MI-HORIZON3D Digital 3D Cinema System

Installation & Operation Manual Revision No. 1.0.0





Revision History

Revision	Date	Release Status	Author	Remarks
PD 0.1	24 th February 2014	Preliminary Document	RJG	
PD 0.2	27 th February 2014	Preliminary Document	RJG	Changes to software utility
PD 0.3	6 th March 2014	Preliminary Document	RJG	Text Improvement
PD 0.4	12 th May 2014	Preliminary Document	RJG	Packaging additions
1.0.0	22 nd May 2014	Initial Release	RJG	

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1. Introduction

1.1. Welcome

Congratulations on choosing the finest digital projection 3D system available.

The MASTERIMAGE MI-HORIZON3D delivers the clearest, brightest, full-color images in a studio-approved single projection, patented three-way beam, liquid crystal, digital 3D system.

Paired with MASTERIMAGE high quality 3D eyewear, the MI-HORIZON3D provides the clearest and truest color 3D picture of any available liquid crystal 3D system.

This user manual provides all the information required for simple installations and the operation of the MI-HORIZON3D, with any DLP cinema projector and digital cinema server.

1.2. Contacting Technical Support

If you require technical support, our contact information is listed below:

MASTERIMAGE 3D, INC

Email:	support@masterimage3d.com
Web Site:	www.MasterImage3d.com
USA Tel:	+1-323-606-7800
UK Tel:	+44 1753 785131
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2. Warnings and Cautions

2.1. Installation Consideration



When planning installation of the MI-HORIZON3D, ensure that the image height entering the system is less than 55mm.

The auditorium throw ratio should be greater than 1.5:1 for this version of the system.

2.2. Heat Damage



To avoid burning the polarizer film of the liquid crystal panel ensure a panel surface temperature of $<80^{\circ}F$ is maintained.

2.3. General Electrical Safety



Disconnect the power cord before servicing or opening the control box for any reason.

2.4. General Handling



Avoid touching any optical components with bare hands. Handle the optical head assembly by the handles only.



3. System Overview

3.1. The New Horizon of Digital 3D Projection

Key Features:

- MI-HORIZON3D is a single-projection; three-way beam, liquid crystal based, easy-to-use, high-quality Digital 3D Cinema System that enables 3D cinema presentation. The system can be quickly installed in front of the lens of any DLP digital cinema projector.
- MI-HORIZON3D's patented construction three-way beam uses three specific Liquid Crystal (LC) panels that are accurately bonded to ensure effective polarization of the left and right images from the projector lens.
- MI-HORIZON3D provides an accurate synchronization function for both current format 72Hz, 24fps, triple flash and future HFR 3D formats.
- MI-HORIZON3D is perfectly matched to the high quality polarized 3D eyewear produced by MASTERIMAGE 3D.
- MI-HORIZON3D consists of the three-way beam optical head, actuator, control box, connection cables, and floor stand.





4. Installation and Configuration

4.1. Unpacking the MI-HORIZON3D

Inspect the MI-HORIZON3D packaging box for any external damage. Report any damage to shipper and to MasterImage 3D.



Floor Stand Outer Carton contains Floor Stand, Actuator, Control Box and Accessories



Low Vibration Case for Head Assembly

Head Assembly Outer Carton Box



4.2. Confirm Package Contents of MI-HORIZON3D

- Optical Three-Way Beam Head Assembly inside Low Vibration Case
- Floor Stand
- Actuator
- Control Box
- Power Adaptor
- Sync Cable
- Actuator Cable
- 3D Glasses



5. Detailed Component Overview

5.1. Three-Way Beam Optical Head Assembly





5.2. Actuator & Control Box



5.3. Floor Stand





5.4. Control Box – Front Panel & Connections





6. System Setup

6.1. Initial System Assembly

6.1.1. Attach Optical Head to Actuator



Insert the optical head assembly into the front section of the actuator tilt stage whilst aligning with the two guide pins. Once located correctly secure with two hex screws provided.





6.1.2. Cable Connections

1. Attach the LC Connector from the Actuator assembly to the Optical Head Assembly.



LC Cable Connection

2. Ensure the Actuator Cable is connected between the Control Box and Actuator and the LC Cable is connected to the rear of the Control Box. Connect the 24v DC power cable to the Actuator.



Actuator & Power Cable Connection



6.1.3. Initial Height Adjustment







IMPORTANT The Optical Head Assembly must be installed perpendicular to the light path exiting the lens. The angle of this light may not be the same angle as the lens itself, so observe the light path from the side to make sure the head is exactly perpendicular.





6.1.4. Locking Feet



Once the height and tilt adjustment has been made, lock down all four rolling wheels to prevent system movement.

6.1.5. GPIO Cable

Connect the GPIO cable from the DLP Digital Cinema Projector.



GPIO Cable Connection



6.2. Initial Test

6.2.1. Auto Power On

To turn on the control box power automatically, connect the main cable from the DC power supply to a power outlet.

With no sync signal present the LED display panel indicates 00 showing that it is in a READY state.



Auto Power On and Display Indication

6.2.2. Actuator Operation – 3D Position

Press the 3D button for 2 seconds. The actuator moves to the 3D position.

The 3D button flashes for approx. 13 seconds before becoming steady

If a GPIO Sync signal is present the LC Panels will become active and the frequency displayed on the LED, the Run button will illuminate.



6.2.3. Actuator Operation – 2D Position

Press the **2D** button for 2 seconds. The LC Panel operation will be stopped (Run LED Off) and the actuator moves to the 2D position.

The 2D button flashes for approx.13 seconds before becoming steady.



7. MI-HORIZON3D System Alignment & Configuration

7.1. Upper Beam Alignment

1, Open the two adjustment screw covers on the top side of the optical head assembly.

2, Load the standard cross-hair test pattern from the projector.

3, Using a 2mm or 5/64" hex key use the right hand screw to alter the horizontal image position and the left hand screw for the vertical image position.





7.2. Lower Beam Alignment

1, Open the two adjustment screw covers on the bottom side of the optical head assembly.

2, Using the same standard cross-hair test pattern from the projector.

3, Using a 2mm or 5/64" hex key use the right hand screw to alter the vertical image position and the left hand screw for the horizontal image position.



LOWER MIRROR PRISM ADJUSTMENT SCREW (HORIZONTAL) CLOCKWISE: RIGHT COUNTER-CLOCKWISE: LEFT LOWER MIRROR PRISM ADJUSTMENT SCREW (VERTICAL) CLOCKWISE: UP COUNTER-CLOCKWISE: DOWN



Once alignment of both the upper and lower secondary images is complete, close the four adjustment screw covers.



7.3. 3D Phase Sync Polarity

If necessary it is possible to change the sync polarity of the 3D phase by changing the position of DIP switch 2 on the Control Box next to the Ethernet RJ-45 Connector.

Using the tip of your finger nail move the switch to the ON position as indicated to 'Invert' the sync polarity.



7.4. Actuator 3D Position

If necessary it is possible to change the actuator 3D position by changing the position of DIP switch 1 on the Control Box next to the Ethernet RJ-45 Connector.

Using the tip of your finger nail move the switch to the ON position as indicated to change the Actuator 3D Position from Left to Right depending on your installation.





8. Projector Configuration

8.1. Projector 3D File Configuration

The projector's 3D control file must be configured to work with the MI-HORIZON3D. These procedures describe configuring the control files for Series II projectors.

The **Dark Time** should be set to **350µS** with the **Delay** being set to **-100µS**. These figures are applicable to all frame rates and projector flash configurations.

Follow the instructions for the appropriate projector.

8.2. Series II Projectors

Configure the projector settings as shown in the graphics below for NEC, Christie, and Barco Projectors.

8.2.1. NEC Series II File Settings for External Server Playback

D File Name	MI-HORIZON3D	D					mport	
Frame Rate Ratio								
3D Control								
L/R Input Reference	Γ	Use Line In	terlea	ve(1st	line=Left 2	nd line=F	light) 👱	
Input Frame Dominand	e [i	Left (L1R1	L2R2)				-	
L/R Display Reference	Ī	Not Used					•	
L/R Output Reference	Polarity [-	True					•	
Dark Time Adjustment	Setti	ng 📑	50	us	Actual	350	us	
Output Reference Dela	y Time	• [-	100	us	Phase	0	deg	
				C au		F	vit	

NEC



8.2.2. Christie Series II File Settings for External Server Playback



Christie

8.2.3. Barco Series II File Settings for External Server Playback

3D Control				- ? - 💌
Frame Rate Multiplication: 6:2	•			3D Test Pattern Activate 48 🜩 Hz
3D Control				
L/R Input Reference	е	Use line interle	eave where first line =	Left, second line = Right 👻
Input Frame Domin	nance	Left (L1R1 L2F	32) 🗸	
L/R Display Refere	ence	Not Used	•	
L/R Output Referer Dark Time Adjus	nce Polarity (GP tement	0 1) True 🗸		
Setting:	350	🗢 us	Actual:	350 us
Output Reference	e Delay			
Time (us):			-100	
		Refresh	Close	

Barco





Barco Series II projectors have a pre-installed 3D configuration file for the settings required by the MI-CLARITY3D system. It is possible to select this file rather than making fully manual entries, but editing of Dark Time and Output Reference Delay would be required.

8.2.4. IMB Configuration Settings

Projector configuration settings when using an IMB (Integrated Media Block) are slightly different; an example of this is given below for a Christie projector and a Doremi IMB. The changes are highlighted in bold; other projector/IMB manufacturers' configurations may vary slightly. Contact the respective manufacturers for specific information.

Config. 1

- Input = IMB-Internal
- Data Format = 4:4:4 (RGB)
- Source File = Based on content resolution + aspect ratio (1998x1080 Flat, 2048x858 Scope, etc.)
- Screen File = Site-specific (typically Flat or Scope based on content)

Config. 2

- Measured Color = Site Specific (Create on-site)
- Target Color = DC28_DCI_XYZE_314_351
- Color Space = Unity RGB
- Gamma = Gamma 2.6

- Use PCF = not selected (unchecked)
- Lamp File = Site-specific
- ILS File = Site-specific
- Auxiliary Lens = Site-specific Selected if Anamorphic Lens or WCL needed, otherwise unselected
- LUT-CLUT = Linear_9x9x9
- Scan Type = Progressive
- LD Bypass = Selected (this sends IMB output directly to ICP. This is required if no LD is installed)

3D Control

- Enable 3D = Selected
- 3D Sync Input Mode = Use Selected Input Port (polarity = true)
- Frame Rate N:M = 6:2
- L/R Display Sequence = Left (L1R1 L2R2)
- 3D Sync Polarity = True (If left/right eye images swapped set to Inverted)
- Dark Time = 350
- Output Delay = -100
- Phase Delay = 0



9. System Setup Using the Monitor Application

9.1. Initial Configuration

Connect your PC to the MI-HORIZON3D with an Ethernet cable and configure your network settings with Control Panel of Microsoft Windows.

You can use a different IP address that is suitable to your network

ieneral	
You can get IP settings assig this capability. Otherwise, yo for the appropriate IP setting	ned automatically if your network supports au need to ask your network administrator ps.
💮 Obtain an IP address av	Itomatically
Use the following IP add	tress:
IP address:	192 . 168 . 10 . 11
Subnet mask:	255.255.255.0
Default gateway:	192 . 168 . 10 . 1
🕐 Obtain DNS server addr	ess automatically
Use the following DNS s	erver addresses:
Preferred DNS server:	[/2 23 (2]]
Alternate DNS server:	
Validate settings upon	exit Advanced

9.2. Execute the Monitor Application using a Web Browser

Input the default IP address of the MI-HORIZON3D (192.168.10.95) into your web browser.

When attempting to connect a security window will be displayed, enter the user ID and password information and select OK.

The server 192	.168.10.95 at Protected requires a username and password.
Warning: This sent in an inse connection).	server is requesting that your username and password be cure manner (basic authentication without a secure
	admin
and 1	[++
	Remember my credentials



The default user id and password is like as below:

- User ID: "admin"
- Password: "mi"

Once access is gained the MI-HORIZON3D Web Server will be displayed.



🖉 MI-HORI	ZON3D Web Server			_ 🗆 ×
00.	8 http://192.168.10.95/			• •
🔶 Favorites	🏉 MI-HORIZON3D Web Server	\$		
			Log / New password	J
		MI-HOR	IZON3D Web Server	
	Status	READY		
	Actuator position	2D		
	Sync Frequency	72.00Hz		
	LCPM Frequency	0		
	Version	v1.0.8		
	Build Date	Feb 17 2014		
	RUN	2D	3D	
	Sync Polarity	TRUE	TRUE	
	3D Position	LEFT	LEFT	
	Automation	MANUAL	MANUAL	
	Sync Source	GPIO	GPI0 💌	
	Delay 2D (SYNC PULSE)	5 Seconds	5	
	Setup	Default	Save & Reset	
	Reference sync	Net	work Configuration	
	Copyright (c) 2013 I	MasterImage 3D. All Righ	ts Reserved.	
			(n • (*)	100% -
		, j v	j.m. j.~.	



MI-HORIZON3D Web Server shows all the system status information.

- Status: Ready or Running
- Actuator Position: 2D or 3D
- **Sync Frequency**: Sync frequency from the Projector
- **LCPM Frequency**: Operating Sync frequency from the Liquid Crystal Panel
- Version & Build Date: Built date and Firmware Version No.

9.2.1. Changing the User Password

To prevent access to the MI-HORIZON3D from unauthorized persons it is possible to change the system password.

Click the [New Password] link in the upper right corner of the MI-HORIZON3D Web Server and the 'Change Password' dialog box will be displayed.

		MI-WAVE3D Web Server
Ch	ange Password	
o ch he na hissp	ange your password, first enter you ew password. Confirm the new pass ell it. (It can not be longer than 13 Current password : New password :	ir current password, followed by word to make sure you did not characters.)
	Confirm :	e password





- Input the current password. (mi)
- Input a new password.
- Input the new password for confirmation and click the [Save password] button.

9.3. System Operation via the Monitor Application

Click the [RUN] button to start the Liquid Crystal Panel operation.

		Log / New pass	word			Log / New passw
	MI-HO	RIZON3D Web Se	rver		MI-H	IORIZON3D Web Serv
Status	READY			Status	RUNNING	
Actuator position	2D			Actuator position	2D	
Sync Frequency	72.00Hz			Sync Frequency	72.00Hz	
LCPM Frequency	0			LCPM Frequency	72.00Hz	
Version	v1.0.8			Version	v1.0.8	
Build Date	Feb 17 2014			Build Date	Feb 17 2014	
Sync Polarity	TRUE	TRUE		Sync Polarity	TRUE	
3D Position	LEFT	LEFT		3D Position	LEFT	LEFT
Automation	MANUAL	MANUAL		Automation	MANUAL	MANUAL
Sync Source	GPIO	GPIO		Sync Source	GPIO	GPIO
Sync Source Delay 2D (SYNC PULSE)	GPIO 5 Seconds	GPIO 5		Sync Source Delay 2D (SYNC PULSE)	GPIO 5 Seconds	GPIO 5
Sync Source Delay 2D (SYNC PULSE) Setup	GPIO 5 Seconds Default	GPIO 5 Save & Reset		Sync Source Delay 2D (SYNC PULSE) Setup	GPIO 5 Seconds Default	GPIO 5 Save & Reset
Sync Source Delay 2D (SYNC PULSE) Setup Reference sync	GPIO 5 Seconds Default Net	GPIO 5 Save & Reset	n	Sync Source Delay 2D (SYNC PULSE) Setup Reference sync	GPIO 5 Seconds Default	GPIO 5 Save & Reset Network Configuration

The color of the [RUN] button will change from black to green.

The indication under Status will change from 'Ready' to 'Running'.

Once synchronized the Liquid Crystal Panel operating frequency will be displayed.



9.4. Position Movement via the Monitor Application

9.4.1. 3D Position

Click the [3D] button to move the actuator to the 3D position.

		Log / New pas	ssword	ABSOLUTELY 3D		Log / New password
	MI-HOF	RIZON3D Web S	erver		MI	HORIZON3D Web Server
Status	READY			Status	RUNNING	
Actuator position	3D_MOVING			Actuator position	3D	
Sync Frequency	72.00Hz			Sync Frequency	72.00Hz	
LCPM Frequency	0			LCPM Frequency	72.00Hz	
Version	v1.0.8			Version	v1.0.8	
Build Date	Feb 17 2014			Build Date	Feb 17 2014	
RUN	2D	3D		RUN	2[3 D
Sync Polarity	TRUE	TRUE	•	Sync Polarity	TRUE	TRUE
3D Position	LEFT	LEFT	•	3D Position	LEFT	LEFT
Automation	MANUAL	MANUAL	•	Automation	MANUAL	MANUAL
Sync Source	GPIO	GPIO	•	Sync Source	GPIO	GPIO
Delay 2D (SYNC PULSE)	5 Seconds	5		Delay 2D (SYNC PULSE)	5 Seconds	5
Setup	Default	Save & Res	et	Setup	Default	Save & Reset
Reference sync	Net	twork Configurati	on	Reference sync		Network Configuration
Copyright (c) 2013	MasterImage 3D. All Righ	nts Reserved.		Copyright (c) 2013	MasterImage 3D. A	ll Rights Reserved.

The color of the [3D] button will change from black to green.

The color of the [RUN] button will change from black to green.

The indication under Status will change from 'Ready' to 'Running'.

Whilst the actuator is transitioning to the 3D position '3D_Moving' will be displayed, when the 3D position is reached this will change to '3D'.

Once synchronized the Liquid Crystal Panel operating frequency will be displayed.



9.4.2. 2D Position

Click the [2D] button to move the actuator to the 2D position.

		Log / New password	ABBOLUTELY 3D		Log / New password
	MI-HOR	IZON3D Web Server		MI-HOR	IZON3D Web Server
Status	READY		Status	READY	
Actuator position	2D_MOVING		Actuator position	2D	
Sync Frequency	72.00Hz		Sync Frequency	72.00Hz	
LCPM Frequency	0		LCPM Frequency	0	
Version	v1.0.8		Version	v1.0.8	
Build Date	Feb 17 2014		Build Date	Feb 17 2014	
RUN	2D	3D	RUN	2D	3D
Sync Polarity	TRUE	TRUE	Sync Polarity	TRUE	TRUE
3D Position	LEFT	LEFT	3D Position	LEFT	LEFT
Automation	MANUAL	MANUAL	Automation	MANUAL	MANUAL
Sync Source	GPIO	GPI0 💌	Sync Source	GPIO	GPIO 💌
Delay 2D (SYNC PULSE)	5 Seconds	5	Delay 2D (SYNC PULSE)	5 Seconds	5
Setup	Default	Save & Reset	Setup	Default	Save & Reset
Reference sync	Net	work Configuration	Reference sync	Net	work Configuration
Copyright (c) 2013	MasterImage 3D. All Righ	ts Reserved.	Copyright (c) 2013 N	4asterImage 3D. All Righ	ts Reserved.

The color of the [3D] button will change from green to black.

The color of the [2D] button will change from black to green.

The color of the [RUN] button will change from green to black.

The indication under Status will change from 'Running' to 'Ready'.

Whilst the actuator is transitioning to the 2D position '2D_Moving' will be displayed, when the 2D position is reached this will change to '2D'.

The Liquid Crystal Panel operation will stop and the frequency will display as 0.



9.5. Sync Polarity via the Monitor Application

Check the current value of the Sync Polarity.

		Log / New password			Log / New passv
	МІ-НС	RIZON3D Web Server		MI-I	HORIZON3D Web Ser
Status	READY		Status	READY	
Actuator position	2D		Actuator position	2D	
Sync Frequency	72.00Hz		Sync Frequency	72.00Hz	
LCPM Frequency	0		LCPM Frequency	0	
Version	v1.0.8		Version	v1.0.8	
Build Date	Feb 17 2014		Build Date	Feb 17 2014	
Sync Polarity	2D	3D	Sync Polarity	TRUE	
3D Position	LEFT	LEFT	3D Position	LEFT	INVERT
Automation	MANUAL	MANUAL	Automation	MANUAL	MANUAL
Sync Source	GPIO	GPI0 💌	Sync Source	GPIO	GPIO
Delay 2D (SYNC PULSE)	5 Seconds	5	Delay 2D (SYNC PULSE)	5 Seconds	5
Setup	Default	Save & Reset	Setup	Default	Save & Reset
eference sync	N	etwork Configuration	Reference sync		Network Configuration
Copyright (c) 2013	MasterImage 3D. All Ri	ghts Reserved.	Copyright (c) 2013	MasterImage 3D. All	Rights Reserved.

Depending on the condition of 3D material on screen change the Sync Polarity as required from 'True' to 'Invert'.

Click [Save & Reset] to accept any changes.



9.6. Setting 3D Position via the Monitor Application

Check the current setting for the 3D position of the Actuator.

master mage		Log / New password			Log / New password
	MI-HOR	IZON3D Web Server		MI-H	ORIZON3D Web Server
Status	READY		Status	READY	
Actuator position	2D		Actuator position	2D	
Sync Frequency	72.00Hz		Sync Frequency	72.00Hz	
LCPM Frequency	0		LCPM Frequency	0	
Version	v1.0.8		Version	v1.0.8	
Build Date	Feb 17 2014		Build Date	Feb 17 2014	
RUN	2D	3D	RUN	2D	3D
Sync Polarity	TRUE		Sync Polarity	TRUE	
3D Position	LEFT	LEFT	3D Position	LEFT	
Automation	MANUAL	MANUAL	Automation	MANUAL	RIGHT
Sync Source	GPIO	GPIO	Sync Source	GPIO	GPIO
Delay 2D (SYNC PULSE)	5 Seconds	5	Delay 2D (SYNC PULSE)	5 Seconds	5
Setup	Default	Save & Reset	Setup	Default	Save & Reset
Reference sync	Net	work Configuration	Reference sync	Ν	letwork Configuration
Copyright (c) 2013	MasterImage 3D. All Righ	ts Reserved.	Copyright (c) 2013	MasterImage 3D. All R	ights Reserved.

If required by the installation requirements for the system the 3D Position can be changed from 'Left' to 'Right' accordingly.

Click [Save & Reset] to accept any changes.



9.7. Automation Source via the Monitor Application

Check the current setting for the Automation Source of the system, by default this is set to 'Manual'.

		Log / New password	master mage		Log / New password
	MI-HOF	IZON3D Web Server		MI-H	ORIZON3D Web Server
Status	READY		Status	READY	
Actuator position	2D		Actuator position	2D	
Sync Frequency	72.00Hz		Sync Frequency	72.00Hz	
LCPM Frequency	0		LCPM Frequency	0	
Version	v1.0.8		Version	v1.0.8	
Build Date	Feb 17 2014		Build Date	Feb 17 2014	
RUN	2D	3D	RUN	2D	3D
Sync Polarity	TRUE		Sync Polarity	TRUE	
3D Position			Automation		
Sync Source	GPIO	GPIO 🔽	Sync Source	GPIO	MANUAL GPIO(37-9)
Delay 2D (SYNC PULSE)	5 Seconds	5	Delay 2D (SYNC PULSE)	5 Seconds	ETHERNET
Setup	Default	Save & Reset	Setup	Default	Save & Reset
Reference sync	Net	work Configuration	Reference sync	Ν	letwork Configuration
Copyright (c) 2013	MasterImage 3D. All Righ	ts Reserved.	Copyright (c) 2013	MasterImage 3D. All R	ights Reserved.

The options available for selection are:

- Manual Control via front panel button
- GPIO (37-9) Automation via the 37-pin GPIO cable connection
- GPIO (15-9) Automation via the 15-pin GPIO cable connection
- Ethernet Automation via server ethernet connection
- Sync Pulse Automation via GPIO/TTL sync pulse detection

Click [Save & Reset] to accept any changes.



9.8. Sync Pulse Automation Reference Frequency via the Monitor Application

Set the reference frequencies when the automation source is set to Sync Pulse.

master Image		Log / New pa	ssword	
	мі-но	ORIZON3D Web S	erver	
Status	READY			
Actuator position	2D			
Sync Frequency	72.00Hz			Log / New password
LCPM Frequency	0			
Version	v1.0.8			MI-HORIZON3D Web Server
Build Date	Feb 17 2014			
Sync Polarity	TRUE		V	Inis page allows the configuration of the device Reference sync settings. Enter the new settings for the board below:(45~150Hz)
3D Position	LEFT	LEFT	•	
Automation	SYNC PULSE	SYNC PULSE	•	Reference sync 1: 72
Sync Source	GPIO	GPIO	•	Reference sync 2 : V 60
Delay 2D (SYNC PULSE)	5 Seconds	5		Reference sync 4 : 🔽 96
Setup	Default	Save & Res	et	Reference sync 5 : 🔽 144
Reference sync	Ne	etwork Configurat	ion	Default Save Reference
Copyright (c) 2013	MasterImage 3D. All Rig	ghts Reserved.		Copyright (c) 2013 MasterImage 3D. All Rights Reserved.

Once the Automation Source has been set to Sync Pulse click [Reference Sync] in the bottom left of the application.

Up to five reference frequencies can be activated and these can be altered from 45-150Hz as required. The default settings being 72Hz, 48Hz, 60Hz, 96Hz and 144Hz.

Deselect the check box for any frequency that is not currently being used or required.

Click [Save Reference] to accept any changes.

Click your browser back button to return to the main screen.



9.9. 2D Delay Time via the Monitor Application

When using the Sync Pulse Automation option with material of varying frequency or frame rate it may be necessary to apply 2D Delay Time to the system to prevent unwanted 2D transition.

۲		Log / New password	
	MI-HO	RIZON3D Web Server	
Status	READY		
Actuator position	2D		
Sync Frequency	72.00Hz		
LCPM Frequency	0		
Version	v1.0.8		
Build Date	Feb 17 2014		
RUN Sync Polarity	2D	3D	
3D Position	LEFT	LEFT	
Automation	SYNC PULSE	SYNC PULSE	
Sync Source	GPIO	GPIO 💌	
Delay 2D (SYNC PULSE)	5 Seconds	5	The input value range for this option
Setup	Default	Save & Reset	is between 5 and 30 seconds.
Reference sync	Ne	etwork Configuration	
Copyright (c) 2013	MasterImage 3D. All Rig	ghts Reserved.	

Enter the required 2D Delay Time for your particular situation i.e. transition from 48fps HFR 3D to 24fps 3D.

Click [Save & Reset] to accept the changes.



9.10. Network Configuration via the Monitor Application

Configure the network settings of the MI-HORIZON3D to operate on your network via ethernet communication.

		Log / New passwo	d
	МІ-НО	RIZON3D Web Serve	1
Status	READY		Log / New password
Actuator position	2D		
Sync Frequency	72.00Hz		MI-HORIZON3D Web Server
LCPM Frequency	0		Network Configuration
Version	v1.0.8		This page allows the configuration of the device network settings.
Build Date	Feb 17 2014		CAUTION: Incorrect settings may cause the board to lose network
RUN	2D	3D	Enter the new settings for the board below:
Sync Polarity	TRUE	TRUE	Host Name: MI-HORIZON3D
3D Position	LEFT	LEFT	
Automation	MANUAL	MANUAL	IP Address: 192.168.10.95
Sync Source	GPIO	GPIO	Gateway: [192.168.10.1
Delay 2D (SYNC PULSE)	5 Seconds	5	Subnet Mask: 255.255.0 Primary DNS: 0.0.0.0
Setup	Default	Save & Reset	Secondary DNS:
Reference sync	Ne	twork Configuration	Default Save Config
Copyright (c) 2013	MasterImage 3D. All Rig	hts Reserved.	Copyright (c) 2013 MasterImage 3D. All Rights Reserved.

Click [Network Configuration] to access the settings window.

Enter the IP Address, Gateway, Subnet Mask, Primary DNS and Secondary DNS of your network accordingly.

Click the [Save Config] button to accept any changes. Note the system will reboot in order to recognize these changes.

Click your browser back button twice to return to the main screen.



The default IP Address is 192.168.10.95 The maximum Ethernet speed is 1Mbps



9.11. Sync Source via the Monitor Application

Check the current setting for the Sync Source. The default is [GPIO].

		Log / New passv	word	master image		Log / New password
	MI-HOR	RIZON3D Web Ser	ver		МІ-НО	RIZON3D Web Server
Status	READY			Status	READY	
Actuator position	2D			Actuator position	2D	
Sync Frequency	72.00Hz			Sync Frequency	72.00Hz	
LCPM Frequency	0			LCPM Frequency	0	
Version	v1.0.8			Version	v1.0.8	
Build Date	Feb 17 2014			Build Date	Feb 17 2014	
RUN	2D	3D		RUN	2D	3D
Sync Polarity	TRUE	TRUE	•	Sync Polarity	TRUE	TRUE
3D Position	LEFT	LEFT	•	3D Position	LEFT	LEFT
Automation	MANUAL	MANUAL		Automation	MANUAL	MANUAL
Sync Source	GPIO	GPIO		Sync Source	GPIO	
Delay 2D (SYNC PULSE)	5 Seconds	5		Delay 2D (SYNC PULSE)	5 Seconds	
Setup	Default	Save & Reset		Setup	Default	Save & Reset
Reference sync	Net	work Configuration	·	Reference sync	Ne	twork Configuration
Copyright (c) 2013	MasterImage 3D. All Righ	its Reserved.		Copyright (c) 2013 I	MasterImage 3D. All Rig	hts Reserved.

Choose the option for [TTL] if the system is being used in a non-cinema application. Click [Save & Reset] to accept any changes.



9.12. Log File via the Monitor Application

The system contains a log function that stores the last 200 records of activity including any errors that occurred.

In order to access the log file click [Log] at the top of the Monitor Application.

master Image		Log New password	ABBOLUTELY BD	Log / New password
	MI-H	ORIZON3D Web Server		MI-HORIZON3D Web Server
Status	READY		Time 2013/12/24 10:22:11 2013/12/24 10:21:57	Log data AUTOMATION : SYNC PULSE
Actuator position	2D		2013/12/24 10:21:57 2013/12/24 10:21:56 2013/12/24 10:21:56	STOP 20
Sync Frequency	72.00Hz		2013/12/24 10:21:54 2013/12/24 10:21:54	SYNC SOURCE : GPIO FAN SPEED : HIGH
LCPM Frequency	0		2013/12/24 10:21:54 2013/12/24 10:21:54	AUTOMATION : MANUAL 3D POSITION : LEFT
Version	v1.0.8		2013/12/24 10:21:54 2013/12/24 10:21:41	POLARITY : TRUE REFERENCE(3) : 60 Hz OFF
RUN	2D	3D	2013/12/24 10:21:00 2013/12/24 10:20:56 2013/12/24 10:20:56 2013/12/24 10:20:56 2013/12/24 10:20:56	FREQ : 0.0 Hz ERR : FAN ERROR RUNNING ACTUATOR : 3D
Sync Polarity	TRUE	TRUE	2013/12/24 10:20:33 2013/12/24 10:20:55 2013/12/24 10:20:55	FAN SPEED : MID AUTOMATION : GPIO(37-9)
3D Position	LEFT	LEFT	2013/12/24 10:20:55 2013/12/24 10:20:55	3D POSITION : RIGHT POLARITY : INVERT
Automation	MANUAL	MANUAL	2013/12/24 10:20:46 2013/12/24 10:20:34 2013/12/24 10:20:34	2D 2D MOVING STOP
Sync Source	GPIO	GPIO	2013/12/24 10:20:30 2013/12/24 10:20:30	ERR : FAN ERROR RUNNING
Delay 2D (SYNC PULSE)	5 Seconds	5	2013/12/24 10:20:30 2013/12/24 10:20:19	3D 3D MOVING
Reference sync	N	letwork Configuration	2013/12/24 10:20:05 2013/12/24 10:20:02 2013/12/24 10:20:00	FREQ : 73.28 Hz # POWER ON : v1.0.8
Copyright (c) 2013	MasterImage 3D. All R	ights Reserved.	Copyright (c) 2	013 MasterImage 3D. All Rights Reserved.

The Log File will be displayed accordingly. For an explanation of the respective log entries please refer to the table on the following page.



	LOG	Description			
	# POWER ON : v1.0.0	Power On : Firmware Version Number			
	RUNNING	RUNNING			
	STOP	STOP			
	2D	Current Position : 2D			
	2D MOVING	Actuator Moving to 2D Position			
	3D	Current Position : 3D			
Status	3D MOVING	Actuator Moving to 3D Position			
	STOP MOVING	Actuator Stop			
	FREQ : 72.0Hz	Sync Change			
FREQ : 72.0HzSSYNC PULSE : 3DS	SYNC PULSE Input [2D/3D]				
	GPIO 15-9 : 3D	GPIO 15-9 Input [2D/3D]			
	GPIO 37-9 : 3D	GPIO 37-9 Input [2D/3D/RUN]			
	AUTO COMMAND : RUN	AUTOMATION COMMAND [2D/3D/RUN/STOP]			
	3D POSITION : LEFT	ACTUATOR 3D Position Setting			
	SYNC SOURCE : GPIO	Sync Source Setting			
	AUTOMATION : GPIO(37-9)	Automation Source Setting			
	REFERENCE(1): 72Hz	Reference Sync Frequency Setting			
	REFERENCE(1): 72Hz ON	Reference Sync Frequency Enabled			
	REFERENCE(1): 72Hz OFF	Reference Sync Frequency Disabled			
	POLARITY : TRUE	Sync Polarity Setting			
	PASSWORD : CHANGED	Password Changed			
Setting	IP : 192.168.10.95	Ethernet IP Setting			
	GW : 192.168.10.1	Ethernet Gateway Setting			
	MASK : 255.255.255.0	Ethernet Subnet Mask Setting			
	FACTORY RESET	Factory Reset			
	DELAY 2D : 5	Delay 2D Time Setting			
	HOST NAME : MI-HORIZON3D	SYSTEM NAME Setting			
	MAC : 00-00-00-00-00	MAC-ADDRESS Setting			
	POLARITY(SW) : TRUE	POLARITY Mode Switch Setting			
	3D POSITION(SW) : LEFT	3D POSITION Mode Switch Setting			
	ERR : ACT NOT DETECT	No Connection with the Actuator			
Error	ERR : ACT NOT LIMIT	No Movement of the Actuator Normally			
	ERR : ACT FAULT	Malfunction Status of the Actuator			



9.13. Factory Default via the Monitor Application

Should it be necessary for any reason to reset the system to Factory Default this can be achieved by clicking the [Default] button. This can be completed for operational settings or network configuration.

master mage		Log / New p	assword	mas		Log / New passw
	МІ-НО	RIZON3D Web	Server			MI-HORIZON3D Web Serv
Status	READY			Ne	etwork C	Configuration
Actuator position	2D					..
Sync Frequency	72.00Hz			This p	age allows the config	uration of the device network settings.
LCPM Frequency	0			CAUT. conne	ION: Incorrect settin ctivity. Recovery opt	gs may cause the board to lose network ions will be provided on the next page.
Version	v1.0.8			Enter	the new settings for t	the board below:
Build Date	Feb 17 2014				and non occarigo for	
DUN	00	0.0			MAC Address:	74:8F:1B:00:00:95
RUN	20				Host Name:	MI-HORIZON3D
Sync Polarity	TRUE	TRUE	•			Enable DHCP
3D Position	LEFT	LEFT	•		IP Address:	192.168.10.95
Automation	MANUAL	MANUAL	•		Gateway:	192.168.10.1
Sync Source	GPIO	GPIO	•		Subnet Mask:	255.255.255.0
Delay 2D (SYNC PULSE)	5 Seconds	5			Primary DNS:	0.0.0
Setup	Default	Save & Re	set		Secondary DNS:	Default Save Config
eference sync	Ne	twork Configura	ation			
Copyright (c) 2013	MasterImage 3D. All Rig	hts Reserved.			Copyright (c) 2013	MasterImage 3D. All Rights Reserved.



10. MI-HORIZON3D Troubleshooting.

10.1. Error Indication via LED Display

Check the Control Box LED display for any error indication as per the below table.



Error code	Description
E01	No connection with the Actuator
E02	No movement of the Actuator normally
E03	Malfunction status of the Actuator



11. Appendix A – Firmware Upgrade for MI-HORIZON3D

11.1. Prerequisites for Upgrading Firmware

1. Access the MasterImage ftp site using these credentials:

ftp://masterimage3d.us

Login: mi3dguest1

Password: MI3DuploadASIA

2. From the MI-HORIZON3D folder, download and install the MI-HORIZON3D firmware upgrading utility.



Installed shortcut: MITftp.exe

3. Download and save the latest firmware file having a "*.hex" file extension.

Example: MI-HORIZON3D_v1.1.1_20121119.hex

4. Prepare a CAT5-E cable for connection to the system.

11.2. Firmware Upgrade Procedure

- 1. Connect the MI-HORIZON3D control box to your PC with the Ethernet cable.
- 2. Execute "MITftp" utility by double-clicking the utility's icon on your PC.







3. Configure the utility to match your individual site network requirements.

۵	MI-HORIZ	ON3D / MI-WAVE3D	Firmware Up	dater 🛛 🗶
Г	Information -			
	IP Address	192.168.10.95	Port :	69
	HEX File :			
	File Size :		0 bytes	<u>O</u> pen
-	MI-HORIZO Version : 1.0	N3D / MI-WAVE3D Fin).2	mware Updater	
Γ				
		l	_pgrade	E <u>x</u> it

Enter the device IP address and Port Number.

Default: IP: 192.168.10.95 Port: 69



4. Click the [Open] button to select the firmware (.hex) file saved to your PC.

💋 MI-HORIZON3D / MI-WA	VE3D Firmware Updater 💦 🗙
- Information	
IP Address : 192.168.10.95	Port : 69
HEX File :	
File Size :	0 byte <mark>r0pen</mark>
- MI-HORIZON3D / MI-WAVE: · Version : 1.0.2	3D Firmware Updater
	Upgrade E <u>x</u> it

5. Select the file to be used and click [Open].



6. Click the [Upgrade] button to start the upgrade of the selected file to the system.

Ø MI-HORIZO	N3D / MI-WAVE3D) Firmwa	are Up	dater	×
- Information-					
IP Address :	192.168.10.95		Port :	69	
HEX File :	C:₩hex₩MI-HORIZ	ON3D.h	ex		
File Size :	31	1228 byt	es 🦳	<u>O</u> pen]
	Firmware Updater 2 e information ##### I-HORIZON3D.hex 228 bytes				
		<u>U</u> pgrade		E <u>x</u> it	



7. You will see the "Start Firmware Upgrade" message in the utility after pressing the [Upgrade] button.

۵	MI-HORIZ	ON3D / MI-WAVE3D Firmware Updater	×
Г	Information-		
	IP Address	: 192.168.10.95 Port : 69	
	HEX File :	C:₩hex₩MI-HORIZON3D.hex	
	File Size :	311228 bytes Open	
	Version : 1.0 H#### Hex F File Name : N File Size : 31 Start Firmwar	3.2 File information ##### MI-HORIZON3D.hex 11228 bytes are Upgrade	•
		<u>U</u> pgrade E <u>x</u> it	

8. You will see the "Success Firmware Upgrade" message in the utility after the progress bar reaches the end.

Click the [Exit] button to close the utility after successful upgrade.

MI-HURIZU	DN3D / MI-WAV	E3D Firn	nware Uj	pdater	×
Information -					
IP Address :	192.168.10.95		Port :	69	1
HEX File :	C:₩hex₩MI-H0	RIZON3	D.hex		
File Size :		311228	bytes	<u>O</u> pen	
	le information ###				-
- File Name : N - File Size : 31 	11-HORIZON3D.h 1228 bytes 	ex 			
- File Name : M - File Size : 31 - Fackets: 605 - Success Firm	II-HORIZON3D.h 1228 bytes , Bytes: 311226 ware Upgrade				



Note: Should the upgrade procedure fail for any reason, disconnect the power from the system for 10 seconds, reconnect and attempt the procedure again.



12. Appendix B – MI-HORIZON3D Automation

Table B-1. GPIO Automation

DSUB9(GPI	C)	Comm.	DSUB37		
Pin name	Pin number	tion	Pin number	Description	Comments
NC	1			No connection	
PRJ_COM_nRUN	2	÷	12(+)	Liquid Crystal Panel RUN	Comparator
	5		31(-)	commanu	24V max,
PRJ_SYNC	3	÷	9(+)	Vertical sync pulse	(LM2901H)
	5		28(-)		
PRJ_COM_nUP	4	÷	2(+)	Optical Head Assembly 3D	
	5		21(-)	Low Pulse ≥ 200ms	
GND	5		20,21,22, 28,29,30, 31,	Ground	
PRJ_COM_nDOWN	6	÷	3(+)	Optical Head Assembly 2D	(LM2901H)
	5		22(-)	Low Pulse ≥ 200ms	
PRJ_STS_nLOCK	7	\rightarrow	1(+)	Liquid Crystal Panel driving	Open
	5		20(-)	High pulse ≥ 200ms	output
PRJ_STS_nUP	8	\rightarrow	10(+)	Optical Head Assembly	24V, 20mA (SN7407)
	5		29(-)	High pulse ≥ 200ms	
PRJ_STS_nDOWN	9	\rightarrow	11	Optical Head Assembly	
	5		30	High pulse ≥ 200ms	
Shield ground	frame		frame	Chassis Ground Connection	



DSUB9(G	BPIO)		DSUB15		
Pin name	Pin number	Comm. Direction	Pin number	Description	Comments
NC	1				
NC	2				
SYNC	3	←	7(+)	Vertical sync pulse	Comparator 24V max , 12 threshold (LM2901H)
NC	4				
GND	5		13,14	Ground	
NC	6				
NC	7				
NC	8				
NC	9				
Shield ground	frame		frame	Chassis Ground Connection	

Table B-2. GPIO (15-9 pin) Automation



12.1. Ethernet Automation

This section covers the requirements for Ethernet automation in detail and explains the process for the writing of macros for commonly found digital cinema servers in the market.



Attempt these steps only if you are familiar with server configuration settings. If you are unsure of the processes involved, please contact the respective manufacturer of your equipment for further information.

If you require detailed information on other forms of automation control please contact MasterImage at *support@masterimage3d.com* for details.

12.1.1. Doremi Server

1. Within the server menu, open Device Manager (Menu > DTS Digital Cinema > Device Manager)



- 2. Click the **Add** button and the list of devices will display (shown right).
- 3. Select the **Raw** option to create MasterImage as a known device in the server's listing.
- 4. Complete the fields as shown below. Ensure the settings entered match those of the MI-HORIZON3D for IP Address and Port Number. Check the **Enabled** box and save the entry.

Flojec	tor	
CSS		
Raw		
eCNA		
JNior		



Device Manager - Doremi (Cinema				×
🕂 Add 💻 Delete				jave 🔀 Qui	it
JNior 310	Device T	ype: Raw		🗷 Enabl	lec
Master Image	Setup-	Master Image			٦
MB2K-ST	Vendor	Master Image	Product Name	MI2500	=
Pegase-Audio	Device IP	192.168.0 .240			5
	Protocol	tcp 💌	Port	23	
Monu				02, 20, 10	DM

The MI-HORIZON3D has now been successfully added into the server configuration.

It is now possible to create the macro files to enable the server to control the MI-HORIZON3D. The files required are: **MasterImage Start**, **MasterImage Stop**, **MasterImage 2D**, **MasterImage 3D** and **MasterImage Up/Down Stop**. These are created in the Macro Editor option of the server menu. (Menu > DTS Digital Cinema > Macro Editor)

<u>R</u> eset Save			X 0
÷ - *	+	× 🔍	emov
Macro	Start Time	Action	
START_FLAT			
FEATURE			
END			
CREDIT			
3D_FLAT_1998			
3D_SCOPE_2048			
3D_FLAT_1920			
3D_SCOPE_1920			
48FPS MODE			
START_SCOPE			
MEG ELAT DO			
INPED SLUPEPS	and the second se		

 Within the Automation Cue tab click the + button to start a new macro. Replace the default Test_Macro text with the label for one of the MI macros (for example, MI Start).



Name of the Macro:	Test_Macro		
Comments:			
		<u>0</u> k	<u>C</u> ancel

2. After the item has been created click **OK** return to the main Macro Editor screen. Repeat this process for the other four required macros, **MasterImage Stop**, **MasterImage 2D**, **MasterImage 3D** and **MasterImage Up/Down Stop**.

🎯 Macro Editor - Doremi Cinema	
Reset Save	🔀 Quit
+ - *	Eemove
Macro	Start Time Action
Master Image 2D	
Master Image 3D	
Master Image Run	
Master Image Stop	
Master image op/Down stop	
	- Insert a new Action
Automation Cue Trigger Cue	,
Menu 🔄 🔤 🥶 Macro Edito	02:24:09 PM

3. To insert an action for each newly created macro, select the macro in question from the list within the Macro window and click the **Insert a New Action** button which will become available.

🎨 Macro Editor - Doremi Cinema	
Reset Save	Quit
Add a new Action	× _
Projector	General Purpose Output
lnput / Output	Send Message
N Playback	
Macro Control	
⊾ Library	
System	
	Send Message Send a message to a connected device.
	Add <u>Cancel</u>
Automation Cue Trigger Cue	
Menu 🔄 🔤 🤯 Macro Editor	🧐 Add a new 02:26:10 PM



4. Highlight the **Input/Output** option and **Send Message**, and then click the **Add** button. The following configuration window will appear:

🎯 Macro Editor - Doremi Cinema		
Beset		🖌 Ouit
Master		Bemove
Device name]	
Macro Master Image	•	
Master Image 3D Message type		
Master Image Run		
Master Image Stop Text	▼	
New Macro		
Start)n		
		Action
	<u>O</u> k <u>C</u> ancel	
		1
Menu 🔄 🚐 🦁 Macro Editor 👰	Send a Mes	02:27:29 PM

- 5. In this window, choose the device MasterImage from the Device name dropdown list and type in the Message label of MasterImage Start. Ensure the Message type is Text and type Start\n in the Message box. After all fields have been completed click the OK button.
- 6. Repeat this step for the remaining four macros entering the corresponding message text:

MasterImage Stop	Stop\n
MasterImage 2D	PFD DOWN\n (or 2D\n)
MasterImage 3D	PFD UP\n (or <mark>3D\n</mark>)
MasterImage Up/Down Stop	PFD Stop\n (or LCM Stop\n)



At the end of each command, add the text "\n" to complete the command

- 7. Once all message text has been added, click the **Save** button from the main Macro Editor screen.
- 8. Now when you return to the CineLister screen and click the **Refresh** button, the macros will all display in the **Automation Cues** section (shown below) and can be added to future playlists as required.



😳 CineLister - Doremi Cinema (User Level: Projec	ition)
New Den Save	<u>C</u> leanup
Add to Show Playlist	▲ ► 🔍 🕹
🔍 all elements	Start Time Elements
Doremi_Logo_Flat_2D Doremi_Logo_Scope_2D New_Doremi_Logo_2K_3D New_Doremi_Logo_Flat_3D New_Doremi_Logo_Scope_3D automation cues Master Image 2D Master Image 3D Master Image Stop Master Image Up/Down stop	
© feature 27_DRESSES_TRL_C_EN_XXE_20071015 Alvin_Trl_D_F_20071102_DDE Doremi Animated Logo	Properties: ShowPlaylist, 2D
Editor Playback Schedule Control	
Menu _ 🔤 😳 CineLister	02:30:38 PM

In future versions of Doremi software updates, the MasterImage macros will be included in a file named MasterImage_cueslib. This will remove the requirement for the information to be entered manually as described in the above steps.

🎨 Macro Editor - Doremi Cinema		
Reset Save		Quit
Add a new Action		- U × E
Projector	cp750	
Input / Output	dfc100	151
[▶] Playback	Dolby DFC100	
Macro Control	ecna	855
Library	jnior expansion module	
System	jnior	
	MasterImage_cueslib	
	Certainty Manage Certainty products.	
		<u>A</u> dd <u>C</u> ancel
Automation Cue Trigger Cue		
Menu 🔄 🥃 😇 Macro Editor	🥶 Add a new	02:29:14 PM

The MasterImage_cueslib file will be found in the **Library** section of the Macro Editor and the macros will be seen within that file.



🎯 Macro Editor - Doremi Cinema		×
Reset Save	×	<u>Q</u> uit
Action Master Image 2D Master Image 3D Master Image Run Master Ma		ove
<u>O</u> k insert a new	<u>C</u> ancel	H
Automation Cue Trigger Cue		
Menu 🔄 🚎 👰 Macro Editor 👰 Library	02:29	9:52 PM



12.1.2. Qube Server

To create automation macros for the MI-HORIZON3D in the Qube server it is necessary to edit two XML files within the server's configuration.

The files in question are located in the path C:/Program Files/Qube Cinema/XP and are named *automationdevices.xml* and *automationcues.xml*

Within the same path it is necessary to load a new file named MasterImage.xml

1. First create a link between the server and the MI-HORIZON3D within the *automationdevices.xml* file. Below you will see the structure of this file:

```
<?xml version="1.0" encoding="utf-8"?>
```

<Devices xmIns="http://schemas.qubecinema.com/Automation/Devices/2008-01-26">

```
<Device name="Device Name" class="Device Class" enable="true">
```

<Configuration>

<Key name="File" value="file name of the device"/>

<Key name="Address" value="address value"/>

<Key name="Port" value="port value"/>

</Configuration>

</Device>

</Devices>

2. Complete the red fields with the details of the MasterImage MI-CLARITY3D where:

"Device Name"	is	"MasterImage"
"Device Class"	is	"Qube.Automation.streamdevice.TCP"
"file name of the device"	is	"MasterImage.xml"
"addess value"	is	MI-HORIZON3D Assigned IP Address
"port value"	is	"23"

It is recommended that **Notepad++** or a similar program is used for xml file editing.



The *automationdevices.xml* file is a shared file for all devices that the server can control via automation cues thus it will contain information for devices such as DLP Projector, Sound System and Lighting Control etc. For this reason the file cannot be replaced and must be modified with the lines added as above for the MI-HORIZON3D.

Next it is necessary to create and load onto the server the *MasterImage.xml* file. This file defines and names the commands and text that will be sent to the MI-HORIZON3D.

3. Edit this file so that it contains the information below:



<?xml version="1.0" encoding="utf-8"?>

StreamDevice name="MasterImage"

xmlns="http://schemas.qubecinema.com/Automation/StreamDevice/2008-01-26">

<Method name="Start">

<Instructions>

<Send>Start
</Send>

</Instructions>

</Method>

<Method name="Stop">

<Instructions>

<Send>Stop
</Send>

</Instructions>

</Method>

<Method name="3Dposition">

<Instructions>

<Send>PFD UP
</Send>

</Instructions>

</Method>

<Method name="2Dposition">

<Instructions>

<Send>PFD Down
</Send>

</Instructions>

</Method>

<Method name="PFDStop">

<Instructions>

<Send>PFD Stop
</Send>

</lnstructions>

</Method>

</StreamDevice>

The symbols

 are necessary at the end of each command to close the command in the xml structure.

Finally the *automationcues.xml* file can be edited so that the MI-HORIZON3D device is associated with the command names that have been created. This allows the cues to be seen in the Qube graphical interface.



Again, this file is a shared file with other devices in the system so must be edited and not replaced.

4. Edit this file so that it contains the information below:



<Cue name="Start 3D">

<Actions>

<InvokeMethod name="Start" device="MasterImage"/>

</Actions>

</Cue>

<Cue name="Stop 3D">

<Actions>

<InvokeMethod name="Stop" device="MasterImage"/>

</Actions>

</Cue>

<Cue name="3D Position">

<Actions>

<InvokeMethod name="3Dposition" device="MasterImage"/>

</Actions>

</Cue>

<Cue name="2D Position">

<Actions>

```
<InvokeMethod name="2Dposition" device="MasterImage"/>
```

</Actions>

</Cue>

```
<Cue name="Up/Down Stop">
```

<Actions>

<InvokeMethod name="PFDStop" device="MasterImage"/>

</Actions>

</Cue>

Once this file has been edited and saved the graphical interface of the Qube server will display the new cues that can be selected for future playlist creation.





12.1.3. GDC Server

The steps described below are specific to the GDC SX-2001 server. If information is required for different models, please contact GDC directly.

1. In the SMS Main Menu click the **Control Panel** button and log on as **Maintenance Access**.

1:04 pm Aug 05 2011	Screen 1 Show: test	i	Â
	Ш		
14		hh mm s	ss ff frame#
[13:03:32] GDC SMS started [13:03:39] Show is loaded [test] [13:03:39] Unfinished playback re	asumed		
Stopped[1/8] [Show: test] Clip	x DATE-NIGHT_TLR-B_F_EN-XX_	US-GB_51_2K_TCF_200	90930_FKI
G•D•C Control	Panel Scheduler	Configuration	Shutdown
	Enter the password:		
	7 8	9	
	4 5	6	
	1 2	3	
	0	Del	
	Enter		
G·D·C			

2. Once you have logged on, click the **Automation** button found on the **General** tab.



Use startup/shutdown pass	word	Reset TimeC	ode at end of clip	
Playlist menu password protected		Enable playba	ack resumption	
Skip non-playable composit	tion playlist	Skip checking	assets during ing	jest
Settings				
Subtitle Overlay	ASI Packet	204	Date Format	
Subtitle Delay 0 frames	Font Size	12	Language	English _
Password				
Change User Password	Change Te	chnician Password	i Change Ma	intenance Password
Setup				
SNMP Setup	A	utomation		
eneral CineCanvas Assista	ance Audio	Caption	Streaming	

The MI-HORIZON3D must be added as a device within the GDC server configuration.

3. Select the **Devices** tab and click the **Add** button.

Device Name	System	⊻	Add	Edit	Delete
Device Type			Search	devices on n	network
-System Settings					
Status		$\overline{\Delta}$			
Actions Inputs D	evices Options				
G·D·C			Save		Close

The following screen will display:



Name		
Type NETWORKSOCKET		

- 4. Name the new device **MasterImage**, and ensure the **Type** selection is set to **NETWORKSOCKET**, then click **OK**.
- 5. In the next screen, enter the configuration settings for the MI-HORIZON3D IP Address and Port Number.
- 6. In the **Transport** option select **TCP** and in the **Linefeed Type** select **CR** and ensure the **Status** is set to **Enabled**.
- 7. Once all entries have been made click the Save button.

Device Type	NETWORKSOCKET	Search devices on network
Network and Contro	l Cues Settings	
	102 168 1 221	Enabled
	132.100.1.2.31	Transport
Port	23	TCP 🔾 UD
····		Linefeed Type
Local Port		CR 🛛
Control Cues	Edit Cont	rol Cues
ctions Inputs D	Devices Options	

Last, it is necessary to program the control macros in the server.

8. Click the Edit Control Cues button and the following screen will display.





9. Click the Add button to create a new event. In this case, name the event START.

Enter new name:		
START		
1 2 3	4 5 6 7	8 9 0
q w e	r t y u	i o p
a s d	f g h	j k l
z x c	v b n	m / .
	Space	<u> </u>
BackSpace	Caps En	ter Cancel
G·D·C		

10. Click the **Enter** button and enter the command value for the event. Again in this case, **START**.



Enter value:				
1 2	3 4	5 6	7 8	9 0
y w	e r	t y	ui	o p
a	s d	f g	h j	k I
z	x c	v b	n m	
@	•	Spac	ce	%
	BackSpace	Caps	Enter	Cancel
G·D·C				

11. Click the **Enter** button to save this change, then go back and make entries for the remaining four macros that are required.

Event Name STOP	Enter Value STOP
Event Name 2D POSITION	Enter Value PFD DOWN
Event Name 3D POSITION	Enter Value PFD UP
Event Name UP/DOWN STOP	Enter Value PFD STOP

- 12. Once all macros have been created, return to the **Actions** tab of the **Automation** screen to create the events that are needed to communicate. This is done by clicking the **Add** button.
- 13. For each event, choose the device that was defined in the first step, **MasterImage**, and then select the required event action from the dropdown list, for example: **Start**.
- 14. Follow the same steps to create the rest of the event actions for **Stop**, **3D Position**, **2D Position** and **Up/Down Stop**.



Ev	rent Label	TEST MI		Add	Delete	Edit
	Device	Action				
1	м	Event:	START			$\overline{\Delta}$
			PFD DOWN PFD STOP PFD UP START STOP			
	Add	Delete			Schedule	Execute
Actio	ons Inputs	Devices Option	S			
G•I	D•C			Save		Close

15. Once all event actions have been created click the **Save** button followed by **Yes**.

1 MI Event: START Image: Save before execute Image: Save changes and execute label? Image: Yes Image: Save changes and execute label?	<u>∑</u>
Save before execute	
Add Delete	Schedule Execute



13. Appendix C – Installation Record

The form below is an example of the installation record form to be filled out once the MI-HORIZON3D has been set up and configured.

For a copy of the form to be filled out, 'contact your equipment provider or email a request to support@masterimage3d.com.

Once the form is completed, send it to support@masterimage3d.com.

mastarlinage

MasterImage 3D System Installation Record

. Thesire information		Date New/Rev.	8/29/2012		
Thesize Name		SuperVisual Multiplex	۲	Auditorium No.	2
Address			152 Cinema Street		
City	Cinems	Town	State/Province	CA	
Zipcode	94832		Country	USA	
Theatre Manager	Stove Clarity		Thestre Phone	818-549-7	853
Technical Manager	Deve C	Christia	Technical Phone	818-549-8	526
Screen Size	45' x 24'	Throw distance	60'	No of Seals	160

2. System information

Model No.	MI-WAVE3D	Vallage	120	200/220
Serial No.	1207-0549	Software Ver.	1.2.0 R23	
Install Date	29-Aug	Install Rep. Stuart Leger		
Distributor/Intergrator		Digitach Services		
Install Notas				

2-2. Projector					
Manufacturar	Christie	Model No.	CP-2220		
Nolas		Doremi IMB Installed			

2-3. Server/IMB

Manufacturar	Dorami	Model No.	DCP-2K4	
Noles				

2-4. Silver Screen

Manufacturer	Severtson	Model No.	
Nolas			



14. Appendix D – Dimensional Drawings





Optical Head Assembly





End of Manual

For additional information, go to www.masterimage3d.com.



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