

**yesTRUEyesyesDTX - Help
InformationDTXyesyes02/08/95**

Contents

[General Info](#)

[Things you need to know](#)

[How do I...?](#)

[HOG files](#)

[PIG files](#)

[HOG Manager](#)

[Music Manager](#)

[Image Manager](#)

[Sound Manager](#)

[Cheat codes](#)

[Credits](#)

Help file produced by **HELLLP!** v2.3a , a product of Guy Software, on 1995-08-02 for Unregistered User.

The above table of contents will be automatically completed and will also provide an excellent cross-reference for context strings and topic titles. You may leave it as your main table of contents for your help file, or you may create your own and cause it to be displayed instead by using the I button on the toolbar. This page will not be displayed as a topic. It is given a context string of `__` and a HelpContextID property of 32517, but these are not presented for jump selection.

HINT: If you do not wish some of your topics to appear in the table of contents as displayed to your users (you may want them ONLY as PopUps), move the lines with their titles and contexts to below this point. If you do this remember to move the whole line, not part. As an alternative, you may wish to set up your own table of contents, see Help under The Structure of a Help File.

Do not delete any codes in the area above the Table of Contents title, they are used internally by HELLLP!

[Distributing changes](#)

[Pulse Code Modulation \(PCM\) Format](#)

[Windows display drivers and the Image Manager](#)

[DTXPATCH.EXE](#)

[DTX Version history](#)

General Info

DTX allows you to examine, save, and replace most of the MIDI music, images, and sounds in registered versions of the game Descent. It also lets you create and manipulate HOG files that may contain new Descent levels, new soundtracks, and other game resources.

DTX is distributed as shareware. If you are a CompuServe member you can register the product online by GOing SWREG and entering registration number [5995](#). If you are not a CompuServe member, please see the file README.TXT for more information.

Important note

Changing the original Descent game with tools like DTX voids the warranty and claim to technical support from Interplay. Make sure you save the original game files before starting to use DTX.

[Version history](#)

Known problems

- Replaced images don't always look good if the Windows display driver supports less than 64K colors

E-mail

Please send comments/bug reports to one of the following addresses:

Internet: stefan_nilsson@msn.com

CompuServe: 100277,2432

msn: Stefan_Nilsson

DTX is Copyright © 1995 Stefan Nilsson

Descent is Copyright © 1994, 1995 Parallax Software Corporation.

Descent is a trademark of Interplay Productions, Inc.

Things you need to know

Below are some of the concepts you should be familiar with to be able to use DTX to its fullest potential.

Main resource files

Descent's game data (images, sounds, music etc.) are contained in two fairly large files: **DESCENT.HOG** and **DESCENT.PIG**. **DESCENT.HOG** is a library file that contains ordinary DOS data files stored after each other (223 files in version 1.0 of registered Descent). Some examples of files stored in DESCENT.HOG are: IPLOGO1.PCX (the Interplay logo), LEVEL01.RDL (the first level of the game), and GAME01.HMP (the MIDI soundtrack for the first level).

When Descent wants to read a file from DESCENT.HOG, it starts by checking if a file with the same name exists in the Descent directory on the hard disk. If it does find such a file, it will read this file, and ignore the original file in DESCENT.HOG. (You could try this by copying any PCX picture file to your Descent directory, and renaming it to IPLOGO1.PCX. When you start Descent, this picture will be displayed instead of the Interplay logo).

DESCENT.PIG contains other game resources, mainly graphics and digital sounds. There is no simple way of replacing these resources without permanently altering the DESCENT.PIG file.

Additional levels

When Parallax designed Descent, they made it possible to add your own levels to the game. The recommended steps for doing this are:

1. Create one or more new levels (RDL files) with a Descent level editing tool (such as **Devil** by Achim Stremplat).
2. Put the new level(s) in a separate HOG file.
3. Create a mission (MSN) file with the same name as the HOG file.
4. Put the HOG and MSN files in your Descent directory.

When you select 'New Game' in Descent, the selection list will contain your newly created mission.

What can DTX do?

DTX lets you manipulate the contents of both DESCENT.HOG and DESCENT.PIG. Most of the resources in these files can be changed/replaced, and there is special support for images, digital sounds, and MIDI music.

With DTX, you can create special 'patch' files for distributing changed graphics and digital sounds.

DTX also lets you specify mission details for any additional HOG file, and automatically loads/creates/saves a MSN file in the same directory as the HOG file.

How do I...?

Below are step-by-step instructions for completing some common tasks with DTX.

[Add Descent levels to a HOG file](#)

[Add new MIDI music to a Descent level](#)

[Replace images/digital sounds in Descent](#)

Adding Descent levels to a HOG file

This instruction assumes that you have already created one or more Descent custom levels residing on your disk.

- Create a new HOG file (Select **File/New HOG File** from the menu)
- Display the Hog Manager (Press the Hog Manager button  in the new HOG file window)
- Add any Descent levels to the HOG file (Press **Add/Replace** and select an RDL file from disk)
- Give your mission a name, for example 'My New Mission' (Press **Mission Details**, enter a mission name, and press **Done**)
- Save the HOG file (Select **File/Save HOG File As** from the menu)



If you saved the HOG file as, for example, MYNEW.HOG, DTX automatically created a mission file called MYNEW.MSN in the same directory as MYNEW.HOG.

Put MYNEW.MSN and MYNEW.HOG in the Descent directory. Next time you start Descent, 'MY NEW MISSION' will show up on the menu when you start a new game.

Adding new MIDI music to a Descent level

This instruction assumes the Descent level is already in a HOG file.

The first Descent level in a HOG file always uses the Level 01 music resource (**game01.hmp**), the second level uses the Level 02 music resource (**game02.hmp**) and so on. To add new music to the first level in the HOG file, you will need to copy the resource **game01.hmp** from the main hog file and paste it into your custom HOG file in the following way:

- Open the HOG file containing the Descent level (Select **File/Open HOG File** from the menu and select the HOG file)
- Display the main Music Manager (Press the Music Manager button  on the main toolbar)
- Copy a music resource to the clipboard (Select the Level 01 music resource, press the right mouse button, and select **Copy**)
- Close the main Music Manager (Press **Done**)
- Display the Music Manager (Press the Music Manager button  in the new HOG file window)
- Paste the music resource into the new HOG file (Press the right mouse button, and select **Paste**)
- Replace the music resource with any MIDI or HMP file (Select the music resource in the music list, press **Replace**, and select a MIDI or HMP file from disk)
- Save the HOG file (Select **File/Save HOG File As** from the menu)

When the mission using this HOG file starts next time in Descent, the new music will be heard instead of the original music in DESCENT.HOG.

Replacing images/digital sounds in Descent

There is no built-in support in Descent for changing images (like wall textures) or digital sounds easily. DTX makes it possible anyway, but this requires changing the file DESCENT.PIG permanently.

You could of course save DESCENT.PIG after making changes in the main Image/Sound Managers, but this is not a practical way to do it if you want others to be able to use your new images and/or sounds.



The distribution solution works as follows:

- Use DTX to save all changed/added resources in a PIG patch file.
- Distribute the PIG patch file together with [DTXPATCH.EXE](#), and make sure everyone runs DTXPATCH.EXE with your patch file on their DESCENT.PIG file before loading your new Descent level. (DTXPATCH.EXE will automatically save a backup copy of the original DESCENT.PIG file).


This solution is a bit ugly, but it works, and lets you distribute modified Descent resources in a small patch file. Hopefully Parallax/Interplay will make it easier to incorporate modified resources in future versions of Descent.

Below are detailed instructions on creating a PIG patch file:

Adding/replacing images

- Create a new PIG patch file (Select **File/New PIG Patch File** from the menu)
- Display the main Image Manager (Press the Image Manager button  on the main toolbar)
- Copy any image resource(s) to the clipboard (Select any image resource(s), press the right mouse button, and select **Copy**)
- Close the main Image Manager (Press **Done**)
- Display the PIG patch Image Manager (Press the Image Manager button  in the new PIG patch file window)
- Paste the image resource(s) into the new PIG patch file (Press the right mouse button, and select **Paste**)
- Replace the image resources with any BMP file (Select an image resource in the image list, press **Replace**, and select a BMP file from disk)
- Save the PIG patch file (Select **File/Save PIG Patch File As** from the menu)


Adding/replacing digital sounds


This is done in exactly the same way as when adding images above, except you use the Sound Manager  instead of the Image Manager. The same PIG patch file can be used for both images and sounds.

HOG files

The main HOG file (DESCENT.HOG)

When DTX starts for the first time, it will ask for the name of a main Descent HOG file. If a valid HOG file name is supported, the file will load, and a status bar will indicate the name of the file and the file's version number. Currently, versions 1.0 and 1.4 of registered Descent are supported.

All resources in the main HOG file can be exported to disk, or replaced with other resources. This is done through the [HOG Manager](#) (Select **Resources/HOG Manager** from the menu, or press  on the toolbar).

DTX allows for special handling of the MIDI music data contained in DESCENT.HOG. The [Music Manager](#) (Select **Resources/Music Manager** from the menu, or press  on the toolbar) can play all MIDI songs, save them to disk as MIDI or HMP files, and replace the current songs with other MIDI or HMP files.

When HOG resources have been changed, the resource file can be saved back to disk. Don't forget to make a backup copy of the original DESCENT.HOG before saving to a file with the same name in the Descent directory.

Additional HOG files (*.HOG)

Other HOG files than DESCENT.HOG normally contains one or more custom Descent levels. One example of such a file is CHAOS.HOG that is distributed with Descent. CHAOS.HOG contains five Descent levels without robots, and it is supposed to be used as a multiplayer mission only.

DTX can create and edit these additional HOG files as well. Select **File/New HOG File** to create a new HOG file, or select **File/Open HOG File** to open an existing HOG file. A small window will appear below the main HOG/PIG status bars for each HOG file that is opened. Each window has its own HOG Manager and Music Manager buttons.



Resources can be copied from the main HOG file and pasted to an additional HOG file, or the other way around. See the description of the respective manager function.

Each time a HOG file is loaded or saved, it will be added to the 'Recent Files List' that appears below the Exit choice in the File menu. This list is a convenient shortcut for loading up to ten previously edited HOG files.

PIG files

The main PIG file (DESCENT.PIG)

When DTX starts for the first time, it will ask for the name of a main Descent PIG file. If a valid PIG file name is supported, the file will load, and a status bar will indicate the name of the file and the file's version number. Currently, versions 1.0 and 1.4 of registered Descent are supported.

All image and sound resources in the main PIG file can be viewed/played, exported to disk, or replaced with other resources. The images are controlled from the [Image Manager](#) (Select **Resources/Image Manager** from the menu, or press  on the toolbar). The sounds are controlled from the [Sound Manager](#) (Select **Resources/Sound Manager** from the menu, or press  on the toolbar).

When image/sound resources have been changed, the resource file can be saved to disk. Don't forget to make a backup copy of the original DESCENT.PIG before saving to a file with the same name in the Descent directory.

PIG patch files (*.DTX)

PIG patch files are used for [distributing changed images and/or digital sounds](#) to other Descent users. They have the same file format as the DESCENT.PIG file of registered Descent, version 1.0.

Select **File/New PIG Patch File** to create a new PIG patch file, or select **File/Open PIG Patch File** to open an existing PIG patch file. A small window will appear below the main HOG/PIG status bars for each PIG patch file that is opened. Each window has its own Image Manager and Sound Manager buttons.

Resources can be copied from the main PIG file and pasted to any open PIG patch file, or the other way around. See the description of the respective manager function.

Each time a PIG patch file is loaded or saved, it will be added to the 'Recent Files List' that appears below the Exit choice in the File menu. This list is a convenient shortcut for loading up to ten previously edited PIG patch files.

HOG Manager

The HOG Manager shows all file resources contained in the current HOG resource file.

Type: The file type of the resource. Used for sorting the resources.

Name: The file name of the resource.

Size: Resource length in bytes.

Replaced: An 'R' in this column indicates that the resource has been added or replaced with another resource since the HOG file was loaded.

Commands

Mission Details: Maintains the mission specific info for the current HOG file (not applicable to the main HOG file). This button is grayed-out if the HOG file does not contain any Descent level files (*.rdl).

Save: Saves the resource to disk. Select multiple resources for saving by using Ctrl-click and/or Shift-click in the resource list window.

Add/Replace: Reads any file from disk and adds/replaces it into the HOG file.

Pop-up menu commands (mouse right-click)

Delete: Deletes the selected resources from the current HOG resource file (deleting from the main HOG file is not allowed, since this could prevent Descent from working correctly).

Music Manager

The Music Manager shows all MIDI music in the current HOG resource file.

Description: A short description of the music. (The 'FM Mix' sounds are special versions for sound cards using an OPL-x FM chip). Please note that there are only 22 level soundtracks in the game. Level 23 to 27 use the soundtracks for level 1 to 5, and the three secret levels use the soundtracks for level 2, 3, and 4, respectively.

Length: Length in minutes and seconds.

Name: Descent's internal name of the music.

Replaced: An 'R' in this column indicates that the music has been changed and/or replaced since the resource file was loaded.

Commands

Play/pause/stop/rewind: Controls music playback.

Save HMP: Saves the music as a HMP file (a special MIDI format created by Human Machine Interfaces). Select multiple music for saving by using Ctrl-click and/or Shift-click in the music list window.

Save MIDI: Saves the music as a standard MIDI file (type 1). Select multiple music for saving by using Ctrl-click and/or Shift-click in the music list window.

Replace: Reads a HMP or MIDI file from disk and replaces the current music. MIDI files must be standard, type 1 files.

Adjust volume: Changes the volume of the music to between 1% and 300% of the original volume. Please note that many MIDI files are already at or near maximum volume, so the change may sometimes be difficult to notice.

Pop-up menu commands (mouse right-click)

Copy: Copies the selected music to the clipboard.

Paste: Pastes any music from the clipboard into the current HOG resource file.

Delete: Deletes the selected music from the current HOG resource file (deleting from the main HOG file is not allowed, since this could prevent Descent from working correctly).

Note on playing music from the Music Manager

If there is no sound when pressing Play in the Music Manager, or the music sounds strange, try reconfiguring your Windows MIDI Mapper settings. If you can play a standard MIDI file with the Windows Media Player, the Music Manager should work as well. If everything is correctly configured, the songs should sound almost exactly as they do when playing Descent.

Note on MIDI files

If not all MIDI channels are heard when playing Descent after importing a MIDI file to a HOG file, try changing some of the MIDI channel numbers in the MIDI file, then reimport it.

Image Manager

The Image Manager shows all images in the current PIG resource file.

Description: A short description of the image.

Size: Image width and height in pixels.

Name: Descent's internal name of the image.

Transparent: Any white pixels (palette color index 255) of the image will not be drawn on the screen.

See-through: Any dark brown pixels (palette color index 254) of the image will be replaced with whatever is beyond the wall with this texture on it.

Animated: The image consists of two or more image frames that will be shown in sequence as an animation. (Note that some of the images are not really animated, but still share the same name. Look at 'gauge18' in the 'Cockpit Info' section for an example).

Replaced: An 'R' in this column indicates that the image has been replaced with another image since the resource file was loaded.

Commands

Save: Saves the image as a BMP file (256 colors). Select multiple images for saving by using Ctrl-click and/or Shift-click in the image list window. The frames of an animated image will automatically get an extension corresponding to their position in the animation.

Replace: Reads a BMP file from disk and replaces the current image. The frames of an animated image must be replaced one at a time. See note about [Windows display drivers](#).

Show frames: Shows all frames of an animated image.

Hide frames: Hides the frames of an animated image.

Pop-up menu commands (mouse right-click)

Copy: Copies the selected images to the clipboard.

Paste: Pastes any images from the clipboard into the current PIG resource file.

Delete: Deletes the selected images from the current PIG resource file (deleting from the main PIG file is not allowed, since this could prevent Descent from working correctly).

Replacing an image

When a BMP file is opened to replace the current image, you will be given the opportunity to control the clipping of the imported image. The clipping dialog has the following options:

X offset: The spin button changes the X offset into the imported image.

Y offset: The spin button changes the Y offset into the imported image.

Width: The spin button changes the width of the new image. All frames of an animated image must have the same width.

Height: The spin button changes the height of the new image. All frames of an animated image must have the same height.

Stretch: When this button is pressed, the imported image will be stretched as necessary to completely fill the area of the new image. In this case, the X and Y offset values will have no effect.

When the Ok button is selected, DTX will convert the BMP file to a Descent bitmap, and optimize the palette as far as possible. Please note that images with many different colors may not look good after optimizing. This is because the available colors are restricted to those contained in Descent's standard palette.

Sound Manager

The Sound Manager shows all digital sounds in the current PIG resource file.

Description: A short description of the sound.

Length: Sound length in seconds.

Name: Descent's internal name of the sound.

Replaced: An 'R' in this column indicates that the sound has been changed and/or replaced with another sound since the resource file was loaded.

Commands

Play: Plays the sound.

Save: Saves the sound as a WAV file (11025 Hz, 8 bit, mono). Select multiple sounds for saving by using Ctrl-click and/or Shift-click in the sound list window.

Replace: Reads a WAV file from disk and replaces the current sound. The WAV file must be a standard, unpacked **PCM** file, and can be of any format (e.g. 44100 Hz, 8 bit, stereo); it will be automatically resampled and converted to Descent's internal sound format.

Adjust volume: Changes the volume of the sound to between 1% and 300% of the original volume.

Pop-up menu commands (mouse right-click)

Copy: Copies the selected sounds to the clipboard.

Paste: Pastes any sounds from the clipboard into the current PIG resource file.

Delete: Deletes the selected sounds from the current PIG resource file (deleting from the main PIG file is not allowed, since this could prevent Descent from working correctly).

Mission Details

The Mission Details dialog shows all mission specific information for the current HOG file.

Mission Name: The name that will show when selecting a new mission in Descent.

Mission Type: **Normal or Anarchy** means the mission will be selectable as either a single-player or multi-player game. **Anarchy only** missions will only be selectable as a multi-player game.

Level Order: Shows the playing order of the different levels in the current HOG file. The arrows move the marked level up or down the playing order.

Comments: Optional text. This text will be placed at the bottom of the MSN file.

All mission details will automatically be saved in a MSN file when the current HOG file is saved.

Cheat codes

Here is a list of all known Descent cheat codes as of July 1995.

All cheat codes should be typed in when playing. First, enable cheats by typing **GABBAGABBAHEY**. You will receive a 'Cheats Enabled' message. Then, type one or more of the following codes:

Shareware/registered cheat codes

FARMERJOE - Warp to another level
GUILE - Cloak on/off
MITZI - Get all keys
RACERX - Invulnerability on/off
SCOURGE - Get all weapons in shareware version
TWILIGHT - Recharge shields
Alt+F in map mode - Display full map

Registered only cheat codes

AHIMSA - Robot firing on/off
BIGRED - Get all weapons in registered version
BRUIN - Extra life
BUGGIN - Turbo speed on/off
FLASH - Mark the exit path with energy powerups

Registered only (version 1.4/1.4a) cheat codes

ASTRAL - Pass through doors, grates, fans, etc.
POBOYS - Destroy Main Reactor/Boss
PORGYS - Get all weapons in registered version, increase firepower

Credits

Among others, the following people deserve a special thanks:

- Achim Stremplat, the creator of Devil, for letting others share his important research
- Michael Salzlechner and Robert Zoz, for beta testing and great suggestions
- Mac, Squid, and Suede at CompuServe's Action Games Forum, for beta testing and invaluable help
- Borland, for creating such a brilliant development tool as Delphi
- The people at Parallax and Interplay, for giving us one of the greatest games ever

Pulse Code Modulation (PCM) Format

This is the standard Windows sound format. It stores the sound as uncompressed 8 or 16 bit samples. To convert any other WAV file format to PCM, use a suitable converter, such as the Sound Recorder if you are using Windows 95.

Windows display drivers and the Image Manager

To get the best results when replacing images, use a Windows display driver with 64K colors or more. A 256 color display driver will give good results when the imported BMP files have 256 colors or less. A 16 color display driver will only work well with BMP files of 16 colors or less.

DTXPATCH.EXE

This utility patches DESCENT.PIG with the information in a PIG patch file (*.DTX).
Type **DTXPATCH** in a DOS window for more information.

DTX Version history

1.0

- HOG file support (import/export)
- MSN file support
- Music resource editing
- Distribution utility for images and sounds

0.95 to 0.99

- Internal versions, not publicly released

0.94

- Export of all frames in animated images
- Export of multiple resources
- Better clipping routines when importing BMP files
- Recent Files List
- Toolbar

0.93a

- First public version

