

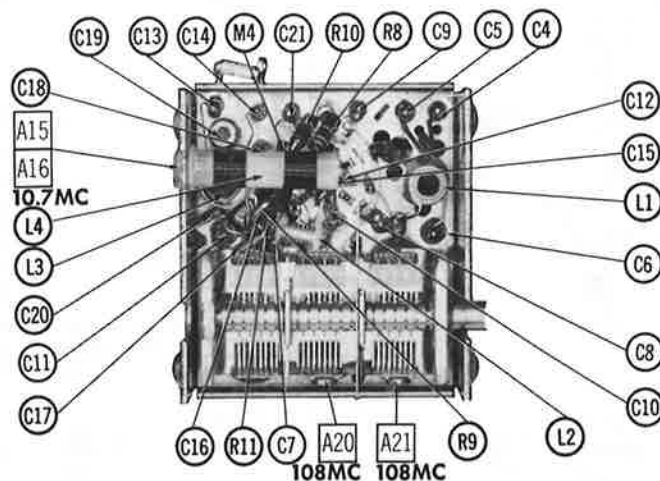
PHOTOFACT® Folder

with CIRCUITRACE™

RCA VICTOR
AM-FM CHASSIS RC-1215A/B/C

IMPORTANT FILING NOTICE

This PHOTOFACT Folder covers equipment used with the TV chassis covered in PHOTOFACT SET 704 FOLDER 2. File this Folder with the TV Folder in the yellow filing jacket provided.

RCA VICTOR
AM-FM CHASSIS RC-1215A/B/CRCA VICTOR
AM-FM CHASSIS RC-1215A/B/C

FM RF SUBCHASSIS

TRADE NAME	RCA Victor Chassis RC-1215A/B/C
SUPPLIER	Radio Corporation of America, RCA Victor Home Instrument Division, Indianapolis 1, Indiana
TYPE SET	AM-FM Tuner with Multiplex
TUBES	Nine
POWER SUPPLY	Obtained from Power Amp. Chassis RS-203B
TUNING RANGE	AM-540-1620KC (IF 455KC) FM-88-108MC (IF 10.7MC)

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

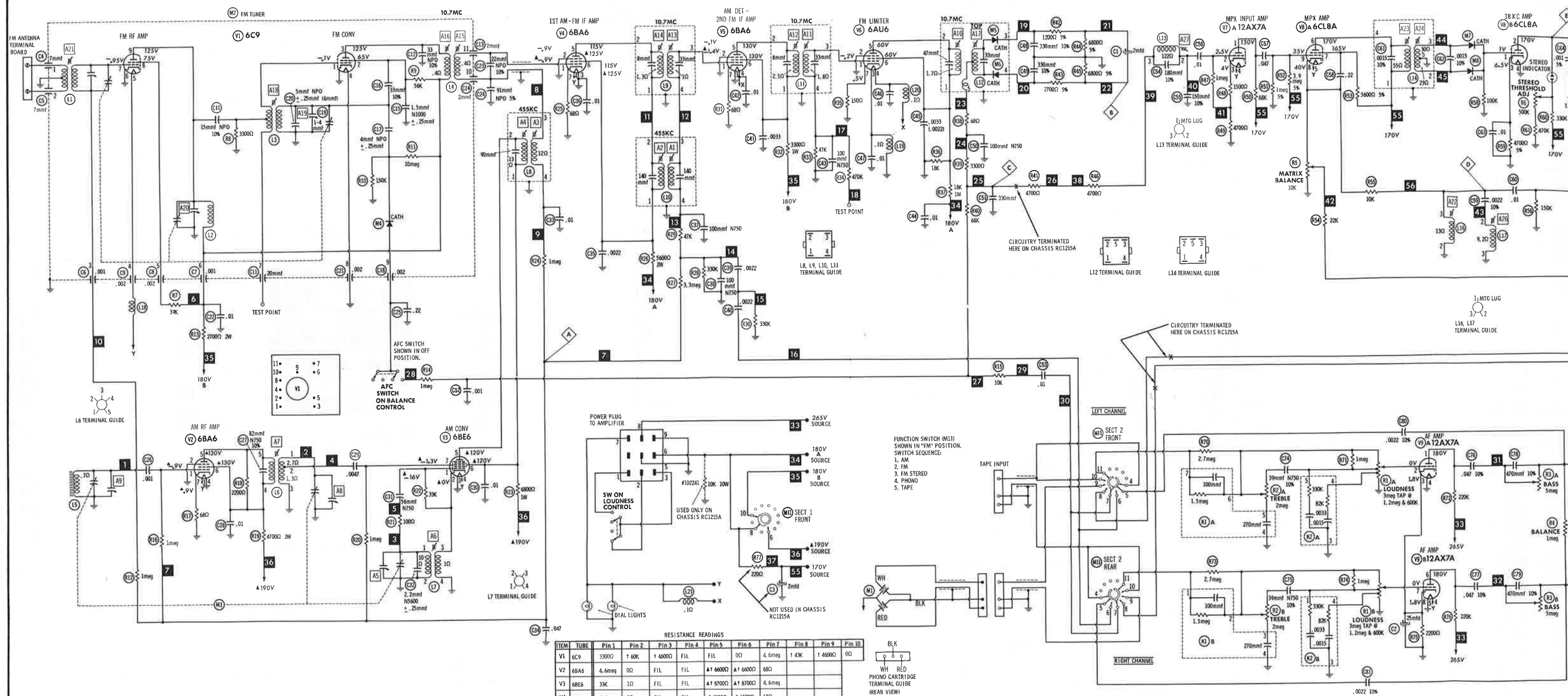


The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W. Sams & Co., Inc., by the manufacturers of the particular type of replacement part listed. MN591 MA715

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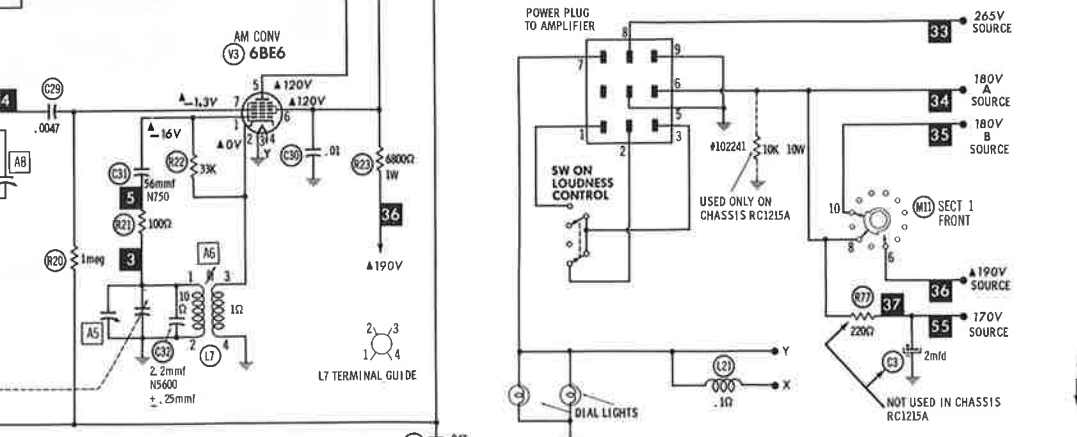
SET 704 FOLDER 2-C



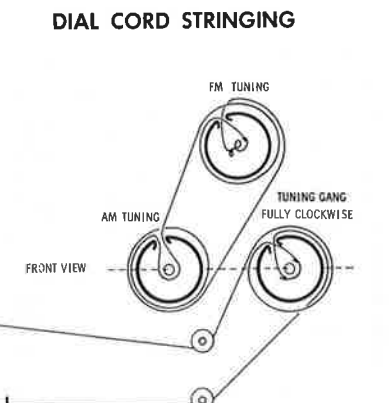
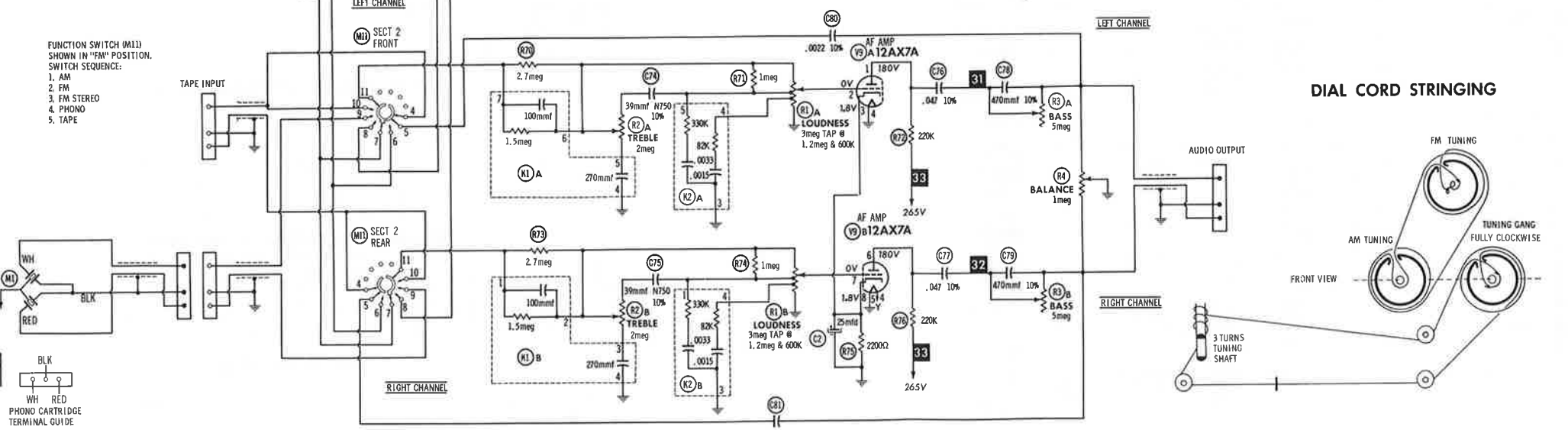
MULTIPLEX CIRCUITRY NOT USED IN CHASSIS RC1215A

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.

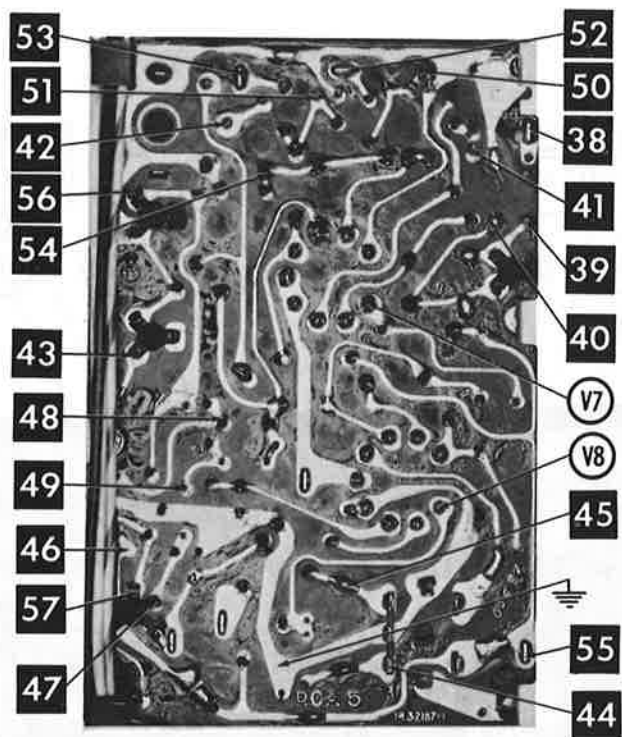
A PHOTOFACT STANDARD NOTATION SCHEMATIC
 with **CIRCUITRACE**
 ©Howard W. Sams & Co., Inc. 1964



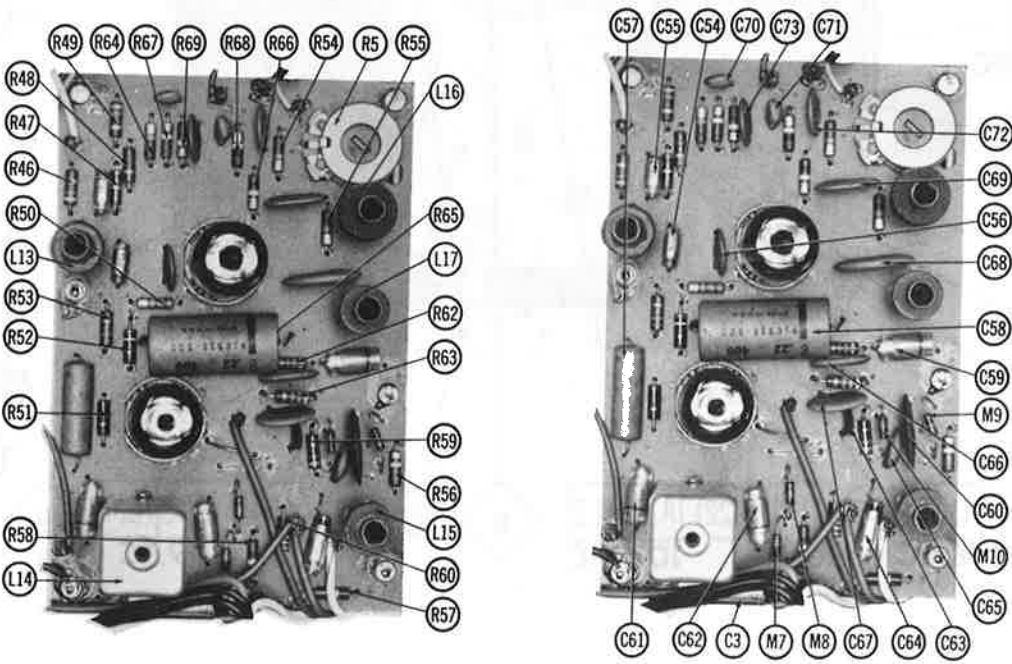
ALL MEASUREMENTS TAKEN IN "FM" POSITION UNLESS OTHERWISE DESIGNATED.
 ▲ MEASURED IN "AM" POSITION. † MEASURED FROM OUTPUT OF X2.
 THIS READING WILL VARY DEPENDING UPON THE CONDITION OF THE ELECTROLYTIC IN THE CIRCUIT.



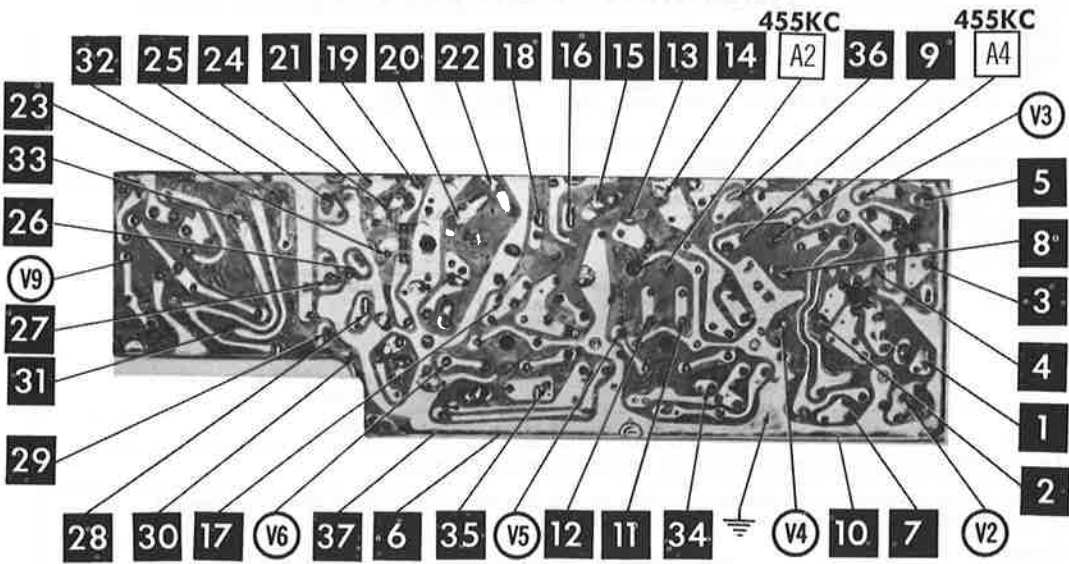
ARROWS INDICATING TUBE LOCATIONS ARE
POINTING TO PIN 1 UNLESS OTHERWISE INDICATED



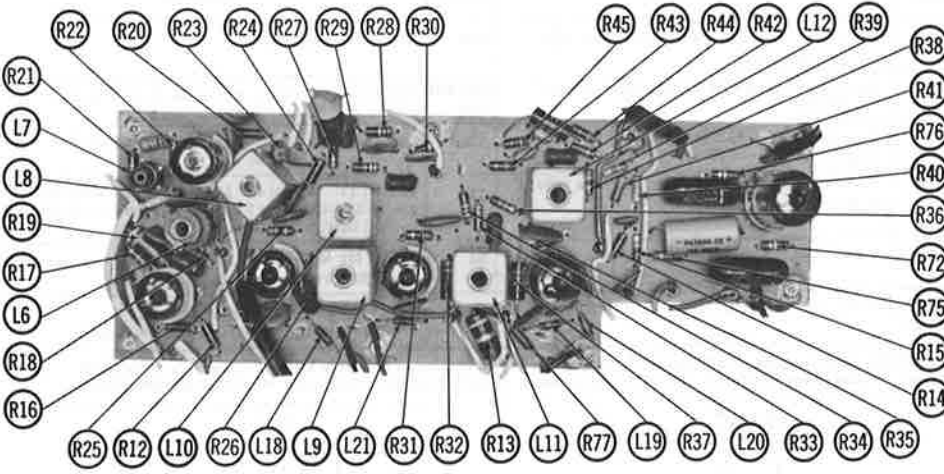
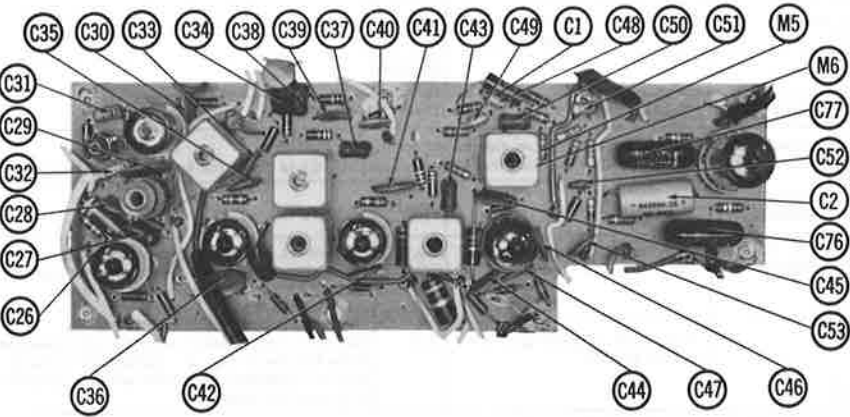
MULTIPLEX PRINTED BOARD



MULTIPLEX PRINTED BOARD-TOP VIEW



A Howard W. Sams CIRCUITRACE[®] Photo TUNER PRINTED BOARD
ARROWS INDICATING TUBE LOCATIONS ARE
POINTING TO PIN 1 UNLESS OTHERWISE INDICATED



TUNER PRINTED BOARD-TOP VIEW

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 WALSCO
A1 thru A5, A8, A9, A19, A20, A21 ... 9089, 8868, 9087 ... 2541, 2528, 2587
A6, A7, A10 thru A18, A22 thru A27 ... 8806, 8806L, 8869 ... 2543, 2544, 2588

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
1. 455KC (Unmod.)	Tuning gang fully open.	DC probe of VTVM to point Δ ; common to ground.	A1, A2, A3, A4	Adjust for maximum.
2. 1620KC	"	"	A5	"
3. 800KC	Tune to signal	"	A6, A7	Rock tuning gang and adjust for maximum. Repeat steps 2 and 3.
4. 1400KC	"	"	A8, A9	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 for IF. Connect generator across FM antenna terminals with 120 Ω carbon resistor in series with each lead for RF.

GENERATOR FREQUENCY	DIAL SETTING	INDICATOR	ADJUST	REMARKS
5. 10.7MC (Unmod.)	Point of non-interference.	DC probe of VTVM to point Δ ; common to ground.	A10, A11, A12, A13, A14, A15, A16	Adjust for maximum.
6. "	"	DC probe to point Δ ; common to ground.	A17	Adjust for zero reading. A positive or negative reading will be obtained on either side of the correct setting.
7. 90MC (Unmod.)	90MC	DC probe of VTVM to point Δ ; common to ground.	A18	Adjust for maximum.
8. 108MC	108MC	"	A19, A20, A21	"

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.

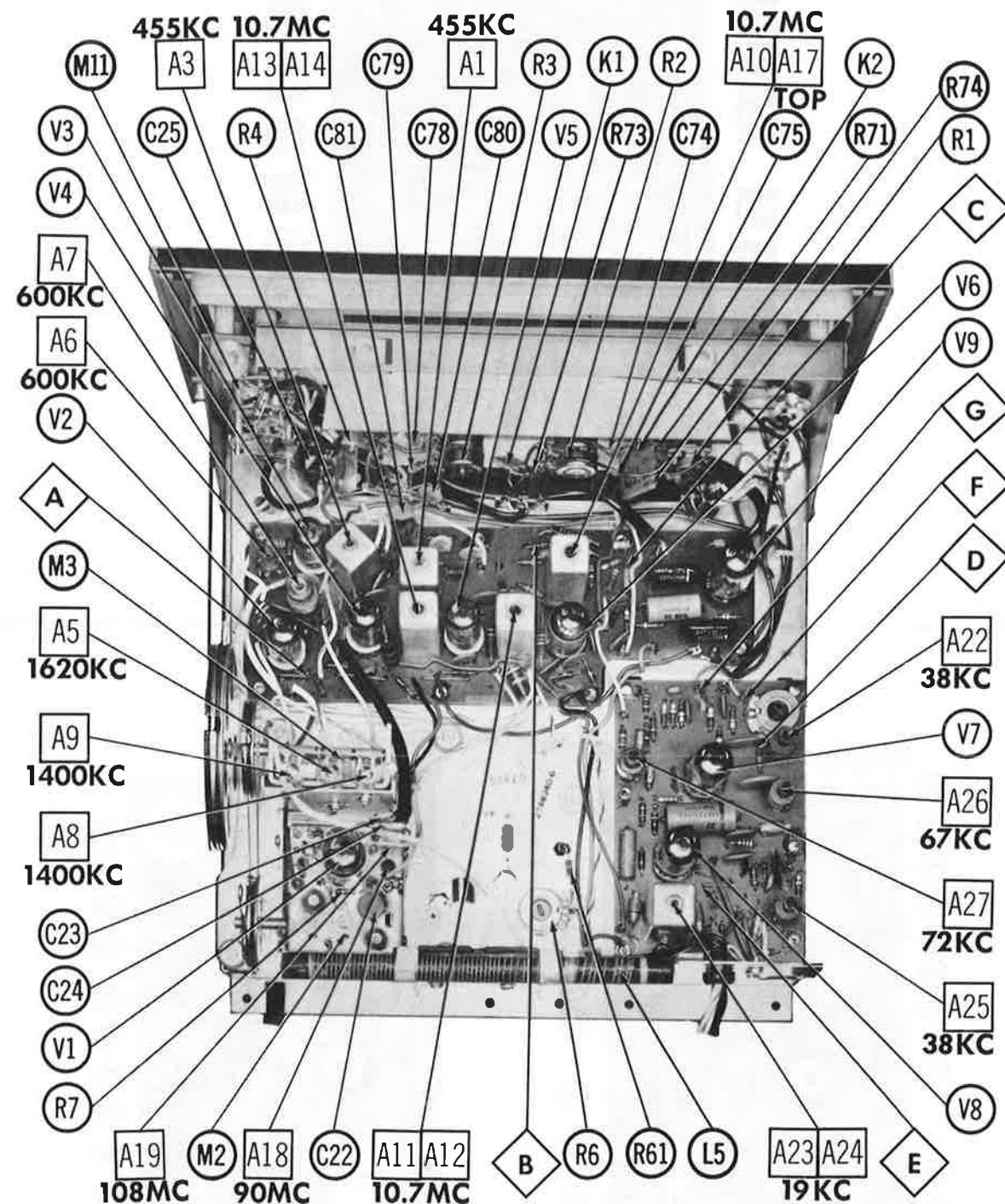
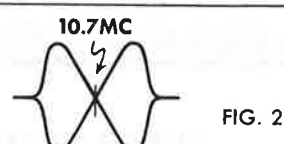
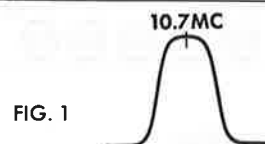
GENERATOR FREQUENCY	DIAL SETTING	INDICATOR	ADJUST	REMARKS
5. 10.7MC (450KC Swp.)	Point of non-interference.	Vert. amp. of scope to point Δ ; low side to ground.	A10, A11, A12, A13, A14, A15, A16	Disconnect stabilizing capacitor C 1. Adjust for maximum gain and symmetry of response similar to Fig. 1 with marker as shown. Reconnect C 1.
6. "	"	Vert. amp. to point Δ ; low side to ground.	A17	Adjust to place marker at center of crossover lines similar to Fig. 2. SLIGHTLY retouch A10 for maximum amplitude and straightness of crossover lines.

FM STEREO MULTIPLEX ALIGNMENT USING FM STEREO SIGNAL GENERATOR ($\pm .0001\%$ ACCURACY)

High side to point Δ , low side to ground.
Suggested Alignment Tools:

GENERATOR FREQUENCY	INDICATOR	ADJUST	REMARKS
9. 19KC	Vert. Amp. of scope thru 47K to point Δ , low side to ground.	A22	Adjust for maximum.
10. "	Vert. Amp. thru 47K to point Δ , low side to ground.	A23, A24, A25	Adjust for maximum. Set scope to lock in 2 cycles of 19KC waveform.
11. 67KC	Vert. Amp. thru 47K to point Δ , low side to ground.	A28	Use Audio Oscillator if necessary. Short L13. Adjust for MINIMUM.
12. 72KC	Vert. Amp. thru 47K to point Δ , low side to ground.	A27	Short L17. Adjust for MINIMUM. If 72KC is not available, adjust to 67KC, then turn core 3/4 turn toward bottom of coil.
13. Modulated Left channel	Vert. Amp. to point Δ , low side to ground.	R5	Adjust for MINIMUM output. It may be necessary to slightly retouch A23, A24, and A25.
14. Modulated Right channel	Vert. Amp. to point Δ , low side to ground.	R5, A23, A24, A25	Check for MINIMUM output at point. Make compromise adjustment if necessary.

To align multiplex section using an air signal, first make sure FM section is properly aligned. Tune in a strong FM stereo signal. Follow steps 9 thru 14 above except in steps 11 and 12 adjust to eliminate whistle or interference.



TUNER CHASSIS TOP VIEW

TUNER PARTS LIST AND DESCRIPTION

TUBES

ITEM No.	USE	TYPE	ITEM No.	USE	TYPE
V1	FM RF Amp. - FM Conv.	8C9	V6	FM Limiter	6AU6
V2	AM RF Amp.	8BA6	V7	MPX Input Amp. - Phase Inverter	12AX7A †
V3	AM Conv.	8BE6	V8	MPX Amp. - 38KC Amp.	6CL8A †
V4	AM - 1st FM IF Amp.	8BA6	V9	AF Amp.	12AX7A
V5	AM Det. - 2nd FM IF Amp.	8BA6			

† Not used in Chassis RC-1215A.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA
CAP.	VOLT.	RCA Victor PART No.
C1	2	50
C2	25	6
C3	2	350

① Used in Chassis RC-1215B.

FIXED CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA
			AEROVOX PART No.
C4	7	#110973	
C5	7	#110973	
C6	.001		EF-001
C7	.001		EF-001
C8	.002	#110969	
C9	.002	#110969	
C10	15	NPO 10%	NPO-DI 15
C11	20		DTZ-15
C12	33	NPO 10%	TCZ-33
C13	2	#110970	
C14	2	#110970	
C15	1.5	N1000 ±.25mmf	NPO-DI 33
C16	33	10%	DTZ-33
C17	4	NPO ±.25mmf	
C18	.002	#110969	
C19	1-4		829-4
C20	5	NPO ±.25mmf	
C21	.002	(4) †	
C22	.01	#110969	
C23	22	NPO 10%	BPD-01
C24	91	NPO 5%	DD-103
C25	.22	50V	TCZ-22
C26	.001		TCZ-61
C27	82	N750 10%	P288N-22
C28	.01		BPD-001
C29	.0047		DD-102
C30	.01		TCN-82
C31	56	N750	DD-103
C32	2.2	N5600 ±.25mmf	DD-472
C33	.01		DD-103
C34	.047	100V	DD-103
C35	.0022		DD-103
C36	.01		DD-103
C37	100	N750	DD-103
C38	100	N750	DD-103
C39	.0022		DD-103
C40	.0022		DD-103
C41	.0033		DD-103
C42	.01		DD-103
C43	100	N750	DD-103
C44	.01		DD-103
C45	.0033		DD-103
C46	.01		DD-103
C47	.01		DD-103
C48	330	10%	DD-103
C49	330	10%	DD-103
C50	100	N750	DD-103
C51	330	10%	DD-103
C52	.001		DD-103
C53	.01		DD-103
C54	180	10%	DD-103
C55	150	10%	DD-103
C56	.01		DD-103
C57	.047	200V	DD-103
C58	.22	400V	DD-103
C59	.0022	10%	DD-103
C60	.01		DD-103
C61	.0015	10%	DD-103
C62	.0015	10%	DD-103
C63	.01	100V	DD-103
C64	.001	5%	DD-103
C65	82		DD-103
C66	.01		DD-103
C67	.01		DD-103
C68	470		DD-103
C69	.0033		DD-103
C70	270		DD-103
C71	270		DD-103
C72	.01		DD-103
C73	.01		DD-103
C74	39	N750 10%	DD-103
C75	39	N750 10%	DD-103
C76	.047	400V 10%	DD-103
C77	.047	400V 10%	DD-103
C78	470	10%	DD-103
C79	470	10%	DD-103
C80	.0022	10%	DD-103
C81	.0022	10%	DD-103

RCA Victor Part Number

† Alternate Value

Note 1. Used in Chassis RC-1215B.

TUNER PARTS LIST AND DESCRIPTION (CONTINUED)

CONTROLS

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

ITEM No.	USE	RESIST-ANCE	REPLACEMENT DATA
			RCA Victor PART No.
R1A	Loudness, Left	3meg	111356
R1B	Loudness, Right, Sw.	600K & 1.2meg	(974857-3)
R2A	Treble, Left	2meg	111356
R2B	Treble, Right	2meg	(974857-4)
R3A	Bass, Left	5meg	111356
R3B	Bass, Right	5meg	(974857-5)
R4	Balance, AFC Switch	1meg	111357
R5	Matrix Balance	10K	111371
R6	Stereo Threshold Adjustment	500K	111358

① Cut off shaft and bend terminals back to facilitate wiring.

② Used in Chassis RC-1215B.

* "SNAPTROL"

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA
		RCA Victor PART No.
L1	FM Ant.	111601
L2	FM RF	111604
L3	FM Osc.	111603
L4	1st FM IF	111602
L5	Loopstick	111390
L6	AM RF	111388
L7	AM Osc.	110059
L8	1st AM IF	111383
L9	2nd FM IF	111384
L10	2nd AM IF	111385
L11	3rd FM IF	111386
L12	Ratio Detector	111387
L13	72KC Trap	111380
L14	18KC Doubler	111377
L15	38KC Output	111378
L16	38KC Bandpass	111379
L17	87KC Trap	111378
L18	Fl. Choke (20 turns)	111382
L19	Fl. Choke (20 turns)	111382
L20	Fl. Choke (20 turns)	111382
L21	Fl. Choke (20 turns)	111382

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	RCA Victor PART No.	REPLACEMENT DATA
K1	Tone Comp.	1.5meg, 1.5meg, 100mmf, 100mmf, 270mmf, 270mmf	111361	
K2	Tone Comp.	82K, 82K, 330K, 330K, .0015mfd, .0015mfd, .0033mfd, .0033mfd	111362	

PHONO CARTRIDGE & NEEDLES

*NEEDLE LISTINGS SHOWN ARE FOR RESPECTIVE REPLACEMENT CARTRIDGES ONLY.

ITEM No.	REPLACEMENT DATA	NOTES
	RCA Victor PART No.	
M1	111348	110022

MISCELLANEOUS

ITEM No.	PART NAME	RCA Victor PART No.	NOTES
M2	FM Tuner	111600	
M3	AM Tuning Cap.	111360	
M4	Diode	111605	
M5	Diode		
M6	Diode		
M7	Diode	111207	
M8	Diode	111207	
M9	Diode	111207	
M10	Diode	111207	
M11	Switch	111365	
	Printed Board	111655	
	Printed Board	111656	

WIRING DATA

General-use Unshielded Hook-up Wire Use BELDEN No. 8530 (Solid) Available in 12 Colors
8524 (Stranded) Available in 12 Colors
Power Cord Use BELDEN No. 17106 (Plastic) or 17126 (Rubber) - 6 Ft.
17109 (Plastic) or 17129 (Rubber) - 9 Ft.
Power Cord (Interlock Type) Use BELDEN No. 8874 (Rubber) or 8895 (Plastic)
Low-Loss Shielded Lead (Interconnecting) Use BELDEN No. 8401 or 8421
Phono Pick-up Arm Cable Use BELDEN No. 8430 (Two Conductor-Unshielded)
8429 (Two Conductor-Shielded)
8419 (Three Conductor-Shielded)