



CODAN

Unreliable communication of the 8570 Remote Control Console

Introduction

This Service Bulletin describes how to improve the communication efficiency of the 8570 Remote Control Console. It affects all users of the 8570 Remote Control Console that:

- have serial numbers prior to B0487 with resistor pack R502 (part number 40-83101-500)
- are communicating with an IPC-500 Radio Telephone Interconnect, or via an RS232/I²C interface to/from a PC or a Global Positioning System (GPS)



All 8570 Remote Control Consoles with serial numbers B0487 onwards have been fitted with the correct resistor pack (part number 40-82471-500).

Symptoms

Using an IPC-500 Radio Telephone Interconnect

The 8570 Remote Control Console fails to display the correct channel information from an IPC-500 Radio Telephone Interconnect. This symptom is most likely to be observed while the IPC is scanning. During scanning, the 8570 should “mirror” the channel information from the IPC-500. The channel information on affected 8570s will remain static when the IPC is scanning.



This symptom may be difficult to detect because it rarely occurs and is of an intermittent nature.

Using an RS232/I²C interface

Commands sent to and/or sent from an 8570 via an RS232/I²C interface will be unsuccessful, or will initiate a poor response.

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Cause

The unreliable communication of the 8570 is caused by excessive series resistance of the resistor pack R502 (part number 40–83101–500) on the Remote Control Filter PCB. This causes loading of the I²C Clock and Data lines.

Part required

The following part is required:

- 1 x 470 Ω , 20%, 0.1 watt (x 5) resistor package (part number 40–82471–500)

Tools required

The following tools are required:

- pozidrive screwdriver (1 point)
- desoldering tool
- 60/40 Tin/Lead resin core solder
- soldering iron

Action

The modification involves checking which resistor pack is fitted on the Remote Control Filter PCB in the 8570, and changing the resistor pack if required.

Checking the resistor pack R502

- Disconnect the power and remove the 8570 from the installation.
- Lay the unit face down on a soft surface and remove the four screws securing the front panel to the chassis.
- Return the unit to its upright position and remove the front panel to expose the PCBs.
- Locate the Audio Processor and Power Supply Unit PCB (next to the power transformer).
- Remove the eight screws securing the Audio Processor and Power Supply Unit PCB to the chassis.
- Move the Audio Processor and Power Supply Unit PCB to gain access to the underside of the Remote Control Filter PCB.

The Remote Control Filter PCB is the small PCB mounted upright in the right-hand corner of the Audio Processor and Power Supply Unit PCB (see Figure 1).

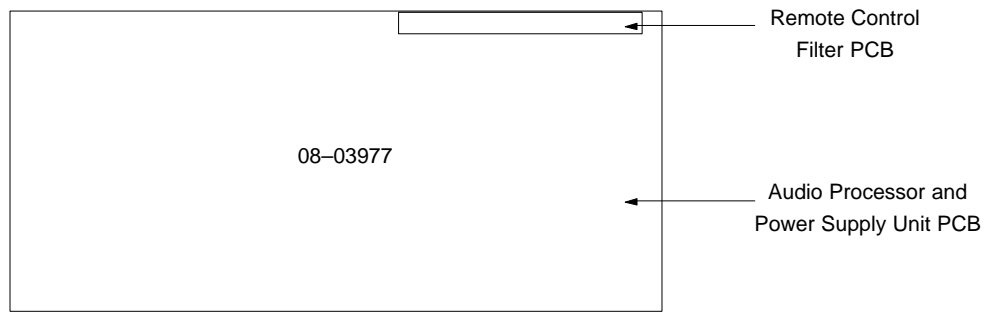


Figure 1: Location of Remote Control Filter PCB on the Audio Processor and Power Supply Unit PCB

- Locate R502 on the Remote Control Filter PCB (see Figure 2).

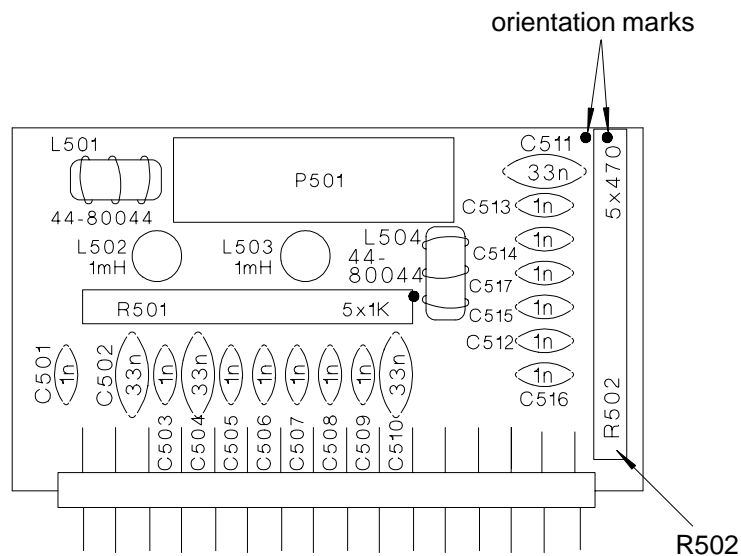


Figure 2: Location and orientation of R502 on the Remote Control Filter PCB

- Measure the resistance between pins 1 and 2.

If the resistance is $\approx 470 \Omega$, then no action is required.

↪ If possible, check that the part number on R502 is 40-82471-500.

Continue from page 4, *Reassembling the 8570*.

If the resistance is $\approx 1 \text{ k}\Omega$, then the resistor pack R502 needs replacing.



↪ If possible, check that the part number on R502 is 40-83101-500.

Continue from page 4, *Changing the resistor pack R502 on the Remote Control Filter PCB*.

Changing the resistor pack R502 on the Remote Control Filter PCB

- Desolder and remove R502.
- Observing the correct orientation, fit the replacement resistor pack (part number 40-82471-500) in the position that R502 occupied.

Reassembling the 8570

- Refit the Audio Processor and Power Supply Unit PCB into position.
 -  Ensure that the green earth wire is refitted under the mounting screw located in the corner of the Audio Processor and Power Supply Unit PCB.
 -  Ensure all cables and looms are not pinched or trapped.
- Loosely fit the eight screws that secure the Audio Processor and Power Supply Unit PCB, then tighten them into position.
- Replace the front panel of the 8570 and secure it into position using the four screws.
- Reconnect the 8570 to the installation, then reconnect the power.