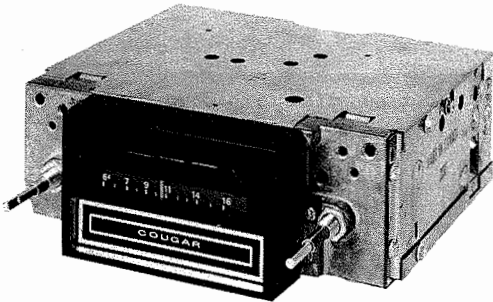




PHOTOFACT[®] with CIRCUITRACE[®]

For Supplier Address See PHOTOFACT Index
NOTE: Manufacturer Part Numbers Shown Are MOTOROLA



MODELS 1MY4106, 2MY4106 (2MR6) (D1MA-19A242AD)
(71 Mercury)
2CR4107 (2CR7) (D1WA-19A242AD)
(71 Cougar)
2MR4111 (2MR1) (D1YA-19A242AD)
(71 Meteor)

OPERATING INSTRUCTIONS

Insert cartridge until it locks and turns unit on.

Set operating controls as desired.

Press program selector to play desired tracks, or allow unit to select tracks automatically.

Remove cartridge to turn unit off.

CLEANING

Clean all tape contact surfaces with a soft, lint-free material and head cleaner or methyl alcohol. Use alcohol to remove oil and grease from all driving surfaces.

CAUTION: Avoid getting head cleaner on any plastic surface.

LUBRICATING

Lubricate bearings and bushings lightly with #20 machine oil. Use a light film of non-hardening grease on cam surfaces.

HEAD DEMAGNETIZING

Demagnetize head when unit is serviced. Avoid using magnetic materials near head.

MERCURY MODELS 1MY(2MY)/4106, 2CR4107, 2MR4111

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

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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 (S2) dirty. Cam (3) binding or worn. Pawls (4) and (5) worn. Arms (7) and (8) 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. Speed regulator circuit defective. Spring (26) weak or missing. Spring (30) weak or missing. Lever (28) binding.
Tape is pulled from cartridge.	Cartridge defective. Capstan dirty or scored.

ADJUSTMENTS

ADJUST	REMARKS
Head Height	Play a test cartridge, follow instructions with cartridge, and adjust B1 for proper response.
Head Azimuth	Connect an AC VTVM across right output. Play a test cartridge and adjust B2 for maximum.
Indexing Solenoid	Press program selector to continuously cycle indexing mechanism, turn Screw B4 clockwise until cycling stops, and then turn screw counter-clockwise 1/4 turn past restart of cycling.

MECHANICAL PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
1*	42-42683B01*	Drive Belt*	17	43-41989B02	Delrin Spacer
2	49-43510B01	Flywheel and Capstan Shaft	18	47-42174B01	Cam Shaft
3	45-40428B11	Ratchet Cam	19	41-40444B01	Azimuth Adjust Spring
4	55-40606B01	Pull Ratchet Pawl (Stamped "B")	20	3-41697B01	Azimuth Screw
5	55-40605B01	Push Ratchet Pawl (Stamped "A")	21	46-40299B01	Solenoid Stop
6	41-40681B01	Pawl Tension Spring	22	43-43593B01	Cartridge Retainer Spacer
7	45-41231B02	Left Radius Arm (2 used)	23	5-40336C01	Motor Support
	(1)		24	1-40400C57	Ejector and Bracket Assembly
8	45-41230B01(1)	Right Radius Arm (2 used)		(3)	
9	42-41229B01(1)	Spring Clip	25	45-41364B01	Switch Acuator Arm
10	15-40059A78	Capstan Housing Assembly	26	41-40805B01	Tape Drive Assist Spring
	(2)		27	45-41777B03	Ejector Arm
11	1-42902B83	Head Retainer		(4)	
	(1)		28	(4)	Ejector Lever
12	41-40540B03	Head Tension Spring	29	49-41549B01	Cartridge Roller
	(1)			(4)	
13	41-40445B02	Plunger Spring	30	41-42279B01	Ejector Lever Spring
14	47-40298B01	Solenoid Plunger		(4)	
15	4-40409B01	Thrust Washer (2 used)	31	4-40104A14	Spring
16	43-40411B02	Thrust Bearing	32	41-41251B02	Cam Tension Spring

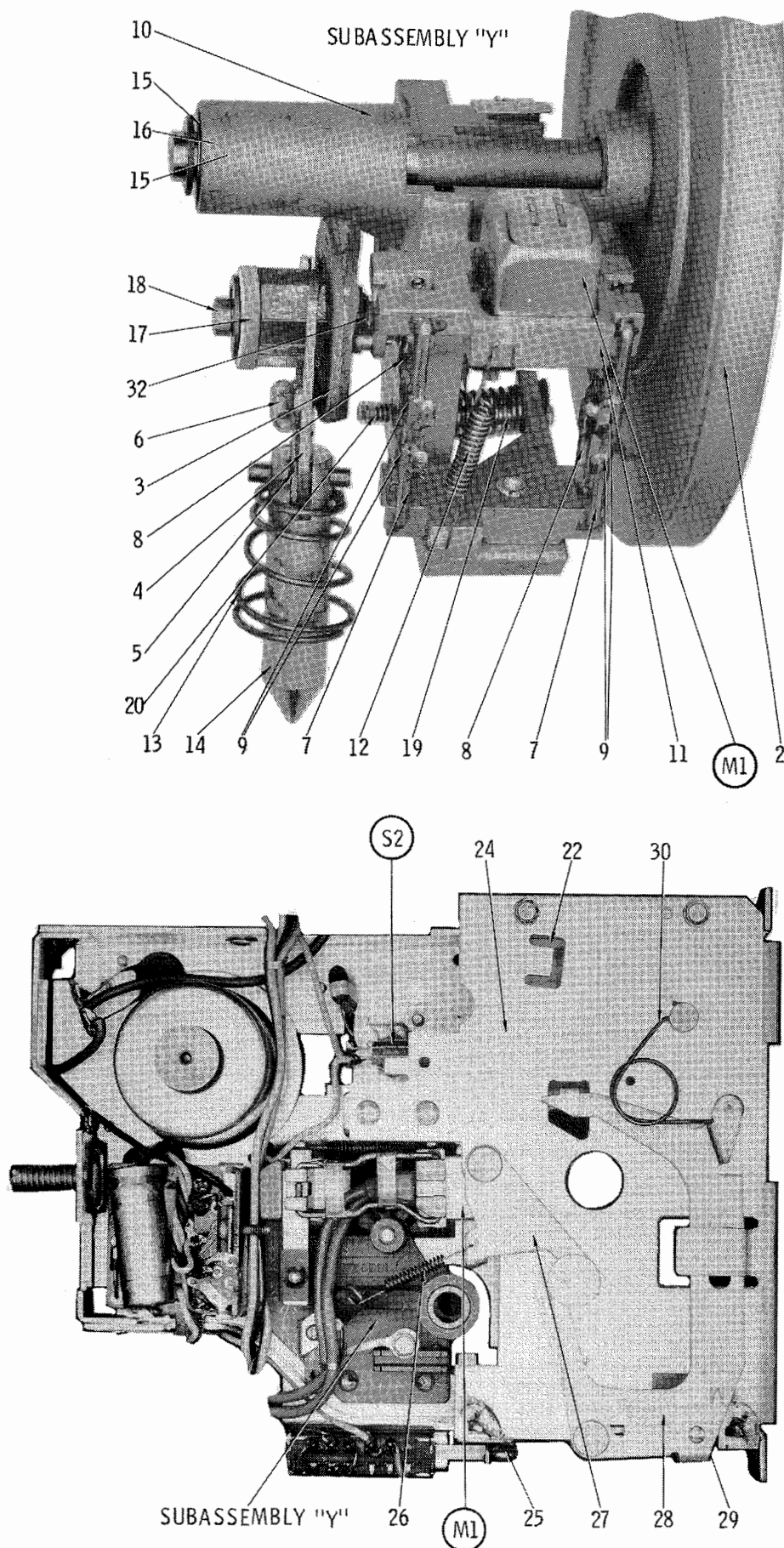
* Drive Belt - WALSCO Replacement Number 1424-06.

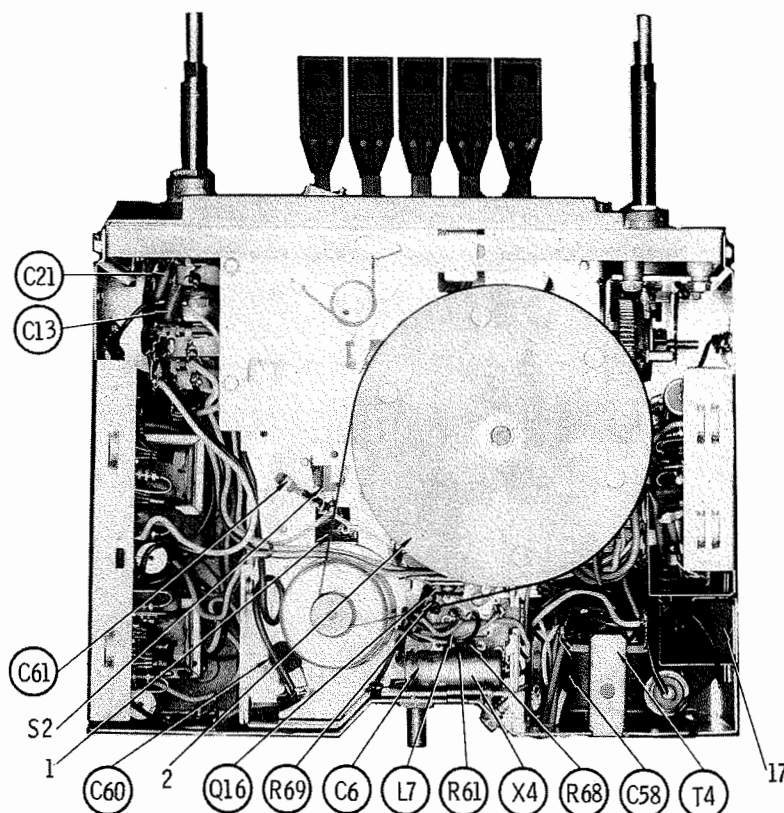
(1) Part of Assembly (10).

(2) Includes Ref. Nos. (7), (8), (9), (11), and (12).

(3) Includes Ref. Nos. (27), (28), (29), and (30).

(4) Part of Assembly (24).





ALIGNMENT INSTRUCTIONS

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

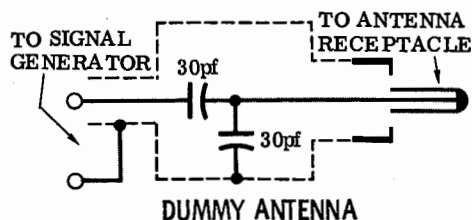
GENERAL CEMENT:
A1 thru A4 #9296, 9297, 9300
A5, A6, A7 #8290, 8868, 9087

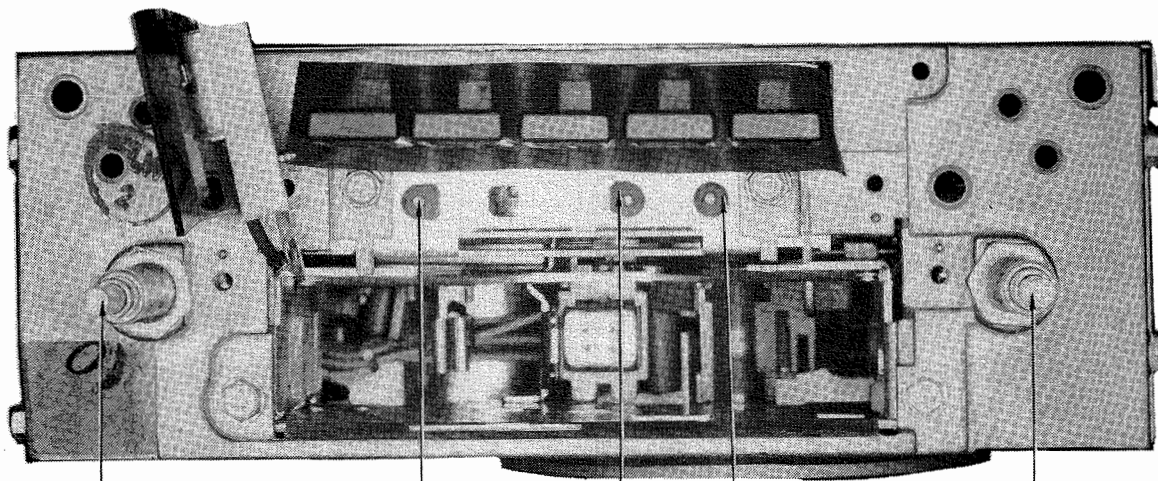
PUSH-BUTTON ADJUSTMENT

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

	GENERATOR COUPLING	GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1.	High side thru .1mfd to point Δ , low side to ground.	262KC 400 cycle modulation	High freq. end stop.	Output meter across voice coil.	A1,A2, A3,A4	Adjust for maximum.
2.	Thru dummy antenna to antenna input.	1615KC	"	"	A5,A6, A7	"
Step 3 is not necessary unless tuner or associated components have been disturbed. If necessary, back tuning cores (A8,A9,A10) out of coils but not out of forms. Repeat Step 2.						
3.	Thru dummy antenna to antenna input.	1000KC	Tune to signal	Output meter across voice coil	A8,A9, A10	Adjust for maximum. Repeat Steps 2 and 3 until no further improvement is noted

With radio installed in car and antenna extended to desired height, tune in a weak station near 1400KC and adjust A7 for maximum output. Antenna adjustment (A7) is located at upper left rear corner above antenna input.





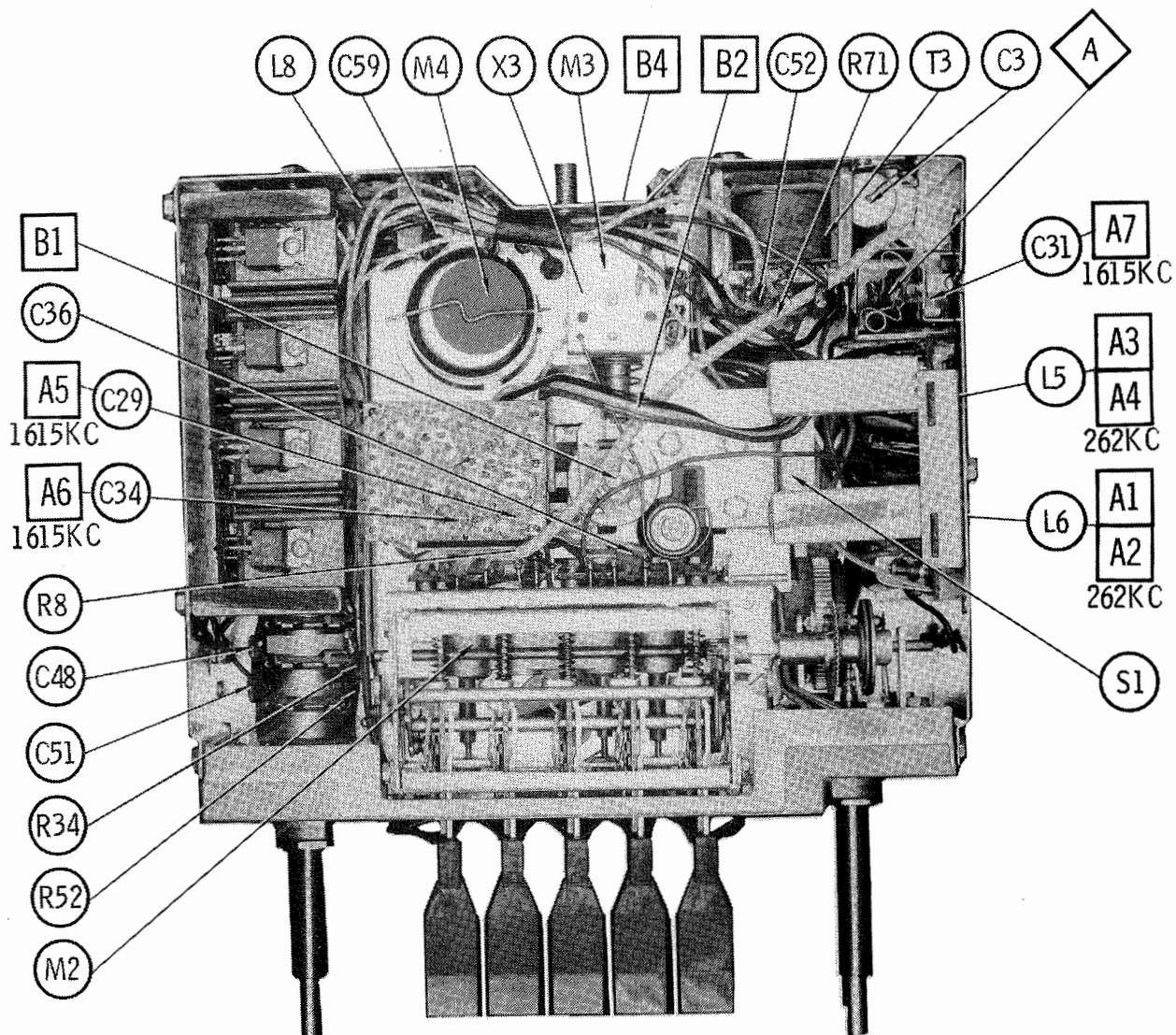
L2
 A10
 1000KC

L4
 A8
 1000KC

L3
 A9
 1000KC

R1

R2



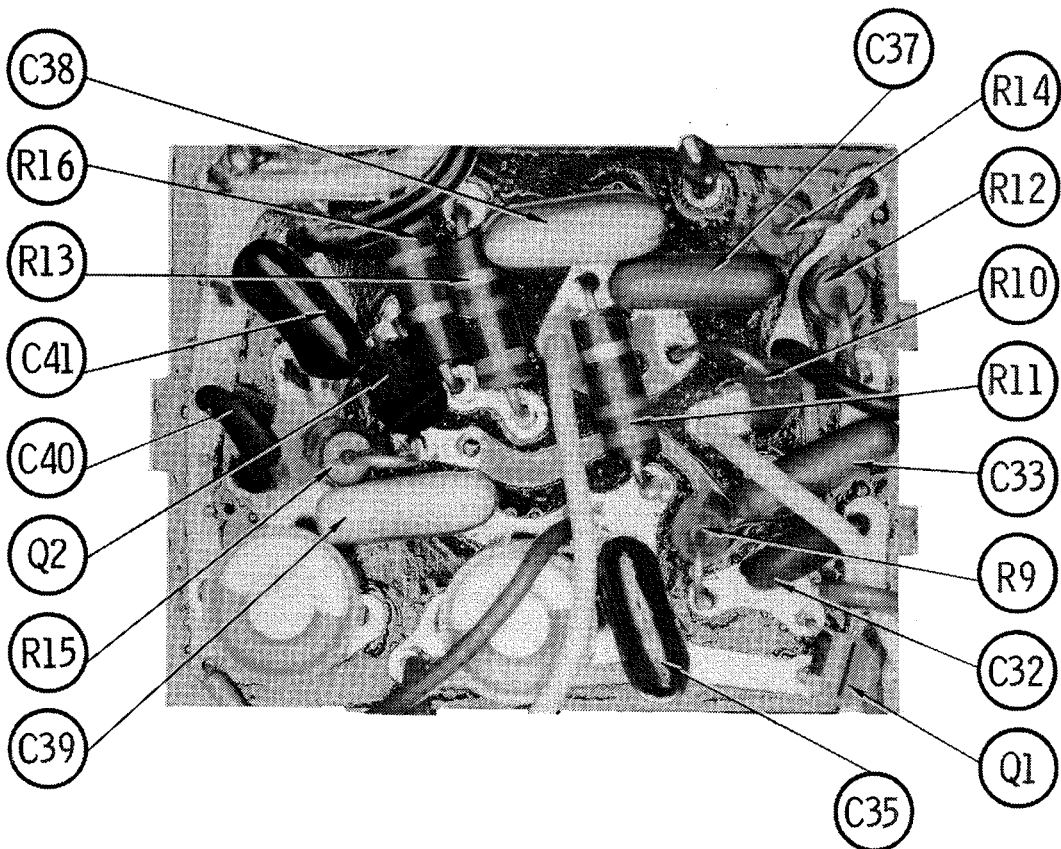
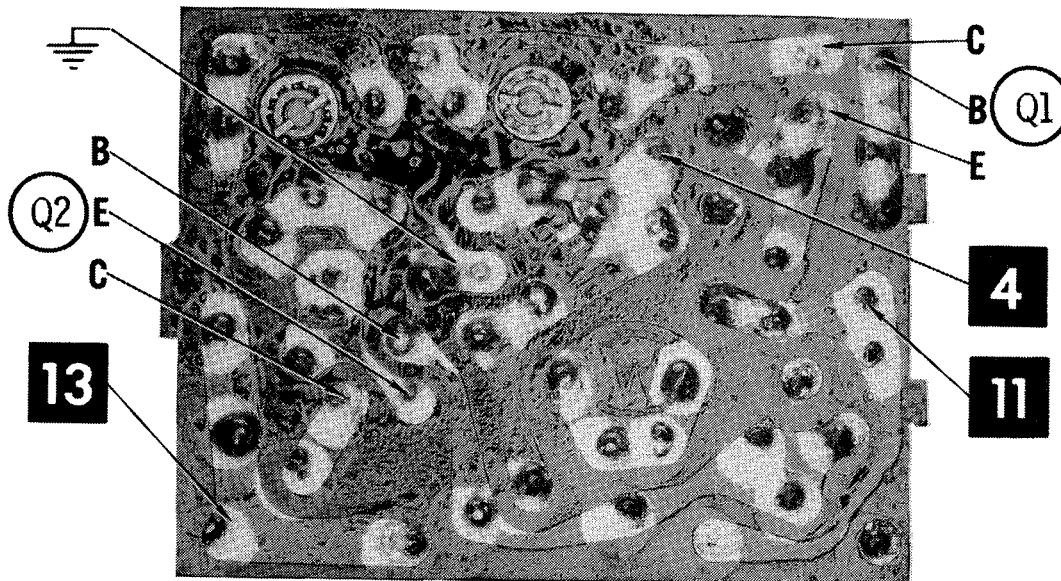
L8 C59 M4 X3 M3 B4 B2 C52 R71 T3 C3 A

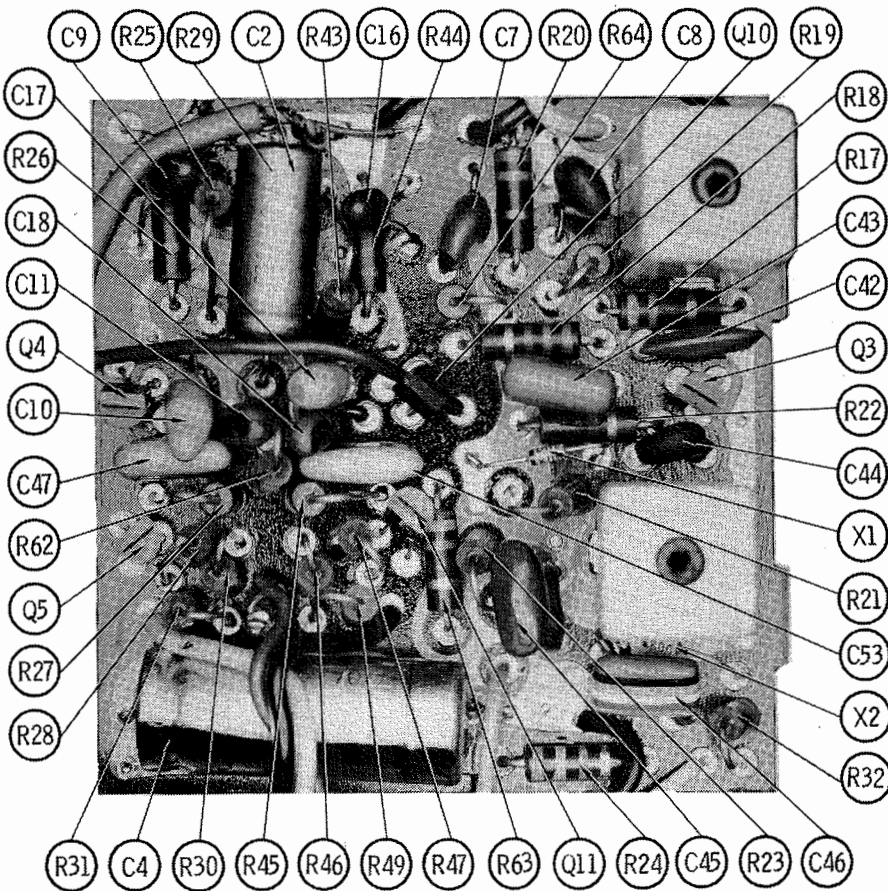
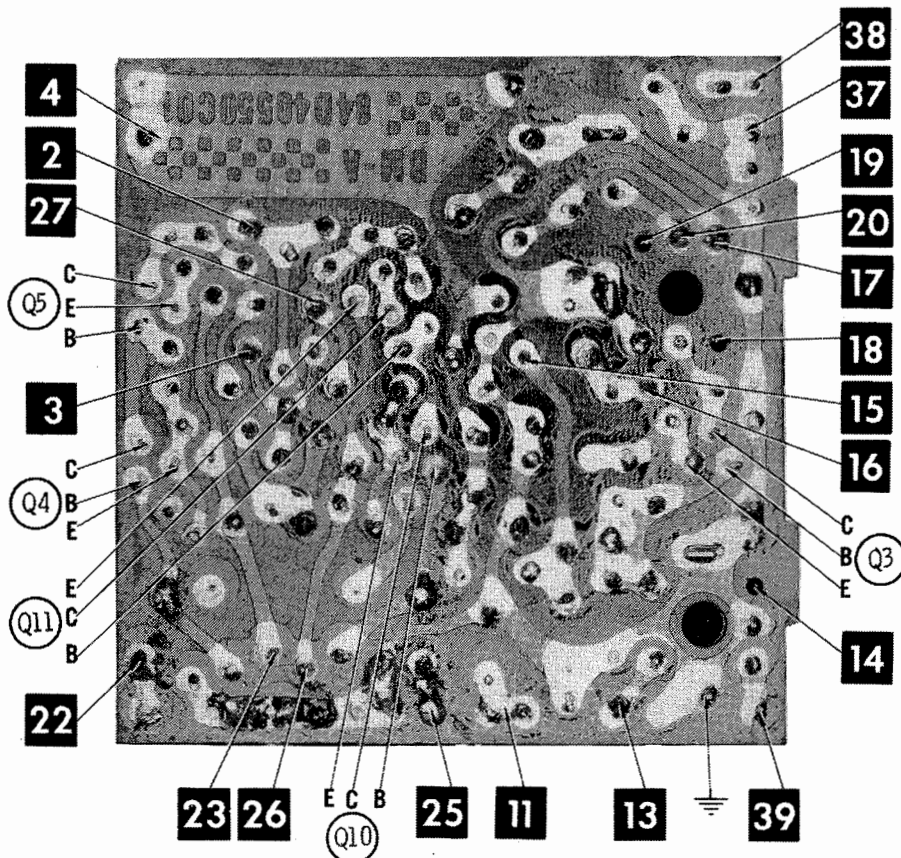
B1
 C36
 A5
 1615KC
 C29
 A6
 1615KC
 C34

C31 A7
 1615KC
 L5 A3
 A4
 262KC
 L6 A1
 A2
 262KC
 S1

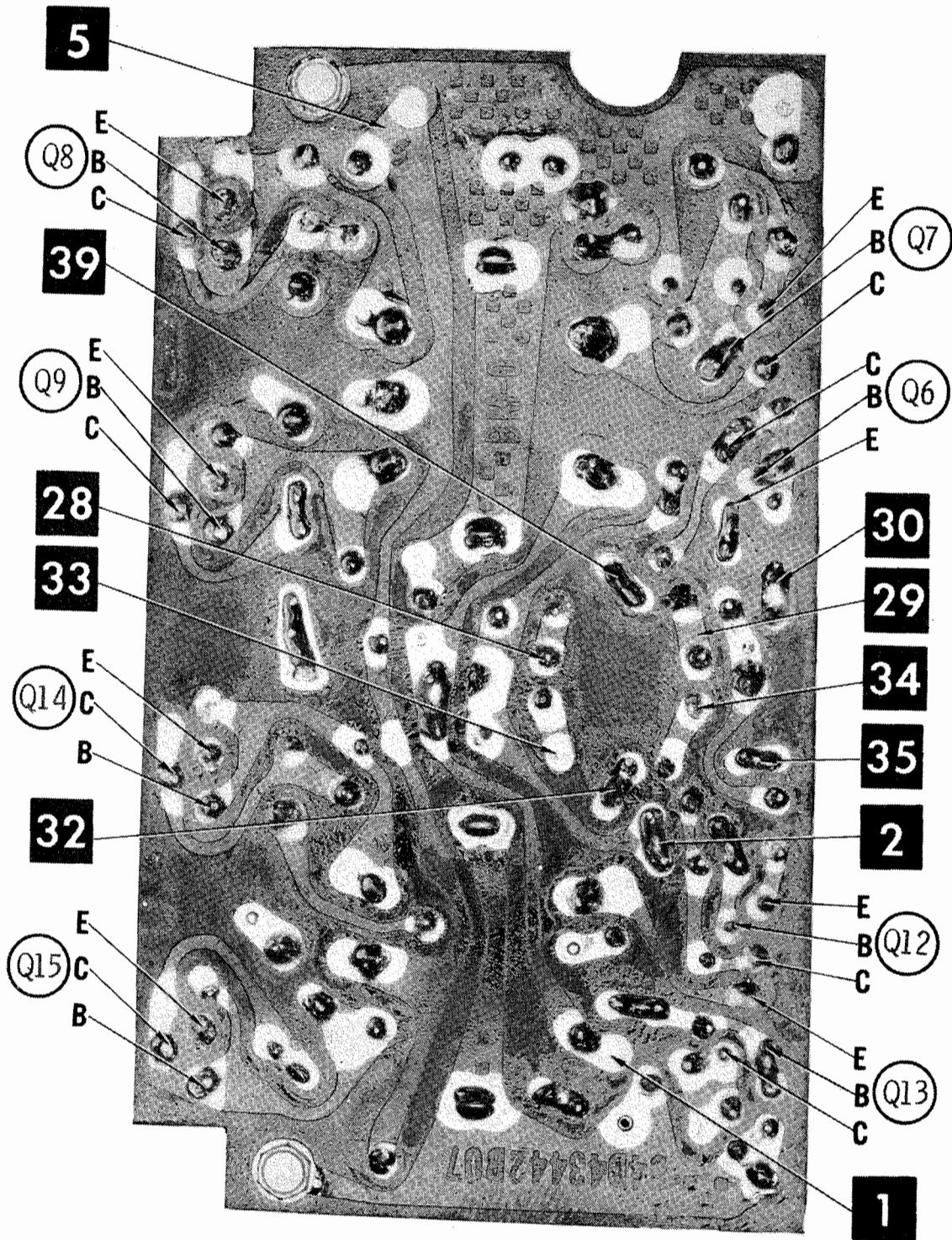
R8
 C48
 C51
 R34
 R52
 M2

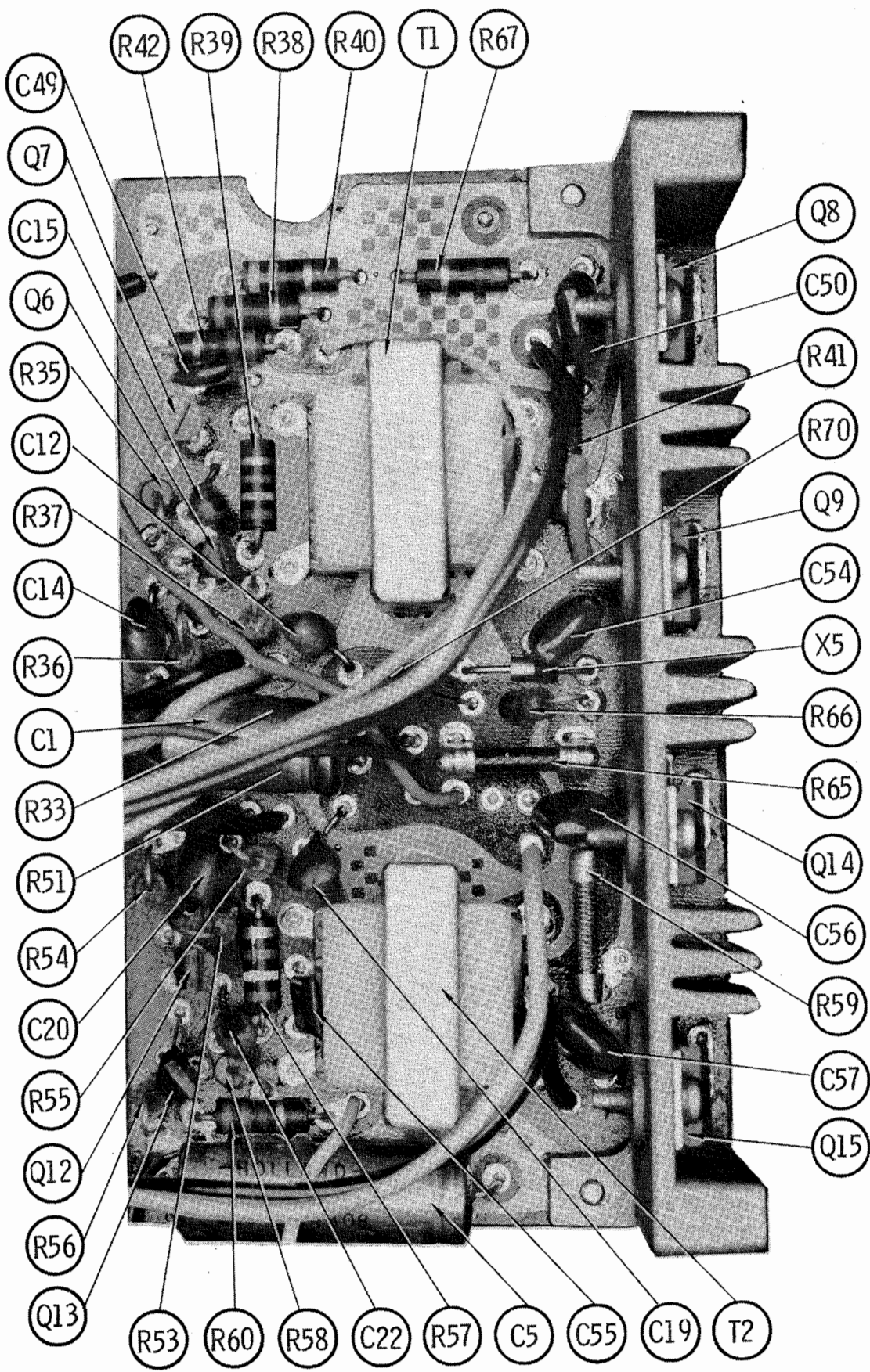
MERCURY MODELS 1MY(2MY)/4106, 2CR4107, 2MR4111





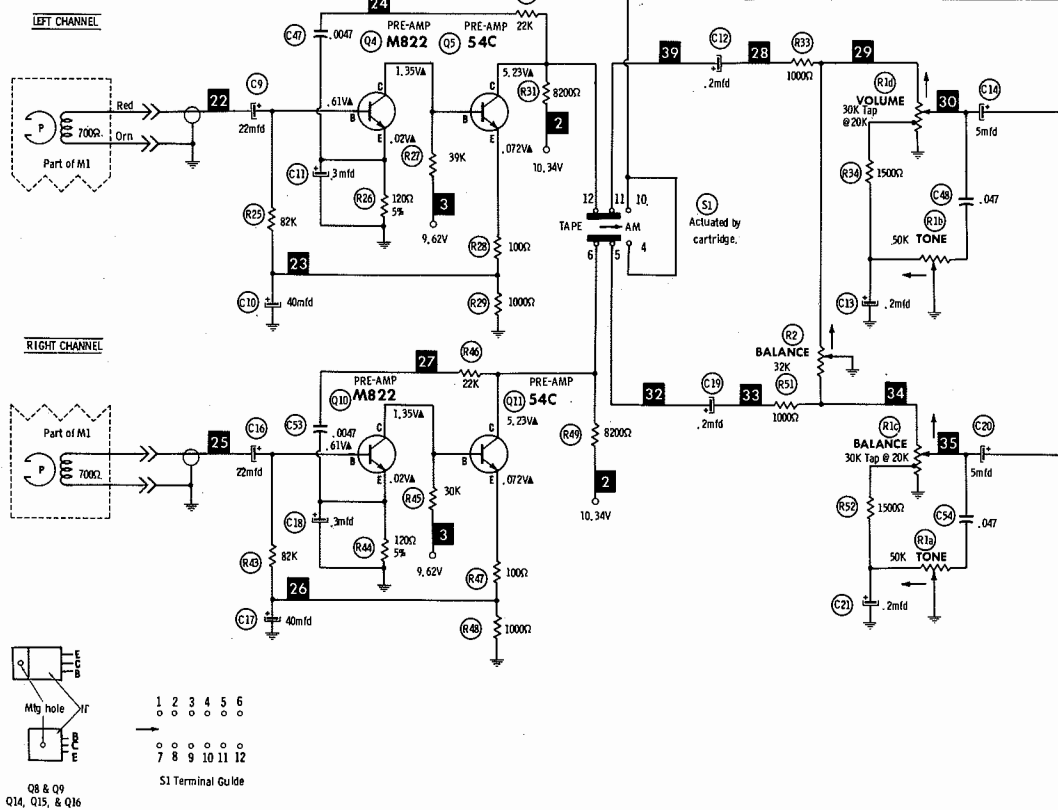
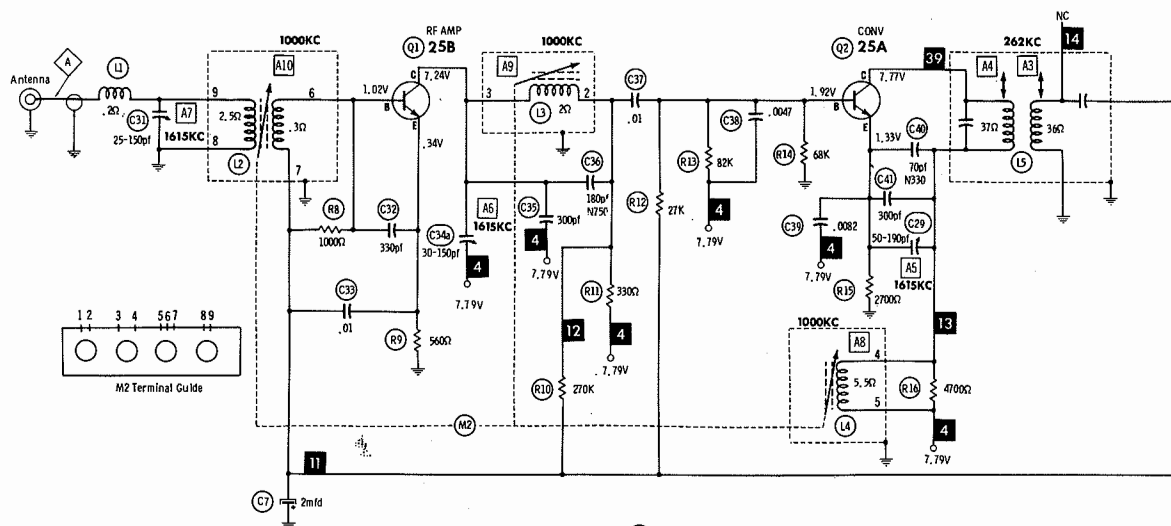
MERCURY MODELS 1MY(2MY)4106, 2CR4107, 2MR4111





MERCURY MODELS 1MY/2MY/4106, 2CR4107, 2MR4111

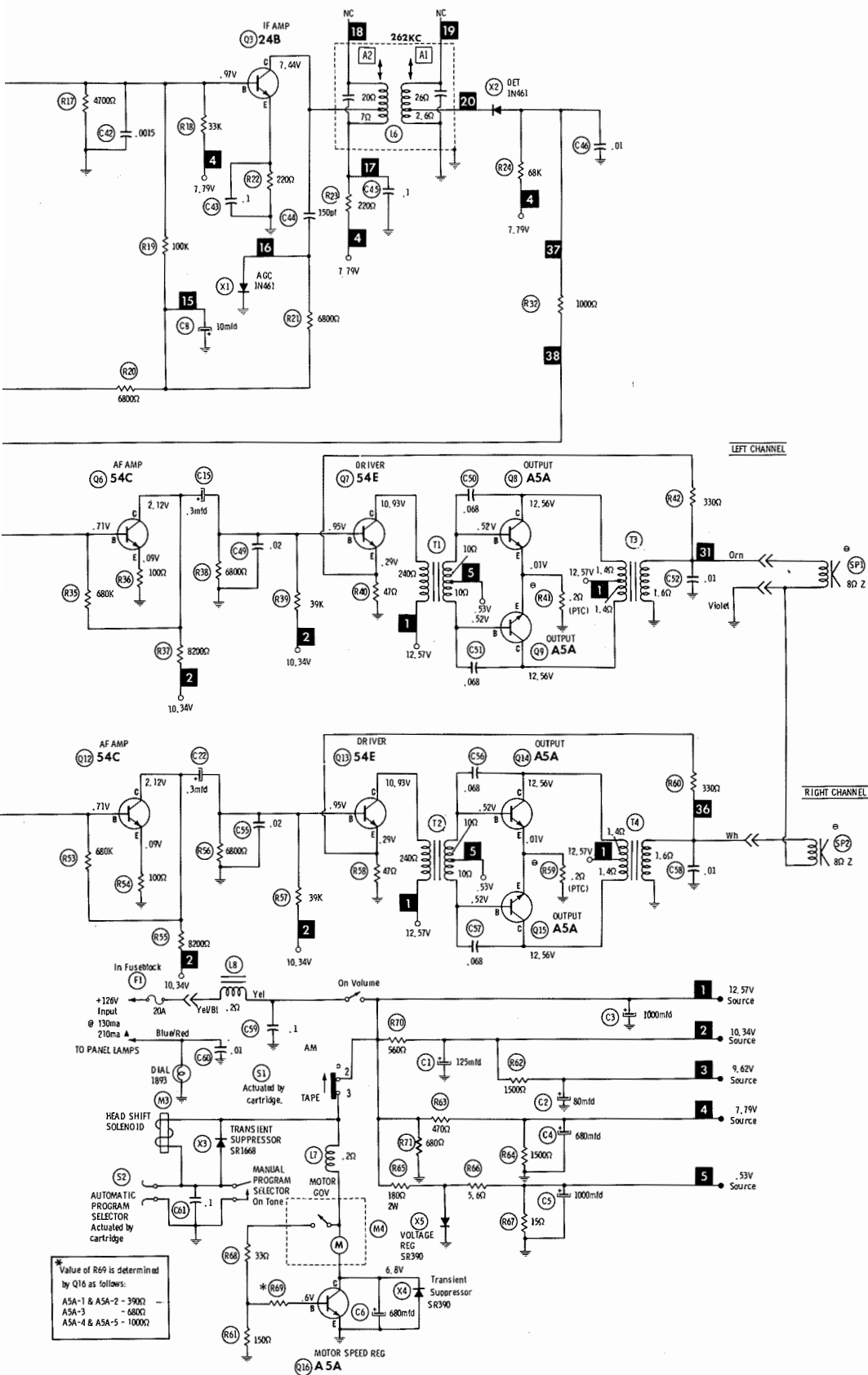
NOTE: DEMAGNETIZE HEADS AFTER SERVICING



- e See parts list.
 ▲ Measured in "TAPE" position.
 Measurements taken with switching in position shown unless otherwise indicated.
 Resistors are 1/2W or less, 10% or 20%, unless otherwise indicated.
 Supply voltage maintained at rated value for measurements.
 Voltage and resistance measured with VTVM or equivalent meter,
 no signal applied and controls adjusted for normal operation.
 Controls viewed from actuator end. Arrow indicates clockwise rotation.
 Numbers assigned to terminals may not be found on the unit.
 Transistor resistances vary widely. No resistance measurements taken.

A PHOTOFAC[®] STANDARD NOTATION SCHEMATIC
with **CIRCUITACE[®]**

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**MERCURY MODELS 1MY(2MY)4106, 2CR4107, 2MR4111**

PARTS LIST AND DESCRIPTION

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

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

WIRING DATA

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

TRANSISTORS

ITEM No.	TYPE No.	FUNCTION	REPLACEMENT DATA					
			MFGR. PART No.	GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	MOTOROLA PART No.	RCA PART No.	SYLVANIA PART No.
Q1	25B	RF Amp	48-134805	GE-17	TR-21	HEP723	SK3018	ECG 108
Q2	25A	Converter	48-134804	GE-17	TR-21	HEP722	SK3018	ECG 108
Q3	24B	IF Amp	48-134807	GE-17	TR-21	HEP725	SK3018	ECG 108
Q4	M822	Preamp	48-134823	GE-20	TR-21	HEP730	SK3020	ECG 123A
Q5	54C	Preamp	48-134810	GE-20	TR-21	HEP725	SK3020	ECG 123A
Q6	54C	AF Amp	48-134810	GE-20	TR-21	HEP725	SK3020	ECG 123A
Q7	54E	Driver	48-134846	GE-20	TR-21	HEP724	SK3020	ECG 123A
Q8	A5A	Output	48-137080	GE-28	IRTR55	HEP701	SK3041	ECG 152
Q9	A5A	Output	48-137080	GE-28	IRTR55	HEP701	SK3041	ECG 152
Q10	M822	Preamp	48-134823	GE-20	TR-21	HEP730	SK3020	ECG 123A
Q11	54C	Preamp	48-134810	GE-20	TR-21	HEP725	SK3020	ECG 123A
Q12	54C	AF Amp	48-134810	GE-20	TR-21	HEP725	SK3020	ECG 123A
Q13	54E	Driver	48-134846	GE-20	TR-21	HEP724	SK3020	ECG 123A
Q14	A5A	Output	48-137080	GE-28	IRTR55	HEP701	SK3041	ECG 152
Q15	A5A	Output	48-137080	GE-28	IRTR55	HEP701	SK3041	ECG 152
Q16	A5A	Motor Regulator	48-137080	GE-28	IRTR55	HEP701	SK3041	ECG 152

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MFGR. PART OR TYPE No.	REPLACEMENT DATA				NOTES
		GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	RCA PART No.	SYLVANIA PART No.	
X1	DHD800				ECG 177	
X2	DHD800				ECG 177	
X3	SR1668	GE-504A	5A4D	SK3016	ECG 116	
X4	D2H	GE-504A	5A4D	DK3016	ECG 116	
X5	D2H	GE-504A	5A4D	SK3016	ECG 116	

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
			PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	SPRAGUE PART No.
C1	125	16V	23C41928A42	CRE473A	EA15-100	WBR100-16	MT1-19	MTA100E15	TE-1162
C2	80	16V	23C41928A23	CRE473A	EA15-100	WBR100-16	MT1-19	MTA80E15	TE-1162
C3	1000	16V	23C41928A44	PRST230	EA15-1000	WBR1000-16	QT1-32	TC1501A	TL-1166.5
C4	680	16V	23C41928A43	PRST230	EA15-1000	WBR1000-16	QT1-32	TC1501A	TL-1166.5
C5	1000	4V	23C42674B08	PRST130	EA6-1000	WBR1000-16	QT1-32	TC610A	TL-111
C6	680	16V	23C41928A43	PRST230	EA15-1000	WBR1000-16	QT1-32	TC1501A	TL-1166.5
C7	2	10V	23C43280A02	MCD-30	EP15-2	WBR2-50	MT1-1	MTV2CB50	TE-1121
C8	10	6V	23C43280A03	MCD-70	EP6-10	WBR10-25	MT1-5	MTV10CB50	TE-1087
C9	22	6.3V	23C42582B07	MCD-90	EP15-25	WBR25-25	MT1-10	MTV20CD50	TE-1130
C10	47	6V	23C42582B08	MCD-130	EP6-50	WBR50-25	MT1-15	MTV40CB15	TE-1133
C11	.3	6V	23C43280A28		UK10-474	TYR13BD334K		TAS334K006P0A	196D334X0035DB
C12	.2	15V	23C43280A33		UK20-204	TYR13BD224K		TAS224K015P0A	196D224X0035DB
C13	.2	15V	23C43280A19		UK20-204	TYR13BD224K		TAS224K015P0A	196D224X0035DB
C14	5	6V	23C43280A27	MCD-50	EP6-5	WBR5-50	MT1-3	MTV5CB50	TL-1084
C15	.3	6V	23C43280A28		UK10-474	TYR13BD334K		TAS334K006P0A	196D334X0035DB
C16	22	6.3V	23C42582B07	MCD-90	EP15-25	WBR25-25	MT1-10	MTV20CD50	TE-1130
C17	47	6V	23C42582B08	MCD-130	EP6-50	WBR50-25	MT1-15	MTV50CB15	TE-1133
C18	.3	6V	23C43280A28		UK10-474	TYR13BD334K		TAS334K006P0A	196D334X0035DB
C19	.2	15V	23C43280A33		UK20-204	TYR13BD224K		TAS224K015P0A	196D224X0035DB
C20	5	6V	23C43280A27	MCD-50	EP6-5	WBR5-50	MT1-3	MTV5CB50	TL-1084
C21	.2	15V	23C43280A33		UK20-204	TYR13BD224K		TAS224K015P0A	196D224X0035DB
C22	.3	6V	23C43280A28		UK10-474	TYR13BD334K		TAS334K006P0A	196D334X0035DB

PARTS LIST AND DESCRIPTION (CONTINUED)

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

Replacement parts shown may be superseded by the availability of newly introduced replacements.

Have your local distributor check Sams COUNTER FACTS™ for the most up-to-date replacement.

CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C29	110-380	#20-43646B01						
C31	330	#20-40746A06						
C32	.01 100V		GPD X5F331K	DD-331	GP330	CCD-331	GP333	10TS-T33
C33			V1612S1	CPR-10000J	DPMS6S1	1DP-1-103	PVC211	225P10391WD3
C34		#20-43646B02						
C35	300		ADM-15-301	CPR-300J	CD15F301J500	DM-15-301	SX330	MS-33
C36	180 N750			TCN-180		*	*	10TCU-T18
C37	.01 100V		V1612S1	CPR-10000J	DPMS6S1	1DP-1-103	PVC211	225P10391WD3
C38	.0047 100V		DBE6D5	CPR-5000J	DPMS6D5	1DP-1-502	PVC625	6PS-D50
C39	.0082 100V		DBE6D82	CPR-8200J	DPMS6D82	6DP-2-822	PVC6282	6PS-D82
C40	70			DTZ-68			CN0468	10TCC-Q68
C41	300		ADM-15-301	CPR-300J	CD15F301J500	DM-15-301	SX330	MS-33
C42	.0015		GPD X5F152K	DD-152		CCD-152	GP215	10TS-D15
C43	.1		DBE2P1		DPMS2P1	1DP-2-104	PVC101	225P10491WD3
C44	150		GPD X5F151K	DD-151	GP15D	CCD-151	GP315	10TS-T15
C45	.1		TTP-1	CK-104			TA010	TG-P10
C46	.01 100V		V1612S1	CPR-10000J	DPMS6S1	1DP-1-103	PVC211	225P10391WD3
C47	.0047 100V		DBE6D5	CPR-5000J	DPMS6D5	1DP-1-502	PVC625	6PS-D50
C48	.047		TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50
C49	.02		TTP-02	CK-203	MGP02	CCD-203	TA120	TG-S20
C50	.068		DBE6S68		DPMS6S68	6DP-4-683	PVC6168	6PS-S68
C51	.068		DBE6S68		DPMS6S68	6DP-4-683	PVC6168	6PS-S68
C52	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C53	.0047 100V		DBE6D5	CPR-5000J	DPMS6D5	1DP-1-502	PVC625	6PS-D50
C54	.047		TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50
C55	.02		V1614S2		DPMS2S2	1DP-1-203	PVC212	2PS-S20
C56	.068		DBE6S68		DPMS6S68	6DP-4-683	PVC6168	6PS-S68
C57	.068		DBE6S68		DPMS6S68	6DP-4-683	PVC6168	6PS-S68
C58	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C59	.1 100V		DBE2P1		DPMS2P1	1DP-2-104	PVC101	225P10491WD3
C60	.1 100V		DBE2P1		DPMS2P1	1DP-2-104	PVC101	225P10491WD3
C61	.1		TTP-1	CK-104			TA010	TG-P10

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

Motorola Part Number

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.	CTS-IRC PART No.	MALLORY PART No.
R1a	Tone (Left)	50K	18C41849B09(1)				
b	Tone/Program Switch (Right)	50K					
d	Volume (Left)	30K					
		Tap @ 22K					
d	Volume/Switch (Right)	30K					
		Tap @ 22K					
a	Tone	50K	18C41849B08(2)				
b	Tone/Program Switch	50K					
c	Volume	30K					
		Tap @ 22K					
d	Volume/Switch	30K					
		Tap @ 22K					
R2	Balance	32K	18B41512B04(1)				P353L, 3100, SH31, OX1687
	Balance	32K	18B41705B02(2)				

(1) Used in Models 2CR4107 (2CR7) (D1WA-19A242AD) 1971 Cougar.

(2) Used in Models 1MY4106, 2MY4106 (2MY6) (D1MA-19A242AD) 1971 Mercury and 2MR4111 (2MR1) (D1YA-19A242AD) 1971 Meteor.

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA	
		WORKMAN PART No.	MFGR. PART No.
R41	.2 5% (PTC)		17-40756A06

ITEM No.	RATING	REPLACEMENT DATA	
		WORKMAN PART No.	MFGR. PART No.
R59	.2 5% (PTC)		17-40756A06

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA			
		PART No.	MEISSNER PART No.	MILLER PART No.	WORKMAN PART No.
L1	RF Choke (1.5uh)	24C40788A04	19-1001	4604	T856
L2	Antenna	(1)			
L3	RF	(1)			
L4	Oscillator	(1)			
L5	Input IF	24D40317B17		8002	
L6	Output IF	24D40317B18		8010	
L7	RF Choke (1.5uh)	24C40788A04	19-1001	4604	T856

(1) Part of M2.

MERCURY MODELS 1MY(2MY)/4106, 2CR4107, 2MR4111

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.

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA				NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	MFGR. PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L7	130ma 210ma*	.2	5mh	24D43869B06	TC-2	TR-157	TY17XT	* Measured in Tape Position

TRANSFORMER (Driver)

ITEM No.	TURNS RATIO			REPLACEMENT DATA				NOTES
	PRI.	SEC. 1	SEC. 2	MFGR. PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD Part No.	
T1 T2	8 8	1 1		25D40409C01 25D40409C01				

TRANSFORMER (Audio Output)

ITEM No.	IMPEDANCE		REPLACEMENT DATA				NOTES
	PRI.	SEC.	MFGR. PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T3 T4	16 CT 16 CT	8 8	25D41586B13 25D41586B13				

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MFGR. PART No.	QUAM PART No.	
SP1 SP2	8 ohms, PM 8 ohms, PM			Obtain from Ford Dealer Obtain from Ford Dealer

FUSE DEVICES

ITEM No.	DESCRIPTION	REPLACEMENT DATA					
		PART No.		BUSS PART No.		LITTELFUSE PART No.	WORKMAN PART No.
		DEVICE	HOLDER	DEVICE	HOLDER	DEVICE	HOLDER
F1	SFE 20A		In Fuse Block	SFE20		307020	

TAPE HEADS

ITEM No.	MEASURED		BIAS FREQ.	PART No.	NORTONICS PART No.	DESCRIPTION
	INDUCTANCE	BIAS/ERASE VOLTS (RMS)				
M1	380mh			59-43542A01	5800 (1)	8-Track Stereo Play (1) Use original mounting.

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
M2	Tuner	77-42901B41	AS-121 Model 2CR4107 AS-126 Model 1MY4106, 2MY4106, 2MR4111
	Tuner	77-42901B42	
	Coil Assembly	1-41700B61	
M3	Solenoid	24-42064B01	
M4	Motor	59-43663B05	
S1	Selector	40-41363B01	
S2	Automatic Program Sw.	40-40296B01	

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

ITEM	MODEL:	PART No.	ITEM	MODEL:	PART No.
Tape Door		15-41349B04	Knob, Tone or Balance	2MR4111, 1MY4106, 2MY4106	36-40758C01
Escutcheon	2CR4107	1-40500C04			
Escutcheon	2MR4111	1-40500C61	Dial Pointer		52-42579B26
Escutcheon	1MY4106, 2MY4106	1-40500C11	Pushbutton	2CR4107	38-43641B01
Knob, Tuning or Volume	2CR4107	36-40709C02	Pushbutton	2MR4111, 1MY4106, 2MY4106	38-43639B01
Knob, Tuning or Volume	2MR4111, 1MY4106, 2MY4106	36-40709C01			
Knob, Tone or Balance	2CR4107	36-40708C01	Dial Glass	2CR4107	34-43863B01
			Dial Glass	2MR4111	34-40162C03
			Dial Glass	1MY4106, 2MY4106	34-40162C02