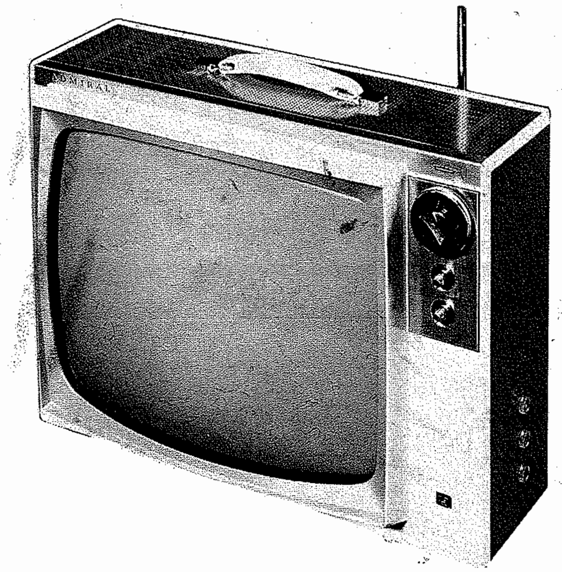
PHOTOFACT® Folder with CIRCUITRACE®

ADMIRAL CHASSIS 16B9B, 16G9B, 16UB9B, 16UG9B

ADMIRAL CHASSIS 16B9B, 16G9B, 16UB9B, 16UG9B



CAUTION

ONE SIDE OF AC LINE CONNECTED TO CHASSIS.

MODEL P915

TRADE NAME	ADMIRAL Models	Chassis	VHF Tuner	UHF Tuner
Chassis Runs 10, 11	P901, P909	16G9B	94E203-1	
	UP901, UP909	16UG9B	94E163-10	94E173-1
	P911, P915, P918	16B9B	94E200-11	
	UP911, UP915, UP918	16UB9B	94E200-12	94E204-1

MANUFACTURER	Admiral Sales Corp., Service Division, 903 Morrissey Drive, P.O. Box 845, Bloomington, Illinois
TYPE SET	Television Receiver
TUBES	VHF - Fourteen, UHF - Fifteen
POWER SUPPLY	110-120 Volts AC, 60 Cycle RATING VHF - 155 Watts, 1.4 Amp. @ 117 Volts AC
TUNING RANGE	Channels 2 thru 13 VHF, 14 thru 83 UHF, Video IF 45.75MC, Sound IF 41.25MC (Intercarrier)

SERVICING IN THE FIELD

SAFETY GLASS REMOVAL

For picture tube and safety glass cleaning, it is necessary to remove the chassis. (See "Disassembly Instructions".)

FUSE DEVICE

A Circuit Breaker is used for low voltage power supply protection, and may be reset by depressing the reset button. (For location, see "Tube Placement Chart".)

VHF TUNER OSCILLATOR ADJUSTMENT

Models P911/915/918, UP911/915/918 (Ch. 16B9B, 16UB9B): To touch up the VHF Oscillator, remove Channel Selector and Fine Tuning knobs.

Models P901/909 (Ch. 16G9B): To touch up VHF Oscillator, adjust A201 for best picture on highest channel received (with fine tuning at center of its range).

Models UP901/909 (Ch. 16UG9B): To touch up the VHF Oscillator, remove Channel Selector, Fine Tuning knobs, and plastic cap (below knobs).

AGC

The AGC may be varied by means of an AGC Control. (See "Tube Placement Chart" for location.

FOCUS

The focus may be varied by connecting the lead from pin 4 of the picture tube to various voltage points. (For location, see Photo "Cabinet - Rear View".)

SYNC STABILITY

Sync stability may be varied by means of a Picture Guard Control. (For location, see "Tube Placement Chart".)

HORIZONTAL OSCILLATOR FIELD ADJUSTMENT

See "Horizontal Sweep Circuit Adjustments" on back page for detailed instructions.

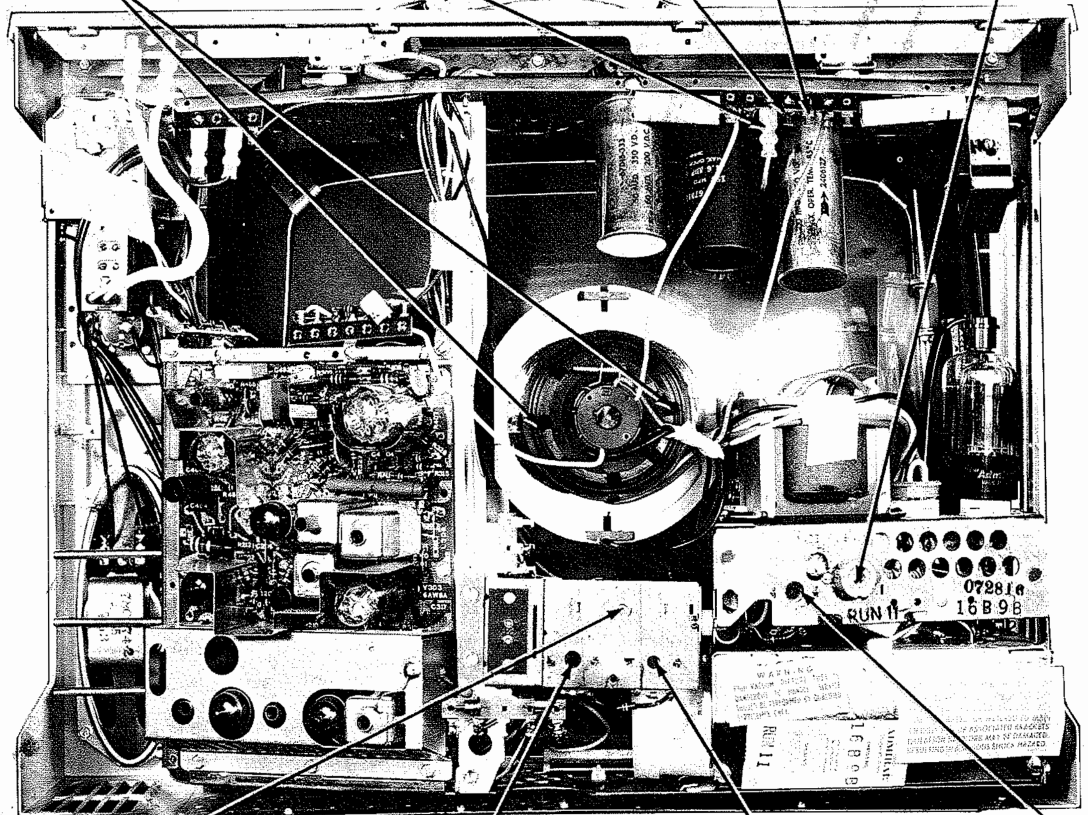
CENTERING

Centering is accomplished by 2 magnetic rings, located behind the yoke, on the neck of the picture tube.

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

LA303

SET 568 FOLDER 1



CABINET—REAR VIEW

HORIZONTAL SWEEP CIRCUIT ADJUSTMENTS

Suggested Alignment Tools:
GENERAL CEMENT #8282, 8606, 8606L, 9295, 9440
WALSCO #2526, 2543, 2544, 2545

Tune in a weak station and allow the receiver to warm up. Connect a clip lead from point Ⓑ to chassis.

Connect another clip lead across the Horizontal Stabilizing Coil (L18).

Adjust the Horizontal Hold control for a single horizontal blanking bar in the picture (from top to bottom). If this condition cannot be reached with the Horizontal Hold control near the center of its rotation, change position of the jumper that is connected between R81 and R82. Short out either resistor or leave both unshorted whichever is necessary to allow this condition to be obtained with the control near the center of its rotation.

Remove the jumper from L18 and adjust the Horizontal Frequency Slug (B1) to again obtain a single horizontal blanking bar in the picture. Remove the clip lead from point Ⓑ. The picture should lock in.

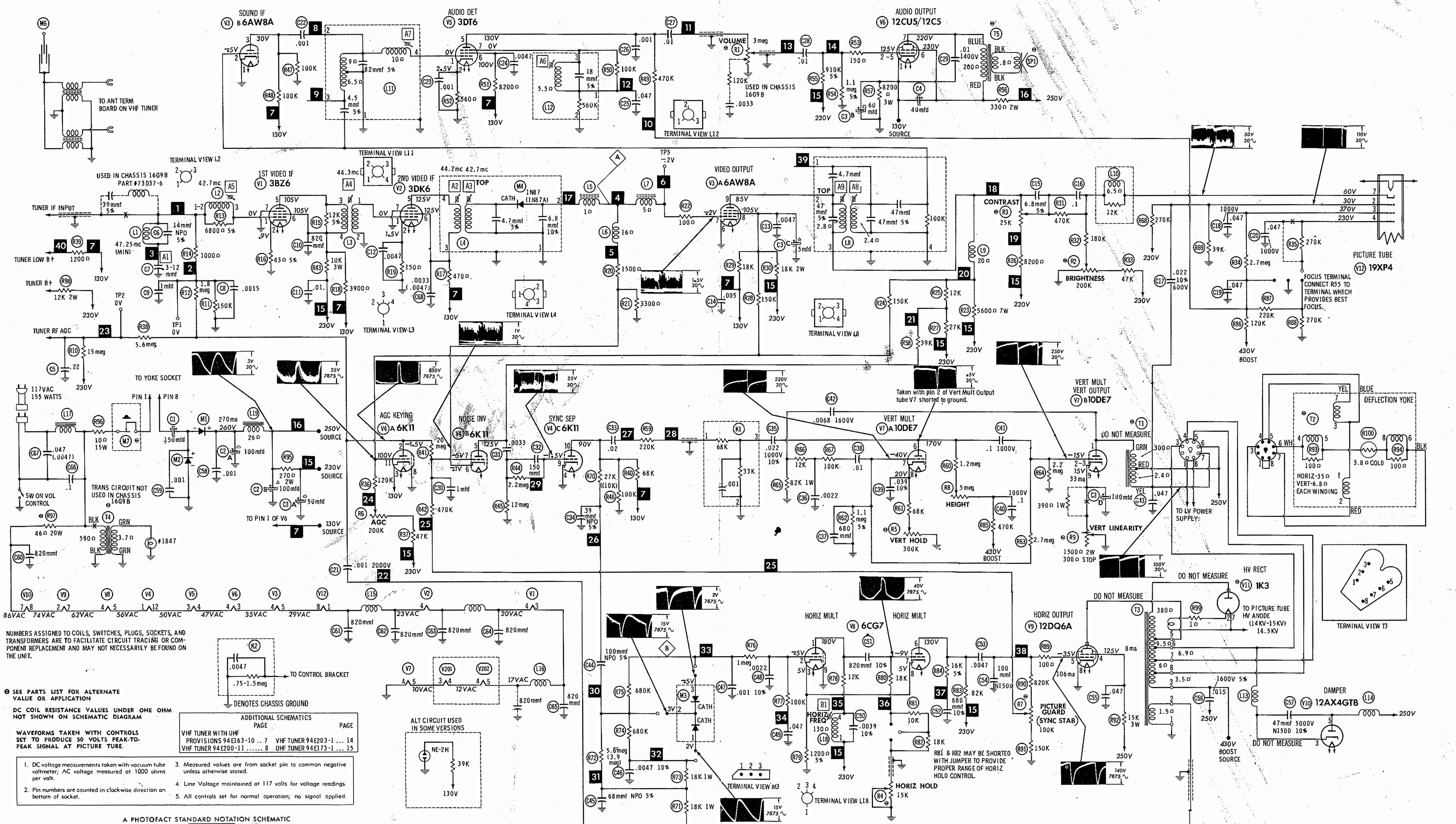
DISASSEMBLY INSTRUCTIONS

CHASSIS REMOVAL MODEL P915

1. Remove 2 push-on type knobs, channel selector, and fine tune knobs from front. Remove 3 push-on type knobs from side.
2. Remove rear cover (11 screws).
3. Remove 5 screws holding the chassis and 3 screws holding the tuner bracket.
4. Unplug speaker, yoke, picture tube socket, hi voltage lead, and antenna lead from tuner.
5. Remove chassis.

PICTURE TUBE REMOVAL

It is necessary to remove chassis for picture tube removal.



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

WAVEFORMS TAKEN WITH CONTROLS SET TO PRODUCE 50 VOLTS PEAK-TO-PEAK SIGNAL AT PICTURE TUBE.

DENOTES CHASSIS GROUND

ADDITIONAL SCHEMATICS	PAGE		PAGE
VHF TUNER WITH UHF PROVISIONS 94E163-10	7	VHF TUNER 94E203-1	14
VHF TUNER 94E200-11	8	UHF TUNER 94E173-1	15

1. DC voltage measurements taken with vacuum tube voltmeter; AC voltage measured at 1000 ohms per volt.
2. Pin numbers are counted in clockwise direction on bottom of socket.
3. Measured values are from socket pin to common negative unless otherwise stated.
4. Line Voltage maintained at 117 volts for voltage readings.
5. All controls set for normal operation; no signal applied.

A PHOTOFACT STANDARD NOTATION SCHEMATIC with CIRCUITRACE®

ADMIRAL CHASSIS 16B9B, 16G9B, 16UB9B, 16UG9B

ADMIRAL CHASSIS 16B9B, 16G9B, 16UB9B, 16UG9B

FOLDER 1

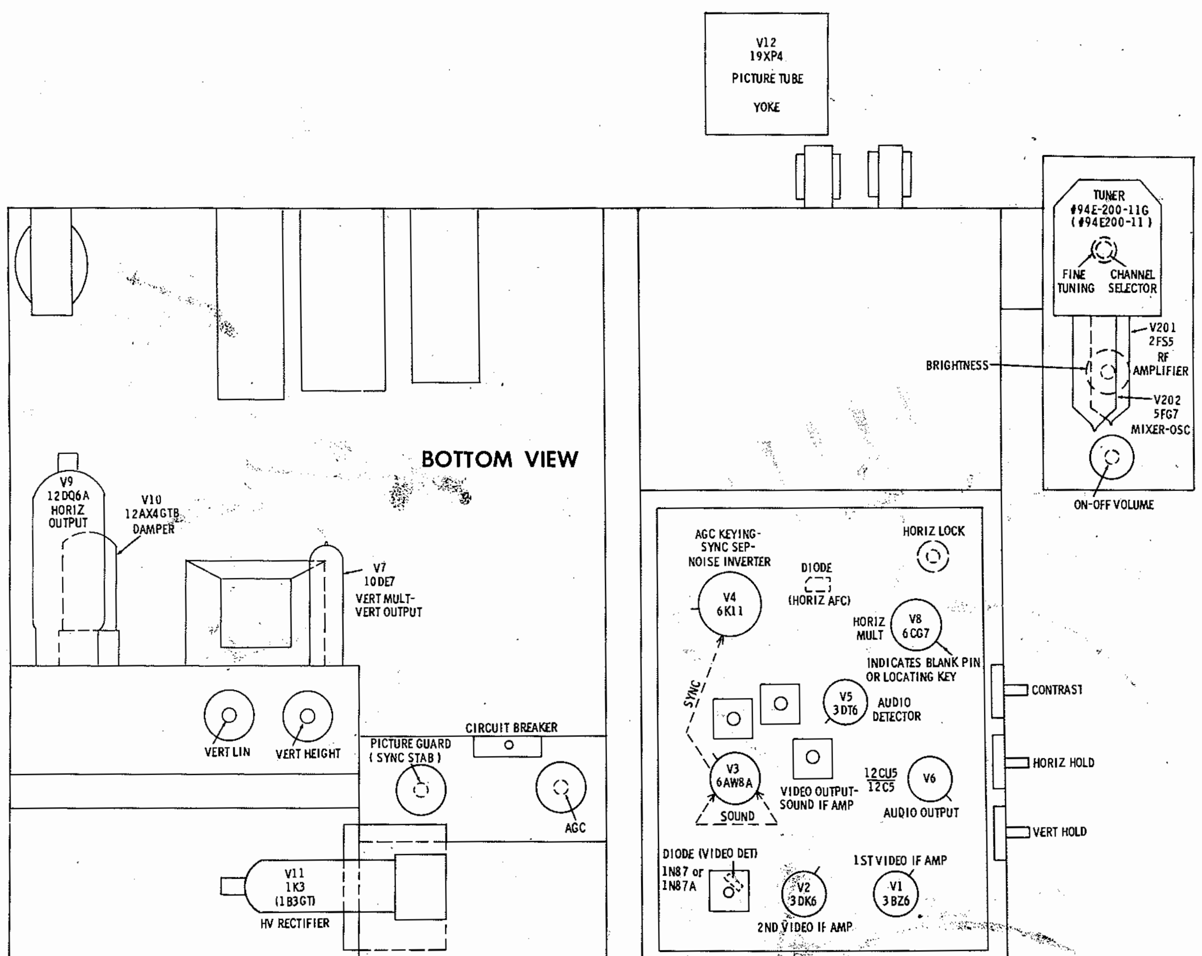
ADMIRAL CHASSIS 16B9B, 16G9B, 16UB9B, 16UG9B

RESISTANCE MEASUREMENTS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	3BZ6	150K	43Ω	15Ω	17Ω	■3500Ω	■3500Ω	0Ω		
V2	3DK6	.1Ω	150Ω	17Ω	20Ω	■470Ω	■470Ω	0Ω		
V3	6AW8A	0Ω	100K	■50K	30Ω	25Ω	0Ω	5000Ω	†10K	†4700Ω
V4	6K11	50Ω	1.9meg	■0Ω	0Ω	†50K	3300Ω	●700K	0Ω	14.2meg
		Pin 10 ■45K	Pin 11 ●60K	Pin 12 42Ω						
V5	3DT6	19Ω	560Ω	42Ω	40Ω	‡600K	■8200Ω	560K		
V6	12CU5	¶10K	550K	30Ω	40Ω	NC	†355Ω	†555Ω		
V7	10DE7	†325Ω	1.5meg	NC	0Ω	10Ω	●‡5meg	1meg	●150K	●500Ω
V8	6CG7	†12K	2.5meg	1200Ω	55Ω	50Ω	†82K	●42K	1200Ω	0Ω
V9	12DQ6A	NC	65Ω	NC	†15K	1.1meg	NC	55Ω	0Ω	TOP CAP ‡10Ω
V10	12AX4GTB	NC	NC	620K	NC	†26Ω	NC	75Ω	65Ω	
V11	1K3	PINS 1 THRU 8 HAVE INFINITE RESISTANCE								TOP CAP ‡390Ω
V12	19XP4	20Ω	39K	‡2.2meg	‡500K	NC	NC	●150K	25Ω	
V201	2FS5	5.2meg	0Ω	10Ω	11Ω	†13K	†13K	0Ω		
V202	5FG7	15K	■12K	0Ω	11Ω	15Ω	■3900Ω	■1700Ω	0Ω	1meg
ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9

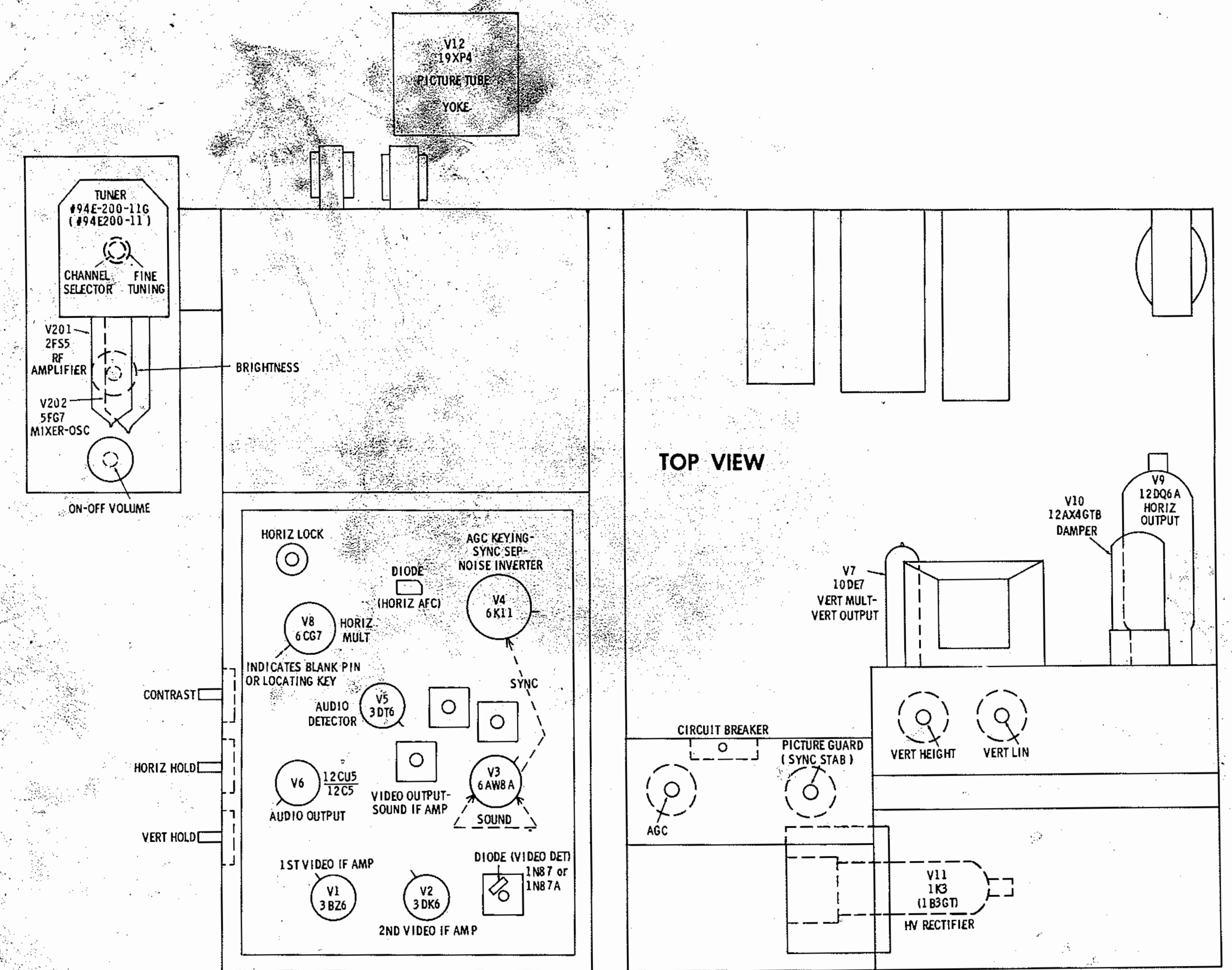
¶ THIS READING WILL VARY DEPENDING UPON THE CONDITION OF THE ELECTROLYTIC IN THE CIRCUIT.
● THIS READING WILL VARY. CONTROL SET FOR NORMAL OPERATION.
† MEASURED FROM OUTPUT OF M1.
‡ MEASURED FROM PIN 3 OF V10.
■ MEASURED FROM 130V SOURCE.

NC NO CONNECTION
TP TIE POINT



TUBE PLACEMENT CHART

TUBE PLACEMENT CHART



TUBE FAILURE CHECK CHART

The following chart lists tubes whose failures are most likely to produce indicated symptoms. Refer to tube placement chart for location and type of tube.

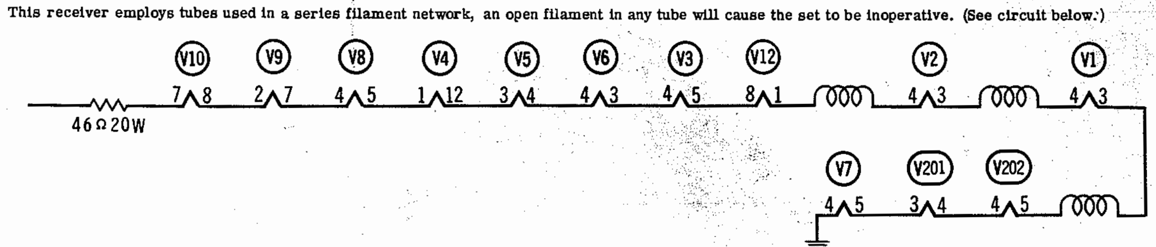
POWER SUPPLY FAILURE
No raster, no sound Circuit Breaker, Rectifiers M1, M2

SWEEP FAILURE
No raster, has sound V8, V9, V10, V11, V12
No vertical deflection V7
Poor vert. linearity or foldover V7
Poor horiz. linearity or foldover V8, V9, V10
Narrow picture V8, V9, V10, M1, M2
Vert. off freq. V7
Horiz. off freq. Diode (Horiz. AFC), V8

LOSS OF PICTURE OR SOUND
No pic, no sound, has raster V1, V2, Diode (Video Det.), V3, V6
No pic, no sound, has snow V201, V202
No pic, has sound, has raster V3, V12
Has pic, no sound V3, V5, V6
Overloaded picture V4

SYNC FAILURE
No vert. sync V4
No horiz. sync V4
No vert. or horiz. sync V4

This receiver employs tubes used in a series filament network, an open filament in any tube will cause the set to be inoperative. (See circuit below:)



ALIGNMENT INSTRUCTIONS

PRE-ALIGNMENT INSTRUCTIONS

USE AN ISOLATION TRANSFORMER TO PROTECT THE TEST EQUIPMENT.
The High Voltage lead should be securely taped and kept away from the chassis.
Allow a 20 minute warm-up period for the receiver and test equipment.

Suggested Alignment Tools:
- A1 .... GENERAL CEMENT #5004, 5008, 5009; WALSCO #2520
- A2 thru A9 .... GENERAL CEMENT #8282, 8606, 8606L, 9295; WALSCO #2528, 2543, 2544, 2545
- Mixer Plate Coil .... GENERAL CEMENT #9296, 9297; WALSCO #2546, 2547

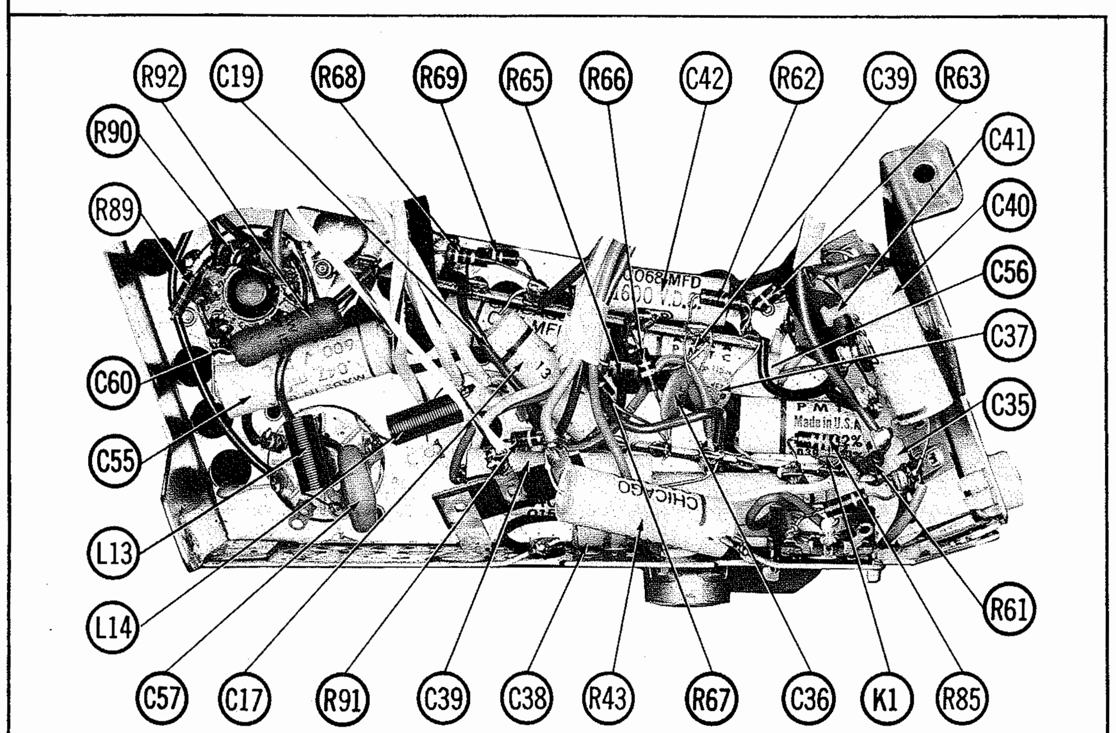
VIDEO IF ALIGNMENT

Connect the synchronized sweep voltage from the sweep generator to the horizontal input of the oscilloscope for horizontal deflection.
The generator output lead should be terminated with its characteristic impedance, usually 50 ohms.
Use only enough generator output to provide a usable indication on VTVM.
Connect variable bias to IF AGC line. Adjust bias to obtain response curve which shows no indication of overloading.

	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
1.	High side to ungrounded tube shield floating over Mixer-Osc. (V202). Low side to chassis.	Not used	47.25MC (Unmod.)	Any non-interfering channel	USE VTVM DC probe thru 47K to point Ⓐ. Common to chassis. (Across Video Det. load)	A1	Adjust for MINIMUM deflection.
2.	"	"	44.2MC	"	"	A2	Adjust for maximum deflection.
3.	"	"	42.7MC	"	"	A3	"
4.	"	"	44.3MC	"	"	A4	"
5.	"	"	42.7MC	"	"	A5	"
6.	"	"	44.8MC	"	"	Mixer Plate Coil	"
7.	"	44.0MC (10MC Swp.)	42.25MC 45.75MC	"	Vert. Amp. thru 47K to point Ⓐ. Low side to chassis.		Check for response similar to Fig. 1. If necessary, retouch SLIGHTLY A2 thru A5 and Mixer Plate Coil for desired response.

SOUND IF ALIGNMENT

Tune in a strong TV signal and adjust controls for normal operation.
Turn A6 slowly counterclockwise until a buzz is heard in the sound. Turn clockwise for maximum undistorted sound. Reduce the signal at the antenna terminals (by use of an adjustable attenuator or disconnecting antenna) until a strong hiss similar to super-regeneration is heard in the sound.
Carefully adjust A7 for maximum undistorted sound with MINIMUM hiss. If the hiss disappears during alignment, further reduce signal until hiss returns and retouch A7.
Carefully adjust A8 for MINIMUM 4.5MC beat interference in picture.
Carefully adjust A9 for maximum undistorted sound with MINIMUM hiss. If the hiss disappears, further reduce signal until hiss returns and retouch A9.



VERT. MULT. - OUTPUT, HORIZ. OUTPUT SECTION

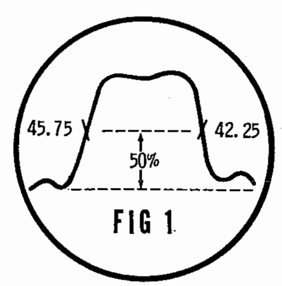
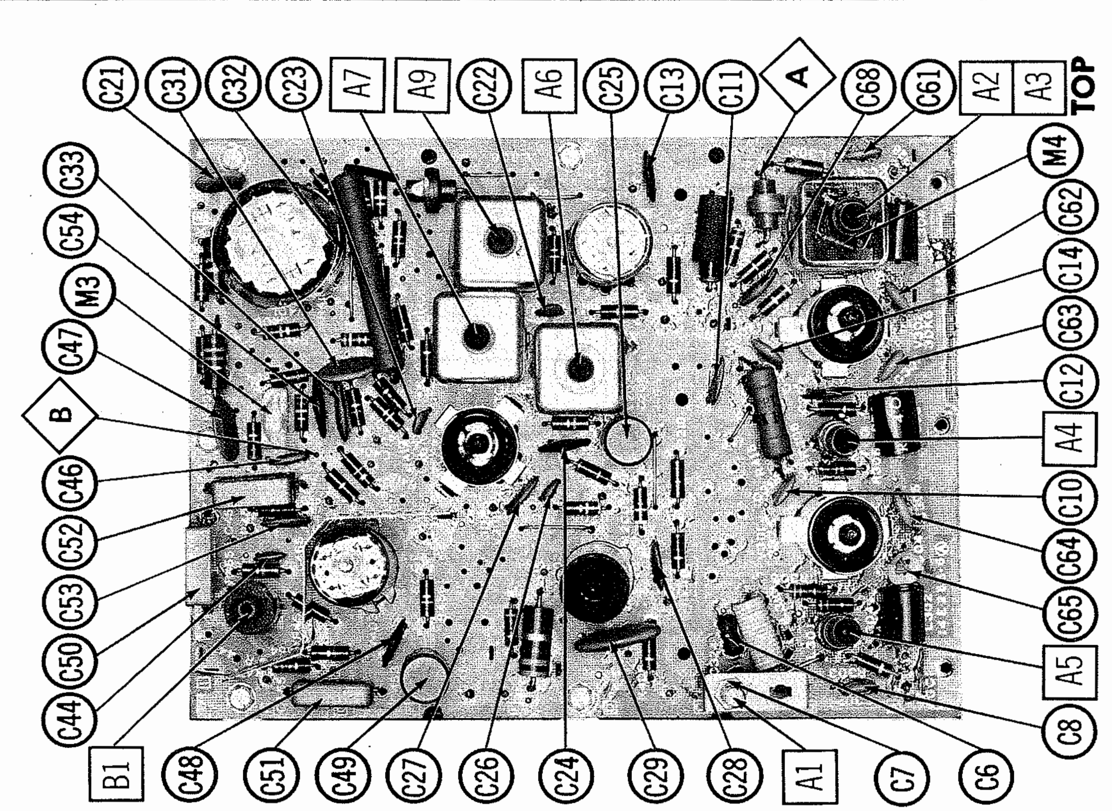
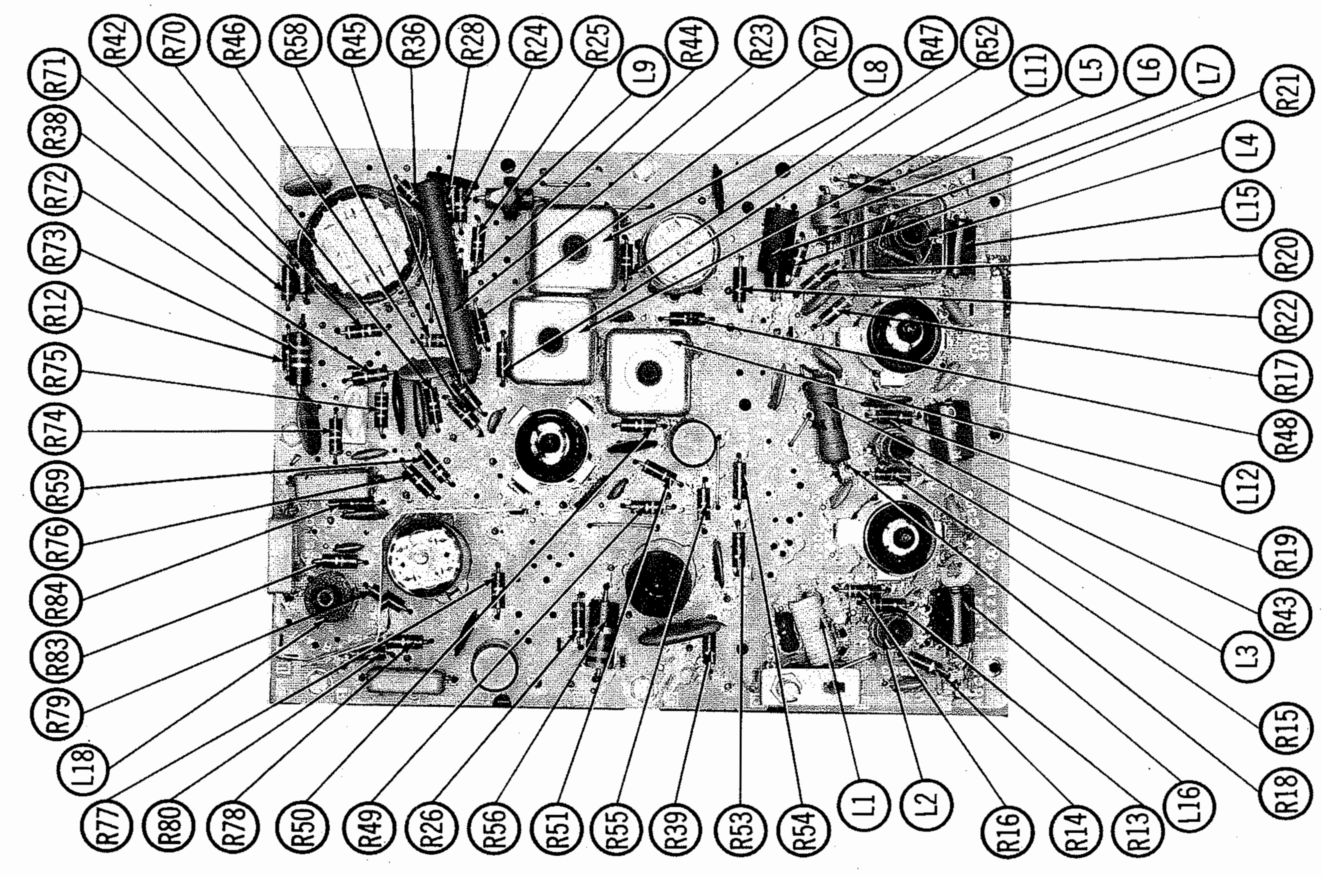


FIG 1



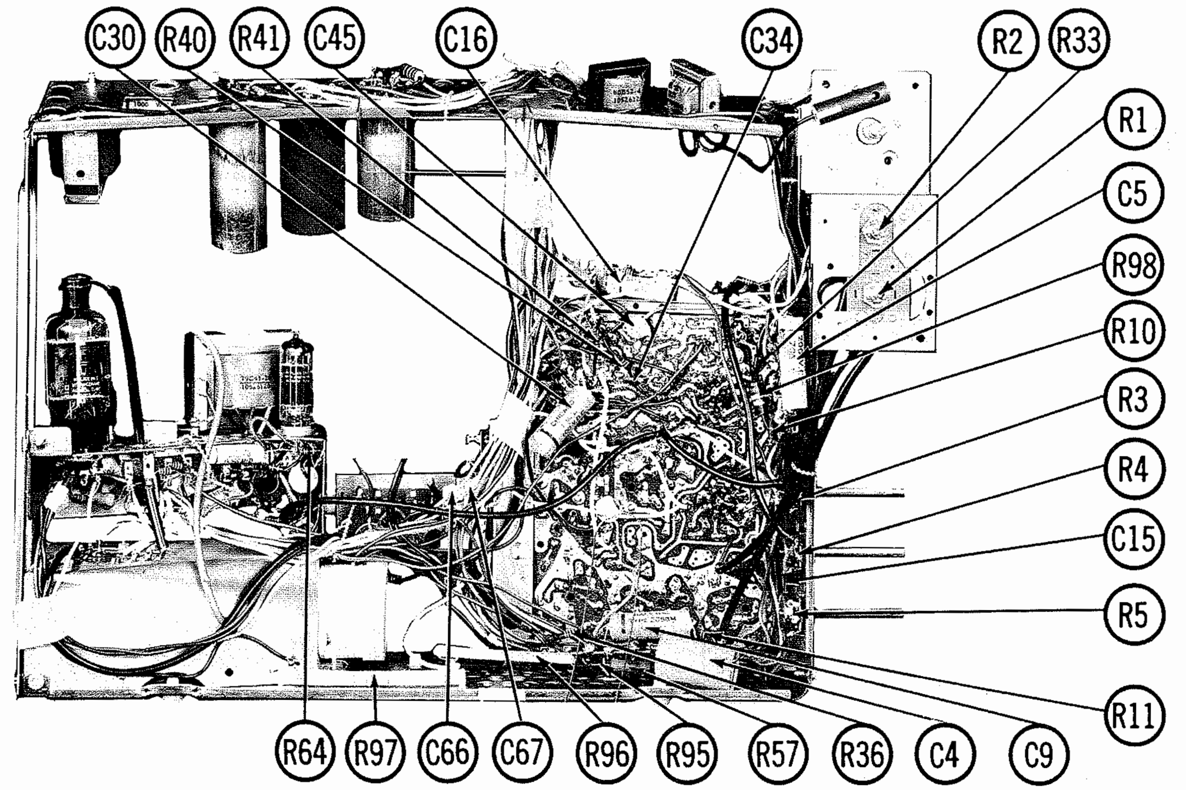
PRINTED BOARD
ALIGN., CAPACITOR, MISC. IDENT.



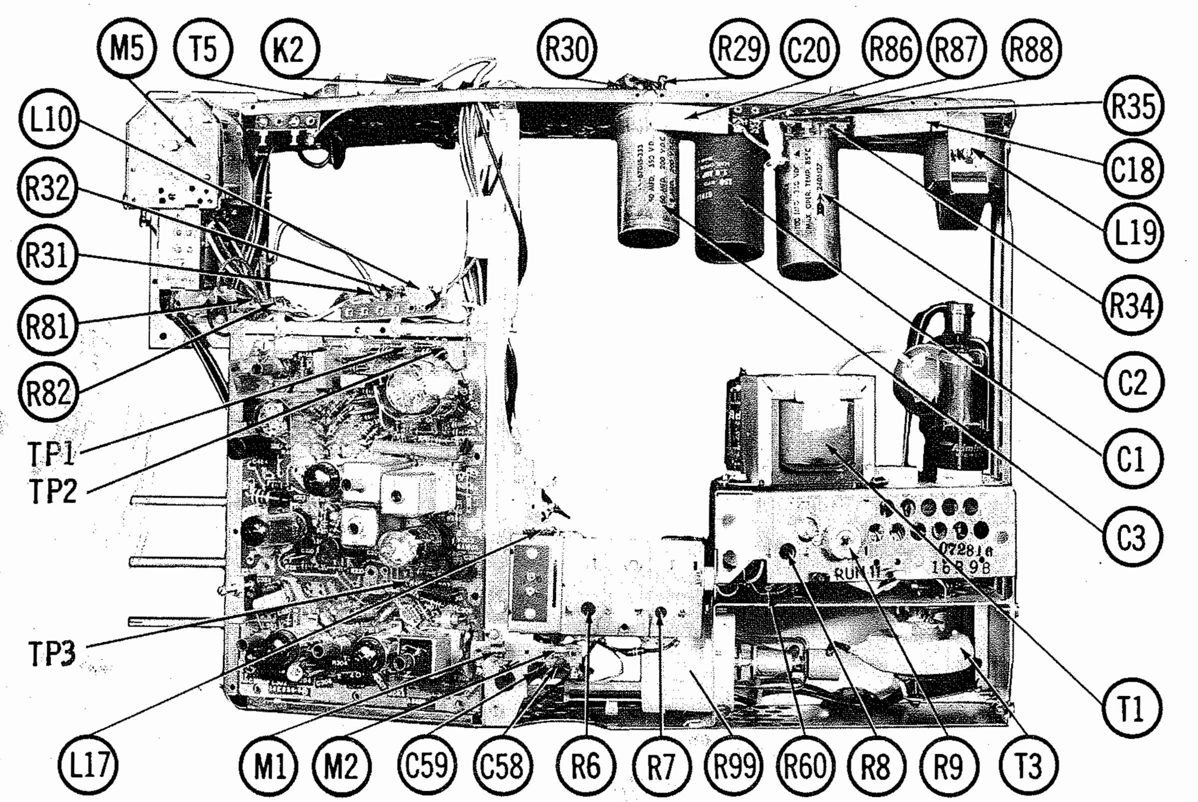
PRINTED BOARD - RESISTOR, INDUCTOR IDENT.

ADMIRAL CHASSIS 16B9B, 16G9B, 16UB9B, 16UG9B

FOLDER 1



CHASSIS - FRONT VIEW



TP1 0V IF AGC
TP2 0V TUNER AGC
TP3 -.2V VIDEO OUTPUT GRID

CHASSIS - REAR VIEW

ADMIRAL CHASSIS 16B9B, 16G9B, 16UB9B, 16UG9B

PRINTED BOARD

ARROWS INDICATING TUBE LOCATIONS ARE POINTING TO PIN 1 UNLESS OTHERWISE INDICATED

A Howard W. Sams CIRCUITRACE Photo

VHF TUNER ALIGNMENT INSTRUCTIONS

94E163-10, 94E200-11

PRE-ALIGNMENT INSTRUCTIONS

USE AN ISOLATION TRANSFORMER TO PROTECT THE TEST EQUIPMENT.
The High Voltage lead should be securely taped and kept away from the chassis.
Allow a 20 minute warm-up period for the receiver and test equipment.
Suggested Alignment Tools: A201, A202 ..... GENERAL CEMENT #5009, 8195, 8274, 8275, 8728, 8729, 8987, 8988, 8988, 8989
WALSCO #2515, 2531, 2532
A203 thru A214 ... GENERAL CEMENT #8282, 8606, 8606L, 9091
WALSCO #2526, 2541, 2542, 2543, 2544

VHF RF AND MIXER ALIGNMENT

Connect the synchronized sweep voltage from the sweep generator to the horizontal input of the oscilloscope for horizontal deflection.
The generator output lead should be terminated with its characteristic impedance, usually 50 ohms.
Connect the negative lead of a 3 volt bias supply to point (T). Positive to chassis.
Use 10MC sweep unless otherwise noted.
Use only enough sweep generator output to provide a usable pattern on scope.

	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
1.	Across antenna terminals with 120Ω in each lead.	195MC	193.25MC 197.75MC	10	Vert. Amp. thru 10K to point (U). Low side to chassis.	A201, A202	Adjust A201 and A202 for response similar to Fig. 201 with markers on shoulders of curve.
2.	"	213MC	211.25MC 215.75MC	13	"		Check for response similar to Fig. 201. If markers fall below 90% on any channel, make compromise adjustment of A201 and A202 with channel switch set to that channel. Check all other channels to see that they have not been seriously affected.
		207MC	205.25MC 209.75MC	12			
		201MC	199.25MC 203.75MC	11			
		189MC	187.25MC 191.75MC	9			
		183MC	181.25MC 185.75MC	8			
		177MC	175.25MC 179.75MC	7			
		85MC	83.25MC 87.75MC	6			
		79MC	77.25MC 81.75MC	5			
		69MC	67.25MC 71.75MC	4			
		63MC	61.25MC 65.75MC	3			
		57MC	55.25MC 59.75MC	2			

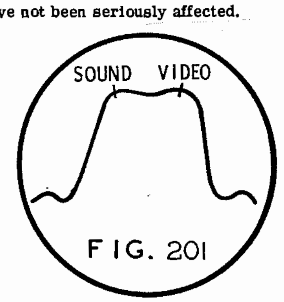


FIG. 201

VHF OSCILLATOR ALIGNMENT

Connect the synchronized sweep voltage from the sweep generator to the horizontal input of the oscilloscope for horizontal deflection.
The generator output lead should be terminated with its characteristic impedance, usually 50 ohms.
Set the Fine Tuning to the center of its range.
Use only enough sweep generator output to provide a usable pattern on scope.
Connect variable bias to IF AGC line. Adjust bias to obtain response curve which shows no indication of overloading.
Use 10MC sweep unless otherwise noted.

	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
3.	Across antenna terminals with 120Ω in each lead.	213MC	211.25MC 215.75MC	13	Vert. Amp. thru 47K across Video Detector load.	A203	Adjust to place sound marker in trap notch as in Fig. 202. Video marker should fall at 50%.
		207MC	205.25MC 209.75MC	12		A204	
		201MC	199.25MC 203.75MC	11		A205	
		195MC	193.25MC 197.75MC	10		A206	
		189MC	187.25MC 191.75MC	9		A207	
		183MC	181.25MC 185.75MC	8		A208	
		177MC	175.25MC 179.75MC	7		A209	
		85MC	83.25MC 87.75MC	6		A210	
		79MC	77.25MC 81.75MC	5		A211	
		69MC	67.25MC 71.75MC	4		A212	
		63MC	61.25MC 65.75MC	3		A213	
		57MC	55.25MC 59.75MC	2		A214	

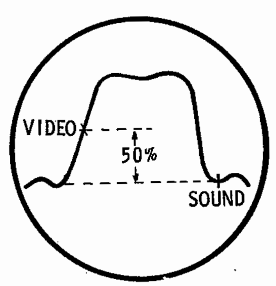


FIG. 202

UHF IF ALIGNMENT (Tuner 94E163-10)

Tune in a weak UHF signal and adjust A215 for best picture quality with MINIMUM Noise Interference.

VHF TUNER ALIGNMENT INSTRUCTIONS

94E203-1

PRE-ALIGNMENT INSTRUCTIONS

USE AN ISOLATION TRANSFORMER TO PROTECT THE TEST EQUIPMENT.
Use only enough sweep generator output to provide a usable pattern on scope.

VHF OSCILLATOR ALIGNMENT

An Over-all Oscillator Adjustment (A201) is provided on top of the tuner in case the Oscillator-Mixer tube is replaced. Adjust for best picture and sound on all channels.
If A201 is not sufficient, it may be necessary to adjust individual oscillator coils by expanding or compressing coil turns or bending tabs.
Start with the highest channel operating in the area and proceed in a descending order.

VHF RF AND MIXER ALIGNMENT

Connect the synchronized sweep voltage from the sweep generator to the horizontal input of the oscilloscope for horizontal deflection.
The generator output lead should be terminated with its characteristic impedance, usually 50 ohms.
Use only enough sweep generator output to provide a usable pattern on scope.
Connect the negative lead of a 4.5 volt bias supply to point (T). Positive to chassis.
Use 10MC sweep unless otherwise noted.

	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
1.	Across VHF antenna terminals with 120Ω in each lead.	213MC	211.25MC 215.75MC	13	Vert. Amp. to point (U). Low side to chassis.	A202, A203, A204	Adjust for maximum gain and symmetry of response similar to Fig. 201 with markers as shown. Adjustments are made by expanding or compressing coil turns or bending tabs.
		207MC	205.25MC 209.75MC	12		A205, A206, A207	
		201MC	199.25MC 203.75MC	11		A208, A209, A210	
		195MC	193.25MC 197.75MC	10		A211, A212, A213	
		189MC	187.25MC 191.75MC	9		A214, A215, A216	
		183MC	181.25MC 185.75MC	8		A217, A218, A219	
		177MC	175.25MC 179.75MC	7		A220, A221, A222	
		85MC	83.25MC 87.75MC	6		A223, A224, A225	
		79MC	77.25MC 81.75MC	5		A226, A227, A228	
		69MC	67.25MC 71.75MC	4		A229, A230, A231	
		63MC	61.25MC 65.75MC	3		A232, A233, A234	
		57MC	55.25MC 59.75MC	2		A235, A236, A237	

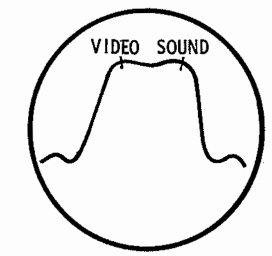
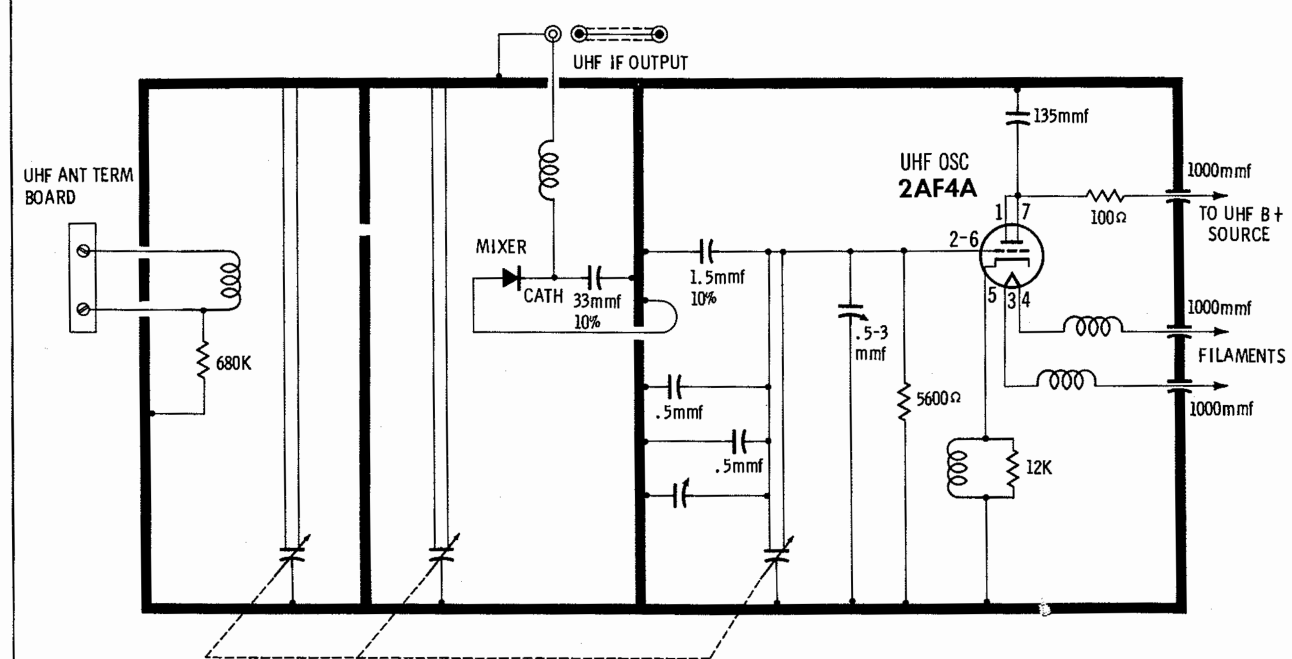
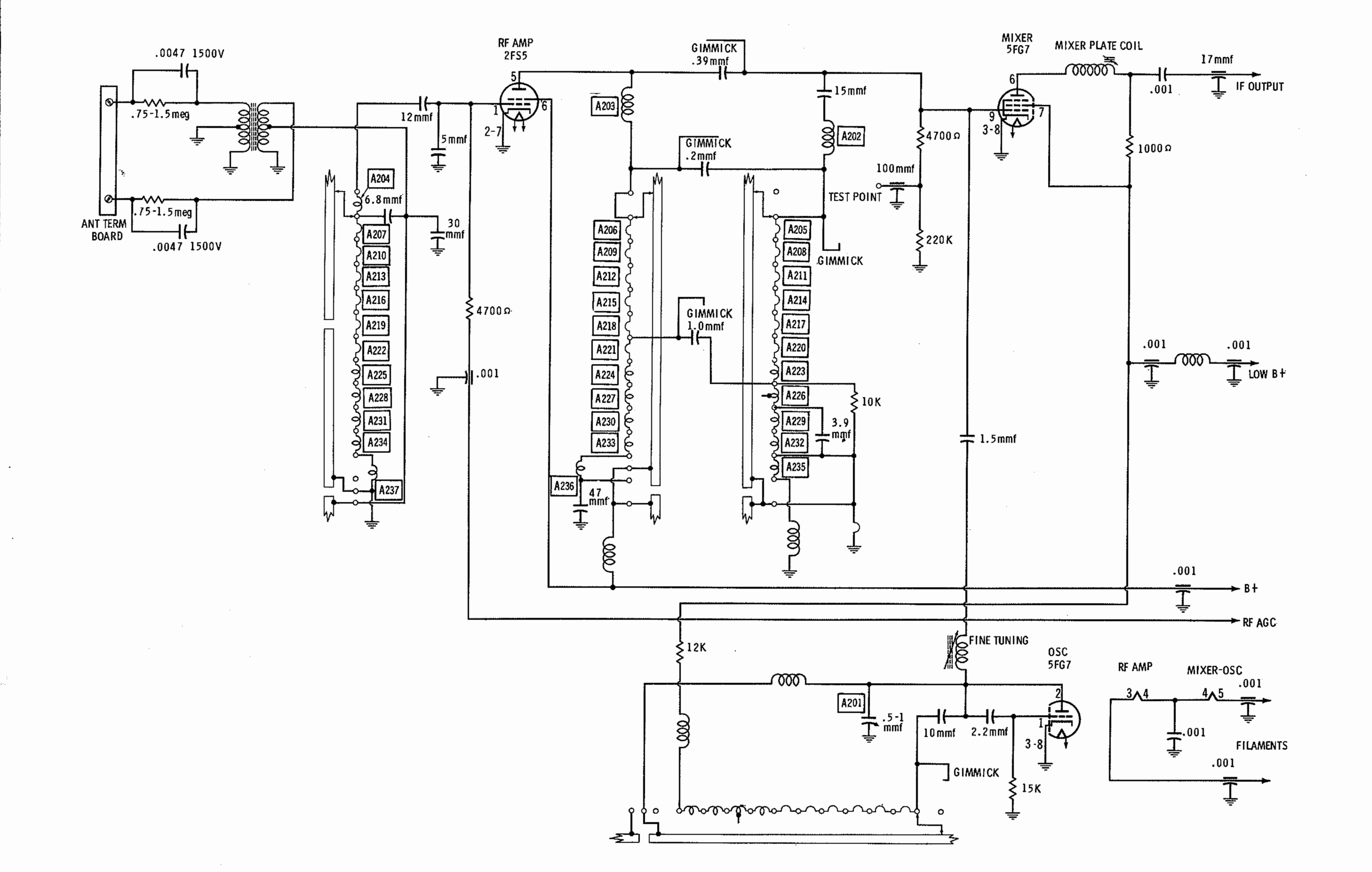


FIG. 201



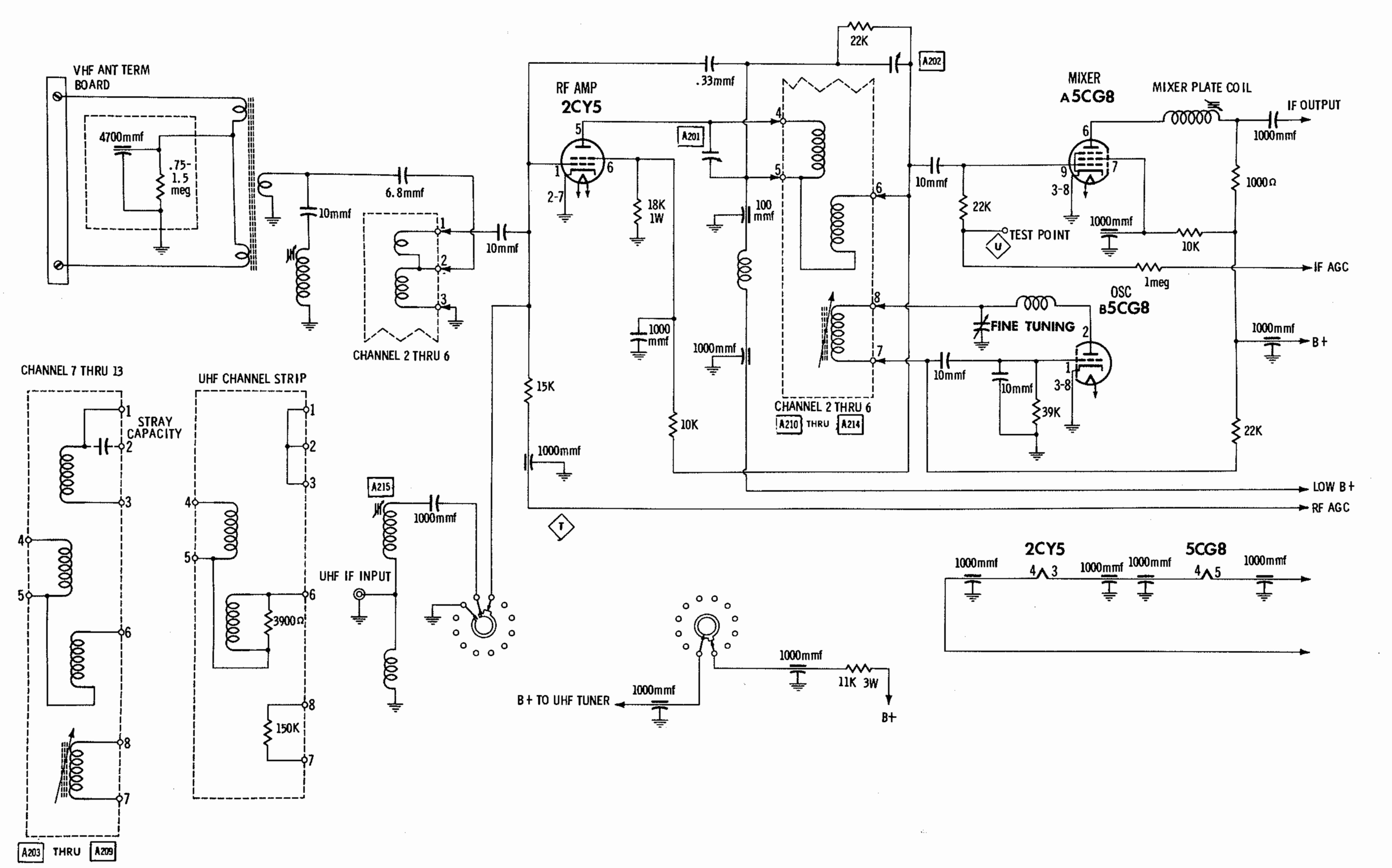
A PHOTOFACT STANDARD NOTATION SCHEMATIC

UHF TUNER 94E173-1



A PHOTOFACT STANDARD NOTATION SCHEMATIC

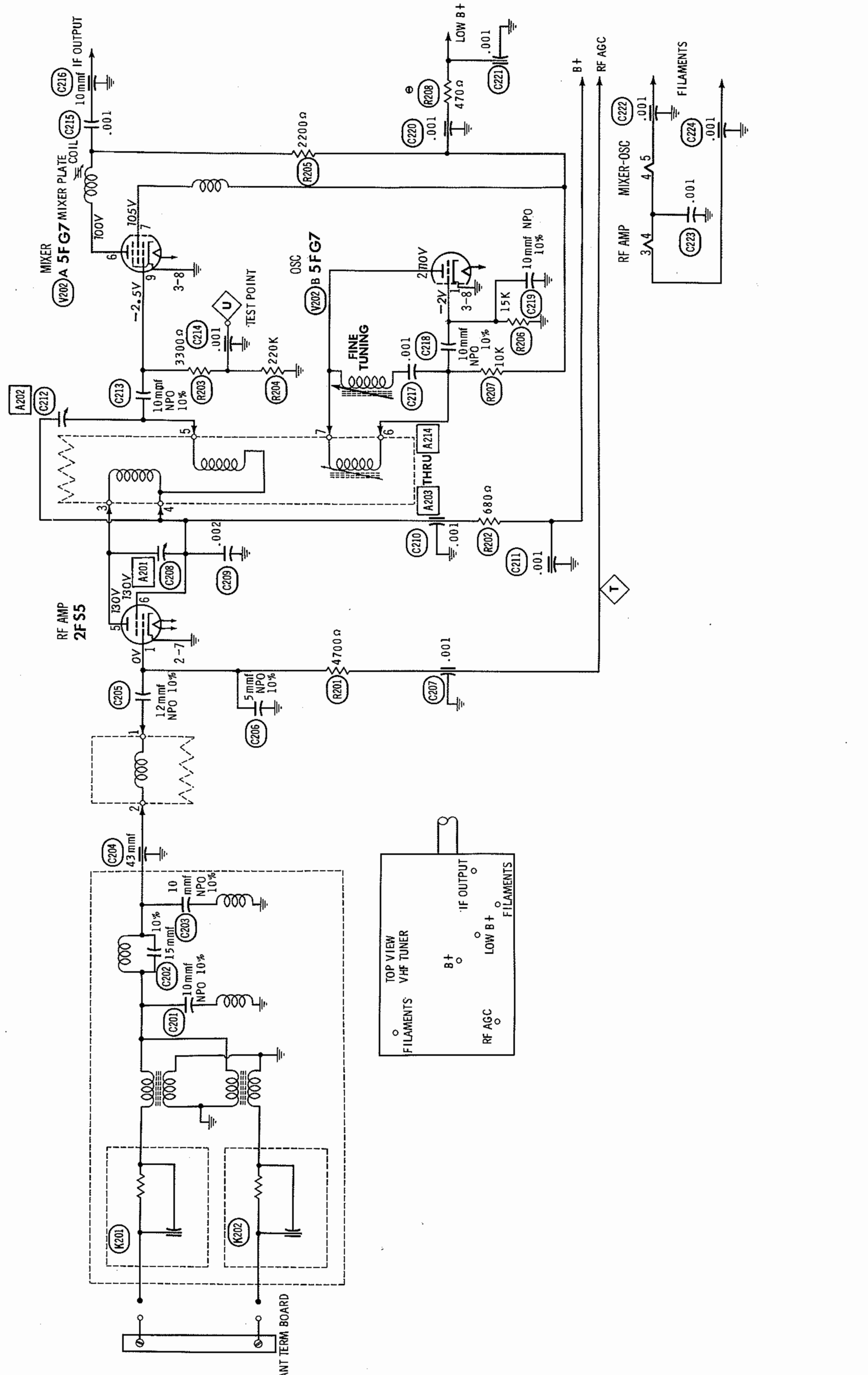
VHF TUNER 94E203-1



A PHOTOFACT STANDARD NOTATION SCHEMATIC

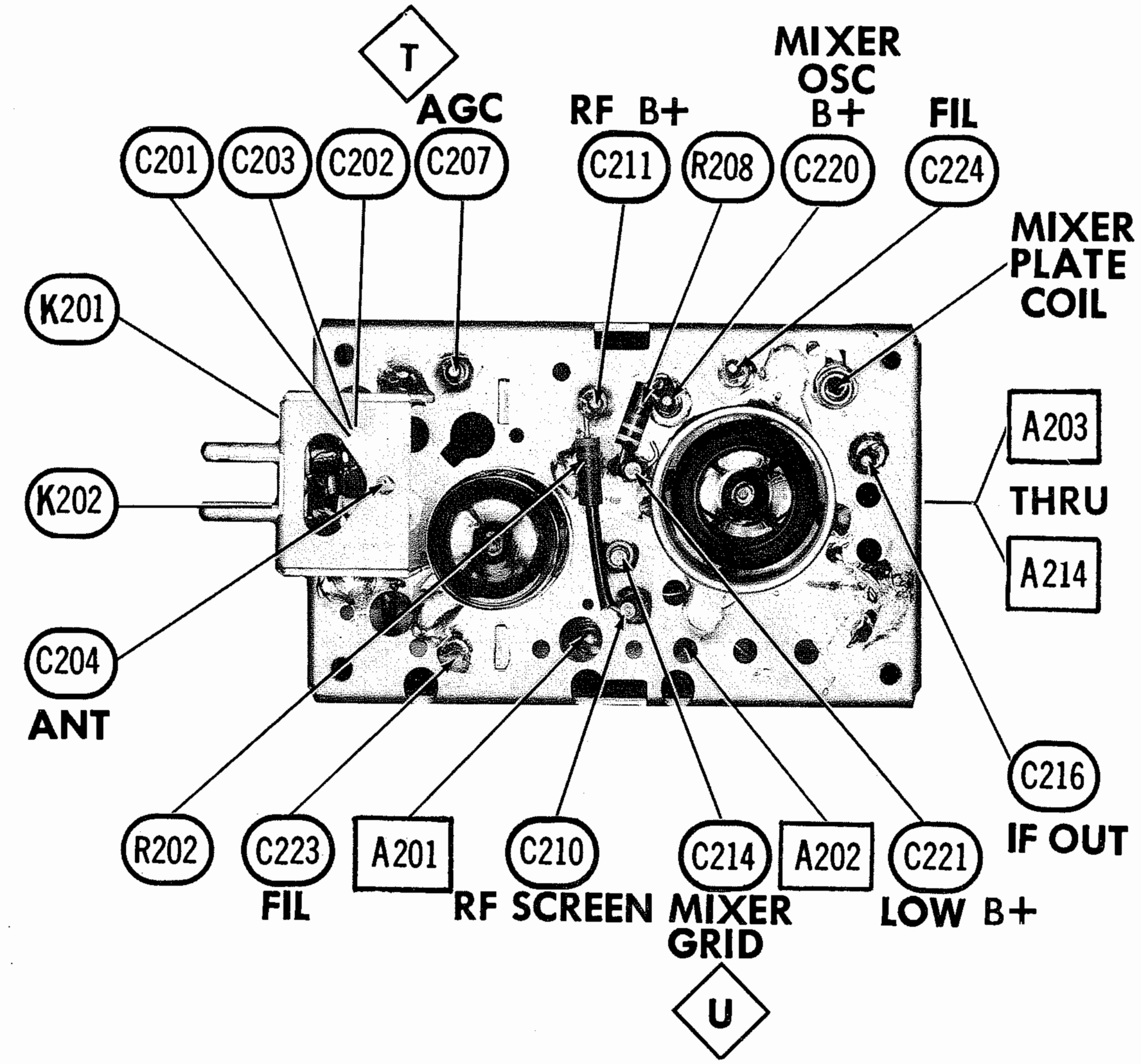
VHF TUNER WITH UHF PROVISIONS 94E163-10

ADMIRAL CHASSIS 16B9B, 16G9B, 16UB9B, 16UG9B

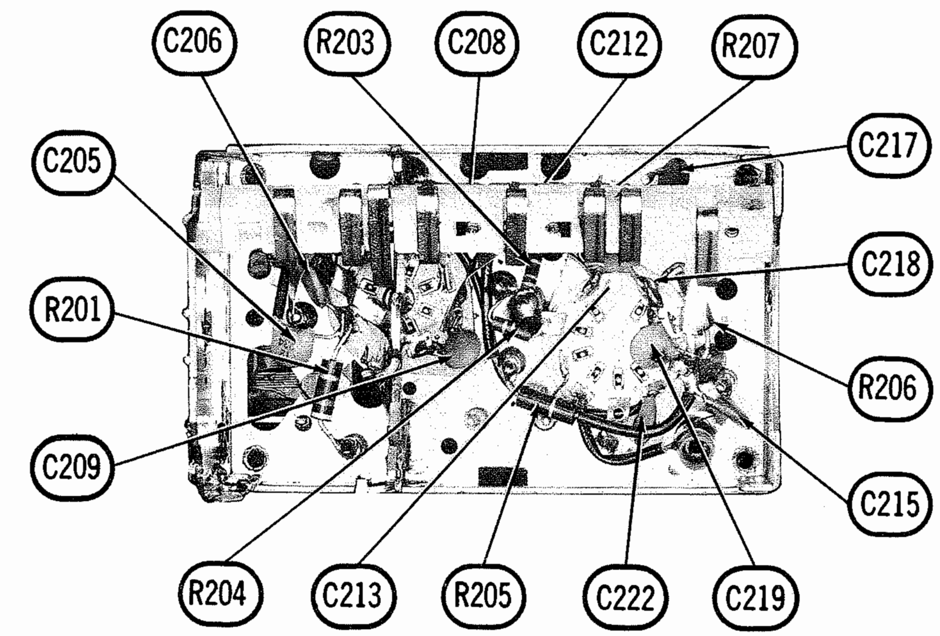


VHF TUNER 94E200-11

A PHOTOFACT STANDARD NOTATION SCHEMATIC



VHF TUNER 94E200-11 - TOP VIEW



VHF TUNER 94E200-11 - BOTTOM VIEW

VHF TUNER PARTS LIST AND DESCRIPTIONS

94E200-11

TUBES

• GENERAL ELECTRIC • RAYTHEON • SYLVANIA •

ITEM No.	USE	TYPE	ITEM No.	USE	TYPE
V201	RF Amp.	2FS5	V202	Mixer - Osc.	5FG7

FIXED CAPACITORS

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.
C201	10 NPO 10%		NPO-DI 10	DTZ-10	C10Q1C	CCTO-100	CNO-410	10TCC-Q10
C202	15 10%		NPO-DI 15	DTZ-15	C10Q15C	CCTO-150	CNO-415	10TCC-Q15
C203	10 NPO 10%		NPO-DI 10	DTZ-10	C10Q1C	CCTO-100	CNO-410	10TCC-Q10
C204	43							
C205	12 NPO 10%			TCZ-12	C10Q12C	CCTO-120	CNO-412	10TCC-Q12
C206	5 NPO 10%		NPO-DI 5.0	DTZ-4R7	C10V5C	CCTO-050	CNO-547	10TCC-V50
C207	.001		EF-001	MFT-1000		CCF-102	CT280A	
C208								
C209	.002		BPD-002	DD-202	BYA10D2	CCD-202	B-220	5HK-D20
C210	.001		EF-001	MFT-1000		CCF-102	CT280A	
C211	.001		EF-001	MFT-1000		CCF-102	CT280A	
C212								
C213	10 NPO 10%		NPO-DI 10	DTZ-10	C10Q1C	CCTO-100	CNO-410	10TCC-Q10
C214	.001		EF-001	MFT-1000		CCF-102	CT280A	
C215	.001		BPD-001	DD-102	BYA10D1	CCD-102	B-210	5HK-D10
C216	10							
C217	.001		BPD-001	DD-102	BYA10D1	CCD-102	B-210	5HK-D10
C218	10 NPO 10%		NPO-DI 10	DTZ-10	C10Q1C	CCTO-100	CNO-410	10TCC-Q10
C219	10 NPO 10%		NPO-DI 10	DTZ-10	C10Q1C	CCTO-100	CNO-410	10TCC-Q10
C220	.001		EF-001	MFT-1000		CCF-102	CT280A	
C221	.001		EF-001	MFT-1000		CCF-102	CT280A	
C222	.001		BPD-001	DD-102	BYA10D1	CCD-102	B-210	5HK-D10
C223	.001		EF-001	MFT-1000		CCF-102	CT280A	
C224	.001		EF-001	MFT-1000		CCF-102	CT280A	

RESISTORS

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

ITEM No.	RATING	REPLACEMENT DATA			ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN TV PART No.	REMARKS			IRC PART No.	WORKMAN TV PART No.	REMARKS
R201	4700Ω				R205	2200Ω			(1000Ω) *
R202	680Ω				R206	15K			
R203	3300Ω			(3900) *	R207	10K			(1000Ω) *
R204	220K			(1meg) *	R208	470Ω			Note 1

* Alternate Value

Note 1. May not be used in some versions.

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	ADMIRAL PART No.	REPLACEMENT DATA
K201	Antenna Filter			
K202	Antenna Filter			

PARTS LIST AND DESCRIPTIONS

TUBES

• GENERAL ELECTRIC • RAYTHEON • SYLVANIA •

ITEM No.	USE	TYPE	ITEM No.	USE	TYPE
V1	1st Video IF Amp.	3BZ6	V6	Audio Output	12CU5/12C5
V2	2nd Video IF Amp.	3DK6	V7	Vert. Mult. - Vert. Output	10DE7
V3	Video Output - Sound IF Amp.	6AW8A	V8	Horiz. Mult.	6CG7
V4	AGC Keying - Sync Sep. - Noise Inverter	6K11	V9	Horiz. Output	12DQ6A
V5	Audio Detector	3DT6	V10	Damper	12AX4GTB
			V11	HV Rectifier	1K3 (1B3GT) *

* Alternate

PICTURE TUBE

ITEM No.	REPLACEMENT DATA					NOTES
	ADMIRAL PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	RAYTHEON PART No.	SYLVANIA PART No.	
V12	19XP4	19AVP4/XP4 ①	19XP4 ①		19XP4 ②	① Aluminized ② Silver Screen "85"

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	ADMIRAL PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	PYRAMID PART No.	SPRAGUE PART No.
C1	150	200	67D15-234	AFHS1-37-25	XA0315	XC1-19	FP140.6	TMS-1400	TVL-1540
C2A	▲100	350	67D15-331	AFH2-41-50	B0332	XC2-39	FP227.7	TMD-2435	TVL-2641
B	▲100	350							
C3A	▲50	350	67D15-333	AFHS4-56-05	D0473	XC4-11	WP419.585	TMQ-4283	TVL-4739.5
B	■60	200							TVA-1310
C	▲5	200							
D	100	50							
C4	40	200	67A4-21	PRS1580	BR4025	QT1-14	TC58	TD-40-250	TVA-1511

FIXED CAPACITORS

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.
C5	.22 200V		P288N-22		CUB2P22	2DP-4-224	GEM-2022	2TM-P22
C6	14 NPO 5%			TCZ-15	C10Q15C	CCTO-150	CNO-415	10TCC-Q15
C7	3-12							
C8	.0015		BPD-0015	DD-152	BYA10D15	CCD-152	B-215	5HK-D15
C9	1mfd 100V		P288N-1.0		CUB2W1	1DP-5-104	GEM-21	2TM-M1
C10	820		DI-820	DD-821	BYA10T82	CCD-821	B-382	10TS-T82
C11	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C12	.0047		BPD-0047	DD-472	BYA10D47M	CCD-472	B-247	5HK-D47
C13	.0047		BPD-0047	DD-472	BYA10D47M	CCD-472	B-247	5HK-D47
C14	.005		BPD-005	DD-502	BYA10D5	CCD-502	B-250	5HK-D50
C15	6.8 5%		NPO-SI 6.8	TCZ-6R8	C10V68C	CCTO-6R8	CNO-568	10TCC-V68
C16	.1 400V		P488N-1	DF-104	CUB4P1	4DP-3-104	GEM-401	4TM-P10
C17	.022 600V 10%		V84C6S22-10%		PM6S22	6DP-2-223	GEM-1612	6TM-S22
C18	.047 1000V		P1088N-047		CUB10S47	16DP-5-473	GEM-10147	10TM-S47
C19	.047 600V		P688N-047	DD-503	CUB6S47	6DP-3-473	GEM-6147	6TM-S47
C20	.047 1000V		P1088N-047		CUB10S47	16DP-5-473	GEM-10147	10TM-S47
C21	.001 2000V		HVD-30-1000	DD30-102	HVB20D1	3CCD-102	2HV-210	BL-D10
C22	.001		BPD-001	DD-102	BYA10D1	CCD-102	B-210	5HK-D10
C23	.001		BPD-001	DD-102	BYA10D1	CCD-102	B-210	5HK-D10
C24	.0047		BPD-0047	DD-472	BYA10D47M	CCD-472	B-247	5HK-D47
C25	.047 200V		P288N-047	DD-503	CUB2S47	4DP-3-473	GEM-4147	2TM-S47
C26	.001		BPD-001	DD-102	BYA10D1	CCD-102	B-210	5HK-D10
C27	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C28	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C29	.01 1400V		DAC-27	DD16-103	HVE16S1	16DP-3-103	UAC-110	BL-S10
C30	1mfd 100V		P288N-1.0		CUB2W1	1DP-5-104	GEM-21	2TM-M1
C31	.0033		BPD-0033	DD-332	BYA10D33	CCD-332	B-233	5HK-D33
C32	150		DI-150	DD-151	L10T15	CCD-151	B-315	10TS-T15
C33	.02		BPD-02	DD-203	BYB6S2	CCD-203	B-120	5HK-S20
C34	39 NPO 5%			TCZ-39	C10Q39C	CM-19B-390J	CNO-539	10TCC-Q39
C35	.022 1000V 10%				DPMS16S22	16DP-5-223	GEM-1612	10TM-S22
C36	.0022		BPD-0022	DD-222	BYA10D22	CCD-222	B-222	5HK-D22
C37	680		DI-680	DD-681	BYA10T68	CCD-681	B-368	10TS-T68
C38	.01 600V		P688N-01	D6-103	CUB6S1	6DP-4-103	GEM-611	6TM-S10
C39	.039 600V 10%		P684CM-039		DPMS6S39	6DP-3-393	GEM-1614	6PS-S39
C40	.1 1000V		P1088N-1		CUB10P1		GEM-1001	10TM-P10
C41	.1 1000V		P1088N-1		DPMS10P1		GEM-1001	10TM-P10
C42	.0068 1600V		P1688N-0068	DD16-007	CUB16D68	16DP-3-702	GEM-16268	MB-D68
C43	.047 600V		P688N-047	DD-503	CUB6S47	6DP-3-473	GEM-6147	6TM-S47
C44	100 NPO 5%			DTZ-100	C10T1	CM-19B-101J	CNO-310	10TCC-T10
C45	68 NPO 5%			DTZ-680	C10Q68C	CM-19B-680J	CNO-468	10TCC-Q68
C46	.0047 10%		DI-4700		PM6D47	CCD-472	JL-247	10TS-D47
C47	.001 10%		DI-102	DD-102	PM6D1	CCD-102	GP210	10TS-D10
C48	.0022		BPD-0022	DD-222	BYA10D22	CCD-222	B-222	5HK-D22
C49	.047 200V		P288N-047	DD-503	CUB2S47	4DP-3-473	GEM-4147	2TM-S47
C50	.0039 10%		1464-0039		1R5D39	CM-20B-392K	MCJ462.5	MS-339
C51	820 10%		1469-00082		5R5T82	CM-19B-821K	MCB251	MS-382
C52	680 10%		1469-00068		5R5T68	CM-19B-681K	MCJ249	MS-368
C53	.0047		BPD-0047	DD-472	BYA10D47	CCD-472	B-247	5HK-D47
C54	100 N1500			TCL-100		*		
C55	.047 600V		P688N-047	DD-503	CUB6S47	6DP-3-473	GEM-6147	6TM-S47
C56	.015 1600V 5%	#64C2-59						
C57	47 5000V N1500 10%	#65D10-242						
C58	.001		BPD-001	DD-102	BYA10D1	CCD-102	B-210	5HK-D10
C59	.001		BPD-001	DD-102	BYA10D1	CCD-102	B-210	5HK-D10
C60	820		DI-820	DD-821	BYA10T82	CCD-621	B-382	10TS-T82
C61	820		DI-820	DD-821	BYA10T82	CCD-821	B-382	10TS-T82
C62	820		DI-820	DD-821	BYA10T82	CCD-821	B-382	10TS-T82
C63	820		DI-820	DD-821	BYA10T82	CCD-821	B-382	10TS-T82
C64	820		DI-820	DD-821	BYA10T82	CCD-821	B-382	10TS-T82
C65	820		DI-820	DD-821	BYA10T82	CCD-821	B-382	10TS-T82
C66	.1 600V		P688N-1	DF-104	CUB6P1	6DP-4-104	GEM-601	6TM-P10
C67	.047 600V		P688N-047	DD-503	CUB6S47	6DP-3-473	GEM-6147	6TM-S47
C68	.0033	(.0047) †	BPD-0033	DD-332	BYA10D33	CCD-332	B-233	5HK-D33

Admiral Part Number † Alternate Value

* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

PARTS LIST AND DESCRIPTIONS

CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA: ADMIRAL PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1	Volume & Switch	3meg	75D1-135 ①	(AB-85, AK-33, KR-1)	A47-3meg-Z/ RS-3/16, SWE-12	(B13-140, SK9, 76-1) or (BU1, CF28, SS4, GC)†	(U57, DS-37, US-26)
R2	Brightness	200K	75D13-113 ②	AB-52, AK-33,			
R3	Contrast	25K	75D20-137③	AB-26, AK-33	A47-25K-S/ RS-3/16	B11-120, SK9, or (BU11, CF11, SS4, DC1) †	U29, DS-37
R4	Horiz. Hold	15K	75D20-138④	AB-19, AK-33	A47-15K-V/ RS-3/16		U22, DS-37
R5	Vert. Hold	300K	75D20-136⑤	AB-50, AK-33	A47-300K-S/ RS-3/16	B11-131, SK9	U46, DS-37
R6	AGC	200K	75D20-143	TT-46, or BX-46	B47-200K-S	B11-129, TM4,	TA184L, or U43
R7	Pix Guard (Sync Stab.)	100K	75D20-116 ⑥	TT-40, or (AB-40, AK-8)	B47-100K-S	B11-128, TM4	PTA15L, or TA15L
R8	Height	5meg	75D20-119	TT-87, or (AB-87, AK-19)	B47-5meg-S	HLC-5	PTA56L, or TA56L
R9	Vert. Linearity	1500Ω (2W) 300Ω Stop	75B81-1 ⑦	WN-152 *	39-1500 *, or A43-1500/ FKS-1/4	112-1500 *, or WPS1500 *	R1500L *

① Chassis 16G9B/16UG9B use Part #75C2-27.
② Some versions may use Part #75D13-113.
③ Chassis 16G9B/16UG9B use Part #75D20-122.
④ Chassis 16G9B/16UG9B use Part #75D20-130.
⑤ Chassis 16G9B/16UG9B use Part #75D20-120.
⑥ Chassis 16G9B/16UG9B use Part #75D20-145.
⑦ Chassis 16G9B/16UG9B use 750Ω, Part #75D20-124.
† "SNAPTROL"
* Use 270Ω 2W Series Resistor.

RESISTORS

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

ITEM No.	RATING	IRC PART No.	WORKMAN TV PART No.	REMARKS	ITEM No.	RATING	IRC PART No.	WORKMAN TV PART No.	REMARKS
R10	15meg				R56	330Ω 2W			
R11	150K				R57	8200Ω 3W	PW3-8200	3G-8200	
R12	1.8meg				R58	39K			
R13	6800Ω 5%				R59	220K			
R14	1000Ω				R60	1.2meg			
R15	12K 5%				R61	68K			
R16	43Ω 5%				R62	1.1meg 5%			
R17	470Ω				R63	2.7meg			
R18	3900Ω				R64	2.2meg			
R19	150Ω				R65	82K 1W			
R20	1500Ω				R66	12K			
R21	3300Ω				R67	100K			
R22	100Ω				R68	270K			
R23	5600Ω 7W	PW7-5600	7W-SQ-5600		R69	39K			
R24	150K				R70	27K			(10K) *
R25	12K				R71	16K 1W			
R26	8200Ω				R72	5.6meg			(3.9meg) *
R27	27K				R73	18K 1W			
R28	150K				R74	680K			
R29	18K				R75	680K			
R30	18K 2W				R76	1meg			
R31	470K				R77	100K			
R32	180K				R78	12K			
R33	47K				R79	1200Ω 5%			
R34	2.7meg				R80	18K			
R35	270K				R81	10K			
R36	120K				R82	18K			
R37	47K				R83	82K			
R38	5.6meg				R84	16K 5%			
R39	1200Ω				R85	470K			
R40	68K				R86	120K			
R41	20meg				R87	220K			
R42	470K				R88	270K			
R43	10K 3W	PW3-10K	3G-10K		R89	100Ω			
R44	2.2meg				R90	820K			
R45	12meg				R91	150K			
R46	100K				R92	15K 3W	PW3-15K	3G-15K	
R47	100K				R93	100Ω			
R48	100K				R94	100Ω			
R49	470K				R95	270Ω 2W			
R50	100K				R96	10Ω 15W	PW15-10	15W-SQ-10	
R51	8200Ω				R97	46Ω 20W			Note 1
R52	560Ω				R98	12K 2W			
R53	150Ω				R99	1Ω			
R54	1.1meg 5%				R100	3.8Ω (Cold)			#61A27
R55	910K 5%								

Note 1. 46Ω 20 watt in Ch. 16B9B (Pt. #61B3-35), 42Ω 20 watt in Ch. 16UB9B (Pt. #61B3-36), 51Ω 20 watt in Ch. 16G9B (Pt. #61B3-34), 46Ω 20 watt in Ch. 16UG9B (Pt. #61B3-35).
Admiral Part Number
* Alternate Value

COILS (RF-IF)

ITEM No.	USE	ADMIRAL PART No.	Merit PART No.	Miller PART No.	Stancor PART No.	Workman TV PART No.	NOTES
L1	RF Choke (1.5uh)	73B37-3	BC-562	4604	RTC-8516	T856	
L2	1st Video IF	72C132-41				TA293	
L3	2nd Video IF	72C132-42				TA294	
L4	3rd Video IF	72B207-2				TB260	
L5	Peaking (68uh)	73B31-1		4630	RTC-8526	T865	
L6	Peaking (500uh)	73B5-20	TV-203	6174	RTC-8592	T324	
L7	RF Choke (28uh)	73B31-3	TV-192	4626	RTC-8525	T984	
L8A	4.5MC Trap	72C185-2	TV-236	1471-A		T277	
B	Sound Takeoff						
L9	Peaking (880uh)	73B5-34	TV-207	6156	RTC-8588	T363	
L10	Peaking (180uh)	73B5-39 ①	TV-184 ▲	6180 ▲	RTC-8597 ▲	T372 ▲	① Wound on 12K Resistor.
L11	Sound IF	72B208-1				TB248	▲ Shunt with 12K Resistor.
L12	Quadrature	72B132-37				TA291	
L13	RF Choke (2.4uh)	73B31-8	BC-563	4606	RTC-6517	T857	
L14	RF Choke (2.4uh)	73B31-8	BC-563	4606	RTC-8517	T857	
L15	Fil. Choke (1.5uh)		BC-562	4604	RTC-8516	T856	
L16	Fil. Choke (1.5uh)		BC-562	4604	RTC-8516	T856	
L17	Line Choke (68uh)	73B31-1		4630	RTC-8526	T865	

COILS (SWEEP CIRCUITS)

ITEM No.	USE	ADMIRAL PART No.	Merit PART No.	Miller PART No.	Stancor PART No.	Thordorson PART No.	Triad PART No.	Workman TV PART No.	NOTES
L18	Horiz. Stabilizer	94D17-14				HS-16		T169	

FILTER CHOKE

ITEM No.	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000 ∿)	ADMIRAL PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	NOTES
L19	.270A	26Ω	1.2 Hy.	74C18-33	C-4084	C-2343	26C44	C-28X	

TRANSFORMERS (SWEEP CIRCUITS)

ITEM No.	USE	ADMIRAL PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	NOTES
T1	Vert. Output	79C43-20			26S07	A-140X	
T2	Yoke Horiz. 18MH (114°) Vert. 11MH	94D189-4E	MDF-129	DY-27A	Y-52	Y-60-1	
	Alt. Yoke	94D189-4					
	Rear Cover and Centering Device	94C152-3					
T3	Horiz. Output	79D83-8				D-203 *	
	Alt. Horiz. Output	79D83-5					

*HORIZONTAL OUTPUT TRANSFORMER CONNECTION DATA

	ORIGINAL TERMINAL CONNECTIONS	Merit Replacement Connections	Stoncor Replacement Connections	Thordorson Replacement Connections	Triad Replacement Connections
	5				5
	6				6
	7				7
	8				8
	3				3
	2				2
	1				1

TRANSFORMER

ITEM No.	RATING PRI.	SEC. 1	SEC. 2	ADMIRAL PART No.	Merit PART No.	Stancor PART No.	Thordorson PART No.	Triad PART No.	NOTES
T4	117V @ .010A	6.3V @ .150A AC		80B52-4 ①	P-2964 ②	P-6465 ②③	21F21 ②	F-13X ②	① May not be used in some versions. ② Drill new mounting Hole(s). ③ Tape center tap.

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE PRI.	SEC.	ADMIRAL PART No.	Merit PART No.	Stancor PART No.	Thordorson PART No.	Triad PART No.	NOTES
T5	2800Ω	3-4Ω	79D33-41 ①	A-3025	A-3332	24S53	S-12X	① Part #79D33-28 used in Chassis 16G9B, 16UG9B.

SPEAKER

ITEM No.	SIZE	FIELD	V. C. IMP.	ADMIRAL PART No.	QUAM PART No.	NOTES
SP1	2 1/4" x 6 1/4"	PM	3-4Ω	78C174-2 ①		① Used in Models P911, UP911, P915, UP915, P918, UP918.
	3" x 5"	PM	3-4Ω	78C158-3 ②	35A05	② Used in Models P901, UP901, P911, UP911.

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	ADMIRAL PART No.	REPLACEMENT DATA
K1	Vert. Integrator	.001mfd, 33K, 68K	83D6-23	
K2	Isolation	.0047mfd, .75-1.5meg	63B10-3	Centralab RC-490 Sprague AC1-2

POWER RECTIFIERS

ITEM No.	RATING CURRENT (Measured)	ADMIRAL PART No.	RCA PART No.	SARKES TARZIAN PART No.	NOTES
M1	.270A	93B12-1	1N1763	40H	
M2	.270A	93B12-1	1N1763	40H	

SIGNAL DIODES

ITEM No.	ORIG. TYPE	ADMIRAL PART No.	GENERAL ELECTRIC PART No.	RAYTHEON PART No.	NOTES
M3	*	93B5-6 *	6GC1 *		* Dual Selenium, Common Cathode Type
M4	1N87 †	1N87 †		1N87 †	† Video Detector
	1N87A ‡	1N87A ‡		1N87A ‡	‡ Video Detector Alternate

MISCELLANEOUS

ITEM No.	PART NAME	ADMIRAL PART No.	NOTES
M5	Tuner	94E200-11G (94E200-11)	VHF STANDARD COIL REPLACEMENT #GGS-4221A
	Tuner	94E200-12	VHF with UHF Provisions
	Tuner	94E204-1	UHF
	Tuner	94E203-1	VHF
	Tuner	94E163-10	VHF with UHF Provisions
	Tuner	94E173-1	UHF
M6	Antenna	69C270-1	JFD REPLACEMENT #TA412, Models P911, P915, P918, UP911, UP915, UP918.
	Antenna	69C238-1	JFD REPLACEMENT #TA370, Models P901, P909, UP901, UP909.
M7	Circuit Breaker	84A17-4	

CABINETS & CABINET PARTS

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

DESCRIPTION	PART NO. / MODEL NO.	P901	P909	P911	P915	P918	UP901	UP909	UP911	UP915	UP918
Safety Glass	21D141-1	X	X	X	X	X	X	X	X	X	X
VHF Channel Selector Knob	33C391-1	X	X								
"	A8246			X	X	X					
"	33C391-3						X	X			
"	A8247								X	X	X
UHF Indicator Disc	33D340-12						X	X	X	X	X
Fine Tuning Knob	33D340-5	X	X								
"	33C474-1			X	X	X			X	X	X
On-Off-Volume Knob	20C50-2	X	X	X	X	X	X	X	X	X	X
Brightness Knob	20C50-2	X	X	X	X	X	X	X	X	X	X
Contrast Knob	33B345-4	X	X				X	X			
"	33B345-2			X	X	X			X	X	X
Vertical Hold Knob	33B345-4	X	X				X	X			
"	33B345-2			X	X	X			X	X	X
Horizontal Hold Knob	33B345-4	X	X				X	X			
"	33B345-2			X	X	X			X	X	X
Cabinet, Wrap-around	750D256-11	X					X				
"	750D256-10		X					X			
Cabinet, Back	33E337-5	X	X				X	X			
"	33E446-1			X					X		
"	33E446-2				X					X	
"	33E446-3					X					X
Cabinet, Front	23E438-1			X	X	X					
"	23E438-2								X	X	X
Grille, Top Cabinet	36D132-1			X	X	X			X	X	X
Escutcheon, Front	23E400-3	X	X				X	X			
Escutcheon, Speaker (Brown)	20D29-12	X	X				X	X			
Escutcheon, Speaker (White)	20D29-5	X	X				X	X			
Handle, Carrying	37D196-22	X	X				X	X			
"	37D196-7			X	X	X			X	X	X
Insert, Monogram	23B416-1	X	X				X	X			
"	23B416-2			X	X	X			X	X	X
Cap, Cover, Brass ▲	37C196-3	X	X				X	X			
Insert Trim, Controls	23C458-1			X	X	X			X	X	X
Insert Trim, Top Front	23D456-1			X	X	X			X	X	X

▲ FOR HANDLE MTG PLATE

WIRING DATA

High Voltage Lead .... Use BELDEN No. 8869
Shielded Hook-up Wire .... Use BELDEN No. 8885 (Single Conductor)
8738 (Two Conductor)
General-use Unshielded Hook-up Wire .... Use BELDEN No. 8530 (Solid) Available in Ten Colors
8524 (Stranded) Available in Ten Colors
Power Cord (Interlock Type) .... Use BELDEN No. 8874
300Ω Tuner Input Lead .... Use BELDEN No. 8225
300Ω Antenna Lead-in .... Use BELDEN No. 8230 or 8275
Antenna Rotor Cable .... Use BELDEN No. 8464 (Flat) or 8484 (Round) - 4 Conductor
8485 (Round) - 5 Conductor
8488 (Round) - 8 Conductor