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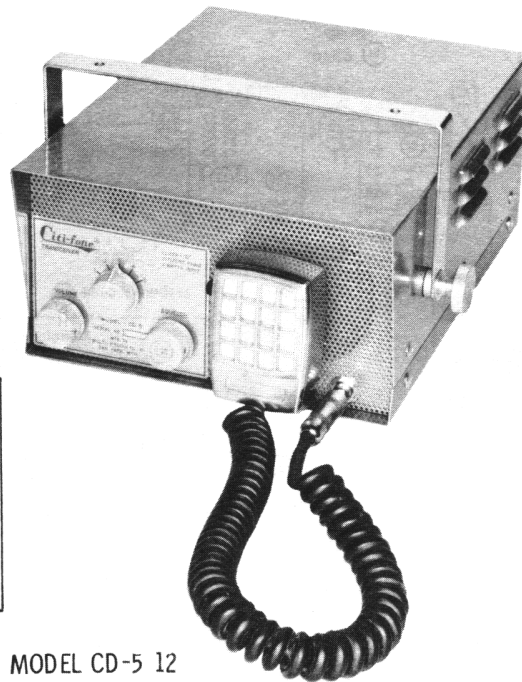
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PHOTOFACT® Folder

with CIRCUITRACE

CITI-FONE MODELS
CD-5/6, CD-5/12



NOTICE

ONLY THOSE PERSONS PROPERLY LICENSED BY FCC ARE PERMITTED TO EFFECT REPAIRS OR MAKE CRYSTAL SUBSTITUTION ON THE TRANSMITTER PORTION OF THIS UNIT.

MODEL CD-5 12

CITI-FONE MODELS
CD-5/6, CD-5/12

TRADE NAME	Citi-Fone Models CD 5/6, CD 5/12
MANUFACTURER	Multi-Products Co., 21470 Coolidge Highway, Oak Park 37, Michigan
TYPE SET	AC-Battery Operated 9 Tube Citizens Band Transmitter-Receiver
POWER SUPPLY	110-120 Volts AC (or) 6 Volt Storage Battery (or) 12 Volt Storage Battery
RATING	35 Watts, .36 Amp. @117 Volts AC (or) 3 Amp. @12.6Volts DC (or) 6 Amp. @6.3Volts DC (Receive)
TUNING RANGE	Any 5 of Citizens Band Channels 1 Thru 22

ALIGNMENT INSTRUCTIONS

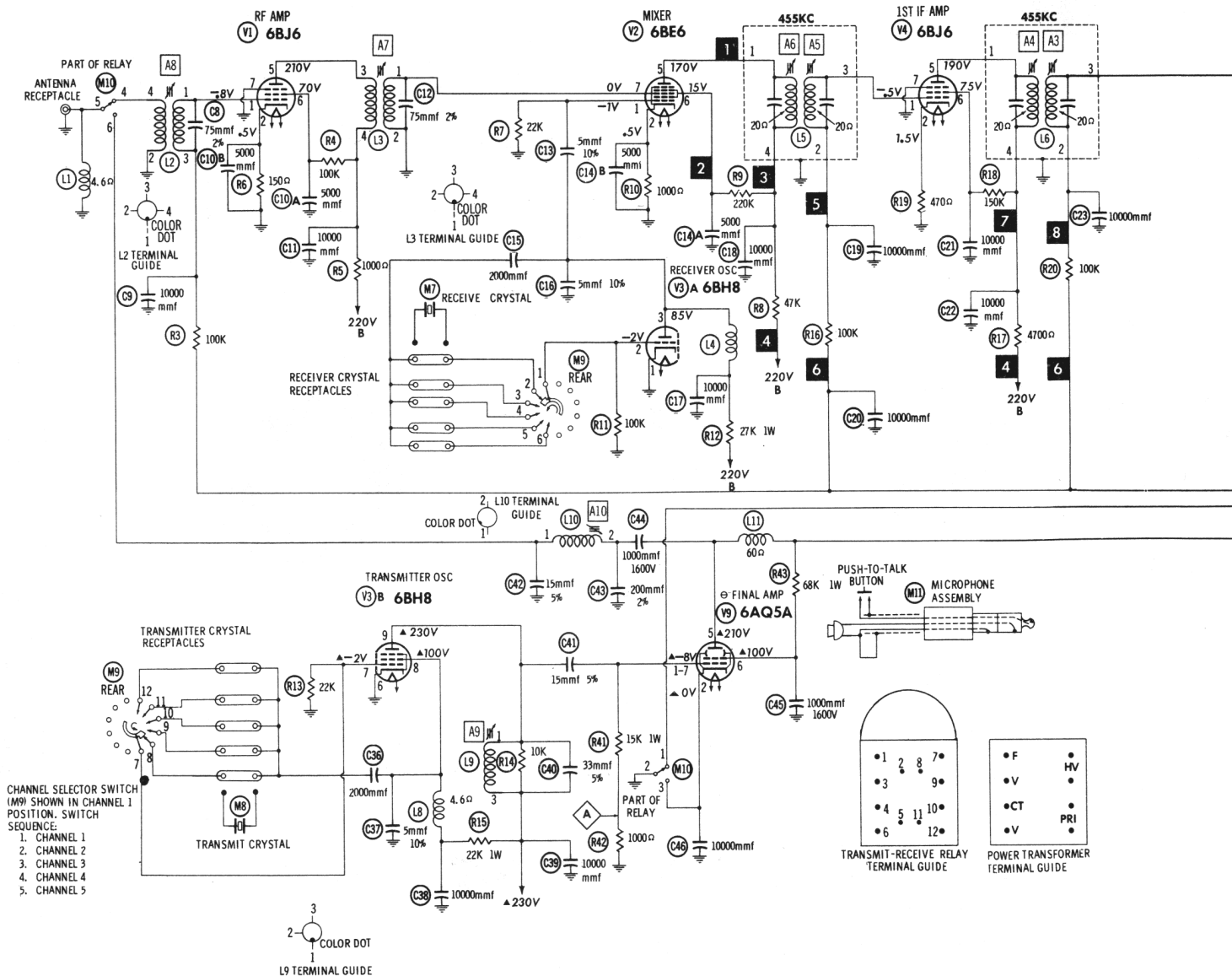
ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT				
Set Squelch Control fully counterclockwise. Set Gain Control fully clockwise. Suggested Alignment Tools: A1 Thru A8... GENERAL CEMENT #8282, 8606, 8606-L, 9295, 9440 WALSCO #2526, 2543, 2544, 2545 A9, A10..... GENERAL CEMENT #8721, 8722 WALSCO #2519				
SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	OUTPUT METER	ADJUST	REMARKS
1. High side to ungrounded tube shield floating over Mixer. Low side to chassis.	455KC (400v Mod.)	Across voice coil.	A1, A2, A3, A4, A5, A6	Adjust for maximum deflection.
2. High side to antenna jack. Low side to chassis.	Frequency of channel in use.	"	A7, A8	"
3.		USE VTVM AC probe to point \diamond A. Common to chassis.	A9	Press "Talk" button. Adjust for maximum deflection.
4.		Use Field strength meter or RF Output Indicator.	A10	Connect 27MC antenna (or 50-75 Ω load) to antenna terminals and press "Talk" button. Adjust A10 for maximum deflection.

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

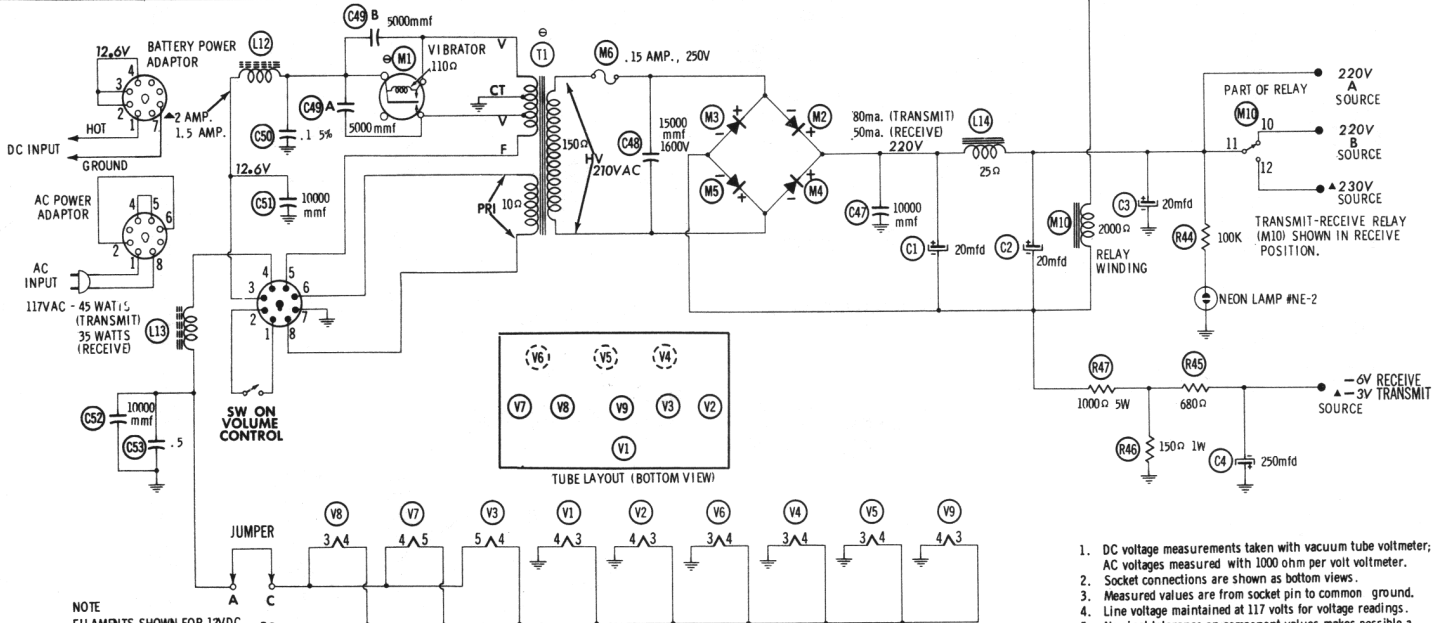
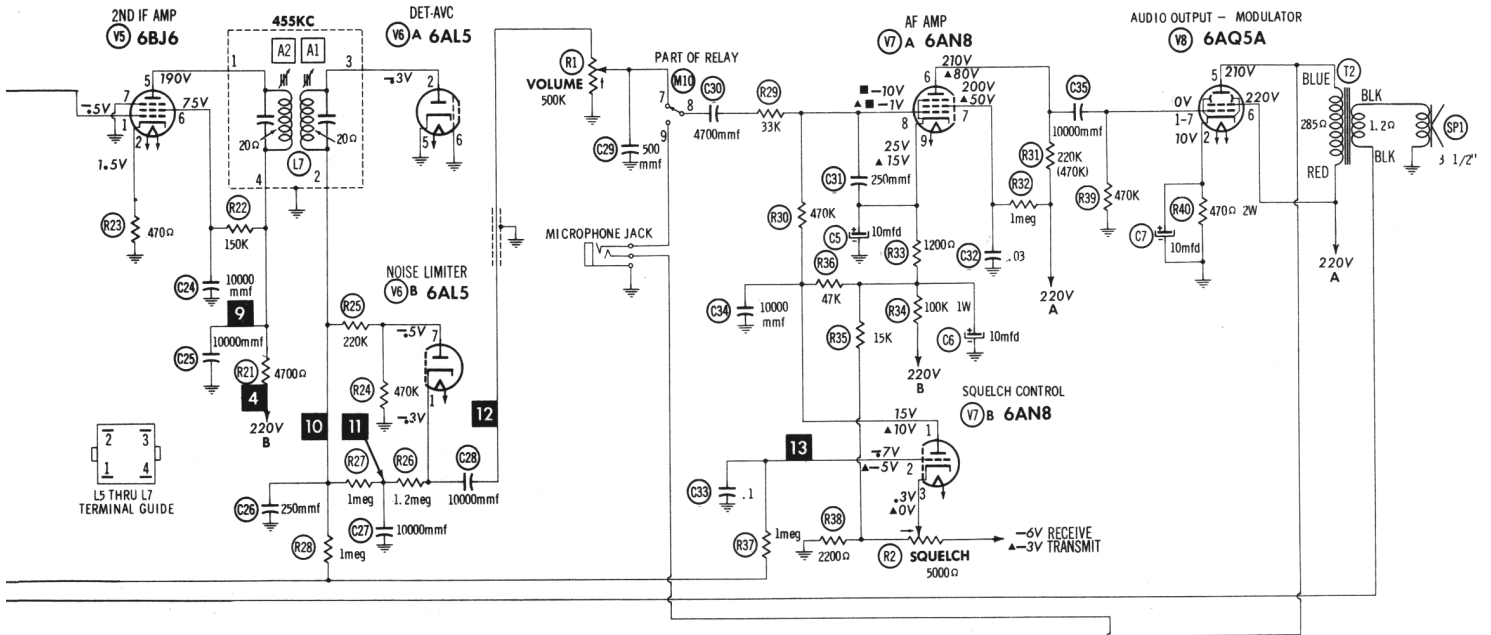


The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W. Sams & Co., Inc., by the manufacturers of KZ353

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A PHOTOFAC STANDARD NOTATION SCHEMATIC
with CIRCUITRACE
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NOTE
FILAMENTS SHOWN FOR 12VDC.
FOR 6V OPERATION, REPLACE
T1 AND M1. (SEE PARTS LIST).
CONNECT JUMPER FROM A TO
B AND GROUND C.
(TERMINALS LOCATED ON
CHASSIS BOTTOM, REAR).

RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	6BJ6	1.8meg	150Ω	.1Ω	0Ω	† 1000Ω	† 100K	0Ω		
V2	6BE6	22K	1000Ω	.1Ω	0Ω	† 47K	† 220K	.2Ω		
V3	6BH8	0Ω	100K	† 27K	.1Ω	.1Ω	0Ω	22K	† 22K	† 25Ω
V4	6BJ6	1.8meg	470Ω	0Ω	.1Ω	† 4700Ω	† 155K	0Ω		
V5	6BJ6	1.8meg	470Ω	0Ω	.1Ω	† 4700Ω	† 155K	0Ω		
V6	6AL5	3meg	700K	0Ω	.1Ω	0Ω	0Ω	470K		
V7	6AN8	65K	2.7meg	2000Ω	.1Ω	.1Ω	† 220K	† 1meg	535K	18K
V8	6AQ5A	470K	470Ω	.1Ω	.1Ω	† 310Ω	† 25Ω	NC		
V9	6AQ5A	16K	1NF	0Ω	.1Ω	0Ω	† 370Ω	† 68K	16K	

ALL MEASUREMENTS MADE IN "RECEIVE" POSITION WITH RECEIVER JUST SOUQLCHED AND DUMMY LOAD
CONNECTED UNLESS OTHERWISE DESIGNATED.
▲ MEASURED IN "TRANSMIT" POSITION. ■ MEASURED FROM CATHODE
† MEASURED FROM OUTPUT OF M2 AND M4. NC NO CONNECTION

- DC voltage measurements taken with vacuum tube voltmeter; AC voltages measured with 1000 ohm per volt voltmeter.
- Socket connections are shown as bottom views.
- Measured values are from socket pin to common ground.
- Line voltage maintained at 117 volts for voltage readings.
- Nominal tolerance on component values makes possible a variation of ±15% in voltage and resistance readings.
- Volume control at maximum, no signal applied for voltage measurements.

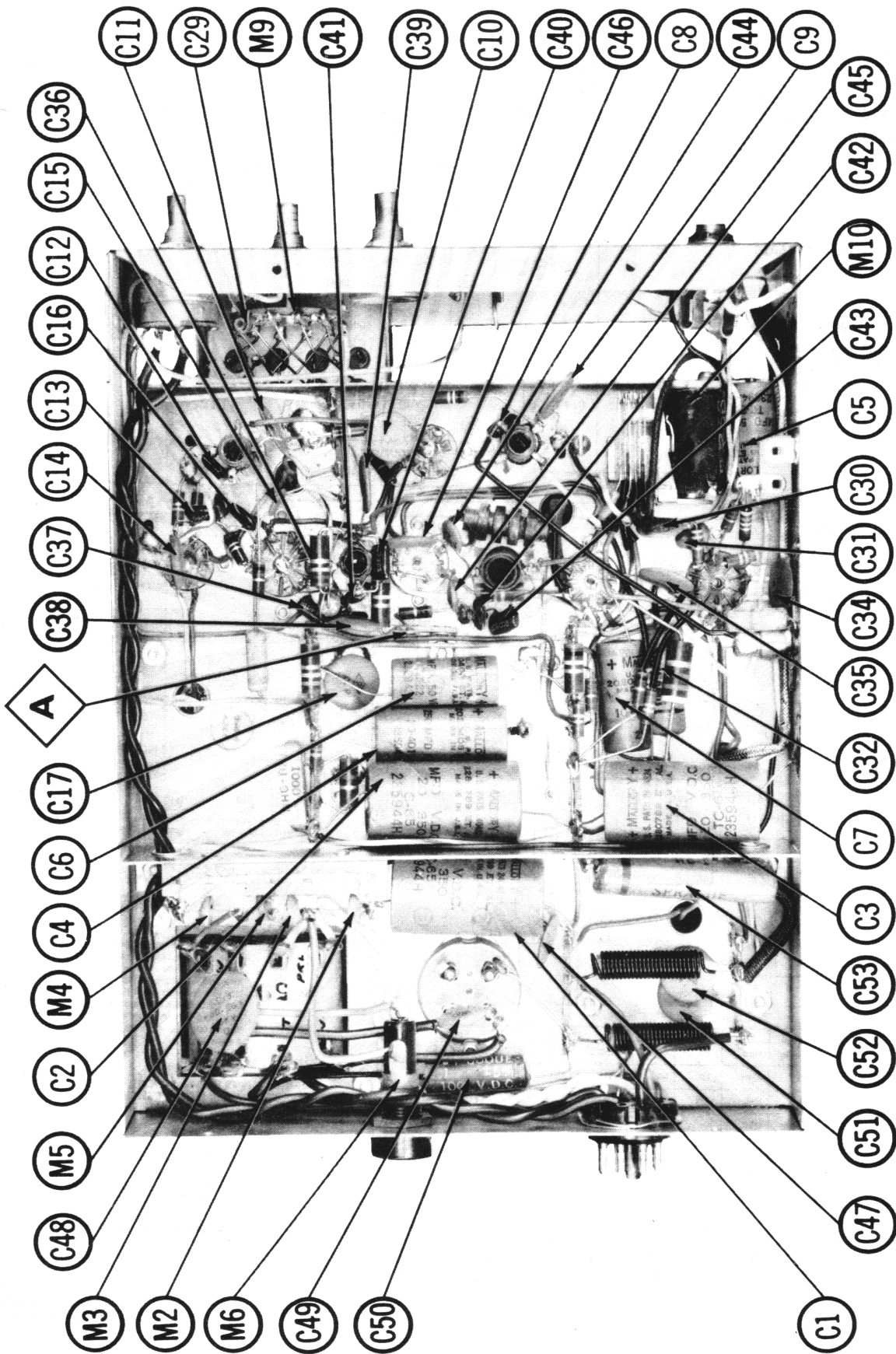
NUMBERS ASSIGNED TO COILS, SWITCHES, PLUGS, SOCKETS, AND TRANSFORMERS ARE TO FACILITATE CIRCUIT TRACING OR COMPONENT REPLACEMENT AND MAY NOT NECESSARILY BE FOUND ON THE UNIT.

SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

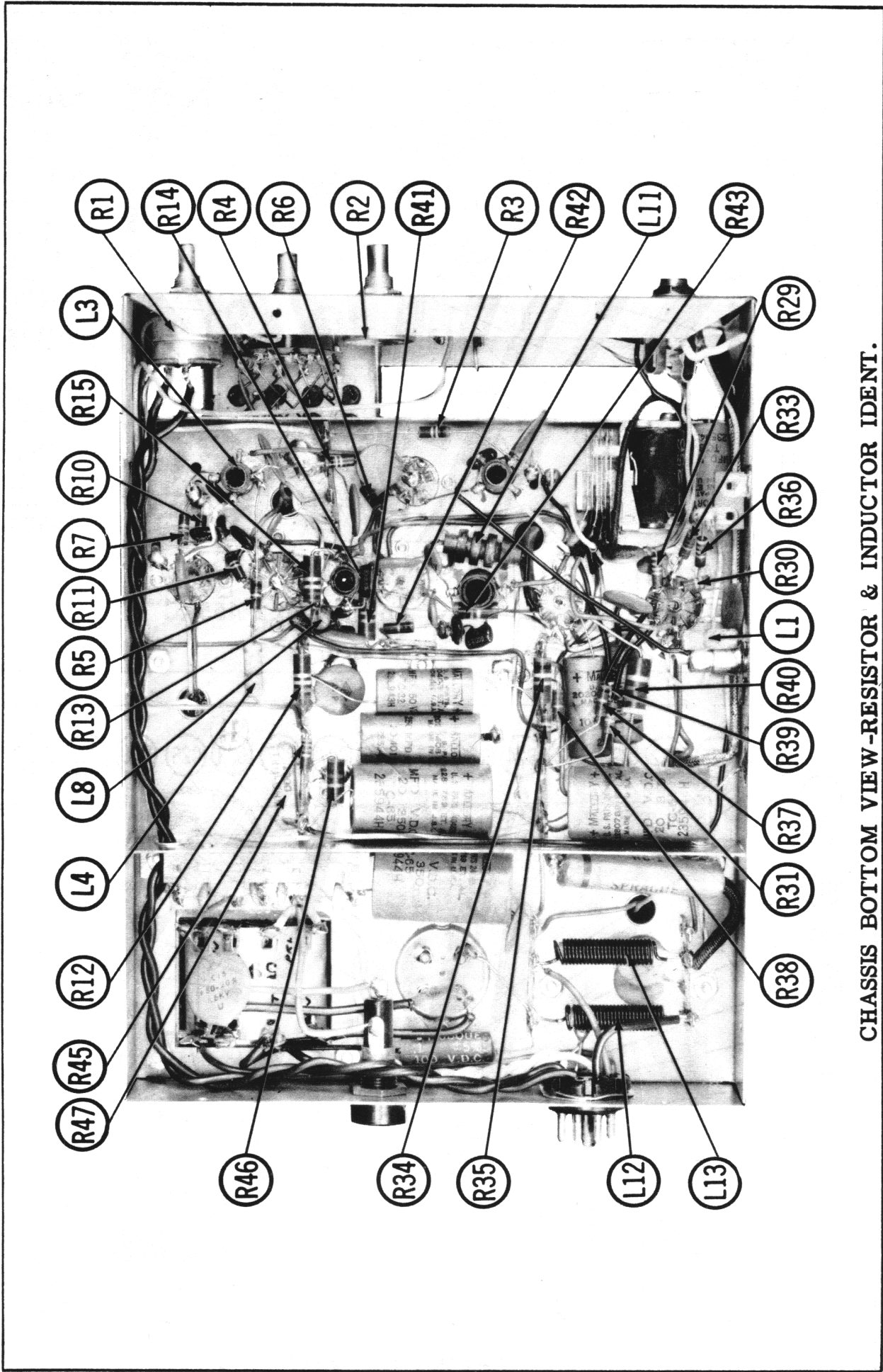
DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM

ARROWS ON CONTROLS INDICATE CLOCKWISE ROTATION (CONTROL VIEWED FROM SHAFT END)

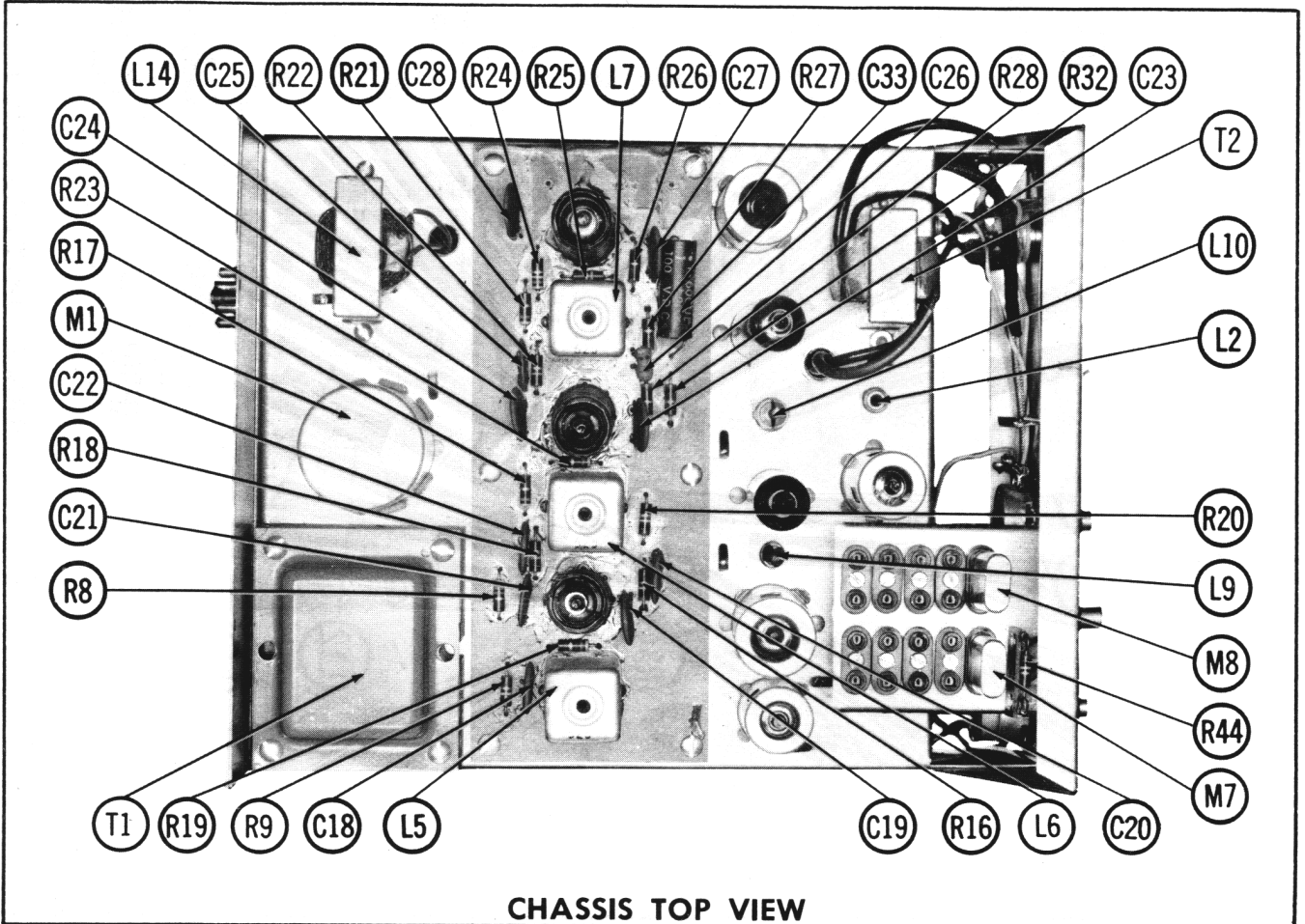
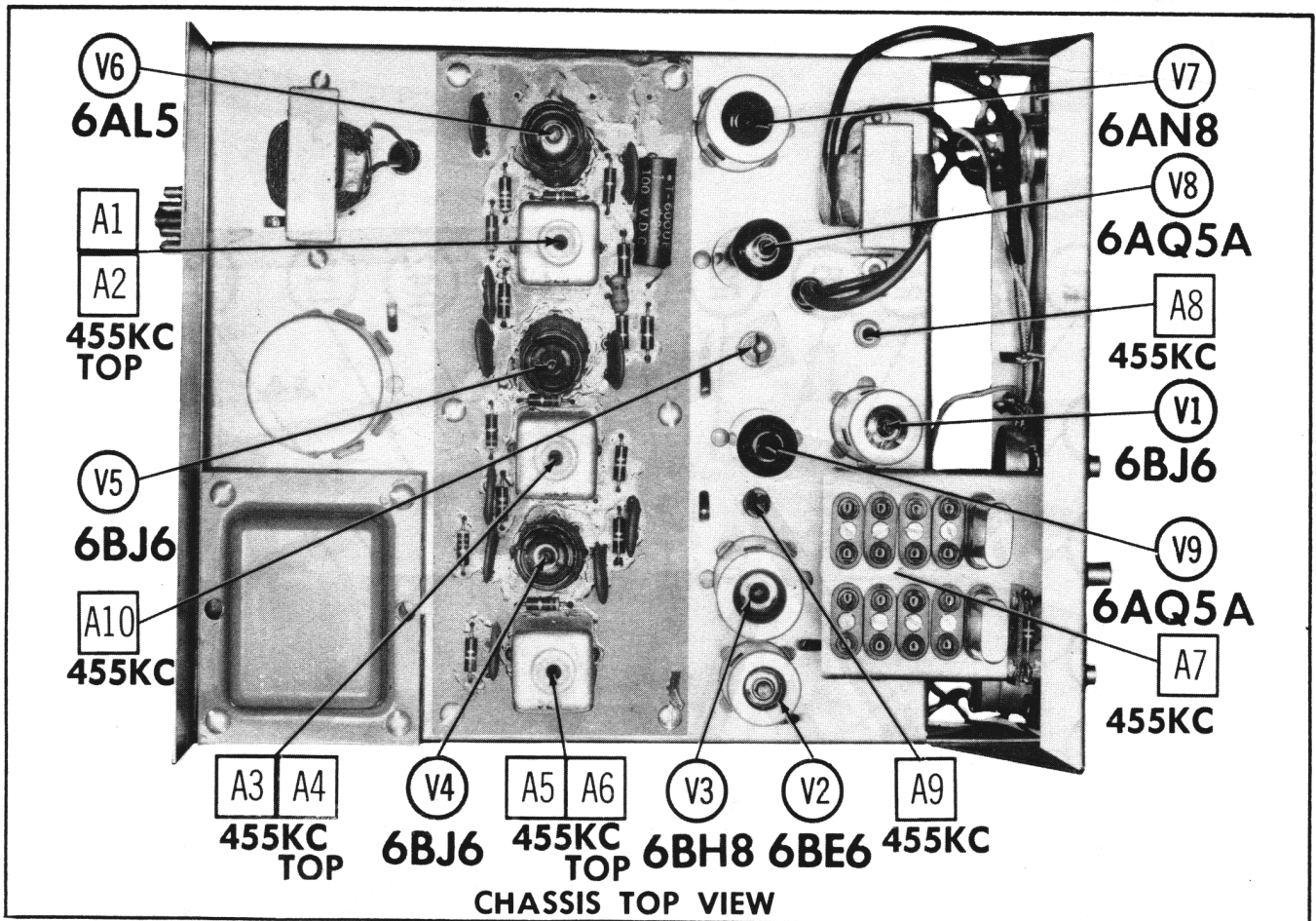
CITI-FONE MODELS
CD-5/6, CD-5/12



CHASSIS BOTTOM VIEW-CAPACITOR & MISC. IDENT.



CHASSIS BOTTOM VIEW-RESISTOR & INDUCTOR IDENT.



PARTS LIST AND DESCRIPTIONS

FIXED CAPACITORS (cont)

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.
C43	200 2%		1469-0002	DD30-102	HVB20D1	CM-15E-20IG	MCE237	BL-D10
C44	1000 1600V		DAC-2	DD30-102	HVB20D1	3CCD-102	2HV-210	BL-D10
C45	1000 1600V		DAC-2	DD30-102	HVB20D1	3CCD-102	2HV-210	BL-D10
C46	10000 1600V		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C47	10000 1600V		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C48	15000 1600V		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C49A	5000		BPD-2X005	DD3-502	BYDDDD5	16DP-4-153	B-110	MB-S15
C50	.1 100V 5%		V84C2PI-5%	DD-103	PM2PI	CCD-502	B2X250	5HK-2D50
C51	10000		BPD-01	DD-103	BYA10S1	IDP-2-104	B-110	5HK-S10
C52	10000		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C53	.5 120V		P282Z-5		CUB2P5	2DP-5-504	GEM-205	2TM-P50

TUBES

ITEM No.	TYPE	USE	RAYTHEON		SYLVANIA	
			ITEM No.	USE	ITEM No.	TYPE
V1	RF Amplifier		V6	Det. -AFC-Noise Limiter	6AL5	
V2	Mixer		V7	AF Amp. -Squelch Control	6AN8	
V3	Rec. Osc. -Trans. Osc.		V8	Audio Output & Modulator	6AQ5A	
V4	1st IF Amplifier		V9	Final Amplifier	6AQ5A *	
V5	2nd IF Amplifier					

* Manufacturer Recommends Replacing with Original Brand Only (Tung Sol)

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA					NOTES
		CITI-FONE PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	
C1	20 350		PR81735	BR2035	TC65	TD-20-350	TVA-1608
C2	20 350		PR81735	BR2035	TC65	TD-20-350	TVA-1608
C3	20 350		PR81735	BR2035	TC65	TD-20-350	TVA-1608
C4	250 6		PR81110	BBR250-6	TC50025	TD-250-6	TVA-1102
C5	10 50		PR81320	BBR10-50	TC32	TD-10-50	TVA-1304
C6	10 50		PR81320	BBR10-50	TC32	TD-10-50	TVA-1304
C7	10 50		PR81320	BBR10-50	TC32	TD-10-50	TVA-1304

FIXED CAPACITORS

Capacity values given in the rating column are in mfd. for Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					SPRAGUE PART No.
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	
C8	75 2%		BPD-01	TCZ-75	BYA10S1	CM-15E-750Q	MCE230	5HK-S10
C9	10000		BPD-2X005	DD3-502	BYDDDD5	CCD-502	B2X250	5HK-2D50
C10A	5000		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C11	10000		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C12	75 2%		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C13	5 10%		1469-000005	TCZ-4R7	22R5V5	CM-19B-050K	MCE230	MS-55
C14A	5000		BPD-2X005	DD3-502	BYDDDD5	CCD-502	B2X250	5HK-2D50
C15	2000		BPD-002	DD-202	BYA10D2	CCD-220	B-220	5HK-D20
C16	5 10%		1469-000005	TCZ-4R7	22R5V5	CM-19B-050K	MCE230	MS-55
C17	10000		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C18	10000		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C19	10000		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C20	10000		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C21	10000		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C22	10000		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C23	10000		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C24	10000		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C25	10000		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C26	250		SI 250	DD-251	LI0T25	CCD-251	GP325	5HK-S10
C27	10000		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C28	10000		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C29	500		SI 500	DD-501	BYA10T5	CCD-501	B-350	5HK-S10
C30	4700		BPD-0047	DD-472	BYA10D47M	CCD-472	B-247	5HK-D47
C31	250		SI 250	DD-251	LI0T25	CCD-251	GP325	5HK-S10
C32	.05 400V		F488N-03	DD-303	CUB6S3	4DP-2-303	GEM-413	4TM-S30
C33	.1 100V		P288N-1	DF-104	CUBEPI	2DP-3-104	GEM-201	2TM-P10
C34	10000		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C35	10000		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C36	2000		BPD-002	DD-202	BYA10D2	CCD-202	B-220	5HK-D20
C37	5 10%		1469-000005	TCZ-4R7	22R5V5	CM-19B-050K	MCE230	MS-55
C38	10000		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C39	10000		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C40	33 5%		1469-000033	TCZ-33	22R5Q33	CM-19B-330J	CNO-433	MS-433
C41	15 5%		1469-000015	TCZ-15	22R5Q15	CM-19B-150J	CNO-415	MS-415
C42	15 5%		1469-000015	TCZ-15	22R5Q15	CM-19B-150J	CNO-415	MS-415

* Alternate Value.

CONTROLS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					INSTALLATION NOTES
			CITI-FONE PART No.	AEROVOX PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	
R1A	500K Shaft		475A	B-60-S	A47-500K-Z	Q13-133	U48	Volume
B	Switch			Not Req.	BS-2	76-1	Not Req.	Power Off-On
C	5000Ω			B-10	A47-5000-S	Q11-114	U14	Squelch
R2A	5000Ω			Not Req.	BS-2	Not Req.	Not Req.	

RESISTORS

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

ITEM No.	RATING	REMARKS	REPLACEMENT DATA		RATING	ITEM No.	REPLACEMENT DATA	
			IRC PART No.	WORKMAN TV PART No.			IRC PART No.	WORKMAN TV PART No.
R3	100K				1.2meg	R26		
R4	1000Ω				1meg	R27		
R5	1000Ω				33K	R28		
R6	150Ω				470K	R29		
R7	22K				330	R30		
R8	47K				220K	R31		
R9	220K				100Ω	R32		
R10	1000Ω				120Ω	R33		
R11	1000Ω				100K 1W	R34		
R12	27K 1W				15K	R35		
R13	22K				47K	R36		
R14	10K				2200Ω	R37		
R15	22K 1W				470K	R38		
R16	100K				470K 2W	R39		
R17	4700Ω				15K 1W	R40		
R18	150K				1000Ω	R41		
R19	470Ω				1000Ω	R42		
R20	100K				68K 1W	R43		
R21	4700Ω				100K	R44		
R22	150K				680Ω	R45		
R23	470Ω				150Ω 1W	R46		
R24	470K				1000Ω 5W	R47		
R25	220K				1000Ω 5W			

* Alternate Value.

PARTS LIST AND DESCRIPTIONS (Continued)

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA				NOTES
		CITI-FONE PART No.	Meritt PART No.	Miller PART No.	Stancor PART No.	
L1	RF Choke(7.5uh)	① 603	BC-565	461L	RTC-8521	① IRC Part #CLA
L2	Ant.	602				
L3	RF Choke(7.5uh)	① 525	BC-565	461L	RTC-8521	
L4	1st IF	525				
L5	2nd IF	525				
L6	3rd IF	525				
L7	RF Choke(7.5uh)	① 604	BC-565	461L	RTC-8521	
L8	Trans. Osc. Plate	G-15	TV-118	6171-A	RTC-8809	
L9	Transmitter Output		TV-118	6171-A	RTC-8809	
L10	RF Choke(2.5MH)		BC-549	4537	RTC-9166	
L11	Hash Choke (10uh)		5220		RTC-9182	
L12	Hash Choke (10uh)		5220		RTC-9182	
L13	Phi. Choke (10uh)					

FILTER CHOKE

ITEM No.	CURRENT (Measured)	DC RES. (1000 Ω)	INDUCTANCE (1000 μH)	REPLACEMENT DATA				NOTES
				CITI-FONE PART No.	Meritt PART No.	Stancor PART No.	Thordarson PART No.	
L14	.080A	25Ω	.5 HY	M88-628				

TRANSFORMER (POWER)

ITEM No.	INPUT	RATING	REPLACEMENT DATA				NOTES
			CITI-FONE PART No.	Meritt PART No.	Stancor PART No.	Thordarson PART No.	
T1	117VAC @ 210V @ 18V Tap @ .46A or 12.6VDC @ 1.5A	SEC. 1 200V @ 18V Tap @ .46A or 12.6VDC @ 1.5A SEC. 2 .15A DC 12.6V * 6V *	592 ①				① For 12 VDC operation. Part #591 used for 6 VDC operation. * Secondary 2 not used in DC operation.

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE	REPLACEMENT DATA				NOTES
		CITI-FONE PART No.	Meritt PART No.	Stancor PART No.	Thordarson PART No.	
T2	6700Ω	121-A6	A-3026	A-3850①	24505①	① Drill New Mounting Hole (s).

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		CITI-FONE PART No.	QUAM PART No.	
SP1	3 1/2" PM 3-4Ω	5531	3A07	

VIBRATOR

ITEM No.	TYPE	INPUT VOLTS/FREQUENCY	REPLACEMENT DATA			NOTES
			CITI-FONE PART No.	CORNELL-DUBILIER PART No.	MALLOY PART No.	
M1	Interrupter	12V 115% 6V 115%	G-1601	G-1601	G-1601	6301 5300

POWER RECTIFIERS

ITEM No.	RATING CURRENT (Measured)	REPLACEMENT DATA			NOTES
		CITI-FONE PART No.	SARKES TARZIAN PART No.	SYLVANIA PART No.	
M2	.080A	IN1763 *	2F4 *	SR200 *	* Silicon
M3	.080A	IN1763 *	2F4 *	SR200 *	
M4	.080A	IN1763 *	2F4 *	SR200 *	
M5	.080A	IN1763 *	2F4 *	SR200 *	

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA			
			CITI-FONE PART No.	LITTELFUSE PART No.	HOLDER	FUSE HOLDER
M6	3AG	15/100A 250V S/B		313, 150 (.15A 250V S/B)	342001	MDL 15/100 HKP

MISCELLANEOUS

ITEM No.	PART NAME	CITI-FONE PART No.	NOTES
M7	Crystal		
M8	Crystal		
M9	Switch		
M10	Relay		
M11	Microphone Assy.		

WIRING DATA

General-use Unshielded Hook-up Wire Use BELDEN NO. 8530 (Solid) Available in Ten Colors
8524 (Stranded) Available in Ten Colors
Power Cord Use BELDEN NO. 1765-B (6 Ft. Length)
1725-K (7 1/2 Ft. Length)