



PHOTOFACT[®] with

CIRCUITRACE[®]

For Supplier Address See PHOTOFACT Index

NOTE: Manufacturer Part Numbers Shown Are MOTOROLA



MODELS 1FD4217 (D2AA-19A242-AE) (72 Ford, Mercury, Mercury Meteor)
 1LN4213 (D2VA-19A242-AD) (72 Lincoln Continental)
 1MZ4218 (D2ZA-19A242-AF) (72 Ford Mustang, Mercury Cougar)
 1TB4211 (D2SA-19A242-AH) (72 Ford Thunderbird, Lincoln Mark IV)
 (AM w/8-Track Stereo Tape Player)

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.

TROUBLE CHART

SYMPTOM	REMARKS
Capstan does not rotate.	Belt (1) dirty, worn, or broken. Assembly (10) binding. Motor defective or not supplied with power. Assembly (11) binding. Assembly (2) defective.
Track-Shift mechanism inoperative.	Switch (E8). Cam (3) binding or worn. Pawls (4) and (5) worn. Arms (7) binding. Solenoid (E7) defective or not supplied with power. Head leads binding. Cartridge defective.
Wow or Flutter.	Belt (1) dirty or worn. Capstan dirty or binding. Cartridge defective. Motor defective. Speed regulator circuit defective. Spring (23) weak or missing. Spring (21) weak or missing. Arm (25) binding.
Tape is pulled from cartridge.	Cartridge defective. Capstan dirty or scored.

FORD/LINCOLN/MERCURY 1972 SERIES

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

© 1972 Howard W. Sams & Co., Inc. Printed in U. S. of America 2AH176

MECHANICAL PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
1*	42-42683B02*	Flywheel Belt *	14	41-41251B11	Cam Support Spring
2	49-43510B01	Flywheel Assembly	15	47-42174B01	Cam Shaft
3	45-40428B11	Track Changing Cam	16	41-40445B02	Solenoid Spring
4	55-43353A27(1)	Push Pawl	17	5-40336C01	Motor Cushion Ring
5	(2)	Pull Pawl	18	42-40338C01	Motor Retainer Spring
6	1-42902B83	Head Clamp	19	26-43862B03	Motor Shield
7	45-40707C01	Radius Arm (4 used)	20	1-40400C57(4)	Cartridge Detent Assembly
8	41-40540B03	Head Spring	21	41-42279B01(5)	Cartridge Detent Spring
9	41-40140C01	Retainer Spring	22	45-41777B03	Cartridge Detent Actuator
10	43-40411B02	Flywheel Bearing Assembly	23	41-40805B01	Detent Actuator Spring
11	15-40059A78(3)	Capstan Housing Assembly	24	41-40681B03	Pawl Spring
12	41-40444B01	Azimuth Spring	25	(5)	Cartridge Detent Arm
13	43-41989B03	Cam Friction Washer	26	45-41364B01	Switch Actuator

(1) Includes (5), (24).

(2) Part of (4).

(3) Includes (6), (7), (8).

(4) Includes (21), (22).

(5) Part of (20).

* WALSCO Replacement #1424-19

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.

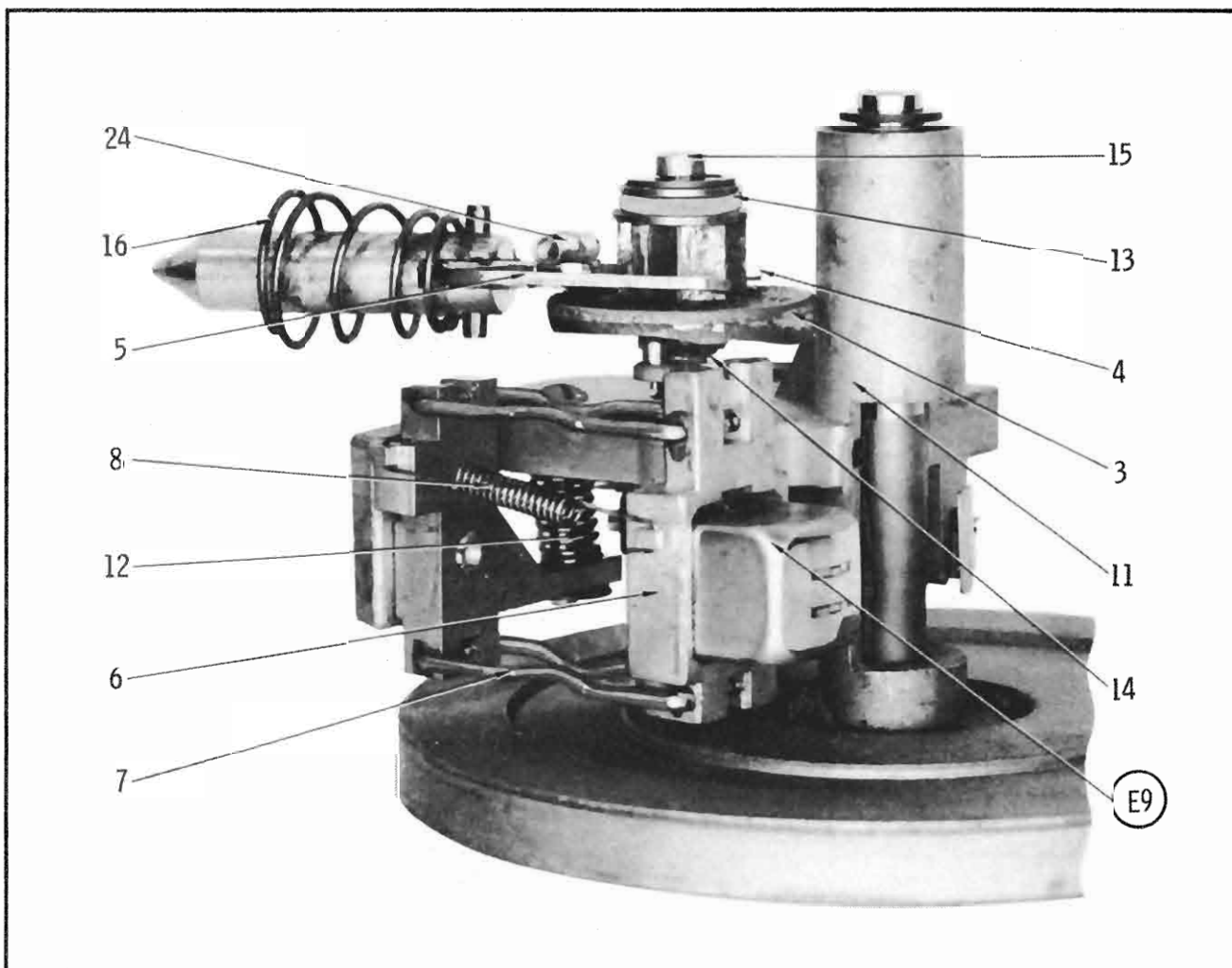
CAUTION: Avoid getting head cleaner on any plastic surface.

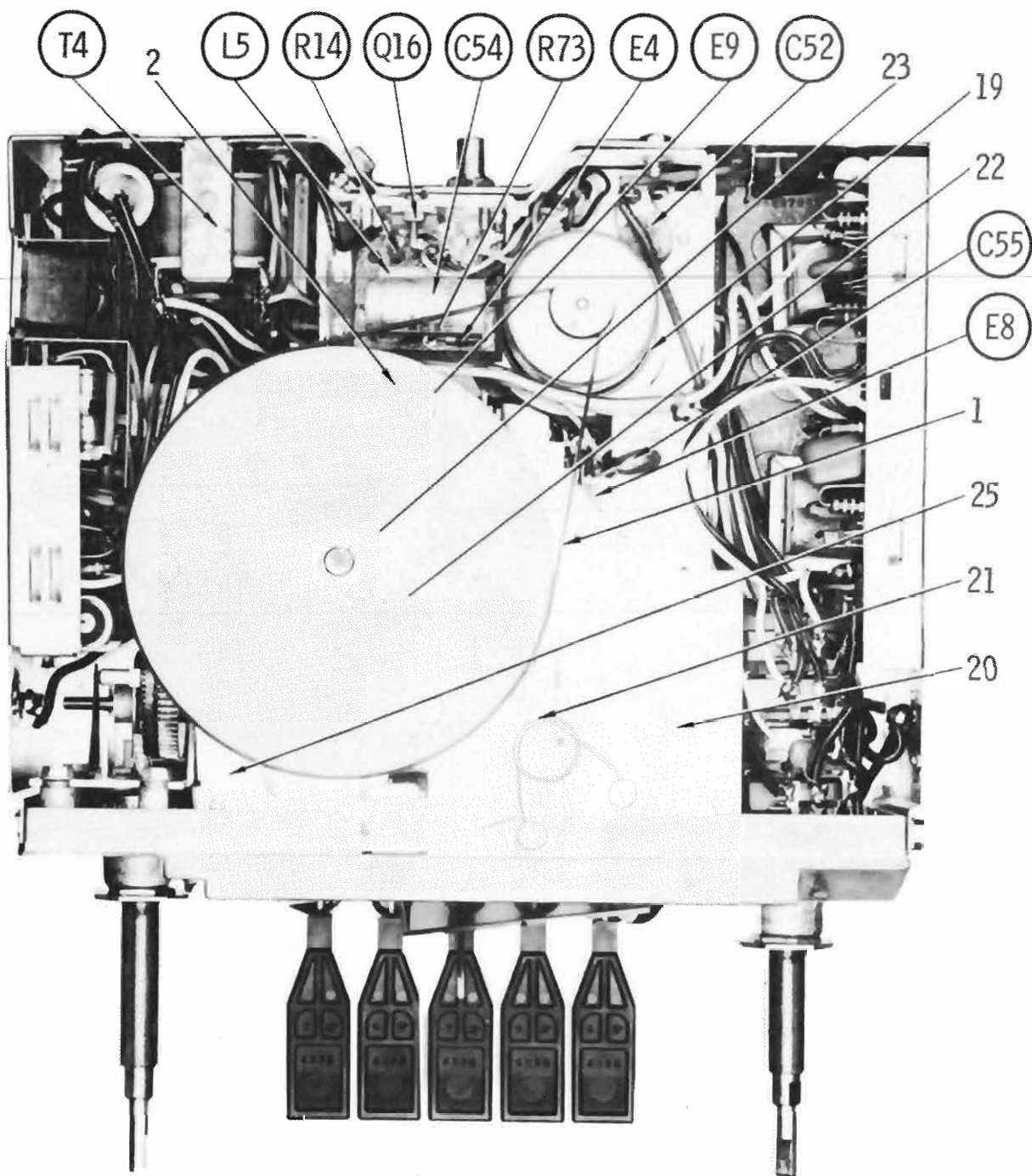
LUBRICATING

Bearings are oil-less type and do not need lubrication. Lubricate bushings lightly with #20 machine oil. Use a light film of nonhardening grease on cam surfaces.

HEAD DEMAGNETIZING

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





FORD/LINCOLN/MERCURY 1972 SERIES

ALIGNMENT INSTRUCTIONS

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

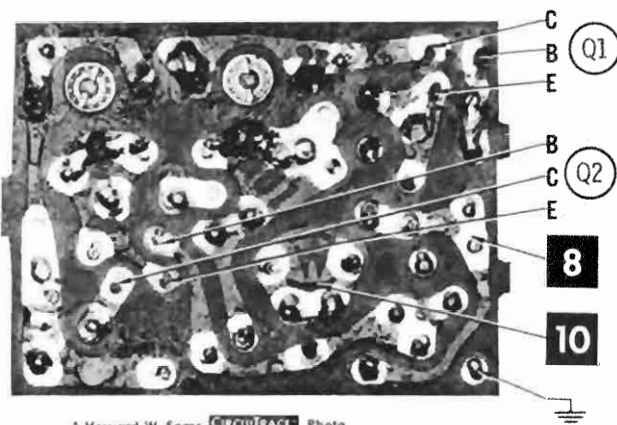
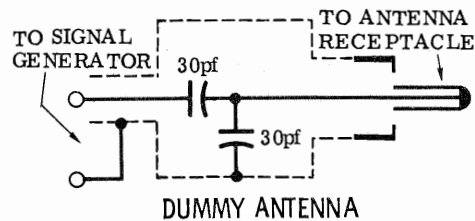
T1, T2.....GC ELECTRONICS: 9296, 9297, 9300
C1, C3, C19GC ELECTRONICS: 8290, 8868, 9087

PUSH-BUTTON ADJUSTMENT

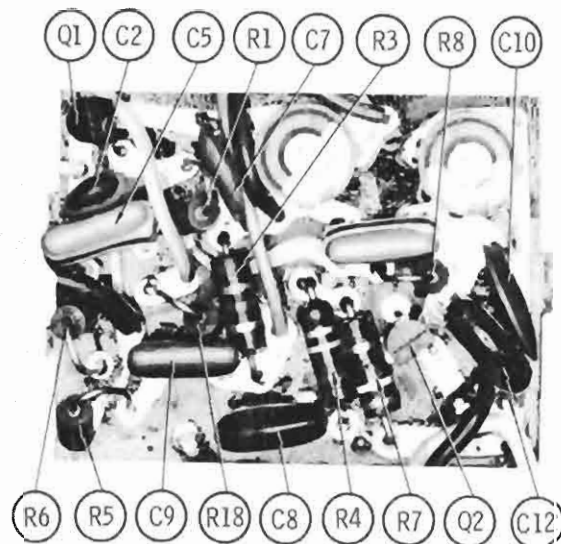
1. Pull button out.
2. Tune manually to desired station.
3. Press button in firmly.
4. Repeat for remaining buttons.

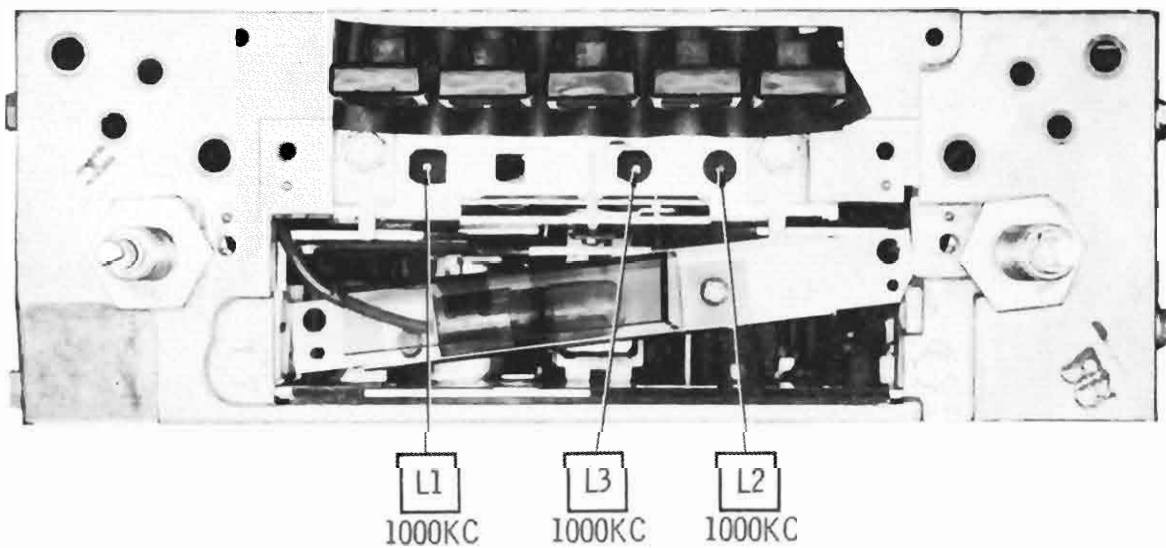
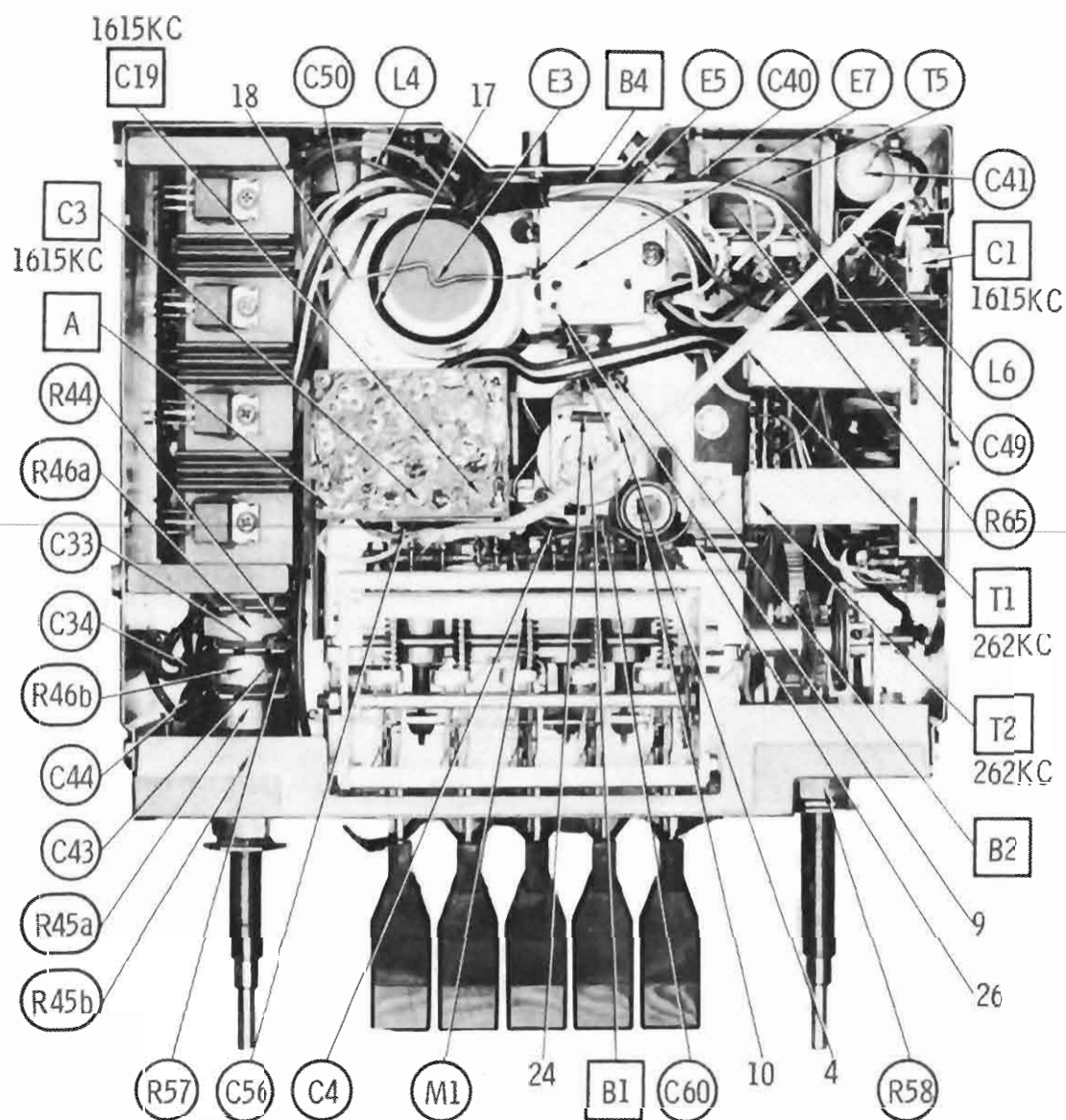
	GENERATOR COUPLING	GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1.	High side thru .1mfd to point A, low side to ground.	262KC 400 cycle modulation	High freq. end stop.	Output meter across voice coil.	T1, T2	Adjust for maximum.
2.	Thru dummy antenna to antenna input.	1615KC	"	"	C1, C3, C19	"
Step 3 is not necessary unless tuner or associated components have been disturbed. If necessary, back tuning cores (L1,L2,L3) 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	L1, L2, L3	Adjust for maximum. Repeat Steps 2 and 3 until no further improvement is noted

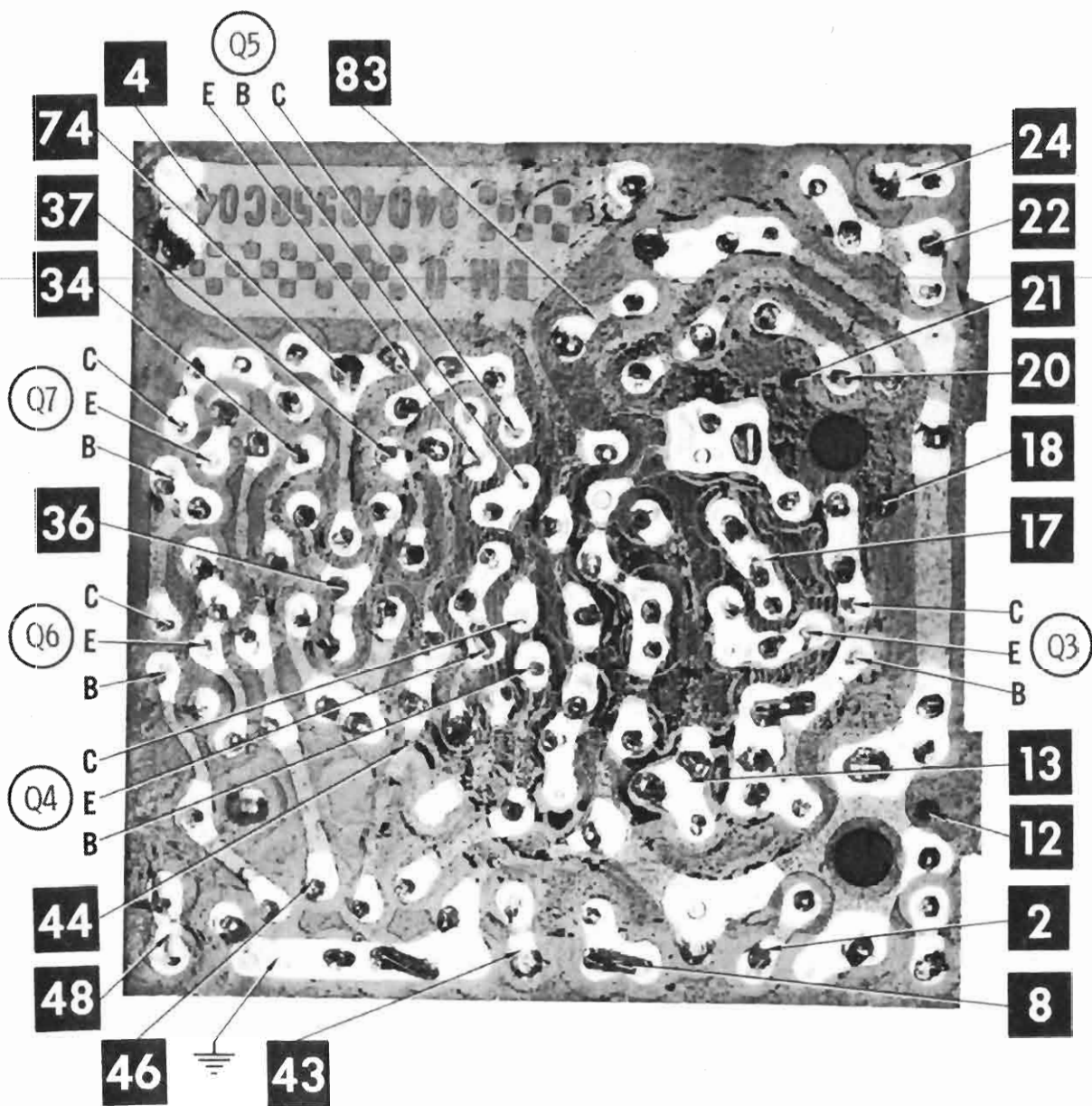
With radio installed in car and antenna extended to desired height, tune in a weak station near 1400KC and adjust C1 for maximum output. Antenna adjustment C1 is located upper Left Rear Corner above Antenna Input.

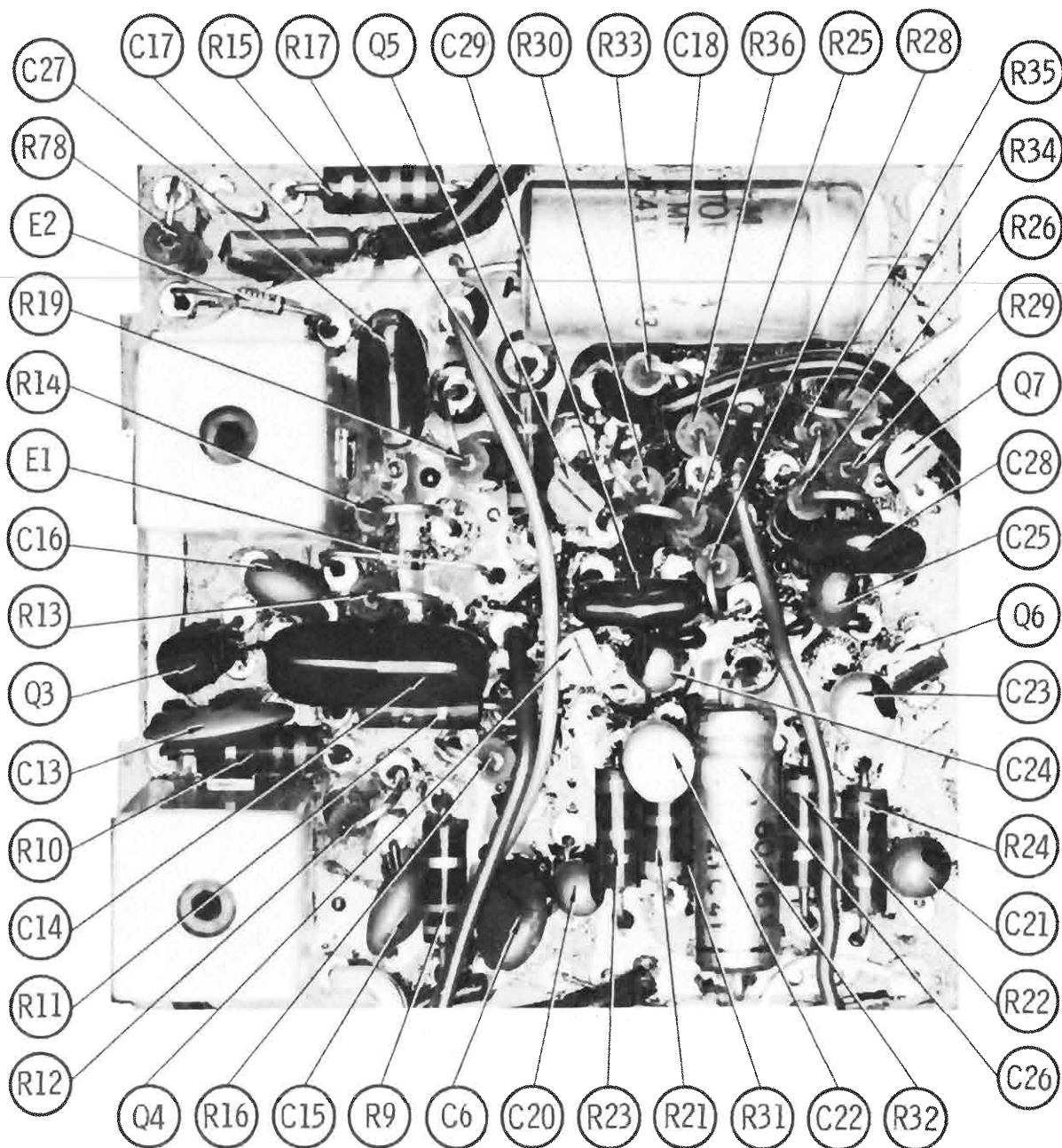


A Howard W. Sams CIRCUITRACE Photo

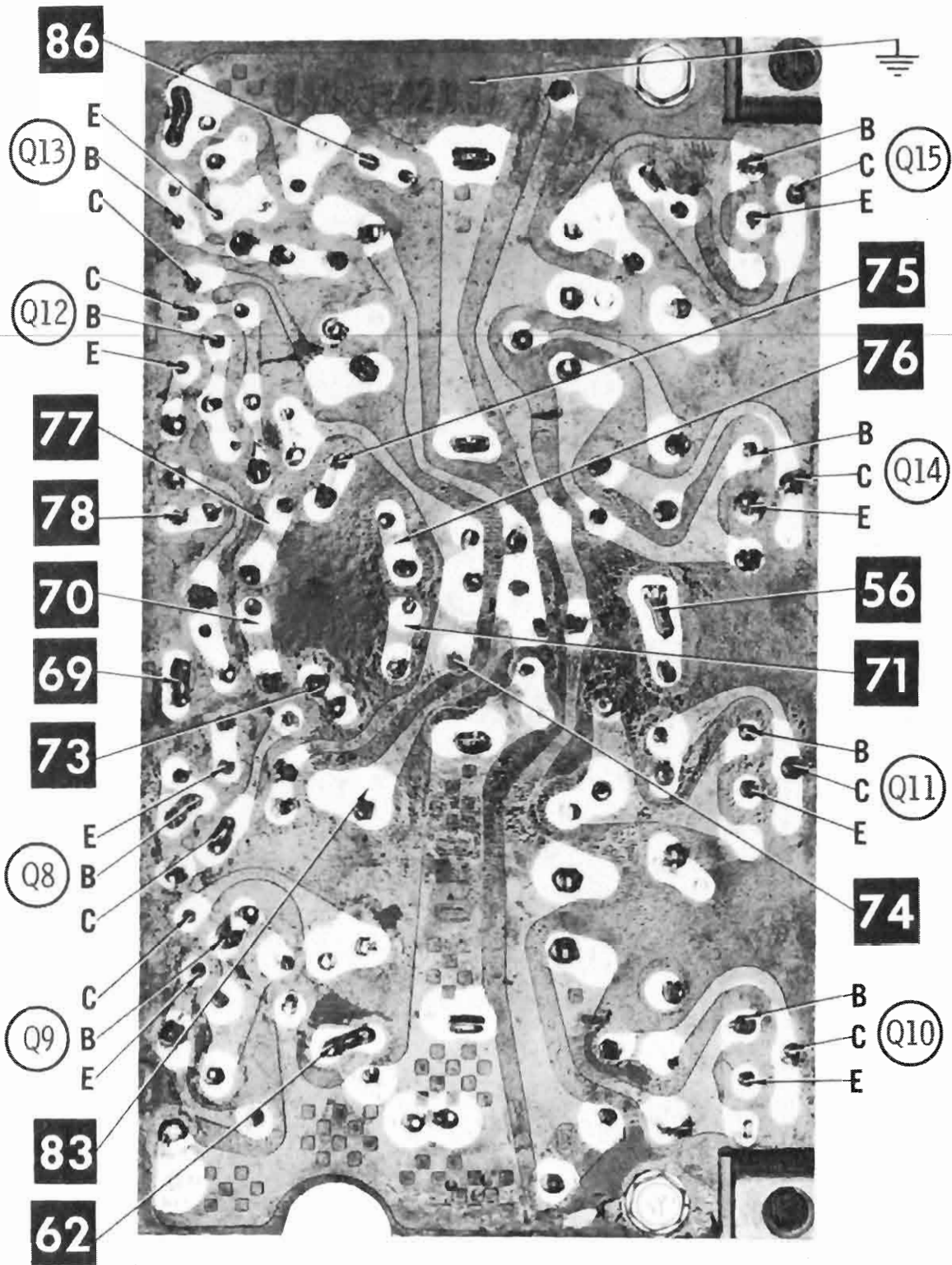


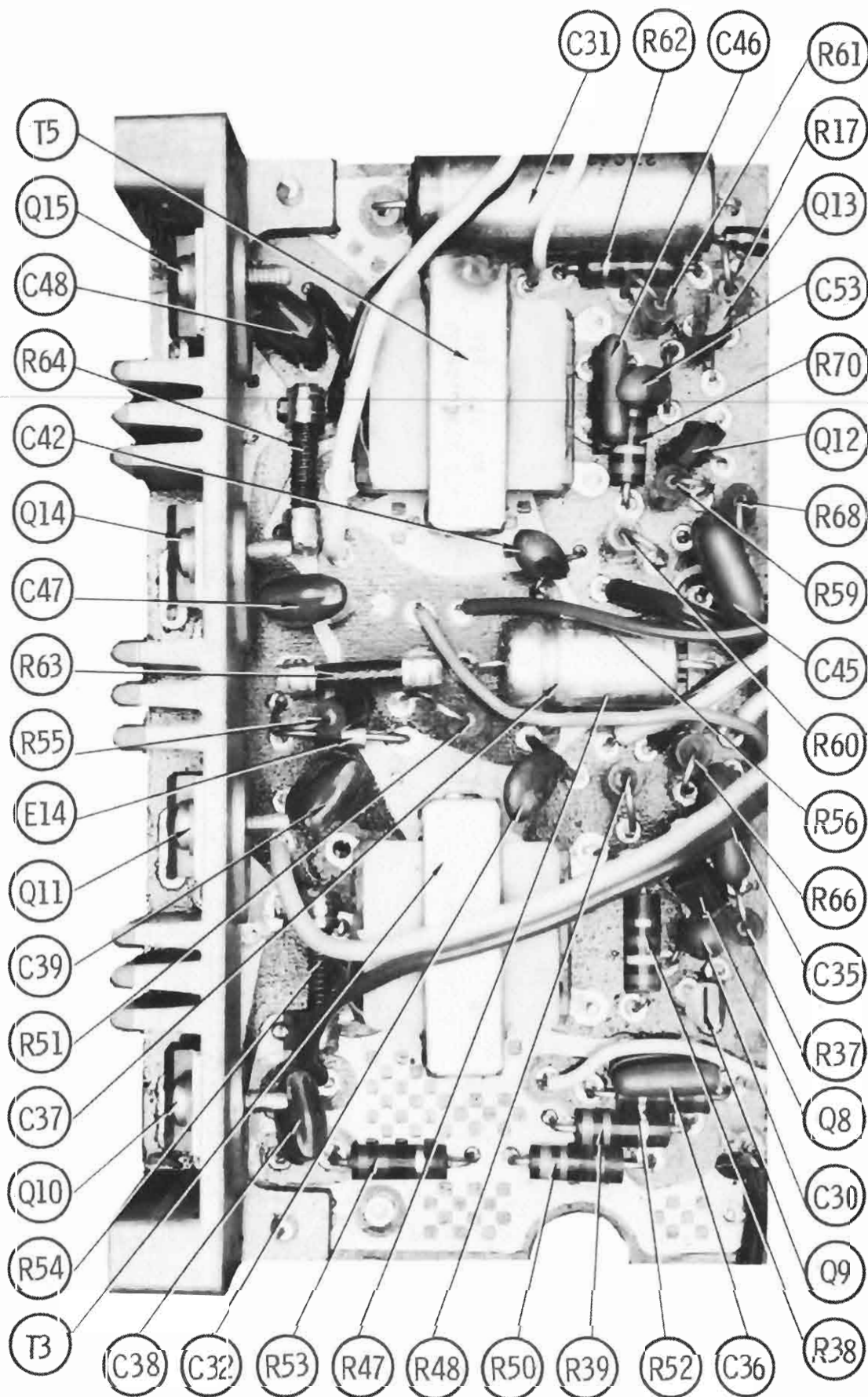




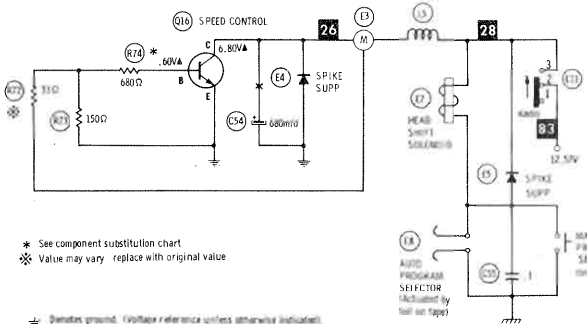
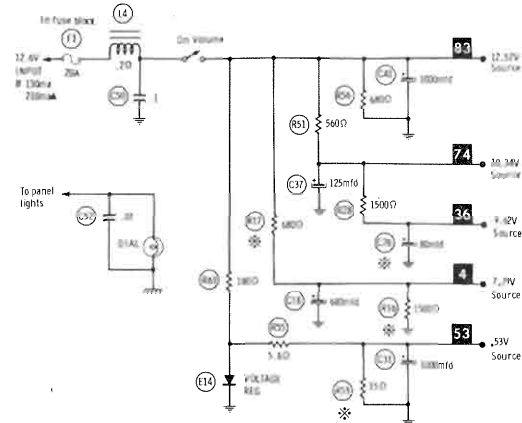
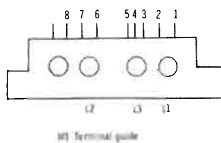
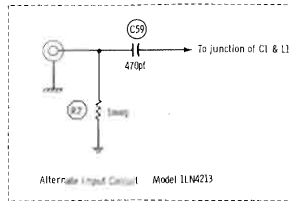


FORD/LINCOLN/MERCURY 1972 SERIES





NOTE: DEMAGNETIZE HEADS AFTER SERVICING

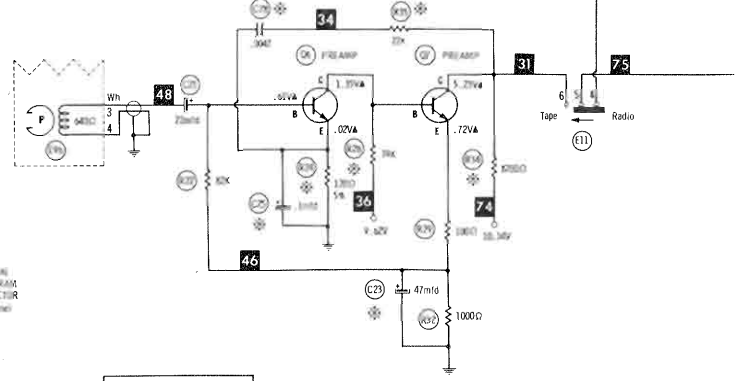
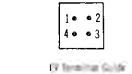
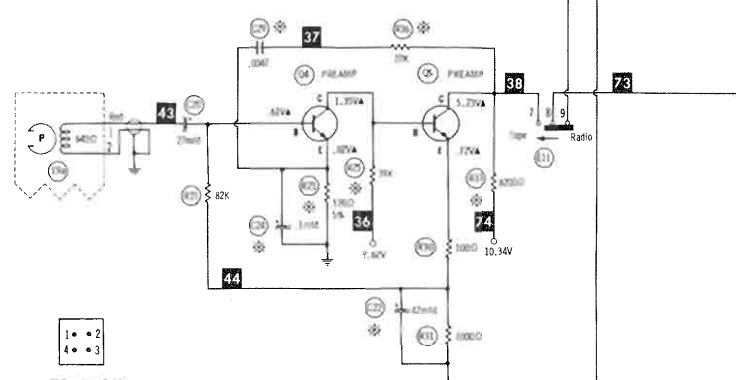
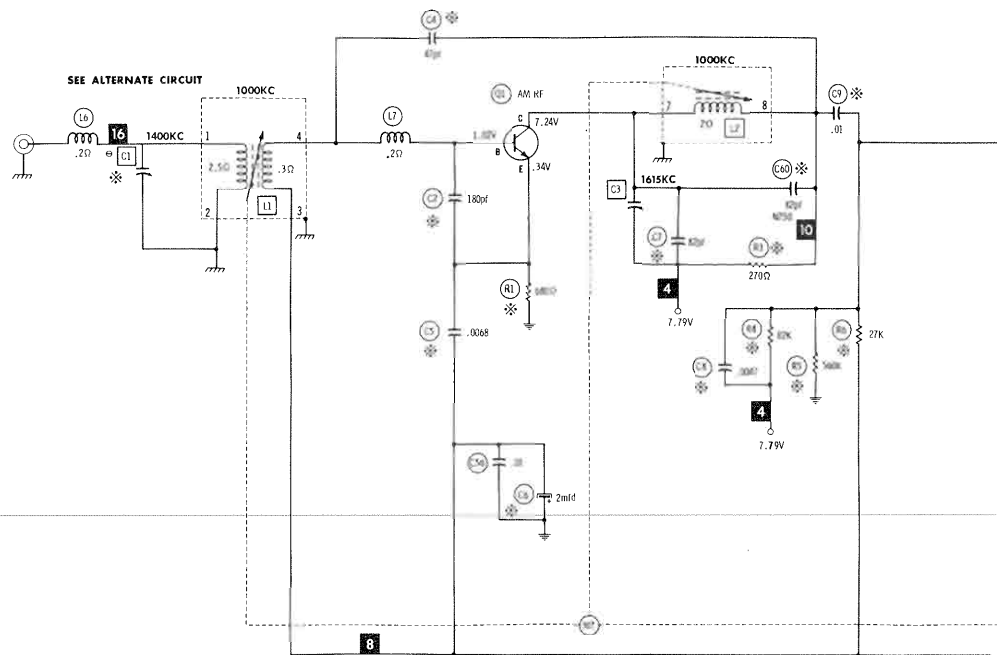


* See component substitution chart
 ✱ Value may vary replace with original value

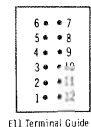
- ⊕ Denotes ground. (Voltage reference unless otherwise indicated).
- Indicates connection used in some variations.
- - - Indicates connection not used in some variations.
- o See parts list.
- Measurements taken with switching in position shown unless otherwise indicated.
- ▲ Measured with switching in T-4 position.
- Values shown in (1) are used in some applications.
- Resistors are 1/2W or less, 10% or 20%, unless otherwise indicated.
- Supply voltage maintained at rated value for measurements.
- Voltage and resistance measured with VTM or equivalent meter.
- No static applied and controls adjusted for normal operation.
- Arrow on control indicates direction of advance.
- Numbers assigned to terminals may not be found on the unit.
- Transistor resistances vary widely. No resistance measurements taken.

A PHOTOFACT STANDARD NOTATION SCHEMATIC

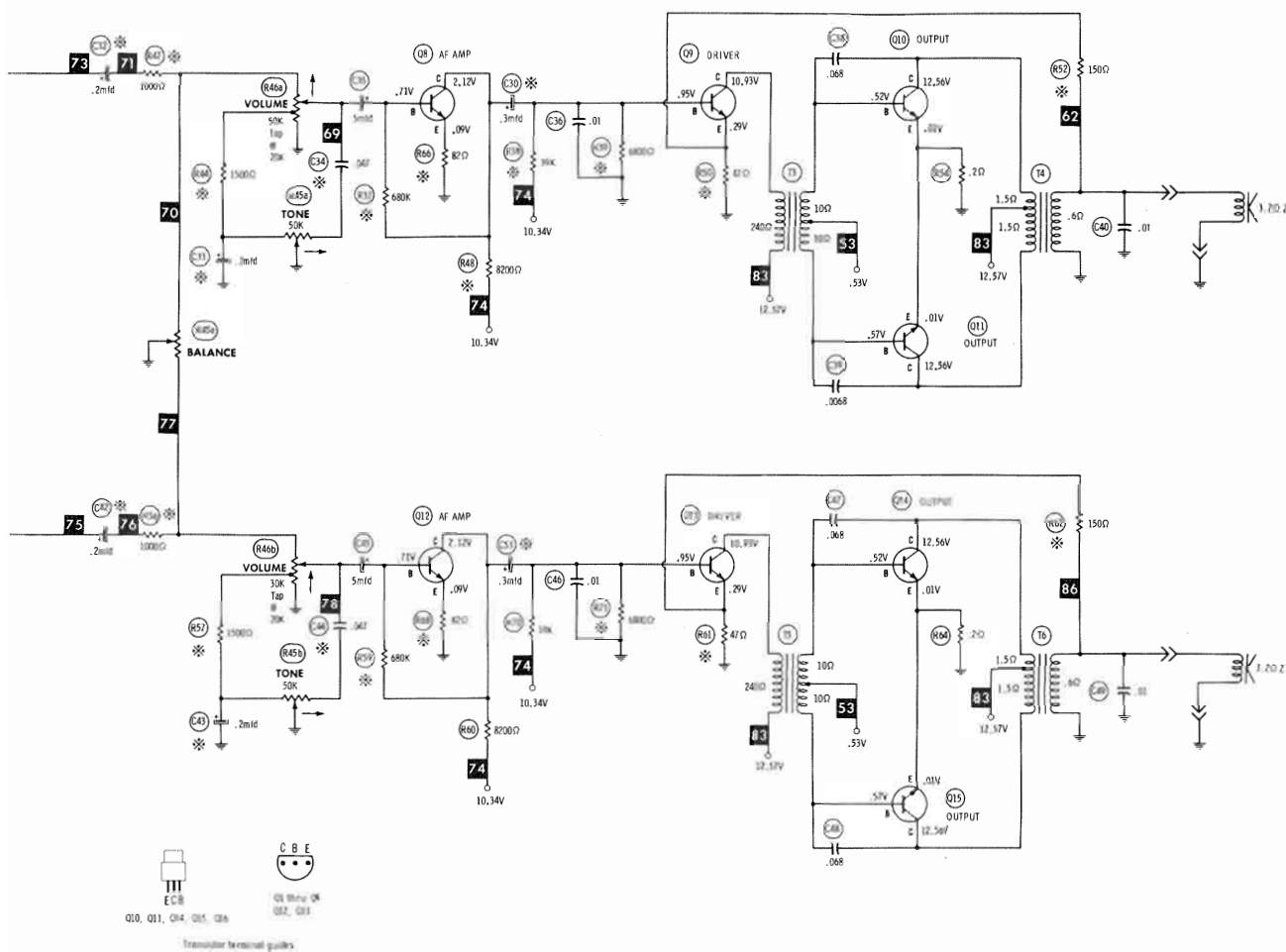
© Howard W. Sams & Co., Inc. 1972



Value of RFE is determined by	
Q10 Type No.	
ASA-1, ASA-2	1000
ASA-3	1000
ASA-4, ASA-5	1000



67



FORD/LINCOLN/MERCURY 1972 SERIES

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

ITEM No.	TYPE / MFR. No. / PART No.	REPLACEMENT DATA						
		GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	MALLORY PART No.	RCA PART No.	SPRAGUE PART No.	SYLVANIA PART No.	MOTOROLA PART No.
E1	DHD800/48-134816	GE-300	D200	PTC214	SK3100	RT218	ECG 177	
E2	DHD800/48-134816	GE-300	D200	PTC214	SK3100	RT218	ECG 177	
E4	D2H/48-137029	GE-504A	804 or 5A4D	PTC201 or PTC202	SK3030 or SK3031	RT213 or RT214	ECG 116 or ECG 117	
E5	D2H/48-137029	GE-504A	804 or 5A4D	PTC201 or PTC202	SK3030 or SK3031	RT213 or RT214	ECG 116 or ECG 117	
E14	D2H/48-137029	GE-504A	804 or 5A4D	PTC201 or PTC202	SK3030 or SK3031	RT213 or RT214	ECG 116 or ECG 117	
Q1	25B/48-134805	GE-20	TR-21	PTC123	SK3122	RT100	ECG 108	HEP723
Q2	25A/48-134804	GE-20	TR-21	PTC123	SK3122	RT100	ECG 123A	HEP722
Q3	24B/48-134807	GE-20	TR-21	PTC123	SK3122	RT100	ECG 123A	HEP725
Q4	M822/48-134823	GE-10	TR-24	PTC123	SK3124	RT102	ECG 123A	HEP730
Q5	54C/48-134810	GE-10	TR-24	PTC123	SK3124	RT102	ECG 123A	HEP725
Q6	M822/48-134823	GE-10	TR-24	PTC123	SK3124	RT102	ECG 123A	HEP730
Q7	54C/48-134810	GE-10	TR-24	PTC123	SK3124	RT102	ECG 123A	HEP725
Q8	54C/48-134810	GE-10	TR-24	PTC123	SK3124	RT102	ECG 123A	HEP725
Q9	54C/48-134846	GE-20	TR-21	PTC123	SK3122	RT100	ECG 123A	HEP724
Q10	A5A/48-137080	GE-66	1RTR-78	PTC110	SK3054		ECG 152	HEP701
Q11	A5A/48-137080	GE-66	1RTR-78	PTC110	SK3054		ECG 152	HEP701
Q12	54C/48-134810	GE-10	TR-24	PTC123	SK3124	RT102	ECG 123A	HEP725
Q13	54C/48-134846	GE-20	TR-21	PTC123	SK3122	RT100	ECG 123A	HEP724
Q14	A5A/48-137080	GE-66	1RTR-78	PTC110	SK3054		ECG 152	HEP701
Q15	A5A/48-137080	GE-66	1RTR-78	PTC110	SK3054		ECG 152	HEP701
Q16	A5A/48-137080	GE-66	1RTR-78	PTC110	SK3054		ECG 152	HEP701

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA						
		MFR. PART No.	ARCO PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	SPRAGUE PART No.
C6	2 10V	23-43280A02					TDC225M035FL	SD35-2R29
C15	10 6V	23-43280A03					TDC106M035FL	SD35-109
C18	680 16V	23-41928A43	ME-G1000	EA15-1000	WBR1000-16	QT1-32	TC1501B	TVA-1163
C20	22 6.3V	23-42582B07					TDC226M035GL	SD35-229
C21	22 6.3V	23-42582B07					TDC226M035GL	SD35-229
C22	47 6V	23-42582B08					TDC476M035HL	SD25-479
C23	47 6V	23-42582B08					TDC476M035HL	SD25-479
C24	.1 15V	23-43280A14		UK25-104			TDC104M050EL	SD35-R109
C25	.1 15V	23-43280A14		UK25-104			TDC104M050EL	SD35-R109
C26	80 16V	23-41928A23	ME-4-E-100	EA15-100	WBR100-16	MT1-19	MTA100E15	TVA-1160
C30	.3 6V	23-43280A28		UK16-304			TDC334M050EL	SD35-R339
C31	1000 4V	23-42674B08	ME-D1000	EA15-1000	WBR1000-16	QT1-32	TC1210A	TVA-1128
C32	.2 15V	23-43280A19		UK25-204			TDC224M050EL	SD35-R229
C33	.2 15V	23-43280A19		UK25-204			TDC224M050EL	SD35-R229
C35	5 6V	23-43280A27					TDC475M035FL	SD35-4R79
C37	125 16V	23-41928A42	ME-6-E-200	EA15-250	WBR250-16	MT1-23	MTA200F25	TVA-1160.6
C41	1000 16V	23-41928A44	ME-G1000	EA15-1000	WBR1000-16	QT1-32	TC1501B	TVA-1163
C42	.2 15V	23-43280A19		UK25-204			TDC224M050EL	SD35-R229
C43	.2 15V	23-43280A19		UK25-204			TDC224M050EL	SD35-R229
C45	5 6V	23-43280A27					TDC475M035FL	SD35-4R79
C53	.3 6V	23-43280A28		UK16-304			TDC334M050EL	SD35-R339
C54	680 16V	23-41928A43(1)	ME-G1000	EA15-1000	WBR1000-16	QT1-32	TC1501B	TVA-1163

(1) Used in Models 1TB4211, 1LN4213.

CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA				
			ARCO/ELMENCO PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.
C1	25-180	20-40746A20(1)					
C2	7-60	20-40746A03(2)					
C3	180		CCD-181	DD-181	GP180	GP318	10TS-T18
C4	10-60	20-43646B01					
C5	.0068		DM-15-470J	CPR-47J	CD15ED470J03	SX447	424MC470J501
C7	.0047		CCD-682	DD-682		JF268	10TS-D68
C8	.01		CCD-820	DTZ-82	NP082	CN0482	10TCC-Q82
C9	.0047		DM-30-472J	CPR-4700J	CD19FD472J03	SX247	MS-243
C10	150 N750 5%		CCD-103	CK-103	MGP01	TA110	TG-S10
C11	.0068		CCTN-151	DTN-150	N150	CN7315	10TCU-T15
C12	220 5%		CCD-682	DD-682		JF268	10TS-D68
C13	.0015		DM-19-221J	CPR-220J	CD15FD221J03	SX322	424ME220J501
C14	.1		CCD-152	DD-152		GP215	10TS-D15
C16	150		CCD-151	DD-151	GP150	SXMD10	431P10492
C17	.01		CCD-103	CK-103	MGP01	TA110	10TS-T15
C19	10-60	20-43646B01					TG-S10
C27	.1						
C28	.0047		DM-30-472J	CK-104		TA010	TG-P10
C29	.0047		DM-30-472J	CPR-4700J	CD19FD472J03	SX247	MS-243
C34	.047		CCD-503	CPR-4700J	CD19FD472J03	SX247	MS-243
C36	.01		CCD-103	CK-103	MGP05	TA150	TG-S50
C38	.068		10P-2-683		MGP01	TA110	TG-S10
C39	.068		10P-2-683			PVC1168	225P68391
C40	.01		CCD-103	CK-103	MGP01	PVC1168	225P68391
C44	.047		CCD-503	CK-503	MGP05	TA110	TG-S10
C46	.01		CCD-103	CK-103	MGP01	TA150	TG-S50
C47	.068		10P-2-683			TA110	TG-S10
C48	.068		10P-2-683			PVC1168	225P68391
C49	.01		CCD-103	CK-103	MGP01	PVC1168	225P68391
C50	.1			CK-104		TA110	TG-S10
C52	.01		CCD-103	CK-103	MGP01	TA010	TG-P10
C55	.1	(3)		CK-104		TA110	TG-S10
C56	.01		CCD-103	CK-103	MGP01	TA010	TG-P10

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 (cont)

ITEM No.	RATING	MFR. PART No.	REPLACEMENT DATA			
			ARCO/ELMENCO PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.
C59	470	(2)	DM-16-471	CPR-470J	CD15F471J500	SX347
C60	82 N750		CCTN-820		N82	CN7482
						MS-347
						10TCU-Q82

(1) Used in Models 1TB4211, 1FD4217, 1MZ4218.

(2) Used in Model 1LN4213.

(3) Used in Models 1TB4211, 1LN4213.

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

ITEM No.	FUNCTION	RESIST-ANCE	REPLACEMENT DATA				
			MFR. PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R45a	Tone (Left)	50K	18C41849B08,U				
b	Tone (Right)	50K	(1)				
R46a	Volume (Left)	30K					
		Tap @					
		20K					
b	Volume (Right)/	30K					
	Switch	Tap @					
		20K					
a	Tone	50K	18C41849B07,T				
b	Tone	50K	(2)				
c	Volume	30K					
		Tap @					
d	Volume/Switch	20K					
		Tap @					
		30K					
a	Tone	50K	18C41849B09,U				
b	Tone	50K	(3)				
c	Volume	30K					
		Tap @					
d	Volume	20K					
		Tap @					
		30K					
a	Tone	50K	18C41849B10,T				
b	Tone	50K	(4)				
c	Volume	30K					
		Tap @					
d	Volume/Switch	20K					
		Tap @					
		30K					
R58	Balance	20K	18B41512B04(1)				P353L,3258(5),
		32K					SH31,None,
							OX2375,None
	Balance	32K	18B41512B03(2)				P353L,3012,SH31,
							None,OX812,None
	Balance	32K	18B41705B02(3)				P353L,3100,SH31,
							None,OX1687,None
	Balance	32K	18C41705B05(4)				P353L,3112,SH31,
							None,OX1875,None
R74	Fader		18-41488C01(1)				

(1) Used in Model 1FD4217 (D2AA-19A242-AE) - 1972 Ford, Mercury, Meteor.

(2) Used in Model 1LN4213 (D2VA-19A242-AD) - 1972 Lincoln.

(3) Used in Model 1MZ4218 (D2ZA-19A242-AF) - 1972 Mustang, Cougar.

(4) Used in Model 1TB4211 (D2SA-19A242-AH) - 1972 Thunderbird, Mark IV.

(5) Alter bushing to meet requirements.

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA		ITEM No.	RATING	REPLACEMENT DATA	
		WORKMAN PART No.	MFR. PART No.			WORKMAN PART No.	MFR. PART No.
R54	.2 (PTC)	WS2.2	17-40756A06	R64	.2 (PTC)	WS2.2	17-40756A06
R55	5.6	CA-2-5.6	6-10053879				

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA			
		PART No.	MEISSNER PART No.	MILLER PART No.	WORKMAN PART No.
L1	Antenna	(1)			
L2	RF	(1)			
L3	Oscillator	(1)			
L5	RF Choke (1.5uh)	24-40788A04	19-1001	4604	T856
L6	RF Choke (1.5uh)	24-40788A04	19-1001	4604	T856
L7	RF Choke (1.5uh)	24-40788A04	19-1001	4604	T856
T1	Input IF	24-42517A27		8002	
T2	Output IF	24-42517A28		8010	

(1) Part of M1. Coils assembly (L1,2,3) Part No. 1-41500C84 used in Model 1TB4211;

Part No. 1-41300C31 used in Models 1FD4217, 1LN4213, 1MZ4218.

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA				NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	MFR. PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L4	130ma 210ma (1)	.2	5mh	25-43869B06	TC-2	TR-157	TY17XT	(1) Tape

FORD/LINCOLN/MERCURY 1972 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.

TRANSFORMER (Driver)

ITEM No.	TURNS RATIO			REPLACEMENT DATA				NOTES
	PRI.	SEC. 1	SEC. 2	MFR. PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD Part No.	
T3	8	1		25-40409C01				
T5	8	1		25-40409C01				

TRANSFORMER (Audio Output)

ITEM No.	IMPEDANCE		REPLACEMENT DATA				NOTES
	PRI.	SEC.	MFR. PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T4	23.3	3.2	25-40782C10				
T6	23.3	3.2	25-40782C10				

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MFR. PART No.	QUAM PART No.	
SP1	PM, 3.2 ohms			
SP2	PM, 3.2 ohms			

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	20 Amp Quick Acting		In Fuse Block						

TAPE HEADS

ITEM No.	MEASURED			MFR. PART No.	NORTONICS PART No.	DESCRIPTION
	INDUCTANCE	BIAS/ERASE VOLTS (RMS)	BIAS FREQ.			
E9	410mh			59-43542A01	5800 (1)	8-Track Stereo (1) Use original mounting.

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
M1	Tuner	77-42901877	AS-175 (Model 1TB4211) AS-200 (Model 1LN4213) AS-201 (Model 1FD4217) AS-202 (Model 1MZ4218) (6000 RPM @ 12.55V, on Blue Lead). Coil
	Tuner	77-42901878	
	Tuner	77-42901879	
	Tuner	77-42901880	
E3	Motor, Tape	59-43663B05	
E7	Solenoid, Head Shift	24-42064B01	
E8	Switch, Automatic	40-43642A01	
	Program Selector		
E11	Switch, Radio - Tape	40-41363B01	

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

ITEM	PART No.	ITEM	PART No.
Model 1TB4211 Escutcheon, with Dial Glass Tape Door Knob, Volume, Balance, Tone, Tuning Dial Pointer Dial Glass	1-41300C64 15-41349B04 (1) 52-42479B26 34-43863B02	Model 1FD4217 Escutcheon, with Dial Glass Tape Door Knob, Volume or Tuning Knob, Tone Knob, Balance Dial Pointer Dial Glass	1-41300C71 15-41349B04 36-40709C01 36-40758C01 36-41486C01 52-42479B26 38-43639B01
Model 1LN4213 Escutcheon, with Dial Glass Tape Door Knob, Balance Knob, Volume, Tone, Tuning Dial Pointer Dial Glass	1-41300C55 15-41349B03 36-43793B01 (1) 52-42479B19 34-43166B01	Model 1MZ4218 Escutcheon, with Dial Glass Tape Door Knob, Tone, Balance Knob, Volume, Tuning Dial Pointer Dial Glass	1-41300C75 15-41349B04 36-40708C01 36-40709C01 52-42479B26 34-43863B01

(1) Obtain from auto dealer.

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 Sea: 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.)