

drawIt

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## Welcome

First, let me say thank you for using DrawIt. It's been a great learning experience for me to write it, and I hope it gives you some pleasure, or at least is vaguely useful.

This software was written entirely on the palm, using OnBoard C and OnBoard RsrcEdit, both fine packages available from <http://www.individeo.net>, mostly in parts while I was outside smoking, or while I was supposed to be doing something useful. I also received help from Steve Nerby from Vista-software with the save routines, and Aaron Ardiri, who has helped in various ways since I started programming on the Palm.

Thank you to all the people who have helped in the development of this software, those who have written other applications which support it, and mostly to the users of it (that's you).

You may think the word COLOR is misspelled in this document, but in New Zealand, it is spelled 'Colour', so that's how I'll do it here. Apologies for any confusion which may arise over this ;)

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Installation

In the Zip file containing DrawIt, and this manual, you will find two 'PRC' files. DrawIt.prc, and CustIt.prc. Both of these files should be installed onto your Palm device, although CustIt is optional. DrawIt is the main application, and CustIt is an extra which allows you to set the position of the tools available to DrawIt, and to define the functions of the Hardware keys. Extract these two files from the archive, and follow the standard Palm installation procedure, which goes something like this: Run the Install Tool which came with the software when you got your Palm device. Select Install, and find the two files you just extracted. When you next Hotsync your device, you will see the following icons in your 'Unfiled' category.



If you are upgrading from a previous version of DrawIt, there is no need to remove the files prior to installation. When you first run DrawIt 2 after upgrading, your image database will be updated to the new format. You will however have to add the new tools and commands from CustIt to access them.

If this is your first installation, you don't need to run CustIt as the tools all have a default position.  
Tap the DrawIt icon to get started.

Image Index

The first screen which appears in DrawIt is the Index screen. This is where you manage your images. From here, you can open, rename, delete or duplicate one of your images, create a new image, or obtain the file size of an image.

DrawIt 2.0

Untitled Picture

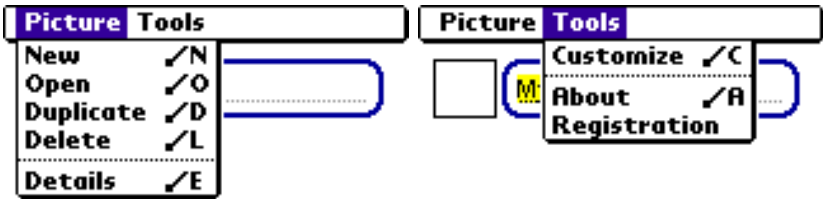
My Image

New

Details

To create a new image, tap the 'New' button on the Index screen. Any image you have selected will have a blue ring around it as shown in the screenshots below. If you are using a greyscale device, this ring will appear in black. Commands like Delete or Open will only effect the image you have selected.  
A new image will automatically have the title 'Untitled Picture'. To rename it, simply hilight the name within this index screen, and use standard Graffiti characters in the silkscreen Graffiti area to enter a new name. You can also rename an image through the Details screen.

The menu options available within the index screen are as follows:

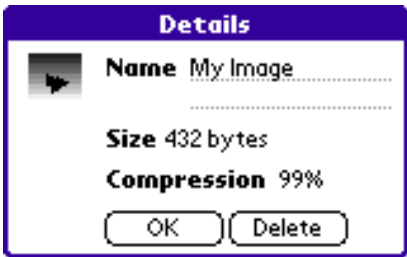


**New** Creates a new image in your database. This is the same as tapping the New Button on the index screen. An image is created before the currently selected image in the list, unless you have the last image selected, then the new image will appear at the end. The new image will be called 'Untitled Picture'; and can be renamed once it has been created. The name of the image is not important, and you can have many images with the same name without causing a problem.

**Open** Opens the currently selected image for editing. This is the same as tapping the image thumbnail in the index screen. To return to this index screen, tap the Index icon ( ) in the edit screen, or press the hardware key which corresponds to the Index function (by default, this is the To-Do button, though you may change it).

**Duplicate** Makes a copy of the currently selected image.

**Delete** Removes the currently selected image permanently from your database. Because this image can not be restored, you are asked for confirmation of this action. Selecting Delete from the menu is the same as tapping the Delete button from the Details screen.



**Details** brings up the Details screen, which shows you a small thumbnail of the image, its name, size and compression ratio. 100% is fully compressed, and 0% is uncompressed. An uncompressed image takes up 25.6Kb of Palm Ram, and a fully compressed image (blank) takes up 0.2Kb. Tapping the Delete button is the same as selecting it from the Picture menu, and renaming it is the same as renaming it within the index screen.

**Customize** Attempts to run CustIt if you have it installed. To return to DrawIt from CustIt, tap the Done button from within CustIt. See the section on Customizing later in this manual for details on using CustIt.

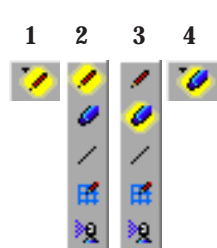
**About** and **Registration** bring up dialog boxes with details on the software.

## Editing Images

Once you have selected an image to edit, and tapped either the Open command, or the thumbnail of the image, you will be presented with the Edit screen. This is where you create and edit your images. Along the top of the screen you will see a toolbar, which by default has three tabs on it, although this can be changed with CustIt. Tap on one of the tabs to move it to the front. If you tap on the tab which is at the front already, the toolbar will be hidden, allowing you to edit the full-screen image. To view the toolbar again once it has been hidden, tap the silkscreen Menu icon, or the down hardware key. The toolbar can also be hidden by tapping either the silkscreen Menu icon, or the hardware Up key.




Along the top of the toolbar, you will see two sliders. These change in functionality depending on the tool you have selected. Generally, the slider on the left indicates the brush size of the tool you have selected, and the slider on the right indicates the shape or function of the tool. Details for each tool can be found in the Tools section of this manual.



### Stacked tools

There may be more than one tool or command at any position on the toolbar. This is called 'Stacking'. If this is the case, you will see a small black triangle at the top-left hand side of the tools icon. To access the tools beneath, first select the tool, then lift the stylus off the screen (1). If you already have the tool selected, this step can be skipped. Hold the stylus on the tool, and a menu containing the hidden tools will pop out (2). Highlight the tool you want by moving the pen over it (3), then release the pen. The tool you have selected will now appear on the toolbar (4). If it is a command rather than a tool, the command will be actioned immediately. A full list of tools and commands is available in a later section of this manual.

To return to the index screen after you have finished editing your image, you tap the Index tool (  ), which by default is on the hardware To-Do button, but may be moved to the toolbar if necessary.

## Picking Colours



Along the right hand side of the toolbar, you will see two boxes. When you first start DrawIt, these will be Black on the left, and White on the right. These are your foreground and background colours. Foreground colours are used for all of the drawing operations, including the Text tool. Background colours are used in operations which clear parts of, or the entire screen, like the eraser, the Cut and the Clear screen commands. To select a colour to be used in either the foreground or background, tap the appropriate square. Foreground is on the left, and background on the right.

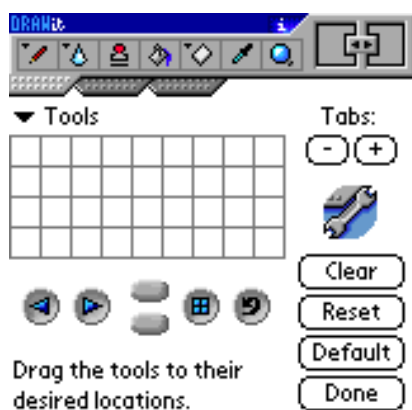
In the screen which appears (see the image to the left), tap the new colour you want to use, then tap OK to return to the edit screen.

Between the two boxes on the toolbar is a two-way arrow button. Tap this to swap the foreground and background colours.

## Customization

Along with DrawIt comes an application called CustIt. This will appear in the Untitled category of your launcher if you install it. You can access CustIt either as a stand-alone application from the launcher by tapping its icon, or from DrawIt, by selecting 'Customize' from the Tools menu on the Index screen. To return to DrawIt from CustIt, you can either tap the silk-screen 'Home' icon, then tap the DrawIt icon in the launcher, or tap the 'Done' button in CustIt.

Installation of CustIt is optional. If you don't install it, you will have to use the default settings for DrawIt, but if you're upgrading from a previous version of DrawIt, you will need to install CustIt to add the new tools and commands if you want to be able to access them. Once you are happy with your settings in DrawIt, you can safely delete CustIt from your palm without effecting the custom positioning of the tools, or your images.



### The CustIt screen

When you run CustIt, you will see along the top, the same toolbar as you see in DrawIt, but with boxes running along it. These boxes indicate positions where the tools can be placed. CustIt can be used to add or remove the tabs along the bottom of the toolbar, to set the positions of the tools, and to assign the hardware keys to either tools, or commands. By default, the hardware keys are used to navigate between images, return to the index screen, and undo your last action, though you can change these here to do whatever you prefer.

The up and down hardware keys are reserved for showing and hiding the toolbar in DrawIt, so can not be assigned to any tools or commands.

Running down the right hand side of the screen are a series of buttons:

- removes the right hand tab from the toolbar. Any tools or commands you have on that tab will be returned to their holding positions.

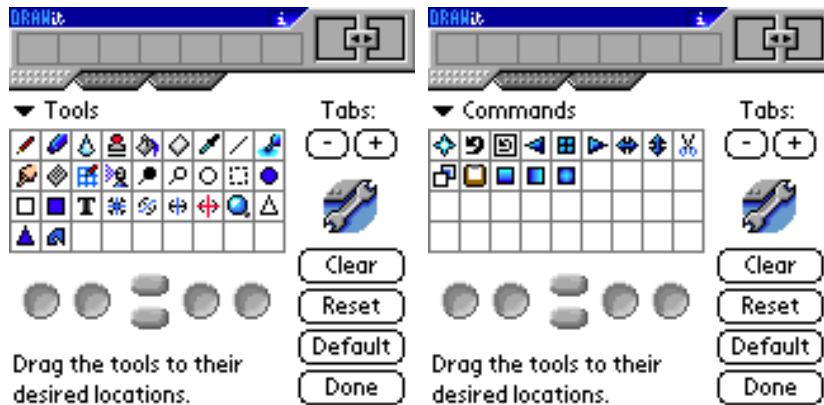
- + Adds a tab to the toolbar. You can have up to 5 tabs on the toolbar.

**Clear** Removes all tools and commands from the toolbar and hardware keys and returns them to their holding positions.

**Reset** Restores all tool and command positions to where they were when you started CustIt.

**Default** Places all tools and commands into their default positions.

**Done** Returns to DrawIt.



## Tools and Commands

DrawIt tools are organized into two categories: Tools and Commands. Tools are items which effect the way you draw on the screen like a pencil or crayon, and commands are items which cause an immediate action like clearing the screen or undoing your last action. In CustIt, there is a dropdown menu below the toolbar which either reads 'Tools' or 'Commands'. Depending on which one you select, the grid in the middle of the screen will display one or the other categories of tool. This grid shows which tools have yet to be placed on the toolbar. Each tool has a particular spot on the grid, referred to in this documentation as its holding position.

To place a tool on the toolbar, hold the stylus on it, and drag it to the position you want it to appear at. If there is already

a tool or command in that position, the tool will be 'stacked'. Stacked tools have a small black arrow next to them indicating more tools underneath. You can also drag a tool from one position on the toolbar to another to move it. To access the hidden tools which are stacked on the toolbar, tap the position where the tool is stacked, and the next one in the list will show up in its place. This can then be dragged to a new position, or back off the toolbar. To remove a tool from the toolbar, drag it off. It will re-appear in its holding position.

## Hardware Keys

Along the bottom of the screen are placeholders for the four hardware keys. To remove a tool from a hardware key, tap on its placeholder. To add one, drag it from its holding position to the placeholder. A tool or command can appear both on the hardware key, and in the toolbar, so can be accessed either way.

If you have tools left over in CustIt, and they are not assigned to any hardware key, they will not be available to DrawIt. By default, all tools and commands are assigned positions, but there are four commands left in their holding positions as they are assigned to hardware keys. These are Previous, Next, Index and Undo.

## Tips and Tricks

**High resolution mode:** DrawIt doesn't like high-resolution mode yet. It should work, but is untested, and will be very slow and unresponsive. DrawIt uses direct screen access to get enough speed out of the Palm to be of any use. This works fine for standard screen modes, but not the higher resolutions some new models.

**3rd party fonts:** There are hackmaster extensions which allow you to change the built in fonts to something else. DrawIt saves any text you enter as part of the image, and determines the correct heights of the fonts so these shouldn't cause any problems.

**Blurring:** When blurring two images together, use small strokes with a small-ish brush, and try diagonal scribbling for best effect.

**Polygons:** Don't tap and release to close a polygon. If you miss the first point, you will have to tap again, possibly several times (particularly on a complex image) to find the point. It works better to drag the final point so that it snaps to the first point, and closes.

**Back ups:** Back up your database every now and then. The files you need are in your Palm folder under <Your Name>\Backups\ and they are called 'DrawItDB.pdb' (The images) and 'DrawItDBT.pdb' (The thumbnails and names). Just make copies of these files somewhere else. That way, if you need to restore an old database, you can install the backup and it will overwrite the current one.

## Updates








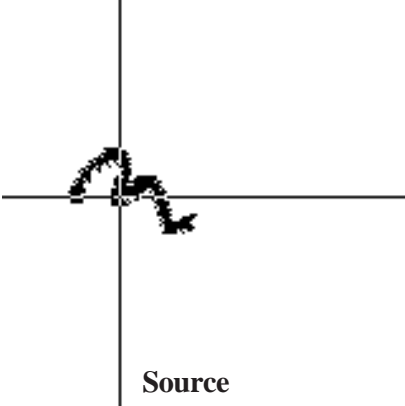
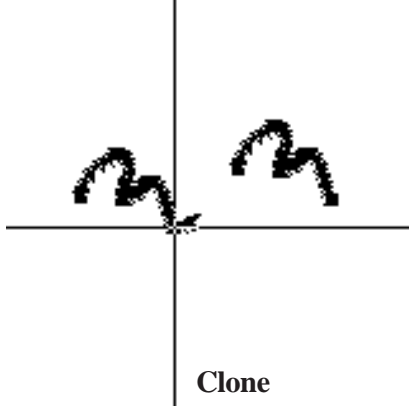











I try to update DrawIt as often as I can, so check my website for updates. <http://www.drawit.co.nz/> If you're a registered user, these are free, and will be sent to you via email. When you receive an update, don't remove the previous version from your system, because you'll lose your images. Simply install the new version over the top of the old. You will need to install the new version of CustIt to add any new tools which have been developed. Once you have added the tools, you can remove CustIt.

If you find a bug, or there is something you would like to see added to DrawIt, please contact me ([andrew@drawit.co.nz](mailto:andrew@drawit.co.nz)), or leave a message on the forum on my site, and I'll do what I can to fix it.














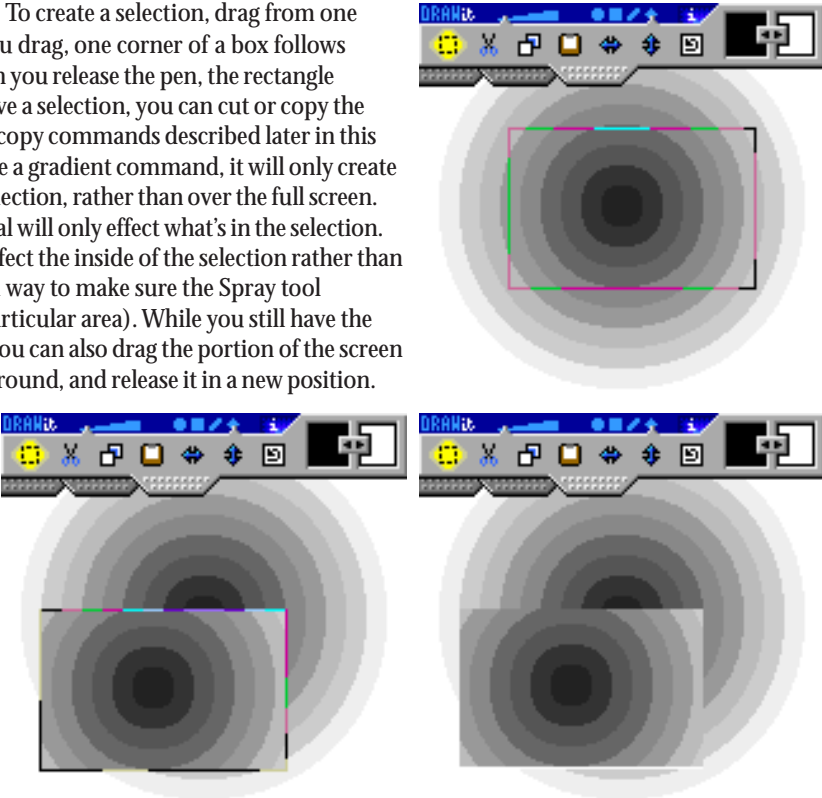


## Removal (Uninstall)

If for any reason you wish to remove DrawIt from your device, select 'Delete' from the App menu of the launcher, and find it in the list. Tap on DrawIt, and tap Delete. If you have installed CustIt as well, find that in the list, and delete that too. This will not delete the backed up databases or applications. These are on your desktop machine in the 'Palm' folder, under <Your name>\Backups, and are called 'DrawItDB.pdb' and 'DrawItDBT.pdb', as well as 'DrawItCust.pdb'. Delete these files from this folder, and Bob's your Uncle.








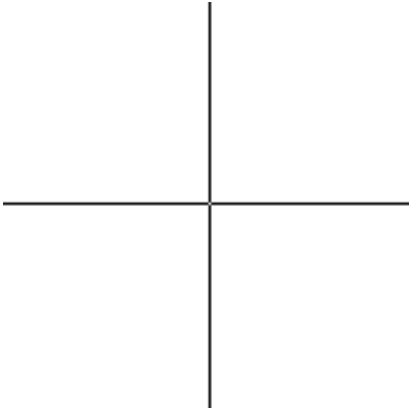

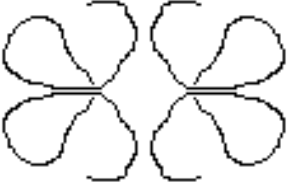



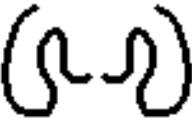


## Tools

Icon	Tool	Description	Sample
	Pencil	Draws a freehand line following the pen around the screen using the current foreground colour. The left slider is for the brush size, the right changes the shape of the pencil.	
	Crayon	Draws freehand following the pen around the screen using the current foreground colour. The line drawn simulates a crayon. Neither of the sliders on the toolbar are used for this tool.	
	Blur	Merges colours together where you draw with the stylus, causing a blurring effect. Due to the limited colour palette of the Palm, the blending is not perfect, but as close as possible within the constraints. The left slider is for the brush size, the right does nothing.	
	Clone	<p>This tool has two different states: Cloning and Source. When the tool is first selected, it is in its Source state. This is the icon with the lifted stamp. Here, you define a position from which to clone to. The pen is tracked around the screen with a cross-hair. When you release it, the clone tool switches to its other state, cloning. This is the icon with the stamp down. When cloning, the area defined by the source clone is copied to the area you draw with the stylus. To define a new source point, tap the tool icon again, and the stamp will lift. The left slider is for the brush size, the right does nothing.</p>	<div>  <p>Source</p> </div> <div>  <p>Clone</p> </div>
	Fill	This tool uses the current foreground colour to fill in closed areas of the drawing. Just tap on the screen where you want the fill to start, and it will do the rest. Be ready to undo in case there is a gap in one of the lines enclosing the space you want to fill. Neither of the sliders do anything with the Fill tool.	
	Erase	Uses the background colour to erase the part of the image where you draw with the stylus. The left hand slider alters the size of the eraser, the right hand one does nothing.	
	Eye Dropper	Selects a new foreground colour from the image. Drag this tool around the screen and release to get the colour. Once the colour has been selected, DrawIt will revert to the previously selected tool. Neither slider does anything.	
	Line	Draws a line in the current foreground colour. Hold the stylus where you want the line to start, then drag it to where you want it to end. The line will be drawn when you release the pen. The left slider is used for the brush size, and the right for the shape.	
	Wet Felt	Draws with a semi-transparent blurring line where the colour is based on the current foreground colour, and whatever is on the screen under the pen. Try scribbling with this tool for some interesting effects. The left slider is used for brush size, the right is for brush shapes.	
	Smear	This is similar to the Blur tool, but more like dragging your finger along a dark pencil stroke. The colour will be carried further into a new area than with the blur tool. The left slider is used for brush size, the right for brush shape.	










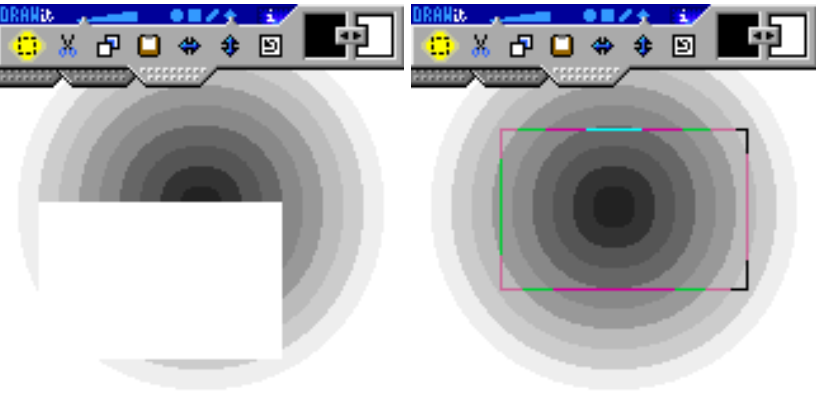

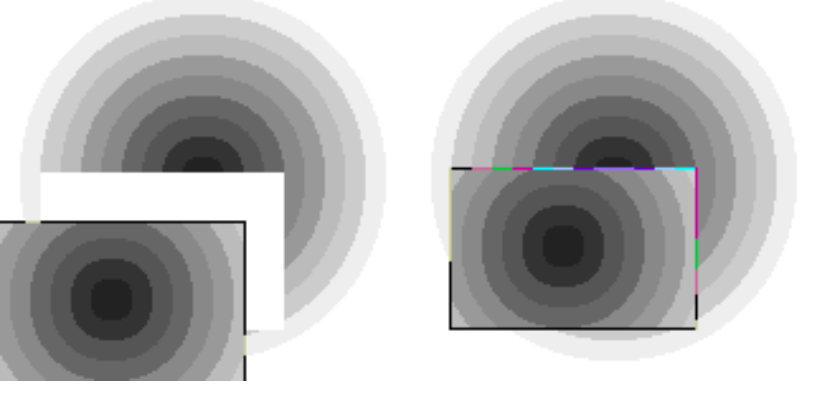



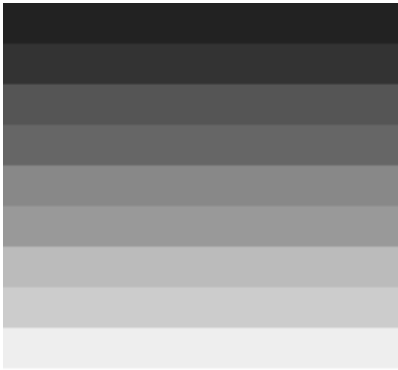

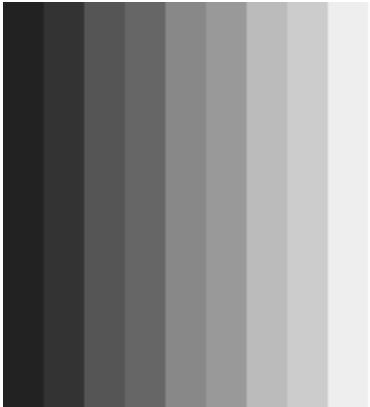

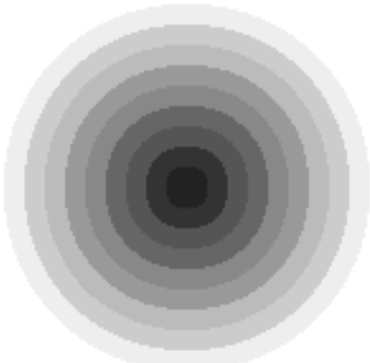
Icon	Tool	Description	Sample
	Undo Eraser	A cross between the Undo command, and the Eraser tool. Erases the part of the image where you drag it, not to the background colour, but to the image as it appeared before your last action. The left slider is for the eraser size, the right is unused.	
	Quantized Line	As with the Pencil tool, tracks the stylus around the screen, but constrains the drawing to 45° angles. The left slider is for the brush size, and the right is for the shape.	
	Spray	Splatters the foreground colour around the pen in a random pattern. The left slider is for the size of the spray, the right is unused.	
	Burn	Works in much the same way as the wet felt, but always with a black colour, and not quite as intense as the wet felt. Use this tool to darken areas of the image. The left slider is for the size of the brush, the right is for the shape.	
	Dodge	Again, similar to the wet felt, but with a white colour, and still not as intense. Use this tool to lighten areas of the image. The left slider is for the size of the brush, the right is for the shape.	
	Circle	There are two circle tools. To draw a circle, drag from the top left hand side of where you want the circle to start, and release the pen at the bottom right hand side, or vice versa. The circle will be drawn within the rectangle constraints you have set. The clear circle icon creates a circle in the background colour with an outline in the foreground colour. The solid circle icon creates a filled circle in the foreground colour. The sliders are unused.	
	Selection/Mask	This tool has several uses. To create a selection, drag from one corner to the other. As you drag, one corner of a box follows the pen around, and when you release the pen, the rectangle will remain. Once you have a selection, you can cut or copy the contents using the cut or copy commands described later in this documentation. If you use a gradient command, it will only create the gradient within the selection, rather than over the full screen. Flip horizontal and vertical will only effect what's in the selection. The drawing tools only effect the inside of the selection rather than the full screen (it's a good way to make sure the Spray tool doesn't spray outside a particular area). While you still have the Selection tool highlighted, you can also drag the portion of the screen which has been selected around, and release it in a new position. This is the same as copying and pasting the selection. To release your selection, tap the Selection/Mask tool on the toolbar again. Your selection will disappear from the screen. The images to the right show the effect of dragging your selection.	
	Square	Use this to draw either hollow (outline) squares or filled squares in the foreground colour. Drag from one corner of your square to the other corner, and release the pen. For hollow squares, the left hand slider is used for the brush size, the right hand one for the brush shape. For the filled square the sliders are not used.	





























Icon	Tool	Description	Sample
	Triangle	Creates a triangle on screen. Like the square tool, there are two versions of this tool: Hollow and filled. To draw a triangle, tap and hold the stylus where you want the first point of the triangle to appear, and drag the stylus to where you want the base. The remaining two corners and the angle of the triangle are calculated on how far the base is away from the first point. Hollow triangles use the left hand slider for the brush size, and the right for the shape of the line, and filled triangles are done in solid foreground colour.	
	Polygon	Draws a polygon on the screen. Tap and drag, and you will see a small box appear under the pen. Release the pen, and when you put it down again, a new square will appear, with a line linking the two. You can move this around while the pen is down, but once you release it, the point is set. You can continue adding points until you are happy with your polygon, at which point, you need to tap the first square in the polygon to close it, and it will be filled with the current foreground colour. If you change your mind while you are creating the polygon, you can tap a different tool on the toolbar and your polygon will be cleared and removed.	
	Text	Creates a line of text on the screen. Tap this tool, then tap on the screen where you want your text to appear. Use standard Graffiti on the silk-screen area to enter text, and it will appear on screen as you write. You can drag the text around while you are entering it. Once you are happy with your text, you can write the Enter character '/' to finish, or tap another tool. Text is created in the current foreground colour and with the font set by the right hand slider on the toolbar. The left hand slider does nothing. See the sample on the right for the built in fonts.	
<b>Kaleidoscope tools:</b>			
	Centre	Sets the centre used by the other 3 Kaleidoscope tools. If you don't use this tool, the default centre is in the centre of the screen. The pen will be tracked by a crosshair in the same way as with the source clone tool. When you release the pen, the centre is set.	
	4-way	Mirrors the pen movement in 3 directions (an X shape) in the foreground colour, around the centre set by the Kaleidoscope Centre tool. Uses the left hand slider to set the brush size, and the right hand slider for the shape.	
	180°	Mirrors the pen movement rotated 180° around the centre point using the current foreground colour. The left slider is for brush size, the right is for brush shape.	
	Mirror	Reflects horizontally through the centre using the current foreground colour and the sliders for brush size and shape.	
	Zoom/Pan	Select this tool, then use the right hand slider to alter the zoom level. The levels for the zoom are 1 (No zoom), 2x, 4x and 8x, as indicated by the icons under the slider. To pan the image (move the viewport to a different part), drag the zoom tool around the screen. When you first put the pen down, the image will zoom out, and a rectangle of the correct size will show you where the viewport is. Move the pen around, and the rectangle will move with it. When you release the pen, the image will zoom back in to the position defined by your viewport. Some of the tools you would normally use are unavailable while the image is zoomed in. To use these tools you need to zoom back out.	



















## Commands

Icon	Command	Description
	Clear Screen	Clears the current image to the background colour. If you change your mind after clearing the screen, you can undo it as long as you haven't drawn anything over the top of the clear screen. If you have, and you want your original image back, select the Revert tool, or return to the index screen without saving the image. (You are asked if you want to save your image on returning to the index screen, or tapping the silkscreen home icon.
	Undo	Restores the image to the state it was in before you last drew something. There is only one level of undo, and this command is unavailable while you are zoomed in. By default this command is assigned to the hardware Memo key, rather than appearing on the toolbar.
	Revert	Restores the image to the state it was in the last time you saved it. This action can not be undone.
	Previous	Moves to the previous image in your database. If you are at the beginning of your database, you will be asked if you wish to add a new image. If you do, it will be added as the first image. If your image needs saving, you will also be asked for confirmation before you can switch to the previous image. By default, this command is assigned to the hardware Date Book key.
	Next	Like previous, but moves forwards in the database, and adds an image at the end if you try to move too far. By default, this command is assigned to the hardware Address Book key.
	Index	Returns to the Index screen. By default this command is assigned to the hardware To-Do key, and does not appear in the menu. Use CustIt if you wish to add it to the toolbar.
	Flip Horizontal	Flips either the whole screen, or the current selection horizontally on the screen.
	Flip Vertical	Flips either the whole screen, or the current selection vertically on the screen.
	Cut/Copy	<p>The Cut tool only works if you have an active selection. It cuts the selection from the image, and places it on the local clip-board. The area which has been cut out is replaced with the background colour. The Copy tool works the same way, only does not remove the selection or its contents from the image. To retrieve the clip-board, use the paste command. The sliders do nothing with either of these commands.</p> 
	Paste	<p>Places the contents of the local clip-board onto the current image. This does not need to be the same image as the clip-board was created from, but does need to be in the same run-time i.e. You can't cut or copy part of an image, then quit from DrawIt, and return to it later with the clip-board intact. When you paste, the Selection/Mask tool is activated, and the clipboard is placed in the bottom left hand side of the screen as an active selection. This can be dragged into position while the Selection tool is active. As soon as you tap on another tool, the selection becomes static, and can no longer be dragged around as it was. Cutting again while the selection is active will place the same image on the clipboard, but will still cut out from the main image. Once you have pasted, the clip-board is cleared.</p> 

Icon	Command	Description	Sample
	Horizontal linear gradient	Creates a block of graduated colours either on the screen, or in the current selection. The colours range from the foreground at the top to the background at the bottom. To swap the direction of the gradient so that the foreground is at the bottom, use the swap colours button between the foreground and background swatches on the tool bar, then re-apply the gradient. As with the blur tool, the gradients applied in DrawIt are far from perfect, but as good as they can be with the limited palette. Small gradients between dark and light colours work best.	
	Vertical linear gradient	Much the same as the Horizontal, but the blocks of colour are arranged vertically down the screen. The foreground colour is on the left, and the background on the right.	
	Radial gradient	Creates a circular gradient between the foreground and background colours with the foreground colour on the inside, and the background colour on the outside.	

## Quick Reference

Icon	Tool	Description
	Pencil	Draws freehand
	Crayon	Draws like a crayon
	Blur	Blurs colours together
	Source Clone	Defines a source for the clone
	Clone	Clones from the source
	Fill	Fills an enclosed area
	Erase	Erases to the background
	Eye Dropper	Picks up a colour from the image
	Line	Draws straight lines
	Wet Felt	Draws like a wet felt
	Smear	Smudges colours together
	Undo Eraser	Erases to the previous image
	Quantized Line	Draws straight lines freehand
	Spray	Splatters ink
	Burn	Darkens the image
	Dodge	Lightens the image
	Background Circle	Draws a circle
	Filled Circle	Draws a filled circle
	Selection/Mask	Selects and masks an area
	Hollow Square	Draws a square
	Filled Square	Draws a filled square
	Hollow Triangle	Draws a triangle
	Filled Triangle	Draws a filled triangle
	Polygon	Draws a filled polygon
	Text	Enters text
	Zoom/Pan	Zooms in and moves the view

	Kaleidoscope Centre	Sets the kaleidoscope centre
	Kaleidoscope 4-way	X shaped mirror
	Kaleidoscope 180°	180° rotated mirror
	Kaleidoscope Mirror	Horizontal mirror
Icon	Command	Description
	Clear Screen	Clears the screen
	Undo	Undoes the last action
	Revert	Restores the last saved image
	Previous	Moves back (or adds a page)
	Next	Moves forwards (or adds a page)
	Index	Jumps to the index screen
	Flip Horizontal	Flips an area horizontally
	Flip Vertical	Flips an area vertically
	Cut	Cuts the selection to the clip-board
	Copy	Copies the selection
	Paste	Restores the clip-board to the image
	Horizontal linear gradient	Creates a gradient fill
	Vertical linear gradient	Creates a gradient fill
	Radial gradient	Creates a gradient fill

drawIt

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