



Service Bulletin

Title: **DSP-3 RS-232 Pin 9 Functionality**
Bulletin #: DSP0003 Issue Date: December 6, 2001
Models Affected: DSP-3 Bulletin Revision: A
Production Range: All

Description:

The RS-232 interface was developed by the Electronic Industry Association (EIA) to be an "Interface Between Data Terminal Equipment (DTE) and Data Communications Equipment (DCE) Employing Serial Binary Data Interchange," as the title suggests. According to the RS-232 standard, pin 9 carries a control signal called the ring indicator. Also, according to this standard, data signals are bipolar; that is a +3 to +12 volt signal indicates an "on" condition and a -3 to -12 volt signal indicates an "off" condition. An "on" state on the ring indicator line signals the DTE that there is an incoming call. Normally this line is "off."

Since the ring indicator signal is rarely used and is not necessary for communications between the DSP-3 and the computer (PC), the DSP-3 uses pin 9 of its RS-232 port as its contact closure input. However, when pin 9 is wired through to the PC, early production DSP-3s may detect a small resistance on pin 9 and incorrectly identify that with a contact closure input. With later production DSP-3s, the PC may detect a voltage on pin 9 and respond in an unusual way.

Units Affected:

This bulletin applies to all DSP-3s.

Symptoms:

DSP-3s manufactured in August 2001 or earlier

When connected to some PCs via the RS-232 port, the contact closure input on the DSP-3 may oscillate between "open" and "closed"; this will occur without any external relay or trigger input. In this case, switched gain blocks and switch blocks in the Signal Manager software will randomly indicate "open" or "closed" states.

DSP-3s manufactured in August 2001 or later

When the RS-232 cable is connected between the DSP-3 and a PC running the Windows ME operating system, the PC may freeze or lock up. The PC will immediately resume normal operation once the RS-232 cable is disconnected.

Note: The Signal Manager software is not qualified to run under the Windows ME operating system. For more information concerning supported platforms see the Readme file included with the Signal Manager software.

Instructions:

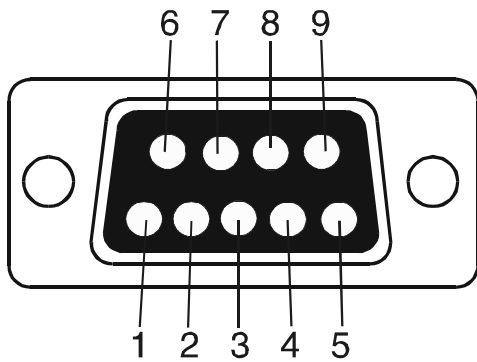
Either symptom can be solved one of two ways:

- Use an RS-232 cable with no pin 9 conductor.
- Remove pin 9 of your RS-232 cable.

The RS-232 cable is a male-to-female cable. The male end plugs into the DSP-3 and the female end plugs into a COM port of the PC. If you will not be using the contact closure while the DSP-3 is connected to the PC, simply cut pin 9 from the male connector (the DSP-3 end).

Do not cut pin 9 at the male connector if you will be using the contact closure while the DSP-3 is connected to the PC. For this situation, connect pin 9 at the male connector to the relay, switch, or triggering device. All other pins are wired through according to the RS-232 pinout diagram in Figure 1. Make sure that pin 9 is not wired through.

Please note that since the DSP-3 does not use pin 9 to communicate with the PC, removal of this pin does not limit performance or functionality of the DSP-3. However, it is a good idea to mark any modified cables in case they will be used in other applications.



Pin	Signal Description
1	Data Carrier Detect
2	Transmitted Data
3	Received Data
4	Data Terminal Ready
5	Signal Ground
6	Data Set Ready
7	Request To Send
8	Clear To Send
9	Contact Closure

Figure 1: Pin assignments for the RS-232 connector on the DSP-3. Note that pin 9 is used for the contact closure function.

Tools and materials required:

- Small-tip wire cutters
- Safety glasses

Contact information

If you need any further information regarding this service procedure, please contact QSC Technical Services at the addresses or numbers below. You can also order replacement parts; to expedite processing please use the correct part number when ordering.

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