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UFO: Alien Invasion - Manual [Rev. 0.0.8]

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UFO:AI Development-Team and contributing Comunity: www.ufoai.net

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1.1 About the game and its history

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1.3 UFO:AI - the beginning

The original engine development was done as an extreme modification of IDs famouse Quake 2 engine by a team around Herby (see credits in the appendix) in ????. After ?? years people lost interest on the project while additionally Herby didn't had the as much time at his hand as in the early days. To prevent that all the work already invested till that stage (tech demo 2) is lost he took the offer of one of the former contributors (Mattn) to make it open source. Since those days the source code is hosted by sourceforge.org and given to the community which is asked to use this chance to resurrect one of the most unique and influential games ever. After a short time it became clear that the interest in supporting the development of UFO:AI was unbroken and a bunch of volunteers found together to add their flavour and skill up to what you have in front of you nowdays.

2 Free games / the community

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 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 helps a lot. So we hope to do our 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, 3D-moder, 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.

2.1 License

As stated on the title page, this manual comes under the GNU Free Document License which can be found in the section entitled "GNU Free Documentation License" in the appendix. Furthermore UFO:Alien Invasion is published under the "GNU General Public License" which is stored in the gamefiles ( ) and is also given in the appendix.

2.2 Contact / Support

Support, additional information, FAQs and the forum can be found at http://wwwufoai.net. For a release history, latest releases and bugfixes as well as the bug -and featuretracker please

see our project page at sourceforge.org. Sourceforge also offers you to take a look at our project page (where you find detailed status reports, contribution -and memberlists) as well as the official UFO:AI-mailinglist to its members. In addition to the forum we also host channel UFO:AI on the freenodes IRC network (irc.freenode.org). As usual and according to netiquette pleases 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 planed coverage - feel free to contact us personally by one of the above ways or using the sourceforges Development-team list. Financial support is also gladly welcome. For further information see www.ufoai.net

3 Story

3.1 Prelude

It is the year 2084. Earth, never the most stable of places, enjoys a time of relative peace. The violent beginnings of the 21st century are far away now; distant memories, but not so distant that they've been forgotten. To most of Earth's people, the Second Cold War is a dark shadow from the past, much like the World Wars were to the children of the late 20th.
Conflicts have gotten rarer near the end of the century as new technology and universal healthcare finally became available to the third world. Even the fires of terrorism have cooled in the wake of the Second Cold War, with its horrors and inhumanities still fresh in the minds of the people, from the old United States to the ravaged Indian subcontinent. Class struggles are ascending to the political battlefield now that every nation is guaranteed fair representation in the UN, and the global standard of living is slowly on the rise down to the most impoverished corners of the planet. Countries have solidified, stabilised around a restructured United Nations that successfully polices the world governments. Fragmented clumps of smaller nations, frightened at first by the vast power blocks accumulating around China and the European Union, have banded together into powerful political leagues of their own – then found themselves with no neighbours they could safely fight. For the first time in the history of mankind, there is law and order across more than three quarters of the world.
To many people on Earth, it seems like things are going all right.
The first attack hits the city of Mumbai on the third of May, 2084. Six small UFOs appear out of nowhere and come screaming down from orbit, undetected by the vast radar installations covering the skies over Mumbai, and set down in the single most densely-populated city on Earth. They offer no warning, no explanation. Twenty thousand innocent civilians and three battalions of elite troops are massacred over the course of twelve brutal hours before massed Commonwealth soldiers manage to bring the aliens' advance to a standstill. Then, as suddenly as they appeared, they retreat to their craft and vanish back into orbit, leaving only the ravaged streets of Mumbai as evidence.
An emergency meeting of the UN provides no conclusive direction. The incursions continue faster, larger and more savage than before, this time in Bonn, Johannesburg and Bangkok. Some nations attempt diplomacy, sending messages in a thousand different languages to the aliens ravaging across the countryside. Their words are ignored. Within hours, all three cities are emptied of human life. The attack is over by the time the various militaries are given permission to strike back. The aliens leave nothing behind them but concrete and blood. All the UFOs disappear without a trace – but no one doubts they'll be back.
Eighty-seven hours after the initial attack on Mumbai, Earth declares war. For two weeks, the armies of humanity each try to fend off the mysterious alien attackers to the best of their ability. They score precious few successes.
Left with only one alternative, the UN takes action. Ancient equipment is dusted off, some of it more than a century old, and the long-defunct anti-extraterrestrial agency of the former United States – PHALANX – is resurrected under a new UN banner. Its sworn duty is to combat the alien threat, and to ensure the survival of the human race at all costs.
Funded by all eight of the political powers, and drawing its soldiers from the elite of their armies, PHALANX is the best of the best. It is Earth's first and only line of defence. It can't afford to fail; because if it does, humanity doesn't stand a chance.

3.2 First instructions

TO: Base Commander, PHALANX, Atlantic Operations Command
FROM: SecGen. Mahouf Serra, United Nations, New York City
DATE: 01 January 2084
SUB: Good Luck
Welcome to your new post, Commander. You now have full command over the PHALANX Extraterrestrial Response Unit. Your mission is to protect the citizens of Earth and stop the alien threat at all costs. How you accomplish this is up to you; our only requirement is that you succeed.
Your first order of business is to set up a headquarters. The UN has access to military bases all over the world, so you may consider any region for your base of operations. Choose the location wisely, because it will have great influence on the success of the PHALANX project.
A recent analysis of the attacks on Mumbai and Bonn reveal that UFO sightings and alien activity seems to focus on the most densely populated regions of Earth, including coastal North- and South-America, Europe, Eastasia, South and Mediterranean Africa, and Australia. You should consider including these territories in your field of operations.
Once you've established your first base, you must prepare your soldiers. The recruits we have assigned to PHALANX must be stationed on your dropship, then equipped for battle.
Take care of them, Commander. The rest of us are all counting on you, and praying for you.
That is all. Good luck and good hunting.

3.3 Goal of the game

As a consequence of the lack of knowledge about the alien threat your very immediate goal is to find out as much as possible about the invaders, their goals, methods and technical... and to save as much Innocent citizens as you can in order to prove your worth to the UN.
To reach this goal you will have to distribute your rare resources choosing priorities carefully, expand the effective action radius of your task force and other challenges to your management skills. But on the other hand there waits a victory to be achieved in every tactical mission you fight. All your management serves just one final goal. To beat the alien threat wherever you encounter it. Using a global map (geoscape) and flexible tactical interface (battlescape) you will have to show that you are able to command your troops and outsmart an enemy who - without doubt - is far superior technologie-wise.

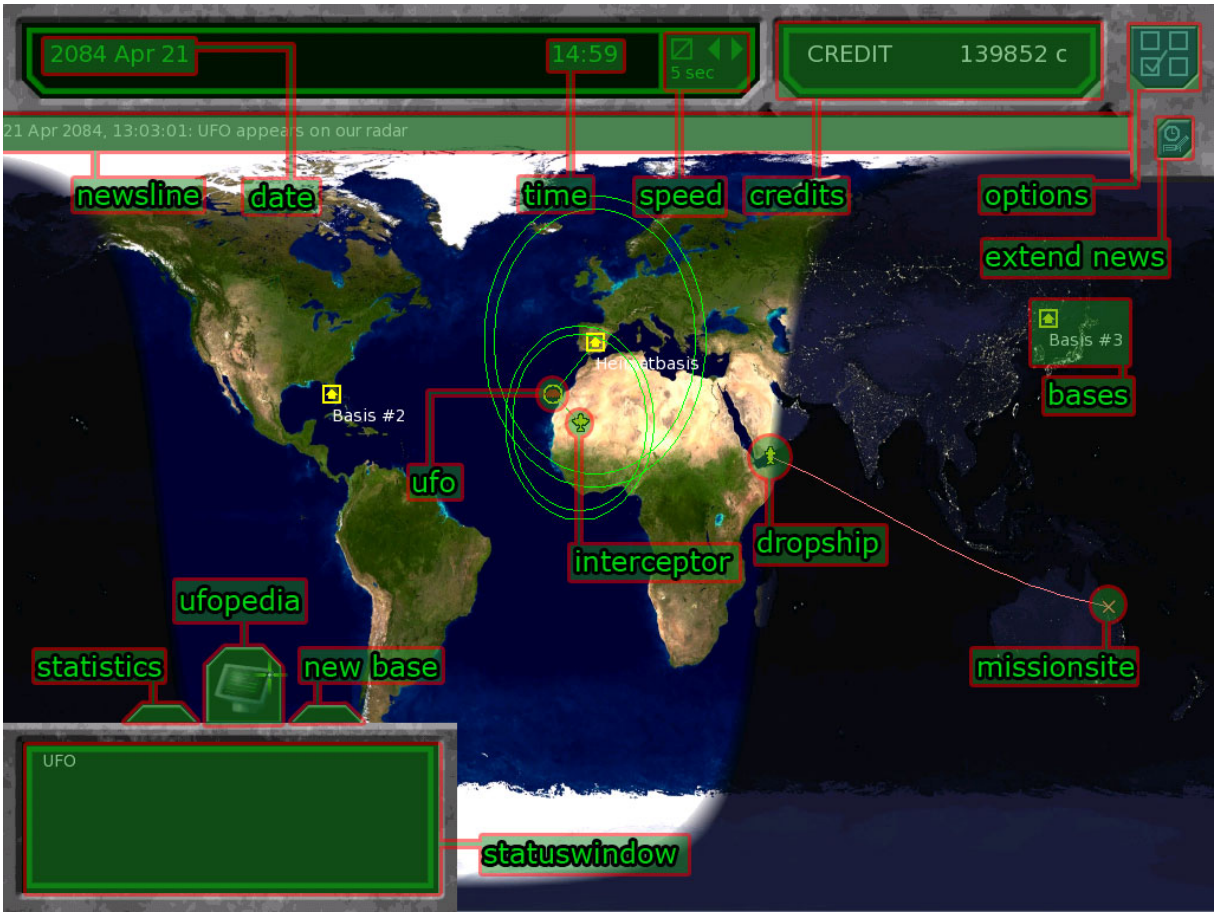
4 Geospace

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 boarderline 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 explaint 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 attemp 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 rescources (financial and employees)

4.1.3 Ufopedia

Ufopedia is a comprehensive collection of usefull 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 aircrafts 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 stoped 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 Upcomig 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 furfil 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 concretee 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 Aircrafts

This menu brings up a screen where you manage aircrafts 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 aircrafts 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). Propably 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 standart 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$\surd$ 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 equiped with different types of ammo. A simple click on the arrow symbol in the very bottom right corner confirmes your selections and gets you back to the aircrafts 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 summery screen. If you want to use the items capured you can simply buy them back here. As there is no differences between purchasing and selling prices you won't "loose" 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 attemps to defend earth against the alien threat it is essential to keep your R D department busy not only in order to get the lastest 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 its usually nesessary 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 its a better strategy to focus on one research at a time.

5.6 Production

Here you can built equipment that is not available on global market or a result of your research departments efforts. Production prices are 10 times of the global market ones, so in opposite to the original UFO series it is no way to earn cash with high tech products. This is still an

open issue within current development and subject to heavy discussion. To order an item to be build simply select it on the left part of the screen and adjust the amount to be build 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 $\surd$ 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 / Managment

6.1 Research

is going to be re-done in 2.1 anyway

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.


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) looses 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 a some quite powerfull tools at you 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 its 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 cause. In the following we will discuss bot of them. You may switch between them as often as you want until you feel familiar with one of them (options ↪ game). While the first one is heavily inspired by the classic HUD the second one (althud) tries to utilise modern technics to achive 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 aboard or retry current missions. Be aware that it's not possible nor intended to save a ongoing mission.

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.

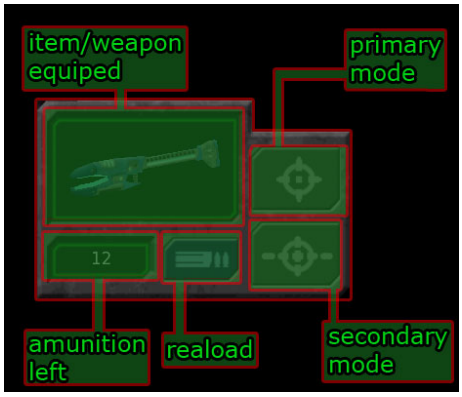
7.1.11 Crouch

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 equiped 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 equiped item/weapon. This turnes 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 / powerfull 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 / powerfull 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 equiped weapon, if ammunition is left in the inventory.

Amunition 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 equiped 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 abou 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 aproximate propability to hit the target. Hint: Even with an 100% chance it is still possible (but very unlikely) that your soldier failt to hit the target for unforseen 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.

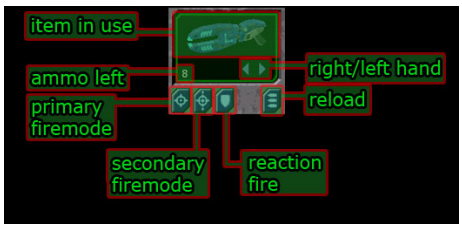
7.2.8 Floor switch

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 disapear. 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 equiped item/weapon. This turnes 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 / powerfull 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 / powerfull 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 equiped 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 do 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, eg. 3rd-mouse-button / ctrl.-button/ q-button (default-settings). For details please refer to your keybindings.

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 you 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 twohanded one or not. What seems rather wired on first sight has a simple reason. As some weapons can be equiped 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 Chance to hit

8.6 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 usefull alternative.

8.7 Friendly fire

This is subject to heavy discussion right now. Yet you better make sure there is noone of your soldiers in any possible line of fire when using RF or normal firemodes - friendly fire is rather strict right now.

8.8 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 (refered to RF-1 or RF-2 in the following). The RF-mode that is activated is indicated by one or two $\surd$ 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 firest 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 suprising 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 tollerance to friendly fire) in their aproach to kill the enemy. For details about this and other effects of a bad moral please refer to the according section of the manual.

8.9 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 unpenetrateable for plasma damage fails to offer any protection against weapons that inflict fire damage.

8.10 Stun

nothing implemented so far... :(

8.11 Moral

Your squads, but also your enemies, moral plays an important role in tactical combats. Especialy in critical situations that tend to bring the decision on win or loose. As the moral system is not fully implemented we will limit ourself to talk about what can be said about the thinks that are already in.

There are a couple of influences to any characters moral and once one reaches a critical point the reslt 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 Tips and Hints

10 First steps

This chapter is obviouly 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 cause 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 you 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 discused 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 off all soldiers available. By turning the "X" buttons to the right of their names into a $\surd$ 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 sqad" screen. While its particular elements have been discussed in the regarding chapter (geoscape - your base) we will limit ourselfs to the most urent 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 actualy own. If you lack a certain item you can try to buy the missing ones using the "Buy / Sell Equipment" menue (reached through the base screen). After you did your best to equipt 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 helpfull. 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 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 prrof you are worth leading PHALANX. Until then, you are dismissed - soldier.

11 Options

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

11.1 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 betweem 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.

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

Lexture Lod

Image filter

Gamma

Here you may adjust UFO:AIs Gamma factor to your grafic card or monitor settings.

11.2 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 realy familiar with sound engeniering, so i guess it is "the more the merrier"...

Sound renderer

Here you may selsect the sound renderer UFO:AI uses. Options are SDL, wapi and DirectX[tm] (win32 only). Unless you know what you are doing or sound is not working properly you may be ok with the presets.

11.3 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 realy everything on your own, switch to "no" here.

Start with buildings

If you say "yes" here UFO:AI will equip your first base with standart 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.

12 Troubleshooting

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

12.1 Usefull commands

There are some quite helpful commands to be entered on UFO:AI console that may help you to work around problems or help getting debugging information for better diagnostics.

12.1.1 Changing drivers used

maybe not all of the following option may be valid for you, depending on your systems config.

Linux +ref_gl [glx—sdl] $\Longrightarrow$ for grafic drivers with valid driver options given in brackets. +ref_snd [sdl—oss—arts—alsa] $\Longrightarrow$ for sound drivers with valid driver options given in brackets again.

Windows +ref_gl [gl] $\Longrightarrow$ for grafic drivers with valid driver options given in brackets. +ref_snd [sdl—wapi—dx] $\Longrightarrow$ for sound drivers with valid driver options given in brackets again.

12.2 Turning off sound completly

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

13 Things to come

Because UFO:AI is always work in progress we will include a small list of features we all would love to have but cant tell you when, if ever, they are to come. So we are glad for any suggestions and feedback but please check if someone had the same idea before you.

more ships	more maps	more models ...
random maps	interceptor battles	voice support
reaction fire for aliens	destructable terrain	alien autopsy
interrogation of aliens	more subtle influence of all primary stats	armor effects TUs
improved inventory system	did i mention more of everything ?	

As you can see we are far away from thinking we got it perfect, but in order to improve things we allways need individuals with passion, skill and attitude to support this project of which we think its worth our time and maybe yours as well...

A Ufopedia

In the following you will find a list of selected Ufopedia entries. As a big part of UFO:AIs gameplay is about research and learning about your extraterrestrial enemy we do not want to spoil your fun by giving away all the secrets for free here. Also we have limited ourselves to list things that may be helpfull to get started with the game and make reasonable decisions without starting a new game a dozen times.

A.1 Skills

A.1.1 Basic skills

Power reflects a soldier's physical strength. A high physical strength is especially important for soldiers who handle heavy weapons and armor, as well as soldiers who fight in close quarters. Power directly influences the damage a soldier can do in melee combat, and how well a soldier is able to handle a weapon's recoil. Recoil decreases accuracy, so a soldier using a weapon with a lot of recoil needs strength to keep it pointing in the right direction when firing.
Power also affects soldier's health points (HP) and the amount of equipment a soldier can carry before he becomes encumbered. An encumbered soldier suffers a time units (TU) penalty, as well as an accuracy penalty.

Speed represents how fast a soldier moves. The attribute affects mainly how much time units (TU) a soldier has. However, TU are, arguably, the most important survival characteristics of a soldier, so the speed attribute should not be underestimated. Morever the skill determines the initiative (who shoots first) when reaction fire is triggered.

Accuracy represents how good a soldier is at hitting a target. Accuracy is important for all soldiers who use ranged weapons, but especially so for snipers, assault weapon specialists and explosive weapon users.

Mind is a representation of the mental training of a soldier. The better this attribute, the less likely a soldier is to panic, and the better the soldier is at psionic warfare. Moreover, the use of utility miscellaneous equipment, as well as mines, depends on this skill. Soldiers with weak minds should not count on fast promotions.

A.1.2 Weapon Proficiencies

Close combat skill represents a soldier's proficiency with close-range weapons. A soldier with a high Close Combat skill is better at aiming a pistol at a fast moving enemy, and can also wield a blade better in combat, increasing damage. Fire modes affected by the Close Combat skill are always short range and with relatively low TU costs.
Examples: Combaat knife, 9mm Pistol

Heavy weapons skill affects how well a soldier is able to handle weapons that weigh a lot or weapons that produce much recoil. Recoil decreases accuracy tremendously, unless the soldiers is trained to counteract with the muscles of his arms. Heavy weapons include high stopping power firearms such as flame throwers and shotguns, as well as many medium and long range heavy support fire weapons. Fire modes governed by the Heavy Weapons skill always trade

accuracy for damage, but differ in every other characteristics.
Examples: Riot Shotgun, Flamethrower

Assault guns skill reflects a soldier's proficiency with assault weapons. The assault skill is a combination of the ability to quickly identify friend from foe in tight combat situations, and to fire a rifle at the latter, not the former. Weapons that use the Assault Guns skill tend to be good all-round weapons, with decent damage, accuracy and rate of fire.
Example: Assault Rifle, SMG

Sniper rifles skill represents a soldier's skill to aim a weapon very accurately, provided the weapon is designed for that. Most weapons used with that skill are indeed sniper rifles, but there are exceptions — long range, high accuracy fire mode of any weapon is bound to require Sniper Rifles skill.
Example: Sniper rifle

Explosives skill represents a soldier's ability to use grenades, and weapons with a splash damage effect (whether caused by a high-explosive ammunition or any other ammunition, even alien). A soldier with a big High-Explosives skill is better at landing the charge at the spot where he wants it: at the feet of the enemy or, if the spot is unreachable, still close enough to harm him. A soldier trained in this skill will also be more attuned to a launcher's recoil and more accustomed to its fire trajectory, increasing accuracy.
Example: Rocket launcher, Frag granade

A.2 Primary Weapons

The alien attack on Mumbai made our situation painfully clear. Their technology is far more advanced than ours. The complete inability of Commonwealth troops to make a dent in the Mumbai offensive revealed critical weaknesses in current military training and equipment. They lost three battalions just bringing the aliens to a standstill without inflicting significant casualties. PHALANX has to overcome these odds, and to do that we need the very best human technology has to offer.

The Excalibur Program was created to find the most effective weapons on Earth by reviewing their manufacturing standards, durability, operational record, and their combat performance in the situations where we've managed to bring the aliens to battle.

Assault Rifle

Technical Specifications: AR-80 Assault Rifle
CLASSIFIED LEVEL YELLOW
PHALANX Extraterrestrial Response Unit
Technical Document, Delta Clearance
Filed: 20 March 2084
By: Cdr. Paul Navarre, RD: Engineering Division, PHALANX, Atlantic Operations Command

Overview The French LeBlanc FAA-191 (Fusil Assaut Automatique) provides the most advantageous mix of range, penetration against alien armour, and magazine size in the assault rifle class. It is a bullpup design, meaning the magazine and action of the weapon are located behind the grip to reduce overall weapon length. The 191 fires a 30-round box magazine of 4.7mm caseless ammunition, tungsten-cored steel penetrators with impressive armour-piercing capability over short and medium ranges. The round does not perform well at long range, but then assault rifles aren't meant for long-range firefights.

Though the design is far from new, first prototyped in 2057, no other rifle has fully surpassed the 191. It is accurate and quick to reload. Its rugged construction makes it dependable in combat and unlikely to break or jam. It is resistant to heat, cold, dust and humidity all at once. Ammunition and replacement parts are widely available due to the design's maturity and relative popularity among Earth's armed forces. This is a rifle you can entrust your life to.

For PHALANX use, we have given this rifle the classification AR-80.

Recommended Doctrine This should be our go-to weapon for medium-range engagements. It can lay down an impressive amount of fire and is deadly out to far longer ranges than any pistol or SMG.

However, no one should entertain the illusion that the assault rifle is the end-all be-all of our arsenal. A balance of weapons is required for us to be able to deal with different situations; while the assault rifle remains a good weapon at close range, it can be slow to manoeuvre in tight spaces and is eclipsed by both submachine guns and shotguns at these ranges, weapons which provide a far greater point-blank punch. Any sweep of an urban building should be led by close-range weapons, while rifle-equipped soldiers either secure the perimeter or form a second assault wave to support the others.

If our rifle-equipped troops are caught beyond effective weapon range, they should make an advance from cover to cover in order to effectively bring their weapons to bear. Snipers should

provide covering fire for the advancing teams or attempt to take out the enemy at range.

Addenda While the AR-80 is a fine rifle in all respects, it was not designed to fight an alien invasion force. We should develop our own purpose-built weapons as soon as it becomes feasible to do so.

S-1 Sniper Rifle

Technical Specifications: S-1 Sniper Rifle
CLASSIFIED LEVEL YELLOW
PHALANX Extraterrestrial Response Unit
Technical Document, Delta Clearance
Filed: 20 March 2084
By: Cdr. Paul Navarre, RD: Engineering Division, PHALANX, Atlantic Operations Command

Overview Originally an anti-materiel rifle, the Canada-built Forrester LRWS (Long Range Weapon System) has since been adopted by many countries as their principal sniper rifle. It is one of the bare handful of sniper rifles developed after 2040 that do not feature a bullpup configuration ('bullpup' meaning the magazine and action of the weapon are located behind the grip to reduce overall weapon length). It fires the massive 20mm HMG (Heavy Machine Gun) cartridge, fed by 5-round magazines which can weigh as much as one kilogramme apiece. The piston-retarded floating breech is equipped with an intricate gas dispersal system which decreases felt recoil to the level of an ordinary hunting rifle. This allows quick repeated shots on semi-automatic without any loss of accuracy.

The greatest advantages of the LRWS over other modern sniper rifles are its incredibly short barrel and light weight, the only rifle in its size class that can fire the 20mm HMG round. This is made possible by a uniquely-reinforced breech and barrel made almost entirely of tungsten and titanium alloys, able to withstand the force of the round's super-high-velocity powder. Due to its short barrel, designed for tactical urban situations, the LRWS is only effective out to approximately 1 kilometre – barely a third of the range of a standard anti-materiel rifle – but we estimate that PHALANX should never face a situation where this might become a problem. Its reduced accuracy is amended by a highly-advanced scope that will calculate and display intelligent bullet trajectories wherever the rifle is pointing.

The integral 'smart' bipod features a pneumatic suspension system that keeps the barrel perfectly horizontal to allow accurate fire even on broken ground. The buttstock and grip automatically mould themselves to fit any shooter. Most importantly, this rifle has racked up more alien kills in Mumbai than any other weapon deployed in the fighting.

At half the weight of other sniper rifles and twice the manoeuvrability, the LWRS offers the power and flexibility that our agents require. This weapon will not disappoint.

For PHALANX use, we have given this rifle the classification S-1.

Recommended Doctrine Soldiers equipped with the S-1should keep their distance, fire from cover, and try to use aimed shots whenever possible. This is not an automatic weapon; a missed shot wastes time, ammunition and possibly life.

All our snipers should carry at least one backup sidearm such as the P-12 or the CRC-8 SMG, or a combat knife at the very least. Should aliens threaten a sniper at close range, he should immediately draw his sidearm. Under no circumstances should he try to use an S-1 to fend off attackers at close range. The S-1 is too slow-firing to stop an advancing alien and will quickly deplete its magazine if this is attempted. If the soldier tries to shoot his magazine dry before drawing his sidearm, it will be too late.

Addenda Along with high-explosive rockets and grenades, this is one of the few standard-issue human weapons that are fully effective against robotic aliens.

Flamethrower

CLASSIFIED LEVEL YELLOW
PHALANX Extraterrestrial Response Unit
Technical Document, Delta Clearance
Filed: 20 March 2084
By: Cdr. Paul Navarre, RD: Engineering Division, PHALANX, Atlantic Operations Command

Overview From our experiences in Mumbai and other stricken cities, we've concluded that the aliens seem to concentrate their efforts on population centres, especially dense urban areas. A majority of engagements have taken place at knife-fighting range. For the purposes of the Excalibur Program, we've chosen several high-performance weapons for our Close Range Combat package.

The Iranian ADA 22 flamethrower (nicknamed 'The Torch of God' by Alliance troops) is a marvel of modern engineering. Unlike the old flamethrowers of the 20th century, it requires no heavy pressure tanks to be carried on a soldier's back – the ADA is one unit carried in the hands without any hoses or tubes. It simply slots a relatively small 200mm gas canister into the feed, fires its deadly ammunition, and then ejects the empty canister to make room for a reload. The system is ingenious and surprisingly reliable.

The muzzle of the weapon is a powerful pump that squirts gas into the air, then sets off the gas-air mixture by way of four parallel spark igniters, one main unit and three backups. These igniters each emit as many as ten sparks per second in order to ignite the fuel before it disperses. The backups are very important in preventing an explosion due to the special fuel the ADA uses, a substance called Compound 90.

Compound 90 is a new flamethrower fuel that, when injected into the air, creates a slow thermobaric reaction – a fuel-air ignition rather than a fuel-air explosion – that can roast living tissue in seconds. C90 inflicts horrific damage on organic targets; the heat generated exceeds 1700 degrees celsius, enough to melt titanium. However, due to its gaseous nature it leaves no burning residue (like napalm) on the target or in the surrounding area and disperses its heat much more quickly. This makes it significantly safer for urban use than napalm-derivative substances.

The ADA 22's main drawbacks are its short range and its complex internals, which are difficult to repair. However, our experienced technicians should have no problem doing maintenance on this model.

For PHALANX use, we have given this flamethrower the classification CRCL-FL.

Recommended Doctrine The CRC-FL is a close-range weapon; the operator needs to be fast in order to get into weapons range and unleash as much hell as possible. It is also a rather weighty weapon despite its relatively slim design. Strength as well as speed is required to wield it effectively.

Flamethrowers also make great ambush weapons – just make sure that none of our soldiers are in the line of fire.

Addenda This weapon should not be fired if there are civilians in or near the target zone.

HMPL Rocket Launcher

CLASSIFIED LEVEL YELLOW
PHALANX Extraterrestrial Response Unit
Technical Document, Delta Clearance
Filed: 20 March 2084
By: Cdr. Paul Navarre, RD: Engineering Division, PHALANX, Atlantic Operations Command

Overview The South-African MPMDS (Multi-Purpose Missile Delivery System) has a classic, almost surgically clean name that completely belies its purpose. It is the heaviest infantry missile launcher on the market, able to fire anti-tank shells as easily as high-explosive rockets that turn infantry into hamburger. Originally intended as light field artillery, this weapon is fairly new; its only combat experience has been in Mumbai in the hands of Commonwealth troops. It was one of the handful of weapons that eventually turned the tide in the fighting – and there is a good reason why.

Alien UFOs on the ground emit fantastic amounts of jamming and other EW (Electronic Warfare) activity. In fact, they emit so much of it that ordinary 'smart' missiles are rendered completely ineffective. If one type of alien EW doesn't fool the missile's relatively stupid electronic brain, another will. No amount of tinkering by Earth's military engineers has been able to fix the situation. The MPMDS, however, will remain effective against the alien invaders – one of the few human missile launchers that can – because its rockets carry no onboard guidance.

The rockets are 120mm monsters the size of artillery shells. They are fired out of a smoothbore barrel, fin-stabilised in flight, and have a maximum effective range of 70 metres. Surprisingly they are made up of only three parts: a rocket booster, a warhead and an impact trigger. This simplicity allows them to remain effective and reliable in the most hazardous situations. Though the rockets are not very accurate, they will devastate anything in their path, even aliens. It takes only one good hit from an MPMDS rocket to send the enemy flying.

Standard ammunition for this launcher includes: HE (High-Explosive) rockets, AA (Anti-Armour) rockets, and IC (Incendiary) rockets. New types of MPMDS ammo were being researched by Commonwealth manufacturers before the start of the war. We have all their data on file and could use it to create revolutionary new rocket types.

Along with the HPGL Grenade Launcher, this weapon will provide our troops the artillery support they need to survive and win through.

For PHALANX use, we have given this rocket launcher the classification HPML.

Recommended Doctrine The HPML is best used in a support role, providing covering fire for our assault troops with high-explosive and/or incendiary rockets. However, care should be taken that friendly fire incidents do not occur, as this could have disastrous effects in a combat mission.

Friendly troops should be kept away from the rear of the launcher during firing; the hot exhaust gases are extremely dangerous to nearby humans. The HPML should not be fired at targets closer than 8 metres from the shooter. Violating these safety guidelines could result in serious injury or death to the shooter and other members of the team. If a target is closer than 8 metres, any shooter should immediately resort to his sidearm or a combat knife. Anything else would be suicide.

Addenda Along with sniper rifles and grenades, this is one of the few standard-issue human weapons that are fully effective against robotic aliens.

A.3 Secondary Weapons

Combat Knife

CLASSIFIED LEVEL YELLOW
PHALANX Extraterrestrial Response Unit
Technical Document, Delta Clearance
Filed: 20 March 2084
By: Cdr. Paul Navarre, RD: Engineering Division, PHALANX, Atlantic Operations Command

Overview The combat knife is a solid, twenty-six centimetre bar of sharp steel that can be used for a number of everyday purposes. As a weapon, the combat knife's edge is reinforced with hard ceramics to give it extra armour-piercing power, and it is balanced for throwing should the need arise. It also has a bayonet ring for affixing the knife to the barrel of an old-style battle rifle.

The inclusion of the combat knife in our arsenal was a subject of hot debate. Mumbai has taught us that even in the most favourable conditions, a knife is no match for the aliens' weaponry. If a knife-equipped soldier isn't shot down before he even reaches his target, he will almost certainly be gutted by one of the wicked alien blades that slice right through armour. Only in a handful of occasions have experienced knife-fighters been able to win out against alien opponents.

Still, the combat knife has saved many a life over the years when firearms became inoperable or ran out of ammo. It has never been rendered obsolete by centuries of progressing technology; even the aliens use bladed weapons. When the chips are down, a knife in hand is still vastly better than a man's own fists.

If a soldier makes it all the way to melee range, this weapon will serve him well.

Recommended Doctrine In combat, the knife is a weapon of last resort. If all other weapons are exhausted and the enemy is at the gates, then a good knife can save the day. However, even in such desperate situations it is risky business; using a knife on an enemy that hasn't been previously wounded or weakened is a fast way to end up in the morgue.

Addenda None.

P-12 / 9mm Pistol

Technical Specifications: P-12 Pistol
CLASSIFIED LEVEL YELLOW
PHALANX Extraterrestrial Response Unit
Technical Document, Delta Clearance
Filed: 20 March 2084
By: Cdr. Paul Navarre, RD: Engineering Division, PHALANX, Atlantic Operations Command

Overview With the return of armour to the battlefield, starting with steel helmets in World War 1 and fragmentation vests in Vietnam, pistols have had a harder and harder time keeping up. Due to their far lower muzzle velocity compared to longer-barreled and/or fully automatic weapons, they've had increasing trouble penetrating the new, ever-higher standards of human armour – much less advanced alien composites. The very concept of the pistol in military use came under fire at one point in the 21st century, and was saved only by the advent of super-high-velocity powder.

Chief among the new generation of super-pistols is the Dolvich DV762 from Russia. It follows the design philosophy of its home country; rugged, reliable power without frills. Its design is extremely basic, and though the materials used in its construction are far stronger to cope with the new powder, the DV762's internals are no more advanced than any pistol of the late 20th century.

The DV762 does not compromise. It isn't a multi-function firearm. It's designed for only one thing: to punch through armour and kill the person inside. In order to do this, the DV fires the ancient 7.62mm Tokarev pistol round, either on semi-automatic or three-round burst mode, from a 12-round detachable box magazine. The Tokarev round is known for its excellent penetration, and it has been significantly upgraded on its return to military service. This pistol can shoot clean through the side of a modern ballistic helmet at ranges of up to 10 metres – and then out the other side.

Unfortunately, in order to achieve penetration, the DV sacrifices stopping power. The 7.62mm round makes a very clean hole in the enemy, which is the problem; it's very reluctant to fragment or tumble, requiring a direct hit on a vital organ or major artery to incapacitate or kill an enemy.

For the purposes of the Excalibur program, we concluded that a guaranteed minor hit is better than one that may simply bounce off an alien's armour, especially as we have yet to gain a clear picture of how nasty alien armour can get. We need sidearms that we know will be effective in the crunch, and the DV762 is the best of them.

For PHALANX use, we have given this pistol the classification P-12.

Recommended Doctrine The P-12 is primarily a backup weapon. It is a significant step up from the combat knife as a weapon of last resort, and it lets a soldier respond to new close-range threats if the primary weapon is rendered ineffective at such ranges or has run out of ammo.

Ambidextrous soldiers may even consider using two pistols at the same time, though this will negatively impact accuracy and reduce the soldier's already minimal effective range.

A single P-12 should rarely be considered as a primary weapon, as it is outclassed in this role by nearly every other weapon in our arsenal. Its advantages are the advantages of a sidearm – small size and weight. Still, it may find a use as a primary weapon with field medics and technicians who do not have room for larger weapons.

Addenda Despite good penetration against organics, this weapon performs very poorly against robotic targets.

CRC-8 SMG

Technical Specifications: CRC-8 SMG
CLASSIFIED LEVEL YELLOW
PHALANX Extraterrestrial Response Unit
Technical Document, Delta Clearance

Filed: 20 March 2084
By: Cdr. Paul Navarre, RD: Engineering Division, PHALANX, Atlantic Operations Command

Overview From our experiences in Mumbai and other stricken cities, we've concluded that the aliens seem to concentrate their efforts on population centres, especially dense urban areas. A majority of engagements have taken place at knife-fighting range. For the purposes of the Excalibur Program, we've chosen several high-performance weapons for our Close Range Combat package.

Designed and manufactured in mainland China, the Ohm 55 SMG is one of the most frightening weapons to come out of the Second Cold War. It was first prototyped in 2035 by scientists working for the Communist Chinese government. Production models were only trickling into government units by the end of the war, but the rebel and Commonwealth troops quickly learned to respect the Ohm's ferocity.

Its rate of fire at full auto exceeds 1200 rounds per minute. It can chew through a 50-round magazine in three seconds. It fires an upgraded version of the Belgian 5.7mm armour-piercing round, a steel penetrator with aluminium core, which can tear kevlar like paper and tumbles brutally through flesh and bone. Even modern ballistic fibre cannot stop this round at anything closer than 12 metres. The Ohm 55 has dominated the field of SMGs for the past 50 years and will continue to do so for at least the next decade.

The Ohm is highly manoeuvrable with a short barrel and sleek lines, but can suffer from excessive muzzle climb on full auto due to the sheer weight of lead the weapon puts out. Autofire also tends to empty the magazine before the shooter even realises he's holding down the trigger. Still, after nearly 50 years in service around the world, this remains the Ohm 55's only known design flaw.

For PHALANX use, we have given this submachine gun the classification CRC-8.

Recommended Doctrine The CRC-8 is intended for point-blank urban firefights. It will perform very well in this role, but don't expect it to hit the broad side of a barn out to medium range. It can also function as a high-powered sidearm, but may be too bulky for most soldiers to use in this manner.

While the CRC-8 does suffer excessive muzzle climb on full auto, throwing off the aim of even experienced users, it is much more docile in its standard burst mode. Full auto should rarely be considered outside of panic situations.

Addenda Despite good penetration against organics, this weapon performs very poorly against robotic targets.

Riot Shootgun

Official Description

Battle Implications The SG-260 riot shotgun has tremendous stopping power at close range and, accordingly, considerable recoil. Its main bulk hardly fits in the holster and the double barrel, though short, slightly protrudes along the soldier leg. To master this secondary weapon, the soldier needs both hands and considerable skill with heavy weapons.

A.4 Misc

Frag Granade

CLASSIFIED LEVEL YELLOW
PHALANX Extraterrestrial Response Unit
Technical Document, Delta Clearance
Filed: 20 March 2084
By: Cdr. Paul Navarre, RD: Engineering Division, PHALANX, Atlantic Operations Command

Overview The concept of the fragmentation grenade has changed little since it was first conceived, when Chinese soldiers packed gunpowder into ceramic or metal containers. It only solidified further after the end of the 20th century. Improvements in explosive technology and casing materials have made them a little faster and a little deadlier, but the mechanics are the same: An explosive substance at the heart of the grenade causes the casing (and possibly additional payload such as a layer of wire or white phosphorus coiled around the explosive) to fragment into shrapnel and fly in all directions at high speed, killing or wounding targets in the area of effect. The delayed fuse is ignited by first pulling the pin and then releasing the handle, usually released as the grenade is thrown. It will detonate after a period of several seconds.

For PHALANX purposes, we?ve selected the Australian HG15 as the best of the lot. This grenade is loaded with an extremely conventional charge of C8 solid chemical explosive, an inner layer of coiled wire, and an outer layer of thin plated steel. It's designed to maximise coverage by putting out more shrapnel than any other grenade on the market. The HG15's outer layer is smooth and unbroken, unlike the old 'pineapple' grenades of World War 2, to make it easier to roll across various surfaces. The C8 explosive at its core may be old in design, but it's both highly powerful and can be counted on to work right under harsh conditions. Reliability is an especially important attribute in any kind of hand-held bomb.

Recommended Doctrine Though quite effective against enemy infantry, frag grenades are weapons of opportunity, not a replacement for firearms or portable artillery. Their range is highly limited and their casualty radius is small. However, if the situation calls for close-range indirect fire or something deadly thrown around a corner, the frag grenade is just the thing.

Care should be taken that no friendlies (especially civilians) are caught in the area of effect. In such situations the use of lethal grenades is strongly discouraged; flashbangs should be given preference.

It's recommended that all soldiers carrying non-heavy weapons should be equipped with at least one grenade of some variety – be it a frag grenade, flashbang, incendiary grenade or other – in case the need should arise. Two or more are strongly recommended.

Addenda None.

A.5 Amor

Combat Armour

CLASSIFIED LEVEL YELLOW
PHALANX Extraterrestrial Response Unit
Technical Document, Delta Clearance Filed: 20 March 2084

By: Cdr. Paul Navarre, RD: Engineering Division, PHALANX, Atlantic Operations Command

Overview The use of armour on the battlefield never quite died out completely, though it was rendered ineffective in most forms between the early 18th century and the late 20th. It began to find its way back to common use in World War 1 in the form of steel helmets. This practice continued through WW2, and was later superceded by the invention of kevlar. Today, however, kevlar is thoroughly obsolete in nearly all its forms; it's now used only by civilians and police forces with budget problems. Even more advanced types of 20th-century body armour have been rendered useless by modern weapons. New materials were needed, materials to make armour stronger and its wearers tougher than ever before.

Surprisingly, several ancient files we've unearthed seem to confirm that PHALANX was responsible for some amazing technological breakthroughs in the past, technologies that were later adopted across the world. Every attempt at producing artificial spider silk had failed, but researchers at the PHALANX Pacific Operations Command base finally managed it in 2017. Their technique is still in use today, centred around a device called the 'organic loom'; a large feeding armature supporting hundreds of individual silk glands and spinnerets, designed solely for the mass-production of spider silk.

The first widespread use of military combat armour made from spider silk came as a joint effort by NATO in 2023, after ballistic tests proved that Chinese rounds tore right through their aging standard-issue kevlar vests. The armour itself is a layercake of spider silk and treated ultra high molecular weight polyethylene, giving it astonishing strength and flexibility. The resulting fabric is about 18 times stronger than steel and provides a performance increase over kevlar that is estimated between 300 and 400

The Combat Armour's only disadvantage is its relatively high weight compared to older suits, but this is mainly due to the number of layers required to properly protect against modern weapons. The weight is evenly distributed, making it quite comfortable to wear and much less bulky than experimental nanocomposite armours. This armour will save lives while preserving the soldier's all-important mobility.

Recommended Doctrine Where possible, PHALANX troops should always wear armour whenever they are sent into a combat situation. The Combat Armour should be considered the basic protection no soldier can afford to go without. For some soldiers, the Combat Armour will remain a viable choice compared to heavier, more advanced armours due to the freedom of movement it provides. Snipers and anyone else not expected to be at the front line will be able to make good use of the extra mobility.**armor types don't influence TUs right now**

Addenda None.

B Systemrequirements

The only way for us to figure out the minimum requirements is to gather information about systems that manage to run UFO:AI. That means if you have a "weaker" system than those listed here please tell us ! (fps and system-settings would be helpfull)

B.1 Linux

B.2 MacOS

B.3 Windows

C Keybindigs

Pause	pause	1	team member 1
F12	screenshot	2	team member 2
F11	"mn_push nohud"	3	team member 3
		4	team member 4
Left Mouse	select	5	team member 5
Right Mouse	action	6	team member 6
Center Mouse	turn	7	team member 7
Control	turn	8	team member 8
e	turn		
c	stand / crouch	v	1st-person-view
x	toggle reaction fire on / off	b	time stop
Space	next alien	n	slow down time
Enter	confirmation	m	fasten up time
Up Arrow	level up	w	level up
Down Arrow	level down	s	level down
Right Arrow	circle camera to the right	d	circle camera to the right
Left Arrow	circle camera to the left	a	circle camera to the left
Keypad Right	shift right	Page up	zoom in
Keypad Left	shift left	Page down	zoom out
Keypad Up	shift up	Mouse wheel up	zoom in
Keypad Down	shift down	Mouse wheel down	zoom out
Insert	change camerapitch(up)	r	change camerapitch(up)
Delete	change camerapitch(down)	f	change camerapitch(down)
k	message say	e	next round
l	message sayteam	**hook??**	console

D Credits

D.1 Thanks and Credits (manual)

I want to thank the entire Dev-Team around UFO:AI for their great effort, making this game possible. Also as the author of this manual I want to thank everyone who helped and helps to improve the quality of this document and thereby hopefully helping new players enjoying the game. A special "thank you" also goes out to Bandobas and Winter(slice) who provided a major part of of Ufopedia quoted within the manual.

D.2 Development Team (tech demo/engine)

Herby:	Code / Visual Effects
SparX:	Maps / Textures / Art
Rastamann:	Models / Animation
Vanethian:	Music
Ww3	Webdesign

D.3 Development Team (after tech demo 2)

- Projectleaders: Mattn Hoehrer

BTAxis:	Storyline
Draikon:	Sound
Hoehrer:	Projectleader / Coder / Models
Mattn:	Projectleader / Coder / Models / Maps / Visual Effects / Textures
TorF:	Coder
Winter:	Storyline / Ufopedia

D.4 Contributors

id Software (Quake 2 Engine)	Sacrusha

D.5 Versionhistory

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