Game Troubleshooting (Windows)

Table Of Contents

- 1 Information
- 2 Overview
- 3 AI Helicopter Issues/Problems
- 4 Disable desktop composition (graphics issues)
- 5 Intro videos and startup problems (graphics issues; black screen/purple screen/red screen problems)
  - 5.1 Selecting the rendering mode (Software vs Primary Display Driver)
  - 5.2 Enable DrawPrimitive
- 6 UAC file system virtualization (missing save game data files issues)
- 7 Proper uninstallation and reinstallation
- 8 Setting up DirectPlay
- 9 In-game music/soundtrack data
- 10 High-definition resolution patch (experimental; optional)
- 11 DirectDraw Modification (Wrappers)
- 12 Using Virtual Machines and Emulators
- 13 OpenUA/UA:Source
- 14 Technical Assistance
- 15 Notes

This article covers various technical troubleshooting workarounds and fixes for Urban Assault on Windows with modern hardware systems.

1 Information

This is the main technical assistance and troubleshooting article for *Microsoft Urban Assault*.

Please read this section carefully to find appropriate solutions for specific game-related issues.

2 Overview

Urban Assault usually runs well on modern Windows systems. But there are certain problems that occur on Windows Vista and newer.

Many issues are also dependent on individual hardware models/drivers or specifications and their compatibility with the game engine.

This page contains solutions for commonly known issues and problems, as well as some additional technical information for the game.

The following article is intended for the original Urban Assault game engine, and therefore does not apply to OpenUA/UA:Source.

3 AI Helicopter Issues/Problems

Main Article: AI Helicopter Glitch

Unresponsive and defective AI helicopters are common on all modern computers regardless of the operating system.

The AI Helicopter Glitch problem is extensively covered in another standalone article.

4 Disable desktop composition (graphics issues)

Disabling desktop composition is often useful as it may resolve several types of graphical problems:

- Game screen goes black immediately after startup or after a video.
- The button texts in the game installer are not visible.

To disable desktop composition, right-click the desired executable (`UA.exe` for original UA; `Ua_xp.exe` for Metropolis Dawn; `ua_trial.exe` for the Trial version; `Setup.exe` for the installer etc.) ? Properties ? Compatibility tab ? Check Disable desktop composition.

On Windows 7, composition can also be disabled globally by selecting a desktop theme that does not use Windows Aero.

5 Intro videos and startup problems (graphics issues; black screen/purple screen/red screen problems)

If the screen gets black (the 'black screen' issue) and stay that way when launching the game, or the game's main menu colours get distorted after the game's intro video (the 'red screen' or 'purple screen' issue), disabling the game's video player may help with circumventing the issues.

The recommended official method to disable the game's movie player is via editing the `Nucleus.ini` config file in the UA directory: Open the config file located in the game's main root folder, and set the value of `gfx.movie_player` from `on` to `off`, then save the file to apply the change.

If the intro videos are enabled, third-party video decoders and renderers may cause startup problems. This has been observed with (obsolete) versions of FFDShow, but more information is needed. If you suspect problems, disabling such video utilities for UA may help.

Note that rendering mode may also have an effect on the startup problems (see the below section!).

5.1 Selecting the rendering mode (Software vs Primary Display Driver)

UA supports both hardware rendering via Direct3D and software rendering via machine CPU. The choice between hardware rendering and software rendering depends on which mode works better, and the personal preference of the player.

Changing the rendering mode may help if any of the following symptoms occur:

- Game screen goes black after startup.
- Game screen has distorted colours or wrong aspect ratio, typically after startup (more common with software rendering).
- Game performance is inconsistent; for example, the game may run too fast (may happen with software rendering).

Rendering mode can be selected in the game options, under Direct3D device. The typically available options are `Software` (software rendering) and `Primary Display Driver` (hardware rendering).

It is also possible to set the rendering mode option directly (and externally) by editing `guid3d.def` file located in ENV folder. Known possible options are `<software>` and `<primary>` (<software> is for software rendering, <primary> is for hardware rendering).

Hardware rendering provides smoother graphics and it is generally considered better in terms of graphical quality. However, certain effects such as colour inversion during beaming or the blue light when destroying certain units, are only visible in software rendering mode.

NOTE: After changing the rendering mode, the game resolution usually resets to 640×480. Return to the settings menu to change it.

5.2 Enable DrawPrimitive

It is almost always recommended to turn DrawPrimitive on in UA options. It can be especially useful if any of the following symptoms occur:

- Game crashes when playing or when starting a mission.
- Major graphical issues such as game scene not rendered properly or at all.
- Minor graphical issues such as the preview model not visible or not spinning properly in mission briefing.

NOTE: The DrawPrimitive option does not have any effect in software rendering mode. But when hardware rendering mode is used, it is highly recommended to keep it on.

6 UAC file system virtualization (missing save game data files issues)

If Windows User Account Control (UAC) is enabled and UA is installed into the default program directory (`<drive>:\Program Files\…`) and run without explicit administrator privileges, it cannot write files such as configuration data and saved games into the program's directory.

In this case, the UAC file system virtualization redirects the write requests to another directory, `VirtualStore`. This mechanism can be quite a nuisance in many instances, and may also cause a loss of save data tracking or missing save game data files in a user profile.

There are a few different ways to prevent it:

- Install UA into a directory that is not protected such as your home folder (recommended!). Do not install it to any Program Files or other protected folder.
- Disable User Account Control and use administrator account (not recommended for security reasons).
- Run UA as administrator (inadvisable). Certain compatibility modes do this automatically, otherwise you must do this every time and it can lead to slight problems if there are already files in VirtualStore.

Depends on system settings and configurations, sometimes the files may not simply generate inside at all. However, there is no report of this instance for the game so far.

7 Proper uninstallation and reinstallation

If UA was installed using the official installer, it should be uninstalled using the official uninstaller before attempting reinstallation. The official installer creates the registry keys which override certain configuration files of the game, most notably `assign.txt`.

If UA was 'installed' by copying the game files from a CD manually, the registry keys will still point to the old location if they exist. The uninstaller removes these registry keys. They can also be removed manually, but one should be careful when editing Windows registry.

Reinstallation using the official installer should be safe even without uninstallation, but it is still recommended to uninstall the game completely before the process.

The official Metropolis Dawn installer (`Setup.exe`) will not work if the registry keys for the original UA do not exist. The most straightforward solution for most users is to use the official installer to install the base game first.

8 Setting up DirectPlay

UA requires DirectPlay to work, even if multiplayer features are not used.

DirectPlay is not included with Windows 10 and above by default, but when a program that requires it is started, Windows should ask about installing DirectPlay components and install it automatically. If this does not happen, you may have to manually enable it with the following method.

Go to Control Panel ? Programs and Features ? Turn Windows Features on or off ? check Legacy Components (DirectPlay).

9 In-game music/soundtrack data

The in-game music/soundtrack data is stored on the UA game CD as standard CD audio tracks (from track numbers 2 to 6; track 1 is the untitled 'data track' that is allocated for sound data in the game engine) and the game engine plays it using the CD audio interface.

In order to get the music to work in the game, the UA game CD must be present in the primary CD drive with the first drive letter. If the UA CD is not present in the primary disc drive with the first drive letter, the music will not play; or if another CD is present in the first drive instead, the game will play sound data from that CD instead.

Alternatively, you can use a virtual drive software and load the game CD image into it. Note that the virtual image file must contain all the tracks and the software must support mixed-mode images. For example, Daemon Tools can support the format, while WinCDEmu does not support mixed-mode images.

If the music does not work, check if the Music option is enabled in the game options. Also, check that the CD audio line is not muted in Windows audio settings.

10 High-definition resolution patch (experimental; optional)

Urban Assault originally supports display resolutions up to 1024×768 natively. An experimental patch has been made to allow higher resolutions up to 4k level.

Author's Note: Since OpenUA/UA:Source can now fully support the vanilla engine functionality, I highly recommend using it to play the game on higher resolutions instead this experimental patch for the original UA engine.

--Charlotte

11 DirectDraw Modification (Wrappers)

Under Construction. More details coming soon.

12 Using Virtual Machines and Emulators

Urban Assault is an old game, and therefore runs naturally and optimally in its older native development environment (Windows 95/98-era hardware). The best and most straightforward method for natively running the original game engine can be accomplished via setting up retro-computers.

Alternatively, virtual machines and emulators can be used to simulate the original operating software and hardware environments that the game was originally designed to be played on. Currently, 86Box with specific hardware setups are probably the best option for implementing this task.

More details coming soon.

13 OpenUA/UA:Source

Main Article: OpenUA (UA:Source)

OpenUA/UA_Source is an open-source UA engine re-implementation/reverse engineering project of the original Urban Assault game engine. OpenUA can be mainly used to resolve most issues and problems pertaining to modern computer hardware and operating systems.

Currently, OpenUA can support every original game functionality and thanks to the continued development cycles, the frequency of bug occurrences is minimal. However, the multiplayer layers may still contain numerous bugs in them, and the latest release versions and builds may inevitably introduce new kind of issues and glitches until thoroughly tested beforehand.

OpenUA can be reliably used as a comprehensive alternative to play the game on modern hardware and systems regardless of OS or architectures. If all else fails, always use OpenUA.

It is highly recommended to use OpenUA Standalone Package, which is an all-inclusive package that has been designed with every necessary key game file and configuration applied.

14 Technical Assistance

Should you require further technical troubleshooting or assistance for the original UA or OpenUA-specific issues, please open a support ticket on the forums or visit the Discord server.

15 Notes

As mentioned earlier in this article, this guide does not apply to OpenUA/UA:Source. Feel free to open a new support ticket regarding the issues and problems pertaining to OpenUA.