



ELECTRONIC INDUSTRIES LTD. BULLETIN: SR/SS-1.

CAR RADIO DIVISION

126-130 GRANT STREET, SOUTH MELBOURNE, S.C.A

File: Receivers Auto

Date: 21-10-55.

## SERVICE BULLETIN

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### MODELS "SR" AND "SS"

#### 6-VALVE SUPERHETERODYNE CAR RADIO RECEIVERS

**FOR OPERATION FROM:**

Model "SR" 6-volt Accumulator  
Model "SS" 12-volt Accumulator

**TUNING RANGE:**

535-1610 Kilocycles      560.7-186.3 Metres

**BATTERY CONSUMPTION: Manual Tuning.**

Model "SR" 6 Amps      } does not include dial or indicator lamps.  
Model "SS" 3.25 Amps }

**BATTERY CONSUMPTION: Selectomatic Tuning.**

Model "SR" 21 Amps      } does not include dial or indicator lamps.  
Model "SS" 9.25 Amps }

**Note:** The 21 amps drawn by the Model "SR" consists of 6 amps for the receiver and 15 amps for the selectomatic tuning unit. The 15 amps is only instantaneous while the foot switch or tuning knob is pressed to operate the tuning unit mechanism.  
The 9.25 amps drawn by the Model "SS" consists of 3.25 amps for the receiver and 6 amps for the selectomatic tuning unit. The 6 amps is only instantaneous while the foot switch or tuning knob is pressed to operate the tuning unit mechanism.

Minimum voltage required to operate the selectomatic mechanism:

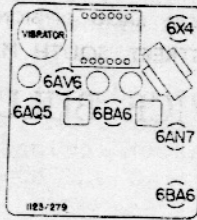
6 volt Model "SR" - 5.5 volts.  
12 volt Model "SS" - 11 volts.

Voltage measured between receiver metal can and end of battery lead supplied on receiver, Selectomatic tuning unit operating.

**THIS BULLETIN CONTAINS:**

1. Operation of Selectomatic Tuning Unit.
2. Receiver Operating Instructions.
3. Alignment Instructions.
4. Circuit Diagrams.
5. Electrical and Mechanical Parts List.
6. Connections for Transformers.
7. Valve Placement Diagram.
8. Instructions for Fitting a Foot Switch to the Car for Foot Operation of the Selectomatic Mechanism.
9. Circuit Modifications.

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## ANTENNA COMPENSATING CONDENSER ADJUSTMENT

(after the receiver has been installed in the car):

A control is provided to ensure correct matching of the antenna to the receiver for maximum long-distance reception.

This control is a small knob located on the side of the receiver case near where the antenna lead-in cable enters the receiver.

To adjust the control, extend the antenna to half its fully extended height, then tune the receiver to a barely audible distant station near the centre of the dial.

Slowly turn the small control knob in either direction for maximum volume of the signal.

If a barely audible distant station is not available, adjust the antenna matching control knob for maximum volume of the background noise between two stations near the centre of the dial.

For best results it should be adjusted in a locality free from interference from overhead power lines, etc.

Once the control has been set it should not require readjustment unless the receiver or antenna and lead-in cable have been moved or removed from the vehicle.

## OPERATION OF SELECTOMATIC TUNING UNIT

The Model SR/SS car radio incorporates a pre-settable station changing principle known as "Selectomatic" tuning.

The Selectomatic unit includes a permeability tuner similar to that used in the Model RL/RM, but with the addition of a six-position turret, embodying the pre-set tuning stops, and is powered by a solenoid. One of the turret positions is designated "Manual tuning", in which the receiver may be tuned by pulling out the tuning knob and turning it in the normal way. The other five turret positions are for pre-settable stations.

To operate the Selectomatic unit, the push switch contacts are closed by fully depressing the tuning spindle knob or by pressing a foot switch. This connects the solenoid coil across the car battery; the plunger is then drawn into the solenoid coil loading the turret operating mechanism. On releasing the push button the two main springs withdraw the plunger and the core carriage from the solenoid, at the same time completing the action of rotating the turret through one position. The core carriage is brought to a halt against the adjustable screwed stop on the turret.

In each of the six positions of the turret there is a lead screw on which is mounted a specially shaped nut which forms the stop.

By rotating any of the lead screws the stop is moved up and down the length of the screw. This length represents the broadcast tuning range, so that any of the adjustable stops may be tuned to any frequency on the broadcast band, although, generally, stations are set up in normal sequence as they occur.

On the end of each lead screw is a gear wheel which is intended to engage with the crown wheel on the tuning shaft.



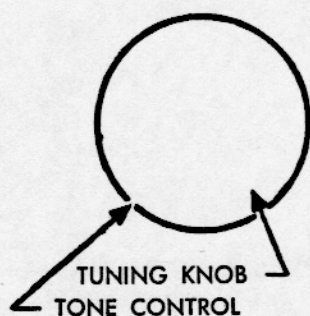
The manual tuning lead screw is of a coarser pitch and has a larger gear wheel than those attached to the pre-settable lead screws, so that when the manual position is opposite the tuning shaft, the tuning knob may be pulled out until the spindle rides over the indexing spring, whereupon the crown wheel is engaged with the gear wheel on the lead screw and the receiver is tunable in the normal way.

When any of the other five pre-settable positions are opposite the tuning shaft, the tuning shaft must be pulled out against spring tension to engage the gears while adjusting the stops for the desired station settings.

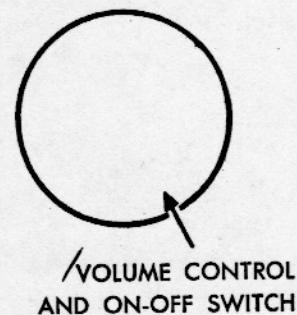
When these pre-settable positions are adjusted, the knob is released and the station is tuned, and will remain so throughout all subsequent automatic usage of the receiver until altered at will.

A cam is mounted on the end of the turret shaft and operates a pair of contacts, causing a light to show behind the receiver dial to indicate when the manual position may be engaged with the tuning shaft.

## RECEIVER OPERATING INSTRUCTIONS



White light indicates manual → •



• ← Red light indicates set-on

### TO SWITCH RECEIVER "ON":

Turn clockwise the knob for the combined "ON/OFF" switch and volume control. A red indicator light will show at the bottom of the dial, indicating that the receiver is switched "ON".

### MANUAL TUNING:

A white light at the bottom of the dial indicates that the receiver is in the manual tune position. If the light does not show, press and release the tuning knob several times until the light comes on, then pull the tuning knob out as far as it will go.

Stations may now be tuned in just the same as with an ordinary car radio.

### SELECTOMATIC TUNING:

If the manual tuning white indicator light is seen at the bottom of the dial, firmly press the tuning knob fully in until the light goes out and which will automatically set the receiver in the first Selectomatic position.

To change from station to station set by the Selectomatic tuning, press and immediately release the floor switch on the car floor or the tuning knob.

### TO CHANGE A STATION TUNED BY THE SELECTOMATIC:

1. Press and immediately release the tuning knob or the foot switch until the dial pointer indicates and the station to be changed is heard.
2. Pull the tuning knob out as far as it will go and with the knob pulled out tune in the station required, just the same as with an ordinary car radio.
3. Press the tuning knob firmly and straight in as far as it will go while the station is being received, until the Selectomatic mechanism is heard to click into position.

4.

- Any of the stations tuned by the Selectomatic mechanism may be changed to different stations by following the above procedure.

**Note:** Make sure to push the tuning control knob firmly in where it is mentioned in the instructions. Failure to do so may lock the mechanism. Firm pressure on the tuning knob will clear it.

## ALIGNMENT INSTRUCTIONS

### Equipment:

Signal generator:

Output meter:

Alignment tools: Part No. M195 and PM581.

Mica capacitor: 0.01 MF Part No. PC145 for IF. trans. alignment.

Dummy antenna: 65 MMF Part No. M341.

IF. Attenuator: Part No. M174.

This attenuator consists of a 0.004 MF condenser and a 10K. ohm non-inductive resistor connected in series and having clips fitted for attaching to the receiver.

### Alignment Conditions:

Supply voltage - Model 'SR' 6 volt accumulator.

Model 'SS' 12 volt accumulator.

Volume control - maximum volume (fully clockwise).

Output level - 50 Milliwatts.

Load impedance - 5,000 ohms.

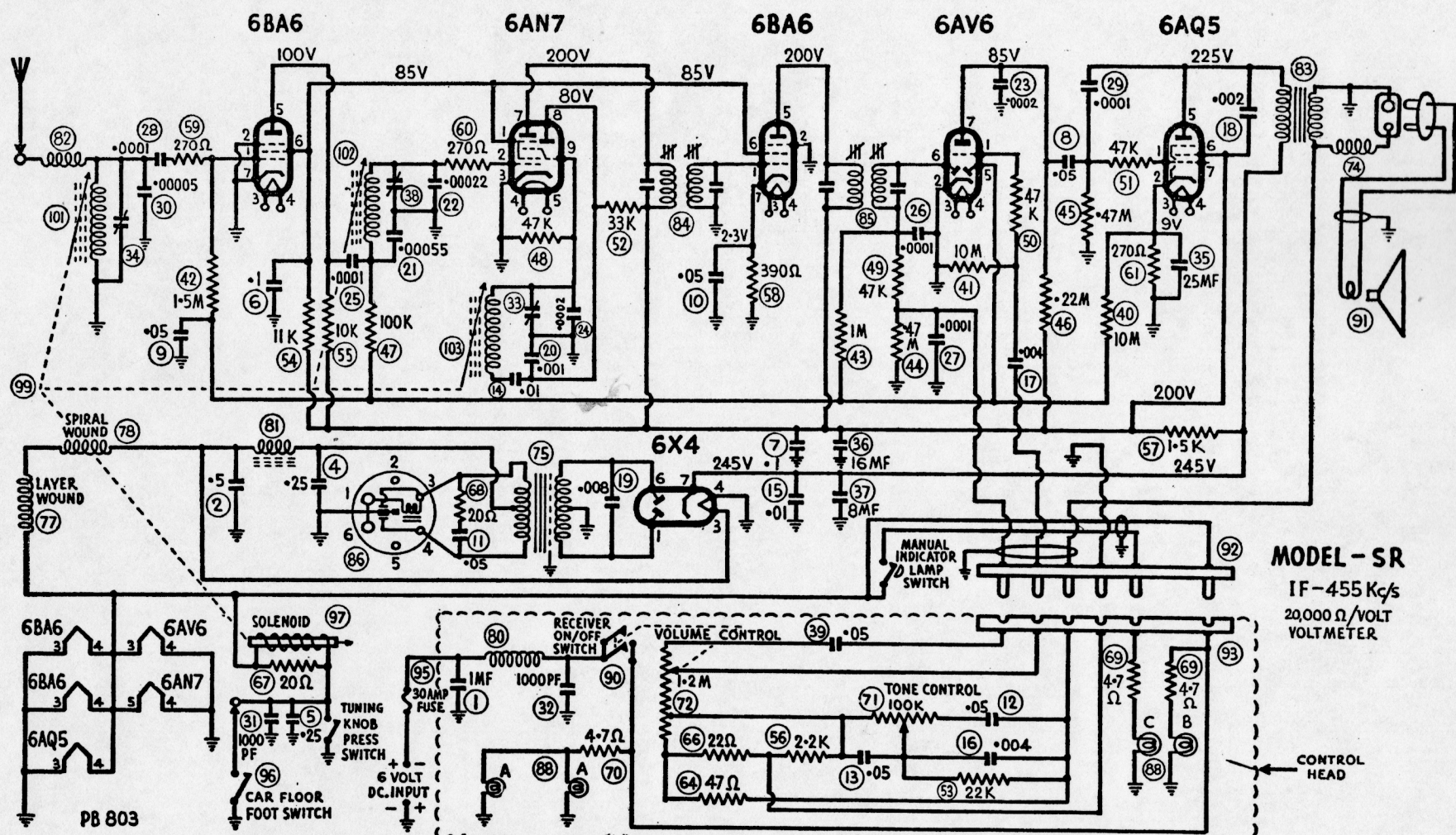
Tone control - treble position.

Intermediate frequency - 455 Kc/s.

Do not use a screwdriver or an alignment tool with an iron point for adjusting the variable iron cores. Special tools - Part Nos. M195 and PM581 are available from the factory for alignment purposes.

Oper- ation No.	Generator Connection	Generator Frequency	Dummy Antenna	Instructions
1.	Remove top and bottom sections of metal can to align IF. transformers.			
2.	To control grid of 6BA6 IF. valve (pin No. 1)	455 Kc/s.	0.01 MF Mica cond. in series with generator.	Peak 2nd IF. trans. pri. and sec. for maximum output.
3.	To control grid of 6AN7 valve (pin No. 2)	455 Kc/s.	0.01 MF Mica cond. in series with generator.	Turn tuning control knob until perm. tuner iron cores are fully out of the windings on the coil formers and the unit is hard against the stop. Peak 1st IF. trans. pri. and sec. for maximum output.
4.	Repeat operations No. 2 and 3.			
5.	Refit top section of metal can during alignment of RF. signal circuits to eliminate variations in oscillator setting.			
6.	Connect attenuator Part No. M174 between 6BA6 IF. valve control grid pin No. 1 and the metal chassis.			
7.	Turn control head tuning knob to bring iron cores fully out of windings and perm. tuner unit against stop. Make sure the centre of the dial pointer aligns with the centre of the end of travel spot on the dial reading at the high frequency end.			





"A" Dial Illumination. "B" Receiver ON Indicator RED. "C" Manual Operation Indicator GREEN or WHITE.

**MODEL - SR**  
 IF-455 Kc/s  
 20,000  $\Omega$ /VOLT  
 VOLT METER

ISSUE No.4.

