# **D-Cine Communicator**

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User Guide Engineering Edition



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# **1. INTRODUCTION**

# 1.1 General Introduction

#### **D-Cine Premiere configuration tool**

A uniquely powerful and easy to use configuration program for the Barco D-Cine Premiere projector, D-Cine Communicator provides all of the tools necessary for the total projector set-up and control. A comprehensive array of easy to access menu pages provide control of the D-Cine Premiere's digital input, output and screen display via a combination of simple buttons and WYSIWYG displays.

#### **Quick and Easy configuration**

Via clearly indicated tab pages for control of Projector Connection, Configuration, Test, Color Calibration, File Management, and configuration with your existing Automation system.

#### **Total Control**

Of the Projector Input selection, alignment and switching; Screen Display output, including Lens type selection, Sizing, Masking and Barco's unique CLO (Constant Light Output) calibration

#### ... And Total Security

With extensive projector Status indication, Lamp run-time register, Factory or User Definable projector back-up settings, Security Key settings control ... plus a comprehensive Help File.

#### About this manual

This User Guide provides detailed information about the D-Cine Communicator features. This guide is designed to be a reference tool in your everyday work with the D-Cine Communicator.

The following icons are used in the manual :

1	Caution
4	Warning
i	Info, term definition. General info about the term.
	Note, gives extra information about the described subject.
	Tip, gives extra advice about the described subject.

Typography:

- Clickable menu items or buttons are indicated in bold, e.g. Open
- A menu window is indicated in italic, e.g. Measure CLO.
- Step related notes, tips, warnings or cautions are printed in italic.
- Procedure related notes, tips, warnings or cautions are printed in bold between 2 lines preceding by the corresponding icon.

# 2. SOFTWARE INSTALLATION AND START UP

# 2.1 Required Configuration

#### **PC** requirements

- Windows 2000, Windows XP and WinME
- 266 MHz, 64 MB Ram
- Minimum disk space : 50 MB
- Minimum Screen resolution: 1024 x 768

## 2.2 Installing the Software

#### How to install

- 1. Insert the CD-ROM in the CD-ROM drive.
- Is the AutoPlay active on your PC. If yes, go to step 6 If no, from within the Windows environment go to the Start Menu. Choose Run... from the menu and proceed with the next steps.
- 3. Open windows explorer.
- 4. Select the CD-ROM drive.
- 5. Double click 'setup.exe' file.
- 6. Press OK to run the installation.

Follow the instruction of the Installation shield.

7. The setup program will ask you for to specify an install directory. You can accept the default location or browse to a specific directory. Click **NEXT**.

Theatre Edition	C:\Program Files\BARCO\D-CineCommunicatorTheatre
Engineering Edition	C:\Program Files\BARCO\D-CineCommunicatorEngineering
Post Production Edition	C:\Program Files\BARCO\D-CineCommunicatorPostProd

8. Read the Licence agreement and click Yes to continue the installation. (image 2-1)

The program will be installed on the PC system and the user will be prompted to ask a icon will be



placed on the desktop



Image 2-1 Licence agreement

## 2.3 Upgrading the Software

#### How to update

- 1. Download or copy the update zip file locally.
- 2. Unzip the update file in the communicator install directory..
- 3. Run Setup.exe.

The windows install shield opens.

4. Click on Next to continue.

The install shield check the PC for an old version of the D-Cine Communicator software.

A selection window will be displayed. (image 2-2)

- 5. Select the radio button in front of Upgrade Software to version xxxx.
- 6. Click no Next.

The actual version on the PC will be replaced by the new one.

Maintenance			
			æ
There is a D-Cine Communicator Post F	Production 1.2.1 installe	d on this PC.	
C Upgrade software to version 1.3.0			
C Delete the current installed software	•		
atShield			
	( Park	Nexts	Cancel

Image 2-2 Install selection window



If you were previously issued licensing key, this key will be valid for this version.



If upgrading the D-Cine Communicator software from versions lower than 1.2.0 to 1.2.0 or higher, the default folder where the software is installed has been changed. Any existing license files (communicator.lc) need to be copied manually to the new communicator folder. The D-Cine Communicator, Theatre version is free of license.



See D-Cine Communicator release notes to find out the differences with previous versions.

# 2.4 Getting access

#### To start up

1. Click on the D-Cine Communicator icon.

The program starts up. (image 2-3)

2. Enter your password.

The default password is premiere.

3. Click **OK** to enter the software.

Only for Post Production and Engineering version, when it is the first start up, the D-Cine Communicator will run in a non registered mode for 30 days. The user will be warned by several messages. (image 2-4)

The software starts up with the Projector Connection window.

D					
Please	e Enter Your	Password OK	Cancel		
	Engi Ed	neering ition	Visibly	<b>O</b> rours	
Image 2-3 Logon scree	'n				
Registrati Yau Sen you	on info his is a still have 2 d your register BARCO Digit	a non re 3 days to registr dat file that is gene al Cinema Represer Oi	egistere er. rated in your D-Cine dative.	<b>d vers</b>	ior Folder t



It is strongly recommended to change your password after the first logon.

×

# 2.5 Registration procedure

#### Registration

At the first start up of the D-Cine Communicator software a register.dat file is created in the directory where the software is installed.

#### How to register

- 1. Send the register.dat file to your local supplier.
- Or,

Open the register.dat file in your favorite editor and write down the serial number which has to be sent to your local supplier.

2. Your local supplier will sent a communicator.lc file back.

- 3. Copy this communicator.lc file into the directory where the software is installed.
- 4. Restart the D-Cine Communicator software. Your version is registered.

# 2.6 Removing the D-Cine Communicator software

#### How to remove

1. Run Setup.exe.

The windows install shield opens.

2. Click on Next to continue.

A selection window will be displayed (image 2-2).

- 3. Select the radio button in front of Delete the current installed software.
- 4. Click on Next.

The software will be removed from the PC.

### 2.7 Start up of the D-Cine Communicator via a batch file

#### How to start up

1. Create a batch file to start up the D-Cine Communicator by entering the exe file in the batch file. drive letter:\installation path\D-Cine Communicator\_exe\_file -arguments

The communicator can be started with arguments

Argument	Description
-ac IPaddress	autoconnect to given IP address
-gt tabname	goto the given tab page
-np	connect without password

Example : to view immediately the status pages with the Post production version of the D-Cine Communicator (for the other versions, fill out the appropriate exe file.):

Installation path\DCineCommunicatorPP.exe -gt Status

# **3. PROJECTOR CONNECTION**

# 3.1 Introduction

#### Overview

The D-Cine Communicator can be connected to the D-Cine Premiere in one of following ways:

- Via an Ethernet connection
- Via a serial connection

#### Note when connecting to the D-Cine Premiere

When metadata control is enabled on this projector, the following message will be displayed while connecting.

1)	Metadata the serve Executing PCF files o Do you w Control, a	a Control is enabled by er, g Macros and activating will not work as expected, ant to turn off Metadata automatically ?
	Yes	No, cancel this action

During this session, executing macros and activating PCF files will not work as expected. To switch off metadata control automatically, click **Yes**. If not, click **no, cancel this action**.

# 3.2 Ethernet Connection

#### Overview

- Hardware connection
- · Ethernet Connection via entering an IP address
- Ethernet connection via short cuts

#### 3.2.1 Hardware connection

#### Possibilities

Two Ethernet connection are possible at the same time:

- Primary
- Secondary

Use the primary connection as default to connect the D-Cine Communicator to the D-Cine Premiere.

If another device or another D-Cine Communicator is already connected to the D-Cine Premiere, use the secondary connection to connect.



Image 3-2 Physical indication of Ethernet connector on DP50



Image 3-3 Physical indication of Ethernet connector on DP30

VIDEO IN	00	0	0			CONTRO
		Γ.	1	ALL NO		io non
					Amile	10
		C				9 10
BARCE .				No. of Contraction		ALC: NOTICE STATE

Image 3-4

Physical indication of Ethernet connectors on DP100 and DP90

For DP100 and DP90, connect the Ethernet to port 1 or port2.



For DP30 and DP50, a crossed Ethernet cable is necessary.

For DP100 and DP90, a crossed or non crossed cable can be used. the projector switched automatically for the correct cable.

#### 3.2.2 Ethernet Connection via entering an IP address



This way of connecting to the D-Cine Premiere is not valid when *Obtaining an IP address automatically (DHCP)* is enabled.

#### **Possible Ethernet connections**

Two Ethernet connection are possible at the same time:

- Primary
- Secondary

Use the primary connection as default to connect the D-Cine Communicator to the D-Cine Premiere.

If another device or another D-Cine Communicator is already connected to the D-Cine Premiere, use the secondary connection to connect.

#### Connection

1. Click on the tab button Network Connection. (image 3-5)

The tab page opens.

- 2. Fill out the Ethernet address of the D-Cine Premiere. *Note:* An address contains 4 octets with a maximum value of 255.
- 3. Select a Port by clicking Primary (default selected when starting up) or Secondary. (image 3-6)
- 4. Click on Connect. (image 3-7)

When a connection is possible, a *Logon Successful* will be indicated in the connection status pane. (image 3-8)

All other tabs will become enabled and accessible.

S Network Connection		
3 Serial Connection		
🎾 Dialup Connection	X	
2	Modem COM Port	COM 1 💌
	Modem Telephone Number:	0
Image 3-5		

Selecting Ethernet

rojector Address:	192 - 168 - 100 - 2	
Port:	🔨 Primary C Secondary	
Available projectors		
	X	
	2 1	
	Carlos and a second sec	

Image 3-6

Primary port selected within an Ethernet connection

Connect 08:58:15 Disconnected.		Connection Status:	Disconnected
Disconnect	Connect Disconnect	08:58:15 Disconnected	

Image 3-7 Selecting Connect

	Connection Status: CONNECTED	
	10:15:19 Connecting	
Connect	10:15:19 Ethemet, host 150:158:194:171 poit: 43681 (AAA1h) 10:15:20 Logging in to Til Boards 10:15:23 Logging in to BARCO Boards 10:15:23 LUCCESEUI: CONVERTION to DP100 excisence	
Disconnect		

Image 3-8 Logon connection status

#### 3.2.3 Ethernet connection via short cuts

#### **Broadcast query**

The broadcast query for projectors scans the complete LAN network to detect available projectors on the network.

These projectors will be indicated in the *Available projectors on the Ethernet* pane as short cuts. The short cut will be referenced by the IP address and the host name of the projector.

Broadcast Query for projectors is based on UDP.

#### Connection

1. Double click on the short cut of the projector you want to make a connect with. (image 3-9) *Tip: The IP address and host name of the projector is displayed below the short cut.* 

When a connection is possible, a *Logon Successful* will be indicated in the connection status pane. (image 3-10)

All other tabs will become enabled and accessible.

The projector IP address will be filled out in the Host Address field.



Image 3-9 Available projectors on the Ethernet

	10.15.19 Connecting	
Connect	10.15.19 Ethemet , host 150.158.194.171 port: 43681 (AAA1h)	
	10:15:20 Logging in to 11 Boards 10:15:23 Logging in to BARCO Boards	
- Carettering and the	10:15:23 SUCCESSFUL CONNECTION to DP100 projector	
Disconnect		*

# 3.3 Serial Port Connection

#### Overview

- Serial Connection to RS232/422
- Serial Connection to Loop In / Out
- Modem Dial Up connection

#### 3.3.1 Serial Connection to RS232/422

#### **Physical connection**

Connect a serial cable from PC to projector



Image 3-11 Physical indication of RS232/422 connector on DP50

#### 3. Projector Connection



Image 3-12 Physical indication of RS232/422 connector on DP30



Image 3-13 Physical indication of RS232/422 connector on DP100 and DP90

#### **Necessary parts**

Straight serial cable from PC to projector.

#### Software connection

1. Click on the tab button Serial Connection. (image 3-14)

The tab page opens.

- 2. Set up the communication port by clicking on the drop down menu (1) and selecting the correct port. (image 3-15)
- 3. Click on the bits per second drop down menu (2) to setup the desired baud rate.
- 4. Click on Connect. (image 3-16)

When a connection is possible, a Logon Successful will be indicated in the connection status pane.

All other tabs will become enabled and accessible.

Projector Address:	150 . 158 . 194 . 171	
Port:		
Available projectors		
Available projectors		
Available projectors	2111 III	
Available projectors	P30-LAB-PHMT projector	
Available projectors	P30-LAB-PHMT projector	

Image 3-14 Selecting Serial Port

Connect	using	COM 1 🛫
lits per s	econd	115200 - (2)
	Carial Natural mode	Pariasta Addaras

Image 3-15 Selecting the communication port

	Connection Status:	Disconnected	
Connect	08:58:15 Disconnected		

Image 3-16 Selecting Connect

### 3.3.2 Serial Connection to Loop In / Out

#### **Physical connection**

Connect a serial cable from PC to projector



Image 3-17 Physical indication of the Serial Loop in connector on DP50



Image 3-18 Physical indication of the Serial Loop in connector on DP30

VIDEO IN	00	0	0		ONTRO
	F	r <b>' '</b> 7	RECEIPTER IN		
_		OM #	_ a(io	a10	
		_ • 🖪 🚍	4 (m) •	dimio dimio	
			-		
Innie			T	and the second se	-

Image 3-19

Physical indication of the Serial Loop in connector on DP100 and DP90

#### **Necessary parts**

Straight serial cable from PC to projector.

#### Software connection

1. Click on the tab button Serial Connection. (image 3-20)

The Serial Connection tab opens.

2. Set up the communication port (1) by clicking on the drop down menu and selecting the correct port. (image 3-21)

The bits per second (2) has no importants.

3. Check the box in front of Serial Network mode. (image 3-22)

The Bits per second box grays out. The communication speed is only 115200 bps.

The default projector address is set to 1.

- 4. To change the projector address, click on the up or down arrow until the desired address in shown in the box.
- 5. Click on Connect. (image 3-23)

When a connection is possible, a *Logon Successful* will be indicated in the connection status pane. All other tabs will become enabled and accessible.

rojector Address:	150 . 158 . 194 . 171	
ort:	Primary C Secondary	
Available projectors	11	
Available higheriors		
	215 HL	
BARCO-OP100 D	P30-LAB-PHMT projector	
BARCO-OP100	P30-LAB-PHMT projector	
RARICO-OP100	P30-LAB-PHMT projector	



Connect using	COM 1
lits per second	115200 - (2)
Serial Network mode	Projector Address

Image 3-21 Selecting the communication port

Connect using	COM 1 💌				
lits per second	115200 -				
Serial Network mode	Projector Address: 1 🛔				

	Connection Status:	Disconnected	
Connect	08:58:15 Disconnected		

Image 3-23 Selecting Connect

#### 3.3.3 Modem Dial Up connection

#### What is possible

To take full control of the projector via a telephone line from anywhere in the world.



#### PSTN

PSTN (public switched telephone network) is the world's collection of interconnected voiceoriented public telephone networks, both commercial and government-owned.



#### Null modem cable

An adapter cable or adapter piece to switch the receive and transmit line within a RS232 cable.

#### Principle hardware set up

Principle diagram :



Image 3-24 Principle diagram modem connection

The following hardware configuration should be set up:

At the Cinema theatre side (optional package) :

- Connect a US Robotics modem via a null modem cable to the *IN Serial Network* connector on the D-Cine projector.
- Connect the other side with the analog telephone line.

Modem on theatre side is configured for auto answering and for different users.

For more detailed installation instructions, consult the documentation delivered with the modem package.

At the technician side for a laptop computer with built-in modem :

• Connect the modem output of the laptop to the analog telephone line.

At the technician side for a computer with external modem (any type) :

- Connect the telephone output of the modem with the telephone line.
- Connect the other side of the modem via a serial cable with a com port on the PC.

#### How to set up the software connection

- 1. Click on tab button Dialup Connection. (image 3-25)
  - The dialup connection tab opens.
- 2. Select the communication port to which your modem is connected (1). (image 3-26)

If it is an external modem, you can physically see to which port it is physically connected.

If it is in internal modem, click *Start* on your desk top page and select *Control Panel*. Go to *Network* and *Dial-up connections*. The modem Com port is indicated in that window.

- 3. Fill out the telephone number (2) of the remote projector's modem.
- 4. Click on Connect. (image 3-27)

The Modem Terminal Window appears. (image 3-28)

This shows the AT commands send to the modem. ATDT number (1) means that the modem is currently dialing the specified number. CONNECT **speeds** ... (2) means the other modem is answering.

You will be prompted to enter the password of remote projector's modem (3). (image 3-29)

- 5. Fill out your password and click OK.
- 6. When the message 'Security Access granted' is displayed, click on Take Control. (image 3-30)

Full control of the projector is now possible via the telephone line.

ojectoi Audiess.	150 . 158 . 195 . 225	
ort:	🙃 Primary C Secondary	
Available projectors	L	
BARCO-DP100	projector	
BARCO-DP100	projector	

Image 3-25 Dialup connection selection

Dialup Connection		
5	Modem COM Port	СОМ 1 💌 (1)
l.o	Modem Telephone Number:	(2)

Image 3-26 Dialup connection

Connection Status	Projector Dial-up / Modem Term	mal <u>? ×</u>
Connect Disconnect	ATE 1 OK ATDT 0003256368695	
mage 3-27 Dial-up connection	I	
	Cancel	Take Control

Image 3-28 Modem Terminal Window

OK	-(1)		
CONNECT 33	6368695 600/ARQ/V34/LAPM/	/42BIS	
3Com USRobo Serial Number	tics Courier V.Everythin 24M68 40CM8MQ	ng Dial Security Session	
Password (Chi	C to cancel ? - (3)		

Image 3-29 Modem Terminal Window : password

IS
al Security Session
/

Image 3-30 Take Control via dial-up



The connection is only guaranteed for the following modem type at the theatre side : 3Com USRobotics Courier V.Everything.

## 3.4 Disconnection from the D-Cine Premiere

#### Software disconnection

1. Click on **Disconnect**. (image 3-31)

A logout will happen. (image 3-32)



Image 3-31 Disconnect from D-Cine Premiere



Disconnect status

## 3.5 Changing the password

#### To change

1. Click on Change Passwords.

The change password menu will be displayed. (image 3-33)

- 2. Click in the *Old password* input field and enter your current password. *Note:* Your password is case sensitive.
- 3. Click in the New password input field and enter your new password.
- 4. Click in the Confirm password input field and re-enter your new password.
- 5. Click on **OK** to change your password.
  - The following messages can be displayed.
  - Case sensitivity of the old password (image 3-34)
  - Confirm password and new password are not the same. (image 3-35)

		(did you use the correct
DK.	Cancel	Image 3-34 Case sensitivity old password
	DK.	DK. Cancel

Image 3-33 Password menu

Eth

Di

Ne

×

sword. correct case ?)



# 3.6 Reset Projector Head

#### How to reset

- 1. Click on Reset Projection Head.
  - A warning message will be displayed. (image 3-36)
- 2. Do you really want to reset the head? If yes, Click on **Yes**.

The projector head will be reset. The connection will be lost. If no, Click on **No, Cancel this action**.

The software returns to the Projector Connection window.



Image 3-36 Reset Projector Head message



Reset projector head, does not mean a complete power down of the head. Only some boards will be reset.

# 3. Projector Connection

# 4. PROJECTOR SETUP

#### Overview

- Control Interface set up
- Pattern Shortcuts
- Execute Quickly a MacroSet up
- Activate Projector Configuration
- Activate Projector Screen Set up
- Macro Shortcuts for DP30 and DP50
- Input and Source set up
- · Output and Screen set up
- Advanced Settings
- Function keys

# 4.1 Control Interface set up

#### Overview of the layout

		DP1	00: DP100RE	LLAB			
Source	Processing	Active Area		Lens	Dowser	Resizing	Test Pattern
	, Cinema	1.77 (16.9 HDTV) 2048	-	1.00 x	Open	(0.0)	0#
Automatic		1080					
	Standard			Lamp	On	[2047.1079]	
Freq: 23.97 Hz				18.	39 IL	LetterBoxing On	

Image 4-1 Set up interface

All the settings and setups are visualised in this control interface.

The following is visualised from left to right:

- · The projector type and host name of the projector
- Input source : name of the input source.
- Source Input Frequency
- · Processing path : cinema or standard
- Active area in pixels and the aspect ratio
- Lens factor
- Lamp status
- Light output indication
- Dowser open or closed (mechanical dowser), Dowser (E-Dowser) open or closed for electronic dowser.
- Projector logo
- Resizing dimensions
- Letterboxing on or off
- Image projection, a light beam indicates that the projector projects an image, black indicates that no image is produced.
- · Test pattern on/off + the name of the test pattern or preview

### 4.2 Pattern Shortcuts

#### What can be done?

A predefined pattern can be set immediately on the projection screen.

#### To set a pattern

1. Click on one of the predefined icons. (image 4-2)

The selected pattern will be displayed by the projector when the lamp is on and the dowser is open. The following patterns are available:

- RGB-12bit-Full Screen White.tga
- RGB-12bit-Full Screen Black.tga
- RGB-12bit-ANSI-CheckerBoard Normal.tga
- RGB-12bit-Full Screen Red.tga
- RGB-12bit-Full Screen Blue.tga
- RGB-12bit-Alignment.tga
- RGB-12bit-Color Bars.tga
- Alternating Checkerboard.tga
- RGB-12bit-Full Screen Green.tga
- BDCLogo.tga



Image 4-2 Pattern shortcuts



These patterns can also be selected via Test tab page item Change test pattern.

# 4.3 Execute Quickly a MacroSet up



#### Macro

Macro files contains a sequence of commands. These commands are typically select Input Source, Activate PCF, Activate SCREEN.


When metadata control is enabled on this projector, the execution of macros will not work as expected. The following message will be displayed:



Image 4-3 Metadata enabled message

Click Yes to turn off metadata control automatically.

#### How to quickly execute a Macro.

- 1. Click on Macro. (image 4-4)
  - A file list of possible Macro files will be retrieve. (image 4-5)
- 2. Select the desired file out of the list.
- 3. Click on Execute to execute the macro.

For DP30 and DP50, the macro will be executed.

For DP100 and DP90, the macro will be executed and the macro name will be added just below the **MACRO** button. The active PCF and active SCREEN file name will also be added below the corresponding button. (image 4-6)

Execute MACRO File	Activate Projector Configuration	Activate Projector Screen Setup
MACBO	PCF	SCREEN
	MART Distant	

Image 4-4 Macro selected

Name	Туре	Size	Date/Time		
ACSAR	File	42	2002/10/23 17:03:43		
BIGMACRO	File	14432	2003/08/25 15:55:42		
blank	File	6	2002/10/15 15:35:09	5	
CloseDowser	File	8	2003/07/16 16:11:36	13	
deblank.	File	6	2002/10/15 15:35:21		
dvd	File	46	2003/08/12 10:57:52		
MACR001	File	57	2003/08/08 16:13:12		
MACR002	File	14	2003/12/06 14:02:10		
MACR003	File	43	2003/03/29 09:21:47		

Image 4-5

Retrieve Macro files

#### 4. Projector Setup



Image 4-6

Selected macro indicated for DP100 and DP90



## 4.4 Activate Projector Configuration



#### PCF File

Projector Configuration File. This file is a file that will be delivered with each movie. It contains all data needed to display a certain movie as it is defined by the movie distributor.



When metadata control is enabled on this projector, the following message will be displayed when clicking on PCF:



Image 4-7 Metadata enabled message

Click Yes to turn off metadata control automatically.

#### How to quickly activate a PCF file.

1. Click on PCF. (image 4-8)

A file list of possible PCF files will be retrieve. (image 4-9)

- 2. Select the desired file out of the list.
- 3. Click on Activate to load the file in Active.

The configuration will be loaded from the internal file system to ACTIVE. The indication on the Control interface will change accordingly.



Image 4-8 PCF selected

Name	Туре	Size	Date/Time
1_85_BetaSP	File	3590	2003/08/19 13:47:3
1_85_BetaSP_new	File	3590	2003/08/06 10:05:4
ACSAR	File	3586	2003/08/25 11:33:4
BARCO_ACTIVE	File	3590	2003/08/19 16:10:3
beta_storybrd	File	3590	2003/08/20 10:25:1-
Default	File (RS)	3586	2003/06/26 16:14:30
dvd	File	3590	2003/08/12 11:02:2
FLAT P3	File (R)	11776	2002/10/15 15:18:0
•	100000000	N 97.DKB	
Cancel			Activate

Image 4-9 Retrieve PCF files

### 4.5 Activate Projector Screen Set up



#### Screen File

Screen presentation configuration file. This file contains information about resizing, letterboxing, masking and lens factor.

#### How to quickly activate a Screen file.

- 1. Click on Screen. (image 4-10)
- A file list of possible Screen files will be retrieve. (image 4-11)
- 2. Select the desired file out of the list.
- 3. Click on Activate to load the file in Active.

The screen presentation configuration will be loaded from the internal file system to ACTIVE. The different indications on the Control interface will change accordingly.

Execute MACRO File	Activate Projector Configuration	Activate Projecto Screen Setup
MACRO	PCF	SCREEN
	Mit? Detroit	



Name	Туре	Size	Date/Time	
1.33_screen	File	46	2003/06/12 21:54:55	
1_85_BetaSP	File	46	2003/06/19 20:29:28	22
1280x1024 No Cro	File (RS)	46	2003/06/26 16:15:22	
2048x1080 No Cro	File (RS)	46	2003/06/26 16:15:24	
ACSAR	File	46	2003/08/27 08:40:37	
ANA1-0-RAT5-4	File (R)	46	2002/03/28 13:56:57	
ANA1-5-FLAT	File (R)	46	2002/03/28 13:56:57	
ANA1-5-RAT16-9	File (R)	46	2002/03/28 13:56:57	
ANA1-5-RAT4-3	File (R)	46	2002/03/28 13:56:57	
Cano	el		Activate	1

Image 4-11 Retrieve Screen files

### 4.6 Macro Shortcuts for DP30 and DP50

#### What can be done?

The content of the macro file associated with the shortcut will be executed.

MACRO01 is associated with button 1, MACRO02 is associated with button 2, etc. .

To create or to change a macro file, see Macro Editor.

#### To activate a macro

1. Press on one of the 6 macro shortcuts. (image 4-12)

The macro associated with this button will be executed.



Macro shortcuts

### 4.7 Input and Source set up



#### DVI-EDID

Digital Visual Interface - Extended Display Identification Data

DVI sources that are reported to the projector via the VESA E-EDID standard. These will be autodetected and displayed at the source format size, using standard processing.



#### 292–DUAL

Input A and input B are combined to 1 input. From a complete signal, part is send to input A and the other part to input B to reach bigger way through.



#### SMPTE

Society of Motion Picture and Television Engineers - A global organization, based in the United States, that sets standards for baseband visual communications. This includes film as well video standards.



#### 4:2:2

A commonly used term for a component digital video format. A ratio of sampling frequencies used to digitize the luminance and color difference components (Y, R-Y, B-Y) of a video signal. It is generally used as shorthand for ITU-R 601. The term 4:2:2 describes that for every four samples of Y, there are two samples each of R-Y and B-Y, giving more chrominance bandwidth in relation to luminance compared to 4:1:1 sampling.



#### 4:4:4

Similar to 4:2:2, except that for every four luminance samples, the color channels are also sampled four times.

#### Overview

- Source Selection for DP30 and DP50
- Source Selection for DP100 and DP90
- About DVI standards
- Active Area Selection & Aspect Ratio

#### 4.7.1 Source Selection for DP30 and DP50

#### How to select a source

1. Click on **Source Selection**. (image 4-13)

The source selection window opens. (image 4-14)

- 2. Click on a radio button in front of source type. The following choices are possible:
  - 292 A
  - 292 B
  - 292 Dual
  - DVI A
  - Auto-Select : auto select will monitor the three ports (292-A, 292-B, DVI-A) and select a port that has an active input signal. If more ports are active simultaneously, the selection is based on priorities
    - 1) DVI A as first priority
    - 2) 292-A as second priority
    - 3) 292-B as third priority

3. Select the source mode for each input by clicking on the drop down box next to the source type.

The following	modes are	possible
---------------	-----------	----------

Source	Source Modes
292-A	<ul> <li>Standard 4:2:2</li> <li>Non Standard 4:2:2, 12 bits/color</li> <li>Non Standard 4:4:4, 10 bits/color</li> <li>Non Standard 4:4:4, 12 bits/color</li> </ul>
292-B	<ul> <li>Standard 4:2:2</li> <li>Non Standard 4:2:2, 12 bits/color</li> <li>Non Standard 4:4:4, 10 bits/color</li> <li>Non Standard 4:4:4, 12 bits/color</li> </ul>
292-DUAL	<ul> <li>Default - 4:2:2 Packed, 10 bits/color, O/E pixels</li> <li>4:2:2 Packed, 10 bits/color, O/E lines</li> <li>4:2:2 Packed, 12 bits/color, O/E pixels</li> <li>4:2:2 Packed, 12 bits/color, O/E lines</li> <li>4:4:4 Unpacked, 10 bits</li> <li>4:4:4 Packed, 10 bits, Mixed</li> <li>4:4:4 Packed, 10 bits, O/E pixels</li> <li>4:4:4 Packed, 12 bits</li> </ul>
DVI-A	<ul> <li>Standard 8 bits/color</li> <li>10 bits/color, packed</li> <li>12 bits/color, packed</li> </ul>

For more explanation about the supported DVI standards, see "About DVI standards", page 43.

4. Select Processing path for the selected source by clicking on the drop down box. (image 4-15) Note: Cinema processing contains the following functionality : image scaling, 3:2 pull down functionality, SMPTE291 embedded data, LUT's for analog, de-gamma and color correction. However, contrast and brightness settings are only applicable for standard processing (non-cinema processing).

Standard processing has no scaling, no resizing, and no anamorphic lens factor.

When *Automatic* is selected, the projector itself makes a choice between standard processing or cinema processing. The choice depends on the input frequency of the selected source.

5. Press Exit to close the Source Selection window.

Input / Source	Source Selection	the second s	?
Cine Content - Active Area	Available sources	Source Modes	
	C 292 · A	Standard 4:2:2	•
mage 4-13 Source Selection	○ 292 - B	Standard 4:2:2	*
	C 292 - DUAL	Default - 4:2:2 Packed, 10 bits/color, 0/E pixels	•
	C DVI - A	Standard 8 bits/color	•
	C Auto-Select		
	-Processing Path		
	Automatic	×	
		Exit	10

Image 4-14 Source Selection window

Automatic	
Automatic	
Standard Pr	cessing

Image 4-15 Processing path selection

#### 4.7.2 Source Selection for DP100 and DP90

#### Overview

- Cine Input
- ACSAR 2 source selection start up

#### 4.7.2.1 Cine Input

#### How to select a source

1. Click on the check box next to **Cine Input**. (image 4-16)

The Cine Input buttons becomes active. The path line jumps to the cine input.

2. Click on Cine Input.

The source selection window opens. (image 4-17)

3. Click on a radio button in front of source type.

The following choices are possible:

- 292 A
- 292 B
- 292 Dual
- DVI A
- DVI B
- DVI DUAL/TWIN
- Auto-Select : auto select will monitor the six ports (292-A, 292-B, DVI-A, DVI-B and DVI-Dual) and select a port that has an active input signal. If more ports are active simultaneously, the selection is based on priorities
  - 1) DVI A as first priority
  - 2) 292-A as second priority
  - 3) 292-B as third priority
- 4. Select the source mode for each input by clicking on the drop down box next to the source type.

The following modes are possible

Source	Source Modes
292-A	<ul> <li>Standard 4:2:2</li> <li>Non Standard 4:2:2, 12 bits/color</li> <li>Non Standard 4:4:4, 10 bits/color</li> <li>Non Standard 4:4:4, 12 bits/color</li> </ul>
292-B	<ul> <li>Standard 4:2:2</li> <li>Non Standard 4:2:2, 12 bits/color</li> <li>Non Standard 4:4:4, 10 bits/color</li> <li>Non Standard 4:4:4, 12 bits/color</li> </ul>
292-DUAL	<ul> <li>Default - 4:2:2 Packed, 10 bits/color, O/E pixels</li> <li>4:2:2 Packed, 10 bits/color, O/E lines</li> <li>4:2:2 Packed, 12 bits/color, O/E pixels</li> <li>4:2:2 Packed, 12 bits/color, O/E lines</li> <li>4:2:2 Packed, 10 bits, O/E Frames</li> <li>4:4:4 Unpacked, 10 bits</li> <li>4:4:4 Packed, 10 bits, Mixed</li> <li>4:4:4 Packed, 10 bits, O/E pixels</li> <li>4:4:4 Packed, 10 bits, O/E pixels</li> <li>4:4:4 Packed, 12 bits</li> </ul>
DVI-A	<ul> <li>Standard 8 bits/color</li> <li>10 bits/color, packed</li> <li>12 bits/color, packed</li> </ul>
DVI-B	<ul> <li>Standard 8 bits/color</li> <li>10 bits/color, packed</li> <li>12 bits/color, packed</li> </ul>
DVI-DUAL/TWIN	<ul> <li>Dual 10 bits/color, Packed</li> <li>Twin 10 bits/color, Packed</li> </ul>

For more explanation about the supported DVI standards, see "About DVI standards", page 43.

Note: 292-DUAL with packing 4:2:2 Packed, 10 bits, O/E Frames is used for 3D projection.

 Select Processing path for the selected source by clicking on the drop down box. (image 4-18)
 Note: Cinema processing contains the following functionality : image scaling, 3:2 pull down functionality, SMPTE291 embedded data, LUT's for analog, de-gamma and color correction. However, contrast and brightness settings are only applicable for standard processing (non-cinema processing).

Standard processing has no scaling, no resizing, and no anamorphic lens factor.

When *Automatic* is selected, the projector itself makes a choice between standard processing or cinema processing. The choice depends on the input frequency of the selected source.

6. Press Exit to close the Source Selection window.

re Selection		
Ce selection		
vailable sources Sources	Modes	
C 292 - A	Standard 4:2:2	
○ 292 - B	Standard 4:2:2	
C 292 - DUAL	4:4:4 Unpacked, 10 bits	
C DVI - A	Standard 8 bits/color	
C DVI - B	Standard 8 bits/color	
C DVI - DUAL/TWIN	Dual: 10 bits/color, Packed	-
• Auto-Select		

Image 4-17 Source selection window



Processing path selection

#### 4.7.2.2 ACSAR 2 source selection start up

#### How to select

- 1. Click on the check box next to ACSAR 2. (image 4-19)
  - The ACSAR 2 buttons becomes active. The path line jumps to the ACSAR 2 input.
- 2. Click on the **ACSAR 2** button.

The Alternative Content setup window appears. (image 4-20)

ACSAR 2	Active
Cine Input	Area

Image 4-19 ACSAR 2 selected

		put 2		Input 2 Window
		٠		X: 1024 불 Y: 0 북
ut 3	le	put 4		Width:         1024 ±           Height:         540 ±           Z:         2 ±
Input 2 Input Image Settings  Im	file : hd-25p[1] put Setting=			
Input 2 Input Image Settings   In Contrast	file : hd-25p[1] put Settings   Brightness	Phase	Sharpness	Saturation

Image 4-20 Alternative Content setup window



For detailed description of the ACSAR 2 functionality via the D-Cine Communicator, see chapter "ACSAR 2", page 257.

#### 4.7.3 About DVI standards

#### Supported VESA E-EDID standards

The DVI inputs supports a limited number of sources that will be reported to the host via the VESA E-EDID data structure standard. These sources are listed in the next table.

These sources will be auto-detected and displayed.

These source bypass the Cinema processing, using standard processing, and will be displayed at the source format size. Images smaller than the array size will be centered on the array.

Port Protocol	Source Format <sup>1</sup>	Vertical Rate	Clock Rate	Scan Type	Color Space
DDWG DVI	640x480	60 Hz	25.175 MHz	Progressive	RGB
DDWG DVI	640x480	72 Hz	31.500 MHz	Progressive	RGB
DDWG DVI	800x600	60 Hz	40 MHz	Progressive	RGB
DDWG DVI	800x600	72 Hz	50 MHz	Progressive	RGB
DDWG DVI	1024x768	60 Hz	65 MHz	Progressive	RGB
DDWG DVI	1024x768	70 Hz	75 MHz	Progressive	RGB
DDWG DVI	1280x1024 <sup>2</sup>	50 Hz	89.970 MHz	Progressive	RGB
DDWG DVI	1280x1024	60 Hz	108 MHz	Progressive	RGB

For the processing path, select Standard processing path.



When for the processing path, Automatic is selected, the projector will select Standard Processing path automatically.

#### Other supported sources

In addition to the sources mentioned in Supported VESA E-EDID standards, the DVI port(s) will support any input that is presented to the port as described in the next table.

Port Protocol	Source Format	Vertical Rate	Clock Rate	Scan Type	Color Space	Process- ing Path	Display Format
DDWG DVI	1280x1024	23-61 Hz	82.5 MHz	Progres- sive	RGB	Cinema	1280x1024
DDWG DVI	1280x1024	23-96 Hz	165 MHz	Progres- sive	RGB	Standard	1280x1024



When for the processing path, Automatic is selected, the projector will select itself the correct processing path by looking to the Vertical Rate.

For a Vertical Rate between 23 and 61 Hz it will select the Cinema processing path.

For a Vertical Rate higher than 61 Hz it will select the Standard processing path.

#### 4.7.4 Active Area Selection & Aspect Ratio



#### Aspect ratio

Relation between the horizontal & vertical dimension in which the window will be displayed, e.g. 4 by 3 or 16 by 9.

VESA standard compliant
 Timing is extrapolated from VESA standard timing

#### **Active Area**

The active area within a source frame equals the relevant movie information within the movie stream. E.g. :  $1280 \times 1024$  movie can be mastered in a  $1920 \times 1080$  stream.

Only the 1280 x 1024 frame contains the relevant movie information. In this case, the active area is 1280 x 1024.

#### How to start up

1. Click on Active Area Selection. (image 4-21, image 4-22)

The Active Area window opens. (image 4-23)

2. Do you want to set the active area manually? If yes, go to step 3 If no, check *Entire Active Input*.

When *entire active input* is checked, the projector will search itself for the active area. If the image is not correct, uncheck *entire active input* and continue with step 3, otherwise continue with step 4.

3. Click on the up or down arrows of the *Width* and *Height* field to set up the active area size. Or,

click in the input fields of the *Width* and *Height* and enter the values with the keyboard.

The width and the height referring to the size of the image (active area) is set. (image 4-24)

 Click on the up or down arrows of the Horizontal Center Offset and Vertical Center Offset field to set up the center offset. Or,

click in the input fields of Horizontal and Vertical and enter the values with the keyboard.

The offset is referring to the center of the active area and to the center of the source frame. (image 4-25)

5. Select the image aspect ratio by clicking in the drop down box and selecting an aspect ratio.

When automatic is selected, the system assumes square pixels and calculates the aspect ratio based on the Active Area Size.

When the image pixels are not squared, select one of the following aspect ratios:

- 1.25 [5:4]
- 1.33 [4:3]
- 1.77 [16:9 HDTV]
- 1.85 [Flat]
- 2.39 [Scope]

6. Click **Close** to return to the Projector configuration window.



ACSAR 2	Active
Cine Input	Are

Image 4-21 Selecting active area for DP30 and DP50

Image 4-22 Selecting active area for DP100 and DP90

Counce	1400					
frame	Active Area					
Antina A			- Center Offset			
ACTIVE A	Width (pixels)	Height (pixels)	Horizon	tal	v	ertical
2048	Width (pixels)	Height (pixels)	Horizon (pixels	tal )	V. (r	ertical iixels)
2048	Width (pixels)	Height (pixels)	Horizon (pixel:	ial )	V. (r	ertical iixels)
2048 Enl	Width (pixels)	Height (pixels)	Horizon (pixel:	tal )	V/ (r	ertical bixels)
2048 Enl Image A	Width (pixels)	Height (pixels)	Horizon (pixel:	tal )	V. (r	ertical ixels)

Image 4-23 Active Area window

Active Area					? ×
Source Frame Area					
Active Area Size	Peight	Center Of	lset		
(pixels)	(pixels)	Hor (Pi	izontal ixels)	Vertica (pixels	d )
2048	1080 🚊	1			
Entire Active Inp	ut	0	2	0	2
Image Aspect Ratio					
Automatic (Square	Pixels)	]			
Company and the second second second					

Image 4-24 Width & height indication



Image 4-25 Center offset indication

- 1 source frame
- 2 Active area on source frame
- A Horizontal offset
- B Vertical offset

### 4.8 Output and Screen set up

#### Overview

- Lamp ON/OFF
- Image Orientation
- Lens Type selection
- Anamorphic Lens holder calibration for DP100 and DP90
- Resizing the image
- Masking the image
- Saving Screen Settings while Resizing or Masking
- Dowser Open or Close
- Constant Light Output for DP50
- Light Output and Calibration for DP30
- Light Output and Calibration for DP100-DP90

#### 4.8.1 Lamp ON/OFF

#### What can be done?

The projection lamp can be switched ON or OFF using the buttons in the software.

#### Toggling the lamp status

1. Press lamp on icon (()) in the Output / Screen box. (image 4-26)

The lamp will be switched ON. The interface will indicate lamp ON.

2. Press lamp off icon ()) to switch off the lamp.



Image 4-26 Toggling the lamp ON/OFF.



#### Only for DP30:

When the lamp could not be ignited, messages will be displayed with the reason for the failure.

Typical message are : Lamp runtime exceeded: Issued If 1.5 times maximum runtime is exceeded, in that case lamp will not be powered. Wrong article number, Wrong lamp parameter, Communication to LPS failed, Communication to fan controller failed, Lamp Ignition Failure, Lamp Communication Error.

#### 4.8.2 Image Orientation

#### **Possible orientations**

The projector can be configured as:

- · Normal front projector
- Normal rear projector
- Upside down front projector
- Upside down rear projection

#### How to switch

1. Click on Image Orientation. (image 4-27)

The image orientation window pops up. (image 4-28)

2. Click on one of the four possible orientations.

The logo in the middle of the window will change according the projector position.

3. Press Exit to return to the Projector Configuration window.



 Normal FRONT Projection
 TOP

 Upside Down FRONT Projection
 L

 Exit

Image 4-28 Image orientation set up window



For DP30 : when table mounted (normal cases), set the image orientation on *Upside Down Front projection*.

This reverse setting is due to the hardware configuration inside the projector.

#### 4.8.3 Lens Type selection



The anamorphic factor will only be taken into account when the processing path for the source is Cinema processing.

#### What will be done?

With this interface, it is possible to select the anamorphic factor for the lens that is attached to the head.

Depending on the lens, the projector will squeeze the image. This is to compensate the effect of the lens.

#### How to select?

1. Click on Lens Type. (image 4-29)

The Lens anamorphic factor selection window opens. (image 4-30, image 4-31, image 4-32, image 4-33)

2. Click on the drop down box and select the correct factor.

Projector type	Anamorphic factor
DP30	1.00 - 1.50 - 1.90
DP50	1.00 - 1.50 - 1.90
DP100	1.00 - 1.26
DP90	1.00 - 1.26

Custom lens types can be inserted manually.

3. Press Exit to return to the Projector configuration window.



Configuration			<u>? ×</u>
Anamorphic Factor : 1.00 💌	Lens shift	Lens Zoom	Lens Focus
			Exit

Image 4-31 Lens Anamorphic factor set up for DP30

Lens shift	Lens Focus	Lens Holder On
		Lens Holder Off
📕 🕨 🕨		<b></b>

Image 4-32 Lens Anamorphic factor set up for DP100 and DP90 with motorized lens

	?.
1.00	*
lder	
si On	
n Off	
	5
Fuit	1
	1.00 Ider er On er Off

Image 4-33

Lens Anamorphic factor set up for DP100 and DP90 with non-motorized lens

#### Lens Adjustment for DP30

As a DP30 is equipped with motorized lens adjustments, it is possible to adjust the standard lens via the D-Cine Communicator software.

#### Adjusting the standard lens of DP30

1. To shift the image, click on red arrows under Lens shift.(image 4-32)

The image can be moved left-rigth and top-bottom

- 2. To zoom, click on the red arrow under Lens Zoom.
- 3. To focus the image, click on the red arrows under *Lens Focus*.

#### Lens Adjustment for DP100 and DP90 with motorized lens

As a DP100 or DP 90 is equipped with motorized lens adjustments, it is possible to adjust the standard lens via the D-Cine Communicator software.

#### Lens Adjustment for DP100 and DP 90 with motorized lens

1. To shift the image, click on red arrows under *Lens shift*.(image 4-31)

The image can be moved left-rigth and top-bottom

2. To focus the image, click on the red arrows under Lens Focus.

#### Lens Adjustment for DP100 and DP90 with non-motorized lens

As the lens adjustment is not motorized, this should be done be hand. For more information on how to adjust the lens, consult the Installation manual of the projector.

#### 4.8.4 Anamorphic Lens holder calibration for DP100 and DP90

#### What can be done ?

The shift range of the anamorphic lens holder can be adapted according the used prime lens and anamorphic lens.

#### Pin in - pin out function

The pin in - pin out function is only used for maintenance functions. Consult the service and maintenance manual of the projector. Never use this function during the calibration procedure.

#### How to calibrate the shift range?

- 1. Remove first the anamorphic lens before starting the calibration procedure.
- Click on the arrow down just below the lens holder buttons (1) to expand the lens calibration window (2). (image 4-34, image 4-35)

#### 3. Click on Lens Holder On.

The anamorphic lens holder will pivot till the anamorphic lens in on the same axis as the prime lens.

- 4. Click on the **Shift out** button to shift the anamorphic lens holder to its maximum position.
- 5. Turn in the anamorphic lens.
- 6. Click now on the **Shift in** button until the anamorphic lens is close to the prime lens (± 5 mm between prime lens and anamorphic lens..
- 7. Loosen both screws of the end of range block and slide the block forward until it hits the end of range switch of the anamorphic lens holder. (image 4-36)
- 8. Fixate both screws of the end of range block.

Lens Configuration	Anamorphic Factor : 1	Anamorph Lens Lens Ho Lens Ho (1)	? ×       Holder       older Off       (2)
	Lens shift	Lens Focus	Anamorph Lens Holder Lens Holder On Lens Holder Off Installation - Calibration <shift -="" in="" out="" shift=""> <pin -="" in="" out="" pin=""> &lt;</pin></shift>
			<u> </u>

Image 4-34 Anamorphic Lens calibration for DP100/DP90 with motorized lens

	Lens Configuration	?
Anamorph Lens Holder	Anamorphic Factor : 1.00	
Lens Holder On		
Lens Holder Off	Anamorph Lens Holder	
	Lens Holder On	
1	Lens Holder Off	
((1) <u>Exit</u> (2)	Installation - Calibration <-Shift IN Shift OUT> <-Pin IN Pin OUT> <	

Image 4-35 Anamorphic Lens calibration for DP100/DP90 with non-motorized lens



Image 4-36 End of range blocks

### 4.8.5 Resizing the image



CAUTION: Set lens anamorphic factor to 1.0 before starting resizing.



For standard processing paths, no resizing is not taken into account.

#### Overview

- What is Resizing?
- · Resizing with the arrow keys
- Resizing with direct user input
- Letterbox function



Displaying test patterns to check resizing: make sure the anamorphic lens factor is set correctly.

<u> </u>

Resizing images are only give as an illustration to explain the principle. There is a difference between the DP30-DP50 and DP100-DP90.

#### 4.8.5.1 What is Resizing?

#### Definition

With the resizing tool it is possible to adapt the projected image on the screen size (defining the area available for image display). So, look always to the screen when resizing the image.

The projector will always attempt to keep the image centered within this defined area, and the correct aspect ratio of the image will always be preserved.

The key function that determines how the image will be displayed is the Letterbox function. For a more detailed explanation, see "Letterbox function", page 58.



As the D-Cine Premiere project an image under an angle, the original image will be shown as trapezium.

The image will be squared with the masking function by masking the shaded areas.

#### 4.8.5.2 Resizing with the arrow keys



Click on  $\bowtie$  to return to the initial values for the selected dots while resizing the image.



Before starting the resizing, it is preferable to select a test pattern.

#### How to resize?

1. Click on Resizing. (image 4-37)

The Resizing window opens. (image 4-38)

As it is preferable to resize on a test pattern rather then on the normal image, select a pattern by clicking on one of the pattern short cuts.

The following patterns can be selected:

- full white
- hatch pattern (image 4-39)

When a button is pressed (in state on the interface), the pattern is selected.

3. Select a red button (indicated by an arrow in the image 4-38) by clicking on it. To select both buttons together, select first one button, hold the shift key down and select the second button.

A selected button becomes clear red.

4. Move the selected button by pressing on the arrow keys on your keyboard.

Or, by pressing the arrows of the keypad interface.

**Note:** The representation on the interface is not an exact representation of the resizing on the screen. Therefor, always look to the screen to see the exact resizing.

The image will move in the direction of the clicked arrow. Yellow arrows on the interface image will indicate the direction. The values in the corner will change accordingly. (image 4-40)

- 5. When finished, press Exit to return to the Projector Configuration menu.
  - **Note:** Before pressing Exit, it is possible to save the screen setting. see "Saving Screen Settings while Resizing or Masking", page 68 for more explanation.



Image 4-37 Start up Resizing



Image 4-38 Resizing window

0	Resizing	1279	
Ŷ			
		F letterbox e	mable
123 0	DMD Boundary	1023	tcut:
Selecting mult	iple corners : Hold down the Shift button i additional corner	while clicking an Save Screen F	ile swite

Image 4-40 Resizing indication

(P)

When leaving the Resize window without switching off the test pattern, this pattern will still be available for masking.



As the resizing is best done on a test pattern, when finished, switch back to the normal image to check the resizing settings.



After resizing set the anamorphic lens factor back to its original value.

#### 4.8.5.3 Resizing with direct user input

#### What can be done

With direct user input it is possible to enter the resizing values with your keyboard.

#### How to resize

1. Click on **Resizing**. (image 4-41)

The Resizing window opens. (image 4-42)

- 2. As it is preferable to resize on a test pattern rather then on the normal image, select a pattern by clicking on one of the pattern short cuts.
  - The following patterns can be selected:
  - full white
  - hatch pattern (image 4-43)

When a button is pressed (in state on the interface), the pattern is selected.

3. Select a red button by clicking on it. To select both buttons together, select first one button, hold the shift key down and select the second button.

A selected button becomes clear red.

- 4. Right click on a selected button.
- The coordinate window pops up on the resize window. (image 4-44)
- 5. Click in the input fields for X and Y and fill out the desired value.
- 6. Click on Apply to activate the resizing.
- 7. When finished, press **Exit** to return to the *Projector Configuration* menu. **Note:** Before pressing Exit, it is possible to save the screen setting. see "Saving Screen Settings while Resizing or Masking", page 68 for more explanation.



Image 4-41 Start up Resizing





A Full white patternB Hatch pattern

Image 4-42 Resizing window

0	Resizing	1279	_
		0	
	×		
	Y 0		
		F letterbox en	sbie
		ppiy	
	<u></u>	ancel Pattern shorter	ut:
0		<u> </u>	
	DMD Boundary	- Sava Seven Ede	3
Selecting mult	ple corners : Hold down the Shift button while additional corner	e clicking an New Overv	, viite





When leaving the Resize window without switching off the test pattern, this pattern will still be available for masking.



As the resizing is best done on a test pattern, when finished, switch back to the normal image to check the resizing settings.



After resizing set the anamorphic lens factor back to its original value.

#### 4.8.5.4 Letterbox function

#### **Function**

The letterbox function determines how the image will be displayed.

If Letterbox enabled is checked, the system will show all of the original image data on the screen. This may require that the system letterbox the image, either on the top and bottom, or left and right side.

If Letterbox enabled is not checked, the system will fill all the screen with image data. This may require that the system discard image data, either from the top and bottom, or the left and right side.

The following two examples show what will be displayed based on the state of the letterbox function.

Letterbox enabled.



Image 4-45 Example letterboxing enabled

W and H are width and height of the resized area.

#### 4. Projector Setup

- A : input source
- B:
  - Resized area equals the maximum DMD size
  - The input image has a different aspect ratio from the resized area.
  - Full image is letterboxed (top and bottom) and centered within the resized area.
- C:
  - The screen height is narrowed, bottom is moved upwards.
  - The input image has a different aspect ratio from the resized area.
  - Full image is letterboxed (top and bottom) and centered within the resized area.
- D:
  - Bottom of resized area is moved upward to where image fills this area.
  - The input image has now the same aspect ratio from the resized area.
  - Full input image centered within the resized area and letterboxing is not required.
- E :
  - Bottom of resized area has moved upward to where image at previous size cannot be fully displayed.
  - Resized area reduced in both directions (maintaining aspect ratio) so full scaled image can be displayed.
  - Image is letterboxed ( right side and left side).

Letterbox disabled



W



W



W



Image 4-46 Example letterboxing disabled

W and H are width and height of the resized area.

- A : input source
- B:
  - Resized area equals the maximum DMD size
  - The input image has a different aspect ratio from the resized area.
  - Image is scaled up to fill resized area, requiring that some input data be discarded because it falls outside the resized area (dark transparent areas left and right).
- C :
  - Bottom of resized area has moved upward.
  - The input image has a different aspect ratio from the resized area.
  - Image is scaled up to fill resized area, requiring that some input data be discarded because it falls outside the resized area (dark transparent areas left and right).
- D:
  - Bottom of resized area has moved upward so that the height is smaller than the image height.
  - The input image has a different aspect ratio from the resized area.
  - Input image is not scaled, however, data at the top of the image must be discarded because it falls outside of the resized area, and data at the bottom of the image must be discarded because it falls outside the resized area.

#### 4.8.6 Masking the image



CAUTION: Set lens anamorphic factor to 1.0 before starting masking the image

#### **Overview**

- What is masking
- Masking via the arrow keys
- Masking with direct user input



Displaying test patterns to check masking: make sure the anamorphic lens factor is set correctly.



Masking images are only give as an illustration to explain the principle. There is a difference between the DP30-DP50 and DP100-DP90.

#### 4.8.6.1 What is masking

#### Definition

After resizing the image, it may be still need to mask away pixels on the screen due to keystone and/or bow distortion of the projected image. So look always at the screen while masking pixels.



# 4.8.6.2 Masking via the arrow keys

Click on 🖄 to reset the masking for the selected button.



Before starting masking, it is preferable to select a test pattern.

#### How to mask?

1. Click on Masking. (image 4-48)

The masking window pops up. (image 4-49)

In most cases, test pattern will be on. If not continue with step 2, otherwise with step 3.

2. As it is preferable to resize on a test pattern rather then on the normal image, select a pattern by clicking on one of the pattern short cuts.

The following patterns can be selected:

- full white
- hatch pattern (image 4-50)

When a button is pressed (in state on the interface), the pattern is selected.

3. Click on a red button in one of the corners. To select extra corner buttons together, select first one button, hold the shift key down and select another button.

A selected button becomes clear red.

4. Move the selected button by pressing on the arrow keys on your keyboard.

Or, by pressing the arrows of the keypad interface.

The image will move in the direction of the clicked arrow. Yellow arrows on the interface image will indicate the direction. The values in the corner will change accordingly. (image 4-51)

- 5. Click on a red square in the middle of a side. *Note:* Only one square button can be selected at a time.
- 6. Move the selected square by pressing on the arrow keys on your keyboard Or,

by pressing the arrows of the keypad interface.

The moving will blind the side-curves. A yellow arrow with a curved yellow line will show the direction of the correction. The value will change accordingly. (image 4-52)

7. Press Exit to return to the Projector Configuration.

**Note:** Before pressing Exit, it is possible to save the screen setting. see "Saving Screen Settings while Resizing or Masking", page 68 for more explanation.



Image 4-48 Start up Masking





Short cuts to patterns

A Full white patternB Hatch pattern

Image 4-49 Masking window



Image 4-51 Masking the corners

	Masking	1279	
			< × × ×
			<u> </u>
			Reset All
23		1023	Pattern shortcuts
. 0.	DMD Boundary	12/9	
Selecting mul additional	tiple corners : Hold down the Shift button I corner (remark: curve handles are mutually (	while clicking an exclusive)	New Overwrite
	Euro I		

Image 4-52 Curve masking

Press the Reset All button to reset the complete masking.



As the masking is best done on a test pattern, when finished, switch back to the normal image to check the masking settings



After masking set the anamorphic lens factor back to its original value.



Do not forget to switch off the test patterns.

#### 4.8.6.3 Masking with direct user input

#### What can be done

With direct user input it is possible to enter the masking values with your keyboard.



Before starting masking, it is preferable to select a test pattern.

#### How to mask

1. Click on Masking. (image 4-53)

The masking window pops up. (image 4-54)

In most cases, test pattern will be on. If not continue with step 2, otherwise with step 3.

2. As it is preferable to resize on a test pattern rather then on the normal image, select a pattern by clicking on one of the pattern short cuts.

The following patterns can be selected:

- full white
- hatch pattern (image 4-55)

When a button is pressed (in state on the interface), the pattern is selected.

3. Click on a red button in one of the corners. To select extra corner buttons together, select first one button, hold the shift key down and select another button.

A selected button becomes clear red.

4. Right click on a selected corner button.

The coordinate window pops up on the masking window. (image 4-56)

- 5. Click in the input fields for X and Y and fill out the desired value.
- 6. Click on Apply.

The corner masking will be applied to the image on the screen.

7. Right click on a selected square button in the middle of a side.

The curve factor window pops up on the masking window. (image 4-57)

- 8. Click on the input field and enter the curve factor.
- 9. Click on OK.

The curve masking will be applied to the image on the screen.

- 10.Press Exit to return to the *Projector Configuration* menu.
- **Note:** Before pressing Exit, it is possible to save the screen setting. see "Saving Screen Settings while Resizing or Masking", page 68 for more explanation.



Image 4-53 Start up Masking





Short cuts to patterns

A Full white pattern B Hatch pattern

Image 4-54 Masking window



Direct masking input corners

0	Masking	1279	
• B	op Curve		▼
Ento	e the curve factor :		
10		<u>o</u> k	Cancel
	DID Basedon	1023 1279	Pattern shortcuts
electing multip additional c	ole corners : Hold down the Shift button orner Jamark: curve handles are mutually	while clicking an exclusive)	Save Screen File

Image 4-57 Curve factor window for masking



Press the Reset All button to reset the complete masking.



As the masking is best done on a test pattern, when finished, switch back to the normal image to check the masking settings



After masking set the anamorphic lens factor back to its original value.



Do not forget to switch off the test patterns.

#### 4.8.7 Saving Screen Settings while Resizing or Masking



**CAUTION:** Before saving SCREEN settings, set first the anamorphic lens factor back the value used before.

#### How to overwrite an existing file.

1. While in Resizing or Masking, click on Overwrite. (image 4-58)

The file selection window pops up. (image 4-59)

2. Select a file you want to overwrite and click Overwrite.
| Save Screen File | ROVERWRITE Existing screen file |           |      |                     | <u>? ×</u> |  |
|------------------|---------------------------------|-----------|------|---------------------|------------|--|
| New Overwrite    | Name                            | Туре      | Size | Date/Time           |            |  |
|                  | ANAT-O-RAT5-4                   | File      | 46   | 2002/03/27 14:03:38 | 1.000      |  |
|                  | ANA1-5-FLAT                     | File      | 46   | 2002/03/27 14:10:49 |            |  |
| Image 4-58       | ANA1-5 RAT16-9                  | File      | 46   | 2002/03/27 17:56:48 |            |  |
| Save Screen File | ANA1-5-RAT4-3                   | File      | 46   | 2002/03/27 14:06:15 |            |  |
|                  | ANA1-5-SCOPE                    | File      | 46   | 2002/03/27 14:28:12 |            |  |
|                  | ANA1-9-FLAT                     | File      | 46   | 2002/03/27 14:32:59 | -          |  |
|                  | ANA1-9 RAT16-9                  | File      | 46   | 2002/03/27 14:43:35 |            |  |
|                  | ANA1-9-SCOPE                    | File      | 46   | 2002/03/27 14:34:08 |            |  |
|                  | BARCO_ACTIVE                    | File      | 46   | 2002/07/01 13:43:42 |            |  |
|                  | Mk7 Default                     | File (RS) | 46   | 2001/11/07 20:31:07 |            |  |
|                  | SCR01                           | File (A)  | 46   | 2002/06/28 13:59:14 | -          |  |
|                  | Cancel                          |           |      |                     | Overseite  |  |

File Selection window

#### How to save in a new file

1. While in Resizing or Masking, click on Save (image 4-58).

The file name enter window opens. (image 4-60)

2. Fill out a file name and click on OK.

The ACTIVE settings for resizing, masking and lens factor will be stored in the entered file.

## 4.8.8 Dowser Open or Close

#### What can be done?

With this function you have full control over the dowser setting. With a single click it is possible to open or close the dowser.

#### How toggling the dowser

1. Click on one of the dowser icons to open or close the dowser. (image 4-61)

The status of the dowser is indicated on the interface window.

To open the dowser, click on the open icon ( $\square$ ).

To close the dowser, click on the close icon ( $\blacksquare$ 



Image 4-61 Open or close the dowser

## 4.8.9 Constant Light Output for DP50



The constant light output functions are options for which a key must be installed.

## Overview

- Start up of the CLO functions
- · Read out the light output
- Calibrating CLO

#### What is CLO?

The CLO function will regulate the lamp power within its minimum and maximum limits, to ensure a constant light output.

## 4.8.9.1 Start up of the CLO functions

#### How to start up

1. Click on CLO. (image 4-62)

The CLO read out / calibration window will be displayed. (image 4-63)

Output	/ Screen					
. 0	Image Orientation	- Lens Config	= Resizing	= Masking		CLQ
	2				<u> </u>	-

Image 4-62 Start up of the CLO functions

lead CLO	Read CLO now	
	??.?? footLambert	
Calibrate CLO Step 1: press the "Measure now" Button and measure the amount of footLambert on the screen.	Measure now	
Step 2: press "Insert measured values" button, fill out the measured footLambert value.	Insert measured values	
	E	oìt

Image 4-63

## 4.8.9.2 Read out the light output

#### How to read out

1. Click on Read CLO now. (image 4-64)

A Read CLO message will appear on the screen. (image 4-65)

To read out the light output value, it is necessary to set the screen out to black. All light must be redirected to the CLO measuring device inside the projector to measure the correct value.

- 2. Do you want to continue?
- If yes, Click on Yes.

The screen becomes black and the measuring starts. The interface window becomes black too and after a few seconds the value will be filled out in footLambert.

The **Read CLO now** button changes into Stop reading. When the value is filled out, click on **stop Reading** to return the screen output to normal. (image 4-66) If no, click on **No, cancel this action**.

The screen returns to the CLO read out / calibration window.

Constant Light Output read out / Calibrati - Read CLO	00
	Read CLO now
	22.22 footLambert
	??.?? footLambert

Image 4-64 CLO window, read selected

Reading out the CLO Do you agree the scre	requires the screen output to go black. en output changes to black ?.

CLO read message

stop Reading
12.00 footLambert

Stop reading light output

## 4.8.9.3 Calibrating CLO

#### How to calibrate

1. Press Measure now. (image 4-67)

A measure CLO message will be displayed. (image 4-68)

To measure the CLO output, it is necessary to set the screen output to fully white. All light must be projected on the screen to measure the light output correctly with a colorimeter.

2. Do you want to continue?

If yes, Click on Yes and continue with step 3.

A measuring busy screen will be displayed and the screen output will go automatically white. (image 4-69)

If no, click on No, cancel this action to return to the CLO read out ./ calibration window.

- 3. Measure the amount of footLambert with a colorimeter on the screen.
- 4. Press Insert measured values. (image 4-70)

An Insert value / calibrating CLO message will be displayed. (image 4-71)

To insert the measured value, the screen output must set to fully black.

5. Do you want to continue?

If yes, Click on Yes to continue.

The screen goes fully back and the insert value window opens. Continue with step 6. (image 4-72) If no, Click **No, cancel this action** to return to the *CLO read out / calibration* window.

- 6. Click in the fill out field and insert the measured value.
- 7. Click OK to continue.

The projector CLO is now calibrated. (image 4-73)

Step 2: press "Insert measured values" button, fill out the measured footLambert value.	Insert measured values
and measure the amount of footLambert on the screen.	Measure now



	you amee the screen	output chappes to full white 2
-	yes agree the screen	to part of the mile of the

Measure CLO message

and measure the amount of footl ambert on	Measure now
the screen.	
Step 2: press "Insert measured values" button, fill out the measured footLambert	
value.	Insert measured values
Measuring CLD on Screen	

Image 4-69 Measuring CLO on Screen

ond measure the amount of footLambert on	Measure now
he screen.	
itep 2: press "Insert measured values"	
utton, fill out the measured footLambert	
alue.	Insert measured values
AN ALCONOMY AND A REAL PROPERTY OF	
Measuring CLD on Screen	1

Image 4-70 Select insert measured values

📰 Inser	ting values/Calibratin	g CLO	×
⚠	Inserting the measure Do you agree the sci	ed values (calibratin reen output changes	g) of the CLO requires the screen output to go full black. s to full black ?.
		Yes	No, cancel this action
		165	(arce dis actor

Image 4-71 Insert value / calibrating message

onstant Light Output read out Read CLO	/ Calibration	start Reading		CLO Calibration CLO Calibration was s OK Image 4-73 Calibration successful t	accessful I message
Calibrate CLO Step 1: press the "Measure and measure the amount of the screen. Step 2: press "Inset measured button, fill out the measured value.	Insert the measured amount of footLambert IZCO Cancel OK red values'' I footLambert	footLambert			
Inserting	) footLambert Values / Ca	librating.			
	S.		Exit	1	

Insert value window for measured CLO

## 4.8.10 Light Output and Calibration for DP30



The constant light output functions are options for which a key must be installed.

## Overview

- Start up of the CLO functions
- Target set up for Normal Mode
- Target set up for CLO Mode
- Light output Calibration

## What is CLO?

The CLO function will regulate the lamp power within its minimum and maximum limits, to ensure a constant light output.

## 4.8.10.1 Start up of the CLO functions

#### How to start up

1. Click on CLO. (image 4-74)

The *Light Output / calibration* window will be displayed. Depending on the mode selection, the window can be a little bit different. (image 4-75)



Image 4-74 Start up of the CLO functions

	Lamp	power	
Footlambert Measured: 5	1.38	Max. 2000 Wat	
Normal Mode		Mir: 1500 Wat	
Hode Selection			
Normal Mode			
CLO Mode			
Nominal Mode Paramete			
Lamp Power (Watt)		- 1738	
ight output calibration —			
Light output calibration Calibrate current output with 1.0 Lens to:	13.00 -	Calibrate 1.0	
Light output calibration Calibrate current output with 1.0 Lens to: Calibrate current output with 1.5 Lens to:	13.00 - 12.50 -	Calibrate 1.0 Calibrate 1.5	

Image 4-75 Light output / calibration window

## 4.8.10.2 Target set up for Normal Mode

#### How to set up

1. Check the radio button next to Normal Mode. (image 4-76)

The mode selection pane changes to the Normal mode parameters.

2. Adjust with the slide bar until the desired lamp power is obtained. Or,

click on the up or down arrow until the desired power is obtained.

The Current Light Output and Lamp power pane will change accordingly. A histogram will indicate the lamp power. The color of that histogram changes from green when lamp power is minimum to red when the lamp power is maximum. The value indication can have a tolerance of 50W. So the value can be 50W higher or lower than the entered target value. The corresponding footLambert value will change accordingly. (image 4-77)

## 4. Projector Setup



Image 4-77 Lamp indications

Normal Mode

## 4.8.10.3 Target set up for CLO Mode

Target set up for CLO mode is lens dependent.

$\bigcirc$
F

Before starting the calibration procedure, set the lamp power to its minimum power in normal mode. Start calibration with a 1.0 lens.

(F)
-----

CLO mode is only available when a valid CLO key is installed.

n: 1500 Walt

#### How to set up

1. Check the radio button next to CLO Mode. (image 4-78)

The mode selection pane changes to the CLO mode parameters.

- 2. Enter the target foodLambert by clicking on the up or down arrows.
- 3. Click on Set target now.

The lamp power will change accordingly between maximum and minimum until the entered light output is reached each time the lamp is switched off and is ignited again.

When the entered value is to high, the lamp power goes to its maximum. When the value is to low, the lamp power goes to its minimum.



## 4.8.10.4 Light output Calibration



Light output calibration is lens specific. This procedure has to be redone for each other lens used with the projection system.

#### How to calibrate

- 1. Select first the lens anamorphic factor via Lens Configuration.
- 2. Physically install the corresponding lens onto the projection system.
- 3. Switch on a white test pattern via the pattern short cuts.
- 4. Measure the light output in the middle of the screen with a light meter.
- 5. Enter the measured value into the input box next to corresponding lens indication.
- 6. Click on Calibrate to start the calibration procedure. (image 4-79)

The calibration message window will be displayed. (image 4-80)

7. Click Yes to start the calibration.

Light output calibration			
Calibrate current output with 1.0 Lens to:	14.00	Calibrate 1.0	
Calibrate current output with 1.5 Lens to:	13.00	Calibrate 1.5	
Calibrate current output with 1.9 Lens output to:	9.00	Calibrate 1.9	
Start calibration			2
Calibrating the CLO of The current Light ( Do you really want	the projector with th Dutput for a 1.0 to calibrated th	he current input means that : Lens will be calibrated a e CLO with the current y	s being 13.00 footLambert. alues ?
	Yes	No, cancel this actio	n
Image 4-80			

Calibration message

## 4.8.11 Light Output and Calibration for DP100-DP90

## Overview

- Start up of the CLO functions
- Target set up for Normal Mode
- Target set up for CLO Mode
- Light output Calibration



The constant light output functions are options for which a key must be installed.

## 4.8.11.1 Start up of the CLO functions

#### How to start up

1. Click on CLO. (image 4-81)

The *Light Output / Calibration* window will be displayed. Depending on the lamp type, the values in left pane will be different. (image 4-82)



Image 4-81 Start up of the CLO functions

and a cigin cracpus	Lamp current	
Footlambert Measured: 1	1.98	
	Actu	at 165 Ampere
Normal Mode	Min	110 Ampere
lode Selection		
Normal Mode		
CLO Mode		
Nominal Mode Parameters		
Lamp Dimming (255 = Ma	sximum) ——	128 ±
ight output calibration		
ight output calibration Calibrate current output with 1.0 Lens to:	12.00 ± Ca	ibrate 1.0
ight output calibration Calibrate current output with 1.0 Lens to: Calibrate current output with 1.26 Lens to:	12.00 높 Cal	ibrate 1.0 brate 1.26

Light output / calibration window

## 4.8.11.2 Target set up for Normal Mode

#### How to set up

- 1. Check the radio button next to Normal Mode. (image 4-83)
  - The mode selection pane changes to the Normal mode parameters.
- 2. Adjust with the slide bar until the desired lamp power is obtained. Or,

click on the up or down arrow until the desired power is obtained.

The Current Light Output and Lamp power pane will change accordingly. A histogram will indicate the lamp power. The color of that histogram changes from green when lamp power is minimum to red when the lamp power is maximum. The corresponding footLambert value will change accordingly. (image 4-84)



Normal mode selection



Image 4-84 Lamp indication

## 4.8.11.3 Target set up for CLO Mode



Target set up for CLO mode is lens dependent.



Before starting the calibration procedure, set the lamp power to its minimum power in normal mode. Start calibration with a 1.0 lens.



CLO mode is only available when a valid CLO key is installed.

#### How to set up

1. Check the radio button next to CLO Mode. (image 4-85)

The mode selection pane changes to the CLO mode parameters.

- 2. Enter the target foodLambert by clicking on the up or down arrows.
- 3. Click on Set target now.

The lamp power will change accordingly between maximum and minimum until the entered light output is reached each time the lamp is switched off and is ignited again.

When the entered value is to high, the lamp power goes to its maximum. When the value is to low, the lamp power goes to its minimum.



For DP100-DP90, CLO mode selected

#### 4.8.11.4 Light output Calibration

(	

Light output calibration is lens specific. This procedure has to be redone for each other lens used with the projection system.

#### How to calibrate

- 1. Select first the lens anamorphic factor via Lens Configuration.
- 2. Physically install the corresponding lens onto the projection system.
- 3. Switch on a white test pattern via the pattern short cuts.
- 4. Measure the light output in the middle of the screen with a light meter.
- 5. Enter the measured value into the input box next to corresponding lens indication.
- 6. Click on Calibrate to start the calibration procedure. (image 4-86)
  - The calibration message window will be displayed. (image 4-87)
- 7. Click Yes to start the calibration.

Calibrate current output with 1.0 Lens to:	12.00 圭	Calibrate 1.0	
Calibrate current output with 1.26 Lens to:	13.00 当	Calibrate 1.26	
age 4-86 art calibration			
Calibrating CLO			×
Calbrating the CLO of The current Light	the projector with the Output for a 1.0 L to calibrated the	e current input means that : .ens will be calibrated as being CLO with the current values	g 12.00 footLambert. ?
Do you really want			
Do you really wan	Yes	No, cancel this action	

## 4.9 Advanced Settings

#### Overview

- Advanced Source settings
- Advanced Image settings
- Advanced 3D Settings
- Image Freeze

## 4.9.1 Advanced Source settings

#### Overview

- Start up of the advanced source settings
- SMPTE Field bit
- SMPTE 291
- 3 2 pull down
- Re-synchronisation
- Offset

## 4.9.1.1 Start up of the advanced source settings

#### How to start up

1. Click on Source Settings within Advanced settings. (image 4-88)

The Advanced settings window opens. (image 4-89)

Advanced	Image	Advanced Source Se	ttings <b>?X</b>
Source Settings Image Settings 3D Settings	Freeze	SMPTE field bit	Normal (default)
Image 4-88	in the	SMPTE 291	Enabled (default)
Source settings selected		3:2 pull down	Disabled (default) 💌
		Re-Synchronization	Enabled (default)
		Offset	Field 1 (default) ·
			Exit
			2

Image 4-89 Advanced Settings window

## 4.9.1.2 SMPTE Field bit

## When used

The SMPTE field bit function is used for segmented frames. Both rasters of the image could be shifted in a wrong way. This can be corrected by forcing the SMPTE field bit from normal to inverse or vice versa.

#### How to invert

1. Click on Source Settings.

The Advanced Source settings window opens.

2. Click on the drop down box next to *SMPTE field bit* and select the desired value. (image 4-90) Default value : normal

SMPTE field bit	Normal (default) 💌
	Normal (default)
SMPTE 291	Invert
3:2 pull down	Disabled (default) -
Re-Synchronization	Enabled (default) 💌
Offset	Field 1 (default) -

Image 4-90

Advanced settings window : SMPTE field bit

#### 4.9.1.3 SMPTE 291

#### How to toggle

1. Click on Source Settings.

The Advanced Source settings window opens.

- 2. Click on the drop down box next to SMPTE 291 and select the desired value. (image 4-91)
  - Enabled Decoding of SMPTE291 auxillary data, embedded in the SMPTE292 data stream, is enabled. This data could be decryption data, meta data, etc.

Disabled Decoding of SMPTE291 auxillary data is disabled.

SMPTE field bit	Normal (default)	
SMPTE 291	Enabled (default) -	
3:2 pull down	Enabled (default) Disabled	
Re-Synchronization	Enabled (default)	
Offset	Field 1 (default) -	
	Exit	

## 4.9.1.4 3 - 2 pull down

#### When used

Activate 3-2 pull down when 24 fps of film must be mapped onto 30 fps (60 fields) or 25 fps (50 fields) to be shown as normal video.

#### How to toggle

1. Click on Source Settings.

The Advanced Source settings window opens.

2. Click on the drop down box next to 3-2 pull down and select the desired value. (image 4-92)

disabled Pull down process not active (default)

enabled Pull down process a	active.
-----------------------------	---------

SMPTE field bit	Normal (default) 💌
SMPTE 291	Enabled (default)
3:2 pull down	Disabled (default)
Re-Synchronization	Disabled (default) Enabled
Offset	Field 1 (default) *

#### Advanced settings window : 3-2 pull down

#### 4.9.1.5 Re-synchronisation

#### When used

The re-synchronisation command is used to enable or disable the re-synchronisation function associated with the Pull-Down Sequence. It is sometimes useful to disable the re-synchronisation function when the time code is not running at the proper rate, such as when a jog control is being used with a tape machine.

#### How to toggle

1. Click on Source Settings.

The Advanced Source settings window opens.

- 2. Click on the drop down box next to Re-synchronisation and select the desired value. (image 4-93)
  - enabled Re-synchronisation function enabled

disabled Re-synchronisation function disabled

SMPTE field bit	Normal (default) 💌
SMPTE 291	Enabled (default)
3:2 pull down	Disabled (default) 💌
Re-Synchronization	Enabled (default) ·
	Enabled (default)
Offset	Disabled

Image 4-93

Advanced settings window : Re-Synchronisation

## 4.9.1.6 Offset

#### Why offset

The offset command is used to select the offset or dominant field associated with the Pull-Down Sequence. The offset can be changed between field 0, field 1, field 2, field 3, field 4 or field 5.

## How to change

1. Click on Source Settings.

The Advanced Source settings window opens.

2. Click on the drop down box next to Offset and select the desired offset. (image 4-94)



Image 4-94 Advanced settings window : Offset

## 4.9.2 Advanced Image settings

## Overview

- · Start up of the advanced image settings
- Anti log Lut
- De-Gamma Lut
- 3D lookup table (complex Lut)
- Image Scaling

## 4.9.2.1 Start up of the advanced image settings

#### How to start up

1. Click on *Image Settings* within *Advanced settings*. (image 4-95)

The Advanced settings window opens. (image 4-96)





Image 4-96 Advanced Image settings window

## 4.9.2.2 Anti log Lut



Lut Look up table

#### How to toggle

1. Click on Image settings.

The Advanced Image settings window opens.

2. Click on the drop down box next to Antilog Look up table and select the desired value. (image 4-97)

activated Anti-Logarithmic data correction is activated.

by Anti-Logarithmic data correction is by passed.

passed

default value : activated (image 4-98)

AntiLog lookup table (LUT-AL)	Enabled (default)
	Enabled (default)
DeGamma lookup table (LUT-DG)	Disabled
3D lookup table (LUT CLUT)	Enabled (default) -
Image scaling	Enabled (default) 💌

Image 4-97

Advanced image settings : anti log Lut





Image 4-98 Anti lut exemple

- A Original source with logaritmical input signal
- B Image when by passing the logarithmic data correction

## 4.9.2.3 De-Gamma Lut

#### How to toggle

1. Click on Image settings.

The Advanced Image settings window opens.

2. Click on the drop down box next to DeGamma Look up table and select the desired value. (image 4-99)

activated	De-gamma correction is activated.
by passed	De-gamma correction is by passed

Default value : Activated



Image 4-99 Advanced image settings : De-Gamma Lut

## 4.9.2.4 3D lookup table (complex Lut)

## What are Complex Luts

These complex lut tables are used to color correct the output signals.

## How to toggle

1. Click on Image settings.

The Advanced Image settings window opens.

2. Click on the drop down box next to 3D lookup table and select the desired value. (image 4-100)

activated Color correction is activated.

by Color correction is by passed.

Default value : Activated

AntiLog lookup table (LUT-AL)	Enabled (default)	
DeGamma lookup table (LUT-DG)	Enabled (default)	
3D lookup table (LUT CLUT)	Enabled (default)	
	Enabled (default)	
Image scaling	Disabled	
P 22	1 48	

Image 4-100 Advanced Image settings : complex Lut

## 4.9.2.5 Image Scaling

#### When used

Image scaling is only available in the Cinema processing path.

Image scaling is available in both directions, horizontal and vertical.

The image scaling filter coefficients are optimized for bandwidth-limited image contents, and as such, they may not suitable for high bandwidth image contents. Therefore when graphics data is being processed in the Cinema processing path, it is desirable to disable the filter.

#### How to enable/disable

1. Click on Image settings.

The Advanced Image settings window opens.

- 2. Click on the drop down box next to Image scaling and select the desired value. (image 4-101)
  - enable With image scaling enabled, the incoming data is scaled according to the screen presentation file.
  - disable If the image filter is disabled, and if resizing of the image is occurring, the output will be a nearest neighbor resample of the input.
    - If the image filter is disabled, and if no resizing of the image is occurring, the output will be a pixel for pixel representation of the input.

AntiLog lookup table (LUT-AL)	Enabled (default)	
DeGamma lookup table (LUT-DG)	Enabled (default)	
3D lookup table (LUT CLUT)	Enabled (default)	
Image scaling	Enabled (default)	
	Enabled (default)	

Image 4-101

Advanced Image settings : image scaling

|--|

In no resizing is desired, the user should set the Active Area (SOURCE) data (input image size) and Resizing (SCREEN) data (output image size) such that the input and output image sizes match.

## 4.9.3 Advanced 3D Settings

#### Overview

- About 3D projection
- Start up of the advanced 3D settings
- Frame rate multiplication
- 3D Test pattern
- 3D Controls



3D projection can only be performed on a D-Cine Premiere DP100 and DP90.



3D information can be stored to EXTRA files which can be recalled via a macro.

## 4.9.3.1 About 3D projection

#### Summary

Typical scenario for 3D projection:



Image 4-102 Signal flow processing path

The left eye image data comes in over a HDSDI 24 p signal on port A on the projector.

The right eye image data comes in over a HDSDI 24p signal on port B of the projector.

On the interface board both signals are combined to a 48 Hz signal. Left and right frames are combined. The signals are further up scaled to 96 Hz at the level of the Modular Formatter and DMD

The 48 Hz signals can be outputted to an external polarizer system, or active polarity glasses. They can be outputted through the GPO connection.

For 3D projection, with Dual link HDSDI input where the input A represents the left eye stream, and input B represents the right eye stream, the following settings should be enabled.

Input selection	Cine input	
	Source selection	292 Dual
	Mode selection	4:2:2 Unpacked, 10 bits, O/E Frames
3D settings		
	Frame rate Multiplication	4:2
	L/R Input Reference	Use active data port: Port A = Left; Port B = Right

Set 3D Dark Time adjustment, 3D L/R Output Reference Delay and 3D L/R Output Polarity as needed.

## 4.9.3.2 Start up of the advanced 3D settings

#### How to start up

1. Click on 3D Settings within Advanced settings. (image 4-103)

The Advanced 3D settings window opens. (image 4-104)

dvanced			Image
Source Settings	Image Settings	3D Settings	Freeze
	а <del>н с</del> о.		

rame Rate Multiplication:	3D Test Pattern	Hz
ID Control	4 <u></u>	
L/R Input Reference	Use assigned GPI (polarity = true)	-
Input Frame Dominance	Left (L1R1 L2R2)	
L/R Input Reference GPI	None	*
L/R Display Reference	Not Used	*
L/R Display Reference GPI	None	*
L/R Output Reference Polarity	True	
L/R Output Reference GPO	None	*
Dark Time Adjustement	Setting: 0 us Actual: 388	u:
Output Reference Delay	Time: 0 us Phase: 0.000	deg

Image 4-104 Advanced 3D settings window

## 4.9.3.3 Frame rate multiplication

#### Introduction

The system provides the capability to do frame rate multiplication based on an N/M system.

For this system, M and N are defined as follows:

- M is defined as the number of input frames of data (defined by input vertical sync) that are required to
  constitute a full frame of image data. This parameter is used to determine the "base" or "full" image
  frame rate for the input data, in the form: Base rate (Hz) = Input frame rate (Hz) / M.
- N is defined as the number of frames of data to be displayed during a base rate time. This parameter
  is used to determine the output vertical rate, in the form: Output rate (Hz) = Base rate (Hz) \* N

The following are a few examples:

Example 1:

- Full frame of picture data input each vsync, therefore M = 1
- One frame of picture data output each base rate, therefore N = 1

E.g. 24 Hz input, 24 Hz output (Normal projector use)

Example 2:

- $\frac{1}{2}$  frame of picture data input each vsync, therefore M = 2
- frames of picture data output each base rate, therefore N = 4
- E.g. LR data input at 48Hz, LRLR output at 96Hz (LRLR 3D)

4:2 is generally used for 3D.

#### Frame rate Setup

Click on the combo box next to Multiplication and select the desired multiplication.

1:1 is normal projector use.

4:2 is generally used for 3D

others are used for experimental purposes.

#### 4.9.3.4 3D Test pattern

#### What can be done?

With the 3D test pattern, it is possible to test the complete setup in combination with an external polarizer system, or active polarity glasses. The output frequency of the test pattern can be entered so that the simulation of the input signal is completely.

#### Entering the output frequency

1. Click in the input field next to the test pattern icon. (image 4-105)

2. Enter the new frequency with the keyboard.



#### How to check the complete setup

- 1. Click on the test pattern icon to run the test pattern.
  - A 3D test pattern generated on the interface board will be displayed.

Alternating, the left and the right pattern will be displayed.

For the best test pattern and to display the pattern for the left or the right eye:

- set the frequency on 48 Hz
- set frame rate multiplication on 4:2
- set 3D control, 3D L/R Input Reference on White Line Code True or Blue Line Code True.
- set 3D L/R Display Reference GPI on one of the GPIs.
- set 3D L/R Display Reference on Use assigned GPI (polarity = true)
- set 3D Dark Time Adjustment, 3D L/R Output Reference Delay and 3D L/R Output Reference Polarity as needed.

Either the left or the right eye pattern will be displayed.

When e.g. the left pattern (indicated with L) is displayed, only the left eye may see this image. When it is not so, the setup is wrong and should be corrected.

2. Change the 3D setting L/R Display Reference to Use assigned GPI (polarity = false).

When the left patterns was displayed, now the right pattern will be displayed. Only the right eye may see this pattern. When it is not so, the setup is wrong and should be corrected.

## 4.9.3.5 3D Controls

#### **Overview**

Caroline Anglese (1017)	A let fate		
N Lood 10 Tool Research D Looked Inter Anno Research D Looked Life Inter Materian (III) Life Inter			
And in the second states of	- 3D Control		
Salph Talance State State (2	L/R Input Reference	Use active data port: Port A = Left; Port B = Right	<u> </u>
Annual L	Input Frame Dominance	Left (L1R1 L2R2)	•
	L/R Input Reference GPI	None	
	L/R Display Reference	Not Used	•
	L/R Display Reference GPI	None	
$\backslash$	L/R Output Reference Polarity	True	•
	L/R Output Reference GPO	None	
	Dark Time Adjustement	Setting: 0 us Actual: 388	
	Output Reference Delay	Time: 0 us Phase: 0.000	deg

Image 4-106 3D controls

#### L/R Input Reference

The Input Reference indicates which frame is Right and which frame is Left.

The following choices are possible:

Setting	Description
3D disabled	no 3D images possible
None Provided	no 3D L/R input reference provided
Use assigned GPI (polarity = true)	Can be used for single stream inputs High : Left is Active Low : Right is Active
Use assigned GPI (polarity = false)	Can be used for single stream inputs High : Right is Active Low : Left is Active
Use active data port : Port A = Left, Port B = Right	Use Active data port assignment (for dual port sources) to determine 3D L/R input reference.
Use active data port : Port A = Right, Port B = Left	Use Active data port assignment (for dual port sources) to determine 3D L/R input reference
Use <white code="" line=""> (polarity = true)</white>	Use "White Line Code" embedded in data stream as 3D L/R input reference.
Use <white code="" line=""> (polarity = inverted)</white>	Use "White Line Code" embedded in data stream as 3D L/R input reference.
Use <blue code="" line=""> (polarity = true)</blue>	Use "Blue Line Code" embedded in data stream as 3D L/R input reference.
Use <blue code="" line=""> (polarity = inverted)</blue>	Use "Blue Line Code" embedded in data stream as 3D L/R input reference.

## About <White Line Code> or <Blue Line Code>

The **White/Blue Line Code** is an embedded methodology for specifying whether a specific frame of input data has left or right eye data.

- The bottom pixel-row of the left-eye subfield should be pure white (blue) for the left-most 25% of the pixel-row, and pure black for the remainder of the row.
- The bottom pixel-row of the right-eye subfield should be pure white(blue) for the left most 75% of the pixel-row, and pure black for the remainder of the row.



- A Green field with white L and last lines 25 % white, 75 % black
- B Magenta field with last lines 75 % white, 25% black

The system will only sample the blue channel, allowing the external user to use either White or Blue Line Code. The system will blank out the encoded line so that it is not displayed.

This mechanism is only relevant when using a single stream input. The input reference is encoded in the content. (Information is on R, G and B channels).

This information can also be on blue channel only (Blue line bottom) Blue Line Code.

#### Input frame dominance

Only relevant for dual stream input.

The frames are arriving at the same time, but they will be inserted sequentially.

Insert order selection:

- Left (L1, R1, L2, R2 ...)
- Right (R1, L1, R2, L2 ...)

#### L/R Input Reference GPI

Only relevant if L/R Input Reference is set to Use assigned GPI.

Select the GPI which is used to set retrieve the L/R Input Reference.

#### L/R Display Reference

The optional 3D L/R Display Reference signal is used to specify which frame of eye data is to be displayed during a specific display frame. This signal is referenced to the display frame rate which is specified by the Frame Rate Multiplication command. The system will sample this reference in the middle of each display frame, inverting the sample for use during the following display frame.

Vsync (Display)	
3D L/R Display Reference	
Data (Displayed)	Right Left Right Left

Image 4-108

Relationship of 3D L/R Display Reference and displayed data

#### L/R Display Reference GPI

Only relevant if L/R Display Reference is set to Use assigned GPI.

Select the GPI which is used to set retrieve the L/R Display Reference.

#### L/R Output Reference Polarity

Indicates the polarity of the outgoing reference signal.

## L/R Output Reference GPO

The L/R Output Reference signal provides an external reference to the start of dark time for each displayed frame, as well as specifying which frame of eye date (left or right) is being displayed.

It is used to synchronize external polarizer systems, or active polarity glasses.

Defines which GPO is used to output the reference signal.



Image 4-109 Output reference display

## Output reference - displayed data

## **Dark Time Adjustment**

Between switching the frames the image needs to be black the same time the external devices need to switch (external devices can be 3D Glasses, or polarizing filter).

For 3D applications, systems typically need a period of time where the image projected on the screen is black. This black or "dark time" is used to switch the mechanism that controls what a viewers left eye and right eye sees. This software command is used to adjust the projector dark time to meet the requirements of whatever switching mechanism is being used.

3D dark time adjustment will be disabled (set to 0) whenever 3D is disabled. With 3D enabled and 3D dark time adjustment disabled, the projector will be set to its default dark time of approximately 388  $\mu$ s. There is no dark time when 3D is disabled.

The system will have a minimum and maximum dark time that can be achieved. If the specified value is smaller than the system can provide, the dark time will be set to the systems minimum value, which will be reported as the actual dark time value. If the specified value is larger than the system can provide, the dark time will be set to the systems maximum value, which will be reported as the actual dark time value.

For 3D applications, systems typically need a period of time where the image projected on the screen is black. This black or "dark time" is used to switch the mechanism that controls what a viewers left eye and right eye sees. For most 3D applications, the system will provide an output reference signal that indicates whether left or right eye data is being displayed, as well as the start of dark time. This signal is the 3D L/R Output Reference.

## **Output Reference Delay**

Delay values from Delay – Time and Delay – Phase are added to the nominal timing between the displayed dark time and the 3D L/R Output Reference.



Image 4-110

Delay example for 3D L/R Output Reference

## 4.9.4 Image Freeze

#### How to freeze

- 1. Check the image freeze check box to freeze the image. (image 4-111)
  - The word freeze becomes red. (image 4-112)

Advanced	Image	Advanced	Image
Source Settings Image Settings 3D Settings	Freeze	Source Settings Ima	age Settings 🔽 Freeze
age 4-111 dvanced Image settings : freeze		Image 4-112 Advanced Image setting	s · freeze activated

# 4.10 Function keys

## Overview

F1	Macro 1
F2	Macro 2
F3	Macro 3
F4	Macro 4
F5	Macro 5
F6	Macro 6
F7	Freeze image
F8	De-freeze image
F9	Dowser open
F10	Dowser close

# **5. PROJECTOR CONFIGURATION**

## Overview

- Set up of the Internal Clock
- Set up of the Serial Bus Address
- Set up of the Network Properties
- OPTO-Isolated GPI Configuration
- Controller Configuration
- Lamp Run Time Configuration for DP50
- Lamp Settings for DP30
- Lamp Settings for DP100-DP90

# 5.1 Set up of the Internal Clock

## Set up of the internal clock

1. Set up the date by clicking on the up or down arrow next to the month, day and year input. (image 5-1) Or,

click in the digit field and enter the correct month, day and year.

 Set up of the time by clicking on the up or down arrow next to the hour, minute and second input (image 5-1). Or,

click in the digit field and enter the correct hour, minute and seconds.

3. Click on the graphic icon to set the internal clock. (image 5-2)

A message will be displayed. (image 5-3)

Internal clock       Date (mm-dd-yyyy)       Time (hh:mm:ss)       15 ±       Use current PC-time	16 ± 2004 ♥ 35 ± 00 ±	Apply now		
Image 5-1 Internal clock set up	16 1 2004		Clock	X
Time (hh:mm:ss) 15 ± Use current PC-time	35 1 00 1	Aply now	Image 5-3	successively solu
Image 5-2			Internal clock set message	

Setting the internal clock

## Set the internal clock with the current PC time

- 1. Check the box Use PC time. (image 5-4)
- 2. Click on the graphic icon to set the internal clock (image 5-2).
  - A message will be displayed (image 5-3).



Image 5-4 Set current PC time as internal clock

# 5.2 Set up of the Serial Bus Address



Do not change the serial bus address when connected over a serial loop.

## How to set up

- 1. Click on the + or button next to the address indication. (image 5-5)
- 2. Click on Apply now.

The serial bus address will be set, the Apply now button will gray out.



0

# 5.3 Set up of the Network Properties



For DP100-DP90, it is highly recommended to set the IP addresses in the same range as that of the PC running the D-Cine Communicator.

#### Overview

- Ethernet Connections
- · Assign a hostname to the projector
- · Assign an Ethernet address via DHCP for the TI boards
- Manually assign an Ethernet address for the TI boards
- Assign an Ethernet address via DHCP for the Barco controller (only for DP100-DP90)
- Manually assign an Ethernet address for the Barco controller

## 5.3.1 Ethernet Connections

IP



Internet Protocol. The network layer of TCP/IP. Required for communication with the internet.

## For a DP100-DP90

In the user interface of the D-Cine Communicator two IP addresses can be changed:

- TI IP address Cinema IP Address: this IP address is used as the primary access point. This is the IP address used by the D-Cine Communicator and servers. The servers need to connect to the TI interface board to send over Metadata and Subtitle data.
- Barco IP address Projector IP Address: This IP address is used as the secondary access point. This IP address is used to update the Barco controller DIM PC. It will also be used for third parties that would like to integrate the projector into a custom system. E.g. Post houses that want to control a projector through a Creston Controller.

When the projector is set up in a network configuration, those 2 different Ethernet address should be applied to the projector.

Both Ethernet interfaces, from TI boards and from the Barco controller, are internally connected to a built-in Ethernet Hub. Both Ethernet ports on the connection panel are also connected to that built-in Ethernet hub. This hub detects automatically if a straight or crossover cable is used and adjusts this internally. Both straight and crossed cable can be used.

## For a DP50 or DP30

When the projector is set up in a network configuration, only one Ethernet address should be applied to the projector. Only the TI boards are addressable via Ethernet. A crossed cable must be use to connect a PC to the Ethernet port.



After changing any Ethernet configuration setting, it is NECESSARY to reset/restart the projector's electronics



#### Subnet mask

A number that is used to identify a subnetwork so that IP addresses can be shared on a local area network.



#### Default Gateway

A router that serves as an entry point into and exit point out of a network. For example, a local network (LAN) may need a gateway to connect it to a wide area network (WAN) or to the Internet.



#### DNS server

Computers, Projectors connected to a network are referenced by their IP address. The only problem is that remembering IP addresses is not easy. If you need to use hundreds of addresses then it will become impossible to remember them. This is why domain names are created. Internet names (domain and host names) are just aliases to these IP addresses. When you use an Internet address it is automatically translated to an IP address. In fact a program or device that translates those Internet names to IP addresses is called a DNS Server.



#### Host name

This is the name that will be returned, along with the IP address in response to the UDP broadcast query for projectors.



## DHCP

Dynamic host configuration protocol. DHCP is a communications protocol that lets network administrators manage centrally and automate the assignment of IP addresses in an organization's network. Using the Internet Protocol, each machine that can connect to the Internet needs a unique IP address. When an organization sets up its computer users with a connection to the Internet, an IP address must be assigned to each machine. Without DHCP, the IP address must be entered manually at each computer and, if computers move to another location in another part of the network, a new IP address must be entered. DHCP lets a network administrator supervise and distribute IP addresses from a central point and automatically sends a new IP address when a computer is plugged into a different place in the network.



## UDP

User Datagram Protocol

## What should be set up for each Ethernet address

2 ways can be used to assign addresses:

- use the DHCP setting so that a automatic address will be assigned.
- Assign manually an IP address, Subnet-mask, default gateway and DNS server address.
  - Set the IP-Address field to the desired value. This must NOT be 0.0.0.0 for static IP-Address assignment. The IP address identifies a projector's location on the network in the same way a street address identifies a house on a city block. Just as a street address must identify a unique residence, an IP address must be globally unique and have a uniform format.
  - Set the Subnet-Mask as appropriate for the local subnet.
  - Set the Default-Gateway to the IP-Address of the local router (MUST be on the local subnet!) on the same network as this projector that is used to forward traffic to destinations beyond the local network. This must not be 0.0.0.0. If there is no router on the projector's local subnet then just set this field to any IP-Address on the subnet.
  - Set the DNS server address to the IP address if the DNS server obtained from your network administrator or Internet Service Provider. That address can be any address. The DNS Server might be used in future releases to support the projector subtitling mechanism.

## 5.3.2 Assign a hostname to the projector



When using the type of projector as part of the hostname, the correct pictographic will be displayed in the connection window. Otherwise a standard pictographic will be used.

#### How to set up

- 1. Click on the **TI** button. (image 5-6) *Note:* For DP30 and DP50, the second part of the window (Barco settings) will be grayed out.
  - The Network settings window will open.
- 2. Click in the input field next to Hostname.
- 3. Enter a hostname for your projector. (image 5-7)

As example : e.g. DP100\_Theatre1, DP30\_Theatre3

TI HostName: DP10	0-HRE	
DHCP is Enabled.	150 150 100 00	1
II IP Address:	150.158.198.89	
11 Subnet:	255.255.248.0	5 3
TI DNS Server:	150.158.192.2 150.151	1 11
TI DefaultGateway:	150.158.192.1	<b>4</b> II
•	•	T
DHCP is Enabled. BARCO IP Address: BARCO Subnet: BARCO DefaultGateway	150.158.198.85 255.255.248.0 150.158.192.1	BARCO

 Projector Network Settings

 You can get IP Settings assigned automatically if yous network supports

 this capability (DHCP). Otherwise, you need to ask your network administrator

 Image 5-7

 Hostname

## 5.3.3 Assign an Ethernet address via DHCP for the TI boards

#### How to set up

- Click on the **TI** button. (image 5-8) *Note:* For DP30 and DP50, the second part of the window (Barco settings) will be grayed out. The Network settings window will open. (image 5-9)
- 2. Check the check box next to Obtain an IP address automatically (DHCP).

This selection will become active. Other selections are grayed out.

3. Click on **OK** to activate.

TI HostName: DP10 DHCP is Enabled.	D-HRE
TI IP Address:	150.158.198.89
TI Subnet:	255.255.248.0
TI DNS Server:	150.158.192.2 150.151
TI DefaultGateway:	150.158.192.1
•]	» /
DHCP is Enabled.	
BARCO IP Address:	150.158.198.85
BARCO Subnet:	255.255.248.0
BARCO DefaultGateway	: 150.158.192.1

Image 5-8

Network properties, TI button selected.

HostName: DP	100-HRE		_
Obtain an IP add	liess autor	natically	(DHCP)
Use the following	IP addre	18:	
P address:			
ubnet Mask:		-	53
efault Gateway:	1 12		15
NS Server:			

Image 5-9

Network settings window, DHCP selected



When DHCP is enabled and the projector does not find a DHCP server on the network, or the projector is not connected to a network, than the projector will be in a fail state. The hardware Fail LED on the interface board will be on. The status (Status tab) will indicate 'Ethernet Not OK'



Image 5-10 Ethernet state

## 5.3.4 Manually assign an Ethernet address for the TI boards

#### How to set up

1. Click on the **TI** button. (image 5-11) *Note:* For DP30 and DP50, the second part of the window (Barco settings) will be grayed out.

The Network settings window will open. (image 5-12)

- 2. Check the check box next to Use the following IP address
- 3. Click in the input field of the IP address and fill out the 4 fields. *Note:* An address contains 4 octets with a maximum value of 255.

This must NOT be 0.0.0.0 for static IP-Address assignment

- 4. Click in the Subnet mask input fields and fill out the 4 fields as appropriate for the local subnet.
- Click in the Default Gateway input fields and fill out the 4 fields. Set the Default-Gateway to the IP-Address of the router (MUST be on the local subnet!).
   Note: This must NOT be 0.0.0.0.

If there is no router on the projector's local subnet then just set this field to any IP-Address on the subnet.

- 6. Click in the DNS server input fields and fill out the 4 fields. **Note:** Address will be provided by your network administrator or Internet Service Provider.
- 7. Click **OK** to activate.



Image 5-11

HostName: DP1	00-HRE	_	_	
CObtain an IP add	ess autom	atically	(DHCP)	]
Use the following	IP addres	E	100	-
IP address:	+	•	E.	
Subnet Mask:	+			
Default Gateway:	-			
DNS Server:			12	

Image 5-12

Network settings window, manual set up selected



The PC's IP Address MUST be within the same subnet as the projector's IP Address in order for communication to be possible. This requires checking the PC's and projector's Subnet-Mask settings.

#### **IP** address examples

First example

- PC IP Address : 192.168.100.5
- PC Subnet Mask : 255.255.255.0
- Projector IP Address : 192.168.100.2
- Projector Subnet Mask: 255.255.255.0

Result : Communication possible. PC address is in the subnet range of the projector's IP address.

Second example

- PC IP Address : 10.16.236.100
- PC Subnet Mask : 255.255.255.0
- Projector IP Address : 192.168.100.2
- Projector Subnet Mask: 255.255.255.0

Result : No communication possible. PC address is not in the subnet range of the projector's IP address.

Third example

- PC IP Address : 192.168.200.1
- PC Subnet Mask : 255.255.255.0
- Projector IP Address : 192.168.100.2
- Projector Subnet Mask: 255.255.255.0

Result : No communication possible. PC address is not in the subnet range of the projector's IP address. The third group in the PC IP address and Projector IP address must be the same.
Fourth example

- PC IP Address : 192.168.200.1
- PC Subnet Mask : 255.255.0.0
- Projector IP Address : 192.168.100.2
- Projector Subnet Mask: 255.255.0.0

Remark : Communication possible. PC address is in the subnet range of the projector's IP address. The third group in the IP" addresses can be any value as the third group in the subnet mask is 0.

# 5.3.5 Assign an Ethernet address via DHCP for the Barco controller (only for DP100-DP90)

#### How to set up

- 1. Click on the BARCO button. (image 5-13)
  - The Network settings window will open. (image 5-14)
- 2. Check the check box next to Obtain an IP address automatically (DHCP).

This selection will become active. Other selections are grayed out.

3. Click on **OK** to activate.

TI HostName: DPT0	IO-HRE
DHCP is Enabled.	and the second
TI IP Address:	150.158.198.89
TI Subnet:	255.255.248.0
TI DNS Server:	150.158.192.2 150.151
TI DefaultGateway:	150.158.192.1 T
4	
DHCP is Enabled. BARCO IP Address: BARCO Subnet: BARCO DefaultGateway	150.158.198.85 255.255.248.0 150.158.192.1

Image 5-13 Network properties, Barco controller



Network settings window, Barco controller



When DHCP is enabled and the projector does not find a DHCP server on the network, or the projector is not connected to a network, than the projector will be in a fail state. The hardware Fail LED on the interface board will be on. The status (Status tab) will indicate 'Ethernet Not OK'



Image 5-15 Ethernet state

#### 5.3.6 Manually assign an Ethernet address for the Barco controller

#### How to set up

1. Click on the **BARCO** button. (image 5-16)

The Network settings window will open. (image 5-17)

- 2. Check the check box next to Use the following IP address
- 3. Click in the input field of the IP address and fill out the 4 fields. *Note:* An address contains 4 octets with a maximum value of 255.

This must NOT be 0.0.0.0 for static IP-Address assignment

- 4. Click in the Subnet mask input fields and fill out the 4 fields as appropriate for the local subnet.
- Click in the Default Gateway input fields and fill out the 4 fields. Set the Default-Gateway to the IP-Address of the router (MUST be on the local subnet!).
   Note: This must NOT be 0.0.0.0.

If there is no router on the projector's local subnet then just set this field to any IP-Address on the subnet.

6. Click OK to activate.



Image 5-16

🔽 Obtain an IP addre	ss autom	atically	(DHCP)	]
Use the following I	P addres	s:		
IP address:	+	-		
Subnet Mask:	+	4		]
Default Gateway:				

Image 5-17 Network settings, Barco controller



The PC's IP Address MUST be within the same subnet as the projector's IP Address in order for communication to be possible. This requires checking the PC's and projector's Subnet-Mask settings.

#### **IP** address examples

First example

- PC IP Address : 192.168.100.5
- PC Subnet Mask : 255.255.255.0
- Projector IP Address : 192.168.100.2
- Projector Subnet Mask: 255.255.255.0

Result : Communication possible. PC address is in the subnet range of the projector's IP address.

Second example

- PC IP Address : 10.16.236.100
- PC Subnet Mask : 255.255.255.0
- Projector IP Address : 192.168.100.2
- Projector Subnet Mask: 255.255.255.0

Result : No communication possible. PC address is not in the subnet range of the projector's IP address.

#### Third example

- PC IP Address : 192.168.200.1
- PC Subnet Mask : 255.255.255.0
- Projector IP Address : 192.168.100.2
- Projector Subnet Mask: 255.255.255.0

Result : No communication possible. PC address is not in the subnet range of the projector's IP address. The third group in the PC IP address and Projector IP address must be the same.

Fourth example

- PC IP Address : 192.168.200.1
- PC Subnet Mask : 255.255.0.0
- Projector IP Address : 192.168.100.2
- Projector Subnet Mask: 255.255.0.0

Remark : Communication possible. PC address is in the subnet range of the projector's IP address. The third group in the IP" addresses can be any value as the third group in the subnet mask is 0.

## 5.4 **OPTO-Isolated GPI Configuration**



### GPI

General purpose Input/Output



#### MACRO

A macro is file that contains a sequence of commands, internally to the projector, that must be executed.

#### What is possible

This interface enables the user to configure the automation system that is present inside the projection head (standard GPI configuration). The D-Cine Communicator enables the user to couple a macro file to a rising edge or falling edge on one of the inputs of the GPI connector (DB37).



Next to this standard GPI connector, there are also GPIOs on the button module and eventually on the optional automation modules.

#### Physical position of the connector.



Image 5-18 Physical position of BD37 connector on DP50



Image 5-19 Physical position of BD37 connector on DP30

VIDEO IN	00	0	NUMBER OF		CONTRO
		<b></b>	00	<u>لمحم</u>	lo
		-• 🔳 📰	400	de la de	10
				-	-
ENVICE-			1	and the second se	BANCO

Image 5-20 Physical position of DB37 connector on DP100-DP90

#### How to associate a macro

- 1. Select a General purpose input by clicking on the drop down box next to GPI selection. (image 5-21)
- 2. Click on Change next to Falling edge or Rising edge.

The macro selection menu will be displayed. (image 5-22)

3. Select a Macro file and click on Select. (image 5-23)

The selected macro file will be filled out next to falling edge or rising edge. (image 5-24)

- 4. If one edge is filled out, repeat from step 2 for the other edge if necessary.
- 5. If a Macro file has to be associated to another GP Input, repeat this procedure.





Image 5-22 Macro selection menu

Select	a D-Cin	e Pre	miere file	<u>? × </u>	- Opto-Isolated GPI Configuration -
Name	Type	Size	Date/Time		GPI Selection GP Input 1 -
MACRO01 MACR002 MACR003 MACR004 MACR005	File File File File File	37 37 37 37 37 37	2002/03/27 12:30:39 2002/03/27 12:32:10 2002/04/22 10:44:22 2002/04/22 10:44:22 2002/04/22 11:33:48		Macro Filename to be associated >Falling Edge 2 MACROON >Rising Edge 5
Cancel	1			Select	Macro file filled out

#### Image 5-23 Macro selected

#### How to clear a macro file

1. Click on Clear next to the macro file your want to remove.



To edit or to create a Macro, see "Macro Editor", page 225.

ssociated with MACROOT

Change Clear

Change Clear

#### 5.5 **Controller Configuration**

#### **Overview**

- **Configuring Serial Ports**
- Read out of the serial number
- Entering a SNMP key
- SNMP settings •
- Entering a CLO key •
- Lens Motor Availability

#### **Configuring Serial Ports** 5.5.1

#### What can be done?

A serial port can be configured as RS232 or RS422.

By default all values are set to RS232.

#### How to configure

1. Click on Configure.

A drop down menu opens. (image 5-25)

2. Select Configure serial ports.

The serial port overview menu will be displayed. (image 5-26)

- 3. Do you want to configure for RS232? If yes, Click on RS232 button next to the port input you want to configure. If no, Click on **RS422** button next to the port input you want to configure and click on **Terminate** if you want to terminate the line.
- 4. Repeat from step 3 for the other ports.
- 5. Click on Set to really configure the ports.

	Configure Serial Ports	E Data	ntroller Modul	e Configuration	·	
	Serial Number : 9197286	Control Port	R\$-422	RS-232	Temnate	
ι	SNMP Settings	Loop-Out Port	R5-422	RS-232	Terminate	
	CLO key	Loop-In Port	R5-422	RS-232	Terminate	
	Lens Motor Availability	Console Port	R5-422	R5-232	Teminate	
nage :	5-25	External TI Port	R5-422	RS-232	Termisate	

Image 5-26

#### Serial Port overview window

### 5.5.2 Read out of the serial number

#### How to read out

1. Click on Configure.

A drop down menu opens.

The second line indicates the serial number of the D-Cine Premiere. This serial number can also be found on the external label on the projection head. (image 5-27)



### 5.5.3 Entering a SNMP key



#### SNMP

Simple Network Management Protocol is the protocol governing network management and the monitoring of network devices and their functions.

#### What can be done?

Depending whether this option has been ordered, it is necessary to enter the key that has been delivered with the projector. When the key is correctly entered, the SNMP mechanism will be enabled. From that moment on a agent will send alarms to a specific person when something goes wrong with the projector.

#### How to enter a key?

1. Click on Configure. (image 5-28)

A drop down menu opens.

2. Click on SNMP key.

The SNMP key window pops up. (image 5-29)

- 3. Enter the key exactly as indicated.
- 4. Click on Proceed.

A check window appears to confirm your key entry. (image 5-30)

5. When OK, click Yes.

The SNMP mechanism will be started.





SNMP key check

#### Deleting a SNMP key

- 1. Go to *Configure* and select *SNMP key*. The SNMP key window will appears.
- 2. Press **Delete Key**(image 5-29).

The key will be removed.

#### 5.5.4 SNMP settings

#### SNMP Settings start up

- 1. Click on *Configure*. (image 5-31) A drop down menu opens.
- 2. Click on SNMP Settings.

The SNMP settings window opens. (image 5-32)

Configure			
Configure Serial Ports Serial Number : 9137286 SNMP key : CA96-D8624E68-EB60	Mgt systems Mgt system to receive traps	150.158.195.70	Edit
SNMP Settings	Trap type	V1 💌	
CLD key <sup>o</sup> Lens Motor Availability	Agent++ log file size:	10000	
ge 5-31 MP settings selected	BARCO SNMP log file size:	5000	
			ОК

SNMP configuration

#### Management System address setup

- 1. Click on Edit to set up the management server address.
  - The IP address window opens. (image 5-33)
- 2. Enter the IP address of the management server.
- 3. Click OK to activate.

P Address	
150 . 158	. 195 . 70
Cancel	OK

Image 5-33 Management system server IP address

### Trap type

SNMP exists in different versions. You have SNMP V1 and SNMP V2. The difference is basically the format of the SNMP messages. Some management systems will support V1, others will support V2. Depending on the management system used one should select V1 or V2 traps to be sent out to the management system.

To change the trap type, click on the combo box next to Trap type and select the corresponding type.

### Log size settings

The following settings are sizes of log files that relate to the operation of the SNMP agent.

Basically they should never be changed. These settings can be used for debugging.

Agent ++ log file size: Size of log file that contains logging of the SNMP Agent core engine.

BARCO SNMP log file size: Size of log file that contains logging of software modules build around the SNMP core engine.

### 5.5.5 Entering a CLO key

CLO



Constant light output

#### What can be done?

Depending whether this option has been ordered, it is necessary to enter the key that has been delivered with the projector. When the key is correctly entered, the CLO mechanism will be enabled. To read out or to calibrate the CLO for DP50, see "Constant Light Output for DP50", page 69, for DP30, see "Light Output and Calibration for DP30", page 74, for DP100-DP90, see "Light Output and Calibration for DP100-DP90", page 78.

#### What is CLO?

A lamp powered with a constant power will produce less light when ageing. The CLO function boosts the lamp power so that the light output stays constant.

#### How to enter

1. Click on Configure.

A drop down menu opens.

2. Click on CLO key. (image 5-34)

The CLO key window pops up. (image 5-35, image 5-36)

- 3. Enter the key exactly as indicated.
- 4. Click on Proceed.
  - A check window appears to confirm your key entry. (image 5-37)
- 5. When ok, click on Yes.

The CLO mechanism will be enabled.



Check !!
Are you sure F070-4551-2D79-2EE0 is the con CLO key for this projector ?
Yes No
Image 5-37 CLO key entry check window

Image 5-36

CLO key window for DP30, DP100 and DP90

### Deleting a CLO key in the DP30, DP100 and DP90

1. Go to Configure and select CLO key.

The CLO key window will appears (image 5-36).

2. Press Delete Key.

The key will be removed.

×

#### 5.5.6 Lens Motor Availability

#### What can be done?

Only for DP100-DP90.

The D-Cine Premiere can be equipped with a motorized lens or a non-motorized lens. As the software cannot detect that by itself, that can be configured in the Lens Motor availability.

#### How to configure?

1. Click on Configure.

A drop down menu opens. (image 5-38)

2. Select Lens Motor Availability.

The Lens Motor Availability window opens. (image 5-39)

3. If a motorized lens is available, check the check box. If no motorized lens is available, uncheck the check box.



## 5.6 Lamp Run Time Configuration for DP50

#### Run time and strikes

The total run time of the lamp and the number of strikes are indicated in he lamp run time configuration pane.

Lamp Run Time: Lamp Strikes:	200 hours 42 strikes	
Apply new values	Set Run Time valu	e Set Strikes value
Apply new values		10 3

#### When using

This configuration can be used when installing a new lamp to set the values to zero or when inserting an already inserted lamp to set the values to the previous values of this lamp.

#### How to change

- 1. Click on the up or down arrows of the value indication box for the lamp run time and/or the number of strikes. (image 5-41)
- 2. Click on Apply new values. (image 5-42)

A confirmation window will be displayed with the new values. (image 5-43)

3. If you want to continue, click on **Yes**. If you want to cancel, click on **No, cancel the action**.

.amp Run Time: .amp Strikes:	200 hours 42 strikes
	Set Run Time vilue Set Strikes vilue
Apply new value	
le 5-41 nging the value	25
ge 5-41 nging the value	35
ge 5-41 anging the value Set lamp run time	values
ge 5-41 anging the value set lamp run time This operatio to 0 hours a	es values X n will set the lamp run time values and 0 strikes.



Image 5-42 Applying new values Lamp

#### Image 5-43

New lamp values confirmation window

# 5.7 Lamp Settings for DP30

#### Overview of the settings

RunTime (Hours)	5
Remaining RunTime (Hours)	994
Strikes (Strikes)	16
Article Number	R9806550
Serial Number	1234567
Reset	

Image 5-44 Settings overview

The values are given as read only.

The following values can be consulted:

Run time in hours	Run time since first start up of the lamp or since the last reset.
Remaining Run time in hours	Remaining run time that the lamp can be used with risk of damaging the projector.
Strikes	Number of strikes since the first start up of the lamp or since the last reset.
Article number	Article number of spare lamp which must be used in this projector.
Serial number	Serial number of actual installed lamp inside the projector.

#### When using the Reset button

This reset button has to be used when installing a new lamp to set the value for run time and the number of strikes to zero and reset the remaining run time.

#### How to reset the values?

1. Click on Reset.

A reset message will be displayed.

- 2. Fill out the Article number and the Serial number of the new lamp. (image 5-45)
- 3. Click on Reset.

The software will check if the entered article number and serial number are valid numbers. If so, the lamp parameters will be reset. If the entered numbers are not valid, everything remain as it was.

riesetting the La allowed when a inserted. Please number and seria Lamp below.	imp Run Time is only new lamp has been enter the Article al number of the new
Article Number:	
Serial Number:	

Image 5-45 Lamp reset message

### 5.8 Lamp Settings for DP100-DP90

#### Overview of the settings

The values are given as read only.

The following values can be consulted:

Run time in hours	Run time since first start up of the lamp or since the last reset.
Remaining Run time in hours	Remaining run time that the lamp can be used without risk of damaging the projector.
Strikes	Number of strikes since the first start up of the lamp or since the last reset.
Article number	Article number of spare lamp which must be used in this projector.

#### When using the Reset button

This reset button has to be used when installing a new lamp to set the value for run time and the number of strikes to zero and reset the remaining run time.

#### How to reset the values?

1. Click on Reset. (image 5-46)

A reset message will be displayed. (image 5-47)

- 2. Fill out the article number of the new lamp.
- Or,

click on **Select** to display a list of possible article numbers. Select an article number and click **Open**. (image 5-48)

The software will check if the entered article number is a valid number.

3. Fill out the serial number of the lamp. (image 5-49)

4. Click on Reset to activate the procedure.

The lamp parameters for this new lamp will be loaded and the number of strikes, run time and remaining run time will be reset.

Remaining RunTime (Hours)	498
itnikes (Strikes)	25
Article Number 🛛 🖊 🗍	R1000
Serial Number 🖌 📔	12345678
Reset	



21 ×1

Name	Description	Power	Currer_
H9806480	XEO 2000/WHEM OFH	5000W	TAUA
R9806490	XB0 6000W/HP OFR	6000w/	170A
R98064901	XB0 6000W/HP OFR	6000W/	170A
R9806510	UXL-70SC	7000W	160A
R9852400	XLM-DXL-60BA2	6000w/	160A
R9852410	XLM-DXL-608A2	6000w/	160A
R9992000	GENERIC 2000W	2000w/	80A
R9992500	GENERIC 2500W	2500w/	90A
R9993000	GENERIC 3000W	3000W	100A
R9994000	GENERIC 4000W	4000w/	135A
R9995000	GENERIC 5000W	5000w/	140A
R9996000	GENERIC 6000W	6000w/	160A
R9997000	GENERIC 7000W	7000w/	160A -
4			

only allowed w has been inser the Article num number of the	hen a new lamp ted. Please enter aber and serial new Lamp below.	
Article Number:	R9992500	Select
Serial Number:		
Pourt	Cancel	

Image 5-49

Lamp article number filled out

Image 5-48

Lamp article number selection

lmage 5-47 Lamp reset message

# 6. PROJECTOR TESTS

#### Overview

- General Purpose Outputs
- Ethernet test
- Test Patterns
- Port 292 error counts
- Self Test

## 6.1 General Purpose Outputs

#### What can be done?

The general purpose outputs (GPO) for DB37 are the standard GPOs.

The general purpose outputs (GPO) can be high, low or toggle.

#### How to set up

1. Click on the icons to set the status of the GPO. When the icon is on a white field, it is clickable and becomes active.

£	set low (make output low)
Ŧ	set high (make output high)
K	toggle (toggle the output from high to low or from low to high
NL.	continues toggle (toggles the output continuously between high and low or vice versa

The result of the selection is indicated in the status column.

### 6.2 Ethernet test

#### How to realize

1. Fill out the Ethernet address of the device you want to ping to. A ping goes from the projector to the other device. (image 6-1)

Note: An address contains 4 octets with a maximum value of 255.

2. Click on the graphic icon to start the ping test. (image 6-2)

When the ping test is successful, a message will be displayed. (image 6-3)

when the ping test is not successful, the message ping failed will be displayed. (image 6-4)

IP-address to ping to :	150 . 158 . 60 .	7 Ping now
-------------------------	------------------	------------



## 6.3 Test Patterns

#### **Overview**

- · Changing a test pattern
- Clear the projected test pattern

#### 6.3.1 Changing a test pattern



The default test patterns are in the RGB color space. The color space option is by default RGB. If a test pattern with YCbCr color space is uploaded, select first YCbCr otherwise the pattern will be displayed in wrong way.

#### How to change

1. Click on Change test pattern. (image 6-5)

A retrieving window appears for a while until a file manager with the list of patterns is displayed. (image 6-6, image 6-7)

- 2. Select a test pattern out of the list.
- 3. Click on Select.

A loading window appears and the test pattern will be displayed. The name of the pattern will be fill out in the field Test pattern currently displayed. (image 6-8, image 6-9)





Name	Tupe	Size	
3x3 checkerboard	Fie	49170	1
3x3 checkerboard inv	File	49170	2
BDCLogo	File	630705	1
Blenish Blue Check	File	4675	÷.
Blemish Red Check	File	4675	4
Convergence_pattern	File	55086	
MIf_black	File	47808	2
Mtf_blue	File	47908	2
Mtf_green	File	47808	2
Mif_red	File	47808	2.
4		1	ſ
Cancel		Select	t I

Loading test pattern. Please wait ....

Image 6-8 Loading test patterns

Image 6-7

List of test patterns

DCLogo		Change test pattern	
Options		Clear test pattern	
Color Space:	• RGB C YC	эСr	j

Test pattern displayed.



When the actual color space is different from the color space of the test pattern due to external settings or due to loading a typical PFC file or CSC-0 or CSC-1 file, the color space will be switched to the color space of the test pattern.

When clearing a test pattern everything will be set back to the original settings except masking, resizing and anamorphic lens factor.

#### **Pattern shortcuts**

10 predefined test patterns can be quickly selected via the shortcuts.

1. Click on one of the 10 predefined test pattern shortcuts. (image 6-10)

The selected test pattern will be displayed. The button will be in the pressed state.

2. To clear the test pattern, click a second time on the pressed button

Or, click on the **Clear test pattern** button.

The test pattern will be removed.

		Change lest p	attern	_ =
0		Clear test pa	tern	
Color Space:	· RGB C Y	СЬСт		

Image 6-10 Test pattern shortcuts

#### 6.3.2 Clear the projected test pattern

#### How to clear

1. Click on Clear test pattern. (image 6-11)

A warning message will be displayed to indicate that any projector configuration changes made while a test pattern was enabled are not saved into the ACTIVE configuration, and will be lost when clearing the test pattern (except resizing and masking). Settings will be set back to the original settings as before the test pattern was selected. Settings on resizing and masking will remain active. If you want to save these configuration settings save them first in a file via the file manager. (image 6-12)

The test pattern will be removed from the screen.

2. Do you want to save the settings ?

If yes, **Click No, cancel this action** and continue with saving procedure in File manager. If no, click **Yes**.

A remove test pattern message will be displayed. (image 6-13)

CLogo	Change test pattern
	Clear test pattern
Options Color Space: @ RGB @ YCbC	

Image 6-11 Clear test pattern

🔲 Clear	Test Patterns	×	and the second s
	Configuration changes made while a test pattern was displayed are not saved. Do you want to clear this test pattern ?		Removing test pattern. Please wait
-			Image 6-13 Removing test pattern
	Yes	No, cancel this action	
Image 6-1	2		

Clear test pattern warning

### 6.4 Port 292 error counts

#### Overview

Total Error Count includes all reported errors on the source input ports A and B since the system was last reset or power-cycled.

Recent Error Count includes all reported errors in the last 60 seconds on the source input ports A and B.



Error count on port 292 A & B

If you check Continuous update, the error count will be update every 300 milliseconds.

### 6.5 Self Test

#### 6.5.1 Start up of the self tests setup

#### How to start up?

1. Click on Self Tests. (image 6-15)

The self tests selection window pops up. (image 6-16)

at pattern currently direland	_0	diam shortcuts	General Purpose Outputs	
Ch	inge lest paltern		GPO 1 E F 1/2 III	LOW
0	ear test pattern		6P0 2 7 5 1/1 1	HIGH
Options Color Space: © RGB C YCbCr		S S	6P0 3 王 王 浙 11	LOW
			6P0 4 1 5 %	TOGGLE
			GPO 5 E F M IL	HIGH
ernet lest			GPO 6 <u>t</u> <u>f</u> <u>M</u>	LOW
IP-address to ping to :	X X	Ping now	EPO 7 E F 1/1 II	LOW
t 292 Error Counts				
2-A: Total Error Count	0			
2-A: Hecent Error Count 12-B: Total Error Count	0		1.000	
D. D. Danard Franc Franch	0		Sell Tests	
2-D: Necenk Error Lount				-

Image 6-15 Start up Self tests setup



Image 6-16 Self test setup

#### 6.5.2 Self tests choices

#### **Overview tests**

All self tests		
	All Interface Board Tests	
		Interface FPGA register test
		Interface Frame Store test
		Interface ANC-FIFO test
		Interface RTC test
		Interface Trusted Platform Module
	Interface Processor / Connection test	
	All processor tests	
		Processor Datapath test
		Processor LUT-CLUT test
		Processor LUT-DG test
	Formatter test	

When selecting a test from the first column, all underlaying test from column 2 and 3 are executed. When selecting a test from column 2, the underlaying tests from column 3 are executed.



Additional information on the results of the self test can be found in the status tab.

# 7. COLOR CALIBRATION

#### Overview

- Introduction to Color Calibration
- Color Correction

# 7.1 Introduction to Color Calibration

#### Overview

The color coordinates for the projected primary colors must be measured on the screen. The values can be different than those originally inside the projector due to reflection on the screen or due to the influence of the glass between the projection booth and the theatre and even the projected colors are different from setup to setup.

These measured color coordinates are references for the projector and will be entered so that the projector knows how its colors are projected on the screen.

This reference measuring, together with the delivered gamut file of the film will introduce a color correction so that the film will be projected with the correct color settings.

## 7.2 Color Correction

#### Overview

- Color Correction Process
- Color Measuring
- Installing a Target Color Gamut file
- Verifying the colors after correction

#### 7.2.1 Color Correction Process

#### Step to be taken

1. Measuring of the color gamut of the projector.

- 2. Select a target color gamut file or upload a target color gamut file.
- 3. Verify the colors on screen after correction (optional step).



While executing step 2, the previous color corrections on the projector will be removed. 3D tables are bypassed.



When standard processing is selected the cinema color correction is not valid. The active TCGD data is not taken into account.

#### 7.2.2 Color Measuring



**CAUTION:** Set anamorphic lens factor to 1.0 before starting the color measuring.

#### How to measure

1. Click on Measure Color Gamut. (image 7-1)

The Color Gamut Measurement window will be displayed showing the actual color values. (image 7-2)

2. Select a color by clicking on the color name. (image 7-3)

A loading color test pattern message will be displayed. After a while, the selected color will be projected **without any color correction** on the screen. (image 7-4)

The selected input fields of that specific color becomes white.

- 3. Measure the color coordinates for that specific color.
- 4. Enter the measured coordinates in the white input fields. Enter just the digits of the decimal value.
- 5. Repeat this procedure for the other colors and for white by starting at step 2.
- Do you want to use the color calibration values in a macro file? If yes, press Save to file (image 7-3).
  - *Tip:* This is handy when using the same projector for normal cinema projection and for 3D cinema projection. The color calibration can then be done via a macro file but first, both color calibration files must be saved.

The *Save measured colors to file* window opens. If no, continue with step 8.

7. Enter a name in the Filename input field and press Save.

The color values will be stored for later use.

8. To use the measured values immediately, press now **Apply and Exit** (image 7-3). *Note:* It is still possible to return to the previous coordinates by clicking **Cancel**.

The measured values are written to file and become active. (image 7-5)

9. Set the anamorphic lens factor back to its original value.



Image 7-1 Selecting Measure Color Gamut

NO Color	RED	GREEN	BLUE	WHITE
8->	0. 6800	0.2650	0. 1400	<b>0</b> . 3140
y ->	<b>0</b> . 3200	0. 6900	0. 0700	0. 3510
		Save to file	Apply and Exit	Cancel

Image 7-2

Color Gamut Measurement window

NO Color	RED	GREEN	BLUE	WHITE
x->	0. <u>6807</u>	0, 2650	0. 1400	<b>0</b> . 3140
y ->	0, 3200	<b>0</b> . 6900	0. 0700	0.3510
		Save to file	Apply and Exit	Cancel

Image 7-3 Color Gamut Measurement Red selected

	🔞 Projector's Response
Loading color test pattern. Please wait	Measured color gamut data successfully written to file. The values are active now
Image 7-4 Loading test pattern message	ОК
	Image 7-5 Values successfully applied

### 7.2.3 Installing a Target Color Gamut file

Ĭ

#### TCGD

Target Color Gamut Data. These files defines the Target Color Gamut. For each movie, it is possible to select a 'Target' Color Gamut File, which defines the color gamut values for that specific movie. The TCGD file is part of the PCF file delivered with the movie.

#### Selecting a target file inside the projector

1. Click on Select Target Color Gamut file. (image 7-6)

A retrieve list message will be displayed and after a while the file list comes up. (image 7-7, image 7-8)

- 2. Select a file out of the list.
- 3. Click Select.

An adjust gamut message will be displayed. (image 7-9)

4. Click **Proceed** to continue.

Click Cancel to return to the selection window.

The selected file will be made active. (image 7-10)



Image 7-6 Selecting Target Color Gamut file

Retrieving file firt	Name	Тире	Size	Date/Time	-
redicting file instan	Adantis	File (RS)	136	2002/03/13 16:30	00
	Mk7 color verification	File (FL)	136	2001/11/13 17:16	54
. 7 7	P7v0 (Star Wars)	Fie (RS)	136	2002/03/13 16:30 1	06
e /-/	P7v1	File (RS)	136	2002/03/13 16:30	10
etrieving color gamut files	P7v2 telecine	File (RS)	136	2002/03/13 16:30	14
	P7v2 theatre	File (RS)	136	2002/03/13 16:30	18
	Rec. 709	File (RS)	136	2001/11/13 17:17:	24
	SMPTE C	File (RS)	136	2002/03/13 16:29:	16
	Shrek	File (RS)	136	2002/03/13 16:30:	28
	TS2 (P3)	File (RS)	136	2002/03/13 16:30.3	32
	test	File	136	2002/02/07 15:17:	24 💌
	Cancel				Select
	Overview color	gamut	files	;	



File active message

×

Image 7-9 Adjust color gamut message

#### Uploading a target file from a PC.

1. Click on Upload Target Color Gamut file. (image 7-11)

A browser window opens. (image 7-12)

2. Select the desired TCGD file on your file system and click **Open**.

The file will be loaded to the projector and will be made active.



Image 7-11 Selecting Target Color Gamut file

Look in: Communic	ator Software	+ 10 + 10-	
23			
Hatory			
Desktop			
Documents			
ly Computer			
Computer	000000		Onen

Image 7-12 Browser window to TCGD files

### 7.2.4 Verifying the colors after correction



CAUTION: Set anamorphic factor to 1.0 before verifying the colors after correction.

#### Overview

The color coordinates of the projected image after correction can be verified by measuring the coordinates on the screen again. The measured values should be the values as indicated on the interface.



This part of the color correction procedure is optional.

#### How to verify

1. Click on Verify Color Gamut. (image 7-13)

The verify color gamut window opens. (image 7-14)

2. Select a color button.

### 7. Color Calibration

A loading message will be displayed.

The selected color will be displayed on the screen with color correction.

- 3. Measure the coordinates with a colorimeter on the screen and check with the values below the color bottom.
- 4. Repeat this procedure for other colors, starting by step 2.
- 5. When finished, click on **Remove Color**.

A remove color pattern message will be displayed. (image 7-15)

The color pattern will be removed.

6. Set the anamorphic lens factor back to its original value.



Image 7-13 Select Verify Color Gamut

Red	Green	Blue	Magenta	Cpun	Anne	White	Remove Color
0.653	0.265	11 140	0.373	0.194	0.438	0.311	

Image 7-14 Verify color window



Image 7-15 Remove test pattern

# 8. FILE MANAGER

#### Overview

- Introduction
- · Internal file system
- File Upload
- File Download
- · Actions on Projector files
- · Backup the file system
- · Restore the file system

## 8.1 Introduction

#### Overview

The D-Cine Premiere makes use of an internal "disk chip". This chip contains a file system that can handled in a similar way as a file system on PC. That allows the D-Cine Premiere to make use of files and directory structures similar to those found on a PC.

The D-Cine Premiere stores the state of the projector in something called ACTIVE. ACTIVE can be compared with a file. Changes made to the projector are immediately reflected in ACTIVE. So ACTIVE always represents the current state of the system. When powering up the latest state will be restored.

Within the interface it is possible to manage the internal file system and the ACTIVE configuration.



#### ACTIVE

Stores the current state of the projector.

### 8.2 Internal file system

CSC



Color Space Converter

#### Overview

- Changing the view
- Renaming files and folders
- Deleting files and directory
- Creating a new folder
- Navigation through folders
- Changing the attribute setting

#### **Overview**

The default view is the "Directory Structure" view.

	Name	Type	Size	Date/T
	ARM_Main_App.bin	File	352532	2001/11
	BARCO	Directory		
	DSP_Main_App.bin	File	81500	2001/1
Change View>	Input_Fpga.bin	File	823497	2001/1
	LOGFILES	Directory		
	PROJFILES	Directory		
	system.cfg	File	268	1980/0
==Upload=>				
c=Download==				
C-D'GHILLOUG-				
	•		-	3

Image 8-1

Default projector file system view

The same manipulation can be done as on a normal file system of a PC.

The files are shown with extensions in the Directory Structure view.

#### 8.2.1 Changing the view

#### How to change

1. Click on Change View ==>.

The file or structure show window pops up. (image 8-2)

The radio button in front of Show Directory Structure will be selected.

With Show Directory Structure selected, the file extension will be displayed too. For all others, the file extensions are hidden.

2. Select a mode and click on **OK**.

The following mode are possible:

Mode	Explanation
CSC	Color Space Converter
	Defines the Color Space to be used. It can be RGB or YcbCr.
TCGD	Target Color Gamut Data
	These files defines the Target Color Gamut. For each movie, it is possible to select a 'Target' Color Gamut File, which defines the color gamut values for that specific movie.
	Together with the measured color coordinates of the projector, the corrections for the projector are calculated so that the color gamut of the movie is reached.
LUT-AL	Anti logarithmic lookup table.
LUT-DG	De-Gamma Lookup table.
LUT-CLUT	Complex LUT lookup table.

Mode	Explanation
SOURCE	Source information.
	Source file defines the capture configuration of the data presented to the input port.
	Number of Columns/Rows that refer to the sub-image (or active area) that is to be captured from the active data input stream.
	Offset information: shifts the offset of the active area. Image aspect ratio of the active area.
	Everything that can be configured with the Projector configuration tab in the D-Cine Communicator package, can be saved in a Source File.
PCF	<ul> <li>Projector Configuration File. This file is a file that will be delivered with each movie. It contains all data needed to display a certain movie as it is defined by the movie distributor. This file includes :</li> <li>LUT-CLUT data</li> <li>LUT-AL data</li> <li>LUT-DG data</li> <li>Color Space Convertor data</li> <li>Target Color Gamut data</li> <li>Source data</li> </ul>
MCGD	Measured color Gamut Data This file contains the measured color gamut data (color reference values) for a specific projector installation. This type of file can be created with the 'measure color gamut' function in the color gamut tab.
CSC-P7	Color Space Convertor – P7
	Normal projector use has the CSC-P7 values calculated based on MCGD and TCGD parameters. Therefore, downloading CSC-P7 values is typically done for debug purposes, rather than normal operation.

Mode	Explanation
EXTRA	Extra files can contain the following information: Source selection Port 292-A Source Type and Packing Port 292-Dual Source Type and Packing Port 292-Dual Source Type and Packing Port DVI-A Source Type and Packing Port DVI-B Source Type and Packing Port DVI-B Source Type and Packing Processing Path Select Advanced source settings SMPTE Field Bit 3:2 Pull-Down Enable Pull-Down Offset Pull-Down Re-Synchronization SMPTE 291 Disable Image Orientation Select Settings not accessible through the D-Cine Communicator: Vertical Frequency (Isb) Vertical Frequency (msb) Image Filter/Scaler Disable GPI Configuration 3D setting Frame Rate Multiplication 3D Control commands (All)
SCREEN	<ul> <li>Screen presentation configuration These type of files include:</li> <li>Resizing information</li> <li>Letterboxing information</li> <li>Masking information</li> <li>Anamorphic factor of projector lens information</li> <li>All information in the SCREEN file can be set with the Resizing, Masking and Lens Type interface on the projector configuration tab.</li> </ul>
MACRO	Macro files Macro files contain a sequence of commands that need to be executed when executing the macro file.
TGA	Targa Bitmap files These files are typically used as test patterns. The D-Cine Premiere supports the TGA <sup>™</sup> format as specified by TrueVision TGA <sup>™</sup> , File Format Specification, V2.0 with some restrictions. See next table for these restrictions.

Color Space	Bits/Color	Sampling	Total Bits w/ alpha <sup>3</sup> w/o alpha		
RGB	8	4:4:4	32	24	
RGB	12	4:4:4	48	36	
YC <sub>b</sub> C <sub>r</sub>	8	4:4:4	32	24	
YC <sub>b</sub> C <sub>r</sub>	12	4:4:4	48	36	
YC <sub>b</sub> C <sub>r</sub>	8	4:2:2	-	16	
YCbCr	12	4:2:2	-	24	

Restriction to the TGA format:



File or structure selection window

#### 8.2.2 **Renaming files and folders**

#### How to rename

1. Right click on a file or folder.

A pop up menu pops up. (image 8-3)

2. Select Rename.

The Rename dialog box pops up. (image 8-4)

- 3. Fill out the new name in the input field. Note: File attributes must allow this action.
- 4. Click **OK** to rename the file or folder.



Renaming files and folders

#### 8.2.3 **Deleting files and directory**

#### How to delete

1. Right click on a file or directory.

A pop up menu pops up. (image 8-5)

```
3. Alpa data is ignored for test patterns.
```

#### 2. Select Delete.

Note: File attributes must allow this action.

Note: To delete a directory, the directory should be empty.

A confirmation window pops up. (image 8-6)

3. Click **OK** to confirm.

Name		Туре	Is it OK to delete MACROOT	MACRO
		Directory Directory	Cancel	OK
MACROOLMAC	n Rename	File	Image 8-6	
MACRO03.MACI	Delete	File	Delete confirmation	
MACRO06.MACI MACRO09.MACI	Change Attributes	File		
MACROjpna.MAC	MACROjpna.MACRO			
mage 8-5 Deleting a file or	directory			

### 8.2.4 Creating a new folder

#### How to create

1. Right click over an empty space.

A pop up menu pops up. (image 8-7)

#### 2. Select New folder.

The new folder creation menu pops up. (image 8-8)

3. Fill out the name of the new folder and click **OK**.

The new folder is created.



### 8.2.5 Navigation through folders

#### Navigation

The same functionality is possible as in a PC environment. Double click on a folder to open this folder.

#### 8.2.6 Changing the attribute setting



Changing the attribute setting is only possible in *Directory Structure View*.

#### How to change

1. Right click on a file.

A pop menu pops up. (image 8-9)

2. Select Changing Attributes.

The attribute window opens. (image 8-10)

3. Check the attributes you want to set and click **OK**.

Name	Туре	DCineCommunicator	? X
MACRO01.MA CDO MACRO02.M. Rename MACRO03.M. Delete MACRO05.M. Change Attributes MACRO09.M. Change Attributes MACRO09.M. Change Attributes	Directory Directory File File File File File File	Change the file attributes as needed. Read Only Hidden System Archive	Press OK to change.
nage 8-9 selecting Changing Attributes		Cancel	<u>ОК</u>

### 8.3 File Upload



#### How to upload

- 1. Change first the view to the specific view of the file you want to upload. see "Changing the view", page 134.
- 2. Select a file or select multiple files by holding down the Ctrl button on the PC file system.
- 3. Click on **==Upload==>**. (image 8-11)

The file or files will be copied to the internal file system on the selected location. Checks on file type and size will be executed.

ODATA     OATA     OACCESS     Ocopy of Security     OEXCEL	Directos Directos Directos		MACRO01 MACRO03	File	11	2002/06/06 05
Manuals     My Pictures     My Pictures     PPT     Socurity     My ORD     Crimbo.exe     MACRO     PLAN2.jpg     SCR04.SCREEN     TEST XLS     Whereuse1.xls	Director Corector Director Director Director Director Director Director Director File File File File File File File File	==Upload=>	MACR099 MACR0_DVI_01 MACR0_DVI_02 MACR0_DVI_03 MACR0_DVI_04 Macro12 macro05	rae Filo Filo Filo Filo Filo Filo	96 42 37 37 37 37 37 5 15	2002/05/06 0 2002/05/30 1 2002/05/05 1 2002/05/27 0 2002/05/27 0 2002/05/27 0 2002/05/28 1 2002/05/28 1
Backup Actions on Projector F	File 1				T	

Image 8-11 Uploading file or files

### 8.4 File Download

#### How to download

- 1. Select a folder on the PC file system to which the file must be downloaded.
- 2. Select a file or select multiple files by holding down the Ctrl button on the internal file system.
- 3. Click on <==DownLoad==. (image 8-12)

The file or files will be copied to the PC file system on the selected location.

Nane	Type -		Name	Туре	Size	Date/Time
	Director Director Director Director Director Director Director Director Director Director Director Director File File	Change View==> ==Upload=>	MACR001 MACR003 MACR099 MACR0_DVI_01 MACR0_DVI_02 MACR0_DVI_03 MACR0_DVI_03 MACR0_DVI_04 Macro12 macro05	File File File File File File File File	111 96 42 37 37 37 37 5 15	2002/06/06 09 2002/06/06 09 2002/05/30 16 2002/05/05 14 2002/05/27 09 2002/05/27 09 2002/05/27 09 2002/05/27 0 2002/05/28 10
Backup Backup/Restore Used disk space 302	File File File File File File File File	<-DownLoad== m Active Save Fro	n Active Selec	t Active		Tine

Image 8-12 Download file or files
# 8.5 Actions on Projector files

#### Overview

- Save from ACTIVE
- Select ACTIVE
- Write ACTIVE Direct
- Read from ACTIVE
- Read Files Active
- Executing a Macro file

## 8.5.1 Save from ACTIVE

### What can be done?

The ACTIVE configuration or parts of the configuration can be saved on the internal file system. E.g. the screen configuration (masking, resizing and letterboxing) can be saved in Screen File. This example will be used to show the procedure. All other types can be saved in the same way.

#### How to save

- 1. Click first on Change View. (image 8-13)
- 2. Select first the typical directory, e.g. SCREEN, to save these typical settings and click **OK**. (image 8-14) *Note:* TGA and MACRO are not allowed.
- 3. Click on **Save from Active**. (image 8-15) **Note:** When in directory structure view while clicking on Save From Active, a message will be displayed. (image 8-16)

The Save input window opens. (image 8-17)

4. Fill out a name for the file and click OK.

The Active will be saved.



Image 8-13 Change view internal file system

File type selection		?  x
Select file or structure to show		
C CSC C LUT-DG C PCF C E	EXTRA C TGA	OK
C TCGD C LUT-CLUT C MCGD 🤆 S	CREEN	
CLUTAL C SOURCE C CSC.P7	ACR0 C Show Directory Structure	Cancel
mage 8-14 View selection internal file system		
Actions on Projector Files		
Write Active Direct Read From Active Sa	sve From Active Select Active	
Other functions Execute Macro	s Active	
mage 8-15 Save from active selected		
MarkVII FileManager	X	Enter the name of the file where to write the active configuration to.
Use the Change View Button, to specify what to sa	ve from active	(without standard extension)
L0K		Cancel OK
mage 8-16		Image 8-17
Nessage Directory structure new		Save from Active input

# 8.5.2 Select ACTIVE

### What can be done?

A saved configuration on the internal file system can be loaded as ACTIVE. This configuration will be the new configuration of the D-Cine Premiere.

### How to select

- 1. Click first on Change View. (image 8-18)
- 2. Select first the typical directory, e.g. SCREEN, to select these typical settings and click OK. (image 8-19)
- 3. Select a file out of the list.
- 4. Click on **Select Active**. (image 8-20) **Note:** When in directory structure view while clicking on Select Active, a message will be displayed. (image 8-21)

A confirmation screen will be displayed. (image 8-22)

5. Do you want to continue? If yes, Click **Yes** 

The configuration will be loaded for the internal file system to ACTIVE. A successful message will be displayed. (image 8-23)

#### If no, Click No, cancel the operation.

The operation is canceled, the selected file will not become active.



Image 8-18 Change view selected



Select SCREEN

Write Active Direct	Read From Active	Save From Active	Select Active
	Other functions		1
	Execute Macro	Files Active	

Image 8-20 "Select Active" selected



Select active confirmation window

×

### 8.5.3 Write ACTIVE Direct

### What can be done?

A stored file on the PC file system can be written to ACTIVE. The type of file that can be written to ACTIVE is determined by the View selection in the internal file system.

#### How to write

- 1. Click first on Change View.(image 8-13, image 8-24)
- 2. Select first the typical directory, e.g. SCREEN, corresponding to the file you want to write directly to ACTIVE and click **OK**. (image 8-25)
- 3. Select a file on the PC file system.
- 4. Click on Write Active Direct. (image 8-26)
  - If the corresponding file extension does not match the selected internal directory type and the file is a valid file for Write Active Direct, the message "Only files with the extension SCREEN e.g. can be used". (image 8-27)
  - While clicking on Write Active Direct and the internal file system is still in the directory structure, a message as followed will be displayed : "You cannot perform a write active direct action this type of configuration" (image 8-28)
  - When the extension corresponds with the internal file structure view, a confirmation message will be displayed. (image 8-29)
- 5. Do you want to continue? If yes, Click **Yes**.

The file will be written to ACTIVE. A success message will be displayed. (image 8-30) If no, click **No, cancel operation**.



Image 8-24 Select Change View

File type se	lection				<u>? ×</u>
select file or st	ructure to show				
C CSC	C LUT-DG	C PCF	C EXTRA	C TGA	OK
C TCGD	C LUT-CLUT	C MCGD	SCREEN		
C LUT-AL	C SOURCE	C CSC-P7	MACRO	C Show Directory Structure	Cancel





## 8.5.4 Read from ACTIVE

### What can be done?

A specific configuration will be saved to a PC file. The type of file that can be written to a PC is determined by the View selection in the internal file system.

#### How to save

- 1. Click first on Change View. (image 8-31)
- Select first the typical directory, e.g. SCREEN, corresponding to the configuration file you want to write to the PC from ACTIVE and click **OK**. (image 8-32)
- 3. Select a directory on the PC file system.
- 4. Click on Read From Active. (image 8-33)
  - If the internal file system is still on the 'directory structure' view, the message that you cannot read from active while in the directory structure will be displayed. (image 8-34)
  - If the internal view is correct, an input box will be displayed to enter a file name. (image 8-35)
- 5. Enter a file name without extension and click OK.

The configuration will be written to the PC file system.



Image 8-31 Select Change View



## 8.5.5 Read Files Active

### What can be done ?

The actual active files are indicated. When some modifications are done to one of these files, this will be indicated in the list.

? ×

The following information is given:

- PCF file with all its sub information files. •
- SCREEN .
- MCGD •
- CSC-P7 •
- **EXTRA** •

Normally a file name is returned next to the items, but in certain cases the following non-filenames will be returned:

<default></default>	Default data was used
<direct></direct>	Write Active Direct command was used, from PC data
<calculated></calculated>	Typical return for CSC-P7 data, since this data is calculated each time new MCGD or TCGD data is entered.
<colors-mixed></colors-mixed>	Used for LUT-AL and LUT-DG when ACTIVE updated with a file for only one color.
<testpattern></testpattern>	Used for SOURCE and CSC data when set to test pattern values. SOURCE data can not be changed when a test pattern is displayed. CSC data can be temporarily changed when a test pattern is displayed, but will revert to previous user settings when test pattern is turned off.
<metadata></metadata>	Data set by Metadata function

### How to get an overview of the active files ?

1. Click on Read Files Active. (image 8-36)

The active file window opens. (image 8-37)



Image 8-37 Files Active window

### 8.5.6 Executing a Macro file

#### What can be done?

A macro file stored on the internal file system of the D-Cine Premiere can be execute when in the macro view.

#### How to execute

- 1. Click first on Change View. (image 8-38)
- 2. Select MACRO and click OK. (image 8-39)
- 3. Select a macro file you want to execute.
- 4. Click on Execute Macro. (image 8-40)
  - If the macro view is not selected, a message to warn that you cannot execute a macro in this view will be displayed. (image 8-41)
  - If the view is correct and a macro file is selected, a confirmation window will be displayed. (image 8-42)
- 5. Do you want to continue.

If yes, Click on Yes

The macro will be execute and a message successful executed will be displayed.

If not successful, see logging information for more details. (image 8-43)

If no, Click on No, cancel the action.

No macro will be executed.



Image 8-38 Select Change View

File type se	election				? ×
Select file or st	ructure to show				
C CSC	C LUT-DG	C PCF	C EXTRA	C TGA	OK
C TCGD	C LUT-CLUT	C MCGD	C SCREEN		
C LUT-AL	C SOURCE	C CSC-P7	MACRO	C Show Directory Structure	Cancel

Image 8-39

- Special functions Execute Macro Read Full Acti	ve
age 8-40 ecute macro selected	
MarkVII FileMailsager  You cannot do an execute MACRO action in this view of the MarkVII file system Use the Change View Button to change to MACRO view.	Enecute Macro      Are you sure you want to execute macro file: MACRO03 ?      Yes No, cancel this action
age 8-41 ong View message	Image 8-42 Execute Macro Confirmation window
Execute Macro X The macro was executed successfully OK	
age 8-43	

# 8.6 Backup the file system

### What can be done?

Backup takes a complete backup of the internal file system of the D-Cine Premiere, including ACTIVE.



Ś

It is preferable to use in the first place an Ethernet connection or in the second place a direct RS232 connection to backup.

### How to backup

1. Press Backup/Restore. (image 8-44)

The Backup/Restore selection window opens. (image 8-45)

2. Click on Backup.

A message to indicate that backup can take some time appears. (image 8-46)

 Do you want to continue? If yes, go to step 4 If no, Click No, cancel this action.

The software returns to the file manager screen.

4. Click Yes.

A browser window on the file system of your PC opens. (image 8-47)

5. Browse to the location where you want to store the backup files and click OK.

A retrieve file message appears first for a few seconds followed by a message to indicate the number of files and amount of data. (image 8-48, image 8-49)

 Do you want to proceed with this backup action? If yes, go to step 7 If no, click on No, cancel this action.

The software returns to the File manager window.

7. Click Yes.

The files will be transferred to the indicated directory. A status window indicates which file is transferred. (image 8-50)

When finished, a ready status message will be displayed. (image 8-51)



Image 8-45 Backup/Restore choice window



Image 8-46 Backup message

Backup/Restore selected

Select the destination backup PC directory					2
.ook in: 🔄 D:/Communicator Software/Backup/	<u>.</u>	+	٤	d'	11 m
<u> </u>					
ile pame:					ОК

Image 8-47 Browser on PC file system

Backup/Restore MarkVII filesystem	<u> 1 × 1</u>	🖬 Backup MarkVII internal filesystem	×
Status :		This operation will transfer 129 files	
Retrieving File List. (Stand by)		The total amount of data to be harsfored is 5 The full backup will be stored in the d D:/Communicator Software/Backup/	649538 bytes irectory
i and i a	1	Do you want to proceed with this back	kup action ?
Backup	Ristore	Ves No, cancel the	action
mage 8-48			
ackup status, retrieve files		Image 8-49	
		Backup amount indication	
		Backup amount indication	
		Backup amount indication	
Backup/Restore MarkVII filesystem	1×1	Backup amount indication	গ্রম
Backup/Restore MarkVII Filesystem Status :	1×1	Backup amount indication Backup/Restore Mark/11 filesystem Status :	<u> 1</u> ×
Backup/Restore MarkVII Filesystem Status : Backup Bury : VPRDJFILESVACTIVEVLUT CLUT ACTIVE	2 x	Backup amount indication Backup/Restore MarkVII filesystem Status : Backup Ready	<u>2</u>  X
Backup Restore MarkYII Tilesystem Status : Backup Bury : \PRDJFLES\ACTIVE\LUT CLUT ACTIVE	Ĩ.×I	Backup amount indication  Backup/Restore Mark/III filesystem Status : Backup Ready	ĩ×
Backup Bury : VPROFILES VACTIVE VLUT CLUT ACTIVE	Testore	Backup Amount indication Backup/Restore Mark//II filesystem Status : Backup Ready! Backup	?] X       Restore
Backup Bury : VPROFILES/ACTIVE/LUT CLUT ACTIVE Backup Bury : VPROFILES/ACTIVE/LUT CLUT ACTIVE Backup	2 ×	Backup amount indication    Backup Restore MarkVII Hilesystem  Status:  Backup Rest/ Backup  Image 8-51	<u>?</u> x Retore



This mechanism backs up the complete file system, including Test patterns, configurations, etc.

A partial back up can be made by downloading specific files with the File Manager.

It is recommended that for each installation the SCREEN files, PCF files and MACRO files are copied to local PC as partial back up.

# 8.7 Restore the file system

### What can be done?

The file system of the D-Cine Premiere can be restored from a original backup directory on the PC. Before the restore will take place, certain checks will be performed to make sure that the backup files are valid.



It is preferable to use in the first place an Ethernet connection or in the second place a direct RS232 connection to restore the file system.

	$\mathbf{N}$
_	

CAUTION: Do not switch off the power !

Never give a reset command !

Never disconnect the Ethernet connection !

Never cancel the restore operation !

### How to restore

1. Press Backup/Restore. (image 8-52)

The Backup/Restore selection window opens. (image 8-53)

2. Click on Restore.

A message to indicate that restore can take some time appears. (image 8-54)

3. Do you want to continue?

If yes, go to step 4 If no, click on **No, cancel this action**.

4. Click on Yes.

A browser window on your file system appears. (image 8-55)

5. Select an original backup directory and click on OK.

A message with the amount of files will be displayed.

When the selected directory is not an original directory, the restore fails. (image 8-56)

6. Do you want to continue? If yes, Click on **Yes**.

The files will be restored. A status message will be displayed during the restore. (image 8-57)

When finished, a ready message will be displayed followed by a restore successful message. Click **OK** to terminate. (image 8-58, image 8-59)

If no, click on No, cancel this action.

7. Reset the projector head, in order to make the restored settings active. **Note:** The projector can be reset remotely,see "Reset Projector Head", page 29

Backup	Action	Backup/Restore MarkVII Hesystem	<u>? × </u>
Backup/Bestore	Writ	Status :	
Hand disk an on	1.1	IDLE	
382		· · · · · · · · · · · · · · · · · · ·	
		Backup	Restore
Image 8-52 Backup/Restore selecte	d	Image 8-53	

Backup/Restore choice window



Image 8-54 Restore message

.ook in: D:/Communicator Software/	*	() ()	i di	
		No.11		1000
Backup				
ile Dame:		_		OK



🔚 Restore MarkVII internal filesystem 🛛 🔀	Backup/Restore MarkVII Filesystem	1×
This operation will transfer 129 files.	Status :	
The total amount or data to be transiened in 3643538 bytes. The directory Di\Communicator Software\Backup\ will be tradeered into the MarkVII. Do you want to proceed with	Restore Busy: VARM_Main_App.bin	
this restore action ?	Ration 1	Rentres
Ves No, cancel this action		
Image 8-56	Image 8-57	
Restore message, amount of files	Restore message, busy	
Backup/Restore MarkVII Filesystem	store MarkVII internal filesystem	xI
Status :		
Partna Banki	The filesystem has been successfully restored     Beset the projector now if you want b	
Leave used.	use	·
Backup Bethan	the restored projector software and configuration.	
	(Announced and a second	
Image 8-58		

Image 8-58 Restore ready message

Image 8-59 Restore successful message

# 9. UPDATES



CAUTION: Do not perform any other hardware updates while updating the software. Never reset the power off the projector while performing software updates.

Never break the connection between your projector and your PC while performing software updates.

see "Upgrade Troubleshooting", page 163 if such an event would occur.

#### Overview

- General overview
- General Updates
- · Other individual upgrades
- Upgrade Troubleshooting

# 9.1 General overview

### Updating

The D-Cine package contains only Barco updates. TI updates are done via a separate software package (see "Updating TI boards", page 279).

The D-Cine Communicator enables the user to update Barco software and relevant settings to the D-Cine Premiere module.

### Way of updating for DP30 and DP50

There are three ways to update from a D-Cine package file:

- once a serial connection to RS232/RS422 and once a Serial connection to LoopIN/Out (Serial Bus mode) to update the controller software.
- once a Ethernet connection and once a Serial connection to LoopIN/Out (Serial Bus mode) to update the controller software. These method goes fast.
- the complete update via a Serial connection to Loop IN/Out but that can take 2 hours.

### Way of updating for DP100-DP90

Updating should always be done via an Ethernet connection. Two connections are possible:

- Connect via the projector's Barco IP address (preferred way).
- connect via the TI/Cinema IP address. This address must be within the same range as the Barco IP address.

#### **Upgrade recommendations**

- · When using Windows® XP with service pack 2, disable the internal firewall.
- For DP100-DP90, put the Barco IP address in the same range as the TI IP address (restore the IP address after update to prevent problems with communication to other devices).

# 9.2 General Updates

### **D-Cine Software updates**

All Barco update files are combined in one package file (zip file). This D-Cine software package file contains software, configuration files and file for the file system of the projector.



**CAUTION:** Do not power down the projector while upgrading.

Do not break the connection between the PC and the projector.

### How to update

Updating via an Ethernet connection :

1. Click on D-Cine Update Manager. (image 9-1)

The update manager opens. (image 9-2)

2. Click on Open Package File.

A Browser window opens.

3. Select the package file and click on Open. (image 9-3)

A version check of the hardware is executed at the same time. That means that the update software version must be compatible with the actual installed hardware version. If there is a difference, a message request to replace the hardware component will be displayed. (image 9-4)

After the hardware version check, the software scans the projector to look up the version and the time stamp of the files actually loaded on the projector. It compares this information with the information in the package file and builds up a table. The checked items are those which are recommended to be updated, the background will be light yellow. (image 9-5)

For DP30 and DP50, when updating via the Ethernet connection, the Control Software will not be check and the background will be dark yellow as this item can only be updated via a serial connection.

When clicking on a file, a short description will be shown in the Description pane.

4. Click on Update now. (image 9-6)

The updating will be started but first a message will be displayed. (image 9-7)

5. Click on Ok, start update now.

When the update is finished, a message will be displayed to indicate how many updates are successful. (image 9-8)

6. After update, immediately reset the projector.

The connection will be lost.

opoates	
D-Cine Update Manager	Automatic update from D-Cine Software Package

Starting the update procedure

Open D-Cine Software Package File Press Open Package File Button	
omponent Name PC File Version Projector Version Comments	- Description

Image 9-2 Update manager

ielect D-Cine So	ftware Packag	: file		1	? ×
Look in:	CinePierr	iere2.0	• • E	d 📰 •	
History Desktop My Documents	D-CinePrent	ereV2.00.ap			
My Computer	File name: Files of type:	D-CinePremiereV2.00.zip		Open     Cance	#

Image 9-3 Selecting the update file

Please select/deselect addi Component Name DP100 Hain Controller DP100 TouchPanel Lamp Info Module Settir FPGA CPU Board SMPS Software	PC File Version Projector Version 1.05 (51) 1.04 (20) Replace Component physically The component physically The component needs to be replaced. Do not update any other con component is updated !	Comments Reparent Helder Update recommended Controller splication (Linux d. ed physically aponents until this	Description
	Open Package File	Updat	e now Close

Image 9-4 Hardware version check

Con	ponent Name	PC File Versi	on Projector Version	Comments	Deso	iption
3	DP100 Main Controller	1.05 (51)	1.04 (20)	Update recommended		
9	DP100 TouchPanel	1.03	1.02	Update recommended		
]	Lamp Info Module Settings	1.01	1.01			
]	FPGA CPU Board	1.03	1.03			
1	SMPS Software	1.08	1.06	Update recommended		

Image 9-5 Update list

Updating Components:				
ARM Main Application				Updating
Component Name	PC File Version	Projector Version	Comments 🔺	Description
ARM Boot Application	2.01	2.01	Update OK	Interface Board Main Application Software
DSP Boot Application	1.00	1.00	100 B	
ARM Main Application	2.01	1.08	Update recomme	
DSP Main Application	1.07	1.03	Update recomme	
Interface Board Fpga Code	1.02	1.01	Update recomme	
Processor Board Fpga Code	2.40	2.30	Update recomme -	
•			<u>ا</u> د	
ARM Main Application: Loading Code	944 ()			
Oper	Package File		Lindate now	Close





For DP30 and DP50, perform the same procedure via a Serial Connection Loop IN/Out (Serial Bus Mode) to update the controller software if needed.



Ethernet will not work if default "default Gateway IP address" is not in the range of the configured IP address.

When the ARM Main Application software is updated from 4.x to 5.x continue with the procedure below.

### Set default gateway after update via Ethernet connection

1. Make a serial connection.

A message will be displayed. (image 9-9)

- 2. Click on Projector Configuration tab.
- 3. Set within the Ethernet address pane the Default Gateway to the IP-Address of the router (MUST be on the local subnet!)
  - *Tip:* If the router address is not known, set the Default Gateway IP Address the same IP address of the projector.

If the address is not correct, a warning will be displayed.

4. Go back to the Updates tab and continue with the update of the Controller software. Follow the same procedure as described above for a standard update.



Message after reset

### **Update timings**

A Major Update to D-Cine Premiere Package file 2.00 typically takes for DP30-DP50:

- Ethernet: 7.5 minutes + 2 minutes for controller update over Serial Connection to Loop In / Out
- Serial Connection to RS232/422: 18 minutes + 2 minutes for controller update over Serial Connection to Loop In / Out
- Serial Connection to Loop In / Out: 120 minutes

For DP100-DP90:

• Updating will take about 30 minutes.

Updates from 2.00 to higher versions, will take significant less time.

# 9.3 Other individual upgrades

### Overview

- · Loading setting in the Button module
- Upgrading the Touch panel menu structure
- Controller Software update

# 9.3.1 Loading setting in the Button module



#### Button Module Settings

Button module settings contains info on which actions are coupled to each button/input. For manual configuration, see Automation tab.



Only for DP30 and DP50.

### How to load

1. Check the radio button in front of the Button Module Settings and click on Load. (image 9-10)

A browser window opens.

2. Select the settings file for the button module. Click on Open.

The new settings will be loaded in the button module.

Other Individual	Updates
e	Button Module Setting:
c	Touch Panel Menu Structure
c	Contractor software
	Load
maga 0 10	

Button module upgrade

## 9.3.2 Upgrading the Touch panel menu structure

### How to upgrade

- Check the radio button in front of the Touch Panel Menu Structure and click Load. (image 9-11) A browser window opens.
- 2. Select the touch panel menu structure file for the Touch Panel. Click on **Open**.

The new settings will be loaded in the Touch Panel.

Files to upload are typically called depending of the projector configuration. E.g. :

Menu M7 Chinese V2.0 bin	Uses Chinese fonts for projector without an ACSAR
Menu M7 Chinese with ACSAR V2.0 bin	Uses Chinese fonts for projector with an ACSAR
Menu M7 English V2.0 bin	Uses English fonts for projector without an ACSAR
Menu M7 English with ASCAR V2.0 bin	Uses English fonts for projector with an ACSAR

C	Button Module Settings
G	Touch Panel Menu Structure
c	Controller software
	Load

Image 9-11 Touch panel upgrade



If the connection to the projector was broken during this upload, you can restart the procedure. It is recommended to physically power OFF/ON the touch panel before retrying a new Touch panel menus structure upload.

## Typical update timings

Ethernet	14 to 16 minutes
Serial Connection to RS232/422:22	22 to 24 minutes

Serial Connection to Loop In / 18 to 20 minutes Out

# 9.3.3 Controller Software update



Only for DP30 and DP50.

### Why a separate upload procedure.

The separate upload procedure can be seen as an emergency procedure. When something goes wrong during the normal update procedure, e.g. power failure or connection failure, it is possible that the controller software is damaged. The projector cannot start up anymore. Via this procedure it is possible to reinstall the controller software and then run the complete upgrade.

#### How to re-install the controller software.

1. Make a serial connection between the PC and the projector.

2. Go to the Updates tab and select the radio button in front of Controller Software. Click on Load.

A browser window opens.

3. Browse to the directory where the D-Cine Communicator software is installed. Click on *Updates* and select *controller.bin*.

The Controller software will be loaded again.

# 9.4 Upgrade Troubleshooting

#### **Overview**

- · Connection broken, projector reset
- · Connection broken while updating Button control or touch panel software.

### 9.4.1 Connection broken, projector reset



For DP30 and DP50

#### Problem

Connection has been broken while updating the controller software or the projector has been reset while the controller software was being upgraded.

When connected over Ethernet, no temperatures, voltage levels, and main controller software can be read out. Status LED 6 on the Barco Controller board is not blinking.

When connecting over Serial Connection to Loop IN/Out you get the following message:



## Controller software message

### Solution

- 1. Press OK on popup window.
- 2. Go to the Updates tab.
- 3. Select Controler software.
- 4. Load the *controller.bin* file.
  - **Note:** The controller.bin file is always present in the D-Cine Software Package file. It can be extracted from this zip file.

# 9.4.2 Connection broken while updating Button control or touch panel software.

### Problem

The connection was broken while updating the button control software or the touch panel software. The touch panel does not work as expected and or the button control does not work as expected.

### Solution

- 1. Click on D-Cine Update Manager.
- 2. Click on Open Package File
- 3. Reopen the D-Cine Software package file with the D-Cine Update Manager (image 9-13)

The Touch Panel and/or button control software will be indicated as not available, because their main application software might not be running.

- 4. Explicitly select the button Module software and Touch panel software on the check box.
- 5. Restart the update. **Note:** Make sure the touch panel and/or button control are physically well connected.

Compone	ent Name	PC File Version	Projector Version	Comments	1	Description
Con	troller Software	0.08	0.08			Button Module Software
Tou	ch Panel Software	2.00		Component not available		
Butt	on Module Software	2.00		Component not available		
ARN	4 Boot Application	2.01	2.01			
DSF	Boot Application	1.00	1.00			
ARN	Main Application	2.01	2.01			
DSF	<sup>o</sup> Main Application	1.07	1.07		-1	

Image 9-13 Update manager

# **10. SECURITY MANAGEMENT**

# Overview

- Security management overview
- Starting up the Security management with valid key
- Adding an extra key to the list
- Changing the pin code of an existing key
- Get an overview of the Card Cage access



Security management is located within the Update tab of the software.

# 10.1 Security management overview

### Overview

The physical access to the internal card cage of the projector is protected by a dallas iButton® and an associated pin code. Each projector is delivered with its own physical Dallas key which is also entered in the security management system.

For DP50 and DP30, to gain access to the card cage, place your dallas iButton® in the key slot and enter the correct pin code on the keyboard next to the key slot.

For DP100 and DP90, to authorize after accessing the card cage and removing the light processor (engine), place your dallas iButton® in the key slot and enter the correct pin code on the keyboard next to the key slot.



Image 10-1 Card cage Dallas key protection

With the D-Cine Communicator software it is possible to add key/pin code combinations to the existing ones. This can only be done when entering the original key with its corresponding pin code.

# 10.2 Starting up the Security management with valid key

### How to start up

1. Click on **Retrieve Key List**. (image 10-2)

The Key Code window appears. (image 10-3)

- 2. Fill out the key code of the original dallas iButton® . (image 10-4) **Note:** The given key combination is only as an example and is not valid for your projector.
- 3. Enter the corresponding pin code and click on Continue..

The key will first be validated. (image 10-5)

When the key is a valid one, the key list will be displayed. (image 10-6)



Image 10-2



Image 10-4 Key code window example



Image 10-3 Key code window



Image 10-6 Key list

- A Key list when entered with original key
- B Key list when entered with another valid key

# 10.3 Adding an extra key to the list

### How to add

- 1. Start up first the Security management. see "Starting up the Security management with valid key", page 165.
- 2. Double click on it to add a new key to the list.

The Key Code window opens.

- 3. Fill out the key code of the new dallas iButton® (image 10-4).
- 4. Enter a new pin code and press Continue.
  - The new key will be added to the key list (image 10-6).
- 5. Click on Save Key List to make the changes active.

# 10.4 Changing the pin code of an existing key

## How to change

- 1. Start up first the Security management. see "Starting up the Security management with valid key", page 165.
- 2. Double click on an existing key. (image 10-7)

The key code window opens.

3. Enter a new pin code and press Continue.

The key list returns active.

4. Click on Save Key List to make the changes active.

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	Retrieve Key List	Sa Key	ive List
	Cancel 0	peration	
[	No Access	8	_
		51304201	
	94Q		

Image 10-7 Key code list

# 10.5 Get an overview of the Card Cage access

### How to get an overview

- 1. Start up first the Security management. see "Starting up the Security management with valid key", page 165.
- 2. Click on Read Log File. (image 10-8)

The Card Cage log file opens. (image 10-9)

This log file gives an overview of who accessed the card cage at which time.



Image 10-8 Read log security file

# **11. AUTOMATION**

# Overview

- Introduction
- Creating an Action List

# 11.1 Introduction

### Overview

Each D-Cine Premiere is delivered with one button module. Optionally, it is possible to buy up to 4 general purpose input output boards (GPIO) for automation purposes of other processes related to the cinema projection. E.g. opening the curtains, dimming the lights, etc.

Button 1 to 4 of the button module are completely configurable. The 4 lower buttons are always predefined and cannot be configured. The upper two are for powering on/off the projection head and the lamp. The lower two are for opening or closing the dowser (shutter).

Each GPIO board has up to 8 configurable inputs. The D-Cine Communicator detects automatically the automation modules and shows the result in the automation interface.

Pressing on the automation interface one of the configurable buttons of the button module or a button on an extra GPIO board, opens the configuration panel. Each input of the GPIOs can be configured to execute an action list when going high and a different one when going low. Each button on the button module can be configured to execute an action list when pressed or released.



Button panel with one extra automation module connected on position 2.

Image 11-1 Automation interface

# 11.2 Creating an Action List

### What is an Action List?

An action list is an list of actions that can be executed when a certain input becomes high or low (button pressed or released).

The following actions can take place:

- Put a certain output of a module (this module or another module) to high or low.
- Execute a Macro File
- Switch the lamp on or off
- · Open or close the dowser/shutter

An action list can contain maximum 8 actions.

#### How to create

1. Push first on a button in the automation interface for which input you want to create an action list.

The Configuration Panel opens. (image 11-2)

- 2. Click on a radio button in the action pane to create an action.
  - The following items can be selected: - Output: see selecting an output.
  - Macro
  - Lamp: lamp on or off
  - Dowser: open dowser of close dowser
- 3. Click on <== to add the action to the action list for 'input goes high' or 'input goes low'.
- 4. Repeat step 2 to add other actions (maximum 8 actions are allowed).
- 5. Click on Proceed to save the current action list.

	OUTPUT     Button Module      Output 3     OFF
(ww	
	Name Tupe Size Date/Time
1	MACR001 File 42 2002/05/29 10:14:58
action List, executed when input goes low :	M4CR003 File 37 2002/05/2910:55:50 M4CR004 File 48 2002/05/2815:05:27
	MACR0_DVI File 42 2002/05/28 14:5
	MACB0_DVI File 37 2002/05/27 09:5
(mm	
	C DOWSER One Downer
Enor assignment	
No error	Proceed
C Enor when button pressed or input goes high	
	and the second sec

Image 11-2 Configuration panel action list

## Selecting an output

1. Click on the module selection drop down menu.

The drop down menu opens. (image 11-3)

- 2. Select a module.
- 3. Click on the output drop down list.

The output drop down list will be adapted according the module selection. (image 11-4)

4. Select an output.

5. Click on the status list for the selected output. (image 11-5)

- The choices are:
- off
- on
- pulse

© OUTPUT	© OUTPUT
Button Module V Dutput 3 V OFF V	Module 2 • Output 1 • OFF •
Button Module	C MACRO Dutput 1 Dutput 2 Dutput 3
Image 11-3 Output module selection	Name         Type         Output 5         %            MACR001         File         Output 6         10.14:58            MACR003         File         Output 7         10.55:50
	Image 11-4 Output selection
₢ output	

Output 1 👻	OFF •
-	OFF
	ON PULSB-¢
	Output 1 👱

Image 11-5 Status selection output

#### Selecting a macro

1. When macro is selected, a list of macro files will be displayed. Select a macro out of the list. (image 11-6)

Some macro file will be grayed out when the name of the file is not conform. In this automation system only macro files in the form of MACROxx can be coupled with the system. Macro files with another name can also be used as they can be renamed to the standard macro name format. To rename a file, see "Renaming files and folders", page 137.

MACROxx as name is MACRO followed with 2 digits (between 01 and 99).

Name	Type	Size	Date/Time	
MACRO01	File	42	2002/05/29 10:14:58	
MACRID03	File	37	2002/05/29 10:55:50	
MACR004	File	42	2002/05/30 09:47:23	1.11
MACRO_DVI	File	42	2002/05/28 14:5	
MACRO_DVI	File	37	2002/05/27 09:5	-

Image 11-6 Macro selection for action list



When changing the commands associated with a button of the button control, it is necessary to reset the touch panel (if any available) after pressing the proceed button. See installation manual of the projector.

# 12. AUTOMATION FOR DP100 AND DP90

# Overview

- Introduction
- Activating a macro
- Macro association
- Edit a macro

# 12.1 Introduction

### Overview

The user interface represents 14 preset buttons which are the same as those on the button panel of the projector. With each button a macro can be activated by pressing the corresponding button.

To each button, a macro can be associated. The associated macro can also be edited via the Macro Editor by selecting the Edit macro button.



Image 12-1 Button configuration

Button <sup>4</sup>	Macro name
1	292A_P7_Flat_1280
2	292A_P7_Scope_1280
3	292A_P7_Flat_1920
4	292A_P7_Scope_1920
5	292A_P7_Flat_2048
6	292A_P7_Scope_2048
7	292A_P3_Flat_1280
8	292A_P3_Scope_1280
9	292A_P3_Flat_1920
10	292A_P3_Scope_1920
11	ACSAR_Input1
12	ACSAR_Input2
13	ACSAR_Input3
14	ACSAR_Input4

### **Default associations**

# 12.2 Activating a macro

### How to activate

1. Click on the button next to the desired macro description.

The selected macro will be executed. As an indication that the macro is activated, a green led will be displayed in the corner of the button. (image 12-2)



Image 12-2 Active button

# 12.3 Macro association

### How to associate

1. Move you mouse over a button.

Next to the button, two selection buttons appear. (image 12-3)

2. Click on Change macro.

The Macro selection window opens. (image 12-4)

3. Select a macro out of the list and click on Select.

#### 4. Buttons are numbered from left to right and from top to bottom

**Button - Preset Configuration** Change marro 292A\_P7\_FLAT\_1280 292A\_P7\_SCOPE\_1280 Edit macro 292A\_P7\_SCOPE\_1920 292A\_P7\_FLAT\_1920 292A\_P7\_FLAT\_2048 292A\_P7\_SCOPE\_2048 292A\_P3\_FLAT\_1280 292A\_P3\_SCOPE\_1280 292A\_P3\_FLAT\_1920 292A\_P3\_SCOPE\_1920 ACSAR\_Input1 ACSAR\_Input2 ACSAR\_Input4 ACSAR\_Input3

The selected macro will be associated with button and the name of the macro will be filled out next to the button.

Image 12-3 Change macro selected

Name	Type	Size	Date/Time	
292A_HDTV	File	92	2003/11/13 14:55:58	
292A_P3_FLAT_1280	File	113	2003/11/24 12:38:58	
292A_P3_FLAT_1920	File	113	2003/11/13 14:23:19	
292A_P3_SCOPE_1280	File	115	2003/11/24 12:39:45	
292A_P3_SCOPE_1920	File	115	2003/11/13 14:23:23	
292A_P7_FLAT_1280	File	123	2003/11/13 14:23:27	
292A_P7_FLAT_1920	File	113	2003/11/13 14:23:33	
292A_P7_FLAT_2048	File	123	2003/11/13 14:23:38	
292A P7 SCOPE 1280	File	125	2003/11/13 14:23:43	
Cancel			Select	1

Image 12-4 Macro selection window

# 12.4 Edit a macro

### How to edit

- 1. Mouse you mouse over a button.
  - Next to the button, two selection buttons appear. (image 12-5)
- 2. Click on Edit macro.

The Macro editor starts up. (image 12-6)

For the explanation about the Macro editor, see "Macro Editor", page 225.



Image 12-5 Edit selected macro


Image 12-6 Macro editor

# 13. SERVER

## Overview

- Introduction
- Server overview interface
- Time Control
- Subtitle Control
- Metadata Control

# 13.1 Introduction

## **Overview**

The D-Cine Premiere projectors are equipped with the possibility to process Subtitle and metadata information coming from a server.

Principal diagram :



Principal diagram subtitling

The following process happens :

Image information together with audio data enters the server. Next to it, separate subtitle files in multiple languages are stored on the same server as well as metadata files.

The operator of the Cinema theatre selects the film and the additional subtitling on the server.

The image data will be sent over the SMPTE292 line to the projector. When the subtitling mechanism is activated inside the projector, this projector will process subtitle data and timings which are sent over a Ethernet network to the projector. The projector will render the subtitling in overlay to the image.

# 13.2 Server overview interface

## Overview of the layout



Image 13-2 Overview interface

In order to simulate a server triggering the projector's subtitling mechanism, or to check if a server is configured as it should be, Barco provides an interface as shown above.

The following is visualized from left to right and from top to bottom :

- time code, internal or external
- time code itself
- Status, running or not running
- · Subtitle status, enables or disabled
- Subtitle file location
- Subtitle 'time to live' (TTL)
- · Metadata status, enabled or disabled
- Metadata file location
- Metadata 'time to live' (TTL)

# 13.3 Time Control

## Overview

- Time source
- Input frequency
- Timeline stamp
- Timeline adjustment
- Control

## 13.3.1 Time source

## Why used

The selected time source will be used to synchronize the subtitling and metadata information with the image stream.

## How to select

1. Click on one of the radio buttons in the *Time source* field. (image 13-3)

292 External	The projector will take the time code that is inserted in the SMPTE292 stream for subtitle synchronization
Internal	The projector will take the time code from its internal time code generator.



Time source selection



When 292 External is selected, the Timeline stamp and Timeline adjustment are grayed out.

## 13.3.2 Input frequency

#### Why necessary

The projector needs to know the frequency of the input signal presented to the projector so that it can calculate internal synchronization parameters.

#### How to select

- 1. Click on one of the radio buttons in the *Input frequency* field. (image 13-4) Possible choices :
  - 23.98 Hz
  - 24.00 Hz



## 13.3.3 Timeline stamp



Only available for an internal time source.

## What is the purpose

The internal time code will be set to the value of the timeline stamp. The image displayed will be the image with eventually the subtitling overlay at the time of the timeline stamp. When the play button is pressed, the time code starts running from the value in the timeline stamp.

## How to enter a timeline stamp

- 1. Click on the hours, minutes or seconds value and enter the new value with the digit keys on your keyboard
  - Or,

click on the hours, minutes or seconds value and click then on the up or down arrows to change the value to the desired one. (image 13-5)

2. Click on Apply time now to apply the new time to the time code.



## 13.3.4 Timeline adjustment



Only available for an internal time source.

## What is the purpose

While the time code is running, the timeline can be adjusted by adding time to current time or by subtracting time from the current time. With these small corrections, it is possible to adjust small misalignments between the spoken text and the subtitling.

## How to add a correction

1. Click into the minutes, seconds or milliseconds field and select the actual value. Change that value by entering the new value with the digit keys on your keyboard

Or,

click on the up or down arrows next to the minutes, seconds or milliseconds input field to change the value to the desired one. (image 13-6)

40 milliseconds corresponds with 1 frame for an input frequency of 24 Hz.

- 2. Click on + or button to activate the correction.
  - + Entered correction will be added to the current time
  - Entered correction will be subtracted from the current time



## 13.3.5 Control



Only available for an internal time source.

## How to control

- 1. Click on the Start button () to start the internal time code.
- 2. Click on Stop button (**III**) to stop the internal time code.

# **13.4 Subtitle Control**

#### Overview

- Steps to be taken for subtitle control
- Subtitle server
- Subtitle file
- Time to live (TTL)
- Subtitle Control activation



When the projector is reset or power-cycled, the subtitling function will be disabled.

## 13.4.1 Steps to be taken for subtitle control

#### **Overview**

- 1. With Subtitle enable not checked, fill out first the subtitle server address.
- 2. Set up the subtitle file.
- 3. Set up the "time to live".
- 4. Activate the subtitling

#### 13.4.2 Subtitle server

#### How to set up

- 1. Click in the subtitle server input field.
- 2. Fill out a valid IP address or host name (only when a DNS server is used) (image 13-7) *Note: An address contains 4 octets with a maximum value of 255.*

☐ Subtitle enabled			TTL (seconds)		
C.A.M.	v Name or IP-Address	150 159 193 137	Select	1	
Suborie Serve	in firming on it Modelessi	130.130.133.137			

Image 13-7 Subtitle server address

## 13.4.3 Subtitle file

## How to select

1. Click on the Select button next to the server address. (image 13-8)

A DCine Subtitle browser will open. (image 13-9)

2. Click on file to select that file.

The content of the file will be displayed. (image 13-10)

3. Is this the correct file?

If yes, Click on **OK**.

The complete URL will be written in the *Selected Subtitle XML file* field. If no, click on **Cancel** and select another file.

☐ Subtitle enabled			TTL (seconds) 0 🛔
Subtitle Serve	r (Name or IP-Address)	150.158.193.137	Select
Selected Subl	itle XML File:	http://150.158.193.137.	/NemoGermanFrench.xml

Image 13-8 Subtitle file selection start up

Address M of /	Last modifie 16-Jun-2003 26-Aug-2003	n7/	Size	Description			A
of/	Last modifie 16-Jun-2003 26-Aug-2003	ed 10:02	Size	Description			
<pre>Directory Sverigedemoengl&gt;</pre>	Last modifie	10:02	Size	Description			
Directory Sverigedemoengl>	16-Jun-2003	10:02					
Verigedemoengl>	26-Aug-2003		-				
	no well 2000	16:56	18k				
ngNemoSubtitle.xml	16-Jun-2003	09:52	584k				
ataExample.xml	11-Ju1-2003	14:43	1k				
rmanFrench.xml	16-Jun-2003	13:28	1k				
rmanFrenchReel>	16-Jun-2003	13:28	66k				
rmanFrenchReel>	16-Jun-2003	13:28	107k				_
rmanFrenchReel>	16-Jun-2003	13:28	89k				
rmanFrenchReel>	16-Jun-2003	13:28	87k				
rmanFrenchReel>	16-Jun-2003	13:28	92k				
rmanFrenchReel>	16-Jun-2003	13:28	54k				
lo.ocx	16-Jun-2003	13:28	4.5M				-
	taExample.xml rmanFrenchReel> rmanFrenchReel> rmanFrenchReel> rmanFrenchReel> rmanFrenchReel> rmanFrenchReel> cmanFrenchReel> Cancel	taExample.xml         11-Jul-2003           rmanFrench.xml         16-Jun-2003           rmanFrenchReel>         16-Jun-2003           cmanFrenchReel>         16-Jun-2003           cmanFrenchReel>         16-Jun-2003           cmanFrenchReel>         16-Jun-2003           cmanFrenchReel>         16-Jun-2003	taExample.xml         11-Jul-2003         14:43           rmanFrench.xml         16-Jun-2003         13:28           rmanFrenchReel>         16-Jun-2003         13:28           o.ocx         16-Jun-2003         13:28	taExample.xml         11-Jul-2003         14:43         1k           rmanFrench.xml         16-Jun-2003         13:28         1k           rmanFrenchReel>         16-Jun-2003         13:28         66k           rmanFrenchReel>         16-Jun-2003         13:28         107k           rmanFrenchReel>         16-Jun-2003         13:28         89k           rmanFrenchReel>         16-Jun-2003         13:28         87k           rmanFrenchReel>         16-Jun-2003         13:28         92k           rmanFrenchReel>         16-Jun-2003         13:28         92k           rmanFrenchReel>         16-Jun-2003         13:28         54k           o.ocx         16-Jun-2003         13:28         4.5M	tafxample.xml         11-Jul-2003         14:43         1k           rmanFrench.xml         16-Jun-2003         13:28         1k           rmanFrenchReel>         16-Jun-2003         13:28         66k           rmanFrenchReel>         16-Jun-2003         13:28         89k           rmanFrenchReel>         16-Jun-2003         13:28         89k           rmanFrenchReel>         16-Jun-2003         13:28         87k           rmanFrenchReel>         16-Jun-2003         13:28         92k           rmanFrenchReel>         16-Jun-2003         13:28         54k           o.ocx         16-Jun-2003         13:28         4.5M	taffxample.xml       11-Jul-2003       14:43       1k         rmanFrench.xml       16-Jun-2003       13:28       1k         rmanFrenchReel>       16-Jun-2003       13:28       66k         rmanFrenchReel>       16-Jun-2003       13:28       89k         rmanFrenchReel>       16-Jun-2003       13:28       87k         rmanFrenchReel>       16-Jun-2003       13:28       87k         rmanFrenchReel>       16-Jun-2003       13:28       92k         rmanFrenchReel>       16-Jun-2003       13:28       54k         o.ocx       16-Jun-2003       13:28       4.5M	tafxample.xml       11-Jul-2003       14:43       1k         rmanFrench.xml       16-Jun-2003       13:28       1k         rmanFrenchReel>       16-Jun-2003       13:28       66k         rmanFrenchReel>       16-Jun-2003       13:28       89k         rmanFrenchReel>       16-Jun-2003       13:28       89k         rmanFrenchReel>       16-Jun-2003       13:28       87k         rmanFrenchReel>       16-Jun-2003       13:28       92k         rmanFrenchReel>       16-Jun-2003       13:28       54k         o.ocx       16-Jun-2003       13:28       4.5M

Image 13-9 Example of subtitle browser

DCine Subtitle Browser		2 ×
🗢 👐 🔹 🚖	Address http://150.158.193.137/NemoGetmanFrench.xml	2
xml version="1.0"<br *** XHL Subi<br *** Created<br *** Bonday,<br - <dcsubtitle version<br=""><subtitleto>d32b <subtitlefile offse<br=""><subtitlefile offse<br=""><subtitlefile offse<br=""><subtitlefile offse<br=""><subtitlefile offse<br=""><subtitlefile offse<br=""><subtitlefile offse<="" td=""><td><pre>encoding="UTF-8" ?&gt; ittle file ***&gt; By Texas Instruments ***&gt; June 02, 2003 ***&gt; ="1.0"&gt; 529d-9c46-4d16-82bb-972750268cd0 t="-1:59:55:00"&gt;NemoGermanFrenchReel1.xmlNemoGermanFrenchReel2.xmlNemoGermanFrenchReel2.xmlNemoGermanFrenchReel3.xmlNemoGermanFrenchReel3.xmlNemoGermanFrenchReel3.xmlNemoGermanFrenchReel4.xmlNemoGermanFrenchReel6.xmlNemoGermanFrenchReel6.xmlNemoGermanFrenchReel5.xmlNemoGermanFrenchReel6.xmlNemoGermanFrenchReel6.xmlNemoGermanFrenchReel6.xmlNemoGermanFrenchReel6.xmlNemoGermanFrenchReel5.xmlNemoGermanFrenchReel6.xmlNemoGermanFrenchReel6.xmlNemoGermanFrenchReel6.xml</pre></td><td>File&gt; eFile&gt; eFile&gt; eFile&gt; eFile&gt;</td></subtitlefile></subtitlefile></subtitlefile></subtitlefile></subtitlefile></subtitlefile></subtitlefile></subtitleto></dcsubtitle>	<pre>encoding="UTF-8" ?&gt; ittle file ***&gt; By Texas Instruments ***&gt; June 02, 2003 ***&gt; ="1.0"&gt; 529d-9c46-4d16-82bb-972750268cd0 t="-1:59:55:00"&gt;NemoGermanFrenchReel1.xmlNemoGermanFrenchReel2.xmlNemoGermanFrenchReel2.xmlNemoGermanFrenchReel3.xmlNemoGermanFrenchReel3.xmlNemoGermanFrenchReel3.xmlNemoGermanFrenchReel4.xmlNemoGermanFrenchReel6.xmlNemoGermanFrenchReel6.xmlNemoGermanFrenchReel5.xmlNemoGermanFrenchReel6.xmlNemoGermanFrenchReel6.xmlNemoGermanFrenchReel6.xmlNemoGermanFrenchReel6.xmlNemoGermanFrenchReel5.xmlNemoGermanFrenchReel6.xmlNemoGermanFrenchReel6.xmlNemoGermanFrenchReel6.xml</pre>	File> eFile> eFile> eFile> eFile>
	Cancel	ок

Image 13-10 Subtitle file : example

## 13.4.4 Time to live (TTL)

## Why used

The TTL (Time to live) is a countdown time-out used to prevent subtitles from being left on the screen through loss of communication.

The server or D-Cine Communicator will continuously ask for the subtitle status. As long as the 'time to live' counter has not been expired and the subtitle status command is executed, this TTL value will be resetted to its original value set in the TTL interface.

If the TTL value reaches '0', the system will disable the subtitle function and the subtitling will be removed from the screen.

## How to set up

 Click into the TTL input field and select the actual value. Change that value by entering the new value with the digit keys on your keyboard (the value must be in seconds) Or,

click on the up or down arrows next to the TTL input field to change the value to the desired one. (image 13-11)

TTL (seconds)

Image 13-11 Time to live setting subtitling

## 13.4.5 Subtitle Control activation

## How to activate

1. Check the check box in front of *Subtitle enabled*. (image 13-12) *Note:* This is only possible when a server address and a subtitle file are filled out.



# 13.5 Metadata Control



## Metadata

Generally referred to as "data about data" or "data describing other data". More specifically, information that is considered ancillary to or otherwise directly complementary to the essence. Any information that a content provider considers useful or of value when associated with the essence being provided.

## Overview

- Introduction
- Steps to be taken for metadata control
- Metadata server
- Metadata file
- Time to live (TTL)
- Metadata Control activation

## 13.5.1 Introduction

#### Overview

In case of a digital Cinema projector, Metadata contains all the data the projector needs, to be able to display a certain content as it should be. Typically the Metadata is the data that we find in PCF files.

Metadata mode means that the server has control over the projector's active PCF Data. Accessing the Active PCF data of a projector in Metadata mode from the D-Cine Communicator or touch panel will fail. Metadata Control needs to be disabled first.

## Content of the metadata info

Metadata Control from a server:

- Provides projector setup instructions without operator action
- Contains instructions provided by content creator (PostProduction)
- Information sent from server to projector at start of the movie
- Setup parameters include:
  - Target color space (7-point) (TCGD)
  - Color space conversion parameters (CSC)
  - Gamma (LUT-DG)
  - Incoming image size (SOURCE)
  - Projector Lookup tables (LUT-AL, LUT-CLUT)

## 13.5.2 Steps to be taken for metadata control

## Overview

- 1. With Metadata enable not checked, fill out first the metadata server address.
- 2. Set up the metadata file.
- 3. Set up the "time to live".
- 4. Activate the metadata

#### 13.5.3 Metadata server

#### How to set up

- 1. Click in the metadata server input field.
- 2. Fill out a valid IP address or host name (only when a DNS server is used) (image 13-13) *Note:* An address contains 4 octets with a maximum value of 255.

T MetaData	enabled		TTL (seconds)
MetaData Ser	ver (Name or IP-Addres	=) 150.158.193.137	Select
Selected Meta	Data XML File:	http://150.158.193.137	7/MetadataExample.xml
been see all a see a			

Metadata server address

## 13.5.4 Metadata file

#### How to select

1. Click on the Select button next to the server address. (image 13-14)

A DCine browser will open. (image 13-15)

2. Click on file to select that file.

The content of the file will be displayed. (image 13-16)

3. Is this the correct file? If yes, Click on **OK**.

The complete URL will be written in the *Selected Metadata XML file* field. If no, click on **Cancel** and select another file.

T MetaData (	enabled		TTL (seconds) 0 #
MetaData Ser	ver (Name or IP-Address):	150.158.193.137	Select
Selected Meta	aData XML File: 🤇	http://150.158.193.137	//MetadataExample.xml
white Control	MataData Control		

Metadata file selection

DCine Subtitle Browser				2)2
🖛 📫 🌒 🖍 🔒 🛛 Add	ess http://150.158.193.137/			0
Index of /				Î
Nome	Last modified	Size	Description	
Parent Directory	16-Jun-2003 10:02	-		
BastISverigedemoeng	L> 26-Aug-2003 16:56	18k		
FindingNemoSubtitle.	xml 16-Jun-2003 09:52	584k		
HetadataExample.xml	11-Jul-2003 14:43	lk		
NemoGermanFrench.xm.	16-Jun-2003 13:28	1k		
NemoGermanFrenchRee	16-Jun-2003 13:28	66k		
NemoGermanFrenchRee.	> 16-Jun-2003 13:28	107k		
NemoGermanFrenchRee	16-Jun-2003 13:28	89k		
NemoGermanFrenchRee	16-Jun-2003 13:28	87k		
NemoGermanFrenchRee	16-Jun-2003 13:28	92k		
NemoGermanFrenchRee	16-Jun-2003 13:28	54k		
2 ODeSolo.ocx	16-Jun-2003 13:28	4.51		1
-				

Image 13-15 Example of browser window



Image 13-16 Example of metadata file

## 13.5.5 Time to live (TTL)

## Why used

The TTL (Time to live) is a countdown time-out used to prevent the use of metadata information through loss of communication.

The server or D-Cine Communicator will continuously ask for the metadata status. As long as the 'time to live' counter has not been expired and the metadata status command is executed, this TTL value will be resetted to its original value set in the TTL interface.

If the TTL value reaches '0', the system will enable the metadata function.

## How to set up

 Click into the TTL input field and select the actual value. Change that value by entering the new value with the digit keys on your keyboard (the value must be in seconds) Or,

click on the up or down arrows next to the TTL input field to change the value to the desired one. (image 13-17)



Time to live

## 13.5.6 Metadata Control activation

## How to activate

1. Check the check box in front of *Metadata enabled*. **Note:** This is only possible when a server address and a metadata file are filled out.

Note: An indication in the Setup Control interface will be added.



CAUTION: When metadata control is enabled, the following functions are not possible : execution of macros, applying a PCF file (e.g. on Setup page, when connecting), changing the Active Area and using the PCF editor.

# **14. PROJECTOR STATUS FOR DP50**

## Overview

- General overview
- Status overviews
- Projector Log Information
- Security log file
- Certificates

# 14.1 General overview

## Summary

This interface gives feedback on any item that can be read out in the D-Cine Premiere.

Modules status		- Bowch: status	Various read outs
Switch Mode Power Supply	OK.	System Status DK. Files Active	Module Value
Lano Power Supply	OK.	System Sell Test OK	E Tec Voteges
Passing of the state of the		Interface board ARM OK	-(+P) 7.03 V (36) -(+5V) 4.89 V (39)
FAN/Teo Lowroter	Failed	Interface Board FPGA OK	-(+24V) 23.59 V (188)
Boards Status	OK.	Processor Board (PSP UK. Processor Board FPGA OK	
External Cooler Unit	Not active	Other error messages Status	Fan Speed
CL0	DK		Digital Channels     Analog Channels
Security Card Cage	0K		
Active Cooling Red	Ide		
Active Cooling Green	Ide		
Active Cooling Blue	Ide	Interface Board Type: Series 0 Processor Board Type: Series 0	
Projector Temperatures	22.65	Other properties	Certificates
Anders Interface troatd	111	Lang Hun Hite: 1 Stilles	
DMD Super	351	Bottom Inlet Filter DK	
DMD Blue	31	Barco Access Level (0x04)	Projector Log Security log
Cooler SMPS 1.	3212		
Cooler SMPS 2	32 °C		Status retrieved
Anbient UV/IR Filter	24 °C		Heliesh
Anbient Input	23 °C		
Ambient Dutout	24 °C		BARCO

Image 14-1 Projector status

Check first the Module Status. If the status is indicated in black is everything OK. If some items are indicated in red, follow the description in the next items to find out what is wrong with your projector.

To be sure the projector is ready as *Secured platform*, check the *Interface Board Type*. When the board is a type 3 board, then the projector can operate as a secured platform.

If the card cage inside the projector is open, an error message will be displayed: Tamper-Switch Activated.

## 14.2 Status overviews

## Overview

- Switch Mode Power Supply status
- Fan/Tec Controller status
- Boards Status
- External Cooler Unit Status
- CLO status
- Security Card Cage Status
- Barco access level

## 14.2.1 Switch Mode Power Supply status

#### **Status overview**

If the Switch Mode Power Supply status is failed, one of the following items must have a red indication:

- · SMPT voltages: these voltages can out of range
- Analog Channels
- Digital Channels
- · Fan speed, SMPS
- Projector Temperatures
  - Cooler SMPS 1
  - Cooler SMPS 2
  - Ambient Output
- Bottom inlet Filter

				Various read outs	
Modules status	07	elowds dwus	r manual	Module	Value
Lanp Power Supply FAN/Tec Controller Boardu Status Esternal Codes Unit CLO Security Card Cage Active Cooling Red Active Cooling Bisen Active Cooling Bise	OK Failed OK Not active OK OK Ide Ide Ide	Interface Board Type Processor Board Type Interface Board Type Processor Board Type Processor Board Type Processor Board Type Science Board Type	K K Status	<ul> <li>☐ Tec Volteges</li> <li>-(+P)</li> <li>-(+SV)</li> <li>-(+SV)</li> <li>-(+24V)</li> <li>-(+24V)</li> <li>SMPS Voltages</li> <li>Fan Speed</li> <li>Digital Channels</li> <li>Analog Channels</li> </ul>	7.03 V (56) 4.03 V (29) 23.59 V (188) 23.34 V (186)
Projector Temperatures Antieret Interface Board DMD Ried DMD Blase DMD Blase Dobler SMPS 1. South SMPS 2. Antibres 10/20 Ether	nr St St St D	Other properties Lang-Plan Trive 1 hos Lang-Shiller 1 Stel Botton Inder Fahr Botton Inder Fahr Barco Access Level (Dodd	ar kes 1	Certificates Projector Log Sec Retriesh Status	outly log



## 14.2.2 Fan/Tec Controller status

#### **Status overview**

If the Fan/Tec Controller status is failed, one of the following items must have a red indication:

- Fan Speeds (all, except SMPS)
- Tec Voltages
- DMD temperatures (red, green, blue)
- Ambient Input

Modules status		Bowds status	Various read outs
Switch Mode Power Supply	OK.	System Status DK. Files Active	Module Value
Lang Douge Courts	04	System Sell Test DK	E-Tec Vokeges
carb i over subby		Interface board ARM DK	-(+P) 7.03 V (56) (+5V) 4.89 V (39)
FAN/Tec Controller	Failed	Interface Board FPGA OK	-[+24V] 23.59 V (188)
Boards Status	DK	Processor Doerd DSP OK	[-[+24V FAN]] 23.34 V (186)
External Covies Unit	Not active	Processor Board FPGA UK	E-SMPS Vollages
		Other error messages Status	E-Digital Channels
CLO	DK.		Analog Channels
Security Card Cage	OK.		
Active Cooling Red	Ide		
Active Cooling Green	1010	Interface Board Type: Series 0	
Active Cooling Blue	Ide	Processor Board Type: Series 0	
	1		
Andrient Interland Boast	22 1	Lano Run Time: 1 hours	Cetificates
DMD Ret	250	Leng Strike: 1 Stekes	
DMD Green	252 /	Bottom Inlet Filter DK	representation of the second second
DMD Blue	st /	Barco Access Level (0x04)	Projector Log Security log
Cooler SMPS 1	3270		
Cooler SMPS 2	22 'C		Status retrieved
Anbient UV/IR Filter	24 'C		Hellesh
Anbient Input	23.1		
Archinel Charact	34.90		BAR

Image 14-3 Projector Status Fan/tec overview



WARNING: Servicing only allowed by a Barco authorized service technician.

## **Fan locations**





Image 14-5 Fan Card cage inside

1 Fan card cage inside

Image 14-4 Fan location

- 1 IR filter
- 2 Engine
   3 Integrator
   4 SMPS
- 5 Power Factor



Image 14-6 Fan Card cage cover

1 Fan card cage back side cover



Image 14-7 Fan Engine

1 Engine sealing

## 14.2.3 Boards Status

## **Status overview**

If the Boards Status is failed, check the boards status pane. If one of them is in failed status, information of the status is given in the log table of the same pane.

			Varius mall outs
Modules status	OF	Blowds status	Module Value
SHRON MODE POWER SUDDY	UK.	System Solitus UK. Files Active	E-Tec Voltages
Lamp Power Supply	OK.	System Self Test DK	-(+P) 7.03 V (56)
FAN/Tec Controller	Failed	Interface Board FPGA DK	-(+5V) 4.83 V (29) -(+34V) 23.59 V (188)
Boards Status	OK	Processor Board DSP OK	-[+24V FAN]] 23.34 V (186)
External Cooler Unit	Not active	Other arror mattages	E-Fan Speed
CLO	DK		Digital Channels     Analog Channels
Security Card Cage	OK.		
Active Cooling Red	Ide		
Active Cooling Siren	Ide		
Active Cooling Blue	Ide	Interface Board Type: Series 0 Processor Board Type: Series 0	
Projector Temperatures		Other properties	Certificates
Antient Interface Board	II C	Long Hun Time: Thous Long Shikes: 1 Shikes	
DMD Heg	0 L 35-F	Bottom Inlet Filter DK	
DMD Blue	37	Barco Access Level (0x04)	Projector Log Security log
Cooler SMPS 1	127		
Cooler SMPS 2	32 'C		(Status untrinued
Andrient UV/IR Filter	24 °C		Reliesh
Anbient Input	23°C		
Anbient Dutput:	24 °C		BAR

Image 14-8 Projector Status Boards Status

## 14.2.4 External Cooler Unit Status

## Status overview

The following statuses are possible:

- Not Active: Cooler unit not powered
- Check fluid:
- · Check flow: no circulation of liquid in the cooler system
- OK

## 14.2.5 CLO status

## Status overview

CLO status can be OK or failed. When failed, there is a communication error between the CLO device and the projector controller.

## 14.2.6 Security Card Cage Status

## Status overview

Security card cage status can be OK or failed. When failed, there is a communication error between the Security card cage and the controller.

## 14.2.7 Barco access level

#### Status overview

Value should be 0x04.

When not correct, communication between TI input boards and Barco controller will not work.

When this value is higher, click on the *Barco Access Level* item. The access level will change to the correct value (This must be done when a spare TI board was inserted into the projector).

## 14.3 Projector Log Information

#### Overview

- Displaying Projector Log Information
- Saving the Projector Log File
- · Refreshing the Projector log information
- Clearing the Projector log file
- Active Cooling on DMD's

## 14.3.1 Displaying Projector Log Information

#### How to display

1. Click on Projector Log File. (image 14-9)

The Projector log file will be retrieved. A reading window will indicate the status. (image 14-10)

When ready, the projector log information will be displayed. The projector log file contains the following information:

- actions done on the projector
- status indication when projector is in the fail state. (image 14-11)



Image 14-9 Projector log file selected

Controller Logging			? ×
Save Refresh Clear			
Date/Time	Event	Info	-
Mon Feb 28 10:13:46 2935093	Lamp Runtime Counter Write	65535	
Mon Feb 28 10:13:46 2935093	Lamp Strikes Write	0	
Mon Feb 28 10:15:16 2935093	RS Mode Select	15	
Mon Feb 28 10:15:17 2935093	RS Termination Select	0	-
Mon Feb 28 10:15:33 2935093	RS Mode Select	31	
Mon Feb 28 10:15:33 2935093	RS Termination Select	0	
Mon Feb 28 10:15:37 2935093	RS Termination Select	0	-
			-

Image 14-11 Projector Log information

## 14.3.2 Saving the Projector Log File

#### How to save

1. Click on Save. (image 14-12)



## 14.3.3 Refreshing the Projector log information

#### How to refresh

1. Click on Refresh. (image 14-13)

The Projector log file will be loaded again. A reading window will indicate the status. (image 14-14) When ready, the projector log window will be updated.

Save Refres	n Logging h Clear		Deadland to share 1000 second and
Date/Time		Ew	Heading log dataTo-s completed
Mon Feb 28 1 Mon Feb 28 1	0.13.46 2935093	Lan	
Mon Feb 28 1 Mon Feb 28 1	0 15 16 2935093	RS RS	Image 14-14
mage 14-2 Refresh the	13 e projector log	g file	

## 14.3.4 Clearing the Projector log file

## How to clear

1. Click on Clear. (image 14-15)

The projector log will be cleared.



## 14.3.5 Active Cooling on DMD's

#### Status overview

The following states are possible:

- idle : no cooling active
- cooling : cooling active

# 14.4 Security log file

## Get log file

To get an online security logging, click on Security Log. The software will retrieve the security log information from the projector. When somebody tries to break-in in the projector electronics by opening the card cage, this action will be logged in the security logging. This security log file cannot be deleted.

	Current projector time:	2006-04-11 07:42:22	
Projector Log Security log	Line Nr   Message		_
Refresh Status retrieved			
mage 14-16 Security log selected			
	Save to file on PC	ОК	

Image 14-17

In normal circumstances, this security log file must be empty.

## Save to PC

The online security log file can be saved to PC just by clicking Save to file on PC. A save window opens. Select a location and enter a file name for the logging. Click on Save.

# 14.5 Certificates

#### About certificates

Before some productions are authorized to be displayed with a certain projector, the film distributor must distribute a key to the theatre owners. This key is associated with the projector certificate which will be available for the film distributors on a web portal.

The certificate file must be uploaded on that web portal during the installation of the projector or after servicing the Interface board.

## To get the certificate file

	ł
Projector Log	Security log
Datast	Status retrieved

Image 14-18 Certificate selection

To get online a certificate file, click **Certificate**. A browse window opens. Browse to the desired location, enter a file name and click on **Save**. The file will be saved as an .xml file.

To upload the file on the web portal, follow the procedure in the installation manual.

# **15. PROJECTOR STATUS FOR DP30**

## Overview

- General overview
- Status overviews
- Projector Log Information
- Security log file
- Certificates

# 15.1 General overview

## Summary

This interface gives feedback on any item that can be read out in the D-Cine Premiere.

non I seub I compo	axon   PD-Edition	reas   coorcabraton   reavanage   opdates	Automation Server Statut (+ + Log
Modules status		- Boards status	Valous read outs
Switch Mode Power Supply	DK	System Status OK Files Active	Module Value
Lamp Power Supply	0K	Interface board ARM OK	-+5/ Standby 5.02 V (40) -+5/ 5.02 V (40)
DCDC Controller	OK.	Processor Board DSP OK Processor Board DSP OK	-+31V 30.62 V (244) -+3.3V 3.39 V (27)
Boards Status	DK.	Other error messages Status	-+24V Standay 23.35 V (202) -+24V Fanz 24.09 V (192) -+24V Flectors 24.09 V (192)
CLO	OK.		+12V 12.05 V (96)
Security Card Cage	OK.		E Digital Channels
Lens Motor Controller	ÓK.		In charge charters
Lamp Info Module	OK.	Interface Board Type: Series 0 Processor Board Type: Series 0	
Projector Terresotheres		Other suspectar	
Anbient Interface Board	12 °C	Lang Run Time: 181 hours	Certificates
DMD Red	26 °C	Lamp Strikes 499 strikes	
DMD Green:	26 °C		
DMD Blue	26°C	Barco Access Level (0x04)	Projector Log Security log
Cooker SMPS 1	33 °C		Contraction of the second s
Cooler SMPS 2	34.12		
LPS Input	23 °C	Entr Messages	Rebein Status retrieved
Lamo House	24 °C	Morker Marrane	
LPS Rectiler	24 °C	the second se	
LPS PEC:	37		BAB
LPS Heatsink:	24 °C		BHIN

Image 15-1 Projector Status

Check first the Module Status. If the status is indicated in black is everything OK. If some items are indicated in red, follow the description in the next items to find out what is wrong with your projector.

To be sure the projector is ready as *Secured platform*, check the *Interface Board Type*. When the board is a type 3 board, then the projector can operate as a secured platform.

If the card cage inside the projector is open, an error message will be displayed: Tamper-Switch Activated.

## 15.2 Status overviews

## Overview

- Switch Mode Power Supply status
- Lamp Power Supply status
- DCDC Controller
- Board status
- CLO status
- Security Card Cage Status
- Lens Motor Controller
- Lens Info Module
- Barco access level

## 15.2.1 Switch Mode Power Supply status

## Status overview

If the Switch Mode Power Supply status is failed, one of the following items must have a red indication:

- SMPS voltages
- Fan speed
- Analog Channels
- Digital Channels
- Projector Temperatures
  - Cooler SMPS1
  - Cooler SMPS2
  - Ambient Output

Modules status		Boards status	Various read outs
Guild Moste Preser Surger	OK	Sustain Status OK Files Activ	e Module Value
Lamp Power Supply	OK	System Self Test OK. Handbee board AFM OK.	SMPS Vohage: +5V Standby 5.02 V (40) +5V 5.02 V (40)
DCDC Controller	ок	Processor Board EPOT OK	-+31V 30.52 V (244) -+3.3V 3.39 V (27)
Boards Status	OK	Other error messages Supp	-+24V Startosy 25.55 V (252) -+24V Fant 24.09 V (192) -+24V Electroni 24.09 V (192)
CLO	OK.		+12V 12.05 V (96)
Security Card Cage	ок		E Digital Charmets
Lens Mator Controller	OK		The ready contrast.
Lamp Into Module	OK	Interlace Board Type Series 0 Processor Board Type Series 0	
Projector Temperatures		Other properties	
Ambient Interface Board	32.°C	Long Run Time: 181 hours	Centricales
DMD Red	26 °C	Lamp Sträkes: 499 sträkes	
DMD Green	26.10		
DHD BUE	26.0	Barco Access Level (0x04)	Projector Log Security log
Looker SMPS 1	30 %		
Cooler SMPS 2	34 12 5		
LPS Input	210	Error Messages	Refeate Status retrieved
Lanp House:	24 °C	Module Message	
LPS Rectifier	24 °C	and a state of the	
LPS PFC:	25 °C		808
1 DC Manhala	34.97		Britt

Image 15-2 Projector status SMPS overview

## 15.2.2 Lamp Power Supply status

#### Status overview

If the Lamp Power Supply status is failed, one of the following items must have a red indication:

- SMPS voltages
- Fan speed
- Lamp house temperature

druck dass of store		Box	to status			Var	inter beer mee			
Sudich Mode Prese Surely	DK	Set	en Statue	0K	Files Active	1	fodule	V	alue	
Lano Power Supply DCDC Controller Boards Status CLO Security Card Cage		Syd Inte Pro Pro	ten Sell Test risce board APM risce Board FPG/ sensor Board DSF ressor Board FPG her enter message	0K 0K 0K 0K A 0K a 5tah	a		SMPS Valt +5/ 51 +5/ 51 +5/ 51 +3/ +3/ +3/ +24/ 5 +24/ 5 +24/ 5 +24/ 5 +24/ 5 +24/ 5 +24/ 5 +24/ 5 +24/ 5 -24/	ages andby 5 3 3 itandby 2 ans 2 lectioni 2 lectioni 2 1 innels	02 V (40) 02 V (40) 0.52 V (244) 39 V (27) 5.35 V (202) 4.09 V (192) 5.35 V (192) 5.35 V (195)	
Lamp Into Module	OK	Inte	rlace Board Type cercor Board Type	Seves 0 s Seves 0						
Projector Temperatures		Othe	poperties			0	etificales			
Anbert Interface Board DMD Red	200	La	np fun Twe np Sakec	499 strikes		-				
DMD Green	26.00		1							
DMD Blue:	26°C	Ba	ICO ACORE Level	(Dx04)		Pro	ector Log	Security	bg	
Cooler SMPS 2	-mer		<u> </u>							
LPS Input	27	Error	Messages				Rehesh 1	Status retr	ieved	
Lamp House	24 7	M	duie Message	0						
LPS Rectifier	2410									_
DPS-EST	-									3A

Image 15-3

Projector status Lamp power supply overview

## 15.2.3 DCDC Controller

#### Status overview

If the DCDC controller is failed. Error messages will be given in the error message pane.

							Contract Carland	- second of
Modules status		Boards status			Variout	riead outs		
Switch Mode Power Supply	OK.	System Statue	OK.	File: Active	Mod	Life	Value	
Lamp Power Supply	OK.	System Sell Test Interface board AFM	OK OK			-+5V Stan -+5V	± £y 5.02 ∨ (40) 5.02 ∨ (40)	
DCDC Controller	OK	Processor Board DSP	OK. OK.			-+3.3V	30.52 V (244 3.39 V (27)	4
Boards Status	ок	Other error messages	51aku			-+24V Sta -+24V Fan	ndby 25.35 V (20) a 24.09 V (19)	5
CLO	ок					-+24V Elec	12.05 V [96]	9
Security Card Cage	ок	X			8-0	an Spred Digital Channi	ela ada	
Lens Mator Controller	OK	X				shalog unan	NEEL.	
Lamp Info Module	OK.	Interface Board Type: Processor Board Type:	Series 0 Series 0					
Designation Transmission						10		
Anbient Interface Board	32 °C	Lano Run Time	181 hours		Cetil	icales		
DMD Red	26 °C	Lang Stikes	andrite 664			10		
DMD Gwen	26.10	<b>A</b>						
DMD Blue	26.12	Barco Access Level	0x041		Project	tor Log	Security bg	
Cruiter SMPS 1	10 12		8-57/					
Cooler SMPS 2	34 10	1						
LPS local	23.1	Farry Manager			Rel	Inth Sta	Aus retrieved	
Lann House	24.35	No.4 in Manual						
IPS Baciller	24.10	MODUR   MELLER						
IDC DET	36.10							2000
LES HE ALLS	20 0							внис

Image 15-4 Projector Status DCDC convertor Status

# 15.2.4 Board status

## **Status overview**

If the Boards Status is failed, check the boards status pane. If one of them is in failed status, information of the status is given in the log table of the same pane.

Andular status		Boards status			Various read outs	1.000	
Cultick March Davas Currely	- AF	Guideau Status	01 3	Electricity	Module	Value	
SHICK HODE FOWER SUPPLY	un.	Frank Lak Lack	ar -	Ting Posts	SMPS Volt	ages	
Lamp Power Supply	OK V	Interface board AFM			- +5/ 51	andby 5.02 V (40)	
	1	Interface Board FPG	A OK		-*31V	30.62 V (244	8
DCDC Controller	ак	Processor Board DS	P OK		-+3.3/	3.39 V (27)	
Roads Status	OK	Processor Board FPI	GA OK		-+24V S	itandby 25.35 V (202	£
	-	Other error messag	es Status		-+2471	and 24.09 V [192 Jection: 24.09 V [192	
CLO	ок 🔪			<b>↓</b>	-+12V	12.05 V (96)	· .
Provide Productions	~				Fan Speed		
Securey card cage	UK.				E-Digital Cha	nnet:	
Lens Motor Controller	OK .	X			1.00000	10.00	
		Interfaces Report Turn	Error D				
Lamp Info Module	OK.	Processor Board Typ	xe Selec 0				
		1					
Projector Tempesatures	-	Other properties			Cetticales		
Antiant Interface Board	321	Land Hun Time	181 Featres				
DMD Guarr	26 C	Caral Cara					
DMD Rue	26.10	Barco Achers Leve	# 10x041		Projector Log	Security log	
Cooler SMPS 1	10.12		3,03,520				
Cooler SMPS 2	34.7						
1PS loved	23.1	Farry Messager			Beheith	Status retrieved	
Lano House	24 10	Markin Manan					
LPS Rectifier	24 °C	Involve   HEILING	1				
105.001	26.17						201
L'erri							эни

Image 15-5 Projector Status Boards Status

## 15.2.5 CLO status

#### **Status overview**

CLO status can be OK or failed. When failed, there is a communication error between the CLO device and the projector controller.

## 15.2.6 Security Card Cage Status

#### **Status overview**

Security card cage status can be OK or failed. When failed, there is a communication error between the Security card cage and the controller.

## 15.2.7 Lens Motor Controller

#### **Status overview**

If the Lens Motor Controller Status is failed, check the ambient temperature and read the error messages.

ion   Setup   Conngu	istion   PCF Edito	y   Tests	Color Calbratio	FileManag	er   Updates	Autons	ston   Server	Statut	<u>.</u>
lodules status		Board	de stakue				Various read out		
Switch Mode Power Supply	DK.	510	tem Statue	0K	File: Active		Module	V	alue
		C.c.	ten Lat Test	OK			SMPS Vol	lages	
Lamp Power Supply	OK.	Inte	flace board AFM	OK.				landby 51	32 V (40)
		Inte	rface Board FPGA	OK.			-*3V	3	152 V (244)
DCDC Controller	OK.	Pip	cessor Board DSP	OK.			+3.3/	1	39 V (27)
Second State	2000	Pip	cessor Board FPG4	OK			-+24V	Standby 25	35 V (202)
Boards Slahus	UK	01	her error messages	State			-+241	Fano 24	.09 V (192)
CL0	OK.				- W 3		-+24V	Electioni 24	(39 V (192)
							Fan Speed	1	100 V [36]
Security Card Cage	OK.						B-Digital Cha	mets	
							E-Analog Ch	annels	
Lens Mator Controller	OK								
Lann Into Module	OK N	Inte	dace Board Type:	Series 0					
	1	Pip	cessor Board Type	Sele: 0			1		
	X	$\mathbf{N}$							
Tangan tangan		Dite	numeries						
Anbient Interface Board	32 'C	La	ng Run Time	181 hours			Centricales		
DMD Red	22	X	mp Stikes:	499 strikes					
DMD Green:	26 °C		<b>\</b>						
DMD Blue:	26 °C	Ba	ACC ACCESS Level	(Dx04)			Projector Log	Security	bg
Cooler SMPS 1	30.42		1						
Cooler SMPS 2:	34.10							Paster and	
LPS Input	23 °C	Error	Messages				Rehesh	acanus retur	even
Lamp House:	24 °C	M	duie Message						
LPS Rect/liet	24 °C								-
LPS PFC:	25 °C								BF
LPS Heattink	24 °C								

Image 15-6

Projector Status Lens Motor Controller Status

#### 15.2.8 Lens Info Module

#### **Status overview**

The lens info module status can be OK or failed.

#### 15.2.9 Barco access level

#### Status overview

Value should be 0x04.

When not correct, communication between TI input boards and Barco controller will not work.

When this value is higher, click on the *Barco Access Level* item. The access level will change to the correct value (This must be done when a spare TI board was inserted into the projector).

# **15.3 Projector Log Information**

#### Overview

- Displaying Projector Log Information
- Saving the Projector Log File
- Refreshing the Projector log information
- · Clearing the Projector log file

## 15.3.1 Displaying Projector Log Information

## How to display

1. Click on Projector Log File. (image 15-7)

The Projector log file will be retrieved. A reading window will indicate the status. (image 15-8)

When ready, the projector log information will be displayed. The projector log file contains the following information:

- actions done on the projector
- status indication when projector is in the fail state. (image 15-9)



Image 15-7 Projector log file selected

Controller Logging	The subscription of the su		<u> ? ×</u>
Save Refresh Clear			
Date/Time	Event	Info	-
Mon Feb 28 10:13:46 2935093	Lamp Runtime Counter Write	65535	1
Mon Feb 28 10:13:46 2935093	Lamp Strikes Write	0	
Mon Feb 28 10:15:16 2935093	RS Mode Select	15	
Mon Feb 28 10:15:17 2935093	<b>RS</b> Termination Select	0	_
Mon Feb 28 10:15:33 2935093	RS Mode Select	31	
Mon Feb 28 10:15:33 2935093	RS Termination Select	0	
Mon Feb 28 10:15:37 2935093	RS Termination Select	0	-

Image 15-9 Projector Log infor

Projector Log information

## 15.3.2 Saving the Projector Log File

## How to save

1. Click on Save. (image 15-10)



## 15.3.3 Refreshing the Projector log information

## How to refresh

1. Click on Refresh. (image 15-11)

The Projector log file will be loaded again. A reading window will indicate the status. (image 15-12) When ready, the projector log window will be updated.

Save Refres	h Clear		Deadles has date 10% secondate			
Date/Time	<u>.</u>	Ew	neading log dataTo-s completed			
Mon Feb 28 1	0.13.46 2935093	Lan				
Mon Feb 281	13.46 2935093	Lan				
Mon Feb 28 1	0.15.16 2935093	RS	Image 15-12			
Man Feb 28 1	0 15 17 2935093	BS				
mage 15- <sup>2</sup>	11					
Refresh the	e proiector lo	a file				

## 15.3.4 Clearing the Projector log file

## How to clear

1. Click on Clear. (image 15-13)

The projector log will be cleared.

Date/Time Mon Feb 28 10:13:46 1935093 Mon Feb 28 10:13:46 2935093 Mon Feb 28 10:15:16 2935093	Save Refresh Clear		
Mon Feb 28 10:13:46 1935093 Mon Feb 28 10:13:46 2335093 Mon Feb 28 10:15:16 2935093	Date/Time		
	Mon Feb 28 10:1 Mon Feb 28 10:1 Mon Feb 28 10:1	13:46 1935093 13:46 2335093 15:16 2935093	

# 15.4 Security log file

## Get log file

To get an online security logging, click on Security Log. The software will retrieve the security log information from the projector. When somebody tries to break-in in the projector electronics by opening the card cage, this action will be logged in the security logging. This security log file cannot be deleted.

Certificates	🕈 Projector log file	2 🛛
	Current projector time:	2006-04-11 07:42:22
Projector Log Security log Refresh Status retrieved	Line Nr Message	
	Save to file on PC	OK

Image 15-15

In normal circumstances, this security log file must be empty.

## Save to PC

The online security log file can be saved to PC just by clicking **Save to file on PC**. A save window opens. Select a location and enter a file name for the logging. Click on **Save**.

# 15.5 Certificates

#### About certificates

Before some productions are authorized to be displayed with a certain projector, the film distributor must distribute a key to the theatre owners. This key is associated with the projector certificate which will be available for the film distributors on a web portal.

The certificate file must be uploaded on that web portal during the installation of the projector or after servicing the Interface board.

## To get the certificate file



Image 15-16 Certificate selection

To get online a certificate file, click **Certificate**. A browse window opens. Browse to the desired location, enter a file name and click on **Save**. The file will be saved as an .xml file.

To upload the file on the web portal, follow the procedure in the installation manual.

# 16. PROJECTOR STATUS FOR DP100-DP90

## Overview

- General Overview
- Status overviews
- Certificates

# 16.1 General Overview

## Summary

This interface gives feedback on any item that can be read out in the D-Cine Premiere.

iton   Setup   Contiguration	POFEditor   Tests	Color Calibration   Filel/	lanager   Updates	Automation Server 51a	# • •	Log
General		Enor Messages Module Mess	ige	200		
-	2			Read outs	Interio	+
Summe U				⇔ Voltages ⇒ +TEC ⇒ +Fan3 ⇒ +Fan2 ⇒ +Fan1	12.25V 15.88V 0.75V 0.75V	
Boerdr statur		Other properties		+FanD	0.75V	
System Status OK	File: Active	Lamp Run Time:	32	+	3.25V	
System Self Test OK. Interface board ARM OK.		Lamp Stilker:	89	+12V ACSAR2	12.25V	-
Interface Board FPGA OK		Rarro Access Level	10-041	(± +12V (± ++7V)	12.00 V 5.00 V	
Processor Board DSP OK Processor Board EPG6 OK			(present)	± ++12V	12.25V	
Dthet error methaden	Statur	Active Cooling Red	Not Active	E Terperatures	10.10	
		Active Cooling Green	Not Active	Earp House	21 °C	
		Active Cooling Blue	Not Active	Heaturik SMP	23 °C	
		and the second second		# Heshink SMP	_23*C	1
		Watesflow	0K	121		1
Interface Board Type: Sele Processor Board Type: Sele	e 15 Type 3 s 1	Outlet Air Flow	OK			
Cert	Ficales S	iecurity log   Projector Log	Fie	heath Status retrieved	I	BAR

Image 16-1 Projector status

Check first the Board Status. If the status is indicated in black, everything is OK. If some items are indicated in red, follow the description in the next items to find out what is wrong with your projector.

To get an overview of the active files, click on **File Active**. An overview window will be displayed. For more information, see chapter "8. File Manager", "Read Files Active", page 146.

To be sure the projector is ready as *Secured platform*, check the *Interface Board Type*. When the board is a type 3 board, then the projector can operate as a secured platform.

If the card cage inside the projector is open, an error message will be displayed: Tamper-Switch Activated.

## 16.2 Status overviews

## Overview

- Voltage statuses
- Temperature statuses
- Fan statuses
- Other projector properties
- Projector Log file
- Security log file

## 16.2.1 Voltage statuses

## **Status overview**

When one of the voltages are out of specification, the voltage indication will be red.

D-Cine Communicator 2.7.0 If Build 02 POST PRODUCTION EDITION				
ector   Setup   Configuration   POF Editor	Tests Color Calibration   FileManager   Updates   Automation   Server   Status   + +   Log			
Sterus OK	Module         Message           bin         Value           + +TEC         12.25 ∨           + +Fan3         15.60 ∨           + +Fan2         0.75 ∨			
- Roards status	075V ++ +Fan1 0.75V ++ +Fan0 0.75V			
System Status OK File: Act System Self Test DK Interface board ARM OK Interface Board PFGA OK Processor Board PFGA OK Processor Board FFGA OK	Lang Run Tane:         32         + +3.3V         3.25V           Lang Stake:         69         + +2V ACSAR2         12.85V           Barco Access Level         (Not Action         + +12V         12.00V           Action Context Red         Not Action         + +12V         12.00V			
Diffeet eeror nvestaagee Statue	Active Cooling Brean Not Active Active Cooling Brean Not Active Active Cooling Blue Not Active Waterflow OK			
Interface Board Type Series 15 Type 3 Processor Board Type Series 1	Dutet Air Row DK			
Certicates	Security log Projector Log Raheah Status retrieved			

Image 16-2 Status overview voltages

To see the minimum and maximum allowed value for each item, just click on the + before that item.

## 16.2.2 Temperature statuses

## Status overview

When one of the temperatures are out of specification, the indication will be in red.
General		Enor Messages Module Message	
Status	OK		Read outs         Value           Immersitures         Immersitures           Immersitures         Immersitures
Boards status		Other properties	+ Heaturik SMP 27 °C + Heaturik SMP 25 °C
System Status	OK. Files Active	Lavo Bus Tata 22	#-Heatink SMP., 35 °C
System Sell Test Interface board ARM Interface Board FPGA Processor Board DSP Processor Board FPGA	ОК ОК ОК ОК	Lang Stakes: 89 Barco Access Level (DaG Access Level (DaG	4) +
Difver error messages	Statur	Active Cooling Hes Hock	Fin Speeds
		Active Cooling Green Not A	Active Fan Sealing 2274 rpm
		Active Cooling Blue Not A	Active Fan Lanp Cat. 0 rpm
		Waterflow DK	+ Fan Lanp Ano Urpm
Interface Board Type Processor Board Type	Seies 15 Type 3 Seies 1	Dutlet Air Flow DK	
	Certificates	Security log Projector Log	Reheih Status retrieved BAI

Image 16-3 Status overview temperatures

To see the minimum and maximum allowed value for each item, just click on the + before that item.

WARNING: Servicing only allowed by a Barco authorized service technician.

# **Sensor locations**



Image 16-4 Ambient temperature sensor



Image 16-5 Sensors on modules

A Sensor on PFCB Sensor on heatsink SMPS



Image 16-6 Lamp house sensor

# 16.2.3 Fan statuses

#### Status overview

If one of the fans fail, the corresponding indication will be displayed in red.

Cine Communicator 2.7.0 B Build 02 POST PR	RODUCTION EDITION
nection Setup Configuration PDFEditor Tests	Color Calibration   FileMenager   Updates   Julionation   Server   Status   + Log @
Gerenal	Exor Message Module Message Read outs
Source UR.	Heatink SMP, 26 C           Heatink SMP, 26 C           Heatink PFC 36 C           Heatink PFC 36 C           Houbox 24 C           DND Bid 24 C           DND Gisen 24 C
Boards status	Other properties
System Status OK Files Active System Self Test DK Interface Board FPGA OK Processor Board FPGA OK Processor Board FPGA OK	Lamp Run Time: 32  Fin Speeds Fin Stat Pols. 2627 pm Fin State Pols. 2627 pm Fin Sealing 2274 pm Fin Lamp Tep Lamp Tep Organ Barco Access Level (0x04) Fin Lamp Cel. 0 pm Fin Lamp Ano. 0 pm Anthe Coden Red Not Active Fin Campo Red Not Active Fin C
Diffeet error oversnager: Statue	Active Cooling Breen Not Active Fan Cald Hiso. 2493 rpm Fan Cald Hiso. 2493 rpm Fan 4 Elcabos 2499 rpm Fan 3 Elcabos 2496 rpm Fan 2 Elcabos 2496 rpm Fan 1 Elcabos 2496 rpm
	Watestow OK
Interface Board Type: Series 1 Series 1	Outer Air Flow DK
Processor Board Type Series 1	ecusty log Projector Log Rieleuh Status retrieved BARCO

Image 16-7 Status overview fans

To see the minimum and maximum allowed value for each item, just click on the + before that item.



## **Fan locations**



Image 16-8 Cold mirror bottom fan



Image 16-9 Cold mirror top fan



Image 16-10 Fan 1 – 4 elcabox



Image 16-11 Lamp fan cathode



Image 16-12 Lamp fan anode



Image 16-13 Start pulse generator fan

# 16.2.4 Other projector properties

#### Overview

3eroecal		Exter Messages			
		Module Mess	NDH	Read outs	
Status	OK			Rem	Value *
loande statue				⊖ Voltages	12.25V 15.88V 0.75V 0.75V 0.75V
System Status	OK. Filez Active	Lano Buo Time	22	++5/	4.88V
Sustem Sell Test	OK.	Last river i me.	S 1	± +3.57 ± +24V	23.68 V
Interface board ARM	OK	Lamp Stikes:	69	+12V ACSAR2	12.25 V
Interface Board FPGA	ОК	Rann docers Level	10-00	÷+12V 10:+17V	12.00 V
Processor Board DSP	OK	Diacto Access Carves	( ( detailed)	8-++12V	12.25V
Processor Soard FPISA	UK	Active Cooling Red	Not Active	Temperatures	
Udvet error messages	Statur		100000000	B Rack	22 °C
		Active Cooling Ureen	Not Active	T-Heaturk SMP	30 °C
	<b>N</b>	Active Cooling Blue	Not Active	+ Heatsink SMP + Heatsink SMP	2310 -
		Waterflow	ок		「
Interface Board Type: Processor Board Type:	Selec 15 Type 3 Selec 1	Outlet Air Flow	ок		
		-			
	Certificates	Security log Projector Log	Bahash	Status retrieved	BAR

Miscellaneous items

- Lamp run time : expressed in hours. Time lamp is running since first start up.
- Lamp strikes : number of strikes since first start up of the lamp.
- Barco access level : value should be 0x04. When not correct, communication between TI input boards and Barco controller will not work. When this value is higher, click on the *Barco Access Level* item. The access level will change to the correct value (This must be done when a spare TI board was inserted into the projector).
- Active cooling Red (active not active) : when active, Peltier cooling is activated for Red DMD.
- Active cooling Green (active not active) : when active, Peltier cooling is activated for Green DMD.
- Active cooling Blue (active not active) : when active, peltier cooling is activated for Blue DMD.
- Waterflow: checks if waterflow is possible. See also location waterflow switch (image 16-15).
- Outlet air flow : checks if there is air coming out of the outlet.



Image 16-15 Waterflow switch location

# 16.2.5 Projector Log file

# Get log file

To get an online logging, click on **Projector Log**. The software will retrieve the log information from the projector. This can take several minutes as the log file can be very large.

22 85	Presd outs           hem           ⇒ Voltages           ÷ +TEC           ÷ +fan2           ÷ +fan2           ÷ +fan1           ÷ +fan0           ÷ +97           ÷ +337	Value 12.25 V 15.80 V 0.75 V 0.75 V 4.86 V	
22	Here           Dem           Uotages           + 1EC           + fan3           + fan1           + fan1           + fan1           + 43 3V	Value 12.25 V 15.00 V 0.75 V 0.75 V 0.75 V 4.88 V	
32	⇒ Voltages	12.25V 15.80V 0.75V 0.75V 0.75V 4.88V	
32	++ and ++ +9V ++ +3.3V	4.88V	
32 69	+3.3V		
69		3.25 V	
	⊕ +24V ⊕ +12V ACS ⊕ +12V	23.88 V SAR2 12.25 V 12.00 V	-
(0+04)	(a) ++5V (b) ++12V	5.00 V	
Not Active	E Texperatures	12.231	
5 002002/00000	· Rack	22 °C	
Not Active	E Lamp Hou	USE 211C SMP_301C	
Not Active	Heatsink.	SMP 23 °C	
	Heataink 1	SMP 23 °C	, č
OK.	121		1
OK.			
		_	
	Not Active Not Active Not Active OK OK	Not Active Not Active Not Active Not Active OK. (************************************	Not Active Not Active Not Active Not Active Not Active OK OK Not Active

Image 16-16 Projector log selection

Cu	arrent projector time: 2005-01-26 08	33:07
Line Nr	Message	2
0001	2005JAN26 08:33:02 B i2c bus 6 (anamorphic,) dow	n (scl) -
0002	2005JAN26 08:32:58 B i2c bus 6 (anamorphic,) dow	n (scl)
0003	2005JAN26 08:32:53 B i2c bus 6 (anamorphic,) dow	n (sci)
0004	2005JAN26 08:32:48 B i2c but 6 (anamorphic,) dow	n (sci)
0005	2005JAN26 08:32:42 B i2c bus 6 (anamorphic,) dow	n (sci)
0006	2005JAN26 08:32:40 B i2c bus 6 (anamorphic,) dow	n (scl)
0007	2005JAN26 08:32:34 B i2c bus 6 (anamorphic,) dow	n (sci)
8000	2005JAN26 08:32:30 B i2c bus 6 (anamorphic, ) dow	n (sci)
0009	2005JAN26 08:32:24 B i2c but 6 (anamorphic,) dow	m (scl)
0010		
0011		
0012	Reading projector log file. Please wait	
0013	and (77%)	
0014		
0015	200004N26 06.51.05 B 120 D0s 6 (anamolphic,) dow	er (sci)
0016	2005JAN26 08:31:49 B i2c bus 6 (anamorphic,) dow	n (sci)
0017		an fastel
0017	2005JAN26 08:31:42 B i2c bus 6 (anamorphic,) dow	n (scl)
0012	2005JAN26 08:31:42 B i2c bus 6 (anamorphic,) dow 2005JAN26 08:31:37 B i2c bus 6 (anamorphic,) dow	n (scl) n (scl)
0012 0018 0019	2005JAN26 08:31:42 8 i2c bus 6 (anamorphic,) dow 2005JAN26 08:31:37 8 i2c bus 6 (anamorphic,) dow 2005JAN26 08:31:33 8 i2c bus 6 (anamorphic,) dow	n (scl) n (scl) n (scl)
0012 0018 0019 0020	2005JAN26 08:31:42 8 i2c bus 6 (anamorphic,) dow 2005JAN26 08:31:37 8 i2c bus 6 (anamorphic,) dow 2005JAN26 08:31:33 8 i2c bus 6 (anamorphic,) dow 2005JAN26 08:31:29 8 i2c bus 6 (anamorphic,) dow	m (scl) m (scl) m (scl) m (scl)
0012 0018 0019 0020 0021	2005JAN26 08:31:42 8 i2c bus 6 (anamorphic,) dow 2005JAN26 08:31:37 8 i2c bus 6 (anamorphic,) dow 2005JAN26 08:31:33 8 i2c bus 6 (anamorphic,) dow 2005JAN26 08:31:29 8 i2c bus 6 (anamorphic,) dow 2005JAN26 08:31:23 8 i2c bus 6 (anamorphic,) dow	m (scl) m (scl) m (scl) m (scl) m (scl) m (scl)
0017 0018 0019 0020 0021 0022	2005JAN26 08:31:42 8 i2c bus 6 (anamorphic,) dow 2005JAN26 08:31:37 8 i2c bus 6 (anamorphic,) dow 2005JAN26 08:31:33 8 i2c bus 6 (anamorphic,) dow 2005JAN26 08:31:29 8 i2c bus 6 (anamorphic,) dow 2005JAN26 08:31:21 8 i2c bus 6 (anamorphic,) dow 2005JAN26 08:31:21 8 i2c bus 6 (anamorphic,) dow	m (scl) m (scl) m (scl) m (scl) m (scl) m (scl) m (scl)
0017 0018 0019 0020 0021 0022 0023	2005JAN26 08:31:42 8 i2c bus 6 (anamorphic,) dow 2005JAN26 08:31:37 8 i2c bus 6 (anamorphic,) dow 2005JAN26 08:31:33 8 i2c bus 6 (anamorphic,) dow 2005JAN26 08:31:29 8 i2c bus 6 (anamorphic,) dow 2005JAN26 08:31:21 8 i2c bus 6 (anamorphic,) dow 2005JAN26 08:31:21 8 i2c bus 6 (anamorphic,) dow 2005JAN26 08:31:21 8 i2c bus 6 (anamorphic,) dow	m (sc) m (sc) m (sc) m (sc) m (sc) m (sc) m (sc) m (sc)
0017 0018 0019 0020 0021 0022 0023 0023	2005JAN26 08:31:42 8 i2c bus 6 (anamorphic,) dow 2005JAN26 08:31:37 8 i2c bus 6 (anamorphic,) dow 2005JAN26 08:31:33 8 i2c bus 6 (anamorphic,) dow 2005JAN26 08:31:29 8 i2c bus 6 (anamorphic,) dow 2005JAN26 08:31:21 8 i2c bus 6 (anamorphic,) dow 2005JAN26 08:31:21 8 i2c bus 6 (anamorphic,) dow 2005JAN26 08:31:21 8 i2c bus 6 (anamorphic,) dow 2005JAN26 08:31:14 8 i2c bus 6 (anamorphic,) dow 2005JAN26 08:31:14 8 i2c bus 6 (anamorphic,) dow	n (sc) m (sc) m (sc) m (sc) m (sc) m (sc) m (sc) m (sc) m (sc)
0017 0018 0019 0020 0021 0022 0023 0024 0025	2005JAN26 08:31:42 8 i2c bus 6 (anamorphic,) dow 2005JAN26 08:31:37 8 i2c bus 6 (anamorphic,) dow 2005JAN26 08:31:33 8 i2c bus 6 (anamorphic,) dow 2005JAN26 08:31:29 8 i2c bus 6 (anamorphic,) dow 2005JAN26 08:31:21 8 i2c bus 6 (anamorphic,) dow 2005JAN26 08:31:21 8 i2c bus 6 (anamorphic,) dow 2005JAN26 08:31:14 8 i2c bus 6 (anamorphic,) dow 2005JAN26 08:31:09 B i2c bus 6 (anamorphic,) dow 2005JAN26 08:31:09 B i2c bus 6 (anamorphic,) dow	n (sc) m (sc) m (sc) m (sc) m (sc) m (sc) m (sc) m (sc) m (sc) m (sc)
0017 0018 0019 0020 0021 0022 0023 0023 0024 0025 0026	2005JAN26 08:31:42 8 i2c bus 6 (anamorphic,) dow 2005JAN26 08:31:37 8 i2c bus 6 (anamorphic,) dow 2005JAN26 08:31:33 8 i2c bus 6 (anamorphic,) dow 2005JAN26 08:31:29 8 i2c bus 6 (anamorphic,) dow 2005JAN26 08:31:21 8 i2c bus 6 (anamorphic,) dow 2005JAN26 08:31:21 8 i2c bus 6 (anamorphic,) dow 2005JAN26 08:31:14 8 i2c bus 6 (anamorphic,) dow 2005JAN26 08:31:19 8 i2c bus 6 (anamorphic,) dow 2005JAN26 08:31:09 8 i2c bus 6 (anamorphic,) dow 2005JAN26 08:30:59 8 i2c bus 6 (anamorphic,) dow	n (sc) n (sc)
0017 0018 0019 0020 0021 0022 0023 0024 0025 0026 0027	2005JAN26 08:31:42 8 i2c bus 6 (anamorphic,) dow 2005JAN26 08:31:37 8 i2c bus 6 (anamorphic,) dow 2005JAN26 08:31:33 8 i2c bus 6 (anamorphic,) dow 2005JAN26 08:31:29 8 i2c bus 6 (anamorphic,) dow 2005JAN26 08:31:21 8 i2c bus 6 (anamorphic,) dow 2005JAN26 08:31:21 8 i2c bus 6 (anamorphic,) dow 2005JAN26 08:31:21 8 i2c bus 6 (anamorphic,) dow 2005JAN26 08:31:14 8 i2c bus 6 (anamorphic,) dow 2005JAN26 08:31:09 8 i2c bus 6 (anamorphic,) dow 2005JAN26 08:30:59 8 i2c bus 6 (anamorphic,) dow 2005JAN26 08:30:59 8 i2c bus 6 (anamorphic,) dow 2005JAN26 08:30:52 8 i2c bus 6 (anamorphic,) dow 2005JAN26 08:30:52 8 i2c bus 6 (anamorphic,) dow	n (sc) n (sc)



# Save to PC

The online log file can be saved to PC just by clicking **Save to PC**. A save window opens. Select a location and enter a file name for the logging. Click on Save.

# 16.2.6 Security log file

#### Get log file

To get an online security logging, click on Security Log. The software will retrieve the security log information from the projector. When somebody tries to break-in in the projector electronics by opening the card cage, this action will be logged in the security logging. This security log file cannot be deleted.

General	Enter Messages				
	Module Mess	age			
			Read outs		
Status OK			Item	Value	*
			⊖ Voltages ÷ +TEC ÷ +Fan3 ÷ +Fan2 ÷ +Fan1	12.25V 15.88V 0.75V 0.75V	
Boerds status	Other properties		++Fan0	0.75V	
System Status OK. Files Ac	tive Lano Bun Time:	32	++3.3V	4.88V 3.25V	
System Sell Test DK		355		23.88 V	
Interface board ARM OK	Lamp Stilker:	69	+12V ACSAR2	12.25V	
Interface Board FPGA OK	Rees Assess I was	10.00	€ +12V	12.00 V	
Processor Board DSP OK	Barco Access Level	(care)	a ++5V	1225V	
Processor Board FPGA OK	Active Cooling Red	Not Active	E-Temperatures		
Dthet error messages Status	A DE DAMAGE DE DE DAMAGE DE DE DAMAGE DE		· Rack.	22 °C	
	Active Cooling Green	Not Active	+ Lamp House	21 °C	
			THEATINK SMP	- 30 °C	
	Active Cooling Blue	Not Active	Heaturk SMP	23 °C	
	Waterflow	OK.			
1	A GROUP	0			
Interface Board Type: Series 15 Type 3 Processor Board Type: Series 1	Outlet Air Flow	0K			
	$\sim$				
		Call Contraction of the Contract	NUMBER OF STREET, STRE		-

Image 16-18 Security log selection

🕈 Proje	tor log file			? 🔀
Cu	ment projecto	r time:	2006-04-11 07:42:22	
Line Nr	Message			
10		and the	[]	
	Save to file on	PC		



In normal circumstances, this security log file must be empty.

#### Save to PC

The online security log file can be saved to PC just by clicking **Save to file on PC**. A save window opens. Select a location and enter a file name for the logging. Click on **Save**.

# 16.3 Certificates

#### **About certificates**

Before some productions are authorized to be displayed with a certain projector, the film distributor must distribute a key to the theatre owners. This key is associated with the projector certificate which will be available for the film distributors on a web portal.

The certificate file must be uploaded on that web portal during the installation of the projector or after servicing the Interface board.

General		Exor Messages Module Message		
Salar	DK		Read out:	
Boerds status System Status	OK Files Active	Other properties Lamp Run Time: 32	++5/ 4.88V ++33V 3.25V	
System Sell Test Interface board ARM Interface Board FPGA Processor Board DSP Processor Board FPGA	ОК ОК ОК ОК	Lamp Staker: 89 Barco Access Lavel (De04) Active Coolers Red Not Active	+ +24V 23.88V + +12V ACSAR2 12.25V + +12V 12.00V ++5V 5.00V ++12V 12.25V	-
Other error messages	Status	Active Cooling Silven Not Active	Rack 22 °C E Lamp House 21 °C Heattank SMP 30 °C Heattank SMP 23 °C	
		Watesflow OK	+ Heshink SMP_ 23 °C	1
Interface Board Type Processor Board Type	Seles 15 Type 3 Seles 1	Oudet Air Flow OK		
	-			

# To get the certificate file

Image 16-20 Get certificate file

To get online a certificate file, click **Certificate**. A browse window opens. Browse to the desired location, enter a file name and click on **Save**. The file will be saved as an .xml file.

To upload the file on the web portal, follow the procedure in the installation manual.

# **17. VERSION INFO**

# Overview

• Version Information

# **17.1 Version Information**

## Overview

The Version Information pane gives an overview of the firmware versions used in the boards.

The following boards are listed:

- E2 Formatter Board
- Interface Board
- Modules/Devices
- Processor Board
- SMPS & Fan Ctrl settings
- Touch Panel menu structure
- Touch Panel Software

Name	Version	
E2 Sequence	0.00	
E Interface Board		
- ARM boot	2.01	
-ARM main	2.01	
FPGA	1.02	
E Modules		
Button Ctrl	2.00	
- CLO CM	0.01	
- Fan Ctrl	1.03	
Main Ctrl	0.07	
SMPS	1.03	
- Security Ctrl	1.02	
-Touch Panel	2.00	
E Processor Board		
- DSP Diagnosti		
DSP FPGA	2.40	
- DSP boot	1.00	
DSP main	1.07	
E Settings		
Fan Ctrl Setting	s 1.02	
SMPS Settings	1.02	-
	eteret i	_
F	lefresh	

Image 17-1 Version information

# **18. MACRO EDITOR**

# Overview

- Create a new Macro
- Save a Macro
- Edit a Macro file
- Edit the attributes (values) of the items

# 18.1 Create a new Macro

#### How to create

1. Click on Create new macro. (image 18-1)

A message will be displayed. (image 18-2)

2. Click Yes to create a new macro.

The current settings will not be saved.

A new macro file will be created. The macro editor will be displayed without any command filled out.

- 3. Insert the desired commands.
- 4. Enter a new name for the macro.
- 5. Click on Save/Exit to save your new created macro.

The macro will be added to the list of macro files.



# 18.2 Save a Macro

#### Save macro with same name

1. When a macro has already a name, just click on **Save/Exit**. (image 18-3) The macro will be saved and the macro editor will be closed.

Cieale new macro	Macao name:	newMACRO	
vailable command set: Input Control Preset Files Test Pattern Output Automation		Macro commands: Select Input Processing Path Activate EXTRA File Error Handling	This command changes the error handling bin case an error in the macro occurs.         On Macro Error:         C Hak Macro Execution, Indicate as failed.         C Continue Macro Execution, Indicate as failed.
I∕∏ GPO Control			← Continue Macro Execution, Indicate as passed
Ciror Handling			Cancel Save and E

Save macro

#### Save macro on a different name

- 1. Click in the Macro name input field. (image 18-3)
- 2. Delete the actual indicate name and enter a new name with your keyboard.
- 3. Click on Save/Exit.

The macro will be saved with the new name and the macro editor will be closed.

# 18.3 Edit a Macro file

#### 18.3.1 Selecting a Macro file

#### How to select

 Right click on a file in the macro file list (this list is visible after clicking Change in Projector Configuration section Opto isolated GPI or after starting the configuration panel of the Automation tab or in the Internal File system list, Macro view in File Manager) and select Edit Macro file or for DP100/DP90 click on Edit Macro in the Automation tab after moving your mouse over a button. (image 18-4)

The macro editor window starts up with the selected macro in edit mode. (image 18-5)



Create new macro	Macro name:	292A_P3_FLAT_1280	
Vailable command set: Input Control Select Input Select Input Path Processing Path Offic SMPTE 292A Packing Offic Dual SMPTE 292 Packing Output Preset Files Test Pattern Output Automation Percent Handling	Insert ->	Macro commands: Froe Handling Disable Test Pattern Blank Image Output Select Input Processing Path MOS SMPTE 292 A Packing Activate PCF File Activate SCREEN File Deblank Image Output	This command changes the error handling bin case an error in the macro occurs. On Macro Error:
			Cancel Save and Ex

Macro editor window

# 18.3.2 Delete a command out of a macro file

#### How to delete

- 1. Select the item that has to be deleted and push delete on your keyboard.
  - Or, right click on that item.

A delete pop up menu appears. Select delete. (image 18-6)



# 18.3.3 Add commands to a macro file

#### How to add

1. To insert an item, click first the a *command set* tab to which that item belongs.

The following commands tabs are available:

- Input control
- Preset files
- Test pattern
- Output
- Automation
- Error handling (image 18-7)

The selected tab opens and the commands become available.

2. Select a command and click Insert ->. (image 18-8)

The inserted command will be added as last one in the list. (image 18-9)









Insertion result

# 18.3.4 Change the order of the Macro commands

#### How to change

1. Click on an item and hold down the mouse button. (image 18-10)

2. Move your mouse up or down until the desired position is reached for the selected item.

Macro commands:		
Disable Test Pattern Blank Image Output	This command pu to the active cor	ats the data of a certain file afiguration of the projector.
Activate PCF File Deblank page Output Activate CREEN File Processing Path	Filename:	PCF166
		Select file

Image 18-10 Change macro file list

# 18.4 Edit the attributes (values) of the items

#### **Overview**

- Input Control
- Preset files
- Test pattern
- Output
- ACSAR2
- Automation
- Error handling

# 18.4.1 Input Control

# 18.4.1.1 Select input

#### What will be done?

This command sets the active input to a certain port.

# How to select

1. Click on Select input.

The right pane shows an overview of the possible inputs. (image 18-11)

This overview is different for DP30 – DP50 and DP100 – DP90.

2. Click on the radio button in front of the port you want to select.

Disable Test Pattern Blank Image Output	This command sets the active input to a ce port.
Select Input	
Deblank Image Output	
Activate SCREEN File	C 292 - A
Processing Path	C 292 - B
1 locossing i dui	C 292 - DUAL
	© DVI A
	C DVI B
	C DVI Dual
	C Auto-Select

Image 18-11 Select input command

# 18.4.1.2 Select input path (only for DP100-DP90)

#### What will be done?

This command sets the DVI-A path for Cine input (projector DVI-A input) or for the output of the ACSAR2.

#### How to select

- 1. Click on Select input.
  - The right pane shows an overview of the possible inputs. (image 18-12)
- 2. Click on the radio button in front of the path you want to select.

Cine input path	External DVI is routed to the projector
ACSAR input port	ACSAR inputs are routed to the projector



Select input path command

# 18.4.1.3 Processing path

#### What can be done?

The processing path for the incoming signals can be set to standard processing or cinema processing. When set to automatic, the projector itself detects the correct path.

#### How to select

1. Click on Processing path.

The right pane shows an overview of the possible paths. (image 18-13)

2. Click on the drop down box.

The possible choices become available.

3. Click on the desired processing path.

Standard processing	Standard processing has no scaling, no resizing, and no anamorphic lens factor.
Cinema processing	Cinema processing contains the following functionality : image scaling, 3:2 pull down functionality, SMPTE291 embedded data, LUT's for analog, de-gamma and color correction. However, contrast and brightness settings are only applicable for standard processing (non-cinema processing).
Automatic	The projector makes the choice itself depending on the input frequency.
	For a Vertical Rate between 23 and 61 Hz it will select the Cinema processing path.
	For a Vertical Rate higher than 61 Hz it will select the Standard processing path.

Macro commands:	
Disable Test Pattern Blank Image Output Select Input	his command changes the processing path.
Activate PCF File Deblank Image Output Activate SCREEN File	
Processing Path Path	Automatic
	Automatic
	Standard Processing Cinema Processing

Image 18-13 Processing path command

# 18.4.1.4 SMPTE292 packing

#### What can done ?

The source format can be selected for SMPTE292 A and SMPTE292 B.

#### How to select

1. Click on SMPTE292 A Packing or SMPTE292 B packing.

The right pane shows an overview of the possible packings (source formats). (image 18-14)

2. Click on the drop down box.

The possible choices become available.

- 3. Click on the desired packing The following packings are supported:
  - Standard 4:2:2
  - Non-Standard 4:2:2 12 bits/color
  - Non-Standard 4:2:2 10 bits/color
  - Non-Standard 4:4:4 12 bits/color

3 Select Input	_	for 292A input.
Activate PCF File Deblank Image Output Activate SCREEN File Processing Path	292A Packing	Standard 4:2:2
DIDI SMPTE 232 A Packing		Standard 4:2:2 Non-Standard 4:2:2, 12 bits/color Non-Standard 4:4:4, 10 bits/color Non-Standard 4:4:4, 12 bits/color

Image 18-14 SMPTE292 packing command

# 18.4.1.5 SMPTE 292 dual packing

#### What can done ?

The source format can be selected for SMPTE292 dual.

For the moment, only a default format is available.

#### How to select

1. Click on SMPTE292 Dual Packing.

The right pane shows an overview of the possible packings (source formats). (image 18-15) Only the following format is supported:

- Default :4:4:2 Packed 10 bits/color



Image 18-15 SMPTE292 dual packing command

# 18.4.1.6 DVI packing

## What can done ?

The source format can be selected for DVI A (all projectors) and DVI B (only DP100-DP90).

#### How to select

1. Click on DVI A Packing or on DVI B Packing. (image 18-16)

The right pane shows an overview of the possible packages (source formats).

2. Click on the drop down box.

The possible choices become available.

3. Select the desired format.

The following format are supported:

- Standard 8 bits/color
- 10 bits/color, packed
- 12 bits/color, packed



Image 18-16 DVI A packing command

# 18.4.1.7 DVI Dual packing

#### What can done ?

The source format can be selected for DVI dual (only DP100-DP90).

#### How to select

1. Click on DVI Dual. (image 18-17)

The right pane shows an overview of the possible packages (source formats).

2. Click on the drop down box.

The possible choices become available.

- Select the desired format. The following format are supported:
  - 10 bits/color Dual
  - 10 bits/color, Twin



Image 18-17 DVI A packing command

# 18.4.2 Preset files

#### 18.4.2.1 Activate PCF file

#### What can be done ?

The active PCF file can be installed in the projector via the Activate PCF file command.

#### How to select a file

1. Click on Activate PCF file. (image 18-18)

The right pane shows the actual selected file.

#### 2. Click on Select files.

A files overview window will be displayed. (image 18-19)

3. Select the desired file out of the list and click Select.

Or, double click on the desired file.

The selected file name appears next to Filename.

Disable Test Pattern Blank Image Output Select Input Activate PCF File	This command puts the data of a certain file to the active configuration of the projector.
Activate SCREEN File	Filename: PCF166
	Select file

Image 18-18 Activate File command



Image 18-19 Active file selection

5	

It is also possible to click in the *Filename* input field and enter an existing file name with the keyboard.

# 18.4.2.2 Activate SCREEN file

#### What can be done ?

The active SCREEN file (contains information about the screen configuration) can be installed in the projector via the Activate SCREEN file command.

#### How to select a file

1. Click on Activate SCREEN file. (image 18-20)

The right pane shows the actual selected file.

#### 2. Click on Select files.

A files overview window will be displayed. (image 18-21)

3. Select the desired file out of the list and click **Select**. Or,

double click on the desired file.

The selected file name appears next to Filename.

Disable Test Pattern Blank Image Output Select Input Activate PCF File	<ul> <li>This command puts the data of a certain file to the active configuration of the projector.</li> </ul>
Deblank Image Output Activate SCREEN File Processing Path Activate SCREEN File	Filename: [1.33_screen
	Select file

Image 18-20 Activate SCREEN File command

Select a D-Cine	Premie	re File	li de la companya de	<u>? ×</u>	tor.
Name	Туре	Size	Date/Time		
1.33_screen	File	46	2003/06/12 21:54:55	8	
1_85_BetaSP	File	46	2003/06/19 20:29:28		
1280x1024 No Cro	p File (RS	46	2003/06/26 16:15:22	100	
2048x1080 No Cro	p File (RS	146	2003/06/26 16:15:24		10
ACSAR	File (A)	46	2003/12/02 23:54:35		
ANA1-0-RAT5-4	File (R)	46	2002/03/28 13:56:57		
ANA1-5-FLAT	File (R)	46	2002/03/28 13:56:57		
ANA1-5-RAT16-9	File (R)	46	2002/03/28 13:56:57		
ANA1-5-RAT4-3	File (R)	46	2002/03/28 13:56:57	-	
Can	cel		Select	1	

Active SCREEN file selection list



It is also possible to click in the *Filename* input field and enter an existing file name with the keyboard.

# 18.4.2.3 Activate EXTRA file

#### What can be done ?

The active EXTRA file (can contains information about the source settings, 3D settings, etc., information not included in other files) can be installed in the projector via the Activate EXTRA file command.

# How to select a file

1. Click on Activate EXTRA file. (image 18-22)

The right pane shows the actual selected file.

2. Click on Select files.

A files overview window will be displayed. (image 18-23)

3. Select the desired file out of the list and click **Select**. Or.

double click on the desired file.

The selected file name appears next to Filename.

Macro commands: Select Input Processing Path Activate EXTRA File	This command puts the data of a certain file to the active configuration of the projector.
	Filename: EXTRA01
	Select file

Image 18-22 Activate EXTRA File command

Select Input Processing Path Automatic Pythat Fits		Th	is con the a	nmand puts the data of a ctive configuration of th	a certain file e projector.
Activati	Select a D-Cir	ne Premier	e File		? ×
	Name	Type	Size	Date/Time	
	Default rod_fault_soho_e	File (RS otra File	2199 2199	2003/06/26 16:14:54 2005/06/13 15:04:00	
	Ca	ncel		Select	11
_				Select file	

Image 18-23 Active EXTRA file selection list



It is also possible to click in the *Filename* input field and enter an existing file name with the keyboard.

## 18.4.2.4 Activate MCGD file

#### What can be done ?

The active MCGD file (contains color calibration information) can be installed in the projector via the Activate MCGD file command.

#### How to select a file

1. Click on Activate MCGD file.

The right pane shows the actual selected file. (image 18-24)

2. Click on Select files.

A files overview window will be displayed. (image 18-25)

3. Select the desired file out of the list and click **Select**.

Or, double click on the desired file.

The selected file name appears next to Filename.

Macro commands:	
Select Input Processing Path	This command puts the data of a certain file to the active configuration of the projector.
Activate FCF File Activate EXTRA File Activate MCGD File Disable Test Pattern	
Deblank Image Output	Filename:
	MCGD01
	Select file

Image 18-24 Activate MCGD file command

Select Input Processing Path Activate PCF File		T his to th	command puts the data o ne active configuration of	f a certain file the projector.
sable Tot Dou	D-Cine Pre	miere	File	<u>? ×</u>
Name	Туре	Size	Date/Time	
ivh	File	22	2005/10/06 13:54:10	
jvh2	File	22	2005/10/06 14:57:22	
jvh3	File	22	2005/10/06 15:28:16	
Measured	Colors File	22	2005/10/06 15:28:20	
Mk7 nomin	hal File (RS	5122	2001/11/12 20:43:54	
Nominal	File (RS	5) 22	2003/06/26 16:15:08	-
	Cancel		Select	

Image 18-25 Activate MCGD file selection list



It is also possible to click in the *Filename* input field and enter an existing file name with the keyboard.

# 18.4.2.5 Activate ACSAR 2 layout file

#### What can be done

When an ACSAR 2 is connected and the ACSAR 2 path is selected, the window (inputs) layout can be loaded via a macro.

#### How to load a layout file

- 1. Click on Active ACSAR 2 layout file
  - The right pane shows the actual selected layout file. (image 18-26)
- 2. To change the actual file, click on *Select file*.
  - The Open a layout file window opens. (image 18-27)
- 3. Select a file out of the list and click **OK**.

The selected file comes in the Layout Filename field.

Select Input Processing Path Activate PCF File	This command activates an ACSAR2 Layout
Activate SCREEN File	Layout FileName D320 Layout

Image 18-26 Activate ACSAR 2 layout file

Disable Test P	The second se	
Select Input	Name	2 Lawout
Calculation of D	input0	- Lujou
Select Input P	input1	
Processing Pa	input1_4_3	
VI A Packing	input1_A	
ctivate PCF F	input1234	
-time CCDT	input2	
ictivate SURE	input3	
Activate A2 La	lauro et	
Load A2 Input	Lauru #12	
and \$2 Input	Layoutz	
and the input		THE
	Cancel	Open

Image 18-27 Select layout file

# 18.4.2.6 Activate ACSAR 2 Input file

#### How to activate

1. Click on Activate A2 Input file.

The right pane shows the actual selected input and selected input file for this input. (image 18-28)

- 2. Select an input.
- 3. Click on Select file.

The file list opens. (image 18-29)

4. Select a file and click **OK**.

The name of the file will be filled out next to Input FileName.

Select Input Processing Path Activate PCF File	his command activates an ACSAR2 Input Fil
Activate SCREEN File Activate A2 Layout File Activate A2 Input File	<ul> <li>Input 1</li> <li>Input 2</li> <li>Input 3</li> <li>Input 4</li> </ul>
	Input FileName:
	Select file

Image 18-28 Load input file

Aacro commands;	Open an Input File	? ×	
Select Input	Name		Input Fil
Processing Pa	8514-a		
Activate PCF	cga		
Activate SCRI	compusc4		
A	ed		
Activate A2 La	ega		
Ctivate A2 In	imr		
	Imto-2		
	hd-24p		
	no-24p[1]		
	hd-25el11		
	hd-30		
	hd-30p		
	hd-60p	•	file
	Cancel	Open	

Image 18-29 Input file selection

# 18.4.2.7 Auto load ACSAR2 input file

#### How to enable

1. Click on Auto load input.

The right pane shows the actual setting. (image 18-30)

2. Click on the desired radio button to switch between automatic file load on or off.

Select Input Select Input Path Processing Path Auto Load A2 Input	This command enables/disables the auto input file selection on ACSAR2
Lamp Control	<ul> <li>✓ Automatic File Load On</li> <li>✓ Automatic File Load Off</li> </ul>

Image 18-30 Auto load file

# 18.4.3 Test pattern

# 18.4.3.1 Enable test pattern

#### What can be done ?

A test pattern which is stored in a file can be enabled.

#### How to select a test pattern

1. Click on Enable test pattern. (image 18-31)

The right pane shows the actual selected test pattern file.

2. Click on Select testpattern.

The test pattern selection window opens. (image 18-32)

3. Select a file and click Select.

The selected file will be filled out in the Testpattern Filename field.

Select Input Processing Path 000 DVI A Packing Activate PCF File	This command displays an internal test pattern
Lamp Control	TestPattern Filename:
	Select testpattern

Image 18-31 Enable test pattern selection

slect Inpu		This		and displays	
ocessing	Select a D-Cine Premiere Fi	e			? ×
1 A Pac	Name	Type	Size	Date/Time	•
the second	RGB-12 bit Color Bars	File	4809	2001/09/05 10:54	
able ter	RGB-12 bit Convergence Pattern	File	4809	2001/09/05 10:54	C
np Cont	RGB-12 bit Full Screen Black	File	4809	2001/09/05 10:54	C
	RGB-12 bit Full Screen Blue	File	4809	2001/09/05 10:54	C
	RGB-12 bit Full Screen Cyan	File	4809	2001/09/05 10:54	(
	RGB-12 bit Full Screen Green	File	4809	2001/09/05 10:54	C
	RGB-12 bit Full Screen Magenta	File	4809	2001/09/05 10:54	С.
	RGB-12 bit Full Screen Red	File	4809	2001/09/05 10:54	r -
	Cancel	1		Select	1

Test pattern file selection

# 18.4.3.2 Disable test pattern

#### To disable

Insert the command in the macro list. All actual test patterns will be disabled.



Image 18-33 Disable test pattern

#### 18.4.4 Output

#### 18.4.4.1 Lamp control

## What can be done ?

The lamp can be switched on or off via this macro command.

#### How to switch the lamp

1. Click on Lamp control. (image 18-34)

The right pane shows the selection buttons.

2. Select the radio button of your choice.

lamp on lamp will be switched on

lamp off lamp will be switched o	off	mp off	ff lam	) will	be	switched	0
----------------------------------	-----	--------	--------	--------	----	----------	---

Blank Image Output Select Input Processing Path Lamp Control	This command controls the lamp.
Deblank Image Output	(° LampOn ℃ LampOff

Image 18-34 Lamp control command

# 18.4.4.2 Dowser control

#### What can be done ?

The dowser can be closed or opened via this macro command.

#### How to switch the dowser

1. Click on *Lamp control*. (image 18-35)

The right pane shows the selection buttons.

2. Select the radio button of your choice.

Open dowser dowser will be opened Close dowser dowser will be closed

Blank Image Output	
Select Input	This command controls the Dowser.
Processing Path	
Lamp Control	
Dowser Control	
Deblank Image Output	( Open Dowser
	C Chur Damas
	Close Dowser

Image 18-35 Dowser control command

#### 18.4.4.3 Set the execution delay for a 'blank image'

#### What can be done ?

The image can be electronically be blanked after a certain delay time.

#### How to set

1. Click on Blank Image Output. (image 18-36)

The right pane shows the execution delay input field. The value is expressed in milliseconds.

2. Click on the up or down arrows to change the value. The value change in steps of 10. Or,

click in the input field and enter the desired value with the keyboard.



Image 18-36 Black image output command

# 18.4.4.4 Set the execution delay for a 'deblank image output'

#### How to set

1. Click on Deblank Image Output. (image 18-37)

The right pane shows the execution delay input field. The value is expressed in milliseconds.

2. Click on the up or down arrows to change the value. The value change in steps of 10. Or,

click in the input field and enter the desired value with the keyboard.

Blank Image Output Blank Image Output Select Input Processing Path Lamp Control Dowser Control Deblack Image Output	This command blanks away the image outpu or de-blanks the image output. This is an electronic dowser.
	0 🐴 Execution delay (milliseconds)

Image 18-37 Deblank image command

# 18.4.5 ACSAR2

# 18.4.5.1 Input mode

## What can be done ?

When an input module (slot) has different working modes, these modes can be set with the Input Mode command in a macro.

## How to select ?

1. Click on Input mode. (image 18-38)

The right pane shows an overview of the possible inputs.

2. Select the desired input by clicking on the corresponding radio button.

The actual mode will be displayed in the combo box below the selection.

3. Click on the combo box and select the desired mode.



Image 18-38 Input mode selection

# 18.4.5.2 Input Locking

#### What can be done?

The output signal can be locked on an internal generated sync signal or on the sync signal of one of the input sources. Locking the output signal on an input signal can be required if motion artifacts occurs in that window or if frame delay for that input has to be set to zero.

#### How to select ?

1. Click on Input Locking. (image 18-39)

The right pane show the possible inputs and shows also if a lock was set or not.

- 2. To lock to an input, select first the radio button in front of the desired input.
- 3. Select the radio button in front of Locked.

The output will be locked on the selected input.
acro commands: Input Locking Input Mode	This command performs input locking on ACSAR2 modules.
	<pre>⑦ Input 1 ⑦ Input 2 ⑦ Input 3 ⑦ Input 4</pre>

Image 18-39 Input locking



If no locking is desired, click on the radio button in front of unlocked.

## 18.4.6 Automation

# 18.4.6.1 GPO control

#### What can be done ?

A function can be associated to a general purpose output.

#### How to add a function

1. Click on GPO Control. (image 18-40)

The right pane shows a GPO selection box and function box.

- 2. Click on the drop down box next to Output.
- 3. Select a GPO out of the list.
- 4. Click on the drop down box next to *Function* to associate a function to the selected Output. (image 18-41) Possible functions:

- Set low
- Set high
- Toggle
- Continuos toggle



Image 18-40 GPO control command

Blank Image Output	This co outpu	mmand changes the state t on the Standard GPO (D	of the B37).
Activate PCF File Deblank Image Output Processing Path Error Handling GPD Control	Dutput	GP0 1 💌	
	Function	Set low	

Image 18-41 GPO functions

# 18.4.7 Error handling

# 18.4.7.1 Error handling

## How to handle errors

- 1. Click on Error handling. (image 18-42)
  - The right pane shows the possible error handlings.
- 2. Click on the radio button next to your choice. Possible choices :
  - Halt macro exception. Indicate as failed.
  - Continue macro execution. Indicate as failed.
  - Continue macro execution. Indicate as passed.

Disable Test Pattern Blank Image Output Select Input	This command changes the error handling be in case an error in the macro occurs.
Activate PLF File Deblank Image Output Processing Path Error Handling	On Macro Error: C Halt Macro Execution, Indicate as failed. Continue Macro Execution, Indicate as failed. Continue Macro Execution, Indicate as passed

Image 18-42 Error handling command

# **19. D-CINE COMMUNICATOR LOG INFORMATION**

# 19.1 Log information window

## Overview

The logging of the D-Cine Communicator register all information about actions, errors and statuses while D-Cine Communicator is connected to the projector.

D-Cine	Communicator - Log	-		
Line Nr	Date/Time	Туре	Message	
100041	Mon Jun 3 15:28:21 2002 859	w	Barco Controller: Cooling Error detected.	
17 00040	Mon Jun 3 15:28:21 2002 859	w	Barco Controller: FAN Error detected.	
17 00039	Mon Jun 3 15:28:21 2002 859	w	Barco Controller: SMPS Error detected.	
100038	Mon Jun 3 15:28:20 2002 765	w	BDCVersionInfo_invalid header received (FF), address (83)	
17 00037	Mon Jun 3 15:28:20 2002 343	w	BDCVersionInfocinvalid header received (FF), address (FF)	
00036	Man Jun 3 15:28:16 2002 890	1	Extended Status[16]= 00 00 00 00, [20]= 00 00 00 00, [24]= 00 00 00 00, [28]= 00	-

Image 19-1 Log view

The following information is given:

- · Line number with importance icon in front of it.
- · Date and time when the registration happened
- Type of logging
  - W = warning
  - I = info
  - E = error
  - F = fatal
- Message

The logging can be sorted by clicking in an item in the title area.



# This D-Cine Communicator logging can also be found as file *log.txt* in the same directory as those where the program is installed

# **20. HELP FUNCTION**

# Overview

- Introduction
- Using help

# 20.1 Introduction

## How is the help structured

Most items on the tab pages contains online help which will pop up while dragging with the help icon on it. For the tab pages, the help icon is situated on the right upper corner on the same level of the tab bar. For the pop up pages, the help icon is situate next to the close icon in the window heading.

# 20.2 Using help

## How to use help

1. Click first on the help icon (indicated with a ?).

Micon on the tab pages.

A question mark will be added to the cursor.

- 2. Drag your cursor over the item for which you want to see help. (image 20-1)
- 3. Click on that item.

A yellow help pop up window will appear with a short description of the function. (image 20-2)



Image 20-1 Help on item



Image 20-2 Yellow help window

# 21. ACSAR 2

# Overview

- General introduction
- Create a new layout
- Edit an existing layout
- Renaming a layout
- Deleting a layout
- Windowing
- Settings
- Input slot configuration
- Input locking

# 21.1 General introduction

#### Overview

With the ACSAR 2 it is possible to connect up to four sources which can be mixed to one image. Each source is displayed in a separate window on which z-ordering is possible. The window size, timings and other settings can be set up for each source independently.

The result image is internally connected to the projector.



#### Window

A window represents the active area of an input source.



#### Layout

A layout is a collection of windows. These windows are placed on a certain position within the screen.

# 21.2 Create a new layout

#### How to create

1. Click on Layout file on the menu bar (1). (image 21-1)

The menu drops down.

2. Select Open(1).

An overview window with the existing layout files will be displayed (2).

- 3. Select a file out of the list (3) and click Open (4) .
  - The selected layout will be loaded (5).
- 4. Change this layout to the desired one.
- 5. Save this layout into a new file by selecting Layout file  $\rightarrow$  Save as. (image 21-2)
- 6. Click in the Filename input field and enter a new name for the layout. (image 21-3)
- 7. Click on Save.

R5976510 D-CINE COMMUNICATOR 11/04/2006 \_

The new layout will be saved.

	Qpen Ctrl+O Save Ctrl+5 Save at Other	Cipen a Layout File	<u>? ×</u>
	Rename Ctri+R	Name input0	<u> </u>
Layo	nput 3	It fi input1_A input1_A input1_A input2_24 input2_24 input2_24 input2_24 input3_	(4) ▼ Deen (4) ▼ Upen (4) ♥ Upen (4) ♥

Image 21-1 Create new layout

Alternative Content Set	Save to a Layout File	? ×
Layout File Input File View Qpen Ctri+O Save Ctri+S Save as Ctri+A Rename Ctri+R Delete Ctri+D	Name input0 input1_4_3 input1_A input1_234 input2_ input2_tot	
nage 21-2 Save as layout	input3 input3.bit input4 input4.bit Insurt	
	Image 21.2	Cancel

# 21.3 Edit an existing layout

# How to edit

1. Click on Layout file on the menu bar.

The menu drops down.

2. Select Open.

An overview window with the existing layout files will be displayed.

.

- Select the file you want to edit out of the list and click Open.
   The selected layout will be loaded.
- 4. Edit the layout.
- 5. Save the layout by selecting Layout file  $\rightarrow$  Save. (image 21-4) The layout will overwrite the exiting one.



Save layout

# 21.4 Renaming a layout

#### How to rename

- 1. Click on **Layout file** on the menu bar. (image 21-5) The menu drops down.
- 2. Select Rename(1).

The layout file selection window opens (2).

- 3. Select the layout file you want to rename (3).
- 4. Click on Rename (4).

The rename window opens (5).

- 5. Click in the filename input field (6) and enter a new name for the layout.
- 6. Click on **OK** to rename (7).

Layout File Input File View Open Ctrl+0					
Save Ctrl+S	(2)				
Save as Ctrl+A	9 Select a Layout	File to rename	? ×		
Rename Orl+R					
Delete (tri+p)	Name				
	input1_A				
	input2.bd	-	(5)		
	input3.bd	Rename Layout		Street of Concession, Name	? ×
	layout 1.txt	Rename layout layout1.txtto:	¥		
	Layou 12		-		
	1(3)	(6)		OK	Cancel
		140		<b>\(7)</b>	
		Mer.			
	Cancel	Rename			
Image 21-5					

Rename layout file

# 21.5 Deleting a layout

#### How to delete

- 1. Click on Layout file on the menu bar. (image 21-6)
  - The menu drops down.
- 2. Select Delete (1).

The layout file selection window opens (2).

- 3. Select the layout file you want to delete (3).
- 4. Click on **Delete** (4).

The Delete confirmation window opens (5).

5. Click on **OK** to delete the file (6). Click on **No, cancel this action** to interrupt the deletion process.



Delete layout

# 21.6 Windowing

#### Overview

- Window selection
- · Enabling or disabling a Window
- Moving Windows
- Scaling Windows
- Z-order
- Full size
- Aspect Ratio

# 21.6.1 Window selection



When a certain window is not visible in the layout pane, that means that the window is disabled.



Each input corresponds with one window in the layout pane.

## Using the mouse

- 1. Move your mouse over the window you want to select.
- 2. Click with the left mouse button on that window.

The border color changes to yellow. (image 21-7)



Image 21-7 Select a window

# Using the menu bar

1. Click View to pull down the selection menu. (image 21-8)

The input selection menu opens.

2. Select the window (input) your want to activate.

The border color of the selected window in the layout pane changes to yellow.



Image 21-8 Window selection via menu bar

# Using the function keys

1. Click on the corresponding function key to activate the window.

- F1 Input 1
- F2 Input 2
- F3 Input 3
- F4 Input 4

The border color of the selected window in the layout pane changes to yellow.

#### 21.6.2 Enabling or disabling a Window

#### How to disable a window

- 1. Select the window. (image 21-9)
  - The border colors will change to yellow
- 2. Remove the checked symbol next to enable by clicking on it.

The window representation will be removed from the layout pane.



Image 21-9 Disabling a window

#### How to enable a window

- 1. Select the window you want to enable via the menu bar or the function keys. (image 21-10) The window indication changes to that corresponding window and the enable box in not checked.
- 2. Check the enable box.

The window representation appears in the layout pane.



Image 21-10 Enabling a window

# 21.6.3 Moving Windows

# Moving via drag and drop

1. Click on the window you want to move. (image 21-11)

The border changes to yellow and the cursor changes to a four arrow cursor.

- 2. Hold down the mouse button to grab the selected window.
- 3. Move the window to the required position. The coordinates in the right pane will change accordingly.



Image 21-11 Moving windows

# Moving via the coordinates

- 1. Select the window you want to move.
- 2. Change the X and Y value indicating the actual start position of the window by clicking on the + or keys (image 21-12)

Or,

by entering a new value with the keyboard.



Image 21-12 Move window via coordinates

# 21.6.4 Scaling Windows

## Scaling via drag and drop

1. Click on the window you want to scale. (image 21-13)

The border changes to yellow and the cursor changes to a four arrow cursor.

2. Move your cursor to corner.

The cursor changes in a two arrow cursor.

Hold down your mouse button and drag the corner to the desired position to down-scale or upscale the selected window. The coordinates of the selected window will be automatically adjusted in the right pane.



Image 21-13 Scaling windows via drag and drop

## Scaling via the height and width

- 1. Select first the window you want to scale. (image 21-14)
- 2. Change the width and height value by pushing the + or button Or,

by entering the new values with the keyboard. *Note:* The upper left corner is fixed during the scaling.



Image 21-14 Scaling via Width of Height

# 21.6.5 Z-order



Z-order

The layer sequence in which windows will be displayed in relation to one another.

#### How to order

- 1. Select the window you change the order.
  - The border changes to yellow and the cursor changes to a four arrow cursor.
- 2. Change the Z-value in the right pane by clicking on the + or button (image 21-15) Or,

by entering the desired value with the keyboard.

X:	780 ±
Y:	52 ±
Width:	748 ±
Height:	500 ±
Z:	30 ±

Image 21-15 Z-order



The higher the value, the more the window is in front.

#### 21.6.6 Full size

#### How to reset to full size

1. Select the window you want to size to full size. (image 21-16)

The border changes to yellow and the cursor changes to a four arrow cursor.

2. Click on the full size button. (image 21-17)

The selected window will be reset to the full size of the DMD.



Image 21-16 Select a window to scale

Input 1 Input 2	Input 3	Input 3 Window F Enabled
		X: 860 ±
		Y: 56 ±
		Width: 828 ±
Input 4		Height: 512 ±
		Z: 30 ±
mage 21-17		

Reset to full size

# 21.6.7 Aspect Ratio



### Aspect ratio

Relation between the horizontal & vertical dimension in which the window will be displayed, e.g. 4 by 3 or 16 by 9.

#### How to change

1. Select the window of which you want to change the aspect ratio.

The border changes to yellow and the cursor changes to a four arrow cursor.

2. Right click on the selected window and select the desired aspect ratio. (image 21-18)

#### Or,

click on the aspect ratio icon and select the desired aspect ratio. (image 21-19) Possible aspect ratios

- 3/2
- 4/3
- 14/9
- 16/9
- 21/9
- 1.85 flat
- 2.35 scope
- snap to current : fix the current aspect ratio what ever it is.
- none : no fixed aspect ratio

When a fixed aspect ratio is selected, the width and height will be coupled in the value pane. (image 21-20)



Image 21-18 Aspect ratio via right click

#### Image 21-20 Fixed aspect ratio selected

# 21.7 Settings

#### **Overview**

- Introduction
- Load a file
- Save a file
- Save all file
- Rename a file
- Delete a file
- Auto Load Enabled
- Image Settings
- Input Settings

# 21.7.1 Introduction

#### Overview

With each input source corresponds a source file which contains the settings for this typical source. If there is not yet a source file available, the system can search for the most fitting file or you can associate a file yourself. This file can then be edited and saved under a new name.

### Types of source files

When opening the list of source files, you will recognize 2 types of source files :

- system source files
- custom source files

The custom source files which have the same name of the system source files are indicated with a index number between brackets.

#### 21.7.2 Load a file

#### How to load a file

1. Select a window. (image 21-21)

The input number and the associated file name will be indicated in the settings pain.

2. Click on Input File on the menu bar and select Load [All] (1) or Load [Fit] (1). (image 21-22, image 21-23)

The Open an input file window opens (2).

When the following is selected :

Load file [All] All available files will be displayed in the Open an input file window.

Load file [Fit] Only the best fitting files will be displayed in the Open an input file window.

Or,

push CTRL + L for Load file [Fit] or push CTRL + S for Load file [All].

3. Select the desired file (3) and click on **Open** (4).

When a system file is selected, the software will ask to create a custom file with the same name, followed with a next possible index. When **OK** is selected the settings of the system file will be copied into this new file. (image 21-24)

The settings of the selected file will be loaded.



Image 21-21 File association





Image 21-23 Load file [fit]



Image 21-24 Load file message

## 21.7.3 Save a file

#### How to save

1. Click on Input File on the menu bar and select Save. (image 21-25)

The settings of the actual input will be saved.

Input File	Yiew	Installation
Load	[FIT]	Shift+L
Load	[ALL]	Shiit+S
Save		Shift+T
Save a		Shilt+D
Benam	e	Shiit+R
Delete		Shift+D
AutoLa	ad Ena	bled Shift+A

Save actual settings

## 21.7.4 Save all file

#### How to save all files

1. Click on Input File on the menu bar and select Save all. (image 21-26)

The settings of the 4 active input files which are associated with the 4 inputs will be saved.

Input File	View	Installation
Load	[FIT]	Shilt+L
Load	[ALL]	Shift+S
Save		Shift+T
Save a	1	Shift+0
Benam	ŝ	Shilt+R
Delete		Shift+D
Auto Lo	ad Enal	bled Shift+A

Image 21-26 Save all files

#### 21.7.5 Rename a file

#### How to rename

1. Click on Input File on the menu bar and select Rename (1). (image 21-27)

The Select Input File to rename window opens (2).

2. Select a file (3) and click on Rename (4).

The rename window opens (5).

- 3. Click in the input field (6) and enter the new file name.
- 4. Click on OK (7).

Input File Yiew I	stallation					
Load (FIT)	Shilt+L	- (2)				
Load [ALL]	Shilt+S	(4)		-		
Save	Shift+T	Select a Input File t	o rename	? ×		
<u>S</u> ave all	Shilt+0	Name		-		
Bename	Shilt+R	hd-24p[1]				
Delete	Shilt+D	hd-25p[1]				
Auto Load En able	d Shilt+A	sun-1600x1280-67[1]	100			
		sun-xgo-60[2] xyga-75(1) yga-85(1) yga-85(1)[1] yideo525-2[1] yideo525-2[3] yideo525-2[1] yideo525-2[1]	Rename Input File sun	ile 1×30-60(2):0 (4)	(5)	<u>?</u> ] × ] <u>Cancel</u> (7)

Image 21-27 Rename input file

# 21.7.6 Delete a file

#### How to delete

1. Click on Input File on the menu bar and select Delete (1). (image 21-28)

The Select Input File to delete window opens (2).

2. Select an input file (3) and click on Delete (4).

The delete input file confirmation window opens (5).

3. Click Yes to delete.



Image 21-28 Delete input file name

# 21.7.7 Auto Load Enabled

#### What can be done ?

When this function is enabled, the ACSAR 2 will create by itself a new custom file when it detects a relevant input signal.

#### How to enable ?

1. Click on Input File on the menu bar and check Auto Load Enabled (1).

A check mark will appear in the box just before the Auto Load Enabled item.

# 21.7.8 Image Settings

#### Overview

The following image settings can be adjusted depending on the source type :

- Contrast
- Brightness
- Phase
- Sharpness
- Saturation

When a setting is not adjustable, this setting will be grayed out.

# Adjusting via dragging

1. Click on the slider bar of the specific adjustment. (image 21-29)

The complete slider bar will be selected within a rectangle.

2. Move the slider up or down until the desired value for that specific adjustment is reached.

The value below the adjustment will change accordingly.



Image 21-29 Adjusting via dragging

## Adjusting via the up and down keys

1. Click on the up or down arrow keys until the desired value is reached.

The value next to the arrow keys will change accordingly.

## Adjusting via the input box

- 1. Click inside the value input box.
- 2. Select the actual value and enter a new value with your keyboard.

## 21.7.9 Input Settings

#### How to change

1. Click on the Input settings tab.

The input settings values will be displayed

- Click in the input field of a setting and change the value with the keyboard. Or, click on the up or down arrow key to change the value.
- 3. When the source is Interlaced, check the check box in front of Interlaced.
- 4. Select Single or dual path.

# How to find the correct values for the item in the Input File?

Hor. line



LIVEI2	vertical bars in the projected image) will be seen in the image.
	Select "Total" and adjust the pixel quantity. Adjust for zero bars.
	hint: if the number of bars increase, adjust in the other direction.
Active Pixels	The "Active Pixels" : determine the width of the window on the screen. This value is normally given in the source specifications. If not, adjust until full image is displayed (no missing pixels).
Horizontal Start Pixel	number of pixels between the start of the sync signal and the start of the video information.
Vertical Total Lines	already filled when an active file is selected to be edited
Vertical Active Lines	number of horizontal lines determining the height of the projected image. This value is normally given in the specification of the source. If not, adjust until full image height is displayed (no missing lines)

Vertical Start Line	number of lines between the start of the sync signal and the start of the video information.
Interlaced	this selection is automatically filled out when file has loaded. If the image is wrong due to mismeasurement, check or leave the check box blank before interlace. (for interlaced images, 1 frame contains 2 fields).
Horizontal Period	already filled in with the correct value when active file. Horizontal period = Horizontal Total pixels / clock frequency

# 21.8 Input slot configuration

#### What can be done ?

Each of the input slots can be configured with the correct setting.

#### How to configure ?

1. Click on Installation and select Input slots. (image 21-31)

The Input slots configuration menu appears. (image 21-32)

- 2. Click on the drop down box next to the slot which must be configured.
- 3. Select the desired configuration.

When all configuration are finished, click on OK.

Installation	Input Slot Configuration	? ×
Input slots Shift+I	Slot 1 : IdS20 eves/swidt	cvbs)
Input slots selection	Slot 2 d320 rab an usina	-
	Jacondo al anga	
	Slot 3: d320 no input	*
	Slot 4 : d320 no input	*
		ок
	Image 21-32 Input slots configuration	

# 21.9 Input locking

#### What can be done ?

The output signal can be locked on an internal generated sync signal or on the sync signal of one of the input sources. Locking the output signal on an input signal can be required if motion artifacts occurs in that window or if frame delay for that input has to be set to zero.

#### How to set up?

1. Click on Locking. (image 21-33)

A drop down menu opens with the possible inputs. The locked input is indicated with a check sign.

2. Click on the input on which the output must be locked. *Note: To remove a lock, click on the locked input.* 

The lock will be set and the menu disappears.

Lo	cking	
	Input 1	Shift+1
-	Input 2	Shilt+2
	Input 3	Shift+3
	Input 4	Shift+4

Image 21-33 Locking input

# A. UPDATING TI BOARDS

# A.1 Installation of the Update Package

#### How to install?

- 1. Download the Update package from the Barco Partnerzone and copy this file (.zip format) into a new directory.
- 2. Unzip the package file into this directory. (image A-1) The directory contains:
  - An update program file (.exe)
  - Software update file (.dlpcinema)
  - read me and instruction files (.txt and .doc)
  - a configuration files directory containing configuration files.
  - a recovery files directory containing recovery files.
  - a processor board binary files directory with binary files for the processor board.
  - an interface board binary files directory with binary files for the interface board.
  - a formatter sub system directory.

😋 D:\TICinema			_1012
File Edit View Favorites Tools Help			<b>2</b> 1
4=Back • 🔁 🔞 Search 🗟 Folders 🎯 🖓	CX 20	<b>I</b> .	
Address 🔁 D:\TICinema			• 200
Name	5	ze Type	Modified T
Release9.0.dpcinema	32	KB DLPCINEMA File	7/06/2005 14:54
Readme_Versions.txt	3	KB Text Document	19/05/2005 23:54
E Readme_ReleaseNotes.txt	KB Text Document	19/05/2005 19:00	
DLP Cinema(TM) Firmware Installation Program v2.01(12).exe	KB Application	17/05/2005 22:25	
E Readme_Install.txt	4	KB Text Document	5/10/2004 16:25
Firmware Installation Instructions.doc	KB Microsoft Word Doc.	10/09/2004 14:44	
Readme_Ethernet.txt	7	KB Text Document	13/02/2004 14:12
Readme_EDID_update.doc	33	KB Microsoft Word Doc.	27/11/2001 19:56
ConfigurationFiles		File Folder	17/06/2005 14:08
RecoveryFiles		File Folder	17/06/2005 14:08
ProcessorBoardBinaryFiles		File Folder	17/06/2005 14:08
InterfaceBoardBinaryFiles		File Folder	17/06/2005 14:08
FormatterSubsystem		File Folder	17/06/2005 14:08
•			
13 object(s)		559 KB	My Computer

Image A-1 Unzipped package file

# A.2 Start up the update program

#### How to start up ?

- 1. Browse to the installation directory of the TI update software.
- 2. Double click on *DLP Cinema(TM) Firmware Installation Program v2.01(12).exe* to start up the update program.

Note: The version indication in the startup file can be different for other releases.

The start up v	window will	be displayed.	(image A-2)
----------------	-------------	---------------	-------------

Current Projector Info	Selected Release		
<no connection="" selected=""></no>	<no release="" selected=""></no>		
Connection to Projector Connection to Projector	≍ 		
• 115200 • Boot-App	** Start Auto-Instal **		
IP Address           Ethemet Port         150 . 158 . 193 . 52	Show Log		

Image A-2 Start up of update program

# A.3 Make a connection

# A.3.1 Type of connections

#### Overview

The TI software update can be done in two ways:

- Via a serial connection
- Via an Ethernet connection

# A.3.2 Serial connection

#### **Necessary parts**

A fully wired straight serial cable

# **Physical connection**



Image A-3 Physical indication of RS232/422 connector on DP50



Image A-4 Physical indication of RS232/422 connector on DP30

VIDEO IN	00	0	<b>d</b>		CONTROL
	[· · ·]	ſ' ']	Saura H		non Dia
				1 miles 1	
		Lord ra	9.00	0	1000
			C RELIGIES IN	Manual of	CARGONIA T

Image A-5 Physical indication of RS232/422 connector on DP100-DP90

## Software connection

- 1. Select first the PC com-port by clicking on the combo box just below PC com-port #(1). (image A-6)
- 2. Select the baud rate by clicking on the combo box just below Baud Rate (2).
- 3. Check the radio button in front of *Serial Port* (3).

The connection will be established. A login message will be displayed. Click **OK** to continue.

4. Enter the userid and password. (image A-7)

Defaults are:

- User Id: Service
- Password: Heal Thyself

Both are case sensitive.

When correct, the Current Projector Info of the selected projector will be filled out.

Connection to Projector	Projector Login
(3) C Ethemet Port 2 (1) 2 (1) 2 (1) 2 (1) 2 (1) 2 (1) 2 (2) 3 (1) 0 . 158 . 193 . 52 (2) 3 (1) 0 . 1520 . 1520 . 1520 . 1520 . 1520 . 152 . 153 . 153	User ID: Password: Cancel
Projector Search	
Image A-6 Serial connection setup	Image A-7 Login window

# A.3.3 Ethernet connection

## **Physical connection**



Image A-8 Physical indication of Ethernet connection on DP50



Image A-9 Physical indication of Ethernet connection on DP30



Image A-10

Physical indication of Ethernet connection on DP100-DP90

For DP30 and DP50, a crossed Ethernet cable is necessary.

For DP100-DP90, a crossed or non crossed cable can be used. the projector switched automatically for the correct cable.



The PC's IP Address MUST be within the same subnet as the projector's IP Address in order for communication to be possible. This requires checking the PC's and projector's Subnet-Mask settings.

#### **IP** address examples

First example

- PC IP Address : 192.168.100.5
- PC Subnet Mask : 255.255.255.0
- Projector IP Address : 192.168.100.2
- Projector Subnet Mask: 255.255.255.0

Result : Communication possible. PC address is in the subnet range of the projector's IP address.

Second example

- PC IP Address : 10.16.236.100
- PC Subnet Mask : 255.255.255.0
- Projector IP Address : 192.168.100.2
- Projector Subnet Mask: 255.255.255.0

Result : No communication possible. PC address is not in the subnet range of the projector's IP address.

Third example

- PC IP Address : 192.168.200.1
- PC Subnet Mask : 255.255.255.0
- Projector IP Address : 192.168.100.2
- Projector Subnet Mask: 255.255.255.0

Result : No communication possible. PC address is not in the subnet range of the projector's IP address. The third group in the PC IP address and Projector IP address must be the same.

Fourth example

- PC IP Address : 192.168.200.1
- PC Subnet Mask : 255.255.0.0
- Projector IP Address : 192.168.100.2
- Projector Subnet Mask: 255.255.0.0

Remark : Communication possible. PC address is in the subnet range of the projector's IP address. The third group in the IP<sup>°</sup> addresses can be any value as the third group in the subnet mask is 0.

#### Software connection

- 1. Click in the IP address input field and fill out directly the IP address of the projector (1a). (image A-11) **Note:** For DP100-DP90, the IP address must be the TI/Cinema IP address. To read out that address, look for the Cinema IP address via the touch panel or look for the TI IP address via the D-Cine
  - Communicator software, tab page Projector Configuration.

Or,

click in the host name input field just below the IP address and fill out the host name of the projector to perform a DNS-lookup (requires the local network to be configured to support this) (1b). Or,

click on Projector Search (1c).

The projector scans the network and build up a list of available projectors with host name and IP address (only possible for projectors on the local subnet AND that have Release 5.1 or later installed).

2. Select the desired projector out of the list (1d) and click OK (1e).

The IP address and host name will be filled out.

3. Check the radio button in front of Ethernet Port (2).

The program will prompt the user to login to the projector.

- 4. Enter the userid and password.
  - Defaults are:
  - UserId: Service
  - Password: Heal Thyself

Both are case sensitive.

When correct, the Current Projector Info of the selected projector will be filled out.



Make Ethernet connection
# A.4 Installation of the new software release

## How to install ?

1. Click on Select Release Installation File (1). (image A-12)

A browser window opens (2).

- 2. Browse to the directory that contains the Release to be installed. *Note: The release files are indicated as .dlpcinema .*
- 3. Click on the file to select (3) and click **Open** (4). Or,

double click on the file (3).

The content of the file will be displayed in *Selected release* (5) after a validation. A comparison with the actual loaded software is possible. (image A-13)

4. Click on Start Auto-Install (6).

The verification and installation process will be started. It installs anything that does not exactly match the release.

It includes also the resetting of the projector and the re-connection to verify the installation.

A success or error dialog box will be displayed when completed.

Current Projector Info	Selected Release
Normal operating mode	(No Release Selected)
Release unknown (no data to compare)	
Interface Board Type = Series-0 ARM Boat App 4 00 (53) ARM Main App 5 01 (195) Intf FPGA [0] 2 02 (117) Intf A/D PIC 0.00 (5)	
Processor Board Type = Series-0 DSP Boot App 2.02 (20) DSP Diag App 2.01 (12) DSP Main App 3.06 (161) Proc FPGA [0] 8.01 (72)	-
1 <u>&gt;</u>	
Connection to Projector	Select Release Installation File
Serial Port PC Com-Port # Baud Rate Stay In   1 1 115200 Secience Stay In   Boot-App	
Ethemet Port 150 158 193 52	Show Log (2)
DP30-PHI DLP Cinema(TM) Release In	stallation File
Look in: 🔂 TICine	ma 🔹 🕂 🖬 📅 🚺 - 🖊
Configu	rationFiles
History Interfac	eroubsystem ieBoardBinaryFiles
Process	orBoardBinaryFiles
Recover	yFles
Uesktop Release	e.u.dponema
	(3)
My Documents	
	1
My Computer	(4)
and the second se	
File name:	- Dpen

Image A-12 Select Release file

Current Projector Info	Solosted Rolesse
Normal operating mode	D:\TICinema\Release9.0.dpcinema
Release 8.1 (25) Currently Installed Cinema-boards: Release 8.1 (25) Currently Installed	Release 9.0 (26)
Formatter-Subsystem: Release 9.0 (26) [Selected Relea Interface Board Type = Series-0 ARM Boot App 4.00 (53) ARIM Main App 5.01 (195) Intf FPGA (0) 2.02 (117) Intf A/D PIC 0.00 (5)	ARM Boot App 4.00 (53) ARM Main App 6.00 (208) Init FPGA (0) 2.02 (117) Init FPGA (1) 5.37 (217) Init A/D PIC 0.00 (5) DSP Boot App 2.02 (20)
Processor Board Type - Series 0 DSP Boot App 2.02 (20) DSP Diag App 2.01 (12)	DSP Diag App 2.01 (12) DSP Main App 4.00 (178) Proc FPGA (0) 8.01 (72) Proc FPGA (1) 1.00 (21)
Connection to Projector C Serial Port PC Com-Port # Baud Rate Stay In 1 115200 Boot-App	Select Release Installation File
Ethemet Port     IP Address     150     158     193     52     DP30-PHMT	** Start Auto-Install ** (6) Special Operations >>
Protector Search	Factory Installation >> Close

Image A-13 Start auto-install

<u>.</u>

**CAUTION:** Do not reset or switch off the projector during an installation operation. A reset during some operations may leave the affected board in the projector in a non-functional state, requiring factory recovery.



In case of failures, always send a copy of this log file to your Barco representative.



**C**AUTION: Log files are not saved automatically. A Dump log to file has to be done.

# A.5 Logging of the operation

## What is possible?

The program maintains a log of all operations performed.

To show this log, click on Show Log.

Current Projector Info	Selected Release	
Normal operating mode	D:\TICinema\Release9.0.dpcinema	
Release 8.1 (25) Currently Installed	Release 9.0 (26)	
Formatter-Subsystem: Release 9.0 (26) [Selected Relea	ARM Boot App 4.00 (53) ARM Main App 5.00 (208)	
Interface Board Type = Series-0 ARIM Boot App 4.00 (53) ARIM Main App 5.01 (195) Left EPGA 101 2.02 (117)	Intl FPGA [0] 2.02 [117] Intl FPGA [1] 5.37 [217] Intl A/O PIC 0.00 [5]	
Init A/D PIC 0.00 (5)	DSP Boot App 2.02 (20)	
Processor Board Type = Series-0 DSP Boot App 2.02 (20) DSP Diag App 2.01 (12)	DSP Diag App 2.01 [12] DSP Main App 4.00 [178] Proc FPGA [0] 8.01 [72] Proc FPGA [1] 1.00 [21]	
Connection to Projector PC Com-Port # Baud Rate Stay In	Select Release Installation File	
IP Address	** Start Auto-Install **	
DP30-PHMT	Special Operations >> Show bog	
Projector Search	Factory Installation >> Close	

Image A-14 Show logging started

The log window opens.

Date/Time	Log Entry
2005/06/20 01:29:03 PM	Delete File: File not present on projector (\PR0JFILES\CSC\Mk7 YCbCr 240M.CSC)
2005/06/20 01:29:03 PM	Delete File: VPR0JFILES\CSCVMk7 YCbCr 709.CSC
2005/06/20 01:29:03 PM	Delete File: File not present on projector (\PROJFILES\CSC\Mk7 YCbCr 709.CSC)
2005/06/20 01:29:03 PM	Delete File: \PR0JFILES\CSC-P7\Mk7 no correction.CSC-P7
2005/06/20 01:29:03 PM	Delete File: File not present on projector (\PROJFILES\CSC-P7\Mk7 no correction.CSC
2005/06/20 01:29:03 PM	Delete File: VPR0JFILES\EXTRAVMk7 Default.EXTRA
2005/06/20 01:29:03 PM	Delete File: File not present on projector (\PROJFILES\EXTRA\Mk7 Default.EXTRA)
2005/06/20 01:29:03 PM	Delete File: \PR0JFILES\LUT-DG\Mk7 Linear.LUT-DG
2005/06/20 01:29:03 PM	Delete File: File not present on projector (VPR0JFILES\LUT-DG\Mk7 Linear.LUT-DG)
2005/06/20 01:29:03 PM	Delete File: VPROJFILES VLUT-DG VMk7 PL2.6.LUT-DG
2005/06/20 01:29:03 PM	Delete File: File not present on projector (VPR0JFILES\LUT-DG\Mk7 PL2.6.LUT-DG)
2005/06/20 01:29:03 PM	Delete File: VPR0JFILESVMCGDVMk7 nominal.MCGD
2005/06/20 01:29:03 PM	Delete File: File not present on projector (VPROJFILES/MCGD/Mk7 nominal.MCGD)
2005/06/20 01:29:03 PM	Delete File: VPR0JFILES VPCFVMk7 Default PCF
2005/06/20 01:29:03 PM	Delete File: File not present on projector (VPR0JFILES/PCFVMk7 Default.PCF)
2005/06/20 01:29:03 PM	Delete File: \PROJFILES\SCREEN\Mk7 Default.SCREEN
2005/06/20 01:29:03 PM	Delete File: File not present on projector (\PR0JFILES\SCREEN\Mk7 Default.SCREEI
2005/06/20 01:29:04 PM	Delete File: \PROJFILES\SOURCE\Mk7 Native Array.SOURCE
2005/06/20 01:29:04 PM	Delete File: File not present on projector (\PR0JFILES\S0URCE\Mk7 Native Array.S0
2005/06/20 01:29:04 PM	Delete File: \PROJFILES\TCGD\Mk7 color venification.TCGD
2005/06/20 01:29:04 PM	Delete File: File not present on projector (\PROJFILES\TCGD\Mk7 color verification.T(
2005/06/20 01:29:04 PM	Reset Projector
2005/06/20 01:31:13 PM	Reconnect after reset succeeded
2005/06/20 01:31:13 PM	Operation successful
2005/06/20 01:31:43 PM	Normal operating mode
2005/06/20 01:31:43 PM	Release 9.0 (26) [Selected Release]
2005/06/20 01:31:43 PM	Cinema-boards: Release 9.0 (26) [Selected Release]
2005/06/20 01:31:43 PM	Formatter-Subsystem: Release 9.0 [26] [Selected Release]
2005/06/20 01:31:43 PM	Interface Board Type = Series-UIIARM Boot App

Image A-15 Log info

.

By clicking on one of the buttons, the following is possible with the log:

- **Dump to file** : the log will be dumped into a file on the hard disk. A name and location will be asked first.
- Clear log : the log will be cleared. All information will be removed.



Log files are not saved automatically to disk. To save the file execute a Dump to file.

# A.6 Special functions

### Overview

To select a special installation and/or verification function, click on **<<Special Operations>>**. Before clicking on Special Operations, a connection to the projector must be present and a release file must be selected.

Special Op	perations
Auto-Install Cinema Boards C	Inly
Auto-Install Formatter Subsys	tem Only
Verity Release Only (no insta	JI)
Force Cinema Be-Install (with	Disk-Chin Formati
Torce cilienta rienisiai (with	
File-System Install Uniy (with I	Disk-Chip Formaŋ
ОК	Cancel

Auto-Install Cinema Boards Only	will only verify and install components related to the Interface and Processor boards.
	Use only if cinema boards are replaced (interface board, processor board)
Auto-Install Formatter Subsystem Only	will only verify and install components related to the Formatter subsystem.
	Use only when the engine was replaced.
Verify Release Only	will check all components of a Release supported by this program. No changes will be made to the projector.

Force Cinema Re-Install (see note)	will reinstall all Cinema components (Disk-Chip and flash) whether or not they are up to date. This rarely needed and is intended for special recovery purposes only.
Fill-System Install Only (see note)	will format the Disk-Chip and install all files (no other flash components are touched). This is intended for special file-system recovery only.

Note : with these options you will loose all default MACRO, PCF and SCREEN files. These options should not be used.

# A.7 Factory Install Options



CAUTION: Never use these options in the field. Only for factory use.

## **Overview**

These options are intended for factory use for brand new boards.

For special factory-install operations, select **Factory Installation** >> to open the dialog window to select the function to perform. Before click on **Factory Installation**, a connection to the projector must be present and a release file must be selected.

# A.8 Recovery option - Stay in Boot option

### Problem

The main software of the interface board can get corrupt when the projector was reset while a software update was busy. In that case the projector might be in a state where it tries to load the main software continuously, but it fails as the software is corrupt.

It is possible to force the projector to load only its boot application and not to start its main application. This is called Stay in Boot.

The Stay in Boot option can be activated only when connected via a Serial connection (RS232/RS422).

### How to activate

1. Check Stay in Boot App. (image A-17)

A message will be displayed to indicate that a recovery will take place.

2. Click **OK** to continue.

When the boot application is successfully started, a message will be displayed. The current projector info will indicated that the boot application is running.

3. Click on Select Release Installation file and select the release file.

The content of the file will be displayed.

4. Click on Start Auto Install. (image A-18)

The verification and installation process will be started. It installs the ARM\_main\_app.

	Current Projector Info	Selected Rele	lase
(No Connectio	n Selected>	<no release="" selected=""></no>	
SI	tay In Boot-App Procedure	recovery from some types of corrupted fi	
- 1	Turn projector power OFF,		
<u>s</u>	Select the Serial-Port attached t Turn projector ON within 20 sec	orthe projector, onds.	
Serial Port	Select the Serial-Port attached t Turn projector ON within 20 sec C Collin On * Obdustrate Stay In 1 • 115200 • Boot App	OK	
Serial Port	Select the Serial-Port attached t Turn projector ON within 20 sec C Colline on # Dadd Hate Stay In 1 • 115200 • Boot-App IP Address It 150 . 158 . 139 . 218	OK	Show Log
Serial Port	Select the Serial-Port attached t Turn projector ON within 20 sec C Common * Deductions Stay In 1 • 115200 • Boot-App IP Address It 150 . 158 . 139 . 218 DP100-LAB0-8R	OK	Show Log

Image A-17 Stay in boot mode

Current Projector Info	Selected Release
ARM-Boot-App currently running	D:\work\TI software\release9.0\Release9.0.dlpcinx
Release 9.0 (26) [Incomplete] [Selected Release] Direma-boardy: Belease 9.0 (26) [Incomplete] [Selecter	Release 9.0 (26)
Interface Board Type = Series-1A ARM Boot App 4.00 (53)	ARM Boot App 4.00 (53) ARM Main App 6.00 (208) Intf FPGA [0] 2.02 (117) Intf FPGA [1] 5.37 (217) Intf A/D FIC 0.00 (5)
	DSP Boot App 2.02 (20) DSP Diag App 2.01 (12) DSP Main App 4.00 (178) Proc FPGA [0] 8.01 (72) Proc FPGA [1] 1.00 (21)
<	<
Connection to Projector           • Serial Port         PC Com-Port         # Baud Rate         Stay in           • Serial Port         1         •         115200         •	Select Release Installation File
C Ethernet Port 150 . 158 . 199 . 218	** Start Auto-Install ** Show Log
DP100-LABO-BR	Special Operations >>
Projector Search	Excland Installation 2.2

Image A-18 Start auto install of ARM application

# GLOSSARY

## 292–DUAL

Input A and input B are combined to 1 input. From a complete signal, part is send to input A and the other part to input B to reach bigger way through.

## 4:2:2

A commonly used term for a component digital video format. A ratio of sampling frequencies used to digitize the luminance and color difference components (Y, R-Y, B-Y) of a video signal. It is generally used as shorthand for ITU-R 601. The term 4:2:2 describes that for every four samples of Y, there are two samples each of R-Y and B-Y, giving more chrominance bandwidth in relation to luminance compared to 4:1:1 sampling.

### 4:4:4

Similar to 4:2:2, except that for every four luminance samples, the color channels are also sampled four times.

## ACTIVE

Stores the current state of the projector.

### Aspect ratio

Relation between the horizontal & vertical dimension in which the window will be displayed, e.g. 4 by 3 or 16 by 9.

### **Button Module Settings**

Button module settings contains info on which actions are coupled to each button/input. For manual configuration, see Automation tab.

## CLO

Constant light output

### CSC

Color Space Converter

### **Default Gateway**

A router that serves as an entry point into and exit point out of a network. For example, a local network (LAN) may need a gateway to connect it to a wide area network (WAN) or to the Internet.

### DHCP

Dynamic host configuration protocol. DHCP is a communications protocol that lets network administrators manage centrally and automate the assignment of IP addresses in an organization's network. Using the Internet Protocol, each machine that can connect to the Internet needs a unique IP address. When an organization sets up its computer users with a connection to the Internet, an IP address must be assigned to each machine. Without DHCP, the IP address must be entered manually at each computer and, if computers move to another location in another part of the network, a new IP address must be entered. DHCP lets a network administrator supervise and distribute IP addresses from a central point and automatically sends a new IP address when a computer is plugged into a different place in the network.

#### **DNS** server

Computers, Projectors connected to a network are referenced by their IP address. The only problem is that remembering IP addresses is not easy. If you need to use hundreds of addresses then it will become impossible to remember them. This is why domain names are created. Internet names (domain and host names) are just aliases to these IP addresses. When you use an Internet address it is automatically translated to an IP address. In fact a program or device that translates those Internet names to IP addresses is called a DNS Server.

## DVI-EDID

Digital Visual Interface – Extended Display Identification Data

DVI sources that are reported to the projector via the VESA E-EDID standard. These will be autodetected and displayed at the source format size, using standard processing.

## GPI

General purpose Input/Output

#### Host name

This is the name that will be returned, along with the IP address in response to the UDP broadcast query for projectors.

### IP

Internet Protocol. The network layer of TCP/IP. Required for communication with the internet.

### Layout

A layout is a collection of windows. These windows are placed on a certain position within the screen.

### Lut

Look up table

### LUT

Lookup table

### Macro

Macro files contains a sequence of commands. These commands are typically select Input Source, Activate PCF, Activate SCREEN.

### MCGD

Measured Color Gamut Data

## Metadata

Generally referred to as "data about data" or "data describing other data". More specifically, information that is considered ancillary to or otherwise directly complementary to the essence. Any information that a content provider considers useful or of value when associated with the essence being provided.

#### Null modem cable

An adapter cable or adapter piece to switch the receive and transmit line within a RS232 cable.

### PCF File

Projector Configuration File. This file is a file that will be delivered with each movie. It contains all data needed to display a certain movie as it is defined by the movie distributor.

### PSTN

PSTN (public switched telephone network) is the world's collection of interconnected voice-oriented public telephone networks, both commercial and government-owned.

#### Screen File

Screen presentation configuration file. This file contains information about resizing, letterboxing, masking and lens factor.

#### SMPTE

Society of Motion Picture and Television Engineers - A global organization, based in the United States, that sets standards for baseband visual communications. This includes film as well video standards.

#### SNMP

Simple Network Management Protocol is the protocol governing network management and the monitoring of network devices and their functions.

#### Subnet mask

A number that is used to identify a subnetwork so that IP addresses can be shared on a local area network.

### TCGD

Target Color Gamut Data. These files defines the Target Color Gamut. For each movie, it is possible to select a 'Target' Color Gamut File, which defines the color gamut values for that specific movie. The TCGD file is part of the PCF file delivered with the movie.

#### TGA

Targa Bitmap Files

UDP

User Datagram Protocol

#### Window

A window represents the active area of an input source.

### Z-order

The layer sequence in which windows will be displayed in relation to one another.

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# **Revision Sheet**

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Please correct the following points in this documentation (R5976510/07):

page	wrong	correct