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RReady Rendition Verite Wrapper

V1.2

August 28, 2024

RRedline is the Windows graphics API of the Rendition Verité graphics cards of the mid-1990s. Speedy3D is the MS-DOS based precursor to RRedline.

This app adds an RRedline rendering subsystems to Windows. The renderer must be selected within the application for this to function (for some apps, others may auto-detect and use it). All 13 RRedline games are supported (both v1.0 and v2.0 of RRedline).

Custom forks of Dosbox (Dosbox-Rendition) Dosbox-Staging (Dosbox-Staging-Rendition) along with an open source DosClient app, which has license exemptions to interface with close source redline.dll and verite.dll libraries add an accelerated Speedy3D code path for DOS based Rendition Verité games. The support for DOS apps is currently in an alpha state (though vQuake 1, Indy Car Racing 2, Rebel Moon and Tomb Raider 1 Rendition Edition are feature complete. Whiplash has a very high level of compatibility. Nascar 2 and Nascar Racing 1999 produce mouse pointer trails in menus but otherwise fully functional. Eurofigher 2000+ is playable in FIFO mode. The source code for Dosbox-Rendition and Dosclient is available here: <https://sourceforge.net/projects/dosbox-rendition/>.

Dosbox-Staging is experimental and is designed solely for running vQuake (source is available here: <https://sourceforge.net/projects/dosbox-staging-rendition/>). You may have to left click the mouse for it to be detected.

The source for RReady's Speedy3D (DOS) code can be found here:

<https://sourceforge.net/projects/rready-speedy3d-for-dosbox/>

Support for DOS/Speedy3D apps is currently experimental and is subject to change. Some apps like Scorched Planet (cutscenes don't render and menus difficult to access) and Descent 2 Verité (support incomplete, missing textures). Currently vQuake, Rebel Moon, Tomb Raider and Whiplash are stable on all system and should run without issue. ICR2/Cart2 might need thread safety settings enabled depending on system speed. Nascar 2 and Nascar Racing 1999 need thread safety settings enabled or the game will crash. Eurofighter 2000+ will run in FIOF mode without issue (unless temporarily returning to game menu, in which case a catastrophic loss of performance will be experience).

Vogon robermo3 has managed to patch Rebel Moon CGL (Creative Graphics Library) and Rebel Moon Rising (the sequel) to run off the Rendition Rebel Moon engine/binary (<https://www.vogons.org/viewtopic.php?p=1260636#p1260636>).

All other DOS games will currently run but with major graphical errors and possible instability.

Please note support for DOS apps is currently in a state of flux and the long term aim of the project is to support all Speedy3D apps with 100% compatibility. Your feedback will help immensely.

DO NOT RUN multiple Speedy3D apps in the same Dosbox instance. Relaunch Dosbox before running another app.

For best results ensure that Hyper-V and Virtual Machine support in Add/Remove programs (Windows Components) are disabled, particularly for games using DxWnd.

INFO

For RRedline (Windows)

Minimum requirements:

Dual core 3.00 GHz

Intel HD 4000 (Some application may have issues due to outdated drivers on this chipset)

10 MB disk space

Windows 7 SP1 or later

Recommended:

Quad core

Discrete OpenGL 3.3 compatible GPU with GLSL 1.40 compatibility profile support (Most discrete GPUs built after 2010 should be fine, GTX460 era)

Windows 7 SP1 or later.

For Speedy3D(DOS)

Minimum requirements:

Quad core 3.40+ GHz

Discrete GPU (GTX740 tested/GTX660(tested)/GTX460 will probably work)

10 MB disk space

Windows 7 SP1 or later

Recommended:

Hex Core CPU 3.00+ GHz

Discrete OpenGL 3.3 compatible GPU with GLSL 1.40 compatibility profile support (Most discrete GPUs built after 2012 should be fine)

Windows 7 SP1 or later.

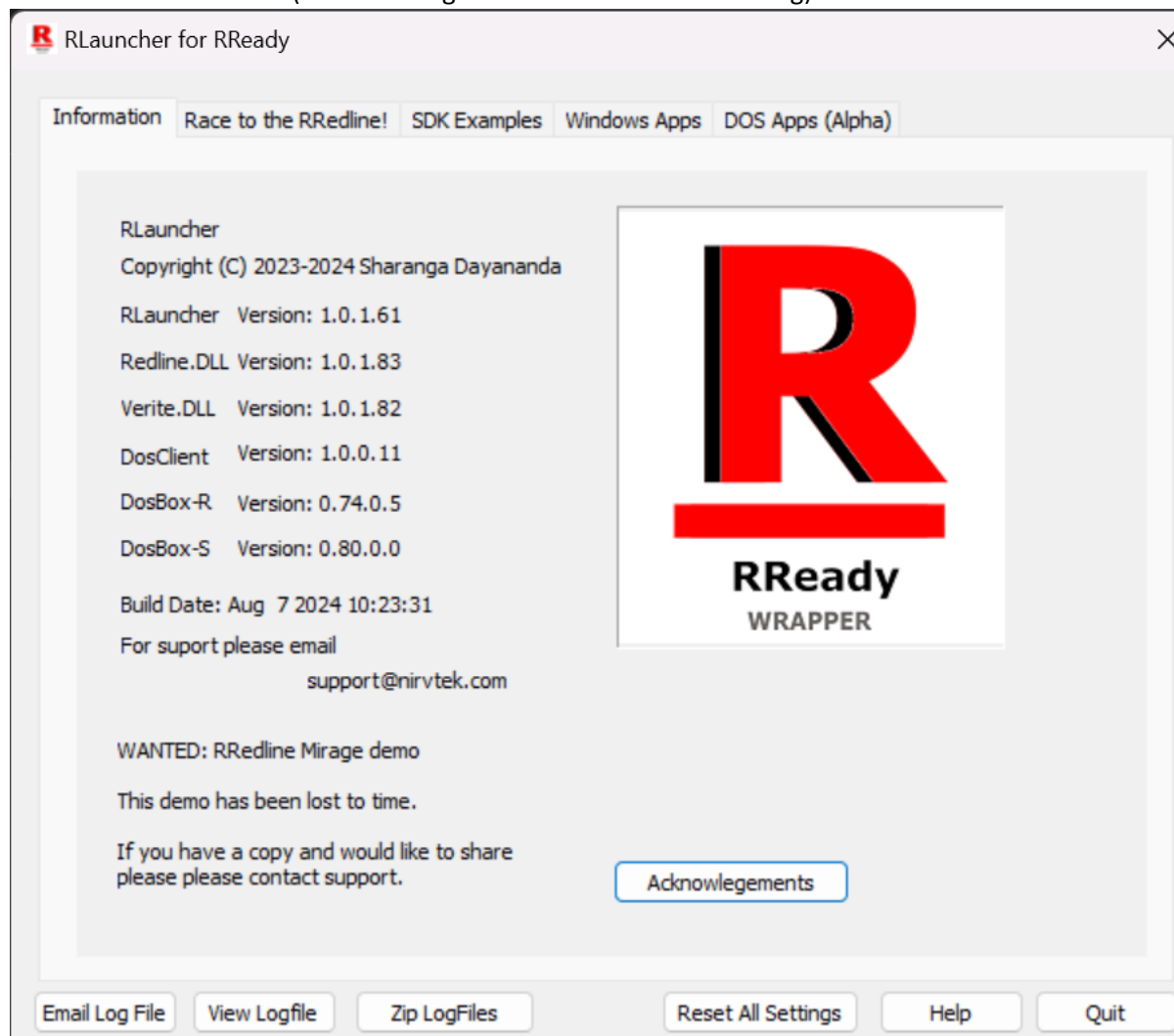
For the latest info on RReady including compatibility look here:

<https://www.vogons.org/viewtopic.php?f=9&t=95721>

For support email support@nirvtek.com (Hit the “Zip logfiles” button in the launcher and when the Explorer window opens attach the highlighted zip file into your email. If Microsoft Outlook is installed, you click “Email logfiles” and after a short pause, a new email will be composed addressed to support@nirvtek.com with the zipped up log files attached.

Usage

The launcher has 5 tabs (In some images the DOS tab will be missing):



Information

This lists version numbers for individual components.

Race to the RRedline!

This lists the “Race to the RRedline!” competition winners from the 1990s. These are not supplied with this app but can be manually downloaded from public servers.

One demo is lost to time: Mirage.exe. If you have a copy and would like to share it, email support@nirvtek.com.

The download link for “Race to the RRedline!” (2TheRRedline, updated March 23, 2024) is :

<https://nirvtek.com/downloads/2TheRRedline.zip>

MD5 Checksum: **472b6907b16a9f524d65a93c89bef33e**

(See Verifying checksums in the next below)

SDK Examples

This tab contains SDK demos that Rendition released to teach developers how to code against RRedline v2.0. The apps are not supplied with RReady, but can be downloaded from public servers and MD5 checksum verified.

The latest download link for the SDK demos is (This includes RRosetta (Rhino)):

<https://nirvtek.com/downloads/SDKDemos.v2.zip>

MD5 Checksum : **9560e2f82b8f56c831ac7468cc04b899**

(Old demos without RRosetta (Rhino))

<https://nirvtek.com/downloads/SDKDemos.zip>

MD5 checksum: **ff93c26cf3c341bfc9d974d9e39f1661**

To verify a checksum:

- 1) Click **Start** (to bring up the start menu.
- 2) Type **cmd** and press **[ENTER]**
- 3) In the black window which pops up type
- 4) **Certutil -hashfile <Filename> md5**

(where <Filename> is the full path to the downloaded file.)

For example:

```
Command Prompt
12-Sep-23 15:26 <DIR> RRedline
0 File(s) 0 bytes
3 Dir(s) 79,589,654,528 bytes free

C:\Code\Test>cd RRedline

C:\Code\Test\RRedline>dir
Volume in drive C has no label.
Volume Serial Number is 647F-948E

Directory of C:\Code\Test\RRedline

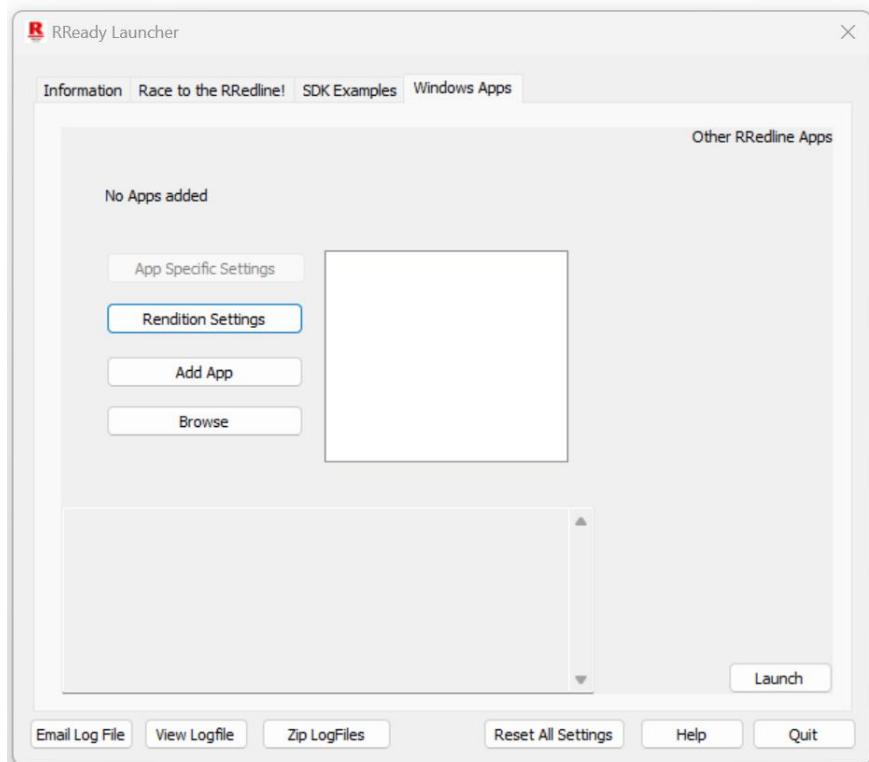
12-Sep-23 15:26 <DIR> .
12-Sep-23 17:16 <DIR> ..
12-Sep-23 15:10 9,256,518 RaceToTheRRedline!(Full Set).zip
12-Sep-23 15:26 682,478 SDKDemos.zip
2 File(s) 9,938,996 bytes
2 Dir(s) 79,589,588,992 bytes free

C:\Code\Test\RRedline>certutil -hashfile "RaceToTheRRedline!(Full Set).zip" md5
MD5 hash of RaceToTheRRedline!(Full Set).zip:
cd20d1e90eca101d7b7ca85589f8745b
CertUtil: -hashfile command completed successfully.

C:\Code\Test\RRedline>certutil -hashfile SDKDemos.zip md5
MD5 hash of SDKDemos.zip:
ff93c26cf3c341bfc9d974d9e39f1661
CertUtil: -hashfile command completed successfully.

C:\Code\Test\RRedline>
```

Windows Apps



Adding an App

Click “add app” and using the file location dialog navigate to the application exe. Once an app is added it’s EXE file’s name will appear in the white section in the middle. Click “Rendition Settings” to configure resolution and other settings (described in a later section.)

Removing an app

Right click the app name in the list in the middle and select remove.

Launch an app

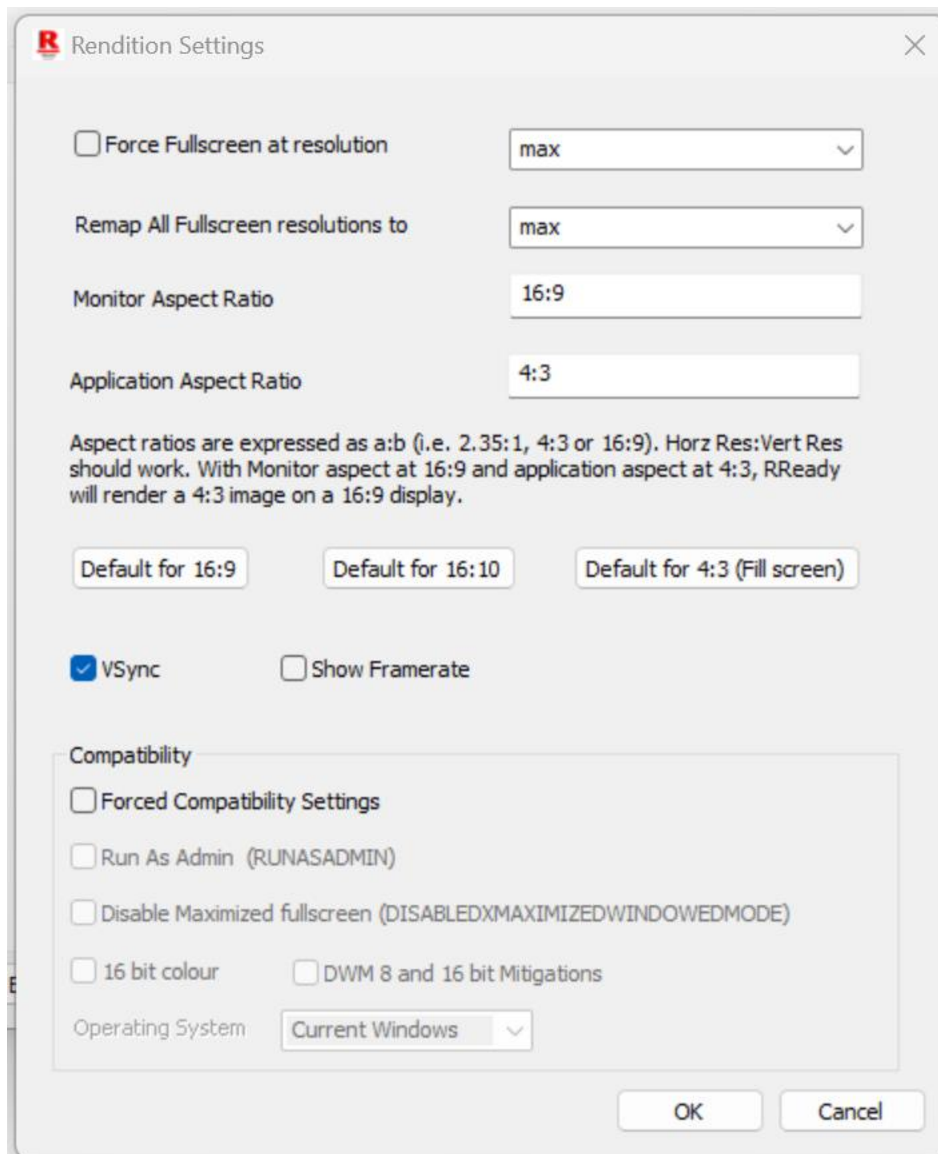
Click on the app name in the list and then click the “Launch” button in the lower right (just above quit.) It’s best to configure the app in Rendition Settings (next section) before launching it.

Browse

Should open an explorer window in the selected application’s folder. The selected application is the highlighted entry in the white section in the middle.

Rendition Settings

Click Rendition Settings and the following dialog box will appear:



“Force full screen at resolution” used to be needed with vQuake 2 (original ref_v1k). Nothing else needs it. With the patched ref_v1k (1 byte change Window style EX) even vQuake 2 doesn’t need it. Redownload it from the link below. With this patched DLL the game can be toggled in and out of windowed mode at will. If the original ref_v1k.dll supplied by Rendition/Id Software is used, tick “Force Fullscreen at resolution” and in the game folder/baseq2/config.cfg add set vid_fullscreen "0" With the original renderer you cannot toggle between fullscreen and windowed. If there’s a need to run it in a window uncheck Force full screen and restart the game.

(Original ref_v1k only) Select the resolution in force fullscreen (if ticked) or “Remap All fullscreen resolutions to:” to one of the listed resolutions. “Max” selects the highest available resolution and “default” whatever the application requests (the refresh rate is capped to the highest available at that resolution). The resolutions listed are from querying the list of available Windows resolutions.

NOTE: Just because a resolution is supported does not mean that an RRedline application will have enough texture memory to run at that resolution. Display corruption and lockups may occur if insufficient GPU video RAM (VRAM) is available.

Aspect ratio is split into 2 parts, the monitor aspect (i.e. 4:3, 16:9, 16:10, ...). The application aspect is the aspect ratio that the application expects (4:3 for everything).

Clicking the “16:9 “ button pillarboxes the app’s fullscreen display to suit a 16:9 display (black strips on the left and right).

“16:10” does the same but for a 16:10 monitor. Default for 4:3 fills the entire screen irrespective the monitor aspect. Setting both to be identical also fills the screen.

The aspect ratios can be floating point values.

“Vsync” enables vertical sync and “show framerate” shows an average framerate over the last second in the top left hand corner of the screen.

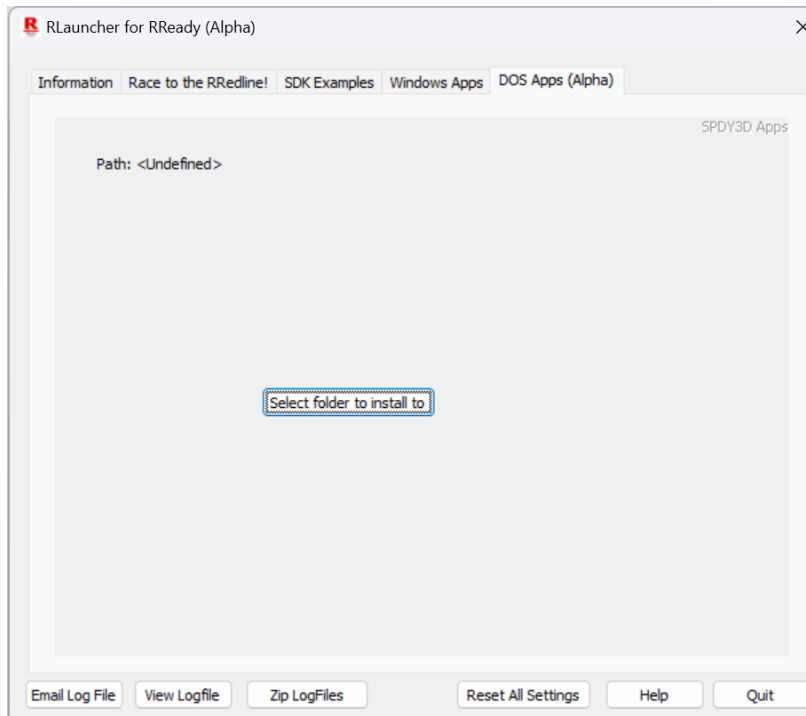
“Forced compatibility” toggles the Windows compatibility flags for the application. Usually most apps will only need 16 bit colour. It may depend on your Windows installation. RRedline applications were designed for Windows 98. The 16 bit colour option is enabled for some demos automatically. They can be disabled by unticking “Forced compatibility settings” and clicking “Launch” or by right clicking on the EXE file in Windows Explorer, bringing up properties and disabling them from the compatibility tab.

App Specific Settings

Some apps have application specific settings. They vary depending on the app.

DOS Apps (Alpha testing support)

Installation



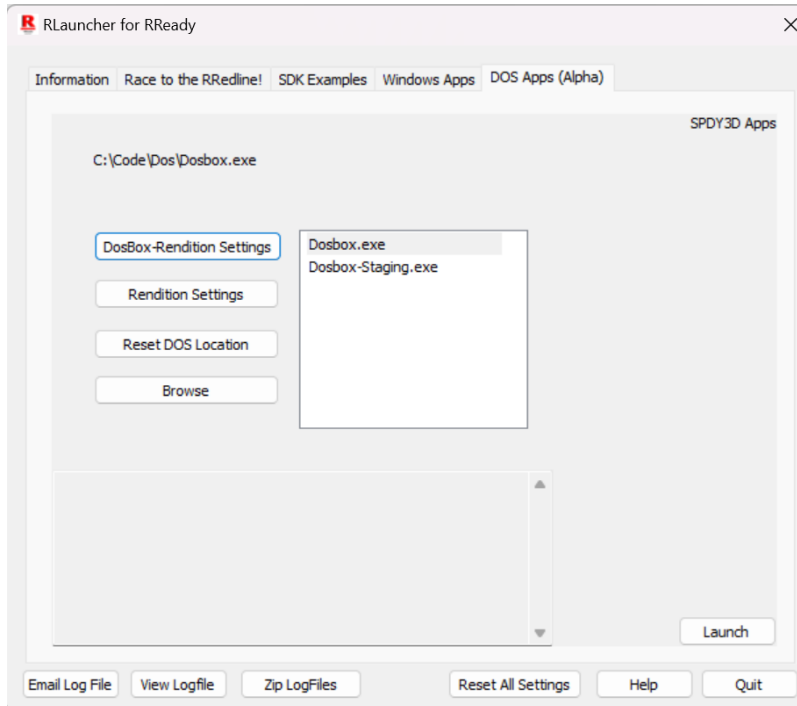
Create a folder to be the permanent home of the Dosbox installation from Windows File Explorer and from RLauncher's "Dos Apps" tab click "Select folder to install to" and navigate to and select your newly created folder.

Note when running Speedy3D (DOS) apps it is possible for mouse movement to not register. If this happens, **[ALT+TAB]** back to the desktop(Dosbox visible) and **[ALT+TAB]** back in.

Configuration

(See next page)

Once this is done the tab will look like this:



[Dosbox-Rendition.conf](#)

Once the launch button has been clicked at least once the Dosbox-Rendition.conf file will be created in the %localappdata%\dosbox folder. This file can be edited by clicking “Dosbox-Rendition Settings.”

Dosbox-Staging (experimental) uses %localappdata%\dosbox\dosbox-staging.conf. It does not support per-app config files (see below).

Some settings which are critical for adjustment:

[sdl]

priority = *normal, normal* (for Dosbox-Rendition)

priority = *auto auto* (for Dosbox-Staging-Rendition)

(Two comma separated values each of which must be one of higher, normal or lower.)

This indicates the priorities that Dosbox-Rendition should use when in the foreground and the background. This should on most systems be set to **normal, normal**.

[rendition]

renditionEnabled=true

When set to false, Rendition Emulation for DOSBox-Rendition is disabled, Dosbox-Rendition functions as if there is no virtual Rendition video card installed.

maxVRAM=16

This setting only affects Speedy3D apps and sets the maximum amount of virtual Rendition video memory is available to DOS apps (4-16, default if missing is 16 MB). Windows (RRedline apps) apps aren't affected by this and each has its own setting in rendition.cfg (default 128 MB if missing).

biosfile = MIROV1K.VBI

(Do not change the BIOS file name).

highperformance=true

This configures quad core or higher mode. On dual core systems (which aren't officially supported, this should be set to false). On faster systems, Whiplash might have occasional audio stutter with ***highperformance=true*** and ***picdma=true***.

picdma=true

This is a thread-safety setting that needs to be enabled for ***highperformance*** mode. This setting should match the ***highperformance*** setting. If it does not Dosbox-Rendition's stability will be severely affected. Not enabling this when ***highperformance=true*** will result in Rendition apps crashing with corrupted graphics. On faster systems, Whiplash might run slower with ***highperformance=true*** and ***picdma=true***.

threadsafe = false

(This setting (when **true**) can stabilise ICR2 (and the Nascar apps) and stop them from randomly crashing. This setting has no effect when ***picdma=true*** set and these two settings are the most stable for the Nascar games. It is also obsolete as ***picdma*** handles it a lot better).

fullscreen = true

(This controls whether apps start up full screen or in a window. This cannot be changed during runtime. A future update will add window size scaling for windowed mode, so windowed mode won't run at 640x400 or 640x480 on modern Windows)

cacheddma = false

This is a legacy setting and should not be used.

(Similar to ***threadsafe=true*** when set to true. However on discrete GPUs [ALT+X] demo mode will work with ICR2). Do not use ***chacddma=true*** with NASCAR, preferring ***threadsafe=true*** instead. Threadsafe itself is an obsolete settings, prefer enabling ***highperformance*** and ***picdma***.

Application Specific config

An application specific version of dosbox-rendition.config can be created per app. The files must be placed in %appdata%\dosbox and the filename should be **exename.exe.config** (See the Compatibility settings section for required exe names/binary names, i.e. Tomb Raider should be **tombren.exe.config** or **vquake vquake.exe.config**).

N.B. Not Dosbox-staging does not currently support per-app configs. This applies solely to dosbox-rendition.

An application specific config can only alter the following sections:

[sdl] Section (only priority)

[rendition] Section (entire section)

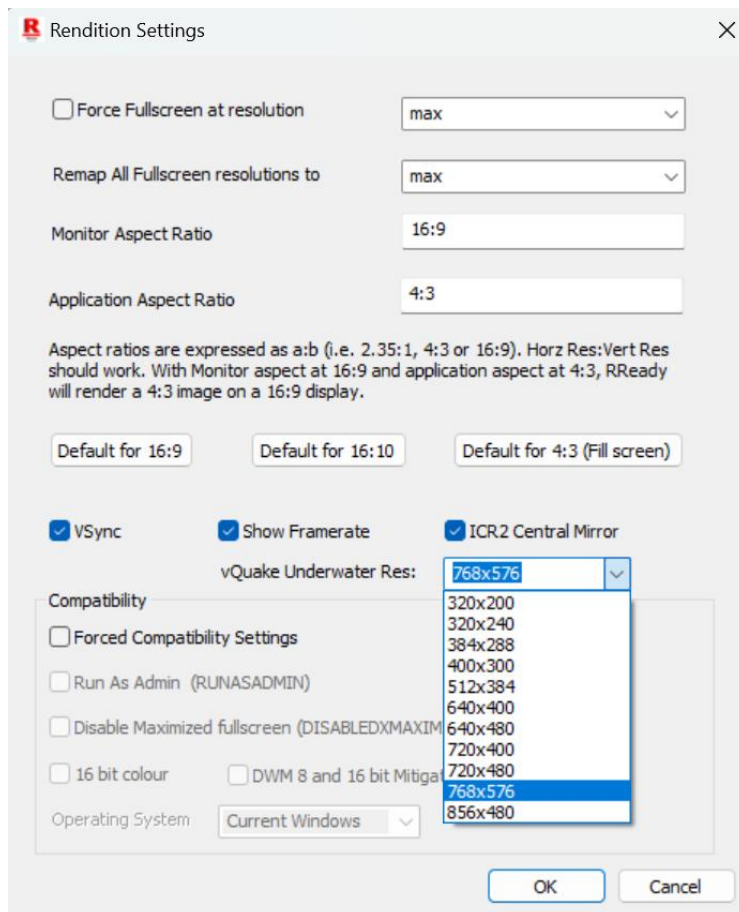
[cpu] Section (entire section)

NOTE

Threadsafe should not be used for games with high compatibility: vQuake, Whiplash, Rebel Moon and Tomb Raider. They may work with the setting enabled, but with reduced performance. It is also an obsolete setting. Also note Whiplash may have occasional audio stutter with **picdma=true** and **highperformance=true**.

Rendition Settings

Clicking on “Rendition settings”:



This is similar to the Windows Rendition Settings page except for the inclusion of “ICR2 Central Mirror,” which allows a top centre rear view mirror to be enabled in ICR2. This is not a feature the game originally supported, but RReady supports it since it’s a widely requested feature.

“vQuake Underwater Res” is used to set the underwater resolution for vQuake. Currently this destructively patches vQuake.exe to use the resolution. A future release will perform in-memory (non-destructive) patching. Generally this should be set to the selected resolution. The default resolution is 320x200, even when running at higher resolutions. Dosbox-Staging supports both these settings.

Running Dosbox

Dosbox should always be run from RLauncher. This will guarantee that all binaries are up to date and patched from the Microsoft Store. Click the “Launch” button once configured.

Frame Generation for Higher Frame Rates with 30 fps apps

This can be done either with the Steam app “Lossless Scaling” (not supplied) or using RReady’s internal frame generator which is a basic linear mix of the previous and the current frame.

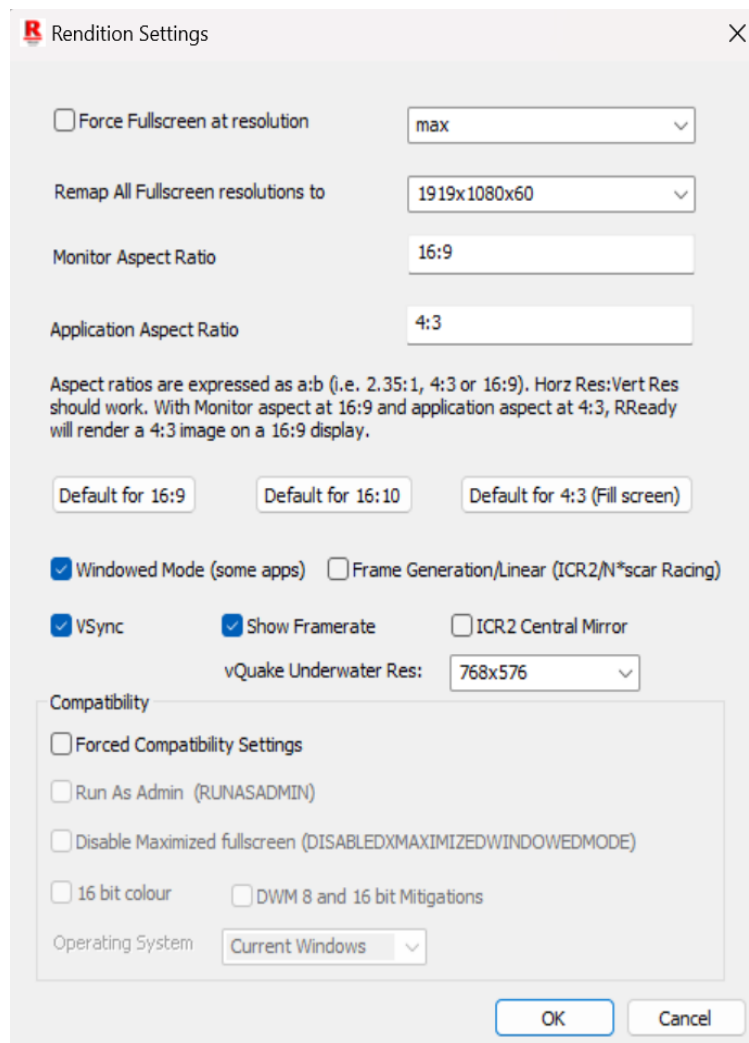
“Lossless Scaling” is not supported yet, but should work given sufficient CPU and GPU.

With Lossless Scaling

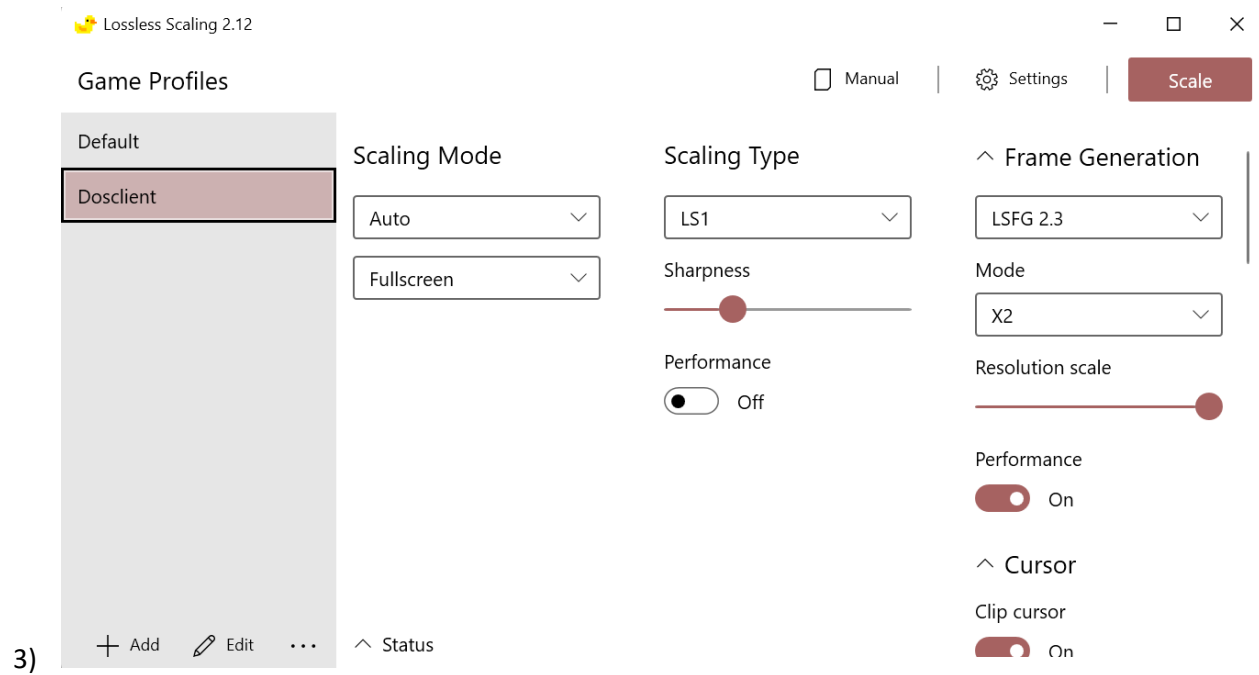
Use of RReady and Dosbox-Rendition with Steam App “Lossless Scaling’s” Frame Generation

To use Lossless Scaling with RRead (2 steps)

- 1) Configure RReady to use windowed mode AND type in a resolution that’s one horizontal pixel less than the current screen resolution, i.e. For 1920x1080 set the resolution to 1919x1080x60, the refresh rate is ignored. For 2560x1440, set it to 2559x1440x60. The next release of RReady will support native borderless full screen obviating the need for custom resolutions



- 2) Configure Lossless Scaling to target dosclient.exe (for Dosbox-Rendition support. For Windows apps(unsupported), target the game binary itself.):



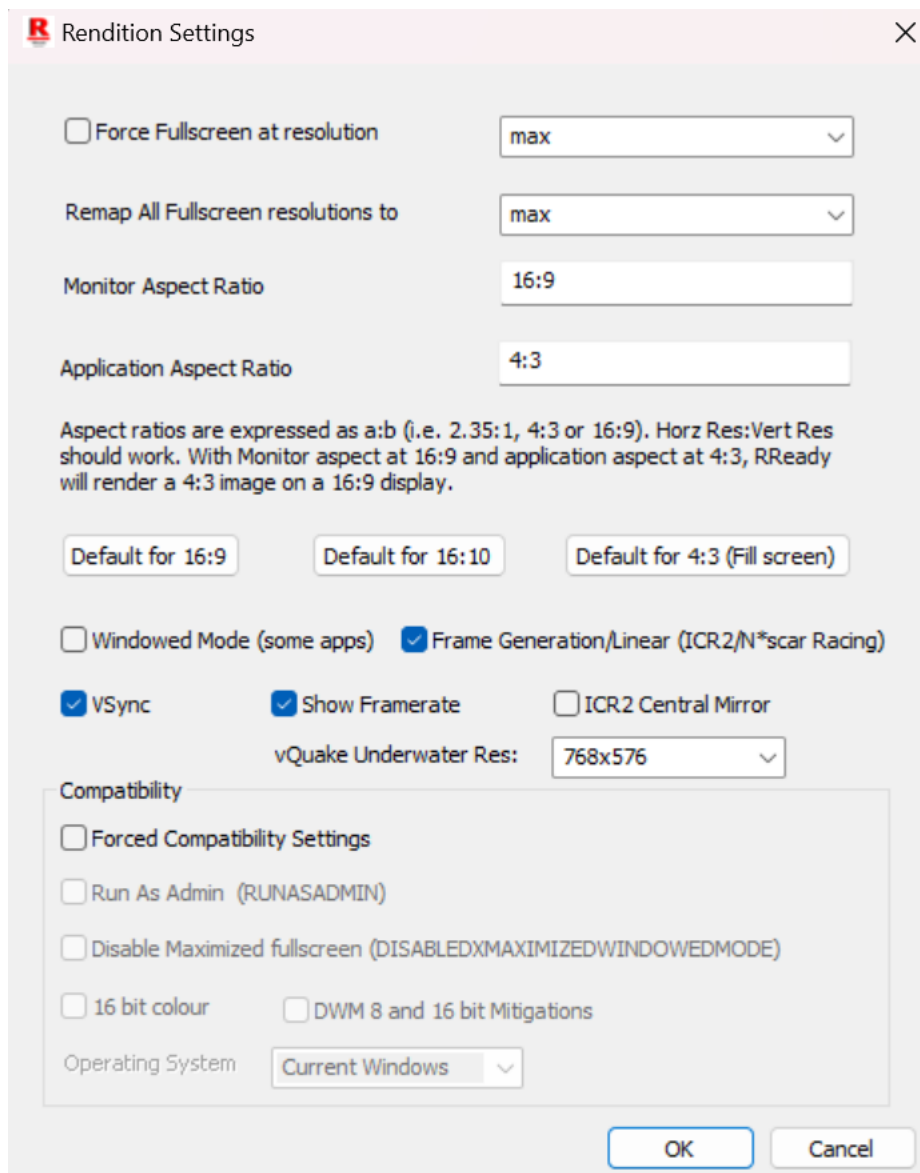
With RReady

RReady performs a blend of the last frame rendered and the next frame and inserts it between the two. This allows a low level of smoothness with relatively high performance. Customs resolutions are not required and this will work in windowed or full screen modes.

To use this simply check the Frame Generation in Rendition settings for Dosbox.

Note: RReady Internal Frame Generation should only be used for 30 fps apps to boost the frame rate to 60 fps. Do not use it for apps with higher frame rates. It is currently only support for Indy Car Racing II (Cart Racing II) and the Nascar Games.

(Image on next page)



This adds an **interpolate=1** entry to Rendition.cfg in the app folder.

Compatibility:

DOS

With the exception of vQuake all other dos apps need to have their soundcard settings configured. This is done through setup.exe or config.exe in the game folder.

Some games like Tomb Raider will need joysticks/gamepads disconnected.

With the exception of Descent 2(currently only partially compatible) all other games run in DMA mode.

Most games can be forced into DMA mode (except for vQuake) by using

```
set SPEEDY3D=
```

```
set SPEEDY3D_DMA=1
```

```
set SPEEDY3D_MEMSIZE=16
```

```
cd <game folder>
```

```
game.exe
```

This can be done from a batch file (a text file with the extension .bat). It can be run from dosbox-rendition by typing batchfilename.bat (from the folder the game is in)

Generally DO NOT RUN multiple Speedy3D apps in the same Dosbox instance. Relaunch Dosbox before running another app. Even on original hardware this can be an issue, often requiring a reboot.

vQuake 1

This game should run fine (vquake 1.08 beta, minor byte swap/texture column corruption is fixed in 1.0.23)) (Internally Dosbox-Rendition/Dosclient/RReady identify this game as cwsdpmi.exe. The actual executable that's run is vquake.exe), Earlier betas will have graphical glitches. The per app config should be called **vquake.exe.config**. With 16 MB of VRAM higher resolutions are available but currently they are unstable. This will be fixed in a future update.

(This download is obsolete, since Dosbox can automatically patch the underwater resolution):A patched version of vquake 1.08 beta is currently supplied which supports an underwater resolution of 768x576 (White Magic Raven hack). The game must be running at 768x576 for this to work correctly.

<https://nirvtek.com/downloads/vQuake.Underwater.768x576.zip>

MD5: **b2c4290e4594c0e46778a37a23abb646**

This can be configured directly from the launcher, so the download is redundant.

Indy Car Racing 2/Cart Racing 2

The Rendition specific DOS (found on the game CD) version of the game should be used with the original microcode (UC). Dosbox-Rendition/RReady does not actually execute the microcode, but the layout of framebuffers in virtual VRAM is dependent on the exact size of the UC file. Do not use patched UC files with any of these games.

A patched version of the game which uses a much larger texture heap size (with and without the Indy branding) is available below. This should allow custom carsets to load. This increases the texture heap size from ~6MB to ~48 MB. It will also work on original Rendition hardware provided the system has at least 64 MB of (system) RAM. It comes both with and without Indy branding:

<https://nirvtek.com/downloads/ICR2.IncreasedHeapSize.7z>

MD5: **MD5:44a72b1efc15fbc2171b906a63f5133e**

The game should be run using the batch commands below and not through carfast.bat or indyfast.bat (because RR.exe, the Rendition logo app, runs and that may lead to instability).

This game has no graphical glitches, but some systems the require either ***highperformance=true*** and ***picdma=true*** OR ***highperformance=false*** and ***picdma=false*** and ***threadsafe=true***. High-poly carsets are only possible if ***highperformance*** and ***picdma*** are set to true, but this will need a fast quad-core or better. This game will run without either of these settings on modern quad-cores without stability issues. Please see if the app runs (races and replays) under heavy load. If ICR2 crashes with screen corruption (or experiences intermittent screen corruption: momentary checkerboard pattern in menus is present even on original hardware when exiting a race), enable ***threadsafe=true***. The **[ALT+X]** demo mode in ICR2 (uncapped framerate with 30 fps physics) will not work correctly with ***threadsafe=true***. This is not a part of normal gameplay. ***Threadsafe=true*** can cause occasional audio stutter when starting a level.

Some custom carsets and tracks don't load. Carsets can be made to load by using a version of the game that has been patched to incorporate a larger texture heap size

<https://nirvtek.com/downloads/ICR2.IncreasedHeapSize.7z> (MD5:

MD5:44a72b1efc15fbc2171b906a63f5133e) This is an issue with the game itself. Track designers at icr2.net are working to make existing tracks compatible with the game.

(Game exe name should be **cart.exe** or **indycar.exe**)

For high poly carset support and general stability in ICR2:

[rendition]

Highperformance=true

Picdma=true

(*threadsafe* is ignored in this mode)

If high poly carsets aren't required and the game is exhibiting stability issues, use the following settings:

Highperformance=false

Picdma=false

Threadsafe=true

Suggested batch file

set SPEEDY3D=

set SPEEDY3D_DMA=1

rem This assumes ICR2/Cart2 is installed in the cr folder at the root of the hierarchy (current drive letter)

cd cr

set SPEEDY3D_MEMSIZE=16

cart.exe (or **indycar.exe**)

Rebel Moon

This game should run without issue. The game binary should be **rebmoon.exe**. Release (1.0.20 corrects random sprite corruption issues).

Suggested batch file

set SPEEDY3D=

set SPEEDY3D_DMA=1

rem assumes game is in \reb2 on current drive.

cd reb2

rebMoon.exe

Nascar 2/Nascar Racing 1999

This game requires either **highperformance=true** and **picdma=true** OR **highperformance=false** and **picdma=false** and **threadsafe=true**. It will not run without graphical and stability issues unless one of these is set. The first setting is best for this game but will require a fast quad-core or better CPU.

For Nascar '99 the DMA setting is in **nr1999.prf** (text file in the game folder)

rem NODMA

Ensure the **rem** NODMA entry is there. If the **rem** is missing the game will run in FIFO mode, which is currently very slow.

The game binaries must be **nr1999r.exe** (Nascar Racing 1999) and **nasrend** (Nascar 2).

Recommended batch file

For Nascar Racing 1999 run the game with

Nr1999r.exe

For Nascar 2 run the game with the following batch file:

nasrend -dma %1 %2 %3 %4 %5 %6 %7 %8 %9

Whiplash (US Edition of Fatal Racing)

The game must be fully patched. It runs stably on all systems. On a faster system FIFO mode is also useable. The game exe must be **rwhip.exe**.

Recommended batch file

rem @echo off

eregcard

set SPEEDY3D=

set SPEEDY3D_DMA=1

RWHIP %1 %2 %3

Tomb Raider 1

This game is stable and should run on pretty much all system. The game exe should be **tombren.exe** or **tomb.exe**. (The missing health bar issue is corrected in 1.0,24)

Recommended batch file

Rem This assumes the game is installed to subfolder 'tomb' of the current directory

cd tomb

set SPEEDY3D_DMA=1

tombren.exe

Descent 2

This game runs in FIFO mode only and has missing distant textures and has a subpar framerate. However cutscenes, menus and level intros should work. Game binary expected is **d2verite.exe**.

Recommended batch file

REM @echo off

CD D2

set SPEEDY3D_DMA=0

```
set SPEEDY3D=
rem Batch file to run Descent 2
if exist *.swp del *.swp
eregcard
d2verite %1 %2 %3 %4 %5 %6 %7 %8 %9
if exist *.swp del *.swp
```

Eurofighter 2000+

This game can be configured (graphics+sound) through the config app, but cannot be launched from there. Rendering and stability is in FIFO mode, however returning to the menu during and then returning to the game results in sluggish performance with possibly corrupted graphics. Executable must be called **ef2000.exe**. Graphics/detail must be set to high in the config app. DMA mode for this game is currently unstable.

Recommended batch file

```
set SPEEDY3D=
set SPEEDY3D_DMA=0
ef2000
```

Scorched Planet

This game must be patched. The CD based version's out of the box Speedy 3D support is broken. It does not work on original hardware. The game exe should be called **spverite.exe** (the broken exe is also called spverite.exe).

This game runs but cutscenes render as a black screen without audio. Pressing [ENTER] repeatedly (for a while) will produce the game menu from which a new game can be started. More missing/corrupted cutscenes ensue and the game will finally start. There may be stability issues.

Recommended batch file

```
set SPEEDY3D_DMA=1
cd splanet
SPVERITE.EXE
```

Windows

All the SDK demos, "Race to the RRedline!" demos and all RRedline version 2.0 /1.0 apps should work (which is all of them).

Just run the launcher and from the "Windows Apps" tab select add app (to remove right click the app name in the list and select remove).

Launching games from the launcher, RLauncher, will automatically set compatibility settings for some, but not all apps. The launcher no longer needs to be running for games to work, once configure and launched once from the launcher. Subsequent launches can be directly from the app folder or shortcut.

For Quake 2 the following file (if you don't already have it) is needed (Many thanks to user Raven-05(@WhiteMagicRaven) for fixing the window style ex bug in CreateWindowEX):

https://nirvtek.com/downloads/ref_v1k_fullscreen.zip

MD5: **cc8012a2c3e91992be87162b2431839c**

(Old link below, due to a bug in the original code does not support toggling full screen/windowed modes on modern Windows. Do not use or download this! This is the original version of ref_v1k which was supplied by Id/Rendition and needs to run in a window with full screen forced in RLauncher. Set Forcefullscreen in RLauncher and in baseq2\config.cfg set set vid_fullscreen "0".

<https://nirvtek.com/downloads/refv1kb5.zip>

MD5: **91580ded721714ec4b35c42b97adf6f6)**

This was supplied by Rendition and developed in conjunction with Id Software.

Hexen II

<https://nirvtek.com/downloads/vh2b5r2.zip>

MD5: **eea7e2cecf7aa6aa451f26c7be0bf70**

This was developed by Raven software in conjunction with Rendition.

MDK

<https://nirvtek.com/downloads/MDKRED.zip>

MD5: **8dc8bf57da32a209b39721a36ca82fc4**

See the earlier section on verifying MD5 signatures.

If the files are already part of your installation the download is unnecessary.

Indy Car Racing 2/Cart Racing 2

<https://nirvtek.com/downloads/ICR2.IncreasedHeapSize.7z>

MD5: **44a72b1efc15fbc2171b906a63f5133e**

This increases the texture heap size from ~6 MB to ~48 MB. Patched versions indycar.exe and cart.exe are included. The only difference is the Indy branding and licensing.

Supported apps:

vQuake II (Quake II)

<https://youtu.be/qb1eYQ35iV0>

- [If the updated ref_v1k listed above is used this does not apply] force fullscreen in rlauncher.exe and a resolution needs to be set (can be max). The Quake2/baseq2/config.cfg needs to be set to windowed.

- Does work with Remaster (add quake2.exe, configure in RLauncher, copy dlls* and launch original game from Steam,). (*to copy dlls you could just run the game from the launcher. This will copy the dlls and run the remaster. Quit and on subsequent runs launch original version from Steam).

The internal resolution for underwater rendering can be modified(default:320x240) for full screen modes from RLauncher. This modifies ref_v1k.dll directly. Do not set the underwater resolution higher than the full screen resolution. Additional full screen resolutions (higher than 800x600) can be unlocked from RLauncher for this game. This no longer modifies ref_v1k directly, performing in-memory patching. The highest resolution that can be selected is 1152x864 (and a similar resolution is available for underwater sequences. This must be set manually). Many thanks to user RaVen_05 (@WhiteMagicRaven) on Vogons.org for this modification. **When using unlocked resolutions, the underwater resolution for this game must be set one higher than the display resolution or the underwater view will be clipped at the bottom of the screen, i.e. not visible.**

The default AA mode for this game, when enabled from app specific settings is MSAA. A partial and experimental version of Rendition's original Quake2/vHexen 2/Quake1 AA mode can be enabled by setting UseMSAA=3 in rendition.cfg. This is experimental and might not be fully stable.

vQuake 2/vHexen support for v1k_nopageflip "1" and the vHexen II equivalent. This disables internal vsync within the game. It's not a true 'no-vsync' mode, the back buffer is copied to the front buffer without a buffer swap. This causes a horrendous amount of tearing, but higher framerates can be achieved. If vsync really needs to be disabled, disable it in RLauncher's Rendition settings for the game. This allow GPU native vsync controls.

For water surfaces to render to with v1k_nopagflip enabled vQuake ref_v1k beta 5 of the wrapper is required. The version linked to with this app is an earlier beta (and will not render water surfaces without page flipping). The supplied version has been modified to support full screen on modern Windows. If an unpatched ref_v1k is used, vid_fullscreen=0 in baseq2/config needs to be set and forcefullscreen used with RLauncher and toggling full screen will not be possible. The developer has been unable to source beta 5 of ref_v1k. Currently available beta5s are ***NOT*** actually beta 5. Should beta5 become available, patched version (a 1 byte patch) will be made available.

vHexen II (Hexen II)

<https://youtu.be/w0hFT8umNQw>

Loading progress bars might not work correctly on Intel HD graphics. Discrete GPUs should be OK. With the September 10 2023 build of RReady, WIn98 compatibility or DxWnd is no longer required (and will not work). It should run natively. The green and Egyptian golems don't change colour unless MaxVRAM=14 (or any value between 4-14) is set in Rendition.cfg in the VH2.exe folder. Reducing available VRAM will impact performance (reduce the frame rate). The internal resolution for

underwater rendering can be modified (default:320x200) for fullscreen modes from RLauncher. This no longer modifies VH2.exe directly, performing in-memory patching. **Do not set the underwater resolution higher than the fullscreen resolution. It must be at the fullscreen resolution or below.** There may be rendering issues with using higher underwater resolutions with the default screen/HUD size. Either set the gameplay window to be full screen with a minimal HUD or use r_nomurk 1. Many thanks to user RaVen_05 (@WhiteMagicRaven) on Vogons.org for this modification.

The default AA mode for this game, when enabled from app specific settings is MSAA. A partial, incomplete and experimental version of Rendition's original Quake2/vHexen 2/Quake1 AA mode can be enabled by setting UseMSAA=3 in rendition.cfg. This is experimental and might not be fully stable.

Bronze and Egyptian golems will change colour during particle attacks when MaxVRAM=14 is set in Rendition.cfg (or any value between [4,14] is set). Do not use this option with any other applications. It is untested against all those. Game performance will be poor when VRAM is restricted. This doesn't affect gaming resolution, only texture storage capacity. Running at the default VRAM capacity (128MB) will prevent the golems from changing colour, but the frame rate will be fluid. This appears to be an issue with the application.

Monster Truck Madness 2

https://youtu.be/7ZV_FXSGcpg

No issues.

Heavy Gear 1 demo/Heavy Gear 1

<https://youtu.be/UdNUEEuFKts>

If after an update of RReady "Heavy Gear" missions fail to start crashing to the desktop:

- 1) Restart HG
- 2) Press [ESC] to bring up the system menu
- 3) In combat controls toggle the renderer to Software or Direct3D.
- 4) Start a mission and quit the mission once it starts up.
- 5) Bring up the system menu→combat controls and switch back to RRedline

It should remain functional afterwards.

Exiting a mission may leave you with a black screen. Stick dgvoodoo's Ddraw.dll along with D3dImm.dll in the game folder and it should work for most users. If a black screen persists, [ALT]+[TAB] out and then back in again after encountering a black screen and the mission completion screen should render. Heavy Gear 1 uses DirectDraw for some of its windowing and this has compatibility issues with OpenGL, which RReady uses.

Sub Culture/Sub Culture Demo

<https://youtu.be/f5JAAI6FYcE>

Should run without issue.

MDK

<https://youtu.be/Hgxik-rUWT4?si=sP5sbbD73fMTNbA5>

No problems.

SODA Offroad '97

<https://youtu.be/uiyCT3FMcQA>

Intel HD graphics of all varieties will have issues rendering the menus. Not sure about AMD GPUs. Nvidia GPUs get a clean bill of health. Otherwise fully functional.

Die by the Sword

<https://youtu.be/HUtbSuzfqgw>

Starting up WinDie.exe may be iffy and the menus can be randomly slow in Win11. You may have to initially start up with Win98 compatibility to be able to select "Rendition" as the renderer, but this needs to be done only on the first run. Shutting down all other programs and rebooting before running the game also helps.

Grand Prix Legends (GPL)

<https://youtu.be/Rth5IU8zM2A>

RLauncher's resolution settings should be set at default and the aspect ratio should be set to 4:3. Higher resolutions should be selected from the in-game options menu. Aspect ratio correction should be carried out through your GPU's control panel.

Intel HD integrated gpu users will have issues. Discrete gpus should be fine.

Interstate '76/Interstate '76 Nitro

<https://youtu.be/EAjSmOrCef0>

Nitro

<https://youtu.be/aoZYEalJ8kk>

Runs with DxWnd. Stable 2.05.99 should work as well as the upcoming release.

You might need to add **MaxFPS=18** to the Rendition.cfg file in the game folder after adding the game and opening and closing "Rendition Settings" (with save). Adding the game through RLauncher and then clicking "Browse" should open the game folder. From here locate Rendition.cfg, open it in notepad and add the line **MaxFPS=18**. This should correct the game timing issues which break gameplay.

Check that the registry key at HKLM\Software\Microsoft\Windows NT\CurrentVersion\AppCompatFlags\Layers does not have an entry for i76 (full filesystem path).

Delete this key. Using an online store this key may have to be deleted every time the game store launcher runs.

A pre-configured build of DxWnd is available here:

https://nirvtek.com/downloads/DxWnd.v2_05_99_build.zip

MD5: 2589755d68f9a5c8b4a0388940e58611

The app path has to be configured by right clicking the app in DxWnd (Reboot before DxWnd is run and ensure no other apps are running, Launch the game from RLauncher while DxWnd is running).

Myth :The Fallen Lords

<https://youtu.be/vfCLjEXMM1o>

Needs WinXPSP2 compatibility set in Launcher. v1.3 Runs with dgoodoo's directdraw.dll and d3dim.dll present in the game folder. (XP SP2 compatibility is needed to fix a "too much RAM" bug with this game on modern Windows.)

This game should be run at 640x480 or the "default" resolution setting. It has a mouse lock in the [0,0]-(640,480) screen region which will render on screen controls inoperable. Running at "default" resolution should allow correct operation.

Mech Warrior 2 Titanium/Mercenaries

<https://youtu.be/QunN6dDEGPo?si=19UfgoZBumtQ2t4E>

Runs with DxWnd stable 2.05.99. Please see a guide for details.

A pre-configured build of DxWnd is available here:

https://nirvtek.com/downloads/DxWnd.v2_05_99_build.zip

MD5: 2589755d68f9a5c8b4a0388940e58611

The app path has to be configured by right clicking the app in DxWnd (Reboot before DxWnd is run, preferably with no other apps running. Run the game from RLauncher while DxWnd is running).

Team Apache

Runs, skip the intro videos by pressing ESC 2-3 times quickly and the game should be fine from then on, though a few niggling issues still remain in the menus. Does not run on Intel HD graphics.

The videos need to be skipped because of corruption. Corrected versions of the videos do exist online, however they have nothing to do with RReady and will not work with the original game CD.

Formula 1 (1997)

<https://youtu.be/kFRRI686S94?si=DsUrdHnP5B6Blyd->

Built for V1.0 of the RRedline API and with the October 12 2023 release is fully supported. Runs natively. Task Manager, if running, should be shutdown before launching as some strange interactions with the window occur (window lockup/busy cursor).

vQuake 1(Alpha)

<https://youtu.be/9QXNQcAo1-c>

Indy Car Racing 2 / Cart Racing 2 (100% complete, still in Alpha)

<https://youtu.be/GPsD3yzrKw8> (with HQ custom mid-Ohio track)

Whiplash (Alpha)

<https://youtu.be/oRMVeXXIgDM>

Rebel Moon (Alpha)

<https://youtu.be/IMGNC85jeb5> (Corrected)

<https://youtu.be/-cWgGqMfzlg>

Tomb Raider 1 Rendition Edition (Alpha)

<https://youtu.be/lbAhvjMwDYg>

Nascar Racing 1999 (Alpha)

https://youtu.be/2PY-xnGV_68

Nascar 2 (Alpha)

<https://youtu.be/0K40dz-B1Jo>

Eurofighter 2000+

<https://youtu.be/1tv574bxoM4>

Scorched Planet

<https://youtu.be/qbWCPSQ74DM>

Descent 2 (Rendition) appears to be a front buffer renderer and cannot be grabbed with software capture devices.

This has been tested on nvidia and Intel hardware (GPUs). Alpha testing has confirmed that RReady does work on AMD GPUs, but no exhaustive testing has been done. The shaders have been run against AMD offline shader validation tools and they appear to pass. Intel ARC remains untested.

Generally you should be fine with an nvidia gpu.

If it doesn't work or you have any suggestions please email support@nirvtek.com. RLauncher has a "View logfile" button near the bottom, which should help diagnose what's wrong (barring catastrophic failure, in which case an instrumented build would be necessary). If not "Zip log files" will zip up 4 generations of log files (the maximum maintained) and open an explorer view to %localappdata%\temp (where the log files live).

NirvSolo

Recommended Autoexec.cfg Files (for Quake Engine Games)

vQuake 1

(place in root of id1, hypnotic, rogue and malice subfolders)

```
r_surfacelookup 0  
r_waterwarp 1  
r_antialias 7  
vid_mode 9  
+mlook
```

[Rogue subfolder also requires this in a quake.rc file(if expansion pack is installed)]

```
// filename quake.rc  
// load the base configuration  
exec default.cfg  
// load the last saved configuration  
exec config.cfg  
// run a user script file if present  
exec autoexec.cfg  
// stuff command line statements  
stuffcmds  
// start demos if not allready running a server  
startdemos demo1 demo2 demo
```

vQuake 2

(place in baseq2, xatrix, rogue subfolders)

```
+mlook  
set v1k_antialias "7"  
set v1k_drawflat "0"  
set v1k_mipscale "0"  
set v1k_mode "7"  
set v1k_nopageflip "0"  
set v1k_refreshrate "60"  
set v1k_surfacelookup "0"  
set v1k_waterwarp "1"
```

vHexen II

(place in root of data1 subfolder)

```
+mlook  
d_mipscale "0"  
r_antialias "7"  
r_drawflat "0"  
r_nomurk "0"  
r_refreshrate "60"  
r_surfacelookup "0"
```

Release Notes

6 January 2025

- Support for a full 16 MB of VRAM for Speedy3D apps. This is the upper limit for Speedy3D (24 bit).
For Speedy3D apps, VRAM is configured in dosbox-rendition.conf (or ...-staging.conf) with
[rendition]
MaxVRAM=nn (nn is in MB, range 4-16, default 16 if setting missing)
For RRedline **MaxVRAM=nn** can be set in **rendition.cfg** and it defaults to 128 MB
- vQuake beta 1.06 is once again playable and joins betas 1.07 and 1.08* (*recommended beta)
- Higher resolutions may be selectable in vQuake 1, but currently have issues. This will be resolved in a future release.
- Bilinear filtering can be disabled by adding **nofilter=1** to rendition.cfg. Some games might not render correctly with this setting.
- vHexen II additional resolutions can be unlocked by selecting the game in the WinApps tab of RLauncher and clicking "App Settings."->Unlock resolutions. There may be rendering bugs with higher resolutions. This will be fixed in a future update.
- Regression ucube.exe (SDK demo) fails to render correctly in full screen mode.
- Corrects OpenGL GLSL shader "error C7011: implicit cast from "uint" to "int"" error on some hardware.
- 60 fps Frame Generation/interpolation supported for Grand Prix Legends and "Die by the Sword." Note GPL will have to be run at default resolution/4:3 (fill screen aspect) aspect as the game has a mouse lock. Higher resolutions can be selected from within the game, Your GPU's internal aspect ratio controls from its control panel should be used for aspect ratio selection. "Die by the Sword" can be upscaled without issue.
- Fixes Eurofigher 2000+ texture corruption when switching between menu and active mission. This was caused by the game writing to 8 MB of VRAM and choosing textures within the 4 MB range. Rounding write addresses modulo 4 MB, effectively restricting writes to the first 4 MB for this game, corrects the issue.
- Whiplash minor fixes.

19 November 2024

- Frame Generation support for 30 fps DOS apps to run at 60 fps. (interpolate=1 in Rendition.cfg)
- Windowed mode support (this will allow alternate frame generation through Lossless Scaling when a custom resolution less than the screen is used. Knocking one pixel off the horizontal resolution (i.e. 1919x1080x60 for 1080p) will work without any scaling artifacts in Lossless Scaling.
- Restores generic VESA support for non-Rendition apps in Dosbox-Rendition, such as setup.exe in TR1, for audio config.
- Adds Rendition 32 bit mode VESA support for CGL demo "21s Century Digital Boy." The CGL 3D sections do not work currently.

19 October 2024

- Initial support for Eurofigher 2000+ in FIFO mode(DMA mode does not currently work reliably)

- Performance increases across the board by two new settings:
[rendition]
Highperformance=true
Picdma=true
 And
[sdl]
Priority=normal, normal
 (Previous DMA performance can be restored by setting both these to false. **Threadsafe=true** only has an effect if both these are set to false).
 The new high-performance mode is extremely CPU intensive and might not work on older CPUs and might introduce audio static (random occasional pops).
- Custom car sets in ICR2 should be usable on most modern quad core or better systems.
- RebelMoon should sustain a solid 60 fps right throughout.
- RebelMoon chroma keying fixes: particle impact cloud sprites should render fully and not be clipped.
- FIFO mode memory write tweaks to support EF2000 in FIFO mode.
- Dosbox-Staging-Rendition has a full set of config settings under [rendition]. It also has performance improvements in ICR2. However it may have stability issues with Nascar Racing 1999R and possibly other apps. It does not currently support per-app config files.
- Nascar Racing 1999 improved stability with Dosbox-Rendition.
- Dosbox-Rendition vQuake performance parity with Dosbox-Staging-Rendition.

28 September 2024

- Nascar Racing 1999 corrects texture clamping mode for some textures
- MDKRed.exe fixes power up collection blended background.

11 September 2024

- Fixes r_surfacelookup "1" not working. In vQuake The earlier betas (1.07) should render, but r_surfacelookup "1" and earlier betas are not officially supported, yet. There may be bugs. Note enabling surfacelookup ("1") is slower than disabling it ("0"). This is true for vQuake 2 and vHexen II as well with RReady.
- Fixes random texture corruption with r_surfacelookup 1 (vQuake 1). On weaker CPUs (in modern terms) r_surfacelookup 1 will be faster, just like in Rendition's heyday.
- vQuake 2 chroma keying and texture filtering is now shader based. This should fix pixelated textures in expansion pack "The Reckoning."
- RLauncher remembers the last tab and selected app in each and every tab between restarts.

27 August 2024

- vQuake runs in FIFO mode with vanilla Dosbox, but not with staging. It should be run with DMA enabled for best performance.
- ICR2 cockpit view minor corruption fixed
- Nascar 2 and Nascar Racing 1999 mirror background colour fix
- Tomb Raider Health+Oxygen bars and correct chroma keying (thick line drawing is only used for Tomb Raider 1)
- Eurofighter cockpit HUD seems a bit more alive than usual.

22 August 2024

- Dosbox-Staging not showing up right after selecting installation folder

- Dosbox and dosbox-staging mouse motion and button clicks not registering on some systems
- Partial support for Descent II
- vQuake byte ordering (texture column swap): There was a serious bug in the handler for V_FIFO_MEM_WRITE_RECT, leading to texture corruption.
- vQuake, vQuake II and vHexen II underwater palette colour bug fixed (cl_blend/r_nomurk)

08 August 2024

- Adds experimental support for dosbox-Staging
- Rapid mouse input should no longer cause lock ups with both versions of Dosbox (Rebel Moon fix).
- vQuake 2/vHexen II v1k_nopageflip should no longer tear/band. This is the Rendition native no-vsnc mode. It's best to not enable this and disable vsync in rendition settings instead. This should allow for higher frames rates than 85 Hz.
- vQuake has byte ordering issues with some textures. This will be fixed in an upcoming release,
- Descent II (still not working), pre-mission intros no longer flicker.
- Mouse input should be a lot more stable not cause lockups.

25 July 2024

- vQuake "Loading" indicator should be fixed. There should be no more corruption.
- Rebel Moon sprite corruption (noticeable in UN Bluesuits' legs) is fixed
- Under the hood changes.

11 July 2024

- Initial store release with support for DOS(Speedy3D) apps.
- vHexen II lava death shaky cam should work.

11 June 2024

- Alpha support for Speedy3D (DOS) Rendition Verité apps.
- vQuake 2/vHexen support for v1k_nopageflip "1" and the vHexen II. This disables internal vsync within the game. It's not a true 'no-vsnc' mode, the back buffer is copied to the front buffer without a buffer swap. This causes a horrendous amount of tearing, but higher framerates can be achieved. If vsync really needs to be disabled, disable it in RLauncher's Rendition settings for the game. This allow GPU native vsync controls.

23 March 2024

- Adds support for the last known versions of tdhdemo and RRide(RRide3) (From the 2TheRRedline competition). Found thanks to @MichaelHuth and @WhatTheHex (both on youtube) for supplying final versions of these. The Bacchus demo still remains lost.
- With this release higher resolutions in vQuake 2 and vHexen II are officially supported (@WhiteMagicRaven hacks).

19 Feb 2024

Texturing fixes:

- scverite.exe - mission screen texture single pixel boundary rounding fixes
- f1red.exe - End credits - developer names having strange underlining
- f1red.exe - Car spray/mist trails sometimes becoming corrupted (mis-sized)

Adds:

- Palette texture caching for (for paletted textures) for f1red.exe. Should allow for more consistent framerates. Can be disabled with CachePalettes=0 in rendition.cfg.

Includes

- vh2.exe ,vq**ke 2 in-memory patching for (WhiteMagicRaven tweaks, higher resolutions including underwater).
- Log file code internal changes. Shouldn't make a difference.

01 December 2023

- Rearranges config settings for vQuake 2 and vHexen II. Adds 144 fps option to vh2.exe and option to unlock 22 kHz audio (This may have issues).
- Corrects ref_v1k unlocked resolutions list. 1280x1024 is no longer shown as the highest unlockable resolution (1152x864 instead with underwater resolutions up to 1280x1024).

27 November 2023

- Updates help document with updated link for modified ref_v1k for Quake 2, This is a one byte change which will allow vQuake 2 to toggle full screen. Without this binary, Quake 2 must be configured to run in a window with full screen forced in RLauncher.

20 November 2023

- VH2 bronze and Egyptian golems will change colour during particle attacks when MaxVRAM=14 is set in Rendition.cfg (or any value between [4,14] is set). Do not use this option with any other applications. It is untested against all those. Game performance will be poor when VRAM is restricted. This doesn't affect gaming resolution, only texture storage capacity. Running at the default VRAM capacity (128MB) will prevent the golems from changing colour, but the frame rate will be fluid. This appears to be an issue with the application.
- RRosetta can toggle between renderers by using F1-F3 (for F3 (Direct3D) to work dgoodoo's directdraw/3d files (4 files: DDraw.dll, D3DImm.dll, D3D8.dll and possibly D3D9.dll) must be placed in the same folder as RRosetta)
- UseMSAA=3 enables the experimental (and incomplete) vh2 and vq2 AA. RReady defaults to MSAA (UseMSAA=1).
- The screenshot command in vQuake 2 should correctly down sample the physical rendering resolution to the game's internal resolution (I.e. text should be clearly legible.)
- Save games in WinDie.exe should correctly show a screenshot of the save level.
- End credits should be visible in Formula 1.
- Bilinear filtering is forced for paletted textures.

6 November 2023

- VH2.exe texture format conversions now handled correctly for all textures.
- VH2 shader based chroma keying toned down for polygons. Previously some enemies rendered with transparent polygons. VL_Rectangle still has full strength chroma keying with filtered textured for vh2.exe.
- Tweaks to Z edge antialiasing for vh2 and the application that gave its name to the engine. Full RReady support for V_FIFO_QAAZEDGE will come in a forthcoming update. Currently MSAA is used which may cause blurring underwater. UseMSAA=1 (default when omitted) enables MSAA. UseMSAA=2 in Rendition.cfg will enable the currently incomplete implementation of V_FIFO_QAAZEDGE.
- The screenshot command in vQuake 2 should work with RReady with a downsampled screenshot.
- Save game screen shots in WinDie.exe should now work.

27 October 2023

Adds: RRosetta SDK demo. This needs to be redownloaded: hit reset and automatically downloading in the alpha build or manually in the store release. Store rules prohibit bundleware, which is why the auto download is stripped.

Fixes:

SODA Offroad:

- Menus should show a copy of what used to be on the screen instead of a flat colour.
- Texture coordinate generation for this game now uses rounding to nearest pixels. Without this the revised code (requiring repeating texture support/default no clamping) shows artifacts. Games like vQuake2 and VH2 require precise coordinates. This is probably down to how textures are sampled on Verité as opposed to OpenGL.
- Stability fixes for ref_v1k.dll (vQuake 2).
- The golden golems not going green when firing beam is an outstanding issue.

12 October 2023

- Initial support for Formula 1 Verité edition.

16 September 2023

- Corrects issue with RReady/SODA Offroad '97 not handling 320x240 correctly. RReady was primarily tested at higher/monitor native resolutions with the game's internal resolution set to max (640x480), so this was never detected.
- Rlauncher no longer adds Remap320x240=640x480x60 to Rendition.cfg in the application folder when adding an application.
-

14 September 2023

- Initial Windows store release.