

UFO: Aftermath Phoenix Company Field Manual



"The nations of the world will have to unite for the next war will be an interplanetary war. The nations of earth must someday make a common front against attack by people from other planets"

- General Douglas MacArthur, 1955





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1 UFO: Aftermath

1.1 Introduction

Thank you for buying and playing UFO: Aftermath!

UFO: Aftermath is a combination of a small-squad tactical combat and a global strategy game, pitting you against an alien threat. In the strategic part of the game you control the expansion of your territory, research new technologies and manufacture new equipment for your soldiers.

In tactical missions you and your elite squad will fight the alien scum in close combat. You will be using our Simultaneous Action System, designed to give you complete control of the battlefield while capturing the action of real combat with an alien threat. We hope you will enjoy playing it at least as much as we enjoyed making it.

1.2 Installation

UFO: Aftermath comes on two CDs: One is marked Play (CD 1) and the other is marked Install (CD 2). To install the game, simply insert the Play CD into your CD/DVD drive. If you have autoplay enabled on your PC, a splash dialog will appear with the "install" option. Select the install option.

If the dialog does not appear, double-click the "My computer" icon and then double-click the icon of your CD drive. Here, run the Setup.exe program by double-clicking it.

1.3 System requirements

UFO: Aftermath runs on a 100% intel-compatible computer that meets or exceeds the following specifications:

1.3.1 Minimum

- Pentium® III 500 MHz
- NVIDIA GeForce2 or ATI Radeon 7000 with 32 MB VRAM
- 128 MB RAM
- 1,25 GB free hard drive space
- 8x CD-ROM, mouse
- Windows 98/ME/2000/XP with DirectX 8.1

1.3.2 Recommended

- Pentium[®] IV 2 GHz or Athlon[™] 2 GHz
- NVIDIA GeForce4 TI or ATI Radeon 9000 with 64 MB VRAM
- 256 MB RAM

- 8x CD-ROM, mouse
- Windows 98/ME/2000/XP with DirectX 8.1

1.4 Background story

On May 25, 2004, a giant spacecraft approached the earth. Silent, it hovered ominously over the world and began to release great clouds of spores into the upper atmosphere. Rapidly multiplying, the spores soon darkened the skies, and before long obscured the sun completely. In later days, this period would be known as the "Twilight."

The spores, having reached critical mass in the skies, began to rain down. Over the course of several days, they began to clog and streets and bodies of water, smothering people in their homes and burying animals in the wild. During the "Nightfall," as it came to be called, most of the higher life forms on the earth were wiped out.

During the Twilight, all human responses were futile. Choosing caution over aggression, the governments of the world didn't realize how quickly the end could come, and were buried alongside those that they governed. A few, however, did survive, sealed in underground bases with stocks of food and oxygen. After several weeks, the spores seemed to have disintegrated, decomposing and settling into the soil. The world seemed safe again, for a time. This is where you come in: You must gather together the remaining peoples of the planet, find out what has happened and, if possible, get your revenge.

1.5 Quick start



The best way to get into the game is to start playing. You will notice the Hint button (left) appearing from time to time, whenever a new situation occurs. Just click the button to read the

tutorial message. the more complex windows have a tip button: You can press it and then click any component in that window to get more detailed information.

UFO: Aftermath plays in two distinct game styles: strategic and tactical. In the strategic game (the part that takes place on the globe), you must learn how to fight the alien menace that has destroyed your planet, and reclaim it for humanity. From the vantage point of space, you will see mission after mission appear on the geoscape and you must push back the alien menace.

You decide what research or development you want the Council of Earth to carry out on your behalf, what missions are important enough to warrant your attention and which shall be left to other, not-so-elite troops, and whom to include in your squad.

The tactical game throws you and your troops into face-to-face combat with the alien threat. You will be in complete control of every movement your squad makes. Plan your

actions, and watch them carry out your orders, pausing only to await new commands. A successful tactical mission will increase your presence in the surrounding territories and eventually allow you to capture more bases and enlarge your sphere of influence.

Keep in mind that you need not (and indeed cannot) attempt every tactical mission. You must select those that you think are the most propitious for your strategy.

1.5.1 Getting around

Quick start

When you start the game, you enter the Main menu. There are six buttons. To start immediately, just click the Play button in the center of the upper row. If you want to change the name or difficulty of your game, click the Game button and then either switch the difficulty level or create a new game by clicking the New button. Switching the difficulty in the middle of a game influences all future missions you will play.

You can also go to the Load and Save window from the Main menu. Here you can save the current game or load an older save. If for any reason you should want to restart the game completely, go to the Game screen and create a new game for yourself.

1.5.2 Strategic game

When you first enter the strategic game you are asked if you want to play Tutorial Mission. We strongly recommend that you do, as it will show you how to play the tactical missions (see also next section). When you finish the tutorial mission, you will return to the strategic game Time is stopped and nothing is happening. You may wish to take some time to familiarize yourself with the interface: You can rotate the globe with rightclick, zoom in and out using your mouse wheel and select bases by left-clicking them. You can also enter the other two important screens - Research & Development and Squad management - by pressing their respective buttons.

When you're ready to begin, just click one of the three arrows in the upper-left corner. The further to the right, the faster time will pass. Almost immediately starting the game, you will receive your first recruit. A window will appear informing you about his arrival. You have the option of returning to the main view or entering the Squad management screen.

If you choose the latter, you will enter the area where you can arrange and equip your squad. Start by dragging your new recruit from the pool of Available men (bottom right) to the Current squad (bottom left). You can then review his equipment and modify it: Clicking the arrows next to his arms, belt or backpack will clear these areas, and you can then drag new equipment from the Equip box on right. Remember, there are several tabs in the lower part of the Equip box: These tabs switch between various weapon categories.

You can ignore for the time being the other tabs (Info, Train) just as you can ignore Skill, Attributes and Professions on the left. These will be discussed later.

When you are satisfied, you can click the Return button to get back into the main view. You can now enter the R & D screen: Here you can see the list of technologies on the left side of the screen, divided into four categories: Ready for Development, Ready for Manufacturing, Not Ready for Development and Development Finished. Select the technology "UFO Detection" from the list of technologies and click the Start Development button. Research and development is very important for playing - and winning - the game, so take care not to let your scientist remain idle.

You should then click the Research button on the upper left. This will switch you to the Research screen. Research works very much like development, but at the present you have no Research bases so you cannot research anything. You might wish to return to this screen later, when you have at least one reserch base. For now, you can return to the main view.

Now, if you allow the time to pass, new tactical missions will became available. A message window will inform you of each mission as it appears. Click one of the mission pins (red) and then click the Accept button. You will enter the Squad management menu, where you can review your current squad and its equipment. Click the Continue button and return to the main view. You will see a chopper leaving your base and flying toward the destination. When the chopper arrives, the loading screen appears and the tactical mission starts.

1.5.3 Tactical game

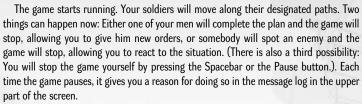
Once the tactical mission is loaded, you are on your own. You must use your men to locate and eliminate the aliens or complete whatever other objective the mission may have, or die trying. (You can always review mission objectives by clicking the Objectives button on the upper toolbar.)

You should first find out how to move around. Move the mouse cursor toward the edge of screen to move the view. Press and hold the middle mouse button (or mouse wheel) and move the mouse to rotate and tilt the camera.

The game is paused when the mission is first entered. Select one soldier and rightclick somewhere on the map. A line will appear, ending with a small square. This is the travel plan for this soldier, and the square indicates a waypoint. If you once again rightclick somewhere, more waypoints will be added to the planned route. The waypoints and their joining lines show exactly how the soldier will move.

Now try plotting the routes for the other soldier(s) as well. You will notice that your soldiers are color-coded so that you can easily identify each soldier's travel route or plan. Once each soldier has his travel plan, press Spacebar or click on one of the "Run" buttons (in the upper-left corner of the interface) - the three buttons correspond to the three possible speed settings.

Quick start



Move your soldiers until you spot an enemy. You can choose between Walk (slow but stealthy) and Run (quick but noisy). This is done by clicking the corresponding switch on the interface on the right. The soldier's current movement mode is displayed by an icon on his face panel.

When you spot an enemy, order your men to advance to it and open fire. When you hover your mouse over an alien, you will see a number (in a color corresponds to the color of the soldier who is selected) next to the enemy's selection box, showing the chance of making a hit. If you want to enter the attack order, just right-click the enemy. If you are too far away or there is an obstacle in your line of fire, the number will not appear and the game will give you the reason for it in the message log. Press C to cancel the plan, plan movement to a better vantage point and plan the attack again. You can choose between Burst and Aimed attack modes: The former is faster but not as accurate. Moreover, Burst is not available for all weapons. You change the fire mode by clicking the weapon picture.

If you then run the game, you will see your soldiers shooting the enemies (and quite likely enemies shooting at you!). If one of your men is hit, his health bar (the green stripe under his portrait) will get shorter. If the soldier is out of combat, his portrait turns red. He falls down and you can save him by timely application of a medikit.

You may want to change the way the camera moves when it shows you a new alien, or perhaps you do not want to issue orders to all your men before you run the game. In that case, you should enter the Options screen and turn of various options. Turning off the Auto Camera options will prevent the camera from moving on its own, while unchecking the Stop Game options will make the game more "real-time."

When the objectives are completed or all your men are dead or out of combat, the mission will end and you will return to the strategic game.

You may want to take a look at the Controls section to see the various ways of controlling the game.

2 More on Gameplay

The following text gives a more detailed description of the various elements of UFO: Aftermath. While by no means necessary to play and enjoy the game, the knowledge of the underlying principles may prove interesting and allow for better gaming experience, as well.

2.1 Strategic game

In the Strategic game, you have to decide on an overall approach. Your long-term strategy will rest on four pillars:

- Deciding which missions you take, thus influencing the direction of your expansion
- Deciding on the types of bases to build, balancing need for research with the need for protection
- Deciding which sciences and technologies will be researched and developed, choosing between better equipment and the advancement of the story
- Deciding on interceptions, thus protecting your territory and making available unique items that can be found on board UFOs

As hinted here, the strategic game is also the primary place in which where the story of UFO: Aftermath unfolds. You gain new information as a result of research or (occasionally) as a result of a tactical mission. But even in the latter case you will be informed of your progress only when you return to the main strategic view.

Your most important task overall is to strike a balance between your territorial expansion and technological progress. If you try to play every possible tactical mission and more, you may expand too quickly and the alien backlash may catch you technologically unprepared. If, on the other hand, you only rely on research and ignore the tactical missions, you won't be able to survive for long. The incessant waves of invaders will eventually break through and destroy all your bases.

There are several ways to win the game, so there is more than one strategy that leads to success. However, there are many strategies that lead to failure.

2.1.1 Territory and expansion

The sharply defined light-blue lines border the bases you have captured and have in your possession. When you successfully complete a mission in a hostile territory, you increase your influence in that territory and to some degree in the neighboring ones. You may then see very light, semitransparent lines appear around those territories. The more solid a line is, the sooner it is that the territory will come into your possession. A single mission in the vicinity may be enough to bring it your way!

If, on the other hand, you lose a mission, the enemy's influence increases. When this occurs, you lose your grip on a territory you already own. When this happens, you will

see a yellow line surrounding one of your bases. As the danger increases, the line turns red, until the insidious aliens attack the base itself. If you fail to protect it, it will disappear completely and you lose the surrounding territory. (You can still win it back in the same manner as when you won it previously.)

It should also be noted that everything we've discussed applies to the missions you do not take and that are handled by the regular troops. (We call these missions "autoresolved."). Therefore, it is entirely possible that you will capture another base without actually playing a single tactical mission but simply by virtue of successfully auto-resolved missions. However, it is more likely that you will lose a base through this approach, because the other troops - even though you don't command them directly draw strength from your examples. If you forego fighting on the ground for extended periods of time, their combat morale diminishes.

Missions

Strategic game

Missions are displayed as red pins. The little triangular symbols at the bottom correspond to the different types of missions: sorties into alien territory, enemy incursions into human areas, investigations of downed UFOs or rescuing stranded pilots. There are many types of missions you can accept.

As explained in the previous section (Territory), a successful mission – be it won by your Phoenix Company or by other human units - increases your influence on the territory. When you reach a critical threshold, the territory will tip over to you.

An exception to this principle is the base-capture mission: Sometimes a location for a new base is discovered within the occupying territory, and if you win that mission the new base will be captured immediately.

When you click a mission pin, the following information is displayed:

- **Objective:** The mission objectives; the goals you must satisfy to complete the mission (see below)
- Environment: This may be a city, wilderness, an UFO crash site, a base, etc. You should adjust your squad and its equipment accordingly. For example you can usually see (and shoot) farther in an open country mission than in a city.
- Terrain: This is only displayed for wilderness (open country) missions. It can be mountains, hills or flatland.
- Vegetation: Again, this parameter is only displayed for wilderness missions. It tells you what kind of vegetation there is (or used to be) in the area.
- Limit: This is how many men you can take with you into the mission. There is only enough room in your chopper for eight men, including a pilot, so if you plan to rescue somebody on the mission, you must have room for him on your squad.

- Urgency: Some missions are more urgent than others, but all missions must be resolved eventually. If you do not take up it, the regular troops will take care of it.
- Additionally, there are three buttons in a mission window:
- Accept: This will commit you to the mission. The Squad management window will open, where you can review your squad and equipment, and then you will see your chopper leaving a military base and flying toward the mission.
- Delegate: This will delegate the mission to other troops. Use this button when you know that you are not interested in this mission and want to see other potential missions.
- Close: This will take you back to the main strategic window.

When you accept the mission and confirm it on the Squad management screen, the chopper takes off and flies to the mission. Time passes normally during this period, so it may happen that some outstanding tactical mission is resolved while your chopper is en route to another mission. Do not be alarmed by this: You are not supposed to defeat single-handedly every single alien on Earth. You must leave some glory to other soldiers!

While the chopper is in flight, it can still be recalled to base, just as it can be redirected to another mission. To cancel the flight, either select the destination mission and click the Reject button (in the same place where the Accept button is normally found) or select the chopper and click the Retreat button.

To redirect the chopper to another mission, simply select that other mission and click the Accept button. You can also send a chopper to another mission while it is returning to a base by the same method, but be advised that you will have to do with the men and supplies you have with you at the moment. If you do not land in one of your bases, you cannot re-equip your squad.

Base

Your bases are marked by light-blue pins. The symbols on the lower ends of the pins identify the type of the base: military, research, engineering and, hopefully in later stages of the game, anti-Biomass.

Each base type is important. Military bases are the only ones that can launch air interceptions or host a transport chopper from your squad. Furthermore, military bases exercise more control over the neighboring territory and are therefore more resistant to enemy attacks.

Research bases are essential for the advancement of your knowledge: It is here that new scientific discoveries are made. Engineering bases are important for the development of new technologies and the manufacture of new equipment. See also the Research & Development section for more more information.

Anti-Biomass bases only become available in the latter stages of the game. Their sole purpose is to stem the tide of the Biomass, which we shall shortly discuss.

The important thing about bases is that they cannot be built, only captured, so the only way to get new bases is to expand your territory. In the "militarily advanced" territories (mainly Europe and the U.S.) the bases are denser, while elsewhere (e.g. central Africa or Antarctica) they are more sparse. Notwithstanding the size of the territory a base controls, all bases are equal in terms of production, capacity and the like. Also, when you lose a base, you can always re-capture it later.

When you select a base, a window is displayed with the following information:

- Name: The name of the base. The base is always named after a nearby city.
- **Type:** This is one of the four types described above: You can change the base by clicking the button next to it.
- **Ready:** The time it will take before the base becomes ready. This is displayed when the base is either under reconstruction or when it repairs aircraft.
- Presence: An indication of the strength of the base grip on its vicinity. If the presence
 decreases, the surrounding territory is framed by a yellow-red border.
- Fly here: Early in the game you have to control the location of your chopper manually. It always returns to the nearest military base when it flies back from a mission. If you want to move it to another base (e.g. because you think the next mission is going to be somewhere close), just press this button.
- Close: This will return you to the main strategic window.

Events

Throughout the game, there are various kinds of messages that keep you informed of events taking place in the game world. Generally, they fall into two categories:

- The events taking place on the geoscape: These include the reports of new missions, new UFOs, bases captured or lost, missions fought and won or lost.
- The events that have no specific location: These are reports about new reinforcements
 or new equipment, about successfully finished research or development, and also socalled CoE (Council of Earth) messages, reporting on the story-related developments.

All Event messages have the checkbox "Do not show again," you can check if you do not wish to be informed about this kind of event in the future. You can also turn the messages on and off by going to the Options menu and turning off the Stop game checkboxes. You can also turn off the display of messages in the message console (the lower center of the screen), but generally that is not recommended.

Biomass

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In the advanced stages of the game there appears a new global enemy: the Biomass. Without going into detail about its origins and intentions (please research the subject), we'll provide some basic information about it:

The Biomass is a tangled, snarled mass of creepers, shoots and sprouts of distincly unearthly origin and appearance.. The Biomass expands rapidly and covers whole areas of the globe. You can see it clearly in the strategic game: we don't have to have a picture here. You will know it when you see it.

The Biomass is very dangerous. Its steady progress is difficult to check, and nothing can survive in the infested areas. A base can be swallowed by the Biomass: It will simply disappear. The Biomass will also erase all tactical missions in the area. It is possible to fight tactical missions in the Biomass – on its surface, that is – and while these missions can yield priceless information about the abomination, they will not stop it.

2.1.2 Air combat

The struggle for the liberation of earth takes place not only on the planet's surface, but in the air as well. You have to research UFO detection technology first, so that you are able to spot the alien airplanes. But when you do, you can also engage them with your aircraft and try to shoot them down. If you succeed, you can then explore the wrecks in tactical missions and capture various useful equipment and information. On the other hand, if you fail your aircraft will be shot down and you will have to rescue their pilots, if they managed to bail out in time. (To some extent this can undo the negative effect of a defeat in air combat.)

UFO

Given the proper technology, you can detect the enemy flying craft, the infamous UFOs. Every time a new UFO is spotted, it is assigned a tracking number and a message is displayed showing the following information:

- **UFO type:** This is the type and size of the UFO. (Human observers refer to some UFOs as fighters and to others are laboratories or observers, based on our assessments of their purpose. There is little doubt the aliens refer to them differently.)
- UFO cover: The bigger UFOs usually don't fly alone but instead move under the escort
 of three smaller UFO fighters.

There are also buttons:

- Intercept: This will launch a fighter wing from a nearby military base, which will try
 to pursue and intercept the UFO.
- Close: This will return you to the main strategic window.

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You can then see the UFO as a red, disc-shaped object moving across the globe. You can click it at any time to display a window similar to the one you saw when it was spotted.

Planes and Chopper

If an air interception is launched, a wing of three aircraft – represented by one light-blue aircraft icon – flies from the nearest serviceable base and tries to catch up with the enemy craft. You can click on the icon at any time to display information about the craft. You can also break off the pursuit in this manner, simply by pressing the Retreat button in the Information window.

Your chopper behaves in a similar way. It is displayed as a light-blue chopper icon and is somewhat slower than your aircraft, but it has a much longer range of flight. One difference between a chopper and fighters is that while the latter always returns to a specific "home base," the chopper always returns to the nearest military base. The other difference is that you have as many fighter wings as you have military bases, but you always have just one chopper: the one your squad uses.

Engagement

Once a wing comes within range of a UFO, it engages it in aerial combat. When this happens, you will see a window consisting of two parts: On the right side, there is a larger window showing in-flight footage from the onboard cameras, while on the left you can watch the combat as it unfolds.

In the upper-left part of the Dogfight window you can see silhouettes of one large UFO and three small ones: This corresponds to the most common in-flight configuration of the enemy planes as a single large UFO with fighter cover of three smaller ones. If the actual configuration is different, some of these outlines will be disabled. You may also notice that the different types of alien craft (e.g. observers, laboratories, etc.) have different icons in this window.

In the lower-left portion of the same window, there are three silhouettes of your aircraft: Your fighters always fly in groups of three. When either craft is hit, it turns red; when it's shot down, it turns gray. During combat, you will see two buttons:

- Retreat: Pressing the button will immediately break off the engagement and surviving fighters will return to their base. The engagement counts as a lost battle.
- Skip: This button skips to the end of the air combat, whereupon you'll immediately see the results.

Various technologies increase your chances in a dogfight: Some increase your defense, while others improve your weapons. See the in-game glossary for detailed descriptions of the individual technologies.

It should also be noted that the dogfights count as missions for the purpose of grabbing territory; that is, a successful interception will increase your influence in the

surrounding territory and vice versa. However, this influence is weaker by comparison to that of the tactical missions.

Aircraft Repairs

If your fighters are damaged in a dogfight – regardless of outcome – they must be repaired. They return to their home base (always a military base, as mentioned above) and you will see the icon "repairs under way" appear above that base. You can click the base to display the information about the time it will take.

The fighter wing cannot participate in an air mission while it is being repaired. It should be noted it takes more time to get a new aircraft than repair it. Therefore, a squadron in which all planes were damaged will be ready for combat sooner than one in which a single aircraft was shot down, even if the other two escaped unharmed.

2.1.3 Research and development

Research and development is the single most important thing apart from tactical missions. It is here you develop new weapons and armor, discover the secrets of the alien technology and eventually puzzle out the rationale of their attack. It is essential that your scientists and engineers not be allowed to remain idle.

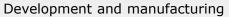
If it so happens that you have some science or technology you could work on and yet nothing is being researched, the Research button in the main view will start flashing to make you notice it. Click the button, enter the Research & Development menu and than make your selections.

Research vs. development

In UFO: Aftermath, we distinguish between research and development. We say that scientists research sciences and engineers develop technologies. (However, when we discuss a principle pertaining to both, we often refer simply to the research of technologies.) There are two tabs at the top of the R&D screen, that switch between the two. These screens look similar, so you're right to ask, "What's the difference?"

There are many similarities: Research and Development may both need certain prerequisites in order to be researched (see below); both need time to be carried out; both will bestow upon you certain advantages and advancements. However, they do not form two separate research trees. On the contrary, a scientific research may allow you to do some technology development and vice versa.

The main difference is that the technologies always bring some practical, tangible advantages, such as increasing your chance of winning a dogfight, producing a new weapon or armor for you, etc. Besides, the division in the two categories allows you to do both research and development simultaneously and thus advance more rapidly. Be sure not to squander this advantage: Always check both tabs on the R&D screen to be certain that both scientists and engineers have something to do.



It is easy to confuse development with manufacturing, but that's only partly true. The technologies that appear under the heading "Ready for manufacturing" work exactly like that: If you develop them, a certain number (usually one) of the corresponding items will become available to you in the Squad screen. An example of such technology would be "Laser rifles." Developing this technology will add one Laser Rifle to your weapons store. If you develop it once more, another will be added, and so on. These technologies never move under the heading "Finished."

The other technologies work more like research. When you complete them, you gain some advantage that is instantaneous and applies throuhgout of your territory. For example, Aircraft Speed improves all your aircrafts no matter where they are.

Time and research power

Every science and technology takes time to be researched. This can be easily seen at the center of the R&D screen when you select the technology. This time depends on the technology itself and also on your research strength, i.e. how many resources are at your disposal to direct to research and development, respectively.

Research is carried out exclusively in research bases, while development is done only in the engineering bases. The relationship is quite simple: Each base adds a certain amount to your research or engineering strength. Therefore, if a technology takes eight days to develop with three bases, with four it takes only six days.

Ready and not ready

The technologies on the Research or Development screen are divided into three categories: Ready, Not ready and Finished. The last group is self-explanatory: These are simply the technologies already researched. But what do the first two groups mean?

You will see only a handful of technologies at first, but you can research them all. However, when your research department finishes its research, a new avenue of exploration may open up to them. And while sometimes the new research path is immediately accessible, more often it needs some prerequisite: An object must be captured in one of the tactical missions or another technology must be researched before it is possible to continue.

In summary, the Ready technology is available for immediate research. Just select it and press the Start Research button. Not Ready technology needs something first: either an object or another technology. Select the Not Ready technology and look for the solid-red icons in the prerequisites list. Those are the items that block research by their absence.

Prerequisites

All but the very first technologies and sciences require conditions to be met before they can be researched. This may be either a possession of a certain object – e.g. the hull of a UFO – or research in some other technology.

Not all prerequisites are actually required, however. For many technologies, there are items on the list of prerequisites that would merely speed the research but are not compulsory in order to start the research or development.

The list or prerequisites of the currently selected technology is displayed at the center of the R&D screen. Before the name, there is a symbol carrying three different pieces of information:

- The shape is the type of prerequisite: A cog stands for technology, a biohazard for science and an alien object for an object discovered in a tactical mission.
- The color is the ownership of the prerequisite: A white icon means you own them, but a red icon means you don't.
- The outline is the necessity of prerequisite: An outlined icon means the item is not required, but a solid icon stands for items the research cannot commence without.

	Item	Research	Technology
Required	•	I	*
Not-required	ତ	丛	69

(A white icon means you have captured the item or researched the technology. A red icon means you have not.)

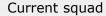
Many prerequisites must be captured in a tactical mission. We will discuss this later, so suffice it to say that if your mission is successful you will be in possession of all objects in your area. You need not go around it with your men and pick it one by one.

2.2 Squad management

The Squad Management screen can be accessed via the Squad button from the strategic screen or by right-clicking a soldier's portrait in the tactical game. Even though some options aren't available in the latter, the basis layout is the same.

2.2.1 Selecting soldiers

This is available only in the strategic game. Before a tactical mission you must select your squad members and equip them accordingly.



Squad management

You will see seven color-coded slots in the lower-left portion of the screen. These are the men and women you want to take with you on a tactical mission. At first you won't even have enough soldiers to fill your squad, but as you progress you'll get more recruits. Eventually, you will have to make your selections. This is not to say you have to take the maximum number on all missions. In fact, it is sometimes better to use a smaller, more compact squad.

Soldiers will be removed from your squad when they are severely injured in a mission and must recuperate in a hospital, and also when you send them to a training.

If you enter the Squad Management screen while the chopper is in flight, the soldiers in the current squad are disabled. You can inspect them and their equipment, but that's all.

Available men

To the right of the current squad you can see the pool of all available soldiers. You can include them in the squad simply by clicking and dragging them to the desired slots. If for some reason a solider can't be included in the current squad - e.g. because of his/her injuries or training in progress - an icon is displayed over his face to inform you of that.

2.2.2 Soldier Characteristics

The selected character is displayed above the current squad list. All statistics and the current load-out are shown against a background portrait of the soldier.

Stats

There are three tabs: Skill, Attributes and Professions. Their meanings and interdependencies are explained in the section "Your Soldiers," below. Briefly, the six attributes are the basic values you can directly influence during a level-up. The fourteen skills are derived from the attributes, and they immediately influence the game. (A higher Marksmanship skill means a better chance of hitting with a sniper rifle, for example.) The professions are acquired through training, and they give bonuses to certain skills. Please refer to the "Training" section, below.

Experience

The fundamental information about the selected soldier is displayed in the upper center of the screen. It is his or her name, level, number of experience points and how many points are needed to reach the next level.

Loadout

The soldier currently selected is displayed at the center of the screen, dressed in armor and a helmet and accompanied by equipped items for inspection. Any item can be kept in one of three places:

- Hands: The upper rectangle. An item of any size can be fitted into the hands, but at any one time there can be only one. For small items, though, it is possible to have one in each hand. Items in hand can be used immediately in a tactical mission.
- **Belt:** The medium rectangle. Notice the square grid (and that the lower-center square is missing!). Each item has a set size in terms of these squares, and therefore must fit into the empty area.
- Backpack: The lower square. While it is possible to store more items in your backpack than in your belt, it takes longer to take an item from the backpack, e.g. when reloading.

Equipping

To equip the soldier, simply drag an item from the list on the right toward to the desired place on the soldier's portrait. To equip armor, drag it from the list anywhere over the soldier. To equip a helmet, drag it over the soldier's head. You can also equip an item by double-clicking it.

To relieve the soldier of an item, drag it with your mouse somewhere to the right. To empty the whole backpack or belt, just click the arrow next to it. To remove the armor, click the arrow near the middle of the portrait. To remove the helmet, click the arrow next to it.

Encumbrance

When you equip and un-equip the soldier, you can see the total load just below the stats. The weight is displayed both in absolute numbers (in kilograms) and in a percentage of the soldier's maximum carrying capacity (as derived from his Capacity skill). As long as the percentage is below 100%, the load does not affect the speed of the soldier. If it is higher, the Speed skill will start to diminish: You can see the actual speed just below the load.

When the percentage exceeds 200% (i.e. twice the load allowed for the character), the soldier becomes encumbered. His speed will be reduced to the minimum (Awful) and he cannot run.

2.2.3 Equipment

The right side of the screen shows the equipment panel. In the strategic game, here will can see all the supplies at your disposal, while in the tactical game you'll see only those that lie on the ground below the soldier. In the former, the equipment is sorted

into five categories you can switch among by clicking the tabs in the lower part of the panel:

- Handguns: Pistols, revolvers and sub-machine guns (personal defense weapons, or PDWs).
- Rifles: Assault rifles, sniper rifles and shotguns
- Heavy: Machine guns, rocket launchers, grenade throwers and some special weapons
- Other: Grenades and non-combat equipments, like flares, medikit, etc.
- Armor: Armors and helmets.

Limited and unlimited supplies

You will notice that while some items have numbers over them others do not. The former are so-called *limited* supplies, and the numbers indicate the quantity remaining in the store. The latter are *unlimited* supplies, and you can have as many of them as you want.

The limited supplies are the items that are rare. Even your elite unit can't get as many as it wants. All alien items belong in this category, as do the weapons you develop based on alien technologies. But even most of the human equipment is limited. It can be found and salvaged in tactical missions. You also get a new kit whenever you manage to capture a new base.

Be careful with your equipment, and use it wisely. This is the key to success in the game.

Weapons

A weapon's statistics are displayed when you select it. For most weapons, the statistics are formatted in two columns:

- Aimed: Aimed mode information. Aimed firing is slower but more accurate.
- Burst: Burst mode information. Burst firing is faster but inaccurate.

Not all weapons support both modes, however, so only one column is displayed. A weapon's statistics include the following information:

- Max. Range: The maximum range of fire. For our purposes, the range of fire is the distance (in meters) where the chance of a hit averages 10%.
- Damage: The total damage of one burst and the number of rounds. If, for example, the weapons fires three rounds in burst mode and one round does damage of 20 hit points, the damage stats will read "60/3."
- Rate of fire: Damage per second. It displays the same information as the previous line, not per volley but per second. Thus the first number is damage per second of fire, while the second number is the number of rounds fired per second. This data does not take into account the time it takes to reload the magazine, if any.

• Skill: The name of the skill that influences proficiency with that weapon.

Magazines

Most weapons need magazines. This may be a magazine in the conventional sense an ammo clip - but it may be a battery for a laser weapon or a rocket for a launcher. When you select a weapon, all the available magazines for that weapon will be displayed in the Magazines area of the Equipment panel. You can equip spare magazines for your weapon like you would any other item. Be careful, though, to take the clips you really want. The magazines for similar kinds of weapons look similar. First select the weapon for which you want spares, then equip the magazines.

When you select a magazine, more statistics may become available. The following information is displayed:

- Capacity: The number of rounds in the magazine. For batteries it is the number of energy units.
- Reload: the time (in seconds) it takes to reload the magazine.
- Damage: The damage type, or the nature of damage. Can be soft, hard, burn, laser, psi, etc. See also Armors below.
- **Area:** The radius (in meters) of the area affected by the weapon. This info is displayed for *area effect* weapons only (i.e. grenades, rocket launchers and the like).

Weapon categories

It is important to realize in this context the various underlying concepts of different weapons. Most weapons are *projectile* weapons. These include "normal" firearms (human rifles, pistols, etc.), rocket launchers and grenade launchers. Here, the effects of the weapon – the damage dealt, area effected, etc. – are determined by the ammunition. A rocket launcher may deal so much damage with this rocket and different damage with another one. An assault rifle may be able to use both soft and armor-piercing ammunition, and the weapon stats for both could be different.

The other group comprises the energy weapons, e.g. laser rifles. These weapons can take different "magazines" – batteries, in fact – however it only influences how many rounds can be fired before the "magazine" must be reloaded. Moreover, the same battery can usually be loaded into different kinds of weapons, so that the same energy cell can fit both a laser rifle and a plasma pistol. This is not true of projectile weapons, where one magazine fits only one weapon.

We dwell on this topic at length to demonstrate the following point: To get the complete statistics for a weapon, you have to select *both* weapon and magazine. When you select a projectile weapon, we find the ammunition for it and display the stats that

correspond to the first we found. (Very often there is only one, so there's no need to worry.) When you select an energy weapon, the situation is simpler, as the stats mostly do not depend on the batteries. When you select a magazine for a projectile weapon, all the stats are found and displayed. However, when you select only a battery but no energy weapon, is isn't possible to display statistics other than the battery capacity.

Armor

Squad management

The last tab in the Equipment panel is Armor. Here you can select from a list of available armor and equip a soldier by dragging it toward him.

When you select an armor, you can see its statistics in the panel. Different armor may protect against different types of damage. Combat armor may provide better protection against slow-moving Soft projectiles, but it is still vulnerable to the high-velocity armorpiercing Hard ammunition.

The statistics for the armor simply show how much damage from a hit the armor will absorb. Thus, a soldier with an armor rating of 20% against laser fire, when hit by a volley of total damage equal to 150 hit points, will suffer damage of only 120 hit points.

You should note that some armor may impair your movement abilities. Specifically, heavy armor will not allow you to run.

2.2.4 Training

As explained in the section "Your Soldiers," you can train your soldiers in order to improve some of their skills. This is done on the Training panel. The training panel is not available in tactical missions.

A list of available sessions is shown when you open the Training panel. These generally fall into three categories:

- Ready (blue): Training sessions for which the soldier meets the minimum requirements
- Not ready (red): Training sessions the soldier can't take because he/she doesn't meet the minimum requirements
- Finished (white): Training the soldier has completed

When you select a training session, two sets of statistics are displayed: the minimum requirements (in terms of minimum values of attributes the soldier needs to be eligible for that training) and skill effects (skills the training improves). As explained later in the chapter "Your Soldiers," each skill can be improved only once. Therefore, the skills that would be actually improved by the training are displayed in blue, while the skills that were already improved by a completed training are displayed in white.

2.2.5 Info

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While the performance-related information about the selected soldier (attributes, skills, equipment, etc.) is displayed on the left side of the screen, the personal information can be found on the Info tab of the right panel.

When you open the Info panel, you can review the analysis of the selected soldier's past missions:

- Missions: How many missions the soldier has taken part in
- In service: The total time the soldier has spent in your unit
- Out of action: The total time the soldier has spent recovering from injuries
- Recuperation: The time needed to recover from current injuries
- Callsign: The soldier's callsign. This is by default the soldier's first name, but you can modify it to suit your needs.
- Name: The soldier's real name

2.3 Tactical game

Tactical missions are where you will probably spend most of your time. It is therefore important to understand how the combat system works.

UFO: Aftermath uses the Simultaneous Action System (SAS) to control your squad in combat. The system's basic premise is simple: You plan a string of actions - go here, take the gun, fire at the enemy – for all your soldiers and then press the Run button. The squad executes your orders until one of the following happens:

- One or more soldiers complete all planned actions.
- Some planned action cannot be completed (e.g. the enemy hides and it is no longer possible to attack it).
- Something important happens (e.g. a new enemy is spotted, a soldier is attacked, etc.).
- You pause the game.

Whatever the reason, the game stops running and the soldier "responsible" for it (i.e. the one who completed the plan, whose plan was interrupted or who spotted the enemy) informs you. You can now review all your plans, amend them as needed and run the game again.

See the Options screen to modify the conditions when the game pauses and its behavior when it does.

2.3.1 Possible orders

Most orders can be entered either as default orders by right-clicking the target or by clicking the appropriate button on the Command panel in the lower-right corner of the screen. The meaning of the order is the same, regardless it was entered. You may want to look at the "Default Orders" table in the "Controls" section. It describes what orders are issued under various circumstances.

No order: Wait

When you have more than one soldier at your disposal, it often happens that you want only some of your squad to partake in action, while the rest should just stand back and wait. When this happens, give those units the Wait order. The soldiers will stay put, observe their surroundings and be ready for action when you want them.

Movement and its modes

Right-clicking on an empty space issues the Move order. A thin line of the soldier's color will be traced to the destination square. You can use the movement button to plan movement to the places momentarily occupied by the enemy. (Using your mouse in this case would issue the Attack order instead, as it is the default order for right-clicking an enemy.)

There are two movement modes: *Walk* and *Run*. The former is slower but less conspicuous and the soldier has a better chance of spotting the enemy, while the latter is the exact opposite: faster but more noticeable and with less chance of noticing anything strange. (See the "Visibility" section.)

You can switch the movement mode by clicking the appropriate button. This change is not retroactive: The already planned movement orders will not be affected. If you plan a movement somewhere and then realize, to your dismay, that the soldier is going to walk there, you have to cancel that order, switch the movement mode and plan the movement again.

The current movement mode is displayed for each soldier on his face panel.

Attack and modes of fire

Right-clicking on an enemy issues the Attack order. A number in the soldier's color will appear next to the target's rectangle, showing the chance of hitting. This is an estimate based on the current situation. The enemy is usually likely to move to or away from the soldier, so the actual chance of hitting when the soldier fires may differ. You will see the number being constantly updated as the game runs.

Most weapons have two modes of fire: Aimed and Burst. The former is more accurate but slower, while the latter is fast but inaccurate. (See also the "Equipment" section.) Moreover, in Aimed mode the impact of your Aliens skill is more profound when

calculating the damage. You can switch between the modes of fire by clicking the Weapon button. The currently selected mode of fire is displayed on this button. If you have two one-handed weapons (e.g. a pistol and a grenade), clicking the Weapon button switches which one will be active, and the selected weapon moves to the right.

The order to attack an enemy is repeated as long as possible (until the enemy moves out of range or is out of combat), so there is usually no need for you to enter several attacks. However, there is nothing to prevent you from doing so. Simply right-click the enemy several times and you will see a number in parentheses next to the chance of hitting it. This is the number of planned attacks.

If you do not plan anything after the last attack order, several planned attacks will behave exactly as one: The soldier will keep attacking as long as he can. However, it is possible and sometimes advisable to plan a couple of attacks and then something else. The soldier will perform only the given number of attacks and then go to the next order regardless of the enemy's state. For example, you may want to move from cover, shoot an enemy and run back. This is very easy to enter: Right-click the place you want to move to, right-click the enemy and finally right-click the place you want the soldier to hide.

Attack Unit vs. Attack Ground

When you either right-click an enemy unit or press the Attack button and click a unit, you are issuing the Attack Unit order. When you press the Attack button and then click an empty square, you are issuing the Attack Ground order.

It is important to understand the difference between the Attack Unit and Attack Ground commands. The former is always associated with an enemy unit and the soldier will always try to hit that unit, not the space it was standing on when the attack command was issued. The Attack Ground command, though, is associated with a single square. The soldier will try to hit that square regardless of who happens to be there or in its vicinity.

The difference between Attack Unit and Attack Ground should not be confused with the difference between direct and indirect fire or the difference between normal and area-effect weapons (see below).

Stance

Your soldiers' stance – when he is stationary – may be either kneeling or standing. Standing is the default, meaning the soldier stands normally when firing, waiting or equipping. However, you can order them to kneel whenever possible by pressing the Kneel button. A kneeling soldier is less likely to be hit, but kneeling down and getting up takes some time.

The soldier's current stance mode is displayed on the face panel.

Reload and equip

The most frequent equipment is to reload the current weapon. As such, it has its own button on the Command panel. When you press it, the soldier will try to reload from his belt. If that isn't possible, he'll reload from the backpack with the same magazine he was using before.

All other equipment operations by entering the Squad Management screen (either by right-clicking the soldier's portrait or by pressing the button on toolbar). Here you rearrange the soldier's possessions any way you want. You can also pick up any items lying on the ground there.

Two things should be kept in mind: First, all rearrangements you make in the Squad Management screen are only planned for the soldier. They won't actually take place until you run the game. Second, each rearrangement you make in the soldier's equipment will translate into a planned action. For example, if you move two clips from backpack to belt, it will plan two "re-equipment actions" for the soldier and it will take him twice as long to do it than to move a single clip.

Use

In UFO: Aftermath, only doors are usable. To open a door, either right-click it or press the Use button and then click the door.

Throw

In certain circumstances you may wish to throw something just to get it there, not to attack the target square. In such cases you should use the Throw order. This can be only enter using the Throw button on the command panel and will always throw the item in hand.

The difference between the Attack Ground and Throw orders is that the latter doesn't damage the target square or surrounding units. When you throw a grenade, it will land on the target square (or somewhere close to it) and remain there. Another soldier can come there, pick it up and then use it.

2.3.2 Canceling orders

Occasionally, you may want to cancel the orders you've entered. You might have simply made a mistake or the situation has evolved so that the old orders are no longer relevant. In any case, there are several ways to go about it.

There are two buttons on the command panel: Cancel Last Action and Cancel Plans. The former removes just the last order in the queue, while the latter removes it all. Both buttons only apply to the selected soldiers.

The orders will also be replaced whenever you reselect a soldier and then start planning. (There is more about this in the section "Adding vs. Replacing."

Finally, it should be noted that it is never possible to cancel the action currently in progress. For example, if a soldier is reloading his gun, he must finish reloading before doing anything else.

2.3.3 Issuing Combat Orders

In UFO: Aftermath, you usually want to give your soldiers more than one order at a time. You want to plan a sequence of orders: the order queue. This works automatically. After you enter the first order, the next is queued after it, and so on. You can always cancel the orders by pressing C or clicking either of the Cancel buttons.

When you select a soldier that already has an order queue, the first order you give him will erase the old order queue and will become the first order of the new one. This is natural, as you usually select the soldier whose orders you want to change. However, if you want to override this behavior, you can press the Shift key when issuing that order.

To remind you of this, the words "**NEW PLAN**" are displayed above the Command Buttons when the new order replaces the order queue, and words "**ADD PLAN**" are displayed when the order is added to the order queue.

Select a soldier, order him to move somewhere, select another one and give him orders, then select the first one again. If you give him an order now, the original movement order is replaced by the new one.

Equipment and planning

The soldier's face panel (a picture along the bottom of the screen) always displays the equipment current as of the time you're issuing orders. When you enter the Squad Management screen, make changes there (e.g. arm the soldier with another weapon) and exit that screen. The changes you've made are added to the plan but not executed.

Any order you enter now will be queued after the equipment order. Therefore, the interface displays the new weapon, which will be the current weapon when the new order is executed. If you give an Attack order, the chance of hitting shown will be the chance of hitting with the newly equipped weapon.

However, if you then select another solider and immediately go back to the first one, your next order will replace the equipment order and the interface will display the equipment current for this moment, i.e. the old weapon. Press Shift to see how the weapon changes as the interface adjusts to the queuing orders.

This is a very powerful feature, when you know how to use it. For example, it's possible for you to plan for one soldier to go somewhere, pick up a weapon, equip it and use it without your having to pause the game and supplement the orders.

2.3.4 Attack resolution

The system for attack resolution is at the heart of every tactical combat game: what influences the chance of hitting, how the damage is calculated, etc. Without going into the actual formulae, here are the underlying principles of SAS.

Standard case

All attacks are resolved in the following steps:

- Determine Chance to hit: Depends on the weapon's maximum and effective ranges, attacker's skill with the weapon, defender's size, Dodge skills, speed and stance, distance between the two, and defender's cover from the attacker's perspective.
- Determine Hit: When the chance of hitting is unknown, a random number is generated and compared with it. Depending on the result, the attacker scores No hit, Normal hit, Severe hit or Critical hit. Severe hit does twice the normal damage, and Critical hit does four times the normal damage. The damage is then adjusted by the attacker's Alien skill.
- Calculate and Apply Damage: When the total damage is calculated, the part absorbed by the defender's armor is subtracted, depending on the type of damage. The rest is subtracted from the defender's hit points.

In the following paragraphs we shall try to point out briefly how some special cases differ from this basic model.

Ground attack

Ground attack, i.e. an attack that targets a square as opposed to an enemy unit, differs in certain critical respects. First, we must assume that the attacker doesn't manage to hit the intended square, and we must find out which square has actually been hit. We have the following approach:

- Calculate deviation: We calculate the maximum distance of the actual and intended target squares. This depends on the distance from the attacker to the intended target, the maximum range of the weapon and the attacker's skill with the weapon.
- Calculate actual hit square: We take a random number and use it to find the actual
 hit square within the distance calculated in the previous step. The squares closer to
 the intended target are more likely to be hit.
- Apply damage: If it is an area-damage weapon, we calculate and apply damage to all
 units and structures in range (see below). If it is not, we only apply damage to
 structures on the square actually hit. It is not possible to hit a unit using ground
 attacks with a non-area weapon.

Throwing attack

The Throwing attack is a type of Ground Attack with something thrown by hand, usually a hand grenade. However, it's also used to throw flames and other types of equipment.

As it is a special case of Ground Attack (see above), the attack resolution is carried out exactly as described there, the only difference being that the maximum range depends on the attacker's Throwing skill. Of course, if the object thrown is anything other than a grenade, no damage is applied.

Area damage

Some weapons in UFO: Aftermath do what is known as *area-effect damage*, meaning they explode on the square where they land and damage all nearby units. You can tell the Area Effect weapons by looking at their statistics: they always have the Area datum that indicates the radius of the area affected by the blast.

An attack with an area-damage weapon is always a ground attack. However, from the perspective of attack resolution, the way it was entered makes a huge difference for you. If you order a soldier with a rocket launcher to move and attack an enemy, the soldier will interpret it as an Attack Unit order and attack the square the enemy is standing on at the time of attack, not the square the enemy was standing on when the attack order was given. Had it been the Attack Ground order, the latter would be true and the soldier would attack exactly the square he was told to attack, regardless of the positions of other units.

When calculating the area damage, we take into account the radius of the affected area (this is a weapon statistic) and then we process the attack calculations normally, with the following exceptions:

- The chance of hitting is influence neither by the attacker's skill nor by the defender's Dodge or speed. It is influenced by the defender's stance and size, though.
- The damage dealt by the weapon decreases with the distance from the actual target square.

Psi attack

Some weapons are capable of psionic attacks. Such attacks generally have other effects, beside mere damage. Some may confuse the target and make him attack his friends, or paralyze him for some time, etc.

The psionic attacks differ from the standard attacks in the following points:

 All attacks are resolved in the normal manner, but we use Psi skill instead of Dodge and Aliens skills.

- We take into account the speed and size of the target, but not its stance and cover.
- When calculating damage, instead of hit points lost we calculate the duration of the weapon's effect.

Melee attack

Melee attack plays only a secondary role in UFO: Aftermath. Your units have no melee weapons and only some groups of enemies are able to engage you in melee combat. The following rules apply to melee combat:

- The attacker must stand next to the target to be able to engage in melee combat.
- The chance of hitting depends on the attacker's combat skill and defender's Dodge skill. It is influenced neither by size, speed or stance, nor by distance or environment.
- The damage dealt by the attack is constant (adjusted by armor, of course).

2.3.5 Destructible terrain

Many smaller structures - fences, garden walls, cars, dustbins, hot-dog stands

- can be destroyed. On the other hand, some cannot. To find out if a structure is destructible, press the Attack Button and then move the cursor over the structure. If the square cursor turns green, the structure can be destroyed. If it is white, the square is empty, and if it is purple, the structure cannot be destroyed.

To destroy something, simply plan Attack Ground on that square. For fences and garden walls, destroying one piece often brings down the whole segment, three or five meters long. Cars and other self-contained objects are always destroyed completely.

Destroying these objects is a very important tactical feature. Destroying a wall can often open new tactical options to you and surprise the enemy.

2.3.6 Spotting the enemy

The essence of tactical combat is to see without being seen. To achieve it, you should have a basic idea of how this system works in UFO: Aftermath.

Observation threshold

For each unit we determine its *observation threshold*, which basically says how good it is at realizing that it sees something.

The unit's observation threshold depends on its basic threshold (rabbits are keener observers than bears) and its Observation skill. The lower the observation threshold, the sooner the observer will spot a target.

The threshold is fixed, so it doesn't depend on the target, the observer's movement, etc.

Target's visibility

When considering the question of spotting unit A (let's call it the target) by unit B (let's call it the observer), we need to determine the target's visibility with respect to the observer, meaning how well the observer can see the target.

The unit's visibility depends most importantly on its inherent visibility (i.e. a dog is usually move conspicuous than a cat, even one of the same size), its Stealth skill, speed and stance. It also depends on the observer's movement and the distance between them, and of course on the objects between them. The higher the visibility, the sooner the target will be spotted.

If the target's visibility is smaller than the observer's threshold, the observer will not spot the target. However, as long as the target remains in the observer's field of vision (i.e. it is not obscured by objects), its visibility accumulates over time and the moment it crosses the threshold the target is spotted.

To an extent, this behavior simulates the observer's reaction time. You can easily imagine a big, stupid monster with a high observation threshold. Even if you go straight to it without any cover at all, it will take some time before the creature notices you and reacts.

Observer's movement

The observer's movement plays an important role in calculating a target's visibility. If the observer is standing, the conspicuousness is not affected. However, when the observer walks, the target's visibility is reduced to anything between one and three quarters of its normal value, the greatest reduction being behind the observer and the relatively smallest reduction in front of him. And when the observer runs, the conspicuousness is farther reduced between 5% and 50% of the standard value.

Wait order and observation

Because observation works best when the observer is stationary, it makes sense to enter the Wait order in the queues of your soldiers from time to time. This will cause them to stop briefly before continuing with their plans, thus in effect looking around for any new enemies.

Direct vs. indirect fire

Most weapons in UFO: Aftermath are what we call *direct-fire* weapons. That is, the projectile moves from muzzle to target in more or less a straight line. However, some weapons are *in-direct fire* weapons, where the projectile moves along an arc. These include grenades, grenade launchers and similar slow projectiles (but not rocket launchers because despite their slow speed they're propelled and therefore fly straight).

Both direct and indirect weapon attacks are resolved in the manner described in "Attack Resolution," above. The difference is their relationship to visibility. While direct-

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fire weapons can attack only targets the soldier can see, indirect-fire weapons can attack spaces that are obscured to the soldier: it is for example possible to throw a grenade over a wall.

2.3.7 Objectives

To complete a tactical mission, you must meet its objectives. These can be a simple as eliminating a certain number of hostile units in the area or as complex as making your way to a downed UFO, forcing your way in, grabbing an object in the designated area and then making your way to the exit.

Whatever your objectives, you can always review them by clicking the Objectives button on the toolbar. The completed objectives are marked as such.

Target, Enter and Exit areas

Many mission objectives work with areas. Your objective may be to reach an area, find somebody or something, destroy an installation, etc. Whatever the case, the entry and exit areas are highlighted in green while the target area is outlined in yellow with a thick, white arrow at the edge of the screen pointing at it. Click the arrow to move the camera toward the area.

We often refer to the entry and exit areas: the places where we continue on to the next mission or places we have to reach before the mission ends. In such cases, it may happen that the soldiers outside the area are not recovered. Whenever you press the Next Area or Abort Mission button, a list of soldiers that would be recovered and would continue to the next mission or return to base is displayed. If some soldier is missing from it, the reason may be that he or she is not in the appropriate area. Cancel the window and move him there.

Capture objective

In some missions your objective will be to capture a live transgenant. To do this, you must first incapacitate it; that is, injure it so that it's out of combat but not so much that it will die. Then you must carry the wounded transgenant to the appropriate exit area (green). Please note that the soldier can only carry a transgenant in his hands, as it will not fit into a backpack or on a belt.

Linked missions

Many tactical missions are what we call linked missions, i.e. two different missions in one. One example is a base-capture mission: You start outside, where your first task is to reach the entrance to the base. Once you get there, you must enter the base and fulfill your objectives.

You enter the next part of the linked mission by pressing the Next area button on the toolbar. The game will then display a list of soldiers who will go there (see previous paragraph). Once you get to the next area, there is no going back.

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Aborting missions

You can abort a tactical mission at any time before you fulfill the objectives. The mission then counts as lost, but you may be able to save all or some of your men in this manner. When you press the Abort Mission button, the game will display a list of soldiers retrieved and set for a return to base.

Picking up objects

There may be some interesting equipment in the mission, e.g. the weapons of the enemies killed. You can pick those items manually during the course of the mission, or you can have the game do it for you. At the end of each mission, the game determines the items you would have been able to recover and adds them to your supplies.

2.4 Your soldiers

Your soldiers are your most important assets. Considerable care goes into their development, so it's beneficial to know more about their statistics. Each soldier in UFO: Aftermath is described in terms of Attributes, Skills and Training. The three groups correspond to the three tabs in left side of the Squad Management screen.

Along with statistics, your soldiers have Level, Experience points and Name. These are displayed in the top center of the Squad Management screen.

2.4.1 Values

The values of Skills and Attributes are expressed on an eight-point scale, which has the following values:

Awful

Poor

Average

Good

Very good

Excellent

Heroic

Super-heroic

We intentionally refrain from using numbers here. It is not true that Average is 3 and Good 4. The differences between the various levels increase as one ascends the scale, so these descriptions are actually more accurate than numbers would be.

2.4.2 Skills

There are fourteen skills in all. For easier orientation, we divide them into four groups.

Combat Skills

The combat skills are only used when calculating the chance of hitting. Each skill applies to a different type of weapon. For more information, see "Attack Resolution."

 Marksmanship
 Influences the chance of hitting with sniper rifles

 Rifles
 Rifle skill influences the chance to hit with assault rifles.

 Handguns
 Influences the chance of hitting with pistols and machine guns

 Launchers
 Influences the chance of hitting with rocket/grenade launchers

and other heavy weapons

Throwing Influences accuracy and range when throwing grenades and

other objects

Defense Skills

Defense skills are a motley collection. The first skill, Psi power, is half an attack skill, Hit points are not used in any calculation in the game, and Speed influences many other things beside defense. Still, defense is one thing these skills have in common. For more information, see "Attack Resolution."

Psi Power Psi power influences the chance to hit with psionic attack and is

also the measure of the ability to withstand them.

Hit Points The number of hit points – the amount of damage the soldier can

withstand - is calculated from this skill.

Speed Speed governs how fast the soldier walks, runs, handles weapons

and generally the timing of most actions.

Dodging Dodging is the soldier's ability to avoid being hit.

Detection Skills

This is the smallest group of skills. Both pertain to the chance of spotting or being spotted. For more information, see the section "Spotting Enemy."

Observation Observation is the ability to notice enemies.

Stealth Stealth is the ability to avoid being spotted by the enemy.

Other Skills

The following skills do not fall into any of the previous groups:

Capacity Capacity influences how much the soldier can carry.

Aliens Aliens skill enables the soldier to hit enemies more effectively.

Medical Medical skill is the ability to heal wounds in the field.

2.4.3 Attributes

Attributes are the fundamental statistics. The Skill values are derived from them. See "Relationship Between Skills and Attributes," below.

Physical Attributes

Strength Strength influences mainly Capacity and skills with respect to

heavy weapons.

Agility Agility influences mainly Speed and Rifles.

Dexterity Dexterity influences mainly Dodging and Handguns.

Mental Attributes

Willpower Willpower influences mainly Psi Power and Marksmanship.

Intelligence Intelligence influences mainly Aliens and Medical skills.

Perception Perception influences mainly Observation and Stealth skills.

2.4.4 Training and Professions

Training is entered from the Training tab of the right panel in the Squad Management screen. A successfully completed training session improves certain skills and becomes the soldier's profession.

Effect of training

Other than increasing an attribute training is the only other way to improve a skill. When you send a soldier into training, certain skills will be increased by one level, as shown in the following table:

An important feature of training is that a single skill can only be improved once. Thus, if a soldier has Rifle skill Average and goes to the Sniper training, the skill will be Good then. However, if he now goes to the Soldier training, the Rifles skill will remain Good.

Minimum requirements

Your soldiers

To enter training, the soldier must meet that training's minimum requirements in terms of attributes, as summed up in the following table:

Strength	Agility	Dexterity	Willpower	Intell.	Perception
			Average	Average	Good
Average	Average	Average			
Good		Good		•	
			Good	Very good	
	Good			Very good	
		Good		Average	
				Very good	Good
	Average	Average Average Good	Average Average Good Good	Average Average Good Good Good Good	Average Average Average Good Good Good Very good Good Very good Good Average

As you can see, a soldier with all Average attributes can take up Soldier training but no other.

Professions

Successfully completed training becomes the soldier's profession. The affected skills are then used to calculate the soldier's level in that profession. Here it does not matter if a skill is counted more than once. For example, if a soldier has both Sniper and Soldier training, the Rifles skill is used when calculating the levels for both.

A skill improved through training is improved permanently and the professions have no further effect on the soldier. They are something like a label: If you send a soldier to Sniper training, it is probably because you want that character to serve as a sniper. Therefore, this profession will be displayed when you click the Profession tab for that character and his/her level in that profession - calculated from the skills that are important for a sniper - will be displayed.

This does not preclude you from sending that character to different training, or from employing him in another role. There is nothing to prevent you from equipping him with a sub-machine gun and sending him to the front line, if you consider this a good idea.

2.4.5 Experience

The characters can improve when they accumulate enough experience to advance to the next level. Experience is only gained in tactical missions. Experience points are awarded for spotting an enemy, wounding or killing an enemy, for completing objectives and similar tasks. Extra experience is awarded for a wound requiring hospitalization. No experience is awarded for damage by friendly fire.

Level-up screen

If a soldier accumulated enough experience to advance to the next level during a tactical mission, a level-up screen will be displayed at the end of the mission. For the most part, it resembles the Squad Management screen. However, there are little "+" icons next to the attributes and eight-step progress bars for skills replace the Equip panel.

You can now increase one of the character's attributes by one level. Click the Plus button next to the attribute and see how the skills change. You will notice that while some skills really improve (e.g. from Good to Very good), some do not but their progress bars do. This allows you to see the true effect of increasing an attribute. Even a skill doesn't actually change, it gets closer to the next value and may change in the next level up.

Don't be afraid to experiment!! Until you press the Done button, you can review your selection and award the attribute point wherever you want.

If there is more than one character with level-up, their face panels will be highlighted. In exceptional circumstances a soldier may advance more than one level in a single mission. If that happens, the level-up window reappears immediately after you press the Done button.

2.4.6 Injury and Healing

A soldier may be injured while on a mission and may also get first aid there. However, that doesn't mean the soldier can receive any amount of damage as long as he manages to get patched up in the field. While the stimulants and drugs in medikits can keep him going for the duration of a mission, more advanced medical treatment may be required when the soldier returns.

Unconscious unit

Whenever a unit - yours or the enemy's - loses more than half its maximum hit points in total, it becomes unconscious: It falls to the ground unable to do anything. You can heal the unconscious unit in a normal way by "attacking" it with a medikit. When the hit points exceed the 50% threshold, the soldier gets up and is ready to fight again.

Sickbay

When the squad returns to base, all soldiers with injuries exceeding 50% of their maximum hit points in total (since they were last at the base) must be hospitalized for treatment. They are removed from squad and red cross "in hospital" icon is placed over them. Click the Info tab in Equipment panel to see how much time they are going to spend there.

2.5 Options

Both strategic and tactical parts offer you a range of options that allow you to customize the behavior of the game.

2.5.1 Strategic options

Strategic options let you decide which events should pause the game and which should be logged. If an event interrupts the game, an appropriate information window is displayed allowing you to either go to the event or let the game run (see the "Events" section).

If the event is logged, a message will appear in the message log (bottom center of the screen). This will not pause the game, but you can click the message to go to the location of the event.

Invert mouse wheel

Some people feel that scrolling down should zoom in (default option), while other think exactly the opposite. Check this option if you belong to the second group.

2.5.2 Tactical

Tactical options allow you to customize the game behavior when specific events occur (enemy is spotted, unit is hit, etc.). For each event you can decide if it pauses the game, if it moves the camera to the "cause" of the problem and if the event should be logged.

The logged messages are color-coded to correspond to the soldier who reported them. You can click the message to center on the spot to which it pertains.

2.5.3 Miscellaneous options

These options usually pertain either to performance or to both parts of the game. Most options on this screen are completely self-explanatory.

Highlight hidden units

Check (default) to display units (both yours and the enemy's) obscured by buildings or other objects (but still only enemy units spotted by your soldiers are displayed). Unchecked makes for a nicer but less game-friendly screen.

Rotate camera

Check to stop the camera from rotating when it moves to the cause of an event. This may result in the causing unit being obscured by buildings. It is not recommended that you check this and uncheck the previous option.

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Controls

3.1 Main menu

The main menu has six buttons:

Continue playing the current game. When you quit the game and run it again, you can simply click this button and continue exactly where you left off. Note, however, that there is no way to restart the current game. You can only create a new one by going to the Game screen.

Load/Save Here you can load and save your game. You can also delete older saves. You can order saves either by name or by time. You can sort saves either by name or time. To see saves from a different game, switch to it in the Game screen.

This lets you create, delete and switch to different games. One game is Games a complete "campaign" in UFO: Aftermath, from the humble beginnings to glorious victories and ignominious defeats. You can also modify the difficulty of the current game there.

This is where you can customize the game behavior. **Options** Credits This displays the list of people who created UFO: Aftermath for you. This auto-saves the game and exits to Windows. Quit

3.2 Controls

3.2.1 Strategic game

The following table sums up all available commands and their keyboard shortcuts (where available) for the main window of the strategic game.

Action	Mouse	Key	Description
Selection	Left click	none	Click the left mouse button over a mission, base or alien craft to select it. See "Icons" for descriptions of in-game icons and marks.
Rotate	Right click	Arrow key	Click the right mouse button over the spot you want the globe to rotate to. Or, left-click one of the four arrows on the control in the lower-left corner of the screen.

Action	Mouse	Key	Description
Zoom	Mouse wheel	PgUp/ PgDn	Use the mouse wheel to zoom in and out. Alternatively, you can also use the rings marked "+" and "-" on the control in the lower-left corner.
Run/ pause	Run button	Spacebar, Num +/-	Left click the arrows in the upper-left corner of the screen. The three arrows correspond to the three speed settings.
Research	R&D button	R	Left click the "Research" button to enter the corresponding screen.
Develop.	R&D button	D	Left click the "Research" button to enter the corresponding screen.
Squad	Squad	S	Left click the "Squad" button to select soldiers for your squad and equip them.
Glossary	Glossary button	G	Left click the "Glossary" button to enter the on-line help screen.
Menu	Menu button	Esc	Left click the "System menu" button to enter the game main menu.
Save game	none	Ctrl + S	Left click the "System menu" button, then click "Save game."
Load game	none	Ctrl + L	Left click the "System menu" button, then click "Load game."
Quick save	none	Alt + S	Press and hold Alt, then press "S" key to quick-save the game.
Quick load	none	Alt + L	Press "Alt + L" key to load the latest quick-save of the game.
Options	none	0	Left click the "System menu" button, then select "Options" to enter the Options screen.

3.2.2 Tactical game

The following table sums up all available commands and their keyboard shortcuts (where available) for the tactical game.

Controls

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Action	Mouse	Key	Description
Center enemy	Enemy icon	Tab	Left-click the alien icon on soldier's face panel or press the Tab key to center view on the enemy the soldier can see. Press the tab repeatedly to cycle through all the enemy units the soldier can see.
Follow mode	none	F2	Press F2 and the camera will follow the currently selected unit.
Normal mode	none	F1	Press F1 to turn off the camera follow mode.
Fast camera	none	Caps Lock	Turn on Caps Lock to make camera movement faster. Turn off Caps Lock to return to normal.
		Selection	and group controls
Selection	Left click	1-7	Left-click a soldier or his portrait to select him. You can also press key from "1" to "7" (these correspond to your soldiers, from left to right).
Select & Center	Double click	1-7, double tap	Double-click a soldier or his portrait to select and center on him. You can also double-tap the corresponding number ("1" to "7").
Select next	Alt + Mouse wheel	none	Press and hold Alt key, then use your mouse to scroll between your soldiers.
Create group	none	Alt + 8-0	Select the soldiers you want, then press and hold Alt and press a key from "8" to "0". You can select up to three groups in this manner.
Select group	none	8-0	Press number from "8" to "0" to select corresponding group.
Select all	none	Ctrl + A	Press and hold Ctrl, then press A to select all your soldiers.
Next w/o orders	none]	Press "]" to select next soldier without any plans
Prev w/o orders	none	[Press "[" to select previous soldier without any plans

Action	Mouse	Key	Description
		0	rder controls
Default order	Right click	none	Right-click over the target to issue the default order. The actual order depends on the soldier's weapon and on the target. See below.
Move	Move button	М	Click the Move button or press "M", then left-click the destination.
Attack	Attack button	A	Click the Attack button or press "A," then left- click the target. If there is a unit on the square, Attack Unit is planned; if not, Attack Ground is planned.
Wait	Wait button	W	Click the Wait button or press "W" to plan Wait order to the selected unit.
Reload	Reload button	R	Click the Reload button or press "R" to plan reload of the current weapon.
Open	Use button	U	Click the Use button or press "U," then left-click the item you want to use or doors you want to open.
Throw	Throw button	T	Click the Throw button or press "T," then left- click the spot where you want to plan throwing the currently equipped item.
Cancel All	Cancel All button	С	Press "C" to delete the current queue or orders.
Cancel Last	Cancel Last button	Shift + C	Press and hold Shift, then press "C", to cancel the last planned orders.
Walk/ Run	Walk/Run switch	Q/E	Use Walk/Run switch or the "Q" and "E" keys to switch between Run and Walk mode. The new movement mode will only apply to orders issued after you pressed the switch.
Stand/ Knee	Stand/Knee switch	X/V	Use Stand/Knee switch or the "X" and "V" keys to switch between standing and kneeling.

Action	Mouse	Key	Description
7.5		Gam	ne flow control
Run/ Pause	Speed buttons	Spacebar	Click a Speed button or press the spacebar to run and pause the game.
Change speed	Speed buttons	Num pad +/-	Click another Speed button or press "+" and "-" keys on the numeric pad to change the game speed. There are three possible game speeds, so pressing "+" when at maximum speed has no effect.
Always Pause	Pause button	Alt + Space	Press Alt + Space to pause the game. This is useful in complex situation.
Always Run	none	Shift + Space	Press Shift + Space to plan Wait orders to all soldiers who have no outstanding orders and run the game.
		Sys	stem controls
Main menu	Menu button	Esc	Click the Menu button or press Esc to enter the System menu.
JPG Screenshot	none	Ctrl + Alt + P	Press and hold Ctrl and Alt, then press "P" to make a low-res screenshot in JPEG format.
TGA Screenshot	none	Ctrl + Alt + T	Press and hold Ctrl and Alt, then press "T" to create a high-quality Targa screenshot.

Default order

The following table tells you what kind of default order will be entered when you click right mouse button, depending on what you have in hand and what you are clicking on.

Target	Weapon	Order
Empty space	Any	Move
Door	Any	Open door
Impassable space	Any	No order
Enemy	Direct fire	Attack Enemy
Enemy	Indirect fire	Attack Ground
Friend	Any but medikit	Move
Friend	Medikit	Heal
Item	Any	Move and opens the Equip screen
	•	



Strategic Screen

Speed controls: The three buttons correspond to three speed settings, increasing from left to right. You can also press the spacebar anytime to pause the game.

Outstanding tactical missions (the red pins). Click to open the menu, then choose Accept to go to the mission.

Your bases (the blue pins). Click to open the menu where you can change their type.

Biomass

Zoom and tilt controls: Click the buttons to zoom in and out and rotate the view. You can also use +/- on Num pad to zoom and right-click anywhere to rotate.

Hint button: Click to open the window with important information for first-time players.



Message log: Displays information about the events in the game.

Enemy UFO flying a recon mission.

Your plane intercepting an enemy UFO.



Soldier Portrait. To un-equip an item, drag it to the right with your mouse or press the Un-equip All arrow.

Un-equip arrow

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Equipment panel. To equip an item from here, drag it with your mouse to the desired place on the soldier (it must be empty so un-equip if necessary).

These three tabs allow you to either Equip soldier, send him to Training or view Info on his history.

These three tabs display info about the character. Currently displaying skills.

Character information area. The content depends on selected tab.

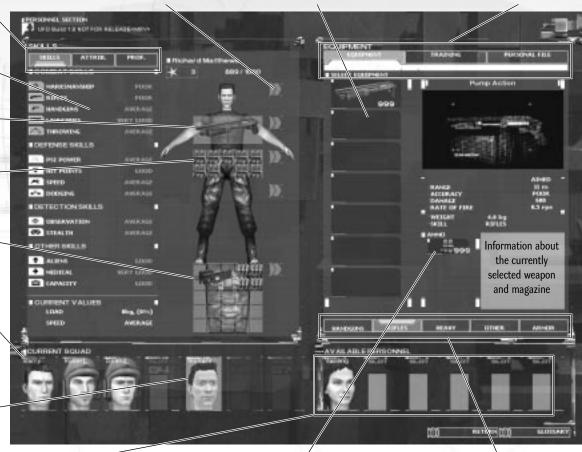
"Item in hand" area. Currently equipped with a Pump shotgun.

"Items in belt" area. Currently equipped with shotgun ammo.

"Items in backpack" area. Currently equipped with spare weapon (P90 personal defense weapon) and ammo for its Current squad area.

Current squad area. Click a soldier to equip him. To remove him from the squad, drag him to the right.

Currently selected soldier. Note the red wash in the background.



Available soldiers for your squad. To include one, drag him to the desired position on left.

Ammunition for the currently selected weapon. Drag it to belt or backpack to take spares.

These tabs switch between different types of weapons and armor.

Info

Soldier's callsign. Click and enter your own callsign, if you want the soldier to appear under a different name.



Fire Soldier button. Click it to permanently remove the soldier from the pool of available soldiers.

Training

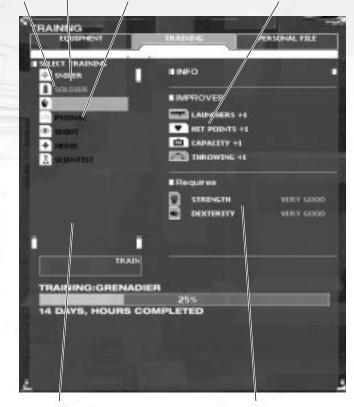
The list of training sessions.

Training that can be started immediately.

Training the soldier does not meet the minimum requirements for.

Effects of the currently selected training.

The grayed-out items were already improved by a different training.



Completed training.

Minimum requirements for the currently selected soldier.

Research Screen

The two buttons switching between the Research and Engineering windows. The layout of both windows is basically the same.

This is the list of researches. They fall into three categories: Ready for research, Not ready for research (i.e. a vital item must be retrieved or other technology researched), and Already researched. There are of course more researches than shown here, but as most of them do not fall into either category, they are not yet visible to the player.

Prerequisites. Solid icons denote required items, outlined items are merely "helpful," i.e. research will be faster if the player possesses them.

A red icon means the item is missing. The icon's shape denotes the type of the prerequisite (alien for items retrieved on battlefield, beaker for technology, cog for manufactured items).

Description of research.



Time remaining to finish the research.

Research progress bar.

Start research button.

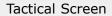
current weapon.

Current weapon. Acts also as Burst/Aimed fire

selector (currently on Burst).

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Command panel.



Target rectangle. Next to it are chances to hit for different soldiers.

Pause/Run buttons Message log Options Equipment Objectives Main menu Abort mission Next area The soldier selection rectangle. The square shows that an action is planned at this point, in this case, waiting. This large square means that an attack is planned at this spot. The character box. Click to select, and double-click to center. Number of alien(s) seen by soldier. Click to center on the alien(s). Skill with the current weapon. Time to complete the plan. Figure Library Run/Walk indicator. Kneel/Stand indicator. Hit points. Ammunition left in the

The soldiers' plans. The color of the plan corresponds to the color

of the soldier's box. The brightened plan is the plan of the currently selected soldier, while the other plans are dimmed.





3.4.1 Strategic game

D

This is the default selection cursor.



This is the wait cursor, displayed when the system is busy.

3.4.2 Tactical game



This is the default cursor.



This is the movement cursor. The green variant shows the square is accessible; the read variant means no unit can enter that square.



This is the attack cursor. The green color means the unit can attack the target, the red one indicates the target cannot be attacked (the soldier is too far, has no ammo, etc.) Right-click and the message log will show the reason why you cannot plan the attack.



This is the ground-attack cursor. The arrow is green when the soldier can hit that square, and red otherwise. The square underneath is green when there is some destructible structure (e.g. a fence) on that square, purple if the structure cannot be destroyed, and white over an empty square).



This is the open/use cursor. It appears green when the unit can open the door, red when it is not possible, and white when there is nothing to open or use on that square.

3.5 Icons

3.5.1 Strategic game



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Engineering base



Research base



Military base



Repulsor base



Capture alien base



Explore landed UFO



Explore crash-landed UFO



Alien incursion to our territory



Defend our base from aliens



Liberate territory or settlement



Story-based quest



Rescue mission

3.5.2 Tactical game



Move



Attack



Wait



Reload



Equip



Manipulate



Incapacitated



Paralyzed



Mind-controlled



Confused



Healed



Other

Credits

Credits

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TECHNICAL SUPPORT

Before contacting our technical support, please prepare a detailed specification of your computer and exact description of the problem.

It will help us to provide you with support in a fast, efficient way.

Information Required:

Computer model (CPU, CDROM, RAM, Video/Sound card, DirectX version, Windows version)

In order to get this information, please go to "Run" in your Windows Start menu and type "dxdiag" in the command line then press the enter key., The DirectX diagnostic program will start.

This will show all the relevant driver files installed on your system. In order to receive a text file of this information, please click the button "Save All Information."

You can then save a text file with all the information we require on your hard drive. You will then be able to send this information to us via e-mail.

Contacts:

via e-mail at: support@cenega.co.uk

Please use the email address provided. All support enquires to the company address or phone number(s) cannot be answered by our staff.

For more information and updates please visit:

www.ufo-aftermath.com www.cenega.com

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Warning: To Owners of Projection Televisions

Still pictures or images may cause permanent picture-tube damage or mark the phosphor of the cathode ray tube. Avoid repeated or extended use of video games on large-screen projection televisions.

EPILEPSY WARNING

Please read before using this game or allowing your children to use it.

Some people are susceptible to epileptic seizures or loss of consciousness when exposed to certain flashing lights or light patterns in everyday life. Such people may have a seizure while watching television images or playing certain video games. This may happen even if the person has no medical history of epilepsy or has never had an epileptic seizure. If you or anyone in your family has ever had symptoms related to epilepsy (seizures or loss of consciousness) when exposed to flashing lights, consult your doctor prior to playing. We advise that parents should monitor the use of video games by their children. If you or your child should experience any of the following symptoms: dizziness, blurred vision, eye or muscle twitches, loss of consciousness, disorientation, any involuntary movement or convulsion while playing a video game, discontinue use IMMEDIATELY and consult your doctor.

Precautions During Use

- Do not stand too close to the screen. Sit a good distance away from the screen, as far away as the length of the cable allows.
- · Preferably play the game on a small screen.
- · Avoid playing if you are tired or have not had much sleep.
- Make sure that the room in which you are playing is well lit.
- Rest for at least 10 to 15 minutes per hour while playing a video game.

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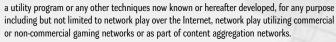
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