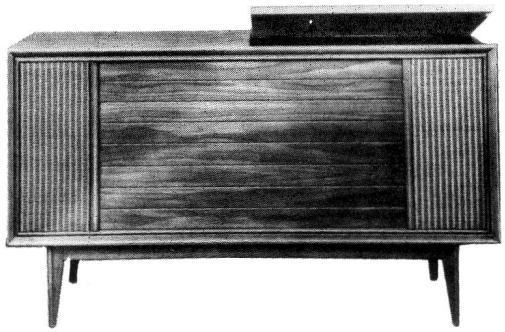
RCA VICTOR



Model SF-20

STEREO-HIGH FIDELITY COMBINATION

SERVICE DATA

MODEL SF-20

GENERAL INFORMATION

ELECTRICAL SPECIFICATIONS

Tuning Range

AM Broadcast ..... 540-1600 kc
FM Broadcast ..... 88-108 mc

Intermediate Frequencies

AM ..... 455 kc
FM ..... 10.7 mc

Tube Complement

Symbol	Type	Function
V-1	RCA 17C9	Mixer/Oscillator FM Receiver
V-2	RCA 12BE6	AM Converter/IF Amplifier FM
V-3	RCA 12EQ7	AM/FM Amplifier/2nd Detector and AVC
V-4	RCA 7025	Audio Amplifier
V-5	RCA 35C5	Audio Output
V-6	RCA 35C5	Audio Output

Power Supply Rating ..... 115 volts, 60 cycle

Frequency Response ..... 75 to 16,000 cycles

Loudspeakers

Two 6" x 9" PM ..... 8 ohms

Record Changer

Model Garrard 1000
Turntable Speed ..... 16-2/3, 33-1/3, 45 or 78 rpm
Cartridge 63-29835
Stylus 33-1/3, 45, 78 rpm 63-7642

DESCRIPTION

The Model SF-20 is a stereophonic high-fidelity combination unit containing a four speed Model Garrard 1000 Automatic Record Changer, six tube AM-FM Radio Receiver and two dual cone speaker network housed in a single cabinet.

Provision is made for the use of an external speaker system if so desired.

FOR MODEL GARRARD 1000 RECORD CHANGER SERVICE INFORMATION REFER TO SERVICE DATA ISSUE 1965 NO. 23

SUPPLEMENTARY INFORMATION LISTINGS	
Issue	**Subject**

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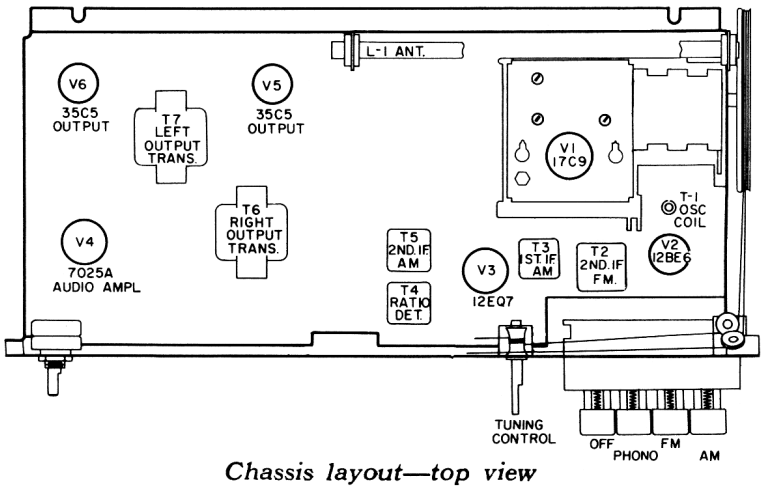
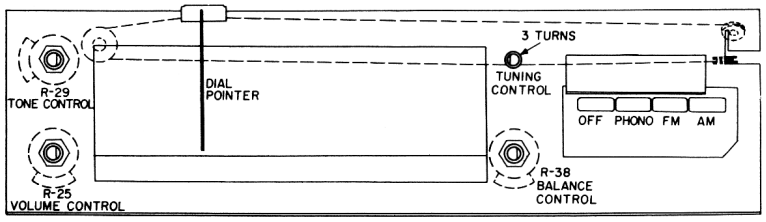
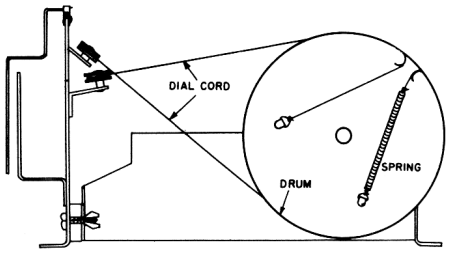


Chassis layout—top view



Chassis layout—front view—showing stringing arrangement



Dial cord arrangement

ALIGNMENT PROCEDURE

ALIGNMENT INDICATORS:

An RCA VoltOhmyst® or equivalent VTVM is necessary for measuring developed d-c voltage during FM alignment. Connections are specified in the alignment tabulation. An output meter is also necessary to indicate maximum audio output during AM alignment. Connect the output meter across the speaker voice coil. The RCA VoltOhmyst can also be used as an AM alignment indicator, either to measure audio output or to measure AVC voltage. When audio output is being measured, the volume control should be turned to maximum. Adjust tone control to mid-position.

SIGNAL GENERATOR:

For all alignment operations, connect the low side of the signal generator to the receiver chassis, close to the point of signal injection. If output measurement is used for AM alignment, the output of the signal generator should be kept as low as possible to avoid AVC action.

AM Alignment

FUNCTION SWITCH IN AM POSITION—VOLUME CONTROL MAXIMUM—TONE CONTROL CENTER

Step	Connect High Side of Sig. Generator to	Set Sig. Gen. to	Set Radio Dial to	Adjust
#1	To high side of tuning capacitor (antenna section)	Connect Voltohmyst across speaker coil		
#2		455 KC 400 C/S modulated	Quiet spot near high frequency end	Adjust top and bottom cores T-3 and T-5 for maximum
#3	Short wire placed near loop for radiated signal	1620 KC	1620 KC	Adjust Oscillator Trimmer for maximum C-3B
#4		1500 KC	1500 KC	Adjust antenna trimmer for maximum C-3A
#5		600 KC	600 KC	Peak Oscillator Coil T-1 for maximum
#6	Repeat step Nos. 3, 4 and 5			

Oscillator frequency is above signal frequency on both AM and FM.

If an FM sweep generator is used for FM alignment, adjust for 10.7 mc, 0.4 mc sweep. Connect oscilloscope across C-11, adjusting T-4 top core for 10.7 mc-crossover, and T-4 bottom core for balanced peaks. Peak separation should be approximately 330 kc. When aligning the other FM tuned circuits, connect oscilloscope lead through a 270K resistor to pin 2 of V-3. Follow alignment table sequence, adjusting for maximum gain and symmetrical curves.

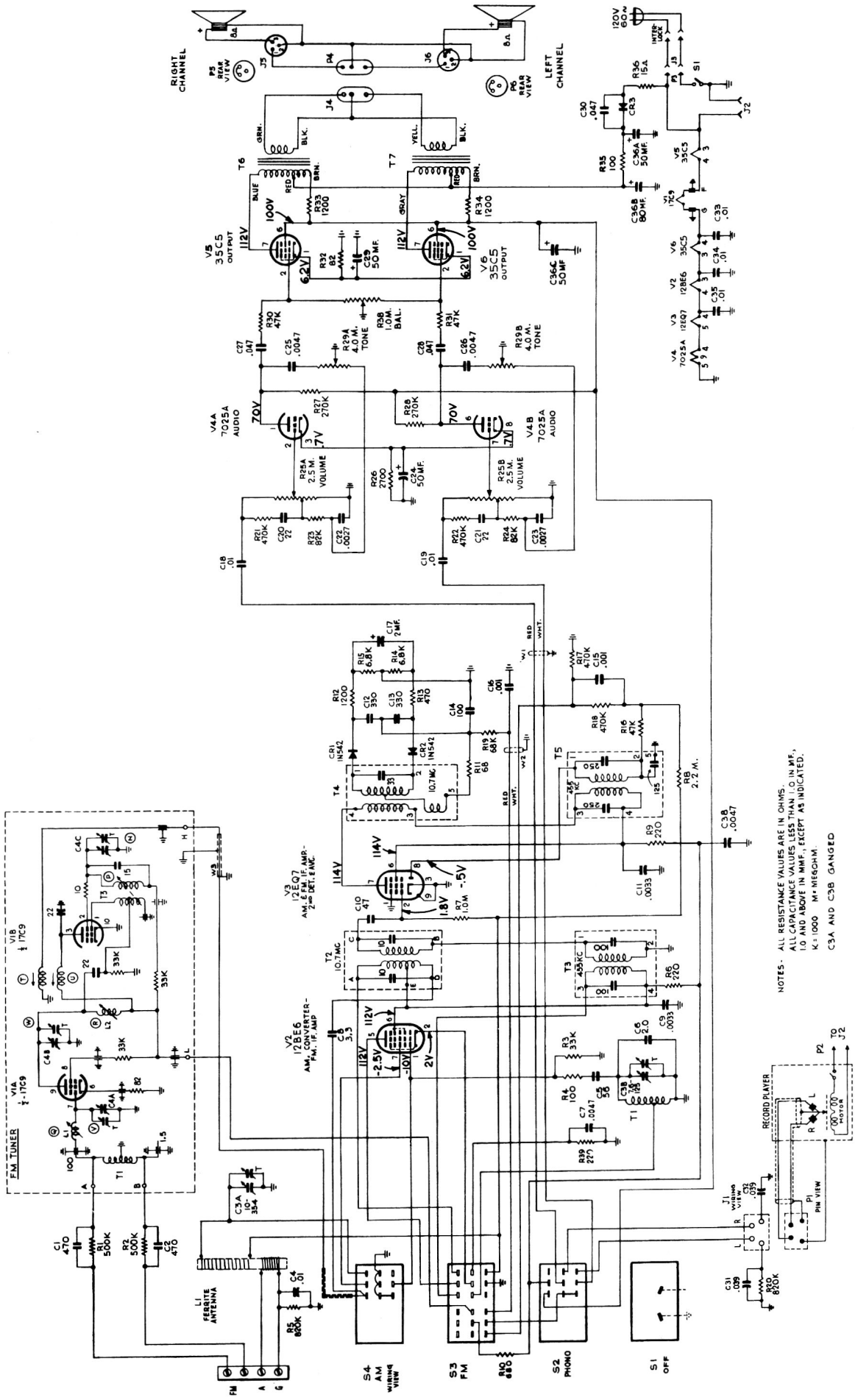
FM Alignment

FUNCTION SWITCH—IN FM POSITION—VOLUME CONTROL MINIMUM—TONE CONTROL CENTER

Step	Connect High Side of Sig. Generator to	Set Sig. Gen. to	Set Radio Dial to	Adjust
#1	Pin #2 V3 (12EQ7)	Connect Voltohmyst to the junction of R-19 and C-16		
#2		10.7 MC	Quiet spot near 108 MC	Adjust T-4 top core for zero reading
#3				Adjust T-4 bottom core for maximum
#4	Pin #7 V2 (12BE6)	Repeat steps Nos. 2 and 3		
#5		Connect Voltohmyst to T-4 (use RF Probe)		
#6		10.7 MC	Quiet spot near 108 MC	Adjust T-2 top and bottom core for maximum
#7	Use 300 ohm dummy antenna	96 MC	96 MC	Align Tuner IF Transformer for maximum
#8		106 MC	106 MC	Adjust RF Antenna and Oscillator Trimmer for maximum
#9		89 MC	89 MC	Adjust Oscillator Antenna and RF Coils for maximum
	Repeat step Nos. 6, 7, 8 and 9			

* Adjust output level of signal generator to provide approximately 1 volt indication on VoltOhmyst.

† Alternate loading may be required for accurate peaking; the winding not being peaked should be loaded with a resistor, 270 ohms in Step 8 and 470 ohms in Step 9.



Schematic Diagram

REPLACEMENT PARTS LIST

Insist on Genuine Factory Tested Parts, which are readily identified and may be purchased from Authorized Dealers.

SYMBOL	STOCK NO.	DESCRIPTION
		CHASSIS ASSEMBLY
C-3A, C-3B		Capacitor-Variable Tuning (part of FM Tuner)
C-17	63-25221	Capacitor-Electrolytic 2 mfd. 50 volts
C-24	63-24519	Capacitor-Electrolytic 50 mfd. 6 volts
C-29	62-9900	Capacitor-Electrolytic 50 mfd. 25 volts
C-36	63-26672	Capacitor-Electrolytic 50/80/50 mfd. 350 volts
CR-1, CR-2	63-25342	Diode-IN542 Rectifier
CR-3	62-15483	Rectifier-Selicon Rectifier
C-1, R-1	62-14260	Capristor-Consists of R-1, C-1
C-2, R-2	62-14260	Capristor-Consists of R-2, C-2
L-1	63-26674	Coil-Ferrite Antenna
R-25A, B	63-28621	Control-Volume
R-29	63-27652	Control-Tone
R-38	63-27651	Control-Balance
S-1, S-2, S-3, S-4	63-28633	Switch-Push Button Assembly
T-1	63-26674	Transformer-Oscillator Coil
T-2	63-25358	Transformer-Second IF Transformer FM
T-3	63-25344	Transformer-1st IF Transformer AM
T-4	63-23856	Transformer-Ratio Detector FM
T-5	63-25345	Transformer-Second IF Transformer AM
T-6	63-27447	Transformer-AF Output Right Channel
T-7	63-27447	Transformer-AF Output Left Channel
		MISCELLANEOUS ASSEMBLY
	63-26942	Assembly-Interlock
	63-15919	Cable-Speakers
	63-27349	Board-Antenna Terminal Board
	63-28622	Bracket-Pulley
	*63-28620	Cable-Cable Assembly Phono 4 pin Wafer
	63-29835	Cartridge-Astatic 133
	62-106993	Clip-Retainer Clip for Line Cord
	63-17171	Cloth-Grille Cloth 8-1/2 Warp x 17-1/2
	63-25055	Connector-Phono Motor Leads
	63-106842	Contact-For Connector
	62-12941	Cord-Power Cord
	*63-29855	Cover-Back Cover
	62-15652	Crystal-Plastic Cover
	62-15061	Decal-Dog Decal
	63-28937	Hinge-Butt Hinge
	88-2570	Instructions - Customer's Instruction Book
	62-15505	Knob-Tone-Off Loudness, Tuning, Balance
	63-28625	Plate-Chassis Mounting Top
	63-28631	Plate-Front Plate
	63-28632	Plate-Trimplate Dial Scale
	63-23904	Plate-Extension Speaker Plate Assembly
	63-28628	Pointer-Dial Scale
	63-27438	Pulley-Plastic Pulley Small
	62-15109	Pulley-Plastic Pulley Large
	63-28616	Pull-Door Pull
	63-3179	Plug-Phono Cable
	63-28630	Retainer-Trimplate
	63-101370	Retainer-Retainer Spring for Crystal
	63-28940	Retainer-Loud Speaker
	63-28847	Screen-Under Trim Plate
	63-28604	Shaft-Drive Shaft FM Tuner
	62-14035	Speaker-6" x 9" PM Speaker 8 ohms
	63-28624	Spacer-Chassis Mounting Top
	63-28623	Spring-Chassis Mounting Top
	63-31418	Spring-Dial Cord
	62-14356	Socket-Tube 35C5
	63-26313	Socket-Tube 12BE6
	63-24841	Socket-Tube 12EQ7, 7025A
	63-38853	Socket-Phono
	62-14444	Socket-Speaker
	62-17170	Support-Lid Support
	63-7642	Stylus-Turn Over
	63-26677	Tuner-FM Tuner includes AM Tuning Cap
	63-23998	Washer-"C" Washer Tuner Shaft

* Indicates New Stock Items.

Only items listed under stock numbers are available as Replacement Parts.

All parts subject to change or withdrawal without notice.