

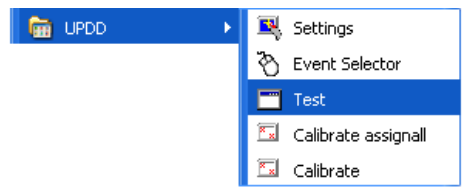
UPDDdraw is used to simply test the performance and accuracy of the touch device as handled by the UPDD driver. It can be used to view stylus input from single and multi-touch devices.

This document refers to the UPDDdraw supplied with UPDD version 4.1.6, build 1177 and above.

Invoking draw

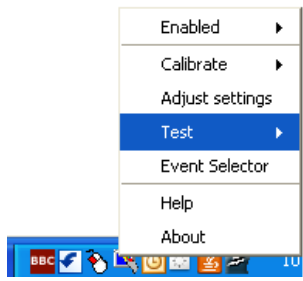
UPDDdraw can be invoked in various ways:

Program Manager, UPDD entry



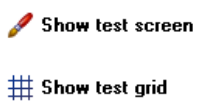
Runs draw on the monitor associated with the first UPDD device.

UPDD system tray



Runs draw on the monitor associated with the first UPDD device or offers a selection of configured devices in multi touch device configuration.

UPDD Console, Status



Runs draw on the monitor associated with the currently selected device in the UPDD Console. Show test grid invokes draw with a grid displayed in the drawing area.

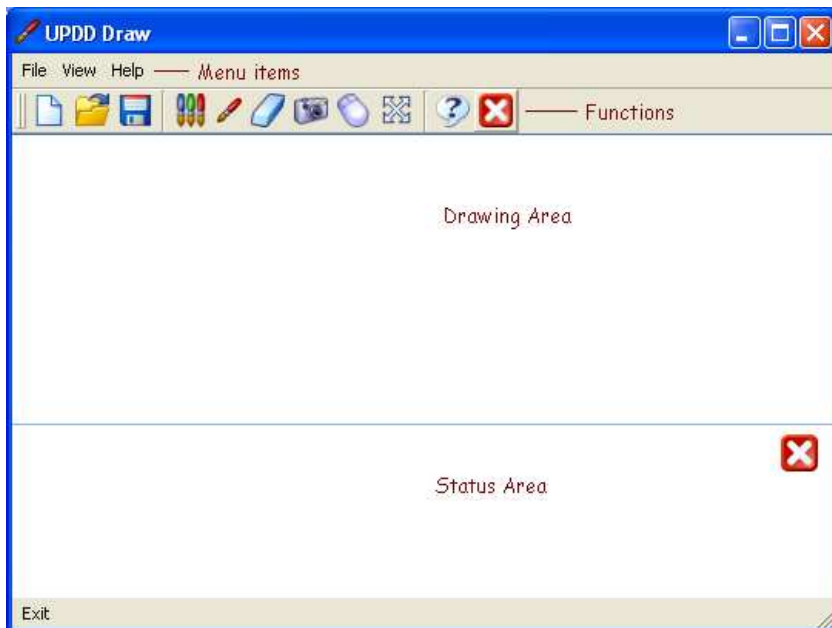
Draw parameters

UPDDdraw utility can accept a number of parameters as follows:



- /test Brings up maximised
- /grid Brings up maximised with grid background
- /fullscreen Run in full screen mode – implemented in some UPDD distributions at the request of OEMs
- /device n Invoked on the desktop associated with a specific device

Dialog and functionality

When invoked, the dialog is shown as below:



The dialog has four main areas, Menu, Functions, Drawing and Status:

Menu	File	New, Open and save captured drawings
	View	Allows status area to be enabled or disabled
	Help	Draw information
Functions		
New		Starts new drawing session
Open		Open previously saved images
Save		Save current drawing
Colour		Select pen colour
Width		Select pen width
Clear		Clear drawing
Snap		Snapshot desktop into drawing area
Mode		Toggle between mouse emulation and direct hardware mode. See Mode of Operation section below.
		Mouse emulation mode: Drawing reflects data seen on the mouse port
		Direct mode: Drawing reflects data seen directly from all stylus on the device
Full Screen		Enter full screen mode – Single touch use only – Mainly used to test full screen calibration accuracy
Info		UPDD draw general information
Cancel		Close (dialog or status area)
Drawing		Drawing area
Status		Stylus data, content depending on mode of operation

Mode of operation

The draw utility can run in Mouse emulation mode or direct mode.

Mouse Drawing reflects the mouse movement. In this mode the drawing also reflects the calibration of the device so the pen drawing is only seen when the mouse pointer is in the draw area. Status information reflects the mouse clicks and desktop video co-ordinate as shown in the following example:

```
11:50:07: Mouse left button down @ x=780 y=515
11:50:07: Mouse left button up @ x=776 y=515
11:50:07: Mouse left button down @ x=846 y=513
11:50:07: Mouse left button up @ x=846 y=513
```

This status output reflects two touches, one after another, passed to the mouse port (by the default stylus) that generated Mouse left button down and

up and shows the calculated video co-ordinates.

Direct

Drawing reflects the data received directly from the touch device via the UPDD API interface. In this mode drawing is scaled into the drawing area so will not reflect calibration but will show the drawing from the full extent of the device. **This mode must be used to see data from a dual or multi touch device.**

Status information shows some of the information available at the API level of interface as shown in the following example:

```
12:00:14: Touch stylus 0 left button Down @ (raw) x=1106 y=2079 (cal) x=150 y=140
12:00:14: Touch stylus 0 left button Up (Non-timed) @ (raw) x=1550 y=1976 (cal) x=209 y=133
12:00:15: Touch stylus 0 left button Down @ (raw) x=1292 y=2079 (cal) x=175 y=140
12:00:16: Touch stylus 0 left button Up (Timed) @ (raw) x=1780 y=2012 (cal) x=240 y=135
```

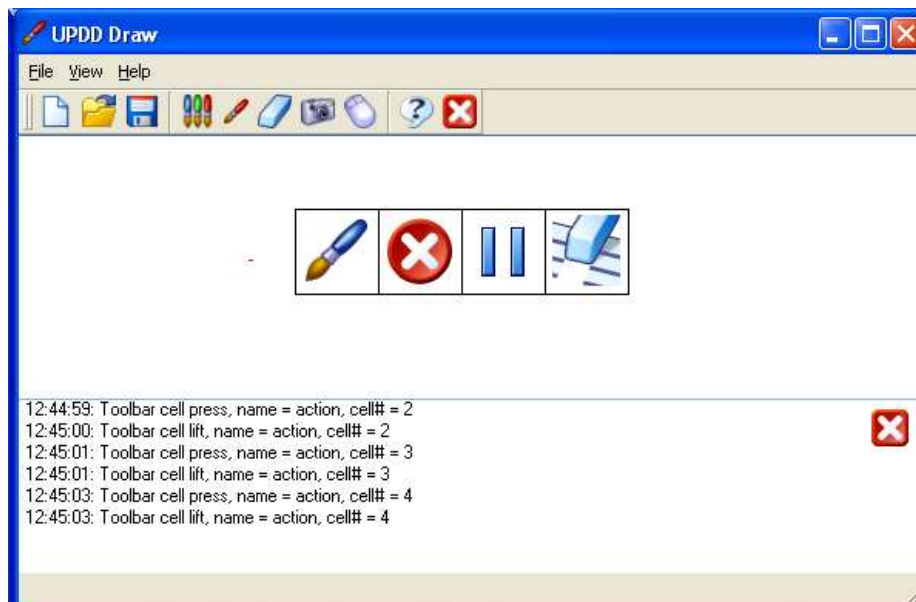
This status output shows two touches, one after another, where the data is received directly from a single stylus on a touch device and the events generate by the driver for each touch.

Import note: Given that mouse emulation is disabled in this mode the dialog functions cannot be activated via touch. To cater for this situation this mode is automatically exited after 10 seconds of inactivity - returning to mouse emulation mode.

Touch stylus	Indicates stylus number, 0, 1, 2 etc. Drawing is colour coded, 4 colours are utilised, stylus 0 = currently selected colour (default red) 1=blue, 2 = green, 3 = black.
Mouse event	The mouse event relating to current UPDD mouse click settings.
Pen up trigger	Non-timed: Pen up touch data packet received. Timed: Driver generated due to lift off time setting trigger.
Raw device co-ordinates	Raw co-ordinates generated by the device.
Calibrated co-ordinates	Video co-ordinates as calculated from the calibration data.

Toolbars

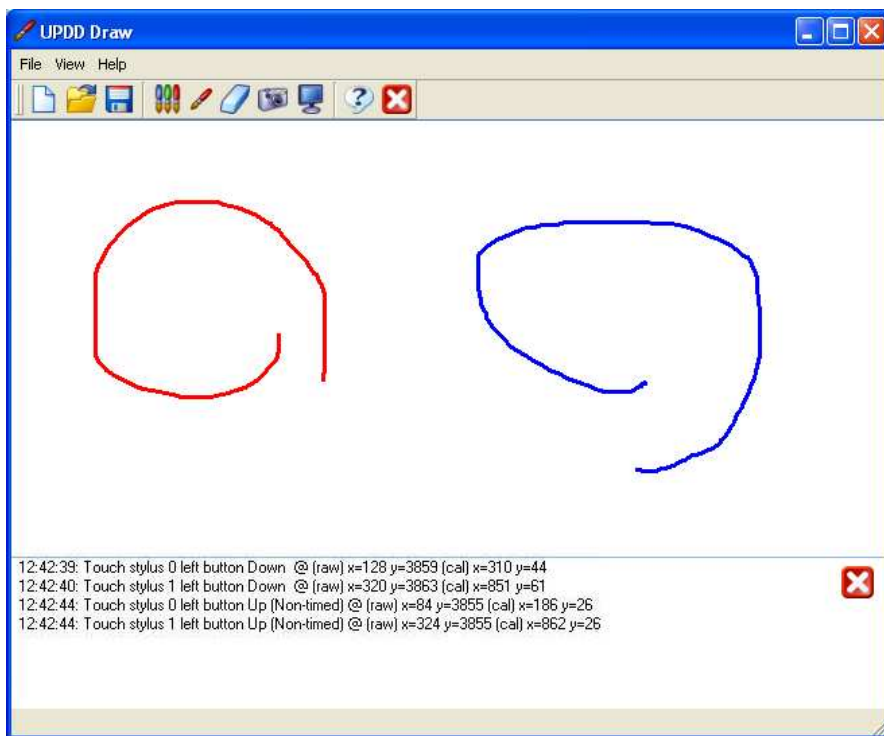
Systems utilising [UPDD toolbars](#) can view toolbar information in UPDD draw (from [UPDD build 1274](#) onwards) as shown in the following example:



In this example a toolbar, named 'action' is in use to utilise UPDD desktop annotate functions to allow live annotation over a Windows desktop. As each toolbar cell is touched relevant toolbar information is displayed in the UPDD draw status area.

Example

In the following example UPDD Draw is placed in direct mode to show the drawing and stylus information seen simultaneously from both stylus of a dual touch device:



Contact

For further information or technical assistance please email the technical support team at technical@touch-base.com