DTouch

User Guide

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Introduction

The **DTouch** interface can be used for digital video capture, conversion, control and playback.

DTouch is designed to operate either standalone as a capture/playback workstation software, or in conjunction with a DDR solution as a streamlined interface for digital intermediate work flows.

To run this application click on the following: **Start|Programs|<install directory>|DTouch**.

Features

Touchscreen

The product is equipped with and mainly operated using the touchscreen. This control surface offers a host of attractive and intuitive options for element review, control and selection. Users may "swipe" through clip lists, metadata elements and so on, with a "drag and pull" approach similar to that of many consumer products.

Video Capture

The user may capture video from an incoming signal. Incoming signal is displayed during recording or passthrough through the video hardware output. The signal is also displayed during record and passthrough on the touchscreen's VGA display monitor.

Clips captured within a project will be added to the user's clip bin. When the user changes the project, an empty clip bin is presented.

Video Playback

The user may play video files available on local or networked drives through the video hardware output, and also through the touchscreen's VGA display monitor.

Clips captured within a project will be present within the user's clip bin. Clips existing on local or networked storage may be added to the clip bin without clip duplication or reallocation. Once a clip is in the clip bin, it may be selected for playback.

Signal Analysis

The user may view signal output through an onscreen vector scope, a luminance wave form monitor, a chrominance wave form monitor, an histogram and a safe area view for analysis and calibration purposes.

Metadata

The user may view and set metadata.

Controls and Displays

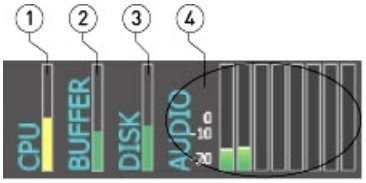
The functions and locations of the controls and displays of the interface are detailed in this section.

Main Interface Overview

1	**Transport Display** section	Displays the current time code location, the state of the video input, and the current signal and format settings.
2	**Levels Display** section	Displays the CPU and Buffer usage levels, how full the disk is, and the audio levels.
3	**Exit** button	Press the **Exit** button to close **DTouch**.
4	**Setup** button	Press the **Setup** button to display controls to adjust the current system settings.
5	**Main** button	Press the **Main** button to display video passthrough (in **Stop**) and playback in the **VGA Display** area.
6	**Clips** button	Press the **Clips** button to display the contents of the **Clip Bin** in the **VGA Display** area.
7	**VGA**	This area provides various controls and displays, depending on which

	Display section	controls have been adjusted.
8	**Import** button	Press the **Import** button to browse to and select clips or importation into the format **DTouch** is set to.
9	**Overlay** button	Press the **Overlay** button to access the **Vectorscope**, **Wave Form Monitor**, **Histogram** and **Safe** views.
10	**Meta** button	Press the **Meta** button to view metadata associated with the current selected clip.
11	**Transport Controls** section	Provides play and record, and clip naming, controls and displays.

Levels Display Section



The **Operations Selector** provides access to the various operations that may be performed within the application. Clicking on either the **Input**, **Output** or **Setup** tabs reveals the choices for each operation. These controls are also duplicated in the **Main Menus**, under the **Operations** heading.

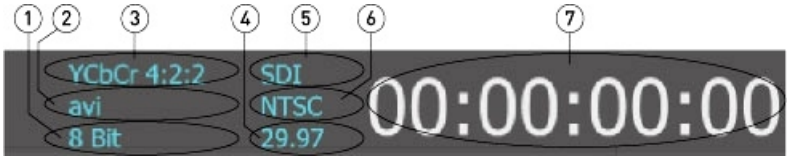
1	**CPU** display	Displays the current level of CPU usage, indicated by a yellow bar.
2	**Buffer** display	Displays the current level of buffer usage, indicated by a green bar.
3	**Disk** display	Displays the percentage of the designated storage that has been used, indicated by a green bar.
3	**Audio** display	Displays the audio levels, indicated by a multicolor bar. The lower levels are green, the bar shows yellow through robust signal areas, and shows red toward the top where levels are past their optimum level.

Audio Levels Pair Display

Clicking on the audio bars will invoke the audio pair output bars on the right side of the touchscreen. They are identified as item number one on the image below.

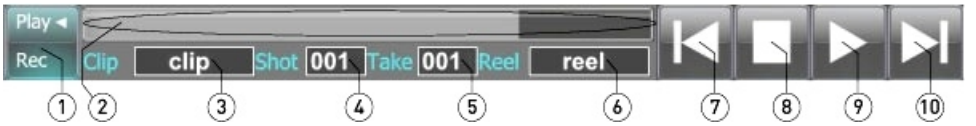
These bars provide a relative signal strength reading for the first audio pair or first two audio channels, to show the user whether their signal is within acceptable parameters for input or output level.

Transport Display



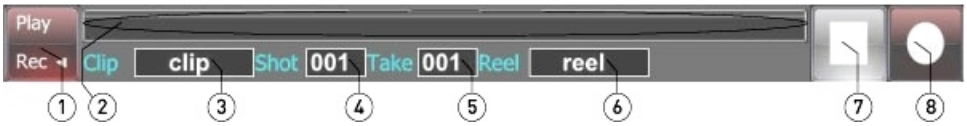
1	**Bit Setting** display	Displays the current bit depth setting for the system.
2	**File Format** display	Displays the current file format setting for the system.
3	**Codec** display	Displays the current codec setting for the system.
4	**Frame Rate** display	Displays the current frame rate setting for the system.
5	**Input Signal** display	Displays the type of input signal the system is set to. Where the input signal is missing or not detected, this field will indicate **No Signal**.
6	**Video Standard** display	Displays the current video standard for the system.
7	**Time Code Location** display	Displays the current time code location, either during record, or for clip playback and cueing, in standard SMPTE time code nomenclature - hours:minutes:seconds;frames.

Transport Controls - Play Mode



1	**Play / Record** toggle	Each press switches between play and record modes for the **Transport Controls**. When in **Play** mode, displays as green, with the arrow pointing to **Play**. When in **Record** mode, displays as red, with the arrow pointing to **Record**.
2	**Position** slider	Displays playback progress as a clip is being played, and allows the user to dynamically adjust the cued location by adjusting the slider, or clicking on an area of the clip.
3	**Clip** field	Displays the current setting for the **Clip** portion of a **Clip Name**. Clicking in the field invokes the keyboard, which allows the user to edit this field.
4	**Shot** field	Displays the current setting for the **Shot** portion of a **Clip Name**. Clicking in the field invokes the keyboard, which allows the user to edit this field.
5	**Take** field	Displays the current setting for the **Take** portion of a **Clip Name**. Clicking in the field invokes the keyboard, which allows the user to edit this field.
6	**Reel** field	Displays the current setting for the **Reel** portion of a **Clip Name**. Clicking in the field invokes the keyboard, which allows the user to edit this field.
7	**Start** button	Pressing this button cues up the start of the selected clip.
8	**Stop** button	Pressing this button stops any playback in progress, and shows passthrough video if present.
9	**Play** button	Pressing this button plays the current selected clip, from the current location.
10	**End** button	Pressing this button cues up the end of the selected clip.

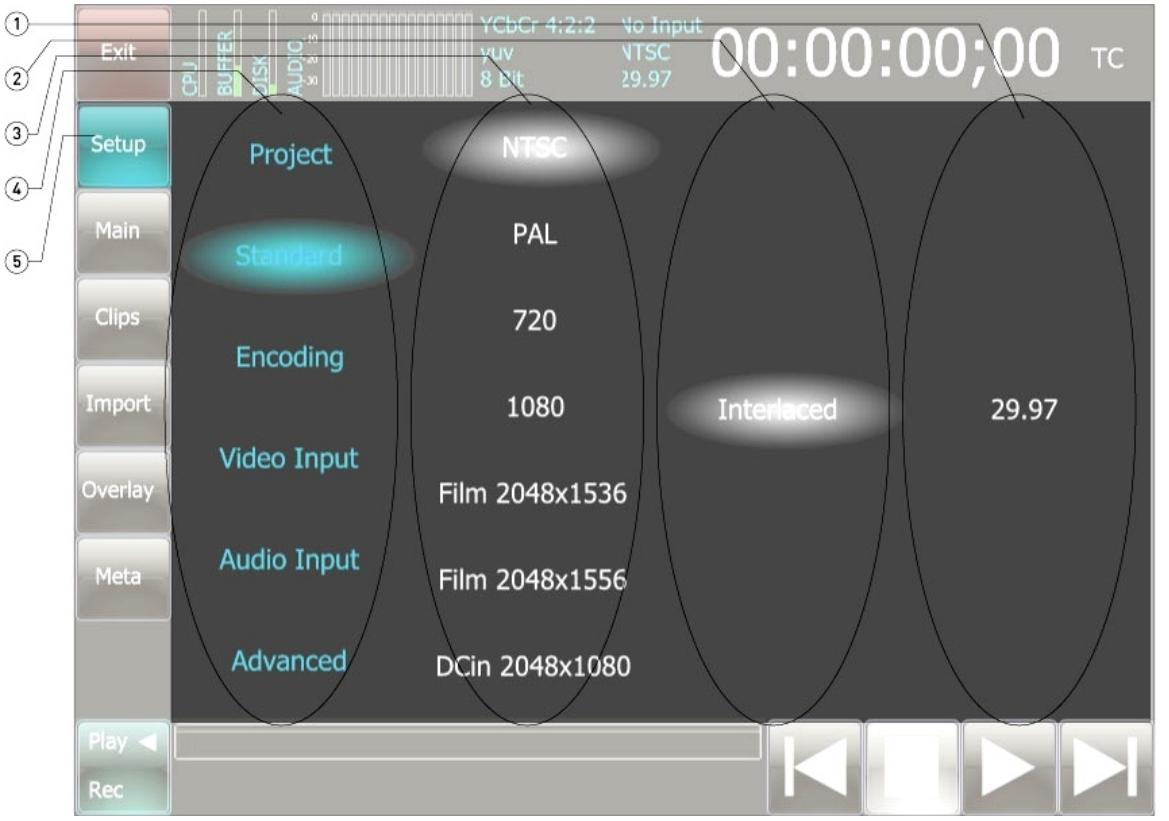
Transport Controls - Record Mode



1	**Play / Record** toggle	Each press switches between play and record modes for the **Transport Controls**. When in **Play** mode, displays as green, with the arrow pointing to **Play**. When in **Record** mode, displays as red, with the arrow pointing to **Record**.
2	**Position** slider	Displays playback progress as a clip is being played, and allows the user to dynamically adjust the cued location by adjusting the slider, or clicking on an area of the clip.
3	**Clip** field	Displays the current clip name setting. The text in this field will be used to create a a portion of the file name for the clip that is being recorded. The user may enter text of their choice into this field by clicking on it (this brings up a virtual keyboard), or keep the default name of "clip".
4	**Shot** field	Displays the current shot number setting. The shot number will be appended to the clip name to allow the user to create sequentially-named clips whose naming convention describes shot, take and reel information. Each time a new shot is set up, the user may click in this field to enter a new shot number, which will reset the **Take** field to 001.
5	**Take** field	Displays the current take number. The take increments upward by single integers for every record during a shot. When the shot is changed, the take field is reset to 001 to keep track of how many takes were required for each shot.
6	**Reel** field	Displays the current reel name (reel by default). Originally featured within VTRs to alert the operator to the fact that the tape in the deck needs to be replaced with a new tape, now this may be used to designate for example a switched hard drive or other removable media, or new record folder. Clicking in this field brings up a virtual keyboard, which allows the user to enter a new **Reel** name.
7	**Stop** button	Press the **Stop** button to end the recording in progress.
8	**Record** button	Press the **Record** button to initiate a recording.

Setup Controls and Displays

Press the **Setup** button to reveal the **Setup** controls and displays.



1	**Column 4** display	The third subsection - for each choice made in the second subsection this area provides the sub-choices. For example if the **Encoding** menu is selected, and the file format column has **MOV** selected, and the **Codec** column has **YCbCr 4:2:2** selected, this column will display bit depth choices, such as 8, or 10.
2	**Column 3** display	The second subsection - for each choice made in the top subsection this are provides the sub-choices. For example if the **Encoding** menu is selected, and the file format column has **MOV** selected, this column will display codec choices for MOVs such as RGBA, YCbCr 4:2:2, and so on.
3	**Column 2** display	The top subsection - for each menu the main group is selected here, and that choice populates the next column with information. For example if the **Encoding** menu is selected, this column offers choices between the main file format choices.
4	**Column 1** display	The main selection - provides a way to select between **Video Standard**, **Encoding**, **Video Input**, **Audio Input** and **Record Folder** menus.
5	**Setup** button	The **Setup** button is selected to provide the **Setup** controls and displays.

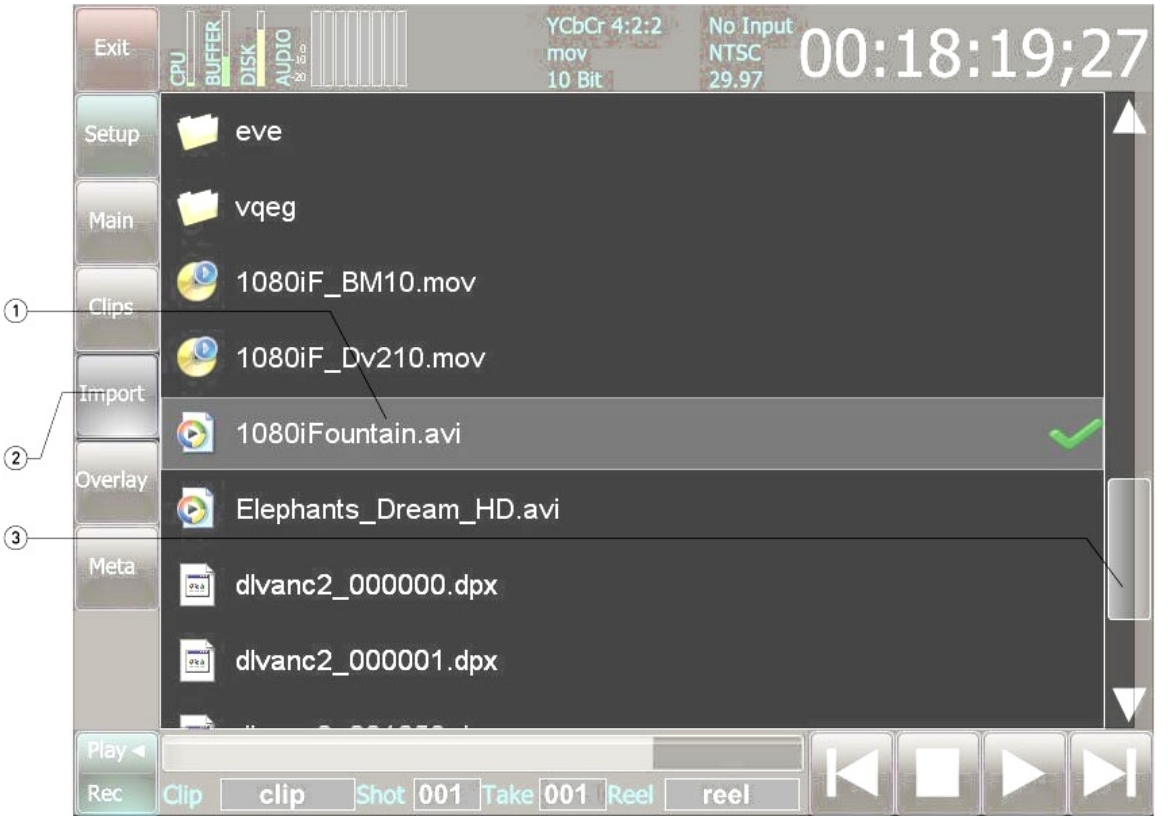
Clip Bin

Press the **Clips** button to reveal the **Clip Bin** controls and displays.

1	**Selectable Clip**	The **Clip Bin** functions a bit like an old rotary file - offering clips via their picons. When a clip is rotated to the front, its clip information is displayed. Clicking on the clip in the front selects it, and pressing **Play** will play it.
2	**Background Clip**	As clips rotate toward the back, they are reduced in size but may still be located by looking for the associated picon.
3	**Clips** button	Press the **Clips** button to reveal the **Clip Bin** controls and displays.
4	**Clip Information** display	A clip that has been rotated to the front has its clip information displayed. This information may include: File name/path information, video and audio file information and file duration.
5	**Scroll Through** right arrow	Press the **Scroll Through** right arrow to rotate and view the contents of the **Clip Bin** toward the right.
6	**Scroll Through** left arrow	Press the **Scroll Through** left arrow to rotate and view the contents of the **Clip Bin** toward the left.

Import

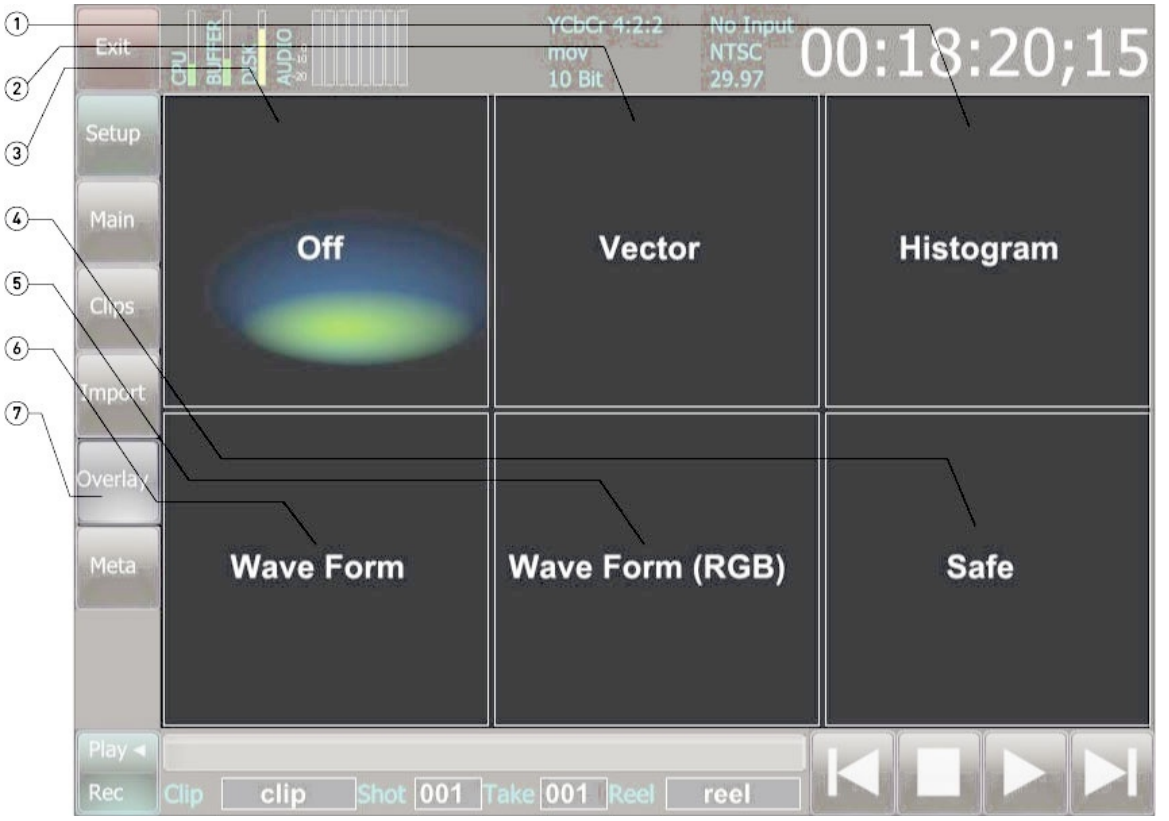
Press the **Import** button to reveal the **Import** controls and displays.



1	**Selected Clip**	The user may click on a clip to select it for import. A selected clip will display a green check mark. Once the clip has been imported, it will appear in the clip bin, available for playback.
2	**Import** button	Press the **Import** button to reveal the **Import** controls and displays.
3	**Up/Down** scroll bar	The user may click and pull the scroll bar up or down to reveal clips not displayed.

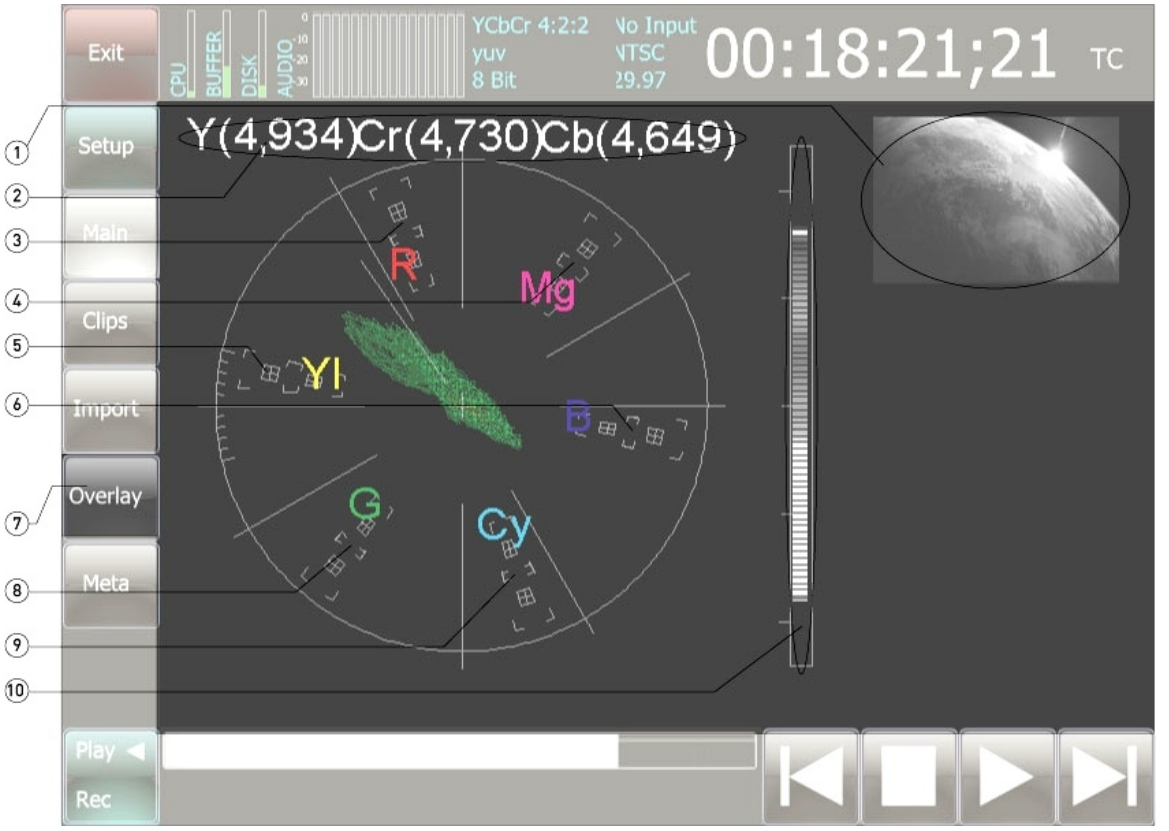
Overlay

Press the **Overlay** button to reveal the **Overlay** controls and displays.



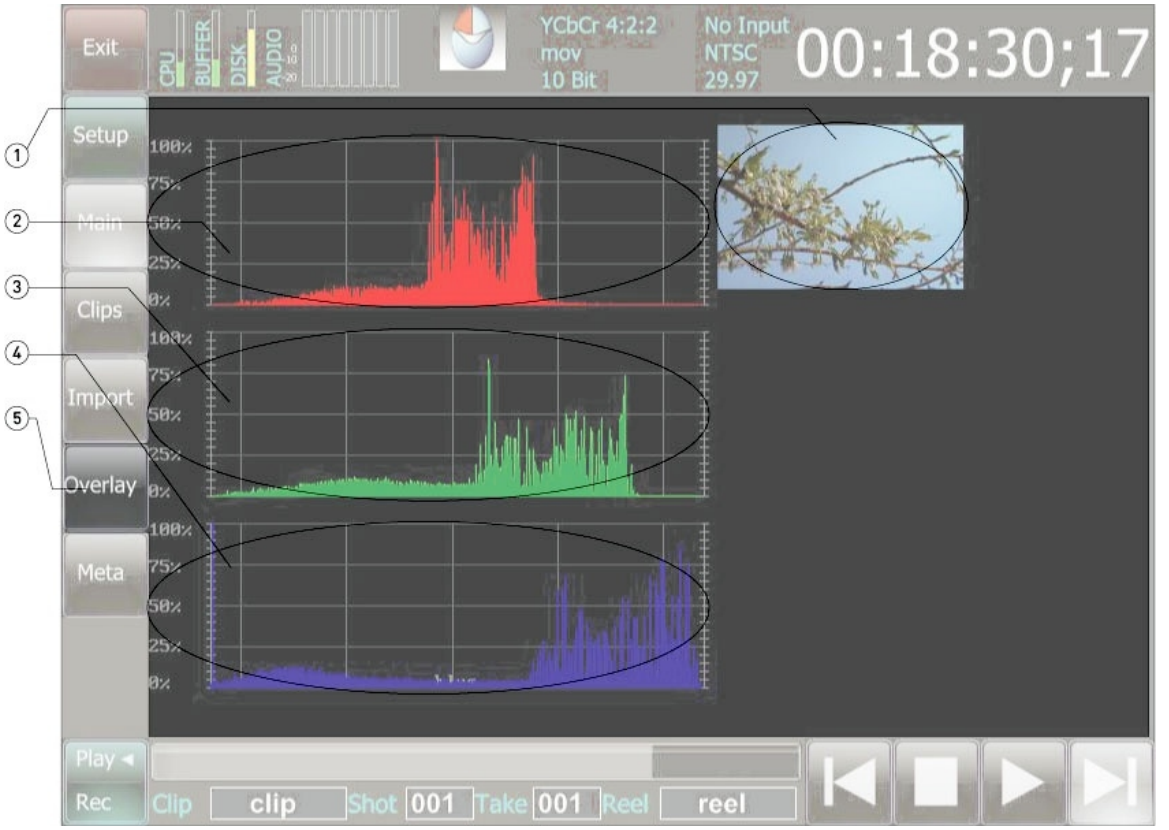
1	**Histogram** control	Press the **Histogram** area of the screen to open the **Histogram** section of **DTouch**
2	**Vector** control	Press the **Vector** area of the screen to open the **Vector** section of **DTouch**
3	**VGA Display** control	Press the **VGA Display** area of the screen to toggle the **VGA Display** on and off.
4	**Safe** control	Press the **Safe** area of the screen to open the **Safe** section of **DTouch**
5	**Wave Form (RGB)** control	Press the **Wave Form (RGB)** area of the screen to open the **Wave Form (RGB)** section of **DTouch**
6	**Wave Form** control	Press the **Wave Form** area of the screen to open the **Wave Form** section of **DTouch**
7	**Overlay** button	Press the **Overlay** button to reveal the **Overlay** controls and displays.

Overlay - Vector Scope



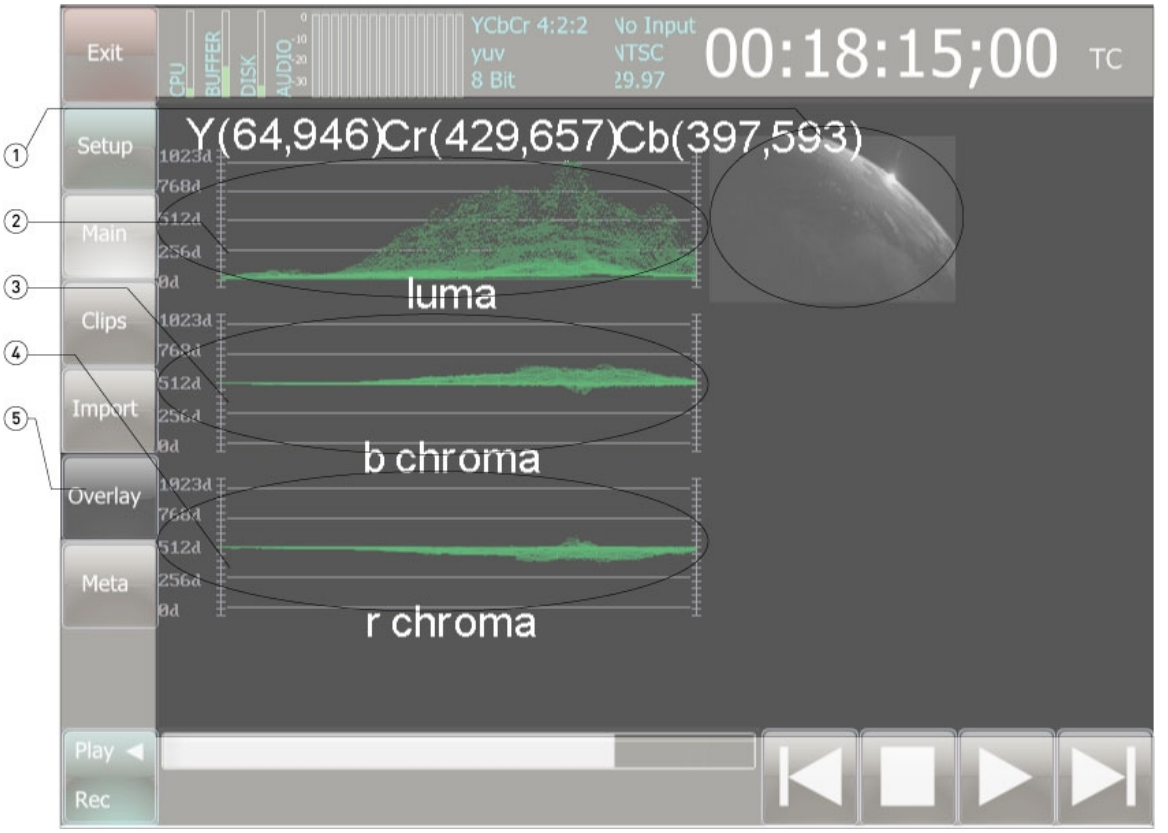
1	**Clip Display** screen	Provides a scaled down version of the clip or passthrough video that is being played through the **Vector Scope**.
2	**Peak Values** display	Shows the maximum levels for Y, CB and Cr.
3	**Red** location	Shows the location of Red within the scope.
4	**Magenta** location	Shows the location of Magenta within the scope.
5	**Yellow** location	Shows the location of Yellow within the scope.
6	**Blue** location	Shows the location of Blue within the scope.
7	**Overlay** button	Press the **Overlay** button to reveal the **Overlay** screen. Press the **Vector Scope** button to select the **Vector Scope**.

Overlay - Histogram



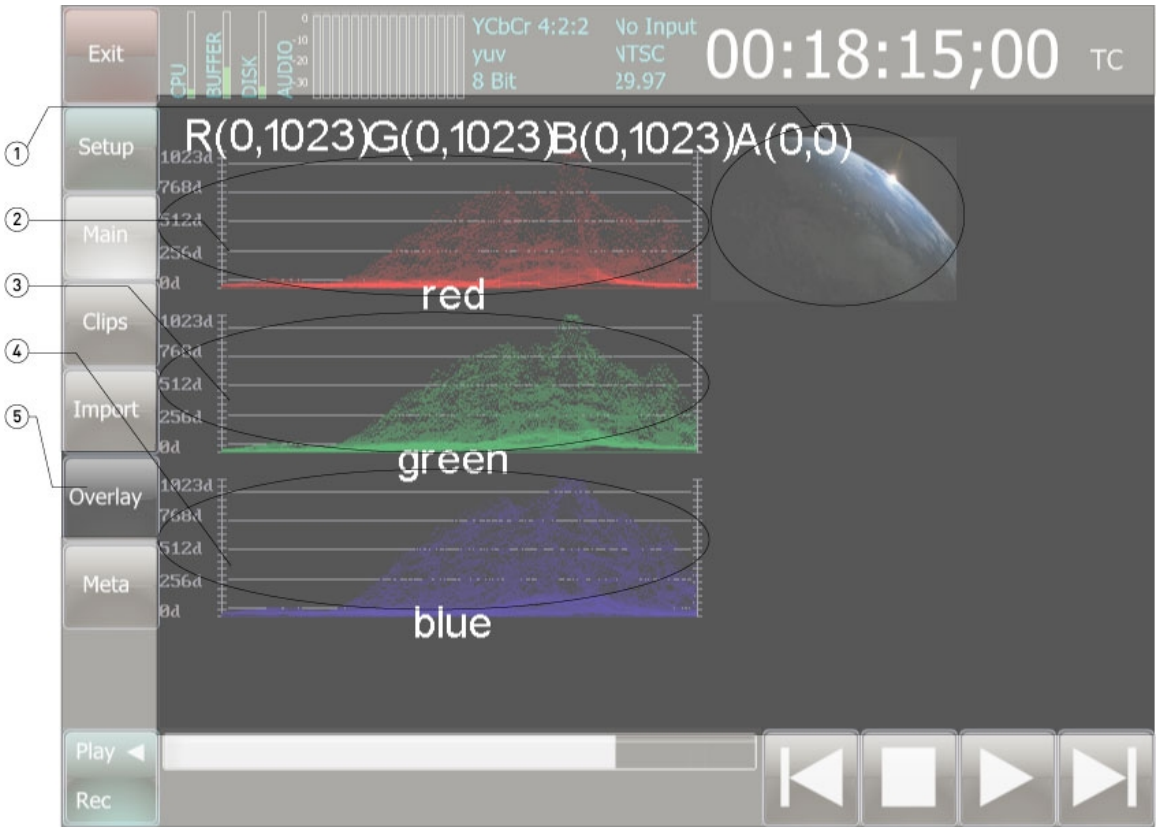
1	**Clip Display** screen	Provides a scaled down version of the clip or passthrough video that is being played through the **Histogram**.
2	**Red** display	Shows the red portion of the signal as a histogram.
3	**Green** display	Shows the green portion of the signal as a histogram.
4	**Blue** display	Shows the blue portion of the signal as a histogram.
5	**Overlay** button	Press the **Overlay** button to reveal the **Overlay** screen. Press the **Histogram** button to select the **Histogram**.

Overlay - Wave Form Monitor



1	**Clip Display** screen	Provides a scaled down version of the clip or passthrough video that is being played through the **Wave Form Monitor**.
2	**Luma** display	Shows the luma portion of the signal as a wave form.
3	**B Chroma** display	Shows the b chroma portion of the signal as a wave form.
4	**R Chroma** display	Shows the r chroma portion of the signal as a wave form.
5	**Overlay** button	Press the **Overlay** button to reveal the **Overlay** screen. Press the **Wave Form Monitor** button to select the **Wave Form Monitor**.

Overlay - Wave Form RGB Monitor



1	**Clip Display** screen	Provides a scaled down version of the clip or passthrough video that is being played through the **Wave Form RGB Monitor**.
2	**Red** display	Shows the red portion of the signal as a wave form.
3	**Green** display	Shows the green portion of the signal as a wave form.
4	**Blue** display	Shows the blue portion of the signal as a wave form.
5	**Overlay** button	Press the **Overlay** button to reveal the **Overlay** screen. Press the **Wave Form Monitor RGB** button to select the **Wave Form Monitor RGB**.

Overlay - Safe

1	**HD Safe Area** border	The larger white border overlay outlines the safe area for HD.
2	**Red** display	The smaller white border overlay outlines the safe area for SD.
3	**Overlay** button	Press the **Overlay** button to reveal the **Overlay** screen. Press the **Safe** button to select the **Safe** screen.

Metadata

1	**Up/Down** slider	Use the **Up/Down** slider to reveal any metadata menu items not shown
2	**Value** column	The value for each metadata type is displayed in this column
3	**Metadata Type** column	The specific metadata type is listed in this column. The metadata types are grouped into areas such as video, audio etc. for the convenience of the user.
4	**Meta** button	Press the **Meta** button to reveal the **Metadata** screen.

Setup

The setup tools within the application provide for a wide range of functionality by enabling differing setups using the same software. These tools can be revealed by pressing the **Setup** button. Some of the features described below are only available where supported by the hardware and configuration.

Project

Press the **Project** button to reveal a browser. This browser allows the user to set where the files will be recorded within the networked storage.

Standard

Press the **Standard** button to reveal the various raster sizes available, such as NTSC, PAL, 720, 1080, 2K and so on. Click on one of these choices to select it - this action reveals the available types of raster creation such as interlaced, progressive, segmented and so on. Click on one of these choices to select it - this action reveals the available frame rates for the selected standard. Click on a frame rate to select it. Once the frame rate has been selected, all of the settings are applied.

Encoding

Press the **Encoding** button to reveal the various file type choices available, such as MOV, AVI, MXF, DPX and so on. Click on one of these choices to select it - this action reveals the available codecs/color spaces such as RGBA, YCbCr, Cineform and so on, that will be applied to the file during clip creation (recording). Click on one of these choices to select it - this action reveals the bit depth setting choices for the selected codec, such as 8 or 10. Click on one of the bit depth choices to select it. Once the bit depth has been selected, all of the settings are applied.

Video Input

Press the **Video Input** button to reveal the various choices available for the video input source, such as SDI, Dual Link, HDMI and so on. Click on one of these choices to select it. Once a video input source has been selected, this setting will be applied.

Audio Input

Press the **Audio Input** button to reveal the various choices available for the audio input source, such as Balanced +4db, AES/EBU BNC and so on. Click on one of these choices to select it. Once an audio input source has been selected, this setting will be applied.

Display

Press the **Display** button to reveal the various choices available to display the signal on the screen, such as Best Fit, Anamorphic and so on. Click on one of these choices to select it. Once a display setting has been selected, this setting will be applied.

Functions

This section describes the various functions and how to perform them.

Video Capture

This section describes how to create files through video capture.

Here is how to capture media from an incoming video signal. Make sure all of the settings are correct for the type of video and audio you wish to create. You can confirm the settings in the **Settings** section of the interface. For video capture, press the **Main** button if it is not already selected.

The default display will show the **Transport Controls** section in **Play** mode. Press the **Play/Record** toggle to switch it to **Record** mode. In this mode there are clip, shot, take, reel fields, and a record and a stop button.

Clip Capture Details

Clip Name - by default this field shows "clip" as the clip name. The text in this field is used to create the first portion of the name of the clip, as a prefix to the shot, take and reel information. The user may enter a clip name of their choice by clicking in the **Clip Name** field. This brings up a virtual keyboard, which allows the user to enter the preferred text into this field.

Shot Number – the shot number starts at 001 by default. The number in this field is used to create a portion of the clip name. Each clip that is recorded with the same shot number causes the take number to increment upwards by a single integer. This allows the user to create a number of takes for the same shot, and to confirm which shot and take a clip is from by looking at the clip name. Clicking in this field increments the shot number upward by a single integer, and resets the take field to 001.

Take Number - the take number starts at 001 for each shot. The number in this field is used to create a portion of the clip name. Each time a new record is made with the same clip and shot information, the take field increments upward by a single integer. This allows the user to create a number of takes for the same shot, and to confirm which shot and take a clip is from by looking at the clip name.

Reel Name - by default this field shows "reel" as the reel name. The reel name is stored in the metadata to help define which media storage device (in analog terms it would be which tape) the media was recorded onto. This field might be used to define which folder or storage device the file was recorded onto. Clicking in this field brings up a virtual keyboard, which allows the user to enter a new reel name.

Press the **Record** button. This starts a new record. Time code should start rolling and record portions of the interface will take on a red hue. Once enough media has been captured, press the **Stop** button. Time code should stop rolling, and a new clip should now be present in the clip bin.

A new clip should appear within the folder the user has set in the **Project** menu. The file name of the clip should be based on the parameters set in the **Name**, **Shot** and **Take** fields.

More records may be set up and performed using the above methods.

Video Output

This section describes how to play, or output files.

The interface features transport controls (play, stop, pause, fast forward etc.) and displays (time code location, type etc) analogous to a professional VTR.

Press the **Clips** button. This reveals the clip bin. All of the clips that have been recorded or imported within the current project will be displayed as a rotatable field of picons. To scroll through the list of clips, the user may touch one side of the screen, and drag across the screen to "pull" the clips around within the display, for selection. When the desired clip is in the front (it will be larger) the user may click on it to select it.

Once a clip has been selected, the transport controls will operate clip playback. The video and audio output will play through the hardware outputs, and through the touch screen within the VGA display monitor section.

Pressing the **Start** button will cue the clip to the first frame of the clip.
Pressing the **Play** button will play the clip at 100% of normal playback speed.
Pressing the **Pause** button will stop playback and display the frame of video at the paused location.
Pressing the **End** button will cue the clip to the last frame of the clip.

Where the user has selected an alternate overlay (such as the vector scope or wave form monitor), clip playback is provided within a scaled down VGA display monitor. The wave forms or other manifestations of video signal modulation are displayed in real time as clips are played or cued.

Import

This section describes how to import clips into the clip bin. The import process allows the user to select a clip that is not in the clip bin, but is available on networked drives, and "add" it to the clip bin. The clip is not moved or duplicated, rather a pointer is placed within the clip bin to allow the user to select it for playback.

Press the **Import** button to reveal the **Import** screen. This screen offers a browser wherein the user can look through available networked drives to find clips that need to be added to the bin for playback. A clip that is already in the clip bin will have a check mark to the right of the file name within this browser.

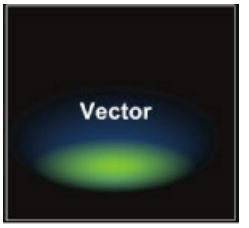
Once the correct clip has been located, click on it - a check mark will appear to its right. This signifies that the clip will be present in the clip bin and the user can select it for playback.

Overlay

This section describes the various available overlays.

Vector Scope

To access the **Vector Scope** screen, press the **Overlay** button. There will be six fields within the screen that is revealed. Press the **Vector Scope** button.



This will reveal the **Vector Scope** screen. The **Vector Scope** provides video signal output through a virtual vector scope, including Red, Magenta, Blue, Cyan, Green and Yellow field optimal locations for signal analysis and calibration.

The **Drastic Luma Stick** is located to the right of the vector scope. It provides a bar graph view of the signal's luminance levels for signal analysis and calibration.

A scaled down VGA display monitor is provided to confirm the correct signal is being viewed.

Histogram

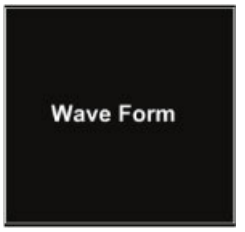
To access the **Histogram** screen, press the **Overlay** button. There will be six fields within the screen that is revealed. Press the **Histogram** button.

This will reveal the **Histogram** screen. The **Histogram** provides video signal output through a virtual histogram with levels for chrominance with each element of the color space displayed in the primary color corresponding to R-G-B or Y-Cb-Cr.

A scaled down VGA display monitor is provided to confirm the correct signal is being viewed.

Wave Form Monitor

To access the **Wave Form Monitor** screen, press the **Overlay** button. There will be six fields within the screen that is revealed. Press the **Wave Form Monitor** button.



The **Wave Form Monitor** screen displays the luminance portion of the signal through a virtual wave form monitor for signal analysis and calibration.

A scaled down VGA display monitor is provided to confirm the correct signal is being viewed.

Wave Form RGB Monitor

To access the **Wave Form RGB Monitor** screen, press the **Overlay** button. There will be six fields within the screen that is revealed. Press the **Wave Form RGB Monitor** button.

The **Wave Form RGB Monitor** screen displays the chrominance portion of the signal through a virtual wave form RGB monitor for signal analysis and calibration.

A scaled down VGA display monitor is provided to confirm the correct signal is being viewed.

Safe

To access the **Safe** screen, press the **Overlay** button. There will be six fields within the screen that is revealed. Press the **Safe** button.

Press the **Safe** button to reveal the **Safe** screen.

The **Safe** screen displays two white rectangles over the video output with the VGA display screen. These rectangles allow the user to determine the safe area within a large raster screen for playback where less capable monitors will be able to render the video output without image-altering downconversion processing.

A scaled down VGA display monitor is provided to confirm the correct signal is being viewed.

View - Meta Data

Meta data may be viewed in association with a clip or to view or change system meta data settings. Meta data elements can be viewed and set in the **Meta Data** view. Click on the **Meta** button to reveal the **Metadata** screen. The **Metadata** screen offers a scrollable list of metadata elements for review and in some cases to reset specific values.

The **Metadata** screen displays static metadata elements, which includes information about the file, the video parameters and the audio parameters. These elements cannot be changed within the **Metadata** screen and are displayed in green.

The **Metadata** screen also displays dynamic metadata elements. These include elements the user may set, such as producer, artist, and so on. These elements can be changed and are displayed in white.

To change a dynamic metadata element, click on one of these elements. This action invokes a virtual keyboard on the touchscreen which allows the user to type in a new value for the selected metadata element.

Once the correct value has been typed in for the selected metadata, the user can press the **Enter** button on the virtual keyboard to enter the new value.

Exit

Click on the **Exit** button to close the application.

Copyright Information

Disclaimer

Parts of this manual that describe optional soft - or hardware modules do usually contain a corresponding note. A lack of this note does not mean any commitment from the point of Drastic Technologies Ltd.

This manual has been compiled to assist the user in their experience using **DDR** products. It is believed to be correct at the time of writing, and every effort has been made to provide accurate and useful information. Any errors that may have crept in are unintentional and will hopefully be purged in a future revision of this document. We welcome your feedback.

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