

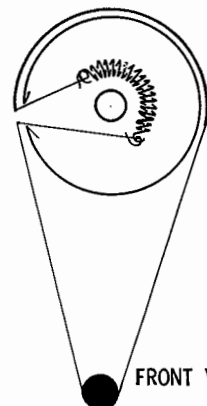
PHOTOFACT® Folder

with CIRCUITRACE®

**SARKES TARZIAN
MODEL 723-509**



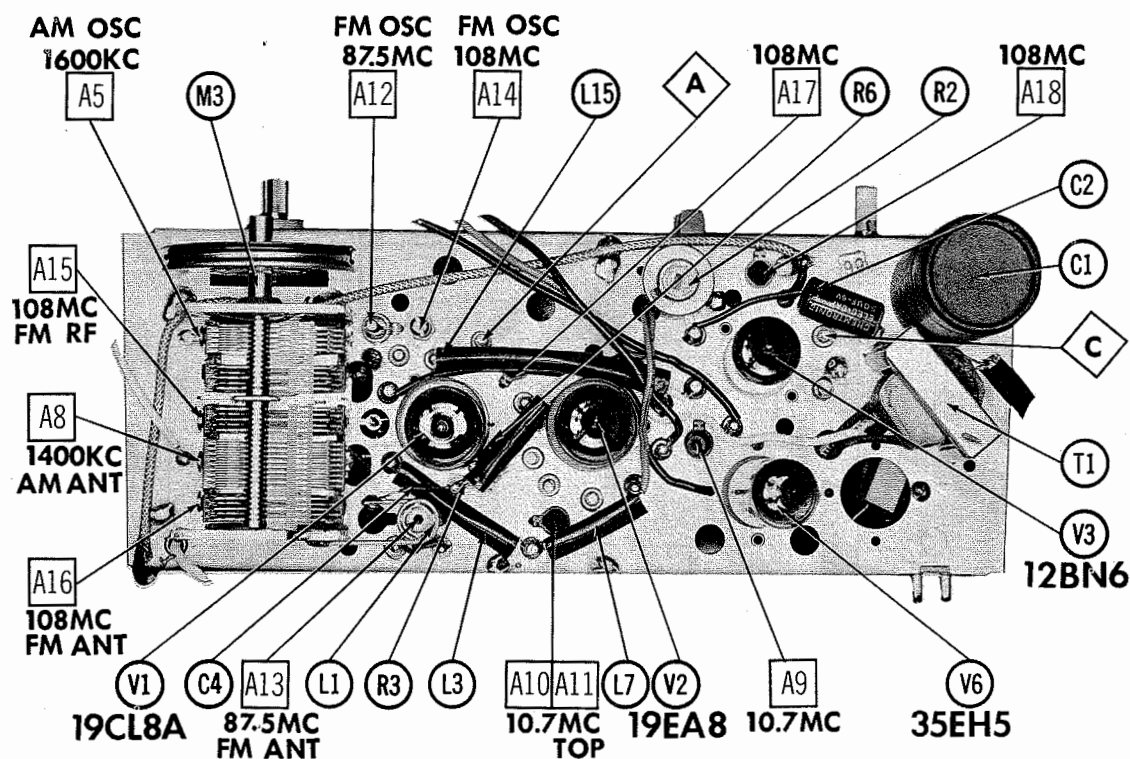
TUNING GANG CLOSED



FRONT VIEW

2 1/2 TURNS ON
TUNING SHAFT

TRADE NAME	Sarkes Tarzian Model 723 — 509		
MANUFACTURER	Sarkes Tarzian, Inc., East Hillside Drive, Bloomington, Indiana		
TYPE SET	AC-DC Operated 6 Tube FM-AM Receiver		
POWER SUPPLY	110 — 120 Volts AC-DC	RATING	28 Watts, .3 Amp. @117 Volts AC
TUNING RANGE—BROADCAST	540 — 1600KC	FREQ. MOD.	87.5 — 108MC



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 LK013

the particular type of replacement part listed. Reproduction or use, without express permission, of editorial or pictorial content, in any manner, is prohibited. No patent liability is assumed with respect to the use of the information contained herein. © 1962 Howard W. Sams & Co., Inc., Indianapolis 6, Indiana. Printed in U.S. of America

**SARKES TARZIAN
MODEL 723-509**

SET 573 FOLDER 12

PARTS LIST AND DESCRIPTIONS

TUBES

CHASSIS—BOTTOM VIEW

♦ GENERAL ELECTRIC ♦ RAYTHEON ♦ SYLVANIA ♦					
ITEM No.	USE	TYPE	ITEM No.	USE	TYPE
V1	FM RF Amp. -FM Conv.	19CL8A	V4	AM Converter	12BE6
V2	FM IF Amplifier	19EA8	V5	AM IF Amp. -AM Det.	12EQ7
V3	FM Audio Detector - AM AF Amplifier	12BN6	V6	Output	35EH5

ELECTROLYTIC CAPACITORS

ITEM No.	RATING CAP. VOLT.	REMARKS	REPLACEMENT DATA			
			AEROVOX PART No.	CORNELL-DUBIERRE PART No.	GENERAL ELECTRIC PART No.	SPRAGUE PART No.
C1A	50	#13-259-159	AFR2-17	XB085	XC2-50	TF28-8
B	150	#13-261-120	PTT13	NLW100-6	MTI-16	MLV100-3
C	100	#13-261-150	PTT29	NLW50-10	MTI-15	MLV50-6
C2	50	#13-261-909				TE-1100

FIXED CAPACITORS

ITEM No.	RATING	REMARKS	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBIERRE PART No.	ELWENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C3	47 10%	#13-259-159	DI-47	DD-470	L10Q47	CCD-470	GP447	10TS-Q47
C4	22 .001		DI-22	DD-220	L10Q22	CCF-402	GP442	10TS-Q22
C5	12 NPO 10%		EF-001	MFT-1000		CCF-102	CT280A	
C6	15 .001							
C7	12 NPO 10%							
C7	15 .001	#13-261-120	DI-15	DD-150	L10Q15	CCD-150	GP445	10TS-Q15
C8	1.5-7.5mmf			829-7				
C9	12 NPO 10%							
C10	1 .1 200V							
C11	15 NPO 5%							
C11	1 .1 200V	#13-261-150	P288N-1	DF-104	CUB2P1	2DP-3-104	GEM-201	2TM-P10
C12	1 .1 200V		EF-001	MFT-1000		CCF-102	CT280A	
C13	15 NPO 5%							
C14	100 5%							
C15	9 NPO 5%							
C16	47 10%	#13-261-909	EF-001	MFT-1000	22B5T1	CM-19B-101J	CT280A	10TCC-T10
C17	22 .001							
C18	47 10%							
C19	01 .001							
C20	200 01							
C20	200 01	#13-261-120	EF-001	MFT-1000	BYA10S1	CCD-103	B-110	10TS-Q47
C21	200 01		EF-001	MFT-1000		CCF-102	CT280A	5HK-S01
C22	200 01		EF-001	MFT-1000		CCF-102	CT280A	
C23	12 NPO 10%							
C24	200 01							
C24	200 01	#13-261-120	EF-001	MFT-1000	BYA10D1	CCF-102	CT280A	5HK-D10
C25	200 01		BPD-001	DD-102		CCF-102	B-210	4TM-S10
C26	200 01		P288N-01	D6-103	CUB4S1	4DP-1-103	GEM-411	6TM-D10
C27	200 01		P488N-002	D6-202	CUB4S2	6DP-1-202	GEM-412	4TM-S10
C28	200 01		P288N-047	DD-503	CUB2S47	4DP-3-473	GEM-4147	2TM-S47
C29	200 01		P288N-047	DD-503	CUB2S47	4DP-3-473	GEM-4147	2TM-S47
C30	200 01		P288N-047	DD-503	CUB2S47	4DP-3-473	GEM-4147	2TM-S47
C31	200 01		P288N-01	D6-103	CUB4S1	4DP-1-103	GEM-411	4TM-S10
C32	200 01		P488N-047	DD-503	CUB4S47	4DP-3-473	GEM-4147	4TM-S47
C33	200 01		EF-001	MFT-1000		CCF-402	CT280A	
C34	200 01		EF-001	MFT-1000		CCF-402	CT280A	
C35	200 01		EF-001	MFT-1000		CCF-402	CT280A	
C36	200 01		EF-001	MFT-1000		CCF-402	CT280A	
C37	200 01		EF-001	MFT-1000		CCF-402	CT280A	

PARTS LIST AND DESCRIPTIONS (Continued)

RESISTORS

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

ITEM No.	RATING	REPLACEMENT DATA		ITEM No.	RATING	REPLACEMENT DATA		REMARKS
		IRC PART No.	WORKMAN TV PART No.			IRC PART No.	WORKMAN TV PART No.	
R3	470K			R12	100K			
R4	33K			R13	22K			
R5	47K			R14	22K			
R6	100K			R15	470K			
R7	100K			R16	100K			
R8	100K			R17	100K			
R9	22K			R18	500 3W			
R10	10K			R19	22K			
R11	470K							

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA			ITEM No.	USE	REPLACEMENT DATA			NOTES
		Sarkes Tarzian PART No.	Merit PART No.	Miller PART No.			Sarkes Tarzian PART No.	Merit PART No.	Miller PART No.	
L1	FM Ant.	28-009-1								
L2	FM RF	28-004-1								
L3	RF Choke (2.8uh)	22-031-6								
L4	FM Osc.	28-002-1								
L5	1st FM IF	28-003-5								
L6	2nd FM IF	28-003-7								
L7	RF Choke (3.8uh)	22-031-8								
L8	3rd FM IF	28-003-6								
L9	Quadrature	28-003-4								
L10	Loop Ant.	28-008-1								
L11	AM Ant.	28-007-1								
L12	AM Osc.	28-006								
L13	1st AM IF	28-005								
L14	2nd AM IF	22-031-14								
L15	FM Choke (2.8uh)	22-031-14								
L16	Line Choke (.9uh)	22-034-1								
L17	Line Choke (.9uh)									

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE	REPLACEMENT DATA			ITEM No.	IMPEDANCE	REPLACEMENT DATA			NOTES
		Sarkes Tarzian PART No.	Merit PART No.	Stencor PART No.			Sarkes Tarzian PART No.	Merit PART No.	Stencor PART No.	
T1	50002	3-40	24-019-1	A-3028						

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		SIZE	FIELD			SIZE	FIELD	
SPL	4"	PM	3-40	ST-002-1	4A07			

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	Sarkes Tarzian PART No.	REPLACEMENT DATA
K1	Antenna Filter	330mmf, 330mmf, 47K, 100K	37-019-1	
K2	Diode Filter		B9-006	

POWER RECTIFIERS

ITEM No.	RATING	REPLACEMENT DATA		ITEM No.	RATING	REPLACEMENT DATA		NOTES
		Sarkes Tarzian PART No.	RCA PART No.			Sarkes Tarzian PART No.	RCA PART No.	
M1	.075A	F4	JN1763	F4				

SIGNAL DIODES

ITEM No.	ORIG. TYPE	REPLACEMENT DATA		ITEM No.	ORIG. TYPE	REPLACEMENT DATA		NOTES
		Sarkes Tarzian PART No.	GENERAL ELECTRIC PART No.			Sarkes Tarzian PART No.	GENERAL ELECTRIC PART No.	
M2	1N60	40-013		1N60	FM AVC			

MISCELLANEOUS

ITEM No.	PART NAME	Sarkes Tarzian PART No.	NOTES
M3	Tuning Cap	19-008-1	
M4	Switch	43-088	
M5	Switch	43-089	

CABINETS & CABINET PARTS

(When Ordering Cabinets & Cabinet Parts, Specify Model, Chassis & Color)

ITEM No.	NAME	REPLACEMENT DATA		ITEM No.	NAME	REPLACEMENT DATA	
		PART No.	DESCRIPTION			PART No.	DESCRIPTION
Dial Cabinet		74-020					

ALIGNMENT INSTRUCTIONS

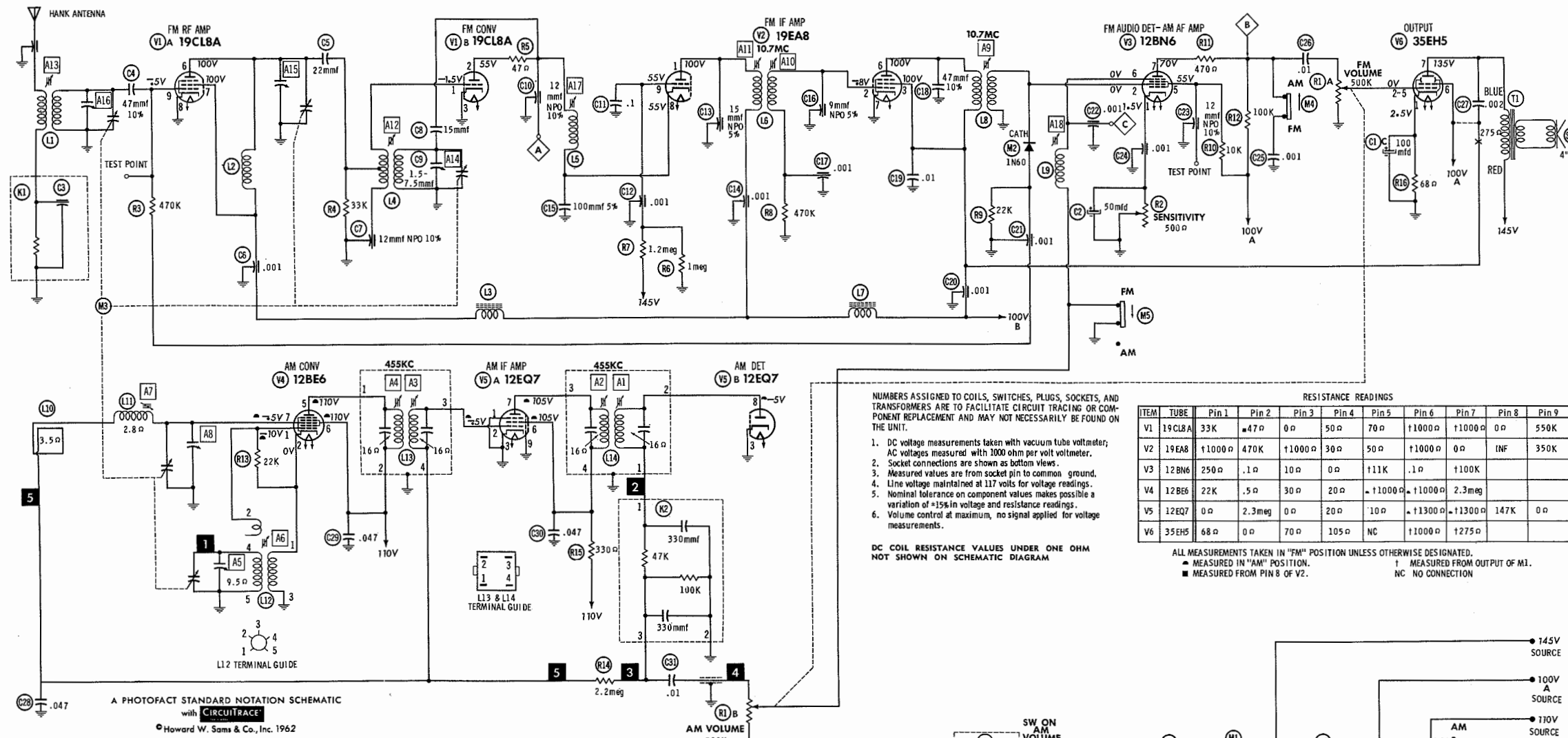
ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT	
Volume control should be at maximum position. Output of signal generator should be no higher than necessary to obtain an output reading.	
Suggested Alignment Tools:	
A1 thru A4.....	GENERAL CEMENT #5009, 8195, 8274, 8275, 8728, 8729, 8987, 8988, 8989
A5, A8, A14, A15, A16..	WALSCO #2515, 2531, 2532
A6, A7, A9, A10, A11, A13, A17, A18.....	GENERAL CEMENT #5004, 5008, 5009
A12.....	WALSCO #2520
	GENERAL CEMENT #8282, 8606, 8606-L, 9295, 9440
	WALSCO #2526, 2543, 2544, 2545
	GENERAL CEMENT #8721, 8722
	WALSCO #2519

AM ALIGNMENT

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	High side thru .1mfd to pin 7 (grid) of AM Converter. Low side to chassis.	455KC (400% Mod.)	(AM) Tuning gang fully open.	Across voice coil.	A1, A2, A3, A4	Adjust for maximum output.
2.	"	1600KC	1600KC	"	A5	"
3.	"	600KC	600KC	"	A6, A7	Adjust for maximum output while rocking tuning gang.
4.	"	1400KC	1400KC Signal.	"	A8	Adjust for maximum output. Repeat steps 2, 3 and 4.

FM ALIGNMENT

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
5.	High side thru .001mfd to point \diamond . Low side to chassis.	10.7MC (450KC Swp.)	(FM) Point of non-interference.	Across voice coil. Vert. amp. of scope to point \diamond . Low side to chassis.	A9, A10, A11	Short point \diamond to chassis. Adjust for maximum gain and symmetry of response curve.
6.	High side to FM antenna terminal thru 75 Ω . Low side to chassis.	87.5MC	Tuning gang fully closed.	"	A12, A13, L2	Pre-set A14 for 1/2" screw length above chassis and A15 and A16 one turn from tight. Adjust A12, L2 and A13 for maximum output.
7.	"	108MC	108MC	"	A14, A15, A16	Adjust for maximum output.
8.	"	"	"	"	A17	Adjust for maximum output. Touch-up A9, A10, and A11.
9.	"	87.5MC	Tuning gang fully closed.	"	A12	Retouch for maximum output. Repeat step 7.
10.	"	108MC (76KC 400% Mod.)	108MC	"	A18	Remove short from point \diamond . Adjust A18 for maximum output with 100 microvolts signal input.
11.	"	"	"	"	R2	Reduce signal level to 20 microvolts. Adjust R2 for maximum output.

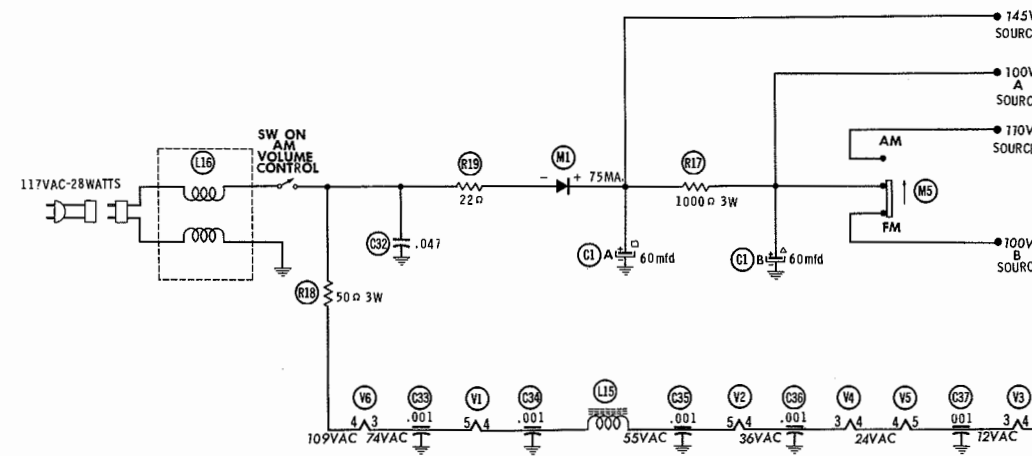


- NUMBERS ASSIGNED TO COILS, SWITCHES, PLUGS, SOCKETS, AND TRANSFORMERS ARE TO FACILITATE CIRCUIT TRACING OR COMPONENT REPLACEMENT AND MAY NOT NECESSARILY BE FOUND ON THE UNIT.
1. DC voltage measurements taken with vacuum tube voltmeter; AC voltages measured with 1000 ohm per volt voltmeter.
 2. Socket connections are shown as bottom views.
 3. Measured values are from socket pin to common ground.
 4. Line voltage maintained at 117 volts for voltage readings.
 5. Nominal tolerance on component values makes possible a variation of $\pm 15\%$ in voltage and resistance readings.
 6. Volume control at maximum, no signal applied for voltage measurements.

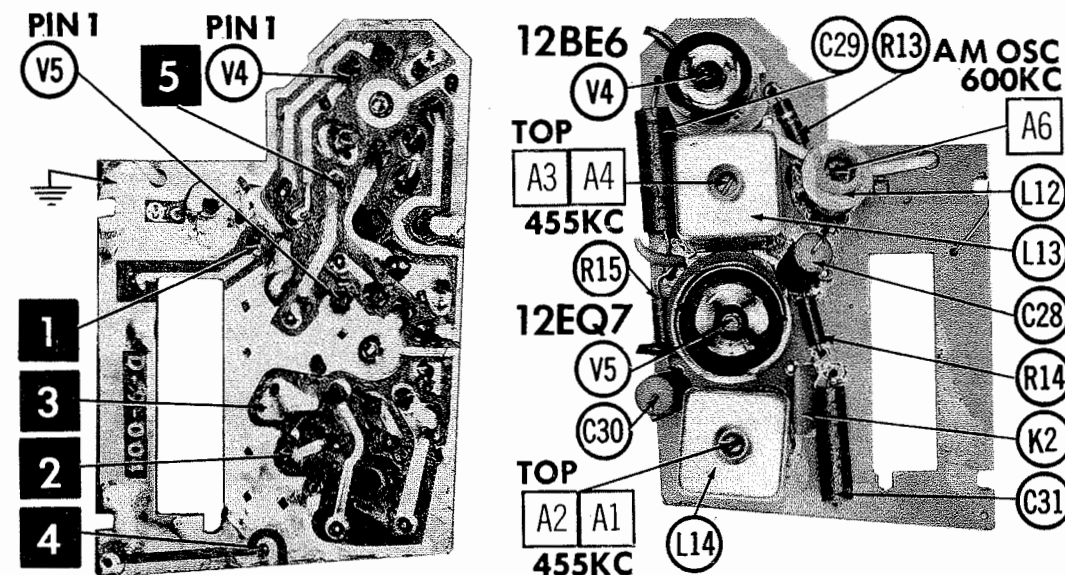
DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM

RESISTANCE READINGS									
ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
V1	19CL8A	33K	470	0	50	70	1000	1000	550K
V2	19EA8	1000	470K	1000	30	50	1000	0	INF
V3	12BN6	250	.1	10	0	11K	.1	100K	
V4	12BE6	22K	.5	30	20	1000	1000	2.3meg	
V5	12EQ7	0	2.3meg	0	20	10	1300	1300	147K
V6	35EH5	68	0	70	105	NC	1000	1275	

ALL MEASUREMENTS TAKEN IN "FM" POSITION UNLESS OTHERWISE DESIGNATED.
 ■ MEASURED IN "AM" POSITION. 1 MEASURED FROM OUTPUT OF M1.
 ■ MEASURED FROM PIN 8 OF V2. NC NO CONNECTION



SARKES TARZIAN
MODEL 723-509



A Howard W. Sams CIRCUITRACE Photo

AM PRINTED BOARD