



Handbook of MIDI Player Piano Tools

For Yamaha Disklavier, PianoDisc and QRS Pianonation Pianos

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Introduction

It could be argued that the old bellows-driven player piano that used an air motor to run punched paper piano rolls over an 80 hole tracker bar in the 19th century was the world's second computer – the loom using cards to weave patterns being the first. MIDI Players are the modern version of the old-style player pianos that used paper player rolls. Today's MIDI Players use digital "rolls" called MIDI files that can be accessed from floppy disks or playlists located on a computer. Unlike Audio files that play on your stereo system, MIDI based music is data that can be controlled and edited by the user.

This handbook is an attempt to explain some of the available technology that expands the creative possibilities of your MIDI Player Piano. It presents information to help manage your music files, control the volume of the songs played on your piano and use a computer with your MIDI Player. It will show you where to find music files on the internet and how to play them on your piano.

Music software that can turn your piano into a music publishing machine, a jukebox, or an orchestra will be explored. There are programs that can teach you to play your piano, create sheet music, transpose music to better fit the range of your voice and create piano accompaniments for solo instrument playing.

This **Handbook of MIDI Player Piano Tools** is constantly being updated. The music software presented here is continually being improved and repackaged in different forms. There are many more programs out there than the ones evaluated here, but each of these I have personally found useful.

MIDI Players themselves are coming out with more features every year. Soon they will be equipped with hard drives, ethernet ports, and Linux operating systems. What a long way we have come to update the bellows-driven air motors and paper rolls!

Have fun!

Frequently Asked Questions

About Disks

- How do I know what disks and files will work on my piano's floppy disk drive?
- How many songs can I put on a floppy disk?
- Can I just burn a bunch of MIDI files to a CD and play them?

About Music Files

- Are there different kinds of music files?
- What is MIDI?
- What is XG?
- Can I change the "voices" coming through the speakers?
- What kind of software do I need to edit these MIDI files?
- Is it possible to convert audio files to MIDI files?
- Is it possible to convert MIDI files to audio files?

About Music Files on the Internet

- Will my piano play files downloaded from the Internet?
- Where can I find good piano MIDI files on the internet?
- Why won't the keys on my piano play a file I downloaded from the Internet?
- Why does nothing happen when I try to play a disk of MIDI files from the Internet?

About My Piano

- Is there a way to make the player mechanism play my piano more quietly?
- How do I connect a computer to my MIDI player piano?

About Music Software

- Is there software to help me learn to play the piano?
- What kind of software do I need to print sheet music?
- Is there a way to generate piano accompaniment so I can practice my [flute]?
- Can I change the key of a MIDI file to fit my voice?
- What is Utility Software?

About Disks

How do I know what kinds of disks and files will work on my piano's floppy disk drive?

Refer to the [Chart: Disk and File Formats](#) .

How many songs can I put on a floppy disk?

About 99 standard MIDI files or 60 songs in Yamaha ESEQ format.

If my system has a CD player, can I just burn a bunch of MIDI files to a CD and play them?

You can burn MIDI files to folders on a CD; jazz, hymns, favorites, etc., but not individual MIDI files. The only MIDI Player at this time that can play a data CD with MIDI files in the QRS Pianomation "Chili" system. Both PianoDisc and Disklavier require a digital-to-analog conversion. You can however, connect a computer to your system using [MIDI Player Software \(Jukebox\)](#) and use Playlists of your favorite MIDI files.

About Music Files

Are there different kinds of music files?

Yes. It is important to understand the difference between audio files and MIDI files. Audio files are on CDs you play in your stereo, and MIDI files make the keys on your piano play. See the section [Music Files](#) for more detailed information.

What is MIDI?

Musical Instrument Digital Interface. MIDI based music is data that can be controlled by the user allowing for editing. You can choose which instrument plays; how loudly; etc. Refer to the section on MIDI File Formats.

What is XG?

Yamaha XG is the next generation improvement on General MIDI. It offers more control over the voices. Yamaha Disklaviers with XG have a tone generator that plays the Ensemble (orchestra) sounds along with the piano.

Can I change the "voices" coming thru the speakers?

Yes. Refer to your owner's manual and the section on Editing MIDI Files. To see a list of available voices and their MIDI assignments, refer to the [Chart: MIDI Voice List](#)

What kind of software do I need to edit these MIDI files?

You would use [sequencer software](#) or a utility program like [gnmidi](#).

Is it possible to convert audio files to MIDI files?

The dream of being able to convert the digital audio music played on stereos to MIDI files that would play your Midi Player Piano is still that – a dream! [Transcription software](#) attempts to do this. This works best on single voices rather than polyphonic sounds; including piano strings because they generate too many harmonics.

Is it possible to convert MIDI files to audio files?

You can use the "render" function in sequence software (Pro Audio 8 and Band-In-A-Box) to convert a MIDI file to audio using the sampled sounds on your computer's soundcard, or make an audio recording of a MIDI performance. You could use a microphone to record your piano playing; or on the MarkIII Disklaviers, you can send the piano part through the audio amplifier, record it on digital tape, take the taped performance into the soundcard of your computer and create a .wav file, then burn it to CD. You could then play the recorded piano performance on your stereo from the CD.

[About Music Files on the Internet](#)

Will my piano play files downloaded from the Internet?

Yes. Most Midi Player pianos will play a standard MIDI file in Format 0. Many MIDI files on the internet are in Format 1, so you may have to use the Convert software to make it play on your system. Refer to the [Chart: Disk and File Formats](#) to see what will play on our piano's floppy disk drive. Music Files on the Internet are discussed on the [Music Files](#) page. However, all Midi Player pianos will play MIDI files from the hard drive of a computer connected through a MIDI interface and using a Player or Jukebox software program. See the section [Connecting A MIDI Player to a Computer](#).

Where can I find good Piano MIDI files on the internet?

See the section, [Where to Find MIDI Files on the Internet](#) .

Why won't the keys on my piano play a file I downloaded from the Internet?

The piano keys play data found on Channel 1 in MIDI files, and maybe none of the music on the file is assigned to Channel 1. If music is coming thru the speakers, a simple program change will fix this. Use [Sequencer software](#) to edit the file, or when using the [gnmidi](#) software, select "prepare sound program for PianoDisc" from the Modify menu even if you have a QRS or Disklavier system. A good setting on the Disklavier for playing MIDI format 0 files is to set L=01 and R=Prg. See Owner's Manual under Import Files.

Nothing happens when I insert a disk I made from files collected from the internet. What is wrong?

Make sure the files on the disk are all the same format, and that the format will play on your piano. It is possible the file you downloaded is not really a MIDI file, or it may be an Apple Music file. A program like [gnmidi](#) can evaluate and repair different file formats. Make sure the floppy disk is the right type; 2DD or 2HD. Refer to the [Chart: Disk and File Formats](#) and the sections on [Managing Disks](#) and [Music Files](#).

About My Piano

Is there a way to make my piano play more quietly?

Yes. It is possible to lower the volume through software manipulation of the MIDI file. See the section [Editing MIDI Files](#) in the [Music Files](#) section. The three utilities that have been most successful are [gnmidi](#), [veloset](#), [MidiMod2](#) and the [Giebler](#) software. There are also acoustic solutions such as foam baffles installed next to the soundboard. On MarkIII Disklaviers, the Silent System can be engaged and the volume of the tone generated piano sound can be infinitely adjusted. See the section on [Volume Control](#).

How do I connect my piano to a computer?

There are both hardware and software considerations. The section, [Connecting to a Computer](#) explains the difference between standard MIDI connections and Yamaha instruments equipped with a [TO HOST port](#). You will also need some cables; either a [CBX cable](#) available from Yamaha, or a MIDI interface and standard MIDI cable available from stores that sell electric guitars.

About Music Software

Is there software to help me learn to play the piano?

Yamaha offers special music disks for their Smart Key feature. [Home Concert](#) and Voyetra's [Teach Me Piano](#) have demo versions.

What kind of software do I need to print sheet music?

Programs dedicated to this task are referred to as [Notation Software](#). Most [Sequencer software](#) also offers this option. Sheet music is printed from MIDI files. See [Music Software](#).

I play the flute (or guitar, violin, etc.). Is there any way to generate piano accompaniment so I can practice?

You can use a program like [Band In A Box](#) from <http://www.pgmusic.com/>.

I want to sing a song I have a MIDI file for, but the arrangement is too high/low for my voice. Is there a way to change the key?

You can transpose any MIDI file up or down using a program like [gnmidi](#), or any MIDI sequencing software. You can also use the Transpose function on your piano.

What is Utility Software?

These are very powerful little programs that allow you to do such tasks as back-up your disks, convert files from one format to another and change the volume of the MIDI file to be played on your piano. The disk copy programs only run in true DOS environments, not a virtual DOS window. Usually, you must restart your computer in DOS mode. These programs may not work in Windows XP, and definitely not in Windows NT environments.

Managing Disks

Floppy Disks

Both Yamaha Disklaviers and PianoDisc have control boxes equipped with floppy disk drives (an option on Pianomation and Concert Master systems). Some models use only 2DD (720 Kb) diskettes which only have one square hole in the lower left corner of the diskette. These disks are very hard to find now as the most common disks now to be found, 2HD (1.44 MG). Both disks look the same, but 2HD diskettes have 2 square holes - one in each lower corner of the diskette. Refer to the [Chart: Disk and File Formats](#) to determine which diskettes your particular model of Midi Player uses. All models of Disklaviers from the MarkIIXG series and later can use either disk.

Connecting a computer to your Midi Player can eliminate the need for the disk drive on the control box. In this case, you would only need one 2DD disk, usually included with the purchase of the piano, to use over and over again, to make back-up copies of your music disks and save the images and files to the computer's hard drive. Details describing how to make these connections are explained in the section, [Connecting a MIDI Player to a Computer](#).



It has been said, that in a pinch, you can use black tape to cover the hole on the lower right corner of a 1.44 MB 2HD disk to "fake out" the computer into thinking it is a 2DD 720k disk. I have not always been successful with this and recommend that you buy a supply of 2DD disks while you still can.

Where to Buy Double Density (DD) Floppy disks

Office Outlet at www.shoplet.com or 55 John Street, 11th floor, New York, NY 10038. Phone is 212-619-3353 Fax: 212-619-3389. They sell either the IBM formatted #UNV00340 (1st choice) or the unformatted #UNV00320 (2nd choice) for \$4.55 per box of 10 (11).

WorldWide Computer Supplies in Columbus, Ohio for around \$.25 each. Call 800-994-7344 or 614-279-6886.

Quill at 1-800-789-1331. 50 bulk pack floppies for about \$20. Order #7-10315FB

Formatting Floppy Disks

PianoSoft floppy disks from Yamaha, and floppy disks formatted in the Disklavier cannot be seen by your computer because nothing is written on boot sector of the disk. However, you can format disks on your computer that can be read by the Disklavier. Starting with the MarkIIIXG models, any IBM formatted 1.44 MB diskette will do. However, for those models (MX100A/B, MX80, Wagon Grand, and MarkII) that can only read a 720k double density disk, formatting can be an adventure with newer computer operating systems like Windows 2000, NT and XP. I suggest that you obtain or keep an older laptop or desktop computer with a Windows 98 or older operating system that support DOS.

If using Windows 95, 98 or ME: Put a blank floppy in Drive A. Right click on the drive A icon and choose Format. When the format window appears, click the down arrow where it says 1.44 MB and choose 720k format.

If using Windows XP, try the following. Go to the DOS prompt and type:

```
format a: /t:80 /n:9
```

or click on "Start", select "Run", type in **cmd /k format a: /t:80 /n:9** The advantage of using this method is that the long command will be remembered as a pull-down selection when you select the "Run" command as long as you are logged in on the same computer as the same user.

If using DOS, you have several options as well as those listed in the paragraph above. You might also be able to type: **format a: /F:720** and press Enter.



Sometimes the DOS prompt that runs in Windows operating systems is "virtual DOS" running in a Window. Disk copy programs will often want you to be running "real" DOS. To do this, you must reboot your computer in DOS mode. This can be done two different ways. You can click "Start", then "Shut down", then choose "Restart in DOS mode" or use or create a Windows start-up disk (boot disk). A boot disk has the system files included on the formatted floppy. This can be done by choosing the floppy drive from My Computer with a blank floppy inserted, and choosing "create boot disk" or when formatting the disk using a DOS command, type: **format a: /s** Restart the computer with this "boot disk" in the floppy drive and the computer will come up in a real DOS mode. If you do this using Windows XP, you will be able to see the A: drive, but not necessarily the C: drive because Windows 2000, NT and XP do not use the FAT system for formatting the hard drive; rather the NTFS (New Technology File System) is used. DOS can only read FAT (FAT32) formatted drives.

Note: *in the above examples examples, I have exaggerated the spaces that appear between the DOS commands so they are noticed! You MUST have one space before each /*

Making Back-up Copies of PianoSoft floppy disks

You can make back-up copies of your PianoSoft floppy disks. Use the copies in your Disklavier and put the originals away for safe-keeping. You may also want to copy some songs on the PianoSoft floppies to a hard drive on a computer. Because your computer will not detect the presence of a PianoSoft floppy disk (because nothing is written on the boot sector) you will need to use special software. The free program, **dkcopy** (part of the **dkvutil** software) and the shareware programs, **AnaDisk** and **RipARoot**, run in DOS. The **RootARipper** program will work in Windows NT, 2000 and XP. These programs are explained further in the [Music Software](#) section. If your MidiPlayer only uses 720k DD disks, you will need a supply of them for your copies, or try taping over the hole in the 1.44 MB floppies with a black, opaque tape.

Both the Disk Copy utility that comes with your operating system, and **AnaDisk**, make exact copies of the floppy disk you make a back-up copy. The **dkcopy** and **RootARipper** programs make a copy of your original PianoSoft disk that can be read by your computer. You can see the individual songs; meaning that you are able to copy these song files to play lists or convert them to a standard MIDI format. More information on this will be in the Music Software section when it is completed.

Disk Capacity

For a Yamaha Disklavier, the maximum number of songs that fit on a disk (either DD or HD) is 60 songs in E-Seq format, or 99 songs in SMF (standard midi file). Refer to section on Music File Formats.



Never mix music file formats on a diskette. A single floppy disk should contain all E-Seq files, **or** SMF format 0 files, **or** SMF format 1 files!

Memory Disks

Starting with the MarkIIXG Disklaviers you can record songs without using a floppy disk. If you start the Record function without a floppy disk in the disk drive, the songs will automatically be recorded to the memory disk. The memory disk is equal to that of one floppy disk (60 songs in E-Seq format or 99 songs in SMF format). The new Yamaha Mark III's have 16 different memory disks! You can always copy songs from the memory disk onto floppy disks and vice versa. You can even copy the copy-protected songs from your Yamaha disks onto the Memory disk(s) for continuous play, but cannot copy these copy-protected songs back out onto other floppies.

Disk and File Formats for Midi Player Pianos

Yamaha Disklaviers will have the controller model numbers on the control box

<u>Controller</u>	<u>DKV Model</u>	<u>Floppy Disk</u>	<u>Recording</u>	<u>Playback</u>
Built-in	MX100A/B	2DD	E-Seq	E-Seq
DKW10 (Wagon)	DGP	2DD	E-Seq	E-Seq
DKC5R	MX80	2DD	E-Seq	E-Seq
Built-in	MX100II MPX100II	2DD	E-Seq	E-Seq, SMF/0
DKC100R	DGP11	2DD	E-Seq	E-Seq, SMF/0
DKC100XG (Playback Only)	DGH1BXG	2DD, 2HD	No	E-Seq, SMF/0, 1
DKC500RXG	MX100IIXG MX1 DGP11XG	2DD, 2HD	E-Seq, SMF/0	E-Seq, SMF/0, 1
DKC500R	MPX100IIXG MPX1 DGPS DGT2IIXG DGT7	2DD, 2HD	E-Seq, SMF/0	E-Seq, SMF/0, 1
DKC500RWXG	MX1Z	2DD, 2HD	E-Seq, SMF/0	E-Seq, SMF/0, 1
DKC500RW	PRO DGT2IIXG DGT7 MPX1Z	2DD, 2HD	E-Seq, SMF/0	E-Seq, SMF/0, 1
DKC50R	MPX70	2DD, 2HD	E-Seq, SMF/0	E-Seq, SMF/0, 1
DKC55RCD	DKVMK111	2DD, 2HD	E-Seq, SMF/0	E-Seq, SMF/0, 1
DKC55 (Playback Only)	DGA1 DGP1	2DD, 2HD	No	E-Seq, SMF/0, 1
DSR-1 PianoDisc 128 Plus	(Upgrade Kit) 128	2DD, 2HD 2DD	E-Seq, SMF/0 SMF	E-Seq, SMF/0, 1 SMF/0
QRS Pianomation	QRS	2DD, 2HD	SMF General MIDI	SMF/0, 1

Baldwin ConcertMaster same as QRS

Music Files

The two different kinds of music files used in MIDI Players are **digital audio** files and **MIDI** files. The digital audio files are found on the CDs with singing and orchestra accompaniments. The MIDI files contain the data that make the keys on the piano play and control the sounds on the tone generators. MIDI files in the past were only marketed on floppy disks, but with the technological advancement of CD standards, the CDs purchased from PianoDisc, QRS Pianomation, and the Disklavier PianoSoft Plus Audio CDs contain the digital audio on one channel, and the MIDI information on the other channel. These CDs can be copied for back-up purposes, but the MIDI information written on them cannot be accessed for editing. Most of this handbook is devoted to using and editing MIDI files with floppy disks or from hard drives located on personal computers.

How Digital Audio Files differ from MIDI files

An audio file (**.wav**) contains a massive amount of numbers that represent the fluctuating amplitude of the pressure wave in front of the microphone that made the recording. No matter if the sound was an orchestra, a guitar or a car horn, the audio file simply contains measurements for the pattern of motion produced by that sound. When you hear an orchestra playing on an audio CD, the strings, brass and woodwinds are all playing on a single track. An audio CD is basically packaged music that the "user" can enjoy, but not interact with. Audio files are much larger than MIDI files.

MIDI based music data (**.mid**) files can be controlled by the user, allowing participation in addition to simple listening enjoyment. On a MIDI file, each instrument or voice is assigned to its own track. The data in a MIDI file tells what note to play, how long to play it, how loud, at what pitch, using what instrument, etc. MIDI files are much more flexible than digital audio files, as you can reassign instruments, change tempo, change the volume, add or delete some notes, etc. by using a musical editing program called a [Sequencer](#). Sheet music is also arranged and printed from MIDI files using [Notation Software](#). Detailed descriptions of different kinds of music software appear in the [Music Software](#) section.

When you hear someone playing the violin (or any other instrument) on an audio CD, you are hearing all the artistry of the musician and nuances of the music. When you hear violins (or any other instrument) on a MIDI Tone Generator, you are listening to a "sampled" sound tweaked with numbers between 0 and 128 to create the nuances of loud/soft, fast/slow, sustain/staccato, etc.

For MIDI Player Pianos, however, we have the best of both worlds. Because of the finely designed sensors on different parts of the piano action, piano performances can be recorded in a MIDI format as well as an audio format. The Yamaha Disklavier has unmatched MIDI recording capabilities, and the Pro models that generate twice as much data can hardly be differentiated from an audio recording. In fact, MIDI data of live Disklavier piano performances can be transmitted in real time over the internet to be received by a MIDI Player Piano in your home playing your own piano while you view images of this live performance on television! You can even send the MIDI data of your piano lesson to a teacher on the other side of the world as an email attachment.

MIDI File Formats

Musical Instrument Digital Interface (**MIDI**) is a communications standard that allows musical instruments and related devices from any manufacturer to communicate with one another via a simple cable. At first, the different producers of MIDI data used their own proprietary formats eventually creating a need for a standard. The General MIDI (GM) standard came out in the mid 1980s and was further improved upon in 1994 by Yamaha's XG standard.

There are **128 track assignments** in MIDI. Refer to the *Chart: MIDI Voice Assignments* to see some standard MIDI voices and program assignments. Volume, and other MIDI data are given values from 0 to 128. MIDI Players use **16 Channels** in MIDI. One or several voices (tracks) can be assigned to a single channel.

NOTE: The data in the MIDI file that plays the keys on your Midi Player Piano is found on Channels 1 and 2 - sometimes referred to as L and R. The pedal data is found on Channel 3, and the Drums on Channel 10.

It is important to know which MIDI file formats play on your piano. Refer to the *Chart: Disk and File Formats* to determine which MIDI formats your MIDI player piano uses.

Standard MIDI Format 0 (SMF-0) - This format assembles all MIDI data on a single track, allowing playback on even the simplest of sequencers or playback devices. This format also offers the greatest compatibility.

Standard MIDI Format 1 (SMF-1) - Format 1 is capable of handling multiple tracks, and is designed to work best with sequencers that allow different parts to be recorded and played back on different tracks - essential for editing and modifying data as well as simple playback

ESEQ is a Yamaha proprietary format for Disklaviers . All the files on a genuine Yamaha Pianosoft disks are their proprietary **E-SEQ** format and usually have the extension **.FIL**

This is the **only** file format that can be played on the MX100A/B, Wagon Grand, DGP and MX80 Disklaviers **from the floppy disk drive**. All MIDI Player pianos, including all models of Disklaviers, can play standard MIDI files in format 0 from a computer (running Sequencer or Jukebox software) attached via a MIDI interface.

Yamaha refers to MIDI files as Import Files in their Owner's Manuals and prompts on the Control Box messages. Conversion software is used to convert one MIDI file format to another and is described in greater detail in the Music Software section.

Setting up your MIDI Player to play MIDI files

It is important to check your Owner's Manuals, usually the Advanced Manual under the chapter dealing with Import Files, to make sure your piano is set up to play whatever MIDI data is located on Channel 1 and 2. These settings are usually the Default settings anyway, but you can check them by pressing Function on the Control Box, choose MIDI Setup, then Piano Part. The Piano Part should be set to Rcv Ch=01, then set the Piano Receive Channel to Prg(All) or better, L=Prg and R=Prg.

If you are planning to put MIDI files on a floppy disk and use the MIDI Player's floppy disk drive, refer to the [Chart: Disk and File Formats](#) and the section on Managing Disks to make sure you are using compatible formats. If you plan to connect a computer to your MIDI Player, refer to the section, Connecting a MIDI Piano to a Computer.

Not all MIDI files are created to play on a piano in an optimum fashion. In fact, once you start editing some of the free files you find on the internet, you start to realize what you pay for when you purchase them from Yamaha, QRS or PianoDisc. You can use a software program like **gnmidi**, and select from the pull-down menu choices "prepare program for PianoDisc" to convert any MIDI file to one (MIDI 0 file) that automatically puts the MIDI data on Channel 1 so it will play your piano keys. Sometimes the MIDI file will produce a poor piano performance and will need editing. See section on [Editing MIDI files](#).

Music Files on the Internet

There are countless music files on the Internet, but **only those in a MIDI format can play the keys on your Midi Player piano**. Other types of music files on the internet are audio files like WAV, MP3, Real Player files, etc. These will NOT play the keys on your Midi Piano, but the Digital Audio files (.wav) may play through the speakers on your system.

Sometimes you may download a MIDI file from the internet, put it on a floppy disk, and find it doesn't work in your piano. If your disk drive on the Midi Player will not even read the disk, the file is probably in the wrong format. Most of the MIDI files you will find on the Internet are in SMF format 1. Refer to the Chart: Disk and File Formats to determine the correct file formats for different Midi Players.

Only files of the same type should be placed on a floppy disk. A disk should contain **only SMF-1 files, or SMF-0 files, or ESEQ files.**

Unless you have speakers attached to your Disklavier or MIDI piano, **you may not hear anything while the MIDI file is playing**. It may be that no data is assigned to Channel 1 or Channel 2, sometimes referred to as L and R. Only MIDI data assigned to these channels will play the keys on your piano. If you have speakers attached to your system, you may hear other musical instruments, but the keys are not playing. The use of [Sequencer Software](#) enables editing to correct this. Yamaha Disklaviers have software built into them that will reassign the channel assignments. Refer to the Owner's Manual.



Many MIDI files you find on the Internet were created using electronic keyboards and the velocity (or volume) is set to 100 or greater. That amount of pounding can also damage your piano action. You may find this unpleasant and your piano will play very loudly. You can edit these files and set the volume to no greater than 80 by using a software program like **Veloset**, **MidiMod2** or a [Sequencer](#). Refer to the section on [Editing MIDI Files](#).

There are some excellent websites on the that have very nice piano MIDI files. listed in the section [Where to Find MIDI Files on the Internet](#).

Editing MIDI files

MIDI files can be edited to play on a MIDI Player piano. You can change the pitch and volume, or remove wrong or duplicate notes; even change which track the piano will play. If the original MIDI file was created with cello and tango accordion voices, all that is necessary for the piano keys to play your piano is to assign those tracks to Channel 1.

MIDI files are edited using Sequencer software. A sequencer can be thought of as a word processor for music. This is the kind of program used to edit, play and record MIDI files, and assign parts of the score to various instruments as well as the piano. **PowerTracks Pro Audio** and **Cakewalk Home Studio** are inexpensive commercially available programs; **gnmidi** is shareware, and **Jazz++** is free. In order to edit the XG features of MIDI, you would need to use **Yamaha XG Works 3.0** available from a Yamaha dealer. The [Music Software](#) section describes the software in more detail.

Volume Control

One of the most common reasons to change MIDI data is to keep the piano from playing too loudly. Because the volume on a piano comes from the force at which the piano hammers hit the strings, it is not like turning down the volume control on a stereo. **Pianos can only play as softly as someone performing at the keyboard.** The Velocity values of individual tracks, or the global parameters of Controller 7 messages can be edited. For pianos, the ideal velocity numbers are between 30 and 80. The default value for PianoSoft disks is 100. Anything over 100 will eventually pound your piano action to pieces. Often MIDI files acquired on the internet are produced on electronic keyboards with the velocity values at 128. The **Veloset** program is a Windows based part of the free **dkvutil** software on this website that is good for editing piano-only MIDI files that do not have separate Ensemble sounds. The challenge is to turn the parts you want the piano to play down, but still leave the Ensemble tracks loud enough to hear. A new program, called **MidiMod2** allows for editing the piano parts on Channels 1 and 2 separately from the other Ensemble sounds. Another way to edit these files is to use software that will lower the volume by a percentage like the **Giebler** utilities or **gnmidi**.

Some MIDI Voice Program Assignments

Group	Number	Voice Name	Group	Number	Voice Name
Piano	1	Acoustic Grand Piano	Ensemble	49	String Ensemble 1
	2	Brite Acoustic Piano		50	String Ensemble 2
	3	Electric Grand Piano		51	Synth Strings 1
	4	Honky Tonk Piano		52	Synth Strings 2
	5	Electric Piano (Rhodes)		53	Choir Aahs
	6	Chorused Piano		54	Voice Oohs
	7	Harpsichord		55	Synth Voice
	8	Clavinet		56	Orchestral Hit
Chromatic Percussion	9	Celesta	Brass	57	Trumpet
	10	Glockenspiel		58	Trombone
	11	Music Box		59	Tuba
	12	Vibraphone		60	Muted Trumpet
	13	Marimba		61	French Horn
	14	Xylophone		62	Brass Section
	15	Tubular Bells		63	Synth Brass 1
	16	Dulcimer		64	Synth Brass 2
Organ	17	Hammond Organ	Reed	65	Soprano Sax
	18	Percussive Organ		66	Alto Sax
	19	Rock Organ		67	Tenor Sax
	20	Church Organ		68	Baritone Sax
	21	Reed Organ		69	Oboe
	22	Accordion		70	English Horn
	23	Harmonica		71	Bassoon
	24	Tango Accordion		72	Clarinet
Guitar	25	Acoustic Nylon Guitar	Pipe	73	Piccolo
	26	Acoustic Steel Guitar		74	Flute
	27	Electric Jazz Guitar		75	Recorder
	28	Electric Clean Guitar		76	Pan Flute
	29	Electric Muted Guitar		77	Bottle Blow
	30	Overdriven Guitar		78	Shakuhachi
	31	Distortion Guitar		79	Whistle
	32	Guitar Harmonica		80	Ocarina
Bass	33	Acoustic Bass	Ethnic	105	Sitar
	34	Electric Bass fingered		106	Banjo
	35	Electric Bass picked		107	Shamisen
	36	Fretless Bass		108	Koto
	37	Slap Bass 1		109	Kalimba
	38	Slap Bass 2		110	Bag pipe
	39	Synth Bass 1		111	Fiddle
	40	Synth Bass 2		112	Shanai
Strings	41	Violin	Percussive	113	Tinkle Bell
	42	Viola		114	Agogo
	43	Cello		115	Steel Drums
	44	Contrabass		116	Woodblock
	45	Tremolo Strings		117	Taiko Drum
	46	Pizzicato Strings		118	Melodic Tom
	47	Orchestral Harp			

Printing Sheet Music from MIDI files

Each generation of software designed for this purpose gets a little better, but this is still a very labor-intensive task. Expensive Scoring software does this best like **Finale** or **Sibelius**, but most Sequencers have notation windows built into them. If you look at a MIDI file in a notation window you can see the scoring, but you would not necessarily be able to hand this to a pianist to play without some editing.

Perhaps the best explanation of how to do this comes from a post to the Disklavier Users Group on Yahoo from PianoBench@aol.com:

*This can definitely be done if you do the right steps in the right order. **The crucial issue is relocking the MIDI file.***

Any time a person makes a MIDI recording, they play to a metronome click. When the original recording of this particular piece was made, the pianist played to a metronome but did not listen to the metronome. Accordingly, any music software program that is used to open the MIDI file will look at the metronome data, assume that is where the beats are, and will then transcribe the recorded notes accordingly. Obviously, the notation will be a mess because the defined beats in the MIDI file have no true relationship to the music as it was performed.

It is important to note that the "quantization" feature that is available in many music programs will not be any help in straightening out this problem. When you use quantization, the notes get pushed and pulled to the nearest beats or sub-beats. If the beats of the MIDI file don't have any close relationship to the notes as they were played, quantization messes things up further.

To understand relocking, it easiest to think about the process in reverse. Suppose you knew what the arrangement should look like in music notation, and you used a music notation program to enter the notes manually, clicking them onto the staff with the mouse. Of course you would end up with a beautiful score, but its playback would be horribly mechanical and boring.

If you wanted to make the playback sound just like your the pianist's recording, you would have to do three things: (1) edit the note-on velocity of each note to match the way that it was played it, (2) add pedal information, and (3) add tempo changes every beat to reflect the human ebb and flow of the original recording.

#3 would be challenging and time consuming, but it would be necessary. The result would be that your score would look square, boring, and mathematically perfect, but it would play with the tempo flexibility used by the original artist.

The purpose of relocking the file is to achieve the same result: a score that is square, boring, and mathematically perfect but which plays with the original tempo flexibility imparted by the artist.

When you relock a file, you go through a process of telling a sequencing program where the true musical beats and barlines are in the MIDI file. This is done in different ways by different programs.

I happen to use Digital Performer for the Macintosh. DP has a feature called "Adjust Beats." I set up DP to show me the recorded music in piano roll notation. In this view, I see all of the notes laid out on a grid. When I turn on the adjust beats feature, I can drag the beat markers on the grid to the notes to which they musically apply. DP then moves the notes

Music Files

*around to line up properly on the rigid grid AND DP creates a tempo map that preserves the tempo nuances of the original performance.
When using this feature, I have to drag every beat marker to the correct note.*

I could do this another way in DP. The other way to do it is similar to the way that some of the Cakewalk sequencers do this (using a Cakewalk feature called "Fit Improvisation"). What you do is create a new track and set it to record. Then during the recording, you listen to the original performance and simultaneously tap a key on your MIDI keyboard. The idea is to record one note for every beat in the music and to record each note so that it coincides with the musical beats of the original performance. This new beat track enables the program to reorganize the MIDI data in the file, line things up properly, and compute a new tempo map. After this is done, the beat track is discarded.

The second way of doing things is not as accurate, but it can be faster.

Once you have relocked the file, you can further quantize the notes in any program if you wish.

Before importing the notes into a music notation program, I generally view the notes in piano roll view in my sequencer and select the notes that I deem to be left hand notes and cut-and-paste them into a separate track. Having the left- and right-hand notes in separate tracks will result in a cleaner transcription by the music notation program.

*Regards,
PianoBench*

Where to Find MIDI Files on the Internet

Piano Roll Scans from Terry Smythe <http://members.shaw.ca/smythe/rebirth.htm>

Spencer's E-Rolls www.spencerserolls.com

Sue Keller's jazz and ragtime www.rtpress.com

Warren Trachtman's collection www.trachtman.org/ragtime

Perfessor Bill Edwards archive at: <http://www.perfessorbill.com/>

John Roache Ragtime piano <http://www.johnroachemusic.com>

John Farrell stride piano <http://homepages.tesco.net/~stridepiano/midifiles.htm>

Doug McKenzie jazz solo piano <http://home.wanadoo.nl/dougmckenzie/>

Renee's Piano Bar at <http://www.nurisite.com/midisonly/pianobar/pianobar.htm>

Bob Mace at <http://www.scottj.f9.co.uk/bobmidi.htm> for contemporary songs.

Classical piano files <http://www.classicalarchives.com/>

Order Yamaha Disklavier disks

<http://www.yamahamusicsoft.com/disklavier/index.php>

Order disks from QRS at www.qrsmusic.com

Connecting a MIDI Piano to a Computer

Why Connect a MIDI Piano to a Computer?

There are several reasons you might want to connect your MIDI piano to a computer:

- **Need to bypass the floppy disk drive.** This is particularly useful if the floppy drive is broken, or only proprietary files like early PianoDisc or Yamaha ESEQ files will play on your disk drive, and you would like to play standard MIDI files. All Disklaviers will play MIDI files from a computer.
- **Create Playlists.** Instead of changing the floppy disk or the CD every dozen songs or so, you can copy your MIDI files to the hard drive on a computer and create longer play lists. Play songs in any order you want or organize your music by category, i.e., jazz, hymns, Irish tunes, etc. A simple Jukebox software program will do this for standard MIDI files, like the **vanBasco Karaoke Player**. **Sequencer software** will also do this, like **Jazz++** .. You would first need to convert any propriarty file formats (Eseq) to standard MIDI files first. The **dkvutil** software has an **ESEQ2MID** program that runs in Windows. Make sure that you have duplicate directories of the files you want to convert so you don't mess up your originals!
- **Use educational software.** There are programs available to help you learn to play the piano, or provide Ensemble sounds to accompany you while playing. Check out the Band-in-a-Box and Home Concert software on the Music Software section.
- **Record a song from your keyboard directly into an editing program.** Although any file you create by recording to a floppy disk or memory disk can also be edited, some find it more convenient to record directly into their Sequencing Software. This may require the use of an interrupt (IRQ) on an IBM compatible PC. Consult the documentation for your computer's soundcard.
- **Control other MIDI instruments.** With appropriate software, you could use your MIDI Player to control the sounds coming from another electronic keyboard, drum machine, etc.

Connecting a MIDI Player to a computer requires BOTH consideration of the hardware and the software.

Hardware Considerations

The first thing to consider is the computer. You can use either a laptop or desktop model; a Mac or an IBM compatible PC. The most important decision will be from which **port** on the computer will you be making the MIDI connections. There are **USB** ports, **parallel** ports (often used for the printer), **serial** ports, and the **joystick port** on the soundcard. Many new laptops today do not have a serial port.

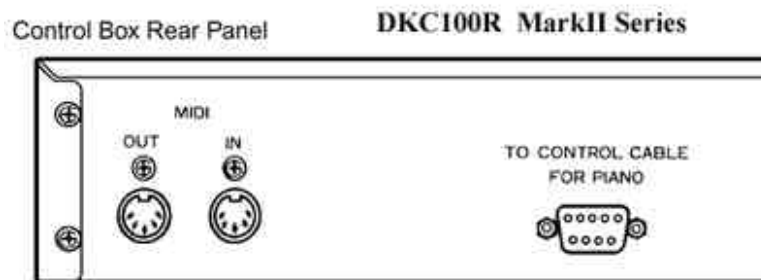
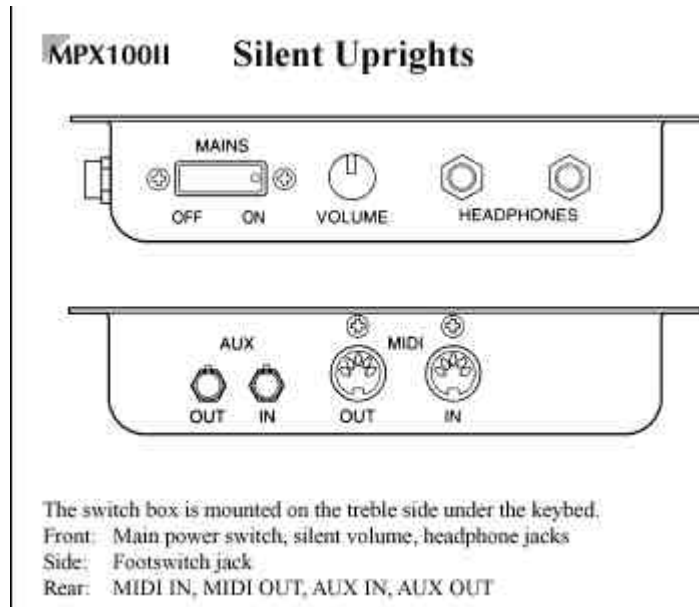
The next piece of hardware you need is a **MIDI Interface** unless you are using a Yamaha instrument equipped with a **TO HOST Port**. A MIDI Interface has one end that connects to a computer, so the type of MIDI interface is determined by what port you have decided to connect to on your computer. You can buy parallel, serial and USB MIDI interfaces or a pigtail cable that attaches to the Joystick port on the soundcard. Only IBM computers need soundcards as Macs already have that capability. The other end of the MIDI interface has MIDI connector ports; a MIDI IN, at least one MIDI OUT, and a MIDI THRU.



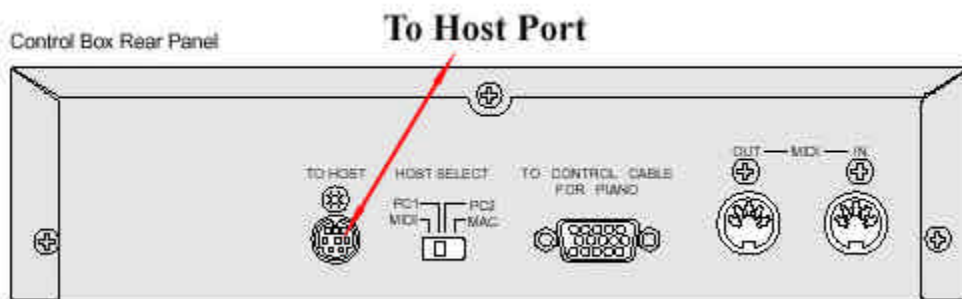
Connecting a MIDI Piano to a Computer

MIDI cables are attached at one end to the MIDI Interface, and the other end attaches to the piano's MIDI ports. MIDI cables are inexpensive and come in various lengths. They are one-way communication only, so you would need two cables if you were going to record music from your piano into your computer as well as play music from the hard drive into your piano. **The MIDI OUT on the interface would connect to the MIDI IN on the piano, and the MIDI IN on the interface would connect to the MIDI OUT on the piano.**





The TO HOST Port is a Connection Option found on Yamaha Instruments.



Disklaviers starting with the MarkIIXG models come equipped with a TO HOST port that eliminates the need for a MIDI Interface and MIDI cables. The quality of the MIDI signal is identical to using the standard MIDI connections on the control box. To connect to a Macintosh, all that is necessary is a standard serial cable (mini DIN 8-pin). To connect to an IBM PC computer, you would use a standard serial cable with one end a mini DIN 8-pin

Connecting a MIDI Piano to a Computer

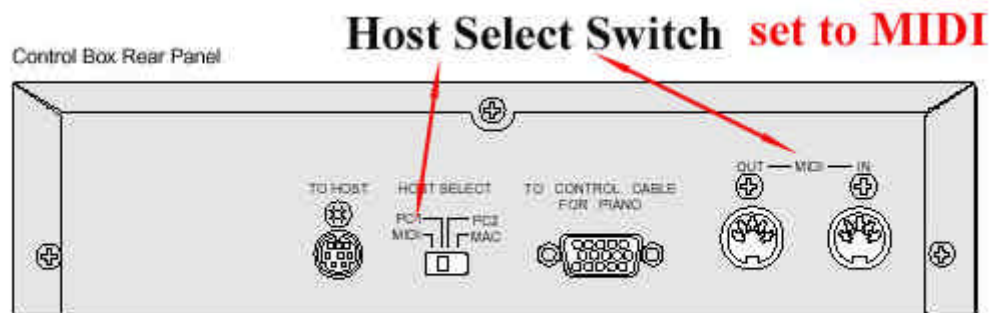
connected to the To HOST port, and the other end either a D-SUB 9-pin or a D-SUB 25-pin to connect to the serial port on the computer. **Yamaha sells a cable (part number Yamaha CCIBM) for connecting PCs to any Yamaha product equipped with a To-Host connector port.**



When using the TO HOST port, you must also use the CBX driver for your particular operating system when using an IBM PC. These can be downloaded for free from the Yamaha website under Support and Downloads at <http://www.yamaha.com/>. There is also one included on this website for Windows 98 called **cbx.exe**

The **HOST SELECT Switch** appears on all models of Yamaha instruments equipped with a TO HOST port and it is absolutely necessary to set it to the proper position. If you are using the TO HOST port, the set the switch to your computer type; MAC or PC2. Only if you were using a NEC computer from Japan would you set it to PC1. **If you are connecting MIDI cables to the standard MIDI ports, set the switch to MIDI.**

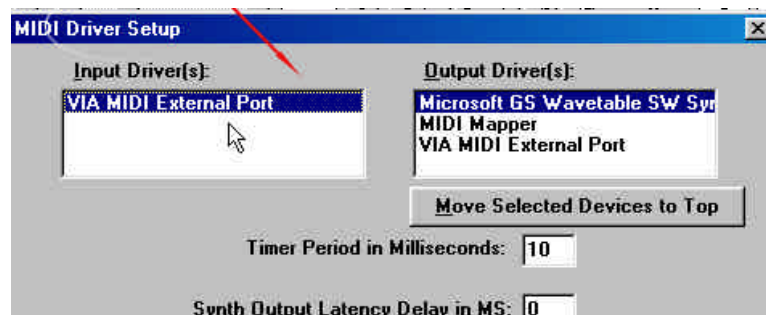
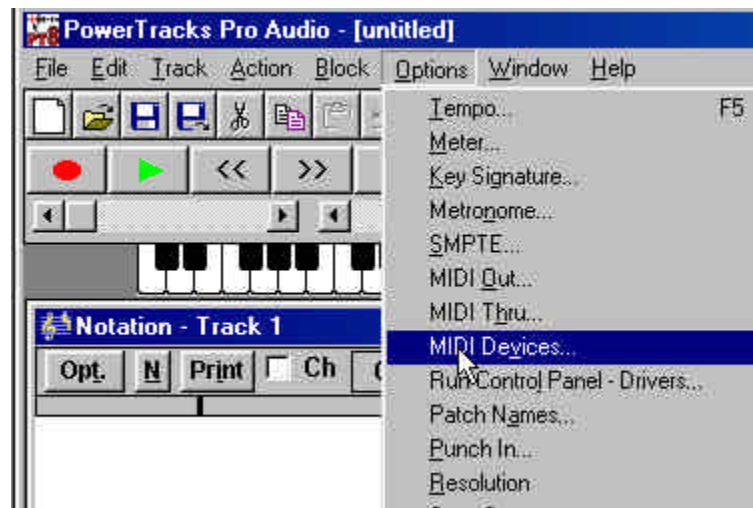
The HOST SELECT SWITCH must be set to the appropriate position!



Software Considerations

The IRQ assignment for PCs only needs to be considered if MIDI IN is used for Recording data directly into the soundcard port on the computer. Make sure there are no conflicts and that the proper drivers are installed for MIDI on your soundcard. **Remember, when using the CBX cable to install the CBX driver!**

When using Sequencer software, make sure you tell your computer where to look to find the MIDI inputs and outputs. Usually this is done by selecting from the Options menu in the software. Select the soundcard, or the MIDI interface, or whatever you are using for **both** MIDI inputs and outputs. Also, make sure the MIDI options on the volume controls are turned up and that the Mute button is not checked.



Troubleshooting a computer connection to a MIDI Player

- **Why Don't I Hear Anything?** One of the most frustrating scenarios is correctly connecting the MIDI cables, MIDI interfaces, installing the appropriate software, etc. and nothing happens! The simple answer is that somewhere in all that maze, the appropriate connection is not turned on. Here are some things to check.
- Make sure the **Host Select** switch on the back of the Disklavier Control Box is set correctly for those models that have this feature. If using a MIDI interface connected to the MIDI ports, choose MIDI. If using the To Host port, set the switch to PC2 for a PC computer, or Mac for a Macintosh computer.
- Check the MIDI cable connections. **MIDI Out from one device always connects the other end of the MIDI cable to MIDI In on the other device.**
- Sometimes there are several MIDI drivers installed on your computer - the soundcard MIDI Player, the Windows Media Player, the MIDI interface, etc. and you need to tell the program you are using which driver to use for MIDI IN and MIDI OUT. You select **MIDI Devices** from the **Options** pull-down menu and choose the appropriate drivers. If you are using a Yamaha CBX cable connected to the To Host port, make sure you have chosen the CBX driver.
- Your Windows MIDI Mapper properties may need checked. Access these by choosing **Control Panel**, then **Multimedia**, the Properties to see what drivers are installed.
- Check that your **soundcard** has the MIDI turned on and the Mute box is **not** checked! Go to Control Panel, then System, and check the Sound, Video and Game controllers section. Make sure Full Duplex is set "on". Some soundcards come with a Mixer. Make sure the sliders in the Volume Controls are turned up and the appropriate Mute boxes are NOT checked. Also in the **Control Panel** (Windows operating systems), click the icon for Multimedia Properties or Sound and Audio devices depending upon the operating system, and make sure the appropriate drivers are present.
- On the Midi Player Piano end of the connection, check to make sure that the appropriate settings are enabled for receiving and sending MIDI information. For the Yamaha Disklavier, **set the Piano Part to Rcv Ch=01** then set the Piano Receive Channel to Prg(All). You may also want to set L=01 and R=Prg. You may also want to set the Delay In=ON.
- If you are sending data from your keyboard to your computer (recording) thru a MIDI cable instead of the TO HOST Port, be sure to **set MIDI Out=KBD Out**. Select the MIDI Out Channel so that Keyboard and pedal data is where you want them. Half pedal data is usually sent on Channel 3 and Keyboard data and on/off pedal data usually on Channel 1.

Music Software and Utilities

This section briefly describes the kinds of music software that is available, and presents programs that are free or inexpensive for downloading from the website. Music software is constantly improving and being packaged under different names. To see a good listing of what is available, as well as demo versions of professional programs, go to the <http://www.sharewaremusicmachine.com>

NOTE: You will need to have a program on your computer like **WinZip** to open some of the software described here. The software described in this section can be found at www.carolrpt.com/softwaredownld.htm Each program comes with detailed instructions in the readme.txt files.

Disk and File Copy Utilities

Most of these programs are DOS programs, and need to be run by restarting your computer in DOS mode. They don't always work from the DOS prompt in Windows.



A common tendency when using DOS utilities such as these, is that they will happily overwrite your files in the directory or on floppy disk you are using. **Always use a COPY of the song file you want to change when using these utilities, and keep the original, unchanged copy somewhere else just in case you don't like the results!** You should be familiar with the information in the sections on **Managing Disks** and **Music Files** before using any of this software.

CBX driver from www.Yamaha.com for Windows 98

This utility must be installed when using the Yamaha CBX cable to connect the To Host port on a Disklavier Control Box to computer. See [To Host Port](#) in the [Connecting a MIDI Piano to a Computer](#) section.

AnaDisk

A disk copy program has been able to copy any copy-protected disk so far. Even runs in the DOS window of XP. The resulting copy is still copy protected, so your computer may not see the individual files if nothing is written on the boot sector..

RootARipper

The nice thing about this copy utility is that it copies files from floppy disks to your hard drive on XP computers. It saves the trouble making an exact but un-copy protected copy of the floppy disk first, and then putting the files on a hard drive.

RipARoot

This copy utility does the same thing as above in that it copies files from a floppy drive to a hard drive without needing to duplicate the floppy disk first. It only works on DOS. Before running the program, create the directory you want the files copied to (target directory on the hard drive) first.

Convert~1.exe also called SMF Utilities.

These utilities are DOS programs provided by the Roland Corporation as unsupported utility software for the PianoDisc website. In this package there are two utility programs for converting Standard MIDI Files (SMF) file types. The **FCNV10.EXE converts SMF of Type 1 to Type 0**. This is probably the program you will use most often. Users should have a working knowledge of DOS. The detailed instructions are in the SMF Utilities Readme.txt. This is a very simple program to use once you get the hang of it!

gnmidi v.2.04

This is not a free program, but Shareware from the author, Guenter Nagler who will eventually want \$30. Not only does it convert MIDI format 1 to format 0, MIDI format 0 to format 1, but repairs errors in MIDI file structure, convert MIDI files to and from Karaoke (.kar) files, edit MIDI files, change volume, contains a simple MIDI player, etc. One really nice feature is the "convert program to PianoDisc" which puts all the tracks in a MIDI file (format 0) on channel 1 so that it plays on a player piano. I think this is a "must have" program to editing MIDI files.

MIDImod

This utility was written by Richard Stibbons has good documentation and is available at: <http://www.spencerserolls.com/Download.html>

MidiMod2

This program was written by Spencer Chase to modify the volume in MIDI files. It was written with the MIDI Player Pianos in mind as the piano parts (channels 1 and 2) can be modified separately from the Ensemble parts.
<http://www.spencerserolls.com/NewRelease.html>

The Disklavier Utilities Programs (dkvutils)

These are 5 very handy programs. The detailed instructions for these programs are contained in the **dkvutils.txt**.

DKVCOPY

A DOS utility which must be run from the real DOS (i.e. not DOS running under Windows). It copies copy-protected Disklavier discs onto unprotected blank floppies. You can then see the individual files on the new floppy and copy them to a hard drive. The new copies must be Double Density (2DD) (not 2HD) disks formatted to 720 KB. See the section, [Formatting Floppy Disks](#).

ESEQ Explorer

explores Disklavier discs and enables Disklavier **.FIL** files to be added to the disc directory, PIANODIR.FIL. Enables editing of title fields, disk name, etc. You would use this program to create you own Yamaha-type (ESEQ) disks from songs in your collection.

VELOSET

displays the velocity distributions of any MIDI file (and E-SEQ file) dropped into the window. The dynamic range and minium velocity may be adjusted using the right and left sliders. The modified version of the file may be re-saved and will overwrite the original version. This is the program that is easiest to use to make "quiet" versions of your Yamaha disks. However, it will also quiet the Ensemble sounds coming from the tone generator as well. Using a program like MIDIMod2 allows you to turn down just the channels that play the piano keys.

MIDI2SEQ

Converts MIDI type 0 or type 1 files to ESEQ. The output filename takes the input name, substituting the FIL extension. The filename is truncated to 8 characters and made. It will overwrite an existing ESEQ file of the same name without warning. **It would enable you to collect songs from the internet and play them on Disklaviers that ONLY played ESEQ files**

ESEQ2MID

Converts ESEQ to MIDI type 0 files. The output filename is the same as the input name, substituting the MID extension. Again, it will happily overwrite an existing MIDI file of the same name without warning. **You would use this program to convert a Yamaha ESEQ file to a standard MIDI file so you could print out the sheet music and learn to play that particular arrangement of a song yourself.**

The Giebler Utilities

These are commercially available disk manager and sequencer utilities from Giebler Enterprises at www.giebler.com. Cost is about \$59. They provide disk manager copy utilities for many electronic keyboards including Yamaha Disklavier and PianoDisc. They are DOS based programs. To copy the copy-protected disks, each song must first be copied individually to your hard drive, then reconstructed onto a floppy disk. The new disk image can then be stored on your hard drive and reproduced with a single click. **You could even store copies of disks that have the volume adjusted lower than the original copies for those "party" events.**

The software DOMSMF program will allow you to turn down each song file separately as a percentage of the volume. This makes a more balanced copy of a song with Ensemble sounds when turning down the velocity of the piano keys.

Sequencer Software

A sequencer can be thought of as a word processor for music. This is the kind of program used to edit, play and record MIDI files. You can change which track the piano will play (the MIDI pianos use Tracks 1 and 2 sometimes noted on the controller as L and R); edit "wrong" notes; change pitch and volume; assign parts of the score to various instruments as well as the piano. Most sequencers also have a Notation Window from which you can edit and print sheet music.

PowerTracks Pro Audio

Also has Jukebox feature; Notation view for editing and printing sheet music; Tracks Window view for editing tracks and the instruments that play on them; Mixer Window for editing volume; etc. You can use a program like this to record music off your MIDI piano directly into your computer; set up play lists to control your piano from your computer, edit and print sheet music. Also comes with a really good instruction manual. **Has a feature which will convert MIDI files to audio files that can be burned to a CD.** Available from www.pgmusic.com

Yamaha XG Works 3.0

This is the Yamaha Music Sequence Software that does all the standard features, but also does a lot more. Has an incredible assortment of editing tools and views. **It is specially designed to edit the XG sounds that came with your Disklavier.** It also does guitar editing and tablature and Voice to Score editing. Available from Yamaha Dealers. To see a more complete explanation go to: http://www.yamaha.co.uk/xg/html/midplug/m_mid10.htm.

PC Music Studio Kit (PCMSKIT)

Advertised by Yamaha and produced by Voyetra as an all-purpose music sequencing program. Looks like a good value for the money. Also has capabilities for editing MIDI files and producing sheet music. Check it out at from www.buyyamaha.com

Cakewalk Home Studio

This product keeps changing available features. The latest version can be found at www.cakewalk.com. It can edit and print sheet music with lyrics and guitar tablature, transpose key signatures, etc. Has multitrack digital audio and MIDI recording and editing. Much more.

Jazz++

This is a free, open architecture music sequencer program with many features available at <http://www.jazzware.com>. **JAZZ++** is a full featured, audio capable midi sequencer for Linux and Windows and offers a lot of functions normally only found in expensive sequencer software.

Media Player Software

Also known as **Jukebox Software**. These programs allow you to compile “**play lists**” on a computer connected to your Midi piano or Disklavier. You can choose any number of songs you want and play them in the order you prefer. Great for parties when you don't want to change the disk every 20 minutes, or your disk drive is broken on your control unit. Usually, only MIDI files play in these Jukebox programs, meaning that native and proprietary file formats must be converted to MIDI files first. See **Eseq2mid** software above for using PianoSoft files.

VanBasco's Karaoke Player

A free program with many features that works on all Windows platforms. Also have very good instructions. Make sure you don't overlook the little buttons in the corner!

YamPlayer

This program is still under development. The unique feature will be that it will be able to use **.fil** files (Yamaha's proprietary Eseq files) right from the PianoSoft floppy disks without having to convert them to MIDI files first.

Music Education Software

Home Concert

A musician can play a piece of music on a MIDI instrument, reading the music off the computer screen, while the music's accompaniment is synchronized to his/her playing. You play the "solo" part on a keyboard, and Home Concert plays the accompaniment, following your timing, tempo, and dynamic changes! It's like having a private orchestra and conductor to play with you every time. Available from it's creator at www.timewarptech.com

Teach Me Piano

Available from <http://www.voyetra.com/site/products/tmp/serieshome.asp>

Band In A Box

This is one of the coolest music software programs around!! It can generate accompaniments, chords, bass lines, guitar tablature, etc. as well as the music notation. Definitely check this one out. Available at www.pgmusic.com

Notation and Scoring Software

Used to edit and produce sheet music. Although Sequencer Programs above have this feature, a dedicated program for this purpose may have more features. Most notation software will let you enter the notes with a mouse; enter notes by playing them on your computer keyboard, or import a MIDI file you created on your Midi Piano. These programs are also used to change the key signature or transpose music up or down with just a few mouse clicks.

It has been my experience that no matter what program you use, extensive editing is needed to produce playable sheet music. See the comment in the section on [Printing Sheet Music.From MIDI Files](#).

Cakewalk Music Creator

A commercial program available from www.cakewalk.com My suspicion is that it is a repackaging of their older **Scorewriter** program.

Finale

This is thought by many to be the primo scoring program available. Full details, free versions of **Note Pad**, and less expensive versions are available on their website at: www.finalemusic.com

Smart Score

This is a precision **music scanning program** that works with **Finale**. It claims to be able to scan sheet music and turn it into MIDI files. It also claims to be able to transport the scanned images of sheet music into a form that can be used to transpose the key signature and do other editing. My own experience is that this process still needs a lot of editing, even for the amount of money spent!
Produced by Musitek at www.musitek.com

Sibelius

This is the other professional software package that is very popular. It works with their **Photo Score Pro** software with supposedly good results. Check them out at www.sibelius.com

Transcription Software

The dream of being able to convert the digital audio music played on stereos to MIDI files that would play your Midi Player Piano is still that - a dream! However, some progress has been made in converting **single** voices to MIDI files. This means that the human voice, or a guitar, or flute might work with this software, but definitely NOT a piano because of the harmonics generated.

NOTE: The opposite process, converting a MIDI file to an audio file is possible. Many audio CDs use the sound of MIDI music. **MIDI to Wav Conversion** is easier, called "rendering", and is available in the Pro Audio Tracks sequencer software mentioned above from <http://www.pgmusic.com> MIDI files are converted to audio and burned to a CD.

Akoff Music Composer 2.0

It is music recognition software which performs WAV to MIDI conversion. You can sing, whistle or play guitar, piano, flute and so on with your microphone, Composer will automatically recognize and score your music and create standard MIDI sequences. Neither a MIDI keyboard nor any musical experience are required to compose music.

Amazing MIDI 1.60

Automatically transcribes music, converting WAV files into MIDI files. It can recognize single-instrument polyphonic music. Even if the music contains several different instruments, Amazing MIDI writes down all detected notes as a single-instrument music. The demo version of this program creates a 30-second MIDI file!

Companion Website

The website <http://www.carolrpt.com> contains more information about MIDI Player pianos. There you will find information about:

Buying a New Piano

Buying a Used Piano

Buying a Disklavier

Piano Care and First Aid

How a Piano is Tuned

The Yamaha PianoSmart Upgrade

Sheet Music

MIDI files for downloading to play on your MIDI Player Piano

Software Downloads of the computer programs described in the Handbook