Contents

The Story

It was the greatest crisis to befall the Alliance of Confederated Worlds...

Near the heart of Confederation territory lay a massive binary black hole in the Halkyon Prime system.   For centuries, differential gravimetric engines had tapped the immense store of energy in this system and powered the hundreds of Allied worlds.   With almost unlimited energy, these worlds were prospering.   Since energy could be converted directly into matter, limited resources became a problem of the past.   And with that problem also went the problems of greed, over-crowding and war.   Life was good.   But all of that was about to change...

Dr. Johann K. Tastrophe was upgrading one of the Diff-Grav engines with a new heavy neutrino reaction core.   As he guided the engine back to its position between the black holes, he was unaware that his work had been sabotaged.   A build-up of heavy neutrinos near the engine began creating a local anomaly in the gravitational field.   The change was so slight that it was never detected by the remote monitors.

However, the gravitational distortion was strong enough to begin drawing the black holes into an ever-tightening orbit.   At that final instant when their event horizons merged, a single black hole of enormous mass shattered the very fabric of space with its birth.

...the warning arrived via tachyon relays only months ahead of the first shock wave.   The Confederation began an immediate and frantic evacuation.   Huge cargo vessels, never intended for long-term human occupation, were converted into escape pods, each capable of carrying a million passengers.   Military craft were retrofitted for use as escape pods.   Even civillian recreational craft were pressed into service.   The resources of a hundred worlds were focused on a single goal: survival.

Thousands of ships, and billions of passengers, raced outward from Confederation territory as fast as possible.   When the shock wave reached the first unprotected Allied world, it shattered the planet into a million fragments without even the slightest hesitation.   The heavy shield generators on the escape ships were the only thing that prevented the complete destruction of the Confederation when the shock wave finally overtook them.

But the shock wave itself was only the first of the threats to the escaping colonists.   The planetary fragments from a hundred worlds and countless moons were following just behind the shock wave. The once powerful shields of the escape vessels were now drained beyond their limits, and were now incapable of protecting the craft from this meteoric shower.   In addition, as the refugee fleet moved ever further away from Confederation space, hostile alien races were encountered.

Thus was created the "Street Sweeper Squadron."   Led by Lieutenant Francois deBris, it consisted of only the best pilots and the most capable military craft.   Charged with the objective of protecting the remaining refugees, their mission was to sweep out around the slower moving fleet and clear a safe path for the vulnerable escape vessels.

The mission is a difficult one, and it isn't likely to get any easier.   It is a thankless job, no more than a galactic garbage gatherer, and if a pilot can't handle it...well, he dies alone.

But the lives of countless refugees depend upon the Squadron, and it is only through their diligent efforts that the Confederation has any hope of surviving until tomorrow...

How To Play

To start a new game:
   From the title screen press [F2] to begin, or select New from the Game menu.   Then select either a one- or two-player game.   During a competitve 2-player game each player's ship can be destroyed by the other player.   During a cooperative 2-player game both ships are immune to damage from the other player.

Game Type ☒

1 - Player

2 - Player Competitive

2 - Player Cooperative
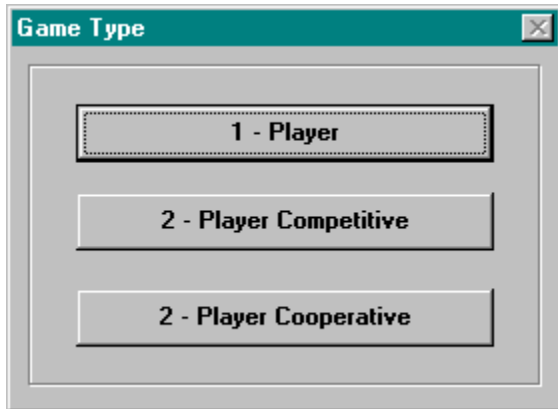
Objective
Your Ship
Default Controls
Displays
Waves
Bonuses
Enemies
Scoring
Playing Against The Computer

Objective

If it moves, shoot it.   If it can't be shot, collect it.

The object of the game is to clear the entire screen of space debris by blasting it to bits with your ship's weapons.   You must avoid colliding with the asteroids, while collecting bonuses and avoiding and destroying any enemy ships that appear.   After you have cleared all of the debris from a particular wave, a new wave will begin, each successive wave becoming more and more difficult. You are given 4 ships with which to accomplish your mission.

Your Ship

The Splorkon Systems XJ-37 is a heavily armed fighting vehicle, ideal for close combat and clean-up operations.   It has a standard stardrive engine with optional turbo-thrust capability, 7 configurable weapons ports, 2 onboard shield generators and armor plating.

Each of the three main sub-systems (engines, weapons and shields) are each independently powered by their own battery and generator systems.   The primary advantage of this design is the continued availability of a system even if other systems have been exhausted.   This prevents, for example, the shield system from failing simply because the engine system has been overloaded.

However, this is also a disadvantage of the design. Not all of the ship's total power reserve is available for use equally by all of the ship's sub-systems.   It is not possible to operate the shield system with the weapon system's power supply, for example.

Thus, the optimally configured vehicle is one in which the balance of power supply capacities best matches the intended mission.   Typically, all 3 power supplies are expected to be configured for approximately the same capacity.

The battery component of the power supply will determine the maximum peak energy availability at any moment, while the generator component will determine the rate at which the battery is recharged after depletion.   An oversized generator can somewhat compensate for an undersized battery, or vice versa.

The current battery level of each sub-system is indicated by the energy level bar graph displays within the game.   Collecting certain bonus items can increase battery capacity.   The generator's recharge rate is not displayed, but you can collect bonus items which can affect this rate.

ENGINES

The engine system affects the speed of your ship.   There is a turbo mode available (Turbo Engines) which can double the thrust output for a limited time.   The engine system can also optionally dampen the recoil from weapons fire (Recoil Dampers) and automatically bring the ship to a complete stop whenever thrusters are disengaged (Auto-Braking).   Recoil Dampers allow you to avoid losing forward velocity when firing weapons, thus saving engine energy.   Auto-Braking causes you to lose a lot of velocity, but allows you to make very tight turns without overshoot.   Care should be exercised when Auto-Braking is used in conjuction with the shields - see the section on shields below for more information.

Your ship also has a reverse thruster mounted at the front of the ship, enabling you to brake your forward momentum or thrust backwards.

WEAPONS

The weapon system consists of 7 configurable armament ports, arranged as 5 armament systems.   3 of the systems consist of a single armament port, while the other 2 consist of a pair of armament ports.   The paired armament ports cannot be activated independently, they must be configured as a pair.   The main gun is a center-mounted, forward firing weapon.   The auxiliary guns are a pair of side-mounted, forward firing weapons.   The side guns are a pair of side-mounted, side firing weapons.   Both the tail gun and the mine gun are rear-mounted, rearward firing weapons.

To acquire superior ammunition, or activate guns other than the main gun, you must collect weapon "bonuses" or "power-ups".   Each power-up provides you with a limited supply of a particular type of ammunition.   When the ammunition for a particular gun is exhausted that gun will become inactive.   However, the main gun has an unlimited supply of normal ammunition, and is always available even after the other guns have become inactive.

Additionally, your ship may be equipped with an "outrigger" - an external weapons pod that tracks

your ship's movement.   There are two types of outriggers: one which fires forward in the same direction as your ship is facing, and one that fires outward in the direction that the outrigger is facing. The outrigger is an especially powerful addition to your ship in later waves, since it contains it's own energy source - it provides extra fire-power for free.   The outrigger uses the same ammunition as the main gun.   Armed with the outrigger and superior main gun ammunition, you are truly a force to be reckoned with!

   A special "spray" weapon for the main gun may also be acquired from enemy ships - keep your eyes open for opportunities to collect the alien escape pods!   If you collect additional pods while the spray gun is already active you will increase the width of the spray.

   SHIELDS
   The default shield generator is known as the Nudger Shield.   If your ship contacts another object with these shields activated, the shields will eventually "nudge" you gently away from the object. You may even penetrate the object for a short period before the shields accomplish their job, however your ship will be completely protected as long as the shields are active.
   The more powerful shield generator is known as the Repulsor Shield.   It will actively "bounce" you away from other objects that your ship comes into contact with, without allowing your ship to penetrate the other object.   This means that you can usually activate your shields for a much shorter period of time than with the Nudger Shields, while still protecting your ship during the collision.
   There is a potentially dangerous effect which can occur when the shields and engine Auto-Braking are used simultaneously.   As the shields attempt to move you away from the colliding object, the engines will simultaneously try to bring the ship to a complete and immediate stop.   This may prolong your collision with the other object for a period long enough to exhaust your shields!   In this situation you should quickly turn and thrust your way out, or jump to hyperspace.
   Either shield generator may optionally be charged with extra energy which will allow it to destroy objects that it contacts (Destructo Shields).   Thus, your shields can actually function as a weapon system of sorts.

   Additionally, the ship may be covered with one or more layers of armor.   Each layer of armor is capable of dissipating the energy from a single collision.   However, armor is not automatically recharged after use as the shields are - it is a "disposable" item.   Therefore, it is advisable to use your shields instead of armor whenever possible.   Save your armor for emergencies when you've run out of shield energy and have no other options.

Default Controls

The default <u>controls</u> are listed below.   You may customize your keyboard and joystick setup by choosing the Controls item on the <u>Options menu</u>.

```
KEYBOARD:
---------
Left Arrow       Rotate Counter Clockwise
Right Arrow      Rotate Clockwise
Up Arrow         Thrust
Down Arrow       Reverse Thrust
Control          Fire
Shift            Shields
Spacebar         Hyperspace
F3               Pause

MOUSE:
------
Move Mouse       Rotate to face pointer
Left Button      Fire
Right Button     Thrust
(Use keyboard to activate shield, reverse thrust and hyperspace)

JOYSTICK:
---------
Left             Rotate Counter Clockwise
Right            Rotate Clockwise
Up               Thrust
Down             Reverse Thrust
Button 1         Fire
Button 2         Shields
Button 3         Hyperspace

(Note that Button 3 may not be available on all joysticks.)
```

A note on using the mouse as controller: The mouse is a difficult and non-intuitive controller to use for this particular game.   It is not recommended, however it is provided for completeness. When using the mouse, it will still be necessary to use the keyboard for some functions, as there are not enough buttons on the mouse itself to handle them all.

Displays

Along the right and bottom of the main game area are displayed various status indicators which help keep you informed of the progress of the game and the state of your ship.

Your current score is displayed in the upper right corner.   Just below it is the name of the current sector.

Below the score display are three colored gauges which track the energy level of your ship.
   The red gauge labeled "E" tracks your Engines energy level.
   The green gauge labeled "W" tracks your Weapons energy level.
   The blue gauge labeled "S" tracks your Shields energy level.
You will notice these gauges falling and rising as you use the various systems and they recover.   If any gauge falls to zero, then that system will be temporarily unavailable until enough time has passed to allow it to recharge.

A graphic depiction of your ship is displayed just below the energy gauges.   On this display is shown both your current weapons configuration as well as your current armor.   Active weapons ports will be indicated by a red light near the respective port.   Armor level is indicated by the brightness of the outline around the ship - a bright outline indicates a high armor level, a dark outline indicates low armor level.   If no outline is visible you have no armor remaining.

   The current wave number is displayed just below the ship status display.

   The number of remaining ships is displayed at the bottom right.   If you have more than 5 ships remaining, the total number of ships will be displayed as a numeric value superimposed over the symbolic display.

The bottom status panel is the message display.   Messages will appear informing you of which particular bonus you've collected, the approach of aliens, the status of your ship, etc.   At the end of each wave it will also display a marksmanship rating which describes your shooting accuracy - it is a ratio between the total number of shots fired and the number of hits scored.   You can expect your marksmanship rating to go down if you have multiple weapons enabled - since there will be more total bullets fired there will also probably be more misses.

Waves

The game consists of a series of "waves" of debris and aliens which you must destroy. A wave is over when all of the rocks, aliens and bonus items have been cleared. After one wave ends, the next wave will begin. Each wave gets a little more difficult: a few more rocks to destroy, earlier appearance of aliens, more aggressive aliens, etc. This will continue indefinately - there is no practical upper limit on the number of waves.

A mission briefing screen will appear every few waves. It may give you some hints as to what you may expect in upcoming waves. Each wave is slightly different, and some have special combinations of rocks, mines, aliens and bonuses. The mission briefing screen can help you prepare for these special waves and provide clues to special scoring opportunities.

Bonuses

As the space debris is destroyed, occasionally a spinning disc - shaped bonus item will be released which you can collect.   You must fly your ship over a bonus in order to collect it.   They only remain visible for a short time, so if you want that bonus you'd better chase it down right away!

Also, every once in a while any of the bonus items may also contain an extra ship!   So it really helps to collect as many of them as you can.

There are four main categories of bonuses, and variations within each category.   Some of the possible bonuses you may acquire are listed below:

ENGINES

Maximum energy level and recharge rate.

Friction increase/decrease, auto-braking.

Turbo engines.

Recoil dampers.

WEAPONS

Maximum energy level and recharge rate.

Weapon range and speed.

Activate weapon port or additional ammo.

Activate weapon port and change ammo type.

SHIELDS

Maximum energy level and recharge rate.

Repulsor or nudger shields.

Increase armor.

Destructo shields.

SPECIAL

Activate outrigger, grenade launcher.

    Some bonuses remain in effect indefinately until you lose your ship, others time out automatically, and others expire after a certain amount of use or at the end of the current wave.
    In general, the "PLUS" bonuses increase your energy and remain active until you lose your ship. The "LEFT-RIGHT" bonuses adjust some aspect of the indicated system (such as weapon range, type of shield, etc) and remain in effect until another bonus item is collected to change the setting. The "UP" arrows are temporary upgrades that expire once you've used them up (run out of ammo, use up armor, use up turbo engines).   The "QUESTION" arrows may fall into any of the above categories, although they are generally special upgrades which will expire with use.

Enemies

All of the aliens in the game are actively aggressive.   That is, they will hunt you, as opposed to just floating across the screen in random patterns.   A dextrous combination of firing and shields will usually defeat them without too much trouble however.   Aliens only appear once the wave is almost completely cleared of debris, and will stop appearing once all rocks have been destroyed.

Tol`Doth -   This is a less aggressive alien.   Its ship is slightly slower and less maneuverable than your own.   It has a moderate weapons load but it is not a very good shot.   It becomes gradually more aggressive in later waves.

Myotani -   This is a more aggressive alien.   Its ship is generally faster and more maneuverable than your own (although your collection of bonuses may alter this balance).   It has a heavy weapons load and is a pretty good shot.   If you see one of these guys, run!   It will not appear until after the first few waves, (unless you hang around a long time at the end of a wave) and will gradually become even more aggressive in later waves.

K`rin Vahl -   This alien does not shoot at you directly, rather it drops mines behind it, hoping that you'll run into one of them.   Its typical strategy is to approach you straight on, then reverse course while dropping a load of mines - making it difficult to follow them for the kill.   It may also just drop long sweeping lines of mines, creating a barrier of sorts.   The mines linger around for quite a while before dissipating, and are just as deadly as other enemy weapons.

Preliminary intelligence reports have confirmed the presence of at least three other hostile alien races present in this sector.   Information is sketchy, but it is believed that the following races represent a threat to your mission:

Finzrath -   A light scout vehicle.

Yvittori -   A heavy fighter.

Gahr`Boj -   A mine layer.

In addition, intelligence reports have confirmed the presence of an alien referred to simply as

"Classic".   They are not a very intelligent species, but their presence in a sector should be considered a threat just the same.

Scoring

The scores listed below are based on the **Moderate** difficulty level.   Greater score values are awarded for destroying or collecting objects at higher difficulty levels.

Extra ships are awarded every 50,000 points.

```
OBJECT                      SCORE
------------------------  ------------
Tiny Rock                     400
Small Rock                    300
Medium Rock                   200
Large Rock                    100

Tiny Mine (crash/shot)     400/4000
Small Mine                 300/3000
Medium Mine                200/2000
Large Mine                 100/1000

Aliens                    1000 - 2500
Alien Patrol                  5000
Alien Mother Ship            10000
Alien Escape Pod               500

Bonuses/Power-Ups              100

The Other Player              1000
```

Playing Against The Computer

To play a game against a computer-controlled opponent, simply check the Computer-controlled option on the <u>Controls</u> configuration dialog for one of the players.   Then start a new 2-player game, either competitve or cooperative.

In a cooperative game, the computer-controlled player will help you to clear out the debris from the waves.   This may make the game easier for you, although you may get fewer opportunities to collect bonuses if you allow the computer-controlled player to collect them first.   The challenge in cooperative mode is to clear the wave while trying to score higher than the computer-controlled player.

In a competitve game, the computer-controlled player is still primarily interested in clearing the wave of debris.   However, it will defend itself against your weapons, and will attack you if you get too close.   The computer-controlled player is generally a **much** more challenging opponent than the aliens.   The computer-controlled player becomes increasing more aggressive towards the other player at higher difficulty levels.   The challenge in competitive mode is to clear the wave while avoiding being destroyed by the computer-controlled player!

The computer-controlled player does **not** cheat.   It obeys all the same rules as a human player, and it's ship is exactly the same as yours.   However, the computer-controlled player can respond very rapidly, often more rapidly than a human player, and it may **appear** at times that it must have cheated.   Rest assured that it did not.

The Menus

The menus allow you to load and save games, control the appearance of the game window, adjust various graphical and sound-related options, find help on using the program, as well as many other tasks.

Game Menu
Window Menu
Options Menu
Help Menu

New	F2
Open...	Ctrl+O
Save	Ctrl+S
Save As...	Ctrl+A
Pause	F3
Load Waves...	
High Scores...	
Exit	Alt+F4

Game Menu

New - Begins a new game starting with wave #1.

Open - Opens a previously saved game and begins play.

Save - Saves the current game with its current filename.   If you have not yet saved your game you will be prompted for a filename.

**Save As** - Saves the current game, prompting you for a filename.

Pause - Suspends the game.

Load Waves - *(registered version only)*   Allows you to load a customized Wave Configuration File (WCF) created with the Wave Editor.   Three additional WCF's are supplied with the registered version:

- MANYROKS.WCF   -   Contains waves which are more heavily populated with rocks than the original waves.   Also has fewer aliens.   For those who want a slightly more "crowded" and challenging game.
- NOALIENS.WCF   -   Contains waves which are essentially the same as the original waves, except that no aliens appear.   For those who like blasting rocks, but don't like the aliens.
- CLASSIC.WCF   -   Contains waves which are more like the original arcade game.   Fewer variations and only the "classic" alien will appear.   For those who miss the good old days.

High Scores - Allows you to view the current high score roster.

Exit - Exits the program.

| Normal Size |
| Correct Aspect |
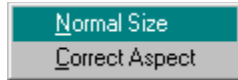
Window Menu

Normal Size -   While you may resize the game window to any size you like, the game runs best at its "native" resolution.   At this resolution, Windows doesn't have to scale the display, resulting in much better graphics performance.   You may select the Normal Size item from the Window Menu to return the game window to its default size.   (This is the display mode the game defaults to.)

Correct Aspect - This item may be used to correct the aspect ratio of any arbitrarily sized window. Aspect Correction will assure that the game window is "square" - not flattened out or stretched like a funhouse mirror - but still lets you pick any size you like and that your PC will support.

Music / Sound...	F7
Controls...	F8
Preferences...	F9

Options Menu

The Options Menu allows you to change various game settings and access optional features.

The <u>Music/Sound</u> menu item allows you to select the type and volume of music and sound within the game.

The <u>Controls</u> menu item allows you to select either keyboard, mouse or joystick control of the game, as well as customizing exactly which keys/buttons perform each of the various actions.
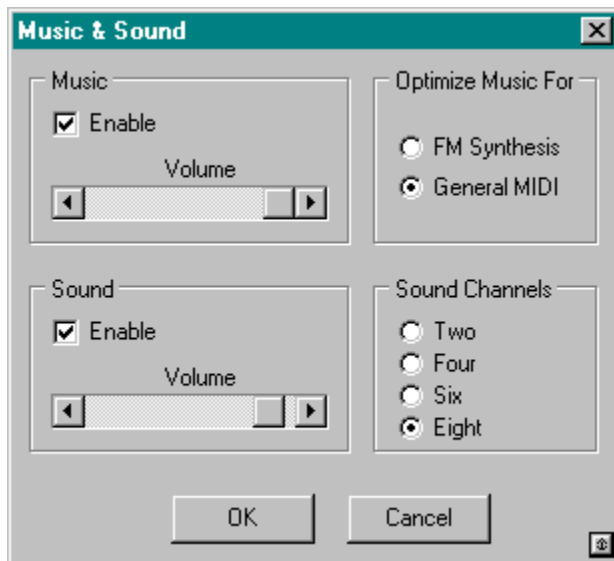
The <u>Preferences</u> menu item allows you to change the speed of the game, as well as enable or disable various additional features.

[Music and Sound](#)
[Controls](#)
[Preferences](#)

Music and Sound

The Music and Sound dialog box allows you to turn music and sound effects on or off, adjust volume, optimize the music for your particular sound card and control the number of channels used to mix sound effects.

Music -   The check box allows you to turn the music on or off.   The volume slider allows you to adjust the volume of the music.

Optimize Music For -   If you have a sound card which uses FM synthesis to generate music, such as a SoundBlaster or compatible, you may want to select the music which has been optimized for FM synthesis sound cards.   If you have a sound card which uses wavetable synthesis to generate music, such as the AWE32, you may want to select the music which has been optimized for General MIDI.   Simply select the type of music which sounds best in your opinion with your sound card.

Sound -   The check box allows you to turn the sound effects on or off.   The volume slider allows you to adjust the volume of the sound effects.

Sound Channels -   Allows you to choose the number of channels used for mixing digital sound. A lower number may improve performance on slower PC's, although sound quality may be reduced. Select the highest value which your PC can handle.

Controls
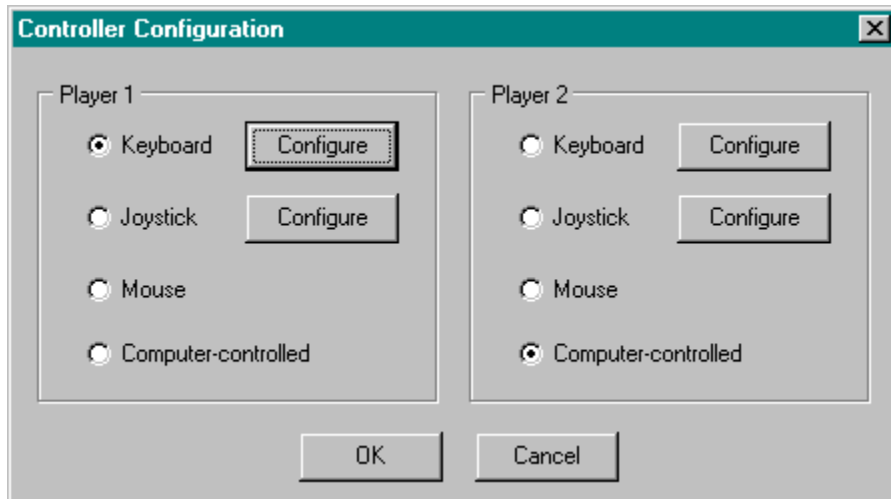
    The controller configuration dialog box allows you to choose either keyboard, mouse or joystick control, as well as customize which keys or joystick buttons activate each of the functions of your ship.

    To customize the controls, press the "Configure" button next to the controller you wish to configure.   A separate dialog box will pop up allowing you to define exactly how the controller is configured.

    Note that using the mouse as a controller still requires that the keyboard be used to activate some functions.   The keys listed under the keyboard section for shield and hyperspace will continue to operate when mouse control is selected.   Note also that you'll probably want to turn off the "Hide Mouse" option on the Preferences dialog box so that you can see where the mouse pointer is.

    The keyboard controls also remain active while using the joystick.

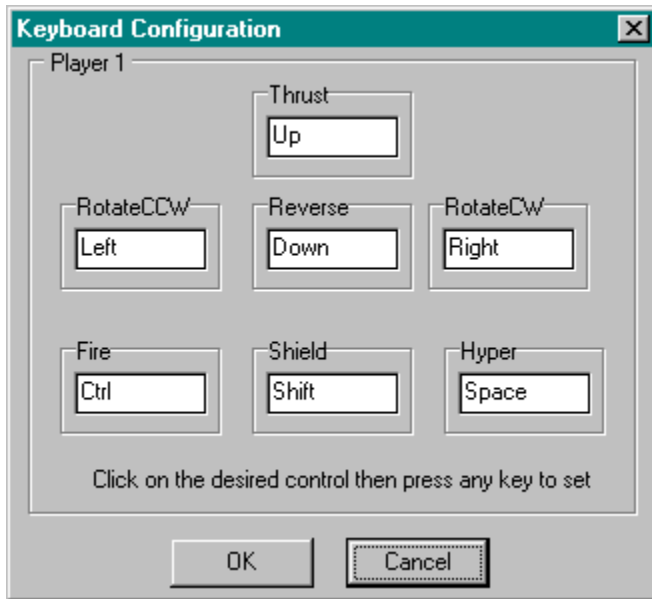   **Be careful when redefining the controls for a 2-player set-up.   If both players use the same controller, or share the same keys, very weird things can happen!**

    The Computer-controlled option allows you to play a 2-player game against the computer.   The computer will handle all of the controls for the selected player using an artificial brain.
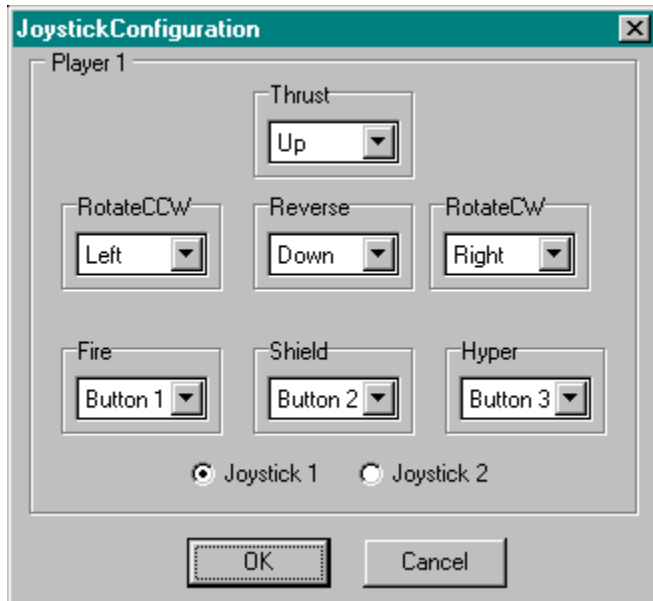
Keyboard Configuration
Joystick Configuration

Keyboard Configuration

```
┌─────────────────────────────────────────────┐
│ Keyboard Configuration                    [X]│
│ ┌─ Player 1 ──────────────────────────────┐  │
│ │              ┌─Thrust──────┐            │  │
│ │              │ Up          │            │  │
│ │              └─────────────┘            │  │
│ │  ┌─RotateCCW─┐ ┌─Reverse───┐ ┌─RotateCW─┐│  │
│ │  │ Left      │ │ Down      │ │ Right    ││  │
│ │  └───────────┘ └───────────┘ └──────────┘│  │
│ │  ┌─Fire──────┐ ┌─Shield────┐ ┌─Hyper────┐│  │
│ │  │ Ctrl      │ │ Shift     │ │ Space    ││  │
│ │  └───────────┘ └───────────┘ └──────────┘│  │
│ │   Click on the desired control then press any key to set │
│ │        ┌────OK────┐   ┌──Cancel──┐       │  │
│ └─────────────────────────────────────────┘  │
└───────────────────────────────────────────────┘
```

To change the keyboard configuration, simply click on the edit box for the desired control then press the key you wish to use.

Joystick Configuration

JoystickConfiguration	☒

Player 1

Thrust
Up ▼

RotateCCW
Left ▼

Reverse
Down ▼

RotateCW
Right ▼

Fire
Button 1 ▼

Shield
Button 2 ▼

Hyper
Button 3 ▼

◉ Joystick 1   ○ Joystick 2

[OK]   [Cancel]

To change the joystick configuration, simply select an axis or button from the list corresponding to the function you wish to redefine.

Preferences

Overall

Mission Briefings -   If this option is enabled, you will see the mission briefing screen every few waves.   If it is disabled, the mission briefings will be skipped and consecutive waves may be played uninterrupted.

Hide Mouse -   If this option is enabled, the mouse cursor will be automatically hidden whenever it passes over the game portion of the window.

Crash Shake - If this option is enabled, the display will "shake" whenever your ship is destroyed or collides with an object with the Repulsor shields.   If this option is disabled no "shaking" will occur.

Bonus Blink - If this option is enabled, bonus items (power-ups) will blink on and off for a short time just before disappearing.

Game Speed

This slider affects the master "clock" of the game, allowing you to speed up or slow down game play. Note that it functions as a limit on the speed of the game - it will not make the game run any faster than your PC can support otherwise.   If you have a fast Pentium, you will be able to use all of the speed settings, and the fastest setting will probably be way too fast!   If you have a slower 486, you will notice that increasing the speed beyond a certain point ceases to have any effect - at this point you have reached the hardware limit of your PC.   If you wish to make the game faster you should try disabling some of the options listed below under Graphic Detail.

Message Duration

This slider allows you to control the amount of time that status messages remain visible.   Move the slider to the left to shorten the time, or to the right to lengthen the time.

Difficulty

Easy, Moderate, Hard, Insane, Psychotic - Select one of these items to set the difficulty level.   On the easy and moderate difficulty levels the number of rocks per wave increases more slowly than with the hard difficulty level.   The easy and moderate difficulty levels also slow down the motion and firing frequency of the aliens.   A lower difficulty level also increases the chance that your ship will only be damaged, instead of destroyed, when hit by enemy weapons.

Brightness

Use this control to adjust the brightness of the game for your monitor.   Slide the pointer to the right to increase the brightness, or to the left to decrease it.   Press the Reset button to return the slider to its default position.

Graphic Detail

The graphic detail options allow you to disable or modify certain aspects of the game's graphics. You may wish to disable some of these options either to improve performance or to reduce screen clutter if you find the extra graphics distracting.

Draw Thrust - If this option is enabled, the small thrust particles coming from the ships' engines will be drawn.

Draw Fireballs - If this option is enabled, the fiery portion of the explosions will be drawn.

Draw Shrapnel - If this option is enabled, the small glowing embers of the explosions will be drawn.

Draw Fragments - If this option is enabled, the larger debris fragments during ship explosions will be drawn.

Draw Backdrop - If this option is enabled, the "background" area of the game screen is filled with a pretty space image, otherwise it is black.

Transparency - If this option is enabled, a technique known as "alpha blending" will be used to improve the appearance of the explosions by making them semi - transparent.   If this option is disabled, the explosions will be drawn normally.   If you find that the game runs slowly on your PC, this is a good option to disable as it is fairly CPU - intensive.

Starfield

Draw Starfield - If this option is enabled, the background star field will be drawn.

Super Stars - If this option is enabled, the background stars will be drawn larger than normal.

# of Stars - This slider allows you control the total number of background stars which are visible on screen (assuming that Draw Starfield is enabled).

Help Menu

Quick Instructions - Displays a graphic help screen.

Contents - Displays this help file.

Credits - Displays the names of those responsible for creating the game.

About - Displays version and copyright information.

Hints and Tips

- First, try the Easy difficulty setting on the <u>Preferences</u> dialog on the <u>Options menu</u>.   This will slightly reduce the total number of rocks and aliens on each wave, as well as slowing down the rocks and your alien enemies, and causing the aliens to fire at you less frequently.
- The difficulty setting also affects the amount of "health points" for both the rocks and aliens.   In later waves, an easier setting will prevent you from having to shoot each target multiple times before destroying it.
- Try reducing the Game Speed slider on the Preferences dialog.   This slows down the *entire* game, giving you more time in which to react.
- Save your game frequently.   If something terrible happens, simply restore your last saved game.
- Try to collect as many bonus items as possible.   If you can acquire some more powerful weapons or more shield energy, you may find that a previously difficult wave will become quite easy.   The earlier you start collecting bonus items and building up the power of your ship, the better off you'll be.
- However...don't be so greedy to collect bonus items that you just chase after them without watching out for the rocks!   No bonus item is worth dying for (except perhaps an extra ship, in which case you'll "break even").
- Sometimes it is easier to chase after a bonus item by flying in the *opposite* direction rather than trying to catch up to it from behind.   This way the bonus item's movement is working **for** you instead of **against** you.   Bonus items can travel fairly rapidly, and you may deplete your engines before catching one if you attempt to follow it directly.
- Learn to conserve your shields for when you really need them.   Don't simply fly around with your shields on all the time, or they may not be charged when a critical situation occurs.
- Learn how to "dog fight" with the aliens.   Simply flying at them straight on with weapons blazing will probably get you killed, especially as difficulty increases.   Try flying circles around them, then turn to face them for a quick burst of weapons, then resume your evasive manoeuvres and repeat as necessary.   Don't sit still!
- Don't forget about the Hyperspace key.   If you're being chased after by some nasty alien and your energy is too low to do anything about it...try jumping to hyperspace.   This may disorient the alien for just long enough for you to recover enough energy to blast 'em to bits!
- Try to capture the alien escape pods that are occassionally released after you destroy an enemy ship.   You'll get a nice surprise if you do!

There are three ways to ensure a trip to a bonus wave:

- Collect **every** bonus released during a wave.   You must collect at least 7.
- If the aliens release escape pods after being destroyed, collect **every** released during the wave. You must collect at least 4.
- If there are mines present at the start of a wave, destroy one of the mines **before** destroying a single rock.

The cheat keys are intentionally difficult to activate.   First, you must press and hold the [Backspace] key.   Then, you must press 4 more keys all simultaneously.   This will really stretch out your fingers!   Here are the four key cheat combinations:

```
    [W] [I] [M] [P] - super damage bullets, one shot kills most things
    [G] [U] [N] [S] - triple-fire (main+aux) guns and rapid weapon
recharge
    [S] [H] [I] [P] - gives 3 ships left
    [A] [R] [M] [X] - gives full armor
    [S] [I] [D] [E] - activates the outrigger
    [G] [B] [O] [M] - gives grenades
    [B] [F] [G] [2] - big ammo for all weapon ports (does not enable
ports)
    [B] [O] [N] [S] - ensure trip to bonus wave
    [B] [R] [A] [K] - turn off auto-braking, reduce friction
    [A] [M] [O] [#] - (where # = 1-9) gives particular ammo to main gun
    [N] [R] [G] [#] - (where # = EWS) set maximum energy for specified
system
    [W] [A] [R] [P] - immediate advance to next wave
    [S] [P] [R] [A] - full strength spray gun
    [G] [O] [D] [Z] - God Mode, player cannot be injured
    [Z] [P] [6] [Numpad+] - massive cheat, all kinds of goodies
```

A handy technique is to use your right pinky finger for the the backspace, and then just hunt and peck for the other keys with your remaining fingers. Sorry they're so hard to get at, but isn't that what cheats are supposed to be?

I can't figure out how to activate the secret-weapons:

Each weapons port has a unique super weapon associated with it. To activate the secret weapon the weapons port must first be enabled, you can do this by collecting power-ups or using one of the cheats above.   The second part of the secret is that you must have a LOT of weapons energy before the super weapon can be activated - the weapons power meter must be at least 3/4 charged to use a super weapon. So go collect a bunch of weapons power-ups until you have enough energy (or use the NRGW cheat as described above).

The final part of the secret involves the key combinations to fire the super weapons. You must press several keys in the proper sequence, and in quick succession, in order to activate the secret weapons.   This kind of key combo is often referred to as a "twiddle".   The combinations for each weapons port are listed below:

[Thrust] [Thrust+SpinCCW] [SpinCCW] [Fire]
- Fires the main gun special weapon, if you have the single main gun active and enough weapon energy available. The main gun special weapon is a serpentine spray of bullets in the forward direction. (With the default keyboard layout, this is a quick roll over the up-left arrows followed by the fire key.)

[Thrust] [Thrust+SpinCW] [SpinCW] [Fire]

- Fires the aux guns special weapon, if you have the dual aux guns active and enough weapon energy available. The aux gun special weapon is a pair of long linear chains of bullets in the forward direction. (With the default keyboard layout, this is a quick roll over the up-right arrows followed by the fire key.)

[SpinCW] [SpinCCW] [SpinCW] [Fire]
- Fires the side guns special weapon, if you have the dual side guns and enough weapon energy available. The side guns special weapon is a pair of short wide fans of bullets in the lateral directions. (With the default keyboard layout, this is three quick taps - right,left,right arrow - followed by the fire key.)

[SpinCCW] [SpinCW] [SpinCCW] [Fire]
- Fires the tail gun special weapon, if you have the tail gun and enough weapon energy available. The tail gun special weapon is a long narrow fan of bullets in the rearward direction. (With the default keyboard layout, this is three quick taps - left, right,left arrow - followed by the fire key.)

[SpinCCW] [Thrust] [SpinCW] [Fire]
- Fires the mine gun special weapon, if you have the mine gun and enough weapon energy available. The mine gun special weapon is a ring of mines spreading out in all directions. (With the default keyboard layout, this is three quick taps - left, up, right arrow - followed by the fire key.)

    Hint: The super weapons are usually easier to activate if you're using the keyboard as a controller.

Troubleshooting

The game plays slowly on my computer:

- This game is intended to run adequately on a 486DX-66 with 4M of memory.   A local bus video card is strongly recommended.   For the best gameplay, run this game on a Pentium (tm) system with 8M or more memory.
- This game runs best under Windows 95 (tm).
- Although this game is not guaranteed to run under all versions of Windows NT (tm), it should run acceptably under Windows NT Workstation 4.0.   You may experience problems with the digital sound effects with Windows   NT.
- This game runs best in 256 color display modes (also known as 8-bit display modes).   If you have Windows configured for a different display mode you may wish to try changing your display settings.
- This game is designed to run in a "normal" window size of approximately 640x480.   At this size, the display does not need to be scaled to fit the window, which is usually the best situation - resulting in the best mix of performance and appearance.   However, you may try reducing the size of the window to improve graphics performance.   This will greatly distort the game's appearance, and so should only be used as a last resort.
- If you are using Windows 3.x, you can improve performance by installing Win/G.   Microsoft released Win/G as an add-on for Windows 3.x specifically to improve graphics performance, and the game will take advantage of it if present.   Win/G is not required on Windows 95 systems.
- If you are running other programs in the background while playing the game, try closing them - they may be using up valuable system resources.   If you are running the game on a PC with 8M or less of memory, Windows may be "swapping" virtual memory to a disk file which can significantly slow down the game.   Closing all other programs may free up enough memory to avoid this swapping.
- You can speed up several specific aspects of the game by disabling some of the graphic detail by using the <u>Preferences</u> dialog on the <u>Options menu</u>.   Try turning off "Draw Backdrop" or "Transparency" or reducing the number of stars in the background.
- If the game appears to slow down whenever multiple sounds are played simultaneously, you may wish to change the number of channels used by the sound mixer.   You can find this setting on the Music and Sound dialog under the Options menu.   A lower value may improve performance on slower PC's, although sound quality may be reduced.

The game window is too large for my screen, I can't see part of it:

- The game is designed to completely fill a 640x480 screen when run in a "normal" size window (see the Window menu, Normal Size item) when using the default desktop font.   However, the title bar and menu may take up extra space on your screen if you are using large fonts, thus reducing the amount of screen space available for the game.   If you are running at a resolution higher than 640x480 this should not be a problem.   If you are running at 640x480, you may correct this problem by either using a smaller font on your desktop, or by maximizing the game window.   Maximizing the game window will cause the window to scale itself to optimally fill the screen.   (However, note that scaling the window may distort the image somewhat and reduce performance.)

When I run the game with other applications the colors go crazy:

- In 256-color display modes, all running applications must share the same set of 256 colors. However, only one application (the active application) has control of the color palette at any one time - this may cause inactive applications to look "funny", since they are forced to use the "wrong" color palette.   An application should restore its own colors once it is again activated.   If you are using 256-color wallpaper it will be similarly affected by the changing color palettes.

I hear no music, or cannot adjust the volume of the music:

- The game may be unable to change the volume on some sound cards with older driver software. (The SoundBlaster AWE32 is one such card.)   If this happens you will not be able to adjust the music volume with the volume slider.   You might not hear music at all if the volume is set low. To solve this problem you should acquire and install the latest driver software from your sound card manufacturer.   (The SoundBlaster AWE32 will work correctly with the game if the latest driver software is installed.)

The sound effects are "choppy" or have intermittent "drop-outs":

- The game uses a Microsoft add-on called "WAVEMIX" to produce multi-channel sound.   This product is fairly CPU-intensive, and you may notice drop-outs on slower PC's.   Drop-outs are usually most noticeable when the system is very busy with other tasks such as graphics and disk access (especially if memory is being swapped to disk).   It is possible to slightly modify the performance of the WAVEMIX system by editing the parameters in the WAVEMIX.INI file. Suggested settings are listed for several common sound cards.   You may also try reducing the graphics detail via the Preferences dialog on the Options menu in order to free up your CPU for sound chores.
- You may also try changing the number of channels used by the sound mixer.   You can find this setting on the Music and Sound dialog under the Options menu.   A lower value may improve performance on slower PC's, although sound quality may be reduced.

In two-player mode, one player is controlling both ships:

- Open the Controls dialog box and check which controller each player is using.   Make sure that both players aren't using the same joystick, or the mouse, or have conflicting keyboard set-ups. (Since the keyboard controls are ALWAYS active regardless of which controller is selected, the keyboard controls must ALWAYS be unique for each player.)

I can't get my joystick to work:

- The game will only recognize your joystick if you have properly installed and configured a joystick driver within Windows.   The game does not contain any internal joystick configuration or calibration routines, all such functions are left to the Windows driver to take care of.   If your joystick is not working properly with the game, check the Windows Control Panel for an applet which allows you to configure and/or calibrate your joystick.

My joystick works, but it seems "backwards":

- You can either try reversing the offending axis within your joystick control applet, or simply redefine the joystick by using the Controls dialog on the Options menu so that the offending axis is reversed from the defaults.

Joystick Configuraiton