Installation, Operating Instructions

—AND—

Service Information

for Your— **"VIKING" ...**

Model 53-129

RADIO-PHONOGRAPH COMBINATION

— FEATURING —

Webster Model 114 Automatic 3 Speed Record Changer with G.E. Variable Reluctance Cartridge
Phonograph Preamplifier — Built-in Broadcast Band Loop Antenna
12-Tube, 3 Gang A.C. Operated Superheterodyne Receiver with a Tuned Radio Frequency
Stage on Both Standard Broadcast and 2 Band-Spread Short Wave Bands
Advanced Design Dual Tone Control

For operation on 110 to 120 volts A.C.—Cycle as listed on license plate.

IMPORTANT

READ THIS CAREFULLY AND RETAIN
FOR FUTURE REFERENCE

THE T. EATON Co LIMITED
CANADA

INSTALLATION

Before operating, release the record changer to "Floating Position" (SEE CAUTION CARD).

ANTENNA

This receiver has been designed to provide reception on both the Standard Broadcast (BC) and 2 Band Spread Short Wave (SW1 and SW2) Bands without the necessity of connecting an external or outdoor antenna for reception of local stations and in other areas of high signal strength.

The BC. ANTENNA is a built-in, high impedance loop.

The SW. ANTENNA is a braid antenna mounted on the rear of the cabinet.

Should greater signal pickup be desired on Broadcast, Short Wave or both, connect an external antenna, 50 to 100 ft. long including lead-in to terminal (1) for Broadcast (2) for Short Wave and (1 and 2) for Broadcast and Short Wave.

GROUND

While this receiver will operate without a ground connection, the use of a good ground is recommended. This may be obtained by connecting term. "G" to a water pipe or a metal rod driven into the ground.

POWER SUPPLY

This receiver is intended to be operated only on the power supply specified. Before connecting, make sure that the voltage and frequency shown on the serial name plate correspond to those of your power company.

OPERATION

SELECTOR SWITCH

There are four positions at which the switch may be set. These are indicated by lettering on the cabinet as follows:

PH — Phonograph Operation
BC — Broadcast Band
SW1— First Short Wave Band Spread Band
SW2— Second Short Wave Band Spread Band

SHORT WAVE BAND

The band selector switch is set on short wave as indicated on the front of the cabinet by the letters "SW1" and "SW2" and the station selector operated in the same manner as for use on the broadcast band.

Band spread has been added to facilitate the ease of tuning, which in a radio without band-spread is rather critical.

PHONOGRAPH OPERATION

For the reproduction of phonograph records, the band selector switch is set in the phonograph position as indicated by the letters "PH" marked above the knob. The automatic record changer is thereby connected to the audio amplifier portion of the receiver. The volume and tone controls are operated in the same manner as when used in radio reception.

VOLUME CONTROL

The volume control is a standard type control incorporating an OFF-ON A.C. switch to turn the receiver ON or OFF. Turn the control to the right to increase and to the left to decrease volume.

TONE CONTROL

The tone control circuit built into this receiver is of advanced design allowing for a possible 81 combinations of Bass and Treble frequency response in order that recordings and radio programs can be reproduced with greater fidelity.

This control is accomplished by means of separate Treble and Bass Tone switches which can be adjusted to provide a tone response to suit the individual ear and type of recording or radio program that is being reproduced.

In the normal or center position, that is with both controls set in normal position as indicated by the dots on the knobs, the frequency response of this receiver is similar to that of a receiver with its conventional type of tone control set in normal position. Turn the Treble control to the right to increase or the left to decrease the Treble frequency response and likewise the Bass control, to the right to increase and left to decrease the Bass frequency response. The setting which gives the most pleasing performance will be found by experiment. in the field. Should servicing be required consult your dealer or Authorized Serviceman.

SERVICE INFORMATION

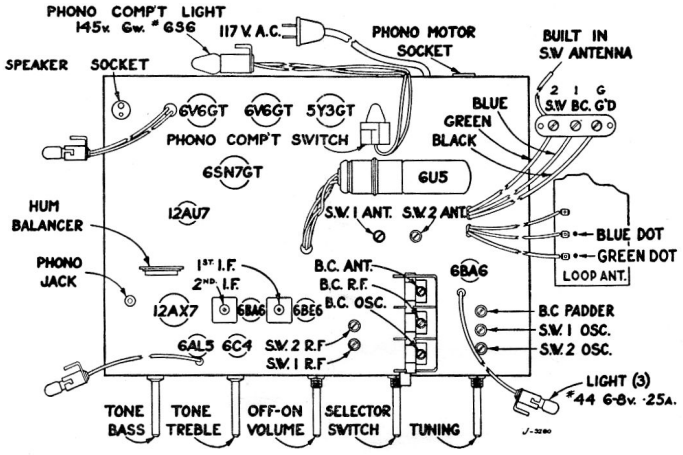
Model 53-129

SPECIFICATIONS

Standard Broadcast Range	540 Kc. - 1640 Kc.
Short Wave Range SW1	5.7-11.0 Mc.
SW2	10.0-18.0 Mc.
Intermediate Frequency	455 Kc.
Power Consumption (Radio Only)	120 Watts
Power Consumption (Radio and Phono)	132 Watts
Undistorted Output	6 Watts
Maximum Power Output	9 Watts

When writing for Service Information or Parts, please quote the following.

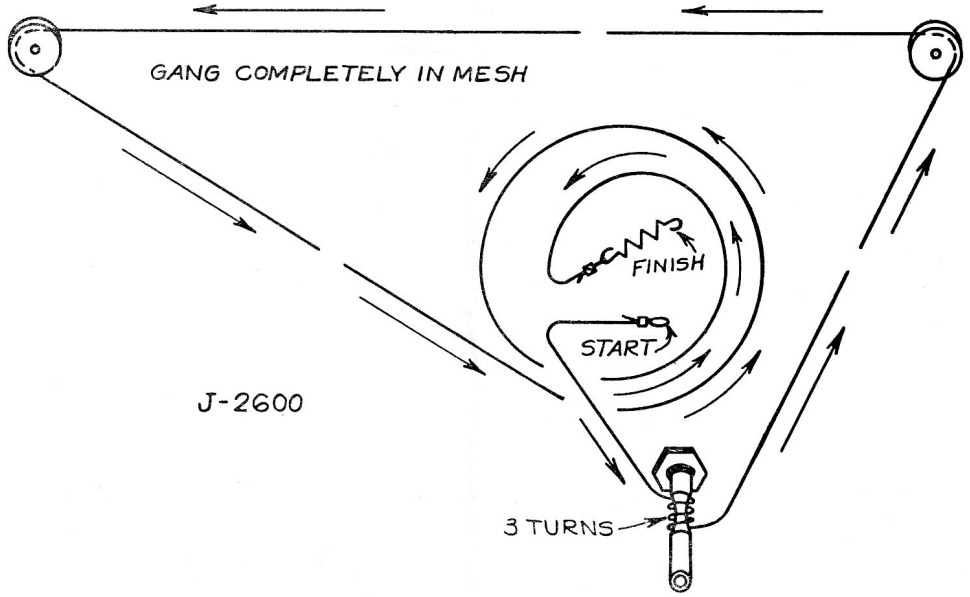
1. Model 53-129
2. "SERIAL NUMBER" — shown on license plate.
3. Finish.



TUBES

If at any time it is necessary to replace tubes, care must be taken to insure that they are inserted in their proper sockets. (Refer to chassis layout chart.) Unless this procedure is carefully followed the receiver will not function and the tubes may be seriously damaged.

A Hum-Balancer has been incorporated in this receiver to balance out hum which may be present because of the high gain and wide frequency response of the audio portion of the receiver. It may be found necessary to re-adjust the hum-balancer for minimum hum reproduction when the 12AX7 tube is replaced. Set the Bass and Treble tone switches in their extreme right hand positions (positions of maximum boost), turn the selector switch to phono position, the volume control full on and adjust the hum-balancer for minimum hum level.



FOR ALIGNMENT AND SENSITIVITY DATA SEE SCHEMATIC

SERVICE REPLACEMENT PARTS LIST

CHASSIS ASSEMBLY

A-2551.....Dial Scale

G-235.....5 ufd 100V Electrolytic
G-504.....Dual Electrolytic 20 & 40 ufd.
G-531.....Dual Electrolytic 15 & 15 ufd.
G-536.....1.0 ufd 100V Metal Cased Condenser
G-553.....Dual Electrolytic 15 & 15 ufd.

K-735.....A.C. Line Cord Assy.
K-771A.....Pilot Lamp 6-8 Volt 25 Amp. No. 44
K-1133-1.....Pilot Lamp 145V.

LK-443.....Choke
LK-495-1.....Output Transformer
LK-499-1.....Power Transformer 25 Cycle
LK-500-1.....Power Transformer 60 cycle

MP-1204-29...Pointer & Slider Assy.

P-2602.....Loop Antenna Assy.
P-2279-1.....B.C. Interstage Coil
P-1778.....B.C. Oscillator Coil
P-1779.....S.W.1 Antenna Coil
P-1780.....S.W.1 Interstage Coil
P-1781.....S.W.1 Oscillator Coil
P-1782.....S.W.2 Antenna Coil
P-1783.....S.W.2 Interstage Coil
P-1784.....S.W.2 Oscillator Coil
P-1833.....R.F. Choke
P-1843-1.....1st I.F. Transformer
P-1844-1.....2nd I.F. Transformer

Q-306-1.....Selector Switch (Band)
Q-290-3.....Selector Switch (Tone 2 wafer)
Q-291-3.....Selector Switch (Tone 2 wafer)
Q-297 or
Q-298-1.....Switch—Phono Compartment Light

R-333.....Variable Resistor— Hum Balancer
R-317-4.....Volume Control with A.C. Switch

V-362-3.....Gang Condenser Assy.

CHASSIS RIVETTED

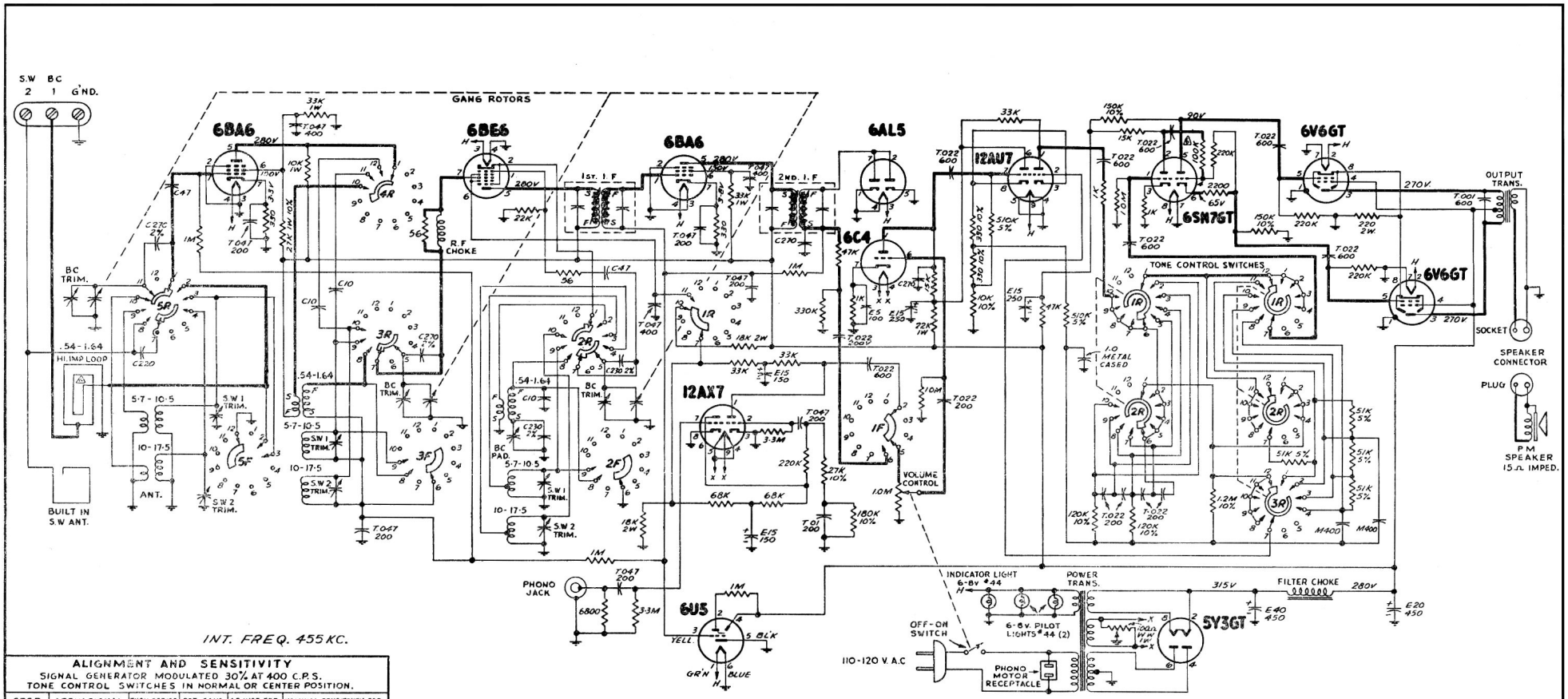
K-875-1.....Phono Socket
K-923.....A.C. Receptacle
K-1333.....2 Prong Speaker Socket

INSTALLATION

A-1842-8.....Celluloid Washer

C-835.....Record Adapter Insert

N-333-1.....Walnut Knob
N-334-1T.....Walnut Knob (Indicator)
N-333-2.....Mahogany Knob
N-334-2T.....Mahogany Knob (Indicator)
N-333-3.....Autumn Leaf Mahogany Knob
N-334-3T.....Autumn Leaf Mahogany Knob (Indicator)
P-2422-4.....12" P.M. Speaker Assy.
P-2546-13.....Webster Model 114 60 cycle Auto. Changer Complete
P-2547-13.....Webster Model 114 25 cycle Auto. Changer Complete
K-1308-1.....GE Cartridge with Reversible Needle



INT. FREQ. 455 KC.

ALIGNMENT AND SENSITIVITY

SIGNAL GENERATOR MODULATED 30% AT 400 C.P.S.
TONE CONTROL SWITCHES IN NORMAL OR CENTER POSITION.

STEP	APPLY SIGNAL AT KC.	APPLY SIGNAL TO	THRU SERIES DUMMY	SET GANG AT	ADJUST FOR MAX. OUTPUT	NOMINAL SENSITIVITY FOR 500 MILLIWATTS OUTPUT.
1	455	6BA6 I.F #1 PIN	.05		2ND. I.F IRON CORES	3250
2	455	6BE6 #7 PIN	.05	MIN CAP.	1ST & 2 I.F IRON CORES	75
3	1460	6BE6 #7 PIN	.05	1460 KC.	BC OSC. TRIM.	—
4	1460	ANT.	*	1460 KC.	BC ANT. & INTERSTAGE TRIMMERS	
5	600	ANT.	*	600 KC.	BC OSC. PADDER	
6	16 MC.	ANT.	400Ω.	16 MC.	S.W 2 OSC. INTERSTAGE & ANT. TRIM.	10
7	10·5 MC.	ANT.	400Ω.	10·5 MC.	S.W 2 CHECK POINT	10
8	10 MC.	ANT.	400Ω.	10 MC.	S.W 1 OSC. INTERSTAGE & ANT. TRIM.	10
9	6 MC.	ANT.	400Ω.	6 MC.	S.W 1 CHECK POINT	10

COMPONENT VALUES

RESISTORS: HALF WATT, UNLESS OTHERWISE NOTED.
20% TOLERANCE UNLESS OTHERWISE NOTED.
K = 1000 OHMS.
M = 1000,000 OHMS.

CONDENSERS: T = TUBULAR, FOLLOWED BY CAP. IN MFD. & D.C.W.V.
C = CERAMIC, FOLLOWED BY CAP. IN MMFD & TOL. IF CRITICAL.
E = ELECTROLYTIC, FOLLOWED BY CAP. IN MFD. & D.C.W.V.
M = MICA, FOLLOWED BY CAP. IN MMFD. & TOL. IF CRITICAL.

* STEPS #4 & 5 : FASHION LOOP FROM SEVERAL TURNS OF WIRE & USE AS RADIATOR WHEN CONNECTED TO SIGNAL GENERATOR.

ALL VOLTAGES MEASURED TO CHASSIS WITH 20,000 OHM PER VOLT METER. ZERO SIGNAL OUTPUT. BAND SWITCH SHOWN IN PHONO POSITION. TONE CONTROL SWITCH SHOWN IN NORMAL OR CENTRE POSITION.

C.N. No.	DATE	CHANGE	SYMB.	CK.
53-84	3-3-53	WAS ROD ANT ⚠ 100K RESISTOR ADDED ⚠		

J-3279

WEBSTER-CHICAGO MODEL 114 AUTOMATIC RECORD CHANGER

Using Variable Reluctance Cartridge with "Dual Stylus" Assembly

DESCRIPTION AND OPERATION

The Webster-Chicago Model 114 is a three speed automatic record changer that will automatically play a 1-inch stack of any of the three popular diameter records 7", 10" or 12", at speeds of 33⅓, 45 or 78 rpm.

Simple in design and operation it features

1. "Automatic Shut-off" after last record in a stack has been played.
2. "Automatic Indexing" (adjustment) for correct record size.
3. "Automatic-Manual" position—no adjustment needed for playing records "one at a time".
4. "Instant-Start" for simplified playing of records "one at a time"—lift the Pick-up arm and the motor starts, return it to the Rest position and the motor stops.
5. "Velocity-Trip Mechanism" to provide a fast record change cycle.
6. "Minimum Vertical" Pick-up Arm friction to reduce warped record hiss.
7. "Minimum Lateral" needle pressure to reduce wear of the delicate sides of the record grooves.
8. An improved center drop record spindle that provides a flat record drop, and carefully lowers the unplayed record stack to the spindle step, ready for the next record change cycle.
9. A Neutral position on Speed Selector to remove pressure on idler, and reduce the possibility of a flat developing in the rubber wheel, when records are not being played.

IMPORTANT ALWAYS RETURN THE SPEED SELECTOR TO THE NEUTRAL (N) POSITION WHEN THROUGH WITH THE CHANGER TO RETRACT THE IDLER WHEEL FROM THE MOTOR SHAFT.

CARTRIDGE

The special cartridge has a Dual Stylus for playing Standard and Microgroove Records. A button on the cartridge is pushed down and turned to place the proper stylus into playing position. All 78 rpm. (standard) and some 33⅓ rpm. records, including "Books for the Blind" require the Standard Point, 78 as marked on the arm. The 33⅓ and 45 rpm. (Microgroove) records require the Microgroove point, 33-45 as marked on the arm. The proper needle is in position for playing Standard (78) or Microgroove (33-45) records when the arrow on the button points to → 78 or 33-45 ← respectively.

REMOVE NEEDLE GUARD BEFORE OPERATING CHANGER.

AUTOMATIC RECORD CHANGE

1. Load the Changer.

   Lift the Record Ballast Arm and swing it and the Automatic Index Lever away from the spindle until it latches. Place up to a 1" stack of records, any one size, on the spindle. Swing the Record Ballast Arm Back over the spindle, allowing it to drop into position with the spindle in the hole.

2. Select the Speed and Needle.

   Move the Speed Selector Lever to the correct speed, and turn the Needle Selector Lever for the groove, of the records being played.

3. Start the changer by pushing the Start-Reject button.
4. To reject any record while playing in the Automatic Position, push the Reject Button.

TO PLAY RECORDS MANUALLY—"ONE AT A TIME"

1. Lift the Record Ballast Arm and swing it and the Automatic Index Lever away from the spindle until it latches. Place a record on the turntable, tilting it slightly to clear the step of the spindle.
2. Move the Speed Selector Lever to the correct speed, and turn the Needle Selector Lever for the groove of the record being played.
3. Move the Pick-up arm to the record, the motor and turntable start—return the Pick-up arm to the Rest position, the motor and turntable stop.

The changer is in "Manual" as long as the Record Ballast Arm is not moved in and placed over the Spindle and the Pick-up arm can be moved in or out without tripping the Velocity Trip Mechanism.

IMPORTANT ALWAYS RETURN THE SPEED SELECTOR TO THE NEUTRAL (N) POSITION WHEN THROUGH WITH THE CHANGER TO RETRACT THE IDLER WHEEL FROM THE MOTOR SHAFT.

J-3198 3500-11-52-D.P.

CARE OF RECORDS

Records should be protected as much as possible from dust and lint. Dust will not only interfere with perfect reproduction, but may collect in the delicate parts of the pickup cartridge. If dust is allowed to collect on the record surface, it should be gently removed with a soft, slightly damp, lint free cloth. Water should not be allowed to stand on the labels, particularly around the centre hole where it might roughen the label edge. Do not use oils or solvents on your records, since these will only increase their tendency to accumulate dirt.

Reasonable care should be exercised in handling to prevent scuffs and scratches which may damage the fine music grooves and thereby produce poor reproduction or affect the functioning of the mechanism.

Keep your records in a cool, dry, clean place where they are not likely to be damaged. When not in use records should be stored in envelopes either Flat or Vertically never propped at an angle which will allow them to warp. They should never be exposed to high temperatures, such as might be encountered near a radiator or above a hot air register. Always remove records from the record player and place in file after playing.

SERVICE INFORMATION

This changer has been adjusted, lubricated and tested at the factory and should require no further adjustment in the field. Should servicing be required consult your dealer or Authorized Serviceman.

INDEX ADJUSTMENT

The single adjustment which is accessible from the top of the changer, and which may be made at the discretion of the user, is the index, or point at which the needle is set down on the edge of the record.

It is adjusted by the screw which is accessible through the hole in the top rear of the Pickup Arm. Turning the screw clockwise indexes the needle toward the spindle; counter-clockwise indexes it toward the outside edge of the record. The adjustment should be made on a standard 10" record so that the needle is set down approximately in the first groove. The 12" and 7" indexing will be correct when the 10" index is properly set.