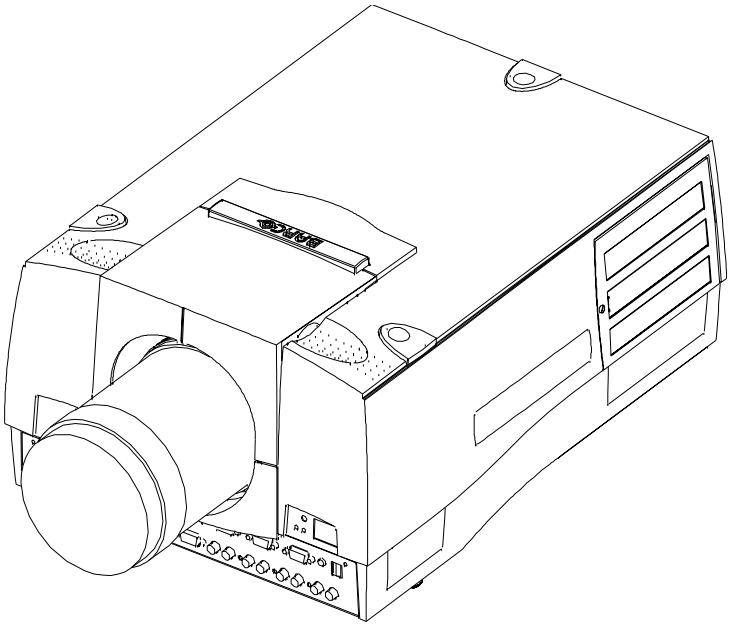
SIMULATION PRODUCTS



BARCOREALITY SIM 6 MK II

R9040142
R9040143

OWNER'S MANUAL

08092003 R5976493/02

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Changes

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This equipment has been tested and found to comply with the limits for a class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area may cause harmful interference, in which case the user will be responsible for correcting any interference.

TABLE OF CONTENTS

1. PACKAGING AND DIMENSIONS

This chapter handles about the way the projector is packed and gives an overview of the dimensions.

- Lens Packaging
- Dimensions

1.1 Lens Packaging

Way of Packaging

Lenses are supplied as an individual item.

They are packed in a carton box.

Save the original shipping carton and packing material, they will be necessary if you ever have to transport the lens.

Never transport the projector with the lens mounted on it !

Always remove the lens before transporting the projector.

1.2 Dimensions

Dimensions overview

Dimensions are given in mm (1 inch = 25.4 mm)

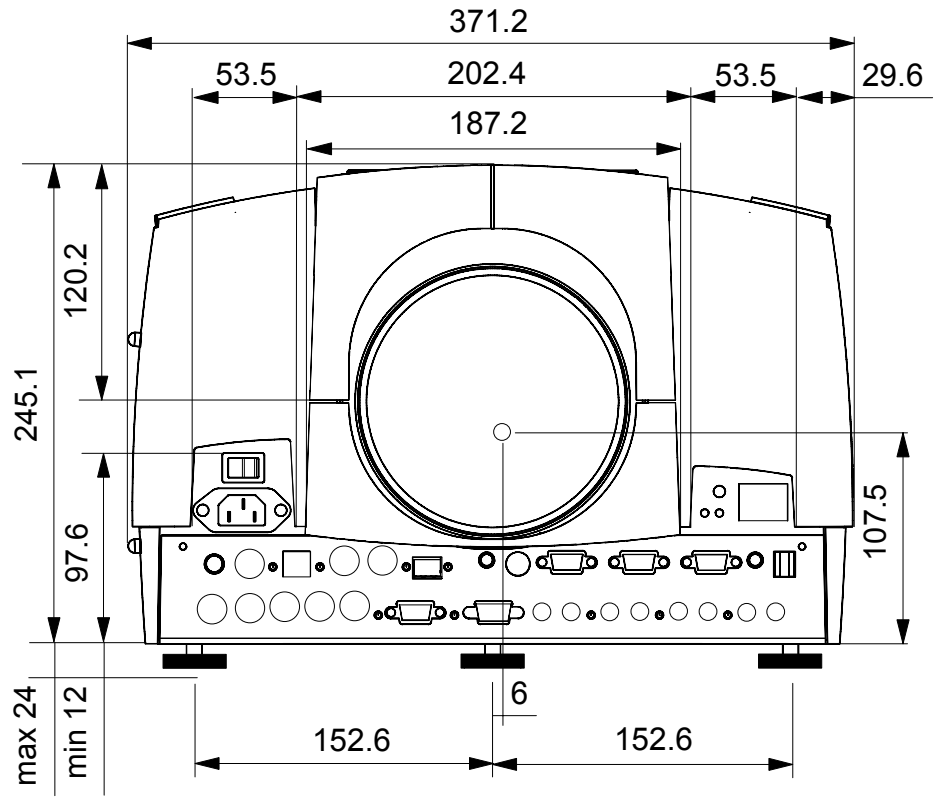


Image 1-1
Front view dimensions projector

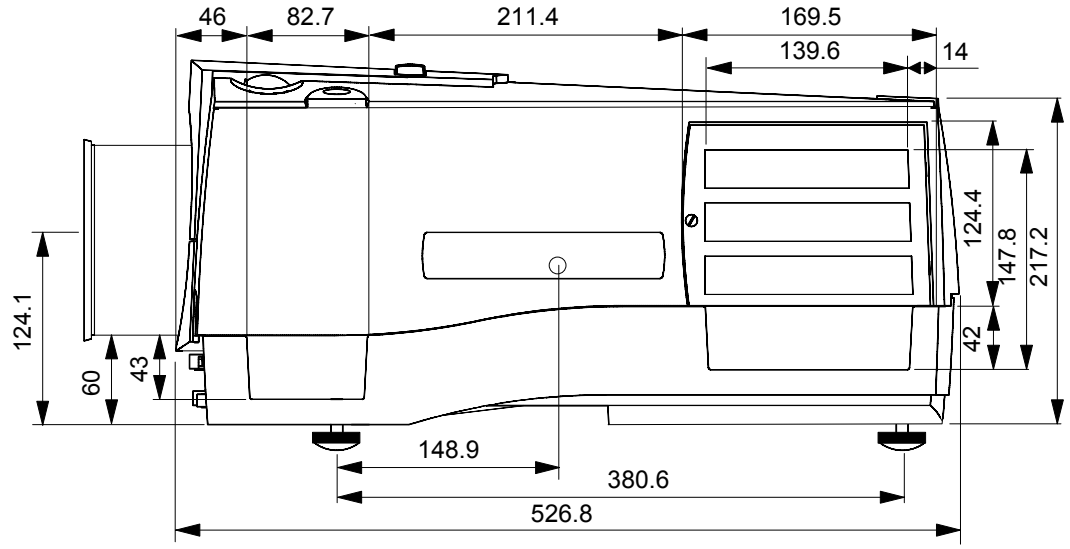


Image 1-2
Side view dimensions projector

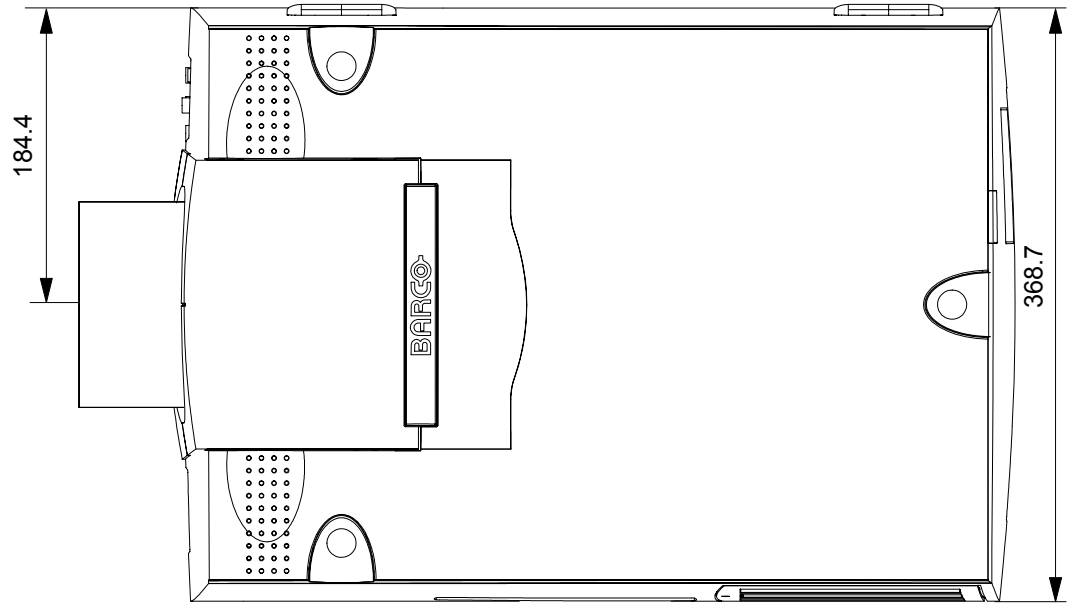


Image 1-3
Top view dimensions projector

2. INSTALLATION GUIDELINES

Overview

- Installation guidelines
- Configuration
- Lenses
- Batteries

Before installing the projector, read first the safety instructions supplied with the BarcoReality SIM6 MKII.

2.1 Installation guidelines

Ambient Temperature Conditions

Careful consideration of things such as image size, ambient light level, projector placement and type of screen to use are critical to the optimum use of the projection system.

Max. ambient temperature : 40 °C or 104 °F

Min. ambient temperature : 0 °C or 32 °F

The projector will not operate if ambient air temperature falls outside this range (0°C- 40°C or 32°F-104°F).

Storage temperature: -35°C to +65°C (-25.6°F to 149°F)

Humidity Conditions

Storage: 0 to 98 % RH Non-condensing

Operation: 0 to 95 % RH Non-condensing

Environment

Do not install the projection system in a site near heat sources such as radiators or air ducts, or in a place subject to direct sunlight, excessive dust or humidity. Be aware that room heat rises to the ceiling; check that temperature near the installation site is not excessive.

Harmful Environmental Contamination Precaution

Environment condition check

A projector must always be mounted in a manner which ensures the free flow of clean air into the projectors ventilation inlets. For installations in environments where the projector is subject to airborne contaminants such as that produced by smoke machines or similar (these deposit a thin layer of greasy residue upon the projectors internal optics and imaging electronic surfaces, degrading performance), then it is highly advisable and desirable to have this contamination removed prior to it reaching the projectors clean air supply. Devices or structures to extract or shield contaminated air well away from the projector are a prerequisite, if this is not a feasible solution then measures to relocate the projector to a clean air environment should be considered.

Only ever use the manufactures recommended cleaning kit which has been specifically designed for cleaning optical parts, never use industrial strength cleaners on a projectors optics as these will degrade optical coatings and damage sensitive optoelectronic components. Failure to take suitable precautions to protect the projector from the effects of persistent and prolonged air contaminants will culminate in extensive and irreversible ingrained optical damage. At this stage cleaning of the internal optical units will be non-effective and impracticable. Damage of this nature is under no circumstances covered under the manufactures warranty and may deem the warranty null and void. In such a case the client shall be held solely responsible for all costs incurred during any repair. It is the clients responsibility to ensure at all times that the projector is protected from the harmful effects of hostile airborne particles in the environment of the projector. The manufacture reserves the right to refuse repair if a projector has been subject to wantful neglect, abandon or improper use.

What about ambient light ?

The ambient light level of any room is made up of direct or indirect sunlight and the light fixtures in the room. The amount of ambient light will determine how bright the image will appear. So, avoid direct light on the screen. Windows that face the screen should be covered by opaque drapery while the set is being viewed. It is desirable to install the projection system in a room whose walls and floor are of non-reflecting material. The use of recessed ceiling lights and a method of dimming those lights to an acceptable level

is also important. Too much ambient light will 'wash out' of the projected image. This appears as less contrast between the darkest and lightest parts of the image. With bigger screens, the 'wash out' becomes more important. As a general rule, darken the room to the point where there is just sufficient light to read or write comfortably. Spot lighting is desirable for illuminating small areas so that interference with the screen is minimal.

Which screen type ?

There are two major categories of screens used for projection equipment. Those used for front projected images and those for rear projection applications.

Screens are rated by how much light they reflect (or transmit in the case of rear projection systems) given a determined amount of light projected toward them. The 'GAIN' of a screen is the term used. Front and rear screens are both rated in terms of gain. The gain of screens range from a white matte screen with a gain of 1 (x1) to a brushed aluminized screen with a gain of 10 (x10) or more. The choice between higher and lower gain screens is largely a matter of personal preference and another consideration called the Viewing angle. In considering the type of screen to choose, determine where the viewers will be located and go for the highest gain screen possible. A high gain screen will provide a brighter picture but reduce the viewing angle. For more information about screens, contact your local screen supplier. A high gain screen will provide a brighter picture but reduce the viewing angle.

What image size ? How big should the image be ?

The projector is designed for projecting an image size (video) from 1.00m (3.3ft) to 6.00m (19.7ft) with a aspect ratio of 5 to 4.

2.2 Configuration

Which configuration can be used ?

The projector can be installed to project images in four different configurations :

- Front/table
- Rear/table
- Front/ceiling
- Rear/ceiling

Positioning the projector

Drawings are given for a nominal lens position.

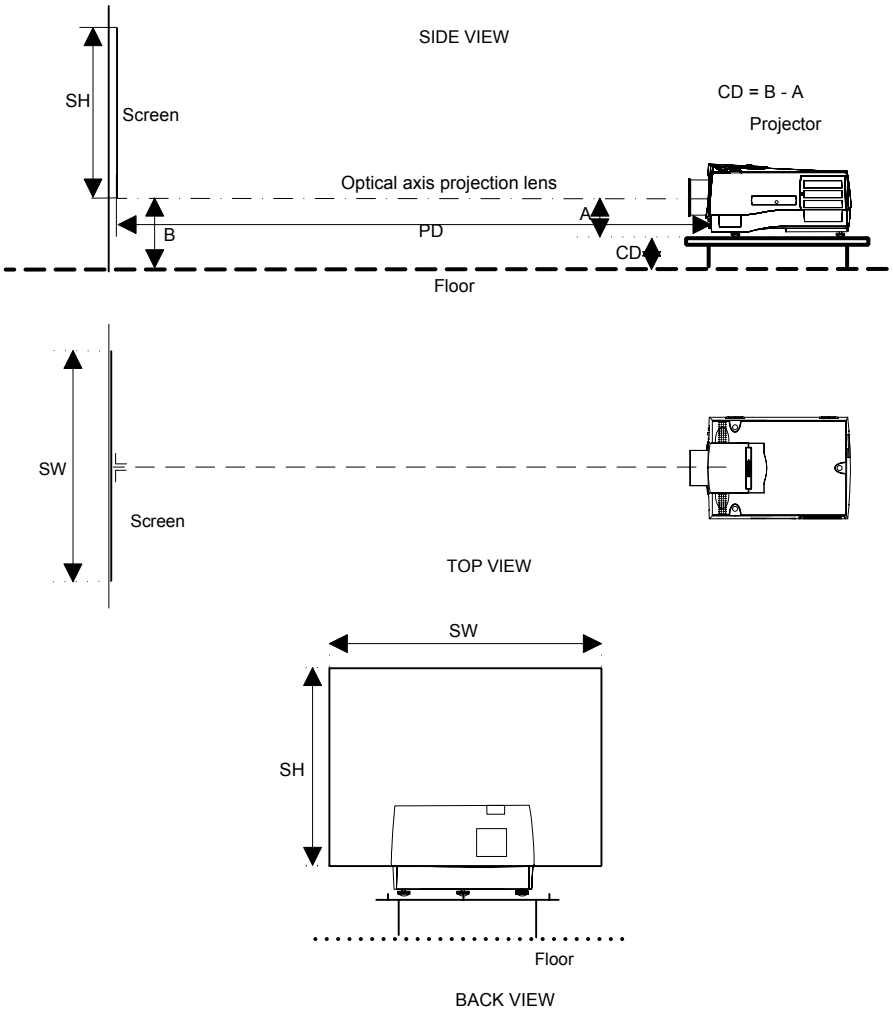


Image 2-1

B Distance between ceiling and top of the screen or between floor and bottom of the screen.
A Correction value, distance between bottom side of projector (without feet) and middle of the lens. Value to be subtracted from B to obtain the correct installation position. (A value is a constant value for all screen widths and type of lenses, A = 124.1 mm or 4.89 inch)
CD Total distance between projector and ceiling or projector and floor.
SW Screen width
SH Screen height (image height)
PD Projector distance, distance between screen and projector

2.3 Lenses

Overview

- Lenses
- Lens formulas
- Lens installation
- Cleaning the lens

2.3.1 Lenses

Available lenses

The following lenses are available, or will become available (contact a BARCO service center) as an option :

Lenses	Standard version	Scheimpflug version
QFD(1.27:1)	**R9840400**	**R9840600**
QFD(2.5:1)	**R9840290**	**R9840470**
QFD(1.4-2.1:1)	**R9840380**	**R9840610**
QFD(2.1-3.0:1)	**R9840390**	**R9840590**
QFD(3.4-4.5:1)	**R9840060**	**R9840580**
QFD(4.5-6.0:1)	**R9840100**	**R9840460**
QFD(7:1)	**R9840410**	—
QGD(0.8:1) / SW: (1-1.4)m	**R9829800**	**R9840480**
QGD(0.8:1) / SW: (1.7-2.4)m	**R9840040**	**R9840490**
QGD(0.86:1)	**R9840491**	**R9840492**

2.3.2 Lens formulas

Formulas

Lenses	Metric Formulas (meter)	Inch Formulas (inch)
QFD(1.27:1)	PD = 1.33 x SW — 0,0195 + 0,00270 / SW	PD = 1.33 x SW — 0.768 + 4.185 / SW
QFD(2.5:1)	PD = 2.486 x SW + 0,025 + 0,0215 / SW	PD = 2.486 x SW +0.984 + 33.325 / SW
QFD(1.4-2.1:1)	PD_{min} = 1,48 x SW + 0,0287 — 0,0215 / SW PD_{max} = 2,25 x SW — 0,01 + 0,0195 / SW	PD_{min} = 1.48 x SW + 1.13 — 33.325 / SW PD_{max} = 2.25 x SW — 0.39 + 30.225/ SW
QFD(2.1-3.0:1)	PD_{min} = 2,18 x SW — 0,10 + 0,055 / SW PD_{max} = 2,97 x SW + 0,10 — 0,0730 / SW	PD_{min} = 2.18 x SW — 3.937 + 85.25 / SW PD_{max} = 2.97 x SW + 3.937 — 113.15 / SW
QFD(3.4-4.5:1)	PD_{min} = 3,457 x SW — 0,115 + 0,056 / SW PD_{max} = 4,542 x SW — 0,133 + 0,054 / SW	PD_{min} = 3.457 x SW — 4.528 + 86.80 / SW PD_{max} = 4.542 x SW — 5.236 + 83.70 / SW
QFD(4.5-6.0:1)	PD_{min} = 4,39 x SW — 0,02 + 0,0008 / SW PD_{max} = 6,00 x SW + 0,15 + 0,0029 / SW	PD_{min} = 4.39 x SW — 0.787 + 1.24 / SW PD_{max} = 6.00 x SW + 5.906 + 4.495 / SW
QFD(7.0:1)	PD = 7,083 x SW — 0,049 + 0,061 / SW	PD = 7.083 x SW —1.929 + 94.55/ SW
QGD(0.8:1) / SW: (1-1.4)m	PD = 0,794 x SW — 0,048 + 0,0072 / SW	PD = 0.794 x SW — 1.89 + 11.16 / SW
QGD(0.8:1) / SW: (1.7-2.4)m	PD = 0,794 x SW — 0,048 + 0,0072 / SW	PD = 0.794 x SW — 1.89 + 11.16 / SW
QGD(0.86:1)	PD = 0,862 x SW + 0,00254 — 0,0146 / SW	PD = 0.862 x SW + 0.1 — 22.63 / SW

Lens program to calculate the projector distance is available on the BARCO web site : http://www.barco.com/projection_systems/customer_services/lens_program.asp

2.3.3 Lens installation

How to install ?

Follow the next procedure :

1. Open the lens cover of the projector by pivoting it up and take it off. (image 2-2)
2. Pull the lens locks levers backwards to open the lens locks. (image 2-3)
3. Put the lens on the lens holder. (image 2-4)
4. Push the lens locks back in position and lock the levers.
5. Plug the wires of the motor unit into the connector (image 2-5)
6. Re-install the lens cover.

Image 2-2

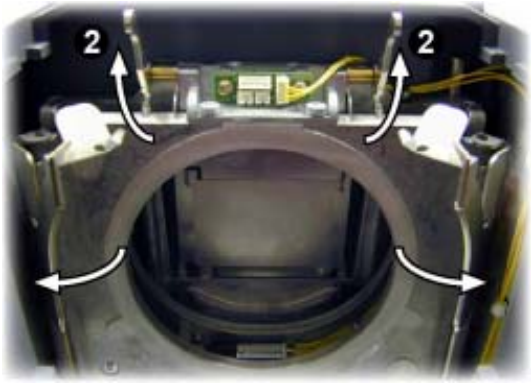


Image 2-3

Image 2-4

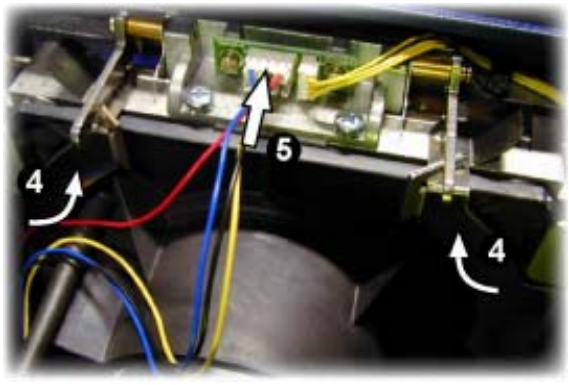


Image 2-5

The procedure for the mounting of a Scheimpflug lens is different.

Refer to the installation manual of the lens.

Never transport the projector with the lens mounted on it !

Always remove the lens before transporting the projector.

2.3.4 Cleaning the lens

To minimize the possibility of damaging the optical coating or scratching exposed lens surface, we have developed recommendations for cleaning the lens. FIRST, we recommend you try to remove any material from the lens by blowing it off with clean, dry deionized air. DO NOT use any liquid to clean the lenses.

Necessary tools

Toraysee™ cloth (delivered together with the lens kit). Order number : R379058.

How to clean the lens ?

Proceed as follow :

1. Always wipe lenses with a CLEAN Toraysee™ cloth.
2. Always wipe lenses in a single direction.
   Warning: *Do not wipe back and forwards across the lens surface as this tends to grind dirt into the coating.*
3. Do not leave cleaning cloth in either an open room or lab coat pocket, as doing so can contaminate the cloth.
4. If smears occur when cleaning lenses, replace the cloth. Smears are the first indication of a dirty cloth.

Do not use fabric softener when washing the cleaning cloth or softener sheets when drying the cloth.

Do not use liquid cleaners on the cloth as doing so will contaminate the cloth.

Other lenses can also be cleaned safely with this Toraysee™ cloth.

2.4 Batteries

Overview

- Battery installation

2.4.1 Battery installation

How to install the battery

Two batteries are packed together with the RCU. Before using your RCU, install first these batteries.

1. Remove the battery cover on the backside by pushing the handle a little towards the bottom of the RCU.
2. Lift up the top side of the cover at the same time.
3. Insert the batteries as indicated in the RCU.
4. Put the battery cover on its place.

3. CONNECTIONS

Overview

- Power connections
- Switching on
- Switching to standby
- Switching off
- Input source connection
- Communications connections

3.1 Power connections

AC Power cord connection

Use the supplied power cord to connect your projector to the wall outlet. Plug the female power connector into the male connector at the front of the projector. The power input is auto-ranging from 90 to 240 VAC.

Fuses

For continued protection against fire hazard :

- refer replacement to qualified service personnel.
- ask to replace with the same type of fuse (T10 AH/250V).

3.2 Switching on

How to switch on.

1. Press the power switch to switch on the projector.
   - When ’0’ is visible, the projector is switched off.
   - When ’1’ is visible, the projector is switched on

   The projector starts in standby mode. The projector mode indication lamp is red.

Starting image projection.

1. Press **Stand by** key once on the local keypad or on the remote control.

   The projector mode indication lamp will be green (image 3-1, image 3-2)

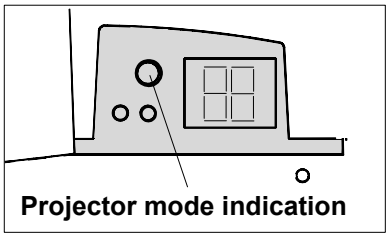


Image 3-1

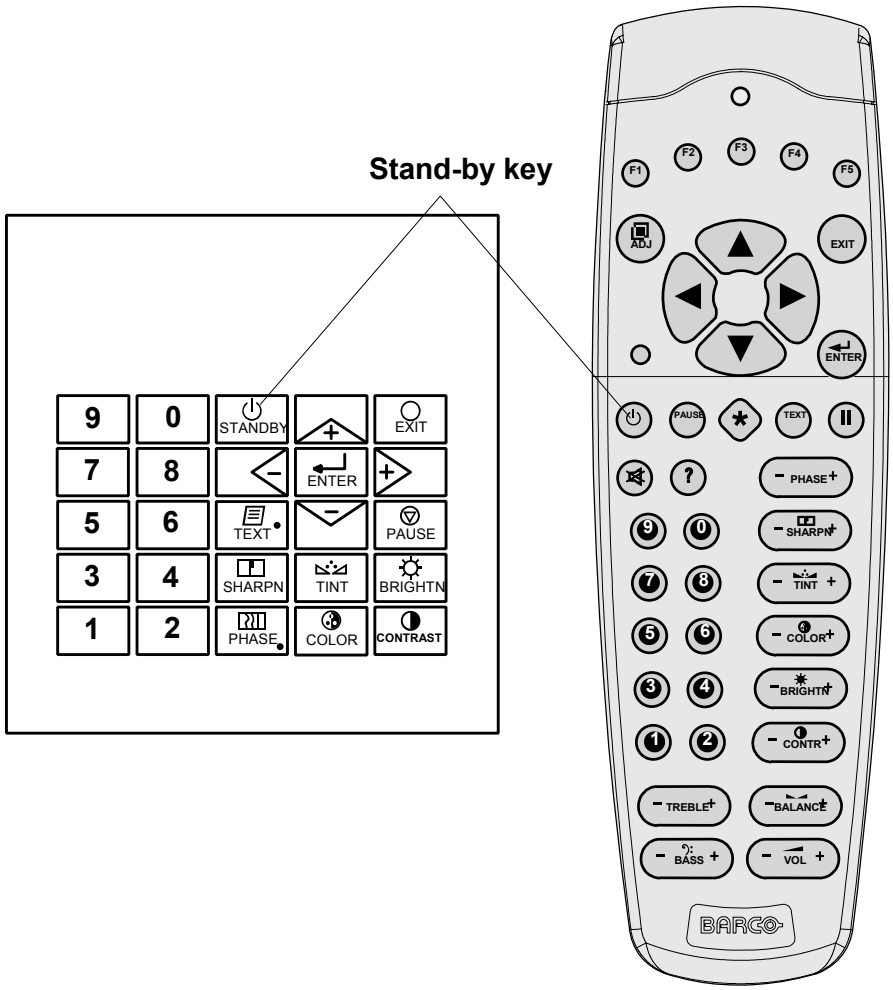


Image 3-2

Lamp run time indication while running

The lamp run time warning will only be displayed when the time is exceeding the limit. A warning message will be displayed 100 hours beforehand , with the exact run time “x” displayed on the screen. This message is displayed only at the start up of the projector. Press the **EXIT** button on the RCU or keypad to remove this warning message.

If the projector is running all the time the lamp warning will never be displayed.

```
Lamp run time is
      x
   hours.
Operating the lamp
   longer than
      x
   hours
  may damage
the projector.

<ENTER> to reset the
   lamp runtime.
  Please replace
    the lamp.
```

Menu 3-1

The total lifetime of the lamp for a safe operation is “x” hours max, do not use it longer. Always replace with a same type of lamp. Call a BARCO authorized service technician for lamp replacement.

Press **ENTER** to reset the lamp runtime.

Max Lamp runtimes for the available projectors.

SIM Projector	x (Max lamp runtime, in hours)
BarcoReality SIM6 MKII	1000

Using a lamp for more than its recommended life time is dangerous as the lamp could explode.

3.3 Switching to standby

How to switch to standby?

1. Press **STANDBY** for 2 seconds until the messages *Saving data please wait* is displayed. (image 3-3)

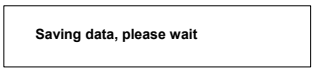


Image 3-3

When switching to standby the projector waits for 30 sec. before it can be restarted. During this period the LED display will show a jumping square with a dash. After one minute, two dashes will be displayed and the projector can restart.

3.4 Switching off

How to switch off the projector?

To switch off the projector, handle as follow :

1. Press **STANDBY** key for 2 seconds. When the message *Saving data, please wait* is displayed, do not press any longer on the **STANDBY** key otherwise the projector will restart.
   When switching to standby the projector waits for 1 minute before it can restart again. During this period the LED display will show a jumping square with a dash. After one minute, two dashes will be displayed and the projector can restart.
   Warning: *Let cool down the projector at least 10 min.*
2. Switch off the projector with the power switch.

3.5 Input source connection

3.5.1 Input facilities

Overview input facilities

- 5-cable input
- Computer
- Video (optional)
- S-Video (optional)
- Serial digital input (optional)
- IEEE (not implemented)

Input selection

This can be manually or automatically.

When 'automatic' is selected in the Input slots menu, by starting up the projector, it searches for an input source by scanning the inputs one by one. If only one source is found, this source will be projected. If different sources are found, the priority is as follow

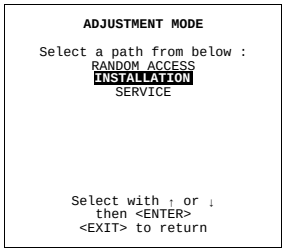
1. Video
2. S-Video
3. 5 cable input
4. Computer input

SDI input is never automatically selected.

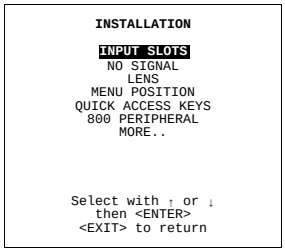
When a RCVDS is connected to the projector, the 'Automatic' selection is disabled.

Set up of the input selection

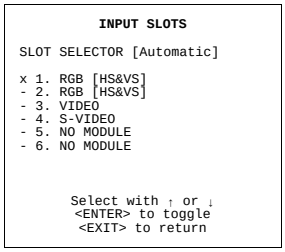
1. Press **ENTER** to start up the adjustment mode.
2. Press the cursor keys to select *Installation*. (menu 3-2)
3. Press **ENTER** to display the *Installation* menu.
4. Press the cursor keys to select *Input slots*. (menu 3-3)
5. Press **ENTER** to display the *Input Slots* menu.
6. Press the cursor keys to select *Slot Selector*. (menu 3-4)
7. Press **ENTER** to toggle between [Manual] or [Automatic].
8. Press **EXIT** several times to leave the adjustment mode.



Menu 3-2



Menu 3-3



Menu 3-4

3.5.2 Inputs via RCVDS05

Overview

When using a RCVDS05, it is recommended to use a 5-cable output module in the RCVDS. The outputs of this module have to be connected to the 5 cable input (slot 1) of the projector. To switch the projector in the 5-cable mode see chapter 'Installation mode'.

3.5.3 5–Cable input

Where to find ?

Slot 1 has 5 BNC input terminals. These are in the left corner on the front panel.

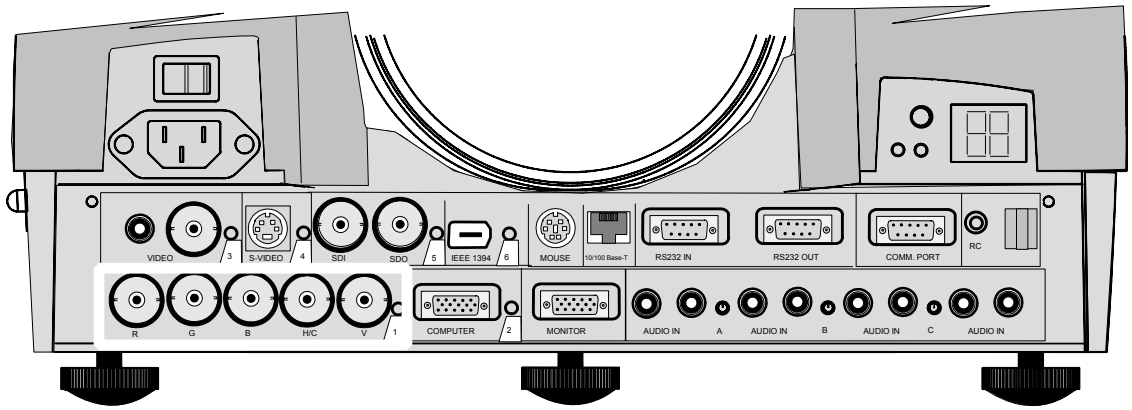


Image 3-4

Which signals can be connected to the 5 cable input.

The following signals can be connected to these BNC connectors :

Connector name	R	G	B	H	V
RGBHV	R	G	B	H	V
RGBS	R	G	B	S	-
RGsB	R	Gs	B	-	-
Composite video	-	Video	-	-	-
Super Video	-	Y	-	-	C
Component Video - SS	R-Y	Y	B-Y	S	-
Component Video - SOY	R-Y	Ys	B-Y	-	-

How to select slot 1

1. Press key 1 on the RCU or the local keypad.

Configuring the 5-cable input.

The configuration has to be done on the *Input Slot* menu. To change the signal format :

1. Press **ADJUST** or **ENTER** key to start up the Adjustment mode. (menu 3-5)
2. Push the cursor keys to select *Installation*.
3. Press the cursor keys to select *Input Slots*. (menu 3-6)
4. Press **ENTER**.

   The internal system will scan the inputs and display the result in the *Input Slots* menu. (menu 3-7)
5. Push the cursor keys to select the first slot (menu 3-7).
6. Press **ENTER** to toggle the input signal priority.

```
ADJUSTMENT MODE

Select a path from below :
RANDOM ACCESS
INSTALLATION
SERVICE

Select with ↑ or ↓
then <ENTER>
<EXIT> to return
```

Menu 3-5

```
INSTALLATION

INPUT SLOTS
NO SIGNAL
LENS
MENU POSITION[CENTER]
QUICK ACCESS KEYS
800 PERIPHERAL
MORE ...

Select with ↑ or ↓
then <ENTER>
<EXIT> to return
```

Menu 3-6

```
INPUT SLOTS

SLOT SELECTOR [Automatic]

x 1. RGB [HV&VS]
- 2. RGB [HV&VS]
- 3. VIDEO
- 4. S-VIDEO
- 5. NO MODULE
- 6. NO MODULE

Select with ↑ or ↓
<ENTER> to toggle
<EXIT> to return
```

Menu 3-7

Possible indications on the input slot menu.

- RGB [HS&VS] = RGB analog signals, separate sync is horizontal and vertical sync.
- RGB CS = RGB analog signals, separate sync is composite sync.
- RGB CV = RGB analog signals, separate sync is composite video or tri-level sync.
- RGB-SOG = RGB analog signals, sync on green is composite sync.
- COMPONENT VIDEO - CS = separate sync is composite sync.
- COMPONENT VIDEO = component video with composite sync on Y or composite tri-level sync on Y.
- VIDEO
- S-VIDEO

When using an RCVDS 05 with a 5 cable output module, connect these 5 cables to this 5-cable input slot (slot1) of the projector. All sources of the RCVDS can now be accepted by the projector.

Audio Connection

Connect the audio input to one of the 3 audio inputs.

3.5.4 Computer input

How to connect a computer to the projector ?

1. Connect the output of the graphical card of the computer to the Computer input of the projector (image 3-5)
   Note: *Only if the connection is < 60 cm. Otherwise insert an interface between the output of the computer and the input of the projector.*

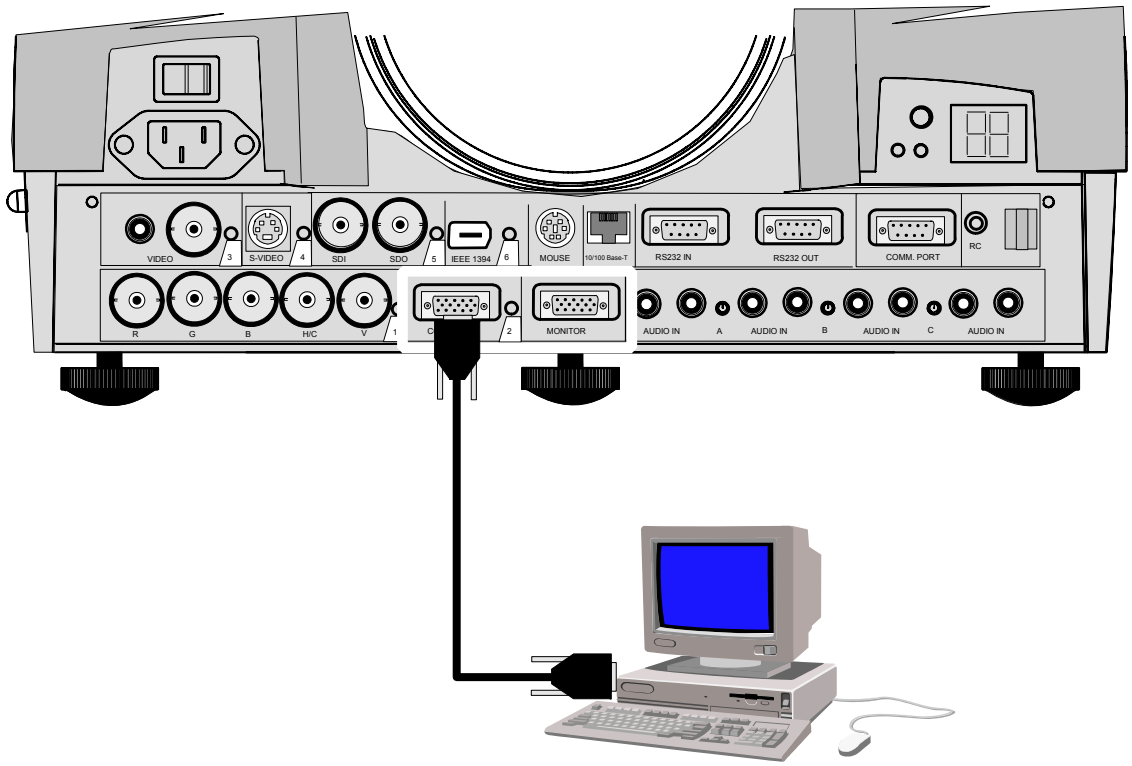


Image 3-5

Pin configuration of the D15 connector.

1	RED
2	GREEN
3	BLUE
4	loop through to monitor

5	ground
6	ground
7	ground
8	ground
9	loop through to monitor
10	ground
11	loop through to monitor
12	loop through to monitor
13	horizontal/composite sync
14	vertical sync
15	loop through to monitor

How to select slot 2.

1. Key in 2 on the RCU or local keypad.

3.5.5 S-Video Input (optional)

What can be connected?

Separate Y-luma/C-chroma signals for higher quality playback of Super VHS-signals.

How to connect an S-Video Input ?

1. Connect the S-video output of your source to the S-video input of the projector (slot 4) (image 3-6)

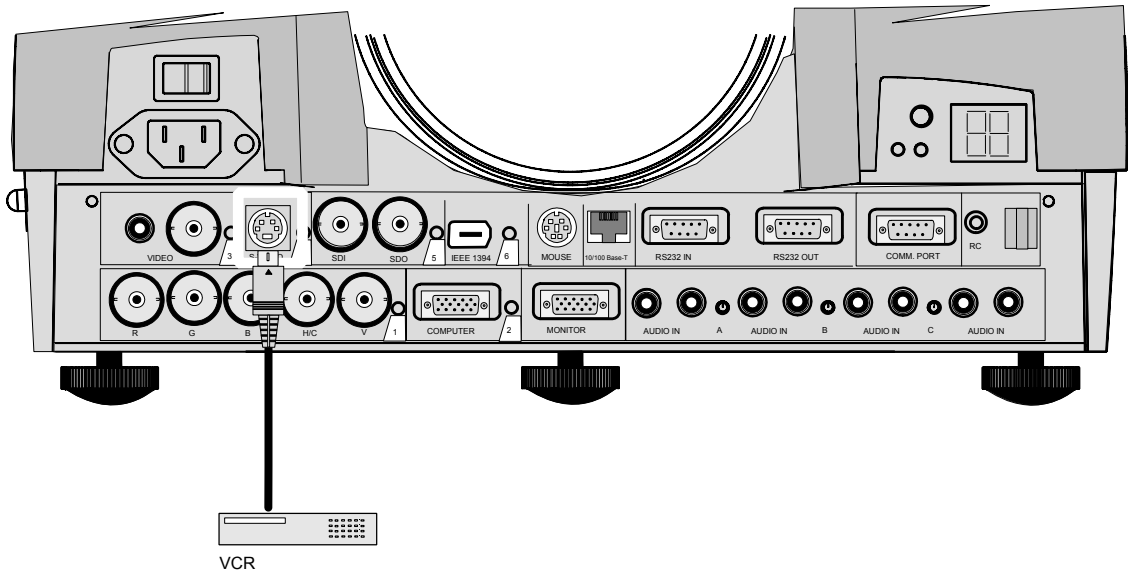


Image 3-6

Pin configuration of the mini DIN plug.

1	ground luminance
2	ground chrominance
3	luminance 1.0Vpp ± 3dB
4	chrominance 282 mVpp ± 3dB

3.5.6 SDI input / SDI output (optional)

What can be connected ?

Full compatibility with digital Betacam, or digital video sources. This avoids the need for analog processing anywhere in the video production chain and guarantees the ultimate image quality. An active loop through of the SDI input signal is provided for monitoring or for double or triple stacking applications.

An active loop through of the SDI input signal is provided for monitoring or for double or triple stacking applications.

How to connect a SDI source ?

1. Connect the out of your SDI source to the BNC SDI input of the projector.
   Note: *The input is always 70 ohm terminated.*
2. If loop through is needed, use the SDI output to connect to next device.
   Note: *The output impedance of the SDI output is 75 ohm.*

How to select slot 5

1. Key in 5 on the RCU or the local keypad.

When a RCVDS05 is connected to the projector, the SDI input is available by keying in 85 on the RCU.

3.6 Communications connections

Overview

- RS232

3.6.1 RS232

Application

1. Remote control :
   - easy adjustment of projector via an IBM PC (or compatible) or MAC connection.
   - allow storage of multiple projector configurations and set ups.
   - wide range of control possibilities.
   - address range from 0 to 255.
2. data communications : sending data to the projector or copying the data from the projector to a hard memory device (hard disc, floppy, etc.).

How to connect ?

1. Connect the serial communication port of computer or Apple Macintosh to the RS232 in port of the projector.

4. GETTING STARTED

4.1 RCU & Local keypad

How controlling the projector ?

The projector can be controlled by the local keypad or by the remote control unit.

Location of the local keypad ?

The local keypad is located on the backside of the projector.

Remote control functions.

This remote control includes a battery powered infrared (IR) transmitter that allows the user to control the projector remotely. This remote control is used for source selection, control, adaptation and set up. It includes automatic storing of picture controls (Brightness, Sharpness...) and settings.

Other functions of the remote control are :

- switching between stand by and operational mode.
- switching to "pause" (blanked picture, full power for immediate restarting)
- direct access to all connected sources.

4.2 Terminology overview

Overview

The following table gives an overview of the different functionalities of the keys.

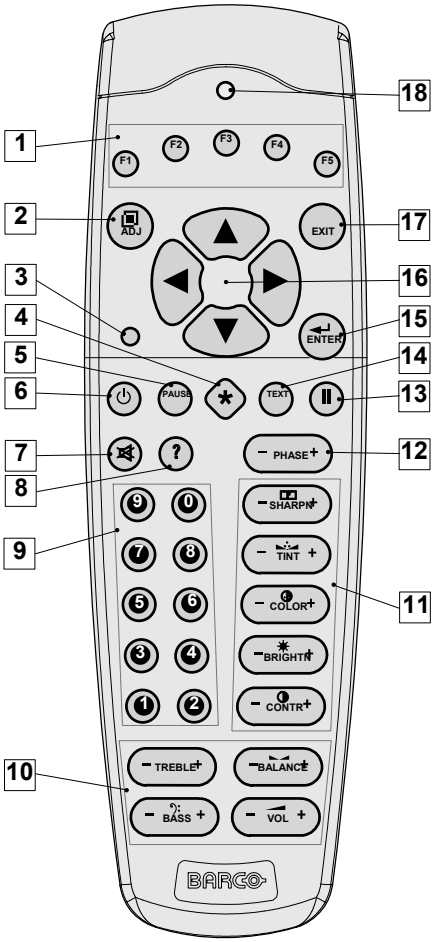


Image 4-1
RCU function indication

1	Function keys	user programmable keys with functions for direct access.
2	ADJ.	Adjust key, to enter the adjustment mode
3	Address key	(recessed key), to enter the address of the projector (between 0 and 9). Press the recessed address key with a pencil, followed by pressing one digit button between 0 and 9.
4	Selection key (*)	to direct access the zoom/focus/shift functions.
5	PAUSE	to stop projection for a short time, press 'PAUSE'. The image disappears but full power is retained for immediate restarting.
6	STBY	standby button, to start projector when the power switch is switched on and to switch off the projector without switching off the power switch. **Attention : Switching to Standby. When the projector is running and you want to go to standby, press the standby key for 2 seconds until the message 'Saving data, please wait' is displayed. Do not press any longer on the standby key otherwise the projector will restart.**
7	MUTE	to interrupt the sound reproduction.
8	?	Auto image, to center the image on the active LCD surface.
9	Digit buttons	direct input selection.
10	Audio controls	use these buttons to obtain the desired sound level.
11	Picture controls	press to adjust the projected image.
12	Phase	be sure the projector is warmed up for at least 15 min before adjusting the phase, press to adjust the phase of the projected image.
13	FREEZ	press to freeze the projected image.

14	TEXT	when adjusting one of the image, e.g. controls during a meeting, the displayed bar scale can be removed by pressing 'TEXT' key first. To re-display the bar scale on the screen, press 'TEXT' key again.
15	ENTER	to start up the adjustment mode or to confirm an adjustment or selection in the adjustment mode.
16	Cursor keys	to make menu selections when in the adjustment mode or to zoom/focus when the direct access is active. Comparison between the cursor keys and the use of the '+' and '-' keys on the local keypad : RCU = local keypad cursor key up = '+' key up cursor key down = '-' key down cursor key right = '+' key right cursor key left = '-' key left
17	EXIT	to leave the adjustment mode or to scroll upwards when in the adjustment mode.
18	RC operation indication	lights up when a button on the remote control is pressed. (This is a visual indicator to check the operation of the remote control)

Table 4-1

4.3 Operating the projector

4.3.1 Switching on

How to switch on.

1. Press the power switch to switch on the projector.
   - When '0' is visible, the projector is switched off.
   - When '1' is visible, the projector is switched on

   The projector starts in standby mode. The projector indication lamp is red.

Starting image projection.

1. Press **Stand by** key once on the local keypad or on the remote control.

   The projector mode indication lamp will be green (image 4-2, image 4-3)

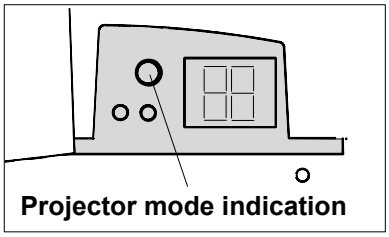


Image 4-2

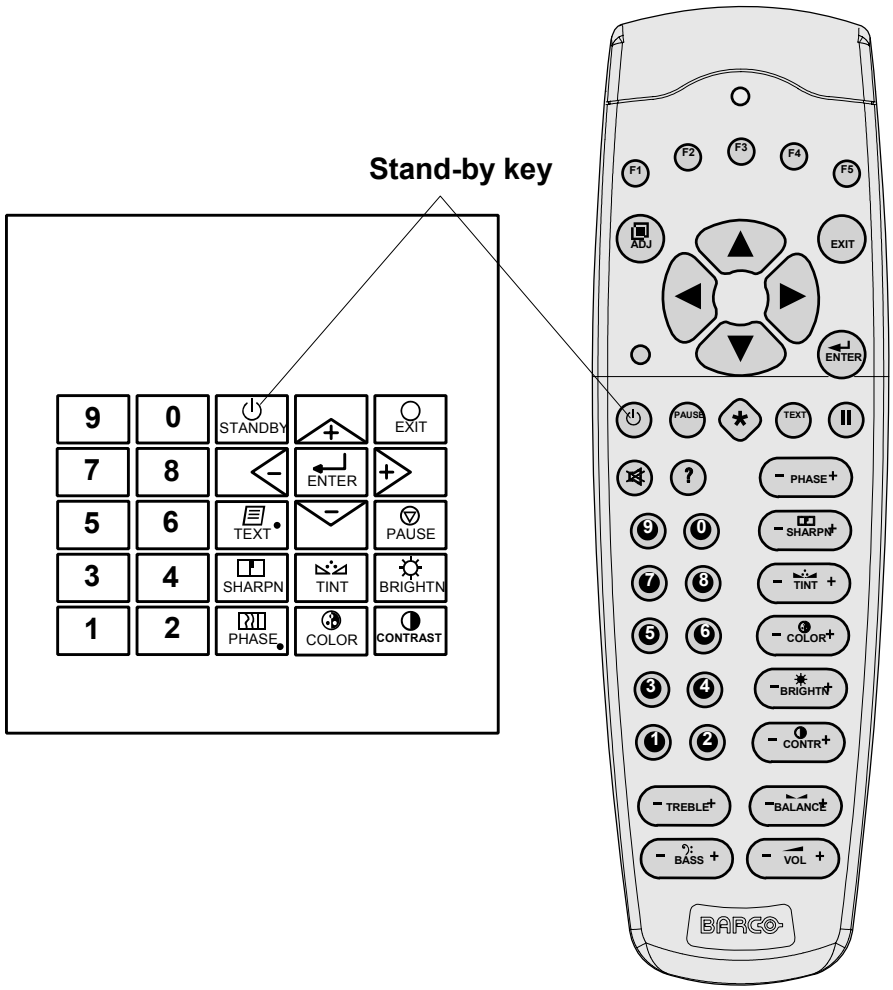


Image 4-3

4.4 Quick setup adjustments

Overview

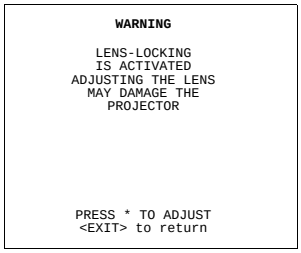
- Quick lens Adjustment
- Quick on Screen Color Change.

4.4.1 Quick lens Adjustment

What can be done ?

For a quick lens adjustment press the * key on the RCU to display immediately the lens menu.

If the “Rugged” option is installed the * key will display a WARNING message.



Menu 4-1

Quick zoom/focus adjustment

1. Press the Selection key *****.

   The zoom/focus menu will be displayed.

2. Push the cursor key ↑ or ↓ to zoom and ← or → to focus the image.

3. When finished, press **EXIT** key to return or **ENTER** to continue to the shift adjustment.

Quick shift adjustment

1. Press the Selection key *****

   The zoom/focus menu will be displayed.

2. Press **ENTER**.

   The shift menu will be displayed.
   Or,
   Push the cursor key ↑ or ↓ to shift the image up or down and ← or → to shift the image left or right.

3. When finished, press **EXIT** key to return or **ENTER** to continue to zoom/focus.

4.4.2 Quick on Screen Color Change.

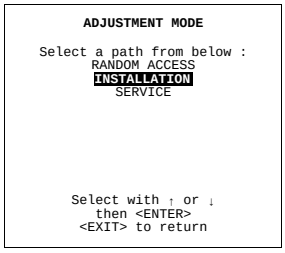
What can be done ?

For quick change of the on-screen color of the highlighted items.

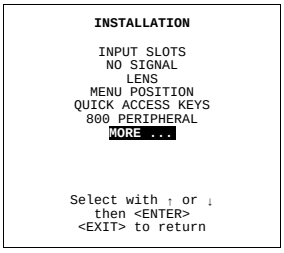
The highlighted items on the menus can be displayed in red, green or yellow.

How to change ?

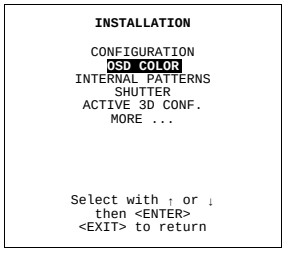
1. Press **ENTER** to start up the adjustment mode.
2. Push the cursor key ↑ or ↓ to highlight *Installation*. (menu 4-2)
3. Press **ENTER** to select.
4. Push the cursor key ↑ or ↓ to highlight *More...* (menu 4-3)
5. Press **ENTER** to select. (menu 4-4)
6. Push the cursor key ↑ or ↓ to highlight *OSD COLOR*
   The OSD color menu will be displayed. (menu 4-5)
7. Push the cursor key ↑ or ↓ to highlight the desired color.
8. Press **ENTER** to activate.



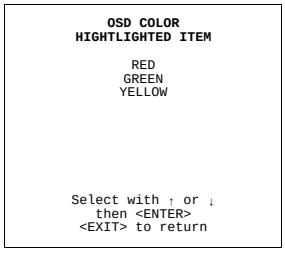
Menu 4-2



Menu 4-3



Menu 4-4



Menu 4-5

4.5 Using the RCU

Pointing to the reflective screen

1. Point the front of the RCU to the reflective screen surface. (image 4-4)

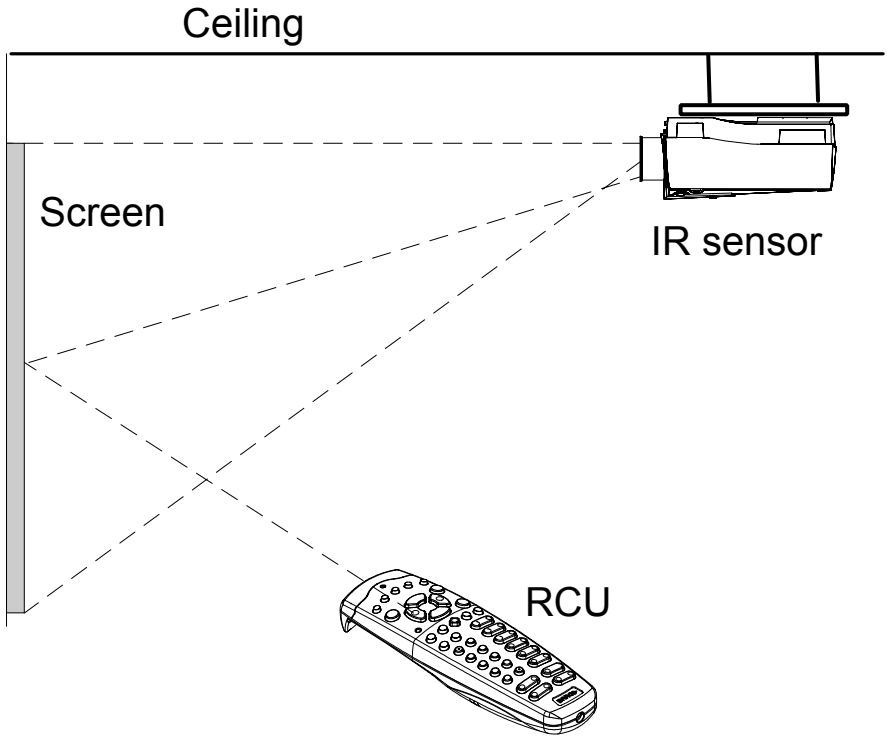


Image 4-4
Pointing the RCU via the screen to the IR sensor

Hardwired Remote Input

1. Plug one end of the remote cable in the connector on the bottom of the RCU.
2. Plug the other end in the connector in the front panel of the projector labelled ***RC***. (image 4-5)

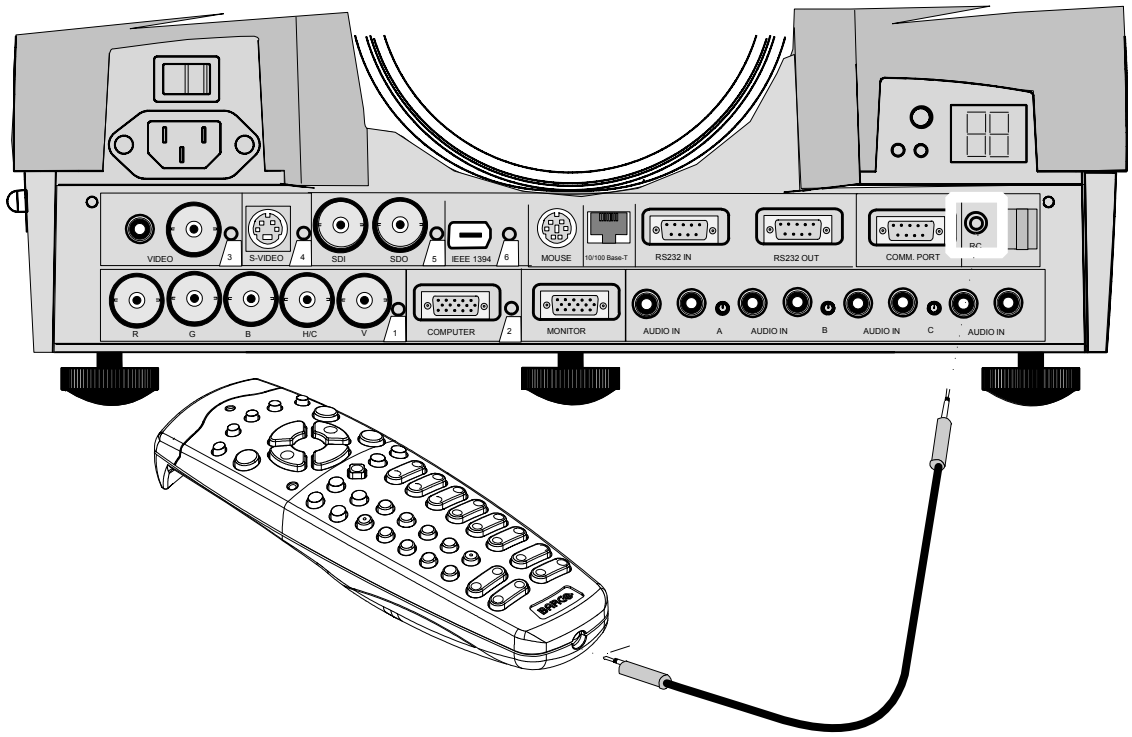


Image 4-5
RCU Hardwired to Remote Input

Directly to one of the IR sensors of the projector.

When using the wireless remote control, make sure you are within the effective operating distance (30m, 100ft in a straight line). The remote control unit will not function properly if strong light strikes the sensor window or if there are obstacles between the remote control unit and the projector IR sensor.

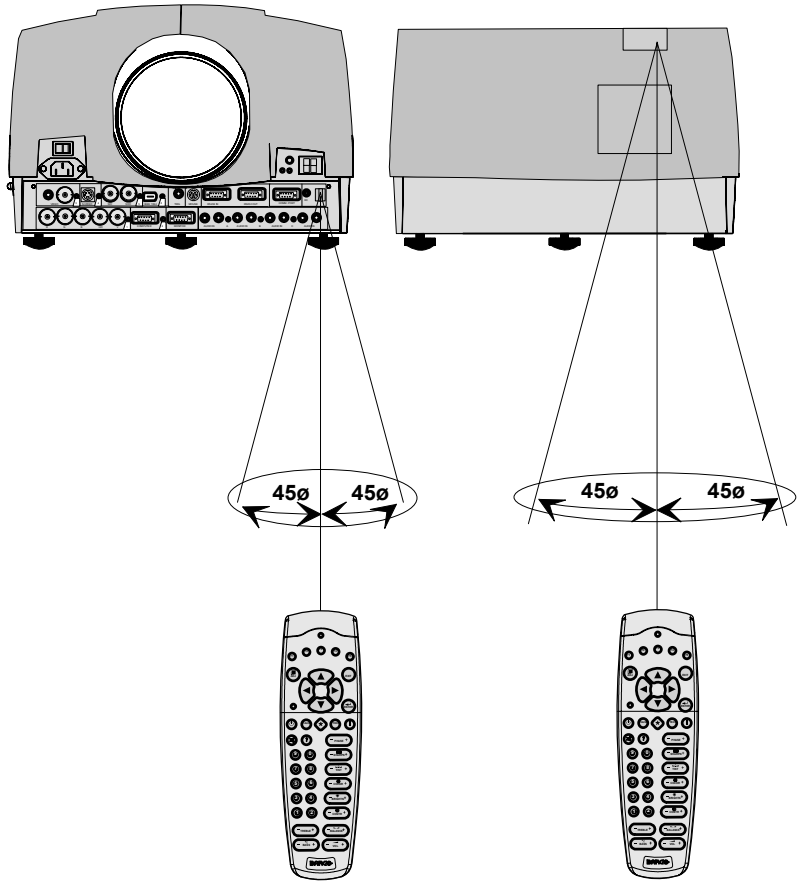


Image 4-6
RCU directly to the IR sensor

4.6 Projector Address

4.6.1 Controlling the projector

Projector address

Address installed in the projector to be individually controlled.

Common address

Default address. Projector will always execute the command coming from a RCU programmed with that common address.

Why a projector address ?

As more than one projector can be installed in a room, the separate projector should be separately addressable with an RCU or computer. There for each projector has its own address.

Set up an individual Projector Address.

The set up of a projector address can be done via the software. See 'Change projector address' in chapter 'Service mode'.

Projector controlling.

Every projector requires an individual address between 0 and 255 which can be set in the Service mode.

When the address is set, the projector can be controlled now:

- RCU for addresses between 0 and 9.
- computer, e.g. IBM PC (or compatible), Apple MAC, etc. for addresses between 0 and 255.

A projector will respond to a RCU set to the common address (’0’ or ’1’) regardless of what address is set in the projector itself.

The RCU is default programmed with address 0 or 1, ’common address’. With that ’common address’ programmed into the RCU, every projector, without exception will listen to the commands given by this RCU. If it is necessary to control a specific projector, than enter the projector address into the RCU (only when that address is between 0 and 9). The projector with the corresponding address will listen to that specific RCU.

Common Address

Every projector has a common address ’0’ or ’1’. The choice between ’0’ and ’1’ can be selected in the Service mode.

4.6.2 Displaying and Programming addresses

Displaying the Projector Address on the Screen.

1. Press **Address** key (recessed key on the RCU) with a pencil.

   The projector’s address will be displayed in a ’Text box’

To continue using the RCU with that specific address, it is necessary to enter the same address with the digit buttons (address between 0 and 9) within 5 seconds after pushing the address key. For example : if the Address key displays projector address 003, then press "3" digit button on the RCU to set the RCU’s address to match the projector’s address. Do not press 003 digits. This will address the remote control to ’0’ and control all projectors in the room. If the address is not entered within 5 seconds, the RCU returns to its default address (zero address) and control all projectors in the room.

How to Program an Address into the RCU?

1. Press the **Address** key (recessed key on the RCU) with a pencil.
2. Enter the address with the digit buttons within 5 seconds after pushing the address key.
   Note: *That address can be any digit between 0 and 9.*

4.7 Controlling the projector

Input Selection

Key in the corresponding slot number with the digit keys on the RCU. The selected source will be displayed.

Picture Controls

When an image control is pressed, a text box with a bar scale, icon and function name of the control, e.g. ’brightness...’ appears on the screen (only if text is ON). See example screen. The length of the bar scale and the value of the numeric indication indicate the current memorized setting for this source. The bar scale changes as the control stick on the RCU is pressed or the + or - buttons on the local keypad.

Brightness	A correct ’brightness’ setting is important for good image reproduction. Use the + button for a higher brightness. Use the - button for a lower brightness.
Contrast	A correct ’contrast’ setting is important for good image reproduction. Adjust the contrast to the level you prefer, according to room lighting conditions. Use the + button for a higher contrast. Use the - button for lower contrast.
Color	Color saturation is only active for Video and S-Video. Adjust the color intensity of the picture. Use the + button for richer colors. Use the - button for lighter colors.

Tint	Tint is only active for Video and S-Video when using the NTSC 4.43 or NTSC 3.58 system. Use the + button Use the - button.
Sharpness	Use the + button for a sharper picture. Use the - button for a softer picture.
Phase	Use the + or - button to adjust the phase.
Freez	Press Freez to freeze the displayed image.

Sound Controls

When a sound control is pressed, a text box with a bar scale, icon and function name of the control, e.g. 'volume...' appears on the screen (only if text is ON). See example screen. The length of the bar scale indicates the current memorized setting for this source. The bar scale changes as the + or - buttons of the control are pressed. The sound controls can only be adjusted with the RCU.

Volume	Volume control adjusts the volume. Use the + button for a higher volume. Use the - button for a lower volume.
Bass	Bass control adjusts the bass level (low tones). Use the + button for more low tones. Use the - button for less low tones.
Treble	Treble control adjusts the treble level (high tones). Use the + button for more high tones. Use the - button for less high tones.
Balance	Is only effective if a external amplifier with loudspeakers is connected to the audio output. The balance control adjust the sound level between the left and the right box. Use the + button for a higher sound level on the right box than on the left one. Use the - button for a higher sound level on the left box than on the right one.

The Pause Key

When the Pause key is pressed, the image projection is stopped, a blue or black screen will be displayed and the projector remains with full power for immediate restart. The sound is not interrupted. The display on front of the projector will show a "P".

To restart the image :

- Press **Pause** key.
- Press **EXIT** key
- Select a source number.

The Selection key

See Quick lens Adjustment, page 24

5. RANDOM ACCESS

Overview

- Random Access Overview
- Random Access Start up
- File Services
- Picture tuning
- Audio tuning (Optional)
- Geometry
- Soft Edge
- Demo

5.1 Random Access Overview

Random Access Overview

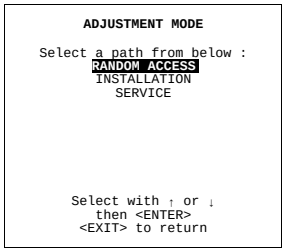
- File Service
  - Load
  - Edit
  - Rename
  - Copy
  - Delete
  - Options
    - File Sort [Name/Index]
    - File Load [Automatic/Manual]
    - Serial File Load [On/Off]
- Picture Tuning
  - CTI [On/Off] (Optional)
  - Motion Compensation (Optional)
    - LCD Speed
    - LCD Speed R/G
    - LCD Speed B/G
  - Color Temperature
    - Projector White
    - Computer 9300K
    - Video 6500K
    - Film 5400K
    - Broadcast 3200K
    - Custom Balance
  - Gamma
  - Decoding [EBU/IRE] (Optional)
  - Color Depth
  - Input Balance
    - White Balance
    - Black Balance
    - Default
  - Black Color
- Audio Tuning (Optional)
  - Volume
  - Balance
  - Bass
  - Treble
  - Mute [On/Off]
  - Fade
  - Mode [Mono/Stereo]
  - Video-Audio Lock

- Geometry
  - Shift
  - Size
  - Side Keystone
  - Blanking
    - Top
    - Bottom
    - Left
    - Right
  - Aspect Ratio
  - Options [Yes/No]
- Soft Edge
  - Type
    - None
    - Left
    - Right
    - Left+Right
    - Top
    - Bottom
    - Top+Bottom
  - Size
  - Options [Yes/No]
- Demo
  - Split Screen [On/Off]

5.2 Random Access Start up

How to start up ?

1. Push the cursor key ↑ or ↓ to highlight *Random Access*. (menu 5-1)
2. Press **ENTER**.



Menu 5-1

5.3 File Services

5.3.1 File annotation

How a file is built up

The file notation on a menu is built up in different parts. Let us have a look to these parts.

Take the following notation : xxxxxxxx.eee n ppppXppppi

xxxxxxxx	base name, 8 characters
eee	file extension first character C : custom made file first character S : standard file The second and third character is used for a following number (= file index). The file index for custom files : 01 to 20.
n	source number
ppppXpppp	active pixel rating
i	i or blank i = interlaced file blank = not interlaced

Table 5-1

5.3.2 Possible file manipulations

Connecting a new source.

Before using a new source, a correct file has to be installed. The projector's memory contains a list of files corresponding to the most used sources. When the new source corresponds with one of these files, the file can be loaded and saved for future use. When there is a little difference, the file can also be loaded and then edited until the source specs are reached.

File loading can be done automatically. Files with a ~ in front of the file name are temporary files. These files will be deleted when switching to another source.

Possible file Manipulations

The following file manipulations are possible :

- Load : installation of a file for a new source.
- Edit : editing a loaded file to the source specs.
- Rename : renaming a file.
- Copy : copying a file.
- Delete : deleting a file
- Options : way of sorting the files.

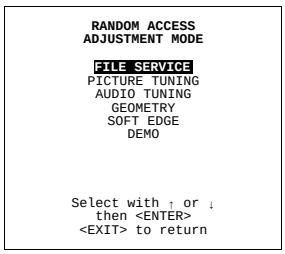
5.3.3 Start up of the file services

Start up

To enter the File Service, handle as follow :

1. Push the cursor key ↑ or ↓ to highlight *File Service*. (menu 5-2)
2. Press **ENTER** to select.

   The *File Service* menu will be displayed.



Menu 5-2

5.3.4 Load file

Start up Load file

To start up the load file, handle as follow :

1. Push the cursor key ↑ or ↓ to highlight *Load*. (menu 5-3)
2. Press **ENTER** to select.

   The *Load* menu displays the corresponding files depending on the installed filter. (menu 5-4)

```
FILE SERVICE

LOAD
EDIT
RENAME
COPY
DELETE
OPTIONS

Select with ↑ or ↓
   then <ENTER>
 <EXIT> to return
```

Menu 5-3

```
LOAD FILE
FILTER LIST [All]

Filename     Src     resolution
video525.s01 1       675x240i
video525.c01 1       675x240i
video525.c02 1       675x240i

----------------------------
Active file : Video525.c50

Select with ↑ or ↓ , →
   <ENTER> to accept
   <EXIT> to return
```

Menu 5-4

Changing the filter setting

1. Push the cursor key ↑ or ↓ highlight *filter list*.
2. Press **ENTER** to toggle the annotation between brackets.

   [All] : all files that can be loaded will be displayed.

   [Fit] : only the best fitting files will be displayed (with a distinction of ± 2 lines and line duration of ± 300 ns, if nothing is found within this small area, the projector continues searching until it finds something).

How to load a file ?

1. Push the cursor key ↑ or ↓ to select the best fitting file. (menu 5-5)
2. Press **ENTER** to select.

   A confirm Load file menu will be displayed with the newly created file and the one on which the new file is based on. (menu 5-6)
3. Press **ENTER** to confirm the new creation or **EXIT** to return to the load file menu.

```
LOAD FILE
FILTER LIST [All]

Filename     Src     resolution
video525.s01 1       675x240i
video525.c01 1       675x240i
video525.c02 1       675x240i

----------------------------
Active file : Video525.c50

Select with ↑ or ↓ , →
   <ENTER> to accept
   <EXIT> to return
```

Menu 5-5

```
CONFIRM
LOAD FILE

create file
Video525.c02
based on file
Video525.s01?

<ENTER> to return
<EXIT> to return
```

Menu 5-6

During a load file, the actual file is displayed next to the indication *Active file*.

When scrolling through the files, the image will be adapted according to the settings of the selected file (on line adaptation.

The image is not perfect ?

If the displayed image is not correct after selecting the best fitting file, go to the Edit menu, select the active file and change the File settings.

5.3.5 Edit file

The Edit file menu makes it possible to change the settings of the file according to the real settings of the connected source. Consult the source specification before entering the data.

- Start up
- Changing the settings
- Correct value
- Rename
- Copy
- Delete
- File options

5.3.5.1 Start up

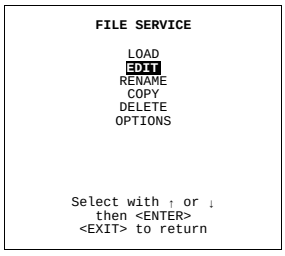
How to start up the Edit menu ?

To start up the EDIT menu :

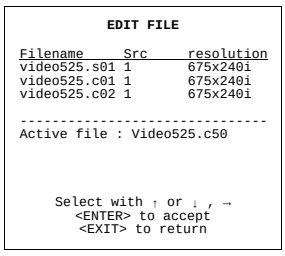
1. Push the cursor key ↑ or ↓ to highlight *Edit*. (menu 5-7)
2. Press **ENTER** to select.

   The Edit file adaptation menu will be displayed. (menu 5-8)
3. Select the file which must be edited (mostly the active file).
4. Press **ENTER**.

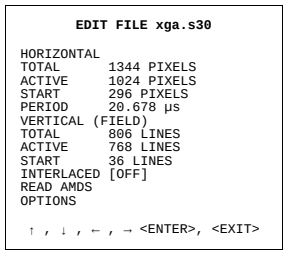
   The file name will be displayed in the upper right corner. (menu 5-9)



Menu 5-7



Menu 5-8



Menu 5-9

5.3.5.2 Changing the settings

Different methods

The 3 different methods to change a setting will be describe hereafter. These methods are:

- with the numeric keys on the remote control.
- with the arrow keys selecting the changing digit.
- with the arrow keys counting up or down.

How to change a setting with the numeric keys?

1. Push the cursor key ↑ or ↓ to highlight an item.

   The color of the selected item will change.
2. Press **ENTER** to activate the digits.
3. Enter directly with the numeric keys on the RCU or local keypad the new value.

How to change a setting with the cursor keys?

1. Push the cursor key ↑ or ↓ to highlight an item.

   The color of the selected item will change.
2. Press **ENTER** to activate the digits.
3. Push the cursor key ← or → to select the changing digit.
4. Push the cursor key ↑ or ↓ to scroll to the desired digit.
5. When finished, press **ENTER** to confirm.

How to change a setting with the cursor keys and counting up or down?

1. Push the cursor key ↑ or ↓ to highlight an item.

   The color of the selected item will change.

2. Press **ENTER** to activate.
3. Counting up or down by pushing the cursor key ← or →.

5.3.5.3 Correct value

What is already available during start up?

During the installation of a file with LOAD, the horizontal period, the total number of vertical lines and the interlaced mode are automatically measured and filled in, in the menu table. These values will be available when starting up the EDIT procedure of an active file.

Do not adjust these settings on an active file, they are used to identify the input source file.

How to find the correct values for the item in the Edit file menu?

Horizontal Total Pixels	If the value for "Horizontal Total Pixels" is wrong, sampling mistakes (small vertical bars with noisy and unsharp data 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	number of pixels between the beginning of the input signal and the start of the video information in the signal.
Horizontal Period	already filled in with the correct value when active file.
Vertical Total Lines	already filled when an active file is selected to be edited
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	number of lines between the start of the input signal and start of the image on the screen.
Interlaced [On] or [Off]	this selection is automatically filled when active file has to be edited. If the image is wrong due to mismeasurement, use the ENTER key to toggle between [On] and [Off]. (for interlaced images, 1 frame contains 2 fields).
Read AMDS	AMDS = automatic mode detection & synchronization During the installation of a file with LOAD, the system automatically measured the horizontal period, the total vertical lines and the interlaced mode. When selecting Read AMDS, the system remeasures the above indicated items.

How to install the correct settings for the options in the Edit file menu.

```
        EDIT FILE OPTIONS

Source number           1
Clamp position          [leading]
Clamp delay             0
Clamp width             10
Field polarity          [pos]
Field select            [both]
Vertical refresh        [sync]
Vertical sync polarity  [leading]


       Select with ↑ or ↓
        <ENTER> to toggle
     ↑ or ↓ to change value
         <EXIT> to return
```

Menu 5-10

Source number	The source number of a non-active source can be changed to any other source number. This makes it possible to create a file for future source numbers.
Clamp position	Clamping determines the black level of the signal. The clamp pulse can be related to the leading or the trailing edge of the sync pulse. Use the **ENTER** key to toggle between [leading] and [trailing].
Clamp delay	The time between the leading edge of the clamp pulse and the locked edge of the sync pulse. Can be any value between 0 and 255. Change the value by pushing the cursor key ↑ or ↓.
Clamp width	The width of the clamp pulse can be any value between 0 and 255. Change the value by pushing the cursor key ↑ or ↓.

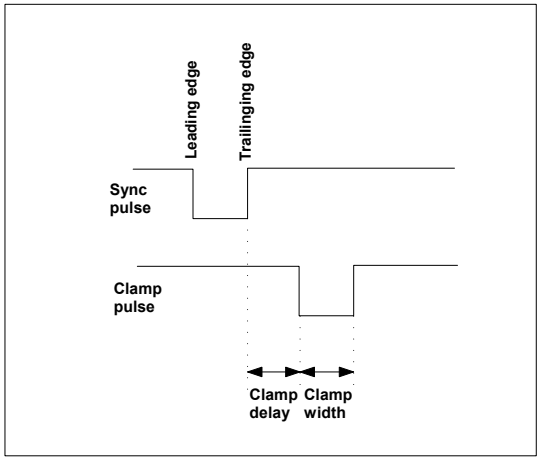


Image 5-1
Example for *Clamp position* [trailing]

Field polarity	The field polarity function is used for interlaced images. Both rasters of the image could be shifted in a wrong way (double lines are visible in the image). This can be corrected by forcing the field polarity to [neg] or [pos]. Use the **ENTER** key to toggle between [pos] and [neg].
Field select	Default [both] The field select is only used for interlaced images. One frame of an interlaced image contains two fields, an even and an odd field. The choice exists to project [both] fields on the screen or only the [even] or [odd] field. Use the **ENTER** key to toggle between [both], [even] and [odd]. **If the active Stereo Compatibility Option is installed, the field select parameter will be changed into a [left] and [right] selecting parameter which will be selectable for stereo files. This setting will then be saved in the active image file.**
Vertical refresh [sync/async]	The way of updating the image information on the LCD panels. Not available for PAL-NTSC-SECAM sources. Where this option will be displayed in gray. • For sources with a vertical frequency up to 60 Hz : the vertical refresh rate is the same as the vertical frequency of the incoming source. This is a necessity to project moving images without 'motion artifacts'. For stationary images with a vertical frequency up to 60 Hz it is still possible to use asynchronous refresh. • For sources with a vertical frequency higher than 60 Hz : the vertical refresh is different than the vertical frequency of the incoming source. Synchronous refresh cannot be used.
Vertical Sync Polarity: [leading] or [trailing]	The vertical refresh can be synchronized with the leading sync edge or trailing sync edge. Default on [leading]. Toggling to [trailing] is only necessary for special applications where the trailing edge of the sync signal has to be taken as a reference. Use the **ENTER** key to toggle between [leading] or [trailing]

5.3.5.4 Rename

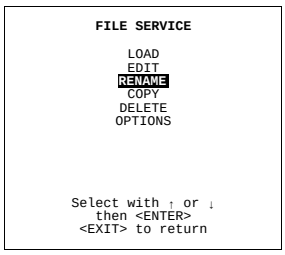
Start Up

To change the name of a selected file :

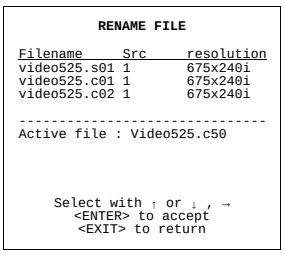
1. Push the cursor key ↑ or ↓ to highlight *Rename*. (menu 5-11)
2. Press **ENTER**.

   The Rename selection menu will be displayed. (menu 5-12)
3. Push the cursor key ↑ or ↓ to select a file name.
4. Press **ENTER** to select.

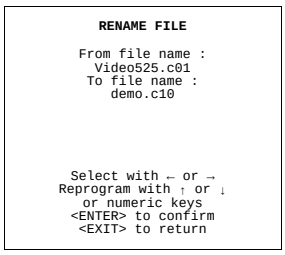
   The Rename file menu will be displayed with the selected file name already filled in, in the 'From file name :' area and in the 'To file name :' area. The first character in the 'To file name :' area is highlighted. (menu 5-13)



Menu 5-11



Menu 5-12



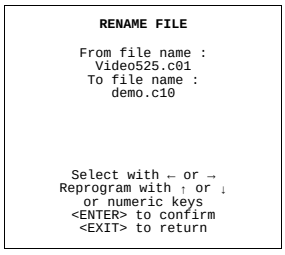
Menu 5-13

Changing the characters

1. Push the cursor keys ← or → to select the desired character. (menu 5-14)
   Or,
   Change that character by pushing the cursor keys ↑ or ↓. Numeric characters can be entered directly with numeric keys on the RCU.
   Or,
   Press **ENTER** to confirm.

   The renamed file is entered in the list of files.
2. Press **EXIT** to return to the Rename menu selection.

   No changes are made.



Menu 5-14

5.3.5.5 Copy

Start Up

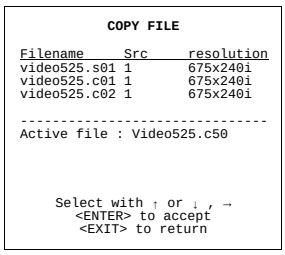
To copy the name of a selected file :

1. Push the cursor key ↑ or ↓ to highlight *Copy*.
2. Press **ENTER**.

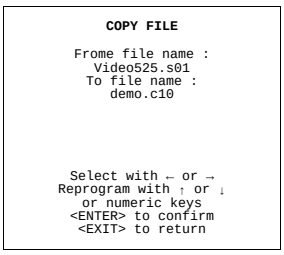
   The Copy selection menu will be displayed. (menu 5-15)

3. Push the cursor key ↑ or ↓ to select a file name.
4. Press **ENTER** to select.

   The Copy file menu will be displayed with the selected file name already filled in, in the 'From file name :' area and in the 'To file name :' area. The first character in the 'To file name :' area is highlighted. (menu 5-16)



Menu 5-15



Menu 5-16

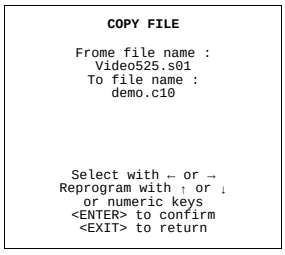
Changing the characters

1. Push the cursor keys ← or → to select the desired character. (menu 5-17)
   Or,
   Change that character by pushing the cursor keys ↑ or ↓. Numeric characters can be entered directly with numeric keys on the RCU.
   Or,
   Press **ENTER** to confirm.

   The copy file is entered in the list of files.

2. Press **EXIT** to return to the Copy menu selection.

   No changes are made.



Menu 5-17

5.3.5.6 Delete

Start up and delete

To delete a selected file out of the list of files :

1. Push the cursor key ↑ or ↓ to highlight *Delete*. (menu 5-18)
2. Press **ENTER**.

   The delete selection menu will be displayed. (menu 5-19)

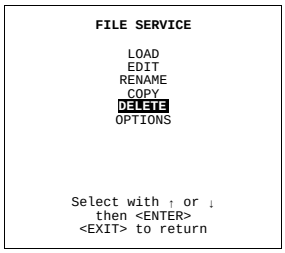
3. Push the cursor key ↑ or ↓ to select a file name.

4. Press **ENTER** to select.

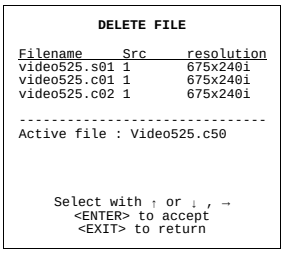
   If [all] is selected, your password has to be entered before all files will be deleted.

   A confirmation menu "Delete file 'file name'?" is displayed. (menu 5-20)

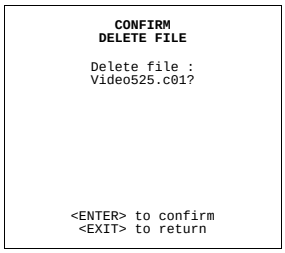
5. Press **ENTER** to delete the file, press **EXIT** if you want to keep it.
   Note: *The active file cannot be deleted.*



Menu 5-18



Menu 5-19



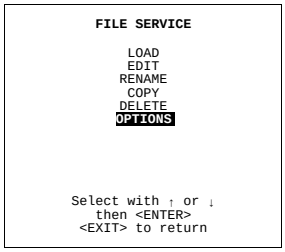
Menu 5-20

5.3.5.7 File options

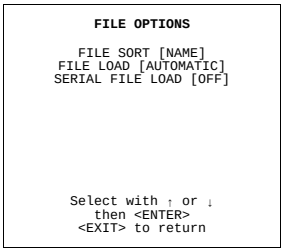
Start up

1. Push the cursor key ↑ or ↓ to highlight *Options*. (menu 5-21)
2. Press **ENTER** to select.

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



Menu 5-21



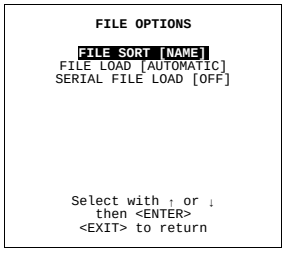
Menu 5-22

File Sort

1. Push the cursor key ↑ or ↓ to highlight *File Sort*. (menu 5-23)
2. Press **ENTER** to toggle between [NAME] or [INDEX].

   This File Sort setting is default set to [NAME].

[NAME]	The files in the list will be sorted on the file name.
[INDEX]	The files in the list will be sorted on the file extension.



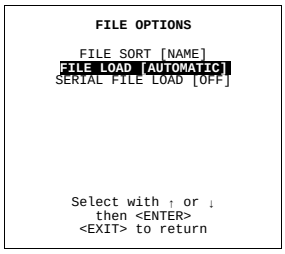
Menu 5-23

File Load

1. Push the cursor key ↑ or ↓ to highlight *File Load*. (menu 5-24)
2. Press **ENTER** to toggle between [AUTOMATIC] or [MANUAL].

   This File Load setting is default set to [AUTOMATIC].

[AUTOMATIC]	The projector will automatically load the file that is best suited for the selected Input Slot.
[MANUAL]	The user will select and load the desired file.



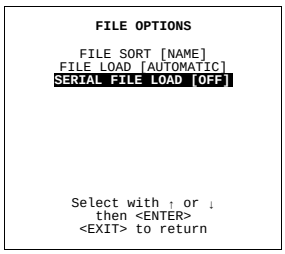
Menu 5-24

Serial File Load

1. Push the cursor key ↑ or ↓ to highlight *Serial File Load*. (menu 5-25)
2. Press **ENTER** to toggle between [OFF] or [ON].

   This Serial File Load setting is default set to [OFF].

[OFF]	The Serial File Load command is set to off.
[ON]	The projector is forced to load a file through RS232, all other means to load a file are disabled until Serial File Load is set to off.



Menu 5-25

5.4 Picture tuning

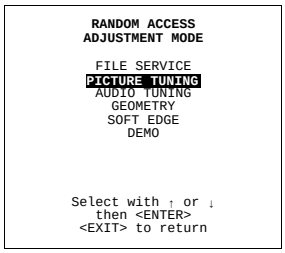
5.4.1 Start up

Start up

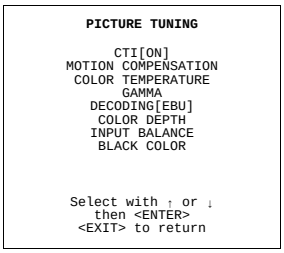
To improve the image quality, the items in the Picture Tuning menu can be toggled or adjusted. To start up the Picture Tuning :

1. Push the cursor key ↑ or ↓ to highlight *Picture Tuning*. (menu 5-26)
2. Press **ENTER** to select.

   The picture tuning menu will be displayed. (menu 5-27)



Menu 5-26



Menu 5-27

Which items are available ?

- CTI : optional
- Motion compensation: optional
- Color temperature
- Gamma
- Decoding: optional
- Color depth
- Input balance
- Black color

5.4.2 Motion Compensation (TMR) (Optional)

The Motion Compensation menu item will be greyed out when this option is not installed.

Overview

- Starting up Motion Compensation
- LCD speed
- LCD speed R/G
- LCD speed B/G

What can be done ?

Motion Compensation allows to change the response time of the LCD panels.

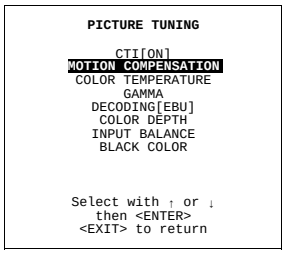
The following options can be adjusted:

- LCD speed
- LCD speed R/G
- LCD speed B/G

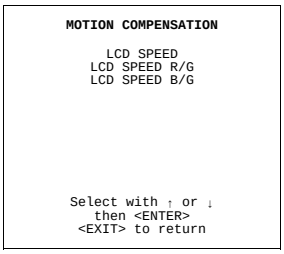
5.4.2.1 Starting up Motion Compensation

How to start up ?

1. Push the cursor key ↑ or ↓ to highlight *Motion compensation*. (menu 5-28)
2. Press **ENTER** to display the menu. (menu 5-29)



Menu 5-28



Menu 5-29

5.4.2.2 LCD speed

What can be done ?

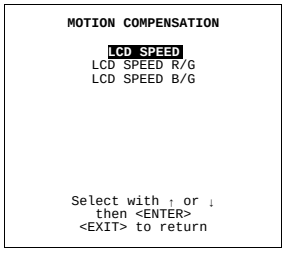
The response time of the LCD's can be modified.

Range: 0–16

Default: 8

How to set the LCD speed ?

1. Push the cursor key ↑ or ↓ to highlight *LCD speed*. (menu 5-30)
2. Press **ENTER** to select.
   A sliderbow will be displayed
3. Push the cursor key ← or → to set the LCD speed.



Menu 5-30

5.4.2.3 LCD speed R/G

What can be done ?

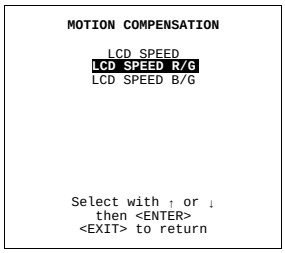
The response time of the Red LCD compared to the Green LCD can be modified.

Range: 0–2 with steps of 0.125

Default: 1.00

How to set the Red LCD speed ?

1. Push the cursor key ↑ or ↓ to highlight *LCD speed R/G*. (menu 5-31)
2. Press **ENTER** to select.
   A sliderbow will be displayed
3. Push the cursor key ← or → to set the Red LCD speed.



Menu 5-31

5.4.2.4 LCD speed B/G

What can be done ?

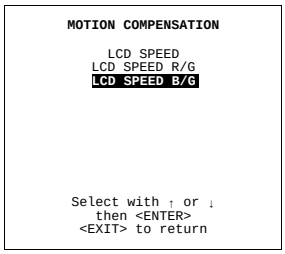
The response time of the Blue LCD compared to the Green LCD can be modified.

Range: 0–2 with steps of 0.125

Default: 1.00

How to set the Blue LCD speed ?

1. Push the cursor key ↑ or ↓ to highlight *LCD speed B/G*. (menu 5-32)
2. Press **ENTER** to select.
   A sliderbow will be displayed
3. Push the cursor key ← or → to set the Blue LCD speed.



Menu 5-32

5.4.3 Color Temperature

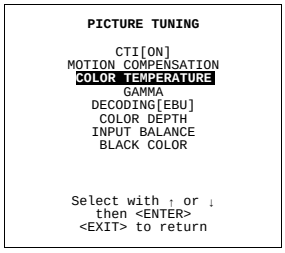
Available Color temperatures

- Projector white
- Broadcast 3200K
- Film 5400K
- Video 6500K
- Computer 9300K
- Custom balance

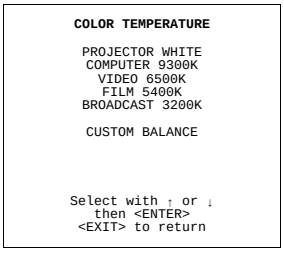
Start Up

1. Push the cursor key ↑ or ↓ to highlight *Color Temperature*. (menu 5-33)
2. Press **ENTER** to select.

   The color temperature selection menu will be displayed. (menu 5-34)



Menu 5-33



Menu 5-34

Adjusting the color balance

1. Adjusting the color balance by selecting a fixed color balance ?
   If yes, Push the cursor key ↑ or ↓ to highlight one of the preprogrammed color balances. Press **ENTER** to select
   Note: *Projector white will provide maximum projector light output. The calibrated 'Broadcast', 'Film', 'Video' and 'Computer' presets will provide optimum color tracking.*

   If no, go to step 2
2. Push the cursor key ↑ or ↓ to adjust red and push the cursor key ← or → to adjust blue (range 0 to 2.5)in comparison with the green color. (image 5-2)

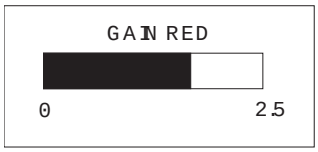


Image 5-2

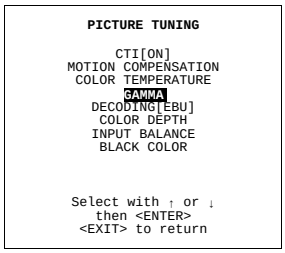
5.4.4 Gamma

What can be adjusted ?

With the gamma correction adjustment, it is possible to accurately set the gamma of the projector image.

Changing the gamma value

1. Push the cursor key ↑ or ↓ to highlight *Gamma*. (menu 5-35)
2. Press **ENTER** to select.
3. Change the gamma value by pushing the cursor key ← or → until the desired value is reached.
   Note: *Default value of gamma : 1.9*
4. Press **EXIT** to return to the *Picture Tuning* menu.



Menu 5-35

5.4.5 Decoding (Optional)

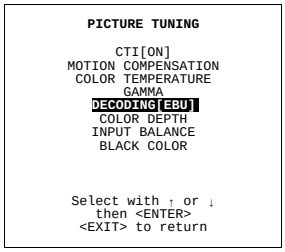
Decoding is only for NTSC video signals.

What can be done ?

The possibility is offered to decode the NTSC video signals via the default American IRE standard or via the European EBU standard. Decoding a NTSC signal using the European EBU standard may result in a greenish tint.

How to change the decoding setting ?

1. Push the cursor key ↑ or ↓ to highlight *Decoding*. (menu 5-36)
2. Press **ENTER** to toggle between EBU or IRE.
3. Press **EXIT** to return.



Menu 5-36

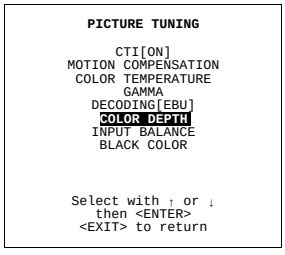
5.4.6 Color Depth

Purpose

Increases the dark color saturation for video and data sources.

Changing the Color depth value.

1. Push the cursor key ↑ or ↓ to highlight *Color Depth*. (menu 5-37)
2. Press **ENTER** to select.
3. Change the value by pushing the cursor key ← or → until the desired dark color saturation is reached.
4. Press **EXIT** to return the *Picture Tuning* menu.



Menu 5-37

5.4.7 Input Balance

Why adjusting the input balance?

The input balance is normally correct adjusted in the factory. But due to signal distribution or signal transmission outputs a color imbalance can be the result. This imbalance can be adjusted source by source for color critical applications. These adjustments influence only the actual custom adjustment file. This procedure is not so easy and is best done or first demonstrated by an authorized Barco service technician.

Step to be taken

To adjust the input balance, the following steps have to be executed in the following order:

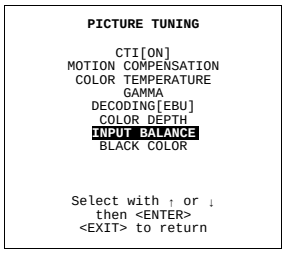
1. The procedure is best done when using a source that can generate a full black and full white image.
2. Start with the Black Balance.
3. Continue with the White Balance.

The default values are normally loaded with the factory preset when selecting a source. If the image is not as desired, continue with the next procedure.

How to start up Input Balance?

1. Push the cursor key ↑ or ↓ to highlight *Input Balance* and press **ENTER** to select. (menu 5-38)

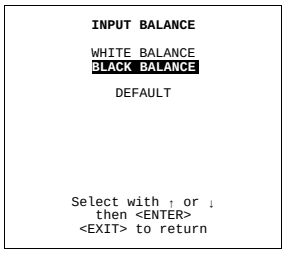
   The *Input Balance* menu will be displayed.



Menu 5-38

How to adjust the Black Balance?

1. Generate a full black image on the source. (image 5-3)
2. Push the cursor key ↑ or ↓ to highlight *Black Balance* and press **ENTER** to select. (menu 5-39)
3. Use the cursor keys ← and ↓ to lower the Black Level of the Blue and Red color.
4. Use the **Brightness + or –** key to adjust the Black Level of the Green Color until there is ±50% noise visible. (image 5-4)
5. Use the → and ↑ key to raise the Black Level of the Blue and Red Color until there is ±50% noise visible.
6. Press **EXIT** to return to *Input Balance* menu.



Menu 5-39

Image 5-3
Full black image on the source

Image 5-4
Perfect Black Balance

How to adjust the White Balance?

1. Generate a full white image on the source. (image 5-5)
2. Push the cursor key ↑ or ↓ to highlight *White Balance* and press **ENTER** to select. (menu 5-40)
3. Use the cursor keys ← and ↓ to lower the Gain of the Blue and Red color.
4. Use the **Contrast + or –** key to adjust the Gain of the Green Color until there is ±50% noise visible. (image 5-6)
5. Use the → and ↑ key to raise the Gain of the Blue and Red Color until there is ±50% noise visible.
6. Press **EXIT** to return to *Input Balance* menu.

```
INPUT BALANCE

WHITE BALANCE
BLACK BALANCE

   DEFAULT




Select with ↑ or ↓
   then <ENTER>
 <EXIT> to return
```

Menu 5-40

Image 5-5
Full white image on the source

Image 5-6
Perfect White Balance

How to return to the Default factory preset?

1. Push the cursor key ↑ or ↓ to highlight *Default* and press **ENTER** to select. (menu 5-41)

   The input balance is set to the default factory preset.

```
          INPUT BALANCE

        WHITE BALANCE
        BLACK BALANCE

           DEFAULT




      Select with ↑ or ↓
         then <ENTER>
       <EXIT> to return
```

Menu 5-41

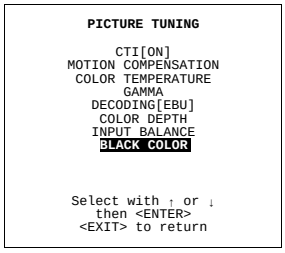
5.4.8 Black Color

What can be done ?

Modifies the color of a black image for color matching between different projectors.

How to change the black color ?

1. Push the cursor key ↑ or ↓ to highlight *Black Color.* (menu 5-42)
2. Press **ENTER** to select.
3. Adjust the R, G, B black levels by positioning the cursor on the displayed arrows and pressing **ENTER**.



Menu 5-42

5.5 Audio tuning (Optional)

Overview

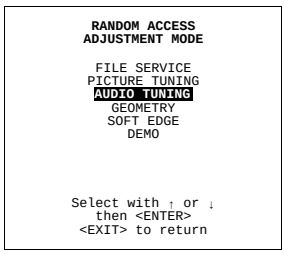
- Start up
- Volume, Balance, Bass and Treble
- Mute
- Fade
- Mode
- Video - audio lock

5.5.1 Start up

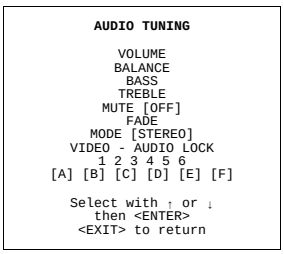
Startup

1. Push the cursor key ↑ or ↓ to highlight *Audio Tuning*. (menu 5-43)
2. Press **ENTER** to select.

   The audio tuning menu will be displayed. (menu 5-44)



Menu 5-43



Menu 5-44

5.5.2 Volume, Balance, Bass and Treble

How to adjust ?

When a sound control is selected by highlighting the item with the cursor key, a text box with a bar scale, icon and function name of the control, e.g. 'Volume' appears on the screen (only when text is ON). The length of the bar scale indicates the current memory setting for this source.

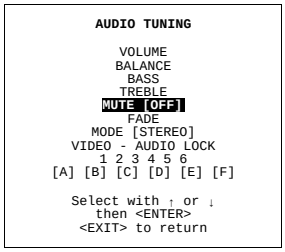
5.5.3 Mute

Purpose

To stop the sound reproduction.

How to stop sound reproduction ?

1. Push the cursor key ↑ or ↓ to highlight *Mute*. (menu 5-45)
2. Press **ENTER** to toggle between [on] or [off].



Menu 5-45

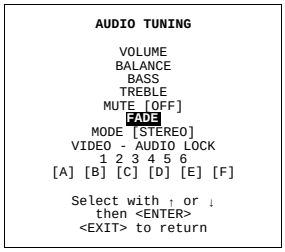
5.5.4 Fade

Purpose

Determine where the sound signals will be reproduced, internally or externally.

How to set up the fade ?

1. Push the cursor key ↑ or ↓ to highlight **Fade**. (menu 5-46)
2. Press **ENTER** to select.
3. Adjust the desired fade level. Fade can be adjusted between -15 and 15.



Menu 5-46

Fade values

Fade on -15 : no sound reproduction on the external loudspeakers, max on the internal loudspeakers with the same volume level as adjusted with the volume control.

Fade on 15 : no sound reproduction on the internal loudspeakers but max on the external loudspeakers with the same volume level as adjusted with the volume control.

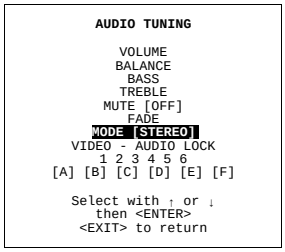
5.5.5 Mode

Purpose

To switch the sound reproduction between mono and stereo.

How to set up the sound mode?

1. Push the cursor key ↑ or ↓ to highlight *Mode*. (menu 5-47)
2. Press **ENTER** to toggle between [stereo] or [mono].



Menu 5-47

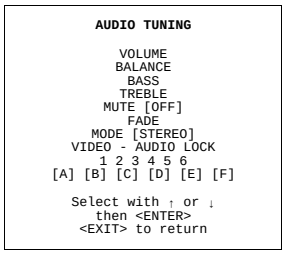
5.5.6 Video - audio lock

Purpose

An input source can be locked to an audio input.

How to lock the input source to an audio source?

1. Push the cursor key ↑ or ↓ to highlight the first input source. (menu 5-48)
2. Press ENTER to scroll the associated audio input between [A], [B] or [C].
3. Push the cursor key ← or → to highlight another input source.
4. Press ENTER to scroll between [A], [B] or [C].
5. Continue for the other inputs in the same way.



Menu 5-48

5.6 Geometry

Overview

- Introduction
- Geometry start up
- Shift
- Size
- Side Keystone
- Blanking
- Aspect Ratio
- Options

5.6.1 Introduction

Introduction

An adjustment can be done as follow :

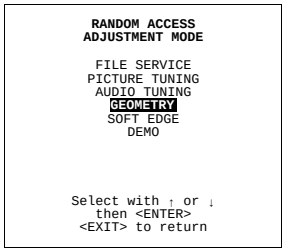
1. Using the cursor key to adjust
2. Entering the value with the digit keys. Therefore, press **ENTER** to select the indicated value and enter the desired value with the digit keys. Press **ENTER** to confirm the entered value.

5.6.2 Geometry start up

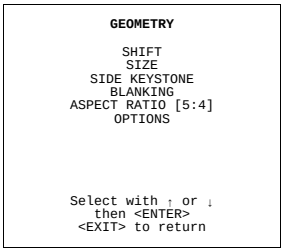
Start up

1. Push the cursor key ↑ or ↓ to highlight *Geometry*. (menu 5-49)
2. Press **ENTER** to select.

   The geometry menu will be displayed. (menu 5-50)



Menu 5-49



Menu 5-50

5.6.3 Shift

What can be done ?

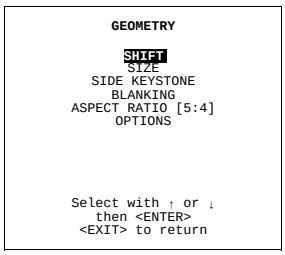
The image can be shifted in a horizontal or vertical direction.

How to shift the image ?

1. Push the cursor key ↑ or ↓ to highlight *Shift*. (menu 5-51)
2. Press **ENTER** to select.
3. Push the cursor key ↑ or ↓ to shift the image in a vertical direction.
   Push the cursor key ← or → to shift the image in a horizontal direction.
   Note: *The default value for the shift is 0.*

   Shifting in a vertical direction : when the shift value is positive, the image is shifted upwards, when the value is negative, the image is shifted downwards.

   Shifting in a horizontal direction : when the shift value is positive, the image is shifted to the right, when the value is negative, the image is shifted to the left.



Menu 5-51

5.6.4 Size

What can be done ?

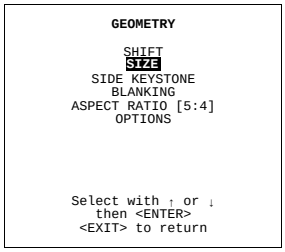
The size can be adjusted in a vertical or horizontal way.

When adjusting the vertical size, The upper side of the image is fixed (table and ceiling mounted configurations) and only the lower side can be moved to its exact position.

When adjusting the horizontal size, the left side of the image is fixed and only the right side can be moved to its exact position.

Size adjustment

1. Push the cursor key ↑ or ↓ to highlight *Size*. (menu 5-52)
2. Press **ENTER** to select.
3. Push the cursor key ↑ or ↓ to size the image in a vertical direction.
   Push the cursor key ← or → to size the image in a horizontal direction.



Menu 5-52

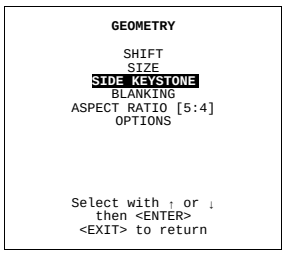
5.6.5 Side Keystone

What can be done ?

The side keystone adjustment is used to align the image if the projector is mounted at a non standard projector angle.

Aligning the keystone.

1. Push the cursor key ↑ or ↓ to highlight *Side keystone*. (menu 5-53)
2. Press **ENTER** to select.
3. Push the cursor key ↑ or ↓ to adjust the keystone of the image.
   When the upper part of the image is wider than the lower part of the image, push the cursor key ←. The number indication below the bar scale will be negative.
   When the upper part of the image is smaller than the lower part of the image, push the cursor key →. The number indication below the bar scale will be positive.



Menu 5-53

5.6.6 Blanking

What can be done ?

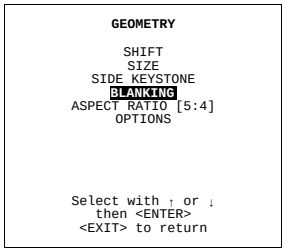
Blanking adjustments affect only the edges of the projected image and are used to frame the projected image on to the screen and to hide or black out unwanted information (or noise). A ’0’ on the bar scale indicates no blanking.

Which blanking adjustments are available ?

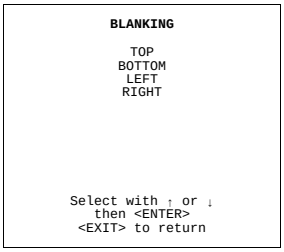
- top blanking
- bottom blanking
- left blanking
- right blanking

Adjusting the blanking.

1. Push the cursor key ↑ or ↓ to highlight *Blanking*. (menu 5-54)
2. Press **ENTER** to display the blanking menu. (menu 5-55)
3. Push the cursor key ↑ or ↓ to highlight the desired blanking.
4. Press **ENTER** to start up the chosen blanking.
5. Use the cursor keys to adjust the blanking.



Menu 5-54



Menu 5-55

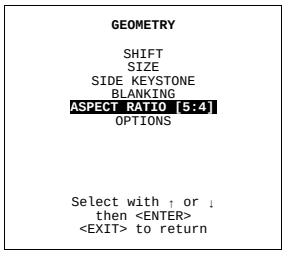
5.6.7 Aspect Ratio

Purpose

To force the projector in a typical aspect ratio. E.g. projecting a 4:3 image in a 16:9 aspect ratio.

How to set up the desired aspect ratio ?

1. Push the cursor key ↑ or ↓ to highlight *Aspect Ratio*. (menu 5-56)
2. Press **ENTER** to scroll between [5:4] or [4:3] or [16:9].



Menu 5-56

5.6.8 Options

What is possible ?

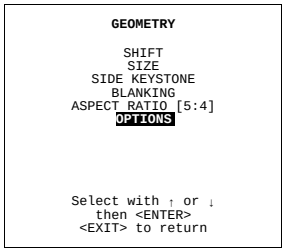
Within the Geometry options menu, it is possible to set up the side keystone for the active file only or for all files equal.

[No] = keystone has to be adjusted file per file.

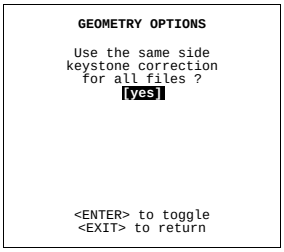
[Yes] = keystone correction the same for all installed files.

Set up of the geometry options.

1. Push the cursor key ↑ or ↓ to highlight *Options*. (menu 5-57)
2. Press **ENTER** to display the *Geometry options* menu. (menu 5-58)
3. Press **ENTER** to toggle between [Yes] or [No].
4. Press **EXIT** to return to the *Geometry* menu.



Menu 5-57



Menu 5-58

5.7 Soft Edge

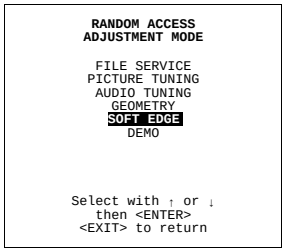
The electronic Soft Edge Matching is optional.

- Starting up the soft edge
- Type
- Size
- Options

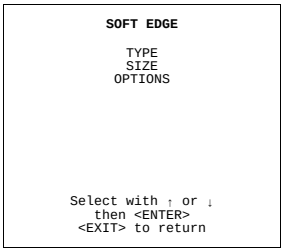
5.7.1 Starting up the soft edge

How to Start Up Soft Egde?

1. Push the cursor key ↑ or ↓ to highlight *Soft Edge* (menu 5-59)
2. Press **ENTER** to select
   The soft edge menu will be displayed. (menu 5-60)



Menu 5-59

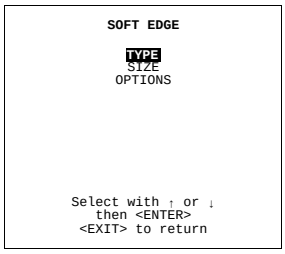


Menu 5-60

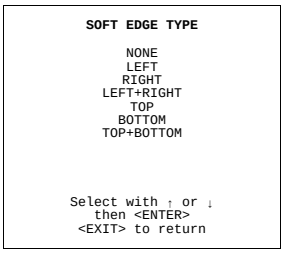
5.7.2 Type

To select the type of soft edge:

1. Push the cursor key ↑ or ↓ to highlight *Type.* (menu 5-61)
2. Press **ENTER** to select
   The Type menu will be displayed. (menu 5-62)



Menu 5-61



Menu 5-62

Available soft edge types

- None: no soft edge area installed
- Left: soft edge on the left side of the image
- Right: soft edge on the right side of the image
- Left + Right: soft edge on the left and right side of the image
- Top: soft edge on the top of the image
- Bottom: soft edge on the bottom of the image
- Top + Bottom: soft edge on top and bottom of the image

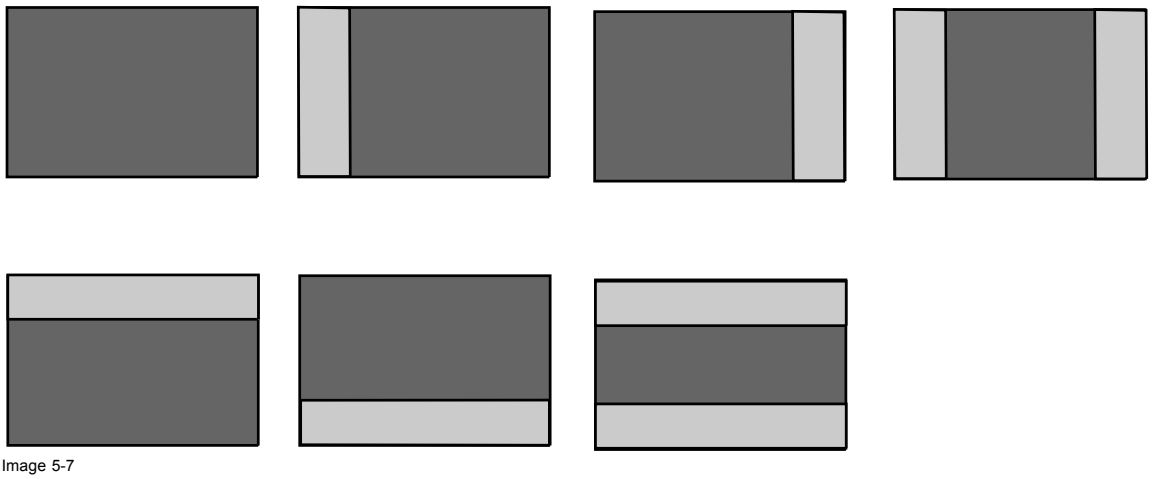
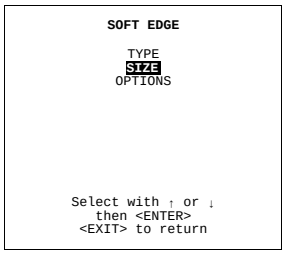


Image 5-7

5.7.3 Size

To change the width of the soft edge:

1. Push the cursor key ↑ or ↓ to highlight *Size...* (menu 5-63)
2. Press **ENTER** to select.
   Push the cursor key ← or → to set up the desired soft edge area width.
   Range (percentage of the complete image width): 1 to 20.



Menu 5-63

***Black color* in the Picture Tuning menu can be used to match the black parts of the image center to that of the soft edge overlap zones at the right and/or left side of the image.**

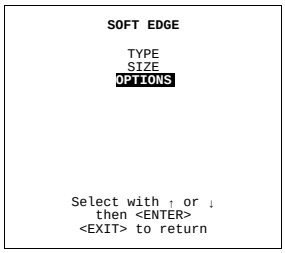
5.7.4 Options

What can be done ?

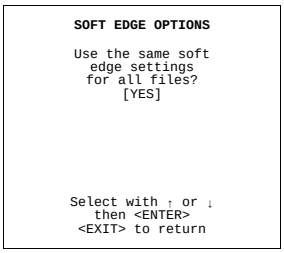
The soft edge settings can be made active for the active file only or for all the files

Set up of the Soft edge options.

1. Push the cursor key ↑ or ↓ to highlight *Options*. (menu 5-64)
2. Press **ENTER** to display the *options* menu. (menu 5-65)
3. Press **ENTER** to toggle between [Yes] or [No].
4. Press **EXIT** to return to the *Soft edge* menu.



Menu 5-64



Menu 5-65

5.8 Demo

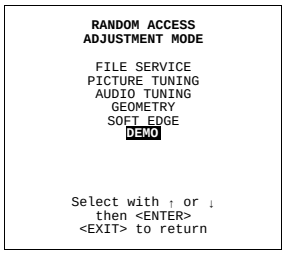
5.8.1 Start up

What can be done ?

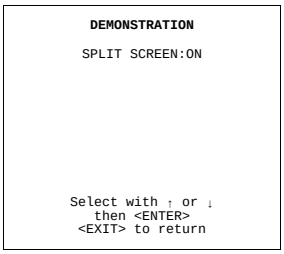
This function allows the user to demonstrate the projector's image processing features.

How to start up Demo ?

1. Push the cursor key ↑ or ↓ to highlight *Demo.* (menu 5-66)
2. Press **ENTER** to select
   The Demo menu will be displayed. (menu 5-67)



Menu 5-66



Menu 5-67

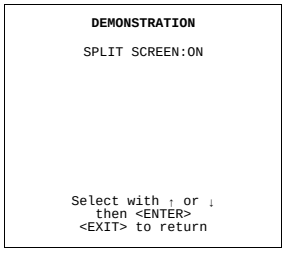
5.8.2 Split Screen

What can be done ?

Spliting the screen allows to evaluate the image processing settings.

How to split the screen ?

1. Press **ENTER** to toggle between *ON* and *OFF*
   ON splits the screen in two parts. (menu 5-68)



Menu 5-68

6. INSTALLATION MODE

Overview

- Installation Mode Overview
- Build-up
- Start up
- Input slots
- No signal
- Lens adjustment
- Menu Position
- Quick access keys
- 800- Peripheral
- Configuration
- OSD Color
- Internal Patterns
- Shutter (Optional)

6.1 Installation Mode Overview

Installation Mode Overview

- Input Slots
- No Signal
  - Color [Blue/Black]
  - Shutdown [On/Off]
  - Shutdown Time
- Lens
  - Zoom/Focus
  - Shift
- Menu Position [Center/Edges]
- Quick Access Keys
- 800 Peripheral
  - Output Module [Standard/5 Cable]
  - Infrared [PPM/RC5]
- Configuration
  - Front table
  - Front ceiling
  - Rear table
  - Rear ceiling
- OSD Color
  - Red
  - Green
  - Yellow
- Internal Patterns
  - Outline
  - Hatch
  - Color Bars
  - Multiburst
  - Checkerboard
  - Page Char
  - Alphanumeric Chars
  - Character Sets
- Shutter (Optional)
  - Present [Yes/No]
  - Night Mode Status (Optional)
- Active 3D Conf.
  - Image [Left/Right]

6.2 Build-up

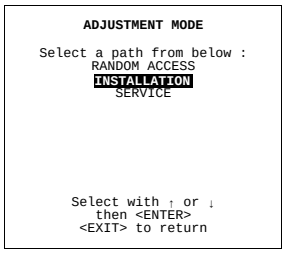
Build-up of the installation mode.

The installation menu is build-up in two parts which are connected together with the ’more’ item. If the desired item is not in the list of the displayed menu, select ’more’ with the cursor key and push **ENTER** to display the other items in the installation menu.

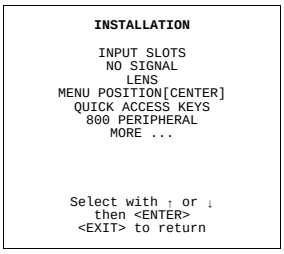
6.3 Start up

How to start up the installation Mode

1. Push the cursor key ↑ or ↓ to to select *Installation*. (menu 6-1)
2. Press **ENTER** to start up the installation mode. (menu 6-2)



Menu 6-1



Menu 6-2

Overview of the different settings of the Installation menu

- Input slots: to set up the input priority
- No signal: selection of a black or blue background color
- Lens: to perform lens adjustments
- Menu Position: to position the menu (picture settings: contrast,...) in the center or at the edges of the screen
- Quick access keys: function keys for direct access
- 800 -Peripheral: to select the type of output module and communication code used in the RCVDS 05
- OSD color: to change the color of the highlighted item
- Internal Patterns: selection of different patterns
- Shutter: to indicate whether or not a shutter is used
- Active 3D configuration: forces the projector to project the left or the right image of a 3D source

6.4 Input slots

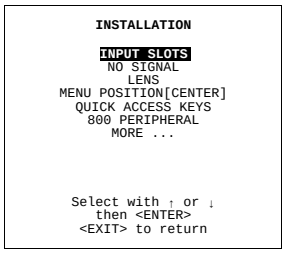
What can be done ?

The input configuration of the variable inputs is shown in the *Input slots* menu.

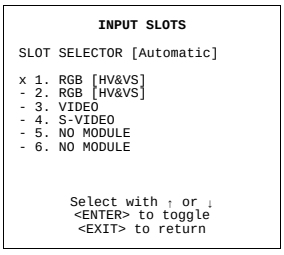
To view or change the input configuration.

1. Push the cursor key ↑ or ↓ to highlight *Input Slots*. (menu 6-3)
2. Press **ENTER** to select.

   The input slots menu will be displayed. (menu 6-4)



Menu 6-3



Menu 6-4

The black indicated inputs are selectable and changeable. The gray indicated inputs are fix inputs and are not changeable.

The indication in front of the digit means :

x : valid signal connected to the input.

- : no valid signal connected to the input.

No module: the option is not installed

Possible results for the input slots.

Source	Indication
Video or S-Video	Video S-video
RGB analog	RGB-CV : separate sync is composite video on H/C input RGB-HS&VS: separate sync is horizontal and vertical sync RGB-CS : separate sync is composite sync RGB-SOG : sync on green
Component Video	Component video
SDI	Digital input

What if a switcher is connected to the projector ?

If a RCVDS (switched on) or VS05 is connected to the projector, it will be also indicated on the menu by adding +800 peripheral.

If no 800 peripheral indication is made on the menu, there are still two possibilities, no RCVDS or VS05 connected or RCVDS is switched off.

When a 800 peripheral is connected to the projector, the input slots are not accessible with the cursor key to toggle their function.

6.5 No signal

Overview

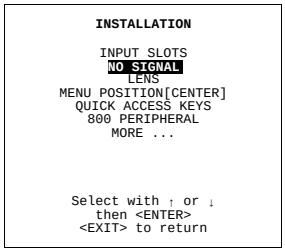
- Changing the background color
- Changing the shutdown setting
- Changing the shutdown time

6.5.1 Changing the background color

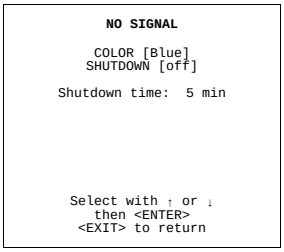
How to change ?

1. Push the cursor key ↑ or ↓ to highlight *No signal*. (menu 6-5)
2. Press **ENTER** to select.

   The no signal menu will be displayed. (menu 6-6)
3. Push the cursor key ↑ or ↓ to highlight *Color*.
4. Press ENTER to toggle between [blue] or [black].



Menu 6-5



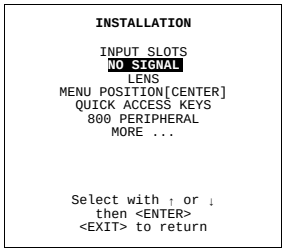
Menu 6-6

6.5.2 Changing the shutdown setting

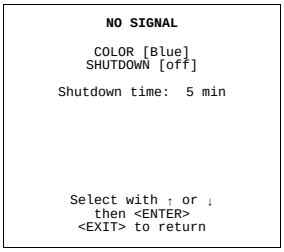
How to change ?

1. Push the cursor key ↑ or ↓ to highlight *No Signal*. (menu 6-7)
2. Press **ENTER** to select.

   The no signal menu will be displayed. (menu 6-8)
3. Push the cursor key ↑ or ↓ to highlight *Shutdown*.
4. Press **ENTER** to toggle between [On] or [Off].



Menu 6-7



Menu 6-8

6.5.3 Changing the shutdown time

Range

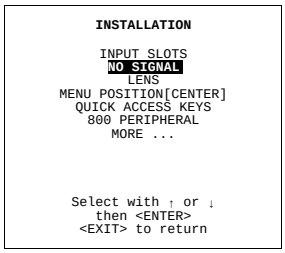
The shutdown time can be set between 5 min. and 60 min.

How to change ?

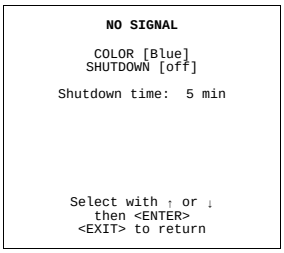
To set up the shutdown time, handle as follow:

1. Push the cursor key ↑ or ↓ to highlight *No Signal*. (menu 6-9)
2. Press **ENTER** to select.

   The no signal menu will be displayed. (menu 6-10)
3. Push the cursor key ↑ or ↓ to highlight *Shutdown Time*.
4. Push the cursor key ↑ or ↓ to change the digits.
   Or,
   Enter the digits directly with the digit keys on the RCU.



Menu 6-9



Menu 6-10

6.6 Lens adjustment

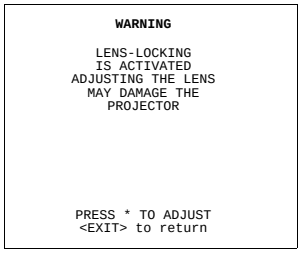
What can be done ?

All lens adjustments are motorized and can be adjusted with the RCU.

The following items can be adjusted:

- zoom/focus
- shift

If the “Rugged” option is installed the * key will display a WARNING message.



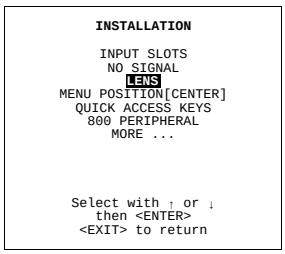
Menu 6-11

Zoom/Focus adjustment of the lens.

1. Push the cursor key ↑ or ↓ to highlight *Lens*. (menu 6-12)
2. Press **ENTER** to select.

   The adjustment pattern will be displayed.

   With the **TEXT** key it is possible to toggle between the internal adjustment pattern or the connected source.
3. Push the cursor key ↑ or ↓ to zoom and ← or → to focus the image.
   Note: *The zoom/focus function is only applied when a motorized zoom lens is mounted.*
4. When finished, press **EXIT** to return to the installation menu or press **ENTER** to go to the shift function.



Menu 6-12

Shift adjustment of the lens.

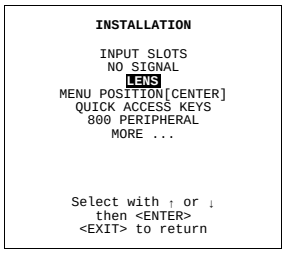
1. Push the cursor key ↑ or ↓ to highlight *Lens*. (menu 6-13)
2. Press **ENTER** to select.

   The adjustment pattern will be displayed.

   With the **TEXT** key it is possible to toggle between the internal adjustment pattern or the connected source.
3. Push the cursor key ↑ or ↓ to shift the image up and down and ← or → to shift the image left or right.
   Note: *The lens can be shifted in a range of :*

   vertical shift : - 2 mm to + 20 mm

   horizontal shift : - 5 mm to + 5 mm
4. When finished, press **EXIT** to return to the installation menu or press **ENTER** to go to the zoom/focus function.



Menu 6-13

6.7 Menu Position

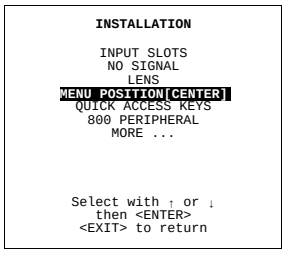
What can be done with the Menubox?

The Menubox position can be changed from bottom right to the center of the image.

How to change the position?

1. Push the cursor key ↑ or ↓ to highlight *Menu Position*. (menu 6-14)
2. Press **ENTER** to toggle between and [CENTER] and [EDGES]

[EDGES]	text box will always be displayed in the bottom right corner.
[CENTER]	the text box position will always be in the middle of the image.



Menu 6-14

6.8 Quick access keys

Overview

- What are Quick Access Keys?
- Getting an overview

6.8.1 What are Quick Access Keys?

What can be done with these keys?

The function keys on top of the RCU can be associated with an adjustment item in one of the adjustment menus. Each item which is not password protected or does not have a key on the RCU can be associated to a function key. This key allows then a quick access to the adjustment function.

Factory programmed functions.

F1	color depth
F2	dimming
F3	configuration
F4	gamma
F5	color temperature

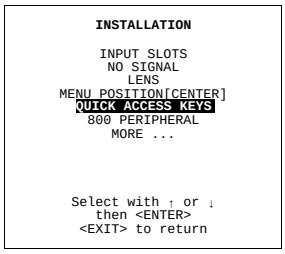
6.8.2 Getting an overview

Overview

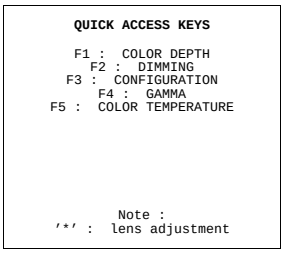
To get an overview, handle as follow :

1. Push the cursor key ↑ or ↓ to highlight *Quick Access Keys*. (menu 6-15)
2. Press **ENTER** to select.

   The Quick Access Keys menu will be displayed. (menu 6-16)



Menu 6-15



Menu 6-16

6.9 800- Peripheral

Overview

- Defining the Output module of the RCVDS05
- Defining the communication protocol of the RCVDS05

6.9.1 Defining the Output module of the RCVDS05

Which modules are available?

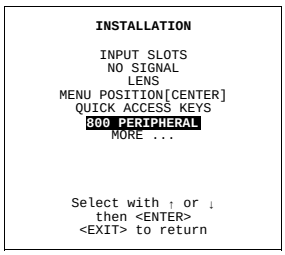
When a RCVDS05 is connected to the projector, the type of output module of this RCVDS05 has to be defined in the 800 peripheral menu.

- standard output module
- 5 cable output module

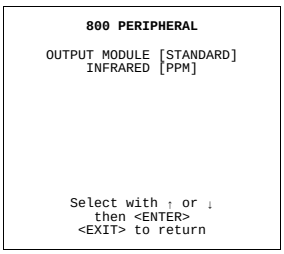
Defining the output module

To define the output module:

1. Push the cursor key ↑ or ↓ to highlight *800 Peripheral*. (menu 6-17)
2. Press **ENTER** to select.
3. Push the cursor key ↑ or ↓ to highlight *Output module*. (menu 6-18)
4. Press **ENTER** to select.
5. Press **ENTER** to toggle between [STANDARD] or [5CABLE].



Menu 6-17



Menu 6-18

6.9.2 Defining the communication protocol of the RCVDS05

Which protocols are available?

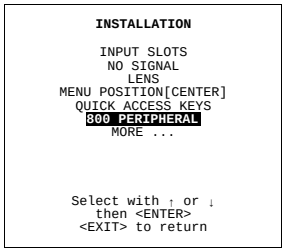
When a RCVDS05 is connected to the projector, the type of communication protocol used to communicate with the peripheral has to be defined in the 800 peripheral menu.

- PPM
- RC5

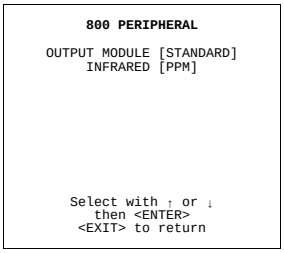
Defining the communication protocol

To define the communication protocol:

1. Push the cursor key ↑ or ↓ to highlight *800 Peripheral*. (menu 6-19)
2. Press **ENTER** to select.
3. Push the cursor key ↑ or ↓ to highlight *infrared*. (menu 6-20)
4. Press **ENTER** to select.
5. Press **ENTER** to toggle between [PPM] or [RC5].



Menu 6-19



Menu 6-20

6.10 Configuration

What can be done ?

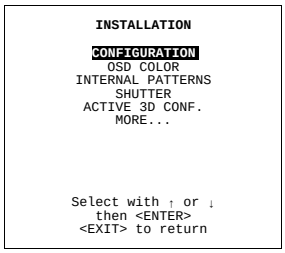
The way of physical installation of the projector can be defined to the projector.

The following installation configurations are possible:

- front/table
- front/ceiling
- rear/table
- rear/ceiling

Choosing the right configuration

1. Push the cursor key ↑ or ↓ to highlight *Configuration*. (menu 6-21)
2. Press **ENTER** to select.
   The configuration menu will be displayed.



Menu 6-21

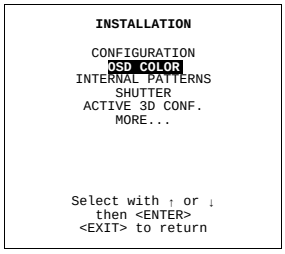
6.11 OSD Color

What can be done?

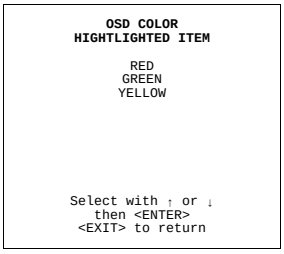
The highlighted items on the menus can be displayed in red, green or yellow.

How to change the OSD Color ?

1. Push the cursor key ↑ or ↓ to highlight *OSD Color*. (menu 6-22)
2. Press **ENTER** to select.
   The OSD color menu will be displayed. (menu 6-23)



Menu 6-22



Menu 6-23

6.12 Internal Patterns

What can be done with these internal patterns?

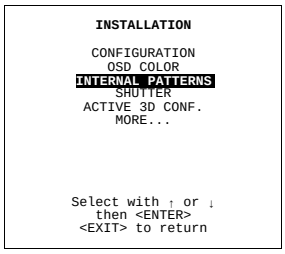
The projector is equipped with different internal patterns which can be used for measurement purposes.

Available patterns

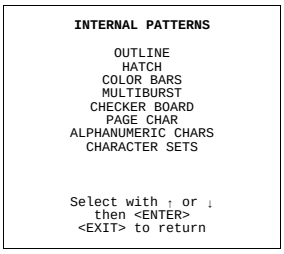
- Outline
- Hatch
- Color bars
- Multiburst
- Checker board
- Page Char
- Alpha numeric char
- Character sets

How to select an internal pattern ?

1. Push the cursor key ↑ or ↓ to highlight *Internal Patterns*. (menu 6-24)
2. Press **ENTER** to select.
   The internal patterns menu will be displayed. (menu 6-25)



Menu 6-24



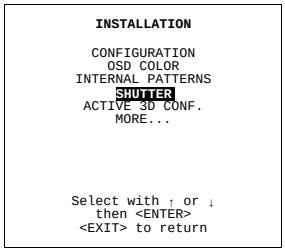
Menu 6-25

6.13 Shutter (Optional)

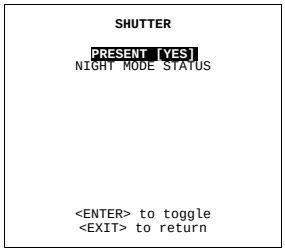
The shutter is optional, the presence of a shutter has to be confirmed in the shutter menu.

Setting the shutter

1. Push the cursor key ↑ or ↓ to highlight *Shutter.* (menu 6-26)
2. Press **ENTER** to select.
   The Shutter menu will be displayed.
3. Push the cursor key ↑ or ↓ to highlight *Present.* (menu 6-27)
4. Press **ENTER** to toggle between [YES] or [NO].



Menu 6-26



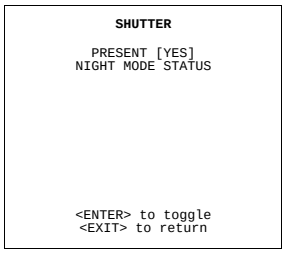
Menu 6-27

Night Mode (Optional) Status

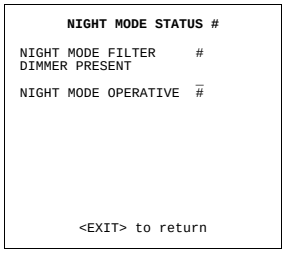
The optional Night Mode improves the Black Level in e.g. night missions, the IG will generate nightly images and will control the dimmer on the projector. The night mode filter will be activated when the light output is dimmed to a certain level. the Night Mode Status will show the status of the night mode filter and the dimmer (Green = OK, Red = Error).

1. Push the cursor key ↑ or ↓ to highlight *Night Mode Status.* (menu 6-28)
2. Press **ENTER** to select.

   The Night Mode Status menu will be displayed. (menu 6-29)



Menu 6-28



Menu 6-29

7. SERVICE MODE

Overview

- Service Mode Overview
- Build-up
- Start up
- Identification
- Change password
- Change the address
- Change Baudrate
- Reset lamp runtime
- Lamp Runtime history
- Dimming
- Barco logo
- Panel adjustments
- Uniformity
- Preset Input Balance
- Electronic convergence
- I2C Diagnoses

7.1 Service Mode Overview

Service Mode Overview

- Identification
  - Title Page
  - Sim Options
- Change Password
- Change Language (Grayed Out)
- Change Proj. Address
  - Projector Address
  - Common Address (RC5)
  - Common Address (PPM)
- Change Baudrate PC
- Reset Lamp Runtime
- Lamp Runtime History
- Dimming
  - Lamp Dimming
  - Motorized Dimming (Optional)
- Barco Logo
  - Status [On/Off]
  - Background [On/Off]
  - Shift
  - Hot Key [Text/Off]
- Panel Adjustments (Reserved to Qualified Service Personnel)
- Uniformity (Reserved to Qualified Service Personnel)
- Preset Input Balance (Reserved to Qualified Service Personnel)
- Electronic Convergence
- I2C Diagnostics

7.2 Build-up

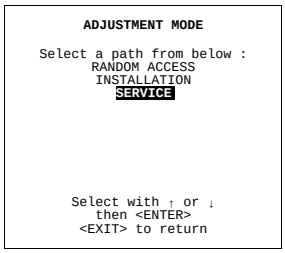
Build-up

The service menu is build-up in two parts which are connected together with the 'more' item. If the desired item is not in the list of the displayed menu, select 'more' with the cursor key and push ENTER to display the other items in the service menu.

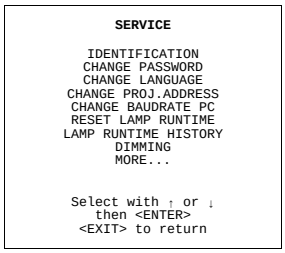
7.3 Start up

How to start up the service mode ?

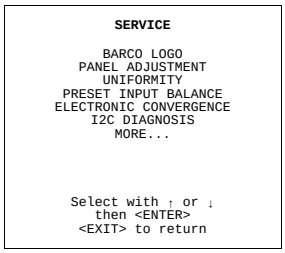
1. Push the cursor key ↑ or ↓ to highlight *Service* (menu 7-1)
2. Press **ENTER** to display the service mode menu (menu 7-2)



Menu 7-1



Menu 7-2



Menu 7-3

Some items in the Service mode are password protected (when the password function is active). Enter the password to continue. All other password protected items are now available if you stay in the adjustment mode.

7.4 Identification

Overview

- The different identification screens
- Displaying the identification screen

7.4.1 The different identification screens

What can be seen in the identification menu ?

- Title page: general information of the projector
- SIM Options: shows which options are installed

What can be seen on the title page screen?

The title page screen shows the general information of the projector.

The following items will be displayed:

- Type of projector: BarcoReality SIM6 MKII
- Proj. address: To change the address of the projector, see "Projector Address", page 28
- Software version
- Configuration:
  - front/ceiling
  - front/table
  - rear/ceiling
  - rear/table
- Baud rate PC: transfer speed for communication with an IBM PC (or compatible) or MAC. The baud rate of the projector must be the same as the baud rate of the connected computer. When there is a difference, consult 'Change Baudrate PC' in this chapter.
- Text: Indicates if the on screen text information (picture setting textboxes: contrast,...) is enabled or not
- Projector Serial number: indicates the fabrication number of the projector. This number can be useful when calling for technical assistance.
- Projector Run Time: gives the total run time since the first start up. All projectors leave the factory with a run time of approximately 24 hours.

What can be seen on the BarcoReality SIM6 MKII Options screen ?

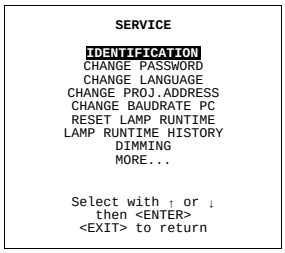
Following options are indicated as active or inactive (YES/NO)

- Soft edge
- TMR: True Motion Reproduction
- Uniformity
- Motorized dimming
- Rugged
- Night Mode
- Active 3D

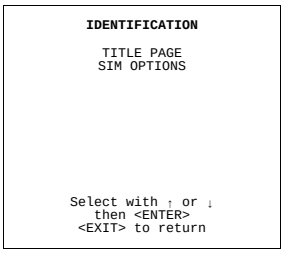
7.4.2 Displaying the identification screen

Start up

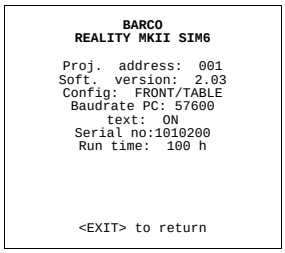
1. Push the cursor key ↑ or ↓ to highlight *Identification* (menu 7-4)
2. Press **ENTER** to display the Identification screen. (menu 7-5)
3. Push the cursor key ↑ or ↓ to choose between *Title page* or *Sim options*
4. Press **ENTER** to confirm. (menu 7-6)



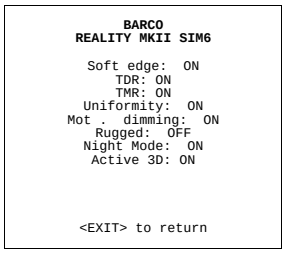
Menu 7-4



Menu 7-5



Menu 7-6



Menu 7-7

7.5 Change password

How to enable or disable the password function ?

This item is password protected when the password strap is installed.

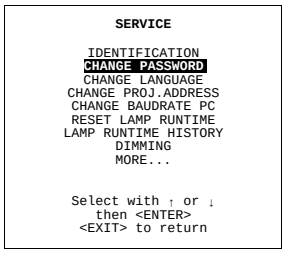
The password function is enabled when the password strap on the controller module is installed. Consult an authorized Barco service technician to change the strap position.

How to change the password ?

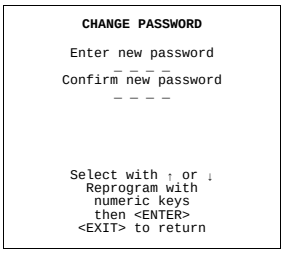
1. Push the cursor key ↑ or ↓ to highlight *Change Password*. (menu 7-8)
2. Press **ENTER** to display the *Change Password* menu. (menu 7-9)

   4 '_' characters are displayed. A new password can be entered with the digit keys of the RCU or local keypad. Every time a digit is entered, a 'X' appears on the screen. The confirm new password is still grayed out.
3. Press **ENTER**, the confirm new password item becomes active. Press **EXIT** if no changes have to be made.
4. 4 'x' characters are displayed in the confirm new password area. Key in your password again with the digit keys of the RCU or the local keypad.
5. Press **ENTER**.

   If the confirm new password entry is the same as the entered new password, the password is changed.



Menu 7-8



Menu 7-9

7.6 Change the address

What can be changed?

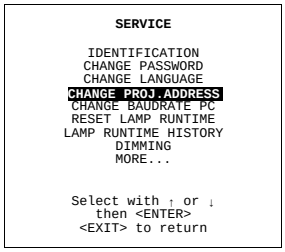
Within the Change password address item, the following items can be changed:

- projector address
- common address

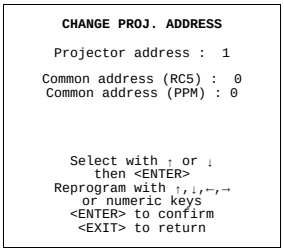
7.6.1 Start up

How to change the address

1. Push the cursor key ↑ or ↓ to highlight *Change proj.address* (menu 7-10)
2. Press **ENTER** to select.
   The actual address is filled in.
   The first digit is highlighted. (menu 7-11)



Menu 7-10



Menu 7-11

How to enter the new projector address?

1. Enter the digits with the digit keys on the RCU or local keypad.
   Or,
   push the cursor keys ← or → to select a digit and change the value by pushing the cursor key ↑ or ↓ until the new value is reached.

Continue with the other digits on the same way. The individual address must be between 0 and 255.

7.6.2 Projector Address

How to change the projector address?

1. Push the cursor key ↑ or ↓ to highlight *Projector Address*. (menu 7-12)
2. Press **ENTER** to select.

   The actual address is filled in.

   The first digit is highlighted.

```
CHANGE PROJ. ADDRESS

Projector address :  1

Common address (RC5) :  0
Common address (PPM) : 0



Select with ↑ or ↓
   then <ENTER>
Reprogram with ↑,↓,←,→
   or numeric keys
 <ENTER> to confirm
  <EXIT> to return
```

Menu 7-12

How to enter the new projector address?

1. Enter the digits with the digit keys on the RCU or local keypad.
   Or,
   push the cursor keys ← or → to select a digit and change the value by pushing the cursor key ↑ or ↓ until the new value is reached.

Continue with the other digits on the same way. The individual address must be between 0 and 255.

7.7 Change Baudrate

Start up

1. Push the cursor key ↑ or ↓ to highlight *Change Baudrate PC*. (menu 7-13)
2. Press **ENTER** to display the *Change Baudrate PC* menu. (menu 7-14)

   The actual baudrate will be highlighted.

   The following baud rates are available: 115200/57600/38400/19200/9600/4800/1200
3. Push the cursor key ↑ or ↓ to highlight the desired baudrate.
4. Press **ENTER** to select.

```
SERVICE

IDENTIFICATION
CHANGE PASSWORD
CHANGE LANGUAGE
CHANGE PROJ.ADDRESS
CHANGE BAUDRATE PC
RESET LAMP RUNTIME
LAMP RUNTIME HISTORY
DIMMING
MORE...


Select with ↑ or ↓
   then <ENTER>
  <EXIT> to return
```

Menu 7-13

```
CHANGE BAUDRATE PC

115200
57600
38400
19200
9600
4800
1200



Select with ↑ or ↓
   then <ENTER>
  <EXIT> to return
```

Menu 7-14

7.8 Reset lamp runtime

When is it allowed?

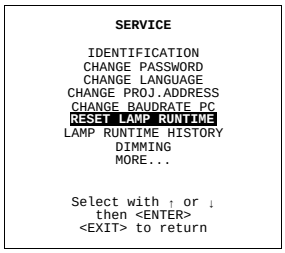
Reset lamp run time is only allowed when a new lamp is installed.

Start up

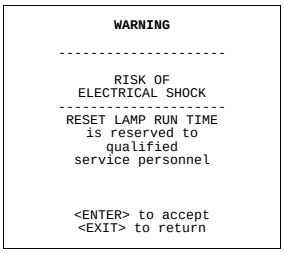
1. Push the cursor key ↑ or ↓ to highlight Reset Lamp Run Time. (menu 7-15)
2. Press **ENTER**.

   The following warning will be displayed :

   Risk of electrical shock. Reset lamp run time is reserved to qualified service personnel. If you are not qualified, press **EXIT** to cancel the reset operation. (menu 7-16)



Menu 7-15



Menu 7-16

7.9 Lamp Runtime history

What can be done?

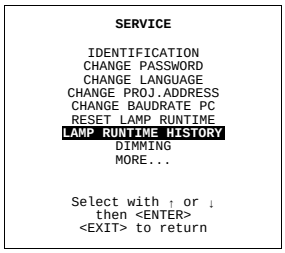
Getting an overview of the different lamp run times

Start up

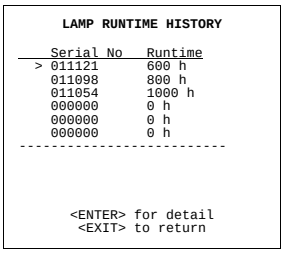
1. Push the cursor key ↑ or ↓ to highlight *Lamp Run Time History* (menu 7-17)
2. Press **ENTER** to display the *Lamp Run Time overview*. (menu 7-18)

   A listing with the lamp serial number and the corresponding run time will be displayed.

   The actual installed lamp will be marked.
3. Press **ENTER** to return to the service mode selection menu.



Menu 7-17



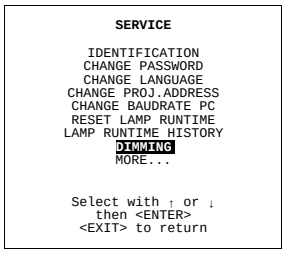
Menu 7-18

7.10 Dimming

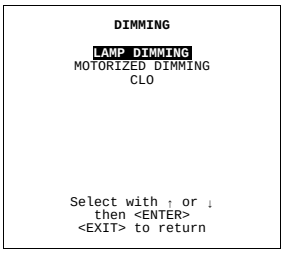
7.10.1 Lamp Dimming

How to perform lamp dimming ?

1. Push the cursor key ↑ or ↓ to highlight *Dimming* (menu 7-19)
2. Press **ENTER**
   The *Dimming* menu is displayed (menu 7-20)
3. Push the cursor key ↑ or ↓ to highlight *Lamp dimming*
4. Press **ENTER**
   A sliderbox is displayed
   Push the cursor key ← or → to dim more or less the lamp



Menu 7-19



Menu 7-20

7.10.2 Constant Light Output (Optional)

The CLO menu item will be greyed out when this option is not installed.

What can be done?

In a multichannel setup, due to tolerances on the lamps and optical components (e.g. lenses), or due to the different positions of the projectors in relation to the screen, there will always be a difference in light output between the projectors.

Within this menu it is possible to track and maintain the brightness level of each projector, the projector will deliver a Constant Light Output = CLO.

How to set up a CLO system?

CLO levels in Multichannel setups are controlled through RS232 by e.g. the xRACU™ Master Control Unit.

Overview of the CLO menu

Following 'Adjustable' parameters are available in the CLO menu:

- Tracking Interval: this parameter will determine the time between each Light Measurement.
- Following Tracking Intervals are available:
  - 8s
  - 16s
  - 32s
  - 64s
  - 128s
- Target Light Value: this parameter will set the desired Constant Light Output Value.

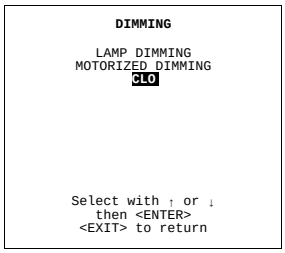
Following parameters can be consulted to start up or maintain a setup with projectors running in CLO mode:

- light value: this parameter will display the current Light Output Value measured by the Light Sensor.
- tracking in range: CLO is running in optimal conditions when this parameter indicates [YES].
- measuring in range: CLO is running in optimal conditions when this parameter indicates [YES].

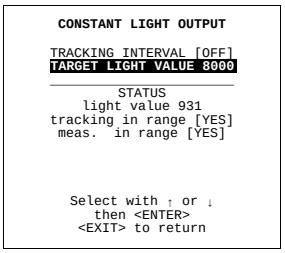
How to use the CLO menu?

1. Push the cursor key ↑ or ↓ to highlight *CLO*. (menu 7-21)
2. Press **ENTER** to select.

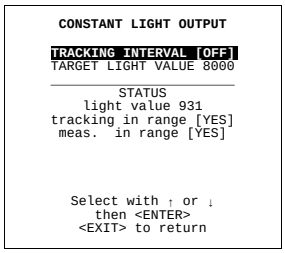
   The *CLO* menu will be displayed.
3. Push the cursor key ↑ or ↓ to highlight Target Light Value and press **ENTER** to select. (menu 7-22)
4. Use the cursor keys ← or → in combination with the numeric keys to enter the Target Light Value, e.g. 8000, and press **ENTER** to confirm.
5. Push the cursor key ↑ or ↓ to highlight Tracking Interval and press **ENTER** to select. (menu 7-23)
6. Use the cursor keys ← or → to select the desired Tracking Interval, e.g. 16s, and press **ENTER** to activate. (menu 7-24)
   Note: *The Motorized Dimming menu item is greyed out when CLO is active.*



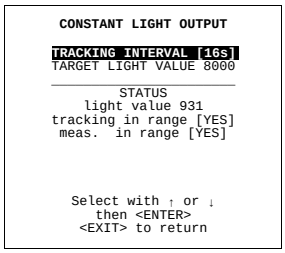
Menu 7-21



Menu 7-22



Menu 7-23



Menu 7-24

7.11 Barco logo

What can be done?

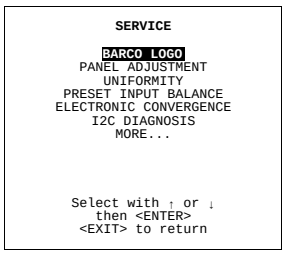
The BARCO logo can be added to the image, in overlay or on a background, on any place on the screen.

How to use the Barco Logo ?

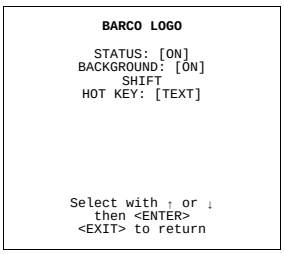
1. Push the cursor key ↑ or ↓ to highlight *BARCO logo*. (menu 7-25)
2. Press **ENTER** to select.

   The *BARCO logo* menu will be displayed. (menu 7-26)

   The actual settings will be displayed. Within this menu, three toggle settings and a shift control are available.



Menu 7-25



Menu 7-26

Available Settings

- STATUS [ON/OFF]
  ON : BARCO logo will be displayed on the screen.
  OFF: NO BARCO logo displayed on the screen.
- BACKGROUND [ON/OFF]
  ON: BARCO logo will be displayed on a black background.
  OFF: BARCO logo will be displayed without any background.
- SHIFT
  By pushing the cursor key ↑, ↓, ← or →, the BARCO logo can be positioned anywhere on the screen.
- HOT KEY [TEXT/OFF]
  OFF: no key on the RCU is used to display the BARCO logo.
  TEXT: the TEXT key on the RCU is used to display or to remove the BARCO logo with one single push on this key (only in operational mode).

7.12 Panel adjustments

Changing these settings may seriously affect the performance of the projector.

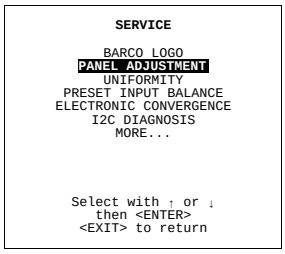
All panel adjustments are factory adjusted. If not really necessary, do not touch any of these adjustments. They are useful when a new panel is installed.

Start up

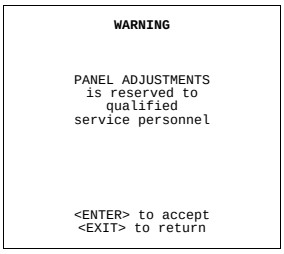
1. Push the cursor key ↑ or ↓ to highlight *Panel Adjustments* (menu 7-27)
2. Press **ENTER** to select.

   The following warning will be displayed : (menu 7-28)

   Panel Adjustments is reserved to qualified service personnel. If you are not qualified, press **EXIT** to cancel the panel adjustments.



Menu 7-27



Menu 7-28

7.13 Uniformity

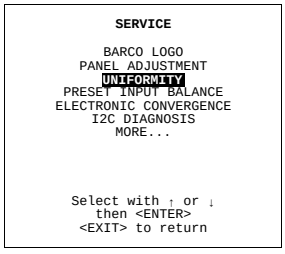
Changing these settings may seriously affect the performance of the projector.

Start up

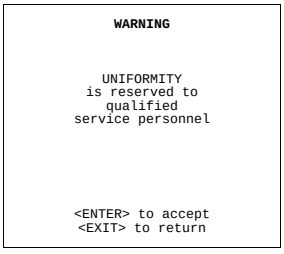
1. Push the cursor key ↑ or ↓ to highlight *Uniformity*. (menu 7-29)
2. Press **ENTER** to select.

   The following warning will be displayed : (menu 7-30)

   Uniformity is reserved to qualified service personnel. If you are not qualified, press **EXIT** to cancel the uniformity adjustment.



Menu 7-29



Menu 7-30

7.14 Preset Input Balance

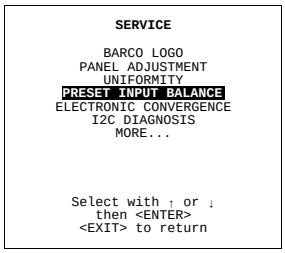
Changing these settings may seriously affect the performance of the projector.

Start up

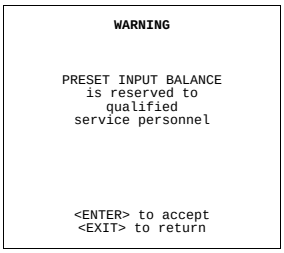
1. Push the cursor key ↑ or ↓ to highlight *Preset Input Balance*. (menu 7-31)
2. Press **ENTER** to select.

   The following warning will be displayed : (menu 7-32)

   Uniformity is reserved to qualified service personnel. If you are not qualified, press EXIT to cancel the Preset input balance adjustments.



Menu 7-31



Menu 7-32

7.15 Electronic convergence

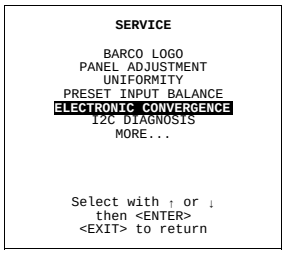
What can be done ?

The electronic convergence allows to correct some convergence errors by shifting horizontally an integral amount of pixels (-3,-2,-1,0,+1,+2,+3), the adjustment is possible on the three colors.

To avoid color distortion when not necessary leave the electronic convergence settings with a neutral value for the three colors (+0)

How to adjust the convergence ?

1. Push the cursor key ↑ or ↓ to highlight *Electronic convergence.* (menu 7-33)
2. Press **ENTER** to select.
   A sliderbox is displayed
   Push the cursor key ← or → to adjust the convergence
   Push the cursor key ↑ or ↓ to change the color between red, green or blue.



Menu 7-33

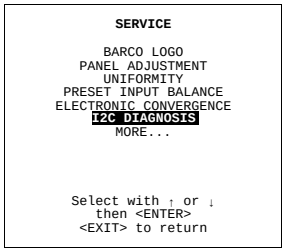
7.16 I2C Diagnoses

What can be done?

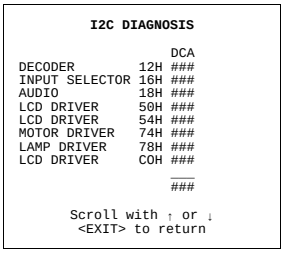
This menu gives an overview of the correct working of the I²C controlled IC's.

How to start up the I2C diagnoses?

1. Push the cursor key ↑ or ↓ to highlight *I2C Diagnoses*. (menu 7-34)
2. Press **ENTER** to display the overview. (menu 7-35)



Menu 7-34



Menu 7-35

A. STANDARD SOURCE SETUP FILES

A.1 Table overview

Table overview

The following standard source files are pre-programmed in the projector.

Name[1]	Resolution[2]	Fvert Hz[3]	FHor kHz[4]	Fpix MHz[5]	Ptot[6]	Pact[7]	Ltot[8]	Lact[9]
1600_60V	1600x1200	60,000	75,000	162,000	2160	1600	1250	1200
1600_65V	1600x1200	65,000	81,250	175,500	2160	1600	1250	1200
1600_70V	1600x1200	70,000	87,500	189,000	2160	1600	1250	1200
8514_A	1024x384i	43,479	35,522	44,900	1264	1024	409	384
CGA	640x200i	59,924	15.700	14.318	912	640	262	200
COMPUSC4	1024x480i	29,945	30,694	39,779	1296	1024	512	480
ED	735x480	59,943	31,470	28,638	910	735	525	480
EGA	640x350	59,702	21,851	16,257	744	640	366	350
FMR	640x400i	42,323	36,440	28,570	784	640	431	400
FMTO_2	640x400	55,370	24,370	21,056	864	640	440	400
HD_1080i[10]	1920x540i	30,000	33,750	74,250	2200	1920	562	540
HD_720P[10]	1280x720	60,000	45,000	74,250	1650	1200	750	720
HDMAC[10]	1252x570i	25,020	31,250	39,125	1252	1024	625	570
INTER_GR	1184x886	67,170	61,796	92,941	1504	1184	920	886
MAC_2	640x480	66,667	35,000	30,240	864	640	525	480
MAC_3	512x384	60,147	24,480	15,667	640	512	407	384
MAC_4	560_384	60,147	24,480	17,234	704	560	407	384
MAC_5	512x342	60,158	22,259	16,670	704	512	370	342
MAC_6	832x624	74,546	49,722	57,280	1152	832	667	624
MAC_7	1024x768	74,907	60,150	80,000	1330	1024	803	768
MAC_LC	640x480	66,619	34,975	31,338	896	640	525	480
MAC_POR	640x870	74,996	68,846	57,280	932	640	918	870
MUSE	1172x518i	30,000	33,750	37,125	1172	1024	563	518
MXGA_100	1152x864	99,932	10,760	147,398	1586	1152	930	864
MXGA_60	1152x864	60,000	54,540	60,000	1456	1152	909	864

1. Name: name of file, contains the settings.
2. Resolution: image resolution, when followed by ..i means interlaced.
3. Fvert Hz: vertical frame frequency of the source
4. FHor kHz: horizontal frequency of the source
5. Fpix MHz: pixel frequency
6. Ftot : total pixels on one horizontal line.
7. Pact: active pixels on one horizontal line.
8. Ltot: total lines in one field
9. Lact: active lines in one field.
10. Optional file

Name[1]	Resolution[2]	Fvert Hz[3]	FHor kHz[4]	Fpix MHz[5]	Ptot[6]	Pact[7]	Ltot[8]	Lact[9]
MXGA_70	1152x864	70,000	63,630	94,500	1480	1152	909	864
MXGA_75	1152x864	75,000	67,500	75,000	1600	1152	900	864
MXGA_80	1152x864	80,000	76,640	80,000	1440	1152	958	864
MXGA_85	1152x864	85,000	77,055	121,500	1576	1152	907	864
PAM500	640x400	60,000	26,400	22,810	864	640	440	400
PAM800	1120x375i	44,936	36,443	50,000	1372	1120	406	375
PC98_1	640x400	56,416	24,823	21,050	848	640	440	400
PC98_2	1120x375i	39,994	32,835	47,840	1457	1120	411	375
PC98_3	1120x750	60,000	50,000	78,569	1571	1120	833	750
S1152_66	1152x900	66,004	61,846	94,500	1528	1152	937	900
S1152_76	1152x900	76,637	71,809	108,000	1504	1152	937	900
SDI_525[10]	675x240i	29,970	15,734	13,500	858	720	263	240
SDI_625[10]	675x278i	25,000	15,625	13,500	864	720	313	278
SG_50	1600x1200	50,000	62,500	130,313	2085	1600	1250	1200
SG_60_1	1280x1024	60,000	63,900	107,352	1680	1280	1065	1024
SG_60_2	1024x768	60,000	48,780	64,390	1320	1024	813	768
SG_60_3	960x680	60,000	43,200	54,432	1260	960	720	680
SG_60_4	1600x1200	60,000	75,000	156,375	2085	1600	1250	1200
SUNEWS67	1280x1024	67,189	71,691	117,000	1632	1280	1067	1024
SUNEWS76	1280x1024	76,107	81,130	135,000	1664	1280	1066	1024
SUNXGA60	1024x768	59,984	48,287	64,125	1328	1024	805	768
SUNXGA70	1024x768	70,041	56,596	74,250	1312	1024	808	768
SUNXGA77	1024x768	77,069	62,040	84,375	1360	1024	805	768
SUP_MAC	1024x768	60,000	48,780	63,999	1312	1024	813	768
SVGA_100	800x600	100,000	62,800	100,000	1056	800	628	600
SVGA_56V	800x600	56,250	35,156	36,000	1024	800	625	600
SVGA_60V	800x600	60,317	37,879	40,000	1056	800	628	600
SVGA_72V	800x600	72,084	48,080	50,003	1040	800	667	600
SVGA_75	800x600	75,000	46,875	75,000	1056	800	625	600
SVGA_85	800x600	85,000	53,635	56,250	1048	800	631	600

Name[1]	Resolution[2]	Fvert Hz[3]	FHor kHz[4]	Fpix MHz[5]	Ptot[6]	Pact[7]	Ltot[8]	Lact[9]
SXGA_100	1280x1024	100,139	107,350	185,500	1728	1280	1072	1024
SXGA_114S[10]	1280x1024	114,000	124,602	199,363	1600	1280	1093	1024
SXGA_50	1280x1024	50,000	52,350	87,948	1680	1280	1047	1024
SXGA_60	1280x1024	60,000	63,900	107,352	1680	1280	1065	1024
SXGA_60V	1280x1024	60,282	63,657	110,000	1728	1280	1056	1024
SXGA_72	1280x1024	72,000	76,968	130,076	1690	1280	1069	1024
SXGA_75	1280x1024	75,025	79,976	135,000	1688	1280	1066	1024
SXGA_85	1280x1024	85,024	91,146	157,500	1728	1280	1072	1024
SXGA_92S[10]	1280x1024	92,003	10,225	156,479	1600	1280	1063	1024
SXGA_96S[10]	1280x1024	96,003	9,530	167,890	1600	1280	1093	1024
VGA_100	640x480	100,675	18,920	44,821	848	640	525	480
VGA_120S[10]	640x480	120,000	60,840	51,106	840	640	507	480
VGA_72V	640x480	72,800	37,856	31,496	832	640	520	480
VGA_75	640x480	74,999	26,667	31,500	840	640	500	480
VGA_85	640x480	85,009	23,111	37,132	832	640	525	480
VGA_GR	640x480	59,941	31,469	25,175	800	640	525	480
VGA_TXT	720x400	70,087	31,469	28,322	900	720	449	400
VGA75ISO	640x480	75,000	39,375	31,500	800	640	525	480
VIDEO525[10]	1302x239i	29,970	15,734	32,207	1302	1024	263	239
VIDEO625[10]	1024x278i	25,000	15,625	31,984	1310	1024	313	278
XGA_100	1024x768	100,000	80,800	100,000	1368	1024	808	768
XGA_120S[10]	1024x768	120,000	96,840	123,955	1280	1024	807	768
XGA_60	1024x768	60,000	48,360	64,996	1344	1024	806	768
XGA_70	1024x768	70,000	57,050	78,044	1368	1024	815	768
XGA_70V	1024x768	69,705	56,182	74,610	1328	1024	806	768
XGA_72	1024x768	71,955	58,140	80,000	1376	1024	808	768
XGA_75	1024x768	75,781	61,080	86,000	1408	1024	806	768
XGA_85	1024x768	85,000	68,680	94,500	1376	1024	808	768
XGA_96S[10]	1024x768	96,000	77,472	99,164	1280	1024	807	768
XGA75_GS	1024x768	74,534	59,701	79,284	1328	1024	801	768

Name[1]	**Resolu-tion[2]**	**Fvert Hz[3]**	**FHor kHz[4]**	**Fpix MHz[5]**	**Ptot[6]**	**Pact[7]**	**Ltot[8]**	**Lact[9]**
SXGA_60L	1280x1024	60,000	64,000	196,397	3088	1280	1060	1024
SXGA_60R	1280x1024	60,000	64,000	196,397	3088	1280	1060	1024

Table A-1

B. SOURCE NUMBERS 81 — 86 AND 91 — 96

B.1 Projector without any 800 peripheral connected

Overview

The source numbers 81 - 86 and 91 - 96 do not correspond to physical inputs. An additional adjustment file can be created for these source numbers. This file can contain different settings. The relationship between sources 1 - 6 and 91 - 96 or between 1 - 6 and 81 - 86 is shown in the diagram below.

Source input 1	source number 1	file A
	source number 81	file A’
	source number 91	file A”
Source input 2	source number 2	file B
	source number 82	file B’
	source number 92	file B”
Source input 3	source number 3	file C
	source number 83	file C’
	source number 93	file C”
	...	
Source input 6	source number 6	file F
	source number 86	file F’
	source number 96	file F”

How to create a second source?

Follow the steps below to create a second or a third file for sources 1 to 6 :

1. Select the source between 1 and 6.
2. Select the corresponding source number between 81 and 86 or 91 and 96 with the digit keys on the RCU.
3. Enter the adjustment mode and load a corresponding file. Edit this file if necessary.
4. Save the file and exit the adjustment mode.

B.2 Projector with a 800 peripheral connected

Overview

- Source numbers 91 — 96
- Source numbers 81 — 86

B.2.1 Source numbers 91 — 96

Overview

The source numbers 91 - 99 do not correspond to physical inputs. An additional adjustment file can be created for these source numbers (source numbers of the 800 peripheral). This file can contain different settings. The relationship between sources 1 - 9 of the 800 peripheral and 91 - 99 is shown in the diagram below.

source input 1	source input 1	file A
	source input 91	file A’
source input 2	source input 2	file B
	source input 92	file B’

source input 3	source input 3	file C
	source input 93	file C’
	...	
source input 6	source input 6	file F
	source input 96	file F’

Follow the same procedure as for a projector without a 800 peripheral connected.

B.2.2 Source numbers 81 — 86

Overview

Only valid if no input module is connected to slot 81 - 86 of a RCVDS05. The source numbers 81 - 86 correspond to the physical inputs 1 - 6 of the projector. e.g. When slot 1 of the projector has to be selected, key in source number 81. The relationship between the sources of slot 1 - 6 of the projector with 800 peripheral is shown in the table below.

source of slot 1	source number 81
source of slot 2	source number 82
source of slot 3	source number 83
source of slot 4	source number 84
source of slot 5	source number 85
source of slot 6	source number 86

C. CLEANING THE DUSTFILTER

C.1 Cleaning

When should it be done?

Depending on the environement, the dust filters should be cleaned at least when replacing the lamp. When the projector operates in dusty environement, clean the dust filters earlier than when replacing the lamp.

How to clean the dustfilter?

To clean the dustfilter, follow the next procedure :

1. Turn the projector upside down.
2. Turn out the 2 fixation screws of both dust filters. (image C-1, image C-2)
3. Clean the dust filter with a dry cloth.
4. Re-insert the dust filter.
5. Secure their position by insertion and tightening 2 fixation screws.

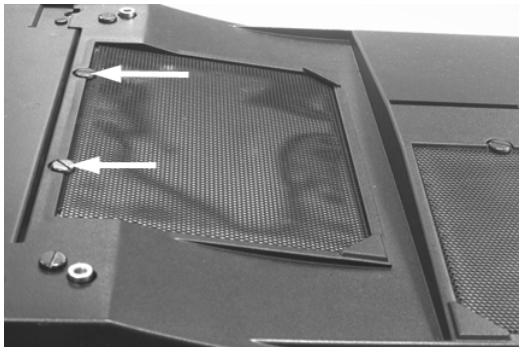


Image C-1

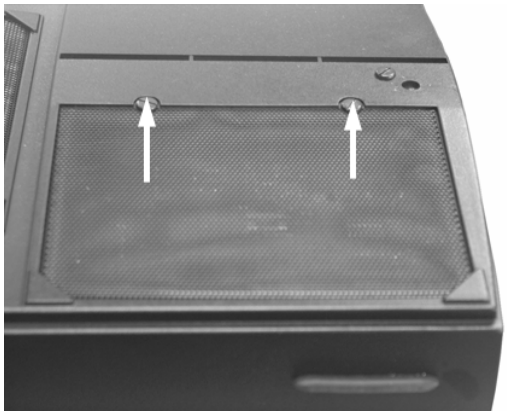


Image C-2

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Revision Sheet

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Please correct the following points in this documentation (**R5976493/02**):

page	wrong	correct