



DEEP061.BMP

## WELCOME TO DEEP

DeeP is a professional quality level editor for DOOM, DOOM II, ULTIMATE DOOM, HEXEN, or HERETIC in ONE program.

DeeP features a long list of features, some of them are:

- Awesome built-in graphics texture drawing to instantly personalize your level.
- Cut, Copy, Undo and paste (even between different levels).
- Powerful interactive WYSIWYG drawing tools.
- Flicker free Fast graphics, minimum screen redraws required.
- Edits ALL the games in 1 program with dynamic game switching.
- True ONE-step linedef/sector drawing, no guesswork.
- Accurate Gamma correction for easy viewing of those -dark- textures!
- Unmatched reliability, ease of use and configuration options.
- Extensive and totally configurable error checker.
- Convenient MAP and TEXTURE browsers.
- Extensive online help is always available.

## SYSTEM REQUIREMENTS FOR DEEP

- A 386 processor or higher (a math co-processor is highly recommended).
- VGA monitor and a video board with at least 512Kb.
- There are 13 different video boards supported with VESA recommended first (see Note1).
- A minimum of 6MB extended, although 8MB is recommended (see Note 2)
- DO NOT use expanded memory with EMM386, use the NOEMS option.
- HIMEM.SYS loaded in CONFIG.SYS.
- FILES=20 or higher in CONFIG.SYS.
- Approximately 2.5 MB of disk space.
- A mouse (keyboard is a lot harder and some features are mouse only).

- Either a PATH= to your COMMAND.COM or a SHELL= in CONFIG.SYS.

**Note 1 :** VIDEO-The SVGA options tries to detect if you have a video board that supports 256 colors. This is not VESA and may lock up when you try it.

Some older boards are not VESA compatible, but they are SVGA with 512kb or more. In other cases, the VESA BIOS does not work correctly (ATI is one). VESA software drivers that you can load anytime may solve your problems.

UNIVBE is such a driver and will probably work and be fast to boot. This product is NOT made by SBS, but SciTech Software. Unzip the file UVBE50BD.ZIP in the same directory as DeeP (or another if you like). Look for the latest version to see if your card has been added. UVBE51BD.ZIP is a new version with lots of extra stuff, but is too large to include. Its available from [ftp.scitechsoft.com](http://ftp.scitechsoft.com) or <http://www.scitechsoft.com>.

**Note 2 :** MEMORY-For systems with less then 8MB, you should not run SMARTDRV. For 8MB systems, , the suggested size of Smartdrv is 256-512kb. Look at the bottom of the DeeP screen display to see how much memory you are using. The maximum amount is used when you turn texture caching on and do a full texture browse. If you have 2mb left after doing that, you are in good shape.

## OPERATING SYSTEMS

### DOS

DOS versions 5.0 to 7.0 are supported with CONFIG.SYS options as described above. DeeP requires the programs 32RTM.EXE, DPMIVM.OVL, BGI32.DLL and METWND08.DLL in the directory where DeeP was installed as well as the .FNT files included.

### WINDOWS 3.x

To run DeeP from within windows, SYSTEM.INI must have the following line added (use DOS EDIT ) after the line [386Enh]:

```
device = c:\DEEP\WINDPMI.386
```

Change the C:\DEEP to reflect the location where you installed the program).

### QEMM

The QEMM QDPMI.SYS driver and the Borland RTM.EXE used by DeeP do not work together. You will get an Exception = 000cH..etc., from QDPMI. The program QDPMI.SYS appears to be installed if you used the default config when you installed QEMM.

Remove the DEVICE=QDPMI.SYS from the CONFIG.SYS file or make an alternate boot setup that doesn't use this file. You may not need QDPMI.SYS at all! Refer to QHINTS.DOC for information.

### OS/2

DeeP works with the latest OS/2 Warp. You do have to allocate at least 6MB preferred to the DOS environment or else the DPMI extender complains about not enough uncommitted memory! DeeP is run from the WINDOWS environment with the same modifications as shown for WINDOWS.

## WINDOWS 95

The DPML support in WIN95 is not currently compatible if running in Windows. If you "boot" to DOS 7.0 it all works fine. Check out the AUTOEXEC.BAT the Windows 95 is using. WINDOWS 95 removes SMARTDRV from the AUTOEXEC.BAT when you installed it. DeeP works better if you run a SMARTDRV cache of around 512kb. Please put the SMARTDRV line back in AUTOEXEC.BAT.

Here's how to start DeeP from WINDOWS 95:

- Click on the Start button (lower left corner)
- select Shutdown
- Restart in DOS mode.

## STARTING DEEP FOR THE FIRST TIME

The first time DeeP is started by typing DEEP, you select one of the video modes displayed on the screen. Normally we suggest selecting the VESA driver the first time, unless you spot your card on the list below:

SVGA256	Autodetect 256 color devices
VESA256	VESA standard 256 color devices
ATI256	ATI VGA Wonder, Wonder Plus, Wonder XL
COMPAQ	Compaq Advanced VGA
TSENG3000	Tseng 3000 based cards
TSENG4000	Tseng 4000 based cards
GENOA5000	Genoa SuperVGA 5000
GENOA6000	Genoa SuperVGA 6000
OAK	Oak OTI-067 based cards
PARADIS256	Paradise VGA Professional, VGA 1024
TECMAR	Tecmar VGA/AD
TRIDENT256	Trident Impact
VIDEO7	Video 7 FastWrite, VRAM, 1024i
VIDEO7II	Video 7 VRAM II

The initial video resolution is 800x600. You can change this within the program at any time. You can also change the resolution at load time by typing DeeP -V #, where # is from 1 to 4 (1=640x480, 2=800x600, etc.)

## DEEP ONLINE HELP

DeeP has online documentation to help. Press F1 at any time to bring up a help screen that explains what each option does in full detail. To see the complete documentation, select All Help under Help on the top Menu bar. You can print the documentation by selecting the Print button.

## THE DEEP PROJECT FILE (.PRJ)

The next screen appears after you have selected the video mode:

DEEP001.BMP

## Installation Startup Screen



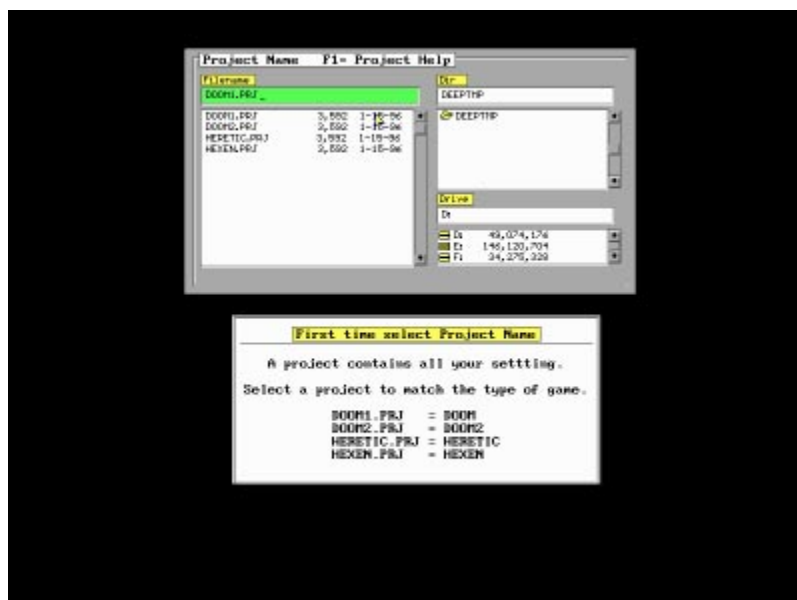
DeeP uses a *project* file structure to keep track of the type of game, the levels and the options selected. When first starting, decide the type of game you want to edit first. (Don't worry, the other games can be added later at any time). There are four projects DeeP has already made for you. They are called :

- DOOM1.PRJ      Select this for DOOM or Ultimate DOOM
- DOOM2.PRJ      Select this for DOOM II
- HERETIC.PRJ      Select this for HERETIC
- HEXEN.PRJ      Select this for HEXEN

Each project has the correct defaults applicable for the game selected, so be sure you start with the right one. The colors and defaults are incorrect if they do not match. The next screen appears:

DEEP002.BMP

## Installation Set Project Screen



The HEXEN.PRJ defines the IWAD and default texture name HEXEN.TCF. "HEXEN" varies according to the game selected (TCF is explained in just a minute).

Assuming you choose HEXEN.PRJ, the following screen appears ONLY if the file HEXEN.IWAD is not found at the default location C:\HEXEN\HEXEN.WAD

DEEP003.BMP

Installation Set IWAD Name

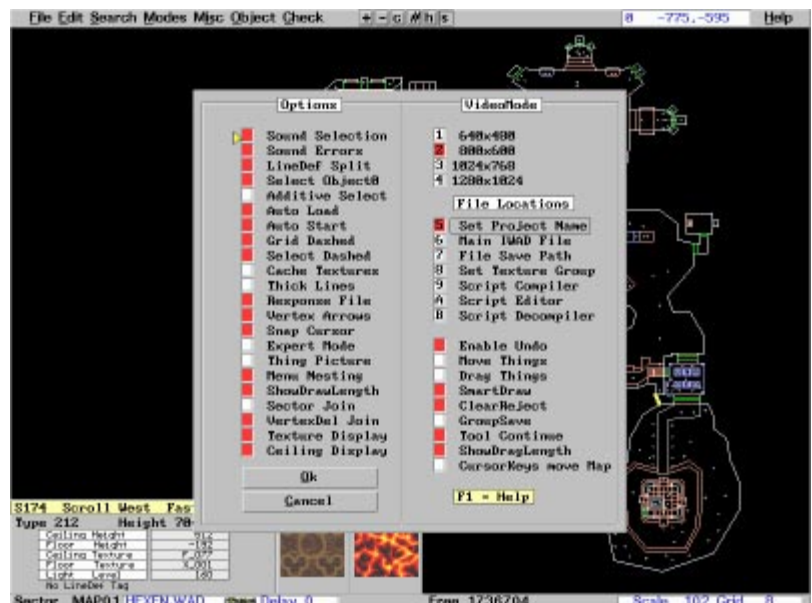


You can directly type the location and name of the IWAD in the Filename box as shown in the figure. Or, if you prefer, you can use the Drive and Dir browse boxes to find where you placed the IWAD for the game. This same screen appears every time you select a game project and the IWAD is not the default assumed.

## THE FIRST DEEP OPTION SCREEN

DEEP033.BMP

DeeP Main Option Settings

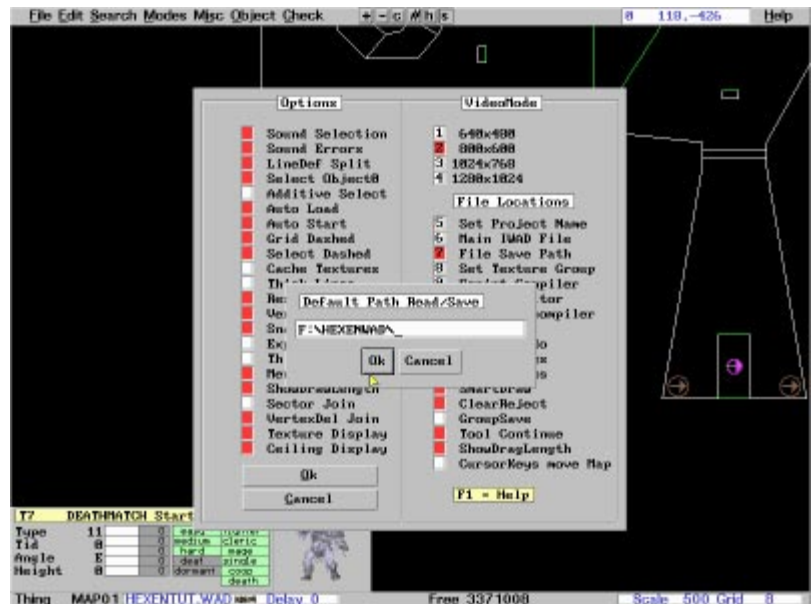


Activate an option on this screen by clicking in the box. When the square is *RED* the option is active, if it is *WHITE*, the option is not active. To get a list of the meaning of each option press F1.

The only option you should set right now is **7 File Save Path**. Press the number 7 or left click the mouse inside the square. Enter a drive and directory where you will read and store the levels you will edit. Suggestion: if you have more than one of the games, make a different directory for each type of game. This makes it easier to keep track of your work.

DEEP081.BMP

Setting Default Read & Save Path



The largest complete path name for any file is 42 characters. This includes the drive specification "C:\".

The largest default path (either explicit or implied by the directory you are in) is 27 characters.

For example: C:\HEXENWAD\TESTLVL.WAD is 23 characters long.

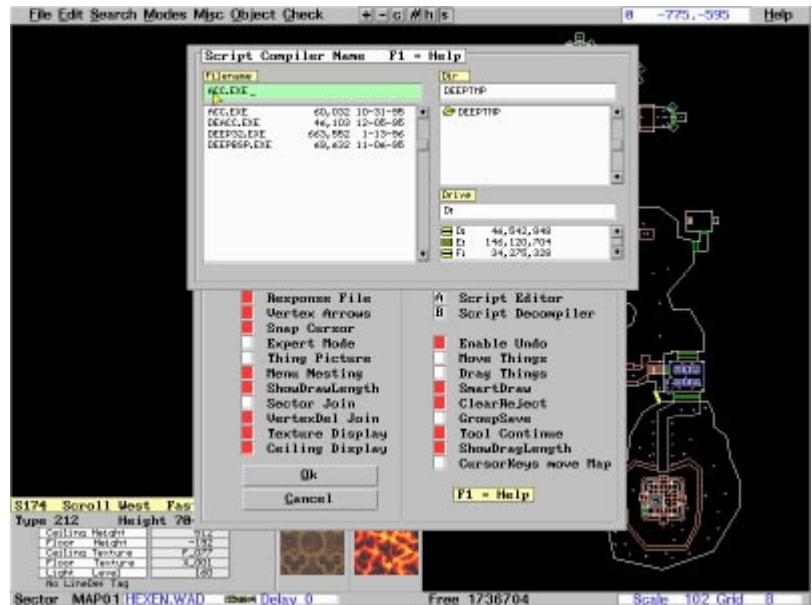
The default path is always added to any file you read or write, so don't forget to count it.

## SCRIPT OPTIONS

Set the names of the script compiler, editor and decompiler if you have them installed in a location different than the directory in which DeeP was installed.

DEEP034.BMP

Script File Options



## THE DEEP .CHK CHECKPOINT AND .TCF TEXTURE FILES

The DEEP.CHK file contains the status of your options and settings for the last project active.

The xxxx.TCF file defines a set of default textures to use. You can define multiple texture default groups for different themes.

If you mess up the settings, delete DEEP.CHK to restore all files to the defaults. It is possible for this file to get corrupted due to "normal" DOS FAT table allocation errors. We suggest you delete the file and start over when any FAT error for this file is reported. Inexplicable behavior can sometimes be traced to corrupted .CHK, .PRJ or .TCF files.

## DEEPBSP

DeePBSP is the **only** fastest nodes builder in the world in *TURBO* mode as any benchmark shows. *TURBO* mode is used for rapid level development. *FINAL* mode is used in the final stages of level design and builds a better balanced node tree for better playing performance on large levels. *TURBO* mode is set by entering -8 for *NODE* depth. A negative number is *TURBO* and a positive number is *FINAL*. Normally this is 8 and -8 and should not be changed.

DeePBSP is about 20-50 times faster than BSP, can distinguish smaller vertex spacing and features a display to see how your level is progressing as it is being built. In addition, DeePBSP can build nodes from within a grouped PWAD, so DO NOT substitute another node builder, since it won't work right when run by DeeP!!

### Construction Note

If the manner in which you build 2-sided objects is not correct, you may get "floating" floors and barriers. These types of errors are not caught by the error checker, since 2-sided LineDefs have too many valid combinations. Basically, when you build an object, you should try to have all the LineDef sidedefs (side1



or side2) all facing the same direction, either all in or all out. Counter-clockwise is preferred. Failure to follow this guideline, may introduce node conflicts.

DeePBSP is automatically run by selecting "Yes" when asked whether you want the nodes built on a Save. Please note that if you do not build nodes, you cannot play your level! This is an option to help you quickly exit the program if you are in a hurry. Don't forget to build the nodes the next time!

DeePBSP COPIES the reject map "as is", so be sure to clear the reject area with DeeP when requested.

There is a check in DeePBSP for viruses or allocation errors. The message !!! Warning DeePBSP size wrong? !!! appears if it detects an error. An extra startup delay is added (so you can see the message). The program continues to execute. A change in the program size indicates a serious error in the FAT file allocation or a virus! So you must try to find out why it's complaining.

If you get an ATAN2 error or DOMAIN error, you forgot to run the total check on the level and you have overlapping vertices or other errors in your level.

Registered users can run DeePBSP by hand by entering:

C:\..DeePBSP INWAD.WAD OUTWAD.WAD.

The shareware version works only with PWAD files created by DeeP.

## **REJECT Fun**

Experiment with the DeeP clear REJECT options (under File, Save with Build). The REJECT option has various uses. You can make a *FUN* reject that can make some or all the monsters *TAME*. This is useful to calmly test you level with all the enemies swarming around you, yet you do not have to fight them off. It's also a quick and fun way to randomly create areas where monster will attack you. You never know if they are going to attack...or not. For the serious enthusiast, it quickly indicates if your level will benefit from a REJECT built using RMB. If your level plays slow with a REJECT where NONE of the monsters attack, the problem is not with the REJECT, but with the number of enemies, size of the level or many 2-sided Sectors with varying heights in a small area.

## **THE ~DEEP.WAD AND ~HEEP.WAD TEMPORARY FILES**

The file ~DEEP.WAD is created when you rebuild Nodes from DeeP for DOOM or DOOM II.

The file ~HEEP.WAD is created when you rebuild Nodes from DeeP for HERETIC and HEXEN.

~DEEP.WAD and ~HEEP.WAD contain a copy of your last saved level. You can use this to restore (use COPY) in case something goes wrong with the node building or for any other reason.

You will get the message level "YOUR.WAD" (whatever you called it) not found.

This can happen if you attempted to save a level, but it did not successfully save for some reason.

Typical reasons are:

- 1) You ran out of memory (reduce Smartdrv cache).
- 2) You ran out of disk space.
- 3) FAT errors?



- 4) Errors caused by DOOM/HERETIC/HEXEN from playing a level with errors.
- 5) You bypassed the DEEP.BAT file using your own batch file and forgot to make it work the same. The batch files have to be constructed as distributed!

When running from DeeP, the message will flash and you won't be able to tell what happened. But you never see the DeePBSP screen come up. That's your first clue that something is amiss.

Then you might want to use the temporary file (or use the one named .BAK, although the .BAK is prior to your changes).

Use the DOS COPY command to copy the file back to the original name.

**>>> !! CAUTION !! <<**

DO NOT USE the ~DEEP.WAD or ~HEEP.WAD as direct input. Copy it and give it a different name if you want to use it again. Failure to do this will result in the loss of all data in the level!

## THE INTRODUCTION SCREEN

This screen and the first screen at the beginning of the chapter appear in the shareware version of DeeP. Press any key or click the mouse to continue. This screen does not appear in the registered version.

DEEP060.BMP

Shareware Startup Screen

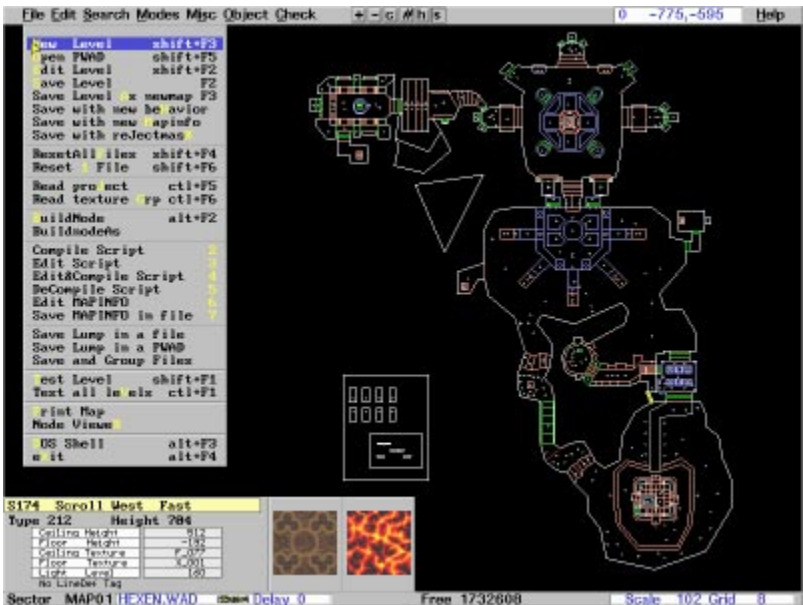


# FILE MENU

Press Alt+F or click on File on the top menu bar to select the menu selections shown below: There are many choices available. Press F1 to get a detailed description of each option. Edit level is discussed here to demonstrate the browser feature.

DEEP039.BMP

File Menu

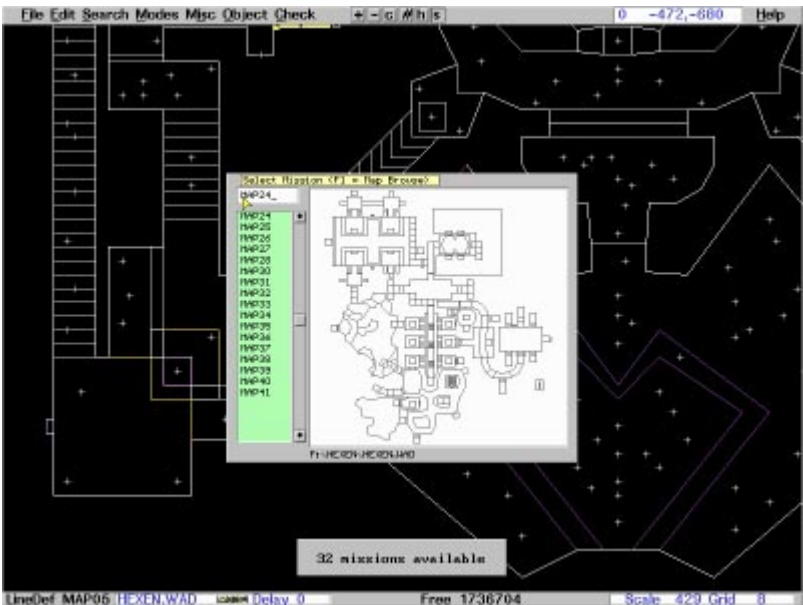


# MAP OR MISSION SELECTION

Select Edit Level from the prior menu and all the available maps are displayed with a thumbnail preview of each map. If the background color of the map is blue, then the level is in a separate PWAD and not the main IWAD.

DEEP056.BMP

Selecting a level

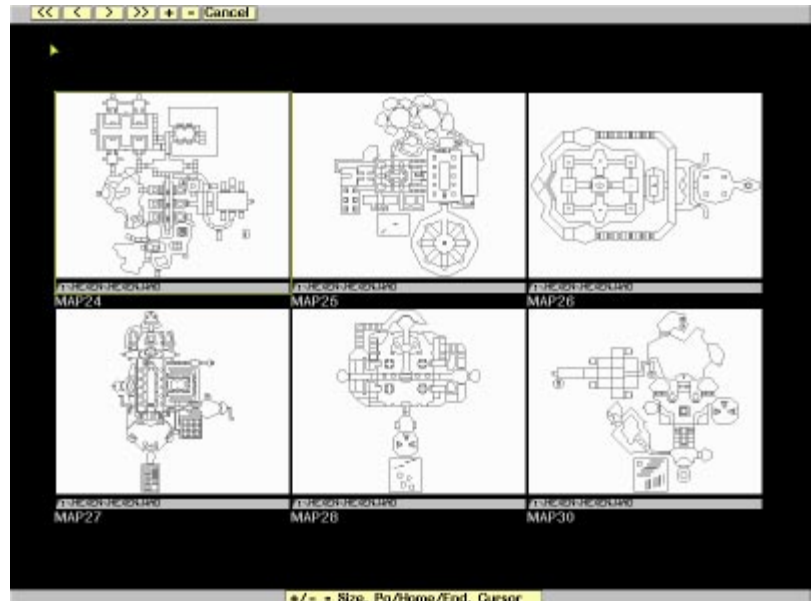


## BROWSING MULTIPLE LEVELS AT ONCE

When you press F1 or click the left mouse button in the middle of the thumbnail, the DeeP MAP browser pops up. Press + and - to zoom in and out. This increases (-) and decreases(+) the number of thumbnails shown at once on the screen. Click on the map desired and it is selected. You can also use the cursor keys to move to the level desired and press enter.

DEEP057.BMP

File Browser Screen



## EDITING A MAP

The four main editing modes are:

1. Sector Mode
2. Vertices Mode
3. Thing Edit Modes
4. Linedef and Sidedef Modes

Press S, V, T or L for each respective mode or use the double right mouse click submenu shown next.

In addition there are four Tool editing modes:

1. Line drawing mode
2. Rectangle mode
3. Polygon mode
4. Stair mode

Press Ctrl+D, Ctrl+R, Ctrl+P and Ctrl+S or use the submenu as already mentioned.

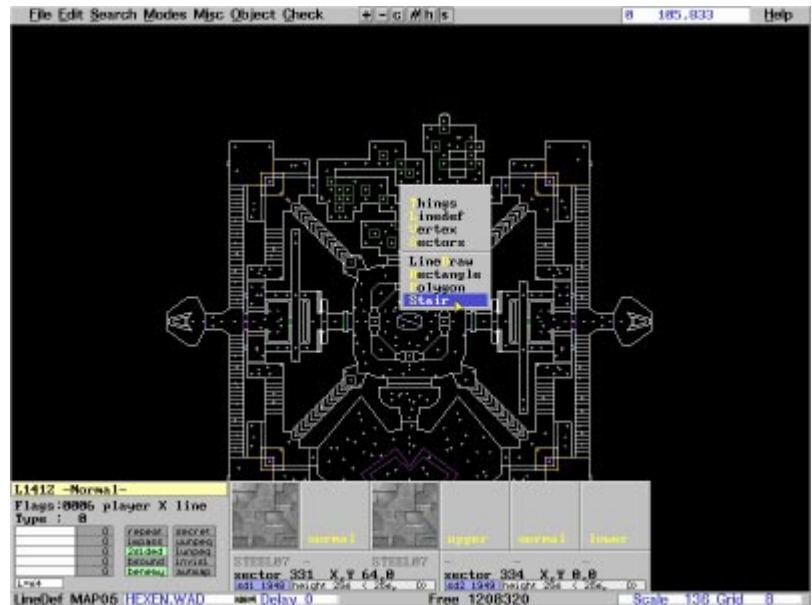
I suggest you follow the instruction under Quick Start under Help. The instructions quickly teach you how to make two rooms, connect them and put a door between them. I am going to show some other control aspects that are not obvious.

## Quick Double Right Click of the mouse

As depicted in the figure DEEP047.BMP, a small pop up menu appear when the right mouse button is quickly double clicked. You can access the editing modes from this menu and also the 4 interactive WYSIWYG tools.

### DEEP047.BMP

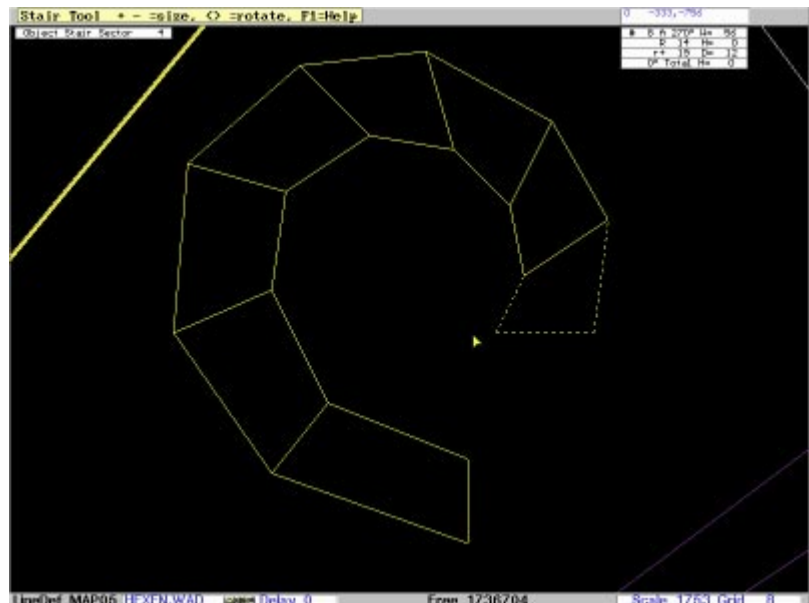
Pop Up menu when the right mouse button is quickly double clicked



This is an example of a curving stair. Press F1 to see the commands available. Use the right mouse button to drag interactive drawing tools across the screen. Left click to finish, right click to quit.

### DEEP049.BMP

Interactive WYSIWYG curving stair drawing tool.

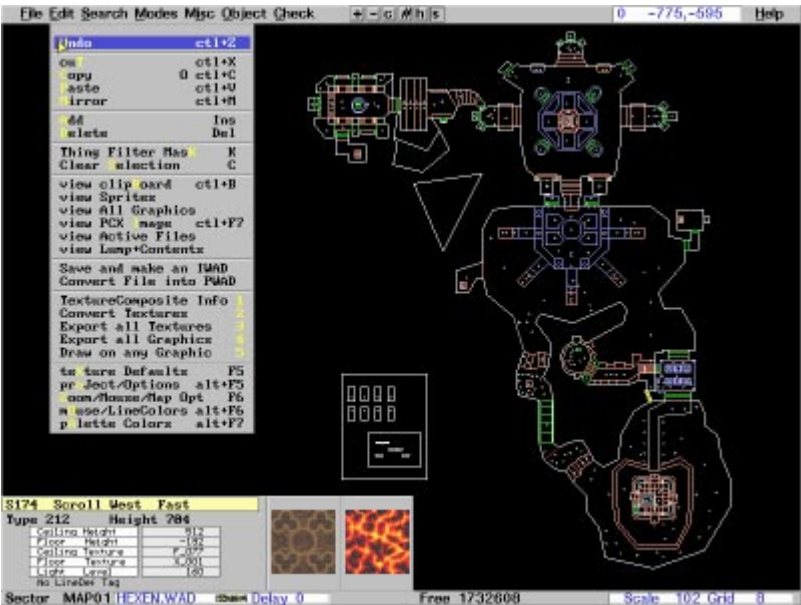


# THE EDIT MENU

These powerful options help you manage your graphics and give you a detailed glimpse into level construction. The first 11 selections are normally selected using the short-cut key shown on the right hand side of the option description. (Project Options were discussed in first time setup.)

DEEP040.BMP

The Edit Menu



# TEXTURE DEFAULTS

In this menu you set the defaults to use when you design a level. Typically, you want these to represent the basic flavor of the level. Of course, you don't use these defaults everywhere, since you selectively edit the textures and heights throughout the level. It can save you some work, when for many common areas, the textures reflect the theme you choose.

DEEP037.BMP

Texture defaults for drawing





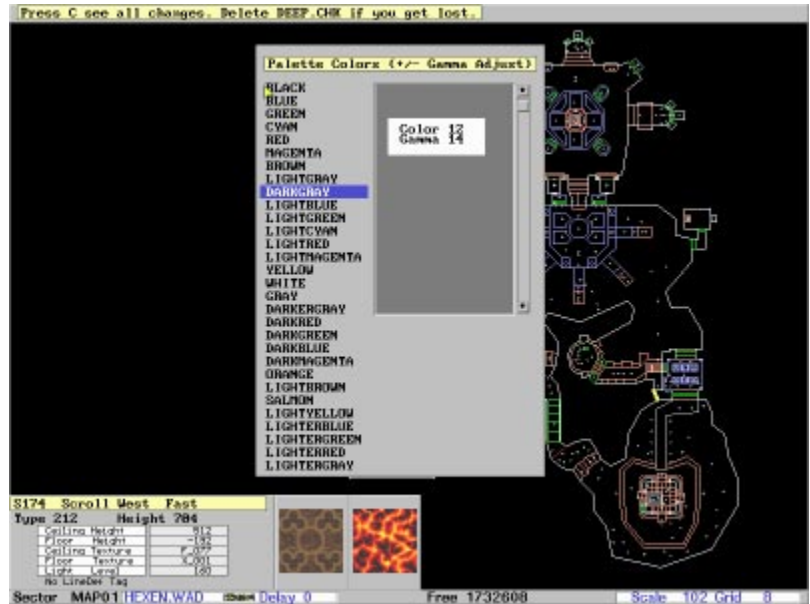
# PALETTE COLORS

With the option you can set the color to ANYTHING you like. If you want to get really wild, you can make RED display GREEN and BLUE be YELLOW. The idea is to make the colors reflect your taste and monitor display.

You also set the default **brightness or GAMMA** of the screen display. After you select a color to change press + or - to vary the lightness of the display. Press F1 while in color selection mode to see a display of all the colors available. Who knows, you might see something you like!

DEEP035.BMP

Palette and color options

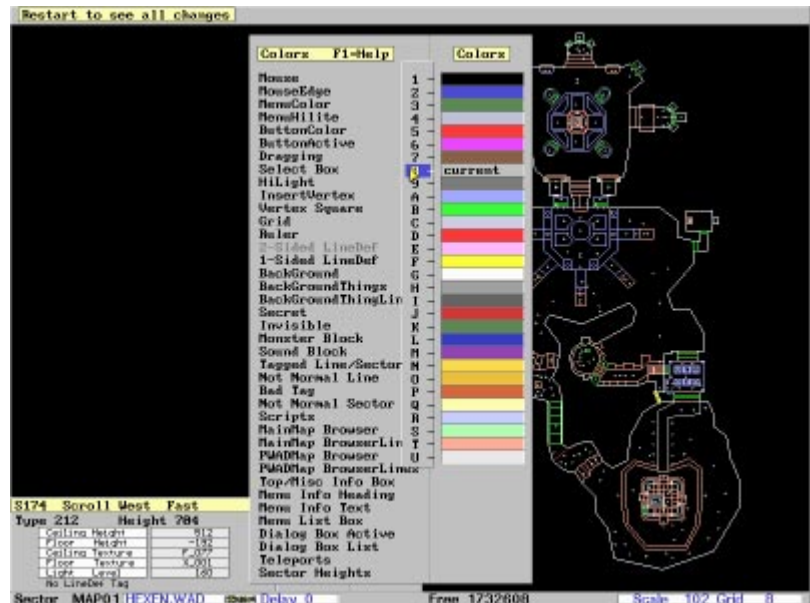


# MOUSE AND LINE COLORS

Using this selection you can reprogram the colors displayed by DeeP for the features shown. Combined with the ability to change the colors, you can achieve complete *color happiness!*

DEEP038.BMP

Color function assignment



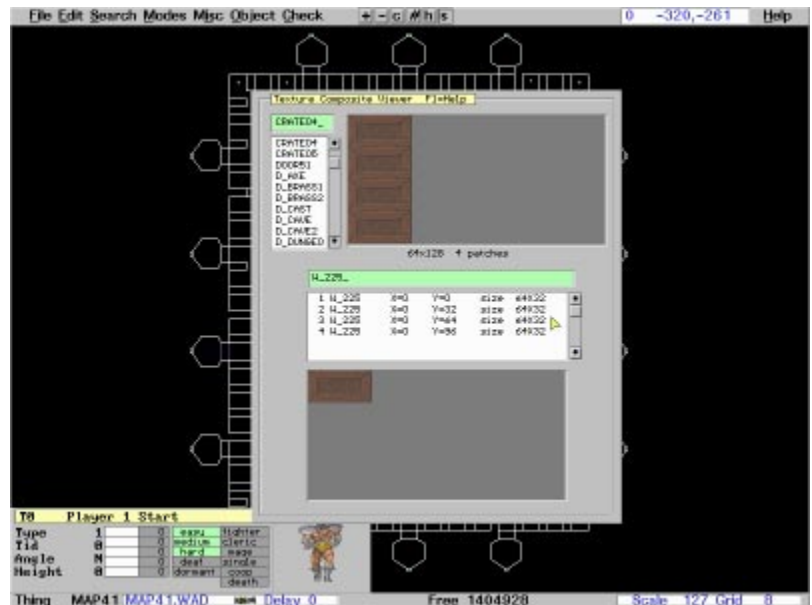
If you get the colors all messed up, you can delete DEEP.CHK and reinstall DEEP to get all the original defaults back.

## TEXTURE COMPOSITE INFORMATION

This selection shows you exactly what makes up each texture. The actual LUMP names and the offsets used are displayed. Use this information to save the correct LUMP name into a PWAD (see FILE menu) and then read this name so you can Draw on the texture!

DEEP064.BMP

Texture Composite Viewer



In this example, the texture CRATE04 is made up of 4 repetitions of the LUMP W\_225 with 4 different Y offsets. Move the scroll bar on the bottom right to view how each part displays.

## DRAW ON ANY GRAPHIC

Once a graphic is saved in a PWAD, this unique feature of DeeP permits you to quickly customize it using no other graphic programs. The example shown is basic, since your imagination is the limit. You can paste ANY graphic on top of another one, instantly creating a wall with a monster or anything else you can get your hands on!

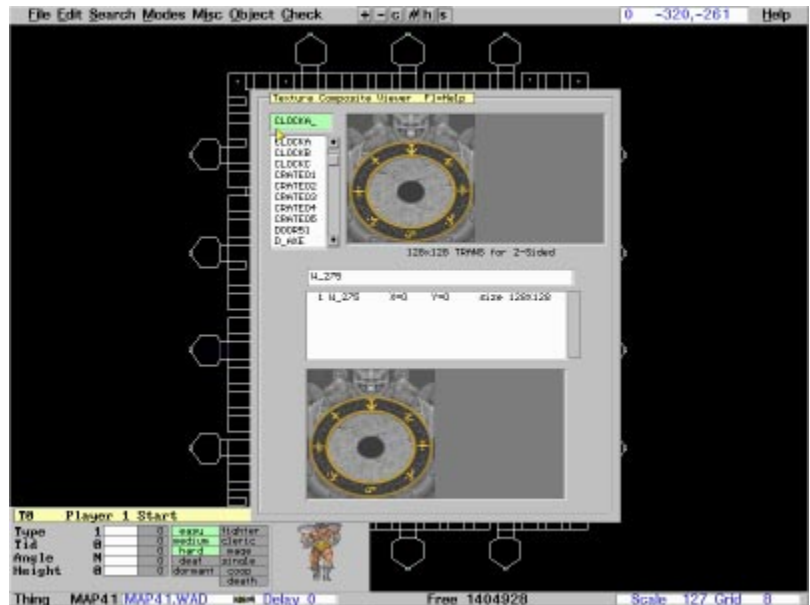
The next sequence shows the steps from creating a PWAD with a texture to making a modified version of the texture.



## 1. Getting the name of the texture

DEEP065.BMP

Shows the LUMP texture name of CLOCKA = W\_275.

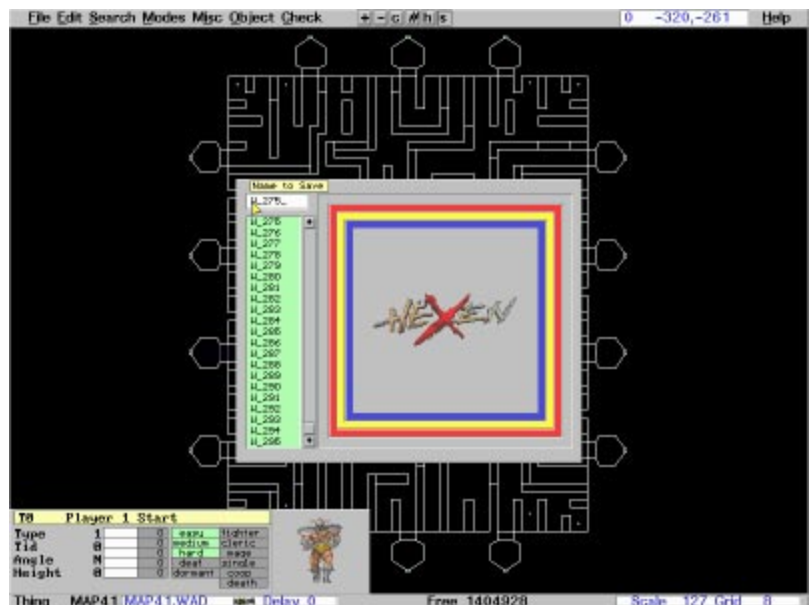


## 2. Save the texture in a PWAD

DEEP066.BMP

From the FILE menu, select Save the LUMP to a PWAD. Here we are selecting the LUMP name W-275 which represents CLOCKA.

Not shown here is a second prompt where we enter the New LUMP name. I kept it the same, W\_275, although you could change the name to match a different LUMP name and thereby replace that texture, since the last duplicate name is used by DOOM/HEXEN/HERETIC.



## 3. Read in a PWAD containing a texture lump.

I called the PWAD with the clock, CLOCKA.WAD and read it in using the read PWAD option in the FILE menu. I then selected **Draw on Any Graphic** from the Edit file menu. Next I selected W\_275 as the LUMP name to edit. Upon entry, the Rectangle select tool was activated and the statue face was selected and put into the drawing paste buffer (depicted by the white select rectangle surrounding the face).

## DEEP070.BMP

Here I've selected the statue face and place it in the paste buffer.



## DEEP071.BMP

The statue face has been pasted on top of the center black circle. The top has been filled in by repeatedly pasting in a small rectangle fill as shown in this picture. The paste buffer was used as a *brush*.

NOTE: In this example, the black hole was part of the graphic and I could paste on top of it. Some graphics, for example, the grated see through variety, do not have any pixels there and therefore DeeP does not permit you to draw there.



## DEEP072.BMP

Here I've pressed the right mouse button and popped up the palette selection for drawing.



## DEEP073.BMP

Here I've used the Line drawing tool to write HI on the picture (don't say it<g>) and I've pasted some more of the faces on the top to make a border.

Again, not shown here, I then pressed save, which overwrote the original file. You can also SaveAS and then you can place it in a different file.



## PCX FILE VIEWER

With the PCX file view you can view screen shots taken while playing the game. Use -DEVPARM for DOOM and -RAVPIC for HERETIC and HEXEN, then press F1 and a .PCX file is made. This is useful for helping you remember how an area looks.

Here is a sample screen shot viewed in DeeP. This is from the HEXEN version of the TUTORIAL level.

DEEP076.BMP

Sample HEXEN screen shot viewed using DeeP's screen shot viewer.

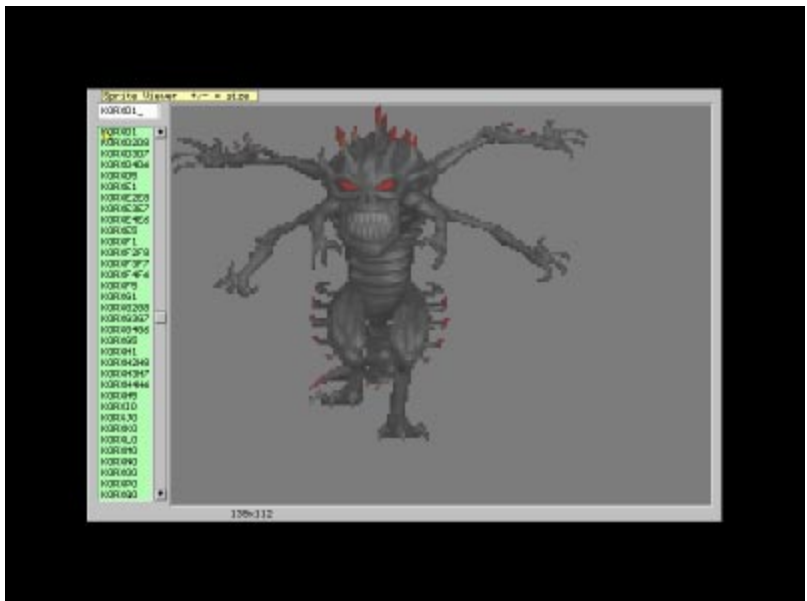


## SPRITE VIEWER

The sprite viewer shows the names of all the sprites. You need to know the name and save the LUMP in a PWAD if you want to draw or paste a sprite to a texture.

DEEP075.BMP

Sample Sprite viewer picture. You can also use view all graphics and get all the graphics in the IWAD.

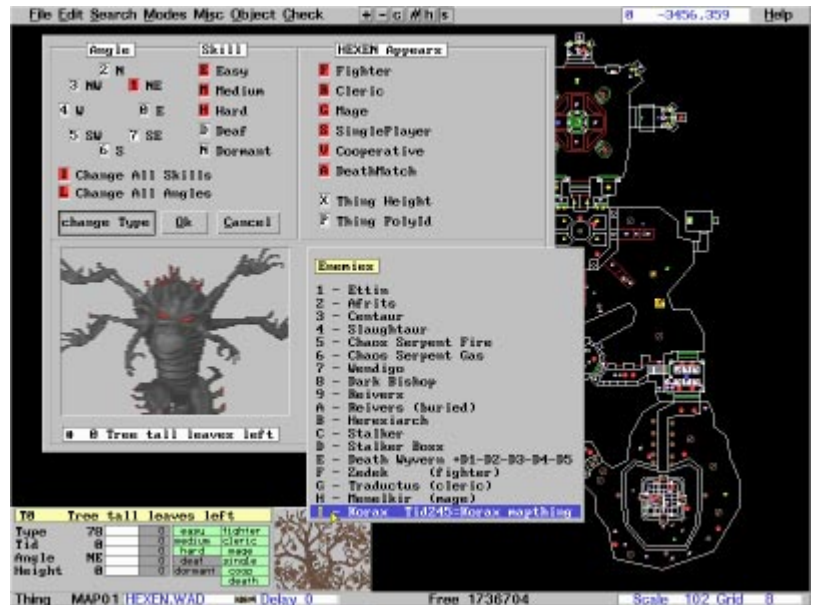


## THING EDITING

Things are inserted by pressing the Ins key. Press Enter or right mouse click to edit a thing.

## DEEP004.BMP

Representative Thing Edit screen. Only the first level is shown. There are more submenus that automatically follow to help you correctly edit HEXEN Things.

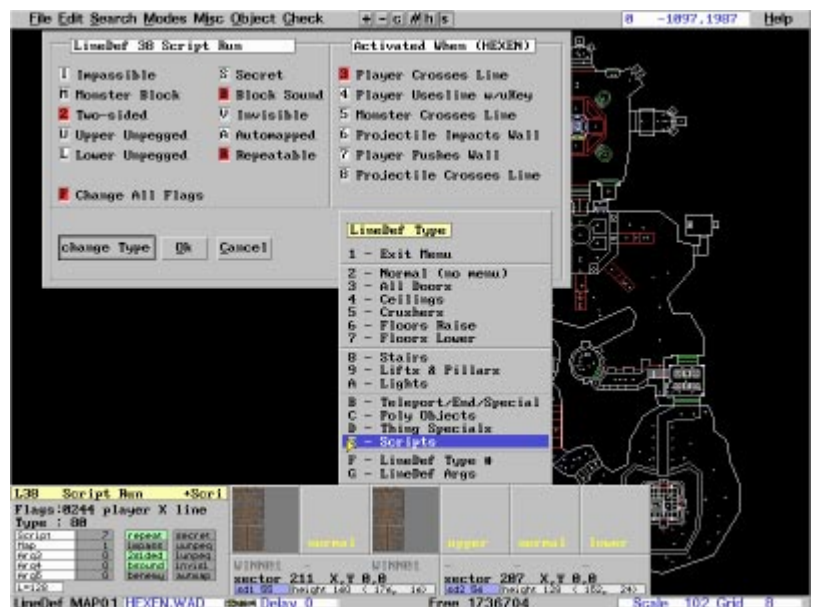


## LINEDEF EDITING

LineDefs are created in Tool Drawing mode. Press Enter or right mouse click to edit a LineDef.

## DEEP016.BMP

Representative LineDef edit screen. Submenus automatically follow where HEXEN arguments are entered.





In this LineDef editing screen the Texture names are being changed.

DEEP020.BMP

Changing a Lower Texture Name on a SideDef.



Browsing for a texture name. You can change the size of the browser image displayed by pressing the plus (+) and minus(-) keys.

DEEP021.BMP

Sample Texture browser screen. The size can be zoomed by pressing the plus (+) and minus (-) keys to make the graphic larger or smaller.

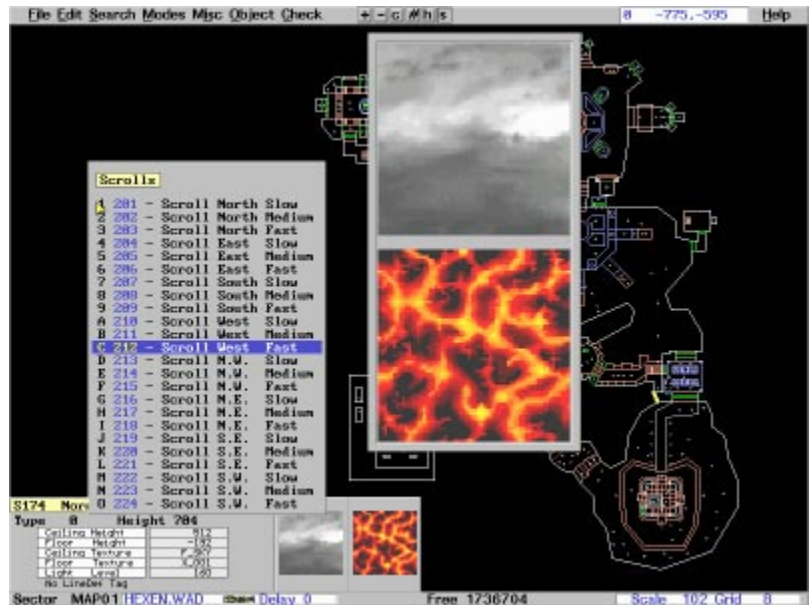


## SECTOR EDITING

Sectors are normally created automatically by any of the drawing tools.

DEEP029.BMP

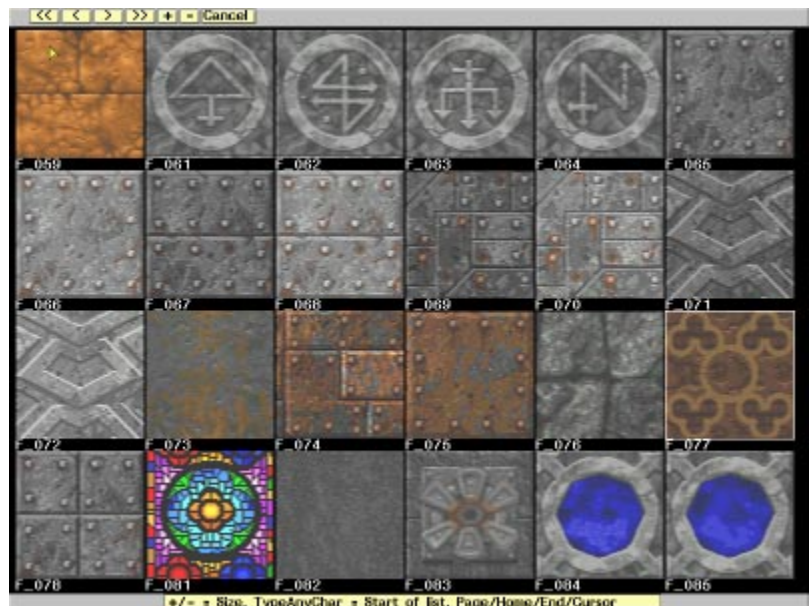
Sample Sector Editing screen. I have already selected the type of Sector.



Browsing multiple Floor and Ceiling textures.

DEEP032.BMP

This is a sample Floor and Ceiling texture browser screen. This size has been magnified 2X. As with all the browser, press plus(+) and (-) to change the size of the graphic displayed.



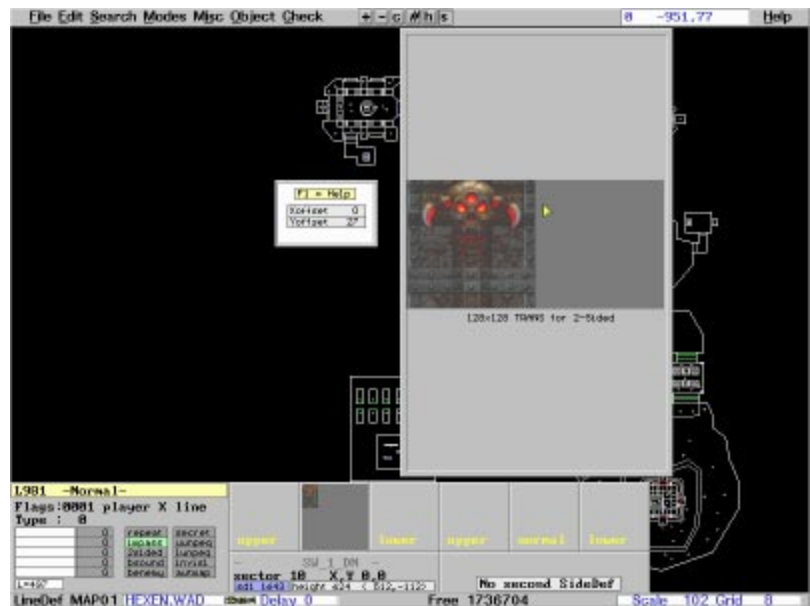
## ITA, INTERACTIVE TEXTURE ALIGNMENT



Interactive Texture Alignment gives you continuous X and Y alignment feedback on all three textures as you vary the X and Y offsets. Two methods of ITA are provided. One uses the mouse, the other the keyboard.

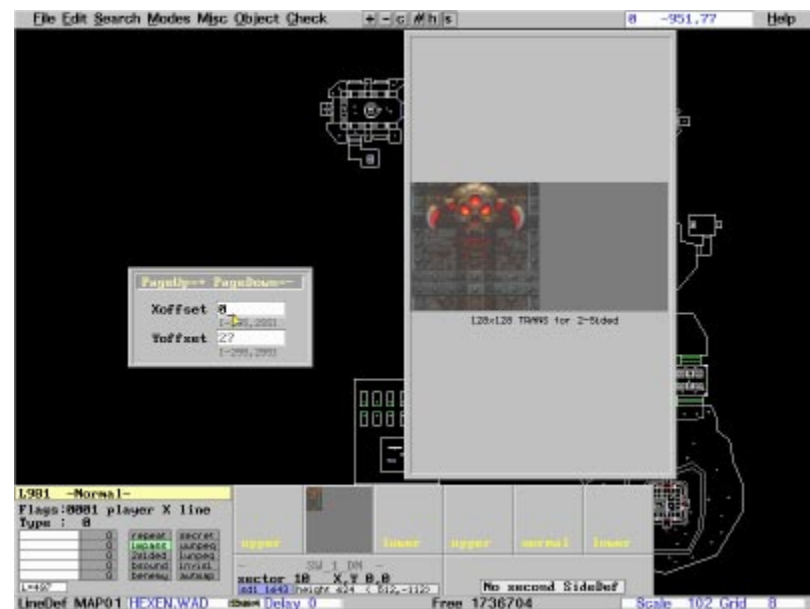
## DEEP024.BMP

This shows ITA alignment using the mouse. As you move the mouse, the X and Y offsets change and the texture shifts accordingly, giving you instant feedback on how it will look.



## DEEP025.BMP

This shows ITA alignment using the keyboard. As you enter X and Y offset values, the Texture(s) immediately shift to represent the values entered.



# TUTORIAL

The best way to learn how to use DeeP is to use it! Remember that F1 is a valuable aid. Use the help search feature to look for any reference to a question. Print the file TUTORIAL.DOC for beginning help on using DeeP to create and edit levels. It is also useful for persons new to DeeP, since it also shows how to use the commands. The file DEEPEXAM.WAD contains examples of some of the predefined structures you can quickly create, from windows to stairs.

The file textures are incorrect for HERETIC/HEXEN, but can be quickly changed using the F10 fix missing textures feature. Also adjust the linedefs as required. We have a converter for doing this, but haven't had time to document it. Soon it will be distributed with DeeP!

# FUTURE STUFF

DeeP is an expanding product with enhancements planned for Windows 95 and more graphic options. To see the latest version of DeeP, visit <http://www.wolfenet.com/~sbs/>

# REGISTERING DEEP

Print the file ORDER.FRM for complete information for registering DeeP. There are four payment options, check, credit card, COD or online at COMPUSERVE, GO SWREG 5392.

The SIN (Strength In Numbers) registration program, lets your friends register at 1/2 price when they register at the same time!

The order form also contains our latest U.S. Mail and Email addresses.