



User Guide



Table of Contents

1.Important information.....	3
About this User Guide.....	3
2.Safety.....	4
3D content.....	5
Environment.....	5
Notice.....	6
Introduction.....	7
Key Features and Benefits.....	8
System Components.....	8
Optional Accessories.....	8
3.Overview.....	9
Remote Control.....	9
Projector Keypad.....	10
Connections.....	10
3D RF Emitter.....	11
3D Glasses.....	11
4.Installation.....	12
Location.....	12
Mounting.....	13
Connections.....	14
5.Switching On and Off.....	16
6.Operation.....	17
Viewing 3D Content.....	17
Operating Modes Menu.....	18
Input Menu.....	20
Main Menu.....	20
Picture.....	21
Image.....	22
Setup.....	25
Menu.....	26
Presets.....	27
Info.....	29
Quick Menus.....	29
Messages.....	29
Troubleshooting.....	30
Specifications.....	32
Projection Distance.....	33
7.COLOR SENSOR PROBE AUTOCAL®	36
Important information.....	36
About this User Guide.....	36
Environment.....	36
Introduction.....	37
Key Features and Benefits.....	37
System Components.....	37
Installation.....	37
Location.....	37
Mounting.....	38

Connection.....	39
Operation.....	39
Submenu SCREEN.....	40
Centering.....	40
Background light measure.....	41
Maximum light measure.....	41
Ambient light compensation.....	42
Ambient color compensation.....	42
Color auto calibration.....	42
Ambient color compensation at startup.....	43
Restore user settings.....	43
Submenu AMBIENT.....	44
Background light measure.....	44
Maximum light measure.....	44
Continuous ambient light compensation.....	45
Restore user settings.....	45
Troubleshooting.....	45
8.Projector Web Control.....	46
Important information.....	46
About this User Guide.....	46
Introduction.....	46
Key Features and Benefits.....	46
Overview.....	46
Connection.....	47
Operation.....	48
Web User Interface.....	48
Structures of Web pages.....	49
Product Information (home page).....	50
Projector Control.....	50
Image and Pictures.....	50
Colors.....	51
Setup.....	51
Presets.....	52
Virtual RC.....	53
Miscellaneous Settings.....	53
Ethernet.....	53
WiFi.....	54
Packet logs viewer.....	54
Software update.....	55
Administration login.....	58
Company Profile.....	58
Customer Service.....	58
Troubleshooting.....	58

1. Important information

About this User Guide

This User Guide describes how to set up and operate the following projector:

- AR

Information contained in this User Guide may be updated from time to time due to product improvements and customer feedback. Visit www.sim2.com to find the latest version of this document.

This document contains proprietary information protected by copyright. All rights are reserved. All trademarks and registered trademarks are the property of their respective owners.

2. Safety



To reduce the risk of electrocution, disconnect the power cord on the rear panel before removing the top cover of the projector. For technical service refer to trained personnel authorized by the manufacturer.

If the lamp suddenly explodes with a loud bang, turn off the projector immediately and air the room thoroughly. Do not attempt to restart the projector and do attempt to replace the bulb: contact your local service center.

Read this manual

Read all chapters of this manual carefully before switching on the projector. This manual provides basic instructions for operating the AR projector. Installation, preliminary adjustments and procedures that necessitate the removal of the top cover and contact with electrical components must be performed by authorized, trained technicians. To ensure safe operation and long term reliability use only the power cords supplied by the manufacturer. Observe all warnings and precautions. Keep the manual for future consultation.

Do not touch internal parts of the projector

Inside the housing there are electrical parts carrying dangerously high voltages and parts operating at high temperature. Never open the housing. Entrust all servicing and repair work to a SIM2 Authorized Service Center. Opening the housing voids the warranty.

Disconnect the appliance from the power supply

The device that disconnects the projector from the mains is the power plug. Ensure that the power cord plugs and the electrical outlets are easily accessible during installation operations. Pull the plug, not the cord, to disconnect the projector from the mains. Use only the specified power supply. Connect the projector to a mains electrical supply with rated voltage of between 100-240 V AC, 50/60 Hz and equipped with a protective earth connection. If you are not sure of your domestic mains rating, contact an electrician. Take care to avoid overloading the power socket and any extension leads.

Switching the projector off

Pay attention to the switch off procedure for the projector. The projector must always be brought back to the standby state to allow the projector to carry out the cooling procedure. Should this not happen, for example due to a power cut, the projector may enter a state of protection that leads to switch-on being blocked. This block will last until the internal components of the projector have completely cooled down.

Changing the fuses

Before changing the fuse, disconnect the projector from the mains power supply. The fuse compartment is next to the power supply connector. Remove the fuse holder with a flat head screwdriver and replace the fuse. Fit the replacement fuse. Use only type T 10 A L H fuses for the projector.

Be careful with cables

Make sure cables are routed so that people are not impeded or become a trip hazard. Keep all cables away from children. Install the projector as close to the wall socket as possible. Avoid stepping on power cords, make certain they do not become tangled, and never jerk or tug them; do not expose them to sources of heat, and make sure they do not become knotted or crimped. If the power cords become damaged, stop using the projector and request the assistance of an

authorized technician.

Disconnect the projector from the mains power during electrical storms and when not in use

To prevent damage from lightning strikes in the vicinity, disconnect the projector during storms or when the projector is going to be left unused for a long time.

Avoid contact with liquids and exposure to damp

Do not use the projector near water (sinks, tubs and so on); do not place objects containing liquids on or near the projector and do not expose it to rain, humidity, drops of water or sprays; do not use water or liquid detergent to clean it.

Place the projector on a stable surface

Place the projector on a stable surface or use a suitable ceiling mounting bracket. Never place the projector on its side or rear, on the lens or top panel.

Do not allow the projector to overheat

To prevent overheating, allow a free space of at least 0.25 m (10 in.) on the left, right and rear sides of the projector. Do not obstruct the ventilation slots. Do not place the projector near heat sources such as heaters, radiators or other devices (including amplifiers) that generate heat. Do not place the projector in an area where there is insufficient space (shelving units, bookshelves and so on) and in general avoid placing it in poorly ventilated areas as this may prevent sufficient cooling and significantly reduce lamp life.

Never look directly at the projection lamp

Never look directly into the lens when the lamp is on as the intense light may damage your eyes. Take particular care that children cannot do so.

Take special care regarding movement of the lens

Do not place objects in the slots on the side of the lens and also ensure that vertical lens movements are not impeded by external objects.

Do not insert objects through the openings in the projector

Make sure that no objects are inserted inside the projector. If this should occur, disconnect the projector from the power supply immediately and call an authorized technician.

Power saving

We advise disconnecting the projector from the power supply when not in use. In this way you will achieve considerable power savings while at the same time protecting internal electrical parts from wear.

3D content

Discomfort (such as eye strain, headaches, motion sickness, nausea, dizziness, disorientation) may be experienced while watching 3D content. In this case, stop watching and consult a doctor if symptoms are severe.

Consult a doctor before allowing young children (especially those under six years old) to watch 3D content as their visual system is still under development.

Monitor children (including teenagers) watching 3D content, as they are more at risk of experiencing discomfort and less inclined to report symptoms.

Individuals who may be susceptible to epileptic seizures or strokes (on the basis of personal and family history) should consult a doctor before watching 3D content.

All viewers should take regular breaks from watching 3D content. Length and frequency of these breaks may vary from person to person.

Environment

This product contains materials derived from natural resources during its manufacture. It may contain materials that constitute a health and environmental hazard. To prevent harmful materials from being released into the environment and to promote the use of natural materials, SIM2 provides the following information regarding the disposal and recycling of the product.

Waste electrical and electronic materials (WEEE) should never be disposed of in normal urban waste disposal facilities.



The label on the product, shown here, indicating a canceled garbage can, is intended to remind you that the product requires special handling at the end of its service life. Materials such as glass, plastic and some chemical compounds are recoverable and can be recycled for reuse.

Observe the following instructions:

- When you no longer wish to use your electrical and electronic equipment, take it to your local waste disposal facility for recycling.
- You may return your old equipment to your SIM2 Authorized Dealer free of charge when you buy a new product that is equivalent or has the same functions as the old one. Contact SIM2 to find your local dealer.
- If you need more information regarding recycling, reuse and product exchanges, contact SIM2 customer service.

Lastly we suggest further measures to safeguard the environment, such as recycling of internal and external packaging (including that used for shipping) in which the product was delivered. With your help, we can reduce the amount of environmental resources required to make electric and electronic equipment, reduce the use of waste tips for used equipment and, in general, improve our quality of life by making sure that hazardous materials are correctly scrapped. Incorrect treatment of the product at the end of its service life and failure to follow the above disposal instructions are punishable under local legislation.

Product disposal



The lamp inside this projector contains mercury and may be subject to special disposal or recycle regulations. Dispose or recycle in accordance with local laws. For more information contact the Electronic Industries Alliance at www.eiae.org or check www.lamprecycle.org

Notice

The appliance has been subjected to exhaustive operating tests by SIM2 to guarantee the highest quality. The projector bulb life should thus initially be around 30-60 hours. In addition to the customary checks, the Quality Control department also runs additional statistical tests before shipment. In such cases, the packaging may show signs of having been opened, and the hours of lamp operation may prove to be higher than those normally shown when only standard tests are performed.

As the optical system of the AR is extremely compact and has the purpose of developing very high brightness and contrast, it is possible that a small quantity of light is visible outside of the projection area and will vary depending on the type of lens used and the zoom and shift setup. This characteristic of the optical system is to be deemed as normal. In order to reduce this effect SIM2 recommends that the area surrounding the projection screen is as dark as possible.

The AR is a three chip DLP projector and uses three high resolution DMD (red, green, blue). These three DMD are precisely aligned through a high precision process that reduces the alignment error to within the foreseen limits of tolerance. The maximum limits of misalignment are the following:

- Screen Center: up to 0.7 pixels between each color
- Screen Borders: up to 2 pixels between each color

These limits are perfectly normal for this optical system and will not be considered as a malfunction of the product.

Note: One pixel corresponds to 10 thousandths of a millimeter on the DMD.

Introduction



Designed without compromise, the AR is the result of complete creative and engineering expertise. Created with the desire to offer a powerful and exclusive projector, AR combines compelling charisma with design cues that are unmistakably SIM2. Indeed, SIM2's R&D has challenged itself to combine technological advances, extraordinary design thinking, and top-class performance all in service to its customers. Every detail is unique and its form is pure art. This is a star performer that has the power and clarity to satisfy the most demanding viewer, as well as the ability to deliver bright, contrast-rich images.

Prestigious and Eternally Contemporary: The AR elegance is immediately apparent in the clearly defined lines and forms of a body strongly inspired by the SIM2 tradition. A perfect balance of beautiful design and exceptional materials to satisfy the most refined taste. AR sports a uniquely sophisticated combination of modernity, elegance, traditional craftsmanship, and luxury. The finest materials, coupled with a sophisticated glossy/matte white finish, create a new dimension in luxury for an eternally contemporary product. A true delight to the eyes by designer Giorgio Revoldini.

The AR is a dual-mode 3-chip 3D DLP projector that is based on the SUPERLUMIS platform. It produces images with the same exceptional black level and contrast performance of the SUPERLUMIS, being able to emulate the best 3D cinema projection systems, in terms of color fidelity, definition and depth of image.

In addition, the AR features a unique optical color processing technology that provides a DCI compatible color reproduction, as well as the standard HDTV (REC 709) one ("HC" denotes "Hyper Color"). A motorized Sliding Filter System (SFS) inside the optical engine allows for an almost instantaneous color gamut change, obtained via optical components only, with no need of electronic compensation.

AR now delivers greater light output thanks to a more powerful 350W lamp and the option of high brightness lenses. The improved optical light engine now includes Perfect Fit, a fully-programmable zoom, focus and lens shift feature which enables a lens-free option to create 2.40:1 images.

The AR is designed for use with large screen sizes – up to 5 m (16.5 ft.) wide. A choice of three high quality glass lenses (T1, T2 and T3) is available, giving the projector a total throw ratio of 1.37-3.90:1.

To aid calibration SIM2's Live Color Calibration software enables complete control over:

- primary, secondary and white point color coordinates
- gamma tables

allowing calibration experts to accurately calibrate the final image via a user-friendly application for Windows-based computers.

Key Features and Benefits

- high picture quality: SIM2 renown image processing and the latest 0.95 in. 1080p Dark-Chip4 DMD from Texas Instruments
- precision optics: SIM2 ALPHAPATH light engine
- high brightness: 3-chip DLP projector
- artifact-free fast-action images: SIM2 PureMotion processing
- high resolution: actual full HD 3D images, without blur and ghosting
- larger color gamut: dual gamut (REC 709/DCI) via a motorized Sliding Filter System
- comfortable 3D viewing: high brightness ghost-free sharp images
- immersive 3D effect: large screen sizes thanks to high brightness images
- 3D wide viewing angle: stereo separation independent from viewing angles
- screen flexibility: no constraints in the choice of the screen material
- compatibility: no need of dedicated sources and preprocessing for 3D viewing
- longer lamp life: affordable and reliable UHP lamps

System Components

Your AR DLP projector ships with the following items:

- 1 x backlit remote control unit (with four AAA/LR03 batteries)
- 1 x SIM2 3D sync RF emitter (ADE025-RF-S1)
- 4 x pairs of SIM2 X105-RF-S1 active shutter glasses
- 1 x AC power cords 2 m (6.6 ft.) long
- 3 x jacks for 12 V output connectors
- 1 x 4.0-millimeter Hex wrench (for lens shift adjustment)
- 1 x User guide (this document)
- 1 x Professional calibration probe

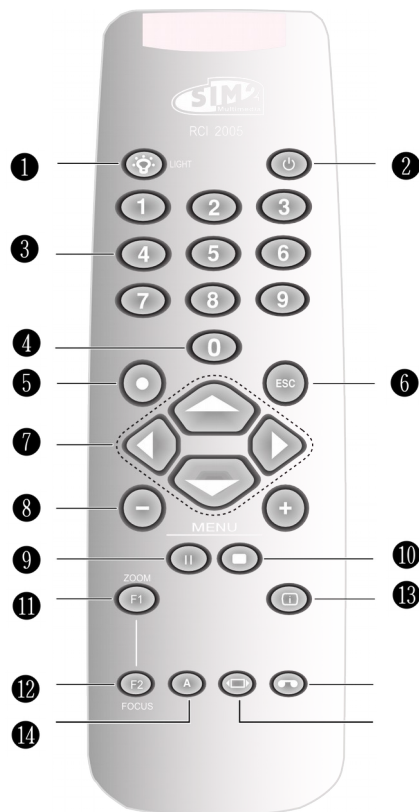
If any items are missing or damaged, contact your SIM2 Authorized Dealer as soon as possible. Keep the original packaging in case anything has to be shipped.

Optional Accessories

- Projector ceiling bracket (LUMISBRKT)
- PANAMORPH Anamorphic lens systems (static or motorized)
- ISCO Anamorphic lens systems (static or motorized)
- VISUSRF-BOX (8 SIM2 Visus 3D RF glasses)
- VISUSRF-SYSTEM (7 SIM2 Visus 3D RF glasses and 1 RF emitter for SIM2 Visus 3D RF glasses)
- VISUSRF-SYSTEM-ACC (4 SIM2 Visus 3D RF glasses and 1 RF emitter for SIM2 Visus 3D RF glasses)

3. Overview

Remote Control



1	Turn backlight on for about 5 seconds
2	⏻ turns the projector off
3	1-9 select inputs and turn the projector on
4	0 enters OSD Input menu and turns the projector on
5	• OK enters submenus, confirms actions
6	ESC exits OSD
7	⬆ ⬇ ⬆ select menu items, adjust settings or cycle through the test patterns
8	MENU enter OSD Main menu and select the desired section, each press of the key selects the next tab in the menu
9	II 3D enters 3D menu
10	■ Memory enters Memories menu
11	perform user-defined actions (default assignments are: F1 = Zoom, F2 = Focus)
12	F1, F2
13	i Info displays projector Info
14	A Auto performs Auto Adjustment
15	◀▶ Aspect enters Aspect Quick menu
16	Not used

Custom Remotes

You can use your own IR remote control to control your AR projector.

- If you are using a remote control with learning capabilities, use the projector remote control to teach the commands to your remote.
- If you are using a programmable remote control, the setup software probably allows importing of Pronto Hex codes. See *SIM2 AR IR Control* for a list of all the projector codes in Pronto Hex format, including a number of discrete codes for:
 - Aspects
 - Memories
 - 3D Controls (3D Mode and Input Formats)
 - Color Gamut (REC709/DCI)

Operation

The AR projector has two IR receivers, one on the front and one on the back of the unit. The operative range of the remote control is approximately 10 m (33 ft.). Make sure that there is nothing obstructing the infrared beam between the remote control and the IR receiver you are pointing to. You can point the remote control towards the screen, as the IR beam is reflected by the screen towards front IR receiver of the projector. In this case the effective range of the remote control may be smaller than declared.

Batteries

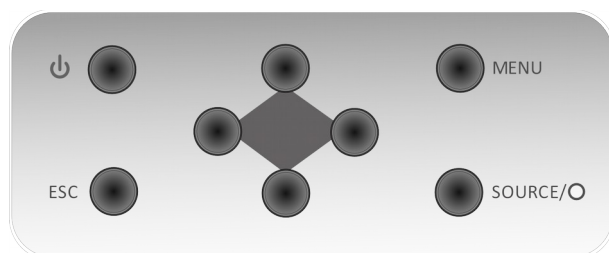
To install batteries in the remote control:

1. Open the battery cover.
2. Insert four AAA (LR03) batteries making sure the polarities match the + marks inside the battery compartment.
3. Replace the cover.

Replace the batteries with new ones when the operating range of the remote control decreases. Dispose of used batteries according to local regulations. Make sure you do not mix old and new batteries or different types of batteries.

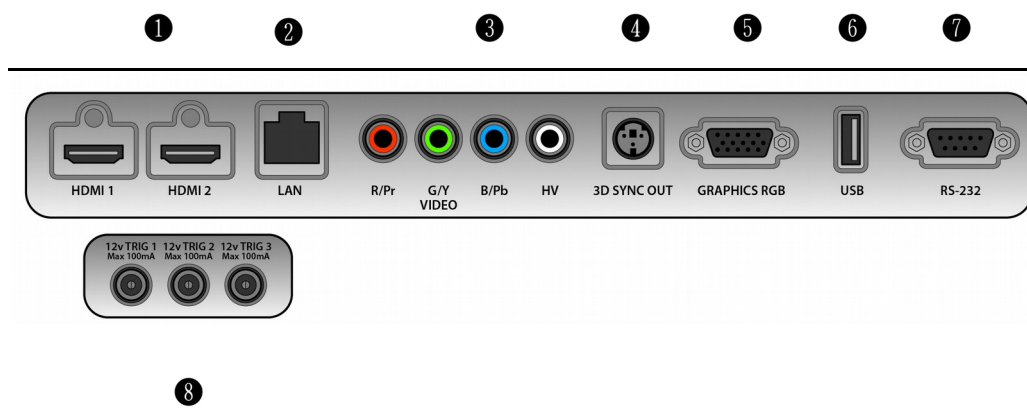
Warning: If you will not use the remote control for a long time, remove the batteries to avoid battery leakage.

Projector Keypad



	turns the projector on or off
	select menu items, adjust settings or switch test patterns
MENU	enters OSD Main menu and selects the desired section
ESC	exits OSD
SOURCE/O	enters OSD Input menu/selects a menu item

Connections



Inputs	❶ HDMI 1 HDMI 2	Accept both HDMI and DVI digital video inputs (1.4a)
	❷ LAN	RJ-45 Networking Connector
	❸ Components/RGB-HV	Four RCA connectors. They accept both standard and high-definition component (YPrPb) and RGB-HV signals. Also used as RGB input for SCART RGBS signals.
	Video	Green RCA connector. Accepts composite video signals. Also used as composite sync input for SCART RGBS signals.
	❺ Graphics RGB	One D-Sub 15-pin female connector. Accepts component or RGB high-definition signals.
Control/Service	❻ USB	USB 1.1 (type A) port for serial commands and firmware upgrade.
	❼ RS-232	RS232 (female D-Sub 9-pin) port for serial commands and firmware upgrade.
Outputs	❽ TRIG 1	12 V 100 mA max output, for motorized screen control. Activates when the projector is switched on.
	TRIG 2	12 V 100 mA max output, for motorized screen masking systems control. See “ Screen ” on page 23.
	TRIG 3	12 V 100 mA max output, for motorized anamorphic lens position control. See “ Anamorphic Lens ” on page 23.
	❹ 3D Sync OUT	VESA DIN-3 connector for 3D RF Emitter cable.

3D RF Emitter

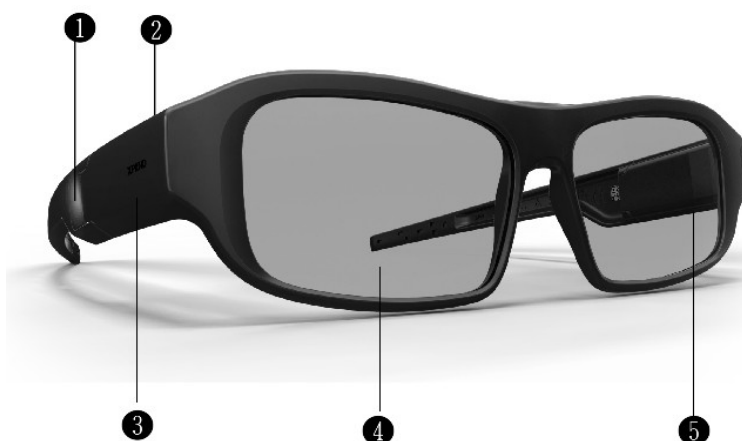
The 3D RF emitter is designed to be placed near the projector and aimed at the screen. It receives the 3D sync signal from the projector and emits RF pulses that reach the 3D glasses RF receiver.

The emitter does not require a battery.

Note: The emitter emits sync pulses only when the projector displays 3D content.

3D Glasses

When displaying 3D content, the projector alternately displays one image for the left eye and one image for the right eye in rapid succession. The 3D glasses turn on and off their lenses, in sync with the projector, so that each eye receives exactly the image intended for it. The sync is possible thanks to the RF pulses received by the glasses from the 3D RF emitter.



①	Indicator light	Indicates glasses status
②	Battery compartment	For CR2032 (3 V DC / 0.2 A) batteries
③	IR receiver	Receives infrared signals from the 3D Emitter
④	Lens	Liquid crystal shutter
⑤	Button	Button for on and off

4. Installation

This section provides instructions for the installation of the AR projector.

Important: Installation procedures should be performed by a qualified AV system specialist.

Location

When installing the AR projector, take the following considerations into account.

Installation Type

Select the installation type that best suits your needs:

- front or rear projection
- floor or ceiling mount

Lens Type

Choose the desired distance from the screen and select the lens type (T1, T2 or T3) that determines the desired screen size.

Cooling

Make sure that the planned location for the projector has adequate ventilation. Check that room temperature is below 35° C and that the projector is away from heating vents. Ensure a minimum 0.25 m (10 in.) clearance on the left, right and rear sides of the projector.

Power Outlets

Verify that the powers outlets are grounded and preferably shielded from power surges and fluctuations. A UPS is optional. AR power supply operates on any nominal line voltage between 100-240 V AC, 50-60 Hz.

Cables

Check planned cable lengths for video and control cables and make sure these lengths do not exceed specifications.

Ambient Light

Avoid or minimize light sources directed at the screen to preserve the quality of the projected image.

Mounting

The projector can be Floor mounted (upright) or Ceiling mounted (inverted). Choose the method that best suits your installation.

Important: The projection lens is not centered to the chassis (it is off-center horizontally by 75 mm or 2.95 in., see “Dimensions” on page 35 for details). Make sure the centerline of the lens is centered horizontally to the center of the screen.

Floor Mounting

Position the projector on a secure and flat surface (such as a table or a shelf). Adjust the three feet at the bottom of the projector until the projector is level on all sides.

Ceiling Mounting

Invert the projector and suspend it from the ceiling using a specific bracket.

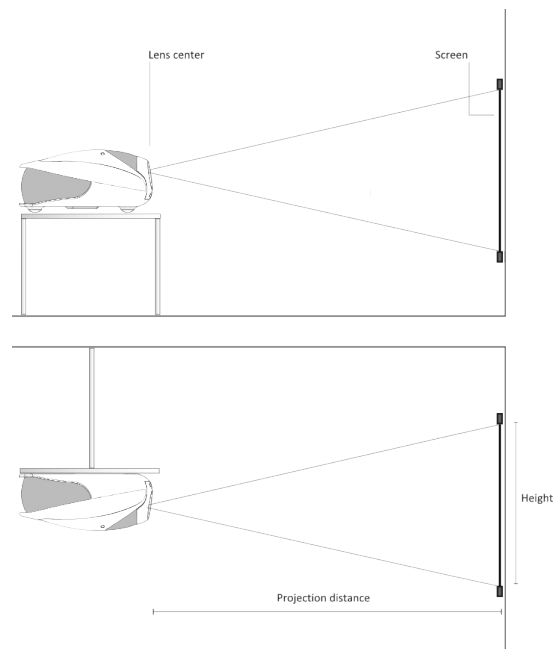
- To fit the bracket unscrew and remove the 3 rubber feet (Do not use the rubber feet to fix the bracket to the projector)
- Attach bracket by using 3 x M6 screws not exceeding 15 mm in length



For ceiling mounting use only SIM2-approved ceiling brackets and adhere to the installation instructions and safety guidelines provided with the bracket. Do not over-tighten the screws.

Orientation

By default, the AR is configured for a Front installation (projector installed upright and in front of the screen). If the projector is installed behind the screen or inverted, you can use the image orientation function of the projector (see “Orientation” on page 25)



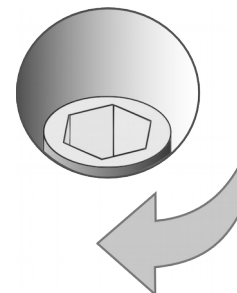
Vertical Lens Shift

Ideally, the projector should be positioned at a right angle to the screen and in such a way that:

- the lens center and screen center are aligned with each other
- the projected image fills the screen perfectly

If it is not possible to position the projector perpendicularly to the projection screen (so that the lens center and screen center are aligned) you can use the mechanical lens control at the top of the projector to shift the projected image vertically:

- insert the provided hex wrench into the vertical lens shift adjuster
- turn the wrench to shift the lens in the desired direction



The AR provides up to 50% of vertical lens shift up. For example, with a 16:9 150 in. diagonal size screen, you can shift the image up to 0.93 m (36.8 in.) above the screen center (see “Projection Distance” on page 33).

Keystone

If the projector is ceiling-mounted and the screen is lower than the projector, you may need to tilt the projector by adjusting the ceiling mount. If you do so:

- the top and bottom borders of the image will be unequal in length
- the sides of the image will be inclined

If the tilt is not excessive, you can use the Keystone function of the projector to correct the image shape. See “Keystone” on page 25.

Note: Keystone correction may cause artifacts in the image and may not be available when displaying specific 3D content (see Table 4.2).

Zoom and Focus

The AR provides motorized Zoom and Focus controls. You can access these adjustments through the remote control directly:

- **F1** key for optical Zoom
- **F2** key for Focus

See “F1-F2 Keys” on page 27 for details.

Connections

Proceed as follows to connect the AR to video sources, control devices, screen control systems, 3D sync emitter and AC power.

When connecting your equipment:

- turn off all equipment before making any connections
- use the correct signal cables for each source
- make sure cables are routed so that people are not impeded or become a trip hazard
- ensure that the cables are securely connected (tighten the thumbscrews on connectors that have them)

Video

Often the sources (Blu-ray Players, Set Top Boxes, Game Consoles and so on) have several outputs. Choose HDMI whenever possible.

- **HDMI** The major benefits of this signal type are:
 - best image quality, because the signal is carried in the digital domain throughout the entire signal path
 - highest available resolution, because video sources can deliver full resolution content via HDMI only
 - availability of 3D content, because most 3D compatible sources deliver 3D content from HDMI only
 - optimization of several image parameters (2D/3D content, color space, aspect, signal range, over scan), thanks to auxiliary information (AVI infoframe) sent by the source device together with the signal.

If your source has dual HDMI outputs, we would recommend direct connection to the projector from one of the HDMI connections and the second HDMI output to the input of an appropriate AV receiver/processor for audio. Sources with a DVI-D output can be connected to the HDMI input of the projector using a suitable DVI-D to HDMI cable. In this case no auxiliary information is sent from the source to the projector.

Note: HDMI uses a code known as HDCP (High-bandwidth Digital Copy Protection), which protects the recorded supports from being copied illegally. The connection between the source and display require that the two devices perform a handshake and exchange code keys before being able to display an image. The InstaPort technology allows a simultaneous pre-authentication of

every attached device at the same it is connected, reducing drastically the time required for HDMI source switching. For this reason you may note a slight delay before the image appears on the screen, but it is perfectly normal.

- **Graphics RGB** Input for Personal Computer and other sources that outputs RGB or YPrPb signals. These sources must be able to provide separate H/V sync or composite H+V sync.
- **RGB/YPrPb** Input for DVD Players, Set Top Boxes and other sources that output one of the following signals:
 - Component (YPrPb)
 - RGB with composite sync on green (RGsB)
 - RGB with HV composite sync

RGB connectors also provides RGB input for SCART RGBS sources. See “**Video**” below and “**RGBS Sync**” on page 25.

- **Video** This is the the input for composite video sources (such as VCR or camcorders). This connector is also the composite sync input for SCART RGBS sources. See “**RGB/YPrPb**” above and “**RGBS Sync**” on page 25.

Control

You can connect the AR projector to a Personal Computer or a control system through one of the following methods:

- RS-232 port, using a standard 9-pin straight serial cable
- RS-232 port, using a USB to serial converter cable. In this case, installation of a device driver provided by the cable manufacturer may be required
- USB port, using a USB Type A cable connector. In this case, installation of a device driver provided by SIM2 may be required – ask your SIM2 Authorized Dealer

Note: RS-232 communications are limited to 15 m (50 ft.), whereas USB are limited to 5 m (16 ft.).

Triggers

Some Home Theater devices can be controlled through a 12 V signal. The projector can output three 12 V (100 mA max) signals:

- TRIG1 for motorized screens control
- TRIG2 and TRIG3 are for motorized screen masks and anamorphic lens motors control. See “**Screen**” and “**Anamorphic Lens**” on page 23 for instructions on how to do configure them from OSD

Note: Three jack adapters are shipped with the projector.

3D RF Emitter

The RF emitter sends the RF pulses that sync the 3D glasses. Proceed as follows to install the emitter:

1. Place the emitter near the projector on a secure surface or use an appropriate mount kit. For maximum range emitter should not be placed on the ground/floor but should be placed at least 10 cm above ground (like on a shelf).
2. Connect the emitter connector to the corresponding **3D Sync Out** output connector in the projector.
3. Once the emitter is connected to the projector, please make sure that the projector is in 3D mode. Check the X sign on the emitter; the red light should be on, indicating that the emitter is functioning.

3D Glasses

Proximity Association with 3D RF emitter

The following procedure has to be done every time the glasses are introduced to new 3D RF emitter. During the proximity association, 3D glasses shall be located within 1 m from 3D RF emitter.

Switch on the glasses (1 short press on the button). LED will change from off to bright, indicating

glasses power on.

Press button for minimum of 1 second.

After 1 second, LED will start to blink with a rate of 1 blink per 2 second.

Release the button.

Successful proximity association is indicated with 6 short LED blinks.

If glasses could not proximity associate LED will change from bright to off and glasses will go in power off state.

Connecting glasses to 3D RF emitter

Once glasses are associated with the emitter, they will automatically connect to that emitter every time they are switched on. If during the operation glasses lost the connection to the emitter, they will automatically try to reconnect to that emitter (LED is blinking with a rate of 1 blink per 2 seconds). If glasses cannot successfully reconnect to the emitter within 60 seconds, LED will change from bright to off and glasses will automatically go in power off state.

Indicating the battery state

If LED flashes every couple of seconds during the operation, battery level is low.

Charging is indicated with lit LED.

Charging the battery

The glasses are shipped with the micro USB to USB Type A cable. To charge the glasses battery, plug the micro USB cable in a computer or other USB device capable of supplying power. LED will remain lit while glasses are charging. When battery is fully charged LED will go off.

For more information on glasses status and transitions, refer to “3D Glasses” on page 18.

Distances from glasses to 3D RF Emitter

The minimum distance from glasses to 3D RF Emitter is 10 m, the maximum depends on how the room is made.

AC Power

Choose the AC power cord that is appropriate in your area among those shipped with the product. Plug the female end of the power cord to the AC receptacle located on the right hand side of the projector (100-240 V AC, 50-60 Hz) and the other end into a grounded AC outlet. An high-quality surge protector is recommended while a UPS is optional.

5. Switching On and Off

Switching On

1. Turn on the main power switch on the right hand side of the projector. The projector enters the low power Standby status. The indicator light on the left hand side of the projector turns red and the status display next to it shows **..**
2. Press any of the numeric keys (**0-9**) on the remote control or the **I/O** button on the projector keypad to switch on the projector.
3. The indicator light turns green and red and the status display shows **88** for a while.
4. When the projector is ready for use an image appears on screen (this can take approximately one minute).
5. If a valid signal is detected, an image appears on the screen, otherwise a black screen with a “No Signal” message is displayed.

Switching Off

1. Press and hold the **Off** key on the remote control or the **I/O** button on the projector keypad.
The indicator light flashes green and red to indicate that the projector is cooling down. Cooling fans remain on for approximately four minutes to cool the lamp. In the meanwhile the projector cannot be turned on again.

2. After cooling is complete the projector enters Standby status. The indicator light turns solid red and the status display turns black, unless an error or warning code is displayed.

Warning: Wait for the cooling fans to turn off before turning off the main power switch or unplugging the projector.

6. Operation

Viewing 3D Content

3D stereo visualization offers clear and sharp 3D images thanks to 3 chip DLP Imaging technology. This technique achieves channel separation using Xpand active shutter glasses.

- Active shutter glasses turn on and off in rapid succession and stop light reaching your eyes. The glasses are synced using a RF emitter connected to the projector.
- When an image is destined for the left eye, the right lens of the glasses goes dark preventing any of the image for your left eye from reaching the right eye. The left lens is completely open.
- The process repeats very quickly (up to 144 times per second) for each eye.
- The human brain combines the two images and creates the illusion of 3D.

Important: Read 3D safety information at the beginning of this User Manual before viewing 3D content.

Your AR projector is capable of displaying 3D Images of exceptional high quality; to ensure maximum enjoyment and trouble free viewing we recommend the following guidelines.

- You will need a Blu-ray player or equivalent that is capable of playing 3D content and is HDMI 1.4 compliant plus of course a copy of a  film that has released on Blu-ray in 3D. Only films with the 3D logo are compatible.
- Ensure your player has the latest software installed.
- If your Blu-ray Player has dual HDMI outputs, we would recommend direct connection to the projector from one of the HDMI connections and the second HDMI output to the input of an appropriate AV receiver/processor for audio.
- If you are routing all of your HDMI sources through an AV receiver/processor the product must be 3D compatible and HDMI 1.4 compliant. Ensure your equipment has the latest firmware installed (refer to the manufacturer for further information).
- Other 3D content providers are available such as Satellite Broadcasters, Cable providers, VOD and Streaming services, gaming consoles such as PlayStation 3. Details of the 3D service provided can be obtained by contacting your local/regional operators.

To watch 3D Content via Blu-ray

- Switch on the AR and all other relevant products such as Blu-ray player and AV receiver and ensure the correct inputs have been selected.
- Insert your 3D Blu-ray disc and press play, follow the on-screen menus.
Note: Some discs contain both the 3D and 2D versions of the film, ensure you select the correct one.
- Switch on your 3D glasses. Refer to the instructions supplied with the glasses to ensure correct operation.
- The projector will automatically detect the 3D signal and you will be prompted to wear your glasses via the OSD.

To Watch 3D Content via Satellite, Cable and Games Console

- Switch on the AR and all other relevant products such as Satellite receiver and AV receiver and ensure the correct inputs have been selected.
- Select the appropriate 3D channel.

- If the projector displays two distorted images side by side or one on top of each other, select the 3D menu by pressing **II** on the remote control.
- Select 3D mode via the OSD (this will expand the menu). Select the correct version of the 3D format using the up/down/left/right keys.
- Switch on your 3D glasses. Refer to the instructions supplied with the glasses to ensure correct operation.

Important: All 3D technologies currently available today filter out a large amount of light. Therefore it is perfectly normal for the 3D image to be noticeably dimmer when compared to the picture in 2D mode. Adjust the 3D picture and lamp settings accordingly for 3D viewing.

3D Glasses

Follow the simple instructions below to operate your 3D glasses.

Turning ON your glasses

Shortly press button once (see “3D Glasses” on page 11). You will see the red LED indicator change from off to bright, and then turn off again. You are now in SIM2 Cinema mode and the glasses and the projector are synced. If, for any reason, the glasses behave differently, reset them (see below).

If glasses cannot find 3D RF emitter within few seconds, LED will ramp from bright to off and glasses will automatically shut down. If glasses find the RF emitter they will automatically connect to it, indicating by lit LED for 1 second.

Turning OFF Your Glasses

Shortly press button once (see “3D Glasses” on page 11). You will see the red LED indicator change from bright to off. Glasses will shut down.

Note: For charging the battery to “3D Glasses” on page 15.

Operating Modes Menu

Additional adjustments are required:

- to view 3D content
- to select the desired Optical Color Filter

When HDMI1 or HDMI2 is selected and a valid HDMI signal is present, press **II** on the remote to access the specific OSD menu.

Optical Filter Type

- **Normal** selects the optical color filter that increases image brightness. Use this settings when HDTV primaries are desired
- **DCI** selects the optical color filter that enables the larger color gamut. Use this settings when DCI primaries are desired

3D Mode

- **3D** activates 3D mode and the RF emitter will be activated. Automatic selection is determined by the source sending the projector the correct information. If the incorrect 3D image is displayed after approximately 10 seconds go to the 3D Input Format and manually select the correct 3D mode for the incoming signal.
- **2D** display mode for normal 2D material. 3D Input Format adjustment is unavailable. PureMotion adjustment is available.

3D Input Format

The AR checks AVI infoframe data and input signal resolution in order to determine the appropriate 3D format. When automatic detection of 3D format is not possible, choose one of the following options:

- **(S-S) Side by Side** Left and right halves of the image are separated, rescaled and displayed. This mode should be applied to 3D images composed of two stereoscopic images compressed to half of their original horizontal resolution and sent simultaneously.
- **(T-B) Top and Bottom** Top and bottom halves of the image are separated, rescaled and displayed. This mode should be applied to 3D images composed of two stereoscopic images compressed to half of their original vertical resolution and sent simultaneously.
- **(F-S) Frame Sequential** This mode should be applied to 3D images that consist of a sequence of alternating frames wherein each successive frame carries the image meant for one or the other eye.
Note: You may need to change the order in which left and right frames are displayed. See “3D Left/Right” below.

3D Left/Right

Use this setting if the 3D effect has an uncomfortable look about it. This setting will change the perception of depth. It is important that the image destined for the left/right eye reaches the correct eye. Sometimes the easiest way to check is to pause the program content to check. For the effect to change you must press **Esc** to exit from the OSD.

- **Normal** Left and right frames are displayed in the native sequence.
- **Swapped** Left and right frames are swapped. Use this setting if image does not give the correct sense of depth.

Supported 3D Video Formats

Compatible 3D formats are listed in Table 4.1.

Table 4.1

Signal	3D Format	HDMI 1.4a	DVB
1920 x 1080p @ 23.98/24 Hz	Frame Packing	Yes	
	Side by Side		Yes
	Top and Bottom	Yes	Yes
1920 x 1080p @ 25 Hz	Side by Side		
	Top and Bottom		
1920 x 1080p @ 29.97/30 Hz	Side by Side		
	Top and Bottom		
1920 x 1080p @ 50 Hz	Side by Side		
	Top and Bottom		
1920 x 1080p @ 59.94/60 Hz	Side by Side		
	Top and Bottom		
1920 x 1080i @ 50 Hz	Side by Side	Yes	Yes
	Top and Bottom		
1920 x 1080i @ 59.94/60 Hz	Side by Side	Yes	Yes
	Top and Bottom		
1280 x 720p @ 50 Hz	Frame Packing	Yes	
	Side by Side		Yes
	Top and Bottom	Yes	Yes
1280 x 720p @ 59.94/60 Hz	Frame Packing	Yes	
	Side by Side		Yes
	Top and Bottom	Yes	Yes

Some adjustments may not be available, depending on the 3D signal format. Refer to Table 4.2 for details.

The items that cannot be adjusted are not displayed in the menu. When Aspect is not available is it fixed at **Normal**. When Keystone is not active, its value is 0 (no correction).

Table 4.2

3D Format	Signal	Aspect	Keystone
Frame Packing	1920 x 1080p @ 23.98/24 Hz	●	●
	Others	-	-
Side by Side	All	● ¹	-
Top and Bottom	All	-	-

Notes:

1. except Panoramic

Input Menu

The desired input can be selected by pressing the corresponding number key on the remote control or through the **Input** menu.

- To enter the **Input** menu press:
Key **0** on the remote control or **Source** on the projector keypad.
- To select an input press the corresponding number on the remote control, or:
 - ▲ or ▼ on the remote control or on the keypad to highlight the input
 - on the remote control or on the projector keypad to confirm
- To turn off the **Input** menu press:
Esc on the remote control or on the keypad

Each time an Input is changed an information window appears on the screen and remains there until a valid signal is detected (this feature can be disabled in the **Setup** section of the main menu, see “**Source Information**” on page 27).

If no signal is detected on the selected input, an appropriate message is displayed.

Main Menu

The main menu gives access to all projector adjustments. It is divided in four main sections (**Picture**, **Image**, **Setup** and **Menu**) with various item and submenus in each of them.

- To enter the main menu and select the desired section press:
MENU + or **MENU -** on the remote control or on the keypad
- To enter a submenu (when available) press:
● on the remote control or on the keypad
- To return to the previous menu when in a submenu press:
MENU + on the remote control or ● on the keypad
- To select menu items press:
MENU + or **MENU -** on the remote control or on the keypad
- To turn off the main menu press:
Esc on the remote control or on the keypad
- To change settings or select an item on a list press:
◀, ▶, ▲ or ▼ on the remote control or on the keypad

Note: Depending on the selected input source and signal characteristics, some adjustments may not be available.

Picture and **Image** menu sections provide access to most commonly-used projector adjustments. Note that:

- you can enter these sections only when an image is displayed
- the controls in these sections only operate on the active input
- when you select another input or change mode (2D/3D), all the settings in these sections are automatically saved

- each time you select an input or change mode (2D/3D), the previously saved settings for that input or mode will be automatically recalled
- if a finer control over saved settings is desired, use the Memory management function (see “P” on page 27)

Setup and **Menu** sections provide access to installation and OSD adjustments. The settings in these sections are global (for all inputs and modes, not just the active one).

Picture

This menu section provides access to common image quality adjustments. Adjustments not available for a given input are not displayed in the menu (See Table 4.3 for details).

Table 4.3

	Video	RGBS YPrPb	RGB Graphics	HDMI 1/2
Brightness	•	•	•	•
Contrast	•	•	•	•
Color	•	•	•	• ³
Tint	• ¹			
Sharpness	•	•	•	•
Filter	•			
Sharpness Mode		•	•	•
Cinema Mode	•	•		
Video Mode				
Noise Reduction	•	• ²	•	•
Mode	•	•	•	• ⁴
DynamicBlack	•	•	•	• ⁴
PureMotion	•	•	•	• ⁴

Notes:

1. NTSC only

2. YPrPb Interlaced only

3. YPrPb only

4. 2D only

Brightness

Use this control to adjust the darker areas of the picture (black level), without affecting bright areas. Increasing the value will give more detail in darker parts of the picture. For correct adjustment it may prove useful to display a gray scale test pattern with at least twenty bands. Now try to reduce the brightness of the black band as much as possible while ensuring that it can still be distinguished from the adjacent band with brightness slightly higher than black. Alternatively use a scene composed of black objects alongside other dark colored objects and try to ensure that all the objects can be separately identified.

Contrast

Use this control to adjust the image's white level without affecting its dark areas. For correct adjustment it may prove useful to display a gray scale test pattern with at least twenty bands. Now try to increase the brightness of the white band as much as possible while ensuring that it can still be distinguished from the adjacent band with brightness slightly less than white. Alternatively use a scene composed of well-lit white objects surrounded by light objects with lower level lighting, and try to ensure that all the objects can be separately identified.

Color

This control (also called Saturation) increases or decreases the picture color intensity. When set to zero, color images are shown in black and white. Increase the value until the colors appear natural: suitable references include skin tones and the green in grass in landscape shots.

Tint

This adjustment controls the purity of colors. Basically it determines the red-green ratio of the picture. Decreasing the value increases the red content of the image, increasing it increases the green content. For this adjustment use skin tones or a test card image with color bars as a reference. This adjustment is primarily used for NTSC sourced material.

Sharpness

This adjustment increases or decreases the level of picture detail. When the sharpness value is reduced the image details appear less pronounced, while increasing the value raises image definition, making the outline of objects sharper. Note that an excessively large value may result in a noisy picture and the outline of images will have a high amount of edge enhancement.

Sharpness Mode

This adjustment selects the type of processing associated with sharpness adjustment. For an interlaced or progressive video signal, set to Video; for PC graphics signals, set to Graphics. If the **Video** option is set, it applies **Noise Reduction** to increase the clarity of the image.

Noise Reduction

This adjustment lets you choose the value of the noise reduction filter.

Filter

This adjustment selects the mode in which the input signal is processed. Selecting the most appropriate value for a given input signal ensures the best horizontal and vertical definition and makes the picture sharper.

Cinema Mode

Use this option if the video signal source is a movie film (obtained from a Telecine device with 3:2 or 2:2 pull-down). In this case a deinterlace algorithm optimized for this type of signal is applied. Selecting **Auto** mode causes the deinterlacer to analyze signal characteristics and apply the correct deinterlace mode automatically.

Mode

When viewing 2D contents, you can choose between two user modes:

- **PureMovie** allows a pure and unprocessed presentation of the signal coming from your source. You can then choose whether or not to engage the DynamicBlack function
- **PureMotion** specifically created for fast-action material, yields smooth motion, free from smear or judder

Note: When viewing 3D contents, the PureMotion3D mode is automatically activated.

DynamicBlack

This function improves the level of black and increases the depth and the detail of the image especially in parts with low and medium brightness. DynamicBlack regulates light based on the informative content of the image being projected. Available settings are **Off**, **Video** and **Movie**. **Off** is recommended when using test pattern for measurement or calibration purposes.

PureMotion

Activates the motion estimation/motion compensation function, which suppresses motion judder. Settings available are **Off**, **Low**, **Medium**, or **High**. Default setting is **Low**.

Image

This menu section provides access to some advanced image settings. Adjustments not available for a given input are not displayed in the menu. See Table 4.4 for details.

Table 4.4

	Video	RGBS YPrPb	RGB Graphics	HDMI 1/2
Aspect	•	•	•	•
Color Management	•	•	•	•
Gamma Correction	•	•	•	•
Over scan	•	•	•	
Position	•	•	•	
Frequency		•	•	
Phase		•	•	
Y/C Delay	•			
Signal Range				• ¹
Lamp Power	•	•	•	•

Notes:

1. when RGB or AVI infoframe missing or incomplete

Aspect

This adjustment changes the dimensions and aspect ratio (relationship between width and height) of the displayed image. There are six default aspects available and three user aspects (with user-settable parameters). You can select a different aspect for each source: the selected aspect ratio will be automatically applied the next time the relative source is displayed. You can also select the required aspect ratio from the remote control by repeatedly pressing **◀□▶** or by pressing **◀□▶** and one of the number **1-9**. The following aspects are available:

- **Normal** projects the image occupying the full height of the screen while maintaining the aspect ratio of the input signal. When the input signal aspect ratio is 4:3, black vertical bands are displayed on the right and left of the picture.
- **Anamorphic** correctly displays a 16:9 image with over scan.
- **Letterbox** displays a 4:3 letterbox image (source signal with black bands above and below the picture) in such a way that it fills the 16:9 screen and maintains the correct aspect. This aspect ratio is also recommended when using Anamorphic Lenses.
- **Panoramic** widens the 4:3 image cutting off a strip from the top and bottom. Panoramic is ideal for displaying a 4:3 image on the 16:9 screen of the display.
- **Subtitles** moves the image upwards, making enough space for the subtitles to be seen.
- **Pixel to Pixel** makes a pixel to pixel map of the image, without introducing any alteration or over scan to adapt it to the screen. The image is projected in the center of the screen and if its horizontal and vertical dimensions are smaller than the display, it is bordered by vertical and horizontal black bands.
- **User 1, 2, 3** can be used if none of the preset formats are satisfactory. You change the size and shape of the image (and hence the aspect ratio) through the **Horizontal** and **Vertical** adjustments.

Note: With Progressive HDMI signals of any resolution, the horizontal adjustment of the User aspect works only for negative values.

You can assign one or more trigger outputs to each aspect ratio. Those triggers are then activated by selecting that aspect ratio:

- **Screen** controls TRIG2 and should be used for the control of a screen masking system
- **Anamorphic Lens** controls TRIG3 and should be used for the control of a motorized anamorphic lens mount

See “Connections” on page 10 for a description of Triggers and their functions.

Color Management

This menu is divided in three sections. Choose:

- **1** on the remote control to activate the first column on the left (**Primaries**), Here you can select one of the five preset settings for primary color coordinates:
 - **Native** the projector native primary color coordinates
 - **HDTV, EBU, SMPTE-C** the primary color coordinates defined by the standards
 - **Auto** the appropriate primary color coordinates for the current input signal (automatically identified)

Note: When using Live Color Calibration software, two additional custom modes will become available. Live Color Calibration lets you define a custom color gamut in terms of primaries (red, green and blue), secondaries (yellow, cyan and magenta) and white color coordinates. Therefore when one of these custom modes is selected, sections 2 and 3 are disabled.

- **2** on the remote control to activate the central column (**White Point**), where you can select one of the nine preset settings of the white point:
 - **Standard** the white point associated to the value selected in column **1**
 - **High, Medium, Low** default white balance levels
 - **Native** the projector native white point
 - **D75, D65, D50** the C standard CIE illuminants
 - **User** a white point that can be adjusted according to your personal preferences as follows:
 - press the number **3** on the remote control to activate the User column
 - position the white point within the CIE chromaticity diagram

Note: To accurately set the Primaries and White Point you will need access to specialized color measuring equipment and also the knowledge to use such equipment. Alternatively, contact the SIM2 Authorized Dealer where you purchased your product and ask them to arrange for an ISF certified calibrator to set up your projector.

Gamma Correction

Determines the projector response to the gray scale, emphasizing or attenuating the different grades of brightness (blacks, dark, medium and light grays, whites) in the projected image. Choose the setting that is appropriate to the type of video source, the ambient lighting and your subjective preferences. The available settings are:

- **Natural** the default preset curve, appropriate for most situations
- **Dynamic** the preset curve that increases the detail in the dark areas of the image
- **Parametric** that lets you select the coefficient that determines the curve. Coefficient values smaller than 2.2 emphasize the detail of dark images, while reducing overall contrast. Values larger than 2.2 increase overall contrast, but reduce the detail of dark areas. For the most common video sources, if you set the parameter to 2.2 you obtain pleasant and well-contrasted images.

Note: When using Live Color Calibration software, Natural and Dynamic preset curves can be replaced by two custom curves.

Overscan

Removes the outer edges of the image and magnifies the remaining portion of the image to fill the display area. It is useful with sources that output images with imperfections around their borders.

Position

Use this adjustment to position the image vertically and horizontally. These parameters do not normally require adjustment because the projector checks the input signal and automatically sets the most suitable values. However, if the image is not perfectly centered it may prove useful to make the projector repeat the input signal analysis and image positioning, activating the automatic adjustment procedure with the **Auto** key on the remote control. When this procedure is requested it is helpful to have a white or light colored background in the current picture on the screen.

Frequency/Phase

These adjustments, available for progressive signals and for signals from a PC, ensure correspondence between the number of pixels making up the signal and the number of pixels that make up the projected image. The projector usually detects the most suitable values but, if the image is disturbed (loss of resolution between equidistant vertical bands or instability and lack of detail in thin vertical lines), you can press **Auto** on the remote control to activate the automatic adjustment function. If the automatic procedure fails to achieve the required effect, enter the Frequency and Phase values manually and move sufficiently close to the screen to observe the effects of the adjustments.

Y/C Delay

Where Video signals are concerned, use this adjustment to correct horizontal color misalignment within the projected image. For a given video standard (for example PAL or NTSC) the stored value does not normally require further adjustment, unless the source or connection cable is changed.

Signal Range

Determines the signal data range of HDMI signals. It is available when the HDMI signal comes from a RGB source or when the AVI (Auxiliary Video Information) infoframe of the HDMI signal is missing or inconsistent.

- **Auto** determines the signal range using the information provided by the AVI infoframe of the HDMI signal. If the AVI infoframe is missing or inconsistent, the projector uses values 0-255. Auto (which is the default setting) usually selects the correct signal range but you can force either 16-235 or 0-255
- **16-235** sets black at R, G, B = 16 and white at R, G, B = 235, to match the luminance values of digital component standards
- **0-255** sets black at R, G, B = 0 and white at R, G, B = 255

Lamp Power

Use this control to adjust the lamp output level in 10 W increments from 280 W to 350 W. Lower values decrease brightness but extend the life of the lamp.

Setup

This menu section provides access to installation adjustments.

Orientation

Selects the orientation of the projected image. Available settings are: Floor, Ceiling, Floor Rear and Ceiling Rear.

Keystone

This adjustment compensates the distortion resulting from the angle of projection.

Note: Keystone may cause artifacts in the image and may not be available when displaying specific 3D content (see Table 4.2). SIM2 recommends that you use this feature only when necessary.

RGBS Sync

This setting indicates where the sync relative to the RGB signal is supplied. Choose:

- **HV** when the HV connector is used for the RGBS sync signal
- **Video** when the RGB sync signal originates from a SCART outlet (via the SCART/R-G-B-sync conversion cable). In this case the R, G and B signals are connected to the specific RCA connectors and the sync signal is connected to the Video input

Projection Lens

To set the custom settings for zoom, focus, vertical and/or horizontal shift is necessary to enter the SETUP menu, Projection Lens or more quickly by pressing the F1 button on the remote control.

Zoom: see zoom on page 27

Focus: see focus on page 27

Vertical Picture offset: vertical compensation for the center shift of image (see note).

Lens Zoom-Focus Calibration: Perform zoom and focus motors calibration

There is the possibility to save the settings for the positions of zoom, focus, vertical shift corresponding to a video format for each type of signal, for each input of the projector. (see “Memories” on page 27)

Note: In the case of off-axis projection, zooming in and out, you get a changing of the center of the image corresponding to the amount of the off-axis. This changing amount must be compensate with the vertical and/or horizontal shift.

With some setting positions, the range of lens shift may be restricted, even though the unit is installed within the specified parameters.

Test Patterns

Enters internal test patterns, that are needed for installation or calibration purposes. Press ▲ or ▼ on the remote control or on the projector keypad to cycle through the test patterns. To exit test patterns press **Esc** on the remote control or on the projector keypad.

Note: OSD menus are not available while test patterns are displayed.

Initial Settings

Resets most projector settings to their factory presets. The settings in the following list are not reset:

- Serial Number and Model name
- Lamp Hours
- User Memories (including Memories Names)
- Source List (including Source Names)
- Orientation
- Zoom and Focus
- Y/C Delay
- Position

Note: Before performing this operation, a confirmation message appears. Press ► to Confirm and continue with the reset or press ◀ to Cancel.

Menu

This menu section provides access to OSD adjustments.

Language

Selects the desired OSD language. The AR can display the menus in English, Italian, French, German, Spanish, Swedish, Portuguese, Russian and Simplified Chinese.

Source List

Allows customization of the Input list. To change the status of an input:

1. highlight the input
2. use the ◀ and ► keys to **Enable** or **Disable** the input.

Disabled inputs are not shown in the input selection menu and cannot be selected via keys 1-5 of the remote control.

Important: Active inputs are numbered according to their position in the list. Changing the status of an input modifies the numbers assigned to the inputs that follow (which is undesirable if you are using a custom control system). You can change the label of each input (for example assigning the name of the device it is connected to). To rename an input:

1. highlight the input
2. press ● on the remote control to enter Text Entry menu
3. use the ◀ and ► keys to underline the character you would like to change
4. enter the desired symbol using keys 1-9 on the remote control

5. cycle through steps 3 and 4 until you have finished entering your custom label
6. press ● on the remote control to save the label you have entered, or **Esc** to discard your changes

F1-F2 Keys

You can have direct access to some functions through the **F1** and **F2** keys on the remote control. The default assignments are: F1 = Zoom, F2 = Focus.

To assign a different function to one of these keys:

1. highlight the function using ▲ or ▼
2. press **F1** or **F2** to set the key assigned to that function.

Available functions are:

- **Zoom** Activates the optical zoom control, where the ◀ and ▶ keys zoom out and in respectively. By pressing ● on the remote control a specific internal test pattern is displayed. This is the default function for key **F1**.
- **Focus** Once selected, ◀ and ▶ allow the image to be focused. By pressing ● on the remote control a specific internal test pattern is displayed. This is the default function for key **F2**.
- **Blank** Turns off the video signal on-screen. Press **Esc** to restore video to the screen.
- **Gamma correction** Activates Gamma Correction quick menu. Use ▲ or ▼ to cycle through available Gamma tables.
- **Freeze** Turns on or off picture still mode.

Source Information

When enabled (**Yes**), the projector displays information about the current input signal every time a new signal is detected. If disabled (**No**) no information is displayed.

Help Menu

When enabled, the Help bar (providing tips for menu navigation) is displayed at the bottom of the main menu.

OSD Background

Selects the background of the OSD (**Clear** or **Solid**).

OSD Position

Changes the location for the display of the Main Menu OSD. To select one of the nine preset positions:

- press **1-9** on the remote control

To create a custom position:

1. select the preset that is closest to the desired position
2. use ◀, ▶, ▲ or ▼ for a finer adjustment

Note: Avoid locations too close to corners or edges to prevent cropping of larger menus.

OSD Display Timeout

Sets duration OSD is visible after the last event. Adjust in 10 second increments from 10 to 200 seconds.

Presets

You can store and recall at a later time up to six different sets of values (preset) per input type, so that you have customized setups for each viewing condition. Each memory saves the main image settings that are available for a given input type. Refer to Table 4.5 for details.

Table 4.5

Settings	Video	RGB/YPrPb Graphics RGB	HDMI 1/2 2D	HDMI 1/2 3D
Brightness	●	●	●	●

Contrast	●	●	●	●
Color	●	●	● ¹	● ¹
Sharpness	●	●	●	●
Sharpness Mode		●	●	●
Filter	●			
Cinema Mode	●	●		
Noise Reduction	●	●	●	
DynamicBlack	●	●	●	
PureMotion	●	●	●	
Aspect	●	●	●	● ²
Color Primaries	●	●	●	●
Color White	●	●	●	●
Gamma	●	●	●	●
Lamp Power	●	●	●	●
Zoom	●	●	●	●
Focus	●	●	●	●
Vertical Picture Shift	●	●	●	●
3D Input Format				●

Notes:

1. YPrPb only

2. See Table 4.2 on page 20 for more information

The Memory Management function menu page is activated by pressing the **Memory** key on the remote control.

Save Current Settings

To save the current settings for the active input in Memory (1-6):

1. press the Memory key on the remote to display Memories menu
2. press ▲ and ▼ to highlight the desired memory
3. press ● to open the corresponding pull-down menu
4. press ▲ and ▼ to highlight **Save current settings**
5. press ► to execute

The confirmation message “**Current settings saved in Memory (1-6)**” is displayed. The icon at the left of the memory name now indicates that custom values are stored. If desired, repeat the steps above to save additional memories in different locations.

Note: You can change the name of each memory. See “**Rename**” below for details.

Recall

To recall the settings for the current input you have previously saved in a Memory:

1. press the **Memory** key on the remote to display Memories menu
2. press ▲ and ▼ to highlight the desired memory
3. press ► to execute

The confirmation message “**Memory (1-6) recalled**” is displayed. The last memory you have recalled becomes the active memory for the current input (the memory that is automatically recalled each time that input is selected). If this behavior is not desired:

1. recall the desired memory as described above
2. select **Auto** (the line numbered 0 in the Memory menu) and press ►

Note: If you are using a custom control system, discrete codes for recalling Memories are available.

Save Initial Settings

To restore factory-default settings for a previously saved memory:

1. press the Memory key on the remote to display Memories menu
2. press ▲ and ▼ to highlight the desired memory

3. press ● to open the corresponding pull-down menu
4. press ▲ and ▼ to highlight **Save initial settings**
5. press ► to execute

The confirmation message “**Initial settings saved in Memory (1-6)**” is displayed. The memory icon now indicates that the memory does not store custom values.

Note: The other memories are unaffected.

Rename

To change the name of each memory:

1. press the Memory key on the remote to display Memories menu
2. press ▲ and ▼ to highlight the desired memory
3. press ● to open the corresponding pull-down menu
4. press ▲ and ▼ to highlight **Rename**
5. press ● on the remote control to enter Text Entry menu
6. use ◀ and ▶ to underline the character you would like to change
7. enter the desired symbol using 1-9 on the remote control
8. cycle through steps 6. and 7. until you have finished entering your custom label
9. press ● on the remote control to save the label you have entered, or **Esc** to discard your changes

Important: When you enter the Memories menu, a copy of the current setting for the active input is saved in a temporary memory, numbered 0 and called **Auto**. After recalling one or more memories for the current input, you will be able to revert to **Auto** settings at any time, provided that you do not exit Memory menu by pressing **Esc**.

Info

Displays a summary of the projector settings

This function is displayed by pressing **Info** on the remote control.

Quick Menus

The quick menus provide access to the main adjustments that affect image quality without opening the main menu. The adjustments **Brightness**, **Contrast**, **Color**, **Tint**, **Sharpness**, **Filter** and **Noise Reduction** will appear one after the other in the lower part of the screen by pressing ▲ or ▼.

Messages

The following messages may appear on your screen:

- **No signal.** The projector does not recognize any signal applied to the selected input. In this case:
 - make sure the selected input is connected to a video or graphic signal and that this source is functioning correctly.
 - check the condition of the cables used to connect the system to the various sources.
 - make sure the video or graphic signals supplied by the source are compatible with the system technical specifications and, in particular, with those of the selected input.
- **Out of range.** This message appears when either the resolution or the vertical/horizontal frequency of the input signal exceeds system specifications (for example a QXGA graphic signal).

Troubleshooting

The projector does not turn on

- Make sure the main power switch (at the rear of the projector) is in the On position.
- Ensure the projector is connected to an electrical outlet and the outlet is working.
- Check the fuse located near the AC receptacle on the right hand side of the projector.
- Replace the fuse with one of the same type and rating (T 10 A L H 250 V).
- If the fuse blows repeatedly, contact an authorized technical center.

Lamp does not turn on

- If the projector is cooling down (indicator light flashing green and red), wait until cooling is complete. After Standby mode is entered (indicator light solid red), turn projector on again.
- The lamp may have overheated. Check that the air inlets and outlets are not blocked and that room temperature is within specifications. Wait at least 30 minutes and then turn the projector back on.
- Check the Status Display for any errors. Contact your SIM2 Authorized Dealer for assistance if the error persists.
- Lamp may need replacement. Contact your SIM2 Authorized Dealer for assistance.

“No Signal” Message is displayed

- Make sure the correct Input is selected.
- Make sure the desired video source is on and its output is configured correctly.
- Check cable connection from the desired video source to the projector.

Remote control does not work

- When using the remote, point it directly at the front of the projector.
- Remove any obstacles between the remote and the infrared sensor in the front of the projector.
- Make sure the remote control batteries are in good condition and are inserted correctly.

3D content cannot be displayed

- Turn the projector off and the 3D source off.
- Ensure your source is 3D compatible and the 3D output is enabled. Ensure 1080p resolution and 24 Hz options are enabled in the 3D source to enjoy full HD 3D viewing. (See your 3D source user guide).
- Turn the projector on first and then turn the 3D source on. Try to play 3D content again.
- Ensure your glasses are switched on and set to SIM2 3D mode.

3D content is displayed as two near-identical images

- If they are next to each other, press the 3D key on the remote control and then choose Side by Side 3D Input Format.
- If they are one above the other, press the 3D key on the remote control and then choose Top and Bottom 3D Input Format.

3D image lacks depth

- Press the 3D key on the remote control, highlight the 3D Left/Right setting and then choose the value (either Normal or Swapped) that restores the correct sense of depth in the image.

HDMI Connection Issues

- 3D requires a substantial data throughput therefore use a good quality High Speed HDMI cable – with or without Ethernet.
- Avoid using excessively long HDMI cables as this contributes to poor connection issues.
 - Cable lengths over 10 m are not recommended.
 - Avoid using HDMI cables that have illuminated plugs or active systems that draw on the 5 V supply rail. If the 5 V drops lower than 4.7 V you will not get any picture!

- Sparkles of random color on screen. This usually means that the cable doesn't have the bandwidth capabilities to handle the signal.
 - Try changing the cable or use a shorter cable.
 - Try using a lower resolution for example if you are using 1080p try switching to 1080i. If this solves the problem the cable is the likely culprit.
- When switching inputs on either the projector or the AV Receiver/Processor sometimes the picture is either green or pink. This usually means the incorrect color standard has been selected. This is sent automatically every time you switch HDMI inputs but sometimes the information is not received by the display.
 - Reselect input, if problem persists disconnect the HDMI cable to either the display or output of the receiver and reconnect – this instigate a hot-plug detect and should resolve the issue.
 - If the problem persists check with your AV receiver/processor/Blu-ray manufacturer for the latest software updates.
 - Try a different HDMI cable.
- Snowy picture. This means that the HDCP system has not authorized the playback of the material.
 - Usually re-selecting the input will resolve the problem.
 - If the problem persists then it is more than likely to be cable related. Try other cables.
 - Try bypassing other product in the system chain. For example connect the Blu-ray player direct to the projector.

Specifications

Projection Type	Digital Light Processing (DLP), 3-chip DLP Type: 0.95 in., 1920 x 1080, DC4
Optical Engine	Die cast, based on SIM2 patented ALPHAPATH, with motorized Sliding Filter System (SFS)
Projection Lens	High-quality glass Throw ratio: ▪ T1: 1.37-1.66:1 ▪ T2: 1.75-2.48:1 ▪ T3: 2.54-3.90:1
Lens shift	Manual (Vertical, up to +50% of image height with standard lens) – Electronically and programmable
Zoom and Focus	Motorized and memorizable (controlled via remote control and OSD)
Lamp	High pressure 350 W (dimnable to 280 W)
Inputs	▪ 1 x Composite Video (RCA) ▪ 1 x Component - Analog YPrPB/RGBS (3 x RCA) ▪ 1 x RGBHV (D-Sub 15-pin female) ▪ 2 x HDMI 1.4 with 3D, DeepColor and InstaPort
Controls	▪ IR remote ▪ Keypad on rear panel ▪ RS-232 Serial commands
Communication Ports	▪ 1 x USB 1.1 (type A) for serial commands and firmware upgrade ▪ 1 x RS232 (female D-Sub 9-pin) for serial commands and firmware upgrade
Outputs	▪ 1 x VESA DIN-3 for 3D sync Out ▪ 1 x 12 V 100 mA jack for system on/off ▪ 1 x 12 V 100 mA jack for 4:3/16:9 aspect ratio ▪ 1 x 12 V 100 mA jack for anamorphic lens driving
Frequency	▪ Horizontal: 15-80 kHz ▪ Vertical: 24-30 Hz and 48-120 Hz
Video Standards	▪ Composite: NTSC 3.58/4.43, PAL B/G/H/I/M/N/60, SECAM (automatically selected) ▪ Components/RGBHV: 480i, 576i, 480p, 576p, 1080i 50/60, 720p 50/60, 1080p 24/25/30/50/60, VGA, SVGA, XGA, SXGA, UXGA ▪ HDMI: 480i, 576i, 480p, 576p, 1080i 50/60, 720p 50/60, 1080p 24/25/30/50/60, VGA, SVGA, XGA
3D Formats	▪ All HDMI 1.4a mandatory formats ▪ All DVB formats ▪ Others (refer to Table 4.1)

Aspect Ratios	Normal (Full Height), Anamorphic, Letterbox, Panoramic, Pixel to pixel, Subtitle, User (3)
Color Gamut	Includes REC 709 and DCI: Fully adjustable with presets (HDTV, EBU, SMPTE-C, DCI)
Power	- Requirement: 100-240 V AC $\pm 10\%$ @ 48-62 Hz - Operating Consumption: 440 W - Standby Consumption: < 1 W
Size and Weight	- Depth: 455 mm (17.9 in.) - Width: 460 mm (18.1 in.) - Height: 210 mm (8.3 in.) - Weight: 13 kg (28.6 lb.) approx.
Temperature	- Operating: 10° C to 35° C - Storage: -15° C to 55° C
Certifications	- Low Voltage Directive: EN 60950-1/UL60950 - EMC Directives: EN 55022, EN 55022 A1 A2, EN61000-3-2, EN61000-3-3

Projection Distance

1.78:1 (16:9) Screen

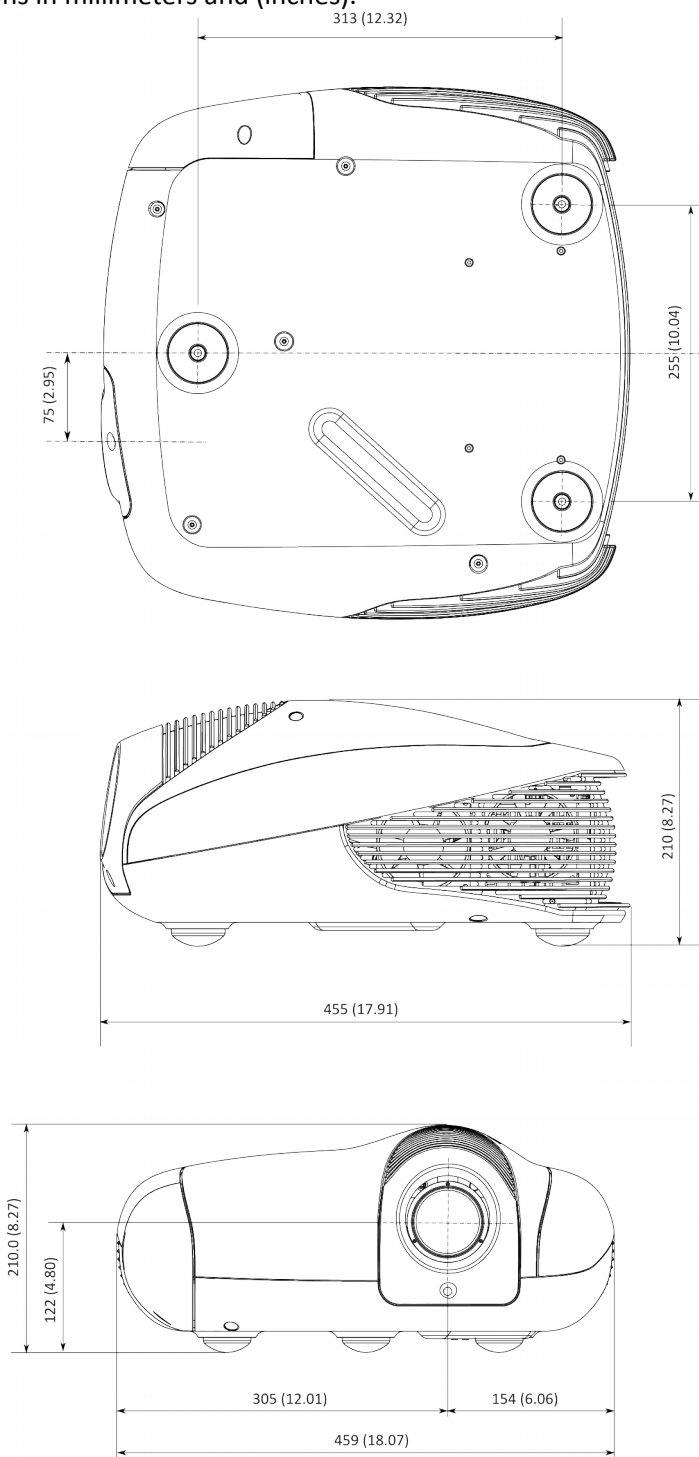
Screen			Projection Distance						Vertical Offset (m)
			T1 (1.37-1.66:1)		T2 (1.75-2.48:1)		T3 (2.54-3.90:1)		
Diagonal Size (in.)	Width (m)	Height (m)	Min (m)	Max (m)	Min (m)	Max (m)	Min (m)	Max (m)	
100	2.21	1.25	3.03	3.73	3.92	5.22	5.76	8.63	0.62
120	2.66	1.49	3.65	4.48	4.72	6.38	6.91	10.36	0.75
150	3.32	1.87	4.58	5.62	5.93	8.24	8.63	12.95	0.93
180	3.98	2.24	5.52	6.76	7.13	9.96	10.36	15.54	1.12
200	4.43	2.49	6.14	7.52	7.94	11.07	11.51	17.27	1.25
220	4.87	2.74	6.75	8.28	8.74	12.18	12.66	18.99	1.37
250	5.53	3.11	7.68	9.41	9.96	13.84	14.39	21.58	1.56
280	6.20	3.49	8.60	10.56	11.15	15.50	16.12	24.17	1.74
300	6.64	3.74	9.22	11.32	11.94	16.60	17.27	25.90	1.87

Screen			Projection Distance						Vertical Offset (in.)
			T1 (1.37-1.66:1)		T2 (1.75-2.48:1)		T3 (2.54-3.90:1)		
Diagonal Size (in.)	Width (in.)	Height (in.)	Min (ft.)	Max (ft.)	Min (ft.)	Max (ft.)	Min (ft.)	Max (ft.)	

100	87.2	49.0	9.9	12.2	12.9	17.1	18.9	28.3	24.5
120	104.6	58.8	12.0	14.7	15.5	20.9	22.7	34.0	29.4
150	130.7	73.5	15.0	18.4	19.5	27.0	28.3	42.5	36.8
180	156.9	88.2	18.1	22.2	23.4	32.7	34.0	51.0	44.1
200	174.3	98.1	20.1	24.7	26.0	36.3	37.8	56.6	49.0
220	191.7	107.9	22.1	27.2	28.7	40.0	41.5	62.3	53.9
250	217.9	122.6	25.2	30.9	32.7	45.4	47.2	70.8	61.3
280	244.0	137.3	28.2	34.6	36.6	50.8	52.9	79.3	68.6
300	261.5	147.1	30.2	37.1	39.2	54.5	56.7	85.0	73.5

Dimensions

AR dimensions in millimeters and (inches).



7. COLOR SENSOR PROBE AUTOCAL®

Important information

About this User Guide

This User Guide describes how to set up correctly and operate with the AUTOCAL® “Color Sensor Probe” connected to the SIM2 Multimedia projectors.

Environment

This product contains materials derived from natural resources during its manufacture. It may contain materials that constitute a health and environmental hazard. To prevent harmful materials from being released into the environment and to promote the use of natural materials, SIM2 provides the following information regarding the disposal and recycling of the product.

Waste electrical and electronic materials (WEEE) should never be disposed of in normal urban waste disposal facilities.



The label on the product, shown here, indicating a canceled garbage can, is intended to remind that the product requires special handling at the end of its service life. Materials such as glass, plastic and some chemical compounds are recoverable and can be recycled for reuse.

Observe the following instructions:

- When you no longer wish to use your electrical and electronic equipment, take it to your local waste disposal facility for recycling.
- You may return your old equipment to your SIM2 Authorized Dealer free of charge when you buy a new product that is equivalent or has the same functions as the old one. Contact SIM2 to find your local dealer.
- If you need more information regarding recycling, reuse and product exchanges, contact SIM2 customer service.

Lastly we suggest further measures to safeguard the environment, such as recycling of internal and external packaging (including that used for shipping) in which the product was delivered. With your help, we can reduce the amount of environmental resources required to make electric and electronic equipment, reduce the use of waste tips for used equipment and, in general, improve our quality of life by making sure that hazardous materials are correctly scrapped. Incorrect treatment of the product at the end of its service life and failure to follow the above disposal instructions are punishable under local legislation.

Introduction

The AUTOCAL® allows to use new features into the projector main menu.

After the successful connection of the probe to the projector, the color sensor submenu will be available under the Color menu.

Key Features and Benefits

- Multi-functional measuring device technologically advanced and ergonomic.
- COLOR SENSOR software for measurement and calibration of the luminance and colorimetry according to the lighting conditions of the environment.
- Intelligent Ambient Light Control - measurement, compensation and ongoing monitoring of ambient lighting conditions.
- Control of the white point, luminance, contrast ratio and gamma correction.

System Components

- 1 pcs Color Probe
- 1 pcs Probe Bracket (with screws)
- 1 pcs User Guide (this document)

If any of the items listed above are missing or damaged, contact your SIM2 Authorized Dealer. Keep the original packaging in case anything has to be shipped.

Installation

This section provides instructions for the installation of the AUTOCAL®.

Important: Installation procedure should be performed by a qualified AV system specialist.

Location

When installing the AUTOCAL®, take the following considerations into account.

There are two possible types of installations:

1. SCREEN
2. AMBIENT

For the first case the probe allows to measure the native colors (in order to preserve the lamp life), the compensation of the white point and the presence of ambient lighting (non-continuous measurement). The installation of the probe should be done in such a way that the lens is directed toward to the center of the screen where the image is projected.

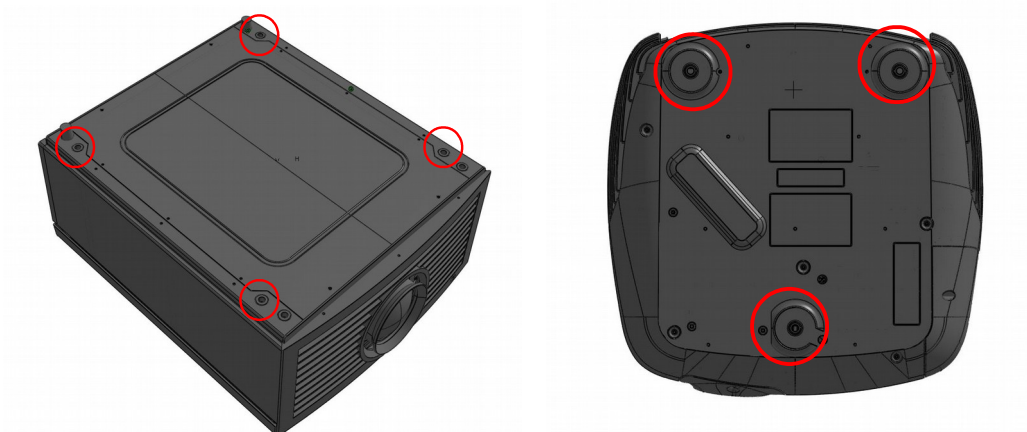
In the second case the probe allows to perform a compensation in the ongoing time of the ambient light background. The installation of the probe should be done in such a way that the lens is directed towards a point in the room where to measure the environmental conditions of projection.

In both cases, the probe lens cap has to be lifted up.

Mounting

Use the provided bracket to fix the probe to the projector as described below.

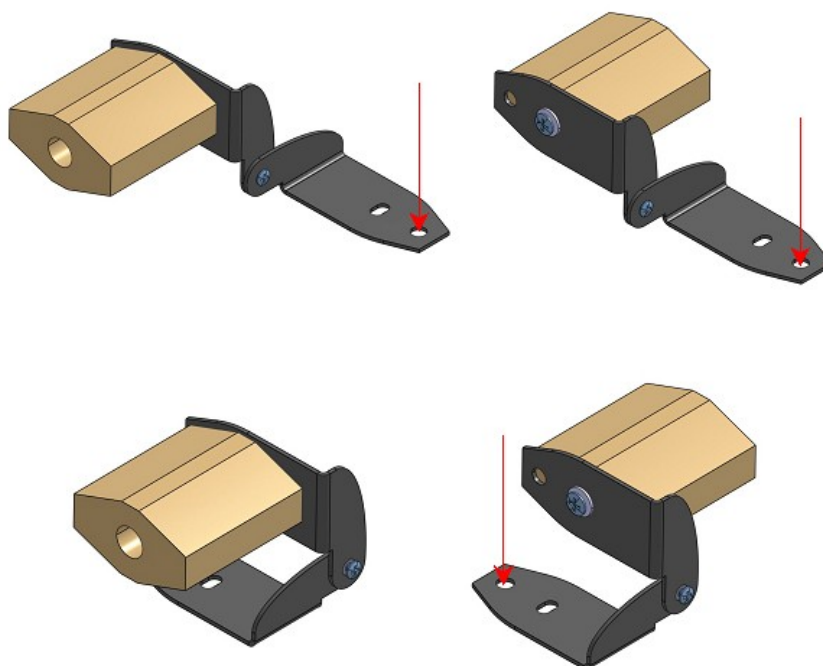
Example: a couple of SIM2 projectors where to install the AUTOCAL



The probe bracket could be fixed into one of the circled holes depending the point that has to be measured.

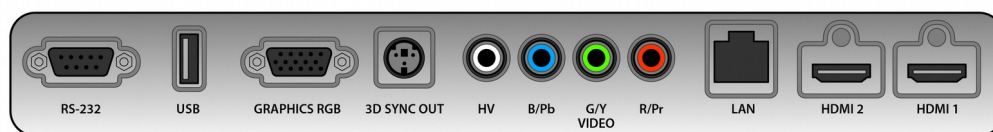
Use the supplied screws to fix the bracket, the probe to the bracket and the bracket to the projector into the hole chosen.

Brackets fixing possibilities:



Note: The maximum distance at which the probe can be installed must be less or equal the height of the projection screen divided by the coefficient of 0.17.

Connection



Input **1** USB USB 1.1 port (type B)

Connect the USB cable to the corresponding input connector on the back panel of the projector. In the SCREEN installation type, the “Centering” process has to be done before to close the screw that fix the bracket to the projector (see “Submenu SCREEN – Centering”).

To access the COLOR SENSOR submenu press the ● button on the remote control, or through the keypad button **O** on the back panel of the projector.

Operation

Connect the Color Probe to the USB connector on the back panel of the projector.

As soon as the connection was successful, in the IMAGE menu, a new submenu called “COLOR SENSOR” will be visible (this submenu will not be present if the probe was not connected properly).

Press the ● button on the remote control to access to the related submenu.

Note: if the probe is not connected, the submenu COLOR SENSOR will show only the “Restore User Settings Values” feature. This will allow to reset all the calibrations previously made with the probe.

Note: if the projector hasn't got the Color Probe as a standard accessory, contact your local dealer to obtain the serial number necessary to enable the COLOR SENSOR features.

There are two possible mounting configurations for the probe:

SCREEN

AMBIENT

SCREEN:

The probe is installed in such a way so that it points toward the center of the projection screen.

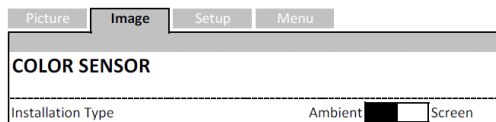
Note: the “Centering” process has to be done before to close the screw that fix the bracket to the projector (see “Submenu SCREEN – Centering” at page 40).

AMBIENT:

The probe is installed in such a way so that it points towards any part of the surrounding environment.

Use the switch next to the “Installation Type” to select the SCREEN or the AMBIENT dedicated

menu.



Submenu SCREEN

With the SCREEN installation, the available features on the COLOR SENSOR submenu are listed below.

- **Ambient Light Compensation**
- **Ambient Color Compensation**
- **Color Auto Calibration**
- **Restore User Settings**
- **Settings**
 - **Centering**
 - **Background Light Measure**
 - **Maximum Light Measure**
 - **Amb. Col. Comp. at Startup**

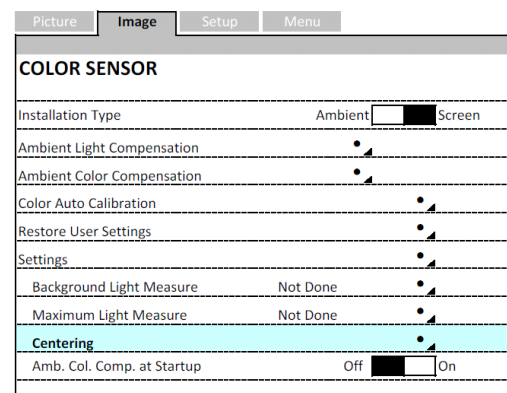
To scroll through these features use the ▲ ▼ buttons on the remote control or the ▲ ▼ on the keypad. To enter in the “Settings” submenu press ● on the remote control or on the keypad.

Centering

Centering process is essential for the Screen installation mode.

Press the ● button on the remote control to access the Centering process. A white square will be shown on the projector screen and the probe will measure continuously the luminance.

To obtain the maximum luminance value, installer has to adjust the probe until highest value is displayed. Result will be displayed in OSD on the top left of the screen.



Note: Measured luminance value should not exceed 1000 Nit, otherwise it means the probe has not done a reliable measurement.

Note: It is recommended to perform this process with ambient light off or as lowest as possible.

Background light measure

This process has to be done in dark room conditions (all the lights turned off)

Background Light Measure process is used for room luminance measuring in normal projection conditions.

Press the ● button on the remote control to run this process. The projector will show a black test pattern and the probe will measure the background light of the surrounding environment (in dark room conditions).

If the measured value from this operation is greater than the maximum possible value, a message "Ambient Is Too Bright" will be shown on the OSD. If the test has run successfully, the value detected will be shown, while if the test has run unsuccessfully, a message "Not Done" will be shown and the repeating of the process is needed.

The value measured with this process will be used in the Ambient Light Compensation process.

Note: It is possible to run the Ambient Light Compensation process even without executing the Background Light Measure, but doing so, the system will apply a default luminance value which obviously does not accurately reflect the characteristics of the projection environment.

Maximum light measure

This process has to be done in light room conditions (all the lights turned on)

Maximum Light Measure process is used for room luminance measuring in normal projection conditions.

Press the ● button on the remote control to run this process. The projector will show a black test pattern and the probe will measure the maximum light on the screen coming from the the surrounding environment.

If the test has run successfully, the value detected will be shown, while if the test has run unsuccessfully, a message "Not Done" will be shown and the repeating of the process is needed.

The value measured with this process will be used in the Ambient Light Compensation process.

Note: It is possible to run the Ambient Light Compensation process even without executing the Maximum Light Measure, but doing so, the system will apply a default luminance value which obviously does not accurately reflect the characteristics of the projection environment.

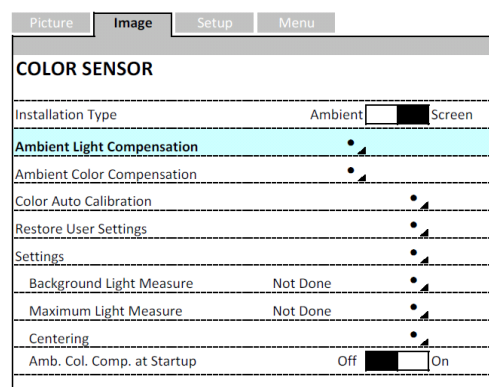
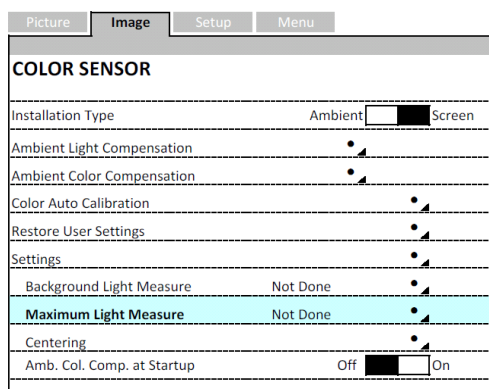
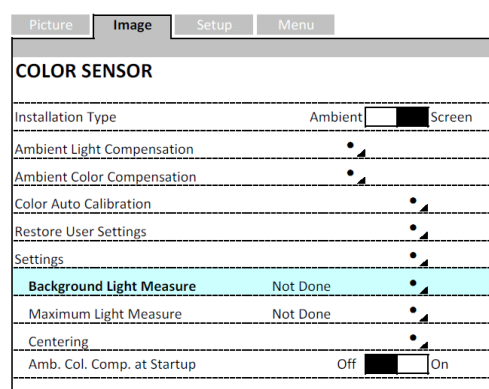
Ambient light compensation

The Ambient Light Compensation process will set the values of projector parameters in order to compensate the environment light.

Press the ● button on the remote control to run this process. A black test pattern will be projected and luminance value will be measured.

When process is successfully completed, a switch next to the label of the feature will be shown. If the feature is enabled (ON), the projector parameters will be applied to the system. Switch to the OFF position to do not apply the values measured.

Note: The values measured are strickly related to the input source connected at the measuring moment. If user changes the input source, it will be necessary to launch this process again. The previous values measured will be erased.



Note: The lamp power value set by the Ambient Light Compensation will always be greater than that chosen by the user.

Note: If the projector parameters will be changed by user in the related OSD menu, the Ambient Light Compensation switch will be automatically moved to the OFF position.

Note: The applied values with this process have got higher priority than the value of lamp power and gamma correction saved in the user memories.

Ambient color compensation

Since the ambient light has effect to the colorimetry perception, the process of Ambient Color Compensation will apply compensation values that will minimize the difference between the white coordinate settings (refer to "Color Management" menu) and the white coordinates measured.

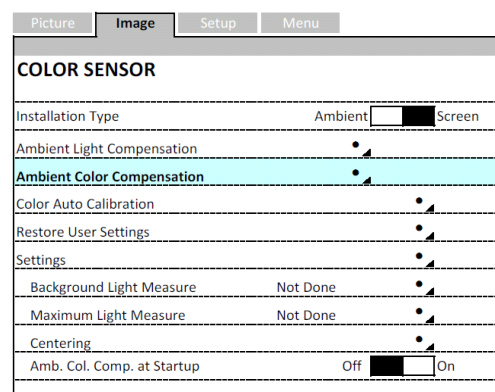
Press the button ● on the remote control to run the process. A white pattern will be projected and the probe will measure the x y white coordinates. The system will use the result to correct the colorimetry.

When process is successfully completed, a switch next to the label of the feature will be shown. If the feature is enabled (ON), measured values are applied. Switch to the OFF position to do not apply the measured values.

When switch is in ON position, a label "COLOR COMPENSATION: ON" will be shown on the top-right of the "Color management" menu.

If user changes white coordinates in the "Color Management" menu, data calculated by Ambient Color Process will be erased.

Note: If the related switch is in ON position, and a user memory will be recalled, and the white point related to that memory is the same of the compensated one (refer to "Color Management" menu), than compensated values will be applied. Otherwise, it's necessary to launch again the Ambient Color Compensation process.



Color auto calibration

This process has to be done in dark room conditions.

The lamp is subject to change its performance in connection to the progressive working time. This results in a colorimetry decay between other effects.

For restoring a perfect colorimetry, it's essential to measure projector native color coordinates and white point.

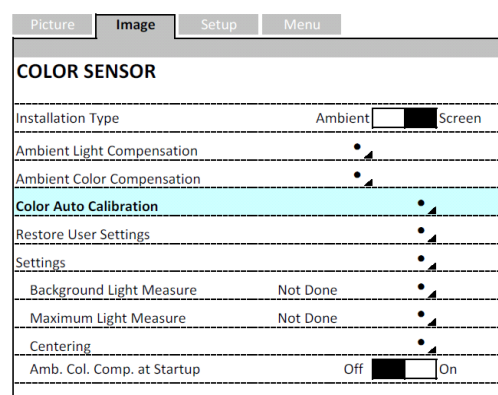
Color Auto Calibration process is used for the automatic calibration of color coordinates and white point. Its execution time is around 2 minutes.

Press the ● button on the remote control to run the process. A Red, Green, Blue & White pattern will be projected.

The color calibration will be ran for two lamp power states: minimum and maximum values.

At the end of the process the values applied will be those measured related to lamp power range set by the user.

At the end of the Color Auto Calibration, the Ambient Color Compensation process will be ran automatically.

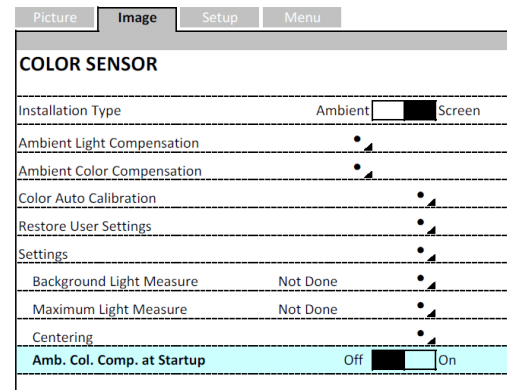


Ambient color compensation at startup

Use the switch to enable or disable the process (respectively ON and OFF).

If the switch is in ON position, when the projector is turned on, a pop-up window will be shown asking to launch or not the process.

For more details regarding the Ambient Color Compensation, please refer to the related description in the dedicated section.



Restore user settings

Press the ● button on the remote to run the Restore User Settings.

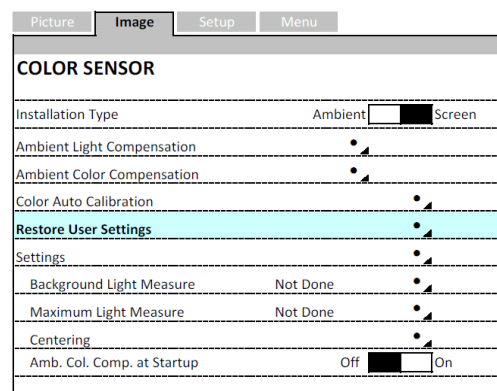
This process will erase the measured values sets the factory values for the:

- native colors coordinates

and erase the values obtained with these process:

- AMBIENT LIGHT COMPENSATION
- AMBIENT COLOR COMPENSATION
- BACKGROUND AMBIENT LIGHT
- MAXIMUM LIGHT MEASURE

and



Submenu AMBIENT

With the AMBIENT installation, the available features on the COLOR SENSOR submenu are listed below.

- Continuous Amb. Light Compensation
- Restore User Settings
- Settings
- Background Light Measure
- Maximum Light Measure

To scroll through these features use the ▲ ▼ buttons on the remote control or the ▲ ▼ on the keypad. To enter in the "Settings" submenu press ● on the remote control or on the keypad.

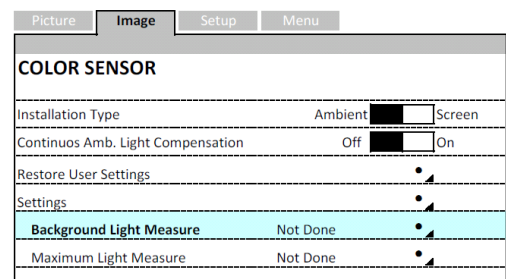
Background light measure

This process has to be done in dark room conditions.

This process allows to measure the luminance of the projection environment.

Press the ● button on the remote control to run this process. The projector will show a gray test pattern and the probe will measure the background light of the surrounding environment.

If the measured value from this operation is greater than the maximum possible value, a message "Ambient Is Too Bright" will be shown on the OSD. If the test has run successfully, the detected value will be shown, while if the test has run



unsuccessfully, a message “Not Done” will be shown and the repeating of the process is needed.

The measured value with this process will be used in the Continuous Ambient Light Compensation process.

Note: It is possible to run the Continuous Ambient Light Compensation process even without executing the Background Light Measure, but doing so, the system will apply a default luminance value which, obviously, does not accurately reflect the characteristics of the projection environment.

Maximum light measure

This process has to be done in light room conditions (all the lights turned on)

Maximum Light Measure process is used for room luminance measuring in normal projection conditions.

Press the ● button on the remote control to run this process. The projector will show a grey test pattern and the probe will measure the maximum light of the surrounding environment.

If the test has run successfully, the value detected will be shown, while if the test has run unsuccessfully, a message “Not Done” will be shown and the repeating of the process is needed.

The value measured with this process will be used in the Ambient Light Compensation process.

Note: It is possible to run the Ambient Light Compensation process even without executing the Maximum Light Measure, but doing so, the system will apply a default luminance value which, obviously, does not accurately reflect the characteristics of the projection environment.

Picture	Image	Setup	Menu
COLOR SENSOR			
Installation Type	Ambient	☐	Screen
Continuos Amb. Light Compensation	Off	☐	On
Restore User Settings			•
Settings			•
Background Light Measure	Not Done		•
Maximum Light Measure	Not Done		•

Continuous ambient light compensation

The Continuous Ambient Light Compensation process sets the values of lamp power and gamma correction in order to compensate the environment light.

Press the ◀ ▶ buttons on the remote control to enable or disable the process of Continuous Ambient Light Compensation. The process will measure continuously the luminance of the projection environment. The system will elaborate these data and, as a result, the projector parameters will change gradually accordingly to the environmental conditions used.

Note: if the process is enabled (ON) the continuous measurement of ambient light will run in background even if the projector will be restarted.

Picture	Image	Setup	Menu
COLOR SENSOR			
Installation Type	Ambient	☐	Screen
Continuos Amb. Light Compensation	Off	☐	On
Restore User Settings			•
Settings			•
Background Light Measure	Not Done		•
Maximum Light Measure	Not Done		•

Restore user settings

Press the ● button on the remote to run the RESTORE USER SETTINGS.

This process will erase the measured values by the following procedure:

- BACKGROUND LIGHT MEASURE

Picture	Image	Setup	Menu
COLOR SENSOR			
Installation Type	Ambient	☐	Screen
Continuos Amb. Light Compensation	Off	☐	On
Restore User Settings			•
Settings			•
Background Light Measure	Not Done		•
Maximum Light Measure	Not Done		•

- MAXIMUM LIGHT MEASURE

and switch to the OFF state the following process:

- CONTINUOUS AMBIENT LIGHT COMPENSATION

Troubleshooting

The probe is connected to the USB connector but on the submenu COLOR SENSOR the only available feature is RESTORE USER SETTINGS:

- Disconnect and reconnect the probe.

If the probe will not be recognized by the system, restart the projector internal system turning OFF and ON by the remote control or through the keypad.

If the problem persists, please contact your SIM2 Authorized Dealer.

The color calibration result is not aligned with the expectations:

- Redo the Color Auto Calibration process.

The probe is connected to the USB connector but it doesn't measure anything:

- The lens cap is not lifted up.

8. Projector Web Control

Important information

About this User Guide

This User Guide describes how to set up correctly and operate with the Projector Web Control.

Introduction

The Projector Web Control management allows to remotely manage and support SIM2 Multimedia projectors from a single computer via the existing web network.

Key Features and Benefits

- Control, diagnose, troubleshoot, and prevent theft using your existing network
- Manage and control any number of SIM2 Multimedia projectors spread over rooms, buildings, districts and states – as long as they are connected to the network.
- Proactively head off maintenance issues before they occur, for example short lamp life.

Overview

Select the Network Settings feature into the Setup Menu.
The OSD of the Network Settings submenu is the following.

Picture	Image	Setup	Menu
Network Settings			
Connection Status			
IP Address Setup		DHCP ☐	Status
IP Address			
Subnet Mask			
Default Gateway			
MAC Address			
Apply Settings OK			

Connection Status

Display the network connection status.

The available states for the connection are:

- **No Connection:** LAN connection doesn't work.

- **User LAN:** only LAN connection exist.
- **Internet:** LAN connection and Internet connection exist.
- **Remote Control:** LAN Connection, internet connection and remote control are operating.
- **Unknown:** Invalid Network parameters.

IP Address Setup

Use this function to select the desired mode for the assignment of the IP Address to the Network Settings.

- **DHCP:** Assign automatically an IP address to the projector from an external DHCP server.
- **STATIC:** Assign an IP address manually.

Note: When changing from DHCP to STATIC mode, the new setting will take effect only exiting and entering again the Network Setting submenu.

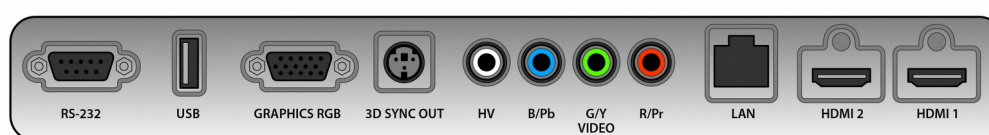
In DHCP mode IP Address, Subnet Mask, Default Gateway are not selectable because the server automatically assign their reference values.

In STATIC mode IP Address, Subnet Mask, Default Gateway have to be inserted manually.

- **IP Address:** select an IP address
- **Subnet Mask:** select subnet mask number
- **Default Gateway:** select the default gateway of the network connected to the projector.
- **MAC Address:** the projector MAC address will be shown after the assignment of the above data
- **Apply Settings:** use the **●** button on the remote control or the **O** on the keypad to apply the selections. A message "Command Sent" will be shown.

Note: if any change is done on IP Address or Subnet Mask or Default Gateway or the IP Address Setup mode, "Apply Settings" is necessary to make effective the new data. Exit the Network Settings submenu and enter again to check if the changes have been applied.

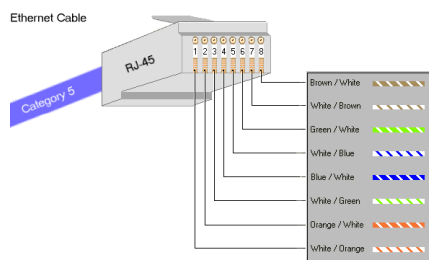
Connection



Input **1** LAN RJ-45 Networking Connector

Connect the dedicated LAN connector on the back panel of the projector to the network with a Cat5 Ethernet Cable.

Operation



Connect the projector to the LAN network through the LAN connector on the back panel.

Enter in the “Network Settings” submenu. Make sure that the hourglass disappears.

Control that the Connection Status is one of the following:

USER LAN

INTERNET

REMOTE CONTROL

Open the web browser on the PC and type the projector IP Address you find on the related feature in the network settings submenu.

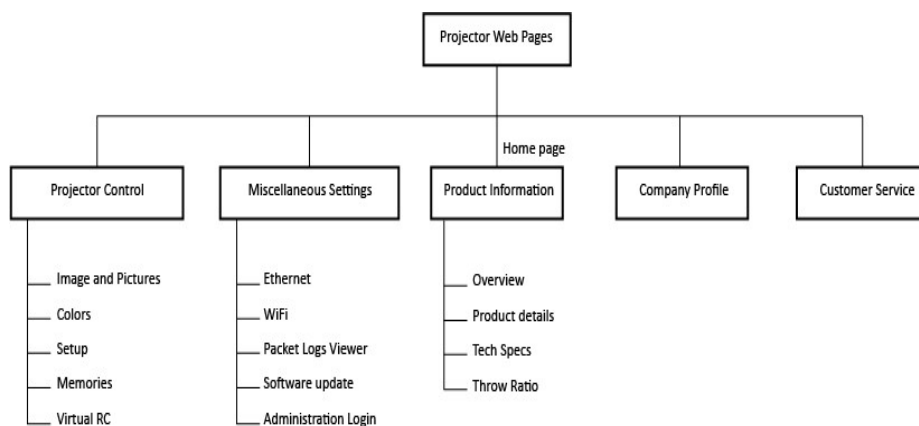
Note: The factory default mode for the IP Address Setup is DHCP.

Web User Interface

The projector Web Pages allows to remote control the projector through a Web interface.

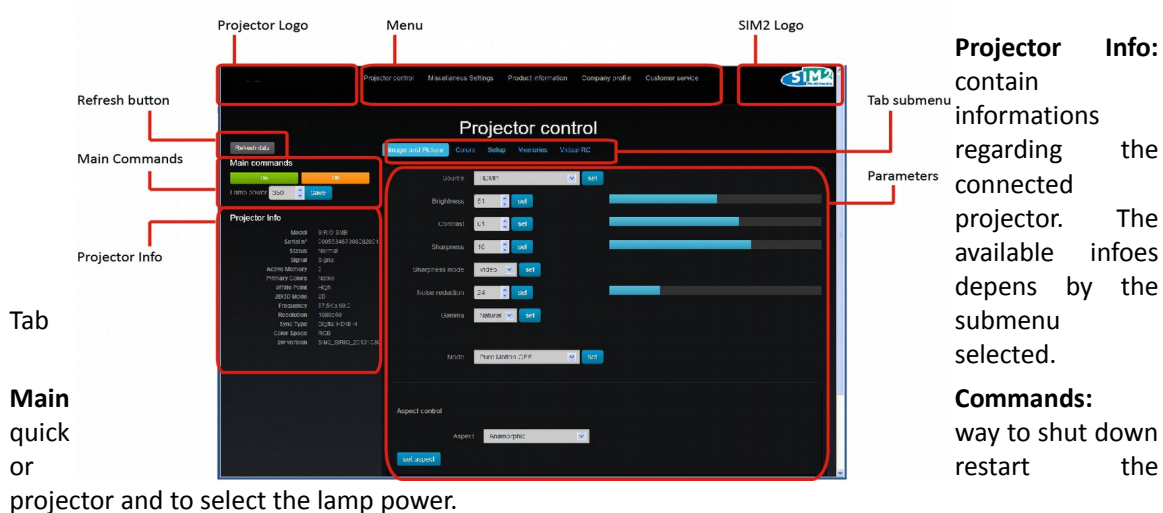
The following diagram shows how the web pages are structured.

The homepage of the Web User Interface is “Product Information”.



Structures of Web pages

This section quickly describes the areas and control elements of the web pages.



Refresh button: reloads the informations and parameters contained in the page.

Tab submenu: it contains the following submenu:

- Image and Picture
- Colors
- Setup
- Memories
- Virtual RC

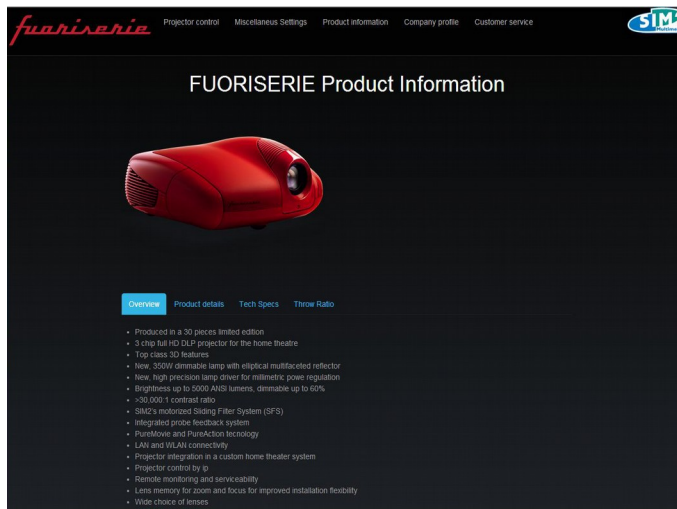
Entering into any Tab submenu, the system will read the informations regarding the projector connected. To change any kind of parameter included into one of the submenu, it is necessary to confirm the action through the dedicated button named "Set...". The displayed and available parameters depends from the projector mode.

The modes can be:

- Standby
- ON with Signal
- ON without Signal
- ON with Test Pattern

Note: In standby mode web pages could take few seconds to be visualized.

Product Information (home page)



When typed in the browser the IP Address obtained, the homepage of the PJ LAN CONTROL BOARD is the Product Information.

The **Product Information** section provides general information regarding the connected projector.

The available tabs are:

- Overview
- Product details
- Tech specs
- Throw Ratio

Projector Control

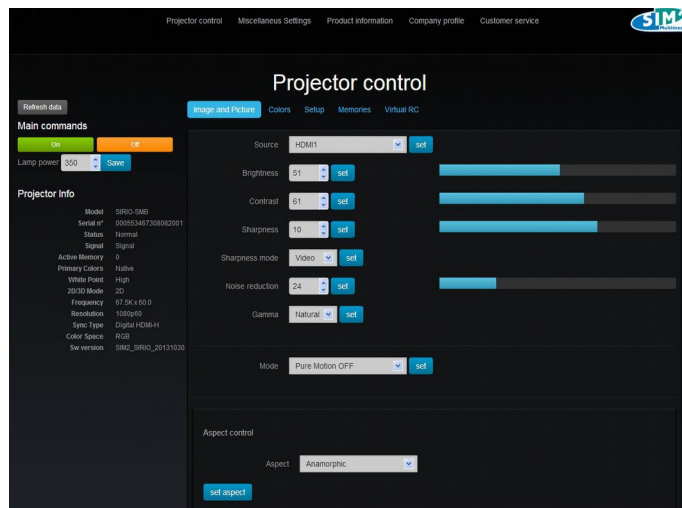
The **Projector Control** web page allows to take control of the following menu:

- **Image and Picture**
- **Colors**
- **Setup**
- **Memories**
- **Virtual RC**

The features available are the same as those reachable through the OSD.

Refer to the “Operation” section of the projector User Guide for more details regarding these menu.

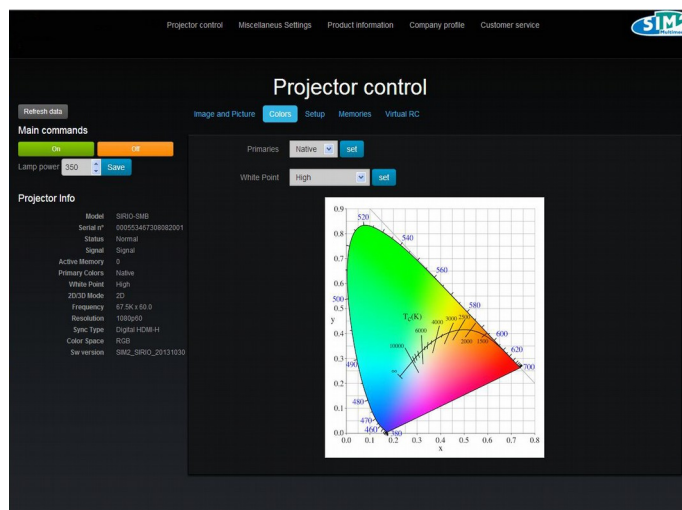
Image and Pictures



The **Image And Picture** tab provides access to control the following features:

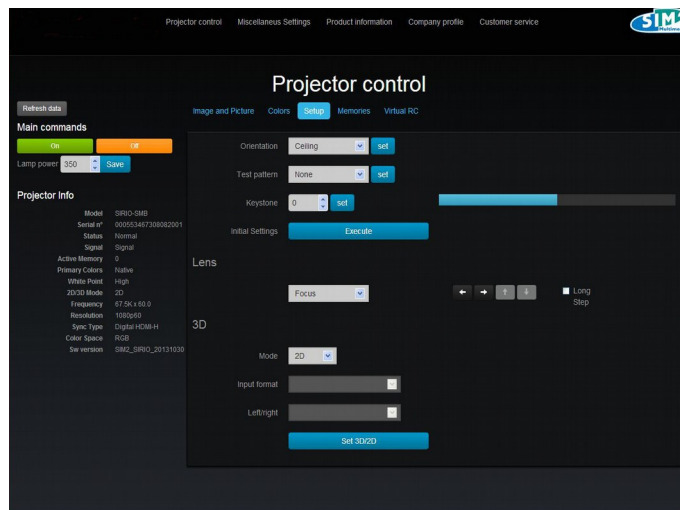
- Source
- Brightness
- Contrast
- Sharpness
- Sharpness Mode – Cinema Mode
- Noise Reduction
- Gamma
- Mode
- Aspect Control

Colors



The **Colors** tab provides access to control the color space and the color temperature, selecting a factory default configuration or creating a customized one.

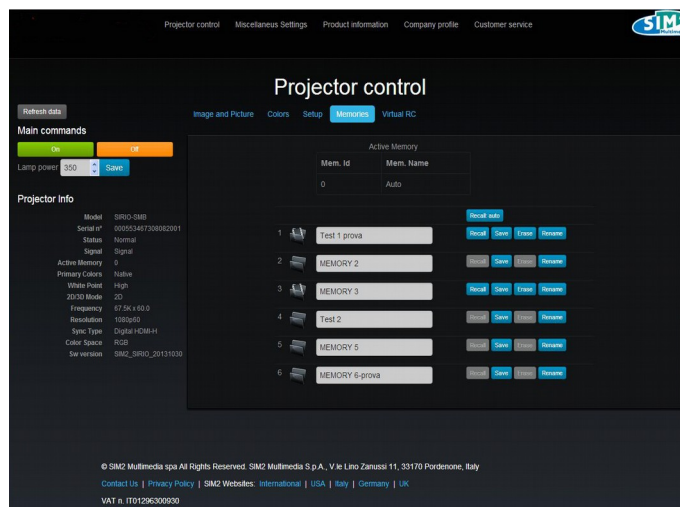
Setup



The **Setup Tab** provides access to the following installation adjustments:

- Orientation
- Test pattern
- Keystone
- Initial Settings
- Projection Lens
- 3D Mode
- 3D Input Format
- 3D Left/Right

Presets



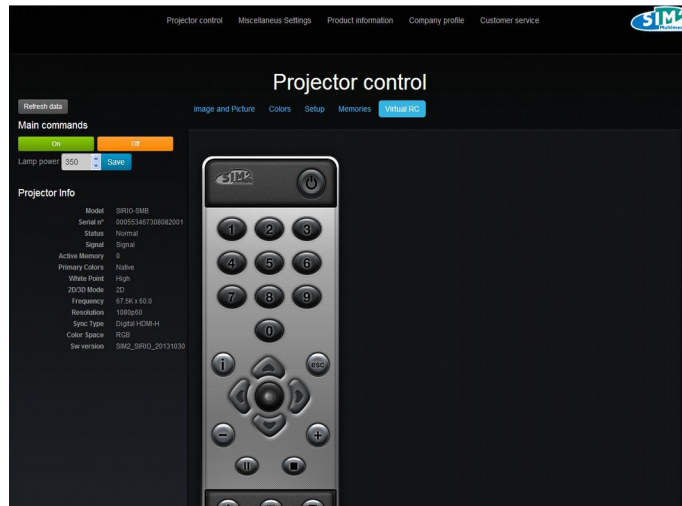
The **Memories** Tab provides access to the memory management page. This allows to Save Current Settings, to Recall, to Rename and Erase up to six different sets of values (Memories).

Note:

The icon  indicates an empty memory. Only Save and Rename functions are active.

The icon  indicates a memory with values stored. Recall, Save, Erase and Rename functions are active.

Virtual RC



The **Virtual RC** Tab provides access to the projector through a virtual Remote Control interface.

Miscellaneous Settings

The **Miscellaneous Settings** section allows to take control of the following menu:

- **Ethernet**
- **WiFi**
- **Packet Logs Viewer**
- **Software Update**
- **Administration Login**

Ethernet

The **Ethernet** tab allows to setup Ethernet connection parameters. It has got the same parameters of the Network Settings submenu. This web page is useful to change the LAN settings through a browser.

Select the DHCP box if the IP Address assignment of the projector has to be done from an external DHCP server automatically. In DHCP mode IP Address, Subnet Mask, Default Gateway are not selectable because the server automatically assign a reference number.

Enter the IP Address, Subnet Mask, Default Gateway if user need to insert the address manually.

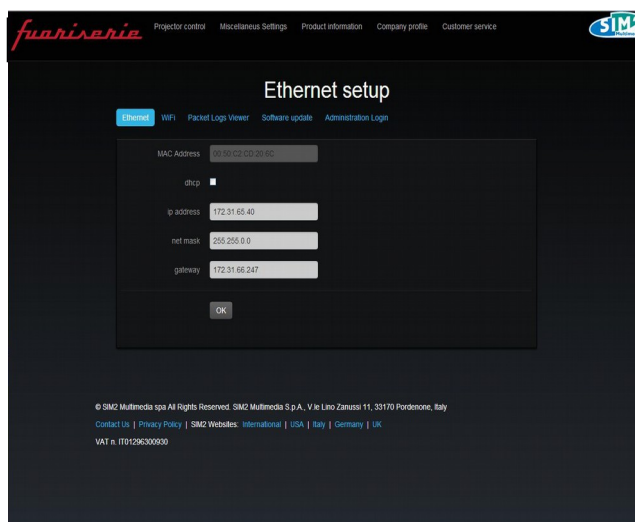
IP Address: select an IP address

Subnet Mask: select subnet mask number

Default Gateway: select the default gateway of the network connected to the projector.

Note: if any change is done on IP Address or Subnet Mask or Default Gateway or the IP Address Setup mode, press the OK button to make effective the new data.

Note: if the IP Address is changed, the web page has to be reloaded with the new IP.

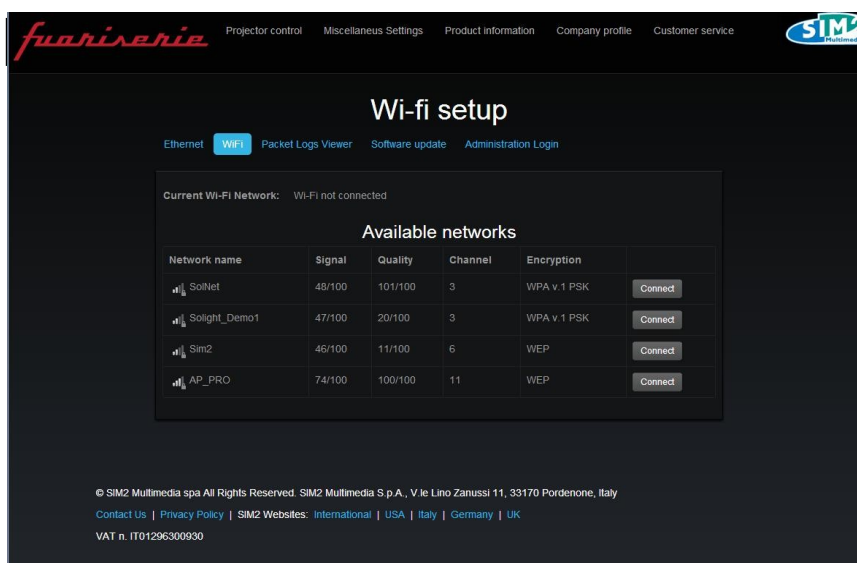


WiFi

The **WiFi** tab allows to setup WiFi connection parameters.

A list of wireless networks available will be shown. Press the “Connect” button to select the desired wireless network. If the network is protected, enter its password or its network key.

It is also possible to connect the projector through a wireless USB adapter wifi commercial dongle suggested by SIM2 Multimedia.



Packet logs viewer

The **Packet Logs Viewer** tab shows all the recorded events of the projector during its connection to the LAN. The records cover all the settings made in any manner, the warning messages, operational errors, internal devices such as communications occurred, etc..

It is possible to filter the event logs list by “Device” (who generated the event or command, or to whom it was addressed) and “Tag” (type of event or command).

The possible devices are:

Eth, wifi, web: command or event are coming from the user LAN or from the internal projector web pages.

StbyProc: microprocessor dedicated to manage the standby projector status.

Bridge: sub-system that bridges any command or event, coming from an internal projector device or external sources, to the appropriate internal projector device, able to manage this command content or event.

MainProc: the main microprocessor in the projector. This one manages the OSD, the image processing and lamp system.

ColProbe: the driver able to communicate with the color probe.

Possible Tags are:

HexCmd: command in hexadecimal format

Cmd: command in ascii format

SrvCmd: service command

EvInfo: internal event with “information” purpose

EvWarning: internal event with “warning” purpose

EvError: internal event with “error” purpose

Upgrade: events happened during the projector upgrade process

Any row in this web page shows an ID (number) and the time when the command or the event happened. Any ID can have one or two rows. Typically any ID will have two rows, one is the request and the other is the communication response.

The “Data” column shows the command or event content. These parameters are shown in JSON syntax format (see www.json.org for more details, or our “Communication command protocol” document to the following address www.sim2.com/home/en/downloads).

Use the page numbers arrow at the top of the list of the events to see the other lists.

At the end of the page there is the possibility to download, in csv format file, the filtered logs.

Software update

The **Software update** tab allows to update the projector software.

The web page shows the current software version of any microprocessor inside the projector. There

are seven dedicated softwares to control a specific part of projector:

1. Web App : web interface and monitoring system
2. Main micro: image scaler/processing and OSD
3. 2D/3D micro: enhanced 2D and 3D image
4. Standby micro: manage the standby state
5. DLP micro: manage the DLP tecnologia
6. Lens micro: manage the lens and motors control
7. DB micro: manage the Dynamic Black function

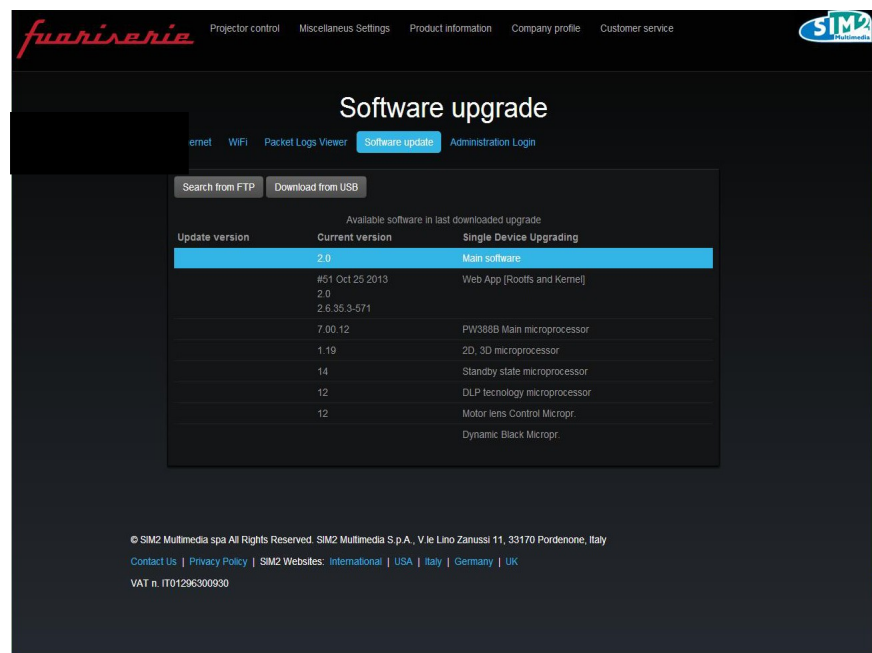
All the above software are included in a single file “Main software” and its version is visible at the top of the list (in the image below the Main Software number is “2.0”).

SIM2 Multimedia provides an ftp site where all the software versions are available (only for the projector models with LAN connectivity)

There are two ways to download the upgrading file:

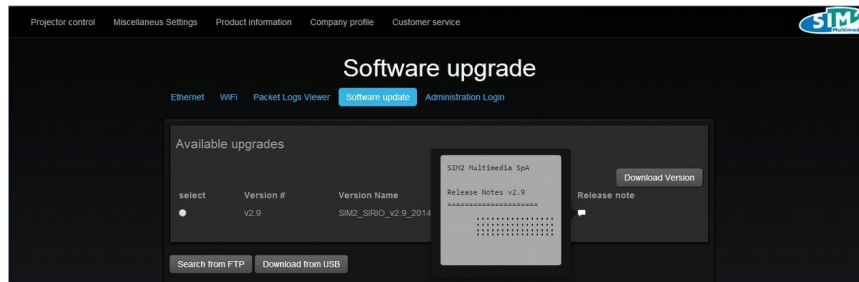
1. Search from FTP
2. Download from USB

Push the related button to run one of those choices.

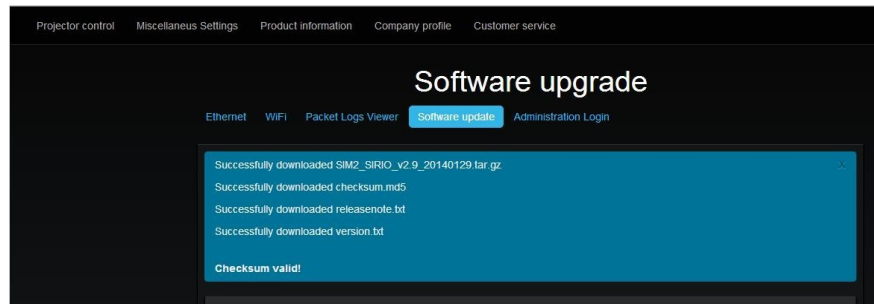


Search from FTP: this method is possible only if the projector is connected to the network. When the button is pressed, the projector automatically will be connected to the SIM2 ftp site and the available versions for your model will be checked.

1. Read the release note (clicking on this icon select the check-box (☐) the preferred version and press the “Download Version” button to start the download.
The release note contains in text format the list of implemented features and bugs fixed related to the previous version.
2. At the end of the download process, the projector will check the file content and will give a feedback regarding its correctly downloads. A “Checksum valid!” expression will appear if the check of the file is correct.



3. After the download process, the upgrade file is into the projector and the web page will be completed in the “Update version” column with the information coming from the downloaded file.



Warning: Before to proceed with the projector upgrade, make sure that the projector is in ON state with a stable signal projected (no testpattern).

4. Press the “Upgrade” button to start the upgrading of any of the devices that have its “Update version” number higher than the relative “Current version”.

The upgrade phase will take some minutes (10 minutes maximum), it depends of the number of devices have to be updated. During the upgrade process the Software upgrade tab gives the updating feedback in realtime.

The feedback messages are:

- **Enter Programming Mode...:** it start the upgrade process.
- **Upgrading Ended:** the upgrade process ended successfully.
- **Updating Interrupted:** an error occurred during the upgrade process. In this case it is possible to repeat the update process.

Download from USB: this method is possible if no other a connection are available for the projector.

The projector software versions are available contacting our customer care or connecting to the address available as addendum to this manual.

To find the software regarding your projector, enter into the above ftp address and check the directory that has the same name of your projector model. Inside the directory there will be one or more directory like “vn.m”, where “n” and “m” are two integer positive number. In any of these directory there will find four files.

Ex (for a SIRIO projector, firmware update version v2.9):

1. checksum.md5
2. releasenote.txt
3. SIM2_SIRIO_v2.9_20140129
4. version.txt

The file “release note” contains the list of implemented features and fixed bugs regarding the version

selected. The “version.txt” file collects the software version of all the devices inside the projector.

Download these four files into a USB pen-drive. Connect it in the USB connector on the back panel of the projector and press the “Download from USB” button in the Software update tab.

Note: the USB pen-drive has to be formatted in FAT32 mode and there should not be other file inside.



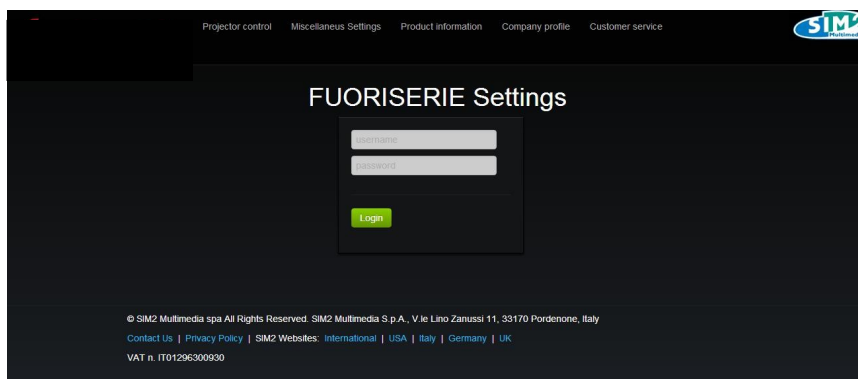
The process reads the root directory in the USB pen-drive and searches the four files.

When found, these files are uploaded into the projector.

Follow the steps described in the “Search from FTP” process (from 1 to 4).

Administration login

The **Administration Login** tab allows the access to the administration/service management.



Company Profile

The **Company Profile** section contains information regarding SIM2 Multimedia factory.

Customer Service

The **Customer Service** section contains information regarding address and phone contact about SIM2 Authorized Service Centers.

Troubleshooting

Network Setting operation

When entering in “Network Settings” the hourglass won't go away.

- Wait a few moments in the submenu “Network Settings”
- Return to the “Setup” menu, wait at least 10 seconds and enter again in the submenu “Network Settings”. Repeat this procedure for two or three times.
- Restart the projector
- If the problem persists, contact your SIM2 Authorized Dealer for assistance.

Connection Status is “No Connection” or “Unknow”.

- Set the IP Address Setup in DHCP or STATIC mode (if the choice is the STATIC mode insert the IP ADDRESS, SUBNET MASK and the DEFAULT GATEWAY data). When done select the APPLY SETTINGS feature through the ● button on the remote control or the ○ on the keypad on the back panel. Wait at least 10 second. Go back to the Setup menu and enter again in the Network Settings submenu.
- Restart the projector.
- If the problem persists, contact your SIM2 Authorized Dealer for assistance.

SIM2 Multimedia S.p.a.

Viale Lino Zanussi, 11
33170 Pordenone – ITALY
Phone: + 39 0434 383256
Fax: +39 0434 383260
Email: info@sim2.it
www.sim2.com

SIM2 USA

SIM2 USA Inc.
10216 NW 47th Street
Sunrise, FL 33351
Phone: +1 (954) 442 2999
Email: sales@sim2usa.com
www.sim2usa.com

SIM2 BRIONVEGA Co., Ltd

Room 303-304, No. 244 Liaoning Road
Shanghai 200080 – CN
Phone/Fax: 86 1 62881991
Email: InfoCHINA@sim2.com

SIM2 UK

Steinway House Worth Farm
Little Horsted Nr. Uckfield
East Sussex TN22 5TT – UK
Phone: + 44 (0)1825 750850
Fax: + 44 (0)1825 750851
Email: info@sim2.co.uk
www.sim2.co.uk