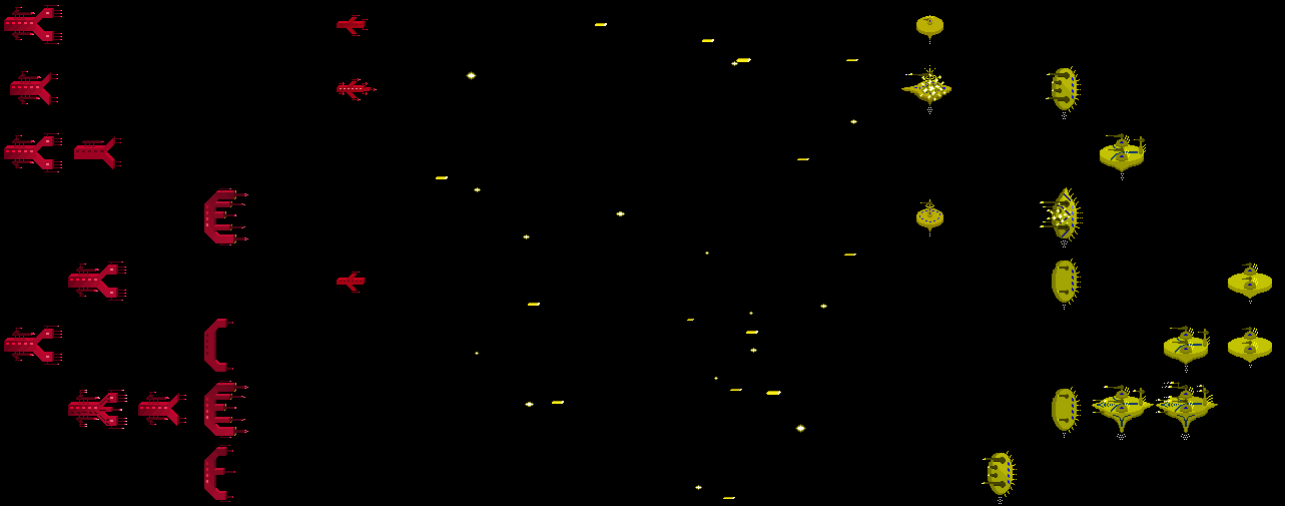


# *Infinity*



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## Installation

This chapter describes install / uninstall instructions, requirements and license information.

### *Hardware requirements*

	<b>Minimum</b>	<b>Recommended</b>	<b>Remark</b>
<b>CPU</b>	1 Ghz	$\geq 2$ Ghz	Will probably work on $< 1$ Ghz but it can be too slow
<b>Screen resolution</b>	1024x768	$\geq 1280 \times 1024$	On smaller resolutions the playfield is too small and interface can be cut off
<b>Graphics</b>	any OpenGL	any OpenGL	Without HW OpenGL the refresh rate and reponses may be too low
<b>Memory</b>	500 MB	$\geq 2$ GB	Cca Tiny=200MB Small=400MB Normal=1GB Large=2GB Huge=4GB + OS req.
<b>free HDD space</b>	100 MB	$\geq 500$ MB	Cca 7MB game, cca 10,20,50,100,200 MB per save game depending on Universe size
<b>Input</b>	Keyboard	Keyboard+Mouse	Can be fully controlled by keyboard but mouse can make few tasks easier
<b>OS</b>	Ms Windows XP	Ms Windows XP, Vista	Should work on other Ms Windows providing requirements are met. Considering migration to other platforms in future (Linux)

### *Installing Infinity*

Infinity is distributed as “portable” version. It does not require any special installation.

- 1. Unpack the installation file**
- 2. Run “Infinity.exe” from “Infinity” main directory.**

### *Uninstalling Infinity*

To uninstall Infinity please follow these steps:

- 1. optional: Run “Unregister.exe”**

This file is located directly in Infinity main directory. It will remove Infinity license information from Windows registry file. You can skip this step if you are upgrading to newer version or if you want to keep license information for future.

- 2. Delete Infinity folder**

Just delete Infinity folder. All Infinity files are located in it and its subdirectories.

## ***License agreement***

By playing or distributing the game you agree to following terms and conditions:

- **LICENSE**: By honouring this license agreement I grant you non-exclusive, non-transferable license to install and use current version of Infinity and included content (documentation etc.) for personal use.
  - **Unregistered version**: You can use the unregistered version of Infinity (with limited functionality) without charge for as long as you like to try it out.
  - **Registered version**: By purchasing and entering registration key the game becomes registered and full functionality is unlocked. For each registration key you are allowed to run one instance of the game. You can install and register the game with same registration key on at most 3 computers providing no two instances are run simultaneously at the same time. You are allowed to use the registration key with any further released Infinity versions that will accept it, with the same restrictions (cumulative).
- **DISTRIBUTION**: You may distribute the software providing it is distributed without any changes, is complete (as distributed by the author), and there is absolutely no charge involved to obtain the software, direct or indirect (for example, but not restricted to, cost of media, cover CD/DVD of magazine, fee required to register to web-page to download it). Distribution involving any fee is allowed only with written permission of the author. You are not allowed to distribute registration keys nor registered version of the game.
- **EXCLUSION OF DAMAGES**: the software is provided “as-is” without any express or implied warranty. In no event will the author(s) be held liable for any damages arising from the use of this software.
- **CODE PROTECTION**: you are not allowed to change, disassemble, reverse engineer, analyze the code (executable files coming with Infinity) or attempt to discover the source code in any other way.
- **MODDING**: Modification is allowed for pictures (directory “obr”), sounds (directory “sound”), text parametrization files (directory “txt” except for file “settings.txt”) and saved games (directory “save”). Any modification package must be distributed independently as completely separate package clearly stating that it is third party modification of the game.
- **SEVERABILITY**. Any provision of this Agreement which is held to be unenforceable as written shall be enforced to the fullest extent permissible and shall not affect the validity of any other provision of this Agreement.

## ***Technical issues***

Great care has been taken to ensure the game will run smoothly and be stable. If you still encounter problem you can try one of the following:

- **game will not run or distorted graphics**  
Make sure your graphic card and drivers support OpenGL
- **minor graphical glitches with zoom** – minor graphical glitches may occur when zooming in/out the game view (this is noticeable on “water” terrain)
- **map is all dark and minimap is all gray**  
You have probably selected upper-stage view by accident (PgUP or mouse wheel up) and

you have nothing explored there. To return back press “1” (bookmark 1 is automatically created at starting location) or try to select some unit/base by pressing “Tab”.

- **unable to start new game**

Sometimes new game will fail to generate valid Universe (e.g. there is no planet supporting life). This is very rare but if it happens just try “New Game” again.

If the creation fails repeatedly you probably don't have enough memory to support the Universe of chosen size. Check the memory requirements and try to decrease Universe size .

- **performance problems**

The game will adapt its refresh rate to run smoothly. To further improve playability on slow computers you can do following:

- **hardware mouse** – if the mouse movement is not smooth you can try to change mouse cursor from software to hardware (Main menu - Settings). Hardware mouse pointer is plain but should respond well.
- **Mouse off** – if the mouse is not responsive enough even on hardware setting you can try to turn the mouse off and play with keyboard only. The game is designed to be playable completely without mouse as the mouse control was added only at the very end. Keyboard control should be more responsive than mouse on slow systems.
- **Computer move takes too long** – Try to play smaller Universe size. Great care has been taken to optimize computer thinking performance so there should be no big slowdowns even late in the game. If one computer player continuously takes much longer to think than others (e.g. few seconds) then it is most likely a bug and you can report it.

- **screen resolution**

Screen resolution is taken from Windows desktop resolution and can not be changed. You can however zoom in/out the view to fit your needs (Main menu – Settings).

- **unable to load saved game**

Check the folder „save“ if it contains the save slot you are trying to load.

If file exists but fails to load it was probably saved in different version of Infinity or the save file is corrupted. If you are positive the file is not corrupted and was saved under the same version of game where you are loading it you can report it as bug.

- **game freeze or crash**

This should not happen :-) But I am just a man and Infinity is lot of code so despite intensive testing problems might occur. In case of game crash/freeze you can try following:

- **autosave**: load most recently saved game (if you did not save recently you can try to load the autosave slot) and try to play from there. The situation will most likely not repeat itself and you can continue on.
- **Reproducible crash**: if you are sure you have no hardware problems and the game crashes repeatedly please save the game the moment before the crash (e.g. before pressing end of turn or other action that causes it). Then please report this bug (see Reporting bug). I will try to fix every reproducible bug that leads to game crash/freeze.

- **other bugs**

I try to fix any bug that I discover still some might have escaped my notice. At the moment I'm not aware of any major bug. Still if you notice one you might report it (see Reporting bug) and depending on my time and the seriousness of the bug it might be fixed.

## **Reporting bug**

Before reporting a bug please try to check if there is some solution already available. On Infinity web page (<http://www.infinitygame.info/>) I will try to update relevant information and post links to online forums I'm attending.

When reporting bug please include following information:

- Infinity version
- operating system
- CPU
- memory
- graphic card (if there is problem with graphics)
- screen resolution (if relevant to bug)
- bug description
- your email (where I can send more questions or answer)

If bug is of graphical nature you can send a screen-shot. **If you need to send save game:**

- if bug is noticeable at some place please save bookmark to such place and make the location visible when saving the game
- always compress (zip) the save game before sending
- if possible **upload the** (compressed) **save game** to some web location (e.g. rapidshare) and send me only the link to it in the email
- if uploading is not possible you can try to send it (**compressed!**) as attachment but because the saved games are large such email might be refused

When you have all this information send email with following parameters:

- **to address:** [support@infinitygame.info](mailto:support@infinitygame.info)
- **subject:** Infinity support
- **reply to address:** where I can send further questions or answer
- **body:** system information, bug description, links to outside resources (save games, screen shots etc.)

**I can not guarantee any response or solution** but I will try to fix at least major bugs (making game unplayable or game crash/freeze) that I can reproduce.

**Keep in mind that this is free-time project so I might be unavailable for extended periods of time** (business trip, vacation, laziness ...).

## **Sending suggestions, opinions**

You can check Infinity web page for any forums I might be reading and responding where



you can post your opinions or suggestions.

If you wish to send email please observe following form:

- **to address:** [support@infinitygame.info](mailto:support@infinitygame.info)
- **subject:** Infinity suggestions
- **reply to address:** where I can send answer
- **body:** your opinions or suggestions

I will try to read all email unless there is too much of it but I can not guarantee any answer.

## ***Donations***

If you like the game you can support the development. You can do this by sending donation by one of following means (please identify the payment as “Infinity”):

- **paypal:** makuchm@hotmail.com
  - **bank account:**  
account no.: 2618007473/1100  
IBAN: SK67 1100 0000 0026 1800 7473
  - **others:** please contact me should you wish to support by another way
- Thanks in advance to everyone supporting the project.

## Playing the game

This chapter describes how to control the game – menus, various keyboard commands and mouse control. For detailed information about game topics please check Game concepts.

### *Navigating menus*

You will come across various menus. You can use either keyboard or mouse to make your choices:

#### **Keyboard**

- ↑,↓ - select menu item
- ←,→ - choose menu item options
- Enter - accept the selected menu item
- Esc - close menu and discard all changes

#### **Mouse**

- move - move mouse cursor over menu item to select it
- wheel - choose menu item options on selected menu item
- left click - accept the selected menu item
- right click - close menu and discard all changes

### *Start menu*



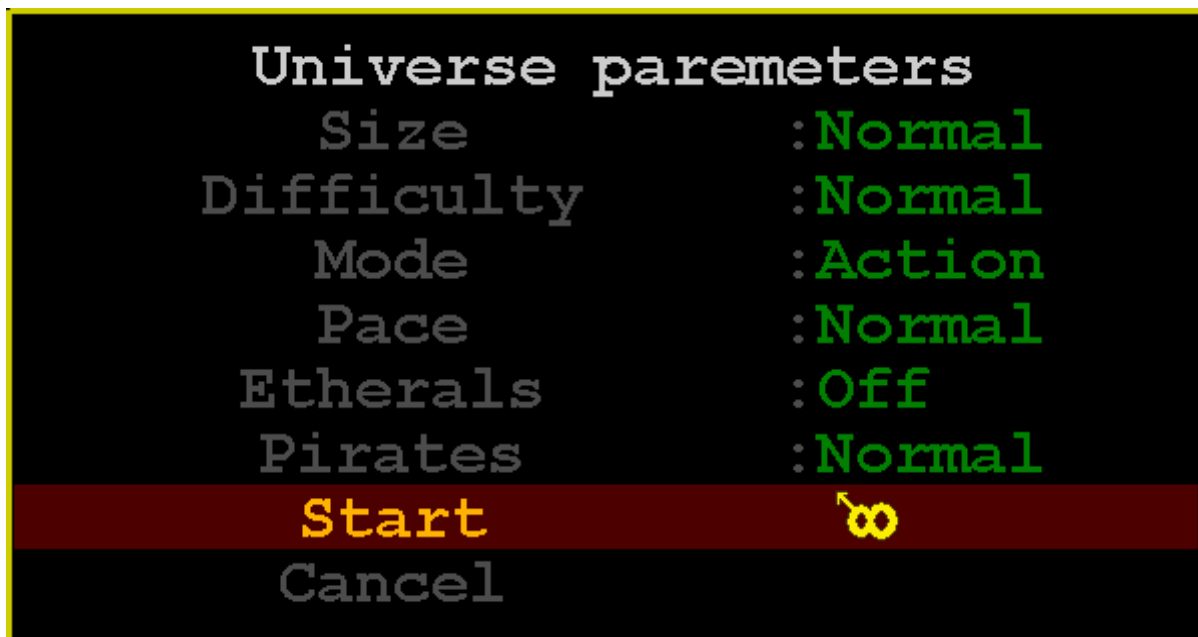
This is the first menu displayed when starting Infinity.

- New Game** - select game parameters and create new game (see Starting new game)
- Load** - load previously saved game (see Loading saved game)
- Settings** - game settings (see Game settings)
- Register** - enter license key to register the game
- Quit** - close the Infinity application

### **Starting new game**

When starting new game you need to choose the game parameters to suit your needs.

Default options are automatically selected that are recommended for most people playing the game for the first time:



## Size

The size does not change the dimensions of the maps themselves but it affects the “density” of the Universe tree. That is how many planets exist per star system, how many stars per galaxy and so on. The bigger the size the more objects are created. This can dramatically increase the total number of “fields” in game and is main factor determining the required memory for playing. Big size can also slow game as more objects need to be processed each turn.

*Smaller sizes* will bring faster, less competitive games, with less memory requirements.

*Bigger sizes* will create slower games with lot of competition and high memory and CPU requirements.

Here are some basic parameters:

size	Max. civilizations	Civs per planet	Approx. memory req.
<b>Tiny</b>	50	3	150 MB
<b>Small</b>	100	3-4	300 MB
<b>Normal</b>	150	3-5	1 GB
<b>Big</b>	180	3-4	2 GB
<b>Huge</b>	180	3	3,5 GB

*Table 1: Memory requirement is without OS taken into account*

## Difficulty

Allows you set the handicap for human or computer players. It does not affect the AI itself as it will always try to play to its best capabilities. The handicap modifies (increases or decreases) amount of resources (all types) gathered from fields by small percentage and affects also cost of

researching technologies.

This bonus mostly means that era advance is reached faster (more energy), there is slightly less problem with attrition (more food means more cultivation), technologies are researched faster and units/buildings can be built more quickly (thanks to better resources income).

I strongly recommend “normal” difficulty for every new player where neither side has any advantages or disadvantages. Starting on higher difficulty would probably mean disaster until you are well familiar with the game concepts.

For players who have no experience with turn based strategy games “Easy” difficulty can be good place to start.

You can increase the difficulty if you find your present setting not challenging enough or decrease it when game is too hard to beat.

Difficulty	Handicap	Suited for
<b>Very easy</b>	~ 25% bonus for human player	Occasional computer game players
<b>Easy</b>	~ 11% bonus for human player	Players new to civ-like games
<b>Normal</b>	No bonus/penalty for any player	Players familiar with civ-like games
<b>Challenge</b>	~ 2% bonus for AI	Experienced Players knowing Infinity
<b>Hard</b>	~ 5% bonus for AI	Expert players when Challenge is easy
<b>Very Hard</b>	~ 11% bonus for AI	If you want to play against big odds
<b>Infinite</b>	~ 18% bonus for AI, ~10% penalty for human player	Masochists. Hackers. Chuck N.

## Mode

There are two modes of game. For most players I recommend “Action” mode as it keeps things more balanced and brings also more local competition. “Classic“ mode brings less autobalancing mechanisms and can lead to much greater differences among technological levels of civilizations and very long „boring“ periods struggling to scrape enough energy for advancing to new era. The main features of each mode are summed below:

### Action mode

- focus of this mode is playability
- energy requirement to reach new era is slightly decreased over time when no civilization advanced for long. This is to allow the game to progress fluently.
- short time after first civilization advances to new era the requirements to advance to this era start to drop over time more significantly. This is to allow others to catch up and keep things interesting.
- “most competitive” planet is chosen as player's civilization starting location (cluster with most settled planets, then most populated galaxy in this cluster and most populated star system in this galaxy).

### Classic mode

- focus of this mode is more “realistic” simulation even if it can bring boring game
- for era advancement you need to gather all required energy income as the requirement will

never drop (except slightly by researching Era Advancement technology). This can lead to long desperate struggles for energy especially when your location does not contain lot of abundant energy fields.

- No requirements drop when someone gets to new era means that whoever gets lead can leave others behind and increase the technological gap without any chance of catching up.
- Starting location for civilization is chosen randomly. Statistically this means that most often you will still play in populated areas but with bad luck your planet might be the only one with life in the whole cluster and you would not meet any competition (except on home planet) until you reach Universe stage.

## Pace

With pace you can influence the progress of the game, it affects the energy requirement to advance to new eras:

Pace	Effect
<b>Very slow</b>	Significantly increased requirements for era advancement.
<b>Slow</b>	Slightly increased requirements for era advancement.
<b>Normal</b>	Normal requirements for era advancement.
<b>Fast</b>	Slightly decreased requirements for era advancement. Buildings and units costs are slightly decreased.
<b>Very Fast</b>	Significantly decreased requirements for era advancement. Buildings and units costs are significantly decreased.

## Etherals

Here you can choose how often will the Etherals intervene or turn them off completely. For new players I recommend to turn Etherals off. On high difficulties turning them on can help you to keep up. Generally they help balance the game but they can be very frustrating when you are on the receiving end...

To learn more about Etherals check chapter Etherals.

Etherals	Effect
<b>Off</b>	Etherals will never intervene against most advanced civilizations.
<b>Sleeping</b>	Etheral interventions are infrequent.
<b>Watching</b>	Etherals intervene normally.
<b>Acting</b>	Etherals intervene a lot.

## Pirates

Here you can choose how often will the pirates spawn and how strong they are. To learn more about pirates see chapter Pirates.

Pirates	<b>Effect</b>
<b>Off</b>	Pirates never spawn.
<b>Weak</b>	Pirates spawn infrequently and in smaller groups.
<b>Normal</b>	Pirates spawn normally.
<b>Strong</b>	Pirates are stronger, spawn often and in bigger groups.

## Cancel

Return to main menu.

## Start

Create the Universe and start new game.

When you start new game rarely there might be problem with creating new Universe. Should this happen you will see one of the following messages displayed for 5 seconds:

*“Memory allocation error”*

You don't have enough memory to create Universe with selected parameters. Reduce the Universe size and try again.

*“Creation failed, please try again!”*

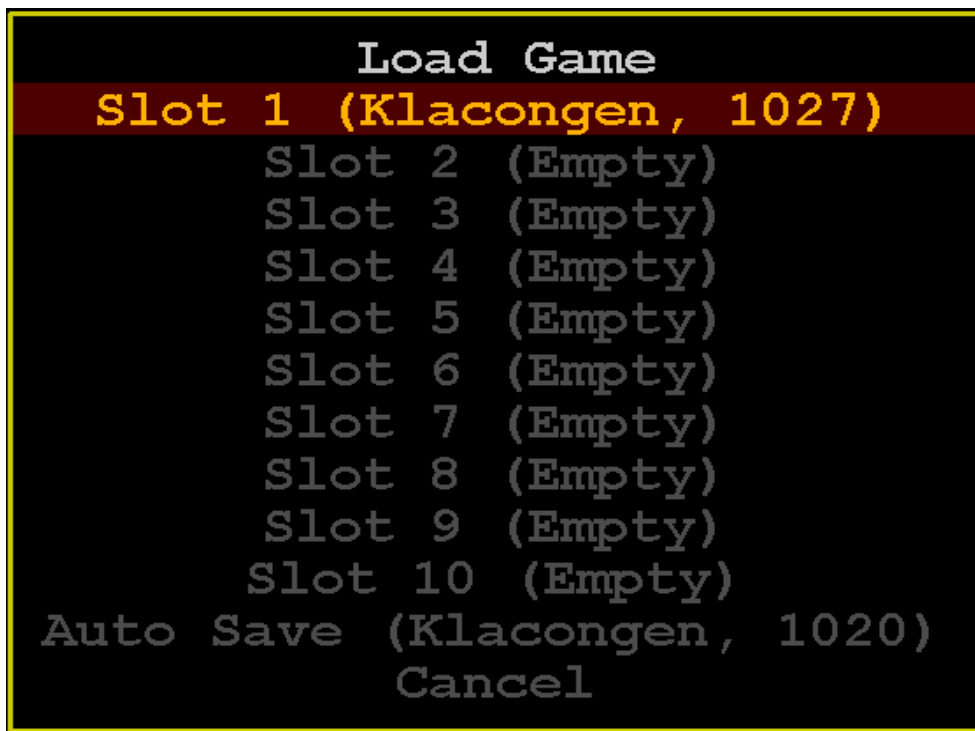
No planet supporting life was generated in whole Universe. While not likely this may happen, especially for “Tiny” size. Just try again and you should get better results.

*“WARNING: Only one populated planet in Universe”*

Your game will start normally but your planet is the only planet in the Universe with civilizations. You can play but as it would be probably boring in an empty Universe it is recommended that you just start new game.

**Tip:** On the right side of screen you can immediately see number of civilizations existing in the Universe. If this number is too small or too big for your liking you can try to repeat the creation process until you get results you like. Keep in mind though that there is upper limit for total number of civilizations increasing with Universe size.

## Loading saved game



When loading previously saved game you can choose that save slot you want to load from or you can load game that was saved by autosave:

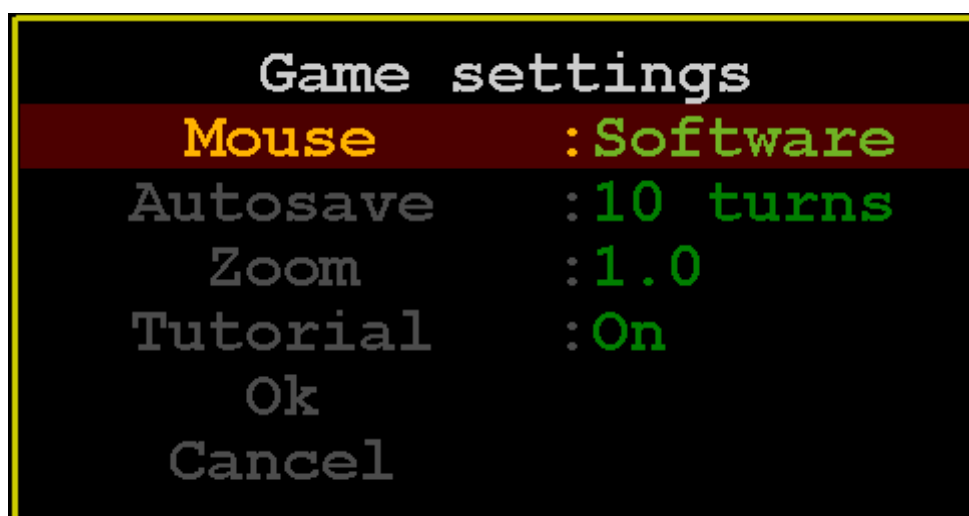
For each slot you can see the name of the civilization and the game turn when the game was saved. Unused slots are marked as “Empty”.

You can choose “Cancel” if you don't want to load a game after all.

Should the loading of game fail (e.g. you are trying to load game saved by different version of Infinity) you will be notified by buzz sound and the game will return to “Start menu”.

## Game settings

On this menu you can select various game options.



**Mouse** – select mouse control

- **Software** – SW mouse pointer, best look but requires good performance
- **Hardware** – HW mouse pointer, simple but responsive also on lower refresh rates
- **Off** – turn mouse control off and use keyboard only, good option when mouse is either not available or the performance is too low to use mouse comfortably

**Autosave** – how often to save the game automatically

You can choose every 1, 10, 20, 50, 100 turns or “Never”.

**Zoom** – you can zoom in or zoom out the game view

While it is not possible to change screen resolution in Infinity you can zoom in or zoom out the view. You can choose one of the five zoom factors: 0.75, 0.875, 1.0 (no zoom), 1.25, 1.5.

Minor graphical glitches may occur when zooming in or out.

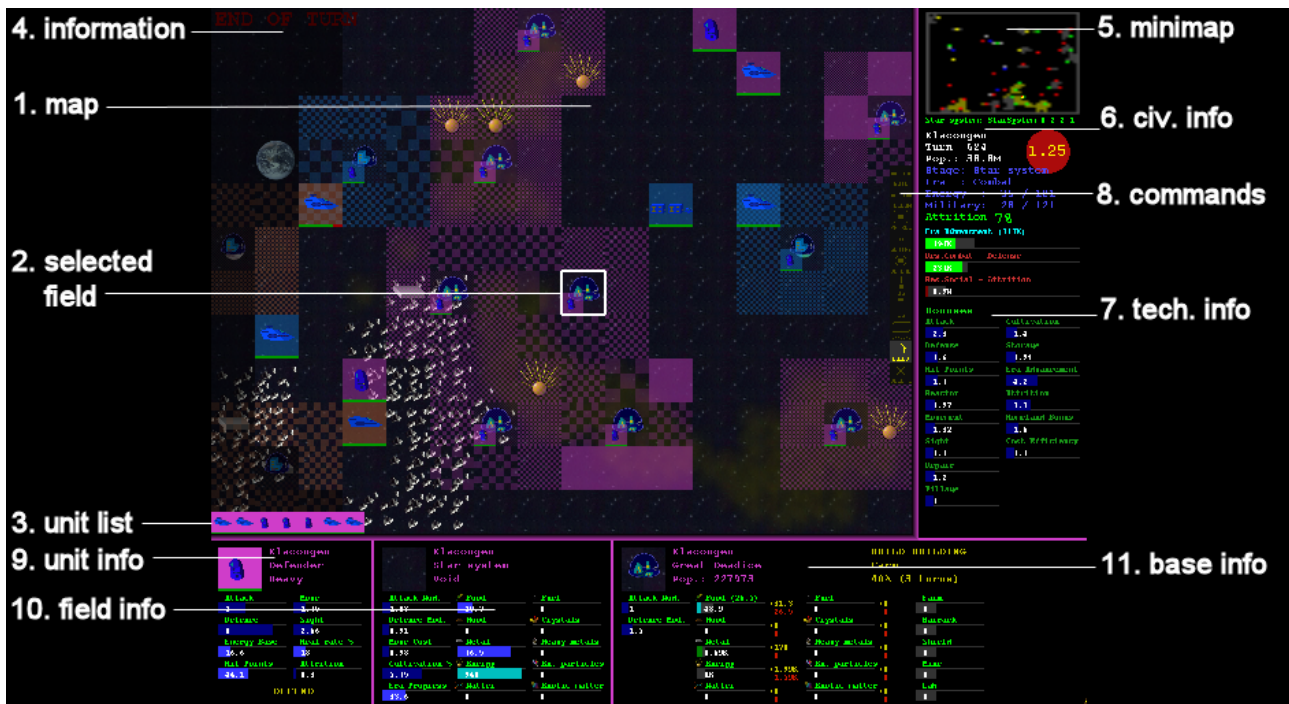
**Tutorial** – tutorial messages

You can turn the tutorial messages on or off. When turned on the game will display some helpful tips when certain breakpoints in the civilization development are reached.

**Ok** – accept changes and save them to configuration file

**Cancel** – discard changes

## User interface



Main game screen is split into several sections:

### 1. map

This is the map of viewed location. Visible terrain, units and bases are displayed. Terrain outside of line of sight is darkened and you see no units that are out of sight.



Unexplored/unknown terrain is hidden and dark fog is displayed in its stead.

If more than one unit is located on field the unit with highest defense is displayed.

## 2. selected field

This is field that is currently selected. Keyboard commands like „**Enter**“ or „**C**“ will select units from this field.

## 3. unit list

This is list of units that are present on the selected field. Pointing on them with mouse will display detailed information in the unit info. By left click you can also select units directly from this list.

## 4. information

Information line. If there are any unread messages in the message queue you will get notification here. You can read the messages by pressing „**M**“.

When there are no more units or bases without orders the „End of turn“ message will be displayed. At this moment you can end the turn simply by pressing „**Enter**“.

## 5. minimap

Minimap displays the full map of viewed stage (planet, star system, etc.). You can left click on it to change view and select new field. You can also hold the left mouse button and move the view fluently on the minimap.

Currently selected field is displayed as blinking red dot on yellow background.

Below minimap you can see the stage that is displayed along with its name/coordinates.

## 6. civ. Info

Summary information about your civilization is displayed here, including:

- name
- played turn
- total population
- modified Kardashev scale (yellow number on red circle, see Kardashev scale)
- total attrition (see Attrition)
- requirement to advance to next era and its progress (see Stages and eras)
- currently researched technology and progress (see Technologies)

## 7. tech. Info

Information about bonuses given by research or from other sources (see Technologies).

If the screen resolution is too small to see all bonuses you can move the mouse pointer to this area to display full list while mouse pointer hovers over it.

## 8. commands

Commands your selected unit or base can execute. You can use mouse to give commands to units or bases by left clicking on this bar. Only available commands are highlighted (e.g. “Build” command is only available for constructors and bases).

## 9. unit info

Detailed information about selected unit (see Unit information display). Displayed unit is chosen according to following priorities:

- unit from unit list when mouse pointer is on it
- unit from map when mouse pointer is on it
- actively selected unit (blinking on map) when mouse pointer is not hovering over any unit
- unit from selected field when no unit is selected and mouse is not hovering over any unit

## 10. field info

Detailed information about field (see Terrain) is displayed in this area according to following priorities:

- field on map where mouse is pointing
- selected field (white rectangle) when mouse pointer is not on map

## 11. base info

Detailed information about base present on selected field is displayed here (see Base information display).

## Main menu

Keyboard: “**Esc**”

You can get to main menu by pressing “**Esc**”. In main menu you have following options:

- **Save Game** – allows you to save game. You can choose one of 10 slots for saving game
- **Load Game** – allows you to load saved game (see Loading saved game)
- **Settings** – you can change various game settings (see Game settings)
- **Continue playing** – return to game
- **End turn** – end current turn
- **Start menu** – go back to start menu (see Start menu)
- **Quit game** – close the Infinity application

## Units and Bases commands

### Selecting units

Keyboard: “**C**”, “**Enter**”, “**Tab**”

Mouse: left click on unit, double click outside map

You can select units on selected field by pressing “**Enter**” or “**C**”. The difference is that “**Enter**” will only select units without orders while “**C**” will cycle through all owned units on field.

You can also select units by left clicking on them. Subsequent left clicks on field will choose other owned units present on the field.

You can also select unit by left clicking on unit list on lower left part of game window.

To select next unit without orders you can also use “**Tab**” key or double click with left mouse button outside of the map. If there are no more units without orders you will select next base that is without orders. If there are no more bases without orders either the “End turn” text will start blinking on information area and you can easily end turn and move to next one.

Selected unit is displayed as blinking and all subsequent commands are addressed to selected unit.

### **Selecting bases**

Keyboard: “**Shift+Tab**”

Mouse: left click on base

Combination of keys “**Shift+Tab**” will select next base without orders. You can also select bases by left clicking on them.

### **Moving units, attacking, combat simulation**

Keyboard: ↑,↓,←,→, “Numpad 1” – “Numpad 9”

Mouse: right click on map

You can move selected unit by pressing arrows or using Numeric pad keys “1” to “9” (make sure you have NumLock turned on). Using mouse you can right click on destination. If destination is not on neighbouring field then Goto command is issued to the unit.

If destination is occupied with non-allied unit you will attack the unit. In case you are not in war with targeted unit you will get controlling questions asking if you really want to attack non-enemy unit. First question asks you if you want to proceed with attack, you can choose:

**Attack** – attack the target unit

**Cancel** – cancel the move command into the occupied field

In case you decide to attack neutral unit another question pop's up to decide how you want to proceed with attack:

**Declare war** – attack the unit and declare war

**Just attack** – attack the unit but do not declare war (of course this does not prevent the targeted civilization to declare war on you in response)

If you don't want to attack yet but you want to see odds of winning battle you can hold “**Left Control**” key while moving unit (with keyboard or mouse). Instead of attacking occupied field you will get results of simulated battle (see Combat simulation).

### **Advanced unit commands**

You can give more specific commands to selected units or bases using either keyboard shortcuts or selecting the command from the command list on the right side of game window.

#### **Skip turn**

Keyboard: “**Spacebar**”

Skip turn. Mark the selected unit or base as “moved” for this turn so it will not appear while selecting units or bases without orders. On next turn the unit/base will be selected again as it is without commands.

If you change your mind you can still order units/bases with “Skip turn” order. You can select them by “C” key or left mouse click and issue commands normally.

### **Defend**

Keyboard: “D”

Order the unit to stay in the field and simply defend.

### **Sentry**

Keyboard: “S”

Order the unit to stay in the field. If enemy unit comes into unit's range it will “wake up” and will be selected next turn as unit without orders.

### **Goto**

Keyboard: “G”, “Ctrl+G”

After issuing Goto command you need to select destination (green rectangle). You can do it either by keyboard (moving with arrows or Numpad and selecting with “Enter”) or you can use mouse, left click to move and right click to accept destination.

After destination is chosen the unit will move towards it and it will cancel its orders when it reaches destination or can't find any route to it.

If the destination field is unowned or allied the unit will use only allied or unowned territory for moving. If target is in enemy territory unit will use also enemy territory for movement. Enemy or neutral bases can not be chosen as target but owned or allied bases can.

Pressing Ctrl with goto command will issue the command to all units on the field.

### **Follow**

Keyboard: “F”

You need to choose destination like in “Goto” command. The target field should be occupied with your unit. Selected unit will then follow the target unit until the command is cancelled or the targeted unit is destroyed.

### **Protect/Patrol**

Keyboard: “P”

You can use this command to protect field, base or other unit. It is best suited for attackers but can be issued also to other unit types.

First you select destination like in “Goto” command. If the targeted field is base your unit will protect the base. If the targeted field is occupied by owned unit you will protect this targeted unit. If there is no owned unit or base on target field then your unit will protect this field (location).

Protecting means that your unit will attack any enemies that come close to the protected target. When there are no enemies in vicinity the unit will return to protected location. If the unit is protecting another unit it will move alongside with it and attack any nearby enemies.

Protecting unit will not attack enemies that are located within bases even if the base is in it's protected range. The protected range depends on the unit's movement (the bigger the movement the bigger area is protected).

You can combine the Goto/Follow/Protect commands, for example issuing goto command to constructor to colonize distant place and the set few attackers to protect the constructor on the route.

### **Explore**

Keyboard: “E”

Explore territory. Best suited for scouts. The unit will move around to any unexplored territory on the location. The command is cancelled when everything is explored or the unit can not find route to unexplored fields (e.g. because of enemy territory).

### **Build base/Construct building or unit**

Keyboard: “B”

When used while Constructor is selected new base is founded (providing it can be built on the field constructor is occupying).

You can only build base when its territory will not overlap with another base territory. Special “stage” fields (Planet, Star, Galaxy, Cluster) can't be in the base territory either.

The base territory reaches one field from construction site to all 4 directions. So each base has totally 4 fields under control.

When no unit is selected but there is owned base present on selected field this command will open base construction menu (see Base construction menu).

### **Disband unit**

Keyboard: “Del”

Disband selected unit and remove it from the game.

### **Move to upper stage**

Keyboard: “Page Up”

Move unit to upper stage. Generally available only to units from advanced era or units located on lower stage than they were constructed. To move to upper stage the unit must have full health and also full movement for the turn. For more information see „Unit movement through different stages or special terrain“.

### **Move to lower stage**

Keyboard: “Page Down”

Move unit to lower stage. Unit must have full health and also full movement for turn. For more information see „Unit movement through different stages or special terrain“.

## **Help screen**

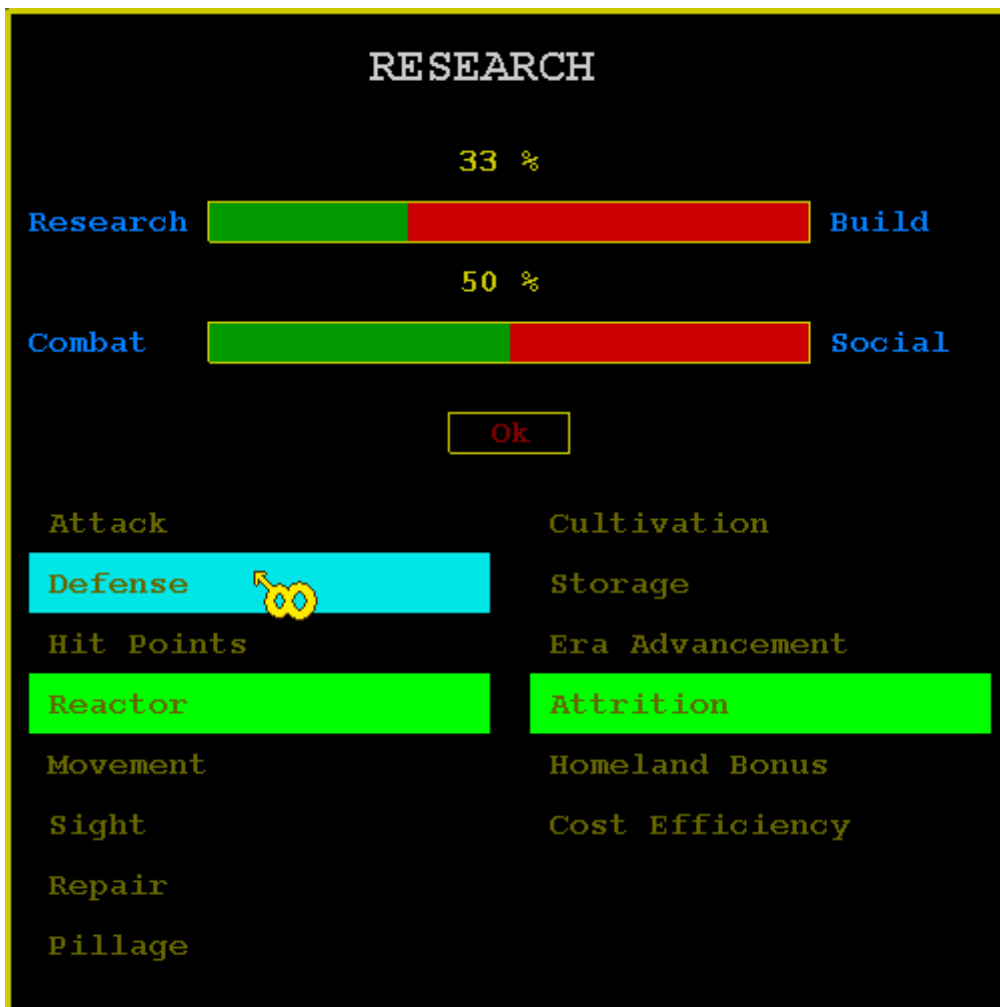
Keyboard: “F1”

Help screen with brief descriptions for keyboard and mouse commands.

## **Energy allocation and research**

Keyboard: “F2”

Allocate energy distribution and set research priorities. You can use arrows or mouse to navigate the screen. You can move the sliders either by ←,→ or simply by left clicking on them. You can use Enter or left click to select an option.



### Research/Build slider

Here you can select how much of produced energy goes to producing units and buildings and how much is used for research. Setting to “33%” means 33% of energy is used for research and remaining 67% is used for production.

When base does not need energy for production or is producing nothing then all energy produced by base goes to research.

Low values mean fast production (useful for fast production of units at war or for fast development of bases) while high values mean quick research at the cost of slower development and unit production.

### Combat/Social slider

Determines how much of energy allocated for research is used for combat technologies (left column) and how much goes to social advances (right column).

Setting to “30%” would mean that 30% of research is used for combat technologies while rest 70% are used for social advancement.

Low values lead to faster development while high values will result in stronger units.

### Technologies

You can select your research priority in both combat and social area. Next time when enough energy for advancement in the area is reached the selected technology is upgraded. Green

field is selected technology. Cyan field is position of cursor and it will become selected by pressing “**Enter**” or left mouse button. To learn more about technologies you can check chapter Technologies.

### **Ok button**

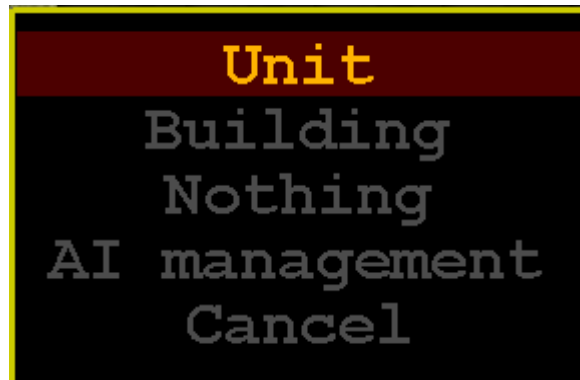
Left clicking or pressing “**Enter**” on Ok button will accept the changes done in the screen. You can also press “**Esc**” or right mouse button to discard the changes.

## **Base construction menu**

Keyboard: “**B**”

Mouse: double click on base or left click on “Build” icon

Give orders to base (build units, construct buildings or set AI base management).



### ***Build new unit***

Select unit to build. You can use arrows to move around the screen and use “**Enter**” or left click to select unit type / variation. You can also choose special resources you want to use for unit production when available.

	Scout	Constr.	Attacker	Defender
Light				
Medium				
Heavy				







BUILD



**Kradodul**  
Attacker  
Medium

**7 turns**

<b>Attack</b>	<b>Move</b>	<b>Food</b>	<b>Fuel</b>
4	1.5	0	0
<b>Defence</b>	<b>Sight</b>	<b>Wood</b>	<b>Crystals</b>
2	2	11	0
<b>Energy Base</b>	<b>Heal rate %</b>	<b>Metal</b>	<b>Heavy metals</b>
2	30	0	0
<b>Hit Points</b>	<b>Attrition</b>	<b>Energy</b>	<b>Ex. particles</b>
10	1	34	0
		<b>Matter</b>	<b>Exotic matter</b>
		0	0

On lower left part of the screen you will see the unit picture and its expected attributes when built. On lower right you can see the unit cost and the estimated time required for building the unit.

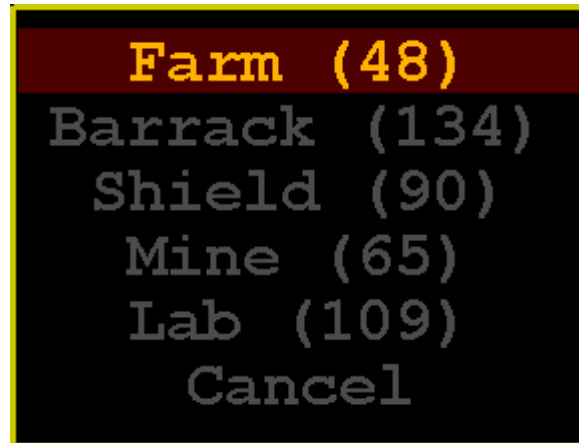
When required resource is not available nor produced in the base the estimate will be set to “999” turns.

You can check more details about units in chapter Units.

Left click or pressing “**Enter**” on “**BUILD**” button will start the production. Pressing “**Esc**” or right mouse button will close the screen without issuing the build order.



## ***Construct building***



You can select building from those available for construction. After each building you get estimated number of turns the construction will take. You can construct same building several times at increasing cost to increase the level of the building and its bonuses. The maximum level of building is determined by the era you advanced to. To learn more about buildings and their bonuses check chapter Buildings.

## ***Nothing***

Cancel current production and set base to build nothing (losing any unfinished production). This can be useful for cancelling the AI management.

## ***AI base management***

You can let AI to manage construction in your bases. This is especially useful on safe territory where you want the base advance for itself without having to bother with it. You have following options:

### **Buildings (10 turns)**

Base will construct buildings which take at most 10 turns to build. When no more such buildings can be constructed the AI is canceled and control is returned to player.

### **Buildings (25 turns)**

Base will construct buildings which take at most 25 turns to build. When no more such buildings can be constructed the AI is canceled and control is returned to player.

### **Buildings+Defense**

AI will upgrade obsolete units in base. When no unit needs to be upgraded it will construct buildings that take at most 40 turns to build. When no such building is available the AI will simply put all energy to research. AI management does not end on its own.

### **Buildings+Defense+Offense**

AI will upgrade obsolete units in base. When no unit needs to be upgraded it will construct buildings that take at most 40 turns to build. When no such building is available the AI will produce an attacker. AI management does not end on its own.

### **Research+Defense**

AI will upgrade obsolete units in base. When no unit needs to be upgraded it will use all

energy for research. No buildings are constructed. AI management does not end on its own.

### **Upgrade defense**

AI will upgrade obsolete units in base and then return control to player.

### **Wait for era advancement**

AI will do nothing and will simply use all energy for research. When civilization advances to new era the AI management is canceled and control is returned to player.

### **Custom**

This allows you to customize the AI management even more in case none of the predefined templates is sufficient. You can set several parameters of the base AI routine:

#### *Build buildings*

Select maximum number of turns allowed for construction of building. AI will construct buildings that do not take longer to build. You can also choose “Never” meaning that AI will construct no buildings in the base.

#### *Upgrade defense*

Select how obsolete units are replaced by modern variations. You can select a factor like “2x”. When new unit is stronger by this factor then unit in the base will be replaced by modern variation. This will keep your defense up to date. You can also select “Never” to prevent AI from upgrading your units.

#### *Build new attackers*

When set to “Yes” new attackers are build when base has nothing else to do. When set to “No” the energy is used for research instead.

#### *Cancel AI when*

Select condition when the AI should be cancelled and control returned to player. “Nothing to do” will cancel AI when nothing can be constructed according to chosen parameters. “Era advanced” will cancel AI when civilization advances to new Era. “Never” means that the AI will never cancel on its own, but it can be still cancelled manually.

## **Diplomacy information**

Keyboard: “F4”

Mouse: right click on territory or unit

This screen displays diplomatic relations and basic information about civilization that owns the field or unit. On unowned field without units it displays information about player's civilization.



On top you can see civilization name displayed in it's colour. Below is basic information:

**Status**

Diplomatic status with displayed civilization. See Diplomatic relations.

**Aggression**

How aggressive is the civilization. See Civilization attitude.

**Morale code**

Policy followed concerning attacks in neutral space. See Civilization policies.

**Relations**

Relations with displayed civilization. See Diplomatic relations.

**K. scale**

Kardashev scale index of displayed civilization. This gives you general information on how advanced the civilization is. See Kardashev scale.

## Allies

List of allied civilizations from most to least advanced.

## Enemies

List of civilizations the displayed civilization is at war with. From most to least advanced.

## Attrition information

This is only displayed if you view your own civilization. You can see how much do individual factors contribute to overall attrition (bases, units, ranking, superiority).

## Command buttons

Following command buttons might be displayed depending on status:

*Close* – close the window (you can also use “**Esc**” or right click to close the window)

*Offer peace* – offer peace to civilization that is at war with you

*Offer alliance* – offer alliance to civilization that is neutral to you

When making an offer proposal is sent to the target civilization. You will get their answer on the next turn among the messages (see Messages).

## Messages

Keyboard: “**M**”

Each turn you might get messages informing you about important events or diplomatic proposals from other civilizations. When there are any messages waiting you will see green blinking text like “2 unread messages” displayed on top left of the screen:



1 unread message

By pressing “**M**” you will display next unread message. The view will shift to the location which is relevant to the message. If it is diplomatic proposal you will also get option to answer it.



Cityburn finished building Scout

You can take following actions:

*left click or enter*

Close message and open next message in queue. In case of diplomatic proposal selected answer is sent to the sender's civilization.

*right click or Esc*

Close message and return control to game without displaying next message. This is useful when you want to take some action before proceeding to the next message. The viewed message is discarded unless it was diplomatic proposal in which case it is preserved so that you can answer it later.

*mouse wheel or arrows*

Change answer to diplomatic proposal.

Following answers can be chosen for diplomatic proposals:

*YES* – agree to the proposal

*NO* – reject the proposal

*CHECK* – does not answer yet but check the situation first. Message is preserved in this case.

All unread messages are discarded at the end of turn.

## **Keyboard controls summary**

↑,↓,←,→ - move unit / view

- in menu: select item / choose menu option

**Numpad 1-9** - same as ↑,↓,←,→ diagonal movement possible

**Ctrl + move** - combat simulation (when moving into field occupied with non-allied unit)

**Tab** - select next unit without order. If no such unit then select next base without order

**Shift+Tab** - select next base without order

**Ctrl+Tab** - select next child object (e.g. planet in star system, star in galaxy etc.)

**Enter** - select next unit without order on field

- in menu: accept selected menu item

**c,C** - select next unit on field (also units with given orders)

**Spacebar** - skip turn (unit or base will be considered as moved/having orders for this turn)

**d,D** - defend. Unit will stay on the field defending against any attacks

**s,S** - sentry. Unit will stay on the field. When enemy gets into unit's radius the unit will be awakened to give it new order

**g,G** - goto. Unit will try to get to selected destination (destination must be within stage)

**Ctrl+g,G** - goto: all units on the same field will receive the goto command

**f,F** - follow unit. Select another unit. Your unit will follow selected unit until order is canceled or selected unit is destroyed

**p,P** - protect unit/field/base. Select target to protect. Your unit will stay close to target and attack any enemies that get near. If target is another unit the protector will follow the protected unit when it moves. When protector unit is destroyed you will get message so that you can replace it or otherwise react to the enemy

**e,E** - explore. Unit will try to explore the stage (map) it is in

**b,B** - build new base (with constructor)

- in base: construct new unit/building or give/cancel orders

**Delete** - destroy unit

**Page Up** - move unit to upper stage. Unit must be able to move to upper stage and it must have full health and movement

- view (no unit selected): move view to upper stage

**Page Down** - move unit to lower stage. Unit must be able to move to lower stage and it must have full health and movement. You can select any field on lower stage to move your unit into. You can only move to fields that are not occupied by enemy or neutral units.

- view (no unit selected): move view to lower stage
- m,M** - read next message (when unread messages text is blinking on upper left)
- t,T** - resend tutorial messages. All tutorial messages that were displayed so far are sent again. You can read them using m/M key.
- Ctrl 0-9** - set bookmark. You can bookmark either unit or field
- 0-9** - recall bookmark. View is moved to the remembered location. If the bookmark is unit it is selected. You can recall bookmarks also when giving order (goto, follow, protect) when the bookmark is in the same location. This can help you to easily move new units to some important (bookmarked) location
- Esc** - display main menu
  - in menu: close menu without accepting any choices
  - in simulation: cancel simulation
- F1** - help screen (command summary)
- F2** - energy allocation / research goals
- F4** - diplomacy info / offers. To view summary about rival civilization select field or unit they own and press F4
- F11** - simulation. Allowed only when your civilization is destroyed (no units or bases left) or when debug mode is activated. In simulation mode all Universe maps and unit/bases locations are revealed. Computer will play for all remaining civilizations. You can stop the simulation at any time by pressing Esc and run it again pressing F11. During simulation autosave is used every 100 turns. You can use simulation mode to observe AI strategies or just to have some fun watching the empires fight for dominance. Easiest way to try simulation mode is to simply delete both starting units in new game (using Delete key) and then using F11 key
- F12** - end current turn, control question is asked to confirm

## ***Mouse controls summary***

### **Left mouse button on**

- unit** - select unit. When more units are in field you can repeat the click to select other units on the same field
- base** - select base
- field** - select field on map
- unit list** - when more than 1 unit is present on field the list of units is shown on lower left part of the map. You can hover over the units in the list to see their attributes and you can click on them to select them directly
- minimap** - move view to selected part and select the field. You can hold the mouse button to move view fluidly
- menu/window** - select menu option and accept it
- G/F/P** - when selecting target for goto/follow/protect order you can change the target of this command and move around map. To select the destination of command use right mouse button click

**message** - discard message and move to next message

**diplomatic message** - accept selected choice

### **Right mouse button on**

**selected unit** - move unit to selected field or attack if it is occupied

**Ctrl + move** - you can use Ctrl + right click on occupied neighbouring field to view combat simulation (expected results of attack)

**base** - construct building/unit or give/cancel commands to base

**owned field** - show diplomacy information for civilization that owns the field

**neutral field** - read next message (when unread messages notification is displayed) or end turn (when end turn notification is displayed)

**outside map** - read next message (when unread messages notification is displayed) or end turn (when end turn notification is displayed)

**menu / window** - close menu / window without making any choice (like **Esc** key)

**G/F/P** - accept destination for goto/follow/protect command

**message** - discard message but do not display next message (so you can react to last message)

**diplomatic message** - close message without answer but keep the message so you can check the situation before making decision

### **Double click with left mouse button on**

**base** - construct building/unit or give/cancel commands to base

**outside map** - select next unit / base without orders

### **Mouse wheel on**

**selected unit** - move unit upper stage or lower stage

**no unit selected** - move view to upper stage or lower stage

**menu** - change menu option

**diplomatic message** - change answer to message

## Game concepts

This chapter describes game concepts and objects you will encounter while playing.

### Introduction

Infinity is civ-like game taking place on a much larger scale. Starting as primitive civilization on planet you continue on to colonize your star system and neighbouring planets. Further moving to settle galaxy and so on... But you are not alone. More than hundred of other civilizations can compete with you for the control of the whole universe. Conquering your home planet is just the beginning.

To keep it manageable many things are simplified while various options are available to automate micromanagement of bases and units. Main focus is placed on expansion and combat.

To make things more interesting and less artificial, many attributes are assigned to terrain and units that will be slightly different from one to other. So you will seldom find too fields or units which are completely identical. You don't need to pay too close attention to all those numbers – “plains” will always provide plenty of food while “mountains” will be rich of metal. Similarly the Attacker unit will always be good for attacking. But when you want to get all advantage you might sometimes check exact values.

### Kardashev scale

Civilization progress in Infinity is inspired by the “Kardashev scale” that generally says: *The technological level of any civilization can be defined by its energy output.*

Modified Kardashev scale index is used to describe the overall technological level of civilisation:

Modified K.index	Energy produced by civilisation equals to
0	No energy produced.
1	Average life friendly planet.
2	Average star system.
3	Average galaxy.
4	Average cluster.
5	Whole Universe.



Your K.index is displayed in the civilisation information area as yellow number in red circle. Other civilization's K.index can be checked in the diplomacy information screen (see Diplomacy information).

### Stages and eras

Stage and era defines technological advancement of civilization. Stage basically says what space is reachable and available for colonization. Each stage is divided into eras that correspond to the technological level achieved in the given stage.

To progress into another era or higher stage, your civilization must achieve certain energy

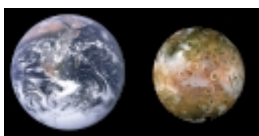


output. That means sum of all energy produced by whole civilization (in one turn) must reach certain breakpoint to advance further. This advance gives you access to more powerful units as well as it usually increases output of produced resources by great amount. The transition to higher era is not instantaneous, it will usually take several turns to reach full potential of production corresponding to new era (upgrading equipment takes some time). During the transition any civilization is vulnerable – new modern units cost a lot and until the transition is completed it might be hard to build new units. So keep this in mind when moving on. After the transition is finished the civilization is usually vastly superior to any other on lower era.

There are five stages and each of them consists of four eras. Each higher stage covers much more space than lower stage – so while map for Planets can be quite small, Galaxy is much bigger to explore.

To allow quick identification of location each stage has dominant colour for its bases and units.

## Stage Planet



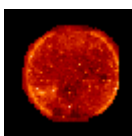
Dominant colour: **none**

This is the first stage. Only your home planet is available for colonization. You can expand to all land based terrain. On last era you will be able to construct bases on water too. Moreover constructors and scouts from last era will be able to move to space and explore your home star system.

Primary resource for military units is **wood** replaced by **metal** in later stages.

Each planet has slightly different colour which can be observed on its terrain as well as on the star map. This is caused by the different spectrum of star light or differences on planet atmosphere or composition.

## Stage Star system



Dominant colour: **blue**

Star system is planetary system of your home star. Now you are able to colonize all planets orbiting your star or build space bases in the vastness of space. Last era units will get access to the Galaxy. Unlike Planet stage, also military units (Attacker, Defender) will be able to move to upper stage.

There are two types of planets – life friendly or dead planets. Dead planets are more common and can be colonized too. They are rich mostly on mineral resources. Life friendly planets are bigger but rare. Quite often your home planet will be the only planet supporting life in the star system. In case there is another such planet it is possible that rival civilizations will develop there. This can lead to planetary wars competing for resources of your star system.

Primary resource for military units is **metal**.

## Stage Galaxy



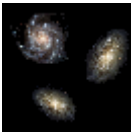
Dominant colour: **green**

Galaxy consists of many stars or various clouds that are leftover of burned out stars or cradles for new formed stars. At this stage you are able to colonize all star systems in your home galaxy (including their planets) as well as the galaxy itself. Reaching last era will allow you to move to the cluster.

As the Galaxy often contains many stars, the competition here is usually very fierce. At this stage you will probably meet many alien civilizations from neighbouring star systems. It is quite likely that you won't be first to reach here – be careful.

Primary resource for military units is **metal**. In later stages **matter** stars to play role as well.

## Stage Cluster



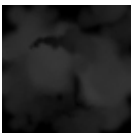
Dominant colour: **red**

Galaxy cluster represents group of galaxies which are relatively close to each other in the vastness of space. Only very advanced civilizations can reach this stage. Here you can come across some truly exotic stuff – be it black holes which can be exploited as very powerful energy source or you can look out for exotic matter or particles which can greatly enhance your units.

Competition here is usually smaller than in galaxy. You can be the first one reaching here especially if neighbouring galaxies can't resolve their conflicts. On the other hand, while you could still find uninhabited star system in the galaxy, it is very unlikely that you will find uninhabited galaxy in the cluster. Colonizing the cluster itself becomes the priority.

Primary resource for military units is **metal** and **matter** with **matter** becoming more important with each new era.

## Stage Universe



No picture of universe is actually available. As far as we know there was no contact with any “outside” observer who could provide it...

Dominant colour: **yellow**

Universe is last and final stage. It consists of clusters of galaxies as well as most exotic objects – be it massive black holes or antimatter. It is also very big and it will take some time even for the fastest scout ship to traverse it all.

Only the largest and most powerful will ever reach here. Whoever can get control of the Universe will become undisputed master of all.

It is quite likely you will find more opposition here than in cluster. For one, there are usually

more clusters in Universe than there are galaxies in cluster. It is also likely that at least one of them produced strong civilization or alliance. Still it probably won't be as fierce as in galaxy – map is much bigger and there are usually less players around. But the stakes are highest so do not underestimate the quiet of the vast space.

Primary resource for military units is **matter**, while **metal** in smaller quantities is still required in earlier eras.

## **Era Explore**

This is the first era of any stage. The main focus of this era is exploring the map and founding first bases in the area. This is also first moment when bases in the stage start to produce to their full capacity (when they were founded in advanced era of previous stage).

## **Era Colonize**

The focus of this era is colonization – founding bases across the stage. This can become to be a chase for taking places with important resources.

## **Era Combat**

Third era – by this time all the usable space is usually taken up by colonies. As the empires can grow no longer and the need for gathering enough energy for advancement becomes a struggle – the wars for more territory are likely to happen.

## **Era Advance**

The final era of the stage showing your empire has mastered the current space and is ready to move on. Scouts and constructors from this era can enter higher stage to found early colonies or settle neighbouring areas. For all stages except planet also the military units from Advance era can enter the upper stage to help establishing early presence.

## **Resources**

Resources are automatically harvested by bases on fields they control. There are two kinds of resources.

*Basic resources* are fundamental for running any empire. Every civilization will need them to provide for all basic needs.

*Rare resources* are infrequent but when available they can greatly enhance military units abilities. They are not necessary for development but can tip the balance of military strength to one controlling them.

Resources sometimes become available only after advancing to later eras.

When icon of basic resource is shown on the terrain it means that this field can produce this basic resource in much larger quantities than other fields of such type. Such field is good spot for bases especially if you are in need of given resource.

When icon of rare resource is shown on the terrain it means that this rare resource can be harvested from this field. Such fields become very good strategic spots to build base since no other fields can produce rare resources.

## Food



Food is *basic resource* required for every base to sustain its population and to grow bigger. Lack of food will diminish population which will have negative effect also for harvesting other resources.

## Energy



Energy is most important *basic resource* (with possible exception of food). Energy is used for about everything – constructing buildings or units, researching new technologies as well as for advancement to higher eras / stages.

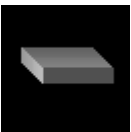
It is also main component for constructing light versions of military units. So even if you lack “military” resources (wood, metal, matter) you can still build at least weaker units. On the other hand you can't build anything without energy.

## Wood



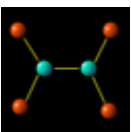
Wood is *basic resource* required for training stronger military units in early eras of Planet stage. After this period it soon becomes obsolete and useless. Do not underestimate its importance in early game though or you might find your units inadequate for any serious combat.

## Metal



Metal is *basic resource* required for training stronger military units in later eras of Planet stage and it becomes primary requirement for strong military units through Star System and Galaxy stage. Its importance starts to diminish in Cluster stage but it is still required in small amounts even in Universe stage until the very late eras are reached.

## Matter



Matter is *basic resource* required for training stronger military units. It is required in small quantities in late galaxy eras and becomes more and more important through the Cluster and Universe stages replacing metal completely at the very end of the game.

## Fuel



Fuel will be probably first *rare resource* you will come across. It is most common of rare resources and can be found on all stages in various quantities. When used in unit construction fuel significantly increases speed of the unit.

## Crystals



Crystals are possibly most useful of the *rare resources*. However it is very scarce and can be only found in small quantities on dead planets. This resource alone can make it worthwhile to explore all the planets you can get access to and building infrastructure to get them.

Unlike other rare resources much smaller quantity of crystal is necessary for building military unit. This makes it possible to use even small quantity of crystals found to improve units on much higher stages.

When used in unit construction crystals significantly increase reactor of the unit. This will effectively make the unit almost as strong as units built in later era.

## Heavy metals



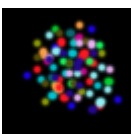
Heavy metals are *rare resource* found in earlier stages – star systems and galaxies. After fuel they are probably most common of the rare resources. When used in unit construction heavy metals significantly increase armour of the unit. In later stages the available quantity of heavy metals will make its use impractical.

## Exotic matter



Exotic matter is *rare resource* found only in later stages – clusters and Universe. They are the ultimate answer for defending significantly increasing defence of any unit they are used on.

## Exotic particles



Exotic particles are *rare resource* found only in later stages – clusters and Universe. They are the ultimate answer for attacking significantly increasing attack of any unit they are used on.

## Terrain

You will come across various types of terrain while exploring the vastness of the universe. Each field has sets of attributes which describe what can be harvested from it or how it will affect movement and combat of units.



Neutral Galaxy Dust cloud		
Attack Mod. 0.92	Food 3.7	Fuel 0
Defense Mod. 1.22	Wood 0	Crystals 0
Move Cost 1.43	Metal 5.68K	Heavy metals 0
Cultivation % 0	Energy 3.06K	Ex. particles 0
Era Progress 0	Matter 567	Exotic matter 0

*Dust cloud field in Galaxy stage*

## Terrain attributes

Each attribute quantity is denoted by number. On terrain display these numbers are also represented by coloured bar to allow easier orientation. As the progress goes towards higher stages, the quantities will exponentially grow to very large numbers. Simplified notation is used for denoting such large numbers – number is then followed by one letter which denotes the scale:

**K** – kilo (5K means 5000)

**M** – mega (3M means 3000000)

**G** – giga (7.2G means 7200000000)

**T** – tera (2.12T means 2120000000000)

The colour coding from least to highest is: **blue, green, red, yellow**. Each colour comes in various shades – brighter generally means bigger quantity.

### *Attack mod.*

This attribute denotes attack bonus/penalty when unit is attacking from this field. The attack value of unit is multiplied by this number.

### *Defence mod.*

This attribute denotes defence bonus/penalty when unit is defending on this field. The defence value of unit is multiplied by this number.

### *Move cost*

Number of move points spent when moving to this field. When moving diagonally the move cost is multiplied by  $\sqrt{2}$  (travelled distance is longer).

### *Cultivation %*

When the field is in radius of base the Cultivation represents the level of infrastructure built. Quantity of harvested resources is limited by this factor. For example if the field provides 50 wood but it is only cultivated to 20% you will harvest 10 wood per turn.

Cultivation will slowly increase by itself as the base grows (assuming enough food is available for base to grow). The level of cultivation is graphically shown on map by transparent mesh. The more cultivated the field is the finer granularity of the mesh is shown:



Cultivation mesh shown on map from least cultivated (left) to most cultivated field (right)

Cultivation of field can also decrease. This happens when there is not enough food available and base population decreases. Significant damage to cultivation is also done whenever combat occurs on cultivated field. Presence of enemy units on cultivated field will decrease cultivation as well (pillaging).

Cultivation also decreases movement cost for own units allowing them to move faster through most cultivated areas. Cultivation provides also combat bonuses for units in home territory. The higher the cultivation the better movement and combat bonuses you get.

### ***Era Progress***

When civilization advances to higher era it will take several turns (up to 20) to fully adapt to new technologies. When this happens the progress of this adaptation is shown in the “Era Progress” field. Income of resources available on higher era will be limited by this factor until the transition is fully achieved.

### ***Food/Wood/Metal/Energy/Matter***

Quantity of basic resources available on current technological level. Full amount is only harvested when both cultivation and era progress are on 100%.

### ***Fuel/Crystals/Heavy metals/Ex. particles/Exotic matter***

Quantity of rare resources available on current technological level. Full amount is only harvested when both cultivation and era progress are on 100%. Rare resources are only found on fields with rare resources icon displayed.

## **Life friendly planet terrain**

Life friendly planets are planets with conditions favourable to support life. All civilizations evolved and begin on life friendly planets. They are excellent for food production.

### ***Plains***



**Resources:** Mainly food and energy

**Military:** Average on all accounts, no special advantages or disadvantages.

Plains are vast patches of fertile land mostly used to grow food. There is enough space to build infrastructure which leads also to good energy output. They are easily crossed and do not provide any advantages or disadvantages in combat.

### ***Forest***



**Resources:** Mainly wood and food. Some energy too.

**Military:** Difficult to cross. Good defence bonus and moderate attack bonus.

Forests are small or vast areas of trees that provide mostly wood. As most of the space is taken by trees their usefulness somewhat diminish once the wood is no longer necessary. From the military point of view they provide good natural fortification to increase defence as well as good hiding place to launch surprise attacks increasing their attack value.

### *Hills*



**Resources:** Mainly energy. Moderate quantities of metal, food and wood. All-round field.

**Military:** Difficult to cross. Good defence bonus and very good attack bonus.

Hills rise up above surrounding territory making them great sites for solar or wind power plants producing good amount of energy. They usually have some deposits of ore as well as sparse forests on the slopes providing smaller quantities of metal and wood. In combat the higher ground their provide is great asset for both defence and attack.

### *Mountains*



**Resources:** Mainly metal. Small to moderate quantities of energy.

**Military:** Very difficult to cross. Great defence bonus but weak attack.

Mountains are high and hard to access areas. Their rich ore deposits make them ideal for producing metal. Thanks to their high ground they can be used to produce energy to some degree as well in later eras. However food and wood is almost non-existent on mountain areas. From the military point of view the high ground and hard terrain makes them ideal places to fortify providing huge defence bonus. On the other hand crossing the hard terrain to launch an attack is difficult as well making attacks somewhat less effective than from other fields.

### *Desert*



**Resources:** Energy. Nothing else can be really obtained in desert areas.

**Military:** Difficult to cross. Hostile environment making both attack and defence difficult.

Deserts are dry and barren areas consisting mostly of sand or rock. They are mostly useless but can be used in later eras for energy production as the large open space and lot of sun makes them ideal place for solar plants. Moving through desert areas is unpleasant and hard on equipment. Both attacking and defending in desert is done with less efficiency.

### *Water*



**Resources:** Mainly food and energy (esp. in later eras).

**Military:** Can be only crossed by later era units. No special advantages or penalties.

Bodies of water – be it lakes or seas – provide plenty of food thanks to the fish and modern era sea farms. They provide also good source of energy especially in later eras. However water is not passable by early units and can be only entered when more advanced units are available. Like plains it provides no special advantage or disadvantage during combat.

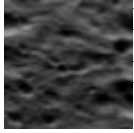
While water fields can be harvested from earliest eras you can only build cities in water with modern constructors coming in the latest era of the planet stage.



## Dead planet terrain

Dead planets can be colonized only after civilization can move across its home star system. They are small in size but provide excellent opportunities for mining since one does not have to take preservation of local environment into account.

### *Barren plains*

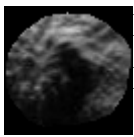


**Resources:** Metal and energy, some food.

**Military:** No special advantages or penalties.

Vast areas of barren planet surface usually provide good ore deposits and enough space to build efficient power plants or artificial farms. They give no bonus or penalty for combat.

### *Barren mountains*

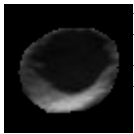


**Resources:** Mostly metal, moderate energy, some food.

**Military:** Very difficult to cross. Great defence bonus but weak attack.

Impressive mountain ranges on dead planet contain very rich ore deposits and are best suited to produce metal. High ground provides good place for solar plants but only smaller areas for growing artificial food. The mountain ranges are very difficult to pass and offer very good defence bonus. Attacking is less efficient though for the same reasons as on life friendly planet mountains.

### *Crater*



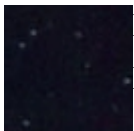
**Resources:** Mostly energy, moderate food and metal.

**Military:** Difficult to cross. Disadvantage for both attack and defence.

Craters are impact zones left by huge meteoroids impacting on planet surface. They are well placed for accessing geothermal energy as well as building solar plants on the slopes. Their ore deposits are not as large as on other barren places though. There is more place to produce food than in barren mountains but less than on barren plains. Lower ground and short range of sight makes craters bad place for conducting any combat, be it attack or defence.

## Star system terrain

### *Void*

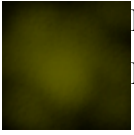


**Resources:** Energy. When not in deep space also food.

**Military:** No special advantages or penalties.

Interplanetary void - vastness of free empty space. It can be used for orbital solar or fusion plants producing energy. When close to more resourceful territory it can be used for farms producing food. In deep space this becomes impractical and no food can be produced. Empty space provides no hindrance for passing ships nor any military advantage for either side.

### *Solar wind*

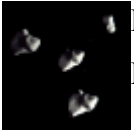


**Resources:** Energy and food.

**Military:** Slightly harder to cross. Slight bonus for attack but bad for defence.

Solar wind is similar to void with much more high energy particles coming from the star. This makes it great place to produce high amounts of energy which can be also used for growing artificial food. As it is more dense than void the ship movement is slowed down a little. Abundance of energy makes this place good for powering an attack but it can interfere with sensors or shields making it poor place to defend.

### *Asteroids*

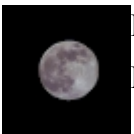


**Resources:** Mainly metal, but also some food and energy.

**Military:** Difficult to cross. Good defence but weaker attack.

Asteroid belts are places where not fully formed or destroyed planet fragments are grouped together. These fields are rich on ore making them excellent to produce large quantities of metal. However there is not much space left to grow food or produce energy so these are found only on limited amounts. Asteroids are very hard to cross requiring passing ships to slow down considerably. They provide excellent hiding place and natural shield making it ideal place to fortify. Lack of manoeuvrability and short range of sight make it bad place to launch attacks.

### *Moon*

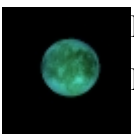


**Resources:** Great for metal, good food production and adequate energy.

**Military:** Very good for both defending and attacking.

Moons are natural planet satellites of considerable size. They can only be found near planets. As smaller version of planet they provide good base for growing food and rich ore deposits make them great for producing metal. As natural fortress in the planetary void they provide great defensive and offensive bonuses.

### *Dwarf planet*



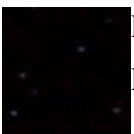
**Resources:** Great for food and energy, adequate quantities of metal.

**Military:** Very good for both defending and attacking.

Dwarf planets are planetary bodies which are not big enough to be classified as planets but they usually have some atmosphere or geological activity. These are great all-round places to establish far-away bases. Abundance of food and energy will let the base to grow quickly. Ores are not as common as on moons but they still come in acceptable quantity. On top of this they are great places for attacking as well as defending. Their main disadvantage is that they are often found alone in the middle of empty space making the base to rely mostly on the planet resources.

## **Galaxy terrain**

### *Void galaxy*



**Resources:** Energy. When not in deep space also food.

**Military:** No special advantages or penalties.

Galaxy void – vacuum gets even less dense in Galaxy than ever before. Not much more than pure energy can be produced here. On boundaries with more solid objects artificial farms become plausible for growing artificial food. Empty space provides no hindrance for passing ships nor any military advantage for either side.

### *Ultraviolet radiation*

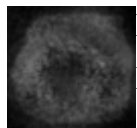


**Resources:** Energy and food.

**Military:** Slightly harder to cross. Slight bonus for attack but small penalty for defence.

Areas of high powered UV radiations are great places to produce energy. This can be then used to power artificial farms to produce some food. Shielding required to protect it from lethal radiation drops the productivity little comparing to the void. The hostile environment hinders all passing ships by small amount. On the other hands it can be used to enchant weapons while it interferes with ships defence mechanisms. Since the ships are more advanced now this effect is somewhat less noticed than on solar wind.

### *Dust cloud*

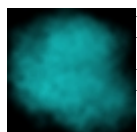


**Resources:** Lot of metal and moderate food, less energy. Small amounts of matter.

**Military:** Harder to cross. Slight bonus for defence.

Dust clouds are areas similar to void but with much higher density of particles. They are often leftover of burned out stars and are rich on ore that can be used to produce metal. Standard artificial food can be grown but the dark and dense space makes it less suitable for producing energy. In later eras small entities of matter can be mined from dust cloud fields. This makes it nice all-round terrain for bases lagging only a little in usefulness behind the protostar clouds. Higher density of space makes ships slow down noticeably. As good hiding place it provides some defensive advantage but since these clouds are not so good as natural shields the effect is much less than on asteroid fields. On the other hand the attack effectiveness is not hindered much.

### *Protostar cloud*

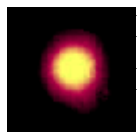


**Resources:** Food, metal, energy and matter are all found in good quantities.

**Military:** Harder to cross. Slight bonus for defence.

Protostar clouds are areas of rich matter where new stars are being born. They are the best all-round terrain to settle in the galaxy and are always searched for. The rich amounts of active matter make it possible to produce good amounts of energy as well as refine ore to get metal or process it in raw state to get nice quantity of matter. Because of abundance of resources food can be produced easily in this environment too. Ships passing there are are slowed down and can use the surroundings to hide to some degree making defence little more advantageous here.

### *Dwarf star*

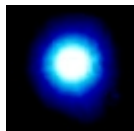


**Resources:** Good food, metal and matter, moderate energy.

**Military:** Significant bonus for attack and defence.

Dying stars without enough mass to end with massive explosion. These stars are rich on matter and metals they created through their fruitful life. However the energy produced by them is not up to the standard. As areas close in conditions to home stars they are ideal for growing large quantities of food making them good places for stranded colonies. Tactical advantage of controlling star makes it very good place for both attacking and defending.

### ***Blue star***



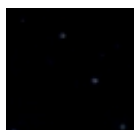
**Resources:** Huge amounts of energy, good food. Weak on metals and matter.

**Military:** Very high advantage for attacks and significant bonus for defence.

Blue stars are massive stars producing very high amounts of energy through natural fusion. As providing similar environment to home stars they are good places for growing food. The metal and matter deposits are low though since the fusion is still on its top and not enough usable material was produced yet by the star. Controlling the star gives significant advantage for defending. Adding the easy availability of high energy they become very lethal to attack from.

## **Cluster terrain**

### ***Void cluster***



**Resources:** Energy. When not in deep space also food.

**Military:** No special advantages or penalties.

It is hard to imagine cluster void – to cross space between galaxies, even nearby, requires most cunning technology and skill. This place is truly empty but it comes in great quantity. Energy is the only resource that can be produced in this emptiness. Where the emptiness is broken by various exotic objects, building artificial farms becomes a possibility. As with other empty space it provides no obstacle for passing ships nor any military advantage for either side.

### ***Gamma radiation***

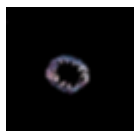


**Resources:** Energy and food.

**Military:** Slightly harder to cross. Disadvantage for both attacking and defending.

Gamma radiation is one of the most lethal high energy radiations one can encounter. This makes it excellent for producing energy but hostile for any other activities. Heavily shielded artificial farms can grow moderate quantities of food but it is not thriving place. The radiation interferes with all ship systems slowing down their movement as well as hindering any attack or defence potential.

### ***Black hole***



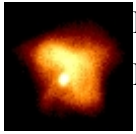
**Resources:** Huge energy, large quantities of matter.

**Military:** Extremely difficult to cross. Greatly reducing attack and defence.

Black holes are one of the most exotic and dangerous objects existing. Their extreme mass makes them into ultimate energy source once one is able to exploit it. Large quantities of raw matter can be harvested in its vicinity as it is pulled inside of this monster. No food can be grown in this

extreme environment. The extreme gravity makes it very hard for any ships to manoeuvre or function. Any ship caught near black hole is in great combat disadvantage.

### ***Pulsar***



**Resources:** Good energy and food. Moderate metal and matter.

**Military:** Good attack. Only slightly increased defence.

Pulsars are rapidly rotating objects once thought to be sending signals created by advanced civilizations. Their rapid movement makes them into good source of energy. Pulsar's gravity and natural light makes it easy to grow food in large quantities. Moderate metal deposits as well as available matter makes it good all-round place for any colony. Available energy adds power to any attacking ships fire. The rapid rotation makes it more difficult to build effective fortifications making defence only slightly better than on empty void.

### ***Dwarf galaxy***



**Resources:** Excellent metal and food. Good matter. Small energy.

**Military:** Great for attack and defence.

Dwarf galaxies are galaxies smaller than their counterparts. As a result no life friendly conditions developed on them by itself. But they are still much alike to bigger galaxies and free to claim – giving access to great amounts of metal and matter as well as ideal place to grow lot of food to support large population. The energy provided by small galaxy is not up to par with other more exotic objects though. Still very valuable place to settle especially when adding its military potential as they provide huge advantage to any attacking or defending ships controlling its space.

### ***Dark matter***



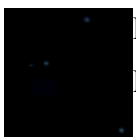
**Resources:** Large matter deposits. Moderate food, metal and energy.

**Military:** Difficult to cross. Provides good defence bonus.

Unknown for a long time, the existence of dark matter was indirectly suggested when mass of the visible objects did not correspond to the expected behaviour of the Universe. It provides vast resources of raw matter as well as moderate deposits of metal. While not in ideal conditions the artificial food can be still grown in sufficient quantities. The energy does not come cheap in this dark place though. Fields of dark matter are difficult to detect and hard to navigate through, slowing any ships considerably. On the other hand they provide natural hiding place as well as shield making it good place for defending.

## **Universe terrain**

### ***Void universe***



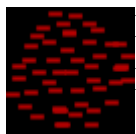
**Resources:** Energy. When not in deep space also food.

**Military:** No special advantages or penalties.

The ultimate reality of emptiness. Space where even galaxies are far away and the density of particles is as low as it will ever get. Whoever wanders here must be either crazy or very well

equipped. While all else is missing space is at premium and this can be used for producing some energy. On the borders of the void where some resources are still available food can be grown in acceptable quantities. Void is not capable of hindering any ship powerful enough to enter so movement and combat happens normally.

### ***Relict radiation***



**Resources:** Energy. Adequate food.

**Military:** No special advantages or penalties.

Background relict radiation is supposed to be uniformly spread across the Universe as an old memento of Big bang. So the scientists were very surprised to discover there are places in the vastness of space where the relict radiations is much more concentrated. So far no one has explanation for this though many theories are speculating on the issue. It takes most advanced technology imaginable to detect and actually use energy contained in this radiation – technology available to any race reaching Universe stage. Apart from rich energy source the food can be grown comfortably too. As relict radiation hardly interacts with anything it provides no hindrance nor advantage to either ship movement or combat capabilities.

### ***Threads of matter***

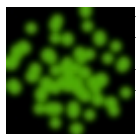


**Resources:** Good matter and metal, average food, smaller energy.

**Military:** Very hard to cross. Small defence bonus and slight attack penalty.

When “picture” of universe was constructed from position of known objects it was surprising discovery that it is not as empty space as one might expect. Huge “threads” of various matter are uniformly crossing the vastness of space. These places are excellent for producing metal or harvesting raw matter as well as fine for growing food. Unlike more exotic objects they are not that attractive when it comes to produce energy. As the Universe faring ships are constructed to operate best in empty space, crossing threads of matter becomes slow and lengthy endeavour. At least it provides ships with some natural defense though it hinders slightly any attacking manoeuvres.

### ***Antimatter***



**Resources:** Great energy and matter, sufficient food.

**Military:** Makes ships faster. Great attack bonus.

As the symmetry of physic laws suggests one would expect to find equal amount of matter and antimatter in the Universe. So one would often speculate what happened to it. As it turns out only the huge distances on Universe level allowed to create natural confinement for this substance. Large areas of antimatter fields can be found across the Universe. However they never touch normal matter and are always surrounded by void – the only natural state it could exist in. Thanks to the very reactive behaviour when coming in contact with normal matter the antimatter provides huge amount of energy. It is also great reservoir of raw (anti)matter which can be processed to normal matter. It is not exactly easy to settle it but latest technology provides enough shielding for bases and equipment and allows growing of food in adequate quantities. Antimatter provides great enchantment for propulsion systems making ships crossing antimatter fields faster than normal. Its addition to weapons make attacks from antimatter field very devastating as well.

## *Quasar*



**Resources:** Good amount of energy, food, metal and matter.

**Military:** Excellent attack and defence.

Quasars are far away objects usually found near the “boundaries” of the Universe. They provide good deposits of every resource – food, metal, matter and energy. Combining with huge combat advantage they provide to anyone controlling it makes them ideal place for building stand-alone bases.

## *Massive black hole*



**Resources:** Extreme amounts of energy, good amounts of matter.

**Military:** Almost impossible to cross. Extreme disadvantage in combat.

Massive black holes contain ultimate forces of nature and up to now are probably most feared phenomenon to be encountered by any star ship captain. Grown to much bigger size than their cluster smaller siblings, massive black holes provide extreme amounts of inextinguishable energy. Good amount of raw matter can be collected in their vicinity as well. However they are completely useless for growing food or producing metal. To cross the black hole every known ship will take at least one full turn – it is always better to fly around. Extreme gravity and conditions near the black hole make it worst possible place where you would want to fight – attack and defence of any ship is reduced by huge amount.

## *Units*

There are four main unit types each coming in three variations. Each new stage/era comes with its own unit icons and increased statistics. Four unit types might not seem much but because of customization through research and buildings you will rarely find two units with exact same attributes (except for the very beginning of game). Each unit has its own unique stats and the few types should make it easy to decide what the unit is for without having to study exact numbers. Graphical representation will help you to see which unit is more advanced and the dominant colour of unit makes it easy to recognize what stage the unit belongs to.

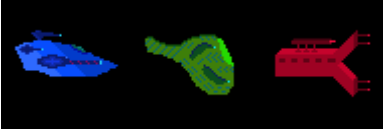
## *Scout*



Scouts are used for exploring unknown territory or for quick spying of enemy locations. They are cheap and expendable. Scouts are faster than other units and see further. However scouts are the weakest units in combat. They don't pillage us much as military units but they also cause only small drop of relations when on non-ally territory.



## Attacker



Attackers are the best units for attacking but they lack somewhat at defence. Protecting bases, patrolling territory, harassing enemy or capturing bases are all roles best performed by these units. Using large numbers of lighter versions or few heavy attackers are both viable options.

## Defender



Defenders perform best when defending against attack though they can be used with some success to attack scouts, constructors, attackers or less advanced units. Used primarily to protect bases but useful also for defending key locations or providing escort to other units. Defenders are slightly slower than attackers.

## Constructor



Constructors help you to expand empire as they are the only unit capable of establishing new bases. They have no attack capability but their sturdiness make them someone capable when defending especially against enemy scouts.

After founding base the constructor is disbanded to create one defensive unit helping with protection of new base. This defender can not be moved outside base but it can be disbanded.

## Unit variations

### Light units

Light units are fastest but have only small armour. They can also repair any sustained damage quickly. Primary resource needed for light units is Energy and only small amounts of other materials are necessary. This makes it fastest unit to produce in most bases since Energy is most common resource. Bases without access to other resources will usually have to resort to light units and use quantity instead of quality.

Light variation is best suited for scouts (which prefer movement) and constructors (because of cost).

### Medium units

Standard units with armor about twice as strong as light units but little slower. Lot more of other resources (wood, metal and/or matter) are necessary to produce them. For combat units this is preferable to light variation when enough resources are available to build in reasonable time.

### Heavy units

Ultimate combat version of units best suited for attackers and defenders. Armor is



approximately three times as strong as on light units but movement and repair speed is even more reduced. Their main attribute (attack for attackers, defence for defenders) is slightly increased. Large quantities of wood, metal and/or matter are required to build them but they cost slightly less energy than lighter variations.

### **Constructor and unit variations**

When it comes to constructors the unit variation plays another role. The cost of medium or heavy constructors is quite extreme but all resources spent on constructing it are stored in newly formed base and can be used to speed up early production or growth (food). Keep in mind though that if new base does not have enough storage for the resources anything overflowing storage will be discarded if not used for production on 1<sup>st</sup> turn.

Heavier variations will also produce stronger initial defending unit. Medium constructor will create medium defender and heavy constructor will produce heavy defender. Thus heavy constructor, when possible to build, can be sent to colonize distant or more dangerous places as the constructor itself will have bigger chance to survive as well as the newly formed base.

### **Unit movement through different stages or special terrain**

Generally each unit can enter one stage below its origin (e.g. galaxy units can enter star systems but not planets). Combat abilities are somewhat worse when operating on lower stage but usually still superior to lower stage units. To enter lower stage the unit must be on the corresponding field (e.g. planet field in star system), have full health and full movement. Using **“Page Down”** key moves unit to lower stage (you can select any unoccupied field where you want to enter this lower stage).

Only last era (Advance) units can enter one stage up (e.g. Advance era galaxy scout can enter cluster). These are the units which will allow you to colonize upper stage or neighbouring stage. There are two exceptions to this: On planet only last era scout and constructor can enter star system, not attacker or defender. On Universe no unit can enter upper stage since this is the last stage available. To enter upper stage the unit must have full health and full movement. Using **“Page Up”** key moves unit to upper stage.

Water on planet can be entered by last era units and also by Combat era scout (scout plane). Explore, Colonize and other Combat era units can't enter water fields. Constructors that can enter water can also build bases there creating water cities. These can be attacked only by other units that can enter water.

### **Unit attributes**

Unit attributes describe various unit capabilities, strengths or weaknesses. The same numbering / colour coded convention is used as for any other attributes (see [Terrain attributes](#)).

#### **Attack**

Chance of hitting target and amount of damage done when attacking. Most important for Attackers.

#### **Defence**

Chance of hitting target and amount of damage done when defending. Most important for Defenders.

#### **Energy base**

Technological level of unit – most important attribute for combat but hard to increase except

by advancing to new eras. It describes the energy available to unit coming from ship reactor or even bare muscles. It affects various aspects of combat but most significantly the damage done per successful hit.

### **Hit Points**

The amount of damage the unit can absorb before being destroyed. Damaged units move slower and also perform worse when fighting. Always try to finish off the damaged units because it is harder to reduce hit points from full health to  $\frac{1}{2}$  than to reduce it from  $\frac{1}{2}$  to zero. This is another reason why heavy units are stronger: They can operate at full potential even after taking lot of damage while light unit will drop in efficiency after very few hits.

### **Move**

Distance the unit can move in one turn on terrain without any movement penalty or bonus. Keep in mind that when moving diagonally the distance (movement cost) is multiplied by  $\sqrt{2}$ .

Unit can move to neighbouring field if remaining move points are higher than  $\frac{1}{2}$  of movement cost required to enter target field.

Unit with full move points can always move at least 1 field even if the movement cost would be too great otherwise.

### **Sight**

Distance the unit can see revealing undiscovered terrain or other player units.

### **Heal Rate**

Base rate of healing when unit is damaged (in % of total health per turn). Unit heals faster in home territory and slower in enemy territory.

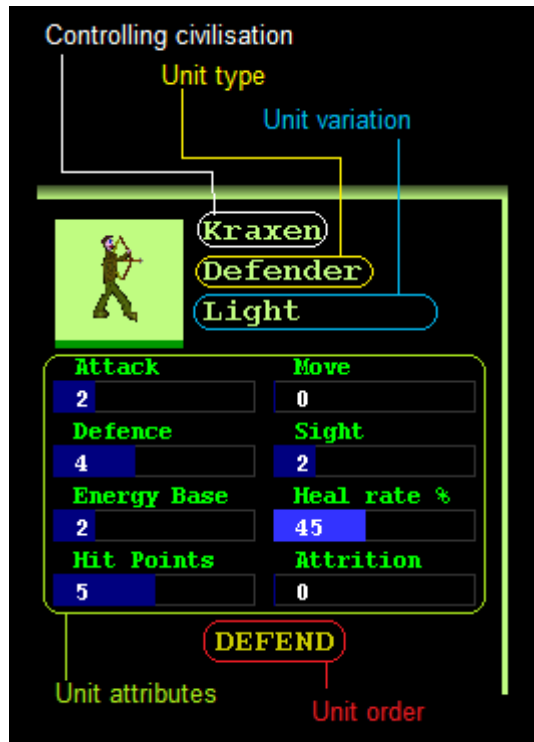
### **Attrition**

This shows the logistic cost of supplying the unit and is set when unit is build according to current technological level. Researching technology to reduce attrition will have no effect on already existing units only on new units.

The value (smaller is better) is how much will unit contribute to total attrition when on neutral territory. This is much less on allied or owned territory especially when unit is stationed in owned base. On the other hand it increases greatly when on enemy territory making supporting units on enemy territory expensive.

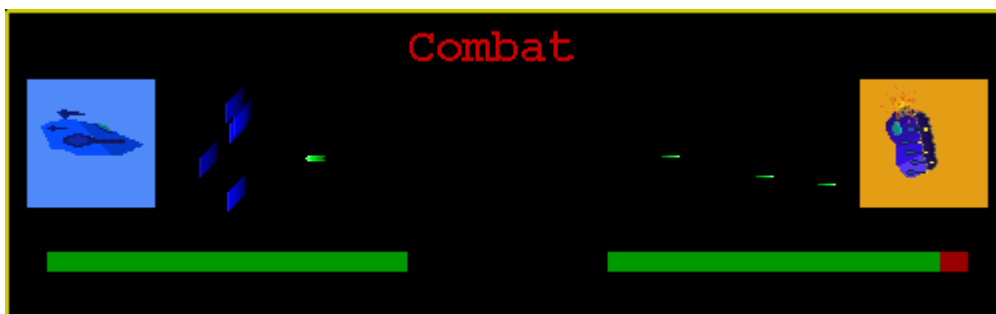
## **Unit information display**

When positioned on unit the unit information display is shown on lower left side of screen:



*Unit information display*

## Combat



*Combat display*

Combat happens when one unit attacks another unit (enemy or neutral). Each unit can attack as many times per turn as it wants providing it has enough movement points left. First the local environment is taken into account to modify units capabilities:

- attack bonus/penalty of attacking unit field
- defence bonus/penalty of defending unit field
- attack/defence bonuses from base if unit is in base
- attack/defence bonuses for fighting in home territory and from level of cultivation
- penalty to reactor (Energy base) applied to units fighting in lower stage than designed for

Then fighting is done in rounds until one of the units is destroyed or maximum combat time is reached (10 rounds). Each round increasing number of shots are fired:

- 1<sup>st</sup> round 1 shot is fired
- 2<sup>nd</sup> round 2 shots are fired
- ...
- 10<sup>th</sup> round 10 shots are fired

From each pair of shots (attacker-defender) one will hit and one will miss. Which one hits is determined mostly by comparing resulting attack and defence attributes but damage sustained by units plays a role too after losing more than 50% of health.

Moreover, each round the defending unit (when it survives the round) has one “free shot” on attacker. If it hits it does damage but if it misses nothing happens. This gives defender slight advantage when everything else is equal.

Whenever the shot hits damage is done to the unit. Amount of damage is determined by attack attribute (attacking unit) or defence attribute (defending unit). This is further modified by the ratio of Energy bases of the fighting units (bigger energy base receives bonus while the lower gets penalty). So much more advanced unit will often need just one hit to kill opponent while the arrows will barely scratch its armour even in large numbers...

While unlikely it can happen that units with low damage and high armour will fail to kill each other. Then it is a draw and both units survive with the damage sustained to them.

When the combat is even and gets to the later rounds where lot of shots are fired at once it is possible that both units will kill each other and there is no winner.

The combat progress is graphically displayed - each shot that hits gets to the opponent unit and explodes. The shots that miss are displayed as being absorbed by armour or shields. The more damaged unit is the darker it appears in the display. Combat graphics can be closed by pressing **Esc** or right mouse button.

## Combat simulation

If you want to see the odds of winning battle before entering it you can run a combat simulation. This is done by **holding left Ctrl while moving** into field with enemy unit. Probability to win for each side is calculated from 1000 simulated battles and average damage done is displayed as well:



*Combat estimate display*

## Bases



Bases are settlements or colonies founded by constructors and can grow to big cities or space complexes. Each base can process resources from the field it is founded on and from all surrounding fields. Territory of two bases might not overlap so you can not found base too close to other colony. Also the stage representing fields (Planet, Star, Galaxy, Cluster) can not be in the base radius but special bases can be built on those fields.

When base has access to enough food its population will grow which will reflect in increased cultivation levels of its fields leading to production of even more resources. On the other hand when not enough food is available the base will shrink in size and fields will lose cultivation levels. This can happen mostly by pillaging or when founding base in hostile terrain (mountains, deserts, deep space) after the initial food stockpile is used up.

## Storage

Each base can store unused resources produced each turn. The basic amount that can be stored is based on amount of resources that can be produced by the base in one turn (when it is fully cultivated) and is multiplied by following factor:

**Era Explore - 2x**

**Era Colonize - 3x**

**Era Combat - 4x**

**Era Advance - 5x**

This storage space can be further increased by researching corresponding technology.

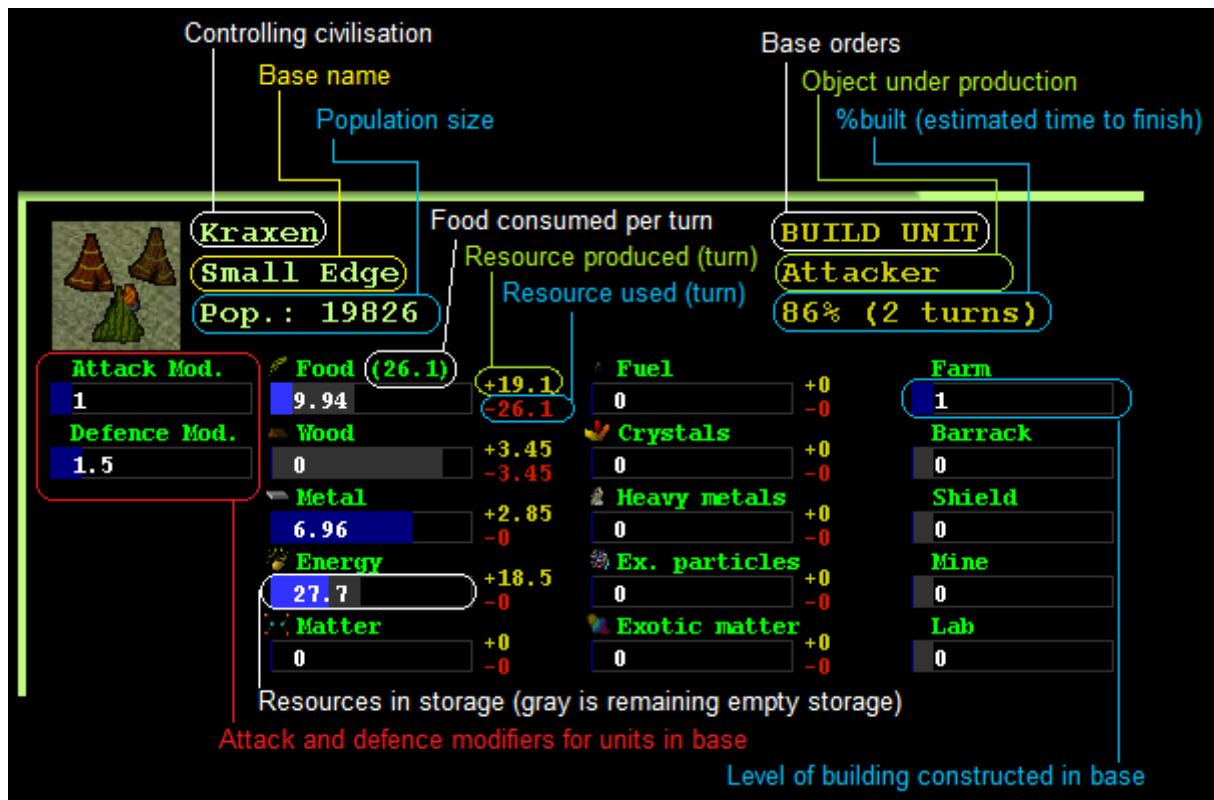
So base is best suited to store resources it produces in large quantities. Base founded near mountains will be able to store large quantities of metal while base near forest can store lot of wood. These stored resources can be then used for faster building of new units or constructions.

When storage is full any unused resources produced are discarded with one exception for energy. Any unused energy that can't be stored is used for research.

When reaching Era Advance the bases can be linked together to create one big storage and thus use resources from other bases which might not be available locally. More on this topic is discussed in "Storagelink" building.

## Base information display

When positioned on colony the base information is displayed on bottom right of screen:



Base information display

## Buildings

Buildings can be constructed in bases to increase their efficiency and to improve units produced there. Each building in base will also decrease the attrition it is contributing thus constructing lot of buildings will decrease the total attrition level and enable empire to grow by building new bases.

There are five building types and each era will enable you to build one more level of them. So in era "Explore" you can build only 1 level of farm but in "Combat" era 3 levels can be constructed (in total). Each level of building will enhance the total bonus provided by that building type.

There is also one special kind of "building" - StorageLink - that allows you to link bases together. This can only be constructed in era "Advance" and there is only 1 level of it.

## Farm

Farms increase the total amount of food produced by base thus allowing them to grow in size and increase cultivation.

## Barrack

Barracks significantly increases attack rating of units produced in the base. Defence rating is increased as well though not as much as attack.

## **Shield**

Shields give bonus to base defence rating making units defending base stronger. They also increase reactor of each unit built in base by small amount.

## **Mine**

Mines increase the extracting rate of metal, matter and rare resources. They also slightly increase hit points of each unit built in base.

## **Lab**

Labs increase energy income of bases thus enabling faster research and help a lot with advancing to next era or stage. They also slightly improve movement and sight of units built in the base.

## **Storagelink**

Storagelink is special kind of building that can be only constructed in Advance era. When first Storagelink is constructed on stage special base is created on higher stage. For example building Storagelink on city of planet will create special base on Star system map in the field which represents the planet.

This special base does not produce any resources by itself but each base that builds Storagelink on planet will be linked to it and contribute to its resource income. Each linked base can also extract resources from this special base when constructing unit or building. So effectively all linked bases are sharing their storage and the size of this linked storage is sum of all individual storage's of linked bases. This allows you to pool large amount of resources and distribute them more efficiently.

The special base can also be used to act on higher stage (star system in our planet example). It can produce higher stage units and also buildings (but the buildings will only contribute to unit bonuses and not to resource income as no resource is actually produced by the special base itself). Ultimately this special base can build Storagelink of its own and link further to Galaxy, Cluster or lastly to Universe.

## **Attrition**

Attrition represents costs for running empire as well as expenses for supporting military force. Level of attrition is displayed in the civilisation information screen as number from 0% (best) to 100% (worst). Basically all produced resources are reduced by the attrition level before they are used for production, research or era advancing calculation.

The attrition grows exponentially so after you reach certain critical size of your empire it will rise very fast unless you take steps to reduce it.

## **Attrition from bases**

There is some basic amount of attrition each base contributes toward total. This is smallest for planetary bases but on each higher stage it increases. Moreover, when your civilisation advances to higher stage the basic cost for all bases on lower stages will drop considerably. For example when you advance to Galaxy stage all StarSystem and planetary bases running costs will decrease. The amount of attrition from base also depends on:

- total cultivation (too low increases attrition while fully cultivated base decreases it to half)
- number of buildings constructed in base – each building will decrease attrition a little, with all buildings constructed you can decrease attrition by another half

Also for each Stage/Era there is certain amount of bases which are managed “for free” and this number grows as the civilization advances.

## Attrition from units

Each unit will contribute to total attrition. The base value is determined by its “Attrition” attribute – the lower the better. This amount is then modified by units presence:

- neutral territory – attrition is normal
- home (owned) territory – attrition is considerably reduced because it is easier to support unit in owned territory
- enemy territory – attrition is greatly increased because logistic costs to support units behind enemy lines are very high

## Attrition from civilization ranking

Attrition is also modified by the current civilization standing comparing to other empires. The most advanced civilizations or those with strongest armies will have normal attrition. Civilizations on the bottom of the ladder will have attrition reduced which can make it easier for them to catch up.

## Attrition from superiority/backwardness

**This is type of attrition is not applied in game mode “Classic”.**

Standard energy income is computed as average from most powerful civilizations. When energy income is much higher than this average the attrition for such superior civilization can be increased dramatically (it is price for pioneering new technology).

When energy income is much lower than the standard average the attrition may be decreased considerably (as the involved technology is already commonplace through the Universe and is cheaply available).

This factor balances game keeping those who gain great lead in check trying to ensure that there is always some competition for strongest civilization.

## Checking attrition sources

You can check how much each source contributes to overall attrition in your civilisation information screen. Select field with your base or unit and press **F4**. On top you can see attrition percentages contributed from each source (bases, units, ranking, superiority).

## Decreasing attrition

Every successful empire will sooner or later run into problems with attrition. When it becomes serious various steps can be taken to reduce it:

- research levels in attrition technology – this will decrease overall attrition from bases and



also lower attrition attribute for all newly built units (but existing units will not benefit from it)

- construct as many buildings in bases as possible
- try to rise cultivation level of bases – build them where enough food is available, construct farms and Storagelinks, research levels in cultivation technology and try to protect your territory against pillaging
- keep units in owned territory whenever possible
- at war try to organize swift attacks so that you don't keep units in enemy territory for too long

## **Technologies**

Part of energy input can be used to research new technologies. They are grouped in two areas – combat technologies improve performance of units and social technologies will help your empire to grow. In Energy allocation and research screen (**F2**) you can select your research priority in both areas and how much of the resources to focus in each of them.

When advancement is done in selected technology the bonus for the specified area increases. This is cumulative with any further research in the same field. However any subsequent research will increase cost but the bonuses per advancement will increase in time too. Standard bonus for most technologies at the beginning of game is 10% per advancement (factor 0.1). Some technologies have this bonus bigger while few also have it much smaller.

## **Attack**

Combat. Attack bonus of new units is multiplied by this factor.

## **Defence**

Combat. Defence bonus of new units is multiplied by this factor.

## **Hit points**

Combat. Hit points of new units are multiplied by this factor.

## **Reactor**

Combat. Energy base of new units is multiplied by this factor. As this is very powerful attribute it will be increased much slower by research comparing to other attributes.

## **Movement**

Combat. Movement of new units is multiplied by this factor. Bigger movement also increases area patrolled by units.

## **Sight**

Combat. Sight of new units is multiplied by this factor so they can explore faster and spot other units further away.

## **Repair**

Combat. Repair rate of new units is multiplied by this factor.

## **Pillage**

Combat. Damage done to the cultivation of pillaged field is multiplied by this factor. To be effective in pillaging without having to engage combat at least few advances should be researched in this field.

## **Cultivation**

Social. This will increase food produced by bases leading to faster growth and bigger population (cultivation). It will help especially in later stages where food is not so common and can help you to rebuild pillaged territory faster. Indirectly it also reduces attrition by small amount.

## **Storage**

Social. Amount of resources each base can store is multiplied by this factor. This affects also existing bases. This is very helpful for building heavier units when you can store the unused resources while you are constructing building that requires only energy. All the stored metal can be then used to build heavier unit faster. Building heavy unit can produce lot of excess energy which can in turn be stored and used for constructing another building.

## **Era advancement**

Social. Increases rate of transformation from lower era to higher era. Standard time required for full transformation is 20 turns which can be greatly reduced by this technology. Moreover it also reduces the energy level required for advancing to next era by a small amount.

## **Attrition**

Social. This will decrease attrition contributed by each base (effectively for all bases). It will also reduce attrition contributed by units for every new units (existing units are not affected).

## **Homeland bonus**

Social. This increases combat bonuses for fighting in owned territory.

## **Cost efficiency**

Social. Cost of each new unit or building is reduced by this factor. This is very useful especially in later stages where things can get very expensive. As this is very powerful ability the bonus per advancement is much smaller than in other fields of research.

## ***Diplomatic relations***

Each civilization you have contact with will modify its view of you depending on your strength, actions and their policies. Their current relations toward you is described by one of the following phrases, from worst to best:

**Beyond repair** – hatred towards your empire run so deep that their only current policy towards you

is to see you removed from the Universe.

**Furious** – you are perceived as enemy and dealt with accordingly.

**Cold** – you are not liked or your actions are disagreeable. The possibility of war is real though it might not be declared immediately.

**Average** – their view of your people is strictly neutral.

**Good** – your actions are commendable and your strength recognized, you are considered friend.

**Excellent** – you share common goals and are recognized as potential ally.

**Harmony** – there are no differences between your civilizations and you live alongside each other in perfect understanding.

There are three possible diplomatic states that can be established with each civilization:

### **Neutrality (peace)**

You start with each other in a state of neutrality where you agree not to attack each other inside owned territory. Attacks in neutral space are more or less tolerated but they are usually perceived as hostile act and will lower the current relations.

Should the war end with both sides still standing their status will get back to neutrality.

### **War**

You are enemies and fighting is brought to home territories. Relationships drop a lot and it is very hard to enhance them. Most wars will not end without one side being destroyed but sometimes it is possible to arrange peace – especially when the fighting sides suddenly share same goals and need both to fight another enemy.

You can start a war any time by attacking unit of neutral civilization. On this attack you are given choice to declare war or just to attack the unit (which can easily lead towards war anyway).

### **Alliance**

When the civilizations share common goals and their bonds become stronger they can join in an alliance. When allied you can see the territory and units of your ally and you can enter fields occupied by allied units. Your ally will often support you in your wars especially when it is the other side which attacks you.

Once signed the alliance can not be broken. This might limit you in your expansion should your ally go where you wanted to settle - so select your alliances well. On the other hand, thanks to the cooperation, you will get some small percentage of ally's energy income added towards your energy production making it easier to advance.

## **Changing diplomatic status**

As already said you can always declare war by attacking other civilization unit or it can declare war on you by simply declaring this in message sent to you.

You can offer peace or alliance from diplomatic information screen (see Checking your status). You will get answer to your offer on the next turn.

Other civilisations may offer you peace or alliance themselves when your relations improve. Should this happen you will get message informing you about the offer which you can accept or decline.

## Civilization attitude

Each civilization has one of four basic behavioural patterns it can follow which are represented by civilisation attitude type:

### Peaceful

Peaceful civilizations believe in friendly coexistence with others. They will generally start with better relations towards everyone. They are the only civilizations that will not decrease relations toward you when stronger as they do not believe in exploiting others weaknesses. These are the easiest to ally with. Their military units tend to focus on defence.

### Neutral

Average civilization which will have standard relationship towards equal opponents. They will declare war when they sense an advantage and will try to stand in good terms should they encounter stronger rival.

### Aggressive

Aggressive civilizations believe in strength above else. They often start with worse relations towards others and are more likely to declare wars, especially when they have advantage. Their military usually focus on offence.

### Total war

These civilizations believe in no diplomacy and can not stand anyone else. They will declare war immediately with everyone they encounter and will never stop the war until one of the sides is destroyed. While not very common they can bring hard times to any neighbour.

## Civilization policies

Each civilization follows one of three basic morale codex's. The codex defines the accepted behaviour of the civilization during neutrality(peace) **on neutral space**. Attacking anyone on his territory or territory of his allies usually means declaration of war.

### No attacks

No attacks are tolerated in neutral space and each attack is considered as hostile act lowering relations.

### Warship attacks

Attacks on civilian ships (scouts, constructors) are prohibited and will lower relations. However, the military units (attacker, defender) may be attacked. Attacking military units on neutral space will slightly improve relations as the opponent recognizes and admires courage and strength of the attacker.

### All attacks

Attacks on any units are allowed in neutral space. Doing so increases relations slightly as the opponent recognizes your courage and cunning.

## Determining relations

Relations between two civilizations are determined by many factors. Keep this in mind when you look for the reasons of the rival's attitude toward you.

- **economy strength**

Based on total energy produced per turn. When your production is lower the relations will drop as you are considered backward. When higher the relations will improve as the other civilization does not want to cross more advanced opponent.

- **military strength**

Based on military strength. When you are weaker the relations will drop as you are considered easy target. When stronger the relations will improve as the other civilization does not want to fight stronger opponent.

- **military actions**

Destroying units will generally lower relations toward affected civilization. Destroying units of civilization enemy will improve relations while fighting their allies will lower them.

- **diplomatic status**

When at war relations drop considerably and when allied they improve.

- **diplomatic status with others**

Being at war with civilization enemies or being allied with its allies will improve relations. On the other hand being at war with their allies or allied to their enemies will lower relations.

- **origin**

As most species are xenophobic in nature the more distant the origin the lower starting relations. The civilizations from same planet will not be affected by this but those from other planets in same star system will be. As you go to upper stages the xenophobia will increase thus civilizations from different stars, galaxies or clusters will have more and more lowered relations towards you.

- **Attitude**

Civilizations with same attitudes will get relationship bonus as they share common view. On the other hand different attitude can lower the relations.

- **Policies**

Same policies followed by civilizations will improve relations while different policies can lower them.

## Improving relations

When you notice relations towards you dropping or you need to end a war or seek an ally you must work hard on increasing your relations with your intended target. You should focus on following:

- fight their enemies (attacking or defending both work), this will steadily increase relations and is most sure way to get favourable view
- try to keep fighting with them in minimum, if at war try to only defend and do not mount attacks on your own or provoke in any way as this would make the relations to drop
- try to become stronger, either military or economically, best in both areas. When you are lot stronger almost any opponent will recognise futility in fighting and will seek peace

## Checking your status

You can always check your relations with other civilization by moving active field to their territory and pressing “F4” or “RMB” on it. To check your own status (current wars and alliances) position active field in your territory and press “F4”.

## Pirates

Pirates are formed from individuals that refuse to follow rules defined by the society. Pirate groups appear only near colonized area. Generally they follow no rules and will attack any units and can even attack or capture bases. Pirates can be observed in following forms:

- **raiding parties** – group of several attackers and few defenders that pillages land and attacks any nearby units. They can attack also bases. After some time the group is disbanded as the common goals in these groups usually do not last for very long.
- **convoys** – when underground parties need to smuggle illegal goods or weapons they form organized convoys to see their goods to safety. Each convoy consists of several cells operating independently trying to transport their cargo across the map in parallel lines. Each cell consists of one strong defender carrying cargo and few fast attackers that protect it. They will attack any units near the leader but they will leave bases alone. If you destroy the cell leader (defender unit) the rest of the cell (attackers) will disband as their purpose is gone.

## Etherals

Etherals are ancient race that exists outside the physical Universe(s). In their astral form they are beings that continue to exist for eternity as they can not be destroyed. Sometimes they can manifest in physical form to intervene in the affairs of ordinary Universe.

Not much is known about Etherals history or their true intentions. What is known though is that Etherals believe in balance. When they choose to intervene they always attack the strongest (military or economically) civilization – though some say it is to eliminate their potential competitors. Etheral attack is swift but decisive. One single avatar is sent to fight but it has several unique abilities:

- **extremely strong** – you will be hard pressed to even scratch it
- **can't repair** – as it is so different from this Universe the Etheral unit can't repair any damage it takes
- **does not stay long** – Etheral avatar can't remain in physical form for too long and will disappear after few turns

You can destroy the Etheral avatar thus banishing him back to his astral form but you can not destroy the Etheral itself and they will be repeatedly coming back.

Their main targets are bases and they can easily destroy several of them in one strike.

As the attacks from Etherals can be very frustrating experience I recommend to keep them turned off until you become more familiar with the game. When turned on they can make the game more interesting as they help to keep the balance slowing down the most advanced civilizations and making space for others to catch up. They can be especially useful on harder difficulties where it is unlikely that your civilization will be the strongest.

## ***Victory conditions***

At the moment there are no defined “victory” conditions. One can say that once you completely control the Universe stage there is nothing that can oppose you and you can consider yourself victorious - or just go on to conquer all the clusters...

This is a game and my advice is to play it as long as it interests you and brings some enjoyment or fun. When you like it no more then I suggest you either take few days break, start a new game, or just switch to doing something else completely. If you do so perhaps check in few months as new features might have been added to catch your interest again.

I don't see much point in playing 100 more turns just to build some extreme structure that will proclaim you victorious but I might add such options in future. These are more or less planned for “Infinity” mode should it ever see the light of our existence...