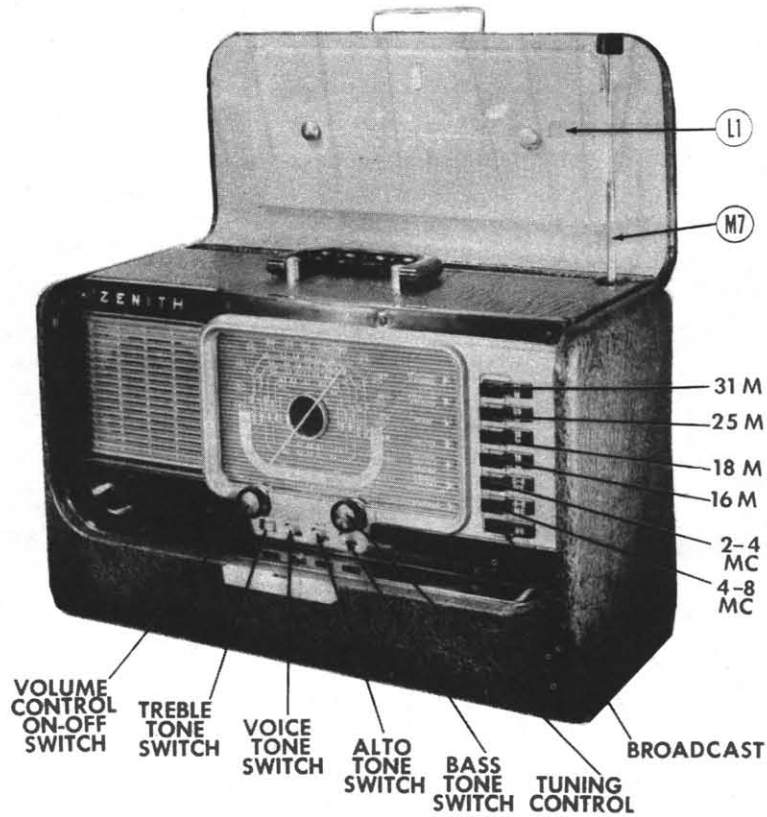




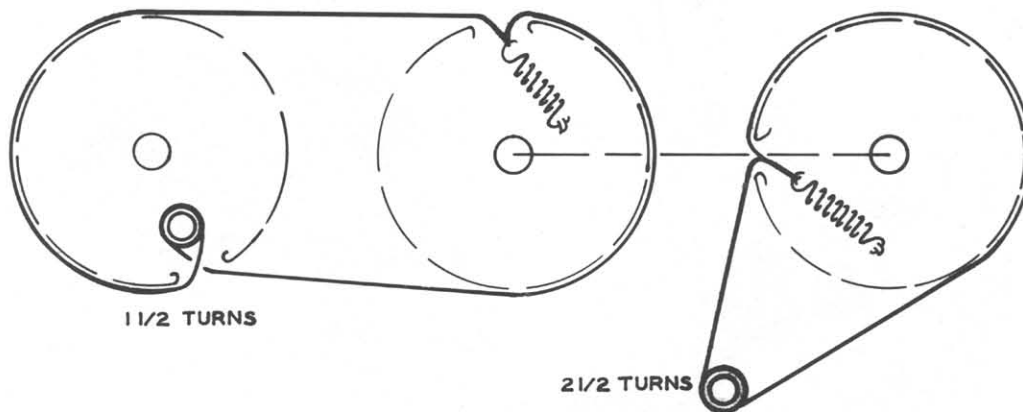
ZENITH
MODEL H500 (Ch. 5H40)



ZENITH
MODEL H500 (Ch. 5H40)

TRADE NAME	Zenith, Model H500 (Ch. 5H40)	
MANUFACTURER	Zenith Radio Corp., 6001 Dickens Ave., Chicago, Illinois	
TYPE SET	Three Power Operated Multi-Band Superheterodyne Receiver with Loop Antenna	
TUBES (FIVE)	Types 1U4 RF Amp., 1L6 Converter, 1U4 IF Amp., 1U5 DET.-AVC-AF, 3V4 Power Output	
POWER SUPPLY	110-120 Volts AC-DC or 9 Volts "A" Supply and 90 Volts "B" Supply on Pack Form	
RATING	.15 Amp. at 117 Volts AC or 70MA at 9 Volts DC and 20MA at 90 Volts DC	
TUNING RANGE—BROADCAST	540-1600KC	SHORT WAVE #1 4-8MC, #2 2-4MC, #3 17.4-18.2MC, #4 14.8-15.6MC, #5 11.5-12.1MC, #6 9.4-9.8MC

TUNING GANG FULLY CLOSED

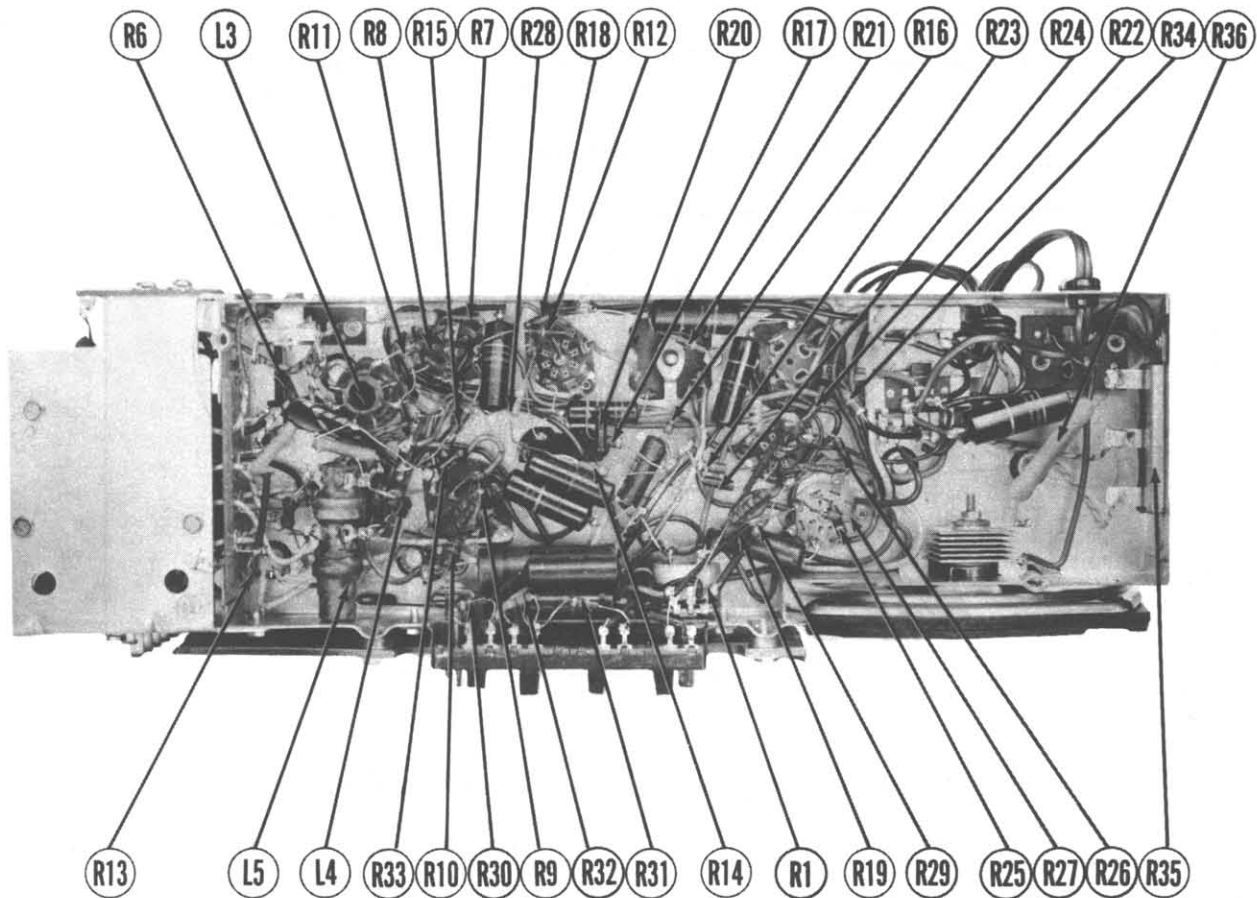
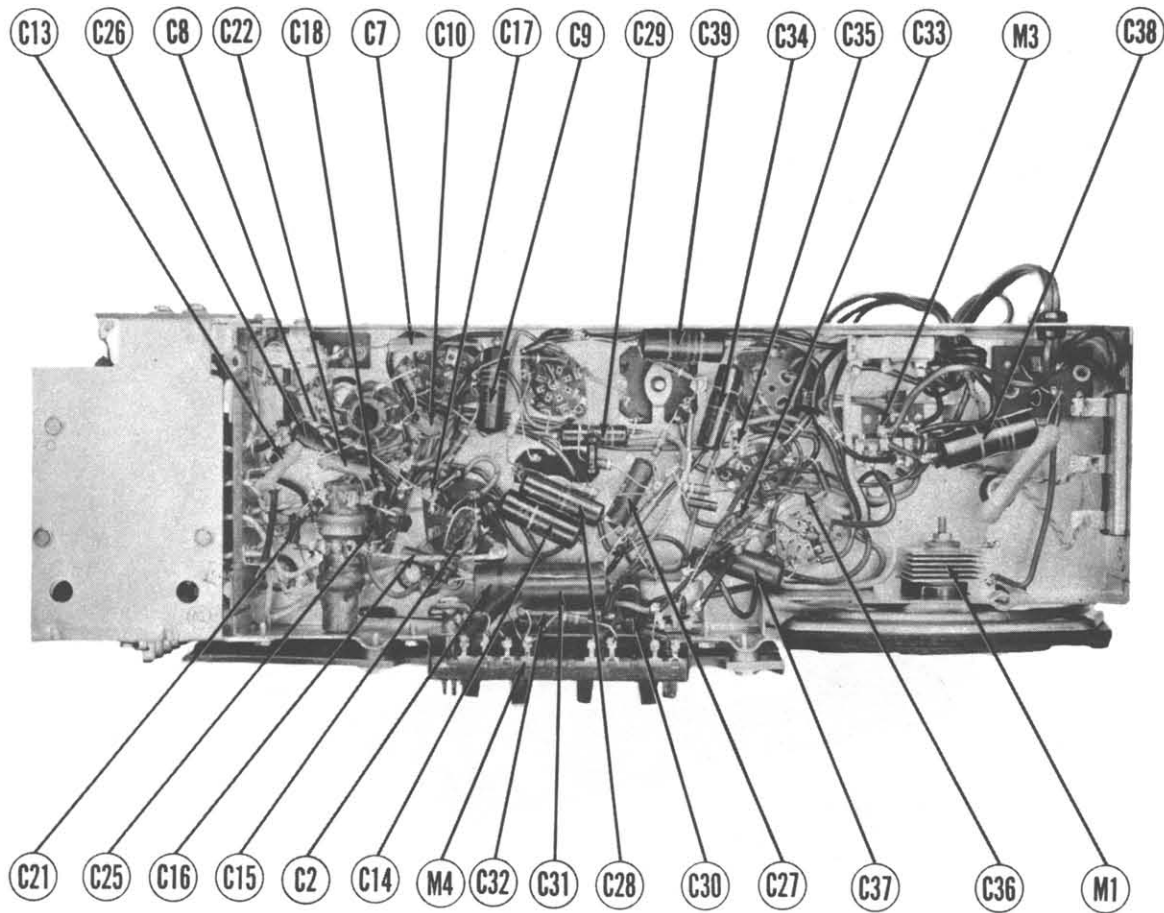


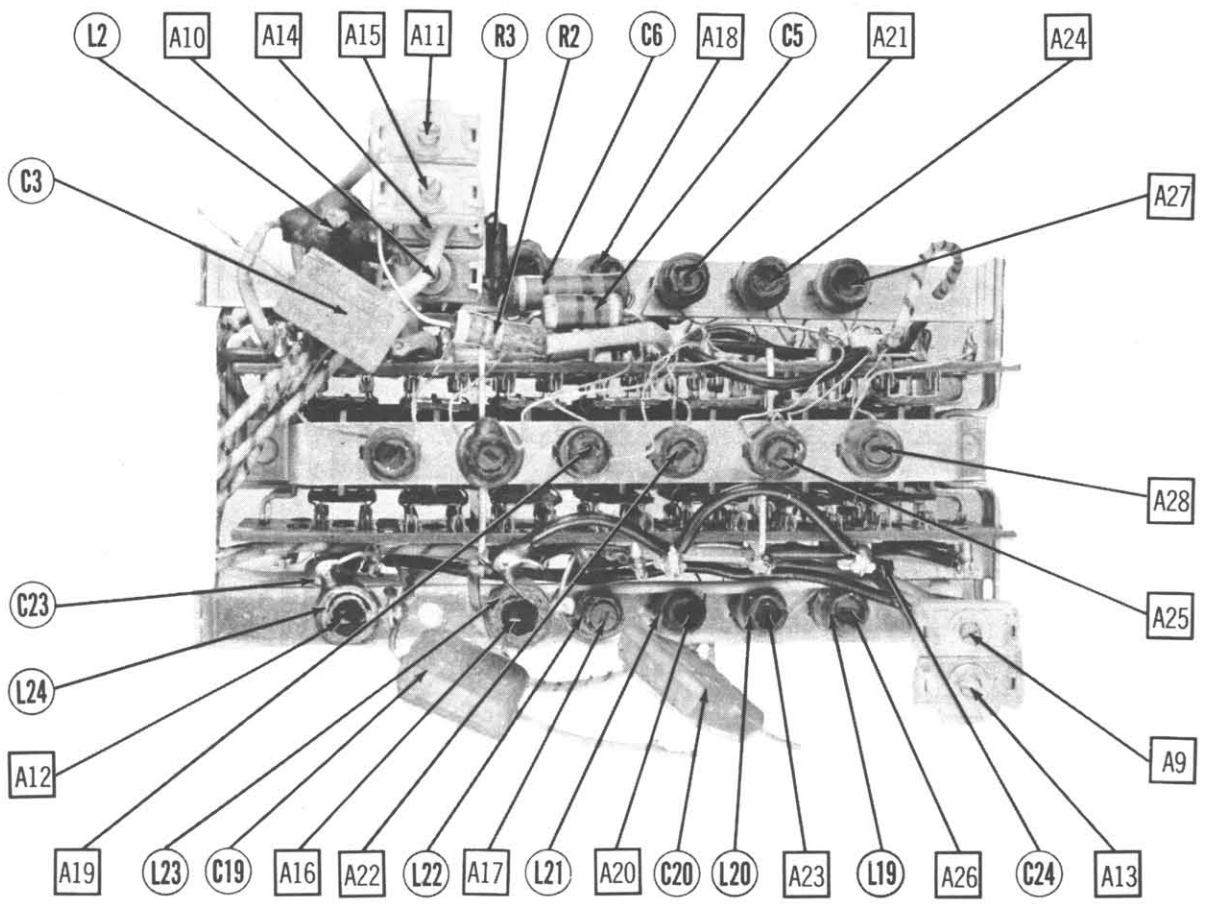
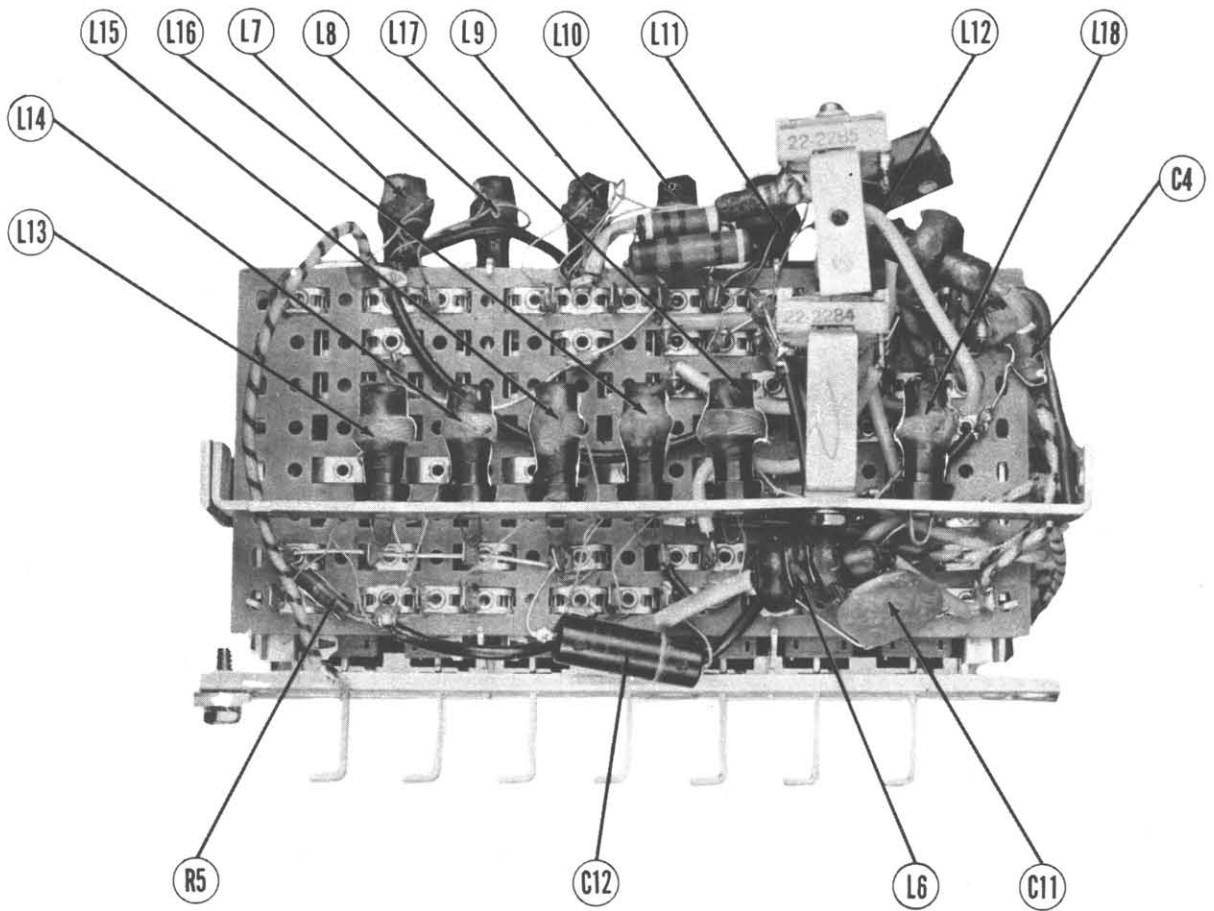
DIAL CORD DRIVE

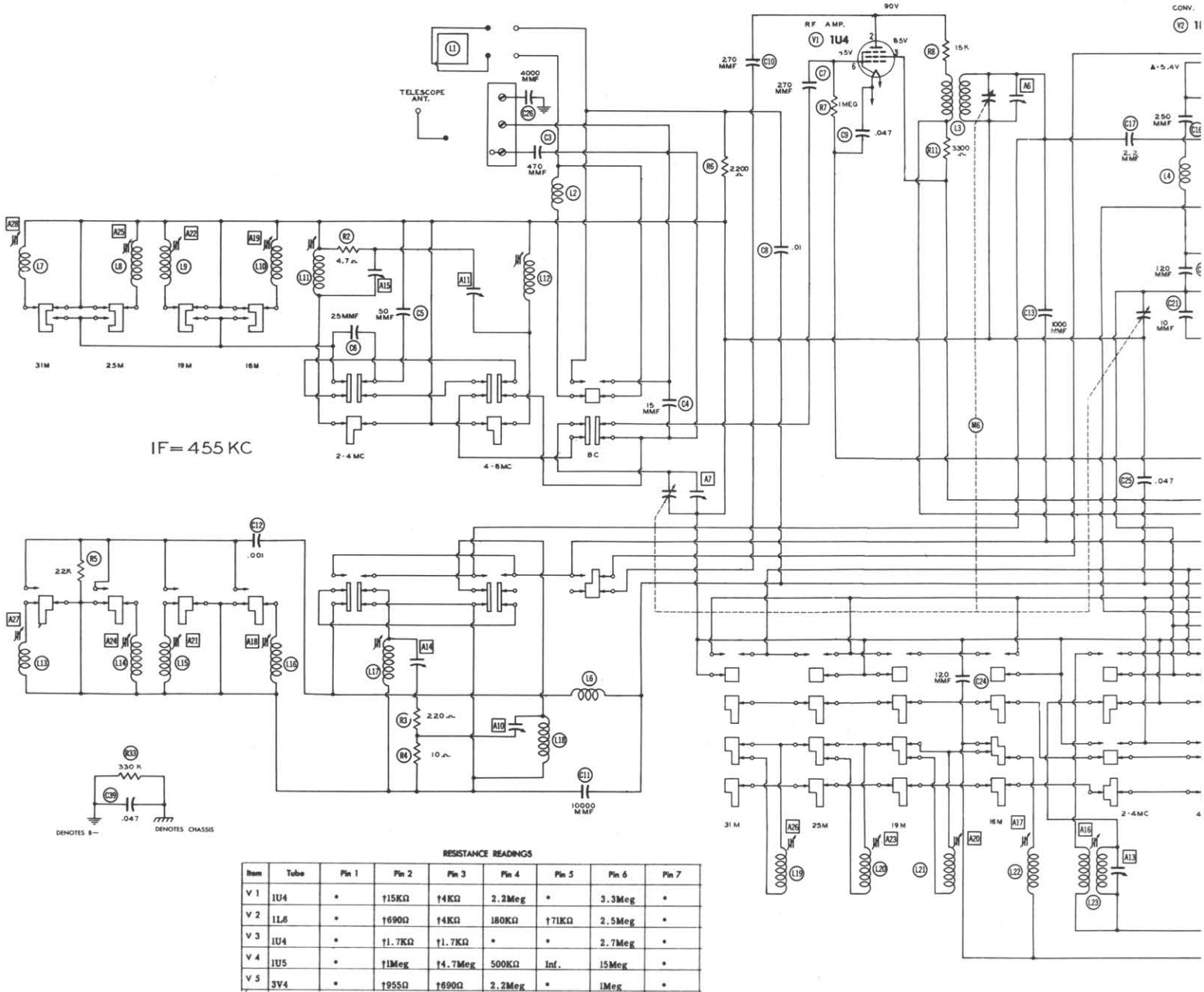
HOWARD W. SAMS & CO., INC. • Indianapolis 5, Indiana

"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."
"Reproduction or use, without express permission, of editorial or pictorial con-

tent, in any manner, is prohibited. No patent liability is assumed with respect to the use of the information contained herein. Copyright 1951 by Howard W. Sams & Co., Inc., Indianapolis, Indiana, U. S. of America. Copyright under International Copyright Union. All rights reserved under Inter-American Copyright Union (1910) by Howard W. Sams & Co., Inc." Printed in U. S. of America







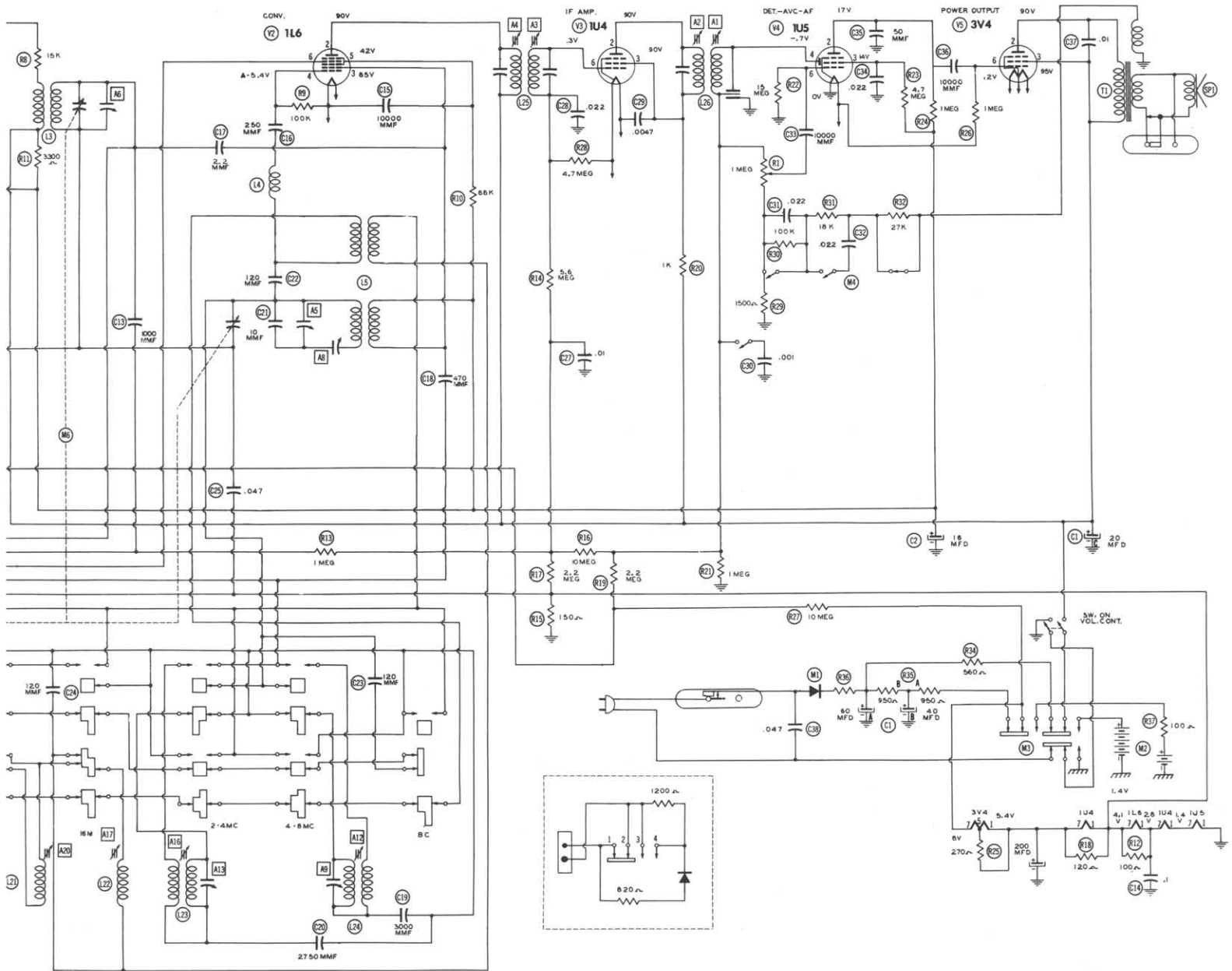
RESISTANCE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7
V 1	1U4	*	†15KΩ	†4KΩ	2.2Meg	*	3.3Meg	*
V 2	1L6	*	†690Ω	†4KΩ	180KΩ	†71KΩ	2.5Meg	*
V 3	1U4	*	†1.7KΩ	†1.7KΩ	*	*	2.7Meg	*
V 4	1U5	*	†1Meg	†4.7Meg	500KΩ	Inf.	15Meg	*
V 5	3V4	*	†955Ω	†690Ω	2.2Meg	*	1Meg	*

ALL MEASUREMENTS TAKEN WITH M3 IN AC POSITION
 ALL MEASUREMENTS TAKEN IN BC POSITION
 † MEASURED FROM OUTPUT OF M1
 * DO NOT USE OHMMETER TO MEASURE FILAMENT RESISTANCE
 ‡ TAKEN WITH VACUUM TUBE VOLTMETER

THE COOPERATION OF THE MANUFACTURER OF THIS RECEIVER MAKES IT POSSIBLE TO BRING YOU THIS SERVICE

1. DC Voltage measurements are at 20,000 ohms per volt measured at 1,000 ohms per volt.
2. Socket connections are shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Line voltage maintained at 117 volts for voltage readings.
5. Nominal tolerance on component values makes possible + 10% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for measurements.



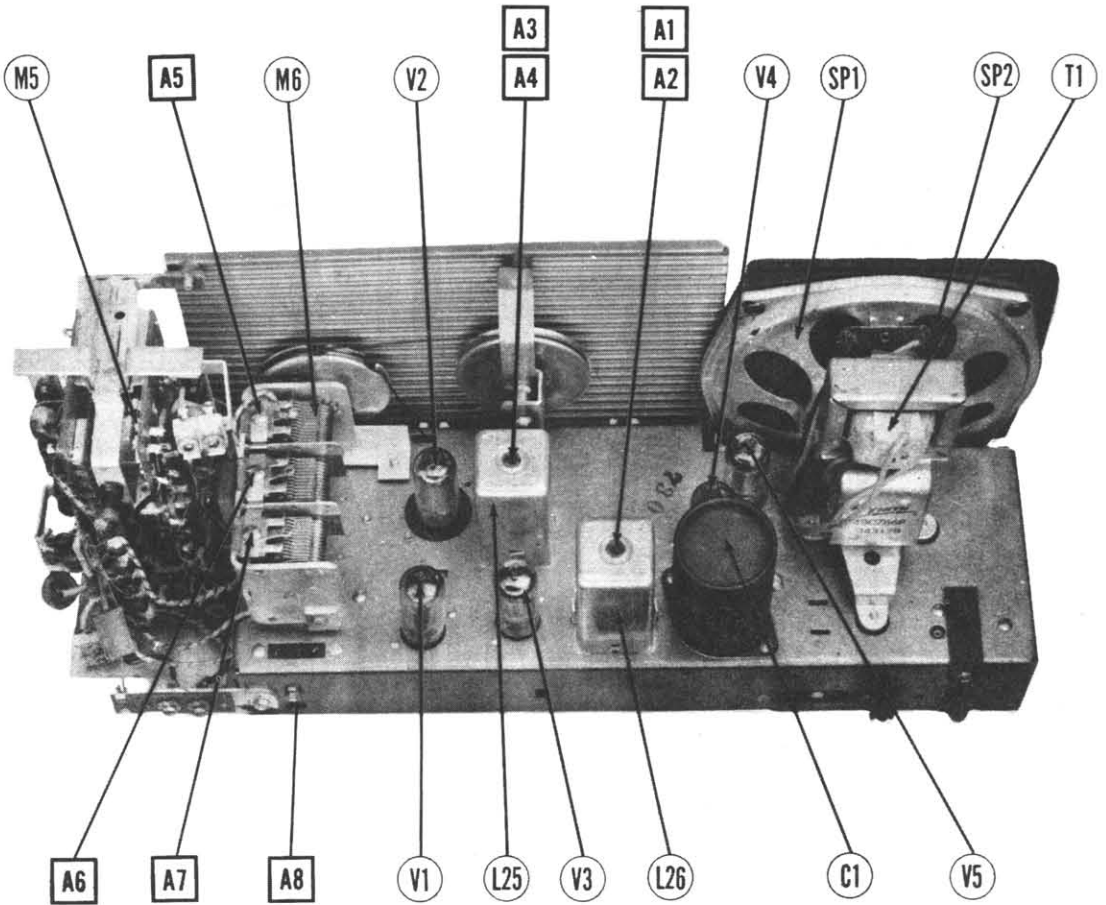
measurements are at 20,000 ohms per volt; AC Voltages 1,000 ohms per volt.
 sections are shown as bottom views.
 values are from socket pin to common negative.
 : maintained at 117 volts for voltage readings.
 tolerance on component values makes possible a variation of
 voltage and resistance readings.
 control at maximum, no signal applied for voltage measure-

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

To set pointer, turn tuning capacitor fully closed and set pointer, parallel with base of dial.
 Use battery power, if possible. If AC power is used, use an isolation transformer when available. If not, connect a .1MFD capacitor in series with low side of the signal generator and B-.
 Loop should be maintained in same relative position to chassis as when receiver is in cabinet.
 Volume control should be at maximum position. Output of signal generator should be no higher than necessary to obtain an output reading. Use an insulated alignment screwdriver for adjusting.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	.1MFD.	High side to pin 6, (Grid), of 1L6, (V2). Low side to B-.	455KC (400 ν Mod.)	BC (bottom button)	600KC	Across voice coil.	A1, A2, A3, A4	Adjust for maximum output. If AC power is used without an isolation transformer, reduce dummy antenna to 200MMF to reduce hum modulation.
2.		Loop	1600KC	"	1600KC	"	A5	Fashion loop of several turns of wire and radiate signal into loop of receiver. Adjust for maximum output.
3.		Loop	1400KC	"	1400KC	"	A6, A7	"
4.		Loop	600KC	"	600KC	"	A8	Rock tuning gang while adjusting A8 for maximum output.
5.	3ft. of wire	Connect high side of generator to 3ft. of wire placed approximately 1ft. from extended whip antenna. Low side not connected.	7.8MC	4-8MC (second button from bottom.)	7.8MC	"	A9, A10, A11	Adjust for maximum output.
6.	"	"	4.2MC	"	4.2MC	"	A12	Rock tuning gang while adjusting A12 for maximum output. Repeat steps 5 and 6.
7.	"	"	3.9MC	2-4MC (third button from bottom)	3.9MC	"	A13, A14, A15	Adjust for maximum output.
8.	"	"	2.1MC	"	2.1MC	"	A16	Rock tuning gang while adjusting A16 for maximum output. Repeat steps 7 and 8.
9.	"	"	17.8MC	16M (fourth button from bottom)	17.8MC	Across voice coil.	A17, A18, A19	Rock tuning gang while adjusting each adjustment for maximum output.
10.	"	"	15.2MC	19M (third button from top)	15.2MC	"	A20, A21, A22	"
11.	"	"	11.8MC	25M (second button from top)	11.8MC	"	A23, A24, A25	"
12.	"	"	9.6MC	31M (top button)	9.6MC	"	A26, A27, A28	"

CHASSIS—TOP VIEW



PARTS LIST AND DESCRIPTIONS TUBES (SYLVANIA or Equivalent)

ITEM No.	USE	REPLACEMENT DATA		RTMA BASE TYPE	INSTALLATION NOTES
		ZENITH PART No.	STANDARD REPLACEMENT		
V1	RF Amplifier Converter	IU4	IU4	6AR	
V2	IF Amplifier	IL6	IL6	6AR	
V3	IF Amplifier	IU4	IU4	6BW	
V4A	Det.-AVC-AF	IU5	IU5	6AU	
B	Det.-AVC-AF	IS5	IS5		
V5	Power Output	3V4	3V4	6BX	

CAPACITORS

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

ITEM No.	RATING CAP.	RATING VOLT	REPLACEMENT DATA				SPRAGUE PART No.	IDENTIFICATION AND INSTALLATION NOTES
			ZENITH PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.		
C1A	60	150	22-1741	AFH4-23	UP66215-X20	R1075	Filter	
C1B	40	150					Filter	
C1C	20	150					Decoupling	
C1D	200	10					Fil. Filter	
C2	16	150	22-1390	PRS150/16	BR1615	TVA-1409	Decoupling †	
C3	470	500		1468-0005	3W575	IFM-35	RF Coupling	
C4	15	50	22-1761	SI5	5W5Q5	5GA-Q15	RF Coupling	
C5	50	25	22-1392	SI25	5W5Q25	5GA-Q5	RF Coupling	
C6	25	500	22-2058	1468-0003	5W573	5GA-Q25	RF Coupling	
C7	270	500	22-1784	P488-047	PTE4S1	MS-33	RF Coupling	
C8	.01	400	22-1778	P288-047	PTE4S1	4TM-S1	AVC Filter	
C9	.047	200	22-2058	1468-0003	5W573	2TM-S47	RF Coupling	
C10	270	500	22-3	BPD-01	DD-103	MS-33	RF Coupling	
C11	1000	600	22-2127	P888-001	IS3S1	5HK-D1	RF Bypass	
C12	.001	600	22-1886	SI1000	D6-102	6TM-D1	RF Coupling	
C13	1000	600	22-1777	P288-1	IF5D1	5HK-D1	RF Coupling	
C14	.1	200	22-3	BPD-01	DD-103	2TM-P1	Fil. Bypass	
C15	10000	250	22-2126	SI2.2NP0	TCZ-2.2	821-01	Conv. Grid Cap.	
C16	2.2	500	22-1763	D6-471	5W5T5	N750-333-251	Osc. Coupling	
C17	2	500	22-1390	1468-0005	NP0K-2R2	IFM-35	Osc. Coupling	
C18	470	500	22-2281	1467-003	1W5D3	IFM-23	Osc. Feedback	
C19	3000	500	22-1433			IFM-23	Fixed Padder	
C20	2750	500	22-1953	SI10	5W5Q1	5GA-Q1	Fixed Padder	
C21	10	200	22-2279	SI120	5W5T15	5GA-Q1	Fixed Padder	
C22	120	200	22-2280			5GA-T12	Fixed Padder	
C23	120	200	22-2279			4TM-S47	Fixed Padder	
C24	120	200	22-1775			4TM-S47	Fixed Padder	
C25	.047	400	22-4	P488-047	PTE4S5	5GA-Q1	RF Bypass	
C26	4000	400	22-1784	BPD-004	DD-503	4TM-S1	AVC Filter	
C27	.01	400	22-2071	P488-022	PTE4S2	4TM-S1	AVC Filter	
C28	.022	200	22-2071	P488-022	PTE4S2	2TM-S2	AVC Filter	
C29	.0047	400	22-1783	P688-0047	PTE6D5	6TM-D47	AVC Filter	
C30	.001	600	22-2127	P688-001	PTE6D1	6TM-D1	AVC Filter	
C31	.022	600	22-2071	P488-022	PTE4S2	2TM-S2	Tone Comp.	
C32	.022	200	22-2071	P488-022	PTE4S2	2TM-S2	Tone Comp.	
C33	10000	200	22-3	BPD-01	DD-103	2TM-S2	Tone Comp.	
C34	.022	400	22-2072	P488-022	PTE4S2	4TM-S22	Audio Coupling	
C35	50	22-1674	22-3	SI50	5W5Q5	5GA-Q5	AF Amp. Screen	
C36	10000	600	22-1779	BPD-01	DD-103	5HK-S1	AF Amp. Plate	
C37	.01	600	22-1844	P688-047	PTE6S1	5HK-S1	Audio Coupling	
C38	.047	600	22-1844	P688-047	PTE6S1	6TM-S1	Output Plate	
C39	.047	400	22-1775	P488-047	PTE4S5	6TM-S47	Line Filter	

† Some models use 12MFD. in this application. (Part # 22-2056)

CONTROLS

ITEM No.	RATING RESIST-ANCE	WATTS	REPLACEMENT DATA			INSTALLATION NOTES
			ZENITH PART No.	IRC PART No.	CENTRALAB PART No.	
RIA	1Meg	1/2	Q11-137	AG-61-S	AK-69	Volume Control
B	Shaft		Not req.	KSS-3	AK-4	Attach to RIA per instructions
C	Switch		Not req.	SWB-2	K-167	Attach to RIA per instructions

PARTS LIST AND DESCRIPTIONS (Continued)

RESISTORS

ITEM No.	RATING		REPLACEMENT DATA		IDENTIFICATION CODES
	RESISTANCE	WATTS	ZENITH PART No.	IRC PART No.	
R2	4.7Ω		63-1581		Parasitic Suppressor - Wire Wound
R3	220Ω		63-1758		Parasitic Suppressor
R4	10Ω		63-1701		Parasitic Suppressor - See Note 1
R5	22KΩ		63-1842		RF Coil Shunt
R6	2200Ω		BTS-22K		Antenna Isolation
R7	1Meg		BTS-1Meg		RF Amp. Plate
R8	15KΩ		BTS-15K		RF Amp. Grid
R9	100KΩ		BTS-100K		Osc. Grid - See Note 2
R10	68KΩ		63-1869		Osc. Anode
R11	3300Ω		BTS-3300		Voltage Divider
R12	100Ω		63-1807		Filament String
R13	1Meg		63-1743		Filament String
R14	5.6Meg		BTS-1Meg		AVC Network
R15	150Ω		63-1943		AVC Network
R16	10Meg		BTS-150		AVC Network
R17	2.2Meg		63-1954		AVC Network
R18	120Ω		63-1926		AVC Network
R19	2.2Meg		63-1747		Filament String
R20	1000Ω		BTS-2.2Meg		Filament String
R21	1Meg		BTS-1000		IF Amp. Decoupling
R22	15Meg		BTS-1Meg		Detector Diode Load
R23	4.7Meg		BTS-4.7Meg		AF Amp. Grid
R24	1Meg		63-1961		AF Amp. Screen
R25	270Ω		63-1912		AF Amp. Plate
R26	1Meg		63-1761		Filament String
R27	10Meg		63-1912		Output Grid
R28	4.7Meg		BTS-10Meg		AVC Network
R29	1500Ω		BTS-1500		AVC Network
R30	18KΩ		BTS-18K		Tone Compensation
R31	18KΩ		63-1858		Tone Compensation
R32	27KΩ		BTS-27K		Tone Compensation
R33	330KΩ		63-1845		Tone Compensation
R34	580Ω		BTS-330K		Isolation
R35A	950Ω	5	BTS-580		Filter
R36	120Ω	5	63-1362		Filament Dropping - Wire Wound
R37	100Ω	↓	63-2018		Filter - Wire Wound
			63-1744		Surge Limiter - Wire Wound
			BTS-100		Filament String

Note 1 Not used in all models.

Note 2 Some models use 180KΩ resistor in this application.

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	RATING		REPLACEMENT DATA				INSTALLATION NOTES
	IMPEDANCE	DC RES.	ZENITH PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.	
T1	7.2KΩ	3.8Ω	2650		208-668		

SPEAKER

ITEM No.	RATINGS		REPLACEMENT DATA		INSTALLATION NOTES
	FIELD	V. C. IMP.	ZENITH PART No.	JENSEN PART No.	
SP1	PM	3.8Ω	49-668	ST803	QUAM PART No.
SP2	CONE DIA.	V. C. DIA.	208-668	Model P525-V	52A1
	5"	9/16"			

PARTS LIST AND DESCRIPTIONS (Continued)

R F COILS

ITEM No.	USE	DC RES.		REPLACEMENT DATA	
		PRI.	SEC.	ZENITH PART No.	ZENITH PART No.
L1	Loop Ant.	.9Ω		S-17747	BC
L2	Ant. Loading Coil	1.9Ω		S-16047	
L3	RF Choke	7.5Ω	3.7Ω	S-17710	BC
L4	RF Choke	.3Ω		S-14403	BC
L5A	Osc. Coil	.8Ω	.1Ω	S-17709	BC
B	Osc. Coil	3.6Ω	5.1Ω	S-17709	
L6	RF Choke	3.4Ω		S-11952	31M
L7	Ant. Coil	.1Ω		S-17721	25M
L8	Ant. Coil	.0Ω		S-17720	19M
L9	Ant. Coil	.0Ω		S-17719	16M
L10	Ant. Coil	.1Ω		S-17718	10M
L11	Ant. Coil	.6Ω		S-17724	2-4MC
L12	Ant. Coil	.0Ω		S-17725	4-8MC
L13	RF Coil	.0Ω		S-17717	31M
L14	RF Coil	.0Ω		S-17716	25M
L15	RF Coil	.0Ω		S-17715	19M
L16	RF Coil	.0Ω		S-17714	16M
L17	RF Coil	.7Ω		S-17722	2-4MC
L18	RF Coil	.0Ω		S-17723	4-8MC
L19	Osc. Coil	.1Ω		S-17729	31M
L20	Osc. Coil	.1Ω		S-17728	25M
L21	Osc. Coil	.0Ω		S-17727	19M
L22	Osc. Coil	.0Ω		S-17726	16M
L23	Osc. Coil	.4Ω	.8Ω	S-17731	2-4MC
L24	Osc. Coil	.1Ω	.8Ω	S-17730	2-4MC
L25	Input IF	28Ω	28Ω	95-1148	4-8MC
L26	Output IF	27Ω	27Ω	95-1149	

SELENIUM RECTIFIER

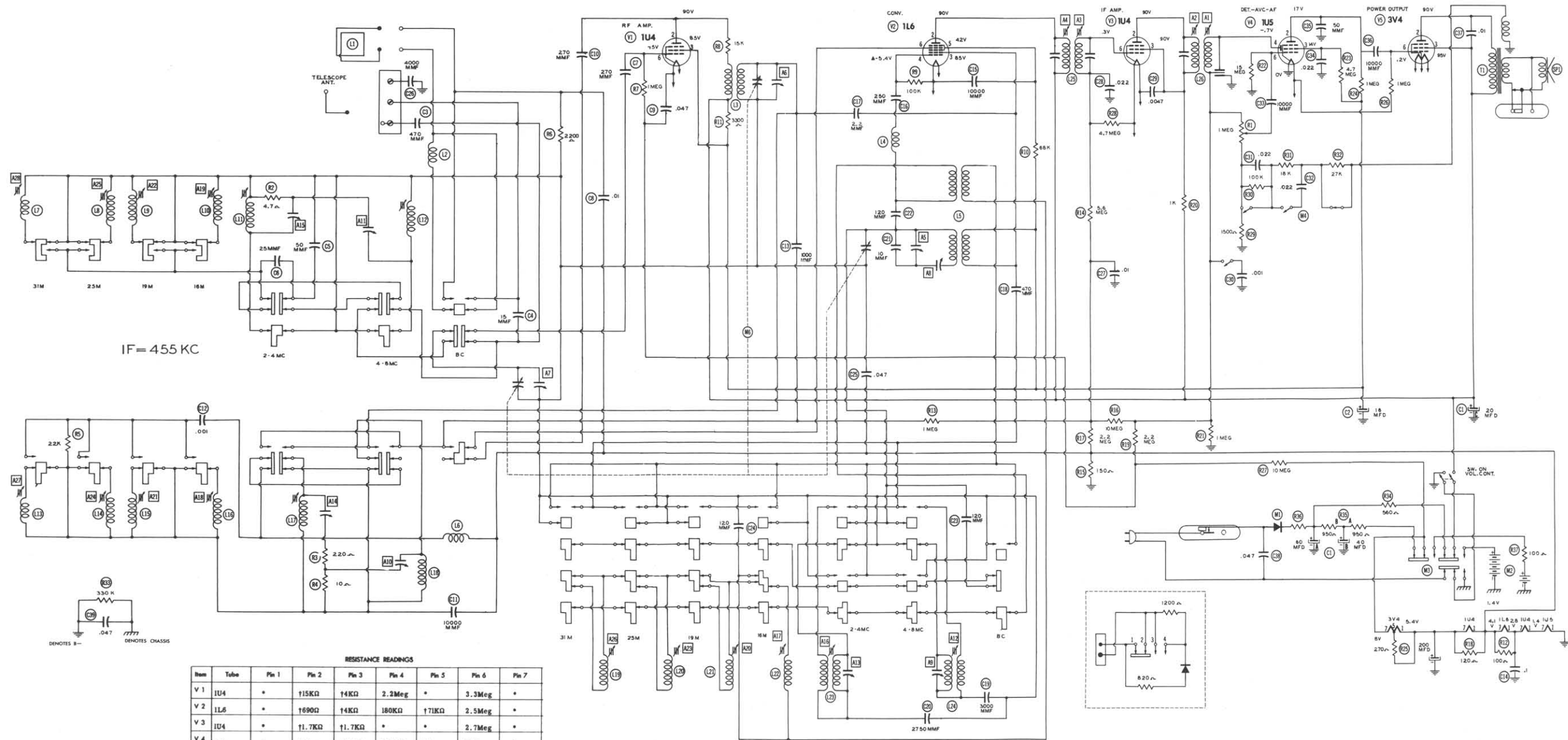
ITEM No.	RATING	REPLACEMENT DATA		NOTES
		ZENITH PART No.	SELETRON PART No.	
M1	CURRENT	212-5	5M4	

BATTERIES

ITEM No.	VOLTAGE	REPLACEMENT DATA				INSTALLATION NOTES
		ZENITH PART No.	EVEREADY	BURGESS		
M2	9V "A" 90V "B"	Z985	"A" "B" "A-B" "A" "B" "A-B"	752	G0860	

MISCELLANEOUS

ITEM No.	PART NAME	ZENITH PART No.	NOTES
M3	Switch	85-450	Power Change over
M4	Switch	85-503	Tone
M5	Switch	85-502	Band
M6	Tuning Cap	22-2286	20-476MMF-20-476MMF
M7	Telescope Ant.		
A9, A13	Trimmer	22-2283	Dual 2-4MC Osc. and 4-8MC Osc.
A10, A14	Trimmer	22-2284	Dual 2-4MC RF and 4-8MC RF
A8	Padder	22-2282	BC Osc. Padder
A11, A15	Trimmer	22-2285	Dual 2-4MC Ant. and 4-8MC Ant.
	Dial Scale	26-457	
	Dial Pointer	59-257	
	Voltage Adapter As.	S-15715	Complete
	Knob	46-913	Tuning and Volume
	Knob	46-912	Band Switch



IF = 455 KC

330 Ω
 .047 MFD
 DENOTES CHASSIS

RESISTANCE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7
V 1	1U4	*	†15KΩ	†4KΩ	2.2Meg	*	3.3Meg	*
V 2	1L6	*	†690Ω	†4KΩ	180KΩ	†71KΩ	2.5Meg	*
V 3	1U4	*	†1.7KΩ	†1.7KΩ	*	*	2.7Meg	*
V 4	1U5	*	†1Meg	†4.7Meg	500KΩ	Inf.	15Meg	*
V 5	3V4	*	†955Ω	†690Ω	2.2Meg	*	1Meg	*

ALL MEASUREMENTS TAKEN WITH M3 IN AC POSITION
 ALL MEASUREMENTS TAKEN IN BC POSITION
 † MEASURED FROM OUTPUT OF M1
 * DO NOT USE OHMMETER TO MEASURE FILAMENT RESISTANCE
 ‡ TAKEN WITH VACUUM TUBE VOLTMETER

THE COOPERATION OF THE MANUFACTURER OF THIS RECEIVER MAKES IT POSSIBLE TO BRING YOU THIS SERVICE

1. DC Voltage measurements are at 20,000 ohms per volt; AC Voltages measured at 1,000 ohms per volt.
2. Socket connections are shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Line voltage maintained at 117 volts for voltage readings.
5. Nominal tolerance on component values makes possible a variation of ± 10% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.