CUBASE
Score

VST Native Audio

f o r   M a c i n t o s h

Installation

D E M O   v e r s i o n

Steinberg

Operation Manual by Ernst Nathorst-Böös and Ludvig Carlson.

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1

Introduction

Welcome!

Welcome to the Cubase Demo Installation on-line documentation!

Please use one of the methods described below to quickly find the desired information:

- **Use the Table of Contents provided by the Adobe Acrobat Reader program.**
- **Use the Adobe Acrobat Reader Search function.**
- **Click on a cross-reference (green text) to jump to the respective topic.**

It is of course possible to print out this document or parts of it.

Additional Information on how to use the Adobe Acrobat Reader program can be found in its on-line Help.

What this document contains

This chapter is an excerpt from the Cubase "Getting Started" book . It will help you determine what you need to use the program and guide you through installation.

● Since this is an excerpt from a bigger book, some references to other texts and chapters will not be accurate.

2

Requirements

About Cubase and VST

The program you are about to install is a demo version of Cubase Score VST. The letters VST stand for Virtual Studio Technology, which means that you will be able to record and play back audio as well as MIDI, without having to connect any external hardware.

● Cubase VST requires a Power Macintosh.

If your Macintosh is a 68k version (non-Power Macintosh), you will not be able to use this demo program. However, if you purchase the complete Cubase or Cubase Score package, this includes a 68k version of the program, allowing you to run the program on any Macintosh model (although without audio recording capabilities).

Also available is an expanded version of Cubase, called Cubase Audio XT. With this you can record audio using various other audio recording hardware. Contact your dealer for details.

This is what you need...

To be able to use Cubase VST at all, you need the following:

- **A Power Macintosh computer running System 7.5 or higher.**
  All desktop Power Macintosh models will work. Cubase will also run on Powerbooks with Power PC processors, but the number of audio channels will be heavily restricted, making Powerbooks a poor choice for audio work. This is due to the internal hardware design in the Powerbooks that were available as of this writing.

- **At least 7 MByte of available RAM when the computer is running.**
  Please note that this is the *minimum* memory requirement for Cubase VST. The *recommended* memory setting is higher (use the Get Info function in the Finder to check this). Assigning less memory to the program than the recommended value will restrict the number of available audio channels.

- **At least one MIDI Interface.**
- **At least one MIDI instrument.**
- **Any audio equipment necessary to listen to the sound from your MIDI devices.**
- **At least two MIDI cables.**
- **To print scores, you also need a printer.**

For Audio Recording

Audio puts higher demands on your computer than MIDI sequencing. To be able to work with audio in Cubase VST, you will need the following equipment in addition to the above:

- **If your Macintosh is running System 7.5.3, the correct Sound Manager extension is already installed, and you don't need to bother about this. If you are using an earlier System version, you need to install the Sound Manager 3.2 extension included with Cubase.**
It is important that you use the version of Sound Manager that is included with Cubase, or a later one. Earlier versions may not work properly. If the program detects an older version during installation, it will automatically be replaced.

- **A large and fast hard disk.**
It is also important that the installed hard disk driver is asynchronous. If in doubt, consult your computer dealer.

- **You also need to install a 2nd level cache memory in your computer (if it has not already got one).**
This should be at least 256 kByte large.

About the Number of audio channels

The number of simultaneous audio channels you will be able to get depends on a number of factors, e.g. processor speed, RAM and, most crucial, the speed of the hard disk. The following examples give you a hint of how many channels you could expect from your computer:

- **A Power Macintosh 7200/90 with enough free RAM for the recommended memory assignment and working against the internal drive (or an external 1 GB drive of equal specs) should be able to handle at least 16 audio channels and 32 activated EQs.**
  Often external hard disks are somewhat faster than the one built into the Macintosh, which may allow up to 24 channels with 24-32 EQs.

- **A Power Macintosh 9500/133 working against a large and fast external hard disk should be able to handle 32 audio channels and 64 activated EQs.**

MIDI Interface

Cubase supports the following interfaces:

Without OMS

Standard Interfaces

Cubase supports all standard Macintosh MIDI Interfaces, both those connected to a single port and those that can be connected to both the Modem and Printer port simultaneously (sometimes called "double interfaces" or "32-channel interfaces").

Mark of the Unicorn MIDI Time Piece (I and II) and MIDI Express

With one of these interfaces you have access to 128 or 96 MIDI channels respectively. Cubase even allows you to use four of these interfaces at the same time for a maximum total of 512 MIDI Channels.

Opcode Studio 4

Cubase supports this interface in its MTP (MIDI Time Piece) emulation mode. This means that Cubase thinks that you have a MIDI Time Piece, so everything said above about multiple interface and MIDI channels is true for the Studio 4 too.

Opcode Studio 5

Again, Cubase supports this interface in its MTP mode. But here, one Studio 5 interface emulates *two* MIDI Time Pieces for a total of 240 MIDI Channels.

● See the ReadMe file on one of the Cubase disks for more information on how to set up your Studio 5 for use with Cubase.

With OMS

If you run OMS, Cubase can be used with any MIDI Interface that can be installed with the OMS Setup program. This for example includes most of the interfaces listed above. There's no real limitation to the number of MIDI Channels. Again, the only requirement is that you have all the necessary software to install the interface in OMS Setup.

3

Installation

Getting the Computer ready

Before you proceed you should have the computer set up:

- **Install System Software and make sure all basic functionality seems to work as intended.**

- **Study the manuals that come with the computer and familiarise yourself with concepts such as file handling, clicking, double clicking, dragging etc.**

About Printers

If you intend to print scores, install the printer. Use the software included with the printer or some other software you already have installed (such as a word processing application) to verify that the printer works as expected.

Do you need the Apple MIDI Manager?

Although Cubase supports the Apple MIDI Manager, it does not in any way require it. We recommend that you don't use the Apple MIDI Manager when you run this demo version.

● The text in this chapter describing how to set up and activate MIDI interfaces assumes you do *not* use the Apple MIDI Manager.

Do you need to install OMS?

OMS is short for Open Music System – a joint effort by various music software companies, including Opcode Systems and Steinberg. This system software adds some capabilities to your MIDI system, which may be useful, mainly if you are running several different programs or hardware devices simultaneously. However, Cubase does not require OMS in any way. When using this demo version, we assume you don't use OMS!

Connecting the MIDI Interface

Installation instructions for the MIDI Interface should come with the interface. However, here's an outline of the necessary steps:

One standard Macintosh MIDI Interface

1. **If you only want use one "simple" interface, decide which serial port on the computer you want to connect it to.**
- If you don't have any other equipment connected to the computer, choose the Modem port.
- If you already have something connected to the Modem or Printer ports, connect the MIDI Interface to the other port.

The symbols for the Modem and Printer ports on your Macintosh.

- If both ports are occupied, there may still be a way to connect your MIDI instrument(s). Many MIDI Interface have "Thru" or "Out" connection for other devices and a "Thru" or "Select" switch. In one position this routes the signals to the MIDI interface. In the other position it lets the signals pass through to the interface to the other device.

2. **Make sure the switch described above is set to the position where the MIDI interface receives the signals.**

3. If your interface has a "clock rate" setting (most don't) which can be switched between 0.5 MHz, 1 MHz and 2 MHz, set this to 1MHz.

4. If the interface has a power supply and/or a power switch, turn it on.

Two standard Macintosh MIDI Interfaces or one "Double" MIDI Interface.

You can use two "simple" MIDI interfaces at the same time, one connected to each port, for a total of 32 MIDI Channels. Some vendors pack two MIDI interfaces into one casing, which is pretty much the same as using two separate standard interfaces. We refer to these as "double interfaces".

1. Connect the interface(s) to both the Modem and Serial ports.

2. Make sure the interface is set to receive MIDI signals, that the clock rate is 1 MHz (if it can be set at all) and turn on power.
See above for details.

Multi-Port Interfaces

A number of multi-port interfaces can be used, as listed in the previous chapter. Installation instructions are included with the interfaces.

● Do not confuse multi-port interfaces with standard interfaces that have more than one MIDI Output! On a multi-port interface, each Output carries *different* MIDI information. On a standard interface with multiple outs, all Outputs carry *the same* information.

1. **If you have one multi-port interface, connect it to either the Modem or Printer port.**
   Which you choose is determined mainly by what other equipment you have connected. If both ports are available, use the Modem port.

2. **If you have two interfaces, connect one to each port.**

3. **If your interface has a setting which can be switched between "1MHz" and "Fast", set it to "Fast".**

4. **Make sure the interface is set to receive MIDI signals.**

5. **Turn on power to the interface if needed.**

6. **Cubase expects the interface to be or to emulate a MIDI Time Piece. If needed make sure it is set to its "MIDI Time Piece Emulation" mode.**
   This is done using the front panel or via its included software.

7. **Quit all interface setup software.**

Connecting the MIDI Equipment

Now its time to set up your MIDI equipment, if not already done.

The descriptions below describe a few setup examples for small MIDI systems. You might need or want to hook things up differently!

Example 1 – Using the same Keyboard for recording and playback

1. **Connect the MIDI Out of the instrument to a MIDI In on the MIDI interface.**
For basic use it doesn't matter which MIDI In you use, if you have several. Cubase can record from both the Modem and Printer ports and from all inputs on a multi-port interface.

2. **Connect a MIDI Out on the interface to a MIDI In on the instrument.**
Your MIDI Interface may have more than one MIDI Out. On smaller MIDI interfaces, the Outputs all carry the same information, so it doesn't matter which you use. (On larger, multi-port interfaces, the MIDI Outputs are all separate, that is, they carry *different* information.)
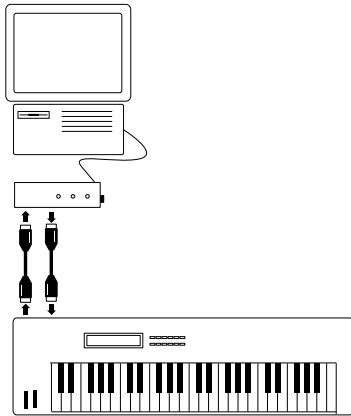
←▭ MIDI In
→▭ MIDI Out

The connection above allows you to feed the computer with the signals from the keyboard, during recording. It also allows you to send MIDI signals from the computer to the instrument during playback.

Example 2 – Adding more devices using the MIDI Thru connectors on the Instruments

←▭▶ MIDI In
➡▭▶ MIDI Out
⇨▭▶ MIDI Thru
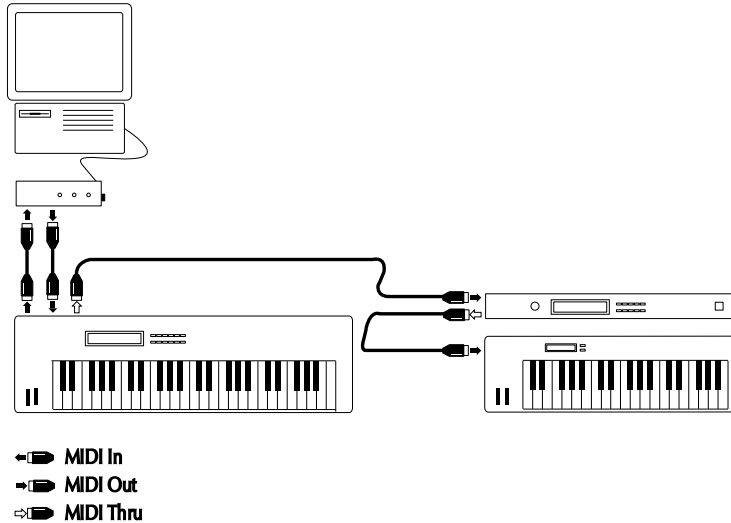
You might want to use more instruments for playback. These can then be connected to the MIDI Thru of each instrument. In this hook-up, you will always play the first keyboard when recording. But, thanks to the Thru connection, you can still use all your devices for providing sounds.

### Example 3 – Adding more devices using a Thru box

If you have more than three instruments we recommend you to always use a Thru-box instead of the Thru connectors on the MIDI instruments, if possible. If you do, you will need to connect as indicated in the picture below. In functionality, this hook-up is identical to the previous. The difference is that it ensures that the MIDI signal is not degraded in any way by passing a "daisy-chain" of MIDI Thru connectors.

←▭ MIDI In
→▭ MIDI Out
⇨▭ MIDI Thru
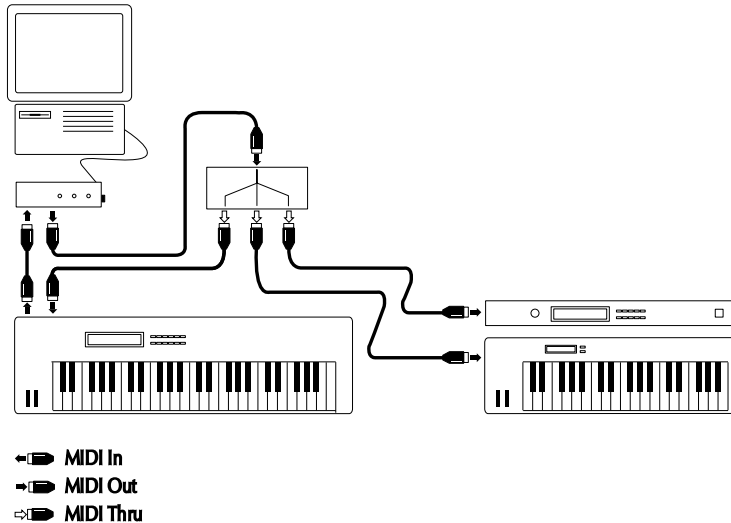
**Example 4 – Using a separate Keyboard and Sound Module(s)**

If you have a separate MIDI keyboard, that produces no sound, and sound modules without keyboards, you should hook things up more or less like in example 1 or 2. Using Cubase's MIDI Thru feature (described later) you will still be able to hear the sound from the sounds modules while recording.

This hook-up is also the one you should use if you use other types of "MIDI Controllers" for feeding MIDI to the computer – like a MIDI guitar, MIDI drum pads or a MIDI wind instrument – that don't produce any sound of their own.

⬅◼ MIDI In
➡◼ MIDI Out
⇨◼ MIDI Thru
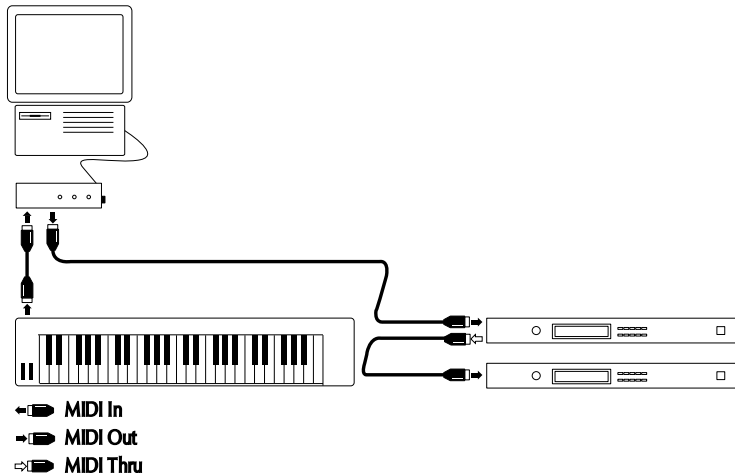
Example 5– Using two MIDI Interfaces

If you have two MIDI interfaces you can connect as in the picture below. The main keyboard is used for all recording, since it is the only device which has its MIDI Out connected to a MIDI In on the interface. However, Outputs on *both* interfaces are connected to MIDI Inputs on the devices providing sounds (including the keyboard used for recording).

←▇ MIDI In
→▇ MIDI Out
⇨▇ MIDI Thru
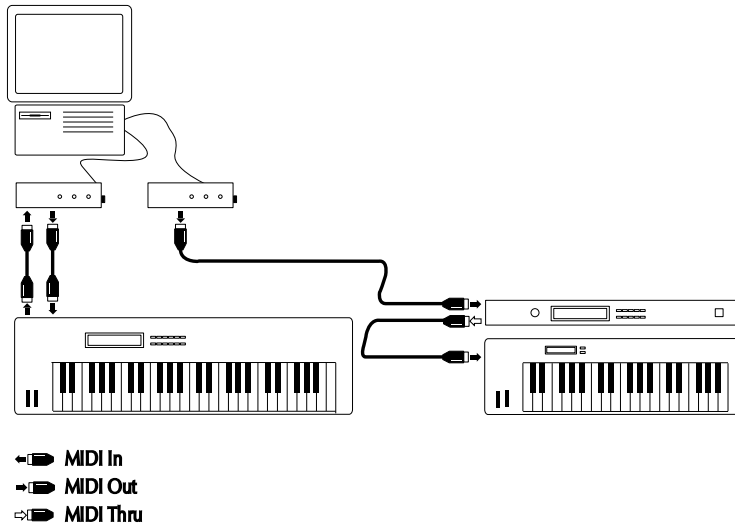
All the previous hook-ups have been limited to 16 MIDI Channels (16 different sounds in your MIDI recordings). This setup however, allows you to play back on 32 MIDI Channels – 16 from each MIDI Interface.

Example 6 – Using a Multi-port Interface

If you have a multi-port interface, there are many ways you can connect your equipment. In the example below, two keyboards can be used for providing MIDI signals to be recorded, but they can also be used to play back sounds. In addition, three sound modules are used for providing sounds.
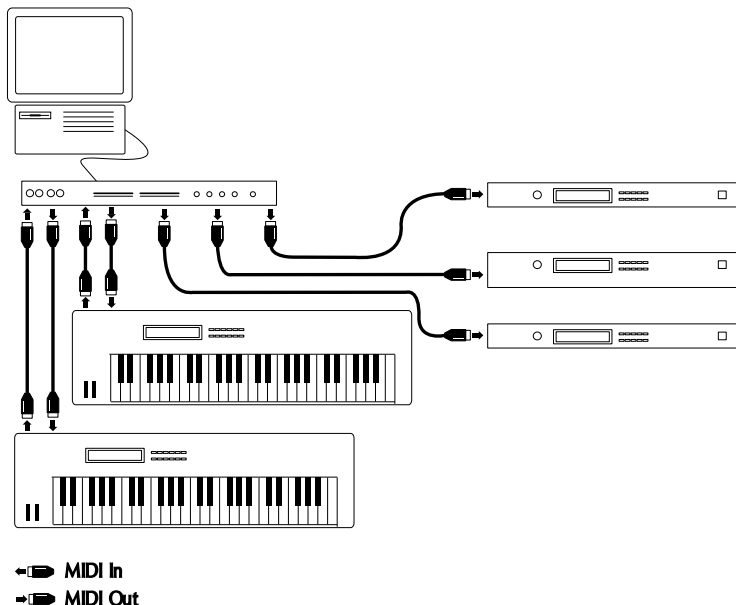
←▭ MIDI In
➡▭ MIDI Out

In this hook-up each instrument uses its own MIDI port on the interface. This lets each device use its own set of 16 MIDI Channels. In the example above, 80 separate MIDI Channels can be transmitted from Cubase (if your MIDI instruments can handle 16 MIDI Channels each!).

Preparing the Computer for MIDI and Audio work

- **Defragmenting the Hard Disk**
  If you plan to record audio on a hard disk where you have already stored other files, now is the time to *defragment* it. Defragmentation reorganizes the physical allocation of space on the hard disk in order to optimize its performance. It is done with a special defragmentation program. Please consult your computer dealer for information on what software to use.

● It is crucial to the audio recording performance that your hard disk is defragmented.

- **Memory Assignment**
  You might want to assign Cubase more memory than the standard setting, to be able to record more MIDI Events and audio channels. This is done using the Finder's "Get Info" command, as described in your Macintosh documentation.

- **Turn off Virtual Memory.**
  The VST version of Cubase will not run with Virtual Memory activated. If you forget to deactivate it, the program will show an alert message on start-up and then automatically quit.

- **Check that the Modern Memory Manager is activated in the Memory Control Panel.**
  You can run the program without the Modern Memory Manager, but this will result in slower screen updates and window handling.

- **Turn off File Sharing.**
  File Sharing may use processor power and "block" disk accesses, thereby slowing down the apparent performance of the computer.

  For changes in the memory settings to have any effect, you have to restart your Macintosh. You may also find it convenient to turn some other extensions off, to maximize the available RAM for Cubase and make sure as much of the processing power as possible remains for the program.

- **Open the Sound control panel and select the audio input you want to use when recording in Cubase.**
  The options depend on which computer you are using. Common options would be the built-in stereo microphone input and audio from the internal CD-player.

● Please note that you cannot change input source in the Sound Manager while Cubase is running!

- **While you have the Sound control panel open, turn down the volume for your System Alert sounds to a moderate value.**
This has nothing to do with Cubase's performance; it is simply a precaution, since you will hear both your recorded audio and the System sounds from the same audio equipment when you work. It's pretty annoying to get a deafening "quack" sound from the speakers while listening to your subtle vocal recording.

Installing the Software

Now is the time to install the actual program.

1. Quit all applications so that you return to the Finder.

2. Disable any Virus protection software.
This is done by using Control Panels, or possibly by removing one or more Extensions and restarting the computer.

3. Put the Program disk in your disk drive. Locate the "Installer" icon (*not* "Install Cubase") and double click on it.
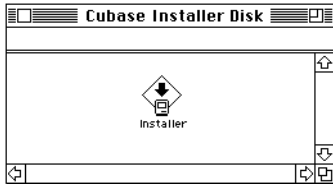
4. In the dialog box that appears, click on the Install button.
This performs a standard installation on your startup hard disk. You can also decide yourself which files to install, see Custom Installation, below.

5. Follow the instructions on screen.
During the installation you will be prompted to insert other disks.

6. When the installation is finished, you may be requested to restart your Macintosh. Do so.

The program has now automatically created a Cubase folder on the top level of your hard disk (if one doesn't exist already). It has put the relevant files there and also installed some files in your System folder.

7. Locate the new folder on your hard disk, open it and examine its contents.

● Some of the files that are in the folder now are absolutely necessary to run the program. Do not move or delete them. However, you can use the Finder to move the whole folder to any place on any of your hard disks.

8. Reactivate any Virus protection software you previously disabled.

Custom Installation

In the startup dialog box you have the option of clicking Customize and deciding yourself which files to install. Only use this option if you are sure what the files are for.

Quadra 900/950 and IIfx Users

If you have one of these computers, you need to use a special control panel to make settings for your computer's serial ports, or Cubase will not run (in fact – the computer crashes!):

1. **Open the Serial Switch Control Panel.**
   This was installed with Cubase.

2. **Select the "Compatible" option.**

3. **Close the Control Panel and restart your Macintosh.**
   If the Control Panel was already set to "Compatible" you don't need to restart.

Start Cubase!

1. Locate your Cubase program icon (in the new folder on the hard disk, *not* on the floppy)

2. Double click on the icon to launch the program.
A startup dialog appears. Cubase starts, and displays an Arrange window.

Setting up and checking MIDI

## Making sure the Serial Ports (Modem and Printer Port) are available

Disabling AppleTalk

Some printers and network utilities use the Printer port for something called Apple-Talk. If you plan you use your Printer port for MIDI you must make sure AppleTalk is deactivated.

1. Open the Chooser and activate the printer or network symbol that uses AppleTalk.

2. Use the on-screen options to deactivate AppleTalk.
The Printer port can now be used for MIDI but not for software that requires AppleTalk. To use that software you must reactivate AppleTalk again.

The Apple Laserwriter II is an example of a device that requires AppleTalk.

To use the Printer port for MIDI you must click this button (deactivate AppleTalk).
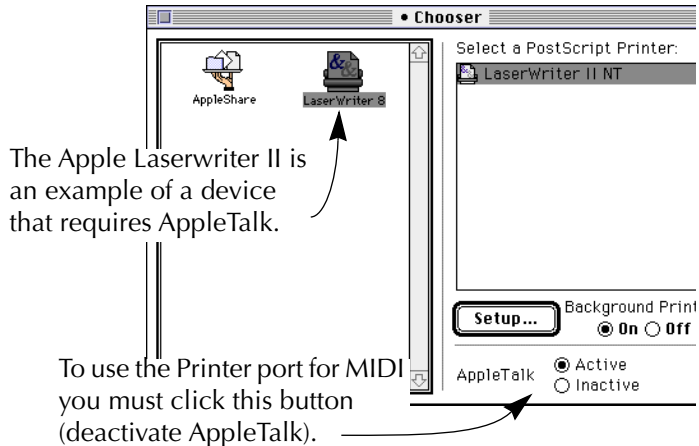
3. Restart the computer to make sure the changes take effect.

Disabling software that uses the Modem Port

Some communications (modem) and faxing software that run "in the background" require the Modem port, which means it can't be used for MIDI. If you plan to use the Modem port for MIDI you must temporarily disable that software.

If you have an Internal Modem

If your computer with a built in modem, you may have communications software that "blocks" the Modem port for MIDI. Please disable this software if you want to use the Modem port for MIDI.

Making Interface settings

1. Pull down the Options menu and select MIDI Setup.

2. Use the two MIDI interface pop-ups to tell the program what interface(s) you are using.
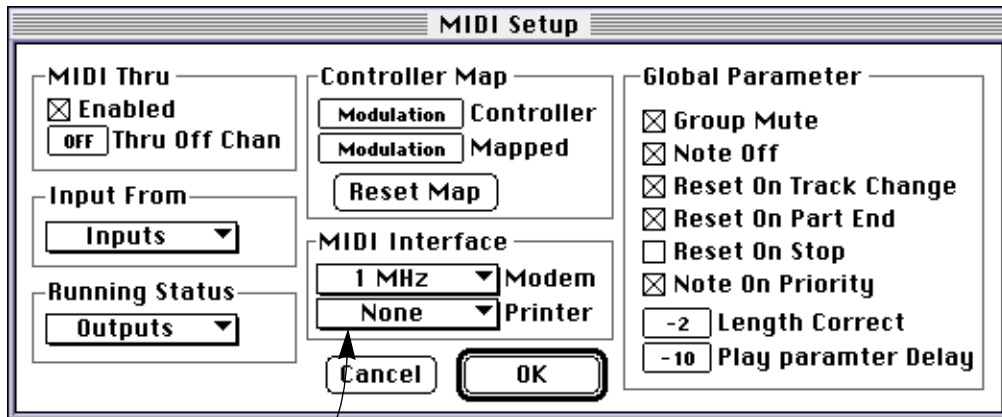
The MIDI Interface pop-ups

The table below lists some of the most common MIDI interface combinations

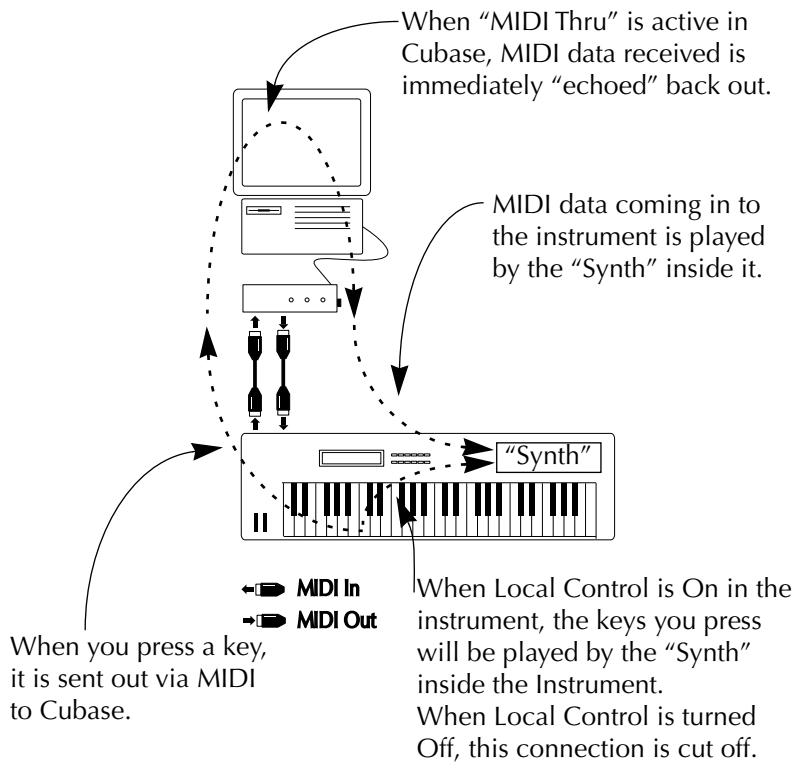| Interfaces used	Modem	Printer
One standard interface on the Modem Port only (set to 1MHz if needed).	1 MHz	None
One standard interface on the Printer port only (set to 1MHz if needed).	None	1 MHz
Two standard interfaces connected to each port, or a double type interface connected to both ports (set to 1MHz if needed).	1 MHz	1MHz
1 MIDI Time Piece or Studio 4 connected to the Modem port.	1 MTP	None
2 MIDI Time Pieces or Studio 4s connected to the Modem port.	2 MTPs	None
1 Studio 5 connected to the Modem port.	2MTPs	None

For more information on how to set up the Opcode Studio 5, see a ReadMe document on one of the Cubase disks.

● If you use the Apple MIDI Manager or OMS, setting up the MIDI interfaces is done differently, see the respective Appendix.

Setting MIDI Thru and Local On/Off

In the MIDI Setup dialog box, you will find a setting called MIDI Thru which can be enabled or not. This is related to a setting in your synthesizer called something like "Local On/Off" or "Local Control On/Off".

- If you use the same instrument for recording into Cubase and for playing back one or more sounds (as in all hook-up Examples except number 3, illustrated earlier in this chapter), MIDI Thru should be activated and that instrument should be set to Local *Off* (sometimes called Local Control On/Off – see the instrument's operation manual for details). This will let the MIDI signal from the keyboard get recorded into Cubase and at the same time re-routed back to the instrument so that you hear what you are playing, without the keyboard "triggering" its own sounds.

When "MIDI Thru" is active in Cubase, MIDI data received is immediately "echoed" back out.

MIDI data coming in to the instrument is played by the "Synth" inside it.

"Synth"

← MIDI In
→ MIDI Out

When you press a key, it is sent out via MIDI to Cubase.

When Local Control is On in the instrument, the keys you press will be played by the "Synth" inside the Instrument.
When Local Control is turned Off, this connection is cut off.

● You should not have Local Control turned on in your instrument if you have MIDI Thru activated in Cubase, since this will make every key you press play twice – once directly in the instrument and once via MIDI. This will lead to reduced polyphony and a "thinner" or "flanged" sound while recording.

• If you use a separate MIDI keyboard, not producing any sounds in itself, as in Example 4 on , MIDI Thru in Cubase should also be activated, but you don't need to look for any Local On/Off setting in your instruments.
• The only situation where MIDI Thru should be *deactivated* is if you use Cubase with only one keyboard instrument and that instrument can't be set to Local Off mode.

Checking your Setup

1. Close the MIDI setup dialog box, by clicking OK.

2. Play your MIDI keyboard or other device.

3. Check the "In" box on the Transport Bar so that you are sure that Cubase receives MIDI data.

4. If you have Thru activated, the "Out" box just below it should indicate Output of data.

When this lights up, Cubase is transmitting MIDI data.

When this lights up, Cubase is receiving MIDI data.

5. Make sure you hear the instrument that you are playing.
If not, check your MIDI connections and Cubase's MIDI Thru setting. Also check the audio equipment and audio connections.

6. If you listen to the sound of the same instrument as you are playing, make sure the sound from the instrument doesn't sound "thin" or "flanged".
If it does, you have probably not set the instrument to Local Off. This means that every key you press is played twice, once directly on the instrument and once via MIDI.

Installation done! Where do I go next?

There are basically two things we suggest you do:

- **Check the other documents and try out the different possibilities as you go along.**

- **Examine your Cubase directory and possibly other disks included in this package for files that might be useful (or even essential) to you.**

Other files included with the Program

Included with the program you will find a number of useful additional files:

Drum Maps

Included with the program you will find ready-made drum maps that allow you to refer to the drum sounds in your equipment directly by name, in Cubase's Drum editor.

Mixer Maps

These allow you to control basic MIDI functions like volume and panning, graphically, from within Cubase. They also allow you to access special functions in various MIDI equipment, from the computer screen instead of from the instrument's front panel. The Mixer even allows you to automate all such changes.

Driver Files

With the program comes driver files for accessing MIDI devices directly from Cubase. An example of such a driver files is the Digidesign SampleCell driver which makes a SampleCell card in your computer appear as a MIDI Output in the Track list, without any need for additional software. You will also find driver files for various tape recorders, for use with Tape Tracks.

Other Example Files

Included with the program are various example files for different sections of the program, simply to give you something to get started with.