

DESCRIPTION AND MAINTENANCE
FOR
CONTROL PANEL MODEL 4EC49A10

Control Panel 4EC49A10 is mounted on the front of the case containing the General Electric Railroad Radio Combination. The panel contains an 8-watt audio amplifier board, volume and squelch controls, and a receptacle for the plug and cable assembly connected to the base mounting.

The squelch and volume potentiometers are adjusted by the radio technician before the Railroad Radio Combination is mounted in the engine or caboose.

AUDIO AMPLIFIER

Circuit Analysis

The audio signal from the receiver is coupled through J5 to the base of transistor Q1. Transistors Q1 and Q728 are connected and act as a class A audio amplifier. Q5 serves as an automatic bias control for Q1 and Q728.

The output of the class A audio amplifier stage is coupled to the second stage through audio transformer T727. The secondary of T727 is connected to the bases of Q726 and Q727, which operate as a common-emitter, class B, push-pull amplifier. Base bias is provided by voltage divider network RT1 and R3. Thermistor RT1 also stabilizes the current to the emitters of Q726 and Q727 under varying temperature conditions. Resistors R4 and R5 form the common emitter bias of transistors Q726 and Q727. Output from Q726 and Q727 is to the loudspeaker on the Control Unit through output transformer T726.

Maintenance

For servicing the Control Panel refer to Interconnection Diagram DD-5497360, Outline Diagram 19C303006, and Parts List LBI-3342 which is on the back of the Interconnection Diagram.