

Malkari Manual



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A Brief History of Malkari

The Fall of the First Age

Eons ago, a planetary system circled the G2-class Main Sequence star, Malkari. The fourth planet in this system was Mestor, a tranquil world and the original home of an advanced civilization. This civilization developed quickly and expanded rapidly throughout the system. First they exploited the other five habitable worlds for their resources, then used them as colonial outlets for their burgeoning population.

“The the GOR’s dominance has finally been ended. No longer will the intransigence and conservatism that hobbles them bind us. We fly far and free, to bring glory to our people.”

-Admiral Hay Molkoth

The demand for resources on Mestor and later the colony sites quickly outstripped diminishing resources. Consequently, the scientists of the First Age focused their formidable talents toward efficiency, recycling, and reuse. But the consequence was a skyrocketing demand for energy. The scientists were exhorted to further develop sustainable energy technologies that wrung every erg from the natural processes of the system, including the harnessing of gravitational effects, galactic radiation fields and solar winds.

Responsibility for overall growth and maintenance during the First Age was officially that of a loose political body, the GOR, in which each colony had a sole representative. An interplanetary communications system allowed delegates to represent the interests of their colony—by voting on

taxation and trade issues—without the need for a face to face meeting. This meant that, in practice, each colony remained isolated and was virtually independent. Each one was overseen by a chapter, whose technologists maintained the essential elements for the colony’s survival.

The End Approaches

Meanwhile, disaster of galactic proportions loomed. A rogue star, making its way outward from the galactic core, was bearing inexorably down on the Malkari system.

At its closest approach, the gravitational influence of the new star would wreak havoc on the heavily populated system. The technologists predicted dire consequences for the habitats and colonies. At the very least, these would be rendered uninhabitable and probably unsalvageable. Even the people on the planets themselves, despite the protection of their atmospheres, would undergo a long Nuclear Winter as they were bombarded by Oort refuse torn from millennia-old orbits.

The rogue star—named Diantos after an evil harbinger from ancient Mestorian mythology—could even cause small planetoids to collide, and the Malkari system would be rendered uninhabitable for many years. Fortunately, Diantos was identified early, and the process of destruction would not begin for hundreds of years. The technologists had plenty of time to prepare. Despite the general lack of knowledge and technology regarding interstellar travel, it was generally agreed that stage one of the survival of the race

was the construction of enormous generation ships—the Arks. These were constructed with enormous effort (and investment in precious resources), then launched towards the most promising of the closer star systems, to seek new home worlds.

Only a small proportion of the population could be saved this way, thus alternative plans were established for ensuring the survival of the people left behind.

These plans involved the feverish construction of deep underground vaults on every planet and moon in the system.

In case of unanticipated catastrophe, the deepest vaults were further equipped with a biosphere, stored genetic material, computer data banks, synthetic food production systems, power production and storage facilities, and several specially selected people. These systems

were capable of maintaining the scientific bank for decades. The process was to continue until people could re-inhabit the surface permanently.

As Diantos came closer it was realized by the astrophysicists that rather than being a swiftly passing nemesis, Diantos would be captured by the mass of the Malkari system. With a slowly dawning horror, they realized the timespan of the disaster would be far longer than at first thought. It would last centuries instead of years. Riots shook the system. Whole cities disappeared in an orgy of violence as the Malkari people realized they were doomed.

But some farsighted technologists, concerned with more than their immediate survival, redoubled their efforts, and revised the standing plans. The genetic storage and handling facilities were fully automated. A hard-earned technical break-

through led to the development of biosystems that could store entire personalities in toto, and overlay them onto a crèche-grown synthetic body. For the first time in a long while, there was optimism in the webs of government. A program of engrammic storage was immediately put into place. In a few short years, every person in the system was assured a form of survival. The vaults (also called scientific banks) were heavily modified, and the biosystems were set to regrow the leaders first. Once this cadre was revived, they could take stock of the post-Diantos situation and begin the work of rebuilding civilization.

Political maneuvering and intrigue had split the original ruling body, the GOR, into many Guilds. The colonies followed their Family allegiances, renouncing the GOR and formalizing the independent relationships they had been operating under for some time.

During the survival efforts, cooperation between the Guilds was strained by the fundamental differences in scientific beliefs and an increasing xenophobia. Despite this, the Engram Programs were a success. The individuals who built the biosystems planned carefully for the worst possible future. Their designs were tamper proof and permanent, the personalities being stored at the molecular level in superdense trans-uranic cores. These would survive all but a direct nuclear strike unscathed.

The individual people of Malkari, their existence post-Diantos in a way assured, returned to their lives to end their time with dignity. Conversely, as the populace quietly faded away under the looming shadow of disaster, arguments between the Guilds became more intense. Each became more protective and secretive of their own ways and more hostile toward the others. Finally, the fragile cooperation failed completely. Guilds sponsored and built their own vaults in secret, stealing resources from each other to try to preserve “their” philosophies and beliefs to the exclusion of others.

“There is no doubt that this will be a crisis for Malkari. But we will survive. Do not doubt me. With maximum precautions, a little common sense, and some hard work, we can turn this into an opportunity!”

-Claude Phortele, Technologist

In the final years, scientific dogmatism grew to the point that technology from other Guilds was regarded as inferior—even when it was not. Anything that another Guild developed was good only as scrap to be recycled. Under the baleful glow of their doom, the Guilds’ rivalry became frenzied. The last leaders of the Guilds were the most fervent advocates of their way being the “only hope for Malkari.”

As Diantos bore down on the system and its effects began to be felt, the vaults became targets. In them lay millions of potential recruits to whatever Guild was present at their rebirthing. Not surprisingly, open warfare erupted as each fought for control of the precious scientific banks. Darker rumors hinted at amoral Guild development of mind control techniques for the fresh engrams. Worse still, some zealots began to advocate the frightening policy of Exclusive Awakening. The Guilds encouraged chapters to create raiding parties to grab as many vaults for their Guild as possible. Rivalry within a Guild existed as well, but was relatively low-key. Chapters merely cheated each other on trade deals, or took

control of a vault held by another. These conflicts, while sometimes escalating into violence, were never allowed interfere with the greater mission of Guild supremacy. With the planets literally swaying in their orbits,

“Exclusive Awakening is being termed a barbarism. This is nonsense. It’s simply a rational calculation. If someone awakens too early in the process to be properly educated, it is far more humane to terminate that creature and reduce them to their composite genetic material for later regrowth and conditioning. It’s not even likely that they’ll remember the previous awakening. So, no harm done.”

-Dr Junat Presithine

and Diantos’ fire scourging the outer reaches of the system, the vaults were sealed and the leaders of the Guilds engrammed.

Secure in their permanent storage, the hope—and hatreds—of the Malkari people awaited their future awakening. In the last months and weeks, the data storage banks were crammed with what-

ever information would be valuable in the future. Filtered carefully by the last leaders, this information contained a full dose of their bigotry and conceit. The histories contained by each bank, superficially similar, were carefully and subtly twisted to support the views of those last fanatical extremists.

Despite the scientific differences between the Guilds, the political ideal of a single ruling body remained preserved in the historical records. As each Guild had written their own version of history, however, distortions caused each Guild to believe that they were the true keepers of the First Age legacy, and each chapter believed they would be the ones to return Malkari to its previous greatness. The reality of the loose confederation of colonies became blurred, replaced by thoughts of a single Guild dominated by a single chapter.

Diantos finally tore through the heart of the Malkari system, ripping the planets apart with surging gravitational tides. Gas giants boiled, incandesced and burned out. Entire planets plunged into one sun or the other, causing brutal flares that scoured the remaining debris. The two stars eventually formed an unstable binary system, temporarily locked in orbit around one another. The devastation was absolute: no planetary surface remained suitable for colonization.

Rising from the Ashes

Most of the scientific banks were destroyed. Of the thousands of deep bunkers, fewer than ten percent remained. Even of these, some of the automated machinery or genetic material had malfunctioned or been destroyed.

But some *did* survive. Centuries passed. As the ambient radiation in the system dropped to survivable levels, still active sensors signaled quietly to their cores: *Awaken!*

The crèches took years to force-grow bodies, and not all the results were perfect. More failures occurred. Some systems never developed beyond a churning organic soup. In some, the engrams were deposited into physiologically normal bod-

ies, only to awaken psychotic, catatonic, or deeply flawed. Again, the success rate was not high—perhaps one in five or ten. It was enough.

The first people immediately began to repair and activate the long-dormant machines, preparing the way for emergence. Each scientific bank had been equipped with the parts to build a large base and a Scout ship to examine what was left of the Malkari system.

The damage that greeted them was unanticipated by even the most pessimistic forecast. Undeterred, they modified the base structures to serve as stations, and began searching for other survivors. The intense environment (twice the radiation and solar interference as before) defeated their early attempts at communication. But systems were adapted and finally, contact was made.

Perhaps in those first weeks, had the effort been made, they could have cast off the philosophies

“We’ve received signals that inform us that at least four other BTC chapters survive, and are thriving. Fortunately, the discipline instilled in society by our leadership enabled them to withstand the hardships of the disaster. There is some miscommunication, however. They mistakenly think that they led the Guild, which I’m sure we’ll clear up once we have a chance to talk.

What I’m concerned about is telemetry that suggests the Crimson Crazies near to us may have finished their scout craft already. The rebirth process has left them dangerously unstable. We need to fix whatever is wrong with their engram systems—for their own good, of course!”

-Talon Aerie Command

that bound them. But this was too much to expect.

They were a direct product of the last leaders, and their hatred of other Guilds was instinctive and inherent.

Communication was maintained only with other chapters of the same Guild,

with each watching the others’ progress carefully. Meanwhile, each Guild formed committees that could coordinate and direct the Guild in its extermination of the others. There was no longer even the pretense of unity. Five separate systems were established.

It was quickly realized that the projections of the Guilds before the cataclysm had been correct: the gene banks were the key. If anyone were to rebuild civilization, they would need the legions stored therein. The Guild that controlled the majority of the banks, controlled the future.

The New Age of Malkari

Thus the five Guilds are reborn, and the revived chapters have inherited the biases and hatreds of the old. There is no hope of their banding together. Instead they survey the ruin of the solar system and make preparations to conquer it, each in the name of their own Guild and with the ultimate purpose of their chapter being dominant.

Malkari’s only hope is that a great leader emerges from the chaos, to unite the chapters within a Guild, and by political persuasion or force of arms, obtain the surrender of all in opposition. Such a leader might at last end the age-old conflict and unite Malkari, outshining even the greatest achievements of the ages long past.

Getting Started

System Requirements

To run *Malkari*, you need the following minimum system configuration:

- Pentium 90 MHz (Pentium 120 MHz or better recommended)
- 16 megabytes RAM (32 megabytes RAM recommended)
- Windows 95 or 98
- Video card and monitor capable of 800 x 600 resolution and 16-bit color
- 4x CD-ROM drive with 32-bit drivers
- Microsoft compatible mouse and driver
- 100% SoundBlaster compatible sound card

Drivers: Please ensure that you have the latest drivers for your system before starting a game. These can be obtained from either the computer system's tech support team, or from the manufacturer's Web page on the Internet. Drivers are updated frequently and even new software might be out of date.

ATI Rage Pro: The ATI Rage Pro chipset has a known problem with hardware cursor support. If you have such a chipset and are experiencing problems with the *Malkari* cursor disappearing, try the following:

1. Select *Start*, then *Settings*, then the *Control Panel*, and then *System*.
2. Select *Performance*, and then click *Graphics*.

3. Set the Hardware acceleration slider two notches below full.
4. Reboot for the changes to take effect.

Installation

You must install *Malkari* on your hard drive. You cannot play the game directly from the CD-ROM.

There are three options for installation: Compact, Typical, and Full. All installations run the game well, but the more information you store on the hard drive, the faster the game runs.

Malkari is designed for Windows 95 or 98 and features an AutoPlay-enabled CD-ROM.

AutoPlay simplifies the installation of multimedia and gaming titles under Windows 95 or 98 by providing instant access to the most common options. An installation menu is displayed to guide you through the process.

If you prefer, you can install *Malkari* manually. Select the *Start* icon, then *Settings*, then *Control Panel*. In the Control Panel window, double-click the *Add/Remove Programs* icon.

In the Add/Remove Programs Properties window, click *Install*. Insert the game CD into the CD-ROM drive. Follow the instructions on the screen.

iLZ

iLZ is Interactive Magic's online game forum. It provides a place to meet opponents, chat with friends, and play Interactive Magic games.

To install *iLZ* insert the *Malkari* CD into your CD-ROM drive. After a few moments the opening screen appears. Select *Install iLZ* then follow the instructions on the screen.

If *AutoPlay* is not active, install *iLZ* manually. Select the *Start* icon, then *Settings*, then *Control Panel*. In the Control Panel window, double-click the *Add/Remove Programs* icon.

In the Add/Remove Programs Properties window, click *Install*. Insert the game CD into the CD-ROM drive and then select *Next*. The *setup.exe* for *Malkari* is the default. To locate the *iLZ Setup.exe*, select *Browse...* Open the *Stuff* folder, then the *Lz* folder, select *setup.exe*, then click *Open*, and then *Finish*. Follow the instructions on the screen.

After *iLZ* is installed, launch it by selecting *Start*, then *Programs*, then *I-Magic Games* and then *iLZ*. Refer to the *iLZ* help file to learn more about this service.

Online Manual

The online manual is an expanded version of the printed manual, providing a full set of module tables. To access this manual, select *Online Manual* from the opening *AutoPlay* splash screen, and then select the *Book* icon.



DirectX 5 Setup

The installer program checks whether your system is compatible with DirectX 5 and offers to install it.

If you already have DirectX 5 on your system select no; if you do not have Direct.X 5 on your system, or do not know, select yes.

About DirectX

Many games and other Windows programs use DirectX, a standardized set of tools that allow programs to communicate with and control your system's hardware. DirectX-based programs use DirectX 'drivers' to perform many functions, such as painting graphics to the screen or having the sound card play music and sound effects.

When configured correctly, DirectX allows all DirectX-based programs to use the same set of drivers to perform these functions. When DirectX drivers are not configured correctly, some of these functions may not work.

If your DirectX drivers are not configured correctly, the most common result is that you are able to start the game, but as soon as you try to perform any actions or use any options, the game halts or crashes. Alternatively, you may experience an immediate crash as soon as the program begins to display graphics, or you might receive a warning message about your video mode.

Should you have any troubles with DirectX installation or its start-up initialization with *Malkari*, you should contact your hardware vendor or call Interactive Magic's Tech Support line, at (919) 461-0948, for assistance in diagnosing which hardware components in your system are causing the trouble and how to obtain help correcting their setup problems.

Walkthrough

Greetings Excellency and welcome to *Malkari*!

While *Malkari* is an in-depth and potentially complex strategy game the basics of movement, conflict, exploitation and expansion are easy to learn.

It is advisable for all new players to go through either this walkthrough or the tutorials (see [page 30](#)).

Load the game following the steps given in [“Installation” on page 11](#).

Launch the game by selecting *Start*, then *Programs*, then *I-Magic Games*, then *Malkari* and then clicking the *Malkari* icon, or by selecting *Play Malkari* from the opening splash screen. The first time the game is launched, the Intro Movie is shown, and then the Main screen is displayed.

1. Select *Single Player* from the Main screen, and then *Start a New Game* from the Single Player screen.
2. The Game Configuration screen is displayed. Leave the default starting values and select *Continue*. The Pick Guild screen is displayed.
3. Select the Emerald Combine as your Guild. Enter a name for your chapter in the Chapter Name box.
4. Click *Easy* on the *Preset Difficulty Levels* slider at the top of the screen.
5. Select *Play*. The *Malkari* system is created and the game begins.

NOTE: For players who want to investigate the initial setup more fully, see [“Game Parameters” on page 32](#). Changing the settings from those stated above, however, may affect your ability to follow the walkthrough.

Navigating the Malkari Solar System

The game opens with the Malkari system moving at an accelerated rate. Press any key or click to stop the movement and to zoom in on your start asteroid.

The opening screen is in Solar view which has three camera modes allowing the system to be viewed from any angle or position.

Linear mode: This is the default mode. The camera always points straight ahead and cannot be rotated. The right, left, up and down arrows on the keyboard move the camera in that direction.

Solar Center mode: Press **Z** to change modes. In this mode the camera always points towards the center of the solar system. The right, left, up and down arrows on the keyboard move the camera in an orbital motion around this point.

Free-Motion mode: Press **Z** again to change to this mode. The camera can point in any direction. The right, left, up and down arrows on the keyboard rotate the camera in that direction.

Zooming in and out: In all modes the **I**, **>** or **+** keys are used to move the camera in or forwards; the **O**, **<** or **-** keys are used to move the camera out or backwards.

Pressing **Z** moves through the camera modes. Press **Shift + Z** to change back to the previous mode.

Press **Tab** to center the view on your start asteroid. When you have ships or ATVs present at many asteroids pressing **Tab** jumps from one to the next; **Shift + Tab** jumps to the previous one.

Data Field Info

Place the cursor over an asteroid and look at the Data field on the right. The information displayed indicates the potential productivity of an asteroid and who owns it.

Most of the data is self-explanatory.

- *Vote*—At the start of the game the vote always belongs to the owner of the asteroid.
- *Orbit*—There are two types of orbit: elliptical or around one of the two stars, Malkari or Diantos. An elliptical orbit takes the asteroid around both the stars and the asteroid tends to move faster the nearer it is to a star.
- *Eco Class*—The economic class of an asteroid determines its base level of resources. See the table on [page 111](#) for a breakdown of each economic grade.
- *Kinetic Coefficient*—The Emerald Combine's power production depends upon the kinetic coefficient of an asteroid. The higher the kinetic coefficient, the greater the amount of power each power ATV can produce. The kinetic coefficient is directly related to the size of the asteroid.
- *Local Pool*—If you have a scientific ATV in the central zone or have built a storage facility elsewhere, there is a Local Pool. Without a Local Pool minerals cannot be transferred or stored.

Your Start Asteroid

Each chapter begins with one asteroid that has a Space Station and a Scout ship in Orbital space above it, and several ATVs producing power and minerals on the surface.

Double-click on your start asteroid while in Solar view to go to Orbital view.

Camera Modes

There are four camera modes that allow the asteroid and any ships around it to be viewed at all angles.

Asteroid Center mode: This is the default mode. The camera always points toward the center of the asteroid. The right, left, up and down arrows on the keyboard move the camera in an orbital motion around this point.

Free Motion mode: Press **Z** to change modes. In this mode the camera can point in any direction. The right, left, up and down arrows on the keyboard rotate the camera in that direction.

Linear mode: Press **Z** again to change to this mode. The camera always points straight ahead and cannot be rotated. The right, left, up and down arrows on the keyboard move the camera in that direction.

Locked mode: Press **Z** to change to this mode, then press **G** to activate the grid. The camera remains on a plane parallel to the grid and pointing towards the center of the asteroid. The right and left arrows on the keyboard move the camera in a circular motion about the center. The up arrow moves the camera toward the asteroid; the down arrow away. This mode is extremely useful when moving ships using the grid (see [page 69](#)). Press **G** again to toggle the grid off.

Zooming in and out: In all modes the **I**, **>** or **+** keys are used to move the camera in or forwards; the **O**, **<** or **-** keys are used to move the camera out or backwards.

Data Field Info

Place the cursor over the Space Station or select it by clicking on it. The Data field on the right displays information regarding the Space Station.

There are at least three pages of information about each ship, each one accessed by either pressing the **Page Up** and **Page Down** keys, or by clicking on *Next Page* in the Data field when the ship is selected.

Some of the information is self-explanatory; the following clarifies some points:

- *Design Class*—The class of a ship is the name that a design has been saved as in the Design Chamber.
- *Hull*—The hull determines the type of ship, such as a Space Station.
- *Speed*—There are two speeds, one for Orbital space and one for Solar space. A ship with a speed of zero can move *extremely* slowly, but only in Orbital space.
- *Power*—The amount of power a ship has stored, and the total amount it is capable of storing.
- *Construction Capacity*—The Space Station has construction capability. The figure shown is the number of build points the ship can use each turn.

Terrain View

Double-click on the asteroid to go to its Terrain view. This view represents a cross-section of the asteroid with the central zone containing the genetic bank, surrounded by zones that may be rich in minerals or good for power production.

Asteroids provide the resources necessary to construct ships, which in turn allow you to expand your empire by capturing additional asteroids. The economic grade and size of an asteroid affects the type and amount of minerals that can be exploited. See [“Asteroid Economic Grades” on page 111](#) for a breakdown of the base amount of minerals a particular economic grade provides.

Zone Information

Placing the cursor over a zone displays the following information in the Data field:

- *Zone Information*—The occupier of the zone, its stacking limit (the number of ATVs it can hold) and the mining value.
- *Current Output*—The amount of power and minerals this zone is producing.
- *ATVs Curr/Arr*—The number of ATVs occupying the zone and the number due to arrive when the turn is processed.

The *Mining Potential* filter button is the default filter, and it highlights the zones in varying shades. The more intense the color of a zone, the higher its mining potential.



Select the *Power Potential* button to find the better zones for power production. The Emerald Combine produces power based on the kinetic coefficient of an asteroid. The outer zones of the asteroid have higher potential due to the rotation of the asteroid. The further from the center of the asteroid a zone is, the higher the kinetic coefficient. Hence, the larger the asteroid the higher its potential power output.



Each Guild produces power by a different method, so an asteroid with a high power output for one Guild may only give a low power output to another Guild (see [“Power ATVs” on page 80](#) for further details).

The scientific ATV in the central zone of an asteroid supplies organics, sets up a Local Pool as a storage facility, and gives you one vote within the Guild. Each asteroid provides one vote, although these can be bought and sold (see [“Trade” on page 91](#) for further details).



Artifact sites may be present in a zone. When a scientific ATV enters a zone with an artifact site, it may reap rich rewards, or suffer drastic consequences.



Constructing ATVs

Your first priority is to build additional ATVs to exploit your start asteroid to a greater extent. The more power and minerals produced, the more construction you can do.

1. Right-click on the ATV facility to open the pop-up menu.
2. Select *Construct ATV*. The Construct ATV screen is displayed.
3. Use the up and down arrows (spin controls) to order two of each ATV type to be built.



Combat
ATV



Mining
ATV



Power
ATV



Scientific
ATV

4. Select *OK*.

One of each type is built each turn.

Each zone on an asteroid holds a finite number of ATVs. To move an ATV, drag-and-drop it into an adjacent zone. ATVs can be returned to the zone that they came from before the turn is processed. See [“Terrain Movement” on page 82](#) for further details.

As ATVs are produced, move them to the zones where they can gain the most. For power ATVs these are the outer zones; for mining ATVs these are the highest mining potential zones.

To automate the movement of ATVs select the *Automanage* button.



When the cursor is over a zone the Data display provides information regarding the number of ATVs that zone can contain, currently contains, and the amount of power and mineral production it generates. See [“Asteroids” on page 78](#) for further details.

Constructing a Ship

While the ATVs are being built, the Space Station can do some construction. In addition to resources, ship construction costs organics, which are produced by the scientific ATV in the central zone of the asteroid. The more asteroids you own, the more organics you produce.

Return to Orbital view by double-clicking in the area between the outer zones of the asteroid and the edge of the map display. (This is can be a very narrow strip if the asteroid is huge.)

1. Right-click on your Space Station to open the Task Orders menu (see [page 70](#) for further details).
2. Select *Construction*, then *Construct*. The cursor changes to a *Hammer*.
3. A list of the default ship designs is displayed in the Data field on the right.
4. Select a ship name with the Assault symbol alongside.
5. Click the *End Turn* button.



The ship being constructed appears alongside the Space Station. Place the cursor over the Space Station again. The highlight of the ship being constructed flashes, showing that it is the target of the Space Station's task, and the Data field display now has the current task listed and the following information:

- *EPC*—When a ship has been ordered to perform a task it uses power. The estimated power consumption records the net change in power at the end of performing the task. A net loss of power is normal. If a task cannot be completed because of a lack of power *Empty* is displayed in red.
- *ETC*—The estimated time to completion for the current order.

It takes several turns to build a ship, so order more ATVs to be constructed on the asteroid and press *End Turn*. Repeat until the ship has been built.

Messages are displayed at the bottom of the screen, stating the amount of minerals and power the asteroid is producing. The messages inform you when a ship has been constructed. For additional information regarding these messages, see the Notification Field section on [page 45](#).

Rename Ship: To change the name of a ship, select it then click on its name above the picture at the top of the Data field. Enter the preferred name, and then click *OK*.

NOTE: If you are not playing at easy level it is advisable to send your Scout to scan an asteroid, as any asteroid you want to capture needs to be scanned before ATVs can land on them. At easy level all asteroids start as scanned.



Recovering ATVs

When the Assault ship is completed it needs to pick up some ATVs from the asteroid. ATVs can be recovered from any zone, unless the asteroid is contested, in which case only ATVs in the outer, surface zones can be recovered.

1. Right-click on the Assault ship.
2. Select *Recover ATVs*. The Recover ATV screen is displayed.
3. Select an ATV on the Terrain map. It disappears from the zone and is listed in the appropriate slot along the top of the screen.
4. Continue selecting ATVs in this way. It is advisable to have at least two mining ATVs and two scientific ATVs (but do not remove the scientific ATV from the central zone).
5. To change the ATVs selected, select *Restore* and start again.
6. When you are finished, select the *Done* slot.



Pass the cursor over the Assault ship in Orbital view. The Data field displays the current task and its estimated time to completion (ETC) and estimated net power consumption (EPC).

Capturing Another Asteroid

When the Assault ship has picked up the ATVs, send it off to capture another asteroid.

To decide which asteroid it is best to capture, return to Solar view by either double-clicking on the Solar view goto slot or by double-clicking on the space backdrop around the asteroid.



Use the asteroid filter buttons (see [page 48](#)) to label certain asteroids. The *Asteroids by Guild* button is very useful as it labels each asteroid with its name color-coded. Use the reverse filter, by pressing **Shift** and then the *Asteroids by Guild* button, to label all unowned asteroids in white.



Use the **Shift** + *Mine* button to label all asteroids not owned by you—at the beginning this is all but your start asteroid.



Pass the cursor over unowned, white-labeled asteroids near your start asteroid, and compare their statistics in the Data field. An unowned asteroid is the easiest to capture, so to begin with focus on them. It is difficult to judge visually exactly how long it would take a ship to move to an asteroid. The system is dynamic and the asteroids orbit at different speeds in different orbits.

To view where the asteroids will be later on, select the *Future View* button. Use the buttons to pause, restart, or move through the changing system frame by frame (see the Future View section on [page 48](#)). Watch to see where the asteroids end up. Later on in the game, asteroids that remain close to your start asteroid may be easier to defend, but on the other hand, those that zip off at great speed can provide a platform for invading the nether reaches of the system.



Press **M** to toggle Future View off.

For now, choose a nearby, unowned asteroid that has good resource and power potential. There may be several eligible asteroids, in which case you want to spend the shortest time travelling as possible.

Goto Slots

The goto slots along the top of the screen provide 100 slots into which ships, asteroids or the Solar view can be placed. Use the buttons just above the slots, or the number keys (not on the numpad) to access a different set of slots. Place an asteroid in the next available slot by selecting the asteroid in Solar view, then double-clicking on the slot. Put all the asteroids you are interested in into goto slots in this way.

Go to Orbital view of the start asteroid by double-clicking in the left-hand side of its goto slot. Ensure that the ATVs have been recovered by checking the Assault ship's orders, and if they have, select it. Then select one of the asteroids you placed in the goto slots. This orders the ship to start moving to that asteroid when the turn is processed.



The ship can be put into a goto slot and the asteroids selected in Solar view, if preferred.

Pass the cursor over the ship and make a note of how long it is estimated for the ship to arrive at the asteroid. Repeat this process for each of the asteroids you are interested in. When you have established which is the nearest, order the ship to that asteroid.

Landing ATVs

When the Assault ship has arrived at the destination asteroid, order it to land the ATVs.

1. Go to Orbital view, and then right-click on the Assault ship.
2. Select *Land ATVs*. The Land ATV screen is displayed.
3. Use the *Mining Potential* button and the cursor to pinpoint the best zone for mining.
4. Select the mining ATV symbol in the slot then click in the zone with the best mining potential.



5. Use the *Power Potential* button and the cursor to find the best zone for power.



6. Select the power ATV symbol in the slot then click in the zone with the best power potential.



7. Place a scientific ATV in the central zone, to claim ownership and establish a Local Pool.

8. When all the ATVs are designated a landing zone, select the *Done* button to return to Orbital view.



NOTE: If another chapter is landing ATVs at the same time, ATVs can only land in the outer zones.

Return to Orbital view and pass the cursor over the Assault ship to see how long it will take to land the ATVs. When they have landed and the scientific ATV occupies the central zone, control of the asteroid is yours. Well done!

NOTE: If you are not playing at easy level the asteroid needs surveying before any ATVs can be landed (see [page 78](#)).

Creating Facilities

Continue colonizing this asteroid with mining and power ATVs by creating an ATV facility. Once the Local Pool has been established, resources can be transferred from your start asteroid, which should help increase ATV production (see [“Trade” on page 91](#)).

1. Go to Terrain view, and then right-click on a scientific ATV, (not the one occupying the central zone).
2. Select *ATV Facility*.
3. The scientific ATV is replaced by the ATV facility symbol.



Other facilities can also be built. A mining ATV can create a Storage or Mining facility. The latter improves the mining output of ATVs in the zone it occupies. A power ATV can be converted to a Power facility, which increases the power output of ATVs in the zone it occupies.

Transferring Resources

Once you have established a Local Pool on a captured asteroid, it is advisable to transfer resources.

1. Go to Information Mode by selecting the *Info Mode* button. 
2. Select the *Trade* button to open the Local Pools screen. 
3. In the top half of this screen your Local Pools are listed. Select the Local Pool of your home asteroid, if it is not already.
4. Select one of the *Transfer* buttons in the lower half of the screen. Each resource has a *Transfer* button.
5. Enter the amount of the resource that is to be sent, then select *OK*.
6. Select the Local Pool of the destination asteroid in the top half of the screen.
7. The resources are deducted and arrive at the destination after a delay for transportation.
8. Repeat for each type of resource to be transferred.

Select *Shipments* to view the transfers in progress, and their arrival times.

Further Expansion

Continue building ships with the Space Station at your home asteroid. You may want to build one with some offensive abilities to protect any unarmed ships when they are producing and landing ATVs, or to eliminate opposition around an asteroid. See [“Ship Design” on page 85](#) for information regarding ships and [“Space Combat” on page 72](#) for information regarding combat.

Information Mode

Be careful not to overextend yourself by heading out to lots of asteroids before you have spent the time to secure your position. Use the screens in Information mode (see [page 54](#)) to keep an eye on what the opposition is up to and how your progress compares with others. 

At the end of each turn, before selecting the *End Turn* button, check that all your ships all have orders by selecting the *Ship List* button while in Information mode. 

For additional help on how to play the game, use the in-game tutorials (see [page 30](#)) and for more general hints and tips on tactics and strategies, see [page 107](#).

Your fate awaits, Excellency. Good luck!

Beginning a Game

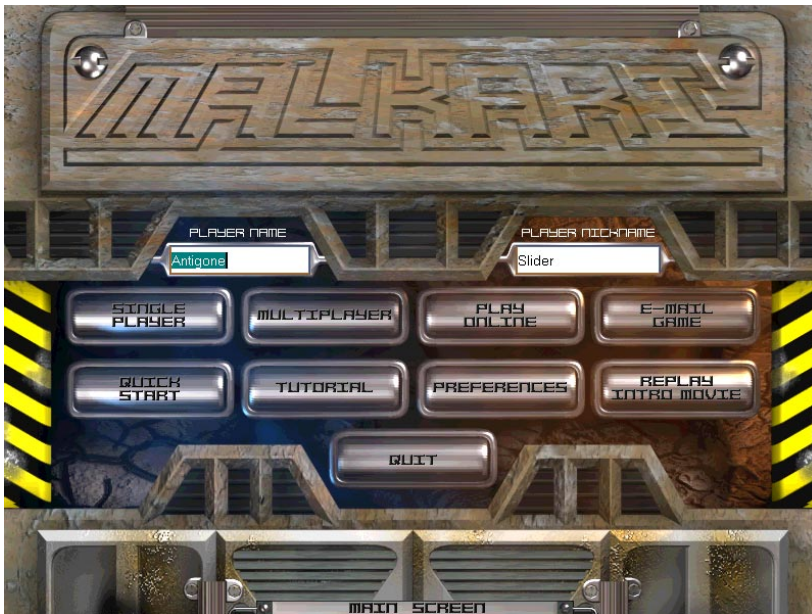
Close all other applications, toolbars, animated cursors, and system tray applets (virus scanners that are commonly accessed from the system tray) when playing *Malkari*.

We recommend that new players follow the Tutorials (see [page 30](#)) or the Walkthrough (see [page 13](#)) to become familiar with the basics of the game.

Main Screen

The first time the game is launched, after the Intro Movie, the Main screen is displayed. To go straight to the Main screen, press **Esc** during the Intro Movie

Enter a player name (the computer's ID) and nickname (player's ID), for multiplayer games.

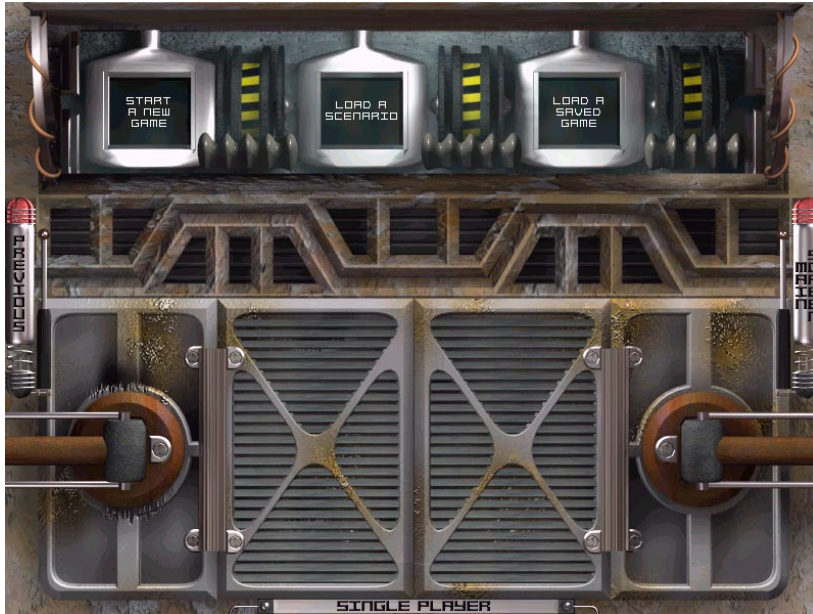


Main Screen

Single Player

Malkari can be played by up to forty players over the internet, on a local area network, or by playing by e-mail, but before taking the plunge into

multiplayer sessions, it is advisable to hone your strategies and tactics in solo games.



Single Player Screen

Starting a New Game

1. From the Main screen, select *Single Player*, the Single Player screen is displayed.
2. Select *Start a New Game*, the Game Configuration screen is displayed (see [page 32](#)). Make the selections you prefer, then select *Continue*.
3. The Pick Guild screen is displayed. Make the selections you prefer (see [page 38](#)). Select one of the Preset Difficulty Level settings and go straight to step 7, or click *Starting Values*, to access the Starting Values screen.
4. Make the selections you prefer (see [page 34](#)) and then select *Fog of War*. The Fog of War screen is displayed.
5. Make the selections you prefer (see [page 35](#)) and then select *Chapter Traits*.
6. The Chapter Traits screen is displayed. Make the selections you prefer (see [page 36](#)).
7. Select *Play* from any of the set-up screens to begin play.

NOTE: We recommend that new players go through the Walkthrough (see [page 13](#)) or the Tutorials (see [page 30](#)) to become familiar with the basics of playing *Malkari*.



Load Game Screen

Continuing a Game or Playing a Scenario

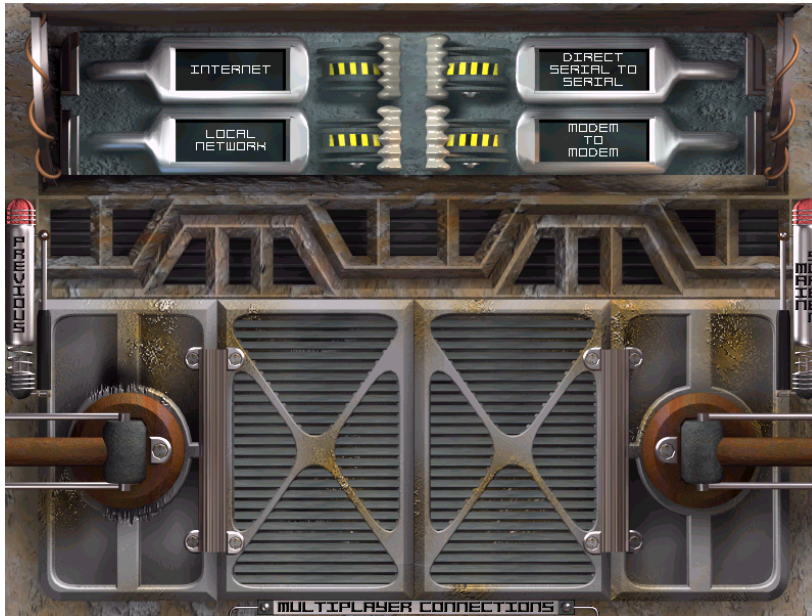
To load a scenario or continue a saved game:

1. From the Main screen, select *Single Player*, the Single Player screen is displayed.
2. Select either *Load a Scenario* or *Load a Saved Game*.
3. The Load Game screen is displayed.
4. Select *Show Saved Games* or *Show Scenarios*, if necessary.
5. Double-click the game or scenario to be loaded, or highlight it then click *Select this Game*.
6. *Malkari* materializes and play continues.

Multiplayer

To begin a multiplayer game, using a LAN or TCP/IP connection, or head-to-head via direct serial link or modem to modem, select *Multiplayer* from the Main screen. To play through

Interactive Magic's Online service, select *Play Online* (see [page 27](#)). To play by e-mail select *E-mail Game* (see [page 29](#)).



Multiplayer Connection Screen

Internet Play Preparation

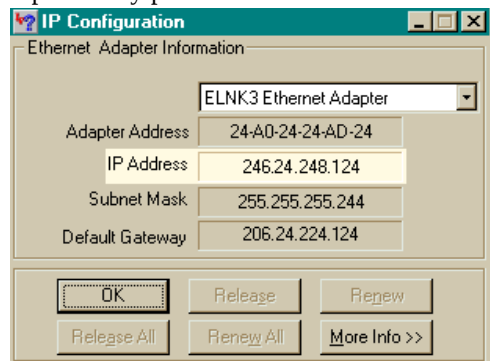
To play a multiplayer game over the Internet, the host needs to provide information to the other players.

While there are several online ‘managers’ or ‘helpers’ that can provide you with this information more easily, the Windows operating system has everything needed built into it already. It is assumed that you are familiar with sending e-mail.

Determining Your IP Address: The host needs to determine the IP address that their service provider has assigned to them.

1. Click on the Windows *Start* button and select *Run...*
2. Type **winipcfg** in the *Open:* field.

3. Press the **Enter** key, or click OK. The IP address is displayed as four numbers separated by periods.



4. Inform the other players of the IP address—they should be waiting for this information.

NOTE: Your IP address may change each time you log onto the Internet. If you have any difficulties determining your IP address, contact your Internet service provider.

Playing an Internet Game

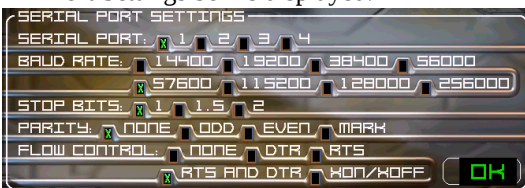
1. Select *Multiplayer* from the Main screen. The Multiplayer Connections screen is displayed.
2. Select *Internet*. The IP address box is displayed. The host should leave this blank; the guests should enter the IP address sent to them by the host.
3. The host should now follow steps 2-7 in [“Hosting a Malkari Session” on page 27](#). The guests should follow steps 2-6 in [“Joining a Malkari Session” on page 28](#).

Playing a Local Network Game

1. Select *Multiplayer* from the Main screen. The Multiplayer screen is displayed.
2. Select *Local Network*.
3. The host should now follow steps 2-7 in [“Hosting a Malkari Session” on page 27](#).
4. The guests should follow steps 2-6 in [“Joining a Malkari Session” on page 28](#).

Playing a Serial Link Game

1. Select *Multiplayer* from the Main screen. The Multiplayer screen is displayed.
2. Select *Direct Serial to Serial*. The Serial Port Settings box is displayed.



3. Unless you know what you are doing, leave the default DirectPlay settings as they are, and click *OK*.
4. The host should now follow steps 2-7 in [“Hosting a Malkari Session” on page 27](#).

The guest should follow steps 2-6 in [“Joining a Malkari Session” on page 28](#).

Modem Preparation

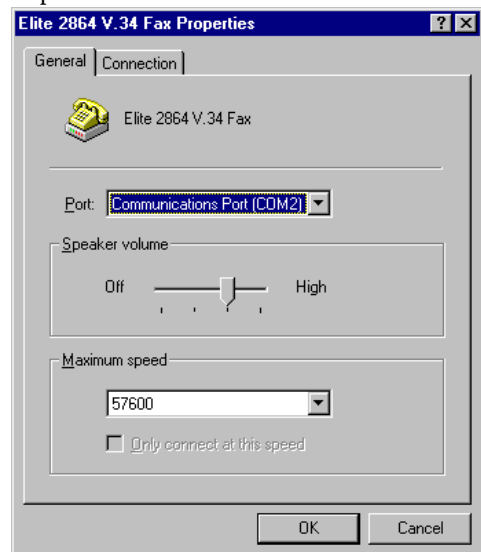
To play multiplayer games via modem, make sure that your modem is installed properly, then configure certain optional settings for optimum performance. If necessary, connect and configure your modem following the manufacturer's instructions or the Windows documentation.

Once you have configured your modem, you need to turn off data compression to ensure smooth play.

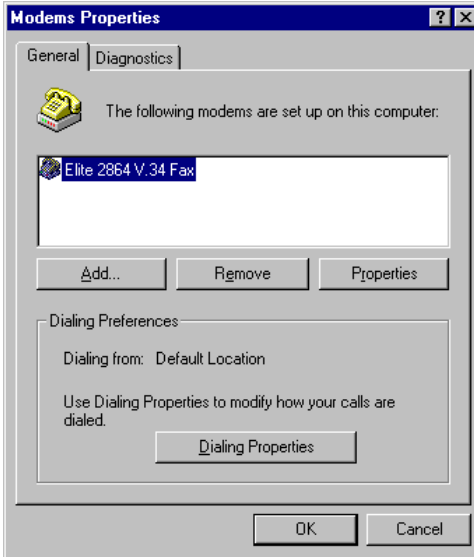
You can change these settings using the Control Panel.

To change your data compression settings:

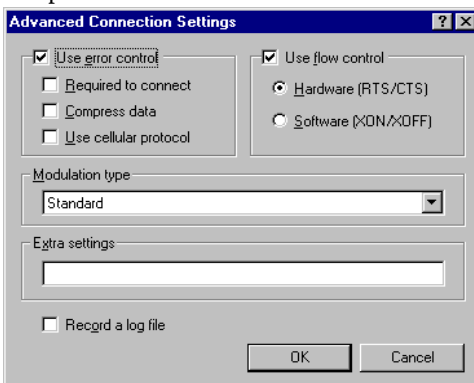
1. Open the Control Panel by clicking the Windows *Start* button, then select *Settings*, and then *Control Panel*.
2. Double-click *Modems* to display the Modem Properties window.
3. Select the modem whose settings you want to change.
4. Click the *Properties* button to display the Properties window for the selected modem.



5. Select the *Connection* tab.



6. Select the *Advanced* button.
7. Make sure that *Compress data* is not checked.
8. Select *Hardware* for flow control. The hardware flow control is usually the default.
9. Select *OK* to return to the Properties window and apply the new settings.
10. If the phone line quality is poor, your modem may not be able to establish a stable connection. If this happens, reinstate the *Use error control* check mark, but be sure to disable (remove the check mark for) data compression.



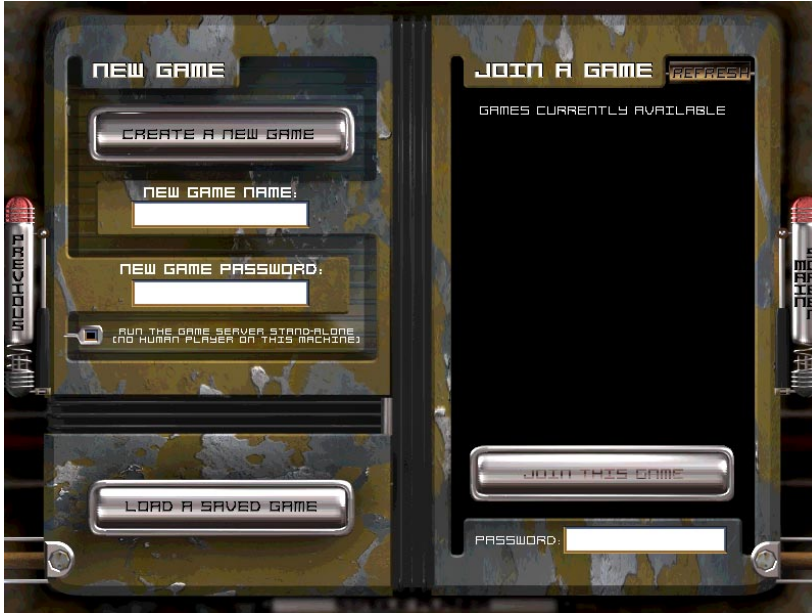
Playing a Modem to Modem Game

1. Select Multiplayer from the Main screen. The Multiplayer screen is displayed.
2. Select *Modem to Modem*. The Modem box is displayed.
3. The host should leave this blank; the other player should enter the host's modem number.
4. The host should now follow steps 2-7 in [“Hosting a Malkari Session” on page 27](#). The guest should follow steps 2-6 in [“Joining a Malkari Session” on page 28](#).

Play Online

Interactive Magic Online provides a lounge facility, iLZ, where players can join or initiate games over the Internet, using a TCP/IP connection. It is essentially a meeting area where

anyone might join in your game—unless you want to keep it private by only allowing those who know the password to join.

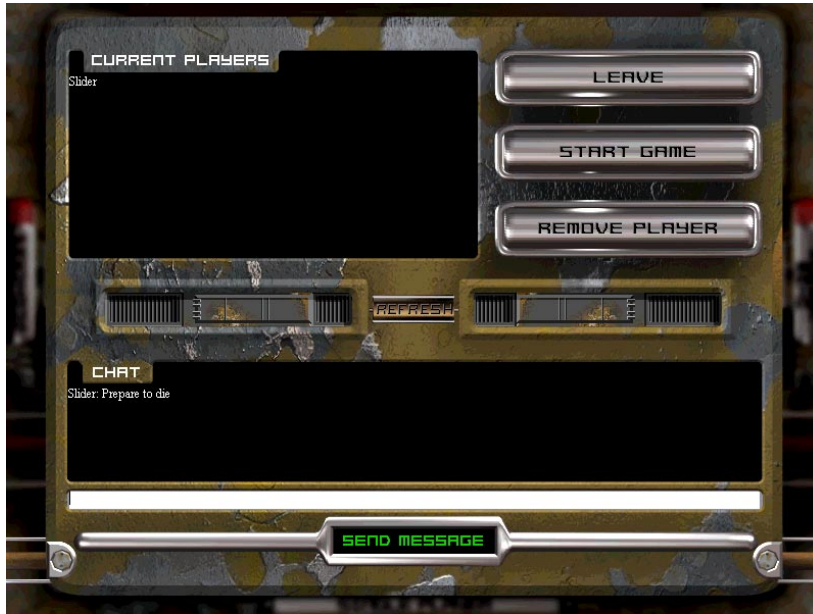


Multiplayer Screen

Hosting a Malkari Session

1. Select *Play Online* from the Main screen
2. The Multiplayer screen is displayed. Enter the new game name.
3. Enter a *New Game Password* if you want a private session. You need to notify the other players of the password you have used. For an open game, leave the password field blank. Select *Create a New Game*.
4. Make selections from the Game Configuration screen (see [page 32](#)), as preferred.
5. The Starting Values screen (see [page 34](#)), and the Fog of War screen (see [page 35](#)) are accessible from the Game Configuration screen when playing a multiplayer game.
6. Make the preferred selections from these screens, then click *OK*. Then select *Lock these settings for all players*, if you do not want players to select their own settings in the usual way.
7. Select *Continue* when your selections have been made, the Pick Guild screen is displayed.
8. Make selections from the Pick Guild screen (see [page 38](#)) and the Chapter Traits screen (see [page 36](#)).
9. Select *Play*.

NOTE: If the *Run the game server stand-alone (no human player on this machine)* box is checked the host computer acts as a server, which slightly increases the speed of play.



Current Players Screen

10. The Current Players screen is displayed.
11. Use the *Refresh* button to update the screen and wait until all the players to be present at the beginning of the game are logged on. Remove a player by highlighting their name, and then clicking *Remove Player*.
12. Type any messages—insults or provocative comments about the opposition’s abilities to establish a suitable atmosphere—then click *Send Message*.
13. To begin *Malkari*, select *Start Game*.
5. Enter the password if you are joining a private game; leave the password field blank if joining an open game.
6. Click *Join this Game*. The Guild Traits screen is displayed. If the host has *not* selected *Lock Settings for All Players* in the Game Configuration screen, selections can also be made in the Fog of War and Start Value screens.
7. Select the Guild and chapter you want to play, and enter your game name in the appropriate field. Chapters that have been chosen by players who have already entered the Current Players screen, are not available.
8. Select *Play*. The Current Players screen opens.
9. Type any messages—insults or provocative comments about the opposition’s abilities to establish a suitable atmosphere—then click *Send Message*.
10. The game begins when the host selects *Start Game*.

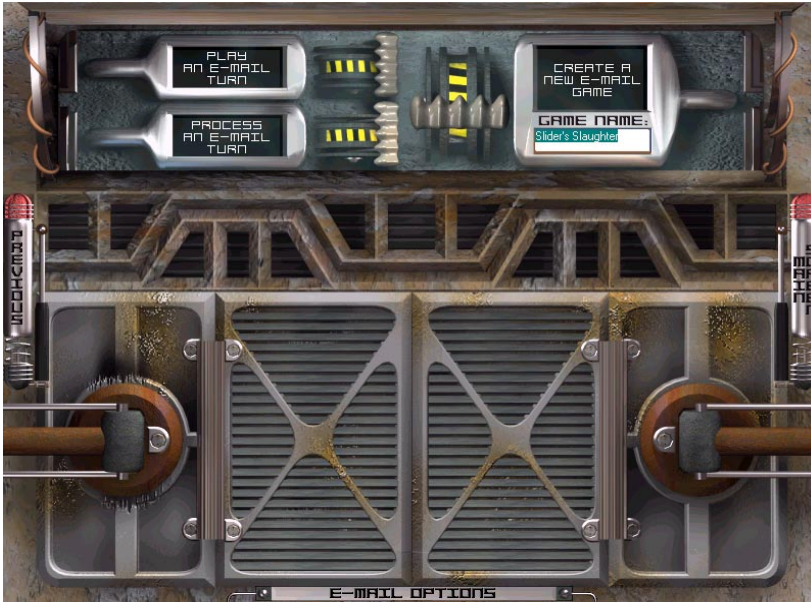
Joining a Malkari Session

1. Select *Play Online* from the Main screen.
2. The Multiplayer screen is displayed.
3. If the game you want to join is not yet listed wait a while, and then select *Refresh*. The list is updated and any new games added.
4. Highlight the name of the game to join from the *Games Currently Available*.

E-mail Game

Up to forty players can play *Malkari* via e-mail. The host sets up the game and sends files to all the guests. The guests and the host then play their

turns and the guests send files back to the host. The host processes the turn and sends the files out again. This is repeated until someone wins.



E-mail Options Screen

Setting up an E-mail Game as the Host

1. Select *E-mail Game* from the Main screen.
2. On the E-mail Game screen, enter a *Game Name*—each e-mail game must have a unique name—then select *Create a New E-Mail Game*. The Game Configuration screen is displayed.
3. Set the game settings on this screen and in Starting Values and Fog of War, accessible from this screen. Settings are always locked in an e-mail game.
4. Select *Continue*. The game setup is processed, generating a *Gamename.esv* file and forty *Gamename.sxx* files (where xx = 00 to 39) in the `..\Malkari\email` folder. *Gamename* is the one entered in step 2.
5. Quit the game, and launch your e-mail program.

6. Mail one of the *Gamename.sxx* files to each guest player. Make a note as to which player receives which file.

Playing an E-mail Turn as a Guest

1. First you need to receive an e-mail from the host with the attached game file.
2. Move the *Gamename.sxx* file from the e-mail program's attachments folder to the `..\Malkari\email` folder.
3. Launch *Malkari* and select *E-mail Game*, the E-mail Game screen is displayed.
4. Select *Play An E-mail Turn*, the Load Game screen is displayed.
5. Select the *Gamename.sxx* from the load game list and click *Select This Game*.
6. The game loads and play begins.

7. Make your moves, then select *End Turn*. A Gamename.cxx file is generated.
8. E-mail the Gamename.cxx file to the host as a file attachment.

Playing an E-mail Turn as the Host

Follow steps 3-7 in Playing an E-mail Game turn as a Guest. Ensure that the Gamename.sxx selected in the Load Game screen is the same each time—unless you *want* to play a different chapter each turn.

Processing an E-mail Turn as the Host

1. When you have received the Gamename.cxx files from the Guests, using normal file move procedures in Windows Explorer, move the Gamename.cxx files from the e-mail program's attachments folder to the ..\Malkari\email folder.
2. Launch *Malkari* and select *E-mail Game* on the Main screen.
3. On the E-mail Game screen, select *Process An E-mail Turn*, the Load Game screen is displayed.
4. Select the Gamename from the load game list and click *Select This Game*.
5. The turn is processed.
6. The Host then quits the game and once again mails the Gamename.sxx files to each Guest player, making certain that each receives the same file number as before.

Quick Start

To jump quickly into the last saved single player game, select *Quick Start*.

If there are no saved games in the saved games folder, an Instant Action scenario begins. *Malkari* materializes with the action centered on one asteroid, each Guild is present with several ships ready to do battle. See [“Space Combat” on page 72](#).

Tutorial

Newcomers to *Malkari* are advised to go through the in-game tutorials to become familiar with all the various aspects of the game.

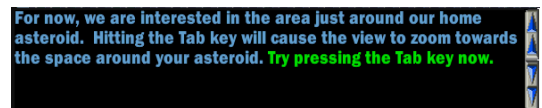


Tutorial Index

To go through the tutorials:

1. Select *Tutorial* from the Main screen.
2. The Tutorial Index is displayed
3. Select one of these tutorials.
4. The Tutorial screen opens.

Use the up and down arrow buttons on the right of the message display to go to the previous or next page. Press *Exit* to return to the index.



The blue writing imparts information; the green gives instructions.

Preferences

To select the sound and music preferences for *Malkari*, select *Preferences* from the Main

screen. These can also be set from within the game (see [page 46](#)).



Sound Preferences Screen

Select the preferred settings:

- *Music Volume*—On or Off.
- *Sound Effects Volume*—Silent, Low, Medium or High.
- *Speech Feedback*—On or Off.

Select *Set Volumes* to save these settings and return to the Main screen.

Replay Intro Movie

Select *Replay Intro Movie* from the Main screen to see the introductory animation and story.

Quit

Click *Quit* on the Main screen to close the game and return to Windows desktop.

Game Parameters

When setting up a game of *Malkari* there are several screens that allow you to change the set-up within a game, to customize each game depending upon your mood, or to establish a particular flavor for a multiplayer game—it is possible for

the host and guest machines to have different settings in the Fog of War and Starting Values screens, allowing the game to be played as a handicap.



Game Configuration Screen

Game Configuration

The Game Configuration screen sets the fixed game parameters such as victory conditions. These parameters are the same for all players.

Lock These Settings for All Players: In a multiplayer game, the host can lock the selections they have made in the Starting Values and Fog of War screens. If the settings are not locked, each player can make select the settings they prefer in the usual way.

Victory Conditions

Multiple victory conditions can be set. The game ends whenever one of the conditions is fulfilled.

Last Man Standing (Always Active): When all other Guilds and chapters have been exterminated, including those in your own Guild, you win.

Capture the Flags: A chapter is destroyed if it loses control of its start asteroid. All members of the last remaining Guild are declared joint winners.

Biggest is Best: The chapter controlling the greatest number of asteroids at the end of the game wins. If there is a tie the joint winners receive a minor victory.

- Use the up and down arrows (spin controls), to set the game duration.

Imperator Wins the Game: The winner is the chapter whose leader is elected Imperator (for details regarding the Imperator and voting see [page 93](#)). The chapters in the same Guild as the Imperator attain a minor victory.

- Set the percentage of Guild-owned asteroids required for an Imperator vote. *# of asteroids = x* indicates the number of asteroids the Guild needs to own before an Imperator vote occurs.
- Select the percentage of Guild votes needed to be successfully elected Imperator. If more than one chapter receives the required percentage of votes, the one with the most votes becomes Imperator. If there is a tie, play continues until there is a winner, unless Interregnum is selected.

Interregnum: This option is only available when *Imperator Wins the Game* is selected. When two chapters have a tied vote, both having the required percentage needed for an Imperator election, civil war breaks out. One chapter and their supporters are declared loyal; the others are declared rebel. See [page 93](#) for further details.

NOTE: Whatever victory conditions are selected, it is possible to continue playing after the official end of the game.

Miscellaneous Settings

Turn Limit: Set the maximum length of time each turn is to take, in either minutes or hours.

Chapters per Guild: Choose the number of chapters in each Guild, up to eight.

Number of Asteroids in System: Select the number of Asteroids in the system, minimum of 40, maximum of 150. There must be at least as many asteroids as there are chapters.

Use the number of chapters and the number of asteroids to influence the crowding within the system. Having one asteroid available per chapter causes conflict very early on in the game. Having many asteroids per chapter normally permits quiet expansion without much conflict until later.

Allow Asteroid Collisions: Asteroids follow scientifically calculated orbits and on occasion this results in collisions that destroy ATVs and ships in the vicinity.

Asteroid Orbit Speed: The rate at which the system rotates around the stars can be altered, or even halted completely to give a static system.

Research Shared: Research within a Guild is normally shared between chapters. To share no research set this percentile to 0; to share all research set it to 100. The more that research is shared, the faster each technology level is gained. The higher this number, the more important and intense upgrading your ship designs becomes.

Chaotic Orbit: If *No*, the asteroids orbit in one plane around the suns, making it is easier to keep track of what is going on. If *Yes*, they orbit randomly—great fun for those who really like a challenge.

Global Starting Values: Go to the Starting Values screen (see [page 34](#)).

Global Fog of War: Go to the Fog of War screen (see [page 35](#)).

NOTE: When accessing the Starting Values and Fog of War screens from here, which is only possible when hosting a multiplayer, online or e-mail game, it is not possible to use the buttons along the bottom of those screens. After making your selections click *OK* to return to the Game Configuration screen.

Starting Values

The Starting Values screen sets the starting situation for a player. When playing multiplayer, these are the same for all players when the host selects

Lock these Settings for all Players in the Game Configuration screen, or each player can set their preferences separately.



Starting Values Screen

Starting Asteroids

Economic Grade: Select the economic grade of your start asteroid. When *Good* is selected, the player's home asteroid is always Economic Class A. (See [“Asteroid Economic Grades” on page 111](#) for a listing of the various grades and their base mineral distribution.)

Orbit: Select the preferred orbit of your start asteroid. An asteroid orbiting both Diantos and Malkari (elliptical) normally moves away from asteroids close to it at the start. This may cause support problems as it moves away from the asteroids settled nearby. On the other hand, contact is made with many asteroids and it is harder for enemies to launch an attack upon it because of its fast orbiting speed.

Starting Values

Resources: The more resources in your Local Pool at the beginning of the game, the easier it is.

Ground Forces: The number of ATVs already constructed at the beginning of the game.

- *Low*—One scientific ATV in the central zone.
- *Average*—One scientific ATV and four of each other type.
- *High*—Two scientific ATVs and eight of each other type.

Play: Begin the game.

OK: When accessing this screen from the Game Configuration screen (multiplayer only), none of the other buttons are active, and the *OK* button returns you to the Game Configuration screen.

Fog of War

The ability to view out of range enemy asteroids, and ships in Solar view, or in the Orbital space of

asteroids where you have no presence are selected from this screen before the game begins.



Fog of War Screen

Show Ships in Solar Space: Select one of the three options:

- *Always.*
- *Within range of my controlled asteroids.*
- *Never.*

Show Asteroids I don't Control: Select one of the two options:

- *Always.*
- *Only after coming in range of my asteroids or ships.*

Asteroids Start as Scanned: Select one of the two options:

- *All (very easy).*
- *Only for asteroids my Guild controls.*

Ships Start Already Scanned: Select one of the two options:

- *All (easy).*
- *Only my ships.*

Display Control of Asteroids: Select one of the two options:

- *Always.*
- *Only if I am present there.*

Play: Begin the game.

OK: When accessing this screen from the Game Configuration screen (multiplayer only), none of the other buttons are active, and the **OK** button returns you to the Game Configuration screen.

Chapter Traits

Each Guild has inherent strengths and weaknesses (see [page 111](#)). In addition, each chapter within a Guild can have slightly different abilities that are chosen from the Chapter Traits screen.

There are default selections for those who do not want to customize the selection.

A chapter may be master of one trait, expert at two or adept at three.



Chapter Traits Screen

Warrior Caste: These traits influence your abilities in combat (see [“Space Combat” on page 72](#)).

- *Projectile Weapons*—Increases the effect of projectile weapons.
- *Energy Weapons*—Increases the damage inflicted by beam weapons.
- *Targeting*—Increases the chance of hitting a target.
- *Terrain Combat*—Gives a bonus to ATVs engaged in combat.

Guardian Caste: These traits influence your ability in defense.

- *Shielding*—Increases the shield value of defense modules against all types of attack.

- *Damage Control*—Decreases the amount of damage received when hit.
- *Stealth*—Decrease the chance of being tracked by boosting ECM values.
- *ATV Armor*—Increase the defensive abilities of ATVs.

Navigation: Enhances the speed of travel.

- *Solar Navigation*—Increases speed in Solar space.
- *Orbital Navigation*—Increases speed in Orbital space.

Academic Caste: Increases the technology or research abilities.

- *Hull Technology*—Increases the rate at which new hulls become available.
- *Module Technology*—Increases the rate at which new modules become available.
- *Research Technique*—Increases the science bonus received per controlled asteroid.

Industry: Enhances the ability to exploit resources.

- *Mineral Extraction*—Increases the mineral production of mining ATVs.
- *Power Generation*—Increases the power production of power ATVs.
- *Genetics*—Increases the amount of organics that each asteroid produces.

Engineering: Enhances the efficiency of modules.

- *Recycling*—Reduce the resources required for ship construction.
- *Ship Building*—Construction modules build ships more quickly.
- *Conservation*—Decreases the power usage of all modules.
- *Miniaturization*—Decreases the mass of all modules.

Pick Guild

The evolution and development of the five Guilds of the Malkari system has led to each Guild having its own technology and characteristics. A brief history of each Guild and their particular

peculiarities can be found in [“The Guilds” on page 95](#). A full history of the split from one cohesive leadership to five bitterly rival Guilds begins on [page 99](#).



Pick Guild Screen

Guild: Select the Guild you want to be in. See [page 95](#) for a brief description of each Guild, and the [“Guild Traits Summary” on page 117](#).

Guild Info: Displays the full history and a description of the selected Guild.

Chapter: Select the chapter you want to play. In a multiplayer game, only those chapters not already taken by other players are available.

Chapter Name: Type in your chapter name.

Play: Click play to start the game.

Starting Values: Access the Starting Values screen, see [page 34](#).

Fog of War: Access the Fog of War screen, see [page 35](#).

Chapter Traits: Access the Chapter Traits screen, see [page 36](#).

NOTE: The four buttons listed along the bottom access the appropriate set-up screen with each being accessible from all the others. Play can be started from any of these screens, except when the Fog of War or Starting Value screens are accessed from the Configuration screen in multiplayer games.

If the host of a multiplayer game selected *Lock these settings for all players* in the Game Configuration screen, the setup screens are read only. If the settings are not locked, each player can select their own settings, as usual.

Preset Difficulty Levels: The preset difficulty levels have the following selections on the relevant screens. If *Easy*, *Average* or *Difficult* is

selected and the settings are then changed in one of the screens, the setting becomes *Custom*.

Fog of War

	Show Ships in Solar Space	Show Asteroids I don't Control	Asteroids Start as Surveyed	Ships Start as Scanned	Display Control of Asteroids
Easy	Always	Always	All	All	Always
Average	Within range of my controlled asteroids	Always	Only for asteroids my Guild controls	Only my ships	Always
Difficult	Never	Only after coming in range of my asteroids or ships	Only for asteroids my Guild controls	Only my ships	Only if I am present there.
Custom	Any other combination of settings				

Starting Values

	Economic Grade	Orbit	Resources	Ground Forces
Easy	Good	Never elliptical	High	High
Average	Good	Random	Average	Average
Difficult	Random	Random	Low	High
Custom	Any other combination of settings			

Using the Interface

This chapter provides information regarding the screens, buttons and keys that can be accessed, clicked or used while playing *Malkari*. For information about playing the game, such as moving units, attacking and capturing asteroids, mining resources and so on, go to [“Expanding your Empire” on page 67](#).

Malkari features an easy-to-use point and click interface. When the cursor is placed over a button, its function is displayed as a ToolTip.

The *Malkari* game screens provide all the information required to develop strategies, assess your enemy and fellow Guild members, capture asteroids, design ships, and manipulate units to perform construction, exploration, and combat.

Game Screen

Malkari’s main area of play is the Game screen.



Game Screen

Goto Slots

The slots along the top of the screen contain shortcuts to the items within. Shortcuts to the Design Chamber, Solar view, and your start asteroid are in place at the beginning of a game.

To place an item in a goto slot, select an asteroid or a ship, then double-click in an empty slot, or right-click on the empty slot and then select *Set Goto* from the pop-up menu. If nothing is selected, when in Orbital or Terrain view, double-clicking on an empty slot places the asteroid in the slot. When in Solar view a goto Solar view is inserted, and when in the Design Chamber a goto the Design Chamber is placed.

Delete a shortcut by right-clicking on the slot then selecting *Clear Goto* from the pop-up menu.

When an asteroid is in a goto slot, double-click the left-hand side to go to Orbital view; the right-hand side to go to Terrain view. The color-coded numbers along the left side of each asteroid goto indicate the number of ships each Guild has in orbit around that asteroid. The white number is how many your chapter has at that asteroid.

There are ten sets of goto buttons. Click the switch above the first slot to access the first set of ten; the switch above the second slot to access the second set and so on. Alternatively, use the numeric keys (not the numpad) to access each set. **1** accesses the first set, **2** the second and so on.

Goto slots act as the item in them. For example, you can right-click on a ship in a goto slot to access the Task Orders menu, or select a ship and click on an asteroid in a goto slot to send it there.

NOTE: Sending a ship to an asteroid by selecting the asteroid in the goto slot orders the ship to move next to the asteroid, that is, to move into Orbital space around the asteroid, and then move next to it. Selecting an asteroid in Solar view orders the ship to move to the asteroid, but not next to it. It stops on entering Orbital space.

Viewing Area

There are three views, Solar view (see [page 47](#)), Orbital view (see [page 49](#)), and Terrain view (see [page 52](#)). When an order is given, a notification is briefly displayed at the top of the viewing area.

Data Field

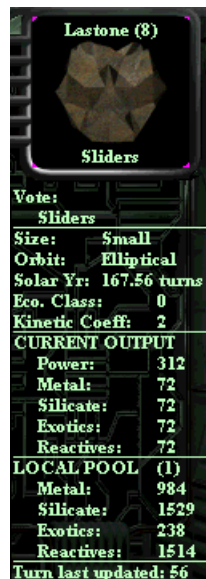
When the cursor is placed over an item in the viewing area or goto slots, information is displayed in the Data field, to the right of the Game screen. If a ship is selected, its data is displayed unless the cursor is over another ship or an asteroid. To deselect an item, click on it again.



Data Displayed when Nothing is Selected

The information displayed when there is no item selected and the cursor is not over anything, is the turn number, the amount of Organics your

chapter has in storage, and the number of asteroids controlled by you and your Guild.



Data Displayed when an Asteroid is Selected

Name, Owner, and Vote:

The basic data regarding an asteroid is displayed who-ever owns the asteroid. The basic data includes the asteroid's name, owner, and the vote-owner—votes can be traded and, therefore, the owner of an asteroid is not necessarily the vote-owner.

Size, Orbit, and Solar

Year: The size and orbit are listed. An elliptical orbit goes around both Malkari and Diantos. If an asteroid orbits only one star, that star is listed.

Asteroids orbit at different speeds. The solar year is the time it takes the asteroid to complete one orbit.

Economic Class and Power Coefficient: The economic class and power coefficients are only available after an asteroid has been scanned. Each Guild produces power differently, and only the power coefficient relevant to your Guild is listed. An asteroid with high power potential for one Guild might be low for another one (see [page 80](#)).

Output: The output of an asteroid depends upon its economic class and power coefficient, and the number and placement of ATVs on the asteroid. ATVs with power potential produce power; ATVs with mining potential produce minerals. Certain facilities can enhance the resource production of ATVs (see [page 81](#)).

Local Pool: A Local Pool is established when a scientific ATV occupies the central zone of the asteroid, or when a storage facility has been built by a mining ATV.

NOTE: Local Pools are blockaded if enemy attack strength exceeds friendly attack strength in Orbital space around the asteroid.

Updates: When you have a presence at an asteroid (that is either a ship in Orbital view, or an ATV in Terrain view), the situation at that asteroid is updated each turn. When you do not have a presence at an asteroid, the information is not updated from the time your ships or ATVs left.



Data Displayed when a Ship is Selected

Name, Class, Type, and Damage: The first, default information page includes the ship's name, class, type and damage summary. Damage to Life Support and Hull Integrity is shown—if either of these reaches zero the ship is destroyed. A complete breakdown of damage is listed on the following page or pages.

Speed: Ships have two speeds. *Orbital* is how fast they travel in the area immediately around an

asteroid; *Solar* is how fast they travel between the asteroids.

Power: The amount of power a ship can store depends on the power storage modules present in the design. The amount of power remaining and the total amount the ship can carry are listed.

Special Abilities: Many ships have particular abilities and information relating to these abilities is displayed here. For example, the number and types of ATV a ship is carrying, or its construction value, which is the number of build points it generates.

Current Order: The order currently being carried out is listed, with its EPC (estimated power consumption) and ETC (estimated time to completion).

If the EPC is *Empty* and red there is not enough power available to complete the current order and it is put on hold until enough power is available.

Next Page: There are at least three pages of information regarding ships. Either click here to access the next page, or use the **Page Up** and **Page Down** keys to move between the pages. The latter also works when the cursor is placed over an item, not only when it is selected. Should your mouse have a wheel, this can also be used to move through the pages.



Damage Breakdown

Access a breakdown of the damage received by either clicking *Next Page*, right-clicking on the ship, then selecting *Display*, and then selecting *Damage*, or by pressing the **Page Up** key, or by using a mouse wheel, should one be available.

If there are more slots on the ship than fit onto one page, they are listed on the following page.

Slot Damage: The modules contained within the ship design are listed with a

damage bar beneath each one. The bars are color-coded to reflect the amount of damage taken. Red indicates severe damage, yellow moderate and green none. When there are more than 10 slots, the damage breakdown continues on the next page. If all modules on a ship are destroyed, the ship is destroyed.

Orders

The last page lists the orders of the ship. The order currently being undertaken is at the top of the list and has its EPC and ETC listed. Access the last page by right-clicking on the ship then selecting *Display*, then selecting *Orders List*, or by selecting *Next Page* from the damage page, or by using the **Page Up** and **Page Down** keys.

Two Rice (46)	
ZONE INFORMATION	
OWNER	Sliders
ATV LIMIT	11
MINING VALUE	9
CURRENT OUTPUT	
Power:	0
Metal:	7
Silicate:	34
Exotics:	7
Reactives:	11
ATVs CURR./ARR.	
Combat ATVs:	0 / 0
Mining ATVs:	5 / 0
Power ATVs:	0 / 0
Scientific ATVs:	0 / 0

Data Displayed when the Cursor is over a Terrain Zone

Name and Owner: The name of the asteroid and the chapter occupying the zone are listed.

ATV Limit and Mining Value: After an asteroid has been scanned, the ATV limit and mining value of a zone is displayed when the cursor is over that zone.

The economic grade indicates the base amount of each type of mineral present on the asteroid (see [page 111](#)). The mining level reflects how easy it is to extract the minerals from that zone.

Current Output: The maximum amount of minerals that can be extracted from a zone depends on the mining value, ATV limit, and the economic grade of the asteroid. The more ATVs present in a zone, the higher the output. A mining facility enhances the output of each mining ATV in the zone it occupies.

Power is produced in a different way by each Guild but the better a zone's power potential (see [page 80](#)) the more power an ATV with power potential produces while in that zone. A power facility enhances the output of each power ATV in the zone it occupies.

ATVs Current and Arriving: When an ATV is ordered to move from one zone to another, although the visual display shows it in the zone already, it does not actually arrive until the turn is processed. Use this to ensure the zone is not going to be over-stacked. Any ATVs above the ATV limit—also indicated by a red stacking number—are destroyed at the end of turn processing. If there is combat between ATVs occupying a zone and those trying to enter it, the combat is resolved before any ATVs are destroyed due to over-stacking.

Notification Field

When a turn is processed, everything that happens is listed in the area at the bottom of the Game screen. Double-click on a message to center the view on the item to which it pertains. Right-click on a message to dim or highlight a message.

Use the up and down arrows, or a mouse wheel to scroll through the messages.

Filter particular types of messages by selecting the appropriate colored buttons, situated to the right of the Notification field:

- *Red*—Unit movement, conflict and encounters.
- *Green*—Trade, mineral extraction and power production.
- *Blue*—Diplomacy notifications such as trades and distress calls.
- *Yellow*—Game events such as asteroid collisions.
- *Light Blue*—Chat when playing multiplayer.
- *Magenta*—Each time a chapter is voted renegade or loyal.

The filtering can be fine-turned to hide more specific message types.

1. Click to select a message, about power production for example.
2. Then select the X button to the left of the notification field.
3. An 'x' is displayed next to all power production messages.
4. Select the *Hide all Filtered Messages* button to hide them.



To unfilter the messages, select the *Show All Messages* button below the X button, then select a filtered message, and finally press the X button to unfilter.

Function Buttons

There are different function buttons associated with each view or mode.

There are five buttons present in every view.



In-Game Settings: Select to access the In-Game Settings menu.



Game Options: Select to access the Game Options menu.



Information mode: Select to access Information mode (see [page 54](#)).



Design Chamber: Select to go to the Design Chamber (see [page 85](#)).



End Turn: Select to process the turn.

NOTE: When participating in a multiplayer game, the turn is processed when the last person selects *End Turn*. It is still possible to play after you have selected *End Turn*, and continue to make adjustments until the last player has selected *End Turn*.

In-Game Settings Menu



In-Game Settings Menu

Visual Settings

Maintain Ship Facing: When *On*, ships always appear to face the same way.

Zoom to Target: When *On*, the view jumps to center on an item. When *Off*, the camera pans to the item.

Distance Fogging: When *On*, the asteroids that are further away appear darker than those nearby. When *Off*, all asteroids are lit equally.

Frame Animations: When *On*, incidental animations occur. Turn off to speed up gameplay.

Background Stars and Nebulae: When *On*, the background star field and nebulae are displayed.

NOTE: The less detail and movement the display has, the faster the game runs.

Audio Settings

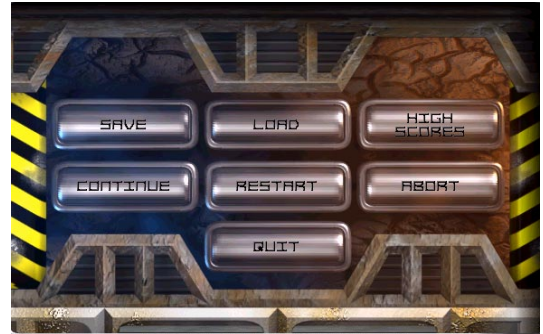
Music Volume: Select whether to have the music playing or not.

Sound Effects Volume: Select the preferred volume for the sound effects.

Speech Feedback: When *On*, if an order is given, an appropriate response is made. The comments and voices are unique to each Guild.

Auto Save: When *On*, the game is saved automatically each time a turn is processed. In addition, a back-up saved game, abaksave, is made for the previous turn.

Game Options Menu

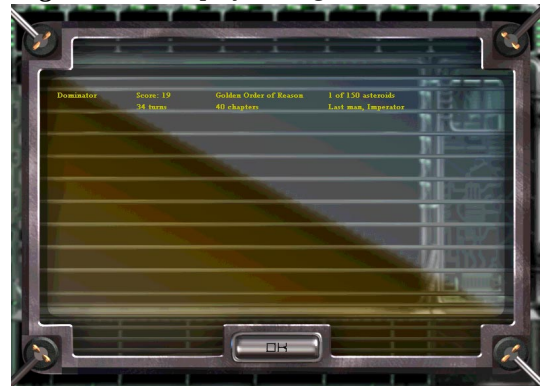


In-Game Options Menu

Save: Open the save game list, enter a name, or highlight a name to overwrite a previously saved game, and select *OK*.

Load: Open the load game list, select a game and select *OK*. Save the current game if you do not want to lose it.

High Scores: Display the high score table.



High Score Table

Continue: Return to the current game.

Restart: Begin the current game from the beginning. Save the current game so as not to lose it.

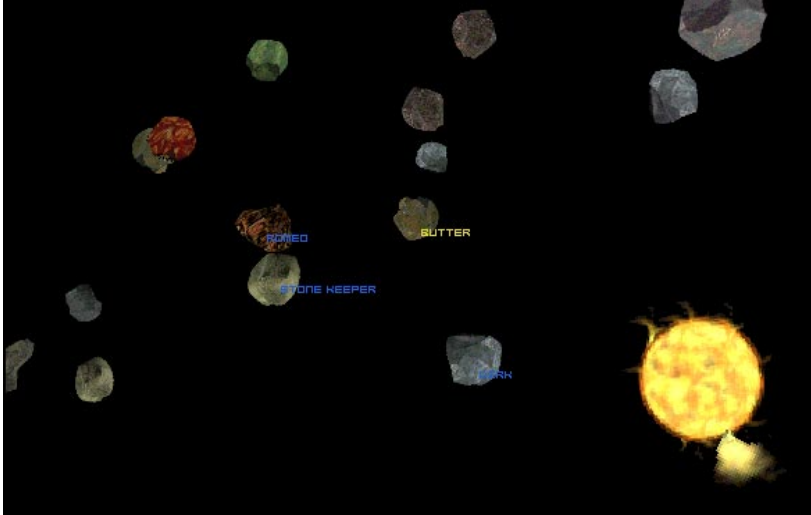
Abort: Close the game and return to the Main screen. Save the current game if you do not want to lose it.

Quit: Close the game and return to Windows desktop. Save the current game if you do not want to lose it.

Solar View

Solar view displays the solar system with the two stars, Malkari and Diantos, and the asteroids in orbit around them. The Malkari solar system is still unstable and occasionally two asteroids collide, destroying ATVs and ships.

For a description of the areas and buttons common to all the game screens, see [“Game Screen” on page 41](#).



Solar View

Clicking: Clicking an asteroid or one of your ships selects it. Click on an asteroid or enemy ship to assign a target to your selected ship. Use the **Shift** + click to select more than one item. Use **Control** + click to give multiple destinations, to which the ship then travels, in order.

Double-click: Double-click on a ship to open the Design Chamber (see [page 62](#)) with that ship’s design displayed—no amendments can be made to the design when accessed this way, it is for viewing only. Double-click on an asteroid to go to the Orbital view of that asteroid.

Right-clicking: Opens a pop-up menu. The options listed vary, depending on where you right-click.

Right-clicking on the Background

- *Find Asteroid*—Opens the Find Asteroid dialog box. Type in the name of the asteroid to be found, then select *Okay*. A flashing halo

appears around the asteroid, and the camera zooms in on it.

- *Battle Plan*—Accesses the default Battle Plan (see [page 72](#)).

Right-clicking on your Asteroids:

- *Orbital Space*—Select to go to the Orbital view of the asteroid.
- *Go to Terrain*—Select to go to the Terrain view of the asteroid.
- *Sell Vote*—Select to open the Sell Vote screen (see [“Making Offers” on page 91](#)).
- *Distress Call*—Notifies non-player chapters in your Guild that you are being attacked and would like assistance.
- *Xfer Power To*—Select the ship that is to be first in the queue to be recharged. (Not available if the asteroid generates no power.)

Right-clicking on your Ships

- **Display**—Opens the Data field display choices: *Basic Info*, *Damage*, or *Orders List*.
- **Rendezvous**—Cancels the movement currently being carried out and allows a friendly ship to be the target of a move.
- **Battle Plan**—Open the default battle plan for this type of ship (see [page 72](#)).
- **Delete Orders**—Delete all this ship's orders.

Camera Modes

There are three camera modes in Solar view that allow the system to be viewed from any angle or position. Change camera modes by pressing **Z**, or by pressing **Shift** + **Z**.

Zooming in and out: In all modes the **I**, **>** or **+** keys are used to move the camera in or forwards; the **O**, **<** or **-** keys are used to move the camera out or backwards.

Solar Center mode: The camera always faces the center of the solar system. The right, left, up and down arrows on the keyboard move the camera in an orbital motion around this point.

Linear mode: The camera always points straight ahead and cannot be rotated. The right, left, up and down arrows on the keyboard move the camera in that direction.

Free Motion mode: The camera can point in any direction. The right, left, up and down arrows on the keyboard rotate the camera in that direction.

Solar Function Buttons

Either a label or a halo can highlight an asteroid. Use the **[** key to toggle the highlights.

There are ten filter and data buttons that change which asteroids are highlighted. Only one of these buttons can be selected at a time; selecting a button cancels the previous selection. Selecting the same button turns that filter off.

Filter Buttons: Use the filter buttons to highlight the asteroids that apply. To highlight the asteroids that *do not* meet a filter's criteria, hold down **Shift** and select the button. For example, to dis-

play the names of all the asteroids that do not belong to your chapter, hold down **Shift**, then select the *My Asteroids* button.



My Asteroids



Asteroids by Chapter



Loyal Asteroids



Asteroids by Guild



Rebel/Renegade Asteroids



Asteroids by Ship Presence



Unscanned Asteroids

Data Buttons: The data buttons display the appropriate information, if available, next to the asteroid in the Solar view.



Economic Grade



Size



Power



Future View: The other function button in Solar view is the *Future View* button. Pressing **M** on the keyboard also toggles this view.

Use the control buttons to play, pause, or move forward and back in future view. If *Asteroid Collision* is selected (see the Game Configuration screen [page 32](#)), a notification is displayed when they collide.



Pause



Begin again



Frame forward



Frame back

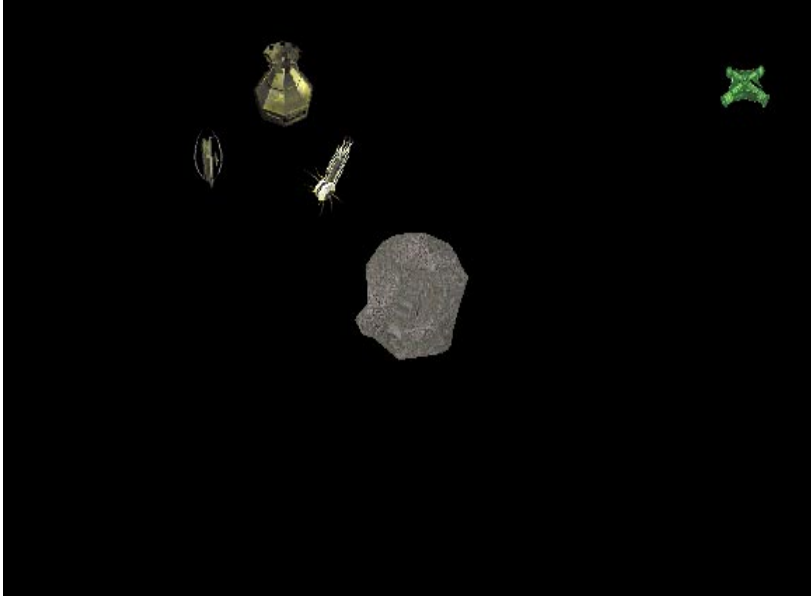
NOTE: Before selecting future view, highlight any asteroids you are interested in. This helps to keep track of those asteroids.

Orbital View

This view shows the area around an asteroid, with any ships in orbital space around it. It is in this view that ship to ship combat takes place, the

construction or repairing of ships occurs and the orders to construct and land ATVs are issued.

For a description of the areas and buttons common to all the game screens, see [page 41](#).



Orbital View

Clicking: Clicking on an asteroid or enemy ship selects that item. Click on a destination to move a ship there. To move to a specific point in space, as opposed to an object, use the grid (see [page 69](#)). Use the **Shift** key and click to select multiple ships.

Double-clicking: Double-clicking on a ship accesses the Design Chamber (see [page 62](#)) with that ship's design displayed—no amendments can be made to the design when accessed in this way, it is for viewing only. Only your ships, or ships of a design class that you have already scanned can have their designs viewed in this way. Double-click on an asteroid to go to the Terrain view of that asteroid. Double-click on the space background to go to Solar view.

Right-clicking: Opens a pop-up menu. The options listed vary, depending on where you right-click.

Right-clicking on your Ships

This accesses the Task Orders menu (see [page 70](#)). All the possible options are listed here, but not all are available to every ship. Only those functions that a ship can do are listed in the game.

- *Display*—There are at least three pages of information that can be displayed in the Data field.

Basic Info: This is the default setting and lists the basic data, any special abilities, and the current order with its ETC (estimated time to completion) and the EPC (estimated power consumption).

Damage: Each module is listed with a damage bar reflecting any damage taken. They may cover more than one page.

Orders List: The current order, and any additional orders are listed (see [“Multiple Orders” on page 71](#)).

- *Rendezvous*—Allows a friendly ship to be the destination target of this ship.
- *Scan*—Scan a ship or survey an asteroid.
- *Xfer Power To*—Transfer power from this ship to the next selected ship.
- *Recharge From*—Transfer power to this ship from another friendly ship or an asteroid.
- *Construction*—Opens the Construction menu (see [“Ship Construction” on page 67](#) for further details).
- *Repair Self*—Select a friendly ship to repair this ship (this could be itself if it has construction ability).
- *Decommission*—Select a friendly ship to scrap this ship.
- *Construct ATVs*—Access the Construct ATVs menu and select the ATVs to be constructed (see [page 81](#)).
- *Land ATVs*—Access the Land ATVs screen, and select the ATVs to be landed (see [page 83](#)).
- *Recover ATVs*—Access the Recover ATVs screen, and select the ATVs to be recovered (see [page 84](#)).
- *Sell*—Open the Sell screen (see [page 91](#)).
- *Self-Destruct*—Select to order this ship to self-destruct.
- *Battle Plan*—Access the Battle Plan screen for this ship (see [“Battle Plan” on page 72](#)).
- *Delete Orders*—Deletes all the ship’s orders.

Right-clicking the Asteroid or Background

- *Solar Space*—Go to Solar view.
- *Go to Terrain*—Go to Terrain view of the asteroid.

- *Sell Vote*—Select to open the Sell screen (see [“Making Offers” on page 91](#)).
- *Battle Plan*—(Background menu only). Access the default Battle Plan screen (see [page 72](#)).
- *Distress Call*—Notifies non-player chapters in your Guild that you are being attacked and would like assistance.
- *Xfer Power To*—(Asteroid menu only). Select the ship that is to be first in the queue to be recharged. (Not available if asteroid generates no power.)

Use **Control** + right-click to give multiple orders.

Camera Modes

There are four camera modes that allow the asteroid and the ships around it to be viewed at all angles.

Zooming in and out: In all the views the **I**, **>** or **+** keys move the camera in or forwards; the **O**, **<** or **-** keys move the camera out or backwards. Toggle the camera modes by pressing **Z** on the keyboard.

Asteroid Center mode: The camera always points toward the center of the asteroid. The right, left, up and down arrows on the keyboard move the camera in an orbital motion around the center.

Linear mode: The camera always points straight ahead and cannot be rotated. The right, left, up and down arrows on the keyboard move the camera in that direction.

Free-Motion mode: The camera can point in any direction. The right, left, up and down arrows on the keyboard rotate the camera in that direction.

Locked mode: The camera remains on a plane parallel to the grid (see [page 69](#)) and pointing towards the center of the asteroid. The right and left arrows on the keyboard move the camera in an orbital motion about the center. The up arrow moves the camera toward the asteroid; the down arrow away. This mode is extremely useful when maneuvering ships in Orbital view.

Orbital Function Buttons

Either a label or a halo can highlight a ship. Use the **[** key to toggle between the highlights.

Filter Buttons: There are six buttons that highlight the applicable ships. Only one of these can be selected at a time; selecting a button cancels the previous selection. Select a button again to turn that filter off.

A label is the color of the Guild and two indicator bars are displayed below each friendly ship. The upper one is white and indicates the hull integrity; the lower one is green and indicates the power level.



When the *Guild* filter button is selected enemy ships also have indicator bars underneath. The upper bar indicates the amount of damage the ship has taken; the lower is only displayed when one of your ships is selected, and indicates the range within which the enemy is positioned. When between effective and maximum range the bar is yellow, when within effective range the bar is green, and if the ship is out of range, the bar is not displayed.

To display the names of all the ships that *do not* meet the criteria, press **Shift** and then select the button. For example, to display the names of all the ships that do not belong to your chapter, press **Shift** and then select the *My Ships* button.



My Ships



Unscanned Ships



Loyal Ships



Ships by Chapter



Rebel Ships



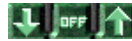
Ships by Guild

NOTE: The *Guild* filter button is extremely useful when there is conflict involving several Guilds occurring around an asteroid.

The unique function buttons in Orbital view are:



Grid On/Off: Select to toggle the grid on. (See [page 69](#).) Use the up and down arrows to move the grid up and down. Select *Off* to toggle the grid off.



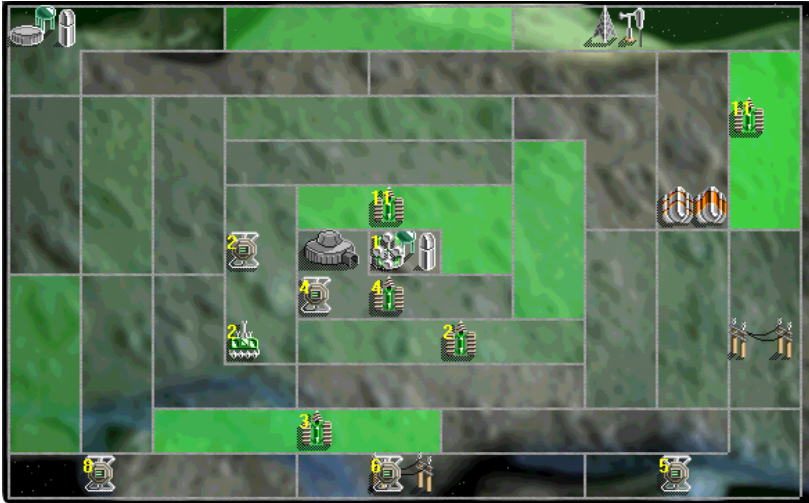
Go to Terrain View: Go to the Terrain view of this asteroid.

Terrain View

This view shows a cross-section of the asteroid with its zones and any ATVs (Asteroid Terrain Vehicles) present. Only a scientific ATV can occupy the central zone, and ATVs can only be landed or removed from the outer zones when

there is a hostile presence. There is only one camera view in Terrain view—top down.

For a description of the areas and buttons common to all the game screens, see [“Game Screen” on page 41](#).



Terrain View

Clicking: Drag and drop an ATV to move it to an adjacent zone (it arrives the following turn). Most ATVs can only move to adjacent zones, but when higher technologies have been researched, some can move two zones. If an ATV cannot move into a zone, that zone turns red when the ATV is dragged to it. To move up to five ATVs in a stack, hold down **Control** then drag and drop.

Double-clicking: Double-click outside of the terrain zones but within the view screen, to go to Orbital view.

Right-clicking: Opens a pop-up menu. The options vary, depending on where you right-click.

Right-clicking

- *Orbital Space*—Select to go to Orbital view.
- *Solar Space*—Select to go to Solar view.
- *Sell Vote*—Open the Sell screen [“Making Offers” on page 91](#).

Asteroidal Terrain Function Buttons

Filter Buttons: There are six buttons that can be selected to give visual information regarding the asteroid zones. Selecting one of the zone buttons, *My Zones* for example, highlights the areas applicable to that button. Only one button can be selected at a time.

The *Mining Potential*, *Stacking Limits*, and *Power Potential* buttons highlight the zones in varying shades. The more intense the color of a zone, the higher its potential.



My Zones



Mining Potential



Loyal Zones



Stacking Limits



Rebel Zones



Power Potential

View Buttons: The other unique function buttons in Terrain view are:



Toggle the automanagement of ATV movement on or off.



Go to Orbital view.

Information Mode

Information mode gives access to all the data you need to keep well-informed about the current situation. The various information screens provide valuable details regarding all aspects of *Malkari*.

For a description of the areas and buttons common to all the game screens, see [“Game Screen” on page 41](#).



Information Mode

Select the *Information* button to access the Information screens. The opening screen is the last one selected, with the Ship List the



initial default. The function buttons which access the various information screens, are as follows:



Ship
List



Asteroid
List



Trade
Screen



Voting
Screen



Game
Statistics



Research



Game
Help



Chat Log



Combat
Log



Game
Settings



Player
Notes



Game Data

Ship List

The *Ship List* button accesses the Ship List and Template screens. The Ship List displays the name, class, location and current order of all your ships. The ships can be listed in order of location, class, name, type, or damage.



NAME	CLASS	LOCATION	ORDER
AASL 8-6	LEVER	REBEL	NO ORDERS
USTA 8-1	MILLHOUSE	REBEL	NO ORDERS
UASL 8-3	LITTER	SERLOS	NO ORDERS
USCT 8-0	MENISCUS	ACORN	NO ORDERS
DEST 8-5	SPUR	IN TRANSIT	MOVING NEXT TO MURPHY'S LAW (ETA: 32)
AASL 8-2	LEVER	IN TRANSIT	NO ORDERS
AASL 8-4	LEVER	IN TRANSIT	MOVING TO SHELTER (ETA: 1)

SHIP LIST
TEMPLATE LIST

ORDER BY: LOCATION CLASS NAME TYPE DAMAGE

MORE PREVIOUS

Ship List

Use the list to stay aware of what your ships are doing. Take a look at the end of each turn to ensure that they are suitably employed.

Damaged ships are displayed in yellow, heavily damaged ones in red.

Move the cursor over an entry to display information in the Data field. Click on an entry to center the view on that ship in Orbital or Solar view, as applicable.

Template List: The Template list displays the class and type of all your ship design class templates, either in the design class list or in service, along with construction and combat details. If a ship class is no longer in the design class list, and if there are none of that class in service, it is not listed.

Use this screen to assess how well each design is performing and to judge whether a design (see [page 85](#)) or battle plan (see [page 72](#)) needs tweaking.

SHIP NAME	SHIP TYPE	TURN CREATED	NUMBER BUILT	DEAD	KILLS	SHOTS	HITS	SHOTS TAKEN	HITS TAKEN
MENISCUS	USCT	0	1	0	0	0	0	0	0
MILLHOUSE	USTA	0	1	0	0	0	0	0	0
LITTER	UASL	0	1	0	0	0	0	0	0
LEVER	AASL	0	2	0	0	0	0	0	0
SPUR	DEST	0	1	0	0	0	0	0	0

SHIP LIST
TEMPLATE LIST

MORE PREVIOUS

Template List

NOTE: When an amended design is saved in the Design Chamber, even if it is saved with the same name, it has a separate entry in the Template screen.

Asteroid List

The *Asteroid List* button accesses the Asteroid List screen, which lists asteroid names, owners, orbit, area (size), and economic class.



NAME	OWNER	ORBIT	AREA	ECON. CLASS
BARON	FINANCE DEPT.	DIANTOS	TINY	
BARRACUDA	OPERATIONS DEPT.	ELLIPTICAL	TINY	
GOLGOTHA	SLIDERS	MALKARI	LARGE	
ATVS PRESENT	2 15 10 1	MINING UTILIZATION	16%	
REBEL	SLIDERS	MALKARI	HUGE	
ATVS PRESENT	2 27 21 1	MINING UTILIZATION	29%	
SCREAM	SLIDERS	ELLIPTICAL	MEDIUM	
ATVS PRESENT	2 20 10 1	MINING UTILIZATION	40%	
SHAHMAT	ACQUISITIONS DEPT.	DIANTOS	TINY	
THE DARK ONE	PROPAGANDA DEPT.	DIANTOS	HUGE	
TIMBUKONE	SLIDERS	MALKARI	TINY	
ATVS PRESENT	0 0 4 1	MINING UTILIZATION	0%	

ASTEROID LIST

ALL MINE GUILD SURVEYED

MORE PREVIOUS

Asteroid List

The asteroids listed are filtered using the *All*, *Mine*, *Guild*, and *Surveyed* options.

When the cursor is over an asteroid entry, the Data field displays the usual Asteroid information (see [page 42](#)). Click on a line to center the view on that asteroid in Orbital view.

Not all characteristics of an asteroid are known at the start of a game. The known details are determined by the degree of difficulty, the Guild of the player, and whether a scan has been completed.

The economic class shows the relative amounts of metals, silicates, exotics, and reactivities available to be mined on the asteroid (see [“Asteroid Economic Grades” on page 111](#)).

If an asteroid is occupied by your ATVs, the number and types of ATVs present are displayed, as well as the proportion of mining potential being exploited.

Trade Screens

The *Trade* screen button accesses the Trade screen. From here resources can be transferred between your Local Pools, and any offers for resources, ships, or votes are listed.



LOCAL POOLS		OFFERED TRADES		SHIPMENTS		
ASTEROID		STOCKPILE				TRANSFER TIME FROM CIGAMI
CIGAMI		269	426	56	1K	0 turns
HECTOR		77	806	112	376	2 turns
MORE PREVIOUS						
LOCAL POOL AT CIGAMI						
RESOURCE	STOCKPILE	PRODUCTION	AUTO-TRANSFER		ACTION	
METAL	↑ 269	19	20	HECTOR	2	SELL TRANSFER
SILICATE	↓ 426	30				
EXOTICS	56	10				
REACTIVES	↑ 1672	68				

Local Pools Screen

Local Pools: A list of all your asteroids with the associated Local Pool's resources, if there are any.

Select an asteroid in the top half of the screen to display details in the bottom half of the display.

Transfers and trades can be setup by selecting the *Transfer* button to the right of the resource entry in the bottom half of the screen.

Resources can be transferred between your Local Pools, or traded between chapters of the same Guild (see [“Trade” on page 91](#)).

The length of time it takes to deliver the resources is displayed when a transfer or trade is setup.

LOCAL POOLS		OFFERED TRADES		SHIPMENTS	
OFFER		CHAPTER		RESOURCES	
		METALS	SILICATES	EXOTICS	REACTIVES
390 REACTIVES AT ISYS	PROPAGANDA DEPT.	14	12	10	---
150 REACTIVES AT JENNER	FINANCE DEPT.	10	10	7	---
130 METALS AT ISYS	PROPAGANDA DEPT.	---	10	8	---
100 SILICATES AT JENNER	FINANCE DEPT.	11	---	8	---
130 REACTIVES AT DENIBRES	OPERATIONS DEPT.	6	8	2	---
80 REACTIVES AT COTEBORG	ACQUISITIONS DEPT.	8	6	6	---
30 METALS AT JENNER	FINANCE DEPT.	---	---	8	---
TRANSFER TIME -- 51 TURNS					
MORE PREVIOUS					
LOCAL POOL AT CIGAMI					
RESOURCE	STOCKPILE	PRODUCTION	AMOUNT	AUTO-TRANSFER ASTEROID	ACTION
METAL	↑ 307	19			SELL TRANSFER
SILICATE	↓ 486	30			SELL TRANSFER
EXOTICS	56	10			SELL TRANSFER
REACTIVES	↑ 1788	68			SELL TRANSFER

Offered Trades Screen

Offered Trades: When something is for sale it is listed in the Offered Trades screen. There are three lists, one for resources, one for votes, and one for ships.

To buy something or to cancel an offer, click on that item.

LOCAL POOLS		OFFERED TRADES		SHIPMENTS	
SHIPMENT		DESTINATION		ARRIVAL TIME	REASON
200 SILICATES		CIGAMI		TURN 30	TRANSFER
MORE PREVIOUS					
LOCAL POOL AT CIGAMI					
RESOURCE	STOCKPILE	PRODUCTION	AUTO-TRANSFER		ACTION
			AMOUNT	ASTEROID TIME	
METAL	↑ 268	19	20	HECTOR	2 SELL TRANSFER
SILICATE	↓ 486	30			SELL TRANSFER
EXOTICS	56	10			SELL TRANSFER
REACTIVES	↑ 1640	68			SELL TRANSFER

Shipments Screen

Shipments: All ongoing one-off shipments are listed, showing what is being transferred, its origin and destination, and when it is due to arrive. Auto-transfers are listed in the Local Pools screen.

Voting Screen

Access the voting screen by selecting the  Voting screen button.

VOTING SCREEN		TOTAL VOTES HELD BY GUILD MEMBERS = 17 TOTAL VOTES HELD BY YOU = 4				
VOTE IMPERATOR	VOTE RENEGADE	CHAPTER	DECLARES YOU	STATUS	IMPERATOR VOTES	RENEGADE VOTES
		SLIDERS	IMPERATOR	LOYAL	4	3
		OPERATIONS DEPT.	LOYAL	RENEGADE	4	13
		PROPAGANDA DEPT.	RENEGADE	RENEGADE	3	12
		FINANCE DEPT.	LOYAL	RENEGADE	4	9
		ACQUISITIONS DEPT.	LOYAL	LOYAL	2	8

Voting Screen

Vote Emperor: The Emperor voting record shows who you are voting for and the number of votes each chapter has received. All votes held by a chapter are cast as a block, and cannot be split. Each chapter can only vote for one chapter to be Emperor—usually themselves. The blue check mark indicates the chapter you are voting for. The number of votes each chapter has received are listed one column from the right.

Vote Renegade: The blue check mark or check marks indicate the chapter or chapters that you are voting renegade. All votes held by a chapter are cast as a block, so it is not possible to split votes among several chapters, although it is possible to vote more than one chapter renegade. If the majority vote for a chapter to become renegade, it does so. The number of votes each chapter has received are listed in the right-hand column.

See [“Voting” on page 93](#) for further details.

Game Statistics

Access the Game Statistics screens by using the  Game Statistics button.

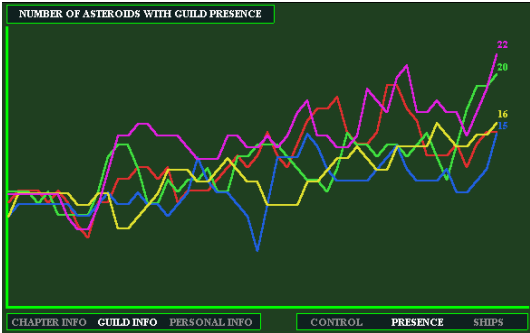
PRESENCE SHIP'S					PRESENCE SHIP'S									
ASTEROIDS VOTES SCORE					ASTEROIDS VOTES SCORE									
ORDER OF THE WAY	2	2	8	31	ORDER OF PEACE	5	3	5	15	70				
ORDER OF HARMONY	1	3	1	11	17	ORDER OF TRUTH	2	3	2	10	40			
ORDER OF FELLOWSHIP	2	4	2	11	36									
					CRIMSON DAWN TOTALS					12	16	12	56	191
SLIDERS	4	5	4	6	58	OPERATIONS DEPT.	4	2	4	7	50			
PROPAGANDA DEPT.	3	6	3	12	56	FINANCE DEPT.	4	3	4	7	50			
ACQUISITIONS DEPT.	2	4	2	7	29									
					EMERALD COMBINE TOTALS					17	20	17	39	243
COMMAND AERIE	3	3	3	7	43	DIPLOMATIC AERIE	2	3	2	13	39			
TRANSPORT AERIE	1	1	1	9	25	TALON AERIE	2	4	2	11	38			
CLOSE WING AERIE	4	4	4	7	54									
					BLUE TALON TOTALS					15	15	12	47	199
FAMILY FORADE	1	1	1	10	27	FAMILY CULLOME	1	3	1	6	24			
FAMILY FORAITH	2	3	2	18	43	FAMILY KLINK	3	3	3	6	43			
FAMILY HORTHETH	1	6	1	15	40									
					GOLDEN ORDER OF REASON TOTALS					8	16	8	55	177
DEVELOPMENT CHAPTER	5	5	5	10	66	INFORMATION CHAPTER	5	6	5	15	70			
RESEARCH CHAPTER	4	3	4	12	58	ACQUISITIONS CHAPTER	2	4	2	9	31			
DISTRIBUTION CHAPTER	2	4	2	8	37									
					DIAMOND COOPERATIVE TOTALS					18	22	18	54	262
CHAPTER INFO		GUILD INFO		PERSONAL INFO										

Chapter Screen

There are three statistics screens, the Chapter screen, the Guild Info screen, and the Personal Info screen.

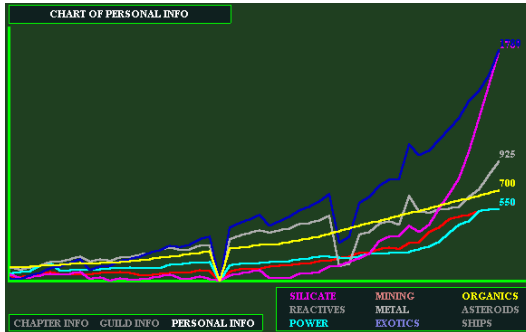
Chapter: The Chapter screen shows each chapter’s control and presence on asteroids, votes and ships owned, as well as a summary if how each Guild is doing.

Guild Information: The Guild Info screen displays a chart where the Guild’s control, presence, or ship information is displayed, when selected.



Guild Info Screen

Personal Information: The Personal Info screen has several items that can be displayed on the chart. The amount of silicates, reactives, metals, and exotics in storage. The amount of power generated, mining production, organics accrued, the number of asteroids owned, and ships in service, can be shown.



Personal Info Screen

Use the Statistics screens to compare your progress with other chapters, and your Guild and the others. Use the Personal Info screen to monitor your input and output. If you build too many ships too quickly in the early stages, the drain on your minerals, organics, and power may cripple you. Try to keep things balanced by building the ATVs necessary to increase power and mineral production, establishing a strong base from which to expand your empire.

Research Progress & Settings

To access the Research Progress & Settings screen, select the *Research* button.



RESEARCH SUMMARY		CONSTRUCTION MODULES		SCIENCE BONUS: 1 (2)	
MODULE NAME		CONSTRUCTION COST	USAGE RATE	ALLOCATION	
CONSTRUCTION CANTRY		100 %	16 + 1	T + + + +	
MINI CONSTRUCTOR		100 %	0 + 0	T + + + +	
CONSTRUCTION RIG		37 % RESEARCHED			

Research Progress Screen

Select whether to display modules or hulls, and then select a type.

Science Bonus: The number of bonus points available to be allocated to research, and the total number currently being generated. They are gained for each asteroid owned, and continued research into superseded modules and hulls.

Module or Hull Name: The name of the module or hull.

Construction Cost: For modules or hulls that are fully researched, the percentage of the base cost required to build the module or hull is displayed. Continued research into a module or hull decreases its construction costs. For modules or hulls that are being researched, the progress of the research is displayed in red.

Usage Rate: The total usage of the module or hull during the previous turn, comprising the number of times each module or hull was used, plus the number of science bonus points allocated. The up and down arrows increase or decrease the number of points allocated.

Allocation: Research can be allocated to either researching technology or improving the construction efficiency. Red squares indicate the amount devoted to researching the next module or hull in the technology tree. Yellow squares indicate the amount devoted to reducing the construction cost of the modules or hulls. To change the allocation, click on the flask or hammer, as appropriate. The usage is allocated in 25 percent increments.

Recover Science Bonus for Reallocation: Cancel any allocated bonuses for use elsewhere.

Modules or Hulls: Select *Modules* to display the module types and the selected module's research. Select *Hulls* to display the hull types and the selected hull's research. Select the type of hull or module to view.

Research is conducted when a module is used and when research is allocated. When *Share Research* was selected in Game Configuration (see [page 32](#)), all non-renegade chapters within a Guild share research.

Each of the module screens lists all the modules of that type that have been fully or partially researched.

The color of the progress bar changes as research comes closer to completion. It is possible to receive a setback in research, so the percentage to completion may go down as well as up.

When considering updating ship designs, use this screen to decide whether it is advisable to wait a couple of turns for a more advanced, and hopefully more effective, module to become available.

Use this screen in conjunction with the Game Data screen to monitor how research is progressing and to decide when to change ship designs (see [page 85](#)).

NOTE: Setting the amount of research shared to 0 percent in the Game Configuration screen, decreases its influence considerably.

Game Help

The *Game Help* button accesses the Help screen, which lists the keyboard commands. See also [“Keyboard Shortcuts” on page 66](#).

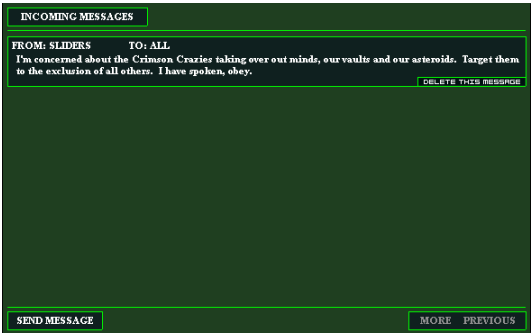


GAME KEYS		FUTURE VIEW	
ESCAPE	EXIT THE GAME	M	TOGGLE FUTURE VIEW
CTRL-S	SAVE	L	FORWARD ONE TURN
CTRL-L	LOAD	K	PAUSERUN
CTRL-R	RESTART	J	BACKWARD ONE TURN
CAMERA MOVEMENT		GRID	
ARROW KEYS	MOVE CAMERA	G	TOGGLE THE GRID
+	ZOOM IN	B	LOWER THE GRID
-	ZOOM OUT	T	RAISE THE GRID
C	DEFAULT POSITION	MISCELLANEOUS	
SPACE	RESTORE POSITION	N	TOGGLE STARS NEBULAE
V	VIEW CENTER	D	TOGGLE INFO VIEW
W	CENTER ON SELECTED	UNITS	
Z	TOGGLE CAMERA MODE	Y	SELECT ALL UNITS
U	CENTER ON NEXT UNIT	H	DESELECT ALL UNITS
SHIFT-U	CENTER ON PREVIOUS UNIT	DELETE	DELETE UNIT'S ORDERS
VIEWS		SHIFT-DELETE	SELECT MULTIPLE UNITS
S	JUMP TO SOLAR VIEW	CTRL-DELETE	APPEND ORDER TO QUEUE
TAB	NEXT ASTEROID W/PRESERVE	KEYBOARD REFERENCE	
SHIFT-TAB	PREV. ASTEROID W/PRESERVE		
F	TOGGLE FILTERS (SOLAR VIEW)		

Game Help Screen

Chat Log

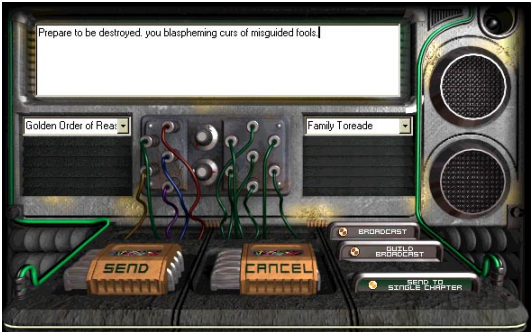
The *Chat Log* button accesses the Chat screen, which lists all messages sent to or by you.



Chat Log Screen

To send a message to other players:

1. Select *Send* on the Chat screen. The Chat dialog box is displayed.



Chat Screen

2. Select one of the send options:
Broadcast—Send to everyone.
Guild Broadcast—Send to all chapters in your Guild.
Send To Single Chapter—Use the drop-down menus to select a Guild and a chapter within that Guild to send to.
3. Type your message, insults or witticisms, then select *Send*.

To delete a message select *Delete this message*.

NOTE: If you send a message to a chapter outside your own Guild, there is a chance that your fellow Guild members will intercept it. Intercepted messages are often garbled.

Combat Summary

Access the Combat Log by selecting the *Combat Log* button.



COMBAT SUMMARY									
ASTEROID	SHIPS PRESENT			SHIPS HIT			ADDITIONAL INFO		
	SIZE	ALLIED	ENEMY	SIZE	ALLIED	ENEMY			
CISTERN	3	3	6	0	0	1	SHOW DETAILS	VIEW REPLAY	
4C-97	1	1	6	0	0	0	SHOW DETAILS	VIEW REPLAY	
WEARY RUST	1	1	2	1	1	0	SHOW DETAILS	VIEW REPLAY	

3 ENCOUNTERS MORE PREVIOUS

Combat Log Screen

The combat summary lists all the battles and encounters that occurred during the previous turn. To view details of a battle, select *Show Details*. The Combat Details screen is displayed.

Review of battle at Cistern									
TURN	SHIPS PRESENT			SHIPS HIT			ADDITIONAL INFO		
	SIZE	ALLIED	ENEMY	SIZE	ALLIED	ENEMY			
TURN	1	1	6	0	0	1	SHOW DETAILS	VIEW REPLAY	
Chapters Involved:	Order of Peace	Order of Truth	Sliders	Command Aerie's			SHOW DETAILS	VIEW REPLAY	
Family Forsyth	Family Klinck	Suppression Chapter					SHOW DETAILS	VIEW REPLAY	
Suppression Chapter's Destroyer 4 fires a Pvoidic Cloud (In effective range with a chance to hit of 49%) at Family Forsyth's Destroyer 0 and misses! Order of Truth's Destroyer 4 shoots a Stiletto 1d (In maximum range with a chance to hit of 35%) at Suppression Chapter's Destroyer 4 and misses! Sliders's Armed Assault 2 shoots a Kraak Kannon (In effective range with a chance to hit of 25%) at Family Klinck's Armed Assault 0 and misses! Sliders's Battleship 4 shoots a Kinetic Kannon (In maximum range with a chance to hit of 24%) at Family Klinck's Battleship 0 and does 35 damage to Investigator IV, 14 damage to hull integrity and 25 damage to life support									

DONE MORE PREVIOUS

Combat Details Screen

This shows details of what was damaged by each weapon, providing information that may have been missed while watching a combat review (see [page 74](#)).

Select *View Replay* to watch the combat review.

Game Settings

Use the *Game Settings* button to access the Game Settings screen, which displays the Game Parameters selected during setup (see [page 32](#)).



STARTING CHAPTER TRAITS	FOC OF WAR SETTINGS
TERRAIN COMBAT: + 46%	+ NEVER SHOW SHIPS IN SOLAR SPACE
VICTORY CONDITIONS	+ ONLY SHOW ASTEROIDS AFTER COMING IN RANGE OF MY ASTEROIDS OR SHIPS
	+ ONLY MY GUILD'S ASTEROIDS START SCANNED
	+ ONLY MY SHIPS START SCANNED
	+ ONLY DISPLAY ASTEROID CONTROL IF I AM PRESENT
OTHER CONDITIONS	STARTING VALUES
	+ BEGINNING ASTEROID HAS GOOD ECONOMIC GRADE
	+ BEGINNING ASTEROID ORBIT IS RANDOM
	+ STARTING RESOURCES ARE AVERAGE
OTHER CONDITIONS	+ STARTING CONSTRUCTION POINTS ARE AVERAGE
	+ DIFFICULTY LEVEL IS AVERAGE
	+ TURN TIME LIMIT = 15 MINUTES
	+ 5 CHAPTERS PER GUILD
	+ 150 ASTEROIDS IN THE SYSTEM
OTHER CONDITIONS	+ ASTEROIDS ARE MOVING AT AVERAGE SPEED
	+ 100% OF RESEARCH IS SHARED
	+ RESEARCH RATE IS 1 (1 = SLOWEST, 8 = FASTEST)

Game Settings Screen

Player Notes

The *Player Notes* button accesses the Player Notes screen, which is used to record any information you feel might be useful.



PLAYER NOTES
Turn 66: I was the punkin that finally rid the stage of the actor. That and a well-aimed potato which removed his hat.
DELETE THIS NOTE
Turn 67: It didn't matter to Gordon that he couldn't outrun the enraged mother Grizzly. All he had to do was out distance his chubby hiking partner, Fred.
DELETE THIS NOTE
ADD NOTE MORE PREVIOUS

Player Notes Screen

To add a note, select *Add Note*, enter a message then select *OK*.

To delete a note, select *Delete this Message*.

Game Data

The *Game Data* button accesses the Game Data screen, which is used to assess how module research is progressing.



NAME	LEVEL	%RES.	LEADS TO	IN USE
ABSORPTION FIELD 1	1	100%	ABSORPTION FIELD 2	0
AGGRESSOR 27	1	100%	AGGRESSOR 32	1
AGGRESSOR 32	2	3%	AGGRESSOR 32+	0
ATV BAY 1	1	100%	ATV BAY 2	5
ATV BAY 2	2	19%	ATV BAY 3	0
CHAMELEON	1	100%	CHAMELEON 2	0
CHARGED ROCKET MOTOR	2	3%	POLAR ENGINE	0
CONSTRUCTION GANTRY	1	100%	CONSTRUCTION RIG	1
CONSTRUCTION RIG	2	9%	CONSTRUCTION PLATFORM	0
ELECTRON DISPENSER 1	1	100%	ELECTRON DISPENSER 2	1
GATEKEEPER 1	1	100%	GATEKEEPER 2	0
GRAVITIC CONVERTER 1	2	5%	GRAVITIC CONVERTER 2	0
ICE MAKER 1	1	100%	ICE MAKER 2	0
KINETIC KANNON	1	100%	KINETIC DUAL KANNON	0
KINETIC STASIS TANK	1	100%	KINETIC STASIS TANK 2	5
KINETIC STASIS WELL	1	100%	---	2
KRAAK KANNON	1	100%	KRAAK DUAL KANNON	0
KRAAK REPEATER 1	1	100%	KRAAK REPEATER 2	0
MANIPULATOR	1	100%	MANIPULATOR V1	0
MATRIX 12	2	28%	MATRIX 12C	0
TECHNOLOGY INFO		MORE PREVIOUS		

Game Data Screen

Each module is listed, with its technology level and the progress of research to the next module, which is also listed. The column on the right records how many modules are currently in use of a particular type.

The Design Chamber

Click the *Design Chamber* button to access the Design Chamber, or use the Design Chamber goto slot.



The Design Chamber provides detailed information about a ship, its modules and abilities. Existing ship designs can be amended, or completely new ships can be designed (see [“Ship Design” on page 85](#) for further details).



Design Screen

Goto Slots: The goto slots along the top can be used as usual. Any designs currently under construction or amendment are not saved or discarded.

Available Modules: The module slots along the bottom of the screen show the modules available for inclusion in any design, as well as those being researched, and how far along the research is. Use the arrows to the right and left of the slots, or the

right and left arrows on the keyboard, to scroll through those available.

Right-click on a module to choose the data displayed in the Data field—basic, costs or defenses.

Available Module Filter Buttons: Select a filter to display only that module type in the available module slots.



Data Field: Displays the design class list, unless the cursor is over a module, hull, or goto slot, in which case information regarding that item is displayed. There are three pages of module information, accessed by pressing **Page Up** and **Page Down**, or by right-clicking on a module and selecting the preferred option, or by using the mouse wheel, should there be one.



Design Class List

A list of all the current designs. Select a *Design Class* to be viewed, or use the up and down arrows on the keyboard to scroll through the list. Save the current design into another place in the list, by holding down **Control** and selecting the design to be overwritten. Use **Control** and

right-click to save or load a template between games.



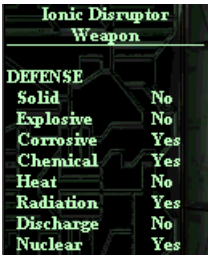
Module Information

Whenever the cursor is placed over a module, a description of that module is displayed.

Basic Information: The first, default page lists the basic information about the module, which can also be found in the module tables, located in the Online manual (see [page 12](#)).

A graphic of the module appears at the top with its name, type, tech level, mass, and power usage listed below.

Any special abilities are then listed, which vary from module type to module type. For example a weapon module lists its weapon attack information, a construction module lists its construction value.



Inherent Defense Rating:

The second page lists the basic defense abilities of the module.

The *Defense* information shows whether the module defends against a particular attack type. When a module has defense against

a given attack type, the attacker's strength is halved, except when the weapon has an attack value of 100 or more.



Costs: The amount it costs to build a module, in terms of resources, and the number of build points it needs.

All modules on a ship are recycled or upgraded when a ship is modified. The recycle efficiencies are

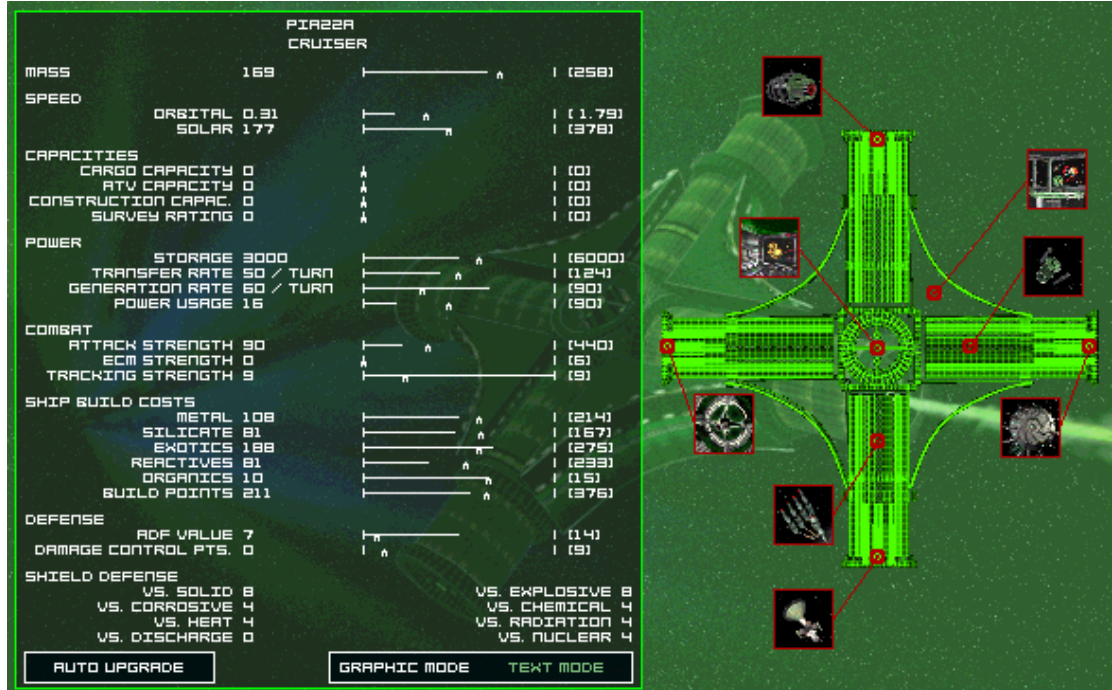
around 75 percent but vary slightly between Guilds for different resources.

Placing Modules: Each slot in the hull has been designed to hold particular modules, indicated by the three-letter abbreviations. Double-click on a module to insert it into the design, in a slot that has that module type listed. Drag and drop a module to an empty slot for a more precise placement.

It is possible to place other modules in a slot, but there is an additional construction cost for the modification to the hull. Each slot that needs modifying incurs additional costs.

Main Display: There are two parts to the main design display, the left-hand side records the statistics and data, the right-hand side depicts the

chosen hull with any modules placed in the appropriate position. Both these displays dynamically change as the design is modified.



Design Data Information

Auto Upgrade: The *Auto Upgrade* option is available when the selected design has outdated modules or the next level hull is available. Select to upgrade all outdated items.

Graphic or Text Mode: Change whether the modules in a design are displayed as a graphic or as text. The text option displays the occupying modules in yellow, the recommended modules in green. If the occupying module is not a recommended one, it is not listed.

- **Ship Class**—The design class of the ship as saved in the Design Chamber, in the above example it is Piazza.
- **Ship Type**—The hull of the ship (see [page 87](#)).
- **Mass**—The total mass of the ship, which affects a ship's maximum speed and is limited by the hull specifications.

- **Speed**—The speed at which the ship travels in Orbital space and Solar space, determined by the mass and propulsion.
- **Capacities**—The various capacities are:

Cargo Capacity: The amount of resources that can be stored.

ATV Capacity: The number of ATVs that can be constructed and carried at one time.

Construction Capacity: The total of all construction values indicating the number of build points that can be used each turn.

Survey Rating: The total of all survey values at normal efficiency. The higher the survey rating, the faster surveys and scans are made.

- **Power**—The various power ratings are:

Storage: The amount of space available to store power.

Transfer Rate: The rate at which power is transferred from this ship to another.

Generation Rate: The rate at which power is generated on this ship.

Power Usage: The amount of power used if each module was used once at normal efficiency during a turn. A lot of modules are used eight times during a turn, so power consumption will always be higher than this figure, up to a factor of eight.

- **Combat**—The various combat ratings are:

Attack Strength: The combined total of weapon attack strengths at normal efficiency.

ECM Strength: The total electronic countermeasure values at normal efficiency. ECM reduces the chance of an enemy making a successful hit.

Tracking Strength: The total tracking values at normal efficiency. Tracking increases the chance of successfully hitting an enemy.

ADF Value: The total of the active defense factors at normal efficiency. The ADF value reduces the chance of a projectile weapon hitting (no effect against beam weapons).

- **Ship Build Costs**—The amount of each resource it takes to construct the ship.

Build Points: The number of construction points it takes to build the ship.

- **Shield Defense**—The defense value of the shields, if any, against particular types of attack. When a ship has a shield value against a particular attack type, the shot may be deflected, or the damage reduced.

Damage Control Points: The total of the damage reduction factors at normal efficiency. The damage reduction reduces the damage inflicted by each hit.



Statistical Feedback: The display to the right of the ship's statistics shows the average rating for that type of ship (the pointer), an indication of how this ship compares (the horizontal line) and the highest rating possible in parentheses on the right.

Function Buttons: The other function buttons in the Design Chamber are:



Create New Design: Remove current design and begin a new one. The original design is not lost until the new one is saved.



Save Design: Saves the design to the active design list, replacing the originally selected design. To save to another slot, hold down **Ctrl** and select the other slot.



Information: Select to access Information mode (see [page 54](#)).



Design View Toggle: Select to return to the previously selected view. Exiting the Design screen does not cancel or save changes to a design.



End Turn: Select to process the turn. Ending the turn does not cancel or save changes to a design.

NOTE: When selecting a hull for a new design, pass the cursor over each hull to view the resource costs and mass limit in the Data field.

Keyboard Shortcuts

Game Keys

Alt + right-click Help
Esc Exit game
Control + S Save game
Control + L Load game
Control + R Restart game
Control + End End turn
N Toggle star field & nebulae on or off
A or Y Select all ships in current view
Shift + A or H Deselect all ships
Backspace Cancel order being given
Delete Delete selected unit's order
[. Toggles highlight between labels and halos
Page Up or Down Change ship data page
Control + right-click Add an order to list
D Goto Info Mode
Shift + click Select multiple units
Esc Exit dialogue box

Camera Movement

Arrow Keys Move camera
Shift + Arrow Key . . Fine tune camera movement
I, <, or + Zoom in
O, >, or - Zoom out
V . . . In free motion, turns camera to face center
W Centers camera selected object
Z Toggles through camera modes
Shift + Z . . Toggles back through camera modes
P Change speed of replay

Fleet Orders

Control + F1 - F12 Allocate ships to fleet
F1 - F12 Select all ships in fleet
Shift F1 - F12 Center on fleet leader

Future View

M Toggle future mode on/off
L Step forward one turn
K Toggle future mode pause/run
J Step back one turn

View Displays

S Jump to solar view
Tab Next asteroid with presence
Shift + Tab Previous asteroid with presence
F Toggles through filters
Shift + F Toggles back through filters
Return Return to previous view
C Jump to default view
Spacebar Jump to view center
U Jump to ship
Shift + U Jump to the previous ship
F Toggles fogging
Numeric keys Set of goto buttons

Grid Display (Orbital View Only)

G Toggle grid on/off
Shift + G Toggle grid at default height
T or Shift + B Lower grid
B or Shift + T Raise grid

Design Chamber

Up & Down arrows Scroll through class list
Left & Right arrows Scroll through modules
Page Up or Down Change module data page
Control + click Save current design
Control + right-click Save or Load template

Expanding your Empire

Malkari is an epic space strategy game in a dynamic, 3D setting. Players take command of a single chapter of one of the five Guilds of *Malkari*, and attempt to lead their brethren to ultimate glory by exploring and conquering the entire solar system.

The *Malkari* solar system has been devastated by an astronomic catastrophe. All that remains are drifting chunks of rock. These asteroids form the power base for the Guilds as they design and build ships to locate and mine valuable minerals to support further expansion.

The Guilds inevitably fight for control of these resources, as well as the valuable scientific banks left behind by their lost ancestors. Control of the scientific banks carries immense political weight, and custom-designed warships accompanying Assault ships are the tools of choice when attempting to win such control.

Ultimately, one chapter will master these challenges and control enough asteroids to achieve total political victory. Its leader becoming the first Emperor in the New Age of *Malkari*.

Ships

At the beginning of the game each chapter has two ships, a Space Station with construction ability, and a Scout with scanning ability, and several ATVs on the start asteroid. To expand, and to increase resource and power production it is necessary to build Assault ships to transport ATVs,

which exploit the asteroids. Use Scout ships to scan asteroids and enemy. Destroyers, Cruisers, and Battleships provide offense and defense, and Constructors perform running repairs and modifications to ships.

All ships are given a default name at the time of construction based on their hull (see [page 87](#)). This can be customized by selecting the ship then clicking on its name in the picture in the Data field and entering the new name in the dialogue box.

The modules that are on a ship determine its eligible orders and capabilities, not the ship's hull.

Ship Construction

Ships and ATVs are the only items that can be constructed.

Only ships with a construction capacity can construct ships. Ships are constructed using one of the options available on the Task Orders menu.

Ships cost resources and construction points to construct. Exact costs vary depending on the modules within a selected design (see [“Ship Design” on page 85](#) for further details).

Constructing a Ship

1. Right-click on the ship that is to perform the construction. The Task Orders menu is displayed (see [page 70](#)).
2. Select *Construction*, then one of the construction order options, as preferred.

3. Select one of the highlighted designs in the Design class list displayed in the Data field. (Designs that cannot be constructed are dimmed.)
4. If *Construct* was selected, ship construction begins when the turn is processed.
If *Modify Target* or *Repair* was selected, select the ship to be modified or repaired.

On placing the cursor over the ship performing the construction, the ETC (estimated time to completion) and EPC (estimated net power consumption) are listed in the Data field. If the power states *Empty* and is in red, there is not enough available to complete the construction. Recharge the ship (see [page 80](#)), and then try again.

When constructing ships take the following into consideration:

- A ship can be ordered to perform a construction order upon itself.
- Ships given a *Construct* order never move prior to beginning construction. Move one of the ships involved to the other first.
- Ships under construction can be given orders. They attempt to carry these out to the best of their abilities.
- A partially constructed module on a ship under construction has its efficiency reduced in direct proportion to the amount of construction still incomplete.
- Ordering a ship under construction to move, cancels the construction order.
- Incomplete ships can be finished later, by selecting the *Repair* option.

Construction Order Options

Modify Target—Alter the design of an existing ship by recycling modules that are not part of the new design, and then constructing any new ones.

Construct—Build a ship from scratch.

Repair—Select a damaged or incomplete ship to be repaired or rebuilt. For a Constructor to repair itself, *Repair Self* should be selected from the Task Orders menu.

Scrap—Any ship can be scrapped to reclaim and recycle the remains, recovering resources.

Additional Constructors

To decrease the time it takes to construct a ship, once construction has begun, additional Constructors may assist.

1. Right-click on the additional Constructor (it must be in range or have the ability to move within range).
2. Select *Construction*, then *Repair* from the Task Orders menu.
3. Click on the ship that is under construction. The Constructor moves towards the target and begins construction when it arrives.

The number of additional Constructors is limited to the number that can fit around the ship under construction.

Check the reduction in the time it takes to complete the construction by placing the cursor over any of the ships involved. The Data field displays the revised ETC (estimated time to completion).

Using Resources

When a unit is constructed or modified, resources are deducted from the Local Pool. If there are not enough resources available, construction cannot take place.

Access the Trade screen by selecting the *Trade* button while in Information mode, to view your Local Pools (See [page 56](#)).



Resources can be transferred from one pool to another. The time this takes varies depending on the distance they have to travel.

Scrapping a Ship

To scrap a ship follow the instructions given in Constructing a Ship and select *Scrap* from the Construction Order options in step 2. When scrapping a ship, approximately three-quarters of the resources used to build the ship are reclaimed and recycled.

Hint: Scrap the remains of destroyed ships soon after their destruction to reclaim resources.

Movement

Simple movement occurs whenever a ship is to move from one place to another and there is no task for it to carry out on arrival.

When moving a ship, ensure that it has the ability to move in Orbital or Solar space, as applicable.

The speed of a ship is displayed in the Data field when the cursor is over the ship, or the ship is selected.

An entry of zero indicates that the ship can only move *extremely* slowly, and only in Orbital space.

To move more than one ship, select one then hold down the **Shift** key and select any others. Select a previously formed fleet by pressing the appropriate function key (see [page 71](#)).

Moving a Ship to an Asteroid or Enemy Ship

1. Select a ship or ships.
2. Click on the destination point. This can be an asteroid or an enemy ship. An enemy ship is any ship not in your chapter.
3. *Target Acquired* is displayed briefly at the top of the map.
4. When the turn is processed the ship begins its voyage.

Take the following into consideration when ordering movement this way:

- If the destination is an enemy ship, it becomes the target of an attack (see Combat on [page 72](#)).
- If the enemy ship has moved by the time your ship arrives, your ship moves to the point in space that the enemy ship was occupying when you selected it as a target.
- If an asteroid is selected as the target when in Solar view, the ship moves into Orbital space, then stops. It does *not* move next to the asteroid.

- When the destination asteroid is selected while in Orbital view, or by using a goto slot, the ship moves into Orbital space, and then moves next to the asteroid.

Hint: Setup your ships in the goto slots and then select each asteroid as a destination in Solar view, and compare the journey time to each. Or place nearby asteroids in the goto slots (see [page 42](#)) and order a ship to move to each one. Generally, the faster you can establish a presence or capture asteroids, the better.

Moving to a Friendly Ship

1. Right-click on the ship that is to move. The Task Orders menu opens.
2. Select *Rendezvous* from the Task menu.
3. Select the target friendly ship. *Target Acquired* is displayed briefly at the top of the screen.
4. When the turn is processed the ship begins moving.

When the cursor is placed over a ship with a move order, the ETC (estimated time to completion) and EPC (estimated net power consumption) are listed in the Data field. If the power states *Empty* and is in red, there is not enough available to complete the movement. Recharge the ship (see [page 80](#)) then try again.

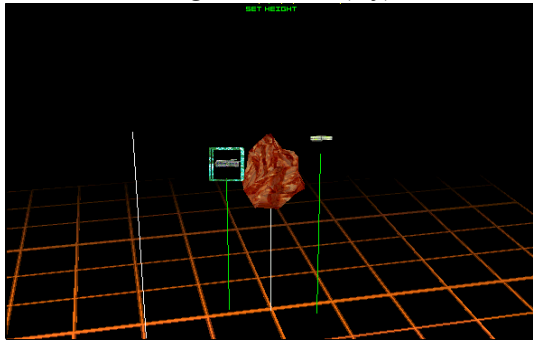
NOTE: The next item you select after selecting *Rendezvous* becomes the ship's target. Be careful not to select something you do not want it to travel to.

Moving to a Point in Orbital Space

Moving to an object is often sufficient, but on occasion movement to a point in space is required. When moving to such a point in Orbital space, the grid is used to set the (x,y) coordinates, then a plumb line sets the vertical distance from the plane of the grid.

When using the grid, use Locked view to hold the camera parallel to the plane of the grid. This helps to keep a sense of perspective. Toggle through the camera modes by pressing **Z**.

1. Go to Orbital view and activate the Grid by pressing **G**, or select the *Grid On* button. 
2. Move the grid up by pressing **T**, or the *Up Arrow* button, and down by pressing **B** or the *Down Arrow* button, until the ship to be moved is above the grid.  
3. If the ship to be moved is not already selected, select it.
4. Click on the grid to set the (x,y) coordinates.



Orbital View with the Grid Active

5. Set the height by moving the cursor. The plumb line indicates the point that the ship is to move to.
6. Click to set the destination point. *Target Acquired* is displayed briefly at the top of the screen.
7. When the turn is processed the ship begins moving.

When the cursor is placed over the ship, the destination point flashes, and the ETC (estimated time to completion) and EPC (estimated net power consumption) are listed in the Data field. If the power states *Empty* and is in red, there is not enough available to complete the movement. Recharge the ship (see [page 80](#)), then try again.

Task Orders

Movement orders are a quick way of moving ships from A to B, but most of the time ships need to perform a task on arrival. Task orders not only instruct ships where to move, but also what to do when they arrive.

Task Orders Menu

The Task Orders menu is accessed by right-clicking on a ship (see [“Orbital View” on page 49](#)). The listings in the menu depend upon the capabilities of each ship. For example, a ship without any construction ability does not have a *Construction* option. A ship may have some or all of the tasks listed on [page 49](#).

When making a selection from the Task menu, the cursor reflects the task:

	Normal.		Transfer power from Target.
	Scan or Survey (see page 78).		Transfer power to Target.
	Construction (see page 67).		Repair (see page 67).

Performing Task Orders

1. Right-click on a ship to open the Task Order menu.
2. Select the task to be performed.
3. Click on the location or target of the task. If the ship has to move to perform the task the Data field displays two orders—one for the movement and one for the task.
4. The ship moves towards the location and, when close enough, attempts to perform the task.

When the cursor is placed over the ship, the ETC (estimated time to completion) and EPC (estimated net power consumption) are listed in the Data field. If the power states *Empty* and is in red,

there is not enough available to complete the order. Recharge the ship (see [page 80](#)), and then try again.

Keep in mind that:

- If on its arrival a ship is unable to carry out a task, the task is cancelled.
- If a ship is given a second order it cancels the first, unless the **Control** button is held down when the ship is ordered the second time.
- Ordering a ship to perform a task that requires it to move does not cancel the task. The ship has a current order to move, then another to perform the task on arrival.

Multiple Orders

Ships and fleets can be given a series of orders by holding down **Control** when selecting the ship or fleet to be given additional orders.

Each order is added to the ship or fleet's order list. View the order list by right-clicking on a ship then selecting *Display*, and then selecting *Order List*. The order list is displayed in the Data field. Alternatively use the **Page Up** and **Page Down** keys, or the mouse wheel, should you have one.

Additional orders may be given in subsequent turns.

If one order cannot be carried out, all subsequent orders are cancelled, and you are notified.

Fleets

Ships can be organized into fleets. Fleets may be organized on a temporary basis or made permanent by the allocation of one of the function keys.

Task orders can be issued to fleets. Any ships in the fleet unable to perform the selected task do not move and all subsequent orders for that ship, are cancelled. Be careful not to accidentally split a fleet between different asteroids, as this can be confusing.

With a few exceptions, the Task Orders menu displays any orders that could be given to any one of the selected ships. The following task orders, however, never appear in the Task Order menu when ordering fleets.

- Land ATVs
- Recover ATVs
- Self Destruct
- Sell

Formation Move

Fleets can be ordered to perform a *Formation Move*. When the destination is an asteroid, all the ships arrive in Orbital space at the same time. When the destination is a target ship, the fleet arrives in Orbital space at the same time, but then each moves towards the target at their maximum speed. It is possible for a target ship to no longer be in the position it was when targeted. In this instance the fleet moves to the location the ship was when it was targeted.

Forming a Fleet

1. Select the first ship to be in the fleet—this is the fleet leader.
2. Hold down **Shift** and select all the ships to be in the fleet—this is a temporary fleet.
3. Hold down **Control** and press one of the function keys to allocate that key to this fleet—this is a permanent fleet.

NOTE: Pressing **A** selects all friendly ships in the current view. This is a quick way to select all the ships around a particular asteroid.

To select all the ships in a permanent fleet, press the previously allocated function key.

Holding down **Shift** on the keyboard and pressing the appropriate function key selects the fleet and centers the view on the fleet leader.

If the fleet leader is removed from the fleet the second ship selected when the fleet was formed becomes the fleet leader and so on.

Removing or Adding Ships to a Fleet

1. If a fleet is not already selected, select one by using a previously allocated function key, or by forming a temporary fleet.
2. Click on any ships to deselect them and remove them from the fleet, or hold down **Shift** and select any ships to be added to the fleet.
3. Save the amended fleet formation by holding down **Control** and pressing the function key. Alternatively, assign a different function key.

Take the following into consideration when dealing with fleets:

- A ship can belong to more than one fleet.
- Ships always perform the most recently given order, unless that order was added to the orders list by pressing **Control** when selecting the ship (or fleet).
- When a ship cannot perform an order it does not move and all subsequent orders are cancelled.

Space Combat

While expanding your empire and travelling from asteroid to asteroid, it is inevitable that you will encounter other Guilds, or even renegades from your own Guild. The combat that ensues is an essential and invigorating ingredient of *Malkari*.

Combat between ships only occurs in Orbital view, never in Solar view.

Combat occurs between:

- Ships from different Guilds.
- Ships belonging to a renegade chapter and any ships not belonging to that chapter.
- Ships belonging to a loyal chapter and any other ship, apart from those belonging to other loyal chapters in the same Guild.
- Ships belonging to a rebel chapter and any other ship, apart from those belonging to other rebel chapters in the same Guild.

Ships use a default battle plan based on their type that can be modified, if required. Ships fire and activate defensive systems automatically when travelling within range of an enemy.

Simple Combat

The simplest way for a ship to engage in combat is to select a target.

1. Select the ship to perform the attack.
2. Click on the enemy ship to be attacked.

The attacking ship moves into range according to its battle plan and fires at the selected enemy in preference to any other possible targets.

If it cannot fire at the selected target it reverts to its battle plan.

Battle Plan

There are three ways to change battle plans.

Through the default battle plan, which is the plan given to each ship when built. Through the individual plan, where any changes made apply only to that ship. Or, through the fleet battle plan, when the battle plans of all the ships in a particular fleet change.

NOTE: It is possible to save the default and fleet battle plans for use in other games. To save a plan, select *Save* when you have made the selections you want. To load the plan into a game, select *Load* then select the previously saved plan.



Default Battle Plan

Modifying the Default Battle Plan

1. Right-click on the background, in either Solar or Orbital view, and select *Battle Plan*.
2. In the right-hand quadrant of the Battle Plan, select a type of hull (see [“Hulls” on page 87](#)).
3. Make modifications as required to that ship type’s current settings (see [“Battle Plan Parameters” on page 73](#)).
4. Select OK.



Individual Battle Plan

Modifying the Battle Plan of Ships

1. Right-click on the ship to open the Task Orders menu and select *Battle Plan*.
 2. The Battle Plan menu opens and all aspects of the ship’s behavior can be set.
 3. To set the new plan for this ship, select OK.
- NOTE:** To cancel any modifications and return to the default plan, select *Revert to Standard Battle Plan*.



Fleet Battle Plan

Modifying the Fleet Battle Plan

1. Right-click on a ship that is in a fleet (see [page 71](#)), and select *Battle Plan*.
2. The Fleet Battle Plan opens. Make modifications as required.
3. Select OK.

Battle Plan Parameters

Firing: The Firing section of the Battle Plan is in the top segment. Firing instructions are set for all weapons on the ship.

Firing takes into account both when to fire and who to fire at.

- *Only Fire at Selected Target*—When this is checked, the ship only fires at a selected target and ignores any other ships.
- *Fire Only at*—Check this option for the *Closest*, *Closest Armed Unit*, *Closest ATV Carrier* or *Closest Constructor* to be the only target to be fired at.
- *Fire when*—Enter the minimum percentage chance to hit and whether to only fire when the ship is in effective range.

Each weapon has an effective range, and a *Chance to Hit* at that range. At maximum range, the chance to hit is halved. Other factors such as tracking modules and combat computers, increase the chance to hit. Defenders can lessen the chance of being hit by having ECM (stealth) or ADF modules, and combat or scout computers.

See the Weapon Module Attack Information of the Module Tables, listed in the Online manual, for effective ranges, maximum ranges, and the chance to hit at effective range.

Emergency Escape Move: This tells the ship when to “Run Away!” which occurs when any of the selected settings are valid:

- *Hull Integrity Reaches*—Select and enter the percentage at which the ship flees.
- *Life Support Reaches*—Select and enter the percentage at which the ship flees.
- *Unable to Fire*—Select to instruct the ship to flee when out of ammunition or power.

When performing an emergency escape the ship moves into Solar space; its destination is the closest asteroid that the chapter controls. If there is no such asteroid, there is no escape move.

Power Allocation: Power allocation is available only on the Individual Battle Plan. The power allocated to each of the modules on a ship can be adjusted. The amount of power allocated changes the effectiveness of the module(s) in that slot.

Power may be set at:

Power Level	Power Consumption	Efficiency Effect
Off	0	Does not function
Minimum	50% of normal	50% of normal
Normal	Normal	Normal
Maximum	150% of normal	150% of normal
Emergency	200% of normal	200% of normal

Adjustments to power consumption are rounded up; adjustments to efficiency are rounded down. Alterations to efficiency due to power allocation are made after alterations due to damage.

There is a chance of damaging a module when it is consuming more than normal power.

Some modules, particularly propulsion, defensive systems, and weapons, may be used more than once in a single turn.

Combat is potentially very power hungry so be careful not to run out. A ship without power is a sitting duck.

During space combat the turn is split into eight phases and the following drains occur on power:

- Weapon rate of reloading or recharging is measured in phases. Some weapons fire every phase, using power each time.
- Defenses are activated each time a ship is targeted by a weapon so a defense system may be activated many times per turn.
- Movement is split over the eight phases and power use for engines is per phase.

NOTE: Power is consumed each time a module is used, which is not necessarily during combat. A propulsion module, for example, could be run at *Maximum* to increase a ship’s travelling speed.

Battle Plan Buttons: The following buttons are present on at least one of the Battle Plans:

- *Load*—Load a previously saved battle plan.
- *Save*—Save the current battle plan.
- *OK*—Keep the changes made and return to the previous view.
- *Cancel*—Return to the previous view without saving the changes made.
- *Revert to Standard Battle Plan*—Load the standard battle plan, losing any modifications that may have been made.

Reviews

Hostile action and encounter reviews are generated during turn processing.

Whenever one of your ships is in the same Orbital space around an asteroid as an enemy ship, an *Encounter at...* message is displayed.

Whenever one of your ships is involved in combat, a *Review hostile action at...* is displayed.

Double-click on the message to center the view at that location and change to Review mode. These reviews are also accessible from the Combat Log. When in Review mode, the review function buttons are displayed below the Data field.

Review function buttons:



Pause



Play



Restart



Stop



Advance

In Review mode the camera can be moved as usual while viewing the action.

To follow a battle step by step, select the *Pause* button, then the *Restart* button, then use the *Advance* button to progress the battle one phase at a time.

Firing and damage information is displayed in the slots along the top of the screen, as it occurs.

To view a written log of the battle, go to Information mode and select the *Combat Log* button, and then select the *Show Details* option of a battle.



Review Screen

Damage Effects

A module is destroyed when it received damage equaling the number of construction points it took to build.

When a module is damaged it does not perform tasks as efficiently.

The following abilities are reduced in proportion to the damage the module has received:

- The base chance to hit of a weapon.
- The active defense factor of defense modules.
- The construction capacity of construction modules.
- The damage reduction factor of damage control modules.
- Shield defense values.
- The transfer rate, storage and generation rate of power modules.
- The speed of a ship when a propulsion module is damaged.
- The survey speed of scanning modules.
- The ECM values of ECM modules.
- The tracking value of tracking modules.
- The ATV capacity of transport modules.

Combat Mechanics

It is not necessary to know the details of combat mechanics to play *Malkari* but for those who want to know exactly how their Ice Maker shield is helping to defend, or why blasting away at an Emerald Combine ship with your Lightning Bolt destroys them in seconds, but the Crimson Dawn ships act as though the hits are merely insect bites, read on...

There are three ways that a ship is destroyed. Its Hull Integrity or Life Support is reduced to zero, or all its modules are destroyed.

Hitting a Target

Each weapon module has a base *Chance to Hit*, listed in the module tables in the Online manual (see [page 12](#)).

Computer Effects: This is modified by any computer effects (see [page 88](#)).

Tracking and ECM Effects: Take the *Tracking* value of the attacking ship and subtract the *ECM* value of the defending ship, and add to the modified *Chance to Hit*.

ADF Effects: Next, take the *ADF* value of the defending ship and adjust according to the weapon type being fired:

Beam weapon—reduce the *ADF* value to 0.

Missile weapon—halve the *ADF* value.

Cannon—no adjustment.

Subtract the modified *ADF* value from the current *Chance to Hit*.

Range Effects: If the ship is in effective range, there is no distance modifier. If the ship is within maximum range, but outside effective range, the *Chance to Hit* is halved.

This is the percentage chance that the weapon has of hitting the target.

If the weapon misses there are no further calculations.

Shield Defense

If the defending ship does not have a shield, or if the shield value against the attack type (solid, explosive, corrosive, chemical, heat, radiation, discharge, or nuclear), is zero, go to damage allocation.

Shield Strength Effects: Look up the Shield value of the defender against this type of attack and adjust the value according to the weapon type of the attacker:

Beam weapon—increase by 75 percent

Missile weapon—increase by 50 percent

Cannon—no adjustment.

Subtract the modified Shield value from the attack strength of the attacker.

This is the percentage chance of the shield being penetrated.

Damage to Shield: When a shield is hit, there is always a chance that it was damaged during the attack.

The percentage chance of damage is equal to the attack strength of the attacker's weapon. If one or more of the following cases occur, the percentage chance is divided by two.

- If the shields are penetrated by anything other than a beam weapon with a discharge attack type.
- If the shields are not penetrated and the attack type is corrosive, chemical, or radiation.

When damage occurs, the shield has 10 percent of its maximum damage points deducted.

Damage Allocation

If the weapon misses or if the shield is not penetrated, no damage is allocated.

If the weapon hits and the shield is penetrated, the following calculations are made.

First of all it is established whether it is one of the modules, or the hull that has been hit. The chance of hitting the hull is equal to the tracking value of the attacker multiplied by five, which is then multiplied by twenty minus the number of modules, divided by twenty.

Chance of a hull hit:

$$\frac{[\text{Tracking Value} \times 5] * [20 - \# \text{ of Modules}]}{20}$$

Hence a ship with 19 modules is unlikely to have a hull hit, whereas one with only five is highly likely to have a hull hit. The more tracking the attacker has, the more likely they are to hit.

Damage to Modules

The attack value of the weapon is the base amount of damage. If a module is hit, establish whether the defense value of the module is greater than the attack value of the weapon.

When the attack value is less than the defense value, halve the attack strength.

Look up the *Damage Reduction Factor* of the ship, and deduct that. Any remaining damage is applied to the module.

If all the modules on a ship are destroyed, the ship is destroyed.

Damage to Hull Integrity

If a module is destroyed, 25 percent of the damage it received goes through to the hull.

When the hull takes a direct hit, it receives damage equal to the attack value of the weapon minus the damage reduction factor of the hull.

When Hull Integrity reaches zero, the ship is destroyed.

Damage to Life Support

If the hull takes a direct hit, 25 percent of the hull damage is inflicted on life support.

If the hull is hit and the attack type is chemical or radiation, all damage is assigned to life support.

If life support is reduced to zero, the ship is destroyed.

Asteroids

The chapter that has a scientific ATV occupying the central zone, controls the asteroid. More than one chapter can have ATVs on an asteroid at one time (see also [“Combat ATVs” on page 79](#)), but control is determined by the occupier of the central zone.

Asteroids are the primary source of minerals and energy. They also determine the amount of organics, votes, and science bonuses a chapter has. Each chapter begins with one asteroid that has ATVs producing minerals and power.

The output of your start asteroid can affect how you decide to develop your strategies. A mineral-rich asteroid can support a lot of ship construction and it is advisable to build Scout and Assault ships to head for other asteroids to begin exploration and exploitation. Even asteroids rich in minerals do not necessarily have an abundance of all resource types. Only “A” grade asteroids have an even distribution of minerals, and they are only present if *Good Economic Grade* was selected in the Starting Values screen (see [page 34](#)).

Maximize the output of an asteroid by constructing ATVs. Use the ATV facility to construct ATVs (see [page 81](#)). Although Assault and Transport ships have the ability to construct ATVs they tend to take longer.

Surveying

Before ATVs can land on an asteroid, it has to be surveyed. If *All Asteroids Start as Scanned* is selected in the Fog of War screen during game setup (see [page 35](#)), they start as surveyed. If not, they need to be surveyed.

Surveys are conducted by ships with scanner modules. To establish whether a ship has such a module, right-click to open the Task Order menu and see if *Scan* is one of the order options. Alternatively, go to the Design Chamber to view a ship’s modules, or access the second page of information in the Data field. The time it takes to conduct a survey depends on the scanner point

value of the ship doing the survey and the size of the asteroid.

Conducting a Survey

1. Right-click on a ship with surveying ability.
2. Select *Scan*.
3. Select the asteroid to be surveyed.

The ship moves towards the asteroid and when in range begins surveying. The ETC (estimated time to completion) is displayed in the Data field when the cursor is placed over the surveying ship. The EPC (estimated net power consumption) is also displayed. If it says *Empty* and is in red, there is not enough power to perform the task. Recharge the ship, then try again.

When a chapter surveys an asteroid that information is available to all chapters in the same Guild.

Surveys identify the economic class and the power coefficient of the asteroid. They also show the location of ATVs at the time of the survey, when looking at the Terrain view.

Asteroid Terrain Vehicles - ATVs

ATVs are the only units that can land, move and fight on an asteroid. Ships with a transport module can land, recover and move ATVs from asteroid to asteroid.

There are four primary roles for ATVs. At the lowest technology levels, ATVs have the ability to perform only one of these primary roles, but as research on particular modules is completed, ATVs gain additional abilities.

Particular ATVs can build certain facilities on asteroids, which can construct ATVs, improve mining and power production, or establish a Local Pool.

Combat

ATVs with combat ability are good at destroying other ATVs. If a combat ATV is massively outnumbered by non-combat ATVs, it is likely to be overwhelmed and destroyed.

Mining

ATVs with mining ability drill through the asteroids, extracting minerals. A Mining ATV can build a storage facility, establishing a Local Pool. It can also build a mining facility, which increases the production of the ATVs in the zone it occupies.

Power

ATVs with power ability, are designed to make use of a Guild's specific power production techniques. Ships in orbit adjacent to the asteroid are recharged by the power produced. A power ATV can build a power facility. This increases the power production of ATVs in that zone.

Scientific

ATVs with scientific abilities give access to the computer banks and genetic materials stored within the scientific bank in the central zone of an asteroid. When in the central zone, they establish a Local Pool, which stores minerals and allows minerals to be transferred from one asteroid to another.

The higher level scientific ATVs have the ability to increase the stacking and mining levels of the zones they occupy on the asteroid.

An ATV with scientific abilities investigates any artifacts present in the zone it currently occupies.

A scientific ATV can build an ATV facility that can then construct ATVs, assuming there are enough resources to do so.

Combat ATVs



Terrain combat occurs in zones on asteroids whenever ATVs from different chapters, irrespective of their Guild, occupy the same zone. Combat ends when one chapter has sole occupancy of a zone.

When combat occurs remember the following:

- Non-combat ATVs are always destroyed in the following order: mining before power before scientific.
- It is possible for a zone to be left empty as a result of combat.
- If after combat the stacking limit is exceeded, excess ATVs are removed.

ATV combat between chapters of the same Guild is considered a border skirmish and does not break the rules preventing chapters of the same Guild attacking each other.

Ranged Firing: Some ATVs have the ability to fire into adjacent zones (see [page 112](#)).

To order an ATV to fire into an adjacent zone, hold the **Shift** key down, then click and drag on your ATV to target the enemy.

Distant Attack: Some ATVs have distant attack ability. This is an automatic defense system that activates when enemy ATVs land on an asteroid. Enemies landing either in the same zone, or one adjacent to an ATV with distant attack ability are fired at by the defending ATV.

Mining ATVs



Minerals are collected each turn by ATVs with mining abilities in a zone that has a mining value.

Minerals mined on an asteroid are stored in the Local Pool.

Automatic transferal of minerals to other Local Pools can be setup through the Trade screen (see [page 91](#)). To view your Local Pools, select the *Trade Screen* button while in Information mode.



The amount of minerals in an asteroid depends upon its *Economic Grade* (see [page 111](#)). The volume of minerals that can be mined from an individual zone depends upon the mining class and stacking limit of a zone.

To evaluate the quantity of a mineral that one ATV in a zone produces, look up the base propor-

tion of that mineral in the Asteroid Economic Grade table (see [page 111](#)). Divide that number by 100 and multiply by the *Mining Value* of the zone, which is listed in the Data field when the cursor is over the zone. The higher the *Mining Value* and the greater the number of ATVs in a zone, the more minerals that are produced.

NOTE: The higher tech scientific ATVs are able to increase the *Mining Value* and *Stacking Levels* of zones, thereby increasing their mineral production potential.

Building a Mining Facility

1. When there are at least five mining ATVs in a zone, right-click on the stack.
2. Select *Mining Facility*.
3. Five ATVs are converted into a mining facility and the number of minerals extracted by each mining ATV in the zone increases.

Building a Storage Facility

1. Right-click on a mining ATV in the zone where the facility is to be built.
2. Select *Storage Facility*.
3. The ATV is converted into a storage facility, creating a Local Pool on the asteroid.

Power ATVs

Power is produced on asteroids by ATVs with power ability.

The amount of power produced on an asteroid varies from Guild to Guild because each has a different method of power production. The placement of a power ATV on an asteroid may vary the amount of power produced.

Use the *Power Potential* button to highlight the zones in varying shades. The more color a zone has, the higher its potential.



Power is generated in different ways by different Guilds. The information relevant to your Guild is displayed in the Data field when the cursor is placed over the asteroid.

- **Blue Talon Corps**
Thermo Coefficient—The larger the asteroid and the closer it is to a star, the better.
- **Crimson Dawn**
Number Controlled—The more asteroids the chapter controls, the more power each ATV generates.
- **Diamond Cooperative**
Spin Coefficient—The faster an asteroid spins the more power each ATV generates. Fast spinning asteroids are randomly distributed.
- **Emerald Combine**
Kinetic Coefficient—The bigger an asteroid is, the more power each ATV generates. The further a zone is from the center, the more potential it has.
- **Golden Order of Reason**
Radiation Coefficient—The closer to a sun an asteroid is, and when there is solar flare activity, the better.

Recharging Ships: Power generated by ATVs is used to recharge ships near enough to the asteroid. If there is more than one ship that needs recharging they are recharged in reverse order of arrival.

To order a ship to recharge from an asteroid before the others in the queue, right-click on the ship to be recharged, select *Xfer From* then select the asteroid. The ship moves towards the asteroid and begins recharging when close enough.

Alternatively, right-click on the asteroid and select *Xfer To* then select a target to recharge that ship first.

Building a Power Facility

1. When there are at least five power ATVs in a zone, right-click the stack.
2. Select *Power Facility*.
3. Five ATVs are converted into a power facility and the production of a power ATV in that zone increases.

Scientific ATVs



Only scientific ATVs can enter the central zone on an asteroid, where the scientific bank is located.

An ATV with scientific ability occupying the scientific bank gives control of the asteroid to its chapter, providing organics each turn and giving that chapter one vote. Although votes can be sold, the control of the asteroid, and therefore the organics produced, belong to the central zone occupier.

If a scientific ATV moves out of the central zone, control of that asteroid is lost. The vote is retained, however, until an enemy chapter takes control. If an asteroid is taken from a friendly chapter, they retain the vote.

Scientific ATVs are used to investigate artifact sites on an asteroid. Artifact sites are placed randomly. To investigate an artifact site, move a scientific ATV into that zone. The site may provide additional resources or it may explode, destroying all the ATVs in that zone.

As the scientific ATVs attain higher technology levels, they can alter the mining and stacking values of individual zones.

An ATV with a scientific ability of two or more can increase the mining level of the zone they are in by one, up to a maximum of sixteen. The abilities of ATVs vary between Guilds (see [page 112](#)).

Having more than one scientific ATV in a zone does not speed up the zone improvement process.

An ATV with a scientific ability of three can increase the stacking limit of a zone by one, up to a maximum of sixteen.

Improving Zones

1. Right-click on an ATV with a scientific ability of two or three.
2. Select *Improve Mining Level* or *Improve Stacking Limit*, as preferred.
3. Pass the cursor over the ATV to see the order displayed in the Data field, with the ETC (estimated time to completion).

Building an ATV Facility

1. Right-click on a scientific ATV in the zone where the facility is to be built.
2. Select *ATV Facility*.
3. The ATV is converted into an ATV facility and can begin constructing ATVs.

ATV Construction

ATV facilities and ships with transport modules can construct ATVs. However, constructing ATVs on ships is three times more expensive, and takes a lot longer.

The cost of constructing an ATV depends on its type.



1. Right-click on the facility or ship that is to construct the ATVs and select *Construct ATV* from the Task Orders menu.
2. The Build ATV dialogue box is displayed.
3. Select how many of each type of ATV are to be built.
4. Click *OK* to begin building.

On placing the cursor over a ship performing the ATV construction, the ETC (estimated time to completion) and EPC (estimated net power consumption) are listed in the Data field. If the power states *Empty* and is in red, there is not enough available to complete the task. Recharge the ship (see [page 80](#)), and then try again.

NOTE: No power is used when building ATVs in a facility.

Terrain Movement

Terrain movement is conducted only by ATVs, moving between zones on asteroids.

Click and drag an ATV to move it. Hold down **Control** then click and drag to move a stack of up to five ATVs of the same type at a time.

The zones into which an ATV or ATVs can be moved become green when the cursor moves over them; zones ineligible for the selected ATV or ATVs become red.

To cancel a movement order, click and drag the ATV back to its original zone.

NOTE: Only scientific ATVs can move into a central zone.

The low tech ATVs can only move to an adjacent zone. Some higher tech level ATVs can move two zones in a turn, although they must stop if the first zone they move into is occupied by an enemy ATV.

Stacking Limits: Each zone has four holding areas and four arriving areas, one for each ATV type, except the central zone which has room for one scientific ATV only.

The number of ATVs in the zone is displayed next to the marker for each type of ATV. When a number is red there are more ATVs in the zone than the stacking limit allows. In the Data field, the number and types of ATV occupying the zone, and how many are due to arrive are listed.

Stacking limits are displayed in the Data field when the cursor is placed over a zone. Any ATVs in excess of the stacking limit are destroyed when the turn is processed, after combat.

The stacking limit is the total number of ATVs that can occupy a zone, not the number of each type.

NOTE: There is nothing to prevent ordering movement which results in over stacking. In fact, this is a legitimate tactic during combat.

The central zone always has a stacking limit of one scientific ATV, other zones vary from four to sixteen. The higher tech scientific ATVs can increase a zone's stacking limit.

Fixed Position: Some of the higher tech ATVs have fixed defense ability (see [page 112](#)). If an ATV with this ability does not move during a turn, it increases its combat value by one. This increase remains until the ATV is moved.

Automanaging ATV Movement

When ATVs are produced by an ATV facility, they are placed in the zone occupied by that facility.

It is possible to queue up to 99 ATVs of each type to be built. If there are not enough minerals to build the ATVs the facility suspends the order until there are enough minerals.

When the zone reaches its stacking limit, production is suspended. Move ATVs out



of the zone manually, or select the *Automanage* button to have them move automatically.

The ATVs move:

- *Mining*—To the best mining zone.
- *Power*—To the best power and away from the best mining.
- *Combat*—Clump together and try to keep out of the way of any others.
- *Scientific*—To the Central zone, if it is not already yours, then to any zones containing artifacts and when neither of those apply, they avoid each other and find the least productive zones.

If *Automanage* is selected when you have ATVs on a friendly chapter's asteroid, your ATVs move to the outer zones.

Landing ATVs

ATVs that are being carried by ships can be landed on asteroids. ATVs can only be landed on surveyed asteroids, and if the asteroid is con-

tested, only in the outer zones. When playing at easy level, all asteroids are scanned and do not need surveying.



Land ATV screen

1. Right-click on a ship with an occupied ATV Bay and select *Land ATVs*. The Land ATV screen opens.
2. Select the type or types of ATV to be landed in the slots along the top of the screen.
3. Click on the zone that those ATVs are to land. One of each selected type is allocated.
4. Select the zone again to land another of each selected type, if they are available.
5. Click *Select All* to land all of the selected type or types in the zone.
6. Repeat steps 2 to 5 until all the ATVs to be landed have been selected and given a destination zone.
7. To cancel the Land ATV orders, select *Restore*. To confirm the orders, select *Done*.
8. The ship carrying the ATVs moves to the asteroid and lands the ATVs when in range.

On placing the cursor over the ship performing the ATV landing, the ETC (estimated time to completion) and EPC (estimated net power consumption) are listed in the Data field. If the power states *Empty* and is in red, there is not enough available to complete the task. Recharge the ship (see [page 80](#)) then try again.

NOTE: If you attempt to land on inner zones and enemy ATVs have landed since your last scan or presence on that asteroid, the order fails and any previously undetected enemy ATVs are displayed.

Recovering ATVs

Only a ship with ATV storage space can recover ATVs from an asteroid. ATVs can only be recovered from outer zones if the asteroid is contested.

That is when there are ATVs other than your own on the asteroid.



Recover ATV Screen

1. Right-click on a ship with an ATV bay and select *Recover ATVs*. The Recover ATVs screen opens.
2. Select the ATVs to be recovered. Up to five ATVs of the same type in the same zone can be selected at the same time by holding down **Ctrl** then selecting the ATV.
3. As each ATV is selected for recovery, it leaves the Terrain view display and is listed in the slots along the top of the screen.
4. The top-right slot lists how many ATVs are being loaded, and how many the ship can carry.
5. When you have selected all the ATVs to be recovered, or that can be recovered, select *Done*.

If there is no room for ATVs on a ship, *Recover ATVs* does not appear in the Task orders list.

On placing the cursor over the ship performing the ATV recovery, the ETC (estimated time to completion) and EPC (estimated net power consumption) are listed in the Data field. If the power states *Empty* and is in red, there is not enough available to complete the task. Recharge the ship (see [page 80](#)) then try again.

Advanced Play

Ship Design

The design of a ship dictates what tasks it is capable of and how well it does them. Some designs have twenty different modules per ship. Deciding whether you want a design to have lots of fire power, defense or some other ability needs to be weighed against the advantages of having a little of everything.

There are two extremes in the formation of a fleet of ships. One is to have every ship as a specialist, with Scouts, Assaults, and Destroyers, for example. The other is to have all General Purpose ships, which have the potential to do almost anything. In addition, the modules of a General Purpose ship can be changed to give a ship with different abilities.

Updating and improving ship designs is essential for the successful conquering of the solar system. Improved propulsion modules speed up travel between the asteroids, and better ATV Bays speed up ATV construction and increase ATV storage space. Bigger guns make bigger holes and upgraded hulls enable additional modules to be placed in each design.

When considering a design change, be aware of any modules that are close to having their research completed. It may be worth waiting a few turns to take advantage of a new, improved weapon rather than using a current one. Research progress is shown in the Design Chamber, and on the Research Progress and Game Data screens,

accessible while in Information mode (see [page 54](#)).

Space Stations with their massive construction modules normally generate the greatest number of construction points, and therefore build ships more quickly. Use mobile construction ships to modify and update ships already in service, and to carry out repairs, of course!

Designing a Ship

Access the Design Chamber by selecting the *Design* button from the Game screen (see [page 62](#)), or the Design Chamber goto slot.



There are several different hulls available as the basis of a ship design. The hull of a ship indicates its main purpose. The slots on a hull are intended to hold particular modules. Each module that is allocated to a slot that it is not intended for, incurs additional costs for the hull modifications.

Be aware of the purpose for which you are designing a ship when you choose a hull, then customize it by adding modules.

The statistics of a design are displayed on the left of the Main display. These numbers change as you add and remove modules. Use these numbers to consider which modules improve a design and which might be left out when their disadvantages outweigh their advantages.

Use the statistics to compare your designs to others of the same type, keeping in mind the inherent strengths and weaknesses of your Guild.

Designing a New Ship

1. Select an obsolete design from the design list in the Data field, then click the *Create New Design* button. 
2. Select the appropriate Hull type by clicking on it, then select a hull (see [page 87](#)).
3. Add modules by either double-clicking to place a module in the appropriate slot, or by dragging and dropping the module into the slot.
4. Select the *Save Design* button; enter the name of the new design and click *OK*. 

NOTE: To save to a different place in the list, hold down **Control** and click on the place in the list where the design is to be saved. This can be done before any changes are made, in effect using one design as a template for another.

Amending a Current Design

1. Select the design to be changed from the Design List.
2. Remove any modules by dragging the module out of the slot.
3. Follow steps 3 and 4 in Designing a New Ship, above.

NOTE: Amending a current design only changes the template, it does not change any ships currently in service. Hulls cannot be amended within a design, a new design must be created.

To upgrade ships of an old design that are currently in commission, it is necessary to modify each one using a construction order (see [page 67](#)). Only the modules of a ship can be modified, not the hull.

The cost in time and resources to replace a module is reduced by the recycle value of the modules being replaced.

Slots

Each slot is designed to hold particular module types, indicated by the letters in each slot.

Code	Module Type	Button
CON	Construction	
CMP	Computer	
DCN	Damage Control	
DEF	Defense	
POW	Power	
PRO	Propulsion	
SCT	Scout	
ECM	Electronic Countermeasures	
TRK	Tracking	
TRN	Transport	
WPN	Weapon	
ANY	Any	

The hull determines how many modules can be placed in a design.

Adding New Modules: Double-clicking on a module in the available modules area adds one module to an appropriate empty slot. Alternatively, drag and drop the module into the slot to be occupied—this is the only way to place a module in a slot that it was not intended to occupy.

Removing Modules in a Slot: Drag a module out to remove them it from a slot.

Module Upgrades: Modules on existing designs are not automatically upgraded when research is completed on the next module.

Upgrade modules by amending a current design. Then use a Constructor to *Modify Target* or *Modify/Assemble Target* task (see [page 70](#)) to upgrade ships already in commission.

Saving Designs

To save a design, select the *Save Design* button, enter a class name, and then click *OK*. To exit this dialogue without entering a name, press **Esc**. To save to a different place in the list, hold down **Control** and click on the place in the list where the design is to be saved.



If another design is selected before the current design has been saved a prompt appears, asking whether to discard any changes. Selecting yes loses any modifications that have been made.

It is not necessary to save a design before returning to another of the Game views, or before the turn ends, only when another design is selected. The amended design is not available for construction, however, until the template is saved.

Save a design to another place in the list by holding down **Control** and clicking, before any changes are made, in effect using one design as a template for another.

Saving or Loading a Template

Templates can be saved and then used in other games. You cannot load a previously saved design if a hull or module on that design has not yet been discovered.

1. **Ctrl** + right-click on a design class name.
2. Select *Save Template Design* or *Load Template Design*, as appropriate.
3. Select the previously saved design to be loaded, or enter a name.
4. Select *Save* or *Load*, as applicable.

Hulls

There are eleven ship types, each determined by the hull used in its design. The typical uses are listed here but it is the actual modules placed in a design that determine exactly how a ship should be used. An Armed Scout for example, is no good for light attacks if it has no weapon to fire!



**Assault
(aasl)**

Use for ATV landing and recovery, and light attack and defense.



**Armed Scout
(asct)**

Use for asteroid and ship scanning, and light attack and defense.



**Armed Space
Station
(asta)**

Use for constructing ships and asteroid defense.



**Battleship
(batt)**

Slow but great on attack and defense.



**Constructor
(cons)**

Use for ship repair and modifications.



**Cruiser
(crus)**

Use for attack and defense.



**Destroyer
(dest)**

Fast with light attack and defense abilities.

No Symbol

**General
Purpose
(genp)**

Allows combinations of construction, transports, and survey.



**Scout
(usct)**

Asteroid and ship scanning.



**Station
(usta)**

Constructing ships; power storage.



**Transport
(uasl)**

ATV construction, landing and recovery.

Module Types

Construction

Construction modules are used to construct, assemble and rebuild ships.

Construction modules automatically make repairs, if necessary, to ships they are on when the ship has no orders.

Computers

The computer specializes the automation of a ship. All ships are automated and the hull generally indicates which one should be used to best enhance the ship's primary purpose. For example, having a Scout computer on a Cruiser is not very wise. A Combat computer adds far more to the fighting ability of the ship.

There are five types of computer with three different technology levels per Guild, which have specific effects. (See [“Computer Effects” on page 114](#) for full details.)

Damage Control

Damage Control modules reduce the effect of hits that penetrate shields.

At the end of a turn the Damage Control modules attempt to repair damaged modules on the ship. Add ten to the Damage Control Factor; this is the percentage chance of five points of damage being repaired on a module. There is a ten percent chance of two points of damage being repaired. Repairs only take place on ships that have no other orders.

Defense

Defense modules have an Active Defense Factor, which reduces the chance of being hit and defends against projectile weapons.

The following modifications occur to the active defense factor, depending on the weapon type being used:

Beam weapon—reduce the ADF value to 0.

Missile weapon—halve the ADF value.

Cannon—no adjustment.

Defense modules also have a shield, which defends the entire ship against specific attack types (see [“Shield Defense” on page 76](#)).

The shield value is modified, according to the attack type, as follows:

Beam weapon—increase by 75 percent

Missile weapon—increase by 50 percent

Cannon—no adjustment.

If a shield is not penetrated the damage applied to the ship is zero and the shot is deflected.

ECM

ECM modules reduce the chance of a ship being hit by their ECM value, and are equally effective against each weapon type.

Power

Power modules have three important values:

Power Generation—the amount of power generated by the module each turn.

Power Storage—the amount of power a module can store.

Power Transfer—the amount of power a module can transfer to another ship in a turn.

Propulsion

Propulsion modules have two propulsion values: one is used when the ship is in Orbital space; the other is used when the ship is in Solar space.

A ship's speed is determined using its total mass and its propulsion value.

Scout

Scout modules perform the dual role of surveying asteroids and of scanning ships.

An asteroid must be surveyed to access additional information. This includes things like the economic grade, power production coefficient (Guild specific), and the orbit of the asteroid. An asteroid must be surveyed before ATVs can be landed on it.

Surveying enemy ships reveals how damaged they are and allows you to access the design details of the ship by double-clicking on it.

There is a possibility that a shield, whether penetrated or not, takes some damage, which reduces its efficiency (see [“Combat Mechanics” on page 76](#)).

The following modifications occur to shield values, depending on the weapon type being used:

Beam weapon—increase by 75%

Missile weapon— increase by 50%

Cannon—no adjustment.

Tracking

Tracking modules increase the chance of all a ship’s weapons hitting their target.

Transport

ATV Bays can be used to build, transport, land and recover all types of ATVs (Asteroid Terrain Vehicles).

Weapons

There are two major groups of weapons, Projectile and Beam.

Projectile weapons use less power but have a limited number of shots.

The rate of reload figure in the module tables, available in the Online manual (see [page 12](#)), is the number of phases during a turn (a turn has eight phases) that it takes for the weapon to be ready for firing.

The length of time it takes to rearm a projectile weapon is also determined using this figure.

There are two sub-groups of projectile weapons, cannon and missile.

Beam: Beam weapons use a lot of power but do not need reloading, having an unlimited number of uses as long as the ship has sufficient power.

Cannons: These use a variety of methods to hurl a warhead towards its target. The size of the warhead is limited by the power of the cannon. Use the rapid fire cannons to constantly activate a target’s defenses, which drains power.

Missiles: Use self-contained, onboard motors and guidance systems to fly towards their target. Missile warheads are much larger than those hurled by cannon but the extra maintenance and operating requirements limit the number of shots.

Attack Types: There are eight different attack types. Solid, heat, radiation and discharge can be fired by any weapon type. Explosive, corrosive, chemical, and nuclear can only be fired by projectile weapons.

If a module has defense against a particular attack type, the attack strength is halved, except against the ultra-powerful weapons with attack strengths greater than 100. Module defenses are listed in the module tables, available in the Online manual (see [page 12](#)).

Research

At the start of a new game only modules and hulls at technology level 1 are available. As progress is made in research, technologically advanced modules become available.

When a module or hull is used, research points are gained towards the next breakthrough in technology in that area.

Science bonuses are given for each asteroid owned and these are assigned in the Research screen (see [page 58](#)) to increase the amount of research being done in particular areas. In addition, science bonuses are given when research is continued into a module when the next technology level has been reached.

Research can be assigned to achieve the next technology level, or to increase the efficiency of module or hull construction.

Earlier modules remain available; they are not lost when the next technology level is achieved. In fact, low tech modules can be very useful as they are usually cheaper and take less time to build than the higher tech modules, particularly if research has been allocated to reduce their construction costs. They also tend to have a lower mass.

If *Shared Research* was set at 100 percent in the Game Configuration screen (see [page 32](#)) any research gained by a chapter is shared by the entire Guild. If it was set to zero, then a breakthrough is gained only by the chapter that did the research. The percentage of shared research can be set between these two extremes to limit the amount of research that is shared.

Chapters that have been voted renegade do not gain any research. A loyal chapter shares only with other loyal chapters; rebel chapters only with other rebel chapters.

Once sufficient points have been accumulated one of the following occurs:

- *Breakthrough*—The chapter has successfully made a technological advance.
This may be a simple improvement to an existing module or a completely new line of modules.
- *Cross Research*—While researching one technology, discoveries were made that improved a different area of research.
Research points are added to another technology area.
- *Setback*—Research took a wrong turn, time and effort has been wasted.
Research points are deducted from this area of technology.

Research progress can be monitored from the Design Chamber (see [page 62](#)) or using the Research screens in Information mode (see [page 58](#)).

Resources

There are three basic types of resource—power, organics, and minerals.

Power

Power is generated by power modules, or by power ATVs on an asteroid.

An operational, power-generating module on a ship or a power ATV produces the maximum available power for its current location and efficiency.

Excess power generated by ship modules is stored in power modules on that ship.

Power that cannot be stored is lost.

Organics

Chapters earn organics every turn from each asteroid they control.

Minerals

There are four types of minerals: metals, silicates, exotics, and reactives.

Minerals are mined on asteroids and are stored in the asteroid's Local Pool.

Trade

Trade only occurs within a single Guild. Buying is conducted in the Trade screens, which are accessible in Information mode (see [page 54](#)).

Renegade chapters cannot trade.

Access the Trade screens by clicking the *Trade* button in Information mode.



LOCAL POOLS		OFFERED TRADES		SHIPMENTS	
ASTEROID		METALS	SILICATES	EXOTICS	REACTIVES
CIGAMI	269	426	56	1K	0 hours
HECTOR	77	806	112	376	2 hours

MORE PREVIOUS

LOCAL POOL AT CIGAMI		PRODUCTION	AMOUNT	AUTO-TRANSFER	TIME	ACTION	
RESOURCE	STOCKPILE			ASTEROID			
METAL	269	19	20	HECTOR	2	SELL	TRANSFER
SILICATE	426	30				SELL	TRANSFER
EXOTICS	56	10				SELL	TRANSFER
REACTIVES	1572	68				SELL	TRANSFER

Local Pools Screen

When trade takes place, nothing is actually transferred until turn processing occurs. It is possible to enter a transaction that becomes invalid because another player outbid you, and the ship or vote is no longer available.

Transferring and Selling Resources

Resources are transferred between your asteroids using the Trade screens. You can also try to sell resources, which is useful to barter for others.

Transferring Resources

Resources can be transferred in a once-off lump sum or by a set amount automatically each turn.

- In the top half of the Local Pools screen, select the Local Pool sending the resources.
- Then select the *Transfer* button for the resource to be transferred, in the bottom half of the screen.
- Enter the amount of the resource to be sent, then select *OK*.



- Check the *Autotransfer* box to have this amount of resource sent each turn.
- Select the Local Pool that is to receive the resources, in the top half of the screen.
- The resources are deducted and arrive at the destination after a delay for transportation. If an autotransfer was selected it is listed.

NOTE: Select *Shipments* to view the resources currently being transported. Auto-transfers are listed in the Local Pool information area.

Making Offers

Trading with other chapters in your Guild is done by tendering and accepting offers.

- From the Local Pools screen, select the Local Pool that is supplying the resource to be sold.
- Select the *Sell* button of the resource to be sold.
- The Sell dialogue box is displayed.



Sell Dialogue Box

- Enter the maximum amount to be sold and the resources you want in exchange, per 10 of those on offer (maximum of 999).
- Select *OK*. Your offer is displayed on the Offers screen the following turn.

When an offer is accepted, the resources are deducted from and added to the appropriate local pool. Resources are removed from the pools immediately and arrive at their destination after a delay for transportation.

LOCAL POOLS		OFFERED TRADES	SHIPMENTS	RESOURCES		SHIPS	VOTES
OFFER	CHAPTER	METALS	SILICATES	EXOTICS	REACTIVES		
390 REACTIVES AT ISYS	PROPAGANDA DEPT.	14	12	10	---		
150 REACTIVES AT JENNER	FINANCE DEPT.	10	10	7	---		
130 METALS AT ISYS	PROPAGANDA DEPT.	---	10	8	---		
100 SILICATES AT JENNER	FINANCE DEPT.	11	---	8	---		
130 REACTIVES AT DANDERBORG	OPERATIONS DEPT.	6	8	2	---		
80 REACTIVES AT GOTTEBORG	ACQUISITIONS DEPT.	8	6	6	---		
30 METALS AT JENNER	FINANCE DEPT.	---	---	8	---		

TRANSFER TIME -- 51 TURNS

LOCAL POOL AT CICAMI

RESOURCE	STOCKPILE	PRODUCTION	AMOUNT	AUTO-TRANSFER	RESTERIOD	TIME	ACTION
METAL	307	19					SELL TRANSFER
SILICATE	486	30					SELL TRANSFER
EXOTICS	76	10					SELL TRANSFER
REACTIVES	1708	68					SELL TRANSFER

Offered Trades Screen

Selling Ships and Votes

It is possible to offer votes and ships up for sale.

1. Right-click on an asteroid or ship and select *Sell*.



2. The Sell For screen is displayed.
3. Enter the price you are willing to accept.
4. Select *OK*. The offer is listed in the Offered Trades screen on the following turn.

NOTE: Cancel an offer by selecting it in the Offered Trades screen.

Accepting Offers

Resources are sold to the first chapter that accepts an offer. Ships and Votes are sold to the highest bidder.

1. Select the Local Pool that is accepting the offer, then go to the Offered Trades screen by selecting *Offers*.

2. Select *Resources*, *Ships*, or *Votes* as appropriate.
3. Select the offer to be accepted. The Accept Offer dialog box is displayed.



4. Use the up and down arrows (spin controls) to specify the number to be bought in the case of resources, or to enter a bid for a ship or vote. The cost is shown below.
5. Select *OK* to confirm the deal.
6. The resources are removed from the purchasing Local Pool.

NOTE: Buying resources from asteroids closer to the destination decreases the transportation time. There is no delay when buying votes, they are allotted the following turn. Ships remain wherever they were when sold.

Blockading

If the enemy fire power present at an asteroid outguns the friendly fire power, the asteroid is considered blockaded.

The following trade options are not available during a blockade:

- Transfers
- Autotransfers (current ones are suspended)
- Buy votes
- Buy ships
- Sell or Buy minerals

Voting

Each scientific bank has one vote associated with it, irrespective of the size or economic grade of the asteroid.

When a chapter takes control of an asteroid it gains one vote.

The vote remains the property of that chapter until it is either sold to another chapter or the control of the asteroid is taken by a different chapter.

Votes can be traded with other chapters within the Guild.

Voting is conducted in the Voting screen, accessible from Information mode (see [page 57](#)).

There are two things that chapters can vote on: whether a chapter should become renegade and who should become Imperator.

It is possible to improve your standing with another chapter by responding to their distress calls. Conversely, if you make a habit of sending out distress calls when there is no threat, your standing goes down.

Renegade Status

Players vote on the status of all chapters in the Guild, including themselves, by altering the check boxes against each chapter on the Voting screen.

At the start of a new game there are no chapters voted for renegade status.

A chapter's votes are applied as a block, and more than one chapter can be voted renegade. Over fifty percent of all available Guild votes are required to change or maintain the status of a chapter. In the event of a tie, a chapter becomes or remains non-renegade.

Chapter status is changed at the start of the following turn.

There is no limit to the number of times a chapter can become renegade, return to normal status and then become renegade again.

Effects of Being a Renegade

- Renegade ships are treated as non-Guild, hence combat is mandatory with everyone, including other renegades.
- Renegade chapters cannot trade.
- A renegade chapter does not share research.

Imperator Candidature

At the end of any turn in which a Guild controls sufficient asteroids, a vote assessment is made to see if a chapter within that Guild has received sufficient votes to be elected Imperator.

The following should be taken into consideration when voting:

- Votes may only be cast in support of one chapter.
- A chapter's votes are always applied as a block.
- There are no abstentions, and votes are only cast in favor.

If one chapter has the appropriate percentage of the available Guild votes they are declared Imperator, which may end the game. The percentage required is set in the Game Configuration screens during setup (see [page 32](#)). If there is no chapter with the appropriate percentage of the vote, the game continues until there is.

Interregnum Effects

Interregnum can be selected in the victory conditions in on the Game Configuration screen (see [page 32](#)).

When two chapters have tied votes, civil war breaks out. One chapter and all those who voted for it are declared loyal and the others are declared rebel.

The normal voting system is suspended within the fractured Guild.

The loyal chapters have a set number of turns to establish a win, otherwise they are overthrown.

Research is not shared between the loyal and rebel factions.

Rebel-owned asteroids do not count towards the Guild requirement calculation. Loyal-owned asteroids are added to the Guild requirement calculation.

During Interregnum there is a chance of loyal chapters revolting and declaring for the rebel chapters, depending on the current strength of the rebel cause.

If during Interregnum all loyal chapters revolt or are defeated, the loyal faction is deemed overthrown.

When the rebel chapters overthrow the loyal chapters, the civil war ends.

The Guilds

Blue Talon Corps - Raiders

During the final conflicts, the Blue Talon Corps gained an aggressive combat reputation due to a series of hit and run attacks to grab scientific banks. These resulted in the warlike, raider image that they maintain.

The Blue Talon Corps developed from the Malkari space navy, and was the second Guild to form.

As Diantos moved towards Malkari, heat exchangers and thermocouplers used the rising ambient surface temperatures and heat flares to produce power. This took place almost exclusively on desolate asteroids in deep space and the color blue was a reminder of the blue skies and seas of the home world.

While the power generators only require small temperature differences to operate, but the amount of power produced is low. To overcome this the Blue Talon Corps concentrated on improving heat insulation and power transfer.

To improve heat dispersion, silicates were used in ship construction. This made them expensive to build, although light, and produced ships with a molecular appearance. They have a good power to mass ratio and are faster in local space than any of the other Guilds. Their modules, however, are structurally weaker.

Heat-generating beam weapons have been developed and the cannons fire globular plasma of intense heat. Research developed effective explosives that are used in warheads and very efficient, small rocket engines give missiles high speed.

The Blue Talon Corps is aggressive, particularly in the early stages when the other Guilds have not yet improved their weapons or engines.

Hints: Use your superior orbital speed to make hit and run attacks with lots of rapid fire weapons. Overcome the structural weakness of ships by adding damage control or mobile construction modules. Shields can help but be careful not to reduce your mobility by increasing mass.

Use your speed to establish a quick start early on in the game, then use your weapon strength to hold it.

Try to control Orbital space before bringing in your transports.

Advantages: Heat and heat exchange technology is good, and research into heat weapons and Orbital propulsion is where the Blue Talon Corps excel. With their excellent weapons the Blue Talon Corps is better in combat than any other Guild. They have by far the lightest hulls and good tracking abilities.

Disadvantages: The military background as caused them to become extremely rigid in their ship designs. They are the worst at construction and transporting abilities, and have poor ECM.

Special Ability: Hyper-fast engines in Orbital space.

Resource Use: Heavy on silicates.

Crimson Dawn - Mind Controllers

The Crimson Dawn's history was entirely different to the other Guilds. It comprised of individuals whose only common link was an unusually high psionic ability. Looked on as a fringe element, denigrated by all the scientific academies and unable to make any practical use of their powers, they had no political influence at all.

This changed dramatically when Jebediah Arktron proved that he could consistently generate power using thermokinesis. Initially the power was limited but as other psionics joined him in his experiments they found ways to link brain power. The more psionics that gathered, the faster the discovery of new ways to do things. The ridicule received from other Guilds to whom the concepts of thermokinesis, and telekinesis were nonsensical, was soon forgotten.

Under the dynamic leadership of Arktron the Crimson Dawn was formed. In a controversial move they chose red, the color of Diantos, as their color to represent the new way forward.

Crimson Dawn ships have an angular appearance. The use of Psi to produce power gives an independent source of power, and their power ATVs work equally well anywhere. This has made them lax on power consumption, however, and their modules are power hungry. Because they also use their Psi abilities to enhance their ship modules they are more susceptible to life support damage than other Guilds. Each ship contains a genetically regrown brain within the ship's computer, directing the ship's actions.

The Crimson Dawn have a better than average ability with electromagnetic fields and although there has been no evidence to support it, it has been postulated that Psi somehow uses these fields. Whatever the reason they have the best discharge beam attack and defense systems and good tracking systems. Their warheads are all solid particle as they seem the least life threatening.

Hints: The Crimson Dawn starts at a disadvantage. Power can be a real problem until the better tech levels are reached. Although the power ATVs work equally anywhere, they rely on the amount of organics being produced. Hence power depends on the number of scientific banks controlled, rather than the physical attributes of the asteroids. The Crimson Dawn needs to be ruthless in gaining control of as many asteroids as possible. Its refusal to use nuclear technology, however, means it starts with below average engines making rapid expansion difficult.

In combat, use superior shields to reduce damage and superior tracking to inflict damage.

Try to take asteroids that no-one else wants, as they all give you equal power.

Advantages: The best at scouting and good at tracking. The best at discharge beam attacks and ECM. Excellent power production late in the game. Their designs are more flexible than those of anyone else.

Disadvantages: With their abhorrence of nuke technology the Crimson Dawn are unable expand rapidly early on. They are the worst at combat. The biggest threat is from the Golden Order of Reason because of their use of life support attack weapons.

Special Ability: Mindwarp weapon.

Resource Use: Lots of Organics

Diamond Cooperative - Realists

The Diamond Cooperative split from the Golden Order of Reason when it was felt they were moving backwards, ignoring some of the more useful developments in technology. It was not long before another schism occurred within the Diamond Cooperative, led in part by disgruntled scientists who wanted to move forward. This resulted in the formation of the Emerald Combine.

The Diamond Cooperative is the least insular of the Guilds and the diamond was chosen as its symbol because light shining through a diamond produces many colors. While the Diamond Cooperative does not recognize the methods of other Guilds, it takes a very practical approach to research and often reconfigures experiments from several branches of science. They are average in most areas and even their ECM technology, which is good, is not exceptional.

The Diamond Cooperative specialized in centrifugal and centripetal forces, particularly those generated by spinning bodies in space. Their power generation techniques rely heavily on spin, hence a faster spinning asteroid provides more power than a slower one. To overcome the lack of power on slower spinning asteroids they have developed efficient transports and good power transference.

Before the cataclysm they worked on the Malkari system's asteroid belt and their engines are effective in both deep and local space. Diamond ships tend to have a rounded, globular appearance as they are considered more aesthetically pleasing.

While the Diamond Cooperative favors chemical and corrosive warhead weapons, their power transference research has made them second only to the Crimson Dawn in the development of discharge weapons and shields.

Hints: The Diamond Cooperative begins with no advantages or drawbacks and a steady approach is usually the best strategy. Do not fail, however, to seize any opportunities that may arise. The Diamond Cooperative has a good selection of weapons, corrosive are good against the Blue Talon Corps, discharge against the Emerald Combine and chemical against the Crimson Dawn. The Golden Order of Reason can be a problem as their weapons are hard hitting—use ECM to make their accuracy even worse than it already is.

Advantages and Disadvantages: Generally average in all areas with no outstanding abilities, except their power production is poor.

Special Ability: Leeching.

Resource Use: No special resource.

Emerald Combine - Fragmentalists

The Emerald Combine developed from a split within the Diamond Cooperative's scientific faction. The fragmentalists wanted to develop kinetics and micro-gravity fields when main stream opinion favored continued development of centrifugal and centripetal forces. The dispute continued after the rebellious families split from the Golden Order of Reason to form the Diamond Cooperative, and was finally resolved when the fragmentalist scientists left, declaring the Emerald Combine independent.

Initially small in number and coming late into the arena, the Emerald Combine's techniques had the advantage over the Diamond Cooperative of providing a reasonable power output on all asteroids irrespective of their spin speed. However, the technique only works well if power ATVs are deployed on or very near the surface. Placing them deep inside the asteroid drastically reduces power output. To overcome this, and the fact that they had to expand rapidly to compete with the already established Guilds, they concentrated their efforts on exploration and exploitation, which enable them to establish themselves on asteroids quickly. They have excellent Solar space engines but poor Orbital space engines, and they tend to have good scanners and defensive weapon systems.

The Emerald Combine ships tend to be tubular in construction and have good protection against solid and explosive warheads. Their own solid warheads and gravitronic force accelerators are second to none, but their lack of in-depth study of power transfer leaves them weak against discharge weapons.

Hints: Use your large, fast transports to expand rapidly, but try not to fight toe-to-toe against other Guilds. This exploits the fast Solar space engines. Later on, build up the economy and overwhelm enemies with lots of large transports (escorted, of course) dropping ATVs.

The lack of maneuverability in Orbital space can be compensated by defensive perimeters to prevent enemy ATVs landing on the asteroid. If taking the offensive, make good use of active defenses and damage control to allow ships to survive long enough to close to where the weapons can take their toll.

Advantages: Excellent transport, damage control and defense abilities.

Disadvantages: Slow in Orbital space, and weak against discharge weapons. Almost the worst at attacking and tracking.

Special Ability: Space Mines.

Resource Use: Exotics.

Golden Order of Reason - Traditionalists

The Golden Order of Reason represents the color of the original star, Malkari, and the color of controlled nuclear power. The Golden Order of Reason was the first Guild to develop, evolving from a wish to preserve ancient, traditional ways. Its early leaders felt that following the old ways of Malkari, prior to the discovery of Diantos, was the only way to return to the Golden Age.

The Golden Order of Reason specialized in the development of galactic radiation collection and conversion processes. Galactic radiation is subject to regular, predictable fluctuations causing power output to pulse. To counter this they concentrate on power storage, efficient use of energy, and weapons that do not rely heavily on power.

The closer an asteroid is to a star the more radiation there is, and hence the more power that can be collected.

Being naturally conservative, the Golden Order of Reason has suffered from hidebound attitudes, bordering on the fanatical, clinging to the use of old technological processes. Research tends to be slow except in traditional areas.

The radiation collecting equipment gives their ships a spiky appearance. This traditional style of ship construction produces heavier, more massive modules, giving them better protection against solid, explosive and corrosive attacks, although the power to mass ratio slows them down.

The Golden Order of Reason prefers to use cannon weapons: partly because they represent a traditional method of combat and partly because they do not rely heavily on power. They are alone in the continued deployment of nuclear weapons, used in both cannon and missile warheads, which are powerful but inaccurate. They have developed an efficient radiation beam, as a side product of their experiments with radiation power methods.

Hints: In combat use the powerful nuclear weapons against the Blue Talon Corps and the Diamond Cooperative; the radiation weapons against the Crimson Dawn. The Emerald Combine can be a problem if they use their defensive capability effectively. Add ECM or defense and add tracking modules to increase the chance of hitting, to overcome weapon inaccuracy. .

Mount an offensive to strike at the faster moving Guilds, such as the Emerald Combine, early on in the game. Try to prevent them achieving too much of an early lead.

Advantages: Good at construction and second best with weapons. Strong hulls, and excellent at construction with good stations. Huge weapons which fire slowly. Their later tracking abilities are excellent.

Disadvantage: Ships are very slow and their weapons tend to be powerful but inaccurate. Their ECM is not good.

Special Ability: Ground Bombardment.

Resource Use: Metals.

Guild History

A History of the Malkari Dissolution

Transmitted to all receiving Communicator nets by Kera-leece of the Guild of Light (deceased), 27 AD (After Diantos).

As we shall see, the discovery of Diantos in the pass 2378 GC (Golden Calendar) shaped the course of the following ten generations of our civilization.

Before that dark day of foreboding, Malkarians lived in an enlightened age, as they had for centuries. The half-forgotten wounds of the prehistory of our people—with its warfare, persecution, and rampant ignorance—had been long-ago cauterized in the fierce blaze of atomic power, discovered by technologists of the first oligarchies. That same energy freed our people to explore their horizons, rather than fight for the resources contained within them!

A new atomic age, and with it came a new government: the Golden Order of Reason's techn-aristocracy. For the next 250 passes our ancestors worked in harmony under direction from the Ten Families. They explored the solar system, settled its asteroid belt, and developed advanced material-processing and energy-production sciences that today's reincarnated Guilds can only dream of possessing.

When the flourishing Space Sciences Division realized that Diantos—a star thought always to be part of a constellation far distant—was actually approaching the Malkari system on a dreadful

collision course, the Golden Order of Reason (GOR) was stunned. The Ten Families debated for many passes their course of action to save the race. Plausible arguments were made for destroying the rogue star, diverting it, moving to it, moving away from it, burying the cities of the Six Worlds—anything to preserve the history and greatness of our people!

In the end, these very arguments to find ways to preserve our way of life would threaten destroy it. The debates fractured the original unity of the GOR Families. Soon the larger issues were hidden behind a fog of personal ambition, aesthetic disagreement, and faddish philosophies of ethics and propriety. The productive unity of the Golden Order of Reason splintered as loyalties passed to the disparate Guilds that formed around partisan viewpoints.

The Age of Arks

Seeds of strife took root when the GOR brushed aside objections and resolved to save the Malkari race by constructing massive Arks—generation ships designed to carry a few thousand Malkarians, technological records, and genetic material to a new home world outside the Malkari solar system.

The GOR plan allotted 200 passes to accomplish three things. First, develop whatever technologies would aid a deep space vessel. Second, locate a habitable planet around a nearby star. Third, build

the Arks to be as strong and reliable as possible and then launch them in a timely manner.

Entire cities sprang up around each continent's launch centers to support Ark development. New lines of research were explored, exploited, and cataloged in record time. Technologists further perfected their traditional nuclear and heat-transfer technologies. The very sciences that had pulled Malkari out of its Dark Age decades past promised to illuminate the uncertain future.

The colonies of the Six Worlds pooled their resources and were able to construct nearly five hundred Arks over the 200 pass period. As each Ark was completed it was staffed, stocked, and launched into the depths of space. Although no new home world destination was ever predetermined each Ark was sent towards the nearby Chotheth Star Cluster in the hope that one of its forty star systems would contain a habitable planet on which the Malkari race could gain a foothold.

And Diantos crept ever closer.

The Vaulting

Malkarian technology had reached its zenith in the late 2500s GC as the last Arks sped off towards the Chotheth Cluster. The peoples of the Six Worlds were exhausted from the effort of supporting the massive Ark launch sites. In response the Golden Order of Reason convened the Ten Families to consider further alternatives. From that meeting came the concept of Vaulting—that to best ensure the survival of the Malkarian way of life hundreds of vaults would be buried deep in the mantles of the Six Worlds.

These vaults would be automated, heavily armored subterranean bunkers containing support machinery, computer systems, and genetic banks with samples from the great lineages of Malkari. New people could be synthesized (“reawakened”) to emerge and reestablish Malkari after Diantos passed. The vault computer systems would be responsible for containing the history and knowledge of the original Malkari and for educating the

new Malkarians in their heritage upon reawakening.

Thus the factories of the Six Worlds retooled. People moved away from the launch cities to new vault sites that peppered the planets, and construction was begun.

Technical difficulties mounted as vaults had to be buried miles deep into the hardest rock mantle to ensure their survival as the gravitational forces of Diantos' passing tore the solar system to shreds. By the time the vaults were dug, armored, insulated, shielded, automated for maintenance, and wired for computer networks there was precious little space remaining for the gene banks and memory storage!

The vaults that had originally been designed to contain sufficient computer memory and material banks to reconstruct all of Malkari culture. However, it became obvious that the vaults would have to be merely a slice of Malkari life, rather than the whole pie. This disheartening announcement by the Golden Order of Reason led to the first open strife in almost 500 passes.

At this time Diantos' approach was marked by increased seismic activity on outlying colony worlds, including daily earthquakes and related volcanic eruptions.

The First Schism

When the task of deciding what facets of Malkari life should be preserved in the vaults came before the GOR, the Families were already emotionally worn by constant earthquakes, popular pressures and the agonizing decisions of who should leave on the Arks. In a reactionary declaration, the GOR decreed that the only things to be preserved in the vaults throughout the Six Worlds were those technologies and practices which existed before the threat from Diantos was realized.

Arguing that the Malkarian way of life was not in the past two hundred passes of hurried research and advancement while building the Arks, but rather in the stately existence enjoyed for the

prior two millennia, they ordered that the vaults be filled only with First Age nucleic and heat transfer designs, armored by the toughest, most tried-and-true techniques of shielding, and seeded with the pure genetics of the original Ten Families of Malkari.

One Division of the Golden Order of Reason, the Space Navy, was outraged by this apparent denial of progress. The Navy had benefited greatly from Ark-related research and demanded that the new silicate construction and beam (and plasma) power-control techniques be preserved in the vaults as well.

And there were further aesthetic disagreements. In the design of spacecraft, which would be among the first necessities of the Malkarians that would reawaken in the vaults. The Space Navy favored lithe and agile designs as developed for their role as armed defenders. The GOR aesthetic in contrast praised the utility of the bulky and stolid designs used for mining and transport.

The Navy Admirals fervently maintained their resistance to the GOR vault design, trying to push technologies and genetics into them that were deemed “too incidental” by the Golden Order of Reason’s technologists. Ultimately, the Navy’s continuing efforts to persuade the GOR Families just angered the leadership, and several key Navy figures were asked to resign.

Those charismatic Admirals did just that—taking with them 90% of the Space Navy’s personnel, ships, and resources! The Golden Order of Reason immediately demanded that the rebellious Admirals return the forces they had taken—the response from the Navy was that those same forces did not want to return to an uninspired, old-tech government. To drive the point home, the Space Navy adopted a new designation, one that drew from Malkarian avian wildlife for its inspiration. Since the Admirals prided themselves on striking with speed and lethal force they looked to the raptors of Malkari for a namesake.

The Blue Talon Corps

In 2580 GC, the Blue Talon Corps (BTC) was formed under the direction of a Council composed of eight Admirals who had been forced to resign from the original Navy. Each Admiral was in charge of an “Aerie,” and given near-autonomous discretion as to its use within the dictates of the greater BTC’s direction.

Immediately, the Corps was faced with a problem: they had gained independence and become the first dissenting party in the Malkari system in almost 500 passes but now they had to plan for the arrival of Diantos without the Golden Order of Reason coffers to rely upon. Admiral Shrike of the Third Aerie suggested that they purchase mining equipment from the Golden Order of Reason and use it to construct vaults in the largest asteroids found in the Malkari system. They would “sleep” through the cataclysm and rise like a phoenix to reclaim what remained of the Malkari system. Then marshaling the remaining resources of the shattered system they would construct their own post-apocalyptic Ark—fast enough to overtake the original Golden Order of Reason Arks—and claim the new home world for Blue Talon Corps before the GOR Ark colonists even arrived!

Shrike’s plan met with resounding agreement from the BTC Council, and a communiqué was dispatched to the Golden Order of Reason, offering a truce and seeking trade agreements. Sadly, the GOR Families were accustomed to getting their own way and refused to trade with the Blue Talon Corps until they gave up their rebellion and returned to the home world, Mestor.

Of course, this was unacceptable to the proud individuals that formed the Blue Talon Corps. They stormed and complained and sent repeated requests and veiled threats. Finally, after three long passes of diplomatic missives, cold war, and strained tempers, the BTC Admiralty threatened to attack the mining ships the Golden Order of Reason used for vault construction. This proved to be the final threat to which the GOR would

have to respond. Although the most conservative of the Families grew indignant over the churlish threats and posturing of the Blue Talon Corps, many of the Barons and Earls who were not of the Ten Families—and as it would later be discovered, even some who were—were terrified by the prospect of war in space.

Others of the lesser nobility could stomach the idea of war in space but could not afford the losses to vaulting resources that such war would bring. And the idea of a decentralized preservation effort struck a responsive chord in the hearts of many of the nobles and they began maneuvering to provide the Blue Talon Corps with the requested mining equipment, and to establish greater control of resources in the Six Worlds so that they could construct vaults of their own—for their own Families and the technologies that they felt should be preserved.

Laser Communicators flashed and the Blue Talon Corps' call for war was mysteriously dropped. Agents of the Ten Families of the Golden Order of Reason spent months trying to determine what had calmed the Blue Talon's ire. When the GOR leadership finally learned of the secret deals being made behind the scenes by the lesser Families the second great schism of the Malkari occurred.

The Diamond Cooperative is Formed

Investigations by the dominant Fifth Family lead to the discovery of the secret plans and deals between two of the Ten Families—the Gordano and the Luchensa—and the Blue Talon Corps. When representatives of the offending Families were brought before the council to answer for their traitorous dealings they argued that their actions were prompted by a concern for their fellow Malkari, that the Blue Talon Corps were still Malkarian and deserved a chance to survive.

The Golden Order of Reason responded with unyielding rigidity, fueled by fear of the looming star and the remaining sixty pass time limit to finish all of the vaults. They told the Gordano, Luchensa and the lesser nobility involved to

either, “cease dealing with the rebels or cease dealing with us.” And thus a second battle line was drawn.

The Gordano and Luchensa Families made their break from the Golden Order of Reason in the “*Declaration of Free Memory of 2582 GC.*” The two disaffected Families withdrew to their private asteroids and orbitals and formed the Diamond Cooperative taking their name from the hardest substance their mines yielded. The more poetic of the Cooperative also attributed the use of Diamond to that stone's inherent quality of producing from yellow Malkari sunlight any color of the visible spectrum. This metaphor of facility represented the ideal of freedom-to-preserve toward which the Diamond Cooperative would strive, for while they would not actively oppose the Golden Order of Reason or the Blue Talon Corps, neither would they help without charging for such efforts.

The ruddy speck of Diantos grew ever larger in the night skies of the Six Worlds, and with it the virus of factionalism penetrated deeper into the Malkarian psyche. Seismic activity swelled to higher levels as the worlds began to wobble in their orbits, drawn off-kilter by the approaching angry star.

The Vaulting Conflicts

The Diamond Cooperative immediately began providing the Blue Talon Corps with much needed mining systems, for a price. Now the independent vaulting of the Blue Talon Corps' genes and new technology could begin in earnest.

Taking a symbolic cue from the Blue Talon Corps, the Cooperative adopted the aesthetics of home world marine life for their ships and interfaces—as new starship hulls were designed to accommodate the greater commercial traffic loads, their systems and skins were styled after octopi, shellfish, and predatory fish.

At the same time, the Diamond Cooperative began to trade with the Golden Order of Reason, to provide them with some of the resources

needed for their vault construction. Within a few passes, the division and aggression of the first Schism gave way to cooler debates on worthwhile aesthetics to preserve, what genes were “part of the true Malkari legacy,” and how many people at a time were to be awakened from the vaults to best facilitate the reemergence after Diantos left the system. Throughout these philosophical duels and dances, the Diamond Cooperative ran their mining interests, developed more efficient power supplies for their vaults, and kept the machines of industry running. Further, the Diamond Cooperative began imposing its own brand of control over the Blue Talon Corps and the Golden Order of Reason.

Essentially, the Diamond Cooperative was still true to the GOR vision for the preservation of Malkari culture. While the expediciencies of their new-found space trading prevented them from denying the use of the Blue Talon Corps’ silicate and beam technology, any other technologies which significantly deviated from the core disciplines of classic thermodynamics and nucleonics were restricted. Essentially, the Cooperative wanted vaulting to proceed apace and would not wait for any new techniques, just to have to find room for them in their already bloated data banks.

The Diamond Cooperative publicly encouraged any and all Malkarians to develop new technology, and in fact the approach of Diantos had stimulated research to high levels. But once that technology had borne fruit, the Diamond Cooperative would clamp down, restricting its dissemination. Since the Cooperative controlled a majority of the shipping and mining resources of the Malkari system, they were able to restrict those technological developments of which they did not approve, or that they felt were not in keeping with the traditions of the race, or those they considered simply not worth the effort. Anyone disagreeing with their restrictions would have to steer clear of the standard shipping lanes or risk discovery, censure, incarceration—even destruction!

The Diamond Cooperative became the watchdogs of the Malkari system for the next two decades. They never delayed vault production but they greatly hindered anything new being added to the vaults. In this way they were the greatest force for stability—and stagnation—in Malkari history.

The Emerald Combine

For twenty passes, the three major rivals (the Golden Order of Reason, the Blue Talon Corps, and the Diamond Cooperative) interacted through shuttle diplomacy, shady materials trades, and prohibitive policies. Where once a war between driven thinkers and passionate survivalists had brewed, now a cold apathy held sway. Divided from each other these three “Guilds” spiraled deeper into their independent ideologies, becoming more stubborn and fanatical with each pass of repetitive digging, cataloging, and construction.

Throughout this period the Diamond Cooperative grew more greedy. Its trade restrictions and strict vaulting prohibitions came to be seen by some of its member Chapters as another extension of the original GOR techno-aristocracy. After all, the Diamond Cooperative Guild had originally been founded out of a desire to preserve the right to a choice-of-preservation, not to enforce an alternate preservation scheme!

Finally, in 2602 GC, two of the six Chapters of the Diamond Cooperative seceded from the Cooperative in the “*Declaration of Dissent*,” forming a monopolistic corporate government called the Emerald Combine. The Emerald Combine espoused the ideal of unlimited development and preservation, driven by their leader Jhoern Sperring’s totalitarian control.

The Emerald Combine’s top down organization was unlike any since the beginning of the Golden Calendar. As a Guild it had no dogmatic restrictions on methods of production or which technologies were ethical, and held no opinion on whose genetics should be vaulted. The Emerald Combine was open for business to all and one of their departments was sure to please!

Within weeks, prohibited developments were being shuttled around the space lanes and the Emerald Combine (EC) was taking orders refused by the Diamond Cooperative and the Golden Order of Reason. This licentiousness shocked and chagrined the GOR, and affected the Diamond Cooperative's profit margin, but the Emerald Combine was not going to let their disapproval slow their growth during the last vital passes of development and invention remaining to the Malkari system.

The Combine rejected the aesthetics of the original Families. Form meant nothing in their designs—function and utility were the only merits used in evaluating a gene or technology. To remind themselves and the other Malkarians of these priorities the Emerald Combine adopted the utilitarian aesthetic of machine architecture to their ship and interface designs. Though horrid in appearance, their designs were eminently practical.

Throughout it all, every penny of Combine profit went into finishing the Emerald Combine vaults—the vaults originally held by the two founding Chapters as well as those added during the final decades of the Golden Calendar.

Fragmentation

With only forty passes remaining before the vaults must be sealed, the Malkarian psyche splintered, became schizoid, turned on itself. The examples of division and conflict represented by the Blue Talon Corps, the Diamond Cooperative, and the Emerald Combine drove other smaller groups to declare their independence.

Naturally, the idea of being left to die in the spectacular collision of stars without having their family history and genes preserved agitated many people and created an environment where radical groups flourished. These smaller splinter Guilds chose to forego the enlightened idealism that lead their parents to agree to the supreme sacrifice of the Ark solution and instead formed ad hoc

groups of their own, sometimes with as few as 200 members.

Most of these smaller Guilds did not survive the cataclysm because the small number of vaults they produced simply did not survive the massive destruction. In fact, most of the small Guilds never completed their vaults because of resource or motivational shortages. Some, like my own Guild of Light, managed to create vaults but then the stored genetic material was soured and destroyed by radiation, dooming their synthesized members to a single despairing generation of sickly existence and then extinction.

The Crimson Dawn

One splinter Guild that was formed during the Fragmentation did survive—but that should not be surprising, given the prime characteristic that defined their members.

In 2647 GC, just five passes before the sealing of the vaults was scheduled to begin, a mystic by the name of Jebediah Arktron began to speak out against the Fragmentation and against the major Guilds in general. Under the pressures of Diantos, the constant earthquakes and meteor strikes, such doomsayers could be ignored or pitied for their breakdown. But Arktron was a special Malkarian, one possessed of the psychic gift of Far Sight. Perhaps it was because he could look upon the surface of Diantos any night that it hung in his sky; perhaps it was because he could sense the agonized straining of Malkari under the building gravitic pressure; or perhaps he was just a traditionalist who longed for the enlightened days of a unified race of Malkari striving as one to escape the doom.

Whatever his motivation, whatever his force of persuasion, Arktron called for all psionically talented and psychically sensitive Malkarians to give up factionalism, to pull together as one, and to save all that could be saved of the Malkarian way of life.

Amazingly, or perhaps due to Jebediah's great psionic power, nearly all Malkarian Psies rallied

to his banner. Psies from the small splinter Guilds, the Golden Order of Reason, the Blue Talon Corps, and even the Diamond Cooperative and Emerald Combine merged their resources, technologies, and vaults to form the Crimson Dawn—named by Arktron after the ruby glow of Diantos and the New Age of Malkari that would dawn after the cleansing cataclysm.

As a resurgence of the Malkarian spirit and drive, the Crimson Dawn was perfection. It collected every data bit and art work and written word it could find, which was a considerable amount given its members' special senses and other related advantages. Not merely packrats, however, the Crimson Dawn moved forward quickly on their own research, especially in the field of power generation. Technologists had long suspected the possibility of a telekinetic method of deriving power, though only now after the formation of the Crimson Dawn's "non-Guild" was there a dense enough collection of those with Far Touch to make effective generators and advance that field of study.

The Crimson Dawn technologists had the pressures of zeal driving them to evolve telekinetic power generation, for Jebediah was maniacally opposed to preserving anything to do with nuclears or atomic power, his parents having been poisoned by a radiation leak in the colony power plant. The Crimson Dawn leader was further steeled in his resolve by the continuing success of his people in unlocking the kernel sources of psychic power, thereby delivering to his group the secrets necessary to drive, pilot, and navigate a spacecraft with the mind alone. Arktron and his disciples were convinced that the "old ways" of crude matter manipulation and fission technologies would not be needed in the New Age.

To ensure their group's survival, the Crimson Dawn members immediately began to use their Far Sight and Far Thought to learn other Guilds' plans, technologies and recent discoveries. The Psies stored this knowledge in their many vaults and attempted kept a low profile as Diantos bar-

reled ever closer. When the other Guilds launched raids to pry apart the Psi organization, the raids found empty vaults, deserted labs, and stripped asteroids. After all, you can't catch a quarry that knows you are coming before you do!

Historical records also seem to suggest that the Crimson Dawn directly manipulated the other Guilds, playing one against the other by selling secrets and blackmailing important figures. No particular examples of these underhanded dealings can be named but the fact of their Guild's rapid growth and relative lack of opposition in spite of their gross betrayals speak volumes. Many people in the other Guilds must have been under Crimson Dawn sway for the Psies to become adequately supplied and prepared for the Vaulting in the short time they had left.

Out of the Fragmentation, after the vaulting conflicts, there were five major Guilds and a score of minor Guilds, all under the glaring star Diantos now two passes away from destroying their system. The vault sealing began.

The Sealing

At the end of 2652 GC, construction sites around the Six Worlds were evacuated. The vaults had already been vacuum-sealed for two months, undergoing final testing and sequencing. The filthy streets, brackish waters, and smoke-filled skies were mute testimonies to the great social cost of the vaults, the resource shortages, and the fragmentation. Most of the fauna that was not preserved was dead from pollution or neglect. Countdowns began. Vault doors ground to a close and tunnel linings were detonated, sealing the miles of shaft that had carried the precious supplies down into the vaults. On the surface, many families walked into 'euthanasia rooms' rather than wait for the lava that would come to sear them, or the rocks that would crush them, or the air that would quickly become poisonous to all life before it evaporated.

The waiting began. The vaults and their contents awaited the Awakening.

No computer or sensor records show exactly what happened as Diantos eased closer to the spasming Malkari system. Simulations run after the emergence—based upon data derived from the remaining stellar bodies—tell a story of tremendous gravitational tides buckling the tectonic plates of the Six Worlds, crumbling them and shearing them from their magma beds. Whole continents and seas sailed away from the worlds as though the planets were smeared along their orbits.

For millennia, Diantos eased closer, collecting its share of the debris of Malkari's planets, divvying up the original asteroid belt, swapping hydrogen with the sun Malkari like two travelers swapping stories of their travels. Then Diantos reached its perigee and began to lumber away from its new solar partner Malkari.

The New Age

When outside conditions allowed, automatic systems in the surviving vaults began to cycle, evacuating fouled air that may have breached the seals, powering up life support systems, and then growing the Chapter Leaders who would guide the emergence.

Thus Malkari awoke from its nightmare—traumatized, divided, its solar system now alien.

It took my Guild of Light seven passes to cycle our vaults, ready production, and open the tunnels to the surface—this after twenty passes of growth, education, and preparation. I established contact with the major Guilds, learned of the tragedies that befell many of the minor Guilds (including my own), and came to the conclusion that I should at least try to see to it that the true history of our race was told.

Our Malkari binary solar system is now just a jumbled collection of asteroids, shattered planetary cores, and two relentless stars. Into that void the Guilds are awakening, emerging, and seeing the terrible desolation.

Had I the resources, or the time, or the genetic staying power to build an Ark, then my Guild of Light could chase after the other ancient Arks into the deepest space, to find a whole planet and start again on a new home world.

But I am doomed, my own minor Guild is doomed, and I can only wish my Malkari cousins luck in their endeavors. While I suspect that some of the Guilds will eke out a living in this new Malkari solar system, I believe nearly all of the survivors will try to build their own Arks now that the pressure of imminent cataclysm is past and time can be spent on such a costly goal.

Sadly, I also know now that the schisms of our race's last age have not faded and may even be worsened as the collected and condensed knowledge stored in the vault memory banks are fed to the new Chapter Leaders. Perhaps one Guild will pull the others together and save all Malkarians from a cold, quiet extinction.

It is more likely, that the Five Guilds in their renewed conflict will complete the destruction that Diantos started...

Hints and Tips

The following are some very broad hints on what to try to do and may not always ensure victory.

Always be Aware of How to Win

Strategically *Malkari* is a complex game. For this reason there is no one sure way to win. There are several strategies and they all need adjusting as the game progresses. Having said this, always keep in mind the victory conditions. *Malkari* at its simplest is a territorial conquest game. If you control the required number of asteroids before anyone else you win; otherwise you lose, or at best gain a minor victory when your Guild wins. It's that simple!

Remember the System Moves

The first thing to consider is the possible length of the game. Assuming you are playing the full game with 150 asteroids, with eight chapters per Guild and the default percentage of asteroids required for victory, you can expect the game to last at least 150 turns.

This means you need to consider carefully where the asteroids will move over time.

They all move at different rates and they all have different orbits. Until you become used to the dynamic nature of the system it is easy to make deployment mistakes.

One of the simplest errors is to send ships to nearby asteroids at the start of the game to find that, due to the varying orbits, by turn 20 your forces are spread thinly all across the system, and bringing them back together is impractical.

Another easy mistake is to believe you are alone, with no enemy Guilds close by, and therefore neglect defense, particularly of asteroids you gain control of quickly. After about ten turns you may find your asteroids are right in the middle of a huge group of enemies.

The potential length of the game, however, usually gives you time to recover from a bad start.

Opening Game Strategies

The first thing to do is to assess your start position. Here are some possibilities:

- **You're All Alone**

There are several uncontrolled asteroids close to you and no enemy.

Consider a quick dash with Scouts and Assault ships to grab asteroids, then construct ships or Stations to hold them while you prepare for the next move.

- **The Start Asteroid is not Good**

There could be several reasons why your start position may be bad. The asteroid is small, with a poor economic grade, it is on a large elliptical orbit, or it is right in the middle of several enemies.

Whatever the reason, remember that unless playing *Capture the Flag*, *Malkari* is not like other games where a bad start position means a defeat or a major setback while reestablishing a new colonies. If you have started on a bad asteroid colonize a good one as soon as possible.

- **Things Seem Fine**

You are in a reasonable start location, there are few enemies, and a few uncontrolled asteroids near you. You have several choices; here are a couple:

Take Out the Enemy First

Build warships and Assault ships with good defenses. Remember that what constitutes a good defense varies with the Guild you are defending against.

Move directly against the enemy asteroids. Target their Constructors and Assault ships while you land your own ATVs to gain control of the asteroids.

Have some Constructors or fleet auxiliaries handy to repair and refuel damaged ships.

Gain Control of the Empty Asteroids First

Build Scouts and use Transports or Assault ships to gain control of empty asteroids.

Build defensive ships or Stations at each asteroid when you capture it then move on.

Make sure the ships and Stations you leave behind have construction capability.

- **I Can't See Anywhere to Go**

When playing with hidden asteroids you may occasionally find that the only asteroids you know about belong to your Guild.

Don't Panic! Remember the game is long, and the asteroids all move, so even if you do nothing eventually you will discover more asteroids. Inactivity is not the best course of action, however. Send your scouts to the known asteroids, preferably along a path near a sun. Redirect them as you locate others.

Use any spare time to construct Transport and Assault ships ready to exploit the asteroids as you find them.

Make use of those elliptical orbits. Place a Scout and or a Constructor at an elliptical orbit asteroid and wait. As it travels from star to star, many asteroids are discovered.

Middle Game

Always be aware of how you are progressing in relation to everyone else. Check this by using the Statistics screen in Information mode.

The middle game can be thought of as that part where most of the asteroids are now controlled and at least one Guild is approaching the required number of asteroids to have an Imperator vote.

If it is not your Guild, try to target asteroids that belong to the lead Guild wherever possible; this not only adds to your total but also reduces theirs. Malkari is a zero sum game.

If it is your Guild, your tactics now depend on how close behind the nearest rival Guild is, and how cooperative you wish to be with other members of your Guild.

If you are happy with a minor win, protecting Guild-controlled asteroids while still keeping rival Guilds low is the best policy. Allocate your votes to the chapter with highest number of asteroids to ensure they are elected Imperator when the vote occurs. Unless there is a chance of an interregnum, do not vote anyone renegade. If there could be an interregnum, vote rival chapters renegade and take their asteroids. This means the Guild does not lose asteroids and that there is only one strong contender for Imperator.

The End Game

If you are not happy to have a minor win, you are moving into the end game. Cooperation within the Guild is secondary to the number of votes you can receive. Try to buy the votes that occasionally become available, and vote renegade either yourself, or the smallest chapter, then start capturing as many asteroids as you can, as fast as you can, from whoever you can. You might still target rival Guilds first but your prime objective is amassing more asteroids than anyone else in your Guild.

Designer Notes

The design parameters for *Malkari* were to produce a cooperative and antagonistic multiplayer strategy game, without the need for a player to become involved in a large amount of micro-management. The latter was so that first time or casual players would not feel lost. It also had to involve combat, with an easy-to-use interface.

Malkari had to have enough depth that, having picked up the basic fundamentals, the player would continue to find new ways of doing things and so interest would be maintained. This would give the hard-core gamer plenty of fun.

Multiplayer Issues: The parameters were such that although *Malkari* was a boxed game it was expected, with modification, to go online. Most Online games are in real time with players joining and leaving continuously. It became obvious early on that the number of players that the boxed game aimed at (up to forty) would not support real-time play. In a turn-based environment one of the biggest problems in multiplayer is maintaining interest while someone else has their turn. It was decided, therefore, to introduce a simultaneous movement system. In the system a player is never shut out of the game. Once they are satisfied with their orders they press end turn. All this does, however, is notify the mechanics that a player is ready. Until every human player ends the turn nothing is processed. A timed turn feature was added to ensure that one really slow player does not hold up the game. Finally we added the feature that allows players to join and leave games in progress by allowing the AI to take over. The only restriction is that the host

computer cannot leave. As with any other player, if the host fails to press *End Turn* within the time limit, the AI takes over play.

Cooperative and Antagonistic Issues: Multiplayer games can become unbalanced if there are natural splits. For example, a three player game nearly always results in two against one at first, and then a two player game. This was why five Guilds were chosen. While we cannot prevent players from different guilds talking to each other, to decrease the chance that they could actively cooperate the game mechanics are such that you automatically fire at anyone not in your Guild.

Combat is a major feature of the game. Which-ever victory conditions are chosen victory is ultimately based on control of asteroids; in order to control an asteroid you must land ATVs. To do this you must fight past any ships in orbital space then fight enemy ATVs already on the asteroid.

Cooperation in a game is difficult to impose because players are not under the same restraints that they are in real life. In a game you can run around acting totally irresponsibly and, unless you stab the same person in the back so many times that they refuse to play with you, you suffer no real comebacks.

One of the key elements of entering into the spirit of *Malkari* is an understanding of the Guild system. Each Guild fervently believes their culture and technology is the key to the Malkarian future, and that the other Guilds are at best misled and at worst a bunch of worthless degenerates who deserve to be wiped out.

In *Malkari*, these underlying laws and ethics are imposed by the game mechanics. For example, without the consent of the majority of the Guild, space combat between chapters is forbidden; combat within a Guild is limited to terrain battles on the asteroid. This restriction forces the player to at least consider what the other members of his Guild are likely to be doing. While players can send chat messages to anyone, if they send them to players not in their Guild there is a chance that the message will be intercepted. However, intercepted messages are likely to be garbled.

On the positive side, a chapter gains when their Guild gains. Survey and research information is usually freely available to all chapters. Knowing you are not going to be stabbed in the back encourages players to defend each other. This is reinforced by the standard victory conditions that look first at the Guild's position, not the individual's. The player can decide to accept a minor win. Electing another chapter Imperator can guarantee your Guild wins.

Combat: The original design concentrated on a tactical 3D combat system, both in Orbital space and on Asteroidal terrain. However, it was felt that this would overly complicate the game and the terrain combat was simplified. As a result of playtest feed back the terrain combat has had some more features added but it has remained 2D and, despite the importance of controlling the asteroids, it is not as involved as Orbital combat. Orbital combat can be simply done by pointing-and-clicking then leaving the rest up to the mechanics. However, players can play a significant role in Orbital combat.

Firstly, they design the ships they are to fight with, although the game has defaults for those who need them. There are thousands of combinations for the player to try out, and each combination may be better against one opponent than another. Modifying existing ships is cheaper than new construction, and there is no obsolescence in *Malkari*. The recycling of modules encourages

the player to continually modify their designs through experience.

Secondly, each ship can be assigned an individual battle plan, which can be changed each turn as required. This consists of whom to fire at, when to fire, when to run away and how much power is allocated to the various ship components. The game starts with default battle plans for each class of ship so the beginner does not have to worry, but an astute player can gain an advantage here. While moving into combat can be as simple as clicking on the target, it is often useful to maneuver using the tactical grid, particularly if your weapons have longer ranges than your enemy's, or if you want to use the asteroid as cover until you get closer.

Dynamic Map: The moving map is perhaps one of the hardest things to get to grips with. Initially it may appear chaotic as there are no fixed boundaries. You cannot build a defensive line and shelter behind it because the asteroids move in relation to each other. However, once you become used to the *Future View* system you can plan effectively. Instead of defending linearly, defend strong points. Notice that some asteroids remain close to each other all the time, taking control of these provides a solid base. Others, particularly those with elliptical orbits, move rapidly and come close to many different asteroids. Use these as mobile bases from which to attack opponents and to reach areas of the map more quickly than ships can travel by themselves. For those who do not want to face this challenge, there is a *Game Setting* feature that allows the speed of the system to be altered, or even stopped. The rotation element of the game, however, definitely provides a worthwhile and unique challenge.

General Reference Tables

Asteroid Economic Grades

Each asteroid has an economic grade that is part of the information ascertained when an asteroid is surveyed. The grades do not go from good to bad but reflect the particular breakdown of mineral distribution and density.

The total density of minerals is only a rough guide as to which asteroids have more minerals available for exploitation. If you are running short on one particular mineral, look for the asteroids with a higher incidence—a higher ppt number—of that mineral.

Economic Grade	Metal/ppt	Silicates/ppt	Exotics/ppt	Reactives/ppt	Total/ppt
A	40	40	40	40	160
M1	60	30	10	10	110
M2	70	10	25	15	120
M3	75	10	10	30	125
M4	90	10	10	10	120
S1	35	60	10	10	115
S2	15	70	30	10	125
S3	15	75	15	25	130
S4	15	90	10	10	125
E1	35	10	60	10	115
E2	10	30	70	10	120
E3	20	10	70	25	125
E4	15	10	90	10	125
R1	40	10	10	60	120
R2	20	30	10	70	130
R3	25	15	35	70	145
R4	10	10	10	90	120

ATVs

Some ATVs have special abilities. When a module technology with a tie to ATV abilities is discovered, all ATVs of that type are upgraded.

Distant Attack Ability (D): An ATV with distant attack ability, when located in the outer zone of an asteroid, automatically fires at enemy ATVs being landed in either the same, or adjacent zones.

Fixed Position Ability (F): An ATV that can fix its position, and does not move during a turn, gains one to its combat ability.

Move Two (M): Some ATVs are able to move two zones during one turn. They must stop on entering a zone containing enemy ATVs, however.

Ranged Fire Ability (R): An ATV with ranged fire ability is able to fire into an adjacent zone. To order such firing, hold the **Shift** key down, then click and drag on your ATV to target the enemy.

ATV Abilities

Guild	ATV Name	Abilities					Module Tech Needed	Module Type
		Combat	Mining	Power	Scientific	Special		
Blue Talon Corps	CATV 1	1	0	0	0		Target Master 1	Tracking
	CATV 2	1	0	0	0	D	Target Master 2	Tracking
	CATV 3	2	0	0	0	D; M	Target Master 3	Tracking
	MATV 1	0	1	0	0		Orbital Staging	Transport
	MATV 2	0	2	0	0	M	Orbital Staging 2	Transport
	PATV 1	0	0	1	0		Thermatic Capacitor	Power
	PATV 2	0	0	3	0	M	Thermatic Capacitor 2	Power
	PATV 3	1	0	3	0	M	Thermatic Capacitor 3	Power
	SATV 1	0	0	0	1		Protector	Computer
	SATV 2	0	0	0	2	M	Protector 2	Computer
	SATV 3	1	0	0	3	M	Protector 3	Computer
Crimson Dawn	CATV 1	1	0	0	0		Mental Wave Detector	Tracking
	CATV 2	2	0	0	0		Null Wave Detector	Tracking
	CATV 3	3	0	0	0	D	Thoughtound I	Tracking
	MATV 1	0	1	0	0		ATV Bay 1	Transport
	MATV 2	0	2	0	0		ATV Bay II	Transport
	MATV 3	1	2	0	0		ATV Bay III	Transport
	PATV 1	0	0	1	0		Telekinetitron I	Power
	PATV 2	0	0	2	0		Telekinetitron II	Power
	PATV 3	0	0	3	0		Telekinetitron III	Power
	PATV 4	0	0	4	0		Telekinetitron IV	Power

Key: CATV=Combat ATV; MATV=Mining ATV; PATV=Power ATV; SATV=Scientific ATV; D=Distant attack; F=Fixed position; M=Move two; R=Ranged fire

ATV Abilities

Guild	ATV Name	Abilities					Module Tech Needed	Module Type
		Combat	Mining	Power	Scientific	Special		
Crimson Dawn (continued)	SATV 1	0	0	0	1		Regulator	Computer
	SATV 2	0	0	0	2		Regulator 2	Computer
	SATV 3	0	0	0	3		Advanced Regulator	Computer
Diamond Cooperative	CATV 1	1	0	0	0		Photonic Feedback Unit	Tracking
	CATV 2	2	0	0	0	D	Ionic Feedback Unit	Tracking
	CATV 3	3	0	0	0	R; D	Tachyon Feedback Unit	Tracking
	MATV 1	0	1	0	0		Launch Pod 1	Transport
	MATV 2	1	2	0	0	D	Launch Pod 2	Transport
	PATV 1	0	0	1	0		Gamma Generator	Power
	PATV 2	0	0	2	0		Flywheel Generator	Power
	PATV 3	1	0	3	0		Flywheel Generator 2	Power
	PATV 4	1	0	4	0		Flywheel Generator 3	Power
	SATV 1	0	0	0	2		Core 1086	Computer
	SATV 2	0	0	0	2		Core 1286	Computer
	SATV 3	1	0	0	2		Core 1586	Computer
	CATV 1	1	0	0	0		Steel Curtain 1	Defense
	CATV 2	2	0	0	0	D	Wildfire	Defense
	CATV 3	3	0	0	0	D	Steel Curtain 2	Defense
	CATV 4	4	0	0	0	D; R	Steel Curtain 3	Defense
Emerald Combine	MATV 1	0	1	0	0		Drop Tubes	Transport
	MATV 2	1	1	0	0		Drop Propulsor	Transport
	MATV 3	2	2	0	0		Drop Accelerator	Transport
	PATV 1	0	0	1	0		Gravitic Reactor	Power
	PATV 2	0	0	2	0		Gravitic Convertor 1	Power
	PATV 3	1	0	3	0		Gravitic Convertor 2	Power
	PATV 4	1	1	3	0		Gravitic Convertor 3	Power
	SATV 1	0	0	0	1		Manipulator	Computer
	SATV 2	0	0	0	2		Manipulator V1	Computer
	SATV 3	1	0	0	2		Manipulator V2	Computer

Key: CATV=Combat ATV; MATV=Mining ATV; PATV=Power ATV; SATV=Scientific ATV; D=Distant attack; F=Fixed position; M=Move two; R=Ranged fire

ATV Abilities

Guild	ATV Name	Abilities					Module Tech Needed	Module Type
		Combat	Mining	Power	Scientific	Special		
Golden Order of Reason	CATV 1	1	0	0	0	F	Sentinel I	Defense
	CATV 2	2	0	0	0	F; D	Sentinel II	Defense
	CATV 3	3	0	0	0	F; D	Sentinel III	Defense
	MATV 1	0	1	0	0		Launcher	Transport
	MATV 2	1	2	0	0	F	Multilauncher	Transport
	PATV 1	0	0	1	0		Ion Battery I	Power
	PATV 2	0	0	1	0	F	Ion Battery II	Power
	PATV 3	1	0	1	0	F	Ion Battery III	Power
	SATV 1	0	0	0	1		Bastion XV	Computer
	SATV 2	0	0	1	1	F	Bastion XVI	Computer
	SATV 3	0	1	1	1	F	Bastion XVII	Computer

Key: CATV=Combat ATV; MATV=Mining ATV; PATV=Power ATV; SATV=Scientific ATV; D=Distant attack; F=Fixed position; M=Move two; R=Ranged fire

Computer Effects

Combat Computer Effects

Guild	Name	Tech	ATV	CON	DCN	ADF	POW	Speed	ECM	SCT	TRK
Blue Talon Corps	Strategist IV	1	-80	-80	-10	10	-10	40	0	-80	40
	Strategist IVa	2	-70	-70	0	20	-10	60	10	-80	70
	Strategist V	3	-70	-50	10	40	0	90	30	-80	100
Crimson Dawn	Tactician	1	-40	-70	0	10	0	0	20	-40	20
	Psionic Tactician	2	-30	-50	10	20	10	20	30	-30	40
	Fist of Arktron	3	-20	-40	20	30	30	40	50	-30	60
Diamond Cooperative	Bulldog 1090	1	-50	-50	0	-10	0	0	10	-60	20
	Bulldog 1290	2	-50	-40	0	20	0	10	20	-60	40
	Bulldog 1590	3	-50	-40	20	30	20	30	30	-60	70
Emerald Combine	Aggressor 27	1	-80	-60	-10	20	10	0	20	-80	30
	Aggressor 32	2	-60	-40	10	30	30	20	30	-70	40
	Aggressor 32+	3	-50	-30	20	40	50	40	40	-60	60
Golden Order of Reason	Warlord XC	1	-80	-50	-10	0	10	0	0	-50	30
	Warlord CC	2	-80	-30	0	20	20	10	10	-50	60
	Warlord DCC	3	-80	-20	10	30	30	20	30	-50	80

Construction Computer Effects

Guild	Name	Tech	ATV	CON	DCN	ADF	POW	Speed	ECM	SCT	TRK
Blue Talon Corps	Strabo	1	-80	10	-10	0	10	0	-60	-70	-50
	Strabo 2	2	-80	30	0	10	20	10	-40	-60	-30
	Strabo 4	3	-80	50	10	20	30	20	-30	-50	-10
Crimson Dawn	JCB	1	-50	30	0	0	20	-40	-40	-50	-80
	JCB-c	2	-30	50	10	0	30	-30	-20	-30	-70
	JCB-d	3	-30	80	20	0	50	-10	-10	-10	-60
Diamond Cooperative	Toolbox 1032	1	-60	20	0	0	20	-30	-50	-70	-60
	Toolbox 1232	2	-50	40	10	10	40	-20	-40	-50	-50
	Toolbox 1532	3	-50	70	20	20	60	-10	-30	-50	-40
Emerald Combine	Matrix 9	1	-80	20	10	0	20	-40	-50	-80	-60
	Matrix 12	2	-60	40	20	0	40	-20	-40	-80	-50
	Matrix 12c	3	-50	70	30	10	70	-10	-30	-80	-50
Golden Order of Reasons	Mech Man XXa	1	-70	60	10	0	20	-50	-70	-80	-60
	Mech Man XXb	2	-50	100	20	10	40	-30	-60	-70	-40
	Mech Man XXc	3	-30	150	30	10	60	-10	-50	-60	-20

Defense Computer Effects

Guild	Name	Tech	ATV	CON	DCN	ADF	POW	Speed	ECM	SCT	TRK
Blue Talon Corps	Gates B	1	-50	-80	10	20	-10	10	10	-80	10
	Gates B_98	2	-30	-60	30	40	0	30	20	-80	20
	Gates W	3	-20	-50	40	60	0	60	30	-80	30
Crimson Dawn	Regulator	1	-40	-50	20	20	0	-20	20	-50	-30
	Regulator 2	2	-20	-40	40	50	0	0	40	-50	0
	Advanced Regulator	3	0	-30	60	70	0	20	70	-40	20
Diamond Cooperative	Core 1086	1	-30	-50	20	20	0	-20	20	-50	0
	Core 1286	2	-10	-40	40	40	10	0	40	-40	0
	Core 1586	3	0	-20	60	60	20	20	60	-30	10
Emerald Combine	Manipulator	1	0	-40	20	30	0	-20	20	-80	0
	Manipulator V1	2	0	-40	40	60	10	10	50	-60	40
	Manipulator V2	3	10	-40	50	90	20	30	70	-50	20
Golden Order of Reason	Multi XV	1	-20	-10	20	30	0	-20	10	-80	0
	Multi XVI	2	-10	0	50	50	10	-10	20	-80	10
	Multi XVII	3	0	30	70	80	20	0	30	-80	20

Scout Computer Effects

Guild	Name	Tech	ATV	CON	DCN	ADF	POW	Speed	ECM	SCT	TRK
Blue Talon Corps	Nostrodamus	1	-70	-80	-20	-10	-30	60	10	50	0
	Elijah	2	-50	-60	-10	-10	-20	100	20	70	10
	Samuel	3	-50	-60	0	0	-10	130	30	100	20
Crimson Dawn	Sensing Eye	1	0	-70	0	-20	-20	40	40	100	-30
	Eye of the Mind	2	20	-70	0	-10	-10	50	70	160	-10
	Eye of Arktron	3	40	-70	0	0	0	70	100	200	0
Diamond Cooperative	Seeker 1076	1	-50	-50	10	10	-20	20	10	70	-10
	Seeker 1276	2	-40	-40	20	20	-10	40	20	100	-10
	Seeker 1576	3	-30	-30	30	30	0	30	30	120	0
Emerald Combine	Visionary 1	1	-50	-80	-10	0	-10	40	20	80	-20
	Visionary 2	2	-30	-50	-10	0	0	60	40	120	-10
	Visionary 3	3	-20	-40	0	0	0	70	60	150	0
Golden Order of Reason	Investigator IV	1	-80	-50	-20	-30	0	30	10	60	0
	Investigator IVc	2	-80	-20	-10	-10	0	50	30	90	0
	Investigator V	3	-80	0	0	0	10	70	40	120	0

Transport Computer Effects

Guild	Name	Tech	ATV	CON	DCN	ADF	POW	Speed	ECM	SCT	TRK
Blue Talon Corps	Marco Polo	1	30	-70	0	10	-10	20	-20	-40	0
	Pickford	2	50	-60	10	20	0	50	-10	-30	20
	Stephenson	3	80	-50	20	30	10	70	0	-10	50
Crimson Dawn	Infiltrator	1	50	-70	20	0	0	0	20	-30	-20
	Peacekeeper	2	80	-60	30	20	0	20	40	-10	0
	Assimilator	3	120	-50	40	30	10	40	60	0	20
Diamond Cooperative	Conductor 1046	1	40	-50	10	10	0	0	0	-50	0
	Conductor 1246	2	70	-50	20	20	10	20	10	-40	10
	Conductor 1546	3	100	-40	30	30	20	40	30	-20	20
Emerald Combine	Stacker 15a	1	70	-50	10	-10	10	0	0	-60	-10
	Stacker 16	2	110	-40	20	0	20	20	10	-40	10
	Stacker 16b	3	150	-30	30	10	30	40	30	-20	30
Golden Order of Reason	Boxcar XI	1	50	-40	20	0	0	0	-30	-50	0
	Boxcar XII	2	80	-30	30	10	10	10	-10	-40	20
	Boxcar XIIa	3	220	-20	80	20	20	80	0	-60	80

Guild Traits Summary

	Advantages	Disadvantages	Power	Primary Resource	Excellent/Good Defense Against	Weak Against	Strong Attacks	Specialty
Blue Talon Corps	Attack abilities Tracking Orbital speed	Rigid ship design Constructors Transports ECM	Close to suns and large asteroids. Zones near the edge of the asteroid.	Silicates	EC/BTC, CD, GOR Solid, Explosive, Radiation	DC	Heat, Explosive	Hyper-fast Orbital engines
Crimson Dawn	Power transfer Flexible designs Best scouts	Assaults Attack abilities No nukes Slow engines	The more asteroids, the better. All zones produce equally.	Organics	BTC, CD, EC/DC Heat, Explosive, Solid, Discharge	GOR	Solid, Discharge	Mindwarp
Diamond Cooperative	Good power transfer and storage Good engines	Power production	Fastest spinning asteroids. All zones produce equally.	No primary resource	CD/BTC, EC, GOR Solid, Discharge, Heat, Nuclear	No-one	Discharge, Chemical, Corrosive	Leeching
Emerald Combine	Solar speed Defenses Transports	Stations Attack abilities Orbital speed Power Transfer	The bigger the asteroids the more power. Outer zones are best.	Exotics	DC, GOR Nuclear, Radiation, Chemical, Corrosive	BTC, CD	Solid, Explosive	Space Mines
Golden Order of Reason	Construction Stations Attack abilities Good power generation	Slow speeds Scouts Slow construction Inaccurate weapons	Asteroids nearer the suns, particularly when there is flare activity. Outer zones are best.	Metals	DC/CD Discharge, Chemical, Corrosive	BTC, EC	Nuclear, Radiation	Ground Bombardment

Hull Tables

Key

Tech Level: Each technology level increases the number of modules that may be placed in a hull design.

Resource Costs: The base cost of constructing a hull is split between metals (Me), silicates (Si), exotics (Ex), and reactivities (Re).

Build Points: The total number of build points it takes to construct the hull.

Mass Limit: The maximum mass of modules that are placed into the hull design.

Mass: The mass of the hull itself.

Slots: Each slot on a hull is designed for a particular module or modules. The modules that are supposed to go in a slot are listed here. It is possible to modify the hull design to enable any module to be placed in a slot, but this costs additional resources and build points.

The Tech 1 hulls list all the slots present in that design. The higher tech hulls list only those slots that have been added to the previous tech level's design. Any slots that have been removed are indicated by parentheses.

Each module is abbreviated as follows:

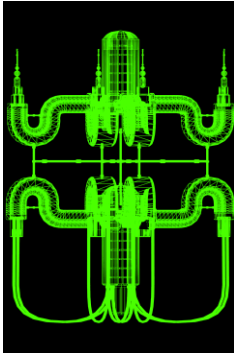
- CMP Computer
- CON Constructor
- DCN Damage Control
- DEF Defense
- POW Power
- PRO Propulsion
- SCT Scout
- ECM ECM
- TRK Tracking
- TRN Transport
- WPN Weapon

Slot Total: The total number of slots on the hull.

Blue Talon Corps

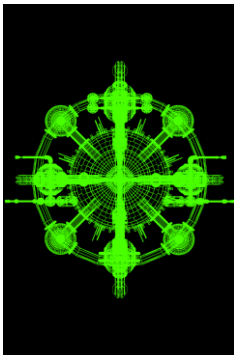
Blue Talon Corps Hull Table

Armed Scout



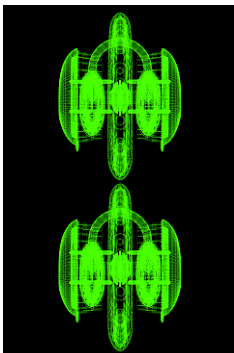
Tech Level	Resource Costs				Build Points	Mass Limit	Mass	Slots	Slot Total
	Me	Si	Ex	Re					
1	41	63	47	47	173	200	30	CMP, DEF, DEF POW, WPN, DCN/DEF, DCN/DEF, DCN/DEF, PRO/SCT, PRO/WPN, SCT/TRK	10
2	60	85	67	67	224	265	35	POW, ECM/WPN	12
3	64	92	72	73	275	294	36	PRO/SCT	13
4	76	114	88	87	104	358	40	WPN, DEF/TRK	14
5	84	127	96	93	304	380	41	SCT	16

Armed Space Station



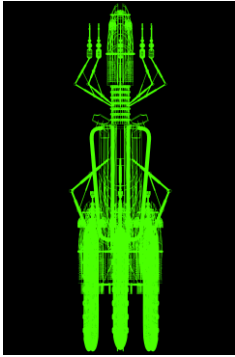
Tech Level	Resource Costs				Build Points	Mass Limit	Mass	Slots	Slot Total
	Me	Si	Ex	Re					
1	82	101	89	85	98	15000	10000	CMP, POW, DEF/TRK, DEF/WPN, POW/WPN,	5
2	128	152	133	130	149	17500	12000	POW/TRK, WPN	7
3	175	204	181	180	200	19500	13500	WPN, CON/DCN	9
4	200	235	207	207	229	20500	14500	POW, CON/WPN	11

Assault

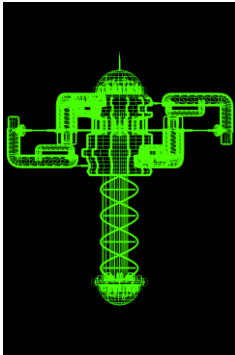


Tech Level	Resource Costs				Build Points	Mass Limit	Mass	Slots	Slot Total
	Me	Si	Ex	Re					
1	27	40	31	30	36	230	72	CMP, POW, TRN, DCN/WPN, POW/PRO, PRO/TRK	6
2	36	55	42	41	49	263	75	PRO/TRN	7
3	52	75	59	59	69	298	77	DCN	8
4	60	86	72	73	81	372	84	PRO, POW/WPN	10

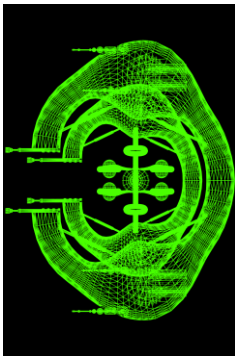
Blue Talon Corps Hull Table (continued)

Battleship

Tech Level	Resource Costs				Build Points	Mass Limit	Mass	Slots	Slot Total
	Me	Si	Ex	Re					
1	63	82	70	69	76	496	130	CMP, POW, PRO, WPN, WPN, DCN/POW, DEF/WPN, POW/WPN, PRO/ TRK, PRO/WPN,	10
2	90	115	98	98	108	590	139	WPN, POW/TRK	12
3	110	142	120	119	134	638	145	DEF/WPN	13
4	119	156	131	130	148	782	157	POW, TRK, PRO/WPN	16
5	142	186	156	156	176	933	167	POW, DCN/WPN, DEF/PRO	19

Constructor

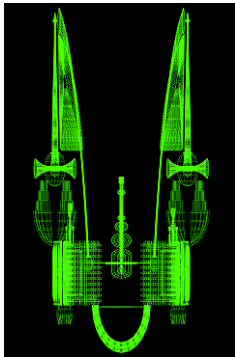
Tech Level	Resource Costs				Build Points	Mass Limit	Mass	Slots	Slot Total
	Me	Si	Ex	Re					
1	34	46	48	47	41	189	99	CMP, POW, CON/POW, CON/PRO, CON/PRO	5
2	48	62	52	52	57	225	103	POW	6
3	62	79	65	66	74	260	105	CON/DEF	7
4	68	90	73	73	85	290	108	POW	8

Cruiser

Tech Level	Resource Costs				Build Points	Mass Limit	Mass	Slots	Slot Total
	Me	Si	Ex	Re					
1	59	76	63	63	70	356	74	CMP, POW, WPN, WPN, DEF/TRK, POW/PRO, POW/PRO, PRO/WPN	8
2	77	100	83	84	94	440	78	TRK, POW/WPN	10
3	78	104	86	86	98	524	85	DCN, DEF/WPN	12
4	98	132	108	107	125	610	91	DEF, POW/PRO	14
5	103	139	113	113	131	652	95	DCN/PRO	15

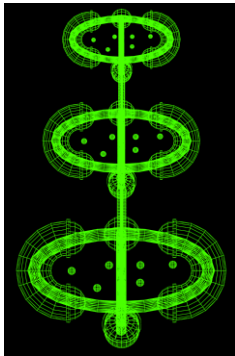
Blue Talon Corps Hull Table (continued)

Destroyer



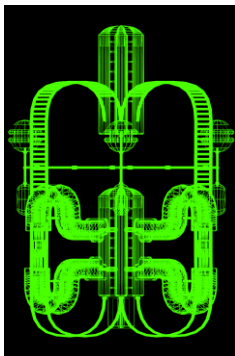
Tech Level	Resource Costs				Build Points	Mass Limit	Mass	Slots	Slot Total
	Me	Si	Ex	Re					
1	20	35	24	26	30	196	25	CMP, POW, POW/WPN, PRO/TRK, PRO/WPN	5
2	40	60	48	50	55	270	28	WPN, PRO/TRK	7
3	47	70	56	57	65	344	34	PRO, DEF/WPN	9
4	62	90	73	74	85	419	35	WPN, POW/TRK	11
5	81	113	93	93	108	491	37	DCN, DEF/PRO	13
6	92	131	105	105	123	538	38	WPN	14

General Purpose



Tech Level	Resource Costs				Build Points	Mass Limit	Mass	Slots	Slot Total
	Me	Si	Ex	Re					
1	18	31	24	22	28	155	75	CMP, PRO, POW/TRN, CON/POW/SCT	4
2	33	52	42	41	50	229	81	WPN, PRO/CON, POW/SCT (CON/POW/SCT)	6
3	42	65	53	53	64	300	86	TRN, CON/PRO	8
4	63	91	76	77	90	372	93	POW, SCT/WPN	10

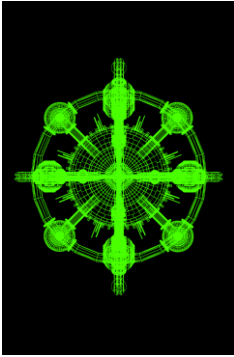
Scout



Tech Level	Resource Costs				Build Points	Mass Limit	Mass	Slots	Slot Total
	Me	Si	Ex	Re					
1	36	56	40	41	48	144	18	CMP, POW, POW/PRO, PRO/SCT, PRO/SCT	5
2	50	80	56	57	67	197	24	DCN, DEF/PRO	7
3	52	84	59	60	70	222	27	WPN	8
4	73	115	81	82	95	275	31	PRO, ECM/SCT	10
5	88	139	97	99	114	304	34	ECM/TRK	11

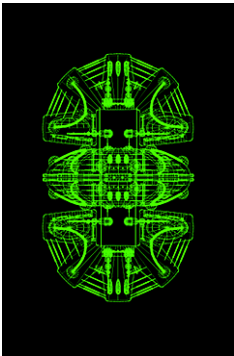
Blue Talon Corps Hull Table (continued)

Space Station



Tech Level	Resource Costs				Build Points	Mass Limit	Mass	Slots	Slot Total
	Me	Si	Ex	Re					
1	80	103	88	86	146	14500	9000	CMP, DCN, DEF, POW, CON/DEF, CON/POW, CON/POW, DCN/DEF, DCN/DEF	9
2	119	147	130	129	190	15500	9500	CON, DCN/POW	11
3	165	200	176	176	241	17000	11000	CON	12
4	215	260	230	232	299	18500	13000	POW, CON/DEF	14

Transport

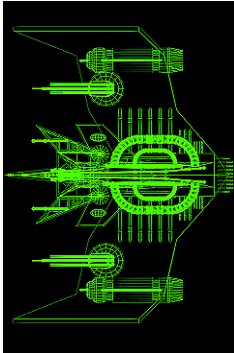


Tech Level	Resource Costs				Build Points	Mass Limit	Mass	Slots	Slot Total
	Me	Si	Ex	Re					
1	22	35	25	26	30	170	55	CMP, TRN, DCN/PRO, POW/PRO, POW/TRN	5
2	32	49	36	37	44	198	58	TRN	6
3	47	69	52	52	64	230	59	DEF/PRO	7
4	55	80	60	59	75	264	61	POW	8

Crimson Dawn

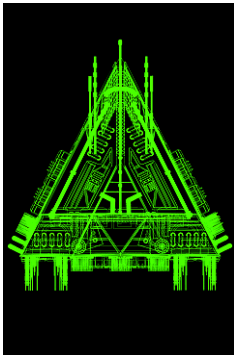
Crimson Dawn Hull Table

Armed Scout



Tech Level	Resource Costs				Build Points	Mass Limit	Mass	Slots	Slot Total
	Me	Si	Ex	Re					
1	62	71	65	70	73	212	26	CMP/ECM/PRO, DEF/ECM/PRO, ECM/POW/PRO, ECM/POW/SCT, ECM/POW/WPN, ECM/PRO/SCT	6
2	75	90	82	88	94	286	30	POW/PRO/SCT, ECM/PRO/WPN	8
3	90	110	99	106	114	390	35	DCN/ECM/PRO, DEF/WTL/WPN, ECM/ SCT/TRK	11
4	97	121	108	117	125	428	35	DCN/SCT/TRN	12
5	102	128	114	123	133	466	37	ECM/POW/PRO	13
6	104	132	116	126	137	504	38	ECM/POW/PRO	14

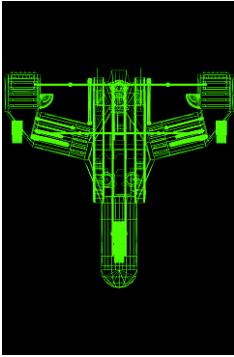
Armed Space Station



Tech Level	Resource Costs				Build Points	Mass Limit	Mass	Slots	Slot Total
	Me	Si	Ex	Re					
1	105	95	102	90	184	15000	11500	DCN/DEF, DCN/DEF, CMP/POW/WPN, CON/DEF/POW, CON/POW/WPN, CON/POW/TRK, DCN/POW/WPN, DCN/DEF/ECM, DCN/DEF/ECM, DCN/DEF/ECM, DCN/DEF/ECM	11
2	165	150	160	145	245	17000	13000	CON/ECM/WPN, DCN/POW/TRK, DEF/ECM/POW	14
3	217	197	212	190	299	20000	15500	CON/POW/TRK, DCN/DEF/WPN	16
4	268	246	263	238	352	22000	17500	CON/DCN/POW, DEF/TRK/WPN	18

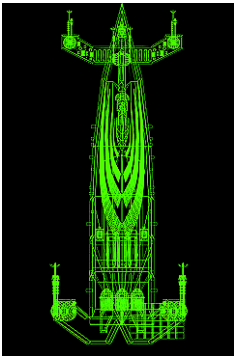
Crimson Dawn Hull Table (continued)

Assault



Tech Level	Resource Costs				Build Points	Mass Limit	Mass	Slots	Slot Total
	Me	Si	Ex	Re					
1	37	29	36	40	42	234	85	CMP/DCN/POW, DCN/POW/TRN, DCN/PRO/TRN, DCN/ECM/WPN, DEF/PRO/TRN, ECM/POW/PRO	6
2	56	44	53	59	61	310	93	DCN/DEF/PRO, DCN/POW/TRN	8
3	85	68	78	89	93	384	100	DCN/POW/WPN, DCN/PRO/TRN	10

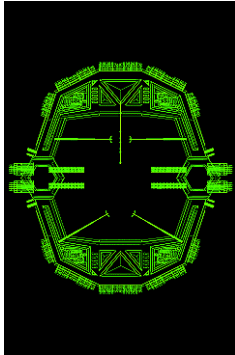
Battleship



Tech Level	Resource Costs				Build Points	Mass Limit	Mass	Slots	Slot Total
	Me	Si	Ex	Re					
1	81	70	76	66	84	470	165	CMP/ECM/PRO, DCN/POW/PRO, DCN/SCT/WPN, DEF/ECM/POW, DEF/POW/WPN, POW/PRO/WPN, POW/TRK/WPN, POW/TRK/WPN, ECM/PRO/WPN,	9
2	99	87	95	85	105	528	177	CON/TRN/WPN, DEF/POW/TRK	11
3	133	116	125	112	140	660	192	CON/SCT/WPN, DCN/POW/PRO, ECM/PRO/WPN	14

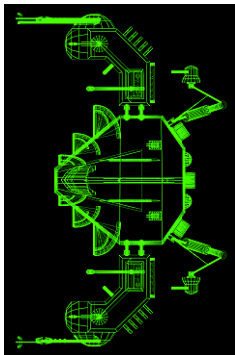
Crimson Dawn Hull Table (continued)

Constructor



Tech Level	Resource Costs				Build Points	Mass Limit	Mass	Slots	Slot Total
	Me	Si	Ex	Re					
1	55	43	55	44	54	192	119	CMP/CONPOW, CON/DCN/PRO, CON/DEF/POW, CON/POW/PRO, DCN/ECM/POW,	5
2	73	60	74	59	71	270	125	CON/DEF/POW, CON/ECM/PRO	7
3	100	81	99	81	97	344	130	CON/DCN/SCT, DEF/POW/PRO	9
4	127	108	128	107	124	458	138	CON/DCN/POW, CON/DEF/ECM, CON/PRO/SCT	12

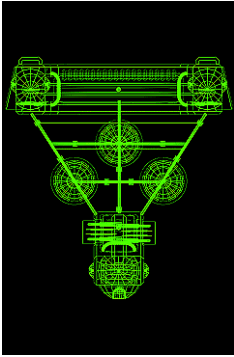
Cruiser



Tech Level	Resource Costs				Build Points	Mass Limit	Mass	Slots	Slot Total
	Me	Si	Ex	Re					
1	70	60	66	57	72	332	99	CMP/DEF/PRO, DCN/POW/WPN, DEF/POW/PRO, DEF/ECM/POW, DEF/POW/WPN, DEF/PRO/TRK, DEF/PRO/WPN, ECM/PRO/WPN	8
2	85	75	79	72	93	419	106	DCN/DEF/POW, SCT/TRK/TRN	10
3	110	96	103	90	114	500	113	CON/ECM/WPN, DEF/POW/PRO	12

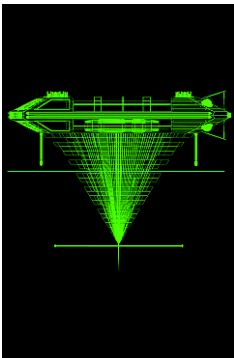
Crimson Dawn Hull Table (continued)

Destroyer



Tech Level	Resource Costs				Build Points	Mass Limit	Mass	Slots	Slot Total
	Me	Si	Ex	Re					
1	31	26	29	25	33	190	43	CMP/TRK/WPN, DEF/POW/TRK, POW/PRO/TRK ECM/POW/TRK, ECM/PRO/WPN	5
2	48	40	44	37	52	226	47	DCN/POW/PRO,	6
3	55	48	54	44	61	300	52	DCN/PRO/WPN, ECM/POW/TRK	8
4	86	75	81	72	95	373	56	CON/TRN/WPN, DCN/POW/TRN	10

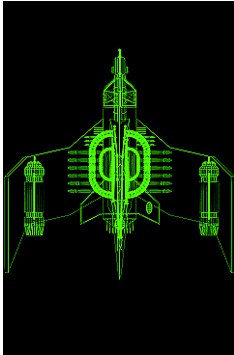
General Purpose



Tech Level	Resource Costs				Build Points	Mass Limit	Mass	Slots	Slot Total
	Me	Si	Ex	Re					
1	36	39	38	34	40	198	75	CMP/CON/PRO, CON/POW/PRO, CON/SCT/TRN, POW/SCT/TRN, POW/SCT/TRN	5
2	74	77	77	71	80	236	77	ECM/TRN/WPN, POW/SCT/TRK (POW/SCT/TRN)	6
3	114	117	119	110	126	314	83	CON/DEF/PRO, POW/SCT/TRN	8

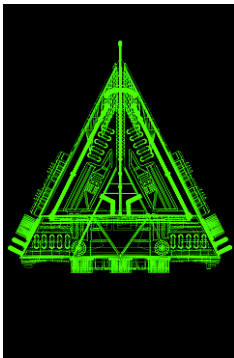
Crimson Dawn Hull Table (continued)

Scout



Tech Level	Resource Costs				Build Points	Mass Limit	Mass	Slots	Slot Total
	Me	Si	Ex	Re					
1	45	52	48	51	53	188	13	CMP/PRO/SCT, DEF/POW/SCT, POW/PRO/SCT, POW/PRO/SCT, ECM/PRO/SCT, PRO/SCT/TRN	6
2	62	75	68	73	77	286	20	DCN/ECM/PRO, DEF/PRO/SCT, ECM/POW/SCT	9
3	78	94	85	91	99	348	24	DCN/ECM/PRO, POW/SCT/TRN	11
4	82	99	90	95	104	380	25	POW/PRO/SCT	12
5	106	119	112	118	124	415	27	PRO/SCT/TRN	13
6	130	148	138	146	152	520	32	DEF/PRO/WPN, ECM/POW/SCT, PRO/SCT/TRK	16

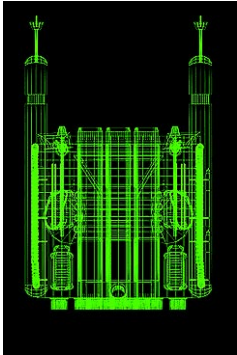
Space Station



Tech Level	Resource Costs				Build Points	Mass Limit	Msss	Slots	Slot Total
	Me	Si	Ex	Re					
1	100	89	95	80	155	14000	10000	DCN/DEF, DCN/DEF, CMP/CON/POW, CON/DCN/POW, CON/DEF/POW, CON/ECM/POW, DCN/DEF/ECM, DCN/DEF/ECM, DCN/DEF/POW	9
2	145	129	139	120	200	16000	12000	CON/DCN/POW, CON/DEF/POW	11
3	196	177	190	165	252	19000	14000	CON/DEF/ECM, CON/ECM/POW, DCN/POW/WPN	14
4	218	197	211	180	275	21000	15000	CON/POW/TRK	15

Crimson Dawn Hull Table (continued)

Transport

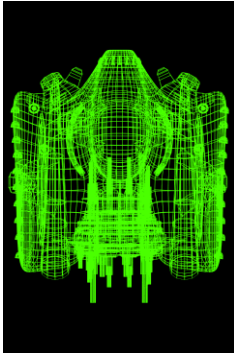


Tech Level	Resource Costs				Build Points	Mass Limit	Mass	Slots	Slot Total
	Me	Si	Ex	Re					
1	28	21	27	31	31	167	66	CMP/PRO/TRN, DCN/POW/TRN, DEF/PRO/TRN, ECM/POW/PRO, ECM/POW/TRN	5
2	47	36	45	51	21	202	70	ECM/PRO/TRN	6
3	73	58	68	75	76	234	73	DCN/POW/TRN	7
4	85	68	79	88	90	332	81	DCN/ECM/TRN, DEF/PRO/TRN, PRO/SCT/TRN	10
5	91	73	85	95	97	380	88	DCN/POW/TRN, DEF/ECM/SCT	12

Diamond Cooperative

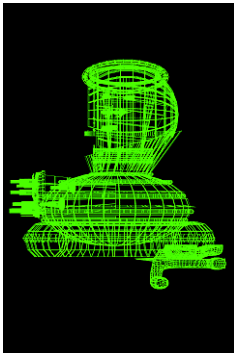
Diamond Cooperative Hull Table

Armed Scout



Tech Level	Resource Costs				Build Points	Mass Limit	Mass	Slots	Slot Total
	Me	Si	Ex	Re					
1	39	52	44	45	50	211	40	CMP/ECM, POW/PRO, ECM/POW, ECM/PRO, POW/SCT/WPN, ECM/POW/SCT	6
2	55	71	62	62	68	284	47	DCN/ECM, PRO/WPN	8
3	70	86	78	79	85	358	54	DCN/PRO, ECM/WPN, POW/PRO/SCT (PRO/WPN)	10
4	96	114	106	107	112	430	60	DEF/ECM/WPN, PRO/TRK	12

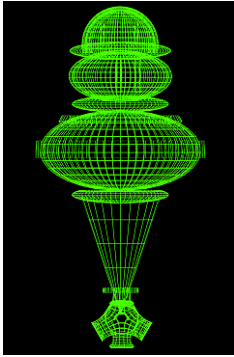
Armed Space Station



Tech Level	Resource Costs				Build Points	Mass Limit	Mass	Slots	Slot Total
	Me	Si	Ex	Re					
1	85	91	98	96	170	16000	11500	CMP/WPN, DCN/DEF, DCN/DEF, DEF/POW, DEF/TRK, POW/TRK, CON/DCN/WPN, CON/POW/WPN, DCN/DEF/STL, DCN/DEF/STL, DCN/DEF/STL,	11
2	110	120	128	125	201	18000	13000	DCN/WPN, ECM/POW	13
3	150	160	170	171	245	20000	15000	POW/TRK, CON/DEF/WPN	15
4	197	207	220	217	295	21000	16000	DEF/WPN, POW/WPN, CON/POW/ECM	18

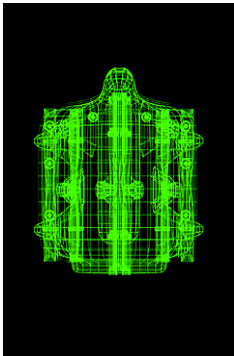
Diamond Cooperative Hull Table (continued)

Assault



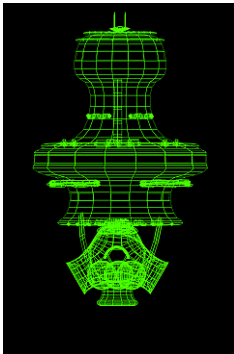
Tech Level	Resource Costs				Build Points	Mass Limit	Mass	Slots	Slot Total
	Me	Si	Ex	Re					
1	34	30	35	33	36	204	90	POW, CMP/DCN, DCN/PRO, DCN/POW/TRN, PRO/TRN/WPN	5
2	44	37	46	44	47	286	97	DCN/PRO, POW/TRN/WPN	7
3	87	75	90	90	94	409	107	DCN/TRN, DCN/WPN, DCN/POW/PRO	10
4	105	92	108	109	110	452	110	PRO/TRK/TRN	11

Battleship



Tech Level	Resource Costs				Build Points	Mass Limit	Mass	Slots	Slot Total
	Me	Si	Ex	Re					
1	83	74	73	83	86	505	163	CMP/WPN, DCN/PRO, POW/TRK, POW/WPN, PRO/WPN, ECM/WPN, TRK/WPN, DCN/DEF/ECM, DEF/POW/WPN, POW/PRO/WPN	10
2	97	83	85	96	100	558	174	PRO/WPN	11
3	130	115	116	127	135	712	187	DCN/WPN, DEF/POW, ECM/PRO/TRK	14
4	138	120	122	136	144	816	196	CON/DEF, CON/POW	16

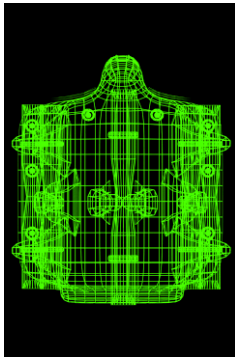
Constructor



Tech Level	Resource Costs				Build Points	Mass Limit	Mass	Slots	Slot Total
	Me	Si	Ex	Re					
1	52	48	45	49	54	202	125	POW, CMP/CON, CONPRO, CON/DEF/POW, CON/POW/PRO	5
2	74	66	62	68	77	325	132	CON/DEF, POW/PRO, CON/DCN/POW	8
3	94	84	79	87	95	369	135	CON/DEF	9
4	100	94	85	402	402	452	142	CON/PRO, CON/DCN/POW	11

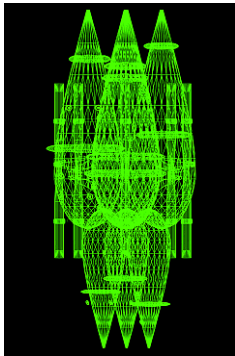
Diamond Cooperative Hull Table (continued)

Cruiser



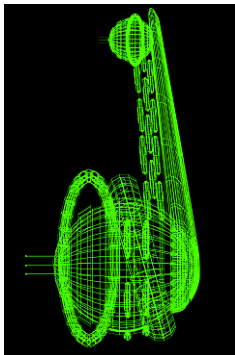
Tech Level	Resource Costs				Build Points	Mass Limit	Mass	Slots	Slot Total
	Me	Si	Ex	Re					
1	73	66	67	73	76	365	100	CMP/DCN, DEF/POW, DEF/WPN, DEF/WPN, POW/WPN, TRK/WPN, DEF/POW/PRO, POW/PRO/WPN	8
2	82	72	81	74	85	458	105	PRO/WPN, DCN/POW/ TRK	10
3	95	85	85	93	99	550	110	DEF/PRO/WPN, ECM/POW	12
4	121	108	108	118	125	644	117	PRO/TRK, ECM/WPN	14

Destroyer



Tech Level	Resource Costs				Build Points	Mass Limit	Mass	Slots	Slot Total
	Me	Si	Ex	Re					
1	28	25	25	28	30	200	40	CSM/TRK, DEF/TRK, POW/WPN, PRO/TRK, POW/PRO/WPN	5
2	42	36	37	43	46	241	42	ECM/PRO/WPN	6
3	55	47	47	55	59	283	42	POW/PRO	7
4	77	65	76	66	80	366	44	DCN/WPN, DEF/PRO	9
5	87	73	86	73	90	450	50	ECM/POW/TRK, PRO/WPN	11

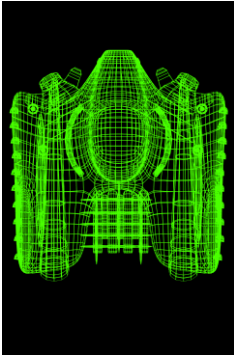
General Purpose



Tech Level	Resource Costs				Build Points	Mass Limit	Mass	Slots	Slot Total
	Me	Si	Ex	Re					
1	29	33	35	35	36	203	82	CON/PRO, CON/TRN, POW/SCT, SCT/TRN, CMP/POW/PRO	5
2	55	60	64	64	65	245	86	DEF/POW/PRO	6
3	74	80	86	86	89	329	95	CON/SCT, TRN/WPN	8

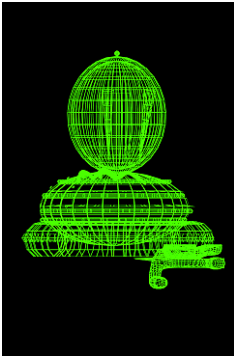
Diamond Cooperative Hull Table (continued)

Scout



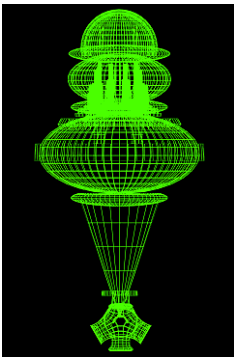
Tech Level	Resource Costs				Build Points	Mass Limit	Mass	Slots	Slot Total
	Me	Si	Ex	Re					
1	35	41	38	39	45	152	25	CMP/SCT, POW/PRO, PRO/SCT, PRO/SCT, ECM/POW/PRO	5
2	51	63	57	57	65	216	31	POW/PRO, ECM/PRO/SCT	7
3	72	89	80	80	90	310	38	DCN/PRO, DEF/PRO, ECM/POW/SCT	10
4	82	101	93	94	103	343	42	PRO/SCT	11

Space Station



Tech Level	Resource Costs				Build Points	Mass Limit	Mass	Slots	Slot Total
	Me	Si	Ex	Re					
1	93	96	102	100	153	15000	10500	CMP/CON, DCN/CON, DCN/DEF, DCN/DEF, DCN/DEF, POW/SCT, CON/DEF/POW, CON/POW/TRN, DCN/DEF/ECM, DCN/DEF/ECM	10
2	133	138	144	141	195	16500	12000	CON/DEF, ECM/POW	12
3	176	185	195	194	248	17000	12000	CON/DEF/ECM, DCN/POW	14
4	220	229	240	240	292	19000	14000	CON/POW, DEF/POW/WPN	16
5	245	255	268	270	320	21000	15500	CON/WPN	17

Transport

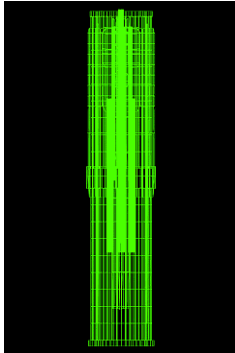


Tech Level	Resource Costs				Build Points	Mass Limit	Mass	Slots	Slot Total
	Me	Si	Ex	Re					
1	28	27	25	27	31	178	70	CMP/TRN, DCN/TRN, POW/PRO, PRO/TRN, POW/PRO/TRN	5
2	47	46	43	46	50	218	74	DCN/POW/TRN	6
3	60	58	61	59	64	288	80	DCN/DEF, PRO/TRN	8
4	98	89	99	95	104	395	86	DEF/ECM, POW/TRN, DCN/PRO/TRN	11
5	100	90	100	99	107	470	93	DEF/ECM/TRN, POW/TRN	13

Emerald Combine

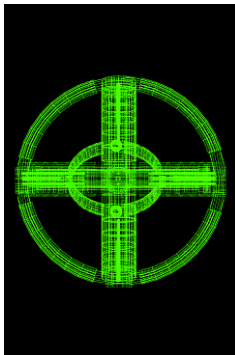
Emerald Combine Hull Table

Armed Scout



Tech Level	Resource Costs				Build Points	Mass Limit	Mass	Slots	Slot Total
	Me	Si	Ex	Re					
1	46	40	59	47	50	211	36	ECM/POW, PRO/SCT, ECM/PRO, CMP/DEF/SCT, DEF/ECM/WPN, ECM/POW/SCT	6
2	60	50	75	62	66	282	41	PRO/WPN, DEF/POW/SCT	8
3	84	72	106	86	92	355	46	DCN/PRO, SCT/TRK/TRN	10
4	92	78	120	95	102	392	50	PRO/ECM/WPN	11
5	103	85	133	106	115	430	52	POW/WPN	12

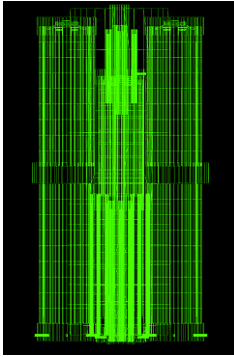
Armed Space Station



Tech Level	Resource Costs				Build Points	Mass Limit	Mass	Slots	Slot Total
	Me	Si	Ex	Re					
1	82	75	98	80	164	16500	12000	POW/TRK, POW/WPN, DCN/DEF, DCN/DEF, CMP/CON/POW, CON/DCN/WPN, CON/DEF/POW, DCN/DEF/ECM, DCN/DEF/ECM, DCN/DEF/ECM	10
2	116	105	134	112	202	18000	13000	DEF/WPN	11
3	143	130	164	136	231	19500	14500	CON/WPN, DCN/POW/TRK	13
4	196	179	220	187	287	22000	16500	CON/WPN, DCN/DEF/POW, ECM/POW/TRK	16

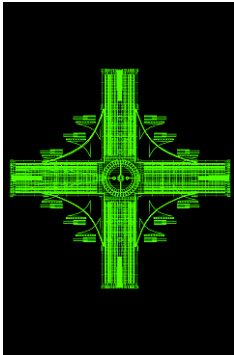
Emerald Combine Hull Table (continued)

Assault



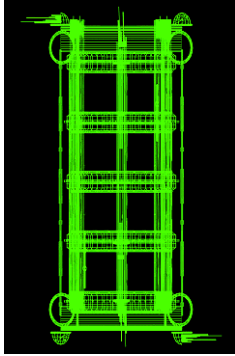
Tech Level	Resource Costs				Build Points	Mass Limit	Mass	Slots	Slot Total
	Me	Si	Ex	Re					
1	46	40	58	44	80	254	73	CMP/TRN, POW/PRO, PRO/TRN, DCN/DEF/POW, DCN/TRN/WPN, DEF/PRO/TRN	6
2	51	43	65	48	83	304	75	POW/TRN/WPN	7
3	71	61	89	68	90	430	82	DEF/TRN, PRO/TRN, DCN/ECM/TRK	10
4	90	79	112	86	92	477	84	POW/TRN/WPN	11
5	113	100	140	108	99	600	90	DEF/TRK, TRN/WPN, DCN/PRO/TRN	14

Battleship

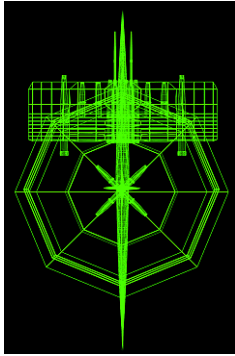


Tech Level	Resource Costs				Build Points	Mass Limit	Mass	Slots	Slot Total
	Me	Si	Ex	Re					
1	77	62	90	65	83	448	158	DCN/DEF, POW/WPN, PRO/WPN, PRO/WPN, CMP/POW/WPN, DCN/DEF/TRK, DEF/POW/WPN, ECM/POW/PRO, POW/PRO/TRK	9
2	88	75	108	79	96	592	170	POW/PRO, TRN/WPN, DEF/ECM/TRK	12
3	120	104	144	111	132	788	185	POW/PRO, TRN/WPN, DCN/DEF/POW, DCN/ECM/WPN	16
4	148	124	183	131	164	830	191	DEF/TRK/WPN	17

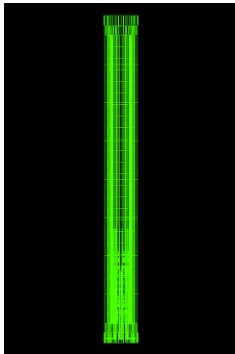
Emerald Combine Hull Table (continued)

Constructor

Tech Level	Resource Costs				Build Points	Mass Limit	Mass	Slots	Slot Total
	Me	Si	Ex	Re					
1	42	34	50	39	45	240	120	CMP/DEF, CON/POW, POW/PRO, CON/DEF/ECM, CON/DCN/POW, CON/POW/PRO	6
2	75	64	86	70	80	352	128	ECM/POW, CON/DEF/ECM, CON/PRO/TRN	9
3	92	79	105	85	100	444	134	CON/POW, CON/DEF/PRO	11
4	98	84	112	91	107	488	135	CON/TRN	12

Cruiser

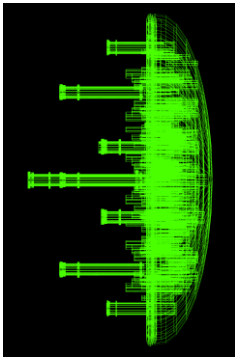
Tech Level	Resource Costs				Build Points	Mass Limit	Mass	Slots	Slot Total
	Me	Si	Ex	Re					
1	63	51	72	53	65	355	93	DCN/POW, DEF/POW, DEF/PRO, PRO/WPN, CMP/POW/WPN, DEF/PRO/TRK, DEF/ECM/WPN, POW/PRO/WPN	8
2	74	58	88	62	80	482	103	PRO/TRK, DCN/DEF/ECM, POW/TRN/WPN	11
3	85	68	104	73	95	526	106	POW/WPN	12
4	102	84	126	90	114	562	109	ECM/PRO/TRN	13

Destroyer

Tech Level	Resource Costs				Build Points	Mass Limit	Mass	Slots	Slot Total
	Me	Si	Ex	Re					
1	31	24	38	26	32	195	39	CMP/TRK, POW/PRO, DCN/PRO/WPN, DEF/TRK/WPN, POW/PRO/TRK	5
2	49	39	62	41	52	270	45	DEF/PRO, DCN/POW/WPN	7
3	65	50	76	52	70	305	45	POW/PRO	8
4	89	68	111	82	98	380	48	ECM/PRO, DEF/TRN/WPN	10

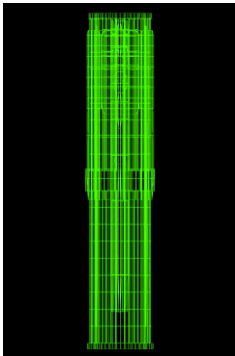
Emerald Combine Hull Table (continued)

General Purpose



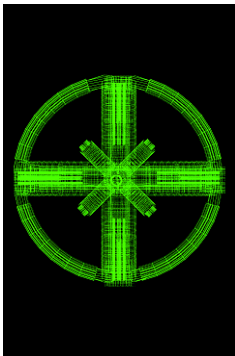
Tech Level	Resource Costs				Build Points	Mass Limit	Mass	Slots	Slot Total
	Me	Si	Ex	Re					
1	32	29	41	33	38	204	78	DCN/PRO, DEF/POW, CMP/POW/PRO, CON/SCT/TRN, CON/SCT/TRN	5
2	58	55	70	60	66	288	86	DEF/WPN, CON/SCT/TRN	7
3	87	82	104	89	99	410	97	PRO, CON/SCT/TRN, ECM/POW/TRK	10
4	104	97	125	107	120	455	100	POW/PRO/WPN	11

Scout



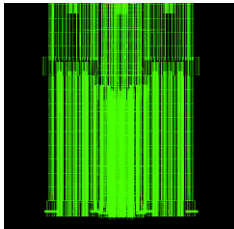
Tech Level	Resource Costs				Build Points	Mass Limit	Mass	Slots	Slot Total
	Me	Si	Ex	Re					
1	38	30	50	38	43	151	24	POW/PRO, ECM/POW, PRO/SCT, CMP/PRO/SCT, DEF/PRO/SCT, POW/PRO/SCT	6
2	52	48	70	53	59	240	29	DEF/POW, DCN/ECM/PRO	8
3	75	65	94	77	85	273	32	DEF/PRO/TRN	9
4	85	74	109	88	100	336	37	POW/PRO, DCN/ECM/SCT	11
5	97	85	128	100	114	675	40	PRO/TRN	12

Space Station



Tech Level	Resource Costs				Build Points	Mass Limit	Mass	Slots	Slot Total
	Me	Si	Ex	Re					
1	65	75	95	80	139	15500	11000	CON/POW, DCN/DEF, DCN/DEF, CMP/CON/POW, CON/DCN/POW, CON/DEF/POW, DCN/DEF/ECM, DCN/DEF/ECM, DCN/DEF/ECM	9
2	121	106	136	113	176	17000	12000	CON/POW, CON/DCN/DEF	11
3	163	145	180	153	224	19000	14000	CON/DEF/POW, POW/WPN	13
4	206	185	225	193	268	20000	15000	CON/TRK, DEF/ECM/POW	15

Emerald Combine Hull Table (continued)

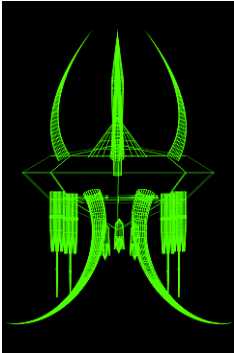
Transport

Tech Level	Resource Costs				Build Points	Mass Limit	Mass	Slots	Slot Total
	Me	Si	Ex	Re					
1	40	35	50	40	62	188	56	CMP/TRN, POW/TRN, DEF/PRO/TRN, POW/PRO/TRN, ECM/PRO/TRN	5
2	49	43	61	50	67	250	61	DEF/POW, PRO/ECM/TRN	7
3	66	56	80	65	72	324	65	PRO/TRN, POW/ECM/TRN	9
4	87	76	108	85	75	398	68	DEF/PRO, DCN/ECM/TRN	11
5	98	85	121	95	80	469	73	ECM/TRN, DEF/POW/PRO	13
6	122	103	151	118	86	540	78	ECM/PRO, PRO/WPN, PRO/TRK/TRN (PRO/TRN)	15

Golden Order of Reason

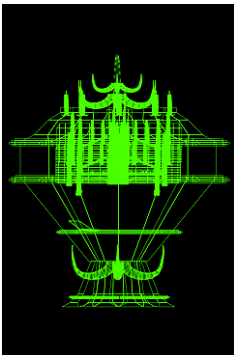
Golden Order of Reason Hull Table

Armed Scout



Tech Level	Resource Costs				Build Points	Mass Limit	Mass	Slots	Slot Total
	Me	Si	Ex	Re					
1	50	36	39	41	45	208	49	PRO, CMP/WPN, POW/SCT, POW/PRO, POW/TRK, ECM/SCT/WPN	6
2	64	46	50	53	58	274	57	DCN/DEF, PRO/WPN	8
3	68	49	52	56	61	304	62	PRO/WPN	9

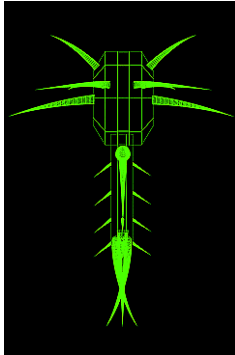
Armed Space Station



Tech Level	Resource Costs				Build Points	Mass Limit	Mass	Slots	Slot Total
	Me	Si	Ex	Re					
1	100	82	87	91	170	17500	13500	POW, DCN, DCN, CMP/WPN, CON/POW, CON/WPN, DCN/DEF/DCN/DEF, DCN/DEF, POW/WPN, CON/DEF/TRK	11
2	144	120	128	132	214	20000	16000	DCN/WPN, POW/TRK	13
3	159	135	141	145	230	21000	17000	POW/WPN	14
4	190	160	167	172	260	23000	19000	DEF/WPN, POW/TRK	16
5	250	215	222	228	317	24500	20000	POW, CON/WPN, DCN/DEF/ECM	19

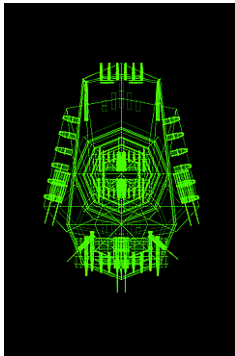
Golden Order of Reason Hull Table (continued)

Assault



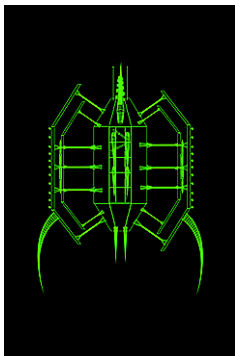
Tech Level	Resource Costs				Build Points	Mass Limit	Mass	Slots	Slot Total
	Me	Si	Ex	Re					
1	49	30	35	38	43	251	103	CMP, POW/PRO, POW/TRK, POW/WPN, PRO/TRN, DCN/DEF/TRN	6
2	60	38	43	46	53	296	108	PRO/WPN	7
3	77	51	56	60	70	382	115	DEF/WPN, POW/TRN	9
4	85	55	61	65	78	466	123	PRO, DCN/ECM/TRN	11

Battleship



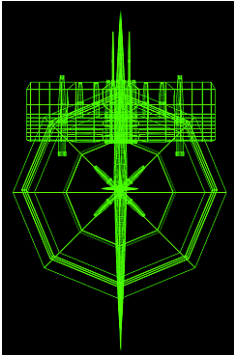
Tech Level	Resource Costs				Build Points	Mass Limit	Mass	Slots	Slot Total
	Me	Si	Ex	Re					
1	82	64	68	71	76	512	182	WPN, CMP/WPN, DCN/POW, POW/PRO, POW/TRK, POW/WPN, PRO/WPN, PRO/WPN, DCN/DEF/WPN, DEF/POW/TRK	10
2	95	75	79	83	89	620	194	DEF/PRO, POW/WPN	12
3	118	94	98	102	111	728	208	CON/WPN, DEF/POW	14
4	148	118	123	129	139	880	221	CON/TRK, DCN/WPN, POW/PRO	17

Constructor

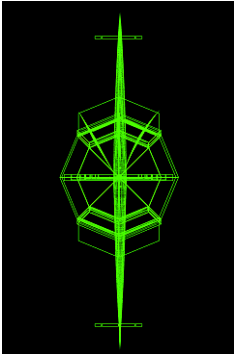


Tech Level	Resource Costs				Build Points	Mass Limit	Mass	Slots	Slot Total
	Me	Si	Ex	Re					
1	55	36	40	45	50	220	119	CON, CMP/CON, CON/POW, CON/POW/PRO, CON/POW/PRO	5
2	74	55	59	65	73	300	125	CON/DCN, POW/PRO	7
3	100	70	76	83	92	430	133	POW, CON/DEF, CON/PRO	10
4	129	94	101	109	121	515	137	CON/DCN, CON/POW	12
5	155	116	123	133	146	596	143	CON/DEF, POW/PRO	14
6	202	155	165	175	192	5685	144	CON/POW, CON/WPN	16

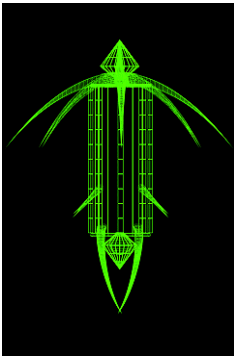
Golden Order of Reason Hull Table (continued)

Cruiser

Tech Level	Resource Costs				Build Points	Mass Limit	Mass	Slots	Slot Total
	Me	Si	Ex	Re					
1	69	52	56	59	64	370	102	CMP/POW, DCN/DEF, DCN/WPN, POW/PRO, POW/TRK, POW/WPN, PRO/WPN, PRO/WPN	8
2	89	69	73	77	83	508	117	TRK, POW/WPN, CON/DEF/WPN	11
3	107	82	87	91	100	606	123	ECM/WPN, PRO/TRK	13
4	121	92	96	102	114	720	131	DCN/POW, CON/WPN,	15

Destroyer

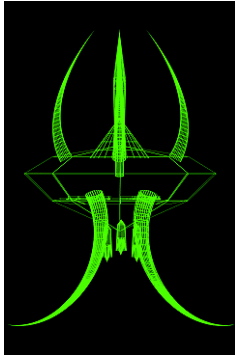
Tech Level	Resource Costs				Build Points	Mass Limit	Mass	Slots	Slot Total
	Me	Si	Ex	Re					
1	34	20	23	26	30	214	94	DCN, POW, POW/WPN, CMP/PRO/TRK, POW/PRO/WPN	5
2	55	35	59	43	49	255	46	PRO/WPN	6
3	72	58	53	57	65	430	51	POW/TRK, PRO/WPN	8
4	98	70	78	82	91	470	55	PRO, CON/TRK, DEF/ECM/WPN	11
5	107	73	82	88	98	435	56	DCN/PRO, DEF/ECM	13

General Purpose

Tech Level	Resource Costs				Build Points	Mass Limit	Mass	Slots	Slot Total
	Me	Si	Ex	Re					
1	41	26	30	33	37	245	103	POW, PRO, CON/TRN, SCT/TRN, CMP/POW/PRO, CON/POW/SCT	6
2	59	40	44	48	54	332	112	CON/WPN, DCN/PRO	8
3	90	64	69	74	83	418	121	DEF/POW, TRK/TRN	10
4	120	89	94	100	111	500	129	ECM/DEF, PRO/SCT	12

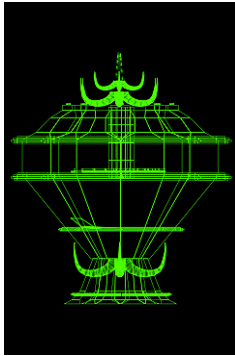
Golden Order of Reason Hull Table (continued)

Scout



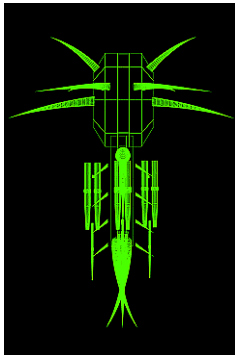
Tech Level	Resource Costs				Build Points	Mass Limit	Mass	Slots	Slot Total
	Me	Si	Ex	Re					
1	36	25	28	30	32	150	32	POW, PRO, CMP/PRO, DCN/POW/SCT, DEF/PRO/SCT	5
2	54	38	41	44	48	179	38	DCN/POW	6
3	83	60	63	66	75	264	53	PRO, DEF/SCT, CON/ECM/WPN	9

Space Station



Tech Level	Resource Costs				Build Points	Mass Limit	Mass	Slots	Slot Total
	Me	Si	Ex	Re					
1	118	95	99	103	160	17000	12500	POW, DCN, CON/DCN, CON/DEF, CON/POW, CON/POW, DCN/DEF, DCN/DEF, DCN/DEF, CMP/CON/POW	10
2	163	132	139	143	205	18000	13500	CON/POW, DEF/POW	12
3	194	160	166	171	235	20000	15500	POW/WPN	13
4	226	186	191	197	265	21500	17000	CON/DCN, DEF/POW	15
5	260	210	217	225	292	24000	19000	DEF/TRK	17
6	275	223	230	238	307	25000	20000	ECM, CON/POW/WPN	18

Transport



Tech Level	Resource Costs				Build Points	Mass Limit	Mass	Slots	Slot Total
	Me	Si	Ex	Re					
1	41	26	29	32	37	179	79	PRO, TRN, POW/TRN, CMP/POW/TRN, DCN/POW/PRO	5
2	55	37	40	43	50	254	87	DCN/TRN, DEF/PRO	7
3	78	56	60	63	73	328	95	TRN, CON/DEF/POW	9
4	85	61	65	69	80	400	103	ECM/PRO, TRN/WPN	11
5	109	80	85	90	103	478	111	DEF/TRN, PRO/ECM	13

Credits

Interactive Magic

<i>Original Concept & Design</i>	Adrian Earle
<i>Designer</i>	Brent Smith
<i>Additional Design</i>	Chris Wall, Brian Stone, Scott Jacobs, Chris Roby
<i>Senior Producer</i>	David Green
<i>Producer</i>	Jerry Heneghan, Brent Smith
<i>Lead Programmers</i>	Brent Smith, Chris Wall
<i>Programmers</i>	Eddie Davis, Scott Jacobs, Brian Stone
<i>Artists</i>	John Amos, Tim Buie, Allison Britt, Mark Garcia, David Knox, John Zwicker
<i>Music</i>	Brian Safron
<i>Sound</i>	Chris Roby
<i>Creative Writers</i>	David Artman, Brent Smith
<i>Creative Editors</i>	W R “Chip” Faulkner II, Dan Osterland, Steve Lieb
<i>Ingame Text</i>	Dan Osterlund
<i>Narrator</i>	Sara Ley
<i>Voices</i>	Jay Littman, Christine Heneghan, Angela Lipscomb, Paul Potera, Clint Richards
<i>Tutorials</i>	Chris Roby, Fred Welterlin, Wesley Leonard
<i>Multimedia Support</i>	Robert Stevenson, Chris Roby, Tim Allen, Wesley Leonard
<i>Launcher and Installer</i>	Steve Bridge
<i>Network Design</i>	Tracy McQuillen, Eddie Davis, Scott Jacobs

<i>Quality Manager</i>	Mark Moormans
<i>Test Coordinators</i>	Dave Hefner, Sean McDaniels, James Cowgill
<i>Internal Playtesters</i>	Chris Ashton, Jeremy Bowers, Franklin Crawford, Chris Gardner, Christine Heneghan, Joey Luther, Jim Osborn
<i>External Playtesters</i>	Steve Lieb, Mark Logsdon, Curtis Sims, Jim Pedicord, Kent Coleman, Loren Webster, Scott Mcmillan, Robert Fiorini, Craig Bucklin, Jonathan Hayes, Tom Jett
<i>Product Marketing Manager</i>	Gina Waluk
<i>Package Illustration and Design</i>	Allison Britt
<i>Technical Editor</i>	Sara Ley

Module Tables

These tables provide detailed information for every module.

The following information is displayed in the tables, as applicable:

- **Active Defense Factor:** The percentage chance to hit of weapons is reduced by up to this amount, depending on the weapon type (see [“Combat Mechanics” on page 76](#)).
- *****: An asterisk by a module name indicates that the module has a technology tie to ATVs (see [page 112](#)).
- **Attack Strength:** The base amount of damage inflicted by the weapon, if it hits a target. Also, when a module has a greater defense value than the attack strength of the weapon firing at it, the damage inflicted is reduced.
- **Attack Type:** There are eight attack types, every module has a defense value against each type. If a module has a greater defense value than the attack strength of the weapon firing at it, the damage inflicted is reduced.
- **Build Points:** The number of points a Constructor needs to expend to build the module.
- **Chance to Hit:** The chance to hit listed is that which applies at effective range. At maximum range, the chance to hit is halved.
- **Construction Value:** The number of construction points this module generates per turn, which can be used for construction.
- **Cost:** The cost of a module is split into metals, silicates, exotics, and reactives, which are mined from asteroids, and organics which are generated by the scientific banks on asteroids.
- **Damage Reduction Factor:** The damage inflicted by each hit is reduced by this amount. This is also known as the Damage Control Value or Factor, and the higher it is the more likely that five points of damage are repaired.
- **Defense Value:** When a module has defense against the attack type of the weapon firing at it, the damage inflicted is reduced, if the attack strength of the weapon is less than 100. The subsections refer to the different types of weapon attack: solid, explosive, corrosive, chemical, heat, radiation, discharge and nuclear.
- **ECM:** The reduction in the chance of an enemy making a successful hit.
- **Effective Range:** When a weapon fires within effective range, its chance to hit is the figure listed under chance to hit.
- **Generation Rate:** The amount of power the module generates each turn.
- **Mass:** The total mass of a ship and the amount of thrust the propulsion modules provide, determine its speed.
- **Maximum Range:** When a weapon fires at maximum range, its chance to hit is half that listed under chance to hit.
- **Number of Shots:** The number of shots a weapon can make before it needs rearming. Beam weapons rely on power to fire and therefore have unlimited shots, but they cannot fire if the ship has no power remaining.
- **Orbital Thrust:** The combination of orbital thrust and the mass of a ship determines its speed when travelling in Orbital space.
- **Power Storage Capacity:** The amount of power the module can store.
- **Power Used:** Each time the module is used it consumes this amount of power at normal settings.
- **Rate of Reload:** Each turn is split into eight phases. The number of phases it takes to reload a weapon is the rate of reload. It is the time taken to place another bullet in the chamber, not the time taken to replace the magazine.
- **Research Points:** Each time a module is used a certain number of points are added to the research of the next upgrade.
- **Shield Value:** Each shield module has a value of defense against the various types of attack.
- **Solar Thrust:** The combination of solar thrust and the mass of a ship determines its speed when travelling in Solar space.
- **Storage Capacity:** The number of ATVs the module can store.
- **Scanning Speed:** The rate at which the module conducts a scan or survey.
- **Tech Level:** The technology level of the module.
- **Tracking Value:** The increase to the chance of hitting an enemy.
- **Transfer Rate:** The amount of power the module can transfer to another ship each turn.
- **Weapon Types:** There are three weapon types, beam, cannon and missile. Cannon and missiles are projectile weapons.

Computer Modules

Combat Computer Modules

Guild	Name	TL	Cost					RP	Ma	PU	BP	Defense against Attack Type							
			Me	Si	Ex	Re	O					So	Ex	Cs	Ch	He	Ra	Di	Nu
Blue Talon Corps	Strategist	1	0	34	15	0	1	16	12	0	35	Yes	Yes	0	0	0	Yes	0	0
	Strategist 2	2	0	52	24	0	3	14	14	0	49	Yes	Yes	0	0	0	Yes	0	0
	Strategist 3	3	0	71	31	0	4	12	14	0	74	Yes	Yes	0	0	0	Yes	0	0
Crimson Dawn	Tactician	1	1	20	20	0	2	10	14	0	35	Yes	Yes	0	0	Yes	0	Yes	0
	Psionic Tactician	2	3	35	35	0	4	6	14	0	50	Yes	Yes	0	0	Yes	0	Yes	0
	Fist of Arktron	3	6	50	50	2	6	4	15	0	74	Yes	Yes	0	0	Yes	0	Yes	0
Diamond Cooperative	Bulldog 1090	1	0	24	24	0	1	12	14	0	38	Yes	0	0	0	Yes	0	Yes	Yes
	Bulldog 1290	2	0	38	38	0	2	10	16	0	52	Yes	0	0	0	Yes	0	Yes	Yes
	Bulldog 1590	3	0	56	56	0	4	6	17	0	78	Yes	0	0	0	Yes	0	Yes	Yes
Emerald Combine	Aggressor 27	1	0	20	32	0	1	12	13	0	38	0	0	Yes	Yes	0	Yes	0	Yes
	Aggressor 32	2	0	32	50	0	2	8	15	0	53	0	0	Yes	Yes	0	Yes	0	Yes
	Aggressor 32+	3	0	41	72	0	4	6	15	0	77	0	0	Yes	Yes	0	Yes	0	Yes
Golden Order of Reason	Warlord XC	1	4	22	22	0	1	12	14	0	40	0	0	Yes	Yes	0	0	Yes	0
	Warlord CC	2	10	32	32	0	3	10	15	0	56	0	0	Yes	Yes	0	0	Yes	0
	Warlord DCC	3	18	50	48	0	4	6	17	0	82	0	0	Yes	Yes	0	0	Yes	0

Key: TL=Tech Level; Me=Metals; Si=Silicates; Ex=Exotics; Re=Reactives; O=Organics; RP=Research Points; Ma=Mass; PU=Power Used; BP=Build Points; So=Solid; Ex=Explosive; Cs=Corrosive; Ch=Chemical; He=Heat; Ra=Radiation; Di=Discharge; Nu=Nuclear

Construction Computer Modules

Guild	Name	TL	Cost					RP	Ma	PU	BP	Defense against Attack Type							
			Me	Si	Ex	Re	O					So	Ex	Cs	Ch	He	Ra	Di	Nu
Blue Talon Corps	Planner	1	2	20	14	0	2	10	20	0	20	Yes	Yes	0	0	0	Yes	0	0
	Planner 2	2	5	42	22	0	4	6	23	0	34	Yes	Yes	0	0	0	Yes	0	0
	Planner 3	3	8	60	32	0	5	4	25	0	50	Yes	Yes	0	0	0	Yes	0	0
Crimson Dawn	JCB	1	4	12	15	0	3	12	20	0	25	Yes	Yes	0	0	Yes	0	Yes	0
	JCB-c	2	6	18	26	0	6	8	20	0	37	Yes	Yes	0	0	Yes	0	Yes	0
	JCB-d	3	9	26	40	2	8	6	22	0	52	Yes	Yes	0	0	Yes	0	Yes	0
Diamond Cooperative	Toolbox 1032	1	5	12	16	0	2	12	20	0	24	Yes	0	0	0	Yes	0	Yes	Yes
	Toolbox 1232	2	8	16	28	0	4	10	22	0	38	Yes	0	0	0	Yes	0	Yes	Yes
	Toolbox 1532	3	10	22	38	0	5	6	25	0	54	Yes	0	0	0	Yes	0	Yes	Yes
Emerald Combine	Matrix 9	1	3	12	24	0	2	12	18	0	24	0	0	Yes	Yes	0	Yes	0	Yes
	Matrix 12	2	5	14	48	0	4	10	20	0	37	0	0	Yes	Yes	0	Yes	0	Yes
	Matrix 12c	3	8	20	66	0	5	8	21	0	51	0	0	Yes	Yes	0	Yes	0	Yes
Golden Order of Reason	Mech Man XXa	1	16	8	12	0	2	16	17	0	26	0	0	Yes	Yes	0	0	Yes	0
	Mech Man XXb	2	28	18	20	0	4	12	20	0	42	0	0	Yes	Yes	0	0	Yes	0
	Mech Man XXc	3	44	26	30	0	5	10	21	0	58	0	0	Yes	Yes	0	0	Yes	0

Key: TL=Tech Level; Me=Metals; Si=Silicates; Ex=Exotics; Re=Reactives; O=Organics; RP=Research Points; Ma=Mass; PU=Power Used; BP=Build Points; So=Solid; Ex=Explosive; Cs=Corrosive; Ch=Chemical; He=Heat; Ra=Radiation; Di=Discharge; Nu=Nuclear

General Purpose Computer Tables

Guild	Name	TL	Cost					RP	Ma	PU	BP	Defense against Attack Type							
			Me	Si	Ex	Re	O					So	Ex	Cs	Ch	He	Ra	Di	Nu
Blue Talon Corps	*Protector	1	0	15	0	0	1	10	14	0	11	Yes	Yes	0	0	0	Yes	0	0
	*Protector 2	2	0	24	4	0	2	6	16	0	22	Yes	Yes	0	0	0	Yes	0	0
	*Protector 3	3	0	38	10	0	4	4	17	0	35	Yes	Yes	0	0	0	Yes	0	0
Crimson Dawn	*Regulator	1	0	7	7	0	2	18	16	0	13	Yes	Yes	0	0	Yes	0	Yes	0
	*Regulator 2	2	0	13	13	0	3	14	17	0	25	Yes	Yes	0	0	Yes	0	Yes	0
	*Advanced Regulator	3	0	25	25	0	5	10	18	0	38	Yes	Yes	0	0	Yes	0	Yes	0
Diamond Cooperative	*Core 1086	1	0	7	7	0	1	12	16	0	13	Yes	0	0	0	Yes	0	Yes	Yes
	*Core 1286	2	0	12	14	0	2	10	18	0	25	Yes	0	0	0	Yes	0	Yes	Yes
	*Core 1586	3	0	18	24	0	4	6	19	0	38	Yes	0	0	0	Yes	0	Yes	Yes
Emerald Combine	*Manipulator	1	0	4	12	0	1	12	16	0	13	0	0	Yes	Yes	0	Yes	0	Yes
	*Manipulator V1	2	0	7	22	0	2	8	17	0	26	0	0	Yes	Yes	0	Yes	0	Yes
	*Manipulator V2	3	0	11	40	0	4	6	19	0	38	0	0	Yes	Yes	0	Yes	0	Yes
Golden Order of Reason	*Bastion XV	1	4	4	4	0	1	14	17	0	14	0	0	Yes	Yes	0	0	Yes	0
	*Bastion XVI	2	8	10	8	0	2	12	19	0	27	0	0	Yes	Yes	0	0	Yes	0
	*Bastion XVII	3	14	18	16	0	4	8	20	0	41	0	0	Yes	Yes	0	0	Yes	0

Key: *=ATV tech tie; TL=Tech Level; Me=Metals; Si=Silicates; Ex=Exotics; Re=Reactives; O=Organics; RP=Research Points; Ma=Mass; PU=Power Used; BP=Build Points; So=Solid; Ex=Explosive; Cs=Corrosive; Ch=Chemical; He=Heat; Ra=Radiation; Di=Discharge; Nu=Nuclear

Scout Computer Modules

Guild	Name	TL	Cost					RP	Ma	PU	BP	Defense against Attack Type							
			Me	Si	Ex	Re	O					So	Ex	Cs	Ch	He	Ra	Di	Nu
Blue Talon Corps	Astrogator	1	0	20	6	0	1	12	9	0	22	Yes	Yes	0	0	0	Yes	0	0
	Astrogator 2	2	0	44	12	0	1	10	11	0	38	Yes	Yes	0	0	0	Yes	0	0
	Astrogator 3	3	0	64	20	4	2	6	13	0	54	Yes	Yes	0	0	0	Yes	0	0
Crimson Dawn	Sensing Eye	1	0	14	14	0	2	16	8	0	24	Yes	Yes	0	0	Yes	0	Yes	0
	Eye of the Mind	2	0	24	24	0	3	14	10	0	40	Yes	Yes	0	0	Yes	0	Yes	0
	Eye of Arktron	3	0	36	36	2	3	10	11	0	57	Yes	Yes	0	0	Yes	0	Yes	0
Diamond Cooperative	Seeker 1076	1	0	12	16	0	1	12	9	0	24	Yes	0	0	0	Yes	0	Yes	Yes
	Seeker 1276	2	0	20	30	2	1	10	11	0	40	Yes	0	0	0	Yes	0	Yes	Yes
	Seeker 1576	3	0	30	45	5	2	6	12	0	58	Yes	0	0	0	Yes	0	Yes	Yes
Emerald Combine	Visionary 1	1	0	8	22	1	1	12	9	0	23	0	0	Yes	Yes	0	Yes	0	Yes
	Visionary 2	2	0	14	41	2	1	8	11	0	40	0	0	Yes	Yes	0	Yes	0	Yes
	Visionary 3	3	0	20	60	2	2	4	14	0	58	0	0	Yes	Yes	0	Yes	0	Yes
Golden Order of Reason	Investigator IV	1	2	10	13	0	1	10	10	0	26	0	0	Yes	Yes	0	0	Yes	0
	Investigator IVc	2	6	16	26	0	1	8	12	0	44	0	0	Yes	Yes	0	0	Yes	0
	Investigator V	3	11	25	36	3	2	6	13	0	62	0	0	Yes	Yes	0	0	Yes	0

Key: TL=Tech Level; Me=Metals; Si=Silicates; Ex=Exotics; Re=Reactives; O=Organics; RP=Research Points; Ma=Mass; PU=Power Used; BP=Build Points; So=Solid; Ex=Explosive; Cs=Corrosive; Ch=Chemical; He=Heat; Ra=Radiation; Di=Discharge; Nu=Nuclear

Transport Computer Modules

Guild	Name	TL	Cost					RP	Ma	PU	BP	Defense against Attack Type							
			Me	Si	Ex	Re	O					So	Ex	Cs	Ch	He	Ra	Di	Nu
Blue Talon Corps	Logistics	1	1	16	8	0	3	12	11	0	16	Yes	Yes	0	0	0	Yes	0	0
	Logistics 2	2	2	30	13	0	5	8	14	0	27	Yes	Yes	0	0	0	Yes	0	0
	Logistics 3	3	4	50	24	0	8	4	15	0	44	Yes	Yes	0	0	0	Yes	0	0
Crimson Dawn	Infiltrator	1	4	12	12	0	4	12	12	0	19	Yes	Yes	0	0	Yes	0	Yes	0
	Peacekeeper	2	7	14	16	0	7	10	14	0	30	Yes	Yes	0	0	Yes	0	Yes	0
	Assimilator	3	8	18	28	0	10	6	15	0	47	Yes	Yes	0	0	Yes	0	Yes	0
Diamond Cooperative	Conductor 1046	1	3	10	10	0	3	12	14	0	18	Yes	0	0	0	Yes	0	Yes	Yes
	Conductor 1246	2	7	14	16	0	5	10	15	0	30	Yes	0	0	0	Yes	0	Yes	Yes
	Conductor 1546	3	10	20	30	0	8	6	16	0	48	Yes	0	0	0	Yes	0	Yes	Yes
Emerald Combine	Stacker 15a	1	0	10	16	0	3	16	10	0	17	0	0	Yes	Yes	0	Yes	0	Yes
	Stacker 16	2	2	15	24	0	5	14	11	0	29	0	0	Yes	Yes	0	Yes	0	Yes
	Stacker 16b	3	5	22	40	0	8	10	13	0	47	0	0	Yes	Yes	0	Yes	0	Yes
Golden Order of Reason	Boxcar XI	1	9	6	12	0	3	12	13	0	20	0	0	Yes	Yes	0	0	Yes	0
	Boxcar XII	2	16	11	21	0	5	8	15	0	41	0	0	Yes	Yes	0	0	Yes	0
	Boxcar XIIa	3	26	15	28	0	8	6	18	0	58	0	0	Yes	Yes	0	0	Yes	0

Key: TL=Tech Level; Me=Metals; Si=Silicates; Ex=Exotics; Re=Reactives; O=Organics; RP=Research Points; Ma=Mass; PU=Power Used; BP=Build Points; So=Solid; Ex=Explosive; Cs=Corrosive; Ch=Chemical; He=Heat; Ra=Radiation; Di=Discharge; Nu=Nuclear

Construction Modules

Construction Modules

Guild	Name	TL	Cost					RP	Ma	PU	BP	Defense against Attack Type								CV
			Me	Si	Ex	Re	O					So	Ex	Cs	Ch	He	Ra	Di	Nu	
Blue Talon Corps	Wingbinder	1	24	0	10	0	1	40	19	20	17	Yes	Yes	0	0	0	Yes	0	0	6
	Wingmender	2	32	4	16	0	4	34	22	35	34	Yes	Yes	0	0	0	Yes	0	0	12
	Wingfixer	3	41	6	24	0	6	30	25	37	51	Yes	Yes	0	0	0	Yes	0	0	15
	Wingmaker	1	50	0	26	0	6	22	255	75	44	0	0	0	0	0	0	0	0	15
	Wingmaker II	2	56	10	48	0	11	18	255	93	64	0	0	0	0	0	0	0	0	30
	Wingmaker III	3	66	24	70	0	16	12	255	106	94	0	0	0	0	0	0	0	0	42
Crimson Dawn	Construction Dock	1	48	0	26	0	9	24	255	81	46	0	0	0	0	0	0	0	0	15
	Power Dock	2	66	0	48	2	15	20	255	106	68	0	0	0	0	0	0	0	0	27
	Reactive Dock	3	80	0	65	5	20	36	255	112	98	0	0	0	0	0	0	0	0	43
	Remote Arm	1	20	0	10	0	3	48	18	25	17	Yes	Yes	0	0	Yes	0	Yes	0	6
	Power Arm	2	24	0	20	1	5	44	22	45	33	Yes	Yes	0	0	Yes	0	Yes	0	12
	Reactive Arm	3	30	0	30	4	7	18	26	47	48	Yes	Yes	0	0	Yes	0	Yes	0	15
Diamond Cooperative	Minor Space Dock	1	50	0	30	0	7	24	255	60	42	0	0	0	0	0	0	0	0	23
	Space Dock	2	70	0	50	0	12	20	255	93	60	0	0	0	0	0	0	0	0	34
	Major Space Dock	3	94	0	75	0	16	14	255	106	92	0	0	0	0	0	0	0	0	61
	Robotic Construction	1	16	0	8	0	1	46	20	20	14	Yes	0	0	0	Yes	0	Yes	Yes	9
	Positronic Construction	2	30	0	16	0	3	42	24	35	26	Yes	0	0	0	Yes	0	Yes	Yes	15
	Orbitronic Construction	3	38	0	28	0	6	38	28	37	40	Yes	0	0	0	Yes	0	Yes	Yes	20
Emerald Combine	Construction Gantry	1	34	0	48	0	7	24	255	75	46	0	0	0	0	0	0	0	0	20
	Construction Rig	2	52	0	72	0	12	20	255	93	63	0	0	0	0	0	0	0	0	28
	Construction Platform	3	71	0	98	0	16	14	255	106	90	0	0	0	0	0	0	0	0	50
	Mini-Constructor	1	12	0	14	0	1	46	20	20	14	0	0	Yes	Yes	0	Yes	0	Yes	9
	Semiauto-Constructor	2	20	0	31	0	3	44	24	35	27	0	0	Yes	Yes	0	Yes	0	Yes	15
	Auto-Constructor	3	27	0	44	0	5	42	27	37	42	0	0	Yes	Yes	0	Yes	0	Yes	20

Key: TL=Tech Level; Me=Metals; Si=Silicates; Ex=Exotics; Re=Reactives; O=Organics; RP=Research Points; Ma=Mass; PU=Power Used; BP=Build Points; So=Solid; Ex=Explosive; Cs=Corrosive; Ch=Chemical; He=Heat; Ra=Radiation; Di=Discharge; Nu=Nuclear; CV=Construction Value

Construction Modules (continued)

Guild	Name	TL	Cost					RP	Ma	PU	BP	Defense against Attack Type								CV
			Me	Si	Ex	Re	O					So	Ex	Cs	Ch	He	Ra	Di	Nu	
Golden Order of Reason	Assembly Drone	1	32	0	6	0	1	60	16	15	11	0	0	Yes	Yes	0	0	Yes	0	7
	Assembly Net	2	36	0	10	0	2	52	20	30	24	0	0	Yes	Yes	0	0	Yes	0	12
	Assembly Web	3	44	0	14	0	4	48	25	30	38	0	0	Yes	Yes	0	0	Yes	0	18
	Construction Bay	1	60	0	22	0	5	28	255	56	37	0	0	0	0	0	0	0	0	26
	Construction Shop	2	78	0	32	0	10	26	255	81	52	0	0	0	0	0	0	0	0	42
	Construction Center	3	94	0	44	0	14	22	255	87	80	0	0	0	0	0	0	0	0	65
	Positronic Web	4	52	0	20	0	6	44	28	37	51	0	0	Yes	Yes	0	0	Yes	0	26

Key: TL=Tech Level; Me=Metals; Si=Silicates; Ex=Exotics; Re=Reactives; O=Organics; RP=Research Points; Ma=Mass; PU=Power Used; BP=Build Points; So=Solid; Ex=Explosive; Cs=Corrosive; Ch=Chemical; He=Heat; Ra=Radiation; Di=Discharge; Nu=Nuclear; CV=Construction Value

Damage Control Modules

Damage Control Module Table

Guild	Name	TL	Cost					RP	Ma	PU	BP	Defense against Attack Type								DRF
			Me	Si	Ex	Re	O					So	Ex	Cs	Ch	He	Ra	Di	Nu	
Blue Talon Corps	Mech Medic	1	16	42	0	0	1	30	9	25	41	Yes	Yes	0	0	0	Yes	0	0	5
	Mech Healer	2	33	64	0	0	2	26	11	27	56	Yes	Yes	0	0	0	Yes	0	0	7
	Positronic Healer	3	45	85	2	0	3	24	13	30	65	Yes	Yes	0	0	0	Yes	0	0	10
Crimson Dawn	Auto Repair	1	30	20	0	0	2	48	7	30	40	Yes	Yes	0	0	Yes	0	Yes	0	4
	Advanced Repair	2	45	40	1	0	3	40	10	32	53	Yes	Yes	0	0	Yes	0	Yes	0	7
	Arktron's Repair	3	60	60	4	0	6	30	12	32	65	Yes	Yes	0	0	Yes	0	Yes	0	11
Diamond Cooperative	Fixer 1	1	24	32	0	0	1	32	8	25	44	Yes	0	0	0	Yes	0	Yes	Yes	5
	Fixer 2	2	40	52	2	0	2	26	10	27	58	Yes	0	0	0	Yes	0	Yes	Yes	7
	Fixer 3	3	52	66	5	0	3	22	12	30	66	Yes	0	0	0	Yes	0	Yes	Yes	10
Emerald Combine	Midas	1	22	30	4	0	1	54	7	25	40	0	0	Yes	Yes	0	Yes	0	Yes	5
	Midas 2	2	36	44	8	0	2	48	10	25	53	0	0	Yes	Yes	0	Yes	0	Yes	8
	Midas 3	3	48	58	11	0	3	44	12	27	62	0	0	Yes	Yes	0	Yes	0	Yes	11
	Midas 4	4	61	73	15	0	4	36	15	30	74	0	0	Yes	Yes	0	Yes	0	Yes	14
	Midas 5	5	77	90	20	0	5	28	16	37	88	0	0	Yes	Yes	0	Yes	0	Yes	18
Golden Order of Reason	Onboard Recovery I	1	40	20	0	0	1	38	7	20	46	0	0	Yes	Yes	0	0	Yes	0	5
	Onboard Recovery II	2	60	35	0	0	2	30	10	22	60	0	0	Yes	Yes	0	0	Yes	0	7
	Onboard Recovery III	3	82	48	0	0	3	24	12	25	69	0	0	Yes	Yes	0	0	Yes	0	9

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Defense Modules

Defense Module Table

Guild	Name	TL	Cost					RP	Ma	PU	BP	Defense against Attack Type								Shield Values Against								ADF
			Me	Si	Ex	Re	O					So	Ex	Cs	Ch	He	Ra	Di	Nu	So	Ex	Cs	Ch	He	Ra	Di	Nu	
Blue Talon Corps	Calorific Dispersal	1	15	0	10	0	1	130	8	18	15	Yes	Yes	0	0	0	Yes	0	0	0	0	0	45	34	0	0	0	
	Calorific Dispersal 2	2	35	0	21	0	1	112	10	31	35	Yes	Yes	0	0	0	Yes	0	0	0	0	89	78	0	0	0		
	Calorific Dispersal 3	3	53	0	35	0	1	88	13	50	60	Yes	Yes	0	0	0	Yes	0	0	0	0	111	99	0	0	0		
	Particle Wall	1	16	0	8	0	0	124	10	12	13	Yes	Yes	0	0	0	Yes	0	0	36	0	0	34	0	0	0	5	
	Particle Wall 2	2	38	0	28	0	0	106	14	12	33	Yes	Yes	0	0	0	Yes	0	0	81	0	0	76	0	0	0	5	
	Particle Wall 3	3	50	0	44	0	0	80	17	12	56	Yes	Yes	0	0	0	Yes	0	0	104	0	0	98	0	0	0	5	
	Plasmic Solvent T4	1	10	0	15	0	0	138	8	25	14	Yes	Yes	0	0	0	Yes	0	0	0	0	24	0	0	35	0	2	
	Plasmic Solvent T12	2	23	0	33	0	0	118	11	40	33	Yes	Yes	0	0	0	Yes	0	0	0	0	65	0	0	78	0	8	
	Plasmic Solvent T20	3	38	0	50	0	3	94	14	55	57	Yes	Yes	0	0	0	Yes	0	0	0	0	87	0	0	101	0	15	
	Radion Wall	1	12	0	12	0	0	138	8	37	14	Yes	Yes	0	0	0	Yes	0	0	0	49	0	0	0	0	23	10	
	Radion Wall 2	2	26	0	26	0	0	120	10	53	34	Yes	Yes	0	0	0	Yes	0	0	0	95	0	0	0	0	70	10	
	Radion Wall 3	3	44	0	44	0	0	100	12	68	58	Yes	Yes	0	0	0	Yes	0	0	0	117	0	0	0	0	81	15	
Crimson Dawn	Curium Shield	1	8	0	12	2	1	200	4	31	16	Yes	Yes	0	0	Yes	0	Yes	0	0	0	0	34	0	0	5		
	Curium Shield II	2	15	0	20	2	2	200	6	37	25	Yes	Yes	0	0	Yes	0	Yes	0	0	0	0	50	0	0	8		
	Curium Shield III	3	20	0	26	3	3	194	8	43	30	Yes	Yes	0	0	Yes	0	Yes	0	0	0	0	67	0	0	11		
	Forge	4	30	0	30	0	4	190	9	30	30	Yes	Yes	0	0	Yes	0	Yes	0	0	0	94	0	0	0	11		
	Forge II	5	38	0	36	0	5	156	10	37	38	Yes	Yes	0	0	Yes	0	Yes	0	0	0	115	0	0	0	13		
	Forge III	6	48	0	42	0	6	120	12	50	48	Yes	Yes	0	0	Yes	0	Yes	0	0	0	135	0	0	0	15		
	Heat Sink	1	8	0	8	0	1	200	6	18	12	Yes	Yes	0	0	Yes	0	Yes	0	0	0	47	0	0	0	5		
	Heat Sink II	2	14	0	16	0	2	200	8	22	18	Yes	Yes	0	0	Yes	0	Yes	0	0	0	63	0	0	0	7		
	Heat Sink III	3	22	0	23	0	3	200	9	26	24	Yes	Yes	0	0	Yes	0	Yes	0	0	0	79	0	0	0	9		
	Guardian	4	28	0	35	4	4	148	10	50	40	Yes	Yes	0	0	Yes	0	Yes	0	0	0	81	0	44	11			
	Guardian II	5	38	0	48	5	5	114	10	62	52	Yes	Yes	0	0	Yes	0	Yes	0	0	0	99	0	54	13			
	Guardian III	6	51	0	64	6	6	80	11	70	65	Yes	Yes	0	0	Yes	0	Yes	0	0	0	121	0	65	16			

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Defense Module Table (continued)

Guild	Name	TL	Cost					RP	Ma	PU	BP	Defense against Attack Type								Shield Values Against								ADF
			Me	Si	Ex	Re	O					So	Ex	Cs	Ch	He	Ra	Di	Nu	So	Ex	Cs	Ch	He	Ra	Di	Nu	
Crimson Dawn (continued)	Matter Block	1	4	0	8	0	1	200	7	18	15	Yes	Yes	0	0	Yes	0	Yes	0	56	0	0	37	0	0	0	0	3
	Matter Block II	2	8	0	16	0	3	200	9	18	24	Yes	Yes	0	0	Yes	0	Yes	0	72	0	0	51	0	0	0	0	5
	Matter Block III	3	10	0	25	0	6	200	11	18	30	Yes	Yes	0	0	Yes	0	Yes	0	88	0	0	65	0	0	0	0	9
	Mind Wall	4	12	0	30	0	8	156	12	37	36	Yes	Yes	0	0	Yes	0	Yes	0	101	44	0	80	0	0	0	0	5
	Mind Wall II	5	13	0	32	0	11	124	13	37	42	Yes	Yes	0	0	Yes	0	Yes	0	122	54	0	99	0	0	0	0	9
	Mind Wall III	6	14	0	32	0	14	90	14	37	50	Yes	Yes	0	0	Yes	0	Yes	0	145	64	0	121	0	0	0	0	14
	Neutralizer	1	2	0	10	0	1	200	6	12	12	Yes	Yes	0	0	Yes	0	Yes	0	0	45	0	0	0	0	0	46	0
	Neutralizer II	2	4	0	16	0	2	200	10	25	16	Yes	Yes	0	0	Yes	0	Yes	0	0	59	0	0	0	0	0	61	4
	Neutralizer III	3	6	0	21	0	3	200	11	36	21	Yes	Yes	0	0	Yes	0	Yes	0	0	73	0	0	0	0	0	78	7
	Neutralizer IV	4	8	0	28	0	4	170	12	46	27	Yes	Yes	0	0	Yes	0	Yes	0	0	87	0	0	0	0	0	94	10
	Neutralizer V	5	10	0	34	0	5	132	12	56	34	Yes	Yes	0	0	Yes	0	Yes	0	0	105	0	0	0	0	0	115	12
	Neutralizer VI	6	14	0	40	0	6	98	13	67	40	Yes	Yes	0	0	Yes	0	Yes	0	0	126	0	0	0	0	0	134	15
	Psionic Barrier	1	6	0	6	1	1	200	7	25	14	Yes	Yes	0	0	Yes	0	Yes	0	0	0	45	0	0	0	54	0	0
	Psionic Barrier II	2	10	0	10	3	2	200	8	56	20	Yes	Yes	0	0	Yes	0	Yes	0	0	0	59	0	0	0	69	0	0
	Psionic Barrier III	3	16	0	16	6	4	190	10	87	28	Yes	Yes	0	0	Yes	0	Yes	0	0	0	75	0	0	0	86	0	0
	Psionic Shield	4	24	0	24	8	5	140	10	37	35	Yes	Yes	0	0	Yes	0	Yes	0	0	0	91	0	0	0	100	0	0
	Psionic Shield II	5	30	0	30	9	7	110	11	50	42	Yes	Yes	0	0	Yes	0	Yes	0	0	0	109	0	0	0	120	0	0
	Psionic Shield III	6	36	0	36	10	9	72	12	62	48	Yes	Yes	0	0	Yes	0	Yes	0	0	0	128	0	0	0	142	0	0
Diamond Cooperative	Arc Deflector 1	1	12	0	10	0	0	156	5	27	13	Yes	0	0	0	Yes	0	Yes	Yes	45	0	0	0	0	0	0	0	0
	Arc Deflector 2	2	22	0	21	0	0	126	6	38	27	Yes	0	0	0	Yes	0	Yes	Yes	63	0	0	0	0	0	0	0	0
	Arc Deflector 3	3	33	0	32	0	0	100	8	52	40	Yes	0	0	0	Yes	0	Yes	Yes	90	0	0	0	0	0	0	0	0
	Arc Deflector 4	4	46	0	44	0	0	74	10	68	55	Yes	0	0	0	Yes	0	Yes	Yes	127	0	0	0	0	0	0	0	0
	Dispersion Field 1	1	11	0	11	0	1	160	6	15	13	Yes	0	0	0	Yes	0	Yes	Yes	0	0	50	50	0	0	0	0	0
	Dispersion Field 2	2	23	0	23	0	1	134	7	18	26	Yes	0	0	0	Yes	0	Yes	Yes	0	0	69	69	0	0	0	0	0
	Dispersion Field 3	3	35	0	35	0	1	108	9	22	39	Yes	0	0	0	Yes	0	Yes	Yes	0	0	95	95	0	0	0	0	0
	Dispersion Field 4	4	50	0	50	0	1	80	11	30	52	Yes	0	0	0	Yes	0	Yes	Yes	0	0	131	131	0	0	0	0	0

Key: *=ATV tech tie; TL=Tech Level; Me=Metals; Si=Silicates; Ex=Exotics; Re=Reactives; O=Organics; RP=Research Points; Ma=Mass; PU=Power Used; BP=Build Points; So=Solid; Ex=Explosive; Cs=Corrosive; Ch=Chemical; He=Heat; Ra=Radiation; Di=Discharge; Nu=Nuclear; ADF=Active Defense Factor

Defense Module Table (continued)

Guild	Name	TL	Cost					RP	Ma	PU	BP	Defense against Attack Type								Shield Values Against								ADF	
			Me	Si	Ex	Re	O					So	Ex	Cs	Ch	He	Ra	Di	Nu	So	Ex	Cs	Ch	He	Ra	Di	Nu		
Diamond Cooperative (continued)	Neutron Deflector	1	13	0	10	0	0	150	6	37	14	Yes	0	0	0	Yes	0	Yes	Yes	0	0	0	0	0	31	40	0	8	
	Gamma Deflector	2	27	0	20	0	0	120	8	62	28	Yes	0	0	0	Yes	0	Yes	Yes	0	0	0	0	0	68	75	0	10	
	Neutron Hypershield	3	41	0	32	0	0	96	10	87	41	Yes	0	0	0	Yes	0	Yes	Yes	0	0	0	0	0	101	120	0	12	
	LowVolt Neutron Shield	4	54	0	43	0	0	72	11	6	55	Yes	0	0	0	Yes	0	Yes	Yes	0	0	0	0	0	90	110	0	10	
	Reactive Carapace 1	1	10	2	10	0	0	120	3	22	14	Yes	0	0	0	Yes	0	Yes	Yes	9	7	12	11	6	5	7	5	22	
	Reactive Carapace 2	2	20	5	22	0	0	100	4	38	24	Yes	0	0	0	Yes	0	Yes	Yes	18	16	22	21	15	13	16	13	38	
	Reactive Carapace 3	3	32	8	36	0	1	80	5	65	36	Yes	0	0	0	Yes	0	Yes	Yes	27	25	32	31	24	21	25	21	59	
	Thermal Disipator	1	16	0	6	0	0	144	8	18	15	Yes	0	0	0	Yes	0	Yes	Yes	0	40	0	0	39	0	0	31	4	
	Thermal Disipator B	2	26	0	12	0	0	116	10	31	29	Yes	0	0	0	Yes	0	Yes	Yes	0	65	0	0	64	0	0	53	5	
Thermal Absorber	3	38	0	17	0	0	90	13	43	42	Yes	0	0	0	Yes	0	Yes	Yes	0	93	0	0	91	0	0	81	6		
Thermal Reflector	4	56	0	24	0	0	72	15	56	57	Yes	0	0	0	Yes	0	Yes	Yes	0	118	0	0	117	0	0	105	9		
Emerald Combine	Absorption Field 1	1	8	0	16	0	0	120	10	15	16	0	0	Yes	Yes	0	Yes	0	Yes	0	62	0	51	0	0	0	0	6	
	Absorption Field 2	2	18	0	40	0	0	102	12	26	34	0	0	Yes	Yes	0	Yes	0	Yes	0	100	0	92	0	0	0	0	11	
	Absorption Field 3	3	28	0	74	0	0	86	14	43	60	0	0	Yes	Yes	0	Yes	0	Yes	0	175	0	151	0	0	0	0	17	
	Electron Disperser 1	1	6	0	14	0	0	134	5	21	14	0	0	Yes	Yes	0	Yes	0	Yes	0	0	0	0	0	0	42	50	8	
	Electron Disperser 2	2	14	0	36	0	0	118	8	42	31	0	0	Yes	Yes	0	Yes	0	Yes	0	0	0	0	0	0	69	91	12	
	Electron Disperser 3	3	24	0	64	0	0	102	10	52	54	0	0	Yes	Yes	0	Yes	0	Yes	0	0	0	0	0	0	126	149	18	
	Ice Drip	1	9	0	17	0	0	122	8	42	16	0	0	Yes	Yes	0	Yes	0	Yes	0	0	0	47	0	43	0	0	0	5
	Ice Maker	2	18	0	42	0	0	106	10	56	34	0	0	Yes	Yes	0	Yes	0	Yes	0	0	0	90	0	82	0	0	0	10
	Ice Storm	3	26	0	76	0	0	90	13	78	61	0	0	Yes	Yes	0	Yes	0	Yes	0	0	0	146	0	134	0	0	0	15
	Rontgen Barrier 1	1	10	0	15	0	1	128	7	31	15	0	0	Yes	Yes	0	Yes	0	Yes	0	0	0	0	0	56	0	0	8	
	Rontgen Barrier 2	2	19	0	41	0	1	112	9	43	33	0	0	Yes	Yes	0	Yes	0	Yes	0	0	0	0	0	95	0	0	13	
	Rontgen Barrier 3	3	27	0	65	0	1	94	11	62	56	0	0	Yes	Yes	0	Yes	0	Yes	0	0	0	0	0	152	0	0	19	
	*Steel Curtain 1	1	8	1	14	0	0	200	5	6	14	0	0	Yes	Yes	0	Yes	0	Yes	69	0	0	0	0	0	0	0	5	
	*Wildfire	2	14	1	20	0	0	200	6	25	23	0	0	Yes	Yes	0	Yes	0	Yes	52	0	44	49	0	0	0	0	12	
	*Steel Curtain 2	3	19	3	29	0	0	186	8	6	32	0	0	Yes	Yes	0	Yes	0	Yes	100	0	0	0	0	0	0	0	5	
	*Steel Curtain 3	4	24	4	41	0	0	154	10	6	39	0	0	Yes	Yes	0	Yes	0	Yes	165	0	0	0	0	0	0	0	5	
Wildfire Plus	5	26	7	50	0	1	120	12	31	48	0	0	Yes	Yes	0	Yes	0	Yes	99	0	95	98	0	0	0	0	12		
Wildfire Vaporizer	6	30	12	68	0	2	88	15	43	62	0	0	Yes	Yes	0	Yes	0	Yes	120	0	124	125	0	0	0	0	14		

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Defense Module Table (continued)

Guild	Name	TL	Cost					RP	Ma	PU	BP	Defense against Attack Type								Shield Values Against								ADF
			Me	Si	Ex	Re	O					So	Ex	Cs	Ch	He	Ra	Di	Nu	So	Ex	Cs	Ch	He	Ra	Di	Nu	
Golden Order of Reason	Discharge Field I	1	16	0	10	0	0	124	7	32	16	0	0	Yes	Yes	0	0	Yes	0	0	0	0	0	0	32	0	0	0
	Discharge Field II	2	38	0	20	0	0	112	9	47	37	0	0	Yes	Yes	0	0	Yes	0	0	0	0	0	0	67	0	0	0
	Discharge Field III	3	56	0	28	0	0	96	11	60	61	0	0	Yes	Yes	0	0	Yes	0	0	0	0	0	0	99	0	0	0
	Energy Shield I	1	20	0	5	0	0	108	10	43	17	0	0	Yes	Yes	0	0	Yes	0	0	21	0	0	0	0	0	22	10
	Energy Shield II	2	42	0	12	0	0	90	12	60	39	0	0	Yes	Yes	0	0	Yes	0	0	59	0	0	0	0	0	57	12
	Energy Shield III	3	64	0	20	0	0	78	14	87	64	0	0	Yes	Yes	0	0	Yes	0	0	91	0	0	0	0	0	85	14
	Heat Shield	1	18	0	6	0	0	118	9	37	16	0	0	Yes	Yes	0	0	Yes	0	0	0	0	35	0	0	0	0	0
	Magma Shield	2	41	0	15	0	0	102	11	52	36	0	0	Yes	Yes	0	0	Yes	0	0	0	0	71	0	0	0	0	0
	Solar Core Radiator	3	60	0	22	0	0	84	12	75	60	0	0	Yes	Yes	0	0	Yes	0	0	0	0	109	0	0	0	0	0
	Radiation Shield I	1	12	0	10	0	0	156	6	25	14	0	0	Yes	Yes	0	0	Yes	0	0	0	0	0	37	0	0	5	5
	Radiation Shield II	2	26	0	24	0	0	138	7	37	32	0	0	Yes	Yes	0	0	Yes	0	0	0	0	0	59	0	24	5	5
	Radiation Shield III	3	44	0	40	0	0	120	9	50	53	0	0	Yes	Yes	0	0	Yes	0	0	0	0	0	81	0	42	5	5
	Radiation Shield IV	4	60	0	60	0	0	100	12	62	70	0	0	Yes	Yes	0	0	Yes	0	0	0	0	0	106	0	62	5	5
	*Sentinel I	1	12	2	10	0	1	150	6	31	17	0	0	Yes	Yes	0	0	Yes	0	4	5	7	7	6	13	9	11	20
	*Sentinel II	2	22	4	16	0	1	132	7	45	32	0	0	Yes	Yes	0	0	Yes	0	9	10	12	12	11	18	14	16	29
	*Sentinel III	3	38	8	24	0	1	114	8	60	47	0	0	Yes	Yes	0	0	Yes	0	14	15	17	17	16	23	19	21	40
	Sentinel IV	4	65	12	38	0	2	90	10	76	66	0	0	Yes	Yes	0	0	Yes	0	19	20	22	22	21	28	24	26	55

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ECM Modules

ECM Module Table

Guild	Name	TL	Cost					RP	Ma	PU	BP	Defense against Attack Type								ECM
			Me	Si	Ex	Re	O					So	Ex	Cs	Ch	He	Ra	Di	Nu	
Blue Talon Corps	Shadow 1	1	0	18	6	0	1	52	4	18	21	Yes	Yes	0	0	0	Yes	0	0	11
	Shadow 2	2	0	33	13	0	3	48	5	18	35	Yes	Yes	0	0	0	Yes	0	0	14
	Shadow 3	3	0	46	21	0	5	42	7	15	49	Yes	Yes	0	0	0	Yes	0	0	18
Crimson Dawn	Psi Shadow	1	0	6	12	0	2	72	3	22	18	Yes	Yes	0	0	Yes	0	Yes	0	12
	Psi Shadow II	2	0	13	26	0	3	62	4	22	28	Yes	Yes	0	0	Yes	0	Yes	0	15
	Psionic Cloak	3	0	22	44	8	5	54	6	18	42	Yes	Yes	0	0	Yes	0	Yes	0	18
	Improved Psionic Cloak	4	0	35	65	14	6	50	7	22	50	Yes	Yes	0	0	Yes	0	Yes	0	21
Diamond Cooperative	Fader	1	0	12	12	0	1	92	4	18	24	Yes	0	0	0	Yes	0	Yes	Yes	6
	Fader 2	2	0	26	26	0	2	84	6	18	38	Yes	0	0	0	Yes	0	Yes	Yes	11
	Fader 3	3	0	36	38	0	3	78	7	15	48	Yes	0	0	0	Yes	0	Yes	Yes	16
	Fader 4	4	0	46	52	0	4	70	8	15	55	Yes	0	0	0	Yes	0	Yes	Yes	21
	Fader 5	5	0	61	67	0	4	60	10	18	60	Yes	0	0	0	Yes	0	Yes	Yes	27
Emerald Combine	Chameleon	1	0	2	20	0	1	58	4	18	22	0	0	Yes	Yes	0	Yes	0	Yes	14
	Chameleon 2	2	0	8	36	0	2	54	5	18	36	0	0	Yes	Yes	0	Yes	0	Yes	19
	Chameleon 3	3	0	18	55	0	4	80	6	15	53	0	0	Yes	Yes	0	Yes	0	Yes	23
Golden Order of Reason	Screen I	1	6	18	16	0	1	56	4	16	20	0	0	Yes	Yes	0	0	Yes	0	10
	Screen II	2	13	35	32	0	2	50	5	16	33	0	0	Yes	Yes	0	0	Yes	0	13
	Screen III	3	20	49	45	0	3	46	6	12	46	0	0	Yes	Yes	0	0	Yes	0	16

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Power Modules

Power Module Table

Guild	Name	TL	Cost					RP	Ma	PU	BP	Defense against Attack Type								TR	PSC	GR
			Me	Si	Ex	Re	O					So	Ex	Cs	Ch	He	Ra	Di	Nu			
Blue Talon Corps	Solar Panels	1	0	4	8	12	1	36	5	0	12	Yes	Yes	0	0	0	Yes	0	0	0	400	50
	Thermic Panels	2	0	6	12	15	1	34	7	0	17	Yes	Yes	0	0	0	Yes	0	0	0	500	60
	Thermal Block	1	0	20	90	100	6	16	255	0	56	0	0	0	0	0	0	0	0	1000	10000	0
	Thermal Block 2	2	0	50	140	150	11	12	255	0	84	0	0	0	0	0	0	0	0	1300	13000	0
	Thermal Intensifier	3	0	10	18	22	2	30	10	0	23	Yes	Yes	0	0	0	Yes	0	0	28	650	70
	Thermal Intensifier 2	4	0	12	25	30	2	24	12	0	40	Yes	Yes	0	0	0	Yes	0	0	32	750	80
	Thermal Intensifier 3	5	0	16	30	36	3	20	16	0	54	Yes	Yes	0	0	0	Yes	0	0	38	1250	95
	Thermal Intensifier 4	6	10	18	32	40	4	14	20	0	60	Yes	Yes	0	0	0	Yes	0	0	44	1875	110
	*Thermatic Capacitor	1	0	0	26	28	3	14	16	0	24	Yes	Yes	0	0	0	Yes	0	0	62	2500	0
	*Thermatic Capacitor 2	2	0	8	34	35	3	10	19	0	41	Yes	Yes	0	0	0	Yes	0	0	77	3000	0
	*Thermatic Capacitor 3	3	0	15	40	40	3	6	22	0	56	Yes	Yes	0	0	0	Yes	0	0	115	3500	0
Crimson Dawn	Arktron Wave Store	1	10	10	80	70	6	26	255	0	40	0	0	0	0	0	0	0	0	1000	8000	50
	Arktron Wave Store 2	2	15	20	140	135	11	22	255	0	65	0	0	0	0	0	0	0	0	1750	14000	70
	Arktron Wave Store 3	3	25	30	200	160	16	16	255	0	90	0	0	0	0	0	0	0	0	2250	18000	85
	Arktron Wave Tube I	1	0	3	20	20	3	12	19	0	25	Yes	Yes	0	0	Yes	0	Yes	0	75	3000	40
	Arktron Wave Tube II	2	0	5	32	32	4	8	21	0	45	Yes	Yes	0	0	Yes	0	Yes	0	90	3500	45
	Arktron Wave Tube III	3	0	8	45	45	5	6	22	0	62	Yes	Yes	0	0	Yes	0	Yes	0	100	4000	50
	*Telekinetitron	1	0	2	12	15	2	24	8	0	17	Yes	Yes	0	0	Yes	0	Yes	0	40	600	80
	*Telekinetitron II	2	0	3	20	25	4	20	10	0	24	Yes	Yes	0	0	Yes	0	Yes	0	60	900	120
	*Telekinetitron III	3	0	5	30	40	6	16	11	0	31	Yes	Yes	0	0	Yes	0	Yes	0	90	1100	180
	*Telekinetitron IV	4	0	8	40	56	8	10	13	0	40	Yes	Yes	0	0	Yes	0	Yes	0	125	1250	250
Diamond Cooperative	Camlocked Gimmel	1	25	5	120	100	6	8	255	0	64	0	0	0	0	0	0	0	0	750	10000	0
	*Gamma Generator	1	0	0	12	12	1	32	6	0	14	Yes	0	0	0	Yes	0	Yes	Yes	0	400	40
	*Flywheel Generator	2	0	0	16	16	1	28	8	0	18	Yes	0	0	0	Yes	0	Yes	Yes	25	500	60
	*Flywheel Generator 2	3	0	0	28	28	1	24	11	0	26	Yes	0	0	0	Yes	0	Yes	Yes	40	800	75
	*Flywheel Generator 3	4	0	4	45	45	3	18	13	0	36	Yes	0	0	0	Yes	0	Yes	Yes	60	1250	95
	Flywheel Generator 4	5	4	4	60	60	4	16	14	0	48	Yes	0	0	0	Yes	0	Yes	Yes	80	1750	120

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Power Module Table (continued)

Guild	Name	TL	Cost					RP	Ma	PU	BP	Defense against Attack Type								TR	PSC	GR
			Me	Si	Ex	Re	O					So	Ex	Cs	Ch	He	Ra	Di	Nu			
Diamond Cooperative (continued)	Reciprocating Gimmel	1	0	0	24	24	2	12	18	0	23	Yes	0	0	0	Yes	0	Yes	Yes	40	2500	0
	Reciprocating Gimmel 2	2	0	0	38	38	3	10	19	0	42	Yes	0	0	0	Yes	0	Yes	Yes	50	2800	0
	Reciprocating Gimmel 3	3	0	0	60	60	4	6	21	0	58	Yes	0	0	0	Yes	0	Yes	Yes	60	3200	0
Emerald Combine	*Gravitic Reactor	1	0	0	15	4	1	32	6	0	13	0	0	Yes	Yes	0	Yes	0	Yes	0	500	55
	*Gravitic Converter 1	2	0	0	26	12	1	24	8	0	22	0	0	Yes	Yes	0	Yes	0	Yes	25	700	75
	*Gravitic Converter 2	3	0	0	44	20	2	20	11	0	40	0	0	Yes	Yes	0	Yes	0	Yes	32	1000	95
	*Gravitic Converter 3	4	0	0	62	30	3	18	13	0	52	0	0	Yes	Yes	0	Yes	0	Yes	40	1200	120
	Gravitic Converter 4	5	0	0	85	40	4	12	15	0	66	0	0	Yes	Yes	0	Yes	0	Yes	47	1500	140
	Kinetic Stasis Well	1	10	10	180	60	6	8	255	0	66	0	0	0	0	0	0	0	0	900	10000	0
	Kinetic Stasis Tank	1	0	0	30	12	3	14	16	0	22	0	0	Yes	Yes	0	Yes	0	Yes	50	2500	0
	Kinetic Stasis Tank 2	2	0	0	45	20	3	10	18	0	42	0	0	Yes	Yes	0	Yes	0	Yes	65	2800	0
	Kinetic Stasis Tank 3	3	0	0	72	26	4	8	19	0	60	0	0	Yes	Yes	0	Yes	0	Yes	87	3200	0
Golden Order of Reason	Hydrogen Drive	1	2	0	10	10	1	36	9	0	14	0	0	Yes	Yes	0	0	Yes	0	0	425	50
	Hydrogen Scoop I	2	5	0	20	18	2	30	11	0	24	0	0	Yes	Yes	0	0	Yes	0	30	625	65
	Hydrogen Scoop II	3	10	0	30	26	2	26	12	0	45	0	0	Yes	Yes	0	0	Yes	0	32	875	70
	Hydrogen Scoop III	4	14	0	44	40	3	24	14	0	55	0	0	Yes	Yes	0	0	Yes	0	45	1375	95
	Hydrogen Scoop IV	5	25	0	50	50	3	20	16	0	70	0	0	Yes	Yes	0	0	Yes	0	50	1750	107
	*Ion Battery I	1	0	0	24	24	1	14	21	0	25	0	0	Yes	Yes	0	0	Yes	0	80	3500	0
	*Ion Battery II	2	0	0	40	40	2	10	22	0	45	0	0	Yes	Yes	0	0	Yes	0	85	3750	0
	*Ion Battery III	3	0	0	62	62	3	8	24	0	61	0	0	Yes	Yes	0	0	Yes	0	95	4000	0
	Ion Station	1	40	0	120	140	8	10	255	0	72	0	0	0	0	0	0	0	0	1400	13000	0

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Propulsion Modules

Propulsion Module Table

Guild	Name	TL	Cost					RP	Ma	PU	BP	Defense against Attack Type								ST	OT
			Me	Si	Ex	Re	O					So	Ex	Cs	Ch	He	Ra	Di	Nu		
Blue Talon Corps	Implosive Thruster	1	0	10	0	10	1	12	2	2	15	Yes	Yes	0	0	0	Yes	0	0	2	25
	Implosion Drive	2	0	24	0	30	1	10	3	5	28	Yes	Yes	0	0	0	Yes	0	0	3	40
	Thermic Thruster 1	3	20	10	0	25	2	24	7	15	28	Yes	Yes	0	0	0	Yes	0	0	13	30
	Magma Rocket	4	0	42	0	54	1	8	5	10	48	Yes	Yes	0	0	0	Yes	0	0	3	55
	Thermic Thruster 2	5	28	20	0	40	3	20	7	15	38	Yes	Yes	0	0	0	Yes	0	0	28	30
	Diantos Rocket	6	0	64	0	80	1	4	6	12	70	Yes	Yes	0	0	0	Yes	0	0	3	75
	Thermic Thruster 3	7	42	38	0	60	4	18	9	12	55	Yes	Yes	0	0	0	Yes	0	0	35	41
	Thermic Thruster 4	8	44	40	0	60	4	16	9	10	58	Yes	Yes	0	0	0	Yes	0	0	40	42
	Thermic Thruster 5	9	40	46	0	60	5	12	10	15	62	Yes	Yes	0	0	0	Yes	0	0	42	47
	Thermic Thruster 6	10	50	60	0	60	6	10	11	12	70	Yes	Yes	0	0	0	Yes	0	0	45	52
	Nuclear Engine	1	8	2	0	8	1	38	4	2	10	Yes	Yes	0	0	0	Yes	0	0	14	18
	E-Nuclear Engine	2	10	4	0	12	1	34	5	5	15	Yes	Yes	0	0	0	Yes	0	0	17	24
	A-Nuclear Engine	3	16	8	0	22	2	28	6	10	24	Yes	Yes	0	0	0	Yes	0	0	20	25
Crimson Dawn	Reactive Accelerator	1	6	1	0	10	1	46	4	3	8	Yes	Yes	0	0	Yes	0	Yes	0	12	7
	Turbo Accelerator	2	7	1	0	14	1	36	5	6	13	Yes	Yes	0	0	Yes	0	Yes	0	16	11
	Arktron Pulse Drive	3	10	2	0	20	2	22	7	18	20	Yes	Yes	0	0	Yes	0	Yes	0	18	21
	Arktron Stream Drive	4	14	4	0	30	3	20	8	18	32	Yes	Yes	0	0	Yes	0	Yes	0	23	28
	Arktron Wave Drive	5	16	6	0	35	4	16	9	18	35	Yes	Yes	0	0	Yes	0	Yes	0	28	30
	Arktron Jet Drive	6	20	9	2	40	5	14	9	11	44	Yes	Yes	0	0	Yes	0	Yes	0	33	35
	Arktron Storm Drive	7	24	12	5	45	6	10	10	18	50	Yes	Yes	0	0	Yes	0	Yes	0	37	40
	Arktron Cyclonic Drive	8	30	15	10	52	7	6	10	18	60	Yes	Yes	0	0	Yes	0	Yes	0	40	44
	Reactive Thruster	1	4	1	0	6	1	46	4	3	7	Yes	Yes	0	0	Yes	0	Yes	0	8	14
	Turbo Thruster	2	6	1	0	10	1	36	5	6	11	Yes	Yes	0	0	Yes	0	Yes	0	8	18

Key: TL=Tech Level; Me=Metals; Si=Silicates; Ex=Exotics; Re=Reactives; O=Organics; RP=Research Points; Ma=Mass; PU=Power Used; BP=Build Points; So=Solid; Ex=Explosive; Cs=Corrosive; Ch=Chemical; He=Heat; Ra=Radiation; Di=Discharge; Nu=Nuclear; ST=Solar Thrust; OT=Orbital Thrust

Propulsion Module Table (continued)

Guild	Name	TL	Cost					RP	Ma	PU	BP	Defense against Attack Type								ST	OT
			Me	Si	Ex	Re	O					So	Ex	Cs	Ch	He	Ra	Di	Nu		
Diamond Cooperative	Pulse Emitter	1	3	0	1	6	1	30	5	2	6	Yes	0	0	0	Yes	0	Yes	Yes	11	9
	Pulse Thruster	2	5	0	1	13	1	26	7	5	10	Yes	0	0	0	Yes	0	Yes	Yes	16	14
	Pulse Drive	3	10	0	1	20	1	22	8	10	20	Yes	0	0	0	Yes	0	Yes	Yes	20	22
	Centridrive	4	16	0	3	25	1	20	8	15	28	Yes	0	0	0	Yes	0	Yes	Yes	24	25
	Conicual Pulse Drive	5	20	0	5	29	2	16	10	15	33	Yes	0	0	0	Yes	0	Yes	Yes	29	29
	Tamped Centridrive	6	30	0	8	41	3	14	12	12	41	Yes	0	0	0	Yes	0	Yes	Yes	34	34
	Baros Drive	7	32	0	10	45	4	12	12	10	44	Yes	0	0	0	Yes	0	Yes	Yes	39	39
	Enhanced Baros Drive	8	37	0	12	48	5	8	13	15	52	Yes	0	0	0	Yes	0	Yes	Yes	41	41
	Enclosed Baros Drive	9	46	0	15	60	6	4	15	12	60	Yes	0	0	0	Yes	0	Yes	Yes	45	45
	Pulse Rocket	1	4	0	0	16	1	30	4	2	12	Yes	0	0	0	Yes	0	Yes	Yes	5	14
Emerald Combine	Multipulse Rocket	2	7	0	0	25	1	26	4	5	19	Yes	0	0	0	Yes	0	Yes	Yes	7	19
	Gravinuclear Thruster	1	4	0	1	8	1	32	5	2	7	0	0	Yes	Yes	0	Yes	0	Yes	12	8
	Isonuclear Thruster	2	6	0	3	16	1	26	7	5	11	0	0	Yes	Yes	0	Yes	0	Yes	16	20
	Sling Drive	1	2	0	8	5	1	32	3	2	15	0	0	Yes	Yes	0	Yes	0	Yes	16	4
	Whipshot Drive	2	5	0	20	10	2	26	4	5	23	0	0	Yes	Yes	0	Yes	0	Yes	23	6
	Polar Engine	3	10	0	3	20	1	24	7	12	20	0	0	Yes	Yes	0	Yes	0	Yes	26	12
	Di-Polar Engine	4	12	0	2	26	2	20	8	15	26	0	0	Yes	Yes	0	Yes	0	Yes	32	15
	Percussion Drive	5	18	0	5	40	3	18	9	15	34	0	0	Yes	Yes	0	Yes	0	Yes	36	20
	Gravitic Drop Drive	6	23	0	8	44	3	14	10	12	39	0	0	Yes	Yes	0	Yes	0	Yes	40	24
	Gravitic Thruster	7	27	0	10	50	4	10	11	15	45	0	0	Yes	Yes	0	Yes	0	Yes	45	28
	Displacement Drive	8	35	0	15	53	5	8	13	7	52	0	0	Yes	Yes	0	Yes	0	Yes	50	32
	Mammon Engine	9	44	0	24	64	6	6	15	12	64	0	0	Yes	Yes	0	Yes	0	Yes	55	35

Key: TL=Tech Level; Me=Metals; Si=Silicates; Ex=Exotics; Re=Reactives; O=Organics; RP=Research Points; Ma=Mass; PU=Power Used; BP=Build Points; So=Solid; Ex=Explosive; Cs=Corrosive; Ch=Chemical; He=Heat; Ra=Radiation; Di=Discharge; Nu=Nuclear; ST=Solar Thrust; OT=Orbital Thrust

Propulsion Module Table (continued)

Guild	Name	TL	Cost					RP	Ma	PU	BP	Defense against Attack Type								ST	OT
			Me	Si	Ex	Re	O					So	Ex	Cs	Ch	He	Ra	Di	Nu		
Golden Order of Reason	S-I Nuclear Engine	1	10	0	0	10	1	48	5	2	13	0	0	Yes	Yes	0	0	Yes	0	6	14
	E-I Nuclear Engine	2	18	0	4	20	2	40	7	3	19	0	0	Yes	Yes	0	0	Yes	0	8	18
	A-I Nuclear Engine	3	25	0	6	24	2	30	8	7	26	0	0	Yes	Yes	0	0	Yes	0	11	20
	Emissions Drive I	4	28	0	4	20	2	18	8	12	28	0	0	Yes	Yes	0	0	Yes	0	18	23
	Emissions Drive II	5	35	0	6	24	2	14	9	12	33	0	0	Yes	Yes	0	0	Yes	0	21	28
	Emissions Drive III	6	42	0	8	28	2	12	10	10	37	0	0	Yes	Yes	0	0	Yes	0	25	32
	Emissions Drive IV	7	45	0	14	36	3	8	12	7	46	0	0	Yes	Yes	0	0	Yes	0	28	36
	Emissions Drive V	8	46	0	20	44	4	6	14	12	53	0	0	Yes	Yes	0	0	Yes	0	31	39
	Emissions Drive VI	9	50	0	20	45	5	4	15	10	58	0	0	Yes	Yes	0	0	Yes	0	34	43
	S-II Nuclear Engine	1	6	0	0	4	1	48	5	2	8	0	0	Yes	Yes	0	0	Yes	0	10	11
	E-II Nuclear Engine	2	10	0	0	8	1	40	7	3	13	0	0	Yes	Yes	0	0	Yes	0	13	14
	A-II Nuclear Engine	3	13	0	1	11	2	30	8	7	17	0	0	Yes	Yes	0	0	Yes	0	15	16

Key: TL=Tech Level; Me=Metals; Si=Silicates; Ex=Exotics; Re=Reactives; O=Organics; RP=Research Points; Ma=Mass; PU=Power Used; BP=Build Points; So=Solid; Ex=Explosive; Cs=Corrosive; Ch=Chemical; He=Heat; Ra=Radiation; Di=Discharge; Nu=Nuclear; ST=Solar Thrust; OT=Orbital Thrust

Scout Modules

Scout Module Table

Guild	Name	TL	Cost					RP	Ma	PU	BP	Defense against Attack Type								SS
			Me	Si	Ex	Re	O					So	Ex	Cs	Ch	He	Ra	Di	Nu	
Blue Talon Corps	Inspector 1	1	0	16	4	0	1	56	3	10	12	Yes	Yes	0	0	0	Yes	0	0	2
	Inspector 2	2	0	30	10	0	2	46	5	10	22	Yes	Yes	0	0	0	Yes	0	0	3
	Inspector 3	3	0	48	20	0	3	28	7	7	34	Yes	Yes	0	0	0	Yes	0	0	5
Crimson Dawn	Telemapper	1	0	12	8	0	2	60	3	12	18	Yes	Yes	0	0	Yes	0	Yes	0	3
	Telemapper II	2	0	20	20	0	4	50	5	12	26	Yes	Yes	0	0	Yes	0	Yes	0	6
	Telemapper III	3	0	30	35	0	7	34	6	10	35	Yes	Yes	0	0	Yes	0	Yes	0	9
Diamond Cooperative	Surveyor	1	0	10	11	0	1	54	2	10	17	Yes	0	0	0	Yes	0	Yes	Yes	3
	Surveyor 2	2	0	16	18	0	2	44	4	10	23	Yes	0	0	0	Yes	0	Yes	Yes	4
	Surveyor 3	3	0	30	35	0	4	32	5	7	32	Yes	0	0	0	Yes	0	Yes	Yes	6
Emerald Combine	Seeker 1	1	0	6	24	0	2	52	5	10	24	0	0	Yes	Yes	0	Yes	0	Yes	5
	Seeker 2	2	0	12	38	0	4	44	6	10	30	0	0	Yes	Yes	0	Yes	0	Yes	7
	Seeker 3	3	0	17	50	0	6	30	8	7	36	0	0	Yes	Yes	0	Yes	0	Yes	9
Golden Order of Reason	Virtual Mapper v1	1	0	12	12	0	1	48	4	7	16	0	0	Yes	Yes	0	0	Yes	0	3
	Virtual Mapper v2	2	0	18	18	0	2	38	4	7	22	0	0	Yes	Yes	0	0	Yes	0	4
	Virtual Mapper v3	3	0	27	27	0	3	22	5	5	30	0	0	Yes	Yes	0	0	Yes	0	6

Key: TL=Tech Level; Me=Metals; Si=Silicates; Ex=Exotics; Re=Reactives; O=Organics; RP=Research Points; Ma=Mass; PU=Power Used; BP=Build Points; So=Solid; Ex=Explosive; Cs=Corrosive; Ch=Chemical; He=Heat; Ra=Radiation; Di=Discharge; Nu=Nuclear; SS=Scanning Speed

Tracking Modules

Tracking Module Table

Guild	Name	TL	Cost					RP	Ma	PU	BP	Defense against Attack Type								TV
			Me	Si	Ex	Re	O					So	Ex	Cs	Ch	He	Ra	Di	Nu	
Blue Talon Corps	*Targetmaster 1	1	5	14	0	0	1	34	6	3	16	Yes	Yes	0	0	0	Yes	0	0	15
	*Targetmaster 2	2	18	32	0	0	3	28	8	3	26	Yes	Yes	0	0	0	Yes	0	0	19
	*Targetmaster 3	3	34	48	0	0	4	24	11	3	38	Yes	Yes	0	0	0	Yes	0	0	24
Crimson Dawn	*Mental Wave Detector	1	10	8	0	0	2	32	8	6	20	Yes	Yes	0	0	Yes	0	Yes	0	12
	*Null Wave Detector	2	21	17	0	0	4	26	10	7	30	Yes	Yes	0	0	Yes	0	Yes	0	16
	*Thoughthound I	3	31	27	6	0	7	20	14	6	45	Yes	Yes	0	0	Yes	0	Yes	0	19
	*Thoughthound II	4	48	42	10	0	9	16	17	10	58	Yes	Yes	0	0	Yes	0	Yes	0	24
Diamond Cooperative	*Photonic Feedback Unit	1	10	10	0	0	2	30	8	3	22	Yes	0	0	0	Yes	0	Yes	Yes	14
	*Ionic Feedback Unit	2	20	20	0	0	4	24	10	3	33	Yes	0	0	0	Yes	0	Yes	Yes	18
	*Tachyon Feedback Unit	3	44	40	0	0	5	20	14	3	44	Yes	0	0	0	Yes	0	Yes	Yes	22
Emerald Combine	Auto Target 1000	1	9	9	0	0	2	28	9	3	21	0	0	Yes	Yes	0	Yes	0	Yes	10
	Auto Target 2000	2	20	20	0	0	3	22	10	3	30	0	0	Yes	Yes	0	Yes	0	Yes	14
	Auto Target 3000	3	34	34	0	0	4	20	13	3	39	0	0	Yes	Yes	0	Yes	0	Yes	18
Golden Order of Reason	Targeter I	1	14	6	0	0	2	36	9	2	24	0	0	Yes	Yes	0	0	Yes	0	14
	Targeter II	2	24	12	0	0	3	32	11	2	35	0	0	Yes	Yes	0	0	Yes	0	18
	Targeter III	3	37	20	0	0	5	28	15	2	51	0	0	Yes	Yes	0	0	Yes	0	22
	Targeter IV	4	48	34	0	0	5	20	17	5	56	0	0	Yes	Yes	0	0	Yes	0	26

Key: *=ATV tech tie; TL=Tech Level; Me=Metals; Si=Silicates; Ex=Exotics; Re=Reactives; O=Organics; RP=Research Points; Ma=Mass; PU=Power Used; BP=Build Points; So=Solid; Ex=Explosive; Cs=Corrosive; Ch=Chemical; He=Heat; Ra=Radiation; Di=Discharge; Nu=Nuclear; TS=Tracking Value

Transport Modules

Transport Module Table

Guild	Name	TL	Cost					RP	Ma	PU	BP	Defense against Attack Type								SC
			Me	Si	Ex	Re	O					So	Ex	Cs	Ch	He	Ra	Di	Nu	
Blue Talon Corps	*Orbital Staging	1	10	10	0	0	1	8	13	12	27	Yes	Yes	0	0	0	Yes	0	0	4
	*Orbital Staging 2	2	15	15	0	0	2	6	14	12	33	Yes	Yes	0	0	0	Yes	0	0	5
	Orbital Storage	1	25	16	0	0	2	34	255	11	32	0	0	0	0	0	0	0	0	5
	Reinforcement Bay	1	58	36	0	0	5	30	255	18	72	0	0	0	0	0	0	0	0	16
Crimson Dawn	Affirmation Bay	1	80	40	0	10	7	38	255	30	100	0	0	0	0	0	0	0	0	20
	*ATV Bay I	1	12	4	0	0	1	12	14	15	26	Yes	Yes	0	0	Yes	0	Yes	0	4
	*ATV Bay II	2	16	7	0	0	2	10	15	12	34	Yes	Yes	0	0	Yes	0	Yes	0	5
	*ATV Bay III	3	20	10	0	0	3	8	18	15	40	Yes	Yes	0	0	Yes	0	Yes	0	7
	ATV Stationhouse	1	40	16	0	0	4	42	255	12	48	0	0	0	0	0	0	0	0	7
Diamond Cooperative	Ground Force Storage	1	52	20	0	0	4	40	255	8	52	0	0	0	0	0	0	0	0	10
	*Launch Pod 1	1	8	8	0	0	1	8	13	10	23	Yes	0	0	0	Yes	0	Yes	Yes	3
	*Launch Pod 2	2	18	18	0	0	2	6	16	11	37	Yes	0	0	0	Yes	0	Yes	Yes	6
	Orbital Warehouse	1	96	60	5	8	7	40	255	25	104	0	0	0	0	0	0	0	0	24
Emerald Combine	ATV Storage Cylinder	1	40	40	0	0	5	98	255	10	60	0	0	0	0	0	0	0	0	12
	Handling Area	2	64	70	0	0	8	80	255	15	88	0	0	0	0	0	0	0	0	20
	*Drop Tubes	1	4	14	0	0	1	16	16	12	30	0	0	Yes	Yes	0	Yes	0	Yes	5
	*Drop Propulsor	2	9	20	0	0	1	14	18	12	35	0	0	Yes	Yes	0	Yes	0	Yes	6
	*Drop Accelerator	3	15	30	0	0	2	10	21	12	44	0	0	Yes	Yes	0	Yes	0	Yes	8
	Zero G Bay	1	80	100	0	0	12	52	255	25	124	0	0	0	0	0	0	0	0	30
Golden Order of Reason	*Launcher	1	14	0	5	0	1	6	15	8	25	0	0	Yes	Yes	0	0	Yes	0	3
	*Multilauncher	2	25	0	14	0	1	4	19	10	48	0	0	Yes	Yes	0	0	Yes	0	6
	Orbital Factory	1	128	66	0	0	12	56	255	25	124	0	0	0	0	0	0	0	0	30
	Orbital Launch Bay	1	74	30	0	0	5	80	255	7	60	0	0	0	0	0	0	0	0	12

Key: *=ATV tech tie; TL=Tech Level; Me=Metals; Si=Silicates; Ex=Exotics; Re=Reactives; O=Organics; RP=Research Points; Ma=Mass; PU=Power Used; BP=Build Points; So=Solid; Ex=Explosive; Cs=Corrosive; Ch=Chemical; He=Heat; Ra=Radiation; Di=Discharge; Nu=Nuclear; SC=Storage Capacity

Weapon Modules

Blue Talon Corps Weapon Module Table

Name	TL	Cost					RP	Ma	PU	BP	Defense against Attack Type								Weapon Type	Attack Type	AS	MR	EF	RoR	CtH	#oS
		Me	Si	Ex	Re	O					So	Ex	Cs	Ch	He	Ra	Di	Nu								
Auto-Loader E	1	5	5	2	0	1	68	9	2	8	Yes	Yes	0	0	0	Yes	0	0	Cannon	Explosive	20	8	5	1	55	50
Auto-Loader E2	2	10	10	5	0	1	60	13	3	17	Yes	Yes	0	0	0	Yes	0	0			30	8	5	1	65	40
Auto-Loader E3	3	16	16	10	0	1	54	15	5	26	Yes	Yes	0	0	0	Yes	0	0			40	10	7	1	70	40
Auto-Loader H	1	9	9	3	0	1	58	13	2	10	Yes	Yes	0	0	0	Yes	0	0	Cannon	Heat	25	10	6	1	55	50
Auto-Loader H2	2	22	22	10	0	1	52	16	3	26	Yes	Yes	0	0	0	Yes	0	0			30	12	8	1	65	40
Auto-Loader H3	3	40	40	20	0	1	48	25	5	50	Yes	Yes	0	0	0	Yes	0	0			60	15	10	1	70	40
Crimson Hyperflare 1	1	0	10	10	0	1	144	17	30	15	Yes	Yes	0	0	0	Yes	0	0	Beam	Heat	30	40	15	8	50	U
Crimson Flayer 1	2	0	6	6	0	1	130	10	10	10	Yes	Yes	0	0	0	Yes	0	0			30	9	5	3	90	U
Crimson Flayer 2	3	0	14	14	0	2	120	21	30	22	Yes	Yes	0	0	0	Yes	0	0			45	40	15	6	50	U
Crimson Hyperflare 2	4	0	12	12	0	2	108	13	10	19	Yes	Yes	0	0	0	Yes	0	0			30	9	5	2	95	U
Crimson Flayer 3	5	0	20	20	0	2	94	25	30	30	Yes	Yes	0	0	0	Yes	0	0			65	40	15	4	50	U
Crimson Hyperflare 3	6	0	16	16	0	2	82	15	12	26	Yes	Yes	0	0	0	Yes	0	0			30	9	5	1	100	U
Phasic Beam	7	0	40	35	0	3	72	20	25	48	Yes	Yes	0	0	0	Yes	0	0			110	25	10	4	70	U
Phasic Needle	8	0	48	40	0	3	64	20	25	55	Yes	Yes	0	0	0	Yes	0	0			130	30	10	4	70	U
Phasic Lance	9	0	60	60	0	4	52	20	25	72	Yes	Yes	0	0	0	Yes	0	0			160	35	10	4	70	U
Hellfire	1	15	5	15	0	1	64	19	3	20	Yes	Yes	0	0	0	Yes	0	0	Cannon	Heat	70	15	10	8	45	35
Twin Hellfire	2	30	8	25	0	2	56	24	6	30	Yes	Yes	0	0	0	Yes	0	0			70	15	10	4	50	35
Multi Hellfire	3	40	12	35	0	3	52	27	7	38	Yes	Yes	0	0	0	Yes	0	0			70	15	10	2	50	35
Turbo Hellfire	4	40	20	40	0	3	44	28	10	45	Yes	Yes	0	0	0	Yes	0	0			70	15	10	1	60	40
Swiftsure E	1	20	12	0	0	1	100	30	6	24	Yes	Yes	0	0	0	Yes	0	0	Missile	Explosive	90	15	5	8	80	6
Fleetfoot E	2	30	20	0	0	1	86	35	6	32	Yes	Yes	0	0	0	Yes	0	0			90	20	5	7	85	5
Huntsman E	3	32	35	0	0	2	76	40	6	39	Yes	Yes	0	0	0	Yes	0	0			110	25	5	7	85	5
Talon E	4	35	39	0	0	2	66	45	6	44	Yes	Yes	0	0	0	Yes	0	0			110	28	8	6	80	5
Talon Strike E	5	40	45	0	0	2	48	50	7	50	Yes	Yes	0	0	0	Yes	0	0			110	30	10	6	80	10
Talon Kill E	6	50	60	0	0	3	40	58	8	60	Yes	Yes	0	0	0	Yes	0	0			110	32	10	6	80	18

Key: TL=Tech Level; Me=Metals; Si=Silicates; Ex=Exotics; Re=Reactives; O=Organics; RP=Research Points; Ma=Mass; PU=Power Used; BP=Build Points; So=Solid; Ex=Explosive; Cs=Corrosive; Ch=Chemical; He=Heat; Ra=Radiation; Di=Discharge; Nu=Nuclear; As=Attack Strength; MR=Maximum Range; ER=Effective Range; RoR=Rate of Reload; CtH=Chance to Hit; #oS=Number of Shots; U=Unlimited

Blue Talon Corps Weapon Module Table (continued)

Name	TL	Cost					RP	Ma	PU	BP	Defense against Attack Type								Weapon Type	Attack Type	AS	MR	EF	RoR	CtH	#oS
		Me	Si	Ex	Re	O					So	Ex	Cs	Ch	He	Ra	Di	Nu								
Swiftsure H	1	24	16	0	0	2	92	32	6	26	Yes	Yes	0	0	0	Yes	0	0	Missile	Heat	110	15	5	8	80	6
Fleetfoot H	2	36	24	0	0	1	80	38	6	35	Yes	Yes	0	0	0	Yes	0	0			110	20	5	7	85	6
Huntsman H	3	35	38	0	0	2	68	42	6	41	Yes	Yes	0	0	0	Yes	0	0			120	25	5	7	85	5
Talon H	4	38	42	0	0	2	56	47	6	46	Yes	Yes	0	0	0	Yes	0	0			120	28	8	6	80	6
Talon Strike H	5	44	50	0	0	2	44	52	7	53	Yes	Yes	0	0	0	Yes	0	0			120	30	10	6	80	12
Talon Kill H	6	54	65	0	0	3	38	60	8	65	Yes	Yes	0	0	0	Yes	0	0			120	32	10	6	80	20

Key: TL=Tech Level; Me=Metals; Si=Silicates; Ex=Exotics; Re=Reactives; O=Organics; RP=Research Points; Ma=Mass; PU=Power Used; BP=Build Points; So=Solid; Ex=Explosive; Cs=Corrosive; Ch=Chemical; He=Heat; Ra=Radiation; Di=Discharge; Nu=Nuclear; As=Attack Strength; MR=Maximum Range; ER=Effective Range; RoR=Rate of Reload; CtH=Chance to Hit; #oS=Number of Shots; U=Unlimited

Crimson Dawn Weapon Module Table

Name	TL	Cost					RP	Ma	PU	BP	Defense against Attack Type								Weapon Type	Attack Type	AS	MR	EF	RoR	CtH	#oS
		Me	Si	Ex	Re	O					So	Ex	Cs	Ch	He	Ra	Di	Nu								
Arc Blaster	1	0	2	5	10	1	48	15	15	14	Yes	Yes	0	0	Yes	0	Yes	0	Beam	Discharge	30	10	8	3	55	U
Arc Blaster II	2	0	4	8	15	1	42	16	15	18	Yes	Yes	0	0	Yes	0	Yes	0			30	13	9	2	60	U
Arc Blaster III	3	0	6	13	20	2	34	18	12	24	Yes	Yes	0	0	Yes	0	Yes	0			35	16	11	1	65	U
Arc Megablasters I	1	0	4	6	12	1	86	20	45	27	Yes	Yes	0	0	Yes	0	Yes	0	Beam	Discharge	70	15	12	6	50	U
Arc Megablasters II	2	0	6	9	18	1	78	23	40	36	Yes	Yes	0	0	Yes	0	Yes	0			70	18	15	4	50	U
Arc Megablasters III	3	0	8	12	22	2	74	28	37	45	Yes	Yes	0	0	Yes	0	Yes	0			75	25	20	4	60	U
Arc Megablasters IV	4	0	11	15	28	2	64	33	75	52	Yes	Yes	0	0	Yes	0	Yes	0			90	28	22	4	60	U
Arc Megablasters V	5	0	15	20	35	3	50	35	75	60	Yes	Yes	0	0	Yes	0	Yes	0			90	30	25	4	70	U
Arc Megablasters VI	6	0	20	25	44	4	34	38	70	72	Yes	Yes	0	0	Yes	0	Yes	0			110	33	28	4	80	U
Culverin-S	1	20	6	0	4	1	28	20	7	22	Yes	Yes	0	0	Yes	0	Yes	0	Cannon	Solid	50	30	20	7	55	30
Dual Culverin-S	2	36	10	0	7	2	24	26	12	34	Yes	Yes	0	0	Yes	0	Yes	0			50	30	20	3	55	30
Deraaf's Tubes I	1	1	1	0	10	2	50	12	5	8	Yes	Yes	0	0	Yes	0	Yes	0	Cannon	Discharge	20	10	5	1	55	50
Deraaf's Tubes II	2	2	1	0	18	2	44	14	6	14	Yes	Yes	0	0	Yes	0	Yes	0			30	10	5	1	65	40
Deraaf's Tubes III	3	5	2	0	30	3	34	19	7	22	Yes	Yes	0	0	Yes	0	Yes	0			50	12	7	1	70	40
Mayhem Cannon	1	4	6	0	20	1	26	22	8	24	Yes	Yes	0	0	Yes	0	Yes	0	Cannon	Discharge	60	30	20	8	55	30
Dual Mayhem Cannon	2	8	10	0	40	2	22	29	15	38	Yes	Yes	0	0	Yes	0	Yes	0			60	30	20	4	55	30
Mind Warp	1	0	6	2	2	4	52	20	50	40	Yes	Yes	0	0	Yes	0	Yes	0	Beam	Discharge	10	10	6	21	60	U
Mind Warp II	2	0	14	5	5	7	46	22	56	52	Yes	Yes	0	0	Yes	0	Yes	0			10	12	8	21	70	U
Mind Warp III	3	0	20	8	8	10	38	25	62	66	Yes	Yes	0	0	Yes	0	Yes	0			10	15	10	21	80	U
Shockwave D	1	6	6	0	24	1	36	28	10	26	Yes	Yes	0	0	Yes	0	Yes	0	Missile	Discharge	100	20	4	8	55	4
Shockwave 2D	2	6	15	0	27	1	30	31	10	32	Yes	Yes	0	0	Yes	0	Yes	0			120	30	8	8	70	5
Shockwave 3D	3	6	24	0	30	1	22	36	7	38	Yes	Yes	0	0	Yes	0	Yes	0			130	40	14	8	85	6
Shockwave S	1	30	0	6	0	1	38	25	7	23	Yes	Yes	0	0	Yes	0	Yes	0	Missile	Solid	95	20	4	8	55	4
Shockwave 2S	2	30	4	15	0	1	32	28	7	27	Yes	Yes	0	0	Yes	0	Yes	0			105	30	8	8	70	5
Shockwave 3S	3	30	7	22	0	1	24	32	6	30	Yes	Yes	0	0	Yes	0	Yes	0			110	40	14	8	85	6

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Diamond Cooperative Weapon Module Table

Name	TL	Cost					RP	Ma	PU	BP	Defense against Attack Type								Weapon Type	Attack Type	AS	MR	EF	RoR	CtH	#oS
		Me	Si	Ex	Re	O					So	Ex	Cs	Ch	He	Ra	Di	Nu								
Atomizer XG	1	20	0	20	0	2	86	20	37	28	Yes	0	0	0	Yes	0	Yes	Yes	Beam	Discharge	70	18	10	8	55	U
Atomizer XG+	2	36	0	36	0	3	74	24	37	48	Yes	0	0	0	Yes	0	Yes	Yes			75	18	15	6	55	U
Atomizer XG1000	3	36	0	50	0	3	60	28	37	60	Yes	0	0	0	Yes	0	Yes	Yes			75	25	20	6	55	U
Atomizer XG2000	4	50	0	66	0	3	52	27	70	78	Yes	0	0	0	Yes	0	Yes	Yes			100	25	18	6	45	U
Atomizer XG3000	5	52	0	80	0	4	42	28	70	92	Yes	0	0	0	Yes	0	Yes	Yes			100	30	22	6	50	U
Atomizer TG	6	55	0	104	0	5	30	29	70	110	Yes	0	0	0	Yes	0	Yes	Yes			100	35	25	4	55	U
Corrodizer	1	25	0	50	50	2	44	29	6	46	Yes	0	0	0	Yes	0	Yes	Yes	Missile	Corrosive	100	28	6	8	75	5
Corrodizer 2	2	38	0	70	30	2	36	32	6	62	Yes	0	0	0	Yes	0	Yes	Yes			100	33	7	8	80	5
Corrodizer 3	3	52	0	88	44	3	30	35	6	84	Yes	0	0	0	Yes	0	Yes	Yes			100	40	7	8	85	5
Leech	1	16	10	30	30	3	60	20	25	40	Yes	0	0	0	Yes	0	Yes	Yes	Beam	Discharge	5	10	6	25	45	U
Leech 2	2	25	15	40	50	4	44	23	31	61	Yes	0	0	0	Yes	0	Yes	Yes			8	12	9	25	50	U
Leech 3	3	34	20	54	65	5	34	25	37	75	Yes	0	0	0	Yes	0	Yes	Yes			12	12	10	25	55	U
Maxi-Launcher	1	17	0	32	4	1	28	25	3	30	Yes	0	0	0	Yes	0	Yes	Yes	Cannon	Corrosive	60	30	20	8	45	20
Dual Maxi-Launcher	2	30	0	45	4	1	20	31	6	42	Yes	0	0	0	Yes	0	Yes	Yes			80	30	20	4	50	35
Molecular Dagger	1	25	0	50	20	2	42	29	6	46	Yes	0	0	0	Yes	0	Yes	Yes	Missile	Chemical	100	28	6	8	75	5
Molecular Sword	2	38	0	70	30	2	32	32	6	62	Yes	0	0	0	Yes	0	Yes	Yes			100	33	7	8	80	5
Molecular Axe	3	52	0	88	44	3	26	34	6	84	Yes	0	0	0	Yes	0	Yes	Yes			100	40	7	8	85	5
Pellet Sling	1	2	0	8	0	1	64	9	2	7	Yes	0	0	0	Yes	0	Yes	Yes	Cannon	Corrosive	15	10	5	1	55	50
Pellet Gun	2	5	0	15	0	1	52	12	3	14	Yes	0	0	0	Yes	0	Yes	Yes			25	10	5	1	65	40
Pellet Cannon	3	8	0	24	0	1	46	13	5	20	Yes	0	0	0	Yes	0	Yes	Yes			35	12	7	1	70	40
Pyoidic Cloud	1	12	0	44	0	1	36	25	3	30	Yes	0	0	0	Yes	0	Yes	Yes	Cannon	Chemical	60	30	20	8	45	15
Pyoidic Clouds	2	20	0	60	0	1	28	30	6	42	Yes	0	0	0	Yes	0	Yes	Yes			80	30	20	4	45	30
Pyoidic Fog	1	8	0	40	10	1	48	16	2	32	Yes	0	0	0	Yes	0	Yes	Yes	Cannon	Chemical	50	10	5	1	55	50
Pyoidic Fog 2	2	14	0	60	20	1	44	18	3	45	Yes	0	0	0	Yes	0	Yes	Yes			60	10	5	1	65	40
Pyoidic Fog 3	3	22	0	80	55	2	36	25	5	73	Yes	0	0	0	Yes	0	Yes	Yes			80	12	7	1	70	40
White Lightning	1	16	20	0	0	1	56	15	12	25	Yes	0	0	0	Yes	0	Yes	Yes	Beam	Discharge	35	12	8	4	55	U
White Lightning 2	2	20	25	0	0	1	46	14	12	32	Yes	0	0	0	Yes	0	Yes	Yes			35	12	9	4	55	U
White Lightning 3	3	25	30	0	0	1	40	12	12	38	Yes	0	0	0	Yes	0	Yes	Yes			35	12	10	4	55	U

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Emerald Combine Weapon Module Table

Name	TL	Cost					RP	Ma	PU	BP	Defense against Attack Type								Weapon Type	Attack Type	AS	MR	EF	RoR	CtH	#oS
		Me	Si	Ex	Re	O					So	Ex	Cs	Ch	He	Ra	Di	Nu								
Gatekeeper 1	1	40	0	20	10	0	54	255	40	30	0	0	0	0	0	0	0	0	Missile	Explosive	89	15	10	22	100	1
Gatekeeper 2	2	46	0	24	16	0	50	255	43	38	0	0	0	0	0	0	0	0			89	15	12	22	100	1
Gatekeeper 3	3	60	0	30	25	0	42	255	50	50	0	0	0	0	0	0	0	0			89	20	15	22	100	1
Ionic Disruptor	1	20	0	20	4	1	32	20	3	25	0	0	Yes	Yes	0	Yes	0	Yes	Cannon	Explosive	50	30	20	8	60	20
Ionic Eliminator	2	40	0	36	7	2	26	28	6	47	0	0	Yes	Yes	0	Yes	0	Yes			50	30	20	4	60	25
Kinetic Cannon	1	24	0	12	2	1	36	18	6	22	0	0	Yes	Yes	0	Yes	0	Yes	Cannon	Explosive	50	24	14	8	45	40
Dual Kinetic Cannon	2	48	0	25	4	2	28	25	6	43	0	0	Yes	Yes	0	Yes	0	Yes			50	24	14	4	45	40
Kraak Repeater 1	1	4	0	4	0	1	60	10	2	6	0	0	Yes	Yes	0	Yes	0	Yes	Cannon	Explosive	10	10	5	2	65	40
Kraak Repeater 2	2	6	0	8	0	1	50	11	3	9	0	0	Yes	Yes	0	Yes	0	Yes			15	10	5	1	65	40
Kraak Repeater 3	3	10	0	15	0	1	38	14	5	16	0	0	Yes	Yes	0	Yes	0	Yes			20	12	7	1	70	80
Matter Accelerator	1	44	0	6	0	1	28	22	3	28	0	0	Yes	Yes	0	Yes	0	Yes	Cannon	Solid	45	30	20	8	50	40
Bi-Vortex Accelerator	2	88	0	10	0	2	22	29	6	52	0	0	Yes	Yes	0	Yes	0	Yes			45	30	20	4	55	40
Particle Beam 1	1	6	0	18	0	1	100	16	40	16	0	0	Yes	Yes	0	Yes	0	Yes	Beam	Solid	40	25	15	8	60	U
Particle Beam 2	2	10	0	34	0	2	88	20	42	30	0	0	Yes	Yes	0	Yes	0	Yes			55	30	20	8	65	U
Particle Beam 3	3	16	0	48	0	2	80	29	55	45	0	0	Yes	Yes	0	Yes	0	Yes			70	35	30	4	70	U
Force Beam 1	4	8	0	15	0	1	68	15	12	10	0	0	Yes	Yes	0	Yes	0	Yes			50	15	10	3	70	U
Force Beam 2	5	14	0	24	0	1	54	17	15	18	0	0	Yes	Yes	0	Yes	0	Yes			50	15	10	2	65	U
Force Beam 3	6	20	0	32	0	1	44	19	17	29	0	0	Yes	Yes	0	Yes	0	Yes			50	12	8	1	70	U
Pulse Accelerator 1	1	10	0	0	0	1	56	12	2	6	0	0	Yes	Yes	0	Yes	0	Yes	Cannon	Solid	15	12	7	2	55	50
Pulse Accelerator 2	2	15	1	0	0	1	46	13	3	10	0	0	Yes	Yes	0	Yes	0	Yes			25	12	8	1	55	40
Pulse Accelerator 3	3	24	5	0	0	1	36	15	3	18	0	0	Yes	Yes	0	Yes	0	Yes			35	15	10	1	60	80

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Golden Order of Reason Weapon Module Table

Name	TL	Cost					RP	Ma	PU	BP	Defense against Attack Type								Weapon Type	Attack Type	AS	MR	EF	RoR	CtH	#oS
		Me	Si	Ex	Re	O					So	Ex	Cs	Ch	He	Ra	Di	Nu								
Alpha Cannon	1	10	0	5	25	1	38	29	6	34	0	0	Yes	Yes	0	0	Yes	0	Cannon	Nuclear	70	25	15	8	80	25
Beta Cannon	2	25	0	15	45	2	32	34	2	56	0	0	Yes	Yes	0	0	Yes	0			100	30	15	6	80	28
Gamma Cannon	3	40	0	30	70	2	26	37	3	82	0	0	Yes	Yes	0	0	Yes	0			150	40	18	6	85	28
Dual Alpha Cannon	1	20	0	8	32	2	36	32	8	40	0	0	Yes	Yes	0	0	Yes	0	Cannon	Nuclear	70	30	15	4	40	20
Dual Beta Cannon	2	50	0	25	70	4	30	41	5	78	0	0	Yes	Yes	0	0	Yes	0			100	30	15	3	40	25
Dual Gamma Cannon	3	80	0	50	100	4	24	45	7	116	0	0	Yes	Yes	0	0	Yes	0			150	40	18	3	45	23
H.A.R.P.	1	8	0	8	12	1	60	24	2	21	0	0	Yes	Yes	0	0	Yes	0	Cannon	Nuclear	50	15	10	2	55	30
H.A.R.P. II	2	12	0	15	28	2	52	26	2	32	0	0	Yes	Yes	0	0	Yes	0			50	15	10	2	65	30
H.A.R.P. III	3	16	0	20	35	2	42	26	2	40	0	0	Yes	Yes	0	0	Yes	0			50	20	13	2	70	30
H.A.R.P. IV	4	20	0	20	40	2	34	25	5	47	0	0	Yes	Yes	0	0	Yes	0			55	25	15	2	70	30
Irradiator	1	20	0	0	20	2	120	20	55	25	0	0	Yes	Yes	0	0	Yes	0	Beam	Radiation	5	5	5	24	100	U
Irradiator II	2	36	0	0	40	3	104	22	65	42	0	0	Yes	Yes	0	0	Yes	0			8	8	8	24	100	U
Irradiator III	3	45	0	0	50	3	90	24	75	48	0	0	Yes	Yes	0	0	Yes	0			8	10	10	24	100	U
Microburster	1	10	0	5	18	1	48	28	2	23	0	0	Yes	Yes	0	0	Yes	0	Cannon	Radiation	60	15	5	1	55	40
Microburster II	2	16	0	10	30	1	40	31	2	36	0	0	Yes	Yes	0	0	Yes	0			75	15	5	1	65	40
Microburster III	3	40	0	25	60	3	30	35	2	82	0	0	Yes	Yes	0	0	Yes	0			100	15	5	1	70	40
Needle Gun	1	2	0	4	10	1	68	30	3	15	0	0	Yes	Yes	0	0	Yes	0	Cannon	Nuclear	30	20	12	1	40	50
Needle Gun II	2	5	0	5	15	1	58	20	5	20	0	0	Yes	Yes	0	0	Yes	0			30	25	15	1	45	50
Needle Gun III	3	8	0	7	22	1	52	10	5	27	0	0	Yes	Yes	0	0	Yes	0			30	30	15	1	50	50
Needle Gun IV	4	15	0	7	30	2	44	5	7	40	0	0	Yes	Yes	0	0	Yes	0			50	30	15	1	55	40
Neutron Beam	1	5	0	12	0	1	54	24	12	18	0	0	Yes	Yes	0	0	Yes	0	Beam	Radiation	40	25	15	3	40	U
Neutron Beam II	2	12	0	22	0	1	46	27	12	27	0	0	Yes	Yes	0	0	Yes	0			50	25	15	3	40	U
Neutron Beam III	3	20	0	35	0	2	36	29	12	39	0	0	Yes	Yes	0	0	Yes	0			65	30	15	2	40	U
Nuclear Ram	1	30	0	12	30	1	44	28	3	44	0	0	Yes	Yes	0	0	Yes	0	Missile	Nuclear	80	20	10	8	85	5
Nuclear Ram II	2	50	0	20	45	2	36	32	3	67	0	0	Yes	Yes	0	0	Yes	0			90	30	10	8	90	5
Nuclear Ram III	3	70	0	30	62	3	30	34	3	90	0	0	Yes	Yes	0	0	Yes	0			100	40	15	8	95	6

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Golden Order of Reason Weapon Module Table (continued)

Name	TL	Cost					RP	Ma	PU	BP	Defense against Attack Type								Weapon Type	Attack Type	AS	MR	EF	RoR	CtH	#oS
		Me	Si	Ex	Re	O					So	Ex	Cs	Ch	He	Ra	Di	Nu								
Rad Missile	1	25	0	20	25	1	40	28	3	44	0	0	Yes	Yes	0	0	Yes	0	Missile	Radiation	100	20	10	8	80	5
Rad-2 Missile	2	40	0	30	35	2	32	31	3	67	0	0	Yes	Yes	0	0	Yes	0			100	30	10	8	85	10
Rad-3 Missile	3	55	0	50	40	3	26	31	3	90	0	0	Yes	Yes	0	0	Yes	0			100	40	15	8	90	15
Exterminator	4	50	0	20	56	3	78	27	40	55	0	0	Yes	Yes	0	0	Yes	0			80	40	20	4	50	100
Exterminator II	5	56	0	30	70	4	64	30	42	70	0	0	Yes	Yes	0	0	Yes	0			100	40	20	4	50	150
Exterminator III	6	65	0	35	75	4	48	34	45	80	0	0	Yes	Yes	0	0	Yes	0			120	45	25	4	50	225
Stellar Wave Gun	1	20	0	20	45	2	90	35	2	50	0	0	Yes	Yes	0	0	Yes	0	Cannon	Radiation	120	40	20	6	35	25
Stellar Cannon	2	28	0	30	50	4	70	40	5	78	0	0	Yes	Yes	0	0	Yes	0			120	50	25	3	40	40

Key: TL=Tech Level; Me=Metals; Si=Silicates; Ex=Exotics; Re=Reactives; O=Organics; RP=Research Points; Ma=Mass; PU=Power Used; BP=Build Points; So=Solid; Ex=Explosive; Cs=Corrosive; Ch=Chemical; He=Heat; Ra=Radiation; Di=Discharge; Nu=Nuclear; As=Attack Strength; MR=Maximum Range; ER=Effective Range; RoR=Rate of Reload; CtH=Chance to Hit; #oS=Number of Shots; U=Unlimited

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