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Service Bulletin

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Enhancements in 9323 Series Transceivers

Scope

This Service Bulletin outlines modifications that have occurred to the 9323 series transceivers to facilitate improvements in the operation of these transceivers. There are three changes, two of which involve the change of resistor values and the third involves the addition of a resistor. For each modification there is a separate section to this bulletin identifying the symptom relating to the change, the parts required to perform the change, and the details of the change.

Although the three modifications are not related, any transceiver undergoing any one of them should be checked for, and where required, have the remaining changes done.

Note:- The modifications mentions in this Service Bulletin are incorporated in 9323 transceivers from Serial Number A1334 onwards.

1. **Mute opens on short transient signals**

1.1. **Symptom**

The mute gate operates, ie., opens, on short transient signals. It is not possible to correct for this using the mute adjustment potentiometer as it is related to the attack time of the mute circuit.

1.2. **Parts required**

1 x 100K ohm resistor (Codan Part Number 40-51000-020).

1.3. **Details**

The remedy requires R361 on the Microprocessor & Audio PCB assembly, 08-04966-001, to be changed from 3K9 ohms to 100K ohms. With the transceiver disconnected and removed from the installation, remove the bottom cover. Identify R361, which is located in the bottom left quadrant of the PCB (with the front panel towards you) below IC307, LM339. Check the value of this resistor. If it is 100K ohms then there is no need to perform this change. If R361 is 3K9 ohms, then proceed as follows. Disconnect all the ribbon cables from the PCB taking careful note of the orientation of the connectors on P103 and P302. Remove the 7 cross head screws securing the PCB in place and withdraw the PCB. Using the appropriate desoldering tool, carefully remove R361 and replace it with a 100K ohm resistor. There is no need to readjust the mute following this procedure.

2. **Transceiver turns itself ON and/or unable to turn transceiver OFF**

2.1. **Symptom**

The transceiver turns itself ON and then may or may not be able to be turned OFF. This is caused by leakage in the power-on circuit and can be overcome by biasing V203 (the power-on transistor) off slightly so that it requires a greater base current to turn the transceiver ON.

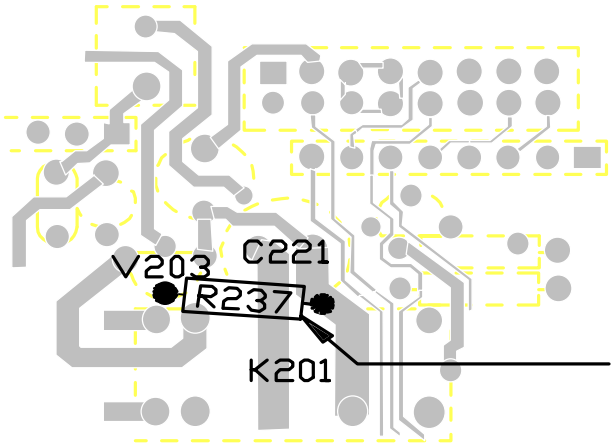
2.2. **Parts required**

1 x 2K2 ohm CR25 resistor (Codan Part Number 40-32200-020).

1.1. **Details**

The remedy requires the addition of a resistor on the Microprocessor & Audio PCB assembly, 08-04966-001. With the transceiver disconnected and removed from the installation, remove the bottom cover. Disconnect all the ribbon cables from the PCB taking careful note of the orientation of the connectors on P103 and P302. Remove the 7 cross head screws securing the PCB in place and withdraw the PCB. Identify V203, which is located at the right rear corner of the PCB (with the front panel towards you) adjacent to the relay K201. Fit a 2K2 resistor between the Base of V203 and relay K201, (Base-Emitter junction of V203), as shown below. This resistor can be added to any circuit diagrams that you may have, and be designated R237.

08-04966-001
Bottom View



2. **<u>Failure of transceiver to reset properly with low battery</u>**

2.1. **Symptom**

The problem is related mainly to vehicle installations in which the transceiver is powered up whilst the engine is being cranked. The symptoms are varied. It may be that the transceiver losses all of its channel information or it may exhibit spurious operation and perform with various peculiarities for which there appears to be no reasonable explanation. The following modification overcomes this problem by ensuring a reset pulse is applied to the processor IC101 under all conditions.

2.2. **Parts required**

1 x 15 ohm CR25 resistor (Codan Part Number 40-11500-020).

2.3. **Details**

The remedy requires R201 on the Microprocessor & Audio PCB assembly, 08-04966-001, to be changed from 39 ohms to 15 ohms. Depending on the circumstances, the transceiver may also need to have channel information reprogrammed.

With the transceiver disconnected and removed from the installation, remove the bottom cover. Identify R201, which is located at the right rear corner of the PCB (with the front panel towards you), adjacent to the relay K301. Check the value of this resistor. If it is 15 ohms then there is no need to perform this change. If R201 is 39 ohms, then proceed as follows. Disconnect all the ribbon cables from the PCB taking careful note of the orientation of the connectors on P103 and P302. Remove the 7 cross head screws securing the PCB in place and withdraw the PCB. Using the appropriate desoldering tool, carefully remove R201 and replace it with a 15 ohm resistor.

<u>Final</u>

Refit the PCB into place and secure with the 7 screws. Replace all ribbon cables correctly onto their corresponding connectors paying particular attention to the orientation of P103 and P302. Replace the bottom cover and if necessary, reprogram the transceiver using XP.