

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:

Windows

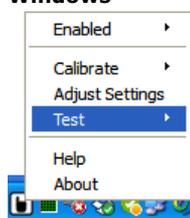
Program Manager, UPDD entry



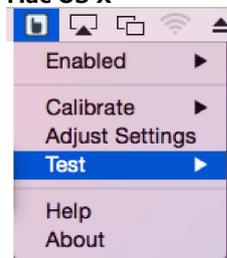
Runs draw on the monitor associated with the first UPDD device.

UPDD system tray or menu item

Windows



Mac OS X



Linux

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

Windows, Mac OS X, Linux

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.

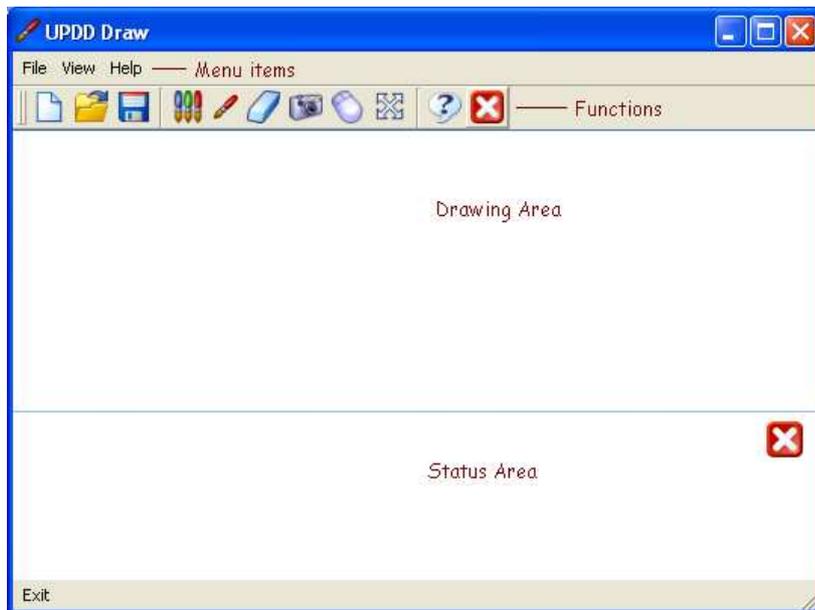
Draw parameters

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
- /touchmode Start in touch mode (data is read direct for touch device, not via mouse emulation)
- /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 via the UPDD API interface
	Full Screen	 Enter full screen mode – Mainly used to test full screen calibration accuracy. Keeps the current mode of operation
	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



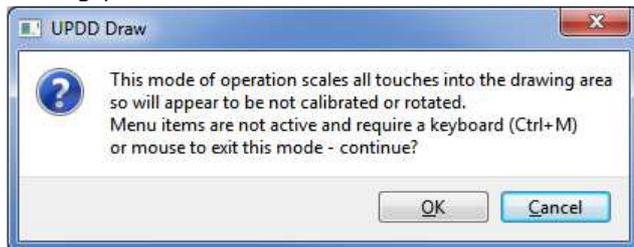
Also referred to as touch mode. Drawing reflects the data received directly from the touch device via the UPDD API interface. In this mode drawing is **scaled into the drawing area so will not reflect calibration** but will show the drawing from the full extent of the device. **This mode must be used to see data from a dual or multi touch device. Since UPDD 4.1.10 caters for up to 16 stylus.**

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
```

The above 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, as per this warning message, shown in UPDD 5.1.x:



Touch stylus	Indicates stylus number, 0, 1, 2 etc. Drawing is colour coded with different colours used per stylus. Stylus 0 uses currently selected colour.
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.

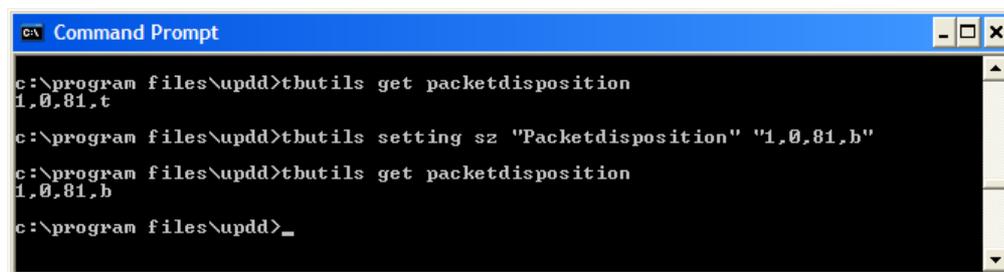
Touch Logging

With UPDD 5.1.x the direct mode drawing is also captured to a log file updddrawing.log. This will be written to the UPDD folder if the user has permissions for this, else in the temp folder.

Under Windows the temp folder location can be retrieved by the command 'set temp'. Under Linux and Mac the file is written to /tmp.

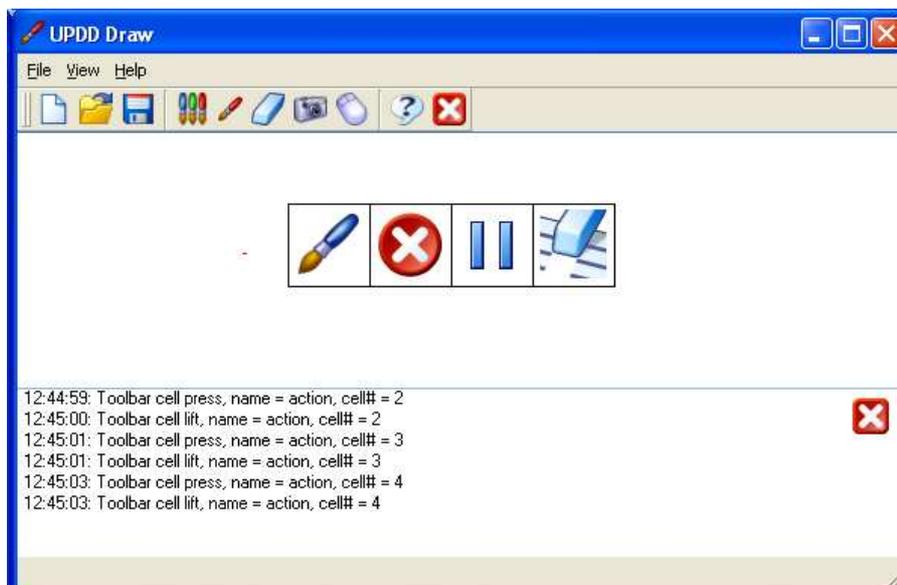
This function was introduced to capture touch data for debugging purposes, especially when trying to understand unexpected touch movements.

Using this logging facility requires that the [packet disposition](#) for the device be set to "both". This is the default setting for most controllers and so unless an API program has changed this it should not be a concern. To check this examine the "packetdisposition" setting and check that it ends with the character 'b' as in the example below:



Toolbars

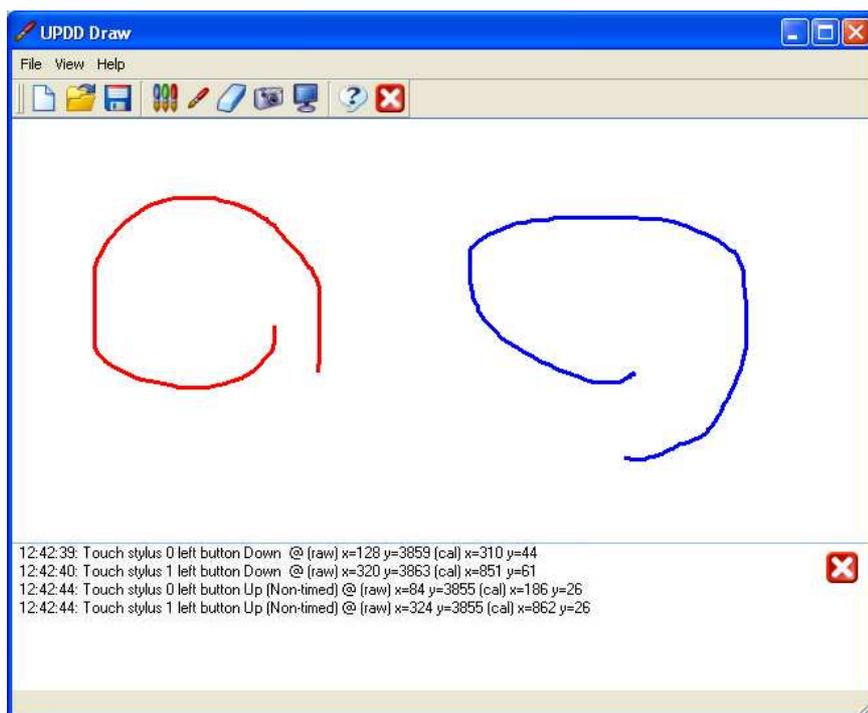
Systems utilising [UPDD toolbars](#) can view toolbar information in UPDD draw (from [UPDD build 1274](#) onwards) as shown in the following example:



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