# PrBoom

Batocera is shipped with the SHAREWARE version of Doom. So you can play Episode 1 of this insane 3rd person shooter from 1993.

This system scrapes metadata for the “prboom” group(s) and loads the `prboom` set from the currently selected theme, if available.

Grouped with the “ports” group of systems.



### Quick reference

- **Emulator:** RetroArch
- **Core:** libretro: prboom
- **Folder:** `/userdata/roms/prboom`
- **Accepted ROM formats:** `.wad`, `.iwad`, `.pwad`

## BIOS

No PrBoom emulator in Batocera needs a BIOS file to run.

# Game files

Batocera comes with the shareware version of Doom. It relies on this to run any other WADs at all. This “base” WAD can be replaced with a commercial copy of the game's WAD.

When adding `.wad` files, make sure you put the filenames in lowercase. Uppercase `.WAD` won't work.

# Emulators

## RetroArch

RetroArch (formerly SSNES), is a ubiquitous frontend that can run multiple “cores”, which are essentially the emulators themselves. The most common cores use the libretro API, so that's why cores run in RetroArch in Batocera are referred to as “libretro: (core name)”. RetroArch aims to unify the feature set of all libretro cores and offer a universal, familiar interface independent of platform.

### RetroArch configuration

RetroArch offers a **Quick Menu** accessed by pressing `[HOTKEY]` +  which can be used to alter various things like RetroArch and core options, and controller mapping. Most RetroArch related settings can be altered from Batocera's EmulationStation.

Standardized features available to all libretro cores: `prboom.videomode`, `prboom.ratio`, `prboom.smooth`, `prboom.shaders`, `prboom.pixel_perfect`, `prboom.decoration`, `prboom.game_translation`

| **ES setting name `batocera.conf_key`** | **Description ⇒ ES option `key_value`** |
|---|---|
| **Settings that apply to all cores of this emulator** | |
| **GRAPHICS BACKEND `prboom.gfxbackend`** | Choose your graphics rendering<br>⇒ OpenGL `opengl`, Vulkan `vulkan`. |
| **AUDIO LATENCY `prboom.audio_latency`** | Audio latency in milliseconds, turn it up if you hear crackles<br>⇒ 256 256, 192 192, 128 128, 64 64, 32 32, 16 16, 8 8. |
| **THREADED VIDEO `prboom.video_threaded`** | Improves performance at the cost of latency and more video stuttering. Use only if full speed cannot be obtained otherwise.<br>⇒ On `true`, Off `false`. |

### libretro: PrBoom

#### libretro: PrBoom configuration

| **ES setting name `batocera.conf_key`** | **Description ⇒ ES option `key_value`** |
|---|---|
| **Settings that apply to all systems this core supports** | |

| ES setting name batocera.conf_key | Description ⇒ ES option key_value |
|---|---|
| **VIDEO RESOLUTION global.prboom-resolution** | Smooth out jagged edges on 3D object polygons<br>⇒ 320×200 320×200, 640×400 640×400, 960×600 960×600, 1280×800 1280×800, 1600×1000 1600×1000, 1920×1200 1920×1200, 2240×1400 2240×1400, 2560×1600 2560×1600. |
| **CONTROLLER TYPE global.prboom_controller1** | Select controller type<br>⇒ Gamepad Classic 1, Gamepad Modern 773, Keyboard + Mouse 3. |

Additional configuration `/userdata/saves/prboom/[DOOM-EPISODE]/prboom.cfg`.

# Wiggle Fix

On some ARM platforms, floor and ceilings got some disruptive graphics output. Disabling it completely gets rid of the effect. This screenshot illustrates the problem at full effect! This is due to some fix for texture “vibrations” (not exactly the same issue as the wiggle but triggered with the same option) the fix was backported from prboom-plus but it seems it's causing trouble in some platforms.



**So how to fix?** Start PRBOOM → Options → General → 3rd page Whiggle fix → No

**Annother method?** Yes, navigate to `/userdata/saves/prboom/[DOOM-EPISODE]/prboom.cfg` and search Video Section for *r_wiggle_fix* and disable it.

```
## Video settings
#screenblocks                  0
#usegamma                      0
#uncapped_framerate            3
#filter_wall                   1
#filter_floor                  1
#filter_sprite                 1
#filter_z                      1
#filter_patch                  1
#filter_threshold          49152
#sprite_edges                  0
#patch_edges                   0
#render_stretchsky             1
r_wiggle_fix                  0
```

# Add Additional WADs (PWADs)

General: `IWAD = Internal Where's All the Data` and `PWAD = Patch Where's All the`

`Data`.

So in general IWADs are standalone files and can be started by themselves. They MUST NOT be renamed.

Known IWADs so far:

| **GAME NAME** | **WAD NAME** | **md5** |
|---|---|---|
| Doom v1.9 | doom.wad | cd63c5ddff1bf8ce844237f580e9cf3 |
| Doom - TNT Evilution v1.9 | tnt.wad | 4e158d9953c79ccf97bd0663244cc6b6 |
| Doom 2 Hell on Earth v1.9 | doom2.wad | 25e1459ca71d321525f84628f45ca8cd |
| Doom 2 - Plutonia Experiment | plutonia.wad | 75c8cf89566741fa9d22447604053bd7 |
| Ultimate Doom | doomu.wad | c4fe9fd920207691a9f493668e0a2083 |
| FreeDoom Part1 (Doom Ultimate free plot) | freedoom1.wad | 91DE79621A393A08C39A9AB2C034B766 |
| FreeDoom Part2 (Doom2 free plot) | freedoom2.wad | DD9C9E73F5F50D3778C85573CD08D9A4 |

PWADs can be renamed. Some example of known PWADs:

| **GAME NAME** | **(P)WAD NAME** | **IWAD ASSOCIATED** | **MD5** |
|---|---|---|---|
| Doom 1 Episode 5 - SIGIL | SIGIL_v1_21.wad | doom1.wad | 743d6323cb2b9be24c258ff0fc350883 |
| Doom 1 Episode 6 - SIGIL II | SIGIL_II_V1_0.WAD | doom1.wad | d0442f5a75f2faef3405c09a0c3acc58 |
| Doom 2 - No Rest for the Living | nerve.wad | doom2.wad | 967D5AE23DAF45196212AE1B605DA3B0 |
| Goldeneye 007 | goldeneye.wad | doom2.wad | EF1E338364A1196533635698AF997A94 |

## File Management

I suggest creating multiple folders for each IWAD like :

```
roms\prboom\Doom
roms\prboom\Doom 2
roms\prboom\Doom Ultimate
...
```

In each of these folder, just put the IWAD associated in it.

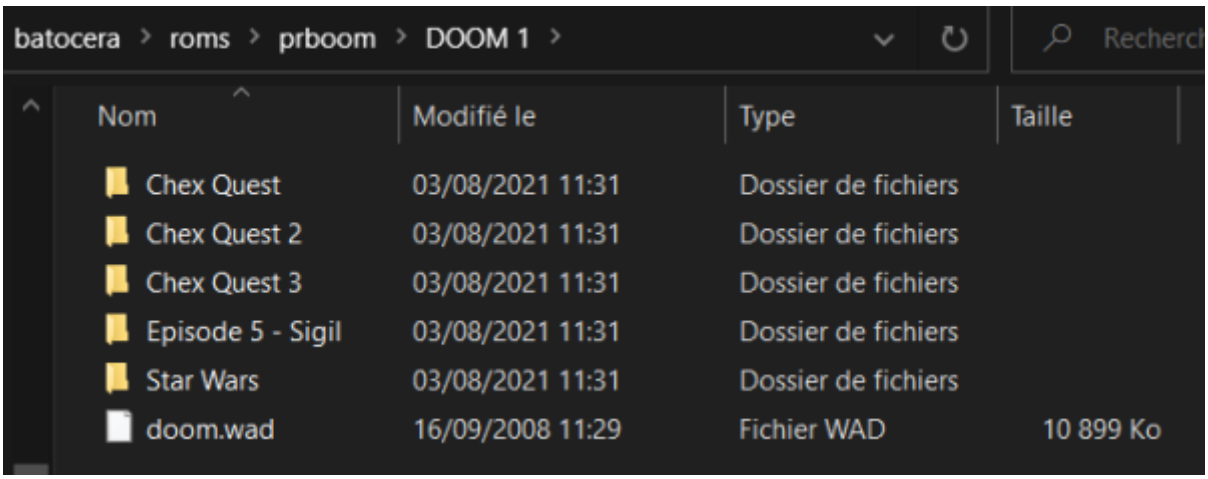
```
roms\prboom\Doom\doom.wad
roms\prboom\Doom 2\doom2.wad
roms\prboom\Doom Ultimate\doomu.wad
...
```

Now if you are going to use some mods and PWAD, just do a folder in the associated IWAD. For example:

```
roms\prboom\Doom\doom.wad
roms\prboom\Doom\Chex Quest\CHEX.wad
roms\prboom\Doom\Episode 5 - Sigil\SIGIL_v1_21.wad
```

```
...
```

That way, PWADs will use the main IWAD file in their parent folder.




## Tweaking options

PrBoom allows to use a `prboom.cfg` file to apply to games recursively.

So if you put a prboom.cfg in `\roms\prboom\prboom.cfg`, it will apply to every game in `roms\prboom\` and subfolders.

For example, I noticed that most WAD mods have a too low brightness. In order to fix that, you can create a `prboom.cfg` file with `Video–>usegamma 0/1/2/3/4`.

Click to open

```
# Doom config file
#
# Format:
#  variable   value
#
# Lines starting with '#' are comments
# When saved, default values are commented out

## Misc settings
#default_compatibility_level    -1
#menu_background                1
#max_player_corpse              32
#flashing_hom                   0
#demo_insurance                 2
#level_precache                 0
#demo_smoothturns               0
#demo_smoothturnsfactor         6

## Files
#wadfile_1                  ""
#wadfile_2                  ""
```

```
#wadfile_3                  ""
#wadfile_4                  ""
#wadfile_5                  ""
#wadfile_6                  ""
#wadfile_7                  ""
#wadfile_8                  ""
#dehfile_1                  ""
#dehfile_2                  ""

## Game settings
#default_skill                3
#weapon_recoil                0
#doom_weapon_toggles          1
#player_bobbing               1
#monsters_remember            1
#monster_infighting           1
#monster_backing              0
#monster_avoid_hazards        1
#monkeys                      0
#monster_friction             1
#help_friends                 1
#allow_pushers                1
#variable_friction            1
#sts_always_red               1
#sts_pct_always_gray          0
#sts_traditional_keys         0
#show_messages                1
#autorun                      0

## Compatibility settings
#comp_zombie                  0
#comp_infcheat                0
#comp_stairs                  0
#comp_telefrag                0
#comp_dropoff                 0
#comp_falloff                 0
#comp_staylift                0
#comp_doorstuck               0
#comp_pursuit                 0
#comp_vile                    0
#comp_pain                    0
#comp_skull                   0
#comp_blazing                 0
#comp_doorlight               0
#comp_god                     0
#comp_skymap                  0
#comp_floors                  0
#comp_model                   0
#comp_zerotags                0
#comp_moveblock               0
#comp_sound                   0
```

```
#comp_666                       0
#comp_soul                      0
#comp_maskedanim                0

## Sound settings
#pitched_sounds                 0
#samplerate                 11025
#sfx_volume                     8
#music_volume                   8
#mus_pause_opt                  2
#mus_load_external              2
#snd_channels                   8

## Video settings
#screenblocks                   0
usegamma                        3
#uncapped_framerate             3
#filter_wall                    1
#filter_floor                   1
#filter_sprite                  1
#filter_z                       1
#filter_patch                   1
#filter_threshold           49152
#sprite_edges                   0
#patch_edges                    0
#render_stretchsky              1
#r_wiggle_fix                   1

## Mouse settings
#mouse_sensitivity_horiz       40
#mouse_sensitivity_vert        40
#mouseb_fire                    0
#mouseb_strafe                  1
#mouseb_forward                 2
#mouseb_backward               -1
#movement_mouselook             0
#movement_mouseinvert           0
#movement_maxviewpitch         32

## Key bindings
#key_right                  0xae
#key_left                   0xac
#key_up                     0xad
#key_down                   0xaf
#key_menu_right             0xae
#key_menu_left              0xac
#key_menu_up                0xad
#key_menu_down              0xaf
#key_menu_backspace         0x7f
#key_menu_escape            0x1b
#key_menu_enter             0xd
```

```
#key_setup              0xc7
#key_strafeleft         0x2c
#key_straferight        0x2e
#key_fire               0x9d
#key_use                0x20
#key_strafe             0xb8
#key_speed              0xb6
#key_savegame           0xbc
#key_loadgame           0xbd
#key_soundvolume        0xbe
#key_hud                0xbf
#key_quicksave          0xc0
#key_endgame            0xc1
#key_messages           0xc2
#key_quickload          0xc3
#key_quit               0xc4
#key_gamma              0xd7
#key_spy                0xd8
#key_pause              0xff
#key_autorun            0xba
#key_chat               0x74
#key_backspace          0x7f
#key_enter              0xd
#key_map                0x9
#key_map_right          0xae
#key_map_left           0xac
#key_map_up             0xad
#key_map_down           0xaf
#key_map_zoomin         0x3d
#key_map_zoomout        0x2d
#key_map_gobig          0x30
#key_map_follow         0x66
#key_map_mark           0x6d
#key_map_clear          0x63
#key_map_grid           0x67
#key_map_rotate         0x72
#key_map_overlay        0x6f
#key_reverse            0x2f
#key_zoomin             0x3d
#key_zoomout            0x2d
#key_chatplayer1        0x67
#key_chatplayer2        0x69
#key_chatplayer3        0x62
#key_chatplayer4        0x72
#key_weapontoggle       0x30
#key_weaponcycleup      0x6d
#key_weaponcycledown    0x6e
#key_weapon1            0x31
#key_weapon2            0x32
#key_weapon3            0x33
#key_weapon4            0x34
```

```
#key_weapon5                0x35
#key_weapon6                0x36
#key_weapon7                0x37
#key_weapon8                0x38
#key_weapon9                0x39
#key_screenshot             0x2a

## Chat macros
#chatmacro0                 "No"
#chatmacro1                 "I'm ready to kick butt!"
#chatmacro2                 "I'm OK."
#chatmacro3                 "I'm not looking too good!"
#chatmacro4                 "Help!"
#chatmacro5                 "You suck!"
#chatmacro6                 "Next time, scumbag..."
#chatmacro7                 "Come here!"
#chatmacro8                 "I'll take care of it."
#chatmacro9                 "Yes"

## Automap settings
#mapcolor_back              0xf7
#mapcolor_grid              0x68
#mapcolor_wall              0x17
#mapcolor_fchg              0x37
#mapcolor_cchg              0xd7
#mapcolor_clsd              0xd0
#mapcolor_rkey              0xaf
#mapcolor_bkey              0xcc
#mapcolor_ykey              0xe7
#mapcolor_rdor              0xaf
#mapcolor_bdor              0xcc
#mapcolor_ydor              0xe7
#mapcolor_tele              0x77
#mapcolor_secr              0xfc
#mapcolor_exit              0x0
#mapcolor_unsn              0x68
#mapcolor_flat              0x58
#mapcolor_sprt              0x70
#mapcolor_item              0xe7
#mapcolor_hair              0xd0
#mapcolor_sngl              0xd0
#mapcolor_me                0x70
#mapcolor_enemy             0xb1
#mapcolor_frnd              0x70
#map_secret_after               0
#map_point_coord                0
#automapmode                0x0

## Heads-up display settings
#hudcolor_titl                  5
#hudcolor_xyco                  3
```

```
#hudcolor_mesg                6
#hudcolor_chat                5
#hudcolor_list                5
#hud_msg_lines                1
#hud_list_bgon                0
#health_red                  25
#health_yellow               50
#health_green               100
#armor_red                   25
#armor_yellow                50
#armor_green                100
#ammo_red                    25
#ammo_yellow                 50
#hud_mode                     0
#hud_showstats                1
#hud_showkeys                 1
#hud_showweapons              1

## Weapon preferences
#weapon_choice_1              6
#weapon_choice_2              9
#weapon_choice_3              4
#weapon_choice_4              3
#weapon_choice_5              2
#weapon_choice_6              8
#weapon_choice_7              5
#weapon_choice_8              7
#weapon_choice_9              1

## Music
#mus_bunny                  "bunny.mp3"
#mus_e1m1                   "e1m1.mp3"
#mus_e1m2                   "e1m2.mp3"
#mus_e1m3                   "e1m3.mp3"
#mus_e1m4                   "e1m4.mp3"
#mus_e1m5                   "e1m5.mp3"
#mus_e1m6                   "e1m6.mp3"
#mus_e1m7                   "e1m7.mp3"
#mus_e1m8                   "e1m8.mp3"
#mus_e1m9                   "e1m9.mp3"
#mus_e2m1                   "e2m1.mp3"
#mus_e2m2                   "e2m2.mp3"
#mus_e2m3                   "e2m3.mp3"
#mus_e2m4                   "e2m4.mp3"
#mus_e2m5                   "e2m5.mp3"
#mus_e2m6                   "e2m6.mp3"
#mus_e2m7                   "e2m7.mp3"
#mus_e2m8                   "e2m8.mp3"
#mus_e2m9                   "e2m9.mp3"
#mus_e3m1                   "e3m1.mp3"
#mus_e3m2                   "e3m2.mp3"
```

```
#mus_e3m3                   "e3m3.mp3"
#mus_e3m4                   "e3m4.mp3"
#mus_e3m5                   "e3m5.mp3"
#mus_e3m6                   "e3m6.mp3"
#mus_e3m7                   "e3m7.mp3"
#mus_e3m8                   "e3m8.mp3"
#mus_e3m9                   "e3m9.mp3"
#mus_e4m1                   "e3m4.mp3"
#mus_e4m2                   "e3m2.mp3"
#mus_e4m3                   "e3m3.mp3"
#mus_e4m4                   "e1m5.mp3"
#mus_e4m5                   "e2m7.mp3"
#mus_e4m6                   "e2m4.mp3"
#mus_e4m7                   "e2m6.mp3"
#mus_e4m8                   "e2m5.mp3"
#mus_e4m9                   "e1m9.mp3"
#mus_e5m1                   "e5m1.mp3"
#mus_e5m2                   "e5m2.mp3"
#mus_e5m3                   "e5m3.mp3"
#mus_e5m4                   "e5m4.mp3"
#mus_e5m5                   "e5m5.mp3"
#mus_e5m6                   "e5m6.mp3"
#mus_e5m7                   "e5m7.mp3"
#mus_e5m8                   "e5m8.mp3"
#mus_e5m9                   "e5m9.mp3"
#mus_inter                  "inter.mp3"
#mus_introa                 "intro.mp3"
#mus_intro                  "intro.mp3"
#mus_victor                 "victor.mp3"
#mus_adrian                 "adrian.mp3"
#mus_ampie                  "ampie.mp3"
#mus_betwee                 "betwee.mp3"
#mus_count2                 "count2.mp3"
#mus_countd                 "countd.mp3"
#mus_ddtbl2                 "ddtbl2.mp3"
#mus_ddtbl3                 "ddtbl3.mp3"
#mus_ddtblu                 "ddtblu.mp3"
#mus_dead2                  "dead2.mp3"
#mus_dead                   "dead.mp3"
#mus_dm2int                 "dm2int.mp3"
#mus_dm2ttl                 "dm2ttl.mp3"
#mus_doom2                  "doom2.mp3"
#mus_doom                   "doom.mp3"
#mus_evil                   "evil.mp3"
#mus_in_cit                 "in_cit.mp3"
#mus_messag                 "messag.mp3"
#mus_messg2                 "messg2.mp3"
#mus_openin                 "openin.mp3"
#mus_read_m                 "read_m.mp3"
#mus_romer2                 "romer2.mp3"
#mus_romero                 "romero.mp3"
```

```
#mus_runni2                "runni2.mp3"
#mus_runnin                "runnin.mp3"
#mus_shawn2                "shawn2.mp3"
#mus_shawn3                "shawn3.mp3"
#mus_shawn                 "shawn.mp3"
#mus_stalks                "stalks.mp3"
#mus_stlks2                "stlks2.mp3"
#mus_stlks3                "stlks3.mp3"
#mus_tense                 "tense.mp3"
#mus_theda2                "theda2.mp3"
#mus_theda3                "theda3.mp3"
#mus_the_da                "the_da.mp3"
#mus_ultima                "ultima.mp3"
```

## Other examples for specific WADs

### Sigil (5th Episode) & Sigil II (6th Episode)

SIGIL was released on 31th Mai in 2019, whereas SIGIL II released on December 2023 on the 30th anniversary of this iconic game. They can be considered as the official 5th Episode and 6th Episode for ULTIMATE DOOM. They were created by the famous author of DOOM - John Romero and both parts can be downloaded for free right here.

#### How to use?

Place the downloaded WADs to your prboom directory in roms. Now edit `/userdata/saves/prboom/[DOOM1-EPISODE]/prboom.cfg` and set the WAD next to be loaded to the main WAD in *Files Section*. I've only tested for ULTIMATE DOOM and it worked like a charme, you are greeted with a nice intro screen and you have the Ultimate DOOM with now six episodes in total.

```
## Files
wadfile_1                 "SIGIL_v1_2.wad"
wadfile_2                 "SIGIL_II_V1_0.WAD"
#wadfile_3                 ""
#wadfile_4                 ""
#wadfile_5                 ""
#wadfile_6                 ""
#wadfile_7                 ""
#wadfile_8                 ""
#dehfile_1                 ""
#dehfile_2                 ""
```

### Lost Episodes of Doom

The Lost Episodes of Doom is a collection of three eight-level episodes for Doom by Christen Klie and Bob Carter. It takes place on the Jovian moons Callisto and Io, and on Jupiter itself. It was a

commercial product.

Extract the two WAD files and then edit `/userdata/saves/prboom/[DOOM1-EPISODE]/prboom.cfg` and set the WAD next to be loaded to the main WAD in *Files Section*.

```
## Files
wadfile_1                 "JPTR_V40.WAD"
wadfile_2                 "Jptr_fix.wad"
#wadfile_3                 ""
#wadfile_4                 ""
#wadfile_5                 ""
#wadfile_6                 ""
#wadfile_7                 ""
#wadfile_8                 ""
#dehfile_1                 ""
#dehfile_2                 ""
```

#### Doom 2 - No Rest for the Living

No Rest for the Living was developed by Nerve Software for the release of Doom 2 on the XBLA. The episode consists of nine levels in all, eight standard levels and a single secret level, as a homage to the similarly structured nine-map episodes in the original Doom, particularly Knee-Deep in the Dead.

Extract the WAD file and then edit `/userdata/saves/prboom/[DOOM2-EPISODE]/prboom.cfg` and set the WAD next to be loaded to the main WAD in *Files Section*.

```
## Files
wadfile_1                 "NERVE.WAD"
#wadfile_2                 ""
#wadfile_3                 ""
#wadfile_4                 ""
#wadfile_5                 ""
#wadfile_6                 ""
#wadfile_7                 ""
#wadfile_8                 ""
#dehfile_1                 ""
#dehfile_2                 ""
```

## Additional tricks

The above methods got the disadvantage that you “lose” your original gameset. That means for DOOM-Sigil that you will the new launching screen ever and ever again. To get rid of this you can copy the main WAD and rename one to `DOOM - Ultimate DOOM.wad` and the other to `DOOM - Sigil of Baphomet.wad` now you edit `/userdata/saves/prboom/DOOM - Sigil of Baphomet.wad/prboom.cfg` and set it up like written above.

Now you edit gamedata and hide the added PWAD files (Sigil.wad), you now have a clean list.

### Enhanced music

PrBoom can let you add enhanced music, like back in the 90s when using a SC-55 synthesizer to render the music tracks. Some of these tunes have been recorded and can be found on the Internet (Google is your friend).

Once you downloaded the tracks that you want to add, you need to update the config file from the Doom game you want to change musics for. Its location follows always the same pattern, for example `/userdata/saves/prboom/[DOOM1-EPISODE]/prboom.cfg/prboom.cfg` for DOOM1. You need to add/modify the section:

```
## Music
#mus_bunny                  "bunny.mp3"
#mus_e1m1                   "e1m1.mp3"
#mus_e1m2                   "e1m2.mp3"
#mus_e1m3                   "e1m3.mp3"
...
```

## Controls

Here are the default PrBoom's controls shown on a Batocera Retropad:

## Troubleshooting

### Further troubleshooting

For further troubleshooting, refer to the generic support pages.

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