### Setting Ring Detection Threshold (JP101–JP401)

If a board has problems detecting rings behind a PBX, you can lower the ring detection threshold. To lower the threshold on a channel-by-channel basis, install the jumpers as follows:

| | |
|---|---|
| Channel 1 | Jumper JP101 |
| Channel 2 | Jumper JP201 |
| Channel 3 | Jumper JP301 |
| Channel 4 | Jumper JP401 |

**Note:** A lower threshold may be too sensitive for boards connected to the CO and cause false detection of rings.

## 2 Installing the Hardware

1. Prepare a static-safe work area, turn off all power to the system, and disconnect the system's power cords from electrical outlets.

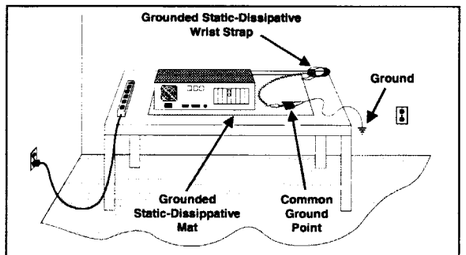



*Figure 2. Static-safe work area*

2. Remove the PC cover.
3. Select an empty ISA expansion bus slot, and remove the slot's retaining screw and access coverplate.
4. Insert the board's edge connector into the bus slot.
5. Replace and tighten the retaining screw.

Select a new slot and repeat steps 3–5 for each board you are installing. Replace the PC cover when finished.

### Connections

- The D/41H and D/21H support a single analog voice channel per RJ-11 jack (channel 1 corresponds to J1, channel 2 corresponds to J2, and so on). Use RJ-11 connectors and phone cable to connect each voice channel jack to a PBX or the CO (see Figure 3).
- A standard telephone will not function when directly attached to a D/41H or D/21H RJ-11 jack.

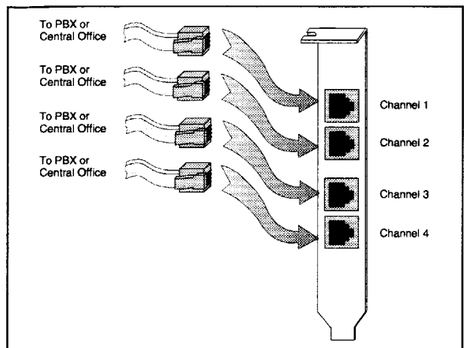



***Figure 3.** Bracket showing voice ports*

## 3 After Installing the Hardware

- Install the voice board software as described in the documentation provided for the Dialogic software release and operating system in use.
- Test the boards using D40CHK.EXE or other diagnostic utilities that came with the Dialogic software release for the D/41H and D/21H.
- For specifications and product information, refer to the Dialogic On-Line Information Retrieval System, 32-2-712-4322, or Dialogic World Wide Web site at http://www.dialogic.com.

### Warranty Period

The D/41H and D/21H boards have lifetime warranties. See the *Hardware Limited Warranty* card for coverage details.

### Return Material Authorization (RMA) Process

If you suspect you have a problem board, you can return the board to Dialogic for servicing. The following outlines the procedures that make up the Return Material Authorization (RMA) process.

1. Check to see if the problem is due to a mistake or oversight in the installation process. Be sure to run the diagnostic utility if you have not already done so.
2. Call Dialogic Technical Support at 32-2-712-4321 to determine whether the board needs servicing.
3. Call Dialogic Telecom Europe at 32-2-712-4311. Telephone lines are open from 9 a.m. to 5:30 p.m. Give the board's serial number (begins with two letters and is located on a label attached to the board) and a brief description of the problem to the RMA coordinator. The RMA coordinator will give you an RMA number and an estimated return date, and fax you a confirmation.
4. While observing correct static-handling procedures, disconnect power, communications and telephone cables, and remove the board from the chassis.
5. Repack the board, observing correct static-handling procedures. Use the original shipping materials if possible. Include diagnostic printouts (for example, D40CHK) when applicable.
6. Write the RMA number on the outside of the box you are shipping (for example, RMA #2201).
7. Ship the package to the attention of the assigned RMA number using the Dialogic address provided on the faxed RMA confirmation. Dialogic is not responsible for loss or damage in transit.

## Regulatory Notices

### SAFETY WARNINGS

1. This Installation Guide must always accompany the D/41H or D/21H. Failure to provide this guide when supplying one of the covered board assemblies will invalidate the approval for that board.
2. These Dialogic boards are approved only for installation in a host and with host attachments, which are either covered by a relevant type approval of their own, or in the United Kingdom, are eligible for the General Approval NS/G/1234/J/100003.
3. It is a condition of approval that the power required by the host and the total of all adapter cards installed within the host environment, together with any auxiliary apparatus, does not exceed the power specification stated in the Technical Reference Manual of the host apparatus. The power requirement for these boards is:

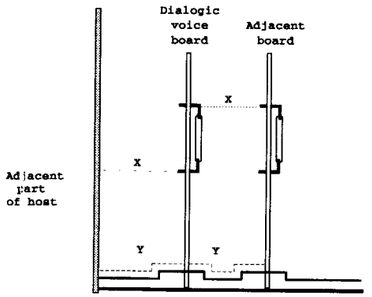
   +5 Vdc @ 1.25 A
   +12 Vdc @ 80 mA
   +12 Vdc @ 80 mA

4. In order to maintain the host-independent approval for the D/41H and D/21H, it is essential that, when other option cards are introduced which use or generate a hazardous voltage (as defined in EN 60 950:1992), the minimum creepages and clearances specified in the table in the next column are maintained.
5. The D/41H and D/21H must be installed such that, with the exception of the connections to the host, minimum clearance and creepage distances shown in the following table are maintained between the approved boards and any part of the host, including other option cards or assemblies. Failure to maintain these minimum distances will invalidate the approval.

| Minimum Clearance X (mm) | Minimum Creepage Y (mm) | Voltage used or generated by other parts of the host, including other card or assemblies |
|---|---|---|
| 2.0 | 2.4 | < 50 Vrms or Vdc |
| 2.6 | 3.0 | < 125 Vrms or Vdc |
| 4.0 | 5.0 | < 250 Vrms or Vdc |
| 4.0 | 6.4 | < 300 Vrms or Vdc |

The above clearance and creepage distances apply in a normal office environment. Seek advice from a competent telecommunication safety engineer before the installation if voltages used are greater than 300 Vrms or Vdc, if you suspect the presence of conductive pollution, or if you have any doubt.

Clearance and creepage distances can be checked by measuring between the adjacent parts as shown below. Clearance distance X is the shortest distance in air between two points. Creepage distance Y is the shortest path across a surface between two points.




### II CE COMPLIANCE

These boards comply with the following European Directives:

| | |
|---|---|
| 89/336/EEC: | EMC Directive |
| 73/23/EEC: | Low Voltage Directive |

# D/41H and D/21H

- Installation
- Warranty Period
- RMA Procedure
- Regulatory Notices

Part number 05-0816-002


## Electrostatic Discharge

**CAUTION**
All computer boards are electrostatic-sensitive. Handle all static-sensitive components, boards, and systems at a static-safeguarded work area.

A static-safe work area consists of a grounded static-dissipative wrist strap and a work surface covered with or composed of a grounded static-dissipative material. The work surface drains electrical charges from conductive materials when the materials are placed on the surface. The grounded static-dissipative wrist strap drains static charge from the person wearing the strap. Both components ensure that static charges are drained at a rate and current level that are safe. Both must be used any time a person is handling any component. See Figure 2 for a diagram of a static-safe work area.

Maintaining a static-safe environment during installation requires the following:

1. Ground yourself to the static-safe work area using a static-dissipative wrist strap for the entire installation.
2. Remove the board from the shipping carton and static shielding at the static-safe work area.
3. Lay the board on the static-dissipative work surface.

## Before You Begin

You can install the hardware and voice software in any order, but Dialogic recommends that you install the hardware first when running in an MS-DOS® or OS/2® environment, and software first when running in any other operating system environment.

You may be able to use the factory defaults when installing the D/41H or D/21H board. Read through these instructions and check for possible interrupt level (IRQ) and memory address conflicts between the board and other software or hardware devices (for example, video card or CD-ROM controller card) before installing the board.

**Note:** If you own software that can determine what IRQs and memory addresses are in use, run it to determine potential conflicts before installing the D/41H or D/21H board.

## 1 Configuring the Hardware

### Configuring Multiple Voice Boards (JP7)

You can install up to 16 D/41H or D/21H boards in a system. One and only one board in a system can have the jumper on JP7 installed (see Figure 1):

- One board: Keep the jumper on JP7 installed (default).
- Multiple boards: Remove the jumper on JP7 from ***all but*** one board.

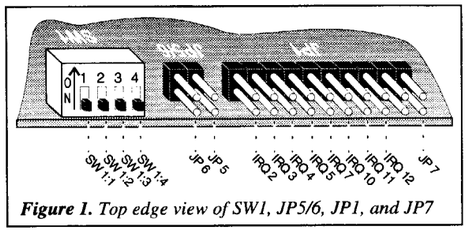


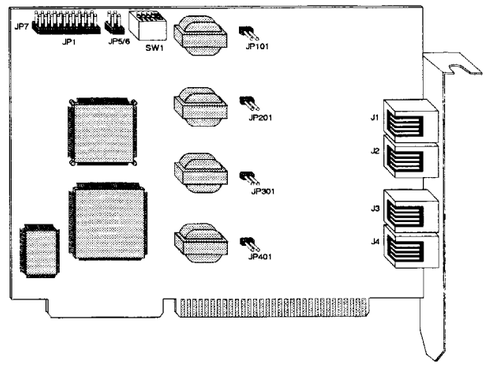

***Figure 1.** Top edge view of SW1, JP5/6, JP1, and JP7*

### Setting the Default Hook Switch State (SW1:4)

SW1 switch 4 (SW 1:4 in Figure 1) sets the default hook switch state for the D/41H and D/21H board when the PC is powered on but the firmware has not yet been downloaded. The default, on-hook, presents a ring with no answer state to inbound calls if the board receives a call before the firmware has been downloaded. You can change the default hook switch state to off-hook to present a busy signal instead of a ring no answer signal. It is not necessary to set all boards in the system to the same default hook switch state.

**WARNING:** This option ***MUST NOT*** be used in the UK; any setting other than OFF will invalidate the Approval.

### Physical Description




| Part | Function |
|---|---|
| J1–J4 | RJ-11 jacks for interface with PBX or CO lines * |
| JP1 | Jumper block to set interrupt level |
| JP5–JP6 | Jumper pins to set base memory segment |
| JP7 | Jumper pins to enable hardware interrupt circuitry for multiple boards |
| JP101–JP401 | Jumper pins to set ring detection threshold * |
| SW1 | Switches to set the offset address and default hook switch state |

* J3, J4, JP301, and JP401 are not available on the D/21H board.

| Hook Switch State | Set SW1:4 | Inbound Call Response when Firmware Not Downloaded |
|---|---|---|
| on-hook | off | Ring no answer (default) |
| off-hook | on | Busy |

**Note:** If the PC is not powered on, the inbound call response is ring no answer when a board receives a call.

### Setting the Hardware Interrupt Level (JP1)

The default hardware interrupt level (IRQ) is set to IRQ 9. Change the IRQ by moving the jumper on jumper block JP1 (see Figure 1) to another IRQ setting if IRQ 9 is in use by another device.

**Note:** Set every D/41H and D/21H board in the system to the same IRQ level.

### Setting the Base Memory Address Segment (JP5 and JP6)

The default base memory address segment for the D/41H and D/21H is D000H (Hexadecimal). You can change the address segment to A000H, B000H, or C000H. Generally, you should use the default unless there are more than eight boards in your system or if other non-Dialogic devices in your system must use the D000H segment. Select the base address memory segment with jumpers JP5 and JP6 (see Figure 1) as follows:

| Base Address (Hex) | JP5 | JP6 |
|---|---|---|
| D000 (default) | removed | removed |
| A000 † | installed | removed |
| B000 † | installed | installed |
| C000 ‡ | removed | installed |

* Be aware of possible conflicts with devices that often use these segments: † video adapters; ‡ disk controller BIOS.

### Configuring the Offset Address (SW 1: 1, 2, 3)

The default offset address for the D/41H and D/21H is 0000H. Each D/41H and D/21H board in your system requires a unique address, so you must change the offset address on every additional D/41H and D/21H board. If you need to change an offset address, set the switches 1, 2, and 3 on SW1 (see Figure 1) as follows:

| Offset Address (Hex) | — SW1: Switches — 1 | 2 | 3 |
|---|---|---|---|
| 0000* (default) | off | off | off |
| 2000* | off | off | on |
| 4000* | off | on | off |
| 6000* | off | on | on |
| 8000 | on | off | off |
| A000 | on | off | on |
| C000 | on | on | off |
| E000 | on | on | on |

* Base memory address segment B000H does not support offset address settings 0000H – 6000H.

- While you can map only one D/41H or D/21H board to an offset, you can set multiple boards to consecutive offsets within a base memory segment as shown in the following example.

| Board | Base:Offset (Hex) | D/41H Lines |
|---|---|---|
| 1 | D000:0000 | 1–4 |
| 2 | D000:2000 | 5–8 |
| 3 | D000:4000 | 9–12 |

- Write the IRQ level and memory address settings below for use when installing system software:

| IRQ | Base | Offset | Lines/Board |
|---|---|---|---|
| | | | |