

This has been a DreamWorld Production.
II Infinitum!

DreamWorld Presents...

DuelTris

The Final Challenge



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Music
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DreamWorld Software

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Preface

Thank you for purchasing DuelTris! This limited edition package includes several "extras" that the regular \$15 registered version does not. You should have received the clear 3.5" disk case with color insert along with this small printed manual. Shareware doesn't have to be drab...we hope you like it. DuelTris features great gameplay, complemented by fabulous graphics and fantastic sound (IMHO). Please support our future shareware projects by not distributing this version of DuelTris!

Thanks,
Steve & Dave

Getting Started

To start the game from the Finder, double-click the mouse on the DuelTris icon. After a few moments, you will see the DuelTris title graphic screen. Click the mouse once to continue to the DuelTris Desktop.

You may set various options, such as the number of players or computer skill level, prior to beginning the game. To begin playing DuelTris, select Play Game under the File menu. Alternatively, you may press the Open Apple and P keys together.

If you leave the computer alone for several minutes, DuelTris will automatically begin a demonstration game.

System Requirements

DuelTris requires an Apple IIGS with one (1) 3.5" disk drive and at least 1.25 megabytes of memory. System Software 5.0 or greater is required.

Stereo sound and color displays are optional, but highly recommended.

Installing DuelTris on a Hard Drive

Select a hard drive partition with at least 500K free, and create a new folder for DuelTris. Copy the contents of the DuelTris disk to this folder. If you are using System 5.0.x, copy the file in the DuelTris ICON folder to the ICON folder on your hard disk system boot partition. If you are using System 6, the icon is automatically created.

How to Play

The challenge of DuelTris is to create filled lines out of falling geometric shapes. The more quickly you can create lines, the higher your score will be. Once a line is filled, it disappears. If you are unable to complete lines in time, the falling geometric shapes will continue to pile up. When the pile reaches the top of the screen, the game is over.

There are seven basic shapes and six "special pieces". Special shapes include a destructive gun, a "fill" gun, a bomb, and a crushing anvil. Points are accumulated for every piece used, hence the longer you play, the more points you'll get. The ability to quickly place pieces will enable you to rack up points rapidly. You are awarded points for completely-filled lines. See the SCORING section for precise scoring information.

How to Play (cont'd)

For single player games, the level of difficulty will increase for every ten lines completed. This difficulty affects on the speed at which the game runs. In two player games, there are no levels. Instead, the speed of the game will increase and decrease.

The Play Screen

When you start playing, you will see a graphic screen divided into two fields. The left playfield of the screen is for Player 1. The right playfield is for player 2. Below these two areas is the DuelLINK, through which competed lines are sent to disrupt the opposing player.

Keyboard Controls

	Player1	Player2
Move Left	A	4
Move Right	D	6
Rotate	S	5
Drop	[SPC]	0
Drop by one line	X	2

Pieces can not be moved through other blocks or off the playing field. If you wish to rotate a piece, you must make sure that there is enough room.

Other Keys

<ESC>	Pause the game. Pressing any key will continue.
<CTRL> Q	Quit from the current game, and return to the DuelTris Desktop.

Other Keys(cont'd)

<CTRL> S	Turn the sound effects ON or OFF.
<CTRL> M	Turn the music ON or OFF.

Scoring

Straight Line	4 pts
Square	5 pts
S pieces	7 pts
L pieces	6 pts
T piece	5 pts
Special pieces	100 pts

Dropping a piece early will give you bonus points. You receive points equal to $2 * \text{the number of lines from the bottom of the playfield}$. Thus, if you drop a piece 5 lines from the bottom of the playfield, the bonus is 10 points.

Scoring (cont'd)

1 line =	50 pts
2 lines =	100 pts
3 lines =	200 pts
4 lines =	400 pts

In a one player game, going up a level will award an additional bonus equal to the level number * 100.

High Scores List

Players who score within the All Time Top Ten will be allowed to enter their name for instant immortality. High scores are automatically saved to disk.

Desktop Reference

Apple Menu

About DuelTris - Displays information about DuelTris.

File Menu

Play Game - Start the game. Set any game options before you start the game. Make sure that all open windows (like a New Desk Accessory) are closed before beginning.

Load Tileset... - Allows you to load in alternate tilesets for DuelTris.

Save Preferences - Saves the current DuelTris settings. This includes keyboard setup information. The settings will be preserved should you decide to quit and restart DuelTris.

File Menu (cont'd)

Close - Has no function in DuelTris. However, if a New Desk Accessory (NDA) is open, selecting this item will close that window.

Quit - Quits DuelTris. To preserve the game settings, use the "Save Preferences" function described above.

Edit Menu

The items listed under the Edit Menu have no function in DuelTris. They are included for compatibility with system NDAs.

Options Menu

One Player - Select this menu item for one player action. One Player mode disables options that are specific to Two Player mode.

Options Menu (cont'd)

Two Players - Select this menu item for two player action. Two player features are enabled. See VS Mode, Player Continues, Inverse, and DuelLINK described below.

Music - Enables or disables music.

Sound Effects - Enables or disables sound effects.

Next Shape - Enables or disables the "Next Shape" window during gameplay. Enabling this option will allow players to plan in advance by showing what piece is coming after the current one is used.

Special Pieces - Allows special pieces in the game. See below.

Options Menu (cont'd)

VS Mode* - Enables or disables VS Mode. VS Mode keeps track of the number of wins for player one and two, which allows for more competitive action. And the end of each game, DuelTris will display the number of wins for each player, and allow continues if desired.

Player Continues* - Enables or disables continuations. When enabled, one player may play on should the other player lose. Otherwise, both games are terminated when one player loses.

DuelLINK* - Toggles DuelLINK on or off. See below.

Items marked with * are used only for two-player games. These menu items are dimmed if the One Player option is selected.

Options Menu (cont'd)

View High Scores - Displays the high score list. The High Score Screen displays the player's name (up to 14 characters), the level attained, and the score. If the high score was made in two-player mode, the level will be displayed as "VS".

Reset High Scores - Erases the high score list.

Player 1 / Player 2 Menu

Computer* - Player 1 is controlled by the computer.

Keyboard - Player 1 is controlled by the keyboard.

Setup - Displays a window which allows the user to configure the control keys for Player 1.

Player Menus (cont'd)

Slowest* - The slowest "thinking" speed for the computer player.

...

Insane* - The fastest "thinking" speed for the computer player.

Level

1 - The lowest (slowest) starting difficulty level.

...

10 - The highest (fastest) starting difficulty level.

Special Pieces

There are six special pieces, identified by the letter or symbol drawn on an otherwise ordinary shape. A special piece is "activated" by completing a line containing that letter or symbol. The special pieces are described below.

(I)nverse - Reverses the other player's keyboard controls. The word 'INVERSE' appears under the Next Shape area for the affected player. Inversed controls go back to normal when the affected player completes a line. This option is disabled in one player mode. If you manage to INVERSE the computer player, its "thinking" speed drops by one level.

(S)hoot - When activated, a blue gun will appear that shoots bullets, destroying pieces directly below it. Press the rotate key to fire

Special Pieces (cont'd)

the gun.

(F)ill - When activated, a green gun will appear that shoots blocks. You can use this to shoot blocks into spaces directly below the gun. Press the rotate key to fire the gun.

(I) Anvil - A large anvil appears. The anvil will destroy any block in its way during its way down to the bottom of the playfield. This piece can not be rotated.

(4) Lines - This piece will remove 4 lines above where the piece was activated.

(o) Bomb - The next piece will be a bomb. It will destroy blocks immediately adjacent to it. The bomb is activated when it no longer can move. Careful placement of the bomb will maximize the area affected.

DuelLink

The empty area below the playfields is the DuelLINK. When DuelLINK is enabled, dueling players can add up to four lines to the other player's side, wreaking havoc on the player. These lines are passed automatically when a player completes at least two lines.

In general, the pieces will slide across the bottom of the screen to be added to the unfortunate player's pile. The player's current piece will also disappear, causing even more confusion. The exception is when the other player is using a special piece such as a gun or bomb. The DuelLINK will wait until the special piece is used before adding lines to the pile.

Changing Keyboard Controls

Selecting the Keyboard item under the Player 1 or Player 2 menu will bring up a configuration window. Commonly-used keys can be selected by using the pop-up menus, which reference "other key", tab key, space bar, left arrow, right arrow, down arrow, and up arrow.

When other key is selected, you may enter that key in the box right of the pop-up menu. Put both the key and the key+<shift> in that box. For example, if you set the 'A' key as You can complete up to four lines at once. Since completing multiple lines is more difficult than completing a single line, you are rewarded with more points.

Changing Controls (cont'd)

"move left" control, select "other key" from the pop-up menu next to the word "Left:". In the text box right of the pop-up, put the two characters, "aA".

The other selections in the pop-up menu are keys that can not be typed directly. Use them to select key combinations that please you.

Click on the "Okay" button or hit <return> to save the control configuration. Click on "Cancel" if you do not wish your changes (if any) to take effect. To permanently save the key configuration, see the "Save Preferences" command above. To start the game, double-click the mouse on the DuelTris icon. After a few moments, you will see the DuelTris title graphic screen. Click the mouse once to continue to the DuelTris Desktop.

Using The DreamGrafix External

An external command for DreamGrafix which allows you to create your own tilesets is included with DuelTris.

To install the external, copy the file entitled "Tilecut" found in the "DG.Ext" folder on the DuelTris disk, into the "Externals" folder in the DreamGrafix directory.

To create your own tileset, select "Open..." within DreamGrafix. Load the template file called "Template", which may also be found in the "DG.Ext" folder on the DuelTris disk. The Template has all of the different shapes and special pieces arranged on the screen.

You may edit the shapes as you please, but it is important that the shapes do not change

positions. After editing the shapes, save the screen with a different name. Click on the Tilecut button, which will be located at the end of the top row of buttons in DreamGrafix. DreamGrafix will prompt you for a name and a location to save the file to.

To test a tileset, use the "Load Tileset..." menu option in DuelTris. The preferences save the current tileset being used, and will load it upon launch.

There are seven different shapes. Each shape is made up of four blocks. The individual blocks are 8x7 pixels. The blocks in DuelTris have a black line along the top and left edges. These lines are recommended, but are not necessary.

The template has to be a 256 color picture. The tile colors are on palette 14. Do not change any of the other palettes. You may use colors 1-6 (black = 0) on palette 14. It is recommended that colors 7 & 8 remain green, but in desperate situations they may be used. Colors 7 & 8 are used for the moss on the play screen, which constitutes a very small portion of the screen.

Technical Notes

DuelTris is written in 100% assembly language, which includes the computer logic. Developed on the Apple IIGS with Merlin 16+.

The sliding DuelTris bar utilizes a stack scroll, and runs 60fps at 2.8MHz. The bar is 34 lines tall by 320 pixels wide, but it is possible to make the bar bigger.

The lines that slide across the screen (DuelLINK) uses compiled shapes that are generated on-the-fly.

Besides the two techniques mentioned above, DuelTris does not use any special techniques to draw to the screen.

The only time interrupts are disabled is during the stack scroll, and during some of the sound routines.

The fonts used in the high score screen and in the "granite dialogs" were clipped using an External command for DreamGrafix, and uses a custom proportion font draw routine.

The computer logic is okay. It does make

mistakes. As of now, the logic doesn't look to make more than one line combinations, but if it did we'd be in big trouble.

There are some slowdowns in the game. So it'll remind you a bit of Super Nintendo games. Seriously though, the slowdowns occur mostly because a vbl (or vertcnt) sync is being called twice. I didn't think it was a big deal, so I didn't bother resolving every case (there are a lot of situations).

The whole DuelTris project ended up being bigger than I expected. I ended up spending a lot of time tweaking things and rewriting things to make them more efficient. And I spent a good amount of time implementing last minute feature additions.

I'd be interested in adding AppleTalk support, but I have no documentation for it. So if you have spare manuals, feel free to send them... <grin>

Graphic Notes

The artwork in DuelTris was created almost entirely on the Apple IIGS with DreamGrafix and DeluxePaint II. The DuelTris visual design was conceived and implemented on the Apple IIGS.

The "title page" Step Pyramid was created and shaded on the IIGS with DeluxePaint II. The sky was created with DeluxePaint II Enhanced on an IBM-PC, composited with the pyramid, then converted with SuperConvert before final touchup with DreamGrafix. The "goodbye" screen is derived from a background that was supposed to look like boilerplate. The texture was extracted with PhotoStyler, which yielded the bumpy texture. The DuelTris logo was embossed onto the surface with PhotoStyler. Lighting, shading, cracks, and highlighting was done on the IIGS to make the screen look really cool.

There are absolutely no digitized or scanned graphics in DuelTris. That's my version of "100% assembly language" :-)

Credits and Thanks

Steve Chiang

Programming, Design, Sound, Manual
"You dork!"

Dave Seah

Graphics, Packaging, Manual
"What extraneous black dot? Er, that's supposed to be there!"

James Brookes

Music
*"*SIGH*"*

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Your thanks is hidden, but thanks for the
help with sound (SC).

~ Plug ~

If you haven't already, please check out
DreamGrafix, the premiere 3200 color paint
program available for the Apple IIGS.
DreamGrafix unleashes the power of 3200 color
pictures, bringing photographic quality pictures to
your Apple IIGS.

DreamGrafix also supports 16 and 256 color
pictures, as well as 16 dithered color 640 mode!