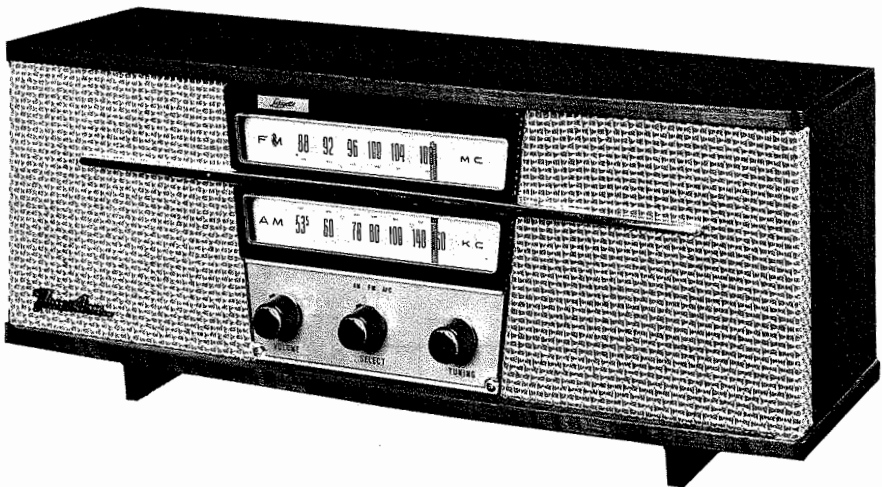


PHOTOFACT® Folder

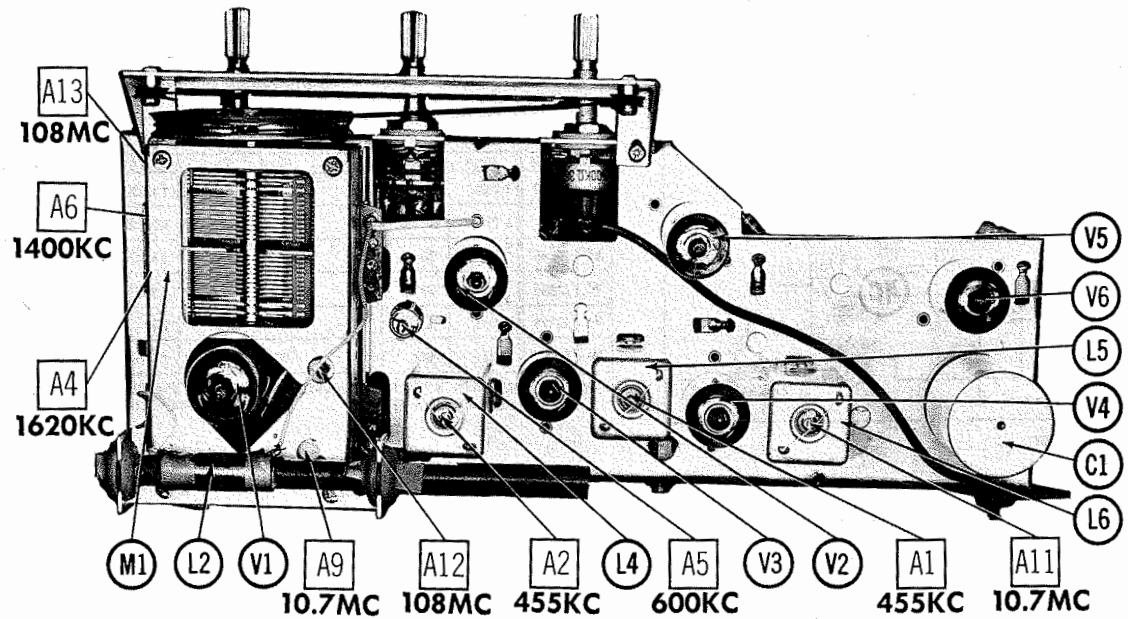
with CIRCUITRACE®

LAFAYETTE
MODEL FS-246



TRADE NAME	Lafayette Model FS-246		
SUPPLIER	Lafayette Radio Electronics Corp., 111 Jericho Turnpike, Syosset, Long Island, N. Y.		
TYPE SET	AC-DC Operated 6 Tube AM-FM Receiver		
POWER SUPPLY	110-120 Volts AC-DC	RATING	34 Watts, .4Amp. @ 117 Volts AC
TUNING RANGE	BROADCAST 535-1625KC	FREQ MOD	88-108MC

LAFAYETTE
MODEL FS-246



HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana

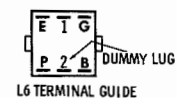
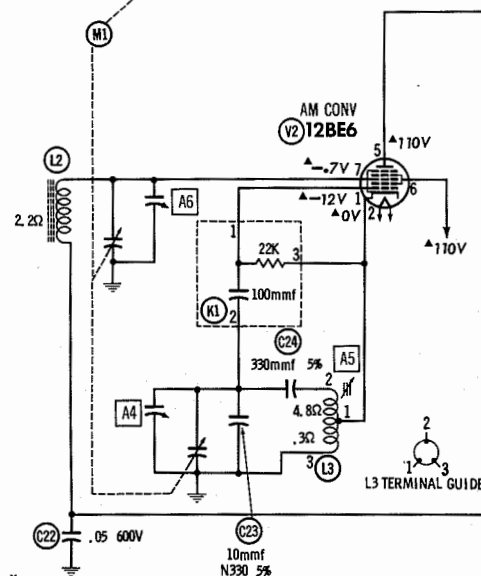


The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W.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

MK364

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DATE 12-63 SET 669 FOLDER 7



ALL MEASUREMENTS TAKEN IN "FM" POSITION UNLESS OTHERWISE DESIGNATED. NC NO CONNECTION
† MEASURED FROM OUTPUT OF X1. ▲ MEASURED IN "AM" POSITION.

SELE
SHOW
SWI
1. A
2. FA
3. FN

* NOT USED IN SOME VERSIONS

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.

A PHOTOFAC[®] STANDARD NOTATION SCHEMATIC
with CIRCUITRACE[™]

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PARTS LIST AND DESCRIPTION

WIRING DATA

General-use Unshielded Hook-up Wire		Use BELDEN No. 8530 (Solid) Available in 12 Colors
Power Cord		Use BELDEN No. 8524 (Stranded) Available in 12 Colors
Power Cord (Interlock Type)		Use BELDEN No. 1708 (Plastic) or 1726 (Rubber) - 6 Ft. Use BELDEN No. 1709 (Plastic) or 1729 (Rubber) - 9 Ft. Use BELDEN No. 8874 (Rubber) or 8895 (Plastic)

TUBES

ITEM No.	AMPEREX		GENERAL ELECTRIC	RCA	RAYTHEON	SYLVANIA	TYPE
	USE	TYPE					
V1	FM RF Amp.-FM Conv	17EW8	V4 V5 V6	AM Det.-2nd FM IF Amp. AF Amp Output	12BA6 12AV6 50C5	12BA6 12AV6 50C5	TYPE
V2	AM Conv	12BE6					
V3	1st AM-FM IF Amp	12BA6					

POWER RECTIFIERS

ITEM No.	MEASURED CURRENT	ORIGINAL Part or Type No.	RECTIFIERS	
			MALLORY PART No.	SARKIS TARTAN PART No.
X1	.080A	SM150	A300 or D300	1N1763 or 1N3861 F-4 or 40H

ELECTROLYTIC CAPACITORS

ITEM No.	RATING CAP.	VOLT.	REPLACEMENT DATA			
			AEROVOX PART No.	CORNELL-DUBIER PART No.	GENERAL ELECTRIC PART No.	SPRAGUE PART No.
C1A	60	180	P1T77 P1T77	NLW5-50	MT1-3 MT1-3	MLV5-25 MLV5-25
C1B	60	180				
C1C	60	180				
C2	5	25				
C3	5	25				

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

FIXED CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA				
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBIER PART No.	ELWENCO PART No.	MALLORY PART No.
C4	.002	Note 1	BPD-002	DD-202	BYA10D2	CCD-202	B-220
C5	3mmf		BPD-001	DD-102	BYA10D1	CCD-102	B-210
C6	.001		BPD-01	DD-103	BYA10S1	CCD-103	B-110
C7	.01			TC2-20	CI0Q2C	CCTO-200	CNO-422
C8	20			TC2-20	CI0Q2C	CCTO-200	CNO-422
C9	20	5%		TC2-20	CI0Q2C	CCTO-200	CNO-422
C10	20	10%		TC2-20	CI0Q2C	CCTO-200	CNO-422
C11	5mmf	(. 01) †		TCN-5	CI0V5U	CCTN-080	CNT-550
C12	5mmf			TC2-4R7	CI0V47C	CCTO-080	CNO-547
C13	5mmf			DD-502	BYA10D5	CCD-502	B-250
C14	.005		BPD-005	DD-502	BYA10D5	CCD-502	B-250
C15	3mmf			TC2-3R3	CI0V3R3C	CCTO-3R3	CNO-533
C16	10	N330 5%		TCA-10	LA10T1583	CCD-151	GP315
C17	150		SI 150	DD-151	LA10T1583	CCD-151	GP315
C18	.01	5%	BPD-01	DD-100	CI0T1C	CCD-103	B-110
C19	100	5%		TC2-100	CI0T1C	CCTO-110	CNO-310
C20	100	5%		TC2-100	CI0T1C	CCTO-110	CNO-310
C21	.05	600V	BPD-01	DD-103	BYA10S1	CCD-103	B-110
C22	.05	600V	P688N-05	DD-503	PM3S5	CCD-3-503	GEM-615
C23	10	N330 5%		TCA-10			
C24	330	5%		DD-502	BYA10D5	CCD-502	B-250
C25	.005	600V	P688N-05	DD-503	PM3S5	CCD-3-503	GEM-615
C26	.05	600V		D6-201	LA10T2-53	CCD-201	GP320
C27	200	10%		DD-502	BYA10D5	CCD-502	B-250
C28	.005		BPD-005	DD-502	BYA10D5	CCD-502	B-250
C29	200	10%		D6-201	LA10T2-53	CCD-201	GP320
C30	.02	600V	P688N-02	DD-203	PM3S22	6DP-2-203	GEM-612
C31	100	5%		TC2-100	CI0T1C	CCTO-110	CNO-310
C32	.02	600V	P688N-02	DD-203	PM3S22	6DP-2-203	GEM-612
C33	100	5%		TC2-100	CI0T1C	CCTO-110	CNO-310
C34	.02	600V	P688N-02	DD-203	PM3S22	6DP-2-203	GEM-612
C35	.02	600V	P688N-02	DD-203	PM3S22	6DP-2-203	GEM-612
C36	.01	600V	P688N-01	DD-103	PM3S1	6DP-2-103	GEM-611
C37	.02	600V	P688N-02	DD-203	PM3S22	6DP-2-203	GEM-612
C38	.005		BPD-005	DD-502	BYA10D5	CCD-502	B-250

Note 1 Not used in some versions
† Alternate Value

CONTROLS

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

ITEM No.	USE	RESIST-ANCE	REPLACEMENT DATA			
			Lafayette PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.
R1	Volume, Switch	500K	36.01T	B-60-S or F2-500K, SU204, KR-1)	A47-500K-Z (BU1, CF25, SSI, CO)*	Q18-133,76-1 or US-41 or (RU55A, SL36, SL3250, US-41) or (U48, US-28)

*"SNAPTROL

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA			
		Lafayette PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.
L1	1st FM IF				
L2	Loopstick				
L3	AM Osc.				
L4	1st AM IF				
L5	2nd FM-AM IF				
L6	Radio Detector				

ALIGNMENT INSTRUCTIONS

Maintain line voltage at rated value. Allow a 15 minute warmup for receiver and equipment.
Use only enough generator output to obtain a suitable indication.
Suggested Alignment Tools: GENERAL CEMENT 8290, 8866, 9087
WALSOCO 2525, 2526, 2587

AM ALIGNMENT - SELECTOR IN AM POSITION

Fashion loop of several turns of wire and connect generator across loop.				
GENERATOR FREQUENCY	DIAL SETTING	INDICATOR	ADJUST	REMARKS
455KC (Unmod.)	Tuning gang fully open.	DC probe of VTVM to point \diamond ; common to ground.	A1, A2, A3,	Adjust for maximum.
1820KC	Tune to signal	"	A4	"
600KC	"	"	A5	Rock tuning gang and adjust for maximum.
1400KC	"	"	A6	Repeat steps 2 and 3.
	"	"		Adjust for maximum.

FM ALIGNMENT USING AM SIGNAL GENERATOR - SELECTOR IN FM POSITION

High side to ungrounded shield over FM converter tube, low side to ground; OR across FM antenna terminals with 1200 carbon resistor in series with each lead.				
GENERATOR FREQUENCY	DIAL SETTING	INDICATOR	ADJUST	REMARKS
10.7MC (Unmod.)	Point of non-interference.	DC probe of VTVM to point \diamond ; common to ground.	A7, A8, A9, A10	Adjust for maximum.
"	"	DC probe to point \diamond ; common to ground.	A11	Adjust for zero reading. A positive or negative reading will be obtained on either side of the correct setting.
108MC	108MC	DC probe of VTVM to point \diamond ; common to ground.	A12, A13	Adjust for maximum.

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

High side to ungrounded shield over FM converter, low side to ground. Use 80v frequency modulated signal with 450KC sweep. Use 120v sawtooth voltage in scope for horizontal deflection.				
GENERATOR FREQUENCY	DIAL SETTING	INDICATOR	ADJUST	REMARKS
10.7MC (450KC Swp.)	Point of non-interference.	Vert. amp. of scope to point \diamond ; low side to ground.	A7, A8, A9, A10	Disconnect stabilizing capacitor C2. Adjust for maximum gain and symmetry of response similar to Fig. 1 with marker as shown. Reconnect C2.
"	"	Vert. amp. to point \diamond ; low side to ground.	A11	Adjust to place marker at center of crossover lines similar to Fig. 2. SLIGHTLY retouch A 7 for maximum amplitude and straightness of crossover lines.

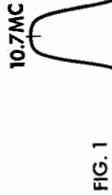


FIG. 1

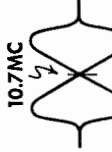


FIG. 2

PARTS LIST AND DESCRIPTION (CONTINUED)

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		Lafayette PART No.	QUAM PART No.	
SP1	4" PM		4A0728	
SP2	4" PM		4A0728	

TRANSFORMER (AUDIO OUTPUT)

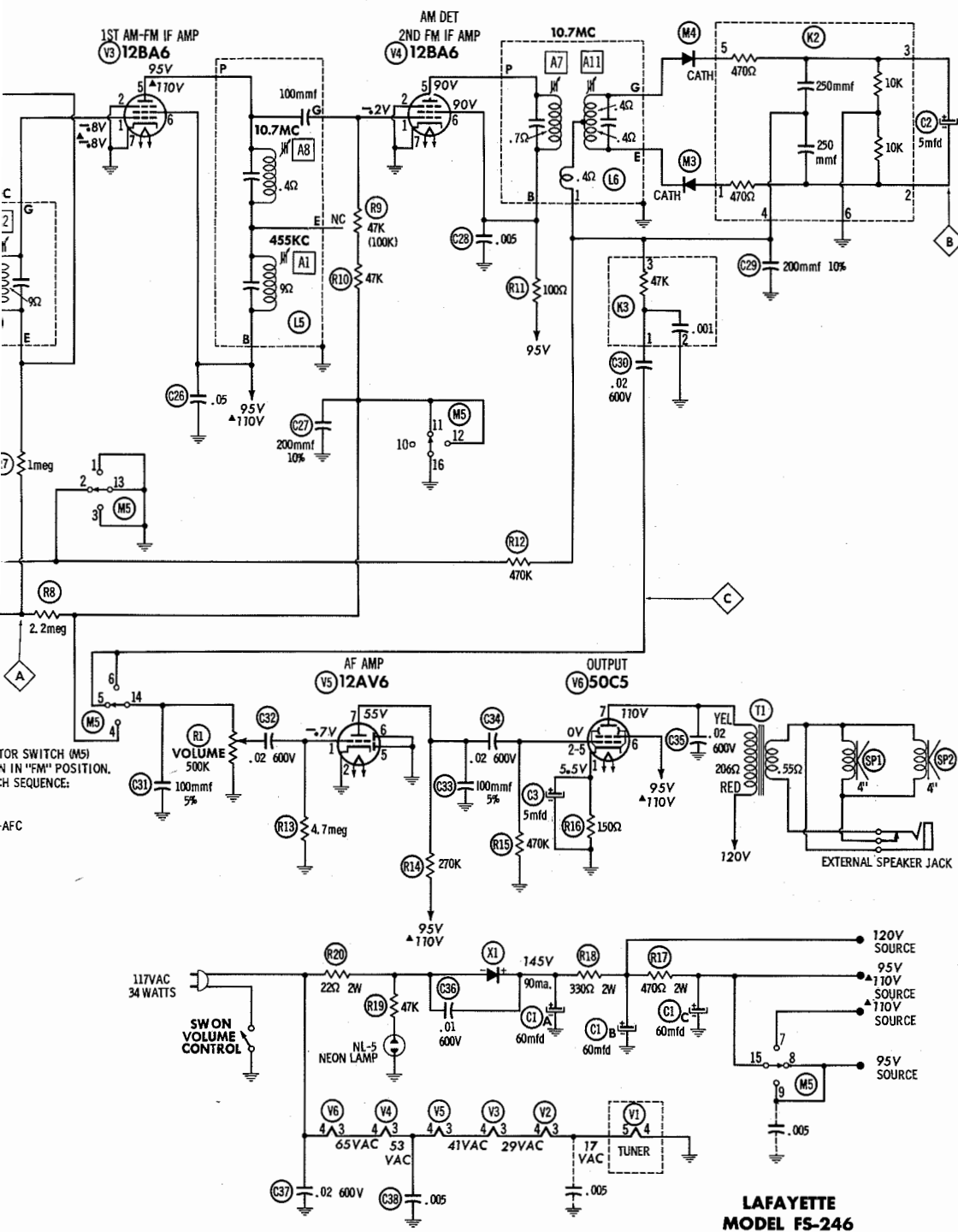
ITEM No.	IMPEDANCE	REPLACEMENT DATA				NOTES
		Lafayette PART No.	MERIT PART No.	STANCOR PART No.	THORNTON PART No.	
T1	18000	3-40	A-3876	24850	S-2X	

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	Lafayette PART No.	REPLACEMENT DATA
K1	AM Osc. Bias	22K, 100mmf		R15-22
K2	Ratio Detector Network	4700, 4700, 10K, 10K, 250mmf, 250mmf		R15-35
K3	Audio Coupling	47K, .001mfd		R15-30

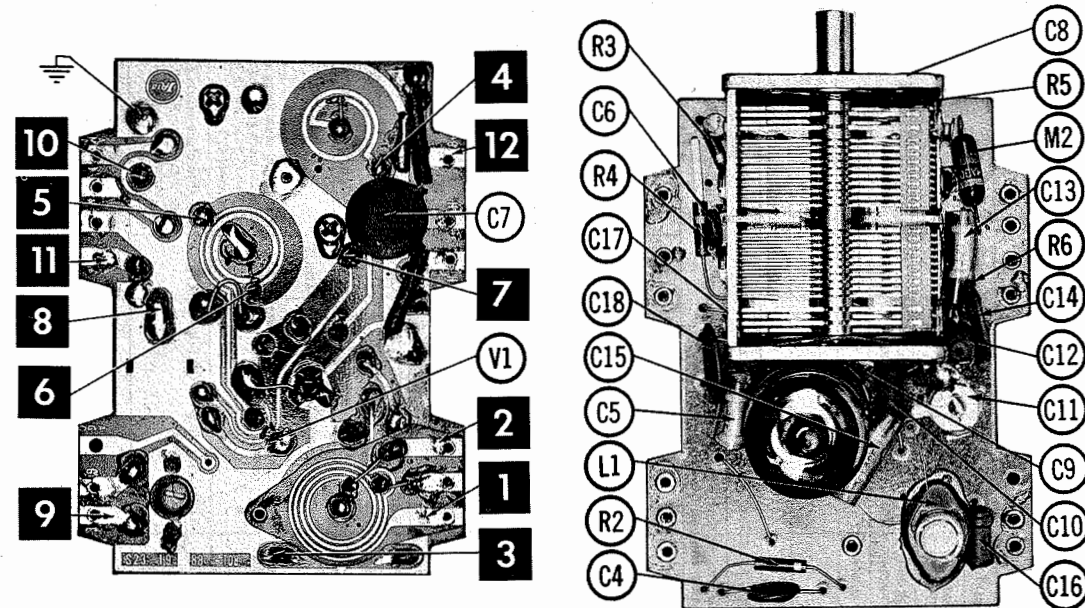
MISCELLANEOUS

ITEM No.	PART NAME	Lafayette PART No.	NOTES
M1	Tuning Cap		
M2	Diode		
M3	Diode		
M4	Diode		
M5	Switch		

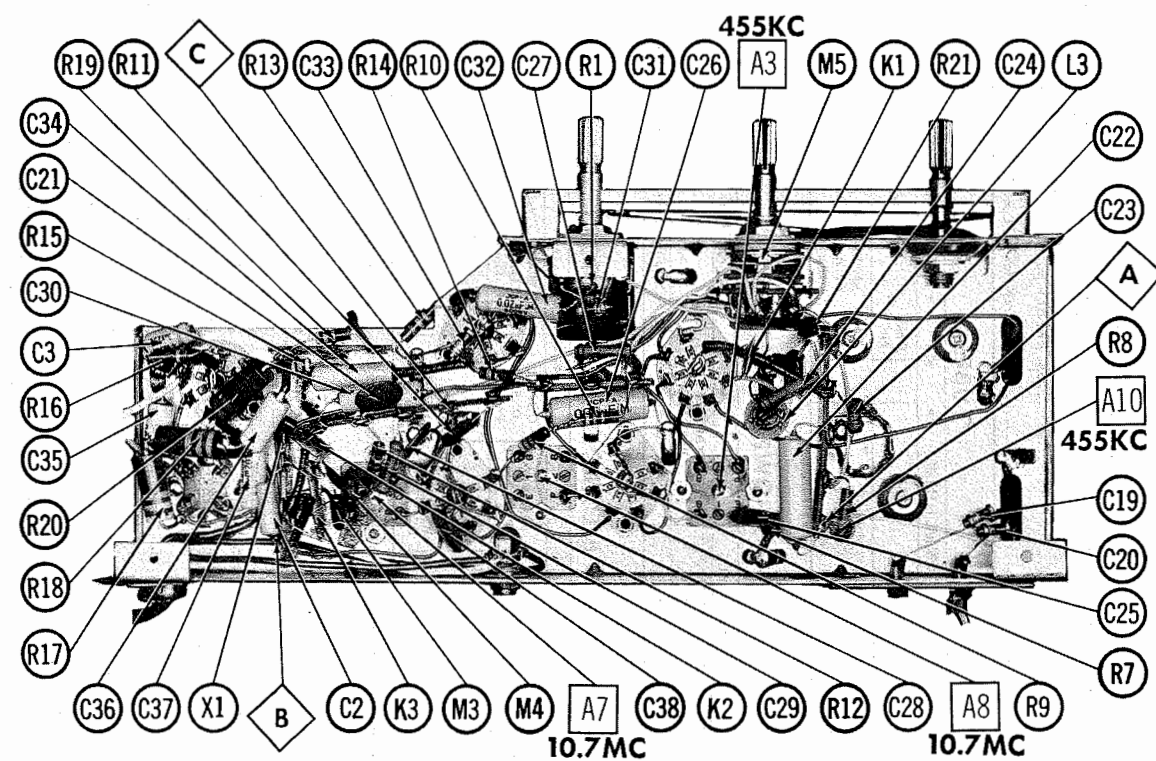


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ARROWS INDICATING TUBE LOCATIONS ARE
POINTING TO PIN 1 UNLESS OTHERWISE INDICATED



FM RF SUBCHASSIS



CHASSIS - BOTTOM VIEW