Adding favourite disc images

To add a favourite disc to WinSTon click the 'Add' button under the favourites option. By using the 'browse' buttons you can select which discs to insert into the emulators' floppy drives. You will also need to add a unique name to the favourite which will appear in the list.

For example, choose 'Browse' and click on, say, 'auto097.st'. Now enter 'Oids' in the description. Click 'OK' and you will see that 'Oids' has been added to the list of favourites. This has now been saved to WinSTon, so by highlighting the name 'Oids' and clicking the 'Run' button, the emulator will automatically reset and load the disc image. You can add up to 64 favourites to the list.

Note that if you already have a disc image selected when you choose to add a favourite, WinSTon will fill in the disc details so you only have to add the description.

What is a favourite?
Editing and removing favourites
Running a favourite

Additional joystick features

As many PC joysticks do not have an auto-fire option I have included one within WinSTon. By enabling this feature, the fire button will cycle on/off which is very handy for shoot-em-ups! Also, by default the second fire button on your PC joystick will simulate pressing the Space bar on your keyboard. Some games use the keyboard to activate effects such as smart-bombs. Now you can simply press fire button two without letting go of the joystick.

<u>Setting up joysticks</u>
<u>Using cursor keys as a joystick</u>

Basic features

There are two important keys needed to run the emulator. The first is the key F12. This toggles between Windows and the ST's mouse mode. Most of the time you will be in the ST's mouse mode, where all movement of the mouse will move the emulators cursor around the window. When you wish to choose icons from the toolbar, resize the window or close the application you will need to return to the Windows mouse. You can do this by pressing F12. Now the familiar Windows mouse will return and you can select disc images etc... To return back to ST mode, simply press F12 again. To make life easier the emulator will automatically swap modes on selecting a disc image or going into full screen.

To toggle between full screen and a window you can press F11. If your system allows full screen your Windows desktop will be replaced by the ST's screen. At any time you can press F11 to toggle back to a Window. Also note that pressing F12 will return you into a Window and go into Windows mouse mode. Whenever you enter full screen the ST's mouse mode will automatically be selected.

Loading the TOS image
Setting up directories
Toolbar icons

Changes to Version 0.1

There have been many changes to this version of WinSTon (the last version was v0.0005)

Major additions/changes:-

Re-written emulation code Less bugs, more accurate.
Full screen mode You can now select full screen in any resolution under all versions of Windows with DirectX.
Sound support A limited version of sound has been implemented.
MFP bugs fixed. The MFP emulation has also been re-written to fix some major bugs.
IKBD/ACIA code has been re-written to fix a lot more games.
FDC emulation Hardware floppy disc emulation has been added.
'.MSA' file support WinSTon can now read compressed disc images.
Favourites WinSTon can keep a list of your favourite games which can be run from a menu.
File associations You can automatically run WinSTon with a selected image by double-clicking a '.ST' or '.MSA' file from the Windows desktop.
Improved TOS support You can now run TOS 1.00,1.02,1.04 and 1.62.

Notes:-
Sound is disabled by default as it is still has bugs. Toggle the sound option on the 'Configure' page to enable sound.
File saving has been disabled, as with previous versions. Again, I have disabled this until I am able to finish debugging the file emulation to prevent corrupting your system.

Changes to this version

Colour/Mono screens

An ST can be connected to a colour or monochrome monitor. In colour, you can select low or medium resolution. With a monochrome monitor you can select high resolution. As with a real ST, you cannot swap between these modes without resetting WinSTon.

[Running in a window](#)
[Running full screen](#)
[DirectX](#)

Configuration

Setting the emulation speed
Enable Sound
Memory Configuration

Creating a blank disc image

To create a blank disc image you will need to obtain a utility such as 'MakeDisc'. This allows you to create disc images, and format them to your specification.

What is a disc image?
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Credits

Credits list

I would like to thanks the following in helping to make WinSTon possible! (in no particular order):-

Stefan Bates for endless testing, giving me hundreds of disc images to debug and all his ideas and support.
Rich Davey for testing, ideas, The Little Green Desktop, the WinSTon homepage, and a million other things. And for waiting so patiently for the new version!
Frederic Gidouin for writing PaCifiST, an excellent ST emulator.
Philippe Gerin for supplying technical documents and being the author of the Atari ST emulator for the Apple Mac - NoSTalgia
Darren Birks for writing the disc ultility MakeDisk.
Ian Biggs and Mike Botham for help testing, especially 2-player games. Lots more testing needed!
All my beta testers(no more requests please!). New versions will be on the way soon.
And all of you for your interest in WinSTon, Atari and emulators!

Thanks again!

Paul Bates   (e-mail) winston_emu@compuserve.com

DirectX

DirectX is a set of drivers from Microsoft to improve efficiency and flexibility when running applications which require access to video and sound hardware.

WinSTon needs to have DirectX installed to allow for full-screen mode to be used under all resolutions and also for sound support. Without this installed, you will only be able to use full-screen in 320x200 resolution and sound will be disabled.
NOTE - WinSTon needs DirectX version 5 or later.

You can get a copy of DirectX from Microsoft, or from any Windows compatible game. Infact most PC cover discs have copies of DirectX.

Running in a window
Running full screen
Colour/Mono screens

Editing and removing favourites

Should you want to edit a favourite, simply highlight the name and choose the 'Edit' button. You can now re-select a disc image or change the description and click 'OK'.

To remove a favourite from the list, highlight your choice and choose 'Remove'. You will then be given a 'Yes/No' prompt. Simply click the 'Yes' button to remove the item from the list.

What is a favourite?
Adding favourite disc images
Running a favourite

Enable Sound

You can enable/disable sound by clicking on this option. At present sound is buggy and quite slow so it has been disabled by default. To enable it click the option. These setting will be saved for the next time you run WinSTon.

Setting the emulation speed
Memory Configuration

Favourites

What is a favourite?
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Running a favourite

Files

How can I create disc images?

New images can be made with utilities available on the Internet. These programs are run on your ST/PC which copy the floppy disc contents to/from a single image.

It is important to note that some disc images will not run under ST emulators. Floppy discs which use protection methods cannot be run when in single file format as this protection data is lost in the transfer. Also you may find that your PC cannot read some of your old ST discs; usually single sided ones.

A list of utilities are:-
MakeDisc -   Creates/writes disc images
STImage -   Read and write floppy disc images in '.ST' format
STtoMSA -   Convert an '.ST' image into a compressed '.MSA' file
MSAtoST -   Convert a compressed '.MSA' image into '.ST' format

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How does it work?

WinSTon works by emulating the hardware of the ST. By using code to emulate the 68000,MFP 68901,IKBD,ACIA 6850,WD 1772 FDC and the YM 2149 we can simulate a real ST using your PC. The only requirement is the addition of a TOS Rom image to govern the operation of the emulator, and make it behave as an ST.

What is WinSTon?

Introduction To WinSTon

Joystick controls

Link

Links

Fatal Design - http://lgd.atari.org
The Little Green Desktop - http://lgd.atari.org/desktop
> Hosted by Rich Davey and all the guys at Fatal Design. The one-stop site for Atari ST emulation.
Has TOS images, Automation/Pompey Pirates archive, support and everything else you may need!

WinSTon homepage - http://winston.atari.org
> Official homepage, this is where you'll find the latest version of WinSTon.

PaCifiST homepage - http://pacifist.atari.org
> And excellent Atari ST emulator for the PC by Frederic Gidouin.

NoSTalgia - http://users.skynet.be/sky39147
> An ST emulator for the Apple Mac, written by Philippe Gerin.

MakeDisk - http://www.fatal-design.com/makedisk
> An excellent disc utility from Darren Birks.

StonX - http://www.complang.tuwien.ac.at/nino/stonx.html
> Another ST emulator, this time for Unix. Has been converted to other platforms, including DOS.

Taito game archive - http://freespace.virgin.net/m.botham/cute/menu.htm
> A great page for all Bubble Bobble/Taito related games. Has images and links for arcade
emulators. By Mike Botham.

Loading ST disc images

Loading the TOS image

Before the emulator will boot, you will need to load a TOS rom image. This is the Atari ST's operating system (TOS) and can be thought of as the machines 'personality'. In more technical terms it controls the hardware, and the look and feel of the ST. To emulate the machine accurately we need this image, which can be extracted from a real ST. Alternatively there are many Internet sites with various versions of these images in single file form(one such site is Fatal-Design). WinSTon is compatible with TOSes 1.00,1.02,1.04 and 1.62. At present TOS 2.06 does not work correctly.

When the emulator first boots it will try and load a TOS Rom; if it cannot find one it will prompt you for an image. Simply find the image using the 'Browse' button and then select it. The emulator will now boot to the familiar green desktop.

Setting up directories
Basic features
Toolbar icons

Memory Configuration

These options are disabled in this release. In future versions they will allow the user to select which Atari ST memory size to use, eg 512k, 1024k, 2Mb or more.

(WinSTon presently uses the 1024k mode)

Setting the emulation speed
Enable Sound

Obtaining ST disc images

There are a number of sites which hold listings and disc images for use with WinSTon and other ST emulators.

A good site is The Little Green Desktop on <u>Fatal-Design,</u> which holds over 500Mb of disc images on-line.

<u>What is a disc image?</u>
<u>Supported file formats</u>
<u>Selecting an image</u>
<u>How can I create disc images?</u>
<u>Creating a blank disc image</u>

Running a favourite

To load and run a favourite disc image, bring up the favourites dialog and highlight an item from the list. Now choose the 'Run' button. The emulator will now reset and load the selected image. Alternatively you can double-click the description and load the image.

What is a favourite?
Adding favourite disc images
Editing and removing favourites

Running full screen

WinSTon now supports Microsoft's DirectX Version 5. This is an interface to allow Windows applications to run in full screen mode. If you do not have a copy of this, then you can still use full screen mode on Windows 95, but you will be limited to low resolution only. With DirectX, WinSTon can run in full screen mode in all resolutions under all versions Windows. To toggle between full screen and a window, simply press F11.

Running in a window
Colour/Mono screens
DirectX

Running in a window

By default WinSTon will run in a window. This window will resize when it needs to change resolution. You can resize the window yourself by pressing F12(to go into Windows mouse mode) and dragging the bottom right hand corner of the window. You will probably notice a speed loss when you do this. Window scaling is handled by your graphics card, and there are not many which can scale graphics efficiently.

Another scaling mode has been added to this version. This is 'double scaling'. This will double the size of the low resolution screen when running in a window. This has two advantages. First, it is more efficient for your graphics card to scale by a multiple of two, improving speed. Also when the emulator swaps between resolutions it retains the same window size.

Running full screen
Colour/Mono screens
DirectX

Running the emulator

Screen modes

Running in a window
Running full screen
Colour/Mono screens
DirectX

Selecting an image

The emulator has two 'floppy drives', Drive 'A' and Drive 'B'. These are shown as two disc icons on the toolbar. By selecting the first icon you can select a disc image to inserted into Drive 'A'. To remove the disc from the drive, simply choose the icon and delete the filename from the dialog. By selecting the second icon you can insert a disc into 'Drive B'. This allows you to run applications which can access both drives, reducing disc swapping. You can select a new disc image at any time by clicking on one of these icons. This is effectively the same as removing and inserting a new disc into a real ST.

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Setting the emulation speed

WinSTon can work at two speeds, the first is ST speed(the default). In this mode the emulation will run at 50 frame per second, as a real ST. You can choose to run at maximum speed. This mode will not hold the emulation speed back and will run as fast as your PC can manage. Note that you can swap between modes at any point, as this can often help disc loading/processing times.

Enable Sound
Memory Configuration

Setting up directories

Besides the TOS rom, WinSTon has two more 'Browse' buttons found on the 'Files' option.

The first is the hard drive directory. You can access files from your hard drive just as you would on a real ST. Simply enter the directory name here and when the emulator resets, double clicking on the 'C:' icon on the desktop will bring up the contents of your PC's hard drive.

You can also select the default directory where you may keep floppy disc images. A disc image is a single file copy of the content of a floppy disc. These can be on hard drive, or CD ROM. Simply choose the directory where you keep these files. This information will be saved with WinSTon for the next time you run the emulator.

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Setting up joysticks

WinSTon will use any Windows compatible joystick. To configure your joystick, simply goto the Windows 'Control Panel', found on the 'Start' menu. From here select 'Game Controllers'. This allows you to select and configure your joysticks. If WinSTon cannot find a suitable joystick connected to your PC it will default to cursor key emulation.

Using cursor keys as a joystick
Additional joystick features

Setup and running the emulator

Sound

[Sound support](#)
[Enable sound](#)

Sound support

Sound runs under Microsoft's DirectX; without this you cannot enable sound. Without DirectX Windows cannot handle the tasks required to play sound under the emulator. As this is the first release to have the sound option, the playback suffers from many bugs and is defaulted to off. Simply enable sound by clicking on the option within the options dialog. You will notice this will slow down emulation.

DirectX

Supported file formats

WinSTon supports the two main file formats for ST disc images. These are '.ST; and '.MSA' format. The '.ST' format is simply a copy of each sector on the disc, while '.MSA' files use RLE(run-length-encoding) compression on each track to reduce the size of the disc image. NOTE - As '.MSA' files are compressed WinSTon does not support writing to these files. Future versions will allow reading and writing to these images.

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Toolbar Icons

Across the top of the WinSTon window you will see a number of icons. These are 'Reset','Floppy A','Floppy B','Options','Favourites' and 'Help'.

The reset button, as it's name suggests, resets the ST.

The floppy disc icons allow you to select disc images into the ST's drives.

The options button will bring up a list of options to configure the emulator.

The favourites icon allows you to select and run your favourite disc images with a single click.

Finally, the help icon will bring up this file.

Loading the TOS image
Setting up directories
Basic features

Using cursors keys as a joystick

You can emulate the joystick movements and fire buttons on the keyboard by enabling this option. Note that this option will become the default if no joysticks are connected to you machine.

This options remaps the cursors keys to joystick movement and the right CTRL/Ins on the numeric keypad to the fire button.
So even without a joystick you can still play games which require one.

You can also play two player games with the help of cursor key emulation. Simply select joystick control for joystick 0 and cursor key emulation for joystick 1. Now you can play any 2-player game as if you have two joysticks connected to the machine. Note that you cannot select both joysticks as cursor emulation due to PC hardware restrictions.

Setting up joysticks
Additional joystick features

What is WinSTon?

WinSTon is an Atari ST emulator for Windows 95/98 and NT. It is designed to emulate all the features of the Atari ST under the Windows environment. Now you can play all those old classics on your PC.

You can run WinSTon in a window or full screen and take advantages of all your Windows compatible hardware such as sound cards.

WinSTon is **freeware** and it will remain this way for all future versions.
Although WinSTon is freeware, many people have offered to make a financial contribution to the project. If you do wish to show show your appreciation, please feel free to send a donation to either of these two charities:-

Cancer Research Campaign   www.crc.org.uk   (donations taken on-line)
Scope   www.scope.org.uk

Thank you for taking the time to run WinSTon.

Paul Bates   (e-mail) winston_emu@compuserve.com

How does it work?

What is a 'favourite'?

Favourites are a new addition to WinSTon which allow the user to keep a list of their favourite disc images in an easy to use list. They can simply run these images by the click of a button rather than scrolling through a list of disc images and selecting the one they want. Favourites can be selected/edited by clicking the 'heart' icon on the toolbar.

Adding favourite disc images
Editing and removing favourites
Running a favourite

What is a disc image?

A disc image is a copy of all the tracks/sectors of an ST floppy disc put into one file. Emulators can access the sectors in the image as if they were real sectors on a floppy disc.

Supported file formats
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