



PHOTOFACT[®] with

CIRCUITRACE[®]

TRADE NAME: Arvin Model 87R59 (Ch. 1,99901)

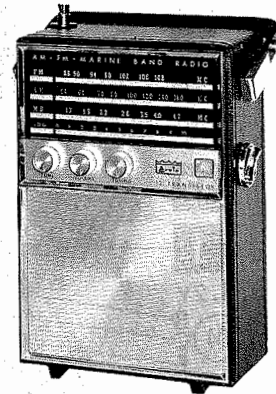
SUPPLIER: For Current Address, See Annual Index

TYPE SET: 12-Transistor AM-MB-FM Receiver

POWER SUPPLY: 6 Volts DC

RATING: (FM) 12ma @ 6VDC (No Signal, Min. Volume)
30ma @ 6VDC (Signal, Normal Volume)

TUNING RANGE: BROADCAST 540 - 1620KC
MARINE BAND 1.7 - 4.7MC
FREQ. MOD. 88 - 108.5MC



ALIGNMENT INSTRUCTIONS

Check for specified source voltage. Set Volume control at maximum.
Fashion loop of several turns of wire and connect generator across loop.
Adjust output of generator to radiate only enough signal into receiver to obtain a suitable indication.
Suggested Alignment Tools:

A1, A2, A3, A5, A8, A10 thru A14. GENERAL CEMENT #9087..... WALSCO #2528
A4, A6, A7, A9, A15, A16..... GENERAL CEMENT #8605..... WALSCO #2505

SELECTOR IN AM

	GENERATOR FREQUENCY	DIAL SETTING	INDICATOR	ADJUST	REMARKS
1.	455KC (400% Mod.)	Tuning gang fully open.	Output Meter across Voice coil.	A1, A2, A3	Adjust for maximum. Repeat until no further improvement can be made.
2.	1620KC	"	"	A4	Adjust for maximum.
3.	600KC	Tune to signal.	"	A5	Rock tuning gang and adjust for maxi- mum. Repeat steps 2 and 3 until no further improvement can be made.

SELECTOR IN MB

4.	4.7MC	Tuning gang fully open.	"	A6, A7	Adjust for maximum.
5.	1.7MC	Tuning gang fully closed.	"	A8	Adjust for maximum.

SELECTOR IN AM

	1400KC	Tune to signal.	"	A9	Adjust for maximum.
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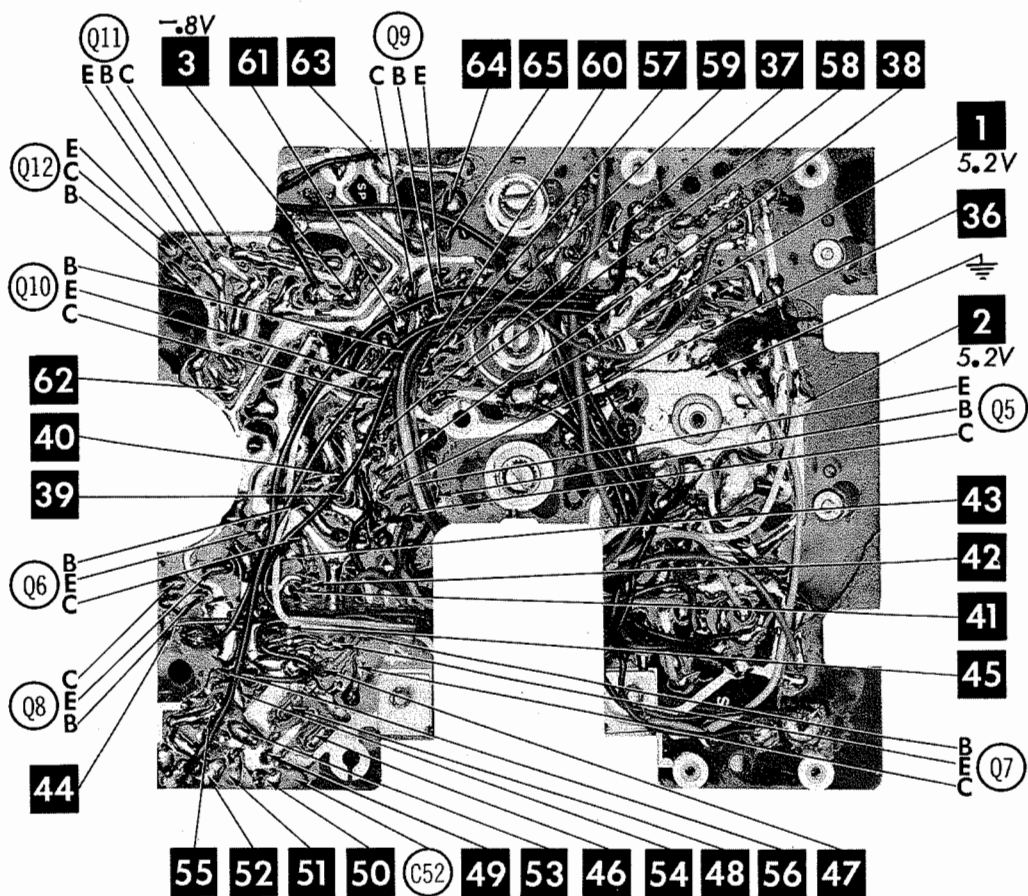
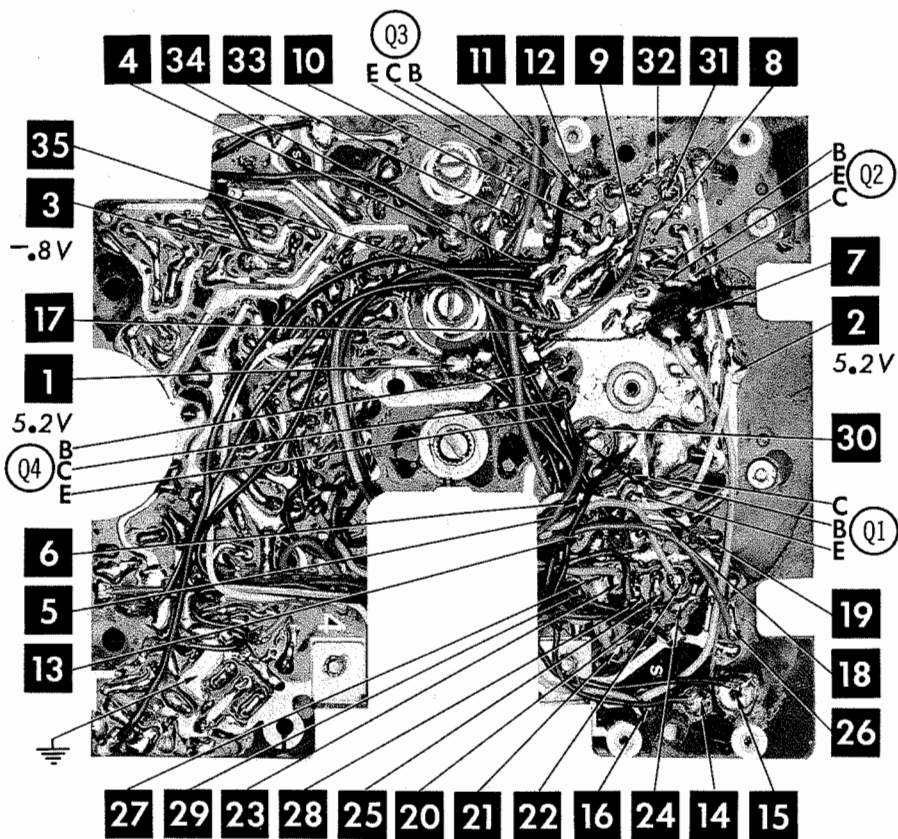
SELECTOR IN FM

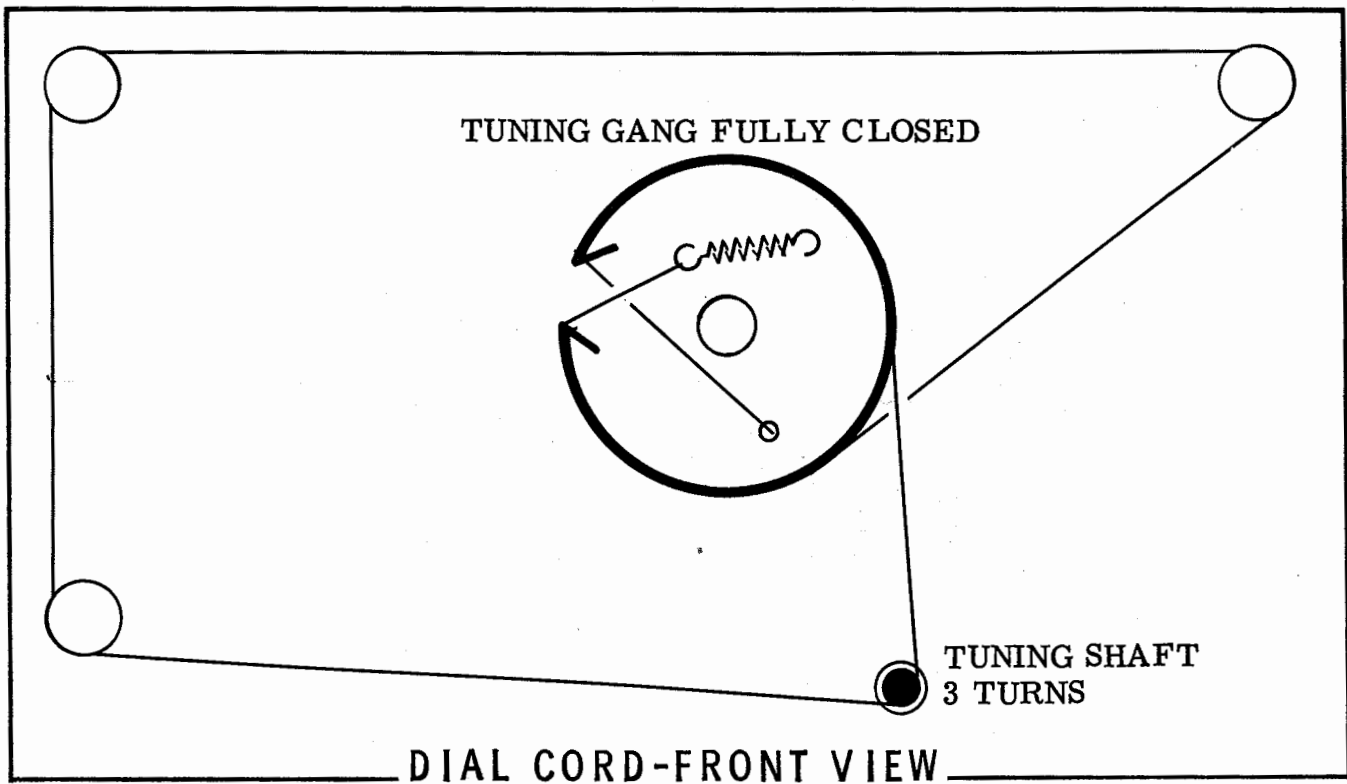
7.	10.7MC (Unmod.)	Point of non- interference.	DC probe of VTVM to point A; common to ground.	A10, A11, A12, A13	Adjust for maximum.
8.	"	"	DC probe to point B; common to point C.	A14	Adjust for zero reading. A positive or negative reading will be obtained on either side of the correct setting.
9.	108.5MC	Set at high end.	DC probe to point A; common to ground.	A15, A16	Adjust for maximum.

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

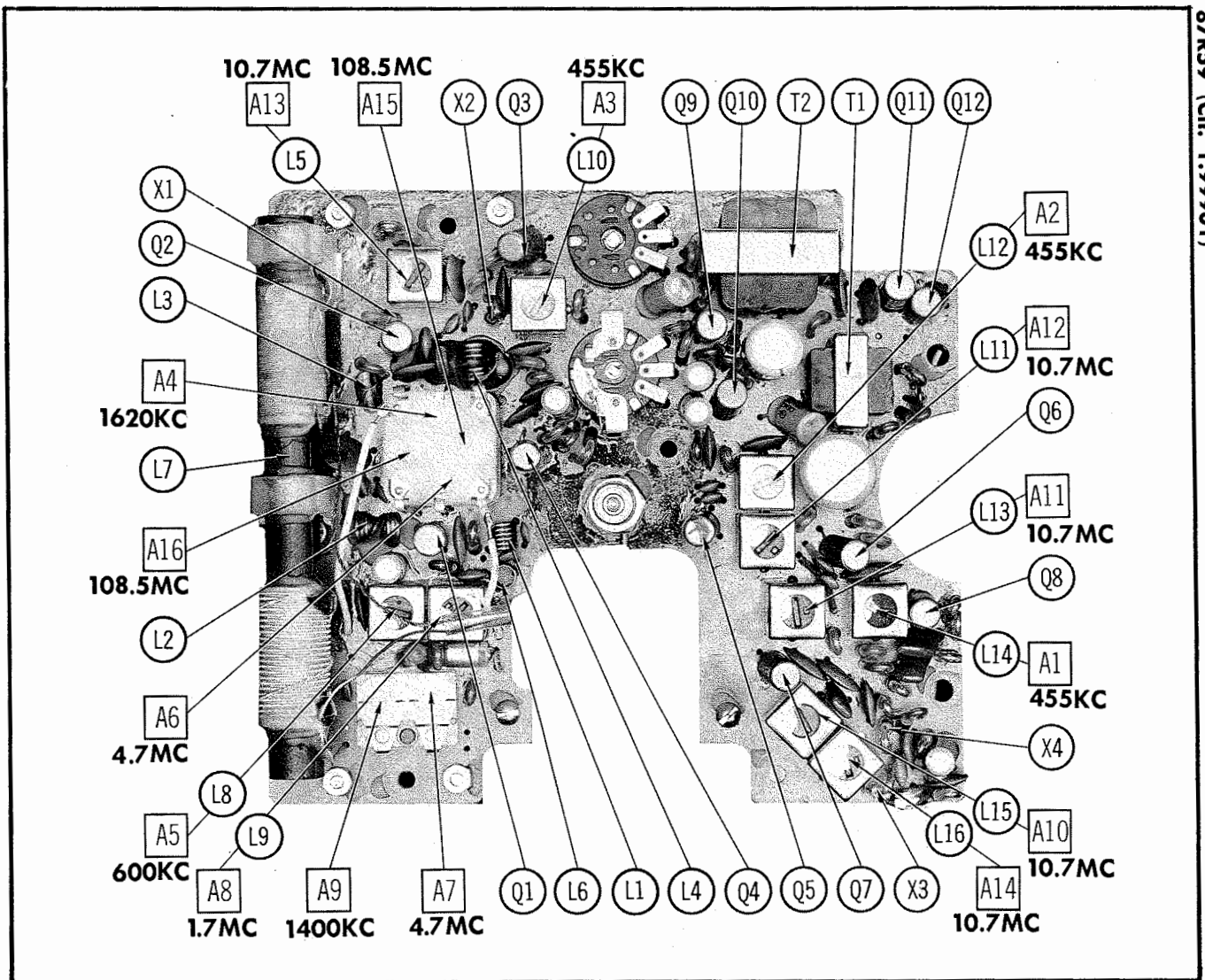
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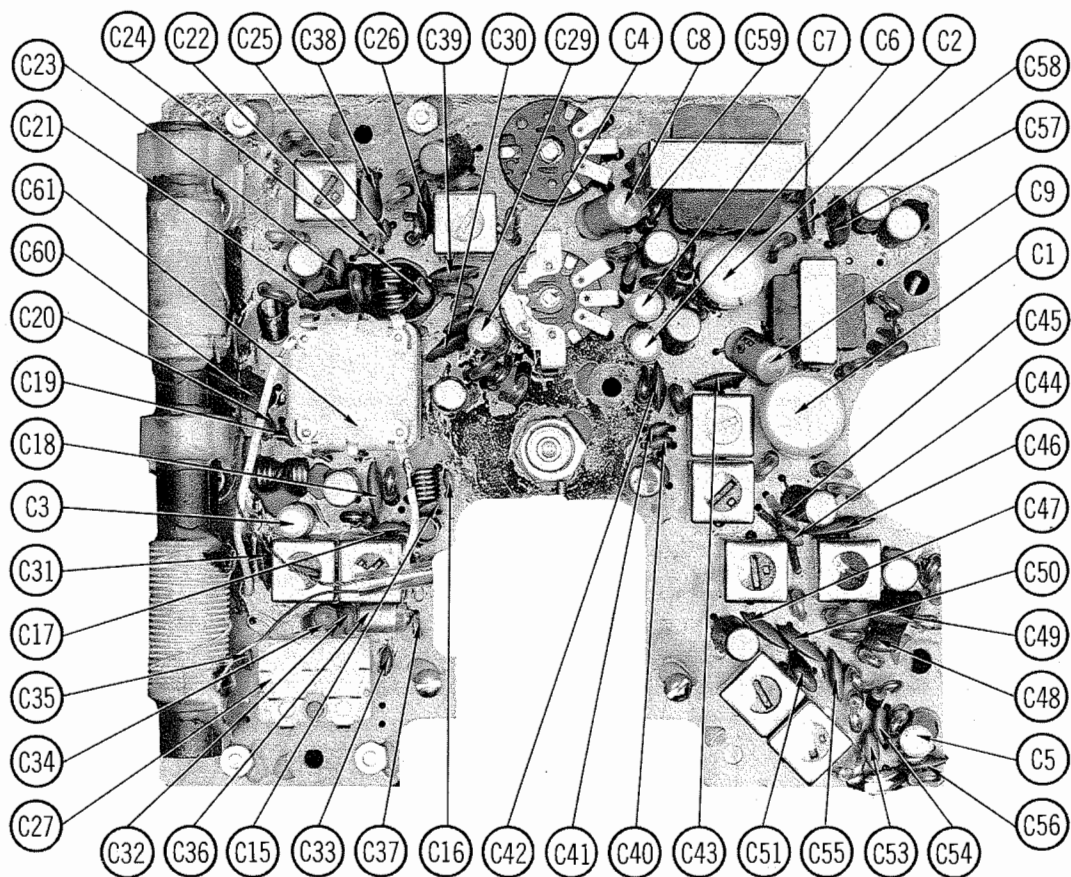
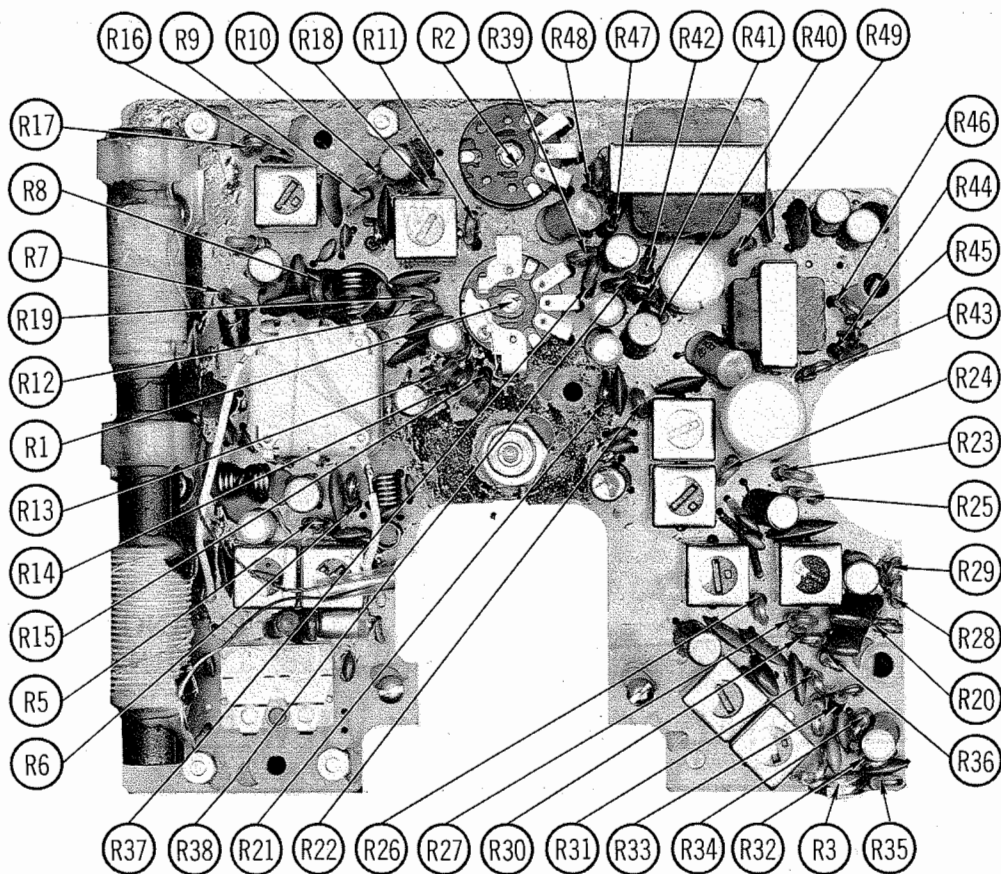
ARVIN MODEL 87R59 (Ch. 1,99901)





ARVIN MODEL 87R59 (Ch. 1.99901)





PARTS LIST AND DESCRIPTION

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

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA				ARVIN PART No.	NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	RCA PART No.		
Q1	2SA235	FM RF Amp.	DS-41		TR-17	SK-3006	310-123	PNP
Q2	2SA235	FM Converter	DS-41		TR-17	SK-3006	310-123	PNP
Q3	2SA234	AM Mixer	DS-41	GE-9	TR-17	SK-3006	2001812-65	PNP
Q4	2SA350	AM Osc.	DS-41	GE-9	TR-18	SK-3007	310-68	PNP
Q5	2SA350	1st AM-FM IF Amp.	DS-41	GE-9	TR-18	SK-3007	310-68	PNP
Q6	2SA350	2nd AM-FM IF Amp.	DS-41	GE-9	TR-18	SK-3007	310-68	PNP
Q7	2SA350	3rd FM IF Amp.	DS-41	GE-9	TR-18	SK-3007	310-68	PNP
Q8	2SA12	AM Det.	DS-56	GE-1	TR-14	SK-3005	67193-82	PNP
Q9	2SB75	AF Amp.	DS-26	GE-2	TR-14	SK-3003	99201	PNP
Q10	2SB75	Driver	DS-26	GE-2	TR-14	SK-3003	99201	PNP
Q11	2SB77	Output	DS-26	GE-2	TR-14	SK-3003	99203	PNP
Q12	2SB77	Output	DS-26	GE-2	TR-14	SK-3003	99203	PNP

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MEASURED CURRENT	ORIGINAL Part or Type No.	RECTIFIERS & DIODES		RECTIFIERS		
			GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	MALLORY PART No.	RCA PART No.	SARKES TARZIAN PART No.
X1		1S990	1N34AS	1N34A			
X2		1S85					
		(2001812-66)					
X3		1N60	1N60	1N60			
X4		1N60	1N60	1N60			

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		ARVIN PART No.	REPLACEMENT DATA				
	CAP.	VOLT.		AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	SPRAGUE PART No.
C1	500	6	2001812-60				MTA500F6	TL-1108
C2	200	6	2001812-63	CRE331A	NLW200-12		TT6X200	VL-1108
C3	.5	6	2001812-54	CRE300A	NLW1-6	MTI-1	TT6X1	TL-1080
C4	10	6	2001812-57	CRE307A	NLW10-6	MTI-5	TT6X10	TL-1087
C5	10	6	2001812-57	CRE307A	NLW10-6	MTI-5	TT6X10	TL-1087
C6	.5	6	2001812-54	CRE300A	NLW1-6	MTI-1	TT6X1	TL-1080
C7	.5	6	2001812-54	CRE300A	NLW1-6	MTI-1	TT6X1	TL-1080
C8	30	6	2001812-61	CRE313A	NLW30-6	MTI-13	TT6X30	TE-1092
C9	30	6	2001812-62	CRE313A	NLW30-6	MTI-13	TT6X30	TE-1092

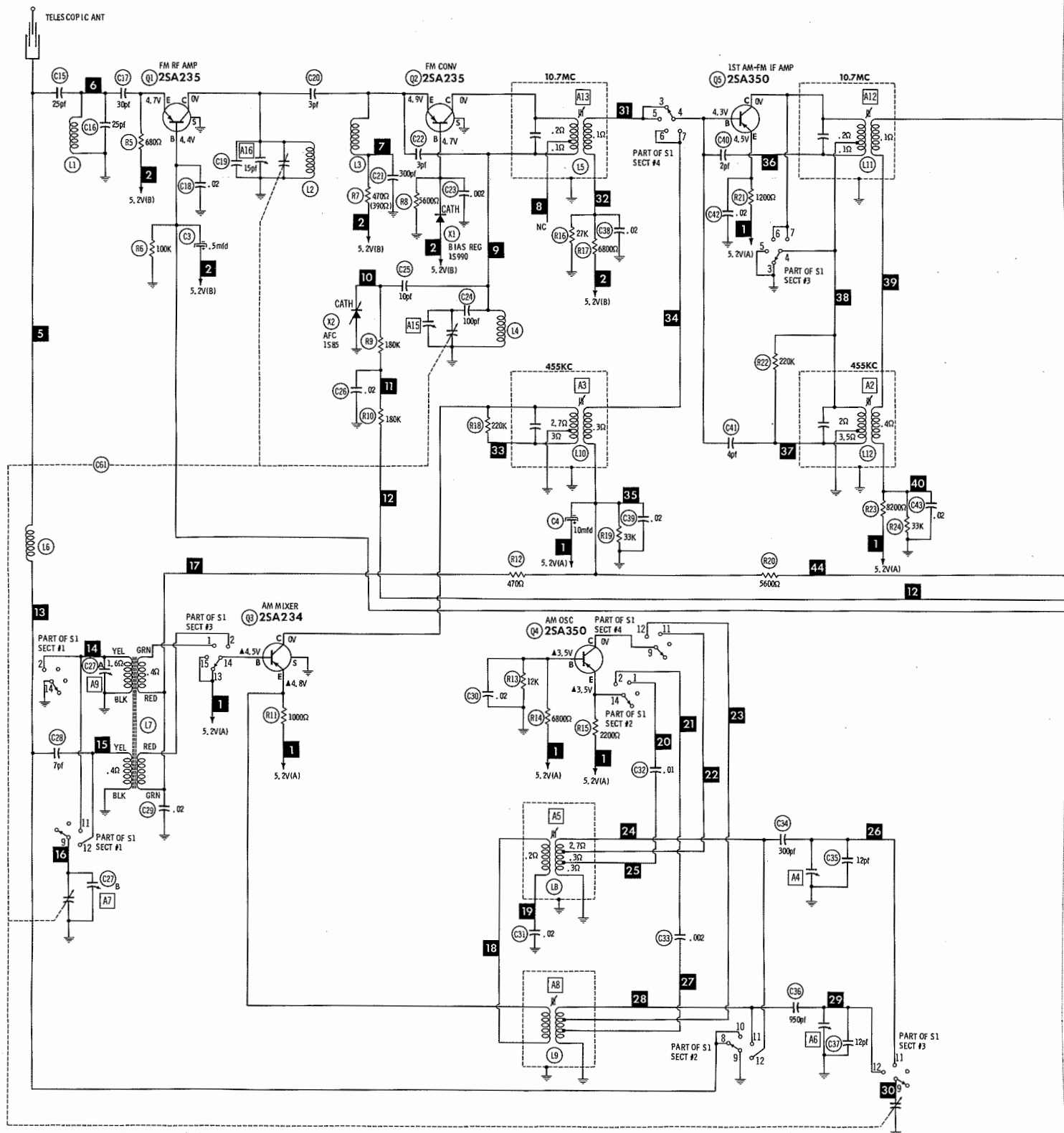
CAPACITORS

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.
C15	25		NPO-DI 22	DTZ-22	CY601CG220K	CCTO-220	CNO422	10TCC-Q22
C16	25		NPO-DI 22	DTZ-22	CY601CG220K	CCTO-220	CNO422	10TCC-Q22
C17	30		NPO-DI 33	DTZ-33	CS601CG330K	CCTO-330	CNO433	10TCC-Q33
C18	.02		TTD-02	CK-203	HOR101ZV203P	CCD-203	TA120	TG-S20
C19	15		NPO-DI 15	DTZ-15	CZ601CG150J	CCTO-150	CNO415	10TCC-Q15
C20	3		NPO-DI 3.0	DTZ-3R3		CCTO-3R3	CNO533	10TCC-V30
C21	300		DI-300	DM-301		CCD-301	GP330	10TS-T30
C22	3		NPO-DI 3.0	DTZ-3R3		CCTO-3R3	CNO533	10TCC-V30
C23	.002		DI-2000	DM-202	JBX601YP202K	CCD-202	GP220	5GAB-D22
C24	100		NPO-DI 100	DTZ-100	CV601CG101K	CCTO-101	CNO310	10TCC-T10
C25	10		NPO-DI 10	DTZ-10	CZ601CG100J	CCTO-100	CNO410	10TCC-Q10
C26	.02		TTD-02	CK-203	HOR101ZV203P	CCD-203	TA120	TG-S20
C27A		#2001812-23						
C28	7		NPO-DI 6.8	DTZ-6R8	CZ601CH6R8D	CCTO-6R8	CNO568	10TCC-V68
C29	.02		TTD-02	CK-203	HOR101ZV203P	CCD-203	TA120	TG-S20
C30	.02		TTD-02	CK-203	HOR101ZV203P	CCD-203	TA120	TG-S20
C31	.02		TTD-02	CK-203	HOR101ZV203P	CCD-203	TA120	TG-S20
C32	.01		TTD-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C33	.002		DI-2000	DM-202	JBX601YP202K	CCD-202	GP220	5GAB-D22
C34	300			CPR-330J	CD15F331J500	DM-15-331J	SX333	MS-333
C35	12			TCZ-12	CZ601CG120J	CCTO-120	CNO412	10TCC-Q12
C36	950			CPR-1000J	CD19F102J500	DM-19-102J	SX210	MS-210
C37	12			TCZ-12	CZ601CG120J	CCTO-120	CNO412	10TCC-Q12
C38	.02		TTD-02	CK-203	HOR101ZV203P	CCD-203	TA120	TG-S20
C39	.02		TTD-02	CK-203	HOR101ZV203P	CCD-203	TA120	TG-S20
C40	2		NPO-DI 2.2	DTZ-2R2	CZ601CJ2R2D	CCTO-2R2	CNO522	10TCC-V22
C41	4							10TCC-V39
C42	.02		TTD-02	CK-203	HOR101ZV203P	CCD-203	TA120	TG-S20
C43	.02		TTD-02	CK-203	HOR101ZV203P	CCD-203	TA120	TG-S20
C44	2		NPO-DI 2.2	DTZ-2R2	CZ601CJ2R2D	CCTO-2R2	CNO522	10TCC-V22
C45	5		NPO-DI 5.0	DTZ-4R7	CZ601CH5R0D	CCTO-050	CNO547	10TCC-V50
C46	.04		BPD-05	DD-503		CCD-503	GP150	5HK-550
C47	.02		TTD-02	CK-203	HOR101ZV203P	CCD-203	TA120	TG-S20
C48	.01		TTD-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C49	.02		TTD-02	CK-203	HOR101ZV203P	CCD-203	TA120	TG-S20
C50	.02		TTD-02	CK-203	HOR101ZV203P	CCD-203	TA120	TG-S20
C51	.01		TTD-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C52	2		NPO-DI 2.2	DTZ-2R2	CZ601CJ2R2D	CCTO-2R2	CNO511	10TCC-V22
C53	.002		DI-2000	DM-202	JBX601YP202K	CCD-202	GP220	5GAB-D22
C54	.002		DI-2000	DM-202	JBX601YP202K	CCD-202	GP220	5GAB-D22
C55	.02		TTD-02	CK-203	HOR101ZV203P	CCD-203	TA120	TG-S20
C56	.02		TTD-02	CK-203	HOR101ZV203P	CCD-203	TA120	TG-S20
C57	.01		TTD-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C58	.01		TTD-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C59	.005		TTD-005	CK-502	HOY101ZV502P	CCD-502	TA250	TG-D50
C60	.02		TTD-02	CK-203	HOR101ZV203P	CCD-203	TA120	TG-S20
C61		#2001812-18						

Arvin Part Number.

(CONTINUED ON PAGE 22)

ARVIN MODEL 87R59 (Ch. 1.99901)



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

NC NO CONNECTION
▲ MEASURED IN "AM" POSITION

Resistors are 1/2 watt or less and rated 10% or 20% unless otherwise indicated.

A PHOTOFACIT STANDARD NOTATION SCHEMATIC
with **CircuitTrace**

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PARTS LIST AND DESCRIPTION (CONTINUED)

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

CONTROLS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA				
			ARVIN PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1	Volume & Switch	10K	2001812-21				
R2	Tone	500K	2001812-22				
R3	Ratio Det. Balance	2000Ω	2001812-24				

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA			ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN PART No.	ARVIN PART No.			IRC PART No.	WORKMAN PART No.	ARVIN PART No.
R45	250Ω (Cold)		GM220	2001812-27					

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA				
		ARVIN PART No.	MEISSNER Part No.	MERIT PART No.	MILLER PART No.	WORKMAN PART No.
L1	FM Ant.	2001812-1				
L2	FM RF	2001812-2				
L3	FM IF Trap	2001812-3				
L4	FM Osc.	2001812-4				
L5	1st FM IF	2001812-8	16-9031		2070	
L6	FM IF Trap	2001812-3				
L7	AM-MB Loopstick	2001812-7				
L8	AM Osc.	2001812-5				
L9	MB Osc.	2001812-6				
L10	1st AM IF	2001812-13	16-9026	BC-574	2066	
L11	2nd FM IF	2001812-9	16-9031		2071	
L12	2nd AM IF	2001812-14	16-9027	BC-575	2067	
L13	3rd FM IF	2001812-10	16-9032		2072	
L14	3rd AM IF	2001812-15	16-9028	BC-576	2068	
L15	Ratio Det. (Pri.)	2001812-11				
L16	Ratio Det. (Sec.)	2001812-12				

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO			REPLACEMENT DATA					NOTES
	PRI.	SEC. 1	SEC. 2	ARVIN PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	1,8	1		2001812-16					

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC.	ARVIN PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T2	200Ω CT	8Ω	2001812-17					

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA			NOTES
		ARVIN PART No.	JENSEN PART No.	QUAM PART No.	
SP1	3 1/2" PM 6-8Ω	2001812-20		3A05RZ8	

BATTERIES

ITEM No.	VOLTAGE	ARVIN PART No.	REPLACEMENT DATA			NOTES
			BURGESS	EVEREADY	MALLORY	
M1	6V		130 or AL-1	1035 or E93	M14R or MN1400	4 Required

MISCELLANEOUS

ITEM No.	PART NAME	ARVIN PART No.	NOTES
S1	Switch, Selector	2001812-19	

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
Cabinet	2001812-29	Knob - Selector	2001812-35
Handle	2001812-36	Telescopic Ant.	2001812-40
Knob - Control	2001812-33		

WIRING DATA

General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid 22AWG)	Available
	8524 (Stranded 22AWG)	in
	8570 (Stranded 26AWG)	12 Colors