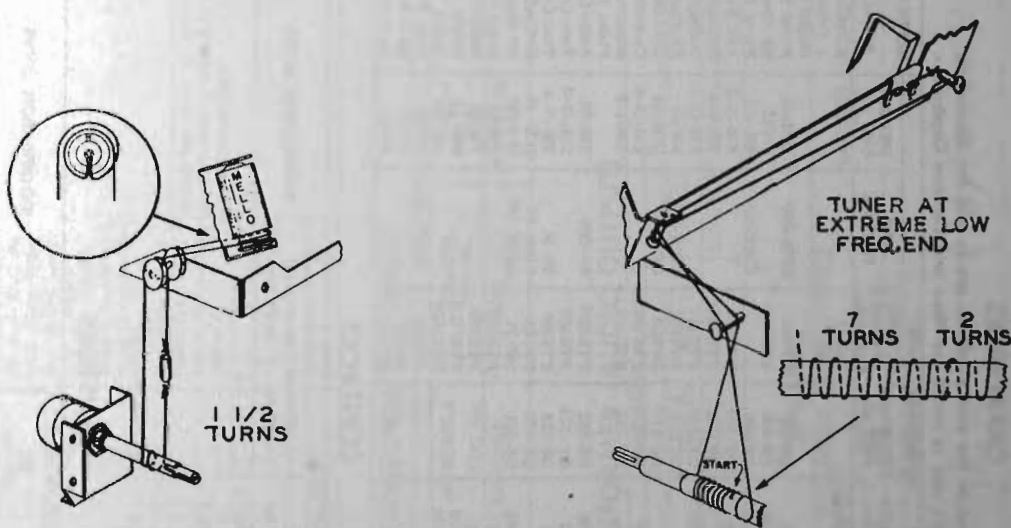


MOPAR MODEL 808

TRADE NAME Mopar, Model 808  
 MANUFACTURER Motorola Inc., 4545 Augusta Blvd., Chicago, Illinois  
 TYPE SET Battery Operated Custom-Built Automotive Superheterodyne Receiver  
 TUBES(EIGHT) Types 6BA6 RF Amp., 6BE6 Converter, 6BA6 IF Amp., 6AT6 DET-AVC-AF, 6AT6 Phase Inverter, (2) 6V6GT Power Output, 6X4 Rectifier

POWER SUPPLY 6 Volt Storage Battery  
 TUNING RANGE—BROADCAST 535-1605KC

RATING 7 Amps. at 6 Volts DC



DIAL CORD DRIVE

HOWARD W. SAMS & CO., INC. • Indianapolis 1, Indiana

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MOPAR  
MODEL 808

# PARTS LIST AND DESCRIPTIONS

## TUBES (SYLVANIA or Equivalent)

ITEM No.	USE	REPLACEMENT DATA		RMA BASE TYPE	INSTALLATION NOTES
		MOTOROLA PART No.	STANDARD REPLACEMENT		
V1	RF Amp. Converter	6BA6	6BA6	7BK	
V2	IF Amp.	6BE6	6BE6	7CH	
V3	DE-T-AVC-AF	6AT6	6AT6	7BK	
V4	Phase Inverter	6AT6	6AT6	7BT	
V5	Power Output	6V6GT	6V6GT	7AC	
V6	Power Output	6V6GT	6V6GT	7AC	
V7	Rectifier	6X4	6V6GT	5BX	
V8	Rectifier	6X4	6V6GT	5BX	

### CAPACITORS

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

ITEM No.	RATING CAP. VOLT	REPLACEMENT DATA		CENTRALAB PART No.	CORNFEL-DUBILIER PART No.	ERIE PART No.	SPRAGUE PART No.	IDENTIFICATION AND INSTALLATION NOTES
		MOTOROLA PART No.	AGROVOX PART No.					
C1A	30	23A473015	AFR6H6G44	D6-101	UP335-330C	GP1K-100	1EM-31	Filter
B	30	21B77582	GP100M	D6-562	5W5T1	GP1K-15	89P212	Output Cathode
C	25	BC459 9	P285-008	D6-150	Z2WD16	GP1K-15	MS-415	Fixed Trimmer
C2	100	21K560179	GP15M	D6-503	PTE4S5	TM-15-2	TM-15-2	Fixed Trimmer
C3	.006	21K560179	GP15M	DF-503	PTE4S5	TM-15-2	MS-415	Fixed Trimmer
C4	.05	8R13166	P488-05	DF-104	PTE4S5	TM-1-4	TM-1-4	Decoupling
C5	.05	8R14791	P488-05	DF-503	TCZ-4, 7	MS-65	IFM-45	Decoupling
C6	.1	8R14791	P488-05	DF-503	5W5Q2	IFM-45	IFM-45	Decoupling
C7	.05	21K70720	GP47M	D6-470	5W5Q2	IFM-45	IFM-45	Decoupling
C8	5	21K74661	GP47M	D6-470	5W5Q2	IFM-45	IFM-45	Decoupling
C9	47	8R13154	P288-05	DE-503	5W5Q2	IFM-45	IFM-45	Decoupling
C10	.05	8R13154	P288-05	DE-503	5W5Q2	IFM-45	IFM-45	Decoupling
C11	.1	8R472035	P288-1	DE-104	PTE4P1	TM-1-2	TM-1-2	Decoupling
C12	.115	21K560275	P688-006	D6-562	PTE6D6	811-005	TM-26	Fixed Trimmer
C13	.006	8R4529	P488-02	DE-203	PTE4S2	811-01	TM-12-2	Audio Coupling
C14	.02	8R51209	P488-01	D6-103	PTE4S1	811-01	TM-11-4	Tone Compensation
C15	.01	8R23690	GP47M	D6-470	5W5Q5	GP1K-47	IFM-45	IF Coupling
C16	47	21K74661	GP47M	D6-470	5W5T1	GP2K-500	IFM-31	IF Coupling
C17	500	21K6639	1468-0005	D6-501	PTE6S3	TM-13	TM-13	AF Amp. Plate
C18	.03	8R71911	P488-03	P488-03	PTE6S3	TM-13	TM-13	Audio Coupling
C19	.03	8R71911	P488-03	P488-03	PTE16D3	MB-23	MB-23	Audio Coupling
C20	.003	8R13165	P1088-003	P1088-003	PTE16D6	MB-26	MB-26	Output Plate Byp.
C21	.008	8R12840	P1688-006	P1688-006	PTE16D6	68P20	68P20	Butler
C22	.5	8C580845	P285-1	P285-1	GT2P5	68P20	68P20	Hash Filter
C23	.5	8C580845	P285-1	P285-1	GT2P5	68P20	68P20	Hash Filter
C24	.5	8C580845	P285-1	P285-1	GT2P5	68P20	68P20	Hash Filter

### CONTROLS

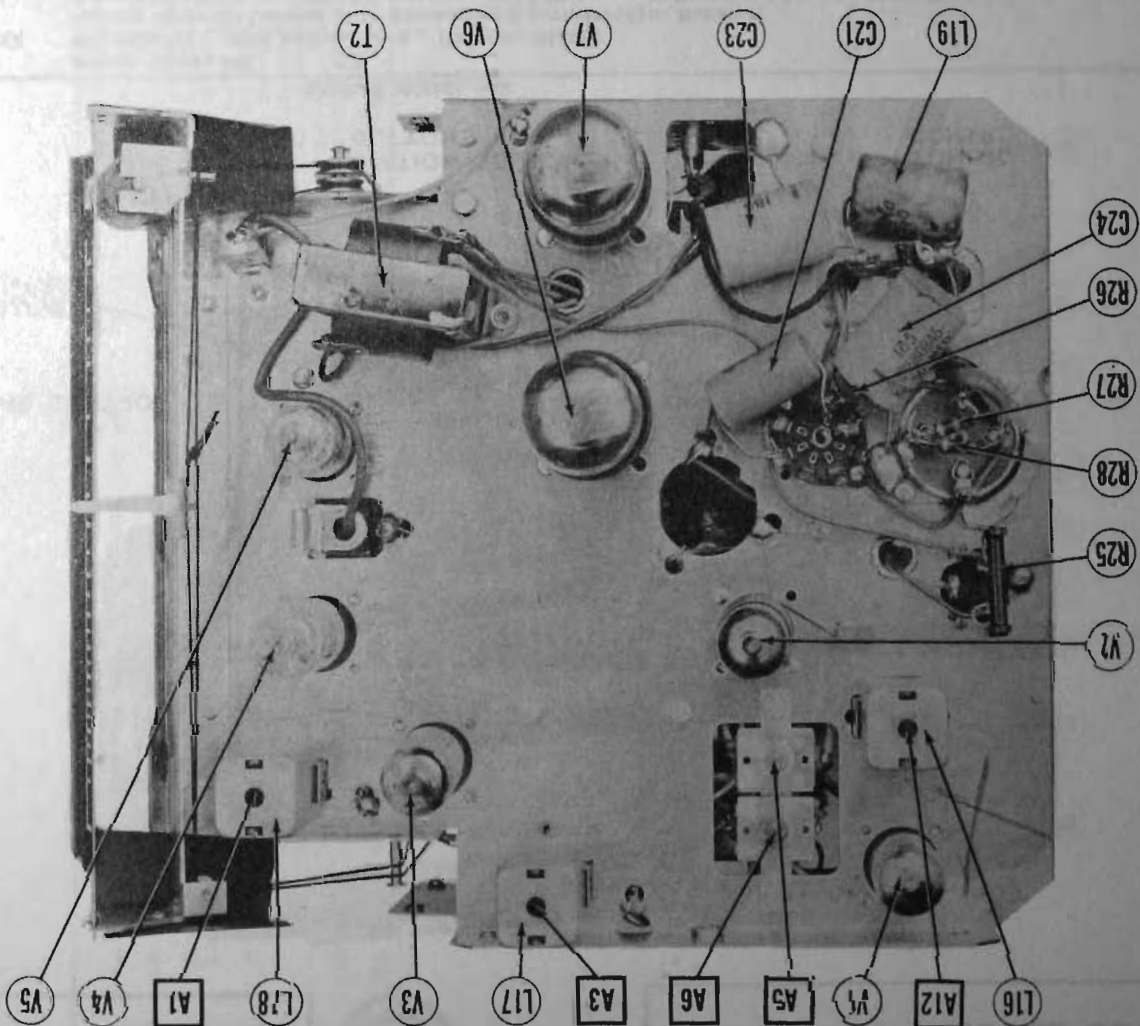
ITEM No.	RATING RESISTANCE WATTS	REPLACEMENT DATA		CLAROSAT PART No.	CENTRALAB PART No.	INSTALLATION NOTES
		MOTOROLA PART No.	IRC PART No.			
RIA	500KΩ	184485319	Concentr-Kit B11-133* B18-133X* E-187*			Tone control-front Volume control-tapped at 50KΩ- rear Note 1 Attach per instr. in "Concentr-Kit"
B	500KΩ	184485319	Concentr-Kit B11-133* B18-133X* E-187*			
C	Sheet End	184485319	Concentr-Kit B11-133* B18-133X* E-187*			

\* Additional parts to be used with "Concentr-Kit".  
Note 1. Wrap scotch tape around outer shaft for dial cord surface.

### RESISTORS

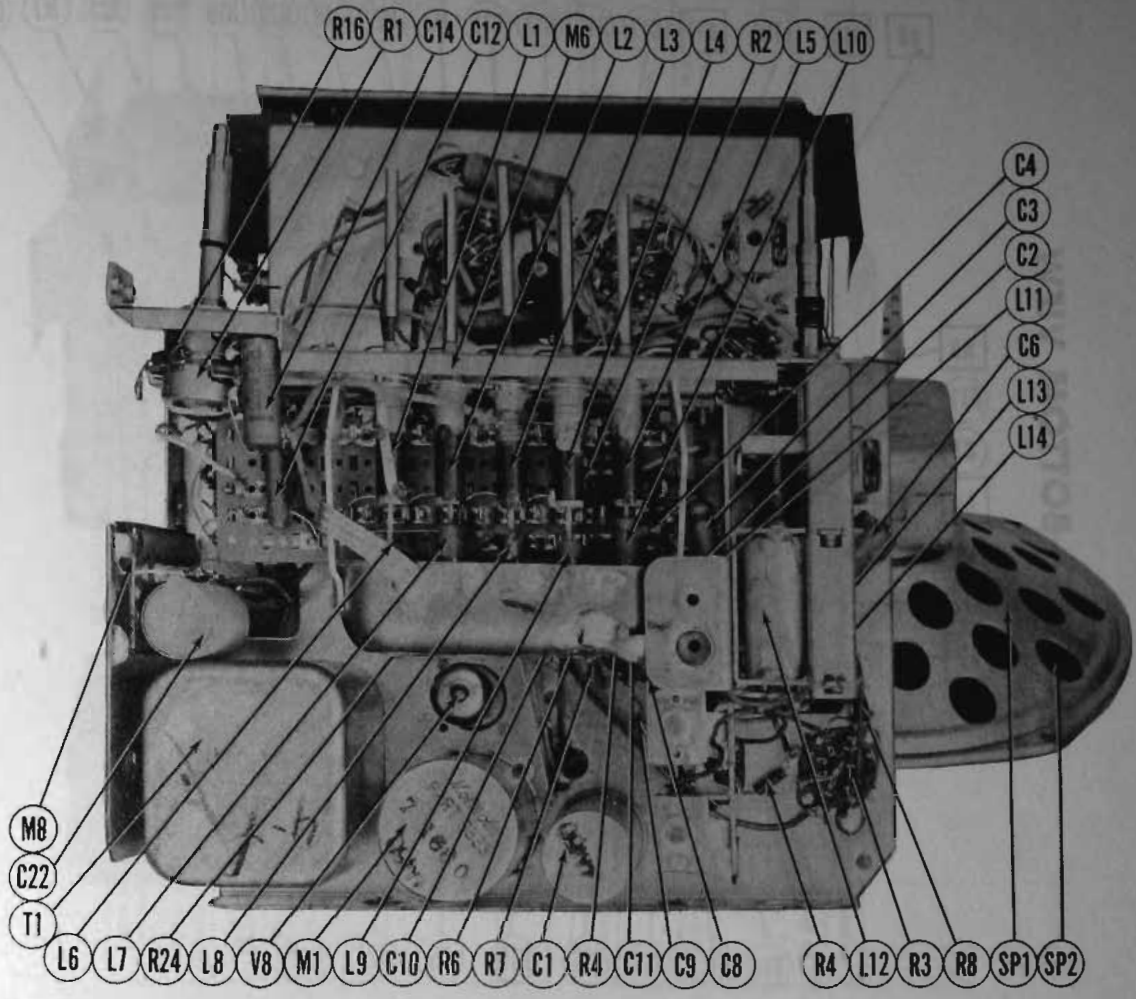
ITEM No.	RATING RESISTANCE WATTS	REPLACEMENT DATA		IDENTIFICATION CODES
		MOTOROLA PART No.	IRC PART No.	
R2	470KΩ	6R6032	BTS-470K	AVC Network
R3	220Ω	6R6270	BTS-220	RF Amp. Cathode
R4	12KΩ	6R5656	BTA-12K	RF Amp. Plate
R5	150KΩ	6R6182	BTS-150K	RF Coupling
R6	100KΩ	6R6075	BTS-100K	Conv. Grid
R7	47KΩ	6R6056	BTS-47K	Osc. Grid
R8	18KΩ	6R490344	BTA-15K	Screen Decoupling-Wire Wound
R9	330Ω	6R6010	BTS-330	Decoupling

### CHASSIS—TOP VIEW



# PARTS LIST AND DESCRIPTIONS (Continued)

CHASSIS—BOTTOM VIEW



## RESISTORS

ITEM No.	RATING		REPLACEMENT DATA		IDENTIFICATION CODES
	RESISTANCE	WATTS	MOTOROLA PART No.	IRC PART No.	
R10	68KΩ		6R6001	BTS-68K	Voltage Divider
R11	330Ω		6R6022	BTS-330	IF Amp. Cathode
R12	47KΩ		6R6056	BTS-47K	Det. Diode Filter
R13	1 Meg.		6R6004	BTS-1 Meg.	Det. Diode Load
R14	1 Meg.		6R6004	BTS-1 Meg.	AVC Network
R15	10 Meg.		6R2109	BTS-10 Meg.	AF Amp. Grid
R16	10KΩ		6R6054	BTS-10K	Tone Compensation
R17	1500Ω		6R8161	BTS-1500	Tone Compensation
R18	220KΩ		6R6015	BTS-220K	AF Amp. Plate
R19	220KΩ		6R6015	BTS-220K	Phase Inv. Plate
R20	10KΩ		6R6054	BTS-10K	Phase Inv. Grid
R21	2200Ω		6R6069	BTS-2200	Phase Inv. Cathode
R22	220KΩ		6R6015	BTS-220K	Output Grid
R23	220KΩ		6R6015	BTS-220K	Output Cathode
R24	270Ω		6R8356	BTA-270	Filter-Wire Wound
R25	2200Ω		6R6054	BTS-2200	Buffer
R26	10KΩ		6R6054	BTS-10K	Hash Suppression
R27	50Ω		6R5614	BW- $\frac{1}{2}$ -56	Hash Suppression
R28	55Ω		6R5614	BW- $\frac{1}{2}$ -56	Hash Suppression

## TRANSFORMER (POWER)

ITEM No.	RATING			REPLACEMENT DATA			CHICAGO PART No.
	PRI.	SEC. 1	SEC. 2	MOTOROLA PART No.	STANCOR PART No.	MERIT PART No.	
T1	6VDC	500VCT	SEC. 3	25B472533	P-4062 ①	P-4071 ①	VT-3 ①

① Drill new mounting holes.

## TRANSFORMER (AUDIO OUTPUT)

ITEM No.	RATING			REPLACEMENT DATA			INSTALLATION NOTES
	IMPEDANCE	DC RES.	SEC.	MOTOROLA PART No.	STANCOR PART No.	CHICAGO PART No.	
T2	900Ω	40 CT	360Ω	25B472558	A-3856	A-2938	RO-110 ② ② Drill one new mounting hole.

## SPEAKER

ITEM No.	RATINGS		REPLACEMENT DATA		INSTALLATION NOTES
	FIELD	V. C. T.M.P.	MOTOROLA PART No.	VIKING PART No.	
SP1	PM	4Ω	50K591921 or 50K591916 or 50K591917	779	QUAM PART No. 7A21
SP2	6 3/4"	V. C. D.I.A.	9/16"		

## COILS (RF-IF)

ITEM No.	USE	DC RES.		REPLACEMENT DATA		NOTES
		PRI.	SEC.	MOTOROLA PART No.	MEISSNER PART No.	
L1	Ant. Coil	18Ω		24B580871 *		Pushbutton #1, brown dot
L2	Ant. Coil	15Ω		24K580872 *		Pushbutton #2, red dot
L3	Ant. Coil	13Ω		24K580873 *		Pushbutton #3, orange dot
L4	Ant. Coil	13Ω		24K580874 *		Pushbutton #4, yellow dot
L5	Ant. Coil	11Ω		24K580875 *		Pushbutton #5, green dot
L6	Osc. Coil	3.3Ω		1X580861 *		Pushbutton #1, brown dot
L7	Osc. Coil	2.8Ω		1X580862 *		Pushbutton #2, red dot
L8	Osc. Coil	1.6Ω		1X580863 *		Pushbutton #3, orange dot
L9	Osc. Coil	1.6Ω		1X580864 *		Pushbutton #4, yellow dot
L10	Osc. Coil	1.3Ω		1X580865 *		Pushbutton #5, green dot

# PARTS LIST AND DESCRIPTIONS (Continued)

ITEM No.	USE	DC RES.		REPLACEMENT DATA		NOTES
		PRI.	SEC.	MOTOROLA PART No.	MEISSNER PART No.	
L11	Ant. Loading	2.5Ω		24B980540		
L12	Ant. Coil	13Ω		24B500155 *		
L13	RF Coil	7.8Ω		24B500155 *		
L14	Osc. Coil	3.5Ω		24K500156 *		
L15	Osc. Padder	7Ω		24B485386		
L16	IF Trap	18Ω		24B580274		Tap at 1.5Ω
L17	1st IF	18Ω	19Ω	24B485353		Tap at 25Ω
L18	2nd IF	18Ω	20Ω	24K485355		
L19	Hash Choke	.1Ω		24A472535		

\* Specify color of dot when ordering.

## VIBRATOR

ITEM No.	TYPE	INPUT VOLTS	FREQUENCY	REPLACEMENT DATA		RADIANT PART No.	INSTALLATION NOTES
				MOTOROLA PART No.	AEROVOX PART No.		
M1	Int.	6V	115 °	48B3333	A-100	C-42	5330

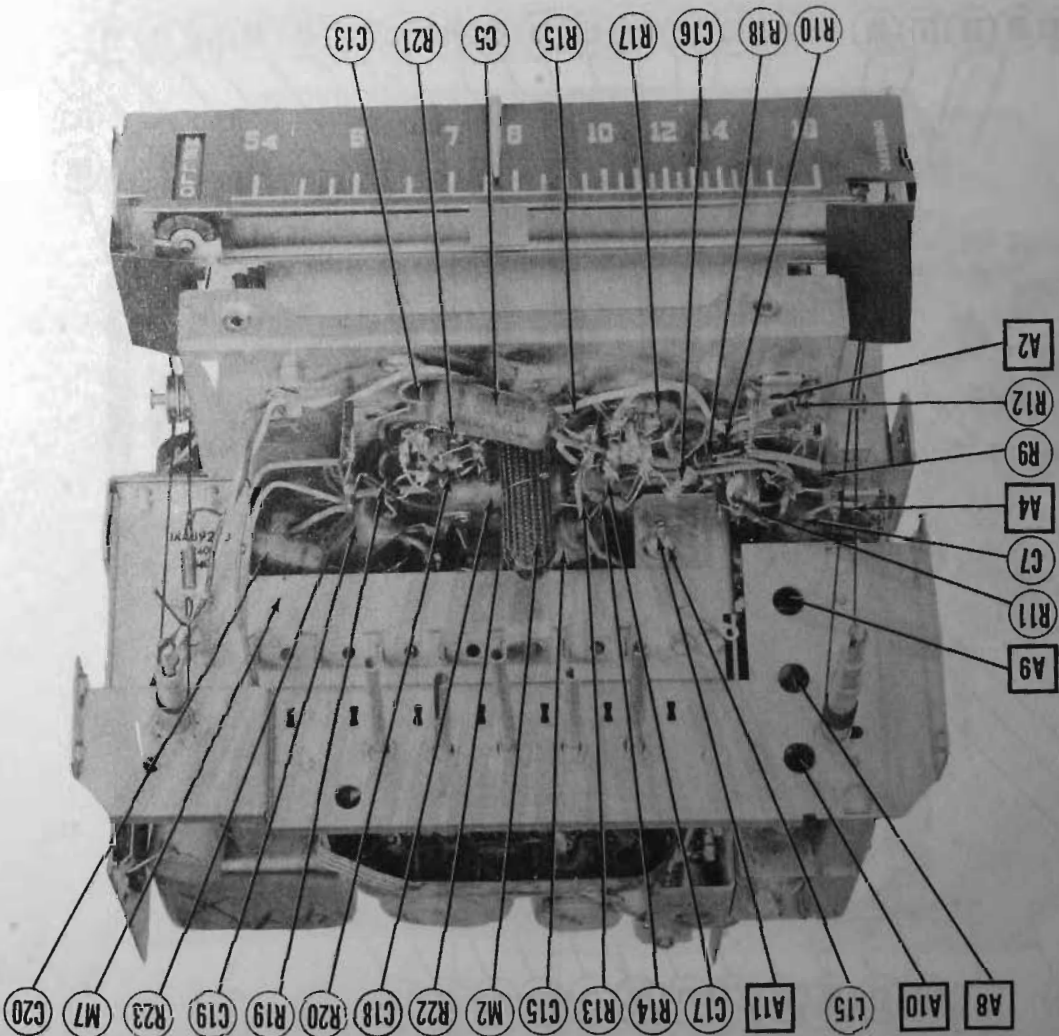
## DIAL LIGHTS

ITEM No.	BASE TYPE	VOLTS	AMPS.	BEAD COLOR	REPLACEMENT DATA		NOTES
					MOTOROLA PART No.	MOTOROLA PART No.	
M2	Bayonet	6-8	.4	White	65X12855	65X12855	Type #53
M3	Bayonet	6-8	.4	White	65X12855	65X12855	Type #53
M4	Bayonet	6-8	.25	Blue	65X10867	65X10867	Type #44

## MISCELLANEOUS

ITEM No.	PART NAME	MOTOROLA PART No.	NOTES
M5	Fuse	65X12899	14 Amp.
M6	RF Tuner Switch	1X489270	On-Off- Pushbutton
M7	Spark Plate	40C485286	
M8	Trimmer	1B580195	
A5	Trimmer	20A580174	Osc. Adj.
A6	Trimmer	20A580174	RF Adj.
A7	Trimmer	20K472613	Ant. Adj.
A13	Dial Scale	20K472613	PB Ant. Adj.
		34K591910	

## CHASSIS—BOTTOM VIEW



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. Use an insulated alignment screwdriver for adjusting.

IF ALIGNMENT

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1. IMFD	High side to pin 7 (Grid) of 6BE6 (V2). Low side to chassis.	455KC (400 % Mod.)	High freq. end (cores out)	Across voice coil	A1, A2, A3, A4	Adjust for maximum output.
RF ALIGNMENT (MANUAL)						
2. Construct a dummy antenna as shown in figure 1. The oscillator 33deter coil adjustment in step 4 has been correctly made at the factory, and should not require adjustment in the field unless components have been changed in the oscillator circuit.						
3. See Fig 1	High side to antenna receptacle. Low side to chassis.	1605KC	High freq. end cores should be 1 1/8" out of cans.	Across voice coil	A5, A6, A7	Adjust for maximum output.
4. "	"	1425KC	Set spacing between carriage plate and coil shield plate to 1 5/16"	"	A8, A9, A10	"
5. "	"	Turn gen. power off	Set spacing between carriage plate and coil shield plate to 7/32"	Not used	All	Adjust for maximum noise. If A-11 must be turned more than 1/2 turn from original position, repeat steps 2, 3 and 4 until it is necessary to turn A-11 less than 1/2 turn.
6. "	"	455KC	Set PB #4 to 600KC (see push button alignment)	Across voice coil	A12	Adjust for MINIMUM output.

RF ALIGNMENT (PUSHBUTTON)

There are five push buttons on this receiver numbered one to five beginning with the 2nd button from the left. The push button tracking nut adjustments as in steps 8, 9 and 10 have been made at the factory and should not require adjustment in the field unless the components have been changed in the push button circuit.

To set push buttons, remove the chrome plated caps from the button and adjust the knurled button to the desired frequency as outlined in steps 6 thru 10 below.

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
See Fig 1	High side to antenna receptacle. Low side to chassis.	1400KC	#5 1400KC	Across voice coil	A13	Adjust for maximum output.
"	"	1605KC	#5 1605KC	"	A13	"
"	"	1425KC	#5 1425KC	"	A14	Adjust tracking nut for maximum.
"	"	1020KC	#4, 3 and 2 1020KC	"	A15, A16, A17	"
"	"	600KC	#1 600KC	"	A18	"

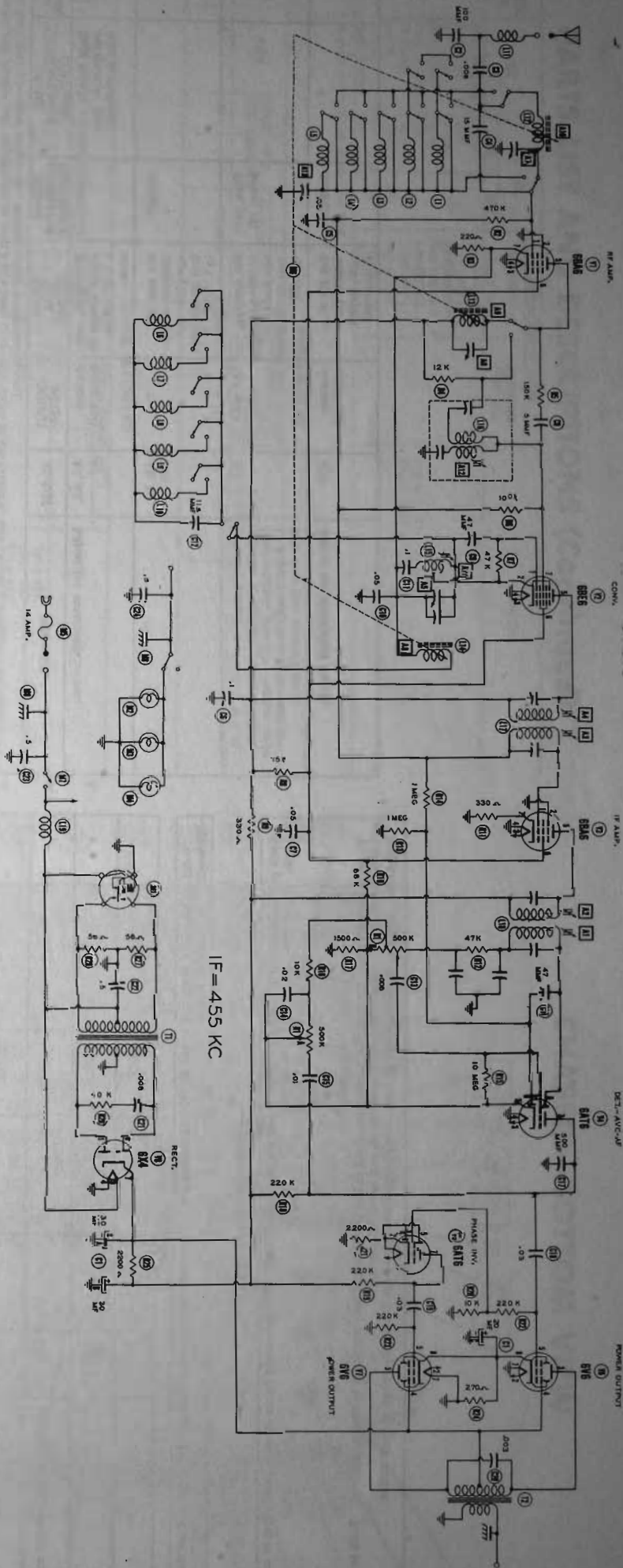
POINTER ADJUSTMENT

To set pointer tune manually to 1400KC signal radiated to antenna receptacle from signal generator and set pointer to 1400KC calibration mark on dial scale.

PUSHBUTTON ADJUSTMENT

Each pushbutton must be set to a station within its frequency range. The frequency range of each pushbutton is as follows: Pushbutton #1 535-1020KC #2 610-2260KC #3 700-1410KC #4 740-1440KC #5 840-1600KC

To set pushbutton remove chrome plated cap. Push in DIAL button and tune manually to station desired. Push in pushbutton and turn the knurled button to tune in station which was tuned in manually. Check with short above for frequency range of each button. Repeat this procedure for each pushbutton.



VOLTAGE RANGES

No.	Tube	No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7	No. 8
V 1	6B4	1.0DC	0V	50DC	0V	150DC	50DC	2.5DC	0V
V 2	6B4	1.0DC	1.4DC	4.0DC	0V	10DC	30DC	100DC	3.0DC
V 3	6B4	1.0DC	0V	0V	0V	10DC	30DC	100DC	0V
V 4	6B4	1.0DC	1.0DC	1.0DC	0V	1.0DC	1.0DC	1.0DC	1.0DC
V 5	6B4	0V	0V	0V	0V	0V	0V	0V	0V
V 6	6B4	0V	0V	0V	0V	0V	0V	0V	0V
V 7	6V6	0V	0V	0V	0V	0V	0V	0V	0V
V 8	6V6	0V	0V	0V	0V	0V	0V	0V	0V

1 TAKEN WITH VACUUM TUBE VOLTMETER.

RESISTANCE RANGES

No.	Tube	No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7	No. 8
V 1	6B4	2.5 MΩ	50	50	50	12.5K	175Ω	250Ω	250Ω
V 2	6B4	50	50	50	50	12.5K	175Ω	250Ω	250Ω
V 3	6B4	50	50	50	50	12.5K	175Ω	250Ω	250Ω
V 4	6B4	50	50	50	50	12.5K	175Ω	250Ω	250Ω
V 5	6B4	50	50	50	50	12.5K	175Ω	250Ω	250Ω
V 6	6B4	50	50	50	50	12.5K	175Ω	250Ω	250Ω
V 7	6V6	50	50	50	50	12.5K	175Ω	250Ω	250Ω
V 8	6V6	50	50	50	50	12.5K	175Ω	250Ω	250Ω

1 MEASURED FROM GRID 1 TO V1

1. DC Voltage measurements are at 20,000 ohms per volt; AC Voltages measured at 1000 ohms per volt.
2. Socket connections are shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Battery voltage maintained at 6 volts for voltage readings.
5. Nominal tolerance on component values makes possible a variation of ± 15% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.