

Warheads for Windows NT/95

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About the Authors

Special Thanks

What's different about this version?

32 bits - Twice as fun!

Version 2.04

Fixes a bug that would not allow the 32 bit version originally compiled for Windows NT to run under Windows 95. Also, this version is officially the death of the 16 bit version. We will no longer revise the 16 bit version. We will only revise the 32 bit version. We will continue to sell the 16 bit version to those who want it, but why would you want it?

Version 2.03

Fixes a small bug which locked the cursor in the upper left hand corner of the screen briefly during the first few moments of the game.

Version 2.02

Version 2.01 does not properly respond to keyboard input. The keys A, and D should fire missiles from the left and right missile bases, respectively. Version 2.02 corrects this problem, as well as another problem with General Protection Faults upon exit from the shareware version.

Version 2.01

Version 2.00 had a bug which caused problems with the use of third party libraries. This was discovered when the WAR-DINO library was being tested. We quickly fixed the problem and created the new version. This disk contains version 2.01.

Version 2.00

Please see the topic [New Features in 2.0](#).

Version 1.12

Eliminated old sound effects. Switched to new and improved wave sound effects.

Version 1.11

A new High Score system has been implemented. You can now save five high scores with whatever cool tag you like. Also, a menu has been added allowing menu access to program features. A small bug that would occur when Warheads couldn't find the WAR-BMP.DLL, causing a UAE, has also been eliminated. Warheads for Windows no longer runs in real mode. If you attempt to run it in real mode an error message is displayed.

Version 1.10

The problem with the icon jumping (when minimized) has been obliterated. Father Guido Sarducci paid a special visit to our computing facility and performed what is known as a [Window Exorcism](#).

We have improved the bomber. It is now a bit more challenging. It is not predictable any longer. We have also added a restart button to the Control, and Status dialog boxes so that players that get really po'd about the city they just lost have some recourse.

Version 1.01

The release of Windows 3.1 fixed a little known problem with the tempo of sound. Our program ran the sound at a value of 255 (fastest) because there was no reason to think that Microsoft (R) would get their act together. Well low and behold they did and the darn music ran too fast. So we went in and fixed it. Thus the new version.

Known Bugs

Praying Mantis

What does registration get me?

That's a pretty good question. Here are some pretty good answers:

- You get the absolute latest version. When you register we send you a disk which contains the absolute latest version that we have on hand. We periodically make updates to enhance and expand features. You can be sure that you have the most recent version by registering.
- You get the whole game. When you register we send you a personal ID code which you can use to access all the customization features in the game. The personal ID code also disables the annoying shareware notices at the beginning and end of the game.
- You get our number. We tell you how to contact us if you need help.
- You get to offer feedback. If you're a registered user, we value your comments and will try our best to improve our games to meet your needs.
- You get a chance to be in the Warheads Hall of Fame.
- You get to input to our new games. Based on the limited success of the original version of this game we were able to write a bunch of others (Warped for Windows). If you register it's like saying to us, "yes we value your efforts - please make more games". We want to write the kind of games that you want to play. So tell us what you want and we'll try to make it.
- You get to support an underground culture of rogue programmers whose sole purpose in life is to absorb the complexity of operating systems and ponder the societal impact of silicon, transistors, magnetic media, and low frequency monitor emissions.

Seriously though, new software doesn't grow on trees you know. It's nurtured by weird people who stay up late at night and type real fast and eat cold pizza and drink warm beer. They need money for programming books and magazines and compilers and electricity...

We plan on writing more games for Windows, but only if people like you respond. We can't afford to put our time into something that offers nothing in return. (Yes, we get the satisfaction of the final product and actually have a lot of fun doing this stuff, but did you ever try to serve a Windows program for dinner?) If you would like more Windows games, then support the authors who make it happen (not just us, but all those who are writing Windows games).

Registration Questions

What's it cost?

If you decide that you would like to register this program, the fee is \$17.00. That's pretty cheap for a Windows program, don't you think?

Didn't I already pay some money for this thing?

If you obtained this program through a shareware distribution service, the fee you paid was not for registration. It was for the media and handling charges associated with distribution. The distributor got that money, not the authors. You do not have a registered copy.

What if I don't want to register?

Was it something we said? We didn't mean to offend you. Please reconsider. Perhaps you'd enjoy one of our [other games](#).

But, if you decide not to register this game then please, by all means, give it to a friend, upload it to your favorite BBS, send it to your aunt Edna in Albuquerque. Even if you do register, we encourage the copying of this game for evaluation purposes. Remember though, at the end of 28 days your evaluation period is over. You must either register or discard the game. You are on your honor (and remember that Santa Claus is always watching).

OK, How do I register

To register, print out a copy of the [registration form](#)(click the words to jump to it). Send it with a check, money order, or cash equivalent to the following address:

*Eric Lee Steadle
750 Harrison City Road
Trafford, PA 15085-1634*

A note to residents of Pennsylvania:

Pennsylvania requires us to collect 6% state sales tax. Please include State sales tax with your order.

A note to those of you in Canada:

If you are sending a check drawn on a Canadian bank then please add \$5.00 to the amount for processing fees (the banks, not ours).

If your bank also does business in the United States and you have an account which allows you to specify the type of currency then you do not need to include the extra processing fees. Just specify the currency as United States Currency.

If you send a Canadian Postal Money Order in United States currency, then you do not need to add processing fees. (The post office will issue you a postal money order in either currency. Please make sure that you specify United States Currency).

A note to those of you outside the United States and Canada:

We cannot accept checks drawn on a bank outside of the United States. We suggest an International Money Order.

Credit Card Users

We apologize, but since we are a small operation, we can't process orders paid with credit cards. Please send a check or money order. Thanks!

Other programs by the Authors

Warped for Windows

Eric and Brian have recently worked their magic again on six arcade games collectively known as Warped for Windows. These six games - SpaceRocks, Venusian Onslaught, RIPCORD, Johnny Fingers, Walnuts, and The Execution - have some pretty impressive features, including:

- Two Player play (4 of them let two people play simultaneously!)
- Sound Card Support
- Adjustable Keyboard, Mouse, and Joystick Control
- High Resolution Video Card Support
- Scaleable / Sizable Windows
- High Score and On Screen Score display
- Options Galore
- Full Frontal Nudity - sorry, this one didn't make it.

Walnuts - Try to catch nuts dropped by a psychotic squirrel high in the treetops. Watch out - he's got a supply of rocks which break your basket.

RIPCORD - Dangerous Dan and Fearless Fred decide that a skydiving competition is the only way to prove who is more of a man. To make it interesting they decide to dive over sparse islands in the South Pacific. Who will win this battle of testosterone?

Venusian Onslaught - The Earth has recently been devastated by a nuclear holocaust. Dissidents on Venus convince the Venusian government that now would be the ideal time to invade and conquer "that pitiful excuse for a planet - Earth". Earth's only hope is a brave soul named Voyde Farstar. Can Farstar and his faithful canine companion, Toby, turn back the entire Venusian military armed only with an aging and decrepit missile launcher?

SpaceRocks - After the attempted invasion of Earth, Voyde Farstar tries to make his way to the outer planets and rescue the hostages kidnapped by the Council of the Other Planets. The remains of a destroyed planet, now a dense, impenetrable asteroid belt, stand in his way. Be careful - the council of the outer planets knows you're coming; you can count on them being prepared.

The Execution - You are one of the world's best lawyers and you've decided to take on your toughest case since the Bar exam. Your client is an alleged murderer and is facing certain death unless you can defend him against these heinous charges. Your success will depend upon your mastery of the English Language.

Johnny Fingers - Career criminal Johnny Fingers is about to retire, however, before he decides to forgo his chosen profession in favor of a Caribbean resort he decides to take on an apprentice. You'll learn how to crack safes from the master, but watch out, the police know Johnny's going away. It makes them that much more determined to catch him - and you too!

The games listed above can be obtained singly (the price of each varies), or you can obtain the entire package for \$35 from the authors. Obtained separately the games would cost you a lot more, but purchase the package and you'll get not only the six games mentioned above but something we call Grimmy's Playroom (a shell for launching Warped Games) as well as a bonus game, "Toby vs. the Anonymous Large Amphibious Lizard". What a great deal! More fun than 500 channels at about the same price as a month of cable! Hurry before the government deregulates us and we're forced to raise our rates like the cable companies!

[Order Forms](#)

New features added by request of registered users.

A lot of the feedback we got from registered users was taken into consideration when we revise the game. Almost everyone comments on something or other, so we categorize the suggestions and complaints, then rank them, and implement the ones we feel like implementing. Here's a list of the current enhancements.

Wave Sound Effects and MIDI Music

A lot of people asked why we didn't take advantage of sound cards. The reason is simple: there weren't any when we originally programmed this beast. We now support all Windows compatible sound cards which provide MCI Wave and MIDI services (most do). Because the old sound function calls were very seldom used, they were buggy. We decided to scrap that method (the one that uses the PC speaker) in favor of sound card support.

Variable Number of Missiles in the Missile bases

You can now choose the number of missiles in each of your missile bases. The range is from 1 to 99. This enhancement is available to those who register Warheads.

On screen display of the number of remaining missiles

During play, you can now see how many missiles are remaining in each of your missile bases. You can also turn this feature off. (This enhancement is available to those who register Warheads.)

Two Players

Now you and a friend can have a friendly competition to see who'll rule the world after a nuclear war. Just select two players.

Incoming Missiles Branch

Incoming missiles now contain multiple warheads which can be independently targeted at each of your cities. At some point in their travel, you might see a missile "split" into two or more missiles, each headed in a different direction. You can also turn this feature off.

Blossoming Missile Explosions

When your Anti-Ballistic Missiles kill an enemy missile, the enemy missile explodes as well. We call this feature "blossoming explosions". It's really quite thrilling when you kill a whole bunch of missiles in one fell swoop due to blossoming explosions. You can also turn this feature off.

Enhanced smart bomb intelligence

Because of the new "Blossoming Missile" feature, the intelligence of the Savant smart bombs was enhanced. They are now completely impossible to hit.

Varying speed on outgoing missiles

You can change the speed at which your Anti-Ballistic Missiles reach their target. This is very helpful for those with big display sizes (1024x768). Previous versions had the missile speed calibrated for (640x480) screen sizes and when run on larger displays, lagged quite a bit. Now you can set the speed at which the missiles move. This enhancement is available to those who register Warheads.

Missiles erase properly on all resolution screens

Outgoing missiles would often leave residual pixels near the missile bases because of small errors in our calculation routines (this happened mainly on machines with large video displays). The routines have been adjusted and now there are no residual pixels left on any displays.

Animation between rounds is now optional

The animation between rounds (the little hands counting the number of remaining missiles and cities

as well as the rebuilding of a city) is now optional. Those who register get the option of turning off this between round animation.

Animation between rounds is now Windows Environment Friendly

If you choose to keep animation on, the animation no longer blocks the system for long periods of time. Other windows programs now run more freely, and Warheads itself even lets you do things while it's animating (like hit the Boss key).

Updated Status Display

The status dialog now shows settings for two players.

Ability to save settings

You can save the settings of the game so that the next time you play, you don't have to fuss with them again. This enhancement is available to those who register Warheads.

More bonus cities

You can now set up to 15 bonus cities in reserve. This enhancement is available to those who register Warheads.

Finer control over starting level

You can now start at any level (in increments of 1) up to level 20. This enhancement is available to those who register Warheads.

Stealth Bomber behaves better

The bomber doesn't pulverize everything in sight anymore. It's also a bit easier to destroy. However, it now gets progressively more difficult to destroy as you advance levels.

People with 3 button mice don't lose cities

If you had a three button mouse and tried to use the middle button, you were probably not a very happy camper when Warheads randomly blew up one of your cities. This is no longer the case. Those with three button mice no longer need to worry about accidentally hitting the third button.

You can design your own cities and sound effects!

If you have access to a compiler which produces Windows programs, then you can make your own cities. Not only that, but you can create your own sound effects as well. You want to hear 'em scream... no problem now. We've included everything you need to create a new resource library that can be used with the Registered version of Warheads. Obviously this is a feature for really advanced users. For more information about creating a new resource library, see the topic: [Creating a New Resource Library](#).

The Cities are Bigger!

Those of you who have high resolution video cards won't have to squint any more to see the cities. Through the magic of Resource DLLs Warheads now adjusts the size of cities so that they can actually be seen in resolutions above VGA. So if you've got one of those fancy Super VGA displays you'll be a lot happier knowing that you're using it to its fullest potential.

There's a super-nuker

The super-nuker is a special weapon that was developed despite all those cuts in the defense budget by spineless, blood-sucking, tax-and-spend, welfare-endorsing, health-care-for-everyone, I-can't-be-responsible-for-every-underfunded-small-business-in-America, bleeding-heart, gender-neutral, special-interests-benefit-everyone-in-the-long-run, *politicians* in Washington. The super-nuker is the ultimate defense weapon, destroying everything (well almost everything) within radar range. Unfortunately, due to budget constraints, only one was built. However, as the people in your cities die, funds from their expensive health care benefits are shifted back into the defense industry to make

more weapons. You'll get more super-nukers as more people die. By the way, the super-nuker doesn't work on Grimmy. This enhancement is available to those who register Warheads.

How to Use a Different Library

This version of Warheads uses something called Resource Libraries. Resource Libraries allow you to use different sets of pictures and sound effects for your game. Resource Libraries only work with the registered version of Warheads.

Two different Resource Libraries are shipped with Warheads. One set, called WAR-BMP.DLL, is used for low resolution displays (VGA). The other set, called WAR-BIG.DLL, is used for high resolution displays (SVGA). The use of these two libraries is automatic. Warheads checks what kind of display you have and uses the appropriate library.

Warheads for NT also ships with two libraries, both high and low resolution versions. These are called WAR32BMP.DLL and WAR32BIG.DLL. Again use of these libraries is automatic.

We have sent out information which tells how to create new libraries, and expect that some additional resource libraries will be created. If you come across one and would like to use it, this topic explains how.

To use a different resource library, you'll need to edit the WARPED.INI file. WARPED.INI can be found in your Windows directory (most often called C:\WINDOWS). Use Notepad or any other ASCII text editor to load this file.

WARPED.INI is broken into sections. Each section begins with the name of the application surrounded by square brackets. Search for the section called Warheads. When you find it, add the following line anywhere underneath of the Section heading:

```
ResourceLibraryName=WAR-LIB.DLL
```

For Windows NT you'd use

```
ResourceLibraryName32=WAR32LIB.DLL
```

Your library might be called something other than WAR-LIB.DLL or WAR32LIB.DLL. Make sure you type the name of the library exactly as it is named. DON'T type a path.

Save the WARPED.INI file and exit Notepad.

Be sure to copy your new Resource Library into the Warheads directory. If you don't, Warheads won't be able to find it.

Start Warheads as you normally would and make sure the library is functional.

Note: If you're running the 16 bit version of Warheads, make sure you specify 16 bit libraries. If you're running the 32 bit version, make sure you specify 32 bit libraries. You can tell the difference by the name of the library: 32 bit libraries have a 32 in their name. So match up the 32's: ResourceLibraryName32=WAR32LIB.DLL is correct - both have a 32. ResourceLibraryName32=WAR-LIB.DLL is WRONG - the lib name has no 32! Nothing tragic happens if you don't specify the right library. You'll probably crash Windows, but NT will recover gracefully with a nice informative error message. Remove the offending line of WARPED.INI, or specify the correct library name and everything should be fine.

What if I already have a previous version of Warheads?

In it's 16-bit version, Warheads was registered by a number of you folks out there. If you'd like to obtain the most recent 16-bit version (2.03) you can do so by downloading it from your favorite bulletin board system, on-line service, or shareware distributor. (We post the latest version on America On-Line as often as we update it.) Using the ID codes you got when you registered the 16-bit version, you can gain access to the latest features in any 16-bit version.

After version 2.03 the 16-bit version will no longer be updated*. All our development efforts will concentrate on 32-bit versions.

If you registered any 16-bit version of Warheads you may upgrade to the 32-bit version for a nominal charge of \$7.00. We'll send you the latest 32-bit version along with new ID codes for all 32-bit versions. You can order an upgrade with the Registration Form.

Note: If you registered Warheads a real long time ago, you may not have gotten a set of ID Codes. If you haven't see this topic:

[How do I obtain my ID codes?](#)

* Please note that 16-bit ID codes won't work on the 32-bit version.

How do I obtain my ID codes

If you registered Warheads a long time ago, you probably don't have ID codes.

However you can obtain them by sending the information below to: STEADLE@AOL.COM. We'll send back your codes in a return E-Mail.

In your E-Mail message please specify the following:

Your full name

The names of the games you registered

The version numbers of the games you registered

The approximate date of registration (to the nearest month).

If you've been hiding under a rock and don't have an E-Mail ID, you can also send Snail-Mail with a Self-Addressed Stamped Envelope to:

Eric Lee Steadle

750 Harrison City Road

Trafford, PA 15085-1634

We will send you your codes so that you can access the new features of the latest version. Remember to include the SASE.

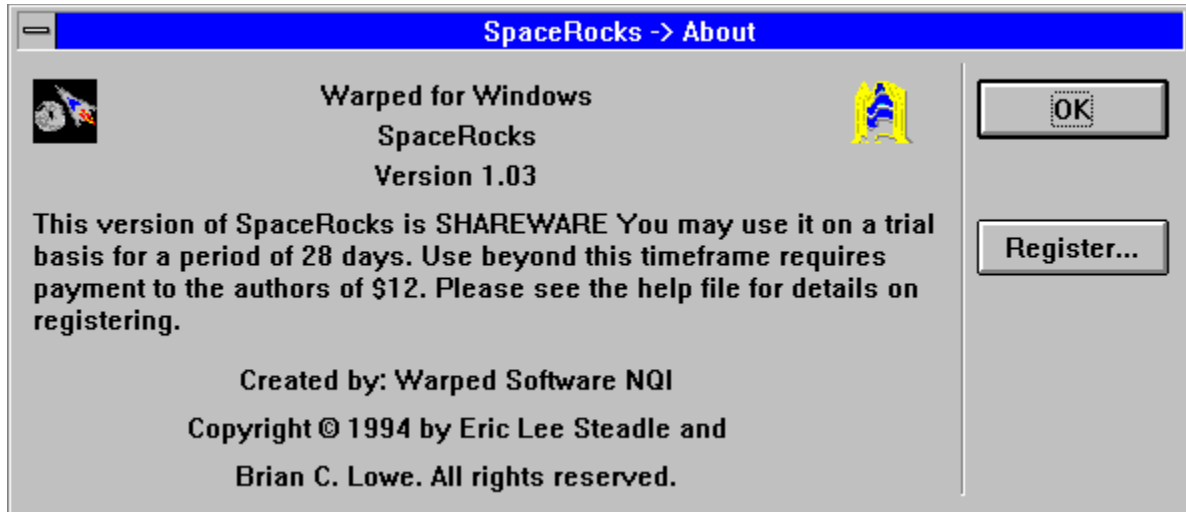
[Other programs by the Authors](#)

Enabling Features of this Version

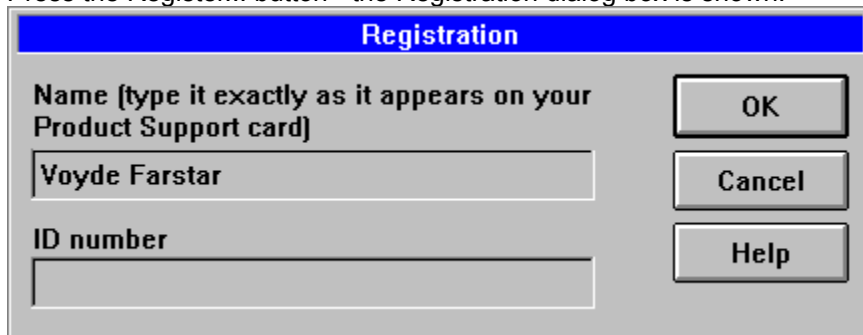
When you register, we send you a disk with a Registered version on it. The registered version doesn't need any special codes before using. However if it's been a while and you downloaded a new version from some BBS or on-line service, you'll find that the downloaded version shows shareware messages. To disable the shareware messages, all you need to do is enter the special set of codes we send you when you register.

To enable the features, have your product support card handy and follow these instructions:

Start the appropriate program - an About box similar to the one below is shown (this is an example for SpaceRocks, but all of our games are similar):



Press the Register... button - the Registration dialog box is shown:



Type the name on the Product support card exactly as it appears on the card. Include spacing, capitalization, and punctuation.

Type the ID code as it appears on the product support card. Include spacing and punctuation here as well.

Press OK.

If you typed the name and the ID code properly, the shareware notice and Register Button disappear. Also, all game features are enabled, and the Shareware notices at the beginning and the end of the game go away. If you did not type the name or ID correctly, try again. Remember punctuation and spelling are significant.

Hall Of Fame

Do you want to be rich and famous?

We can't help you with the rich part, but we can do something about the famous part. Here's the deal (for registered users only)...

Our next shareware game will contain a special place for the names of those with exceptional skill and luck. We are including a special help topic which lists the names of the first 50 people to find the Easter Eggs in two of our current games.

Warheads

Warheads for Windows has a special level embedded in the game. This level is very difficult, and if you get past it with at least one city intact you deserve a special reward. That reward is immortalization in the Hall of Fame. The first 25 people to send in Grimmy's "Phrase of the Day" which you get after you beat the level, will be placed in the Warheads Hall of Fame.

Warped

Warped has two secret passwords which are used to unlock access to the Warped for Windows Certificate of Achievement. Send us a copy of the certificate with your name on it and we put the first 25 names in the Warped Hall of Fame.

The Easter Eggs only work in the registered versions of the software, so in order to be famous, and get your name in the hall of fame you have to register.

List of Immortals

Scenario

Warheads for Windows is set in the near future. You are an Anti-Ballistic Missile Launch Officer whose job it is to site and launch Anti-Ballistic Missiles at incoming enemy missiles. Your Anti-Ballistic Missiles detonate at the location you specify. If enemy missiles are within the vaporization range, they will be destroyed. Otherwise, they will continue until they reach their destination, most often one of your Cities.

Be warned that your enemies have not been resting on their laurels during the Cold War. Rumor has it that a new type of Intellectually Enhanced Intercontinental Cruise Missile exists which has the ability to target only cities, and can even make attempts to evade your Anti-Ballistic Missiles.

Your enemies have also been working on some new technology. A heavily armored strategic bomber (NM-156), capable of withstanding significant damage, will invade your air space. The NM-156 can be destroyed, however; just keep your cool (it takes damage so you have to hit it a couple of times). Your intelligence organization believes that this bomber has stealth capabilities. Unlike the bombers of a large lethargic military organization we all know, this one actually works.

Object of the Game

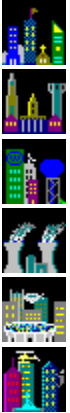
If you played the previous version of this game enough, you probably thought that the stealth bomber really didn't work. Actually it wasn't programmed to go stealth until after round number 50. No one ever got to level 50. In this version we changed how it works so now you'll definitely notice when it goes stealth.

Object of the Game

The object of Warheads for Windows is to keep your cities alive. You do this by firing anti-ballistic missiles at incoming enemy missiles. If any enemy missiles are in the neighborhood when your ABM explodes, they are destroyed. If an incoming missile reaches one of your Cities, it will cause a Humongo Nuclear Explosion and kills everyone in the city (this is not good!!!).

Scenario

Cities



You have six cities assigned to your defense. Each city is a major military target for one reason or another. At the end of each wave of missiles, you receive bonus points based on the number of cities you have left. Obviously the more cities you save, the more points you receive, and the lower the death toll (the U.S. Census Agency will be tracking this number. If you lose too many people, they reduce the number of representatives you can send to Congress. Then you don't get new multi billion dollar pork barrel projects in your home town. Of course your home town is probably a smoking pile of rubble by now...)

Missile Bases

Bonus Cities

Missile Bases



You have two missile bases, one on the far left and another on the far right, from which you launch all missiles. By default you get 20 missiles in each missile base. Using the control panel (a feature of the registered version of this game) you can change the number of missiles from 1 to 99. This is a significant enhancement from the original version of this game.

In early rounds, you don't need that many missiles. In later rounds, you'll need all that you can get.

[Mouse Controls](#)

[Keyboard Controls](#)

Blossoming Missiles

Normally your anti-ballistic missiles vaporize everything in the vaporization range, however if you enable Blossoming Missiles, then when you vaporize an enemy missile it explodes as well, and vaporizes everything near it. This can set up a nice cascade or blossom effect that can destroy a significant number of incoming missiles. This option can be enabled or disabled with the registered version of Warheads.

Now just so you know... in reality Nuclear Missiles aren't armed until just before they reach their target. So they probably wouldn't blow up in a blossoming explosion. In addition, nuclear warheads are very touchy pieces of hardware requiring a precise geometric configuration in order to properly detonate. An anti-ballistic missile would most certainly twist, mutilate and otherwise disrupt the geometry of the delicate components. Thus the warhead, in reality, couldn't possibly explode. But what the hell, this is a game, it isn't reality!

Scoring

Ballistic Missile	= 75 points
Smart Bomb	= 200 points
Bonus for each remaining city at end of round	= 100 points
Bonus for each unused missile at end of round	= 5 points
NM-156 Bomber	= 500 points

For each destroyed city, between fifty and a hundred thousand people (or so) are killed. These casualties contribute toward your Super-Nuker fund (see [New Features](#)).

Bonuses

Bonuses

Every 5000 points you earn causes a city to be rebuilt. You'll find that you need them.

Every 1 million casualties gets you a Super Nuker (see [New Features](#)).

Scoring

Mouse Controls



Use the mouse to move the cursor to the missile destination. Use the Left Mouse Button to fire missiles from the left missile base. Use the Right Mouse Button to fire missiles from the right missile base.

The mouse buttons are also used to call up the Status Dialog Box and Control Dialog Box. See these topics for further details.

Keyboard Controls

Keyboard Controls

First, let us say that there is no way to escape having a mouse; you must have one to move the cursor effectively.

Next, you can use V and B to fire missiles from the left and right missile bases (respectively).

N is the key for the Super-Nuker. Use the Super-Nuker to kill everything on the screen at once. Use it when you need it - you only get one. The Super-Nuker is a feature of the registered version only.

Here's a list of other accelerators.

F1	Help
F3	Quit the game
F9	Control Settings (brings up the Control Dialog Box)
CTRL + H	to see high scores
CTRL+S	to see the Status Dialog Box
CTRL+X	Quit the game
ESCAPE	Boss Button (only available in Registered Version).

Note: the shareware version will display the about box before exiting. If you want to play the game at work and you need the boss button, then you really ought to [register the program](#).

Using the CTRL keys in conjunction with Left mouse button shows you the [Control Dialog Box](#). See this topic for additional information.

Using the CTRL keys in conjunction with Right mouse button shows you the [Status Dialog Box](#). See this topic for additional information.

Mouse Controls

Control Dialog Box

Warheads for Windows contains a dialog box which allows control over various aspects of the game. This thing can be called up by chanting "There's no place like home" three times and then holding down the CTRL key while pressing the LEFT mouse button. You can also use the F9 function key. The control dialog box is automatically displayed when the game first begins, or when you choose to restart the game.

Each of the controls is described below:

Game Type

Warheads lets you play one or two players. Each player takes turns playing the same round.

Sounds

Warheads uses wave sound effects, as well as MIDI background music. Your computer must have the proper hardware (a sound card) and the proper drivers correctly installed. Warheads uses the Windows Media Control Interface (MCI) to control your sound hardware. Make sure that in addition to your sound driver, you install the MCI drivers as well. The MCI drivers for Wave and MIDI come with Windows. See your Windows manual for additional information.

Incoming Missiles

Allows control of the speed of the incoming missiles. The three speed settings are means about which the actual incoming missile speed will be distributed. Default value is Hare. In addition, you can control whether the incoming missiles branch and whether they blossom when hit. Note that as you progress during the game, the speed of the incoming missiles increases automatically.

Outgoing Missiles

You can control the speed at which your anti-ballistic missiles arrive at their target, as well as the number of missiles you start with in each missile base. In addition, an option has been added so that you can see the number of remaining missiles in each base.

Starting Level

Using this control you can start at a higher round than the default (which is the first level). The highest level you can start is level 20.

Bonus Cities

Using this control you can start your game with extra bonus cities. Up to 15 bonus cities can be selected.

Smart Bombs

Using this control you can control the intelligence of the smart bombs. There are five intelligence levels. The default is Smart. Note that as you progress during the game, the intelligence of smart bombs increases automatically.

Other Options

With these controls, you can request that the status dialog be shown between rounds, that the game be paused, and that you're a sucker.

Use Between Round Animation

Warheads normally counts the number of missiles in each base, and the cities that you have remaining after a round. If you don't want to see this count, you can turn it off.

OK Button

The OK button commits any changes on the dialog to the current settings and resumes game play. The OK button does not save changes to the current settings if you haven't registered. In fact, Warheads will tell you this with a message box. The shareware version is thus limited to the default game settings.

Cancel Button

This button ignores any changes you make to the dialog and resumes game play.

Help Button

This button loads the help file.

Load Button

Once you get the game adjusted the way you like it, you can save it (with the Save button). Then once you've done that, you can load your settings all at once by pressing the Load button.

Note: All of your settings are saved in a file called WARPED.INI in your Windows directory. These settings are loaded automatically at the beginning of the game. You won't need to use load every time the game starts. But if you make some temporary changes and wish to go back to your standard setup you need not exit the game, simply click the Load button. Load is not available in Shareware versions of the game.

Save Button

Once you get the game adjusted the way you like it, you can save it by pressing this button. This button writes all of your settings to a file called WARPED.INI. The next time you start the game your options will be loaded automatically. You can also load the settings in your INI file at any time using the Load button.

Note: Your options are NOT automatically saved when you exit the games. They were programmed this way intentionally. If you want to save options you need to use the Save button. Save is not available in Shareware versions of the game.

Defaults Button

This button will restore the default options (the options that the game sets the very first time you run it). This allows you to play with your setting, without ever getting too far away from the established 'normal' options.

Restart Button

Click this button to start over during the middle of a game. You'll notice that certain options are not available during the middle of a game (for example you cannot change number of players while you are engaged in a game). The Restart button allows you to quit the current game, begin again, and enable all options.

Note: When you first start a game, you'll find that the Restart button is disabled. You can't really re-start until you've started once. Subsequent visits to this dialog box cause this button to become available.

Exit Button

This is one of the three methods you can use to quit the game. The other two are Close on the System Menu, and the Ctrl-q accelerator.

Status Dialog Box

This dialog box will give you vital statistics on the game for both players. It can be called up by depressing the CTRL key with some part of your body (keep it clean) and clicking the RIGHT mouse button. You can also press CTRL+S. The stats include:

Level - shows the level that you are currently on.

Bonus Cities - shows the number of Bonus Cities you have (temporarily) in reserve.

Death Toll - This keeps track of the number of people who trusted you to save them, but you allowed to die. Of course this means that all that money going to their health care can now be diverted to the Super-Nuker defense fund. About every million people or so diverts enough money to make a new one.

Score - A measure of your eye-hand coordination and general brain activity.

Known Bugs and Revision History

Below is a list of things that we are working, or have worked on. We're trying to put out quality software, so we constantly think about the program, day and night, every waking moment. We have devoted our lives to fixing bugs and problems. Call us obsessive, call us compulsive, just don't call us if we owe you money.

Questions and/or Comments

Why are there ten hot-dogs in a package, but there are eight hot-dog buns in a pack?

How do they print "M&M" on those little pieces of candy?

Why do doughnuts and Lifesavers have holes in them? Why do they sell the holes separately?

Wait a minute. You crashed your machine on purpose and you didn't save first?

Is a schizophrenic a multi-tasker or a multi-processor?

What is that stuff that you pick out of your navel?

If it takes 20 shingles (costing \$5 each) to cover 10 sq. ft. and there are fifteen barrels of apples (@ \$4.25 each) and ten bushels of oranges (@ \$3.75 each), with a 15 mph northeast wind, how long does it take the farmer's cow to hit ground after falling off the roof of the barn?

How does the logic of a woman work.

Why was the cow on the roof of the barn in the first place?

Why is it that the attractiveness of a person is directly proportional to the number of beers you've had?

Do people who lie down in the middle of the road after seeing it done in movies prove that Darwin's theory still applies to humans?

If a tree falls in the woods and there is no one there to hear it, does it make a noise?

If a star goes nova and there is no one around to hear it or see it, did it really blow?

Is a bearcat, a cat or a bear? Why are some goldfishes black, shouldn't they be gold? Why doesn't a sloth have feet?

Why am I here, and for how long?

If you have any questions and/or comments for us....

Send them to: Eric Lee Steadle
 750 Harrison City Rd.
 Trafford, PA 15085

OR contact us through America On Line using the ID STEADLE.

Just so we don't get a lot of letters telling us that the Succour doesn't work - IT WORKS. It works exactly as intended...

As "Environmentalists for Nuclear Destruction", we would like to state that nuclear energy provides the most economical method of delivering an uncontrolled release of energy over any densely populated area in the world.

We will leave you with this one last thought, if you get good enough at this game maybe Grimmy will come and visit you. If he does, just ask him what the phrase for the day is. Tell us and you'll be immortalized in the next game we produce. Just remember what B.O.C. said, "Don't Fear the Reaper".

Yes, we know these are the same questions that have been here since 1991. We left them here because we thought that not quite everyone in the world has read them yet. If you want the answers, we suggest that you register Warped for Windows. It has answers to these questions. It has brand new questions. It's a regular question and answer ORGY. Buy it today!

Gimme a dyslexic U, Gimme a dyslexic A, Gimme a dyslexic E !!!

Gimme a dyslexic G, Gimme a dyslexic P, Gimme a dyslexic F !!!

Gimme a dyslexic U, Gimme a dyslexic E, Gimme a dyslexic E !!!

(JEE = Unhandled Exception Error - the next big thing).

Registration Form

To register, please print this form (Use File | Print Topic...). It should print on any Windows compatible printer. The information requested is used only for internal processing, to inform you of updates, and of other products by the authors. It will not be given away or sold to anyone. (You may make comments on the back of the form).

Name _____
Address _____
City _____ State _____ Zip _____
Phone _____ Fax _____
Email ID _____

- Warheads for Windows NT/95 \$ 17.00*
 - Upgrade to Warheads NT/95 \$ 7.00* (For those who registered any 16-bit version of Warheads <= v2.03)
 - Walnuts \$ 12.00*
 - SpaceRocks \$ 12.00*
 - Venusian Onslaught \$ 15.00*
 - Warped for Windows \$ 35.00* (includes Walnuts, SpaceRocks, Venusian Onslaught, plus 3 other games)
 - Warheads for Windows 3.11 \$ 17.00*
- Total: _____

How did you obtain this software?

- On-line service (AOL, CIS, Genie, etc.) _____
- Shareware Service (name) _____
- Bulletin Board (name or number) _____
- Friend (height, eye color) _____
- Other (retail, show, aliens in raingear) _____

Tell us about your computer system:

Manufacturer _____	BIOS manufacturer _____
Processor type _____	Processor Speed _____
Hard Disk Size _____	Memory Size _____
Video Board _____	Sound Board _____
Your order will be sent on high density 3.5 inch diskettes unless you indicate otherwise	Disk Size _____

Please return this form and a check or money order to:

Eric Lee Steadle
750 Harrison City Road

Trafford, PA 15085

* Those outside the US please see the topic [How Do I Register](#) for comments about currency conversion and additional fees; PA residents please add 6% state sales tax.

Revised: 4/4/96.

About the Authors

Brian C. Lowe is presently attending third grade at the Hopkins Memorial Elementary School. His interests are nature walks, large moths, and skinny dipping in the Benzene Pool. Brian plans on becoming a mercenary. He already knows how to kill someone with a knife thrust upwards between the rib cage into the vital internal organs of the chest cavity. He's working on gouging out eyeballs with his tongue.

Eric Lee Steadle resides at the Trafford Area Rehabilitation and Mental Health Center. He is recovering from acute psychosis. Before Eric was committed he enjoyed such peaceful things as flying kites, playing piano, & helping older ladies across the street. Since being committed he enjoys things like heavy metal music, chrome and leather clothing, banging his head upon hard objects, and various toxic, dangerous, and radioactive chemicals. 'Civil disobedience' has become Eric's motto.

Special Thanks

Special Thanks

We'd like to thank all of the following people (in no particular order) who have helped us in various phases of game development.

Charles Petzold	Windows God
Annette Blonar	Creative Consultant
Jim Thomas	Beta Tester & Revolutionary
T. Skinner	Beta Tester & Best Man
Phil Messer	Beta Tester & Doughnut Expert
Stu Kron	Beta Tester
Bruce Blonar	Beta Tester
Erol Caglarcan	Beta Tester & Musical Consultant
Grimmy	Death Consultant



Smart Bomb

Very Big

Look it up in the dictionary

Greek for 'a real lot of'

As opposed to Imaginary Mode

Not the whole envelope, just the glue part...

Known Bugs...Get it?

Actually, we're the greatest, but they're pretty cool too.

"More Bang for the Buck"

More, more, more... we LOVE Windows!



Nicknamed "The NightMare"

Ok, it doesn't really exist, we just made it up. But it sounds kind of neat doesn't it?

Frequently Asked Questions / Frequently Made Comments

On our registration forms, we provide space for comments, questions, and suggestions. In the past, we've tried to address each one individually. Over time we have built up a database of responses to many questions. Now that many of the questions coming in are the same we thought we'd share all of the responses with you. They appear below.

Please note, that in certain cases, foul and/or inappropriate language or thoughts may have been used. We caution those of you who might be sensitive to this in case you have some moral objections. We do apologize in advance for any offense you may take, but please realize that we mean no harm.

Thanks to all of you for all your kind comments and helpful suggestions! We really do appreciate your support of shareware. Keep it up!

In the following discussions, a brief title is followed by a response to a question or comment. We weren't very descriptive in the question, but often you can glean the nature of the question from the title and the response. We hope you find this information interesting and / or helpful.

High Score feature

Versions of Warheads later than 1.11 have a high score feature included. When you break a high score, you'll get to put in your name. Several users have requested this option and we thank all those who made the request for pointing out this omission.

My sound cuts out after the first round. What gives?

(Note that this problem applies to versions of Warheads 1.11 and earlier. Versions 1.12 and later use the multimedia features of your sound card or the PC Speaker driver).

You are running the Windows 3.1 speaker driver. This driver takes control of the sound functions when a system sound is played (in this case when a Default Beep is played between rounds as the little hands point down toward the cities). The driver takes control whether or not another process (in this case Warheads itself) has the sound driver open. From that point on, the normal Warheads sounds do not play. The Default Beeps between rounds continue to play, however.

So what do you do to fix the problem?

First, consider running a newer version of Warheads. Versions 1.12 and later use multimedia features only to produce sounds. They don't have this problem.

If you stick with an earlier version, you can use the Control Panel to change the Sound setup. Select the Sound applet (applet is a cute little word for mini-application) on the Windows Control panel. You should see a dialog with two lists: Events and Files. Select the Event, "Default Beep". Now select the File <none>. This will disable the default beep (not a great loss, but a trifle restrictive).

The other alternative is to get rid of the speaker driver. Use the Windows Control Panel to remove the driver from your system.

Turning off Sound

Are you singing the blues because your boss has really good hearing. Bummer, dude. Try the new Warheads for Windows -> Control Panel. Everything you always wanted in a Control Panel, only quieter. Uncheck the Sound Check Box on the CP and voila, silence.

Dull, Boring Music

The newest version of Warheads uses MIDI to play a song written by Eric. Eric hopes you find this music interesting and lively.

Advanced Sound cards

The next major revision of Warheads will take advantage of the MIDI sequencer and digital sound capabilities built into most sound cards. In fact we are working on some games right now and these will have midi support.

(We have in fact gottem the Wave capabilities into version 1.12. MIDI should follow shortly.)

Which Sound Board should I choose?

Get a Sound Blaster. Everybody's got one. How can you go wrong?

Am I the only one?

No you are not the only one to send in the money. Eric's mother sent some money, and so did Brian's sister. Counting you, that's at least 3. Business is really picking up now.

How is shareware?

Well we'll tell you - you can't get rich by doing shareware - then again we weren't really aiming to get rich. We did Warheads to show that responsive arcade type games can be done in Windows (without resorting to DOS <eeeeewwwwww>).

Now it seems like everyone is hopping on the band wagon. Just remember that this game was originally developed in 1991. There were no local bus accelerators, or pentiums, or multimedia features. We did everything by hand. No Foundation Classes, no Object Oriented Programming, no Custom Controls, no Integrated Development Environments. Just a command line compiler and a crappy make utility. When I was young I had to walk to school five miles, uphill, both ways, in a blizzard, carrying 12 slate tablets, and a hammer and chisel to write with every day. We didn't have Video Games, Inline Skates, Cappuccino, or handguns on demand. Did you hear me complain? NO!!!! My parents heard me complain, but you didn't. I don't understand this need for power! **The desire for control! POWER is EVIL! Absolute power corrupts Absolutely! Resist temptation! Repent! Rid yourself of.....** Oh, sorry. No we haven't quit our jobs yet.

Canadian and Foreign Registration Instructions

Well... we apologize for not thinking bigger. We Americans are egocentric - we think we're the only ones on the planet who buy software. Future games will contain instructions for Canadians as well as those in other countries (we've gotten registrations from as far away as Australia). A Canadian Postal Money Order is the way best way to pay. We have had trouble with other registrations from Canada where users wrote checks specified in US funds but drawn on a Canadian Bank. What a mess for our bank! Of course when dealing across international borders, US currency is the best bet. However as this may be a problem for most outside the US, international money orders are a good alternative. We recommend American Express money orders.

I have been unable to get the right mouse button to fire

This problem has been reported twice, once for a Logitech mouse, and once for an unknown mouse. We don't know why the problem might exist, but if you encounter it we encourage you to test the mouse and keyboard interaction by trying the mouse buttons (left, middle, and right) and observing the results. Then instead of using mouse buttons, press V and B which launch missiles from the left and right bases, respectively. If B works, then we suspect the mouse hardware, or mouse driver. If B does not work, contact us and be prepared to give us some more information about your system setup including mouse driver version, mouse manufacturer, and such.

Why is order form so hard to copy to Write or Notepad?

It has to do with the Windows Help utility. It cannot copy formatted text. Don't ask me why, because it knows how to format the text (you see it on the screen formatted right?). This (and the fact that you can't print the whole help file at once) is a serious shortcoming, in an otherwise excellent help system. Unfortunately, there's not much we can do about it. We have to wait for that big software company in Redmond to realize the problem and fix it themselves.

Auto Install

We don't include an Automatic Installation program (otherwise known as setup) with versions of the shareware games distributed on-line because the size of the setup program itself is prohibitive. It would add significantly to the size of the files, and we just can't justify the space. Since our programs require very little in the way of special drivers or libraries, you can basically unzip it to some god-forsaken directory and they'll run without a problem.

We DO include an install program with the registered version of the game, since there's space on the disk for it.

User Manual

We here at Warped Software NQI, in an effort to be environmentally conscious, have adopted the philosophy that using electronic documentation makes the most environmental sense. We therefore have included all necessary information in electronic form, (Windows help format and if necessary, a README.WRI file).

Two Player Version

We'll work on this one, definitely. Can't promise anything at this point but it looks good (hint hint nudge nudge).

Hey, how come the window doesn't resize?

It was a design tradeoff that had to be made. We couldn't figure out how to deal with resizing a window during the middle of a round. For reasons that are not apparent, we couldn't have you resizing in the middle of a round. At that point, we said, "well if they can't resize during the round, why bother at all?"

Number of Levels

Warheads for Windows goes on until your computer runs out of memory or until you get really bored playing it. It does get a bit tricky at higher levels though, especially one particular level...

Why can't you shoot the Bomber?

Uh, gee I don't know. You should be able to kill it. It does require more than one shot though. The bomber takes damage. The more you hit it the more damage that occurs. You might notice that it seems to show the damages as they get worse. The bomber can be destroyed with a minimum of 2 well placed shots. Eric did it once. More often, you'll need 3, 4, or 5.

How about helicopters?

We have some interesting plans for helicopters in a future game. We aren't going to reveal the details yet, but we think you'll be impressed.

A Windows program that doesn't cost your left arm

Well its too bad that all this great software costs so much. But lately if you've noticed, many companies are offering competitive upgrades (which are substantially less expensive than the direct cost).

Our personal opinion is that there is no software worth more than \$300. We will not pay more than this. I also believe that no upgrade should cost more than \$100 (although I've paid more than this in the past).

As you probably already know, shareware is the best alternative.

There should be two PCs in every home

Well now you wouldn't be a programmer would you? It sure looks suspicious; the Redmond Washington mailing address, the parsimonious prospect of a pair of PCs in every American domicile, and the quote at the end, "Live long and prosper." Well, you'll be happy to know that we are working on some other two player games (but right now, we are really limited by Modem bandwidth). Warheads will probably be converted to 2 players, if not over a modem, then definitely on the same PC. Thanks for your suggestion!

What did you guys use to program this game?

Originally we used the Microsoft Windows Software Development Kit and the Microsoft C 6.00 compiler. Everything is in C. We wrote it in C for a reason. At the time we programmed it, we were using a 10 MHz 286 and one of our criteria for programming was that it had to run on our machine. Using the Microsoft compiler gave us the speed we needed.

This time around we used Visual C++ 1.5. Much better.

Death to PASCAL, FORTRAN, APL, PL/1, Modula, Forth, SNOBOL, ADA, LISP and all the piddling crap out there (including XBASE, macro languages, Scripts, the X-Windows spec, OS independent GUI tools, and that cockamamey shell scripting thing from hell which comes with every UNIX box) trying to grow up into real languages. Long live C and BASIC (yeah that's right BASIC, structured BASIC a real programming language) and if I have to - Assembler.

Can you make a version of Strip Poker?

We could but we always have trouble getting the modeling talent we want.

Blossoming Missiles

That is one of the top priorities for the next version. However please realize that real anti-ballistic missiles do not create additional explosions when they destroy warheads. During flight, the warheads are not actually armed, they arm when they are near their intended target. Even if they were armed, achieving a nuclear explosion is very unlikely since a critical mass in a precise geometry must be maintained for a certain length of time before they will properly explode. A nearby explosion would more than likely disrupt this critical geometry rendering the bomb almost harmless. But who the hell needs realism, right? That's why we're working on it for the next version.

Faster anti-ballistic missiles

OK you talked us into it. In our next version of Warheads we'll try to give you the ability to speed up your missiles.

Project collaboration

Hey we're always receptive to new opportunities. What's it you're into? We like arcade games and action. We have some projects in the works right now, so we're a bit busy (and in fact are likely to be for a while). However as we've discovered in this business endeavor, the more you publish, the more receptive people are to your new ideas - the easier it becomes to do more. So yes, we'd be interested in some mutually beneficial collaboration.

Stopping the game to view the help

Just press F1.

Babes

Several of our registrants have requested Babes of one form or another (two asked for full frontal nudity!) Maybe there's some sort of trend here. Sorry, there's no nudity in Warheads for Windows. Perhaps in a future game...

Complaints

Sorry but your complaints were totally unreadable; Where did you learn to write that small? You must have had a class at one time where the instructor allows you to bring one 3x5 card for formulas. Apparently you've figured out how to use the other 4 sides of the card.

Can I be the attacker instead of the defender?

No. We believe in passive resistance. I mean we believe in aggressive passiveness. No, that's not it. We believe in aggressive defensive passover. Wait, we're not Catholic. We believe in aggressively defending against passive aggressors. Wait. Oh, nevermind.

Animated plays between missions

We'll try to come up with something entertaining (with reference to the previous Nudity comment). Thanks....

Boss Key

A quick way out of Warheads is ESCAPE. Of course you must have the registered version.

Why is the sky blue?

When light of varying wavelengths is incident on air molecules of size d where $d \ll \text{wavelength}$, the relative intensity of the scattered light varies as $1/\text{wavelength}^4$. The condition $d \ll \text{wavelength}$ is satisfied for scattering from diatomic Oxygen and Nitrogen molecules in the atmosphere, whose diameters are about 0.2 nanometers. Hence shorter wavelengths (blue light) are scattered more efficiently than longer wavelengths (red light). Because sunlight contains wavelengths from the entire visible spectrum, the sky appears blue. (This also explains why the sky is black in outer space, where there is no atmosphere to scatter the sunlight!)

The above information is from Raymond Serway - Physics for Scientists and Engineers (dweebs and geeks), 1986. Thanks for asking!

Why do we drive on the parkway and park in the driveway?

Well you've obviously never been to Pittsburgh. Here we park on the parkway (especially around 8:00 AM and 5:00 pm). The only place where you CAN drive is your driveway.

Custom City Views

You should be careful what you wish for, you might just get it. See the topic: [Creating a New Resource Library](#).

Why do we ask so many questions?

Well, what do you know about that? Why do YOU think we ask so many questions? Do you think we ask too many questions because we are generally inquisitive people or because we have a specific interest in the lives of people we don't know? Do you suppose that we would like to know about your system so that if you ask questions as to why Warheads doesn't work we might have a clue as to why? Do you think that we might be basing the requirements for our next game on the type of system that the average registrant has? Have you surmised that we might also be interested in the best way to distribute a shareware game? Have you guessed that we also are interested in making the game a better one and that our registrants are the most logical candidates to give feedback? Do you get the feeling that we have a problem constructing declarative sentences? Have you picked up that we are quite fond of interrogative sentences? Why do you think that is?...

System Slowdowns (or why the heck is my system clock running at half speed?)

It better not happen any more.

Detonation sounds

Actually if you think about how it really works, anti-ballistic missiles do not detonate the incoming nuclear missile in the air, rather they render it harmless by disabling its targeting mechanism, its detonation device, and/or its propulsion system. And being that you are in an underground bunker on the ground, looking at your targeting mechanism/radar screen, you couldn't possibly hear the small little detonations of the ABMs themselves, could you. Of course you could hear the explosion of the warhead when it hits one of your cities since you'd be relatively close to the ones you're protecting.

They are in there now.

Compatibility with monochrome notebook screens

Although we didn't originally test Warheads on a notebook, we later tried it out on one. We didn't have too much trouble with it, as long as your mono screen can generate 16 or more gray shades. If all you've got is black and white, then it does get quite difficult. Some of our newer games will have trouble with mono screens because they use the 256 colors available on most better video cards today. We're working on a method to allow mono users (and those who don't have 256 color cards too) a reasonable approximation of the high quality video. Thanks for emphasizing this.

Self Destruct mode (like Lemmings) when all is hopeless

Well don't you think that's a little drastic. What a self destructive person you must be. Never say die! Do you think John Wayne would cower from nuclear weapons and blow himself to smithereens. I don't think so. Stand up and be humiliated like a man.

Or you can always restart.

Color in the background

You mean black isn't a color?

High resolution

We now have new libraries which make high resolution look a lot better. They're used automatically.

Other Games

Yes, we have some other games. See the topic: [Other Programs by the Authors](#).

Joystick type games

While the mouse is almost the perfect input device for this particular game, many have inquired about joysticks. We have developed several other games which do use a Joystick. See the topic: [Other Programs by the Authors](#).

Are you really going to send me a copy of Warheads or is it a scam???

Actually there is no scam involved here. Unless you count that little thing that the new version of Warheads does to your banking system. You see Warheads looks at your computer and attempts to decipher your bank accounts, and financial information. Then when it figures this stuff out, it transfers all of your assets into our Swiss bank accounts from which we get the money to live our lives of lust, immorality, and perversion. Thanks for the subsidy. By the way don't tell anybody this.

Hot dogs/hot dog buns

Thanks for explaining the nature of the world to us; we think your explanation of the hot dog/hot dog bun thing is about the best that anyone has come up with. And gosh dangit it makes sense! (Sorry everyone else. You don't have the benefit of seeing what this guy wrote, but it has something to do with drinking beer while barbecuing and a dog named rover who is awfully hungry).

Warheads and Hard Drive Space

Warheads uses about 1MB of space. It does not use temp files, nor does it write out data files.

Installation Location

Warheads for Windows doesn't really care where it's installed, as long as the program can find the BITMAP libraries (HISCORE.DLL, WAR-BIG.DLL, and WAR-BMP.DLL) and the help file (WARHEADS.HLP) it is happy. This means keeping them in the same directory (which I assume you've done). Other than that there are no restrictions on its placement.

Length of complaint line

As far as the complaint line goes, there's been no lack in innovative and creative expression of 'displeasantries' using the length of the current complaint line. Next time we'll be making it a box and you'll have to fit all complaints within that space. :)

Other Games

Yes we have some. See the topic: [Other Programs by the Authors](#).

Some form of 'Asteroids'

Hey, you read our minds (actually you probably read our programming notes, because we have no minds). There are some versions of asteroids out there already, but we thought we might do one anyway. Hopefully its as easy as it looks.

Flight Simulator

Oh, that's a good one. Flight simulator under Windows, That'll run just great.

Tell you what, we'll think about it - meanwhile you start saving your money for a DEC Alpha with 64 meg of memory, and a graphics co-processor. (Flight simulator...that's a good one, heh, heh, heh.)

I want to control when cities are replaced

If we let you pick when the cities were replaced, you'd build up a whole collection of them and ration them out one to a level. Now what fun would that be? You'd be able to get say, 10 levels above your real skill level. That means you wouldn't have to practice as much either. It just ain't right I tell ya...

Missiles remaining in base

Brian and Eric had a big fight about this particular topic. Brian insisted that game players were so smart that they could easily remember how many missiles they had launched and so did not need any way to keep track of the number remaining. Eric insisted that users were not nearly as intelligent as Brian estimated and that they could barely remember their names from one day to the next. Because of this, then users would demand a visual display of the number remaining. Well, we obviously over-estimated user intelligence and so now have to save face by promising to put it into the next version. Actually it was a pretty lame oversight on our part.

Unlimited Missiles

There's a reason that we haven't provided an unlimited missile capability. If we did then you'd be able to play on forever. At the request (more like threat) of many so called 'Computer Spouses' we were forced to limit the number of missiles so that you'd eventually die. Also it forces you to build your skill level, and something interesting happens if you build your skill level high enough...

If we get more requests for unlimited missiles, Brian and Eric might consider risking heavy skillet applied with fury to cranial area and place the option in a future version. (Actually it made it to this version).

Tax Refund

If you only got 17 bucks for your tax refund, you need to talk to a tax consultant. We happen to know a very good one. In fact, both of us got big refunds this year. If you are interested in her name just drop us a line. Meanwhile we'll certainly enjoy your tax refund, thanks!

Does Frodo Live?

Frodo Lives and has an unplugged set too.

Documentation Typo

Actually since neither Brian nor Eric had any formal schooling at all they never really learned how to spell. So you see, it's not really a typo, it's a spelling mistake because these guys are really just big dumb Neanderthals.

Nation's economy

The relative state of the economy is a direct result of the American marginal propensity to consume being somewhat less than optimum. This coupled with the lackluster performance of the Fortune 1000 organizations over the last few years has produced a general malaise among prime investors. Higher unemployment rates and a reduction in the housing industry all combine to produce what you so

eloquently label "the pits".

Hard drive woes

Its a corollary of the Peter Principle: the amount of software on your hard drive grows in proportion to the amount of available space for that software.

Can you include me in the game?

If you want to, we can include you in our next game. Really, send us a picture, and you might just get in there (no kidding). Nothing pornographic - unless you're an attractive woman.

What's that beef jerky stuff at 7-11?

DON'T TOUCH IT. Didn't you see the movie where a psycho takes people who stay at his motel, buries them up to their necks in his backyard, and then when he's hungry, pulls them out by their necks and takes them to the butcher and turns them into (you guessed it) Beef-Jerky. Stay Away!

Version Information

Some folks have been a bit miffed when they get the new, supposedly registered version of Warheads for Windows. The version that they get is 1.11 or 1.12 and they hold the opinion that they currently have version 1.21. Let me explain:

You **MUST** have either version 1.00 or 1.01, or a version numbered 2.00 or higher. We have never shipped any shareware versions other than these.

You **DO NOT** have version 1.21. The Version Information topic in the help file shows an **EXAMPLE** of our version naming convention. The example uses 1.21, however we have never published this version (nor will we as a result of this confusion).

To find out what version you have, check the About box. The About box always contains the version number. The help file does not contain the version number.

When you register we always ship you the latest version we have on hand. If you got your registered version from us, the disk we sent you contains the absolute latest.

We are sorry for any confusion the help example caused.

Middle button

You may have noticed in the Help system that the middle mouse button randomly destroys a city. We stated very plainly that you shouldn't use it. Don't ask us why it randomly blows up a city - we were in a very bad mood the night we programmed that one. But later we had a small change of heart. We decided that if you have only one city left we won't take that away from you. But if you just happened to get the last city blown to bits and then pressed the button you'll receive the particular message you got. It means that there are no cities left to blow up. Doing this to three button mouse users was cruel and heartless, we know, but gosh it was fun. :)

By the way, the new version doesn't do it anymore.

Skill Level

It is possible to select the intelligence of the Smart Bombs, the speed of the incoming missiles the number of bonus cities in reserve, and the starting missile wave. This provides you with a very good way of tailoring the game to your skill level.

More Games

Yep, we've got some.

See the topic: [Other Programs by the Authors](#).

OS/2

cyberfried: noun: the confused state of a person who has taken so many drugs that they begin to believe that OS/2 will actually run Windows programs correctly; example: Don't listen to him, he's cyberfried.

The world is not flat

Brian actually proved this once. He got really mad one day after watching a news story on the flat earth society (you know the organization dedicated to the perpetuation of obviously ridiculous information). Brian decided that he would settle the whole thing once and for all, started walking west in the hopes that he eventually would walk entirely around the world. Well, when he came to the Pacific Ocean, he remembered that he can't swim. So he walked home, picked up a 52 cm diameter plastic globe and zonked a flat earth society member on the head with it. The member has since admitted that the earth is round, although the admission was obviously under duress, we think that its sufficient to prove the validity of the spherical earth theory.

Taxes

Well, join the club. An interesting anecdote:

One day, Brian remarked that at least they have to stop when they get to 100%. Eric shook his head silently, then Brian realized his mistake.

Left Mouse base droppings

Leftover missile trails: gone.

Sonic The Hedgehog

Hey, what do you think Windows is, a substitute for a real computer like an AMIGA? Sonic the Hedgehog is just a little too intense for the puny little PCs out there. Those 64k GDI, USER, and KERNEL heaps would be applesauce by the time we got through with them. Maybe Win32 will give us the tools to do it. Keep your fingers crossed.

The wait between Levels

You can turn it off now (registered user's that is).

What ends the game?

The answer to this is easy, you do - by choosing Close from the System menu (upper left corner of the Warheads window). Of course the game ends after all of your cities are destroyed, and you have exhausted all those you may have had in reserve. At the end of the round, Warheads will tell you your final score, death toll, and level, and ask you if you wish to play again, reconfigure, or exit.

Quitting

There are two ways to quit, the harder way is to wait until the end of the game and answer 'Outta

here' to the another game question. The easy way is to select Close from the system menu, or double click the system menu box. This behavior is just like any other Windows application.

Can I get the Source Code?

Nobody except UC Berkley gives out source code.

Shareware version is not complete version

Yeah? No kidding. That's your incentive to register - to get the whole thing. We promise you'll be able to make the whole thing work if you register.

User Manuals

We have no printed manual. We're firm believers in electronic documentation - not only for its lack of burden upon the environment, but for its ease of revision. You'll find just about everything you need to know about Warheads in the help file (accessible by pressing F1 during the game, or by double clicking its filename in the File Manager).

Cities too small

We corrected this problem with resource libraries.

Starting at higher levels

The registered version of Warheads for Windows includes a control dialog box which lets you start on various levels as high as 20.

Why 17?

I swear I didn't know. She said she was 21! How did I know? But I didn't touch her anyway. I don't care what she told....., oh you mean 17\$ for the game? That's how much a case of Molson costs.

Modal Dialog Boxes

When you can't switch to another application, you have encountered a Modal Dialog Box. Although it seems as though you're stuck, you really aren't, you just need one more piece of information. You can switch to another application by using the Alt-Tab key combination to call up the windows task list. Other programs will be available using this technique. If Warheads for Windows did not take up the entire screen, then it would be possible to switch applications simply by clicking the mouse in another application's windows. However Warheads takes up the whole screen (for reasons I'd rather not get into) hiding all other applications. Thus you need to use the key combination mentioned previously.

Lost Productivity

We are not responsible for lost productivity. No really we aren't. If you can't control yourself they hey, get some help. Its not like we intended to get you addicted. Although we have been known to stay up until all hours of the morning kicking some video game butt.

Teaching your Dog how to get you a Beer

The mistake most people make when teaching their dog to fetch the beer is giving the dog a taste of the beer as a reward. Well, dogs are smart enough to realize that they are doing all the work and that you get the beer. The best thing to do is buy really bad beer - we recommend I.C. Lite (it's a

Burgh thing!). When the dog fetches the beer, give him a little, and this will cure any urge the dog has to drink beer. **WARNING!** Don't drink any of this beer yourself - it will also cure any urge *you* have to drink beer.

U.A.E.

sknaht rof eht cixelsyd U.A.E.

My spouse complains that I spend too much time on the computer

We do like to notify men and women in your situation (so much computer fun, so little time) that we have a *Spouse Elimination Service*. We terminate spouses that fail to understand the need to spend as much time as possible with the computer. Unfortunately, due to the large demand for this service, the waiting list has extended into the next decade.

SEX, Violence, and Rock 'n Roll dude

It's nice to see that there are other good Americans out there that believe in what made this country great; Sex, Violence, and Rock Music (not to mention drugs and video games). We have been thinking about starting our own cable show that expresses these ideas. We are currently interviewing some hot babes for the show. It would go much quicker if they would talk to us. I think it's the part about having sex throughout the show that they have a problem with. Women are strange sometimes. We'll let you know if we ever make it to primetime.

People screaming as they fry

See the topic: [Creating a New Resource Library](#)

Children's programs

Well, we were thinking about making some kids software, but of course the state intervened. Our friendly corrections officer said that it may not be such a great idea considering our delicate situation. Perhaps in the future when we're well...

When is recess?

Usually after Math in the morning and after History in the afternoon, unless its a snow day, then the morning recess gets skipped. Depending upon your shcool district you may have one after lunch. However, once you get past the 6th grade, recess is abruptly yanked from your vulnerable, naked conciousness and relagated to the void forevermore. Listen to Supertramp's "The Logical Song" for deeper insight.

Where are the cookies?

One of two places:

- In the cookie jar being guarded faithfully by mother until after dinner time.
- In the ice cream in the freezer - which, by the way, is also being guarded by mother until after dinner time.

Are we alone in the universe?

An age old question which has been pondered by many for a long time. Some say that we have been visited by many aliens and the government knows all about it and is hiding something. I know the

government, and I'll tell you this; they couldn't hide and invisible space alien from each other. We have not been visited by anyone. This does not mean that we are alone. The universe is a pretty big place. We have not yet invented a reasonable means of travelling such large distances, and if there is life out in the rest of the universe, I think it's safe to say they're having the same kind of trouble. I'm fairly confident that there's something or someone else although I'm sure I won't know in this particular lifetime. And if I can't know then I'll just have to have a good time while I'm here and not let it worry me too much.

I'm a Poor College Student. Can you send me the game free?

We used to be poor college students too. Then we graduated. That was about 4 years ago. Now we're poor college graduates. Stop whining and ask dad for the freaking 17 bucks.

Beer Money

To all those who sent extra money and encouraged us to spend it on beer: cool, dude.

Unrecoverable Application Errors

The following information is from the Microsoft Knowledge base:

```
=====
Microsoft Product Support Services Application Note (Text File)
      WW0524: TROUBLESHOOTING GP FAULTS (UAEs)
=====
Revision Date: 3/92
No Disk Included
```

The following information applies to Microsoft Windows version 3.1.

```
-----
| INFORMATION PROVIDED IN THIS DOCUMENT AND ANY SOFTWARE THAT MAY |
| ACCOMPANY THIS DOCUMENT (collectively referred to as an |
| Application Note) IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY |
| KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO |
| THE IMPLIED WARRANTIES OF MERCHANTABILITY AND/OR FITNESS FOR A |
| PARTICULAR PURPOSE. The user assumes the entire risk as to the |
| accuracy and the use of this Application Note. This Application |
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| conditions: 1) All text must be copied without modification and |
| all pages must be included; 2) If software is included, all files |
| on the disk(s) must be copied without modification [the MS-DOS(R) |
| utility DISKCOPY is appropriate for this purpose]; 3) All |
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-----
```

WHAT IS A GENERAL PROTECTION (GP) FAULT?

```
=====
```

A general protection (GP) fault in Windows 3.1 (referred to as an unrecoverable application error [UAE] in Windows 3.0) occurs only in standard and 386 enhanced mode Windows. A GP fault signifies that something unexpected has happened within the Windows environment, usually an improper memory access. In other words, something running within the Windows environment has made a call to a location in memory that it did not have access to, potentially overwriting and corrupting other program code in that area of memory. More specifically, an application or Windows component might read or write to a memory location that it has not been preallocated, or memory that it does not "own." All memory management within Windows is handled by the Windows environment itself, and when applications and Windows components directly access memory, the result is often a GP fault.

Another situation where a GP fault may occur involves the passing of parameters between applications and the Windows environment. Invalid parameters affect the performance of Windows and its applications by forcing an invalid instruction. This is usually the result of an application's internal program code incorrectly passing specific data that could not be correctly interpreted for Windows or another Windows application. The result is often a GP fault.

What Is A System Integrity Violation?

The message referring to the violation of system integrity indicates a general protection violation, or the equivalent of a GP fault that is caused by an MS-DOS-based application. Similar to the GP fault, the system integrity violation indicates that an MS-DOS application is accessing memory that does not belong to that specific application. Since Windows is managing memory in this situation, the MS-DOS application's memory access will often corrupt Windows program code or vital data. The result is an application execution error generated from Windows reporting that the "application has violated system integrity due to an invalid general protection fault and will be terminated." This message can also occur when an MS-DOS-based application has tried to directly access a system's hardware component.

How Does Windows 3.1 Handle A GP Fault?

A new feature of Windows 3.1 called parameter validation allows Windows to check for invalid parameters passed between Windows and applications running in the Windows environment. Windows 3.1 is also designed to better manage and maintain which applications "own" specific memory locations and system resources. As a result, Windows 3.1 is more capable of recovering a particular application's RAM memory and system resources. If you do see a GP fault message while running Windows 3.1, the message will provide specific information about which applications and Windows components were running at the time of the error, and where the error occurred. Depending on the severity of the GP fault, Windows 3.1 can continue to run the application that caused the fault, allowing you to save your work before exiting the application. You can also use Dr. Watson, a program provided with Windows 3.1, to learn more about the cause of the GP fault.

Local Restart

Depending on the severity of a GP fault in Windows 3.1, you can press CTRL+ALT+DEL to display information concerning the system integrity and/or information concerning the application that caused the fault. The severity of a GP fault can be measured by how well an application functions within the Windows environment after the fault has occurred. If CTRL+ALT+DEL is pressed when a less severe fault occurs, the following message appears on the screen:

System has either become busy or has become unstable

- Press any key to return to Windows and wait
- Press CTRL+ALT+DEL again to restart your computer (all unsaved information will be lost)

If CTRL+ALT+DEL is pressed when a more severe fault occurs, this message will appear:

This Windows application has stopped responding to the system

- Press ESC to cancel and return to Windows
- Press ENTER to close this application (all unsaved information will be lost)
- Press CTRL+ALT+DEL again to restart your computer (all unsaved information will be lost)

Troubleshooting GP Faults

1. If you are running Windows in standard or 386 enhanced mode, check to see if you are running an application that was designed for an earlier version (2.x) of Windows.

If an application has not been properly designed to function correctly under Windows protected mode, it will cause an error. If an application is designed for Windows versions 2.0, 2.03, 2.1, and 2.11, the application will generate a dialog box when executed that advises you of this error. Such applications should be run only under Windows 3.0 real mode, as the dialog box suggests. Since real mode is not available in Windows 3.1, contact the application's manufacturer for possible workarounds or to obtain an upgrade of the software.

2. Check for incompatible terminate-and-stay-resident (TSR) programs or unsupported device drivers in your CONFIG.SYS or AUTOEXEC.BAT file.

Temporarily comment out all lines relating to suspect drivers and TSR programs to bring the system to a minimum configuration for testing purposes. (To comment out a line, use a text editor such as Notepad, open the AUTOEXEC.BAT or CONFIG.SYS file, and type "rem" (without the quotation marks) at the beginning of the line.) If this eliminates the problem, then the problem was related to one of the drivers or TSR programs that was commented out. Reinstate the removed lines one by one until the problem reappears, thus showing which line was loading the TSR program or driver causing to the error.

Minimum MS-DOS configuration for Windows versions 3.0 and 3.1:

CONFIG.SYS

files=50
buffers=30
device=c:\[path]\himem.sys
stacks=9,256 (Windows 3.1 only)

AUTOEXEC.BAT

path c:\;c:\dos;c:\windows
prompt \$p\$g
set temp=c:\

NOTE: Before modifying these files, make sure you don't comment out lines pertaining to other hardware-specific device drivers, such as Stacker, extended memory boards, third-party disk partitioning programs, and so on. If you do not know the purpose of a line in your CONFIG.SYS or AUTOEXEC.BAT file, leave that line as is.

3. Try different machine switches for the HIMEM.SYS device driver in your CONFIG.SYS file.

HIMEM.SYS is used to access the high memory area (HMA), which is the first 64K of extended memory (1024K-1088K). HIMEM.SYS is also the default device driver Windows uses to access extended memory in standard and 386 enhanced modes. HIMEM.SYS accesses the HMA through the A20 line of memory, and uses what are known as A20 "handlers" to do this. The method used to access the HMA depends on the system, so the A20 handler needed for this access varies as well. HIMEM.SYS follows a certain routine at load time to determine which A20 handler is appropriate for your machine. Unfortunately, some nonstandard machines do not respond to the tests that HIMEM.SYS administers during its routine, which can result in the wrong A20 handler being selected. Using the incorrect A20 handler can result in everything from the machine stopping when HIMEM.SYS loads to erratic Windows performance. The /MACHINE switch is used to gain control of the A20 line by forcing HIMEM.SYS to use a particular handler. The handler numbers range from 1-16, and 18. For

most 100- percent-compatible machines, one of the compatible /M:1, /M:11, /M:12, and /M:13 A20 handler switches will work. Although other switches are intended for use with certain hardware, one of these other switches may be required for proper operation on certain machines if the standard switches do not work. It is recommended that you check your most current MS-DOS or Windows manual for more information about using the /MACHINE switch with HIMEM.SYS. An example of this statement in the CONFIG.SYS file is as follows:

```
device=c:[\path]\himem.sys /machine:1
```

-or-

```
device=c:[\path]\himem.sys /m:1
```

NOTE: When you are testing to see which A20 handler is appropriate, make sure you have a system (startup) MS-DOS disk with an ASCII text editor (such as MS-DOS Edit or Edlin), because some A20 handlers will cause your machine to stop.

4. Check to see if an incorrect machine and/or network was selected while installing Windows.

Some machines and networks require you to override the default detection made by Windows Setup and make a specific selection. If the correct selection is not made, Windows will not operate correctly, or a GP fault may occur.

Machines that must be specifically selected in Windows Setup include the following:

Machine	3.0	3.1
AST: all 80386- and 80486-based machines	X	X
AT&T PC		X
AT&T NSX 20: Safari Notebook		X
Everex Step 386/25 (or compatible)	X	X
Hewlett-Packard: all machines	X	X
IBM PS/2 Model 70P		X
IBM PS/2 Model L40sx		X
Intel 386SL-based system with APM		X
MS-DOS system with APM		X
NCR: all 80386- and 80486-based machines		X
NCR PC386sx	X	X
NCR PC 925	X	
NEC PowerMate SX Plus	X	X
NEC ProSpeed 386	X	X
Toshiba 1200XE		X
Toshiba 1600	X	X
Toshiba 5200	X	X
Zenith: all 80386-based machines	X	X

Networks that must be specifically selected in Windows Setup include the following:

Network	3.0	3.1
3Com 3+Open LAN Manager (XNS only)	X	
3Com 3+Open		X
3Com 3+Share	X	X
Artisoft LANtastic		X
Banyan VINES 4.0	X	X
DEC Pathworks		X

IBM OS/2 Lan Server		X
IBM PC LAN Program	X	X
LAN Manager versions 1.x (or 100% compatible)	X	X
LAN Manager 2.0 (or 100% compatible)	X	X
LAN Manager 2.1 (or 100% compatible)		X
Novell NetWare		X
TCS 10NET		X

If you did not choose your machine or network specifically during Setup, you should exit Windows and run the MS-DOS version of Setup from the WINDOWS directory. This will allow you to make the proper selection without having to completely reinstall Windows.

5. A third-party Windows device driver may not be functioning properly. Run the MS-DOS version of the Windows Setup program and select the lowest level configuration of drivers for the listed hardware devices.

A good troubleshooting technique is to configure Windows through Setup for the minimum necessary hardware devices. When troubleshooting GP faults, only standard Windows device drivers are recommended. For example:

Display: EGA or VGA, depending on video type (systems with VGA cards/monitors can usually use EGA)

Mouse: No mouse or other pointing device

Network: No network installed

6. Check for unsupported third-party drivers in the Windows SYSTEM.INI or WIN.INI files.

Temporarily comment out all lines relating to suspect third-party drivers to bring Windows to a minimum configuration for testing purposes. (To comment out a line, use a text editor such as Notepad, open the SYSTEM.INI or WIN.INI file, and type "rem" (without the quotation marks) at the beginning of the line.) If this eliminates the problem, then the problem was most likely caused by one of the drivers that was removed. Replace the removed lines one by one until the problem reappears, thus showing which line was causing the problem. The installation of certain applications may modify these two files to enhance the overall functionality of Windows or provide additional features to the Windows environment. The statements below are the most commonly altered by third-party software manufacturers. As a result, verify the minimum default Windows configuration.

Check the following statements to verify the default Windows configuration of the most commonly altered statements:

SYSTEM.INI	WIN.INI

[boot]	[windows]
shell=progman.exe	load=
system.drv=system.drv	run=
keyboard.drv=keyboard.drv	
mouse.drv=mouse.drv	
display.drv=vga.drv	

7. Your system may have a page-mapping conflict in 386 enhanced mode.

Page-mapping conflicts occur only in 386 enhanced mode Windows, most frequently in Windows 3.0.

Windows 3.0 often will not see the page frame or upper memory block mapping performed by 386 expanded memory managers (EMMs) and will map over those memory locations. Windows 3.1 inherits the upper memory area (UMA) mapping information from the EMM, so it will not map over memory locations used by the EMM. However, both Windows 3.0 and 3.1 can experience page-mapping conflicts with other devices or applications that use the UMA. Test the problem under standard mode by running Windows with the /s switch from the command prompt (type "win /s" [without the quotation marks]).

If the problem does not occur in standard mode, it may be a page- mapping conflict in the adapter segment area of memory (between 640K and 1 MB). Edit the SYSTEM.INI file with Notepad or SysEdit and insert the following line in the [386Enh] section:

```
EMMExclude=A000-EFFF      (This line is not case sensitive.)
```

NOTE: Because Windows 3.1 inherits its mapping information from any EMM loaded before Windows, it is important to either disable the EMM or exclude the same memory range (as shown above) with the EMM itself. Mapping information inherited from the EMM will override any entries in the SYSTEM.INI file.

Performing the step described above will exclude the entire adapter segment from mapping. If making this change solves the problem, you may want to determine the position of all hardware adapters in the adapter segment and exclude them specifically, rather than excluding the entire region. Multiple EMMExclude lines can be used if necessary. If you are using a Micro Channel Architecture (MCA) bus machine such as an IBM PS/2, you can determine the adapter location by restarting with the machine's reference disk. If you are using an Industry Standard Architecture (ISA) bus machine, consult your adapter documentation and/or your manufacturer's technical support service for information on the memory locations the bus machine uses. You will not want to leave the entire range excluded, because Windows will not be able to use any of the memory addresses in that range to set up such things as expanded memory for MS-DOS applications.

WINDOWS 3.1 ONLY: Use the command "win /3 /d:x" (without the quotation marks) to load Windows from the command prompt. The /d:x switch excludes the memory range A000-EFFF from mapping, similar to the statement EMMExclude=A000-EFFF in the [386Enh] section of the SYSTEM.INI file. However, as with the EMMExclude= statement, this switch will be overridden by any settings inherited from an external EMM. It is best to disable such EMMs if possible.

8. Check the MS-DOS version you are running.

A machine should have the proper MS-DOS version for its hardware type. Original equipment manufacturer (OEM) versions of MS-DOS such as COMPAQ MS-DOS or IBM PC-DOS should be used only on their respective OEM hardware platforms (that is, COMPAQ MS-DOS only on Compaq machines, IBM PC-DOS only on IBM machines).

9. If you have a permanent swap file set up in Windows, it may be corrupted.

The integrity of a permanent swap file is important if these errors continue. If the location of the swap file contains bad sectors, an error can occur. Windows will assume the data area of the swap file is valid. However, if code is swapped to a corrupt area, the data will also be corrupted. Change the swap file to a temporary swap file and restart the machine after first turning the computer completely off. It may also be necessary to run a disk optimization/defragmentation utility to improve the performance of the Windows swap file.

10. Reinstall the software causing the GP fault.

If the GP fault can be tracked to a specific application, you may need to reinstall that software. The files on disk may have become corrupted or damaged or the application may not be properly installed. You may also have to reinstall Windows. If the SYSTEM.INI or WIN.INI file has been modified with poor results, a new installation of Windows will ensure a clean, unaltered Windows configuration.

If all the above troubleshooting techniques have been exhausted and the GP faults or UAEs still occur, you may have to contact your hardware/software supplier for more information.

Whew! That was a lot of information. If you read this far you must be some kind of Windows nut! Anyway, if you can't solve your problem with this information, you may contact us at your convenience. See the accompanying readme.txt file for instructions.

Creating a New Resource Library

Soooo... you want to make a library, eh? Roll up your sleeves...

But, why?

First though, let's talk about why you'd want to create a new library. The answer is pretty easy. You don't like our cities and want to make your own. It's OK, you can say it. Our egos can take it. The library concept is really something we had in mind all along. It wasn't until this version that we got down to business and did it.

After you make a library you can give it to your friends. You can give it to your enemies. Heck, draw some pictures of your boss, teacher, professor, rabbi, president, spouse, or Technical Support Representative being toasted to ashes by a multi-megaton missile of mercy. It'll make you feel better.

And if you don't have access to a compiler you're not screwed. You can create the pictures and send them to us. We'll make your library and send it back to you. We'll also make sure that a lot of other people see it too. We will place your library on a number of bulletin boards and on-line services, maybe even the Internet.

If you create your own library, we encourage you to send it out. In fact, we dare you to create your own libraries. That's right, WE DARE YOU. What do you think of that? We took out the gauntlet, smacked you upside the head, and threw it on the ground. What are you going to do now?

We'd like to see the fruits of your effort, so send us a copy too. We'll be happy to post it for you too.

OK. Now, how?

If you want to create your own resource library for Warheads follow these instructions. By the way, you may want to print this topic out so that you can follow it easier.

There's a file that comes in the Warheads archive called WARLIB.ZIP which contains files required to create a new resource library. This file was probably extracted to the same directory that the other files included in Warheads were.

- Create a new directory somewhere on your hard disk. We suggest WARLIB
- Move the WARLIB.ZIP file to this new directory.
- Extract the files using the -D option. The -D option extracts files so that their original directory structure remains intact. This is important if you want to keep your sanity!

Once you do this you'll have a bunch of files in subdirectories, and a few more in the original directory. The directory structure will look something like this:

```
. \WAR-LIB
. \WAR-LIB\BMP
. \WAR-LIB\BMP\airexp
. \WAR-LIB\BMP\city0
. \WAR-LIB\BMP\city1
. \WAR-LIB\BMP\city2
. \WAR-LIB\BMP\city3
. \WAR-LIB\BMP\city4
. \WAR-LIB\BMP\city5
. \WAR-LIB\BMP\city6
. \WAR-LIB\BMP\city7
. \WAR-LIB\BMP\explo
. \WAR-LIB\BMP\hands
. \WAR-LIB\BMP\jet
. \WAR-LIB\BMP\lbase
. \WAR-LIB\BMP\other
. \WAR-LIB\BMP\rbase
```

.\WAR-LIB\WAVE

The files you compile and link are contained in WARLIB. Their names are:

```
WAR-LIB.OBJ // code*
WAR-LIB.DEF // definition file*
WAR-LIB.RC  // resource script*
WAR-LIB.MAK // Visual C++ 1.5 native make file
WAR-LIB.WSP // Visual C++ 1.5 workspace file
```

- Use your favorite compiler to create a new project called WAR-LIB. Make sure you tell the compiler to create a medium-model Windows DLL.

By the way, we used Microsoft Visual C++ 1.5 to create the DLLs that come with Warheads. If you use Visual C++ you can use the WAR-LIB.MAK and WAR-LIB.WSP files that are already there. Visual C++ may tell you that the project has been moved and that it wants to scan dependencies. Let it.

If you use some other compiler make sure that you add the three required files above and generate 386 specific code, medium model. No additional libraries other than the usual LIBW.LIB, MDLLCEW.LIB and perhaps OLDNAMES.LIB.

- Add the three asterisked files above to the project.

- Compile and test your DLL.

- Edit the images in the BMP directory. The images in this directory are compiled into the DLL by the Resource Compiler. This step will be the most time consuming. We offer some guidance on how to create smooth, good looking animation.

First, the images are 16 color images (4 bits of color depth). Make sure that you use only 16 colors. Nothing catastrophic will happen if you edit them and make 256 color bitmaps out of them, they just won't look right when you're done. Windows paintbrush can make 16 color bitmaps. We used AppStudio, the resource editor that comes with Visual C++.

The cities in Warheads blow up in two different ways. When the city is alive and doing well and a missile hits it, it blows up the first time. When the city has already been destroyed once, and another missile hits it, it blows up again. However the second time the city is just rubble with a mushroom cloud as the center of attention. Each type of destruction requires a different set of pictures.

The first set shows the city blowing up from it's good state. Nine pictures are used to animate this action. If you look in the resource script the cities are numbered in groups of 9 from 501 to 559 (ignore those numbered in the 400s - I'll explain those in a moment). This means that there are 6 groups: 501-509, 510-519, 520-529, 530-539, 540-549, and 550-559. Those pictures ending in 1 are the complete, undestructed, unharmed, "rest-state" of the cities. Those ending in 9 are the destroyed, obliterated, composted, "end-state" of the cities.

The second set shows the city blowing up from it's destroyed state. There are only seven pictures used to animate the destroyed state. Why you ask? Because the first and last pictures are already defined for you. Warheads starts the animation at the completely destructed picture (pictures ending in 9) and cycles through these seven bitmaps, and ends again at the completely destructed picture. The pictures for this cycle are numbered in the 600s. They skip pictures ending in 1 and 9. So the six city groups are numbered from 602-608, 612-618, 622-628, 632-638, 642-648, and 652-658. You can verify that the resource script does not contain pictures for destructed cities with numbers ending in 1 or 9.

Remember those pictures numbered in the 400s? Those are the pictures for the left missile base exploding from it's good state. There are nine of them for this as well. The pictures for the right missile base are numbered from 561-569.

The pictures of the missile bases exploding the second time are numbered from 592-598 (Left missile base) and 662-668 (right missile base).

We've got examples for each of the pictures already completed for you. All you need to do is edit the individual files in the bitmap directory. In addition, there are some auxiliary pictures of mushroom clouds which you can use to nuke the crap out of anything you like. They're in the directory `..BMP\EXPLO`. Copy and Paste dude.

The resource scrip maps the internal picture number (the numbers just described) to the picture files located in the BMP directory. Use the resource script as a roadmap to tell you which pictures to edit. It should be relatively easy since each set of related pictures is broken up into a directory of it's own. For example, all city 1 bitmaps are in the `..BMP\CITY1\` directory. This should make it straightforward.

If you want to rename the files to something that makes more sense (we did these pictures a long time ago back when we were just learning to count) you can do that by editing the resource script.

If you are a lazy SOB, but still want to have your own library, you can draw pictures of one city and then map all city numbers to one set of pictures. Just edit the resource script and make all city names point to the names of your pictures.

You should also consider editing the file `SCREEN.BMP`. This is the picture that Warheads displays when it first loads itself. This picture gives you the opportunity to really show your artistic skills, as well as give yourself credit. There is one thing that you must consider when you create this picture. The names of the Authors will be drawn into the two square areas near the lower part of the bitmap. Please try to keep this area accessible and free of distractions. Please don't put any derogatory remarks or disgusting pictures around our names. Our moms play this game you know.

You can also edit some of the other things in the resource library. You might consider editing the bomber, the smart bombs, or perhaps the missile launchers. Please try to keep the same sizes for these bitmaps as those in the example library. If you do change their size, please test your changes on various hardware to make sure it still looks good.

Feel free to change the size of the cities. You should follow these guidelines however.

All animation pictures for a single city should be the same size. If not the animation won't look right.

Make sure that the cities have sufficient gap between them. If the missile always hits a city on it's way down, then people are going to have a tough time winning. Consider that there are people with all different display sizes. If someone using a VGA display attempts to use your oversized SuperVGA 2400x1600 bitmaps they're going to have all kinds of problems. When you ship your resource library mention what kind of display the library assumes. We recommend that the city width be no smaller than 32 pixels and no larger than 96 pixels.

Keep the height of the cities to a reasonable maximum. The cursor gets clipped to the height of the highest city. We recommend that the city height be no smaller than 32 pixels and no higher than 64 pixels.

If you decide to edit the air explosion pictures, make sure that they are square. This also applies to smart bombs. If they are not symmetrical they will cause errors.

The placement of the ground missile launcher is based on 1/2 of the height of the corresponding missile base. Thus your missile base drawing should take up 1/2 of the bitmap height. Also, the launcher expects to have a black background. Look at the pictures to get the idea.

After you're all done editing the pictures, compile and test the DLL. You can tell Warheads what DLL to use by editing the `WARPED.INI` file in your `WINDOWS` directory. In this file is a section called `[WARHEADS]` - locate this section and add the following string:

ResourceLibraryName=WAR-LIB.DLL

- Copy the DLL to your Warheads directory.
- Start Warheads. Your new library should be active. Note that you must have registered Warheads to use alternate libraries.
- After you're done testing, make sure you SEND US A COPY!
- Wasn't that fun dude?

Immortals

OK so here's a list of everyone who beat the really difficult "Boss" levels in our games. These people are way cool. They should be revered by all. If you know these people then you are truly blessed since these people are so great. If you ever meet these people it would be appropriate for you to fall to your knees, chant, and kiss their rings in homage. At the very least, buy them a beer.

Warheads

Kevin P. Menard

Susan A. Temple

Glenn A. Stout

Mark D. Shorts

