

# **Hippotizer V3.2.2 Manual**

---

# Table of Contents

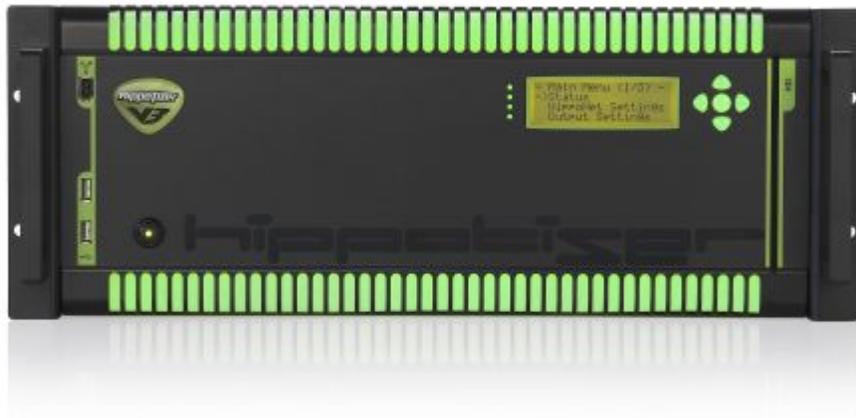
<b>1. Hippotizer V3.2.2 User Manual</b>	<b>1</b>
<b>2. Information and Contents</b>	<b>2</b>
Contents	2
<b>3. Welcome</b>	<b>5</b>
1. Introduction to Hippotizer V3.2.2	5
Disclaimer	6
1. Introduction to Hippotizer V3.2	6
What Are Media Servers	9
1. Introduction to Hippotizer V3.2.2	9
1. Introduction to Hippotizer V3	10
<b>4. Installation</b>	<b>12</b>
2. Introduction to Hippotizer V3.2.2	12
2. Physical Installation	12
2. Introduction to Hippotizer V3.2	13
2. Hardware Installation	13
Hippotizer Server - Hardware and Connections	14
2. Introduction to Hippotizer V3.2.2	14
2. Hardware and Connections	15
2. Hardware and Connections	19
2. Hardware and Connections	20
2. Hardware and Connections	23
<b>5. Getting Started with the Software</b>	<b>26</b>
3. Getting Started with the Software	26
3. Getting Started with the Software	27
3.1 Running the Software	27
3. Getting Started with the Software	29
3.2 Screen Layouts and Ergonomics	29
Zookeeper - an Overview	33
3. Getting Started with the Software	33
3. Getting Started with the Software	35
3. Getting Started with the Software	42
3. Getting Started with the Software	46
3. Getting Started with the Software	51
Media - Importing and Managing your Media	57
3. Getting Started with the Software	57
3. Getting Started with the Software	58
3. Getting Started with the Software	65
3. Getting Started with the Software	73
3. Getting Started with the Software	74
3. Getting Started with the Software	77
Mix Modes - Effects and Generators	80
3. Getting Started with the Software	80
3. Getting Started with the Software	81
3. Getting Started with the Software	91
3. Getting Started with the Software	149

---

<b>6. In-Depth Features</b>	<b>163</b>
4. In-Depth Features	163
Display Settings	164
4. Configuration	164
Timeline Programming	183
4. In-Depth Features	183
4. In-Depth Features	184
HippoNet	186
4. In-Depth Features	186
4. In-Depth Features	190
Controlling Multiple Servers	194
4. In-Depth Features	194
Controlling Hippotizer with External Protocols	199
4. In-Depth Features	199
4. In-Depth Features	200
4. In-Depth Features	211
4. In-Depth Features	218
Dr Hippo	221
4. In-Depth Features	221
<b>7. Components in Detail</b>	<b>229</b>
5.0 Components in Details	229
5.0 Components in Detail - Contents	229
5. Components in Detail	231
5.0 Components in Detail Overview	231
5. Components in Detail	236
5.2 BeatBridge	236
5.0 Components in Details	241
5.3 Clock and Chat	241
5. Components in Detail	245
5.4 CITP	245
5. Components in Detail	247
5.6 Cue Controller	247
5. Components in Detail	250
5.7 DMX2	250
5. Components in Detail	281
5.8 Genlock	281
5.0 Components in Details	284
5.9 HMap2	284
5. Components in Detail	285
5.10 HippoBlaster	285
5. Components in Detail	287
5.11 LCD	287
5. Components in Detail	288
5.12 Live Mask	288
5. Components in Detail	292
5.13 Mackie	292
5. Components in Detail	300
5.14 Media Manager	300
5. Components in Detail	301
5.15 Midi2	301
5. Components in Detail	302
5.16 MultiSelect	302
5. Components in Detail	311
5.17 Network Tester	311
5.0 Components in Details	312
5.18 PhatController	312

5. Components in Detail	314
5.21 PixelMapper	314
5. Components in Detail	329
5.23 RealTime Sync	329
5. Components in Detail	330
5.24 RegionMapper	330
5. Components in Detail	345
5.26 ScreenWarp	345
5. Components in Detail	350
5.27 ScreenThief	350
5. Components in Detail	353
5.29 Sound	353
5. Components in Detail	355
5.30 Syncro	355
5.0 Components in Details	357
5.31 TextEngine	357
5.0 Components in Details	360
5.32 Telnet	360
5. Components in Detail	364
5.34 Timeline Control String	364
5. Components in Detail	366
5.35 Toolbox	366
5.0 Components in Details	368
5.36 UberPan	368
5. Components in Detail	380
5.37 VideoMapper	380
5. Components in Detail	386
5.38 Virtual Media Manager	386
<b>8. Live Video Devices</b>	<b>394</b>
6. Live Video Input Devices	394
6. Live Video Input Devices	396
6.1 S-video / Composite Input (Standard)	396
6. Live Video Input Devices	401
6.2 Four Input Composite Card	401
6. Live Video Input Devices	402
6.3 SDI Input Card	402
6. Live Video Input Devices	403
6.4 Dual and Single VGA Input	403
6. Live Video Input Devices	404
6.5 Blackmagic Design Decklink	404
6. Live Video Input Devices	406
6.6 Elecard HDAccess 2 HD-SDI Card	406
6. Live Video Input Devices	407
6.7 Datapath Capture Cards	407
6. Live Video Input Devices	408
6.8 BlackMagic UltraStudio SDI USB3 Input	408
<b>9. Resources and Resolutions</b>	<b>409</b>
7. Resources and Resolutions	409
<b>10. Index</b>	<b>417</b>

# Hippotizer V3.2.2 User Manual



## Hippotizer V3.2.2 User Manual

# Information and Contents



Welcome to the Green Hippo Hippotizer V3 user Manual. This manual has been put together to help you learn and understand the Hippotizer V3 Product.

While putting this together we strive to make sure that we get as much information into this as possible. However as the software is every changing and getting better we may miss things out from time to time. If you have any queries regarding the information contained in this document then send a E-Mail across to the support team at Green Hippo and they will do all they can to help. [support@green-hippo.com](mailto:support@green-hippo.com)

Green Hippo also run regular training sessions and information on these can be found on the Green Hippo Website. <http://www.green-hippo.com>

## Contents

- [1. Introduction to Hippotizer](#)
  - [Disclaimer contents](#)
  - [What are Media Servers?](#)
  - [Processing Flowchart](#)
  - [Physical Installation](#)
  - [Hardware Installation](#)
- [2. Hardware and Connections - Contents](#)
  - [Front and Rear Views](#)
  - [Power](#)
  - [Display Connection](#)
  - [Detailed Connections](#)
- [3.0 Getting Started with the Software - Contents](#)
  - [Running the Software](#)
  - [Screen Layouts and Ergonomics](#)
- [3.3 ZooKeeper – An Overview](#)
  - [Layer Sources](#)
  - [The Layer Overview Window](#)
  - [The Layer Control Section](#)
  - [The Master Layer](#)
- [3.9 Media: Importing and Managing your Media - Contents](#)
  - [How to Import Media](#)
  - [Importing Media](#)
  - [Using Alpha with Video Clips](#)
  - [Encoding your own Media](#)
  - [WatchFolders](#)
- [3.15 Mix Modes, Effects and Generators - Contents](#)
  - [Mix Modes](#)
  - [Effects](#)
  - [Generators](#)
- [4. In-Depth Features - Contents](#)
  - [Display Settings](#)
- [4.15 Timeline Programming - Contents](#)

- Timeline
  - [Timeline Node Controls](#)
- [4.19 HippoNet - Contents](#)
  - [Set up your Network](#)
  - [Controlling Multiple Servers](#)
- [4.22 Controlling Hippotizer with External Protocols - Contents](#)
  - [DMX / Art-Net](#)
  - [MIDI \(Midi2 Component\)](#)
  - [OSC](#)
  - [Timecode on layer](#)
- [4.28 Dr Hippo](#)
- [5.0 Components in Detail](#)
  - [Overview](#)
    - [BeatBridge](#)
    - [Clock and Chat](#)
    - [CITP](#)
    - [Cue Controller](#)
    - [DMX2](#)
    - [Genlock](#)
    - [HMap2](#)
    - [HippoBlaster](#)
    - [LCD](#)
    - [Live Mask](#)
    - [Mackie](#)
    - [Media Manager](#)
    - [Midi2](#)
    - [MultiSelect](#)
    - [Network Tester](#)
    - [PhatController](#)
    - [PixelMapper](#)
    - [Real Time Sync](#)
    - [RegionMapper](#)
    - [ScreenWarp](#)
    - [ScreenThief](#)
    - [Sound](#)
    - [Syncro](#)
    - [Text Manager](#)
    - [Telnet Component](#)
    - [Timeline Control String](#)
    - [ToolBox](#)
    - [UberPan](#)
    - [VideoMapper](#)
    - [Virtual Media Manager](#)
- [6.0. Live Video Input Devices](#)
  - [S-video / Composite Input \(Standard\)](#)
  - [Four Input Composite Card](#)
  - [SDI Input Card](#)
  - [Dual and Single VGA Input](#)
  - [Blackmagic Design Decklink](#)
  - [ElecCard HDAccess 2 HD-SDI Card](#)

- [Datapath Capture Cards](#)
- [Blackmagic UltraStudio SDI USB3](#)
- [7. Resources and Resolutions](#)

# Welcome

## 1. Introduction to Hippotizer V3.2.2



Hippotizer Version 3.2.2 software is designed to build upon the success of its predecessor V3 which was known for its ease of use, high quality video output and comprehensive set of features. This new version continues this but adds a whole new level of Media Server functionality. However, as with all software which takes a quantum leap, there is a somewhat steeper learning curve with V3 so we recommend you study this document in full and use it as a companion to the product.

This handbook contains important information about your Hippotizer Media Server. It will help you swiftly get up and running with your unit and ensure you get the most from the system. Please take time to read the following pages, as it will help you understand the unit's functionality and assist in achieving the best possible results during operation.

This User Manual is based on Software version 3.2.2. For updates, addenda and errata visit <http://www.green-hippo.com/support/>

## Disclaimer

### 1. Introduction to Hippotizer V3.2



#### 1. Disclaimer

- **1.1 Media**

*All video libraries pre-installed on your system are supplied by us at Green Hippo Ltd. Any queries regarding the use of these should be directed to us. Copyright laws may apply.*

- **1.2 Uploading Own Media**

*It is your responsibility to handle all copyright issues relating to the media you create and upload. Green Hippo Ltd will not accept responsibility for any breach of copyright incurred in these processes.*

- **1.3 Software**

*All Hippotizer software remains the sole property of Green Hippo Ltd and its suppliers. Any attempt to alter or replicate the contents of the Hippotizer is prohibited. Any attempt to copy or alter the software will render any warranties void. Green Hippo Ltd will initiate legal proceedings against anyone attempting to copy or replicate the software in any fashion.*

**Note:** *Installing additional software on your system other than that supplied by Green Hippo Ltd is strongly discouraged. Your Hippotizer has a specific task, which is to play back video reliably. Any third party software may compromise this. If you wish to install third party software we recommend you contact us first. We will also endeavour to post information regarding known issues on our website. Any repairs relating to third party software are not covered under warranty.*

*Additional hardware installation other than USB or external devices will invalidate warranties. Similarly, any removal of external casings should not be undertaken without consultation.*

*Under no circumstances install an additional network device, either internal or external, as this may stop the Hippotizer program from running. For advice on this issue email [support@green-hippo.com](mailto:support@green-hippo.com).*

- **1.4 Warranty**

*Green Hippo Ltd will warranty the Hippotizer for **one year** from date of purchase. This is a full return to base warranty.*

*Please contact Green Hippo Ltd if you experience a hardware fault. You will receive a RMA number and form to send the unit back to our manufacturing partner.*

**Note:** *Any attempt to open the casing will invalidate your warranty. Any attempt to load any software onto the unit in anyway other than that described in the User Manual will invalidate the warranty.*

- **1.5 License Agreement**

*This is the full license agreement that is accepted when installing the software.*

LICENSE

-----

*GREEN HIPPO LTD Company (GREEN HIPPO LTD) hereby gives you a non-exclusive license to use the software Hippotizer-V3 (the Software).*

*Hippotizer-V3 software is for use only in conjunction with a Hippotizer-V3 Media server and a fully purchased Dongle from Green Hippo Ltd or any of its appointed distributors worldwide. Any attempt to use this software under any other circumstances will result in legal action.*

*Should the software be BETA version it must only be used by individuals or companies authorised to perform BETA testing under the Green Hippo BETA testing software programme.*

You may:

- use the Software on the single Hippotizer-V3 media server for which it was supplied;
- Use on a Hippotizer-V2 media server by prior agreement and supply of the relevant dongle/installation details.
- copy the Software for archival purposes, provided any copy contains all of the original Software's proprietary notices.

You may not:

- modify, translate, reverse engineer, decompile, disassemble (except to the extent applicable laws specifically prohibit such restriction),
- create derivative works based on the Software;
- copy the Software (except as specified above);
- rent, lease, transfer or otherwise transfer rights to the Software to a third party unless as part of rental hire-stock and on the Hippotizer server to which the software is tied;
- remove any proprietary notices or labels on the Software.

#### TERMINATION.

*The license will terminate automatically if you fail to comply with the limitations described above. On termination, you must destroy all copies of the Software and Documentation.*

#### DISCLAIMER OF WARRANTY

-----

*The Software is provided on an AS IS basis, without warranty of any kind, including without limitation the warranties of merchantability, fitness for a particular purpose and non-infringement.*

*The entire risk as to the quality and performance of the Software is borne by you.*

*Should the Software prove defective, you and not GREEN HIPPO LTD assume the entire cost of any service and repair.*

*The above disclaimer does not affect your warranty agreement on any hardware supplied by GREEN HIPPO LTD. The above disclaimer does not affect your rights to technical support and response to bug-reporting which will be handled in a fair and efficient manner as far as is possible by GREEN HIPPO LTD.*

*GREEN HIPPO LTD IS NOT RESPONSIBLE FOR ANY INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES OF ANY CHARACTER INCLUDING, WITHOUT LIMITATION, DAMAGES FOR LOSS OF GOODWILL, WORK STOPPAGE, COMPUTER FAILURE OR MALFUNCTION, OR ANY AND ALL OTHER COMMERCIAL DAMAGES OR LOSSES.*

*Title, ownership rights and intellectual property rights in and to the Software shall remain in GREEN HIPPO LTD.  
The Software is protected by international copyright treaties.*

## What Are Media Servers

### 1. Introduction to Hippotizer V3.2.2

#### 1.5 What are Media Servers?



**A real-time media server is designed to control different forms of media and output them simultaneously with manipulation. Manipulation can be made via ZooKeeper, Hippotizer's built in control centre, or externally via DMX, MIDI, RS232, OSC and many other industry standard protocols.**

#### **Dual Output Image/Video Processor**

Hippotizer consists of up to 32 (depending on the unit version) media layers. Hippotizer can run in several different display configurations such as single, dual, or pan mode and display the results using DVI outputs. Hippotizer is also capable of controlling LED fixtures via DMX over Ethernet (Art-Net).

#### **Real Time Effects Manipulation**

Hippotizer allows you to apply FX to images; video and live sources in real time with the effects rendered immediately. The ability to mix between layers and apply FX in real time makes the Hippotizer ideal for live situations where the content may need to be continually changed in real-time.

#### **See also:**

- [Processing flowchart](#)

## 1. Introduction to Hippotizer V3

### 1.5 What are Media Servers?

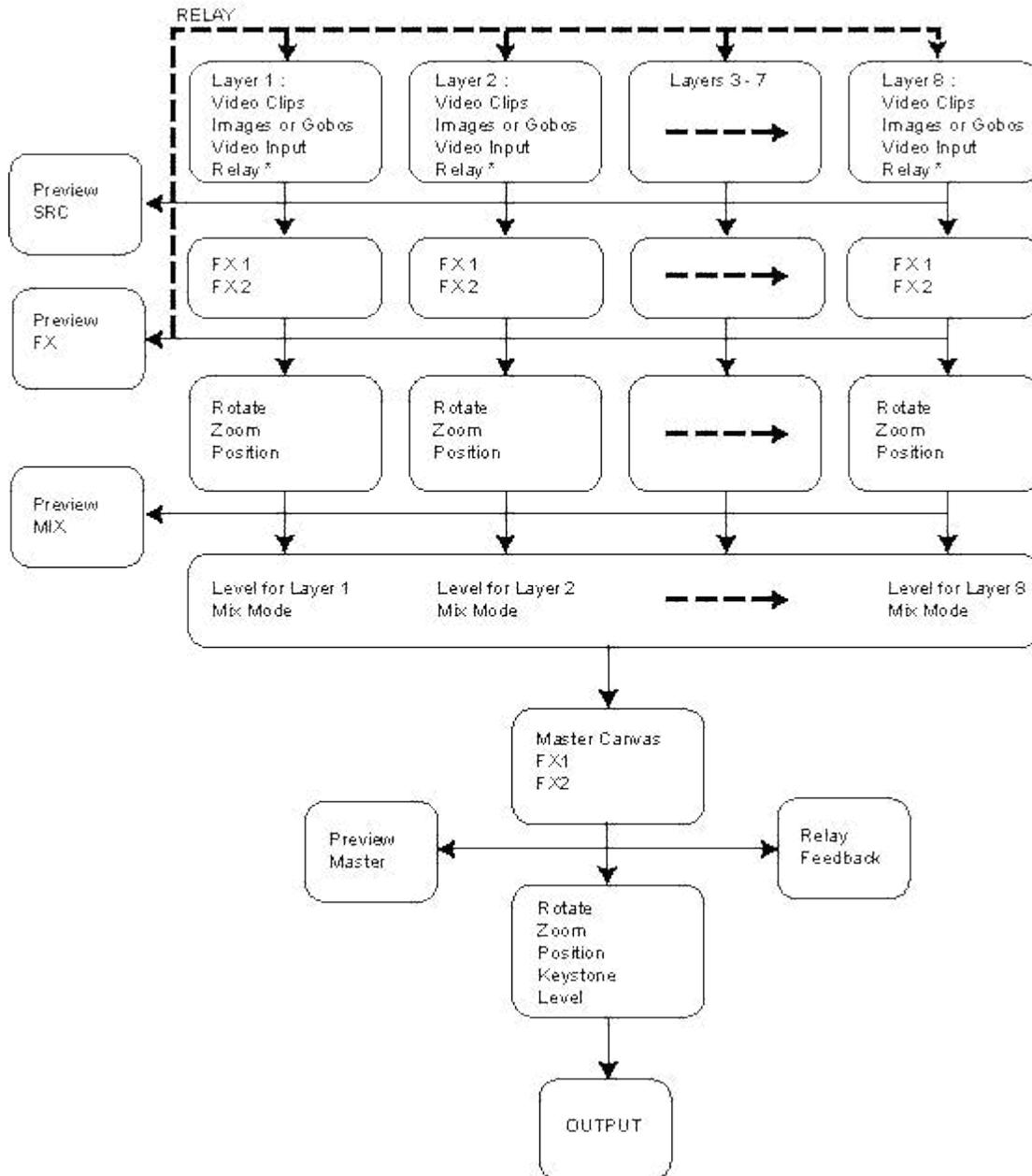


#### Processing Flowchart

The Hippotizer Media Server is, in principle up to 16 video players, a mixer and a selection of effects all in one box. You have instant access to over 250 parameters at any one time. It is possible to manipulate multiple parameters instantly and at random for any media or live camera feed. Any changes to these parameters are executed instantly, which is why we call the Hippotizer a "real-time" media server.

The above is true if running in either single screen mode or pan mode. When running in dual output mode the Hippotizer will operate as two separate 16 layer machines (total number of layers depends on the Hippotizer version and hardware revision).

But before we look at the functions and features of the unit it will prove useful if we familiarize ourselves with the basic flow of information through the Hippotizer Engine. To help us we will use the following diagram.



The process begins with the media player of each layer, where we select the source material. This can be a video clip, a static image, a live video feed or the output of another layer (Relay). On each layer you can then add effects to the chosen media. There are two effects engines per layer. Also at this stage, each layer can be scaled, zoomed, rotated and positioned in the x and y plane of the final output. The mix mode for each layer decides how that particular layer interacts with the layers underneath. See 3.4.1 Mix Modes to find out more about how these work.

Once all 16 layers are mixed together this mix is then presented to the Master Layer. This is the final layer and comprises a combination of effects, positioning and media created on all 16 layers. Any changes made in the Master Layer affect the composition as a whole. The Master Layer is ideally suited to the setup of parameters such as master colour balance or keystone correction for a specific projection setup.

# Installation

## 2. Introduction to Hippotizer V3.2.2

### 2. Physical Installation



- **2.1 Ventilation**

*The unit is cooled by the flow of fresh air via fans in the unit. Therefore the unit must have a clear air-gap with no obstructions to the front and rear. The unit can run to high temperatures safely if well ventilated but damage to components will most likely occur if any of the vents are obstructed. Air flows through the front doors and out of the back of the unit. If installed in a rack ensure that there is a free flow of fresh air front and back. Never run the unit in an enclosure with a sealed back such as a rack mount case with the rear door still in place.*

- **2.2 Rack Mounting**

*The Hippotizer comes in an industry standard 19 inch rack mountable case. The 'ears' on either side allow you to install it into a standard flight case or any environment employing the 19 inch standard. Like any hardware that may be used for touring or industrial installations appropriate protection and support should be provided by the rackmount and flight case. This includes a support tray or slide rails to bear the weight of the unit as this will allow you access to the inside of the Hippotizer should you need to.*

*The Hippotizer HD units can be rack mounted, they occupy 4U and must have the front and back panel removed for operation as this is where the fans operate for ventilation.*

*The Grass Hopper is 2U high and the rack mountable Critter and Rackoon is 1U in height, they can be installed in an appropriately sized flight case.*

- **2.3 Flight Casing**

*The Hippotizer HD unit can be mounted in a flight case, It requires 4U and must have the front and back panel removed for operation as this is where the fans operate. The GrassHopper is 2U and the HippoCritter and Rackoon is 1U in height, and can be installed in an appropriately sized flight cases.*

*For some examples of suitable flight cases please visit [www.green-hippo.com](http://www.green-hippo.com) for more details.*

## 2. Introduction to Hippotizer V3.2

### 2. Hardware Installation



- **2.5 Precautions**

*Do not place drinks, or heavy objects on top of the unit. Any failure caused by fluid, shocks or misuse is not covered under warranty.*

**Note:** *Take care not to push the unit too far back against a wall as this may damage to the connectors positioned at the rear of the unit and may also restrict airflow through the unit.*

- **2.6 Hippotizer Variants**

*Hippotizer V3 is available in four versions:*

- *HippoCritic*
- *Hippotizer Rackoon*
- *HippoPortamus*
- *Hippotizer GrassHopper*
- *Hippotizer HD*
- *Hippotizer Genlock HD*

*Hippotizer versions differ in number of available layers, number of outputs and maximum resolution of applied media. Please refer to comparison tables and documentation on [www.green-hippo.com](http://www.green-hippo.com), or contact your local Green Hippo distributor for specific requirements.*

## Hippotizer Server - Hardware and Connections

### 2. Introduction to Hippotizer V3.2.2

#### 2. Hardware and Connections



#### Contents

- [2.7 Front and Rear Views](#)
- [2.8 Power](#)
- [2.9 Display Connection](#)
- **2.10 Control Connection**

*Depending on the Serial number of your Hippotizer you will have up to 6 USB 2.0 or 3.0 ports. These are useful for connecting a range of devices including mice, keyboards and external drives. It is recommended that the front two USB sockets are kept free to allow easy connection to an external drive for loading media.*

*To operate ZooKeeper you will need to connect a mouse and keyboard to the Hippotizer. Older Hippotizers will accept PS2 or USB devices. **New Hippotizers will only accept USB devices.***

- **2.11 Network Connection**

*Hippotizers should have network connections labelled with a Hippo icon for the HippoNet connection and a '< - >' icon for the Art-Net connection. Using the incorrect port for HippoNet, MAnet or Art-Net can cause communication problems.*

*Multiple Hippotizers can be networked together using a gigabit switch. This should be done by connecting CAT5e cable between the RJ45 sockets to a gigabit switch. Hippotizers communicate using HippoNet enabling the control of multiple units from one ZooKeeper (remote controller) and allowing media to be shared between multiple units.*

*The second network port allows control of the Hippotizer via Ethernet based protocols such as Art-Net from a Lighting Desk or similar controller. If you are connecting directly between a Lighting desk and Hippotizer, a cross over cable can be used. This should be CAT5e to enable fast data transfer. Alternatively a gigabit switch can be used.*

- [2.12 Detailed Connections](#)

## 2. Hardware and Connections

### 2.7 Front and Rear Views



Currently there are a number of types of cases you may have depending on the version and age of your Hippotizer.

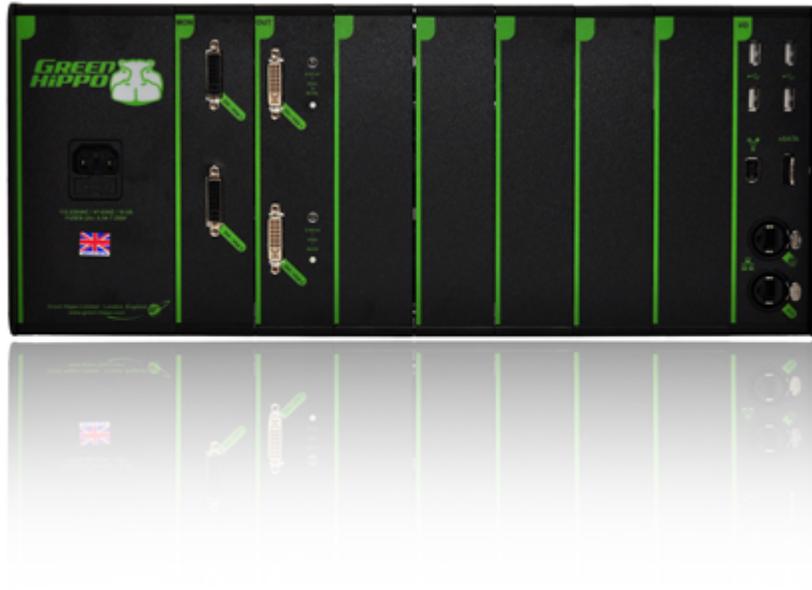
Below are descriptions of the current range after August 2011:

- **Hippotizer HD**

*Front view of 19 inch 4U enclosure (Hippotizer HD):*

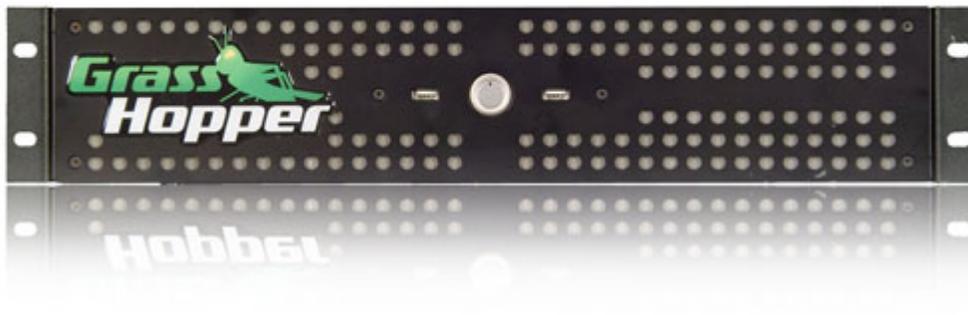


*Rear view of 19 inch 4U enclosure (Hippotizer HD):*



- **Hippotizer GrassHopper**

*Front view of Hippotizer GrassHopper case:*



*Rear view of Hippotizer GrassHopper case:*



- **Hippotizer Critter**

*Front view of Hippotizer Critter case:*



*Rear view of Hippo Critter case:*



- **Hippotizer Rackoon**

*Front View of Rackoon Case:*



*Rear view of Hippo Rackoon case:*



- **HippoPortamus**

*Front View of HippoPortamus*



## 2. Hardware and Connections

### 2.8 Power



**Hippotizer HD**



**GrassHopper**



**HippoCrittter**

or Hippotizer Genlock

or Rackoon

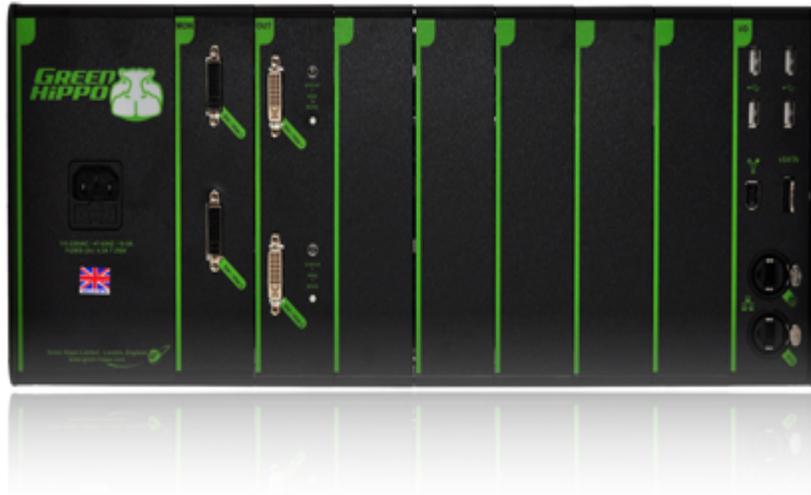
To connect power to the Hippotizer, plug the IEC cable into the back of the unit and connect to a suitable power supply. The Power supply auto senses voltage and can operate between 115-230v AC.

## 2. Hardware and Connections

### 2.9 Display Connections

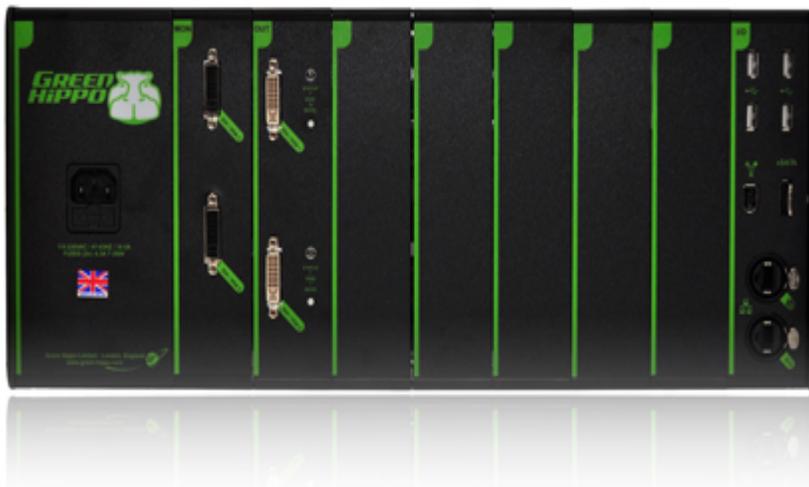


- **HD Enclosure**



*Hippotizers have connections presented as above. Depending on the model and any add-ons you have requested your system may differ slightly but all systems will feature the following:*

- ***I/O** 4x USB2.0 , FireWire400, eSATA, 2x Gigabit Ethernet connections.*
  - ***MON** Are connections for your monitors to display the Windows Desktop and ZooKeeper control application. On each connection, you can connect via either D-Sub VGA or DVI but not both. If you are planning to use only one monitor, connect it to the output marked '**MON 1**'.*
  - ***OUT** Are the output connections for your output devices. If you have only one output device, connect it to the DVI connection at the top of the OUT panel. The lower DVI output on later models only support a digital signal and so will not accept VGA*
- **Genlock HD**



Hippotizer Genlock HDs have connections presented as above. Depending on the model and any add-ons you have requested your system may differ slightly but all systems will feature the following:

- **I/O** 4x USB2.0 , FireWire400, eSATA, 2x Gigabit Ethernet connections.
- **MON** Are connections for your monitors to display the Windows Desktop and ZooKeeper control application. On each connection, you can connect via either D-Sub VGA or DVI but not both. If you are planning to use only one monitor, connect it to the output marked '**MON 1**'.
- **OUT** Are the output connections for your output devices. If you have only one output device, connect it to the DVI connection at the top of the OUT panel. Both DVI outputs are Digital Single Link connections.
- **GrassHopper**



The Hippotizer GrassHopper has a number of similar connections, which are located on the rear of the unit:



*The following are enabled:*

- *PS2 Mouse and Keyboard*
- *2x Rs232 connections*
- *4x USB 2.0 connections*
- *1 Art-Net and 1 HippoNet 1Gigabit Ethernet connections.*

*The lower DVI connection is normally the ZooKeeper monitor connection and the DVI port above it is normally the output. The DisplayPort or HDMI connections can be used but may need to be configured in windows correctly first.*

*In the image that you see above you can also see a HD/SDI input card fitted below the graphics card.*

- **HippoCrittter**
- **Rackoon**

*Type your drop-down text here.*

## 2. Hardware and Connections

### 2.12 Detailed Connections

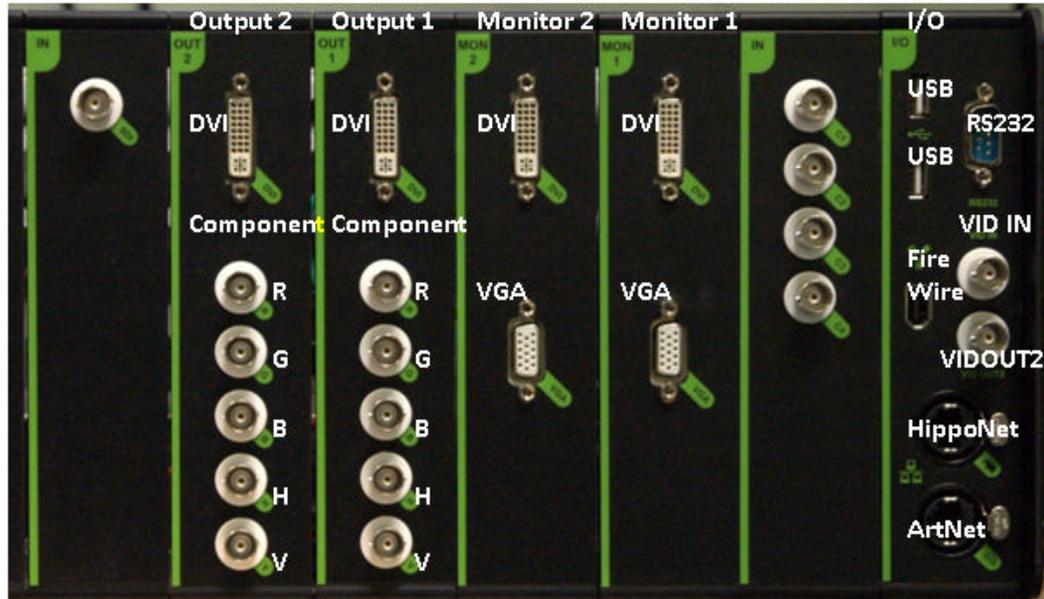


#### Hippotizer HD

Depending on the type of Hippotizer you have, the connection layout may differ, but they are clearly labelled.

**Note:** when using output and monitor connections on the back if there are VGA RGBHV connections available then converters CANNOT be used to change a DVI output into VGA output. However if there are two outputs on one back panel as above (i.e. DVI Parrots) then DVI to VGA adapters/cables can be used as long as the DVI Parrot is set up with a VGA EDID profile.

- *Pre-August 2011*

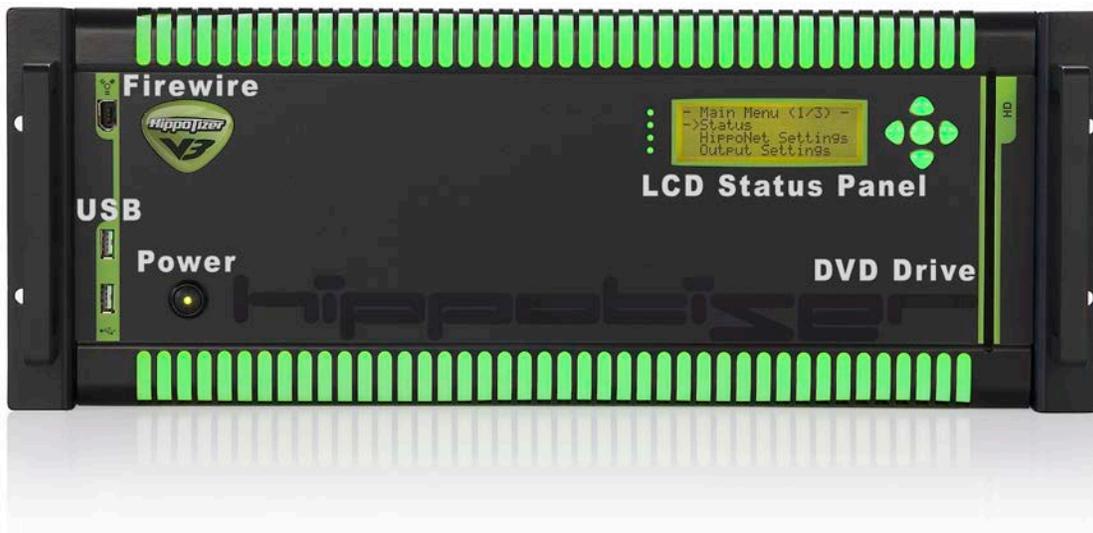


- *Post August 2011 (with DVI parrots)*



**Hippotizer HD Front Panel**

On the front of the HD unit to the left are 2 USB ports, a Firewire400 and the Power button. On the Extreme right is a vertically mounted slot loading DVD drive for loading media and software updates to the Hippotizer. Adjacent to the DVD drive is a LCD display LED display with a control pad to access some settings of the Hippotizer.



GrassHopper Front Panel



Critter Front Panel



# Getting Started with the Software

## 3. Getting Started with the Software



### Contents

- [Running the Software](#)
- [Screen Layouts and Ergonomics](#)
- [ZooKeeper – an Overview](#)
- [Media: Importing and Managing your Media](#)
- [Mix Modes and Effects and Generators](#)

## 3. Getting Started with the Software

### 3.1 Running the Software



Hippotizer V3 software consists of two distinct components, the **HippotizerV3 Engine** and **ZooKeeper**:

- **HippotizerV3 Engine**

*The Hippotizer engine is the software element which generates the output(s) of the system. When running, the Engine can be controlled by either a local control centre called ZooKeeper or an instance of ZooKeeper running on any other machine connected via HippoNet (a method of connecting multiple Hippotizers over a standard Gigabit LAN).*

*Hippotizer can be run in Engine-only mode hence the separation of the Engine from ZooKeeper.*

*However in the majority of this manual, we are going to control Hippotizer with ZooKeeper running on the same machine.*

*To get started, double click on the **Hippotizerv3 Engine** icon on your desktop.*

- **ZooKeeper**

*ZooKeeper is the software element dedicated to controlling the engine of your Hippotizer V3. From this user interface you can have real time control of all elements of your media including timeline and preset creation along with all settings for the engine such as screen configurations, display options and so on.*

*ZooKeeper must be started separately from the Engine component and should ideally be started once the Hippotizer V3 Engine is running.*

To get started, double-click on the **ZooKeeper** icon on the desktop. To get started please connect two monitors, one to a ZooKeeper monitor connection and one to an output connection. Once you have powered up your Hippotizer and Windows is running, you will be presented with a standard Microsoft Windows desktop. On this desktop you will see icons labelled HippotizerV3 Engine and ZooKeeper.



To start the Engine double-click the **Hippotizerv3** engine icon. You will see some screen adjustments take place over a 20 second period but there will be no visible change in your desktop. However if you look on the taskbar at the bottom of your main control screen you will see an icon for the engine and 2,4,6,8,12 or 16 icons (version/settings dependant) side by side which represent the Mpeg2 decoders for each layer.

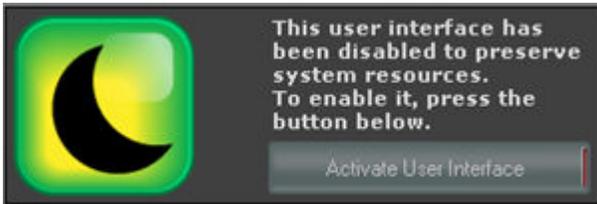


Your Hippotizer V3 Engine is now running and ready to receive control commands from either a local instance of ZooKeeper or ZooKeeper running on another machine. For the purposes of this section we want to run ZooKeeper locally so locate the icon for ZooKeeper on your desktop and double click it.



When you have installed Hippotizer for the very first time you may find some delay in the Zookeeper interface opening. Once this has opened once the rest of the time this should be very quick.

You will see the program start up with a welcome logo and, once running, you should be presented with a screen similar to the one shown here.



In this state ZooKeeper is not running to save system resources but is ready to be opened quickly if needed. This state is only useful when the system is being controlled remotely so click **Activate User Interface**.

By default the system will open in the last screen layout used.

If your Hippotizer is new then you should be presented with the default layer screen.

This is the default layout for controlling Hippotizer. A monitor with a minimum resolution of 1280x1024 is recommended; windows can be re-arranged/re-sized to preference. When managing media the layout can be changed by clicking the **Media Manager** tab to revert back to the default click the **Engine Overview** tab.



## 3. Getting Started with the Software

### 3.2 Screen Layouts and Ergonomics



#### Contents

- **Screen Layouts and Ergonomics**

ZooKeeper has a selection of views designed to help you optimise viewing and layout. All windows are moveable within the main ZooKeeper window, so you can move them to locations that suit your work mode. For now we suggest you leave the default view in place to help you to begin working with Hippotizer. You can experiment later to find the best view for you. Once you have a view that you are happy with, you can use the 'Save Desktop' button on the top task bar to save the layout, and can then switch between different views.



You can also spread your ZooKeeper interface across two monitors if desired. We recommend using a high resolution monitor but in the absence of this, two XVGA monitors can be a good second best, particularly in more advanced situations where you might employ the timeline.

- **Clicking and Double-Clicking**

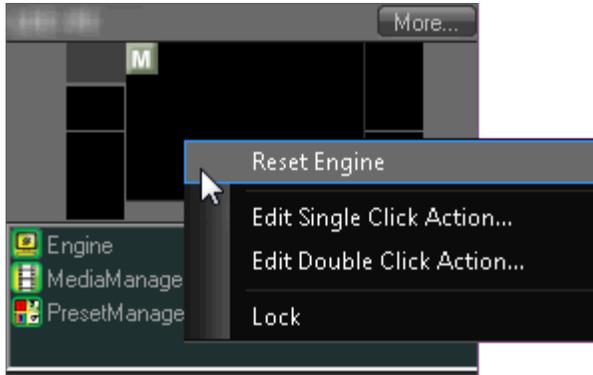
In Hippotizer V3, many sections are capable of being opened or displaying different views by either a single-click or by double-clicking. Also many functions can be dragged to other locations to copy or apply settings. We will cover this in subsequent sections. If you hold your mouse over various parts of the screen areas you will see combinations of the following functions:

- **Arrow Head:**  This means that the area you are hovering over is draggable to other locations.
- **Single Dot:**  This element has a function activated by a single-click.
- **Two dots:**  This element has a function activated by double-clicking.
- **Vertical Line:**  This element can be increased or decreased using, for example, a fader.

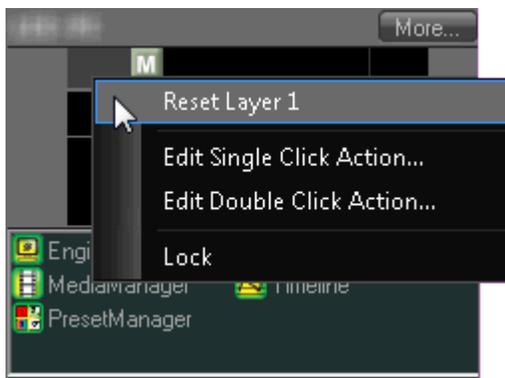
You may see combinations of any or all of the above functions depending on which point in ZooKeeper your mouse is. You will discover how to use these functions in subsequent sections.

- **Reset Functions and Procedures**

**Reset Entire system:** To reset an entire Hippotizer to default values (note, we refer to values that can be changed as 'Pins'), right-click in the centre of the large window in the HippoNet Overview window and select **Reset Engine**. This restores all values to default throughout the system (i.e. it will reset all Pins).



**Reset a Layer:** In the layer control box there is a reset button to restore all functions on that layer to the default values. However, there are some guidelines which if learnt will help you to reset individual functions more specifically.



**Reset Specific functions or groups of functions:** As a general rule in ZooKeeper you can reset any single value by double clicking on its relevant control. Furthermore, a group of functions can be reset by double-clicking anywhere in the box which bounds them.

To test this function, go to the colour correction box as shown below and adjust the brightness, contrast and red values to a value other than default by dragging the relevant fader up or down with your mouse.

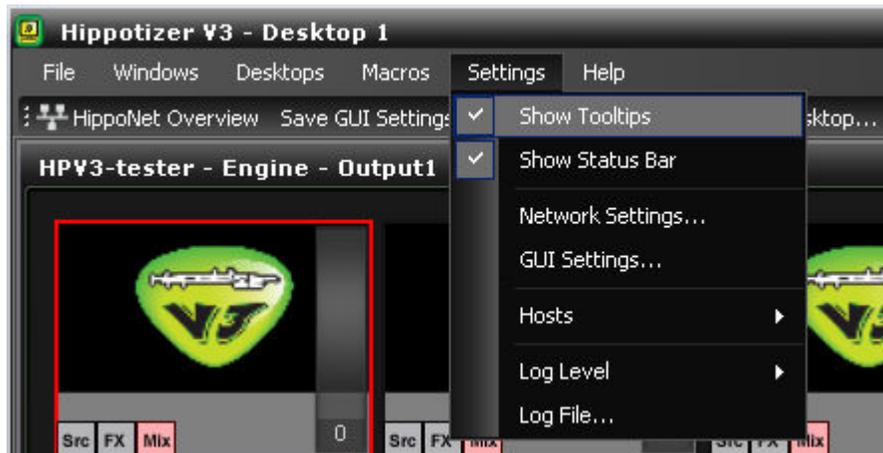
Now place your mouse over the brightness control fader and double click it. You will see its value reset to 0.000. Now place your mouse over the open grey area just to the right of the contrast fader and double click. You will see all the values you changed in the red and contrast sections snap back to their defaults.

So the simple rules are:

- Double-click a specific fader or function to reset only that function.
- Double-click in the grey area to reset any group of functions contained within a bounding box.



If you require more information tooltips are available. Activating this function will give more in-depth information about the function your mouse is currently over as shown in the above diagram.

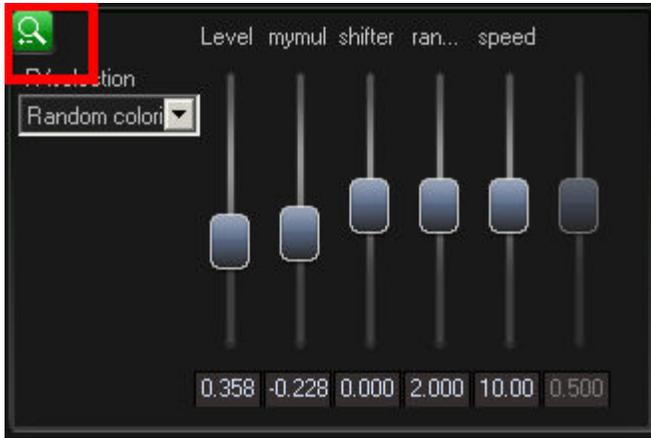


You can switch this function on and off by accessing the settings menu on the top tool bar and selecting **Show Tooltips**

- **Fine Control**

Various parameters in ZooKeeper sometimes require precision adjustment. If this needs to be done, pressing and holding the **Shift** key while adjusting values using the mouse will result in a 'fine' control mode.

If you want to do this without using the keyboard, where available there is a "fine control" button which enables this mode on that control. Highlighted below is the fine control for an FX Control. Simply click to disable/enable.



## Zookeeper - an Overview

### 3. Getting Started with the Software

#### 3.3 ZooKeeper – An Overview



The layout of ZooKeeper is divided in such a way that similar functions are grouped together into boxes. The following will give an overview of all key areas to get you started:

- **3.4 HippoNet Overview**



*This is the heart of your ZooKeeper control centre. In this instance you will see a view similar to that above but in future projects where you have more than one Hippotizer on the network you will see a view like this for every system present, allowing you to control multiple machines simultaneously.*

*Each system has a name at the top to identify it. Below this is a representation of the main output and all layers. The large area in the centre (shown below with the large Green Hippo logo and above with Hippotizer V3 logo) is the main output. The smaller icons around the edges represent the 2, 4, 6, 8, 12 or 16 layers present on the machine (you may have only four layers depending on configuration and hardware version).*



*Below this you will see a list of the key components present on the system. Later we will show you how to add more of these components or 'building blocks'.*

*At this time most of the controls you need have been opened as part of the **Engine Overview** view settings. However, in the future you may need to reopen some sections. Here are some of the key approaches to doing so:*

- *Double clicking the large area to the centre will open the **Layer Overview** window.*
- *Double clicking any layer area opens the relevant **Layer Control** window and **Media Selector** window.*
- *Single clicking the letter **M** at the top left will open the **Master Output Controls**.*
- *Right-clicking in the large central window will give options which will be covered later but at this time the **Reset Engine** function will be the most useful to you since it resets all layers and master canvas to the default settings.*

*Zookeeper can be spread across the two DVI outputs of the graphics card to produce a multi-screen Zookeeper. However, multi-screen output must be set up before the Engine and Zookeeper are loaded. See section [Multi-Monitor Zookeeper Setup](#).*

- [3.5 Layer Sources](#)
- [3.6 The Layer Overview Window](#)
- [3.7 The Layer Control Section](#)
- [3.8 The Master Layer](#)

## 3. Getting Started with the Software

### 3.3 ZooKeeper



### 3.5 Layer Sources



Use the buttons above to switch between the different modes listed in section [3.7 The Layer Control Window](#).

See:

#### 1. **Media Player**



The Media Player on each layer allows you to play back video clips and still images stored on the Hippotizer's hard disc drives. To change a clip either click on it in the Media Selector or drag the thumbnail from the media selector window here. On the left hand side you can see important information like the file name, resolution, and default frame rate etc.



The in-Point and out-point of video clips can be altered by dragging the green pointers located on the left and right of the playback scale. These can also be set to precise numbers by clicking on the white numerical values labelled in-point, out-point and playback position. To reset the default in and out points, double click anywhere on the pointer scale or drag the icons back to the ends of the progress bar.

Added in 3.2 SP1 you can now also select the in or out point marker and move these using the left and right arrow keys.

The **321** button toggles the playback position display from time played to time remaining for the media clip.



Next to the preview screen is a speed control. Drag up and down to vary the speed of a clip. Double-click it to reset to normal playback speed. The speed can also be entered as a value in the box. Note that because the system can play media of differing frames per second values the speed is always shown as a percentage of the normal playback speed. So a 25 frames per second clip set to 50.00 will play back at 12.5 frames per second and so on.

The buttons below act like those on a VCR but with some additional functions.



Play Once Forward



Loop Forward



Pause



Play Once Backwards



Loop Backwards



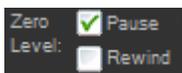
**Ping Pong** – plays forward to the end-point marker then reverses play to the in-point marker and repeats creating a ping-pong effect

**Note:** The efficiency of reverse playback is dependent on the I-frame structure of the clip. For more information see the [How to Import Media](#) section.



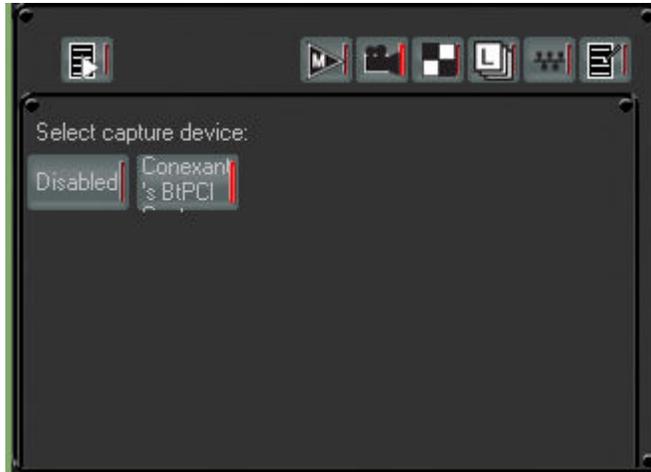
**Random Frame** – this rapidly selects random frames within the clip to jump to and generates some interesting effects. If the speed control is reduced simultaneously some interesting frame grabbing and blending effects can be achieved.

The **Pause on Zero Level** checkbox allows you to choose if you would like the clip to automatically go into pause mode whenever the level of this layer is set to zero and thus the clip cannot be seen. This saves system resources by not playing clips if they cannot be seen.



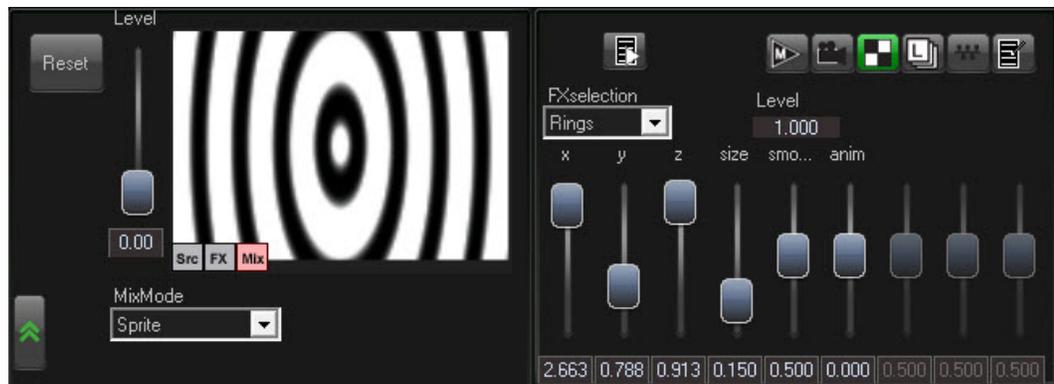
The **Rewind on Zero Level** checkbox allows you automatically rewind the clip to the start

## 2. Live Video Input



This interface allows selection of the layer source from the default S-video/Composite capture card or any of the optional 3G HD/SDI, SDI, DVI or dual DVI or 4-input capture cards. Select one of the inputs to view the live source. The list and the functionality of these buttons will be limited by the capture devices present in your system. You will also have to pre-configure your various input card settings. These settings can be found by right clicking the **Engine** icon in the HippoNet overview and selecting **Settings > Live Video Settings**.

### 3. Generators



Generators do not play back media files, but generate images on the basis of algorithms. These algorithms generate patterns and textures using mathematics without the need to source media. Select a Generator from the drop-down box and then modify the parameters below. Users of LED fixtures will find these especially useful.

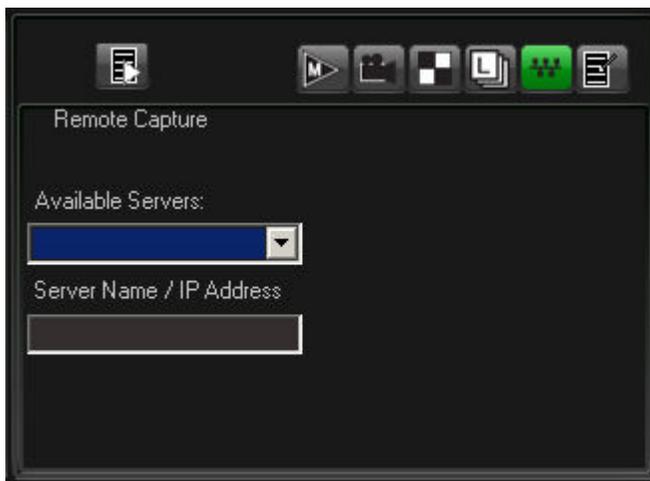
### 4. Relays



Relays allow you to feed the result of one layer into another layer. This allows you to run multiple instances of the same clip whilst keeping system resources to a minimum. Also, Say you need four FX engines to achieve a particular composition then you can feed the result of Layer 1 into Layer 2 and use the FX of Layer 2 on top of the FX from Layer 1.

Alternatively you can also create feedback by feeding the Master Output back into a layer. This can create interesting effects, but requires some experimentation.

5. **ScreenThief**



ScreenThief enables you to capture the desktop output of a remote Windows XP or Windows 7 system, send it over an Ethernet network connection, and then present that as a layer on the Hippotizer. Ideally suited for PowerPoint presentations, or demonstrating live content from a PC. Resolutions up to 1280x1024 are supported.

6. **TextEngine**

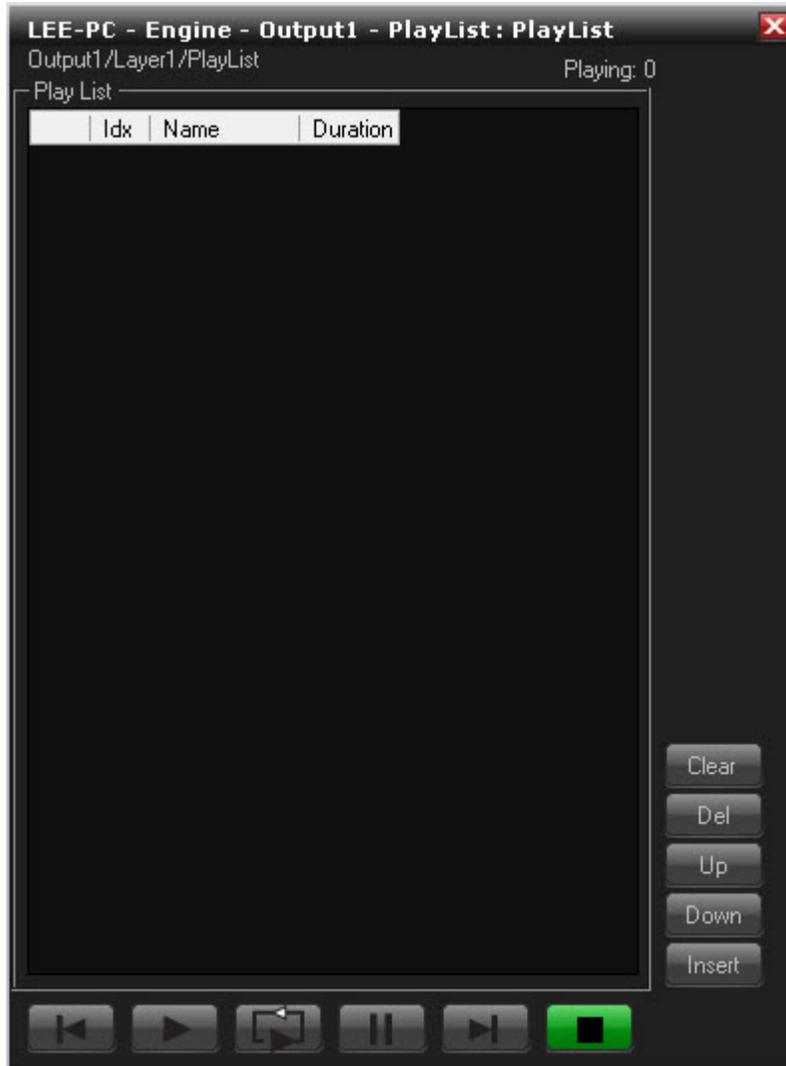


The TextEngine enables users to create text based content and present it using one layer in the Hippotizer. The Text can be then controlled and manipulated to along with video content without having to create video with text within it. For more information please refer to [TextEngine](#).

#### 7. **Playlist**

The Playlist option allows you to drag Media into the playlist and have this play in order over the time given for each clip. By default it will take the time on a video clip and it will use the time of 6 secs for any still image.

You can have one playlist per layer.



*To start click on the playlist button and you will get a new window appear. This will be blank. Then click and drag your selected files from the mediamap onto the playlist. on the right hand side you have options to manoeuvre these or remove them if they have been added in error.*



To change the Duration double-click on the time in the duration box and enter a new time.

Then to play the list you use the play options at the bottom of the list. These are similar to those in the Media Player.

Note that if you are in X-Fade mode then the transition type and time will be respected across all the clips. You cannot currently set individual clips to have different transition times and types.

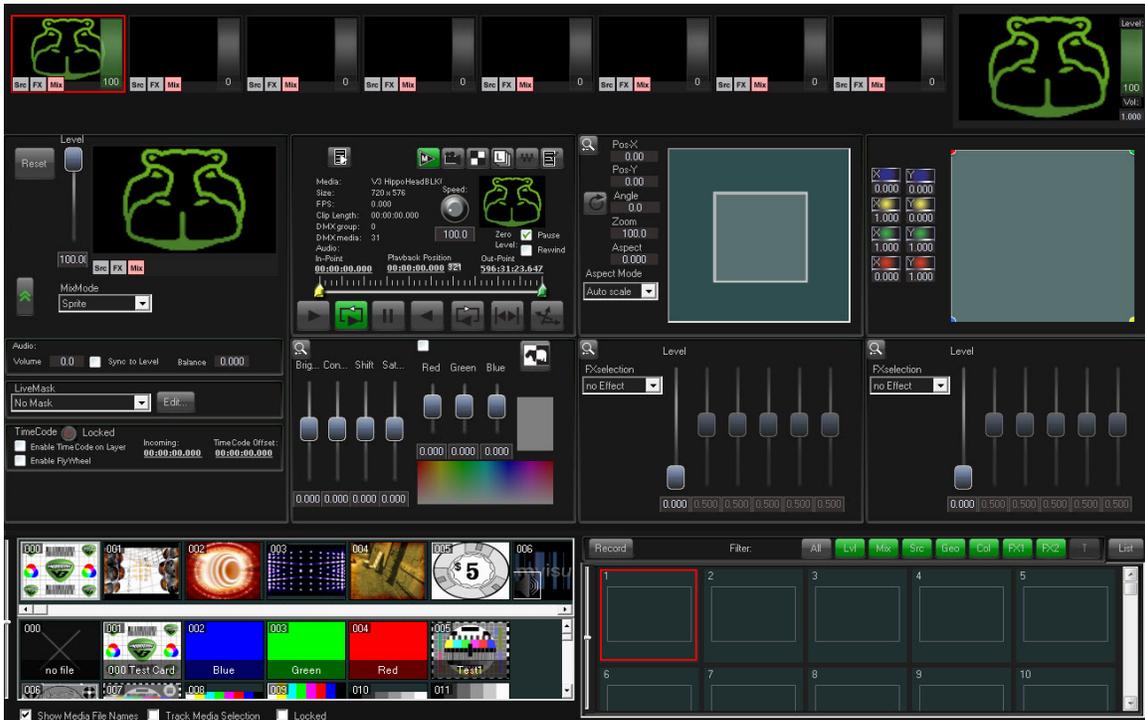
The Duration is still the time that the clip is displayed for and is separate to the transition time.

### 3. Getting Started with the Software

#### 3.3 ZooKeeper – an Overview

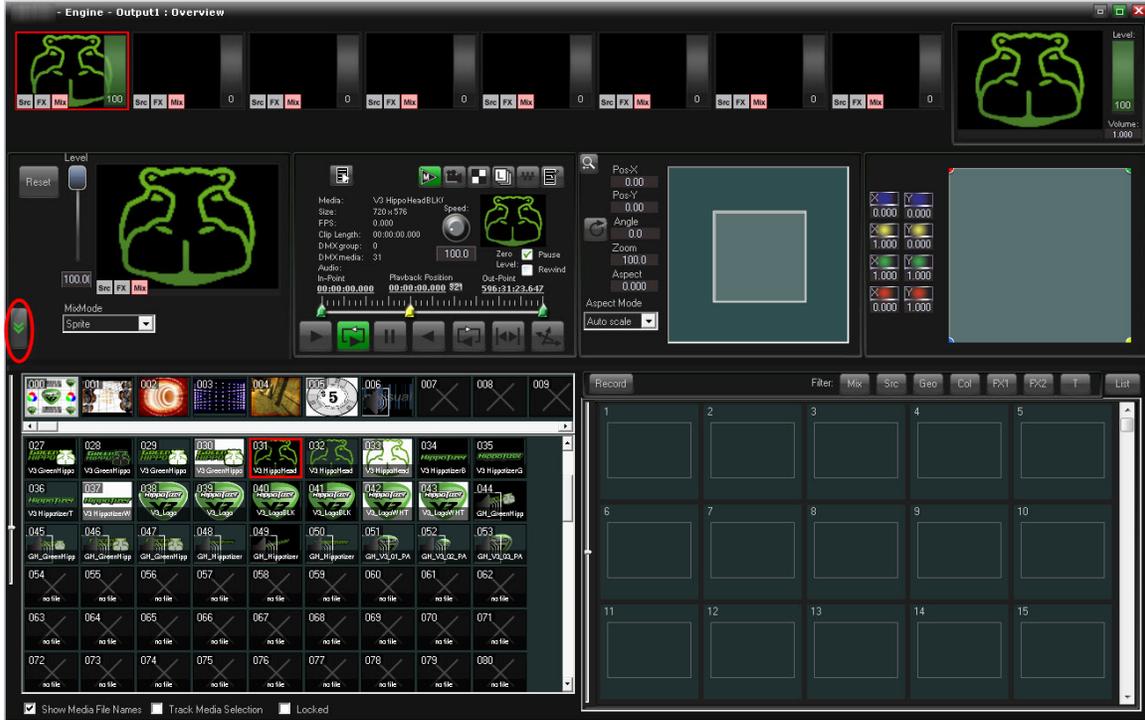


#### 3.6 The Layer Overview Window



The **Layer Overview** window gives a general representation of the layers at the top and the specific controls for the selected layer below. The level of individual layers can be controlled by clicking and dragging up and down the level indicated in the preview of that layer. The level value is indicated by the green transparent meter and displayed numerical value.

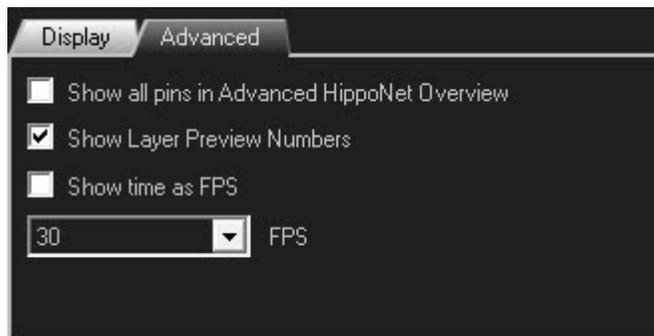
The layout can be adjusted to increase the area used for media selection by clicking the up/down button as shown below.



- **Show Layer Preview Numbers**

If you would like to have an easy to view reference of what the layer number of each Layer is then you can do so via the GUI settings.

Goto Settings->GUI Settings and then click the advanced tab you will see the option here.



This will then display the name of the layer above the layer preview.



### Medium Layer Layout

The Medium layer layout allows users with a smaller Zookeeper monitor still see all the really crucial elements but not have to move or re-size elements of the GUI.

This can be accessed by selecting the medium icon at the top of the Layer window. 



### Small Layer Layout

The smallest of the layer layouts is just the layer previews. This can be accessed by smaller icon in the top left of the layer window.



### 3. Getting Started with the Software

#### 3.3 ZooKeeper – an Overview



#### 3.7 The Layer Control Window



To change the currently selected layer click on the thumbnail preview of that layer at the top of the window. In the above example Layer 1 is selected and all the values in the bottom half of the window are the current values for Layer1.

The **Layer Control** section is divided into different panes, each grouped by the type of controls they contain, such as geometry or effects and so on. The default values can be reset by double clicking in the grey area of the pane for that group of controls or by double clicking on a fader.

So let's look at the elements contained with the **Layer Control** window:

- **Reset Button**

*This is an overall reset of the layer and will reset the attributes of the layer. It sets the Media Player back to bank 000 clip 000 (the first media in the first bank of the Hippotizer library)*

- **Audio**

*If an audio file or a video with audio is loaded into the layer, the volume and balance can be controlled independently of the video level control.*

*The **Synch to Level** option synchronises the audio volume to the layer level value.*

- **Level and Mixer Mode**

The level control allows you to set the level for the individual layer by dragging the fader up and down or by typing a value in the box below. For example, typing 0.5 sets the level to 50%. Moving this fader up and down adjusts the level of that layer in the overall composition.

The Mixer Modes dictate how the layers interact between each other. As a general understanding of this function Layer 1 can be seen as the background layer (as found in other photo and video editing software).

The mix mode dictates the type of transparency or mix that any layer will have with those underneath it. As this is hugely important and can get quite complex there is a separate section explaining their functions in greater detail.

However, we recommend you experiment with these settings to view their effect. To do so, select a video clip or image on Layer 1 as a background (remember to bring the Level up to full to see the layer on the Output). Then go to layer 2 and select another image or video clip. Select different Mixer Modes and play with the Level of Layer 2 and you'll quickly get a grasp on the basic principles.

- **Layer Preview**

This box provides a representation of the media playing on the layer and any geometry, colour, effect and level settings applied to it.

You will also see three buttons labelled **Src**, **FX** and **Mix**.

- **Src:** This button allows you to view the source media without any effects or setting applied to it.
- **FX:** This button allows you to view any media and the effects applied to it but without any geometry or other functions. So if, for example, a piece of media is heavily zoomed to be almost un-viewable you can still adjust the effects on it without un-zooming it.
- **Mix:** This provides a view of the layer with the effects and geometry applied to the preview.

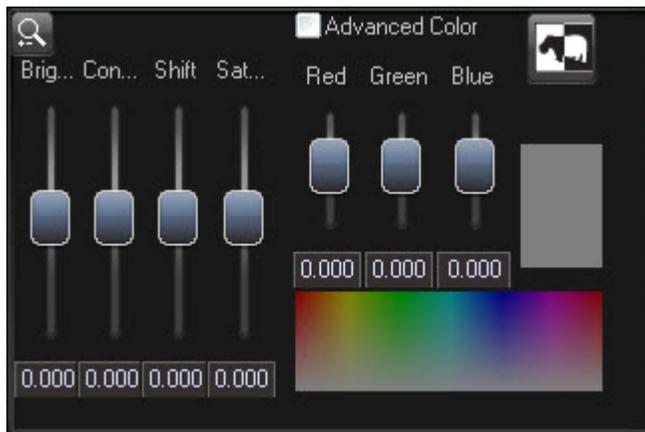
You can select media by dragging and dropping media thumbnails from the media selector into this area. Alternatively you can just click the media in the media selection window. Note that the layer you have active in the window will be the one changed. To switch to another layer click it's relevant icon in the Overview window.

This will mean you don't have to have multiple instances of the layer preview or any other layer controls, only the layer you are working on. The text at the top of the window indicates which layer you are working on.

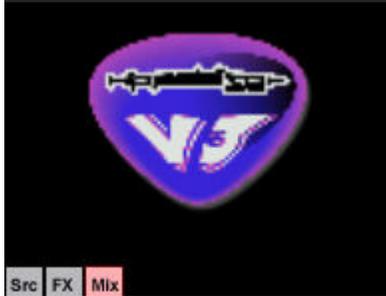
- **Live Mask**

Mask selects created live masks to apply them to that layer. To create/edit masks click the **Edit** button. For more information please refer to the [Live Mask](#) section of the manual.

- **Colour Controls**



Here you will find adjustments for the layer's brightness, contrast. The Colour Shift and the Saturation of that colour along with the RGB colour values. There is also a button for inverting the colour. The colour can be set manually using the faders or by typing the value into the displayed digit.



If you do not wish to set the colours individually using the respective levels of the RGB faders, you can select colour by clicking anywhere on the colour picker and dragging the mouse around while previewing on the output screen. The box to the right is a representation of the current colour selected by the colour picker of combination of fader adjustments.

- **Advanced Colour**

An advanced colour control for users who want to adjust the Low, Mid, and High tones of the Red, Green and Blue is also available. This works independently of the normal Red, Green and Blue adjustment. To enable this, click the **Advanced Colour** check box. You will be presented with the following dialog box.



You can enter specific values from 1.000 to -1.000, or adjust the value by clicking on the number and dragging using the mouse to the desired value. Values can be reset by double clicking on the appropriate area.

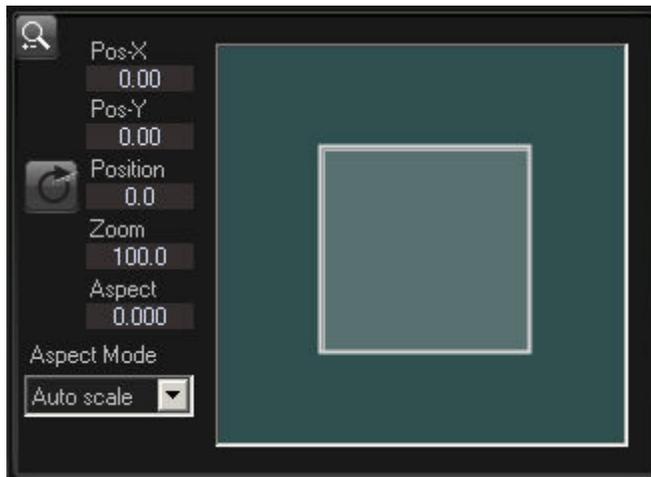
- **Layer Source**

Hippotizer can display a variety of inputs and sources by selecting one from this area. On each layer you can switch between the following different types of Sources:

- **Media Player** – plays videos or stills stored on the Hippotizer Hard disc drives
- **Live Video Input** – Live action or external sources fed in via standard or optional cards
- **Generators** – Algorithmic patterns generated internally
- **Relays** – Using the output of any other layer as the source for this layer
- **ScreenThief** – Remotely capturing the screen from a Windows XP or Windows 7 system over the network.
- **TextEngine** – Creating formatted text files.

See [Layer Sources](#) for details of these.

- **Geometry Control**



These are the controls for the position and scale of the media on the output. This can easily be manipulated by dragging the light blue screen around with the mouse. By simultaneously holding down shift on the keyboard you will get fine control. Similarly, Ctrl + mouse movement rotates the image and Alt + mouse movement will zoom the image. The position of the screen can also be manipulated by dragging the relevant numbers from left to right. This is useful if you only want to adjust, say the X-axis position.

The Aspect Mode drop down menu allows you to choose Pixel 1:1 to maintain the true size of the media, or choose **Auto scale** to allow Hipotizer to expand the media to fill the screen whilst maintaining the aspect ratio.



Clicking the circular arrow button will allow you to set the continuous rotation speed of the media. When this button is pressed, the position value will change to the speed value. By dragging the cursor to the left it will rotate the media to the left and vice versa.

- **FX Controls**

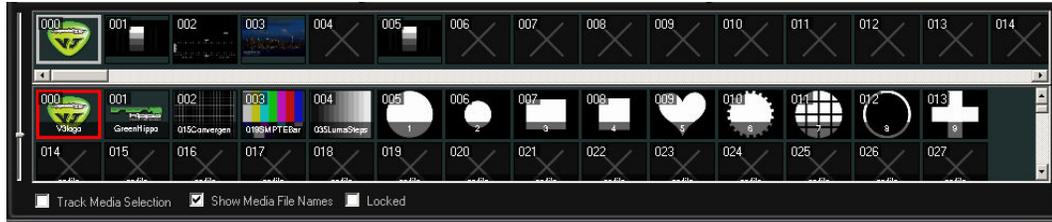


The two bottom windows are two FX engines which can be applied simultaneously to the layer. The drop down menu shows all available FX and by selecting one of them, the controllable parameters will become active and be labelled with their function for that effect.

The results of the effects are covered later in this manual, but you can experiment with these effects quickly by selecting an effect and adjusting its value accordingly.

Remember that you can reset any value by clicking its fader or reset the whole effect to no effect by double-clicking in the grey area around the controls.

- **Media Selector**



Hippotizer ships from the factory with a collection of default shapes, masks, and a bank of 100 media clips pre-installed. You can access these clips from the media selector window. In the **Media Selector Window** you will see a row of thumbnails in the uppermost row, where you can select from one of the 255 media banks. A bank is a 'virtual folder' containing clips and stills selected by the user during the process of importing media.

Clicking on a bank icon in the top row gives access to the media within that bank. Thumbnails of the media within the bank will be found in the window below. Clicking on this will activate that clip or image on the active layer.

The way that this media is organized is covered elsewhere in this manual but for now you can experiment with viewing and selecting clips pre-loaded on the system.

The selection made will affect the active layer so begin by selecting the required layer in the layer overview window. Ideally, if this is your first encounter with Hippotizer, we suggest selecting Layer 1 which is your 'background' layer. Select a bank and click through the media available. You will see the media change on the layer preview and master output (if your levels are at full). Once loaded you can use the functions we have covered in previous sections to manipulate the media and add effects, geometry changes, colour correction and so on.

If you wish to load media to different layers quickly you can simply click and drag the thumbnail into the relevant layer on the **Layer Preview** window.

If you wish to see larger thumbnails there is a slider at the side of the window to increase or decrease the size of the thumbnail.

- [Timecode on Layer](#)

## 3. Getting Started with the Software

### 3.3 ZooKeeper – an Overview



### 3.8 The Master Layer

You may remember from the earlier flowchart that whilst all layers are individually configurable they are then fed to one global layer called the Master Canvas or Master Layer where changes affecting all layers in a composition can be activated.

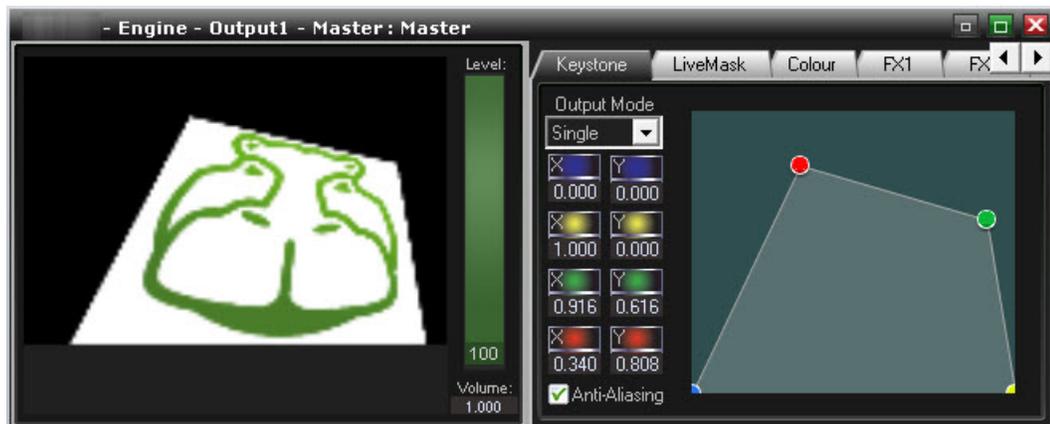
There are two ways to access the Master Layer options. For all builds up to 3.2 SP1 you can access this through the **M** button in the Hipponet Overview window.

If you are using a build later than this you can also select the Master Layer by clicking on the Master Preview in the Layer Overview Window.

#### Pre 3.2 SP1.



- **Keystone**



Select by clicking the tab marked **Keystone**. When projecting onto screens from non-perpendicular positions, the projected image will be distorted. These controls allow you to either enter the value or drag the values to alter the keystone effect applied to the overall image. The output can also be keystoneed by dragging the corners of the green box to create a shape to suit.

- **Geometry**



Select by clicking the tab marked **Geometry**. This has identical functionality to that found on the layers but affects the composition as a whole. By dragging the light green box around this will alter the position of the media within the display playback. Values can again be entered manually or the mouse used to drag the values to increase/decrease them.



Clicking the circular arrow button will allow you to set the continuous rotation speed of the media. When this button is pressed, the position values will change to the speed values. By dragging the cursor to the left it will rotate the media to the left and vice versa.

- **Colour**



Select by clicking the tab marked **Colour**. This contains controls to alter the brightness and contrast of the complete composition. The invert function will invert the colours creating a negative, and there are also the options to alter the RGB levels or use the colour picker in the same manner as the layer functions.

- **FX**



Select by clicking the tab marked **FX1** or **FX2**. The Master layer has two FX engines which work in exactly the same way as the individual layer FX but once again affect the composition as a whole. You can access the second FX Engine by clicking on the **FX2** tab.

- **ScreenWarp**



Select by clicking the tab marked **Warp**. ScreenWarp is a sophisticated screen shaping module found on all Hippotizers. It allows users to adjust the output image to appear linear on non-linear surfaces or just create an effect. This part of the ScreenWarp should be run in conjunction with the main module which can be opened via the ScreenWarp icon in the HippoNet Overview window. Using the section adjoining the Master Canvas controls we can fade between pre-created warps, adjust edge-blending parameters and so on. The creation of ScreenWarp presets is covered in Presets.

The black boxes labelled **BlendLeft**, **BlendRight** etc allow you to adjust the soft edge blending for the warp; this enables you to join more than one output together if using multiple Hippotizer systems. See [Soft-edge Blending](#).

To activate the soft edge blending click the **Enable** button, then adjust the **Gamma** and **Overlap** value. Whilst holding down the left mouse button the values can be increased or decreased by dragging the mouse left or right or by simply typing the value into the value box.

The **BlendRadial** option allows you to create a circular blend. See subsequent sections for more details on using this feature.

- **Multi Display Controllers.**

Manufacturers like Matrox, Datapath and Sapphire develop devices which when connected to the output of the Hippotizer can provide up to four individual outputs. For more information please refer to [Matrox's website](#), [Datapath's website](#) and [Sapphire's website](#)

**Note:** Because of the large output resolutions required to display an output across two, three or four devices using a multi display controller only recommended with a Hippotizer HD and GrassHopper units. Critter and older systems will be limited in the maximum output they can be set to.

Once you have connected a multi display controller and a number of output devices. Windows should detect the available resolutions with the connected devices. Once this has been done, the Engine settings in Hippotizer settings will have the same resolutions available as long as they are within the licence of your system.

**Note:** The feature in Hippotizer does not require the 3rd-party software to be installed. However on some occasions the output devices may not set themselves up correctly with the multi monitor device drivers and application. To resolve this you will need to install the software to force the desired resolution. For more information, refer to the device documentation.

On the main output **Keystone** tab, there is a dropdown list to select the output split mode for the master layer. This setting splits the output layer will have a Keystone, Colour, Warp and Geometry control for each section of the split. This will enable you to control multiple outputs on devices such as Matrox's TripleHead2Go and the Datapath X4 when they are connected to the output of the Hippotizer. The modes available are;

- **Single** - Standard mode.
- **Split Horizontal Dual Pan** - split the output across the resolution horizontally for two output devices
- **Clone Horizontal Dual Pan** - split then clone the output horizontally
- **Split Vertical Dual Pan** - split the output across the resolution vertically
- **Clone Vertical Dual Pan** - split then clone the output vertically
- **Split Horizontal Triple Pan** - split the output across the resolution horizontally for three output devices.
- **Clone Horizontal Triple Pan** - split then clone the output across the resolution horizontally for three output devices.
- **Split Quad Pan**
- **Clone Quad Pan**



Once you have selected your preferred mode, the thumbnail preview will adapt to that mode and more keystone, e.g. in the example below the output is set to **Clone Horizontal Triple Pan** and each output has its own keystone and geometry set:



**Note:** In these modes, there are still the standard two FX options which will be applied on all the outputs as normal.

POST 3.2 SP1



After 3.2 we have made some changes to support Master Presets. For this to happen we have given you a new master window. Here everything is laid out in one window. This is accessible by clicking on the master preview preview in the layer window as shown above.



All of the same functions are here as explained above for the pre SP1 but you now have tabs in each window to show you the various Master options.

Other differences you will see here is that you now have two reset options in the Master window.



Reset Master will just reset any Master options you have changed such as an FX or Keystoning

Reset All will reset all Master options and all Layer information as well. This is a complete Reset.

Also the same as before when you are using Multiple Displays you will see that more tabs become available according to what mode you are in.



## Media - Importing and Managing your Media

### 3. Getting Started with the Software

#### 3.9 Media: Importing and Managing your Media



#### Contents

Hippotizer V3 software brings a revolution in content import for Media Servers. Traditionally users use third party encoding software on an external machine to encode media to the correct format. In Hippotizer Version 3 the encoder is built into the software and the entire process of importing, encoding and finally allocating your media to a bank and location can be done within ZooKeeper or from any other server. This reduces encode times and allows users to integrate the process into their overall working strategy on a running Hippotizer.

In Hippotizer V3 you can import media from any drive connected to the system. During the following process you will arrange your media into banks and clips as you wish without affecting the layout of your media on the source drives.

During the process of importing the media, the system will encode the media to the correct format automatically, and link it to the location you choose.

- [3.10 How to Import Media](#)
- [3.11 Importing Media](#)
- [3.12 Using Alpha with video clips](#)
- [3.13 Encoding your own Media](#)
- [3.14 Watchfolders](#)

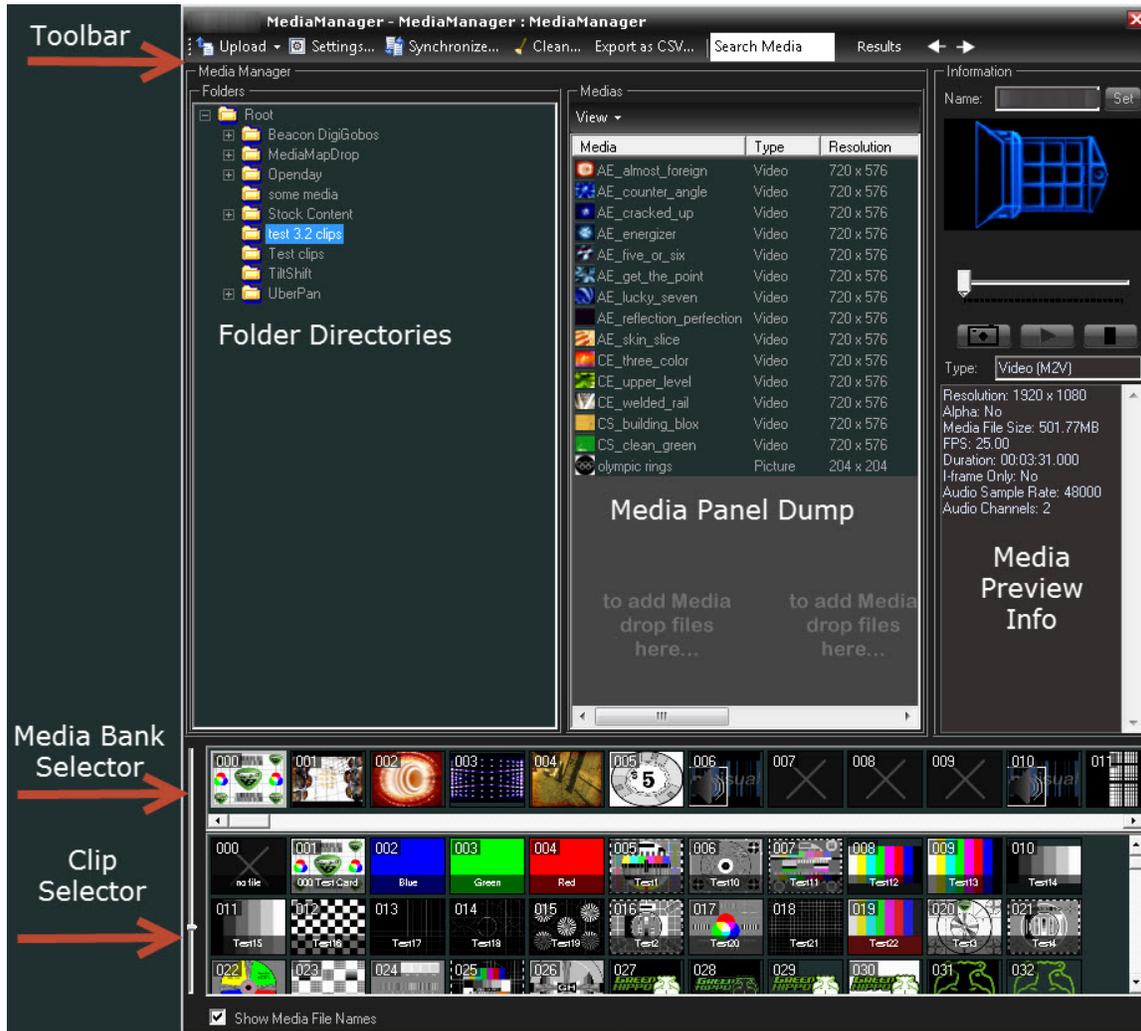
### 3. Getting Started with the Software

#### 3.9 Media: Importing and Managing your Media

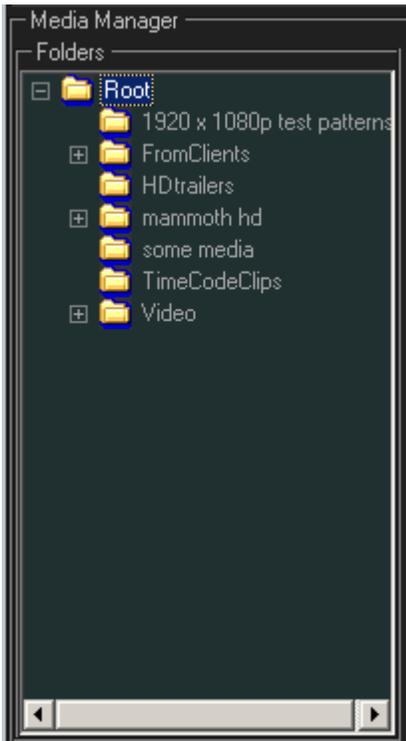


#### 3.10 How to Import Media

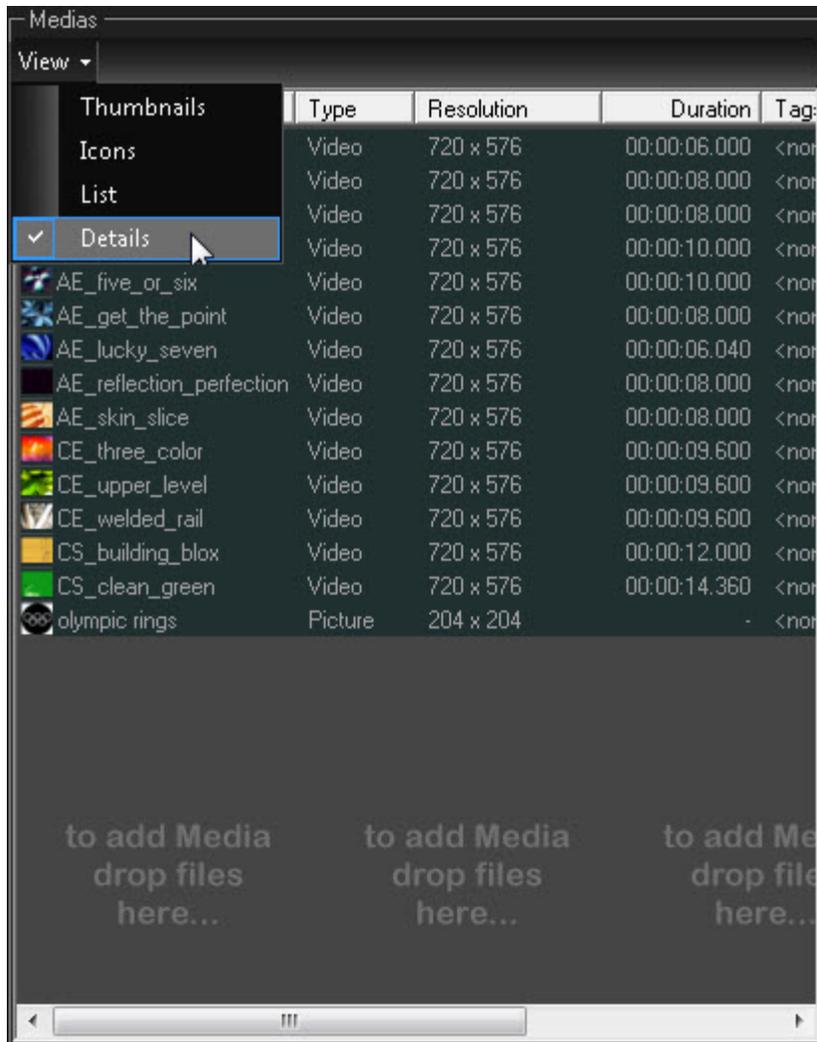
To begin importing media double click the **MediaManager** icon in the HippoNet Overview window as shown below. The MediaManager will now open in a new window.



The Media Manager is divided into different panes with the **Folders** pane left hand side which displays all the possible locations for imported media.



The above is a close-up of an example **Folders** pane. Note that your system may have a different folders than shown in this example.



The **Media** pane displays media already imported and can be viewed in different ways by selecting the options from the **View** menu.

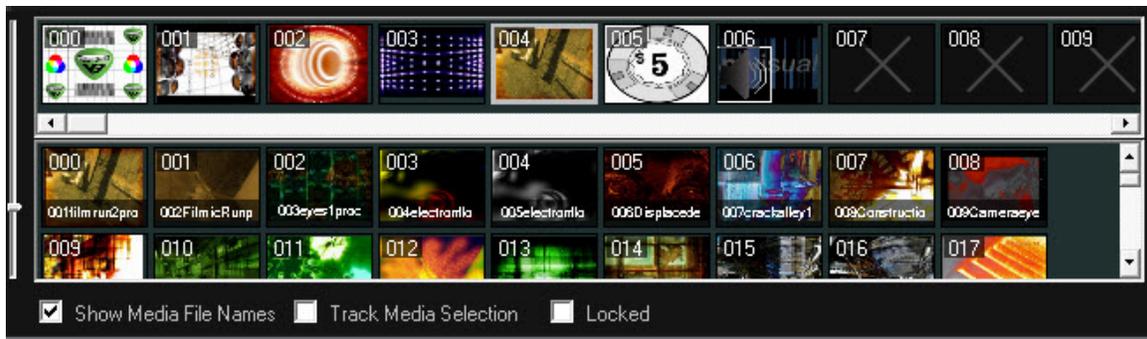


The **Information** pane shows a preview of selected media along with detailed information about the file. Selecting different files in the **Media** pane displays relevant information for that file.

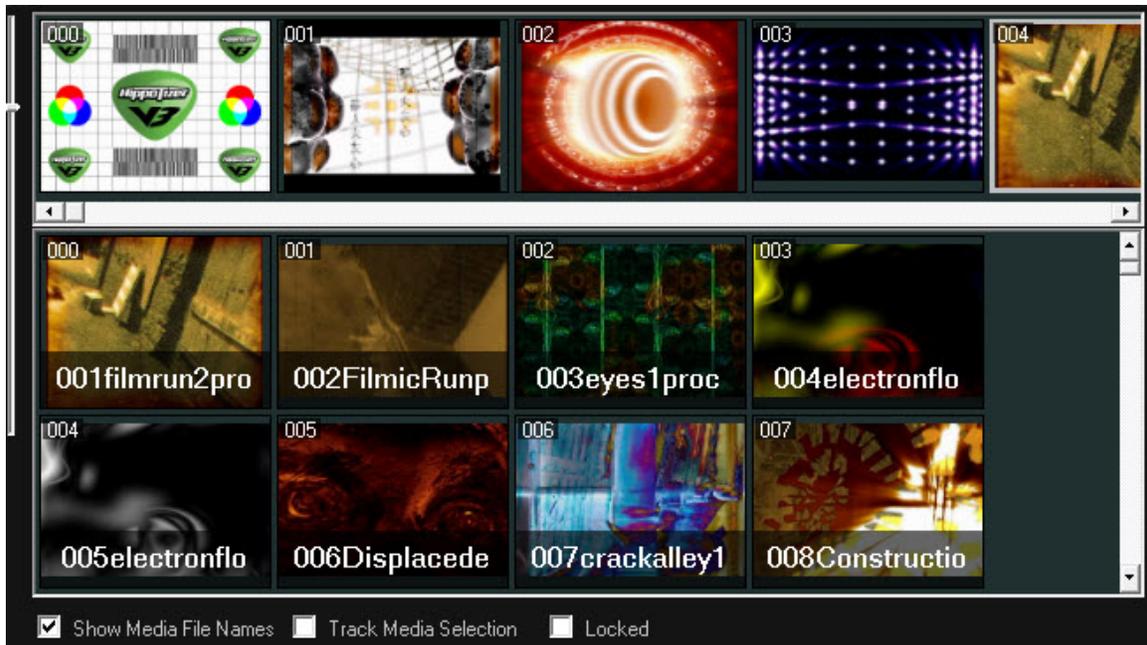
You will also notice that there is a camera icon. If you play the file forward and then pause it at a bright frame you can use the camera icon to take a snapshot of that frame.

That will then become the Thumbnail image of the media in the clip selector.

This is particularly helpful if your clip has a lot of black at the start and shows black in the selector.

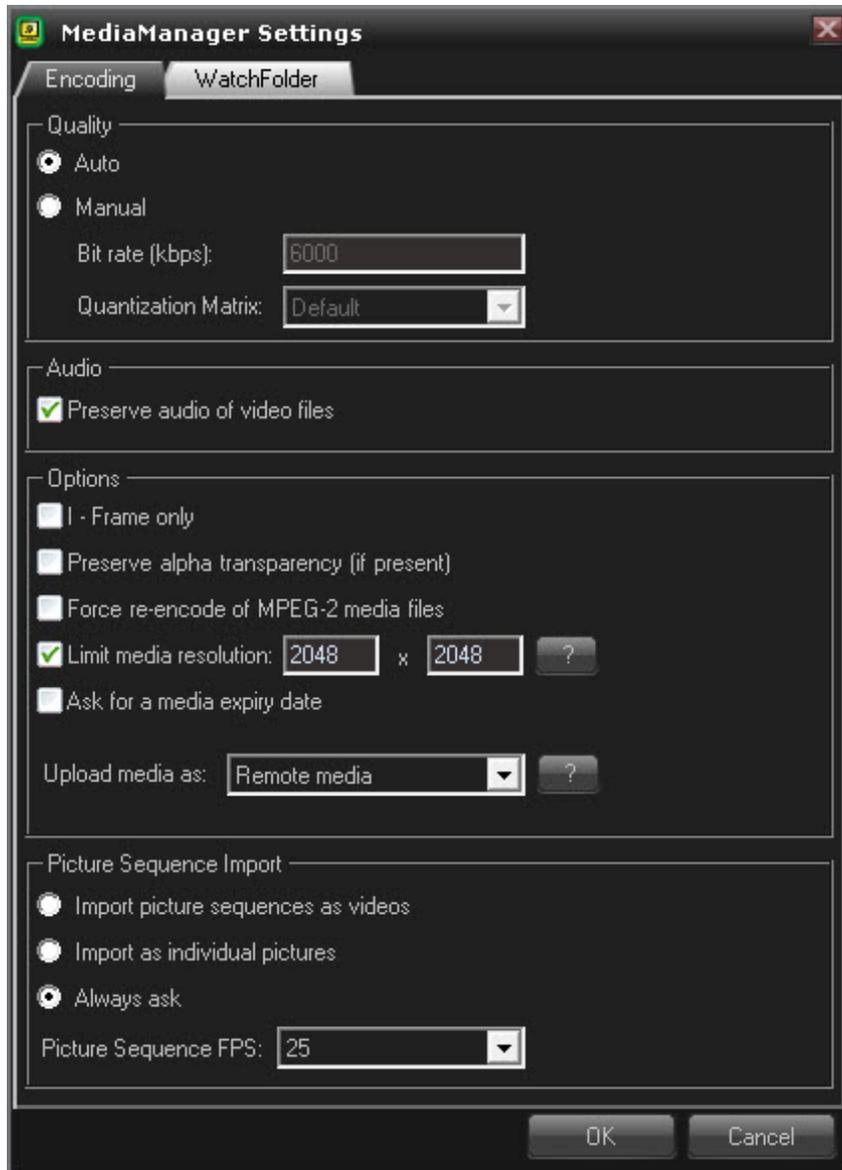


There is a representation of the Media Selector included in the MediaManager. This is used to allocate your content to a location which you can then access via the media selector within the layers. The media banks are displayed along the top of the window with the clip locations below. The first clip in each bank is used as a thumbnail for that bank. To scroll through the media banks use the horizontal scroll bar. The vertical scroll bar allows you to view the clips within a selected bank. To the left hand side of the media banks is a scalable toolbar which alters the thumbnail size allowing you to see more or less rows of clips within the bank. You can also increase the viewing area by clicking the corner of the window and dragging it to the desired size. Clicking on a bank icon displays the contents of that bank in the locations below.



The toolbar, found at the top of the window, allows you to activate importing of clips via the MediaManager, view upload progress of media being encoded, alter the encoder settings and synchronize media between Hippotizers over HippoNet.





Clicking **Encoder Settings** will open a new window. We recommend you leave these settings at their default values unless you have a reason to change them. Hippotizer's Media Encoder is already set to the optimal parameters for general use.

However if you wish to change the setting then these are defined below.

- **Quality** Auto to **Manual** and define your own bit rate.
- **Quantization Matrix** Allows CG/Animation to be selected for improved encoding of computer generated graphics or animation.
- **Preserve audio of video files** If you have a Video clip that contains Audio then this will be retained when encoding.
- **I - Frame Only** Ticking this option will improve playback of clips when played backwards. However the resulting files will be considerably larger increasing the use of system resources. Therefore only select this option if your show relies heavily upon reverse playback of files.

- **Preserve alpha transparency** Will keep the transparent background that a media clip may have. Only certain source files are capable of supporting alpha channels and the most common will be uncompressed QuickTime files. Wherever possible, Hippotizer will encode the source file to Mpeg2 and preserve the Alpha Channel transparency information even in Mpeg2 format. The maximum vertical size for clips with alpha channel is 576 pixels using the HD or 384 using the HippoCrittter. Please refer to [Using Alpha with Video Clips](#) for more information.
- **Force re-encode of MPEG-2 media files** This can be used if you experience erratic or unexpected playback from files added to the encoder which are already Mpeg2 format.
- **Limit video resolution** Enables you to re size media as you are importing it, on some systems when all media is the same resolution there may be a performance improvements.
- **Ask for a media expiry date** This will prompt you for an expiry date before media is imported. After the selected date has passed that media will not be available to playback.

**Note:** If the system date is changed the Hippotizer software will automatically disabled any media with an expiry date.

- **Upload media as** Remote media is uploaded directly and therefore you must always maintain the connection to the drive that the media actually resides. Local Media will make a copy to the local media drive first so that the content will always live on the Hippotizer..
- **Picture Sequence Import** enables you to import a sequence of pictures which the Hippotizer will then create into a video. When using this option you can specify the Picture Sequence video to have an FPS from 23.97 to 60. When importing pictures, if they are sequentially named graphic image files the software can import them as frames of a video. How the media manager treats these files by default can be set using the options below:  
**Import picture sequences as videos**  
**Import as individual pictures**  
**Always ask**

## 3. Getting Started with the Software

### 3.9 Media: Importing and Managing your Media



#### 3.11 Importing Media

To proceed with this section you will need to have a folder on the system or on an external drive with some source media available. A handful of clips of any format will suffice and can comprise of video and stills. We recommend some video files are present as then you will see the full power of the encoder.

First begin by right clicking on the root of the file tree in the **Folders** pane and selecting **Create Subfolder**. You can give the folder a name which will help you organise your media.

Be aware that at this stage you are not arranging your media for your show but simply organising your Hippotizer V3 library. Allocating the media to a specific bank is done later and can be done differently for each show you work with.

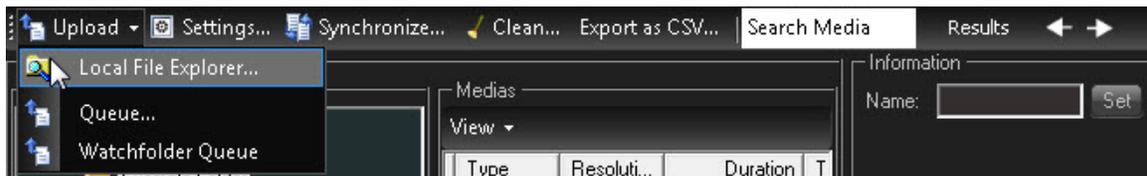
Give the folder a name such as 'Example Folder'.



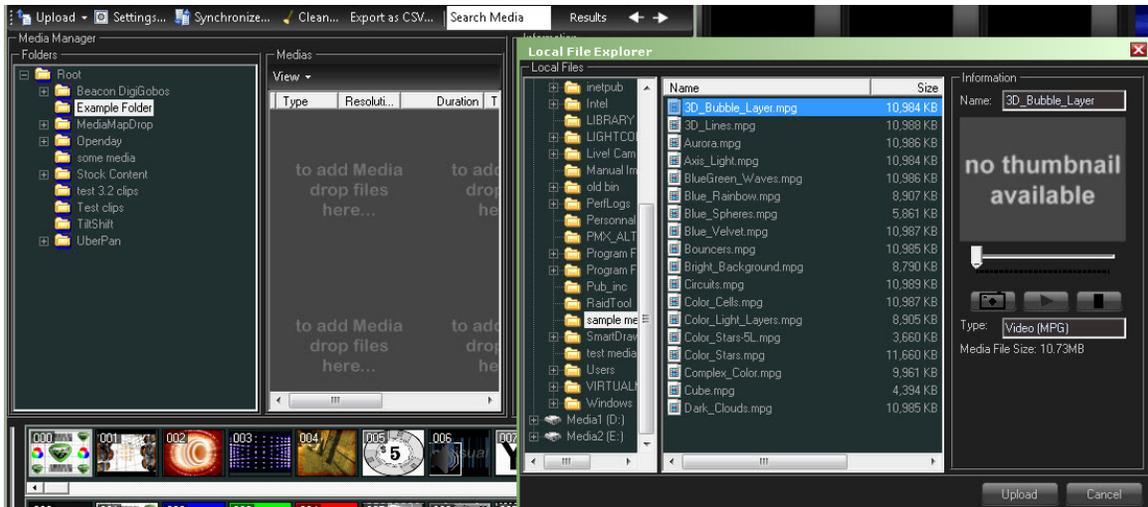
Now highlight your new folder in the folders window. This will mean the media you now encode will be added to this folder.



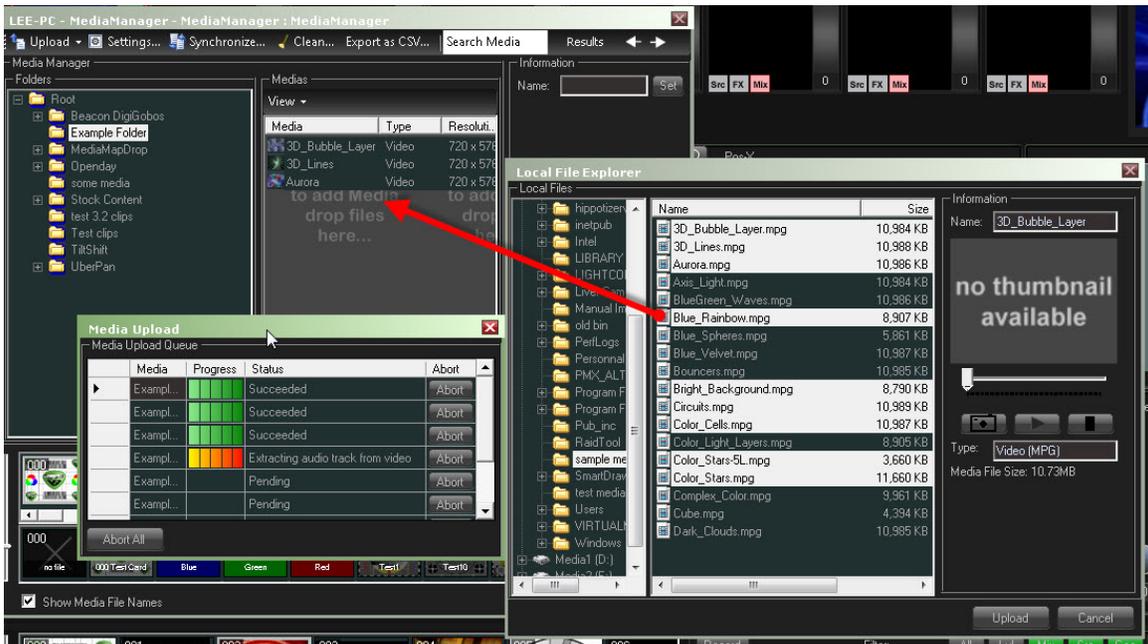
Click **Upload** and then select **Local File Explorer**.



Browse through the required drive or external device until you find the desired folder using the tree in the left hand pane



Then select the media by clicking on the individual file or select a whole folder. Note that multiple files can be selected using the Ctrl key or a range of clips selected using the shift key to select all files within the selection. With the files selected drag them from the explorer window into the area marked **to add Media, drop files here...** in the medias window.



This will start the Media Upload window which shows the progress of the encoding of the files to the MediaManager.

Once a file has been successfully encoded, its status will change to 'Succeeded'. If there is a problem, [an error message will be displayed explaining why it was unable to encode the file](#). If you have inadvertently selected a file or wish to cancel there is an abort button next to each clip and also an abort all option.

If you wish to add more files from other locations the above steps can be repeated at any time.

Once the files have been successfully imported into MediaManager the **Media Upload** window can be closed with the X in the corner.

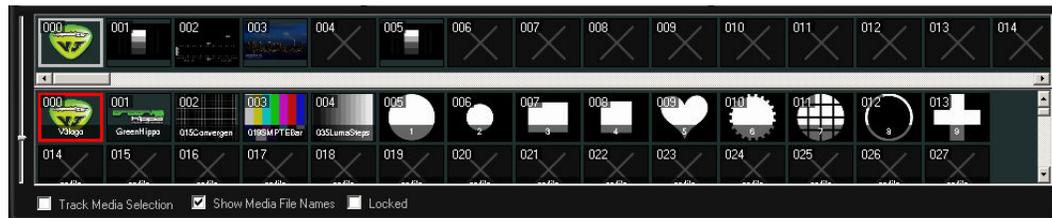
Your files are now encoded and imported into HippotizerV3 but they have not yet been allocated to a bank and clip location allowing access through the Media Selector during normal use.

- **Adding media to banks/clips**

Once the above process is complete, you will see the media listed in the **Medias** pane along with any subfolders you have created. This shows that the media is encoded and present, ready to be allocated to a bank for use during general Hippotizer operation. Media can now be added into banks and clips by simply dragging the thumbnail from the list in the media window onto any space in the clips selector window below. By holding down the shift button and clicking on the first and last clip, multiple clips can be added. Similarly multiple selections can be made by holding down the Ctrl key whilst clicking files. You may also choose to drag the whole folder to the Media Map and this will then populate the map with the contents of the folder and all its sub folders as well.

There are a few working guidelines you might wish to follow here:

- You can drag any or all of the files to any slot in any bank. If you have selected multiple files the slot you chose will be the first media in the list and all others will be added in subsequent slots. For example if you add five clips to bank 1 beginning at 035 you will fill slots 035 to 039.
- If the media you have in the media window is exactly what you want in one folder of the media selector, you can drag the files to the thumbnail in the bank selector, but be warned that this will add the clips at location 000 onwards and overwrite any media references already present.
- The clips can be moved from slot to slot in the media selector by holding the clip and dragging to another slot. You can add the same clip to multiple locations if you wish. Right-click and select delete if the file is no longer required at that location. (this does not delete the actual media file, just that instance of the clip/image)



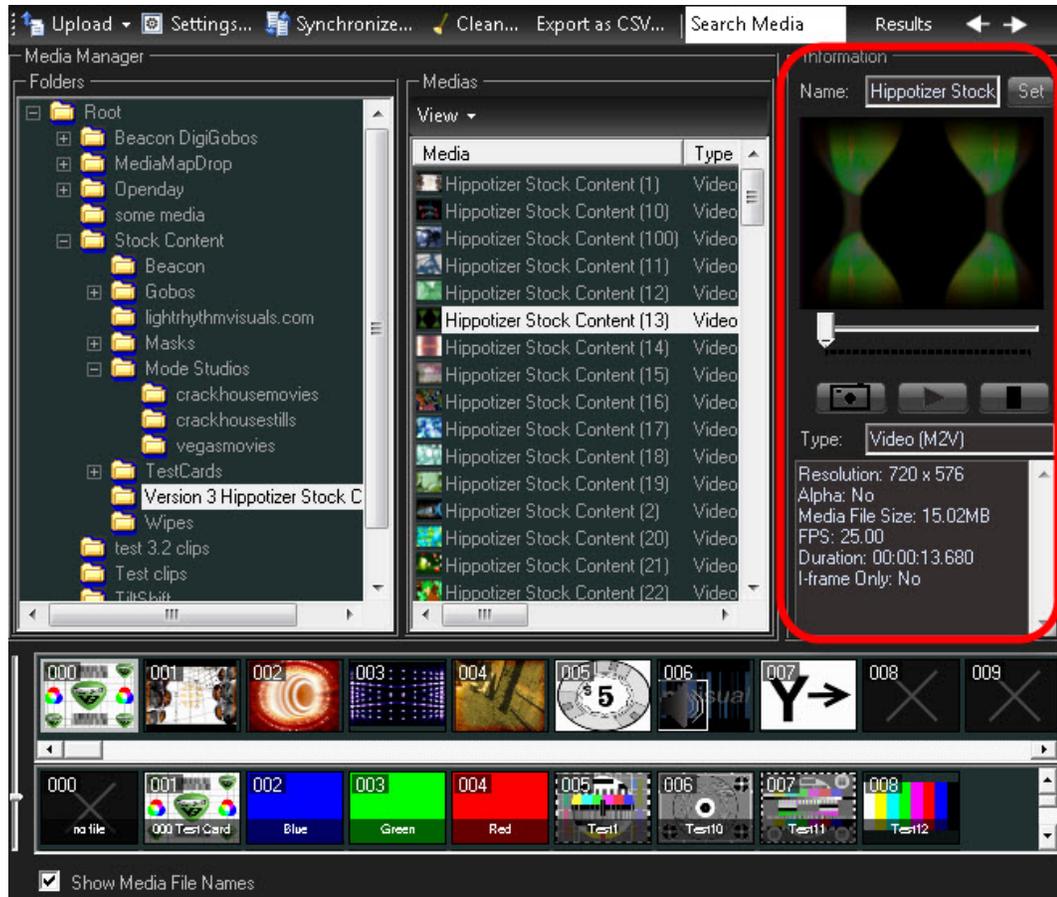
Empty banks or clip locations are signified with a grey X on a black background.

The media is only stored as a clip location within the banks which means if a piece of media is used in a layer and then the clip location updated to new media within the bank it will update the layer to the new media too.

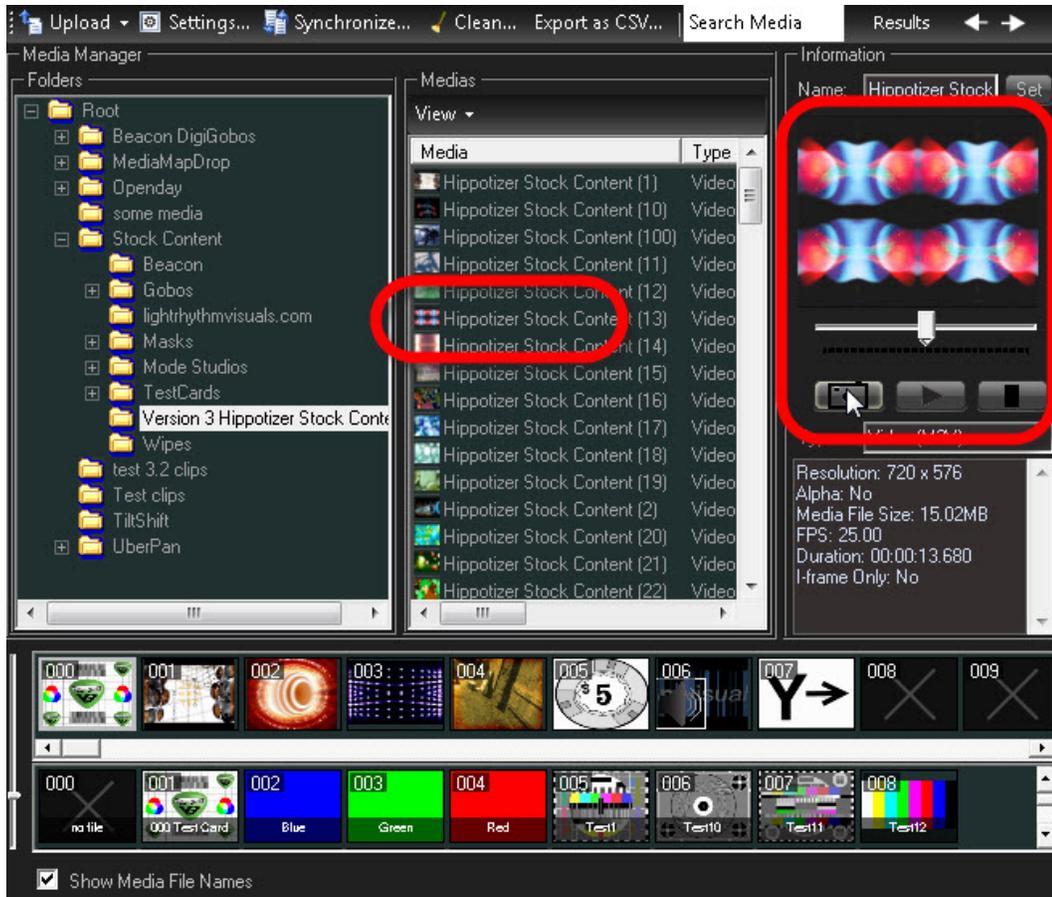
- **Creating a custom Thumbnail**

When you add a piece of media to the Media Map it will auto generate a thumbnail to show you what is in that file. However there may be times when that thumbnail is black or doesn't show you the true representation of what is in the clip. You can therefore choose your own thumbnail here in the Media Manager.

First select the file that you wish to alter. You will see that this is then loaded into the information panel in the Media Manager.



You will see that in this case the thumbnail is dark and doesn't show me much about the content. So to change this play the content forward using the play button and when a suitable frame is found press the Pause Button. With the frame paused press the Camera Icon and you will now see that the Thumbnail has changed in the Media window and if this is already in the Media Map then it will get updated here as well.



- **Delete a Clip**

The clip can be deleted by highlighting and pressing delete or right clicking and selecting delete from the menu.

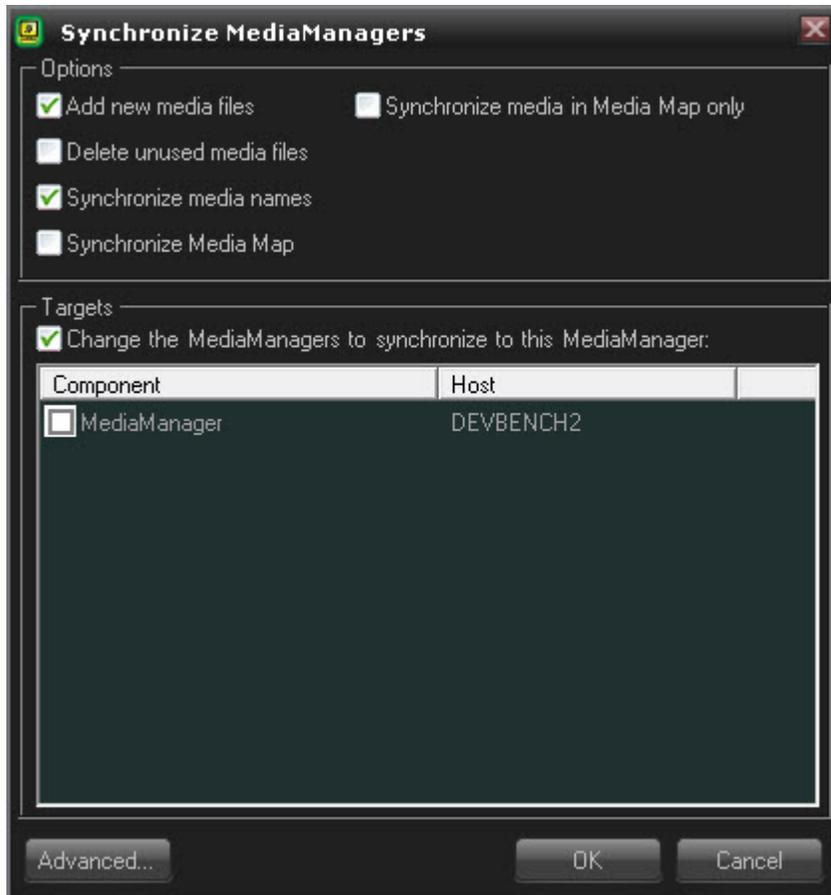
**IMPORTANT:** If you delete a clip from the Media Manager directly then you are deleting it from the Server. If you delete from the Media Map then you are only removing this from the Media Map.

- **Synchronize**

The Synchronize function allows you to duplicate the media library from one Hippotizer to other units on the network via HippoNet. Be aware that any media which is different on the other Hippotizers that may be in the banks will be replaced. To access this function open the Media Manager by double-clicking on the Media Manager icon in the HippoNet Overview. In the main Window click on the **Synchronize...** button on the top right of the menu bar.



You will see the following dialog:



In the top area of the window you will see a list of all media manager components found on HippoNet. Make sure all systems that you wish to update are ticked.

In the lower area you have a series of options:

- **Add new media files:** include the transfer of media files currently not present on the target systems.
- **Delete unused media:** deletes unused media on the target systems. Un-tick this option if you wish to keep media on these systems even if it is not being used.
- **Synchronise media names:** updates the media names if they have been changed by the user.
- **Synchronise Media Map:** updates the way media files from the library are assigned to banks and slots.
- **Synchronise media in Media Map only:** Synchronises only the media in the media map.

Click **OK** to start the synchronisation process.

**Note:** Depending on the amount of media and the amount of systems in found it can take quite some time to synchronise media.

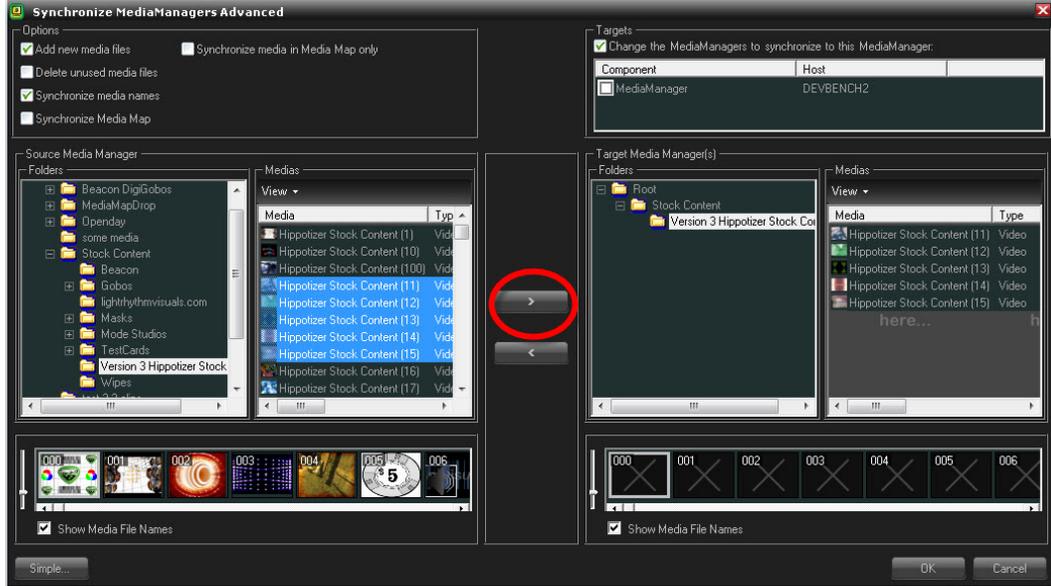
*Advanced*

If you only want to move certain files from one server to another then this is possible using the advance button in the bottom left.

Pressing this will bring up a screen that will allow you to select multiple files at once on the left hand side and



then by pressing the button in the centre you can then transfer media across file by file.



- **Adding Media from a Mac formatted drive**

Often media created on Apple Mac OS X systems needs to be copied to the Hippotizer before it is imported into the Media Manager.

Suggested ways of getting data from a OS X formatted drive onto a Hippotizer are;

1-Using an external USB hard drive which is formatted using the exFAT file system format, copy the data from the Mac onto the USB drive and then connect that to a Hippotizer which has been updated to support exFAT (see below).

NOTE: exFAT is supported on Apple OS X 10.6.5 or newer, and Windows XP can be updated using <http://www.microsoft.com/download/en/details.aspx?displaylang=en&id=19364>

2- Use a 3rd party application which will let a Windows XP system read an Apple formatted drive such as Mac Drive. <http://www.mediafour.com/products/macdrive/>. This will give you the ability to see a Mac formatted hard drive in Windows.

3- If you have an Apple computer, network the two machines together, share a folder on one of the machines. Copy the data on to the Hippotizer system then upload the media.

Or set up a Watchfolder on your Mac drive and share this so that the Hippotizer can get the media from the Watchfolder and import it this way. See [Watchfolders](#) for more information.

## 3. Getting Started with the Software

### 3.9 Media: Importing and Managing your Media



#### 3.12 Using Alpha with Video Clips

Hippotizer Media Server supports Alpha (Transparency) with video clips. This allows the creation of arbitrary shaped media that are partially transparent and reveal the layers underneath.

The easiest way to create such a file is to use a QuickTime format such as animation, .png or .tga and then import them into Hippotizer as described above. The encoder will automatically detect that alpha is present and preserve this throughout the encoding process.

There are certain limitations that are important to know when working with Alpha files.

##### 1. Resolution

Using alpha uses twice the vertical resolution so you are restricted by your license as to what resolution media you can use.

For and Hippotizer HD, GrassHopper and Hippo Portamus systems the maximum vertical resolution with alpha is 576. For Hippo Critter systems the resolution is 768x288.

**Note:** Switch off **Preserve alpha transparency** in the encoding settings if you wish to use these QuickTime formats at higher resolutions but do not need alpha.

##### 2. Playback performance

Playing back video clips with alpha use about twice as many resources (CPU time, hard-drive throughput etc) as a clip without, so carefully plan where you need them and at what resolution.

## 3. Getting Started with the Software

### 3.9 Media: Importing and Managing your Media



#### 3.13 Encoding your own Media

Whilst the media manager in Version 3 has a built in encoding engine for media files, encoding can often take a long time and requires that the media goes through an intermediate format before being placed onto the Hippotizer. The ideal situation is for the media to arrive at the Hippotizer already in the correct format.

There are a number of Encoding software packages available for both PC and Macintosh, and some editing programs can output MPEG2 files directly, whichever software you use, here is a list of some of the settings that you should use:

- Format: MPEG2 Elementary stream or Transport Stream (usually a .m2v or .mpg extension)
- Standard GOP (15 pictures between I-Frames)
- No Audio
- Profile/Level : High Profile Medium Level.
- 25fps for PAL (29.97fps for NTSC)
- Resolution and bitrate

The resolution depends on what you are trying to do and what system you are using, but these are the most common frame sizes, next to the frame size is a recommended bitrate for encoding.

- 720 x 576 Normal PAL Resolution 8000Kbps
- 720 x 480 Normal NTSC Resolution 8000Kbps
- 640 x 480 Alternative NTSC Resolution 8000Kbps
- 800 x 600 VGA 9000Kbps
- 1024 x 768 XGA 10000Kbps
- 1280 x 720 720p HD Content 12000Kbps
- 1920 x 1080 1080p HD Content 16000Kbps

Bitrates are very subjective to the content contained within the media file, so sometimes experimentation may be needed if the encoded file seems to be lacking in quality. The general rule is that the bitrate should be as low as possible but without affecting the quality of the final image.

Do not worry if some of the settings such as GOP or Profile/Level are not available in your software, it probably means that those features are set to a default value and that should be fine, however you may not be able to do non-standard or HD resolutions if this is the case.

## Quicktime

Hippotizer software requires the QuickTime framework to read some kinds of media files in order to import them into the Media Manager. These include clips with extensions of .mp4, .mov, and .avi. Once the clip has been transcoded into the Hippotizer, QuickTime is no longer needed to play back the files. Whenever a version of Hippotizer is installed, the program will run a check to see if QuickTime is present and install it automatically if it is not. However, QuickTime is updated frequently by Apple and it is common for Hippotizers to be running with an old version.

If you are having difficulty importing file types such as .avi or .mov, it is a good idea to update QuickTime on the Hippotizer to the latest version. This can be found for free on Apple's website.

### 3.13.5 Media Manager Errors

There may be times when the Media that you try and encode fails. If this happens then you will be given an error message.

Below are the possible errors and the meanings. This hopefully will help you in troubleshooting.

Most errors will begin "**Error while transcoding file to MPEG-2**" followed by one of the following reasons.

- **Your license does not allow media encoding**

*The user is running a Zookeeper only dongle, or no dongle is detected / inserted, so encoding is not allowed.*

- **Unknown raw media file format XXXXX**

*This error should not appear, however if it does then it indicates that the file that the system copied over to the media manager is corrupt, just try again.*

- **Failed to open raw media file**

*For some reason the media manager is unable to open the file that the user is trying to upload, check that it is still on the disk, that it has not been corrupted and is not read protected – and that the user has access rights to the file.*

- **Creating MPEG-2 index file failed: ??????????. Re-encoding to MPEG-2**

*The file that was uploaded had an extension of an MPEG2 file but did not conform to the MPEG2 standard correctly so the file must be re-encoded – the ?????????? should give more details of the actual problem.*

- **MPEG-2 is not I-frame only. Re-encoding to I-frame only MPEG-2**

*Encode to I-Frames was chosen in the settings but the file that is being uploaded is MPEG2 but not I-Frame only – file will be re-encoded.*

- **MPEG-2 video too big (??? x ???). Re-encoding to size (??? x ???)**

*The licence restrictions of your dongle will not allow you to upload the video that you are uploading at it's normal size, it will need to be re-encoded at the new size.*

- **MPEG-2 is using %s chroma format. Re-encoding to 4:2:0 MPEG-2 or WARNING: Source file was using %s chroma format and had to be re-encoded to 4:2:0**

*The original file was an MPEG2 file but it was encoded using the full 4:2:2 colourspace which Hippotizer does not support, the file will be/ has been re-encoded to correct.*

- **Error while converting file to WAV**

*The audio format of the original file is not supported by the Hippotizer audio engine.*

- **Failed to compute MD5 of media file or Failed to compute partial MD5 of media file**

An internal error occurred probably caused by corruption of the file to the disk, trying again should fix this.

- **Cannot handle audio file or Only 8 or 16 bit WAV files are supported**

The file format of the audio file is not supported.

- **Error while retrieving picture info: ?????**

Still image has incorrect header information so system cannot determine the pictures size.

#### **General processing errors:**

“Media Processing Failed, Reason : ??????” where ????? is one of the following:

- **Unknown error**

An unknown error has stopped the transfer, try the same file again and if it still does not work contact Green Hippo.

- **Connection was lost with client**

The Hippotizer which was doing the encoding went offline while the file was being encoded or uploaded.

- **Client doesn't want to take part in the transfer**

Either the remote host is running a different version of software or is busy doing another processing task. Wait a while then try again, if no luck then try restarting both machines.

- **Transfer was aborted by the client or Transfer was aborted by the user/server**

Upload or encode was stopped manually by the user.

- **Unknown media type or Unknown kind of file**

The file extension of the file being uploaded is not recognised, this can sometimes be caused by non media files in a folder such as .db files or thumbnail files.

A very common problem here is that files that have come from Macintosh machines will have 2 versions of the file with similar names, but the second file will be prepended by a full stop, in this case the second file will give an error because it is not a real file but a resource file created by Mac.

## 3. Getting Started with the Software

### 3.9 Media: Importing and Managing your Media



#### 3.14 Watchfolders

WatchFolders are a new way to manage your encoding of content onto a Hippotizer V3 System. Using Watchfolders will enable you to encode, distribute and sync across multiple systems easily, simply and quickly.

Your default WatchFolder is located in the root of C: on your HippotizerV3, however you can set this folder to be anywhere on the system including on a network drive or a folder on a Mac.

You can use this to keep one folder up to date on a single Hippotizer or you can link multiple Media Managers to a single folder to keep all content in sync.

The content will encode on the machine that it is placed on and then when encoded will be distributed across your Hippos automatically.

Note: If you use file sharing programs such as Dropbox then you can also update your files remotely.

#### Configuration

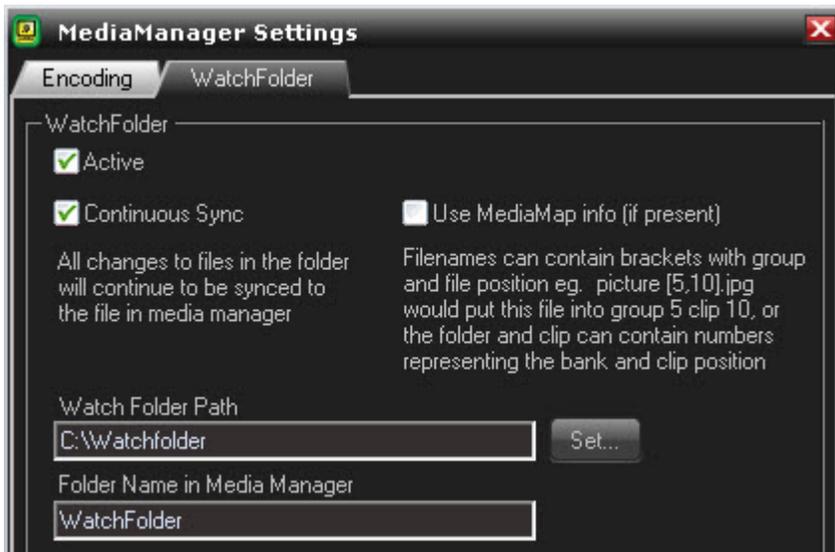
WatchFolders are located in the settings of the Media Manager component.

*Media Manager -> Settings -> WatchFolders*



To turn on and set up your WatchFolder you will need to set the WatchFolder setting to Active. Once you have selected this then you will have the ability to set the WatchFolder path and also name the folder in the Media Manager if this needs to be different from the default.

NB: Currently you need to make sure that the folder exists in the folder path manually



## Settings

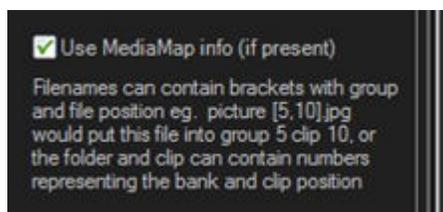
- **Continuous Sync**

With this selected any action that takes place in the WatchFolder will sync to the media manager/s that are pointing at this folder. This means that anything added will appear on all servers and importantly anything **deleted** will be removed across all servers if they are set you watch this folder. This may have an impact on performance if syncing large files across multiple servers.



- **Use MediaMap info (if present)**

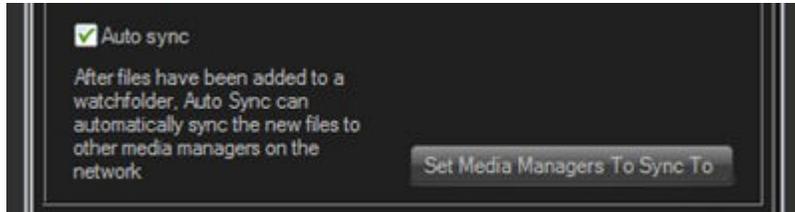
When this is selected the WatchFolder will look at the name of the media in the folder and if it falls within a certain naming convention then this will encode and then place the media in the correct place in the media map.



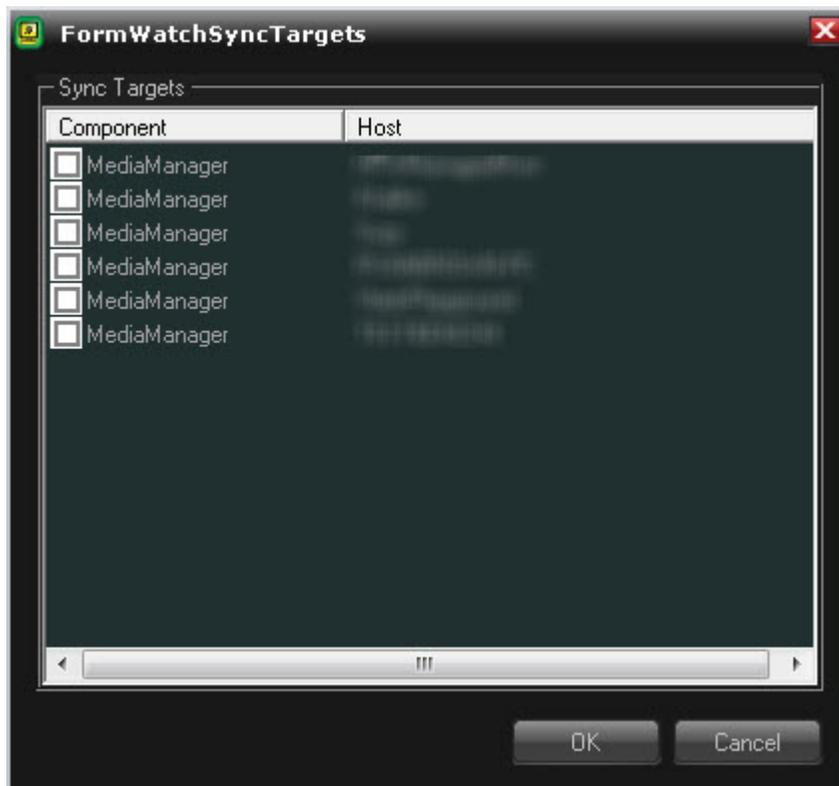
- **Auto Sync**

AutoSync will enable you to select multiple Hippotizers Media Managers to also look at the same WatchFolder. For this all Hippotizers will need to be configured on the same HippoNet.

Select **Set Media Managers to Sync To**. This will open up a dialogue with all possible Hippotizers on the network. Select the Hosts that you want to sync to. Note that here you will have to select the local host that you are working on as well.



Once you have enabled this then you will be presented with this screen where you can select which Media managers you wish to have Auto Sync.



## Mix Modes - Effects and Generators

### 3. Getting Started with the Software

#### 3.15 Mix Modes, Effects and Generators



#### Contents

Now that you are familiar with the basic functionality and navigation of the user interface and how to load and access your media we can now take a look at ways to manipulate your media to combine multiple layers to create certain looks.

- [3.16 Mix Modes](#)
- [3.17 Effects](#)
- [3.18 Generators](#)

### 3. Getting Started with the Software

#### 3.15 Mix Modes, Effects and Generators

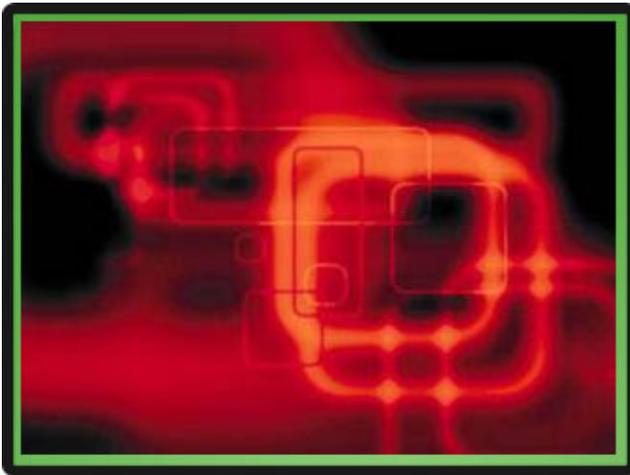


#### 3.16 Mix Modes

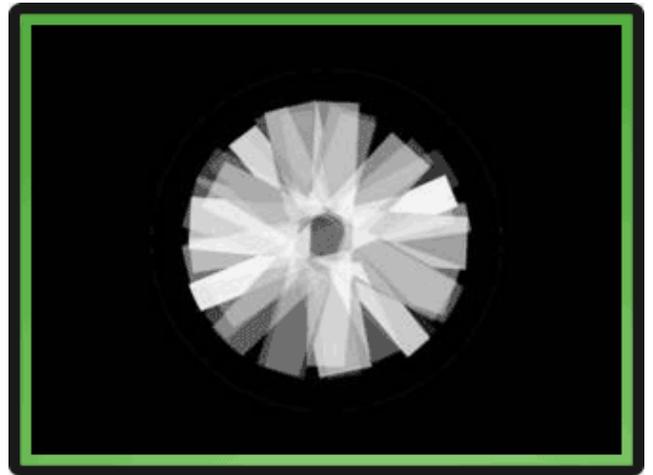
Mix-modes are an essential tool to create multi-layer compositions. Remember that to switch between the different layers and make them active in the **Layer Control** window you must click the corresponding layer in the **Layer Overview** window. Familiarise yourself with this procedure for switching between layers before you attempt to experiment the mix modes as it will be helpful.

So, Mix modes allow you to control how each layer interacts with other layers within the composition. If you are experienced in picture or video editing this will be familiar, albeit with a few key differences. For those not versed in the art of multi-layer compositions, simply look at Mix Modes as a way of deciding what the transparency properties of a layer are in order to view any layers beneath it. Experiment with these settings and use the following tutorials to get a feel for using these functions.

Here are some examples and a few tips on how to use the 16 different mix-modes. The examples all use the same two images on Layer 1 and Layer 2. If you have your Hippotizer running, select two similar images on Layer 1 and 2 and experiment using this guide. By switching the Mix-Mode of Layer 2 you get the following results:



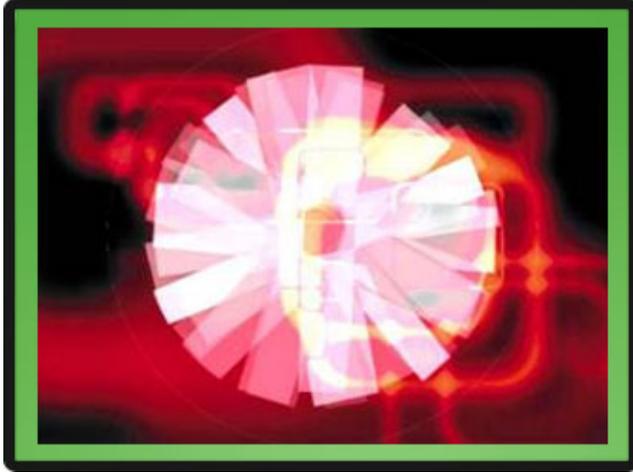
Layer 1



+ Layer 2

See:

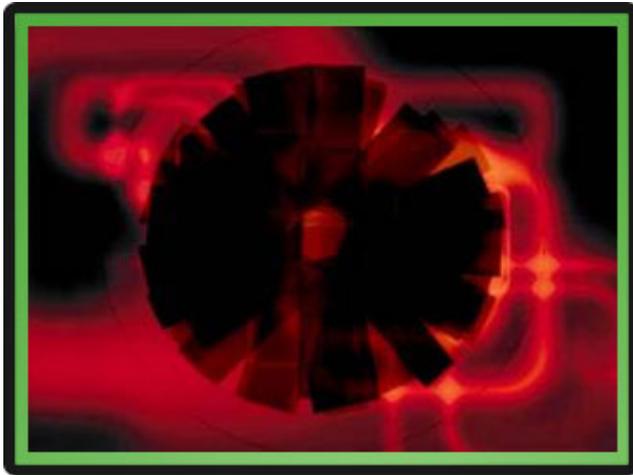
- **Add**



*This adds the pixel values in two layers. This is a good way to combine non-overlapping images in two layers.*

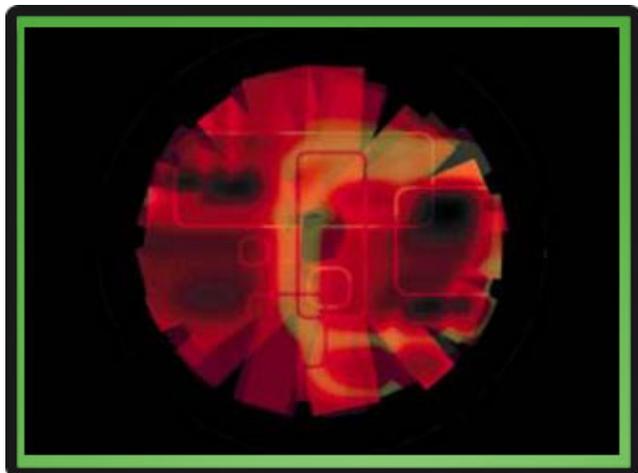
*Because higher pixel values represent lighter colours, adding layers with overlapping pixels lightens the image. Black areas in both layers remain black. White in either layer results in white.*

- **Sub**



*This subtracts the pixel values in the source layer from the corresponding pixels in the target layer.*

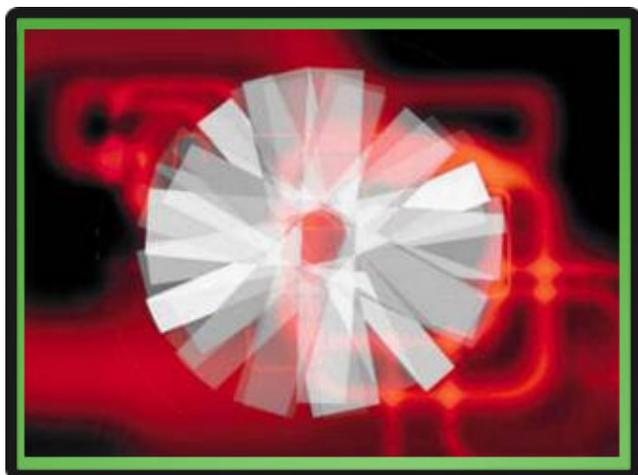
- **Darken**



When using 'Darken' the white disappears. Anything darker than white has the potential of darkening the underlying image.

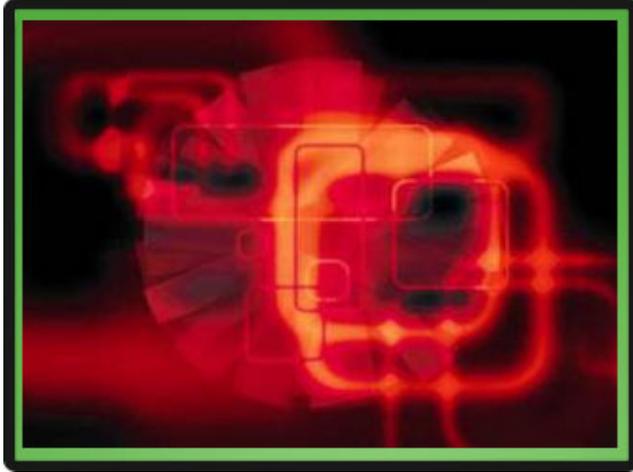
Darken mode compares the active layer to the underlying image, only allowing those areas that are darker than the underlying image to show up.

- **Lighten**



The 'Lighten' mode is the exact opposite of the 'Darken' mode. The black disappears and anything brighter than black has the potential of lightening the underlying image. Lighten mode compares the active layer to the underlying image only allowing those areas that are lighter than the underlying image to show up.

- **Softlight**



*If the colour being applied is lighter than mid-grey, the image is lightened. If the colour being applied is darker than mid-grey, the image is darkened. Depending on the image, Soft light can also be used to produces soft shadows and highlights.*

- **Softlight Inverted**



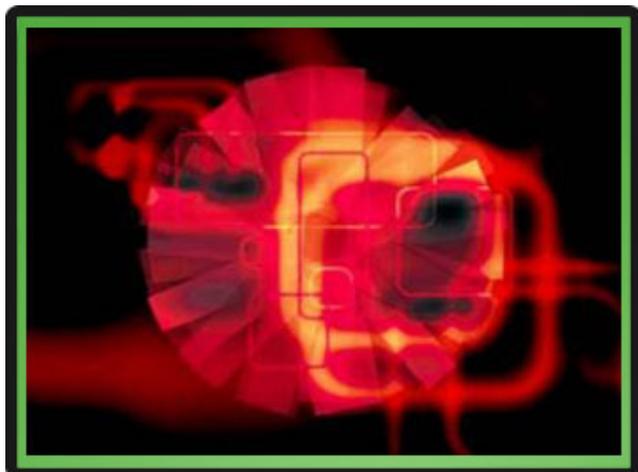
*This is the same as 'Softlight', just more intense.*

- **Hardlight**



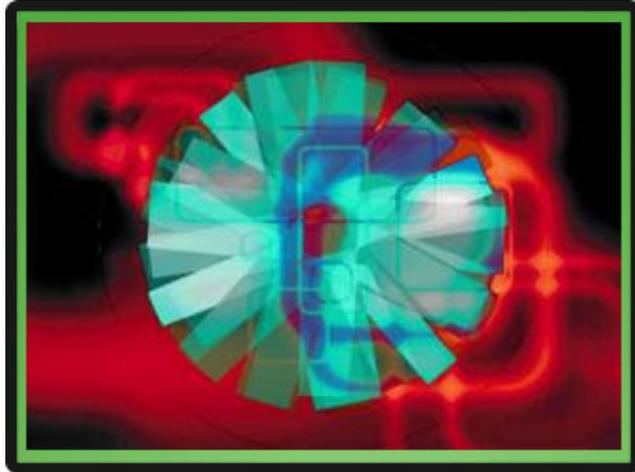
*If the colours being applied are lighter than mid gray, screen mode (lightens) is applied. If the colours being applied are darker than middle gray, multiply mode (darkens) is applied.*

- **Overlay**



*'Overlay' uses the information on the underlying layers to change the contrast of the active layer. It multiplies (darkens), or screens (lightens) the colours depending on the base colour. Totally unpredictable; try it and see if you like it*

- **Difference**



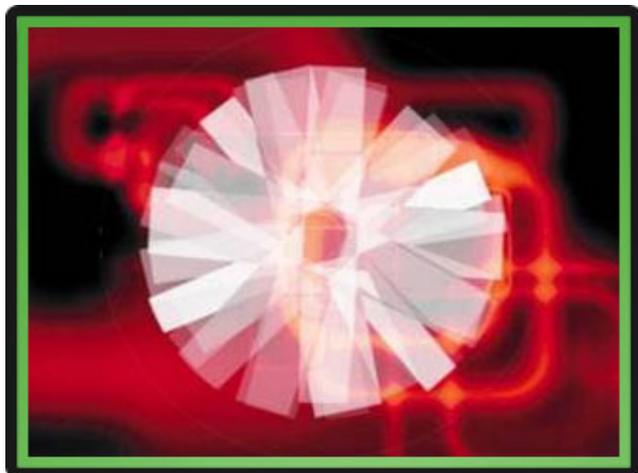
*This looks at the two colours, and, subtracts the less bright from the more bright one. Therefore, blending with white inverts the colour values (you are subtracting colour values of 100 % so you go all the way to the inverse), while blending with black makes no change (black has zero colour values, so you subtract zero). This one changes the colours, not the brightness.*

- **Multiply**



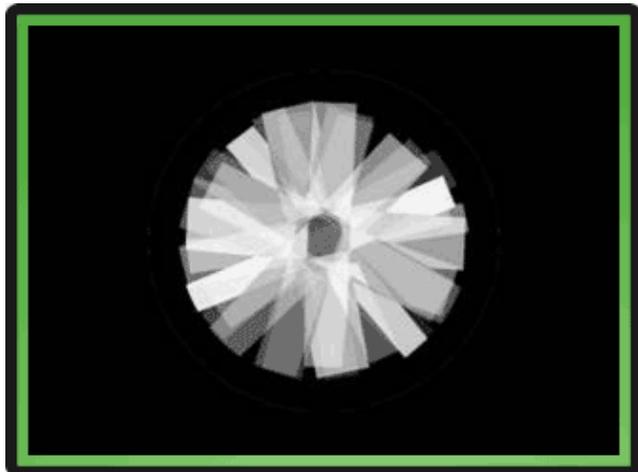
*This effect allows you to place an image over the top of the layer to create a 'mask' as it multiplies the values of one layer with another, causing dark areas to remain dark (multiplying by zero). The lighter areas will let the image behind show through and the darker areas will cover or 'mask' the image underneath.*

- **Screen**



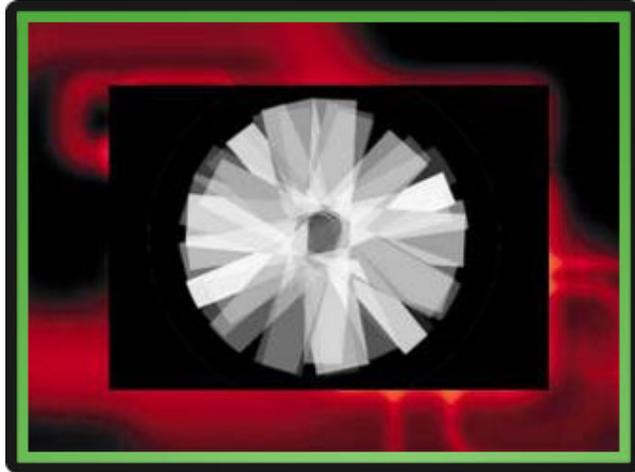
*Screen mode is used for highlighting, and making the layer appear lighter. Since highlights cannot be shown with black, no effect will appear by applying the Screen mode to an entirely black layer, or part of a layer.*

- **Opaque**



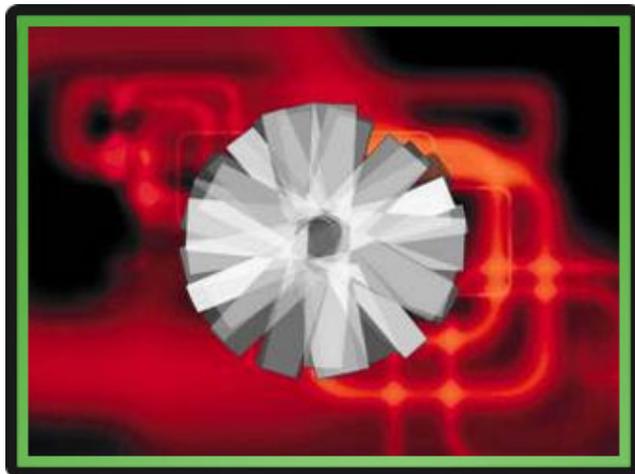
*Opaque takes the top layer and fully covers any layers underneath. Even if you resize the layer using the layer zoom control to a value less than 100% then the underlying layer is still covered.*

- **Sprite**



*Sprite is very similar to Opaque in that, at 100%, it fully covers any layers underneath. However if you resize the layer using the layer zoom control to a value less than 100% then the underlying layer is revealed. Use this mode to create window in window type effects.*

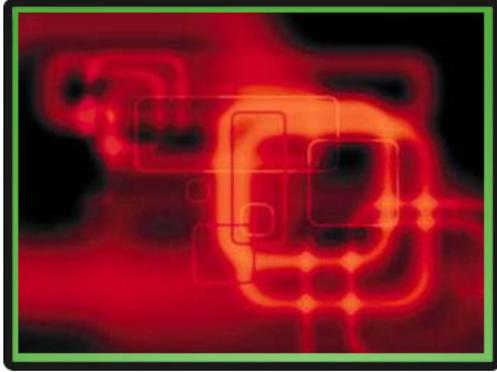
- **LumaKey (Luminance Key)**



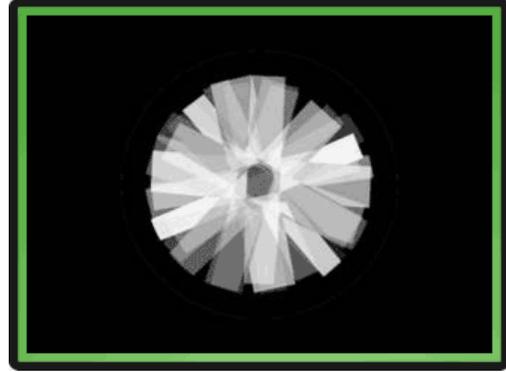
*This mode uses the brightness of its layer to decide whether the underlying layer is visible or not. At 100% brightness, only the current layer is visible, however if you move the Level fader of layer 2 slowly down you will see that more and more of the underlying layer is revealed. The level fader determines the threshold at which the luminance key works. This is particularly useful for removing black surrounds from images and video clips. For those who are used to using Alpha-Channels in still images and want to create similar effects with video, this mode comes close to that and can be achieved by ensuring the areas you wish to be 'transparent' in your videos are black.*

- **Matte**

*Matte uses three layers to work correctly. It uses Layer 2 as a mask to determine which parts of Layer 1 or Layer 3 are visible. Layer 1 can be in any mode but Layer 2 must be in Matte mode. Layer 3 must be in opaque mode to function properly. If you follow the example below, you will be able to see Layer 1 through 'holes' in Layer 3. The shape of the holes is dictated by the contents on Layer 2. In our example we combine the following three images:*



Layer 1



+ Layer 2 (Matte)

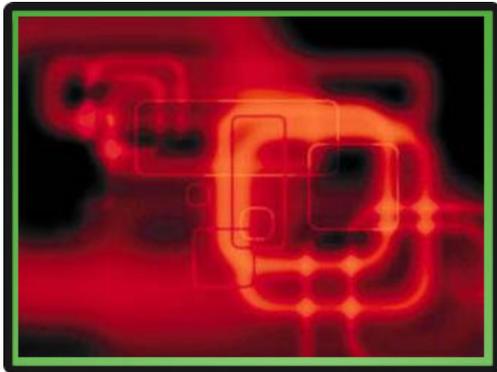


+ Layer 3

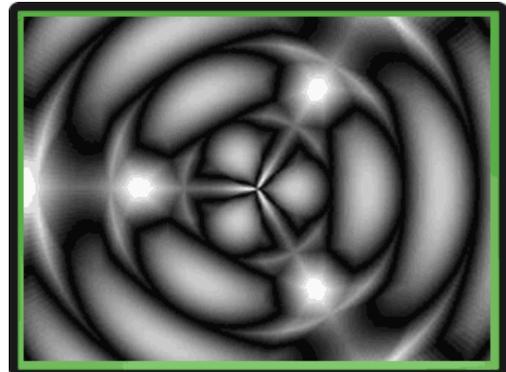


**RESULT**

*With the matte mode you can create your own custom wipes to mix between layers. This is useful if you want to create an interesting transition between, say, video on Layer 1 and video on Layer 3. There are a few greyscale wipe image supplied with you Hippotizer (bank 3 if you have just the default media). Load one of these into layer 2, adjust the contrast for that layer to about 80% and then fade between Layer 1 and Layer 3 using the brightness fader (not the level) of Layer 2.*



Layer 1



+ Layer 2 (Wipe)



+ Layer 3



*RESULT*

*The above image represents the halfway stage of the wipe. When the brightness for Layer 2 is at 100% you will see only Layer 1. When brightness is at 0% you will only see Layer 3.*

*These are just some basic principles for applying mix modes to your compositions. We suggest you chose some clips with which you are familiar and experiment with different mix mode combinations to familiarise yourself with the possibilities.*

## 3. Getting Started with the Software

### 3.15 Mix Modes, Effects and Generators



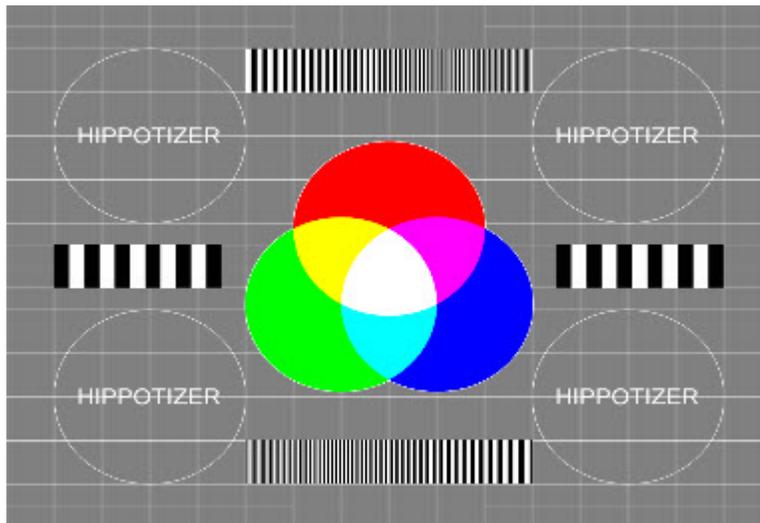
### 3.17 Effects

There are over 100 effects within Hippotizer with different amounts of parameters which can alter how the clip is affected.

There are examples of the effects below. However as they all have multiple parameters this is by no means exhaustive.

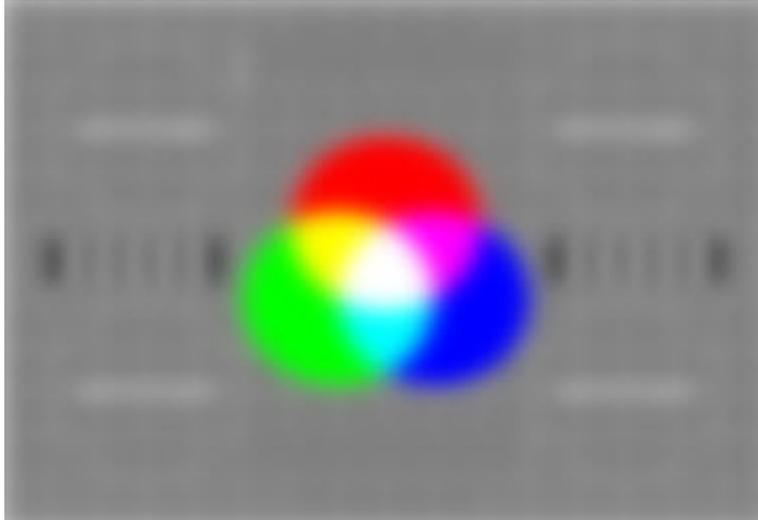
- **No Effect**

*This bypasses the effect engine. Always switch to this mode when you are not using an effect. Even when an effect Level is set to 0, the FX engine is still active and using resources.*



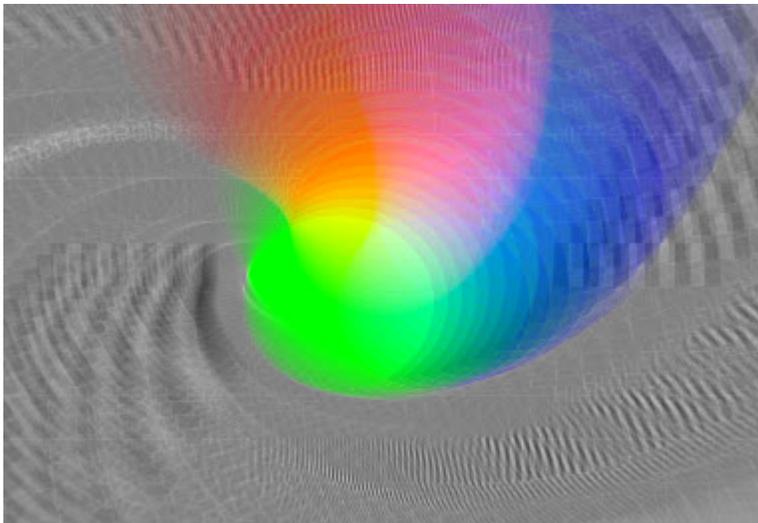
- **Blur**

*The Blur effect applies as Gaussian blur to the whole of the layer.*



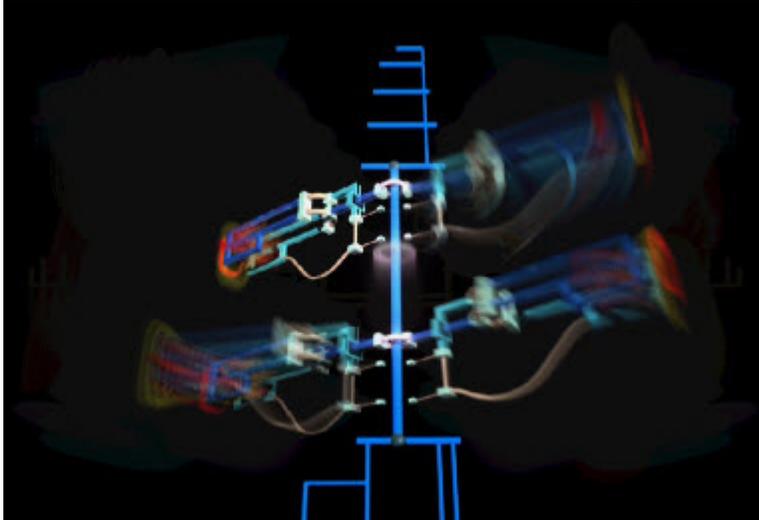
- **Radial Blur**

*This effect uses repetitions of the source image to achieve a rotary blur effect.*



- **Motion Blur**

*This applies a moving blur effect that will leave outlines of the animation within a video*

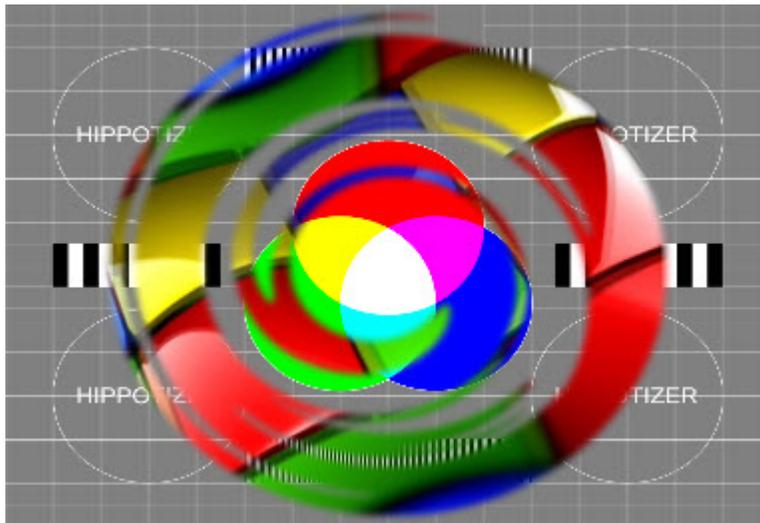


- **Mask**

*This effect allows you to place an image over the top of the layer to create a mask. The images that are used for this contain transparency information, which tells the Hippotizer which parts of the image show through and which do not. In most media servers this is often done using two layers; however this effect makes it possible without having to use another layer. The masked out area will become transparent, which means that if you have an image displayed on this or another lower layer then it will show through in the areas that have been masked.*

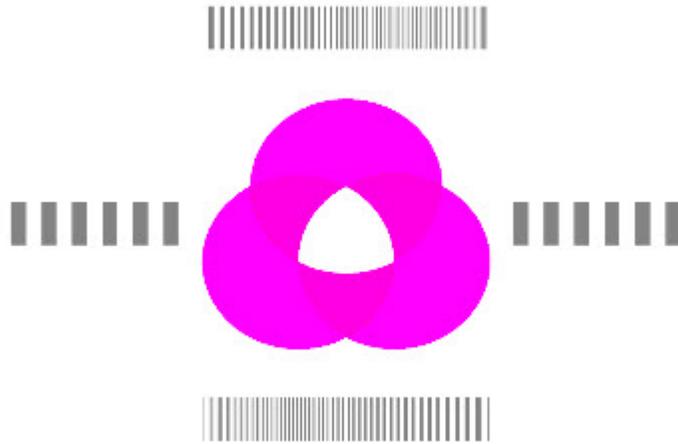
*To use the masks they need to be stored in bank 255 of layer media. The 'Mask' fader allows you to scroll through the different masks within the bank.*

*The blur function should be used carefully as it heavily uses resources.*



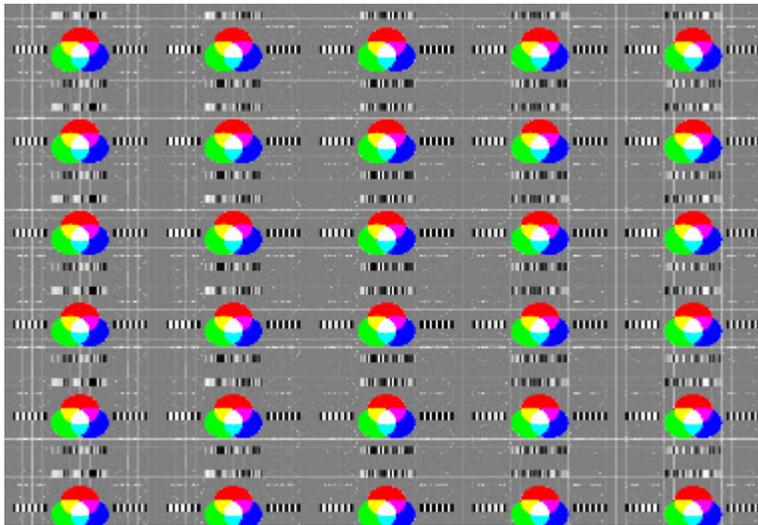
- **ColourTrafo**

*This gives you control over hue, saturation and brightness.*



- **Multimage**

*This effect repeats the source image over and over similar to a multi-monitor wall. Changing the level creates some interesting "glass-wall" effects.*



- **Inv LumaKey**

*Shorthand for Inverted LumaKey. This is similar to the LumaKey mix mode except that it makes the light areas of the picture become transparent instead of the dark areas.*



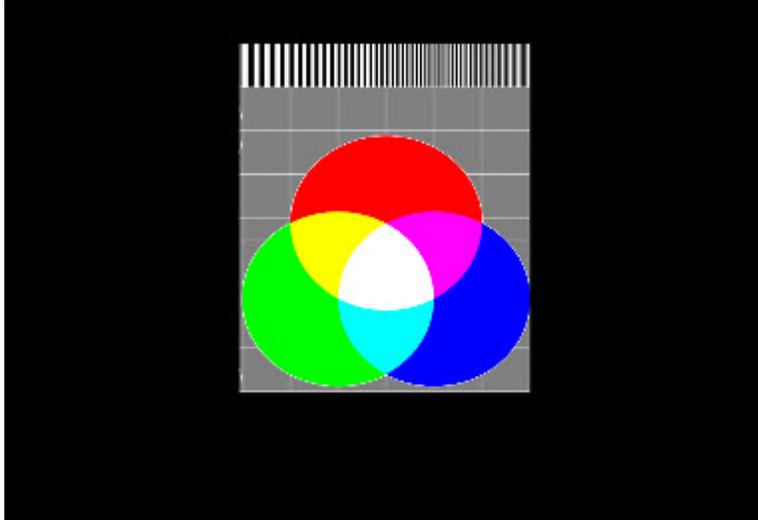
- **Shifter**

*An animated effect that will move the layer around the screen through the X and Y planes, with control to adjust the movement and speed,*



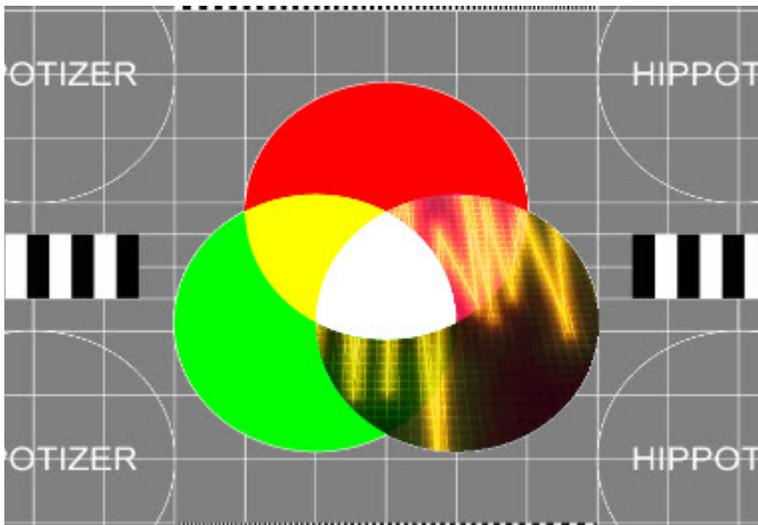
- **Shutter**

*Allows adjustment of image aspect ratio, and allows for cropping of the image (shutters).*



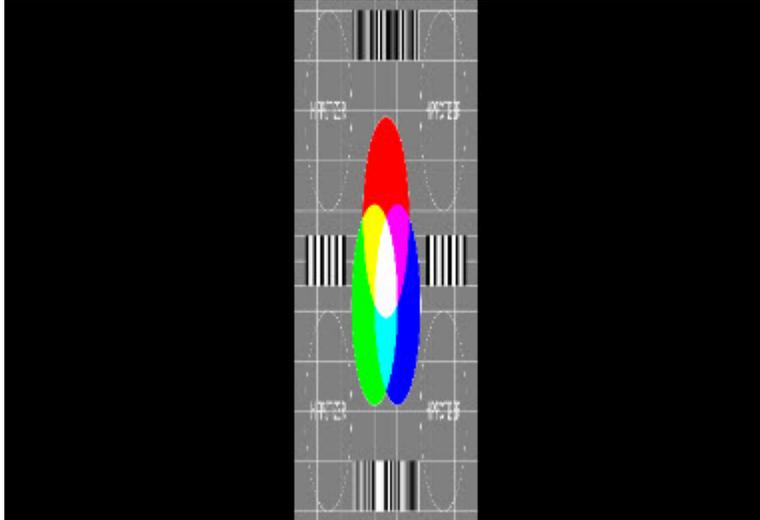
- **ChromaKey**

*This effect allows you to 'key' out certain colours. If you have two layers, it can be used to reveal what's on the layer below. In this example we are "Keying Out" the Blue area of the image to reveal the clip below.*



- **Johans Effect**

*This effect allows you to resize the aspect of the layer, giving both X and Y controls.*



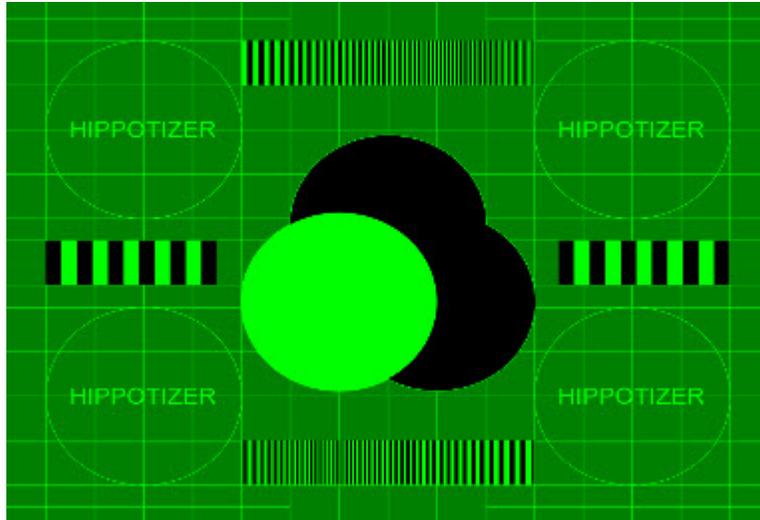
- **Scroller**

*The layer continually scrolls across, with individual controls for direction across the x and y planes and speed.*



- **RGB**

*This effect gives you control to change the colour of the image, with individual red, green and blue controls.*



- **Colour Studio**

*This effect allows you to shift colours around the spectrum with additional brightness control.*



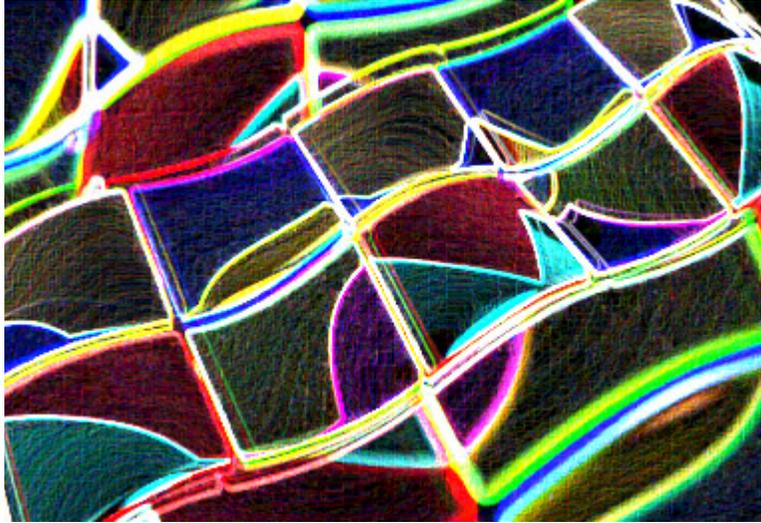
- **Strobe**

*A strobe effect with adjustable timing. A unique feature here is the ability to select the strobe colour.*

*No really possible to show a screen shot here due to the nature of it being a strobe.*

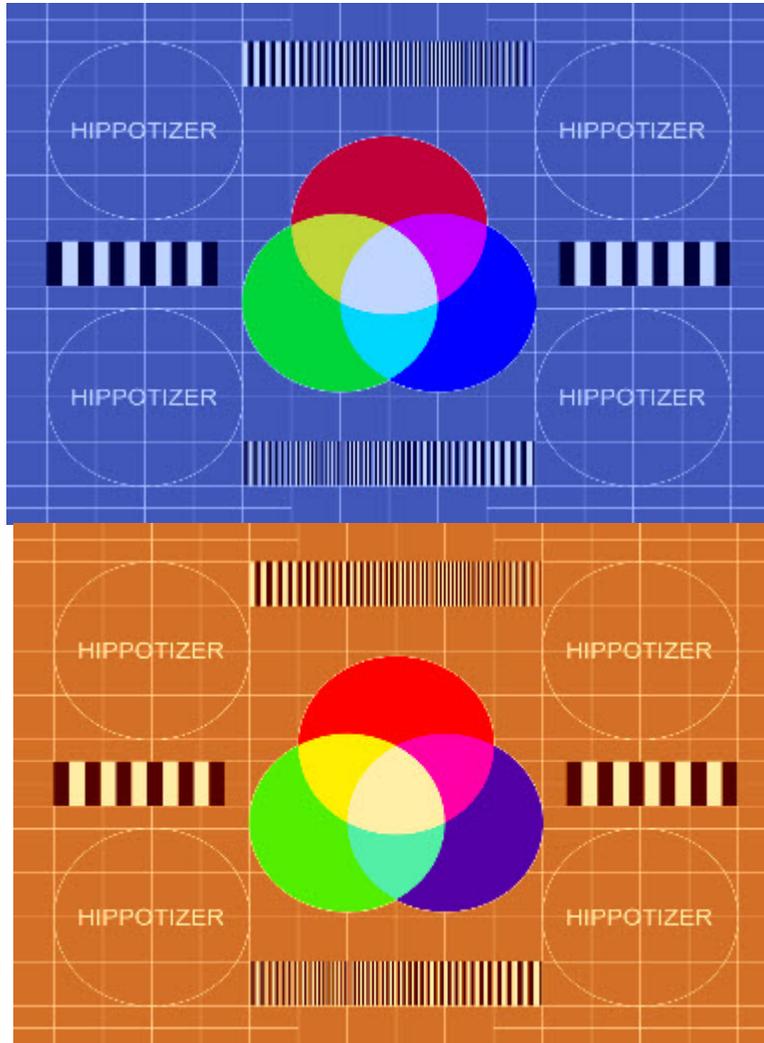
- **Neon**

*Neon traces the outline of elements in the image. Works much better with Video Clips this one.*



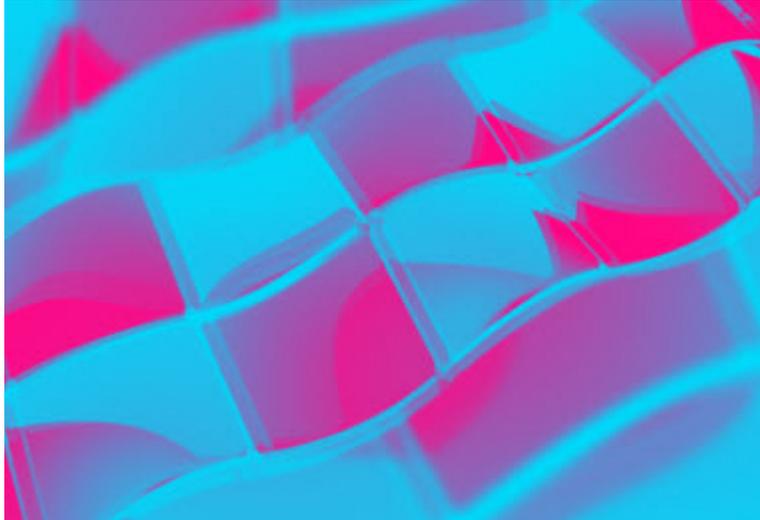
- **CTBO**

*This is a colour correction effect for TV and Film which applies calibrated filters to the image similar to using CTB and CTO lighting filters.*



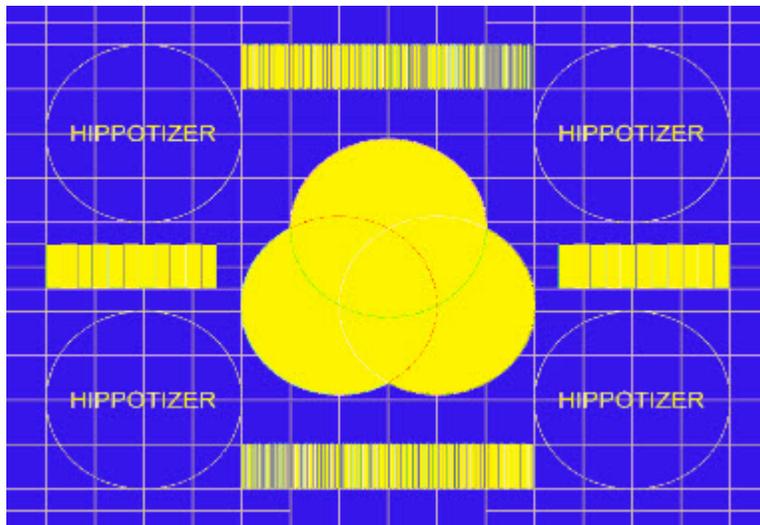
- **DuoTone**

*This colour effect takes your image / video and desaturates the original colours before allowing the user to apply their own choice of tones for the high and low tones. This allows you to select a two colour scheme and have all your content fit within those colours.*



- **Palette**

*This effect allows you to shift each of the individual colours around the spectrum. You can also animate this so you get a colour roll on the content as well.*



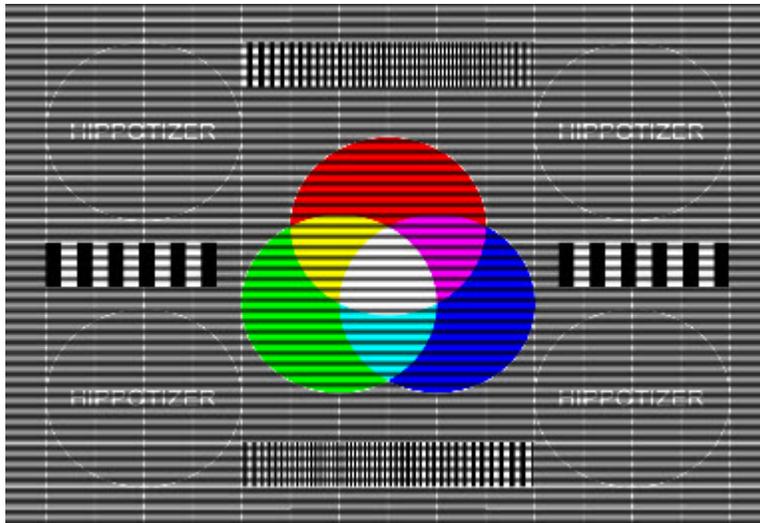
- **Bloom**

*This effect gives the edges of any lines a white glow.*



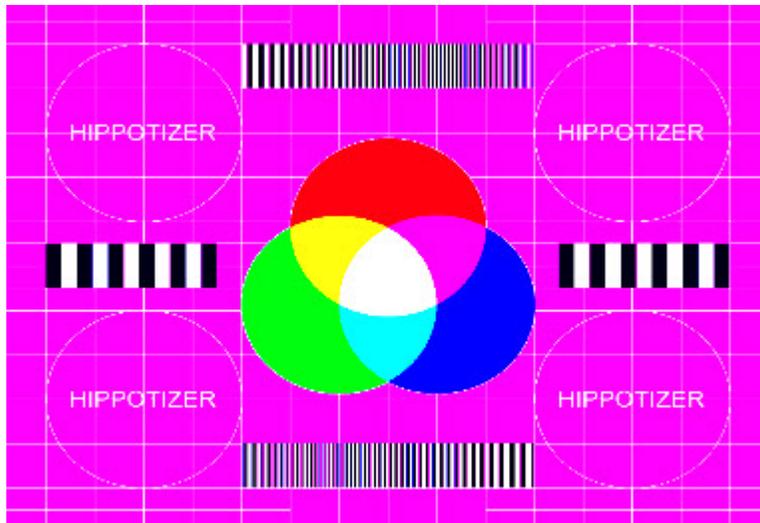
- **Interlace**

*Creates a stripe effect with control to adjust the size and saturation of the stripes.*



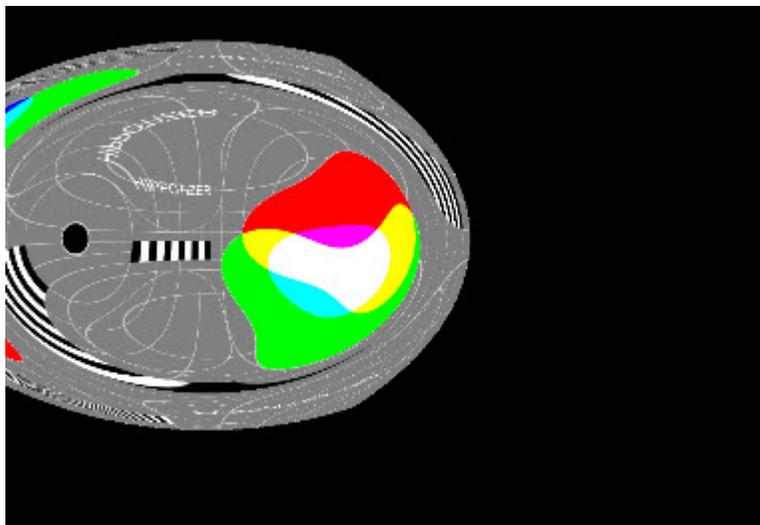
- **Random Colourizer**

*Changes randomly between colours with individual controls for speed and colour shift.*



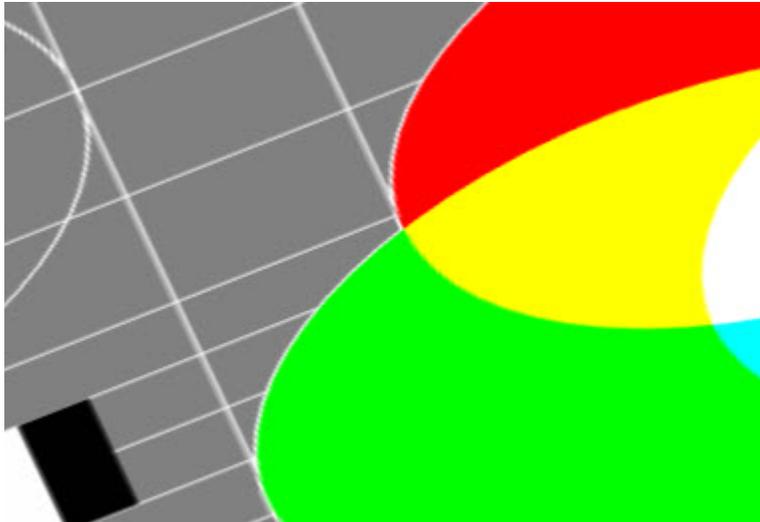
- **Karls Eye**

*Distorts the Image into an fisheye type lens.*



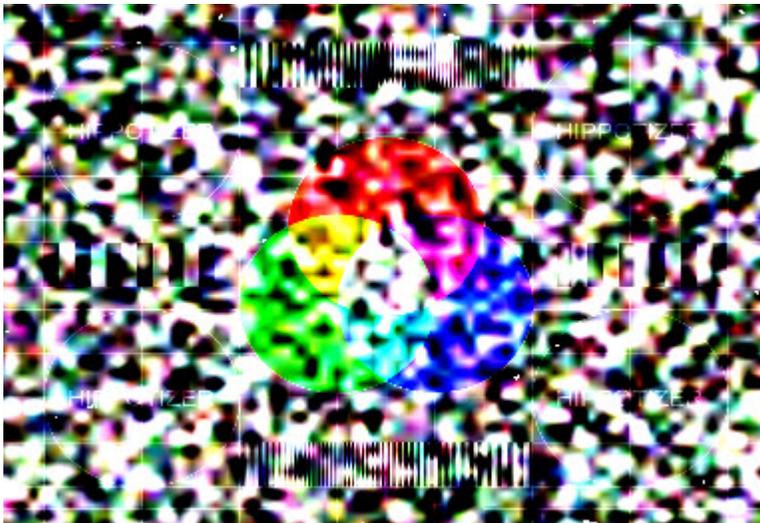
- **MegaZoom**

*This effect changes the geometry of the layer. MegaZoom enables you zoom in and out, rotate, change the aspect ratio and placement on the X/Y Axis.*



- **Noise**

*This effect creates a distorted pixelated effect with controls for grain size, frequency and colour.*



- **Leave Colour**

*Here you can decide what colour you would like to leave out of the clip. You also can set if this colour is then replaced with white or if this becomes transparent.*

*In the example below we have set this to leave green*



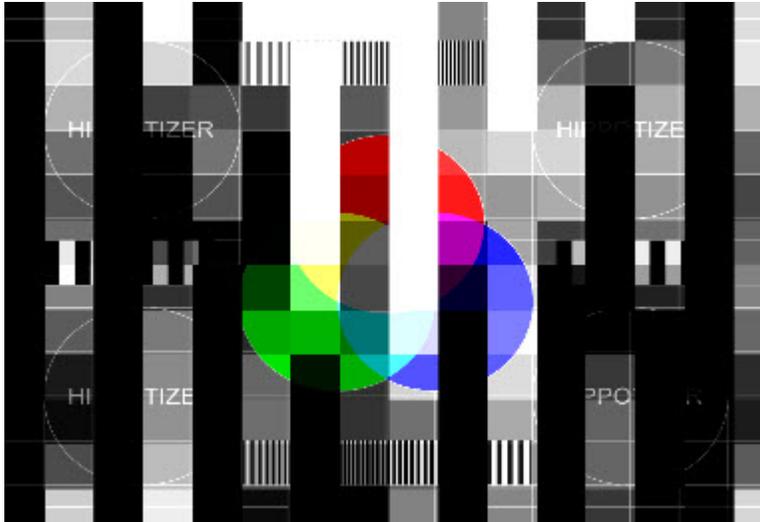
- **Rings**

*Creates a concentric circle break-up.*



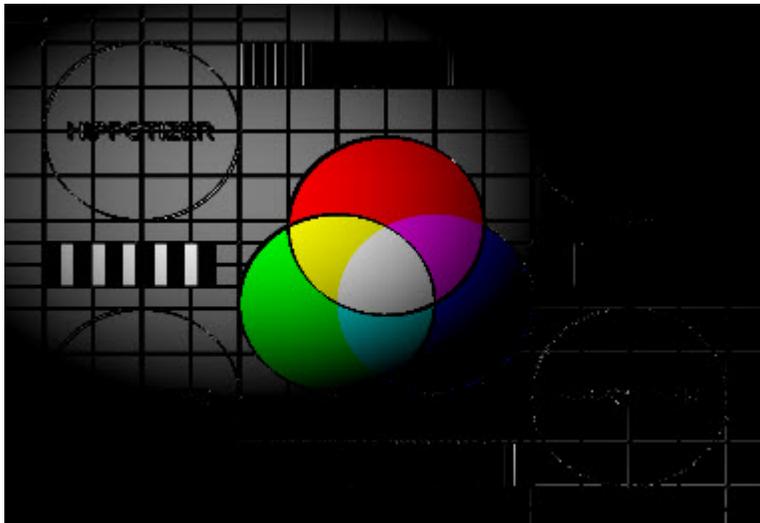
- **CubeStyle**

*Another break-up effect using moving translucent squares with a 'waterfall' style of motion.*

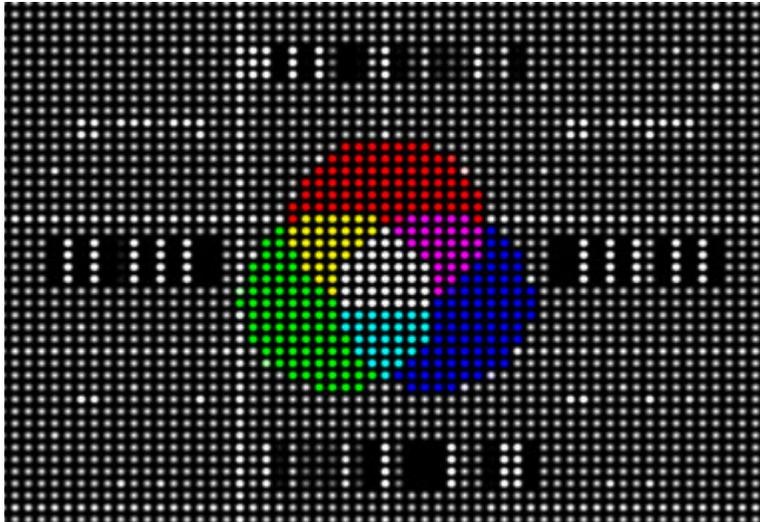


- **Bump**

*This effect uses a 'virtual' spotlight to be able to create the effect of a 3D textured surface from any 2D image; this works best with high contrast images.*



- **LED**



*Creates the look of an LED wall.*

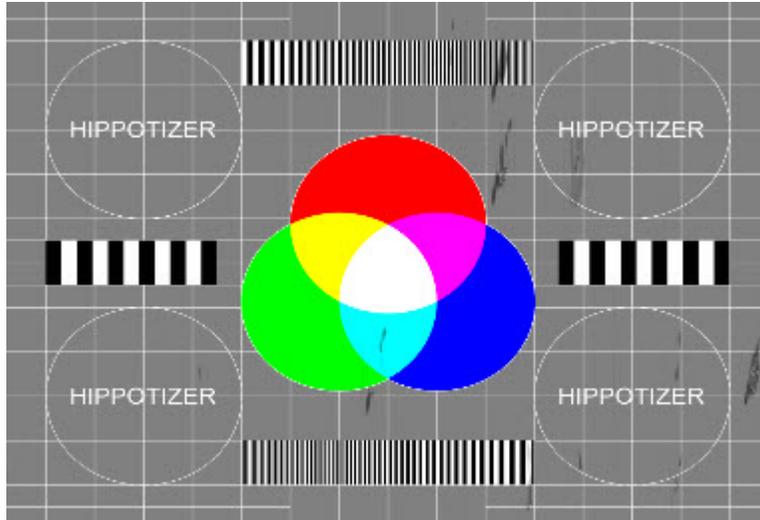
- **Pixelate**

*Pixelates the image. A great effect in combination with Neon for example.*



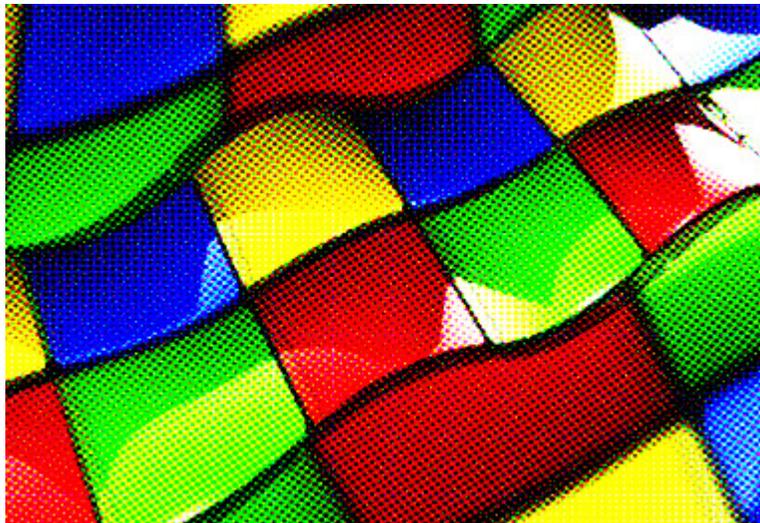
- **Film**

*This effect simulates the attributes of old flickering movies. Use it together with the colour effect to de-saturate the original to black and white first. You can also use colour effects to create lots of different 'old film' looks.*



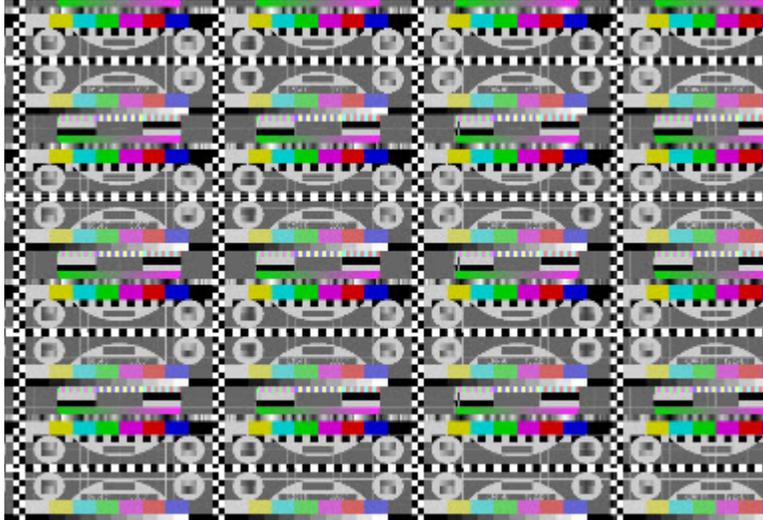
- **Halftone**

*This effect simulates the printing quality/method of magazines / newspapers.*



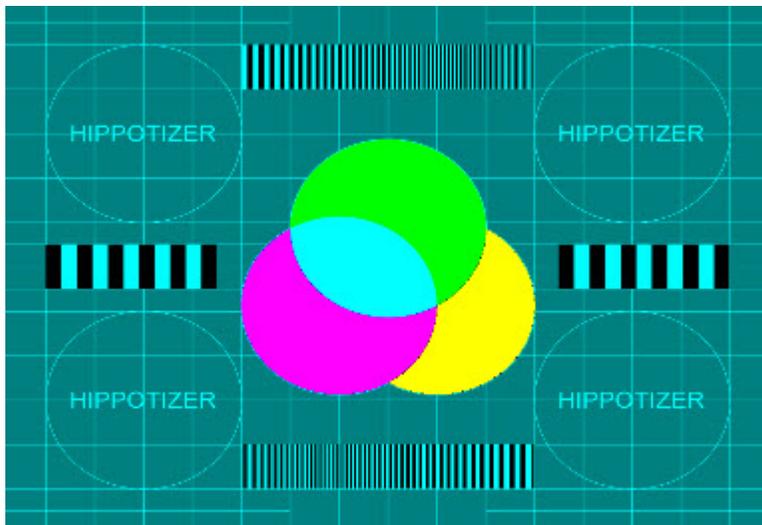
- **Recursion Window**

*This Recursion effect works by multiplying and overlapping your original image file. Similar to Multimage but you also have control of the X and Y.*



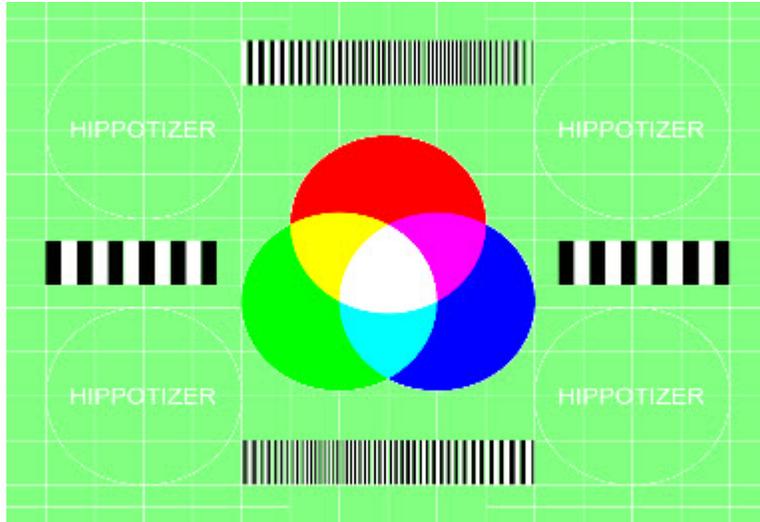
- **Colour Change**

*Colour Change, changes one colour value with another.*



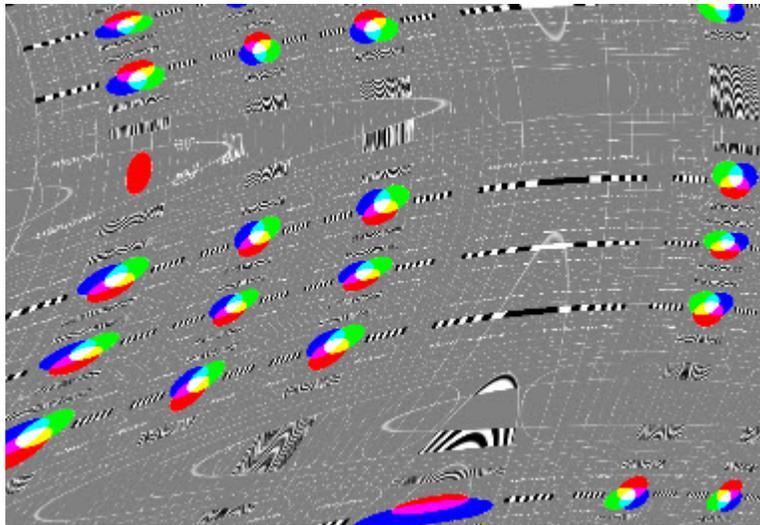
- **Colour Enhancer**

*Colour Enhancer, increases the value Red, Green, or Blue in the layer.*



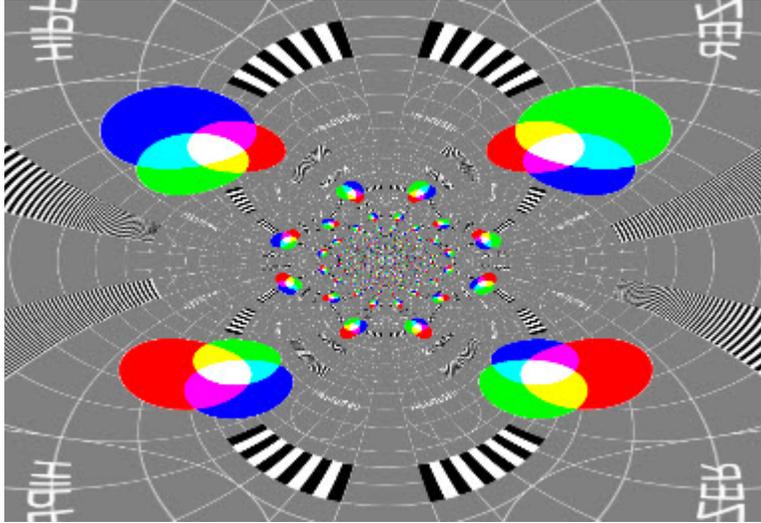
- **Plasma**

*A liquid-like effect.*



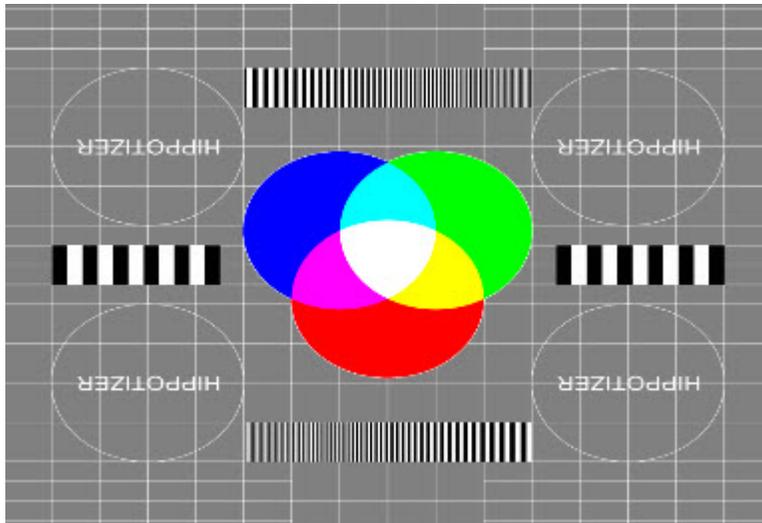
- **Flower**

*This flower effect that distorts the image into a pattern similar to the petals of a flower.*



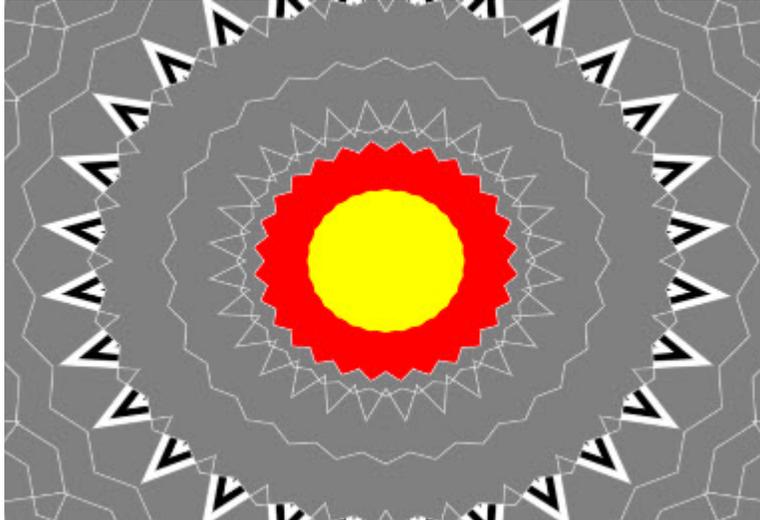
- **Flip**

*This effect allows the layer to be flipped through the X and Y planes.*



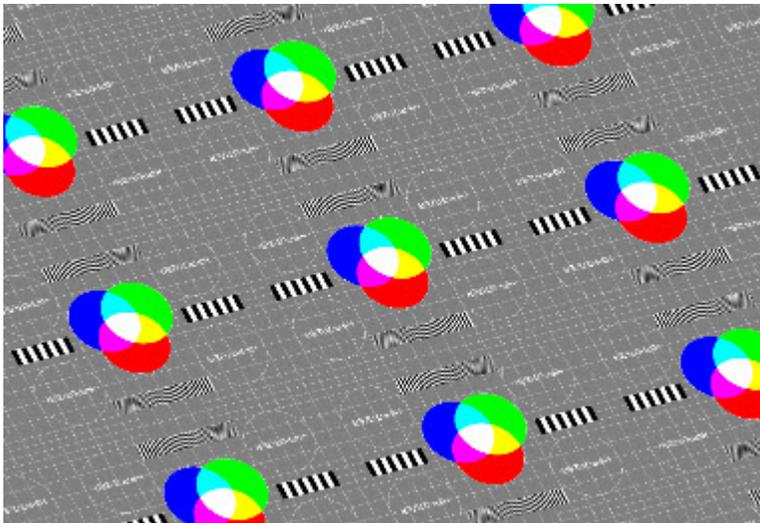
- **Kaleidoscope**

*This effect takes a section of the original image and repeats it 'in the round'.*



- **RotoZoom**

*A static combination effect using circular distortion and plasma distortion together.*



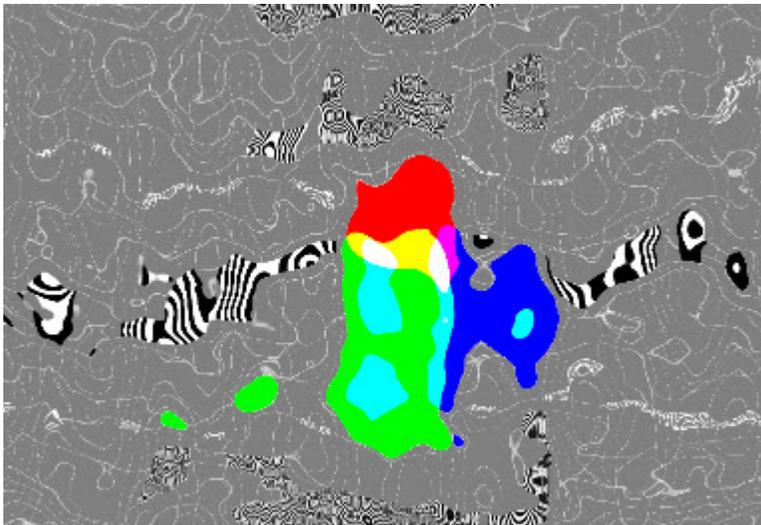
- **Glass**

*A distortion effect as if looking through a moulded glass window*



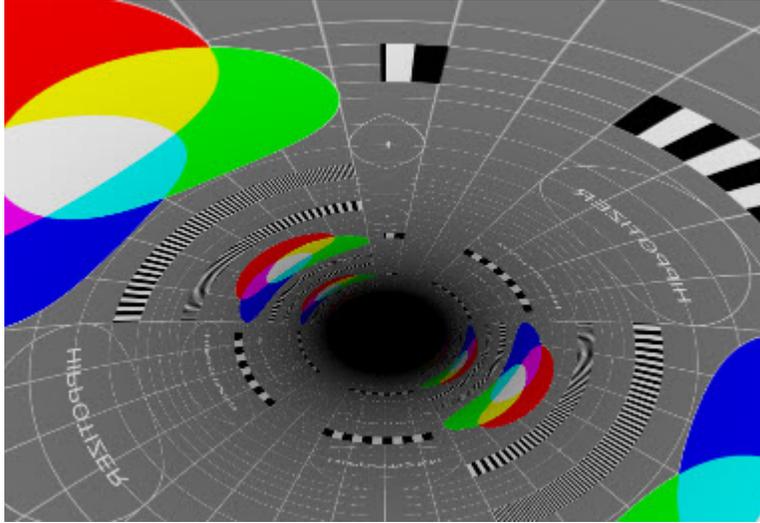
- **Aqua**

*This effect simulates distortions created by ripples on a water surface*



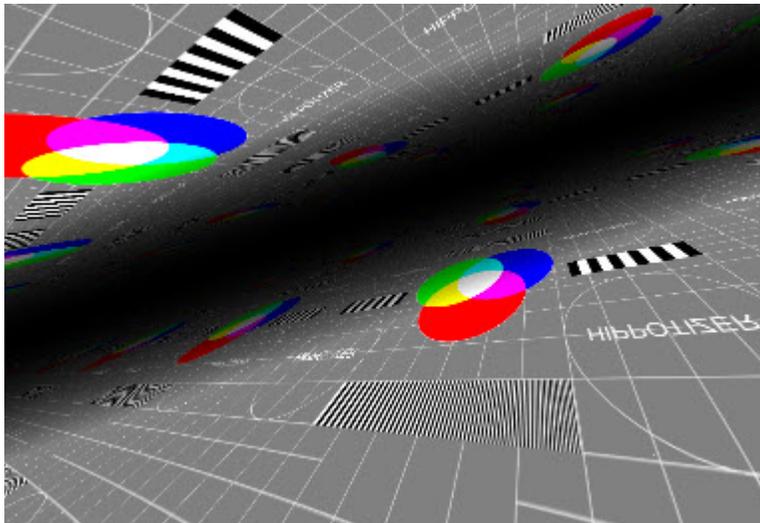
- **Tunnel**

*Creates the effect of travelling through a 3D tunnel*



- **Planes**

*Creates a 3D Planes effect with adjustable orientation, using the Level slider can create some great effects on it's own*



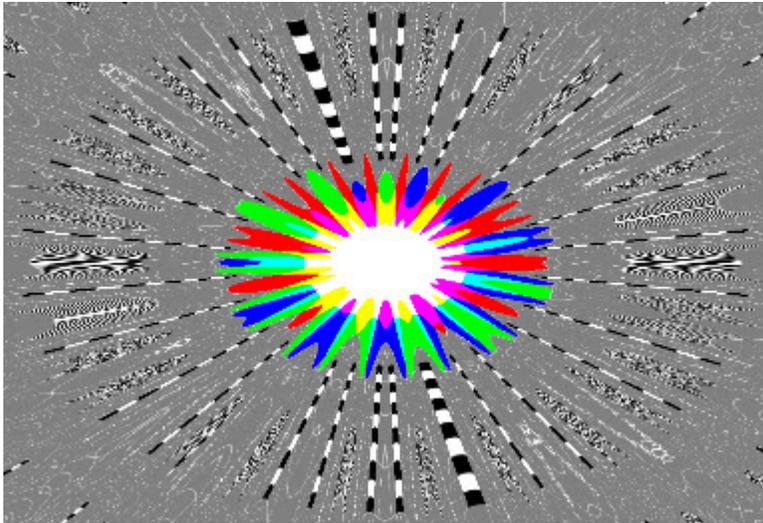
- **Fluid Distortion**

*This effect simulates distortions created by a water surface, very similar to viewing an submerged object.*



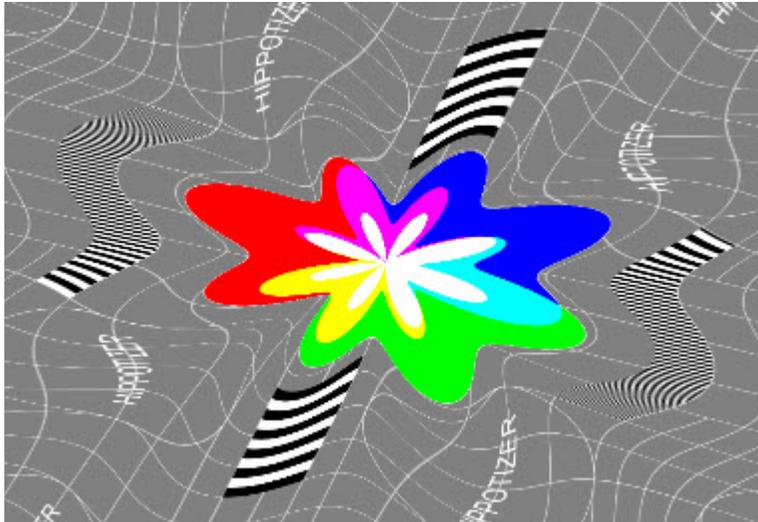
- **PolarWave**

*Creates a wave like effect on the image which extends outwards from the centre.*



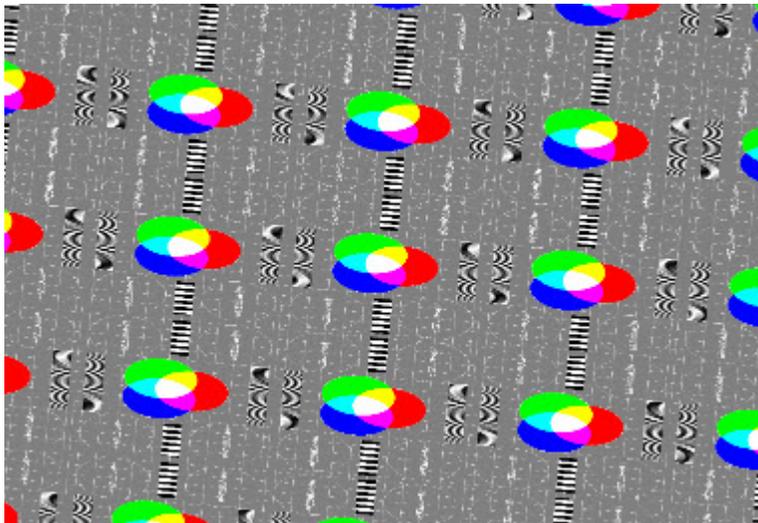
- **Twisted**

*A distortion effect as if looking through a moulded glass window, swirling the image towards the centre.*



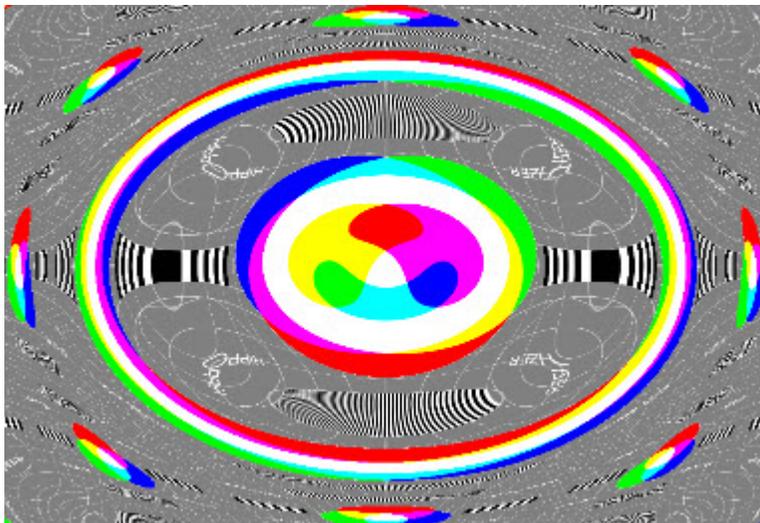
- **Rectangles**

*This effect creates multiple images, with control to adjust the number across the x and y planes. This also has a rotate function to it as well.*



- **Ripple**

*Creates a water ripple effect, with controls for the direction and number of ripples.*



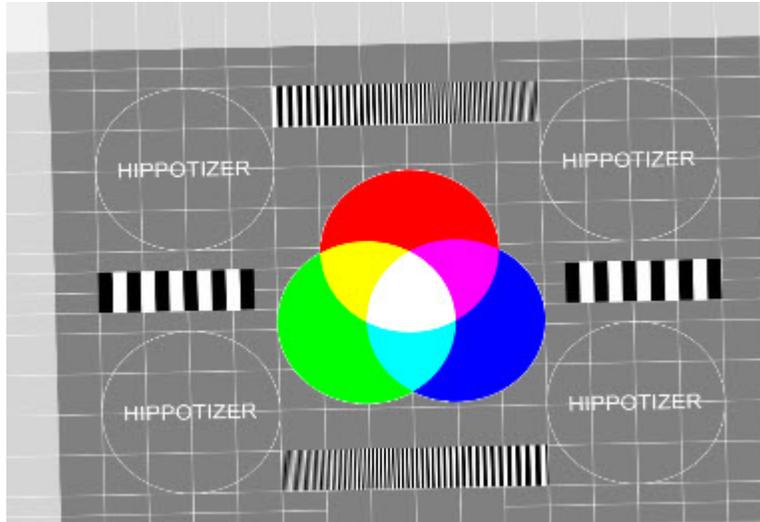
- **Wave**

*This effect is creates a sweeping wave effect, which extends from the centre of the image and moves outwards before moving back to the centre,*



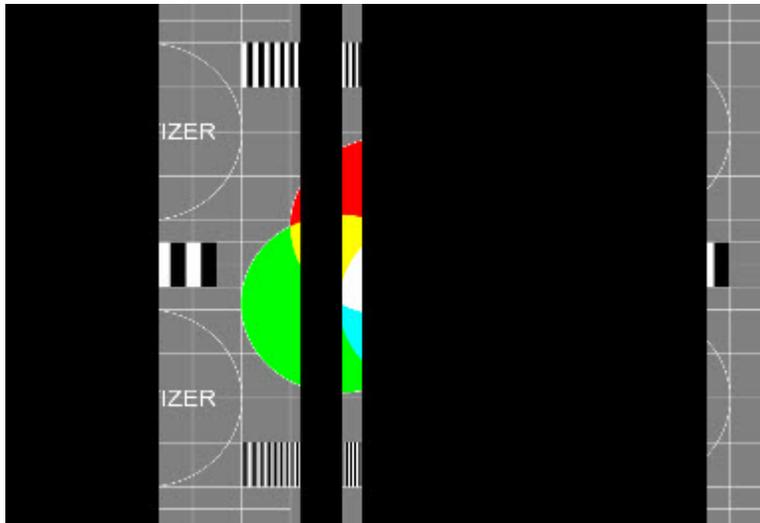
- **Jitter**

*This randomly makes the images dart around, with controls to adjust the offset across the x and y plane, speed, rotation and zoom.*



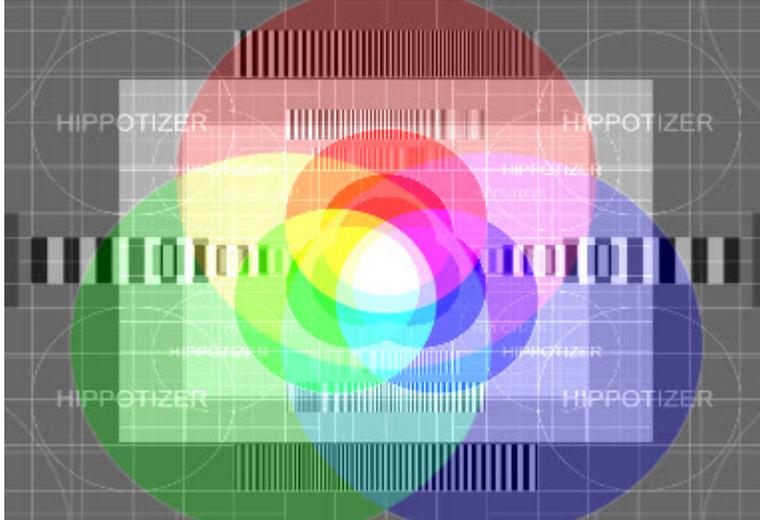
- **Stripes**

*This effect creates a random stripes to reveal the previous layer, controls include scale and frequency*



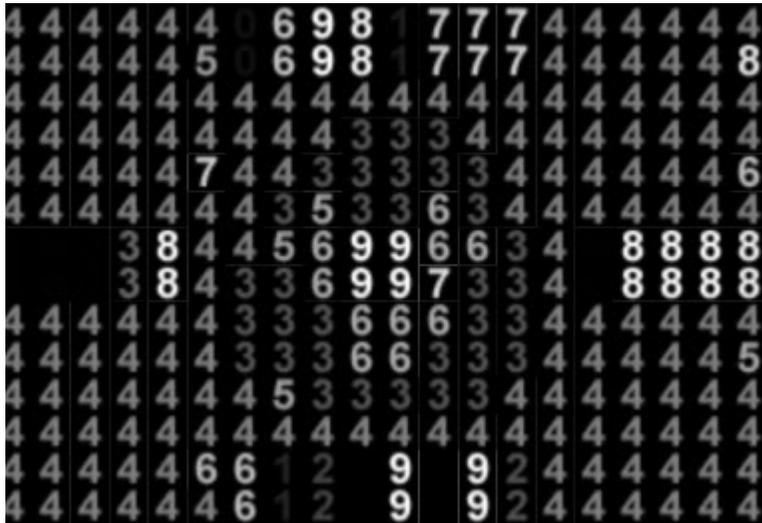
- **Infinite Zoom**

*This effect continually zooms the image, overlaying each time.*



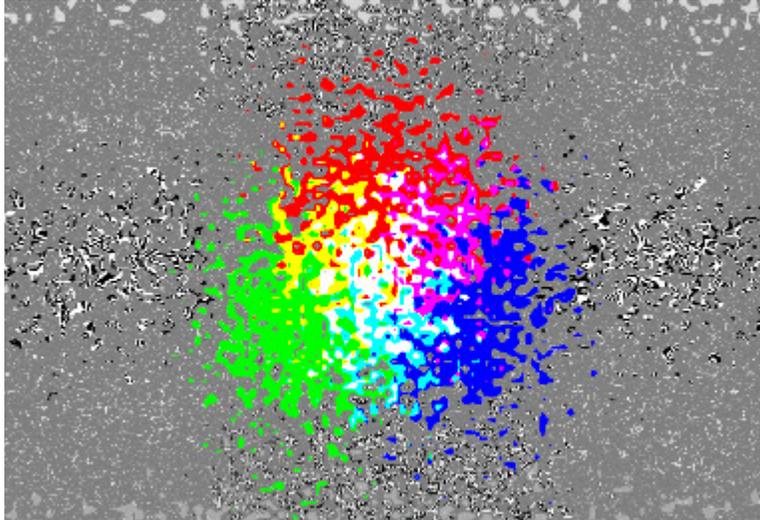
- **Sven Digits**

*Sven's Digits uses the light and dark areas of the picture and replaces them with digits between 1-9.*



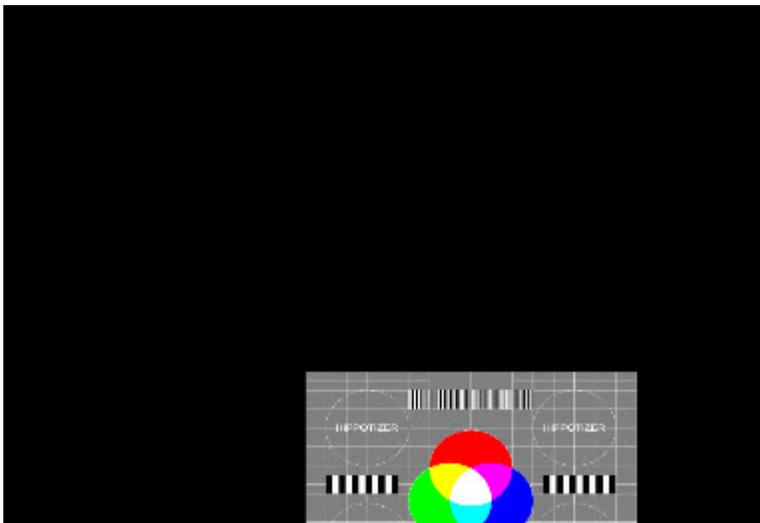
- **Pixel Dust**

*A 'dust' style distortion effect*



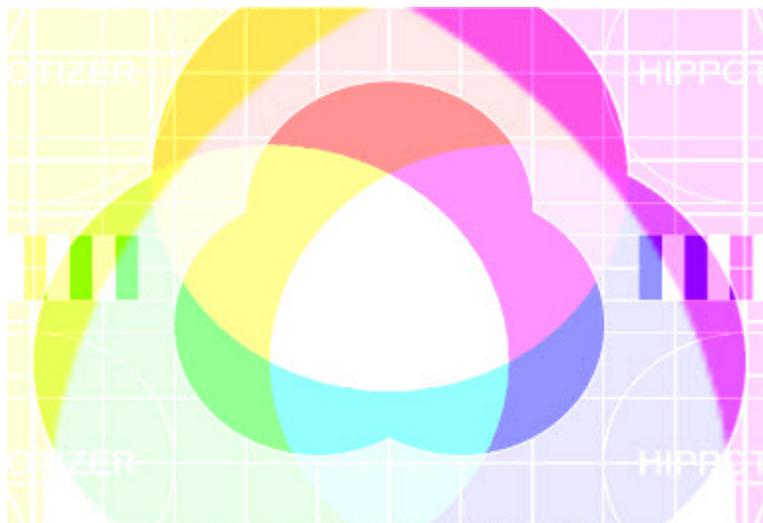
- **Bounce**

*Bounce allows you create a bounce effect and control the size, speed and X, Y movement on the layer.*



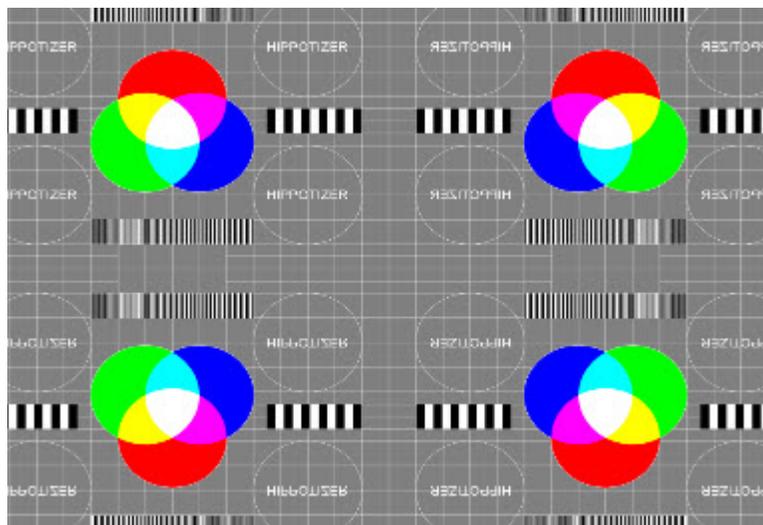
- **Infinity**

*Infinity creates a continuous zooming effect on the layer; the speed and Zoom in and out effect can be controlled.*



- **RBMultiMirror**

*This effect creates a grid of the layer and overlays it on the original media. The number of rows and columns of the grid can be changed. As well as the level of the mix between the grid and overlay.*



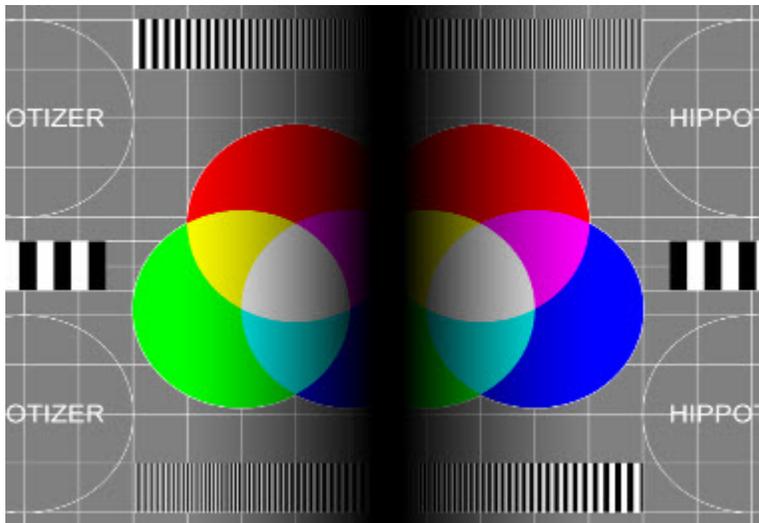
- **Zoom Area**

*ZoomArea lets you control Zoom into a particular area of the layer. Specifying Left, Right, Top and Bottom.*



- **Soft-Edge Blending**

The soft edge effects built into Hippotizer are quite simple, but very powerful when used the correct way. The soft edge effects are designed to be used when the Hippotizer is connected to two projectors, or if you are using more than one Hippotizer and you want to create a wide screen panoramic image without seams. The soft edge effect varies depending on which one is used. The "PAN" soft edge effect is designed to be used with the Hippotizer in PAN mode, and should ideally be used on the master layer on Effect Engine 2. It is likely that you will want to use this effect repeatedly once created so we recommend saving results as a master preset for easy recall. You could replace the media used to create the correction with white to use as a blank but with correct soft-edge blending. Here, the image is split down the middle, and then small section of the left image is copied to the right and a small section of the right image is copied to the left.



The Hippotizer then creates a graduated fade to black on both of the inner edges and then sends each side out to a separate projector. This then allows the user to overlap the left and right images projected from each projector creating a seamless blend between the two and creating a single wide screen image which is almost twice the width of the standard single output. Because this mode creates a single, ultra wide 'desktop' area in the Control Centre, items can be positioned or moved anywhere on the screen including across the overlap.

The left, right, top, bottom and 'both' soft-edge effects are used in a similar way but for when you have multiple Hippotizers. For example, if you have two Hippotizers and you are using each one in single mode, but you want to have a wide screen output – you would set one to use a left hand soft-edge and the other to use a right hand soft-edge, you can then overlap the images to form a seamless join.

**Note:** You can also use screen-warp to create a softedge blend instead of any of the following effects.

*SE-Left*

*Soft Edge blending along the left edge*

*SE-Right*

*Soft Edge blending along the right edge*

*SE-LeftRight*

*Soft Edge blending along the left and right edges*

*SE-Top*

*Soft Edge blending along the top edge*

*SE-Bottom*

*Soft Edge blending along the bottom edge*

*SE-TopBottom*

*Soft Edge blending along the top and bottom edges*

*Softedge Pan*

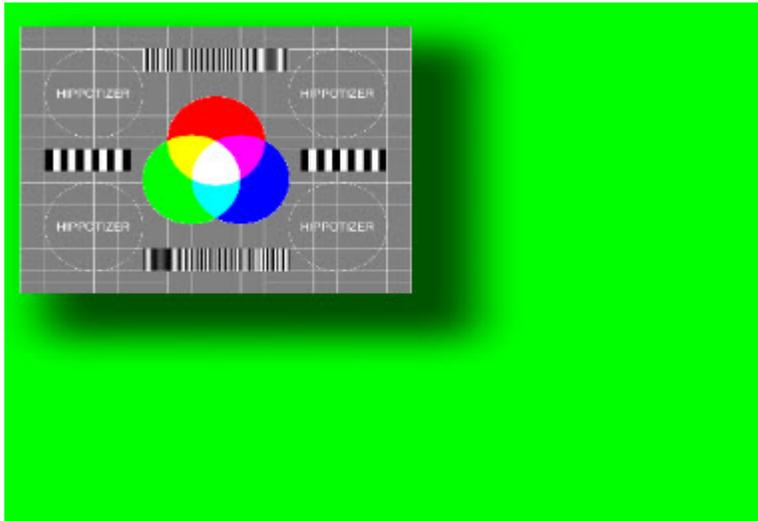
*Soft Edge blending along the centre of the image*

*SE-Frame*

*Soft Edge blending along all edges of the image*

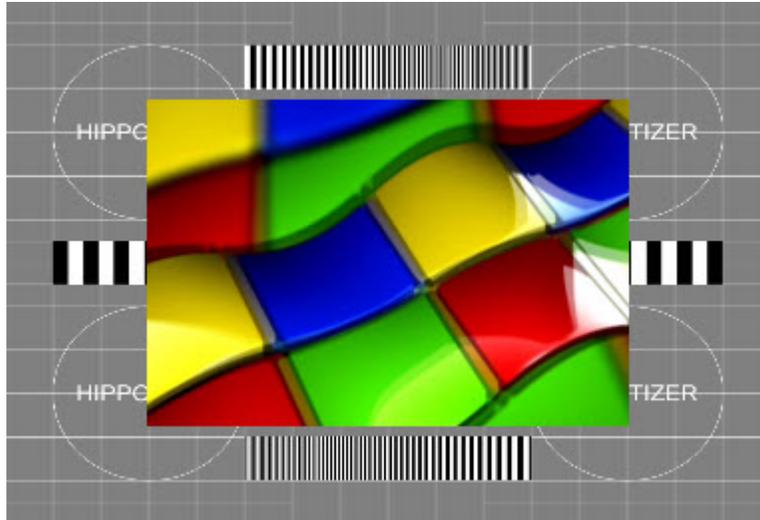
- **Drop Shadow**

*Creates a drop shadow of the layer, with control for distance, size, alpha and softness.*



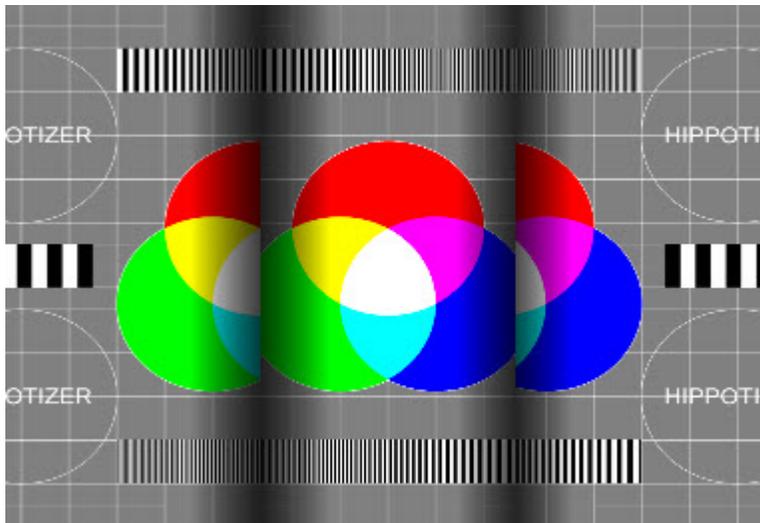
- **Crop DeInterlace**

*Crop de-interlace is used mainly for live video, the effect will crop and de-interlace the video so that it fills the whole screen without losing quality.*



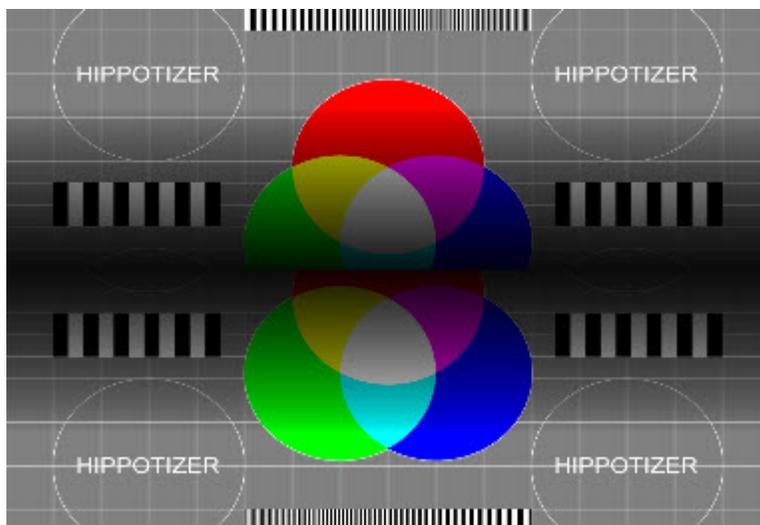
- **SE Dual Pan**

*Soft edge dual pan is used when a single output is connected to a Matrox TripleHead2Go to project a single output using three projectors. This effect enables you to join the overlap to create a seamless projected image.*



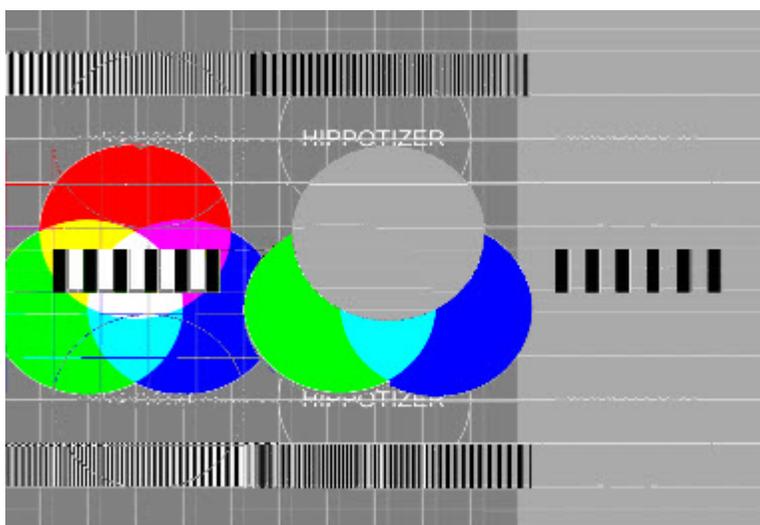
- **SE Pan V**

*Soft edge vertical pan is used when projecting using two projectors with the overlap along the vertical axis.*



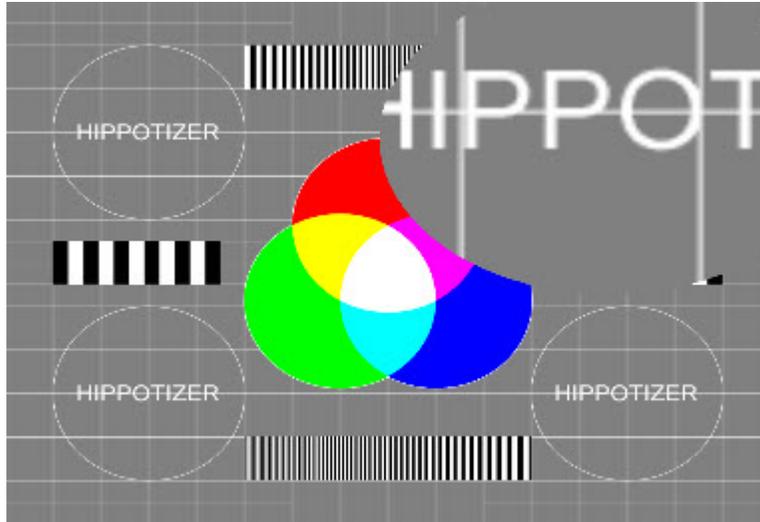
- **Displace Mix Effect**

*Splits the Image into two as such and allows you to place the X or Y around it*



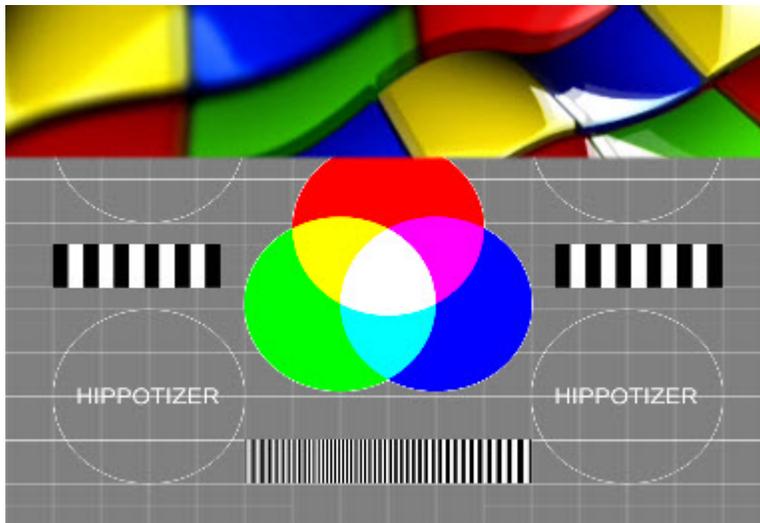
- **Magnifier**

*Enables you to pick an area that will be Magnified or have an area automatically travel around the image.*



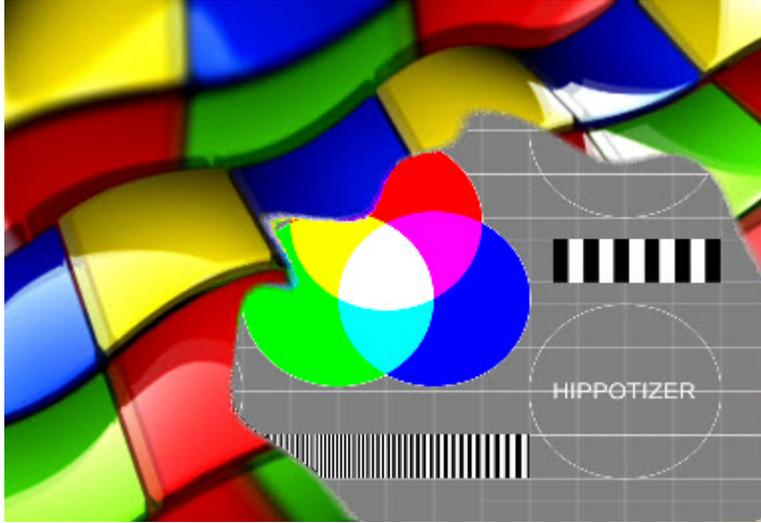
- **Curtain Down**

*An Effect that gives you a a solid line to crop the image and can be rotated to any angle. Used in conjunction with another layer then you can create simple wipes.*



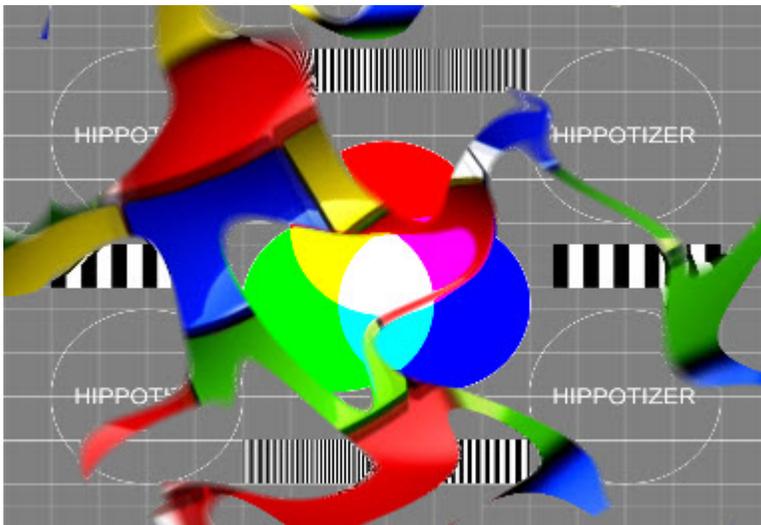
- **BurnOut**

*A Transition effect that Mimics the Burnout of an old projector.*

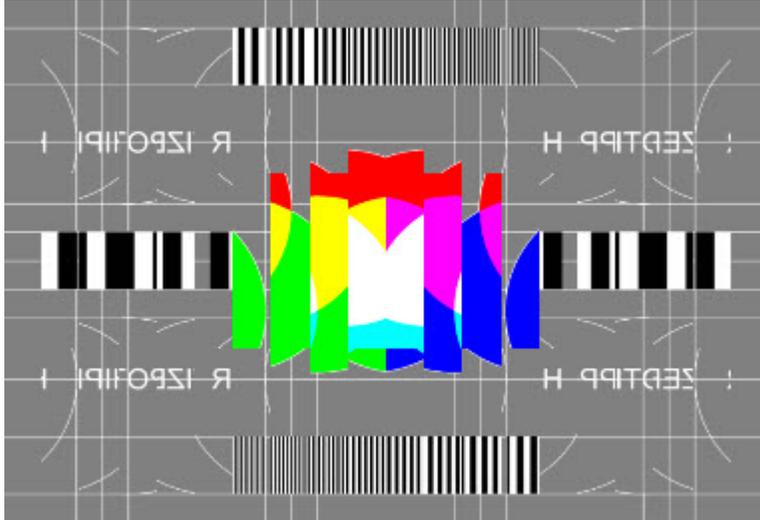


- **Moving Blurb**

*A distortion effect that gives some movement to the image. Again used best with two layers.*



- **DeGapper**



- **TiltShift**

*An effect that creates the well known ToyTown effect*



- **Tilt Shift Radial**

*The ToyTown style effect but using a central radial option.*



- **CadyColour**

*Fully Saturates the image with bold colours and is animated.*

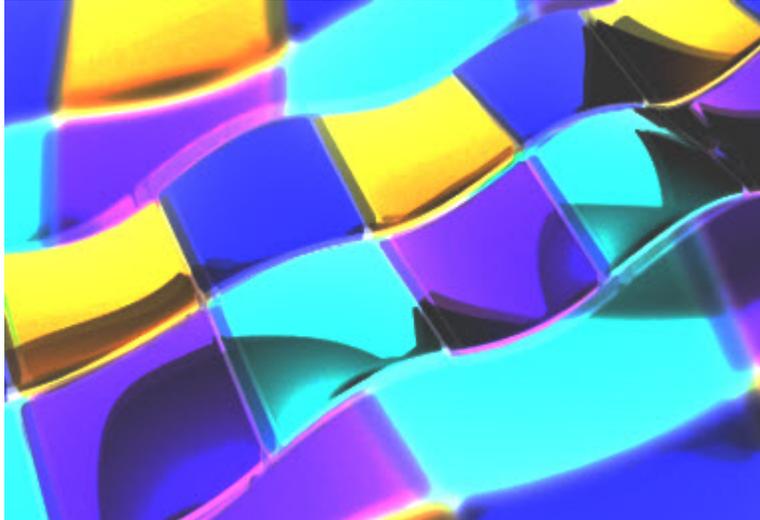


- **IdiotStrobe**

*Another Strobe effect that is very tricky to show in a thumbnail here.*

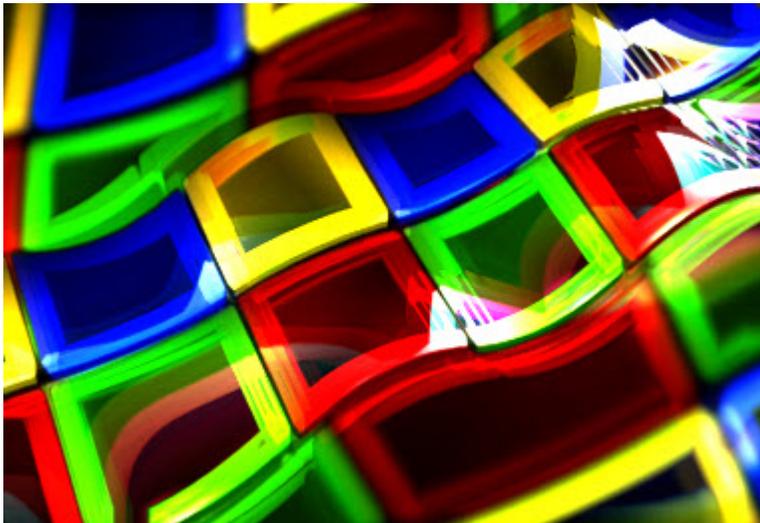
- **Neils Gamma**

*A Gamma correction Effect that allows you to change the colour of the image as well as the amount of contrast*



- **Neon2**

*A neon effect that adds a thicker neon effect to the image than the original Neon Effect*



- **Super8**

*Gives the old super8 camera effect, a sepia effect with a flicker*



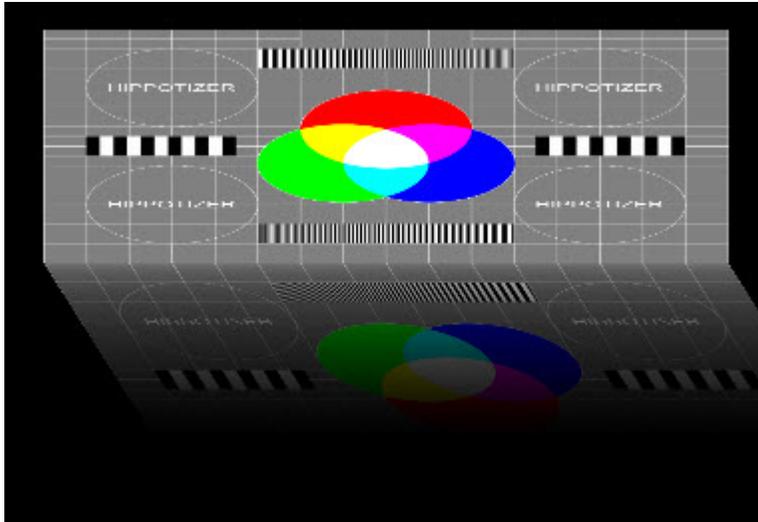
- **JRFade**

*A wipe effect that you can colour and give the edge a fade value from a solid line.*



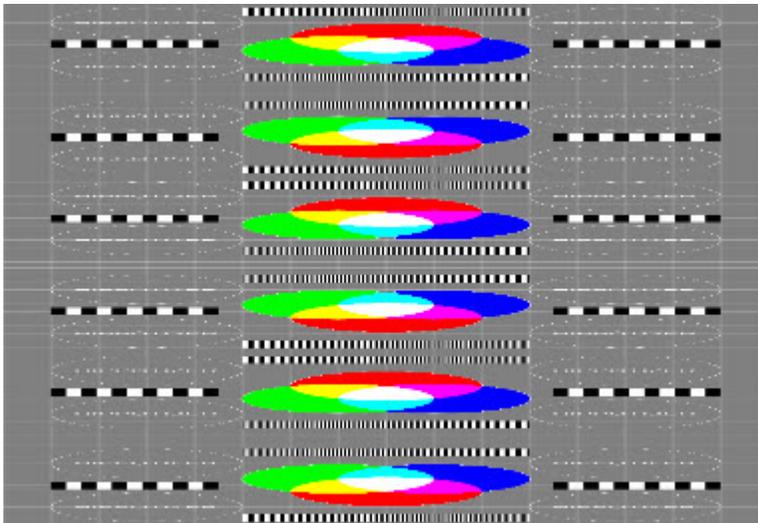
- **Reflection**

*An Effect that give the image a reflection with parameters to control the amount of fade off.*



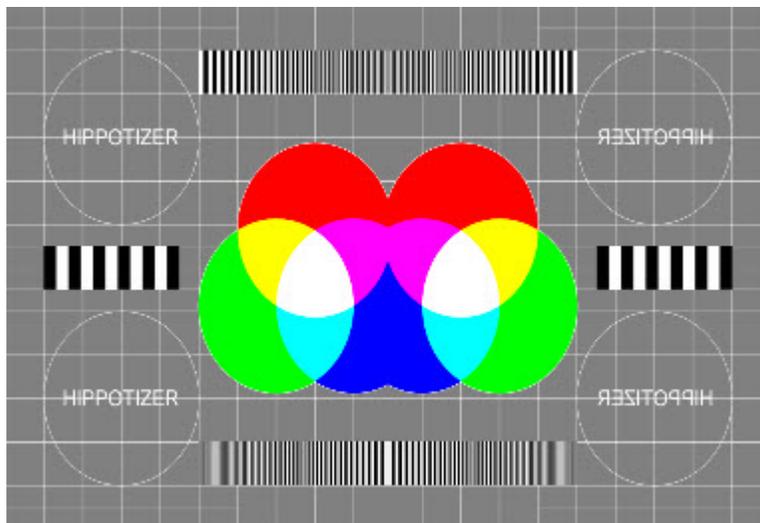
- **KatieMirror**

*Mirrors the image and allows you to control the direction and speed.*



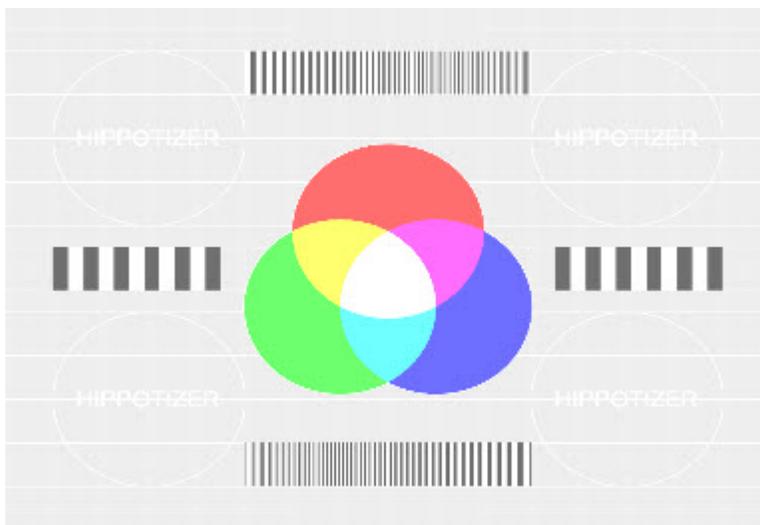
- **MirrorMax**

*Another Mirror Style effect*



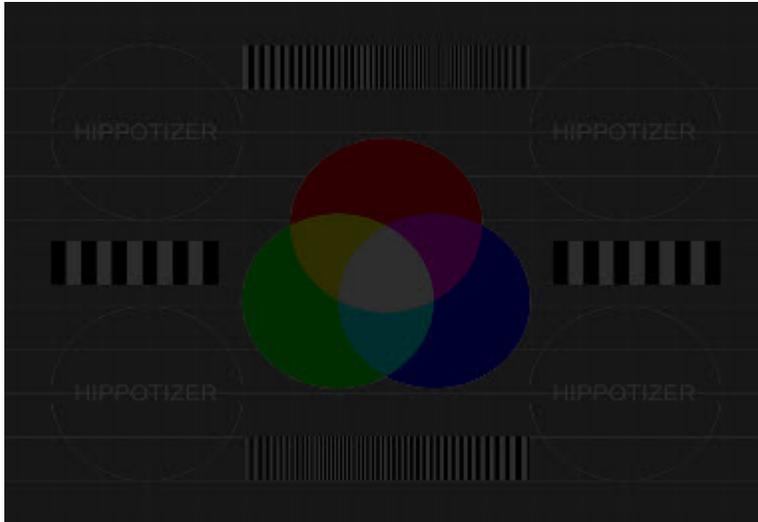
- **Blinder**

*Blinder increases the value for everything on the layer up to 100% white. Fades to white.*



- **Fader**

*Fader acts as a fader on the FX level rather than the layer.*



- **LineDisp**

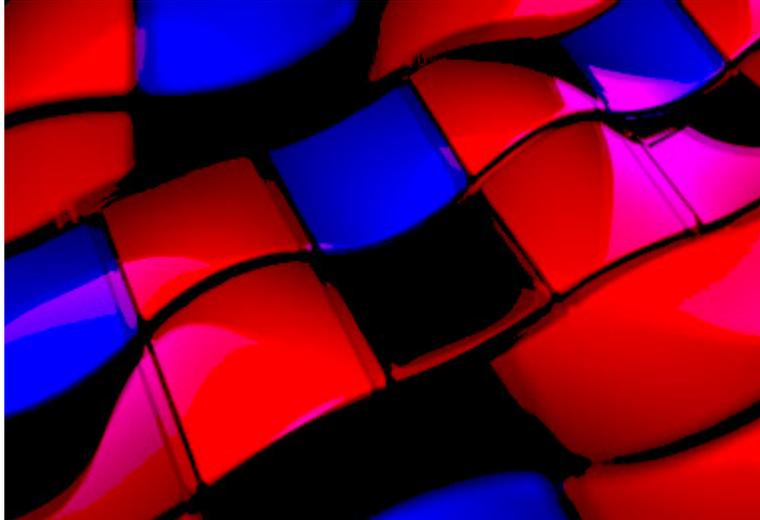
*LineDisp displays media as lines. The number of lines and width can be controlled. Also Y-axis shift caused by media signal*



- **RGBKey**

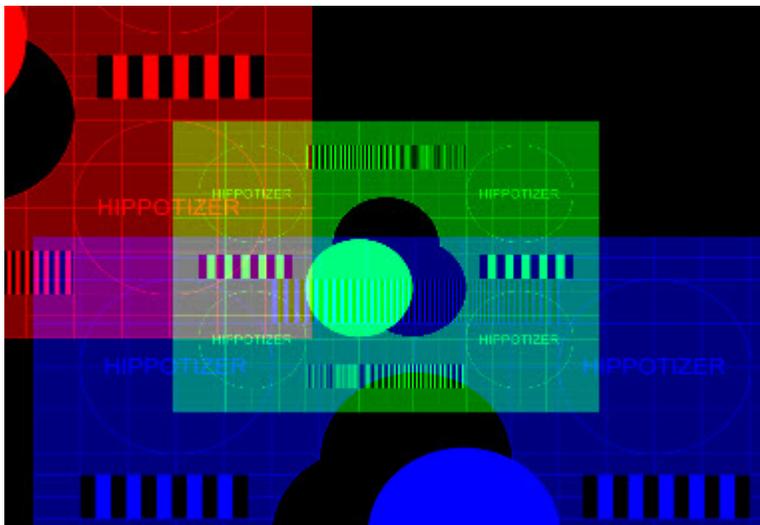
*RGBKey can be used to adjust amount of Red, Green or Blue to Alpha. Controlling the level of transparency.*

*Below we have Keyed out the Green*



- **RGBSplit**

*RGBSplit splits the image into 3 parts: The Red, Green and Blue. You can control the placement of these via this effect.*



- Contour Drop Shadow

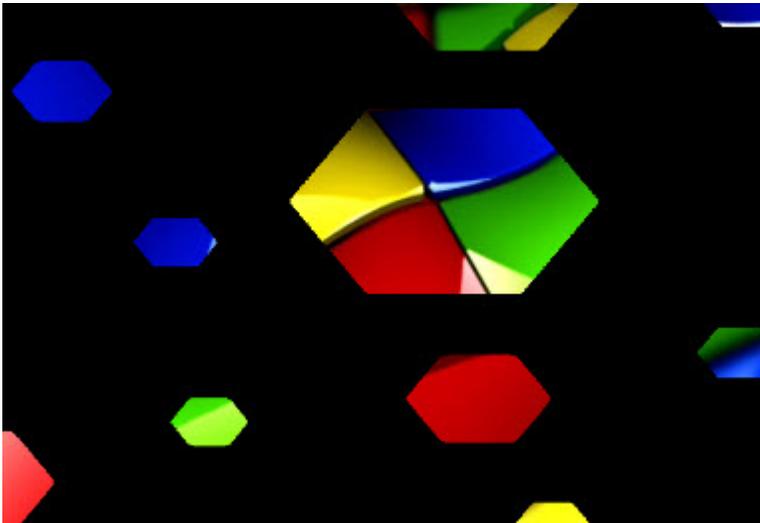
- **Ken Burns Effect**

*The Ken Burns effect is a type of panning and zooming effect. Used well with a movie clip with the speed set very slow.*



- **RBJitterMask**

*An Automated mask effect that has a number of shapes that you can use and the masks will jump/jitter across the image.*



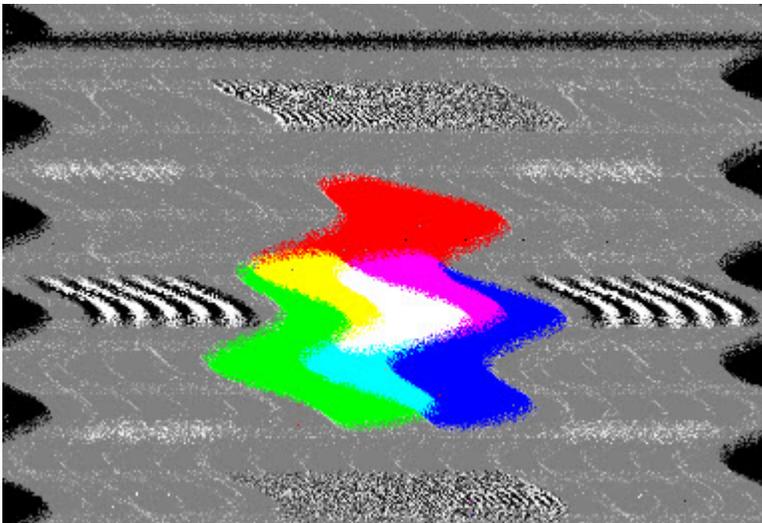
- **LensFlare**

*Adds a Lens flare to your image*



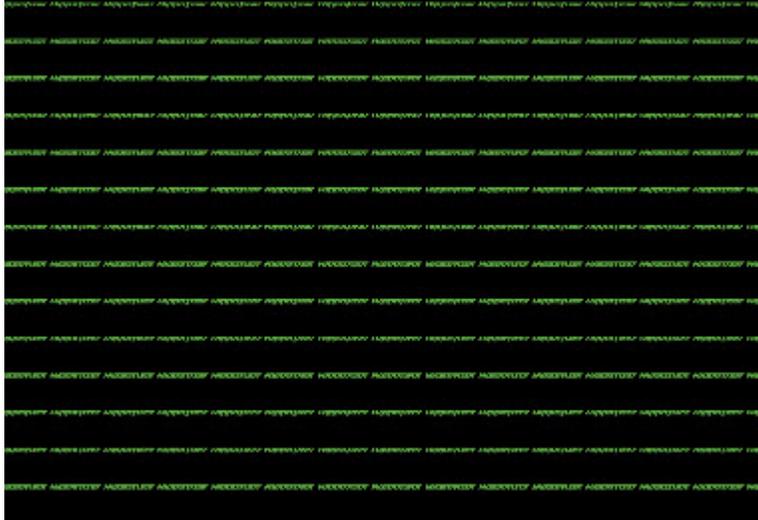
- **BadTV**

*As the name states this gives you an effect of an oldstyle TV on the blink.*



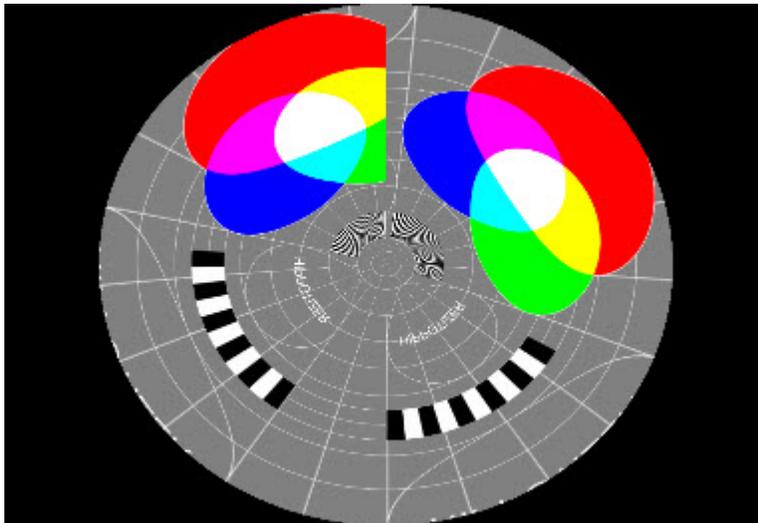
- **UVTile**

*Another Tiling Effect*



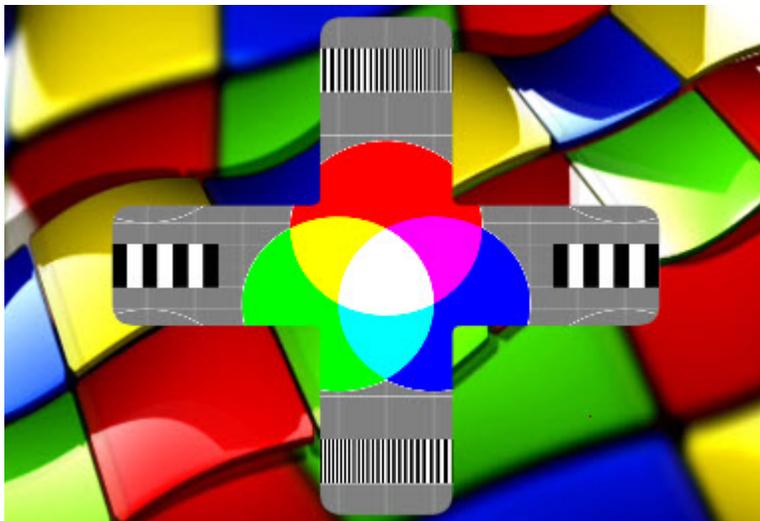
- **Pufferizer**

*The pufferizer effect was generated to allow the Hippotizer to create 360 degree projections when used in conjunction with a special 360 degree projection lens manufactured by <http://www.pufferfishdisplays.co.uk>.*



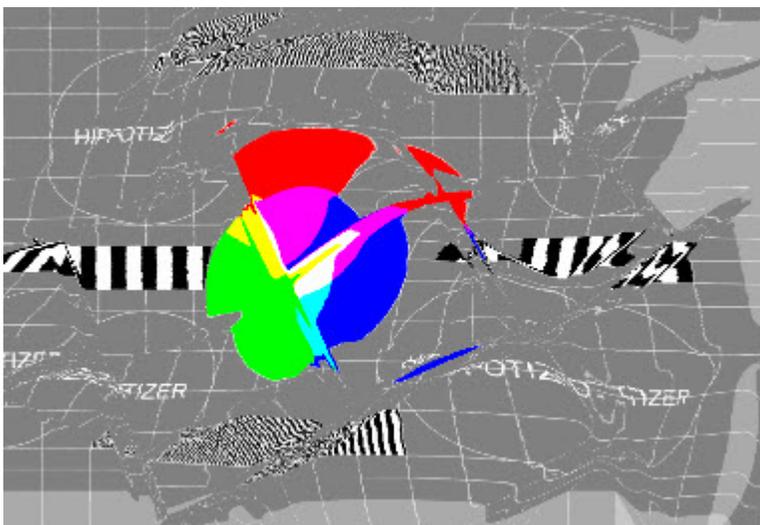
- **Alpha Transition**

*This effect is similar to the Mask FX. It uses the masks in bank 255 to reveal the previous layer. Use opaque or sprite mixmode. First select a mask, then use level to fade between fully opaque and fully transparent.*



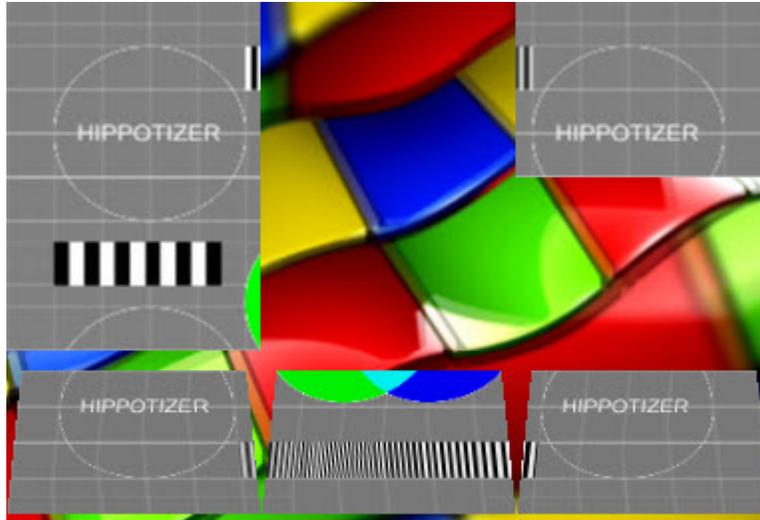
- **Displacement Effect**

*Allows you to use another layer as a Displacement map and control the X and Y of the movement.*



- **Tiles Flip**

*A transition effect that allows you to transition between layers using a tile flip method. There are many variables with this effect*



- **Strobe Freeze**

*Strobe the image and Freezes the moving clip on each Strobe. This can be used to grab a frame from a movie clip.*

*Hard to show this with a Thumbnail*

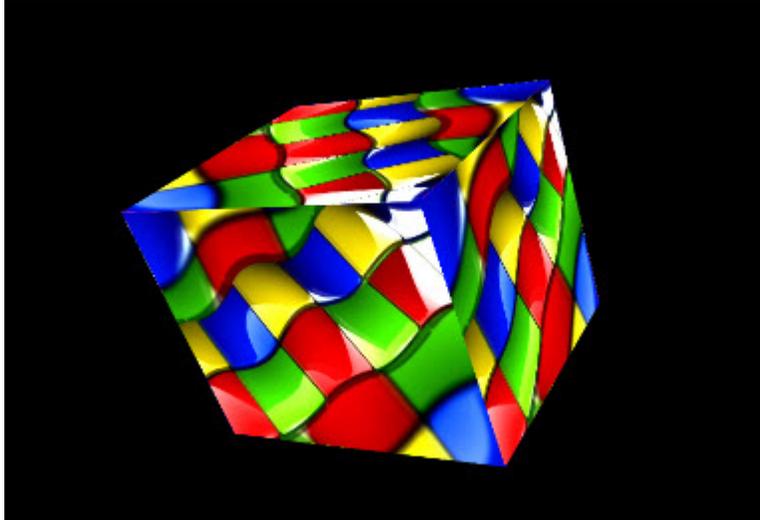
- **Plane**

*This gives you a simple Plane that can be moved on the X and Y axis and zoomed in or out.*



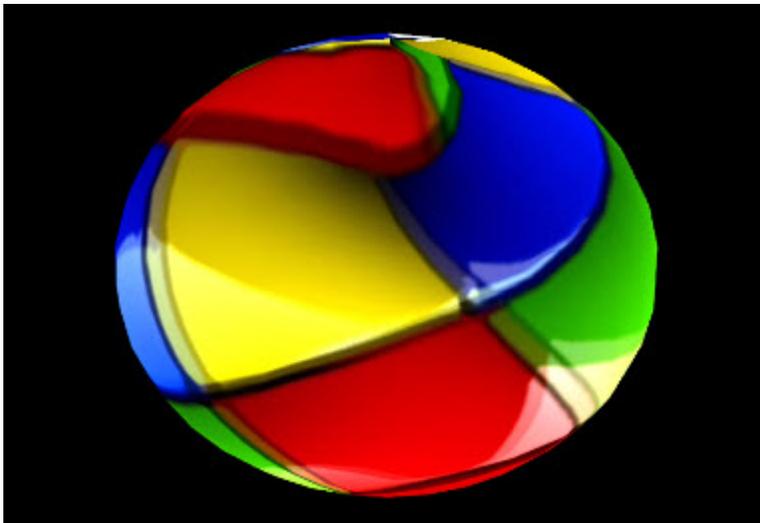
- **Cube**

*This gives you a 3D Cube that can be moved on the X and Y axis and zoomed in or out.*



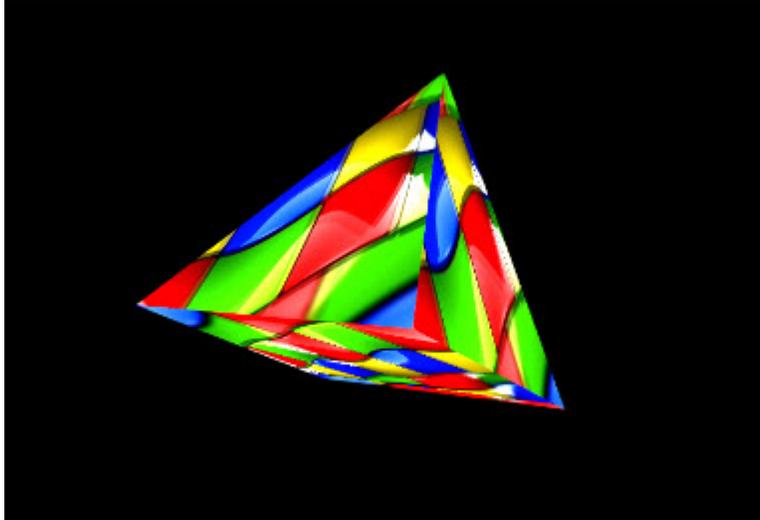
- **Sphere**

*This gives you a 3D Sphere that can be moved on the X and Y axis and zoomed in or out.*



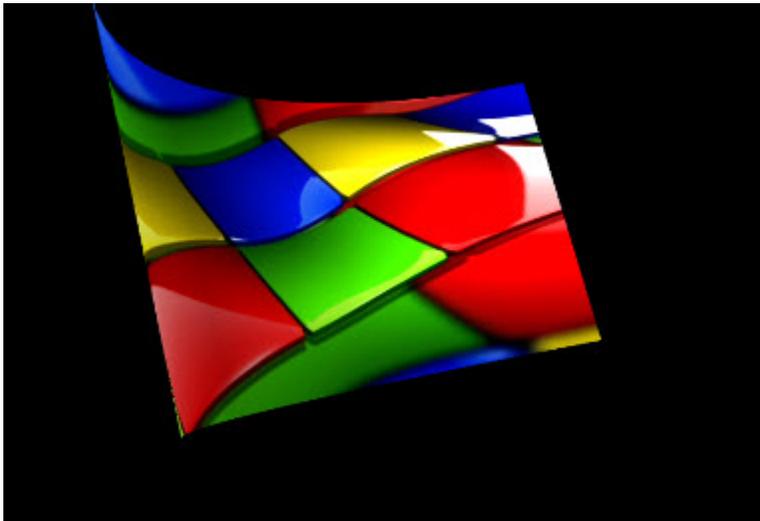
- **Pyramid**

*This gives you a 3D Pyramid that can be moved on the X and Y axis and zoomed in or out.*



- **Curve**

*This gives you a 3D Curve that can be moved on the X and Y axis and zoomed in or out.*



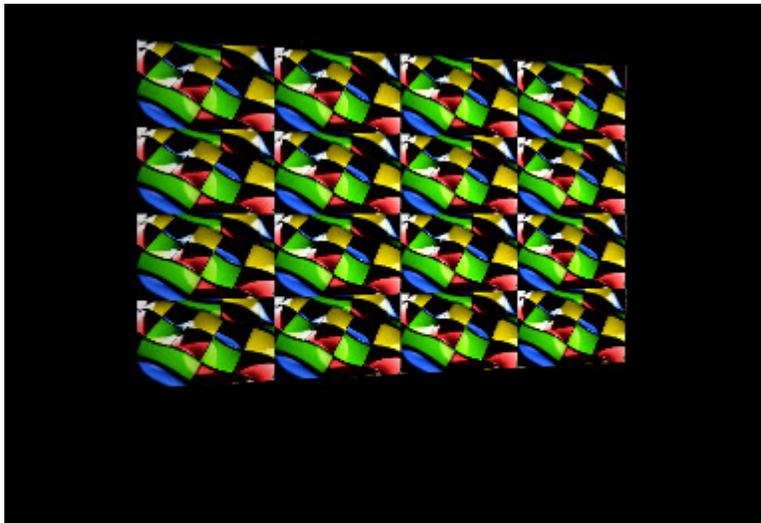
- **Plane Ani**

*This gives you an animated plane, with control of the speed of animation and control of luminance key value.*



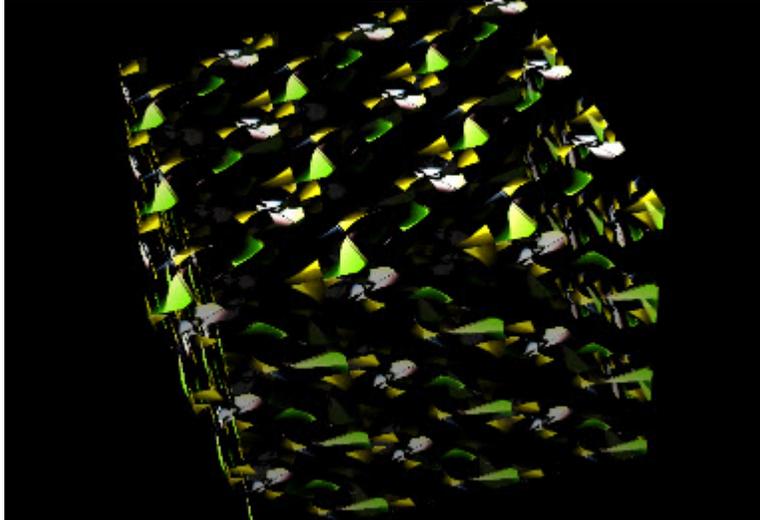
- **Plane Ani2**

*This gives you an animated plane, with multiple copies of the source image – also with control of the speed of animation and control of luminance keying.*



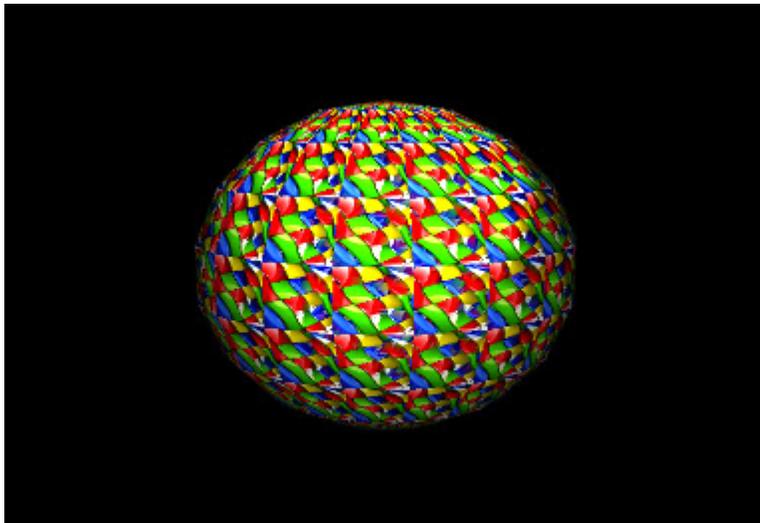
- **Cube Ani**

*This gives you an animated cube, with multiple copies of the source image – also with control of the speed of animation and control of luminance keying.*



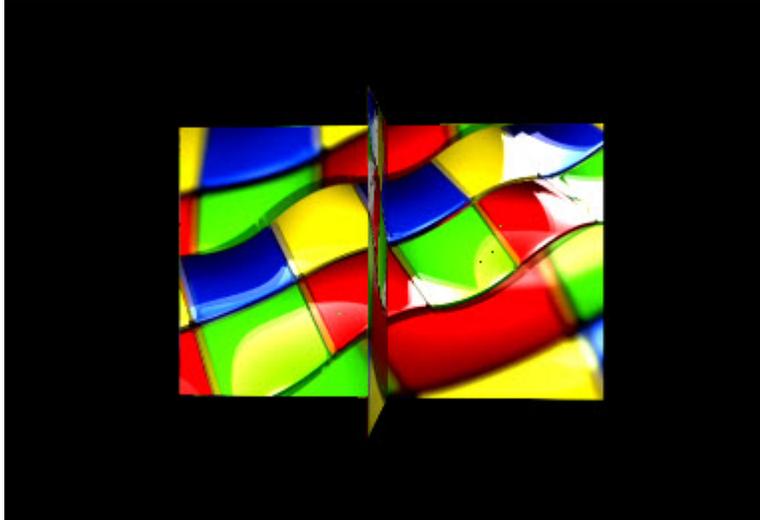
- **Sphere Ani**

*This gives you an animated sphere, with multiple copies of the source image – also with control of the speed of animation and control of luminance keying.*



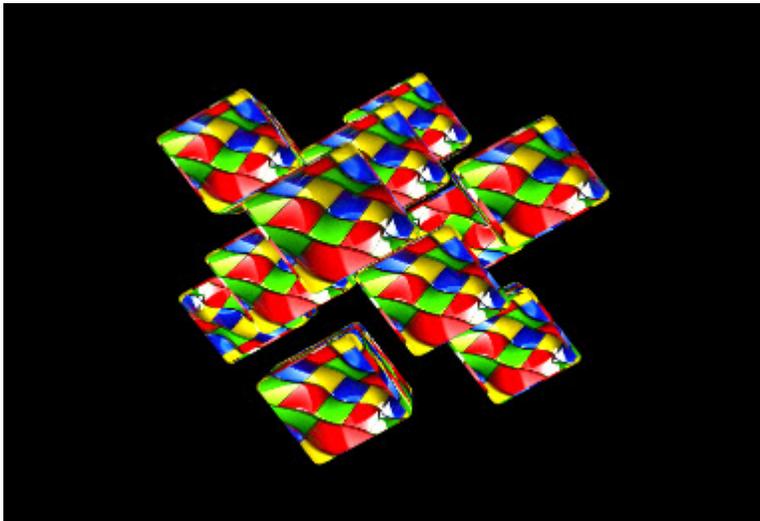
- **Spin**

*This give you two crossed over planes – animated.*



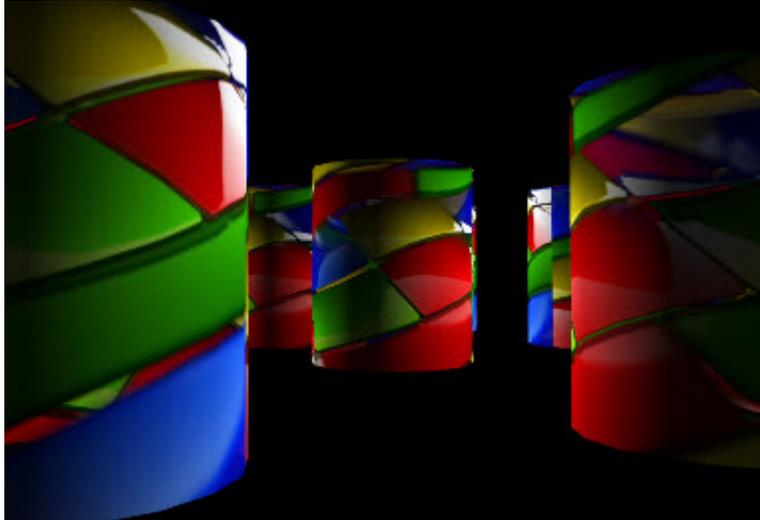
- **Rubics**

*This is a collection of animated cubes that move continuously, creates great effects when zoomed into tightly.*



- **Tubes**

*Animated tubes on a flat rotating platter.*



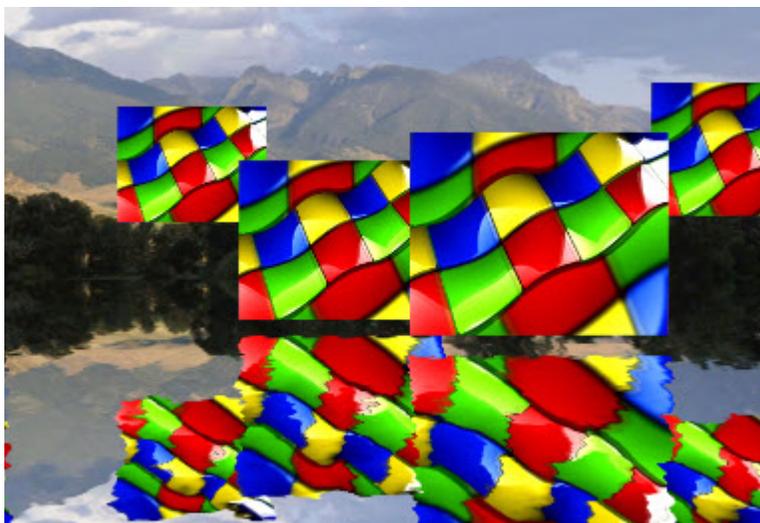
- **Frame**

*This 3D effect lets you put your source image in a 'frame'.*

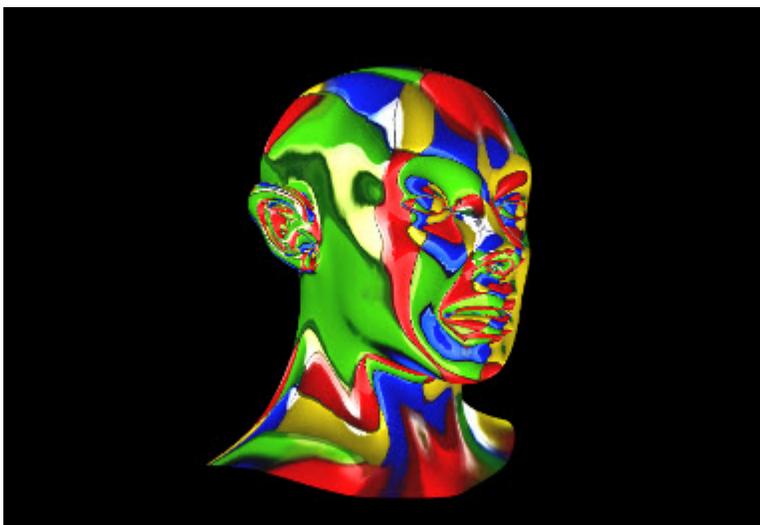


- **Water**

*This effect shows four planes above an animated water surface, which reflects your source image.*



- **Head**



*This effect maps your source image onto our animated chrome spinning head.*

- **9 Wall and 3x3**

*Both 9 Wall and 3x3 are effects that are designed to be used with more than one Hippotizer.*

*They are both used in the same way but create very different results, in both cases the effect is designed to run on a layer and be used with up to nine Hippotizers with their output screen arranged in a linear fashion based on a 3 x 3 grid of screens.*

*It is not necessary for all nine outputs to be used, you could for example just choose to use one row of 3 outputs or a staggered corner to corner arrangement – you can also use a Hippotizer in dual mode to drive two outputs at the same time.*

*The 3 x 3 effect basically splits the media of the layer equally across all nine outputs (or as many as you are using) to create the effect similar to a monitor wall – in this case parameter 1 is set on each Hippotizer to represent which screen that Hippotizer is driving, and parameter 2 is used to compensate for any soft-edge blending that you might be doing (using the soft-edge effects on the master) which allows you to create seamless large displays consisting of multiple projectors.*

*The 3 x 3 effect can be seen in the diagram on the next page.*

*The 9 Wall effect is similar to the 3x3 and is set up in exactly the same way using anywhere between two and nine Hippotizers, but this time the content is kept at its normal size, but the layer can be moved around from one screen to another (from one Hippotizer to another) as if the nine screens formed one large canvas.*

*The important thing to remember with both of these effects is that all the machines need to have the same content on them and the content needs to be synchronised preferably by using time code, and also for the 9 Wall effect to work correctly, all the X, Y, Zoom and Rotate controls on the layer using this effect on all machines needs to be controlled together.*

### 3. Getting Started with the Software

#### 3.15 Mix Modes, Effects and Generators



#### 3.18 Generators

- **Colour**



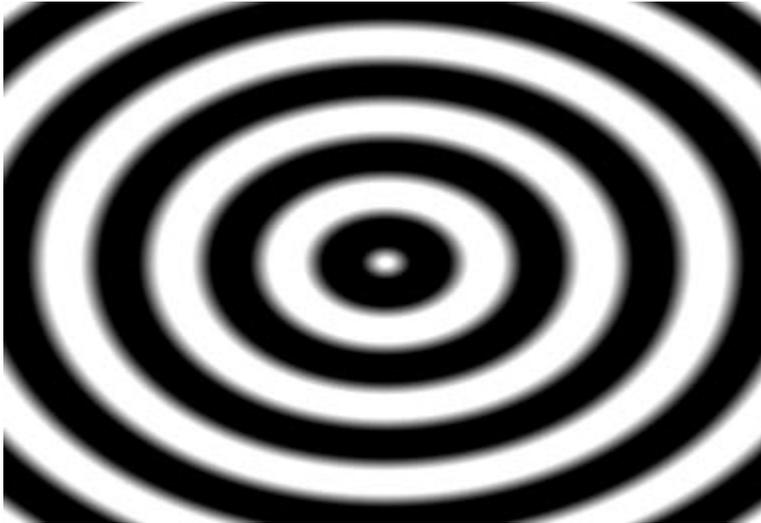
*Allows random generation of colour using Red, Green and Blue faders.*

- **Colour HSV**



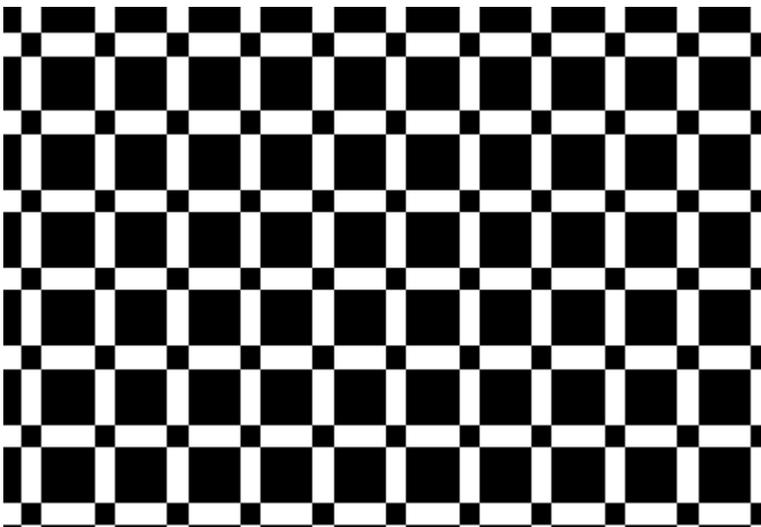
*Allows random generation of colour using Hue, Saturation and Value faders.*

- **Rings**



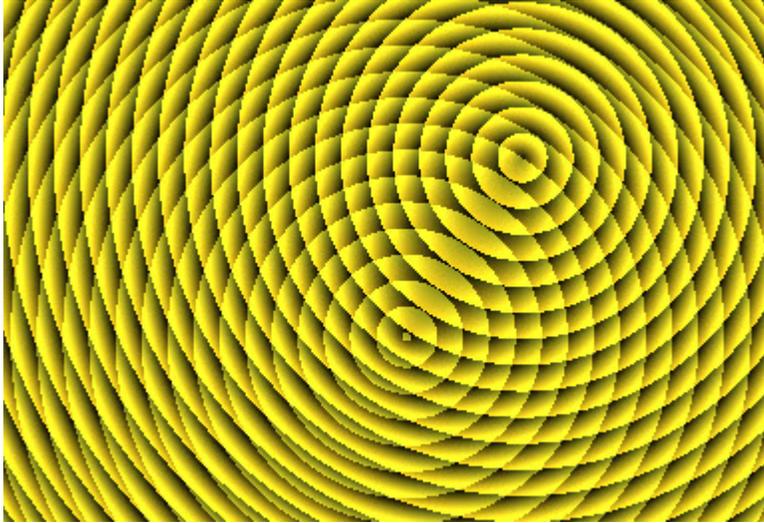
*Concentric rings that expand out, includes Zoom controls.*

- **Chess**



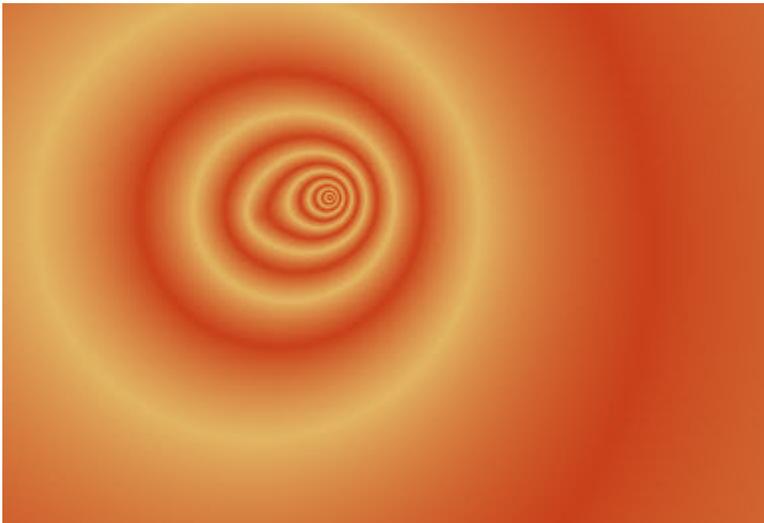
*Generates a grid framework of boxes which can be zoomed*

- **Interferences (C+C)**



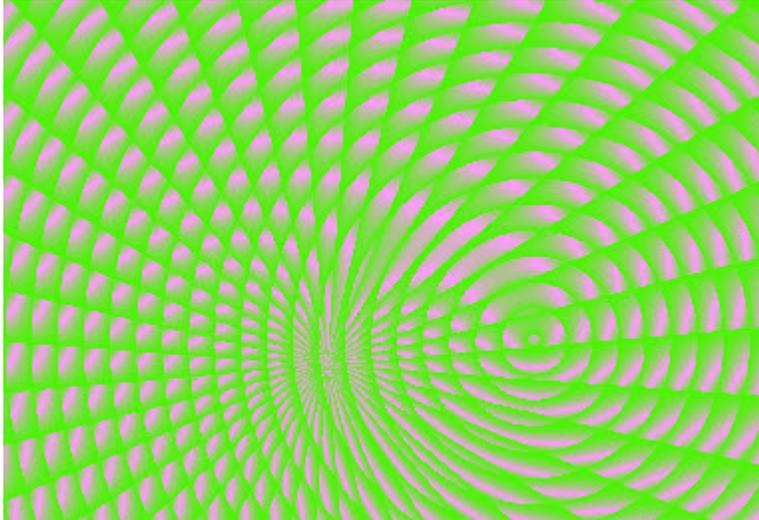
*Generates two concentric swirling circles that move around the screen the two colours can be changed.*

- **Interferences, Retro (C+C)**



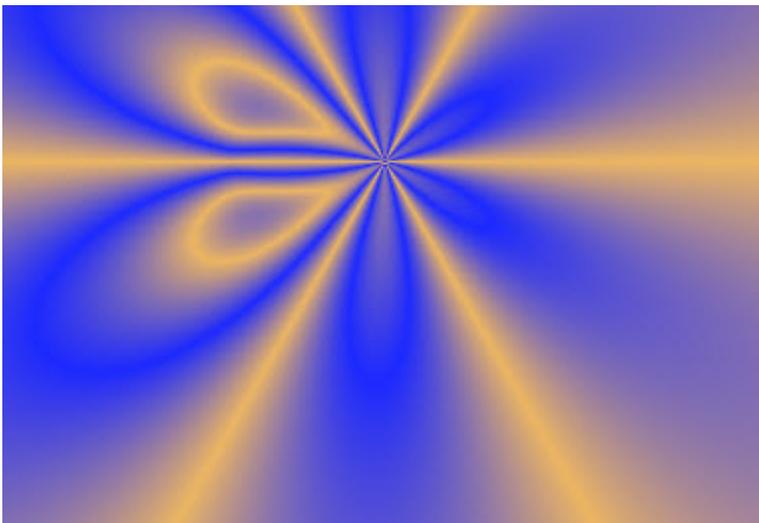
*Creates a tunnel like effect that swirls around the screen whilst cascading.*

- **Interferences (R+C)**



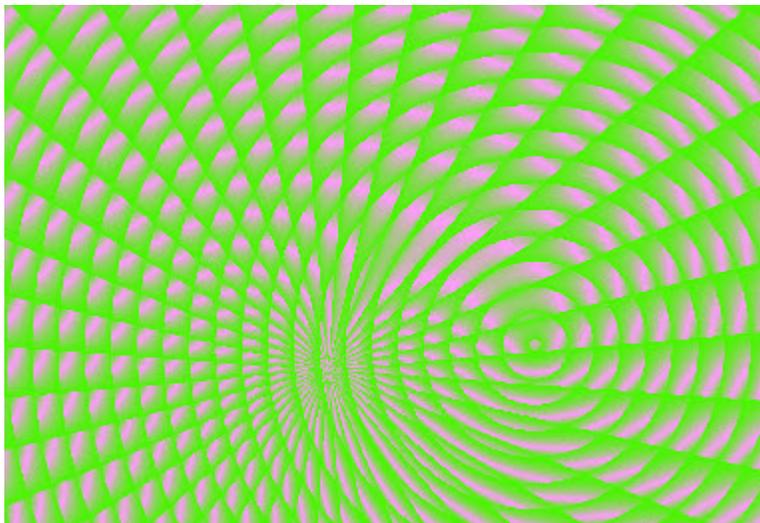
*Generates both a set of concentric swirling rings and a radial fan that swirl around the screen.*

- ***Interferences, Retro 2 (R+C)***



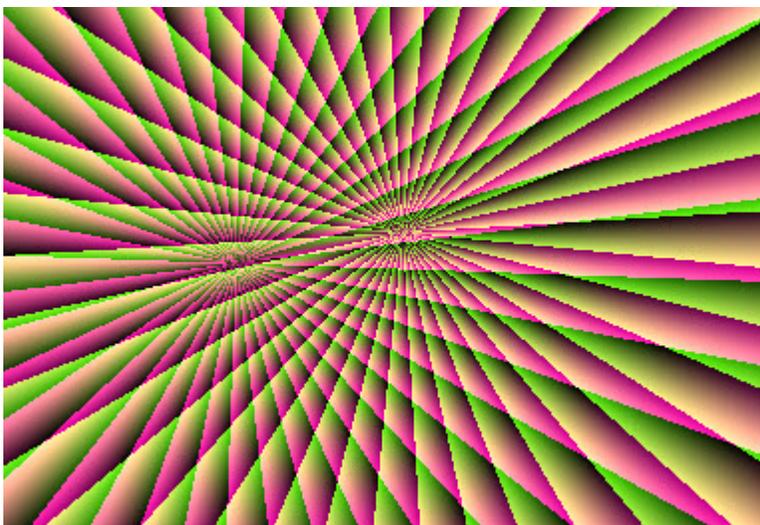
*Creates a tunnels like effect that zooms in and generates a swirling flower effect that move around the screen randomly.*

- ***Interferences, Retro (R+C)***



*Similar to Interferences (R+C) generates both a set of concentric swirling rings and a radial fan that swirl around the screen.*

- **Interferences (R+R)**



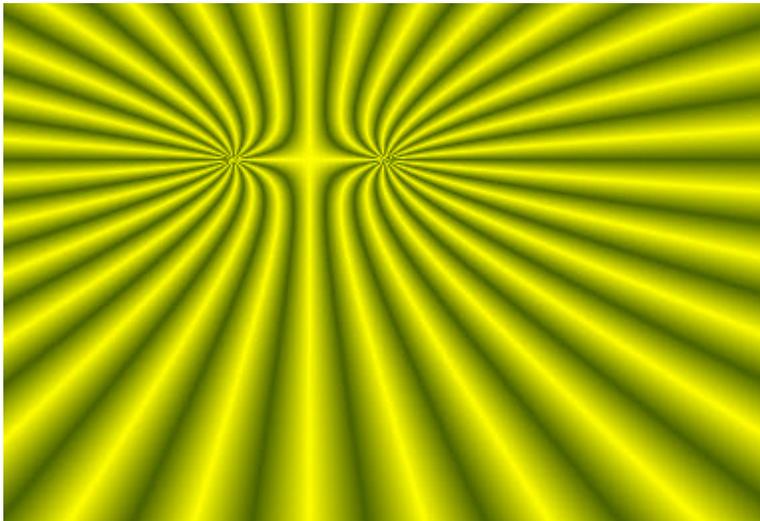
*Creates two swirling radial fans that move around the screen.*

- **Interferences, Retro (R+R)**



*Generates a mirrored tunnel effect that will swirls around the screen.*

- **Interferences, Retro (R+R)**



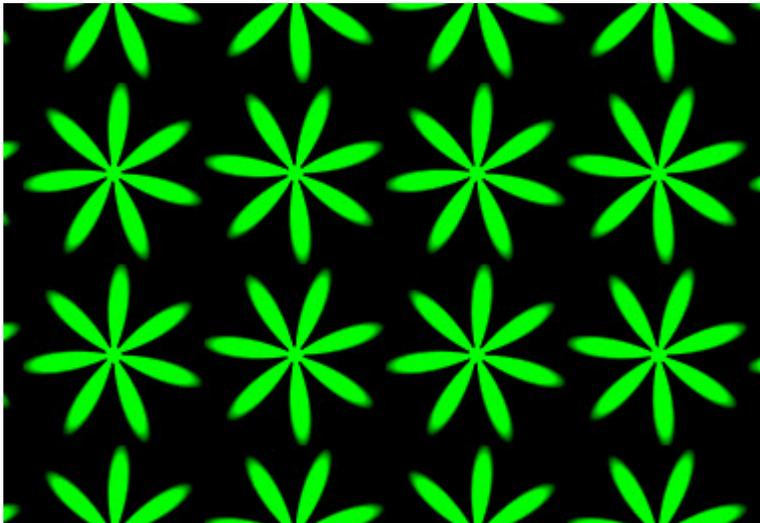
*Creates a mirrored radial fan that swirls around the screen.*

- **Clouds**



*Clouds effect with Light, speed, softness and scale control.*

- **Flowerz**



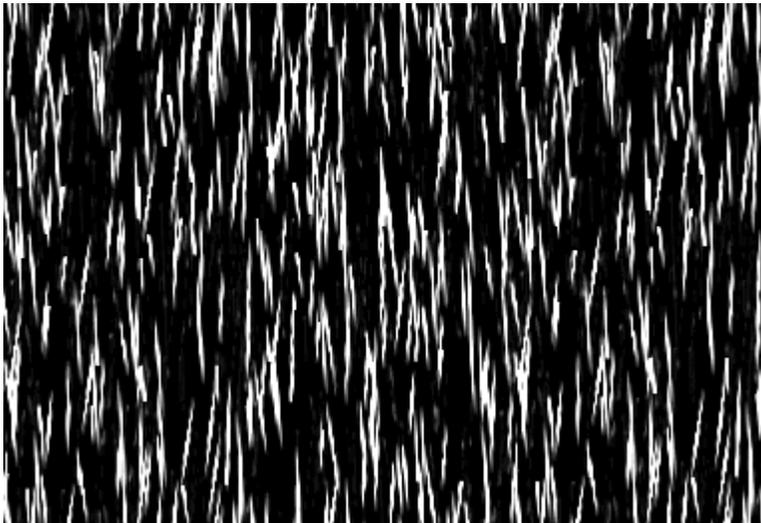
*The Level value refers to the number of petals, and fader controls for Rotational speed, Zoom, Fade, Colour and Colour speed.*

- **Fog**



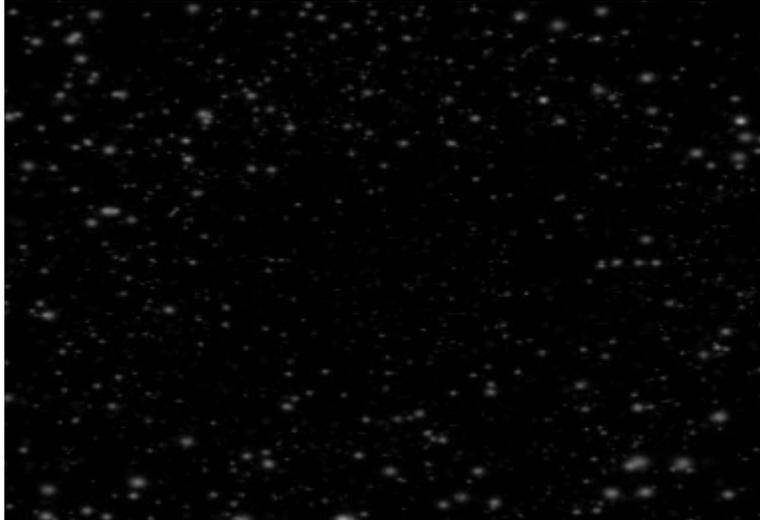
*Simulated fog effect.*

- **Rain**



*Simulates rain, with Density, Length, Angle and Speed variables.*

- **Starfield**



*Similar to the Starfield screen saver.*

- **Gradient**



*Creates a flowing gradient of changing hue.*

- **ColourGames**



*Bright additive colour bands*

- ***Globular I***



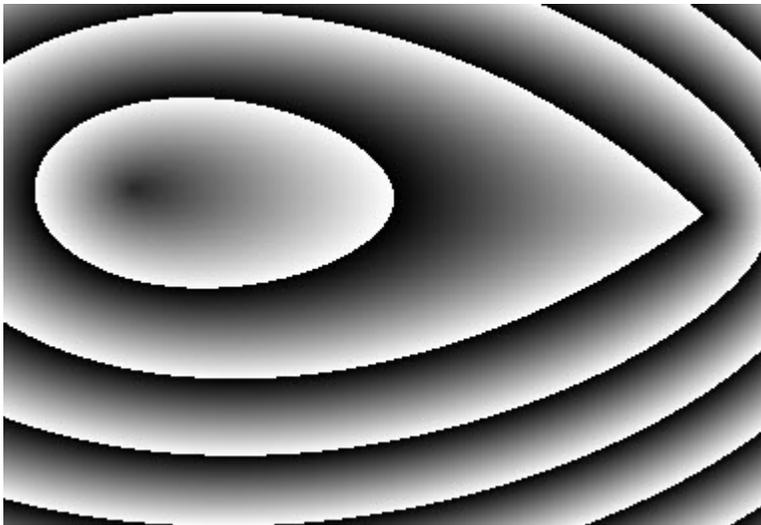
*Black and White Globular shapes I*

- ***Globular II***



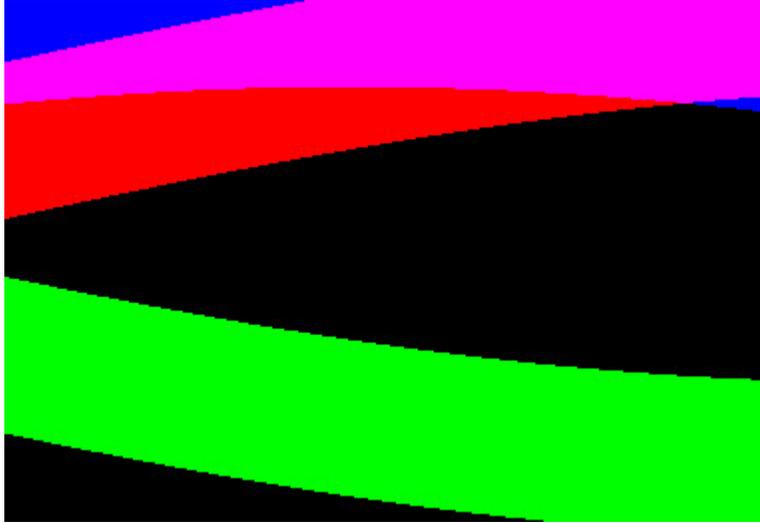
*Black and White Globular shapes II*

- ***Globular III***



*Black and White Globular shapes III*

- ***Colour Bands***



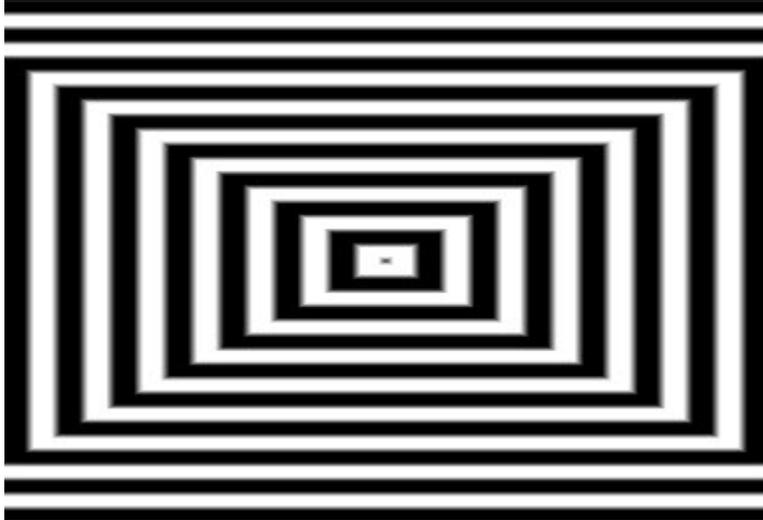
*Bright Colour Bands*

- **Smoke**



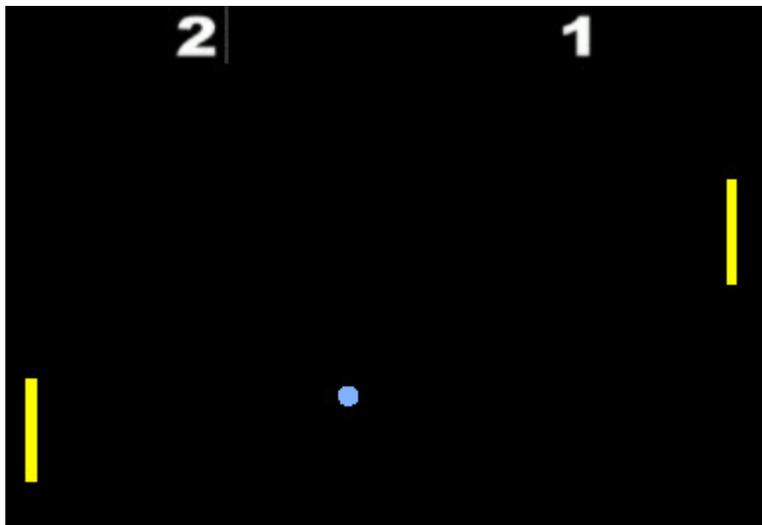
*Simulated Smoke*

- **Squares**



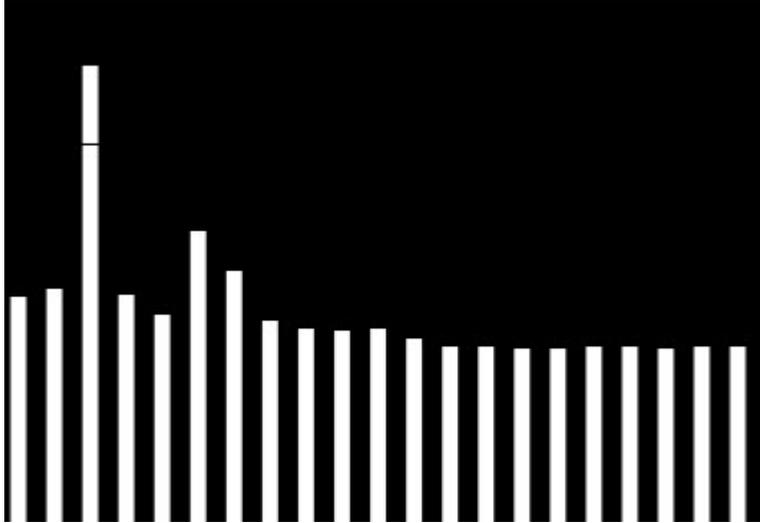
*Concentric squares that expand out, includes Zoom controls.*

- **Pong**



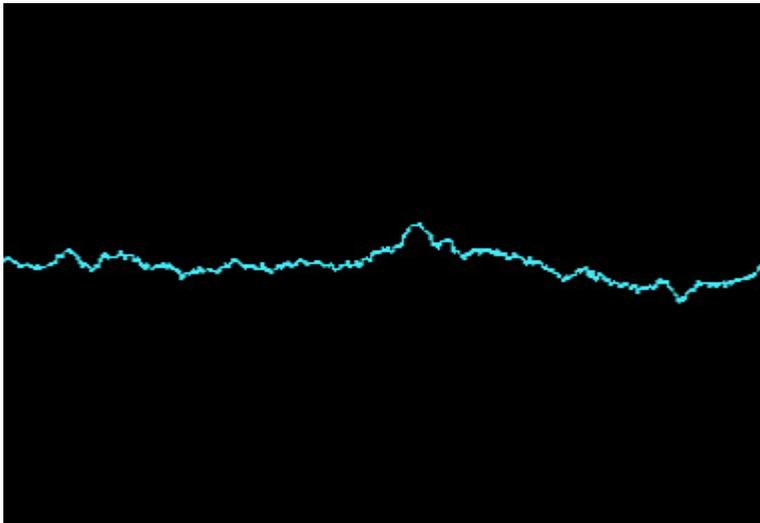
*The Classic game of PONG controlled via your DMX desk*

- **Sound Spectrum**



*Simulated Sound Spectrum responsive to audio input*

- **Waveform**



*Sound waveform that reacts to sound.*

# In-Depth Features

## 4. In-Depth Features



### Contents

- [Display Settings](#)
- [Presets and Timeline Programming](#)
- [HippoNet](#)
- [Controlling Multiple Servers](#)
- [Controlling Hippotizer with External Protocols](#)

## Display Settings

### 4. Configuration

#### 4.1 Display Settings



#### Overview

The Display Settings will allow you to configure the monitors and video displays to function as desired with the Hippotizer.

Which display settings are available depends on which type of Hippotizer is being used. Please see [Hardware and Connections](#) section for diagrams of each system's output(s).

**Please Note:** The term 'Output' refers to dedicated display connectors on each Hippotizer machine. (In most cases a DVI connector). In every machine except a HippoPortamus, there is additional video connector(s) for use as a local control monitor which is referred to as a ZooKeeper monitor. Video output from the Hippotizer software can only be sent to the output video connections.

- **HippoCrittter**

*One output that is limited to 1920 x 1080 pixels.*

*(Please note that encoded media is limited to 1280 x 720 pixels).*

*-One Zookeeper output.*

- **Rackoon**

*-One output limited to 1920 x 1080*

*-Encoded Media is limited to 1920 x 1080*

*-One Zookeeper monitor*

- **GrassHopper**

*-One output with unlimited resolution.*

*-One Zookeeper output.*

- **HippoPortamus**

*-One output with unlimited resolution*

*-Zookeeper is accessed from the Laptop's built in screen.*

- **Hippotizer HD**

*-Two outputs with unlimited resolution: these can be configured in Single, Dual, Clone or Pan Mode.*

*-Two Zookeeper outputs.*

- **Hippotizer Genlock HD**

*-Two outputs: these can be configured in Single, Dual, Clone or Pan Mode.*

-Two Zookeeper outputs.

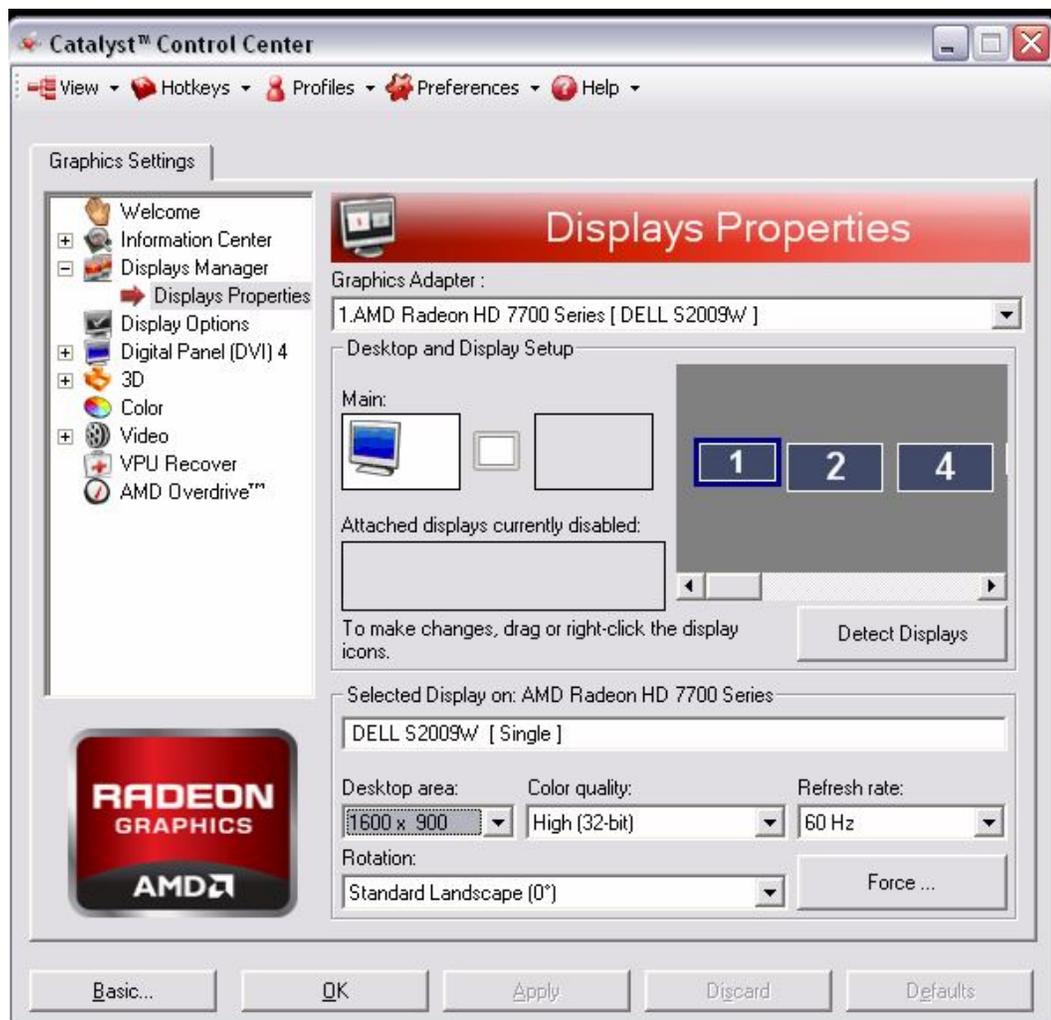
Please note: Due to conversion from Display port to DVI, outputs on the Genlock HD have a limitation of 1920 x 1200 and are Digital only.

- **Configuring Outputs**

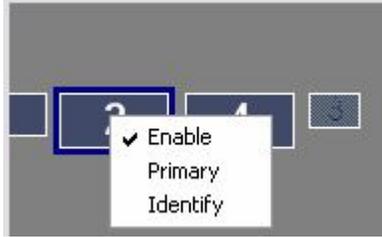
Before setting up the outputs in Hippotizer, it is important to connect all displays to the machine. This ensures the graphics card is able to detect the correct resolution on each output. This is particularly true for the zookeeper outputs: be sure that any zookeeper monitors are attached before turning the Hippotizer system on.

**Please Note:** Hippotizer HD and Genlock machines ship with DVI Parrots attached to both outputs. These are able to simulate the presence of a monitor enabling the Hippotizer software to start normally even when no display is attached to the outputs. Please refer to the Parrot's documentation for further information. This can be found on your Hippotizer system in: C:/Hippotizerv3/Thirdparty/Parrot.

After all displays (or DVI Parrots) are connected, start the machine. Before starting the Hippotizer software, check that all monitors are connected and visible and enabled in the ATI Catalyst Control Center. This is accessed by right clicking on the desktop and selecting Catalyst Control Center.



On a single output system, monitor one should be the ZooKeeper monitor and the primary display while two should be the output.



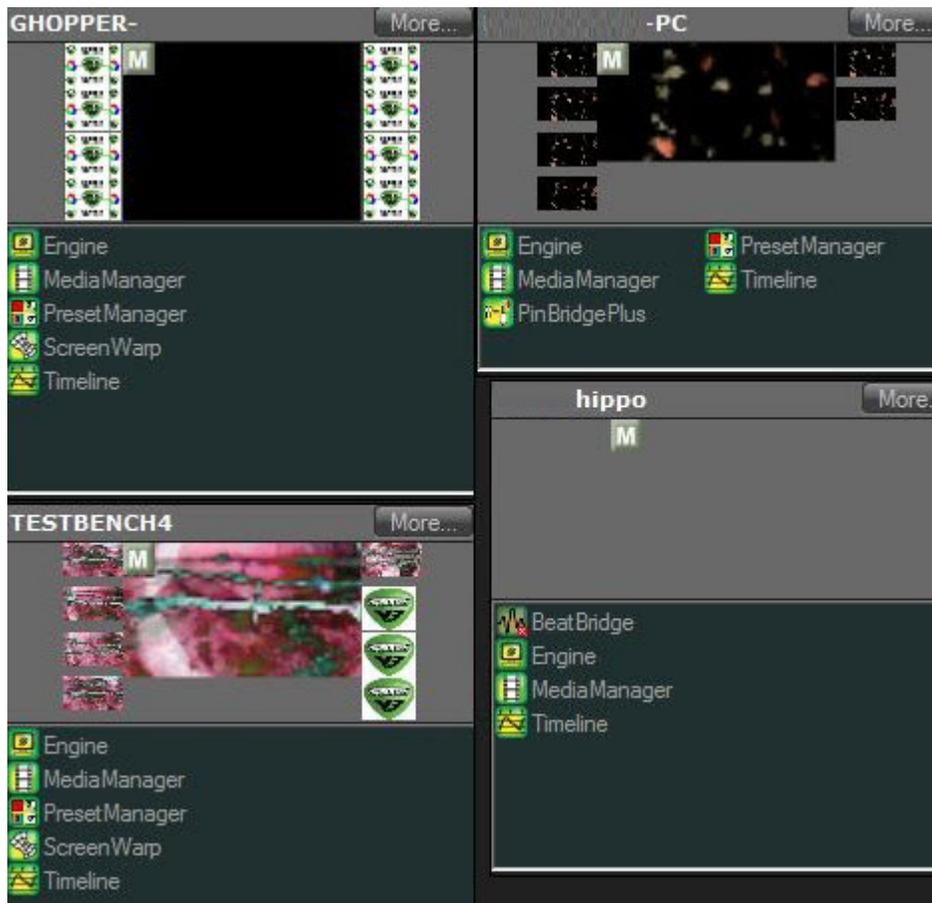
Right click on an output in the Catalyst Control Center to identify the screen.

On an HD or Genlock HD system, monitors two and four are the outputs, while Zookeeper is on monitors one and three. After all monitors are visible and working in Catalyst Control Center then you are ready to start the Hippotizer Engine and Zookeeper.

**Please Note:** As long as the Hippotizer system is always started with all configured monitors or DVI Parrots attached, there should not be a need to open the Catalyst Control Center. If there have been no changes, and on start-up all monitors are showing a signal then the Hippotizer Software can be started immediately.

- **Changing the Engine Settings**

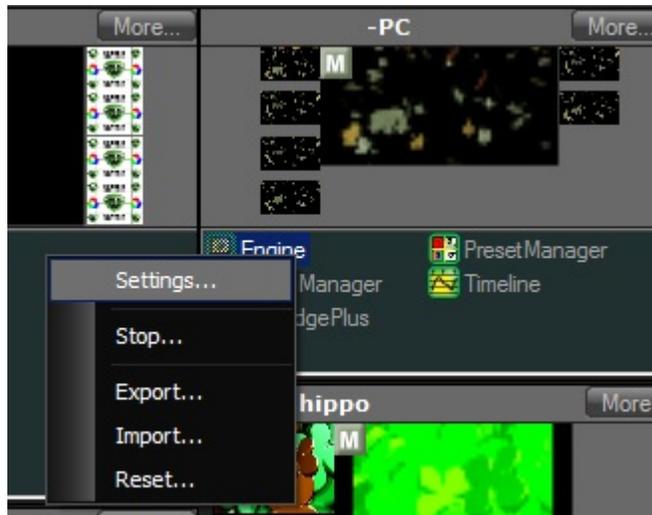
In order to access the engine settings, start the Engine and Zookeeper and allow them to start. In Zookeeper, enable the interface and go to the HippoNet Overview.



**Tip:** If the HippoNet Overview window is not available when ZooKeeper starts, it can be accessed from the HippoNet Overview button in the top left corner of the screen.

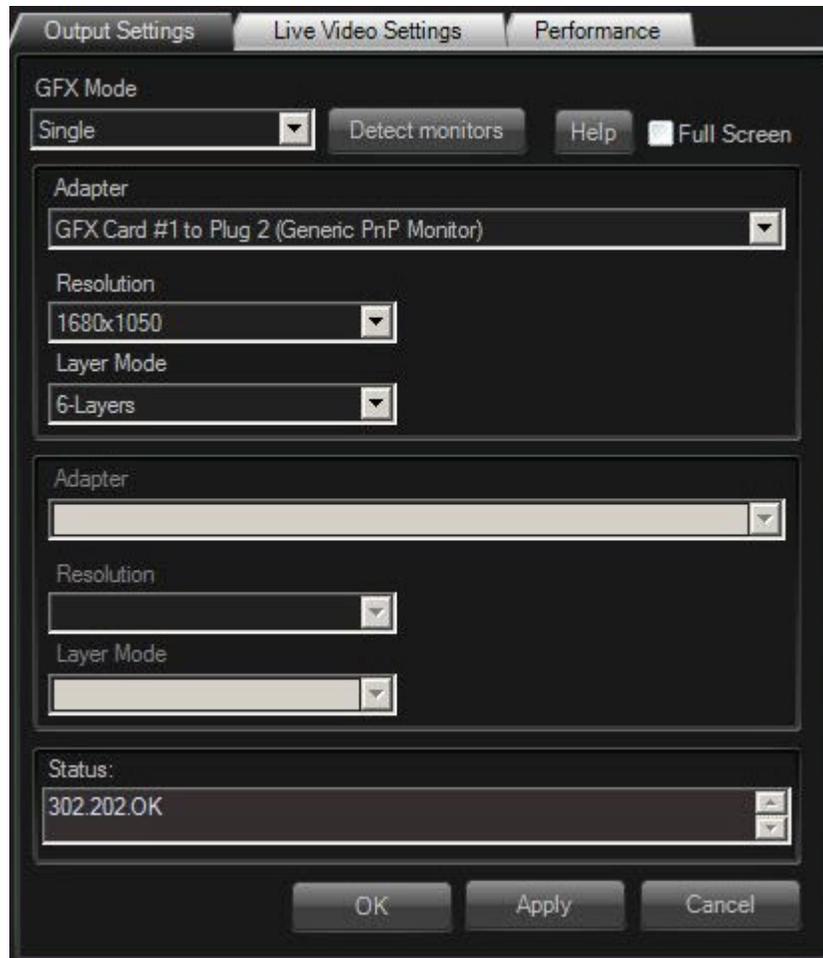


Select the system you would like to modify from HippoNet Overview and right click on the Engine icon.



This method can be used to access and change the engine settings of any Hippotizer on the network.

The settings option will bring up a new window detailing the selected engine's configuration.



This window allows you to set the Output Mode, Layer mode, Resolution and whether the system is set to full screen or not.

- **Setting up Single Output Systems**

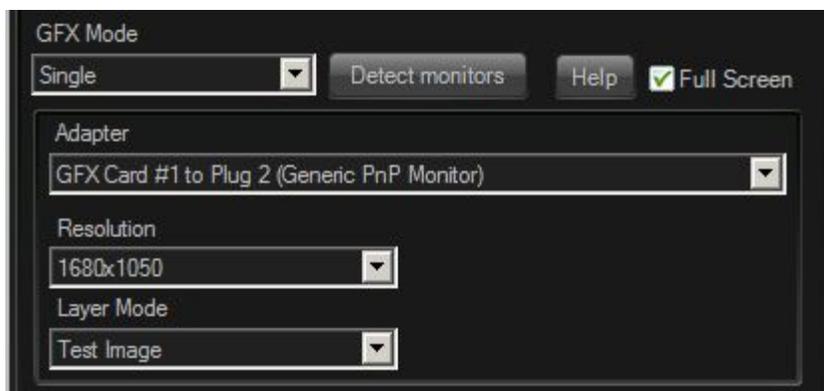
**Please Note:** For all system types except Hippotizer HD and Genlock HD, the GFX Mode will always be single. HD and Genlock systems can also run in Single Mode if needed.

First, make sure that the Hippotizer is in Full Screen mode. This is controlled from the Tick box in the top right corner of the engine settings window. If it is not in Full Screen mode, tick the Full Screen box then ensure that the Adapter selected is correct and select Test Image from the Layer Mode menu finally, click Apply.

This should bring a pattern of colour bars up to your output screen after a few seconds.

Once the Test Image has appeared on the correct screen, set the resolution and layer mode to the desired values, then click apply. The engine will now configure itself: this can take a few minutes.

**Please Note:** For correctly configured Critter, GrassHopper or Portamus systems, the adapter should read: "GFX Card #1 to Plug 2". On an HD or Genlock it should read: "GFX Card #2 to Plug 1" for the first output and "GFX Card #2 to Plug 2" for the second output. (If present).



**Tip:** If the test image appears on the Zookeeper screen, hold down the Esc button for 10 seconds to stop the engine. Then change the Adapter menu to the correct output and click Apply.

If the Hippotizer is being used without a Zookeeper Monitor, then there will be only one option in the Adapter menu.

**Please Note:** The first time Hippotizer is started with only one display attached, the Engine will automatically revert to windowed mode. Once the system has shut down in full screen mode with no zookeeper monitor attached the Engine will subsequently start in the previous configuration.

**Please Note:** The list of resolutions available to the engine is derived from what displays are attached to the Graphics Card. If you do not see the resolution you would like to set available in the list, ensure that the connected monitor (or Parrot) supports that resolution.

- **Setting up multiple output systems**

Configuring multiple outputs on HD or Genlock HD systems is very similar to setting up one output. As with a single output, it is important to connect all displays or DVI Parrots before powering on the Hippotizer system. Follow the single output procedure to ensure that displays are detected properly before starting the Hippotizer Engine and Zookeeper.

Once in the Engine Settings within Hippotizer, there are several options for multiple outputs:

**Dual Mode:** This gives two different outputs with two discrete engines. Each engine operates independently so the system functions as two media servers in one case. The two displays can be configured to different resolutions.

**Pan Mode:** The two outputs are combined to be one logical display split into half; so each output becomes half the display. This is controlled from one engine. Media and effects can be played back and moved around between the two outputs.

**Clone Mode:** The two outputs are identical, driven from the same engine. The maximum resolution is determined by the display with the lowest resolution.

**Tip:** Dual mode is more resource intensive than other outputs modes as it is running two engines. It is prudent to take steps to optimize system usage such as using the lowest number of layers possible and resetting unused layers.



*In order to set the Dual, Pan or Clone mode first, select the desired setting from the GFX Mode menu and then click apply.*

*After the engine has re-loaded itself, select the desired resolution and layer modes then click Apply again. The engine will now re-configure itself.*

**Please Note:** *When setting Pan Mode, the resolution in the Engine's resolution list is the sum of both displays. So in order to get 2 displays at 1920 x 1080 pixels, select 3840 x 1080. If the selected pan resolution works out to be too small or incompatible with the displays then the Engine will default to clone mode.*

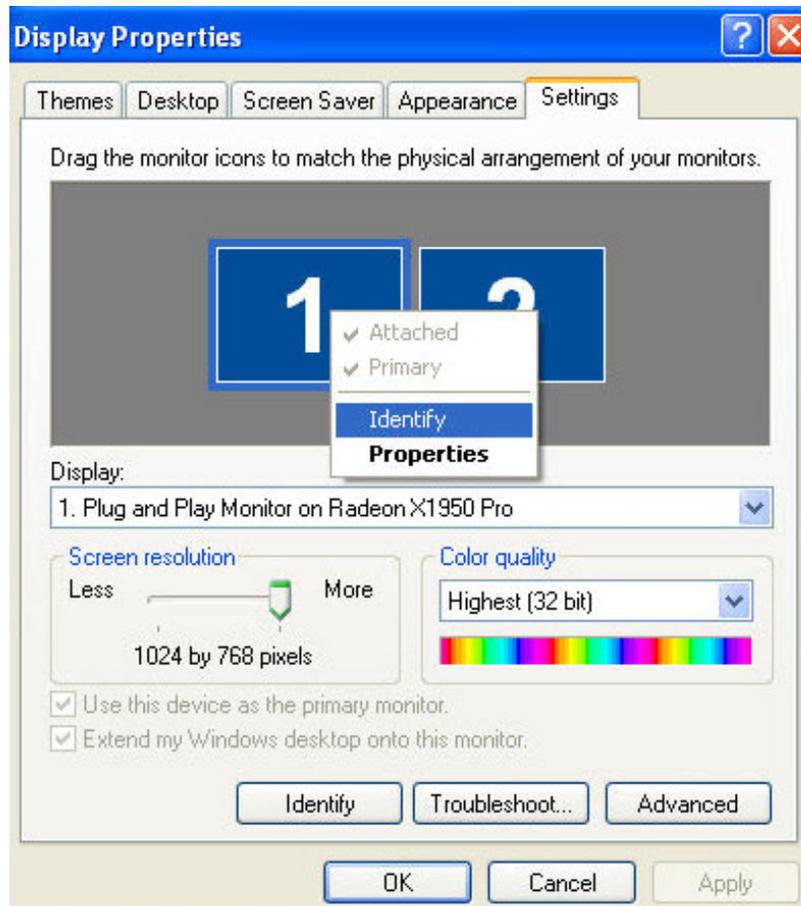


- **Multi-Monitor ZooKeeper setup**

*The Hippotizer HD has a dedicated graphics cards for control. ZooKeeper can be spread across the two DVI outputs of the graphics card to produce a multi-screen ZooKeeper.*

*Setting up a multi-screen output is achieved before the engine and ZooKeeper are loaded.*

- *Right-click on the desktop and go to **Properties**.*
- *Click the **Settings** tab.*
- *You will be able to identify the screens by right-clicking on the blue screen and pressing **Identify**.*



You need to find out which screens are coming off of the ZooKeeper graphics card.

- Monitor number 1 comes off of the ZooKeeper graphics card. The other number differs between 2 and 3 or 4.
- The two screens coming off of the ZooKeeper graphics card need to be next to each other with Monitor 1 being the furthest monitor to the left.
- To save the settings press **Apply** then **OK**

You should now be able to move the cursor from one screen to the other.

- Start ZooKeeper and right-click on the title bar at the top.
- Click **Restore**.
- This will alter the ZooKeeper window. Now if you hover over the side of the ZooKeeper window the arrow will appear that allows you to reshape the window.
- By dragging this out you will be able to fill two monitors with the ZooKeeper programme.

**Note:** You cannot set up dual ZooKeeper screens when using pan output. This is due to ATI graphics cards putting the pan monitors between the ZooKeeper monitors.

- **Layer Modes**

The layer mode drop down menu is where the type and number of layers is determined. The options available depend on the Hardware:

- **Critter2** or 4 Normal Layers, and 2 Layer X-fade modes.
- **HippoPortamus2**, 4 or 6 Normal Layers, and 2 or 4 Layer X-fade modes.
- **GrassHopper2**, 4, 6, 8 or 12 Normal Layers, and 2, 4 or 6 Layer X-Fade modes.
- **Hippo HD and Genlock HD2**, 4, 6, 8, 12 or 16 Normal Layers, and 2, 4, 6 or 8 Layer X-Fade modes

To change the layer mode, select the desired setting and click the Apply button. The engine will now reconfigure itself which can take some time depending on how many layers are selected.



Each running layer is represented by a film strip icon in the system tray of Windows. The engine will start once all layers are loaded.

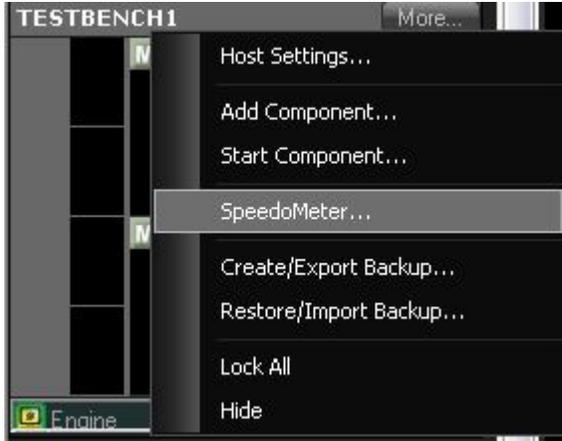


- **How many layers can be used?**

The playback capacity of Hippotizer systems varies with many factors such as the age of the hardware, resolution, if any effects are being used, layer mode and which components are running. There is no simple formula to say how many clips can be played at once before the Engine will start to slow down. The condition of the playback can be monitored in real time using the Speedometer.



The speedometer will open by default in newly installed software, or it can be added from the More button on each system in the HippoNet Overview.



Multiple speedometers from remote systems can be viewed on one Zookeeper, enabling the remote monitoring of Hippotizer systems.

The Speedometer shows four values.

- **Frames Per Second (FPS)** This is a measure of how fast the Engine is creating new frames of video. As the usage of the Hippotizer increases and the system begins to run out of resources the frame rate will begin to fall.
  - **CPU** This is the utilization of the computer's processing chip. Components such as Pixelmapper and certain effects can use a lot of processing resources.
  - **Temp** This is the temperature reported by the Graphics Card's core. A Temperature consistently in the red zone (especially when the engine is not loaded) can be an indication of poor ventilation.
  - **Vmem** Shows the amount of Video Memory being used by the Hippotizer system.
- **Saving and Importing Engine Settings**

The settings of the engine, including Live Mask data, can be exported from the Engine Component. To access this option, right click on the engine icon and select Export



The resulting file can then be imported in order to restore the saved settings.

**Tip:** On every successful shutdown Hippotizer automatically saves the engine and output settings so that it will restart in the same configuration as it closed in. If a setup is applied that does not result in the engine starting normally, it will not be saved.

- **X-Fade Mode**

*X-Fade on Layer adds a new fading engine to certain layer modes enabling seamless transitions between media and attributes changes. X-Fade on Layer can be used in conjunction with Timelines to quickly program seamless media changes. Or, using X-Fade on Layer with Presets create a powerful busking tool: You are now able to save a series of looks and then recall them at any order without any bumps or snap changes.*

**Setting Up Cross Fade on Layer:**

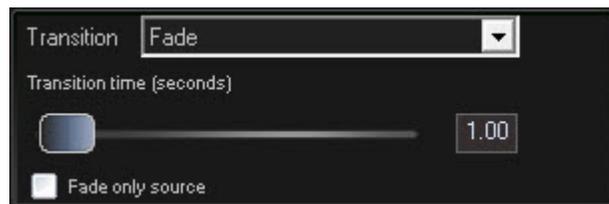
*Common to all layer modes in Hippotizer, X-Fade on Layer is listed in the Layer Mode menu within Engine Settings. This is accessed by right clicking on the engine Icon in Hipponet Overview and selecting Settings.*



*The number of X-Fade Layers available depends on the type of Hippotizer:*

- Critter / Stage = 2 - X fade Layers*
- Portamus = 2/4 - X Fade Layers*
- Grasshopper = 2/4/6 - X Fade Layers*
- HD / Genlock HD = 2/4/6/8 - X fade Layers*

*The X-Fade controls can be found on each layer GUI as seen above. They consist of three settings: Transition, Transition Time, and Fade Only Source.*



**Transition:** You have the option to specify the type fade between media changes. This is set to Fade by default. The transition select includes many types of wipes, burnouts and other animated changes.

**Please Note:** Attribute changes (such as geometry or colour) will only fade regardless of what the transition is set to. Only media changes can use transitions other than fade.

**Transition Time:** The time it takes to complete a transition can be set from 0 - 30 Seconds. The Default for this is 1 second. Setting this value to 0 while a fade is occurring will complete the fade immediately.

**Fade only Source:** If this is enabled (ticked) X-Fade settings will only apply to media changes. When this is not ticked the Hippotizer will crossfade all applicable layer attributes.

- **Simple Mode**

Simple mode is a layer mode that provides a limited feature scope yet some very clever functions for those scenarios where speed of programming and sequencing is of essence.

Also as it has fewer functions to learn it is a great way to start within the Hippotizer range.

What is it?

The processing in Simple mode is a little bit different to the other layer modes seen in previous version. It provides two layers only, however it automatically does a transition whenever the source is changed. As the typical usage is to cross-fade between different media clips, this can be achieved with a single click or command.

Setting up Simple mode

In HippoNet overview right-click on to the engine component and then select **Settings**. The engine settings dialogue will appear. In **Layer Mode** select **Simple** mode from the drop down menu. Then hit **Apply** and the engine will restart in the new Layer mode. Once the engine has fully restarted, close the engine settings dialogue.



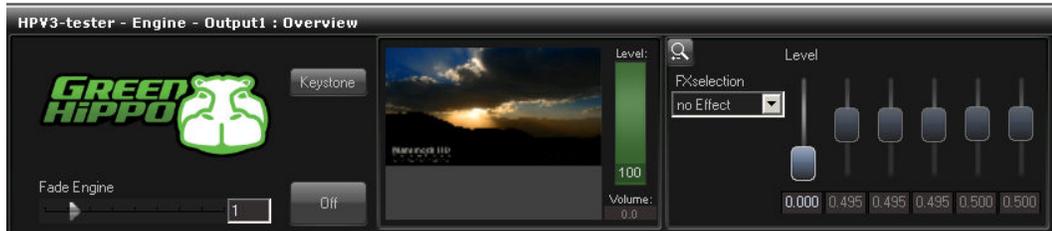
*In HippoNet overview you will see your machine with only two layer previews and one master preview.*



*Click on the Master preview and the user interface for simple mode will appear:*



Let's have a closer look at the user interface for this mode:



On the top you find the generic output section.

- **Fade Engine**

The Fade Engine allows smooth fading between presets when it is switched on. You can use either the slider or the text box to enter the fade time. When active the engine will fade to any value change no matter if this is applied via the user interface, recalling presets or any other method. It is recommended you leave this feature off to familiarise yourself with the general functionality of simple mode before activating it.

- **Master Output Preview with Master Level Control**

The preview output will show what appears on your output screen. The master level controls the level post all layers, mixes and effects. To the left of the preview window you can access the keystone settings. Click on the button labelled **Keystone** and a separate window will appear similar to the typical keystone adjustments found on the typical four or eight layer master.

- **Master effects section**

This effects section applies one effect on the master so it modifies the mix of the background and foreground layer. Please refer to Effects to get a detailed overview over what effects are available and what the parameters do.

### Layer Section



The two layers have the same layout and the same amount of control parameters.

- **Source control**

This section controls your source of the layer. It is similar to those found in the four and eight layer modes. Near the top you can choose between the different source types: Media Player, Live Video input or generator. In Media Player mode you will see the details of the clip or image loaded, you can change the speed as well as the player modes (play once, loop forward, play backwards once, loop backwards, Ping Pong or Random). In Live Video input you can select between the available capture devices. In Generator mode you can select a generator type and adjust the generator using the available parameters.

- **Colour and Geometric Controls**

You have control over contrast and brightness as well as Zoom, X and Y position.

- **Preview, Mixer and transition settings**

The preview will show the currently selected and playing media or source for this layer. Level adjusts the visibility of this layer. Mixer Mode defines how this layer interacts with layer s underneath (please see "MixModes" for a detailed description). Finally you can select a transition type and duration for the layer. Pick one of the many available transitions and select a different media and the engine will automatically blend to the new resource.

- **Media Selection**

Analogue to the Media selector in four and eight layer mode, the media selector is divided into banks of media and the actual media itself. To change the media on the layer simply click on one of the thumbnails. It will use the transition type and duration selected.

- **Greater than HD Resolutions**

When an output splitter is employed (such as a DataPath X4, or Matrox Triple Head to Go) the Hippotizer engine is often required to output at greater than HD resolution. In order to configure this, first connect and set up the output splitter. Make sure that Catalyst Control Center is able to enable a display to the desired resolution before starting the Hippotizer Engine. If Windows cannot see the resolution to be set, then Hippotizer will not either.

**Tip:** It may be necessary to bypass any EDID emulators between the output splitter and the graphics card in order for the correct resolutions to be visible. On a DVI Parrot this can be done by pressing the button next to the DVI output. (The LED should be blue to indicate bypassed).

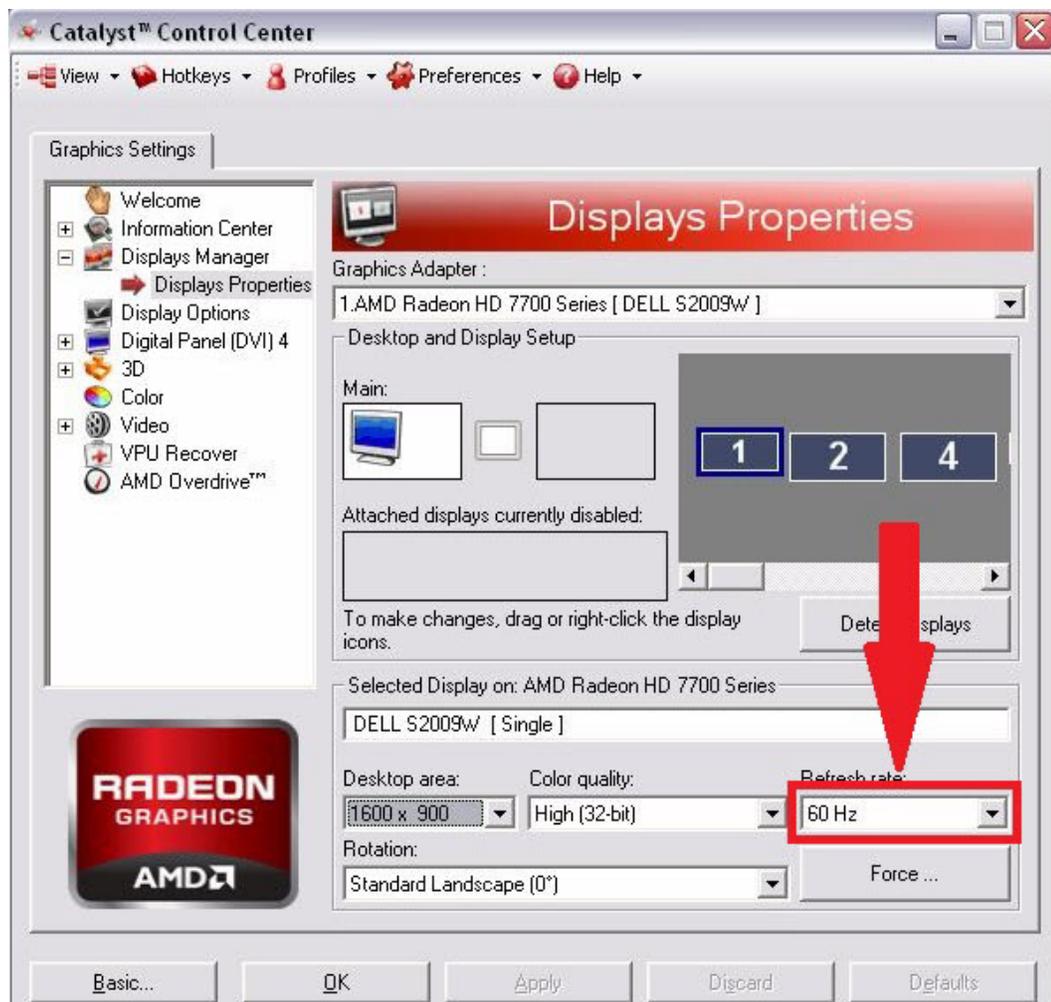
When the new resolution is visible in Catalyst Control Center, and the display can be enabled, then start the Hippotizer Engine. Within the Engine Settings, the new resolutions should now be visible and able to be set.

- **Setting Different Output Frequencies**

Some applications, such as Television Studios sometimes require video to be generated at 50 frames per second. The Hippotizer engine will assume 50Hz so long as there are no 60Hz resolutions available to the graphics card. In practice this means an EDID emulator (Such as a DVI Parrot) is required.

To set 50hz, attach a DVI Parrot to one (or both if an HD or Genlock HD) outputs of the Hippotizer, then power the system on. Use the included Parrot Trainer application to program the Parrots so that the only resolutions contained within have a frequency of 50hz. Save and apply the profile to all attached Parrots, and then restart the Hippotizer.

After the machine has booted, open the Catalyst Control Center by right clicking on the Windows desktop and selecting "Catalyst Control Center".



Select an output display, and in the Refresh Rate menu, select 50hz. This will bring up the list of detected 50Hz resolutions. Set output display(s) to the desired resolution, then apply the changes and close Catalyst Control Center.

**Please Note:** If there are no 50hz resolutions visible in Catalyst Control Center this indicates that the Graphics card is not detecting the EDID correctly. Please repeat the Parrot training procedure to ensure settings were saved correctly.

After Catalyst has been configured correctly, start the Hippotizer Engine and Zookeeper. Now go into Engine settings (Right click on the engine icon in HippoNet Overview and select "Settings") and select the desired resolution and layer mode. Apply the settings and allow the engine to start completely. The output frame rate can be confirmed by viewing the Engine's Speedometer.

**Tip:** It is recommended to always set the layer mode to "Test Image" while applying resolution changes. After the Test Image comes up correctly then select the desired layer mode.

#### IMPORTANT

- It is only possible to configure the outputs of Hippotizer correctly when all the required monitors have been attached and are working correctly.

- **Before following the instructions in the topics above, make sure that you have the required number of display devices connected - one device for single mode or two devices for Pan, Dual or Clone mode.**
- **Failure to do this will result in the engine not being able to re-configure itself correctly.**
- **If only one output device is connected then only Single mode will be available from the mode drop down list, this is normal, and is a protection system for the engine to stop it being placed into a mode that it cannot currently do.**

## Timeline Programming

### 4. In-Depth Features

#### 4.15 Timeline Programming



#### Contents

- 4.17 Timeline
- [4.18 Timeline Node Controls](#)

## 4. In-Depth Features

### 4.15 Presets and Timeline Programming

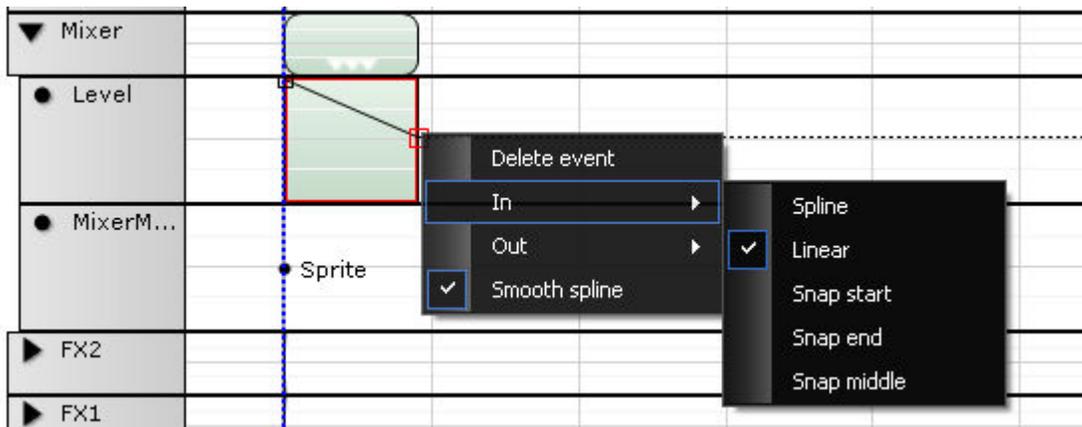


#### 4.18 Timeline Node Controls

Nodes and events are added to the timeline by clicking with the mouse. When you add nodes to the timeline they automatically assume the properties of the previous node applied. However, to allow for greater creativity and flexible programming, it is possible to shape the joining lines resulting from multi-node application.

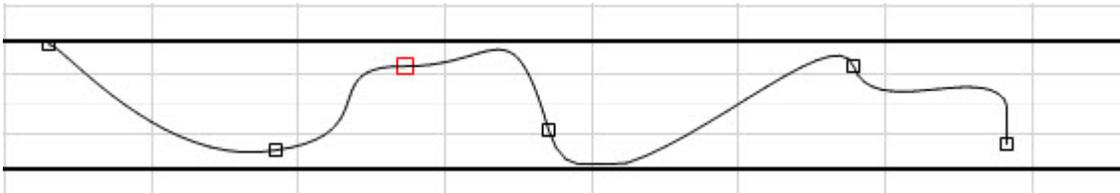
To access these functions, right-click any existing nodes to see the options.

**Note:** For variable values such as level, you can add shaping to the transition line between two nodes.



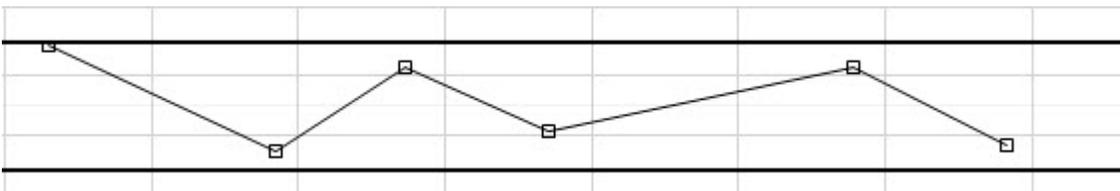
#### Spline

Spline allows the adjoining line to be shaped allowing for smooth in and out transitions. Once selected, hover the mouse over the node and handles will appear. Moving the handles up or down by clicking and dragging will increase or decrease the severity of the curve as it joins the node. Moving to the right will adjust the duration of the curve.



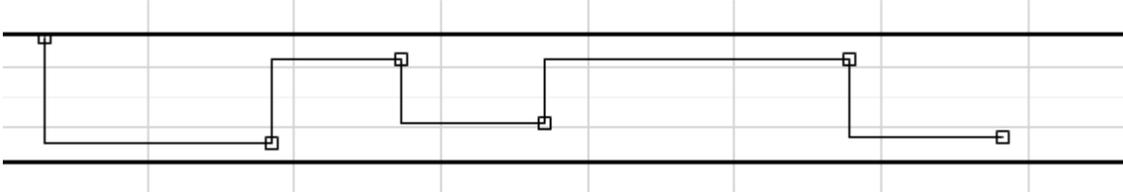
#### Linear

Linear gives a straight line between two nodes.



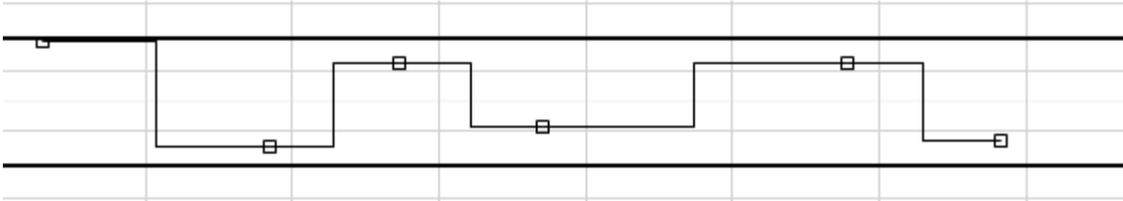
### Snap Start/ Snap End

Snap at end and snap at start allow instant transitions to be achieved without the need to add additional nodes. The jump in value will follow whenever the node is moved.



### Snap Middle

Snap middle will take the distance between the last node and the new node and snap to the final level half way between.



# HippoNet

## 4. In-Depth Features

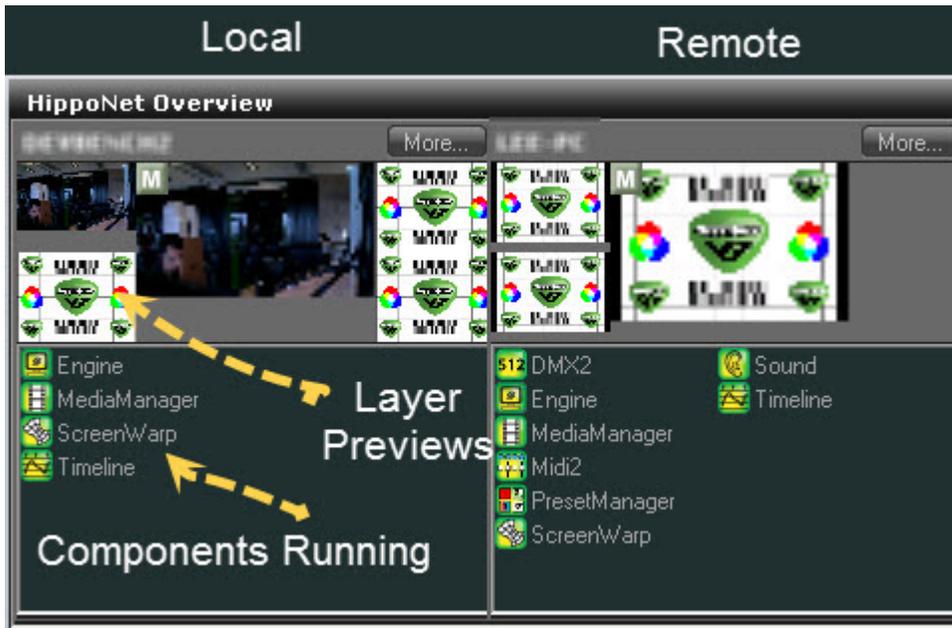
### 4.19 HippoNet



#### 4.19 What is HippoNet

HippoNet is the network protocol that links all Hippotizer enabled systems. HippoNet allows users to view, configure and control any parameter of a HippoNet-ready device from any server when systems are connected together over a standard Gigabit Local Area Network.

What makes HippoNet unique is the ability to control any element of any Hippotizer on the network directly. Many systems claim remote control ability but these usually entail using resource-heavy remote-desktop approaches. HippoNet does not require this. Each user can have a custom desktop, sharing controls which suit their tasks and without affecting other users



The HippoNet Overview Window shows all Hippotizer systems available to you over HippoNet. If you are only running one system you will only see the one Hippotizer displayed within the HippoNet Overview Window. It is good practice to keep this window open at all times as it allows access to most of the regularly used functions in Hippotizer V3. If you should inadvertently close this window, you can open it again at any time by clicking on the HippoNet overview button. This is located in the tool bar.

When using multiple Hippotizers in HippoNet, an auto discovery function allows Hippotizers to appear in the HippoNet overview automatically.

If you wish to not see these then you can hide them. Selecting the More button and then selecting **Hide** will do just that and make the selected Overview disappear from your HippoNet Overview. You can also lock your Overviews from being changed by using the lock function.

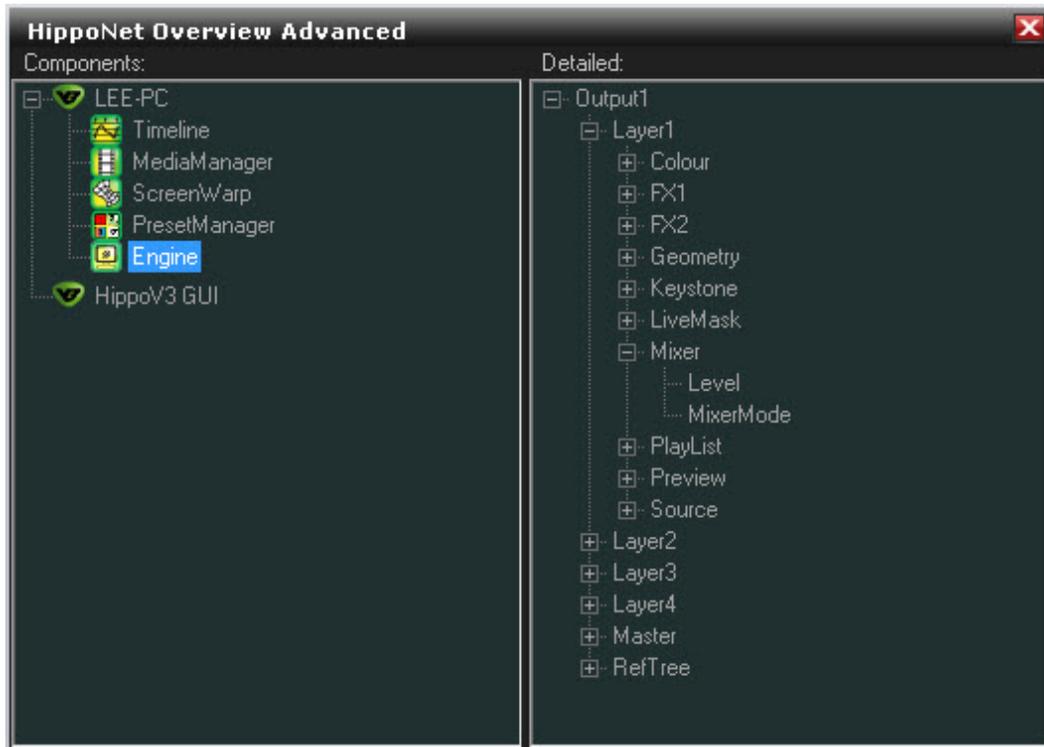


**Lock All:** This can be unlocked by clicking back on the More button and then selecting **Unlock All**

**Hide:** You can show the Overview again by going to the Windows Menu in the top tool bar and then selecting **Unhide All**

- **HippoNet Overview Advanced**

For most projects all you need is the above HippoNet Overview, however sometimes you need to get access to a specific function which is hidden away during general use. Let's explore what components are loaded on the Engine Host by clicking on the "+" symbol next to the Host name on the left.



On the left you can see all components available on the HippoNet network. Anything with the “V3” logo in front of it is what we call a Host. A Host is in essence the mother application where components can run inside. Each Hippotizer engine is a Host, but the user interface ZooKeeper is also a Host. So you should see two Hosts on the left: the Engine and the ZooKeeper.

Let’s explore what components are loaded on the Engine Host by clicking on the “+” symbol. You should now see the Engine, Media Manager, ScreenWarp and Timeline.

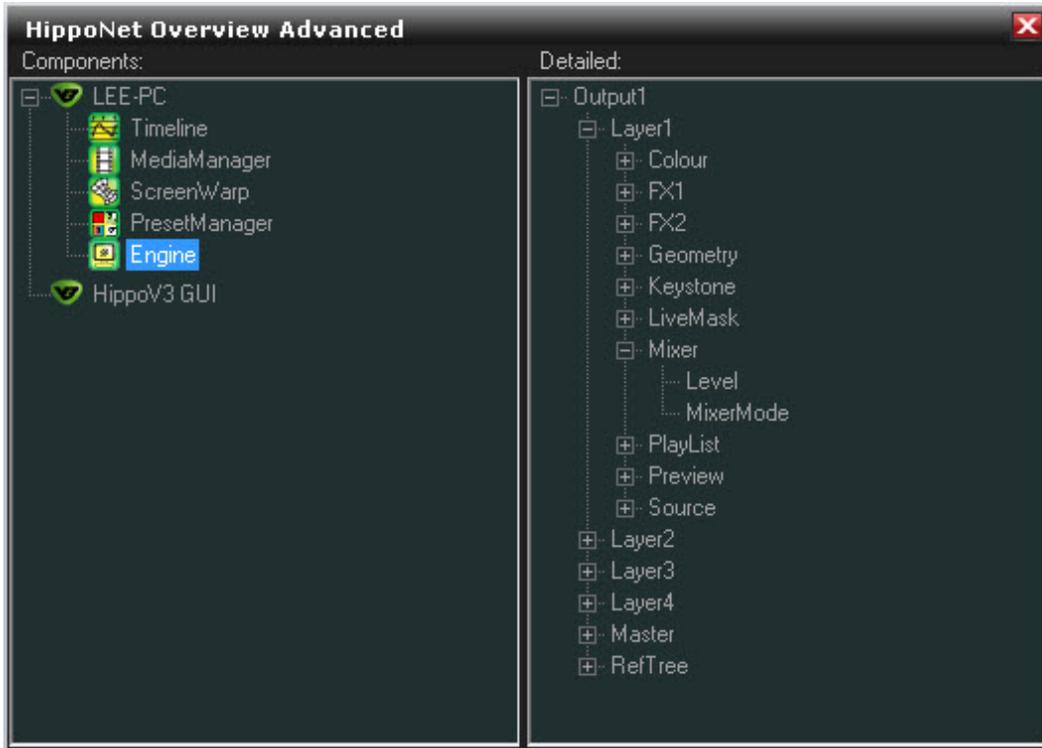
Click on the **Engine** to select it. You will now see Output1 appear on the right. This window contains any details within the selected component which in essence is a list of pins.

- **What are Pins?**

Pins connect components. They can have many different forms, but in essence they are just connectors. Imagine you have a sound desk, microphones, an amp and speakers. Each one of those could be represented as a component with the sockets they have as pins. Once you connect two connectors, the two devices can start to communicate. This is exactly the way HippoNet works. Each pin can be connected to another matching pin and then data can travel between them.

Many pins are simple direct connections; however some pins contain other pins inside. We call those Pin Groups. You could compare this to a MultiCore cable in our audio example: there is only one cable with one connector, however inside are many more cable and connectors.

Let’s get back to our Engine and the Output1 pin that we can see. This is a group pin and if you click on the “+” you can expand the group and see what is contained within. In this case it is another set of group pins. Keep expanding Layer 1 and Mixer so you can see Level and MixerMode. These are normal pins, not pin groups – you cannot expand them anymore.



Let’s double-click on “Level”. You will see a new window appear with a fader inside.



We have created a connection between the Level pin and the User interface. So now you can send information to the pin using the User interface – use your mouse to move the fader and the layer level will change. Now try double clicking on the Mixer group pin.



Again a new window will appear, this time displaying a Mixer, i.e. a drop down box for the mixmode as well as the fader for level. You now have connected a two-way MultiCore containing both signals between the user interface and the engine.

- **Why have HippoNet Overview Advanced?**

As mentioned before, most times you will not need to access the Advance HippoNet Overview window, however occasionally; you will want to have direct access to individual functions without the normal user interface. Or you may want to have a separate set of faders, for say, all levels – you can simply navigate to these pins and double-click them to get new windows. Many components do not have any useful pins for the user, so most of the time you will focus on the engine pins.

- [Set up your Network](#)

## 4. In-Depth Features

### 4.19 HippoNet



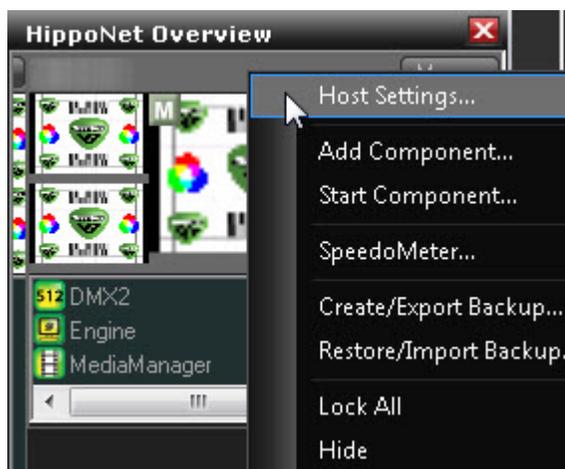
### 4.20 Set up your Network

- **IP Addresses**

#### *HippoNet*

All Hippotizers have two Ethernet ports. One is reserved for HippoNet, the other is for Art-Net. On older cases the HippoNet port is the one on the right, Art-Net on the left. Units are shipped with the default network settings set to DHCP. If your network does not use DHCP you will need to specify the IP address used by HippoNet.

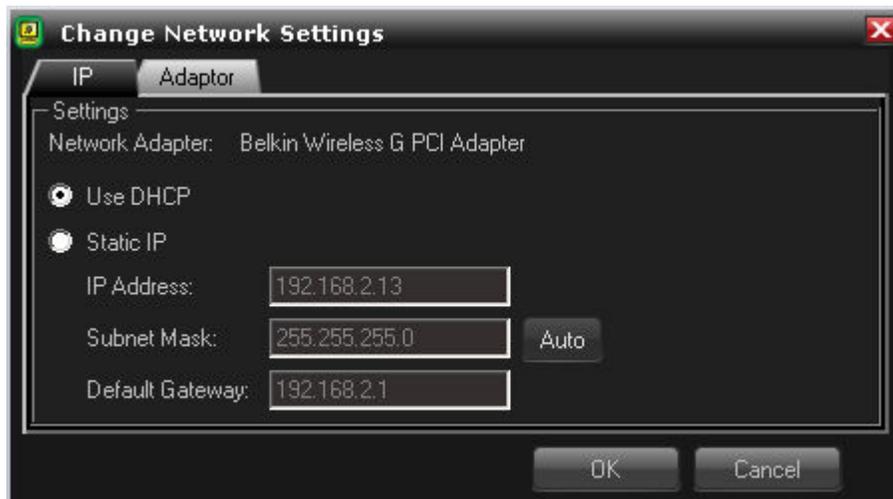
In HippoNet overview, browse to the Hippotizer you wish to administer. Click on **More...** then select **Host Settings...**



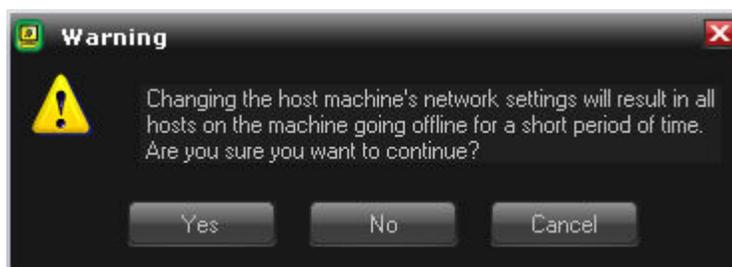
Click on the **Network Settings** tab, you should see the following:



Click **Change...**



On the **Change Network Settings** dialog select **Static IP** and enter the network settings you wish to use with HippoNet. Click **OK** to apply the changes:



And when prompted click **Yes** to confirm.

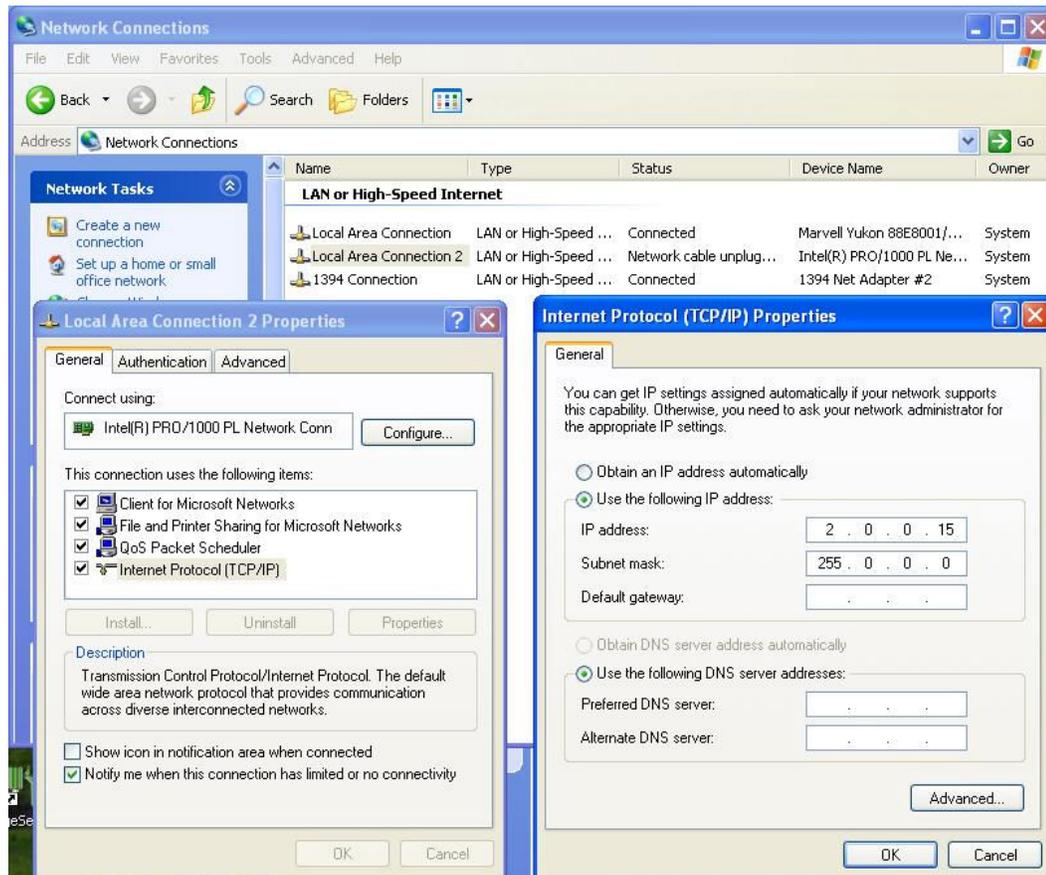
Art-Net

When using Art-Net the network cable needs to be connected to Local Area Connection 2.

IP Address: 2.0.0.X (X is a number that is unique on the network).

Subnet mask: 255.0.0.0.

In Windows, browse to the **Network Connections** in the Control Panel:



Double click on 'Local Area Connection 2', then select **Internet Protocol (TCP/IP)** and click **Properties**.

Select **Use the following IP address:** and enter the values you have chosen for your Hippotizer.

Then click **OK** to exit. You will need to restart the Hippotizer software for the changes to take effect.

- **Firewalls and Viruses**

Hippotizers ship pre-installed with Microsoft Security Essentials and Windows Firewall. The Firewall is set to be disabled by default: this is to ensure it does not interfere with Hippotizer. Microsoft Security Essentials provides a basic level of virus protection only and must be updated from the internet periodically to be effective. This is enabled by default. Please take care when transferring files with USB sticks as viruses can install themselves directly from the external drive. If you suspect a virus, we recommend AVG's free rescue utility: <http://www.avg.com/gb-en/avg-rescue-cd> to scan and repair an infected machine. Please bear in mind that if a Hippotizer has become infected that it is reasonable to assume that any USB sticks and other machines on the network are also infected.

If you need to transfer files (i.e. media) from a place in the internet (i.e. an ftp site) please use a separate machine with strong virus protection and scan any file downloaded before transferring to the Hippotizer. We can take no responsibility for viruses and other malicious software that attacks the Hippotizer.

If you use ZooKeeper on a machine other than a Hippotizer you need to ensure that the network settings are correctly set. Also make sure that if you have a firewall installed it allows for HippoNet data to pass.

- **Performance**

*Please make sure you use the recommended hardware listed below. Although HippoNet is likely to work with most available hardware we have found that there are exceptions which can have an impact on performance of the system. If you do want to use networking equipment other than recommended we suggest you allow for time to do some serious tests before specifying this equipment on a show.*

- **Recommended Hardware**

*We only list a few crucial components here. Please refer to our website and the website forum for more information on particular installations.*

*Network Switchers*

- **Cisco**

*24-port 10/100/1000 Gigabit Switch*

*Model number: SG200-26*

*16-port 10/100/1000 Gigabit Switch*

*Model Number: SG200-08*

*8-port 10/100/1000 Gigabit Switch*

*Model Number: SRW2008*

*Cable*

*Ethernet cable needs to be of the types:*

- **CAT 5e**
- **CAT 6**

## Controlling Multiple Servers

### 4. In-Depth Features

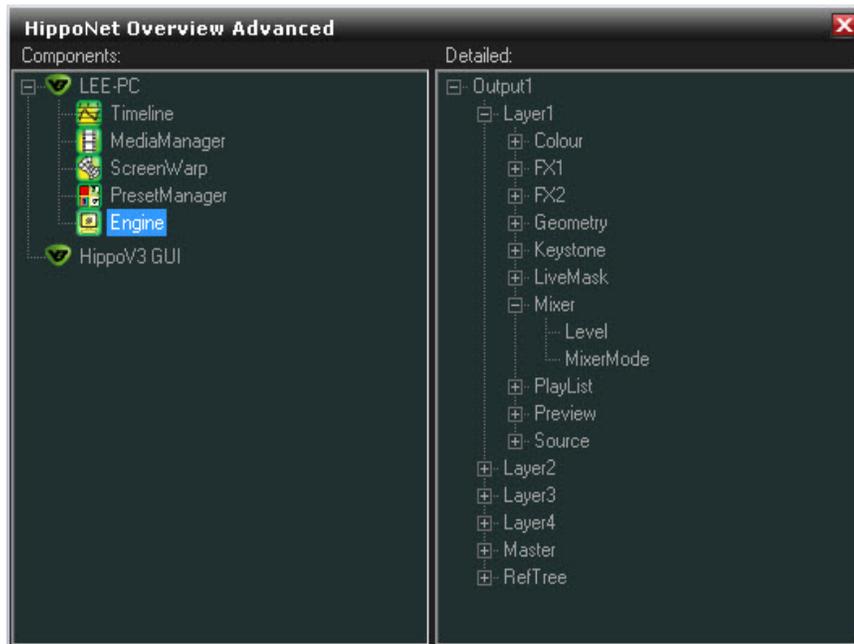
#### 4.21 Controlling Multiple Servers

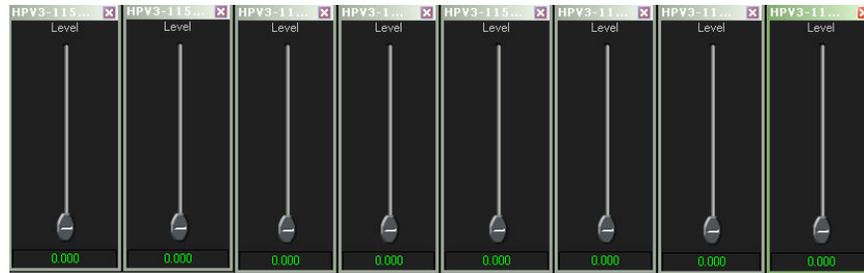


#### Contents

- Here are a few tips to enable you to manage your user interface so that you can easily monitor and control multiple systems:
  - **Tip1: Get a bigger monitor**

*It is difficult to work productively using an XGA monitor with a resolution of 1024x768. This monitor size is ok for general maintenance and controlling a single machine, however it is not suitable for serious multi-unit control. We recommend using one or two 22 inch high definition monitors connected to a separate machine running ZooKeeper for maximum productivity. This way you can layout all your controls and previews you need easily and get to them instantly without having to drag and overlap control windows.*
  - **Tip 2: Take some time to create a functional layout**
    - *It is worth spending 20 minutes or so thinking about what controls you need the most and arrange them in ZooKeeper. This will allow you to work more productively. If you use HippoNet Overview Advanced you can create new windows with specific functions you may need. So if you want a separate set of Master Level Controls, simply browse to the required pin and double-click on it. Then resize and move your control to where you can get to it easily.*





- Also, when working with multiple systems you may want to see the four or eight layer overview for each unit. Using the standard method of clicking on the central output in the HippoNet overview however creates a “shared” overview which gets re-assigned to each machine whenever you click on a different system. So to create fixed overviews that stay the same, simply double click on the engine of each Hippotizer. You will see that each time a new window is generated and it will not be reassigned to any other unit.
- So if you have three Hippos running up to eight layers each, you can then have up to 24 previews one for each layer side by side, so at any point in time you can easily monitor multiple systems.



- **Tip 3: Practise your navigation**

Because you cannot have all controls for all Hippotizers active at the same time you need to share some controls. It seems that most people want to see a preview for each layer and have direct access to its level. However sharing all other layer controls is also possible. When double clicking on a layer you will get the media selection window and a layer control window. Position these conveniently. Whenever you click now on a layer preview anywhere these two windows will now “point” to this layer and you can both monitor and change all parameters. Practise moving from one Hippotizer to another, switch between layers and bring up media and work on compositions to get a feel for the workflow.

- **Tip 4: Save your desktop layouts**

If you have a good layout you like, save it. So make sure you save them and ZooKeeper will create a new button to easily recall this desktop setting for you when you need it. You may also have different layouts for programming and rehearsals. Just save them and easily switch between them.

- **Timeline**

Programming multiple systems is not much different to programming a single system – you simply have more tracks to take care of. All the more it is important to learn about the tools provided to aid you editing the many parameters. Also again we recommend you doing a bit of tidying up before you start. By default when creating a new timeline you will find all the tracks within you selection. You may not want to access all these controls, so take some time to delete the tracks you do not want. This way you can focus on the tracks you really need. Use the **Auto Track Selection** feature to fly between tracks by touching your controls rather than expanding tracks. Zoom in and out to see what you need to see and again get a bigger monitor to see more and do more.

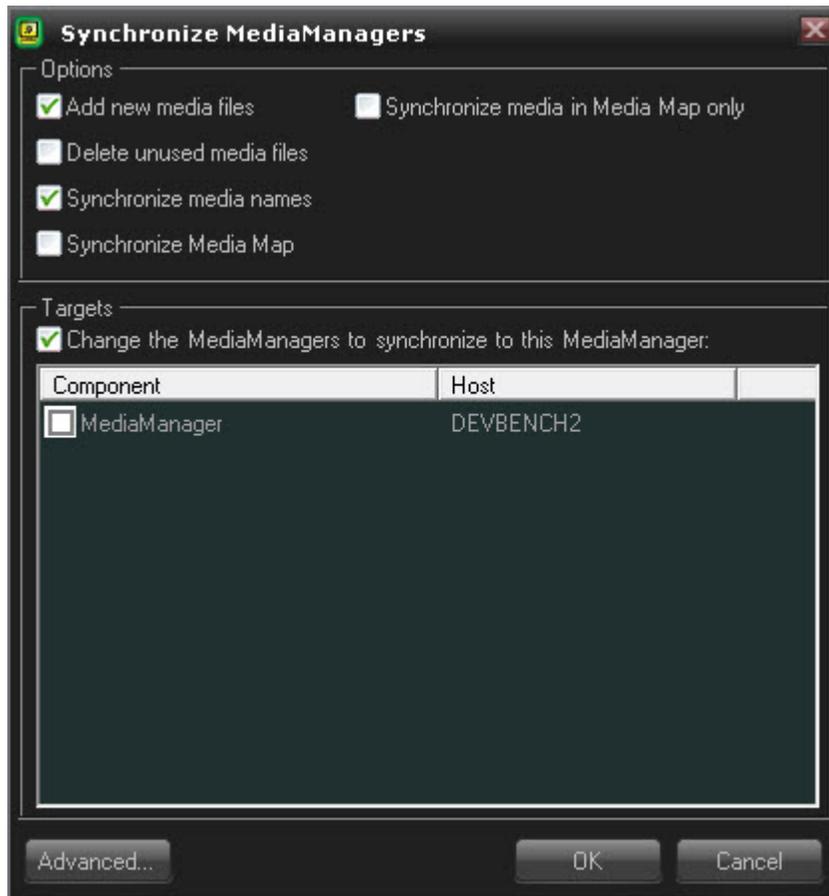
Also please note that although the timeline looks so easy to use, it takes some time to become proficient. Take your time and learn and practise what you need to do before going on a job.

- **Synchronising Media**

The Synchronize function allows you to duplicate the media library from one Hippotizer to other units on the network via HippoNet. Be aware that any media which is different on the other Hippotizers that may be in the banks will be replaced. To access this function open the Media Manager by double-clicking on the Media Manager icon in the HippoNet Overview. In the main Window click on the **Synchronize...** button on the top right of the menu bar.



You will see the following dialog:



In the top area of the window you will see a list of all media manager components found on HippoNet. Make sure all systems that you wish to update are ticked.

In the lower area you have a series of options:

- **Add new media files** include the transfer of media files currently not present on the target systems.
- **Delete unused media** deletes unused media on the target systems. Un-tick this option if you wish to keep media on these systems even if it is not being used.
- **Synchronise media names** updates the media names if they have been changed by the user.
- **Synchronise Media Map** updates the way media files from the library are assigned to banks and slots.

- **Synchronise media in Media Map only** Synchronises only the media in the media map.

Click **OK** to start the synchronisation process.

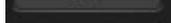
**Note:** Depending on the amount of media and the amount of systems in found it can take quite some time to synchronise media.

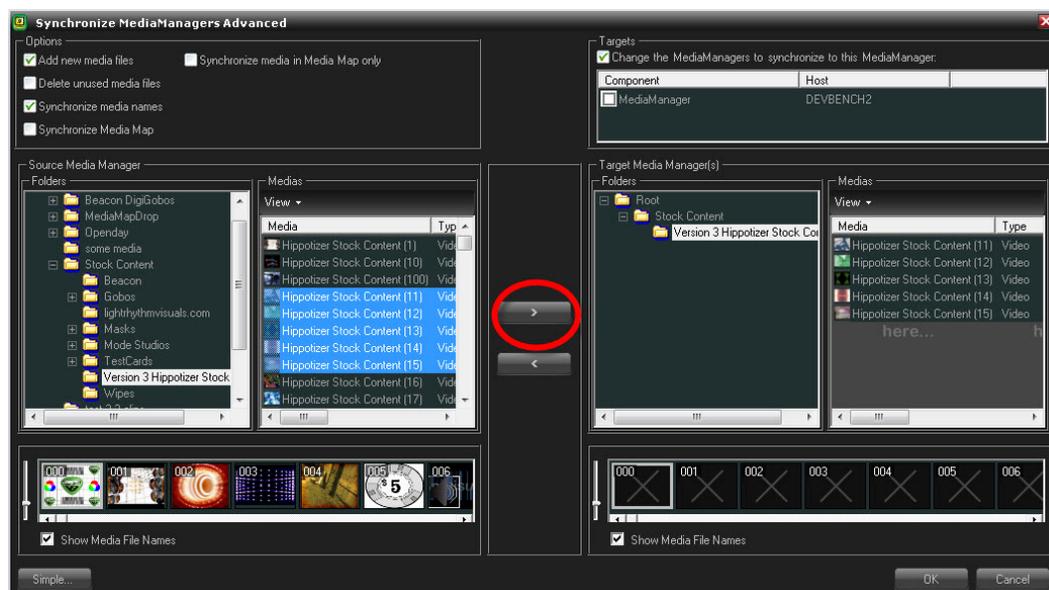
Advance

If you only want to move certain files from one server to another then this is possible using the advance button in the bottom left.

Pressing this will bring up a screen that will allow you to select multiple files at once on the left hand side and



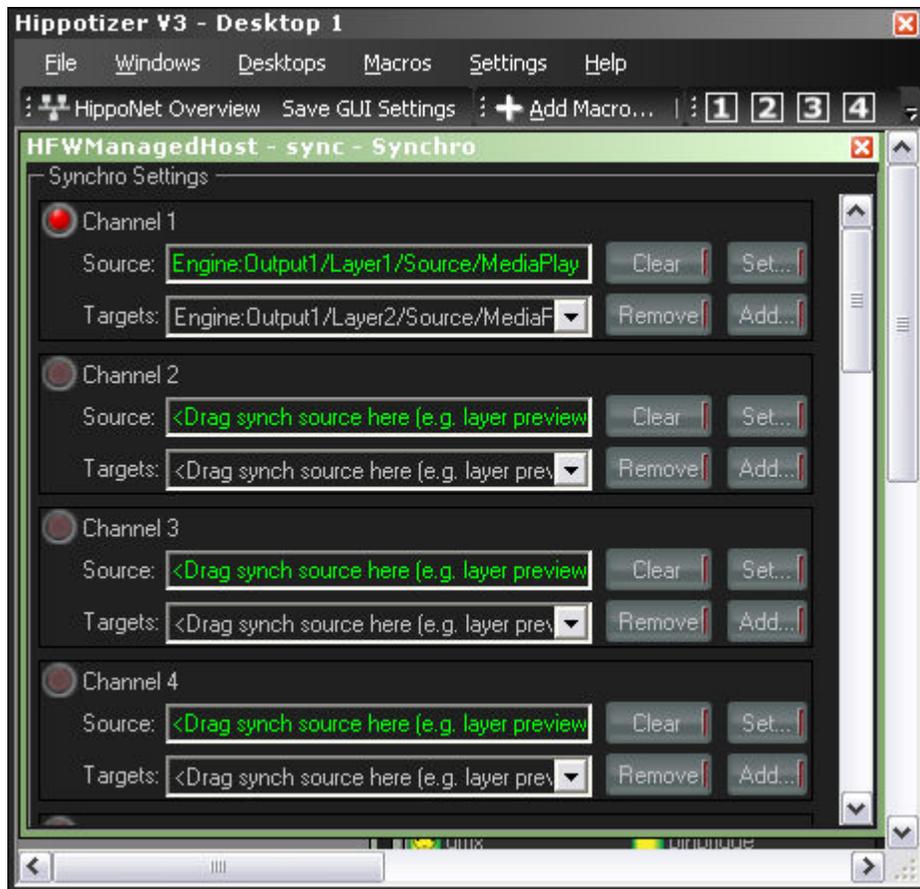
then by pressing the  button in the centre you can then transfer media across file by file.



- **Synchronising Media Playback across multiple systems**

HippoNet supports the transmission of time code in our own special format across the network, so you can link any two media players together. They will do everything together; change media, play forward, play backward, change speed and so on. Continue by:

- Go to the **Host Settings** and add a new sync component, name it 'Synchro Component' (or anything else you will recognise later) click **OK** then exit from the **Host Settings** window.
- In HippoNet overview double click on the Synchro Component you have just created. You should see the following window.



You can have up to 16 channels of synchronised media players per sync component. Each channel consists of one Source and one or more Targets.

As an example we will try to synchronise Layer 2 to Layer 1. Open the layer overview (click on centre of preview), so you can see the four or eight layer previews. Then drag layer 1 preview to the Source text field and then the Layer 2 preview to the Target text-field. Your window should now look similar to the one above.

To test, load a video clip on Layer 1 and play it – check in your layer overview and you can see that Layer 2 does the same thing as Layer 1.

You can drag the preview of any Hippotizer, local or remote, into these fields in order to synchronise them. Common setups are to have one master Hippo and synchronise all 8 media layers of all other Hippotizers to this master unit. So whatever you play back on this machine, all other will follow.

#### Common scenarios

It is common to use multiple Hippotizers to create one large image. The Synchro Component is perfect to sync the different units together. However you need to take care to split the media correctly and distribute it across the different units. As all synced units play the media located in the same bank/slot it is necessary to prepare the media in the right way. If you have three Hippotizers making one big image then you need to place the appropriate media in the same slot across the three. For example in Bank 3, Slot 3 you might have a cloud animation. As an example, Hippotizer 1 is the master and also takes care of the leftmost portion of a three-way softedge pan. So this unit will need the left portion of the clip uploaded to this slot. Hippotizer 2 takes care of the centre portion and needs this clip uploading and Hippotizer 3 looks after the right.

Whenever you now play back this clip on Hippotizer 1, the others will follow frame accurately. Please note you still need to control the levels and all other functions manually or by a timeline.

## Controlling Hippotizer with External Protocols

### 4. In-Depth Features

#### 4.22 Controlling Hippotizer with External Protocols



#### Contents

- [4.23 DMX / Art-Net](#)
- **4.24 RS232**  
See [PhatController](#)
- [4.25 MIDI \(Midi2 Component\)](#)
- [4.26 OSC](#)
- [4.27 Timecode on Layer](#)

## 4. In-Depth Features

### 4.22 Controlling Hippotizer with External Protocols



#### 4.23 DMX / Art-Net

##### Art-Net:

Hippotizers use Art-Net as their default external protocol. There are more and more devices emerging that can generate Art-Net over Ethernet without the use of traditional DMX 512. If you are using this type of device you can simply connect it directly to the Art-Net Ethernet port without the need for a DMX to Art-Net converter. Follow the manufacturer's guidelines for setting IP addresses and configuration of start addresses etc.

##### DMX 512:

DMX 512 has been the standard control protocol in the lighting industry for many years. Although it has its limitations we have endeavoured to make all the functions of the server controllable via an external device using this protocol. This means that where you are controlling DMX devices, you can add the Hippotizer to your setup as another 'fixture' and integrate it into a larger show. Furthermore, there are many lighting consoles available that have the Hippotizer 'personality' and with these you can sequence any series of commands easily. Please see our support website for a list of available drivers for lighting consoles.

- **Connecting Art-Net**

*To use Art-Net you need to connect the Art-Net/Data Ethernet port of the Hippotizer to your Art-Net network (see [Detailed Connections](#) for details). Once this port is configured with an appropriate IP address and you can proceed directly to configuring the software.*

- **Connecting the DMX-Tail**



DMX Tail is another form of inputting DMX control for Hippotizer. This comprises of a DMX to USB connector which connects to the Hippotizer over USB.

The first time the DMX tail is plugged into each USB slot it will ask for the driver. This can be found in the C:\Hippotizerv3\thirdparty\DMX-tail driver folder.

When the windows driver wizard box appears direct it to this folder to install the drivers. Once installed in windows, start the Hippotizer software and it will be able to communicate with the connected DMX tail.

- **DMX2 Overview**



Dmx On/Off,  Toggles DMX Control, when set to off the button will be coloured red 

- **Smart Patch**

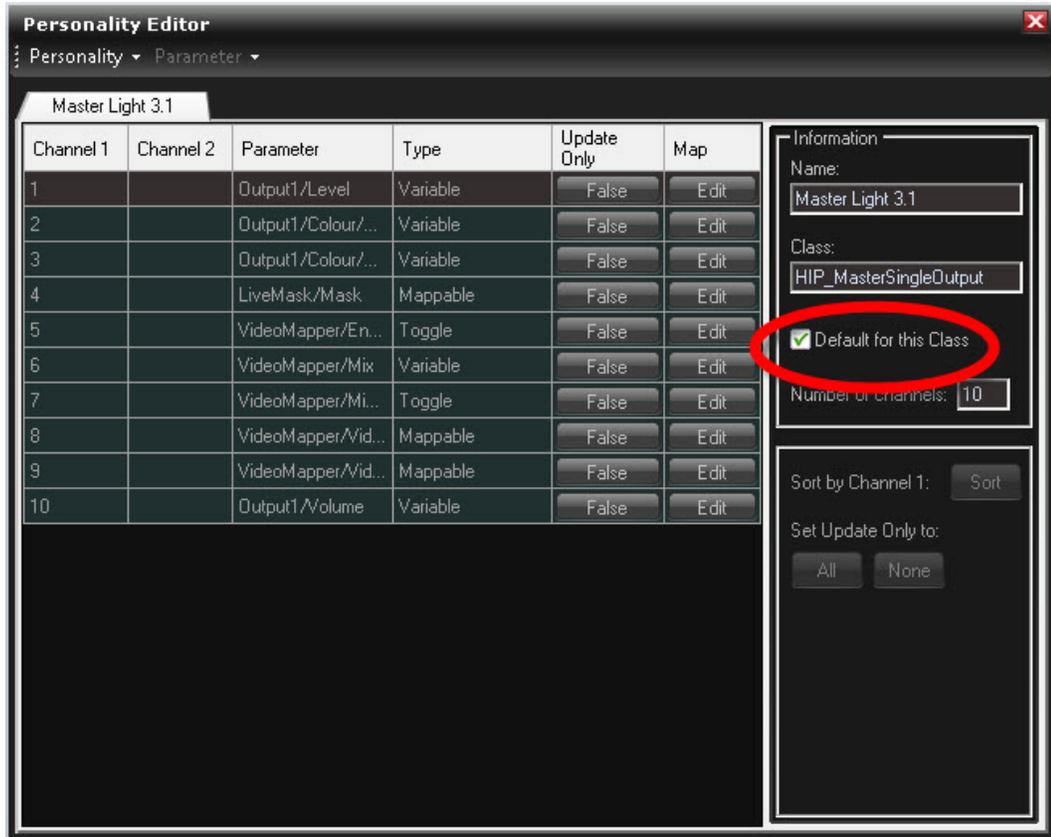
When the DMX2 Component is added, by default it is empty. However the first time you open the DMX2 configuration window it will add a device and create fixtures following the DMX Map as specified on the Green Hippo website (see <http://www.green-hippo.com/support/>).

If you change engine settings, edit the current DMX device or fixtures, you can click the **Smart Patch** button to reset the option. This will patch your Hippotizer with the current default engine mode.



You can change this default by using the personality editor. For example if you wanted the Master Light to be the default when selecting Smartpatch then you open up the personality editor, open

the master light file. Then over in the right hand side select the tick box that says, "default for this class". Then save this and you now when you press smart patch again the master will be the light version.



Name	Start Cha...	Number O...	Target	Personality
Master	1	10	LEE-PC : En...	Master Light 3.1
Layer1	11	88	LEE-PC : En...	Layer 3.2 X-fade
Layer2	99	88	LEE-PC : En...	Layer 3.2 X-fade
Timeline2	187	4	LEE-PC : Ti...	Timeline

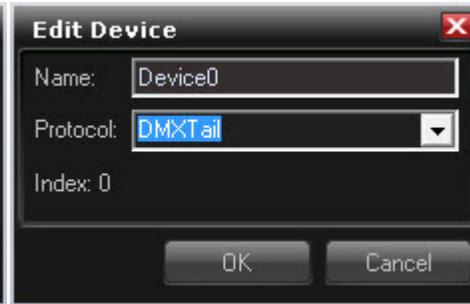
- **Managing Devices and Fixtures**

*In most cases, the Smart Patch and default configurations will be the easiest way to get the DMX2 working. However some more advanced configuration may be required.*

*Below the Menu, the DMX2 configuration window is split into two sections. On the left are listed devices. When using Art-Net the Subnet and Universe are displayed in the (0,0). When a device is configured as a DMXTail the index number of that device is displayed.*



Art-Net. Select Subnet and Universe



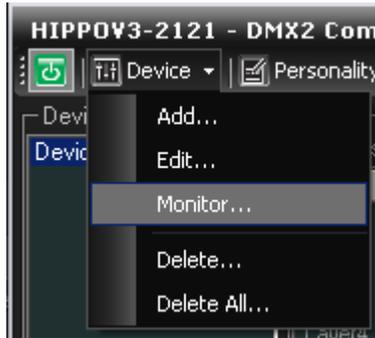
DMX Tail: Select connected device



MANet: Select universe. Session Id: 1  
Settings menu

- **Devices**

*Each device (Art-Net network port, DMXTail Or GrandMa desk) needs to be added and configured before parameters in the Hippotizer can be added as fixtures.*



*There is also a device Monitor (below) to check DMX data being received by a device to troubleshoot problems.*

Monitor for Device																																	
Name:	Device		Protocol:		ArtNet																Universe:								0	Status:			
IP:	2.0.0.10																																
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32		
255	0	0	0	0	255	255	0	0	255	255	255	255	0	0	255	255	128	128	128	128	128	0	0	0	0	127	255	127	255	127	255	0	
33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64		
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	255	120	128	128	128	128	128	0	64	0	127	255	127	255		
65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96		
128	127	255	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	4	10	64	0	0	0	255	255	0	0	0	0	0		
97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128		
0	0	0	128	0	120	128	128	128	128	128	128	0	64	0	127	255	127	255	128	127	255	0	0	0	0	0	0	0	0	0	0	0	
129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160		
0	0	0	0	0	0	0	0	10	64	0	0	255	255	0	0	0	0	0	0	0	0	0	128	0	120	128	128	128	128	128	0	64	0
161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192		
127	255	127	255	128	127	255	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	64	0	0	255	255	0	
193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224		
0	0	0	0	0	0	0	128	0	120	128	128	128	128	128	0	64	0	127	255	127	255	128	127	255	0	0	0	0	0	0	0	0	
225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256		
0	0	0	0	0	0	0	0	0	0	0	10	64	0	0	255	255	0	0	0	0	0	0	0	0	0	128	0	0	0	0	0		
257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288		
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320		
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352		
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384		
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416		
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448		
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480		
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512		
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		

**Note:** The Monitor should be used when troubleshooting and not continuously when operating the software in a live situation. To close the DMX monitor click the red X button at the top right.

- **Configuring Fixtures**

When a Device is selected, on the right fixtures for that device will be listed. To configure fixtures, use the buttons to the right:

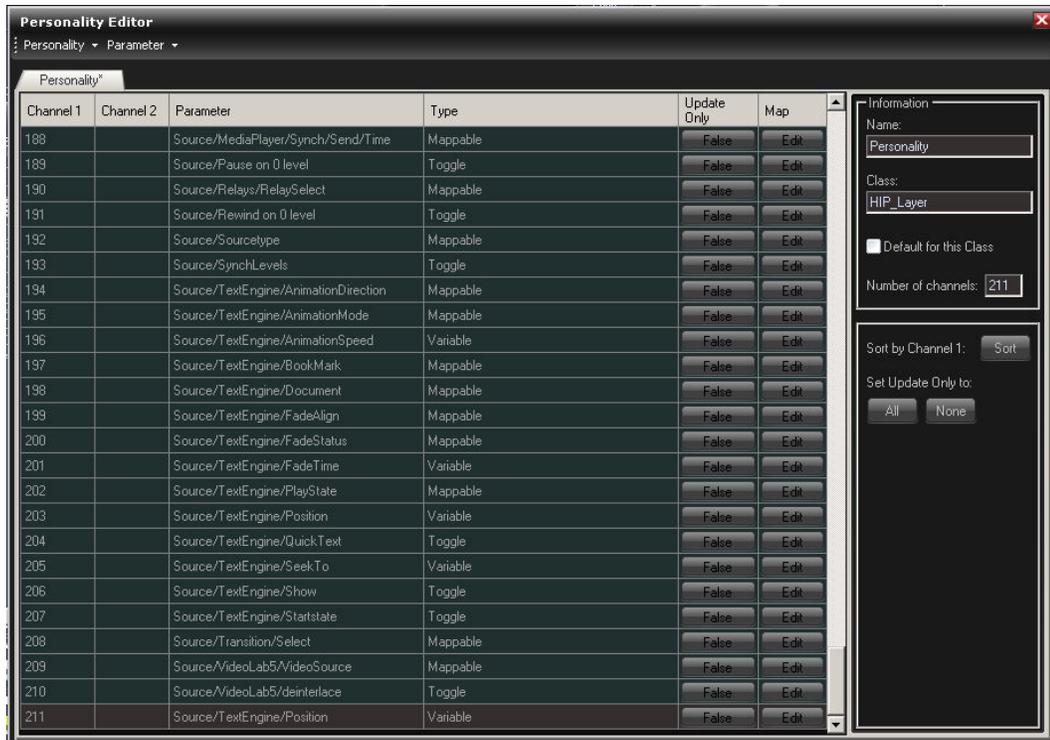
- **Add...:** When adding fixtures, you will be prompted to;
  - Enter a name for the fixture.
  - Select the target the fixture will control.
  - The Personality template which will be used (more on this later).
  - The start

- **Remove** will delete the selected fixture
- **Edit** is used to change edit the fixture settings.
- **Auto Patch** Will re- patch the channels of current fixtures starting from 1.
- **Refresh** Will refresh the displayed fixtures in the fixtures window.
- **Move Up** Selecting a fixture and clicking Move Up will move the fixture up in the list and change its start channel.
- **Move Down** Selecting a fixture and clicking Move Down will move the fixture down in the list and change its start channel.
- **Personality Editor**

When creating fixtures, a corresponding personality is required which specifies how certain fixtures when behave when receiving DMX data.

By default there are a number of personalities provided by Green Hippo which correspond to our documented DMX Maps as published on our website (see <http://www.green-hippo.com/support/>).

If you want to edit these or create your own, the personality editor will enable you to do this. Click **Personality Editor** to open.



Click the **Personality** button to create, open or duplicate the current personality (when duplicated the duplicate's name will be appended with an **\_\*Number\***)

Also you can export the information in the personality as a CSV file.

Once a Personality is loaded the parameter information is displayed. If you want to edit a particular parameter for the default Personality, you should create a duplicate first to keep the original as a backup.

Once you have a duplicate, double-click a parameter to edit it. Below is an example of the Geometry DMX map:

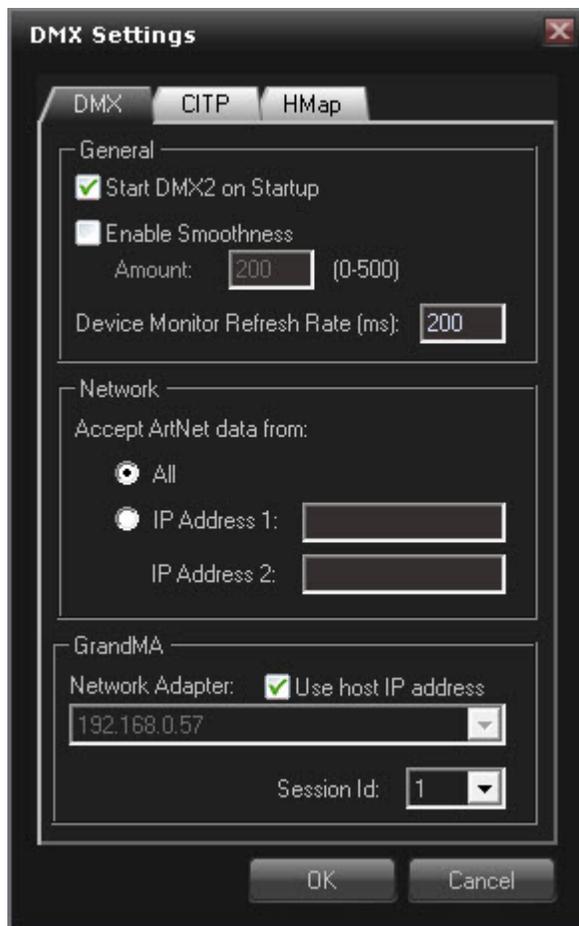


Here the details on how the parameter will behave are listed.

- **Settings**

In DMX Settings. DMX2 Component settings can be set, also the CITP and HMap2 components can be added/started.

DMX Tab



- **Start DMX2 on startup** *this option can set the DMX component to enabled/disabled on startup.*
- **Enable Smoothness** *This sets the levels of smoothing applied to the DMX to help with the various levels of DMX received*
- **Device monitor refresh rate** *When using the DMX monitor, if you want to increase/decrease the rate at which the monitor is updated enter a lower number. The default is 200 milliseconds.*
- **Network** *if you have a number of devices send/receiving DMX on the Art-Net Network you may experience interference. By selecting the IPAddress option and entering an IP Address 1 the DMX component will only accept DMX data from the specified IP address. IP Address 2 can be used for back up lighting desk/secondary DMX device.*
- **GrandMa** *This sets the session ID and the IP address of the GrandMa desk using MANet*

CITP Tab



**Start:** click start to add the CITP component and start it.

*HMap*



- **Start:** click start to add the CITP component and start it.
- *Identifier*
- *Port*



## 4. In-Depth Features

### 4.22 Controlling Hippotizer with External Protocols



### 4.25 MIDI2

Although it has been around for over 20 years now, MIDI is still the de facto control standard in the music world. Synthesizers, keyboards, recording equipment all “speak” MIDI and through this interface can control the Hippotizer.

Users can connect a MIDI controller such as the Behringer BCF2000 to control any combination of Parameters, trigger clips using a MIDI Keyboard or record any sequence of commands on a Sequencer program such as Cubase and then edit and play it back at will.

All parameters inside the Hippotizer have been mapped to specific MIDI commands, so using any controller you can access these parameters through your equipment.

The Behringer BCF2000 is extremely useful when using the Hippotizer as it has a very suitable combination of faders, rotation encoders and buttons that make controlling the system very easy.

Most MIDI devices these days come with USB connectivity, so simply connect your device and install any drivers if required.

Once you have added the midi component on the Hippotizer, double-click it to open the configuration, you will be presented with the following window which has Simple, Advanced and Expert Tabs.



- **Simple Mode**

*Simple mode offers a basic user interface to locate a pin within HippoNet and map it to a midi command on your controller.*

*We will now create a simple mapping as an example.*

1. Click **Add Pin**.



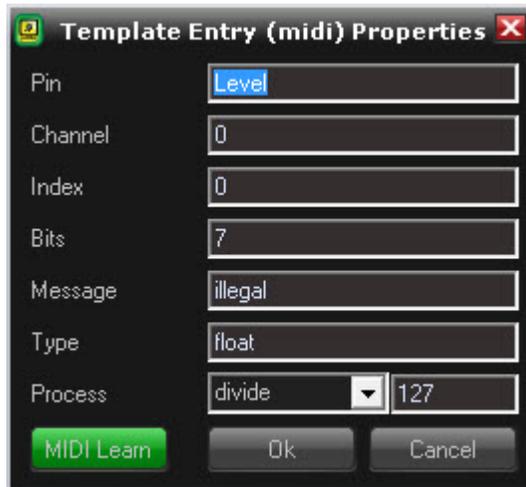
2. Browse to the pin you wish to assign to the midi controller. Then click **OK**.



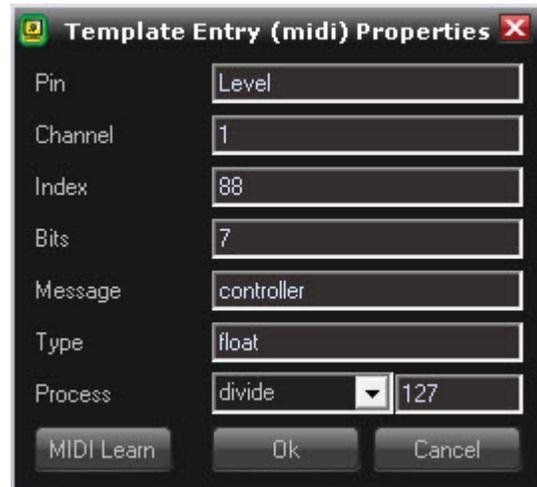
3. You will now be prompted to create a Map reference from the component to a Midi device connected to the computer.

**Note:** You will only have to do this once for each component.

Select the device you wish to add, then click **OK**.



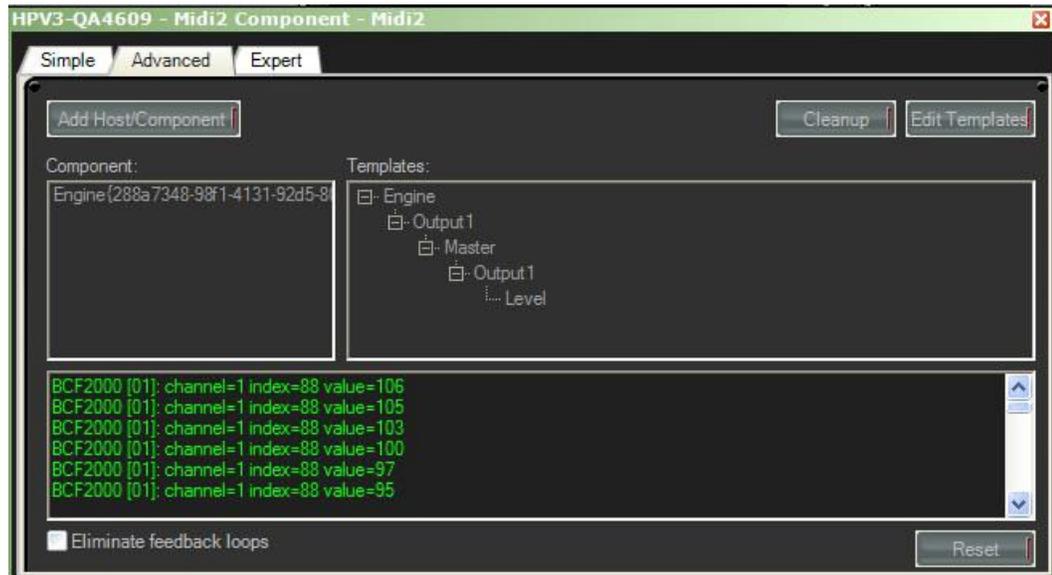
Before



After

4. You will now be presented with the option to enter the settings for the midi device. To simplify things, click **MIDI Learn**. Then adjust the fader/button on the MIDI controller. You will notice the appropriate entries have been made.

- **Advanced Mode**



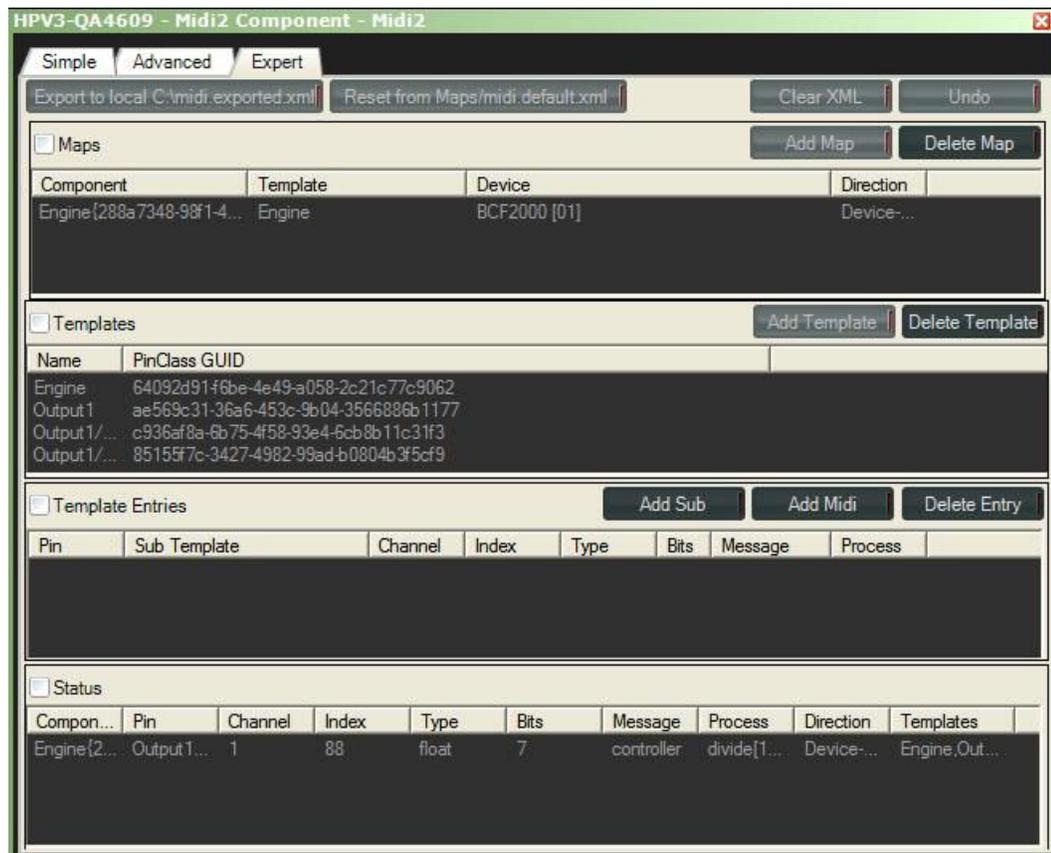
Once you have set up your Midi device using simple mode you may want to edit some of these. However you may find the layout in simple mode does not provide enough information to manage more complex setups. This is where Advanced mode can come in useful. It provides a hierarchical view of the pins you have assigned to Midi controllers.

To edit settings. Click on the component containing the pin you wish to edit. Then browse to the pin in the Templates folder.

Once you have located it. Right-click the pin and select **Edit this entry** to edit it, or **Delete this entry** to delete it.

In Advanced mode you can also view midi values as they are being received by the Hippotizer in the bottom window. These appear in green.

- **Expert Mode**



- **Reset Config**

On all the different types of Midi configuration, there is a **Reset** button. This button resets all the entries you may have made and reverts back to an empty configuration.

- **MIDI Timecode**

If you want to synchronise Timelines for example to external timecode you need to use a MTC (MIDI Timecode) compatible MIDI interface such as the MOTU Timepiece series. They also feature SMPTE to MTC conversion, so you can use this type of signal too. Install the MIDI device as before and configure the Device inside the MIDI component. A Timecode pin will automatically be generated, so you can use it as a synchronisation source inside i.e. the timeline.

- **Controlling Timelines via MIDI**

Controlling timelines from Midi is a very powerful feature. You can trigger complete shows, or just a single effect animation this way.

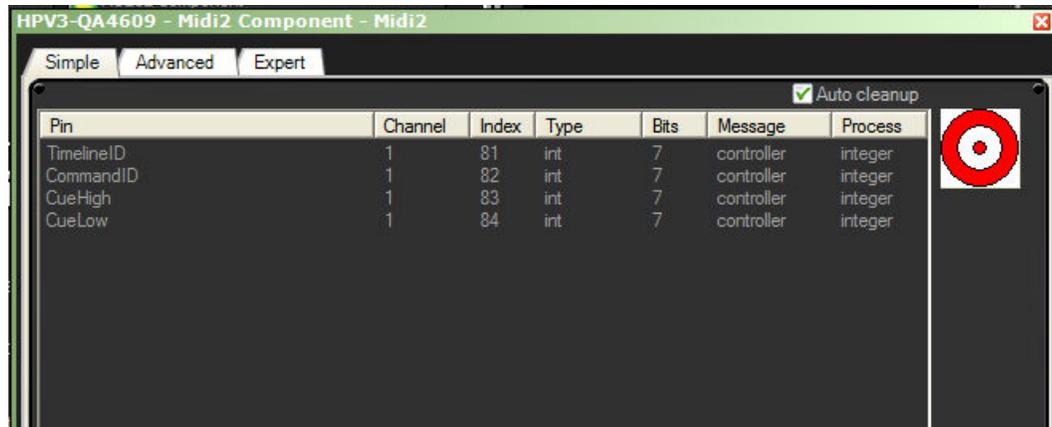
This section explains how you setup you Midi component to trigger timelines, allowing you to jump and play any cue on a timeline.

You need four Midi controller channels to control the timeline component. These four controllers will be assigned to:

- 
- Select Timeline ID
- Select Timeline Command

- CueHigh
- CueLow

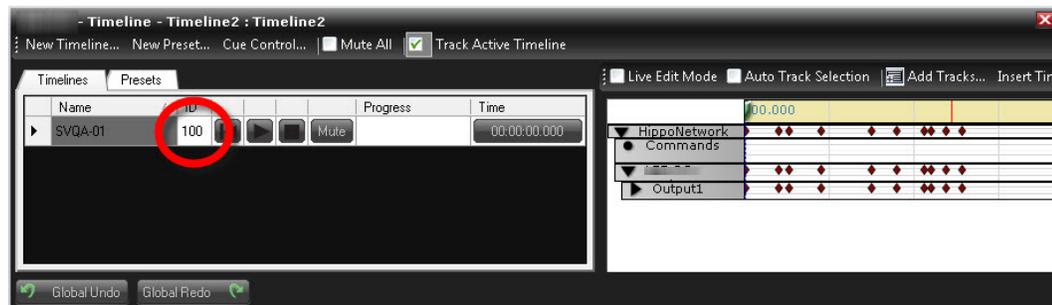
For example:



**Note:** As you add them you will be prompted to assign them to midi commands from your controller. You can use the MIDI Learn feature to do this. If you are not sure of the exact assignments do not worry you can change these by double clicking and selecting Midi Learn again.

**Select Timeline ID (TimelineID)**

The timeline select channel selects which timeline is controlled. This is defined by the ID number entered in the timeline component. By default this ID is empty, so you need to give it an ID number (open the timeline component and enter a unique ID for all the timelines you wish to control via MIDI). These can be integers (whole numbers) from 0-127. If no ID is set, then the timeline cannot be controlled via MIDI. Below is an example of a timeline with 100 as its ID.



**Select Timeline Command (CommandID)**

The following ranges trigger these commands:

- 0-9: Nothing
- 10-19: Play
- 20-29: Pause
- 30-39: Stop
- 40-49: GoCue and Play
- 50-59: Go Cue and Pause

**CueHigh and CueLow**

These two controller channels make up the optional Cue part of the last two commands. CueHigh addresses the full CueNumbers, CueLow the decimal places.

Examples:

*Timeline 1 play-> ctrl1: 001, ctrl2: 015*

*Timeline 15 stop -> ctrl1: 015, ctrl2: 035*

*Timeline 3, Goto Cue 23 and Play: ctrl1: 003, ctrl2: 45, ctrl3:23, ctrl4: 000*

*Timeline 8, Goto Cue 12.4 and Stop: ctrl1: 008, ctrl2: 55, ctrl3:12, ctrl4: 40*

*Adding a TimelineControlString Component*

*The MIDI component cannot talk directly to the Timeline Component, so it needs a TimelineControlString component to translate.*

*To add a TimelineControlString component, click on **More...** on your host, then select **Manage Host**. Go to the Tab components and click the **Add...** button at the bottom of the page. Select the TimelineControlString component from the list, click **OK** and give it a name.*



## 4. In-Depth Features

### 4.22 Controlling Hippotizer with External Protocols



#### 4.27 Timecode on Layer

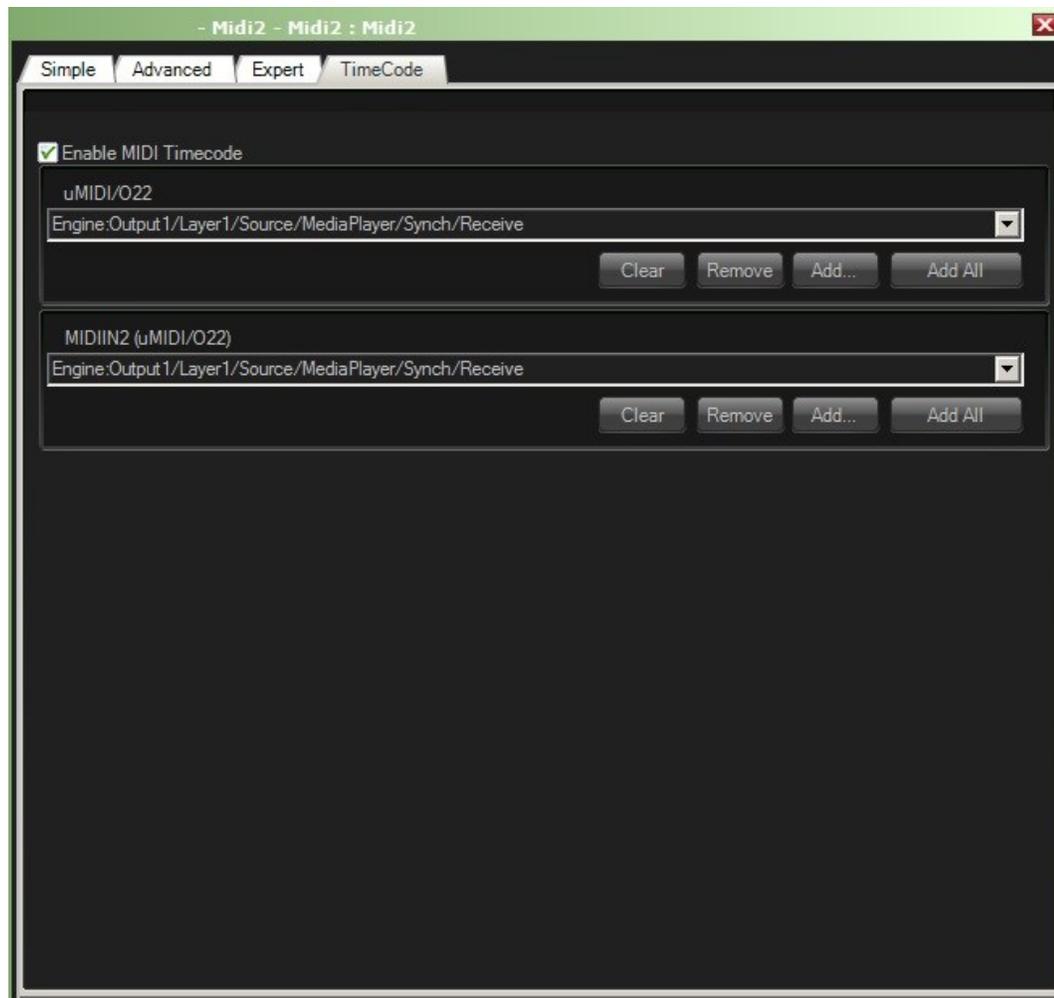
##### Overview

Time code on layer allows each layer of a Hippotizer to individually receive an external timecode source, such as Midi or SMPTE. It also enables you to configure Timecode offset and Fly-Wheel on a layer by layer basis.



- **Configuring TimeCode on Layer**

*Time Code coming into the Hippotizer must first be processed by the relevant Component. If you are using Midi Time Code this is the Midi2 Component. If you are using SMPTE then you will need the SMPTE Timecode reader component.*



For the Midi2 Interface, in the Timecode Tab, Enable Timecode and add the layers you would like to use with Timecode on layer.

If you are using SMPTE, you will need to enable and pin SMPTE to the individual layers.

**Please Note:** Some PCI and PCIe have an on board flywheel function. This is separate from the on layer flywheel in Hipotizer.

- **Enabling TimeCode on Layer**

Time Code on Layer is turned On or Off by clicking on the TC icon.

This can also be controlled from TimeLine, in the Output -> Layer -> Source -> Media Player -> Edit Properties Dialogue.

- **Play Modes**

When Timecode on Layer is enabled, each play mode has a different effect

- **Play Forward Once**

This will play the clip once. If the TimeCode time exceeds the length of the clip the layer will stop playing at the last frame.

- **Play Forward Loop**

*The clip will loop endlessly in time with TimeCode. For example, if you have a 000:04:00:000 (4 Minutes) Clip and the TimeCode is for 000:06:00:000 (6 Minutes), then the clip will be at 2 minutes having looped once*

- **Pause**

*Pressing Pause stops the clip in place. If the Fly-Wheel function is disabled, and the clip is un-paused, then it will jump to the TimeCode position.*

*If Fly-Wheel is enabled the clip will still stop as it normally would. When pause is un-ticked however the behaviour depends on the presence of TimeCode.*

*If TimeCode is present when the pause is disabled, then the clip will resume playing at the position dictated by TimeCode*

*If TimeCode has stopped before the clip was paused, or stops while paused, the layer will jump to the in-point when the layer is un-paused.*

- **Play Backward Once**

*This will play the clip backwards once, starting from the outpoint as TimeCode 000:00:00:000*

- **Play Backwards Loop**

*The clip will play backwards from the endpoint looping at the inpoint endlessly. In Time with TimeCode.*

- **Ping Pong**

*The clip will play from the Inpoint, and run backwards upon reaching the Outpoint. The Clip will Follow TimeCode as multiples of the clip length as it does in looping modes.*

- **Random**

*This will play random frames while TimeCode is received.*

- **Fly-Wheel**

*When Time Code On layer is enabled, the layer will follow incoming Time Code exactly. If the Time Code stops the layer will pause playing.*

*This behaviour can be changed by using the Fly-Wheel option on each layer.*

*If Fly-Wheel is disabled the layer will only play according time code. So, if the time code stops, or skips, the layer will as well.*

- **Timecode locked indicator**

*Each layer has an indicator to show if the media player has successfully synchronised with time code. When the indicator is lit, the layer is synchronised, if not the layer is either fly-wheeling or attempting to re-align with time code. Small skips or drops in the time code will automatically be smoothed out by the Media Player.*

## Dr Hippo

### 4. In-Depth Features

#### 4.28 Dr Hippo



#### 4.28 Dr Hippo

There may be some occasions when you will need to get diagnostic information or configure Hippotizer without starting up the application.

For this reason Dr Hippo is available to you. The one thing to be aware of is that you cannot run Dr Hippo and Hippotizer at the same time.

Below is an explanation of each function available to you within Dr Hippo.

- **Info**

*This is the general Information page and will give you all the data you need to identify your Hippo. It will give you information such as name. (Which you can change easily here), Version of Software running on the unit, serial number and importantly what product version the unit thinks it is.*



- **Logs**

*Logs are a very important way of Green Hippo Support staff understanding when there is a problem, what is going on. We include lots of different logging options so that as much information as possible is recorded but you may not need all of this all the time. We break these down as listed below.*

- **DDinstall.txt**

*Logs Dongle drivers installations*

- **HFWManagedHostLog.txt**

*This is the main log file and gives all information for the main Hippotizer application. This can easily become a large file in its size. Its the main file that Green Hippo Support Staff would ask for if they needed to diagnose any problems.*

- **HPV3 #####.txt**

*This is the log for the install of the version you are running. The ##### here will be the version number.*

- **InstallHistory.txt**

*This is a log of dates that Versions have been installed.*

- **McFtpClient/Server\_log.txt**

*Logs for McFtp. No longer used within Hippotizer so defunct.*

- **ZookeeperV3Log.txt**

*Log file for the separate installation of Zookeeper*

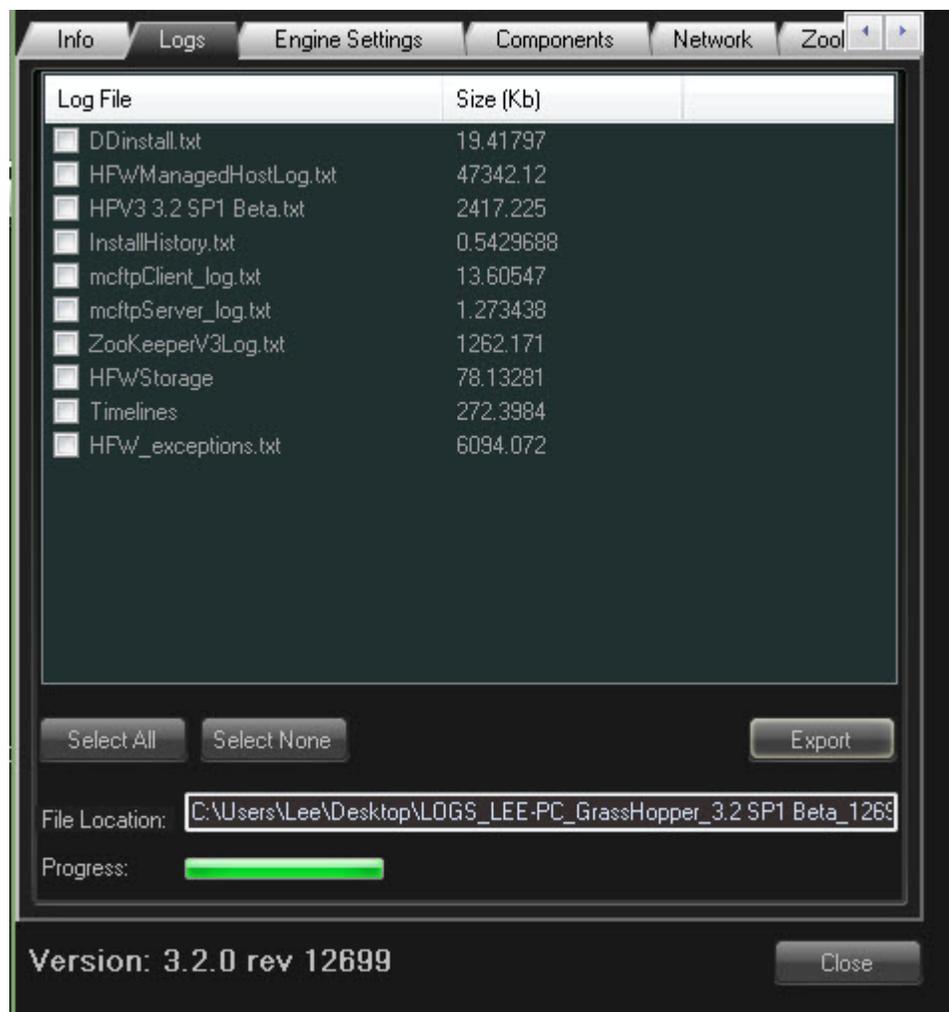
- **HFwStorage**

- **Timelines**

*Log of any Timelines used*

- **HFw\_exceptions**

*This is also another important log file as this captures any major crashed of the Hippotizer Engine.*



*The file location cannot be changed but will package up the logs and add them to a Zip file on the desktop of the Hippotizer you are working on*

- **Engine settings**

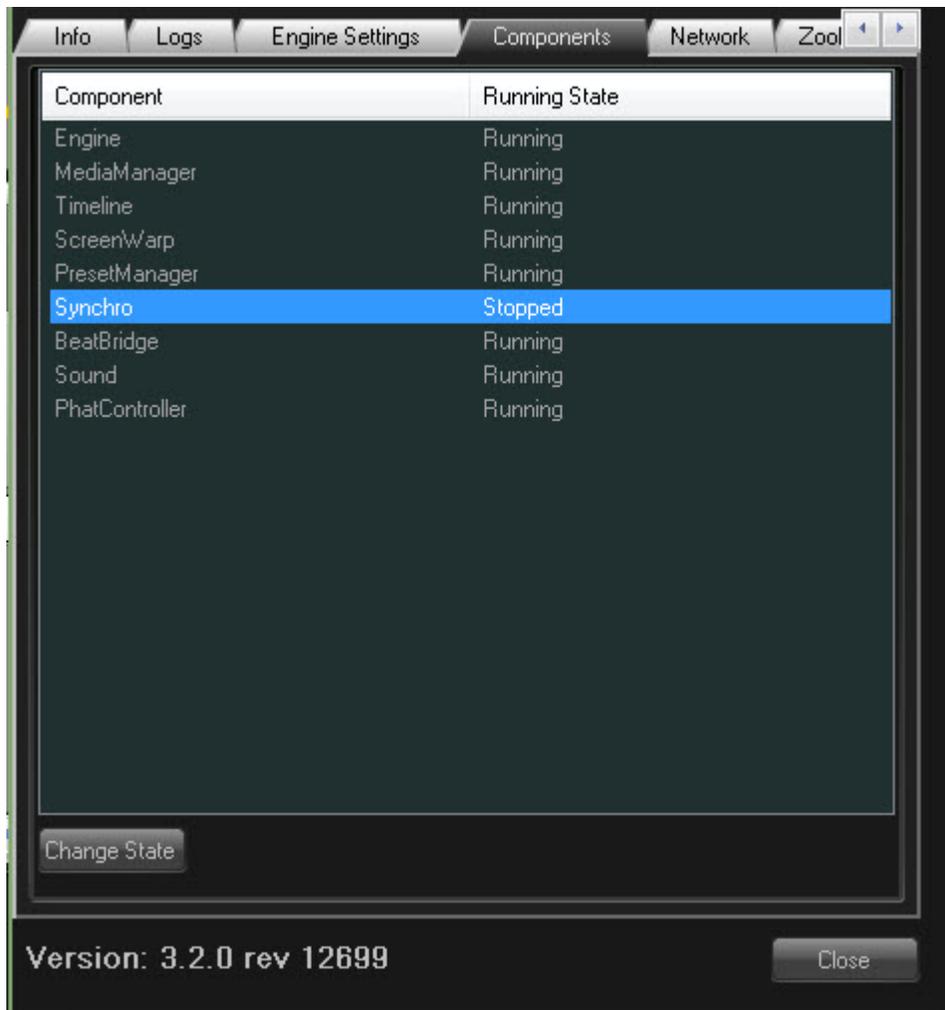
Engine settings allow you to see the resolution that the Hippotizer is outputting and also lets you change from full output to windowed mode should you wish to.

This will also let you see the IP address, Layer modes and in here you can also set any De-interlace settings for Datapath Cards.



- **Components**

In the components tab you can see what components are running and which are stopped. In here you can change the state of any component from running to stopped or vice-versa.



- **Network**

*This is the more advance network information tab and allows you to see all network information of all Hippotizers on your HippoNet setup.*

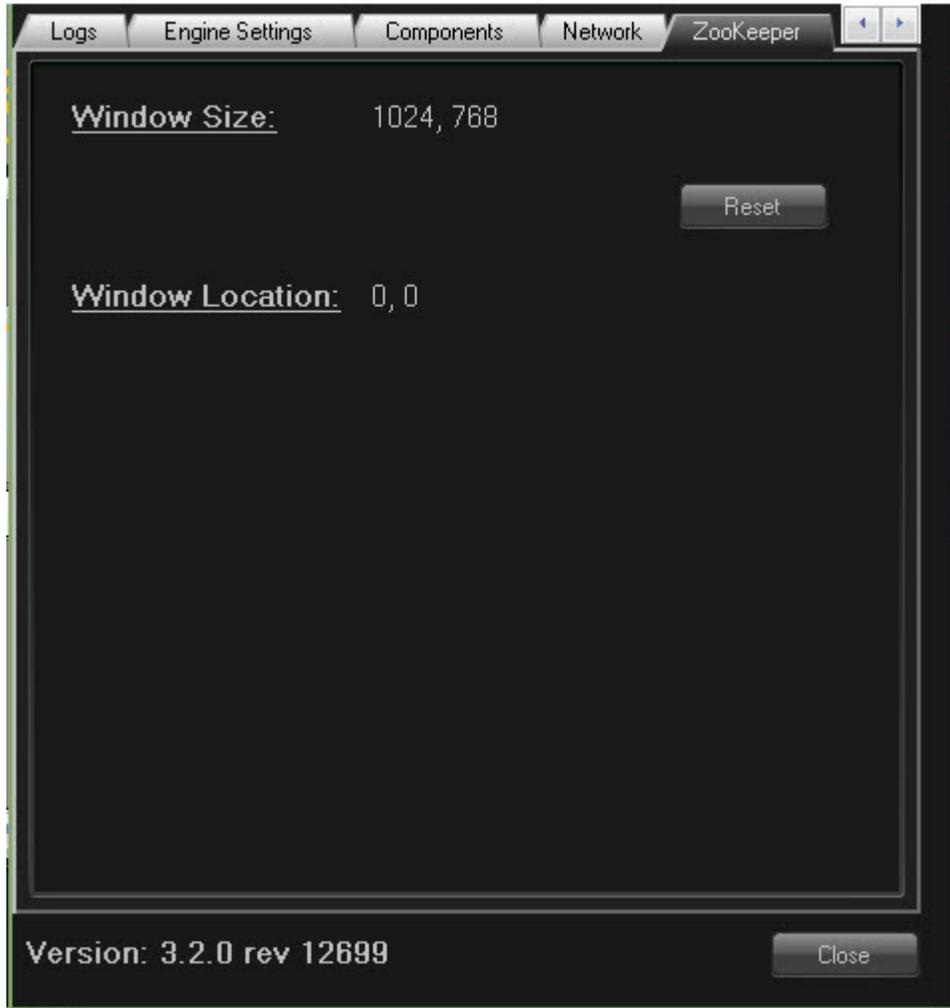
*In here you also have the Network test facility. This enables you to send Data Packets around your network so that you can be sure that all units are receiving data.*

*NB: Be careful when using this on a network that contains non hippotizer units as this will affect speed of network*



- **Zookeeper**

*There may be times when you have a zookeeper monitor that becomes lost. It may have been on a monitor that no longer is plugged in or it may have been minimized and then lost with windows issues. This allows you to reset this back so that it appears back on your local monitor.*





# Components in Detail

## 5.0 Components in Details

### 5.0 Components in Detail - Contents



#### Contents

- [5.0 Overview](#)
- [5.2 Beat Bridge](#)
- [5.3 Clock and Chat](#)
- [5.4 CITP](#)
- [5.6 Cue Controller](#)
- [5.7 DMX2](#)
- [5.8 Genlock](#)
- [5.9 HMap2](#)
- [5.10 HippoBlaster](#)
- [5.11 LCD](#)
- [5.12 Live Mask](#)
- [5.13 Mackie](#)
- [5.14 Media Manager](#)
- [5.15 Midi2](#)
- [5.16 MultiSelect](#)
- [5.17 Network Tester](#)
- [5.18 PhatController](#)
- [5.21 PixelMapper](#)
- [5.23 Real Time Sync](#)
- [5.24 RegionMapper](#)
- [5.26 ScreenWarp](#)
- [5.27 ScreenThief](#)

- [5.29 Sound](#)
- [5.30 Syncro](#)
- [5.31 Text Manager](#)
- [5.32 Telnet Component](#)
- [5.34 Timeline Control String](#)
- [5.35 ToolBox](#)
- [5.36 UberPan](#)
- [5.37 VideoMapper](#)
- [5.38 Virtual Media Manager](#)

## 5. Components in Detail

### 5.0 Components in Detail Overview



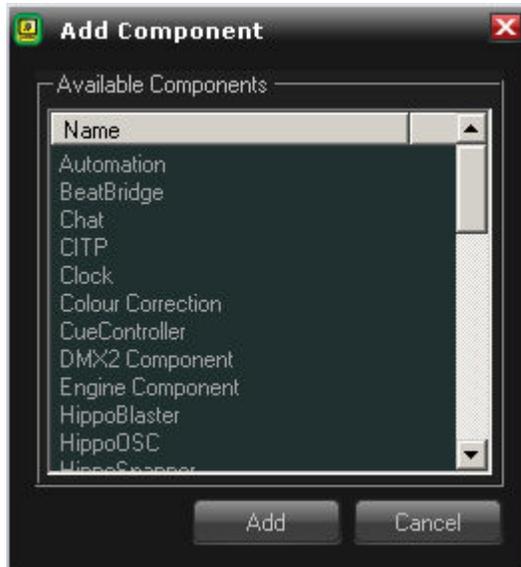
#### Overview

Components comprise of different attributes which can be enabled and disabled in Hippotizer through the setup menu in the HippoNet overview. Such functions as DMX, ScreenWarp can be enable or disabled without switching off the output. This can all be done on a remote instance of ZooKeeper.

The **Components** tab shows details of the components running on a Hippotizer.



- **Adding Components**



The **Add Component** window allows you to add extra components to the HippoNet overview window for the Host Hippotizer. When you choose to add a component you will be asked to name, choose something that will help you identify it. You may wonder at this stage why you are asked to name a component. This is because you may have several instances of similar components running on different machines. For example a Chat component could reside on a Hippotizer with the name Backstage Chat. That way you know which instance of Chat to use to communicate when it is open in ZooKeeper.



Once the component has been added it will start running automatically

- **Removing Components**

To remove a component right click on it in the list and choose **Delete**.



- **Starting and Stopping Components**

To start or stop a component right click on it in the list and choose **Start** or **Stop**.

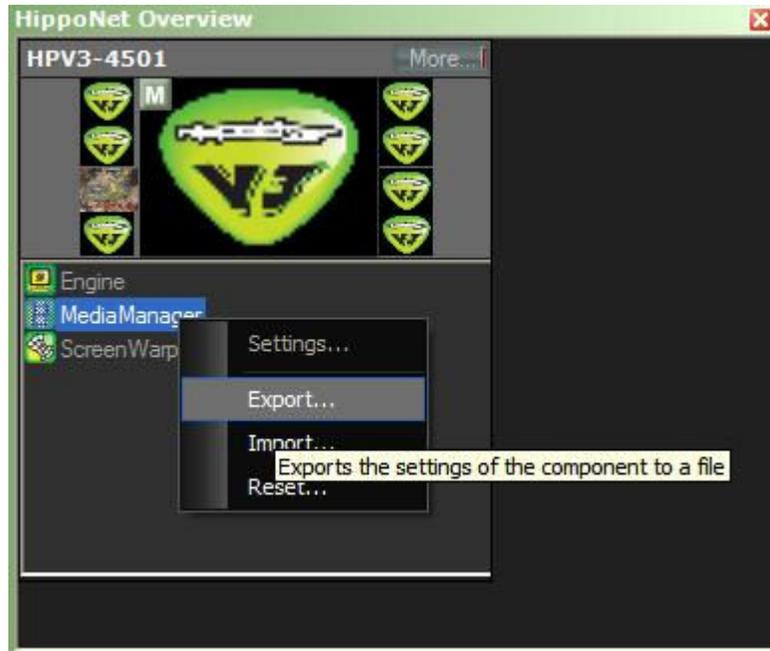


- **Import / Export**

You can export and import the settings for components individually. This is very useful when you for example want to export all the media of a particular show, so you can re-use it at a later stage.

**Note:** Not all components support Import/Export.

To export/import the settings go to the HippoNet Overview and right-click on the component and select the option you need. Please see at the required component for details.



In general each component has a different set of options when exporting settings, so you can usually export only a part of your settings. For example you only want to export your media, but not the media map, then you can use the dialogs to do so.

On Import you again have the possibility to choose between different options, say you have an export with ten timelines, however you only want to load a single one. Also you may need to re-map some of the components references. For example a timeline may have been programmed referencing a specific machine. However at a later date you wish to re-use the timeline, but the original machine has been replaced with a different one. Because each machine is unique you now need to re-map all the timeline references to point to the new machine. You can do this conveniently with the import dialog.



## 5. Components in Detail

### 5.2 BeatBridge



#### Overview

BeatBridge allows incoming audio signals to be used to control attribute values within Hippotizer. As well as using the Bass, Mid or High frequencies of incoming audio, a selection of periodic functions is also included with BeatBridge such as Cosine and Random.

A built in sound analyser can help synchronise the periodic functions to be in time with the music. These can then be mapped to pins in Hippotizer, so for example the intensity of FX1 can react to the intensity of the Bass component of the audio.

- **Starting BeatBridge**

*In order to start Beat Bridge, add the component to your local engine by selecting it from the add component list. The Sound component will also have to be added in order for Beat Bridge to function correctly.*

*Please Note:*

*The Sound Component uses the Default Recording Device within Windows to capture audio. Please ensure that the audio input being used is selected as the default recording device before starting the Hippotizer application.*

- **The Interface**

*Double click on the Beat Bridge component within HippoNet Overview to open its user interface.*



The Beat Bridge window is comprised of three tabs: Main, Presets, and Ranges.

Main:

On the left hand side of the Main Tab is the Sound Component's interface. This gives an indication of the audio signal coming in as well as offering a few options:

The Sound Analyzer has three settings which set how fast the periodic functions are played. These can be accessed from the drop down menu.

**Analyze:** This detects the incoming audio and automatically determines the tempo.

**Generate:** The Analyzer will operate at a specified Tempo set by the Tempo wheel. Double left mouse clicking on encoder will set the tempo to default of 120BPM. (Beats Per Minute).

**Tap Tempo:** Allows the tempo to be set by clicking in time with the music. In order to set the Tempo, click the Tap Tempo button in time with the beat of the music. The plus and minus buttons are used to slightly adjust the Tempo.

**Phase Shift:** This offsets the where each down beat is played without changing the tempo. This can be used to compensate for delay between the detected audio and video on screen.



**Mute / unmute:** Pauses all output from Beat Bridge.

- **Creating BeatBridges**

There are two ways to configure Beat Bridges, drag and drop and directly from the layer interface.

**Drag and Drop:**

Select an attribute to add to the Beat Bridge and left click on it's name. Then, holding the left mouse button down, drag it to the "Drop Here" box within the Beat Bridge component. After dropping the attribute, a prompt will appear so that which output and range can be specified.



Right Click:

Alternatively each attribute can be added by right clicking on the fader and selecting Beat Bridge.



After all of the desired attributes are added to the Beat Bridge, the settings can be saved as Beat Bridge presets.

- **Presets**

Presets:

Each preset allows the instant recall of entire combinations of Beat Bridge settings. Presets are created by setting up the desired combination of bridges and then creating a new Preset. These are then saved as a series of buttons in the in Preset tab.



The number in the name of each preset corresponds to the DMX recall position of that Preset.

The none Preset at index 0 is a good idea to create a preset that has nothing in empty and will clear any active Beat Bridges, it so running Beat Bridges can is generated automatically and cannot be easily cleared, deleted or modified.

Presets can then be Copied or deleted from the buttons to the right of the interface.

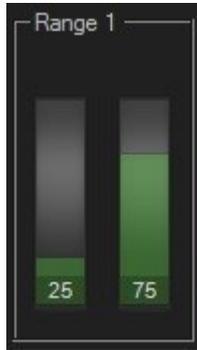
- **Ranges**

Ranges:

Maximum and minimum values the attributes being controlled can be set and recalled. These are controlled from the Ranges tab.



For each range, the left value is the minimum and the right is the max value. So, if you would like to set it so that the level always fluctuates between values of 25% and 75% the required range would be as follows.



- **Importing and Exporting Settings**

The presets made within Beat Bridge can be exported to a .v3s file. This is accessed by right clicking on the Beat Bridge Icon in HippoNet overview and selecting - > **Export** .

In the same menu is the **Import** option. This allows for settings to be brought into the local Beat Bridge component. This has two options: Merge and Replace.

**Merge:** Adds any presets being imported to the existing ones.

**Replace:** Deletes the existing presets and then adds the imported ones to Beat Bridge.

**Please Note:**

Version 3.2 SP1 added absolute indexing of Beat Bridge Presets and also the 'None' Preset at position 0. Due to this, importing Beat Bridge settings from earlier versions will automatically re-number the presets, adding one position to each.

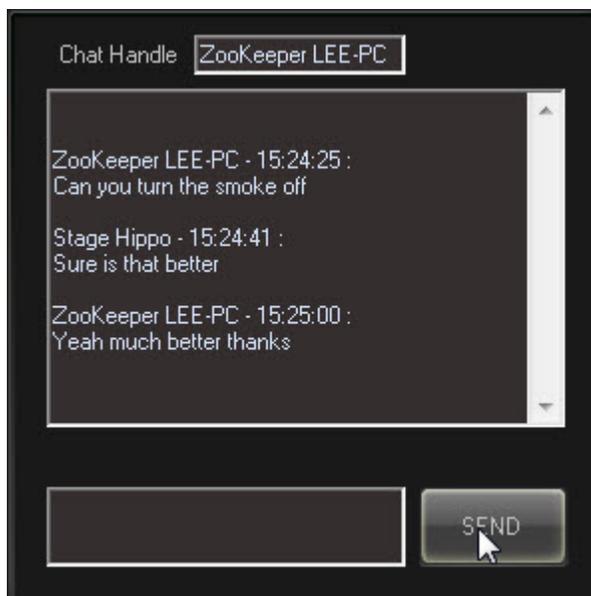
## 5.0 Components in Details

### 5.3 Clock and Chat



#### Chat

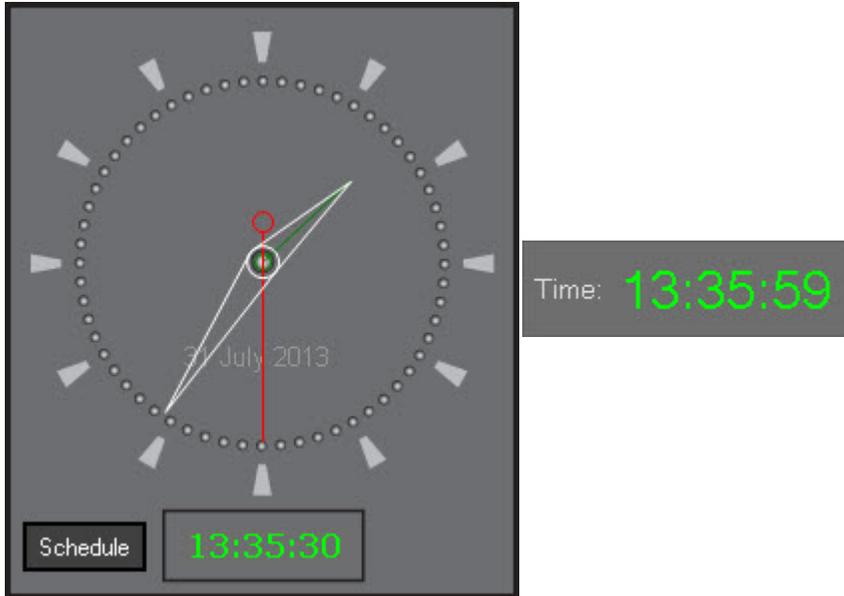
The Chat component is available from the components list. This can then be run from the HippoNet overview window. The Chat component will allow you to talk to other operators using Hippotizers over HippoNet similar to instant messaging applications. To enable chat on the other Hippotizers you must run the chat component from the same Hippotizer as the host, i.e. you will only need to add the component on one Hippotizer on the network.



#### Clock And Scheduler

A Clock component is available from the components list. This can then be run from the HippoNet overview window. The clock can be used to control events at particular times.

The clock is available in three sizes, and features analogue as well as digital time display. It also features the date.



Clicking Schedule will bring up the main Schedule window. This will show you any events already added and when they were last triggered.

To add a new Scheduled event click Add in the bottom right hand corner. This will bring open a new Add to window.

With the scheduler you can perform many tasks, you can move faders at certain times of the day, you can trigger timelines or you can build a whole range of scheduled events.

- **Description**  
*Give your Event a description so that its easy to recognise.*
- **Target of Action**  
*What values you will be affecting with this event, This could be a single parameter or a timeline for example*
- **Set Target Value**  
*This is the value for the above target. This can be a zero to one value or a trigger to play stop load pause etc etc.*
- **Live Output**  
*By ticking this you can see the immediate result of the value on the target.*
- **Schedule**  
*Set the start and end date and time here.*
- **Repeat**  
*Set the repeat duration here*
- **Active**  
*Turn the even on and off*

- **No End Date**

*Set this if you want this to occur with no end date.*



Once you have added the event you can make this active, edit or delete the whole event from the Scheduler main window.

## 5. Components in Detail

### 5.4 CITP



#### Overview

**CITP** or the Controller Interface Transport Protocol is an open source suite of network protocols that allows lighting desks and visualizers to communicate with media servers.

CITP enables the Hippotizer to send thumbnail images of the media map to lighting desks, and streaming video of layer or master previews to compatible third party visualizer software.

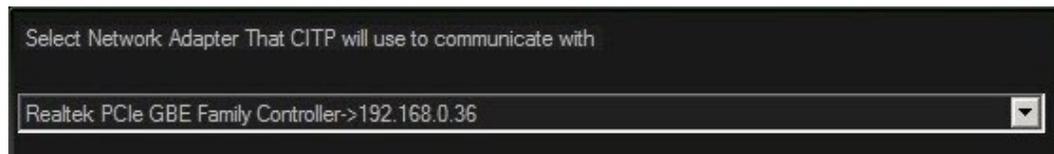
- **Configuring CITP**

*CITP requires a network connection to either a lighting desk or visualizer. Before starting Hippotizer connect and configure the network. CITP can operate on either the Data or HippoNet port, which is more practical will depend on the set-up.*

**Tip:** *It is a good idea to segregate show critical network traffic from all other traffic on the network.*

*CITP requires a standard, Class C (192.168.0.xxx with a subnet mask of 255.255.255.0 for example) Ip address. This IP address should be on the same subnet as any lighting desks or visualizers that it will be communicating with. Take note of the IP address as it is used to select which port to use by CITP.*

*After the network is completely set up, start Hippotizer and add the CITP component. Double left click on the CITP component icon to select which network adapter it will use.*



*Once the network port is specified, CITP will begin running.*

*If becomes necessary to disable CITP, this can be done temporarily from within the DMX2 component.*



*This can be found within the Settings menu under the CITP tab.*

- **Using CITP**

*CITP has been tested with various lighting console and visualizer programs, these include:*

*Visualizer:*

*-Capture Polar*

*-Cast Software's Wysiwyg*

*Lighting Desk:*

*-MA Lighting Grand MA2 (Version 2.7 and later)*

*-Avalites Titan Series Lighting Desks (Version 6.1 and later)*

*This is not an exhaustive list; please contact the lighting desk or visualizer manufacturer if it is unclear if CITP support has been implemented.*

*In most cases it is necessary to start (or restart) the visualizer or lighting desk after Hippotizer is on and CITP is configured and running, before communications will work correctly.*

## 5. Components in Detail

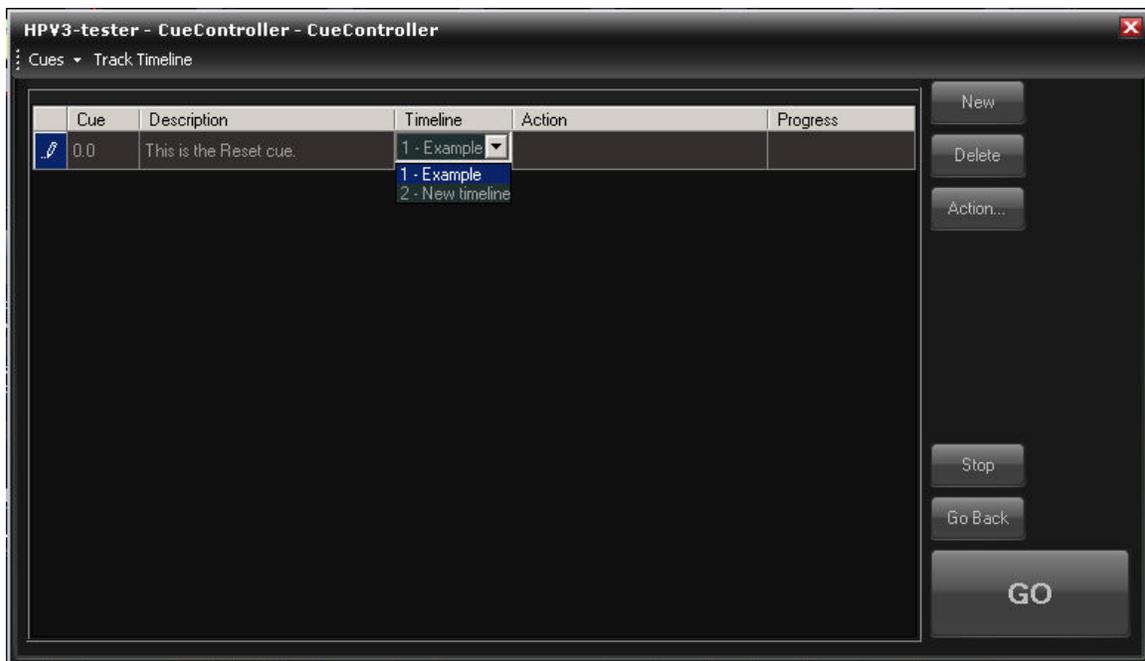
### 5.6 Cue Controller



#### Overview

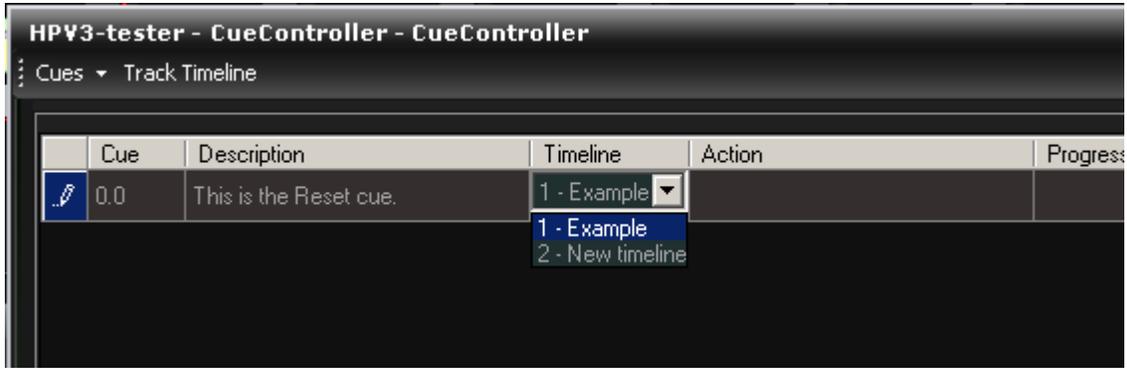
Once you find yourself with a number of timelines, you can control them using a number of different methods (e.g. Midi, HippoNet etc...). However for straight forward sequential playback of a number of timelines the **CueController** component can be used.

Add the component as normal, and then open it. It will initially have one reset cue.



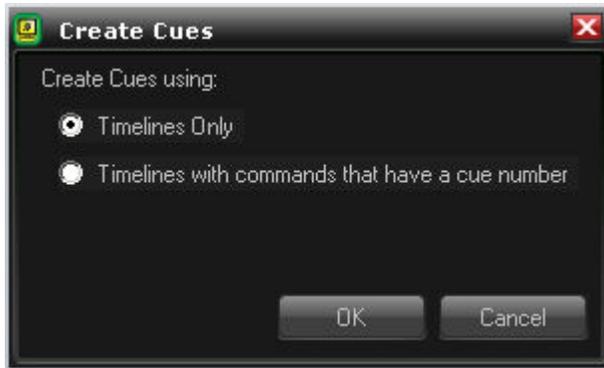
Each cue created will have a Cue number, Description, Timeline, Action, and Progress bar. Using the **Cues** button at the top-left of the window it is possible automatically create a cue for each timeline or command you have created in the timeline component. To do this;

First, the reset cue needs to be assigned an initial timeline to start with. In the **Timeline** drop-down select the first timeline you want in the Cue. As below;

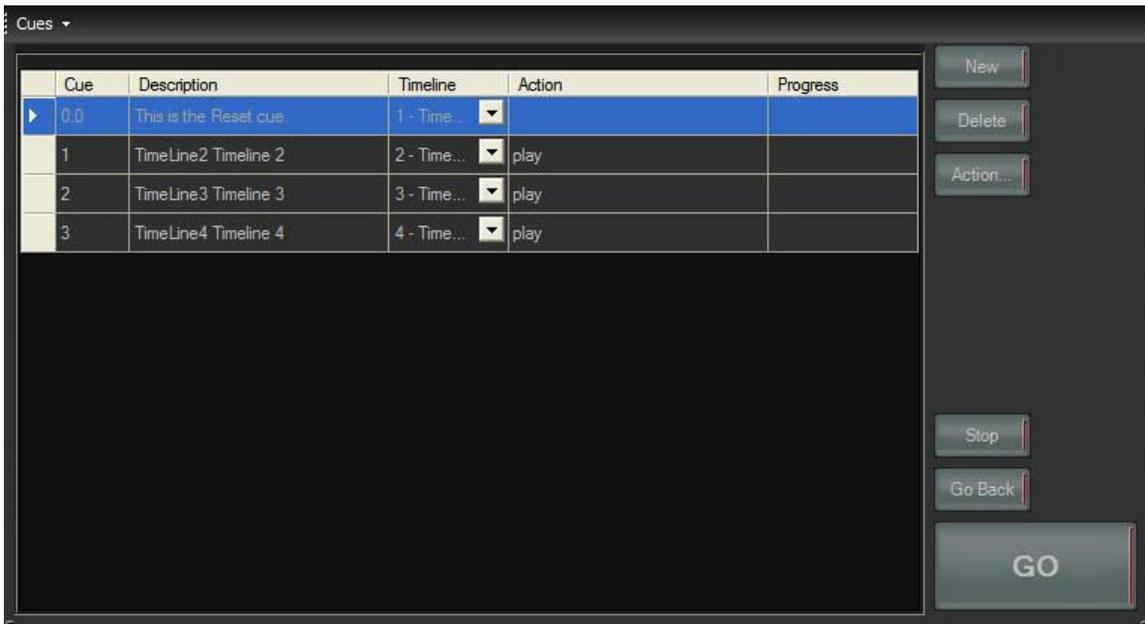


Once an initial timeline has been assigned to a cue click on the **Cues**, and select **Create All...** you will be prompted to create cues for timelines only or timelines with commands (as below).

**Note:** Only commands which have been given cue number can be assigned an action in the **CueController**.



Once you have automatically created a number of cues. The **CueController** should look as below:



**Note:** The progress bar in the **CueController** is not representative of the timeline playback status.

Now, using the **GO**, **Stop**, and **Go Back** buttons you can step through a number of timelines using cues. Easily stepping back if required. For example during rehearsals or playback demonstrations.

Cues can be edited, added, and deleted. When managing cues it is important to remember that currently highlighted cue will have the selected action carried out on it.

## 5. Components in Detail

### 5.7 DMX2



#### DMX / Art-Net

##### Art-Net:

Hippotizers use Art-Net as their default external protocol. There are more and more devices emerging that can generate Art-Net over Ethernet without the use of traditional DMX 512. If you are using this type of device you can simply connect it directly to the Art-Net Ethernet port without the need for a DMX to Art-Net converter. Follow the manufacturer's guidelines for setting IP addresses and configuration of start addresses etc.

##### DMX 512:

DMX 512 has been the standard control protocol in the lighting industry for many years. Although it has its limitations we have endeavoured to make all the functions of the server controllable via an external device using this protocol. This means that where you are controlling DMX devices, you can add the Hippotizer to your setup as another 'fixture' and integrate it into a larger show. Furthermore, there are many lighting consoles available that have the Hippotizer 'personality' and with these you can sequence any series of commands easily. Please see our support website for a list of available drivers for lighting consoles.

- **DMX2 Overview**



Dmx On/Off,  Toggles DMX Control, when set to off the button will be coloured red 

- **Smart Patch**

When the DMX2 Component is added, by default it is empty. However the first time you open the DMX2 configuration window it will add a device and create fixtures following the DMX Map as specified on the Green Hippo website (see <http://www.green-hippo.com/support/>).

If you change engine settings, edit the current DMX device or fixtures, you can click the **Smart Patch** button to reset the option. This will patch your Hippotizer with the current default engine mode.



You can change this default by using the personality editor. For example if you wanted the Master Light to be the default when selecting Smartpatch then you open up the personality editor, open

the master light file. Then over in the right hand side select the tick box that says, "default for this class". Then save this and you now when you press smart patch again the master will be the light version.

Channel 1	Channel 2	Parameter	Type	Update Only	Map
1		Output1/Level	Variable	False	Edit
2		Output1/Colour/...	Variable	False	Edit
3		Output1/Colour/...	Variable	False	Edit
4		LiveMask/Mask	Mappable	False	Edit
5		VideoMapper/En...	Toggle	False	Edit
6		VideoMapper/Mix	Variable	False	Edit
7		VideoMapper/Mi...	Toggle	False	Edit
8		VideoMapper/Vid...	Mappable	False	Edit
9		VideoMapper/Vid...	Mappable	False	Edit
10		Output1/Volume	Variable	False	Edit

Information

Name: Master Light 3.1

Class: HIP\_MasterSingleOutput

Default for this Class

Number of Channels: 10

Sort by Channel 1: Sort

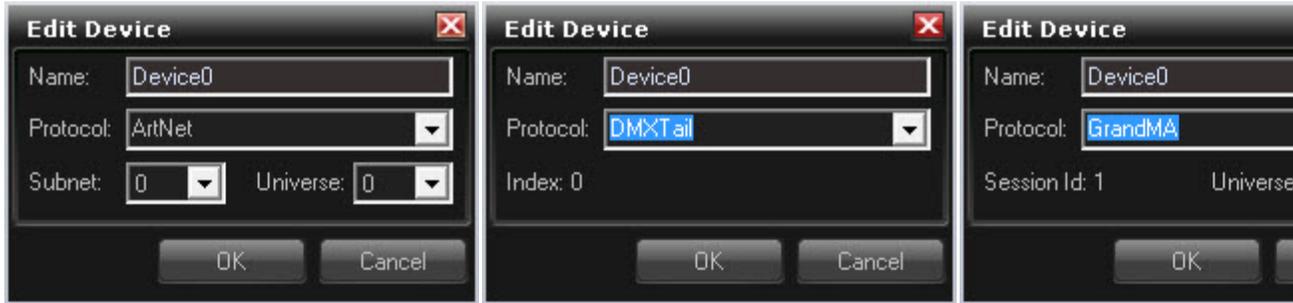
Set Update Only to: All None

Name	Start Cha...	Number O...	Target	Personality
Master	1	10	LEE-PC: En...	Master Light 3.1
Layer1	11	88	LEE-PC: En...	Layer 3.2 X-fade
Layer2	99	88	LEE-PC: En...	Layer 3.2 X-fade
Timeline2	187	4	LEE-PC: Ti...	Timeline

- **Managing Devices and Fixtures**

*In most cases, the Smart Patch and default configurations will be the easiest way to get the DMX2 working. However some more advanced configuration may be required.*

*Below the Menu, the DMX2 configuration window is split into two sections. On the left are listed devices. When using Art-Net the Subnet and Universe are displayed in the (0,0). When a device is configured as a DMXTail the index number of that device is displayed.*



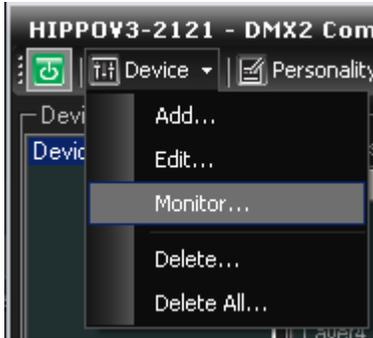
Art-Net. Select Subnet and Universe

DMX Tail: Select connected device

MANet: Select universe. Session Settings menu

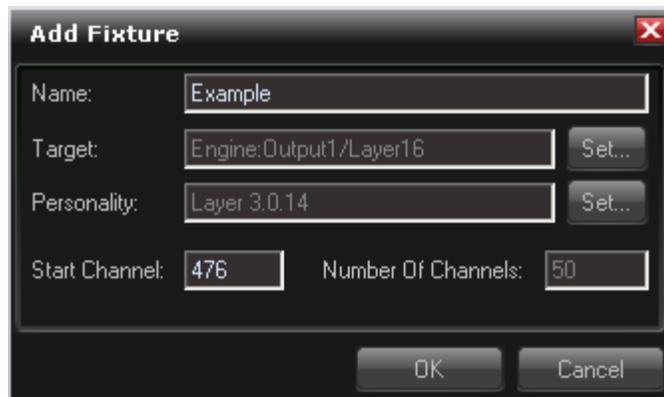
- **Devices**

*Each device (Art-Net network port, DMXTail Or GrandMa desk) needs to be added and configured before parameters in the Hippotizer can be added as fixtures.*



*There is also a device Monitor (below) to check DMX data being received by a device to troubleshoot problems.*





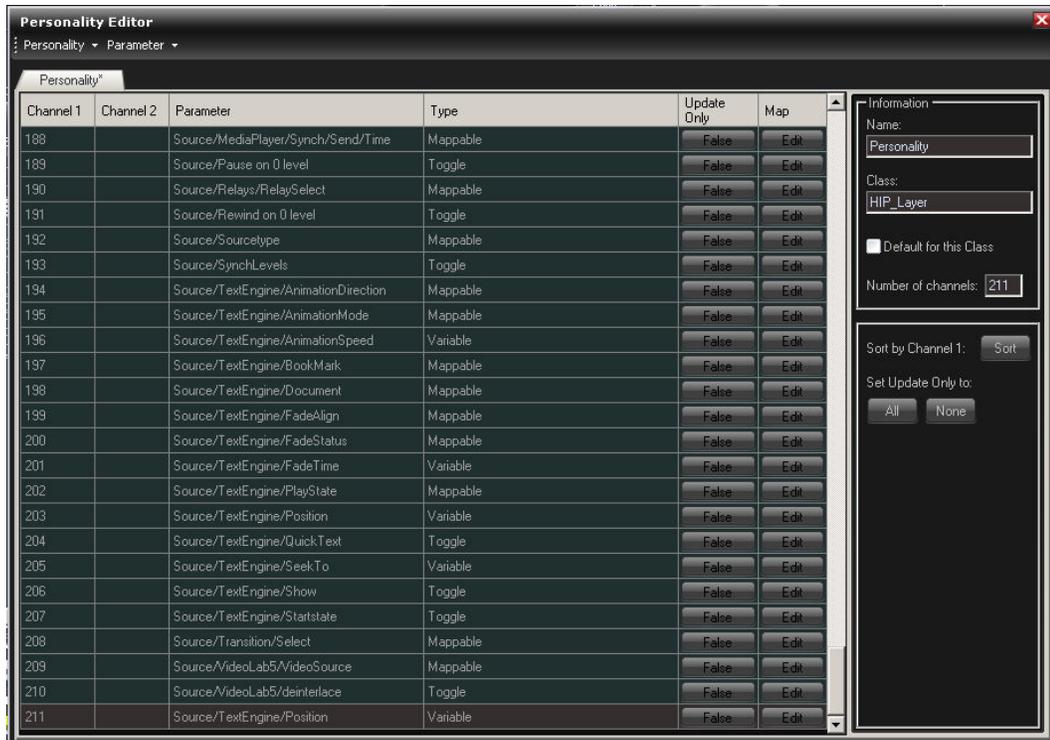
- **Remove:** will delete the selected fixture
- **Edit:** is used to change edit the fixture settings.
- **Auto Patch:** Will re- patch the channels of current fixtures starting from 1.
- **Refresh:** Will refresh the displayed fixtures in the fixtures window.
- **Move Up:** Selecting a fixture and clicking Move Up will move the fixture up in the list and change its start channel.
- **Move Down:** Selecting a fixture and clicking Move Down will move the fixture down in the list and change its start channel.

- **Personality Editor**

When creating fixtures, a corresponding personality is required which specifies how certain fixtures when behave when receiving DMX data.

By default there are a number of personalities provided by Green Hippo which correspond to our documented DMX Maps as published on our website (see <http://www.green-hippo.com/support/>).

If you want to edit these or create your own, the personality editor will enable you to do this. Click **Personality Editor** to open.

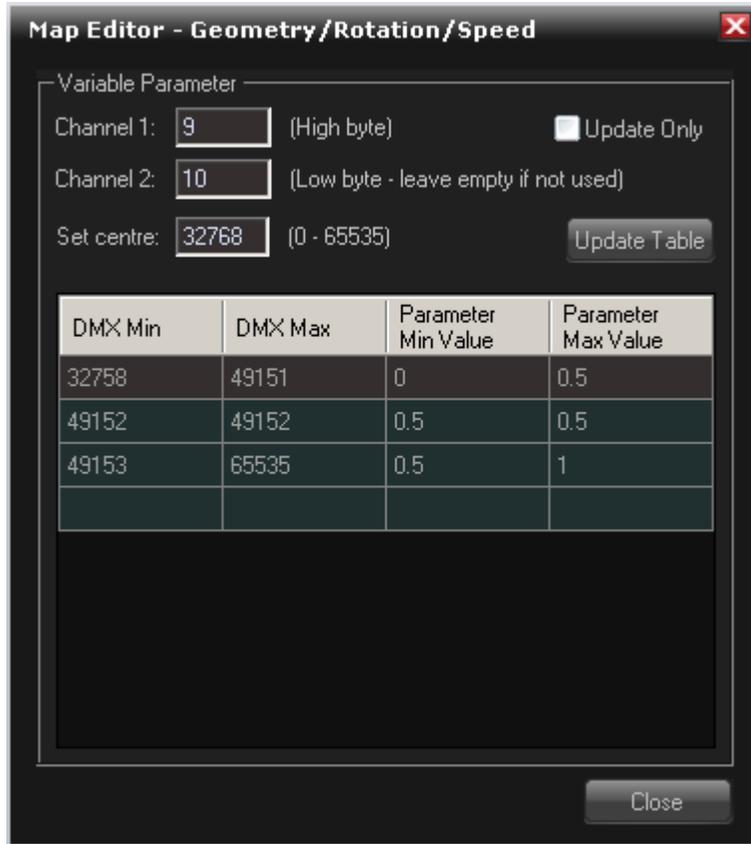


Click the **Personality** button to create, open or duplicate the current personality (when duplicated the duplicate's name will be appended with an `_*Number*`)

Also you can export the information in the personality as a CSV file.

Once a Personality is loaded the parameter information is displayed. If you want to edit a particular parameter for the default Personality, you should create a duplicate first to keep the original as a backup.

Once you have a duplicate, double-click a parameter to edit it. Below is an example of the Geometry DMX map:

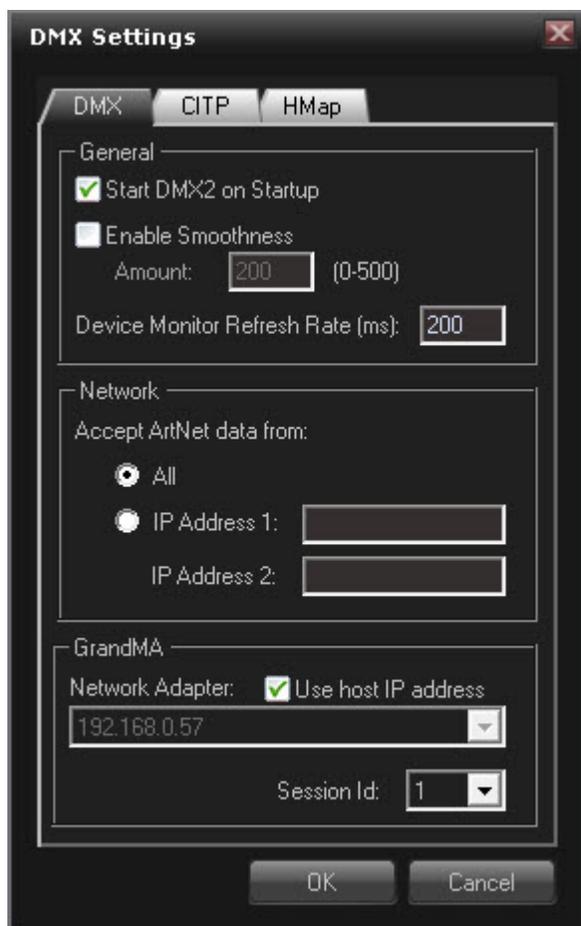


Here the details on how the parameter will behave are listed.

- **Settings**

In DMX Settings. DMX2 Component settings can be set, also the CITP and HMap components can be added/started.

DMX Tab



- **Start DMX2 on startup:** this option can set the DMX component to enabled/disabled on startup.
- **Enable Smoothness:** Smoothness interpolates values between changes to integer pins over a given amount of time. This is best thought of as fading the value, so if the layer level is set to 0, and then instantly brought to 100, smoothness will fade the value from 0-100 over a short period of time. This is to compensate for unstable connections sometimes encountered with the USB DMX Tail. Please Note: Smoothness will also fade values down so can produce undesired effects when resetting a layer from DMX.
- **Device monitor refresh rate:** When using the DMX monitor, if you want to increase/decrease the rate at which the monitor is updated enter a lower number. The default is 200 milliseconds.
- **Network:** if you have a number of devices send/receiving DMX on the Art-Net Network you may experience interference. By selecting the IPAddress option and entering an IP Address 1 the DMX component will only accept DMX data from the specified IP address. IP Address 2 can be used for back up lighting desk/secondary DMX device.
- **GrandMa:** This sets the session ID and the IP address of the GrandMa desk using MANet. There are two versions of MA-Net as of Hippo Version 3.2.2: MA-Net 2 and MA-Net 2.9. If you are using MA software version 2.9 or greater please use MA-Net 2.9. Please note that universes above 64 are not available in MA-Net 2.

CITP Tab



**Start:** click start to add the CITP component and start it.

*HMap*



- **Start:** click start to add the CITP component and start it.
- *Identifier*
- *Port*

**Hippotizer Personalities:**

**Hippotizer contains hundreds of channels to be controlled from DMX and many different layouts to use. We have created a series of 'Stock' channel mappings that contain commonly used attributes.**

- **3.2.2 Master Pan Mode**

3.2.2 Master Pan Mode

93 Channels

Output	Function	DMX	DMX (16bit)	Default	Range	Notes
	Level		1		255 0-255	
	Keystone X1		2	3	0 0-65535	
	Keystone Y1		4	5	0 0-65535	
	Keystone X2		6	7	65535 0-65535	
	Keystone Y2		8	9	0 0-65535	
	Keystone X3		10	11	65535 0-65535	
	Keystone Y3		12	13	65535 0-65535	
	Keystone X4		14	15	0 0-65535	
	Keystone Y4		16	17	65535 0-65535	
	Red		18		128 0-127	Subtract Colour
						128 Normal
					129-255	Add Colour
	Green		19		128 0-127	Subtract Colour
						128 Normal
					129-255	Add Colour
	Blue		20		128 0-127	Subtract Colour
						128 Normal
					129-255	Add Colour
	Brightness		21		128 0-255	
	Contrast		22		128 0-255	
	Invert		23		0 0-127	Invert Off
					128- 255	Invert On
	Rotation		24	25	16384 0 - 32768	Index Position
					32769 - 49151	Continuous rotation CW

49152 Stop

49153 - 65535 Continuous rotation CCW

	Position X	26	27	32768 0-65535	
	Position Y	28	29	32768 0-65535	
	Zoom	30	31	32768 0-65535	
	FX1 Sel	32		00-255	
	FX1 Level	33		00-255	
	FX1 Param 1	34		128 0-255	
	FX1 Param 2	35		128 0-255	
	FX1 Param 3	36		128 0-255	
	FX1 Param 4	37		128 0-255	
	FX1 Param 5	38		128 0-255	
	FX2 Sel	39		00-255	
	FX2 Level	40		00-255	
	FX2 Param 1	41		128 0-255	
	FX2 Param 2	42		128 0-255	
	FX2 Param 3	43		128 0-255	
	FX2 Param 4	44		128 0-255	
	FX2 Param 5	45		128 0-255	
	WarpA Select	46		00-255	Selected warp for Channel A
	WarpB Select	47		00-255	Selected warp for Channel B
	Warp Mix	48		0	0 Warp Channel B
					255 Warp Channel A
	Live Mask	49		00-255	
2	Keystone X1	50	51	00-65535	
	Keystone Y1	52	53	00-65535	
	Keystone X2	54	55	65535 0-65535	
	Keystone Y2	56	57	00-65535	
	Keystone X3	58	59	65535 0-65535	
	Keystone Y3	60	61	65535 0-65535	
	Keystone X4	62	63	00-65535	

Keystone Y4	64	65	65535 0-65535	
Red	66		128 0-127	Subtract Colour
				128 Normal
			129-255	Add Colour
Green	67		128 0-127	Subtract Colour
				128 Normal
			129-255	Add Colour
Blue	68		128 0-127	Subtract Colour
				128 Normal
			129-255	Add Colour
Brightness	69		128 0-255	
Contrast	70		128 0-255	
Invert	71		0 0-127	Invert Off
			128-255	Invert On
Rotation	72	73	16384 0 - 32768	Index Position
			32769 - 49151	Continuous rotation CW
			49152	Stop
			49153 - 65535	Continuous rotation CCW
Position X	74	75	32768 0-65535	
Position Y	76	77	32768 0-65535	
Zoom	78	79	32768 0-65535	
Warp2 ASelect	80		0 0-255	Selected warp for Channel A
Warp2 BSelect	81		0 0-255	Selected warp for Channel B
Warp 2 Mix	82		0	0 Warp Channel B
				255 Warp Channel A
Video Map Enable	83		0 0-128	Disabled
			128-255	Enabled
Video MapMixmode	84		255 0-255	
Mix Morph	85		0 0-128	Morph Off
			128-255	Morph On

Map select A	86		00-255	
Map Select B	87		00-255	
Audio Volume	88		255 0-255	
Region Mapper	89		00-127	Disable
			128-255	Enable
Timecode Shift	90	91	32768 0-65535	Timecode
For Future Use	92		00-255	
Preset Select	93		00-255	0 = No Preset selected 1 = Preset 1 2 = Preset 2 3 = Preset 3 ... 255 = Preset 255

- 

- **3.2.2 Master Layer**

Master Layer 3.2.2 62 channels

Function	DMX	DMX (16bit)	Default	Range	Notes
Level	1		255	0-255	
Keystone X1	2	3	0	0-65535	
Keystone Y1	4	5	0	0-65535	
Keystone X2	6	7	65535	0-65535	
Keystone Y2	8	9	0	0-65535	
Keystone X3	10	11	65535	0-65535	
Keystone Y3	12	13	65535	0-65535	
Keystone X4	14	15	0	0-65535	
Keystone Y4	16	17	65535	0-65535	
Red	18		128	0-127	Subtract Colour
				128	Normal
				129-255	Add Colour
Green	19		128	0-127	Subtract Colour

				128	Normal
				129-255	Add Colour
Blue	20		128	0-127	Subtract Colour
				128	Normal
				129-255	Add Colour
Brightness	21		128	0-255	
Contrast	22		128	0-255	
Invert	23		0	0-127	Invert Off
				128-255	Invert On
Rotation	24	25	16384	0 - 32768	Index Position
				32769 - 49151	Continuous rotation CW
				49152	Stop
				49153 - 65535	Continuous rotation CCW
Pos X	26	27	32768	0-65535	
Pos Y	28	29	32768	0-65535	
Zoom	30	31	32768	0-65535	
FX1 Select	32		0	0-255	
FX1 Level	33		0	0-255	
FX1 Param 1	34		128	0-255	
FX1Param 2	35		128	0-255	
FX1Param 3	36		128	0-255	
FX1Param 4	37		128	0-255	
FX1Param 5	38		128	0-255	
FX2 Select	39		0	0-255	
FX2 Level	40		0	0-255	
FX2 Param 1	41		128	0-255	
FX2 Param 2	42		128	0-255	
FX2 Param 3	43		128	0-255	
FX2 Param 4	44		128	0-255	
FX2 Param 5	45		128	0-255	
Warp A Select	46		0	0-255	Selected warp for Channel A

Warp B Select	47	0	0-255	Selected warp for Channel B
Warp Mix	48	0	0	Warp Channel B
			255	Warp Channel A
Live Mask	49	0	0-255	
Video Map Enable	50	0	0-127	Disabled
			128-255	Enabled
Video Map Mixmode	51	255	0-255	
Mix Morph	52	0	0-127	Mix
			128-255	Morph
Map select A	53	0	0-255	
Map Select B	54	0	0-255	
Audio Volume	55	255	0-255	
Region Mapper	56	0	0-127	Disabled
			128-255	Enabled
Timecode Shift	57	58	32768	Negative Shift
			32769-65535	Positive Shift
Sat	59	128	0-255	
Shift	60	128	0-255	
Region Mapper Map Select	61	0	0	Disable
			1-255	Map Select
				0 = No Preset selected
				1 = Preset 1
				2 = Preset 2
Preset Select	62	0	0-255	3 = Preset 3
				...
				255 = Preset 255

- 

- **3.2.2 Master Layer Light**

Function	DMX	DMX(16bit)	Default	Range	Notes
Master Layer Light 3.2.2				15 Channels	
Level	1		255	0-255	

Brightness	2	128	0-255	
Contrast	3	128	0-255	
Live Mask	4	0	0-255	
Video Map Enable	5	0	0-127	Disabled
			128-255	Enabled
Video MapMixmode	6	255	0-255	
Mix Morph	7	0	0-127	Mix
			128-255	Morph
Map select A	8	0	0-255	
Map Select B	9	0	0-255	
Audio Volume	10	255	0-255	
Region Mapper	11	0	0-127	Disable
			128-255	Enable
Shift	12	128	0-255	
Sat	13	128	0-255	
Region Mapper Map Select	14	0	0	Disable
			1-255	Map Select
				0 = No Preset selected
				1 = Preset 1
				2 = Preset 2
				3 = Preset 3
				...
				255 = Preset 255

•

• **3.2.2 Layer**

Media Layer 3.2.2 91 channels

Function	DMX	DMX(16bit)	Default	Range	Notes
Level	1		0	0-255	
Mixermode	2		120	0-9	Additive Dissolve

			Oct-19	Subtractive Dissolve
			20-29	Darken
			30-39	Lighten
			40-49	Softlight
			50-59	Softlight Inverse
			60-69	Hardlight
			70-79	Overlay
			80-89	Difference
			90-99	Multiply
			100-109	Screen
			110-119	Opaque
			120-129	Sprite
			130-139	Luminance Key
			140-149	Matte
Live Mask	3	0	0-255	
Red	4	128	0-127	Subtract Colour
			128	Center
			129-255	Add Colour
Green	5	128	0-127	Subtract Colour
			128	Center
			129-255	Add Colour
Blue	6	128	0-127	Subtract Colour
			128	Center
			129-255	Add Colour
Brightness	7	128	0-255	
Contrast	8	128	0-255	
Colour Invert	9	0	0-127	Invert Off
			128-255	Invert On
AdvanceColourEnable	10	0	0-127	Enable Off
			127-255	Enable On
Advance Red Low	11	128	0-255	

Advance Red Mid	12		128	0-255	
Advance Red High	13		128	0-255	
Advance Green Low	14		128	0-255	
Advance Green Mid	15		128	0-255	
Advance Green High	16		128	0-255	
Advance Blue Low	17		128	0-255	
Advance Blue Mid	18		128	0-255	
Advance Blue High	19		128	0-255	
				0-32768	Index Position
				32769 - 49151	Continuous rotation CW
Rotation	20	21	16384	49152 Stop	
				49153 - 65535	Continuous rotationCCW
Position X	22		23 32768	0-65535	
Position Y	24		25 32768	0-65535	
Aspect Ratio	26		128	0-255	
Zoom	27		28 32768	0-65535	
				0-14	Auto Scale
				15-24	Pixel 1:1
				25-34	Fill
Aspect Mode	29		0	35-44	04:03
				45-54	16:09
				55-64	16.1
				65-74	01:01
FX1 Sel	30		0	0-255	Effect select (see separate list)
FX1 Level	31		0	0-255	
FX1 Param 1	32		128	0-255	Depends On EffectSelected
FX1 Param 2	33		128	0-255	Depends On EffectSelected
FX1 Param 3	34		128	0-255	Depends On EffectSelected
FX1 Param 4	35		128	0-255	Depends On EffectSelected

FX1 Param 5	36	128	0-255	Depends On EffectSelected			
FX2 Select	37	0	0-255	Effect select (see separate list)			
FX2 Level	38	0	0 - 255				
FX2 Param1	39	128	0-255	Depends On EffectSelected			
FX2 Param 2	40	128	0-255	Depends On EffectSelected			
FX2 Param 3	41	128	0-255	Depends On EffectSelected			
FX2 Param4	42	128	0-255	Depends On EffectSelected			
FX2 Param 5	43	128	0-255	Depends On EffectSelected			
Source Type	44	0	0-14	Media Player			
			15-24	Live Input			
			25-34	Generator			
			35-44	Relays			
			45-54	Screen Thief			
Bank	45	0	55-64	Text Engine			
			0-255				
			Clip	46	0	0-255	
						0-14	Forward
						15-24	Forward Loop
25-34	Backward						
35-44	Backward Loop						
Playmode	47	15	45-54	Ping Pong			
			55-64	Random			
			65-74	In			
			75-79	Out			
			80-255	reserved			
			0-9	Disabled			
			Oct-19 Master				
Relay Select	48	0	20-29	Mix			
			30-39	Relay 1			
			40-49	Relay 2			

			50-49	Relay 3
			60-69	Relay 4
			70-79	Relay 5
			80-89	Relay 6
			90-99	Relay 7
			100-109	Relay 8
Speed	49	64	0-255	
In Point	50	51 0	0 - 65535	Sets In-point
		0	0-127	Pause off
Media Pause	52		127-255	Pause on
Out Point	53	54 65535	0 - 65535	Sets out-point
			0-9	Disabled
				Oct-19 Input 1
			20-29	Input 2
			30-39	Input 3
Live InputSelect	55	0	40-49	Input 4
			50-59	Input 5
			60-69	Input 6
			70-79	Input 7
			80-89	Input 8
			0-127	De-Interlace off
Deinterlace	56	0	128-255	De- Interlace on
GeneratorSelect	57	0	0 -255	See separate list
Generator Level	58	0	0-255	Depends on Generator Selected.
GeneratorParam 1	59	128	0 -255	Depends on Generator Selected.
GeneratorParam 2	60	128	0 -255	Depends on Generator Selected.
GeneratorParam 3	61	128	0 -255	Depends on Generator Selected.
GeneratorParam 4	62	128	0 -255	Depends on Generator Selected.

GeneratorParam 5	63	128	0-255	Depends on Generator Selected.
GeneratorParam 6	64	128	0-255	Depends on Generator Selected.
GeneratorParam 7	65	128	0-255	Depends on Generator Selected.
GeneratorParam 8	66	128	0-255	Depends on Generator Selected.
Text Direction	67	0	0-14	Up
			15-24	Down
			25-34	Left
			35-44	Right
Text Mode	68	0	0-14	Scroll
			15-24	Fade
Text Speed	69	128	0-255	
Text Bookmark	70	0	0-255	
			0-14	No Text
			15-24	Doc 1
DocumentSel	71	0	25-34	Doc 2
			35-44	Doc 3 ..... (Up in Values of 10...45,55,65 ...Etc)
			0-14	Top
Text FadeSel	72	0	15-24	Center
			25-34	Bottom
Text Fade Speed	73	128	0-255	
			0-14	Stop
			15-24	Pause
Text Playmode	74	35	25-34	Play
			35-44	Loop Forward
			0-127	Off
Text Show	75	255	128-255	On
			0-127	Off
Text State	76	0	128-255	On

Audio Volume	77	0	0 - 255	
Audio Pan	78	128	0 - 255	
Audio Sync	79	255	0-127	Sync Off
			128-255	Sync On
Time-code	80	0	0-127	Disable
			128-255	Enable
TC hour	81	0	0-255	0-255
TC minutes	82	0	0-255	0-59
TC seconds	83	0	0-255	0-59
TC Frames	84	0	0-255	0-999
Shift	85	128	0-255	
Saturation	86	128	0-255	
			0-4	Fade
				05-Sep Self Texture
				Oct-14 RGB Flash
			15-19	Luma A
			20-24	Luma B
			25-29	Fountain
			30-34	Burnout
			35-39	Star Wipe
Transition	87	0	45-49	Breakup 2
			50-54	Smoke
			55-59	Moving Blurbs
			60-64	Waves
			70-74	Horizontal waves
			75-79	Soft Radial Wave
			80-84	Simple Polar Wave 2
			85-89	Super Ball 1
90-94	Bounce			

95-99	Frizzle
100-104	Explode
105-109	Diagonal Squares
110-114	Diagonal Wipe
115-119	Zoom
120-124	Shear Flip
125-129	Shutter
130-134	Multiple Spherical Zoom
135-139	Iris
140-144	Rotozoom
145-149	Multiple Iris
150-154	Squash in from top
155-159	Zoom out
160-164	Zoom In
165-169	Open Door Top Bottom
170-174	Open Door Left Right
175-179	Slide Out to Top
180-184	Slide out to bottom
185-189	Slide out to left
190-194	Slide out to right
195-199	Slide in from top
200-204	Slide in from Bottom
205-209	Slide in from left
210-214	Slide in from right
215-219	Door Left Right
220-224	Door Top Bottom

---

Transition Time	88	0	0-255	0-30 Seconds
Future Use	89		0-255	
			0-255	0 = No Preset selected
Preset Select	90	0		1 = Preset 1
				2 = Preset 2

---

3 = Preset 3

...

255 = Preset 255

TC Flywheel	91	0	0-127	Disable
			128-255	Enable

- 

- **3.2.2 Layer Light**

3.2.2 Layer Light				35 Channels	
Function	DMX	DMX (16 bit)	Default	Range	Notes
Level	1		0	0-255	
Mixer mode	2		120	0	Additive Dissolve
				10	Subtractive Dissolve
				20	Darken
				30	Lighten
				40	Softlight
				50	Softlight Inverse
				60	Hardlight
				70	Overlay
				80	Difference
				90	Multiply
				100	Screen
				110	Opaque
				120	Sprite
				130	Luminance Key
140	Matte				
Red	3		128	0-255	
Green	4		128	0-255	
Blue	5		128	0-255	
Brightness	6		128	0-255	
Contrast	7		128	0-255	
Shift	8		128	0-255	

Sturation	9		128	0-255	
Invert	10		0	0-127	Disable
				128-255	Enable
Position X	11	12	32768	0-65535	
Position Y	13	14	32768	0-65535	
Zoom	15	16	32768	0-65535	
Rotation	17	18	16384	0-32768	Index Position
				32769-49151	Continuous rotation CW
				49152	Stop
				49153 - 65535	Continuous rotation CCW
Bank	19		0	0-255	
Clip	20		0	0-255	
Play mode	21		15	0	Forward
				15	Forward Loop
				25	Backward
				35	Backward Loop
				45	Ping Pong
				55	Random
				65	In
				75	Out
Pause	22		0	0-127	Disabled
				128-255	Enable
Speed	23		64	0-255	
Aspect mode	24		0	0	Auto Scale
				15	Pixel 1:1
				25	Fill
				35	04:03
				45	16:09
				55	16.1
FX1 Select	25		0	0-255	Effect select (see separate list)
				65	01:01

Effect Level	26	0	0-255	
FX1 Param 1	27	128	0-255	Depends On EffectSelected
FX1 Param 2	28	128	0-255	Depends On EffectSelected
FX1 Param 3	29	128	0-255	Depends On EffectSelected
FX1 Param 4	30	128	0-255	Depends On EffectSelected
FX1 Param 5	31	128	0-255	Depends On EffectSelected
Transition	32	0	0-4	Fade
			05-Sep	Self Texture
			Oct-14	RGB Flash
			15-19	Luma A
			20-24	Luma B
			25-29	Fountain
			30-34	Burnout
			35-39	Star Wipe
			45-49	Breakup 2
			50-54	Smoke
			55-59	Moving Blurbs
			60-64	Waves
			70-74	Horizontal waves
			75-79	Soft Radial Wave
			80-84	Simple Polar Wave 2
			85-89	SuperBall 1
			90-94	Bounce
95-99	Frizzle			
100-104	Explode			
105-109	Diagonal Squares			
110-114	Diagonal Wipe			
115-119	Zoom			
120-124	Shear Flip			

			125-129	Shutter
			130-134	Multiple Spherical Zoom
			135-139	Iris
			140-144	Rotozoom
			145-149	Multiple Iris
			150-154	Squash in from top
			155-159	Zoom out
			160-164	Zoom In
			165-169	Open Door Top Bottom
			170-174	Open Door Left Right
			175-179	Slide Out to Top
			180-184	Slide out to bottom
			185-189	Slide out to left
			190-194	Slide out to right
			195-199	Slide in from top
			200-204	Slide in from Bottom
			205-209	Slide in from left
			210-214	Slide in from right
			215-219	Door Left Right
			220-224	Door Top Bottom
Transition Time	33	0	0-255	0-30 Sec
Futtrue Use	34	0	0-255	
				0 = No Preset selected
				1 = Preset 1
				2 = Preset 2
Preset Select	35	0	0-255	3 = Preset 3
				...
				255 = Preset 255

- 
- - **3.2.2 UberPan Layer**

Uberpan Layer					62 Channels
Function	DMX	DMX (16 bit)	Default	Range	Notes
Level	1		0	0-255	
Mixermode	2		120	0	Additive Dissolve
				10	Subtractive Dissolve
				20	Darken
				30	Lighten
				40	Softlight
				50	Softlight Inverse
				60	Hardlight
				70	Overlay
				80	Difference
				90	Multiply
				100	Screen
				110	Opaque
				120	Sprite
				130	Luminance Key
140	Matt				
Red	3		128	0-255	
Green	4		128	0-255	
Blue	5		128	0-255	
Brightness	6		128	0-255	
Contrast	7		128	0-255	
Shift	8		128	0-255	
Saturation	9		128	0-255	
Invert	10		0	0-127	Disabled
				128-255	Enabled
Rotation Continious	11	12	16384	0-32768	Index Position
				32769-49151	Continuous rotation CW
				49152	Stop
				19153-65535	Continuous rotation CCW

Position X	13	14	32768	0-65535	
Position Y	15	16	32768	0-65535	
Aspect Ratio	17		128	0-255	
Zoom	18	19	32768	0-65535	
AspectMode	20		0	0	Auto Scale
				15	Pixel 1:1
FX1 Select	21		0	0-255	Effect select (see separate list)
FX1 Level	22		0	0-255	
FX1 Param 1	23		0	0-255	Depends On EffectSelected
FX1 Param 2	24		0	0-255	Depends On EffectSelected
FX1 Param 3	25		0	0-255	Depends On EffectSelected
FX1 Param 4	26		0	0-255	Depends On EffectSelected
FX1 Param 5	27		0	0-255	Depends On EffectSelected
FX2 Select	28		0	0-255	Effect select (see separate list)
FX2 Level	29		0	0-255	
FX2 Param 1	30		0	0-255	Depends On EffectSelected
FX2 Param 2	31		0	0-255	Depends On EffectSelected
FX2 Param 3	32		0	0-255	Depends On EffectSelected
FX2 Param 4	33		0	0-255	Depends On EffectSelected
FX2 Param 5	34		0	0-255	Depends On EffectSelected
Source Type	35		15	0	Media Player
				15	Live Input
				25	Generator
				35	Relays
				45	Screen Thief

			55	Text Engine			
Bank	36	0	0-255				
Clip	37	0	0-255				
Playmode	38		0-14	Forward			
			15-24	Loop Forward			
			25-34	Backward			
			35-44	Look Backward			
			45-54	Pong			
Relay Select	39	0	0-9	Disabled			
			Oct-19	Master			
			20-29	Mix			
			30-39	Relay 1			
			40-49	Relay 2			
			50-59	Relay 3			
			60-69	Relay 4			
			70-79	Relay 5			
Speed	40	64	0-255				
			In Point	41 42	0	0-65535	
			Media Pause	43	0	0-127	Disabled
						128-255	Enabled
			Out-point	44 45	65535	0-65535	
			Live input select	46	0	0-9	Disabled
						Oct-19	Live Input 1
						20-29	Live Input 2
30-39	Live Input 3						
Generator Select	47	0	40-49	Live Input 4			
			0-255	See Separate List			
Generator Level	48	0	0-255				

Generator Param 1	49		128	0-255	Depends on Generator Selected
Generator Param 2	50		128	0-255	Depends on Generator Selected
Generator Param 3	51		128	0-255	Depends on Generator Selected
Generator Param 4	52		128	0-255	Depends on Generator Selected
Generator Param 5	53		128	0-255	Depends on Generator Selected
Media Type	54		0	0-127	Full
				128-255	Partial
Audio Balance	55		128	0-255	
Volume	56		255	0-255	
TC Enable/disable	57	Enable		0-127	Enable
		Disable		128-255	Disable
TC Hour	58		0	0-255	0-255
TC MIn	59		0	0-255	0-60
TC Sec	60		0	0-255	0-60
TC Millisec	61		0	0-255	0-999
TC Flywheel enable	62		0	0-127	Disable
				128-255	Enable

•

**Please Note:** In order to use presets with DMX, all attributes of the personality must be set to Update Only. There are stock personalities included that have both settings. If you presets will be recalled from DMX use the Hippotizer personality labelled "Preset".

## 5. Components in Detail

### 5.8 Genlock



#### Overview

Before you start up the Engine and the Zookeeper you will need to configure the ATI Catalyst Control Centre and your output displays. Please follow the steps below to configure your Genlock Hippotizer.

#### ***This guide assumes the following:***

- You have a Hippotizer Genlock HD with ATI Fire Pro 7800 and 3800 Graphics Cards.
- You are using 3.1 SP1 Genlock or 3.2 Genlock version of Hippotizer. These are available for download from our website: [www.Green-Hippo.com](http://www.Green-Hippo.com)
- You have ATI driver version 8.83 installed (This can be found in the Right Click on the desktop -> Catalyst Control Centre -> Software Information)
- All displays and outputs are attached to the machine. If you are using DVI parrots these should be programmed with the correct EDID profiles.
- There is a Genlock Source attached to the machine.

- **Set-up the attached displays**

*Enable the output displays in the right Resolutions and Refresh rate either in Catalyst Control Center or in Display Properties/Settings. The refresh rate on the output displays will need to be the same or very close as the incoming sync signal.*

*You must set the resolutions for your output screens at this point. So if you want to run dual mode at 1920 x 1080 @ 60 Hz, then set this now by enabling the two output screens and setting the desired resolution.*

*Please Note:*

*- If you are going to be outputting 50Hz, then this must be configured before proceeding. Please see our How to Set 50Hz knowledge base article for more information.*

*-The Genlock version of Hippotizer does not change display settings as normal versions. This means that output modes and resolutions must be set in Catalyst Control Centre before starting Hippotizer.*

*-If you want Dual mode or Clone mode, you must set this in Catalyst Control Centre first.*

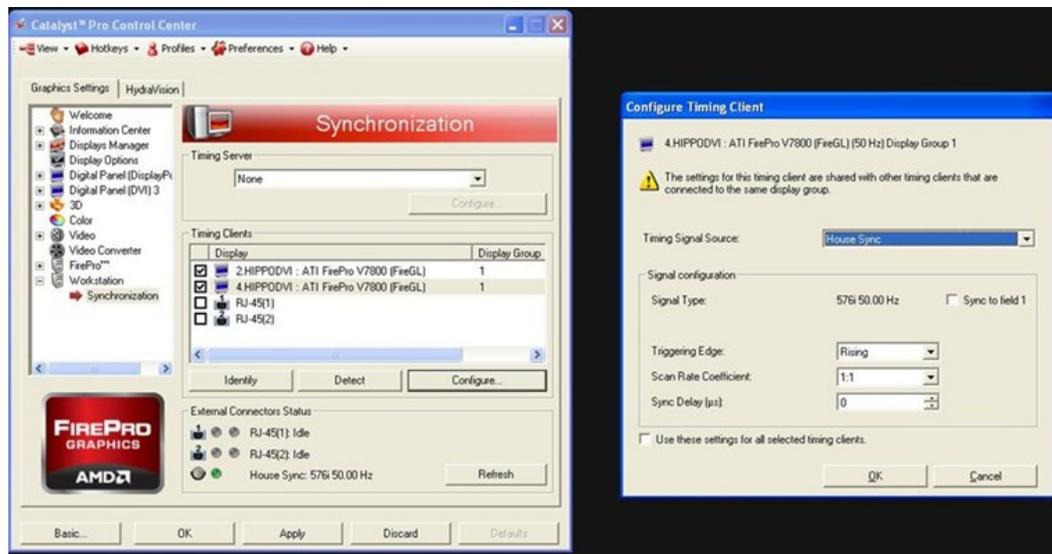
*-Pan mode will not work with Genlock version of Hippotizer.*

*-Sometimes attached displays will not enable in Catalyst Control Centre. If this is the case, try to enable them first from the Windows display manager. (Right Click on the Desktop -> Properties).*

- **Set-up Genlock before starting the Hippotizer Software.**

Open Catalyst Control Center and explore on the Graphics Settings/ Workstation/ Synchronization.

- In the Timing Clients box you will need to check the Displays that you will need to Genlock.
- To select the source from where you want to Genlock you need to select the 'Configure' button. Make sure the Timing Signal Source is set to 'House Sync'
- Once you have configured the timing single source select apply to save all the configurations.
- Close the Catalyst Control Center (CCC) .



- **Start the Hippotizer Software**

Now, start the Hippotizer Software and allow it to load all the layers.

If display settings have been changed, the Engine may start with a red 'x'. This is to indicate that output settings have changed since the last shut-down. Right click on the Engine component and select the Layer Mode that you would like to use. Apply these settings, and the engine will now load completely.

- **Repeat Step 2 to re-synch the output to Genlock.**

It is necessary at this point to go back in to the Catalyst Control Centre and repeat the above steps to Sync to the House Genlock Signal.

- **Start and configure the Genlock Component in Hippotizer .**

Now, in Hippotizer, double click on the Genlock Component and press "Update Configs". This should change the displays as show below.

The Genlock Monitor Component allows you to monitor the Sync Status of all attached Genlock machines.

They are three sync statuses:

1. 'No Sync': That indicates the Unit is not receiving an sync signal.

2. 'Ready': That indicates that the unit is receiving a sync signal but is not activated and the outputs are not locked.
3. 'Active': That indicates that all outputs are in sync with the incoming sync signal.



There is also the option to "Auto Restore" or to "Restore All".

When you enable and disable Genlock, the outputs will flash through black momentarily as the graphics cards re-align themselves to house sync. If Genlock is lost during a performance, it may be preferable to minimize output disruption until a more opportune time. In this case, Auto Restore may be best disabled.

The Genlock Hippotizer(s) will continue to output without a house sync signal, they will free-wheel. In other words, they will run from an internal clock.

You can manage all Genlock Hippotizers on the network from one Genlock Monitor Component.

## 5.0 Components in Details

### 5.9 HMap2



#### Overview

This component enables bi-directional communication between Hippotizer V3 and external devices such as lighting consoles and visualisation software. It allows the manufacturers of these products/applications to integrate Hippotizer V3 with their technology by giving these products access to the necessary information required to integrate Hippotizer effectively. Features include content thumbnails and live previews. Thumbnails on your console make it easier and quicker to select the media from a Lighting Designer/Operators point of view. Live previews of the layer and master will give the Lighting designer a low frame rate representation of the media.

At time of print HMap2 is supported by Avolites, Chamsys and Compulite.

To use the HMap2 component, add the component as normal on the Hippotizer then configure the external device to connect to the Hippotizer.

## 5. Components in Detail

### 5.10 HippoBlaster



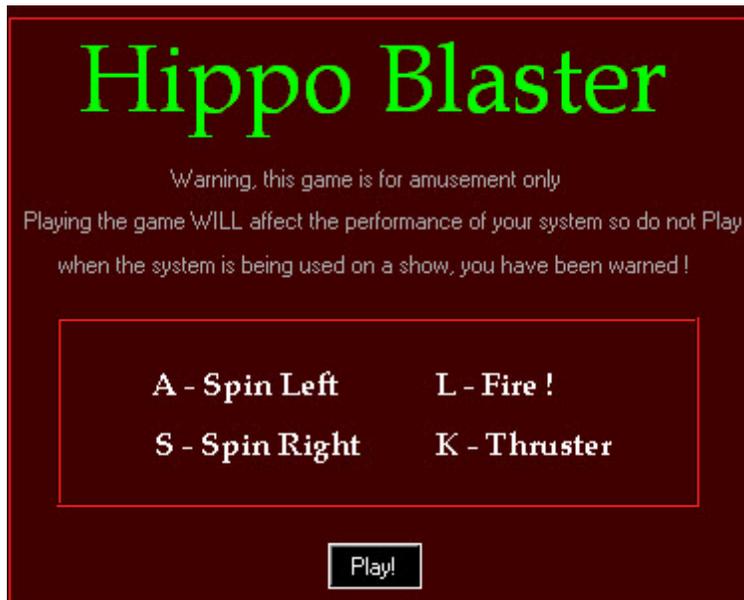
#### Overview

Hippo Blaster is a bit of fun for those moments when you are waiting on others to do their thing.

Based on the game Asteroids (it's basically asteroids) your mission is to destroy all the space rocks floating around in space before you crash and burn.

As mentioned in the startup you should not play this while outputting video as this will compromise the video playback.

Have Fun.



*Screenshot of the Game*



## 5. Components in Detail

### 5.11 LCD



#### Overview

The LCD component will only be available to users of the Hippotizer HD's. This component is normally added by default when you are installing the software. If this is not the case then you should add this in the normal way.

The LCD component looks after the LCD display on the front of the HD and also is need to control the speed of the Fans internally. If you have fans that are constantly running fast then check that this component is running and hasn't been stopped.

In this component you can view the Fan Status and Check the temperature of the unit.

The LCD is designed to be viewed on the hardware but if you wish to view any error messages then you can do so by looking at the status in the component.

This will show you the errors and allow you to clear them.



## 5. Components in Detail

### 5.12 Live Mask



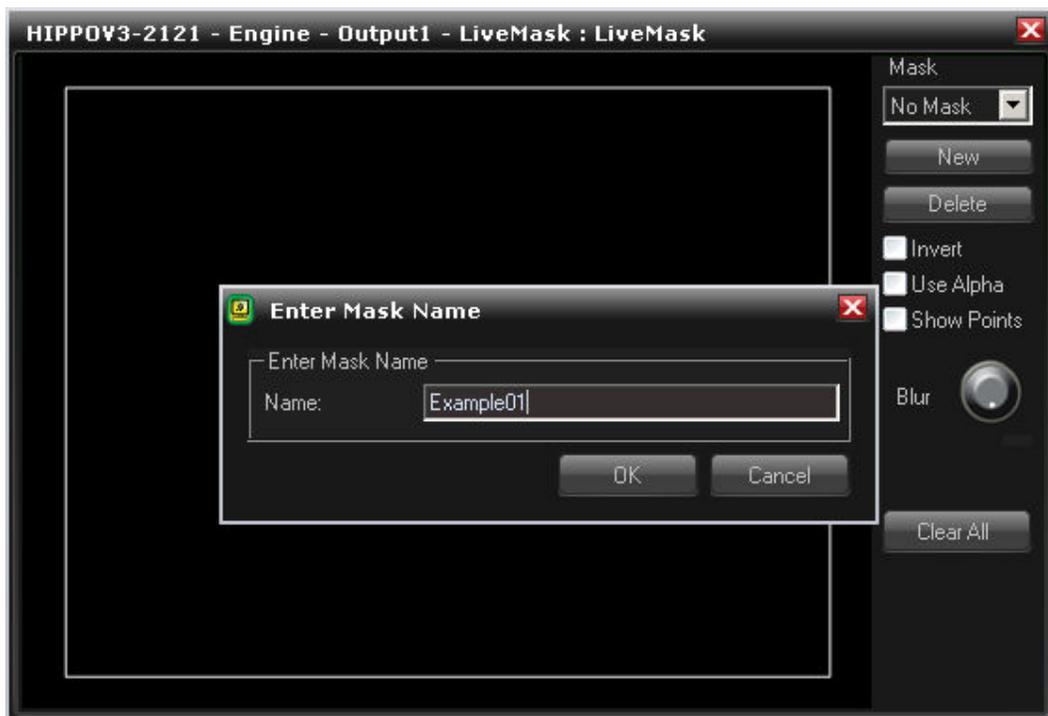
#### Live Mask

Although not strictly a component in its own right Live Mask is something fully featured enough to live in this section. It does not live in the components list but is known as an In layer feature.

Live masks can be created to mask out areas of the output. They can be applied on a layer level or on the main output.

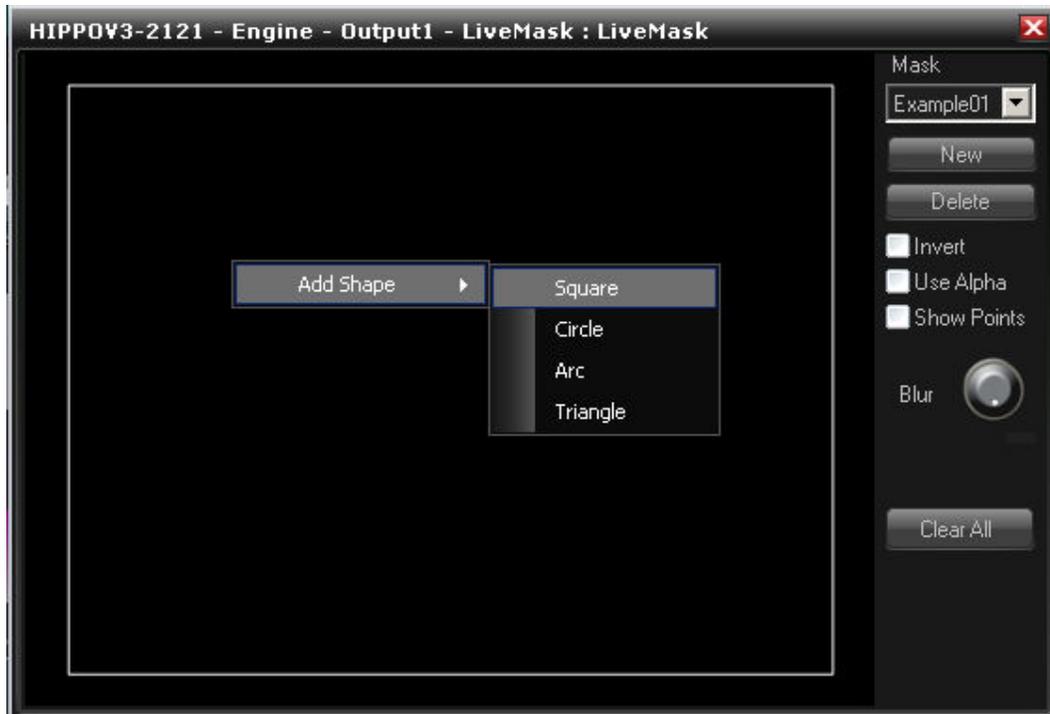
- **Creating Live Masks**

To create a new Live Mask on a layer (you can also do it on the output layer) click on the **Edit** button to open the **Live Mask** editor, then click on the **New** button;



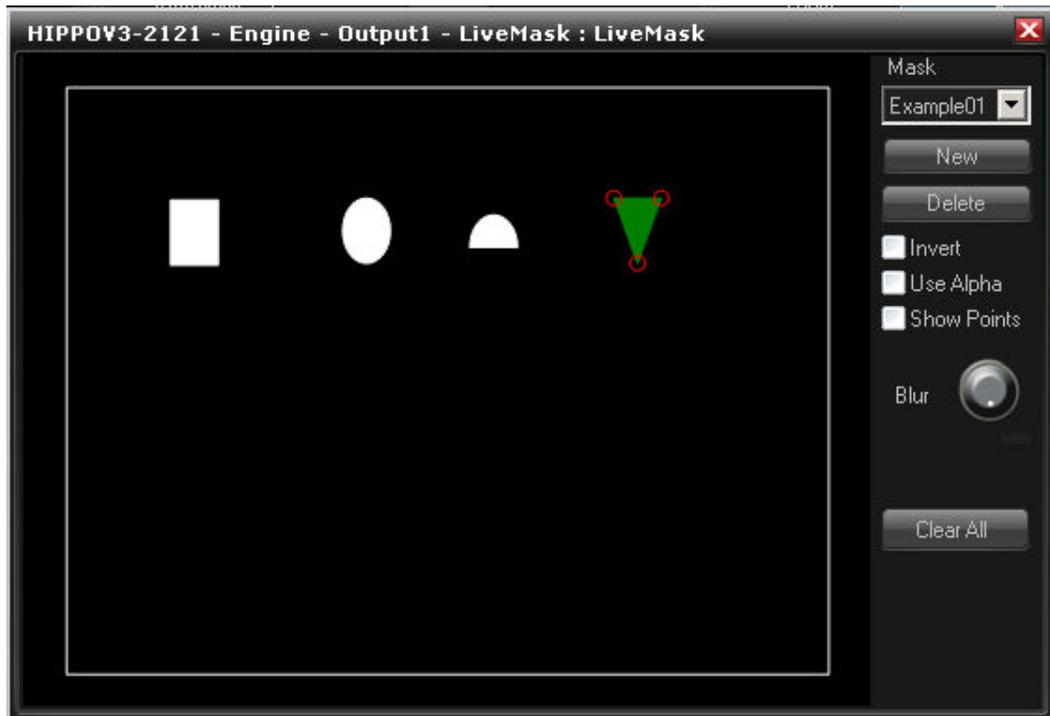
Enter a name for it, and then click **OK**.

- **Adding Shapes**



*In the main window right-clicking brings up the Add Shape list, there are four shape options; in the example all four shapes have been added. More complicated shapes can be created by adding simple shapes and then adding nodes to that simple shape.*

- **Manipulating Shapes**

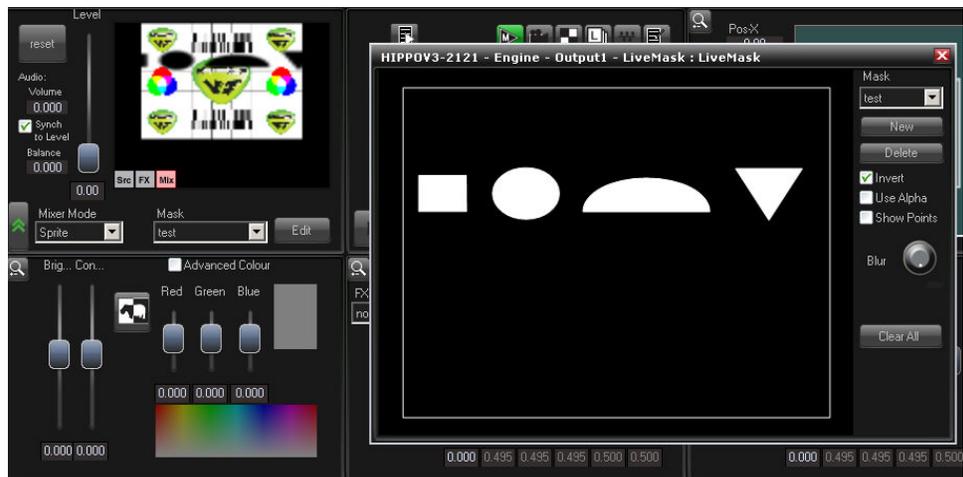


When a shape is selected the following changes can be made;

- The mouse scroll wheel can be used to increase and decrease its size.
- Selecting a node of that shape and dragging it with the mouse can move independently of the other nodes of that shape.
- Right-clicking will provide the options to add another node both of type Spline and Linear node.

- **Adjusting Live Masks**

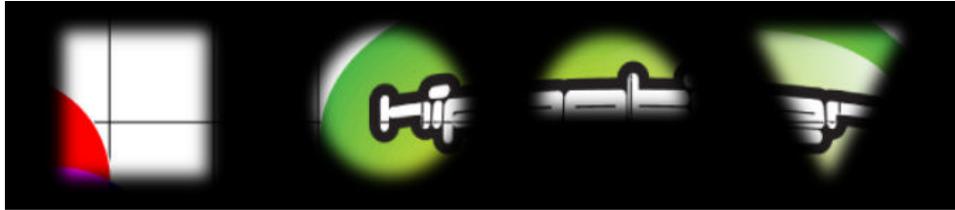
- As well as adding and manipulating shapes, Live Masks have the following capabilities.
- **Invert:** if the area to be masked is the opposite to the shapes added, using Invert creates this effect (see below).



- **Use Alpha:** when using Live Mask on a layer, if the layer below needs to be presented but the media on the current layer needs to be masked over the layer below, the Use Alpha option should be used (see below).



- **Show Points:** when editing Live Masks on site the Show Points options projects the pointer and node information onto the output. Making it easier to make accurate adjustments to nodes in the Live Mask.
- **Blur:** Blur adjust the blur level of edges in the live mask. The one settings adjust all edges in the selected Live Mask e.g.:



- **Managing Live Masks**

**Delete** deletes the currently selected live mask.



**Clear All** clears all created masks.



- **Backup/restore of Live Mask data**

It is not possible in version 3.2 to back up the Live Mask data using the software interface. However, the Live Mask data is located in C:\Hippotizerv3\hippodata\ on the Hippotizer.

To back up Live Masks, shut down the Hippotizer software and make a copy of the MASKDATA folder.

To restore Live Masks from a backup, copy the backed up MASKDATA folder to the C:\Hippotizerv3\hippodata\ folder and then start up the software.

## 5. Components in Detail

### 5.13 Mackie



#### Overview

To use the Mackie Controller hardware with Hippotizer, two components are required, the Mackie component and the MultiSelect component. Both of these components must run on the machine which the Mackie Controller hardware is connected to (via USB or MIDI).

- **Connecting Mackie to Hippotizer**

*If the machine connected to the Mackie Controller is not a full Hippotizer and is running ZooKeeper only (and connecting to Hippotizers via a network), then the components should be added to the local ZooKeeper session rather than to an engine. To do this, select Settings>Hosts from the menu bar and then select your ZooKeeper identity from the list (it will be the host-name by 'ZooKeeper'). Select 'Host Settings', which will bring up the Host Manager window. Choose the Components tab, then click Add and create a Mackie and a MultiSelect component. The ZooKeeper session will now appear in the HippoNet Overview, and component interfaces can be opened by double-clicking on their labels there.*

*Double-click on the MultiSelect component label in the overview window to open it's interface. The component needs to be set up to provide control over at least one output. This needs to be done in the Configuration window by assigning a number to the output. Click the 'OK' button in the bottom of the MultiSelect window, the MultiSelect GUI should now be populated showing Output and Layers.*

*In the HippoNet Overview Window, double-click the Mackie component to bring up the controller settings window. On the left of this window is a list of controllers. The settings on the right hand side of the window show the settings for the controller currently selected from the list.*

*Click the add button beneath the list to add a new controller. Then under Communications, select the MIDI In and MIDI Out port used by the controller, this is the first in both lists labelled 'USB Audio Device'. Now press the Apply Settings button in the lower-right of the window. If communication has been established, the Mackie controller should respond by positioning it's faders to mirror the current layer levels. The controller is now connected.*

- **Using Multiple Controllers**

*If additional controllers are available, they can either be used as independent controllers or extensions. This will not however affect the function of the transport and record options controls, whose functionality will be mirrored on all controllers where they are present.*

- **Independent Controllers**

*Using multiple independent controllers allows each controller to navigate layer pages and outputs without affecting any others. To use controllers in this mode, each controller should be set to **1 of 1**.*

- **Extension Controllers**

*Extension controllers are useful when working with more than 8 layers. In this mode controllers are numbered, and the layers are split across them. For example, in 16-layer mode with two controllers, layer page 1 on controller 1 will access layers 1 to 8, whereas layer page 1 on controller 2 will access layers 9 to 16.*

*To use controllers in this mode, they should be assigned individual numbers. For example, if two controllers are to be used, the first controller should be set to **1 of 2** and the second set to **2 of 2**.*

- **Slaving Controllers**

When controllers are added to the slave group (by checking the **'Slave to other controllers'** box), they will mirror each others layer page and output page. I.e. if a page is changed on one controller, all other controllers will change to the same page. This can be enabled for both independent controllers and extension controllers.

- **Navigating Outputs and Layers**

The Mackie controller has eight channel strips, each of which contains a record button, a signal LED, a solo button, a mute button, a select button and a motorized fader.

When connected to Hippotizer, the controls on each channel strip are automatically assigned to a layer. The fader is always used to control layer level (opacity). To adjust other layer attributes, the eight encoders above the channel strip are used in conjunction with the attribute bank select buttons.

As there are only eight channel strips, only eight layers can be displayed at one time on the controller. In order to view layers numbered above 8, or layers on other outputs, the layer page and output page functions should be used.

- **Changing Layer Page**

To change the active layer page, press the **Page Left** or **Page Right** buttons above the master fader. There are four layer pages, allowing control of up to 32 layers on each output. Layers are always presented in numerical order. The **Left** and **Right** buttons to the left of the jogwheel can always be used to navigate layer pages.

- **Changing Output Page**

In conjunction with the multiselect component, it is possible to select and control layers from multiple Hippotizer outputs, either on the local machine or across a network. Each output is assigned a number in the multiselect configuration, and the Mackie controller uses these numbers to index outputs. (Note. Although an individual Hippotizer may have it's outputs labelled as 1 and 2, they may be assigned different index numbers in the multiselect configurarion).

To select an output number directly, press one of the numbered output buttons. If you wish to select an output above eight, hold shift and press one of the buttons to activate the secondary output value. Alternatively the current output number can be increased and decreased using the **Up** and **Down** buttons to the left of the jogwheel. The currently active output is indicated on the assignment display directly above the master fader.

- **Selecting Layers**

Each layer channel strip contains a **Select** button. This is used for selecting which layers are currently under control. The selection made on the controller mirrors the current selection in the multiselect component. Pressing a select button adds the layer to the current selection, and pressing again removes it. The current selection can be cleared using the **Select None** button, and all layers on all outputs can be selecting using **Select All**.

- **Level Controls**

- **Faders**

The faders always control a layer's level attribute (opacity), apart from the master fader which always controls the master level across all outputs. Two buttons affect which layers the faders control, **Local Faders** and **All Outputs**.

- **Normal Mode**

If neither Local Faders or All Outputs mode is enabled, layers can only be controlled by faders when they are currently selected. If layers with the same number of different outputs are both selected, they will be controlled by the same fader.

- **Local Faders**

*This setting is enabled by default and is indicated with the green LED next to it's button. When activated, the faders are linked automatically to the levels of the layers on the current output (indicated by the number on the small 7-segment display). Changing layer page will allow access to layer numbers above eight.*

- **All Outputs**

*When this mode is enabled, the fader of a selected layer will automatically adjust the level for the same layer number on every output currently active in the MultiSelect component.*

- 

- **Solo and Mute Buttons**

*The solo and mute buttons also affect the layer levels. They are **not** currently implemented in software. (17/10/2012).*

*The **Mute** button on each layer when pressed will temporarily set the level of the layer to zero. The button will light red to indicate this. Pressing the button again will restore the level to it's previous value.*

*The **Solo** button on each layer when pressed will temporarily set the level of all other layers to zero, leaving the level of the relevant layer at it's current value. The button will light yellow to indicate this. Additionally, the **Rude Solo** indicator LED on the right of the timecode display will blink to show that solo mode is active. If any other layers also have their solo button pressed then they will also be left at their current value rather than set to zero. Pressing the button again will restore the level to it's previous value.*

- **Attribute Controls**

*The eight encoders at the top of each channel strip are used to control attributes for the currently selected layer. Note: These encoders have no specific relationship with the channel strips on which they are located. The attribute to be adjusted is displayed on the LCD screen above each encoder. Rotating the encoder will adjust the attribute, and double-tapping on the encoder will reset the attribute to it's default value - much like the ZooKeeper interface.*

*To choose which attributes are currently active on the encoders, the attribute bank selection buttons to the right of the encoders can be used. **Source, Colour, Geom, Effects, User 1** and **User 2** banks are available, and by pressing each bank selection button more than once, multiple pages of attributes (up to four) can be navigated. When a bank is on the first page, a green LED above the relevant bank select button will light solid. If the bank is on page 2, 3 or 4 the green LED will blink.*

*The layout of these pages can be adjusted in the Mackie control configuration.*

- **Edit Functions**

*The Mackie controller has a number of global edit functions for making quick changes whilst adjusting layers. These are found in the 'Global Edit Functions' area on the controller. At any time when using any of these functions, press **Clear** to cancel the operation and return to normal control mode.*

- **Reset Output**

*To reset an output (return all of it's layers plus the master layer to their default settings), press **Reset Output**, and then press one of the numbered output buttons immediately below, and the reset will be performed.*

*To reset a layer above 8, simply hold the shift key whilst pressing the output button and the secondary output value will be reset. To reset multiple layers at once, hold down the control key whilst pressing multiple output buttons sequentially. The reset operation will be performed as soon as the control key is released.*

- **Reset Layer**

*Upon pressing **Reset Layer**, any currently selected layers will be reset to their default values.*

- **Reset Attribute**

*For the currently selected layers, the six attribute groups (source, colour, geom, effects, user 1 and user 2) can be reset using this function, returning all contained attributes to their default values. Press **Reset Attribute** and then one of the attribute bank select keys, and the reset will be performed.*

*To reset multiple attribute banks at once, hold down the control key whilst pressing multiple bank buttons sequentially. The reset operation will be performed as soon as the control key is released.*

- **Copy Output**

*The attribute values of any output can be copied to another output using this function. Press **Copy Output** followed by the numbered output button of the output you wish to use as the source of the copy. Then press the numbered output button of the output to want to copy to. Outputs above 8 and multiple outputs can be selected in a similar manner to that described for the reset output function.*

- **Copy Layer**

*The attribute values of any layer can be copied to another layer using this function. Press **Copy Layer**. The select buttons on all layers will begin to flash. Press the select button of the layer you wish to use as the source of the copy. If the layer is on a different page or output, use the navigation buttons to select the correct one. Now press the select button of each layer you want to copy to. Multiple layers can be selected, and a list of layers to be copied to will be displayed on the controller LCD. Finally, press **Enter** to complete the copy.*

- **Copy Attribute**

*Function doesn't work yet.*

- **Swap Output**

*Two outputs can have their current attributes swapped using this function. Press **Swap Output**, followed by the numbered output button of an output. Then press the numbered output button of a second output to perform the swap. Outputs above 8 can be selected by holding down shift whilst pressing the numbered output button.*

- **Swap Layer**

*Two layers can have their current attributes swapped using this function. Press **Swap Layer**, followed by the **Select** button of a layer. If the layer is on a different page or output, use the navigation buttons to select the correct one. Then press the select button of a second layer to perform the swap*

- **Navigating Timelines**

*The Mackie control features a transport section which can be used to navigate around and control playback of the active timeline.*

- **Selecting a Timeline**

*In order to use the transport section, a timeline must be selected. Open a timeline component and create one or more timelines. In the list, the timeline controlled by the Mackie control will be highlighted in grey, and a white arrow will appear in the row header column. It will also be visible in the right-hand section of the window. Although multiple timeline windows can be opened at once, the Mackie control can only control playback of one at a time.*

- **Using the Transport Buttons**

The large transport buttons control playback of the timeline. The **Play** button begins playback from the current playhead position, and the **Stop** button stops playback (but does not reset the playhead to 0:00:0.000). When a timeline is currently stopped, a solid yellow LED is lit above the stop button. When it is playing a solid green LED is lit above the play button.

The **Rewind** and **Fast Forward** buttons are used for timeline navigation. Their function is linked to the 'Next/Previous' buttons directly above, **Event**, **Command** and **Label**. These buttons choose marker points to be jumped to using the transport buttons, and only one of the three (or none) can be active at once. The selection is indicated by a solid green led above the currently selected button. To remove the selection, press the selected button.

With none of the options selected, the transport buttons jump to the beginning and end (last event) of the timeline only. With **Event** selected, the buttons jump between events placed on the timeline. With **Command** selected, the buttons jump between action commands only (stop or jump commands). With **Label** selected, the buttons jump between commands with no assigned action.

- **Using the Jog Wheel**

The jog wheel can be used to move the playhead forwards and backwards on a timeline in 1 second increments. Moving the playhead in this way will not playback the values underneath.

In **Scrub** mode (activated by the button to the right of the jog wheel) however, moving the jogwheel will play back events as they are passed by the playhead. When scrub is activated by pressing the button, the green LED above the play button will start to blink. There are two speeds of scrub, fast (indicated by a solid red LED) and slow (indicating by a blinking red LED). To de-activate scrub mode, press the stop button to stop the playhead, or the play button to continue playback in realtime.

- **Selecting the Time Display**

Yet to be implemented.

- **Recording Events**

The **Record** button on the transport controls is used to create events on the active timeline at the current playhead position.

- **Recording Process**

To begin the record process, set some layer attributes to the values you want to record, navigate the playhead to the position on the timeline you wish to record to, and press the **Record** button. This will cause a blinking red LED to light above the button to indicate record mode is active. In record mode, the jog wheel does not control the playhead. Instead, it selects a fade time for the autofade function (see below) which is displayed on the timecode display instead of the playhead position. If you wish to exit record mode without recording events, press the **Cancel** button.

Now set the record options (explained below), and select the layers you wish to record events for using their individual Rec buttons. These will light red when selected. If no rec buttons are selected, all layers will be recorded automatically. The layer page and output page controls can be used to navigate whilst making the layer selection. Finally press the **Record** button again, and the events will be inserted at the playhead position on the active timeline.

There are also two special record buttons, **Previous** and **Follow**. If these are pressed instead of record (when record mode is already active) the events recorded will not be the current attribute levels. Previous will search backwards along the timeline and insert a new event for the most recent value. Follow will perform the same operation looking forwards.

- **Record Options**

All record options affect which and what type of events are recorded. Each time record mode is entered, they are reset to the defaults, which are editable in the Mackie component window. Options are active when the LED above each button is lit.

- **Changed**

*When active, only events for attributes which have changed since their last position on the timeline are added.*

- **Snap Start/Mid/End**

*These three buttons allow selection of the recorded event type, between snap start, snap mid and snap end. Only one option can be selected at once, or none. When none are selected, the event type will be fade.*

- **Update**

*Not yet implemented.*

- **Media / No Media**

*This option has three modes. When deactivated, events for all attributes are recorded. When pressed once, (solid green LED), events for all attributes other than the media selection will be recorded. When pressed twice (blinking green LED), only events for the media selection will be recorded.*

- **Add Cue**

*When active, a stop command with the next sequential cue number will be added at the same position as the recorded events.*

- **Autofade**

*The autofade option allows the automatic creation of a fade on the timeline from the previous attribute values to the values being saved. This works by first inserting events at the playhead which reflect the most recent value of each attribute on the timeline (equivalent to pressing the 'previous' button). If the 'add cue' option is selected, a stop cue and cue number will also be inserted here. Events featuring the current states of layer attributes are then added to the timeline after a defined number of seconds, creating a fade. To set this fade length, use the jog wheel whilst in record mode. The current fade time is shown on the timecode display.*

*This option is useful for quickly creating sets of cues on a timeline. If cues are added, they will always be placed at the start of each fade. After the record option is complete, the playhead is automatically positioned 0.5 seconds after the last set of events, allowing for the immediate creation of another autofade without repositioning.*

*Note: If the snap start/mid/end options are active at the same time as autofade, the snap will only be applied to the first set of events created (the previous values), and not the fade to the new attribute values.*

- **Customising Controller Setup and Layout**

*The Mackie component settings window (accessible by double-clicking on the Mackie component in the HippoNet Overview window) allows configuration of all Mackie controllers known to the component.*

- **Editing Default Record Settings**

*The default record settings define which options are initially set when entering record mode. These can be adjusted for each Mackie controller individually. Highlight the controller you wish to adjust the defaults for in the left-hand list and adjust the values to change the default.*

- **Editing Attribute Banks**

All layer attributes are already mapped to encoders in the attribute banks, but this default mapping can be adjusted. On the right-hand side of the Mackie settings window, the 'Attributes' section allows editing of the pages in each attributes bank. Banks 'User 1' and 'User 2' are intended for this purpose, although the pre-defined banks (source, colour, geom, effect) can also be edited. To edit the banks, first select a bank to edit from the drop-down list and then click 'Edit' to bring up the editing window. This will display four rows of encoders and labels, representing the four pages of the selected bank. To adjust the attribute assigned to an encoder, click the encoder. This will open a separate editing window. In this window, the preferences for this encoder can be adjusted. These are described below:

- **Display Label**

*This defines the text shown on the LED screen above the encoder.*

- **Parameter Path**

*This selects the attribute adjusted by the encoder, via a connection to a pin. By default, encoders will adjust the selected attribute for all selected layers on all selected outputs. In order to choose the correct pins, wildcards are used, (shown as '{o}' and '{l}' in the pin address field). These act as indicators for the Hippotizer to automatically map the encoder to the chosen attribute on all currently selected outputs and layers. If however a static functionality is desired, by unchecking the 'Guess Wildcards' option, the encoder will be permanently assigned to the pin address specified, regardless of the current output and layer selection. Wildcards are only added to a pin address if the selected pin is part of a layer or master layer.*

- **LED Mode**

*This selects the mode which the LED ring surrounding the encoder will represent the attribute value.*

- **Button Function**

*This selects the function triggered by pressing the encoder (by default this resets the attribute to it's default).*

- **Small Increment**

*This defines the value added to the attribute when adjusting the encoder slowly.*

- **Large Increment**

*This defines the value added to the attribute when adjusting the encoder quickly.*

- **Editing Controller Mapping**

*The Mackie component allows all buttons on the Mackie controller to be reassigned to different functions in Hippotizer. Different mappings can be created for different varieties of MCU compatible hardware. To change the current mapping for a controller, simply select a new mapping preset from the drop-down list. To create a new mapping preset, first click 'Add' to add a new mapping to the drop-down list with the default values. Then select this from the list and click 'Edit Mapping'. The mapping edit window will now appear. The current mapping values are shown in the list on the right.*



## 5. Components in Detail

### 5.14 Media Manager



#### Overview

Full details of Media manager can be found [here](#).

## 5. Components in Detail

### 5.15 Midi2



#### Overview

Full details of Midi2 can be found [here](#).

## 5. Components in Detail

### 5.16 MultiSelect



#### Overview

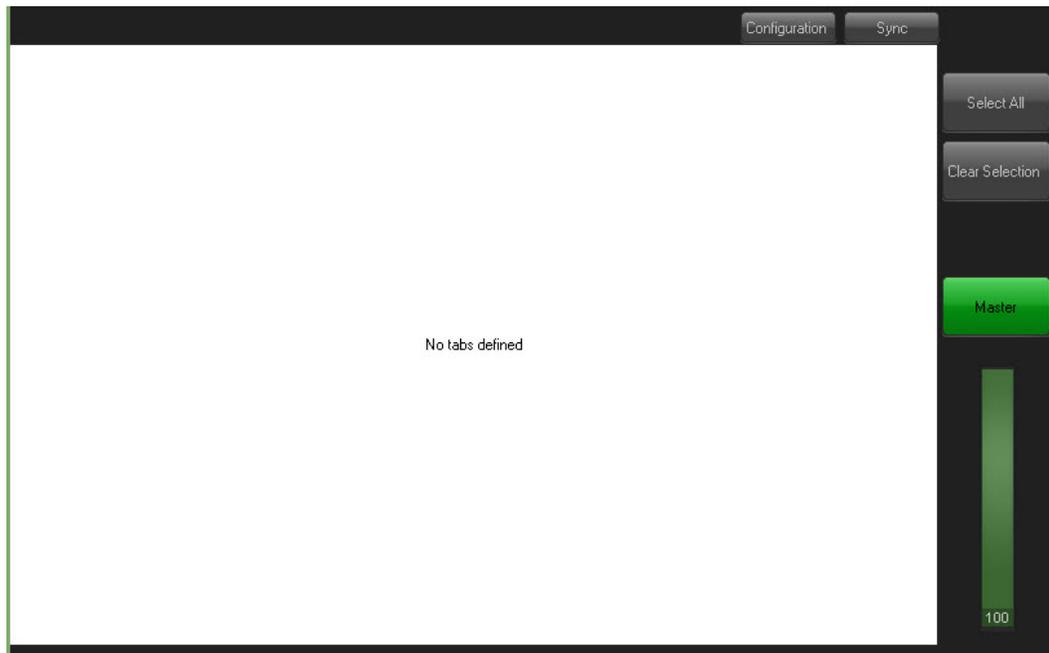
MultiSelect is a brand new philosophy for HippotizerV3. Up until V3.2 you could only select and manipulate one layer at a time via the interface. Of course using DMX you could select more but using the mouse and keyboard this was not possible.

With the introduction of the Mackie controller also came the ability to select more than one layer at once, and importantly across multiple Hippotizers.

MultiSelect allows you the ability to select all layer ones on 3 different Hippotizer Hosts, or layers 1,3 and 5 on a HD and change the level of these at the same time. Even bring the master intensity of all layers on all machines down at the same time as a Grand Master.

- **Configuration**

*When you open MultiSelect for the first time you will not have any Hosts configured so you will be met with a blank MultiSelect panel.*



*Press the configuration button and you open the panel that will show you what machines are detected on the HippoNet. Here you will see the Host Name, Number of Layers and the status of the Hosts.*

Enable XFade Mode

Host Names	Output Names	Number of Layers	Status	Assigned Number	Action
LEE-PC	LEE-PC : Output1	4	ONLINE	-	
HPW/Ma...	HPWManagedHost : Output1	2	ONLINE	-	
TESTB...	TESTBENCH1 : Output1	4	ONLINE	-	
SUZY-P...	SUZY-PC 2 : Output1	2	ONLINE	-	
My 3.2 ...	My 3.2 Debug Hippo : Output1	2	ONLINE	-	

OK Apply Reset Cancel

Once you have identified what machines you would like to control via the Multiselect component then you can give them unique names. Simply click on the Output name box and rename the hosts as you need. Then to allocate these to Multiselect select the drop down Assigned Number Tab and choose the order you would like them to appear in the Multiselect component.

Enable XFade Mode

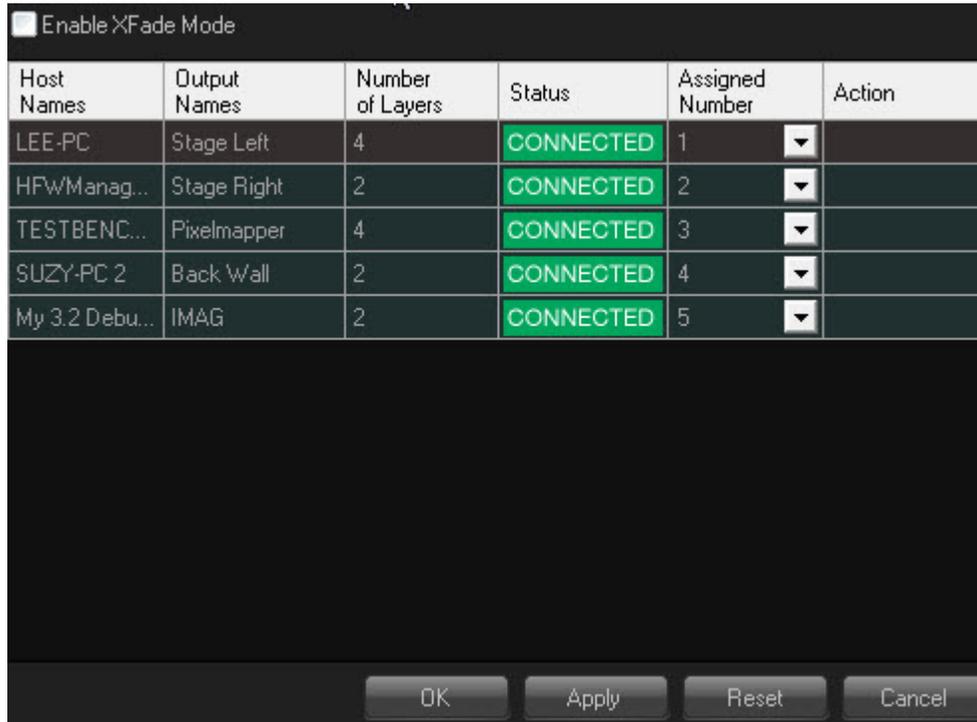
Host Names	Output Names	Number of Layers	Status	Assigned Number	Action
LEE-PC	Stage Left	4	ONLINE	1	
HPW/Manag...	Stage Right	2	ONLINE	1	
TESTBENC...	Pixelmapper	4	ONLINE	2	
SUZY-PC 2	Back Wall	2	ONLINE	3	
My 3.2 Debu.	IMAG	2	ONLINE	4	

OK Apply Reset Cancel

Change the output name to something

This is assigned number for each host and defines the order they

that makes more sense appear in the Multiselect GUI

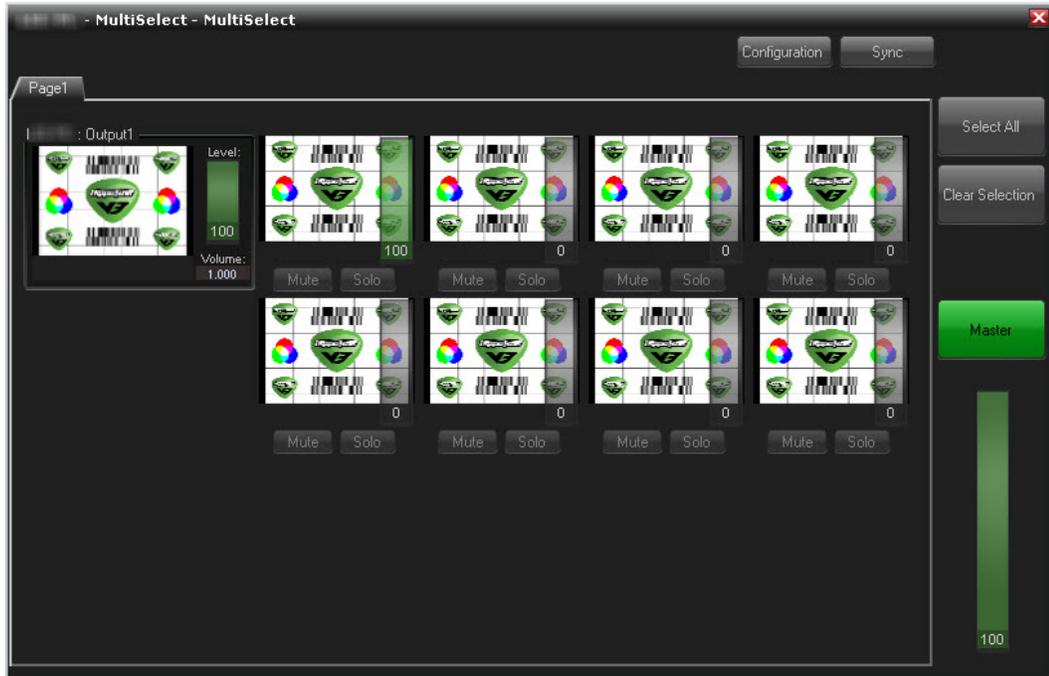


Once you have assigned all hosts then you will see that they will all change to connected and will now appear in the Multiselect GUI.

- **Multiselect Layout**

When you turn on Multiselect you will change the way that the layer window looks. This is because now the layer previews will not appear in the layer window but in the Multiselect window if you have added them. So if you run Multiselect on your local machine then you will need to select the layers via Multiselect instead.

When you have just your local Host added then you will see a window as below.



This shows me all my layers and master for this Host.

The Layer window will now look appear as below.



- **Using Multiselect**

Using Multiselect is very simple. As it states it allows you to select multiple layers or Outputs. This is represented by a simple two colour view in the Multiselect component.



In the above image we have selected layers 1,3,5 and 8. The red box around layer 1 denotes that this was selected first. The others are a Cyan colour and this denotes that they are selected. If you were to deselect layer one then the next layer that was selected previously will then become the main layer. In this case this would be layer 3.

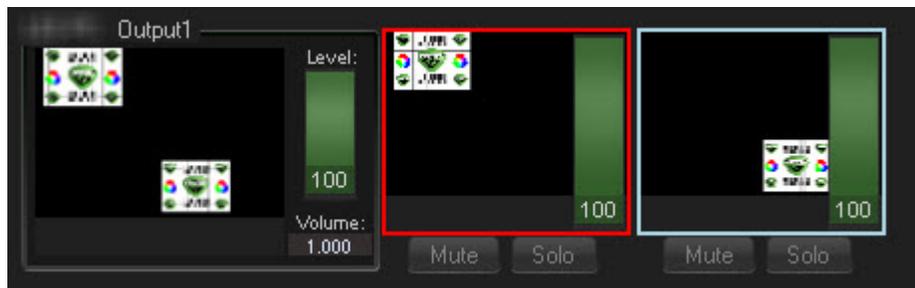


If you select the units 1,8,3,5 and you then deselect layer one, Layer 8 will become the main layer.

At the moment the main layer will then switch in the layer window to the values that it was at.

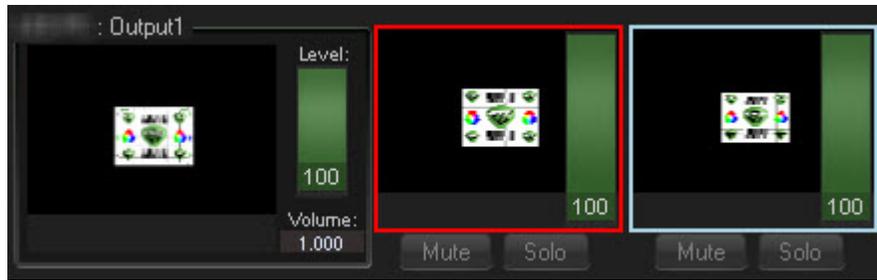
Taking a two layer example should explain this in a simple way.

I have two layers and the content on both layers is the same. However the geometry is different. On Layer one its zoomed in and top left and on layer two its zoomed in and middle bottom.



In this example both layers are selected so if the media changes now it will change on both of them but as its only a media change it will not affect any of the other parameters.

If you look in the layer window you will see that the Geometry is set to top Left as this is the Main layer selected. By then moving the geometry both Layers will then do the same thing , so Layer two will snap to the new position.



This is the same process when using multiple hosts.

- **Select Levels with Multiselect**

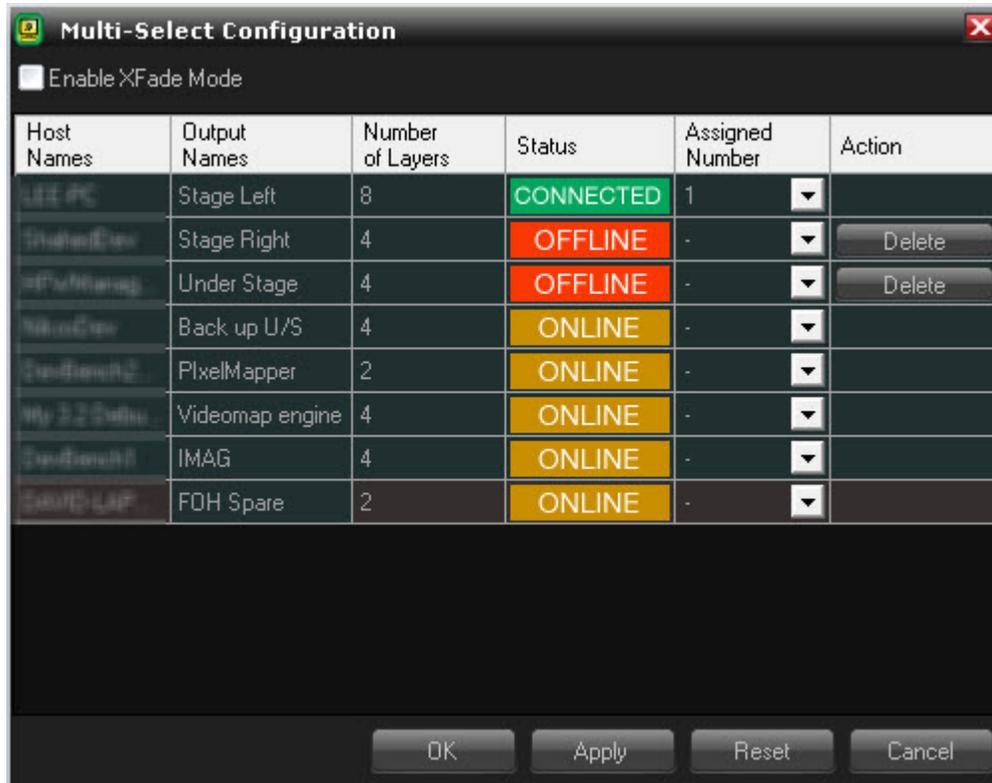
When you need to control groups of levels you have two options. The first is the mast level. You have a Level for the Master and this will control all Masters regardless if they have any layers selected. This is commonly know as a Grand Master.

One of the benefits of Multiselct is also the ability to select and control multiple layer levels at the same time. If you take the previous example of layers 1,3,5 and 8 as below and you want to bring the level of all of these down at once then simply deselect the Master button on the level and this will now control the layer level.



- **Multiselect GUI**

Configuration Window



**Host Name** *This is the name of the Hippotizer Host Machine*

**Output Name** *This is the Given name to the output to make it easy to read in the Multiselect window*

**Number of Layers** *Number of layer each machine is set to*

**Status** *Shows if the Machine is Online and available, Connected to Multiselct or Offline and unavailable.*

**Assigned Number** *The order that the connected Host will appear in the multiselect window. You get four to a Multiselect tab so this is important to remember when you have many hosts on the Network.*

**Action** *Allows you to delete the Previous Offline machines.*

*Multiselect Window*



**Configuration** Opens the configuration window

**Sync** Currently not implemented in V3.2 SP1

**Select All** Selects all layers in the Multiselect window

**Clear Selection** Clears all selection in the multiselct window.

**Master** Controls the Master level of all Masters in the Multiselect. Pressing this and de-selecting the Master button will then control all selected Levels

**Page 1** This tab allows you to switch between pages of layers if you have more than 4 hosts connected.

**Mute** Stops the layer from outputting temporarily by sending the level to zero

**Solo** Highlights this layer and sends all the others to zero.



## 5. Components in Detail

### 5.17 Network Tester



#### Overview

Network tester is a tool to allow you to make sure that your Hipponet setup is fully working and configured correctly.

This tool should only be used on a closed Hipponet setup and not connected to any other non Hippotizer IP machines. This could cause errors and stop these PC's from operating correctly.

The options with the test are:

Flood TCP

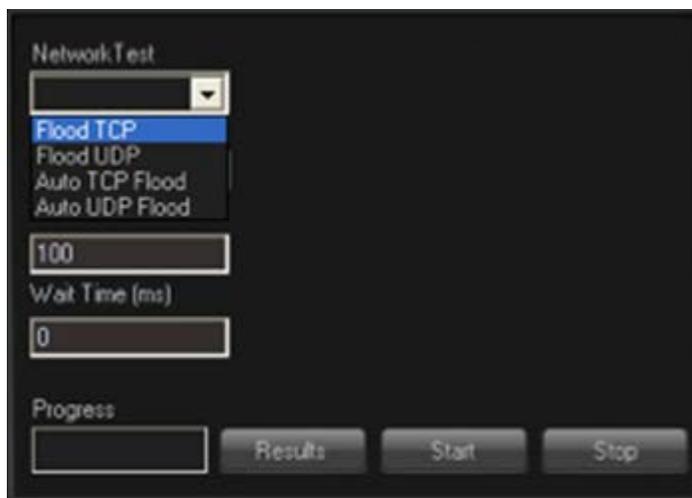
Flood UDP

Auto TCP Flood

Auto UDP Flood

You can also here set the Data Size, number of Packets and the wait time between packets sent.

Once complete the results can be found in a file that will then be stored in the logs.



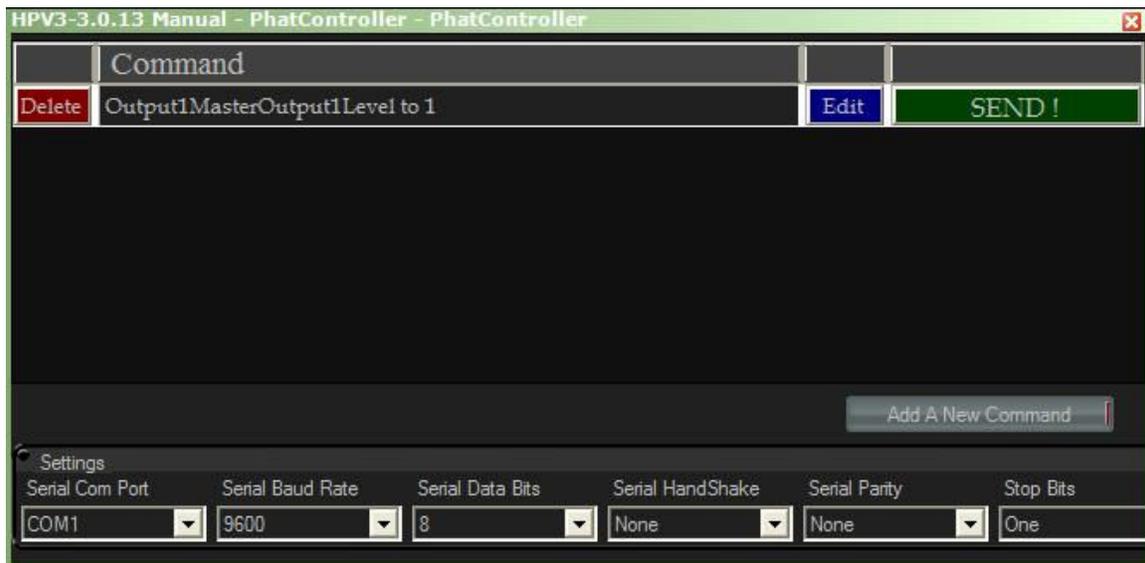
## 5.0 Components in Details

### 5.18 PhatController



#### PhatController

The PhatController is used to send commands to other devices using ASCII or Hex commands via RS232 or TCP/IP connections.



**Note:** If you are using the PhatController via RS232 you will not be able to use that same serial comm port with the RS232 component and vice-versa.

The parameters for the RS232 port need to be set according to the device you are sending commands to. Refer to the 3rd party hardware documentation for these settings. Once this has been configured, you create commands using the **Add A New Command** button.

- **Comm Type** This is either Serial for RS232 or TCP/IP for sending commands over the network.
- **Description** This is a description of the command you are creating, it is there as a reference within the PhatController only.
- **Command String** The command to be sent as documented by the 3rd manual should be entered here.
- **Data Type** This specifies how the data will be sent via RS232
- **IP Address** When sending commands via TCP/IP, the destination IP Address should be entered here.
- **TCP/IP Port** When sending commands via TCP/IP, the port needs to be specified here according to the documentation of the destination hardware

Once you have created a command (e.g. below), click OK and it will be saved in the PhatController list.

To send the command, click on the **SEND!** Button.

## 5. Components in Detail

### 5.21 PixelMapper



#### Overview

PixelMapper is a component in Hippotizer V3 which allows you to control simple or very complex lighting rigs using video instead of complicated cue lists. In a traditional setup a Hippotizer mixes a number of video and still images to produce a picture, this picture is then output as a video signal to a projector or similar display device.

When you use PixelMapper, this image can be output as a set of DMX lighting control channels and can be fed to a whole host of DMX compatible lighting fixtures such as LED battens or moving lights.

- **How does it Work?**

*The image created on a Hippotizer is made up of thousands of small dots called pixels. Each pixel is made up of three colours – red, green and blue.*

*Normally these pixels are sent as video data to a projector or screen where the corresponding pixel lights up using the according colour and brightness.*

*When using PixelMapper, each individual pixel is output as a set of four individual values between 0 and 255 representing each of the red, green, blue and intensity values. These values can then be sent via DMX to a lighting fixture which will read the values and output the correct colour at the correct brightness. If enough lights are placed in a grid-style arrangement on the stage, each receiving its own colour and brightness information from PixelMapper, then you will begin to recreate the picture across all the lights.*

*By carefully selecting your video content you can create very complicated effects across your display using very little programming time.*

*Often the layout of the lights on your stage is not a perfect grid design, and in this case there needs to be a way of telling the Hippotizer which lights are where, and what DMX addresses they all have – this is where PixelMapper comes in. With PixelMapper, you can create a graphical representation of the layout of the lights on your stage. PixelMapper will then automatically create a special pixelmap file that the Hippotizer will use to know where each light is on the stage, and make sure that it receives the right information.*

- **Understanding Fixtures and Personalities**

*Fixtures are the basis of any pixelmap in PixelMapper. They represent the lights that you have on your stage.*

*Fixtures are usually based on LED technology, but this does not always have to be the case – Hippotizer is capable of controlling almost any light that is capable of accepting colour or brightness information.*

*Because there is such a huge range of different fixtures on the market, PixelMapper uses special fixture personality files that contain all the information about the fixture being used.*

*The personality file contains information about how many elements are in the fixture (elements are the individually addressable lights that are within a single fixture), if the elements are capable of displaying multiple colours or if they can only display white, as well as a list of all the special extra functions that a fixture may have such as built in chases or strobe effects.*

*Also contained in the personality file is the physical layout of the cells within a fixture. Some modern fixtures can contain up to 200 separately addressable “elements” and so it is important to know how these are arranged within the fixture.*

- **Pixelmaps**

A pixelmap is the name given to a collection of fixtures that have been arranged in a particular way on the design grid to represent the layout of the fixtures on stage.

The pixelmap contains a copy of all the personalities that are used in it as well as details of the DMX addresses of all the individual fixtures.

It also contains information about the source of the video that is to be displayed on the fixtures when it is used.

- **PixelMapper Engines**

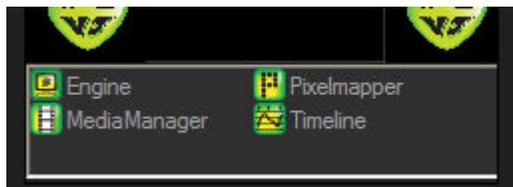
PixelMapper engines are the ‘brains’ of the component. They do the actual conversion between the video pictures and the lighting fixtures. For a pixelmap to do anything it needs to be loaded into a PixelMapper engine.

Each PixelMapper component can run a total of ten separate PixelMapper engines, and each engine can be loaded with a different pixelmap. This can be very useful if you want to send different video signals to different sets of lighting fixtures to create ‘Zones’.

- **Installing PixelMapper**

The PixelMapper component can be added just like any other component in Hippotizer – please see [Adding Components](#) for instructions on how to do this.

Once the PixelMapper component has been added you should see an icon added to the components list in the Hippotizer Overview like this:



In order for PixelMapper to output a signal to a collection of fixtures you need to provide it with a video source, the PixelMapper component must be installed on the Hippotizer that will be providing that video source, although editing of the pixelmap and previewing of the output of PixelMapper can be done anywhere on the HippoNet network.

PixelMapper will automatically start in the background when the system is started and it will enter the last used state unless instructed to do differently.

To access the PixelMapper editor, simply double-click the PixelMapper icon in the overview window and the main PixelMapper screen will open.

- **The Interface**

The interface is divided into three main areas:

- **The Pixelmap Manager Panel**

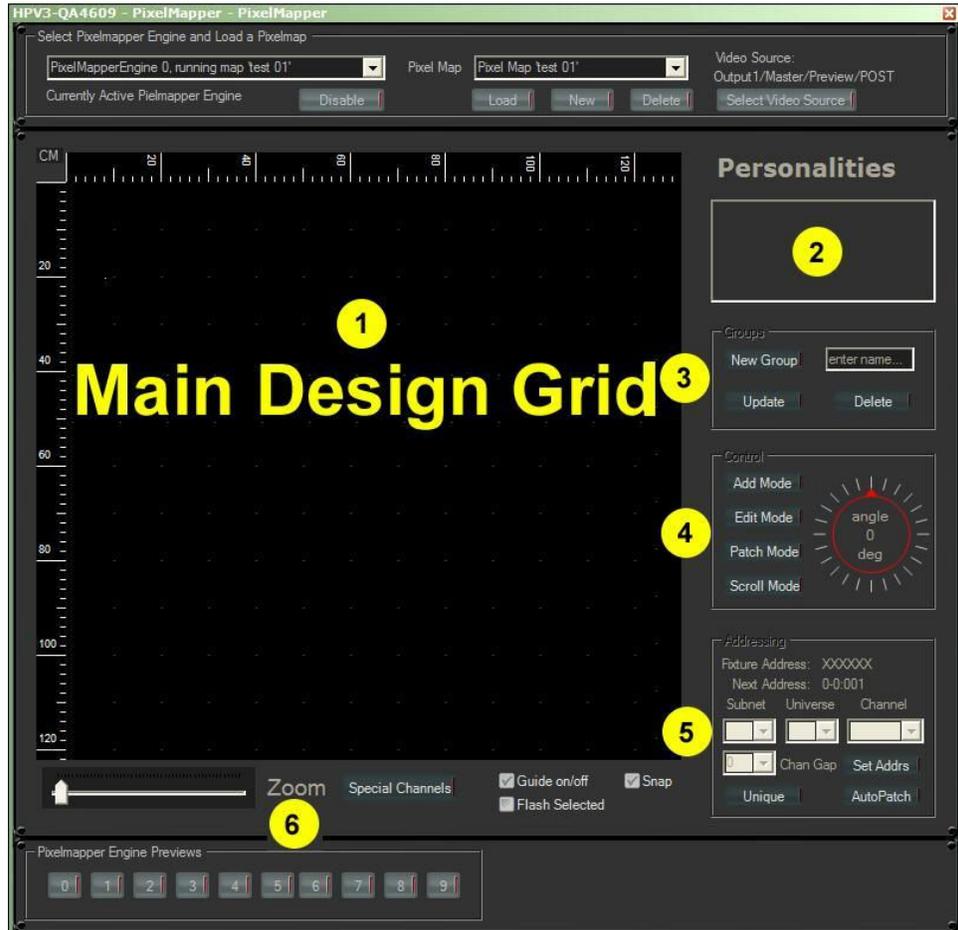


The pixelmap manager panel is used to display and manage the ten PixelMapper engines and also the database of pixelmaps stored on this machine.

From this panel you can create new pixelmaps, delete existing pixelmaps or load a pixelmap into one of the engines.

This is also where you can select the video source for a particular pixelmap.

- **The Main Design Grid**



The main design grid is where the majority of the editing is performed; the central black area is the drawing space and represents the stage or space that your lighting fixtures occupy in the real world.

Design grid areas:

1. The main drawing area
2. Personality selector / Group selector
3. Group management console
4. Mode selection switches and fixture rotation control
5. Patch manager console and fixture patch information
6. Grid zoom control

- **The Preview Selection Panel**



The preview button panel is used to open PixelMapper previews for each of the ten PixelMapper engines.

- **Using PixelMapper**

- **Loading Pixelmaps**

When the main PixelMapper interface is first opened the majority of the controls in the window are disabled, this is because it needs to know which engine/pixelmap it is working with, so before we can start editing a pixelmap we need to select a PixelMapper engine to work with and load a pixelmap into it.

So the first step is to select an engine to work with from the engines drop down box in the top left corner of the window.

If the engine has already had a pixelmap loaded then you will see that pixelmap load into the main design grid and the editor controls will become active, but if no pixelmap has been loaded then you will need to assign one to this engine.

To assign a pixelmap that has already been created, simply select it from the pixelmap dropdown box and then press the load button, the pixelmap will be loaded into the active selected engine and it will be displayed in the main design grid ready for editing.

To create a new pixelmap, press the **New** button and give your new map a name, then select the new map from the dropdown box and press the **Load** button.

All the editing controls will now become active and the main design grid will clear ready for you to add your fixtures.

It is important to note that there is no such thing as saving for pixelmaps, all pixelmaps are saved as they are created so you should never lose any information. As you modify a pixelmap, those changes will instantly be updated to the database and to any other interfaces on the network where that pixelmap is being viewed or edited.

It is possible to have the same pixelmap open in more than one instance of ZooKeeper on the network so that it can be edited by more than one person simultaneously, but it is not possible to have the same pixelmap loaded into more than one engine.

- **Editing Modes**

Once a pixelmap has been loaded you can begin to edit. To help you do this PixelMapper has four different editing modes which can be selected by pressing the appropriate mode button:



- - 
  - **Add Mode:** This is the mode you need to be in when adding fixtures to the grid.
  - **Edit Mode:** In edit mode you can re-position, patch or delete the fixtures in your pixelmap

- **Patch Mode:** This is a special mode used to easily and quickly patch your fixtures to their correct DMX addresses.
- **Scroll Mode:** Selecting scroll mode will change your cursor to a hand which allows you to easily pan around your pixelmap to get to the area that you want to change, very useful on large or complicated pixelmaps.
- **Adding Fixtures to the Pixelmap**

Start by selecting Add Mode by clicking on the **Add Mode** button in the control box to the right of the main design grid. The selector-box in the top right will change to display a list of fixture personalities grouped by manufacturer.



Alongside each of the manufacturers names you will find a small plus sign, by clicking on this plus sign you can display a list of all the fixture personalities for that manufacturer.

If you simply want to control a very basic LED fixture or dimmer, then you will find a manufacturer called 'Generic' which contains a list of very simple single element fixtures which can be used to control almost any LED fixture without any special features.

To add fixtures to the grid you must first click on one of the personalities in the personalities list to select it, as shown in the diagram.

Simply moving your cursor over the main design grid and right clicking will add a fixture to the Pixelmap. You can continue to add more fixtures by clicking again.

If you hold down the mouse button after adding a fixture you can drag the fixture into its correct place and then release it to confirm its position.

It is possible to add multiple fixture types into one Pixelmap by simply selecting a new personality from the list and clicking on the main design grid again.



- **Real World Measurements**

*When adding fixtures to the main design grid it is important to know that it is actually infinite in size, although you can only see a portion of it at any one time in the window.*

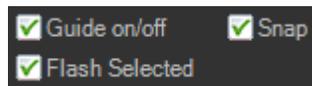
*All measurements in PixelMapper are in real world units, by that we mean that the elements of a fixture will be represented to scale when placed onto the pixelmap, and so when creating your pixelmap you should use the rulers around the grid to place your fixtures in the correct layout according to their distances in the real world, so if two fixtures are one metre apart in real life then place them one metre apart on the grid.*

*To see more of the Pixelmap you can use the zoom control at the bottom of the main design grid:*



*You can also zoom in and out by using the mouse wheel.*

*There are three other functions that help you when placing or moving fixtures on the design grid:*

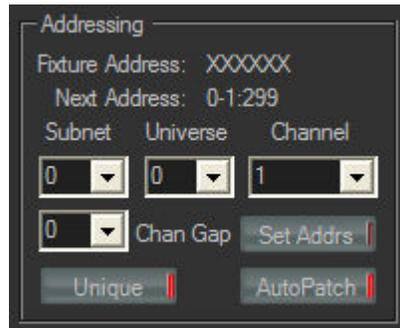


*You can enable or disable the grid markings and select if fixtures are snapped to the nearest gridline point when added or moved – this helps to achieve a very neat pixelmap.*

*When **Flash Selected** is enabled the selected lighting fixtures will flash, this can help when checking the layout and location of lighting fixtures.*

- **Patching**

For a fixture to become active in the Pixelmap it needs to be patched to a DMX address. The controls for doing this are located in the address control panel:



The fixture address readout is for information purposes only; it shows the current patched address of the selected fixture. If more than one fixture is selected then this will simply display XXXXXX.

The **Next Address** readout displays the next available DMX address that is reserved for patching.

There are three ways to patch a fixture or group of fixtures in PixelMapper, but all of them will use the next address readout to determine the starting point for patching the next fixture. For this reason it is possible at any time to manually change the next address so that you can manually set the address of the next fixture or group of fixtures.

To set the next address, select the subnet, universe and start channel from the three drop down boxes and then press the **Set Addr**s button.

By default, consecutive fixtures will always be patched directly after each other using as few channels as possible, but sometimes you will want to separate the fixtures. You can do this by selecting a number in the **Chan Gap** dropdown box, when selected PixelMapper will always leave this many channels between the last channel of the previous fixture and the first channel of the current fixture.

The **Unique** button allows you to turn on or off the unique address check when patching multiple fixtures. When turned on (red LED on) the patching system will always check to make sure that there are no conflicting channels between the current fixture to be patched and any of the other fixtures in the Pixelmap, if there are then it will automatically find the next available address that can be used without conflict and patch the fixture to that address.

You must be careful not to have any patched channels overlapping in your final patch as this will cause LED's to flicker on the output when they are being fed information from two or more parts of the video source at the same time.

- **Autopatch**

Autopatching is the first of three methods of patching a fixture, and is the default when a new pixelmap is created. Autopatching can be toggled on or off at any time by clicking the **AutoPatch** button in the addressing control panel.

When autopatch is active, every fixture added to the pixelmap will automatically be patched to the next available DMX address according to the next address readout.

In most situations this is the ideal setting, however if you have a large pixelmap or a complicated channel assignment then it may be much easier to turn autopatch off and then patch the fixtures later.

Every fixture that is added to the grid will have one element that contains information about the fixture:



The information element shows the position of the fixture on the grid (or in the case of a multi element fixture, the position of the first element), it also contains the patch address of the fixture if it has been patched, or "Not Patched" if it has not.

The gold triangle points to the top left corner of the fixture and allows you to easily see the orientation of a fixture on the grid.

- 
- 

- **Editing the Pixelmap**

Once you have added fixtures to the Pixelmap you will no doubt want to make changes, so this is where the Edit mode comes into play.

You can select edit mode by pressing the **Edit** button in the mode control panel.

- **Selecting Fixtures**

The heart of editing a pixelmap is being able to select and change fixtures in the design grid.

A selected fixture is always shown in RED as opposed to WHITE. The two ways of selecting fixtures are illustrated on the Selecting Fixtures page.

- **Edit Functions**

Once you have selected a fixture or a collection of fixtures using the above method you can carry out the functions listed on the Edit Functions page.

- **Delete**

- **Unpatch**

This will unpatch all the selected fixtures. The fixtures will remain on the grid but will not be active in the pixelmap until they are given a DMX address. This is useful if you want to use the patch mode later to patch the fixtures.

- **Re-Patch**

*This will temporarily unpatch all the selected fixtures, and then automatically re-patch them consecutively starting from the next available DMX address.*

- **Copy**

*This will make a copy of the fixtures that are selected and place it on the clipboard so that it can be pasted into another pixelmap or into the same pixelmap. This is very useful for creating very large pixelmaps as you can simply create one section and copy / paste that section many times.*

*Please note that when a selection is copied to the clipboard it remembers the position of all the fixtures and also the addresses to which they were patched.*

- **Cut**

*The same as Copy but it removes the fixtures from the grid where the cut command was executed.*

- **Paste**

*Following a Copy or Cut command this allows you to put the copied or cut fixtures back onto a grid.*

- **Universe +1, Universe -1**

*Allows you to increase or decrease the universe number of the selected fixtures.*

- **Subnet +1, Subnet -1**

*Allows you to increase or decrease the subnet number of the selected fixtures*

- **Unicast IP Address**

*There are two ways that the Art-Net data can be sent to fixtures or fixture power supplies – Multicast (also known as broadcast) and Unicast.*

*Traditionally Art-Net signals are sent Multicast which means that the DMX data is sent out to anything and everything that wants to listen on that network, the fixture itself then decides if the information that is coming down the network is of any use to it or not.*

*The advantage of Multicast is that it is very simple to setup and the fixtures are very easy to patch, but it has one very important disadvantage – every device on the network has to process all the information for all Art-Net universes even if it does not need that information, this can lead to network hubs and switches being overloaded with information and possible not working correctly.*

*The alternative to this is to use Unicast, with Unicast you specify an IP address of a fixture along with that fixtures Art-Net address – once this is done that fixtures Art-Net details will only be transmitted directly to that fixture and not to all the other fixtures in the pixelmap.*

*A separate IP address must be assigned to each fixture, or each fixture power supply (depending on what device actually receives the Art-Net data)*

*Selecting the IP Address option from the right-click menu will allow you to enter an IP address for the selected fixtures in the form of xxx.xxx.xxx.xxx, or if required will allow you to set those fixtures to broadcast if you do not know the IP address for them.*

- **Patch Mode**

*Patch mode can be selected from the mode buttons in the mode select window.*

*When in patch mode, moving the cursor anywhere over the main design grid will display a cursor showing the next available patch address along with a small arrow. Clicking the arrow onto any fixture on the grid will patch that fixture to the address displayed in the cursor, it will then increase that patch address by the number of channels in the patched fixture so that you can continue on to the next fixture.*

*Double clicking on a fixture with the cursor will make the patch address jump up one whole set of fixture channels without re-patching the same fixture, this allows you to easily create gaps the same size as one fixture in-between fixture patches in case you are patching a power supply that does not have all it's fixtures connected (e.g. Pulsar chromabank).*

- **Scroll Mode**

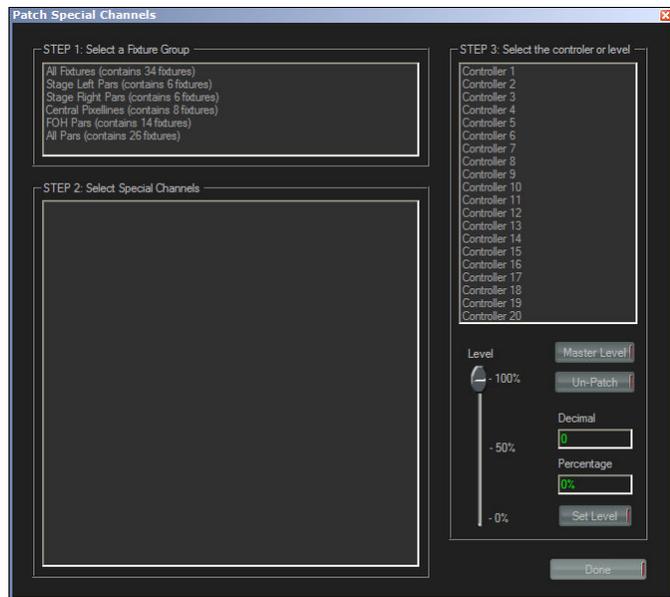
*When scroll mode is selected, the cursor changes to represent a hand. By dragging the hand around the main design grid you can scroll the grid in any direction regardless of the zoom factor of the grid itself – very useful when working on very large pixelmaps so that you can still see enough detail in the map itself.*

- **Patching Special Channels**

*Some fixtures will have 'Special Channels' such as built in chasers or master level controls, some fixtures even have mode select channels which need to be set to specified levels all the time in order for the fixture to work correctly.*

*Special channel patching is done group by group so before you attempt to patch any special channels you need to create at least one fixture group (see [4.9.5.2 Edit Functions](#)), if you want to connect all the similar special channels together on all fixtures then you should select all the fixtures on the grid and create a new fixture group called "All fixtures".*

*Press the **Special Channels** button below the main design grid.*



You will be presented with the special channel patch screen. There are three steps to patching special channels:

- 
- 
- 1. Select the fixtures you want to patch
- 2. Select the special channel that you want to patch
- 3. Select what you want to patch it to

The first step is to select the fixtures that you want to patch and is done by clicking on one of the groups listed in the fixture groups box in the top of the window.

This will then display a list of all the different fixture personalities used by those fixtures in the box below.

The next step is to select one of the special channels listed in the personalities box, this is done by simply clicking on one of the channels in the list of personalities.

Finally you need to choose what controller you want to patch that function to.

In PixelMapper there are 20 special controllers that are available as faders in the main Hippotizer interface, and are also patched as 20 DMX channels via the DMX component if it is installed.

In addition to these 20 special controllers you have a master level controller. The special controllers and the master level controller are identical except that the master level fader has a default value of 100% whilst the other special controllers have a default value of 0%.

Clicking on one of the 20 controllers on the right will patch the special channel to that controller.

Clicking on the **Master Level** button will patch that special channel to the master level controller.

Alternatively you can assign a set value to any of the special channels by simply selecting the value using the level fader on the right and then pressing the **Set Level** button.

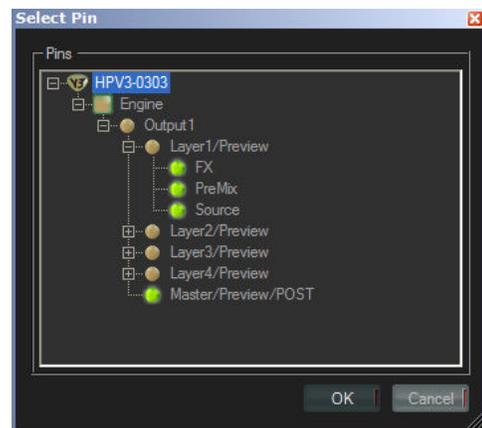
At any time, a special channel can be unpatched by pressing the **Un-Patch** button.

- **Right-Click Edit Menu**

If you right-click on one of the selected fixtures you will be presented with a local edit menu. This will list some additional edit functions along with a list of the Quick-Key shortcuts that can be used to access these functions without the menu later.

- **Assigning a Video Source**

Once you have finished designing your pixelmap, or even while you are designing it – you will want to start to play videos through it. To do this you need to assign a video source for the pixelmap. The video source that is assigned to a pixelmap is remembered with every pixelmap so that when you load it again it can get its video signal straight away.



To do this, press the **Select Video Source** button on the pixelmap manager panel.

You will then see a HippoNet tree window that shows your Hippotizer and allows you to expand all of the various parts of the system.

You can grab a suitable picture source for PixelMapper from any on the nodes that have a bright green dot next to them.

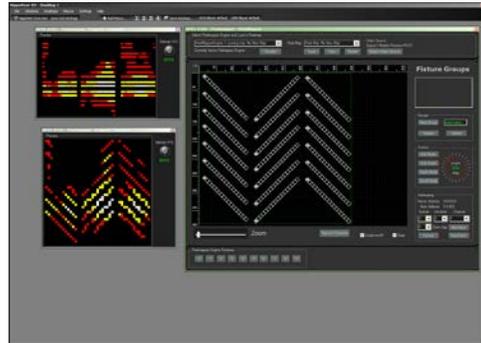
Once a suitable video source is selected, that engine and pixelmap become active.

- **Previewing the Result**

Once a video source has been assigned and the engine is active, you can then preview the result of the pixelmapping and see exactly what is being sent to the fixtures on your stage.

Simply open a preview window by clicking on one of the ten preview buttons at the bottom of the PixelMapper window, this will open a preview window that can be sized to your liking and will remain open until it is closed manually.

You can have as many preview window open as you wish on one desktop. Closing the main PixelMapper edit window will not affect the preview windows.



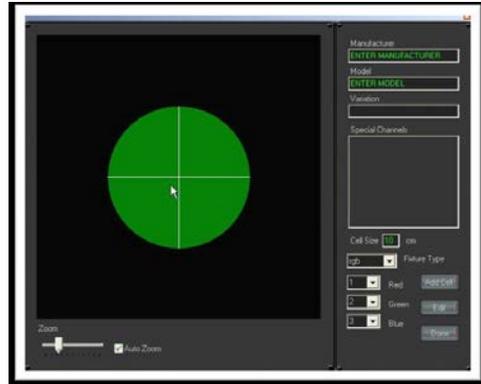
There is only one control on this window and this is the refresh rate of the data being sent to the fixtures. This is normally set around 20fps which is more than sufficient for most layouts, however you can increase this if you are likely to use any fast moving footage or flashing.

It is important to note that whilst increasing the refresh rate may give you a smoother playback result it will also greatly affect the amount of processing power required by the PixelMapper engines – so it is always a good idea to experiment with different values once you have all your PixelMapper engines active.

- **Making your own Personalities**

There will probably be many cases when you discover that the Pixelmapper personality library does not contain the fixtures that you are using. In this case there is a very easy way for you to create a new personality yourself.

Make sure that you have a pixelmap loaded into an engine (it can be blank necessary), and now go into "Add" mode by pressing the **Add** button in the mode panel, this will open the personalities selector window in the top right corner. Right-click anywhere in this window and select **Add** from the context menu, this will open the fixture designer as seen below:



On the left is the designer grid and if you move your mouse over the area you will see that you can control a large green circle.

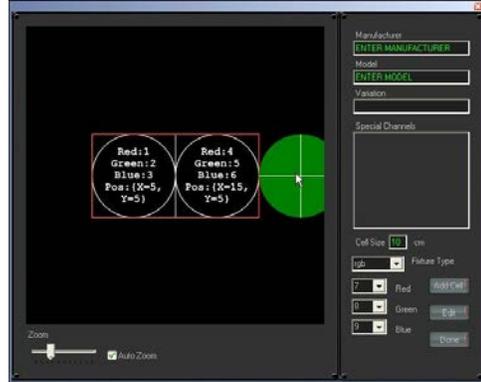
The first thing that we need to do is decide what type of fixture we are creating, the list of available types are:

- **RGB** A fixture with separate Red, Green and Blue Controls for each element (default)
- **CMY** A fixture with Cyan, Magenta and Yellow Elements
- **RGBI** Similar to RGB but has an additional intensity channel for each element
- **CMYI** As per CMY but with an intensity channel

This is a fixture that has only got an intensity or shutter option, this can be used to drive simple light bulbs or moving light shutters or even strobes!

Select the appropriate fixture type from the drop down list. Next you need to enter a cell size. A cell is the name given to a single controllable element of your fixture, so for example if you have a Thomas Pixelline 1044 then you have 18 separately controllable "Cells". Because we work in real world dimensions in PixelMapper, we have to tell it how big each of these "Cells" is, and this can be entered in centimetres in the box above the fixture type select.

Next we need to add the cells of our fixture and this is done by simply moving the cursor over the designer grid and then right-clicking the mouse to insert a cell, you can then move the mouse and click again to place another cell. You should continue to do this, laying the cells out in the same physical arrangement that they are in your actual fixture.



As you do this you will notice that each cell shows you information about what channels are used to control that cell, the cells are automatically patched in the order that you place them onto the grid.

If the **Auto Zoom** button is pressed then the grid will auto zoom so that you can always see your cells, however you can turn this off and instead use the manual zoom slider to change the scale of what you see.

Once you have added all your cells, you can then add any special channels that the fixture may have.

Special channels are defined as any channels that require DMX control but do not actually control the RGB cells directly; examples would be built in chasers, mode channels, strobe channels etc.

To add a special channel, right-click in the special channels box and click **Add**, you will then be presented with the special channel input box where you can choose a channel offset (from the base address of the fixture) and a description for the channel.



You can add as many special channels as you wish.

Once all the special channels have been added (if you had any) then you can enter all the details about the fixture such as Manufacturer, Model and variation. Variation is useful for distinguishing between different variants of the same product, so MKII or ver 3.05 for example.

That's it, you have created your own personality, and when you press **Done** it will instantly be added to the personalities list.

## 5. Components in Detail

### 5.23 RealTime Sync



#### Overview

The RealTimeSync component is a very simple but powerful component when used with other components in the Hippotizer system.

Basically the component simply generates a continuous timecode stream that is perfectly synchronised with the standard system clock (the windows clock). This timecode is compatible with all devices in Hippotizer that read standard timecode.

To test that the component is working, open an advanced HippoNet overview box and drill down to the RealTimeSync component, then double click the Timecode pin, this should open a large timecode readout that will display the timecode that the component is generating (this should actually show the time of day)

The component is best used with a timeline so that you can trigger timeline events to happen at any time of day.

To do this, take a new timeline or an existing timeline and open it, on the toolbar select settings and check the enable external sync button. Next, click on the sync source button and drill down to the timecode pin on the RealTimeSync component and select it.

Basically you can now enter a time into the timecode offset box, whatever time you enter into that box is the time at which the timeline will start playing from. The system will automatically calculate where it should be in the timeline based on the incoming timecode.

You can see the state of the timeline by looking at it's progress bar in the timeline list, if it is blue then it is too early for the timeline to start and it will wait until a later timecode arrives (for example if the incoming timecode displays 11:00am but the timecode you set in the timeline is 12pm), if it is solid green then the timecode is later than the time set for the timeline so the timeline has finished.



If you wish at any time to By-Pass the Real Time Sync then you can use the By-Pass button. This will turn off the time but when reinstated will catch up to the current time.

## 5. Components in Detail

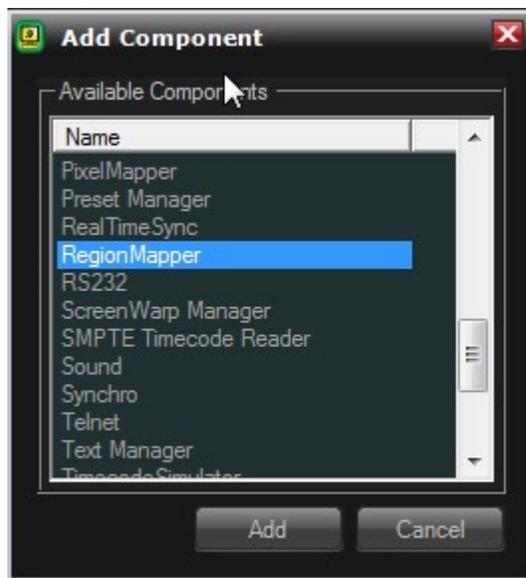
### 5.24 RegionMapper



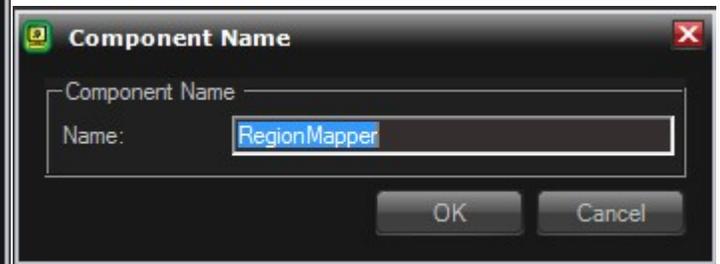
#### Overview

RegionMapper is a 3D mapping tool that allows the user to project 2D media onto 3D structures using a point and click methodology.

- Adding the regionMapper Component



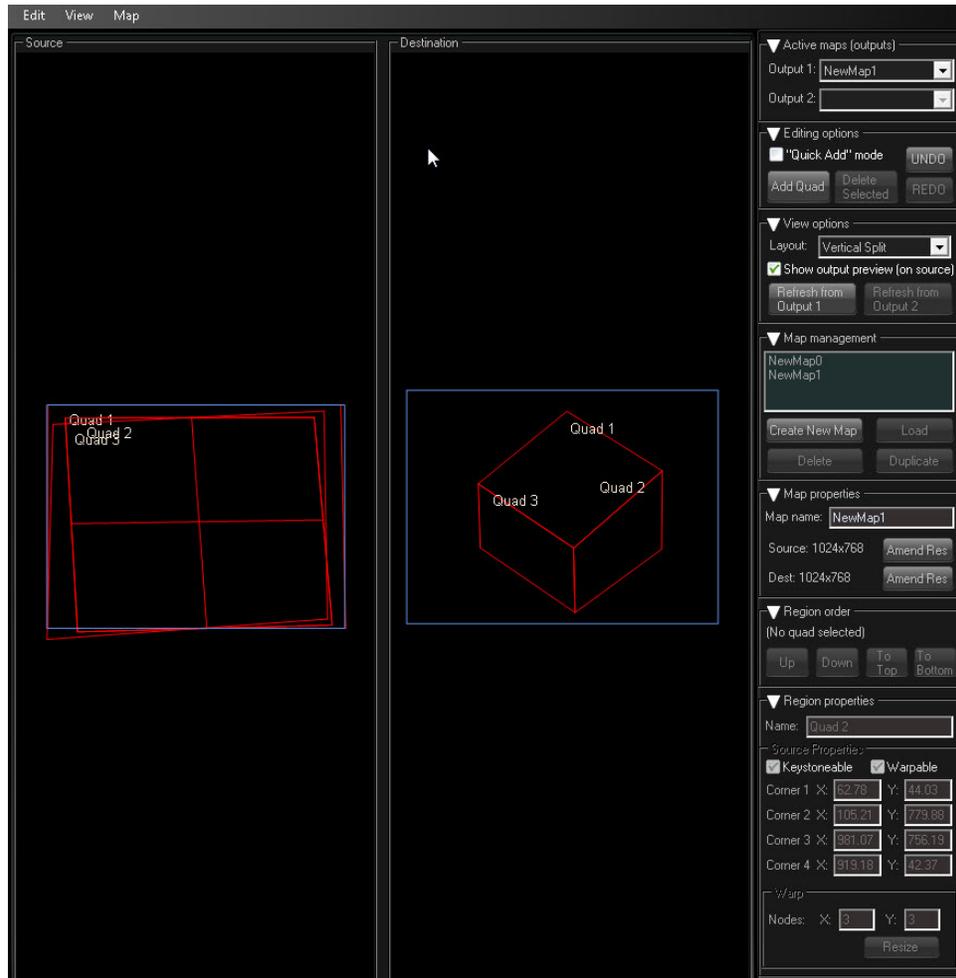
Select the RegionMapper Component from the Add Component Dialog



Name this component

- 
- The Interface and navigation tools
  - Main Interface

## Main RegionMapper



- **Source Area**

*The source area is where you can view the content that is being outputted by the Hippotizer. This is the 2D content that you will map onto your objects.*

- **Destination Area**

*This is where you define your regions. In this area you will be working on where the source content is mapped to.*

- **Active Map**

*As with all other mapping components in Hippotizer you can have multiple maps stored and decide which one you would like to be active at any one time. Here is where you select which is the active map and what output this is active on if you are running a Hippotizer with dual outputs.*

- **Editing Options**

*Standard editing tools can be found here including the very fast and easy way to add a Quad "Quick Add Mode"*

- **Map Management**

*Creating new maps, deleting, duplicating and loading a map into your work area.*

- **Map Properties**

*In RegionMapper you can define the source size to be different from the output size. If your content that you are working on is only 1024 x 768 but your output projector is 1920x1200 then you can define this here so that you are working natively on both canvases.*

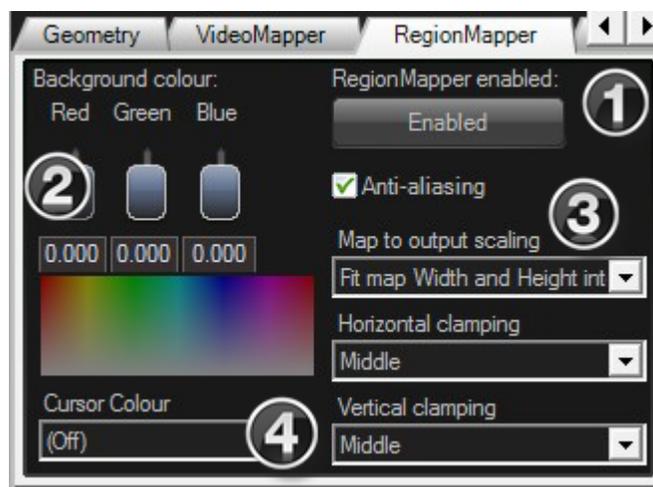
- **Region Order**

*Sometime when working on multiple regions they will end up on top of each other. This allows you to bring individual quads to the front or send them back so that you can work on other quads.*

- **Region Properties**

*Here you can decide on both your source and destination properties. This includes wether the quads are keystoneable, warpable and where they are in the map.*

- **Master Interface**



- **Enable RegionMapper**

*This does what it says on the tin and enables and disables RegionMapper on the output.*

- **Background colour**

*When you are in quick add mode it may be useful to output a solid colour so that you can see the full area of the projection. Here you can mix any colour to help you with this.*

- **Scaling Options**

*This will set the scaling options of each Quad to the map. This is particularly useful if you need to change the main source or destination resolution and want to retain the same scaling as you had before.*

- **Cursor Colour**

*This will determine the main colour of the crosshair when you are in quick add mode.*

- **Other Menu and navigation tools.**

At the top of the main interface you have some menu options.

- **Edit**

Here you have all the normal edit functions. If there are any shortcuts then they will be listed here in the drop down. Note that the Bring forward and Send back menus are dynamic and so will show you the options you have available for each quad. If they are greyed out then this is because that option is not available for that quad.

- **View**

This lays out how and what you see in the main interface. Either allowing only the Source, the Destination or two different ways of displaying them.

- **Map**

Here you can Create, Delete, Duplicate or Rename a map.

To **Zoom** in and out of the map you can use the scroll wheel of the mouse or the + and - Keys on the keyboard.

To **Scroll** around the map press and hold the Spacebar down and the cursor will change to a hand



and you are now in scroll mode. Release the space bar to go back to the std mode.

To **Nudge** a quad point select the point or points with a mouse click and then use the up,down left and right arrow keys to move the point/s.

To **Rotate** a Quad you have a number of options.



- Use the Icon in the Quad  This will rotate using the existing size. (Note that holding down **Ctrl** will adjust the rotation in 45 degree increments)
- If you hold **ALT** down and use the icon then you can rotate this and also adjust the size of the Quad at the same time.
- If you click on a corner point and hold **ALT + Up or Down** then this will rotate around the opposite point.
- Enter the rotation in the region properties as a value

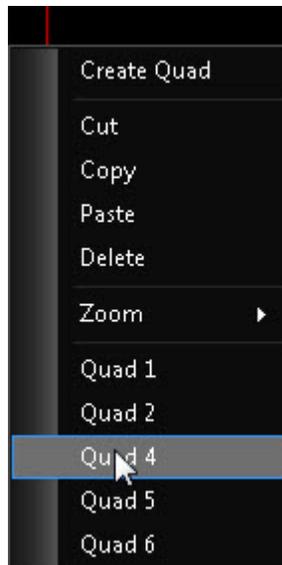
To **Move** a Quad click on this and drag or click to select the quad and use the arrow keys. Note that if you hold down **Shift** and do this then you will use **Fine** control of the movement. You can also enter the Start X and Y co-ordinates in the Region properties.

To **Resize** a Quad



- Click on the resize Icon  and drag to the correct shape.
- Click on a corner point of a quad and drag or use the arrow keys. (**TIP** to get fine control of this then simply zoom into the map more)
- Enter the size in the Region properties.
- Click on an edge of the quad so that the line turns purple. You can then drag this line as a straight line.

To Select a quad that's **hidden** below other Quads then you should right click on the quad you want and then you will see the name of the Quad in the menu.



- **Getting Started**

- **What are Quads**

*The main thing that you need to understand before working in RegionMapper is what Quads are.*

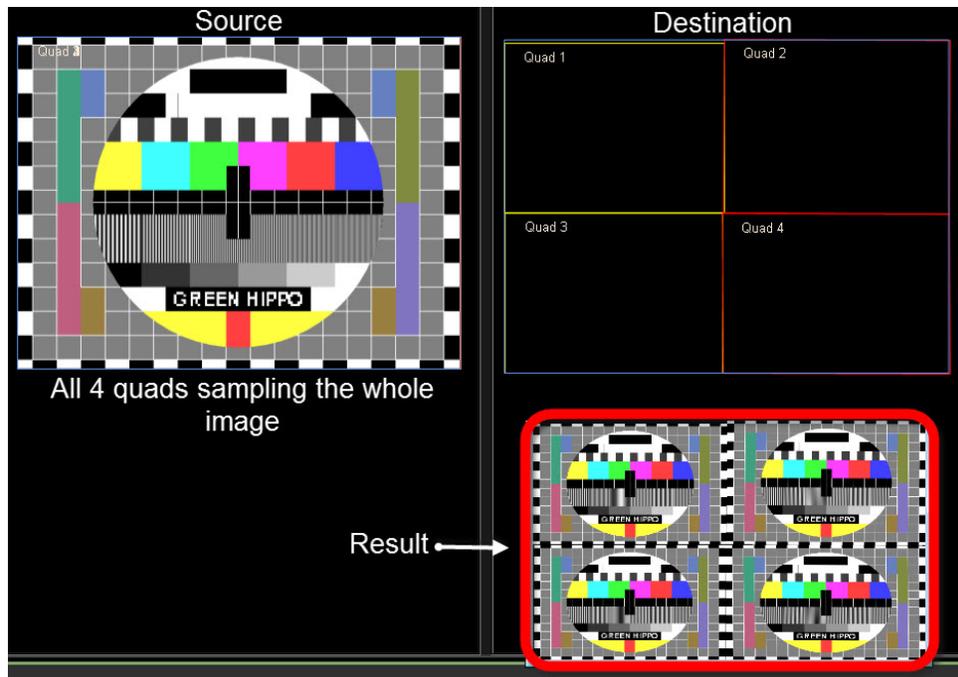
*Quads the containers that you will use to sample the video you need.*

*The simple way to think about this is to actually look at this in a quad of 4.*

*If we look at the first example. We have used all four quads to map the destination areas. These could be four faces of fours different cubes for example.*

*We want to show the whole image on each cube so in the source side we need to sample the whole image.*

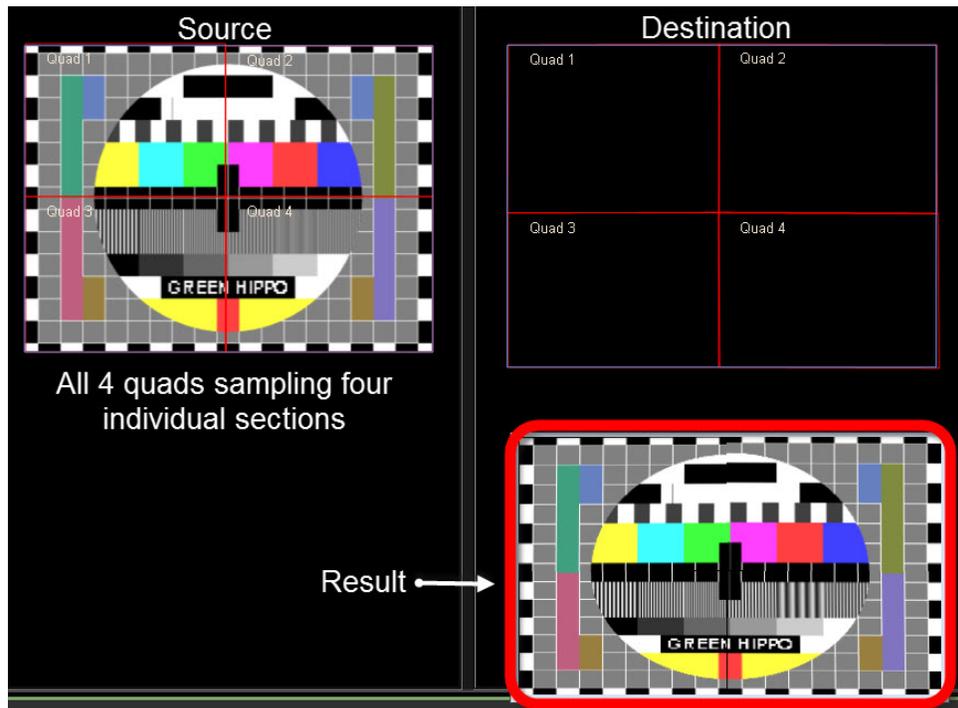
*On the destination side we need to mark out where the four faces are.*



This then gives us the result shown above.

Now in the next example we want to show one whole image over the four faces of the cubes.

So we have the destination mapped out. We don't have to change this so we only need to change what we sample on the source side.



- **How to add Quads.**

*There are three ways to add a quad to your Region Map.*

*The first and easy way is to press the **Add Quad** Button in the interface. This will add a quad that defaults to fill the source and destination Map.*

*The second is to use the shortcut key CTRL + Q. Again this will add a quad that fills the source and destination map.*

*The third is more tricky but ultimately gives you the best and quickest coverage of an area/region. This is added by using the "Quick Add" mode.*

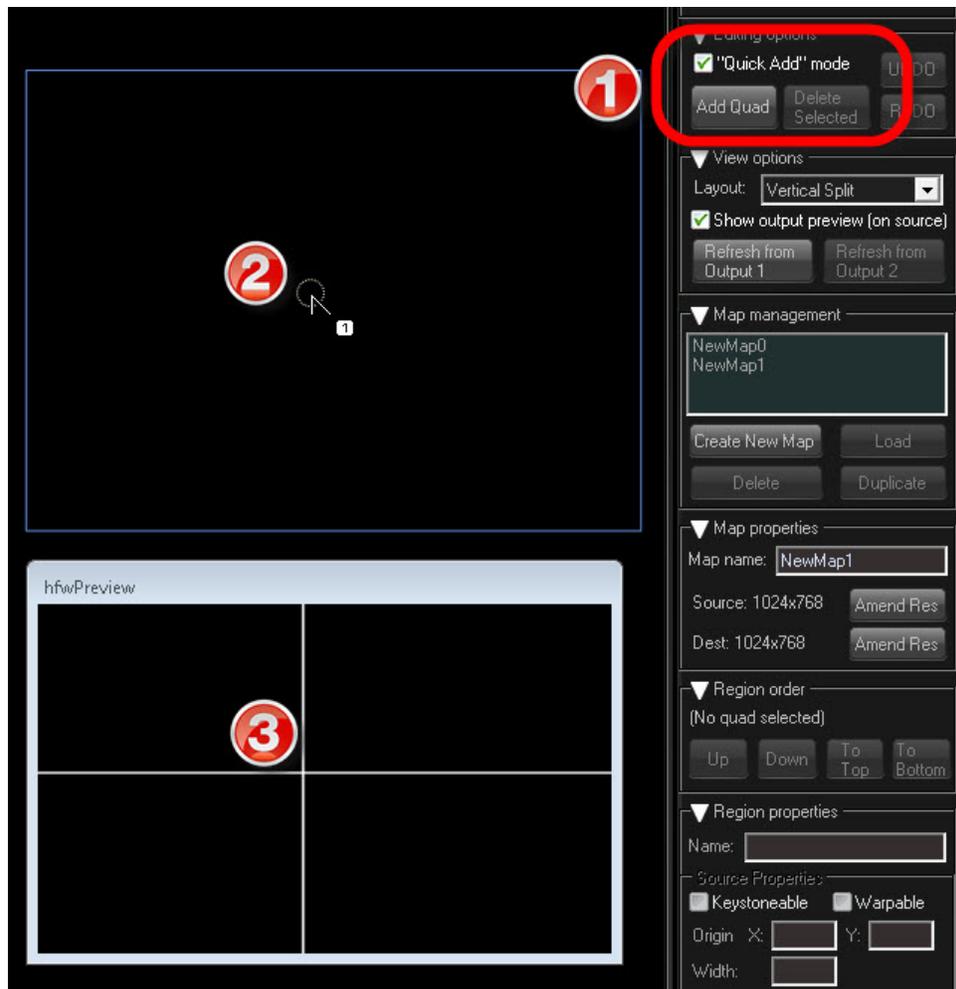
*See Quick Add Mode section.*

- **Quick Add Mode**

*Quick Add mode is designed to be used when you have the projectors onto the object you wish to map onto. The idea is that you draw onto the object and provide the 4 corners of the Quad live. For you to be able to do this we need to set up the output of the Hippotizer.*

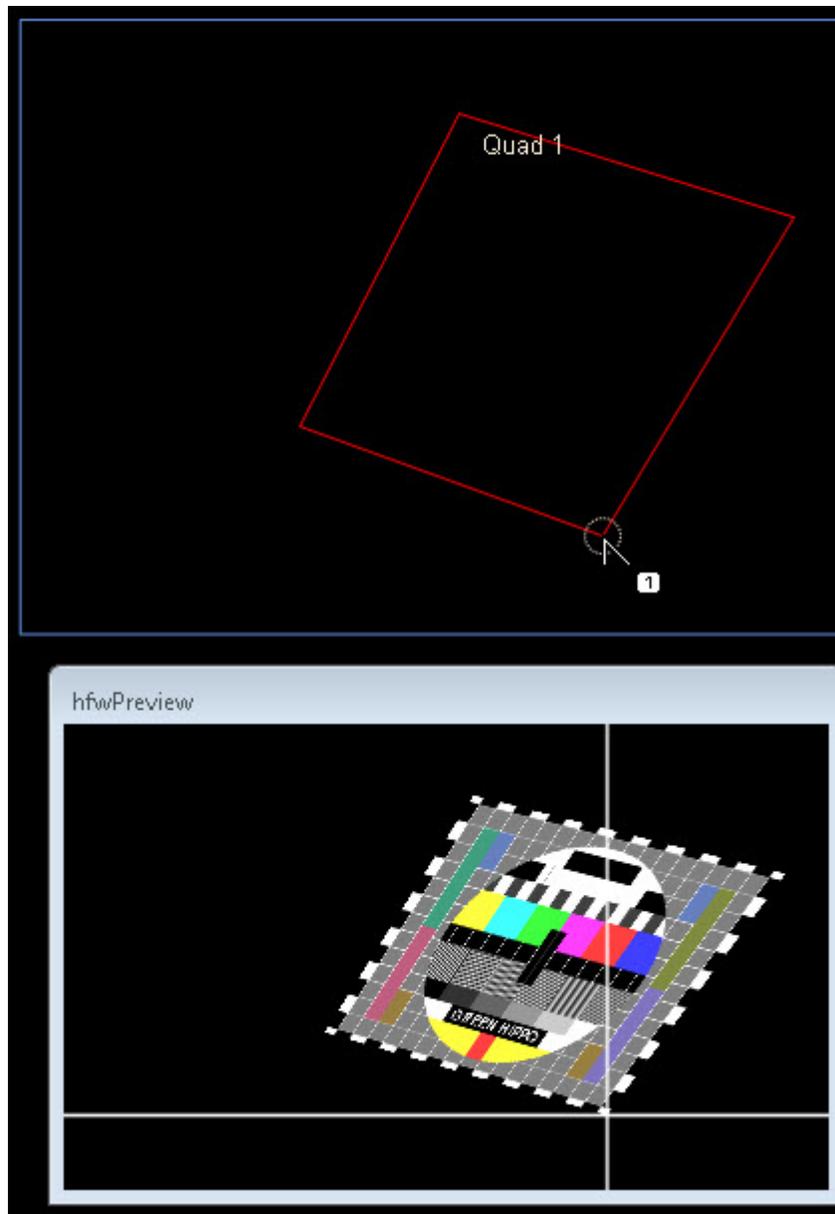
- 1. *Create a Map in Region Mapper*
  2. *Make this Map the active map on the output.*
  3. *Enable Region Mapper in the output*
  4. *Give your cursor a colour so that you can see this on your output.*

*Now when you bring the cursor across your destination map you should see the cursor, the number of the corner you are going to add and this should be shown on your output as well.*



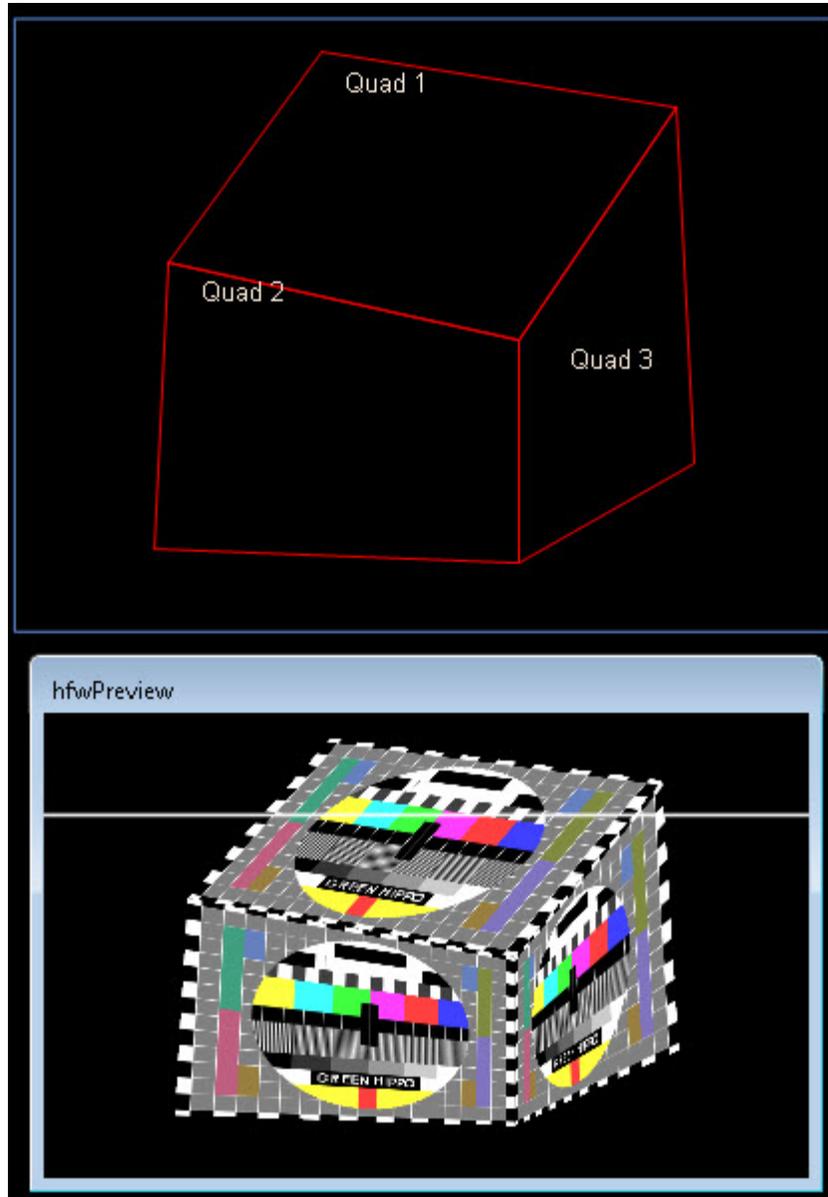
5. Quick Add mode selected
6. Number of the corner that is to be added to the Quad
7. The crosshair on your output.

Now if you select the four corners you require for this quad you will end up with your quad.



*The main reason for doing it this way is that you then dont need to spend time taking a quad and moving each of the corners to fit exactly where you need them. This is a much faster way of doing it.*

*Once you have drawn one then you can continue to add to this and note that the corners will always continue to try and attach themselves to the nearest point. This is very helpful so that you don't get gaps.*



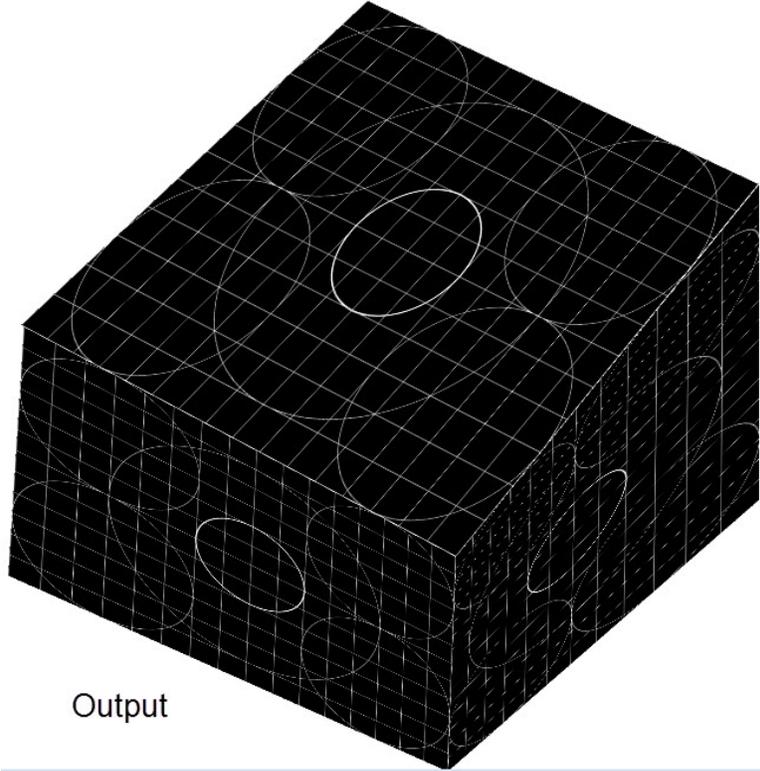
- **Keystoneing Regions.**

*A key benefit to using RegionMapper is the ability to keystone not on the output but the source as well. This means that you no longer have to worry too much about the content that is being used as the source material.*

*If we take a simple example of a cube and one projector.*

*Wherever you place the projector you will hit each side at a different angle. Therefore you will need to keystone each region independently. This is fine on the output but if you want to use the same piece of content for each face then you will need to manipulate the source material separately from each other.*

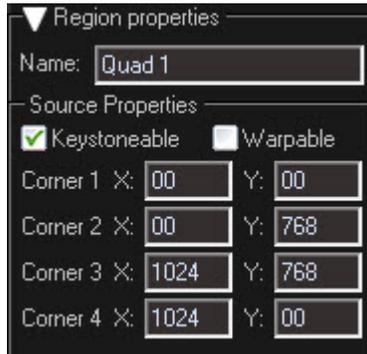
If you look at the example below we have 3 faces of a cube and they all have the same line up grid on them. You can see by this that they are all slightly different in terms of perspective as they will all be hit with the projector at different angles. Normally if you wanted to use the same content on these then you would have to warp the output to make sure the whole picture was the same.



Output

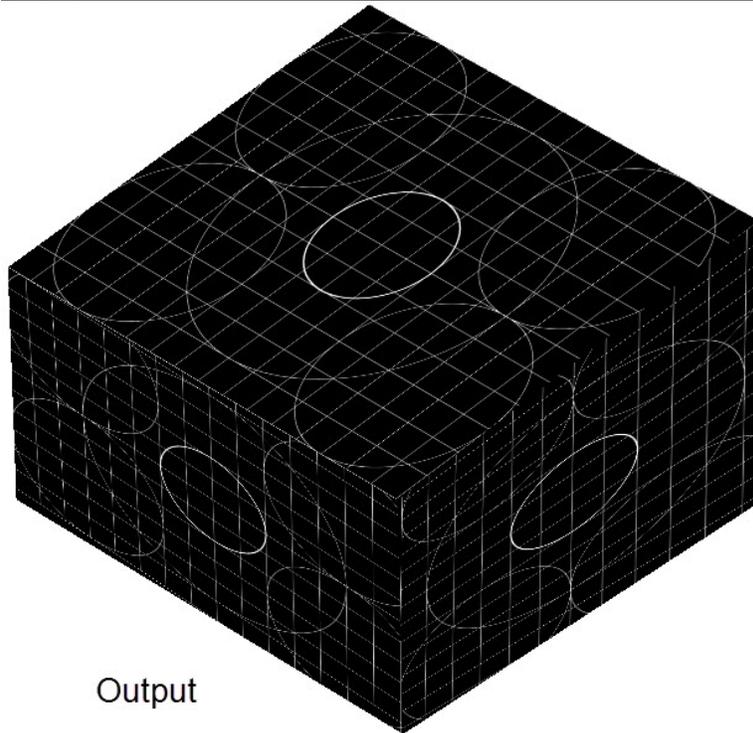
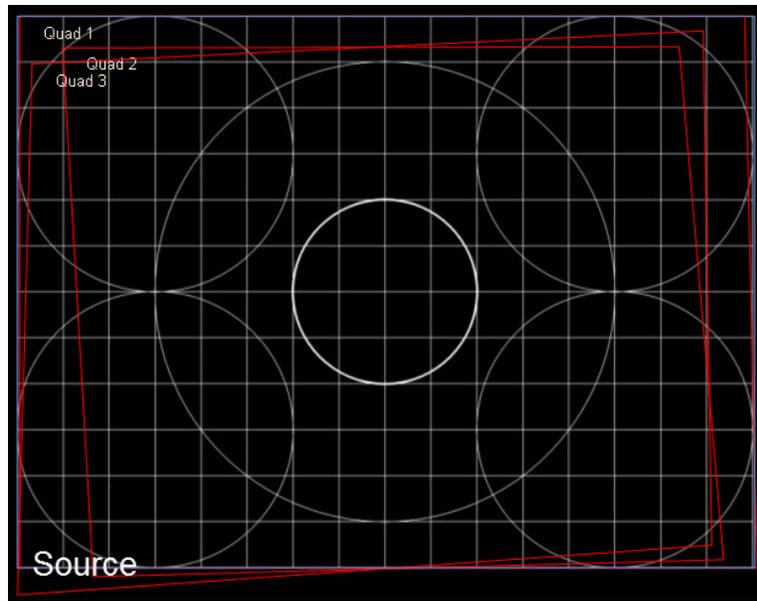
However in Region mapper this is a very simple fix and this can be done by correcting the particular Quad for each region.

To do this we have to select the quads one by one in the source map and make them keystoneable. This is done by selecting the quad and then ticking the keystoneable tick box in the region properties for that particular quad.



Once you have done this when you grab a corner of the relevant quad you can move this in any axis separately from the others. Thus you can correct the perspective.

This is how it would look below once corrected on the source side.



- **Warping**

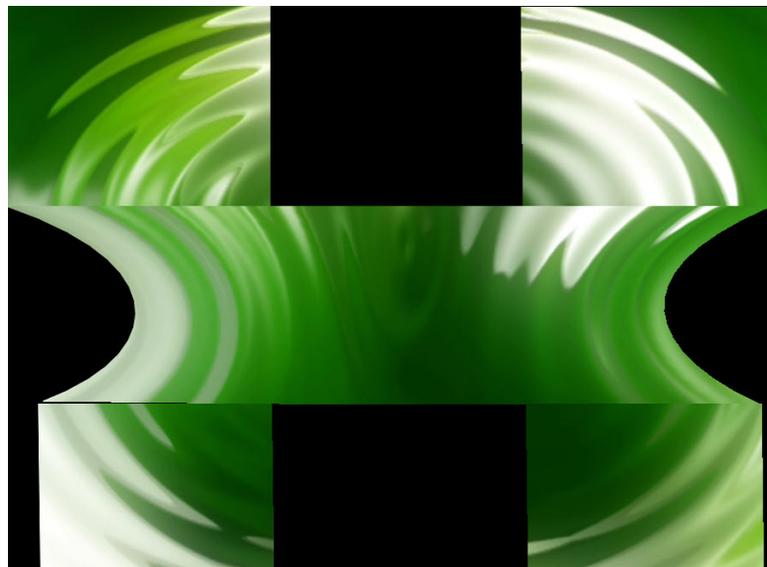
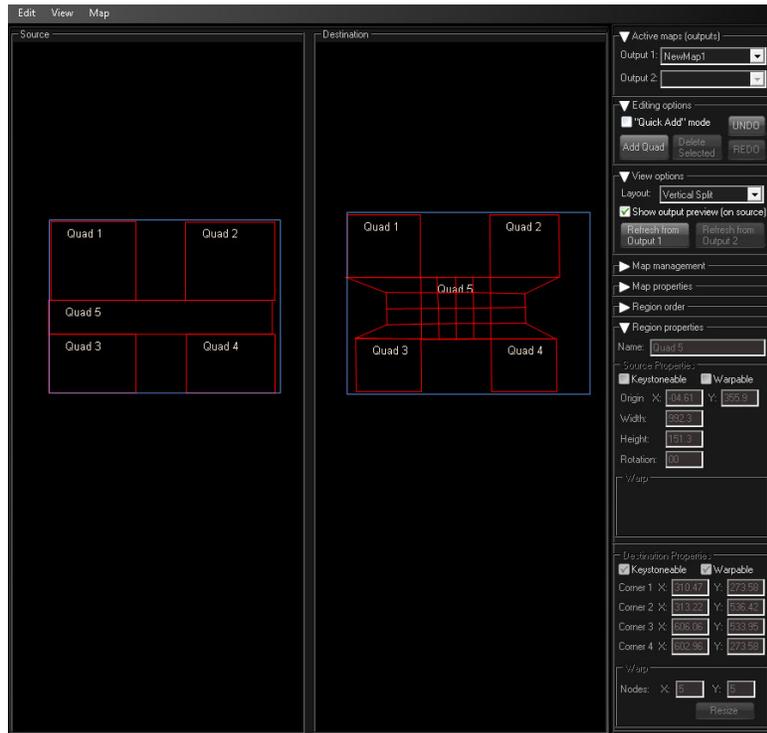
As well as being able to keystone each Quad you can also Warp each Quad as well.

*This is particularly useful when you have a non-flat surface you wish to project onto.*

*the warping is very similar to the screen warp component however here you can directly choose what part of the output you would like to warp.*

*This is therefore a cross between VideoMapper and ScreenWarp.*

The example below shows you that you can map the same piece of content across flat and non-flat objects.



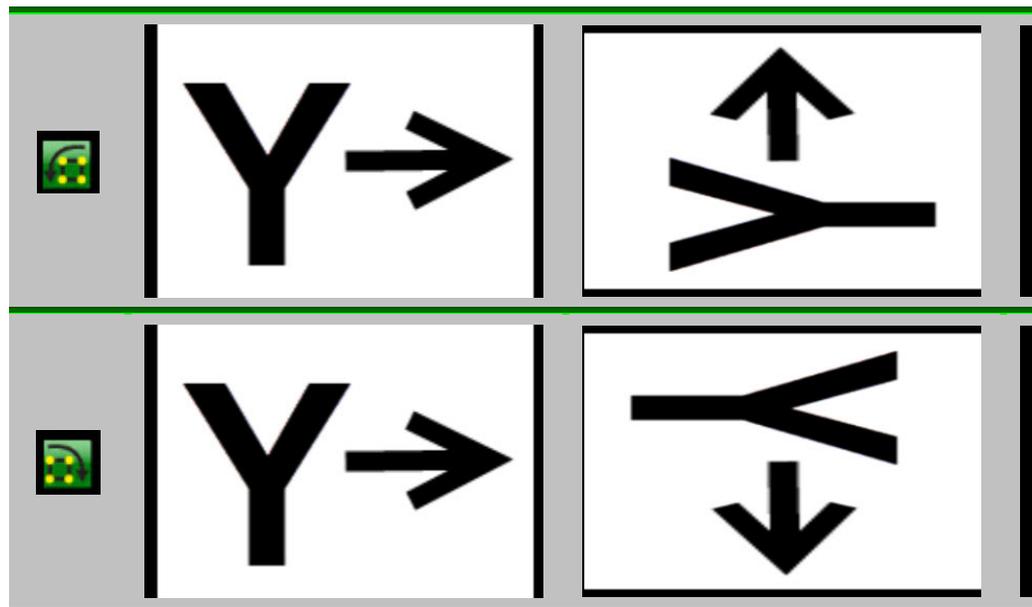
- **Properties of a Quad.**

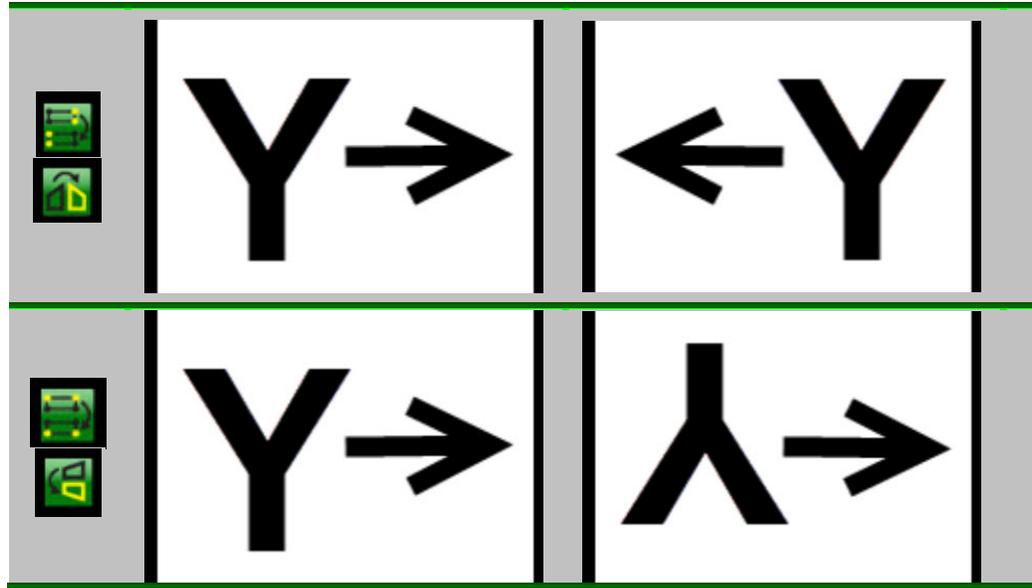
You will notice that when you select a Quad you get a choice of options appear around the edge of the Quad.



The main ones such as [rotate](#) and [resize](#) are simple enough but the ones at the top are explained below.

If we take a sample file, the Y-> and then apply this you can see what the effect is when we apply the options above the Quad. Note that these are for each Quad so if you wanted to have one quad mirror another quad you can do this. Also once you have applied one of the options then applying another will work from where your image currently is so you can get any combination from the options below.





## 5. Components in Detail

### 5.26 ScreenWarp



#### Overview

ScreenWarp is a Hippotizer component for multi-point distortion and allows morphing and shaping of images for use on non-linear surfaces, or simply as an effect for creative designs.

The ScreenWarp Manager component is loaded by default and can be opened by double clicking the ScreenWarp icon in the HippoNet overview window. However for full configuration you need to have the Engine Master window open and expanded to full size.



When expanded you will see a tab at the far right marked 'Warp'. This gives you access to warps you are currently working on and all previously created items. You will notice you can select two active warps simultaneously. This allows you to cross fade between two warps or between an existing warp and no warp.

**Note:** This can also be done on a timeline to powerful effect.

- [ScreenWarp Manager Explained](#)



The blue area of the screen represents your output area.

Select existing warps to edit or create a new warp using the drop down window and radio buttons below the screen area.

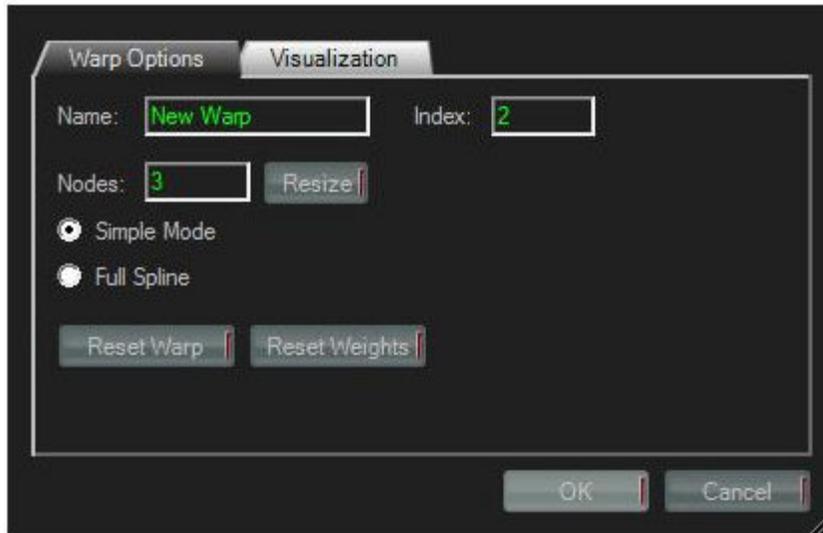
ScreenWarps are controlled by the black circles found at the corners of the box and also in the middle of the lines. These are referred to as nodes. Clicking and dragging will move the node and you will see a corresponding movement on your output screen. If you cannot see any movement it may be necessary to select the warp you are manipulating as the active warp on your output. To do this, in the Master preview window, select your warp as either of the two active warps listed and, if necessary, use the fader to make that warp active.

Experimenting with a warp will provide you with the best insight into how the output behaves when you move a node.

- **Features and Settings**

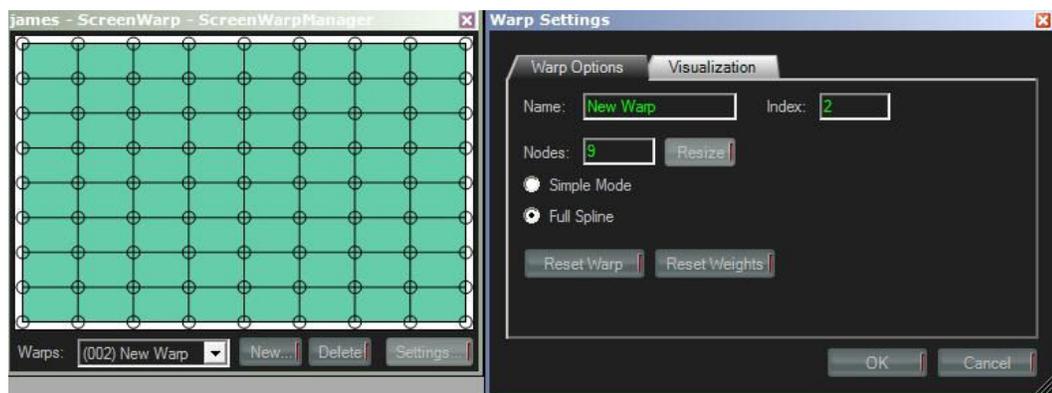
For simple shapes, such as curved screens, most shapes can be configured using the default settings. However, for more complex setups you may want to increase the complexity of the grid and adjust the functions to suit.

Click settings in the ScreenWarp Manager.



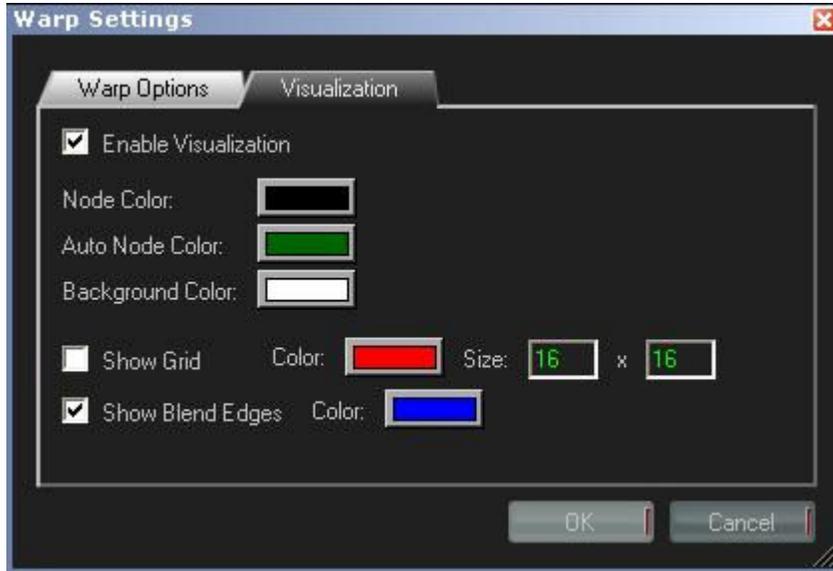
Here you can do the following:

- Rename the warp
- Change the index of the warp to a different value for access from other parts of Hippotizer.
- Adjust the number of nodes available for more complex setups. Type the new value and click resize to apply.
- Switch to **Full Spline** mode. In simple mode, available nodes are placed in the most common areas for creating warps. For more sophisticated warps where you may wish to pull and pinch key areas of the screen, full spline gives access to nodes located across the whole work area. The quantity and location of the nodes will vary according to the number of nodes selected. For example, changing the number of nodes to nine and selecting full spline mode will result in the following. The maximum amount of nodes is 16.



At any time the warp can be reset using the **Reset Warp** button.

The **Visualization** tab allows customisations of the grid and nodes to suit a project. Ticking **Enable Visualization** will activate all active visual aids such as grid lines, nodes etc.



**Note:** You may see a decrease in performance when visualizations are active. This is normal and will cease once visualizations are switched off.

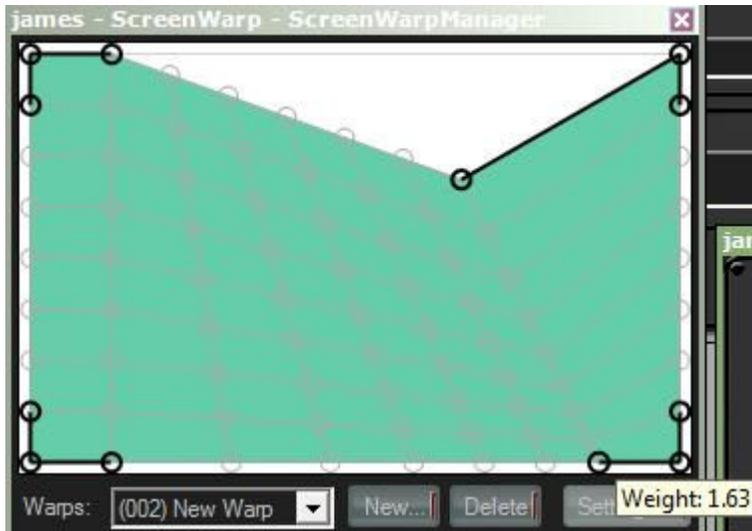
It may be necessary to change the colours of visual aids depending on the media you are running. Options are available to change the colour of nodes, background and grid.

Grid size is independent of node quantities. Adjust to suit your application.

- **Weights Explained**

Each node can have a 'weight'. The weight of a node dictates the degree of distortion and the effect of that distortion on the surrounding areas. If you need to achieve extreme shapes, or vary the amounts across the screen area, changing the weight of a node will help achieve this.

Change the weight of a node by placing the cursor over a node and right-clicking the mouse button and dragging up or down. The value of the new weight will be displayed as you drag.



To reset weights back to default values click **Settings** and in **Warp Options**, click **Reset Weights**.

- **Soft Edge Blending with Warps**

When using multiple servers, you may need to edge-blend between warped images on different machines. The soft-edge blending found elsewhere in Hippotizer may not be appropriate as it edge-blends the outside edges of the screen area. Therefore, ScreenWarp has an alternative method which allows soft-edge blending around the perimeter of the warped area instead.



Firstly, in the **Visualizations** tab, ensure **Show Blend Edges** is ticked. This will give you representation of the area to be affected and is shown in the colour selected. Default colour is blue. You can enable blending on any or all edges of the warp in the **Warp** tab on the master window.

By either manually typing the values into the windows or clicking in the value box and dragging, seamless soft edge blending between warps can be achieved. There is a Gamma and Overlap adjustment for each side of the warp. Once a desirable overlap for the warp is achieved, adjustment of these parameters can provide sufficient adjustment for seamless joining of adjacent warps.

## 5. Components in Detail

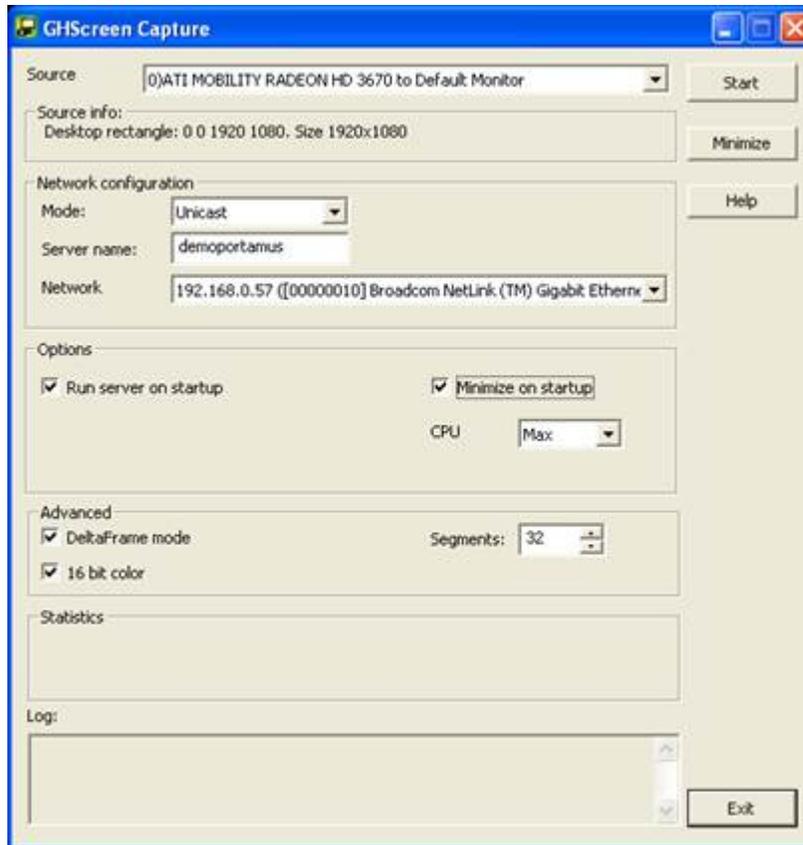
### 5.27 ScreenThief



#### Overview

ScreenThief is a component that allows the Hippotizer receive video data from devices via TCP/IP. This is very useful when you wish to stream web pages from other PC's for example. For this to work you will need to run a small app on the PC that you wish to stream from.

- **Screen Thief in 3 easy steps.**
  1. *Network the Screen thief system and the Hippotizer system together*
  2. *Run Screen thief application on the system running the video source (i.e. PowerPoint presentation)*
  3. *Select the system/IP address on the Hippotizer layer.*
- **Detailed instructions.**
  1. *Before you start using Screen Capture, you need to make sure that both the Hippotizer and the system you want to send the video data from are on the same network and can locate each other. A simple ping will confirm that they are ready. As a general rule the network connection needs to be as fast as possible as a lot of data will be sent between the two system we would suggest that you use a gigabit Ethernet connection for best results.*
  2. *Once you have done this, start up the Hippotizer software and to use Screen Thief, copy ScreenThief.exe to the desktop of the system you want to send the video data from.*
  3. *On that system make sure you are logged in as a local admin and then, run ScreenThief.exe application. It may start up minimized in the system tray (it will be the  icon next to the clock).*
  4. *Click on the icon and select **Open application...** if the GHScreen Capture is running (which it may do by default) click **Stop** to stop sending video.*
- **Screen Capture Settings**



**Mode**Unicast.

**Server name**By default this should be left alone unless the sever name is more than 12 characters, if it is, truncate it to lower than 12 characters.

**Network**This option should be used if the unit has more than one network connection connected. Make sure you select the fastest network connection.

In Options:

**Run server on startup:** With this option checked the software will start sending data as soon as it is started.

**Minimize on startup:**With this option checked the software will minimize to the system tray on start up.

**CPU Max**This will set the amount of CPU resources will be used when the software is capturing video.: .

Advanced:

**DeltaFrame mode:** This option is used to reduce the overheard of network traffic, however there may be artefacts with the received video signal on the Hippotizer.

**16 bit colour:** This option reduced the send video down to 16 bit colour regardless of the colour depth of the desktop graphics settings.

- **Hippotizer Settings**

Once you have you systems networked, click on 'Start' in GHScreen Capture and then on the Hippotizer on a

layer select the  source option. Depending on the version you have you should have options similar to the ones below. If you don't have the **Available Servers:** you will need to enter the IP address of the GHScreen Capture system.



## 5. Components in Detail

### 5.29 Sound



#### Overview

The sound component will allow you to use incoming audio, generate a fixed BPM rate or use Tap Tempo to change the tempo via tapping along with the tempo of the music manually.

There are 3 states of the Sound component.

- **Analyze**

*This will analyse the incoming sound and will set the BPM to whatever the incoming sound is set at, this will be dynamic so will change as the tempo of the sound does.*



- **Generate**

*This will generate a fixed BPM to use. This is set with the BPM pot in the top right hand corner of the component.*



- **TapTempo:**

*This will allow you to tap in a tempo using the Tap Tempo button on the right hand side. This will take two taps before it recognizes a tempo. This will then be displayed in the top right hand corner*



Other Options:

- **Mute**You can Mute the sound coming in by pressing the Unmuted button at the top. This and this can be unmuted by pressing it again.
- **Phase Pitch**This offsets the where each down beat is played without changing the tempo. This can be used to compensate for delay between the detected audio and video on screen.

## 5. Components in Detail

### 5.30 Syncro



#### Overview

HippoNet supports the transmission of timecode in our own special format across the network, so you can link any two media players together. They will do everything together; change media, play forward, play backward, change speed and so on.

- **Using Syncro**

*There are two ways of adding items to the syncro component.*

*By far the easiest is to drag what you want to sync from and what you want to sync to.*

*As an example we will try to synchronise Layer 1 to Layer 2. Start with dragging layer 1 preview to the Source text field and then the Layer 2 preview to the Target text-field. Your window should now look similar to the one below*



*To test, load a video clip on Layer 1 and play it – check in your layer overview and you can see that Layer 2 does the same thing as Layer 1.*

*You can have up to 16 channels of synchronised media players per sync component. Each channel consists of one Source and one or more Targets.*

*You can drag the preview of any Hippotizer, local or remote, into these fields in order to synchronise them. Common setups are to have one master Hippo and synchronise all 8 media layers of all other Hippotizers to this master unit. So whatever you play back on this machine, all other will follow.*

The second way is to use the **Add** and **Set** buttons and then navigate to the source and targets if you so wish. This will do the same thing as dragging.

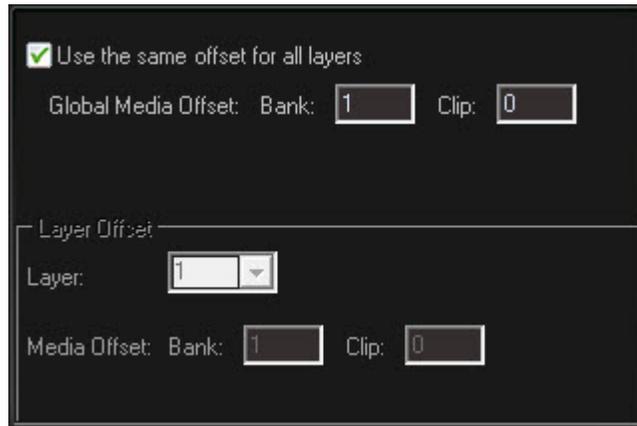
- **Common scenarios**

It is common to use multiple Hippotizers to create one large image. The Synchro Component is perfect to sync the different units together. However you need to take care to split the media correctly and distribute it across the different units. As all synced units play the media located in the same bank/slot it is necessary to prepare the media in the right way. If you have three Hippotizers making one big image then you need to place the appropriate media in the same slot across the three. For example in Bank 3, Slot 3 you might have a cloud animation. As an example, Hippotizer 1 is the master and also takes care of the left most portion of a three-way softedge pan. So this unit will need the left portion of the clip uploaded to this slot. Hippotizer 2 takes care of the centre portion and needs this clip uploading and Hippotizer 3 looks after the right.

Whenever you now play back this clip on Hippotizer 1, the others will follow frame accurately. Please note you still need to control the levels and all other functions manually or by a timeline.

- **Media Offset**

Another setup may be that you have programmed one host as the main controller but you want to use the same programming on a different machine as well but it has a different media map. To get around this you can use the media offset option in the Master window.



Here you have two options. You can apply a Global Media offset or just on a Layer basis. To get this to work simply enter in the offset value you want. For example if you have all your media on the source in Bank 1 and all your media you wish to use on the target is in Bank two, then give yourself an offset of 1 in the bank section. This means that when you select **Bank 1 clip 1** on your source it will apply **Bank 2 clip 1** on your target.

## 5.0 Components in Details

### 5.31 TextEngine

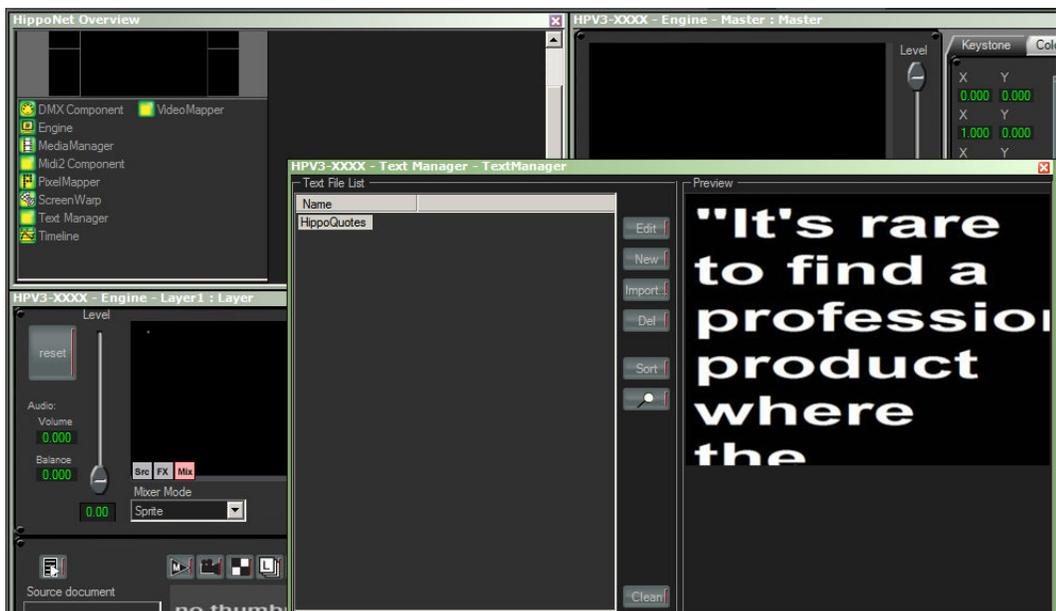


- **Text Manager**

To add the Text Manager, browse to the layer control and select the TextEngine source option. Double-click the window to add the Text Manager as prompted.



Once added, open the Text Manager component from the HippoNet overview. As below:

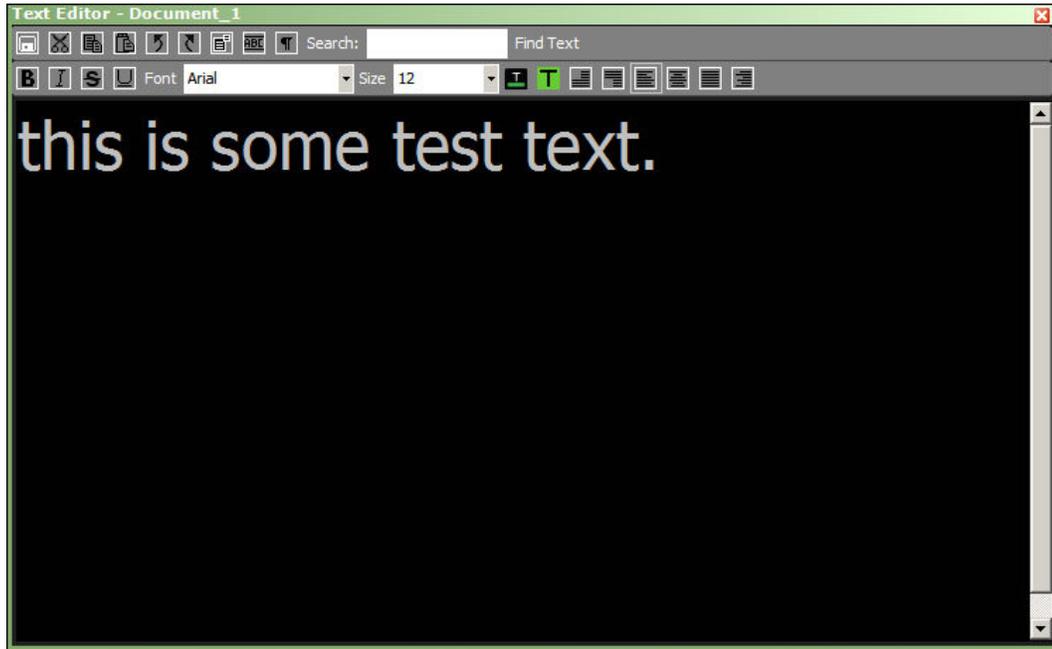


On the left is the list of text files in the Hippotizer, on the right is a thumbnail preview of selected text file.

In the middle, there are options to edit, create new, import and delete text files.

- **Creating Text Files**

To create a file, click **New**, and specify a file name then click **OK**. You will be presented with the document editor (as below).



Nearly all the formatting options are common with most text editors. The one unique to the Hippotizer is the



'Turn into ticker text'. This option converts the text into a single line format to scroll across the screen rather than from top to bottom.

- **Importing Files**

When importing files into Text Manager '.txt', '.htm', '.html' files are supported. If you want to use Word documents ('.doc' or '.docx'), simply save them as html first.

- **Playing Back Files**

To playback a file, select the file in the source document and then specify the play mode.



## 5.0 Components in Details

### 5.32 Telnet



#### Overview

The Telnet component provides a low level means of controlling the functions of a Hippotizer via TCP/IP (Ethernet). It allows the user to query information about the Hippotizer, the functions that it has and then be able to read the values of the current settings and adjust them if necessary.

The Telnet component can be added in the normal way through the host settings screen.

The only settings for the Telnet component are the user settings screen. Double clicking on the Telnet icon in the overview window will open the user settings window. Here you can administer users authorized to login to the Hippotizer remotely, this prevents un-authorized access to the system.



If you do not create any users all login attempts will be accepted without the need for a user name or password.

If you do want to use login access, then make sure that the **Login required** box is ticked and then add at least one user. Users can be added or deleted using the buttons to the right of the user list.

- **Connecting to the telnet component**

*You can use any TCP/IP capable device to connect and communicate with the telnet component as long as it uses port 23. For testing we recommend using Hyperterminal which is the Telnet console included with Microsoft Windows.*

*Whichever system you choose to communicate with the Telnet component you will need to tell it the IP address of the Hippotizer that you are talking to.*

**Note:** *you only need to have one Telnet component in a HippoNet network even if you have many Hippotizers in the system, as the one Telnet component will be able to control and receive information about all the devices on the network.*

*The following examples are done using Hyperterminal with line feeds and data entry echo turned on.*

*Enter the IP address of the Telnet component into the software that you are using and tell it to connect. You will then receive a request for a user name followed by a request for a password if you have enabled user login. After entering the information you should see a screen like this:*

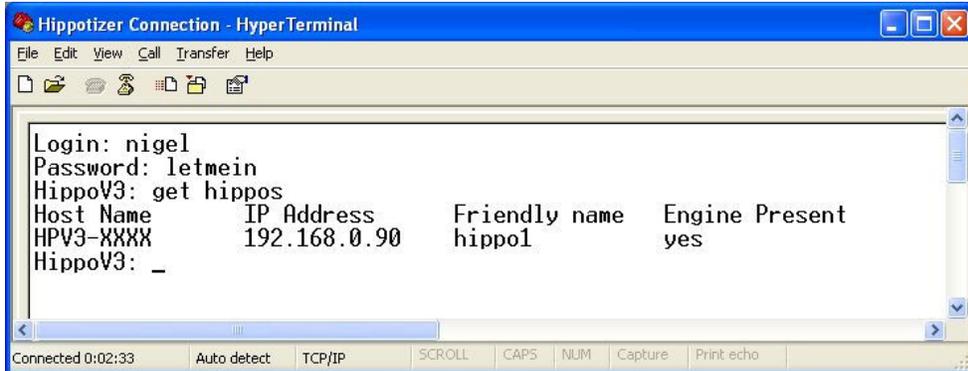


Once you see "HippoV3:" on the left hand side, the system is ready for receiving commands

- **Telnet Command reference**

A command will be given in the form of an instruction together with a number of arguments. The syntax is similar to SQL where each command takes certain arguments in the form of a sentence. The command line is case sensitive and each command is issued in lower case. The commands are as follows:

- **get hippos:** Returns a table containing a list of all the HippoNet Hosts (Hippotizers) running on the network. It returns the IP address of that hippo, the real name of the host, the friendly name of the host (the name used when issuing commands) and whether it is running a video engine or not. Like this:



The friendly name is used as parameter in other commands when a certain command should only be directed to a single Hippotizer. For example, **get components on hippo1** would return a list of the components running on hippo 1 only, where **get components** would return a list of all the components running on all machines. In most cases it is possible to use an asterisk \* to represent the "All" keyword, so **get components on \*** would return a list of components on all the Hippotizers. Items in square brackets should be replaced by the appropriate info, so [component\_name] could be replaced with "Timeline" for example. Items in bold are required, non bold is optional extra parameters.

**get components** [+ on + hippo\_name/\*all hippos]: Lists all components running on the Hippo  
 E.g. get components

- get components on all hippos
- get components on HIPPOV3
- get components on \*

**get pins** [+ from + component\_name/\*all components] [+ on + hippo\_name]: Lists the full pin paths of all pins on the Hippo or, if a component name is supplied, all pins present on that component. Note: the components class name is used, as opposed to the user-supplied component name.

E.g. `get pins`

```
get pins from RC
get pins from "Telnet Component" on HIPPOV3
get pins from all components on all hippos
get pins on HIPPOV3
get pins on all hippos
get pins on *
get pins from *
get pins from * on *
get pins from all components
```

It is also possible to find pins that match certain patterns. For example, the above command set can be qualified so that the command can take the form 'get pins ... where pin name contains "Layer".'

E.g. `get pins where pin name contains Layer`

```
get pins on HFWMangedHost where pin name contains Layer1
get pins from RC where pin name contains Preview
get pins from "Media Manager" on "Hippo 5" where pin name contains "Sample 4"
```

**get status of [ component\_name ] [+ on + hippo\_name]:** Sends a brief status report of the specified component running on a particular Hippo (if Hippo name is supplied) – i.e., running, limited, problem + any other pertinent information).

E.g. `get status of RC`

```
get status of "Telnet Component" on HippoGuiV3
```

**set pin [pin\_name] [+ on hippo\_name] [value]:** Sets the value to the pin. Prints an error message if failed/not possible.

E.g. `set pin Output1/Master/Output1/Level 127`

```
set pin Output1/Master/Output1/Level 255 on HFWMangedHost
set pin Output1/Master/Output1/Level 12 on *
set pin Output1/Master/Output1/Level 0 on all hippos
```

Note: when setting a Boolean value to a pin, the values 'True', 'true', 'TRUE', '1', 'False', 'false', 'FALSE' and '0' are permitted.

**read pin [pin\_name] [on hippo/"all hippos"]:** returns the value of the pin being read, if one exists.

E.g. `read pin Output1/Master/Level`

```
read pin CompMgmt/Status on hippo3
read pin Output1 /Layer2/Level on *
read pin Output2/Layer3/Level on all hippos
```

**Start [component\_name/all components][+ on hippo\_name]:** Starts a given component or, if keyword 'all' is used, starts all components

E.g. `stop *`

```
stop "Telnet Component"
stop all components
stop * on hippo3
stop Engine on hippo2
stop Engine on *
stop "RC" on all hippos
stop all components on hippo3
stop all components on all hippos
stop Engine "Telnet Component" Timeline
```

**restart [component\_name/all components]:** Restarts a given component or, if keyword 'all' is used, restarts all components

**select [hippo\_name /hippo\_name hippo\_name .../all hippos/\*]:** Selects a given number of Hippos. When one or more Hippos are selected, any commands issued are transacted on all hippos currently selected. If any command fails, a message will be displayed regarding that failure and on which Hippo it occurred. Note: When one or more Hippos have been selected, the host running the Telnet component is not selected by default.

E.g. `select Hippo2`

```
select Hippo2 Hippo3 Hippo5
select all hippos
select *
```

Note: the select command will return the number of hippos selected

**deselect [hippo\_name/all hippos/\*]:** Deselects a given number of Hippos.

E.g. `deselect Hippo12`

```
deselect Hippo5 Hippo6 Hippo7
deselect all hippos
deselect *
```

Note: the deselect command will return the number of hippos deselected

**list selected:** Lists all Hippos currently selected

**get exceptions** allows remote machines to monitor the health of hippos on the network. In order for this to work, only one Hippo on the HippoNet must be running the Telnet Component. If an exception (a crash) has occurred on a hippo, **get exceptions** will return the time and details of the crash. This is done by reading the `hwexceptions.txt` file on the C: drive. If there have not been any exceptions since the Telnet component was started, then it will return with no text.

E.g **get exceptions** returns all exceptions on the selected hippos, if none are selected then this returns exceptions on the hippo running the Telnet component.

**get exceptions on hippo2** returns exceptions on hippo2.

**get exceptions on all hippos** returns exceptions on all hippos. Please Note: this will not return exceptions on a hippo where windows has crashed, it is off or not connected to the network.

**clear exceptions** clears the exceptions since the Telnet component was started.

**clear exceptions on hippo2** clears exceptions on hippo2

**clear exceptions on all hippos** clears exceptions on all hippos connected to the network.

Triggering Timelines with Telnet:

You can control Timelines (Play, pause or stop) from the Remote Control Command pin:

Timeline2/RemoteControlCommand. Use the **set pin** command to do this.

E.g `set pin timeline2/RemoteControlCommand 1->Play`

`set pin timeline2/RemoteControlCommand 1->Stop`

`set pin timeline2/RemoteControlCommand 1->Pause`

This will play, stop or pause Timeline 1 on the selected machine.

`set pin timeline2/RemoteControlCommand 1->GoCue(11000)`

This will goto cue 11, in timeline 1. (If you want to goto cue 10.001 for example it would be **GoCue(10001)**).

If you are programming timelines to be controlled by telnet it might make it easier to place a cue at the beginning of each, so that you can reset them with the **GoCue** command. Alternatively, you can manually change the playhead position from the Timeline2/{GUID}/Playhead/Position pin.

E.g `show pins from timeline`

This will display all the pins in timeline. From this list you can find the GUID (A 16-digit Hex code) of the timeline you would like to modify. Then (include the {} in the command):

`Set pin timeline2/{The timeline's GUID}/Playhead/Position 0`

This will move the playhead back to the beginning of the time line.

There are two ways of stopping the hippotizer application from telnet:

The softer method can be done to a remote hippo.

**shutdownhost hippo3 or  
shutdownhost "host name"**

This command will not work on the machine running the telnet component that you are querying. In order to shut down the machine running the telnet component use the command:

**killhost**

Please note that this will stop any other telnet commands from being recieved on that machine as the telnet component will also stop.

## 5. Components in Detail

### 5.34 Timeline Control String



#### Overview

The [MIDI component](#) cannot talk directly to the Timeline Component, so it needs a TimelineControlString component to translate.

The Timeline control string is also a different version of the Cue Controller and enables you to very simply control timelines one at a time.

In the Interface you have a few variables that you can change.

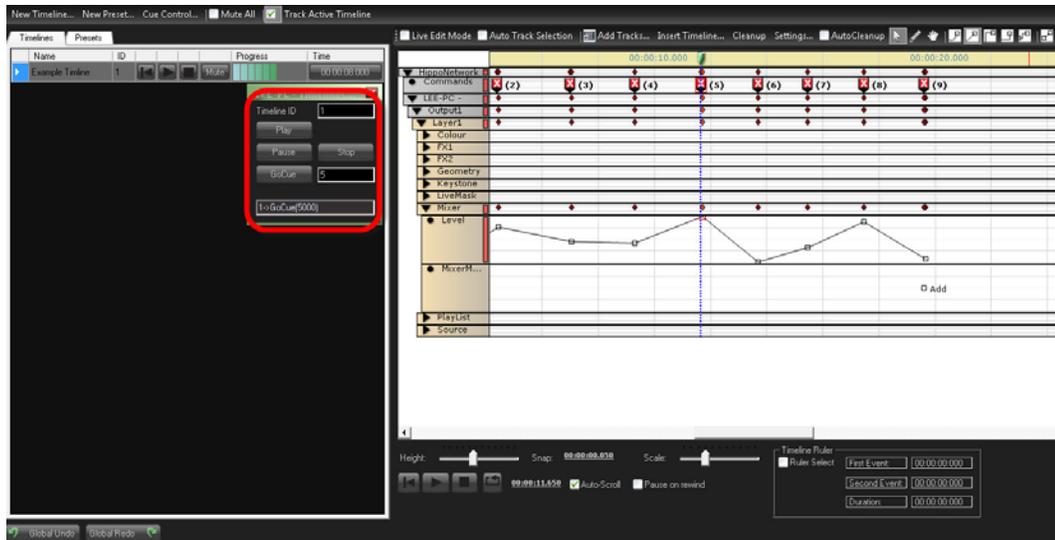


**Timeline ID** This is the ID number given to the timeline

**GoCue** Here you can add the number of the Cue that you want to send the playhead too. This is defined in the command in the Timeline.

- **Using the Timeline control String component.**

*The rest of the options are as they state. Play, Pause, Stop. These all refer to the playhead on the timeline.*



In the screenshot above you can see that we have a Timeline with the ID of 1 and we have created 9 Cues. The value in the GoCue box is 5 so when I press the GoCue button it will send the playhead to cue 5 and then pressing play will play this Cue. As the Cues all have stop values on them then it will stop at 6 but pressing play again on the component will move the playhead onto the next cue.

## 5. Components in Detail

### 5.35 Toolbox



#### Overview

Toolbox is a utility that allows you to manage your herd of Hippos from one Hippotizer or a Zookeeper machine.

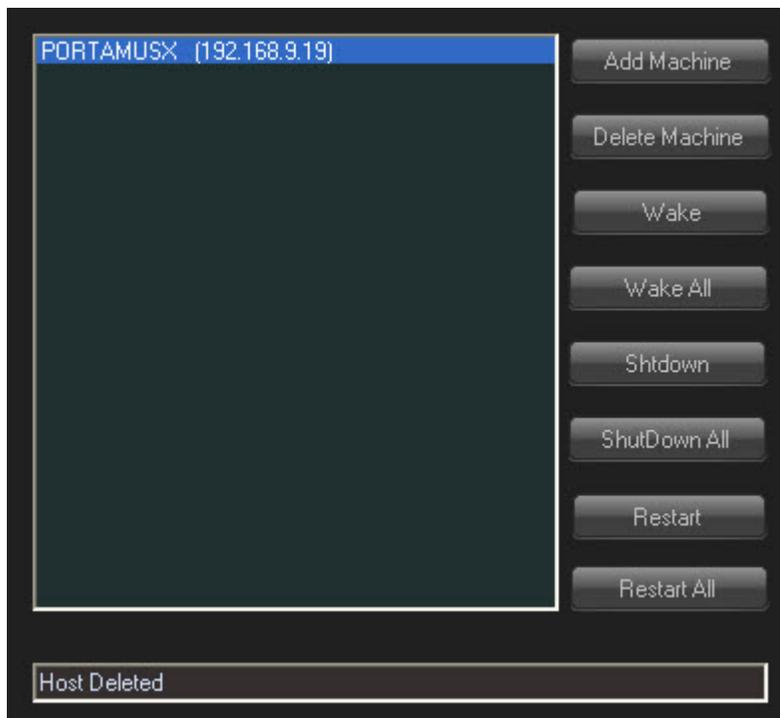
- Adding Machines

There are two ways of Adding machines.

Click the Add machine button you will be presented with a list of all available Hippotizers on the network.

To add a Hippotizer that is already on the network select this in the list and click Add Selected.

To add manually you need to know the IP address of the Unit and if the unit is not online then you will need the MAC address of the unit as well. If the unit is online then when you click Auto then it will fill this in for you.



- **Delete Machine** This will remove the machine from ToolBox
- **Wake** Wakes the selected machine over LAN that are in Standby
- **Wake All** Wakes all machines in the ToolBox List

- **Shutdown**Shut downs the Selected Hippotizer
- **Shutdown All**Shutdown all Hippotizers in the Toolbox list
- **Restart**Restarts the selected Hippotizer
- **Restart All**Restarts all Hippotizers in the toolbox list.

## 5.0 Components in Details

### 5.36 UberPan



#### Overview

Uberpan allows the combination of multiple Hippotizer systems into one virtual canvas. This enables many servers to work together to display very large content. In addition to large content, UberPan allows for the easy configuration of complex canvases with different pixel pitches. Working together with Virtual Media manager, Uberpan will automatically manage the media for the canvas as well as splitting and distributing the content automatically. There are some key terms to understand while using Uberpan:

**Canvas:** The overall space that the Uberpan outputs occupy. The Canvas is defined by it's size (in mm) and the number of pixels.

**Output:** Uberpan treats each Hippotizer Engine as an assignable output in the UberPan canvas. This means that an HD in dual mode is two outputs within Uberpan. Note that an HD in Pan or Clone mode is only one output within Uberpan.

**Full Media:** When media is encoded into Virtual Media Manager, a copy of the media is automatically created and scaled to 1920 x 1080. The enables each machine within the Uberpan to play a lower resolution copy of the media for positioning and proofing.

**Split Media:** Due to the limitations of Mpeg-2, each Hippotizer engine can only play 1920 x 1080 pixels. To enable larger than HD cavases, Uberpan 'splits' the media between all the output machines so that each engine is playing only it's piece of the canvas.

**Render Node:** After an engine is assigned to the Uberpan as an output, it is frequently referred to as a Render Node.

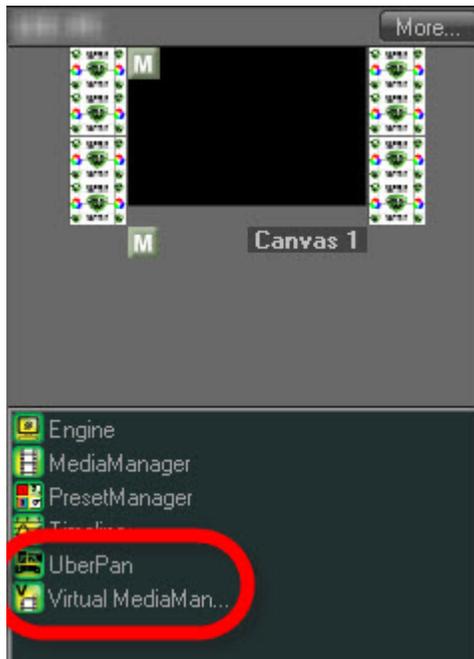
**Uberpan Controller:** The Hippotizer running the Uberpan Component is known as the Uberpan controller. This machine carries out additional calculations when compared to an output machine. For this reason, it is advised to run avoid outputting video from the Uberpan Controller in larger set-ups.

**Uberpan Configurations:** When multiple canvases are used in Uberpan they are assigned to a configuration. This enables the output mapping to be changed during a show by simply switching configuration.

- **Add Software**

*To start you will need to add the UberPan Component and also Virtual Media Manager (VMM).*

Add the UberPan and Virtual Media Manager Components:



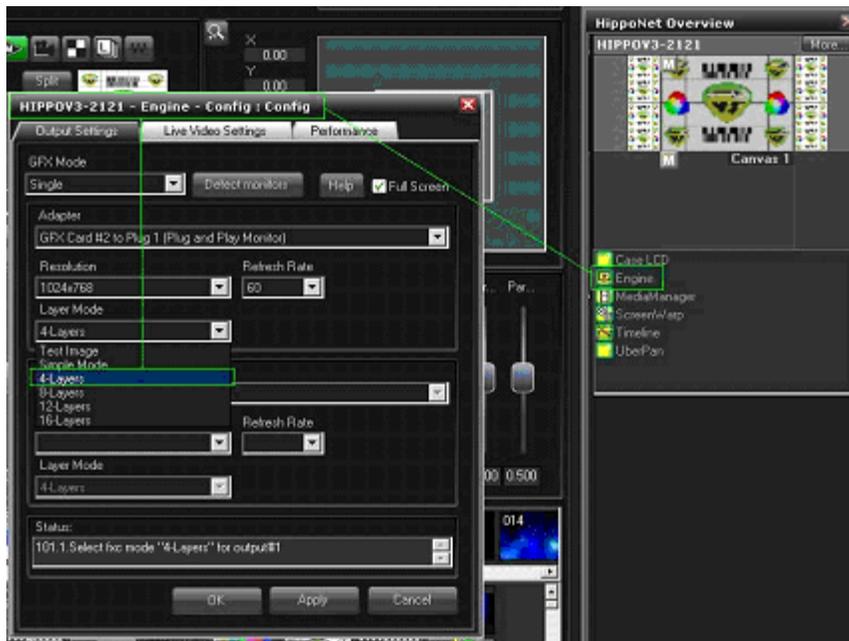
- **Getting Started - Setup**

Once added, the Hippotizer Engine will start a Canvas for the UberPan component.

To control this Canvas, click the canvas box as you would the output of a standard Hippotizer:



**Note:** If no previews are displayed and the UberPan fails to control the Hippotizer as in the example above, be aware that the engine of any Render Nodes need to run in the same layer mode as the UberPan component.



Once configured correctly, the Render Node will be controlled by the UberPan component.

- **Setting Layer Modes and info Provider**

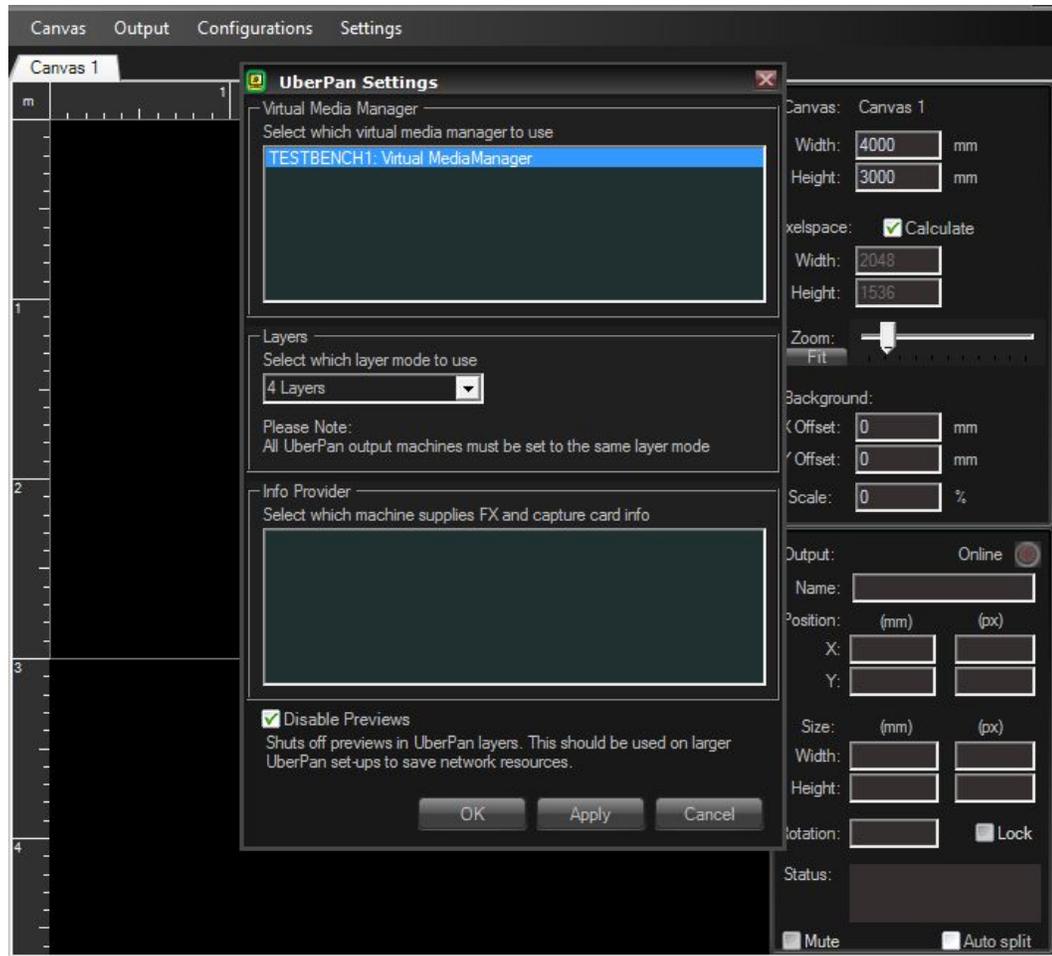
In order for Uberpan to function correctly it requires three settings:

-Layer Mode

-Info Provider

-Virtual Media Manager

These are all accessed from the settings Menu within Uberpan:



**Virtual Media Manager** controls which virtual media manager the Uberpan uses to get media and a media map. There can be multiple Virtual Media Managers on a network (common as a back-up option).

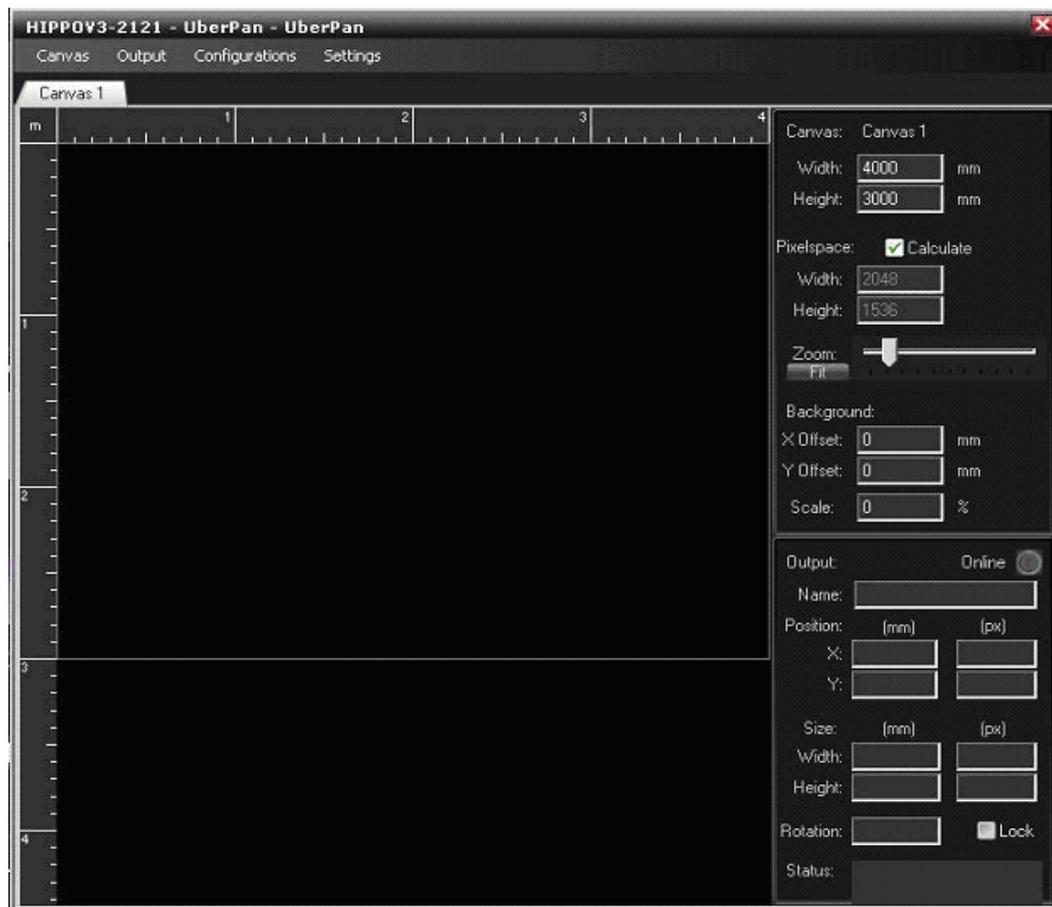
The **Layers** is what number of layers each machine in the Uberpan has. All machines must have the same number of layers configured. Please note that Uberpan does not support cross fade on layer: only normal layer modes.

The **Info Provider** sets which machine provides information about the FX and any capture cards. This should be set to be one of the machines in the Uberpan setup.

**Disable Previews** stops the transmission of layer and master video previews across the network. For larger Uberpan set-ups it is advised to disable previews to save network resources.

- **Starting UberPan**

The first screen you will be presented with is a blank Canvas:



The canvas dictates where the outputs of each machine are situated and how the media is displayed across these screens. This is used to work out where a full media video clip (maximum resolution of 1920 x 1080) leaves one screen and appears on another in real time. This canvas information is also used to enable Hippotizer to split above 1920x1080 content into the correct pieces for each output and display them at the correct time through internal synchronization.

From this blank Canvas, you can:

1. Edit the default Canvas or if required add another Canvas to the desired size specification.
2. Add and position Outputs to the Canvas.

When configuring the Canvas there are two sizes to consider: Size in millimetres (mm), and size in pixels. These two values dictate the pixel density of the canvas. It is best to measure the area to be used for video and to use these measurements when laying out the canvas.

- **Adding Outputs**

There are two ways to add an output:

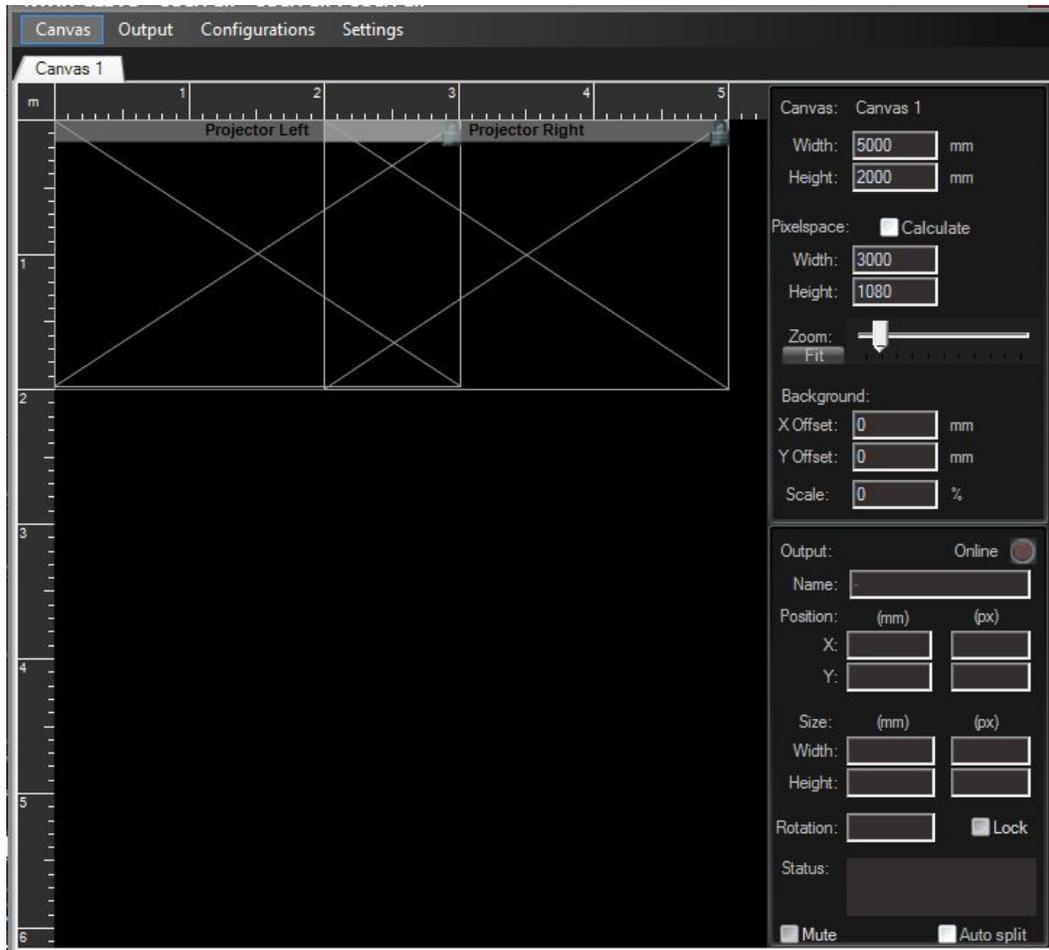
1. Manually add an output by going to the **Output** menu and select add output, right-clicking in the canvas area and selecting **Add output**.

2. Using the Wizard to set up your canvas and outputs.

- **Example: 2 Projector Blend**

*Uberpan can be used to split and distribute media for a soft-edge projector blend.*

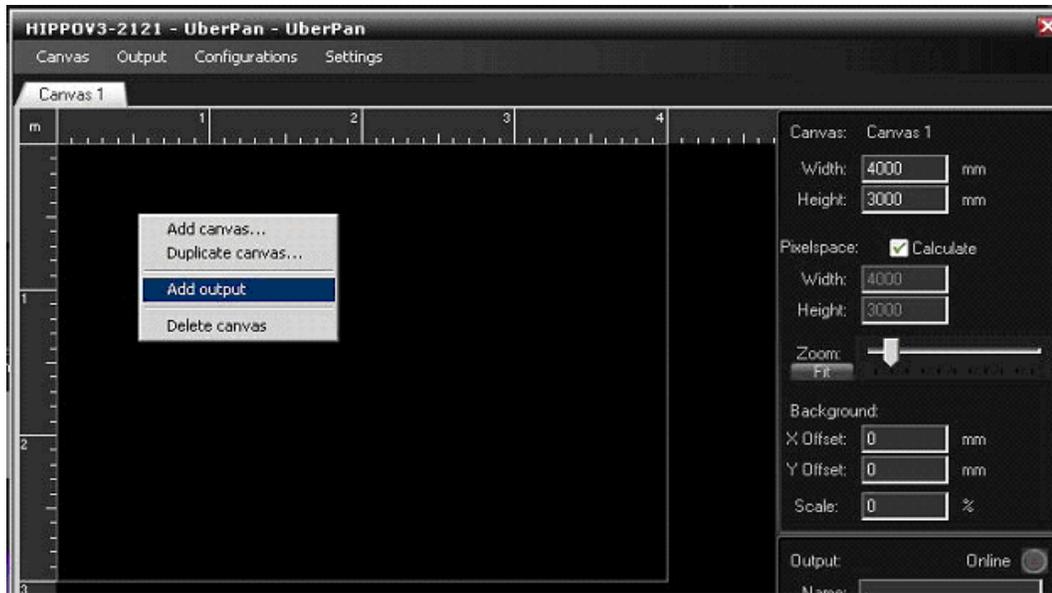
*Consider the case that you are trying to blend two projectors together on an 5 meter by 2 meter screen. The projectors are each HD, and the content going in is 3000 x 1080 pixels. As this is greater than the limit of Mpeg-2 playback, this would not be possible to playback from one system. Uberpan can be used to split and distribute the media for this set-up. The Uberpan configuration would look something like:*



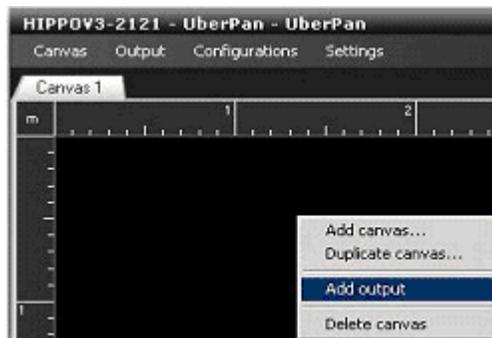
*In this example, the outputs overlap each other to accommodate the projected soft edge blend. The exact distance of the overlap will depend on the set-up. In this case, each output has a resolution of 1920 x 1080, as they are 1080p projectors.*

- **Manually**

*Manually add an output by going to the output menu and select **Add output**:*



Right-click on **Add output**:



Position the Output if required. Then right-click on the canvas and select **Assign** from the displayed menu to assign an engine Output:

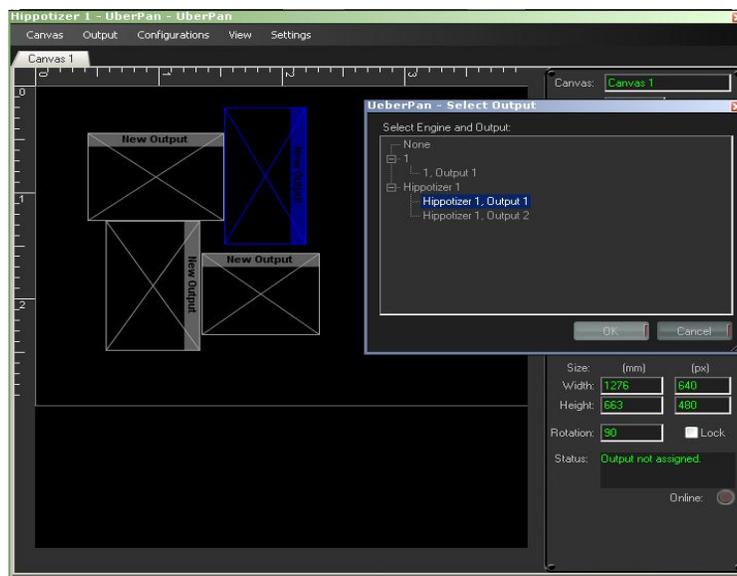


When prompted, select the Hippotizer output which is connected to the specified output device:



1. *Once outputs have been added you will be presented with a screen that resembles the screen below.*

**Note:** *In this example, the rotation feature has been used to rotate the top right screen and bottom left screen*



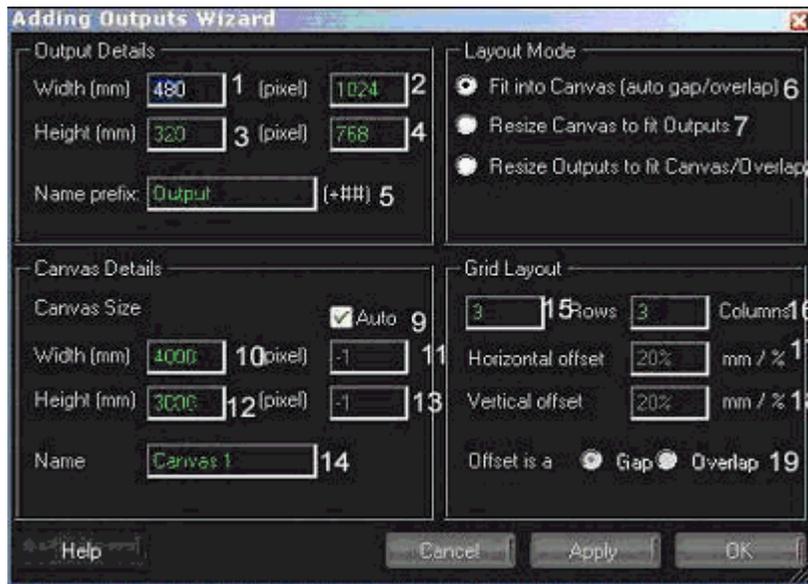
- *Highlight the output name you would like to attach to the box in UberPan and click **OK**.*
- *Within the status box you will now see the output online. This output will turn green to show it has been assigned and the output is online.*
- *When assigning outputs if media has already been loaded into the Virtual Media Manager (VMM) this will automatically be distributed.*
- 

*A Render Node has now been assigned an output on the canvas. When media is loaded onto a layer in the UberPan control the render node will playback the media in the section relative to its position in the canvas (once the media has been distributed to it) – see below.*

*nce all outputs have been assigned you will need to add the canvas to a UberPan Config.*

- **Using the Wizard**

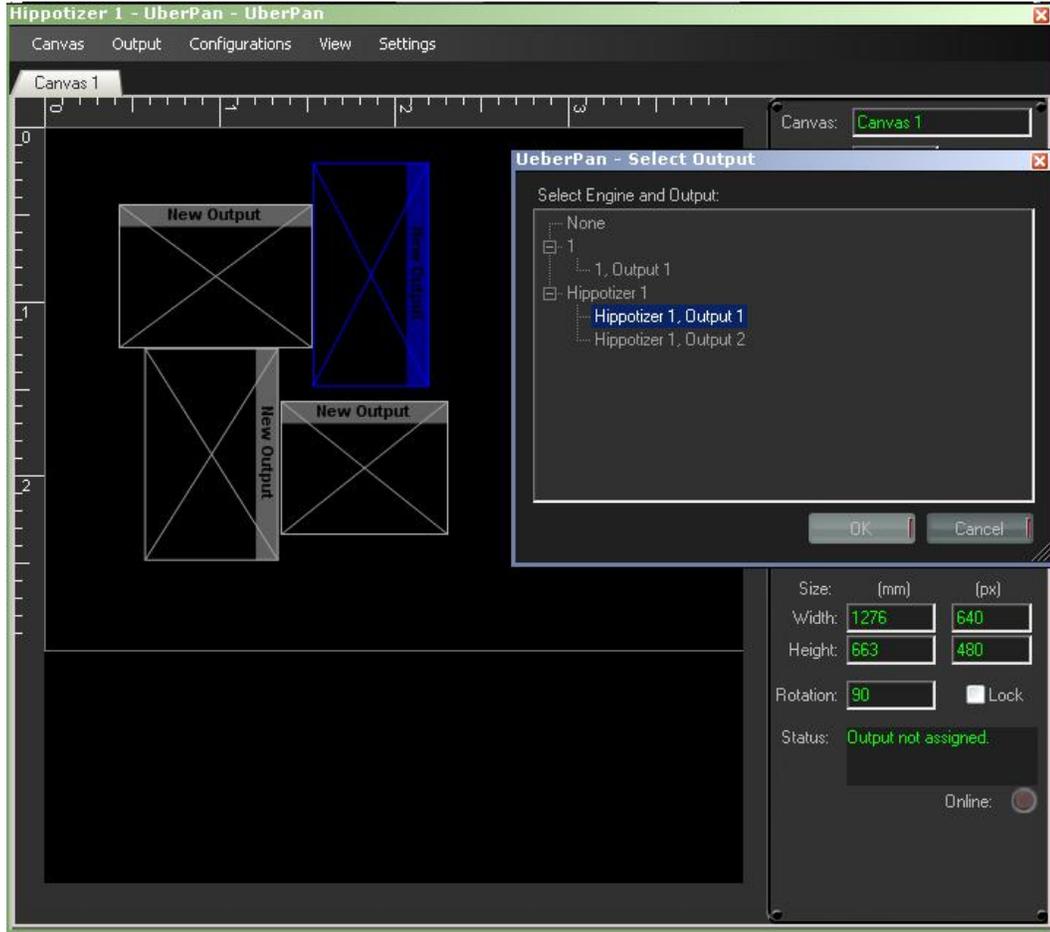
Using the wizard to set up your canvas and outputs:



2. Width of outputs in mm
3. Pixel width of outputs
4. Height of outputs in mm
5. Pixel height of outputs
6. Output prefix name
7. Fit all of the outputs into canvas creating a gap or overlapping each output.
8. Resize canvas to fit all outputs with desired overlap/gap
9. Resize outputs to fit into canvas with desired overlap/gap
10. Auto size canvas to outputs
11. Canvas width in mm
12. Canvas width in pixels
13. Canvas height in mm
14. Canvas height in pixels
15. Canvas name
16. Number of outputs horizontally
17. Number of outputs vertically
18. Horizontal gap between output
19. Vertical gap between outputs
20. Set the offset to be a gap or overlap between the outputs.

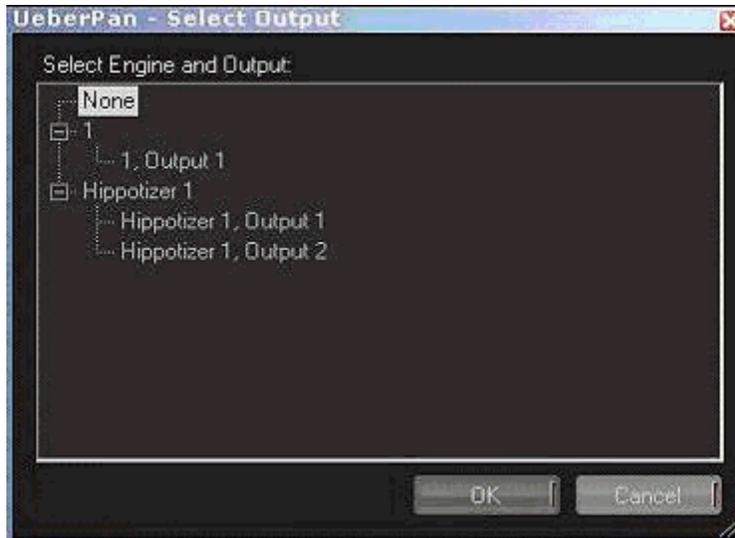
Once outputs have been added you will be presented with a screen that resembles the screen below.

**Note:** In this example, the rotation feature has been used to rotate the top right screen and bottom left screen



Once the outputs have been added and positioned as desired. You will need to assign these outputs to the appropriate Hippotizer output. Highlight one of the boxes and the assign output option.

This option is located in the output menu. By clicking assign outputs this will present you with a list of selectable outputs:



- *Highlight the output name you would like to attach to the box in UberPan and click OK.*
- *Within the status box you will now see the output online. This output will also turn green to show it has been assigned and the output is online.*
- *When assigning outputs if media has already been loaded into the Virtual Media Manager (VMM) this will automatically be distributed.*
- *will automatically be distributed.*

*A Render Node has now been assigned an output on the canvas. When media is loaded onto a layer in the UberPan control the render node will playback the media in the section relative to its position in the canvas (once the media has been distributed to it) – see below.*

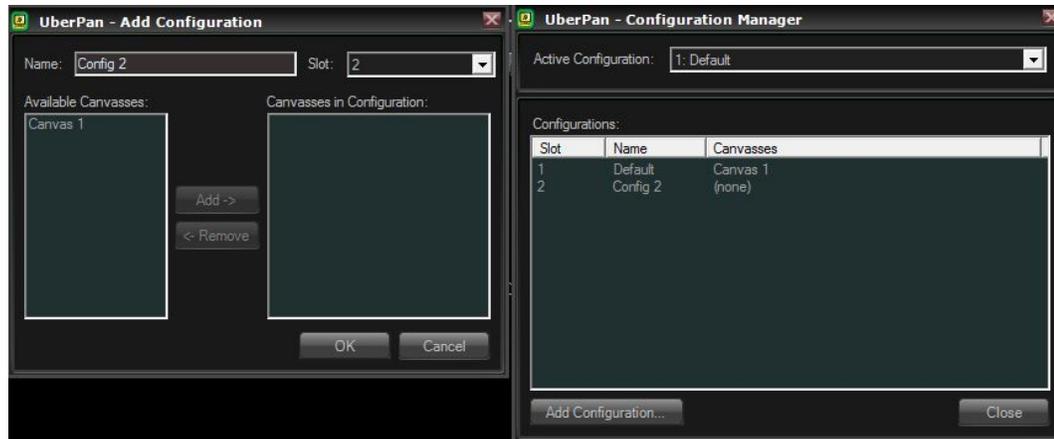


*Once all outputs have been assigned you will need to add the canvas to a UberPan Config.*

- **Using Multiple Canvases**

*Multiple Canvases can be created and stored in the Uberpan Component.*

*A canvas is recalled for use by a Configuration, which is edited from the configuration manager.*



The configuration manager is designed to allow the recall of different output mappings for Uberpan. This could be used for example if screens move during a show necessitating a new output canvas.

To create a new configuration simply press *Add Configuration...* and select the Canvas(s) to add to that configuration. A canvas may only be in one configuration at a time.

*Please Note: Licensing restrictions limit most machines (except HDs) to 2 canvases.*

## 5. Components in Detail

### 5.37 VideoMapper



#### Overview

The VideoMapper enables you to specify the size, position, and orientation of pixels on the output screen. This helps to ensure that content is displayed correctly on any output device even if it's positioned in the most unconventional manner. VideoMapper can also enable you to specify tiles in a setting of any arrangement with varying gaps and angles, and allows you to overcome tile spacing and other limitations imposed by most processors. In the event that you are working with unusually large screens, VideoMapper can map to extremely large resolutions.

- **Using VideoMapper**

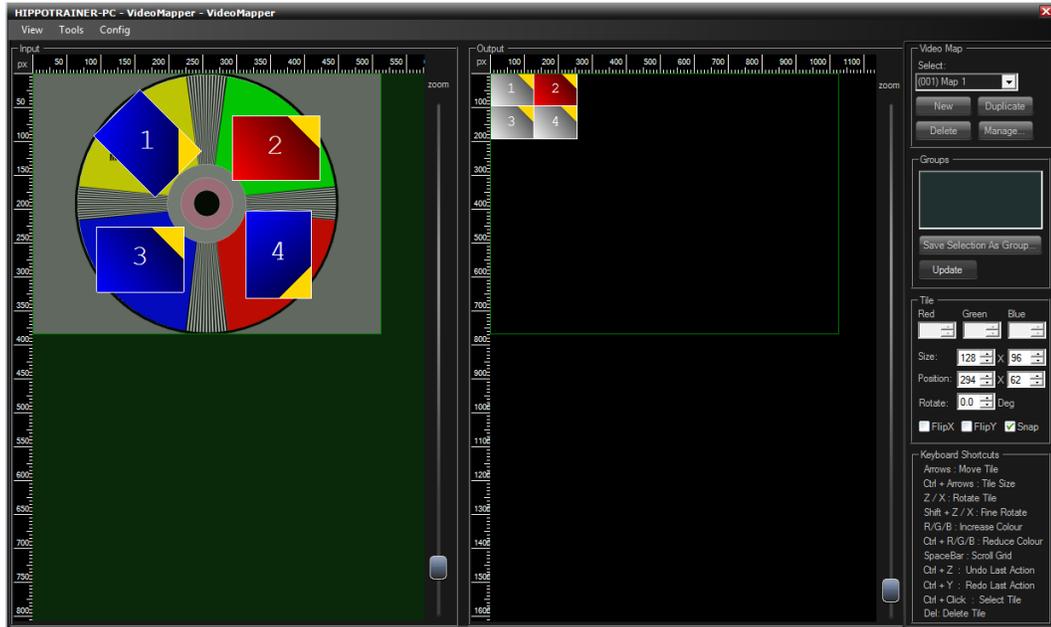
*Once the VideoMapper component has been added ([See Adding Components](#)), it can be opened by double clicking on it in the HippoNet Overview window.*

*The main layout of the VideoMapper is divided into two sections:*

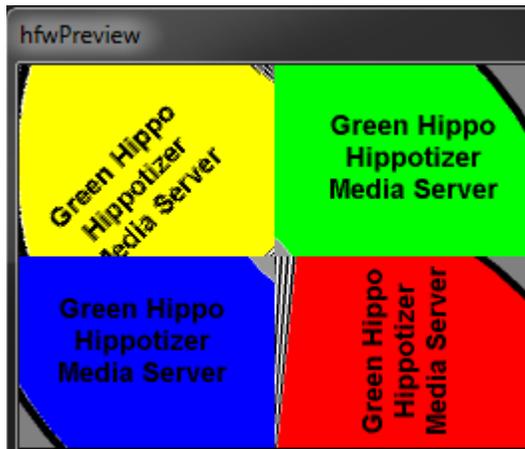
- *Output. On the right side, when you add new tiles and specify their size, they will appear here. This is the area where you specify the size orientation, and spacing of the tiles.*
- *Input. On the left side, this is the area where you can specify how the source content appears on each tile. For example, which portion of the media you want to appear in each tile, and in what rotation or zoom.*

*Like a pixel patch bay, you are able to take information from the right side and send it to the left side where it can be arranged and manipulated to your specifications.*

*The example below shows four simple tiles as they were added, appearing on the right Output side. On the left Input side you can see that the tiles have been positioned and oriented over the areas of the media to be displayed for each tile.*



Below you can see the display resulting from the video map generated in the example above.



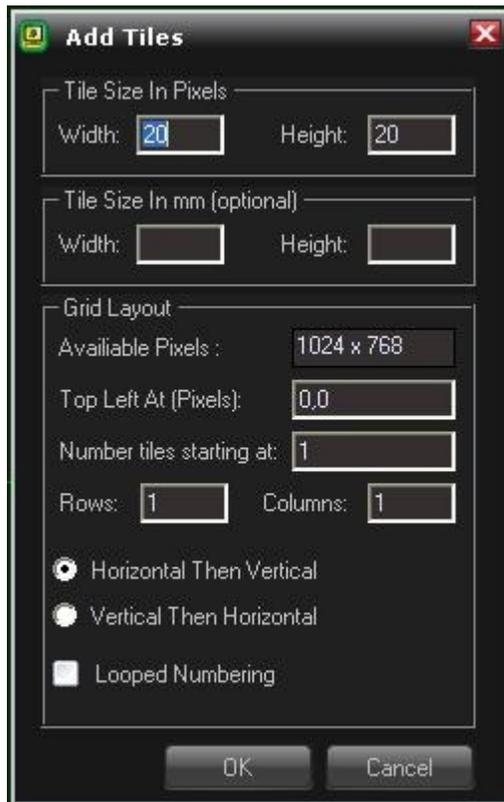
- **Creating a Video Map**

The following steps will walk you through the process of creating a basic video map.

1. To add a video map, click **New** and enter a name for the new video map.

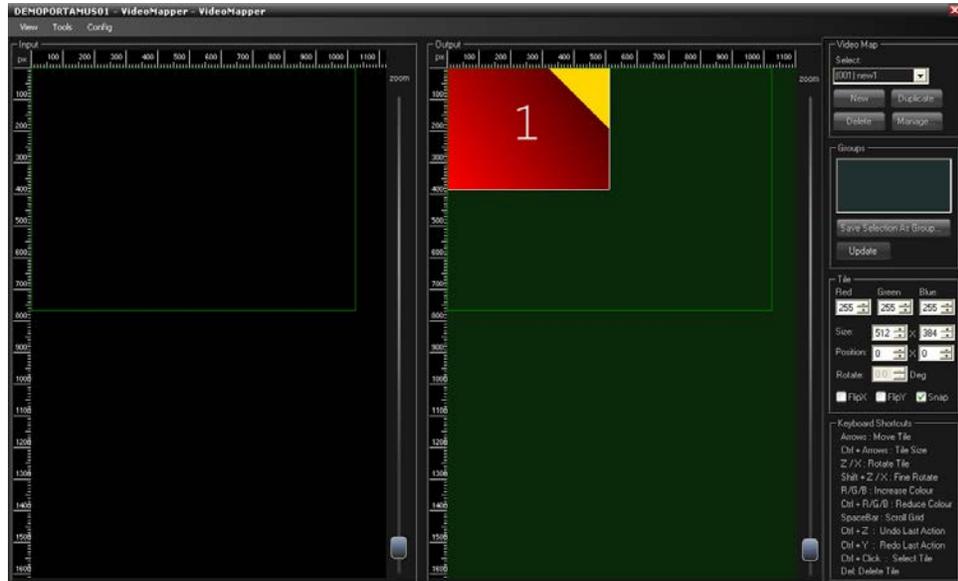


2. Next, you will need to add tiles. Select **Tools** and then **Add Tiles**. The Add Tiles dialog box will appear.



3. Specify the size and arrangement of your tiles. Click **OK** to add them to the Output.

- In the Output area, select a tile and adjust its size and position using the Tile settings on the right. Think of each tile as a blank canvas awaiting paint. This is where you specify how your canvases will appear before content is sent to them.



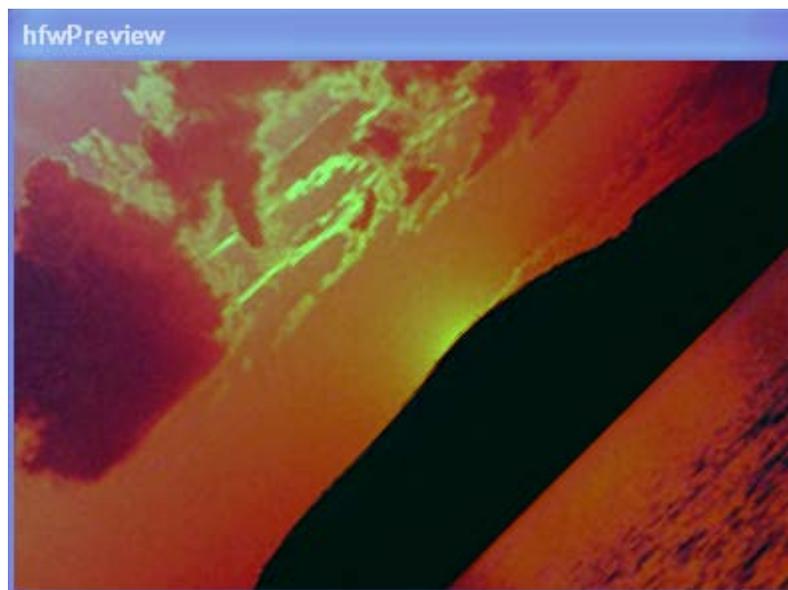
- Once you are happy with the size and location, select and drag the tile(s) into the Input window.
- In order to view your media in the Input window select **Config > Background Image > Input Grid**. The Background Image Settings dialogue box will appear. Tick the box next to **Enable Background Image** and **Browse** to the image in your media folder. Click **OK**.



7. In the **Input** area, select a tile and adjust its size, position, and rotation. This will affect the way content is sent to your tiles (canvases). For example, if I wanted the content sent to tile 1 to appear rotated 45 degrees, I would select tile 1 in the **Input** window and change the **Rotate** value to 45. See the example below.



The media from tile 1 will now be displayed like this.



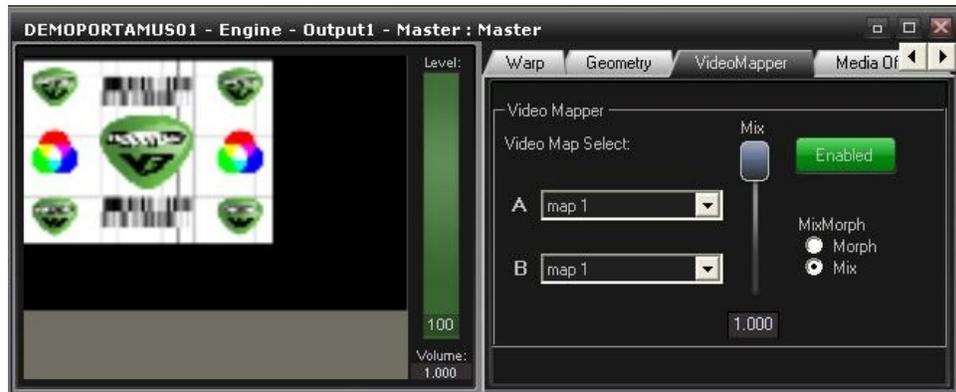
- **Adjusting RGB Values for Tiles**

In the event that tiles have slight variations in their color output, RGB values can also be adjusted. Select **View > Tile > RGB**. Select a tile and use the **Tile** settings to adjust its RGB values.

- **Selecting VideoMaps and Enabling Output**

Once your new video map has been created, you will need to make it active.

1. To assign and enable a video map for output, go to the Master Output control window and browse to the **VideoMapper** tab.
2. Click the Disabled button so that it shows **Enabled**.
3. Select a **Video Map**.



Your output will be visible in the Preview window.

- **Mixing And morphing between VideoMaps**

Video mapper allows you to map pixel by pixel between between the source (your output) and destination which replaces the output when Video Mapper is enabled. In the Master settings you are presented with the option to mix and morph between two video maps that you specify. Mixing between maps simply cross-fades between them, while morphing has the effect of moving the tiles to the new map.

Any two maps can be mixed between. However in order to Morph, the maps should be exactly the same resolution. If you attempt to Morph between two maps of different resolutions the effect will be to Mix them.

## 5. Components in Detail

### 5.38 Virtual Media Manager



#### Overview

Virtual Media Manager works similarly to Media Manager: it stores and catalogues media within Hippotizer. Media is stored as encoded content separately from Media Manager as Virtual Media Manager deals only with content for UberPan. Virtual Media Manager only has to be started on the controlling machine. This machine handles the Splitting, Distribution and storage of source content. Each render node only stores the Full and Split content that has been distributed.

#### Terms

**Canvas:** The overall space that the Uberpan outputs occupy. The Canvas is defined by it's size (in mm) and the number of pixels.

**Source Media:** In order to split media from content that is larger than 1920 x 1080, Virtual Media Manager stores the un-encoded content which is referred to as the Source Media.

**Scratch Media:** While content is being split, temporary files are created and later deleted. This is the scratch media.

**Output:** Uberpan treats each Hippotizer Engine as an assignable output in the UberPan canvas. This means that an HD in dual mode is two outputs within Uberpan. Note that an HD in Pan or Clone mode is only one output within Uberpan.

**Full Media:** When media is encoded into Virtual Media Manager, a copy of the media is automatically created and scaled to 1920 x 1080. The enables each machine within the Uberpan to play a lower resolution copy of the media for positioning and proofing.

**Split Media:** Due to the limitations of Mpeg-2, each Hippotizer engine can only play 1920 x 1080 pixels. To enable larger than HD cavases, Uberpan 'splits' the media between all the output machines so that each engine is playing only it's piece of the canvas.

**Render Node:** After an engine is assigned to the Uberpan as an output, it is frequently referred to as a Render Node.

**Uberpan Controller:** The Hippotizer running the Uberpan Component is known as the Uberpan controller. This machine carries out additional calculations when compared to an output machine. For this reason, it is advised to run avoid outputting video from the Uberpan Controller in larger set-ups.

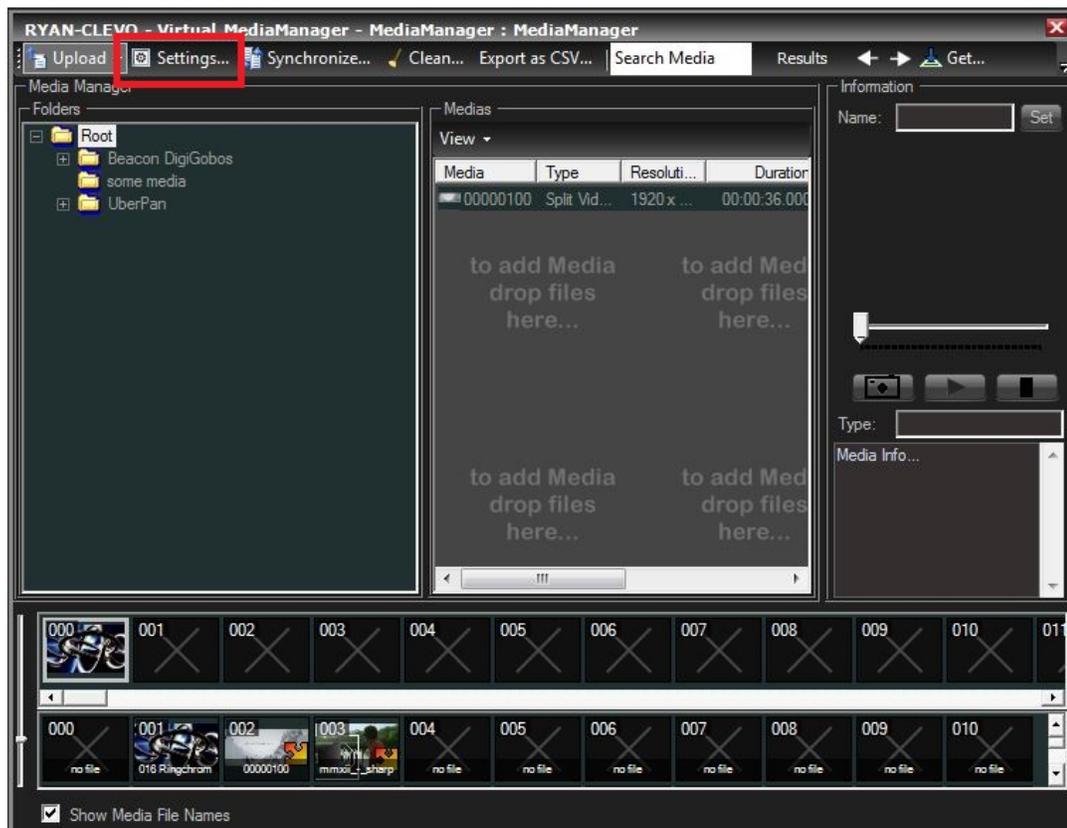
### Virtual Media Manager Settings

Before starting to Encode Media, it is very important to configure Virtual Media Manager Correctly.

To do this:

- Start the Media Manager Component on the machine it will be used on.
- Right Click on the component in HippoNet Overview

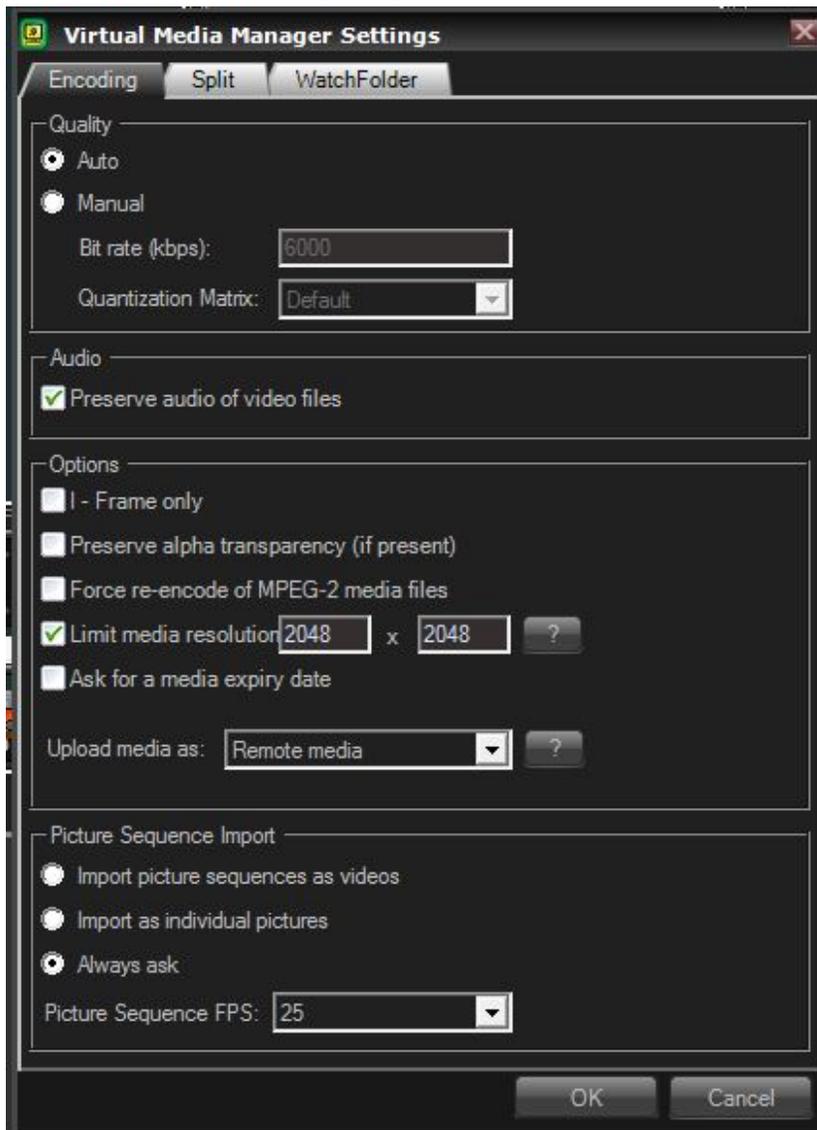
A window will appear:



Enter the settings Menu as highlighted above.

**-The Encoding Settings window**

Virtual Media Manager's Encoding Settings are very similar to Media Manager:



There are a few options and settings that are important to consider:

**Preserve Alpha Transparency:**

As Mpeg-2 does not support alpha transparency, Hippotizer must create an alpha channel separately. This results in a max Vertical resolution of 540 Pixels (Instead of 1080) for clips with Alpha where it is preserved.

**Limit Media Resolution:**

MPEG-2 limits all clips to 1920 x 1080, however still images can be encoded with higher resolution. Importing and playing excessively large images will affect performance of the Hippotizer system. We suggest setting the media resolution limit to a suitable limit for this reason.

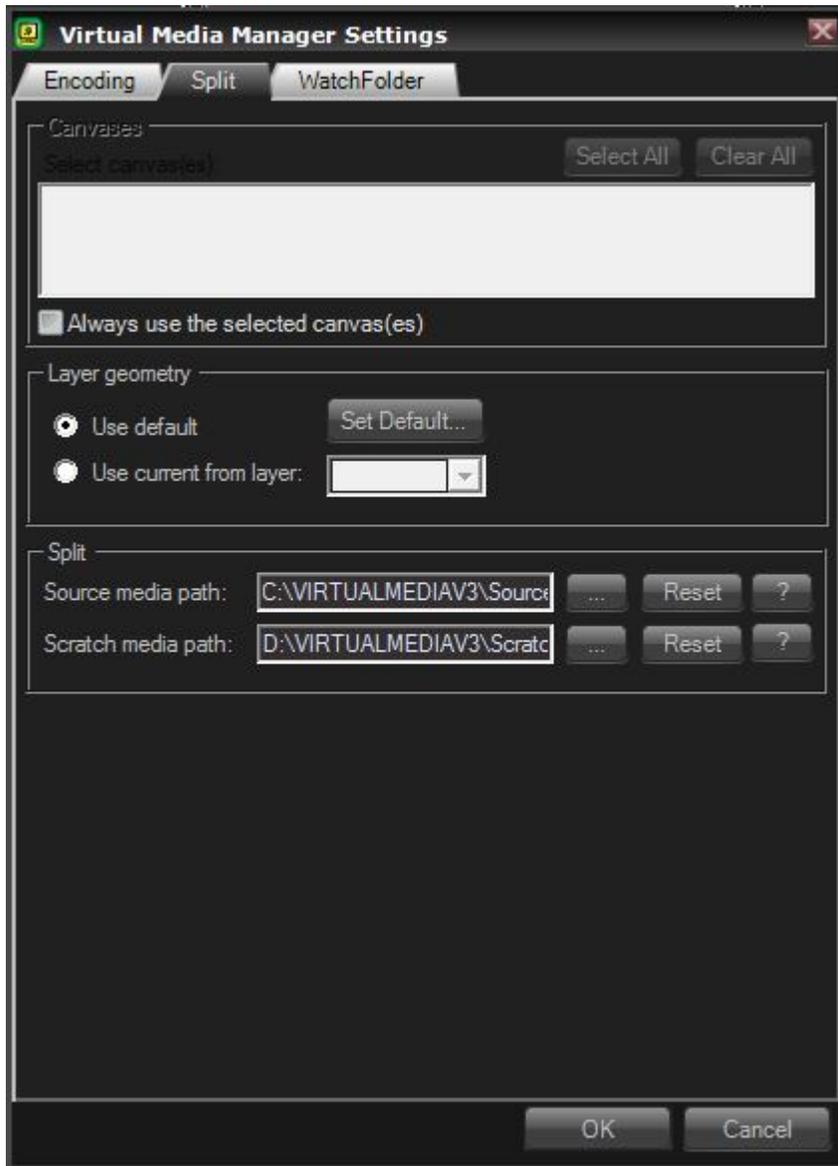
**Upload media as Remote / Local Media:**

This setting controls if Source media is saved or not to the local disk before encoding and splitting. If set to Remote media, the content is encoded and split from its origin. (A removable USB drive for example) If this is set to Local Media the content is first copied to the source media path, then encoded. Local media enables for the splitting of content after the USB drive in this example has been removed.

**Please Note:** Changing the Uberpan output map requires the system to re-split the media. In order for this to occur, the source media must be present. For this reason, we recommend using local media if re-splitting is anticipated.

#### -The Split Settings Window

Split settings are specific options that deal with how data is moved and stored by Virtual Media Manager



Canvases:

This allows the selection of which canvas the media will be split to.

**Please Note:** If the Media is split from the layer controls, the media will be split to the canvas that created the layer control.

Layer Geometry:

*This dictates the position of the media within the canvas. The geometry settings can be referenced from a specific layer with the Use Current from Layer... option or a default can be set.*

**Please Note:** Pixel 1:1 aspect mode can yield unpredictable results as the system will try to fit the full media to the output. It is best to use a set aspect ratio (Such as 16:9) or autoscale which will fit to the nearest axis.

Split:

Source Media Path:

*This is the folder that all un-encoded source media will be stored in.*

**Please Note:** This folder will only contain media if 'local media' is selected in Virtual Media Manager Encode Settings.

*Due to the frequently large size of source Uberpan media, this folder can get quite large. It is important to consider the anticipated size while planning for the location of this path.*

Scratch Media Path:

*During media trans-code, any temporary files that are created are stored in the Scratch media path. In order to limit single drives to Read or write operations (to maximise speed) it is important to keep the scratch media path on a separate drive from the source path.*

Please Note:

*In both media paths, the defaults provided have been found to be the best in terms of speed and reliability based on using an HD or Grasshopper. In the case of a Rackoon or HippoCrittter both folders will be on the C: drive.*

*If changes are made to the media paths, the virtual media manager component must be stopped and started again for the changes to take effect.*

### **-Watch folders**

Watchfolders

*WatchFolders are a new way to manage your encoding of content onto a Hippotizer V3 System. Using Watchfolders will enable you to encode, distribute and sync across multiple systems easily, simply and quickly.*

*Your default WatchFolder is located in the root of C: on your HippotizerV3, however you can set this folder to be anywhere on the system including on a network drive or a folder on a Mac.*

*You can use this to keep one folder up to date on a single Hippotizer or you can link multiple Media Managers to a single folder to keep all content in sync.*

*The content will encode on the machine that it is placed on and then when encoded will be distributed across your Hippos automatically.*

*Note: If you use file sharing programs such as Dropbox then you can also update your files remotely.*

Configuration

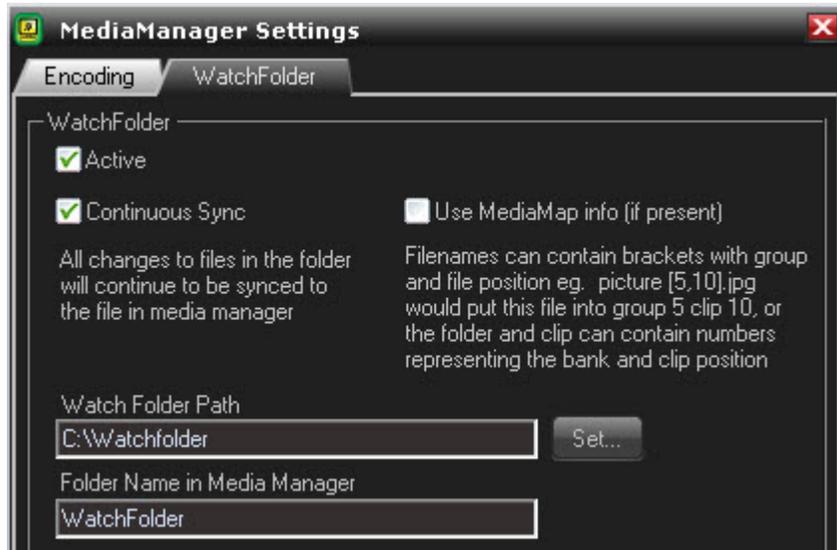
*WatchFolders are located in the settings of the Media Manager component.*

Media Manager -> Settings -> WatchFolders



To turn on and set up your WatchFolder you will need to set the WatchFolder setting to Active. Once you have selected this then you will have the ability to set the WatchFolder path and also name the folder in the Media Manager if this needs to be different from the default.

NB: Currently you need to make sure that the folder exists in the folder path manually



#### Settings

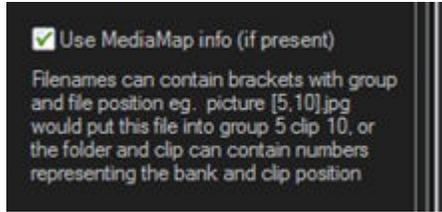
- **Continuous Sync**

With this selected any action that takes place in the WatchFolder will sync to the media manager/s that are pointing at this folder. This means that anything added will appear on all servers and importantly anything **deleted** will be removed across all servers if they are set you watch this folder. This may have an impact on performance if syncing large files across multiple servers.



- **Use MediaMap info (if present)**

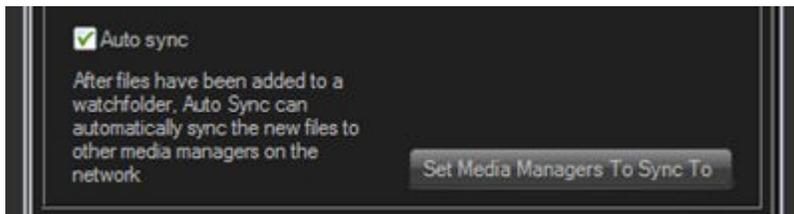
When this is selected the WatchFolder will look at the name of the media in the folder and if it falls within a certain naming convention then this will encode and then place the media in the correct place in the media map.



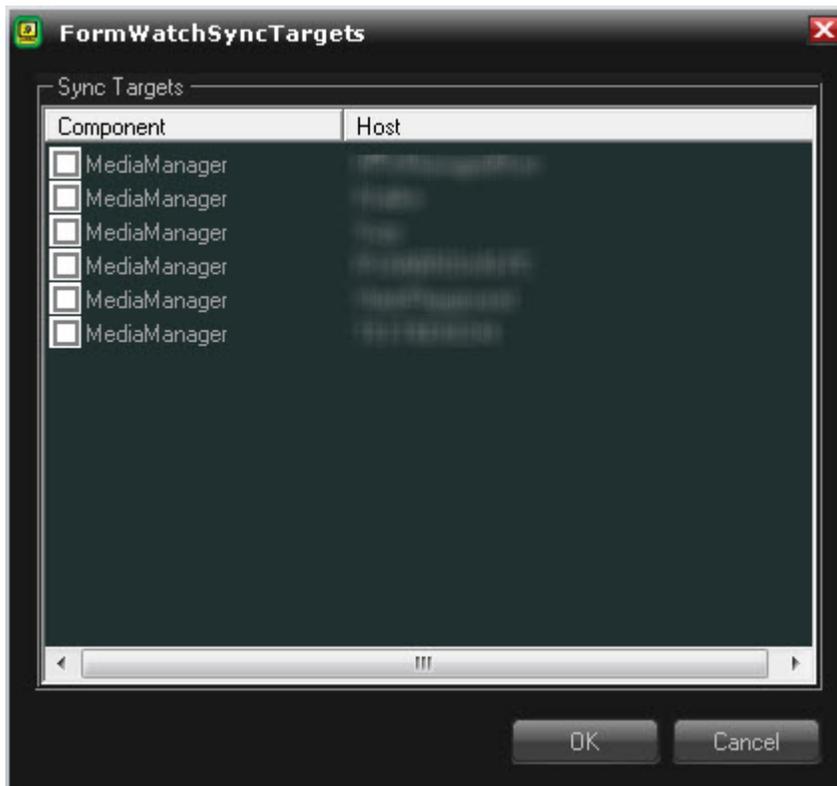
- **Auto Sync**

*AutoSync will enable you to select multiple Hippotizers Media Managers to also look at the same WatchFolder. For this all Hippotizers will need to be configured on the same HippoNet.*

*Select **Set Media Managers to Sync To**. This will open up a dialogue with all possible Hippotizers on the network. Select the Hosts that you want to sync to. Note that here you will have to select the local host that you are working on as well.*



*Once you have enabled this then you will be presented with this screen where you can select which Media managers you wish to have Auto Sync.*



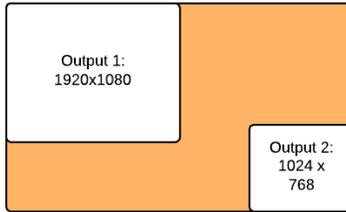
**Virtual Media Manager Workflow**

Create a canvas that encompasses all displays

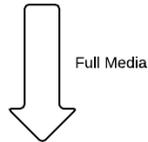


Canvas: 3840 x 1200

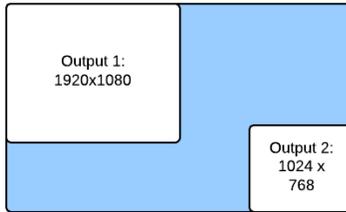
Add Outputs Based on their physical location within the Canvas



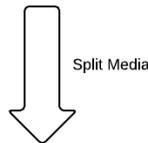
Canvas: 3840 x 1200



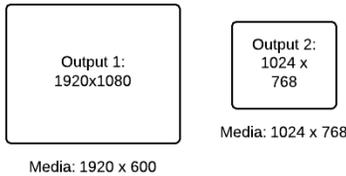
Use Full Media to position content correctly within the Canvas



Media: 1920 x 600



Split the media



Playback partial media

Distribute to Machines over the network



# Live Video Devices

## 6. Live Video Input Devices



### Contents

Hippotizer supports a number of hardware live input cards which can be specified when ordering or installed after if newer cards or upgrades are required.

Once a card has been installed and set up, users can select the format using the Live Input Settings on the engine settings and select the preferred input on the layer control.

If combinations of cards are installed please check the green-hippo support knowledge base for any known problems/limitations.

For capture cards to work with Hippotizer the recommended Windows driver is normally installed on the unit when it is assembled by green-hippo. If the driver is required it can be downloaded from our website. Please note that the recommended driver may vary from version to version. Below all driver information refers to Hippotizer version 3.2.

It is advisable to order specific cards when purchasing the unit or if upgraded after purchase that an experienced Hippotizer technician fits the card and installs the driver.

- [6.1 S-video / Composite Input \(Standard\)](#)
- [6.2 Four Input Composite Card](#)
- [6.3 SDI Input Card](#)
- [6.4 Dual and Single VGA Input](#)
- [6.5 Blackmagic Design Decklink](#)
- [6.6 Elecard HDAccess 2 HD-SDI Card](#)
- [6.7 Datapath Capture Cards](#)
- **6.8 Combination of cards available in a Hippotizer HD**

Card 1	Card 2
Datapath Card*	Datapath Card*
Datapath Card	Elecard Single HD-SDI
Blackmagic Card	Datapath Dual HD-SDI
Blackmagic Card	Elecard Single HD-SDI

- \* The jumper on these cards needs to be set so each card has a different ID number.
-



## 6. Live Video Input Devices

### 6.1 S-video / Composite Input (Standard)



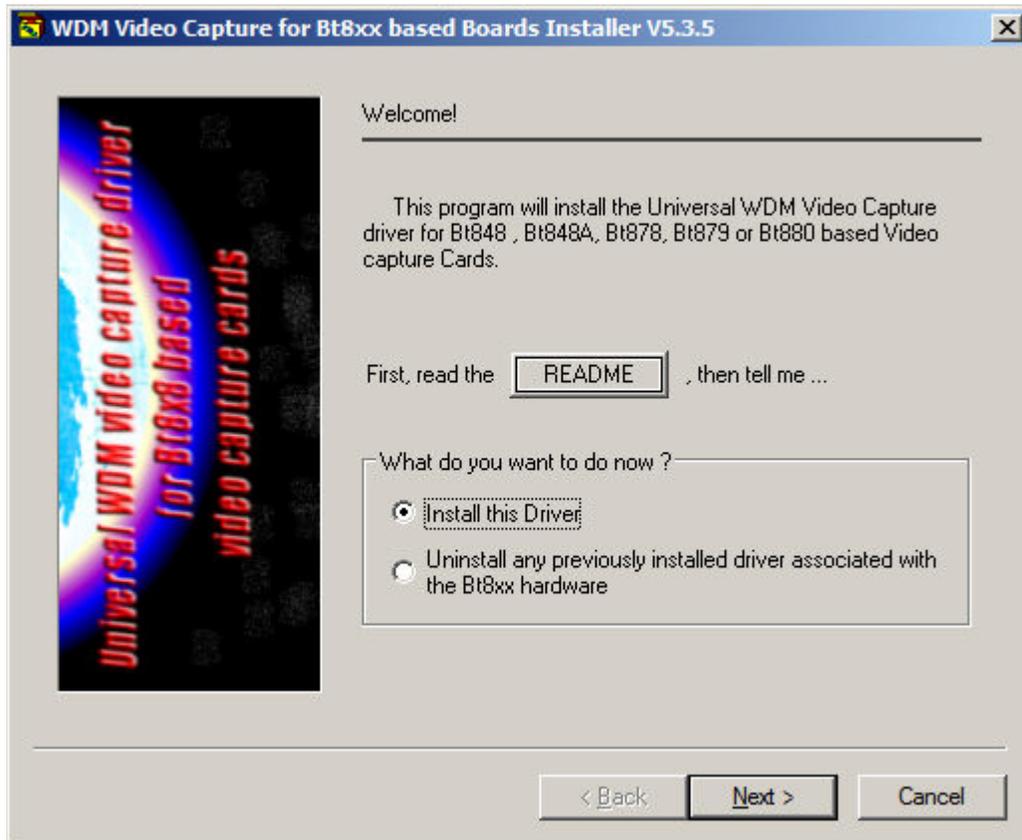
The standard S-Video composite video card allows a single composite input into the Hippotizer. This is a legacy card which used to be shipped with Hippotizer HD and Stage units. It is discontinued but is still supported.

- **Driver**

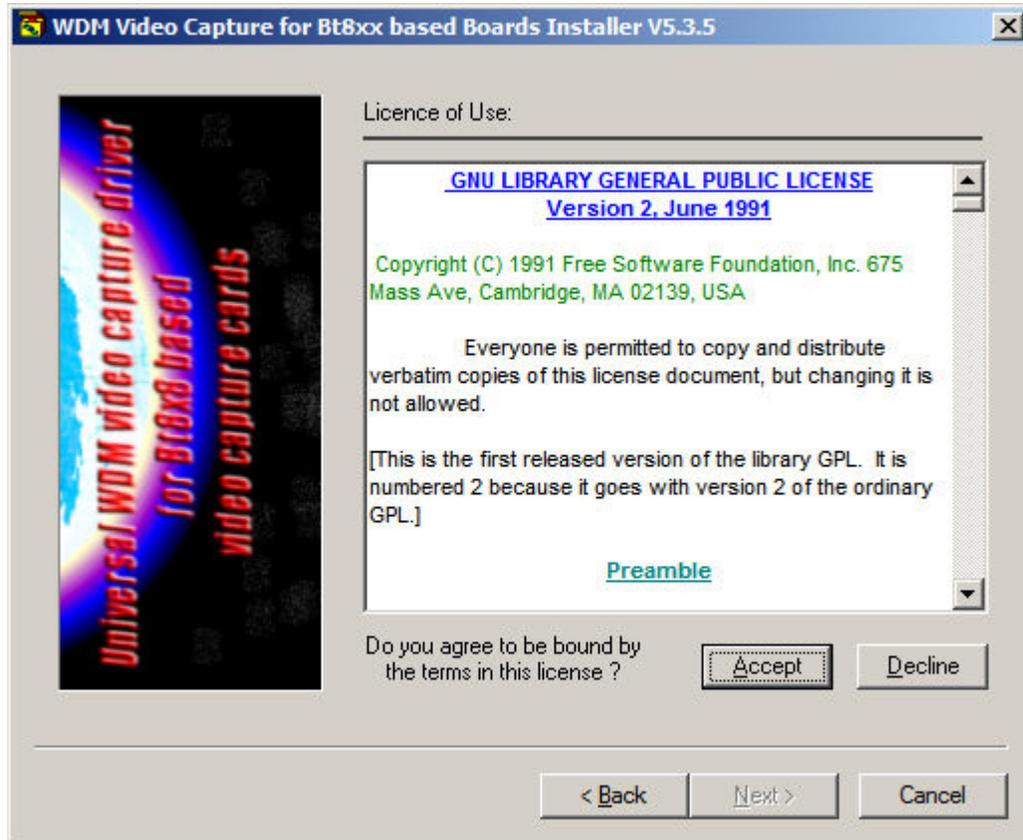
*If you need to download the driver please visit the Green Hippo Support Website.*

*When installing the Single Composite Card 5.3.5.0 drivers it will present you with a series of options. Below are the correct options to use. Selecting other options will result in the card failing to function correctly.*

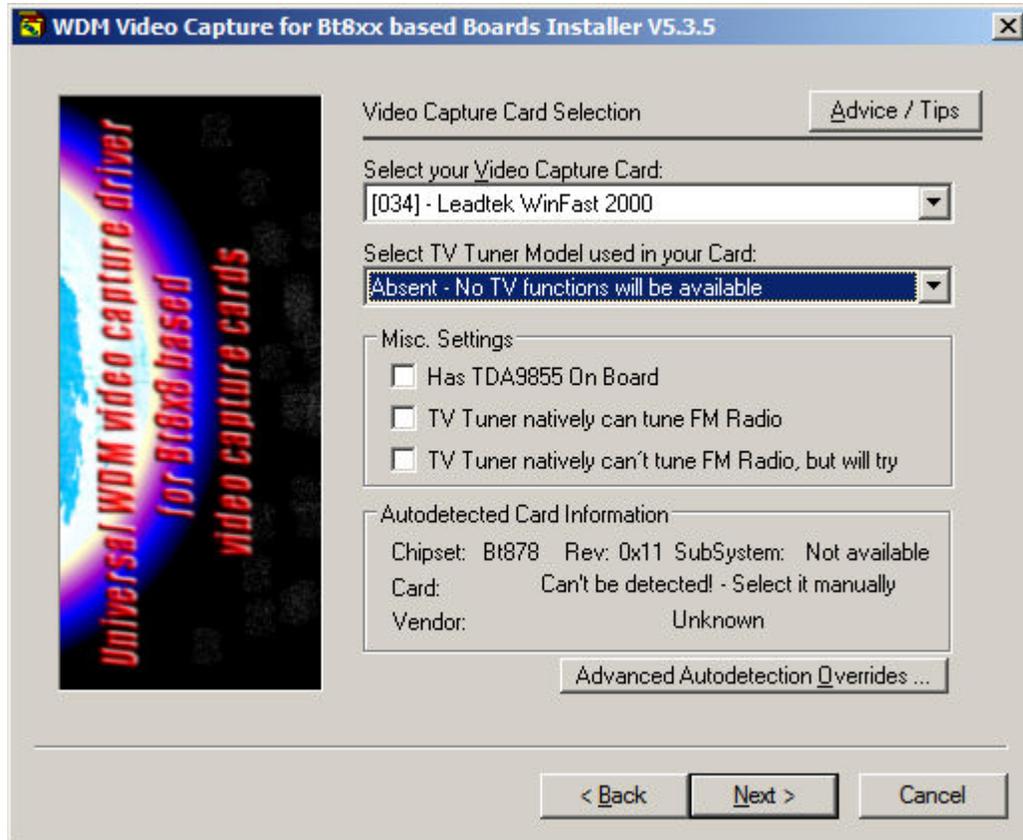
*Run the installer. Make sure the option to **Install the Driver** is checked, then click **Next>**.*



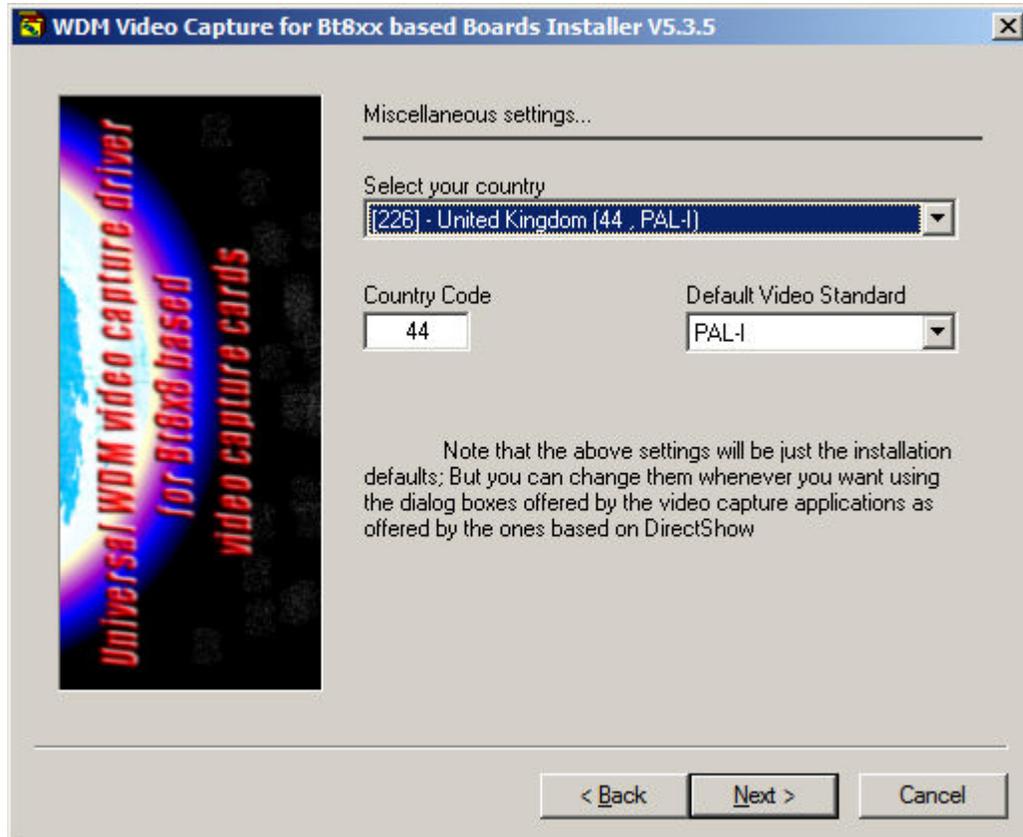
*Click **Accept** and then click **Next>**.*



*When prompted, select (034) - Leadtek winfast2000, and Absent- no TV function will be available, and then click Next>.*



Next, select country [226] United Kingdom (44, PAL-I) and then click **Next>**.



Click **Finish** to complete, if prompted you will need to confirm the driver installation in windows. Once the install has completed you will be prompted with:



Click **OK** to complete the installation.

- **Available Formats in Hipotizer**

Formats the composite card is able to receive are listed below. To set use the **Live Video Settings** options in Engine Settings:

- PAL YUY2
- PAL YV12
- PAL 288 YUY2
- PAL RGB24
- NTSC YUY2
- NTSC YV12

- *NTSC 240 YUY2*
- *NTSC RGB24*

## 6. Live Video Input Devices

### 6.2 Four Input Composite Card



#### Contents

The four input card allows the user to have four simultaneous inputs. These input connect over a BNC connection into the Hippotizer. This is a legacy card which used to be shipped with Hippotizer HD and Stage units as an optional card. It is discontinued but is still supported

- **Driver**

*If you need to download the driver use the following link: [4 Input Capture Card Drivers 3.1.316](#).*

*Install the driver using the default options.*

- **Available Formats in Hippotizer**

*Formats the Four Input Capture Card is able to receive are listed below. To set use the **Live Video Settings** options in Engine Settings:*

- *PAL YUY2*
- *NTSC YUY2*

## 6. Live Video Input Devices

### 6.3 SDI Input Card



#### Contents

The SDI input card caters for a single SDI signal feed.

- *Driver*

If you need to update the driver then please use the driver that is contained in the 3rd Party Folder.

- *Available Formats in Hippotizer*

Formats the SDI Input Card is able to receive are listed below. To set use the **Live Video Settings** options in Engine Settings:

- PAL RGB32
- PAL YUY2
- PAL YV12
- PAL UYVY
- NTSC RGB32
- NTSC YUY2
- NTSC YV12
- NTSC UYVY

## 6. Live Video Input Devices

### 6.4 Dual and Single VGA Input



#### Contents

The dual VGA input card has two VGA inputs which can capture VGA simultaneously.

- **Driver**

*If you need to download the driver use the following link: [VGA \(NOT DVI\) Capture Card Driver v07.02.02](#).*

*Install the driver using the default options.*

- **Available Formats in Hippotizer**

*Formats that Dual and Single VGA Input cards are able to receive are listed below. To set use the **Live Video Settings** options in Engine Settings:*

- 1024x768 RGB555
- 1280x1024 RGB32
- 1600x1200 RGB32

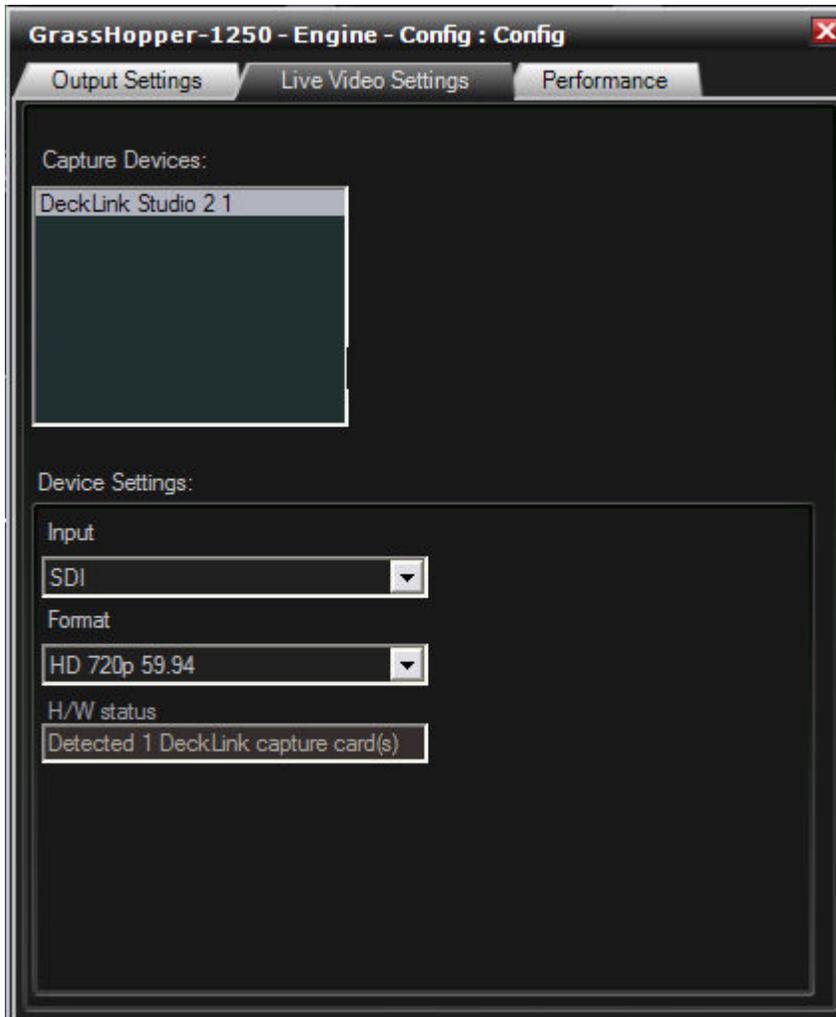
## 6. Live Video Input Devices

### 6.5 Blackmagic Design Decklink



If the Hippotizer was ordered with a Blackmagic Design Decklink card the correct drivers for 3.1 should already be installed. However if you need to re-install them, please use this link: [Green Hippo Decklink](#).

Once installed the software will detect the card and be available on the live input options on the layer control. However, the user will have to specify the input and format (depending on which card) which is being sent to the capture card. To do this, open the **Live Video Settings** in the Engine settings window (as below).



Clicking on the capture device at the top of the window displays the available settings for that capture device:

- **Input:** selects the input being captured on that card (mainly used for the Decklink Studio)
- **Format:** selects the format expected from the live video.

**Note:** this is not dynamic and requires user intervention if the format changes.

## 6. Live Video Input Devices

### 6.6 Elecard HDAccess 2 HD-SDI Card



If the Hippotizer was ordered with an Elecard HDAccess card, the correct drivers for 3.2 should already be installed. However if you need to re-install them, they are located in:

C:\Hippotizerv3\thirdparty\Elecard Drivers

## 6. Live Video Input Devices

### 6.7 Datapath Capture Cards



In Hippotizer Version 3.2.1 we have added the ability to access the hardware de-interlace settings for Data Path Dual HD-SDI (SDI2) Capture cards. This setting can be found in the Dr. Hippo application and must be set before starting Hippotizer and Zookeeper. If you plan to capture interlaced signals (such as 1080i) it is good practice to enable the hardware de-interlace. Please remember to disable de-interlacing for progressive signals as this will affect the aspect ratio of the captured video. The hardware de-interlace is disabled by default.

Hippotizer also includes a software based de-interlace which can be accessed from the zookeeper. The software system is distinct from hardware settings and will work for any capture card you may have, while hardware settings apply only to DataPath cards.

#### Drivers

For more information please refer to the readme at:

`C:\Hippotizerv3\thirdparty\Datapath Drivers\readme\readme.htm`

## 6. Live Video Input Devices

### 6.8 BlackMagic UltraStudio SDI USB3 Input



#### Contents

The Blackmagic UltraStudio SDI USB3 Capture device is for use with the 2013 Hippopotamus Models. These are the units that support USB3 and are running Windows7

- **Driver**

*Download the drivers from the Black Magic Website, which can be found [here](#). We have tested versions 9.7.1 and 9.7.5 with Hippotizer Version 3.2 and found them to work well.*

*-Extract and install the drivers onto your HippoPortamus*

*-When prompted, restart the machine.*

*-Plug the SDI capture box into your USB3 outlet. (It must be one of the blue USB sockets).*

*-Plug an SDI source into the capture device noting it's resolution and frame rate.*

*-Start the Hippotizer Engine and set a layer source to capture and SDI 1.*

*-In the engine settings, under live input settings, select the black magic card and adjust it to the correct resolution and frame rate.*

**Testing has shown that there is approximately a 2.5 to 3 progressive frame latency (40 - 50ms) with this capture device.**

# Resources and Resolutions

## 7. Resources and Resolutions



### Contents

The Hippotizer Media Server is very powerful and flexible, however no resources are unlimited. We believe that it is important to give you the use a great deal in flexibility where and when you want to use those resources. So you can run an HD with eight layers, however it will struggle to playback eight 1920x1080 video clips simultaneously. But rather than restricting this to four layers only you may need at times a fifth layer as a mask and this performs very well.

The engine does not stop under heavy pressure, but reduces the frame-rate at which it renders. You can monitor this as part of the engine settings (right-click on Engine Component and go to the third tab). You will see the readout of FPS (frames per second) the system is running at. Typically this will be around 60, as most displays use this refresh rate. If you now start to load up the system dramatically (lots of high-resolution video clips and many effects) this fps will start to come down. In some cases when doing for example horizontal animations this can be quite noticeable as the steps between frames will be much more noticeable. In other cases (i.e. a slow moving animation) you may not notice anything. So it is important to be aware of such limitations and if the output looks un-smooth, check the fps to see what is going on. Often the same look can be achieved with fewer resources (layers or effects) and can be optimized that way.

- **7.1 Managing Video Memory**

*Video Memory (Vmem) is dedicated graphics memory used throughout the video rendering process. The amount of video memory used by a Hippotizer system is influenced by several factors, however the total number of pixels used in each layer greatly effects this value. The more pixels that are allocated to the layers, the more video memory the system will need.*

**Please Note:** *If video memory limits are exceeded this will result in a severe degradation of performance. This will show as slowing output frame rate and, in extreme cases, additional layers rendering a pink output. If this occurs, simply clear extra layers to free resources and the system will return to normal operation.*

*The Hippotizer can dynamically resize each layer to work natively in the incoming resolution. This means that if you load a PAL clip, the layer will be resized to 720x576, if you use a 720p clip, it will expand to 1280x720. The same goes for images. Switching from one resolution to another takes resources and you may notice a hick in the playback (or you may not, if the system is not so busy). This is because the unit needs to re-allocate buffers for the new player. Once you are inside this resolution switching will be instant and smooth. So it is advisable for critical transitions to design your resolutions, so each layer has a certain function and maintains the same resolution throughout the show. If you need to switch resolutions and it is noticeable (because for example there is a clip with strong motion), move the cue to a more static scene to "hide" the resolution switch.*

*It is important to understand this concept of allocating memory for a specific resolution as this can result in running out of video memory, although you are not "using" many layers. As an example you are using a stage in pan mode and have created back-ground videos at 1920x576 resolutions. Typically you would use layer 1+2 for the background playback and use PAL resolution on all other layers. However if you were to load the background videos on all eight layers you would overload the system and the fps would drop. This is because you are running out of video memory. Even if you now switch to images on all layers, the situation will not improve as the video players on each layers still keep the same amount of video memory reserved. It is important to remember that images and videos reserve their own memory and are treated independently. So the situation will only improve when we start loading layers with lower resolution video clips, i.e. PAL clips. This will reduce the buffer size and release video memory.*

**Please Note:** *The media map position of 0,0 (Bank 0, Clip 0) is very important to video memory management as it dictates the pixel size of layers that are reset. If intensive usage is anticipated, we suggest placing a small (PAL or less) video clip into position 0,0. A short black clip is provided in the stock content in position 0,4 for this reason.*

- **7.2 Resolutions Explained**

On Hippotizer, we differentiate between two different types of resolutions: Media Resolution (which typically is also the Layer resolution) and output resolution. These two can be the same, but do not have to be. Each of the three versions has different restrictions to both resolutions, which are important to understand when designing and using content.

- **Critter**

*The HippoCritter can only play back PAL and NTSC resolution media – this is often referred to as SD (standard definition) content. Media at higher resolution will be reduced in size with imported. The maximum output resolution is 1920x1080.*

- **GrassHopper**

*The GrassHopper can import and play back media with a maximum resolution of or 1920x1080 pixels. It has a single DVI output but using an output extender the output can be set up to 2 x (1920x1080).*

- **HD**

*There are no restrictions on the HD other than the ones the technology places on us. The maximum video clip size is 1920 x 1080, no matter which mode you are in. Images can be bigger though. There are no software restrictions on the output resolutions, only the limitations of the output graphics card.*

- **7.3 Using TeamViewer for Remote Support**

*The Green Hippo Support team can offer remote control and diagnostics using TeamViewer.*

*After Green Hippo Support receives your support Ticket, we may request remote control of the Hippotizer using TeamViewer. With TeamViewer, we can take control of your Hippotizer and directly see what is happening over the Internet. They can see your outputs, transfer files to and from the unit, and install or remove software if necessary. This process usually works best with a telephone or Skype call (Hippo\_Support) so they can speak to you if more information is needed. If these options are not available there is TeamViewer chat or simple notepad text based communication during the session.*

*To install TeamViewer, connect your Hippotizer to the Internet (preferably behind a firewall) and point Internet Explorer to: <http://www.teamviewer.com>.*



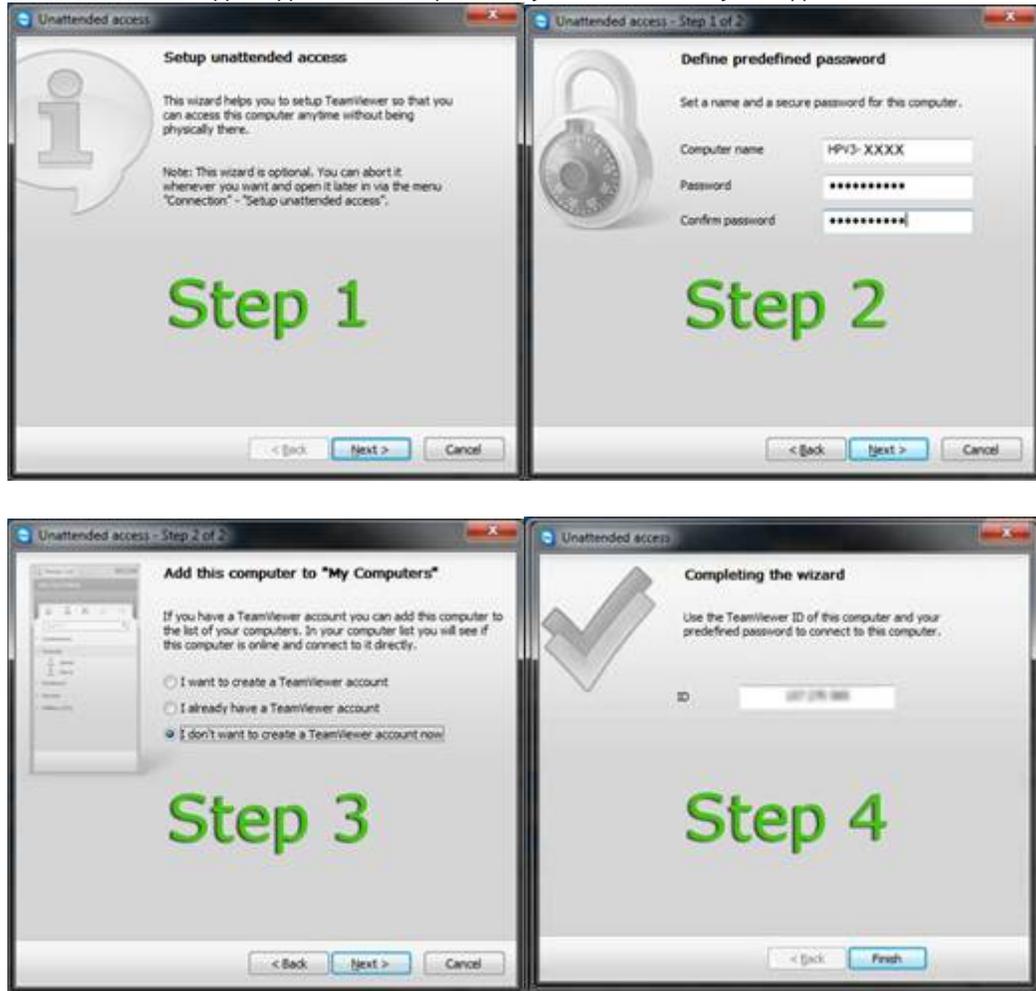
Click on the link and run the TeamViewer installer. \*please note that the option to Run or Install will appear later in the install process. You can choose either but if reboots are needed, the Support team will have to set a password on the unit to login again using unattended access. (see install process for unattended access later).



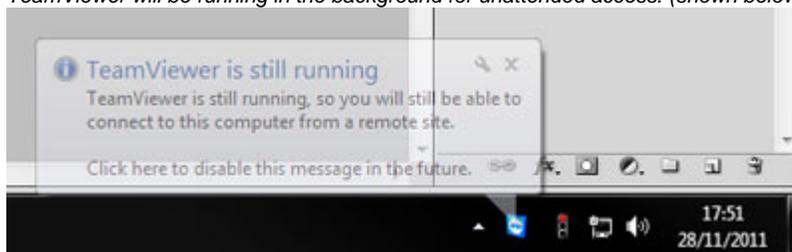
The last step of the TeamViewer install shows you the Session ID and password page which is the information Green Hippo Support will need to connect to your Hippotizer.



In case there is a requirement to reboot the Hippotizer, or you want to leave the unit available for a scheduled session, either party can configure unattended access. The following images show the setup process for this. Please send Green Hippo support the ID and password you have chosen in your support ticket.



TeamViewer will be running in the background for unattended access. (shown below)



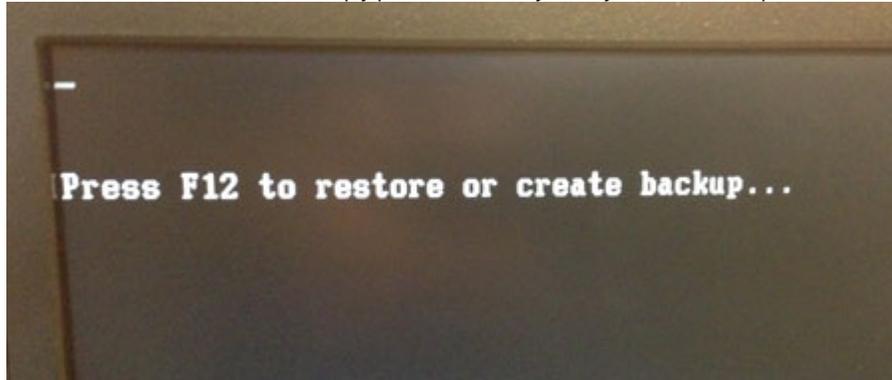
Once the issues have been resolved, you can uninstall TeamViewer.

- **7.4 The F12 Restore**

The F12 function is installed from the factory and places a copy of the entire contents of the system drive on a separate partition on the C: drive.

The Master Boot Record or MBR of the C: or system drive is modified to providing a function that allows you to quickly restore the entire system drive in case the OS installation gets corrupted or damaged from viruses or other problems.

To use the F12 restore function, simply press the F12 key shortly after the BIOS post screen.

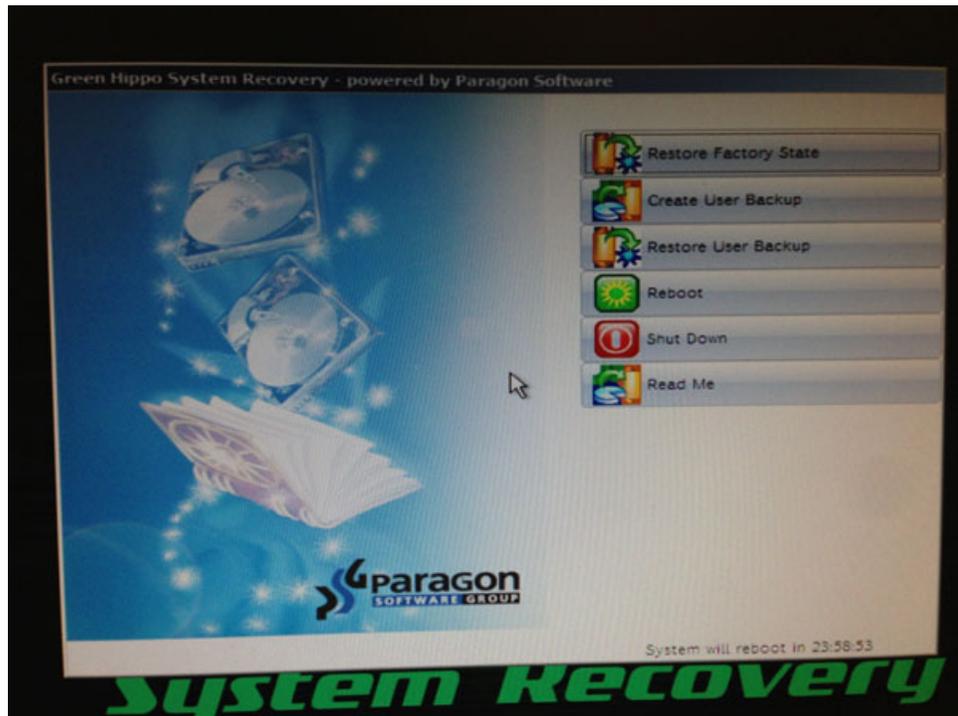


Please see the considerations below before proceeding to avoid loss of data.

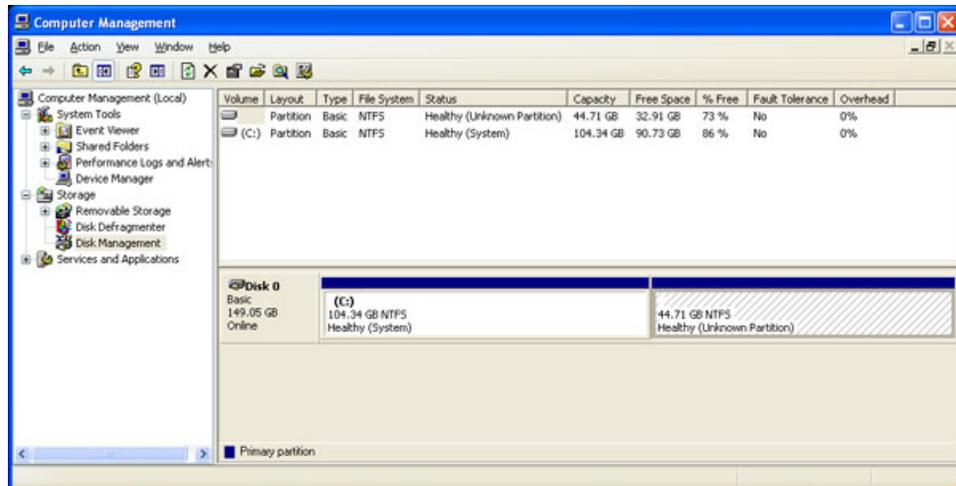
- **What the F12 can do**

*There are 2 "slots" available to save backup your system. Slot 1 is the factory settings which is read only so you can restore factory and slot 2 is available (drive space permitting) for a customized restore (handy where a capture card has been added for example).*

**It is recommended that you always choose Shut Down at the end of any restore or Backup process.**



*Please do not make any changes to the partition or the MBR by installing other partition management software as this will void the Hippotizer warranty and more importantly put your Hippotizer at risk of becoming inoperable due to OS damage/viruses. Replacing this function will require the unit to be returned to the factory and is not covered under warranty.*



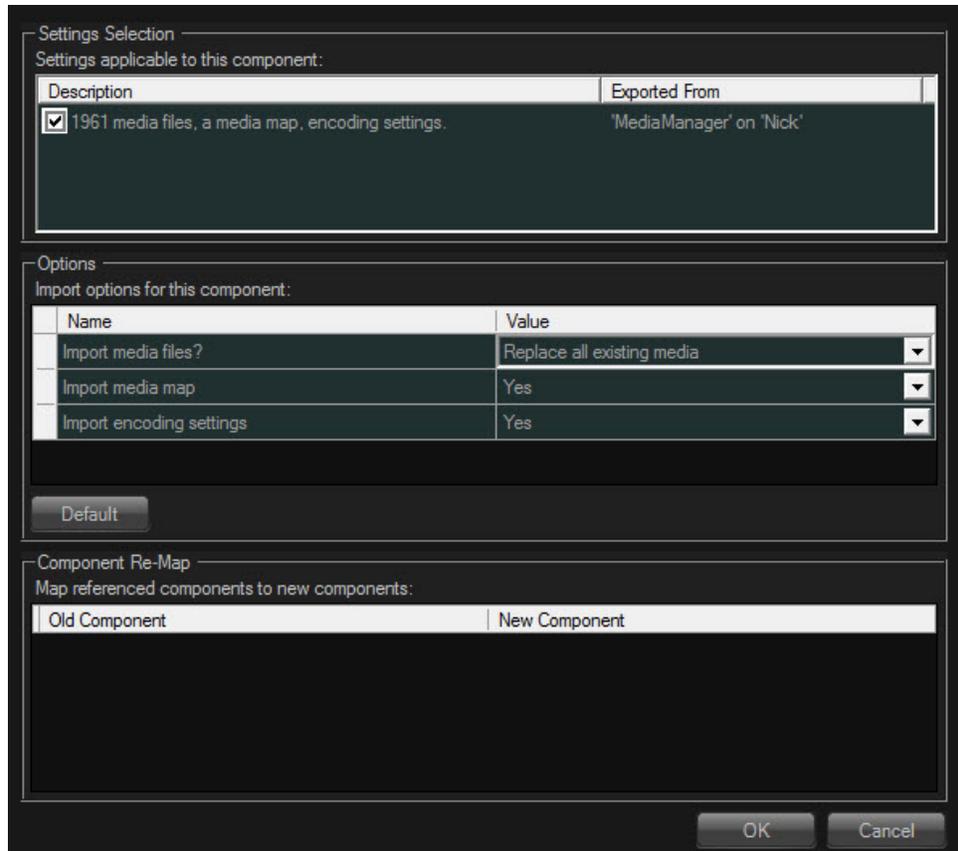
- **Media considerations before using F12**

*On multiple drive units like the GrassHopper and HD, this process does not affect the media contained on the D: and E: media drives. If you are restoring Hippotizers after rental and want to remove customer media, please import the stock content using the "Replace all existing media" and import the Media map from this export. You will then have a factory fresh Hippotizer ready to send out on the next job.*

*On single drive units like the earlier Portamus and Critter, all media in the C drive will be replaced with the default content.*

*Please make sure to **export the Media and the Media Map before restoring** these single drive Hippotizers.*

*The restore process typically take between 10 and 15 minutes - stock media import takes about the same, so depending on the type of unit you have, you can restore everything in approx. 30 minutes.*



- **Other things to consider when using F12**

*All OS settings and other 3rd party software that was installed at the factory will be reset back to date of manufacture. It is very important to update [Quicktime](#) and any other drivers etc. if you will be using newer software on the unit after the F12 restore.*

*You can always update everything and then use the second "slot" to make a user restore point to streamline this process.*

*Please also make sure you have a backup of your current C:\RC.hwk hardware key as you may overwrite this file with an older version. If you find the Engine does not start after a restore and there is a red X on the engine and the pop-up bubble says "please update your kry/key", you will have to contact Green Hippo support to obtain a new hardware key.*



# Index

## 1

16 bit Colour ..... 330, 377

## A

Activate User Interface .....27

Adding Components .....244

Art-Net..... 199, 210, 211

ASCII .....327

ATI Fire Pro.....292

Auto Sync .....85

## B

BeatBridge .....249, 380

Blackmagic .....428, 438

BPM.....380

## C

Canvas.....396

Capture Polar.....258

Case Layout ..... 12, 13, 14, 15, 20, 23

Chat .....254

CITP .....211, 258

Clock And Scheduler .....254

CMY.....330

Command String .....327

Components in Detail .....235, 244

Composite Input.....428

Configuration ..... 172, 396

Configuring Outputs ..... 172

Continuous Sync .....85

Controlling Multiple Servers..... 171, 305, 315, 396, 419

Creating a custom Thumbnail .....69

CSV file .....211

Cue Controller.....260

Curved Screens .....372

## D

Datapath Capture Cards .....428, 441

DataPath X4..... 172

DeltaFrame mode .....377

Desktop Layouts.....203

Detailed Connections..... 12, 14, 23

Device Monitor .....211

Devices ..... 211, 263, 305

DHCP.....199

Display Connection .....29

DMX .....211, 330

DMX compatible lighting fixtures.....330

DMX Maps.....211

DMX-Tail.....211

Dr Hippo ..... 235

## E

EDID ..... 172

Effects ..... 9, 99

ElecCard ..... 440

Encoding your own Media ..... 81

Engine settings .....27, 172, 235

Ergonomics ..... 29

Expert Mode ..... 223

External Protocols..... 211, 223, 231, 305, 351

## F

F12 Restore ..... 443

Fan Status ..... 298

Fine Control ..... 29

Firewalls ..... 199

Flight Casing ..... 12

Fly-Wheel.....231

FPS ..... 443

Frame Accurate.....382

Front and Rear Views ..... 14

Front Panel ..... 23

Full Spline ..... 372

## G

Generators .....35, 157

Genlock.....292

Getting Started with the Software ..... 27

GoCue ..... 392

Gradient.....157

## H

Hardware and Connections ..... 15

HD Enclosures .....12, 20

Hide.....194

HippoBlaster.....296

Hippocritter ..... 20

HippoNet..... 171, 199, 326

Hippotizer GrassHopper ..... 20

Hippotizer Server – Hardware and Connections .. 15, 19, 20, 23

Hippotizer Variants ..... 13

HMap2.....211, 295

Hyperterminal.....388

## I

Importing and Managing your Media 6, 61, 69, 80, 81, 419

## K

Keystone.....53, 352

## L

<i>Layer Control Section</i> .....	35, 47
<i>Layer Mode</i> .....	35, 42, 235, 396
<i>Layer Overview Window</i> .....	35, 42
<i>Layer Sources</i> .....	33, 35
<i>Lighting Desk</i> .....	211, 258
<i>Live Mask</i> .....	299
<i>Live Video Input Devices</i> .....	428
<i>Logs</i> .....	235
<i>LumaKey</i> .....	89

**M**

<i>Mac formatted drive</i> .....	69
<i>Mackie</i> .....	305, 315
<i>MANet</i> .....	211
<i>Master Layer</i> .....	53
<i>Matrox</i> .....	172
<i>Matte</i> .....	89
<i>Media Manager Errors</i> .....	81
<i>Media Offset</i> .....	382
<i>Media Servers</i> .....	10
<i>Microsoft Security Essentials</i> .....	199
<i>MIDI</i> .....	223
<i>MIDI Timecode</i> .....	223
<i>Mix Modes</i> .....	89
<i>Multi-Point Distortion</i> .....	372
<i>MultiSelect</i> .....	315

**N**

<i>Network Settings</i> .....	199, 235
<i>Network Tester</i> .....	235, 326
<i>No End Date</i> .....	254
<i>Nodes</i> .....	352, 372
<i>Non-Linear Surfaces</i> .....	352, 372
<i>NTSC</i> .....	430, 435, 442

**O**

<i>OSC</i> .....	210
------------------	-----

**P**

<i>Patching Special Channels</i> .....	330
<i>Personality Editor</i> .....	263, 330
<i>Phase Pitch</i> .....	380
<i>PhatController</i> .....	327
<i>Pins</i> .....	194
<i>PixelMapper</i> .....	330
<i>Playlist</i> .....	35
<i>Power</i> .....	19
<i>PowerPoint</i> .....	377
<i>Precautions</i> .....	13
<i>Processing Flowchart</i> .....	10

**Q**

<i>Quads</i> .....	352
<i>Quicktime</i> .....	81

**R**

<i>Rack Mounting</i> .....	12
<i>Ranges</i> .....	249
<i>Real Time Effects Manipulation</i> .....	9
<i>Real World Measurements</i> .....	330
<i>RegionMapper</i> .....	352
<i>Relays</i> .....	35
<i>Remote Support</i> .....	443
<i>Removing Components</i> .....	244
<i>Render Nodes</i> .....	396
<i>Reset</i> .....	29, 53
<i>Reset Master</i> .....	53
<i>RGB</i> .....	330, 410
<i>RS232</i> .....	210, 327

**S**

<i>Screen Capture</i> .....	377
<i>ScreenThief</i> .....	35
<i>ScreenWarp</i> .....	352, 372
<i>SDI</i> .....	428
<i>Serial Number</i> .....	235
<i>Set up your Network</i> .....	199
<i>Simple Mode</i> .....	172, 223
<i>Small Layer Layout</i> .....	42
<i>Smart Patch</i> .....	211, 263
<i>SMPTE</i> .....	231
<i>Soft Edge Blending</i> .....	99, 372, 382
<i>Software Version</i> .....	235
<i>Solo and Mute</i> .....	305, 315
<i>Sound</i> .....	157, 351, 380
<i>Sound Spectrum</i> .....	157
<i>Source Media</i> .....	419
<i>Splitting Media</i> .....	419
<i>Sprite</i> .....	89
<i>Starfield</i> .....	157
<i>S-Video</i> .....	430
<i>Synchronising Media</i> .....	203
<i>Syncro</i> .....	382, 419

**T**

<i>TapTempo</i> .....	380
<i>TCP/IP</i> .....	199, 327, 388
<i>TeamViewer</i> .....	443
<i>Telnet Command reference</i> .....	388
<i>Telnet Component</i> .....	388
<i>Text Manager</i> .....	384

*TextEngine* ..... 35, 384  
*The Master Layer* ..... 53  
*Timecode on Layer* ..... 210  
*Timeline* ..... 203, 223, 260, 305, 351, 392  
*Timeline Control String* ..... 223, 392  
*ToolBox* ..... 2  
*Tooltips* ..... 29  
*Transparency* ..... 89  
*Triple Head to Go* ..... 172

**U**

*UberPan* ..... 396, 419  
*UltraStudio SDI* ..... 442  
*Using Alpha with Video Clips* ..... 80

**V**

*Ventilation* ..... 12  
*VGA* ..... 428  
*VideoMapper* ..... 410

*Virtual Media Manager* ..... 419  
*Viruses* ..... 199  
*Visualization* ..... 258, 372  
*VMem* ..... 443

**W**

*Wake All* ..... 394  
*Watchfolders* ..... 85  
*Waveform* ..... 157  
*Weights* ..... 372  
*What is Hipponet* ..... 171, 194  
*Windowed Mode* ..... 172, 235  
*Wizard* ..... 396  
*Wysiwyg* ..... 258

**X**

*X-Fade* ..... 35, 172

**Z**

*ZooKeeper* ..... 27, 33, 35, 42, 47, 53, 172, 235, 326