Oolite

Version 1.90

Installation

Mac OS X

Oolite requires Mac OS X 10.5 or later

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

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

Windows

A folder called 'Oolite' has been created in Start ... ram Files. This folder has icons for running the game, the reference sheet, the link to the official Oolite website, the Ad... New Co...ers guide, this ReadMe and an uninstall program.

To run the game, ch... e icon ... oolite ... .

Linux *(oolite.org ...e)*
(this section is not applica... stalled pac... downloaded from Linux repositories)

For all freedesktop.org-co... ...(e.g. GNOME, KDE, etc.) an 'Oolite (oolite.org)' entry has been created, under the 'Games' application category. Note th... ...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.space.

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 me____ ___thers, especially older ones, can be found at http://wiki.alioth.net/index.php/OXP_List .

Exit Game:
Exit the game.

Controls and Com___nds

The current keyboard settings can be viewed by selecting "View Keyboard Settings ___ ___ menu.

Oolite for Mac OS X is mostly controlled from the keyboard and joystick, although the ___ ___ also be use____ ___en mode. Oolite for Windows and Linux can be controlled from the keyboard, joystick or m___se.

The list below describes the default key settings.

In Dock Commands:

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

2 or **F2**   • **Quick-Save / Save / L___**
      Use **up** and **down** curs___ ___ ___elect, **E___ ___hoos___**
    • **Game Options...**
      • **Autosave**
        Use **left** and ___ cursor k___ ___isable/enable ___ Autosave' feature.
        When enable ___ ___save' wil ___ a s___d game every time you launch from a planetary station.
      • **Docking Clearance ___tol**
        When ___bled, the ___ ___alcop sta___ ___u some OXP stations) will use the docking clearance protocol, and dock___ ___ut cl", ___ result in a fine.
      • **Sound Vol___**
        Use **left** or ___ ___ursor ke___ ___st the volume for effects and spoken messages.
          ___ssage___
          ___ **right** ___ ___ **Enter** to toggle speech off/on.
        Spoke___ ___ages ___ ___efault voice chosen in System Preferences on Mac, or a selectable voice on Windows and Linu___.
      • ___ic
        ___ **left** and ___ cursor keys to toggle music off/on.
      • **Fu___ ___ M___**
        Us___ ___ ___ cursor keys to select screen size and refresh rate.
        Change___ ___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 _ _ _ e 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, governme_ _ _ _ _ _ _

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 hyp_ _ _ _ _ ('Tor_ _ _ _ Drive') o_ _ _ _ _
Note: The drive is disabled by nearby mass/g_ _ _ _ _ _ ts.

Hyperdrive:
h Activate the hyperdrive _ _ _ known as _ _ _chspa_ _ jump drive.
g Activate the Galactic Hyp_ _ _ _ _ (if installe_)
Note: The witchspace jump drive _ust have _ _ _ destina_ _ _ _ _ in one of the charts (F6 key).

Fuel Injection:
i Activate the afterbu_ _ _ _hdrive _ _ _tors (if installed).

Other controls:
p pa_ _ _ _ _-pa_ _ _ ame (_ _ _ _ _ _ flight).
Note: While paused _ _ _ an acce_ _ _ _ eleme_ _ _ _ he Options menu by pressing **2** or **F2**.
Also while paused y_ _ _ press **o** t_ _ _ _how the HUD; useful for taking screenshots.

Weaponry:
a Fire _ _ _ _ _ _ _ e chosen facing.
_ (underscore) Toggle we_ _ _ _ _ _own 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 External free-look camera control
or Mouse w/
CapsLock

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

 c Begin/Abandon automated docking sequence with the main stati t target. I ation is in range, no targeting necessary.

 s Toggle docking music off/on.

 Shift-c Fast docking without docking sequence. A ances the g inutes.

Ejecting cargo items:

 Shift-d Eject one cargo pod.

 Shift-r Rotate cargo to determine what will be eject

Escape pod:

 Esc-Esc Fast double tap the **Esc** pe) k to lau e Escape nstalled).

Other Commands:

Mac only:

 ⌘-q Quit
 ⌘-Shift-f Switch between f l screen size win
 ⌘-? (in windowed isplay co s and license in a Help window.

Windows / **Linux only:**

 Shift-Esc Quit

All platforms:

 F12 Swi ween full and windowed mode.
 * (asterisk) Take hot (write ng' file to the oolite-saves folder under oolite.app).
 Shift-f Toggle lay.
 Shift-m (in full scree oggle mouse control on and off, having mouse left/right (x-axis) mapped to roll.
 Use **Ctrl-Shift-m** le 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 _____ Oolite .

Builds

Starting with Oolite 1.77 there are two different versions ____ ___mal ve___ ___ debugging tools and a slightly slower version with debugging options that can be used with the console. ___ ____st buil__ ___ will b__ ___ for oxp developers.

The test builds have the following extra f____
- When pressing Shift-f, the FPS ___ ___ow a___ _ info, in____ _ TAF indicator.
- A console can be used, to type i_ ___pt comma__ ___ ___ _____ctly with the Oolite universe and its entities.
- The following debugging options ___ ___ble while pa____
  - **0** ___mp_ lis__ __entities in the ___
  - **b** ___le collisi__ ___ debu__ing.
  - **c** ___ octree ___
  - **d** En___ _l debug ___
  - **_** Enab__ ___er debug ___sages.
  - **_** Enables ___ of bounding boxes around all entities.
  - **_** ___ables a__ ___flags and displays HUD again.
  - **left** and ___ ____r keys ___ __s/Do__ __e Acceleration Factor.

Helpful Information

For more information on playing Oolite visit http://www.oolite.space.
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.

Military laser sound courtesy of user "notyermom", sourced from https://freesound.org/people/notyermom/sounds/434834/ under license: https://creativecommons.org/publicdomain/zero/1.0/
Mining laser sound courtesy of user "bubaproducer", sourced from https://freesound.org/people/bubaproducer/sounds/151022/ under license: https://creativecommons.org/licenses/by/3.0/
Beam laser sound courtesy of user "jobro", sourced from https://freesound.org/people/jobro/sounds/35677/ under license: https://creativecommons.org/licenses/by/3.0/

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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