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# **UFO: Alien Invasion - Manual [Rev. 0.1]**

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<http://ufoai.sf.net/>

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# 1 About

## 1.1 General

It is the year 2084. You control a secret organisation charged with defending Earth from a brutal alien enemy. Build up your bases, prepare your team, and dive head-first into the fast and flowing turn-based combat.

UFO: ALIEN INVASION is a squad-based tactical strategy game in the tradition of the old X-COM PC games, but with a twist. Our game combines military realism with hard science-fiction and the weirdness of an alien invasion. The carefully constructed turn-based system gives you pin-point control of your squad while maintaining a sense of pace and danger.

Over the long term you will need to conduct research into the alien threat to figure out their mysterious goals and use their powerful weapons for your own ends. You will produce unique items and use them in combat against your enemies. If you like, you can even use them against your friends with our multiplayer functionality.

'UFO: Alien Invasion'. Endless hours of gameplay – absolutely free.

The game takes a lot of inspiration from the X-COM series by Mythos and Microprose. However, it's neither a sequel nor a remake of any X-COM or other commercial title. What we as a team wanted to make is a brand new experience that tries to surpass the quality of games from 1992, rather than simply recreate them with flashier graphics.

We also believe that open-source projects don't need to be disorganised or badly-managed. We work together in a friendly and professional way, with a clear vision for a game that we know is worth playing.

## 1.2 Gameplay

Like the original X-COM games, UFO:AI has two main modes of play: Geoscape mode and Tactical mode.

In Geoscape mode, the game is about base management and strategy. You manage the activities and finances of PHALANX, controlling bases, installations, aircraft and squads of armed-response troops. You'll research new technologies and use their results in battle against the aliens. You'll launch your interceptor aircraft to shoot down UFOs and dispatch dropships in response to alien activity across the globe. You can build, buy and produce anything you like, as long as your technology level and your budget will allow it.

Geoscape mode employs easy-to-use time buttons to control the passage of time however you like, automatically pausing whenever there's an important message for you to see. Research will progress and items will be produced as time passes.

In Tactical mode, the game is about taking command of your team in various missions to combat the aliens wherever they might appear. Instead of pushing imperonal armies around on giant maps, you use only the team of soldiers you've assigned to deal with this mission – the

same soldiers which you've managed and equipped to your satisfaction in Geoscape mode. You may find civilians and other bystanders during the mission, being targeted and executed by the aliens, or just getting in the way while you're trying to protect them. It's a dangerous world, and some of your men will die.

Tactical mode uses a turn-based system, where your team and the aliens take turns to make moves. During your turn you can order your troops to move around, fire their weapons, throw grenades or use other equipment, etc. Each soldier gets a certain number of Time Units (TUs), representing the total time they have to act during the current turn. All actions in Tactical mode require Time Units to perform. Once a soldier is out of Time Units, he or she can't do anything more until the next turn.

Your mission objectives will vary for each mission, and there are many to perform as the aliens' terrifying plot unfolds. You'll have to watch your back, be quick on your feet, and take the fight to them.

If you don't, humanity is doomed.

## 1.3 Game Engine

The game engine is based on a heavily modified version of ID's Quake2 Engine. This doesn't mean that 'UFO: Alien Invasion' is a modification or even a total conversion of Quake 2. It is a stand-alone game and doesn't require Quake 2 or any other program to run. All you need to play UFO:AI is a computer running Microsoft Windows or a supported version of Linux, and the installer from our website<sup>1</sup>.

Our updated engine has modern OpenGL graphics and special effects, increased texture resolution, hardware-accelerated clipping of map layers for toggling between levels, a new animation system for player models, powerful artificial intelligence, and many other exciting features.

## 2 Free games / the community

### 2.1 Contribute

This game is brought to you by the UFO:AI Development team and its countless contributors. All of them share at least one thought: to make UFO:AI a great free <sup>2</sup> game. Besides detailed legal implications, mentioned in the following section and given in the appendix, most of all this means that every piece of code used to create this game is publicly available. Even more: you are free - even wanted - to change everything you want by yourself whenever you feel you can help making UFO:AI a better way to waste time. This may start with typos or end with complete mods or patches - it's up to you. With UFO:AI being an open-source development by a bunch of non profit orientated people this does also mean there is no big company in the back to pay for extensive testing, balancing or hardwarechecking. So whenever you encounter a bug, a hardware incompatibility or any other problem it would be a fair gesture to give something back to the community - even a carefully filled out bugreport <sup>3</sup> helps a lot. So we hope to do our

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<sup>1</sup><http://ufoai.sf.net/>

<sup>2</sup>free as in freedom

<sup>3</sup>[http://sourceforge.net/tracker/?atid=805242&group\\_id=157793&func=browse](http://sourceforge.net/tracker/?atid=805242&group_id=157793&func=browse)

little share to promote free software and build up a productive open-source gaming community. And no matter what kind of skills you call your own, if you are a coder, 2D or 3D artist, map-designer, even film-script writer, musician, concept-art designer (all of these made UFO:AI what it is today) be assured that there is a project out there waiting for your help - enriching the pool of free software.

If you are interested, please also visit the *Contribute* section in our wiki at <http://ufoai.sf.net/>. You will find a lot of useful information about model and image formats, a lot of tutorials about mapping and so on.

## 2.2 Contact / Support

Support, additional information, FAQs and the forum can be found at <http://ufoai.sf.net/>. For a release history, latest releases and bugfixes as well as the bug- and featuretracker<sup>4</sup> please see our project page at <http://www.sourceforge.org>. Sourceforge also offers you to take a look at our project page (where you find detailed status reports, contribution- and memberlists). In addition to the forum we also host the channel ufo:ai on the freenode<sup>5</sup> IRC network. As usual and according to netiquette please make sure you try to find solutions for rather trivial problems on your own before asking on the board or on IRC.

For interested media we also provide screenshots and offer further support for any planned coverage - feel free to contact us personally by one of the above ways.

## 3 First steps

This chapter is obviously dedicated to players that are new to the UFO-series or maybe even round based tactical combat games in general. Experienced players may skip this one, but of course won't be harmed by reading it as well.

The usual process after starting a new campaign is quite unified and all the same for all kind of players. First you may choose a proper place for your first homebase. Even if there are strategical differences between certain location there is hardly any No-no spot, so feel free to make your selection as you like.

After you have set up your base you may want to prepare your squad so everything is ready in case aliens show up. In the following we will assume that you start your game with default settings (starting with buildings in base and employees hired). So the next thing you may do is open up your base-screen (as discussed in the previous chapters) → Aircraft → Equip aircraft. This might be a strange way to group the squad menu, but turns out to offer certain advantages later on. If you followed those instructions you will now see a list of all soldiers available. By turning the X buttons to the right of their names into a ✓ you now assign all 8 soldiers available to your dropship. Clicking on their names brings up their detailed statistics but instead of doing so we will click the arrow symbol in the very bottom left.

Now we have entered the "equip squad" screen. While its particular elements have been discussed in the regarding chapter (geoscape - your base) we will limit ourselves to the most urgent actions. First you need to get an overview about your soldiers weapon skills using the "actors abilities" screen. Once you have done so you should know how many weapons of each kind (assault, heavy etc.) you want to use for your squad. After that you need to find out how much of each weapon class you actually own. If you lack a certain item you can try to buy

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<sup>4</sup>[http://sourceforge.net/tracker/?group\\_id=157793](http://sourceforge.net/tracker/?group_id=157793)

<sup>5</sup>[irc.freenode.org](http://irc.freenode.org)



the missing ones using the "Buy / Sell Equipment" menu (reached through the base screen). After you did your best to equip every soldier with the best you can get, make sure you do not forget to hand them all the armor you have. Also some extra ammunition (just in case) might be helpfully. Now, the most important part is done and your squad eagerly waits for its first mission.

In the meanwhile your job as the commander of PHALANX isn't halfway done. In order to fight the alien invaders your task force relies on the best technology available. And your research departments job is to offer the best human mind can invent. Using the research menu you can make your selection on what your scientists should focus on next. It may also be a good idea to keep your production facilities busy, for example producing more armor (in case you could not get enough to equip every soldier with this very basic kind of protection.

Now you should be done with the very basics. Of cause there is a whole lot features out there waiting to be explored by you, but this is not the place to spoil all your fun in finding out on your own. Instead you may turn up game speed in geoscape until the first alien attack offers you the chance to proof you are worth leading PHALANX. Until then, you are dismissed - soldier.

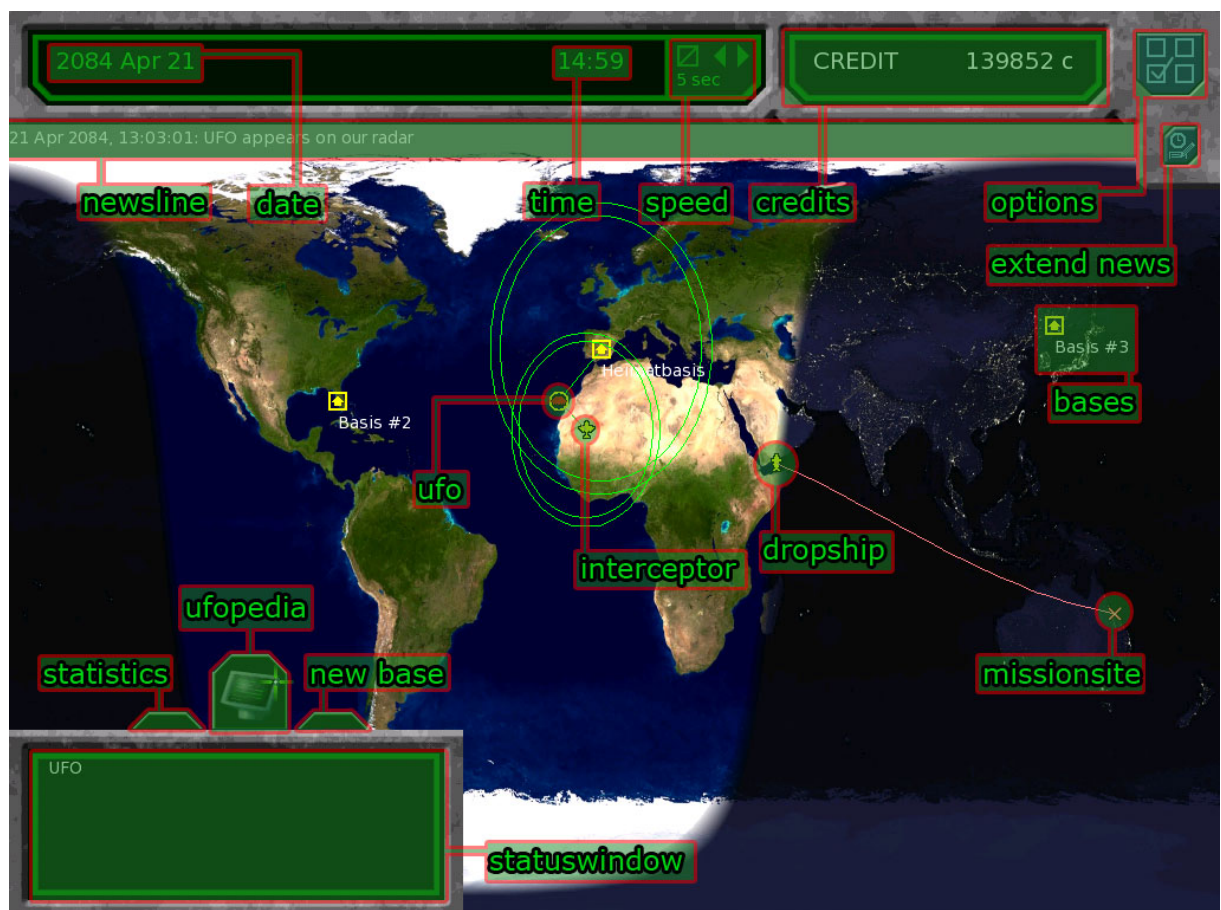
## 4 Geoscape

### 4.1 Worldmap - an overview

Welcome to Geoscape! As said before UFO:AI distincts between two major aspects of the game - macromanagement and tactical combat. To put it simple one could say: Combat is where you earn the bucks (besides honor of cause ... ), Geoscape is where you spend em.

Geoscape itself basically consist of two screens. The first one is the world map. This is where you get in right after starting a new campaign and it is used to get the bigger picture as well as coordinating combat missions and intercepting enemy UFOs. Second is the base overview, where you improve infrastructures and order important decisions about equipment, research and production. In the following we will take a closer look at both of them.

Taking the following screenshot we will have a look at what we might want to use the world map for. Please take notice of the fact that it is divided into day and night zones which actually influence any combat mission you get into (the day/night borderline changes its shape according to the seasons as the relation earth to sun changes).



#### **4.1.1 Statuswindow**

Here some general information(e.g. stats, descriptions) show up depending on the context. What is shown in detail will be explained in the following.

#### **4.1.2 Statistics**

If you hover over those registers three different buttons will show up. While the very left one leads to some more detailed statistics about your attempt to save the world. Besides some more general information (like mission won/lost etc.) you can also find out about the attitude of all the UN countries paying you. Please be aware that if you fail to protect particular countries from alien invasions (maybe because your infrastructure are not well established in that region they will cut your resources (financial and employees)

#### **4.1.3 Ufopedia**

Ufopedia is a comprehensive collection of useful information about items, technologies, damage types and others. As your research proceeds Ufopedia grows as well, so make sure you check the latest news on your enemy's every now and then.

#### **4.1.4 New base**

Finally the right button gives you the chance to establish a new base anywhere (besides water) on the map. A new base, once you installed the required structures, gives additional radar-range, research and production capacities as well as new hangars for your aircraft and is completely equal (also in administration) to your first base.

#### **4.1.5 Date**

Gives you the current date, so you know when its close to pay day. Please keep in mind that for mankind time is kind of running up. While you, in principle, have unlimited time at your hand, in fact aliens get stronger and better equipped as the game proceeds and you will have to catch up with them in order to beat them and save your beloved homeworld.

#### **4.1.6 Time**

Well, as you location isn't nailed down to one certain base this is just to illustrate how fast time proceeds. See also next paragraph.

#### **4.1.7 Gamespeed switch**

This is where you can adjust the gamespeed from 5secs (which is in fact pausing the game) over 5Min's up 1day steps. Whatever you put here, while you are in combat time is stopped and it will be all the same when you return from the field of honor.

#### **4.1.8 Credits**

Should be quite self-explaining. Never forget, you can't spend what you don't have.

#### **4.1.9 Options**

Gets you to the Options-menu where you can load and save your game as well as start a new one. Through "exit" you reach the main menu where you can change game settings and continue your current game (via singleplayer → continue)

#### **4.1.10 News and extended news**

The permanent news line in the upper left always represents the latest news (such as promotions / cashflow / attacks / UFO-sightings) while the extended news button pops up a list of the last 20 newlines. So whenever you notice news, make sure to check the button as well so you don't miss anything.

#### **4.1.11 Bases**

Those yellow houses represent your bases. Circles around them (popping up later in the game) represent their radars range. If you want to "enter" a base just click on its symbol.

#### **4.1.12 Your dropship**

This is the one that gets you squad to action. Clicking on it once brings up some general data about it (like fuel, speed, status and amount assigned soldiers) to the status screen. A second click while it's selected opens a submenu where you may give/change orders,e.g. sending it back home.

#### **4.1.13 Your interceptors**

Those fast ships job is to take enemy UFOs down. If it catches up with one the dogfight is going to be calculated based on both ships equipment and the result shown on screen. Just like one paragraph before a single click selects the interceptor (a further click to a certain spot on the map will order it to move it there) printing some general information in the status window. A second click while it is selected brings up a window where you might give more advanced orders to your ship.

#### **4.1.14 Upcoming missions**

This is where the action waits. Selecting a mission will give you a short description on the status screen while a second one makes you select a ship to bring in the troops you want.

### **5 Your base**

Your bases have to fulfil a wide range of tasks, ranging from researching and producing new equipment, gathering background information on the invaders and supplying the infrastructures to react on any alien attack via interceptors or dropships. You can change the name of your bases by clicking on the pen-icon right next to its name shown on base screen. Using the arrow icons you can also circle through all your current bases. In the following we will list all relevant screens so you can get familiar with the base management system step by step...

## 5.1 Buildings

This is where you order the construction of additional facilities for your base for example because you want to increase your research cap (lab) or fasten your soldiers healing process. In fact all of this is irrelevant for your start-up base as hardly any research/production limit or medical care is implemented yet. Before you finally place a new building make sure you have read its according ufopedia entry. There you can find out if the new site requires additional buildings (for example a power plant) or what its concrete use is. Another important aspect when expanding your base is building time. Buildings vary quite strong in the amount of time needed to be finished once placed so it is important to consider this right from the start. Please also keep in mind that there are some quite elementary buildings needed in each base before the base is functional at all, in particular this is a power plant and command center. As said before, new bases can be build using the world-map so you don't need to place all facilities in one site as space is limited.

## 5.2 Aircraft

This menu brings up a screen where you manage aircraft in the according base. This includes not only equipping your vessels with your latest equipment but transferring them to another base or buying new ones. You can also circle through all your aircraft using the left and right arrow icons in the window displaying the current aircraft. Even if it also possible to call an aircraft back to base or launch it using the buttons in this menu aircraft control is more likely to be done on the global map (as described before). Probably the most important sub-menu here is "Equip Aircraft". A click brings up a screen which allows you to choose which soldiers to assign to your selected aircraft. Obviously this is quite important when it comes to your dropship. A standard dropship offers place for 8 soldiers and there are only very few reasons not to use all of them. In order to choose the best soldiers for an upcoming mission you are provided with an picture of your selected character and his / her statistics. A simple click on the "X" or ✓ assigns or discards the selected soldier from the current ship (which can be changed using the screen in the lower right). By the way: if you are unhappy with the names of your fighters you may change them using the "edit" button in the upper right, just next to current soldiers name.

Also please notice that while you can assign one soldier to an interceptor ship, this wont do any good. Unless of cause you decide to land on a missionsite with just this very one soldier.

Once you made your decision whom to take to battlefield confirm your selection using the button in the very bottom right corner (you can re-do your selection as often as you want as long as the ship in question hasn't left the base) which brings up the inventory screen.

Here you can equip your soldiers for their upcoming missions. The different sections of this screen should be quite self explaining, nevertheless we will comment some of its basic features. In the upper left you see all soldiers assigned to the current aircraft. On the opposite, left, site of the screen you see the soldier with his / her inventory. The amount of space an item requires is represented by the amount of "squares" covered. The biggest part of the screen is used by your bases item stock. In order to make it easier to use the rather big amount of items you can choose one of 4 categories (primary/secondary/misc/armor) to be displayed here. Simple drag drop gets any item from bases stock to the specific inventory of your soldiers. Weapons shown with a red background lack the required ammo and aren't useable. You may equip them anyway but unless you get the according ammunition from somewhere else they won't be of any use. In order to assist you in your task to equip every soldier with a weapon he can handle effectively the lower left shows the soldiers statistics (for details on stats please refer to the appendix or ufopedia). Please keep in mind that some weapons utilise two weapon proficiencies depending

on the chosen firemode. Alternatively to the soldiers stats window you can change this to an object details view which presents the basic stats (one / two handed, round per clip, firemodes, damage, etc.) of an item. For details on damage and firemodes of a weapon you need to view the details of the according clip / ammunition as some weapons can be equipped with different types of ammo. A simple click on the arrow symbol in the very bottom right corner confirms your selections and gets you back to the aircraft screen.

### **5.3 Buy / Sell Equipment**

Here you can get new equipment from the global market or get rid of any item you don't have further use for. Please be aware that the items not carried by your soldiers at the end of a mission are sold automatically. Details will be displayed on missions summary screen. If you want to use the items captured you can simply buy them back here. As there is no differences between purchasing and selling prices you won't "lose" money doing so. This is very likely to be changed once the whole economy thing is set up right till then global market can be exploited as a kind of unlimited equipment storage. Please notice that the amount of any kind of items available may change in the course of the game as your reputation in the world changes. In order to help keeping an overview all items are sorted into four categories again (primary, secondary, misc, armor).

### **5.4 Transfer**

Here you can transfer your equipment between different bases.

### **5.5 Research**

As research is a critical factor in your attempts to defend earth against the alien threat it is essential to keep your R D department busy not only in order to get the latest weapon technology but to gather background information about your enemy and ways to finally defeat him. The basic features of the research screen are rather simple. While the left part gives all possible research options the right part shows details on the selected subject. In order to discover new research options it's usually necessary to capture either at least one kind of the regarding item or a certain key item that offers new information about the alien threat. Sometimes a simple "prototype" of some alien tech is not enough to get your research started. In such cases the research option is given in grey letters as it requires further research on some other more basic field beforehand. The concrete dependencies for each technology are given in its details shown on the right side of the screen.

To assign a given amount of scientists to a research project just use the left / right arrow-icons next to the technology in question. The left arrow will add scientist to the research while the right one will decrease the amount of scientists working on that project.

The actual progress-status is given in the left window. Hint: while it is possible to work on several technologies at the same time in most cases it's a better strategy to focus on one research at a time.

### **5.6 Production**

Here you can build equipment that is not available on global market or a result of your research departments efforts. To order an item to be built simply select it on the left part of the screen and adjust the amount to be built using the arrow-icons under its image on the right part. Also,

please notice that the production cost is taken from your cash when one item is started. For example while: 3 assault rifles cost 63000 you need only 21000 to start production.

## 5.7 Hire employees

Using this screen you can add further personal to your organisation. While especially in the beginning people do not trust in your ability to counter the aliens they might be more enthusiastic (and therefore willing to work for you) as you proceed in the game. On the left side you find all members of one group (soldiers/medics/workers/scientist) listed. clicking on the "X" or ✓ hires or fires them. You can discard / select them as often as you want, they will never get angry at you. But please be aware that personal you hire in one base won't be accessible from another base. So if you want to fire someone make sure you are in the corresponding base. Also you should keep in mind that the amount of personal that can work in your base might be limited by the bases housing or working facilities. AFAIK this is not the case right now. also it doesn't seem possible to hire more than 19 persons of one group for the simple reason that there is no way to scroll down the list.

## 6 Gamemechanics / Management

### 6.1 Research

Every unknown alien technology must be researched by your scientists. You will get a brief description for each technology in your mail client - make sure you read it.

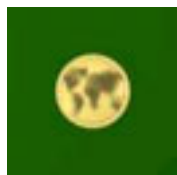
### 6.2 Promotions

While the actual implementation is still under heavy discussion a few comments might help to understand how it works now. Different you ones first thought the main criteria for promotions is not the missions / kills ratio but the mind skill. You simply don't want an psychopathic, thrill seeking terminator like guy as squadleader but someone who is mentally stable ;) Also, up to now, there is only one member of you squad that is going to be promoted while the rest is left with nothing. Here a list of the different badges and their corresponding ranks.

### 6.3 Interceptions

### 6.4 UFO-Recoveries

### 6.5 Alien autopsies



Private



Sergeant



Hauptmann

## 7 Tactical combat - Battlescape

So this is where all the fun happens ;) It is here that your former choices have to proof their worth as well as you will have to prove your commanding skills. The goal of every tactical combat is quite simple: kill all those evil aliens with as few civilian (and of cause squad) losses as possible. In order to achieve this you will have to find a good balance between caution and fast proceedings. You don't want to watch all innocents die like flies just because your soldiers are afraid of the enemy. In the course of the game you will see a wide range of settings and environments, but no matter how bad things may look like, there are some quite powerful tools at your hand to get rid of them. If you have some experience with (turn-based) tactical combat games you should find some redundant elements - and of cause you will if you ever played any other UFO before. Nevertheless you should take a short overview over the interface so you make sure you don't miss any important feature. To change the view within battlescape you may use either cursor buttons or *WASD*. Please be aware that it's also possible to change the pitch of the camera. (*R* and *F* by default) There are two alternative interfaces available right now, offering identical functions of course. In the following we will discuss both of them. You may switch between them as often as you want until you feel familiar with one of them (options  $\leftrightarrow$  game). While the first one is heavily inspired by the classic HUD the second one (althud) tries to utilise modern techniques to achieve cleaner optics.



## 7.1 Buttons - HUD



### 7.1.1 Floors

Here you can change the "ground-level" or floor shown in the tactical view. Besides its obvious use in order to move you soldiers between different floor-levels it's also helpful to get an general overview. So it's always a smart move to switch between all levels at the beginning of each mission so you won't miss the "hidden" cellar or rooftop.

### 7.1.2 Portrait and name

This is more for aesthetic reasons, so no big actions are bound to this. (But of cause - as usual-suggestions are welcome)

### 7.1.3 Team-members

There is where you can switch between you soldiers (alternatively use keybindings: 1 to 8 or just left-click on their model). In case one (or more \*G\*) of your devoted fighters lost their live fighting the evil his button will become grey.

#### **7.1.4 Known aliens**

This states the number of aliens all your squad member have discovered this round. By clicking on it you may switch through all of them.

#### **7.1.5 Next round**

Hmm... so what do you suspect this one does? Exactly!

#### **7.1.6 Options**

Opens the "Options"-menu where you may vary several video/sound-settings as well as abort or retry current missions. Be aware that it's not possible nor intended to save a ongoing mission. If you abort the current mission, all your soldiers will be lost.

#### **7.1.7 Vital stats**

This is where you find more detailed information about health, moral and psi-power of your soldier.

#### **7.1.8 Inventory**

Opens the inventory of the selected soldier. This is where you can change weapons, pick up/drop items or just take a look at your great heroes.

#### **7.1.9 Soldiers stats**

This is a summery of all general information you need to use your soldier most efficiently. Its content interacts with your mouse action, but should be quite self-explaining. Not only you will find health and remaining TUs (we will deal with TUs in the following section) here but also it will give you the amount your currently selected shooting-mode will consume as well as some other info's like current armor and moral.

#### **7.1.10 Reaction fire**

This button enables "reaction fire", a central concept of every tactical combat. We will deal with it in the following chapter. For now you should just remember that it is here where you turn it on and off.

#### **7.1.11 Crouch**

As one might guess, this button will make your soldier kneel down (and by doing so reducing the danger of being hit by enemy fire) or if he already does make him stand up. Please notice that a soldier that kneels down can still move forward as if he would stand upright, but it takes him 1 additional time unit per square to do so.

### 7.1.12 Right/left-hand

Those two fields are completely identical besides the fact the left hand one is active only if you actually wear two one-handed items/weapons. If you have a two-handed item/weapon equipped the left-hand field will be inactive. Because each of the two fields consist of several important buttons itself we will discuss them a bit more detailed. Please take a look at the following image.



### 7.1.13 Item/weapon

Gives a picture of the currently equipped item/weapon. This turns red in case you can't use the weapon, for example because you don't know the tech or don't have any ammunition left.

### 7.1.14 Primary-mode

Activates primary-mode for this item. In case of weapons this is usually (but not always!) a fast but less accurate / powerful shoot. For details see weapon description.

**Secondary-mode** Activates secondary-mode for this item. In case of weapons this is usually (but again, not always!) a more TU-consuming but also more accurate / powerful shoot. Please notice that in case the item supports only one mode (like stun rod) both modes are identical.

### 7.1.15 Reload

Reloads currently equipped weapon, if ammunition is left in the inventory.

**Ammunition left** Shows the ammunition left in your weapon. Please notice that some shooting-modes (also some of the one-shoot ones) require more than one "bullet" here.

## 7.2 Buttons - altHUD



### 7.2.1 Discovered aliens

This states the number of aliens all your squad member have discovered this round. By clicking on it you may switch through all of them.

### 7.2.2 Next round

Hmm... so what do you suspect this one does? Exactly!

### 7.2.3 Options

Opens the "Options"-menu where you may vary several video/sound-settings as well as aboard or retry current missions. Be aware that it's not possible nor intended to save a ongoing mission.

### 7.2.4 Character portrait

Besides giving you the chance to admire your well dressed and equipped soldiers clicking on a soldiers portrait opens up his/hers inventory.

### 7.2.5 Vital stats

This is where you find more detailed information about (from left to right) health, remaining TUs, moral and armor of your soldier.

### 7.2.6 Action details

Here some more details on your current action are displayed. If you are about to move your soldier this means you will be shown the required TU costs as well as how many will be left (if any) at the end of this action. In case you have selected one of the two firemodes you will be informed about the TU costs and the approximate probability to hit the target. Hint: Even with an 100% chance it is still possible (but very unlikely) that your soldier failed to hit the target for unforeseeable reasons.

### 7.2.7 Crouch

As one might guess, this button will make your soldier kneel down (and by doing so reducing the danger of being hit by enemy fire) or if he already does make him stand up. Please notice that a soldier that kneels down can still move forward as if he would stand upright, but it takes him 1 additional time unit per square to do so.

### 7.2.8 Floor switch

Here you can change the "ground-level" or floor shown in the tactical view. Besides its obvious use in order to move you soldiers between different floor-levels it's also helpful to get an general overview. So it's always a smart move to switch between all levels at the beginning of each mission so you won't miss the "hidden" cellar or rooftop.

### 7.2.9 Status overview

There is where you can switch between you soldiers (alternatively use keybindings: 1 to 8 or just left-click on their model). In case one (or more \*G\*) of your devoted fighters lost their live fighting the evil his button disappears. Three different ??? give you an fast overview over your teams vital statistics. Red representing health points, yellow moral and blue the amount of remaining time units.

### 7.2.10 Weapon hand



### 7.2.11 Weapon in use

Gives a picture of the currently equipped item/weapon. This turns red in case you can't use the weapon, for example because you don't know the tech or don't have any ammunition left.

### **7.2.12 Ammo left**

Shows the ammunition left in your weapon. Please notice that some shooting-modes (also some of the one-shoot ones) require more than one "bullet" here.

### **7.2.13 Primary firemode**

Activates primary-mode for this item. In case of weapons this is usually (but not always!) a fast but less accurate / powerful shoot. For Details see weapon description.

### **7.2.14 Secondary firemode**

Activates secondary-mode for this item. In case of weapons this is usually (but again, not always!) a more TU-consuming but also more accurate / powerful shoot. Please notice that in case the item supports only one mode (like stun rod) both modes are identical.

### **7.2.15 Reaction fire**

This button enables "reaction fire", a central concept of every tactical combat. We will deal with it in the following chapter. For now you should just remember that it is here where you turn it on and off.

### **7.2.16 Reload**

Reloads currently equipped weapon, if ammunition is left in the inventory (consumes TUs).

### **7.2.17 Right/left hand**

Switches between the left and right hands item (in case the soldier carries two one handed items).

## **8 Game-mechanics (Battlescape)**

### **8.1 Time-units (TUs)**

As mentioned before every soldier has a certain amount of time units (TUs) which are mainly determined by his "speed" attribute. Every action done by him costs a varying amount of TUs this holds for firing or reloading a weapon as well as walking or re-equipping him in the inventory. The amount of TUs needed for using the primary/secondary mode is given in the status window after selecting one of the two.

### **8.2 Movement**

Like firing a weapon, movement also consumes time units. You can make your soldier walk to a spot using your mouse on the tactical view. You will notice that your cursor turns to a green square indicating that this place is reachable with your current amount of TUs or turn blue if it is not (this might be the case due to a lack of TUs or for geographical reasons). If the square is green it will also prompt two numbers of which the first one states the TU-cost of this movement while the second one represents your actual amount of TUs. In case your soldier notices a new enemy or civilian in his line of sight while walking the movement will be interrupted, giving you the chance to adjust your orders according to this new situation.

### 8.3 Line of sight

For obvious reasons you soldiers, in general, can only shoot at what they see. After finishing an ordered movement your soldier will look in the direction of his last step, which is not very helpful in a lot of situations. To solve this you might make use of the possibility to change your soldiers viewing direction. This can be done in different ways, e. g. *Right-mouse-button* / *CTRL*. For details please refer to your keybindings in the game options menu.

### 8.4 Shooting-modes

As we have said before most items, weapons in particular, do have two different action/firing-modes. While the second firing-mode of a sniper rifle is an aimed shot, some assault rifles can start a long fireburst or fire one concentrated and by that devastating single beam. Whatever weapon raises your interest, Ufopedia is your friend. If you look up a certain weapon like that you might be confused, the only information that can be found here is its name and if its a two-handed one or not. What seems rather wired on first sight has a simple reason. As some weapons can be equipped with a wide range of different kinds of ammunition their use and stats also heavily depend on the ammunition loaded. So once you look up the ammunition you want to use you will find all the data and statistics you are looking for - given you have done the required research. Doing so you will find that different firing-modes not only differ by TU needed and damage done but also by weapon skills needed.

### 8.5 Close combat

An alien is popping up just around the corner and not enough TUs left to fire this Plasma-Blaster in secondary mode while primary-mode offers only indirect fire? Your soldiers being keen on some extra thrill? You want to capture an living alien for "interrogation" but all your research department has to offer is a stun rod of which they say it might work - somehow...? No matter what the reasons may be, there will be a time you will get into close-combat, or it will get to you. While the reason to be that close to an hostile alien might be quite scary, lucky enough the way to use the interface in such a situation is not at all. Overall it works exactly like caring a gun besides the fact that your power skill is taken into consideration when calculating the combat results. Also most close combat weapons (that includes pistols as well) do have a far more devastating impact on their target compared for their needed TUs making them a reasonable choice in small and narrow environments like buildings and the likes. Hint: Most pistols also fall under the close combat category which makes them a useful alternative.

### 8.6 Friendly fire

You better make sure there is no one of your soldiers in any possible line of fire when using RF or normal firemodes - friendly fire is rather strict right now.

### 8.7 Reaction fire

One of the main aspects every experienced commander needs to be able to use for his advantage is what is called "reaction-fire"(RF). When discussing the basics of battlescape we already mentioned its button but spared to explain the corresponding concept. To make things even more complicated there are two kinds of reaction fire (referred to RF-1 or RF-2 in the following). The RF-mode that is activated is indicated by one or two  $\sqrt{\text{ s}}$  (HUD) or an "i" or "\*" (altHUD).



When enabled (costing a certain amount of TUs) your soldier will be able to react on new situations and sightings after you already ended your turn. For doing so in case of RF-1 he has one shot on any enemy that he has at least a 30% chance to hit with no more than 5% risk of friendly fire. Those conditions also hold for RF-2 but with this option the soldier in question fires as often as possible while he has all the TUs of the upcoming round (without costs for RF) at his disposal to fire his weapon in order to deal with this more or less surprising situation. Especially after having suffered heavy penetration by enemy fire with reaction-fire activated, your soldiers will refuse your order to "turn it off" as they are too scared to let their guard down or will take greater risks (lesser chance to hit or bigger tolerance to friendly fire) in their approach to kill the enemy. For details about this and other effects of a bad moral please refer to the according section of the manual.

## **8.8 Damagetypes**

Obviously different weapons cause different kinds of damage. To reflect this fact each weapon is assigned a certain damage-class. This gets important when it comes to armor types as different armor types suit different damage types. Details can be found in the according armor and ammunition Ufopedia entries. This way it might be possible that some armor that is almost impenetrable for plasma damage fails to offer any protection against weapons that inflict fire damage.

## **8.9 Stun**

In order to find out more about your alien enemy and his goal, motivation and structures you might find it useful to catch one or more them for direct interrogation. Once your research lab developed the tools needed to do so you might use them as any other weapon of this kind (e.g. grenades, close-combat, etc.). After successfully finishing a mission those stunned alien will be brought to your base. Please be aware that you will need special structures to make sure your "guest" will stay long enough to give you any answer at all. If you lack those facilities your stunned aliens will die instantly once you've reached your base. In case everything is prepared to make your stunned aliens feel home they will open up new options in the research department.

## **8.10 Moral**

Your squads, but also your enemies, moral plays an important role in tactical combats. Especially in critical situations that tend to bring the decision on win or loose.

There are a couple of influences to any characters moral and once one reaches a critical point the result can be anything from throwing away your weapon and running away to panic attacks including shooting at allied forces.

A characters moral is going to drop slightly when is witnesses a civilian being killed. If the same happens to a squadmember his moral drop far more remarkable and if an alien dies nearby on the other hand moral is going to increase. All that relative to the soldiers moral values.



## 9 Options

The options menu can always be accessed by pressing *ESC* till you reach the main screen → options.

### 9.1 Video

This section offers you various ways to make UFO:AI look the best way possible to the engine and your system. Please be aware that while most options here can cause improved graphics they can also cause remarkable slow downs your computer.

#### Resolution

You may choose resolutions between 320x240 and 2048x1536. It might be worth the note that "after" some rather rare resolutions like 1280x854 and the like follow which might be interesting for laptop users.

You can also set custom resolutions if you set the cvar **vid\_mode** to *-1* and use the cvars **vid\_width** and **vid\_height** to define your wanted resolution.

#### Fullscreen

Well, here you either turn fullscreen mode on or off.

#### Texture compression

#### Texture resolution cap

#### Show FPS

If you choose to turn on this option UFO:AI will display current frames per second in the very upper right corner.

#### Texture anisotropy level

#### Texture Lod

#### Image filter

#### Gamma

Here you may adjust UFO:AI's Gamma factor to your graphic card or monitor settings.

### 9.2 Sound

#### Effects

Use this fader to adjust effects volume to your neighbours ears.

#### Music

Use this fader to adjust music volume once you got bored of your private music collection.

### **Mixing rate**

I am not really familiar with sound engineering, so i guess it is "the more the merrier"...

## **9.3 Game**

Besides having the chance to change your "playername" the game options also offer more practical opportunities.

### **Start with employees**

Choosing this option will make you start with a set of employees as well as some basic equipment for your soldiers. If you prefer to do really everything on your own, switch to "no" here.

### **Start with buildings**

If you say "yes" here UFO:AI will equip your first base with standard set of facilities that will do the trick quite well. Perfectionists may choose "no" here.

### **Confirm actions**

In order to prevent to fast clicking mistakes or making it easier to play UFO:AI while being drunk you may turn on this option. Doing so will make battlescape showing you the path your soldiers will choose once ordered to move to a certain spot. In order to finally make the soldier in question move there you need to press *Enter*.

### **HUD design**

As said at the introduction of battlescape there are two user interfaces available for tactical combats. here you can switch between HUD and altHUD. Please be aware that it is not possible to change the HUD while being in combat (you may change the option, but it won't take affect within the running mission).

### **Center view**

Depending on your setting here the HUD will focus on the selected soldier if you use the team-overview or buttons 1 to 8 to switch between different soldiers or stay focused on your point of view while switching.

### **Cursor tooltips**

Turn on/off cursor tooltips, indicating the function of various UI elements.

### **Camera scroll**

Adjust camera scroll speed.

### **Camera rotation**

Adjust camera rotation speed.

## 10 Multiplayer

### 10.1 General

The game is using http to query the masterserver and the gameserver (both dedicated and listen) is running at port 27910 (TCP). The game supports IPv4 and IPv6.

### 10.2 Client

You can play 'UFO: Alien Invasion' with your friends via LAN or Internet connection. One player controls a human team while another player takes command of the aliens for a bloody head-to-head battle. UFO:AI also supports cooperative team play with multiple players on both sides. Just enter the multiplayer menu. Local servers in your LAN should be shown automatically - if not, you can use the connect to ip feature from the menu. Internet servers should be shown after querying the masterserver. Make sure, that you are using the same version as the server.

### 10.3 Server

#### 10.3.1 General

You can add your own maps or custom maps by copying them (the bsp files) into *base/maps/* or copying the pk3 files to *base/*. These maps can be added to the mapcycle and can be started via the **map** command like any other map. If you want them to appear in the multiplayer menu for listen servers, you have to add a *yourmapname.ufo* into the *base/ufos/* (create this folder if it doesn't exist yet) folder and add a map entry. You can find examples in the *base/0ufos.pk3*<sup>6</sup> file in *maps.ufo*.

Make sure, that the port UFO:AI is using is not blocked by your firewall.

#### 10.3.2 Listen Server

You can start a server for you and your friends from within the game menu, just enter the "Multiplayer" menu, load you team like you would do as a client and enter the "Create" menu. Here you can select the map and the gametype. There are also other settings that can have an influence on gameplay - see their tooltips for more information.

#### 10.3.3 Dedicated Server

Besides the ability to start a server as listen server, you can also start a server as dedicated server. This is a console only version of the server and only has a text input interface to send commands. Useful commands are **gametypelist**, **maplist** and **map**. You can set the gametype by modifying the **gametype** cvar.

### 10.4 Remote Console

You can also use the rcon method to change the map - all the server administrator has to do is to set the cvar **rcon\_password** - the client has to set this cvar to the same value and use the **rcon** as prefix for the normal console commands.

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<sup>6</sup>pk3 files are just zip files

## 10.5 Mapcycle

You can also set up your mapcycle - a map is automatically changed (or restarted when there is no mapcycle) when one team had won the game. The mapcycle is defined in a file called *mapcycle.txt* which is in your *base/* folder or in *./ufoai/"version"/base*. This file is in the form "map gametype" and each entry is separated by a newline.

There are commands to modify the mapcycle from within the game:

**mapcycleadd** Add new maps to the mapcycle

**mapcycleclear** Delete the current mapcycle

**mapcyclenext** Start the next map from the cycle

**mapcyclelist** Print the current mapcycle

## 11 Troubleshooting

This section tries to address some known problems and possible workarounds. Nevertheless your first and most up-to-date reference should be the project homepage.

Your game console is logged to your UFO:AI userdata dir and is named *ufoconsole.log*. It might have some useful information on what is wrong. Make sure that you are also reading our FAQ<sup>7</sup>.

### 11.1 Turning off sound completely

Even if this is not an elegant way to solve problems, it at least helps to narrow things sometimes to switch off any sound. While just turning the volume to zero still loads the drivers `+set snd_init 0` (needs to be entered within the shell / command line on windows) disables them completely. If this solves your problem, please send us an bugreport to help improving the game.

### 11.2 Video drivers

If the game doesn't start up you should make sure, that you've installed the latest vendor specific video hardware drivers for your card - especially on Windows Vista and Linux.

### 11.3 Turning on developer mode

You can set the cvar `developer` to `1` or use the `setdeveloper` command to activate the debug output on the game console. **Warning:** There might be a lot of output that will flood your game console. The output is stored in your *ufoconsole.log*.

### 11.4 Reset your configuration

It might also help from time to time to reset your configuration. Delete *config.cfg* in your UFO:AI userdata directory to get a fresh restart.

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<sup>7</sup><http://ufoai.ninex.info/wiki/index.php/FAQ>

## A Systemrequirements

**OS** Linux, MacOSX (??) or Windows (not 9x)

**Soundcard** Soundblaster compatible

**Graphiccard** with OpenGL support

**RAM** 256 MB

**CPU** 1000 MHz

**HD-Space** 700 MB

## B Credits

### B.1 Current Development Team

BTAxis: Storyline

Gerd: Coding

Hoehrer: Projectleader / Coder / Models / Textures

Kracken: Coding

Mattn: Projectleader / Coder / Models / Maps / Visual Effects / Textures

Winter: Storyline / Ufopedia

Zenerka: Coding

### B.2 To honor the original Development Team

Herby: Code / Visual Effects

Rastamann: Models / Animation

SparX: Maps / Textures / Art

Vanethian: Music

### B.3 Community

Thanks to all supporters and contributors to let this become truth. This wouldn't have been possible without your help.

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