

# SERVICE NOTES

for

## RCA Victor Short Wave Converter SWA-2

Voltage Rating.....	105-125 Volts and 200-250 Volts
Frequency Rating.....	50-60 cycles and 25-40 cycles
Power Consumption.....	20 Watts
Recommended Antenna Length.....	25-75 feet
Type of Circuit.....	Super-Heterodyne Converter
Number and Type of Radiotrons.....	2 UY-224, 1 UY-227
Height.....	16 inches
Depth.....	11 $\frac{3}{8}$ inches
Width.....	13 $\frac{1}{4}$ inches
Weight alone.....	14 lbs.
Weight Packed for Shipment.....	18 lbs.

RCA Victor Short Wave Converter SWA-2 is a three tube, single control short wave unit designed to convert all short wave signals from 13.8-200 meters to a single frequency so that they may then be amplified by means of the usual broadcast receiver.

One Radiotron UY-224 is used as an R. F. Amplifying stage, one UY-224 as the detector and one UY-227 as the oscillator. Heater current for these Radiotrons is obtained from a small transformer incorporated in the unit. Plate supply is obtained from the broadcasting receiver.

A wafer connector is supplied that may be inserted under the tube socket when a receiver using a UX-280 rectifier and a filter in the negative side of the line is used. Under these conditions—most modern receivers are so designed that this is true—the plate supply to the converter is obtained through the contact on the wafer connector to the UX-280 filament. On receivers where this condition does not exist, but where Pentode output tubes are used, the wafer connector can be used to make connection to the screen grid of the Pentode. On receivers where neither condition exist any connection that gives a filtered D. C. output of from 180 to 260 volts between the contact and ground will be suitable.

When Model SWA-2 is used in conjunction with receivers employing a single Pentode output tube, fluttering may occur unless the following precaution is taken.

Connect two 10 MFD. capacitors in series with their center point grounded to the SWA-2 chassis. Connect one capacitor to the +230 volt input to the converter and the other to the screen grid of the R. F. Amplifier in the Converter. The two capacitors will effectively prevent fluttering when receivers of this type are used.

Due to the SWA-2 being identical with the converter chassis used in the RO-23, reference to the RO-23 Service Notes should be made for data pertaining to Service work. The schematic diagram, the wiring diagram and the replacement parts are given in the following pages.

### REPLACEMENT PARTS

Stock No.	DESCRIPTION	List Price	Stock No.	DESCRIPTION	List Price
2747	Cap—Grid contactor cap—Package of 5.....	\$0.50	6109	Knob—Knob with pointer—Package of 5.....	\$1.75
2977	Knob—Station selector, or Resonator knob—Package of 5.....	2.50	6110	Dial lamp shield and indicator.....	.50
3058	Resistor—100,000 ohms—Carbon type—1 watt—Package of 5.....	2.50	6111	Escutcheon—Range switch knob escutcheon—Package of 5.....	1.80
3153	Resistor—1500 ohms—Carbon type—1 watt—Package of 5.....	2.75	6112	Cushion—Receiver chassis rubber cushions—Package of 4.....	.50
3285	Cord—Drive cord—Package of 5.....	1.00	6213	Adapter—Wafer adapter—Package of 5.....	2.00
3286	Spring—Drive cord tension spring—Package of 5.....	1.40	7062	Capacitor—Adjustable capacitor—15-70 mmfd.....	1.00
3288	Socket—UY Radiotron socket—Complete with insulation strip.....	.50	7298	Capacitor—0.01 mfd.....	.80
3289	Contact lug—Complete with mounting rivets—Package of 10.....	.50	7406	Capacitor—Double adjustable capacitor—One section 10-70 mmfd.—One section 800-1000 mmfd.....	1.10
3290	Switch—Antenna—"Off" and "On"—Toggle type—2 used—Complete with mounting nut.....	1.00	7407	Coil—High frequency detector coil.....	1.05
3291	Board—Terminal board with two soldering terminals complete with mounting rivets—Located on switch bracket—Package of 5.....	.50	7408	Coil—Low frequency detector and oscillator coil.....	1.45
3292	Drive shaft with pulley—Package of 5.....	2.35	7409	Coil—High frequency oscillator coil.....	1.85
3293	Coil—For resistor board assembly.....	.65	7410	Capacitor—Variable capacitor—7 plate—Complete with mounting nut and washers.....	1.75
6100	Coil—Coil assembly with mounting eyelet—For switch and bracket assembly.....	.75	8806	Transformer—Filament power transformer.....	3.25
6101	Socket—Dial lamp socket and bracket with mounting rivets.....	.50	8807	Transformer—Filament power transformer—110 volts—25 cycle.....	5.75
6102	Capacitor—1000 mmfd.—Package of 5.....	2.50	8808	Transformer—Filament power transformer—220 volts—60 cycle.....	3.40
6103	Resistor—800 ohms—Carbon type—1 watt—Package of 5.....	2.00	8809	Board—Resistor board less resistors, capacitors and coil.....	1.00
6104	Resistor—80,000 ohms—Carbon type—1 watt—Package of 5.....	2.00	8810	Lever—Switch lever assembly—Comprising shaft, 3 switch levers and coupling bushing.....	.70
6105	Resistor—40,000 ohms—Carbon type—3 watt—Package of 5.....	2.00	8811	Switch—Range switch complete with mounting washer and nut.....	6.60
6106	Coupling—Switch lever shaft coupling with 2 taper pins—Package of 5.....	.50	8812	Capacitor—Variable tuning capacitor assembly.....	5.10
6107	Switch—Toggle type—Power switch.....	1.00	8813	Dial drum and scale.....	1.20
6108	Binding post—Complete with terminal lug, mounting washer and mounting nut—Package of 5.....	1.75	10820	Capacitor—100 mmfd.....	.50
				<b>CABINET</b>	
			3229	Escutcheon—Tuning dial escutcheon with mounting screws.....	.70
			6113	Foot—Cabinet felt foot—Package of 15.....	.50
			9399	Cabinet—Complete less equipment.....	12.00

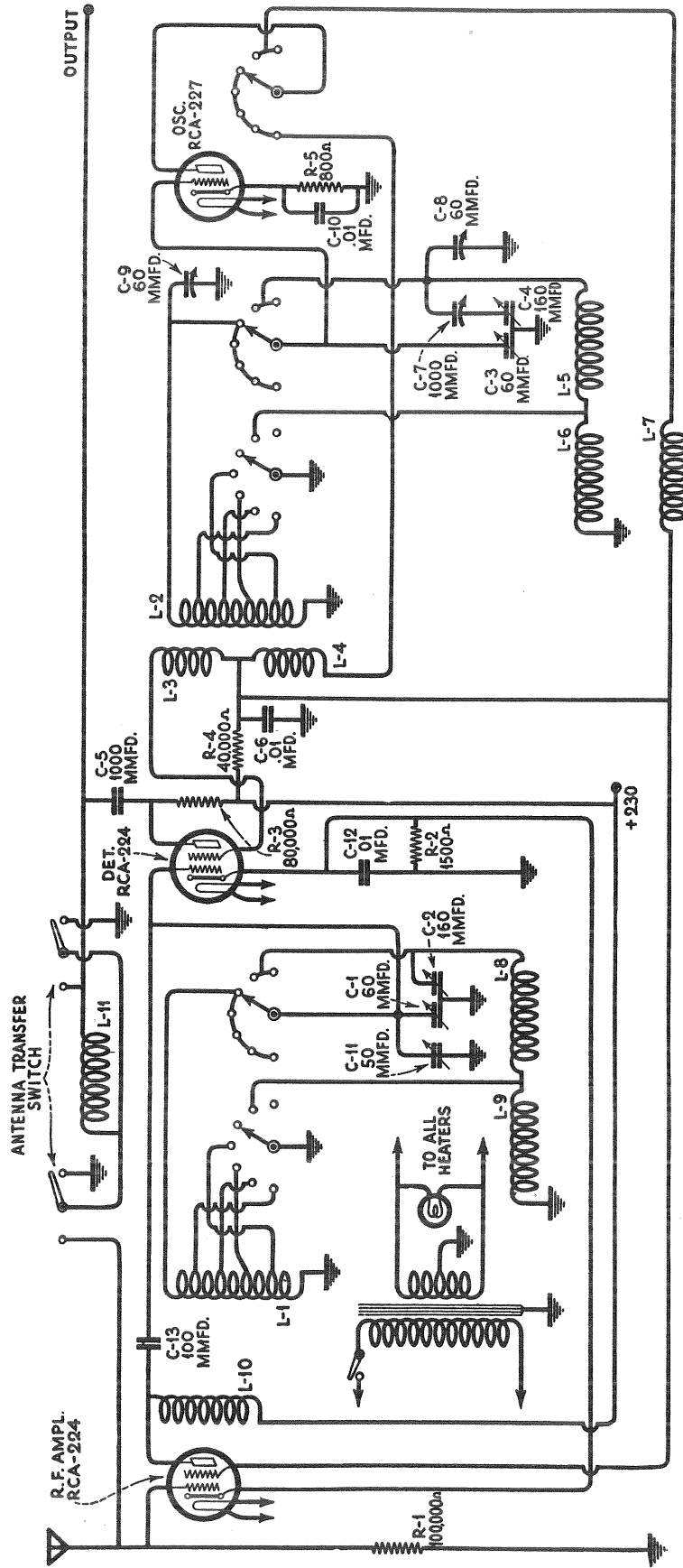


Figure 1—Schematic Circuit

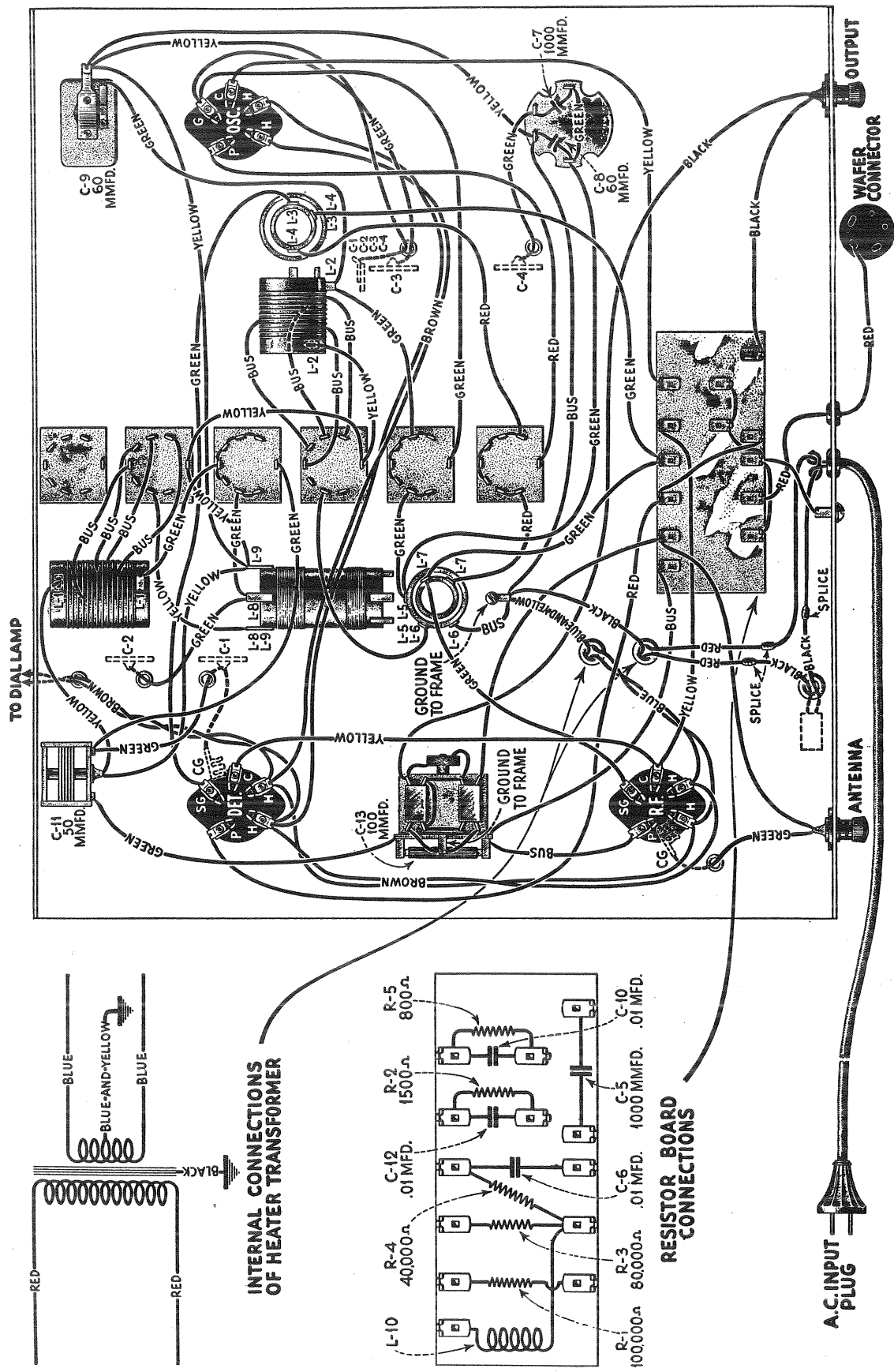


Figure 2—Wiring Diagram



SERVICE DIVISION

**RCA Victor Company, Inc.**

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