Read This!

There are some pitfalls we want you to make sure to avoid, and some advice we want to give, before you start to work with Cubase Audio.

Software Licensing

At the back of this manual you will find a software licensing contract. Read this before you install Cubase Audio. By opening the sealed pack of disks or sending back the registration card, you are declaring yourself to be in agreement with the conditions in the contract.

Installation

Please follow the instructions in the Installation chapter meticulously or the program might not run properly.

Registration card

Send in the registration card! That's the only way for us to know that you exist. And we do want to know, believe us. If we receive the registration you will be informed of upgrades of the program. There may be other direct benefits as well, printed on the card.

Computer

This program runs on any Atari ST/STe, Mega ST/STe, TT or Falcon with at least two megabyte of RAM, but we recommend four. We also recommend you to use TOS 1.4 or later. Cubase can be made to autostart by selecting "Install Application" from the Desktop.

Monitor

This program works with Atari monochrome monitors, like the 12" SM-124 or SM-125 or the 19" SM-194. Other monochrome monitors may work. On the TT you may use the program with a colour monitor in medium resolution mode. On the Falcon you may use a VGA monitor. But please note that using many colours makes the computer run slower.

Hard Disk and SCSI

Using Cubase with the CBX-D5 requires you to connect the computer and the hard disk via SCSI. The ST/STe and Mega ST/STe don't have a SCSI connector. With these you have to connect a Steinberg "DMA To SCSI MkII" (please note that it has to be the "Mark II" model). Other brand converters will not work!

The requirements on the hard disk(s) are dictated by the Yamaha CBX-D5. Contact your dealer for a list of hard drives recommended by Steinberg and Yamaha.

Do not use your internal hard disk for recording audio!

Program Disk
The program comes on a number of double sided disks. None of them are copy protected. You might not need all files on the original disks, see page 2-2.

Backups
The first thing you do, make backups of the original disks that come with the package. You can copy them to other 3.5" floppies or to a hard disk. If you are not familiar with this procedure, consult your Atari Operation Manual. The disk is not copy protected and the copy will run if you have your Key (the plastic cartridge that comes with the program) inserted into the cartridge port.

MIDI Interface
You can use Cubase Audio with the built in Atari MIDI connector only. However, the CBX-D5 is connected to the computer via MIDI and if you plan to use the "Sync Master:Cubase" synchronization feature (see the Hardware Setup chapter), one MIDI Out connector should be reserved for the CBX-D5 only. To then be able to connect other MIDI equipment to the computer you need an additional MIDI interface such as the Steinberg Midex/Midex+ or SMP II.

The Hardware Key
To be able to run the program you must have the Key inserted into the cartridge port of your computer or into a Midex or Midex+ MIDI/Time code interface. The key is the verification to that you have actually bought the program. If you loose it you have lost your program!

Never insert or remove the key with power turned on on the computer! Make sure you don't put the key in upside down!

Defragmentation
When you create many files on your hard disk (as you do with audio recording) it will eventually become *fragmented*. Generally, fragmentation is not a big problem with the Atari/CBX-D5 combination, but if the disk gets *very* severely fragmented, audio playback may suffer (the program will report if it

has problems with the hard disk). You will then have to run a so called *defragmentation* program. For recommendations on which defragmentation program to use, contact your Atari dealer.
If possible, keep the program files on one disk, and your audio and song files on a separate disk.

Saving

Program crashes are a well known fact in the computer industry, and a major crash will probably result in that the material resident in memory is lost forever. The only way to insure yourself against disasters is to save regularly while working or to use the Autosave function. You may run the program from a RAM-disk, but we can't *guarantee* full functionality. Save your work regularly to ordinary disks, since RAM-disks are erased at power-down or after a crash. Disks (even hard disks) can get damaged, so making backups of your files is a must!

The ST/STE/TT/Falcon's MIDI Thru and MIDI cables

The Atari ST/STe/TT/Falcons' MIDI Out port is non-standard. It uses pins 1 and 3 in the connector as a MIDI Thru port. Unfortunately some MIDI cable manufacturers shortcut these pins with the normal ones. This results in a hardware MIDI Thru function that can't be disabled. Make sure the MIDI cables you use are of the right kind!

Accessories

You can use Cubase with Accessory programs that follow the programming conventions for the Atari computers. But beware, not all Accessories follow the standard perfectly.

Steinberg can in no way guarantee the use of Cubase together with any certain Accessory or other type of utility program.

"Read Me" Files

There might be a file called "Read Me" on any of the disks that comes with the program. This is a text file which describes any changes or additions to the program that are not stated in the manual. Double click on this file. Select one of the two options in the dialog box, to either display the text on the screen or to print it out on a printer.

Note Off Controllers
Some Roland synthesizers send a MIDI message called All Notes Off as soon as you release all keys on the keyboard. This may lead to very confusing results when the same synth is used to play back music from more than one Track. If you experience this problem you should filter out this message using the Controller filters in the MIDI Filter dialog box.

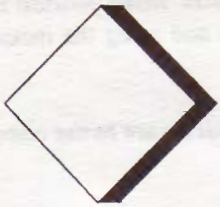
Running Status
There is a way to make MIDI transmission more compact, called Running Status. This was not a part of MIDI from the beginning so not all units can accept this data compression method. If you experience problems with a Korg DDD1 or DDD5, an Ensoniq Mirage, a Sequential Prophet T8 or a very old Yamaha DX7 you should make sure that you are not transmitting under Running Status from your computer. Check the setting in the MIDI Setup dialog box. It will be obvious if you have this problem since the instrument will hardly play back sequenced material at all.

SMP-24
Users of the Steinberg SMP-24 must have software version 1.6 or higher to make this unit work with Cubase. If you have an older software version, contact your dealer for an upgrade.

The Operation manual and Cubase Audio vs Cubase
This operation manual begins with a tutorial section showing you how to get started with MIDI recording in Cubase. After that follow descriptions of all aspects of the regular version of program, that is, the MIDI only version. The audio aspects of the program are described in a separate section of this manual, at the end.

The whole manual is designed so that you don't have to read all the text, only the sections that interest you. However, you should get familiar with all basic operations as they are described in this book. At the end you will find Indexes so that you can look up any function or feature that you need to know more about. In the back you also find a list of all computer keyboard commands.

Whenever the text in the manual refers to a key on the computer keyboard, the key's name is shown in brackets, like this: [Return].



Installation

If your computer isn't already set up as it should be, do so, following the instructions in the computer's Operation Manual. You should also verify that the computer works as it should. Make yourself reasonably familiar with operations like handling disks and using the mouse (clicking, selecting, double-clicking and dragging).

Before connecting any hardware to the computer, make sure power is off on all units.

Installing MIDI Interfaces

The Atari computers have MIDI built in, but you may want to add additional MIDI connectors and time code sync. Steinberg manufacture MIDI peripherals for the Atari range of computers, the Midex, Midex+ (with time code sync) and the SMPII (rackmounted with time code sync). The Midex and Midex+ also works as protection key expanders, allowing you to run several key protected program at the same time.

How to install the various MIDI interfaces is described in the documentation that comes with the interface, but the general procedure is to connect the hardware and then activate a software driver. This last procedure is described on page 11 in this chapter.

Installing a Printer

Exactly what cables and what settings to make of course varies completely with the type of printer you use, and may include such things as changing the printers so called "DIP switch settings". Please refer to the manuals that came with your computer and the printer. If in doubt, ask your dealer for help. In the Read Me File on the Program Disk you will find more information about compatible printers.

We recommend you to make sure the printer installation works as intended before trying to print a score. This will help you isolate the cause of any problems you may have.

Installing SCSI and Hard Disks

The CBX-D5 and the hard disks (you may use several!) for recording audio are connected to the computer via *SCSI* (pronounced "scuzzy", short for Small Computer System Interface, a world standard for data storage computer peripherals).

SCSI

- The Atari TT and Falcon have SCSI built in, so users of these computers may skip to the next heading, "Hard Disks".
- With other Atari models you need a Steinberg "DMA To SCSI Mk II" converter. Please observe that it *has to be* the Mark II model and that other brand converters will *not* work.

How to install the Steinberg "DMA To SCSI MkII" is described in the manual that comes with it. The installation includes both hardware and software. Please note that the computer will not be able to "boot" (start) from a hard disk connected to the converter, you will need to have a floppy disk in the drive when you turn on power.

Hard Disk

In the Yamaha "Questions and Answers" document that comes with your CBX-D5 you will find a list of recommended hard disks. In the CBX D5 manual you will find a very good general checklist for purchasing a SCSI Drive.

The drives normally come formatted. However, you will need to *initalize* and *partition* them:

- If you have an Atari TT or Falcon, initialisation and partitioning software is included with the computer, and the procedures are described in the manual that came with your computer.
- If you use the Steinberg "DMA To SCSI MkII" converter, the software and instructions come with the converter.

Setting SCSI IDs

All SCSI Devices must be set to unique IDs. The computer itself (or the SCSI converter if you use one) has a fixed SCSI ID set to 7. This means that no other device can be set to SCSI ID 7.

CBX-D5
Yamaha recommend using SCSI ID 6 if you have one CBX-D5 and SCSI ID 5 and 6 if you have two.

Hard disks connected to a DMA To SCSI Converter
Set the first hard disk to ID 0, the second to ID 1 etc.

Hard disks connected to an Atari TT
This computer has built in SCSI and a built in hard disk. This internal hard disk is set to SCSI ID 0. Therefore, set the first external hard disk to 1, the second to 2, etc.

Hard disks connected to a Falcon
Set the first hard disk to ID 0, the second to ID 1 etc.

The internal drive in a Falcon is not a SCSI drive at all and can not be used to record audio!

We don't mean to discourage you, but setting up a network of SCSI peripherals does contain some potential pitfalls. The CBX-D5 manual and the computer/converter manual will give you further details and recommendations.

Install Devices

On the Atari computers, hard disks do not appear automatically on the Desktop the first time you turn on power. Select Install Devices from the Options menu. This should make symbols for your hard drive(s) appear. Then select "Save Desktop" from the same menu to make this configuration permanent. The manual that came with your computer describes this procedure in detail.

Before you connect the CBX-D5 to the computer, make sure all hard disks operate as intended; that their symbols appear on the desktop, that you can write to them and read from them without problems, etc.

Installing the CBX-D5(s)

Again we refer to the very comprehensive installation instructions in the manual the comes with the CBX-D5. Specifically observe the following points:

- It is very important that you have your SCSI connections and terminations done correctly.
- If you have two CBX-D5s, install the second one on the SCSI chain, just as with the first. Only use SCSI termination on the last CBX-D5 in the chain!
- You must assign unique SCSI device IDs to all units on the SCSI chain.
- If you have two D5s, you need to differentiate between them in Cubase Audio. Therefore, the CBX-D5 with the highest SCSI ID will be assigned the number "1" in Cubase Audio, the other will be assigned the number "2".
- The Atari Falcon is not mentioned in the Yamaha documentation, but Falcon users may follow the Atari TT installation (except for the hard disk SCSI IDs, see above).

MIDI Connections

You need to have communication from MIDI Out on the computer to MIDI In on the CBX-D5. If you have two CBX-D5s, connect the MIDI Thru on the first unit to MIDI In on the second.

The D5 *can* share MIDI connectors with other MIDI equipment, but if you have the ability to reserve a specific MIDI port for the CBX-D5, we recommend you to do so.

If you plan to use the "Sync Master:Cubase" function in Cubase Audio (See Appendix 1 in the Audio part of this manual), you *must* reserve a MIDI Out port for the CBX-D5. See the Hardware Specifiics chapter for more details.

If you plan to use the "Sync Master:D5" option (see Appendix 1 in the Audio addendum), connect the MIDI Out on the D5 to the MIDI In of the computer. This more or less requires that you have a Steinberg Midex or SMPII, since you also want to connect your keyboard and possibly MIDI sync sources to the computer.

We do not recommend you to use so called MIDI mergers for this purpose.

If you have two D5s they must be connected to one MIDI In each.

Installing The MIDI Equipment

Depending on your setup, you may want to use other MIDI In and Outputs than the computer's own. Since this is an option, the following text refers to the built in MIDI connectors.

- ❑ Connect the MIDI Out of the keyboard (or other MIDI device) you plan to use for recording, to the MIDI In of the computer.
- ❑ Connect the MIDI Out of the computer to the MIDI In of the CBX-D5.
- ❑ Either connect the MIDI Thru of the CBX-D5 to the MIDI In of the first instrument or – if you have an extra MIDI Interface – use one MIDI Out for the CBX-D5 and another for your MIDI instruments. Continue to connect all units (maybe via MIDI Thru on each device) until they all have their MIDI In connected to the computer. If you plan to use more than three sound sources we recommend that you use a separate MIDI Thru box instead of the Thru jacks on each unit. If more than one instrument *doesn't have* a MIDI Thru, you will *have* to get a MIDI Thru box.
- ❑ Make all audio connections on the MIDI equipment, turn on the instruments and verify that they sound (if possible).
- ❑ Set each instrument to receive on a certain MIDI Channel. Or if you have multi-timbral instruments, set each Sound (Timbre, Part, Program, Patch) to receive on a certain MIDI Channel.

Installing the Copy Protection Key

- ❑ Make sure that the computer's power is turned off!
- ❑ Insert the Key, the plastic cartridge that comes with the program into the cartridge port of the computer. Make sure it is not upside down.

Installing the Program

Cubase Audio comes on four disks:

- ❑ The Program Disk contains the Cubase Audio program itself and some files (inside and out of folders) that go with it.
- ❑ The other three disks contain additional files: Modules, Mixer Maps and Drum Maps, example files (for the IPS and other things), plus printer drivers and fonts needed for printing.

None of the files or disks are copy-protected so you may use any means of copying that you find convenient.

You might not need all of these files, but it is very important to have the ones you use in the right folders.

Before you start copying the files to a hard disk, make yourself a backup copy of all original disks as they were when they came from the factory. You might need these at a later stage, for example when you buy additional hardware. Put the originals in a safe place and do the installation from the backups.

Copying Files onto a Hard Disk

Copying the right files from the floppies is a relatively painless procedure. If you wish, put everything in a folder or in the root directory, it doesn't matter. However, the relative positions between the files are very important, so when

we say, "put this file at the same level as that file" they *must* both be visible at the same time in a folder or in the root directory.

If you have an internal disk in your computer, put the program and additional files on this.

However, all audio files should always be put on the external (SCSI) disk, and it makes a good working habit to keep your Song files with your audio files. If you only have one SCSI disk (if you for example use the Steinberg "DMA to SCSI MkII" converter) you must of course put all files on this disk.

The Program Disk

On this disk you will find a complete set of files absolutely needed to run the program. CUBASE_A.PRG is of course the program itself. To be able to use it you also need two folders called CUBASE.DAT and MROS, plus a folder called SCSI_DRV.

- The CUBASE.DAT folder must be found at the same level as the CUBASE.PRG. It contains a number of ".SYS" files you shouldn't touch. It also contains a number of font (".FNT") files that you shouldn't touch either.

- The MROS folder must also be at the same level as CUBASE.PRG. It contains the *M•ROS* itself and *drivers* for Devices you can use. A driver is a file with a name that is an abbreviation of the device's name and which has the suffix "DRV" (or if it is deactivated, only "DR"), for example "MIDEX.DRV". Generally, don't keep any drivers here that you don't need.

- The folder called SCSI_DRV contains files needed for SCSI communication. This folder should also be found at the same level as the CUBASE-PRG, and you should not touch its contents.

- On the program disk you will also find a file called DEF.ALL. You should definitely keep this on your working disk and at the same level as your Cubase Program file, because it will make the program start with sensible settings. You can later alter this file or replace it with your own and thereby customize the program.

- And finally, there might be a README text-file (or even a DOC Folder with README files in it) on the Program Disk that contains additional information and info about possible changes made to the program since this manual was written. Double click on it and select Show or Print from the dialog box that appears. If you select show you can at any time return to the desktop by pressing [Q]. This file is of course not needed to run Cubase.

Read the README file(s). They contain important information!

The Additional Files disks

On the three additional disks you will find a number files in and out of folders.

- The MODULES folder contains all the modules that come free with the program. The Modules files have the extension ".MOD". Modules that you will want to use in everyday work should be moved to the same folder as your Cubase Program file on your hard disk. This will make the program find them automatically and add them to the list of available modules. The following modules come with the program:

MIDIPROC.MOD	The MIDI Processor.
MIXER.MOD	The MIDI Mixer.
IPS.MOD	The Interactive Phrase Synthesizer.
SCORES.MOD	Score Editing and Printing.

  Additional modules can be purchased separately. Installation instructions for those comes with the Module.

- The folder D5_MIX contains mixer maps for the Yamaha CBX-D5. If you only have one CBX-D5 you may not need these files, since the program will automatically start with the Mixer called BASIC1-4.MIX loaded. However, when you get better acquainted with the system you may want to try out one of the alternative mixers. Users of two CBX-D5s will find special Mixer Maps in this folder.

- One folder is called PRINTERS. This contains files needed for printing on certain printers. You might be able to identify the printer you own by the name of the file. If you don't find your printer there, look in the printer's manual for information about models it is compatible with, and use that file instead. Additional information about each printer driver (e.g. the

full name) is also found in a READ_ME file. For instance, many nine dot printers are compatible with the Epson FX-80 and therefore should use the EPSONFX.PRN driver. Since you only use one printer at a time you only need one of these files. Put the printer file you plan to use on the same disk and at the same level as the Cubase Program.

- Two folders are called FONTS, and contain type faces needed for score printing.

  The folder on the "Additional Files 1" disk contains *screen fonts* (the ones displayed in the program) and printer fonts for printing on *dot matrix printers*. The FONTS folder on the "Additional Files 2" disk contains printer fonts for printing on a *laser printer*.

  Copy either FONTS folder on to the same "level" as the Cubase program. Either way, the FONTS folders will be needed when printing. If not found on the same level as Cubase Audio, the program will ask you for it and display a dialog box, so you can locate it. The program will then remember where it was.

  Two of the fonts are special Cubase designs needed to print symbols and chords. These are called CUBANT and CHORDS. In the CUBASE.DAT folder you will already find the files needed to display these on screen.

  But, two additional type faces come with the program. One is called Dutch (Times comparable) and the file names for it contain the abbreviation "ATTR". The other is called Swiss (Helvetica comparable) and its name contains "ATSS".

  In order for you to display these on the screen, you need have one or more font files of the "plain" type (for example ATTR10, 12, 18 and 24 *without* any EP, SP or LS additions) in the CUBASE.DAT folder. The CUBASE.-DAT folder on the Program Disk already contains a "ATTR10" file and you actually only need to keep the ATTR10/ATSS10 files there to be able to use both fonts. This will make text in other sizes than 10 point a bit jagged and ugly on screen, but then again it will save more memory for music (you will be able to record more notes) which is probably more important in most cases. Note that it is only on the screen the font will be displayed in a less pleasant way, when printing it will come out with full resolution.

You can also buy additional standard GEM fonts (also called GDOS fonts) at your Atari dealer, and use them in the same way as the Dutch and Swiss fonts.

The font files included support excellent quality output up to 300 dpi (dots per inch) and if a font with an even higher resolution is found in the FONTS folder (and can be utilized with the printer you have) it will be used.

- Other folders are EXAMPLES, DRUMSETS, MIXERMAP and SCORES. These contain example files of Arrangements, Drum Maps, Mixers and so on. Load these whenever you are familiarizing yourself with a new part of Cubase and want something to start from. These files are not needed for everyday use.

- There is also an IPS folder which contains DEF.COM and other files for the Interactive Phrase Synthesizer. More on this in chapter 32.

- There is a (deactivated) accessory called KEYSLOT.AC which is needed if you have a MIDEX or MIDEX+ and use non-Steinberg programs with hardware keys for copy protection. More info in the README document.

- There's another (deactivated) accessory called SPOOLER.AC, which allows you to print scores in the background.

- A folder called ATARI_TT contains alternative M•ROS drivers for the Atari TT computers and a folder called MIDXFALC contains an alternative MIDEX M•ROS drivers for the Atari Falcon computer.

Launching Cubase

- Turn on the printer (if you have any).

- Turn on the hard disk(s) and the CBX-D5.

- Turn on the computer. The screen should come alive, showing the desktop. Open the folder where you have the Cubase Audio program.

- Locate the MROS folder, and double click on it to open it. In it you will find a number of files with the extension ".DR". These are the drivers for

any devices you want to use (like the Steinberg MIDEX, SMP-24 or TimeLock). You now have to activate these drivers. This is done by changing the extension in their name from ".DR" to ".DRV". Select the first file (click on it so that it turns black). Select "Show Info" from the File menu. When the dialog box appears, press "V" on the computer keyboard so that a "V" is added to the end of the name of the file. Click OK or press [Return] on the computer keyboard, and the dialog box closes. Continue in this way to activate the drivers you need (usually not more than one).

If you have an Atari TT and a Midex/Midex+, use the file MIDXTT.DR found in a folder called ATARI_TT on one of the additional files disks!

If you have a Falcon and a Midex/Midex+, use a file called MIDEXFAL.DR found in the MROS folder on the Program disk. Please note that older Midex's must be modified to work with the Falcon!

- Double click on the Cubase Audio program icon. The desktop should immediately disappear and after a while an Arrange window with the title DEF.ARR should be displayed.

- If you have an Atari computer *without* a battery backed up clock, you will be prompted to enter the date and time. Cubase Audio relies on your audio files being reasonably accurately "time stamped", so this must be filled out with a correct time and date.

Before you go on, make sure that your MIDI Thru setting is correct (see the "MIDI Setup" section in the chapter "The Options menu"). If you use a synth for recording, set this to *Local Off* if possible, and Cubase to *Thru On* (in the MIDI Setup Dialog box on the Options menu). If you use a separate MIDI device like a MIDI keyboard with no sounding capabilities, a guitar to MIDI converter with no built in synth or similar, Cubase should also be set to Thru On. If you use a synth or similar that can't be set to Local Off, the options are a little bit more complicated due to the nature of MIDI.

If you have your keyboard set to Local Off, or if you have a separate master keyboard, you should have MIDI Thru Active ticked and Thru Off Channel set to OFF.

- Play your MIDI keyboard or other device. Check the "I" box on the Transport Bar so that you are sure that Cubase receives MIDI data. If you have Thru activated, the "O" box just below it should indicate Output of data also.

The I and O symbols on the Transport Bar indicate MIDI In and Out activity.

- Select "Hardware Setup" from the Audio menu. In the dialog that appears, use the MIDI Output pop-up to tell the program to which MIDI Output you have connected the CBX-D5.

- Close the dialog.

- Select Save from the file menu. Click on the Song alternative in the dialog box that appears. In the file dialog, type in DEF on the file name line and click Save. This will make sure that the setting changes you have just made will be made permanent (for more info on the DEF.ALL Song, see the chapter The File Menu.).

This completes the Installation procedure. Please proceed to the next chapter to get acquainted with MIDI Recording, and then to the Getting Started chapter in the Audio part of this manual to try out audio recording.