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## Doom v1.4 for the PSP

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Version 1.4 by Chilly Willy (ChillyWillyGuru@gmail.com) based on ADoomPPC version 1.7 by Jarmo Laakkonen (jami.laakkonen@kolumbus.fi) based on ADoomPPC version 1.3 by Joseph Fenton based on ADoom version 1.2 by Peter McGavin.

Icon and EB00T pics by Quare.

Alternate MIDI Instruments by Zer0-X/o'Moses based on samples from Christian Buchner's GMPlay V1.3 and the original MIDI Instruments file by Joseph Fenton.

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This archive contains a PSP port of ADoomPPC, itself a port of ADoom. ADoom is a port of ID Software's Linux DOOM. You can get the original ID Software Linux DOOM source from:

<ftp://ftp.idsoftware.com/idstuff/source/doomsrc.zip>

Source code for this port of Doom is included.

Doom for the PSP is aimed at the new Slim model, fully supporting TV out. However, it still runs on the older model PSP with 3.xx custom firmware.

Features on all models of PSP include three different resolutions on the LCD, stereo sound and music, and control over most of the game options. TV-out is specific to the Slim model.

### Installation

Copy the DOOM folder to GAME on the Slim or a 3.xx custom firmware with the kernel mode set to 3.xx. You can also copy it to GAME371 on the Slim, or GAME3xx on 3.xx custom firmware.

Copy a main WAD file to the same drawer; if you wish to use the WAD file in a different drawer, see the instructions concerning WAD files below.

### Requirements

Doom for the PSP requires a PSP with 3.xx custom firmware. For use with a TV, you need a PSP Slim with a composite or component AV cable.

Doom for the PSP requires a WAD file compatible with DOOM for the PC or Macintosh; you can get a compilation of The Ultimate DOOM, DOOM II, and Final DOOM for around \$20 (US); get it. Only wimps use the shareware wad file. Despite the last sentence, the shareware WAD file is included so that you can play DOOM on your PSP right away.

### GUI

At the upper level, press CIRCLE to run DOOM. You change your selection in the menu using the directional pad. You can use Home to exit the program without running DOOM.

Load Settings: Press CROSS to load a settings file. The file requester is used to select the file. Be sure to only select a file made by the program. Press CIRCLE to cancel the file request.

**Save Settings:** Press CROSS to save the current settings. The PSP OSK is used to enter the save name. The default name is "doom.set", which is the name of the file loaded automatically when you start Doom for the PSP. You don't have to call your file this, but it won't be loaded automatically if you don't.

**CPU Settings:** Press CROSS to enter the CPU sub-menu. There is currently only one entry in the sub-menu - CPU Clock Frequency. Hold the CROSS button and use the directional pad to change the setting. Default means that DOOM will run at whatever speed the CPU was set to when the program was run. Press CIRCLE to return to the previous menu.

**Video Settings:** Press CROSS to enter the Video sub-menu. It has two sub-menus and a Display selector.

**LCD Settings:** Press CROSS to enter the LCD Settings sub-menu.

**Resolution:** Hold CROSS and use the d-pad to change the resolution. The selections are 480x272, 368x272, and 320x240.

**Sync to VBlank:** Press CROSS to toggle on or off. When on, the video refresh waits for the vertical blank before flipping the screen.

**Detail:** Hold CROSS and use the d-pad to select High or Low detail. This sets the starting detail mode of DOOM regardless of what you set it to the last time you played.

**Aspect Ratio:** Hold CROSS and use the d-pad to select 4:3 or 16:9. This allows you to select a wider field of view (16:9), or the traditional field of view. This is selectable for LCD until I figure out how to keep the floors from "swimming" in the 16:9 FOV.

**TV Settings:** Press CROSS to enter the TV Settings sub-menu.

**Cable:** This just tells you what TV cable is detected.

**Resolution:** Hold CROSS and use the d-pad to change the resolution. The selections are 720x480, 704x448, and 640x400. There are two reasons to having smaller screens for the TV. First, DOOM is an old-style 2.5D game, and every single pixel has to be rendered by the CPU. 720x480 is a LOT of pixels for a 200-300 MHz CPU to push around. 640x400 is noticeably faster. Second, a smaller screen allows you to compensate for overscan on the TV, and adjust the positioning so that it looks good on YOUR TV.

**Sync to VBlank:** Press CROSS to toggle on or off. When on, the video refresh waits for the vertical blank before flipping the screen.

**Detail:** Hold CROSS and use the d-pad to select High or Low detail. This sets the starting detail mode of DOOM regardless of what you set it to the last time you played.

**Interlace:** Press CROSS to toggle on or off. Only enabled if you have the component cable since the composite cable is interlaced only. Set this to on if your TV doesn't support progressive video.

**Aspect Ratio:** Hold CROSS and use the d-pad to select 4:3 or 16:9. This is where YOU tell the program the aspect ratio of the TV hooked to the PSP since it can't tell. 16:9 gives you a wider field of view in the game (you can see more side to side). If you think it looks funny, just set this to 4:3 instead for the "normal" DOOM view.

**Center Screen:** Press CROSS and the PSP should go black while the TV screen shows a calibration screen. Use the d-pad to center the screen

(704x448 or 640x400 only!). press CROSS or CIRCLE to exit back to the PSP menu.

Display: Hold CROSS and use the d-pad to select between showing DOOM on the LCD or the TV. This is disabled if there is no cable found, or an error occurs while trying to load and call the TV library.

Sound Settings: Press CROSS to enter the Sound Settings sub-menu.

Update Frequency: Hold CROSS and use the d-pad to select 140 Hz, 70 Hz, or 35 Hz. This is an artifact from when I wrote this code for AROS. You MIGHT save a little speed with 35 Hz, but it's possible the music may sound odd once in awhile.

Sound Effects: Press CROSS to toggle on or off. Disables all sound when off.

Music: Press CROSS to toggle on or off. Disables music when off, but not sound effects.

Controller Settings: Press CROSS to enter the Controller Settings sub-menu.

Disable Analog Stick: Press CROSS to toggle on or off. When on, the analog stick will not be used as a mouse inside the game.

Calibrate Analog Stick: Press CROSS to enter the calibration routine. You need to try to make the minimum and maximum values as small and large, respectively, as possible, then allow the stick return to its natural center. Press CROSS or CIRCLE to return to the previous menu.

TRIANGLE + CIRCLE Cheat: Hold CROSS and use the d-pad to select a cheat.

TRIANGLE + CROSS Cheat: Hold CROSS and use the d-pad to select a cheat.

TRIANGLE + SQUARE Cheat: Hold CROSS and use the d-pad to select a cheat.

File Settings: Press CROSS to enter the File Settings sub-menu.

Main WAD: Press CROSS to bring up the file requester.

Patch WAD: Press CROSS to bring up the file requester. There are four patch WAD fields.

DEH File : Press CROSS to bring up the file requester. There are four deh file fields.

Game Settings: Press CROSS to enter the Game Settings sub-menu.

No Monsters: Press CROSS to toggle on or off. When enabled, monsters will not appear in the game.

Respawn: Press CROSS to toggle on or off. When enabled, monsters will respawn at random intervals after they are killed.

Fast: Press CROSS to toggle on or off. When enabled, monsters will be faster.

Turbo: Hold CROSS and use the d-pad to change. This sets how fast the player will be as a percent of the original value. 200 will make the

player twice as fast.

Map on HU: Press CROSS to toggle on or off. When enabled, the map will appear over the regular display instead of a black screen.

Rotate Map: Press CROSS to toggle on or off. When enabled, the map will rotate as the player turns.

Force Demo: Press CROSS to toggle on or off. When on, it forces DOOM to attempt to play demos from other versions.

Record / Play Demo / Time Demo: Hold CROSS and use the d-pad to select the number of the demo file to Record/Play/Time. Zero means no demo. If you wish to time a demo, be sure to set Force Demo to on as well.

Network Settings: Press CROSS to enter the Network Settings sub-menu. This will be disabled if the network failed to initialize during the startup.

Play Network Game: Press CROSS to toggle on or off. Must be on to play against others via WIFI.

Player Number: Hold CROSS and use the d-pad to set your player number. All players must have different numbers.

Deathmatch: Press CROSS to toggle on or off. When on, the game runs in deathmatch mode, and players will start in different locations and you get frag stats at the end of the level. When off, the players all start in the same place.

Alt Deathmatch: Press CROSS to toggle on or off. When on, the game runs in version 2 deathmatch mode where everything is doubled. This has priority over the Deathmatch settings.

Starting Skill Level: Hold CROSS and use the d-pad to select the skill level you will start at.

Starting Map Level: Hold CROSS and use the d-pad to select the map you will start on. Values are 1 to 32 for Doom 2, 1 to 27 for Doom 1, 1 to 36 for the Ultimate Doom, and 1 to 9 for shareware Doom.

Timed Game: Hold CROSS and use the d-pad to set the number of minutes the level will last.

A.V.G.: Press CROSS to toggle on or off. When on, the level will last 20 minutes.

Copy Stats: Press CROSS to toggle on or off. When on, allows an external statistics program to capture the intermission screen statistics.

Force Version: Hold CROSS and use the d-pad to set the version of DOOM. This can allow you to play against people with a different version of DOOM.

Use PC Checksum: Press CROSS to toggle on or off. When on, uses the same method of computing the checksum for network packets as the PC version. This may allow you to play against PC versions of Doom rather than just other PSPs. This has been used to successfully play Doom for the PSP against SDL\_Doom v1.10 in linux.

Network Type: Hold CROSS and use the d-pad to select TCP/IP Infrastructure or TCP/IP Ad-Hoc. Note - Ad-Hoc is not available yet, so this item is disabled.

Network Type Settings: Press CROSS to enter the Network Type Settings sub-menu.

Network Access Point: Hold CROSS and use the d-pad to change which network access point will be used.

Connect to Access Point: Press CROSS to connect to the currently selected access point.

Disconnect from Access Point: Press CROSS to disconnect from the currently selected access point.

Network Port: Hold CROSS and use the d-pad to change the port which will be used to network the players.

Network Player #1: Press CROSS to enter a network address for the first network player via the OSK. This can be either an IP address, or a network address name. If you do use a name, it CANNOT start with '-' or '.', or a number.

Network Player #2: Press CROSS to enter a network address for the second network player via the OSK.

Network Player #3: Press CROSS to enter a network address for the third network player via the OSK.

Local Network Address: This shows the network address for this PSP and cannot be changed. It will not show your IP address until you connect to an access point. Note that connecting to an access point in the GUI is not required. When you start a network game, the launcher will connect to the selected access point when you start DOOM.

Net Access Points: This shows all the access points on your PSP. You cannot change this, except by creating or deleting access points in the XMB Network Settings.

Network Extra Tic: Press CROSS to toggle on or off. Extra Tic tells DOOM to send the previous ticcmd along with the current one. This effectively handles single packet losses without a delay, but doubles the bandwidth of data transmitted.

Network Tic Dup: Hold CROSS and use the d-pad to change. Valid range is one to nine. Tic Dup tells DOOM to send ticcmds at a lower rate to reduce network traffic. The normal rate is to send ticcmds 35 times per second. Setting Tic Dup to '2' tells DOOM to send ticcmds 17.5 times per second, and so forth. However, doing this reduces the accuracy of movement for network players.

About: Press CROSS to see the About screen.

## Controls =====

TRIANGLE acts as an alternate function selector, as BACKSPACE when typing a savegame description, or as the 'y' key when you select QUIT.

The following controls are when you are not pressing TRIANGLE:

Analog stick - mouse  
D-Pad - forward/back/turn  
LTRIGGER - strafe left  
RTRIGGER - strafe right  
CIRCLE - action  
CROSS - fire

SQUARE - run  
START - pause  
SELECT - map

The following controls are when you are pressing TRIANGLE:

D-Pad UP - change gamma setting  
D-Pad DOWN - toggle the detail setting  
D-Pad Left - previous cheat  
D-Pad Right - next cheat  
LTRIGGER - previous weapon  
RTRIGGER - next weapon  
CIRCLE - instant cheat 1  
CROSS - instant cheat 2  
SQUARE - instant cheat 3  
START - enter text via OSK  
SELECT - menu

#### WAD Files =====

Main WAD files should be in the in the iwad directory, or a subdirectory therein. While it is not a requirement, the requester starts in the iwad directory.

Some older Registered WAD files may not work due to later changes made to the WAD file contents.

It is possible to upgrade at least some old main WAD files using freely available patches from <ftp://ftp.idsoftware.com/idstuff/doom/>. You need a PC to apply the patches.

Playstation WAD files do not work as they are split by level and compressed.

WAD files from games derived from DOOM (such as Heretic or Hexen) do not work due to differences in WAD contents.

WAD files are identified by their name. A misnamed WAD file will not work. Use the following to get the proper name:

Shareware Doom WAD = doom1.wad  
Registered Doom WAD = doom.wad  
The Ultimate DOOM WAD = doomu.wad  
Doom 2 WAD = doom2.wad  
Final Doom Plutonia WAD = plutonia.wad  
Final Doom TNT WAD = tnt.wad

The FreeDoom WAD does not work because it is designed for BOOM, not DOOM.

#### Patch WAD Files =====

Patch WAD files are used to change graphics, sounds, and level designs on DOOM; many are available on CDROM and the net. You can choose up to four patch WAD files with DOOM for the PSP. It is recommended that you put patch WAD files into the appropriate subdirectory of the pwad directory. Patch WAD files are made for a specific version of the DOOM WAD, so keep them straight. Again, this is not a requirement. Doom for the PSP uses full path names for all files, so a file can be located anywhere on the memstick. It's just quicker and easier to use the recommended directories.

## DeHackEd =====

DeHackEd is a PC program that patches certain internal tables inside DOOM so that certain effects can be achieved; these include, a rapid fire shotgun, floating barrels, and many other things.

Doom for the PSP supports the use of DeHackEd configuration files; they have a .DEH extension on them. You may select up to four DEH files. It is recommended that you put them in the deh directory, but again, is not required.

## Networking =====

### TCP/IP: -----

TCP/IP networking in Doom for the PSP is based on the Linux DOOM source code and the PSP networking example by powARman at ps2dev.

To start a two player game of DOOM:

- 1: Make certain both players are using identical WAD files and game settings.
- 2: Make certain you set up a Network Infrastructure entry on the PSP.
- 3: The first player should make sure Play Network Game is 'on', the Player Number is set to '1', and that Network Player #1 is set to the network address of the second player.
- 4: The second player should make sure Play Network Game is 'on', the Player Number is set to '2', and that Network Player #1 is set to the network address of the first player.

To start a three player game of DOOM:

- 1: Make certain all players are using identical WAD files and game settings.
- 2: Make certain you set up a Network Infrastructure entry on the PSP.
- 3: The first player should make sure Play Network Game is 'on', the Player Number is set to '1', that Network Player #1 is set to the network address of the second player, and that Network Player #2 is set to the network address of the third player.
- 4: The second player should make sure Play Network Game is 'on', the Player Number is set to '2', that Network Player #1 is set to the network address of the first player, and that Network Player #2 is set to the network address of the third player.
- 5: The third player should make sure Play Network Game is 'on', the Player Number is set to '3', that Network Player #1 is set to the network address of the first player, and that Network Player #2 is set to the network address of the second player.

A four player game would be set up in a similar manner. Note that

network addresses may be either names or IP addresses. If you don't know how to find the network name of a PSP, consult someone else. I haven't the slightest idea. The program gives you the local IP address, so I'd suggest using that. Further note that although this is intended for PSP to PSP networking, nothing stops you from playing against someone running a compatible DOOM port on a computer hooked to the network. If you need to abort DOOM while it's arbitrating the network game (for example, if you entered an incorrect IP address), use Home to exit.

For more info on setting up a wireless access point, consult the PSP Wireless FAQ's at the Playstation.com Forums:

<http://boardsus.playstation.com/playstation/board/message?board.id=pspnet&message.id=61134>

## Cheats

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There are two kinds of cheats: "instant" cheats and selected cheats. Instant cheats are set up in the GUI. You press TRIANGLE and one of the other three main buttons to activate an instant cheat. Selected cheats are always available. You hold TRIANGLE and press RIGHT or LEFT until you reach the cheat you wish, then release TRIANGLE.

## More...

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For more info on DOOM, check out the DOOM wiki.

<http://doom.wikia.com/wiki/Entryway>

## History

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v1.4 - 2007/11/14 : Automatically switches on LCD after using TV. No need to tap the display button anymore. Now uses intraFonts from Ben Hur as long as the ltn8.pgf font can be loaded. Looks a LOT better. If it fails to load the font for some reason (you deleted it to make room in the flash or something), it falls back to the debug printing. Altered next/previous weapon handling so that you can switch between the shotgun and the double-barrel shotgun in versions that allow it. The file requester now sorts the entries.

v1.3 - 2007/11/05: Networking nows works. Completely changed GUI as relates to network gaming.

v1.2 - 2007/11/02: Added ability to access the OSK during the game so that strings can be entered. Slowed the OSK by half to make inputting characters easier. TRIANGLE can now be used as BACKSPACE when entering the game save description. Added network support for Infrastructure TCP/IP (wireless access points). Also added a selector for 16:9 or 4:3 rendering to the LCD menu; that way you can have "normal" graphics in 480x272 mode. Optimized the rendering for almost twice the frame rate.

v1.1 - 2007/10/29: Fixed problem with strafing and turning at the same time. Big cleanup of the controller handling code in general. Added ability to disable the analog stick and to calibrate it. Added two forms of cheats. If there is no default settings file, or if the default doesn't specify the main WAD file, it now tries to set the main WAD to the shareware WAD (idiot compensator).

v1.0 - 2007/10/28: First version for the PSP. Need to add networking and cheats. The FOV in 16:9 mode is a bit iffy, but not too bad.