What You'll Need
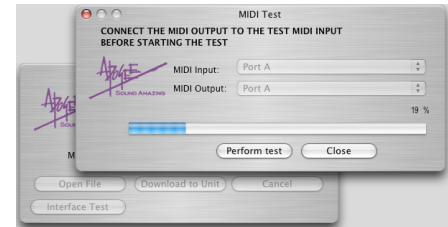- Standard MID Interface, including all drivers necessary for proper operation on a Mac OS X (10.2 or higher) or Windows XP computer.
- ApogeeUpdater application, available for Mac OS X and Windows XP.
- Firmware file – download the firmware file and the ApogeeUpdater from our website here: http://www.apogeedigital.com/downloads/
- Patience to follow each step precisely.

Verify X-HD Firmware Version
In most cases, the present X-HD firmware version is indicated on a label affixed to the board. After updating, it may be best to replace this label with a new one indicating the new firmware version.
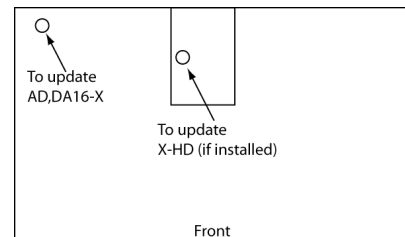
Verify MIDI Interface
- First, verify that the MIDI interface is operating correctly with your computer and operating system, following the interface manufacturer's guidelines.
- Open the ApogeeUpdater application and click on the **Interface Test** button.
- In the **MIDI Test** window (shown at right), select a MIDI Input and MIDI Ouput from the interface to be tested. Using a standard MIDI cable, physically connect the selected output to the selected input. This connection creates a loop through the interface, allowing the ApogeeUpdater to verify if MIDI data is correctly transmitted through the interface.
- Press the **Perform Test** button – progress of the test may be observed in the Status Bar and the percentage indicator above the Bar. If the unit passes, the massage **"MIDI Interface successful"** is displayed. If the message **"Your MIDI Interface failed the test"** is displayed, verify the proper operation of the interface with the computer and operating system.
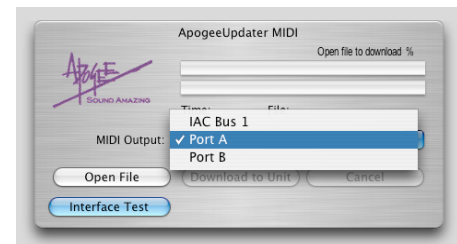
Make Connections
- Unplug the unit and remove the top cover.
- Connect a MIDI cable from the MIDI Interface's output to the X-HD's MIDI Input connection, found on the X-HD card. Do *not* use the MIDI connector found on an AD or DA16X's motherboard (see the diagram at right).

Load Firmware into ApogeeUpdater App
- After downloading the firmware file from the link above, unzip the file.
- In the ApogeeUpdater app, click on the **Open File** button and navigate to the unzipped file.
- Select the file and press **OPEN** (OPEN will remain grayed out until a valid .apo file is selected).
- Once the firmware file has been loaded, click on the **MIDI Output** drop-down selection and select the interface output connected above (as shown at right).
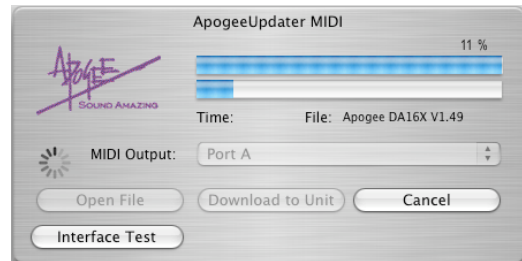
Set Host Interface

- Connect the Host Interface's AC Input. <u>Please be aware that lethal voltages are present.</u>
- Set the Host Interface Clock Source to **Internal** and Sample Rate to **44.1kHz**.

Update!

- In the ApogeeUpdater app, press the **Download to Unit** button.
- Update progress is displayed by the two Status Bars; the first bar displays the erasure of old firmware, while the second bar displays the installation of new firmware. Once installation of firmware commences, two LEDs on the X-HD card, one red and one green, will begin to flash. Once the update is finished, only the green LED should remain lit.
- If problems are encountered, simply reload the firmware and try again.

Reset Unit

- Reset the Host Interface by holding the **DOWN** button while powering on the unit. Remove the AC Input cable, detach the MIDI cable, and re-install the Host Interface's top cover.

Troubleshooting

- If the download fails for any reason:
    - check MIDI cable connections,
    - re-verify the interface using the **Interface Test**.
    - verify that the Host Interface is set to **Internal** clock, **44.1kHz** sample rate.
- If **Interface Test** fails but the interface appears to otherwise operate correctly, the interface may be incompatible with the ApogeeUpdater app due to proprietary "latency reduction" data in the MIDI stream.