (Sim. to Pg. 13)	13	CAP-6552 66 Chev.	39	CYP-5006 65 Chev.	29	FMP-3015A 63 Ford	23	MFM-3283 73 Ford	163
FTR-74-FM-MPX	181	VW-74-FM	193	CAP-6552 66 Chev.	39	CYP-5006 65 Chev.	29	FMP-3015A 63 Ford	23	MFM-3283 73 Ford	163
FTR-74-PB	174	VWB-71-FM (Sim. to Pg. 5)	137	CAP-6552 66 Chev.	39	CYP-5006 65 Chev.	29	FMP-3015A 63 Ford	23	MFM-3283 73 Ford	163
FTR-75-CXP	218	VWB-71-PB (Sim. to Pg. 5)	93	CAP-6552 66 Chev.	39	CYP-5006 65 Chev.	29	FMP-3015A 63 Ford	23	MFM-3283 73 Ford	163
FTR-75-FDX	222	VWF-71-FM (Sim. to Pg. 5)	137	CAP-6552 66 Chev.	39	CYP-5006 65 Chev.	29	FMP-3015A 63 Ford	23	MFM-3283 73 Ford	163
FTR-75-FFX	223	VWF-71-PB (Sim. to Pg. 5)	93	CAP-6552 66 Chev.	39	CYP-5006 65 Chev.	29	FMP-3015A 63 Ford	23	MFM-3283 73 Ford	163
FTR-75-TPX/A	219	VWF-74-FM	193	CAP-6552 66 Chev.	39	CYP-5006 65 Chev.	29	FMP-3015A 63 Ford	23	MFM-3283 73 Ford	163
HCV-73-PB	194	VWF-74-PB	194	CAP-6552 66 Chev.	39	CYP-5006 65 Chev.	29	FMP-3015A 63 Ford	23	MFM-3283 73 Ford	163
HCV-74-PB	194	VWF-75-CXP	218	CAP-6552 66 Chev.	39	CYP-5006 65 Chev.	29	FMP-3015A 63 Ford	23	MFM-3283 73 Ford	163
HO-73-FM (Pg. 5)	137	VWF-75-FDX	222	CAP-6552 66 Chev.	39	CYP-5006 65 Chev.	29	FMP-3015A 63 Ford	23	MFM-3283 73 Ford	163
HO-73-MPX	137	VWF-75-FFX	223	CAP-6552 66 Chev.	39	CYP-5006 65 Chev.	29	FMP-3015A 63 Ford	23	MFM-3283 73 Ford	163
HO-73-PB (Pg. 5)	138	VWF-75-TPX/A	219	CAP-6552 66 Chev.	39	CYP-5006 65 Chev.	29	FMP-3015A 63 Ford	23	MFM-3283 73 Ford	163
HO-74-FM (Pg. 5)	137	VWB-71-FM (Sim. to Pg. 5)	137	CAP-6552 66 Chev.	39	CYP-5006 65 Chev.	29	FMP-3015A 63 Ford	23	MFM-3283 73 Ford	163
HO-74-MPX	177	VWB-71-PB (Sim. to Pg. 5)	93	CAP-6552 66 Chev.	39	CYP-5006 65 Chev.	29	FMP-3015A 63 Ford	23	MFM-3283 73 Ford	163
HO-74-PB (Pg. 5)	138	VWF-74-FM	193	CAP-6552 66 Chev.	39	CYP-5006 65 Chev.	29	FMP-3015A 63 Ford	23	MFM-3283 73 Ford	163
HO-74-TPX/A	219	VWF-74-PB	194	CAP-6552 66 Chev.	39	CYP-5006 65 Chev.	29	FMP-3015A 63 Ford	23	MFM-3283 73 Ford	163
ID-200	202	VWB-75-CXP	218	CAP-6552 66 Chev.	39	CYP-5006 65 Chev.	29	FMP-3015A 63 Ford	23	MFM-3283 73 Ford	163
ID-300	209	VWB-75-FDX	222	CAP-6552 66 Chev.	39	CYP-5006 65 Chev.	29	FMP-3015A 63 Ford	23	MFM-3283 73 Ford	163
ID-400 (Pg. 5)	182	VWB-75-FFX	223	CAP-6552 66 Chev.	39	CYP-5006 65 Chev.	29	FMP-3015A 63 Ford	23	MFM-3283 73 Ford	163
ID-600 (Pg. 5)	187	VWB-75-TPX/A	219	CAP-6552 66 Chev.	39	CYP-5006 65 Chev.	29	FMP-3015A 63 Ford	23	MFM-3283 73 Ford	163
LCO-75-CXP	218	HCV-73-PB	194	CAP-6552 66 Chev.	39	CYP-5006 65 Chev.	29	FMP-3015A 63 Ford	23	MFM-3283 73 Ford	163
LCO-75-FDX	222	HCV-74-PB	194	CAP-6552 66 Chev.	39	C					

AUTOMATIC (CONT.)	VOL.	AUTOMATIC (CONT.)	VOL.	AUTOMATIC (CONT.)	VOL.	AUTOMATIC (CONT.)	VOL.	BLAUPUNKT (CONT.)	VOL.	BUICK (CONT.)	VOL.
NP-5153 63 Amer.		PXM-3638 (XPA-2575A)		TPC-3036 63 Olds.,		XTP-3487B 73 Pont.	170	Koln 3898 Above Serial		04BFM1 70	83
Motors	29	73 Pont.	165	73 Pont.	23	YAM-3050 63 Chev.	23	Q310001	16	04BFP1 70	75
NPX-2349	176	QME-2445A	153	TPC-4026 64 Pont.	28	YAM-4525 64 Chev.	28	KV810	17	04BPB1 70	77
NPX-2390	168	R-54, B.	11	TPC-7170 66-67 Pont.	62	YF-3049 63 Chev.	23	Manhattan 35150		04BPC2 70	73
NT-8222 68 Chry.	60	R-61		TPO-3730 73 Olds.	171	YF-4532 64 Chev.	28	Series W	43	04BPB4 70	77
NJ-65-AT	23	RAP-89 59 Amer.Motors.	13	TPP-87A 57 Ply.	13			Manhattan 34150	26	04BT11 70	82
NJ-3107	23	RAP-100 60 Amer.		TPP-88 57-58 Ply.	13			Serial #V450001	26	04BT12 70	81
NJ-3107A	28	Motors	13	TPP-88C 57-58 Ply.	13			Manhattan 90220	17	04CFM1 70	83
NW-6238 65-67 VW.	54	RAP-3070 63 Amer.		TPP-3737 73 Pont.	171			New Yorker 34750 From	34	04EPM2 70	88
NV-400 60 Chry.	14	Motors	26	TPR-3724 73 Ford, Merc.	171			Serial #V765001	34	04EPP1 70	75
NY-598A 58 Chry.	10	RAY-5403A/AB	57	TR-12 Tractor	4			New Yorker-Series X	34	04EPP2 70	88
NY-3012 63 Chry.	23	RG-59	14	TR-13B	25			From Serial		04EPB1 70	77
NY-3100 63 Chry.	26	RG-59C	14	TR-0048	25			#X1485001	46	04EPB2 70	73
NY-5101N 65 Chry.	35	RMR-7280	63	TR-7281 Tractor	59			Vienna	26	04EPB4 70	77
OE-1120 68 Chry.	60	RP-470 60 Amer.		TR-7292	81			Wolfsburg 9160 Above		14AFP1 71	101
OE-1531 64 Olds.	28	RP-481AT 60-61 Amer.	13	TR-7390 Tractor	59			Serial #G450001	9	14AT411 71	97
OE-169 60 Olds.	14	Motors	16	TR-7390 Tractor	59			9280	13	14BFM1 71	102
OE-171AT 61 Olds.	16	RP-519 59 Amer.		TR-7390 Tractor	59					14BFM2 71	98
OE-3024 63 Olds.	23	Motors	13	TRF-3534 73 Ford, Merc.	168					14BFM71 71	98
OE-3026A 71-73 Olds.	159	RP-3030 63 Amer.		TRF-4523 74 Ford, Merc.	168					14BFP1 71	96
OE-4031 64 Olds.	28	Motors	26	TRF-1490 71 Ford, Merc.	131					14BFP2 71	96
OE-5001 65 Olds.	29	RP-3097 63 Amer.		TRF-2232 72 Ford, Merc.	131					14BPT1 71	100
OE-7162 67 Olds.	60	Motors	23	TRF-3287 73 Ford, Merc.	169					14BPT2 71	114
OFA-3390 73 Olds.	175	RP-3097 63 Amer.		TRF-3356 73 Ford, Merc.	175					14BT41 71	97
OFD-3247 68-73 Kadette,		RP-5151 65 Amer.		TRF-4287 74 Ford	169					14BPT2 72	117
71-73 Opel 1900	172	Motors	29	TRL-4045 74 Ford	159					24AFP1 72	118
OPM-1869 71 Olds.	131	RP-8332M 67 Amer.		TRM-4824 74 Ford						24AFP2/P3 72	129
OPM-2215 71-72 Olds.	131	Motors	55	(Pg. 5)	163					24APB1 72	115
OPM-3290 73 Olds.	169	RRX-4446	170	TRP-4724 74 Ford	171					24APB2	
OKN-3009 68-73 Opel	159	RT-78	13	TRX-4491 74 Ford	170					(7313604) 72	125
OLE-4501 74 Olds.	168	RTW-7284A	58	TRX-4647 74 Ford, Merc.	177					24AT411 72	112
OLF-4290 74 Olds.	169	RUV-5406	78	TUN-5	58					24BPM1 72	113
OL-4026 (Sim. to		RVR-6782(Echomate II)	71	TXC-3449, TXC-3489	94					24BPM2 72	110
PG. 5)	159	S-91 58-59 Simca	6	73 Chev.	167					24BPM3 72	110
OLP-4702 74 Olds.	171	S-500 50-51 Stude.	11	TXC-3650 73 Chev.	165					24BPM4 72	117
OLX-4483 74 Olds.	170	S-551 50-51 (Rev.)	6	TXO-3477, TXO-3479						24BPM5 72	117
OLXA-3099A 73 Olds.	159	Stude.	6	73 Olds.	167					24BPM6 72	125
OML-4099 74 Olds.	159	SA-529 58-59 Simca	11	TXP-3491B 73 Ford,						24BPM7 72	125
OPB-3702 73 Olds.	171	SAB-3071 63 Buick	23	Merc.	170					24BPT1 72	114
OPF-4271 74 Opel	172	SAB-3032 63 Buick	23	TXP-3499	167					24BPT2 72	114
OPM-4009 (Sim. to		SBP-3033 63 Buick	23	Merc.	167					24BPT3 72	128
PG. 5)	159	SBP-4027 64 Buick	28	TXR-3491 73 Ford,						24BPT4 72	112
OPX-4438 74 Opel	174	SBP-7168A 66-67 Buick.	62	Merc.	165					34AFM1 73	142
OPX-4472	170	SCA-6804	77	UAF-6224	64					34AFM2 73	150
OXA-3670 73 Olds.	165	SEA-6801	72	UAF-6270	94					34AFM3 73	145
OXE-3483 73 Olds.	167	SED-9060	76	UE-4155A	28					34APB1 73	139
OXE-3632 73 Olds.	165	SEK-3529 73 Buick	168	UE-4171A	28					34APB2 73	144
P-651 51 Ply. (Rev.)	6	SEL-9606	168	UE-4655A	28					34APB3 73	139
P-4152	27	SEK-3540 73 Buick	168	UE-4671A	28					34APB4 73	144
P-4652	27	SEL-9606	79	UFM-3089	22					34BPM1 73	145
P-4500 65 Pont.	29	SFB-6802	74	UFM-6305	59					34BPM2 73	142
PA-74R	30	SFK-2258 72 Buick	131	UFM-3098	22					34BPM3 73	145
PA-85	23	SFK-3279 73 Buick	169	UN-40	12					34BPM4 73	140
PA-3065 63 Ply.	26	SK-3097 73 Buick	159	UP-2064P (Sim. to						34BPM5 73	140
PA-3285	23	SP-1-58-59 Simca	11	PG. 5)	159					34BPM6 73	139
PAC-90 60 Pont.	23	SPA-2072 65 Buick	11	UP-2064T (Sim. to						34BPM7 73	138
PAC-3067 63 Pont.	14	SPA-4527 64 Buick	28	PG. 45)	160					41XPB1, 41XPB1 74	
PAC-4529 64 Pont.	28	SPA-5000B Sprite	141	UP-6222	60					(Sim. to Pg. 51)	167
PAF-4340	29	SPB-5001B Rover	141	UST-6219	86					44AFM1 74	175
PAP-69 59 Ply.	15	SPC-5002B Boss	152	VAL-4088 74 Ply.	159					44AFM2 74	172
PAP-80 60 Ply.	15	SPD-5003B Opus	150	VAX-4443	159					44AFM3 74	173
PAP-3066 63 Ply.	22	SPF-5004B Grand Boss	158	VBF-4229 74 VW	170					44AFM4 74	170
PC-350 60 Olds.	4	SPK-3735 73 Buick	147	VBK-4088 74 VW (Pg. 5)	159					44APK1 74	170
PC-361AT 61 Pont.	16	SSP-3005B Stock 105	171	VEE-4416 74 VW	174					44APK2 74	171
PC-3027 63 Pont.	23	SSS-2595	143	VEE-4505 74 Chev.	168					44APK3 74	171
PC-3030A 71-73 Pont.	159	SST-1179	145	VEE-4505 74 Chev.	168					44APK4 74	171
PC-4029 64 Pont.	28	SXK-3471 73 Buick	167	VEF-4297 74 Chev.	169					44APK5 74	175
PC-5041 65 Pont.	29	SXK-3673 73 Buick	165	VEL-4004 74 Chev.						44BPM1 74	169
PC-7165 67 Pont.	62	TA-3073 63 Olds.	23	(Pg. 5)	159					44BPM2 74	172
PEO-3519 73 Ford	168	TAC-4541 64 Chev.	22	VEP-4706 74 Chev.	171					44BPM3 74	175
PFM-1434 71 Pont.	131	TAC-3051 63 Chev.	22	VEX-4457 74 Chev.	170					44BPM4 74	173
PFM-2208 71-72 Pont.	131	TAC-5514 65 Chev.	37	VFA-1847 71 Chev.	131					44BPM5 74	171
PFM-3092A 63 Pont.	22	TAP-3074 63 Olds.	23	VFA-2204 71-72 Chev.	131					44BPM6 74	170
PFM-3094 63 Ply.	22	TAP-5149 65 Chev.	37	VFA-3297 71-73 Chev.	169					44BPM7 74	171
PFM-3295 73 Pont.	169	TAP-4526 64 Olds.	28	VFP-3249 73 Volvo	152					50APB1 74	192
PFM-6257 66 Pont.	66	TAX-4542 64 Chev.	28	VGA-3004 71-73 Chev.	159					50APB2 75 (Pg. 29)	192
PFX-5109 65 Ply.	30	TAX-5513N 65 Chev.	37	VOX-4428 74 Volvo	174					50APB3 75	192
PFX-5109N 65 Ply.	35	TC-3035 63 Olds.	23	VP-12	12					50APB4 75	192
PFX-7105 67 Ply.	62	TCH-4011 63 Chev.	22	VP-6228 58-67 VW	74					50BPM1 72 75	191
PFX-8296 68 Ply.	62	TCM-5041 Chev.	28	VP-6235 68-69 VW	89					50BPM2 75 (Pg. 29)	192
PIE-4519 74 Ford	168	TCM-5041 65 Chev.	29	VPA-280 60 Ply.	15					50BPM3 75	192
PIE-4286 (Pg. 21)	169	TCM-304N 65 Chev.	37	VPA-304N 65 Ply.	22					50BPM4 75 (Pg. 29)	192
PIL-4054 74 Ford	159	TCX-3019 (TC5-3049A)	159	VPA-3706 73 Chev.	171					50BPM5 75 (Pg. 29)	192
PIM-4820 74 Ford		73 Chev.	159	VSC-6767 67 VW	70					50BPM6 75 (Pg. 103)	188
(Pg. 5)	163	TCX-4042 64 Chev.	28	VSF-4233 74 VW	172					50BPM7 75 (Pg. 103)	188
PIP-4720 74 Ford	173	TCX-5013 65 Chev.	29	VSK-4420 74 VW	174					50BPM8 75 (Pg. 103)	188
PIX-4495 74 Ford	170	TCX-5013N 65 Chev.	37	VT-5108 65 Ply.	30					50BPM9 75 (Pg. 103)	188
PM-236 53 Ply.	5	TD-8274 67-68 Chev.	60	VTP-440 60 Ply.	15					50BPM10 75 (Pg. 103)	188
PNF-1898 71 Ford	131	TDD-4730 74 Olds.	171	VTP-3038 63 Ply.	22					50BPM11 75 (Pg. 103)	188
PNF-2235 71-72 Ford	131	TDF-4278 (Pg. 21)	169	VTP-5107 65 Ply.	30					50BPM12 75 (Pg. 103)	188
PNF-3358 (APC-1303)		VTP-1257 64-69 Dodge	64	VTP-8208 68 Ply.	60					50BPM13 75 (Pg. 103)	188
73 Ford	175	TDX-4477	170	VWF-4235 74 VW	172					50BPM14 75 (Pg. 103)	188
PN0-3050 71-73 Ford	159	VWX-4422 74 VW	174	VXA-3457 73 Chev.	167					50BPM15 75 (Pg. 103)	188
POE-4570 74 Pont.	169	VXA-3626 73 Chev.	165	W-76 thru 57 VW	12					50BPM16 75 (Pg. 103)	188
POF-4295 74 Pont.	168	W-84 58-63 VW	23	W-84 58-63 VW	23					50BPM17 75 (Pg. 103)	188
POL-4030 74 Pont.	159	W-89 58-59 VW	15	W-89 58-59 VW	15					50BPM18 75 (Pg. 103)	188
POX-4455 74 Pont.	170	W-90 58-63 VW	23	W-90 58-63 VW	23					50BPM19 75 (Pg. 103)	188
POX-4645 74 Pont.	177	W-3040A 64 VW	28	W-3040A 64 VW	28					50BPM20 75 (Pg. 103)	188
PP-330 60											

BUICK (CONT.)	VOL.	BUICK (CONT.)	VOL.	BUICK (CONT.)	VOL.	CHEVROLET (CONT.)	VOL.	CHEVROLET (CONT.)	VOL.	CHEVROLET (CONT.)	VOL.
94BFP1 69	60	7935044 (44AFMT1) 74	173	7930495 72	112	11BFMT2 71	118	60XFP1/PK1 76 (Pg.85)	189	987577 57	7
94BFP1 69	70	7935374 72	113	7937005 71	114	11BFPP2/P2 71	93	60XBP1/BK1 76 (Pg.87)	186	987693 57	7
94BFP2 69	62	7935814 (34APBK2) 73	149	7937025 72	110	11BFPP3/PK3 71 (Sim. to Pg. 47)	93	618BMT1 76 (Pg.29)	206	987724 58	8
94BT411 69	68	7935814 (34APBK2) 73	149	9341846 (36CWM2) 73	178	11BFPK1/BK2 71	93	618BP1/BK1 76 (Pg.65)	187	987730 58	8
94BFP1 69	70	7935814 (44APBK1) 74	171	9341846 (36CWM1) 73	144	11BPB2 71	97	618BPT1 76 (Pg.5)	207	987757 58	9
94EPF1 69	62	7935834 (34AFP1) 73	140	9341866 73	142	11BPB2 71	97	618BPT1 76 (Pg.5)	207	987757 58	9
94EPF1 69	62	7935834 (34AFP1) 73	140	9341876 73	139	11BPB2 71	97	618BPT1 76 (Pg.5)	207	987757 58	9
94EPF2 69	62	9341624 (34BP1) 73	139	9342586 74	178	11BPB2 71	97	618BPT1 76 (Pg.5)	207	987757 58	9
980051 60	12	9341624 (34BP2) 73	139	9342606 (46CFP1) 74	175	11BPB2 71	97	618BPT1 76 (Pg.5)	207	987757 58	9
980052 60	13	9341634 (34BP1) 73	140	9342606 (56CFP1) 75	190	11BT411 71	115	618BPT1 76 (Pg.5)	207	987757 58	9
980132 61	16	9341634 (34BP2) 73	140	9344336 (46CFMT1/T2) 74	172	11BPB2 71	97	618BPT1 76 (Pg.5)	207	987757 58	9
980134 61	15	9342204 73	145	9344336 (56CFMT1/T2/T3) 75	192	11HPF2 71	93	618BPT1 76 (Pg.5)	207	987757 58	9
980135 61	14	9344124 74	171	9344376 75	192	11HPF2 71	93	618BPT1 76 (Pg.5)	207	987757 58	9
980296 62	17	9344134 74	170	9344376 75	192	11TFP1 71	104	618BPT1 76 (Pg.5)	207	987757 58	9
980297 62	18	9344144 (44BPM3) 74	175	9344376 75	192	11TFP1 71	104	618BPT1 76 (Pg.5)	207	987757 58	9
980316 62	19	9344154 74	169	9344376 75	192	11TFP1 71	104	618BPT1 76 (Pg.5)	207	987757 58	9
980462 63	19	9344164 74	173	9344376 75	192	11TFP1 71	104	618BPT1 76 (Pg.5)	207	987757 58	9
980463 (LP) 63	21	9345270 (Pg.103)	191	9345280 (Pg.103)	191	21AFM1 72	109	618BPT1 76 (Pg.5)	207	987757 58	9
980464 (LP) 63	20	9345280 (Pg.103)	191	9345290 (Pg.103)	188	21AFM1 72 (Sim. to Pg.19)	75	618BPT1 76 (Pg.5)	207	987757 58	9
980626 63	21	9345480 75	192	9345480 75	192	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
980635 63	21	9345590 75	192	9345590 75	192	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
980649 64	25	9345500 (75)	215	9345500 (50BPB1) 75	190	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
980655 63	20	9345500 (50BPB2) 75	190	9345510 75	210	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
980657 64	25	9345510 75	210	9345534 75	188	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
980659 64	25	9345534 75	188	9345544 75	188	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
980869 65	29	9345554 75	189	9345554 75	188	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
981059 66	35	9345930 75	192	9345554 75	188	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
981059 66	35	9345940 75	192	9345554 75	188	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
981320 53	4	9347740 76	221	9345554 75	188	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
981321 53	4	9347980 75-76	220	9345554 75	188	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
981323 53	4	9349470 (Pg.103)	191	9345554 75	188	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
981550 54	4	9349480 (Pg.103)	191	9345554 75	188	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
981551 54	4	9349490 (Pg.103)	188	9345554 75	188	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
981651 55	See 981550	9349490 (Pg.103)	188	9345554 75	188	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
981652 55	6			9345554 75	188	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
981707 56	6			9345554 75	188	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
981708 56	6			9345554 75	188	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
981813 57	7			9345554 75	188	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
981814 57	7			9345554 75	188	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
981902 58	8			9345554 75	188	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
981903 58	8			9345554 75	188	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
981906 59	10			9345554 75	188	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
981909 59	11			9345554 75	188	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
981970 59	10			9345554 75	188	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
9825424 65	30			9345554 75	188	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
9825444 65	31			9345554 75	188	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
9828794 65	31			9345554 75	188	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
9828974 65	30			9345554 75	188	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
9829734 65	30			9345554 75	188	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
9829754 65	31			9345554 75	188	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
9829774 65	31			9345554 75	188	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
9829604 66	35			9345554 75	188	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
9829614 66	36			9345554 75	188	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
9829634 66	36			9345554 75	188	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
9829644 66	37			9345554 75	188	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
9829654 66	36			9345554 75	188	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
9829674 66	37			9345554 75	188	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
9829684 66	38			9345554 75	188	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
9829914 66	37			9345554 75	188	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
9829944 66	36			9345554 75	188	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
9829904 67	44			9345554 75	188	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
9829914 67	43			9345554 75	188	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
9829924 67	44			9345554 75	188	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
9829934 67	45			9345554 75	188	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
9829944 67	45			9345554 75	188	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
9829954 67	44			9345554 75	188	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
9829964 67	43			9345554 75	188	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
9829974 67	45			9345554 75	188	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
9830204 68	54			9345554 75	188	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
9830214 68	50			9345554 75	188	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
9830224 68	51			9345554 75	188	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
9830224-B 68	58			9345554 75	188	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
9830234 68	50			9345554 75	188	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
9830244 68	51			9345554 75	188	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
9830394 67	48			9345554 75	188	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
9830484A 68	51			9345554 75	188	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
9830614 69	70			9345554 75	188	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
9830634 69	70			9345554 75	188	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
9830664 69	70			9345554 75	188	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
9830754 72	112			9345554 75	188	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
98313514 (14AFP1) 71	101			9345554 75	188	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
98313514 (24AFP1) 72	118			9345554 75	188	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
98313514 (24AFP2) 72	129			9345554 75	188	21AFM1 72	117	618BPT1 76 (Pg.5)	207	987757 58	9
983136											

CHEVROLET (CONT.)	VOL.	CHRYSLER (CONT.)	VOL.	CLARION (CONT.)	VOL.	DESOTO (See MoPar)	VOL.	DODGE (CONT.)	VOL.	DUO-VOX	VOL.
7933271 (21APBT1)	72.. 74	2DC1011 70	83	RE-121A/B	162	DODGE (Also See MoPar)		395 68	51	AM-8	37
7933271 (51XPK1/T2)		2PD1209 72	128	RE-126A	166	AR-6155G-BL 72	117	397 68	58	AM10	33
75	193	2PD1211 72	128	RE-127A	169	AR-6155G-L	117	706A 68	60	AMF-16B	28
7933281 (21AFMT1)		2PD1212 72	128	RE-132B	167	ARA-10L 72	117	282474A 70	97	DYNATRONIC	
(Sim. Pg. 19) 72	75	2PD1506 75	196	RE-308B	164	ARA-10W 71	117	2824858 70	97		
7933281 (51XPK1/T2)		2PD2509 75	194	RE-311A/B	186	CF-10503 70	93	2824859 70	97	S-401	95
75	192	2PF1203 72	128	RE-321A/B	186	CF-15703 70	96	2824858/859 68 (Sim. to Pg. 79)	60	S-808	79
7933291 (11BPK2) 71.. 97		SCH1401 74	179	RE-322B	182	CF61003 70	88	2864513 68-69 (Sim. to Pg. 41)	57	S-848	91
7933291 (21BPK1) 73.. 137		SCH1605 76	223	CLETRON		CF65803 70	85	2864766 68	54	EDSEL	
7933291 (51BPK2) 73.. 145		SCH2401 74	181	RU-101	27	CF74903 70	89	2864796 68	54		
7933291 (41BPK1) 74.. 165		SCH4508 75	195	RU-104	27	CF75203 70	88	2864059 68 (Sim. to Pg. 41)	58		
7933291 (51BPK1) 75.. 187		SCH4508 75	192	COMET (See Mercury)		CF75703 70	88	2884063 68 (Sim. to Pg. 41)	58	99KF-18805-0/18806-C	10
7933301 (11BPK2/PK3)		SPD1506 75	196	CONTINENTAL (See Lincoln)		CG01303 71	104	2884063 68 (Sim. to Pg. 41)	58	COKE-18805/06 60	12
(Sim. to Pg. 47) 71	93	SPD2509 75	194	CORONADO		CG15603 71	105	2884064 68	51	04BE 60	12
7933301 (21BPK1) 72.. 113		78C 67 71	42	35RA2-43-5101A	5	CG54803 71	93	2884065 68	52	85SE 58	8
7933301 (21BPK2) 72.. 113		188FW1 71	98	CORTINA		CG82704 71	89	2884105 70	93	875E 58	8
7933301 (31BPK1) 73.. 138		188FW2 71 (Sim. to Pg. 27)	98	6BEP 66	39	OBCC 70	94	2884128 69	68	94BE 59	10
7933301 (41BPK1) 74.. 168		28BFW1 72	109	7BEPX 67	50	OBBJ 70-71	89	2884151 68 (Sim. to Pg. 24)	57	ERIC	
7933301 (51BPK1) 75.. 186		39BFW1 73	147	CORVETTE (See Chevrolet)		OBDS 70	92	2884285 69	63	FM-100	18
7933401 75	217	328 69	64	CRAIG		OBDT 70	97	2884610 70	88		
7933501 (21APBK2) 72.. 124		376 67	42	1901	118	OBVD 70	94	2884631 69	61	P-85 (See Oldsmobile)	
7933501 (41XPK1) 74.. 167		376 68	51	3104	54	18B 71	89	2884633 70	90	FALCON (See Ford)	
7933501 (51XPK1) 75.. 186		393 68	53	3108	55	18BJ 70-71	89	2884639 70	92	FIRESTONE	
7933511 (21APFK1/K3)		402 69	73	3110/A	55	18V0 71 (Sim. to Page 45)	94	2884658 70	85	3-D-5 Code 120-MU-60B	19
72	127	403 69	69	3116	95	1CH5513 75	214	2884749 70	89	3-D-6 Code 120-1-R61..	21
7933511 (51XPK1) 75.. 189		404 69	73	3117	89	1CH4007 70	90	2884750 70	94	3-D-6 Code 120-3-P69..	21
7933641 (11BPK2) 72.. 110		419 67	43	3119	90	1CH4402 74	180	2884750 72	128	3-D-6A	27
7933641 (21BPK1) 72.. 112		723 68	55	3120	85	1CH4405 74	181	2884752 (ZPD1006) 70	84	3-D-7 Code 120-3-DUP-42	21
7933641 (51APB1) 73.. 137		746 68	55	3121	85	1CH4508 75	192	2884756 (CF75603) 70..	88	3-D-8	23
7933641 (41APB1) 74.. 165		786 68 (Sim. to Pg. 75)	47	3122	85	1CH4508 75	192	2884757 70	93	3-D-15	27
7933641 (51APB1) 75.. 187		2580786 68 (Sim. to Pg. 75)	47	3123	85	1CP2002 70	84	2884759 (2PD1212) 72	128	4-B-69 Tractor	5
7935021 (21BPK1) 72.. 112		Pg. 75)	47	3124	85	1DP2002 69	67	2884759 (2PD1315) 73	157	4-B-72 53 Chev.	4
7935021 (21BPK2) 72.. 130		2820275 67	43	3125	85	1DT1214 72	135	2884768 68-69 (Sim. to Pg. 24)	60	4-B-74 54 Ford	5
7935021 (51APBK1) 73.. 157		2820635 67	43	3126	85	1DT1244 72	135	2884860 68 (Sim. to Pg. 79)	60	4-B-77 55 Ford	6
7935021 (51APBK2) 73.. 157		2864724 68	55	3127	85	1DT1316 73	153	2932706 68 (Sim. to Pg. 79)	60	4-B-78 55 Chev.	6
7935021 (41APBK1) 74.. 165		2864724 68	55	3128	85	1DT1317 73	153				
7935841 72	125	2864924 68	55	3129	85	1DT1336 73	153	FO-MO-CO (See Ford, Lincoln, Mercury)			
7936011 (11BPK2) 71.. 93		2864966 68	50	3130	85	1DT1919 70	87	FORD			
7936011 (21BPK1) 72.. 113		2864966 68	50	3131	85	1DT2214 72	133	C80A-19A04B 70	87		
7936011 (51BPK1) 73.. 138		2884286 69	64	3132	85	1DT2314 73	159	C80A-19A049 71	106		
7936011 (41BPK1) 74.. 166		2884287 69	64	3133	85	1DP1207 72	131	C9AA-19A127C 70	80		
7936011 (51BPK1) 75.. 186		2884288 69	69	3134	85	1DP1208 72	131	C9AA-19A237-B 69	65		
7936181 72	115	2884289 69	73	3135	85	1DP1209 72	128	C9AA-19A243 59	65		
7936191 72	118	2884544 70	86	3136	85	1DP1211 72	128	C9AA-19A243 59	65		
7936271 72	117	2884544 70	86	3137	85	1DP1212 72	128	C9AA-18806-F 69	66		
7936601 72	112	2884651 69	61	3138	85	1DP1313 73	156	C9AA-18806-F 69	66		
7936721 72	127	2884653 (89MC) 69	65	3139	85	1DP1506 75	196	C9AA-19A241 69	76		
7937571 (21VFP1) 72.. 117		2884653 (1CH4007) 70	90	3140	85	1DP2007 72	135	C9AA-18806-C 69	67		
7937571 (21VFP2) 72.. 117		2884750 72	128	3141	85	1DP2008 72	135	C9AA-18806-C 69	67		
7937581 72	127	2884750 72	128	3142	85	1DP2208 72	135	C9AA-18806-E 69	66		
7937581 72	127	2884752 70	84	3143 (Code 01)	203	1DP2209 72	135	C9AA-18806-E 69	66		
7939071 (51BPK1) 73.. 138		2884753 70	84	3144/A	198	1DP2307 73	156	C9AA-18806-F 69	66		
7939071 (41BPK1) 74.. 166		2884754 70	84	3148	204	1DP2308 73	156	C9AA-18806-F 69	66		
7939071 (51BPK1/T2)		2884758 70	81	3148	204	1DP2309 73	156	C9AA-18806-F 69	66		
75	188	2884759 72	128	3148	204	1DP2312 73	152	C9AA-18806-F 69	66		
7939071 (51BPK2) 75.. 207		2884844 70	87	3148	204	1DP2346 73	158	C9AA-18806-F 69	66		
7939081 (51BPK2) 73.. 142		2884844 70	87	3148	204	1DP2349 73	158	C9AA-18806-F 69	66		
7939081 (51BPK1) 73.. 151		2884847 69	69	3148	204	1DP2509 75	194	C9AA-18806-F 69	66		
7939081 (41BPK1) 74.. 171		2884874 70	77	3148	204	1PF1206 72	131	C9AA-18806-F 69	66		
7939081 (51BPK1/T2)		2884875 70	79	3148	204	1PF1312 73	156	C9AA-18806-F 69	66		
75	189	2884876 70	77	3148	204	1PF2205 72	135	C9AA-18806-F 69	66		
7939081 (51BPK2) 75.. 209		3420560 70	108	3148	204	1PF2347 73	156	C9AA-18806-F 69	66		
9343051 75	189	3420560 69	68	3148	204	2CH1401 74	179	C9AA-18806-F 69	66		
9343061 75	186	3489157 70	96	3148	204	2CH1605 76	223	C9AA-18806-F 69	66		
9344651 75	189	3501013 (1PD1209, 2PD1209) 72	128	3148	204	2CH2402 74	180	C9AA-18806-F 69	66		
9344661 75	191	3501013 73 (Sim. to Pg. 73)	122	3148	204	2DC1011 70	83	C9AA-18806-F 69	66		
9345270 (Pg. 103)	191	3501045 71	105	3148	204	2DP1209 72	128	C9AA-18806-F 69	66		
9345280 (Pg. 103)	191	3501059 71	105	3148	204	2DT1316 73	153	C9AA-18806-F 69	66		
9345290 (Pg. 103)	188	3501156 72	128	3148	204	2DP1306 73	157	C9AA-18806-F 69	66		
9347740 76	220	3501163 (1CH1210, 2CH1210) 72	136	3148	204	2PD1306 73	157	C9AA-18806-F 69	66		
9347980 75-76	221	3501163 (1CH1314) 73	157	3148	204	2PD1308 73	157	C9AA-18806-F 69	66		
9348311 76	217	3501164 (188FW1) 71	98	3148	204	2PD1315 73	157	C9AA-18806-F 69	66		
9348321 76	217	3501164 (28BFW1) 72	109	3148	204	2PD1506 75	196	C9AA-18806-F 69	66		
9348341 76	218	3501164 (S9BFW1/7313966) 73	147	3148	204	2PD2509 75	194	C9AA-18806-F 69	66		
9343061 75	217	3501165 71	108	3148	204	2PF1203 72	128	C9AA-18806-F 69	66		
CHRYSLER (Also See MoPar)		3501166 71	108	3148	204	2PF1324 73	157	C9AA-18806-F 69	66		
B9MC (2884633) 69	65	3501167 71	108	3148	204	SCH1401 74	179	C9AA-18806-F 69	66		
CP09503 70	87	3501231 74	176	3148	204	SCH1605 76	223	C9AA-18806-F 69	66		
CF15703 71	96	3501232/33/34/35 74	181	3148	204	SCH2402 74	181	C9AA-18806-F 69	66		
CF54403 70	86	3501237 74	176	3148	204	SCH3507 75	195	C9AA-18806-F 69	66		
CF84403 70	87	3501238 74	176	3148	204	SCH402 74	181	C9AA-18806-F 69	66		
CG05903 71	85	3501240 (1CH2401, 3501240) 74	181	3148	204	SCH405 74	181	C9AA-18806-F 69	66		
CG16603 71	104	3501240 (1CH3507, 3501240) 75	195	3148	204	SCH4508 75	195	C9AA-18806-F 69	66		
CG16703 71	106	3501240 (75) 75	214	3148	204	SPD1506 75	196	C9AA-18806-F 69	66		
OBCC 70	94	3501329 75	195	3148	204	SPD2509 75	194	C9AA-18806-F 69	66		
OBVD 70	92	3501329 75	195	3148	204	78DD 67					

FORD (CONT.)	VOL.	FORD (CONT.)	VOL.	FORD (CONT.)	VOL.	GIBBS (CONT.)	VOL.	HITACHI	VOL.	JACOBSEN	VOL.
D2DJ-19A241-AA 72	133	T7SMZ 66	45	SMF 55	5	657	101	CS-133	103	7BT	45
D2HA-18806 72	126	T8MF 68	51	SMFB 55	5	805,807	87	CS-214	166	7BTX	52
D2HA-18806 73	138	T8MS 68	53	SMFS/58 55	5	912	103	CS-1000IC	111		
D2HA-18810 (28T) 72	114	T8MZ 68	51	SPN2318 73	178	920	105	CS-1050IC	123	JCPenney	
D2HA-18810 (28MT) 72	136	T9MS 69	62	SPN2411 74	179	950, 952	87	CS1100IC	103	0110	193
(Sim. to Pg. 51)	59	T9MZ 69	66	SPN2513 75	200			CS-1150IC	123	981-0100	134
D2SA-18806 73	138	TR864AX 74	181	STBF 65	28	GM (See GMC or Chevrolet)		CS-1440IC	153	981-0101	119
D2SA-19A242-AH 72	136	TO85TBS 65	32	STBO 65	28			CS-1700IC	123	981-0100	52
(Pg. 57)	135	TO86TBS 66	39	STBT 65	33			CS-1750IC	143	981-0103	195
D2TA-19A241-125 72	126	TO87TBS 66	39	STBU 65	33			CSK-1300 1C	148	981-0105	121
D2TA-18806 72	126	TO88TBS 66	39	STMF 65	28			KM1001	123	981-0110	193
D2TJ-18806 72	124	TO89TBS 66	39	STMS/SF 65	28			KM-1520H	129	981-0115	141
D2UA-18806 72	126	TO90TBS 66	39	STMZ 65	28			TM-816U	37	981-0140	196
D2UA-18806 75	138	TO91TBS 66	39	STPD 65	28			TRQ-206	116	981-0161	164
D2ZA-19A241 72	127	TO92TBS 66	39	STPO 65	28					981-0165	137
D2ZA-19A242-AF 72	135	TO93TBS 66	39	STPZ 65	28			HOFFMAN		981-0166 (Sim. to Pg. 79)	137
(Pg. 57)	135	TO94TBS 66	39	6A-D6DA-18806AA 76	221			16TFP1 71	103	981-0180	166
D2ZA-18806 72	129	TO95TBS 66	39	6BF 56	5			769	31	981-0180	194
D3AA-19A168-AD 73	125	TO96TBS 66	39	6BT 56	6			769 (Rev.)	28	981-1373	166
D3AA-19A241 73	137	TO97TBS 66	39	6BTB 66	36					981-1506	166
D3DA-19A241 73	137	TO98TBS 66	39	6BTB 66 (P)	36			HUDSON (Also see American Motors)		981-1514 (Sim. to Pg. 79)	137
D3DA-18806 73	136	TO99TBS 66	39	6BTB 66	36			HNSAC-8 55	6	981-2230	194
D3SA-19A241 73	137	TO100TBS 66	39	6BTB 66	36			SH758 53	4	981-4021	30
D3TA-18806 73	138	TO101TBS 66	39	6BTB 66	36			SH758 53	4	981-4031	30
D3TA-18806 73	138	TO102TBS 66	39	6BTB 66	36			SH759 53	4	981-5225	125
D3ZA-19A242-AB 73	153	TO103TBS 66	39	6BTB 66	36			236476 53	4	981-5937	196
D3ZA-18806 73	136	TO104TBS 66	39	6BTB 66	36			26T441 72	112	981-7479	164
D4AA-19A168-AA 74	185	TO105TBS 66	39	6BTB 66	36			35RMT1 73 (PCB AR-151)175	4	981-7553	193
D4AA-19A168-BA 74	181	TO106TBS 66	39	6BTB 66	36			41BFM1 74	174	982-0093	30
D4AA-19A241AA 74	174	TO107TBS 66	39	6BTB 66	36			41BFM2 74	169	984-8227	29
D4AA-18806AA 74	171	TO108TBS 66	39	6BTB 66	36			41BPBK1 74	165	984-8243	29
D4BJ-18810AA 74	172	TO109TBS 66	39	6BTB 66	36			41TPB1 74	167	985-2757	195
D4DA-19A171-BA 74	178	TO110TBS 66	39	6BTB 66	36			45RPM1 74 (PCB AR151)175	4	985-6816	30
D4HA-18806AA 74	170	TO111TBS 66	39	6BTB 66	36			45TFP1 74	127	985-6907	141
D4HA-18810AA 74	172	TO112TBS 66	39	6BTB 66	36			45TPB1, 45TTC1 74	167	985-8341	30
D4HA-18810-BA 74	174	TO113TBS 66	39	6BTB 66	36			55TFP1 75	189	985-8558	29
D4TA-19A241AA 74	174	TO114TBS 66	39	6BTB 66	36			55TPB1 75	186	985-8370	30
D4TA-18806AA 74	171	TO115TBS 66	39	6BTB 66	36			55TPB2	186	985-8599	30
D4TA-18806BA 74	170	TO116TBS 66	39	6BTB 66	36			55TPC1 75	186	2230	194
D4TA-18810AA 74	172	TO117TBS 66	39	6BTB 66	36			55TTC2 75	186	3104	29
D4UA-18806AA 74	170	TO118TBS 66	39	6BTB 66	36			60APBK1 76 (Pg. 29)	217	3108 58-63 VN	29
D5AA-19A168 75	186	TO119TBS 66	39	6BTB 66	36			60RPM1 76 (Pg. 57)	191	3114 63 Ford	29
D5AA-19A168-BD 76	222	TO120TBS 66	39	6BTB 66	36			60HBM1/BK1 76 (Pg. 65)187	187	3118	29
D5AA-19A241 76 (Sim. to Pg. 61)	188	TO121TBS 66	39	6BTB 66	36			65HDPB1 76 (Pg. 87)	186	3120 58-63 VN	29
D5DA-19A168-AA 75	199	TO122TBS 66	39	6BTB 66	36			65TCP1 76 (Pg. 85)	189	3121	29
D5DA-19A171-AB 75	200	TO123TBS 66	39	6BTB 66	36			65TCPB1 76 (Pg. 87)	186	3122	30
D5HA-18810AA 76 (Sim. to Pg. 49)	172	TO124TBS 66	39	6BTB 66	36			86TT431 68	155	3129	30
D5MA-19A168AA 76 (Sim. to Pg. 55)	186	TO125TBS 66	39	6BTB 66	36			91TPB1 69 Truck	59	3138	30
D5SA-19A168 75	186	TO126TBS 66	39	6BTB 66	36			96TT411 69	73	3143	29
D5SA-19A241 75	188	TO127TBS 66	39	6BTB 66	36			96TT412 69	73	3144	29
D6BA-19A168-BD 76	222	TO128TBS 66	39	6BTB 66	36			96TTC1 69	69	3146	30
D6BA-19A242-AA 76	221	TO129TBS 66	39	6BTB 66	36			MPT-801	131	3151	30
D6DA-18806AA 76	223	TO130TBS 66	39	6BTB 66	36			MPT-2000	128	3160 64 Chev.	29
D6TA-19A241 76 (Sim. to Pg. 61)	188	TO131TBS 66	39	6BTB 66	36			MPX-7000	128	3161 63-64 Chev.	29
D6TA-18806AB 76 (Sim. to Pg. 85)	171	TO132TBS 66	39	6BTB 66	36			PA-700	49	3162 63-64 Chev.	29
D8MF 68	53	TO133TBS 66	39	6BTB 66	36			QK-48	175	3163 64 Merc.	30
D9MF 69	65	TO134TBS 66	39	6BTB 66	36			RA-04	140	3168 64 Ford	30
D12A-18806 71	94	TO135TBS 66	39	6BTB 66	36			RA-05	139	3169 64 Ford	30
D20A-19A241 72	127	TO136TBS 66	39	6BTB 66	36			RF-06	122	3170 64 Ford	30
D20A-18806 72	122	TO137TBS 66	39	6BTB 66	36			RX-14	184	3171 64 Ford	30
D22A-19A171-AA 72	133	TO138TBS 66	39	6BTB 66	36			S-70A	147	3172 64 Olds	29
D22A-18806 72	125	TO139TBS 66	39	6BTB 66	36			S-75	121	3173 64 Merc.	30
D27J-18806 73	138	TO140TBS 66	39	6BTB 66	36			S-85	139	3174 64 Olds	29
D27J-18806 75 (Sim. to Pg. 85)	171	TO141TBS 66	39	6BTB 66	36			S-100	141	3176 63-64 Pont.	29
D32A-19A171-AA 73	178	TO142TBS 66	39	6BTB 66	36			S-400	176	3179 64 Pont.	29
D32A-19A241 73	137	TO143TBS 66	39	6BTB 66	36			S-505	174	3180 64 Chev.	29
D32A-18806 73	136	TO144TBS 66	39	6BTB 66	36			S-505	213	3181 63-64 Chev.	29
D40A-19A241-AA 74	180	TO145TBS 66	39	6BTB 66	36			S-705A	143	3182 60-64 Chev.	29
D42A-19A171-AB 74	179	TO146TBS 66	39	6BTB 66	36			S-900	119		
D42A-18806AA 74	170	TO147TBS 66	39	6BTB 66	36			S-900A	178	JEEP	
D44A-18806-AA 74	178	TO148TBS 66	39	6BTB 66	36			S-1000	149	U7MK 68	65
D50A-19A168-AA 75	199	TO149TBS 66	39	6BTB 66	36			S-4001	197	1KJ1024 70	118
D52-19A171-BA 75	200	TO150TBS 66	39	6BTB 66	36			S-4200	187	1KJ1025 70	118
D52A-19A241 74-75	174	TO151TBS 66	39	6BTB 66	36			V102	112	1KJ1048 70	118
ED-D10A-19A241 71	98	TO152TBS 66	39	6BTB 66	36			V302	41	1KJ1326/32 73	168
ED-D15A-19A241 71	100	TO153TBS 66	39	6BTB 66	36			VX101	41	3TBN 63	22
ED-D17A-19A241 71	98	TO154TBS 66	39	6BTB 66	36			WAF-609	129	5BN 65	44
ED1-D10A-19A241 71	94	TO155TBS 66	39	6BTB 66	36			WV-209A	125	6BKJ 66	39
ED1-D15A-19A241 71	100	TO156TBS 66	39	6BTB 66	36			WV-509	122	7BKJ (Sim. to Pg. 32)	45
ED1-D17A-19A241 71	98	TO157TBS 66	39	6BTB 66	36			WV502	42	7BKJX 67	56
ED1-D19A-19A241 71	98	TO158TBS 66	39	6BTB 66	36			WX-103	48	8BKJ 66 (Sim. to Pg. 37)	69
ED1-D21A-19A241 71	98	TO159TBS 66	39	6BTB 66	36			WX502	27	9BKJ/JC 69 (Sim. to Pg. 37)	69
F3TFB 63	20	TO160TBS 66	39	6BTB 66	36			X101	41	12BN	69
F3TBS 63	20	TO161TBS 66	39	6BTB 66	36			X102	116	815395	61
F4TFB 64	24	TO162TBS 66	39	6BTB 66	36			X-302	41	978238 68	65
F4TBS 64	24	TO163TBS 66	39	6BTB 66	36			X-304	122	978322/339 68 (Sim. to Pg. 37)	69
F5TFB 65	32	TO164TBS 66	39	6BTB 66	36			XFMA-400	41	981026 70	118
F6TFB 66	39	TO165TBS 66	39	6BTB 66	36			203A	125	981030 70	118
F6TFB 66	39	TO166TBS 66	39	6BTB 66	36			206	180	984336 70	118
F6TBZ 66	39	TO167TBS 66	39	6BTB 66	36					8997004 73	168
F7TFB 67	46	TO168TBS 66	39	6BTB 66	36			INTERNATIONAL			
F7TBS 67	46	TO169TBS 66	39	6BTB 66	36			F9SMH 69-70	124	J.I.L.	
F7TBZ 67	46	TO170TBS 66	39	6BTB 66	36			IL7CA/-12 55	6	515	207
F8TFB 68	54	TO171TBS 66	39	6BTB 66	36			IL7TC/-12 57	7	517	213

J.I.L. (CONT.)	VOL.	LEAR JET (CONT.)	VOL.	MACK (CONT.)	VOL.	MERCURY (CONT.)	VOL.	MERCURY (CONT.)	VOL.	MoPar (CONT.)	VOL.
844	206	A-275	183	U7MMT 67	112	D4RJ-19A241-AA 74	182	STPE 65	18	78C 67 Chry.	42
846/N	208	A-295	203	1MK1132	153	D5AA-19A168 75	186	6A-DS6A-1806GAA 76	221	78D 67 Dodge	42
848	211	AR-140 (Pg. 49)	140	204SX28 (USWMT)	47	D5AA-19A168-BD 76	222	6BM 56	6	78DD 67 Dodge	42
851	215	AS-835H	54	204SX28 (U7WMT)	112	D5AA-19A241 76 (Sim.)		6BMS 56	6	78DT 67 Dodge	44
		AS-831	58	204SX58	153	to Pg. 61)	188	6FD2507 75	290	78P 67 Ply.	42
JOHN DEERE		ASFM-830-H	54			DSDA-19A168-AA 75	199	6TMH 66	35	78VE 67 Ply.	42
		ASFM-871	56			DSDA-19A171-AB 75	200	6TPG 66	37	78WD 67 Chry.	48
AR42431 71	53	ASR-830-H	44	MASSEY FERGUSON		DSMA-19A168AA 76 (Sim.)		7TBM 67	42	7FBD 67 Dodge	48
AR56775	161	ASR-851	55			to Pg. 55)	186	7TPG 67	41	7FDD 67 Dodge	48
AR57156	158	R-905	182	OBTMP 70	82	DSVA-19A168 75	186	8TBM 68	55	7FBP 67 Ply.	48
AR60083	158	R-915	186	1MF1250	164	DSVA-19A241 75	188	9BPM 69	68	7FBPD 67 Ply.	48
OBJJD 70	78	R-925	181	19842A91	164	D6BA-19A168-AA 76	222	9FBM 69	78	7FBVA 67 Dodge, Ply.	48
1AR4231	110	R-945	177			D6BA-19A242-AA 76	223	9FBZ 69	64	12B 61 Dodge	15
1BTJD 71	113			MASTERWORK		D6DA-18806AA 76	221	22BN 62	18	13BC 61 Chry.	15
1JDI229	161	LINCOLN				DBMF 68	53	24ME/MY 62 (Pg. 85)	17	13BD 61 Dodge	16
1JDI243	158			MB200	72	D44A-18806-AA 74	178	73EB-18K810-AA 73	153	13CS 61 Desoto	16
1JDI245	158			MAZDA		DS2A-19A241 75	170	77RM 57	7	14BC 61 Chry.	15
5SMJD	53	CBVY-18805B 68	71			EDTMN 66	35	ED-DIGA-19A241 71	97	14BI 61 Chry.	15
7BT 67	45	C91A-19A242-B 69	80	1MM418 (74)	215	ED-DIGA-19A241 71	97	ED-DIGA-19A241 71	97	24BC 62 Chry.	18
7BTX 67	49	C91A-18806-C 69	66	2MM418 (74)	215	ED-DIGA-19A241 71	97	ED-DIGA-19A241 71	97	24BI 62 Chry.	18
7SMJD 71	110	C91Y-18805-B 69	66	5MM418 (74)	215	ED-D1WA-19A241 71	97	ED-D1WA-19A241 71	97	34BC 63 Chry.	20
		C9VA-19A241 69	71	19842A91 (74)	215	EFSTBM 65	34	EFSTBM 65	34	34BI 63 Chry.	20
		C9VA-19A246 69	71			EF6TBM 66	38	EF6TBM 66	38	44BCS 64 Chry.	24
		D0LA-19A241 70	94	MEDALLION		F3TBM 63	21	F3TBM 63	21	44BI 64 Chry.	24
		D0LA-19A242 70	92			F4TBE 64	24	F4TBE 64	24	84BC 58 Chry.	8
		D0VA-19A241 (OFBL) 70	75	65-201	124	F4TBM 64	24	F4TBM 64	24	85BC 58 Chry.	9
		D0LA-18806 70	84	65-202	124	F5TBE 65	34	F5TBE 65	34	94BC 59 Chry.	10
		D0VA-19A242-E (-185) 70	108	65-203	121	F5TBM 65	34	F5TBM 65	34	101 60 Ply.	13
		D1LA-19A242-AA 71	104	65-206	101	F6TBE 66	38	F6TBE 66	38	102 60 Dodge	13
		D1LA-18806 71	98	65-212	96	F6TBM 66	38	F6TBM 66	38	104 60 Ply.	13
		D1VA-19A241 71	97	65-231	104	F7TG 67	47	F7TG 67	47	106 60 Dodge	14
		D1VA-19A242-AA 71	102	65-241	102	F7TBM 67	47	F7TBM 67	47	107 61 Dodge	15
		D20A-19A241 72	127	65-302	159	F8TBM 68	56	F8TBM 68	56	109 61 Ply.	15
		D2SA-19A242-AH 72	135	65-303	160	F8TBM 68	56	F8TBM 68	56	110 60 Ply.	13
		D2SA-19A242-AH 74		65-304	155	F8TBM 68	56	F8TBM 68	56	111 61 Ply.	15
		(Pg. 57)	135	65-306	160	F8TBM 68	56	F8TBM 68	56	112 60 Desoto	14
		D2VA-19A241 72	127	65-312	155	F9BZ 69	64	F9BZ 69	64	113 61 Ply.	15
		D2VA-19A242-AD 72	135	65-314	174	MTB 67	47	MTB 67	47	114 61 Dodge	15
		D2VA-19A242-AD 72	135	65-320	199	M-5841 58	98	M-5841 58	98	202 62 Dodge	18
		(Pg. 57)	135	65-406	185	OFBA 70	82	OFBA 70	82	203 62 Ply.	17
		D2VA-18806 72	126	65-412	186	OFBQ 70	81	OFBQ 70	81	204 62 Ply.	17
		D3AA-19A168-AD 73	155	65-414	188	OFBQ 70	81	OFBQ 70	81	205 62 Dodge	17
		D3AA-19A241 73	137	65-481	107	OFBQ 70	81	OFBQ 70	81	206 64 Dodge	24
		D3VA-19168-AC 73	155	65-482	103	R2TBM 62	20	R2TBM 62	20	214 63 Ply.	19
		D4AA-19A168-AA 74	183	65-484	103	T6SMH 66	35	T6SMH 66	35	215 63 Dodge	19
		D4AA-19A168-BA 74	181	65-486	123	T7SMH/A 67	45	T7SMH/A 67	45	216 63 Ply.	22
		D4AA-19A241AA 74	174	65-490	207	T7SMH/N 67	45	T7SMH/N 67	45	217 63 Dodge	22
		D4AA-18806AA 74	171	65-501A	121	T7SMH 67	45	T7SMH 67	45	218 64 Ply.	24
		D4VA-19A168-AA 74	183	65-501B	150	T8M 68	54	T8M 68	54	219 64 Dodge	23
		D4VA-19A241AA 74	174	65-502	123	T8M 68	54	T8M 68	54	220 64 Ply.	23
		D4VA-18806BA 74	171	65-505	119	T8M 68	54	T8M 68	54	221 64 Dodge	24
		D5AA-19A168 75	186	65-506	123	T8M 68	54	T8M 68	54	222 65 Ply.	28
		DSGA-19A241 75	188	65-509	157	T9M 69	88	T9M 69	88	223 65 Dodge	28
		DSVA-19A168 75	186	65-516	200	T9M 69	88	T9M 69	88	224 65 Ply.	28
		DSVA-19A241 75	188	65-528	149	T9M 69	88	T9M 69	88	225 65 Ply.	28
		D0M 68	56	65-531	163	T9M 69	88	T9M 69	88	226 65 Dodge	28
		D20A-18806 72	122	65-532	178	DBM 70	77	DBM 70	77	228 66 Ply.	37
		D20A-18806 73	138	65-534	198	O4BM-2 60	13	O4BM-2 60	13	229 66 Dodge	37
		F3TBC 63	21	65-540	161	1CP1047 71	102	1CP1047 71	102	230 66 Ply.	37
		F4TBC 64	25	65-540	158	1CP1323 73	153	1CP1323 73	153	231 60 Ply.	37
		F6TDC 66	40	65-560	165	1CP2033 71	109	1CP2033 71	109	232 67 Ply.	42
		F8TBC 68	71	65-562	198	1CP2235 72	135	1CP2235 72	135	233 67 Ply.	42
		F8UBX 68	61	65-565	205	1CP2417 74	182	1CP2417 74	182	234 66 Dodge	35
		F14TBC 64	25	65-566	208	1CR4005 7C	86	1CR4005 7C	86	235 66 Dodge	35
		TOB5TBC 65	33	65-576	209	1F1RAM 74	178	1F1RAM 74	178	236 66 Ply.	37
		T6SMC 66	36	65-578	192	1F2RPM 74	178	1F2RPM 74	178	235 66 Ply.	37
		T7SMC 67	45			1F3RMK 74	180	1F3RMK 74	180	236 67 Ply.	42
		T7SMK/C 67	45	MERCURY		1FBA 71	98	1FBA 71	98	237 67 Dodge	42
		T8ML 68	52	(Also See Ford)		1FBG 71	98	1FBG 71	98	240 67 Ply.	43
		T8MK 68	54			1FBG 71	97	1FBG 71	97	241 67 Dodge	42
		T9ML 69	64	C80A-19A049E 71	106	1FBG 71	97	1FBG 71	97	301 60 Ply.	14
		T9MK 69	68	C9AA-19A127C 70	80	1FBM 71	98	1FBM 71	98	302 60 Dodge	13
		TF86AX 74	181	C9AA-19A241 70	80	1FBM 71	98	1FBM 71	98	303 60 Chry.	13
		OBLS5 70	82	C9MA-19A241 69	78	1FBM 71	98	1FBM 71	98	304 60 Desoto	13
		OFBL 70	75	C9MA-19A242 69	88	1FBM 71	98	1FBM 71	98	305 60 Dodge	13
		OFBQ 70	81	DOGA-19A241 70	81	1FBM 71	98	1FBM 71	98	306 61 Dodge	16
		OSBH 60	94	DOMA-19A242 70	85	1FBM 71	98	1FBM 71	98	309 61 Ply.	16
		1FB1 71	97	DOMA-18806 70	77	1FBM 71	98	1FBM 71	98	310 60 Ply.	14
		1FD4302 73	155	DOMY-18805B 70	85	1FBM 71	98	1FBM 71	98	311 61 Ply.	16
		1LN4213 72	135	DORJ-19A241A 71	109	1FBM 71	98	1FBM 71	98	312 61 Desoto	16
		1LN4306 73	155	DORJ-18806A 71	102	1FBM 71	98	1FBM 71	98	313 60 Dodge	14
		1MT4002 70	92	DOMA-19A241 70	81	1FBM 71	98	1FBM 71	98	314 61 Ply.	16
		1T84211 72	135	DOMA-19A242 70	86	1FBM 71	98	1FBM 71	98	315 60 Dodge	14
		2BL/LAF 72	126	DOMY-19A241 70	82	1FBM 71	98	1FBM 71	98	316 61 Ply.	16
		2FB1 72	127	D1AA-18806 71	94	1FBM 71	98	1FBM 71	98	317 61 Chry.	15
		2FB2 72	127	D1AA-19A241 71	98	1FBM 71	98	1FBM 71	98	322 62 Ply.	17
		2FB3 72	127	D1AA-19A242 71	98	1FBM 71	98	1FBM 71	98	323 62 Dodge	17
		2LN4110 71	102	D1AA-19A242-AD 71	105	1FBM 71	98	1FBM 71	98	324 62 Ply.	17
		2MT4108 71	104	D1AA-18806 71	94	1FBM 71	98	1FBM 71	98	325 62 Ply.	17
		3SH755 53	4	D1AA-19A241 71	98	1FBM 71	98	1FBM 71	98	326 62 Ply.	17
		4SH764 54	4	D1AA-19A242-AD 71	105	1FBM 71	98	1FBM 71	98	327 62 Ply.	17
		4SH766 54	4	D1YA-19A241 71	98	1FBM 71	98	1FBM 71	98	328 62 Ply.	17
		4TMC F 64	23	D1YA-19A242-AD 71	105	1FBM 71	98	1FBM 71	98	329 62 Ply.	17
		5M 55	5	D1ZA-18806 71	94	1FBM 71	98	1FBM 71	98	330 63 Dodge	21
		5TMC F 65	28	D2AA-19A241-125 72	127	1FBM 71	98	1FBM 71	98	331 63 Dodge	21
		6BC 56	6	D2AA-19A241 72	130	1FBM 71	98	1FBM 71	98	332 63 Dodge	21
		6BH 56	6	D2AA-19A242-AE 72 (See Pg. 57)	1						

MoPar (CONT.)	VOL.	MOTOROLA (CONT.)	VOL.	MOTOROLA (CONT.)	VOL.	MOTOROLA (CONT.)	VOL.	MOTOROLA (CONT.)	VOL.	OLDSMOBILE (CONT.)	VOL.
369 7FBP 67 Ply.	48	BKA63 63 Buick	22	HN4M6 54 Hudson	5	VNM64 58-64 VW	25	891600	24	33AFMT2 (7935053)	
370 67 Dodge	48	BKA64 64 Buick	24	HNS3M6 51-53 Hudson ..	5	03AR (See Amer.Motors		980886 64 Opel	26	73 F-85	144
372 (Pg. 86) 65 Ply.	30	CA61X 61 Buick, Olds,		HT3A6 53 Hudson	5	8990811	12	Chassis		33AFB1 (7938253)	146
373 (Pg. 86) 65 Dodge ..	30	Pont.	16	ILSTCA,-12 55 Intl. ..	6	04MA 60 Amer. Motors				73 F-85	146
374 67 Ply.	48	CA62 62 Buick, Olds,		IM201R	41	(Pg. 19)	11	R15A6	5	33AFPBK2 (9342563)	146
375 67 Chry.	48	Pont.	20	IM202R	41	04MD/MF/MFM (Pg. 77) ..	12	R16M6	5	73 F-85	146
376 78C 67 Chry.	42	CA63 61-63 Buick, Olds,		IM203R	66	12CRFM4 (Pg. 43)	178	R17A6	5	33APB1 (7936143)	142
376 (2820635 68 Chry.	51	Pont.	22	IM204R	64	12CRFM4 (Pg. 39)	180	MUNTZ/STEREO		73 F-85	142
377 67 Dodge	48	CE65A 65 Chev.	32	KR3A6 51-53 Kaiser	5	12CRFM4 (Pg. 39)	204			33APB2 (7936143)	147
378 67 Dodge	48	CE65M 65 Chev.	32	NH3C 53 Nash	5	2AT-1	21			73 F-85	147
379 66 Dodge	36	CE66A 66 Chev.	38	NH4AC 54 Nash (See		2MP2031	127			33APB1 (7938003)	142
381 67 Dodge	43	CE66M 66 Chev.	39	AC-154)	5	2MT	20			73 F-85	142
385 67 Dodge, Ply.	48	CE67A 67 Chev.	44	NHSAC 55 Nash (See		2TMF (Pg. 71)	18			33APB2 (7938003)	147
402 60 Chry.	15	CE68A 68 Chev.	56	AC-154)	5	2TMX (Pg. 71)	18			73 F-85	147
403 60 Chry.	15	CE69A 69 Chev.	59	OE2A6 51-52 Olds.	5	2TMDX (Pg. 131)	17			33APBT1 (7935043)	140
404 61 Chry.	15	CE70A 70 Chev.	77	OE4FM 64 Olds	34	2TMY (Pg. 71)	18			73 F-85	140
407 61 Chry.	15	CE64A 64 Chev.	24	OE4FMC 64 Olds.	34	3AT	22			33BPM1 (7937953)	142
409 62 Chry.	18	CE64A 64 Chev.	25	OE65A 65 Olds.	32	3MT	22			73 Olds, Toronado	
410 62 Chry.	18	CE65M 65 Chev.	32	OE66A 65-66 Olds.	40	4AT	25			(PCB AR-151)	139
411 63 Chry.	20	CE66M 66 Chev.	39	OE67A 67 Olds.	45	4MT	25			33BMT1 (7937973)	145
413 63 Chry.	20	CE67A 67 Chev.	44	OE7X 57 Olds.	45	5CRSMX4	204			73 Olds, Toronado	145
414 64 Chry.	24	CE68A 68 Chev.	56	OE9X 59 Olds.	12	5F4RDX4	204			33BMT2 (7937973)	144
415 64 Chry.	24	CE69A 69 Chev.	59	OEA61X 61 Olds.	17	5F4RDX4	204			73 Olds, Toronado	144
416 65 Chry.	31	CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			33BFP1 (7938333)	146
416 65 Chry.	31	CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			73 Olds, Toronado	146
416 65 Chry.	31	CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			33BPT1 (7937943)	142
416 65 Chry.	31	CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			73 Olds, Toronado	142
417 65 Chry.	31	CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			33BPT2 (7937943)	147
417 65 Chry.	31	CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			73 Olds, Toronado	147
417 65 Chry.	31	CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			33BPT1 (7937963)	140
418 67 Chry.	47	CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			73 Olds, Toronado	140
419 67 Chry.	47	CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			41XPB1, 41XPBK1	
419 67 Chry.	47	CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			74 Omega (Similar to	167
421 67 Chry.	43	CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			43APB1 (9343283)	
421 67 Chry.	43	CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			43APBK1 (9343303)	
421 67 Chry.	43	CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			74 Cutlass	173
608 53 Ply.	4	CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			74 Cutlass, Olds,	
609 53 Dodge	4	CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			Toronado	171
610T 53 Dodge	4	CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			43BMT1 (9343363)	74
611T 54 Dodge (See		CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			43BPK1 (9343333)	74
610T)	4	CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			43BPK2 (9343333)	74
612 54 Dodge (See 609)		CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			43BPK3 (9343333)	74
613 55 Ply.	5	CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			43BPK4 (9343333)	74
614 55 Dodge	5	CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			43BPK5 (9343333)	74
615 55 Dodge	5	CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			43BPK6 (9343333)	74
616 55 Ply.	7	CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			43BPK7 (9343333)	74
621 56 Dodge	8	CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			43BPK8 (9343333)	74
624 57 Dodge	8	CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			43BPK9 (9343333)	74
700 58 Dodge (Rev.) ..	14	CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			43BPK10 (9343333)	74
701 59 Simca	12	CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			43BPK11 (9343333)	74
703 61 Dodge	16	CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			43BPK12 (9343333)	74
706 64 Dodge	26	CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			43BPK13 (9343333)	74
706 58TBD 65 (Sim. to		CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			43BPK14 (9343333)	74
Page 64) Dodge	26	CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			43BPK15 (9343333)	74
706 78TBD 67 Dodge ..	44	CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			43BPK16 (9343333)	74
819 53 Ply.	4	CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			43BPK17 (9343333)	74
820 53 Dodge	4	CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			43BPK18 (9343333)	74
821 Desoto	4	CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			43BPK19 (9343333)	74
824 53 Chry.	4	CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			43BPK20 (9343333)	74
828 54 Dodge	4	CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			43BPK21 (9343333)	74
829 Desoto	4	CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			43BPK22 (9343333)	74
830 54 Chry.	4	CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			43BPK23 (9343333)	74
831 (See 830)	4	CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			43BPK24 (9343333)	74
832 55 Ply.	5	CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			43BPK25 (9343333)	74
833 55 Dodge	5	CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			43BPK26 (9343333)	74
834 55 Desoto	5	CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			43BPK27 (9343333)	74
835 55 Chry.	5	CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			43BPK28 (9343333)	74
836 55 Ply.	5	CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			43BPK29 (9343333)	74
840 56 Ply.	6	CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			43BPK30 (9343333)	74
842/HR 56 Dodge	6	CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			43BPK31 (9343333)	74
843 56 Desoto	6	CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			43BPK32 (9343333)	74
844/HR 56 Chry.	6	CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			43BPK33 (9343333)	74
845 57 Dodge	8	CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			43BPK34 (9343333)	74
846 57 Desoto	8	CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			43BPK35 (9343333)	74
847 57 Chry.	8	CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			43BPK36 (9343333)	74
848 57 Ply.	8	CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			43BPK37 (9343333)	74
849 57 Ply.	8	CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			43BPK38 (9343333)	74
851 58 Chry.	8	CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			43BPK39 (9343333)	74
852 58 Dodge	8	CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			43BPK40 (9343333)	74
854 58 Ply.	9	CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			43BPK41 (9343333)	74
855 59 Ply.	11	CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			43BPK42 (9343333)	74
856 59 Dodge	10	CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			43BPK43 (9343333)	74
857 59 Desoto	10	CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			43BPK44 (9343333)	74
858 59 Chry.	10	CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			43BPK45 (9343333)	74
860 59 Ply.	12	CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			43BPK46 (9343333)	74
861 59 Chry.	12	CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			43BPK47 (9343333)	74
900 55 Dodge	5	CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			43BPK48 (9343333)	74
901 55 Desoto	5	CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			43BPK49 (9343333)	74
902 55 Chry.	5	CE70A 70 Chev.	77	OE65 65 Olds.	32	5F4RDX4	204			43BPK50 (9343333)	74
903 55 Chry.	5	CE70A 70 Chev.	77	OE65 65 Olds.							

PONTIAC (CONT.)	VOL.	PONTIAC (CONT.)	VOL.	PONTIAC (CONT.)	VOL.	RANGER (CONT.)	VOL.	RIVERSIDE (CONT.)	VOL.	RIVERSIDE (CONT.)	VOL.
42BFP2 (9340432)		92BFP1 (7307412)		7313522	217	RR-56T	141	FJB-6580A 61-62 F-85,		FLH-16558A 64 Dart	34
74 Pontiac	173	69 Pontiac	73	7313552	217	RR-59-FT-0	66	Special,Tempest	19	FLH-16598A	31
42BFPK1 (7939132)		69 Pontiac	73	7933241	217	RR-60-FMT	69	FJB-6581 60-62		FLH-16650A 65 Dodge	
74 Pontiac	172	(Similar to page 93)	64	7933401	217	RR-65-T0	150	Corvaire	19	Deluxe,Polaris,Monaco,	
42BFPK2 (9340442)		92BFP6 69 1/2 Tempest	73	9347702 (75)	215	RR-69TC	175	FJB-6583A 60-62Ford	19	880	35
74 Pontiac	173	(Similar to page 105)	73	9347740	221	RR-77T (Ch.100017-219)212		FJB-6584A 60-61		FLH-16651A 63/65	
42BPB1 (7939102)		69 Pontiac	72	9347980 75-76	220	RR-77M	161	FJB-6587	20	Econoline	35
42BPKB1 (7939112)		92BFP6 69 1/2 Pontiac	72	9348082 75	215	RR-86T	216	FJB-6591	20	FLH-16652A 64 Buick	
74 Pontiac	175	(Similar to page 89)	72			RR-93MPX	217	FJB-6592	16	Special	34
42BPT1 (7939152)		92BTA11/12 69 Beau-				RR-104C	178	FJB-6592	16	FLH-16653A 65 Olds	35
74 Pontiac	170	mont,Firebird,Pontiac,				RR-203MPX	151	FJB-6593	16	FLH-16654A 64 F-85	34
42FFM1 74 Pontiac		Tempest	67			RU-101-T	24	FJB-6604B 60-62		FLH-16658A 64/65	
(See page 81)	113	92FFM1, 92FFM2	67			TC-100M	23	Corvaire	19	Tempest	35
42FFP1,42FFPK1 74		69 Firebird	66			TC-100-M	32	FJB-6608A 61 Lancer	18	FLH-16662A 65	35
Pontiac (See page 89),120		92FFP1 (7307422) 69	66			TC-100-MD	32	FJB-6609	19	FLH-16663A 60/63 Chev	34
42FPB1 (7313522)		Firebird	69			TC-200PB	32	FJB-6609A	19	4 GMC Trucks	35
42FPBK1 (7313552)		92FFP2 69 Firebird	69			TC-200-PB	32	FJB-6611 60-61		FLH-16665A 64/65 Dodge	
74 Firebird	174	(Similar to page 93)	64			TC-300M 64 VW	23	Rambler	22	Truck	35
42GPB1 (9342222)		92FPB1 69 Beaumont,				TC-300M,MD 65 Prod.		FJB-6612 61-6612 62		61-16509C	33
42GPBK3 (9342532)		Firebird, Tempest	66			Similar to page 144	23	Chevrolet	18	61-16584A 63 Rambler	26
74 Gran Am, Grand Prix175		92GPM1, 92GPM2	66			TC-300M S-041	36	FJB-6612A 61-62 Chev.	19		
42GPBK5 74 Grand Prix		69 Grand Prix	66			TC-400PB 64 VW	23	FJB-6613A 60-61			
(See page 85)	175	92GPM3 Grand Prix 69	79			TC-400PB 65 Prod.		Falcon or Comet	18		
50HPBT1 75	220	73 914	181			Similar to page 144	23	FJB-6615A	27	OBSA 70	
51APB1 (7933641),		92GPM1 (7307432) 69	79			TP-803	74	FJB-6618A 61 Rambler	17	OBSAA 70 96	
51APBK1 (7935021)		Grand Prix	69			TRM-64M	23	FJB-6619A	21	OBSAB 70 97	
75 Aste	187	92GPM2 69 Grand Prix	69			TRT	52	FJB-6643A 60-62 Comet,		OBSA 70	
51BFM1, 51BFM2		(Similar to page 93)	64			VM-64PB 64 VW	23	Falcon	19	OBSAA 70 96	
(7314211) 75 Aste	191	92GPM6 69 1/2	64			51T (100007-253)	208	FJB-6649A Tractor	20	OBSAB 70 97	
51BFP1 (7936011),		Grand Prix	69			53T (Ch.100007-255)	213	FJB-6658	21	OBSA99 70 99	
51BFPK1 (7933301),		(Similar to page 63)	69			54T	208	FJB-6679A	10	Similar to page 115)	70
75 Aste	186	92GPB1 (7307532)	72			77T (Ch.100017-219)	212	FJB-6681A 58 Plym.	10	1BSA99 71 99	113
51XPM1 (7933261)		69 Grand Prix	72			86T	216	FJB-6682A 58	10	4BH 64	30
75 Ventura II	191	92GPM6 69 1/2	72			93MPX	217	FJB-6684 59 Ford	11	5BH 65 Saab	38
51XPMT1, 51XPMT2		Grand Prix	72					FJB-6685 59 Ford	11	6BSA 66	38
(7933281)75 Ventura		(Similar to page 89)	72					FJB-6688 59 Chev.	11	7BSAX	62
II	193	983578 62	17					FJB-6689A 59 Plym.	12	8BSA 68	70
51XFP1 (7933251)		983687 62	20					FJB-6690A 59 Buick	13	9BSA 69, 9BSAA 69 95-96,	
51XFPK1 (7933511)		983873 63	20					FJB-6691B Renault	12	9BSA99 69 99 (Similar	
75 Ventura II	189	983873A Similar to	20					Dauphine	12	to page 115)	70
51XPB1 (7933241)		page 105 63 Pontiac	24					FJB-6693B Renault	12	9FBSA 69 95-96	
75 Ventura II	186	983878 62	17					Dauphine	12	9FBSAB 69 97(Sonet II)	
51XPB2/BK2	217	983878 62	17					FJB-16590C	33	9FBSA99 69 99	110
51XPBT1 (7933501)		983878 63	21					FJB-16512A 64 VW	28	500127 (8BSA) 68	
75 Ventura II	186	983945 63	21					FJB-16513A 64 VW	28	(Similar to page 115)	70
51XPBT1, 51XPBT2		984065 64 Tempest	24					FJB-16520A 63	23		
(7933271) 75		984076 64	23					Chrysler	28		
Ventura II	193	984077 64 Pontiac	24					FJB-16521A 63 Chev.	23		
52AFM1 (9340452)		984078 64 Pontiac	24					FJB-16522A 63 Dodge	23		
75 Grand Prix,LeMans	190	986823 67 1/2	46					FJB-16523A 63 Ford	23		
52AFMT1, 52AFMT2		986824 67 1/2	46					FJB-16524A 63 Merc.	23		
(7935102) 75 Grand		Firebird	47					FJB-16525A 63 Olds	23		
Prix, LeMans	187	984817 53-54	4					FJB-16526A 63 Plym.	23		
52AFMT3 (75)	215	984961 55	5					Pontiac	23		
52AFP1 (9340432)		985858 56 See 984961	5					FJB-16527A 63	23		
52AFPK1 (9340442)		985659 56	6					FJB-16563A	32		
75 Grand Prix, LeMans 189		988671 57	7					FJB-16566A	20		
52APB1 (7935002)		988672 57	7					FJB-16567A	21		
52APBK1 (9347172)		988822 58	8					FJB-16569A	28		
75 LeMans	193	988823 58	8					FJB-16574A 63 Buick	23		
52APBT1, 52APBT2		988825 58	8					FJB-16576A 63			
(7935092) 75 Grand		988876 58	8					Corvaire	23		
Prix, LeMans	192	988977 59	11					FJB-16577A 63 Dart	22		
52APBT3 75	213	988978 59	11					880			
52BPM1 (9343502)		989614 60	12					FLH-16579A 63 Falcon	23		
75 Pontiac	186	989615 60	13					FJB-16580A 63 F-85	23		
52BPMT1, 52BPMT2		989692 61	14					FJB-16581A 63 Merc.	23		
(7939162) 75 Grand		989693 61	15					FJB-16582A 62-63	23		
Prix, LeMans	187	989792 61 Tempest	15					Plymouth	23		
52BPMT3 (75)	215	989831 61 Tempest	15					FJB-16583A 63Tempest	23		
52BFP1 (9343482)		7284742	22					FJB-16584A 63Rambler	26		
52BFPK1 (9343492)		7284742A 66 Pontiac	36					FJB-16585A 63 Chev.	23		
75 Pontiac	189	7289752 65 Pontiac	29					FJB-16586A 63Corvaire	23		
52BPB1 (7939102)		7289772 65 Pontiac	29					FJB-16587A 63 Falcon	23		
52BPKB1 (7939112)		7291562 65 Tempest	30					FJB-16588A 63 Ford	23		
75 LeMans	193	7291582 65 Tempest	29					FJB-16589A	23		
52BPT1, 52BPT2		7292112 65 Tempest	29					FLH-16607A	32		
(7939152) 75 Pontiac	192	7293472 66 Tempest	38					FLH-16518A 64-65 Chev.			
52BPTB3 75	213	7293472 66 Pontiac	36					8 GMC Truck	35		
52FPM1 (7313542)		7293502 66 Tempest	38					FLH-16519A 60-64 Dodge	34		
75 Firebird	191	7293512 66 Pontiac	35					880			
52FPB1 (7313522),		7294322 66 Pontiac	36					FLH-16529A 65 Chev.	35		
75 Firebird	186	7294322 66 Pontiac	37					FLH-16530A 60-64	35		
52FPB2/BK2	217	7294342 66 Pontiac	38					Corvaire	19		
52FPK1 (7313552)		7298802 67 Tempest	41					FLH-16531A 65Corvaire	35		
75 Firebird	186	7298812 67 Tempest	42					FLH-16533A 62-65			
52FPB2/BK2	217	7298822 67 Pontiac	43					Chevy II	32		
52FPK1 (7313552)		7298822 68 Pontiac	49					FLH-16534A 64	34		
75 Firebird	186	7298832 67 Pontiac	42					Chevelle	34		
52FPB2/BK2	217	Pontiac	73					FLH-16535A 65			
52FPK1 (7313552)		7298842 68 Prod. 68						Chevelle	35		
75 Firebird	186	7298842 68 Prod. 68						FLH-16536A 63-64			
52GPM1 (9342522)		7298842 67 Pontiac	45					Galaxie	34		
52GPKB1 (9347162)		7298842 67 Pontiac	45					FLH-16573A 65Galaxie	35		
85 Gran Am,Grand Prix.193		7302322 67 1/2	45					FLH-16538A 64			
60HPM1 76 (Pg.57)	191	Firebird	47					FLH-16539A 65			
60HPMT2 76	221	(See page 107)	47					FLH-16540A 65			
60HPM1/PK1 76 (Pg.27),186		7302352 68 Tempest	50					FLH-16541A 64/65			
60HPB1/BK1 76 (Pg.65),187		7302762 68 Tempest	49					Falcon, 64 Comet	35		
60HPBT1/T2 76	220	7303262 68 Tempest	50					FJB-16543A 65 Comet	35		
60XPM1 76 (Pg.85)	191	7303302 68 Pontiac	49					FLH-16544A 63/64Merc.	34		
60XPM1/PK1 76 (Pg.85),189		7303302A 68 Pontiac	73					FLH-16545A 65Merc.	35		
60XPM1/BK1 76 (Pg.87),186		7303362 68 Pontiac	50					FLH-16546A 63/64			
62AFM1 76 (Pg.103)	190	7304342 (984888)	68 Pontiac					Ambassador,Classic	34		
62AFB1/BK1 76 (Pg.107)193		68 Pontiac	57					FLH-16547A 65			
62BFM1 76 (Pg.103)	190</										

SIMCA (CONT.)	VOL.	STROMBERG CARLSON (CONT.)	VOL.	TENNA (CONT.)	VOL.	TENNA (CONT.)	VOL.	TOYOTA (CONT.)	VOL.	TRUETONE (CONT.)	VOL.
7BSI X 1969 Simca	59	FO-61-PB 61 Ford &		CII-64PB 62/64		OL-65PB 65 Olds	34	CR-652BTR		DC4206B	18
8BSI 69	66	Mercury	17	Chey II	23	OL-66PB 66 Olds	37	(86011-20200) Corona	180	DC4208	23
9BSI 69, 9BSIA 69 1118		IM-60-M	15	CII-65M 65 Chevy II	35	OL-67PB 67 Olds	46	CR-652FUT		DC4603	39
9BSIB 69 1204 (Similar to page 115)	66	IM-60-MX	17	CII-65PB 65 Chevy II	35	OP-67PB 67 Opel	44	(00852-20250) Corona	180	DC4606	39
		IM-61-PB	17	CII-66PB 66 Chevy II	37	PD-65PB 65 Fury	34	CR-652T		DC5554	183
		LA-61-PB 61 Lark	17	CII-67PB 66/67 Chevy II	46	PD-66PB 66 Fury	36	(86120-20150) Corona	180	DC5560	184
SOMY		LR-61-PB 61 Lancer	18	Chey II	46	PD-67PB 67 Fury	46	CR-753FUTA (00852-20270)		DC5564	185
TC-25F	201	OF-61-PB 61 F-85	17	CA-67PB 67 Camaro	46	PL-63PB 63 Plymouth	26	CR-753.TA(86120-20190)		DF8470	62
TC-26F	221	OL-61-PB 61 Olds	17	CG-67PB 67 Cougar	46	PL-64PB 64 Plymouth	23	CR-754FUTA		ID14DC7908A-86	99
TC-30 (Pg.89)	164	PL-60-M 60 Plym.	14	CH-63M/PB 63 Chev.	26	PL-65PB 65 Plymouth	34	(00852-20280)	208	ID17002A-17	132
TC-30A	164	PL-61-M 61 Plym.	18	CH-64M See page 136		PL-66PB 66 Plymouth	36	CR-755.T	214	ID17002A-27	134
		PO-61-PB 61 Pontiac	18	63/64 Chevrolet	23	PL-67PB 66/67 Plym.	46	CX-175FUT/T	214	ID17002A-27	134
		RA-61-PB 61 Rambler	17	CH-64PB/RS 63/64Chev.	23	PO-63PB 63 Pontiac	26	CX-176FUT/T	214	ID17015A-27	132
SOUNDEX		VA-60-M 60 Valiant	14	CH-65M 65 Chevy	34	PO-64PB 63/64 Pontiac	23	CX-361FUT(86021-20030)	208	ID17105A-27	134
		VA-61-PB 61 Valiant	18	CH-65PB 65 Chev.	34	PO-65PB 65 Pontiac	35	CX-361.T(86260-20020)	208	(4DC7105)	134
				CH-66M/PB 66 Chev.	37	PO-65PB/A 65 Pontiac	35	CX-362FUT		ID17105A-27	136
CEP-764T 64 Chevelle	26			CH-67PB 67 Chev.	46	W/Air Conditioning	35	(86021-20040) Sedan	180	ID17400A-47	179
CHP-164T 64 Chev.	26	STUDEBAKER		CHT-63M 63 ChevTruck	26	RA-64PB 64 Rambler	23	CX-362T		ID17406A-47	179
CHP-165T 65 Chev.	26			CHT-64M See page 136		RA-65PB 65 Rambler	32	(86260-20030) Corona	180	ID17418	183
CHP-166T 66 Chev.	40	AC-2300 S-5327 53	4	64 Chev. Truck	23	RA-66PB 66 Rambler	32	CR-363FUT		ID17500A-57	183
CHP-654T 64 ChevyII	26	AC-2686 S-5528 55	See	CHT-65M 65 ChevTruck	35	RA-67PB 67 Rambler	37	(86021-21030) Van	180	ID17606A-57	217
COM-60 60 Corvair	16	Model AC-2300	4	CHT-65PB 65 Chevrolet	35	RA-68PB 68 Rambler	37	SS-90 Series Ten		ID17908A-86	99
COP-60 60 Corvair	16	AC-2687 S-5524 55	See	Truck	37	RA-69PB 69 Rambler	46	SS-90A	41	ITC4850A-86 (DC4850)	48
COP-006T 66 Corvair	40	Model AC-2301	4	CHT-66M/PB 66 Chevrolet	37	RA-70PB 70 Rambler	46	TO-71-FM	135	ITC4851A-86 (DC4851)	48
CTP-264T 64 Comet	26	AC-2721 S-5529 55	See	CHT-67M, PB 67 Chev.	46	RU-101T	24	TO-71-MPX		ITC4852A-86 (DC4852)	53
CTP-266T 66 Comet	39	Model AC-2300	4	Truck	46	RU-111TC S-004	40	73 Corolla, Corona	156	ITC4860A-86 (DC4860)	56
CTR-166T 66		AC-2745 56	6	CL-64PB 64 Chevrolet	23	RU-112TC S-014	40	TO-71-PB Corolla/4	135	ITC4900A-07	
Chrysler Truck	40	AC-2746 56	6	CL-65PB 65 Chevelle	35	RU-113TC S-018	40	(4DC7004)		ITC7000A-07	111
CYP-465T 65 Chrysler	32	AC-2747 56	6	CL-66PB 66 Chevelle	37	RU-114TC S-016	39	0860B-20010 Corona	41	ITC7000A-07	111
CYP-466T 66 Chrysler	39	AC-2748 56	6	CL-67PB 66/67 Chev	37	RU-115TC S-010	39	0860C-30010 Crown	41	ITC7000A-07(8S08)	77
CYP-565T 65 Chrysler	39	AC-2905 58	9	Chevelle	46	RU-116TC S-012	39	0860D-35010 Stout	41	ITC7010A-07	
DAP-864T 64 Dart	26	AC-2906 58	8	CM-63PB 63 Comet	26	SA-65M 65 Simca	39	0860E-60010		(4DC7010)	99
DAP-865T 65 Dart	32	AC-2907 58	8	CM-64PB 64 Comet	23	SA-65PB 65 Simca	39	Landcruiser	41	ITC7400A-86 4DC7804	59
DAP-866T 66 Dart	32	AC-2977 60	12	CM-65PB 65 Comet	31	SP-63PB 63 Buick Spl.	26	08690-00010		ITC7908A-96	
DOP-864T 64 Dodge	26	AC-2978 60	13	CM-66PB 66 Comet	36	SP-66PB 66 Buick Spl.	37	(CSL1102/TMG)	57	(4DC7908)	99
DOP-865T 65 Dodge	32	AC-3084 61	15	CM-67PB 67 Comet, 202,		SP-67PB 66/67 Buick	37	81120-22080		ITC7910A-86 (4DC7910)	99
DOPP-465T 65 Polara	39	AC-3085 61	17	Capri	46	Special	46	81120-22080		ME4051A-47	167
DOPP-466T 65 Polara	39	AC-3086 61	17	CO-63M/PB 60/63	26	TC-FMC-8	69	Corona Mark II	150	ME4053A-47	159
DPO-866T 66 Dodge	39	AC-3087 61	15	Corvair	26	TC-MPX-1	63	86011-22110	214	ME4060A-47	160
DAP-264T 64 Falcon	26	AC-3216 62	17	CO-64PB 60/64 Corvair	23	TC-MXC-8-0	69	86011-23020	214	ME4060A-47	160
FAP-266T 66 Falcon	39	AC-3217 62	18	CO-65PB 65 Corvair	34	TC-48-T	50	86021-22050	214	ME4060A-47	160
FLP-264T 64 Fairlane	26	AC-3246 62	18	CO-66PB 66 Corvair	37	TC-48-T-FM	63	86021-22091	214	ME4060A-47	160
POP-264T 64 Ford	26	AC-3247 62	17	CO-67PB 66/67 Corvair	46	TC-65T	182	86120-20200		ME4060A-47	160
POP-265T 65 Ford	32	AC-3255 62	18	CR-63PB 63 Chrysler	26	TC-70-T	107	(CR-127FT) Carina	114	ME4060A-47	160
POP-266T 66 Ford	39	AC-3256 62	18	CR-64PB 63/64 Chev	26	TC-73-T	107	86120-20110		ME4060A-47	160
MEP-264T 63/64 Merc.	26	AC-3351 63	19	Chrysler	23	TC-80-T	116	(CR-528FT) Corona	117	ME4060A-47	160
MEP-265T 65 Merc.	32	AC-3353 63	19	CR-65PB 65 Chrysler	34	TC-81-T	116	86120-22010		ME4060A-47	160
MEP-266T 66 Merc.	39	AC-3354 63	19	CR-66PB 66 Chrysler	36	TC-82-T	111	86120-22010		ME4060A-47	160
MUP-266T 66 Mustang	39	AC-3377 63	21	CR-67PB 67 Chrysler	46	TC-104C	178	86120-22050		ME4060A-47	160
PLP-464T 64 Plym.	26	AC-3423 SR2T	22	DA-64PB 64 Dart	23	TC-100M	23	86120-22050		ME4060A-47	160
PLP-465T 65 Plym.	32	AC-3473 64Studebaker	24	DA-65PB 65 Dart	34	TC-104C	178	(CR-201FUT/FCT)	146	ME4060A-47	160
PLP-466T 66 Plym.	39	AC-3474 64 Hawk	24	DA-66PB 66 Dart	36	TC-110M	32	86120-22110	214	ME4060A-47	160
PLPF-466T 66 Fury	39	AC-3498 64Studebaker	24	DA-67PB 67 Dart	46	TC-110MD	32	86260-14010		ME4060B-17(4DC4060B)	103
POP-666T 66 Pontiac	40	AC-3499 64 Hawk	24	DAX-67PB 67 Dart 270.	46	TC-112CM	184	86260-20011		ME4060A-47	160
RAAP-1065T 65		AC-3500 64 Avanti	24	DD-65PB 65 Dodge	34	TC-200PB	23	(CX-165FTB) Carina	114	ME4060A-47	160
Rambler American	32	AC-3506 64 Avanti	24	DD-66PB 66 Polara,		TC-210PB	32	86260-20011		ME4060A-47	160
RAP-364T	27	AC-3556 66Studebaker	36	Monaco	36	TC-300M 64 VW	23	86260-22010		ME4060A-47	160
RAP-365T 65 Rambler	32			DO-67PB 67 Monaco,		TC-300M S-041 65 Prod.	36	86260-22021		ME4060A-47	160
RAP-366T	39	SUNBEAM		Palara	46	TC-300M S-072	36	(CX-171FUT) Corona	114	ME4060A-47	160
SM-130RPE	27			Palara	46	TC-310M/MD	35	Corona Mark II	146	ME4060A-47	160
SM-059 59 Lark	16	R-80001 (8BSU) 68		DE-66PB 66 Dodge	36	TC-400PB 64 VW	23	86260-22020	214	ME4060A-47	160
SP-059 59 Lark	16	(Similar to page 115)	65	DO-67PB 67 Dodge	28	TC-400PB S-045 65	36	86260-22021	214	ME4060A-47	160
UP-220RPT	27	7BSU 67 Sunbeam	46	DO-68PB 68 Dodge	36	Prod.	36	TRUIMPH		ME4060A-47	160
UP-220RPT	27	8BSU 66 Sunbeam	58	DO-69PB 69 Dodge	34	TC-101PB Similar to	36	86120-22010		ME4060A-47	160
VAP-464T 64 Valiant	26	8BSU 66	65	DO-70PB 66/67 Dodge	46	TC-102PB	36	86120-22010		ME4060A-47	160
VAP-465T 65 Valiant	32	9BSU 69, 9BSUB 69	65	DS-67M 67 Sportsman,		TC-103PB	36	86120-22010		ME4060A-47	160
VAP-466T 66 Valiant	39	Alpine, Arrow (Similar to page 115)	65	DT-65M 65 DodgeTruck	34	TC-104C	178	86120-22010		ME4060A-47	160
VMP-19T	27	TEMPEST (See Pontiac)		DT-67M 67 DodgeTruck	46	TC-110M	32	86120-22010		ME4060A-47	160
VMP-19T 65 Prod.	33	TEN		EC-65M 65 Econoline	35	TC-112CM	184	86260-14010		ME4060A-47	160
VMP-19T 66 Prod.	33			EC-66M 66 Econoline	35	TC-200PB	23	(CX-165FTB) Carina	114	ME4060A-47	160
4TBTR V-350 64		AT-96-1 AR-96EX	49	EC-67M 67 Econoline	46	TC-310PB	35	86260-20011		ME4060A-47	160
Triumph	26	AT-96-2 AR-96EX-S	49	FALCON	36	TC-310PB/MD	35	86260-20011		ME4060A-47	160
		AT-96-3 AR-96VM	49	FA-64M/PB 64 Falcon	23	TC-310PB	35	86260-20011		ME4060A-47	160
		AT-96-4 AR-96VM-S	49	FA-65PB 65 Falcon	35	TC-400PB S-045 65	36	86260-20011		ME4060A-47	160
		AT-2010, AT-2110	52	FA-66PB 66 Falcon	36	Prod.	36	86260-20011		ME4060A-47	160
		FA-205/EX, FT-250-2,		FA-67PB 67 Falcon	36	TC-110PB	32	86260-20011		ME4060A-47	160
		13, 12	57	FA-68PB 68 Falcon	36	TC-112CM	184	86260-20011		ME4060A-47	160
		618VM/6 Volt	49	FA-69PB 69 Falcon	46	TC-110MD	32	86260-20011		ME4060A-47	160
		618V12 Volt	49	FA-70PB 67 Falcon	46	TC-112CM	184	86260-20011		ME4060A-47	160
				FA-63M/PB 62/63	26	TC-200PB	23	86260-20011		ME4060A-47	160
		TENATRONICS		Fairlane	26	TC-310PB	35	86260-20011		ME4060A-47	160
		SA-712	40	FL-64PB 64 Fairlane	23	TC-310PB	35	86260-20011		ME4060A-47	160
		SA-822	36	FL-65PB 65 Fairlane	23	TC-310PB	35	86260-20011		ME4060A-47	160
		SM-711	22	S00	35	TC-310PB	35	86260-20011		ME4060A-47	160
		SM-711 Revised	40	FL-66PB 66 Fairlane	36	TC-310PB	35	86260-20011		ME4060A-47	160
		SM-751	22	FL-67PB 67 Fairlane	46	TC-310PB	35	86260-20011		ME4060A-47	160
		SM-751 Revised	40	FO-63M/PB 63 Ford	26	TC-310PB	35	86260-20011		ME4060A-47	160
		SM-82									

VOLKSWAGEN (CONT.)	VOL.	VOLKSWAGEN (CONT.)	VOL.	VOLKSWAGEN (CONT.)	VOL.	VOLKSWAGEN (CONT.)	VOL.	VOLVO (CONT.)	VOL.	WARDS RIVERSIDE	VOL.
1BG 61	16	1VM3401 74 Custom		4TMVG 64 Karmann Ghia		6FBVT 66 Transporter	40	1VV2032, 1VV2908		(CONT.)	
1BT 61 Transporter	16	Beetle, Dasher, Karmann		Serial #50001 and		6FBVW 66 Sedan	40	(279971) 70 140		FMV-16631A	58
1BV 61 Sedan	16	Ghia, Super Beetle,		Higher	29	6FBV3 Type 3	40	Series	120	FMV-16639A	61
1VM10 (Sapphire XI)		Sedan 412, Transporter, 193		4TMVT 64 Transporter	26	6TMVG 66 Karmann		2BAMVO 72 Volvo	129	ZCX-16730A (61-16730)	91
Fastback, Squareback,		1VM4112 (Sapphire XVII)		4TMVT 64 Transporter		Ghia	39	2BFMVO 72 Volvo	135	ZCX-16732A, 26 #16732B	95
Karmann Ghia, Sedan,		71 All Models	124	Serial #50,001		6TMVT 66 Transporter	39	2VY2016 (279959)		ZCX-16753A/B/C/D	
Transporter 70	80	1VM4309 (Sapphire XXI)		and Higher	29	6TMVW 66 Sedan	39	70 140 Series	120	(61-16753)	116
1VM20 70		73 Karmann Ghia,		4TMVW 64 Sedan	26	7BVG 67 Karmann Ghia	46	3BFMVO 73 Volvo	135		
All Models	84	Volkswagen	179	75 Custom Serial		7BVT 67 Transporter	46	3BN 63	20		
1VM116 (Sapphire XV)		1VM4412, 5VM4412		#50,001 and Higher	29	7BVM 67 Sedan	46	4TBN 279958/959/960/			
Sedan, Sedan 411,		74 Custom Beetle,		5BVV	27	7BV3 67 Type 3	46	961 64 Volvo	33		
Transporter	120	Sedan 412, Super Beetle,		5FMBG 65 Karmann Ghia	30	7BVGX 67 Karmann		5BN 279958 65	44		
1VM118 (Sapphire XV)		Super Beetle, Trans-		5FMBT 65 VW		Ghia	44	6BVO 66 Volvo	39		
71 Fastback, Square-		porter, 412	191	Transporter	30	7BVT 67 Transporter	44	7BVO Similar to page			
back	118	75 Custom Beetle,		5FMVW 65 VW Sedan	30	7BVKW 67 Sedan	44	146	39		
1VM1327 (Sapphire XVIII)		Dasher, Karmann Ghia,		5VM1327 (Sapphire XVIII)		7BVK3 67 Type 3	44	7BVOX 67 Volvo (EP)	54		
73 Custom Beetle, Super		Super Beetle, Trans-		73 Custom Beetle, Super		7FBVX (G) Karmann		7BVOX 68	50		
Beetle, Fastback,		porter, 412	191	Beetle, Fastback,		7FBVG 67 Karmann		9BVO 69, 9BVOX 69	67		
Squareback, Karmann		ZBK	102	Squareback, Karmann		Ghia	43	9BVOV 69 Coupe 140,			
Ghia, Sedan 411,		2BT 62 Transporter	102	Ghia, Sedan 411,		7FBVT 67 Transporter	43	Model 144 (Similar to			
Transporter	155	2BV 62 Sedan	102	Transporter	155	7FBVW 67 Sedan	43	page 109)	67		
1VM1419 (Sapphire		2FMVG 62 Karmann		5VM1419 (Sapphire		7FBV3 67 1600, Type 3	43	279958 (8BVO) 68			
XVIII) 74 Custom		Ghia	22	XVIII) 74 Custom		7FBVX (G) Karmann,		Coupe (Similar to			
Beetle, Dasher, Karmann		2FMBT 62 Transporter	22	Beetle, Dasher,		Ghia	49	page 109)	67		
Ghia, Super Beetle,		2FMVW 62 Sedan	22	Karmann Ghia, Super		7FBVX(T) Transporter	49	279956 (8BVO) 68			
Sedan 412, Transporter,		2VM1003 (Canadian)		Beetle, Sedan 412,		7FBVX(M) Sedan	49	Universal (Similar to			
181 Thing	192	Fastback, Squareback,		Transporter, 181		7FBVX(S) 1600 Type 3	49	page 109)	67		
1VM2109 (Sapphire XIV)		Karmann Ghia, Sedan,		Thing	192	7SMVF 67 Fastback		279958 (8BVO) 68			
71 Sedan, Sedan 411,		Transporter 70	80	2VM1116 (Sapphire XXV)		and Squareback	46	Coupe (Similar to			
Transporter,		2VM1116 (Sapphire XV)		73 All Models	181	7SNVG 67 Karmann		page 109)	67		
Karmann Ghia	130	71 Fastback, Karmann		5VN2427		Ghia	46	279959 (8BVO Similar			
1VM2111 (Sapphire XIV)		Ghia, Sedan, Sedan 411,		Custom Beetle, Dasher,		7SMVT 67 Transporter	46	to page 109)	67		
71 Fastback,		Squareback,		Karmann Ghia, Sedan		7SMVW 67 Sedan	46	279961 (8BVO) 68			
Squareback	130	Transporter	118	412, Super Beetle,		8BVG 68 Karmann Ghia	58	7BVOX 67 Volvo (EP)	54		
1VM2114 (Sapphire XVI)		2VM1327 (Sapphire XVIII)		Transporter, 181		8BVT 68 Type 2	58	9BVOV 69 Coupe 140,			
71 Karmann Ghia,		73 Custom Beetle, Super		Thing	199	8BVM 68 Sedan	58	Model 144 (Similar to			
Sedan, Sedan 411,		Beetle, Fastback,		5VM3401 74 Custom		8BV3 68 Type 3	58	page 109)	67		
Transporter	156	Squareback, Karmann		Beetle, Dasher, Karmann		8SMVF 68 Fastback,		279956 (8BVO) 68			
1VM2116 (Sapphire XVI)		Ghia, Sedan 411,		Ghia, Super Beetle,		Squareback	61	Universal (Similar to			
71 Fastback, Square-		Transporter	155	Sedan 412,		8SMVW 68 Karmann Ghia	61	page 109)	67		
back	156	2VM2109 (Sapphire XIV)		Transporter	193	8SMVT 68 Transporter	61	279961 (8BVO) 68			
1VM2219 (Sapphire XIX)		72T Transporter,		5VM4309 (Sapphire XXI)		Squareback	61	7BVOX 67 Volvo	50		
72 Karmann Ghia,		Squareback	130	73 Karmann Ghia,		9SMVG/-6 69 Karmann		TR-241	27		
All Volkswagens	157	3TBV 63 Sedan	20	Volkswagen	179	Ghia,		S-4 (Similar to page			
1VM2323 (Sapphire XIV)		3TBVG	20	5VM4419 (Sapphire XXI)		8SMVF 68 Fastback,		112)	59		
73 Custom Beetle, Super		3TBVT 63 Transporter	20	75 Custom Beetle,		Squareback					
Beetle, Fastback,		3VM1116 (Sapphire XV)		Dasher, Karmann Ghia,		9SMVW/-6 69 Transporter					
Squareback, Karmann		71 Sedan	118	Super Beetle, Trans-		9SMVT/-6 69 Sedan	64				
Ghia, Sedan 411,		4FMVG 64 Karmann		porter, 412	191						
Transporter	154	Ghia	27	6BVG 66 Karmann							
1VM2335 (Sapphire XXV)		4FMBT 64 Transporter	27	Ghia	37						
73 All Models	181	4FMVW 64 Sedan	27	6BVT 66 Transporter	37						
1VM2427		4TBV 64 Sedan	27	6BVW 66 Sedan	37						
Custom Beetle, Dasher,		4TBVG 64 Karmann		6BV3 66 Type 3							
Karmann Ghia, Sedan 412,		Ghia	27	Vehicles	37						
Super Beetle,		4TBVT 64 Transporter	27	6FBVG 66 Karmann							
Transporter, 181 Thing		4TMVG 64 Karmann Ghia	26	Ghia	40						
74	199										

PHOTOFACT® SPECIALIZED SERIES

AUTO RADIO SERIES

Complete and up-to-date PHOTOFACT® coverage of Auto Radios and Tape Players. Regular price \$3.50 per volume—only **\$3.20** when purchased on a Standing Order Subscription! Sign up and save 30¢ per volume.



CB RADIO SERIES

Five to six volumes issued yearly provides complete PHOTOFACT® coverage of all popular CB Radio models. Regular price \$3.95 per volume—only **\$3.65** when purchased on a Standing Order Subscription! Sign up and save 30¢ per volume.



TAPE RECORDER SERIES

Complete PHOTOFACT® coverage of all important late-model Tape Recorders in easy-to-use volumes. Regular price **\$5.25** per volume—only **\$4.95** when purchased on a Standing Order Subscription! Sign up and save 30¢ per volume.



\$3.50
\$4.40 IN CANADA
AR-222
006757



HOWARD W. SAMS & CO., INC.

PHOTOFACT® SPECIALIZED SERIES

are available from your local parts distributor