Getting Inside
The Digital X Bus

Disclaimer:

Use of this guide is entirely at the sole risk of the user. LOUD Technologies Inc. is not liable or responsible in any way for problems or failures that arise within the Digital X Bus as a direct result of the user disassembling the Digital X Bus. Even though the Digital X Bus has been designed to be compatible with "off the shelf" computer parts and components, the user assumes all risks associated with the action of changing or replacing such components or parts. Only an Authorized Mackie Service Center can perform such action and still be covered under the terms of the product warranty. Mackie Technical Support is available for assistance with this procedure at +1 800.898.3211 (toll free in the USA and Canada) or at +1 425.487.4333 from anywhere in the world.

IMPORTANT: The Digital X Bus contains static-sensitive components. Anti-static precautions ***must*** be taken before touching anything inside the Digital X Bus. ***Use an anti-static wrist strap when performing the procedures described here.*** These are available at most computer supply stores. The use of an anti-static mat is also recommended.

Introduction

The DXB is one of the world's first digital mixing consoles that can be opened, accessed, serviced, and/or have its hardware components upgraded by the end user. It is designed to utilize standard "off the shelf" personal computer components and parts that can be purchased over the counter at a wide variety of locations around the world. The Digital X Bus is also designed to support third party accessory products, the most notable of which being the Universal Audio™ UAD-1™ Powered Plugins™ Card that can provide additional DSP resources to the Digital X Bus processing power.

While this poses an enormous benefit in keeping the Digital X Bus current with rapidly advancing computer technology, it also poses a major risk to the customer if specific procedures are not followed beforehand and during that process. As a Digital X Bus user, you must understand and agree to assume all risks associated with this before you begin.

The purpose of the guide is to provide a detailed explanation and step-by-step instructions of how to get inside the Digital X Bus so the internal parts can be accessed. This Guide does not make any specific reference to any one part or component in particular…it is only an instruction of how to get inside the mixer, and close it back up after you have completed whatever it is you are trying to do internally.

What You Need

You only require three tools to perform this procedure:

- A new condition #2 Philips head Screwdriver (Figure A, below left).
- Flathead "Jeweler's" Screwdriver (Figure B, below right)
- Anti-static Wrist Strap

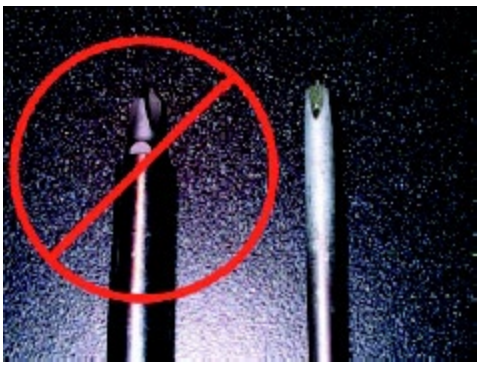

Figure A

Figure B

Before You Start

You'll need to do the following things before starting to open up your Digital X Bus:

- Make sure the console is completely shut off and unplugged from any AC power source.
- Unplug all audio and sync cables from the rear panel.
- Unplug any USB peripherals, mouse, keyboard, or anything other cables attached to the rear panel.
- Place the Digital X Bus on a surface larger than the console, away from any carpeting or static-prone area(s). This surface will need to extend beyond the rear side of the Digital X Bus by at least two-three feet (or one meter) of distance, because the rear panel will eventually slide out (like a drawer) and you will need to make sure it is supported and doesn't fall out of the mixer.
- Put on the anti-static wrist strap and connect the end of the cord to the metal chassis of the Digital X Bus (Figure C).

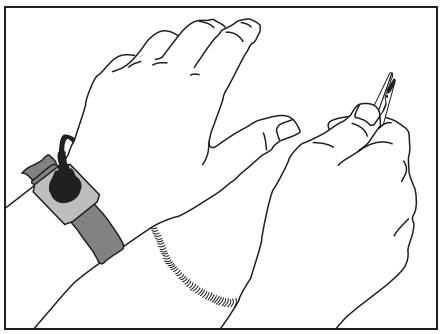

Figure C

Note: We recommend using an area that provides access to all sides of the Digital X Bus, such as a table in the middle of a room…or something similar.

Removing the Motherboard Access Plate

The first step is to remove the rectangular Motherboard Access Plate that is located on the left side of the rear panel of the Digital X Bus.

- Locate the ten small black Phillips Head screws that hold the Motherboard Access Plate to the rear chassis, as shown in Figure D (below)
- Using your Small #2 Philips Head screwdriver, remove the screws holding in the Motherboard Access Plate. Make sure to place the screws in a small cup, or some other small container so they all stay together.

Figure D

- Next, remove the Motherboard Access Plate and set it aside. The Plate may actually fall out by itself once all the screws are removed. If not, you can use the screwdriver to gently pry it off via one of the open screw holes…but be very careful if you do this so you don't damage your screwdriver or the screw holes.

Once you have removed the Motherboard Access Plate, you should be looking into the Motherboard Access Area. It should look like Figure E (below):

Figure E

Removing the COM Cable

Once you can see the Motherboard Access Area, look for a small rainbow or grey colored ribbon cable (called the COM Cable) attached to the motherboard's COM port in the lower left hand corner of the Motherboard Access Area. If you see it there, then you need to remove it.

Locate the two small silver screws on either side of the COM Cable connector. Using your Flathead "Jeweler's" Screwdriver, unscrew those two screws (as shown in Figure F) and disconnect the COM Cable from the COM port (as shown in Figure G):

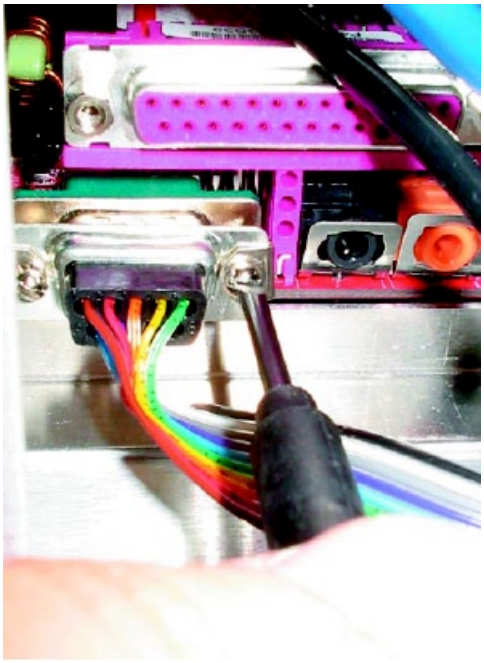

Figure F

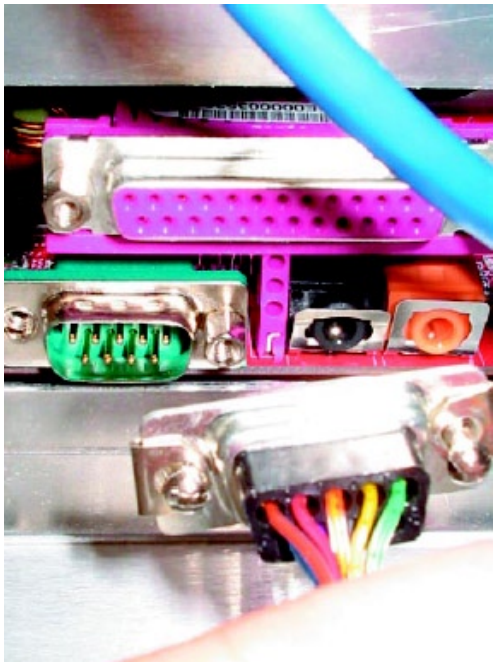

Figure G

Note: Make sure you do not pull on the COM Cable, or you may damage the header on the other end of that COM Cable.

Removing the Talkback Mic Cable

Just to the right of where you just removed the COM Cable, you'll notice a small mini (1/8-inch) cable plugged into a mini jack on the motherboard. That is the Talkback Mic Cable. Pull it straight out of its connection, as shown in Figure H (below):

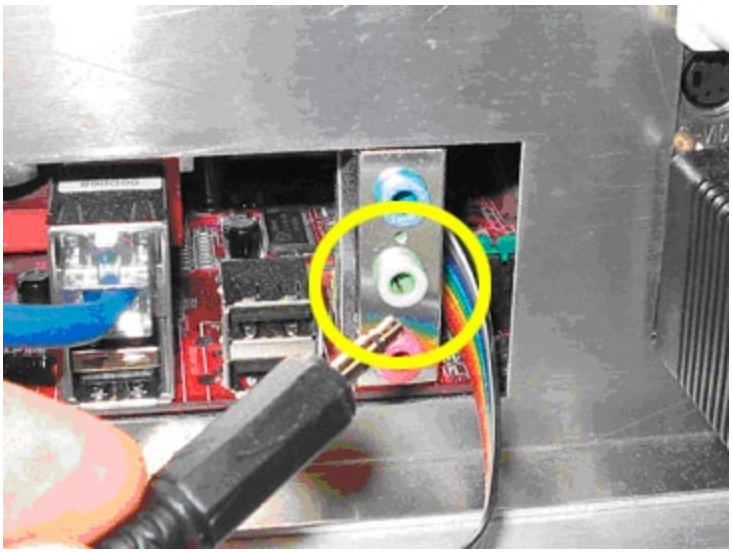

Figure H

Note: The yellow circle in Figure G shows the port that the Talkback Mic Cable should be plugged into when the console is in use.

Make sure that the Talkback Mic Cable end is loose and free from obstruction.

Removing the Video Cable Connectors

You have probably already noticed the two video cable connectors that are attached to the video card, as shown in Figure I (below):

Figure I

Unscrew both the top and bottom holding screws for each video cable connector. Make sure that both video cable ends are loose and free from obstruction.

Removing the Rear Chassis

Locate all the black Philips Head screws that lie along the outer-most edge of the rear chassis, as shown in Figure J (below):

Figure J

Using your small Small #2 Philips Head screwdriver, carefully remove each of the outer-most screws around the entire edge of the rear panel. Do not remove any screws that lie inside the outer most edge as shown in Figure K (below):

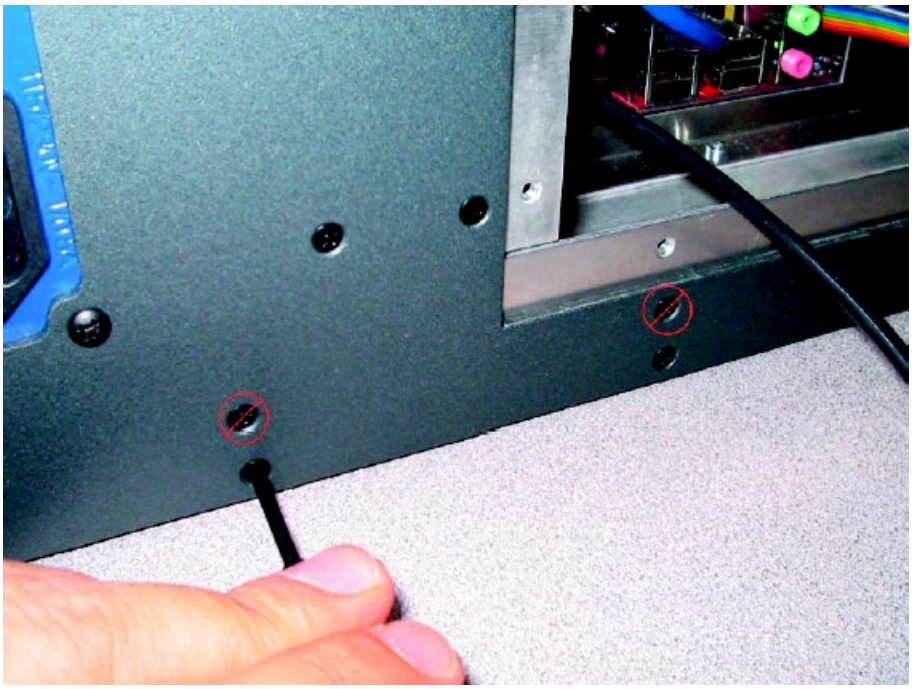

Figure K

Once all the screws have been removed, start to slide out the entire rear chassis from the rest of the mixer. You may need to thread both the COM and the Talkback Mic cables through the metal plate that separates the motherboard from the Motherboard Access Area. A good place to get some leverage is the inside lip of the Motherboard Access Area, as shown in Figure L:

Figure L

As you slide out the rear chassis, you will start to see the motherboard inside the mixer. Only pull the rear chassis out as far as you need to in order to access whatever component you want to access.

Re-Assembly

After you have completed whatever component changes or exchanges you wanted to do, you can re-assemble the rear chassis to the rest of the mixer by walking back through the steps outlined in this Guide. But to summarize, here are the main steps:

- Slide the rear chassis back in towards the mixer, making sure that the Video, COM, and Talkback Mic Cables are threaded back through to the Motherboard Access Area the same way that they were before you started.
- Screw in all the screws you removed in Step 8, starting with the ones along the bottom edge.
- Re-apply the COM, Talkback Mic, and Video Cables to their respective connectors.
- You can put the Motherboard Access Plate back on if desired. If you want to keep access to those ports, you're welcome to leave it off.
- Plug back in all cables and turn on the mixer.

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