Oolite

Version 1.88

Installation

Mac OS X

Oolite requires Mac OS X 10.5 or later

Drag the 'Oolite' folder (containing Oolite, this ReadMe, the License and the 'AddOns' folder) to any convenient place on your hard drive. If you are upgrading from a previous version of Oolite then drag the Oolite application from this disk's Oolite folder to your own Oolite folder.

To run the game, double-click on the file 'Oolite.app' (the Oolite icon) in the 'Oolite' folder.

Windows

A folder called 'Oolite' has been created in Start -> Program Files. This folder has icons for running the game, the reference sheet, the link to the official Oolite website, the Advice for New Commanders guide, this ReadMe and an uninstall program.

To run the game, choose the Oolite icon in the 'Oolite' folder.

Linux *(oolite.org package)*

(this section is not applicable for installed packages downloaded from Linux repositories)

For all freedesktop.org-compliant desktops (e.g. GNOME, KDE, etc.) an 'Oolite (oolite.org)' entry has been created, under the 'Games' application category. Note that a plain 'Oolite' entry, instead of 'Oolite (oolite.org)', indicates an Oolite installation performed using a package downloaded from a Linux repository. Linux repositories often lag behind the latest official application releases. It is recommended to download and install the latest Oolite version available at http://www.oolite.org .

To run the game, choose the 'Oolite (oolite.org)' entry.

Oolite may also run from a terminal. For system-wide Oolite installations (i.e. Oolite installed as root), open a terminal and execute
```
$ oolite
```

while for home-folder Oolite installations, open a terminal and execute
```
$ ~/GNUstep/Applications/Oolite/oolite
```

To remove Oolite, for system-wide installations (i.e. Oolite installed as root), open a terminal and execute
```
$ /opt/Oolite/uninstall
```

while for home-folder Oolite installations, open a terminal and execute
```
$ ~/GNUstep/Applications/Oolite/uninstall
```

For more information, on the Oolite for Linux installation, check the README.TXT file located in the following folder:
system-wide Oolite installation `/opt/Oolite/doc/README.TXT`
home-folder Oolite installation `~/GNUstep/Applications/Oolite/doc/README.TXT`

Start Menu

When starting Oolite, a menu with six options will be displayed.

Start New Commander:
Start a new commander. Three starting scenarios are available by default, though expansion packs may add more. New players may wish to start with the Tutorial scenario which introduces the basics of flight and combat. A commander started with the Strict Mode option will never have any expansion packs affecting the game-play, even if these are installed at a later stage.

Load Commander:
Load an existing commander file.

View Ship Library:
View the specifications and descriptions of the ships and other common space objects.

View Keyboard Settings:
View the current keyboard settings.

Manage Expansion Packs:
Install and remove expansion packs. Not all expansion packs can be installed and removed by this method – others, especially older ones, can be found at http://wiki.alioth.net/index.php/OXP_List .

Exit Game:
Exit the game.

Controls and Commands

The current keyboard settings can be viewed by selecting “View Keyboard Settings” at the start menu.

Oolite for Mac OS X is mostly controlled from the keyboard and joystick, although the mouse can also be used in full screen mode.
Oolite for Windows and Linux can be controlled from the keyboard, joystick or mouse.

The list below describes the default key settings.

In Dock Commands:

1 or **F1** **Launch**
Propels your spacecraft from docked station.

2 or **F2**
- **Quick-Save / Save / Load**
  Use **up** and **down** cursor keys to select, **Enter** to choose.
- **Game Options...**
  - **Autosave**
    Use **left** and **right** cursor keys to disable/enable the 'Autosave' feature.
    When enabled, 'Autosave' will create a saved game every time you launch from a planetary station.
  - **Docking Clearance Protocol**
    When enabled, the main Galcop station (and some OXP stations) will use the docking clearance protocol, and docking without clearance will result in a fine.
  - **Sound Volume**
    Use **left** or **right** cursor keys to adjust the volume for effects and spoken messages.
  - **Spoken Messages**
    Use **left** or **right** cursor keys or **Enter** to toggle speech off/on.
    Spoken messages uses the default voice chosen in System Preferences on Mac, or a selectable voice on Windows and Linux.
  - **Music**
    Use **left** and **right** cursor keys to toggle music off/on.
  - **Full Screen Mode**
    Use **left** or **right** cursor keys to select screen size and refresh rate.
    Changes will only apply the next time you switch into full screen mode.
  - **Play in Full Screen / Play in Window (Windows / Linux only)**
    Press **Enter** to toggle between Window and Full Screen game view.
    (Mac: Press ⌘**-Ctrl-f** during flight to toggle between the two.
    All platforms: Press **F12** at any given time during a game session to toggle between the two.)
  - **Wireframe Graphics**
    Use **left** and **right** cursor keys to deselect/select retro-look wireframe graphics mode.
  - **Graphics Detail**
    Use **left** or **right** cursor keys to adjust the desired level of graphics detail. The number of options available depends on your graphics hardware.
  - **Gamma**
    Use **left** or **right** cursor keys to adjust the gamma correction setting if your monitor requires it.
  - **Joystick Configuration**
    Press **Enter** to go to the joystick calibration and configuration screen.
- **Back**
  Brings you back to the previous screen.
- **End Game and Return to Menu**
  Press **Enter** to reset the game to the starting menu.
- **Exit Game (Windows / Linux only)**
  Press **Enter** to quit the game.

3 or **F3** **Ship Outfitting** / **Ship Purchase** (toggles between the two)
Use **up** and **down** cursor keys to select, **Enter** to purchase.
Use **left** and **right** cursor keys to move between pages.

4 or F4 **Ship and Station Interfaces**
Use **up** and **down** cursor keys to select, **Enter** to open the selected interface.
Use **left** and **right** cursor keys to move between pages.

5 or **F5** **Status** / **Ship's Manifest** (toggles between the two)
Use **left** and **right** cursor keys to move between pages.

6 or **F6** **Zoomed / Entire range Galactic Chart** (toggles between the two)
Map navigation controls:

Mouse drag	Pan
PgUp/PgDn or **mouse wheel up/down**	Zoom In/Out
Cursor keys or **Primary mouse button (single-click)**	Select a hyperdrive target system. When **cursor keys** are used, the map auto-pans when the cursor approaches any map view edge.
Primary mouse button (double-click)	Data on target system
Home	Select the current system.
^	Plots the route from your current system to your target system (requires advanced navigational array).
?	Highlights systems by economy, government or tech level (requires advanced navigational array).
Left / Right cursor keys-Alt	Select previous / next system for which information will be shown in the system info screen.

On the entire range view only, you may type a system name to locate it.
On the zoomed range view only, '**i**' shows information for each system (economy, government and tech level).

7 or **F7** **Planetary Database** (shows data on the selected system)

8 or **F8** **Commodity Market**
Use **up** and **down** cursor keys to select,
right cursor key to purchase commodity, **left** cursor key to sell commodity.
Enter buys or sells as much of the selected commodity as possible.

Flight Key Commands:

Attitude Controls:

left and **right** cursor keys	Roll
up and **down** cursor keys	Pitch
, and **.**	Yaw

Note: Holding **Ctrl** will make the ship turn more slowly.

Drive controls:

w Increase Speed
s Decrease Speed

Hyperspeed:

j Toggle the in-system hyperspeed drive ('Torus Jump Drive') on and off.

Note: The drive is disabled by nearby mass/gravity effects.

Hyperdrive:

h Activate the hyperdrive, also known as the witchspace jump drive.
g Activate the Galactic Hyperdrive (if installed).

Note: The witchspace jump drive must have a target destination selected in one of the charts (F6 key).

Fuel Injection:

i Activate the afterburner Witchdrive Fuel Injectors (if installed).

Other controls:

p pause / un-pause the game (only during flight).

Note: While paused you can access some elements of the Options menu by pressing **2** or **F2**.
Also while paused you can press **o** to hide/show the HUD; useful for taking screenshots.

Weaponry:

a	Fire main weapon for the chosen facing.
_ (underscore)	Toggle weapons lockdown on/off.

Missiles, mines and pylon mounted equipment:

r Activate target identification system (deactivating the missile/mine system).
t Enable targeting for the current missile, or arm the current mine. If the target identification system is active and locked on, then this also locks a missile onto the selected target.
y Switch to the next missile or mine available (requires Multi-Targeting System).
Shift-t Immediately target nearest incoming missile.
u If target identification is active, deactivate it and reactivate the missile/mine system. If missiles are active, clear any targets (places them in safety mode).
m Launch the current missile or mine (it must be locked on target, or armed first), and switch to the next missile available.

Selectable Equipment and Multi-function Displays:

Shift-n Next selectable equipment
Shift-Ctrl-n Previous selectable equipment
n Activate selectable equipment
b Secondary activation key for selectable equipment (not used by all equipment)
Tab Activate selectable equipment in fast activation slot 1.
0 Activate selectable equipment in fast activation slot 2.
; Rotate the currently selected multi-function display.
: Select the next multi-function display, if your HUD has more than one.

Target System Memory Expansion:

+ Lock on to next target in memory (if installed).
- Lock on to previous target in memory (if installed).

Anti-Missile ECM:

e Activate anti-missile Electronic Counter-Measures (if installed).

Scanner:

z Adjust scanner zoom ratio (only during flight).
This allows you to 'zoom in' to navigate around small, close-to objects.
A small indicator next to the compass indicates the current scanner ratio (from 1:1 to 5:1).
Shift-z Zoom out to 1:1 scanner ratio.

Advanced Space Compass:

**** Change compass mode (if the Advanced Space Compass is installed). This toggles your compass between showing the location of the planet, main station (if close enough), sun, your current target, the station beacon, witchpoint buoy, and various additional beacons.
Shift- Change compass mode (reverse cycling).

Communications:

` View communications log. Allows you to see recent ship-to-ship communications.
Shift-l (L) Request / Cancel / Renew docking clearance.

View screens:

1 or **F1** View forward.
2 or **F2** View aft.
3 or **F3** View port.
4 or **F4** View starboard.
5 or **F5** Status / Ship's Manifest (see 'In Dock Commands' above)
6 or **F6** Zoomed / Entire range Galactic Chart (see 'In Dock Commands' above)
7 or **F7** Planetary Database (see 'In Dock Commands' above)
8 or **F8** Commodity Market (see 'In Dock Commands' above)

v	Toggle between external views.
Arrow Keys or Mouse w/ CapsLock	External free-look camera control

Automated Docking (requires Docking Computer)**:**

c	Begin/Abandon automated docking sequence with the main station, or current target. If only one station is in range, no targeting necessary.
s	Toggle docking music off/on.
Shift-c	Fast docking without docking sequence. Advances the game clock by 20 minutes.

Ejecting cargo items:

Shift-d	Eject one cargo pod.
Shift-r	Rotate cargo to determine what will be ejected.

Escape pod:

Esc-Esc	Fast double tap the **Esc** (Escape) key to launch the Escape Pod (if installed).

Other Commands:

Mac only:

⌘**-q**	Quit
⌘**-Shift-f**	Switch between full screen / normal size window.
⌘**-?**	(in windowed mode) Display control keys and license in a Help window.

Windows / Linux only:

Shift-Esc	Quit

All platforms:

F12	Switch between full screen and windowed mode.
***** (asterisk)	Take screenshot (writes a '.png' file to the oolite-saves folder under oolite.app).
Shift-f	Toggle FPS display.
Shift-m	(in full screen mode only) Toggle mouse control on and off, having mouse left/right (x-axis) mapped to roll. Use **Ctrl-Shift-m** to toggle mouse control on and off, having mouse left/right (x-axis) mapped to yaw. When mouse control is active, the following mouse commands are available:

Mouse left/right	Roll (Yaw, if mouse control is activated using Ctrl-Shift-m)
Mouse forward/back	Pitch
Primary mouse button	Fire main weapon for the chosen facing.
Secondary mouse button	Center mouse control. Cancel roll/yaw and pitch.
Mouse Wheel Up	Increase speed.
Mouse Wheel Down	Decrease speed.

Changing user preferences in Windows / Linux

The user preferences defaults file .GNUstepDefaults

The current settings for the following 'Game Options...' menu entries:

- Autosave (Off/On)
- Sound Volume (Mute to 100% in increments of 5%)
- Music mode (Off/On)
- Full Screen Mode and Display Resolutions
- Wireframe Graphics (Off/On)
- Graphics Detail (Minimum, Normal, Shaders Enabled, Extra)
- Gamma correction (0.02 to 4.0 in increments of 0.02)
- Field Of View (30° to 80° in 20 increments)

are stored in the file (created after Oolite first execution) .GNUstepDefaults and is stored in the following folder:

Windows: *<Oolite installation folder>*`/oolite.app/GNUstep/Defaults/.GNUstepDefaults`

Linux: `~/GNUstep/Defaults/.GNUstepDefaults` *(Note: filenames starting with '.' are considered hidden by default in Linux)*

The recommended way to change these settings is to use the in-game options menu. Troubleshooting or the need to experiment with more advanced options, may lead to directly editing the .GNUstepDefaults file. For the changes to take effect, the .GNUstepDefaults file must be edited and saved before executing Oolite. Windows and Linux differentiate on the file format used. Windows is using the OpenStep format, which is easy to read, while Linux is using the XML format, which is more flexible.

See below a couple of examples on how to directly edit the preferences file for both Windows and Linux. The examples focus in changing from windowed mode to full screen mode at a given resolution, by setting the 'display_width' and 'display_height' values, and ensuring the 'fullscreen' property is set to 'YES'.

Example 1 of 2

The following settings will give a full screen display of 800x600, one quarter sound volume, wireframe graphics enabled, and graphics detail with simple shader effects enabled:
(Note that if the 'fullscreen' property is set to 'NO', Oolite will read the 'window_height' and 'window_width' parameter values and will start in a 640x480 window.)

a. Windows OpenStep format:

```
{
    NSGlobalDomain = {
    };
    oolite = {
        detailLevel = 2;
        display_width = 800;
        display_height = 600;
        fullscreen = YES;
        volume_control = 0.25;
        window_height = 480;
        window_width = 640;
        "wireframe-graphics" = YES;
    };
}
```

b. Linux XML format:

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE plist PUBLIC "-//GNUstep//DTD plist 0.9//EN" "http://www.gnustep.org/plist-0_9.xml">
<plist version="0.9">
<dict>
    <key>NSGlobalDomain</key>
    <dict>
    </dict>
    <key>oolite</key>
    <dict>
    <key>detailLevel</key>
    <integer>2</integer>
    <key>display_width</key>
    <integer>800</integer>
    <key>display_height</key>
    <integer>600</integer>
    <key>fullscreen</key>
    <string>YES</string>
    <key>volume_control</key>
    <real>0.25</real>
    <key>window_height</key>
    <integer>480</integer>
    <key>window_width</key>
    <integer>640</integer>
    <key>wireframe-graphics</key>
    <string>YES</string>
    </dict>
</dict>
</plist>
```

Example 2 of 2
The following settings will give a full screen display of 1400x1050, full sound volume, wireframe graphics will be replaced by textured surfaces, and extra graphics detail with full effects active:

a. Windows OpenStep format:

```
{
    NSGlobalDomain = {
    };
    oolite = {
        detailLevel = 3;
        display_width = 1400;
        display_height = 1050;
        fullscreen = YES;
        volume_control = 1;
        window_height = 480;
        window_width = 640;
        "wireframe-graphics" = NO;
    };
}
```

b. Linux XML format:

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE plist PUBLIC "-//GNUstep//DTD plist 0.9//EN" "http://www.gnustep.org/plist-0_9.xml">
<plist version="0.9">
<dict>
    <key>NSGlobalDomain</key>
    <dict>
    </dict>
    <key>oolite</key>
    <dict>
    <key>detailLevel</key>
    <integer>2</integer>
    <key>display_width</key>
    <integer>1400</integer>
    <key>display_height</key>
    <integer>1050</integer>
    <key>fullscreen</key>
    <string>YES</string>
    <key>volume_control</key>
    <real>0.25</real>
    <key>window_height</key>
    <integer>480</integer>
    <key>window_width</key>
    <integer>640</integer>
    <key>wireframe-graphics</key>
    <string>YES</string>
    </dict>
</dict>
</plist>
```

There are quite a few other settings that can be used inside .GNUstepDefaults and that do not have a relevant Oolite menu entry.
For example:

a. Windows OpenStep format:

```
    "use-texture-lod-bias" = NO;
    "splash-screen" = NO;
    "mouse-control-in-windowed-mode" = YES;
```

b. Linux XML format:

```
    <key>use-texture-lod-bias</key>
    <string>NO</string>
    <key>splash-screen</key>
    <string>NO</string>
    <key>mouse-control-in-windowed-mode</key>
    <string>YES</string>
```

For more information please refer to http://wiki.alioth.net/index.php/Hidden_Settings_in_Oolite .

Test Builds

Starting with Oolite 1.77 there are two different versions of the game. A normal version without debugging tools and a slightly slower version with debugging options that can be used with the console. This test build version will be useful for oxp developers.

The test builds have the following extra features:

- When pressing Shift-f, the FPS display will show additional info, including a TAF indicator.
- A console can be used, to type in JavaScript commands, interfacing directly with the Oolite universe and its entities.
- The following debugging options are accessible while paused:

0	Dump a list of all entities in the log-file.
b	Enable collision test debugging.
c	Enables octree debugging.
d	Enables all debug flags.
s	Enables shader debug messages.
x	Enables drawing of bounding boxes around all entities.
n	Disables all debug flags and displays HUD again.
left and r**ight** cursor keys	Halves/Doubles Time Acceleration Factor.

Helpful Information

For more information on playing Oolite visit http://www.oolite.org .
Browse the Oolite Wiki at http://wiki.alioth.net/index.php/Oolite_Main_Page .
Check the Frequently Asked Questions at http://wiki.alioth.net/index.php/Oolite_FAQ .
Most Oolite eXpansion Packs (OXPs) are available at http://wiki.alioth.net/index.php/OXP .
The Oolite Development Project Page (common for Mac OS X, Windows, Linux) is located at https://github.com/OoliteProject/oolite .

For answers to questions about playing Oolite, customizing Oolite and anything else Oolite related, post to the Oolite Bulletin Boards at http://www.aegidian.org/bb .

Oolite is making use of various external open source libraries, some of them modified to fit certain requirements of the game. For more information about where to find the source code of those libraries, as well as information about the modifications required to make them build for Oolite, please refer to the file *ExternalLibrariesSourceCodeChanges.txt*, found inside the Doc folder of the game's source code distribution.

Your feedback is essential to keep improving Oolite.
A lot of effort has been put in making Oolite stable. In the, nowadays rare, event Oolite crashes, it will be highly appreciated if you let us know by raising an issue at https://github.com/OoliteProject/oolite/issues or by sending an email to oolite.bug.reports@gmail.com, attaching the crash log, that is located at

Mac OS X: `~/Library/Logs/CrashReporter/Oolite.crash.log`
Windows: `<Oolite installation folder>/oolite.app/Logs/Latest.log`
Linux: `~/.Oolite/Logs/Latest.log`

You can also report bugs and give feedback at http://www.aegidian.org/bb

We are immensely grateful to all the people who have been testing Oolite and tediously bringing it towards perfection.

Thank you all!

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