



# Audio Media III

**Steinberg**

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# Introduction

Welcome to the Cubase Audio XT AudioMedia III on-line supplement!

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 supplement to the Audio Recording book describes the differences between audio recording in Cubase (or Cubase Score) and in Cubase Audio XT (with an AudioMedia III system).

If you find any discrepancies between the main Audio Recording book and this document, it is this document you should rely on, since using Cubase Audio XT with the AudioMedia III is slightly different from other versions.

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- This addendum assumes you are familiar with handling Cubase in general. Below follow only brief explanations of many procedures that are common to all Cubase versions. Please refer to the main manuals for these details.
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## AudioMedia III Support

Cubase Audio supports all of AudioMedia III's main features: multi-track recording, routing, EQ and mixing. In addition you will find functionality not included in the original Session software, for example off-line DSP functions.

# Requirements

The following equipment is needed, in addition to what is needed for MIDI recording:

- **A computer system that meets Digidesign's requirements for using an Audiomedia III card.**

See the Audiomedia III documentation for details.

- **An AudioMedia III card and the included Session software.**

# Installation

To install the AudioMedia III hardware and Cubase Audio, proceed as follows:

## Preparations

First go through the following steps in the Installation chapter in the getting Started book:

- **Windows 95**
- **Getting the Computer ready**
- **About Printers**
- **Installing the Copy Protection key**
- **Installing the MIDI Interface/synthesizer driver**
- **Connecting the MIDI Equipment**

## **Installing the AudioMedia III**

- 1. Install the Digidesign AudioMedia III hardware as described in the AudioMedia III manual.**
- 2. Install the Digidesign Session software as described in its manual.**
- 3. Connect your studio as described in the AudioMedia III manual.**
- 4. Run the Session software and make some trial recordings to verify that the system operates properly.**  
This is also a good time to familiarize yourself with some of the AudioMedia III concepts. These are described in depth in the AudioMedia III manual.

## **Installing Cubase Audio XT**

- 1. Go back to the Getting Started book and perform the first seven steps in the section “Installing the software” on page 25.**
- 2. In the dialog that appears, select the AudioMedia III option and click OK.**  
If you later need to switch to another hardware system, see [page 11](#).

**3. In the next dialog, click Install.**

This searches your hard disk(s) for a file called “am3\_dsp.dll” which was installed with the Digidesign Session software. It then copies this file to the Windows directory. This file is required to be in the Windows directory for Cubase Audio XT to work with the AudioMedia III.

**4. Continue from step 8 on page 26 in the Getting Started book.**

## **Making MIDI Settings**

Again, please return to the Getting Started book’s Installation chapter and perform the following steps:

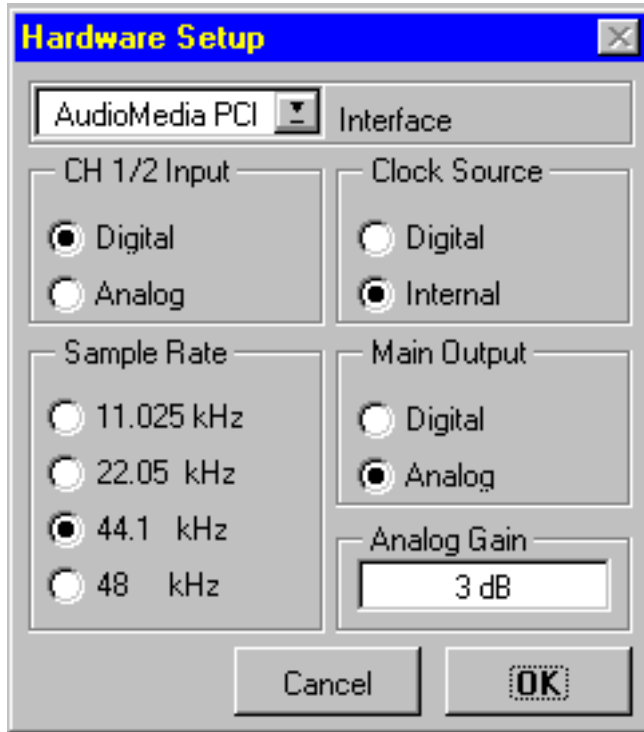
- **Start Cubase!**
- **Checking MIDI Interface Installation**
- **Saving the Settings**



## Making Audio Settings

Now it is time to make some settings for your AudioMedia III system.

1. Pull down the Audio menu and select “Hardware Setup...”.



The Hardware Setup dialog.

- 2. Set up the options in the dialog as desired, and close it by clicking OK.**  
These settings are essentially equivalents of settings in the Session software. If you are not familiar with these, look up [page 53](#) in this supplement.
- 3. To make sure the card is set correctly, select Reset Device from the Audio menu.**
- 4. Select “Save As” from the File menu, select the File Format “Songs (\*.ALL)”, specify the file name “def.all” and save the file in your Cubase Audio directory.**  
This way, the settings you just made will appear automatically when you launch Cubase Audio.

## **Where do I go next?**

Now, please proceed to the Audio Recording book included in this package. For differences between Cubase (Score) and Cubase Audio XT, see the following text.

# Switching to another Audio Hardware System

If you later want to run Cubase Audio XT with some other audio hardware than the one specified at installation, there are two ways:

## By reinstalling

This is the safest and simplest way. Simply reinstall the program, and specify the same destination directory. For files you might have changed, like the def.all startup Song, you will be asked if you want to keep the version already installed or install a new one.

## By changing the cubaseda.ini

This is the more advanced option.

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- If you don't feel confident about changing the "cubaseda.ini" file, please use the reinstall method described above.
- 

In your Cubase Audio XT directory you will find a folder called "audio". Inside this is *one folder for each* of the audio hardware systems that Cubase Audio XT supports. Inside each of these folders is a file called "adevice.dll". Which audio hardware the program uses depends on which of these "adevice.dll" files that is loaded on startup.

The instruction on which file to load is found in the “cubaseda.ini” file. If you change this, Cubase Audio XT will use another system.

Proceed as follows:

- 1. Make sure Cubase Audio XT is not running.**
- 2. Open a text editor, for example Notepad.**
- 3. Locate and open the file “cubaseda.ini”, located in your Cubase Audio XT folder.**
- 4. Locate the PREFS section.**
- 5. Change the path on the “AudioDevice=” line so that it points to the directory corresponding to the audio hardware you now want to use.**
- 6. Save the file.**
- 7. Launch Cubase Audio XT.**

Providing the path is typed in correctly, the other hardware will now be used.

# Audio Routing and Audio Channels

## Channels

The AudioMedia III is an eight channel system, that is, eight different recordings can be played back at the same time.

Each channel is monophonic, that is it can only play back one mono recording. For a stereo recording you need to use two channels.

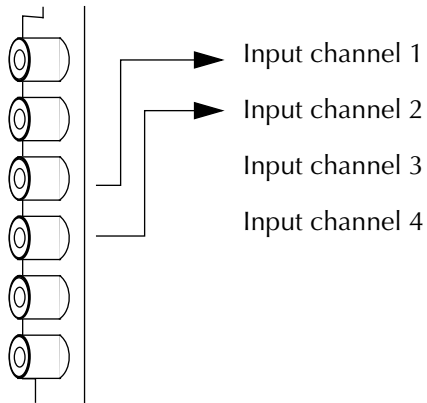
## Inputs

To understand this section completely you must understand the difference between the *physical inputs* and the *input channels* on the AudioMedia III card.

The card has four *physical inputs*. Two of these inputs are on analog connectors. The other two is on one digital S/PDIF connector, which accepts stereo signals, hence it takes two inputs, the left and right channel.

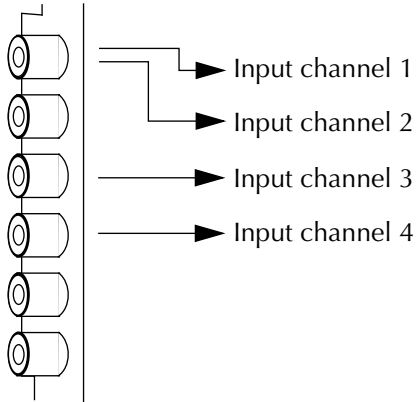
The physical inputs are connected to four *input channels* as follows:

- If the “CH 1/2 Input” setting in the Hardware Setup dialog is set to Analog, the analog inputs are sent to input channel 1 and 2 and the digital inputs are not used at all.



- If the “CH 1/2 Input” setting is instead set to “Digital”, the digital inputs are sent to input channel 1 and 2 and the analog inputs are sent to input channel 3 and 4.

This is the more flexible mode, since you can then have sources connected to all inputs and just use the “Record Sources” dialog (described below) to set up which inputs to actually record.



This leads to the following combinations of signal routing and settings:

- **If you plan to only record analog signals, we recommend you to leave the “CH 1/2 Input” setting at Analog, which means the connected signals will always appear on Input Channels 1 and 2.**
- **If you plan to only record digital signals, we recommend you set “CH 1/2 Input” to Digital, which means the connected signal will appear on input channel 1 and 2.**
- **If you plan to sometimes record analog and sometimes digital signals (or both at the same time), set “CH 1/2 Input” to Digital. The digital signals will use input channel 1 and 2 and the analog signals will use input channels 3 and 4.**

## **Routing Input Channels to Audio Channels**

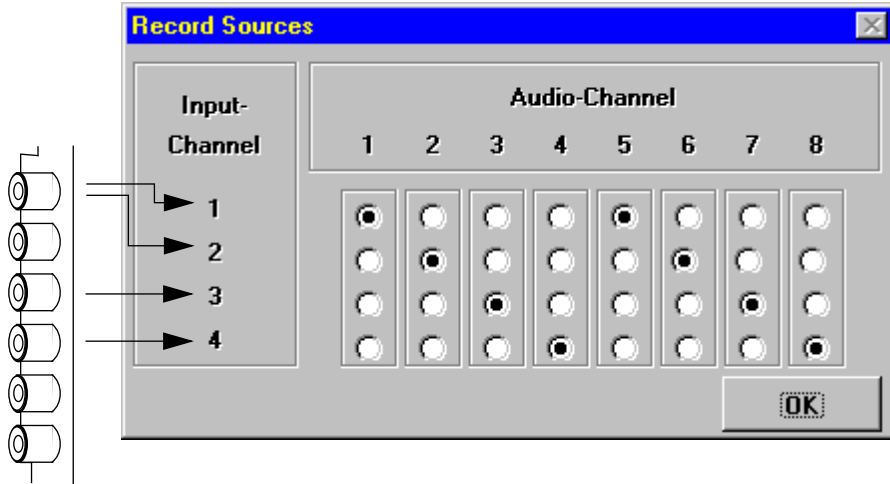
The text above described how the physical inputs are connected to the input channels in the Audiomedia card. To record in Cubase, you need to connect the card input channels to Cubase’s *audio channels* – recordings in Cubase always happen on a specific audio channel.

As there are four input channels (as described above) and eight audio channels (eight recordings can be played back simultaneously) you need to specify which input channel gets recorded on which audio channel, as follows:



**1. Select “Record Sources...” from the Audio menu.**

A window appears which allows you to connect input channels to Cubase audio recording channels.



The Record Sources window and the relation between physical inputs and input channels when “CH 1/2 Input” is set to “Digital”.

**2. To set up the connections, click in the “grid” made up by the rows and columns.**

- In the vertical column to the left you find the Input channels.

- The columns correspond directly to the audio channels in Cubase Audio XT. If you for example route an input channel to “Audio Channel 3”, it can be recorded on a Track set to Channel (Chn) 3 in the Arrange window.

## Output Routing

The Audiomedia III card allows for two types of audio routing.

- If the “Main Output” setting in the Hardware Setup dialog is set to Analog the analog outputs are contain a stereo mix of the eight audio channels. In addition, the digital outputs can be used as effect sends, as described on [page 42](#).
- If the “Main Output” setting is instead set to Digital, the digital outputs will contain the main stereo mix. The analog outputs can then be used as effect sends.

# Recording and Playback

## Specifying a recording file

Record file names and locations can be specified in two places:

- In the Inspector, by clicking the “Filename” button.
- In the Monitor window, by clicking the “Filename” button, at the top of the window, that corresponds to the channel you plan to record on.

A file set up for recording as displayed in the Inspector and in the Monitor



Either way, a standard file dialog appears, where you can specify a name and location for the file.

- 
- See the AudioMedia II documentation for restrictions on which hard disk(s) that can be used for audio recording.
-

# Monitoring

The AudioMedia III provides monitoring, that is it allows you to control how the audio passes through the unit when recording.

If you connect a source for recording, to the inputs of the AudioMedia III, and activate monitoring for that channel, the input signal(s) for that channel are routed directly to the Mix. With monitor activated, (see below) you will then hear *only* the “live” input, in the Mix. This allows you to listen to the input signal when preparing for, and actually performing the recording.

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- If you play back a Track and don't hear anything, make sure Monitoring is not activated for that Channel!
- 

When you *deactivate* monitoring for a channel, its input are also routed to the mix, but now, the level is controlled by the Input/Return faders in the “Main” mixer map. This allows you to use the inputs on your audio interface as effect returns during mixdown (see the AudioMedia III manual and [page 42](#) for details).

## Manual monitoring

There are two ways to *manually* activate and deactivate Monitoring:

- **With the right Track selected, click the Monitor button in the Inspector.**
- **Click the corresponding Monitor button in the Monitor window.**

## Automatic Monitoring

If a Track is set up for recording (a file prepared, Track selected etc.), monitoring is *automatically* activated for that channel, regardless of the Monitor button's state.

## Recording Levels

For all references to recording level adjustments, see your AudioMedia III manual. However, please note the following two points:

- When monitoring is activated, the signal passes through the A/D and D/A converters on the AudioMedia III, which means you can listen to the output of the unit to check for any degradation in signal quality due to improper levels.
- There is an overall input level adjustment control in the Hardware Setup dialog.

## Stereo and Multi Track recording

The AudioMedia III is essentially a mono system, that is, each channel can only play back a mono recording. However, you can record on more than one channel at a time. This can be used to create stereo and other multi-channel recordings.

Multi Track recording is performed as described in the Audio Recording book. The following rules apply:

- You must set each Track you want to record onto a different channel number and activate recording in the “R” column for each of them.
- The channel numbers settings correspond to the recording channels, just as with single Track recording. By using the routing window, each channel can essentially record from any input channel.
- Monitoring and activating recording is done just as with single Track.
- One mono file is created per Track you record on.



Four Tracks set up for recording.

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- With the AudioMedia III, you should not *record* on an Audio Track set to Channel “Any”.
-

## Editing Stereo and Multi-Track Recordings

There are basically two ways to get all the recordings in a stereo or Multi Track recording into the Audio Editor at the same time:

- **Select the Parts (on multiple Tracks) and then open the Audio Editor.**  
See the main Audio Recording book.
- **Perform a Mixdown and then open the new composite “Any” Track in the Audio Editor.**  
See the chapter Arrangement Editing in the Audio part of the Cubase manual.

## Punch In and Out

You can not punch in “on the fly” (activate recording manually during playback) with the AudioMedia III. You must either activate recording from “Stop mode”, or set up the Left/Right Locator and perform an automatic punch-in/out.

# Standby Record

Standby Record allows you to record audio files to your hard disk without setting up Tracks or activating Play. This is practical for example if you want to capture one or more audio samples off a CD or tape, before adding them to a certain Track.

## Recording Inputs

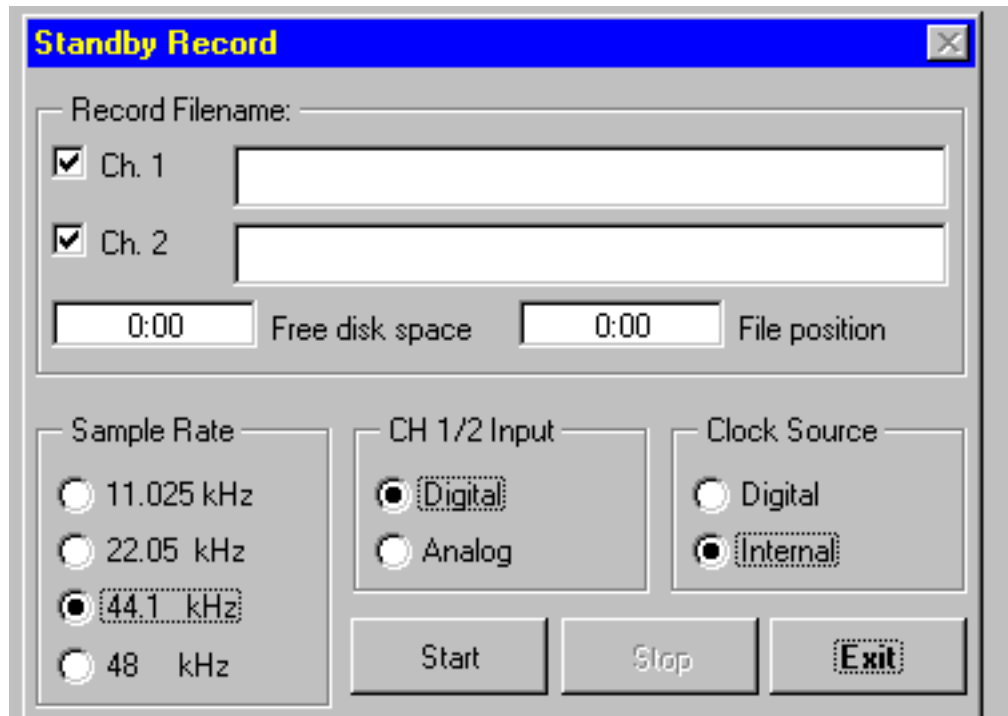
Audio *channel* 1 and/or 2 are always used for Standby Recording. To set up which *inputs* to record, use the routing window to connect the desired inputs to channels 1 and/or 2.



## Recording Procedure

Proceed as follows:

1. Open “Standby Record” from the Audio menu.



The image shows a software dialog box titled "Standby Record" with a blue header bar and a close button in the top right corner. The dialog is organized into several sections. At the top, there is a "Record Filename:" label followed by a text input field. Below this, there are two checked checkboxes labeled "Ch. 1" and "Ch. 2", each followed by its own text input field. In the center, there are two numeric input fields, both showing "0:00", with the labels "Free disk space" and "File position" positioned to their right. The bottom section is divided into three panels. The left panel, labeled "Sample Rate", contains four radio button options: "11.025 kHz", "22.05 kHz", "44.1 kHz" (which is selected), and "48 kHz". The middle panel, labeled "CH 1/2 Input", contains two radio button options: "Digital" (selected) and "Analog". The right panel, labeled "Clock Source", contains two radio button options: "Digital" and "Internal" (selected). At the very bottom of the dialog, there are three buttons: "Start", "Stop", and "Exit".

The Standby Record dialog.

2. If you want to record in mono, activate either of the check boxes “Ch. 1” (Channel 1) *or* “Ch. 2” (Channel 2). If you want to record in stereo, activate both.
3. Click the white name field for the first channel you want to record.  
A file dialog opens up.
4. Use the file dialog to specify a recording file.
5. Repeat with the other channel, if necessary.
6. Select a Sample Rate, Input type and Clock Source.  
See [page 53](#) for details about these options.
7. Click the Start button.
8. Record.
9. When you are done, click Stop.
10. Close the dialog.

The new file(s) now appear in the Pool from where they can be edited, processed or dragged into an Audio editor or the Arrange window.

# Audio Editor Differences

The only difference between the Audio Editor when using Cubase Audio XT with the AudioMedia III, compared to using Cubase/Cubase Score with audio cards, is that there are no stereo events, as described on [page 21](#).

# Using EQ

The AudioMedia III hardware provides equalization (filtering) which can be accessed from Cubase Audio. There are eight separate EQ modules.

## Specifying the Signal Chain

First you need to specify where in the signal chain you want the EQ modules inserted:

### **1. Select “EQs...” from the Audio menu.**

The “EQs” dialog appears.

### **2. In the dialog box, specify for each of the EQ modules, where you want it in the signal chain:**

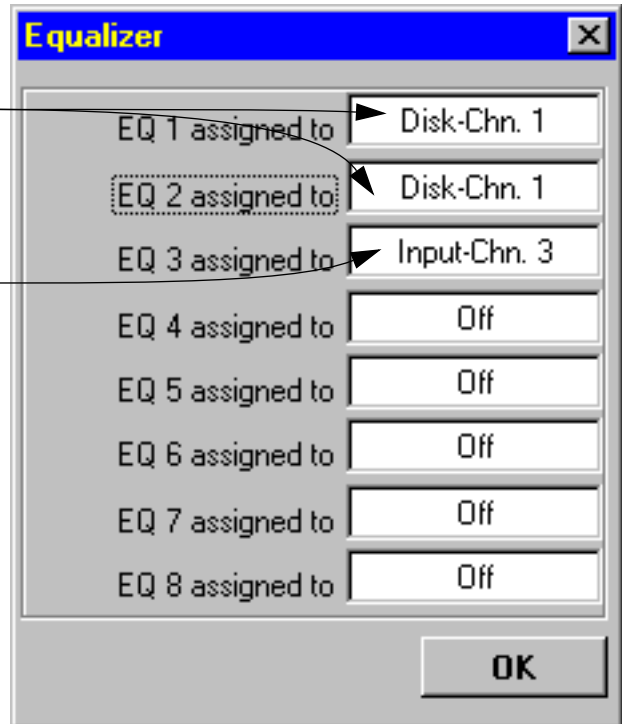
The options are:

- On the output of any of the eight audio channels (Disk-Chn 1 to 8), which means EQ will be applied during playback, or...
- On the input of any of the eight input channels (Input-Chn. 1 to 8), which means EQ will be applied to the recordings you make on that channel.

You can set up to four modules to the same setting, which means they are inserted in series in the signal chain. This allows you to create some very complex filters.

In this example, Tracks playing back on Channel 1 will use these two EQ modules...

...while Tracks being recorded on Channel 3 will use this EQ module.



## **Making Settings for each EQ Module**

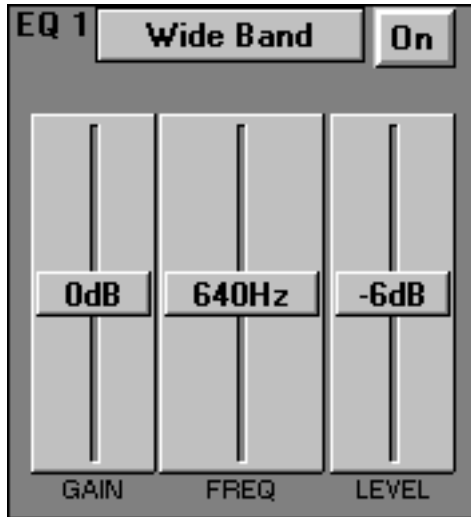
You set up the EQ in Cubase's Mixer window.

- 1. Open the "Setup Mixer Maps" dialog (on the Options menu).**
- 2. Click the Load button.**
- 3. Locate the file "am3eqs.mix" among the other Mixer Maps in the "mixer-map/digidesn" directory in your Cubase Audio directory and open it.**
- 4. Close the "Setup Mixer Maps" dialog.**
- 5. Create a Mixer Track.**
- 6. Set the Mixer Track to Output "AudioMedia EQs" (the Mixermapping you just loaded).**
- 7. Create a Part on the Track.**
- 8. Double click on this Part to open the Mixer window.**
- 9. Make sure the Mixer is in Local Mode.**

## 10. Use the controls in each section to adjust the EQ.

The eight modules in the Mixer Map represent EQ module one to eight in the “EQs” dialog box.

### EQ Mixer Objects



The controls in each Module are as follows:

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<b>Control:</b>	<b>Description:</b>
-----------------	---------------------

EQ Type	The characteristics of the filter. Narrow Band, Wide Band, LoShelf or HiShelf.
On/Off	In “On Mode”, the EQ is activated. In “Off” mode the EQ is bypassed.
Gain	The amount of EQ applied.
Freq	The center or shelving frequency for the EQ.
Level	The output level from this EQ module.

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For more information on the exact use of these controls, see the AudioMedia III manual.

- 
- It may happen that boosting a certain frequency band creates distortion, especially when several EQs are chained one after another. If this happens use the Level controls on each module to reduce the output volume, until the distortion disappears.
-



## Automating EQs

- If you have set up a certain “fixed” EQ for your Tracks (in the Mixer window), and want to make this a permanent part of the Arrangement, we recommend you to turn the settings into a Snapshot and “write” the Snapshot in at the beginning of the Song.
- You can also create dynamic EQ changes, by recording yourself “playing” the Mixer Objects or by using Snapshots. However, do not expect the AudioMedia III hardware to handle drastic dynamic EQ changes perfectly smoothly.

For more information on the Mixer, see the main Cubase manual.

# Mixing

Playback levels can be adjusted in three places:

- In the Audio Editor
- In the Mixer window
- In the Monitor window

## The Event Volumes in the Audio Editor

As described in the chapter about the Audio Editor in the Audio Recording book, each *Event* can have its own independent volume curve. This allows you to have individual control over the volume of each single Event in your production (including fade in and out), regardless of which audio channel each Event is played back on.

## The Mixer Window

The Mixer window provides full control of volumes, panning etc. There are no controls specifically for Muting, but by automating volumes you can achieve the same effect.

Changes made in the Mixer window are applied to each *audio channel* in your system. If you for example Pan a certain channel to the left in the stereo image, all events that play back on this audio channel will appear in the left channel in the mix.

All controls in the Mixer window can be automated, for complete computer controlled mixdown.

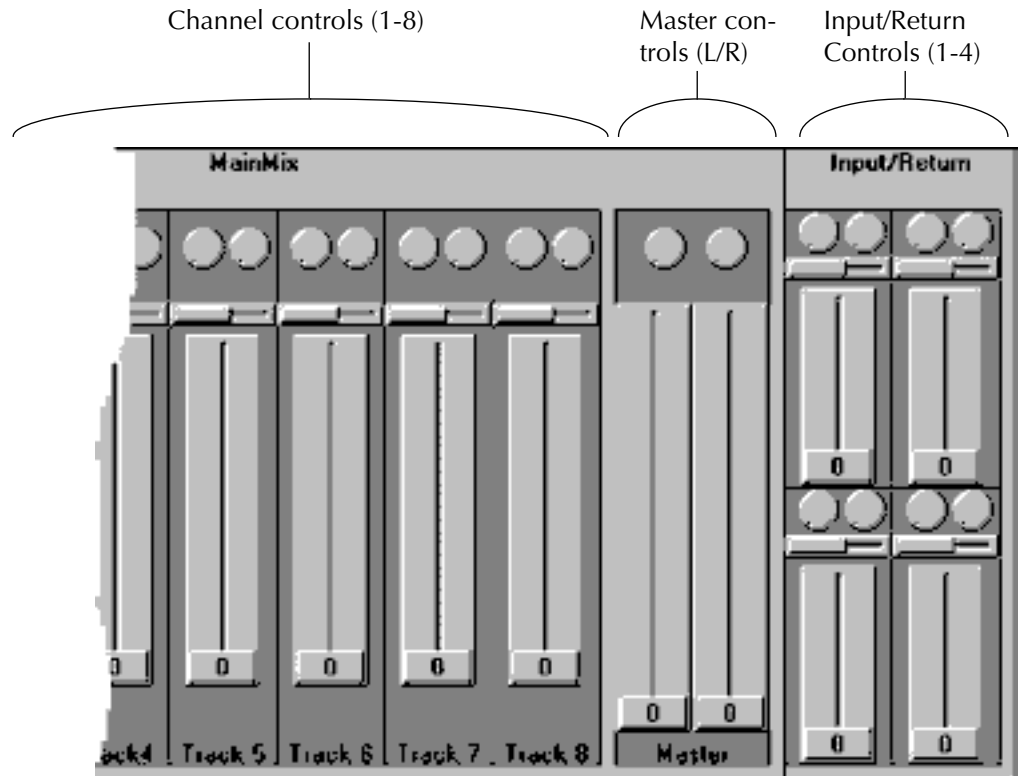
## **The Monitor Window**

The Monitor window is probably best used when recording, for quickly setting up a balance between the audio channels. There are only Volume and Mute settings, and the Monitor window can not be automated. The Mute buttons in the Monitor window can be used as a quick temporary way to silence all output from an audio channel.

## **The Mixer Maps**

The following AudioMedia III Mixer Maps are provided with the program. They are used just as any other Mixer Maps (see the main Cubase manual).

## Bus Mixer (File name: "am3main.mix")



This Mixer Map is your main mixer. The following controls are available for each channel (1-8):

---

**Control:    Description:**

Fx Send 1 and 2	The two small knobs at the top of each channel strip are the effect send controls. These adjust the amount of signal from the analog outputs, as described on <a href="#">page 42</a> . For these controls to have any effect, the corresponding main effect send controls have to be raised, see below.
Pan	Panning is adjusted with the horizontal fader, located just above the main volume fader for each channel. This controls the panning of the channel in the stereo mix.
Volume	This controls the output volume for the channel.

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In addition to the above, there are four Master controls (L/R), located in the middle of the map:

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**Control:        Description:**

Master Fx Send 1 & 2	The two knobs at the top are the master effect send controls. They adjust the total amount of effect send, from all channels together.
Master Volume	These two faders control the overall volume for the left and right channels in the mix.

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To the right of the mixer controls you will find sections for the effect inputs (Input/Return), see [page 42](#), each one comprising the same controls as the main audio channels.

### **EQs (File name: “882eqs.mix”)**

This is the Mixer map used for adjusting the AudioMedia III’s built in equalizers. See [page 28](#) for details.

## Advanced Mixing Information

The following information is provided for those who want to create their own Mixer Map Objects, or use other methods to control the AudioMedia III from Cubase (for example by inserting events in List Edit).

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- This information is for advanced users only. You do not need to understand the following to use Cubase Audio and the AudioMedia III to its full extent.
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Cubase controls AudioMedia III's mixing and EQ facilities via a "virtual" MIDI port. If you check the Output columns, for example for a MIDI Track, you will note that there is always an Output called "AM3MIX". If any MIDI data is sent from Cubase to this port, it will be used to control the AudioMedia III directly.

Each control in the AudioMedia III is accessed via a MIDI Control Change number as listed in the table below. The MIDI channel number is used to direct the data to a certain audio channel in the AudioMedia III hardware.

This means that if you create a Mixer Object, set it to Output "AM3MIX", make it transmit Control Change messages on a certain MIDI channel and specify one of the Control Change numbers in the list below, this Object will control that function in the AudioMedia III hardware.

Likewise, if you set a regular MIDI Track to Output to “AM3MIX” and enter the proper Control Change information into the Track, this Track will control the AudioMedia III hardware.

AudioMedia III Function	Control Change Number		Channel Range	Min/Max value
	Decimal	Hex		
Channel Stereo Bus Volume	102	66	1 - 8	0 - 127
Channel Stereo Bus Panning	103	67	1 - 8	0 - 127
Stereo Bus Master Volume	106	6A	1 - 2	0 - 127
FX Send Master Volume	106	6A	5 - 6	0 - 127
Channel EQ “Gain”	108	6C	1 - 8	0 - 127
Channel EQ Frequency	109	6D	1 - 8	0 - 127
Channel EQ Type	110	6E	1 - 8	0 - 3
Channel EQ Output Level	111	6F	1 - 8	0 - 127
Channel EQ Bypass	112	70	1 - 8	0 or 127 (Off/On)
Channel FX Send 1	113	71	1 - 8	0 - 127
Channel FX Send 2	114	72	1 - 8	0 - 127



<b>AudioMedia III Function</b>	<b>Control Change Number</b>		<b>Channel Range</b>	<b>Min/Max value</b>
	<b>Decimal</b>	<b>Hex</b>		
Input/Return Volume	107	6B	1 - 4	0 - 127
Input/Return Pan	103	67	9 - 12	0 - 127
Input/Return FX Send 1	113	71	9 - 12	0 - 127
Input/Return FX Send 2	114	72	9 - 12	0 - 127

# Using the Effect Sends and Input/Returns

## **Sending to the effect**

The Audiomedia III can use two of the outputs (the analog *or* the digital pair) as two independent effect sends (see the Audiomedia III manual for details). The other output pair is then used for the main mix. Proceed as follows:

- 1. Connect the desired output(s) on the card to the input(s) of the effect unit(s).**
- 2. Open the Hardware setup and set “Main Output” as desired.**  
The main mix will now come out of the outputs you select here and the effect sends will come out of the other two.
- 3. Open the Bus Mixer mixermap and raise the FX Send controls, for the channels as desired. Also raise the corresponding Master FX Send control, until the signal levels to the effect units are appropriate.**

## **Using the card as returns from the effect**

You can also use the inputs on the card for return signals from the effect unit(s). Below we assume you use two stereo effect units, one with analog outputs and one with a digital stereo output. For more possibilities on routing, see [page 13](#) and the Audiomedia III documentation.

- 1. Connect the outputs of one effect unit to the analog inputs, and the output of the other to the digital input.**
- 2. Open the Hardware Setup dialog and switch “CH 1/2 Input” to Digital.**
- 3. Make sure Monitoring is not activated for any channel.**
- 4. Open the Bus Mixer mixermap and locate the Input/Return section to the right.**

The signal coming from the unit with digital input can be controlled with the upper two sections of controls and the signal from the analog unit can be controlled with the controls in the lower two sections.

- 5. Adjust the volume and panning (while playing back), so that the desired amount of effect is applied to the mix.**

If the effect units are in stereo, you will probably want to set the pan controls hard left/right for the upper and lower sections respectively.

# Bouncing

Bouncing is AudioMedia III terminology for mixing down many audio recordings to one single audio file.

Let's say you run out of audio channels, but you still need to record more. If you for example have recorded background vocal harmonies, you could probably do a bounce of all the background vocal tracks to one or two Tracks (mono or stereo) and instead use this composite recording in the final mix. The Tracks previously used for all the background vocals can then be used for adding new instruments.

If the mixdown (the “bounce”) should be in stereo, up to six Tracks can be bounced. If the mixdown should be in mono, up to seven Tracks can be bounced.

In the following text we will call the originally recorded Tracks *source Tracks* and the Tracks you “bounce to”, *destination Tracks*. Proceed as follows:

## Preparations

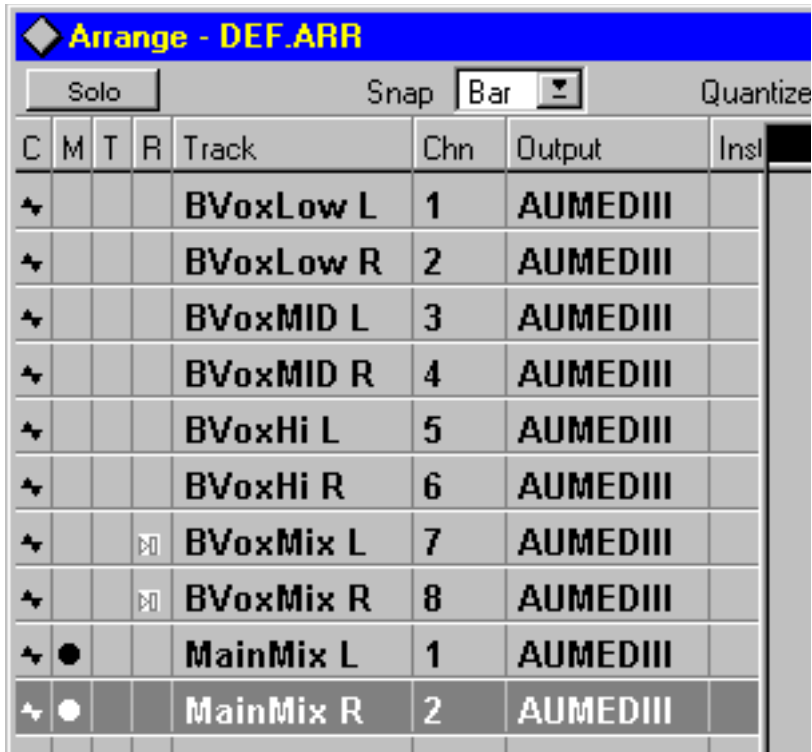
- 1. Record all the source Tracks.**
- 2. If you want to apply EQ separately to the source Tracks, set this up so that they play back as intended.**

3. **If you want to create some special (maybe dynamic) mixing, that you want to be part of the destination Track(s), set this up for the source Tracks, as desired.**
4. **If the destination should be in stereo, adjust panning.**
5. **If the destination should be in mono, adjust the panning of all source Tracks so that they play back on one side of the stereo image only.**  
In other words, pan them *all* hard left *or* right depending on the destination audio channel, see below.
6. **Mute all recorded Tracks that should *not* be part of the bounce.**

## **Setting Up the Arrangement**

1. **Set up one (mono) or two (stereo) destination Tracks for recording (specify files etc.).**
  - Do not set the destination Track(s) to the same channel number as any of the source Track(s).
  - If a destination Track is set to an odd channel number (1, 3, 5, 7) it will record from the left side of the stereo image.
  - if a destination Track is set to an even channel number (2, 4, 6, 8) it will record from the right side of the stereo image.
2. **Activate Bounce Mode from the Audio menu.**

3. If you record on two destination Tracks, activate MultiRecord and set the Tracks to record enable (see the Audio Recording book). If you only record on one destination Track, make sure it is selected.



In this example, the first six Tracks will be recorded as a stereo mix onto the Tracks “BVoxMix L” and “BVoxMix R”. “MainMix L” and “MainMix R” will not be included in the bounce, since they are muted.

4. If you want to do the bounce as an automatic punch in/out, set up the Left and Right Locator and activate In and Out on the Transport Bar.

## **Recording!**

1. Perform the recording.
2. Deactivate Bounce Mode.
3. Mute all the source Tracks and possibly also the Mixer Track that adjusted their volume, panning etc.
4. Play back the destination Track.

You can – if you like – now delete the source Tracks and their audio files. However, you might just as well keep them in the Arrangement, muted, if you have hard disk space enough to hold the files. This will allow you to later go back and redo the bounce, if needed.

Please note that simply bouncing one Track to another is a way to make an EQ setting, or for example a dynamic volume change, an integral part of the audio file. More tips, tricks and advice on bouncing can be found in the AudioMedia III manual.

# Synchronization

Synchronizing digital audio material with the “real world” raises many issues which are not immediately apparent when using MIDI only systems. This is a big subject, and we will only be able to touch upon it here.

## Syncing Cubase vs Syncing the AudioMedia III

When you lock Cubase to time code, for example coming from an audio or video tape recorder, it will replace its internal “absolute time” clock with an external one – the time code. If the time code is slow, fast, or fluctuates in speed, this will affect Cubase’s playback speed likewise – it should, that’s the whole purpose of synchronization!

There are a number of situations where you will encounter time code that varies slightly in speed: when moving a project from one tape recorder to another, when using a tape for long periods of times so that it stretches and wears out, when stripping tapes with different time code generators, etc.

In a system where Cubase only handles MIDI, these differences will be too small to be noticed. However, as soon as you bring digital audio into the picture, things get more complicated.



When Cubase asks the AudioMedia III to play back an audio file it will only specify which file to start and *when*. Once the audio is playing, it is not being clocked by Cubase, but by the AudioMedia III itself. This means that if Cubase's playback speed varies (because it is synchronized to time code coming in from another device), or if the speed is not the same as when you recorded the audio file, the digital audio will drift out of sync with the tape recorder and MIDI.

Let's take an example of a situation where the SMPTE time code is running 0.001% fast when you play back a sound file, compared to when you recorded it. When set against a perfectly stable sound file, we find that this tiny error grows, within 16 bars, to become an audibly disturbing 27 tick positioning error (at 120 BPM). By 64 bars into the song we have a 100 tick error.

So, are there any solutions to this problem? Fortunately – yes!

## **Resolving Digital Audio via the Digital inputs**

The AudioMedia III can be clocked from its digital input. To use this feature, you need to use a *synchronizer*, a device that reads time code based on this can “clock” the AudioMedia III via the S/PDIF input, so that the digital audio playback follows the time code fluctuations.

## Other Solutions

If you don't have access to a synchronizer of this kind, there are still a few things you can do to minimize this problem:

- **Get the tempo right before you record any audio.**  
Do not change the tempo in Cubase Audio after any audio recordings have been made.
- **Use the same type of synchronization through the entire “production”.**
- **Do not switch Cubase Audio from internal sync to sync to time code after you have recorded digital audio.**
- **Keep your Audio Segments as short as possible.**  
Sometimes it might help chopping up a long take into smaller ones, with the scissors in the Arrange window or the Audio editor.

# File Compatibility

All Cubase specific files (Song files, Arrangement files, Pools etc) are compatible between different versions of Cubase, even on different platforms (see Appendix B in “Getting into the Details”). There are a few things to note specific to audio, though.

- The AudioMedia III uses Wave (WAV) files where some other versions of Cubase Audio XT use AIFF files. If you open a Song that uses AIFF files, you will be asked if you want to convert the files to Wave format.
- Normally, Cubase is not responsible for the actual clocking of the digital audio. Therefore, playback speed of audio might differ slightly between systems, which might make the audio in a Song created on another system drift noticeably out of sync. Please observe the precautions you must take for proper synchronization, as described above.
- The sample rates used by the two systems must correspond.

# Menu and Dialog Reference

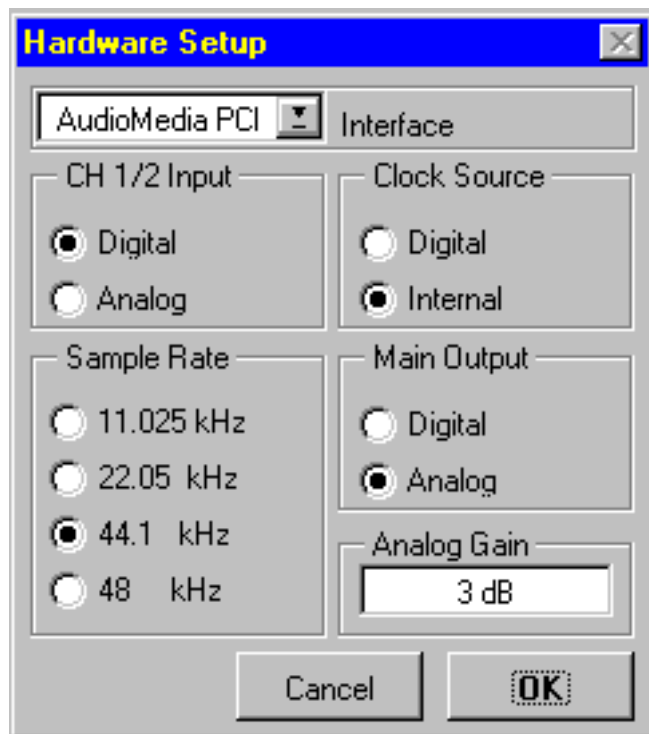
This section lists the AudioMedia III specific items on the Audio menu.

## Reset Device

This item should be used in one of two cases:

- If you find you have communication problems with the audio card.
- If the settings on the card don't seem to be in accordance with those made in Cubase's Hardware Setup dialog.

## Hardware Setup



The Hardware Setup dialog.

The Hardware Setup dialog contains a number of settings for the AudioMedia III hardware. For all of these there are equivalents in the Session software. See the Session manual for more detailed explanations of these functions:

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Option:	Description:
CH 1/2 Input	This is used to decide if input channel 1 and 2 should receive their signals from the analog or digital (S/PDIF) inputs on the card. See <a href="#">page 13</a> for more info.
Clock Source	<p>This should normally be set to “Internal”. However, set it to “Digital” in one of two cases:</p> <ul style="list-style-type: none"><li>• If you are recording from the digital inputs.</li><li>• If wish to synchronize the card externally, as described on <a href="#">page 49</a>.</li></ul> <p>This will cause the AudioMedia III hardware to read its “sample rate clock” from the source you have connected, instead of using its own internal clock.</p>
Sample Rate	<p>This setting determines which sample rate that will be used for the recordings. 11 and 22 kHz are low quality rates. 44.1 and 48 kHz are “CD/DAT” quality rates. The main reason to chose between 44.1 and 48kHz is to maintain compatibility with other devices. If you for example plan to master your recordings digitally to a DAT-recorder which only supports 48kHz, then you have to make all AudioMedia III recordings at 48kHz.</p> <p>You can not change this setting in the middle of a project. If you do, the files you have already recorded will play back at the wrong pitch.</p>

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Option:	Description:
Main Output	This is used to set if the main Mix should be sent to the analog or digital Outputs. See <a href="#">page 18</a> .
Analog Gain	This is used to set the amount of amplification/attenuation for the analog inputs on the card. See the AudioMedia III manual for details.

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## Record Sources

This dialog is used to set up how audio should be routed from input channels to audio channels. It is described on [page 13](#).

## Equalizer

This dialog is used to set up the AudioMedia III's EQ section. See [page 28](#).

## Bounce Mode

This is used to mix a number of recordings down to one or two (stereo) audio files as described on [page 42](#).

## Standby Record

This dialog is used to record audio without having play activated in Cubase. See [page 24](#).