Service Bulletin

DOCUMENT NUMBER: 17-00177
ISSUE NUMBER: 1
ISSUE DATE: January, '98

RELATED DOCUMENTS:
C/R

9003/9003B Scrambler

1. Scope

This Service Bulletin announces corrective action required to all 9003 and 9003B scramblers prior to serial number B0343. The modifications described below should be performed whether the symptoms exist or not.

The modifications described in this document shall be covered under Codan's normal warranty conditions irrespective of the warranty status of the scrambler.

2. Symptom

Where the symptom is experienced; the **Lock** LED (Light Emitting Diode) on the front panel of the scrambler remains lit (whilst the scrambler has power applied) and the scrambler will only function for voice in **Clear** mode.

3. Cause

The cause of the symptom is corruption of the software because the Microprocessor does not reset correctly.

4. What to do if the symptom exists

If the symptom exists, the Voice Protection Device (VPD) PCB must be returned to Codan to have the corruption corrected. Codan will correct the corruption, modify the PCB and reprogram the PCB.

If desired, Codan will supply an exchange modified and programmed VPD PCB. Conditions apply. Part number is 08-05474-001.

Please note that Codan will require the following information irrespective of the action taken.

- The keycode (a unique 10 digit code that the scrambler uses to encode and decode).
- The security level (8, 16, or 32 bit).

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5. Modification

The modification is designed to prevent this problem from occurring or re-occurring. Modifications are required to the VPD PCB and to the power supply protection circuit mounted on the heatsink of the interface PCB.

5.1 Parts required

1 x Reset Integrated Circuit (IC), Codan Part Number XD-01233-500
1 x Voltage Dependant Resistor (VDR), Codan Part Number 41-22506-592
1 x Schottky diode, Codan Part Number 1N5817

5.2 Tools required

Pozidrive screwdriver (1 point)
Standard soldering iron and solder
Fine tipped soldering iron
Fine solder. e.g. 0.8 mm
5 mm Spin tight or socket

5.3 Procedure

- ❑ Remove the scrambler from the installation.
- ❑ Remove the 4 screws securing the top cover and remove the cover.
- ❑ Locate the VPD PCB.
- ❑ Remove the 4 screws securing the VPD PCB to the interface PCB.
- ❑ Carefully remove the VPD PCB from the interface PCB.

5.3.1 Power supply protection circuit modifications

- ❑ Remove the fuse from the fuse holder.
- ❑ Remove the 4 screws securing the interface PCB to the chassis.
- ❑ Remove the nut and washer securing the heatsink to the chassis.
- ❑ Withdraw the interface PCB from the chassis such that access can be gained to the Zener Diode mounted under the fuse holder.
- ❑ Attach and solder the VDR across the diode as shown in Figure 1.

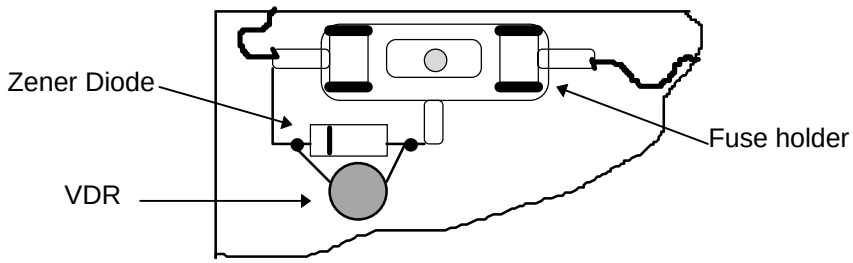

Figure 1: Installation of VDR

- ❑ Refit the interface PCB ensuring that no wires are trapped.
- ❑ Refit the nut, washer and 4 screws.
- ❑ Refit the fuse into the fuse holder.

5.3.2 Modifications to VPD PCB

If the VPD PCB has been replaced by Codan, no modifications are necessary, go to section 6. Otherwise proceed as follows.

❑ Locate TP5 and TP6. Refer to Figure 2.

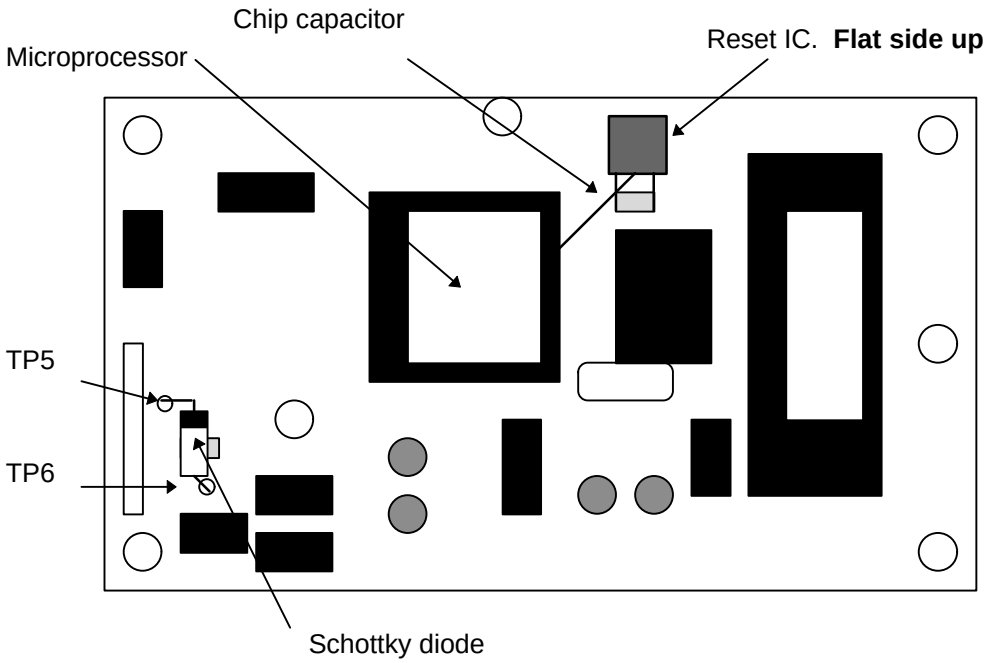

Figure 2: location of Shottky diode and Reset IC

❑ Fit the Schottky diode (1N5817) into TP5 and TP6 as shown in Figure 2.

❑ Solder and trim the leads.

❑ Fit the Reset IC as shown in Figure 2. Ensure the flat side is uppermost.

❑ Trim and solder the two outer leads across the chip capacitor as shown. Be careful not to dislodge the chip capacitor.

❑ Trim and solder the centre lead to Pin 17 of the Microprocessor IC. Ensure that no short circuits exist.

Pin 17 is the 4th Pin down from the top right corner (as viewed in Figure 2). Refer to Figure 3.

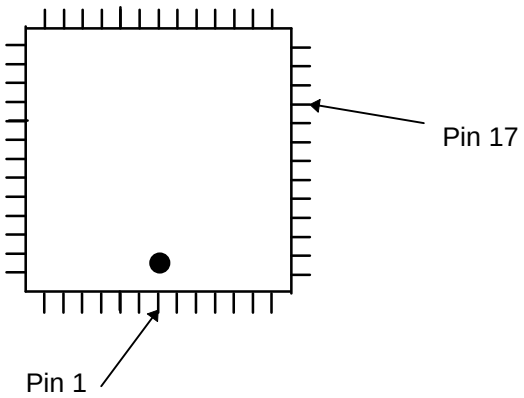

Figure 3: Location of Pin 17 of Microprocessor IC

6. Reassembly

- ❑ Carefully align the VPD PCB onto the interface PCB and push it down firmly.
- ❑ Fit the 4 screws.
- ❑ Replace the top cover.
- ❑ Secure the top cover with the 4 screws.
- ❑ Reinstall the scrambler.