

WAFFER!

MultiMedia

Digest

(Formerly "*The Sound Blaster Digest*")

The *Online* Magazine for MultiMedia Enthusiasts.

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1992 SBD Index

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From the Editor's Desk:

It's 1993: a new year, with new hopes and new expectations. It's also the start of an all new look and feel (along with a new name) for the old **Sound Blaster Digest**.

The world of computers has never been a static place. Technology changes, and with these changes our uses of computers change also. We start doing more things with our computers, and we improve upon the old things that have been with us for over a decade in PC computing. Anybody who is into computers knows that if you don't change your outlook and expectations towards the computer industry, you'll be left long behind in the race for an improved computing environment.

MultiMedia is one of the fastest growing areas of computers today. New technologies appears almost daily, and many old technologies are continually improved upon and copied and then used by others.

Reasons such as these are factors in many of the changes you'll notice in the **WAFFER! MultiMedia Digest**. We're still the same **Digest** that you've come to trust through the years, but with many new improvements added also. Our outlook upon the industry has changed slightly: No longer is the **Sound Blaster** music synthesiser card from **Creative Labs** the only card available on the market (although it is still the most popular sound card ever introduced, along with its offspring, the **Sound Blaster Pro** series, and soon the new **Sound Blaster 16**, **MIDI Blaster** and the **Port Blaster**), and no longer are sound cards a wholly separate domain of computing either. Nearly all new audio cards that appear on the market are fully **Sound Blaster** compatible, many are now **Sound Blaster Pro** compatible at various levels, and with the advent of **Windows 3.1** from **Microsoft**, all sound cards are treated as equals for programming purposes when writing windows-based software.

Third-party software, such as games, now generally support multiple audio cards, and in many cases (such as between **Creative Lab's Sound Blaster Pro** and **Media Vision's Pro Audio Spectrum** sound cards) the technology utilized to generate the synthesised and digital sound in today's sound cards is either the same, or close to the same, so the audio track of any given game on sound card A and that same audio track played back on card B sounds exactly the same (or very close to the same).

Thus, the new **Digest** is no longer dedicated to only **Sound Blaster** enthusiasts, but also to other sound card enthusiasts, CD-ROM enthusiasts, graphics enthusiasts, or to any other enthusiasts where their interests have a direct or indirect application in MultiMedia. So as our new title page clearly states, we are now a magazine for **MultiMedia Enthusiasts**.

To accomodate for these changes, we have brought another new person on to the **Digest** staff: Brian Bourne, our new CD-ROM columnist. Brian's job will be to keep everyone up-to-date in new CD-ROM technologies, applications, and new software available on CD-ROM. He has been a long-time background contributor to the **Digest** through his BBS system, **Super S.O.N.I.C.** BBS. We welcome his knowledge and expertise in CD-ROM related topics.

Also new with the new year, we regret to announce that the **Sound Blaster Digest Support BBS** is no longer our official support BBS. This was not an easy decision, but in the end it was felt that the **Digest** and the **Support BBS** were going in totally separate directions. Todd Clayton, the sysop of the **Support BBS** will still be running his BBS at the same number ((416) 840-2485), but it is now called **The Age of the Dark Renaissance**. The **Digest** will still be sent to this revamped BBS on the official release date, as it always has been. We here at the **Digest** wish Todd luck in his new endeavours.

Before I wrap this column up, I would just like to reassure all of our readers of the old **Sound Blaster Digest** that the numerous changes I have described in this editorial are in no way meant to take the place of all of our old **Sound Blaster** related reviews and articles, but instead are meant to supplement them. We feel that these changes will only add to the quality and content of the old **Digest**, and will not take away from anything that you have come to expect from the **Digest**.

We hope you enjoy the all new **WAFFER! MultiMedia Digest!**

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The Wonderful World of MIDI:

*(Editor's note: Valli Persad, our usual MIDI editor is currently on vacation. He will be back with an article of his own in our March/April edition of the **WAFFER! MultiMedia Digest**. Until his return, we are proud to present you with the following article:)*

WINDOWS AND MIDI: Making Sense of MIDI Files

By Richard D. Clark , MIDI Specialist

Microsoft's addition of music and sound support to Windows was welcome, but making it work isn't always easy. Most sound card owners have succeeded in enabling their digitized audio functions by now, and are happily adding .WAV sounds to all sorts of Windows events. But the PC Music & Sound Forum here on America Online still receives frequent pleas for help from members having trouble with MIDI files.

MIDI (Musical Instrument Digital Interface) is a rich, complex and well established protocol intended to allow electronic musical instruments and other devices (like computers) to exchange data in real time. The Standard MIDI File Format allows MIDI software to import music data created with different programs, even those running on dissimilar computers.

But that's where standardization ends in the world of MIDI — and where the problems begin for users trying to play downloaded MIDI files on their sound boards.

This article will first delve a bit into the workings of MIDI Files, so you can get a sense of the kinds of data being manipulated. Then we'll discuss why there are so many apparent incompatibilities between MIDI files and different synthesizers and sound boards. Finally, we'll outline some strategies for making the files you download sound right on your hardware.

WHAT'S IN A MIDI FILE?

MIDI files are not audio recordings; they're data files. Here are some of the things you'll find if you dissect one:

TEMPO/TIME SIGNATURE — Music is a linear process, where events happen as time progresses. The file must include at least one tempo command and a

time signature, but can also contain many tempo/time changes.

NOTE DATA — For each note played, there will be data occurring at the appropriate point in the sequence, specifying:

- Note On;
- Note On Velocity (how hard the key was struck);
- Note Number (pitch);
- Note Duration;
- Note Off;
- Note Off Velocity.

TRACK DATA — Type 1 MIDI Files, which are the most common, are “multi-track” files. There can be any number of tracks, each containing the note data (any number of simultaneous notes) for one instrument, or “voice.” Each track can have a name up to 20 characters long.

CHANNEL DATA — Each track is assigned for output on one of the 16 MIDI Channels.

PROGRAM ASSIGNMENT — Each track should have at least one “Program Change” event. This sends a command to the receiving synthesizer on the MIDI Channel associated with the track, telling the synth which “Patch” (instrument sound) to use when playing the note data on the track. Tracks can have multiple Program Change commands embedded; the synth will change the sound on that MIDI channel dynamically as these commands are received.

CONTROLLER DATA — Each track can also contain any number of “MIDI Controller” events. These can include MIDI volume, pan position (ie, left-to-right position on the stereo “stage”), sustain pedal on/off, pitch bends, and the like.

WHAT’S NOT IN A MIDI FILE?

Most notably, there’s nothing in a MIDI file to tell you what synthesizer the file was written for (Unless the author embedded some text with this information). And therein lies the rub. Every synthesizer has a set of default sounds, the “default patch bank.” Within that bank, there may be 64, 128, or more discrete sounds; each is numbered (and usually named). The MIDI File Specification allows Program Change commands numbered 0 to 127, but says nothing about what instruments are associated with those numbers.

And, indeed, most synths are unique in how they organize their sounds. Patch 24 on Synth A could be a Glockenspiel, while Patch 24 on Synth B might be a Harmonica. So if you play a MIDI file set up for Synth A, but send it to Synth B, the results may be interesting, but certainly not what the author intended!

Percussion presents another problem. Many synthesizers include a “Rhythm Part” — a set of percussion sounds, all addressed via a single MIDI channel, with each sound triggered by a specific note (C, Octave 2 = Kick Drum; D, Octave 2 = Snare Drum; etc.). The relationship of notes to sounds is called the “percussion map”, and this map can vary among different synthesizers.

So percussion intended for playback on a Yamaha synth will not be mapped properly for a Roland, and vice-versa.

STANDARDS AND PROTO-STANDARDS

As MIDI Files became more and more popular as a medium for musical exchange, authors naturally tried, whenever possible, to create sequences for the widest audience. The best way to do that was to write for the world’s most popular synthesizer module: the Roland MT-32. And so, in the late 80’s, the MT-32 emerged as an early standard, as a result there are thousands of sequences available, both commercial and public domain, that require no modifications when played through an MT-32 (or any of several compatible synthesizers, including Roland’s own LAPC-1 sound board). This also became (and still is) the standard for MIDI sound support in games.

But Roland is just one company. In 1991, the International MIDI Association put together a new standard that could be implemented by any manufacturer: General MIDI. A General MIDI-compatible synth will include a standard bank of 128 instrument and effects sounds, as well as a percussion section using a standard note map, arranged so that a compliant MIDI file will always call the desired sound from the synth. But the file has to be specifically sequenced for General MIDI use — and, while they are beginning to appear, GM files are still far outnumbered by other, non-standard files.

General MIDI synths have been introduced by Roland, Yamaha, Korg and others. Most of these include their General MIDI bank as one of a number of available banks, so GM-compatibility doesn’t limit their usefulness to composers.

GENERAL MIDI AND WINDOWS 3.1

When Microsoft adopted MIDI as the standard for music in Windows, they defined three levels of MIDI support.

Base-level MIDI uses only channels 12-16, and you’ll find precious few MIDI files set up this way. It is intended to support Adlib-type 11-voice FM synths.

Extended MIDI was invented by Microsoft as a way for a single MIDI file to support both General MIDI and base-level MIDI at the same time. If an author adheres to the GM standard and limits a composition to Channels 1-10, then the same composition can be “reduced” to base-level and placed on channels 12-16 *in the same file*. Then, theoretically, the file will play on a system set up for either level, with the inappropriate channels being ignored.

General MIDI is really Windows’ standard MIDI support. Most major sound cards (Sound Blaster Pro, Pro Audio Spectrum, and others) ship with Windows MIDI drivers that load GM-compatible patch banks into the card. Voyetra offers a General MIDI driver (“Super-SAPI”) for Sequencer Plus, the MIDI software bundled with many sound cards.

When you download a MIDI file from your local BBS, the File Description may tell you what synth the sequence was intended for. If the file conforms to one of Microsoft’s “levels,” it may say so.

If you have a GM synth or sound card driver, you’re all set. Of course, 99% of the time either your hardware or the file will not be General MIDI compliant, so next we’ll look at methods for adapting different files for use with your synth.

THE WINDOWS MIDI MAPPER

The MIDI Mapper is accessed through the Control Panel (usually found in the “Main” Program Group). It reads a file called **MIDIMAP.CFG** found in your **\WINDOWS\SYSTEM** subdirectory. The contents of this file will vary, depending on whether you’re using the one supplied with Windows or one supplied with your sound board.

The Mapper’s function is to “re-map” the MIDI Channel and Program Change settings in a MIDI File to those required by the receiving synth. So if you own an MT-32 and are trying to play a GM file with a Glockenspiel part (General MIDI Patch #9), the Mapper will send that track to your MT-32 as Patch #101 (the MT-32’s Glockenspiel patch).

The Mapper can also re-map percussion tracks. General MIDI used the percussion map of the MT-32, though a few more sounds were added.

Finally, MIDI Mapper can “re-channel” MIDI files, though this function is rarely needed. Microsoft probably included it so that normal MIDI files could be re-channeled for “Base-level” MIDI setups. It is also useful when modifying GM files, which usually have their drum tracks set for Channel 16, for playback on Roland instruments that use Channel 10 for drums.

The Mapper's biggest failing is that you can't import new configurations; you must edit existing ones, or create new ones from scratch, and then save them with new names. You can have many different setups, but all must be created manually. You can exchange your **MIDIMAP.CFG** for another one by means of file renaming, of course, but this is awkward. Perhaps Microsoft will correct this oversight in a future version.

MIDI Mapper setups are designed to map GM files to work with other synths. The default **MIDIMAP.CFG** includes patch maps for the MT-32 and the Emu Proteus. Microsoft ignores the reality that virtually all extant MIDI files are not GM-compliant.

There are two approaches to adapting non-GM files for use with a GM setup. One involves creating custom MIDI Setups and Maps that you can call up as needed. The other requires the use of a MIDI sequencer to modify and save the MIDI Files themselves.

CREATING CUSTOM SETUPS AND MAPS

We'll detail the method for creating a MIDI Mapper setup that will allow you to play the hundreds of available MT-32 compatible files with your General MIDI synth or driver. It'll take a few minutes, but when you're done you can save it and load it as needed. You can use the same method to create maps for files sequenced for other synths, too.

1. It will help to have hard copies of the patch lists for both the MT-32 and for General MIDI. Both of these lists can be viewed and/or printed by double clicking on the following icons:



MT-32 PatchMap



General MIDI PatchMap

2. Open the MIDI Mapper, click on **Patch Maps**, and click on **New**. Give the Map a name (**MT32_GM**, for example), and a descriptive name ("MT-32 to General MIDI"). OK that, and you'll get a pristine Patch Map where each **Source Patch** has the same number in the **Destination Patch** column.

3. You cannot change the settings in the **Source Patch** or **Src Patch Name** columns, but that's OK. We will *ignore* the **Src Patch Name** information, using our printed lists for reference instead. The important thing to remember is that we're rerouting the Program Numbers.
4. General MIDI Patch Numbers start with 0, so be sure to select **Zero-Based Patches** at the top of the list.
5. Start down the list, changing the numbers in **Dest Patch** to the General MIDI sound you want to use for each MT-32 patch. For example, MT-32 Patch #8 ("Honkytonk") would be set to Destination Patch #4.
6. You will notice that the MT-32 tends to have more variations of some instruments than General MIDI does, while the reverse is true of other instruments. The MT-32 has three different Pipe Organs (Patches 13-15), all of which will have to be mapped to GM Patch #19 (Church Organ). On the other hand, when mapping the two MT-32 Electric Guitar patches (62-63), you'll have to choose among five GM Destination Patches (26-30). You may need to return to your Map a few times to "tweak" your assignments after playing a few MT-32 files.
7. When complete, Click OK.
8. Now select **Key Maps**, and click **Edit**. Name the new Map (**MT-32 to GM Percussion**) as before. This time, you'll be mapping MT-32 Percussion Notes to GM notes.
9. Guess what? You don't have to do anything! The MT-32 percussion map is a subset of the General MIDI map; MT-32 drum notes will already match the corresponding sound in General MIDI. The only difference is that GM supports more sounds (eg, two different Crash Cymbals instead of just one) than the MT-32. So OK the Map and exit.
10. One final step. Select **Setups** and **New**, then name the new setup again. On the **Setup** form, select the MIDI port for each MIDI Channel by clicking on its **Port Name** and choosing the appropriate option ("SB Pro Stereo FM," "YourCard External MIDI," etc.). MT-32 files use Channels 2-9 for music, and Channel 10 for percussion. Be sure to select the percussion Key Map you created in step 9 in the **Patch Map Name** column for **Source Channel 10**.

That's it! You have not only created a MIDI setup that will give you reasonable playback of MT-32 files on your GM synth or sound card, but in the process you've learned just about all there is to know about the Windows MIDI Mapper. Armed with this knowledge, you should be able to create MIDI Maps for any need.

EDITING MIDI FILES

Depending on how you use your MIDI files, you may decide that creating alternate Maps is too cumbersome, or doesn't produce satisfactory results with all files. An alternate strategy is to modify each MIDI File to achieve compatibility with your sound hardware, and then save the new version of the file. The background information above should arm you with the theory behind this process.

Your tool for this work is any MIDI sequencing program that can import and save Standard MIDI Files. Many sound boards are bundled with one: **Sequencer Plus** by Voyetra Technologies, a DOS program. A capable shareware Windows sequencer, **WinJammer**, is available for downloading on many BBS's. (The unregistered version will not save track names, but this is unimportant for our purposes. You can use it to experiment with these techniques while you wait for your registered version to arrive.)

There are many other sequencers available. Some are DOS programs, and a number of new Windows packages have appeared recently as well. The following general procedures will work with any sequencer.

One cautionary note if you're working in a DOS sequencer with a sound board: many programs (including Sequencer Plus) load a sound bank into the card's FM synth which emulates the MT-32, and not General MIDI. You can play MT-32 files with this setup, of course, but when you modify them for General MIDI they won't sound right until you play them in Windows.

There is a new Voyetra driver for OPL-3 based cards (recent Sound Blaster Pros; Pro Audio Spectrum-16 and Plus, and others) called "Super SAPI" which loads a GM bank into the FM synth when Sequencer Plus starts; this way music will sound the same under DOS as it does under Windows. If you have some other combination of software and hardware you'll need to contact their respective manufacturers for availability of General MIDI drivers for DOS.

The process of modifying files is fairly simple, but the exact method varies with software. Start the sequencer, and load the MIDI file. (Many sequencers require you to "import" the file, consult the documentation.)

You'll see a numbered list of the tracks in the file, each should have a name (usually of the desired instrument, assuming the author typed them in), a MIDI Channel (1-16), and a Program Change command.

To modify an MT-32 file for General MIDI, use the same principles we discussed above. If a track is named "Acoustic Bass" and assigned to Patch #65, just change the patch assignment to #33.

The advantage to working this way (assuming you have a GM patch bank loaded) is that you can audition the changes as you make them, and perhaps try some of the instrument variations (like the multiple electric guitars) offered by General MIDI.

Watch out for "embedded" Program Change commands. Occasionally a composer will include Program Change commands at points throughout a track; these will override the initial setting for the track, and unless you modify them they will not match your General MIDI patches.

The method for finding and changing these commands will vary with the software. Sequencer Plus has an "Edit MIDI" screen which lets you search a track for specific MIDI commands, which you can then edit. Other sequencers use an "Event List" which shows every event in the track; you can often do a "Search and Replace" with such programs.

After you've completed your modifications, resave the file in Standard MIDI File Format (Type 1). From now on, you can load it into your favorite Windows MIDI File player or jukebox with consistent results.

MIDI FOR THE MASSES?

Well, not just yet, but Windows and General MIDI are a step in the right direction. It was impossible to cover all the possible combinations of file setups and sound hardware in this article. If you have questions about using MIDI with your system, please post a message, send e-mail, or join us at one of our regular conferences on **America OnLine**, we'll be glad to help!

RICHARD D. CLARK owns and operates Fundamentally Sound, a MIDI-based project studio in suburban Philadelphia. By day, he is the Audio/Visual Specialist for a major metropolitan science museum. Known "online" as PCA RichC, he is the MIDI Specialist for America Online's PC Music & Sound Forum.

The Patchmaps contained within this article are courtesy of America Online and Richard Clark.

For more information on obtaining access to America Online, please see [The Official WAFFER! Support BBS](#) article later in this issue of the [WAFFER! MultiMedia Digest](#).

Subscriptions to the WMD

The **WAFFER! MultiMedia Digest** is available in over 15 countries around the world, on many of the planet's best bulletin board systems. Sadly, in many areas the **WMD** is very difficult to find on a regular basis, if at all. In addition to this, it sometimes occurs that the reader is just unable to find the issue or version (either Windows or Text) that they want.

For those readers who have problems in receiving the **WMD**, look no further. The **WAFFER! MultiMedia Digest** offers a new and improved subscription service! Once every two months another new and wonderful edition of the **WAFFER! MultiMedia Digest** is sent to your mailing address, including both the Text and Windows issues on a single diskette in either 3.5" or 5.25" diskette format. You will receive 6 issues in all, and if you wish to continue to subscribe after the year is over, you will be able to renew your subscription at a reduced rate.

Here is a listing of our Subscription rates as of January 1st, 1993:

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Commerical Review: **The Legend of Robin Hood - Conquests of the Longbow**

From Sierra Games
Game Designer: Christy Marx
Reviewed by Kim O'Hearn

This game takes you back to 12th century England, to a time when dreams come true, magic really exists and the bravest, strongest person always wins. It takes you to Sherwood Forest and the town of Nottingham where you must conjure up enough ransom money to free King Richard the Lionheart and make England a peaceful country once more. This game uses a point and click method of play, in which no typing is required if you are playing with a mouse. Any hunt and peck typists out there will love this game. All the talking required is automatic, you just have to point the talk icon at the person you wish to talk to. When you talk to a person a close up picture of the person and the words that they are saying come onto the screen.

Throughout the game medieval melodies surround you during the appropriate scenes, along with many sounds for shooting arrows, closing doors, and sounds for the various animals which you meet along the way (try talking to them, they do respond!). This game supports the Sound Blaster and also Adlib and the Pro Audio Spectrum. The graphics in the game are quite amazing, with very detailed backgrounds scenes behind the action.

This is the second game in the "Conquests" series, the first in the series being the Conquests of Camelot. Conquests of Camelot is a game quite similar to this one with similar puzzles and challenges throughout the game. Anyone who enjoys thought provoking, puzzling games will enjoy Conquests of the Longbow, I certainly welcomed it into my collection of games.

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What is the Virtual Village?

Commercial Review: Links 386 Pro

By Access Software
Reviewed by Bill Gallagher

Imagine a nice bright and sunny day far out of reach of your office, wearing your plaid pants, your Izod shirt and those funny little spiked shoes...doin' your best Rodney Dangerfield impersonation. Perhaps you're out on the Firestone course with a light breeze coming in from the south.....You look out onto a pristine fairway and there's not a cloud in the sky. You reach for your ping-eye berilium driver and hunker down for a heavy hit on that little Titlist three that sits on your personalized tees..... Yes, that's part of the fantasy that the new Links 386 Pro game evokes. Now I'm not an old duffer or even close to a seasoned pro so my golfing jargon may be a bit off....but I'm sure you REAL golfers will understand what I'm throwing down. You take a one time caddie who was only really good with a one iron and give him a game like this and there's no

stopping him. I can hit shots off of most of the greens with my ping-eye berilium one iron and be cracking shots off like a heavy hitter....I gage the breeze with the built in directional indicator and wind up and let fly...BOOM....a 300 yard shot that lands me near the rough but I am still undaunted. I pull out the wedge and plant it firmly at the base of my Titlist three and let fly again....ZANG....up onto the green and I'm about to make par...Yeah, I'm fifteen feet from the hole and I line up, watching the terra-forming for the break of the green. As I eye it up, suddenly the wind quickly takes a turn for the worse and I end up way past the cup and far off to the right which has me down in a hole of some sort.... this time it'll take a lot more than finesse and a strong left arm to put me in the cup and on to the next tee....

This is just part of the experience that awaits you if you and your machine can stomp on the terra like the big boys do. Yes, it takes quite a man or woman to stand tall in this arena. The game Links 386 Pro is a mighty powerful experience for a human to take on. And its impact on your computer might be just as big a challenge! This RAM intensive and graphics grinding power-house requires at least a 386 machine (as the name implies) and at least a speed of 16mhz, five megs of RAM and VESA compatable graphics card. And in this critic's opinion at least a 25mhz machine will suffice. But the trade-off as far as equipment and physical/mental expertise is well worth the rigor. I have yet to see anything in the software libraries that can compare with the visual and audible details that this program can provide. From the selection of courses to the impact of the audio detailing no other "game" can come closer to real life. This brings the feel of REAL GOLF to the P.C. explorer.

With this latest version of the Links game you have a varied array of tools and options that can really make an impact on your game . You may select from male or female golfers, play against unique human opponents, save a shot, select a profile view of your swing, reverse view from the pin, and you can even save a game to play against yourself or send it off to a friend for competition. All of these options and so much more make this the most full featured competition game for the PC ever created!

The programmers at Access software must have had a ball playing the wide selection of courses that complement the initial Links 386 Pro package. The game comes equipped with the "Harbour Town" course with all future championship courses available in this high resolution format designed for the Links 386 Pro. But you will decide which courses you want to take on. They stretch from Hawaii to Utah and from Ohio to the Bay Hill Country Club. Some say that the eighteenth hole of the Bay Hill Country Club is the toughest finishing hole in golfing to date.....well we all know that Arnie Palmer was always a stickler for perfection and being that he helped design and manage that facility you can bet that that hole is the nightmare of all true golfers.

Yes it's been quite a while since this boy has played a real round of golf, either on the screen or on the green but you can rest assured that even if I am out of touch with my woods or perhaps hankering for a feel of that wild turkeys bite at the nineteenth hole, I can slide back, pull up a course and let loose with one of nine different and demanding pro courses. I can then proceed to beat the pants off of anything that comes my way . Its like taking on a real pro! Every time I sit down to this masterpiece of golfing expertise I end up coming away with a feeling of being out on the back nine sliding around in old golf cart with my good friend Dr. Lou and the sensation of having beat him like a drum once again. I truly recommend this game for anyone who was pehaps once a "good" player on the golfing team in high school or even the good ol' boys who still play a round or two in high style every weekend at the Hyatt at Dorado Beach. Because we all know how good we are even when playing by "house rules" and taking gimmes on the hard links....But when it all comes down to separating the boys from the men this game will surely be the test. This truly is Golf at its finest!

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THE CD-ROM CORNER

By Brian Bourne

Welcome to the CD-ROM Corner! Starting with this issue you will find this column in each issue of the **WAFFER! MultiMedia Digest**. Considering that Brad came up with the idea for the column only a day before publication, I've only been able to put together a single review on my most recent compact disc. The intent of this column will be to cover yet another realm of the multimedia PC, the CD-ROM. In future you will find reviews for CDs and CD-ROM drives as well as articles on how the CD-ROM drive operates, and any current news bits relating to CDs that may be of interest. If you have any news or reviews relating to this column that you would like to submit, you can send them through Brad Barclay or you can upload them to Super SONIC BBS, where I will receive them directly.

Coming Next Issue: Details/Review of the Kodak Photo CD, more reviews and articles.

CD-ROM Review: The San Diego Zoo Presents: THE ANIMALS

Produced by: Arnowitz Inc and The Software Toolworks Inc

Reviewed by Brian Bourne

As one might expect from a CD based on the **San Diego Zoo, The Animals** is a multimedia encyclopedia of over 200 mammals, birds, and reptiles. As far as multimedia encyclopedias go, this one is rather interesting.

The main menu is an overview map of the San Diego Zoo, complete with Animal Nursery, Zoo Gardens, Research Centre and even a Bus Tour. You can elect to visit any of the exhibits at the various locations on the map. If you really want to get specific, there is an alphabetical listing of the animals at the zoo. Once you begin to browse, it becomes really impressive how everything is cross-indexed, easy and entertaining to find. If you're not sure how to use the package, there is a detailed audio-visual overview that will answer all your questions.

As far as multimedia goes, **The Animals** comes packed with 2.5 hours of audio, 1300 colour photos and 60 minutes of motion video. You may find that you will have to play with your memory manager to get the sound to play back

uninterrupted. Even under Windows 3.1, I found that during the playback of a full motion video the sound tended to suffer infrequent pauses during either a music mix-in or screen updates (and this is on a 486-33)! Depending on your system setup and your personal standards, you may find that for optimum performance this CD may take longer to set up than it may first appear after you run the easy to use installation program. If you are not picky about small details and you don't have a complex system setup, you will then find that you can pop it in and go.

In conclusion, if you find yourself looking for a CD to impress yourself or your friends with sound and animation, you will probably be quite happy with this disc. However, if the library is closed, and you need to do a university research essay on a polar bear, you may find that this falls a little short of your requirements. Sporting over 1000 pages of animal and habitat description, articles and scientific data, The Animals is written with an informal and elementary vocabulary.

Official WAFFER! MultiMedia Support BBS's:

You may notice that later on in this issue, we have included a special listing of **Official WAFFER! MultiMedia Support BBS's**. What does this mean?

The **Official WAFFER! MultiMedia Support BBS's** are a group of bulletin board systems around the world which receive a copy of the **WMD** on the day of it's official release, straight from **WAFFER! MultiMedia Productions**. These BBS systems are *guaranteed* to have the **WMD** on the day it's released, and these files are *guaranteed* to be the exact official **WMD** distribution files, guaranteeing you, the reader, with fast, free copies of the **WMD**.

If you are the sysop of a BBS system and are interested in becoming an **Official WAFFER! MultiMedia Support BBS**, please call or write us here at **WAFFER! MultiMedia Productions**, as we'd be more than glad to discuss terms and rates for this service. In order to fully qualify for **Official WAFFER! MultiMedia Distribution** status, you must be able to provide the **WMD** for free to all users, and the **WMD** must be available for download on a users first call. When you register your BBS system with the **WMD**, you'll be added to our list, and will receive the **WMD** 6 times a year, right on the official distribution date. You and your users will also receive special bonus files, and special discounts to special offers from the **WMD**. The staff of the **WMD** will also be available for your users to leave messages to and ask questions of. For more details on this special service, please contact us. See Contacting Us... below for more information on how to contact **WAFFER! MultiMedia Productions**.

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Commercial Review: Amazon

From Access Software
Reviewed by Bill Gallagher

This high-powered game is styled after the serial-type movies of the 40's....that melodramatic, "to be continued" atmosphere that always leaves you hanging on the edge of your chair. The day that I aquired this game I sat down at my PC and as I ran the usual install program I had no idea of what was going to happen when the game started. As you start the game into motion your screen shows the typical movie countdown with the sounds of an old 3M styled 16 mm movie projector that is reminiscent of the era of the first sound movies way back in the olden days.....but the antiquity quickly fades as your VGA screen takes on a panoramic view of the Amazon Rain Forest in all its detail and splendor.

As the screen pans to the left the title appears super-imposed on the lush vegetation and the adventure slowly begins. The high quality image is then transformed back to the black and white of the b-movies to display the title of the 1st chapter. After the title fades; the origins of the main characters are explained in fantastic detail as to who, what, where and why this story is taking place. The outlines given seem to mean little until you are much deeper into the story...And I do mean into the story...I found myself trying the different icon based structures of the game at every chance I got to see how involved the people at Access software really meant the player(s) to get. And I found out rather quickly that the people who wrote the code on this game really wanted an interactive game on the highest levels I have yet seen. They incorporate not only fantastic story lines but graphics and audio files that will knock your socks off!

Sometimes you come across a game with a lot of fluff and not much substance.....that is where the game, **Amazon**, breaks from the traditional mold and steps into a new realm of gaming interaction that is seldom seen let alone experienced. Imagine yourself as one of two brothers who work for a high-security testing lab that has hewn its security vaults out of solid rock in the foothills of a mountain range somewhere on the Pacific Coast. You, being the consummate lab technician of that gone-by era, drive a large car and keep a nice little apartment off somewhere in suburbia and are content living the domestic life while your older and much more adventurous brother has gone to the Amazon to

work on a secret project that leaves you out of touch with each other for a considerable length of time. As you walk in one day, the secretary tells you that your boss is in a very bad mood and wants to speak to you right away. Sensing that you might be called in for some new project or even worse a whipping session that may leave you a bit frayed....you cautiously enter the boss's office to find a much more serious problem on you. He tells you that your brother's expedition into the Amazon had been attacked and that someone or something is responsible for the disappearance of your brother. Seeing that you are emotionally distraught the boss tells you to take the rest of the day off.

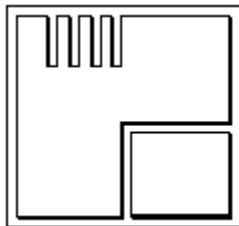
Now before leaving I would suggest a thorough search of the labs and offices to see if anything might be helpful in the adventure that awaits you. I also must caution you to take the time to save your place after each significant occurrence or find so as to not set yourself back too far in the adventure in case the worst should happen....The one thing that keeps you out of trouble may be right there in front of you but you must be alert and resourceful enough to seize the opportunity and capitalize on your "good fortune". Make yourself aware of anything that might seem of use and maybe even some things that aren't so obvious . This clue may make you feel like a rat in a cage running on the great wheel of life with not much at hand to use for your journey into this adventure, but your wits and some carefully placed items that sometimes are deceiving. Again, I must caution you on saving your place so as not to fall prey to the unusual circumstances that will abound once you finally make your way home to contemplate the fate of your beloved brother.

It takes no great feat to accomplish the preliminary objectives at the lab and to make it home but if you're not experienced in this type of game I would suggest experimenting with everything you see. This is as far as I will take you into this maze of dilemmas, otherwise I would be guiding you through the entire game (if the editor would allow such things) . But, fair is fair and they only allow me so much in the area of artistic license....and it certainly wouldn't be much of an adventure if I gave away all of the story plot or more of the pitfalls that await even the most experienced gaming masters.

I believe that Access Software has come a long way from its roots (Echelon is still a favorite), and is taking leaps and bounds in the field of interactive games with the release of **Amazon**. Although I am just one critic of this game, I felt the gravity that comes with the onset of the adventure that Access Software has chosen to call **Amazon**....and so will anyone who is into the delight of manipulation when challenged by an extraordinary piece of interactive software such as **Amazon**. I highly recommend this game and I also recommend that you take a few days off to delve into this reality with both feet, and perhaps a pith helmet and a machete. Good Luck.....and Happy Hunting!

Planning a MultiMedia Presentation

Part two of this multipart series by Brad Barclay will return in issue #22, March & April 1993.



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MAKING FM MUSIC WORK FOR YOU

Written by Rob O'Daniel (aka PC RobO)
PC Music & Sound Forum Leader
America Online

So, you just got a new sound card for Christmas and chances are it's either a Sound Blaster series or it is compatible with Sound Blaster software. Now that you have this new toy, what can you do with it? Well, for many sound card owners, FM music is the first item to try. But how do you cut through the confusing, and often very skimpy, instructions in the manual and get going with FM music? To get started, you should first know a little bit about the two common FM music formats - **ROL** and **CMF**.

The **ROL** format was established by AdLib Inc. **ROL** song files contain the musical scale information such as beats per measure, notes, etc. When you play a **ROL** song, the player utility loads the song file, then loads the needed instrument data from an external instrument 'bank.' The instrument bank must be named **STANDARD.BNK** for the player to recognize it.

The Sound Blaster **CMF** files, on the other hand, contain the instrument data within each song file, so there's no need for an external instrument bank. Apart from that, and a few other minor differences, the **ROL** and **CMF** formats are very similar. In fact, the vast majority of **CMF** songs available are converted AdLib song files.

As a side note, **ROL-to-CMF** conversion utilities are available via most bulletin boards or national networks, such as America Online, but most AdLib songs sound better if left in their native **ROL** format.

One last note about the two formats: While you can play both formats on any Sound Blaster compatible music card, owners of the older AdLib music synthesizer card cannot use the **CMF** music format.

Tsung Hu's **MuchMusic** v1.11 is an excellent song player for both **ROL** and **CMF** files. **MuchMusic** is the player of choice for most FM music enthusiasts because it doesn't demand much memory and, because it only uses

text mode, **MuchMusic** doesn't require any specific video adapter

In order to play AdLib music with your Sound Blaster, you'll need to download the **SB-SOUND.COM** driver from a local BBS or one of the national networks. Once you have downloaded the file, rename it **SOUND.COM**.

If you own a Sound Blaster compatible card, it may require that you install a Sound Blaster emulator-driver, such as the **SBOS** software that comes with the **Advanced Gravis UltraSound** board.

To start up MuchMusic with the appropriate drivers loaded and ready, you can create a batch file with the following lines:

```
REM Call this batch file MM.BAT  
SOUND B9000  
MM
```

Store this batch file in the subdirectory with the drivers and the **MM.EXE** file. Then simply type **MM <ENTER>** to start **MuchMusic**.

Although slightly cluttered and messy, it works best to keep **CMF**'s and **ROL**'s in the same directory with the drivers and the MuchMusic program.

Enjoy

The Sound Blaster Digest 1992 Index:

As you may have already noted, the icon section of our **Table of Contents** on page 3 of this document contains an item listed as the **1992 SBD Index**. This embedded object contains a text file listing all the articles, along with the issue and page numbers where they can be found, from 1992. This listing was compiled by our assistant editor, Karen O'Hearn. Please use it to find articles of interest in previous issues of the **Sound Blaster Digest**.

Commercial review: **Media Player for Windows with Microsoft Video drivers.**

From Microsoft Inc.
Reviewed by Brad Barclay.

Microsoft has recently introduced a new and improved version of their popular Media Player software program, along with new drivers required to play back their new **.AVI** Audio/Visual recording files.

AVI files are a new filetype created by another Microsoft program, **Microsoft Video** which will record full motion video using a variety of colour schemes, along with digital audio to effectively digitally record audio and video into a single file.

This new feature available for Windows is quite interesting indeed (we here at **WAFFER! MultiMedia Productions** are hoping to obtain a copy of this software for review in a future edition of the **Digest**), but it is only half of what this new package, made available for distribution via public domain BBS systems by Microsoft, can do. The new version of the Media Player which comes with the drivers is quite the marvel in itself.

The new Media Player has some excellent improvements over the old version which is currently distributed with Windows 3.1. The new Media Player has a welcome function to make it very easy to take any object loadable by the Media Player, and paste it into any application which supports **Object Linking & Embedding (OLE)**. Simply load your file into the Media Player, make any necessary adjustments in the **Selections...** section, such as changing the title for the object, along with some minor info as to how the object will behave, and select **Copy Object**. Enter your application and select either **Paste** or **Paste Special...** (depending on the application), and voila! One quick and easy embedded object.

Another interesting thing about the new Media Player has to do with it's method it uses to play back the samples imbedded into an application. Using the above method, the new Media Player will actually place a mini version of the Media Player control panel over the icon when it's selected, and then begin to play back the piece. This feature is quite nice indeed, but sadly you are unable to do anything else with the application until the sample has completed playback, else the sample will stop right where it is. For example, using the above embedding method into a Windows Write document, if one then proceeds to scrool through the document while, say, playing back a **.MID** or **.WAV** file, the

playback will stop. Thankfully, there is a way around this problem. By embedding the object in the "old" way (by loading it into the **Object Packager**), when that object is selected, the Media Player will again bring up an abbreviated version of it's control panel, but within it's own window (usually only about 2 text lines wide, so it's very small and can be kept on the screen without a need to minimize it). This is a much nicer way of accessing the embedded object. Also, the object will automatically begin playback upon selection, thus eliminating the need to first start the object, then pressing the **Play** button, as was necessary with the old Media Player.

The newest version of Microsoft's Media Player is available off of Microsoft's BBS systems worldwide, and also on many national and international network systems, and many local BBS systems, and we highly recommend it for anyone who uses Windows OLE.

Contacting Us...

We enjoy hearing from our readers, and we are always willing to accept submissions by readers. If you wish to contact us at **WAFFER! MultiMedia Productions**, the following information should make it a whole lot easier.

By mail, print out the included envelope and attach sufficient postage. Or write to us at:

WAFFER! MultiMedia Productions
36 Sutter Avenue
Brampton, Ontario
CANADA L6Z 1G7

By phone, call voice by calling:

(416) 840-0104

You may also E-mail the **WMD** at the following InterNet address:

InterNet: wmdbrad@aol.com

You may also leave E-Mail to the **WMD** on any of our **Official Support BBS's**. Please address all messages to **Brad Barclay**. Please see the icon marked **Official BBS's** in our icon section of the **Table of Contents** for our listing

of Official Support BBS's.

Wrapping It Up...

Well, that wraps it up for this first issue of the all new **WAFFER! MultiMedia Digest**. We hope you have enjoyed this new publication as much as you have enjoyed our old **Sound Blaster Digest** magazine. We think that the articles presented here in this first issue are an indicator of things to come in the future.

We already have many articles that we are hoping to be able to present to you in future issues of the **Digest**: reviews of the new **Sound Blaster 16**, **MIDI Blaster**, and **Port Blaster** from **Creative Labs**, the **Advanced Gravis UltraSound**, **Turtle Beach System's MultiSound** card, the new **Photo CD** compatible CD-ROM Drives, **Microsoft Golf**, and many other pieces of hardware and software related to MultiMedia, all within the coming months. We'll also be continuing our tutorial on creating your own MultiMedia presentation, and we'll have many more articles for our **CD-ROM Corner** and **Wonderful World of MIDI** columns.

Many thanks go out to Karen O'Hearn this month for the fantastic job she did on this issues included sung file, ***Paper in Fire***.

If you wish to submit any MultiMedia related articles of any kind to the **WAFFER! MultiMedia Digest**, please send them via surface mail or E-Mail (see **Contacting Us...** above for details on how to contact us) to our head office, and we'd be glad to consider them!

Finally, if you have any questions or comments about the all new **WAFFER! MultiMedia Digest**, we'd love to hear them! Again, see **Contacting Us...** above for details on how to get a hold of us here at **WAFFER! MultiMedia Productions**.

Thanks for reading the **WAFFER! MultiMedia Digest!** We hope to see you here again in March!

Deadline for submissions for the next issue of the **WMD** is February 21st, 1993. Official release date for the next edition of the **WMD** is March 7th, 1993.