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**The\*Drumz Wizard™ software**  
**The\*Drumz Wizard PLUS™ software**  
**The\*Muzical Wizard™ software**

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Welcome and thanks for purchasing a **The\*Wizard** product! We are certain that you will enjoy using this software to create exciting music. After all, **The\*Wizard** products are "The Ultimate Pattern-Based Desktop Music Composing & Publishing Software"!

Pattern-based Desktop Music Composing & Publishing Software is our forte – we have been developing such products since 1991. **The\*Wizard** products represent the third generation of our pattern composing technology and the culmination of over 6 years of experience .... we hope you have fun with our products, make great music, and appreciate our efforts to improve our products.

Please take a moment to fill-out and return your completed registration card. Over the years we have release new products and enhanced the features in our products, and we always offer special upgrade pricing to our customers .... without receipt of your registration card, we cannot contact you to let you in on new stuff! We also will only provide assistance and support to registered owners.

Out of respect for our earth, we have intentionally reduced the amount of useless materials in this package, especially for direct mail-order sales, and we also use recycled and/or recyclable materials as much as is practical (even though they do cost a few pennies more). We hope that you agree with these decisions to only send you useful and necessary materials, and not add to your waste-basket.

Thanks to all who have contributed to the development of our products especially those who have contributed to the ultimate design and refinement of **The\*Wizard's** by providing valuable feedback about how they use pattern composing software and what capabilities are most important. And, most importantly, we'd like to thank you -- our customer! Several people deserve specific acknowledgement:

**Raffy & Betsy** for their loving support of the endless endeavors of Team\*Z

**Mark Serotta, Steve Uttley, Robert T. Ihrman, and Fabian Feld** for inspiration, suggestions, data entry, testing & musical.

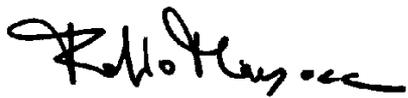
**Enjoy The\*Wizard software, create great music, and have fun!**

Regards,

*Team\*Z*



Ron Stein  
Chief Executive Innovator



Ing. Fabio Marzocca  
Chief Technical Innovator

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# 1 GETTING STARTED

We know that you are eager to get started with **The\*Wizard** software, but we strongly recommend that you read the information in the following sections before installing **The\*Wizard** software.

This user guide is for both **The\*Drumz Wizard PLUS & The\*Muzical Wizard** products. All instructions apply to both products; specific mention will be made where particular features apply to a specific product. In general both products have essentially identical features and capabilities with the salient difference between the two products being that **The\*Muzical Wizard** can have up to a total of 16 band-players and **The\*Drumz Wizard PLUS** has only a single player -- the "Drummer".

## **"Readme" files & Additional important information**

There may be one or more information files copied into your program group called "README" or some similar name. If there are such *readme* files, we suggest that you read them as they provide new information that arose after this guide was printed.

The *readme* files may be a text file or a *Write* document ("Write" is the word processor supplied with Windows-3.1, or "WordPad" which is supplied with Windows-95). The text only files may be viewed using the Windows "Notepad". We have taken the liberty of inserting icons in the same program group that **The\*Wizard** software is inserted into, so to view the important information contained in that file, just double click on the icon and the appropriate Windows utility will be launched to view the information.

## 1.A How this User Guide is organized

In addition to this printed *user manual* is an on-line help system which may be accessed from the **The\*Wizard** program either by using the main Help menu or by pressing the F1 key at any time. The on-line help system is complementary to this user guide and is provided for a quick and handy overview when using the program. Because of the unique media capabilities of Windows on-line help systems, particularly hyperlinks and hotspot enhanced graphics it is much easier to describe specific controls and aspects of this software's graphical user interface .... we therefore recommend that you reference and use the on-line help system as an addition and extension to this *user manual*.

This *user guide* is designed to provide you with information about all of the features and capabilities of **The\*Wizard** products. It will also provide *how to* information so that you can quickly find out how to perform common music composing tasks, as well as manage your patterns, songs and other information that is utilized by the software.

If you need an explanation about a particular feature then you can use either the on-line help system or this document. If you need to know how to accomplish a specific task, or if you need an overview of the features, capabilities, specifications and architecture of **The\*Wizard** product that you have, then you should refer to this manual.

## 1.B Installation

The installation process will install all of the components necessary to use and run **The\*Wizard** software, including many sample patterns and songs. The installation will also configure all of the sample patterns and songs to use a MIDI device that you select as a default (in the event that you have more than one MIDI device driver resident in your PC). Note that all of the samples provided are configured for a General MIDI compatible electronic instrument .... if you do not have a General MIDI instrument, then you may have to change the patch and/or drum-voice settings of the band players.

### 1.B.i Requirements

To run and use **The\*Wizard** software requires an IBM compatible personal computer running either Microsoft Windows-3.1 or Microsoft Windows-95. **The\*Wizard** software has been designed to run perfectly on both the Windows-3.1 and Windows-95 operating environments. Additionally, special features have been implemented to provide Windows-95 verbose naming even if you are running Windows-3.1.

Your PC system will also need a hard disk (you'll need approximately 2 to 3 megabytes of free space on your disk), 8 or more megabytes of RAM memory, and (color or monochrome) VGA or SVGA compatible video monitor are required. Though this software will work with any VGA or SVGA compatible graphics system, **you may find certain display problems if you are using the *large fonts* option and so we recommend that you use the *normal fonts* display option.**

**The\*Wizard** programs like any other Windows software uses device drivers installed into the Windows system to communicate with specific hardware (in this case MIDI hardware) -- so make sure that the driver for your particular MIDI Interface(s) and/or Sound Card(s) are properly installed. And also make sure that your interface is properly connected to your PC and to your MIDI equipment. Also required are:

- a sound amplification system or powered speakers, and
- an audio subsystem in your PC, such as a sound card (e.g., Sound Blaster), note that your sound card or MIDI interface must have a Windows device driver, or
- a MIDI interface (i.e., an MPU-401 compatible card) plus a MIDI synthesizer or MIDI sound module connected to that interface.

<b>Additional notes about the sample patterns &amp; sound quality</b>
---

**All of the sample patterns and songs have been composed and configured to use General MIDI patches & drum-voices, if you are using a non General MIDI compatible device, then it will be necessary for you to make appropriate patch and/or drum-voice changes (using the Drummer Settings/Band Manager utility).** If your electronic musical instrument offers a General MIDI compatible sound-bank, then you should select the General MIDI sound-bank when initially previewing this software as well as any of its supplied samples. If your electronic musical instrument does not support General MIDI compatible sounds then make sure to select a patch or

patch number using the Drummer Settings/Band Manager utility to select an appropriate drumkit patch for your electronic musical instrument. Once you become familiar with the many flexible advanced features of this software, you will find it easy to use and configure it to support any drumkit of any electronic musical instrument as well as custom drumkits that you may create with a sampler.

**The quality of the sound produced is solely dependent on the type and quality of the sound hardware that you are using and has nothing to do with the performance of this software!** Similarly, the selection of sounds is also directly related to the sounds and capabilities built into your sound card, synthesizer, or whatever. The sound quality is related to your speakers and the type and quality of sound card or electronic musical keyboard, etc. It is particularly the case with SoundBlaster and compatible cards using the synthesis technology known as "FM" that the sound of instruments will be quite thin and unrealistic, especially the drum & percussion sounds .... if you are not satisfied with the quality of your system's sound, then you might want to consider upgrading your Sound Blaster (or compatible) FM-type sound card either with a "daughter-card" or purchasing a new card that utilizes "wavetable" technology for its sound generation; and you might also want to consider quality speakers.

## **1.B.ii Installing The\*Wizard Software**

There are actually two steps to the installation process. First you must install the software onto your PC's hard-disk by running the install program from the master disk supplied. Then the first time that you run the program you will have to test and set your default MIDI device driver. When you select your default driver, the program will take a few moments to initialize its settings. If you change your PC's internal MIDI hardware the initialization process will occur again the next time you run the program.

The installation process consist of the following steps which are described in detail:

1. Launching the installation program from the supplied Master Disk
2. Selecting the destination path for where you want the software installed
3. Selection of the installation option – *Full Installation* is recommended
4. Entering your name/personal information
5. Quick-access icon setup
6. Selection of a default MIDI device driver and final program initialization

### **Launching the installation program**

You cannot run **The\*Wizard** software directly from the diskette(s) that came in the product package; the program file on the supplied *master disk(s)* is an installation program and not the actual program itself. You must first install the **The\*Wizard** software into your PC before you can use it. After using your *master disk(s)* to install **The\*Wizard** software into your computer system, keep them in a safe place in case you need them again in the future to recover from a hard-disk crash or if you purchase a new computer! It is a good idea to create a backup copy of your master disk(s). Since the files themselves are not copy protected, you may make a backup disk. If you have returned your registration card then we will have you in our customer database and you

can always obtain a replacement disk directly from us should you need one; we cannot supply replacement disks if a person is not registered in our customer database.

To install the software .... run the Install program on the floppy disk. The actual installation program name may be one of the following: "SETUP.EXE" or something like these filenames: "DRUMZPLS.EXE" or "MUZCLWIZ.EXE" (the important thing is that it will be a file ending with ".EXE" – there should be only one such file).

☞ **If you are running Windows-3.xx:**

Select the Run option from the File menu of the Program Manager which will open a dialog box in which you will type the drive letter corresponding to the drive in which you inserted the disk (usually A:\) then use the *browse* option to find the executable installation program. Or, use the File Manager and double-click on the installation program while viewing the contents of the floppy disk drive.

☞ **If you are running Windows-95:**

Select the Run option from the Start button which will open a dialog box in which you will type the drive letter corresponding to the drive in which you inserted the disk (usually A:\) then use the *browse* option to find the executable installation program. Or, use the Windows Explorer and double-click on the installation program while viewing the contents of the floppy disk drive.

### Selecting the Installation Destination

You must first select where you want to have the software stored on your PC's hard-disk, though you need not make any choice and can stick with the recommended default destination path.

The entire installation will take approximately 3 megabytes of storage, so make sure that the destination drive that you select has at least that much free space.

### CUSTOM INSTALLATION vs. FULL INSTALLATION options & Name Entry:

You will be able to take advantage of selecting which specific components and files that get copied onto your PC's hard-disk by choosing either the *Custom Installation* or *Full Installation* options. In most cases you should select *Full Installation*, unless you have very limited space available on your PC's hard-disk and, for example, do not want to have the additional documentation files and samples copied onto your PC's hard-disk. If you select the *Custom Installation* option you will then have the choice of what program components, and the files related to each component, are installed and copied onto your PC's hard-disk.

After selecting to proceed with the installation, you will be prompted to enter your name and a business -- you must enter something on both lines. In addition to entering your name, if there is no pertinent *business*, then enter "personal" or your address. If you have previously installed the software you will not be able to change the name that was entered the first time the software was installed.

The installation will then start copying files creating several directory paths for storing the different files used including the sample patterns & songs.

### Quick Access Icon Setup

Lastly you will be able to select a Program Group/Start Menu Group into which the program and related documentation quick-access icons will be placed. These are the icons that you use to run **The\*Wizard** software as you run any other software installed onto your PC system.

### Installation is complete .... running The\*Wizard software

At this point, the actual installation is complete! And you are ready to run the program.

You run **The\*Wizard** programs just like you would any other Windows software – open the program group that you selected (most likely the default: "TheWizard") and click on the quick-access program launch icon. As is described below, the first time that you run the software you will be prompted to select a default MIDI device driver and then the program will go through a brief initialization process. Also, if you change or remove the hardware associated with your selected default MIDI device driver, then the next time you run the program it will prompt you to select a new default MIDI device driver and then go through the initialization process again.

Do not remove or rearrange any of the directories or the files within those directories created by the installation process or you may cause unpredictable and undesirable results! If you need to move the installation, then make sure to move the root installation directory and all of its contents and subdirectories in their entirety. If you do move the installed files, then you will also need to modify the quick-access program icons in your Program Groups or Start Menu Groups.

You will notice that the category directory names, category filenames, and song filenames are not readily recognizable (generally they will appear as just numbers).

**You should not attempt to rename, copy, delete, or move these files! If you need to perform such operations use the Pattern Manager and/or Song Manager utilities to manage the pattern, category and song objects stored on your PC's hard-disk.**

## Default MIDI Device Driver Selection & The\*Wizard Initialization

The first time you run the program it will insist that you select a default MIDI device. Be patient while we explain what is going on here .... **The\*Wizard's** flexible architecture allows each pattern to have its own MIDI settings, such as the device it plays through for the Drummer (and the other players as well for **The\*Muzical Wizard**). In order for a pattern to play, it must connect to a particular MIDI device by selecting its Windows device driver. All the sample patterns and songs are shipped in a neutral state with null MIDI device selections since we cannot know the configuration of every person's PC (trust us, they are all different).

The initialization process lets you test and select a MIDI device driver. Use the *test* button before proceeding with the initialization so that you are sure that you hear some sounds to make certain that you select an appropriate MIDI device driver. Selection of an appropriate MIDI device driver is particularly important if your PC has a sound card as there are typically two MIDI devices (and hence two device drivers) associated with most cards (or other internal audio subsystems): an internal synthesizer, and a MIDI port. If there is nothing connected to the MIDI port, then you will not hear any sounds.

When you proceed with the initialization all of the patterns and songs will be set to use the MIDI device that you select. The default MIDI device driver has additional significance as it is automatically selected in the following situations:

- when you create new patterns
- when you import patterns from pattern-groups
- when you import songs from song exchange files

You can change your default MIDI device driver at any time using the MIDI Settings utility. Functions are also provided to let you quickly set all players of an open pattern to use the default MIDI device driver, and also to quickly set all players of all patterns in an open song-sequence to use the default MIDI device driver.

If you change or remove the hardware associated with your selected default MIDI device driver, then the next time you run the program it will prompt you to select a new default MIDI device driver and re-initialize.

Windows automatically installs a *MIDI Mapper* driver, which looks essentially like any MIDI device to **The\*Wizard** (and to other MIDI software as well). The *MIDI Mapper* is more appropriate for non-music and non-MIDI programs. **Because The\*Wizard software works best when it communicates directly with MIDI devices we strongly recommend that you not use the MIDI Mapper! Using the MIDI Mapper with The\*Wizard software only adds confusion to the whole process, and may cause undesirable effects such as the wrong sounds being played from your sound cards and other MIDI devices.**

## 1.B.iii Upgrading to The\*Wizard Software

Removing an MTI product from your PC's hard-disk
--

All of our products have always been considerate of your PC and only installed components into the root directory. That makes uninstallation and removal of any of our products quite simple – just use the Windows disk-file utility (e.g., the File Manager or the Windows-95 Explorer) to delete the root directory and all of its contents. You will also want to remove the quick-access icon program group (or just the icons themselves if you selected to install the quick-access icons into a group other than what was suggested by the installation system).

## Upgrading from previous MTI products

If you own and use one of our earlier products you can easily upgrade to either **The\*Drumz Wizard PLUS** or **The\*Muzical Wizard**. However the upgrade is not fully backward compatible as **The\*Wizard** programs cannot directly open and edit pattern and/or song files created with our earlier products .... sorry. In order to offer the new and expanded capabilities, it was necessary to create a totally new architecture and hence different file formats.

You do not need to remove an older product, unless you have transferred all of the music files that you care about and want to reclaim some space on your PC's hard-disk.

You can transfer any work that you have done with **The\*Drums Professional**, **Rhythm Brainz**, or **Rhythm Brainz PLUS** into **The\*Wizard** software's pattern categories using Standard MIDI File exchanges. To do so, use the Standard MIDI File export capabilities in the particular product you are upgrading from to export your patterns and/or songs, then import those Standard MIDI Files into **The\*Wizard** software using its Standard MIDI File importing feature. Keep in mind that if you are exporting songs for import into **The\*Wizard** software that **The\*Wizard** can only import up to 16 bars at a time into patterns.

### Upgrading within The\*Wizard product-line

If you upgrade from one **The\*Wizard** product to another **The\*Wizard** product, you should install each different **The\*Wizard** product into a separate directory!!! In other words, **do not mix different The\*Wizard products in the same root directory** (e.g., do not install **The\*Drumz Wizard** and **The\*Muzical Wizard** into the same directory). Below we will describe how to transfer patterns and songs.

In general upgrading means that you are moving from a lower class product to a higher class product, such as depicted in the 3 likely upgrade scenarios below. Each successive product is a superset of the features and capabilities of its predecessor and so there should not be a reason to attempt to load pattern and/or song files of a higher class product using a lower class product. The exception here is if you exchange pattern or song files with friends or have found other files posted on-line where the patterns and/or songs are created with a higher class product than you have. There are several likely upgrade scenarios:

1. **The\*Drumz Wizard** to **The\*Drumz Wizard PLUS**
2. **The\*Drumz Wizard** to **The\*Muzical Wizard**
3. **The\*Drumz Wizard PLUS** to **The\*Muzical Wizard**

All **The\*Wizard** products are fully backward compatible allowing easy upgrading from **The\*Drumz Wizard** to **The\*Drumz Wizard PLUS** to **The\*Muzical Wizard**:

- **The\*Drumz Wizard PLUS** can open and edit patterns & songs created by **The\*Drumz Wizard**

- **The\*Muzical Wizard** can open and edit patterns & songs created by both **The\*Drumz Wizard** and **The\*Drumz Wizard PLUS**

There is also some compatibility in the *forward* direction with the caveats listed below, where the caveats arise because the higher class products offer features and capabilities that are neither available nor recognized in a lower class product. We advise you to be careful if you are using a lower class product to open and edit the patterns and/or songs of a higher class product because in some cases **The\*Wizard** programs will not warn you if they are trying to open a pattern or a song made with a higher class product and it is possible that the pattern or song-sequence you are attempting to open will be modified then be saved in the modified condition, losing the original information. However, in most cases if a particular pattern or song is not compatible with a particular version of a **The\*Wizard** product then the software will recognize the situation and not open the pattern or song.

Caveats when working with forward compatibility:

- **The\*Drumz Wizard PLUS** can only open and edit **The\*Muzical Wizard** patterns & songs if the patterns are only single-player (e.g., just the "Drummer").
- **The\*Drumz Wizard** can only open and edit **The\*Drumz Wizard PLUS** patterns if the patterns are 4 bars in length or less; though patterns of up to 16 bars can be opened and played, just neither edited nor saved.
- **The\*Drumz Wizard** can only open and edit **The\*Muzical Wizard** patterns if the patterns are 4 bars or less in length and are only single-player (e.g., just the "Drummer"). Though single-player patterns of up to 16 bars can be opened and played, just neither edited or saved.
- **The\*Drumz Wizard** can open songs created with **The\*Drumz Wizard PLUS** and/or **The\*Muzical Wizard** as long as the song-sequence lists contain only pattern objects; any objects (such as section markers, tempo markers, or the loop marker) in the song-sequence list other than patterns will result in the song not being opened. In the case of songs created with **The\*Muzical Wizard** not only must there be only patterns in the song-sequence list, but the patterns must be single-player (e.g., just the "Drummer") or the song cannot be opened.
- If you open a song that has objects not supported by a particular product then you may see *reference errors* which mostly arise because **The\*Drumz Wizard** does not support song marker objects; it is a good idea that you delete *reference error* slots in the list.
- When importing from pattern-groups, **The\*Drumz Wizard** can only import patterns from **The\*Drumz Wizard PLUS** or **The\*Muzical Wizard** if the patterns are 4 bars or less in length and are only single-player (e.g., just the "Drummer").

## Transferring Patterns & Songs when Upgrading

While the pattern and song files are backward compatible, we recommend the following procedures for transferring your work when upgrading. You will likely find it necessary to review the information on importing and exporting of patterns & songs.

### Transferring Patterns:

The best option for transferring patterns is to use the pattern-group export and import features from within the Pattern Manager utility. Export your patterns to one or more Windows/DOS pattern-group files, then import those patterns from the pattern-group files into your new upgraded **The\*Wizard** product. You may need to create (or recreate) specific categories before proceeding with the importing .... for example if you had the categories: "Hard Rock", "Lite Rock", "Ballads", etc. then you'd want to create these same categories in your new installation then import the respective patterns into the appropriate categories. Here are some handy tips for exporting and importing patterns in a category:

- ☞ To export all patterns in a category ....  
access the Pattern Group Import/Export utility and select a category by clicking on the category name, then use the *Add Category* option button.
- ☞ To import all patterns in a pattern-group file into a category ....  
access the Pattern Group Import/Export utility to open a pattern-group file, then select all the patterns in the group by selecting the first pattern by clicking on it in the list and then pressing the End key while holding the Shift & Control keys, then use the *Copy* option button.

### Transferring Songs:

The best option for transferring songs is to use the song export and import features from within the Song Manager utility. Export your songs to Windows/DOS files, then import those songs into your new upgraded **The\*Wizard** product.

## Patch & Drum-Voice Database Compatibility

The patch and drumkit voice-name database files are fully compatible with all **The\*Wizard** products and may freely be interchanged. However only **The\*Muzical Wizard** uses the chords database file. The patch and drum-voice database files are modeled after the Cakewalk instrument definition files with a few extra extensions particular to features offered in **The\*Wizard** products. With a little bit of editing, you can use Cakewalk instrument definitions in **The\*Wizard** database files. Editing instrument and patch definitions is covered in more detail elsewhere in this document.

A third database file is used by **The\*Muzical Wizard** for the auto chord entry feature. The chords database file: CHORDS.WIZ is a proprietary format for chords and therefore only supplied with **The\*Muzical Wizard** product and its format is unique to only **The\*Muzical Wizard** product. The chords database file may be edited to add new chord definitions as is described in further detail elsewhere in this document.

## 1.C Troubleshooting

Have you read the information that explains the unique and subtle features of this software? Perhaps a better understanding of this software's architecture and subtle features might resolve your problems as there many unique and subtle aspects of this software that may not be readily apparent. Many troubleshooting tips are supplied in the "Troubleshooting" topic of the on-line help system .... please review that topic.

## 1.D Contacting MTI for Technical Support

**Technical support is only provided to registered users of our software!** If you purchased the software from some source other than directly from MTI, then make sure to return your registration card so that we know who you are (if you purchase the software from MTI, then we will have you listed in our customer database). Of course if you are having trouble installing the software or getting it running, then please do not hesitate to contact us even though we may not have yet received your registration card.

Technical support works best as a cooperative interaction. When you cannot solve a problem on your own please try to make some detailed notes about *what you are trying to do*, and *what specifically is happening (or not happening)*. Especially when leaving (email, fax, or voicemail) messages for us, please do not tell us something vague like "I cannot get the software to work" or "when I try to do 'x' it doesn't work". Also, we know that sometimes problems can be frustrating, however when contacting us please try to avoid venting your frustration at us and just focus on describing the problem and perhaps some speculation as to the causes. Also keep in mind that each person's computer setup is unique and that we are not able to be physically at your computer .... so the more information that you are able to supply to us about your situation, the better we will be able to quickly and accurately assist you.

<b>How to contact us for Technical Support: email, telephone, fax</b>
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The fastest and most reliable way to reach us and receive a reply is via email -- we will respond back directly to you via electronic mail. **Our primary email address for tech-support issues is: [tech-support@midibrainz.com](mailto:tech-support@midibrainz.com).**

You may send us email and faxes anytime, but please limit your tech-support calls to weekdays from 10:00 AM to 4:00 PM Pacific Standard time. Direct your support calls and/or faxes to (408) 927-5491 only! **Do not call our order-line** which is staffed by operators who can only process sales orders and are not able to address technical issues.

We maintain an FAQ ("frequently asked questions") with responses on the WorldWide Web at - <http://www.midibrainz.com> (visit the "Support" section). When product upgrades are available, you will be able to find them on our web-site; from time to time we will also make additional information available relevant to your use of our software, such as: solutions to common problems, style-packs, lesson-packs, and patch & voice definitions .... so try to visit our web-site occasionally to get the latest news, product updates, etc.

## 2 THE\*WIZARD'S FEATURES & CAPABILITIES

The\*Wizard products are *pattern-based* music composing tools, and as such your primary activity will be to compose musical patterns. As a composing tool you will create music exclusively with this product using your computer – a process often called "step composing" which indicates that you are composing your music one step at a time. The\*Wizard software is capable only of interactive pattern-based step composing and therefore does not have any real-time MIDI data recording capabilities.

This chapter will delve into the essence of pattern-based music composition and how the various features and capabilities of The\*Wizard software facilitate creating music in a pattern-based environment. The technical aspects of The\*Wizard software are also presented in this chapter to give you a solid understanding of the capabilities, flexibility, and limitations of what you can do with this software, as well as how to best interact with the software.

Many utilities are provided within this software for creating, editing and managing patterns – including categorizing patterns. Utilizing your collection of patterns, you are then able to create song-sequences, and so appropriate tools are also provided for creating, editing and managing songs. Be aware that the actual management of patterns in categories and the management of songs is **your** responsibility.

We have taken many steps to make the software usable and user-friendly. However, this software is a powerful and in some areas it is also a somewhat complex music composing tool! And therefore not every aspect of the program is immediately intuitively obvious. This may particularly be the case if you are accustomed to linear track-based sequencing software as there are many significant differences between The\*Wizard software and typical linear track-based sequencing programs. **Therefore we strongly recommend that you review and take the time necessary to comprehend the information in this section.**

### 2.A The\*Wizard's Specifications

- ◆ The quality of the sound produced by The\*Wizard software is solely dependent on the type and quality of the sound hardware that you are using and is completely independent of the operation and performance of this software!
- ◆ The\*Wizard software can create Standard MIDI Files for use with other desktop music composing & publishing products. The\*Wizard can export patterns as either type-0 or type-1 Standard MIDI Files. The\*Wizard can export song-sequences only as type-0 Standard MIDI Files.
- ◆ The\*Wizard software can import music from Standard MIDI Files for use with other desktop music composing & publishing products. The\*Wizard can only import Standard MIDI Files into patterns.
- ◆ Each pattern is an independent entity with its own settings and music.

- ◆ In the case of **The\*Muzical Wizard**, the players in its patterns can each have independent MIDI settings such as: MIDI device driver selection, patch, etc. .... a very powerful capability.
- ◆ Each pattern can have its own configuration and meter settings, and can have its own band configuration and related player parameter settings:
  - **The\*Drumz Wizard PLUS** patterns can be up to 16 bars in length
  - **The\*Muzical Wizard** patterns can have from 1 to 16 independent players, and the overall pattern itself can be up to 16 bars in length
- ◆ You can have multiple copies of a pattern in different categories; you can also have copies of the same pattern in the same category but the pattern names must differ. You can have multiple copies of a pattern that reside both in one or more pattern categories and one or more songs. It is important to understand this, because the responsibility to manage and synchronize like and similar patterns is yours.
- ◆ Patterns are stored in categories for easy reference. All of the tools necessary to work with patterns are provided in this software and you will not have to use, nor should you use, DOS or the Windows utilities to manipulate files in the directory folders that are part of this software as **The\*Wiz\*ard** provides you with its own pattern management utilities. In fact you will notice that you cannot identify category folders and pattern files using typical DOS & Windows disk utilities.
- ◆ Each song is an independent entity, that contains a set of patterns and a sequence list of how that set of patterns will be played.
- ◆ The tempo setting of the patterns is **not** used when the patterns are played in a song-sequence. Rather the song tempo is set and altered using the tools provided in the Song Wizard.
- ◆ Except for the tempo, all of the MIDI settings of the individual patterns will change or take effect when a particular pattern is played within a song-sequence. For example: if one pattern's band uses patch #4 on MIDI channel #1 and another pattern's band uses patch #10 on channel #1, then the appropriate MIDI patch change commands will be sent so that each pattern (and its band-players) play as you would expect them to during the course of a song.
- ◆ When you add a pattern to a song, one and only one copy of the pattern is placed into the songs overall structure. Changing a pattern from your pattern categories has no effect on a pattern copied to a song, unless you use the update option. Similarly, you can alter a pattern that belongs to a song without affecting the original pattern in some category, unless you copy the altered pattern from a song's pattern set into a category (which you might want to do if you want to keep your patterns synchronized).
- ◆ This next point is very subtle, so please read carefully and make sure to understand it .... **There is only one copy of a pattern in a song-sequence structure!!!** Even though there may be several instances of a pattern in a particular song-sequence -- all instances of a specific pattern in a song-sequence are the same and any instance beyond the first instances is in actuality a reference to the first instance. When you first add a pattern into a song-sequence, it becomes the song's copy of the pattern and all subsequent additions of that same pattern into the song-sequence list create references to that song's copy of the pattern (even though you are physically adding

instances of the pattern by dragging from a category). **Therefore, all instances of the same pattern within a song-sequence will be identical.** So, for example, if you add a pattern from some category into a song then later change the pattern in the category and add new instances of the pattern from that category into other areas of the song-sequence the actual instances of the pattern in the song-sequence list will be identical to the status of the pattern when it was first inserted into the song-sequence list. A function is provided (using the right-mouse popup menu) that lets you easily update all instances of a pattern in a song-sequence from its original source category; a similar function is provided to copy a pattern from a song-sequence into a category.

- ◆ The following limitations pertain to the creation of song-sequences:
  - Maximum number of objects (e.g., patterns plus tools/markers) in a song-sequence list is: 65,534
  - Maximum levels that repeating sections can be nested is: 10
  - Maximum number of repeats for a section: 255 times
  - Maximum number of measures created by a song-sequence resulting from nested repeating sections is: 4,294,967,295 (depending on the memory resources available in your system, you may not reach this limit)

The uniqueness of patterns and building song-sequences from copies of patterns presents great flexibility to you - the composer - in using this software. Having copies of patterns embedded in song-sequences gives you the freedom to modify, move (or even delete) patterns from your library of patterns without affecting your song sequences! You can also update patterns in your songs, and visa-versa.

There are many options for how we could have implemented the ability to create and manage your patterns, and we have opted in favor of that which gives you the greatest ultimate flexibility. However, with this flexibility comes some complexity, and responsibility on your behalf in how you manage and synchronize patterns, pattern categories, and songs. If you are unclear on any of these aspects, please read the bullets above and experiment with the software until you fully understand how **The\*Wizard** software lets you manage and synchronize patterns in both categories & songs.

## **2.B Operating The\*Wizard**

Like most other Windows software, the left & right mouse buttons are used for different types of operations. Various editing & selecting buttons, tools and controls are used for: selecting things, setting values, entering text, and so forth. You will need to become familiar with how the mouse is used and how each of the different controls operates.

We have tried to follow typical Windows conventions, however because of the rich graphical user interface of this software there are some operating methods that are unique to this software. The typical Windows convention is that the left mouse button is used for selecting (using single clicks), opening things for viewing and/or editing (by double clicking), and moving or copying (by dragging). The right mouse button is used for augmented operations using context-sensitive menus and displaying the status or properties of an object – in general **The\*Wizard** software follows these conventions.

## **2.B.i Mouse-button & Quick-key descriptions**

### **Left Mouse Button Uses**

#### **In the pattern-grid:**

When using the Pattern Wizard in edit mode, the mouse cursor will be a pointer arrow.

When using the Pattern Wizard in select mode, the mouse cursor will be a cross-hair, and you will be able to stretch a rubber-band around events in the pattern-grid.

click to create events

click & drag to the right to create variable duration events

drag from the right edge to change the length of events

drag from over top of an event to move it

while pressing the Control-key to delete an event (or group)

while pressing the Shift-key to select a group of events

#### **On the pattern & song play controlz:**

click the play button to start or resume play from the counter

click the stop button to stop play & freeze the counter

click the reverse arrows to move back 1 beat at a time

click the forward arrows to move ahead 1 beat at a time

#### **On the keyboard or voice name:**

to audition the instrument at the pitch of the keyboard,

to audition the drum/percussion voice

#### **On the Song Wizard toolbar:**

drag to insert song enhancement objects into the sequence

#### **In slider controlz:**

drag the slider to move it

on the slider track to changes its value by 10 units

on a tick-mark to move the slider directly to that point

#### **In a slider value box:**

to open a mini edit box allowing you to enter an exact value

#### **On the pattern-grid title bar:**

to open an edit box to set or change the pattern title

#### **On the mixer module #:**

to get a view of the player's name associated with that module

#### **On the real-time counter:**

to move to an exact location, as well as to view & start playback

#### **On the separator between pattern-grid windows in split view mode:**

to change the relative size of both grid views

**In the song pattern-set list:**

to drag patterns into your song-sequence list, to be played as a part of your song

**In the song-sequence list:**

to set the starting point for where to begin the song playing to select one or more patterns for editing (cut, copy, delete)

**CONTROL-Click:**

to delete an event from the pattern-grid to select multiple random items from a list of items

**SHIFT-Click:**

to select multiple consecutive items from a list of items including patterns in the song-sequence list; you can also use the Shift key along with the up & down arrows and the Page-Up, Page-Down, Home & End keys to select a contiguous block of items

<b>Right Mouse Button Uses</b>
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**In the pattern-grid:**

to open a set of menu options if you do not want to access a popup menu option, then use the Cancel option at the bottom of the popup menu or press the Escape key to close the popup menu

**On the pattern-grid player tabs:**

opens player options menu (add/remove a player & mute/solo); the first line of the menu lists the # of events in that player (only the # of events is shown for **The\*Drumz Wizard PLUS**)

**On the keyboard or voice name:**

to show the note & MIDI note # at the pitch of the keyboard, to show the note & MIDI note # of the drum/percussion voice

**In the song-wizard:**

to open a set of menu options if you do not want to access a popup menu option, then use the Cancel option at the bottom of the popup menu or press the Escape key to close the popup menu

<b>Quick-key Keyboard Shortcuts</b>
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<b>Spacebar:</b>	toggles start & stop of play
<b>W:</b>	rewinds the real-time play counter to the beginning
<b>Esc:</b>	the ESCAPE key on your computer's keyboard closes an open dialog, or closes popup menus
<b>CTRL-R:</b>	revert to last saved version
<b>CTRL-S:</b>	immediate forced saving of open pattern or open song

In addition to the *quick-key* assignments listed above, there are many other *quick-keys* that you will learn if you use the software regularly. The *quick-key* assignments are listed to the right of the main menu options. The *quick-key* assignments are a combination of a key (usually a letter) and the ALT key or the CONTROL key; where the ALT or CONTROL key must be pressed and held while selecting the option key to access the desired function. A few functions are mapped to the *function* keys. Rather than list each *quick-key* assignment here, we suggest that you review the main menu options to see the assignments; so as you become an advanced user you will likely memorize some of the *quick-key* assignments by first using the menu options. Generally the *quick-key* assignments follow these rules:

- functions that are performed immediately are a combination of the CONTROL key and a letter that is representative of the function (usually the first letter of the function)
- functions that open a dialog are a combination of the ALT key and a letter that is representative of the function (usually the first letter of the function)
- functions that cause some program action or launch a companion program are assigned to one of the function keys; note the following special unmarked *function key* assignments:

**F1** - access the context sensitive on-line help (a help topic will be displayed that relates to the window, dialog, or function you are currently using)

**F2** - switch to the *pattern wizard composing mode*

**F3** - switch to the *Song wizard composing mode*

**F4** - open the VOICES.WIZ database file for editing the voice names for use by the Drummer

**F5** - open the PATCHES.WIZ database file for editing the patch names for use by the Band Manager/Drummer Settings

**F6** - open the CHORDS.WIZ database file for editing the chord names for use by the auto chord entry feature (**The\*Muzical Wizard** only)

### Other Keyboard Uses

When a control is active (i.e., it has the "focus" which is the dotted line surrounding the control), you can use the following keys on your computer's keyboard to change values:

<b>Home:</b>	moves to the first value in the range
<b>End:</b>	moves to the last value in the range
<b>Page-Up:</b>	increments the current value by 10
<b>Page-Down:</b>	decrements the current value by 10
<b>Left-Arrow or Down-Arrow:</b>	decrements the current value by 1
<b>Right-Arrow or Up-Arrow:</b>	decrements the current value by 1

## 2.B.ii Controlz

The\*Wizard software uses various controls to allow you to edit parameters and select values. While we have tried to follow common conventions in Windows software, there are some special qualities about some of the operation of The\*Wizard's controls.

### General Editing & Selecting Controlz



**Slider** -- are used to continuously vary a parameter over a range of values. There are small sliders (as shown here) and larger sliders as well as horizontally aligned and vertically aligned slider controls. Values are changed by dragging the slider with the mouse; in some cases it may be difficult to select an exact value by dragging the slider and so you can use certain keyboard keys to fine-tune the value or enter a specific value directly. Also if the slider is the active control, you can use the Home, End, Page-Up, Page-Down, and Arrow keys on your keyboard to move the slider. Each slider has associated with it a display-edit box that shows the current value selected by the slider. Depending on the screen resolution that you are running, it may be difficult to obtain an exact value just by using the slider and so **you can click on top of any slider's display-edit box to enter an exact value.**



**Spin-edit** -- are used to select a specific value. You can change the value either by clicking on one of the value-spin-arrows or edit the value directly in the display box by placing the cursor in the box and typing a value. The *divisions/beat* pattern setting can only take-on specific values and cannot be edited.

### Pattern & Song Play Controlz



A set of buttons are provided along the bottom of the screen that somewhat resemble the transport controls on a tape-deck or CD player. Since the play control-bar is common to both the Pattern Wizard and the Song Wizard modes, the respective mode selection buttons have been placed on the left edge of this control bar.

- 1) The Wizard mode selection buttons. This pair of toggle buttons are used to select and switch between the *Pattern Wizard* composing mode or the *Song Wizard* sequencing mode.
- 2) The *play* controls. The *rewind*, *backward*, and *forward* controls are only operational in the Pattern Wizard and are not operational in the Song Wizard. From left to right the buttons function as follows:
  - (rewind) moves the play pointer to the start of the pattern
  - moves the play pointer backward by individual beats
  - moves the play pointer forward by individual beats
  - starts the pattern or song-sequence playing

- stops the pattern or song-sequence from playing and in the Pattern Wizard moves the pattern-grid display to view the position where the pattern is stopped
- 3) A "panic" button that will automatically stop playing and send note-off and volume reset commands to all sound devices in use. You should use it if you experience hanging or stuck notes from any of your sound devices.
  - 4) The real-time play counter (described below) ....

## Real-time Play Counter

The real-time play counter is the rightmost section of the pattern & song control-bar (shown above) that shows the position of the play pointer in real-time. The ticks in the rightmost segment of the counter do not increment in real-time but are shown when playing is stopped. You can set an exact play pointer position for patterns to begin playing (not song-sequences) – click on the face of the counter and set the start position to your liking, then when you start the pattern playing it will start from that point.

Note that the play counter will also accurately show the bar and beat while song-sequences are playing. However due to the size limitation of the counter and the potential to make song-sequences that could be tens of thousands of bars in length the counter will stop displaying after bar number 999.

## 2.C MIDI Support & Settings

The\*Wiz\*ard software products are MIDI applications. That means that the software uses the digital technology known as: "Musical Instrument Digital Interface" in order to drive and control MIDI hardware devices to make music. As explained in the Getting Started section, MIDI software itself does not make any sounds, but rather uses the universal MIDI protocol to cause various devices (such as a PC sound card, for example) to generate the appropriate sounds.

Since MIDI application software such as this controls other hardware, and causes that hardware to play music on up to 16 channels simultaneously, it is necessary to configure MIDI application software to match and take advantage of any unique features of a particular MIDI device. Also because there are many differences among MIDI devices certain settings are necessary to make particular devices operate in a specific manner.

### 2.C.i MIDI Device Type Settings

The\*Wiz\*ard software offers specific support for certain standard and popular electronic instrument types, specifically: General MIDI, Roland's GS, and Yamaha's XG. If your equipment supports sound banks or is of the type: GM, GS, or XG then you will want to make the according settings using the MIDI Settings utility (which is covered elsewhere in this document). MIDI devices and related parameters are selected using the Band Manager/Drummer Settings utility and when selected the software will use a particular device in accordance with how it has been configured.

## 2.C.ii Your Default MIDI Device Driver

When you first ran the program you were forced to select a default MIDI device driver. You can change your default MIDI device driver at anytime using the MIDI Settings utility under the Settings menu or by pressing the Alt and "M" keys together on your computer's keyboard.

The default MIDI device driver is automatically selected for use when you play any of the supplied sample patterns and songs. It is also automatically selected each time:

- you create a new pattern
- import a pattern from a pattern-group exchange file
- import a song from a song exchange file

If you change or add new hardware to your PC you can set all of the players in an open pattern's band to the default MIDI device driver using the *Default MIDI Device Selection* function under the Pattern and Song menus. Also, if you just want to hear how a pattern or song sounds using a different device or electronic musical instrument, then you can easily do so by:

- ☞ using the MIDI Settings utility to set the device or the MIDI port connected to the device that you want to audition, as the default
- ☞ engaging the *Default MIDI Device Selection* function
- ☞ playing the pattern or song

If want to re-initialize **all** of your patterns and songs to use a different default MIDI device driver, then very carefully do the following:

- ☞ exit the **The\*Wizard** program
- ☞ use the Notepad to open either MW.INI or TDWIZPLS.INI
- ☞ look for a line that starts with: `DefaultMIDIDriver=` and carefully remove the entire line
- ☞ save the changes to the .INI file
- ☞ run the **The\*Wizard** program and when the initialization screen is presented select the new MIDI device driver that you want to assign to **all** of your patterns and songs

## 2.C.iii General MIDI, GS & XG

**The\*Wizard** software offers specific support for certain standardized and popular electronic instrument types, specifically: General MIDI, Roland's GS, and Yamaha's XG.

Settings for your Windows MIDI devices are made using the MIDI Settings utility. MIDI devices and the related parameters that are used to select sounds and assign them to MIDI channels are selected using the Band Manager/Drummer Settings utility dialog.

You may never need the following detailed information concerning MIDI devices, MIDI compatibility modes, and MIDI bank selection, but just in case you do ....

### **General MIDI ("GM") – what does it mean?**

GM is an industry agreed upon addendum to the MIDI specifications that attempts to achieve compatibility beyond just generic MIDI capabilities. GM essentially specifies a means by which MIDI music played on any GM compliant equipment will playback in a reasonably consistent manner. This is accomplished by specifying the number of simultaneous voices that must be available and what the minimum selection of voices are as well as the patch/program number corresponding to each voice. For example: if a MIDI device is GM compliant, then anytime patch/program #41 is selected the instrument sound will be a violin; similarly the MIDI notes mapped to percussive sounds on channel #10 are always the same. Most PC sound cards that utilize the wavetable sound generation technology are GM compliant; many models of synthesizers, etc. are also GM compliant (or have a GM mode or GM sound bank). If your equipment is made by Roland, then chances are it is both GM and GS compliant; and likewise if your equipment is made by Yamaha then chances are it is both GM and XG compliant. Check the package and documentation supplied with your equipment to determine which of these compatibility modes your equipment complies with.

### **GS and XG .... manufacturer specific extensions to General MIDI:**

While General MIDI is an industry agreed upon standard, GS and XG are extensions to GM and are in actuality manufacturer specific superset compatibility modes (despite what the manufacturers want to make us believe). Roland Corporation decided that they could offer features beyond what is specified by GM and did so by creating their own superset of capabilities that they call: "GS". Yamaha Corporation felt that they could also embellish upon the GM standard and created their own superset of capabilities that they call: "XG". Being supersets of the GM specifications, both GS & XG systems will accept and play GM files just fine. Indeed GS and XG do offer more compositional and sound-sculpting capabilities, however these modes are confined to specific devices from specific manufacturers .... if you have such a device then you should use its capabilities to its fullest, though beware that music that you compose utilizing those capabilities may not be realizable by others to whom you intend to distribute your MIDI music.

Among other things, the compatibility mode determines how sound banks are selected and therefore how the bank selection controls in the Band Manager/Drummer Settings utility dialog are used. The mode/device type setting determines how **The\*Wizard** software works with and treats particular hardware devices and is detailed below. If you want to achieve a certain compatibility or take advantage of any special features or feature modes of your equipment, it is necessary to set it to the correct mode -- this selection is accommodated in the MIDI Settings utility dialog. While you can change the setting at will (provided that a device has is capable of accommodating a particular mode), once a setting is made the MIDI device will operate in that mode for any player, pattern, or song-sequence that uses that device until changed.

<b>Specific details of how The*Wizard software uses MIDI Device Settings</b>
--

**GM** - sets the device to General MIDI compatibility mode using a system exclusive message. Since there are no banks in a true General MIDI device, the Bank-A and Bank-B controls in the Band Manager/Drummer Settings utility dialog are disabled.

**GS** - sets the device to GS compatibility mode using a system exclusive message. Since there are 128 banks of up to 128 instrument patches in a GS device, the Bank-A control in the Band Manager/Drummer Settings utility dialog allows selection of banks 0 - 127 as well as an option for nothing ("---"); the Bank-B control is disabled. This is not exactly in compliance with the way the MIDI specifications call for bank changes, but this is how Roland has chosen to do implement bank changes. The *nothing* option will not send any bank selection message to your device.

**XG** - sets the device to XG compatibility mode using a system exclusive message. Since there (currently) are 4 types of 128 banks of up to 128 instrument patches in a XG device, the Bank-B control in the Band Manager/Drummer Settings utility dialog allows selection of banks 0 - 127 as well as an option for nothing ("---"); the Bank-A control is used to select a *bank type* (currently defined XG bank types are: Melody, Sound Effects, Sound Effects Kits, and Rhythm Kits; for more information on XG banks and bank types refer to your XG documentation). The *nothing* option will not send any bank selection message to your device.

**Normal** - assumes the device to be in compliance with *normal* MIDI compatibility and does not send any system exclusive message. In this case the device responds to MIDI bank selection messages as defined in the international MIDI specifications which calls for up to 16,384 banks (0 - 16,383). The Bank-A control in the Band Manager/Drummer Settings utility dialog allows selection of banks 0 - 16,383 as well as an option for nothing ("---"); the Bank-B control is disabled. The *nothing* option will not send any bank selection message to your device.

**Other** - is similar to the *Normal* setting, however it can send a custom system exclusive message to setup your equipment. There can be only one custom system exclusive string, although most of you will not need to use this feature. To use the custom system exclusive message feature, follow the instructions below very carefully (errors can cause serious problems).

**The\*Wizard** software will assume that the device responds to MIDI bank selection messages as defined in the international MIDI specifications which calls for up to 16,384 banks (0 - 16,383). The Bank-A control in the Band Manager/Drummer Settings utility dialog allows selection of banks 0 - 16,383 as well as an option for nothing ("---"); the Bank-B control is disabled. The *nothing* option will not send any bank selection message to your device.

1. using the Windows Notepad editor open the file: TDWIZPLS.INI or MW.INI (as appropriate for your software)
2. look for the section [MIDI Settings] and if one does not exist, then add a line with just the bracketed text shown here
3. add a line immediately below the line: [MIDI Settings] starting with the word: "Other" followed by an equal sign
4. following the equal sign enter the system exclusive string for your equipment and make certain that you are using the correct syntax required by your hardware or strange things may occur;

- study your equipment's documentation and/or contact the support department of the manufacturer of your equipment to obtain the exact syntax and commands to setup your equipment
5. your TDWIZPLS.INI/MW.INI file should look like this:  
[MIDI Settings]  
Other=F0 7F
  6. save the TDWIZ.INI/MW.INI file and close the Notepad editor

## 2.C.iv MIDI Clocks, MIDI-Start & MIDI-Stop commands

If you want to synchronize other devices to **The\*Wizard** software for real-time recording, then you will find these features useful.

**The\*Wizard** can send start and stop commands to another device, thereby causing that device to start or stop playing or recording at the same time that you start and stop **The\*Wizard** software playing. You will want to use this feature if, for example, you want to record a pattern into a drum-machine, keyboard-workstation's on-board sequencer, or another software sequencing program.

MIDI clocks can be sent so that some other device or MIDI program can utilize the same timing base as **The\*Wizard** does for as tight of a synchronization as is possible.

**The\*Wizard** software has very strict and unique timing requirements in order to accomplish its magic and so it must be the master. **The\*Wizard** software only sends MIDI clocks to allow other devices to sync to it and it cannot receive MIDI clocks from any other source.

Enabling of the transmission of MIDI control commands and MIDI clocks feature is done within the MIDI Settings Utility dialog. The MIDI clocks, MIDI-Start and MIDI-Stop commands can only be sent to a single MIDI device driver which is selected in the MIDI Settings utility dialog – a selection box is presented in the middle of the dialog to select the desired MIDI output, or you can choose to *disable* the feature altogether.

## 2.D Patternz, Songz and Filez

**The\*Wizard's** pattern and song management system enables you to directly work with patterns and songs without having to deal with the underlying DOS/Windows file system and its limitations! This system also allows you to verbosely name your pattern and song objects without the limitations and quirks of typical filenames (regardless of whether you are running Windows-3.x or Windows-95).

As a music composing tool, the general goal is for you to compose music. This is a pattern-based music composing tool, and so the primary activities that you will engage in with this software will be creating & editing patterns and creating song-sequences. Therefore patterns and songs will be the primary objects that you will be working with. That being the case, we have created an environment and set of integrated utilities to allow you to easily select, open, save, and otherwise manage pattern and song objects without having to deal with the cryptic limitations of the DOS/Windows file system.

Not only does **The\*Wizard** provide integrated tools for handling and managing pattern & song objects, but **The\*Wizard** also automatically saves these objects to your PC's hard-disk for you .... so you are truly freed from DOS/Windows file issues.

In order for **The\*Wizard** to provide you with integrated pattern and song object management capabilities, it does some unique low-level file management – the result of which is that the actual filenames of categories, patterns, and songs are codified. If you look at the folders and files in your **The\*Wizard** installation you will see that you cannot readily recognize the names of any category folders or the patterns stored in those folders. Similarly, all songs are stored in a single directory, but like the patterns you will see that you cannot readily recognize the names of any of the songs. The technique we use allows you to use verbose names for your categories, patterns, and songs even if you are running Windows-3.1 .... this is part of **The\*Wizard's** magic!

**We strongly recommend that you not in any way alter, copy, or move any files in your The\*Wizard installation.** All functions that you would need to perform with patterns, categories, and songs can be carried out using the Pattern Manager and Song Manager utilities, respectively. Messing with the files and/or folders in **The\*Wizard's** root installation directory could cause a loss of data and unpredictable results.

## **2.D.i Saving Patternz & Songz**

**The\*Wizard's magic takes care of automatically saving patterns & songs for you!**

You are probably familiar with typical Windows software where you have to use the File menu to open/load and save/store files. Any time you open a different pattern, switch to the Song Wizard mode, or exit the program – the pattern that you have open and were working on is automatically saved for you. Similarly, any time you open a different song, switch to the Pattern Wizard mode, or exit the program – the song that you have open and were working on is automatically saved for you.

Since saving is automatic, there is no save option in the File menu; though there is a Forced Pattern Save option under the main Pattern menu. Similarly there is a Forced Song Save option under the main Song menu. In case you get paranoid or have been working for a while on a pattern, its a good idea to force a save of your work to disk; in addition to accessing the *forced save* function from the Pattern or Song menus, you can also do a *forced save* by pressing the Control and "S" keys together on your computer's keyboard or by clicking on the disk icon on the toolbar on the left edge of the screen.

## **2.D.ii Undo/Revert to last saved**

There is no *undo* function in **The\*Wizard** software per se – you cannot undo individual actions or edits. However you can revert to the last saved version of a pattern or song. The Revert To Last Saved function is accessed by choosing it from the Pattern and Song menus, by pressing the Control and "R" keys together on your computer's keyboard, or by clicking on the curved arrow icon on the toolbar on the left edge of the screen.

**The Revert To Last Saved function will permanently and immediately erase any changes you make to a pattern and retrieve the version that was last saved ....** so be careful, once you select the Revert To Last Saved function, any changes that you

make between the opening a pattern or song or a *forced save* and the *reversion to the last saved* are lost and cannot be retrieved! In other words, you cannot un-revert!

- When you choose to *revert to the last saved version*, your pattern or song will be replaced with the last saved backup version which may be: the version when a pattern or song was opened, or the version at the point of the last *forced save* .... in other words, when you *force a save* of a pattern or song the reversion backup copy is reset.
- The reversion backup copy is not altered by switching between the Pattern Wizard and Song Wizard modes, even though the pattern or song is automatically saved as a result of these actions.
- The reversion backup copy is automatically deleted when you close a pattern or song or exit the program.
- When you create a new pattern or song, the reversion function does not become active until you have *forced a save* of the pattern or song.

## 2.D.iii Exchanging Patterns & Songs

Music is quite often a collaborative effort. It is also quite common to create and compose music from styles or style templates. Lastly, different tools are used to compose various aspects of musical pieces as well as to complete the *final production* of a piece. In recognition of these aspects regarding music composing and production, the **The\*Wizard** software products offer several features for exchanging patterns & songs.

Two types of exporting and importing features are provided which are very different. *Pattern-group exchange files* and *song exchange files* are file exchange formats that are unique to only **The\*Wizard** software products, whereas Standard MIDI Files are quite commonly used to exchange MIDI music data with other people, with other MIDI software programs, and with MIDI devices (such as keyboard workstations with on-board sequencers that support Standard MIDI Files).

Since **The\*Wizard's** unique file system does not save patterns and songs with names that are readily recognizable by looking directly at the files in the category or song sub-directories on your disk, you will find the *pattern-group* and/or *song* exchange file features useful if you want to exchange **The\*Wizard** patterns and/or songs with other people, or if you want to load additional samples or styles expressly developed for **The\*Wizard** software products, etc. These functions are also necessary if you upgrade from a one version of a **The\*Wizard** software product to another.

You will use the Standard MIDI File export facilities to export patterns and songs to another program to effect different types of editing than can be done with **The\*Wizard** software products. Likewise, you will also use the Standard MIDI File import facilities to import MIDI event data into patterns for use as a style or part of a composition, etc., where the Standard MIDI File may have been composed with another program or it may be from any other Standard MIDI File that you otherwise acquire. There is much discussion elsewhere in this document on this topic, including an entire section devoted to "Working with Standard MIDI Files" .... please refer to that section for a discussion about using Standard MIDI Files with **The\*Wizard** software and detailed instructions on exporting & importing to and from Standard MIDI Files.

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## 3 CUSTOMIZING THE\*WIZARD SOFTWARE

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There are many manufacturers and models of electronic MIDI instruments that are in some respects quite different. To get the most out of your electronic MIDI instruments it is necessary to configure this software (as well as any other MIDI application) to utilize the unique features and access the sound patches in your electronic MIDI instruments. Configuration relates to identifying if your MIDI device(s) are compliant with one of the common modes of operation and selecting instrument patches and drumkit voice maps.

To best understand how the MIDI settings in this software and MIDI hardware fits and works together, we recommend that you review the discussions about MIDI settings, MIDI standards, MIDI compatibility modes, MIDI patches, and drumkit maps provided in the "Relevant MIDI Basics & Terminology" section beginning on page 81 of the "Appendix".

If a particular *instrument*, *patch*, or *drumkit map* is not listed in the selection controls of the Band Manager/Drummer Settings utility dialog, then you will need to add an entry into the PATCHES.WIZ and/or VOICES.WIZ database files. Detailed instructions on how to do this are provided in the remainder of this section. **Warning .... editing of The\*Wizard software's ".WIZ" database files are advanced operations. Incorrect entries in these files could cause unpredictable results, so it is recommended to make a backup copy of any ".WIZ" database file before you make any changes.** We recommend you carefully study the device, patches & chord definitions provided!

Our *instrument patch & drumkit voice-map* database file formats have been intentionally designed to be similar to the *instrument definition files* used by the popular "Cakewalk" sequencing software. If you are also a Cakewalk owner you can copy the patch definitions directly from the Cakewalk database files into The\*Wizard database files. If you are not a Cakewalk owner, you can however, scan their web-site and CompuServe support forums for patch & drum-voice database files. So aside from editing on your own, you can take advantage of many patch & drum-voice definitions that have been created for Cakewalk. Simply use an editor to copy any patch and/or drum-voice definitions from an update into the database files installed onto your PC.

### 3.A MIDI Settings

The\*Wizard software offers specific support for certain standard and popular electronic instrument types, specifically: General MIDI, Roland's GS, and Yamaha's XG. If your equipment supports sound banks or is of the type: GM, GS, or XG then you will want to make the according settings using the MIDI Settings utility (which is covered elsewhere in this document). To take the best advantage possible of the electronic MIDI instrument(s) that you will be using with this software make the necessary settings in your particular installation of this software. Before doing so, you will likely find it useful to review the discussions about MIDI settings, MIDI standards, and MIDI compatibility modes provided in the "Relevant MIDI Basics & Terminology" section beginning on page 81 of the "Appendix" and also in the section: "MIDI Support & Settingz", beginning on page 22, as well as the sections that immediately follow.

## 3.B MIDI Instrument Patches

The *patches* database holds the patch name & corresponding MIDI program-change command number information and is stored in an ASCII text file in the root directory for this software called: PATCHES.WIZ. Most MIDI devices that you will use with this software such as synthesizers and PC sound cards are polyphonic – which means that they are capable of playing several sounds simultaneously. The way they do this is to accommodate the assignment of sounds on each of the 16 possible MIDI channels. Sounds are assigned to a MIDI channel by sending a MIDI Program Change number command on a particular MIDI channel. Often program numbers (or "patch numbers" as they are often called) have a corresponding program name (or "patch name") so that you don't have to remember, for example, that General MIDI program #41 is a violin .... you just pick the program name "violin" and the software automatically looks up the corresponding program number in its database and transmits the corresponding MIDI Program Change command to set a particular channel to play the sound that you select.

Selecting the Edit Patches Definitions option of the main Settings menu (or using the F5 quick-key) will automatically open this file into the Windows Notepad editor. Note that the Windows Notepad editor can only accommodate small files and if your database gets to be large then you may need to use an alternate editor/word processor (such as Write or WordPad, also supplied with Windows – make sure that if you use one of these editors that you save the file as a text file).

We will use the terms "drum-voice", "drum-voice map", and "drumkit" interchangeably, and we will also use the terms "device" & "device type" to generically refer to:

- sound card or type of sound card
- make & model of synthesizer, keyboard, drum machine, etc.
- a General MIDI sound bank or other bank of sounds within a synthesizer
- patch-set (e.g., loading a GM patch set into a synthesizer) where the patch-set is essentially a virtual device

You will see in the Band Manager/Drummer Settings utility dialog a list of electronic MIDI *instruments* are available for selection and use with the software (e.g., sound cards, synthesizers, etc.), as well as *instrument* types (e.g., GM sound cards, GS sound cards, XG sound cards, and so on). Similarly once a device (or device type) is selected, then you also have the opportunity to select any of the *patches* that are associated with that *instrument/instrument type*. The PATECHES.WIZ database is what enables that capability and stores the collection of *instruments* & *patches* used by the program.

We have provided a database of *instruments*, *patches*, and *drum-voice* definitions that correspond to the most popular electronic MIDI instruments when this software was published (from time to time we will update this database and make it available on-line). However the database does not include every *instrument*, *patch*, or *drum-voice* map, even for those. The database does not include entries for upgrade patch sets or 3<sup>rd</sup> party patch sets (e.g., "Voice Crystal" products).

**If you cannot find a patch or drum-voice map that matches your particular equipment or if you are using a sampler, then you will need to add according *instrument* and/or *patch* definitions and/or *drum-voice* mapping entries that match your equipment or what you may have created with your sampler.**

### Format for the patches (patch-set) definitions:

Each patch definition must be on its own line! To create new patches, you must first have a instrument to which the patches corresponds. To add a new MIDI instrument and corresponding set of patches, simply enter the instrument name on its own line surrounded by square brackets, like this: [Instrument Name], make sure that the instrument name/instrument type name does not exceed 25 characters including spaces. These entries show-up in the "Instrument" drop-down selection list and its corresponding patch definitions are available for selection in the "Patch" drop-down selection list of the Band Manager/Drummer Settings utility dialog.

It is important for you to know whether the manufacturer of your instrument starts their *patch* numbering from zero (0) or from one (1). All manufacturers use one way or the other, but there is no common standard on this. This is important because the number that you select as the *patch* number may actually select a *patch* that is off by one. If there's a problem, its typically that a manufacturer shows a particular *patch* as #1 but it really takes a MIDI program change value of zero to select this *patch* and so on (in other words, the MIDI command value is actually one less then the *patch number*). If you have this problem, shift the values of your *patch* list down by one. Consult your user guide or the manufacturer of your instrument if you are not sure or confused about its operation. All *patch* lists in **The\*Wizard's** database files must start with a *zero patch*. If your particular instrument does not have a *zero patch* (that is: the *patches* start at #1), then you will need to create a *patch #0* that is a place holder, for example:

```
0=-----
0=None
```

### Sound Banks & Automatic Bank Selection

In addition to the *instrument* name, it may be appropriate for you to enter information about the bank to which your desired *instrument* corresponds. There are several methods of bank selection in the world of MIDI (sorry we didn't create this mess, but we have tried to present you with a reasonably cogent method to deal with the diversities and inconsistencies). You will probably need to refer to the documentation that came with your *instrument(s)* for details on the bank selection operation of any of your particular *instruments* and which *patch-sets* are associated with each particular *bank*.

The Bank definitions in this database are an optional enhancement for any patch-set definition. The beauty of entering bank definitions into this database is that when you select a specific *MIDI instrument* in the Band Manager/Drummer Settings utility dialog, the bank values will automatically be inserted into the Bank controls as well as automatically sent to your MIDI instrument to select that bank! If you wish to utilize the Auto-Bank-Select feature, then you will need two bank definition lines under the Instrument Name line as shown immediately below. The auto-bank-select uses the keywords "BankA" and "BankB" and are formatted as follows with the bank number to the right of the equal sign; if you do not need any auto-bank selection, then use the "no-bank" code value of minus one (-1) for both Bank-A & Bank-B keywords:

```
BankA=aaa
BankB=bbb
```

## Patch Definitions

After editing the Instrument Name & Auto-Bank-Select definitions, you will then need to create *patch definitions*. Before actually editing the database, carefully follow the format shown below (also study the "General MIDI" patches as an example). The patch names should be limited to be no more than a total of 40 characters including spaces.

There are 2 components to a patch definition: the *patch name* and its corresponding *patch number*. The patch number is used by the software in a MIDI program change command that will be sent to your target instrument to set a specific *patch* on a specific MIDI channel. The patch number is listed as the first character or set of characters on a patch definition line. The patch number is followed by an equal sign ("=") then the name of the patch. If you leave the name of the patch blank, then the number itself will become the patch name (e.g., "Patch #48"). Once again, remember that you must start your list of patches with zero, even if your instrument does not have a #0 patch.

**Where do you get the *patch definition information*?** Typically included in the documentation that came with your electronic MIDI instrument, you should receive a chart of the *patches* that your instrument is capable of playing. Most manufacturers (especially those compatible with GS & XG) allow selection of different *drumkits* using different program numbers. A *drumkit* patch is automatically selected when using MIDI channel 10, however some *instruments* let you set one or more channels to drum (or "Rhythm" channels). If your *instrument* has more than one *drumkit*, then you will need to add a combination of *instrument & patch definitions* for the *drumkits* (closely study the "Yamaha XG" definitions). While **The\*Muzical Wizard** supports up to 16 players, there can only be one "Drummer" (i.e., a player that accommodates a drumkit).

## Drumkit Patches & Drumkit Voice Selection

A *drumkit* is a special type of *MIDI patch* that consists of a mapping of drum and percussion *voice-names* to specific MIDI note numbers – which is how electronic MIDI instruments simulate a drumkit (refer to the section: "Patches, Voices & Drumkits" beginning on page of the "81" Appendix for more information on this topic). A useful feature of **The\*Wizard** software is, when a *drumkit patch* is selected a *drum-voice map* can be automatically selected by using the "DrumVoice" keyword in the definition. This keyword has two components to it as the following example illustrates:

**DrumVoice.nnn=DrumkitName**

- nnn is the value of the actual *drumkit patch #* within the *MIDI instrument* where the *patch-name* appears in the Patch drop-down selection control.
- The *DrumkitName* on the right of the equal sign of this keyword must exactly match a corresponding *drumkit voice-map* definition in the VOICES.WIZ database file! This *drumkit* name will also appear as one of the selections in "Drummer Voice Names" drop-down selection control.

Carefully study the example below, and it is a good idea to closely study the Roland GS group of *patch definitions* (in the PATCHES.WIZ file) and the corresponding *drumkit voice definitions* (in the VOICES.WIZ file).

Patch definition examples:

The example below shows some database entries and the image of instrument, patch & drummer voice-names selection controls of the Band Manager/Drummer Settings utility dialog will appear as a result of those database entries. Furthermore it will operate as follows: if "Drumkit Patches" is selected as the instrument, then Drumkit1 - Drumkit4 will be available in the Patch drop-down selection control. If either "Drumkit1" or "Drumkit2" are selected as the *patch*, then the *drumkit voice-map* names for "Drumkit-A Voices" will automatically be selected in the Drummer Voice Names drop-down selection control. Similarly, if either "Drumkit3" or "Drumkit4" are selected as the *patch*, then the *drumkit voice-map* names for "Drumkit-B Voices" will be selected.

<b>[Generic MIDI Instrument]</b>	<- appears in the Instrument drop-down selection control
<b>BankA=-1</b>	<- automatically sets the Bank-A value
<b>BankB=-1</b>	<- automatically sets the Bank-B value
<b>1=Patch Name 1</b>	<- appears in the Patch drop-down selection control
<b>2=Patch Name 2</b>	<- appears in the Patch drop-down selection control

<b>[Drumkit Patches]</b>	<- appears in the Instrument drop-down selection control
<b>BankA=-1</b>	<- automatically sets the Bank-A value
<b>BankB=-1</b>	<- automatically sets the Bank-B value
<b>0=Drumkit1</b>	<- appears in the Patch drop-down selection control
<b>DrumVoice.0=Drumkit-A Voices</b>	<- appears in the Voice Names for the Drummer
<b>1=Drumkit2</b>	<- appears in the Patch drop-down selection control
<b>DrumVoice.1=Drumkit-A Voices</b>	<- appears in the Voice Names for the Drummer
<b>2=Drumkit3</b>	<- appears in the Patch drop-down selection control
<b>DrumVoice.2=Drumkit-B Voices</b>	<- appears in the Voice Names for the Drummer
<b>3=Drumkit4</b>	<- appears in the Patch drop-down selection control
<b>DrumVoice.3=Drumkit-B Voices</b>	<- appears in the Voice Names for the Drummer



### 3.C Drumkits & Drum Voices

The *drumkit voice-map* database holds the drum & percussion voice-name & corresponding MIDI note number information and is stored in an ASCII text file in the root directory for this software called: VOICES.WIZ. The *drumkit* definitions in this database are used for the voice-names that are displayed on the left edge of the Drummer's pattern-grid, as you will see in the example at the end of this section.

Most synthesizers and sound cards support one or more special *patches* for drum & percussive voices. These "*drumkit patches*" assign a different *voice* or *sound* to

different MIDI note values (unlike pitched instruments where each MIDI note value plays the same *voice* but at a different pitch). MIDI note values for drum programs have a corresponding voice name so that you don't have to remember, for example, that MIDI note #38 triggers a snare drum .... or worse, try to find the voice as one of the keys on a piano-roll image .... you just pick or use the voice name "snare drum" and the software automatically looks up the corresponding MIDI note number in its database.

The vertical dimension of a pattern-grid is always exactly 128 rows which corresponds to the 128 possible MIDI note values (which range from 0 at the bottom to 127 at the top). The Drummer's grid is unique in that the left edge of the grid shows drum & percussion *voice-names* that correspond to the different MIDI note values for each of the rows of the grid. The *voice-names* are extracted from the *drumkits* database file, and a particular set of *drumkit voice-names* is selected using the Band Manager/Drummer Settings utility dialog as is described above.

The *drumkit* database file was intentionally designed as a simple, yet formatted, text file so that you can add *voice* entries to an existing *drumkit* definition or create new custom *drumkits*. Selecting the "Edit Drummer Voice Definitions" option under the main Settings menu will open the VOICES.WIZ database file into the Windows Notepad editor. The Windows Notepad editor can only accommodate small files and if your database gets to be large then you may need to use an alternate editor/word processor (such as Write or WordPad, also supplied with Windows).

One of the things that may not be immediately intuitive is that different drum instruments can use the same *drumkit* mapping, as is the case with instruments that are GS compatible and XG compatible. In such cases a different patch selects a tonal variation of the same drum voices even though the same MIDI note number is used to trigger the generic sound (e.g., one *drumkit* patch may use dry drums and another may use drums with added effects like reverb). Hence an *instrument* can have several *drumkit patches* with the same or a similar *voice list*. Using the `DefaultTo` keyword one *drumkit* definition can utilize all or a portion of the *voice* definitions from another *drumkit* definition within the *drumkits* database ....

- if the *voices* of one *drumkit* are exactly the same as another *drumkit*, you need only enter the *voice* definitions once then refer to it using the keyword: `DefaultTo` (refer to the example)
- if the *voices* of one *drumkit* are similar to another *drumkit* with a few differences, you need only enter the common *voice* definitions once then refer to them using the keyword: `DefaultTo` (refer to the example); only the *voice* definitions that are left undefined will be supplemented by referring to another *drumkit* to pick-up *voice* definitions, or in other words an explicit definition overrides a definition a *drumkit* that is referred to

We have provided a database of *drumkit* definitions that correspond to some of the most popular electronic music instruments. However the database does not include every *instrument* or every *drumkit voice-map*. The *drumkits* database does not include entries for upgrade patch sets or 3<sup>rd</sup> party patch sets (e.g., Voice Crystal products).

**If you cannot find a *drumkit voice-map* that matches your particular equipment or if you are using a sampler, then you will need to update the database supplied with this software to include the *drumkit* definitions that meet your needs.**

<b>Format for the voices definitions:</b>
---

Each voice definition must be on its own line! The *voice-names* should be no more than a total of 16 characters in length including spaces or the text will not fully fit into the Drummer's grid. Most *drumkits* do not use the full range of 128 MIDI note numbers; you only need to enter *voice* definitions that correspond to MIDI note numbers used.

To add a new *voice* to this database, simply enter the *drumkit* name on its own line surrounded by square brackets, like this: [Drumkit Name]; the *drumkit* name cannot exceed 30 characters including spaces. The name entered in the brackets shows up in the selection controls of the Band Manager/Drummer Settings utility dialog. After entering the *drumkit* name, then create the voice definitions below the *drumkit* name.

There are 2 components to a *voice* definition: the *voice-name* text and the MIDI note number to which it corresponds (that will be sent to your *instrument* to trigger the desired sound on a specific MIDI channel). Along with your electronic MIDI instrument (e.g., synthesizer, sound card, drum machine, etc.), you should receive a chart of the *drumkit(s)* that your *instrument* is capable of playing and the MIDI note to *voice-name* mappings for each *drumkit* (this information is usually found in the user's manual; contact the manufacturer of your instrument if you did not receive such information).

- the MIDI note number is listed first followed by an equal sign ("=")
- the name of the drum or percussion voice or sound is entered to the right of the equal sign; if you leave the name of the voice blank, then the number itself will become the voice-name

<b>Voice definitions example:</b>
-----------------------------------

Carefully study the example below as well as the *drumkit* definitions that we have provided and match the format of the data that we have supplied when creating or editing entries! The example below shows some sample *drumkit* database entries and an image of a section of the *voice-names* that will appear in the Drummer's pattern-grid.

<b>[Drumkit-A Voices]</b>	<b>&lt;-- appears in the Voice Names for the Drummer</b>
0=Voice0	
1=Voice1	
2=Voice2	
3=Voice3	

<b>[Drumkit-B Voices]</b>	<b>&lt;-- appears in the Voice Names for the Drummer</b>
DefaultTo= Drumkit-A Voices	<b>&lt;-- uses "Voice0"- "Voice3" of the "Drumkit-A Voices"</b>
4=Voice4	
5=Voice5	





## 4 TUTORIAL: PLAYING & COMPOSING MUSIC

Unlike other MIDI software with which you may be familiar, **The\*Wizard** software has two distinct modes of operation: Pattern mode and Song mode. When working with *patterns* we say that you are using the Pattern Wizard and when working with *songs* we say that you are using the Song Wizard. The best way to become familiar **The\*Wizard** software is to open and play and tinker with the sample patterns and songs.

With this particular (pattern-based) type of music composing tool, you cannot immediately proceed to creating a song. Rather you will compose individual patterns that will become the building-blocks of a song (or songs). The topic: "Pattern Composing" beginning on page 77 of the "Appendix" further discusses the pattern-based method of composing music. Your desire or goal may not be to create songs, but rather to just create patterns, for example, for transferring into a drum-machine. If you do indeed wish, to create songs with **The\*Wizard** software you will first need to create some patterns, then you will ultimately sequence those patterns into a song. Before starting to compose patterns for a new song or other project that you might want to work on, you may want to first create a new *category* to group and store the patterns that you will create for your new song (or project, or whatever) so that you can easily refer to and select that specific set of patterns when you go create and edit a song-sequence.

### Configuration & Settings of the Sample Patterns & Songs

All of the samples were designed and configured to use the General MIDI sound set and the General MIDI drumkit. If the electronic MIDI instrument(s) that you will be using with this software have a General MIDI compatibility mode or sound-bank, then we suggest selecting it at least for following this tutorial.

The examples that follow assume that you have or are using a General MIDI compatible electronic instrument. Note that being configured for General MIDI means that the Drummer is set to play on MIDI channel #10, and also note that most "SoundBlaster" sound cards use MIDI channel #16 for the drums & percussion. If your instrument is not compatible with General MIDI, then when you open or create patterns you will want to open the Band Manager/Drummer Settings utility dialog (by pressing ALT-B) and select an *instrument*, *patch*, and *drumkit* that most closely matches your MIDI hardware.

### 4.A Running The\*Wizard Software

When you run the software you enter "**The\*Wizard's Lobby**", from which you can:

1. open the last pattern that you had open from a previous session
2. select and open a pattern from your library of pattern categories
3. create a new pattern
4. open the last song that you had open from a previous session
5. select and open a song from any of the songs in your library of songs
6. create a new song

## 4.A.i Opening & Playing a Pattern

- ☞ run the program
- ☞ make sure the "Open last used Pattern" option in the Lobby is selected – you will see the name of the pattern and the category in which it is stored
- ☞ click on the "Do It!" button at the bottom of the lobby dialog
- ☞ click the play button on the control-bar on the bottom of the screen (or press the spacebar) and you will hear the pattern play and see the bar & beat numbers shown in the real-time counter at the bottom of the screen
- ☞ while the pattern is playing, position the mouse pointer anywhere in the pattern-grid and click over one or more cells noting the position in the grid where you have added new MIDI note events .... when the pattern cycles around you will hear the new events that you inserted
- ☞ since we are just learning and do not want to unnecessarily corrupt the sample patterns just yet .... first stop the pattern from playing (by clicking on the stop button of the control-bar on the bottom of the screen or pressing the spacebar), then press the Control & "R" keys to *revert to the original version of the pattern*

Now that you know how easy it is to open the pattern opened from a previous session with **The\*Wizard** software, lets try selecting and opening a different pattern ....

- ☞ make sure that a pattern is not actively playing and press the ALT & "O" keys to open the Pattern Manager
- ☞ you will see a list of categories with a plus-sign "+" to the left of the category names .... click directly on the plus-sign of any category that looks interesting to expand it to show the patterns stored in that category
- ☞ click on the name of any pattern that looks interesting to you, then click on the "Open" button
- ☞ you will see that a pattern has been opened .... you can play & edit this pattern as you previously did

### Changing the MIDI Settings used by the players

If you do not have a General MIDI compatible electronic MIDI instrument, or if you want to use a different instrument in your studio, then you will need to modify the MIDI channel or other player settings (such as *patch* or *drumkit*) in order to hear the sounds that you desire, which is done using the Band Manager/Drummer Settings utility dialog.

It may be the case that options that directly match and support the electronic MIDI instrument(s) that you have are not available for selection from within the Band Manager/Drummer Settings utility dialog. The options that are available for selection in this dialog are picked-up from two database files supplied with and used by the software which can indeed be modified to accommodate your particular electronic MIDI instrument(s). **The\*Wizard's** database architecture for *instrument*, *patch*, and *drumkit* definitions offers the flexibility to accommodate new definitions beyond those provided, as is covered in the section: "Customizing The\*Wizard Software".

Make sure that you have a pattern already open (you can even have the pattern playing):

- ☞ select the "Drummer" tab at the bottom pattern-grid by clicking on it (if you are running **The\*Drumz Wizard PLUS** or only have a single-player pattern open then the "Drummer" is automatically selected)
- ☞ press ALT-B to open the Band Manager/Drummer Settings utility dialog
- ☞ using the drop-down selection controls in the dialog, select the options that best match and support the MIDI hardware that you have
- ☞ even if you are using a General MIDI compatible instrument, we encourage you to choose different *instrument* and *patch* as well as changing the MIDI channel; also try selecting a different *drumkit* (using the Voice names for the Drummer drop-down selection control) ... and notice how any of these changes affects the current open pattern

## **4.A.ii Creating a New Category & a New Pattern**

- ☞ make sure that a pattern is not actively playing and press the ALT & "N" keys then click the "New Category" button
- ☞ enter a name for the category ("Test" would be a good choice for now) and also enter a brief description if you like .... then click the "Do It!" button you will see your new category selected in the Category selection box .... you will also see "Untitled" in the New Pattern Name field ....
- ☞ type over the text ("Untitled") and enter a name for the pattern ("Test Pattern 1" would be a good choice for now)
- ☞ to make things easy for now, lets make sure that the pattern is only a Drummer and a single bar in length .... click the Settings button and enter 1 for all of the options except set the divisions/beat to either 8 or 16
- ☞ then click the "Do It!" button
- ☞ you will now have a new pattern open and ready for editing .... so start the pattern playing and start clicking away in the grid
- ☞ if you are really having fun, repeat the pattern creation steps a few times creating "Test Pattern 2" and so on (no need to create another category)

## **4.A.iii Opening & Playing a Song**

- ☞ if the program is not running, then run it and select the Open Last Used Song option from the Lobby (skip the next instruction)
- ☞ if you have the program already running in the Pattern Wizard mode, then click the Song Wizard button on the left-side of the control-bar at the bottom of the screen which will open a list of songs stored on your computer's hard-disk and then select a song name by clicking on it and then click the "Open" button
- ☞ click the play button on the control-bar on the bottom of the screen (or press the spacebar) and you will hear each of the patterns in the song-

sequence play and see the bar & beat numbers shown in the real-time counter at the bottom of the screen; you will also see a pointer descend through the song-sequence list indicating the pattern currently playing

Now that you know how easy it is to open the song opened from a previous session with **The\*Wizard** software, lets try selecting and opening a different song ....

- ☞ make sure that a song is not actively playing and press the ALT & "S" keys to open the Song Manager .... and you will see a list of songs stored on your computer's hard-disk
- ☞ click on the name of any song that looks interesting to you, then click on the "Open" button
- ☞ you will see that a song has been opened .... you can play & edit this song-sequence as you previously did

#### 4.A.iv Creating a New Song

- ☞ make sure a song is not actively playing and press the ALT & "Q" keys
- ☞ type over the text ("Untitled") and enter a name for the song ("Test Song" would be a good choice for now)
- ☞ the Song Wizard screen should be split – showing the category-pattern library and an empty song-sequence list (if this is not the case, then select the Open/Close Category-Pattern List option under the main Song menu)
- ☞ you will see a list of categories with a plus-sign "+" to the left of the category names .... click directly on the plus-sign of any category that looks interesting to expand it to show the patterns stored in that category
- ☞ click on the name of any pattern that looks interesting to you and drag it into the song-sequence list area .... and you will see the pattern inserted or appended to the list (if you drag a pattern into the song-sequence list it is inserted where you drop it and is not just appended to the tail of the list)
- ☞ repeat the previous step a few times, as desired to create a list that has at least a few different patterns in it
- ☞ you now have a new song-sequence .... so start the song-sequence playing

#### 4.B Exiting The\*Wizard

As with any other Windows program, exit the program using any of the normal methods:

- choose the Exit option from under the main File menu
- choose Close from the program menu-box on the topmost title bar
- hold the ALT key then press the F4 key

When **The\*Wizard** software shuts down, it will automatically save the pattern and/or song that are open! **The\*Wizard** will also memorize which pattern and/or song you had open so that the next time you run **The\*Wizard** software you can quickly resume working by selecting the last opened pattern or song from **The\*Wizard's Lobby**.

## 5 WORKING WITH PATTERNZ

This section covers the use of the **The\*Wizard** software regarding patterns, pattern categories, and how patterns are organized in folders called "categories". Also covered is how to manipulate and manage the patterns in your pattern-categories. This section primarily deals with the Pattern Wizard mode which is selected on the play control-bar at the bottom of the screen.

### 5.A Pattern Detailz

Because composing and editing patterns are the very core of **The\*Wizard** software, it is very important to understand exactly what a *pattern* is. The pattern-grid is the primary visual interface for patterns. A *pattern* is a collection of musical MIDI events organized in time and by musical instrument and also MIDI settings. In other words, a *pattern* is a set of related parameters, such as: number of bars & beats, tempo, player/band parameters, and a collection of MIDI events. Patterns have an upper bound of 16 on the number of bars in length that they can be, and also an upper bound on the number of simultaneous instruments/tracks/players -- just one (the "Drummer") for **The\*Drumz Wizard PLUS** and up to 16 for **The\*Muzical Wizard**.

The *Pattern Wizard* is the pattern composing environment that consists of a *pattern-grid* and related tools providing a visual means of viewing and editing the events and parameters of a *pattern*; only one *pattern* may be open at a time. There must always be one and only one *pattern* open which is why you are forced to load a *pattern* when first entering into the *Pattern Wizard* mode; because of this restriction you will not be allowed to delete a *pattern* if it is the open pattern. The name of the pattern and the category to which it belongs is shown on the window title bar; however if you are editing a pattern that belongs to a song, then "Song" will be indicated on the title bar instead of the category. Clicking on the title bar allows you to edit the pattern's name.

What makes **The\*Wizard** software products so unique are that they are true pattern-based composing tools. You have the ability to configure any pattern to meet your needs. Once you've created and setup a pattern, you can compose music in real-time while the patterns continuously loop. All editing and modifications are possible while the patterns loop so that you can hear any changes as you make them – which makes for an incredibly intuitive method to compose (try it, you'll see). You can even change MIDI patch settings while patterns play in real-time so that you can hear how your music sounds with different instruments and/or voices.

#### 5.A.i Pattern/Player Gridz

The pattern-grid is where you will do most of your work, so it is important that you become familiar with its layout and understand its features, characteristics, and capabilities. Scrollbars are provided that allow you to move the display to view different areas of the player-grids. The horizontal dimension of the pattern-grids is

variable depending on the number bars, beats-per-bar, and divisions-per-beat selected. The vertical dimension is always exactly 128 rows which corresponds to the 128 possible MIDI note values (which range from 0 at the bottom to 127 at the top).

In the case of **The\*Musical Wizard** where you can have up to 16 players, each player has its own pattern-grid accessed by selecting a tab at the bottom of the grid .... in actuality the grids are actually "player-grids" as a **The\*Musical Wizard** pattern can have several grids for each player. The Drummer's grid is unique in that the left edge of the grid shows drum & percussion *voice-names* that correspond to the different MIDI note values for each of the rows of the grid.

The grid itself can be set to either a single view or a split view (single view is the default). By dragging the center line while split view mode is enabled, you can change the relative height of each of the two grid sections. You will notice that the display in the two views is completely independent in that you can select a different player for the each of the two views (or you can view different areas of the same player-grid). There is no zoom feature, though you can view more (or less) of a pattern-grid by changing the *divisions/beat* setting which will not in any way alter how your pattern will play.

Immediately below the title bar are numerical *bar* and *beat* markings associated with each of the main visual divider lines. If you have setup an intra-pattern loop, then two markers will be displayed that indicate the starting position & ending position of the intra-pattern loop points; the area between the markers will also be shaded. The upper leftmost portion of the pattern-grid will have a toggle checkbox option to quickly enable or disable the intra-pattern looping feature (when disabled, the pattern will cycle through its entire length). The scrollbars and arrows on the play controls are used to shift the viewing area of the grid to other sections of the grid. The timing of the musical events are represented by configurable horizontal divisions using a variety of different color and thickness lines to separate the bars, beats & divisions allowing you to easily view and create the rhythmic structure of your music. The rows of the pattern-grid represent either individual musical notes (organized as ascending semitones), or in the case of the *Drummer* -- drum & percussion voices as defined by a selectable "drumkit". The status bar at the lower portion of the Pattern Wizard window displays the horizontal mouse position so that can see exactly where the mouse is.

At the bottom of the pattern-grid in **The\*Musical Wizard** are tabs with the names of different players – each player has its own pattern-grid. If there are no events in a player's pattern-grid the player's name appears black, otherwise it appears red. If a player is muted, it is indicated on the tab; similarly if a player is set to solo, all other player tabs will indicate that they are muted. Clicking on a player tab selects that player's pattern-grid. Right-clicking on a player tab activates a popup menu that shows the number of events in that pattern-grid; the popup menu for **The\*Musical Wizard** has additional quick-access options to: mute a player, solo a player (which mutes all other players), and to *remove* the selected player or to *add* a new player to the band.

## **5.A.ii Pattern Settingz: Ticks, Beats & Bars**

A *pattern* may have a variable number of up to 16 bars (or "measures" as they are also called). Each bar can be configured for from 1 to 8 beats per bar, where the number of beats-per-bar determines the feel of the music and is generally referred to as the "meter" or "time signature". If you would like to work on a specific section of bars within a

pattern, there is an intra-pattern looping feature. The display of pattern-grids can be set to show up to 64 visual divider lines per beat; you will notice that the divisions-per-beat setting values can only be powers of two (e.g., 2, 4, 8, 16, 32 or 64). The number of bars, beats, and divisions-per-beat are set using the Pattern Settings utility dialog which can be accessed and changed anytime while you have a pattern open, or using the Settings option when creating a new pattern.

When entering note events into the grid, the notes automatically snap into the grid cells; you may certainly move your events around the grid without lining them up to cell boundaries ... which is one of the great features of this software allowing you to *swing* your events for true realistic compositions. While you are able to have up to 64 visual divisions per beat, the software actually lines-up each event to a "tick", where there are 128 ticks per beat no matter how many beats or divisions per beat you setup in your patterns. Therefore the smallest increment by which you can move an event is a tick, and similarly the smallest amount by which you can change the duration (or length) of an event is a tick. Changing the length or starting position of events by exact tick amounts can be done using the properties dialog (accessed using the right mouse button). To better understand the relationship of beats and ticks, consider the following:

- If an event's length is 64 ticks, it will extend for exactly half of a beat.
- If an event starts on tick #32, then its position is one quarter of the way into the corresponding cell. Furthermore, if the length of such an event is 96 ticks then it will extend exactly to the end of the beat.

### **5.A.iii Playerz & Bandz**

Just like in a real musical band where each player plays a musical instrument, **The\*Wizard** software carries forward that metaphor where players in **The\*Wizard's** patterns correspond to instruments/instrument sounds. Players hold various other MIDI parameters that control the characteristics of the sound. Likewise, in the context of **The\*Muzical Wizard** software a band is a collection of players. A *pattern* uses players to connect to your actual MIDI sound generation hardware. A player mostly corresponds to an instrument voice (or "MIDI Patch"), though other parameters that affect the tonal characteristics of an instrument voice are in each player's settings. Settings and MIDI parameters for the players are discussed in the next section.

There are two types of *players*: a special *player* called the "Drummer" and normal/pitched-voice types of *players*. The drummer is unique in that each row of the pattern-grid, while still corresponding to one of the 128 MIDI note numbers, displays a voice-name (e.g., cymbal, snare-drum, cowbell, etc.) along the left edge of the pattern-grid. The drum & percussion voices displayed for the "Drummer" constitute a drumkit; the drumkit used by a pattern is selected using the Band Manager/Drummer Settings utility dialog. A *normal/pitched-voice player* shows a musical keyboard (or "piano roll") along the left edge of the pattern-grid and each row of the pattern-grid plays the same voice but at a different pitch.

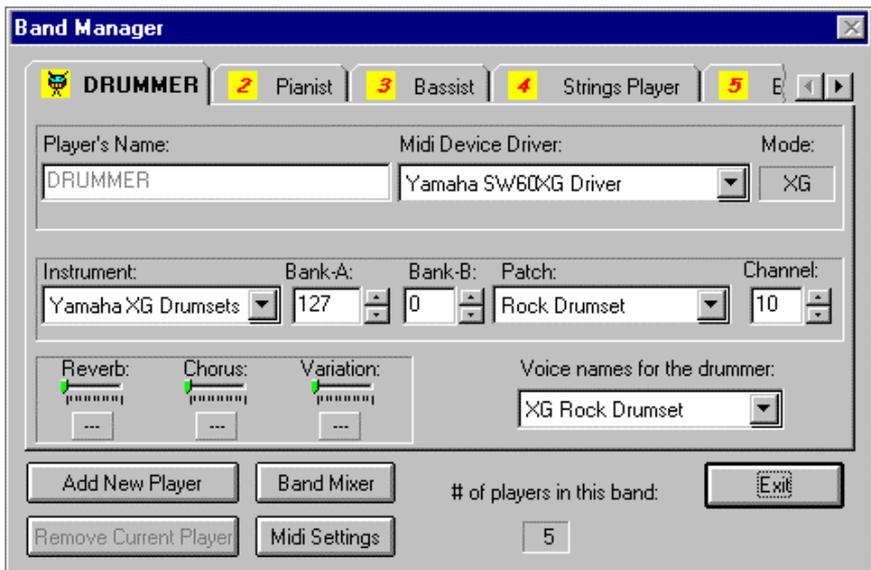
**The\*Drumz Wizard PLUS** has only a single player -- "The Drummer" and is not capable of having a *band*. **The\*Muzical Wizard** can have a *band* of up to 16 players (actually 15 programmable players as one of the players must be a "Drummer"); the drumkit for the "Drummer" and the instrument patches for the other players are selected

using the Band Manager utility dialog. Anytime you use more than one player in **The\*Musical Wizard** you essentially have a *band*. Any player in a *band* can be set to use any patch of any electronic musical instrument associated with the device drivers installed in your PC. You can also set the MIDI channel used and customize the player's name and other parameters that control the characteristics of the instrument's sound.

You can compose with any of players in a band that you have setup in **The\*Musical Wizard** independently of any other player by selecting a player's tab on the lower edge of the pattern-grid window. A special split screen viewing mode lets you see & compose with any two players at once; or you can view separate sections of the same player which can be quite handy, for example, for viewing different sections of the Drummer. While you are composing with a particular player, you may do so while all of your other players are playing or you can mute all or selected players (muting all but one of the players makes the one player "solo"). The mute and solo settings are accessed by right-clicking on a player's tab or from within the *band mixer* which also has controls to independently set the relative volume and pan-position of each player.

### 5.A.iv Drummer/Player MIDI Settings

As a MIDI application, this software commands MIDI hardware to play music according to a MIDI protocol. The way a MIDI device is told what instrument to play is to assign an *instrument patch* to one of the 16 possible MIDI channels (which is done by sending a MIDI program change command to a specific MIDI channel); then any MIDI event data sent to that particular channel will cause the MIDI device to play the *instrument patch* assigned to that channel. The way in which **The\*Wizard** software stores and sets *instrument & patch* settings to MIDI channels is in the band-player MIDI settings facilitated by the Band Manager/Drummer Settings utility dialog, shown below.



**Player's Name** - is a text field that you may freely edit to your liking. The name of the player is shown on the player's pattern tab and the mixer module associated with that particular player. When you create a new pattern (except for cloning) a default player name is automatically selected. Because there must always be at least one player (the "Drummer") you cannot alter its name; it will always be the first player and you cannot remove the "Drummer" player from the band.

**MIDI Device Driver** - is the output MIDI device driver associated with the MIDI device that you want a particular player to use to play MIDI events. To the right of the driver selection is a small read-only information box that shows what type or mode the device is (which can be set using the MIDI Settings utility dialog by pressing the "MIDI Settings" button at the bottom. When you create a new pattern (except for cloning) the MIDI device driver that you designate as the default (using the MIDI Settings utility dialog) is automatically selected.

**Instrument** - is the name of the MIDI device or physical electronic instrument, such as a particular synthesizer, drum-machine, etc. It is not the instrument sound. If you are using a sound card, particularly a *wavetable* type of sound card, then you will generally select the "General MIDI" instrument. If there is no adequate match, then you will need to add an entry into the "PATCHES.WIZ" database file. When you create a new pattern (except for cloning) a default instrument is automatically selected.

**Bank-A & Bank-B** - are used to select patch banks within your hardware. Automatic bank selection is provided as a feature of this software, provided that the instrument & patch are properly entered into *patches* database file. The issues regarding banks are covered in the "Getting Started" section and in the "Appendix".

**Patch** - is the actual sound within the instrument that you want to hear the player play. It can be a bit confusing because several terms are actually used to refer to the sound that you hear: instrument, sound, voice, (MIDI) program, (MIDI) patch. Typical electronic MIDI instruments have many sound patches, and in some cases banks of sound patches. If there is no adequate match, then you will need to add an entry into the "PATCHES.WIZ" database file. When you create a new pattern (except for cloning) a default patch is automatically selected.

**Channel** - is the MIDI channel that will be played by this particular player. Once a patch is set to a MIDI channel, all MIDI event data sent to that channel will play the sound corresponding to the selected patch. When you create a new pattern (except for cloning) a default channel is automatically selected.

**Reverb, Chorus, Variation** - are the effects level controls. If your hardware, for example, is GX or XG compatible then you will be able to use these controls to set the respective effects levels. Your MIDI hardware may or may not have internal effects; consult the documentation to determine whether these controls will set the respective effects in your hardware.

**Voice Names for the Drummer** - is the selection of voice names used by the *instrument's drumkit patch* that you select. Select the voice-name that is the closest match to the drumkit selected. If there is no adequate match, then you will need to add an entry into the "VOICES.WIZ" database file. Automatic *drummer voice-name* selection is provided as a feature of this software, provided that the instrument & patch are properly entered into *patches* database file. When you create a new pattern (except for cloning) a default *drummer voice-name map* is automatically selected.

**Add Player & Remove Player** - adds or removes a player from the current band, respectively. Since **The\*Drumz Wizard PLUS** has only a single player, these controls are not operational; the "Drummer" cannot be removed.

**Band Mixer** - opens the mixer utility allowing you to set the relative volume of each player. You can also set the pan position of each player independently. Lastly, you can *mute* a player or *solo* a player (which mutes all of the other players in the band).

**MIDI Settings** - opens the MIDI Settings utility dialog.

**Exit** - closes the dialog. All selections and settings are automatically retained and stored into the currently open pattern.

If a particular *instrument*, *patch*, or *drumkit map* is not listed in the selection controls of the Band Manager/Drummer Settings utility dialog, then you will need to add an entry into the PATCHES.WIZ and/or VOICES.WIZ database files. Detailed instructions on how to do this are provided in the "Customizing The\*Wizard Software" section.

## **5.B Organizing Patternz into Categoriez**

Provided with the software are many sample patterns and songs; and as you use this software you will create new patterns to add to your library. Rather than hunt for pattern files on your PC's hard-disk, **The\*Wizard** has an integrated pattern management system. So that you can access your patterns in an organized manner, **The\*Wizard** provides a method by which you can group patterns into *categories*, which allow you to group patterns for easy reference. You can think of *categories* as folders for storing patterns. Each time you create a pattern, you will need to select (or create) a *category* folder into which the pattern will be stored. All patterns in all categories are available for creating song-sequences (which is a really powerful capability).

### **5.B.i Creating Pattern Categoriez**

Categories are created using the New Category/New Pattern section of the Pattern Manager utility. The Pattern Manager utility is opened from the main Pattern menu or by clicking on the upper leftmost icon on the Pattern Wizard's toolbar.

Once you have accessed the New Category/New Pattern section of the Pattern Manager utility, you need only click on the "New Category" button and enter a name for the category then click the "Do It" button and the new category will be added to your library – after which you can add patterns into the category. When you create a new category you can not only enter a verbose name for the category but you can also attach a brief description to it.

### **5.B.ii Creating Patternz**

There are several ways to create patterns ....

- ◆ create new empty patterns and begin composing from scratch

- ◆ clone an existing pattern
- ◆ by importing from a pattern from a group of **The\*Wizard** patterns
- ◆ by importing from a Standard MIDI File

## New Patternz

When inspiration strikes and you want to begin composing from scratch, you will want to create a new and empty pattern. New empty patterns are created using the New Category/New Pattern section of the Pattern Manager utility. The Pattern Manager utility is opened from the main Pattern menu or by clicking on the upper leftmost icon on the Pattern Wizard's toolbar.

Once you have accessed the New Category/New Pattern section of the Pattern Manager utility, you need only select the category that you want the pattern to be stored and then enter a name for the pattern then click the "Do It" button and the new pattern will be added into the category shown in the New Category/New Pattern dialog. You can create a new category to store you pattern if you like, but you must of course do that before creating the new pattern (no matter though, you can always move a pattern from one category to another). You have the option to select the pattern's settings from within the New Category/New Pattern dialog before the pattern is created using the button provided in the dialog, or you can do it after the pattern has been created using the third icon from the top on the left-edge toolbar or by selecting the Pattern Settings from the main Pattern menu. **We recommend that make your pattern settings before you begin adding events because certain changes to the pattern settings will have some impact on the event data in a pattern.**

When you create a new empty pattern with **The\*Drumz Wizard PLUS**, it will create a pattern using default MIDI settings of: the *default MIDI output port* (selected with the MIDI Settings utility dialog), MIDI channel #10, and the General MIDI drumkit. When you create a new empty pattern with **The\*Muzical Wizard**, it will create a default 5-player band and also use default MIDI settings of: the *default MIDI output port* (selected with the MIDI Settings utility dialog); the MIDI channel, instrument and patch settings will use the hard-coded defaults which you may alter to your liking. You can also add or remove players as you desire; players are added from within the Band Manager utility dialog or by right-clicking on a player tab and choosing the according option. The settings for new empty patterns in terms of # of bars, # of beats-per-bar, and # of divisions-per-beat will be inherited from the currently open pattern.

## Cloning Patternz

Another method of creating patterns is to *clone* them. The *pattern cloning feature* is accessed from the main Pattern menu or by using the ALT-C quick-key combination. Cloning patterns is a particularly handy feature as it is often the case that you will develop a pattern and want to make a few variations while keeping the same settings and musical qualities. You may also want to extract a portion of a pattern to create a new pattern, which can be done by selecting a subset of the measures in the source pattern – you will see that the pattern cloning utility dialog lets you select the bars from the source pattern that you want to clone.

You have the opportunity to change the name of the new pattern you are creating by cloning from the default name supplied for you (which is the name of the pattern preceded by "clone of"). When you clone a pattern it is stored into the same category as the source pattern; you can always copy or move a pattern to any category.

You have two pattern cloning options:

1. Cloning the settings only, which creates an empty pattern (with no events) but has all of the settings of the source pattern (e.g., # of bars, # of beats, # of divisions, Drummer/Band-Player MIDI parameters, etc.).
2. Cloning the entire pattern, which creates an exact copy of the source pattern in all respects.

## Importing Patternz

When you import a pattern you are actually creating a new pattern and inserting that pattern into one of your categories. It is not possible to merge MIDI event data from an external pattern by importing.

The\*Wizard provides two different types of importing capabilities, specifically: importing native **The\*Wizard** patterns (which is covered in the section: "*Exchanging Patternz*", beginning on page 56), and importing from Standard MIDI Files (which is covered at length in its own section of this document).

## 5.C The Pattern Manager Utility

The *Pattern Manager* is the utility that you use for all file-type operations with patterns and categories and actually consists of 4 modules and is accessed as the topmost icon on the Pattern Wizard's left-side toolbar or from the main **P**attern menu. Each of the Pattern Managers modules can be opened using a quick-key combination.

The software provides you with the ability to work with patterns using long names and descriptions, as well as categorize your patterns. To accomplish this we have developed our own file management utility specifically for working with patterns, songs, and categories. Because of this you will not be able to see your patterns, songs, and categories if you look into your Wizard's disk directory folder. Also, you should **not** attempt to copy, move, or delete files directly from your disk using the Windows File Manager or Windows-95 Explorer, because doing so may result in permanent loss of your work as well as cause the program to not operate properly.

The *Pattern Manager* is used for the following operations:

- select patterns to be opened for playing and/or editing
- create new patterns or create patterns by cloning
- remove patterns from a category (which removes them permanently)
- create new categories or remove categories
- copy or move patterns from one category to another
- export or import patterns to or from a **The\*Wizard** pattern-group file

### **5.C.i Opening Patternz**

Since all patterns are stored in category folders, when you want to open patterns you must first open a category to view the patterns stored within it, then you will select and open a particular pattern. In addition to creating new patterns in a category and selecting/opening patterns you can manage and arrange your patterns and categories with *copy*, *move*, and *delete* operations using the Pattern Manager utility.

To open a pattern, expand the category in which the pattern that want to open is stored (by clicking on the "+" icon at the left of the category name) then either double-click on a pattern name or single-click (to hilight the pattern name) and click the "Open" button.

### **5.C.ii Saving Patternz**

Patterns are automatically saved for you! Any time you open a different pattern, switch to the Song Wizard mode, or exit the program – the pattern that you have open and were working on is automatically saved. Since patterns are stored in category folders and the storing is done automatically and you do not need to select filenames and pathnames, there are no *save* or *save-as* options in the File menu.

For safety, if you have been working for a while on a pattern, its a good idea to force a save of your work to disk; in addition to accessing the *forced save* function from the main Pattern menu, you can also do a *forced save* by pressing the Control and "S" keys together on your computer's keyboard or by clicking on the disk icon on the toolbar on the left edge of the screen.

### **5.C.iii Copying, Moving & Deleting Patternz**

These operations are performed using the Pattern Manager module of the overall Pattern Manager utility (sorry for any double naming confusion). The Pattern Manger is accessed using the ALT-O quick-key or by selecting the Pattern Manager module after opening the Pattern Manager utility as the topmost icon on the Pattern Wizard's left-side toolbar or from the main Pattern menu.

The Pattern Manager lets you perform several file-type operations on your patterns as are described below. The Pattern Manager utility uses a tree-type display to show your categories and the patterns within a particular category. If a category has plus sign ("+") icon to the left of its name, then there are patterns stored in that category which can be viewed as described below. When a category is expanded for viewing, it will have a minus sign ("-") icon to the left of its name. If a category has musical note icon to the left of its name, then there are no patterns stored in that category (e.g., it is empty).

#### Viewing patterns in a category:

- ☞ click on the plus sign (or by double-click on the category name) to expand the category display list to show all of the patterns in the category
- ☞ if the patterns in a category are being displayed, you can collapse the display in the same way as expanding it (by double-clicking on the category name or by clicking the plus sign)

### Opening a pattern to play or for editing:

- ☞ click on the pattern name to highlight it, then click the "Open" button (or double-click on the pattern name)

### Removing a pattern from a category:

- ☞ click on the pattern name to highlight it, then click the "Remove" button (warning: once removed, a pattern cannot be retrieved)

### Removing an entire category:

- ☞ a category cannot be removed if it is not empty -- you must first remove all patterns from a category before you can remove the category itself
- ☞ if a category is empty (it will have a musical note icon to the left of its name in such a case) click on the category name to highlight it, then click the "Remove" button

### Copying a pattern from one category to another category:

- ☞ click on the pattern name and drag it to another category (note that the form of the icon being dragged shows multiple items)

### Moving a pattern from one category to another category:

- ☞ first hold a SHIFT key on your computer's keyboard then click on the pattern name and drag it into another category or over a category name (note that the form of the icon being dragged shows a single item)

## 5.D Playing Patternz

Anytime the Pattern Wizard is active, there will always be an open pattern (we guarantee it) even though the pattern may be empty. You can start the pattern playing by clicking on the play arrow button on the *play control-bar* or by pressing the spacebar on your computer's keyboard; the spacebar actually toggles between play and stop. You can stop the pattern from playing by clicking on the stop button on the *play control-bar* or by pressing the spacebar on your computer's keyboard.

When a pattern is playing certain buttons and menu options will be disabled to prevent certain things from being done that will really confuse **The\*Wizard**. The grid will remain completely static and the real-time counter will show the bar and beat.

If the pattern is not playing you can set a specific starting point before starting it to play. The forward and reverse arrows on the play control-bar will move the starting point by beats; the "W" key or double arrow button sets the play position to the very beginning. You can also click on the face of the real-time counter (on the play control-bar) which will allow you to set an exact starting point in terms of the bar, beat, and tick.

You can fully edit and modify a pattern while it is playing! While playing you can:

- add, remove, alter, select, cut, copy, and paste events

- alter the (volume & pan) mix any player
- mute or solo individual players
- change to different player-grids
- alter a player's MIDI settings
- change the tempo

When you stop a pattern from playing, the grid will shift to showing you the section where you stopped .... this is done so that if you want to make changes to a section of a pattern you can stop when you hear the section that you want to edit and the display will automatically shift to that area of the pattern so that you can make your edits. If you have split the view of the grid, then both views will shift to the point at which you stop.

### **5.D.i Intra-Pattern Looping**

You will at times find it useful to restrict the looping of a pattern to a particular segment of the overall pattern, allowing you to more quickly refine a particular section of a pattern without having to wait for the entire pattern to loop to hear the changes that you make in a particular section. For example, if you have a pattern that is 16 bars in length but you want to just refine bar #2, you will find it convenient to setup an intra-pattern loop causing the pattern to loop just on bar #2 rather than wait for the pattern to play through 15 bars to return to bar #2 so that you can hear the changes you make.

The upper area of the pattern-grid has a header bar that indicates the *bar & beat* numbers associated with each of the main visual divider lines -- if you have setup an intra-pattern loop, then two markers will be displayed that indicate the starting & ending intra-pattern loop points; also the area between the markers will be shaded. The upper leftmost portion of the pattern-grid has a toggle option to enable or disable the intra-pattern looping feature (when disabled, the pattern will cycle through its entire length). When you start a pattern to play and you have an intra-pattern loop enabled, the pattern will jump to the loop starting point and begin playing from that point.

Use the following steps to setup an intra-pattern loop:

1. Set the starting & ending intra-pattern loop points -- by clicking with the mouse on the upper area of the pattern-grid that displays the numbers that correspond to each *bar & beat*; alternatively you can use the "Intra-Pattern Loop Setup" option under the main Pattern menu or the ALT-L quick-access keys. A dialog will be presented which lets you set the starting-point and ending-point of an intra-pattern loop.
2. Make sure that the intra-pattern loop feature is enabled .... a quick-access control is placed at the upper leftmost portion of the pattern-grid (if the control box is clear then the intra-pattern looping is not enabled) alternatively you can use the "Intra-Pattern Loop Enable" option under the main Pattern menu or use the ALT-P quick-access keys.

### **5.D.ii Band-Player Mix (Volume & Pan)**

The *Volume & Pan Mixer* is opened using the ALT-X quick-key, from the main Pattern menu, or from within the Band Manager/Drummer Settings utility dialog. The relative

volume & pan settings for each player in a band is generally referred to as the "mix". The *Volume & Pan Mixer* is a dynamic module in that segments will match the exact number of band players. The number of the segment corresponds exactly with the ordinal position of any player in the band; you can click on the number at the top of a mixer module to see which player it corresponds to.

In the case of **The\*Drumz Wizard PLUS** there is only the "Drummer" player, however you can of course adjust the overall volume of the pattern as well as set the pan position. You may find this useful for creating fade-ins or fade-outs by cloning a pattern and changing its overall volume setting. Since there is only one player, there is no mute and solo capabilities.

In the case of **The\*Muzical Wizard** you can individually adjust the volume and pan of the each player. These mix settings are saved with the pattern and can be helpful for creating fade-ins, fade-outs, or ping-ponging effects. You can also mute or solo a player as is described in the next section.

### 5.D.iii Muting & Soloing Playerz

While you are composing with a particular player, you may do so while all of the other players in the pattern's band are playing .... or you can mute all or selected players. Muting all players except for one, makes the one player "solo".

You can mute or solo players by right-clicking on the player's tab at the bottom of the pattern-grid and select the according option; or you can use the *mute* and *solo* checkbox options in the mixer (as described above).

## 5.E Editing Patternz

Delete
Properties
Cut
Copy
Paste
Transpose
Audition
Chord
Full Beat Triplet
Half Beat Triplet
Select All
Unselect
Cancel

The basic pattern editing operations are adding & removing MIDI events (or "musical notes").

**The\*Wizard** software also provides several more powerful editing features. Many of the advanced pattern editing operations are accessed from a **pattern editing popup menu** (shown at left) that is opened by clicking with the right mouse button either inside of the pattern-grid area or directly over an event or over a group of selected events. Each of the advanced pattern editing features are explained in the sections below. Various options in the popup menu will be enabled or disabled depending upon whether you click over an event or a group of selected events.

**The\*Wizard** software interprets any click of the left mouse button within a pattern-grid as an addition of an event! If you open the popup menu and decide that you do not want to choose any of its options, then **you will need to use one of the following methods listed below to**

**remove the popup menu from the screen**, otherwise if you click with the left mouse button over any area of the pattern-grid even while the popup menu is open you will inadvertently add a new MIDI event into the currently open pattern.

To remove the popup menu without inadvertently creating an event:

- ☞ choose the *Cancel* option in the popup menu itself
- ☞ press the Escape key on your computer's keyboard
- ☞ click with the left mouse button outside of the grid area of the screen

### Adding/Creating, Removing, Moving, Transposing, & Changing Events

- ☞ To **add** or **create** an event, make sure that the pencil icon is selected on the *Pattern Wizard* toolbar at the lower left edge of the screen, which sets the functioning of the mouse pointer to insertion mode. Then simply click in the grid where you want to create an event. The loudness of the event will correspond to the setting of the slider control on the *Pattern Wizard* toolbar at the middle left edge of the screen. If you click and release the mouse immediately the event will be formatted to fit into the cell pointed to by the mouse. If you drag the mouse to the left before releasing the mouse-button you can extend the length (and hence the duration) of the event.
- ☞ To **remove** an event, or a group of selected events:
  - Hold the Control key on your computer's keyboard and click over an event or a group of selected events.
  - Position the mouse pointer over the middle section of an event and click with the right-mouse button which will open a popup menu onto the screen presenting several options. Select the *Delete* option.
- ☞ To **move** an event, position the mouse pointer over the front or middle section of an event and click.. While holding the mouse-button you will see the mouse cursor change to a 4-way arrow and you can drag the event to a new position in the grid. You can also change the horizontal placement of an event, or a group of selected events, by editing it's properties. Another way to move an event vertically is to use the **transpose** function.
- ☞ To **change** an event, there are several options. Typically you will want to either change the length/duration and the loudness of the event.
  - To change the length, position the mouse pointer over the tail (you will see the mouse cursor change to a 2-way arrow), while holding the mouse-button and you can lengthen or shorten the event by dragging the tail. You can also change an event's duration by editing it's *properties*.
  - To change the loudness, you will need to edit the *properties* of the event.
- ☞ **Transposing** is another way to move an event or a group of events vertically by rows. Position the mouse pointer over the middle section of an event or anywhere over a highlighted group of events, click with the right-mouse button and choose the *Transpose* option. Then enter the number of semitones that you want to move the event(s) up or down (each row corresponds to a consecutive MIDI note number and is equivalent to a semitone, except in the case of the "Drummer" player).

## Selecting & Unselecting Groups of Events

At times you will want to edit and change the properties of more than one event. In order to do so you will need to select a group of events.

☞ **To select a specific group of events**, use either of the following methods. When a group of events is selected you will see that the group is clearly marked.

- Hold the Shift key on your computer's keyboard and click with the mouse near where you want to make a selection. While holding the Shift key press and hold the mouse-button and you will see the mouse cursor change to a cross-hair, you can then drag a band around a group of events to select them.
- Click the dashed-box tool icon button on the *Pattern Wizard's* toolbar at the lower left edge of the screen, which changes the functioning of the mouse pointer to selection only. Position the mouse cursor near where you want to make a selection and click, you will see the mouse cursor change to a cross-hair and you can then drag a band around a group of events to select them.

☞ You can **select all events** in a pattern by clicking within the grid with the right mouse button and from the popup menu choosing the *Select All* option.

☞ **To unselect** a group of events

- Position the mouse pointer anywhere in the grid and while holding the Shift key on your computer's keyboard click with the left mouse-button.
- Position the mouse pointer anywhere over the highlighted group and click with the right-mouse button which will open a popup menu onto the screen presenting several options. Choose the *Unselect*.

## Event Properties

Each event has a set of properties associated with it that are established you when you add/create it. Using this utility you can view and edit the horizontal position, length, and loudness properties of an event or group of events.

☞ To edit the properties of an event, position the mouse pointer over the middle section of an event, click with the right-mouse button and choose *Properties* from the popup menu to edit an event's properties (or the common properties of a group of selected events).

- If you are editing the properties for a single event, you will be able to:
  - alter the horizontal position (by setting the *bar*, *beat* and *tick* values)
  - alter the length/duration (by setting the number of *ticks*)
  - alter the loudness of the event
  - you can also audition the sound of the event
- If you are editing the properties for a group of events, you will be able to:
  - alter the relative horizontal position of the events in the group (by setting the *bar*, *beat* and *tick* values for the head of the group)

adjust the relative loudness of each of the events in the group, or set each of the events in the group to the exact same loudness value

### Cut, Copy & Paste Editing

The *cut*, *copy* & *paste* functions are accessed by right-clicking with the mouse over a group of selected events. Since you are freely able to move and delete single events, it makes no sense to *cut*, *copy* or *paste* a single event – so these functions are only enabled in the popup menu when a group of events have first been selected.

**Cut** causes the selected group of events to be removed from the pattern-grid and placed into the clipboard buffer; the events will remain in the buffer until something else is copied into the buffer. Click with the right mouse button over a group of selected events then choose *Cut* from the popup menu. You can paste these events at another area of the same pattern-grid or any other pattern-grid (you can even paste the events to a different player or an entirely different pattern).

**Copy** causes the selected group of events to be copied into the clipboard buffer where they will remain until something else is copied into the buffer. Click with the right mouse button over a group of selected events then choose *Copy* from the popup menu.

**Paste** causes events in the clipboard buffer to be inserted into the pattern-grid starting at the exact position of the mouse pointer. Click with the right mouse button over the spot in the pattern-grid that you want to insert the events and choose *Paste* from the popup menu; as soon as you press the right mouse button the position of the mouse pointer is frozen and memorized. The positioning of the pasting can be tricky, so please read this carefully ..... the leftmost event in a selected group that is *cut* or *copied* is considered the "lead event". If there are two events at the same position in time (e.g., the same bar, beat, division and tick) then the upper leftmost event is the *lead event*. *Pasting* begins by placing the *lead event* exactly where the cursor pointer is positioned, and the rest of the events are placed into the grid to the right of (and possibly below) the *lead event* maintaining the same relative positioning. When pasting events, you do not have to start the pasting on a division boundary, but can begin the paste from any position within a cell. If your pasted events are skewed a bit because you did not have the mouse pointer exactly where you wanted, you can select the group of pasted events and nudge them to where you like by editing the *Properties* of the group (as described above). You will find it useful to use the display panes at the bottom of the screen to identify the (bar, beat & division) position of the mouse pointer prior to pasting.

Another useful aspect of pasting is that you do not need to paste MIDI events into the same player or even the same pattern from which the events were copied or cut! In other words, once MIDI event data has been placed into the clipboard buffer, those MIDI events can be pasted into any player-grid of the same pattern or even an entirely different pattern. For example, if you want to parallel a section of music using two different instrument patches, you should copy all of the events from one player-grid and paste them to another player-grid. Similarly you can open a different pattern or create a new pattern then paste the events previously placed into the clipboard buffer into the newly opened or created pattern.

## Triplets & Chords

These helpful "quickie" features will automatically enter events into a pattern for you:

**Half Beat Triplet** is very similar to the *Full Beat Triplet* function described above. The three inserted events will have the same loudness setting and will be automatically calculated to span the duration of one-half of a beat (64 ticks).

**Full Beat Triplet** will add three evenly spaced events into the pattern starting at the exact position of the mouse pointer. Each of the three automatically inserted events will have the same loudness setting and will be automatically calculated to span the duration of an entire beat (128 ticks). Click with the right mouse button over the spot in the pattern-grid that you want to insert the events and choose *Full Beat Triplet* from the popup menu; as soon as you press the right mouse button the position of the mouse pointer is frozen and memorized.

**Chord** entry is only applicable for **The\*Musical Wizard** product. Additional events will be added to the pattern relative to a selected chord root note using the same loudness value as the root note. Position the mouse pointer over the middle section of an event, click with the right-mouse button and choose *Chord*. This will open the chord selection dialog where you can select the type of chord and the form of the chord that you want inserted. The note that you selected is considered the root and is shown in the dialog, and when you select a chord the notes that make up the entire chord are displayed. You will see elsewhere in this document details about how to add new chords into the *chords database file* used by this function.

## 5.F Exchanging Patternz

Music is quite often a collaborative effort. It is also quite common to create and compose music from styles or style templates. Lastly, different tools are used to compose various aspects of musical pieces as well as to complete the *final production* of a piece. In recognition of these aspects regarding music composing and production, the **The\*Wizard** software products offer several features for exchanging patterns & songs.

### Pattern-Group Exchange Files

The remainder of this section discusses **The\*Wizard** *pattern-group exchange files* and related operations. These functions import native **The\*Wizard** patterns into categories or export native **The\*Wizard** patterns to a self-contained pattern-group exchange file. Similarly you can export and import native **The\*Wizard** songs to or from a file. These utilities are provided since **The\*Wizard's** unique file system does not save patterns and songs with names that are readily recognizable by looking directly at the files in the category or song sub-directories on your disk. *Pattern-group exchange files* will be stored to disk with a file extension of "PTG"; these files are used to combine patterns into a group for distribution as a single file.

To use the *pattern-group* exporting & importing functions described below, you must access the "Pattern Import/Export" module of the Pattern Manager, by using the ALT-G quick-key, by selecting the "Pattern-Group Import/Export" option from the main Pattern menu, or by selecting the "Pattern Import/Export" module from the Pattern Manager utility (which is opened from the main Pattern menu or by clicking on the upper leftmost icon on the Pattern Wizard's toolbar).

## Exporting Pattern-Groups

You can export patterns to a *new pattern-group file*, or you can open an existing *pattern-group file* and add patterns to it. You can also remove patterns from an already existing *pattern-group file*. Hopefully you will infer from the preceding comment that the *pattern-group* exchange files can indeed hold one or more patterns.

### Creating a new pattern-group:

- ☞ click the "New Group" button; the filename will be cleared (actually set to: "Untitled") and the all of the patterns in the pattern-group list on the right side of the utility dialog will be cleared
- ☞ expand the view of one or more pattern categories shown on the left side (click on the plus sign or double-click on the category name to expand or contract the viewing of patterns within a category)
- ☞ add patterns to the group from the list on the left side of the "Pattern Import/Export" utility dialog by clicking to select a pattern then clicking the "**Add ->**" button (repeat this step as necessary)
- ☞ click the "**Save Group As ...**" button and use the file selector and enter a name for the new *pattern-group file*, or if you are modifying an existing *pattern-group file* then you can just use the "**Save Group**" button
- ☞ click the "Open Group" button and use the file selector to select a desired *pattern-group file*

### Adding patterns to a pattern-group:

- ☞ click the "Open Group" button and use the file selector to select a desired *pattern-group file*
- ☞ either open a pattern-group file or create a new pattern-group file
- ☞ expand the view of one or more pattern categories shown on the left side (click on the plus sign or double-click on the category name to expand or contract a category)
- ☞ click on a pattern name within a category to hilght it, then click the "**Add ->**" button or click on a category name and click the "**Add All**" button (which will add all patterns in the category into the *pattern-group*)
- ☞ click the "**Save Group As ...**" button and use the file selector and enter a name for the new *pattern-group file* and enter a path for the file to be saved; or if you are modifying an existing *pattern-group file* then you can just use the "**Save Group**" button

### Removing patterns from a pattern-group:

- ☞ click the "Open Group" button and use the file selector to select a desired *pattern-group file*
- ☞ click on a pattern name within a the group list (the right-side list) to highlight it, then click the "**Remove**" button, or click the "**Rmv All**" button (which removes all of the patterns from the group list)
- ☞ click the "**Save Group As ...**" button and use the file selector and enter a name for the new *pattern-group file* and enter a path for the file to be saved; or if you are modifying an existing *pattern-group file* then you can just use the "**Save Group**" button

## **Importing from Pattern-Groups**

When patterns are imported from a group, the driver selected for the player(s) in the pattern's band will be set to the default MIDI device driver selected in the MIDI settings utility. If you import a pattern into a category that has a pattern with the same name, you run the risk of overwriting the original pattern (which cannot be retrieved).

### Extracting patterns from a pattern-group to categories:

- ☞ open a pattern-group file as described above
- ☞ click on a pattern name within the *pattern-group* list (the right side list of the utility dialog) to highlight it; if you press and hold the Shift or Control keys while clicking on pattern names you can select a set of contiguous or random patterns from the list, respectively; to quickly select the entire group of patterns – click on the first pattern name in the list, press and hold the Shift key, then press the End key
- ☞ click on a category name on the left side of the utility dialog to highlight it and select it as the destination category
- ☞ click the "<- Copy" button

## **Exporting to & Importing from Standard MIDI Files**

Please refer to the section: "Working with Standard MIDI Filez" for more details on exactly how to use Standard MIDI Files with this software. Also refer to the section: "Standard MIDI Filez" beginning on page 79 of the "Appendix" for more information about Standard MIDI Files and using them with **The\*Wizard** software products.

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## 6 WORKING WITH SONGZ

This section covers the use of the **The\*Wizard** software regarding songs as well as how to manipulate and manage the songs in your library of songs stored on your computer. Most of the discussion in this section assumes that the software is operating in the Song Wizard mode which is selected on the play control-bar at the bottom of the screen.

### 6.A Song Detailz

In the context of **The\*Wizard** software, a *song* is a sequence of patterns; in fact we often will use the term: "song-sequence". What makes **The\*Wizard** software products so unique are that they are true pattern-based composing tools with the ability to easily create *songs* just by dragging & dropping *patterns* -- using *patterns* as building blocks.

The *Song Wizard* is the environment that consists of primarily a *song-sequence list* and related tools providing you with a visual means of creating and altering song-sequences. You can also view and edit the individual objects and parameters of a *song-sequence*.

The name of the *song* is shown on the window title bar; clicking on the title bar allows you to edit the song's name. The patterns in their respective categories are also visible on the left-side of the *Song Wizard* screen so that you can select from among your library of patterns for insertion into a particular song-sequence. Only one *song-sequence* may be open at a time and there must always be one and only one *song-sequence* open which is why you are forced to load a *song-sequence* when first entering into the *Song Wizard* mode; because of this restriction you will not be allowed to delete a *song* if it is the open *song*.

**Unlike patterns, song-sequences cannot be edited or altered in any way while the song-sequence is actively playing!**

Once a pattern has been inserted into a song, a copy of the original pattern is made and stored in the song's own envelope. This means that you can and will have duplications of patterns – one (or more) in the categories and a copy in each song. The original pattern resides in some category folder and its copy (which is stored in a song's envelope) are independent and changes to one pattern is not reflected in the other.

When you first add a pattern into a song-sequence, it becomes the song's copy of the pattern and all subsequent additions of that same pattern into the song-sequence create references to that song's copy of the pattern (even though you are physically adding instances of the pattern by dragging from a category). **Therefore, all instances of the same pattern within a song-sequence will be identical.** If you edit an instance of a pattern within a song-sequence, the changes are reflected in all instances of the pattern in the song-sequence because all instances of a pattern reference only one copy of a pattern in a song's envelope. Therefore, if you want to have slight variations in a pattern in a song-sequence, you will have to use the *Pattern Wizard* to clone a copy of the pattern with a different name, make your desired changes, then insert that new pattern into the song-sequence.

## **6.A.i The Song-sequence List**

The song-sequence list should be quite straight-forward. You simply insert patterns into the list and they are played in the order that they appear in the list. You can augment the playing of patterns in the list using section markers which cause all patterns between the markers to be repeated up to 255 times. The other type of objects or markers that can be inserted into a song-sequence list are the tempo-change object and the endless-loop object.

To heighten the visual intuitiveness of the song-sequence, you will also notice that each particular object in the song-sequence list has a unique icon associated with it that appears on the left edge of the list. When an object in the list is selected, the icon changes to an arrow-pointer. You will also notice that each object has information relevant to that object displayed in the columns to the right of the object's name. Lastly you will notice that when you create sections as well as nest sections that objects that make up a section are indented.

As you add patterns to a song-sequence list, each pattern can have a different number of bars. Also if you use repeating sections to structure a song-sequence it may be difficult to know the exact length of a song-sequence. Therefore a status pane at the bottom right corner of the *Song Wizard* screen shows the total number of bars that are created by the entire song-sequence.

When a song-sequence is playing you will see that the song-sequence list is animated with an arrow-pointer showing which pattern is currently playing. Also you will see that the real-time counter will show the bar and beat that is currently being played (though the counter can only display bar numbers up to 999).

### **Viewing Categories & Patterns from within the Song Wizard**

The *Song Wizard* main screen is split into two components: the *category-pattern list* and the *song-sequence list*. The category-pattern list's default state is visible, though it may be hidden (or opened if it is hidden). You can expand or collapse the view of any category in the category-pattern list by alternatively double-clicking on the category name or by clicking on the "+" or "-" icons to the left of the category name, respectively. You use the category-pattern list to select patterns from your categories to be inserted into the song-sequence list by dragging. Also, if you are using the *Copy to selected Category* function described above, you will need to have the category-pattern list visible so that you select a destination category.

## **6.A.ii Synchronizing patterns in songs with categories**

The method of copying patterns into songs gives you the ability to modify a song's copy of a pattern without in any way affecting the original source pattern or other copies of the pattern in other songs. This is a great aspect of flexibility, however it also presents an issue of pattern management as you will can (and likely will) have differing copies of the same pattern. To assist you in the management of patterns two functions are available in the popup menu when you right-click on a pattern in a *song-sequence list*:

☞ **Copy to selected Category**

Copies a pattern from a song-sequence into any of your categories, replacing the original source pattern.

☞ **Update from Source Category**

Replaces a song's copy of a pattern with (presumably) an updated version of a pattern. Because a song really only has one copy of a pattern in its envelope, when you update a pattern within a song-sequence, you are actually updating all instances of that pattern that occur within a particular song-sequence. This function will not work if:

- the original pattern has been moved, removed, or renamed
- the source category has been removed from your hard-disk
- the source category is not on the disk because the song has been imported from an (SNX) *song exchange* file and the category listed as the source category does not exist in your library (you can of course create such a category)

## 6.B The Song Manager Utility

The software provides you with the ability to work with songs using long names. To accomplish this we have developed our own file management utility specifically for working with patterns, songs, and categories. Because of this you will not be able to see your songs if you look into the "Song" folder of your Wizard's disk directory folder. Also, you should **not** attempt to copy, move, or delete song files directly from your disk using the Windows File Manager or Windows-95 Explorer, because doing so may result in permanent loss of your work as well as cause the program to not operate properly.

The *Song Manager* is the utility that you use for all file-type operations with songs. The *DOS/Windows file exchange* feature is for exchanging **The\*Wizard** song files in a proprietary format since you cannot directly access song files; the exchange does **not** create Standard MIDI Files which is a separate feature. You use the *Song Manager* to:

- select songs to be opened for playing and/or editing
- create new songs
- remove songs
- import songs from DOS/Windows exchange files
- export songs to DOS/Windows exchange files

### 6.B.i Opening Songz

When you open the Song Manager utility you will see all of the songs in your library, listed alphabetically. Opening a song is quite simple .... while viewing the list select the song that you want to open either double-click on a song's name or single-click (to highlight the song name) and click the "Open" button.

## 6.B.ii Saving Songz

Songs are automatically saved for you! Any time you open a different song, switch to the Pattern Wizard mode, or exit the program – the song that you have open and were working on is automatically saved. Since songs are stored into a single song library and the storing is done automatically and you do not need to select filenames and pathnames, there are no *save* or *save-as* options in the **File** menu.

For safety, if you have been working for a while on a song, its a good idea to force a save of your work to disk; in addition to accessing the *forced save* function from the main **Song** menu, you can also do a *forced save* by pressing the Control and "S" keys together on your computer's keyboard or by clicking on the disk icon on the toolbar on the left edge of the screen.

## 6.C Playing Songz

Anytime the Song Wizard is active, there will always be an open song (we guarantee it) even though the song-sequence list may be empty. You can start the song playing by clicking on the play arrow button on the *play control-bar* or by pressing the spacebar on your computer's keyboard; the spacebar actually toggles between play and stop. You can stop the song from playing by clicking on the stop button on the *play control-bar* or by pressing the spacebar on your computer's keyboard.

When a song is playing certain buttons and menu options will be disabled to prevent certain things from being done that will really confuse **The\*Wizard**. A pointer will scroll through the song-sequence list in real-time showing the pattern that is currently player and also the real-time counter will show the bar and beat.

By clicking on an object in the song-sequence list before starting the song to play, you can set the starting point of the song. In addition to using the mouse pointer to select a specific song object to set the starting point to play, if the focus is on one of the objects in the song-sequence list, you can use the *home*, *end*, *PageUp*, *PageDown*, and *cursor arrow keys* to move the selected object and hence the song's starting point. If you set the starting point to an object that resides within a loop, then the song will begin to play as if it had just entered the loop executing all of the repeats.

You cannot edit or alter any properties of a song-sequence or any of its objects while it is actively playing! You cannot alter the course of a song-sequence while it is playing by clicking on an object in the song-sequence list.

## 6.D Creating Song-sequences

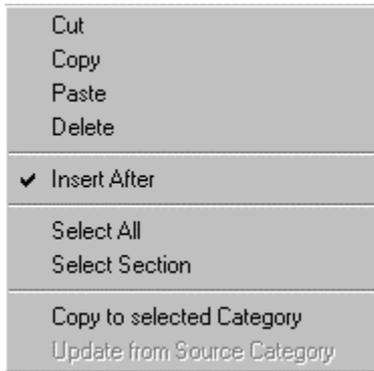
When inspiration strikes and you want to create a new song-sequence from scratch, you will want to create a new and empty song-sequence list. Of course if you are wanting to create a new and original song-sequence, you will first need compose some patterns to use in your song-sequence.

New empty song-sequences are created using the Create A New Song section of the Song Manager utility which is opened from the main **Song** menu or by clicking on the

upper leftmost icon on the Song Wizard's toolbar. You can also go directly to the *Create A New Song* function by selecting the corresponding option from the main Song menu or by using the ALT-Q quick-key.

Once you have accessed the *Create A New Song* function, you need only select the enter a name for the song then click the "Do It" button and a new empty song-sequence list will be added to your library of songs shown in the Song Manager dialog. You can then add patterns and other song-sequence enhancement objects to the song-sequence list.

## 6.E Editing Song-sequences



Since the creation of songs involves selecting musical patterns from your categories and arranging them in a specific order to play .... song editing essentially consists of building song-sequence lists by inserting patterns from your category-pattern library. In addition to patterns, you will see that there are a few objects that you can insert into the song-sequence list that enhance the song-sequence list as it plays in real-time.

You cannot select objects in the song-sequence list, edit or alter any properties of a song-sequence, or edit any of its objects while it is actively playing!

The basic song editing operations consist primarily of dragging patterns and other objects into the song-sequence list using the mouse. The advanced song editing operations and utility functions (primarily consisting of cut, copy, and paste operations) are accessed from a **song editing popup menu** (shown at left) that is opened by clicking with the right mouse button either inside of the song-sequence list area or directly over an object or over a group of selected objects within the song-sequence list. Each of the advanced song editing features are explained in the sections below. Various options in the popup menu will be enabled or disabled depending upon whether you click over an object, or a group of selected objects, or no objects at all.

Any object in the song-sequence list can be opened for editing by double-clicking directly on that object in the song-sequence list ....

- ☞ double-clicking on a pattern will open the song's copy of that pattern for editing in the Pattern Wizard; you will note that the title-bar of the Pattern Wizard screen indicates that the pattern belongs to the song
- ☞ double-clicking on an end-of-section marker object will allow you to alter the repeat count of the section
- ☞ double-clicking on a tempo change marker object will allow you to alter the tempo value that will be used by the song when it encounters that object in the song-sequence

## Selecting objects in a Song-sequence

When you click on an object in the song-sequence list, an arrow icon will show on the left edge of the list. You may select multiple objects in a song-sequence list using conventional Windows methods as are described below. Selected objects may be *cut*, *copied*, or *deleted*. For synchronizing your patterns within categories, you can also copy one or more selected pattern objects to a category.

### ☞ **To select a group of consecutive objects:**

- Click with the mouse on the first object that you want to select. While holding the Shift key, click on another object and you will see that all of the objects between the two objects you clicked over with the mouse become selected.
- Click with the mouse on the first object that you want to select. While holding the Shift key, use any of the following keys on your computer's keyboard to select objects before or after the initially selected object: up, down, left or right arrows, PageUp/PageDown, Home or End.

☞ **To select a group of non-consecutive objects:** click with the mouse on the first object that you want to select. While holding the Control key, click on any other objects that you also want to select and each of the objects that you clicked over with the mouse will become selected.

☞ You can **select all objects** in a song-sequence by clicking within the list with the right mouse button and from the popup menu choose the *Select All* option.

☞ You can **select all objects in a section** of a song-sequence by clicking over a *begin section marker* within the list using the right mouse button and from the popup menu choosing the *Select Section* option. This option is only enabled if you have indeed first selected a *beginning section marker*.

## Cut, Copy Paste & Delete Editing

The *cut*, *copy*, *paste* and *delete* functions are accessed by right-clicking with the mouse over a single object, a group of selected objects, or within the song-sequence list (for non object specific functions).

**Delete** causes the selected object or group of objects to be removed from the song-sequence list. Click with the right mouse button over an object or a group of selected objects then choose *Delete* from the popup menu (you can also use the Delete key on your computer's keyboard to delete selected objects from a song-sequence list).

**Cut** causes the selected object or group of objects to be removed from the song-sequence list and placed into the clipboard buffer; the objects will remain in the buffer until something else is copied into the buffer. Click with the right mouse button over an object or a group of selected objects then choose *Cut* from the popup menu. You can paste these objects into another area of the same song-sequence list.

**Copy** causes the selected object or group of objects to be copied into the clipboard buffer; the objects will remain in the buffer until something else is copied into the

buffer. Click with the right mouse button over a group of selected objects then choose *Copy* from the popup menu.

**Paste** causes objects in the clipboard buffer to be inserted into the song-sequence list starting at the exact position of the mouse pointer. Position the mouse pointer and click with the right mouse button over an object in the list that you want to insert the objects before or after and then choose *Paste* from the popup menu. The positioning of whether the pasting of the objects is before or after the object pointed to with the mouse in the list depends on whether the insertion mode is set to before or after; the popup menu shows a checkmark next to the insertion mode indicator showing if *after* is the selected mode otherwise insertion is set to *before* (after is the default setting).

## **6.E.i Song Tempo, Sections, Repeats & Looping**

The lower section of the toolbar on the left edge of the screen has a set of four real-time song-sequence enhancement tools that affect how song-sequences play in real-time. The song tools are inserted into the song-sequence by dragging them into the song-sequence list. Once in a song-sequence list the tempo or section repeat count can be altered by double-clicking on the tempo object or end-of-section marker, respectively.

**Tempo.** Songs have their own tempo settings and ignore the tempo settings in the individual patterns; all other settings in a pattern are indeed used though! A tempo control on the toolbar sets the starting tempo of a song and that tempo settings is saved along with the song so you do not need to start a song with a tempo marker. Another neat aspect of the tempo slider tool is that you can use it in real-time to override and alter the tempo of a song; if you do this the tempo will that you set with the slider while a song is playing will remain in effect until a tempo change object is encountered within the song-sequence. You can insert as many as 5,000 tempo objects in a song-sequence wherever you want. When you insert a tempo change object into the list you will be prompted to enter the tempo that you want to song to play from that point forward.

**Sections & Repeats.** It is quite common for a song to have one or more patterns that will be repeated to make a section. **The\*Wizard** recognizes this need and provides two tools for defining sections and setting a repeat counter for each section: a section start marker (|:|) and an end-of-section marker (:||). It should be fairly clear that section markers must be evenly matched within a song-sequence! When you insert an end-of-section object into the list you will be prompted to enter the number of times that you want all of the patterns in the section to be repeated. You will notice that objects within a pair of section markers are indented to make the list more visually intuitive. You can nest sections up to 10 levels deep.

The **endless loop** is handy if you want to listen to a song-sequence repeatedly .... for example if you are using **The\*Wizard** for accompaniment while you are practicing a riff or something on another instrument and you want a pattern or song-sequence to continuously play without any intervention. Whenever and wherever the endless loop object is encountered within a song-sequence, it will cause a jump to the start of the song-sequence and continue playing until manually stopped. You can have only one endless loop object in a song-sequence, though you may insert it anywhere in the list that you like (not necessarily at the tail of the list).

## 6.F Exchanging Songz

Music is quite often a collaborative effort, and it is also quite common to create and compose music from styles or style templates. In recognition of this, the **The\*Wizard** software products offer features for exchanging songs. Song's can also be exchanged by exporting to Standard MIDI Files which is covered in the next section.

### Song Exchange Files

These functions import native **The\*Wizard** songs into your library of songs or export native **The\*Wizard** songs to a *song exchange file*. Similarly you can export and import native **The\*Wizard** patterns to or from a file. These utilities are provided since **The\*Wizard's** unique file system does not save patterns and songs with names that are readily recognizable by looking directly at the files in the category or song sub-directories on your disk. *Song exchange files* will be stored to disk with a file extension of "SNX" and hold a single song-sequence.

**It is worth noting that once you have imported a song-sequence from a song exchange file, you can copy patterns from the song-sequence into any category!** When importing a song, it is likely that your library will not have a similar pattern-category to match what composer used and so the source category shown for some or all of the patterns will not match any of the categories in your library. This is just a peculiarity of importing songs composed from an installation of **The\*Wizard** software that is different from yours, and it will not cause any problems. You can of course copy the patterns of the song to a category, then rebuild the song.

### 6.F.i Exporting & Importing Songs

To use the song-sequence exporting & importing functions described below, you must access the Song Manager utility dialog, by using the ALT-S quick-key, or by selecting the "Open/Remove a Song" option from the main Song menu or by clicking on the upper leftmost icon on the Song Wizard's toolbar.

Song exchange files will be stored to disk with a file extension of "SNX". The driver selected for all of the player(s) of all patterns in the imported song will be set to the default MIDI device driver selected in the MIDI settings utility.

#### Exporting songs to a song exchange file:

- ☞ click on a song name within the song list to highlight it
- ☞ click the "**Export**" button and using the Windows file selector enter a name for the file as well as a path .... that's it

#### Importing from a song exchange file:

- ☞ click the "Import" button and enter a name for the file as well as a path
- ☞ using the Windows file selector, choose the song exchange file that you want to import .... that's it

## 7 WORKING WITH STANDARD MIDI FILES

It is very important to note the following: **drum & music patterns created with this software as opposed to linear MIDI tracks created with sequencing software are two entirely different things, and Standard MIDI Files are not a universal standard file format for all types of MIDI software applications.** Even though they are named "Standard MIDI Files", they are far from standard .... this topic is further discussed in the Appendix.

As you may guess, **The\*Wizard** software does not use a file format that is in any way similar to a *Standard MIDI File* ("SMF") nor is it similar to the proprietary format used by typical MIDI sequencing software products. **The\*Wizard** software provides features for importing and exporting MIDI music data to and from *Standard MIDI Files* because it is a very important capability to be able to exchange MIDI music data between **The\*Wizard** software and other MIDI music software (such as MIDI sequencers) and also devices such as MIDI keyboard workstations that can use *Standard MIDI Files*.

Both patterns and song-sequences can be exported directly from **The\*Wizard** software to *Standard MIDI Files*. However, ***Standard MIDI Files can only be imported into patterns and not into song-sequences.*** Actually only portions of up to 16 bars of an SMF can be imported at a time into a newly created pattern because patterns can only be up to 16 bars in length. To import an entire SMF larger than 16 bars must be done in chunks of 16 bars or less; specific details are provided below concerning importing from *Standard MIDI Files* into patterns.

Unlike the unique manner in which patterns and songs are stored by **The\*Wizard** software, when you export to a SMF they are normal Windows/DOS files. You may also copy, delete, move, or rename these files as you would any other file in your PC.

### Standard MIDI File format types

When you export patterns, you have the option to export a pattern to either a *type-0 format SMF* or a *type-1 format SMF*.

Due to incompatibilities between **The\*Wizard's** flexible capabilities and the structure of a *type-1 format SMF*, song-sequences can only be exported as a *type-0 format SMF*.

**A *type-0 format SMF*** by definition has all of its data represented as a single track. As a result there is no accommodation for storing track-name information. MIDI events inherently include channel information, so the absence of track information does not mean that only one MIDI channel can be accommodated using this format. MIDI channel information is inherently preserved and so it is possible and quite common with this format to have data using multiple concurrent MIDI channels stored in a *type-0 format SMF*.

**A *type-1 format SMF*** by definition contains track sections within its file structure and therefore accommodates MIDI data separated by tracks. Tracks are typically synonymous with MIDI channel information (though not necessarily so) and so with this format there is the ability to have data using multiple concurrent MIDI channels separated into different tracks.

- ◆ When importing MIDI event data from a *type-0 format SMF* you can only select to map the events from a particular MIDI channel to a particular player (since there is only one track).
- ◆ When importing MIDI event data from a *type-1 format SMF* you have the option to select to map the events from a particular track or from a particular MIDI channel to a particular player. If you choose to import by channel, you can also import the same MIDI events from a particular channel to more than one player ... which may be useful if, for example, you want the same notes to be played simultaneously by two different instrument patches (e.g., piano and guitar -- provided that you set each of the player's to use different patches).

Regardless of whether data is stored in a *type-0 format SMF* or a *type-1 format SMF* it is possible to mix data for multiple channels into the same track. For example, if in a particular *type-0 format SMF* there is only 1 track, but that track could hold events on all 16 channels. The same is true if a *type-1 format SMF* has just 3 tracks – it could hold events on all 16 channels. **The\*Wizard** software cannot know in advance if the user is so dumb to mix channels on a track. It is not forbidden.

Because **The\*Drumz Wizard PLUS** provides only a single player (the "Drummer") it can only import or export to a single track of a *Standard MIDI File*. Exporting of a pattern to either a *type-0 format SMF* or a *type-1 format SMF* is essentially the same because there can only be one track's worth of data exported from the "Drummer"; the main difference is that the player's name (in this case "Drummer") will appear as the track name in a *type-1 format SMF*.

**The\*Muzical Wizard** provides up to 16 players and therefore can import or export to up to 16 tracks of a *Standard MIDI File*. Exporting of a pattern to a *type-1 format SMF* will have each of the player's names appear as the track names in a *type-1 format SMF*, whereas with a *type-0 format SMF* there will be no track names. Some sequencers will automatically separate MIDI data into tracks according to the MIDI channels used within the SMF when loading a *type-0 format SMF*.

## 7.A Exporting Patterns

Patterns exported to a *Standard MIDI File* have the following attributes:

- the tempo of the pattern will be included
- the number of beats-per-bar (e.g., the "meter") is transferred
- the loudness (e.g., "MIDI Velocity") of each event will be intact
- the timing and duration of each event will be intact
- the number of measures of the SMF will be the same as the pattern
- the MIDI settings for the players, particularly the patch numbers and MIDI channels, will be exported

Because the information listed above is indeed saved into a SMF, when you load a SMF into a sequencer or the Windows Media Player or any other MIDI software, the SMF will play exactly as the pattern that spawned it plays in **The\*Wizard** software! This is regardless of whether the SMF created is a *type-0 format SMF* or a *type-1 format SMF*.

If, for example, you create a pattern with a band containing: a "Drummer" set to use channel #10 and no patch setting, a "Guitarist" set to use channel #1 and patch #28, and a "Bassist" set to use channel #2 and patch #35 -- then the resulting SMF will have data associated with 3 different MIDI channels and also will contain the patch settings for each MIDI channel. The patch changes stored into the SMF will be sent as MIDI program change commands before the MIDI event data so that the patches used when the SMF is played are those same patches used by each of **The\*Wizard's** band players.

Exporting a pattern to a *Standard MIDI File* is quite simple and mostly automatic as you only need to select the resulting file format type, its name and where it will be saved .... just follow these steps:

1. create or open a pattern
2. access the pattern SMF export function  
(using ALT-E, the "Export to SMF" option under main Pattern menu, or the quick-access icon on the left-side toolbar)
3. choose the format type from the popup dialog (type-1 is the default)
4. enter the filename and select a directory path where you want the resulting file to be stored; note that common convention is that a SMF should have a filename extension of ".MID"

## **7.B Exporting Song-sequences**

Due to incompatibilities between **The\*Wizard's** flexible capabilities and the structure of a *type-1 format SMF*, song-sequences can only be exported as a *type-0 format SMF*.

As with exporting patterns to *Standard MIDI Files*, **The\*Drumz Wizard PLUS** provides only a single player (the "Drummer") therefore any song that it exports contains only a single track. Similarly, **The\*Muzical Wizard** provides up to 16 players and therefore can export to up to 16 tracks into a *Standard MIDI File*.

Song-sequences exported to a *Standard MIDI File* have the following attributes:

- the starting tempo and all of the tempo variations of the song-sequence will be included
- all of the bars of the songs are saved as an entire linear structure, which includes bars that result from repeating sections (for example if you have 3 single-bar patterns set to repeat 4 times, then the resulting SMF will contain a total of 12 bars)
- the endless-loop is ignore when exporting a song-sequence
- all of the information stored for individual patterns is saved, as is described above

- the MIDI settings for the players of each of the patterns within the song-sequence, particularly the patch numbers and MIDI channels, will be exported as a part of each pattern segment of the song-sequence

Because the information listed above is indeed saved into a SMF, when you load a SMF into a sequencer or the Windows Media Player or any other MIDI software, the SMF will play exactly as the song-sequence that spawned it plays in **The\*Wizard** software!

Exporting a song-sequence to a *Standard MIDI File* is quite simple and mostly automatic as you only need to select the resulting filename and where it will be saved .... just follow these steps:

1. create or open a song-sequence
2. access the song-sequence SMF export function ("Export to SMF" option under main Song menu, or the quick-access icon on the left-side toolbar)
3. enter the filename and select a directory path where you want the resulting file to be stored; note that common convention is that a SMF should have a filename extension of ".MID"

## 7.C Importing into Patterns

**The process of importing from an SMF is somewhat involved and complicated; we therefore suggest you carefully read through this section of the documentation and carefully follow the detailed instructions at the end of this section on Standard MIDI File importing.** Exporting of patterns and/or song-sequences is a relatively straight forward transformation. However, the same is not true for importing from a SMF into a pattern. Songs or other music as stored in a SMF is typically a linear structure typically using multiple MIDI channels (often separated by tracks), whereas patterns are more well defined and quantifiable objects.

A song-sequence has no MIDI event data of its own, but rather plays the MIDI event data of component patterns that make up a song-sequence. Therefore it is not possible to import SMF data into a song-sequence .... in other words: "**Standard MIDI File data can only be imported into patterns**".

The importing process creates a new pattern. It is not possible to use the SMF import utility to merge data from a SMF into an already existing pattern. If this is your intent, you can use the copy and paste features to paste MIDI events from another pattern into a pattern created by the SMF import process (and visa-versa).

**The\*Drumz Wizard PLUS** software has only a single player (the "Drummer") and so importing from a *Standard MIDI File* can only be from a single channel or track. In other words, you can only choose to map the MIDI event data from a single channel or a single track of a source SMF to the "Drummer". All discussion in this section regarding multiple MIDI channels, multiple MIDI tracks, and multiple players is intended to apply to **The\*Muzical Wizard** product.

**The\*Wizard** software is not a general purpose sequencer and can only import basic MIDI event data. Before we proceed with detailed instructions about how to use the

SMF importing features, we would like to warn you about some common problems encountered when working with *Standard MIDI Files*. Often tracks will be present in a SMF that either have no data at all or will have non-musical data (e.g., other than MIDI events) such as listed below.

- tempo, meter, and time signature information
- continuous controller data (e.g., pitch bend)
- song title, copyright, and description information (actually this is usually written into the title field and no MIDI event data occupies the accompanying track)

The types of situations describe above is important!. For example, if you are attempting to import a SMF that has 8 tracks however only 5 of those tracks actually have MIDI event data stored in them, **The\*Wizard** software will react to this situation as follows:

- ◆ If the source SMF is a *type-0 format* and you choose to import by mapping channels of the source SMF to players (this is the only option for a *type-0 SMF*):

**The\*Wizard** software will allow you to map data from any channel to any player. However, if you map a channel to a player and there is no valid MIDI event data associated with that channel, then the player's pattern will also be empty. There is no harm in doing this, you will just end-up with a pattern that has some empty players (e.g., no events). When viewing the player-tabs you will notice that empty player-patterns have the player's name shown in black on the tab and non-empty player's names are shown in red on the tab. You can also right-click on a player's tab to see exactly how many events are in the player's pattern.

- ◆ If the source SMF is a *type-1 format* and you choose to import by mapping tracks of the source SMF to players:

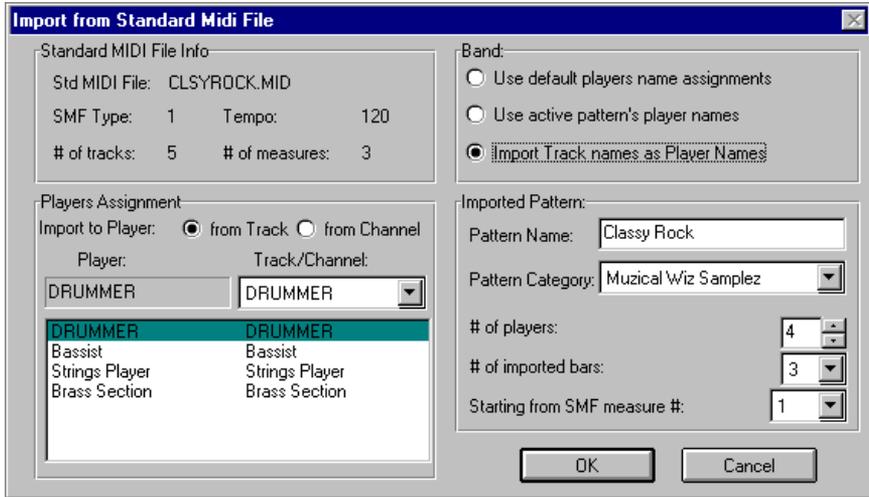
**The\*Wizard** software will only allow you to map data to 5 players in the *Players Assignment* section of the SMF import utility dialog even though the information presented about the SMF will indeed indicate that there are 8 tracks in the source SMF. In other words, you can only map MIDI data from the tracks of a *type-1 SMF* if the track indeed has MIDI event data stored in it. Players in the assignment pane will be restricted to the number of tracks that contain valid MIDI event data.

### The Standard MIDI File Import Utility Dialog

It is worthwhile to first study the utility dialog that is used to import sections of up to 16 bars from a source *Standard MIDI File* into a pattern. The Standard MIDI File import utility dialog is accessed under the main **P**attern menu or by using the quick-access icon on the left-side toolbar, or by using the ALT-I quick-key combination.

Looking at the SMF Import Utility dialog image shown, you will see that the dialog is divided into 4 functional sections which are described throughout the remainder of this section below. When you first choose to import MIDI event data from a *Standard MIDI File* you will be presented with a Windows file selector dialog to select and open the

file for importing. If the file is a valid SMF, then the Standard MIDI File import utility dialog will appear allowing you to configure and customize the importing process.



### **Standard MIDI File Information section:**

As you can see, the following information is shown which will be helpful as you setup to import all or a portion of the SMF into a pattern:

- the filename of the SMF chosen to be imported
- the format type of the SMF:
  - type-0 format, all data is channelized, but combined to a single track
  - type-1 format, all data is separated by track
- the starting tempo of the music
- the number of tracks (only applicable for a type-1 format SMF)
- the length of the SMF in measures (or bars)

### **Band & Player-name Settings section:**

This section has three options that determine what will be used as the player names that results from importing an SMF and creating a new pattern which in turn also creates a new band.

Note that **The\*Drumz Wizard PLUS** has a single player: the "Drummer", which means that you can only import a single channel or track and assign it to the "Drummer" (which cannot be renamed).

If the SMF being imported is a type-0 format, then by definition there is no track information and so you cannot import track names as they do not exist, and therefore you can only choose to use the player names in either the default band, or the band in the pattern that is currently open.

- The top two options let you select player names that correspond to the default band, or the band in the pattern that is currently open. The

default band is hard-coded into the software that automatically selects player names and settings when you add players to a pattern.

- The third option is only active if the SMF being imported is a type-1 format. Selecting this option will extract the actual track names from the source SMF and assign those names to the individual players. When you select this option you will see the player names in the lower left of the Player Assignments pane take-on the track names; deselecting this option restores the player names to either the default or current band.

### **Player Assignment Mapping section:**

There are actually 3 sets of controls in this pane, that determine what MIDI data gets imported into which player of an overall pattern. Note that **The\*Drumz Wizard PLUS** has a single player: the "Drummer", which means that it can only import a single channel or track (presumably the drum & percussion track/channel which is often channel #10). **The\*Muzical Wizard** can import up to 16 channels/tracks and map each channel/track to a player; you can also map the same channel to more than one player.

- In the upper area of the Player Assignment pane is a two-way toggle option that determines whether you want to import by track or by channel. If the SMF is a type-0 format, then importing by channel is the only valid option (and so the track option is disabled).
- The middle of this section consists of two display boxes. The information shown in these boxes corresponds to the highlighted row of the actual assignments display pane at the bottom of the section:
  - the box on the left shows the selected player corresponding to the highlighted row in the assignment list; when you select one of the player assignments in the lower list the player's name appears in this box
  - the drop-down item selection box on the right lets you select which channel/track to import into that player; when you select a player that has an active assignment this box will show the track or channel assigned to that player, and can you use the selection control to alter that assignment
- The lower area of this section is a pane displaying a two column list of the active player-to-track or player-to-channel assignments. The left column shows player's name and the right column shows the channel/track assigned to import into that player.

### **Pattern Settings section:**

There are several fields and controls that let you select the name of the new pattern that will be created as a result of the SMF import process. You must also select into which category you want the new pattern to be stored, and the number of measures imported. The category will default to the category of the pattern that was last opened.

You can add or remove players by changing the number of players.

It is possible and likely that the length of a SMF (in measures) can exceed the maximum number of pattern measures (which is 16). Therefore if you want to import a SMF that has more than 16 measures you will have to import it in chunks of up to 16 measures at a time. It is also possible that you may only want to import a few measures from a SMF (a short 4-bar riff, for example). Two controls are supplied to let you select the starting measure of the SMF to start importing from, and the number of measures to import from that point.

## **7.C.i Detailed instructions for importing from an SMF**

Importing from a *Standard MIDI File* into a pattern for **The\*Drumz Wizard PLUS** is fairly simple and straight forward as it only has a single player, and so you will only need to select which track or which channel of data you want to import. You will only need to know which track or channel of the source SMF contains the drum & percussion MIDI event data .... in most cases the drum & percussion MIDI event data is assigned to channel #10 (and less commonly to channel #16) and the track name will provide a clue.

The remaining discussion mostly applies to importing with **The\*Muzical Wizard ....**

Importing from a *Standard MIDI File* into a pattern for **The\*Muzical Wizard** is somewhat more complicated because you will need to map MIDI event data to various players. But how do you know which tracks or channels to map to which players as well as how many players? In order to successfully import MIDI event data from a SMF it is first necessary to study the composition of a particular SMF. If you have and use a sequencing program we recommend that you do the following (we call this the "import preparation analysis" you will need some paper and a pencil):

1. open the SMF into the sequencer
2. write down the number of tracks or the number of different channels used
3. write down the MIDI patch number associated with each track or channel

Now you are ready to import the MIDI event data from a SMF and map the various tracks or channels to one or more players. There are several ways you can proceed:

- You could first create a band to match the number of tracks/channels with the appropriate instrument and patch settings.
- You could use the band configuration of the current open pattern.
- You could use the band configuration of the "default band". There is a pattern called: "Default Band" supplied for you in the category: "Muzical Wiz Samplez" that has 16 players assigned to it but no MIDI events. We suggest that you do not modify this special pattern; if you do want to modify it we recommend that you clone it and modify its clone to your liking. If you do inadvertently modify it, it is easy enough to correct using the revert-to-last-saved feature or it is also fairly easy to recreate.

We prefer to use the third option and will explain the remaining steps in that context:

1. open the "Default Band" pattern (from the category: "Muzical Wiz Samplez")

2. use ALT-I (or one of the other methods) to initiate a SMF import and then using the Windows file selection dialog, choose the SMF that you want to import from you will then see the SMF import utility dialog open
3. take a moment to study the information of the SMF in the upper left pane, as well as the default player mappings in the list at the bottom left
4. if the source SMF is a *type-1 format* decide whether you want to select and map the MIDI event data by source tracks or by source channels
5. decide how you want the band player names to be automatically setup (you can change the player names later if you want); if the source SMF is a *type-1 format* you have the option to import the track names for use as the player names
6. look at your notes from the "import preparation" and determine if you want to do any changes from the default mapping of MIDI event data to players .... to change the track or channel data that gets mapped to a player you will need to click on the assignment in the lower-left list and then just above the list use the drop-down selection box to select a different track/channel to map to that player make sure to mark on your notes which channels/tracks you mapped which players
7. enter a name for your pattern into the pattern name field ("Untitled" is automatically inserted)
8. Select a category into which to store the new pattern (the category that corresponds with the last opened pattern is automatically inserted)
9. select the number of bars that you want to import, up to the maximum of 16
10. select from what measure in the SMF you want the importing to start
11. if you are importing by channels, alter the number of players to match number of MIDI channels that have valid event data (if you do not know, then continue)
12. click "OK" and a new pattern will be created with the imported MIDI event data
13. lastly, you will need to set the players to use the instrument & patch settings that were in the original source SMF .... use ALT-B to open the Band Manager utility dialog to configure the appropriate MIDI parameter settings
14. select a particular player's tab, using your notes from the *preparation activity*, make the appropriate MIDI channel, instrument, and patch settings; you may also edit the player's name if you like .... repeat this step as necessary

#### Notes concerning importing from Standard MIDI Files:

- More tips for performing step #14 .... Consider, for example, that in your notes you indicated the following:
  - channel #1 (and/or its corresponding track in the case of a type-1 format SMF) used General MIDI patch #5 ("Electric Piano")*
  - channel #2 (and/or its corresponding track in the case of a type-1 format SMF) used General MIDI patch #34 ("Finger Bass")*
  - channel #3 (and/or its corresponding track in the case of a type-1 format SMF) used General MIDI patch #49 ("String Ensemble")*

*channel #10 (and/or its corresponding track in the case of a type-1 format SMF) is drums & percussion*

Then you would want to ....

*map channel #1 (or its corresponding track in the case of a type-1 format SMF) to a player and call it "Pianist" (or something similar)*

*map channel #2 (or its corresponding track in the case of a type-1 format SMF) to a player and call it "Bassist" (or something similar)*

*map channel #3 (or its corresponding track in the case of a type-1 format SMF) to a player and call it "Stringz" (or something similar)*

*map channel #10 (or its corresponding track in the case of a type-1 format SMF) to the "Drummer"*

Lastly, use the Band Manager utility to set all of the players to the "General MIDI" *instrument* and make *patch* settings for each player (e.g., select the "General MIDI Drums" *instrument* for the Drummer and the "Electric Piano" *patch* for the Pianist, and so forth)

- You may find it helpful to start the pattern playing before performing step #14, so that while the pattern is playing you can hear the changes as you select instrument & patch settings.
- The initial number of players used by the dialog corresponds to the number of players in the currently open pattern .... which is why we recommend starting with a pattern of a full of a 16-player band.
- If the source SMF is a *type-0 format* then you will only be able to import by mapping MIDI event data associated with channels to one or more players and you may need to rename the players.
- If you import by mapping MIDI channels to players, then you can create a pattern with more players than are actually necessary (which may not be a bad thing depending upon your ultimate goals and intentions). The extra players will simply be empty and will not affect anything.
- If you create more players than are necessary you will see the player names on the pattern tabs appear in black (red means there are events in that player's pattern) .... if you like, you can remove empty player-patterns by right-clicking on the tab and selecting *Remove Player*.
- If you import by mapping MIDI tracks to players, then only the tracks that have valid MIDI event data can be mapped to players. This is why you would see a lesser number of player-to-track assignments than the number of players selected (in the # of players setting).
- The pattern that is created by mapping track data to players will have only the number of players that match-up to tracks with valid MIDI event data. Unlike the import-by-channel method, empty player-patterns will not be created.

---

## 8 APPENDIX

### 8.A Pattern Compozing

**The\*Wizard** software employs the pattern method of composing which is primarily suited to songs, jingles, background styles, and musical accompaniments (as opposed to music such as suites, symphonic compositions, etc.). Most songs, etc. in actuality consist of several patterns such as: *introduction & ending, choruses, main verses, and solo verses*. For many composers, creating the verses and other components as individual entities is more natural .... which is exactly the composing environment that **The\*Wizard** software provides in its *pattern wizard composing mode*. Once you have created a collection patterns, you then use the *song wizard composing mode* to sequence your patterns into a song. In other words, **The\*Wizard** software enables you to compose musical patterns in real-time, and then to sequence your patterns into songs.

**The\*Wizard** software treats each musical pattern independently offering you great flexibility in the creation of your patterns and hence your music. You are able to name each of your patterns so that you can easily refer to them by a meaningful name; and the names are not limited to DOS/Windows filename conventions. You can also attach a brief text description to your pattern category folders.

With **The\*Wizard** software you can edit and sculpt a musical pattern in real-time until it sounds exactly as you want. You can enter/add musical events, erase musical events, move musical events, transpose the pitch of one or more events, alter the loudness of one or more events, and much more .... all while listening to your patterns as they continuously loop and play. One of the most important and unique features of **The\*Wizard** software is that you can hear all of these changes or transformations live as you make them.

**The\*Wizard** software allows you to easily create song structures from your collection of patterns using a visual song-sequence list. To get an idea of how this works, load any song and watch the animated song chart display as **The\*Wizard** plays!

#### 8.A.i Pattern Compozing versus Linear Sequencing

There are basically two methods of composing with MIDI composing tools: using linear track-based sequencers and using pattern-based sequencers. As you are probably aware, sequencing programs are quite common and popular tools for composing music with MIDI. With linear track-based sequencers you generally compose music as a set of related tracks where different instruments are set to different tracks; there are also hybrid so-called "trackless" linear sequencers as well. In other words, the general idea with a linear sequencer is to compose your music from start-to-finish one instrument (or "track") at a time.

To help understand what pattern-based composing is all about .... think about most songs that you listen to independent of the musical style (e.g., country, rock, hip-hop,

easy listening, etc.). Generally these songs are composed of sections, such as: an intro, one or more main sections, a chorus, often a solo section, perhaps a break or two, and an ending. With **The\*Wizard** software you are able to compose and refine each *section* of a song independently as one or more *patterns*, then sequence your *patterns* into a *song*. The structure of a song viewed in such a light is then merely an ordering of its patterns. Therefore, unlike other types of MIDI music composing tools in which you create music as linear tracks, with **The\*Wizard** software you create patterns order those patterns into songs. Take a look at any of the songs supplied with **The\*Wizard** which should prove instructional. For example a typical song even though it may not have been composed in a pattern-based environment will likely take-on a structure such as this:

<i>Intro</i>
<i>main measures #1 - #4</i>
<i>chorus measures #1 &amp; #2</i>
<i>main measures #1 - #4</i>
<i>chorus measures #1 &amp; #2</i>
<i>solo measure #1 &amp; #2</i>
<i>break or bridge</i>
<i>main measures #1 - #4</i>
<i>chorus measure #1 &amp; #2</i>
<i>break</i>
<i>Ending</i>

## 8.A.ii Pattern Composing Components & Definitionz

**Event** -- the smallest musical entity is what we call an "event" (actually "MIDI event" would be more appropriate), where an event corresponds to a musical note. Technically speaking, a moment of silence is also an event. In MIDI there are also other types of events that can control the various features of an electronic musical instrument or device; these events are control events, however a discussion of such advanced MIDI topics is beyond the scope of this guide.

**Beat** -- is a collection of musical events fitting into a unit of time. When you tap your foot to music, you are generally *following the beat* of the music. You will notice that **The\*Wizard** software uses visual divider lines to segment the time of a beat to assist in the placement of events into the pattern-grid. It is also important to know that every beat consist of exactly 128 subdivisions called "ticks".

**Bars or Measures** are musical structures which are defined by a specific number of beats, often four beats. Generally speaking, a musical measure is the smallest independent portion of composed music.

**Bands & Players.** Just like in a real musical band, each player plays a musical instrument. In the context of **The\*Wizard** software we carry forward that metaphor where players in patterns correspond to instruments/instrument sounds. Players also contain other MIDI parameters that control the characteristics of the sound. Likewise, in the context of **The\*Muzical Wizard** software a band is a collection of players.

**Instruments,** just like in a real band instruments are used for different sounds to fill out the sound of the music. With MIDI systems, different instruments are generally

assigned to one of the possible 16 different MIDI channels using an instrument ID known as a "patch"; often a patch-name is associated with the MIDI patch-ID. In the context of **The\*Wizard** software each band player directly corresponds to an instrument. There is one special instrument -- a *drumkit*, which consists of several instruments or "voices" as they will be referred to (such as cymbals, various drums, and other percussion).

**Patterns** are the heart of **The\*Wizard** software! The *pattern* is the core of this software as it is what you actually compose your music into. See the details below.

**Songs** in the context of **The\*Wizard** software are a structured set of measures. See the details below.

## 8.B Standard MIDI Filez

Linear MIDI tracks created with typical sequencing programs and saved into *Standard MIDI Files* are entirely different from pattern and song objects created with this software, even though MIDI is a common thread among these programs. To a large degree the linear and pattern formats are incompatible. In fact, so-called *Standard MIDI Files* have no provisions for pattern structures and related data. Because the ability to work with and exchange music compositions via *Standard MIDI Files* is very valuable, **The\*Wizard** software has features and capabilities related to *Standard MIDI Files*. However it is important to recognize that the limitations of what **The\*Wizard** software can do with *Standard MIDI Files* is entirely a result of the limitations inherent in *Standard MIDI File* formats and that those formats are linear structures created many years ago when products such as **The\*Wizard** software were never even thought of.

As you are probably aware, the most common type of MIDI music composing tool is called a sequencer -- to be specific they are: *linear track-based sequencers*. We use this verbose term because sequencers are modeled after multi-track recording systems which are used to produce finished recordings and performances where each instrument is recorded from start to finish onto a particular track of a tape (or in the case of MIDI -- a channel). However, this is not necessarily the way the music was initially created, but rather more how the finished recording is produced. Don't misunderstand us, we think that sequencer programs are great and powerful music composing tools, however they are not the only *tool* that musicians should have in their *toolbox*. The fact that you are using this software should make it clear that there are advantages to composing using a pattern-based environment, especially if you are composing songs, jingles, musical styles and accompaniments.

The reason that this software does things that most *linear track-based sequencers* cannot do (or cannot do well) is because this software specifically lets you create musical objects that we call *patterns*. You can manage your *patterns* independently on your computer's disk as well as use them as measures or sections of songs. Is pattern-based composing better than linear track-based composing? There really is no absolute answer here .... depending upon how you compose and how you are inspired .... one type of tool may work better for you. Most people, however, will find that having both pattern-based to complement and inter-operate with their linear track-based composing tools is the best overall solution.

Lets digress for a moment ..... many years ago when the MIDI specifications were developed, they were primarily designed for interconnection of electronic music synthesizers and rudimentary hardware sequencers. Computers integrated with MIDI was an extreme exception as there were no PC sound cards at that time and very few people had computers. Mapping of drum voices onto MIDI notes is more of a common conventional usage of MIDI than an integral aspect of the MIDI specifications. As a result, the MIDI specifications were originally developed without too much thought given to computer music applications beyond basic sequencing. The notion of a *Standard MIDI File* was also born at that time when the only concept of MIDI applications were *linear track-based sequencers*, and so that file format is in reality a *linear track-based sequence* interchange format and not really a *standard MIDI file* for all types of MIDI software applications (there are some subtleties in these points, so we hope that we have not confused you). Anyhow, the fact of the matter is that **music patterns and linear MIDI tracks are two entirely different things and Standard MIDI Files are not a universal standard for all types of MIDI applications.**

There are two reasons for the preceding discussion. First because this software is primarily for composing drum-tracks and since superimposing drum voices onto MIDI is somewhat of an extension to the MIDI specifications this understanding should help you in your use of this product. Also because it is likely that you will want to import *Standard MIDI Files* .... the notion of importing a *Standard MIDI File* into a pattern is analogous to the difference between an escalator and an elevator; an escalator takes a continuous stream of people from one point to another whereas an elevator takes only a small group of people at a time -- however both accomplish essentially the same task of moving people from one point to another. The situation with pattern-based composing tools and linear composing tools is somewhat more complex in that both result in a song, however the notion of importing is to try and load variable-length linear stream of MIDI events associated with tracks into quantifiable patterns. While the two formats are not compatible, we have made great efforts to achieve inter-operability with *Standard MIDI Files*. Because a *song* in **The\*Wizard** software is an ordering of patterns, it is not possible to import an entire song from a *Standard MIDI File*; you must import portions of the song into individual patterns mapping tracks to players.

It is relatively straight-forward to export MIDI events in conformance with the *Standard MIDI File* formats. It is an entirely different matter to take the linear format of a *Standard MIDI File* and import it into a pattern-based format. So, when using the *Standard MIDI File* Import feature, be aware that the process is somewhat complex, and also be aware that we have achieved the best bridging of the linear & pattern formats possible (many other non-linear MIDI editing products do not even attempt to provide *Standard MIDI File* importing capabilities). In the case of **The\*Drumz Wizard PLUS**, you have the ability to import a single track of drum & percussion events (usually associated with MIDI channel #10) to the "Drummer"; in the case of **The\*Muzical Wizard**, you have the ability to import and map each of up to 16 tracks of the source *Standard MIDI File* to one of the pattern band's players.

Note that *Standard MIDI File* importing is not available in **The\*Drumz Wizard**, but is available in the: **The\*Drumz Wizard PLUS** and **The\*Muzical Wizard** products.

## 8.C Relevant MIDI Basics & Terminology

### 8.C.i Patches, Voices & Drumkits

Depending on the type of electronic instrument you may be using and the patch selected, a specific MIDI note may either trigger a different pitch of a sound or an entirely different sound (or voice) as in the case of a MIDI *drumkit*. The term commonly used to describe patches in which different MIDI note numbers trigger different sounds is a "keymap". So a *MIDI drumkit patch* is one in which different MIDI note numbers trigger different drum-voices. In a typical "patch" or more appropriately a "pitched-voice patch", each note plays the same voice but at a different pitch. Notes (or "pitches") are associated with different MIDI note numbers, therefore higher MIDI note numbers correspond to a higher pitch. The MIDI specifications accommodate a range of 128 possible notes, where each note is successively numbered from 0 to 127. Therefore in any MIDI system there may be up to 128 different pitches for a *pitched instrument patch* and up to 128 *drum/percussion voices for a drumkit patch*.

We will at times use the term "patch" interchangeably with the term "program" in the context of electronic music instruments and sound modules (these are common terms that you will come across as you use various MIDI products). A "patch" is derived from the early days of electronic music synthesizers that essentially connotes the parameters and settings that make up a particular sound, such as: a piano, a flute, or brass, etc. However a "patch" can also have unnatural and odd sounds for which there is no corresponding real-world name. The Band Manager/Drummer Settings utility lets you select the patch that you want to use for a particular band-player.

We will use the term "drum-voice" to refer to a particular drum or percussion sound, such as: a cymbal, bongo, snare-drum, etc. The Band Manager/Drummer Settings utility lets you select the drum-voice map that you want to use for the "Drummer". A "drumkit" is analogous to a real "drumkit" in that it actually consists of a collection of percussive instruments (e.g., a real drumkit generally consist of: bass-drum, snare-drum, tom-toms, and cymbals). However, a "MIDI drumkit" can have many more instruments. Specifically, a "MIDI drumkit" is a collection of "drum-voices" all assigned to the same "patch". It is common for an electronic instrument to offer several *drumkit patches* where each patch consists of a different collection of drum-voices (e.g., rock-n-roll type drumkit, Latin drumkit, assorted hand percussion, etc.). The Band Manager/Drummer Settings utility lets you select the drumkit patch and also the drum-voice map that you want to use for the "Drummer" – in fact **The\*Wizard** software has a unique feature that can auto select a drum-voice map when a drumkit patch is selected.

#### More on Drumkits

- The list of voices in each row of a Drummer's pattern-grid represents the individual voices of a *MIDI Drumkit*. In essence a *MIDI Drumkit* is a mapping of MIDI note numbers to drum-voice names.
- **The\*Wizard** software limits its patterns and therefore the *drumkits* to a maximum of 128 grid rows and therefore 128 voices.

- Each pattern's Drummer can use any *drumkit*, independent of all other patterns; you do not have to use the same *drumkit* for each pattern!
- You can select among the many *drumkits* supplied with software or you can also create your own *drumkits* by editing the *drumkit voices* database file (VOICES.WIZ). The *drumkit voices* database file is modeled after the Cakewalk format and therefore you may copy definitions from the Cakewalk product as is explained elsewhere in this document.

## 8.C.ii MIDI Channels

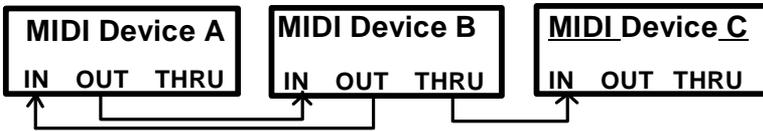
Typical MIDI devices accommodate 16 different channels (numbered 1 through 16). A MIDI channel may be thought of the same way as you would think of a TV or radio channel (i.e., whatever is transmitted on a specific channel is only heard by devices that are tuned in to that channel). Actually it best to think of MIDI channels as you would think of a multi-track recorder, because MIDI channels are often related to and referenced as "tracks" which is why we call them "linear track-based sequencing programs". **The\*Drumz Wizard PLUS** has only a single player which can be set to any MIDI channel. Common convention is to use MIDI channel #10 for drumkit patches. It is noteworthy that many drum-machines default to using MIDI channel #10. General MIDI compliant electronic musical instruments, use channel #10 to automatically access the drumkit patch (or drumkit patches if your device supports multiple drumkits).

When you compose music, you have to choose the instruments and voices you want to use. For example, a pop-rock song will likely have: bass, guitars and the basic drumkit voices (e.g., bass-drum, snare, cymbals, hihat, and tom toms). If you want to compose a pop-rock song, then you would want to use or create a *band* that contains a combination of those *instrument patches* and *drumkit voices*. The instrument patches that you may select and assign to *band-players* in this software are directly related to the capabilities provided within your electronic music equipment.

The point of all of this discussion is that **The\*Muzical Wizard** uses *band-players* to associate electronic musical instrument patches with MIDI channels. Therefore *band-players* are somewhat analogous to sequencer tracks. Having to select instrument patches for composing is certainly not unique to **The\*Wizard** software, for example in a typical linear track-based sequencer you must compose a track at a time and select the instrument or voice that you want for each track. Other composing software also requires selection of the instruments and voices (though in some cases they may make a default selection for you). The way MIDI channels are used it to assign different *sound patches* to different MIDI channels. This allows electronic musical instruments to effectively play different *sound patches* simultaneously when receiving MIDI data on multiple channels at the same time. For example, for a jazz combo you might:

- ☞ assign an acoustic piano patch to MIDI channel #1
- ☞ assign an acoustic/upright bass patch to MIDI channel #2
- ☞ assign a jazz guitar patch to MIDI channel #3
- ☞ assign a drumkit patch to MIDI channel #10

### 8.C.iii MIDI Devices, MIDI Interfaces & MIDI Ports



If you are using external MIDI instruments (such as a drum machine, a sampler, or a synthesizer, etc.) then in order to connect your PC to that equipment, you will need a device known as a MIDI Interface. Not all MIDI devices have a "MIDI Thru" port. In the above example of a typical MIDI studio setup, if you have both devices B & C set to respond to the same MIDI channel(s), then these two devices will play in unison which is referred to as "layering" or "stacking" sounds. You may also set each device to respond to different channels so that their sounds do not overlap. The Input ports of your MIDI Interface are used to input MIDI information into **The\*Wizard** software. The Output ports of your MIDI Interface are used by **The\*Wizard** software to transmit MIDI information to generate sounds from your sound device(s). In the case of a sound card, the connections are within your computer; in such a situation you can think of your computer as *Device-A* and your sound card as *Device-B*, in the above example.

Manufacturers of MIDI interfaces also manufacture multi-port interfaces. Where such interfaces generally have either two pairs of IN & OUT ports or four pairs of IN & OUT ports. This gives you the opportunity to connect different physical devices to different ports. Also, you may have more than one interface unit connected to your PC giving you more than one pair of IN & OUT ports. Sometimes the terms *port* and *device* will be used interchangeably. This is because **The\*Wizard** software can either direct its MIDI output to a specific *device* (such as a sound card), or to a specific physical MIDI Interface *port* (which in turn is connected to a specific MIDI instrument or device).

## 8.D How The\*Wizard software makes sounds

**The\*Wizard** programs are software and therefore do not themselves generate any sounds but rather uses your MIDI hardware to play music, it is better to think that **The\*Wizard** software initiates or triggers sounds to be made from another device using MIDI commands. Therefore the quality and characteristics of the sounds you hear when using **The\*Wizard** software are directly related to the type, characteristics, and quality of the MIDI and other audio components in and connected to your PC.

The basic function of **The\*Wizard** software is to play specific *sounds* or *voices* at specific time intervals. We call playing each individual sound a "MIDI event". To do this **The\*Wizard** software transmits *MIDI Note On* commands over a specific MIDI channels to a particular *MIDI instrument*, where the specific channels of the device are set to play a specific patch. The band-players in the patterns hold the parameters that connect to MIDI devices and select the instrument & patch settings. Each row of a particular player's pattern-grid either plays a different pitch or a different *drumkit voice* using the *patch* and MIDI channel set into the player's parameters.

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