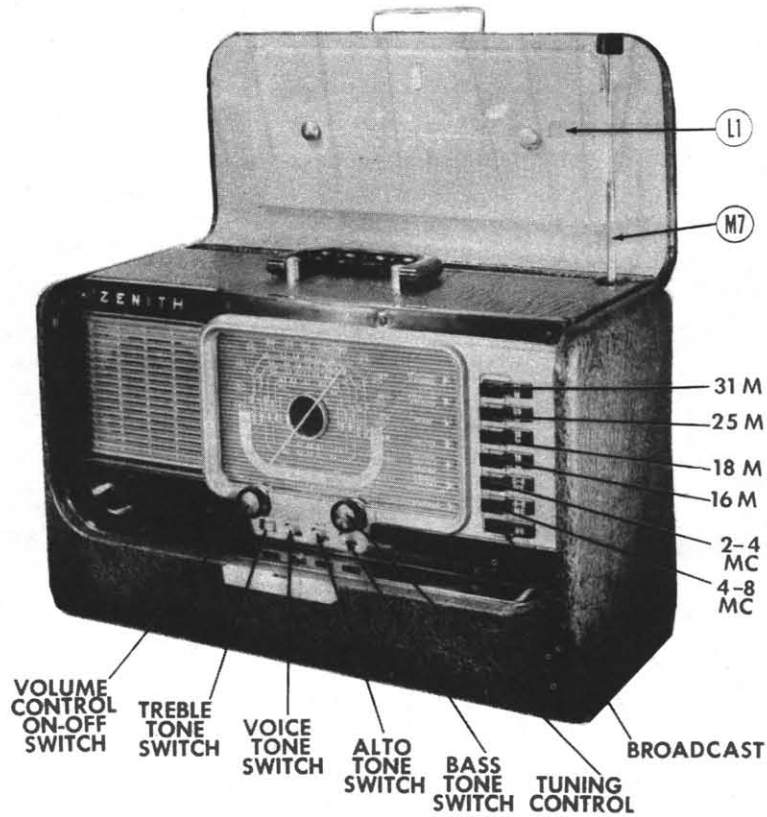




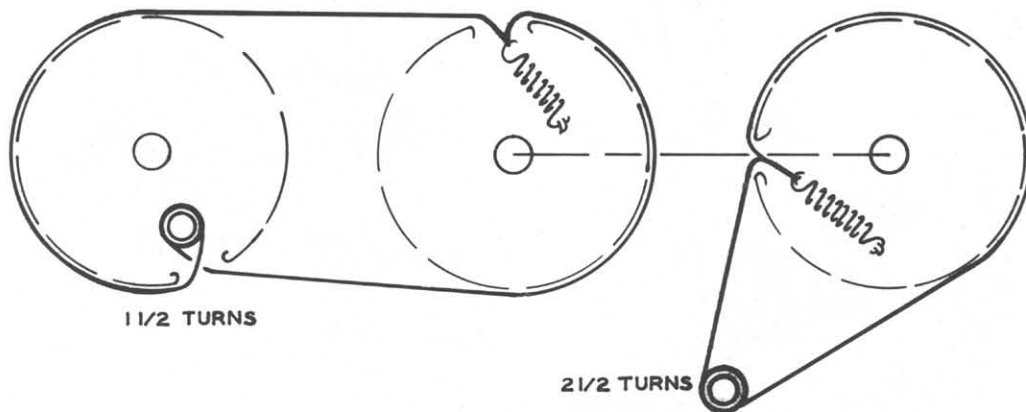
ZENITH
MODEL H500 (Ch. 5H40)



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

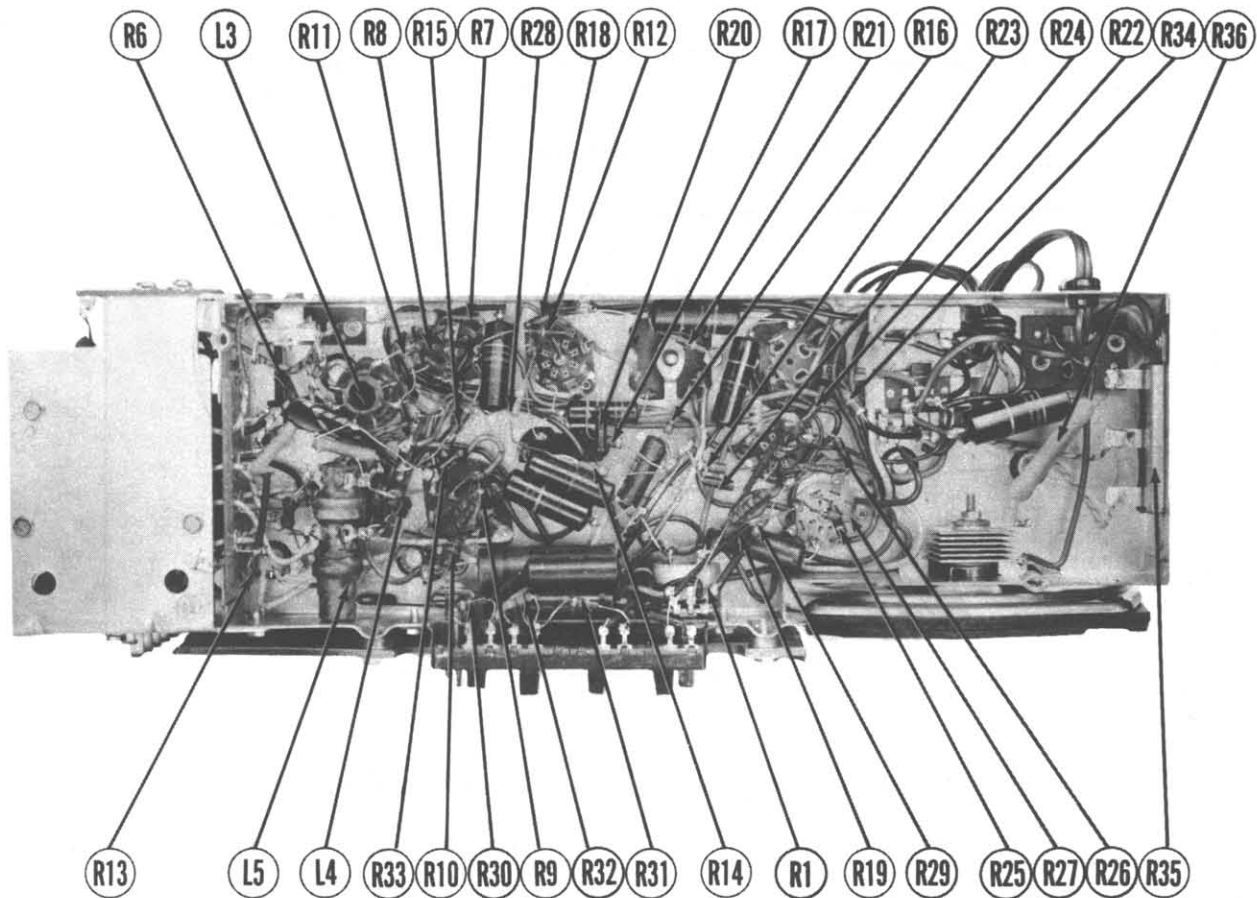
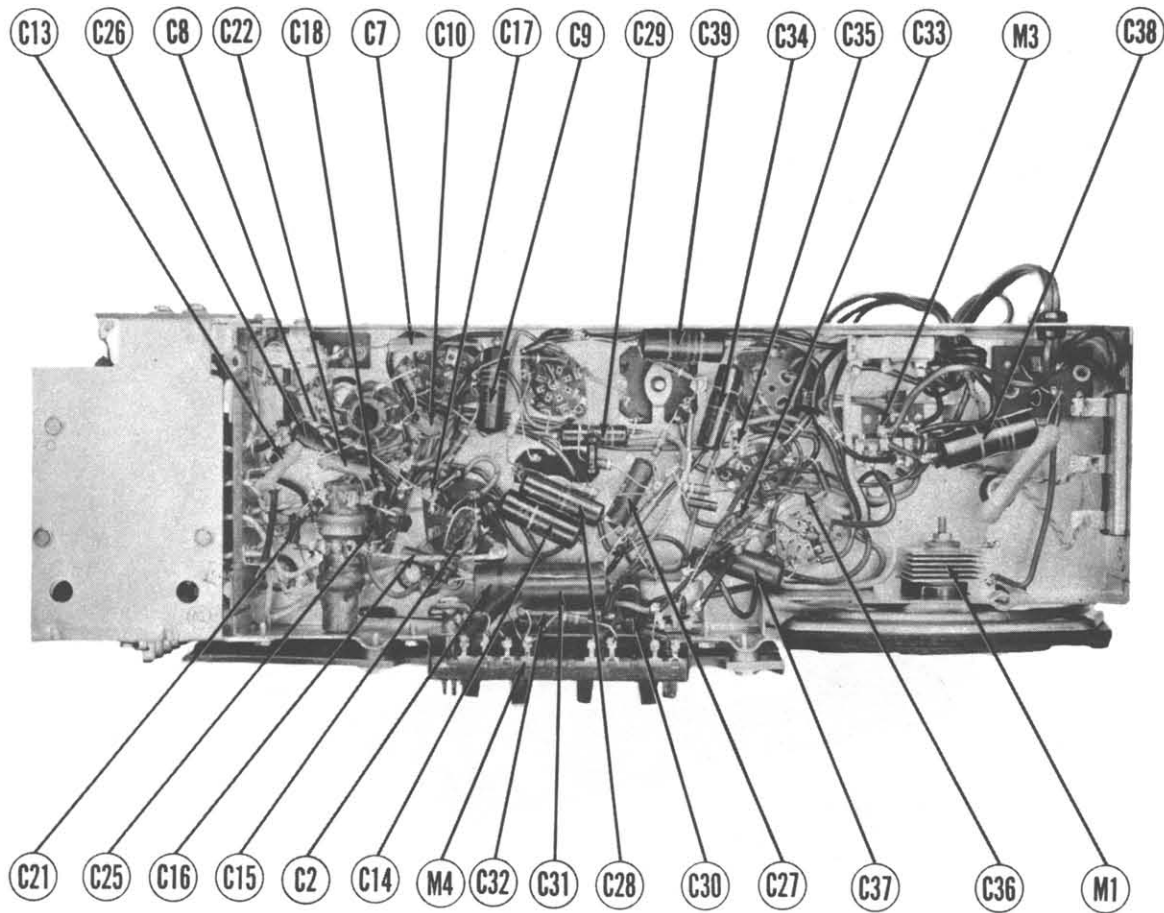


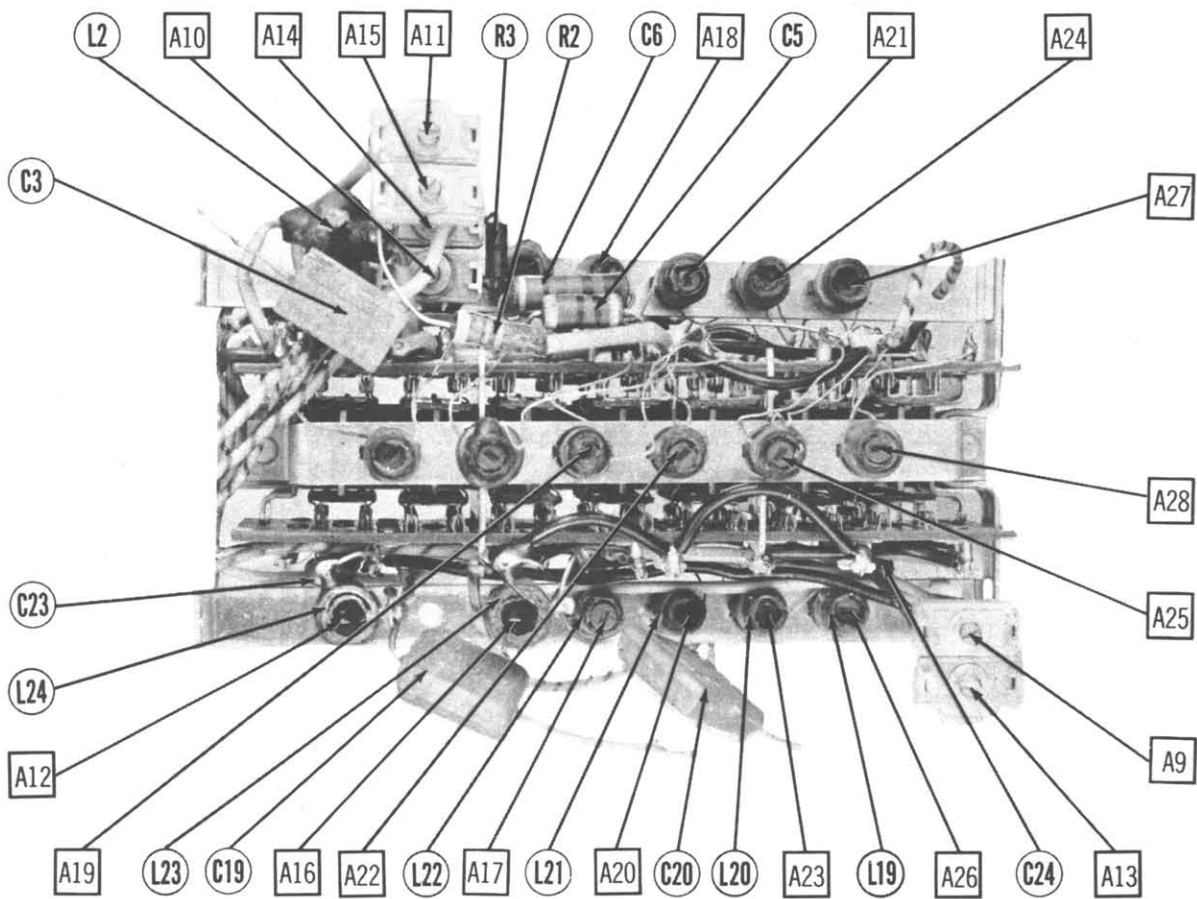
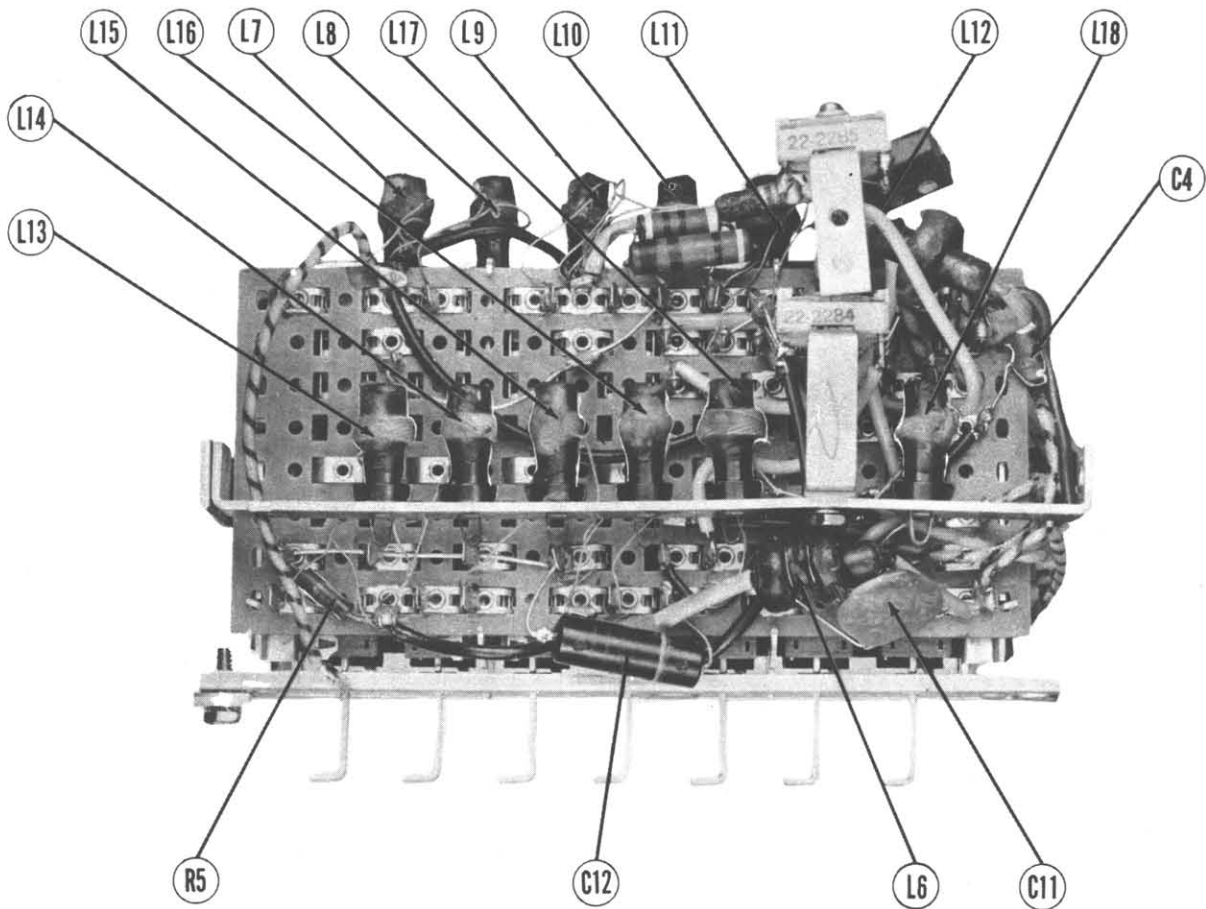
DIAL CORD DRIVE

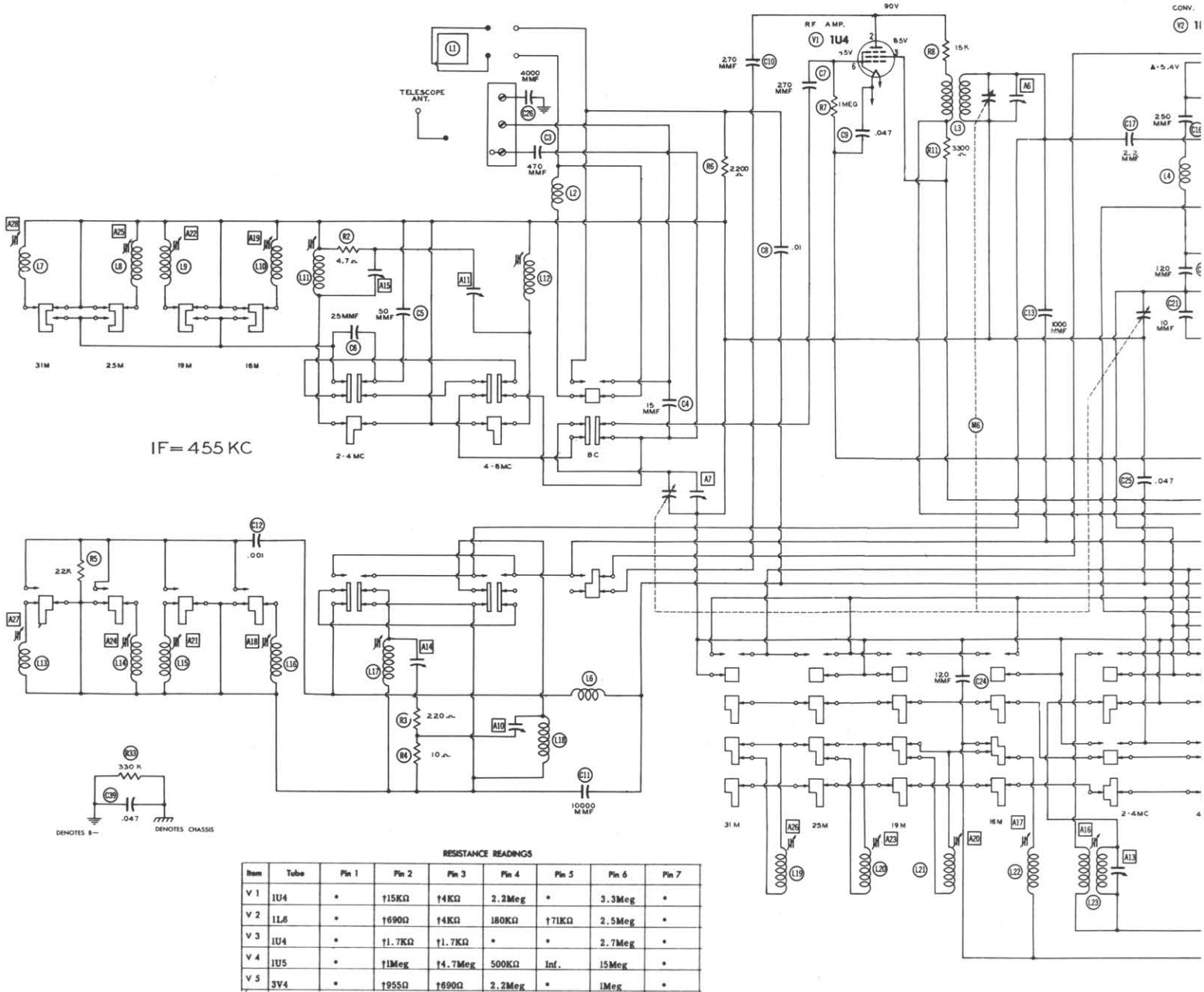
HOWARD W. SAMS & CO., INC. • Indianapolis 5, Indiana

"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."
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IF = 455 KC

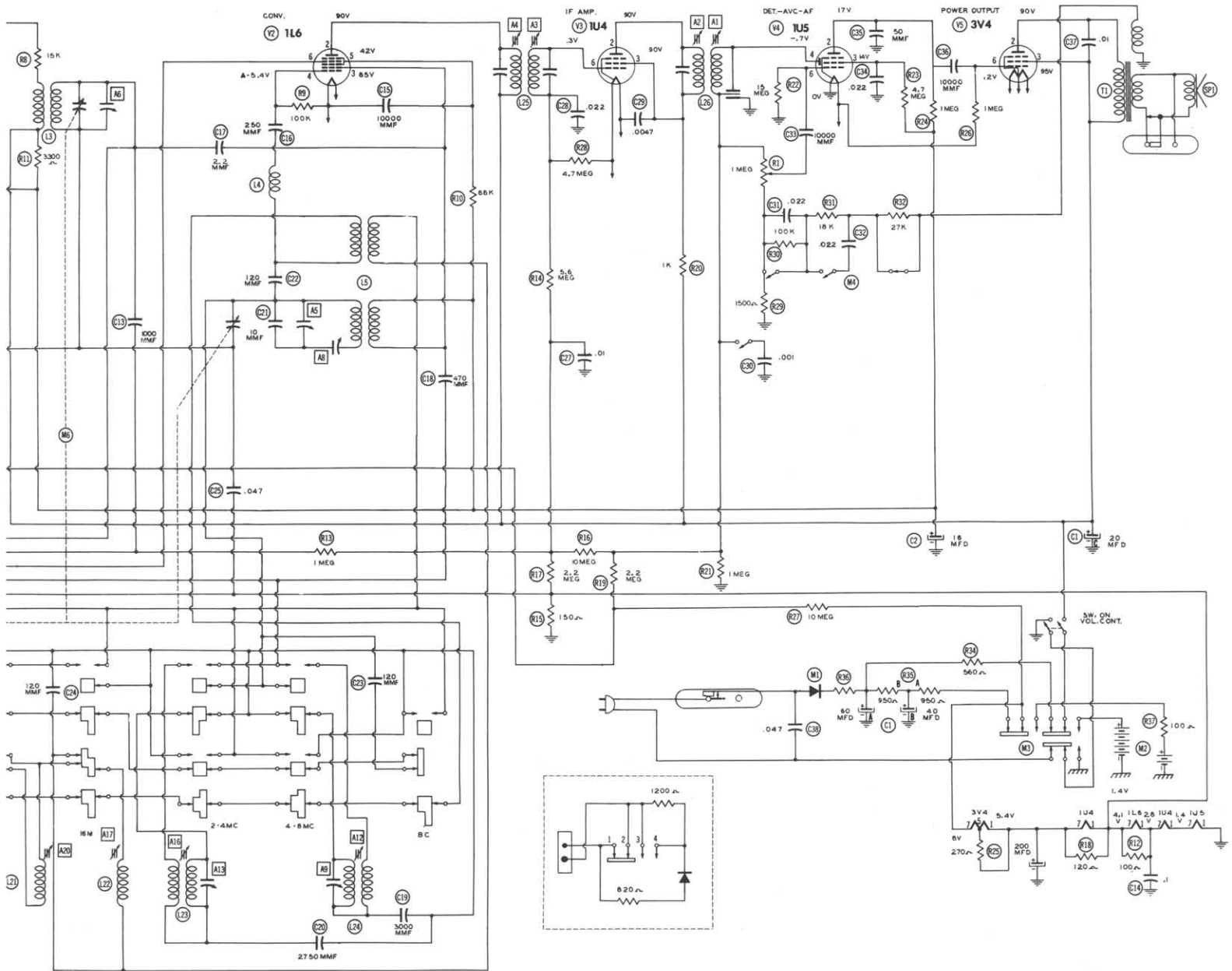
RESISTANCE READINGS

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	"

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	1U4	1U4	6AR	
V2	Converter	1L6	1L6		
V3	IF Amplifier	1U4	1U4	6AR	
V4A	Det.-AVC-AF	1U5	1U5	6BW	
B	Det.-AVC-AF	1S5	1S5	6AU	
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.

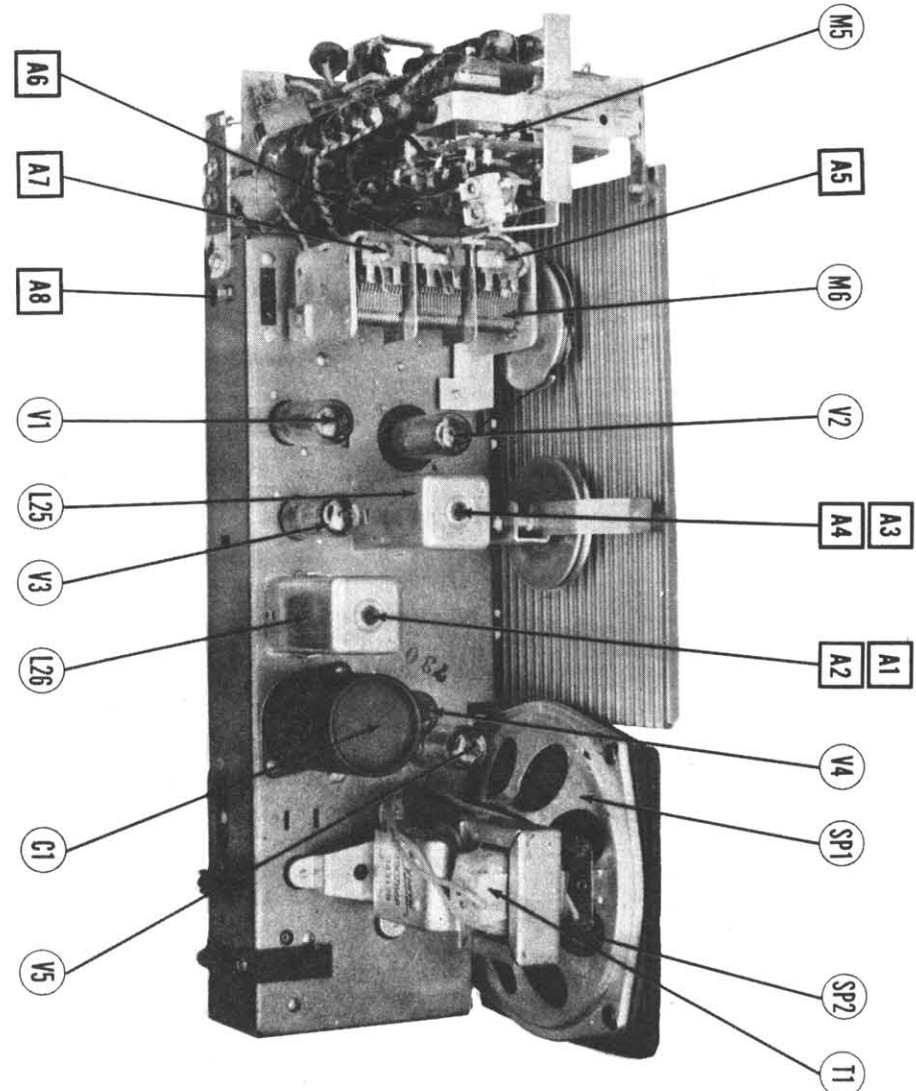
ITEM No.	RATING		REPLACEMENT DATA						IDENTIFICATION CODES AND INSTALLATION NOTES
	CAP.	VOLT	ZENITH PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	SPRAGUE PART No.	
CLA	60	150	22-1741	AFH4-23		UP64215-X20		R1079	• Filter ■ Filter ▲ Decoupling Fil. Filter
B	40	150							Decoupling †
C	20	150							RF Coupling
D	200	10							RF Coupling
C2	16	150		PRSI50/16		BR1615		TVA-1409	RF Coupling
C3	470	500	22-1390	1468-0005	D6-471	5W5T5	GP2K-471	1FM-35	RF Coupling
C4	15			SI15	D6-150		GPIK-150	5GA-Q15	RF Coupling
C5	50		22-1761	SI50	D6-500	5W5Q5	GPIK-500	5GA-Q5	RF Coupling
C6	25		22-1392	SI25	D6-250	5W5Q25	GPIK-250	5GA-Q25	RF Coupling
C7	270	500	22-2058	1468-0003	D6-271	5W5T3	GP2K-271	MS-33	RF Coupling
C8	.01	400	22-1784	P488-01	D6-103	PTE4S1	GP2-333-103	4TM-S1	AVC Filter
C9	.047	200	22-1778	P288-047	DF-503	PTE4S5		2TM-S47	AVC Filter
C10	270	500	22-2058	1468-0003	D6-271	5W5T3	GP2K-271	MS-33	RF Coupling
C11	1000		22-3	BPD-01	DD-103	1D3S1		821-01	RF Bypass
C12	.001	600	22-2127	P688-001	D6-102	PTE6D1	GP2L-102	6TM-D1	RF Coupling
C13	1000		22-1886	SI1000	D6-102	1W5D1	GP2L-102	5HK-D1	RF Coupling
C14	.1	200	22-1777	P288-1	DF-104	PTE4P1		2TM-P1	Fil. Bypass
C15	10000		22-3	BPD-01	DD-103	1D3S1		821-01	Conv. Screen
C16	250		22-2126				N750-333-251		Osc. Grid Cap.
C17	2.2		22-1763	SI2.2NP0	TCZ-2.2		NP0K-2R2		Osc. Coupling
C18	470	500	22-1390	1468-0005	D6-471	5W5T5	GP2K-471	1FM-35	Osc. Feedback
C19	3000	500	22-2281	1467-003	D6-302	1W5D3	GP2-333-302	1FM-23	Fixed Padder
C20	2750	500	22-1433						Fixed Padder
C21	10		22-1953	SI10	D6-100	5W5Q1	GPIK-100	5GA-Q1	Fixed Trimmer
C22	120		22-2279		TCZ-120		NP0-333-121		Fixed Padder
C23	120		22-2280	SI120	D6-121	5W5T15	GP2K-121	5GA-T12	Fixed Padder
C24	120		22-2279		TCZ-120		NP0-333-121		Fixed Padder
C25	.047	400	22-1775	P488-047	DF-503	PTE4S5		4TM-S47	RF Bypass
C26	4000		22-4	BPD-004	DD-402	1D5D4	GP2-333-402		Ant. Isolation
C27	.01	400	22-1784	P488-01	D6-103	PTE4S1	GP2-333-103	4TM-S1	AVC Filter
C28	.022	200	22-2071	P488-022	DF-203	PTE4S2		2TM-S2	AVC Filter
C29	.0047	400	22-1783	P688-0047	D6-472	PTE6D5	GP2-333-472	6TM-D47	IF Amp. Decoupling
C30	.001	600	22-2127	P688-001	D6-102	PTE6D1	GP2L-102	6TM-D1	Tone Comp.
C31	.022	200	22-2071	P488-022	DF-203	PTE4S2		2TM-S2	Tone Comp.
C32	.022	200	22-2071	P488-022	DF-203	PTE4S2		2TM-S2	Tone Comp.
C33	10000		22-3	BPD-01	DD-103	1D3S1		821-01	Audio Coupling
C34	.022	400	22-2072	P488-022	DF-203	PTE4S2		4TM-S22	AF Amp. Screen
C35	50		22-1674	SI50	D6-500	5W5Q5	GPIK-500	5GA-Q5	AF Amp. Plate
C36	10000		22-3	BPD-01	DD-103	1D3S1		821-01	Audio Coupling
C37	.01	600	22-1779	P688-01	D6-103	PTE6S1	GP2-333-103	6TM-S1	Output Plate
C38	.047	600	22-1844	P688-047	DF-503	PTE6S5		4TM-S47	Line Filter
C39	.047	400	22-1775	P488-047	DF-503	PTE4S5		4TM-S47	Line Isolation

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

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA				INSTALLATION NOTES
	RESISTANCE	WATTS	ZENITH PART No.	IRC PART No.	CLAROSTAT PART No.	CENTRALAB PART No.	
R1A	1Meg	½	63-2276	Q11-137	AG-61-S	AN-69	Volume Control
B	Shaft		Not req.	KSS-3		AK-4	Attach to R1A per instructions
C	Switch		Not req.	76-2	SWB-2	K-157	Attach to R1A per instructions

CHASSIS—TOP VIEW



PARTS LIST AND DESCRIPTIONS (Continued)

RESISTORS

ITEM No.	RATING		REPLACEMENT DATA		IDENTIFICATION CODES
			ZENITH	IRC	
	RESISTANCE	WATTS	PART No.	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	BTS-22K	RF Coil Shunt
R6	2200Ω		63-1800	BTS-2200	Antenna Isolation
R7	1Meg		63-1912	BTS-1Meg	RF Amp. Grid
R8	15KΩ		63-1835	BTS-15K	RF Amp. Plate
R9	100KΩ		63-1869	BTS-100K	Osc. Grid - See Note 2
R10	68KΩ		63-1863	BTS-68K	Osc. Anode
R11	3300Ω		63-1807	BTS-3300	Voltage Divider
R12	100Ω		63-1743	BTS-100	Filament String
R13	1Meg		63-1912	BTS-1Mdg	AVC Network
R14	5.6Meg		63-1943	BTS-5.6Meg	AVC Network
R15	150Ω		63-1750	BTS-150	AVC Network
R16	10Meg		63-1954	BTS-10Meg	AVC Network
R17	2.2Meg		63-1926	BTS-2.2Meg	AVC Network
R18	120Ω		63-1747	BTS-120	Filament String
R19	2.2Meg		63-1926	BTS-2.2Meg	AVC Network
R20	1000Ω		63-1785	BTS-1000	IF Amp. Decoupling
R21	1Meg		63-1912	BTS-1Meg	Detector Diode Load
R22	15Meg		63-1961	BTS-15Meg	AF Amp. Grid
R23	4.7Meg		63-1940	BTS-4.7Meg	AF Amp. Screen
R24	1Meg		63-1912	BTS-1Meg	AF Amp. Plate
R25	270Ω		63-1761	BTS-270	Filament String
R26	1Meg		63-1912	BTS-1Meg	Output Grid
R27	10Meg		63-1954	BTS-10Meg	AVC Network
R28	4.7Meg		63-1940	BTS-4.7Meg	AVC Network
R29	1500Ω		63-1792	BTS-1500	Tone Compensation
R30	100KΩ		63-1869	BTS-100K	Tone Compensation
R31	18KΩ		63-1838	BTS-18K	Tone Compensation
R32	27KΩ		63-1845	BTS-27K	Tone Compensation
R33	330KΩ		63-1891	BTS-330K	Isolation
R34	560Ω			BTS-560	Filter
R35A	950Ω	5	63-1362		Filament Dropping - Wire Wound
B	950Ω	5			Filter - Wire Wound
R36	130Ω	5	63-2018		Surge Limiter - Wire Wound
R37	100Ω		63-1744	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	STANCOR	MERIT	CHICAGO	
	PRI.	SEC.	PRI.	SEC.	PART No.	PART No.	PART No.	PART No.	
T1	7.2KΩ	3.8Ω	265Ω	.3Ω	206-668				
				SEC. 2 13Ω					

SPEAKER

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

PARTS LIST AND DESCRIPTIONS (Continued)

R F COILS

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

SELENIUM RECTIFIER

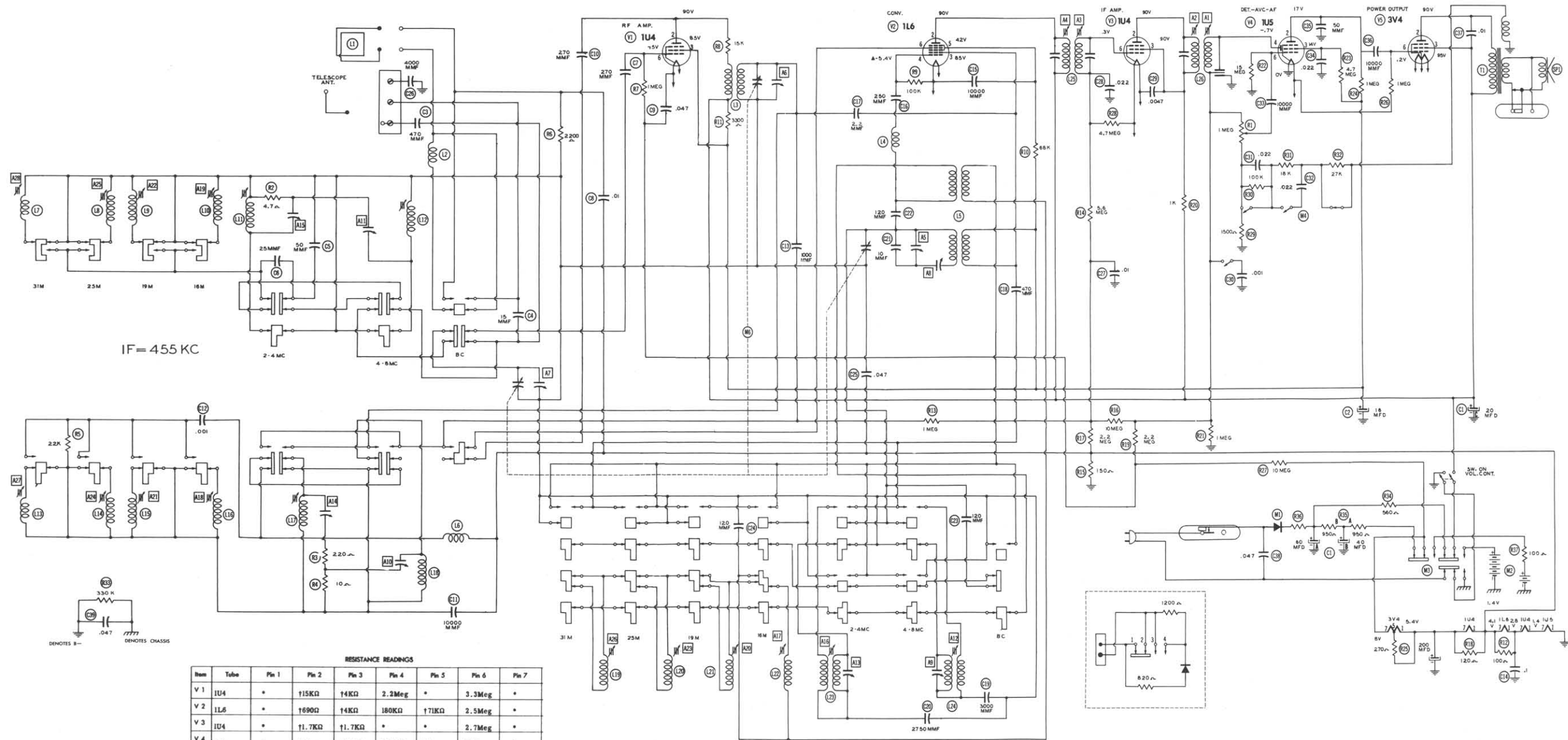
ITEM No.	RATING	REPLACEMENT DATA			NOTES
	CURRENT	ZENITH PART No.	SYLVANIA PART No.	SELETRON PART No.	
M1	.067A	212-5	NB-5	5M4	

BATTERIES

ITEM No.	VOLTAGE	ZENITH PART No.	REPLACEMENT DATA						INSTALLATION NOTES
			EVEREADY			BURGESS			
			"A"	"B"	"A-B"	"A"	"B"	"A-B"	
M2	9V "A" 90V "B"	Z985			752			G6B60	

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-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
All, 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



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 DC POSITION
 † MEASURED FROM OUTPUT OF M1
 * DO NOT USE OHMMETER TO MEASURE FILAMENT RESISTANCE
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- Volume control at maximum, no signal applied for voltage measurements.