

MASTER OF  
**ORION**  
CONQUER THE STARS



# GAME MANUAL

**VERSION 1.3**

Current as of Patch v54.11 December 29, 2016

# INTRODUCTION

Welcome, explorer! Are you ready to start your journey to conquer the stars and become the Master of Orion?

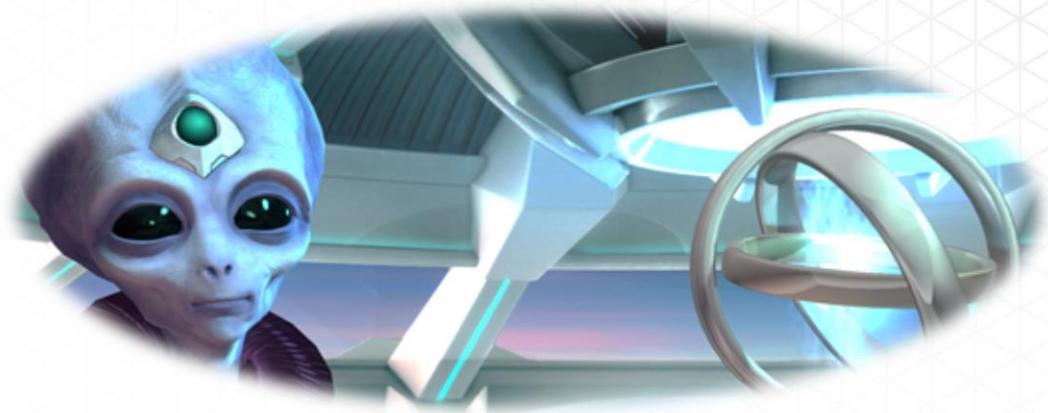
The iconic 4X strategy game that formed the blueprint for a whole generation of successors has been resurrected and upgraded. Stunningly enhanced for a new line of players, Master of Orion inherits and redefines the core elements of the original series of games, providing a graphically beautiful and deeply rewarding experience.

Master of Orion represents the rebirth of a new era of strategy gameplay featuring the latest multi-platform technology and graphical systems. Within the depths of space and on scattered worlds, will you take up the challenge and conquer the stars?

In your bid for domination you will lead one of an array of intergalactic races, each with a unique advisor and several advantages, technologies, and specialized ship designs. Explore an infinite number of galaxies, harness hundreds of unique technologies, design dozens of ships and build a variety of structures. Will you crush worlds, manipulate leaders, hoard resources, or do all of the above? In Master of Orion, you decide how to take control of the galaxy.

This guide provides you with the basics to start conquering the stars. From races and planets to game modes, core mechanics, tactics and more, you will learn all you need to know to eXplore the stars, eXpand your stellar empire, eXploit planetary resources, and eXterminate all who stand in your way.

**DISCLAIMER.** The information below is based on the most recent build. All gameplay, UI, or additional features of the game are subject to change.



# ICARUS

By Kelsey Howard

Mara showed her clearance badge to the heavily armed guards, then placed it in the security scanner. Sliding metal doors opened slowly before her. Her presence in the lowest and most secure level of the Library of the Controller required direct approval from the leader of the Psilon Empire, the Controller of the Quanta. She had been nominated to join a top secret research committee by the Director of the Scientific Advisory Board the week before. Mara was stunned and she accepted the offer on the spot.

She entered a vast research room lined with detailed filing systems and dimly illuminated monitors. A few Psilons, old and pale as ghosts, silently paced the room, completely focused on their work. Mara approached the central desk where a Librarian sat, silently awaiting her request. "Call number?" The Librarian's voice was faint and soft, as if it had not been used for quite some time.

Mara swiftly handed the Librarian the encoded card she had been given back at Headquarters, with "ALPHA-ICARUS File 0012" emblazoned across it. The Librarian immediately began inputting commands into a compact terminal. A small robot rushed out from under the desk towards the stacks, quickly disappearing as it rounded a corner.

The highly classified information Mara had requested was the last intact account of the ICARUS discovery mission. ICARUS, or the Intergalactic Communication Resolution System, was already an ancient technology when it was found hundreds of years ago. Now it was so ingrained in modern civilization that it was regarded as an undeniable attribute of the universe, no different from gravity or time.

The "magic" of a universal translator which traveled seamlessly across electromagnetic fields, infesting and changing both electronic networks and the neuron pathways of biologicals, may have become normal over time, but the unsolved mystery of how this technology worked still eluded and haunted the Psilons.

Centuries of research had yielded no new information. Teams of scientists had come and gone, yet nothing more was known about the system than the day it was found. No one could explain

why or how ICARUS was effortlessly translating hundreds of languages in real time. In fact, the discussions of ICARUS's inner workings had been exiled to the realm of rumors and gossip between eccentric scholars.

Mara herself had heard the rumors, though she always kept her head down and focused on her work—which was always lauded for its brilliance. When asked, she had stated that she had no theories on ICARUS as she lacked access to data. Keeping her thoughts to herself on one of the most frustrating and longest-running Psilon research failures proved fortunate. It was this very dedication, work ethic, intelligence, and prudence that got her a place on the ICARUS Research Team.

With a slight whir, the tiny robot arrived back at the Librarian's desk carrying a small box. The Librarian picked it up and opened it carefully, pulling an antique audio device out along with some carefully preserved physical files. Mara took the materials to a secure room and sealed the door behind her.

The audio file was marked with bold text: "WARNING: HIGHLY CLASSIFIED INFORMATION REGARDING ICARUS SYSTEMS. INDIVIDUALS MUST HAVE QUASAR LEVEL CLEARANCE TO PROCEED." Mara carefully removed the audio file from its protective casing and placed it in the audio player, waiting anxiously for the audio to begin.

The standard boilerplate precautions preceded the actual content. "The following transcription is a direct transcription of Erga, leader of the original team that discovered the ICARUS device. The following information is classified QUASAR and is not approved for reproduction or distribution by any means." The Psilons, ever cautious and paranoid, took every legal precaution to protect their intellectual property.

The audio file clicked to life with the steady breathing of the Psilon on the other side filling the quiet listening room. The audio was so clear it was as if the person on the other side of the recording was in the room with her. This voice, reaching across time from hundreds of years ago, was doomed to have his story buried under strict security classifications for fear of others gleaning a clue to how ICARUS works.

The Interviewer speaks first, his low voice cold and detached. "This is the interrogation of Erga, lead field researcher with the Ampere Salvage Team." There is a momentary pause and the sound of rustling papers. "Erga, begin your account of the recovery of the ICARUS device. Begin with planetary landing."

The second voice enters the audio, clear and confident. Erga's logical and even-tempered tone marks him unmistakably as Psilon, even though this recording was made hundreds of years in the past. "When we first landed on the planet it appeared to be completely barren—devoid of any life or technology. Scouts had reported distant sightings of an isolated building that seemed suspicious. We had with us some hired mercenaries—mostly Sakkra, but a few Humans and Mrrshan as well."

"We entered the building with no difficulty. It seemed to be some sort of deserted outlying facility. There were traces of ancient technology, but it seemed like the place had been cleaned out of anything of value long ago. The mercenaries seemed suspicious of what we would find, but the research team was naturally curious."

Erga pauses and clears his throat. "We found an interior room behind heavy blast doors. Scanners indicated the whole room was heavily shielded and our scanners could not penetrate to the interior. There were signs that others had tried to open the doors before, without success. The Sakkra mercenaries began to set charges of their new directed planar explosives."

The Interviewer pushes Erga forward after a long pause. "Is that when the technology began to work?"

"No. We blew the doors open and investigated the massive room inside. It was barren except for a small glowing node in the center of the room. We began to enact the standard isolation protocols for unknown tech, but when we radioed the mercenary team outside the facility doing patrols... that's when we noticed it."

The Interviewer interrupts politely, "You confirm that the short-range communication device activated the node?"

"To the best of my observational abilities, yes. As soon as we radioed the team we began to understand each other much more clearly. My knowledge of the Sakkra language is rudimentary at best, but I suddenly understood the Sakkra perfectly. I could tell he was speaking his native language, but I understood him without any struggle to translate. When I responded in our language, he understood me as well."

"What happened next?" If the Interviewer is surprised, he is repressing the shock of the situation. He moves forward with the interrogation in a calm, efficient manner. "The main ship detected the communications chatter on the ground and radioed down. They began to panic when they suddenly were able to understand each other." Erga pauses for a moment. "There were some casualties onboard among the mercenaries in the ensuing chaos when they all understood what was being said to each other."

"This... ability traveled to the ship and spread across those onboard?"

"Yes. As we radioed out for assistance, the translation ability seemed to spread." Erga speaks quickly, as if the thrill of experiencing first-hand new technology excites him. "It must be some sort of virus which transmits itself through electromagnetic waves or fields over great distance..."

"This is confirmed information. The virus has reached the Sakkra and Mrrshan regions of space already and shows no signs of slowing. Any information collected from the site may prove crucial in understanding this mysterious device."

"The site was completely isolated. It's possible that no other advanced intelligent life has been in the area since the Orions abandoned the area." Erga is reaching in his logic.

The Interviewer did not hesitate to shut down Erga's wild speculation. "The Orions are little more than myth. It is unsound to make assumptions based on their rumored presence and technology."

"We gave the Controller the coordinates; you must have visited the site and seen the same." Erga is beginning to sound tired. A known Psilon trait was that the pressure of the unknown could wear them down, rendering them catatonic for a time.

The Interviewer is quick to respond. "That is accurate. The site was as you stated. However, you will be held in custody along with the rest of your team until we can determine the exact nature of the device and how it works. The device itself will be moved to a more secure location."

Erga makes a slight sound of displeasure, but speaks calmly to the Interviewer. "I understand what you have to do."

The audio file abruptly ended. Mara looked around for the documents associated with the audio file and pulled up the one she was looking for. The confinement records show nine Psilon, ten Sakkra, seven Mrrshan, and three Humans to be contained after the incident. All died of old age in a secure prison. The file also stated that official letters were sent to the families explaining that an engine malfunction had destroyed the ship with the loss of all onboard. A quick scan of the other documents showed that the location of the device itself was not given.

Mara closed the files and looked up at the featureless ceiling of the secure room. Was it possible that she just signed up to solve the riddle that had haunted the Psilon scientific community for generations? The idea of fully understanding the device became dire as she played over in her mind the scant information she had heard and read.

She rubbed her eyes and recalled her training. Firsthand observational data is always more valuable than the stories and accounts of others. She had to see the device herself. That was the only answer.

Of course, the Psilon government had denied the existence of ICARUS's physical form. They rejected the idea that they had possession of such an unknowable and powerful device. Yet, as Mara was beginning to learn, there was a lot that the Psilon government was willing to keep under wraps in order to secure their research. She packed up the materials to hand back to the Librarian and set out to pick up a trail that had had centuries to grow cold.

For additional stories: <https://www.facebook.com/MasterofOrion.Official/notes>

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# TECHNICAL REQUIREMENTS

## Windows

	Minimum	Recommended
<b>OS</b>	Windows 7/8/10 64 bit	Windows 7/8/10 64 bit Mac OS X 10.6–10.11
<b>Processor</b>	Intel Core 2 Duo 2.0 GHz or AMD Athlon X2 2.2 GHz	Intel i5 2.8GHz or AMD Athlon X4 3.0GHz
<b>RAM</b>	2 GB RAM	4 GB
<b>Video Card</b>	nVidia 240, ATI 4650, Intel Integrated HD4000 or better	NVidia 560, ATI 5870 or better
<b>DirectX®</b>	DirectX 9.0c (Shader Model 3.0)	DirectX 9.0c (Shader Model 3.0)
<b>Free Disk Space</b>	15 GB	15 GB
<b>Sound Card</b>	DirectX 9 Compatible	DirectX 9 Compatible
<b>Video Memory</b>	512 MB	1 GB

## Mac OS X

	Minimum	Recommended
<b>OS</b>	Mac 10.6 – 10.11 (Snow Leopard – El Capitan)	Mac 10.6 – 10.11 (Snow Leopard – El Capitan)
<b>Processor</b>	Intel Core 2 Duo 2.0 GHz or AMD Athlon X2 2.2 GHz	Intel i5 2.8GHz or AMD Athlon X4 3.0GHz
<b>RAM</b>	2 GB RAM	4 GB
<b>Video Card</b>	nVidia 240, ATI 4650, Intel Integrated HD4000 or better	NVidia 560, ATI 5870 or better
<b>Free Disk Space</b>	15 GB	15 GB
<b>Video Memory</b>	512 MB	1 GB

## Steam OS + Linux

	Minimum	Recommended
<b>OS</b>	Ubuntu 14.04 64-bit or newer, Steam OS	Ubuntu 14.04 64-bit or newer, Steam OS
<b>Processor</b>	Intel Core 2 Duo 2.0 GHz or AMD Athlon X2 2.2 GHz	Intel i5 2.8GHz or AMD Athlon X4 3.0GHz
<b>RAM</b>	2 GB RAM	4 GB
<b>Video Card</b>	nVidia 240, ATI 4650, Intel Integrated HD4000 or better	NVidia 560, ATI 5870 or better
<b>Free Disk Space</b>	15 GB	15 GB
<b>Video Memory</b>	512 MB	1 GB

Master of Orion will be available through Steam (<http://store.steampowered.com/>) and Good Old Games (<http://www.gog.com/>).

# GAME MENUS

## Main Game Menu

The main menu allows you to choose a game mode and configure options.

- **SINGLE PLAYER.** Leads you to the single player game against AI-controlled opponents. This is explained in detail below.
- **MULTIPLAYER.** Allows you to find and join an existing game or create a multiplayer game. This is explained in detail below.
- **MODS.** Takes one to your Mods screen to access player developed mods.
- **OPTIONS.** Allows you to configure game settings to best suit your computer. This is explained in detail below.
- **CREDITS.** Credits for all individuals involved in MoO development.
- **QUIT.** Quits game.



## Single Player Screen

The functions of the single player screen are:

- **CONTINUE.** Continues the most recently saved game.
- **NEW GAME.** Creates a new game taking the player to additional screens (see SINGLE PLAYER/NEW GAME SCREEN below).
- **QUICK MATCH.** Creates a new game designed for quick play: two races in a small galaxy.
- **TUTORIAL MATCH.** Creates a small game designed to teach you the basics. You are matched against one AI race.
- **LOAD GAME.** Loads a previously saved game (see LOAD GAME SCREEN below).
- **BACK TO MAIN MENU.** Returns you to the Main Menu.



## Single Player / New Game Screen

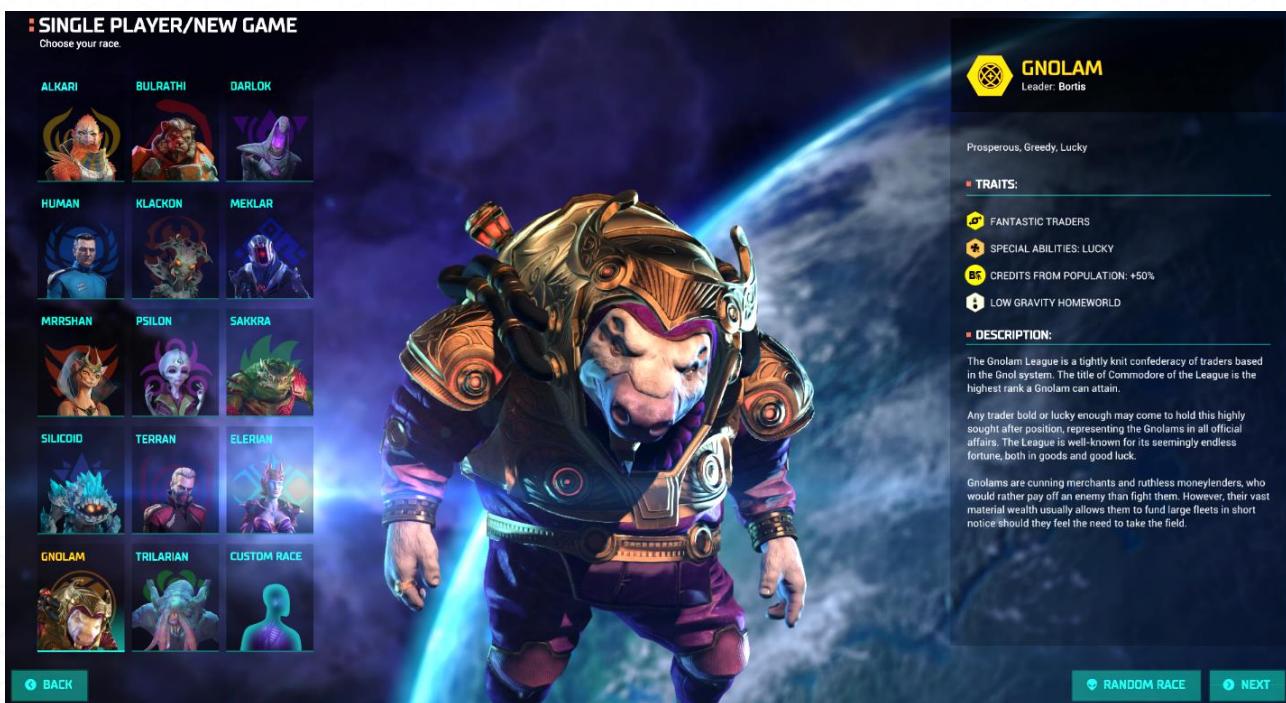
Clicking **NEW GAME** will start the process of generating a new game. The first screen will be your **SINGLE PLAYER/NEW GAME** screen. Here you will select your race for a new game.

Clicking on a Race's portrait will bring up the Leader, Traits, and Description of the chosen race. You can also choose to customize a race by selecting the **CUSTOM RACE** button, which will take you to the **CUSTOM RACE** sub-screen.

Hovering over a trait will bring up a short description of its in-game effects.

Once you have selected a race click the **NEXT** button to be taken to the **NEW GAME/MATCH SETUP** screen.

Selecting the **RANDOM RACE** feature will automatically send you to the **NEW GAME/MATCH SETUP** screen. Your race will be unknown until the game starts. If you change your mind you can either click the **BACK** button to pick a race or click on your race portrait as explained in **NEW GAME/MATCH SETUP** below.



## Custom Race Screen

The **CUSTOM RACE** screen allows you to choose not only a race but their individual traits. You also have the option of changing your leader's name.

You start with 10 points available with which to choose traits. Different traits cost different amount of points. Traits with detrimental effects have a negative point cost: that number of points will be added to your available points (e.g. choosing -25% Food from Population adds 3 points to your total). As your available points are used any trait you can no longer afford becomes greyed out. Incompatible Special Abilities will turn yellow (e.g. you cannot be both Creative and Uncreative).

Hovering over a trait will bring up a short description of its in-game effects,

Any points not spent are lost. NOTE: Your available points cannot go negative.

When you are satisfied with your choices, click the **NEXT** button to be taken to the **NEW GAME/MATCH SETUP** screen.



## New Game / Match Setup Screen

In the **NEW GAME/MATCH SETUP** screen you can choose your AI opponents if you want to play against specific race(s). You can also customize the game settings. Once you have made these selections click **START GAME** to launch the game. The functions and settings are:

**Computer Opponents.** The computer will select the opponent races at random upon game start. At the start of the game you will not know who is out there until you encounter them.

To change a computer opponent from random to a specific race hover over **RANDOM** or currently shown race and click. Select from the available races.

**Game Settings.** You can customize the following game settings:

- Galaxy Type: Choose from Circle, Spiral or Cluster. Type is a factor in determining the maximum number of available opponents.
- Galaxy Size: Choose from Small, Medium, Large or Huge (Small and Huge are not available for all Galaxy Types). Galaxy Size is a factor in determining the maximum number of available opponents.
- Galaxy Age: Choose from Young, Average or Old. Galaxy Age affects the distribution of star color and planet biomes. Young galaxies typically have fewer desirable planet biomes while older galaxies will have a greater number of desirable planet biomes.
- Planet Density by Star: Choose from Low, Normal or High. Density effects how many planets can be found around each star type.
- Starting Age: Select from Pre-Warp, Post-Warp or Advanced. The age determines how far up or down you begin on the tech tree as well as the composition of your starting fleet.
- Difficulty Level: Choose from Very Easy, Easy, Normal, Hard, Very Hard or Extreme. Difficulty level determines how challenging the AI responds in game.
- AI Opponents: Customize the number of opponents you face. Select a value between 1 and the maximum number of opponents allowed by Galaxy Size.
- Game Pace: Select from Lightning, Quick, Classic, Heroic, Colossal, or Custom. Pace will shorten or lengthen the time it takes to complete research, create population, and build up production. This setting affects ALL races in the game equally.
- Big Bang Seed: This number identifies a particular galactic set-up including placement of star systems, planets and random events. If you have a favorite seed you can type the Big Bang Seed into the box and replay the galaxy map generated by that seed. Alternately you can click the **DICE** button to randomly generate a new seed.

**Advanced Settings.** You can further customize your game by using the Advanced Settings. Display or hide these settings by clicking the **Show Advanced Settings** or **Hide Advanced Settings** button. The following settings can be set to be either **On** or **Off** or allow you to choose an option from a drop down menu. All Advanced Settings are pre-set to their default settings.

- Random Events: Toggle Random Events on/off.
- Pirates: Toggle on/off.
- Monsters: Toggle on/off.
- Minor Civilizations: Toggle on/off.
- Allow Racial Traits: Toggle all Racial Traits, including the players, on/off.
- Balanced Starting Conditions: Toggle on/off for fully randomized race and planet locations. Balanced Starting Conditions remove the chance that a race will have an extremely good or extremely bad starting position. When toggled on, each race will have their home world, either an asteroid belt or gas giant in their home system. Neighboring star systems will also typically have desirable biome planets for colonization.
- Timeline: Select the frequency at which the Timeline feature auto-saves. The Timeline feature allows the player to easily reset to an earlier point in the game. If set to **Disabled** this is an ironman mode: you will not be able to reset except by loading a manually saved game.
- Research Speed: Use the drop down menu to speed up or slow down Research for all races in the game.
- Production Speed: Use the drop down menu to speed up or slow down Production for all races in the game.
- Population Growth Speed: Use the drop down menu to speed up or slow down Population for all races in the game.
- Score Victory\*: Toggle on/off. If Score Victory remains on, you have the option of setting a custom turn limit between 250 and 9999 turns. The default is 500 turns. If no race has achieved victory conditions when the turn limit is reached, the race with the highest Score is declared the winner
- Diplomatic Victory: Toggle on/off.
- Technological Victory: Toggle on/off.
- Economic Victory: Toggle on/off.
- Antaran Victory: Toggle on/off.



Hovering over a setting in Advanced Settings will display a pop-up explaining what that setting does. The Conquest victory condition is a default that cannot be toggled on/off.

## NEW GAME / MATCH SETUP

Choose your opponents and customize your experience.

### PLAYERS



Computer

RANDOM

Computer

RANDOM

Computer

RANDOM

ALKARI

BULRATHI

DARLOK

HUMAN

KLACKON

MEKLAR

Computer

RANDOM

### GAME SETTINGS

Galaxy Type	CIRCLE
Galaxy Size	MEDIUM
Galaxy Age	AVERAGE
Planet Density by Star	NORMAL
Starting Age	POST-WARP
Difficulty Level	NORMAL
AI opponents	5
Game Pace	CLASSIC
Big Bang Seed	50108

### ADVANCED SETTINGS

Random Events	ON
Pirates	ON
Monsters	ON
Minor Civilizations	ON
Allow Racial Traits	ON
Balanced Starting Conditions	ON
Timeline	EVERY TURN
Research Speed	NORMAL

 HIDE ADVANCED SETTINGS

 START GAME

 BACK

## Saved Games Screen

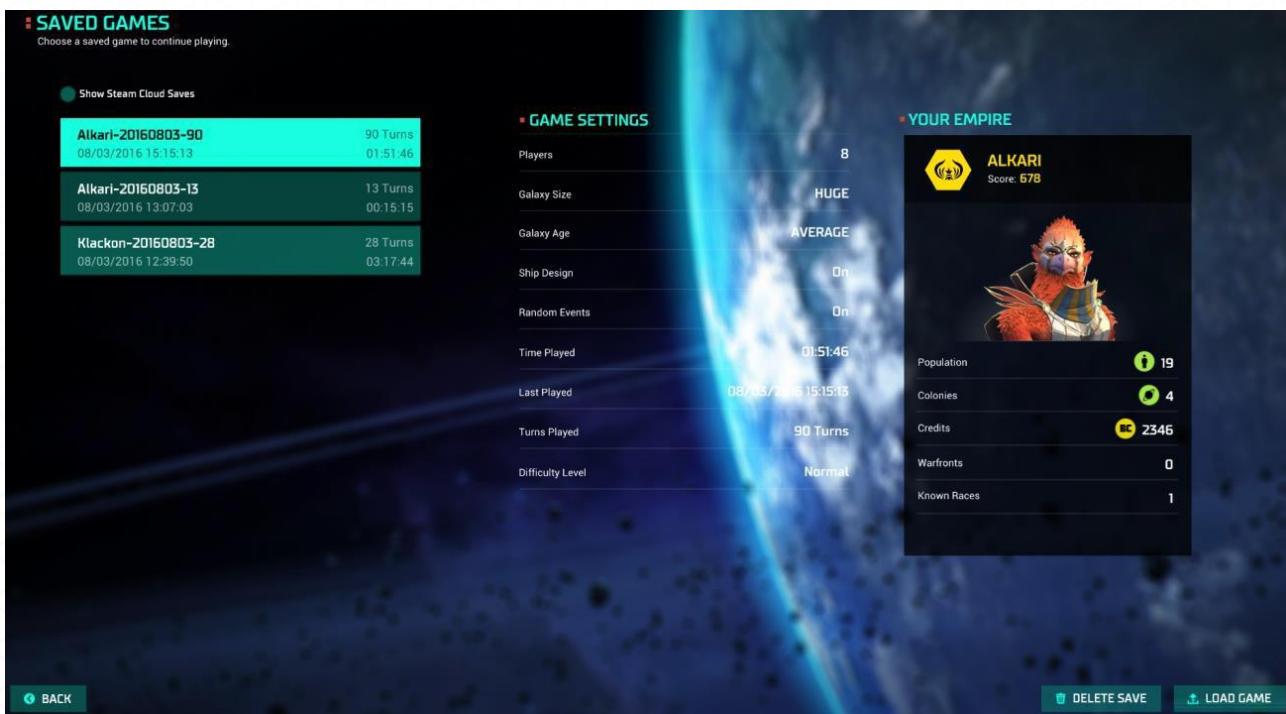
Clicking **LOAD GAME** will take you to the **SAVED GAMES** screen. All of your saved games are maintained here with the most recently saved game at the top. Clicking on a saved game will display its chosen settings and your current empire status.

If you have previously saved a game to the Steam Cloud a **Show Steam Cloud Saves** button will be located above your locally saved games. Toggling this on will display your Steam Cloud saved game.

To load a previously saved game click on the desired game to highlight it, and then click the **LOAD GAME** button. To delete a saved game highlight the game and then click the **DELETE GAME** button.



Saved games will fail to load if the game does not exactly match the active/inactive status of any mods previously linked to that game.



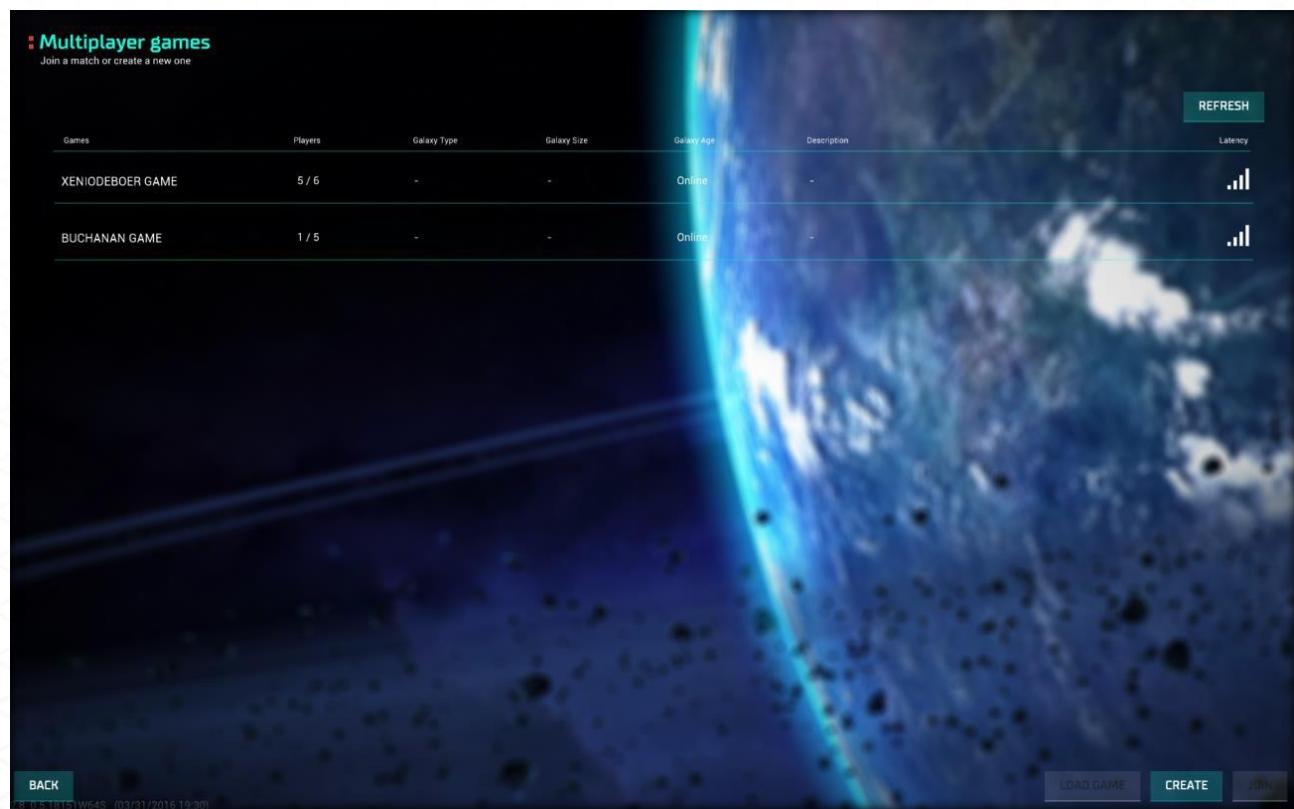
# MULTIPLAYER

## Multiplayer Screen

The multiplayer screen allows you to join an open multiplayer game, if available, or create one.

The functions of the multiplayer screen are:

- **REFRESH.** Refreshes the screen to show current multiplayer games available to join.
- **LOAD GAME.** Loads a saved multiplayer game you had created.
- **CREATE.** Creates a new multiplayer game. This is detailed, below.
- **JOIN.** Allows you to join a match. Click on a multiplayer game on the list and then click the **JOIN** button.



## New Online Game Screen

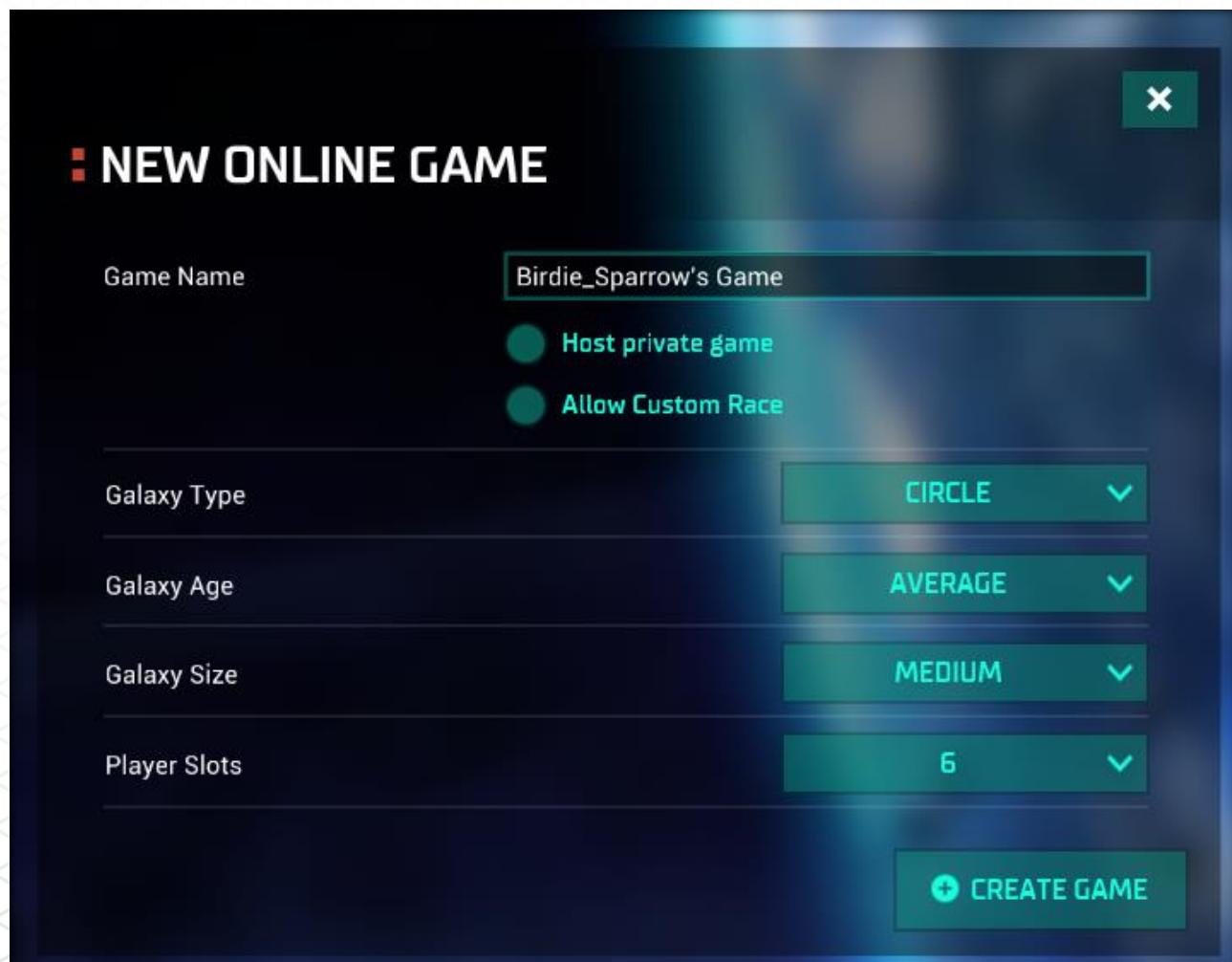
To create your own multiplayer game, click the **CREATE** button in the lower right corner. The multiplayer creation screen will be displayed with the following functions:

- **GAME NAME.** Let's you name your multiplayer game. The default will be your in-game name.
- **HOST PRIVATE GAME.** Checking this button makes the game private. Unchecking this box places the game in the public multiplayer listing.
- **ALLOW CUSTOM RACE.** Checking this toggles on/off the ability of all players to create custom races.
- **GALAXY TYPE.** Allows you to choose the Galaxy Type for the game.
- **GALAXY AGE.** Allows you to choose the Galaxy Age.
- **GALAXY SIZE.** Allows you to choose the Galaxy Size.



Galaxy Size determines maximum available player slots.

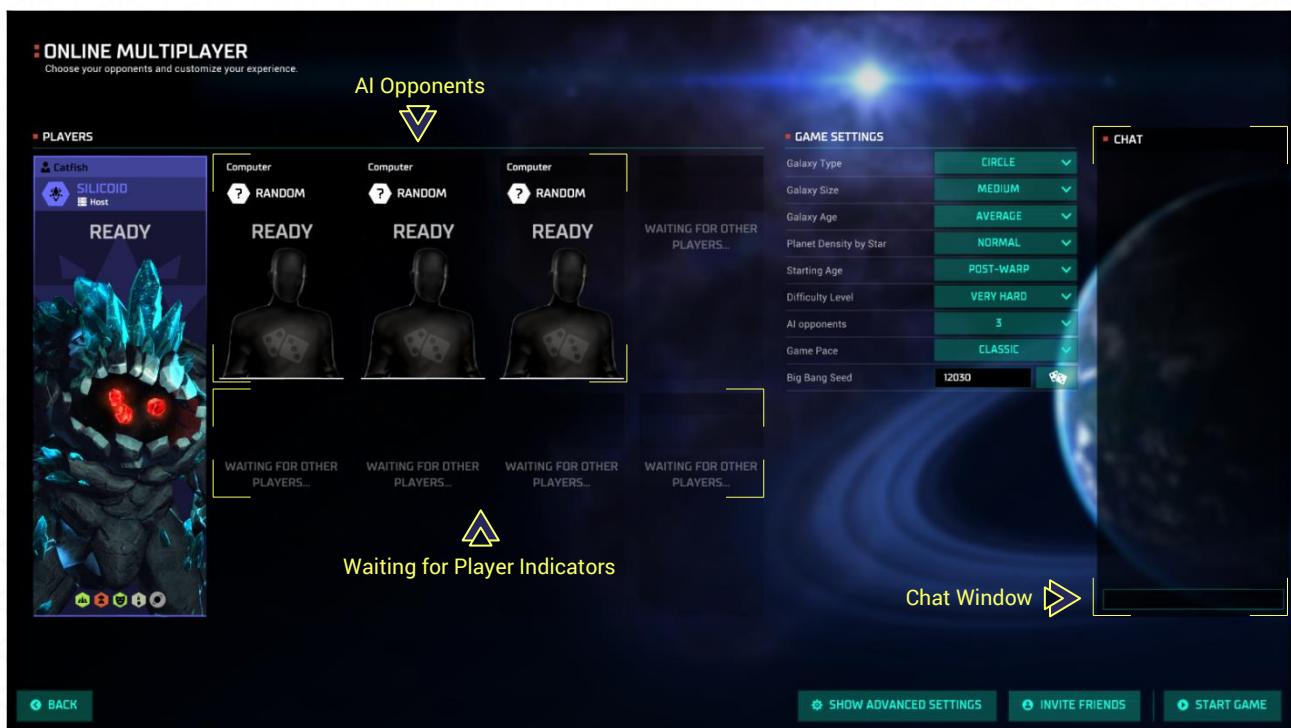
- **PLAYER SLOTS.** Allows you to set the number of players for your game.
- **CREATE GAME.** This creates your multiplayer game and takes you to the **GAME SETTINGS** screen (See the Single Player section, above, for explanations of game settings).



# Online Multiplayer Screen

This screen is similar to the **NEW GAME/MATCH SETUP** screen for single player. The only differences are the following:

- On the Race screens the Race cells will display a **Waiting for Player Indicator** until a player selects a Race. If any opponents are to be AI, they will appear as **Ready** on the screen.
- AI Opponents: In multiplayer this can be set to zero.
- Turn Timer: The Turn Timer, located under the Advanced Settings, is how many seconds all players get once the first player is done and clicks **Ready** on his screen. The timer will appear at the top of the screen and begin the countdown. When the timer reaches zero the turn will end and the next turn will begin. The Turn Timer can be set to **Off**.
- Chat Window: The chat window allows players to write to each other. A chat box will also be available within the game itself.



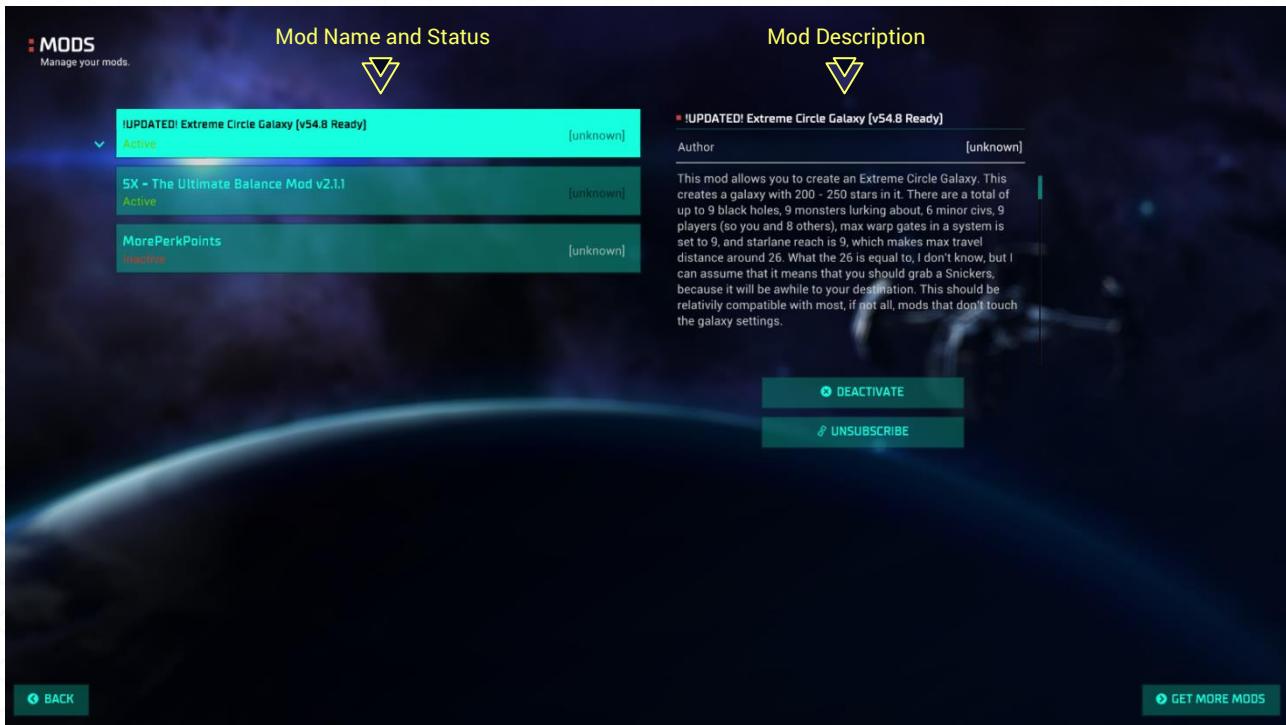
# MODS SCREEN

The **Mods** screen accesses your Mod inventory and/or directs you to additional player developed mods. Before you are allowed access to this screen you must accept the Mod EULA.

If you have no current Mod subscriptions a “**GET MODS**” button will be displayed. Selecting this button will take you outside of the Master of Orion game to the modding community site.

If you have one or more mods selected the **Mods** screen will display the following:

- **Mod Name and Status.** The mod name and current status (Active or Inactive)
- **Mod Description.** The description of the mod and author (if known)
- **Activate/Deactivate.** Allows activation or deactivation of mods
- **Unsubscribe.** Deletes mod from your inventory
- **Get More Mods.** Takes you outside of game to select additional mods
- **Back.** Returns to Main Menu



# OPTIONS SCREEN

The **Options** screen contains the following settings to optimize your computer and game experience. Selection is via drop down menus, on/off buttons, sliders, or key-mapping features:

## Graphic Settings

- Resolution
- Quality
- Antialiasing
- V-Sync
- Full Screen

## Gameplay Settings

- Disable GNN
- Disable Advisor Tips
- Mute Advisor
- Disable Camera Focus
- Enable Edge Panning
- Enable Auto-Turn

### Tactical Combat

- Start Battles on Pause
- Start Camera Mode
- On Pause Camera Mode
- Enable Admiral AI by Default
- Show Tactical Battle Setup

## Audio Settings

- Master
- SFX
- Voices
- Music

## Control Settings

(allows you to map any or all too specific keys)

- Control Type

### Strategy Controls

- Empire Management
- Fleet Management
- Research Management
- Diplomacy
- Planets Management
- Path to Victory
- Options
- Next Turn
- Skip Fleet
- Set Fleet to Guard
- Toggle Auto-Explore
- Colonize a Planet
- Build with Space Factory
- Unload Population
- Move Fleet
- Jump through Wormhole
- Destroy Planet
- Refit Ship
- Attack a target
- Set Fleet to Sleep
- Scrap Ship
- Stop Auto-Turn

## Tactical Controls

- Change Camera
- Hold Position
- Cease Fire
- Match Speed
- Pause
- Speed Up
- Slow Down
- Health Bar Mode
- Formation 1
- Formation 2
- Formation 3
- Formation 4
- Special 1
- Special 2
- Special 3
- Special 4
- Special 5
- Special 6
- Attack
- Move
- Retreat
- Automatic Formation

## Camera

- Up
- Down
- Right
- Left
- Toggle Rotation/Movement

## Interface Settings

- Language
- Voices Language
- Subtitles Language
- Show Subtitles
- Show Intro Cutscene
- Show Enemy Fast Animation
- Show Player Fast Animation

## Tactical Combat

- Show Numeric Damage
- Show Health Bar
- Destination Reached
- Enemy Target Destroyed
- Friendly Squadron Destroyed
- Special Systems Ready
- Enemy Squadron Retreats
- Friendly Squadron Retreats
- Enemy Leader Destroyed
- Friendly Leader Destroyed

## Content Settings

- Retro Fleets
- Mod Upload Tool

## Wargaming.net Account

- Sends you to the Wargaming.net sign-in screen



All Options, except Wargaming.net Account, will have the option to Reset To Default the original settings by selecting the button located at the top of the setting selections.

## OPTIONS

Select your preferred settings for your game experience.

GRAPHICS

GAMEPLAY

AUDIO

CONTROLS

INTERFACE

CONTENT

WARGAMING.NET ACCOUNT

[BACK TO MAIN MENU](#)

### CONTROL SETTINGS

[RESET TO DEFAULT CONTROL SETTINGS](#)

Control Type

KEYBOARD

Unload Population

U

Move Fleet

T

Jump Through Wormhole

J

Destroy Planet

D

Refit Ship

R

Attack a Target

A

Set Fleet to Sleep

Z

Scrap Ship

X

Toggle Auto-Turn

None

[Tactical Controls](#)

# RACES

Fourteen races are available in the Master of Orion universe: Alkari, Bulrathi, Darlok, Elerian, Gnolam, Human, Klackon, Meklar, Mrrshan, Psilon, Sakkra, Silicoid, Terran and Trilarian.



Terrans are only available with the Collector's Edition or the Collector's Edition Upgrade. Elerian, Gnolam and Trilarian are only available with purchase of the DLC either individually or as a package.



# Alkari



Lofty, Inflexible, Honorable

## Traits

- **NATURAL PILOTS.** Beam Defense: +50%, Beam Attack: +25%, Ship Improvements: Travel Speed Bonus +25% and Combat Speed Bonus +25%
- **HOMEWORLD SPECIALS: ARTIFACTS.** Faster Research
- **HOMEWORLD SIZE: LARGE.** Supports Larger Population

The proud and noble Alkari strike fear within their enemies when their ships cross the sky. The Alkari are leaders and gifted combat specialists respected throughout the universe. As natural aviators, they bring their innate knowledge of flight into battle with confidence. Their rich military tradition has tempered their aggression into an unshakable code of honor in war.

# Bulrathi



Headstrong, Territorial, Ferocious

## Traits

- **ECOLOGIST.** Starting Tech: Biology
- **HOMEWORLD MINERALS: RICH.** Faster Production
- **HOMEWORLD SIZE: LARGE.** Supports Larger Population
- **HIGH GRAVITY HOMEWORLD.** Not Affected by High Gravity
- **GROUND COMBAT RATING.** +50% To Ground Combat

The Bulrathi, unmatched in brawn and brute force, will use any advantage to attack their enemies. Peerless in hand-to-hand combat, only a fool would fight a Bulrathi on the ground if given a choice. While notorious for their gruff manners, they are the champions of the weak and exploited. The Bulrathi also care deeply about their planets, focusing their scientific resources on terraforming technologies and pollution control.

# Darlok



Stealthy, Treacherous, Scavenging

## Traits

- **DIPLOMAT.** Starting Tech: Government, Morale: +5%
- **STEALTHY.** Ship Improvements: Stealth, Experience: Spies gain +50% experience faster than normal
- **SHAPESHIFTERS.** Security: +10%, Assimilation Power: +25%

The ruthless, shapeshifting Darloks are the ultimate spies. They often rely on their exceptional espionage network to give them a diplomatic, economic, and military advantage. The universal distrust they face has made them (and other races) paranoid in intergalactic relations. This overwhelming distrust and loathing motivates the Darloks to steal, sabotage, assassinate and manipulate their way into power.

## Elorian



Spartan, Militaristic, Enlightened

### Traits

- **TELEPATHIC – MIND CONTROL.** Invade Planets Using Mind Control, Diplomacy: Improved Negotiations, Security: +10%, Assimilation Power: Immediate
- **OMNISCIENT.** Race can see all stars, planets and opponent's colonies and ships from the beginning
- **BEAM ATTACK.** +25%
- **BEAM DEFENSE.** +25%

The Elorians are a matriarchal race of female warriors led by the Grand Marshal. Only females may enter the Warrior caste and lead the Elorian people. The men belong to a Philosopher caste that forms the support and scientific prowess of the empire. Xenophobic to the extreme the Elorians strive to maintain the purity of their race by keeping others at arm's length. In a quirk of genetics all Elorian women are telekinetic while all men are telepathic to varying degrees.

# Gnolam



Prosperous, Greedy, Lucky

## Traits

- **FANTASTIC TRADERS.** Trade Treaty Bonus: +25% BC from Trade Treaties, Trade Goods Bonus: +100% from Trade Goods project
- **SPECIAL ABILITY – LUCKY.** Negative events rarely occur and opponents attack less often
- **CREDITS FROM POPULATION.** +50%
- **LOW GRAVITY HOMeworld.** Not affected by low gravity

A race of cunning merchants who hold wealth as the primary symbol of status. While they prefer to hire others to fight for them their huge reserve of credits allows them to build a large military quickly. Always seeking new avenues of business the Gnolam have little scruples in where the credits flow from. Bribery, fraud, criminal enterprises and even the occasional poison come naturally to the Gnolam if they cannot obtain the next lucrative deal legally.

# Human



Diplomatic, Stubborn, Charismatic

## Traits

- **DIPLOMAT.** Starting Tech: Government, Morale: +5%
- **CHARISMATIC.** Diplomacy: Improved Negotiations and Improved Disposition
- **TRADERS.** Trading: Trade Treaties Bonus +25% BC and Trade Goods Bonus +25% BC
- **SECURITY.** Espionage Security Lowered: -20%

The charismatic Humans have overcome millennia of internal divisions to present a unified face on the galactic stage. Humans enjoy friendly relations with all races, but when crossed they can become bitter enemies. While they pride themselves on diplomacy and honor, the Humans will fight to the death to protect what they believe in.

## Klackon



Tireless, Uncreative, Hive-Minded

### Traits

- **INDUSTRIALIST.** Starting Tech: Physics, Production from Population: +25%
- **SUBTERRANEAN.** Uber Planet: Cavernous, Homeworld Biome: Arid
- **UNCREATIVE.** Tech: Uncreative, Research from Population: -25%
- **FOOD FROM POPULATION.** Generates Additional Food Per Population: +50%

The Klackon Hive is virtually free of all rebellion and resistance to social order. Klackon are born knowing all they need to know of the world and their place in it. Each individual fulfills a role in society that they were meant to perform without question. The concerns of inferior races are foreign to the Klackon; as a result, they lack the ability to empathize with the plights of others.

# Meklar



Industrious, Erratic, Unpredictable

## Traits

- **INDUSTRIALIST.** Starting Tech: Physics, Production from Population: +25%
- **CYBERNETIC.** Food Consumption: -50%, Ship Improvements: Auto Repair

All Meklar are agents of a single cybernetic entity. The centralized Meklar consciousness offers a level of mechanical efficiency unparalleled in the universe, but makes them terrible at diplomatic efforts. As a result, they stay isolated on a small number of worlds, perfecting their factories and furthering their secretive agendas.

## Mrrshan



Fearless, Warlike, Proud

### Traits

- **MILITARISTS.** Starting Tech: Engineering, Ground Units: Improved Marine Training Rate
- **PLAINS DWELLER.** Uber Planet: Grassland, Homeworld Biome: Arid
- **WARLORD.** Ground Combat Rating: +50%, Ground Units: Extended Barracks
- **DIPLOMACY.** Improved Negotiations: Increased Chance of Accepting Deals

Descended from legendary hunters, the Mrrshan are the most unpredictable and vicious fighters in the universe. Decisive and confident, they will strike first and without mercy when threatened. Ruthless militarists, the Mrrshan make honorable allies and devastating enemies. However, their mercurial temperament means a treaty with them needs to be backed up by strength.

# Psilon



Brilliant, Unsympathetic, Creative

## Traits

- **TECHNOLOGIST.** Starting Tech: Physics, Homeworld Special: Artifacts
- **CREATIVE.** Technology: Creative, Research from Population: +50%
- **HOMEWORLD SIZE: SMALL.** Supports a Limited Population
- **LOW GRAVITY HOMEWORLD.** Not Affected by Low Gravity
- **SECURITY.** Espionage Security Lowered: -20%

Brilliant researchers who devote their lives to science, the Psilon are reclusive geniuses who are physically small and weak. Their peaceful nature is only shadowed by their crippling paranoia that other races will steal their research and technology. They are creative and efficient researchers who are gifted with all technologies.

# Sakkra



Numerous, Brutish, Inarticulate

## Traits

- **EXPANSIONIST.** Starting Tech: Engineering and Biology
- **JUNGLE CREATURE.** Uber Planet: Tropical, Homeworld Biome: Swamp
- **UNCREATIVE.** Tech: Uncreative, Research from Population: -25%
- **POPULATION GROWTH.** Faster Than Normal Growth: +50%
- **REPULSIVE.** Diplomacy: Worsen Negotiations and Worsen Disposition

The Sakkra are an aggressive race that must constantly conquer new planets to support their teeming population. They shun scientific and diplomatic pursuits in favor of aggressive expansionist philosophies. If they run out of room for peaceful expansion, they will not hesitate to attack anyone who stands in their way.

# Silicoid



Resistant, Xenophobic, Withdrawn

## Traits

- **LITHOVORE.** Food Consumption: None
- **LAVA BREATHER.** Uber Planet: Inferno, Homeworld Biome: Volcanic
- **REPULSIVE.** Diplomacy: Worsen Negotiations and Worsen Disposition
- **TOLERANT.** Gravity Does Not Affect
- **HOMEWORLD SIZE: HUGE.** Supports Very Large Population

Stern and stoic, the Silicoids are a repulsive race of mineral-based creatures who absorb the minerals from planets. They make the other races of the galaxy uneasy, even though the Silicoids' dreams of conquest are difficult with only a meager population to support them. Able to withstand high heat and gravity the Silicoids can settle many worlds the other races find to be inhospitable.

# Terran



Hard, Determined, Violent

## Traits

- **MILITARISTS.** Starting Tech: Engineering, Ground Units: Improved Marine Training Rate
- **STRATEGIST.** Command Points: +20%, Ship Cost: -20%
- **BEAM ATTACK.** Beam Weapons Do More Damage: +25%
- **MORALE.** Morale Is Higher Than Normal: +15%

The Terrans, hidden and cast away in the dark regions of space for too long, have emerged with a vengeance to bring the galaxy to heel. They are race of warriors, trained from birth for the harshness of a universe being torn apart by wretched chaos in their view. The Terrans will no longer linger in the shadows, now is the time to strike to bring order and discipline to the galaxy.

# Trilarian



Mystical, Delusional, Enigmatic

## Traits

- **AQUATIC - UBER PLANET.** Ocean Uber-Planet, Homeworld Biome: Ocean
- **TRANSDIMENSIONAL.** Ship Improvement: Travel Speed +25%, Ship Improvement: Combat Speed +25%

The Trilarian are an aquatic race of beings led by a messianic leader with the title of Stinger. They wish to live peacefully with other races often “turning the other cheek” to avoid conflict. However, when pushed the Trilarians become deadly opponents who become ruthless when at war. The race worships the “Old Gods”, a religion steeped in cryptic mythology which the Trilarians are more than willing to spread to the galaxy as a whole.

# EXPLORATION

Your race begins with one planet, a small fleet and the desire to rule the galaxy. Your top priority is to expand your empire.

## Initial Ships

You begin the game with four ships orbiting your home planet – one colony ship, one frigate and two scouts:

- **COLONY SHIP.** Allows you to settle an uninhabited planet; the ship is consumed when the colony is established
- **FRIGATE.** Basic combat ships that can keep pirates at bay during initial turns
- **SCOUT.** An unarmed light ship, useful for quickly exploring the galaxy

These ships provide the capacity to begin exploration and expansion. Every ship has the ability to scan planets, detect other races, and explore space.



The above assumes a Starting Age of Post-Warp. In a Pre-Warp Starting Age, you begin with no ships. In the Advanced Starting Age you start with two scouts, two colony ships, and one each space factory, frigate, destroyer and cruiser.

## Ship/Fleet Movement

Before sending your ships into the unknown, you need to know how to move them. The mouse controls for the main galactic screen are simple:

- **Left Mouse Button.** Hold to pan around the galaxy; click on a fleet to select it
- **Wheel.** Zoom in and out of the galactic map
- **Right Mouse Button.** Assign a destination for a fleet

To select a ship or fleet to move, left click on the fleet and the Fleet window will appear with all ships in that fleet displayed.



If you want to move the entire fleet, you do not need to do anything within the Fleet window.

If you want to send only a part of the fleet, left click in the fleet window on the ship or ships you want to move. Only the selected ship(s) will move, while the rest stay behind.

Once a fleet is selected, you can hover over a prospective destination to see how many turns the fleet would take to get there. The fleet will move at the speed of the slowest ship.

Multiple fleets at a location can be viewed by clicking the Fleet tabs.



## Fleet Merge

The current method of merging fleets is as follows:

- Make sure the fleets you want to merge are at the same warp point or orbiting the same colony or planet.
- Using the Fleet Tabs, select each fleet then select either Guard or Sleep. These will merge the fleets.
- You may immediately move the newly merged fleets, provided no fleet that was merged had moved that turn.

## Fleet Tracking

Zooming out will allow you to see where all of your fleets are. Clicking on a fleet will display the fleet composition as well as allow you to move. The fleets of other races, if in detection range, will also be displayed (clicking on them will also show their fleet composition). You may also view all of your fleets, but not move them, by selecting your fleet control button.

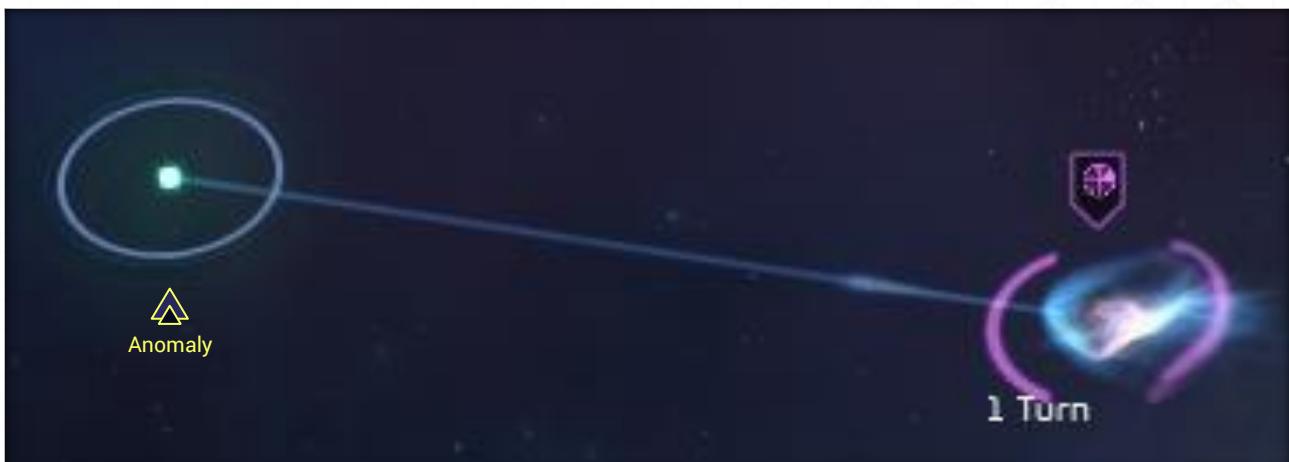


# Discoveries

The galaxy contains many mysterious objects to be discovered.

## Anomalies

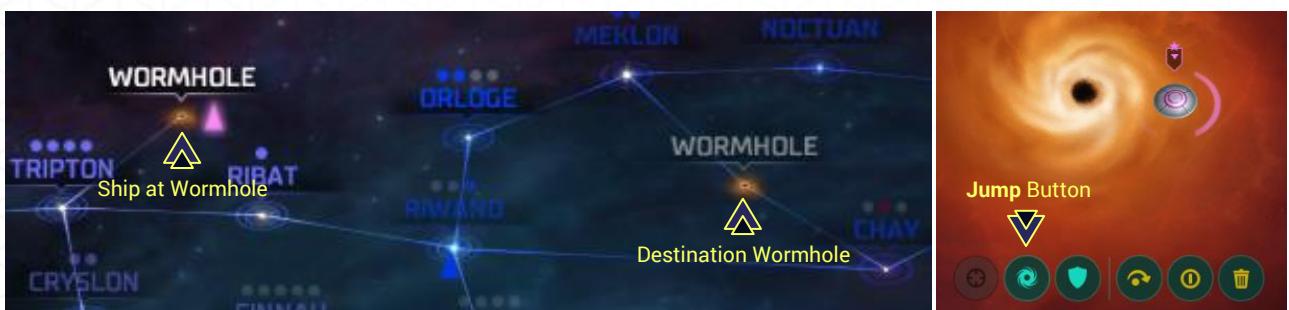
These will appear as green, pulsating points in space. A ship can be sent to an anomaly. Once the ship arrives, you will learn what the anomaly is and receive its benefits, which might be: credits, a new technology, a ship added to your fleet, and more.



## Wormholes

Wormholes are rare stellar phenomena. Each wormhole links to another wormhole within the galaxy. Ships moving through one wormhole travel instantly to its counterpart. When selected for travel, the destination wormhole will be highlighted. These phenomena can be of strategic importance, especially ones located close to or within your empire.

When one of your ships is stationed at a wormhole, the **Jump** button will become available. Clicking it will send the ship to the linked wormhole.

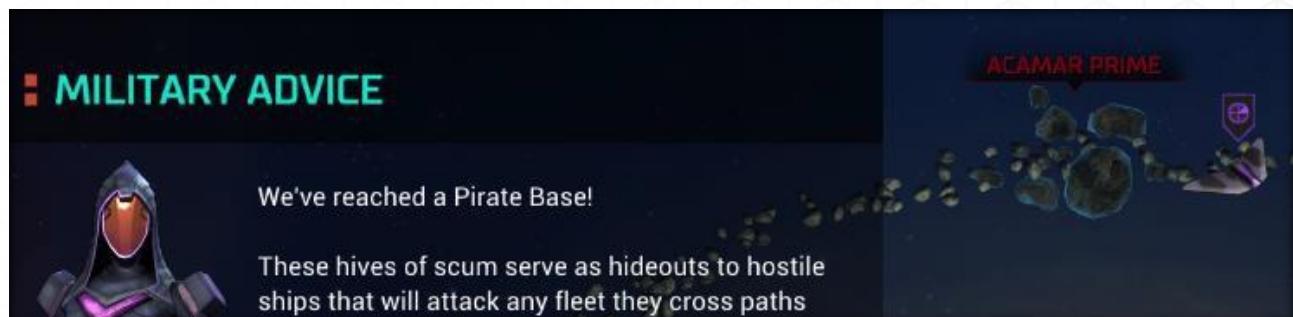


## Electromagnetic Disturbances

As your ships approach a planetary system, you will occasionally receive a notification that an electromagnetic disturbance has been detected. The planet where these disturbances are detected will be briefly highlighted and an audio tone will sound.

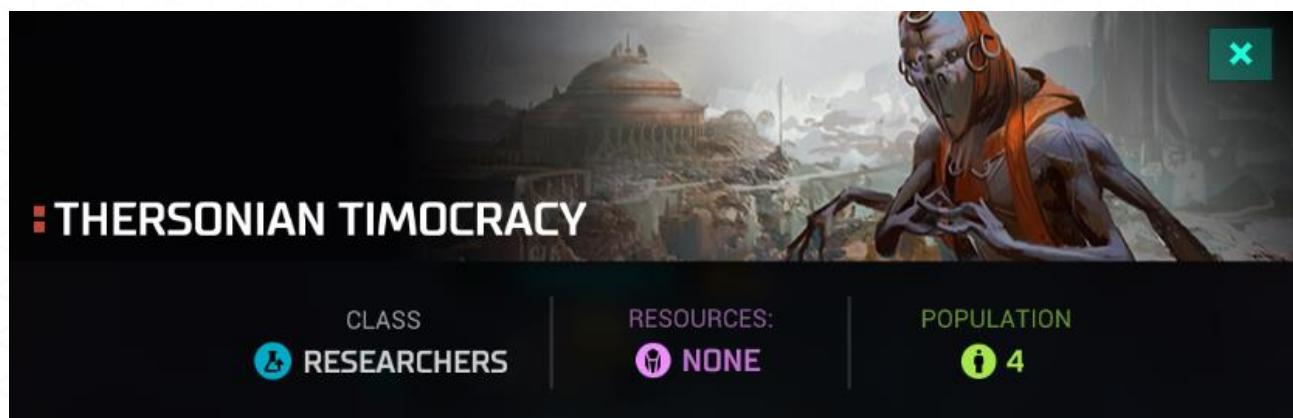
## Pirate Bases

Pirates, the scourge of space, establish bases in asteroid belts or on out-of-the way planets. If not destroyed they can grow in power, sending out more and stronger ships over time. Pirate bases can only be destroyed by ships equipped with bombs. Destruction of the base will often yield some small benefits.



## Minor Civilizations

In your travels you may encounter minor civilizations. These planets are home to various non-space faring races. They will welcome the protection of the space faring races and will grant various bonuses to those that protect them. Minor civilizations are explained in more detail in their own section.



## Planetary Systems

From a distance you can readily discover the presence of planets, discern their relative size and detect any moons. To receive more detailed information about a planet, you will have to actually move a ship into orbit. Technology or racial traits may exist to shorten this system exploration process.

Hovering your mouse over an explored planet will cause a pop-up window to appear. This pop-up will display a snapshot of the planets essential data. This same data is displayed when you click on the **Planet** button in your Empire Command row.



## Space Monsters

In the vast blackness of space there lurk strange, gigantic lifeforms with insatiable appetites. These space monsters come in a variety of forms and strengths. Moving in to take a closer look at one may be the last thing your crew does before being devoured. You must determine if staying in a system used as a lair for such a creature is worth the risk. Until destroyed such creatures will attack any trespasser who orbits the planets or asteroid belts of that system. You may transit the system or remain on a warp point safely.



## Spacefaring Races

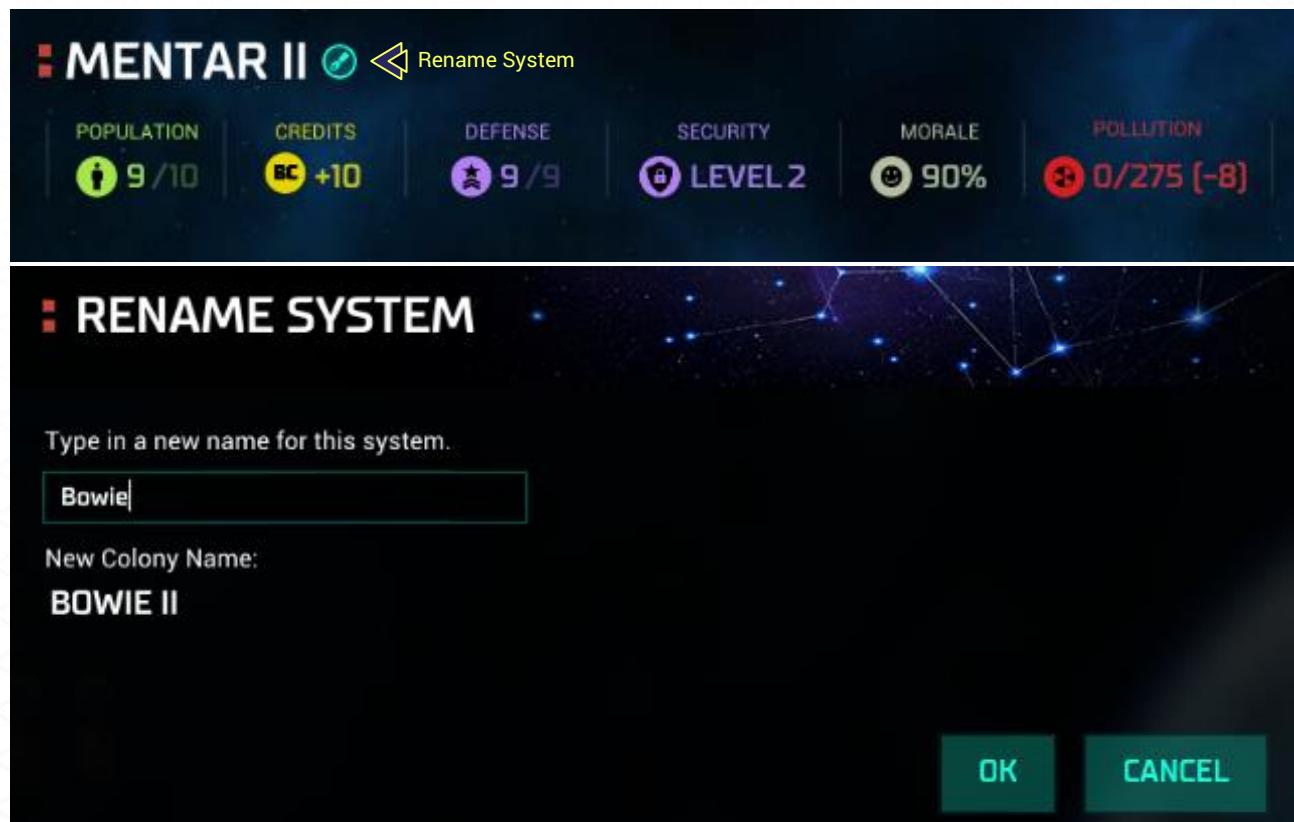
Eventually you will meet other races. When contact is made, the emperor of that race will make himself/herself/itself known. Interactions with your fellow galactic rulers can then be accessed through the Diplomacy screen. While you may be able to continue exploring your neighbor's territory if you wish, keep in mind that other races can be fickle. You could find your ships, or even colonies, trapped behind enemy lines to be destroyed or seized.

## Rename System

When you control a system you have the option of renaming the system as long as you are the only race currently in the system. The **RENAME SYSTEM** button will appear next to the current system name within the COLONY and MANAGE STRUCTURES screens of your colonies. If you opt to rename the system you are limited to 14 characters in any combination of letters (upper or lower case), numbers, and spaces only. You may rename systems as many times as you wish.

Only systems may be renamed. Planet(s) will fall under the normal naming convention of the system name followed by "Prime", "I", "II", etc. All renamed systems will also be indicated on other screens (Empire, Planets, Fleets, etc.) as appropriate.

Systems where minor and/or major civilizations are located may not be renamed.



## Obstacles to Exploration

The galaxy is free for you to roam—until you run into another advanced race. The other space faring races may block entrance into their territory by placing ships on guard duty or by building battle stations. If you run into this situation, four options are open to you:

- Destroy blockading forces (which will lead to war)
- Negotiate an Open Border treaty or Alliance
- Remain at the warp point and risk attack
- Retreat



If you succeed in obtaining an Open Border treaty or Alliance, be careful; if the agreement is cancelled by either side, ships within the other race's territory will be trapped there. Remember that, while such a treaty or Alliance is in force, the other race will have full access to your empire as well.

Pirates and space monsters can also present a hindrance to your exploration of the galaxy. They can pounce on weaker ships and destroy them. Space monsters will attack any ship that enters their system and orbits the system's planets or asteroid belts (remaining at and/or traveling to another warp point in the system will not cause the space monster to attack).

# MANAGING YOUR EMPIRE

## Galaxy Screen

The Galaxy Screen has all of the information and functions needed to manage your empire. These are described in more detail below.



## Empire Snapshot

The Empire Snapshot gives you a brief overview of the current status of critical, empire wide information as follows:

- **Economy.** This shows you information related to the BCs (Billions of Credits) of your empire. The first number is the current total of BCs in your treasury. The second, in parentheses, shows the surplus or deficit for that turn in BCs factoring in all costs. If the second number is in **RED**, it indicates how many BCs will be deducted from your treasury that turn. Note that if you do not have enough BCs to cover that deduction your advisor will begin to scrap ships, structures, etc. to make up the shortfall.
- **Command Points.** These are the number of CP (Command Points) used and the current maximum. Every ship and military outpost costs a number of CPs. Once the maximum is exceeded your empire will automatically pay a per turn cost of 20 BCs for each CP over maximum. CP maximums may be increased through building structures, advanced technologies and leader bonuses.
- **Security.** This represents the level of security percentage to discover spies in your empire. The overall total is also added to individual colony security levels as an Empire Bonus.

- **Research.** The research bar displays the technology currently being researched, the current amount of research points accrued, and the number of turns until completion. The bar itself displays the amount already researched as a solid bar and that turn's contribution to completion as a translucent bar.

Hovering over each snapshot location will cause a detailed drop down to appear. The drop down will break down all factors related to how the total shown was arrived at.

827 [+515]
88/199
LEVEL 1
+353.10
TECTONIC ENGINEERING
4

Economy
Command Points
Security
Research

**Credits** are used to maintain and speed up the production of **Ships** and **Structures**.

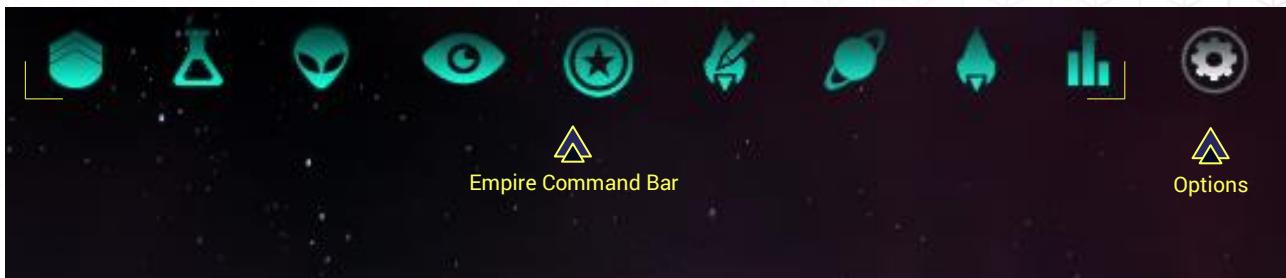
**Credits** come from **Population taxes** and from special **Structures**.

<b>Colonies:</b>	
Taxes	1453
Structures	65
Trade Goods	8.7
Resources	6
Structure Upkeep	-954
<b>Subtotal Colonies</b>	578.7
<b>Diplomatic Deals:</b>	
Trade Treaties	0
Incoming Payments	0
Outgoing Payments	0
<b>Subtotal Diplomatic Deals</b>	0
<b>Fleets:</b>	
Fleets Upkeep	0
<b>Subtotal Fleets</b>	0
<b>Developments:</b>	
Structures	47
Developments Upkeep	-12
<b>Subtotal Developments</b>	35
<b>Espionage:</b>	
Agents	-43
<b>Subtotal Espionage</b>	-43
<b>Leaders:</b>	
Leaders Upkeep	-55
<b>Subtotal Leaders</b>	0
<b>Total</b>	515

Snapshot Dropdown

## Empire Command Bar

The Empire Command Bar is explained in more depth below.



## Turn Bar

The Turn Bars provide several functions besides advancing to the next turn as follows:

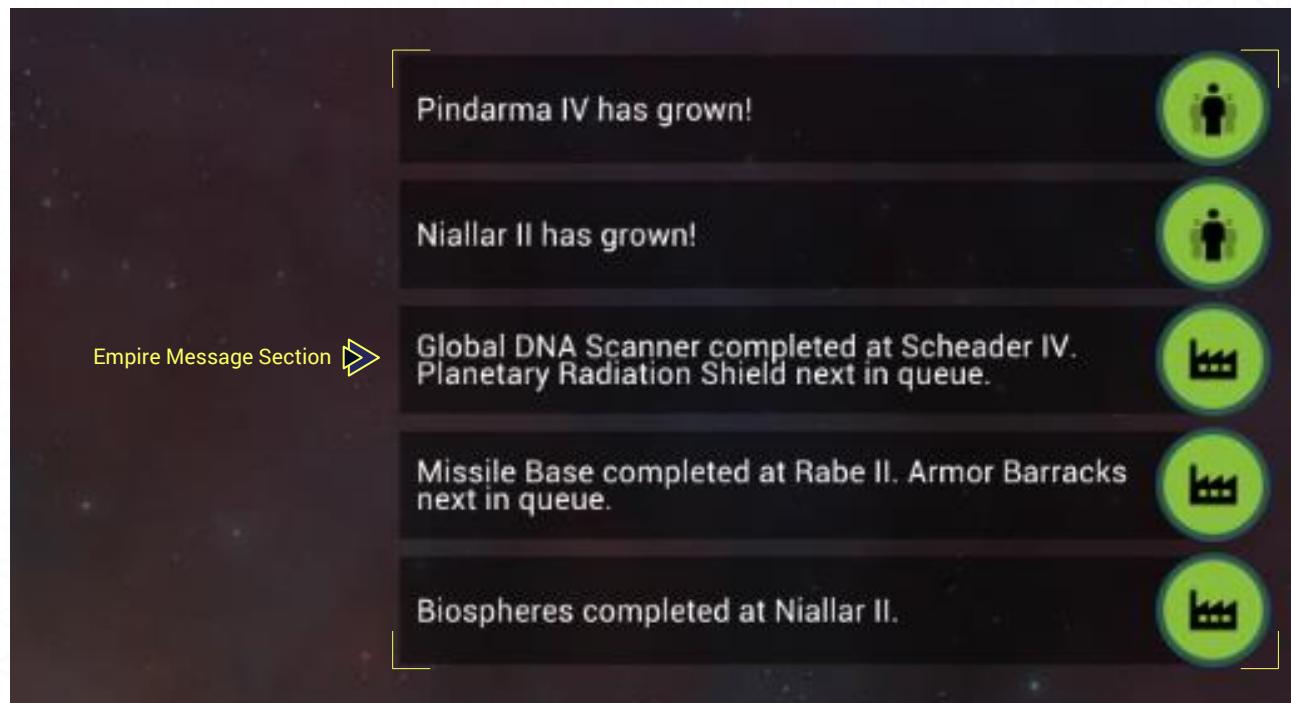
- **Turn/Auto-Turn.** Clicking the button next to your current turn number will enable/disable the Auto-Turn feature. If Auto-Turn is enabled the button will light with a check mark inside and the words **Auto-Turn Enabled** will appear next to the current turn number. Auto-Turn will automatically advance your turns until a condition requiring your attention occurs (a ship reaches a destination, research completes, etc.)
- **Next Turn Bar.** This bar has two features: the extra **MOVE** and **NEXT TURN** buttons.
  - **MOVE.** When this button is lit, one of your ships or fleets can take an extra move that turn. Note that once used, this ability will take time to regenerate.
  - **NEXT TURN.** Once all conditions are met clicking this button will advance the game to the next turn.



## Empire Message Section

The Empire Message Section is where information that can affect your empire is displayed. These messages can range from completion of research, a production item is completed, an espionage mission has succeeded or failed, etc. Message will appear as flags which will fade away but mousing over the message icon will cause the flag to re-appear.

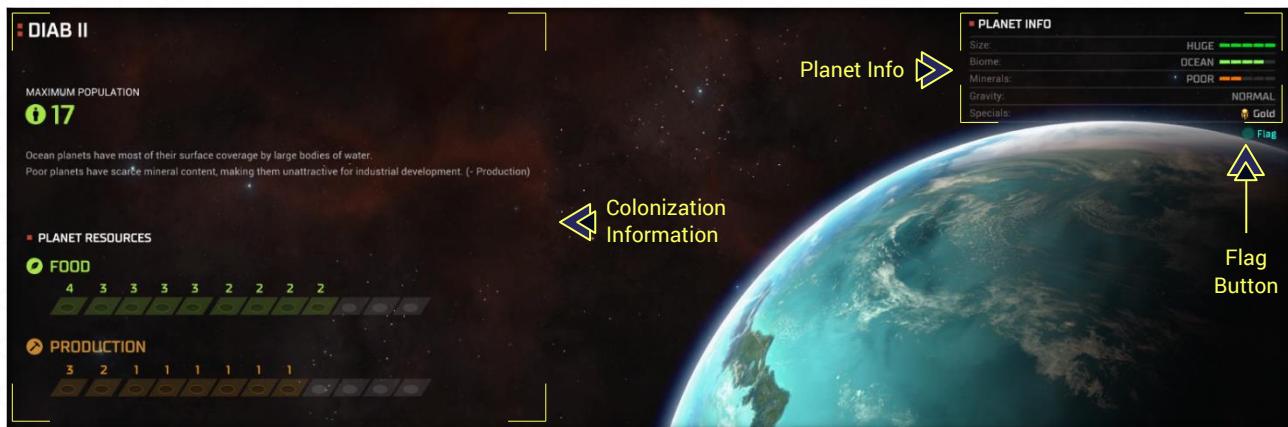
Clicking on the message icon will zoom in the area affected on the Galactic map. However, clicking the icon will also cause it to permanently disappear.



# COLONY MANAGEMENT

Having discovered a new planet, you need information—its size, biome, minerals, gravity, and special traits—to decide whether or not to colonize. Once you have explored a planet, clicking on it will bring up more detailed information to aid in your decision. This information consists of:

- **Colonization Information.** On the left you will see data on maximum population, a description that includes bonuses (positive or negative), and planetary resource status. Note that this information is raw data and does not take into account racial bonuses or technology slots.
- **Planet Information.** On the upper right is displayed information on the planet itself. Colored bars are used to indicate overall suitability for colonization. Gravity and Specials information is also displayed.
- **Flag Button.** If you discover a planet that you want to find again quickly, click the **Flag** button. Within the **Planet** button of the Empire Command row you may sort by flagged planets.



## Planet Information

### Size

A planet's size affects one characteristic: maximum planetary population. All other factors being equal, the larger the planet, the more population it can support. Large populations can provide more credits, production, and research output—although this may not necessarily be the case, as a result of planetary conditions.

- **Giant.** Reserved for gas giants which cannot be colonized unless transformed by Gas Giant Compression technology.
- **Huge.** The largest planet you can colonize.
- **Large.** The second-largest colonizable planet in the game.
- **Medium.** A standard-size planet, generally about the size of Earth.
- **Small.** A viable planet especially with favorable characteristics.
- **Tiny.** The smallest category of planets. Limited resources make this a last resort planet even with a favorable biome.

## Biome

Biome is the overall ecology of a planet; biome affects food production and is one factor in maximum population limits. Some races benefit from colonizing preferred biomes. In descending order of advantage, the following biomes exist:

- **Class A**
  - Gaia: Rare “Garden of Eden” worlds with extraordinarily rich ecosystems.
- **Class B**
  - Ocean: Planets mostly covered with water but having a thriving marine-based ecosystem.
  - Terran: Worlds with abundant flora, fauna, and water supplies.
- **Class C**
  - Swamp: Heavily layered with dense, jungle-like marshes.
  - Arid: Rocky terrain and sparse vegetation. More temperate than Desert.
- **Class D**
  - Desert: Planets notable for harsh weather and scarcity of water.
  - Tundra: Frigid environments featuring permafrost and harsh weather.
- **Class F**
  - Barren: Barren planets with a breathable atmosphere.
  - Radiated: Planets that have no atmosphere due to their star's emissions.
  - Toxic: Totally inhospitable toxic environments. One small bonus is that this biome is immune to pollution.
  - Volcanic: Subject to violent eruptions and tectonic activity making life difficult.
- **Gas Giant.** With advanced technology, these planets can be compressed into a Class F “Barren” biome.
- **Asteroid Belt.** With advanced technology, asteroid belts can be compressed into a Class F “Barren” biome.

## Minerals

Minerals are the lifeblood of production. The richer the veins of ore the higher your planet's production output will be. The mineral levels and their effects on production are:

- **Ultra-Rich.** Overflowing with rare and valuable deposits (+/+ Production)
- **Rich.** Abounding with useful minerals (+ Production)
- **Abundant.** Possessing average mineral deposits (Standard Production)
- **Poor.** Containing some minerals, but production will struggle (- Production)
- **Ultra-Poor.** Exhibiting very few mineral resources (-/- Production)

## Gravity

Another characteristic that will affect your colony is the planet's gravity. Some race traits and/or technology can mitigate the effects of high or low gravity. The gravity types are:

- **Low.** Reduces all planetary resource generation by 50%.
- **Normal.** No production modifier.
- **High.** Reduces all planetary resource generation by 50%.

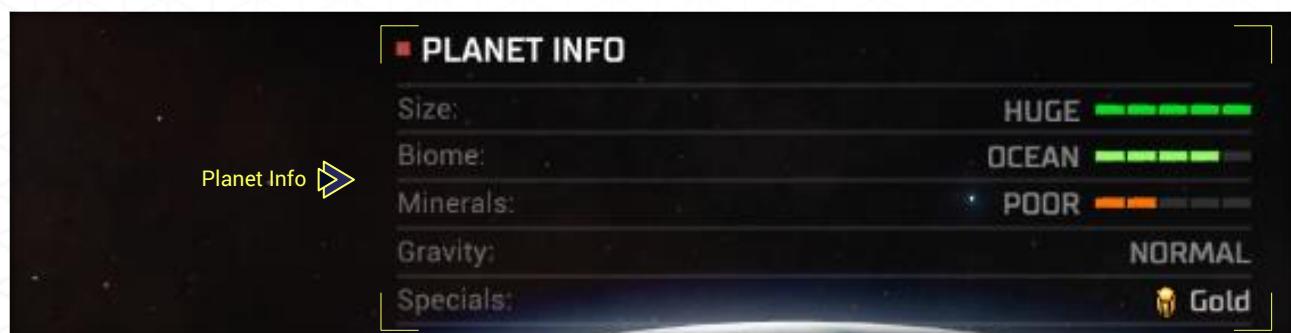
## Asteroid Belts

Asteroid belts may not be colonized unless compressed into a Barren planet. The only information displayed will be their system name when hovered over. However, space factories may build an Asteroid Laboratory which generates a bonus to research. Space factories may build these in any asteroid belt – you do not need to have a pre-existing colony.

## Specials

Some planets contain special resources that provide specific bonuses for that planet only: **Gold**, **Artifacts**, **Dark Quartz**, etc. Gold increases credit (BC) generation, Artifacts provide a research boost, and so on. These benefits do not affect any other planets in the system or the Empire as a whole. Special resources will be shown at the bottom of the planetary information pop-up screen and can be hovered on within the planetary screen for an explanation of the benefits.

Space factories can build specialized structures that generate extra credits or research points. Within an asteroid belt, a space factory may build either an Asteroid Laboratory or Asteroid Mine. A credit generating Superscalar Gas Harvester can be built on a gas giant. In order to build these structures a colony must have been established on a planet in that system with the exception of Asteroid Laboratory which may be built at any asteroid belt.



# Colony Screen

Once you have colonized a planet the Colony screen has all of the information and functions needed to manage the colonies in your empire. These are described in more detail below.



## Colony Information Bar

The Colony Information bar shows you, in a snapshot, important information related to this colony:

- **Population.** Current population and maximum population limit.
- **Credits.** How many BCs this colony currently produces. This can be a negative indicating that many BCs are deducted from the treasury every turn.
- **Defense.** Current and maximum allowed ground defenses
- **Security.** Defense against espionage. The higher the security level the better the defense.
- **Morale.** Percentage of your population willing to work. Morale below 100% risks having some Population going on strike.
- **Pollution.** Current pollution level and the threshold where the biome will degrade. Once pollution equals or exceeds the degradation number the biome Type is reduced. This will result in the loss of Food generation (Food structures will not be affected) often resulting in colonist deaths due to starvation.

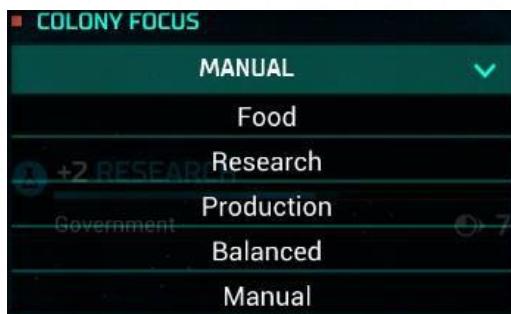


## Colony Focus

The Colony Focus drop down menu allows you to select how you wish direct that planet's workforce as follows:

- **Food.** Colonists will be placed with an emphasis on Food cells.
- **Research.** Colonists will be placed with an emphasis on Research cells.
- **Production.** Colonists will be placed with an emphasis on Production cells.
- **Balanced.** Colonists will be placed as evenly as possible among all Resources cells.
- **Manual.** You must manually distribute colonists amongst Resource cells.

Each colony may have its own colony focus. For example, an ultra-rich world could be set to focus on Production to make sure the bulk of the population produces structures or ships at a high rate.



## Planetary Resources Bars

A planet has three categories of output: Research, Food and Production. Output is generated primarily by the colonists placed in the resource cell, modified by racial traits, structures, and consumption. The total output is then displayed as a positive (or sometimes in the case of food a negative) number next to each resource symbol.

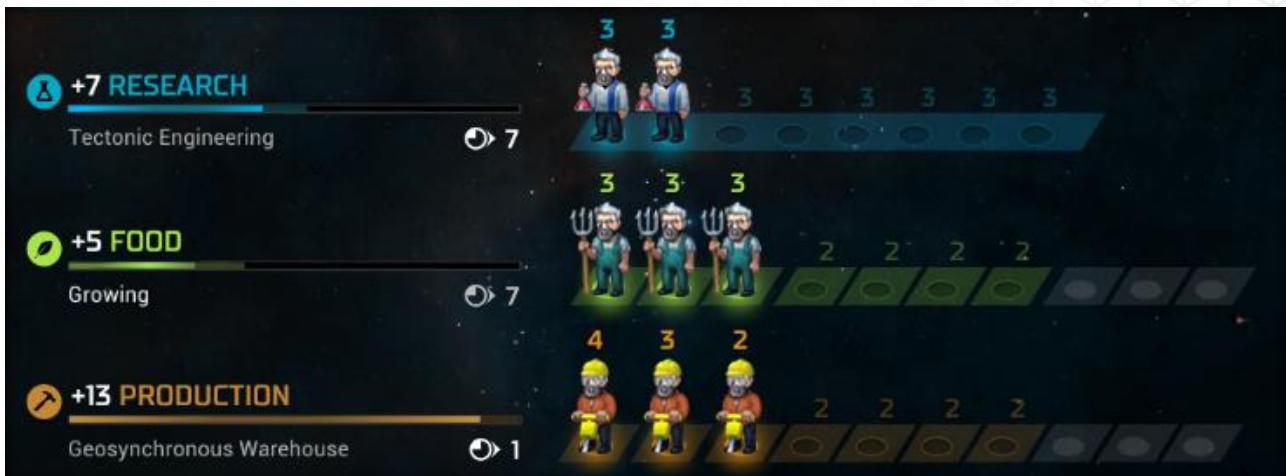
A number will be displayed over each cell with a colonist. This number indicates the total resource being generated by that cell. In the case of fractional generation due to modifiers a "+" sign will appear. Hovering over that colonist will cause a pop-up to appear displaying the total output for that individual cell.



If the number above the colonist is the same color as the resource, this indicates a positive output. If the number is **RED** then that cell is producing less than its optimal resource (usually due to racial traits, though certain events can also affect a resource generation).

Hovering over a resource bar will cause a pop-up to appear. This pop-up will inform you what the resource does, what will affect it, and the current break down of how the total is determined.

Cells that are GREY are not currently usable. Advanced technologies can be used to unlock these cells.



A small clock symbol located under each resource bar indicates how many turns remain to finish the current task:

- **RESEARCH** is the time to complete of the current technology being researched
- **FOOD** indicates when your next unit of population will become available. Food should be kept at zero or above as a negative number means your population is starving and will begin to die off.
- **PRODUCTION** is the number of turns remaining until the current Production project is completed



If you have reached maximum population, the word "Full" will appear on the Food line. You may not proceed to the next turn if any planet has not been assigned a Production project or if you have not selected a Research project for your empire. A "Nothing being researched/produced" notice may appear as a reminder that these projects must be selected before you can end the turn.

## Production Queue

Production allows a planet's workforce to construct Structures, Ships, and Projects. The Production menu will show all available options. Note that some options are planet-dependent and may not be shown (e.g., a Structure requiring a moon will not be displayed if your planet has no moon). Also, any Structure previously built will also not be shown—only Projects and Ships can be produced multiple times.

When selected all ships have a special option located at the bottom of their information screen. This option allows you to build from 1 to 5 ships at once. Colony Ships, Civil Transports, and Troop Ships are dependent on current population and marine totals. The quantities of these ships allowed to be built may be less than 5.

Click on an empty Production Queue box to bring up a screen of all currently available Structures, Ships, and Projects available for that colony. You may also sort by clicking the dropdown menu and selecting the type of item. Arranged across the top are buttons that, when clicked, will display only those items of the selected type.

Clicking on an item will bring up a detailed explanation on the right side of the selection screen. Once you have selected the item you wish to build, simply click on the **BUILD** button in the lower right corner to add it to the Production Queue. The item currently being produced will show an "In progress..." statement and will be highlighted.

You may have up to five items selected if the "Show queue" button has been checked. The first item will begin and the other four will be produced in the order selected. As one item finishes, the next will begin automatically. If the queue is empty, you will be reminded to select a new item for production. If the "Show queue" button has not been checked you are restricted to only a single item in the Production Queue.

If you wish to shorten the production time of the item currently being built and have the credits, you may click the **BUY** button. This will instantly build the item, which will be available at the beginning of the next turn. There is no partial buy-out; this is all or nothing. However, the buy-out price drops every turn as the item gets closer to completion.

To change the order of items, left-click and drag an item to the new queue location. Drop it in the new location; the other items will shift automatically.

To cancel an item in the queue, hover over the item and click on the "X" in the upper right corner of the item.

The Production selection screen will also display a Colony Information bar to aid you.

If you would prefer the AI to make your production decisions check the **Use autobuild** button. The AI will select the most appropriate item to build for that planet.



If you cancel an item that has had production applied to it, you lose all production on that item. However, if you change the order of items in the queue, any production applied is not lost. When that item reaches the top of the queue, production of that item will begin where it left off.

**BUILD AT ALPHA CETI II**  
Select a Structure, Ship, or Colony Project to build.

Colony Information Bar 10 / 13 BC -20 LEVEL 3 100% 75 / 300

Research Food Production Economic Defense General

ALL

Soil Enrichment Facility	Trade Goods	Gaia Transformation	Atmospheric Renewer
Pollution Processor	Toxic Processor	Global DNA Scanner	Armor Barracks
Planetary Radiation Shield	Interplanetary Security Network	Scout VII	Civil Transport IV [Terran]
Space Factory VIII	Troop Transport IV	Bomber IX	Frigate XVII
Colony Ship VII	Destroyer XVI	Colony Ship III x2	Cruiser XV

**TITAN III**  
601 1173

**BONUS**  
Hull Strength: 4950  
Shield Strength: 1155  
Combat Speed: 1.22

**COSTS**  
Turns: 39  
Command Points Costs: 10  
Cost: 926.1

A huge and resilient spacecraft, tougher and more heavily armed than the Battleship.

**Under Production**

**Quantity (Ships Only)**  
 Quantity 1

START BUILDING

BUY BC 288

39

39

Show queue  
 Use autobuild

Production Queue

## Manage Structures

To view the structures currently built on your colony, click the **VIEW** button on the main Colony Screen. This will take you to a new screen that will show your planet as a whole along with the structure selection buttons of the Manage Structures area.



The structure selection buttons are color coded as follows:

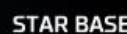
- **Orange:** Production
- **Green:** Food
- **Blue:** Research
- **White:** Morale
- **Yellow:** Credits
- **Aqua:** Pollution Control
- **Purple:** Military and Security

By clicking these you may sort through the various structures which will be displayed below the buttons. Clicking on a structure name will bring that structure to the fore and display its information box. The information box also allows you to scrap that structure.



Think twice before you scrap a structure. Clicking **SCRAP** will instantly scrap the structure. You will not receive a confirmation box for this action.

Structure Selection 

 **STAR BASE**



 Cost: 120

 Maintenance: 1

 Scanner Range: +1

 Command Points: +5

 Ship Self Repair: 5% per turn

 Enables Battleship, Titan and Doom Star construction

The Star Base is an armed orbital platform used to build and service military spacecraft. This base has an extensive array of your most up-to-date weaponry. Places the planet's scanners in orbit, away from atmospheric disturbances.

 **SCRAP**

 **DONE**

**■ MANAGE STRUCTURES**

 Colonial Revenue Service

 Neutron Collider

 Space Elevator

 Government Support Facility

 Moon Laboratory

 Subterranean Farms

 Marine Barracks

 Missile Base

 Global DNA Scanner

 Star Base

 Interplanetary Security Network

 Planetary Radiation Shield

 Armor Barracks

## Leader

If a Leader has been assigned to this colony they will appear within the Colony Management screen next to Planetary Information. A system may only have one Leader assigned. The following information is displayed:

- **Leader Name:** Leaders name and nickname
- **Bonuses:** Current bonus percentage or special ability

Hovering over the Bonuses will display a pop-up with additional information.



# Pollution

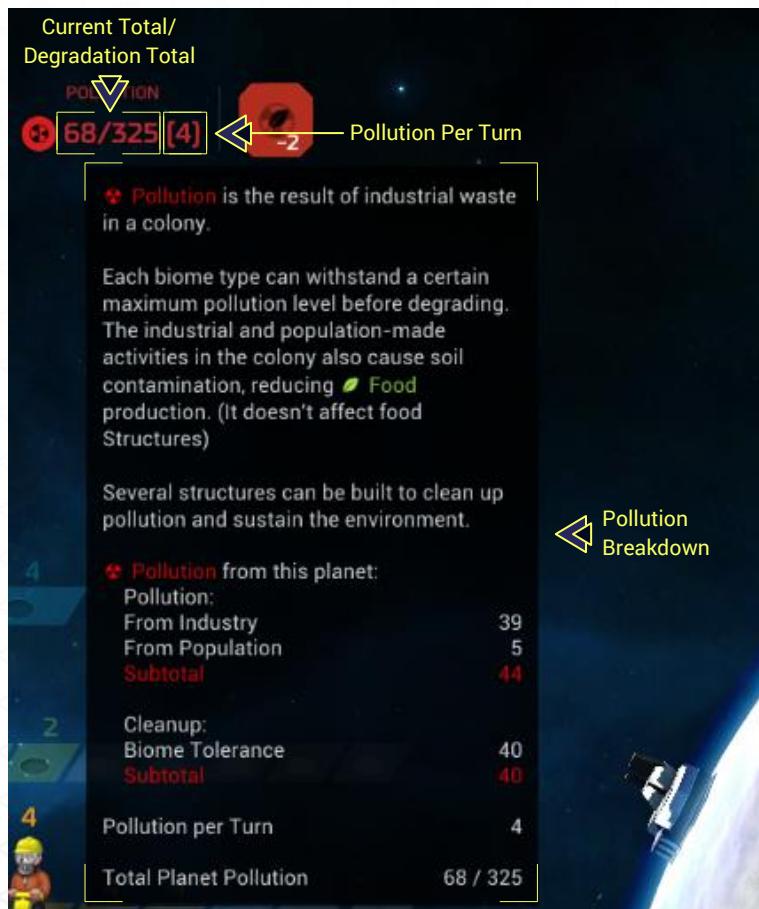
Pollution will gradually increase over time as your colonies become more developed. Pollution negatively affects your food production proportionate to the level of pollution. In extreme cases when pollution equals or exceeds the degradation threshold your biome will degrade. In both cases population increase tends to be slower due to decreased Food production. Your colony also risks losing population to starvation.

Pollution is generated by both production and population. Colonies with a heavy focus on production will generate more pollution than those focused on research or food. Also the larger the population is on the colony the more pollution is produced. Colonies undergoing terraforming or Uber/Gaia transformation generate NO pollution.

Pollution levels may be hovered on to display the current pollution breakdown for that colony. If pollution remains at "0" or less pollution will not accumulate. A positive number is the per turn pollution accumulation. The current pollution total is shown next to the biome degradation threshold. Once the threshold is reached the planet will degrade.

Pollution may be kept under control as follows:

- **Biome Tolerance:** The biome of the planet has a natural clean-up ability
- **Technology:** Advanced technology may add to the overall pollution clean-up total.
- **Population:** Shifting population from production into Food and Research will also aid in clean-up.



## Colonist Morale

Your colonists must be kept happy if you want them to remain productive. When a unit of population becomes unhappy they may go on strike. When this happens they will no longer produce resource points. A number of factors can cause colonists to go on strike: high taxes, pollution, conquest by another race, etc.

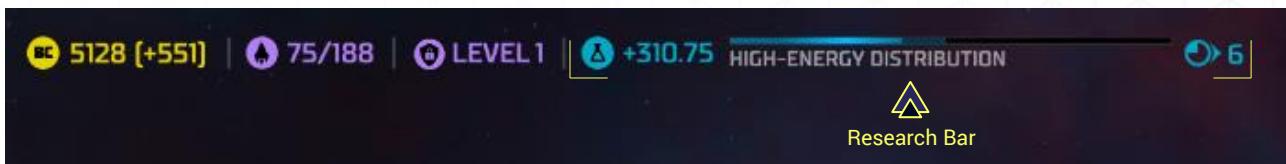


Bringing striking colonists back to positive morale will require your intervention. You can lower your tax rate, build structures that generate a bonus to morale (most often but not always denoted by a happy face in the corner) or hire a leader with a morale boost bonus. For conquered populations, the passage of time combined with other morale-enhancing options will eventually make them productive.



## Research

Research points are applied to the technology currently being researched by your empire. The more colonists assigned to research across all the planets in your empire, the quicker your research will be completed. Any research bonus from technology is also added in. The bar will display the current research bonus, the technology symbol, a bar indicating current completion, and turns to completion.



Research is the only colony resource function that affects your empire as a whole, yet provides no direct benefit to the colony itself (barring a system-wide disaster...).

## Colony Assimilation

When you capture an opponent's colony by planetary assault, any population currently on the colony will come under your control. However, the population tends not to be very happy at being conquered and will need to be assimilated. Until the captured population is fully assimilated they will produce resources at 50% of the normal rate. Unassimilated units of population are denoted with a red number and star above their resource cell.



Assimilation is noted by a new icon located at the end of the Colony Information bar. This icon will display the number of turns until the next unit of population is assimilated. Once assimilated, a unit of population immediately begins to produce resources at the normal rate and their red number and star disappears.

Assimilation occurs naturally over time, even if the conqueror takes no action. The process may be sped up with racial traits and certain technologies and structures. Also, using civilian transports you can import population of your own race to a captured colony. These colonists will immediately fill the leftmost cell in the resource they are dropped into if the captured population is still generating below capacity.

**POLLUTION****0/275 [-18]**

Assimilation Icon

Conquered, unassimilated population has its output halved. In time, these units will join your empire and become fully productive. The Alien Management Center improves assimilation rate.

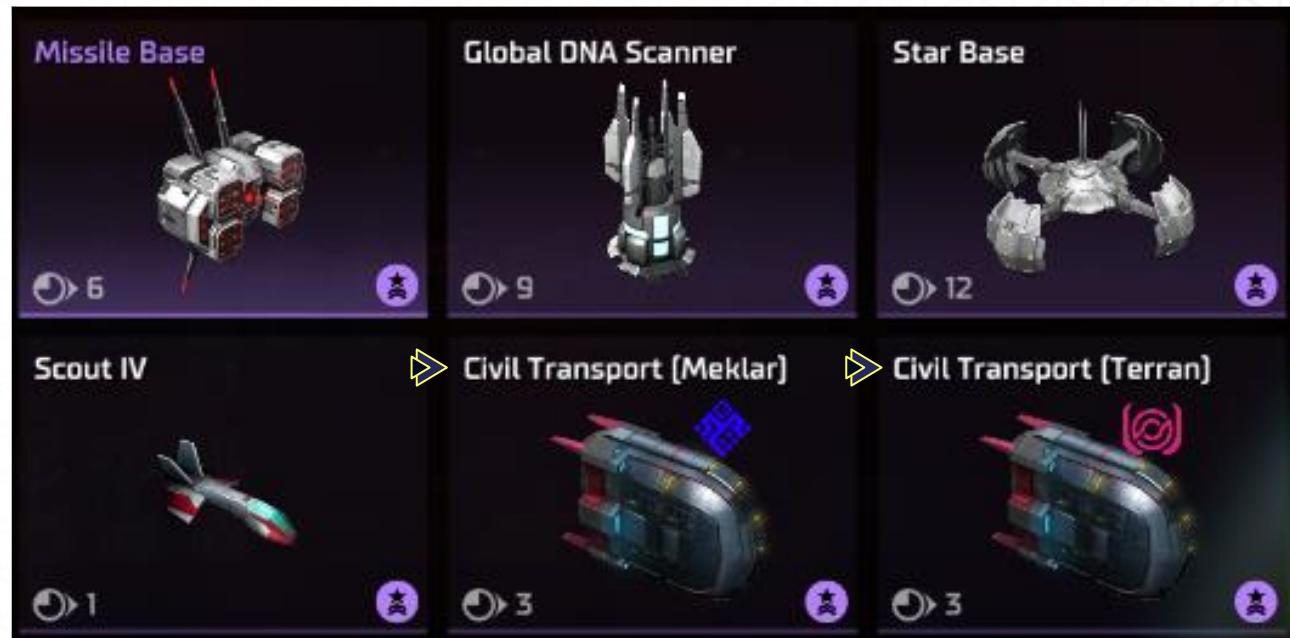
Population on strike is not assimilated, though.

Benefits from structures are still subject to being halved after applied to a resource cell. Units of population produced after the colony is conquered will not suffer from assimilation penalties.



A number of benefits occur when a colony is captured and assimilated. All structures left on the planet immediately come under your control. The population of the conquered race retains their racial traits (e.g., a unit of Psilon population will retain its bonus to research and a unit of Sakkra population will retain its bonus to population growth).

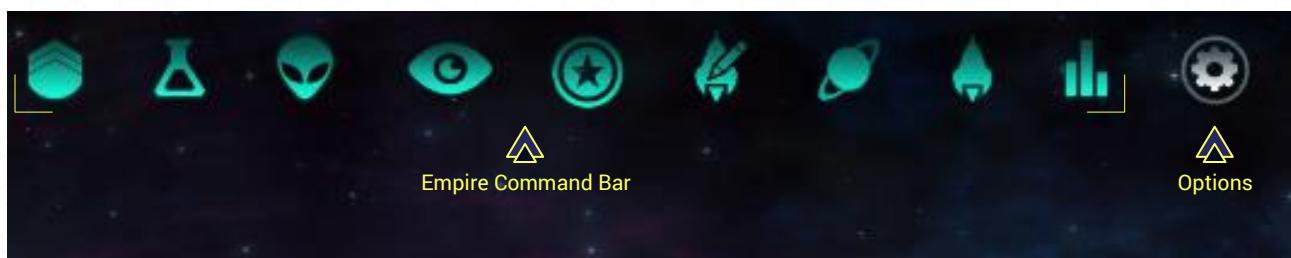
Conquered colonies of mixed races, whether fully assimilated or not, provide the option of making Civil Transports for any race currently at the colony. All races available for transport will have their own Civil Transport ship displaying both their name and racial symbol. Simply select and build the race you wish to transport. Colony ships will always be built having your starting race on board even if a colony has none of your starting race there.



# EMPIRE COMMAND BAR

The Empire Command Bar can be found on every screen so you do not have to click back to the Galaxy map. When clicking out of an Empire Command screen you will be returned to the previous screen. The Empire Command Bar is composed of the following buttons from left to right:

- Empire
- Research
- Diplomacy
- Espionage
- Leaders
- Blueprints
- Planets
- Fleets
- Path to Victory
- Options



## Empire Button

The Empire button will take you to the Empire Management screen, which provides an overview and the ability to control every colony in your empire.

- **Total Empire Overview.** The Total Empire Overview displays information and controls for your empire as a whole. Included are total population, population on strike, total colonies, current BC and BC generation, and the current research project with research points and turns to completion.

Within this screen are two dropdown menus. Tax Rate allows you to set how many BCs are generated each turn per population (3 BCs is the default). Empire Focus allows you to set a focus for all colonists across your empire.



After setting an empire-wide focus, you may still set individual planets to their own unique focus.

- **Colony Overview Bar.** The Colony Overview Bar provides a powerful means of reviewing information and controlling functionalities on all colonies in your empire. Selecting a planet will bring up a dropdown that provides information on the planet as well as the

ability to change that planet's focus and construction queue. From left to right, the Colony Overview Bar is as follows:

- Planet Graphic: Shows the graphic of the planet your colony is on. Clicking on the planet will take you to that colony screen.
- Population: Current and maximum population for that colony.
- Striking Population: Amount of population on strike.
- BC: How many BCs the colony is producing or requires.
- Ground Defenses: Current and maximum ground defense units.
- Security Level: Current Security Level to detect spies at that colony. Security levels range from 1 (lowest) to 5 (highest).
- Morale: Current morale of the population at that colony.
- Pollution: Current pollution level for that colony.
- Food: Current food modifier\*
- Research: Current research modifier\*
- Production: Current production modifier\*
- Production Queue: The item currently being built, along with the ability to **Buy Out** that item. This display can be expanded to show other items in queue, allow you to place more items in queue, and toggle **Autobuild** on/off.
- Flag: You may opt to flag some of your colonies. If the **Show Only Flagged** button is turned on, then only those colonies you have flagged will be displayed.



\* If expanded, the **Focus** dropdown will be displayed. You may change that colony's resource focus from the dropdown.

The screenshot shows the Empire Management interface for a Terran empire. The top bar displays resources: 2451 (+333) Credits, 61/80 Population, LEVEL 1, and +148.69 Research. The Macro Economics tab is selected. The main area is titled "EMPIRE MANAGEMENT" and shows a list of colonies under the "TERRAN" empire, with Alpha Ceti II as the capital. The colonies listed are WASAT PRIME, URANIA PRIME, TETCHYS PRIME, SERPENS PRIME, SCHEADER IV, REX IV, PINDARMA IV, PICTOR II, and OPUSS PRIME. Each colony entry includes a planet icon, population (e.g., 2/5), resources (e.g., 0 BC, 0.02 BC), and various status indicators. To the right of the colony list, there are sections for "TERRAFORMING", "NEUTRON COLLIDER", "SPACE ELEVATOR", "ADVANCED DATA CENTER", and "TERRAFORMING". A "Production" dropdown menu is open, showing options like "TERRAFORMING", "NEUTRON COLLIDER", "SPACE ELEVATOR", "ADVANCED DATA CENTER", and "TERRAFORMING" again. A "Show only Flagged" button is visible. The bottom of the screen features the "Total Empire Overview" and "Colony Overview Bar" buttons.

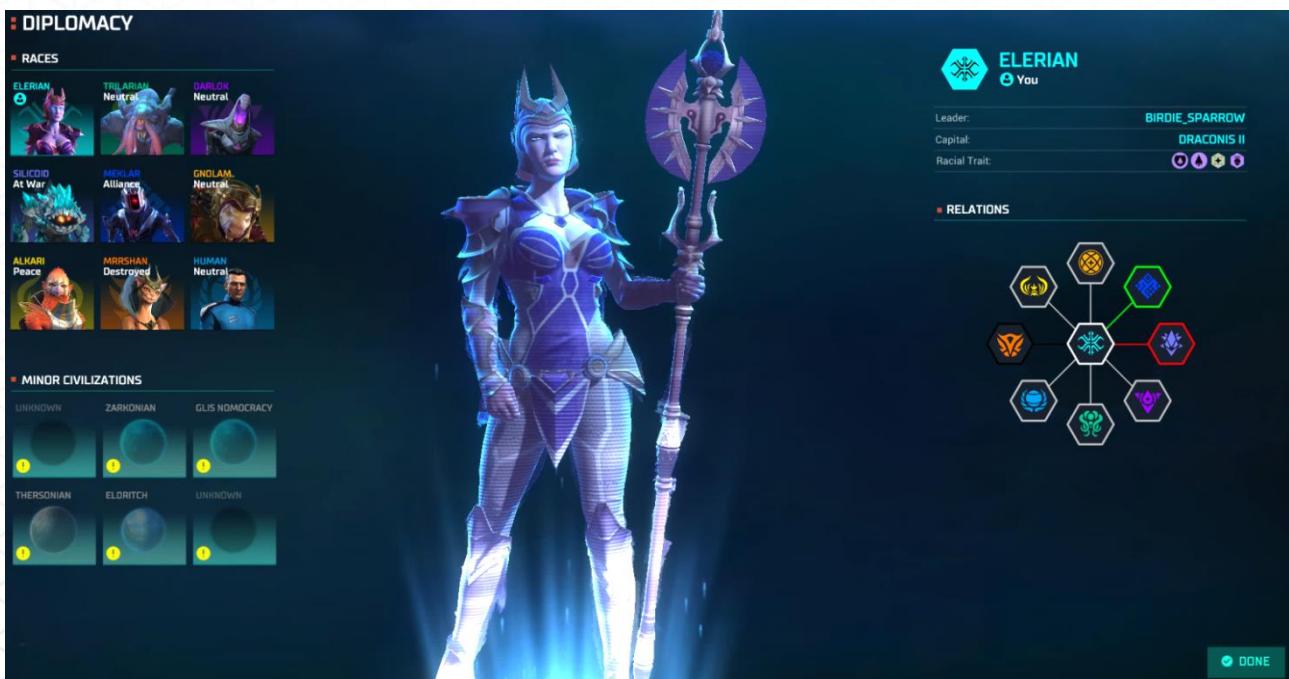
## Research Button

The **Research** button will take you to the main Research screen. Research is described in more detail in the Research section.



## Diplomacy Button

The **Diplomacy** button will take you to the main Diplomacy screen. Diplomacy is described in more detail in the Diplomacy section.



## Espionage Button

The **Espionage** button will take you to the main Espionage screen. Espionage is described in more detail in the Espionage section.



The Espionage screen is divided into three main sections: **SPIES**, **MISSIONS**, and **MISSION DETAILS**.

**SPIES** (Left): Lists agents with their names, levels (e.g., KILO 2), status (e.g., Elerian, Counter Espionage), and orders. A yellow button labeled **TRAIN AGENT** with a cost of 65 is available. An **ETA** button with a value of 4 is also present.

**MISSIONS** (Middle): Shows mission categories: Empire and Colony. Each category has a list of missions with icons, names, and risk levels (e.g., Risk: LOW, Risk: HIGH, Risk: MEDIUM).

- Empire:**
  - INFILTRATE EMPIRE** (Risk: LOW)
- Colony:**
  - INFILTRATE COLONY** (Risk: HIGH)
- Unassigned:**
  - STEAL CHARTS** (Risk: LOW)
  - HACKING** (Risk: HIGH)
  - STEAL** (Risk: MEDIUM)
  - DESTABILIZE** (Risk: HIGH)
  - ASSASSINATION** (Risk: HIGH)
  - SABOTAGE** (Risk: HIGH)
  - CONTAMINATE** (Risk: HIGH)
  - REVOLT** (Risk: HIGH)

**MISSION DETAILS** (Right): A dark panel with a message: "Select a mission to view more information." A green button at the bottom right says **CAPTURED SPIES**.

## Leaders Button

The **Leaders** button will take you to the Leaders screen. Leaders are described in more detail in the Leaders section.



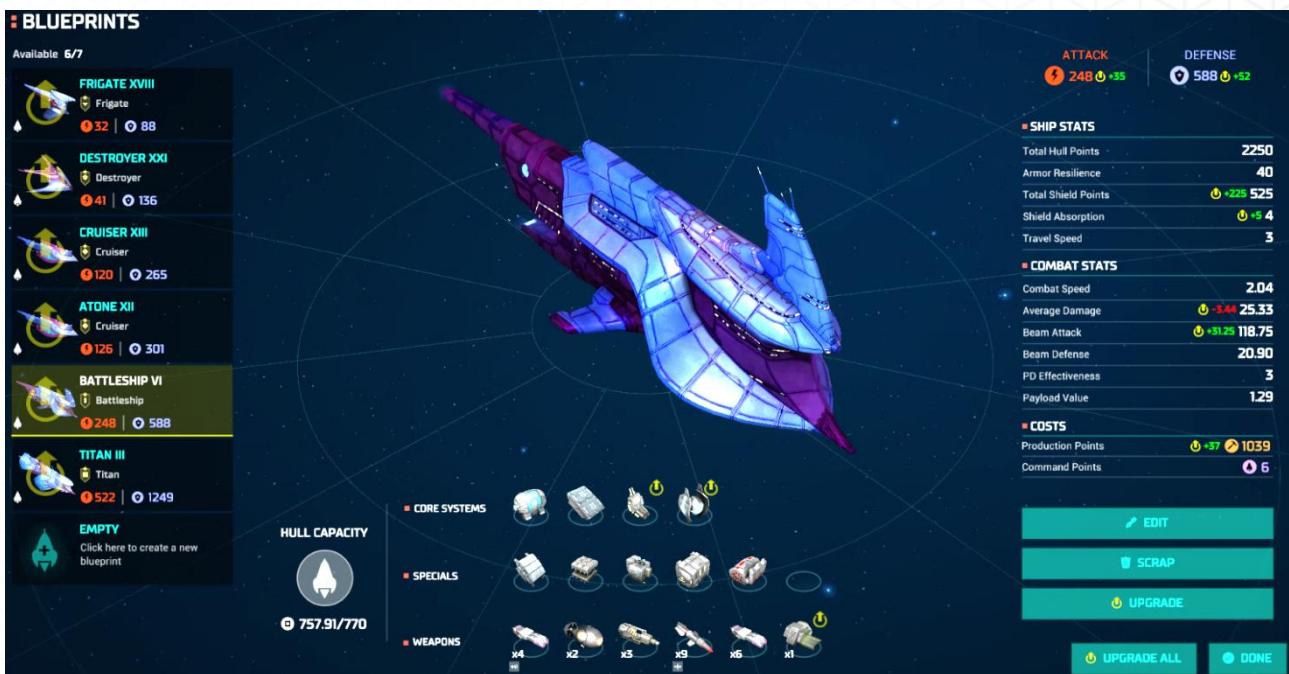
The Leaders screen displays a list of 10 leaders with their names, titles, and management details.

Leader	Manages	Rank	Bonuses	Salary	Status
VALDREN The Mole	5	Governor	+10% +30% +20%	16	Laan Prime
TARO The Priest	4	Magistrate	+40%	12	Naam Prime
STORM The Hacker	4	Rear Admiral	+10% +40%	12	Destroyer XI
REMI The Invader	5	Governor	+10% +16%	7	Draconis II
MORDANA The Hacker	1	Commander	+10%	2	Destroyer XVII
KIYOMI The Elder	5	Governor	+50%	10	Gion Prime
GENERAL JIANG The Leader	3	Commodore	+20% +28% +10%	13	Atone XII
ENIGMA The Codebreaker	3	Commodore	+10% +12%	4	Battleship VI
CASSANDRA The Mystic	5	Governor	+10% +30%	11	Perseas Prime

**GALAXY MAP** (Right): A hexagonal map showing the relationships between various star systems or colonies.

## Blueprints Button

The **Blueprints** button will take you to Blueprints screen where you can customize your ships. Ship customization will be described in more detail in the Blueprints section.



## Planets Button

The **Planets** button brings up a screen listing every planet you have explored but NOT colonized (including the known planets belonging to other races). The following information and functions are available on this screen:

- **Race Selector.** Any race you have had contact with will have their symbol displayed here. Selecting a race symbol will cause their planets to appear with their symbol in the planet list below.
- **Planet Information.** All known planets (including asteroid fields) not colonized by you will appear here. Gas giants and asteroid belts with harvesters and mines built on them will still appear here.  
From left to right, the information and functions displayed include:
  - Planet Graphic: The planet's graphic is displayed here along with the planet's name. Clicking on the planet will take you to that planet.
  - Population Total: Maximum possible population for that planet is displayed.
  - Planet Information: Size, Biome, Minerals, Gravity, and Special (if any) are displayed.
  - Distance: Displays the distance of this planet from your homeworld, measured in turns of travel time using your current technology.
  - Flag: Allows you to flag any planets of interest. You may then sort by flagged planets by clicking the **Show Only Flagged** button.

You may click on any of the headers to sort the list of planets according to that parameter. For example, if you wish to find a planet with high mineral content, clicking the **Minerals** heading will sort the planets according to that parameter, either from high to low or low to high, depending on

how you set the arrow. Sorting may only be done by one heading at a time—you cannot choose **Minerals** and **Size** together for example.

You may also sort by race to determine what planets are currently colonized by the other races. Click the race symbol in the **Race Selector** bar to bring their planets to the top. If you have not yet encountered a particular race, their symbol will not be on the selector bar.



The screenshot shows the 'KNOWN PLANETS' interface. At the top, there are icons for Planets, Size, Biome, Minerals, Gravity, Specials, and Distance, each with a dropdown arrow. A 'Race Selector' button is also present. A green button labeled 'Только отмеченные' (Only marked) is visible. The main table lists two planets:

Planet	Size	Biome	Minerals	Gravity	Specials	Distance
RADIFF IV	Large	Barren	Abundant	Normal		18
RADIFF PRIME	Medium	Barren	Abundant	Normal		18

Each planet entry includes a small image, a name, a size indicator (green bar for Large, yellow bar for Medium), a biome indicator (grey bar for Barren), a minerals indicator (red bar for Scarce, yellow bar for Abundant), a gravity indicator (grey bar for Normal), and a distance value of 18. There are also small 'info' icons with numbers (10 and 8) next to the planet names.

## Fleets Button

The **Fleets** button allows you to manage your fleets. The information and functions of the Fleet screen, from left to right, are as follows:

- **Type.** Badge type of the most powerful ship in the fleet will be on top. Any other ships with that fleet are shown as badges stacked behind the main ship.
- **Location.** Current location of the fleet. If at a planet, only the planet name is displayed. If at a warp point, the location will say "X to Y".
- **Status.** Whether the fleet is set to Guard, Sleep, etc. If the ship is moving its status will be "Arriving", along with the number of turns until it arrives at its destination.
- **Attack.** Total Attack power of the fleet.
- **Defense.** Total Defense power of the fleet.
- **Total Military Power.** Total Attack and Defense values of all your fleets.

Clicking on a fleet will take you to that fleet on the galactic map. You can also sort the list of fleets by clicking on the headings. For example, clicking on **Attack** will sort the fleets from high to low or low to high Attack value, depending on how you set the arrow. Only one sorting parameter can be active at a time—they cannot be combined.



The screenshot shows the 'FLEETS' screen with the heading 'Manage your fleets.' and a 'Close' button. It displays two fleet entries:

Type	Location	Status	Attack	Defense
Guardian	ZARKONIA TD BOOTIS	Guarding	0	20
Wormhole	WORMHOLE	Arriving 2 turns	522	1249

## Path to Victory Button

The Path to Victory button will take you to the Path to Victory screen where you can see how you are progressing against the other races in the selected victory conditions. The **Path to Victory** screen is further detailed below.

**PATH TO VICTORY**

SCORE		CONQUEST VICTORY	TECHNOLOGICAL VICTORY	ECONOMIC VICTORY	DIPLOMATIC VICTORY	ANTARANS VICTORY
Excel in every aspect of galactic empire management to become the best.		Become the ruler of the galaxy by crushing your enemies into oblivion.	Push your scientists through the technological path and build the ultimate machine to transcend this universe.	Fill your coffers and claim economic supremacy by controlling the Galactic Monetary Fund.	Pull the diplomatic strings of the Galaxy and become the Supreme Chancellor.	Discover and investigate the mysterious ruins leading to the Antaran pocket dimension and destroy them once and for all.
1	 <b>MEKLAR</b> Power: 321	 <b>MEKLAR</b> Power: 321	1  <b>UNKNOWN</b> Total Research: 200	1  <b>UNKNOWN</b> GGP Share: 11.98%	1  <b>UNKNOWN</b> Votes: 6	1  <b>UNKNOWN</b> Progress: 0/400
Military Score	321					
Technologic Score	200					
Economic Score	91					
Diplomatic Score	300					
Antaran Score	0					
<b>TOTAL SCORE</b>	<b>912</b>					

Remaining Turns  500

[VIEW TIMELINE GRAPH](#) [DONE](#)

# ECONOMY

## Credits

The BC (Billion Credit) is the foundation of Master of Orion's economy. Credits are needed to maintain structures and (if you do not have enough Command Points) fleets, send tribute or bribes to other races, pay salaries, and rapidly advance production when required. BC generation can vary from turn to turn as your empire grows or contracts—trade treaties, taxation levels, maintenance costs, economic structures, etc., all play a part.

If your economy goes into the negative, your advisor will begin to scrap ships and structures that cannot be supported (you will be told when this occurs and what was scrapped). The best way to avoid this is by maintaining both a positive income each turn and a credit reserve. The reserve will help you make it through periods of high maintenance costs but low production, such as when you are sending a large combat fleet a long distance to attack an opponent.

## Taxes

Taxes affect all colonies in your empire at the same rate. The BC amounts generated are per population unit. Tax rates are set on your Empire Management screen; they can range from 0 BC to 5 BC per population unit. As you adjust the tax rate, you can see how the new rate will affect your overall per-turn credit generation as well as how each planet will be affected in terms of morale and population on strike.

## Technology

Certain technologies help your economy by providing simple credit boosts, reductions to the cost of structure and ship buy-outs, and, at the highest stage, a 100% increase to credits generated by your entire empire.

These technologies are located mainly on the top technology line; most (but not all) are denoted by a yellow or orange symbol.

Example: The technology on the left is Economic in nature and provides +5 BC per colony on which it is constructed. The technology on the right is a Production technology which helps make ship buy-outs less expensive due to the decrease in Production required.



## Trade Treaties

When your empire begins to meet other races, one option in your diplomatic relations is a Trade Treaty. These treaties last 20 turns, with your empire receiving credits every turn. Once the treaty runs out, your advisor will provide a report indicating how many BCs in total were generated—which can run into the thousands!



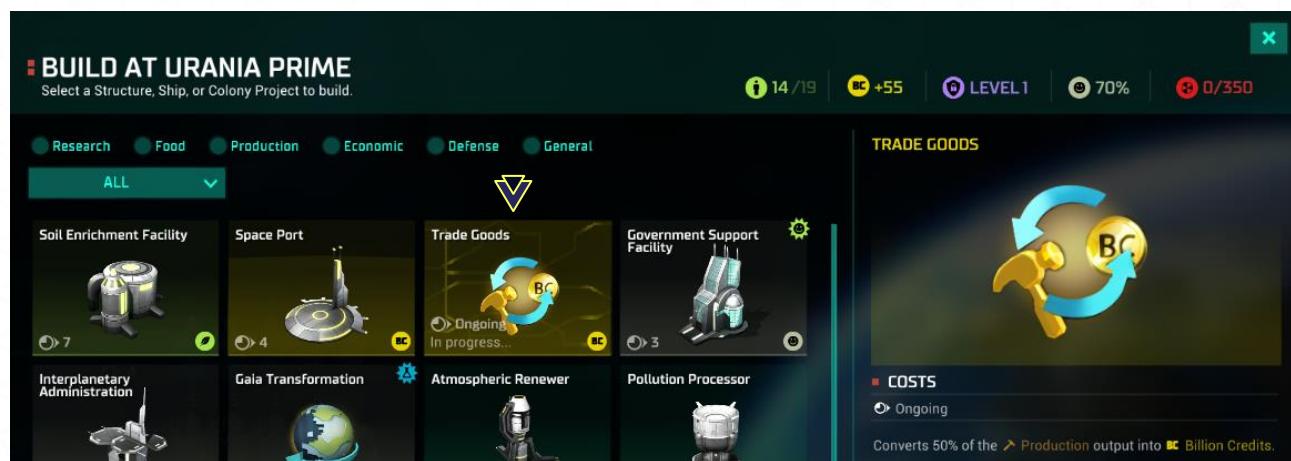
Keep in mind that the other race is also receiving credits (and if war is declared all treaties are immediately canceled).

## Production

Another way to generate credits is to put your Production colonists to work producing trade goods. To do this choose **Trade Goods** under your production Build screen to place it in queue. This will turn 50% of the planet's production value into credits.



The **Trade Goods** project is the ONLY Production item that will continue to produce BCs for as long as it remains in the first spot in Queue. It is an ongoing project that will not allow the building of any other items currently in queue. **Trade Goods** must be either physically moved within the queue or when another item is selected it will automatically remove from Queue. The next item in line will then move into the Build location.



## Maintenance

Every structure within your empire costs credits to maintain. This maintenance is automatic, requiring no decisions on your part.

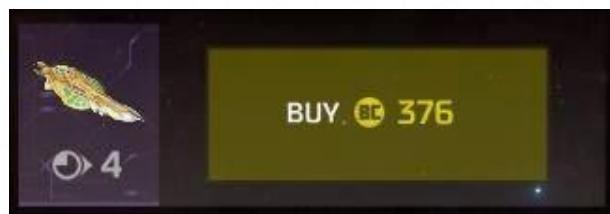
Ships and military outposts are handled differently for maintenance. These require no maintenance as long as command points (CPs) are equal to or under the current maximum CPs. Once CPs are exceeded the maintenance cost is 20 BCs per turn for every CP over maximum. To keep fleets from being a drain on your economy maintain an appropriate amount of command points.



## Buy Out

If you decide that you need that new ship or structure NOW instead of 12 turns later, you can spend credits to speed things up. The item currently being produced in the production queue can simply be bought if you have the credits available. Once bought out, the structure or ship will be available the following turn. This is an all-or-nothing action—you cannot partially pay for the item to decrease its production time by a few turns.

To buy out something in the production queue, simply click the **BUY** button located next to the item in the first build slot (you may also Buy Out an item from your Empire screen). If the buy-out number is greyed out you do not have enough credits to pay for the item or you may not use buy-out for that item. Note that as your colonists build the item the buy-out price will drop each turn.

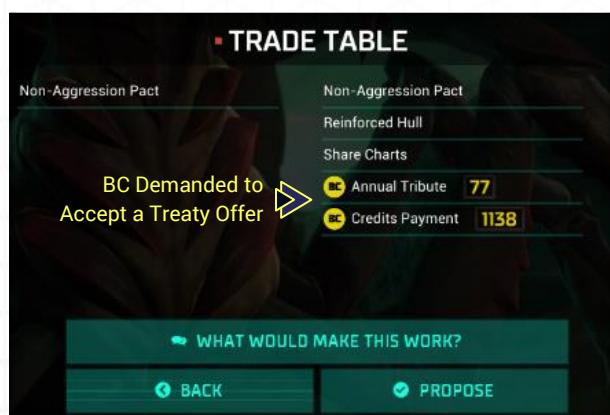


## Bribes

Sometimes, in diplomatic negotiations, the other side will request BCs to accept your propositions. Having a pile of credits can help grease these diplomatic wheels if what you desire is worth the price being asked. This decision must be weighed against the fact that the other empire will receive those credits. You will have no way of knowing what the credits will be used for: to buy out some toxic condensers or build that Titan that will spearhead the attack on your empire.

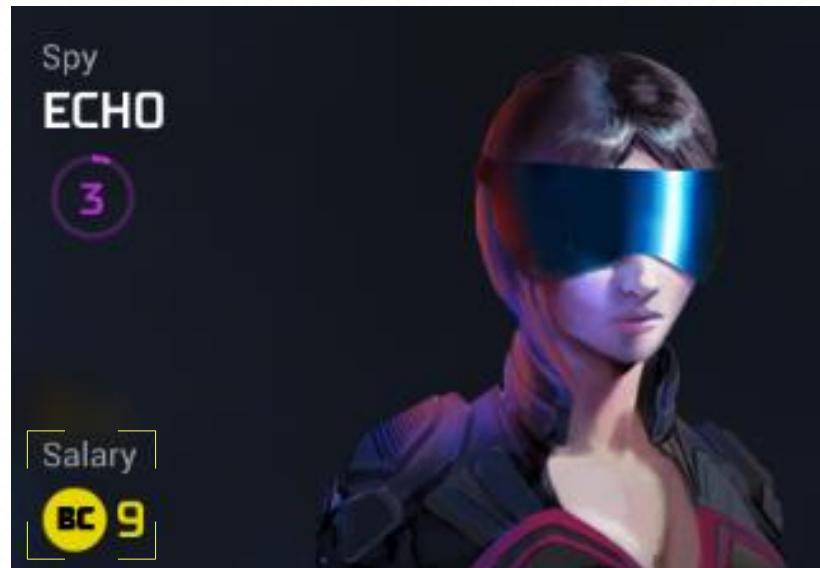
The reverse of the above is you may also ask for BCs as either an annual or one-time payment during negotiations. If you are diplomatically savvy the other race may agree to these counter-offers.

Example Below: To accept a Non-Aggression pact the other race required an annual tribute of 77 BC for 20 turns and a one-time payment of 1138 BC (as well as other requirements). Only you can decide if these requirements or demands are worth the treaty you requested.



## Salaries

Every spy and leader generates a salary that must be paid every turn. As the spy or leader gains levels their salary also goes up. The only method to lower the per turn cost of salaries is to dismiss spies or leaders on your payroll.



# DIPLOMACY

## Main Diplomacy Screen

Whenever you encounter another spacefaring race, their leader will contact you. Leaders' dispositions upon first meeting can range from guarded to affable depending on a number of initial factors. After this first contact, diplomatic relations may be initiated by either side. For you to initiate a diplomatic conversation you must click into the Diplomacy screen.

Click the **Diplomacy** button located on the Empire Command Bar. This will bring up your Diplomacy screen and display the following options:

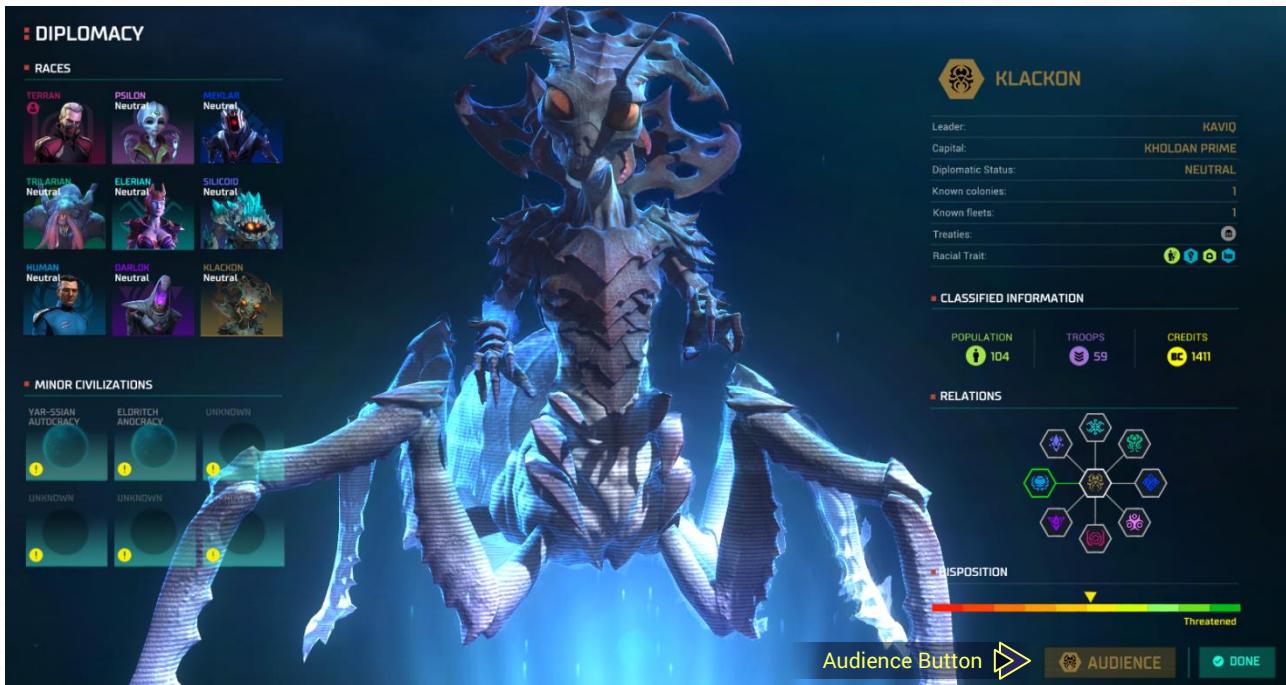
- **Race Selection.** All races you have currently discovered will be on the left side. The pictures of leaders will be displayed along with their current disposition. Clicking on the leader will bring up more detailed information on the selected race as well as the **Audience** button to begin negotiations (although you can be ignored).
- **Diplomatic Wheel.** Hovering over the race symbol with your leader displayed will bring a pop-up screen to the fore. This screen will show that race's current disposition to your empire in a colored bar. Below that will be a list of any treaties currently in effect between your empires.



## Audience Screen

To request an audience with another leader' select their portrait on the Race Selection area to be taken to the Audience Screen. That leader will then appear along with basic information on their empire to include known classified information. A disposition bar will also be displayed.

Clicking the **AUDIENCE** button will take you to the Individual Diplomacy screen where you may make treaties, establish embassies, ask for tribute, etc.



## Individual Diplomacy Screen

Once in the Individual Diplomacy screen you have a number of options as follows:

- **Declare war.** Go to war with the selected race. This will instantly cancel all current treaties.
- **Negotiations.** Establish embassies, sign various treaties, give or request tribute, etc.
- **Declarations.** Send statements to that leader (e.g., "Do not colonize close to us"). They may or may not agree to the request.
- **Repeal Treaties.** All treaties currently in force with that race will be displayed. You may select treaties and cancel them as you see fit.
- **Goodbye.** Brings you back to the Main Diplomacy screen.
- **Show Info** Selecting the "Show Info" button in the upper right corner will display the race information data and diplomacy wheel.

Many of your options will be limited until both leaders agree to create an embassy. It is difficult to negotiate trade treaties, offer an Alliance, or even request the end to a war without an embassy. Note that even with an embassy some diplomatic requests can still remain unavailable. This is due to that race's disposition not being high enough to warrant consideration of a particular request (e.g., a race who views you as "Guarded" will not even consider a formal Alliance).



In order to put forth a request for an Embassy you must unlock the technology "Xeno Diplomacy" under "Xeno Relations" which is located on the Government research line.

When you enter negotiations anything that appears on the **RIGHT** side of the Trade Table is what you are offering to the other race. Anything listed on the **LEFT** side of the Trade Table is what you are asking the other race to give to you. If the other race initiated contact their initial offer will be displayed in the Trade Table where you can add/delete items.

When you initiate the Trade Table you may add or delete any item in the Diplomacy Trade area. If you select BCs you will be prompted to put in the amounts you wish to give or receive.

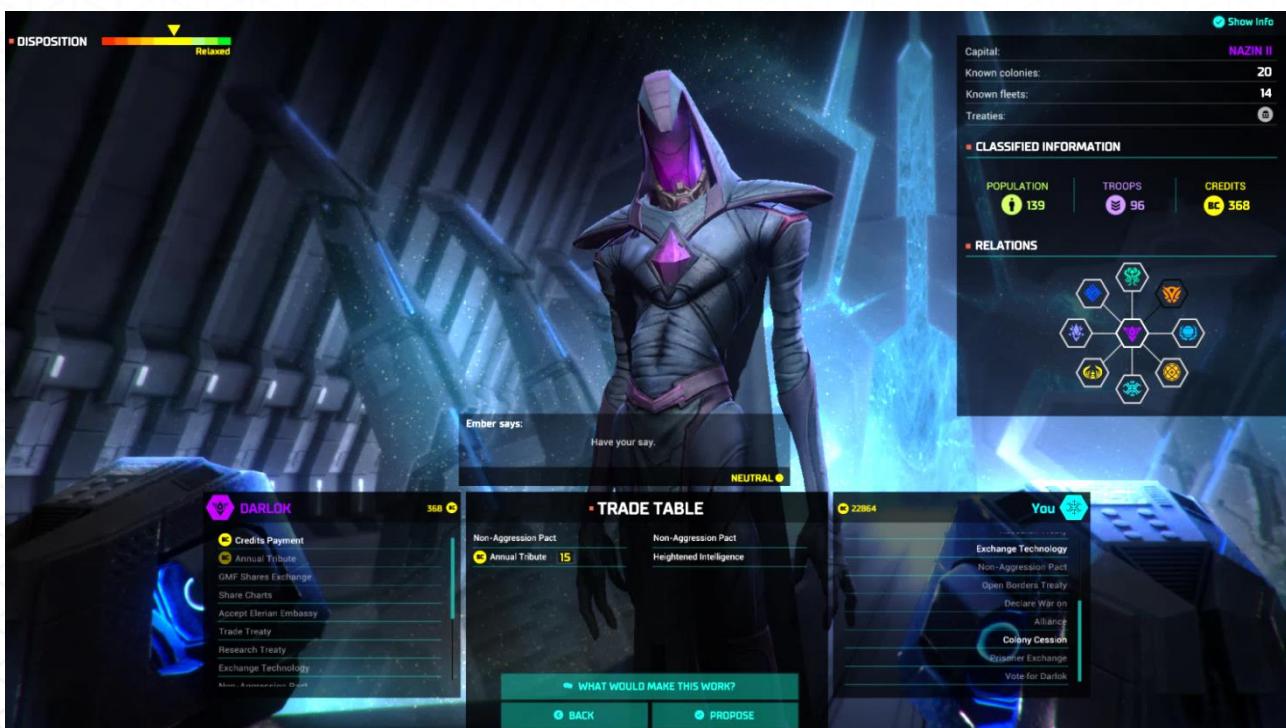
When exchanging technologies select the technologies you wish to give and/or receive from a drop down menu.

Once you are happy with the Trade Table click the **Propose** button. The other leader will either accept or reject the current proposal.

If you truly want the deal to go off click **What Would Make This Work?** to see the counter offer from the other leader. You may accept, modify or reject this offer. Clicking **Propose** on an unmodified proposal will automatically accept the deal. Clicking **Back** will clear the Trade Table.



If you only put items on the **LEFT** side of the trade table the **PROPOSE** button instead becomes **DEMAND**. Be very careful using this – strong races are not easily cowed and a refusal on a demand will cause a loss in diplomatic standing.

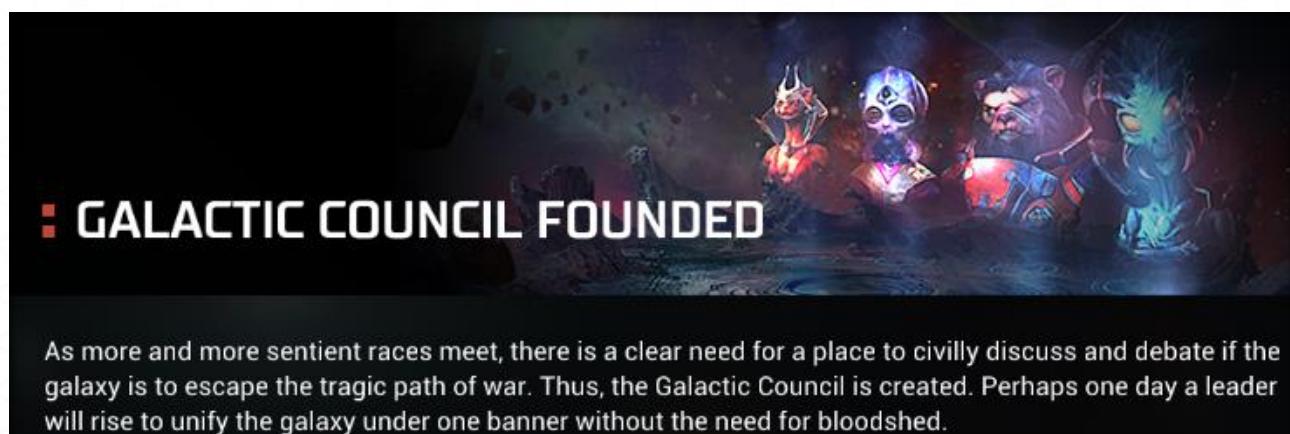


## Galactic Council

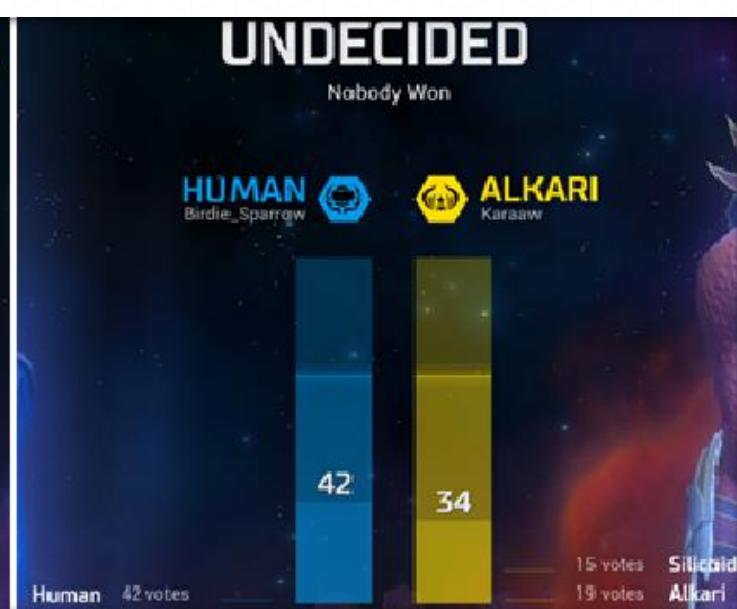
After all currently active races meet each other the Galactic Council will begin to form in approximately 25 turns. When the Council screen appears, the spacefaring races will try to elect a leader who will unify the galaxy. The races with the two highest populations will be put forth as candidates.

Each civilization's leader will cast their votes. They can either vote for one of the two nominated candidates or abstain. Each race has a number of votes based on total population. Spacefaring races are more likely to vote for you if they have a positive disposition toward you.

This is where the ground work for your diplomatic efforts will begin to tell. Races that become green in the Disposition Bar will potentially vote for you if asked (or bribed). When the Galactic Council becomes active a "Vote for X" becomes available under the Negotiations button of the Diplomacy screen allowing you to attempt to secure votes for the next time the council meets. You must secure the votes for your ascension to lead the Council—but be warned even if bribed some races do not stay bribed for long!



The screenshot shows the title "GALACTIC COUNCIL FOUNDED" in large white letters. Below it is a block of text: "As more and more sentient races meet, there is a clear need for a place to civilly discuss and debate if the galaxy is to escape the tragic path of war. Thus, the Galactic Council is created. Perhaps one day a leader will rise to unify the galaxy under one banner without the need for bloodshed." At the bottom of the screen, there are two bar charts for the "HUMAN" and "ALKARI" races, and a summary for the "UNDecided" category.



# EMPIRE DEFENSE

## Space Defenses

### Ships

Your main force in defending your empire could be a single ship or a fleet of ships. Ships (or fleets) have a defensive command that, when used, will take them out of the automatic reminder system—so do not forget about those ships! This command is called “Guard”.

- **Guard.** This command is identified with a shield symbol. A fleet set to guard stays at the current location which must be a warp point or planet. Such ships can be used as a platform for scanning (primarily as an early warning system). Ships on guard when encountered will cause the opposing fleet to make the decision of attacking, remain where they are, or retreat.

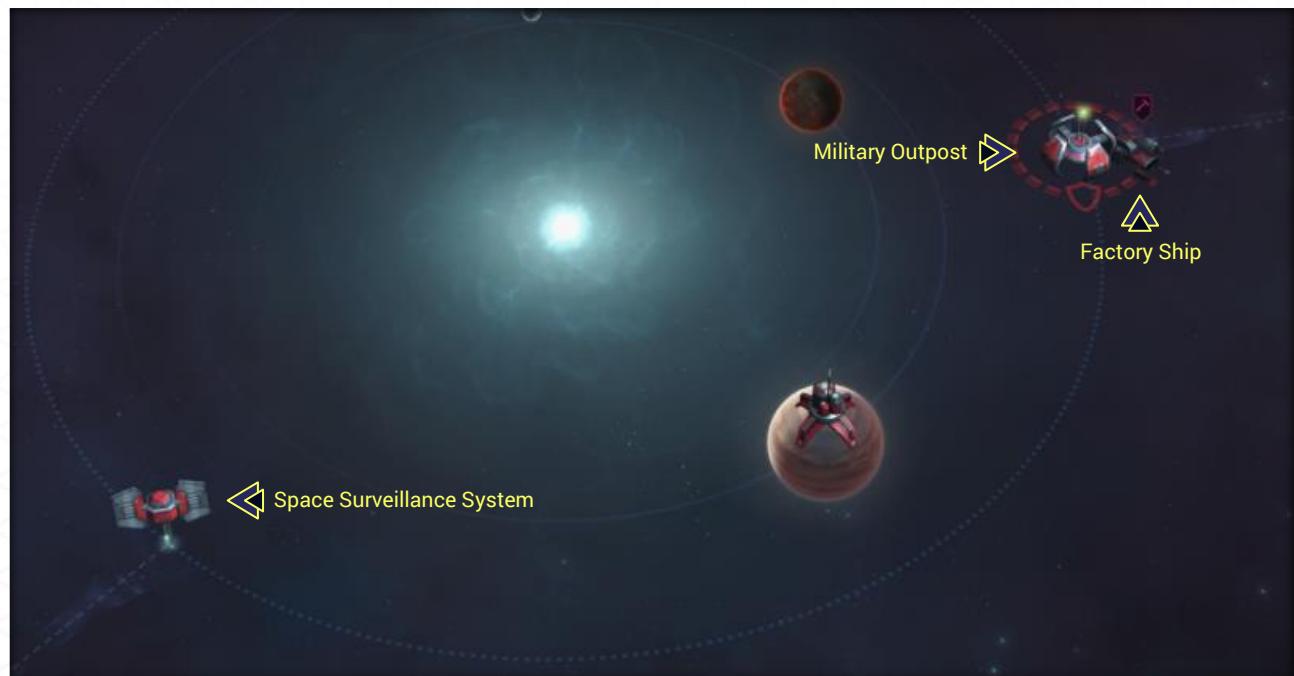


If you have an Open Border or Alliance treaty with another race that race will be allowed to ignore the “Guard” function.

## Space Factory Ships

These highly specialized ships have a number of functions, including the construction of Military Outposts and Space Surveillance Systems.

- **Military Outpost.** These defensive stations are constructed at warp points as a first line of defense. Military Outposts automatically have the Guard command on at all times. These stations take multiple turns to build and until fully constructed provide no defensive benefit. They have the same sensor range as Space Surveillance Systems. Outposts can only be built in systems where you have a colony.  
Advanced factory ships can build or upgrade existing outposts to an Advanced Military Outpost. These outposts are stronger both defensively and offensively over the initial Military outpost.
- **Space Surveillance Systems.** These platforms have no weapons and will not stop fleets who wish to bypass them. Their main advantage over Military Outposts is their ease of construction and no cost to maintain. They provide an early warning system as their scanners can detect ships out to several parsecs. These systems do not require a colony to be in system; thus they can be built at any warp point.



## System-Wide Defenses

At very high technology levels a variety of system-wide defensive units can be researched.

These defenses can include:

- **Artemis System Net.** This structure surrounds an entire system with a mine field. Enemy ships colliding with a mine will suffer damage. Shields have no effect on these mines which makes them very deadly.
- **Jump Gate.** A Jump Gate may be built at a warp point in your system by a Space Factory. Only one may be built per system. This structure allows faster transportation between your colonies bypassing normal star lanes. The ability to shift fleets quickly within an empire has a huge defensive benefit.



# Planetary Defense

## Orbital Stations

Your main orbital defense will include your Star Base, if any, as well as any ships, and/or orbital battery technologies defending the planet. A planet without any form of orbital defense will be quickly invaded or destroyed by an enemy fleet. Your star base and upgrades are briefly described below:

- **Star Base.** This unit is an armed orbital station. It is required for battleship, titan and Doom Star construction. Your home planet begins the game with a Star Base already in orbit.
- **Battle Station.** Upgrades the Star Base into a more heavily armed platform.
- **Star Fortress.** The ultimate upgrade of either a Star Base or Battle Station. This Leviathan is an orbital defensive equivalent of a Titan.

Battle Stations and Star Fortresses also have increased scanner range and increased Command Points generation. They do not have to be built in order—a Star Base may be upgraded directly to a Star Fortress (or a Star Fortress may be immediately built on a colony with no current station).



## Orbital Auxiliary Defense Units

Ships and bases are not the only defensive units placed in orbit. To supplement these units additional technologies may be researched. These are:

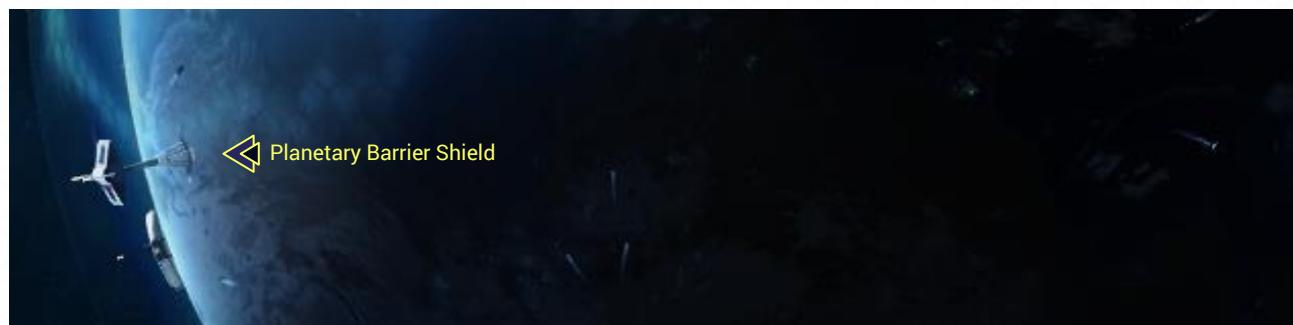
- **Missile Base.** Equipped with your most advanced missiles, these bases automatically fire on an enemy fleet in orbit. They augment your fleets and orbiting bases or, if no such units are available, they will engage as best they can until destroyed. Missile bases update automatically when new missiles are researched.
- **Orbital Battery.** This battery contains a Heavy Mount and PD versions of your best available beam weapon. When a new beam weapon is researched the battery is automatically upgraded. The orbital battery will engage the enemy automatically until destroyed.

## Planetary Shields

A few structures are able to deflect or even stop incoming bombardments and invasions. These planetary shields also provide the benefit of turning a radiated planet into a barren one. However, these shields can be placed on any planet for their defensive benefit.

Some shields must be collapsed to 0% before bombardment and/or a planetary invasion can reach the planet. The shields do regenerate a percentage of their strength each turn. Shields, especially higher technology ones, while not making a planet immune to attack can significantly delay an attack giving you valuable time to counter-attack or strengthen your defenses.

- **Planetary Radiation Shield.** This shield's primary purpose is to shield against radiation. However, it does provide reduced bombardment damage. Does not stop planetary invasion.
- **Planetary Flux Shield.** Replaces the Planetary Radiation Shield if currently built. Bombardment damage is reduced to none until the shield collapses. Does not stop planetary invasion.
- **Planetary Barrier Shield.** The ultimate defensive shield which replaces the other two shields if currently built. Stops all bombardment damage and prevents planetary invasion until the shield collapses.



## Ground Defenses

On the planet's surface you may construct numerous defensive structures and/or upgrade marines with better armor and weapons. Some structures and technology that can be built include:

- **Marine Barracks.** The basic ground defense unit used to defend against a planetary assault. These are available to all colonies with no research required.
- **Armor Barracks.** Allows a colony to train and maintain tank battalions
- **Battleoids.** An adjunct to armor barracks these units are 10% better at ground combat and require 3 hits to destroy.
- **Powered Armor.** Increases the effectiveness of marines in both offense and defense.



## Diplomatic Defense

In your dealings with the other spacefaring races, you have various diplomatic options that can prevent hostilities from breaking out, bring fighting to an end, or bring allies to help your cause. Once an embassy is established, treaties that can aid in defense are:

- **Non-Aggression Pact:** Each party agrees to not attack each other. While this does not provide free access to each other's empires, it does ensure that your ships will pass each other safely. A non-aggression pact is also the means by which a war is ended—provided the other race agrees to talk to you
- **Declare War On:** You may request a treaty with another race to declare war on a third race. Defensively you may be able to get help if the other leader believes such an act can aid them as well. Sometimes the offer of a BC "advance" can help tip a wavering leader into agreeing to this declaration
- **Alliance:** The ultimate treaty the alliance combines the Non-Aggression Pact, Open Borders, and – most importantly – the Declare War On treaties. With an Alliance the other race will not attack you, has free reign to send their ships where needed, and will automatically declare war on and begin attacking the race which attacked you.



If a race you have an Alliance with is attacked you will be notified and a screen will pop- up with a request to declare war on the race attacking your ally. Failure to declare war will reduce your disposition potentially causing the Alliance and additional treaties to be canceled

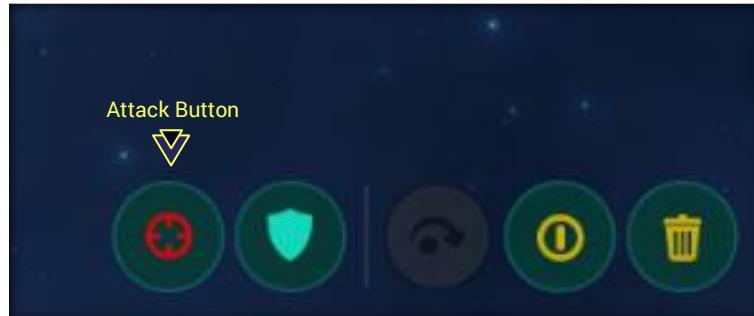
# COMBAT

## Galaxy Screen

There will be times when your colonies will be at risk or you decide another race just needs to be exterminated. That's when the combat ships and marines of your Empire's Fleet come into action.

### How to Attack

To attack simply click the Attack button when a fleet has been selected on the Galaxy screen. You have the option of attacking any enemy fleet you share the same location with – even an Ally. The only time the button will be greyed out is if your fleet is composed of ships with no offensive capability (i.e. scouts, colony ships, transports and factory ships). Selecting this button will take you to the **Attack screen**.



# Attack Screen

## Fleets

Arrayed to either side of the Attack screen will be the fleets that will engage in battle. The number, type and level will be displayed for both sides.

## Victory Chances

Above your **Attack Options** buttons will be displayed the **Victory Chances** bar. This bar will indicate by both color and wording your chances in the selected battle.

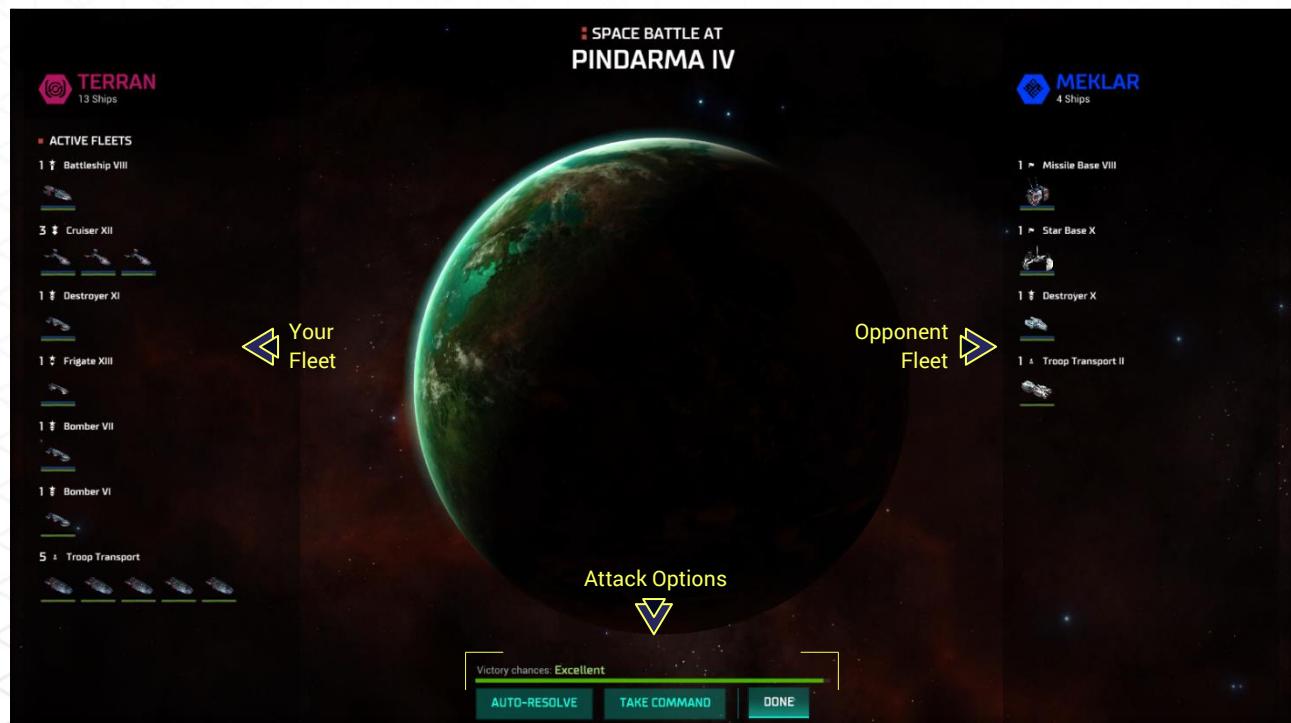
## Attack Options

You may select from three options for combat:

- **Auto-Resolve.** A quick and easy option where the computer controls all combat once initiated on a simple screen. The player has no input once combat has begun when **Auto-Resolve** is selected.
- **Take Command.** Selecting this option will bring you to the Tactical Battle Setup and/or tactical screen, detailed below.
- **Done.** When selected returns you to the Galaxy screen.

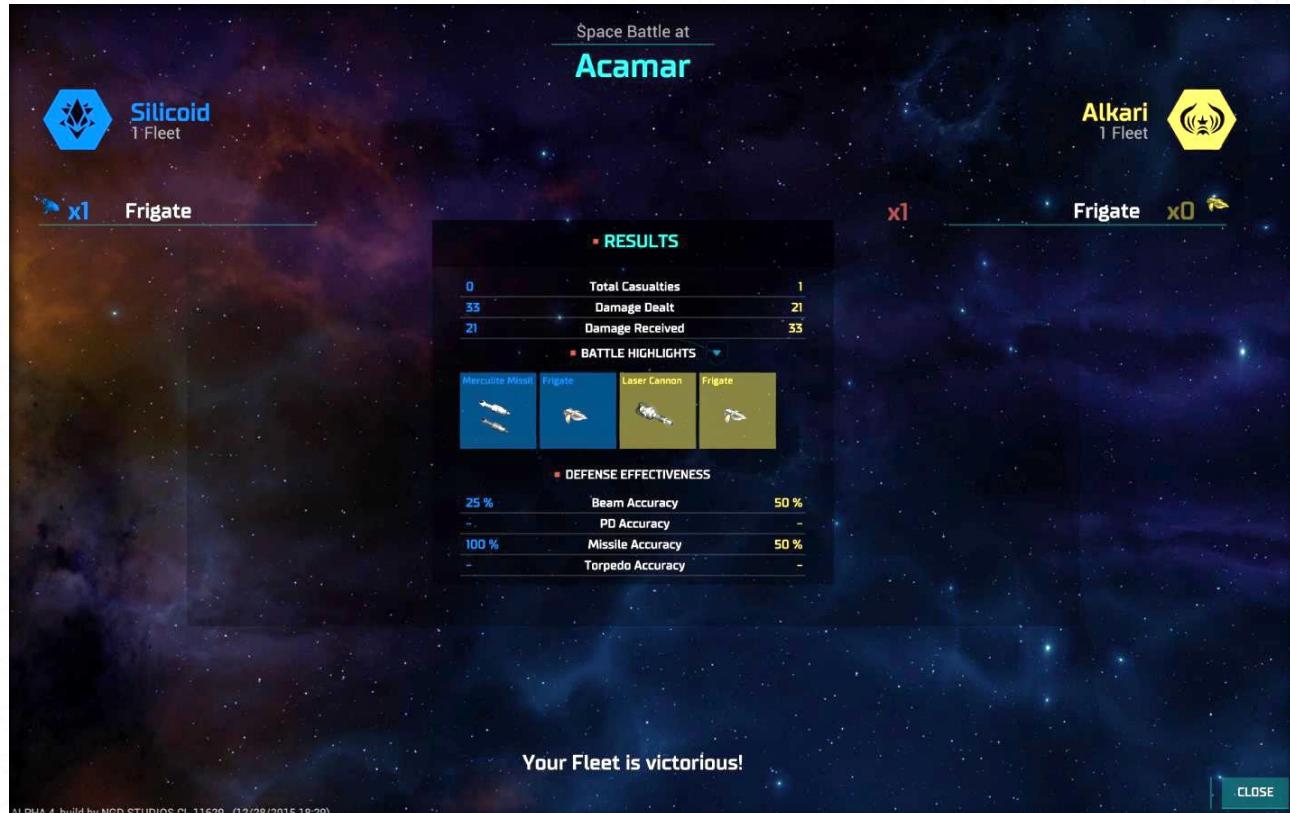


A fleet being attacked that has no offensive capability can only be **Auto-Resolved**. **Take Command** may not be selected.



## Auto-Resolve Battle

After an “Auto-Resolve” battle, a post-battle screen will appear. This screen will display various results, including the main weapons used by each side, which can give you a glimpse into your opponent’s potential military technology level.



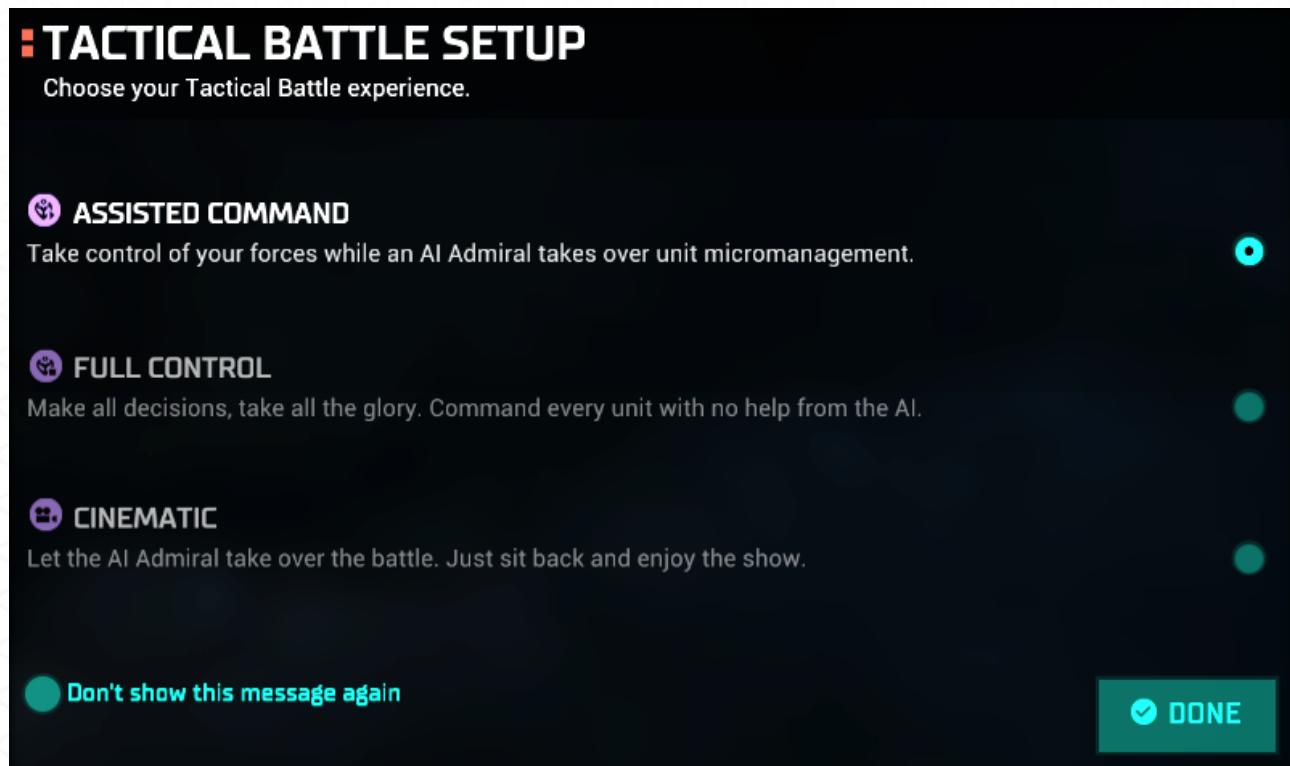
ALPHA 4, build by NGD STUDIOS CL 11629 (12/28/2015 18:29)

## Tactical Battle Setup

When you opt to “Take Command” of a battle the **Tactical Battle Setup** screen will pop-up if the **Enable Admiral AI by Default** button has been disabled in the Options/Gameplay Settings screen prior to battle. A number of choices are then available for you to choose from to aid you within the tactical screen:

- **Assisted Command.** You decide what you will control in battle with the AI assisting as if the Admiral AI was still enabled. The AI will choose targets, speeds, formations, movement, etc. unless you directly input commands.
- **Full Control.** The AI is turned off with all commands coming from you. However, your fleets will always fire at the nearest enemy when in range.
- **Cinematic.** Your battles start in cinematic mode under AI control. You may click out of Cinematic mode to be taken to the Tactical Screen where you may input commands.

Selecting the option of “**Don’t show this message again**” will disable the pop-up. Whichever set-up command was selected will be the default for the remainder of the game. Once disabled the Tactical Battle Setup pop-up may be re-enabled from the **Options: Gameplay screen**.



## Take Command Battle

When you "Take Command" and have selected the Tactical Battle Setup option of your choice you are taken to the Tactical Battle Setup and/or tactical screen. Within this screen you may select formations, weapon ranges, speeds, plot moves, etc.

The initial screen will show a top down view of the battle area. Silhouettes of all forces will be displayed in the color of their race. If any terrain is on the map this will also be displayed.

Selecting any ship or structure will bring up a pop-up. This pop-up will display all weapons, offense and defense stats, and other information. Hovering over a weapon will also display on the tactical map the maximum range of the weapon selected as well as a pop-up of that weapon's stats. A line will show the current target of the selected ship or structure. A more detailed explanation of these functions is given below.

### Tactical Screen

Hovering over any of the below items will display a pop-up displaying data for that item.

- **Leader Bonuses.** Hovering over these symbols will display the bonuses your leaders will give the fleet for this battle.
- **Information Box.** The Information Box lists the following:
  - Total: Number of selected ships in formation.
  - Name/Type: Name, type and level of ships selected.
  - Offense: Total offensive power of a single ship of that level. Hovering on this displays additional information.
  - Defense: Total defensive power of a single ship of that level. Hovering on this displays additional information.
  - Speed: Total current speed per second. Hovering on this displays additional information.
- **Speed and Range Sliders.** These sliders are used to adjust the speed and engagement ranges of the selected ship(s).
  - Speed: This slider adjusts the speed of the ship(s) selected from zero to full speed.
  - Range: Allows you to set the min/max range at which you begin firing as well as stand-off range. The range will be displayed as a red selected range band centered around your ship(s). Sliding the band all the way down will always set this band to maximum range for your farthest firing weapon. Note that if your minimum range is away from your ship then your ship will attempt to maintain that distance from the enemy.
- **Special Action.** The Special Actions buttons allow your ships to perform the following:
  - Match Speeds: Match speed with selected target.
  - Ram: Ram selected target. It is possible for a larger ship to survive being rammed by a smaller ship.
  - Retreat: Ship(s) will begin to retreat at best speed and warp out. This will take time to accomplish. Ships will not warp out until they have reached the edge of the tactical screen and then require a few seconds for their drives to engage.

- **Combat Roles.** Selects combat roles of ships if previously selected from the Blueprints screen. AI selects formation based on assigned roles.
  - None: Default role of mid-range all purpose ship.
  - Blitzer: Hit and run role designed for fast ships with short to mid-range weapons.
  - Sniper: Long range combat role for slow ships suited for the back line.
  - Brawler: Combat role for bulky, resilient ships that thrive in close combat.
- **Formations.** Ships of similar class and role may be put in formations that allow certain benefits. If "A" is selected the ships will select their own formation.
  - Line: This is the default formation even for a single ship. Beam Accuracy: +25%; Weapon Cooldown: -20%
  - Wedge: Ship Speed: +25%; Beam Accuracy: +20%. Requires a minimum of two ships.
  - Square: Beam Defense: +50%; PD Accuracy: +25%. Requires a minimum of four ships.
  - Circle: Beam Defense: +25%; PD Accuracy: +50%. Requires a minimum of three ships.
- **Attack Bar.** Used to control your individual ship(s) as required:
  - Attack: Place the attack symbol over the primary target and click. A red line will appear to indicate your current primary target.
  - Hold: Ship(s) will hold current position.
- **Weapons.** Displays all weapons and amount of weapons on ship. Weapon controls are as follows:
  - Left clicking on a weapon will display range and weapon facings on the tactical screen,
  - Active weapons will display a rotating band – right clicking on a weapon will activate or deactivate it. Deactivated weapons will have no rotating band.
  - Weapons with cool down will display the cool down time around the edge of the weapon symbol after the weapon has fired.
- **Specials.** All special technologies on the ship are displayed here. They are controlled exactly as weapons, above. Those that are passive in nature will be greyed out.
- **Screen Controls**
  - Time Based Auto-Pause: Right click to set a pause to battle every 5, 10, 20 or 30 seconds allowing you to adjust tactics. Left click to turn this feature on/off.
  - Play/Pause: Pauses the battle so you may adjust your tactics.
  - Slow Down: Decreases the speed of the battle.
  - Speed Up: Increases the speed of the battle.
  - Toggle Camera: Turn camera mode on/off. By turning the camera on you may watch a cinematic of the battle.
- **Admiral AI.** Toggles the AI on/off.

- **Options.** Selecting Options lists the following:
  - Options: Displays the standard Options screen found in the Main Menu
  - Abandon Battle: Leave the tactical battle but battle results will be simulated. A pop-up will occur to confirm you wish to take this action.



## Post Battle Screen

After your battle, whether victorious or not and whether simulated or tactical, the Post Battle screen will appear. This screen will display overall results and effectiveness of the forces involved. If you are orbiting a colony you will also be given the choice to attack the colony by selecting the **Attack Colony** button, explained below.



## Ship Damage

Ships and structures do receive damage in battle. Damage is indicated via the damage bar which can be green, yellow or red depending on the amount of damage received. Ships or structures that have been destroyed are shown as greyed out.

If not destroyed they may be repaired via advanced technology and/or by locating to a star base or military outpost. Repairs are not instant often taking multiple turns before a ship is fully repaired if heavily damaged.



## Colony Assault Screen

The Colony Assault Screen is the means by which your forces may either bombard a planet from orbit to destroy it, or to soften it up prior to your marines invading the planet. To destroy a colony simply keep bombarding the planet until no structures or individuals remain; the planet is now ready for you or others to colonize. If your marines can defeat all of the opponents' defense units then you will capture the planet; any remaining enemy population and structures will fall under your control.

## Your Force

The left side of the screen arrays the forces available to you for the colony attack:

- **Explosive Bombs.** The total number of bombs available to bombard the planet.
  - Drop: This button will drop your bombs in a slow steady pattern on the target colony.
  - Drop All: Selecting this button will cause all bombs to drop at once.
- **Marines.** Lists the total number of marines available to assault the colony.
  - Transports: Marines are only available from troop transports. This button allows you to select the number of transports you wish to use for the assault.
  - Clear: This resets your Troop Transport selection to "1".
  - Deploy: This button will cause the selected transports to invade the colony.

- **Stellar Converter.** If any ships are equipped with a Stellar Converter you may select this button to destroy the planet.
- **Mind Control.** If your race has the Mind Control trait you may select this button to assimilate the entire planet immediately. You must have a battleship or greater with your fleet to use Mind Control.
- **Abort.** Located on the bottom of the Colony Assault screen this will take you back to the Galaxy screen. One reason to **Abort** is to allow a bombardment to continue on the following turns.

## Enemy Force

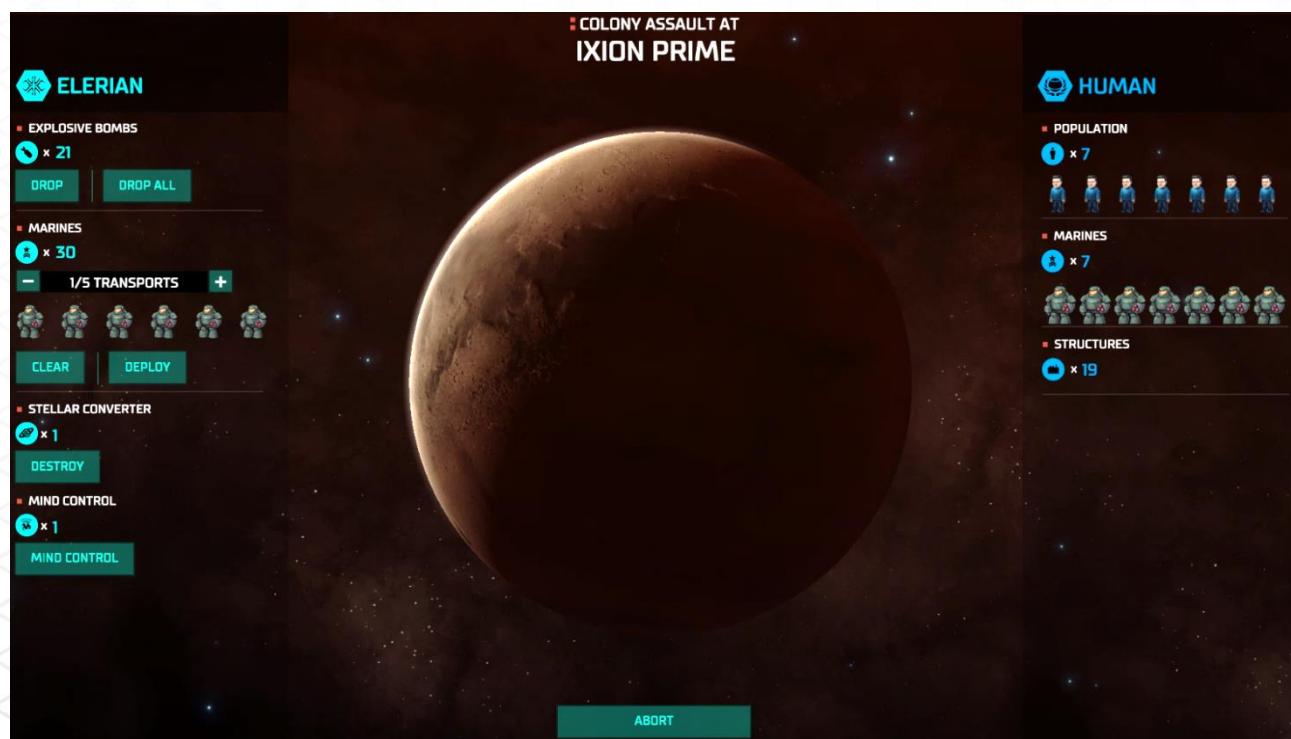
The right side will display what is currently on the planet that you must fight but also what may end up as yours if victorious.

- **Population.** Total population is displayed.
- **Marines.** Total ground defense forces will be shown here.
- **Structures.** Total structures on planet is shown. However, you will not know what these structures are until the planet is conquered.
- **Planetary Shield.** If the planet has a planetary shield this will be shown along with its current shield strength percentage.

## Colony Invasion

Once deployed the computer determines the battle similar to “Auto-Resolve” for fleets. A victory will instantly place what remains of the colony under your control.

See [Colony Assimilation](#), Colony Management section



# ESPIONAGE

Espionage involves researching and building a Spy Center on one of your colonies. Your empire may only ever have one Spy Center as it is a unique structure. Here, your agents are trained to perform missions against your opponents' empires, or within your own empire for **Counter Espionage** missions.

Once built, the Spy Center allows you to begin training and hiring agents through the **Espionage** button of the **Empire Command Bar**. The maximum number of agents is 50 though this can be increased with technology. All espionage is done through the Espionage screen.



If the Spy Center is destroyed, any current agents remain and can be used but no new agents can be trained until the Spy Center is rebuilt.

# Espionage Screen

The Espionage screen has the following information and functions, additional details below.

## Spies

This area is where you recruit new agents and monitor current agents.

- **Name.** Lists the agents name as a phonetic and their current level.
- **Status.** Displays the status of the agent: Mission name and location, time of arrival/mission completion, captured status, etc.
- **Orders.** Hide, recall, assign, dismiss and open diplomatic negotiations.

## Missions

A spy may be assigned various missions against opponent empires. A spy who is recalled, deported or out of training is automatically assigned Counter Espionage.

## Mission Details

Selecting a spy from the **SPIES** section will display a more detailed section of that particular spy.

- **Spy Detail.** Lists spy's name, current level and salary in BCs
- **Mission.** Displays current mission, risk, experience per turn, time to mission completion, mission objective, and current location (empire and colony, if infiltrated).



# Spies

## Training Agent

You determine when a spy is recruited by paying the “**Train Agent**” cost. Once selected the spy will appear in your ready area. The spy will display that they are currently training with the turns to completion. Once fully trained the spy will be available for missions.

You may only have one spy undergoing training at a time. Note that some technology will not only decrease training time but also allow spies to be trained to a higher level.

Selecting “**TRAIN AGENT**” will automatically purchase that agent. You will NOT receive a confirmation request.

## Level

Spies, except during training, if captured or on HIDE, receive experience points (XP) per turn that allow them to increase in level. Select a spy and the XP currently being generated will be displayed in the **MISSION DETAILS** section.

As a spy increases their level mission risk and chance of discovery will begin to decrease. The spy level is also the percentage added to your empires overall Security rating if the spy mission is Counter Espionage.

A spy’s level is indicated by a number surrounded by a circle within their graphic. The circle tracks the current progress to achieve the next level. Note that some technology will increase the amount of XP generated per turn.

A spy has a maximum level of 5.

## Salary

Each spy costs BCs per turn in salary even for those who have been captured (spies in training do not receive a salary). This salary rises as a spy gains levels. Salary is displayed under “**MISSION DETAILS**” when a spy is selected.

## Status

Status details the current empire location of the spy, their current mission, a status bar showing mission completion status, and turns to completion.

Captured spies will display no status other than the empire they were captured in and the mission they were undertaking when captured. Captured spies will also have jail bars over their graphic.

## Orders

Depending on a spy's current status the following orders are available:

- **Hide.** The spy waits within an opponent's empire reducing the chance of discovery.
- **Recall.** Recalls the agent back to the empire.
- **Dismiss.** Dismisses the agent forever.
- **Diplomatic Negotiations.** Available only for captured agents. Takes you to the DIPLOMACY screen to negotiate their release.

Spies currently on missions who receive "Hide", "Recall" and "Dismiss" orders will cause a pop-up screen to appear. This screen will ask you to confirm the order. Abandoning a mission will cause all progress for that mission to be lost.



Spies in training who are "Dismissed" will NOT receive a confirmation screen. They will instantly be removed.

**■ SPIES**

Level **FATROT** ETA **4**

**TRAIN AGENT** **39**

**Spy** **Status** **Orders**

Spy	Status	Orders
CHARLIE 4	Silicoid, Steal ETA 6	Hide, Recall, Dismiss
ECHO 5	Terran, Counter Espionage	
ALPHA 2	Captured Silicoid, Infiltrate Empire	Diplomatic Negotiations

# Missions

## Infiltrate Empire

Spies must pick the “INFILTRATE EMPIRE” button under the “MISSIONS” area as their initial mission. Once the initial mission is selected click “SELECT DESTINATION” which will display a pop-up screen of all available empires to infiltrate. This empire screen will also display the current diplomatic levels to aid you in your empire selection. Select “START MISSION” to begin.

Once successfully completed the following occurs:

- **Empire Reveal.** Reveals all of opponent's current colonies and locations.
- **Infiltrate Colony.** You may proceed to infiltrate a specific colony. Selecting this option will require you to select the specific colony.
- **Empire Missions.** Unlocks all empire wide missions, detailed below.

Note that you may have multiple spies attempting to infiltrate an empire at the same time.



## Empire Missions

Once unlocked spies may choose from a number of missions that can affect the opponent empire as a whole. You may have multiple spies doing the same missions within an empire. The available missions are:

- **Steal Charts.** Steal navigation charts showing all known planets, star lanes, etc. discovered by the targeted empire.
- **Hacking.** Halves the research output of the target for 10 turns.
- **Steal.** Steal a random technology.
- **Destabilize.** Lower disposition from other races against the target.
- **Assassination.** Attempts to kill a random leader from the targeted empire.

## Infiltrate Colony

Spies that successfully complete the **INFILTRATE EMPIRE** mission may, instead of attempting empire wide missions, may attempt to infiltrate a specific colony. Similar to “INFILTRATE EMPIRE” a “SELECT DESTINATION” button will appear under MISSION DETAILS. This button will display every current colony of that empire for you to select from. Select “START MISSION” to begin.

Once successfully completed the following occurs:

- **Colony Reveal.** Reveals the target colonies detailed information.
- **Colony Missions.** Unlocks all Colony specific missions, detailed below.

## Colony Missions

Once unlocked spies may choose from a number of missions that can affect the targeted colony as follows:

- **Sabotage.** Destroy a random defense building
- **Contaminate.** Causes reduction in the amount of Food produced.
- **Revolt.** Causes a planet to permanently leave the target empire. The planet must be invaded to bring it back into the opponent empire.

Missions that are unavailable, such as a planet currently in Revolt, will be greyed out.

## Counter Espionage

Spies not on a specific mission default to COUNTER ESPIONAGE if not given espionage missions. The level of a spy is added to the overall security level of the empire as a percentage (Example: A level 4 spy adds 4% to the overall empire security level). This overall empire security level is also added to every individual colony- as such spies on COUNTER ESPIONAGE duty affect both the empire and colonies.

# Detected Spies

## Your Spies

When your spies have been detected by an opponent empire a pop-up screen will appear. This screen will inform you who was detected, their current mission, and what fate befell them (captured, killed or deported).

- **Captured.** A captured spy will remain in your “SPIES” section with bars over their portrait and their status in orange displaying what race captured them along with the mission they were on. A captured spy generates no experience, cannot complete or start new missions, and still must be paid every turn.
- **Killed.** The spy has been killed by the opponent empire and is removed from inventory.
- **Deported.** The spy has been deported from the opponent’s empire and travels back to your empire. Once returned the spy may immediately be sent on missions.

## Enemy Spies

If an enemy spy is detected a pop-up screen will appear giving you the same three choices (capture, kill or deport). Note that killing a spy often leads to a negative impact to that race’s disposition.

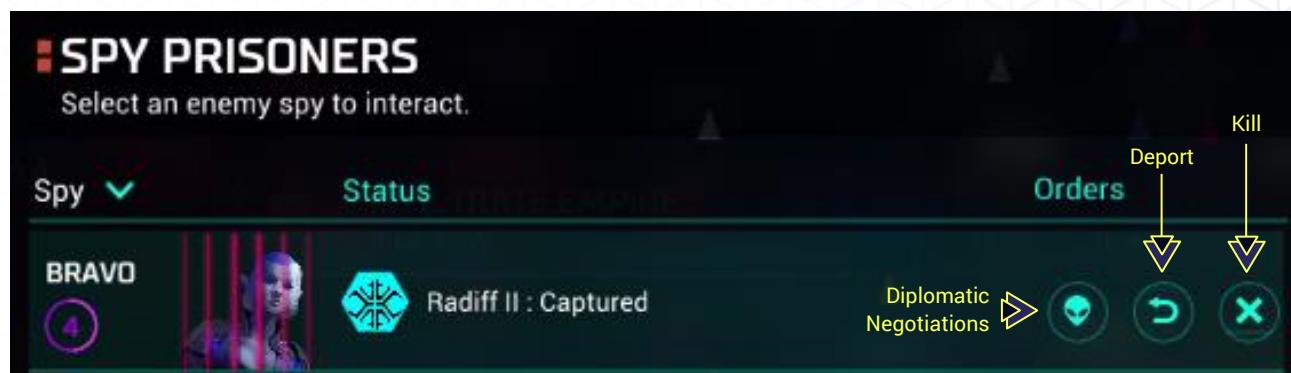
You may review captured spies at any time by selecting the “CAPTURED SPIES” button located in the lower right of the **ESPIONAGE** screen. This will cause a pop-up screen to appear with the following information:

- **Spy.** Name, level and portrait.
- **Status.** Spy empire and where caught.
- **Orders.** Open up “Diplomatic Negotiations” with their empire leader, deport them back to their home empire, or kill them.

## Diplomatic Negotiations

Captured spies, yours or theirs, may be used as bargaining chips during diplomatic audiences. The diplomatic negotiation “PRISONER EXCHANGE” may be used as leverage for any number of diplomatic endeavors. Such negotiations could be a swap of one spy for another, a payment in BC, as a sweetener for that tech exchange, or simply to increase a race’s disposition.

The “PRISONER EXCHANGE” may be initiated from within the Diplomacy screen under “NEGOTIATIONS” or by pressing the “Diplomatic Negotiations” button located in the Status area of the “SPIES” section.



# RESEARCH

## Research Management Screen

The Research screen will display all technologies that can be currently selected for research. Simply select the technology you wish to research from the **Available Technologies** shown then select **DONE** to return to the Galaxy screen.

If a deeper look at your technology is required select the **VIEW TECHNOLOGY TREE** button.



# Technology Tree Screen

The Technology Screen, which can be moved side to side by click/hold and swipe, allows you to view, plan and pick your research. This screen has the following functions:

- **Highlight.** This drop down menu will allow you to pick from the various research areas. Research related to the selected area will remain highlighted.
- **Search.** The search box will highlight any Research whose name contains all or part of a word. Example: The word "Star" will show "Star Fortress" and "Doom Star" as hits on the search.

Hovering over a Technology Bar will cause a pop-up to appear giving a brief explanation of the available technologies, turns to complete, and required Research points. Hovering over the technology within the Technology Bar will display a pop-up detailing the individual technologies.

Technology that has already been researched will be greyed out. Technology available for research will be colored blue with a Turn to Completion symbol in the corner. Technology not yet available for research will be colored black with a lock symbol in the corner.

Technology currently being researched will have a glowing Technology Bar.

## Research Path

Instead of choosing your Research projects one at a time you may instead select a Research Bar farther down the tree. Selecting this project will outline any other Research projects needed to achieve the selected project as well as turning any connecting paths blue. The research will be generated in the order shown by small blue numbers next to the required projects.



# BLUEPRINTS

## Blueprint Management Screen

Blueprints allow you to change your ship designs and even make ships from scratch to conform to your vision of combat. The main Blueprint screen has the following information and functions:

- **Ship List.** The Ship List displays all of your current ship designs along with a snapshot of their attack and defense capability. Slots marked **Empty** may be used to make additional custom ships.
- **Hull Capacity.** Each ship has a finite amount of space for systems and weapons. This shows how much space used/space maximum for the selected ship design.
- **Technology List.** Displays all current Core Systems, Specials and Weapons. Hovering over the item will bring up a pop-up with details. Technologies that can be upgraded will display a blinking yellow symbol. Hovering over this symbol will pop-up the suggested technology to replace the current technology.
- **Ship Stats.** Displays critical information on the ship as currently built. The upgrade symbol may also appear here and will display the net positive and/or negatives of accepting the suggested upgrades, if any.
- **Menu Buttons.** These do the following:
  - Edit: Takes you to the Blueprint Editor screen, detailed below.
  - Scrap: Deletes this ship build.
  - Upgrade: Upgrade the selected ship type.
  - Upgrade All: Upgrades all ship types.
  - Done: Returns to Galaxy screen



Upgrading a ship on the Blueprints screen will ONLY upgrade ships either being built or built later. Currently produced ships may visit a star base/military outpost or better to receive upgrades to conform to the current build, if you wish. However, such upgrades are not free and will cost you BCs to bring your ships up to their latest technology level.



## Blueprint Editor

The Blueprint Editor is where you may design and edit your ships. Similar to the main Blueprint screen in layout the main difference is on the left side. Instead of the Ship List the following functions located here are:

- **Name.** You may rename your ships. This is limited to a maximum of 12 letters, numbers or spaces.
- **Hull.** This will be set if you are editing the initial hull. If you had chosen an “Empty” slot from the Ship List all currently available hull types will be here for you to select from.
- **Model.** Select between the base hull graphic or an alternate graphic.
- **Theme.** Select between 3 alternate markings for your ship.
- **Roles.** Roles for the ship class may be selected. Roles affect how the Admiral AI will command the ships in a tactical battle. The roles are:
  - None. Default role of mid-range all purpose ship.
  - **Blitzer.** Hit and run role designed for fast ships with short to mid-range weapons.
  - **Sniper.** Long range combat role for slow ships suited for the back line.
  - **Brawler.** Combat role for bulky, resilient ships that thrive in close combat.
- **Menu Buttons.** These do the following:
  - Cancel: Cancels the current build and returns to the Blueprints screen.
  - Save: Saves the current build and returns to the Blueprints screen.

The ship stats and hull capacity give you the same information as in the Blueprint screen. The information is dynamic and will change to reflect the addition or subtraction of technology. The System List is now also active. Clicking on an item or an empty slot will take you to that systems currently researched technology. From there you may choose the equipment you want and, in the case of weapons, decide how many, what modification and the facing (if available).



Clicking on a System List button will bring you to the technology screen where you may select your core systems, specials, and weapons. While core and special systems may only have a single instance of a particular technology added to the ship, you may select multiple weapons with the only limitation being space.

When clicking a technology the following information is displayed. Note that not all of the below will be displayed for non-weapon systems:

- **Clear.** This will clear technologies selected for this slot.
- **Technology Systems.** Clicking on a technology will bring its description, modifiers, quantity and other information on the right side of the screen. The system box also displays the production, space required and damage proc of that weapon.
- **Description.** The selected will display its description, cooldown, damage, damage procs, armor penetration or other details, if any.
- **Modifiers.** If technology modifiers have been unlocked they will be displayed here. Clicking on the button will make all weapons for that slot have the identical modifier. Hovering over the modifier will bring up a pop-up detailing how the weapon(s) will be affected. You may select more than one modifier being limited by available hull space. However, weapons selected as PDF systems may only have that modifier.
- **Weapon Range.** A weapon range bar will be displayed showing maximum range and percentage chance to hit at various ranges.
- **Quantity.** Click the arrows to increase or decrease the number of weapons for that slot.

- **Facing.** Clicking on the Facing button will allow you to select how all weapons for that slot will face. Facings are Front, Sides, Rear and Any (360 degrees). The more facings a weapon has the more space they require. Some weapons are automatically Any and this button will not be displayed.
- **Slot Information.** As you add/delete the quantity, facings and modifiers the Total DPS, Total Cost, and Total Space Used will reflect these changes.
- **Add.** Once you are satisfied with your choice click **Add** to add these weapons or other technology to the selected slot in the System List.

## WEAPONS

Click an item to see a detailed description here.

CLEAR	NUCLEAR BOMB	LASER CANNON	NUCLEAR MISSILE
2 7	2 7 2.85	1 3 0.83	2 7 1.11
ANTI-MISSILE ROCKETS	NEUTRON BLASTER	MERCULITE MISSILE	MASS DRIVER
2 3 2.5	2 4 1.28	4 8 1.56	6 6 1.68
PROTON TORPEDOES	DEATH SPORES	FUSION BEAM	FUSION BOMB
4 12 3.33	10 15 1.42	5 10.5 1.56	4 8 4.28
GRAVITON CANNON	PULSON MISSILE	BOMBER BAYS	FIGHTER BAYS
6 7 2.5	8 9 2.5	45 35	30 30
ION PULSE BEAM	PHASORS	HEAVY FIGHTER BAYS	ANTI-MATTER TORPEDOES
14 1.4	12 5	65 65	2 2

88.88/91   

**FUSION BEAM**

SHIP STATUS

Total Hull Power: 1000

Armor Repair: 1000

Total Shield: 1000

Shield Absorb: 1000

Travel Speed: 1000

The Fusion Beam harnesses the radioactive output of a hyper-stimulated breeder reactor to project a collimated stream of charged particles.

Combat Space: 1000

Missile Defense: 1000

PD Effective: 1000

Payload Value: 1000

Production: 1000

Command: 1000

■ COOLDOWN: 12.0

Damage: 5

Damage Procs: 4

Armor Penetration: 10.0

■ MODIFIERS

■ WEAPON RANGE

55

90% 85% 69%

■ QUANTITY

1 Facing: Front

Total DPS: 1.66

Total Cost: 6

Total Space Used: 88.88/91

**ADD**

# LEADERS

Leaders are rare individuals that can provide bonuses to your colonies, fleets or even entire empire. Leaders will appear randomly during the game and may be from any race. Such individuals do not come cheap either as an initial cost or their per turn pay after they are hired.

## Recruitment

A leader will appear randomly during play. When a leader appears a pop-up will be displayed with the following information:

- **Leader.** Lists the leaders name, level, portrait, and a biography.
- **Manages.** Fleet or Colony based
- **Rank.** Current rank of leader
- **Salary.** Per turn cost
- **Bonuses.** The type and percentage of bonuses received
- **Reject.** Dismisses leader
- **Hire.** BCs required to hire. If **HIRE** is selected the leader can be found under the **LEADERS** screen ready to be assigned.

If **HIRE** is selected the leader can be found under the **LEADERS** screen ready to be assigned.

If **REJECT** is selected the leader will remain in the **LEADER** screen for a time before leaving. Rejected leaders while in the **LEADER** screen are identified with a “For Hire” in their status. The turn before leaving a warning will appear.

### NEW LEADER

**REMI**  
The Invader



1

MANAGES	RANK	SALARY
 COLONIES	 ADMINISTRATOR	 4
<b>BONUSES</b>		
Ground Combat Rating		 +10%
Security		 +8%

After a dishonorable discharge from the Agents of the Tides and an exile from Trilar, Remi was forced to work as a mercenary to survive in the universe. He was exiled from the Shoal after he took mercy on an infamous pirate against the will and command of his superior officers. He fights like a man with a death wish, but excels when assigned to protect the innocent.

**REJECT** | **HIRE**  12

## Leaders Screen

The **LEADERS** screen is accessed by selecting the **LEADERS** button on the **EMPIRE COMMAND BAR**. The following information is displayed:

### Leaders

This section details available leaders as follows:

- **Leader:** Lists the leaders name, current level, and portrait.
- **Manages:** Shows if a leader is Fleet or Colony based.
- **Rank:** Current rank as determined by level. As level increases so does rank.
- **Bonuses:** Displays the current bonuses of a leader. As a leader rises in levels bonuses will also increase.
- **Salary:** The current per-turn payment in BCs to maintain the leader or cost to hire a rejected leader.
- **Status:** Will show the current ship or colony the leader is assigned to, if any.
- **Orders:** Displayed only when a leader is selected – you may select Recall, Dismiss, and Assign functions.

You may mouse over the leader portrait, level, and bonuses for additional information.

### Galaxy Map

The Galaxy map displays the current known galaxy with your colonies in green and fleets in your empire color. Fleets or colonies that currently contain a leader will be displayed as a pulsing dot. Fleets or colonies without a leader will be displayed as a colored circle around the system they are located at.

# Leader Actions

Once a leader is hired they will appear in your LEADERS screen. From here a number of actions may be taken to fully utilize your leaders. Your leaders will level up over time which will increase their bonuses. Putting a leader with correct bonuses in a critical location can give your empire the edge needed to conquer the stars!

## Orders

The orders that can be given to leaders are:

- **Recall:** Returns to LEADERS screen.
- **Dismiss:** Leader is removed from LEADERS screen. Once dismissed the leader cannot be recruited again.
- **Assign:** Displays Fleets or Colonies that the leader may be assigned to.
- **Hire:** Hire a rejected leader.



## Assignments

Leaders will be linked to one of two areas which determines where they can be placed. Fleet leaders may only be assigned to ships. Colony leaders may only be assigned to individual colonies (this includes the homeworld) but you may only have one colony leader per system. A leader who is not assigned to a Fleet or Colony will not have their bonuses activated.

A pop-up screen will occur when the ASSIGN button is selected. All Fleets and Colonies will be displayed. Simply select the ship or colony the leader is to be assigned to, and click the SELECT button to send your leader to that location. Fleets or Colonies where a leader may not be assigned (example: another leader is there) will be greyed out.

Once assigned to an individual ship a leader symbol will be displayed on that ship. For colonies a leader portrait displaying the leader bonuses will appear to the left of the PLANET INFO section of the COLONY screen.

An individual ship or colony/system may only have one leader at any time. However, a fleet may have leaders on multiple ships. Fleets with multiple leaders have their bonuses stack as appropriate.



## Bonuses

Bonuses are the reason to hire leaders and leaders may have up to three when encountered. Bonuses always positively affect your empire. Unless stated otherwise all bonuses affect the entire fleet or system where the leader is assigned or for General these affect the entire empire.

Bonuses come in three varieties: Colony, Ship and General.

- **Colony Bonuses** (Affects entire system)

- + Pollution Cleanup
- + Food
- + Credits
- + Leaders Experience Rate
- + Production
- + Research
- + Population Growth
- + Beam Attack Against Orbiting Ships
- + Pollution Cleanup
- + Ground Combat Rating
- + Buy Out Cost Reduction
- + Morale

- **Ship Bonuses** (Affects entire fleet)

- + Shield Restoration
- + Ship Repair per Turn
- + Beam Defense
- + Beam Attack

- + Missile Attack
- + Beam Defense vs. Antarans and Space Monsters
- + Missile Attack vs. Antarans and Space Monsters
- Fleet Maintenance Cost Reduction
- + Travel Speed
- + Command Points
- + Maximum Damage
- + Travel Speed
- + Ground Combat Rating (effects system ship in located at)
- **General Bonuses** (Affects entire empire)
  - + Security
  - + Assassination Immunity
  - + Disposition
  - + Research
  - + Spy Experience Rate
  - + Trade Treaty Income
  - + Credits per Turn
  - + Reduction in Leader Hiring Cost
  - + Reduction in Leader Salary
  - + Leader Appearance Chance

## Levels

Leaders over time will increase in levels when assigned to a ship or colony. Leaders not assigned to a ship or colony receive NO experience.

Once a leader attains a new level a LEADER LEVEL UP pop-up will appear. This will allow you to increase one bonus of that leader. The current bonus is displayed and the potential increase is displayed in brackets. The new salary requirement is also shown next to the current salary (NOTE: The new salary requirement may change depending on the bonus selected).

For leaders with multiple bonuses you may only select one to increase. Click the BONUSES SELECTION button(s) to choose your increase. When you are satisfied with the increase select the CONFIRM button. Once confirmed you may not go back and change the selection. NOTE: Leaders with only one bonus must still have their BONUSES SELECTION button checked then confirmed.

As leaders gain levels their Rank will also increase as follows:

Level	Rank	
	Colony	Ship
1	Administrator	Commander
2	Commissioner	Captain
3	Director	Commodore
4	Magistrate	Rear Admiral
5	Governor	Admiral



# PATH TO VICTORY

## Victory Conditions

You may check the current standings of these victory conditions by clicking on the **Path to Victory** link of the Empire Command Bar. This will take you to a screen showing all victory conditions and the standing of all races currently in the game (conquered and/or exterminated races are dropped from the lists).

When in the Path to Victory you may click on each victory condition to receive a more detailed report on your current status for each condition.

You also have the ability, when creating a new game, to select which victory conditions will apply to you. This appears under Advanced Settings, detailed in that section.

You may win the game via five victory conditions:

- **Score.** Have the highest overall score between the other victory conditions listed below prior to the Turn Limit being reached.
- **Conquest.** Exterminate all other races to become the sole ruler of the galaxy. This victory condition is always **On** and cannot be toggled **Off** in Advanced Settings. Minor civilizations do not have to be conquered to win.
- **Technological.** Be the first to build the three required scientific victory structures (Hyperplanar Transfer Tracking Premises, Transponder Control Plant, and Ultraplanar Dimorphic Prospector in that order).
- **Economic.** After any race builds a Planetary Stock Exchange the Economic Victory is now active (if not disabled as a victory condition in Advanced Settings).\*
- **Diplomatic.** Be nominated to lead the Galactic Council by obtaining 2/3 or more of all available votes.
- **Antaran.** Discover and research Antaran ruins then build the Antaran portal. Invade their pocket dimension and destroy them once and for all.



\* Economic Victory occurs when your empire holds a percentage of both the Gross Domestic Product (GDP) and Galactic Monetary Fund (GMF) shares in excess of other races for 10 consecutive turns. The percent required for victory is dependent on the number of races active in the game - 38% for 8 races, +2% per race below 8; for example, 44% for 5 races.

## GALACTIC STOCK MARKET

Manage your GMF Shares

### GALAXY

Gross Galactic Product

3220.12 BC

Total GMF Shares

136 G

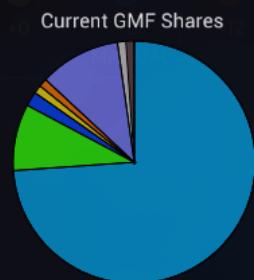
### YOUR EMPIRE

Gross Domestic Product

1079 [33%] BC

Current GMF Shares

101 [74%] G



### GMF SHARES

GMF Buy Price

202 BC



GMF Sell Price

33 BC



Credits

634210.6 BC

SELL

BUY



Any victory type except for Conquest can be disabled during game set-up.

See [NEW GAME / MATCH SET-UP](#) for this function.

## PATH TO VICTORY

### SCORE

Excel in every aspect of galactic empire management to become the best.

2 KLACKON

Military Score: 321  
Technologic Score: 200  
Economic Score: 91  
Diplomatic Score: 300  
Antaran Score: 0

TOTAL SCORE: 912

### CONQUEST VICTORY

Become the ruler of the galaxy by crushing your enemies into oblivion.

- 1 UNKNOWN Power: 323
- 2 UNKNOWN Power: 323
- 3 UNKNOWN Power: 321
- 4 KLACKON Power: 321
- 5 UNKNOWN Power: 317
- 6 UNKNOWN Power: 271

### TECHNOLOGICAL VICTORY

Push your scientists through the technological path and build the ultimate machine to transcend this universe.

- 1 KLACKON Total Research: 200
- 2 UNKNOWN Total Research: 200
- 3 UNKNOWN Total Research: 200
- 4 UNKNOWN Total Research: 200
- 5 UNKNOWN Total Research: 200
- 6 UNKNOWN Total Research: 100

### ECONOMIC VICTORY

Fill your coffers and claim economic supremacy by controlling the Galactic Monetary Fund.

- 1 KLACKON GGP Share: 11.19%
- 2 UNKNOWN GGP Share: 11.16%
- 3 UNKNOWN GGP Share: 11.16%
- 4 UNKNOWN GGP Share: 11.04%
- 5 UNKNOWN GGP Share: 11.04%
- 6 UNKNOWN GGP Share: 11.04%

### DIPLOMATIC VICTORY

Pull the diplomatic strings of the Galaxy and become the Supreme Chancellor.

- 1 UNKNOWN Votes: 6
- 2 UNKNOWN Votes: 6
- 3 UNKNOWN Votes: 6
- 4 KLACKON Votes: 6
- 5 UNKNOWN Votes: 6
- 6 UNKNOWN Votes: 6

### ANTARANS VICTORY

Discover and investigate the mysterious ruins leading to the Antaran pocket dimension and destroy them once and for all.

- 1 KLACKON Progress: 0/400
- 2 UNKNOWN Progress: 0/400
- 3 UNKNOWN Progress: 0/400
- 4 UNKNOWN Progress: 0/400
- 5 UNKNOWN Progress: 0/400
- 6 UNKNOWN Progress: 0/400

Remaining Turns: 500

VIEW TIMELINE GRAPH

DONE

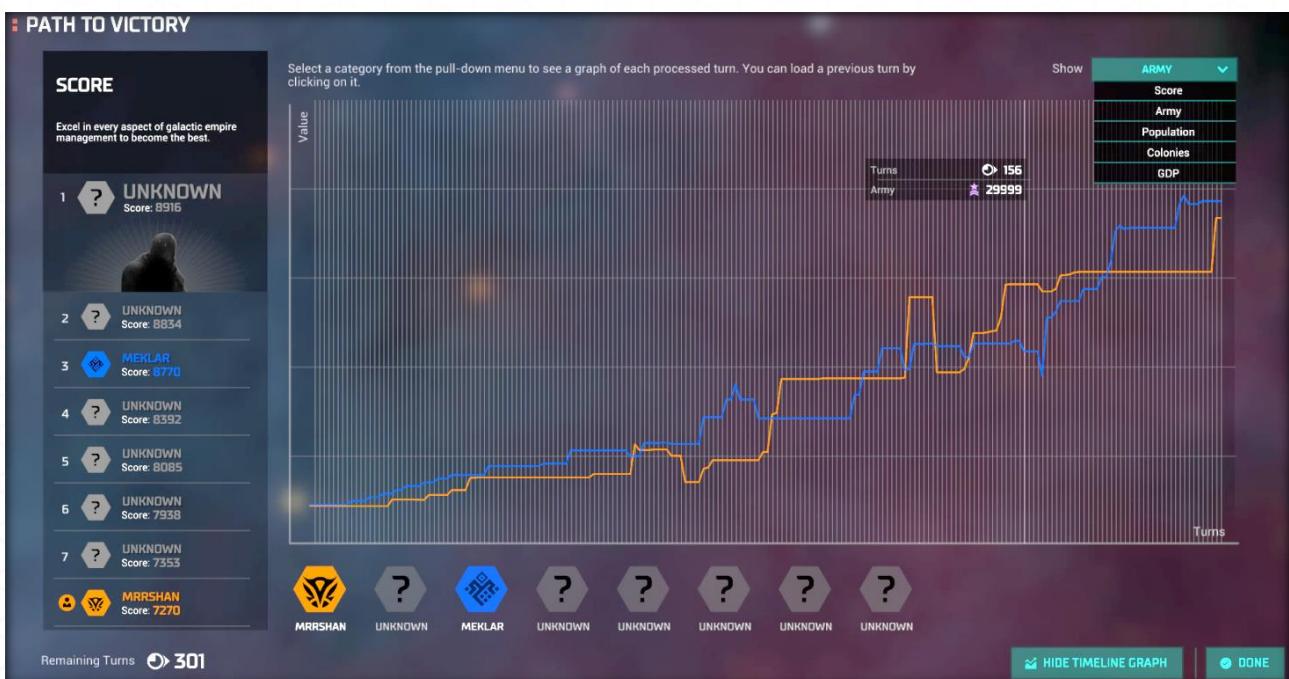
## Timeline Graph

Within the Path to Victory clicking "View Timeline Graph" in the lower right corner will take you to the graph. The graph allows you to accomplish the following:

- **Turn by Turn Data.** By using the drop down menu you may see your progress in five areas (Score, Army, Population, Colony and GDP) over the course of the game.
- **Race Selection.** Located on the bottom of the graph screen are buttons representing all currently known races. Clicking these buttons on/off will allow you to overlay those races on the graph for comparison.
- **Previous Turn Load.** Scrolling across the graph with your mouse will cause a white line to appear. This line highlights the turn and data for that turn. By clicking on the line it will take you back to that turn. A confirmation pop-up will occur to confirm you wish to go back to a previous turn. You will load and restart at the selected turn but turns beyond that will be deleted and unrecoverable.

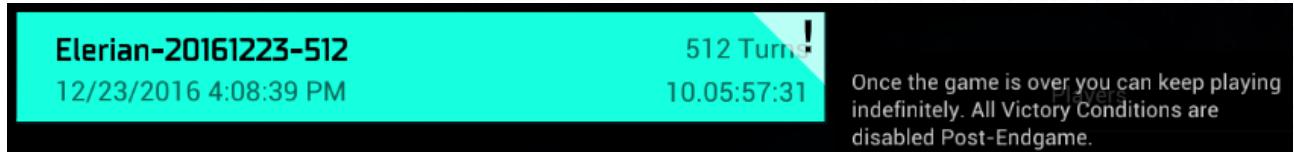


Use of the Advanced Settings to set automatic turn saves to any number other than every turn will affect the graph accordingly.



## Post-Endgame Play

Once a successful victory condition has been met you will be given the option of continuing to play the current game indefinitely. If this option is selected the game will continue but all victory condition will be disabled. Post victory games will display an exclamation point ("!") in the upper right corner of their save bar. Hovering over the exclamation point will display a pop-up reminder that the game has had all victory conditions disabled.



Now that you future explorers have grasped the basics of Master of Orion, you are ready to start your campaign and Conquer The Stars!

# APPENDIX A. GAME ICONS

## Colony Specific

 = Homeworld (Note: White star will be color of race)

 = Blockade

 = High or Low Gravity Planet

 = This colony has a Star Base

 = Jump Gate

 = Colony Event: Plague

 = Colony Event: Population Growth

 = Colony Event: This colony is starving

## Espionage Specific

 = Spy in Transit to Location

 = Spy Mission: Hold

 = Spy Mission: Counter-Espionage

 = Spy Mission: Spy Traveling to Colony

 = Spy Mission: Acquire Data

 = Spy Mission: Infiltrate Cybercrime

 = Spy Mission: Hacking

 = Spy Mission: Steal

 = Spy Mission: Infiltrate Agronomy

 = Spy Mission: Famine

 = Spy Mission: Contaminate

 = Spy Mission: Infiltrate Trade Unions

 = Spy Mission: Strike

 = Spy Mission: Sabotage

 = Spy Mission: Infiltrate Diplomacy

 = Spy Mission: Destabilize

 = Spy Mission: Revolt

 = Spy Mission: Steal Charts

## Ship Specific

 = Frigate

 = Destroyer

 = Cruiser

 = Battleship

 = Titan

 = Doom Star

 = Scout

 = Space Factory

 = Colony Ship

 = Civil Transport

 = Troop Transport

# APPENDIX B.

## SHIP TECHNOLOGY TABLE



Any Technology in *italics* is not researchable. This technology may be recovered when The Guardian is defeated.

### Core Systems

#### Drives

Name	Travel Speed	Combat Speed	Production Cost*	Hull Capacity*
Nuclear	1.0	-	3 - 22	7.5 - 732.42
Fusion	1.5	+20%	3 - 27	8.4 - 668.86
Ion	2.5	+40%	4 - 31	9.2 - 592.14
Anti-Matter	3.0	+60%	4 - 36	9.9 - 510.21
Hyper	4.0	+80%	5 - 41	10.5 - 428.83
Interphased	5.0	+100%	6 - 45	9.5 - 235.23

\*Production Cost and Hull Capacity are dependent on Hull size. Range shown is Frigate to Doom Star.

#### Armors

Name	Resilience Rating	Hull Armor Multiplier	Missile Armor Multiplier	Production Cost*	Hull Capacity*
Titanium	5	N/A	N/A	4 - 128	0
Tritanium	10	1.5	1.2	8 - 256	0
Neutronium	15	2.0	1.4	12 - 384	0
Zortrium	20	2.5	1.6	16 - 512	0
Adamantium	25	3.0	1.8	20 - 640	0
<i>Xentronium</i>	<i>30</i>	<i>2.25</i>	<i>2.0</i>	<i>10 - 320</i>	<i>0</i>

\*Production Cost and Hull Capacity are dependent on Hull size. Range shown is Frigate to Doom Star.

## Computers

Name	Energy Weapon Accuracy	Production Cost*	Hull Capacity*
Electronic	+25	6 - 19	0
Optronic	+50	8 - 26	0
Cybertronic	+75	12 - 38	0
Positronic	+100	16 - 49	0
Moleculartronic	+125	18 - 57	0

\*Production Cost and Hull Capacity are dependent on Hull size. Range shown is Frigate to Doom Star.

## Shields

Name	Shield Strength: % of Base Hull	Damage Reduced per Hit	Production Cost*	Hull Capacity*
Class I	50	-1	6 - 45	10.0 – 976.56
Class III	70	-4	10 - 79	10.8 – 859.96
Class V	100	-9	15 - 113	11.5 – 740.18
Class VII	140	-16	24 - 182	12.1 – 623.59
Class X	200	-25	30 - 227	12.6 – 514.60

\*Production Cost and Hull Capacity are dependent on Hull size. Range shown is Frigate to Doomstar.

## Specials

Name	Production Cost*	Hull Capacity*	Specifications
Achilles Targeting Unit	6 - 340	11.2 – 117.44	One-Hit Kill Chance: 1%
Augmented Engines	10 - 976	12.5 – 1220.7	Travel Speed: 0.5; Beam Defense Bonus: +25; Cooldown: 20.0; Combat Speed Boost: x3.0; Duration: 7.0
Automated Repair Unit	10 - 428	16 – 167.77	Ship Self Repair: 10% per Turn; Cooldown: 24.0; Range 60.0
Battle Pods	5 - 488	8.75 – 143.61	Additional Hull Capacity: +25%
Battle Scanner	4 - 34	6 – 45.56	Energy Weapon Accuracy: +30

Name	Production Cost*	Hull Capacity*	Specifications
Black Hole Generator	156 - 579	180 – 447.9	<i>Cooldown: 40.0; Duration: 10.0; Immobilizes all enemies in targeted area. Damage: 20; Range: 60 units; Damage Procs: 3</i>
Cloaking Device	4 - 34	9 – 170.06	Cooldown: 10.0
Dauntless Guidance System	4 - 415	4.4 – 226.76	Missiles request new targets if current target is destroyed before impact
Displacement Device	6 - 1458	4.6 – 296.07	Cooldown: 30.0; Range: 45.0 units
ECM Jammer	12 - 91	15 – 113.91	Missile Avoidance: +25
Energy Absorber	16 - 512	10 - 320	Cooldown: 25.0; Incoming Damage Absorbed: 50%; Duration: 10
Fast Missile Racks	3 - 366	7.6 – 188.18	Missile Cooldown: -33%
Hard Shields	4 - 128	5 - 160	Bonus Damage Reduction: -6 per hit
Heavy Armor	13 - 193	0	Bonus Resilience Multiplier: x2
High Energy Focus	6 - 340	7.6 – 188.18	Energy Weapon Damage: +50%
Hyper-X Capacitors	8 - 256	10 - 320	Energy Weapon Size: - 50%
Lightning Field	8 - 256	10 - 320	Cooldown: 30; Range: 10 units; Duration: 0.75
Multi-Phased Shields	4 - 128	5 - 160	Bonus Shield Points: +30% of Base Hull
Multi-Wave ECM Jammer	13 - 193	17 – 241.38	Missile Avoidance: +50; Effects from multiple jammers do not stack.
Phasing Cloak	4 - 128	4 - 128	Cooldown: 10.0
Plasma Web	4 - 128	4 - 128	Cooldown: 30; Duration: 5; Range: 20 units; Damage: 5; Damage Procs: 20
Pulsar	11 - 566	10.5 – 172.34	Cooldown: 40.0; Damage: 13; Armor Penetration: 0.0; Range: 40 units

Name	Production Cost*	Hull Capacity*	Specifications
Rangemaster Targeting Unit	6 - 192	8 - 256	Corrects for long range targeting inaccuracies in beam weapons, increases beam hit chance at long range.
Reinforced Hull	5 - 488	0	Bonus Hull Points: 50% of Base Hull
Scanner Beacon	4 - 34	9 – 170.06	Cooldown: 10.0; Range: 50 units; Duration:10; Reveals ships with Stealth
Shield Capacitor	5 - 488	6.8 – 96.55	Cooldown: 30.0; Shield Strength: 20% of Base Hull; Duration: 10
Stellar Converter	208 - 772	260 – 965.36	Cooldown: 30.0; Damage: 600; Damage Procs: 10; Armor Penetration: 0.0; Range: 100 units; No Range Dissipation
Structural Analyzer	3 - 366	7.5 – 732.42	Bonus Hull Damage: +30% [Energy Weapons Only]
Subspace Teleporter	5 - 774	5.25 – 214.42	Cooldown: 20.0; Range: 60 units
Warp Dissipater	24 - 182	30 – 227.81	Creates system wide interference field preventing enemy ships from retreating or using FTL based technologies.
Wide Area Jammer	20 - 289	25.5 – 362.06	Missile Avoidance: +75; Fleet Missile Avoidance: +25; Effects from multiple jammers do not stack.

\*Production Cost and Hull Capacity are dependent on Hull size. Range shown is Frigate to Doom Star. You are limited to one of each special.

# Weapons

## Energy Weapons

Name	Production Cost	Hull Capacity	DPS	Specifications
Laser Cannon	2	6	0.83	Cooldown: 6.0; Damage: 5; Armor Penetration: 0.0; Range: 50 units
Neutron Blaster	5	8	1.28	Cooldown: 7.0; Damage: 9; Armor Penetration: 5.0; Range: 50 units
Mass Driver	10	6	1.68	Cooldown: 8.0; Damage: 12; Armor Penetration: 10.0; Range: 50 units; No Range Dissipation; Shield Piercing
Fusion Beam	8	10.5	1.66	Cooldown: 12.0; Damage: 5; Armor Penetration: 10.0; Range: 55 units; Damage Procs: 4
Graviton Cannon	10	7	2.50	Cooldown: 10.0; Damage: 25; Armor Penetration: 30.0; Range: 50 units
Ion Pulse Beam	18	16	4.61	Cooldown: 13.0; Damage: 12; Armor Penetration: 5.0; Range: 55 units; Damage Procs: 5
Phasors	15	9.6	3.75	Cooldown: 8.0; Damage: 30; Armor Penetration: 20.0; Range: 50 units
Gauss Cannon	15	13.5	4.72	Cooldown: 9.0; Damage: 40; Armor Penetration: 20.0; Range: 80 units; No Range Dissipation; Shield Piercing
Plasma Beam	22	22.5	25	Cooldown: 16.0; Damage: 30; Armor Penetration: 30.0; Range: 60 units; Damage Procs: 5
Disruptor Cannon	25	20	15	Cooldown: 12.0; Damage: 90; Armor Penetration: 20.0; Range: 60 units
Mauler Device	50	35	18.0	Cooldown: 25.0; Damage: 450; Armor Penetration: 15.0; Range: 20 units
<i>Death Ray</i>	<i>20</i>	<i>20</i>	<i>6</i>	<i>Cooldown: 10.0; Damage: 20; Armor Penetration: 20.0; Range: 60 units; Damage Procs: 3</i>

\*Data is for base energy weapons. Potential modifiers once researched are as follows:

- **PDF.** Production Cost Increased: -50%; Hull Capacity Increased: -66%; Firing Cooldown: x0.75; Weapon Range: x0.20; Weapon Damage: x0.50; Weapon Accuracy: x1.25
- **Continuous Fire.** Production Cost Increased: +50%; Hull Capacity Increased: +50%; Armor Penetration: x1.5

- **Auto-Fire.** Production Cost Increased: +50%; Hull Capacity Increased: +50%; Weapon Accuracy: x0.80; Firing Cooldown: x0.50
- **Heavy Mount.** Hull Capacity Increased: +50%; Weapon Range: x1.5; Weapon Damage: x2.0; Weapon Cooldown: x1.25
- **Enveloping.** Production Cost Increased: +25%; Hull Capacity Increased: +25%; Shield Damage: x1.5

## Bombs

Name	Production Cost	Hull Capacity	DPS	Specifications
Nuclear Bomb	4	10	2.85	Cooldown: 7.0; Damage: 20; Armor Penetration: 10.0; Range: 15 units; Warhead HP: 10.0
Fusion Bomb	6	8	4.28	Cooldown: 7.0; Damage: 30; Armor Penetration: 15.0; Range: 15 units; Warhead HP: 10.0
Anti-Matter Bomb	10	9	5.71	Cooldown: 7.0; Damage: 40; Armor Penetration: 20.0; Range: 15 units; Warhead HP: 10.0
Neutronium Bomb	15	10	7.14	Cooldown: 7.0; Damage: 50; Armor Penetration: 25.0; Range: 15 units; Warhead HP: 10.0
Death Spores	10	15	1.42	Cooldown: 7.0; Damage: 10; Armor Penetration: 0.0; Range: 15 units; Warhead HP: 10.0
Bio Terminator	20	15	1.42	Cooldown: 7.0; Damage: 10; Armor Penetration: 0.0; Range: 15 units; Warhead HP: 10.0

## Missiles

Name	Production Cost	Hull Capacity	DPS	Specifications
Nuclear Missile	4	10	1.11	Cooldown: 18.0; Damage: 20; Armor Penetration: 5.0; Range: 60 units; Warhead HP: 2.0
Merculite Missile	6	8	1.56	Cooldown: 16.0; Damage: 25; Armor Penetration: 10.0; Range: 60 units; Warhead HP: 3.5
Pulson Missile	10	9	2.5	Cooldown: 16.0; Damage: 40; Armor Penetration: 20.0; Range: 60 units; Warhead HP: 6.0
Zeon Missile	15	10	4.0	Cooldown: 15.0; Damage: 60; Armor Penetration: 25.0; Range: 60 units; Warhead HP: 10.0

\*Data is for base missiles. Modifiers once researched are as follows:

- **Heavy Armor.** Production Cost Increased: +25%; Hull Capacity Increased: +25%; Missile HP: x2
- **ECCM.** Production Cost Increased: +25%; Hull Capacity Increased: +25%; Jamming Resistance: +50%
- **Fast.** Production Cost Increased: +50%; Hull Capacity Increased: +25%; Travel Speed: x1.5
- **MIRV.** Hull Capacity Increased: +50%; Total Damage: x2

## Torpedoes

Name	Production Cost	Hull Capacity	DPS	Specifications
Proton Torpedoes	6	12	3.33	Cooldown: 15.0; Damage: 50; Armor Penetration: 15.0; Range: 70 units; Warhead HP: 50.0
Anti-Matter Torpedoes	10	13.5	5.66	Cooldown: 15.0; Damage: 85; Armor Penetration: 25.0; Range: 70 units; Warhead HP: 50.0
Plasma Torpedoes	15	15	9.33	Cooldown: 15.0; Damage: 140; Armor Penetration: 35.0; Range: 70 units; Warhead HP: 50.0

\*Data is for base torpedoes. Modifiers once researched are as follows:

- **Enveloping.** Production Cost Increased: +25%; Hull Capacity Increased: +25%; Shield Damage: x1.5
- **Overloaded.** Hull Capacity Increased: +50%; Total Damage: x2; Firing Cooldown: x1.25
- **Fast.** Production Cost Increased: +50%; Hull Capacity Increased: +25%; Travel Speed: x1.5
- **Semi-Guided.** Production Cost Increased: +50%; Hull Capacity Increased: +25%; Limited Homing Capability

## Other Weapons

Name	Production Cost	Hull Capacity	Damage	Specifications
Anti-Missile Rockets	2	3	2.50	Cooldown: 2.0; Damage: 5; Range: 10 units
Fighter Bays	30	30	9.44	Cooldown: 8.0; Range: 60 units; Base Hull Points: 33.75
Bomber Bays	45	35	21.43	Cooldown: 8.0; Range: 60 units; Base Hull Points: 47.25
Heavy Fighter Bays	60	40	30.87	Cooldown: 8.0; Range: 60 units; Base Hull Points: 67.50

# APPENDIX C.

# TECHNOLOGY DESCRIPTIONS



Technologies designated with an # indicates the player must make a choice barring the race has the Creative or Uncreative trait.

## Level 0 Technology

### Space Travel and Starting Technologies

Name	Production Cost	Maint	CP	Notes
Colony Ship	Variable	Variable	1	Base Speed: 1; Required to establish a new colony. Requires 2+ Pop to be built.
Space Factory	Variable	Variable	1	Base Speed: 1.5; Required to build non-planet based structures and terraforming
Frigate	Variable	Variable	1	Base Speed: 2.25; Small, lightly armed ship
Scout	Variable	Variable	1	Base Speed: 2.25; Small, unarmed ship
Missile Base*	60	1	-	Equipped with best missiles your empire has, automatically engages enemy fleets in orbit
Marine Barracks*	60	2	-	Marines: 4; Morale: +5%
Starbase*	120	1	-	Scanner Range: +1; Command Points: +5; Ship Self-Repair: +5% per Turn; Allows Battleship, Titan and Doom Star Construction
Trade Goods*	-	-	-	Converts 50% of Production into BCs.
Capitol*	120	3	-	Empire Unique; Research: +1; Food: +1; Production: +1; Security: +20%; Morale: +25%; Upgrades Government Support Facility; Cannot be scrapped; May be destroyed during planetary assault

Name	Production Cost	Maint	CP	Notes
Space Surveillance System*	25	-	-	Deploys a surveillance system at warp points for long range scanning; May be built at any open warp point; Built at warp point by Space Factory
Military Outpost*	50	-	1	Military base built at warp point; Ship Self Repair: 5% per Turn; Restricted to System with colony; Built at warp point by Space Factory
Asteroid Laboratory*	40	2	-	Research: +2; Restricted to Asteroid Field; Required to research Anataran ruins; May be built at any asteroid field; Requires Space Factory
Superscalar Gas Harvester*	25	-	-	Credits: +5; Restricted to Gas Giant; Restricted to system with colony; Requires Space Factory
Asteroid Mine*	40	-	-	Credits: +4; Restricted to Asteroid Field; Restricted to system with colony; Requires Space Factory

\*Note: Not in Technology Tree but are available as starting technologies.

# Level 1 Technology

55 Research Each

## Government

Name	Production Cost	Maint	Notes
Research Laboratory	35	2	Research: +2
Government Support Facility	40	1	Morale: +10%

## Physics

Name	Production Cost	Maint	Notes
Automated Factory	50	2	Production: +2
Neutron Blaster	5 per	-	Cooldown: 7.0; Damage: 9; Armor Penetration: 5.0; Range: 50 units

## Biology

Name	Production Cost	Maint	Notes
Hydroponic Farm	60	2	Food: +2
Biospheres	45	1	Food: +1; Research: +1

## Engineering

Name	Production Cost	Maint	CP	Notes
Destroyer	Variable	Variable	2	Base Speed: 1.8; Escort vessel – more heavily armed and resilient than frigates.
Anti-Missile Rockets	2 per	-	-	Cooldown: 2.0; Damage: 5; Range: 10 units; Point Defense System against missiles only

## Level 2 Technology

110 Research Each

### Economics

Name	Production Cost	Maint	Notes
Colonial Revenue Service	60	-	BC per Population: +1

### Deep Space Exploration

Name	Production Cost	Maint	CP	Notes
Civil Transport	Variable	Variable	1	Base Speed: 1.5; Transfer 1 Pop from one colony to another. Requires 2+ Pop to be built.
Colony Base	-	2	-	Food: +1; Automatically builds when a new colony is founded.

### Xeno Relations

Name	Production Cost	Maint	Notes
Spy Center	90	2	System Security: +20%; Empire Unique; Allows training of spies for espionage.
Xeno Diplomacy	-	-	Unlocks "Embassy treaty" ability in the Diplomatic screen.

### Advanced Magnetism

Name	Production Cost	Maint	Notes
Neutron Blaster Modifications	Variable	-	Unlocks Heavy Mount, Enveloping, Continuous Fire and Auto-Fire modifications for Neutron Blasters.
# Class I Shield	Variable	-	Shield Strength: +50% to Base Hull; Damage Reduced Per Hit: -1
# ECM Jammer	Variable	-	Missile Avoidance: +25

## Electronics

Name	Production Cost	Maint	Notes
Laser Cannon Modifications	Variable	-	Unlocks Heavy Mount, Enveloping, Continuous Fire and Auto-Fire modifications for Laser Cannons.
# Deep Scanner	-	-	Reveals all planets when a ship arrives in an unknown system.
# Electronic Computer	Variable	-	Energy Weapon Accuracy: +25

## Biotechnology

Name	Production Cost	Maint	Notes
Fungal Farms	60	2	Food: +1; Restricted to Tundra, Desert, Barren, Volcanic, Toxic, Radiated
Death Spores	10 per	-	Cooldown: 7.0; Damage: 10; Armor Penetration: 0.0; Range: 15 units; Warhead HP: 10.0; Use of Death Spores will cause a loss in disposition with other races. Does not damage structures.

## Molecular Manipulation

Name	Production Cost	Maint	Notes
Miniaturization: Missiles Level 1	-	-	Base Space: -10%; Base Cost: -10%; Miniaturizes Nuclear Missiles.
Merculite Missile	6 per	-	Cooldown: 16.0; Damage: 25; Armor Penetration: 10.0; Range: 60 units; Warhead HP: 3.5
Atmospheric Renewer	60	2	Pollution Cleanup: 5

## Advanced Fusion

Name	Production Cost	Maint	Notes
Fusion Drive	Variable	-	Combat Speed Bonus: +20%; Travel Speed: x1.5
Nuclear Missile Modification	Variable	-	Unlocks Fast, Armored, MIRV and ECCM modifications for Nuclear Missiles.

## Level 3 Technology

215 Research Each

### Private Funding

Name	Production Cost	Maint	Notes
Advanced Data Center	110	3	Research per Cell: +1
Crust Prospecting	30	2	Production: +2. Restricted to Poor and Ultra-Poor

### Military Tactics

Name	Production Cost	Maint	CP	Notes
Global DNA Scanner	90	4	-	Security: +15%
Troop Transport	Variable	Variable	1	Base Speed: 1.5; Unarmed transport carrying marines for planetary assault.

### Neutron Physics

Name	Production Cost	Maint	Notes
Miniaturization: Cannons Level 1	-	-	Base Space: -10%; Base Cost: -10%; Miniaturizes Laser Cannons and Neutron Blasters.
Neutron Collider	110	3	Production per Cell: +1
Mass Driver	10 per	-	Cooldown: 8.0; Damage: 12; Armor Penetration: 10.0; Range: 50 units; No Range Dissipation; Shield Piercing
Neutron Rifle	-	-	Marine Ground Combat Rating: +10%

### Positronic Physics

Name	Production Cost	Maint	Notes
Proton Torpedoes	6 per	-	Cooldown: 15.0; Damage: 50; Armor Penetration: 15.0; Range: 70 units; Warhead HP: 50.0
Displacement Device	Variable	-	Cooldown: 30.0; Range: 45.0 units; Allows ship to blink in and out of combat.

## Xenobiotics

Name	Production Cost	Maint	Notes
Toxic Processor	160	3	Pollution Cleanup: 5; Upgrades Toxic planets to Barren
# Soil Enrichment Facility	110	3	Food per Cell: +1. Restricted to Gaia, Grassland, Inferno, Tropical, Cavernous, Terran, Ocean, Swamp, Arid, Tundra, Desert, Barren
# Deep Sea Cooling	90	3	Research: +3; Restricted to Gaia, Terran, Ocean, and Uber-Ocean

## Genetic Engineering

Name	Production Cost	Maint	Notes
# Cloning Center	90	3	Population Growth: +25%
# Microbiotics	-	-	Population Growth: +15%; Empire wide; Reduces the effects of Death Spores and Bio Terminators.

## Advanced Engineering

Name	Production Cost	Maint	CP	Notes
Cruiser	Variable	Variable	4	Base Speed: 1.5; Front line armed ship that forms the backbone of most fleets.
Titanium Armor	Variable	-	-	Resilience Rating: 10; Hull Armor Multiplier: x1.5; Missile Armor Multiplier: x1.2
Merculite Missile Modifications	Variable	-	-	Unlocks Fast, Armored, MIRV and ECCM modifications for Merculite Missiles.

## Fusion Weapons

Name	Production Cost	Maint	Notes
Miniaturization: Bombs Level 1	-	-	Base Space: -10%; Base Cost: -10%; Miniaturizes Nuclear Bombs.
# Fusion Beam	8 per	-	Cooldown: 12.0; Damage: 5; Armor Penetration: 10.0; Range: 55 units; Damage Procs: 4
# Fusion Bomb	6 per	-	Cooldown: 7.0; Damage: 30; Armor Penetration: 15.0; Range: 15 units; Warhead HP: 10.0

## Level 4 Technology

425 Research Each

### Macro Economics

Name	Production Cost	Maint	Notes
Geosynchronous Warehouse	120	3	Buyout Costs: -20%
Recyclotron	140	4	Pollution Cleanup: 25; Restricted to Rich and Ultra-Rich

### Xenology

Name	Production Cost	Maint	Notes
# Alien Management Center	60	4	Improves assimilation rate of conquered colonies.
# Alien Psychology	-	-	Boosts effectiveness of diplomacy.

### Artificial Gravity

Name	Production Cost	Maint	Notes
Gravity Generators	160	3	Remove all gravity penalties from population
Orbital Shipyard	80	4	Ship Cost: -20% Production; Restricted to planets with moons.
Moon Laboratory	100	4	Research: +6; Restricted to planets with moons.

### Tachyon Physics

Name	Production Cost	Maint	Notes
Mass Driver Modifications	Variable	-	Unlocks Heavy Mount, Continuous Fire and Auto-Fire modifications for Mass Drivers.
# Tachyon Scanner	-	-	Scanner Range: 4
# Battle Scanner	Variable	-	Energy Weapon Accuracy: +30

Name	Production Cost	Maint	Notes
# Tachyon Communications	-	-	Command Points: +2 for every Star Base, Battlestation and Star Fortress. Not cumulative with other communication achievements.

## Robotics

Name	Production Cost	Maint	Notes
Orbital Batteries	180	2	Automatically upgrades with best current beam weapon in a Heavy Mount.
Proton Torpedo Modifications	Variable	-	Unlocks Enveloping, Fast, Overloaded and Semi-Guided modifications for Proton Torpedoes.
# Automated Repair Unit	Variable	-	Ship Self Repair: 10% per Turn; Cooldown: 24.0; Range 60.0
# Dauntless Guidance System	Variable	-	Missiles request new targets if current target is destroyed before impact.

## Genetic Mutations

Name	Production Cost	Maint	Notes
Terraforming	Variable	-	Planets may be terraformed several times; Cost is dependent on planet size; Buy Out is not available. Opens up additional Resource cells. Generates no pollution while being terraformed.
# Telepathic Training	-	-	Mission Experience: +50% experience for spies
# Heightened Intelligence	-	-	Research: +1 per scientist; Empire wide.

## Advanced Construction

Name	Production Cost	Maint	Notes
Survival Pods	-	-	Leaders escape destroyed ships and may be redeployed a few turns later
# Battle Pods	Variable	-	Additional Hull Space: +25%
# Fighter Bays	30 per	-	Cooldown: 8.0; Range: 60 units

## Super Alloys

Name	Production Cost	Maint	Notes
# Heavy Armor	Variable	-	Bonus Resilience Multiplier: x2
# Reinforced Hull	Variable	-	Bonus Hull Points: 50% of Base Hull

## Ion Fission

Name	Production Cost	Maint	Notes
Miniaturization: Beams Level 1	-	-	Base Space: -10%; Base Cost: -10%; Miniaturizes Fusion Beam.
Ion Drive	Variable	-	Combat Speed Bonus: +40%; Travel Speed: x2.5
Fusion Beam Modifications	Variable	-	Unlocks Heavy Mount, Enveloping, Continuous Fire and Auto-Fire modifications for Fusion Beams.

## Level 5 Technology

795 Research Each

### Galactic Trading

Name	Production Cost	Maint	Notes
Space Port	210	-	Credits: +5
Advanced Space Factory	-	-	Doubles production value of space factories.

### Magneto Gravitics

Name	Production Cost	Maint	Notes
Miniaturization: Cannons Level 2	-	-	Base Space: -10%; Base Cost: -10%; Miniaturizes Laser Cannons, Neutron Blasters and Mass Drivers.
Graviton Cannon	10 per	-	Cooldown: 10.0; Damage: 25; Armor Penetration: 30.0; Range: 50 units
Class III Shield	Variable	-	Shield Strength: +70% to Base Hull; Damage Reduced Per Hit: -4
Planetary Radiation Shield	160	3	Radiated planets become Barren; Partially reduces damage from orbital bombardment

### Optronics

Name	Production Cost	Maint	Notes
Holo Simulator	160	4	Morale: +15%
# Shield Capacitor	Variable	-	Cooldown: 30.0; Shield Strength: 20% of Base Hull; Duration: 10
# Optronic Computer	Variable	-	Energy Weapon Accuracy: +50

### Cybertechnics

Name	Production Cost	Maint	Notes
Robo-Miners	180	5	Production: +2; Production per Cell: +1
# Armor Barracks	165	2	Trains tank battalions for defense against planetary invasions.
# Powered Armor	-	-	Improves ground combat bonus for marines.

## Planetology

Name	Production Cost	Maint	Notes
Gas Giant Compression	80	-	Turns a Gas Giant into a Large or Huge Barren planet. Requires Space Factory. Restricted to Gas Giants.
Artificial Planet Construction	80	-	Turns an Asteroid Field into a Large or Huge Barren planet. Requires Space Factory. Restricted to Asteroid Fields.

## Molecular Compression

Name	Production Cost	Maint	Notes
Miniaturization: Missiles Level 2	-	-	Base Space: -10%; Base Cost: -10%; Miniaturizes Nuclear Missiles and Merculite Missiles
Pollution Processor	140	3	Pollution Cleanup: 15; Upgrades Atmospheric Renewer
# Neutronium Armor	Variable	-	Resilience Rating: 15; Hull Armor Multiplier: x2.0; Missile Armor Multiplier: x1.4
# Pulson Missile	10 per	-	Cooldown: 16.0; Damage: 40; Armor Penetration: 20.0; Range: 60 units; Warhead HP: 6.0

## Level 6 Technology

1330 Research Each

### Teaching Methods

Name	Production Cost	Maint	Notes
# Astro University	230	5	Research per Cell: +2; System unique
# Espionage Training Facility	260	3	Spy training time: -50%; Spy starting level: 2

### Gravitic Fields

Name	Production Cost	Maint	Notes
Jump Gate	50	5	Allows faster travel between colonies; System unique; Constructed by Space Factory on a Warp Point; Restricted to systems with a colony.
Anti-Gravity Harness	-	-	Improves ground combat bonus for marines.
Graviton Beam Modifications	Variable		Unlocks Heavy Mount, Enveloping, Continuous Fire and Auto-Fire modifications for Graviton Beams.

### Electromagnetic Refraction

Name	Production Cost	Maint	Notes
Multistate Insulator	-	-	Allows ships to travel through unstable Warp Points.
# Personal Shield	-	-	Marine Ground Combat Bonus: +20%
# Stealth Suit	-	-	Espionage Mission Risk: -25%

## Cybertronics

Name	Production Cost	Maint	Notes
# Structural Analyzer	Variable	-	Bonus Hull Damage: +30% [Energy Weapons Only]
# Cybertronic Computer	Variable	-	Energy Weapon Accuracy: +75

## Astro Biology

Name	Production Cost	Maint	Notes
# Subterranean Farms	240	4	Food: +2; Food per Cell: +1
# Weather Controller	240	4	Food Bonus: +25%

## Astro Engineering

Name	Production Cost	Maint	CP	Notes
Space Elevator	220	5	-	Ship Costs: -30% Production
Battleship	Variable	-	6	Base Speed: 1.0; Front line, heavily armed ship
Bomber Bays	45 per	-	-	Cooldown: 8.0; Range: 60 units
Pulson Missile Modifications	Variable			Unlocks Fast, Armored, MIRV and ECCM modifications for Pulson Missiles.

## Anti-Matter Fission

Name	Production Cost	Maint	Notes
Miniaturization: Bombs Level 2	-	-	Base Space: -10%; Base Cost: -10%; Miniaturizes Nuclear Bombs and Fusion Bombs.
Anti-Matter Drive	Variable	-	Combat Speed Bonus: +60%; Travel Speed: x3.0
Ion Pulse Beam	18 per	-	Cooldown: 13.0; Damage: 12; Armor Penetration: 5.0; Range: 55 units; Damage Procs: 5
Anti-Matter Bomb	8 per	-	Cooldown: 7.0; Damage: 40; Armor Penetration: 10.0; Range: 15 units; Warhead HP: 10.0

## Level 7 Technology

1990 Research Each

### Advanced Government

Name	Production Cost	Maint	CP	Notes
Export	-	-	-	Exports all Production from this colony to the colony with the Interplanetary Administration structure.
Interplanetary Administration	160	5	-	Food surplus is automatically distributed between colonies in the same system, Production is sent to colony where Interplanetary Administration is located; System unique.
Interplanetary Security Network	320	7	-	System Security: +10%; System unique
Advanced Colony Ship	Variable	-	1	Base Speed: 1.0; Similar to Colony Ship but deploys some basic structures upon colonization.

### Subspace Physics

Name	Production Cost	Maint	Notes
Miniaturization: Cannons Level 3	-	-	Base Space: -10%; Base Cost: -10%; Miniaturizes Laser Cannons, Neutron Blasters, Mass Drivers and Graviton Cannons.
Phasors	15 per	-	Cooldown: 8.0; Damage: 35; Armor Penetration: 20.0; Range: 50 units
Subspace Communications	-	-	Command Points: +3 for every Star Base, Battlestation and Star Fortress. Not cumulative with other communication achievements.

### Supergravity

Name	Production Cost	Maint	Notes
Miniaturization: Torpedoes Level 1	-	-	Base Space: -10%; Base Cost: -10%; Miniaturizes Proton Torpedoes.
Anti-Matter Torpedo	10 per	-	Cooldown: 15.0; Damage: 85; Armor Penetration: 25.0; Range: 70 units; Warhead HP: 50.0

Name	Production Cost	Maint	Notes
Warp Dissipater	Variable	-	Creates system wide interference field preventing enemy ships from retreating or using FTL based technologies.

## Advanced Robotics

Name	Production Cost	Maint	Notes
Battlestation	320	2	Scanner Range: +2; Command Points: +7; Ship Self Repair: 7% per Turn; Upgrades Star Base
# Battleoids	-	-	Upgrades Armor Barracks. Battleoids have a 10% higher combat rating and take 3 hits to kill versus tanks.
# Fast Missile Racks	Variable	-	Missile Cooldown: -33%

## Trans Genetics

Name	Production Cost	Maint	Notes
Gaia Transformation	Variable	-	Turns Terran planets into Gaia planets. Cost is dependent on planet size. May not use Buy Out. Opens up additional Resource cells.

## Nano Technology

Name	Production Cost	Maint	Notes
Ion Pulse Beam Modifications	Variable	-	Unlocks Heavy Mount, Enveloping, Continuous Fire and Auto-Fire modifications for Ion Pulse Beams.
Microlite Construction	-	-	Production Costs: -25%. Empire wide.
# Zortrium Armor	Variable	-	Resilience Rating: 20; Hull Armor Multiplier: x2.5; Missile Armor Multiplier: x1.6

## Level 8 Technology

2250 Research Each

### Advanced Tactics

Name	Production Cost	Maint	CP	Notes
Marine Pods	-	-	-	Troop Transports now carry 6 marines.
# Space Academy	300	5	-	Command Point Cost: -50%; Empire unique; Applies to: Scout, Civil Transport, Troop Transport, Colony Ship, Frigate and Destroyer.
# Advanced Military Outpost	150	-	3	Ship Self Repair: 8% per Turn; Restricted to System with colony; Built at warp point by Space Factory; Upgrades Military Outpost.

### Multi-Phased Physics

Name	Production Cost	Maint	Notes
Phasor Rifle	-	-	Marine ground combat rating increased 20%.
Phasor Modifications	Variable	-	Unlocks Heavy Mount, Enveloping, Continuous Fire and Auto-Fire modifications for Ion Pulse Beams.
# Multi-Phased Shields	Variable	-	Bonus Shield Points: +30% of Base Hull.
# Hard Shields	Variable	-	Bonus Damage Reduction: -6 per hit

### Subspace Fields

Name	Production Cost	Maint	Notes
Anti-Matter Torpedo Modifications	Variable	-	Unlocks Enveloping, Fast, Overloaded and Semi-Guided modifications for Anti-Matter Torpedoes.
# Class V Shield	Variable	-	Shield Strength: +100% to Base Hull; Damage Reduced Per Hit: -9
# Multi-Wave ECM Jammer	Variable	-	Missile Avoidance: +50

## Warp Fields

Name	Production Cost	Maint	Notes
# Pulsar	Variable	-	Cooldown: 5.0; Damage: 13; Armor Penetration: 0.0; Range: 40 units; Damages nearby ships, missiles and fighters.
# Lightning Field	Variable	-	Cooldown: 30; Range: 10 units; Duration: 0.75; Destroy any missile or fighter passing through the field.

## Positronics

Name	Production Cost	Maint	Notes
Autolab	320	4	Research: +10
# Rangemaster Targeting Unit	Variable	-	Corrects for long range targeting inaccuracies in beam weapons, increases beam hit chance at long range.
# Positronic Computer	Variable	-	Energy Weapon Accuracy: +100

## Artificial Life

Name	Production Cost	Maint	Notes
# Bio Terminator	20 per	-	Cooldown: 7.0; Damage: 10; Armor Penetration: 0.0; Range: 15 units; Warhead HP: 10.0
# Universal Antidote	-	-	Population Growth: +25%; Empire wide; Greatly reduces effects of Death Spores and Bio Terminators. Replaces Microbiotics.

## Astro Construction

Name	Production Cost	Maint	CP	Notes
Titan	Variable	-	10	Base Speed: 0.8; Ultimate ship of the line with extreme firepower and defensive capabilities.
Heavy Fighter Bays	60 per	-	-	Cooldown: 8.0; Range: 60 units

## High Energy Distribution

Name	Production Cost	Maint	Notes
# High Energy Focus	Variable	-	Energy Weapon Damage: +50%
# Energy Absorber	Variable	-	Cooldown: 25.0; Incoming Damage Absorbed: 50%; Duration: 10
# Megafluxers	Variable	-	Ship Space: +15%; All ships have megafluxers installed automatically.

# Level 9 Technology

3990 Research Each

## Galactic Economics

Name	Production Cost	Maint	Notes
# Planetary Stock Exchange	300	-	Credits per Population: +2; System unique; Existence of any Planetary Stock Exchange instantly unlocks the Interstellar Stock Exchange for Economic Victory
# Advanced City Planning	-	-	Adds +5 cells to each colony; Empire wide.

## Plasma Physics

Name	Production Cost	Maint	Notes
Miniaturization: Torpedoes Level 2	-	-	Base Space: -10%; Base Cost: -10%; Miniaturizes Proton Torpedoes and Anti-Matter Torpedoes.
Plasma Rifle	-	-	Increases ground combat rating of marines. Replaces all other rifles.
# Plasma Torpedo	15 per	-	Cooldown: 15.0; Damage: 140; Armor Penetration: 35.0; Range: 70 units; Warhead HP: 50.0
# Plasma Web	Variable	-	Cooldown: 30; Duration: 5; Range: 20 units; Damage: 5; Damage Procs: 20

## Distortion Fields

Name	Production Cost	Maint	Notes
Miniaturization: Cannons Level 4	-	-	Base Space: -10%; Base Cost: -10%; Miniaturizes Laser Cannons, Neutron Blasters, Mass Drivers, Graviton Cannons and Phasors.
# Gauss Cannon	15 per	-	Cooldown: 9.0; Damage: 40; Armor Penetration: 20.0; Range: 50 units; No Range Dissipation; Shield Piercing
# Cloaking Device	Variable	-	Cooldown: 10.0; If ship does not attack it receives a bonus to beam weapons defense and missile evasion; Cloak is dropped on attack; Ships that cease attacking may re-cloak after a delay.

## Artificial Intelligence

Name	Production Cost	Maint	Notes
Neural Scanner	-	-	Security: +15%; Empire wide.
# Achilles Targeting Unit	Variable	-	One-Hit Kill Chance: 1%; Missiles fired have a chance to one-hit kill small vessels.
# Scanner Beacon	Variable	-	Cooldown: 10.0; Range: 50 units; Duration:10; Reveals Stealth units in the area

## Molecular Control

Name	Production Cost	Maint	Notes
Miniaturization: Missiles Level 3	-	-	Base Space: -10%; Base Cost: -10%; Miniaturizes Nuclear Missiles, Merculite Missiles and Pulson Missiles
# Adamantium Armor	Variable	-	Resilience Rating: 25; Hull Armor Multiplier: x3.0; Missile Armor Multiplier: x1.8
# Zeon Missile	15 per	-	Cooldown: 15.0; Damage: 60; Armor Penetration: 25.0; Range: 60 units; Warhead HP: 10.0

## Tectonic Engineering

Name	Production Cost	Maint	Notes
# Deep Core Mine	360	10	Production per Cell: +2
# Core Waste Dump	300	5	Pollution Cleanup: 150; Upgrades Pollution Processor

## Hyper Dimensional Fission

Name	Production Cost	Maint	Notes
Miniaturization: Beams Level 2	-	-	Base Space: -10%; Base Cost: -10%; Miniaturizes Fusion Beams and Ion Pulse Beams.
# Hyper Drive	Variable	-	Combat Speed Bonus: +80%; Travel Speed: x4.0
# Plasma Beam	22 per	-	Cooldown: 16.0; Damage: 30; Armor Penetration: 30.0; Range: 60 units; Damage Procs: 5
# Hyper-X Capacitors	Variable	-	Energy Weapon Size: -50%

# Level 10 Technology

5980 Research Each

## Multi-Dimensional Physics

Name	Production Cost	Maint	Notes
Hyperplanar Transfer Tracking Premises	400	-	The first of three technologies required for a Technological Victory; Empire unique; May not use Buy Out.
Hyperspace Sensors	-	-	Scanner Range: +5
Hyperspace Communications	-	-	Command Points: +5 for every Star Base, Battlestation and Star Fortress; Not cumulative with other communication achievements.

## Quantum Fields

Name	Production Cost	Maint	Notes
Plasma Torpedo Modifications	-	-	Unlocks Enveloping, Fast, Overloaded and Semi-Guided modifications for Plasma Torpedoes.
Gauss Cannon Modifications	-	-	Unlocks Heavy Mount, Continuous Fire and Auto-Fire modifications for Gauss Cannons.
# Planetary Flux Shield	300	6	Converts Radiated planets to Barren; Prevents all bombardment damage until shield collapses; Upgrades Planetary Radiation Shield
# Class VII Shield	Variable	-	Shield Strength: +140% to Base Hull; Damage Reduced Per Hit: -16
# Wide Area Jammer	Variable	-	Missile Avoidance: +75; Fleet Missile Avoidance: +25; Multiple Wide Area Jammers do not stack in battle.

## Moleculartronics

Name	Production Cost	Maint	Notes
Advanced Damage Control	-	-	All ships automatically receive Ship Self Repair: 10% per Turn
Zeon Missile Modifications	Variable	-	Unlocks Fast, Armored, MIRV and ECCM modifications for Zeon Missiles.
# Pleasure Dome	400	6	Morale: +30%; Upgrades Holo Simulator
# Moleculartronic Computer	Variable	-	Energy Weapon Accuracy: +125

## Superscalar Construction

Name	Production Cost	Maint	Notes
Artemis System Net	500	5	System unique; Surrounds system with a minefield that attacking ships have a chance of hitting; All damage bypasses shields.
Transponder Control Plant	550	-	The second of three technologies required for a Technological Victory; Empire unique; May not use Buy Out; Upgrades Hyperplanar Transfer Tracking Premises.
Star Fortress	600	8	Scanner Range: +3; Command Points: +10; Ship Self Repair: 10% per Turn; Upgrades a Star Base or a Battlestation

## Interphased Fission

Name	Production Cost	Maint	Notes
Miniaturization: Bombs Level 3	-	-	Base Space: -10%; Base Cost: -10%; Miniaturizes Nuclear Bombs, Fusion Bombs and Anti-Matter Bombs.
Plasma Beam Modifications	Variable	-	Unlocks Heavy Mount, Enveloping, Continuous Fire and Auto-Fire modifications for Plasma Beams.
# Interphased Drive	Variable	-	Combat Speed Bonus: +100%; Travel Speed: x5.0
Neutronium Bomb	15 per	-	Cooldown: 7.0; Damage: 50; Armor Penetration: 25.0; Range: 15 units; Warhead HP: 10.0

# Level 11 Technology

7980 Research Each

## Galactic Networking

Name	Production Cost	Maint	Notes
Virtual Reality Network		-	Morale: +10%; Empire wide.
# Galactic Currency Exchange	320	-	Empire Credits: +100%; Empire wide; Empire unique.
# Galactic Cybernet	400	10	Research Bonus: +50%; Security: +20%; Empire wide; Empire unique.

## Temporal Physics

Name	Production Cost	Maint	Notes
Miniaturization: Cannons Level 5	-	-	Base Space: -10%; Base Cost: -10%; Miniaturizes Laser Cannons, Neutron Blasters, Mass Drivers, Graviton Cannons, Phasors and Gauss Cannons.
# Disruptor Cannon	25 per	-	Cooldown: 12.0; Damage: 90; Armor Penetration: 20.0; Range: 60 units
# Stellar Converter	Variable	-	Cooldown: 30.0; Damage: 600; Armor Penetration: 0.0; Range: 100 units; Damage Procs: 10; No Range Dissipation; Destroys planets reducing them to an Asteroid Belt

## Transwarp Fields

Name	Production Cost	Maint	Notes
Subspace Teleporter	Variable	-	Cooldown: 20.0; Range: 60 units

## Artificial Consciousness

Name	Production Cost	Maint	Notes
# Planetary Supercomputer	380	6	Research: +25; System Unique
# Cyber Security Link	-	-	Spies starting level: 5

## Planetoid Construction

Name	Production Cost	Maint	CP	Notes
Miniaturization: Beams Level 3	Variable	-		Base Space: -10%; Base Cost: -10%; Miniaturizes Fusion Beams, Ion Pulse Beams and Plasma Beams,.
Doom Star	Variable	Variable	15	Base Speed: 0.4; Empire unique; Galactic terror able to destroy planets with a single shot.
Mauler Device	50 per	-	-	Cooldown: 25.0; Damage: 450; Armor Penetration: 15.0; Range: 20 units

## Level 12 Technology

11950 Research Each

### Temporal Fields

Name	Production Cost	Maint	Notes
Disruptor Cannon Modifications	Variable	-	Unlocks Heavy Mount, Enveloping, Continuous Fire and Auto-Fire modifications for Disruptor Cannons.
# Planetary Barrier Shield	500	10	Converts Radiated planets to Barren; Prevents all bombardment damage, planetary assault or biological weapons from reaching the surface until shield collapses; Upgrades Planetary Radiation Shield or Planetary Flux Shield.
# Class X Shield	Variable	-	Shield Strength: +200% to Base Hull; Damage Reduced Per Hit: -25
# Phasing Cloak	Variable	-	Cooldown: 10.0; Ship is completely hidden from all sensors, scanners and targeting systems; ship cannot be attacked while cloaked

### Planar Transcendence

Name	Production Cost	Maint	Notes
Ultraplanar Dimorphic Prospector	700	-	The third of three technologies required for a Technological Victory; Empire unique; May not use Buy Out; Upgrades Transponder Control Plant.
Mauler Device Modifications	-	-	Unlocks Heavy Mount, Enveloping, Continuous Fire and Auto-Fire modifications for mauler Device.

## Level 13 Technology

Continuous Research

### Evolving Technologies

Name	Production Cost	Maint	Notes
Evolving Technologies	-	-	Researching this node will increase your Score Victory Condition.

## Orion Technology

Only Available Upon Defeat of The Guardian

### Orion Technology

Name	Production Cost	Maint	Notes
Death Ray	20 per	-	Cooldown: 10.0; Damage: 20; Armor Penetration: 20.0; Range: 60 units; Damage Procs: 3
Black Hole Generator	Variable	-	Cooldown: 40.0; Duration: 10.0; Range: 35 units; Temporarily immobilizes enemy
Xentronium Armor	Variable	-	Resilience Rating: 30; Hull Armor Multiplier: x2.25; Missile Armor Multiplier: x2

## Antaran Technology

Only Available Upon Researching Antaran Ruins

### Antaran Technology

Name	Production Cost	Maint	Notes
Antaran Portal Generator	525	-	Empire unique; Transforms system star into a portal to Antaran dimension; Required to complete Antaran Victory Condition

# APPENDIX D. SPECIAL ABILITIES

Name	Abilities
<b>Aquatic</b>	Uber Planet: Ocean Uber-Planet Homeworld Biome: Ocean
<b>Charismatic</b>	Diplomacy: Improved Negotiations Diplomacy: Improved Disposition
<b>Creative</b>	Technology: Creative (Receive all technology when researched) Research from Population: +50% per cell
<b>Cybernetic</b>	Food Consumption: -50% Ship Improvements: Auto Repair (+5% per turn)
<b>Diplomat</b>	Starting Technology: Government Morale: +5%
<b>Ecologist</b>	Starting Tech: Biology Pollution Tolerance: +25%
<b>Expansionist</b>	Starting Tech: Engineering Starting Tech: Biology
<b>Fantastic Traders</b>	Trading: Trade Treaties Bonus +25% Trading: Trade Goods Bonus +100%
<b>Industrialist</b>	Starting Tech: Physics Production from Population: +25% per cell
<b>Jungle Creature</b>	Uber Planet: Tropical Homeworld Biome: Swamp
<b>Lava Breather</b>	Uber Planet: Inferno Homeworld Biome: Volcanic
<b>Lithovore</b>	Food Consumption: None
<b>Lucky</b>	Negative effects never seem to happen and attacks occur less frequently
<b>Militarist</b>	Starting Technology: Engineering Ground Units: Improved Marine Training Rate (Marines generate 50% faster)
<b>Natural Pilots</b>	Beam Defense +50% Beam Attack +25% Ship Improvements: Travel Speed Bonus +25% Ship Improvements: Combat Speed Bonus +25%
<b>Omniscient</b>	Can see all planets, colonies, fleets and star lanes at game start
<b>Plains Dweller</b>	Uber Planet: Grassland Homeworld Biome: Arid
<b>Repulsive</b>	Diplomacy: Worsen Negotiations Diplomacy: Worsen Disposition

Name	Abilities
<b>Shapeshifters</b>	Security +10% Assimilation Power +25% (Assimilate conquered colonies faster)
<b>Stealthy</b>	Ship Improvements: Stealth (Ships cannot be detected at long range) Experience: +50% experience for spies
<b>Strategist</b>	Command Points: +20% Ship Cost: -20%
<b>Subterranean</b>	Uber Planet: Cavernous Homeworld Biome: Arid
<b>Technologist</b>	Starting Tech: Physics Homeworld Special: Artifacts ( Allows faster research)
<b>Telepathic</b>	Diplomacy: Improved Negotiations Security: +10% Assimilation Power: Immediate Assimilation
<b>Tolerant</b>	Gravity Does Not Affect (Immune to High and Low gravity)
<b>Traders</b>	Trading: Trade Treaties Bonus +25% Trading: Trade Goods Bonus +25%
<b>Transdimensional</b>	Ship Improvements: Travel Speed Bonus +25% Ship Improvements: Combat Speed Bonus +25%
<b>Uncreative</b>	Tech: Uncreative (Technology research decisions randomly decided) Research from Population: -25% per cell
<b>Warlord</b>	Ground Combat Rating: +50% Ground Units: Extended Barracks (50% more marines allowed)

# APPENDIX E. LEADERS

Race	Name and Title	Leader Type	Bonuses
Alkari	Coronaa, The Recorder	Loyal Colony	Morale
Alkari	Kiiriki, The Councilor	Loyal Colony	Production Disposition
Alkari	Rawin, The Artisan	Loyal Colony	Pollution Cleanup
Alkari	Ateek, The Warden	Loyal Fleet	Security
Alkari	Veerga, The Aviator	Loyal Fleet	Beam Attack Ground Combat Rating
Alkari	Ariaa, The Defender	Rebel Colony	Ground Combat Rating Security
Alkari	Taeedor, The Archeologist	Rebel Colony	Research
Alkari	Atheer, The Guide	Rebel Fleet	Travel Speed Missile Attack
Alkari	Fohn, The Skirmisher	Rebel Fleet	Beam Defense Beam Attack
Alkari	Seeha, The Scavenger	Rebel Fleet	Credits
Bulrathi	Adrian, The Authority	Loyal Colony	Leaders Experience Rate Spies Experience Rate
Bulrathi	Edita, The Reiver	Loyal Colony	Security

Race	Name and Title	Leader Type	Bonuses
Bulrathi	Maxim, The Protector	Loyal Colony	Ground Combat Rating
Bulrathi	Pasha, The Soldier	Loyal Fleet	Ground Combat Rating
Bulrathi	Sveta, The Hunter	Loyal Fleet	Missile Attack Beam Attack
Bulrathi	Lyuda, The Academic	Rebel Colony	Research Food
Bulrathi	Nadva, The Explorer	Rebel Fleet	Travel Speed Weapons Max Damage
Bulrathi	Grak, The Commando	Rebel Fleet	Beam Attack
Bulrathi	Inna, The Gladiator	Rebel Fleet	Missile Attack Ground Combat Rating
Bulrathi	Milo, The Scrapper	Rebel Fleet	Credits
Darlok	Kara, The Teacher	Loyal Colony	Leaders Experience Rate Spies Experience Rate
Darlok	Switch, The Diplomat	Loyal Colony	Leaders Appearance Chance
Darlok	Wire, The Architect	Loyal Colony	Buyout Cost Reduction
Darlok	Narzelle, The Combatant	Loyal Fleet	Beam Defense Beam Attack
Darlok	Stalker, The Predator	Loyal Fleet	Ground Combat Rating

Race	Name and Title	Leader Type	Bonuses
Darlok	Aster, The Hidden	Rebel Colony	Beam Attack (Orbiting Ships) Ground Combat Rating
Darlok	Valoren, The Mole	Rebel Colony	Morale Disposition Leaders Appearance Chance
Darlok	Enigma, The Codebreaker	Rebel Fleet	Missile Attack Weapons Max Damage
Darlok	Mordana, The Hacker	Rebel Fleet	Research
Darlok	Return, The Whisperer	Rebel Fleet	Travel Speed Credits
Elerians	Cassandra, The Mystic	Loyal Colony	Ground Combat Rating Disposition
Elerian	Kiyomi, The Elder	Loyal Colony	Production
Elerian	Taro, The Priest	Loyal Colony	Morale
Elerian	Ae, The General	Loyal Fleet	Ground Combat Rating
Elerian	Ryu, The Galaxy-Watcher	Loyal Fleet	Travel Speed
Elerian	Sada, The Outcast	Rebel Colony	Population Growth
Elerian	Shotaro, The Philosopher	Rebel Colony	Research Ground Combat Rating
Elerian	Ren, The Telekinetic	Rebel Fleet	Ship Repair per Turn

Race	Name and Title	Leader Type	Bonuses
Elerian	Saeko, The Mercenary	Rebel Fleet	Ground Combat Rating Credits
Elerian	Sho, The Exile	Rebel Fleet	Travel Speed Research
Gnolam	Camile, The Lady	Loyal Colony	Credits Trade Treaties Income
Gnolam	Einar, The Patron	Loyal Colony	Credits
Gnolam	Minna, The Jeweler	Loyal Colony	Production
Gnolam	Arne, The Prospector	Loyal Fleet	Travel Speed Research
Gnolam	Axelsson, The Profiteer	Loyal Fleet	Credits Trade Treaties Income
Gnolam	Elina, The Accountant	Rebel Colony	Buyout Cost Reduction Credits
Gnolam	Olu Agneta Ekholm, The Socialite	Rebel Colony	Security
Gnolam	Ovid, The Miner	Rebel Colony	Disposition Trade Treaties Income
Gnolam	Bror, The Scrapper	Rebel Fleet	Credits
Gnolam	Maja, The Captain	Rebel Fleet	Command Points Missile Attack
Human	Ralleia, The Siren	Loyal Colony	Ground Combat Rating Disposition

Race	Name and Title	Leader Type	Bonuses
Human	Zara Song, The Diplomat	Loyal Colony	Research Disposition
Human	Anna North, The Analyst	Loyal Fleet	Missile Attack Research
Human	Connor, The Pilot	Loyal Fleet	Beam Defense Command Points
Human	Sargon II, The Strategist	Loyal Fleet	Beam Defense (Antarans/Monsters) Missile Attack (Antarans/Monsters)
Human	Tanus, The Revolutionary	Rebel Colony	Buyout Cost Reduction Ground Combat Rating
Human	Xiomara, The Visionary	Rebel Colony	Ground Combat Rating
Human	Chance Valheim, The Recruit	Rebel Fleet	Weapons Max Damage Credits
Human	General Jiang, The Leader	Rebel Fleet	Ground Combat Rating Leaders Appearance Chance Leaders Hiring Cost
Human	Johana, The Assassin	Rebel Fleet	Ship Repair per Turn Research
Klackon	Atl, The Farmer	Loyal Colony	Food
Klackon	Ixtli, The Builder	Loyal Colony	Production Buyout Cost Reduction
Klackon	Nenetl, The Birther	Loyal Colony	Population Growth Production
Klackon	Xoco, The Defender	Loyal Fleet	Beam Defense

Race	Name and Title	Leader Type	Bonuses
Klackon	Zuma, The Fighter	Loyal Fleet	Beam Defense Missile Attack Ground Combat Rating
Klackon	Kaviq, The Usurper	Rebel Colony	Population Growth
Klackon	Ollin, The Caretaker	Rebel Colony	Food Pollution Cleanup
Klackon	Yare, The Handler	Rebel Colony	Security
Klackon	Nelli, The Healer	Rebel Fleet	Shield Restoration Ship Repair per Turn
Klackon	Xio, The Alone	Rebel Fleet	Travel Speed
Meklar	AM-715, The Harvester	Loyal Colony	Production Morale Spies Experience Rate
Meklar	INT-89, The Spy	Loyal Colony	Spies Experience Rate
Meklar	T Class 64, The Salvager	Loyal Colony	Production Pollution Cleanup
Meklar	RSW-72, The Assessor	Loyal Fleet	Credits
Meklar	X-427, The Destroyer	Loyal Fleet	Beam Attack Missile Attack (Antarans/Monsters)
Meklar	QA-99, The Tester	Rebel Colony	Research Production
Meklar	Watch, The Enlightened	Rebel Colony	Research

Race	Name and Title	Leader Type	Bonuses
Meklar	911-CID, The Responder	Rebel Fleet	Beam Defense Ship Repair per Turn
Meklar	RB458, The Disconnected	Rebel Fleet	Credits
Meklar	Storm, The Hacker	Rebel Fleet	Command Points Research
Mrrshan	Aurya, The Supreme	Loyal Colony	Production Morale
Mrrshan	Rachana, The Believer	Loyal Colony	Production Morale
Mrrshan	Zahra, The Manufacturer	Loyal Colony	Production Credits
Mrrshan	Dasya, The Doctor	Loyal Fleet	Research Ground Combat Rating
Mrrshan	Kirsi, The Gunner	Loyal Fleet	Beam Attack
Mrrshan	Haidar, The Tracker	Rebel Colony	Buyout Cost Reduction
Mrrshan	Tachus, The Aide	Rebel Colony	Credits
Mrrshan	Amem, The Countess	Rebel Fleet	Shield Restoration Ship Repair per Turn
Mrrshan	Bata, The Wanderer	Rebel Fleet	Missile Attack
Mrrshan	Natesa Nori, The Rogue Captain	Rebel Fleet	Weapons Max Damage

Race	Name and Title	Leader Type	Bonuses
Psilon	Lebo, The Agriculturist	Loyal Colony	Population Growth
Psilon	Mara, The Archivist	Loyal Colony	Research Security
Psilon	Sechaba, The Designer	Loyal Colony	Morale Leaders Appearance Chance
Psilon	Naleli, The Genius	Loyal Fleet	Missile Attack Weapons Max Damage
Psilon	Tssha II, The Technician	Loyal Fleet	Shield Restoration Ship Repair per Turn
Psilon	Anele, The Ambassador	Rebel Colony	Disposition
Psilon	Daza, The Student	Rebel Colony	Research
Psilon	Izula, The Striker	Rebel Fleet	Weapons Max Damage
Psilon	Ntja, The Marksman	Rebel Fleet	Beam Attack
Psilon	Pabe, The Mechanic	Rebel Fleet	Shield Restoration Ship Repair per Turn
Sakkra	Katja, The Spawner	Loyal Colony	Population Growth
Sakkra	Kurt, The Brainer	Loyal Colony	Research
Sakkra	Tymon, The High Lord	Loyal Colony	Morale Leaders Experience Rate

Race	Name and Title	Leader Type	Bonuses
Sakkra	Liesel, The Challenger	Loyal Fleet	Beam Defense (Antarans/Monsters) Missile Attack (Antarans/Monsters)
Sakkra	Maelia, The Tribe Mother	Loyal Fleet	Ground Combat Rating
Sakkra	Anka, The Brood Mother	Rebel Colony	Leaders Experience Rate Leaders Appearance Chance
Sakkra	Finn, The Navigator	Rebel Fleet	Travel Speed Research
Sakkra	Gunther, The Fixer	Rebel Fleet	Ground Combat Rating Ship Repair per Turn
Sakkra	Lilka, The Raider	Rebel Fleet	Ground Combat Rating Credits
Sakkra	Tyranous, The Armsman	Rebel Fleet	Command Points Ground Combat Rating
Silicoid	Erth, The Prospector	Loyal Colony	Production Population Growth
Silicoid	Renwar, The Caretaker	Loyal Colony	Population Growth Security
Silicoid	Tovar, The Guardian	Loyal Colony	Morale Security
Silicoid	Molith, The Diviner	Loyal Fleet	Travel Speed
Silicoid	Savag, The Crusher	Loyal Fleet	Ground Combat Rating
Silicoid	Balbar, The Glutton	Rebel Colony	Population Growth Credits

Race	Name and Title	Leader Type	Bonuses
Silicoid	Rilog, The Flawed	Rebel Colony	Production Buyout Cost Reduction Leaders Experience Rate
Silicoid	Aisbog, The Commander	Rebel Fleet	Command Points Leaders Hiring Cost Salary Reduction
Silicoid	Sesar, The Consumer	Rebel Fleet	Trade Treaties Income
Silicoid	Verdus, The Destroyer	Rebel Fleet	Missile Attack Weapons Max Damage
Terran	Celeus, The Scientist	Loyal Colony	Research Production Ground Combat Rating
Terran	Titus, The Bureaucrat	Loyal Colony	Security
Terran	Valentina, The Negotiator	Loyal Colony	Leaders Hiring Cost Salary Reduction
Terran	Aelia, The Guide	Loyal Fleet	Beam Defense Ship Repair per Turn Ground Combat Rating
Terran	Horatius, The Legionnaire	Loyal Fleet	Travel Speed Missile Attack Missile Attack (Antarans/Monsters)
Terran	Drusilla, The Specialist	Rebel Colony	Research Food
Terran	Marcellus, The Engineer	Rebel Colony	Research
Terran	Caius, The Courier	Rebel Fleet	Disposition Leaders Appearance Chance Leaders Hiring Cost
Terran	Luciana, The Infiltrator	Rebel Fleet	credits

Race	Name and Title	Leader Type	Bonuses
Terran	Octavia, The Tactician	Rebel Fleet	Command Points Leaders Appearance Chance
Trilarian	Axelle, The Convert	Loyal Colony	Morale
Trilarian	Evrard, The Agrarian	Loyal Colony	Food Leaders Experience Rate
Trilarian	Marina, The Ecologist	Loyal Colony	Research Pollution Cleanup
Trilarian	Alceste, The Aquanaut	Loyal Fleet	Travel Speed Beam Defense
Trilarian	Marcel, The Skipper	Loyal Fleet	Beam Defense Disposition research
Trilarian	Remi, The Invader	Rebel Colony	Ground Combat Rating Security
Trilarian	Victoire, The Pioneer	Rebel Colony	Morale Leaders Experience Rate Leaders Appearance Chance
Trilarian	Amandine, The Athlete	Rebel Fleet	Beam Defense Missile Attack Credits
Trilarian	Oceane, The Betrayer	Rebel Fleet	Beam Defense (Antarans/Monsters)
Trilarian	Quasarrious, The Navigator	Rebel Fleet	Travel Speed Disposition