

WAFFER!

MultiMedia

Digest

(Formerly "*The Sound Blaster Digest*")

The *Online* Magazine for MultiMedia Enthusiasts.

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From the Editor's Desk:

Editorial by Brad Barclay, Publisher & Editor of the **WMD**

Hello everyone, and welcome to the **WAFFER! MultiMedia Digest**.

In the past two months since our last issue, I have started to greatly wonder about the supposed "technical progress" that has been claimed to have been made in the past few years concerning the sound-card industry. Specifically, I am talking about the prolific use of the Yamaha YM-262 chip everyone is now using for their FM synthesis. As a bit of a background, before I get into the main thrust of my editorial this issue, a little history on the evolution of today's generic sound card, be it the basic model, or the "Pro" model of whatever make of audio card that uses FM synthesis.

Back in around the mid 80's, **Ad Lib Inc.** came out with their Ad Lib Music Systems card, which used a 2-operand, 11 voice music synthesiser which was made by Yamaha. This chip was quite versatile in that it could be quite easily programmed to make a whole variety of sounds, from steel drums to violins, to sounds that were entirely experimental and imaginary. The technology was not very good, but it did the job. Many creative people became quite inventive, and by using a combination of sounds, wonderful effects could be achieved. The result was the bountiful availability of .ROL files, many of which were very high-quality pieces of music. The .ROL file is still today a favorite of any user of an Ad Lib compatible card.

It was about 7 years after the initial use of the 2-Op FM chip was replaced by anything in the low-end computer sound card market, and once again, the way was paved by Ad Lib, when they announced the use of the YM-262 4-operand FM, 20 voice stereo synthesiser chip in their new product, the Ad Lib Gold card. The announcement caused many other companies to scramble to use the YM-262 in their cards also. In fact, **Media Vision**, makers of the Pro Audio Spectrum card were the first to use the YM-262 in a sound card, as Ad Lib began to have financial difficulties. **Creative Labs**, which had also announced a new Sound Blaster Pro which would use the YM-262 chip came out not long afterwards. Now today just about everyone building a sound card uses the YM-262 chipset, including **Logitech**, **ATI**, and many smaller companies.

This technology for low-end synthesis stayed around with us for a very long time, and in fact is still quite in high usage: most game software still uses 2-Op FM for game music and sound effects. There is still a huge quantity of .ROL and .CMF (which was Creative Labs answer to the .ROL file format) files available everywhere. On the other hand, use of the high-end YM-262 FM synthesiser is quite low: few, if any, games use the 4-Op FM capabilities, no utilities (other than

the MIDI players which come with many audio cards), and there is no special file format or music sequencing software for it either (with the notable exceptions of MIDI software running a 4-Op FM driver, or anything that uses MIDI from under Windows 3.0 with MultiMedia Extensions or Windows 3.1 also running a 4-Op FM driver).

Currently the only thing that 4-Op FM *is* used for is in MIDI applications, and even then its support is quite lacking. Most MIDI song files available were created on or for music systems using higher-end synthesisers, most of which use either the MT-32 standard synthesiser, or a wave-table based synthesiser. Thus, when played back via 4-Op FM, they don't sound as intended, and thus usually don't sound very good. In fact, most of us have an Ad Lib .ROL file sitting around somewhere that is of better quality than the MIDI files we have when played back on the YM-262 chip. The .ROL format uses almost half as many voices as the YM-262 can, is only in mono, and only requires 2 waves, a carrier and a modulator to generate the sound, and yet the songs *still* sound better!

The reason for this is that companies are no longer making the commitment required to develop a format of their own. Most are more than happy to stick with the good-old standby MIDI, and for the most part, this makes perfect sense: many MultiMedia users have turned to Windows 3.1, which, using the General MIDI format, provides a hassle-free way for programmers and users alike to playback sound on their audio cards, no matter what audio card they have. This is currently where the sound-card industry is heading, and it can be best achieved for a relatively low cost using a synthesiser such as the YM-262 chip.

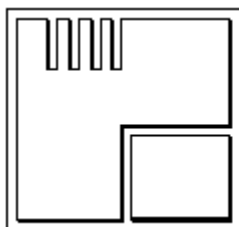
There is a simple solution which would fix all the problems, if only some company took the initiative and made it into reality: to redesign their sound card drivers to allow for a special "instrument bank" file, much like Ad Lib's .BNK format. This would simply be a file that resides in a Windows users **WINDOWS\SYSTEM** directory containing all the information for the 128 instruments used by Windows, plus all the drums. The driver would directly read this file when the driver was loaded, and program itself accordingly (currently each driver has preset instruments right in the driver which cannot be modified by the user). Then the company simply has to provide a program for Windows which would allow the user to modify and create their own instruments in the instrument bank. After the modifications are made, the driver reboots Windows, and the new instruments can take effect. That way, users could have multiple banks of instruments, and they could specify which one they would prefer to use. Different banks could have different effects, so if the user wanted to play a piece with a different sort of effect, they would just have to change which bank they would use. Being that the bank would be a separate file, users could modify instruments and share banks, and possibly collect their favorite instrument modifications. People who wished to program their own MIDI files would no longer be stuck with the same instruments: they could send a bank along with their MIDI files to give their music exactly the

sound that they want. Of course, it would have to be expected that in order to maintain full compatibility, when someone creates a new instrument it would conform closely to what sort of sound Windows expects to be there so that users wouldn't have to continually restart Windows every time they wanted to play a different piece of music.

It's a simple solution to a difficult problem, and it would encourage creativeness and ingenuity on the part of sound card users as a whole. This alone could easily place any sound card company well above all the others in the popularity of their hardware.



Correction: In the last issue of the **WAFFER! MultiMedia Digest**, in my editorial I stated that the UltraSound card from **Gravis Technologies** used a ROM-based wavetable system to generate high-quality sounds. This was in error. It should have stated that the UltraSound is a **RAM** based system, which requires the user to load instrument samples from disk. We apologise for any inconvenience due to this error.



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Icon Hear It, Icon Make It

Reviewed by Bill Gallagher
Software by Moon Valley Software

In this job of commercial reviews one rarely gets the chance to get off on tangents that don't necessarily converge on the multimedia aspects of the PC, but this time I'm hoping that my publisher/editor will allow me some room for a piece on something that could help entice some of the younger members of your family to spend more time on the family computer. The products I am discussing here are Icon Hear It and Icon Make It, from those crazed people at **Moon Valley Software**. I say crazed due to the variety of implements they've included in these two toys for Windows.

My use of the word "toys" may imply that these products are for children, but that would be an injustice to those wizards out in Phoenix. The contents of the disks they had sent for review do have a practical and entertaining side to them.

At first glance, the Icon Make It software seems to be nothing more than an icon maker. And with the availability of so many free icon packages on local access bulletin boards many may feel that the cost of buying this software is not in their best interest. But I've used icon makers and DLL's of pre-packaged icons before and the chunky, block like icon graphics and the limited scope of the prepared icons that are the result of your time working with inferior products are not especially rewarding. They end up making your Windows display looking more like a refrigerator art gallery courtesy of your nieces and nephews. No one wants their business machine to look unprofessional. And on the same note, no one wants to use a software package that takes eons to learn, and that results in less than professional looking productions. This is the beauty of the Icon Hear It and Icon Make It products.

Commercial quality professional graphics and detail are at the very soul of these products. Leave it to those with experience, one might say. Well, with these gems of graphic manipulation you are the professional. No more using valuable on-line time with your favorite BBS trying to find some icon DLL's that might fit the program. No more icons that look like trashy BMP files. No, just fine looking icons that will keep your machine appearing like a prodigy of Microsoft's best. Looking, moving and talking like you've just stepped through the CRT.

With the advent of animated icons and the more advanced features of Icon Hear It one can do practically anything that your imagination can dream up. Along with these abilities, some pre-existing animated icons are available as well as WAV files that spice up the GUI so that it may present a tempting playground for the

kids. Or perhaps a power-packed business tool for the not so everyday world of computer use. Yes, it is a difficult thing to choose once you've loaded these programs. I find myself drawn between the more magical and comic animated icons, cursors, and sounds for my personal pleasure or the professional looking, and more down to earth possibilities that one can choose. Again, this depends on the user and the application.

Check it out for yourself. If you're the type who prefers hyper space to office space. Or prefers Loony Tunes to Sing along with Mitch. This is a nice little present for your visual and auditory senses....But then again if you like Sing along with Mitch and aren't so heavily into hyper space you will still find a use for this truly fun piece of software. It may take some time getting used to your machine moving and talking to you, but I have the notion that you'll get to like this more than your normal Windows screen activity. Icon Hear It calling me even now....can't you ?

MultiMedia NewsDesk

Here at **WAFFER! MultiMedia Productions** we like to continually get together and discuss what changes and additions should be made in upcoming issues of the **WMD**, and this is one such idea. The MultiMedia NewsDesk is going to be a small column which will appear regularly in the **WMD**, with its aim being to provide small news clips on what various companies are doing in the way of multimedia. If you work for a company which is into utilizing multimedia, or if you know of any news which you would think would be of help in this column, let us know, and we'll consider it for publishing.

Creative Labs

Creative Labs has announced a new product similar to its VideoBlaster card, named the VideoSpigot for Windows. The VideoSpigot is designed to do fast, high quality captures for Microsofts Video for Windows in various colour schemes and video resolutions, and accepts APL, NTSC and SECAM format video using standard audio/video RCA input, or S-VHS input. The VideoSpigot has a suggested retail price of \$499.95 US.

NEC

NEC, makers of the famous MultiSync monitor series, have released their new Image series of PC compatible computers. The Image series computers feature high-speed graphic-manipulation capabilities by utilizing high speed 80486 processors (available in 25, 33 and 66Mhz models), with built-in local bus 24bit VGA with graphics acceleration. The systems also feature built-in SCSI controllers and are all network-ready.

COVOX

Covox, makers of various sound-solutions, have recently released their newest software package, Voice Blaster. Voice Blaster is a voice recognition package for both DOS and Windows, and works on all Sound Blaster compatible audio cards to provide smooth, easy to program voice recognition. The software includes special "training" software for both operating platforms, to teach the system what to do when a certain word is spoken. Also included in the package is a special mono headset with a microphone attached for easy hands-free voice input.

WAFFER! MultiMedia Productions

Starting with Issue #23 of their popular WAFFER! MultiMedia Digest, WAFFER! MultiMedia will be selling the online magazine in various retail outlets in both Canada and the United States. The WMD will be sold on 3.5" disks, and will include copies of all the shareware reviewed in that issue. The package has a Suggested Retail Price of \$10 CDN.

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THE CD-ROM CORNER

By Brian Bourne

Due to unforeseeable circumstances, the CD ROM drive reviews that I had promised last issue have been delayed. In their place however we do have two reviews of CD titles that are now available in stores.

I would like to take this opportunity to remind you that your input is needed. If you would like to see a review of a specific product, or if you have a product you would like to review, please feel free to let us know.

CD-ROM Reviews

CD-ROM Review: The Case of the Cautious Condor Murder Makes Strange Deadfellows

Produced by: Tiger Media "An AirWave Adventure"
Suggested Retail Value: \$62.95 Cdn.

Reviewed by Brian Bourne

I have chosen to combine the review of the above two CD's as they are identical in design, although vastly different in storyline. As these new AirWave Adventure games are vastly different from anything you will ever have played, I should start this by explaining the concept behind how this game works.

The basis for the game is one that has never been used before. Tiger Media says in the back of their manual that these CD's are an attempt to combine classic radio drama with detective comics. Actually, that pretty much covers it. The games are pretty much like a multimedia choose your own adventure book. You can select which room to send the character into. You can tell the character to search an empty room or even to accuse any of the suspects. You hear the conversations through your sound card and you can listen to the main character as he talks to himself pondering on what just happened. Other than this though, you have no control over what happens.

In both games you are required to do detective work. In the Case of the Cautious Condor it is to find the murderer before the plane lands, and in Murder Makes Strange Deadfellows you are required to search your deceased uncle's haunted house and uncover his real will before all is lost. Both games have time limits and events continue to happen throughout the plane/house (as the case may be). If you miss a specific event that would have given you a clue you need, all may be lost and you won't even realize it until after the time limit expires.

If you're the type of person that likes a game that requires you to have quick reflexes as you avoid explosions and blow up enemies, then these CD's may not be for you. For the computer user who wants to relax and enjoy an interactive multimedia story unfold, this may be just what you are looking for. The sound tracks on both CD's are absolutely fantastic and worth the price alone. Hours of natural audio and hundreds of hand drawn images that the CD's have produce a challenging story of intrigue and mystery. The hand drawn images are all quite detailed much like the Japanese comic books. Although there is no actual animation both CD's have hundreds of different images for each scene. Regardless what type of game you prefer, the Airwave Adventures are a brand new type of adventure game that I believe is going to be here for quite some time. Take a look, you may be surprised how intriguing these stories can be.

CD-ROM Review: Our House: Featuring The Family Circus

Produced by: Context Systems Inc.

Reviewed by: Brian Bourne

I happened to be able to obtain a copy of this CD, and being a Family Circus fan with two little cousins, I decided to try it out. The first thing to make note of here is that this CD is for children only. What appears is a cut away picture of the house belonging to Bil Keane. The first order of business is to choose a room to investigate. The attic for instance. After clicking on the attic a picture of the room appears. In this case you see Bil's desk, computer, etc. Now you can start exploring the room by clicking on the different items. The narrator then explains what it is used for.

Along the base of the screen appears an icon with Billy and Dolly, one with Mom & Dad, one with Grandmom & Granddad as well as an icon with a couple dressed from Lincoln's time and another from George Washington's time. Each couple as you may have gathered represents a different time period and by clicking on the couple they will tell you what their equivalent of that item used to be.

For children ages 5-10 this CD-ROM would most definitely make a great gift. There are numerous items in the house that can be selected (everything from thermostats to toilets). Each item is not only explained by each time period but certain items have complete animations and explanations on how they work. Definitely a great addition to the classroom as well as the home library.

WMD 1993 Readers Survey!

In this issue, and continuing for the rest of the year, the WAFFER! MultiMedia Digest will be publishing it's all new 1993 Survey form, which will be included with each and every issue of the Digest. Please take the time to fill it out and mail it to us: the form can be found in the Icon Table of Contents, and Page 3 (type F4 - 3 - ENTER in Write to take yourself to page 3).

The results of the survey will let us know what you think about the Digest, and how we can improve it. We hope to hear from you soon!

Shareware Review: Zone 66

Program by Epic MegaGames Inc.,
Reviewed by Brad Barclay

You're in your high-speed bomber/fighter jet, flying over water and land, bombing targets, dodging anti-aircraft flak and missiles, and shooting down enemy planes which buzz around you like flies. This is the sort of mission you'll be facing when you play Zone 66.

Zone 66 is a memory-intensive, high speed, and high action arcade game, which makes the maximum of your computers hardware. It also requires a high speed system: at least a 386-25 is recommended for playing Zone 66. VGA is also required. One major drawback about running this game is that it requires the user to *NOT* load either HIMEM.SYS or EMM386.EXE in their CONFIG.SYS file. For most people, this means that you'll have to run Zone 66 off of your hard drive (as it is quite the large game, taking up about 1.5 Mb), but you'll have to boot your computer off of a boot disk that loads the absolute minimum to start up your system. But once started, this game is a joy to play.

When you start the game, it runs an opening story using smooth, high quality animation and sound via a Sound Blaster or Ad Lib compatible sound card. After watching the beginning of the story, you come to the main menu where you may set up how the game behaves, and start playing the game, along with the standard high score screen, registration info, and the other selections which seem to be standard in todays high-tech shareware games. Once you choose to start the game, you are asked which mission you want to play. For the shareware version you only have one selection, although with registration you have a total of 6 missions to choose from. This review will concentrate on the first shareware mission only.

The mission starts with more of the story line, explaining why you are where you are. After reading or skipping the story (which is interesting to read the first time you play, but can be skipped for subsequent plays), you select your ship type. Two different types are available: one high-speed low bomb capacity fighter, and one low speed, high bomb capacity bomber. For the brave at heart, you also get the choice of controlling one of the 3 enemy ships (all of which are inferior to the two ships you have available to you). Once you select your ship, you get the chance to select what bomb types you wish to carry. After this selection is made, it's time to fly.

Flight may be controlled from either the keyboard or a joystick controller. Your object is to bomb all of the enemy targets, and shoot down enemy planes, while avoiding getting shot down yourself. This is a simple and common premise in arcade type games, but the smooth-scrolling graphics and the high quality synthesised and digitized sounds make this game a real gem.

The mission and game are quite difficult, but there is one feature which will save you from just giving up on the game: you may continue playing after you die as many times as you wish, with all the targets you bombed still destroyed. This way, no matter how badly you play, you will still be able to complete the mission: it simply affects your score. After playing a few times you can get better and better at the missions available, hopefully cutting down on the number of retries required, and also raising your possibility of getting a high score.

Overall, this is a good, fast-paced game with excellent graphics and sound, which would make a good addition to the game collection of anyone who likes fast paced shoot-'em up type games.

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What is the Virtual Village?

Hardware Review: The ATI Graphics Ultra Pro

Manufactured by ATI Technologies Inc.,
Reviewed by Brad Barclay

Today, computer hardware is being designed with the maximum speed obtainable in mind. Especially in the field of multimedia, better speed means better quality. In the area of video, numerous solutions to the bottleneck found in transferring and displaying text and graphical data to the monitor have been developed. One of the biggest developments in the last year that everyone is talking about is local video bus, which directly links the video card memory to the CPU's data bus. But what if you already own a computer, and you don't have a local bus slot?

Most computers today, including high speed 486's are still built with only ISA bus types with 8 and 16 bit bus slots. This is the standard type bus connector, and has been around since IBM released the very first PC back in 1982. So where do you turn if you require high speed graphics capabilities, and excellent colour capabilities under various resolutions? The Graphics Ultra Pro is the answer.

The Graphics Ultra Pro from ATI incorporates ATI's Mach 32 chip

technology, which has video acceleration capabilities, 4, 8, 16 and 24 bit colour capabilities, utilizes one or two megabytes of high speed VRAM memory chips, and supports resolutions up to 1280*1024, is one excellent possibility to easily upgrade your graphics capabilities, not to mention speed, without having to upgrade your entire computer. If you use a graphical-oriented operating system such as Windows or OS/2, then the speed difference and colour capabilities will make a very big and noticeable difference in your everyday computing. For example, using the Graphics Ultra Pro's Mach 32 driver for Windows in 800*600*24bit mode, there is absolutely no need to update the background wallpaper: the required colours were already available in the palette. Thus, in our test, we were able to load numerous different 8-bit images onto the screen, all of which would require radically different palettes if used on a standard VGA system, and all were able to be displayed at once, all in their exact true colours, without worry of conflict. Window drawing and refreshing were also extremely fast: there was quite the noticeable difference between the Graphics Ultra Pro, and the generic 1Mb VGA card on our 486-33 test system.

Under standard text situations the Graphics Ultra Pro also scored high marks: using one popular video test utility, we measured the Graphics Ultra Pro to have a speed of just over 210 000 characters per second for direct video writes on the same 486-33.

The Graphics Ultra Pro also has a mouse option, which gives you a standard InPort mouse plug for using nearly any popular model of mouse with, but there is little need: the three button mouse that comes with the card is quite comfortable. Nonetheless, it was decided that I preferred my good old Microsoft mouse I paid \$150 for 3 years ago, even though it was a two button model. Following the instructions, I took out the mouse driver installed by the GUP's installation software, re-installed my updated Microsoft mouse driver, turned off the system, and installed the Microsoft Mouse. After powering up, it was found that the mouse behaved extremely erratically. So for now, I've switched back to the new three button mouse that came with the GUP, which appears to be working just fine.

The software that came with the GUP is decent: it comes with a simple graphics file viewer for viewing .TGA still photos in 8, 16 and 24 bit colour modes, and for viewing animated .FLI and .FLC files. Included was a single .FLI file which was cute, and demonstrated the excellent smooth-animation capabilities of the GUP. In my opinion, though it may have been more interesting if they had provided a 24 bit colour image to view: many people upon installing such a high colour capable card would like to be able to see what 16 or 24 bit colour looks like (considering many people who would be interested in buying such a card will be upgrading from 8 bit colour cards). The software package also included a special VESA driver for the card, installation software, and test software, along with special software drivers to install into numerous software packages, including Windows 3.1, AutoCad, OS/2's Presentation Manager, Word Perfect, Lotus 1-2-3, Microsoft

Word, and other packages. Due to the software we have available on the test system here at WAFFER!, we were only able to test the Windows drivers.

The driver system for the Graphics Ultra Pro in Windows is not simply a single driver, but a collection of drivers which install into your **\\WINDOWS\\SYSTEM** directory. These drivers allow for various display resolutions and colour schemes, any of which can be selected at any time. To change the resolution and/or colour scheme, the user simply runs the ATI FlexDesk software, which is a windows-oriented package designed to simplify the modification of how your Windows display acts.

Flexdesk also allows the user to set their DeskScan options, where the resolution of the display is smaller than the actual Windows desktop (for example, you may specify that you wish to run a desktop size of 1280*1024, but at a resolution of 640*480). This gives the user the advantage of a large display size for placement of many windows on the screen at once, when they only have access to a display that can show a small resolution. The user moves around the screen by moving their mouse pointer to the edge of their current display window, and the background with smoothly and quickly scroll to the new area.

A new beta driver for Windows 3.1 is now available from ATI which also provides special support for Microsoft Video acceleration. This video acceleration provides wonderfully smooth playback of .AVI files in large windows, with excellent 16 bit colour. The new driver is available directly from ATI, or can be found on CompuServe in ATI's forum (GO ATISUPPORT to access ATI's support forum).

As nice as the Graphics Ultra Pro card is, it was not without its problems when being installed into our test machine. All of the major problems we experienced while trying to use the Graphics Ultra Pro revolved around its near-total incompatibility with the VideoBlaster from Creative Labs. With the Graphics Ultra Pro installed into our test machine, no software could even detect the presence of the VideoBlaster. After numerous hours of frustrating work, we have found a solution that, while it does not provide a total fix, at least makes some use out of the VideoBlaster. Creative Labs has released a driver called VBIOSSET.EXE, which supposedly fixes the problem, and in a sense, it does: the VideoBlaster works perfectly under DOS when this driver is installed. Under Windows, we were only ever able to get the VideoBlaster to work in 640x480x256 colour mode. This at least allows owners of the VideoBlaster to continue to use their hardware, even if it may not be at their preferred resolution and/or colour scheme. We'll continue to research this problem, and will publish any results we find in a future issue.

The Graphics Ultra Pro is definitely a professional card, and because of this, it also carries a professional price: we have seen the card in stores selling in the \$700 - \$900 CDN range, a price which is definitely out of the budget of most users. On the other hand, for business applications requiring high resolutions,

excellent colour quality, and high-speed graphics, this is definately *the* card to buy.

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Are you a sysop or the user of a BBS system, large or small? Do you and your users wish to receive a copy of the **WMD** every month, along with all shareware and public domain software we review in each issue? WAFFER! MultiMedia's new and improved Official BBS service is just the thing for you!

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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.

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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**.

The **WMD** is now online to CompuServe! To reach us on CompuServe, please leave mail to the following address:

CompuServe: 71722,535

We hope to hear from you soon!

Wrapping It Up...

This wraps up yet another edition of the **WAFFER! MultiMedia Digest**. here's a listing of some of the many upcoming events in the **WMD**:

- Our CD-ROM Summit Edition, with reviews of numerous new CD-ROM drives and systems,
- A detailed review of Gravis' UltraSound stereo audio card,
- Our very own CompuServe forum, along with improved BBS support!

- Reviews of lots of new Shareware and Public Domain Software,
- New Music now based on General MIDI instead of the Ad Lib .ROL format
- Special offers!
- ...and a whole lot more!

We hope to see you here again next issue! Keep on Blasting!