RTX 55H
User and Installation Manual

Look Forward ▶▶

SIM2 *Grand Cinema* **RTX**

BACK LIGHT
Turns on the back light

STAND-BY
Switches off to stand-by.

0-9 Keys
Switch on from stand-by and allow direct source selection.

SOURCE
Displays the Source Selection menu.

Not active in this model.

ESCAPE
Deactivates the On Screen Display.

Up/Down/Left/Right Arrow keys
Navigate through and make adjustments to the On Screen menus. **Arrow Up/Down** activate Quick menus.

MENU -
Activates the On Screen Display menus. Navigates menu pages.

MENU +
Activates the On Screen Display menus. Navigates menu pages.

FREEZE
Freezes a moving picture.

MEMORIES
Activates Memories menu

ZOOM

F1
Multifunction key

F2
Multifunction key

FOCUS

INFO
Displays the selected source information and the projector status.

VCR
Improves the video recorder signals quality.

AUTO
Selects Auto Adjust (automatic optimisation of the displayed image).

ASPECT
Selects image Aspect ratio.

SIM2 Multimedia
RCI 2005

LIGHT
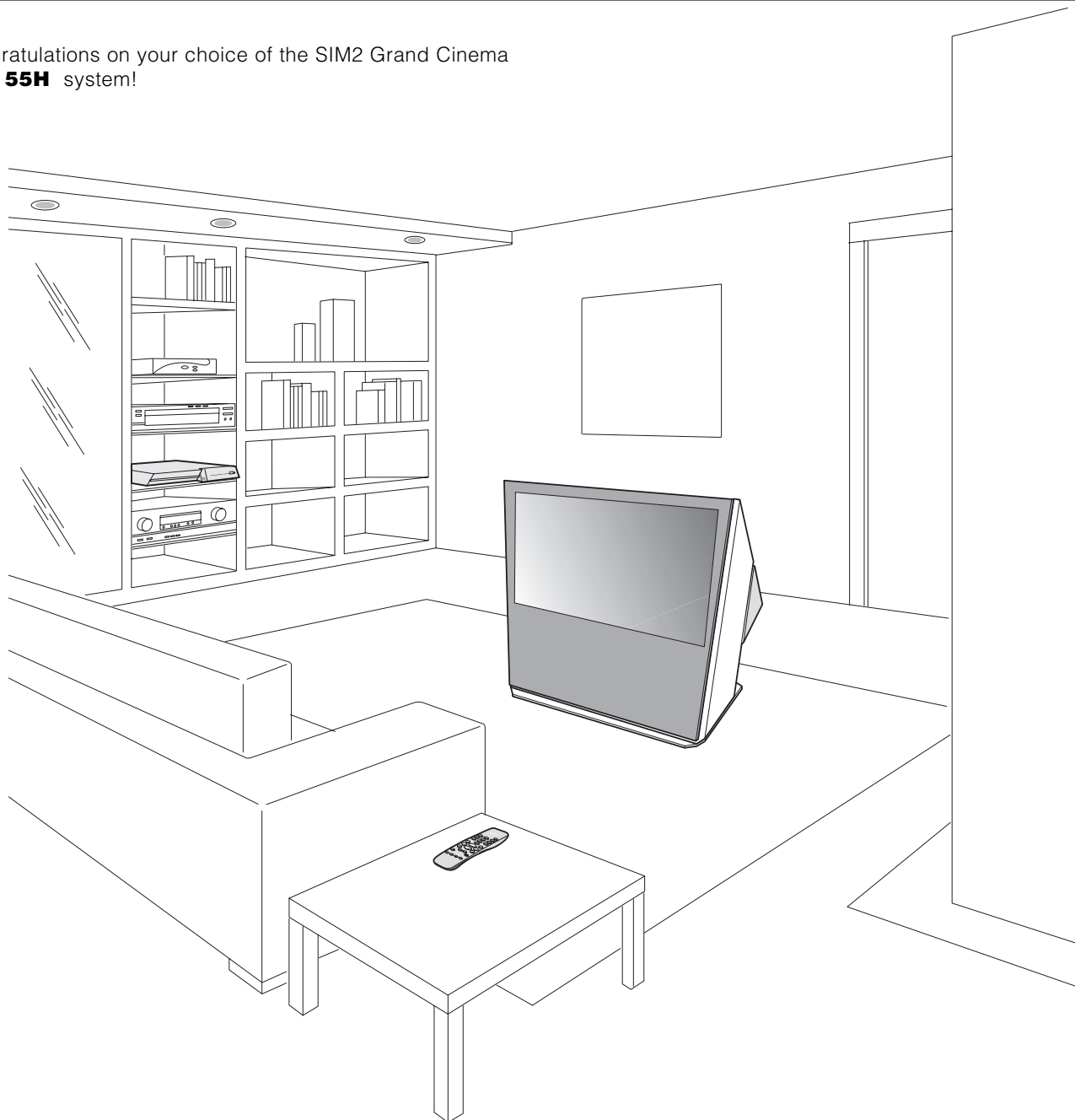MENU

1 INTRODUCTION

Congratulations on your choice of the SIM2 Grand Cinema
RTX 55H system!

The RTX system combines the signal processing capabilities of the DigiOptic™ Image Processor with the high fidelity reproduction of the DLP™ technology Display by linking the two units via a fibre optic cable.

The DigiOptic™ Image Processor, which should be ideally located close to the signal sources, supports and processes a wide range of video signals, transmitting them to the display by means of a fibre optic link cable.

The large number of inputs available (2 Composite Video inputs, 2 S-Video inputs, up to 4 Component or RGB inputs, 2 graphic RGB inputs and 1 DVI-D input,1HDMI™) ensures the system supports a wide variety of analogue and digital sources: DVD players, VCRs, satellite and terrestrial receivers, computers, game consoles, video cameras, etc.

The signal processing capabilities of the Image Processor ensure optimum reproduction of a broad range of input signals, from interlaced video to high definition and graphics.

Conversion of interlaced video signals to progressive signals by means of prestigious DCDi™ technology produces fluid, natural, images free of flicker and stairstepping artefacts.

Faithful reproduction of signals at higher resolutions (such as high definition video and graphics) occurs without loss of information or reduction of image sharpness thanks to the processor's high pixel rate signal acquisition capabilities.

Adaptation of the input signal resolution to the Display resolution occurs without alterations of image quality, in accordance with an ample choice of aspect ratios, including several definable by the user.

All image adjustments can be performed with the remote control with the aid Ôf the On Screen Display; alternatively, the unit can be controlled by from a home automation system through the serial port.

The Display, with its elegant and original design, produces an image using the very latest Texas Instruments DLP™ technology (1280x720 pixel DMD™ panel with 12° technology), a proprietary dust-sealed optical system, a new six-segment colour wheel and a new type of Fresnel lens. All these features combine to provide a top quality image, with definition, sharpness, colorimetry and contrast on a par with the famous frontal Displays in SIM2's Grand Cinema line.

The two units are connected via a three-core fibre optic cable for transmission of the digital signal from the DigiOptic™ Image Processor to the Display and control signals in both directions.

Transmission occurs without interference or attenuation over distances of up to 500 m.
Moreover, the flexibility and small size of the cable allow the maximum freedom when installing the system in your home.

SIM2 carries out comprehensive functional testing in order to guarantee the maximum product quality. For this reason, when you start using the product lamp operating hours may already be at between 30 and 60.

In addition to the regular tests, the Quality Control department performs additional statistical tests at the time of shipment.
In this case the packing may show signs of having been opened, and the accumulated lamp operating hours may be slightly higher than the hours associated with the standard tests.

2 IMPORTANT SAFETY INSTRUCTIONS

ATTENTION:
To reduce the risk of electric shock, disconnect the power supply cable on the rear panel before removing the top cover of the Display.
Refer to trained, authorised personnel for technical assistance.

CAUTION

RISK OF ELECTRIC SHOCK!
DO NOT REMOVE THE TOP COVER
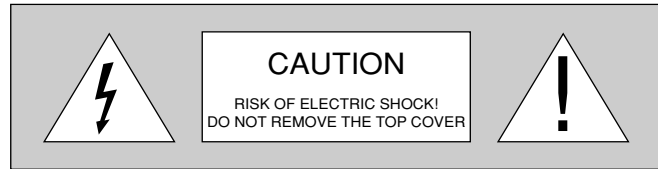
This symbol indicates the possible electric shock hazard associated with uninsulated live components in the interior of the unit.

This symbol indicates the presence of important instructions regarding use and maintenance of the product.

The RTX system consists of two parts connected by a fibre optic cable: the DigiOptic™ Image Processor and the Display. In this manual references to the "unit" refer to one of the two units that make up the system.

Prior to switching on the Display please read each chapter of this manual carefully as this manual provides basic instructions for using the Display.
The installation of the lamp assembly, preliminary adjustments and procedures that necessitate the removal of the top cover, must be carried out by authorised, trained technicians. There are no user serviceable parts inside. To ensure safe and long term reliability please use power cables supplied with the Display. Observe all warnings and cautions.

CLASS 1 LASER PRODUCT
This product complies with fda radiation performance standards, 21 cfr chapter 1 subchapter j.
This product complies with european standard en 60825.
This product is classified as a class 1 laser product and there is no hazardous radiation with the safety protection.
Danger! Invisible laser radiation when open. avoid direct exposure to beam.
Do not open the covers of the product and never touch the internal parts in order to avoid exposure to visible or invisible laser radiation.

• Federal Communication Commission (FCC Statement)
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is used in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determinated by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/Tv technician for help.

• For customers in Canada
This Class B digital apparatus complies with Canadian ICES-003.

• For customers in the United Kingdom
ATTENTION: This apparatus must be earthed
The wires in this mains lead are coloured in accordance with the following code:
  Green-and-Yellow: Earth
  Blue: Neutral
  Brown: Live
As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug proceed as follows:
The wire which is coloured green-and-yellow must be connected to the terminal in the plug which is marked by the letter E or by the safety earth symbol   or coloured green or green-and-yellow.
The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.
The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

- **Read this manual carefully and keep it in a safe place for future consultation.**
  This manual contains important information on how to install and use this equipment correctly. Before using the equipment, read the safety prescriptions and instructions carefully. Keep the manual for future consultation.

- **Do not touch internal parts of the units.**
  The units contain electrical parts carrying high voltages and operating at high temperatures. Do not remove the cover from the units, refer to qualified service personnel for all repair and maintenance requirements.
  The warranty will be automatically invalidated if the cover is removed from the units.

- **Power supply disconnect device.**
  The device for disconnecting the units from the mains power supply is constituted by the power cable plug. Ensure that the power cable plugs and the electrical mains socket outlets are easily accessible during installation operations. To disconnect the units from the electric power supply, pull the plug to remove it from the socket outlet. Do not pull the power cable.

- **Use only the specified type of mains power supply.**
  Connect the units to a mains electrical supply with rated voltage of between 100-240 VAC, 50/60 Hz and equipped with a protective earth connection. If you are unsure of the type of mains power supply in your home, consult a qualified electrician.
  Ensure that the power draw of the units is commensurate with the rating of the electrical socket outlets and any extension cables that are used.
  For the DigiOptic™ Image Processor use exclusively the power supply unit provided or an alternative power supply unit expressly approved by SIM2.

- **Beware of power supply cables.**
  Position the power supply cables so that they do not constitute an obstruction.
  Position the power supply cables where they cannot be reached by children.
  Install the units as close as possible to the wall electrical socket outlet. Do not tread on the power cables, make sure that they are not tangled or pulled; do not expose the power cables to heat sources; make sure that the power cables do not become knotted or kinked. If the power cables become damaged, stop using the system and request the assistance of an authorised technician.

- **Disconnect the apparatus from the mains power supply in the event of electrical storms and when not in use.**
  To avoid damage that could be caused by lightning striking in the vicinity of your home, disconnect the units in the event of electrical storms or when the system will remain unused for prolonged periods.

- **Avoid contact with liquids and exposure to humidity.**
  Do not use the units near water (sinks, tanks, etc.); do not place objects containing liquids on top of or near the units and do not expose them to rain, humidity, dripping water or spray; do not use water or liquid detergents to clean the units.

- **Prevent the units from overheating.**
  Do not obstruct ventilation openings. Do not place the units near heat sources such as heaters, radiators or other devices that generate heat (including amplifiers). Do not position the units in confined, poorly ventilated places (bookcase, shelves, etc.).

- **Do not expose the eyes to the intense light emitted by the lamp.**
  Never look directly at the lamp through the ventilation opening when the unit is switched on.
  Risk of eyesight impairment. Ensure also that children do not look directly at the lamp.

- **Position the unit on a stable surface.**
  To avoid serious injury to persons and damage to property, make sure the units are placed on a level, flat and stable surface from which they cannot fall, tip over or slide. Pay special attention if the units are placed on a trolley so that they can be moved around. Ensure that the units are not subjected to impact.

- **Do not insert objects through the units' openings.**
  Make sure that no objects are inserted inside the units. If this should occur, disconnect the unit from the power supply immediately and call an authorised technician.

3 INSTALLATION

CONNECTING THE TWO UNITS

SIM2's RTX system is made up of the following components *(Fig.1)*:

- Display
- DigiOptic™ Image Processor
- remote control
- DigiOptic™ Image Processor power supply unit
- three power cables for the Display
- three power cables for the DigiOptic™ Image Processor
- triple fibre optic cable for linking the DigiOptic™ Image Processor and the Display
- one cable HDMI™-HDMI™
- one cable HDMI™-DVI
- two brackets for mounting the DigiOptic™ Image Processor to the rack.
- four 1.5 V AAA-type batteries for the remote control
- User and installation manual
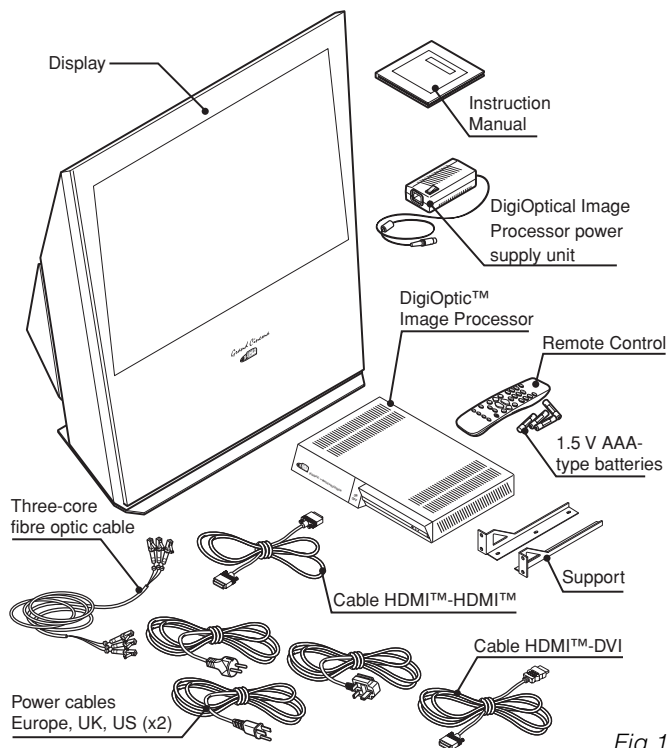
If any accessories are missing, contact your Dealer as soon as possible.

The RTX system consists of two separate units (the DigiOptic™ Image Processor and the Display), each of which is equipped with a power cable; the two units are interconnected by a 20 m fibre optic cable.

The ideal location for the DigiOptic™ Image Processor is on a cabinet shelf or on a rack (dimensions compatible with a standard 19" rack). Make sıre that the support surface is stable and that the unit has sufficient space around it for ventilation purposes (at least 3 cm).

The unit is connected to the mains via an external power supply unit with an output of +7 Vdc; the unit's main power switch is on the power supply unit.

Connect the power supply unit output cable to the POWER socket located on the rear panel *(Fig. 6)*.

Use exclusively the power supply unit provided with the system or an alternative power supply unit expressly approved by SIM2.

The Display is designed to stand on the floor. Place the Display on a flat, level surface where it has sufficient space for ventilation; to prevent glare and reflections, avoid places exposed to direct sunlight or intense light sources.

The mains power input socket and the power switch are both located on the rear panel.

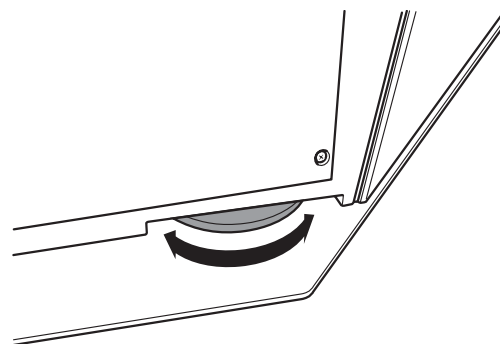Adjust the rear feet to obtain the optimum viewing angle in

Display — Instruction Manual — DigiOptical Image Processor power supply unit — DigiOptic™ Image Processor — Remote Control — 1.5 V AAA-type batteries — Three-core fibre optic cable — Cable HDMI™-HDMI™ — Support — Cable HDMI™-DVI — Power cables Europe, UK, US (x2)

Fig.1

Fig.2

5

accordance with the distance and height of the viewing position in front of the Display *(Fig. 2)*.

The system can be fully controlled using the supplied IR (infrared) remote control handset. There is a single remote control for both the DigiOptic™ Image Processor and the Display; the remote control can be directed towards either unit since they are both equipped with an IR sensor.

The connection between the two units is made with a single cable containing three fibre optic cables each terminating in an LC connector. The standard cable length of 20 m will be sufficient for most installation requirements.

During installation of the fibre optic cable:
• The individual optical cables are delicate: always handle the main cable without touching the individual optical cables *(Fig. 3)*. Never pull the individual optical cables or connectors; if necessary, you may pull the main three-core cable.
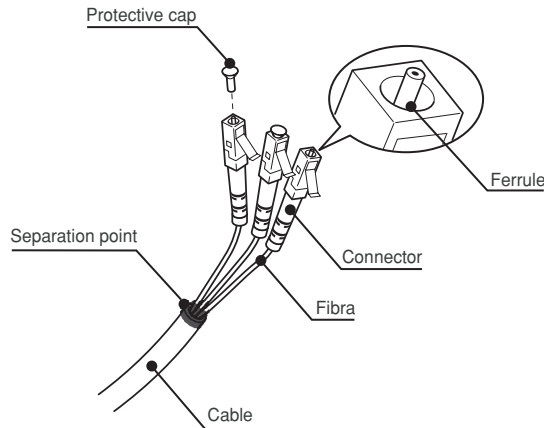

Fig. 3

• Only remove the cap protecting the connector ferrule immediately before inserting the connector; if the ferrule is allowed to come into contact with foreign material it may be damaged, making the connector unusable.
• Take particular care when inserting fibre optic connectors in their respective sockets on the rear panel of the DigiOptic™ Image Processor and the rear panel of the Display *(Fig. 4)*.
• Make sure that the single optical cables are not switched: the numbers on the cables must match the numbers on the connectors.
• Check that the connectors are correctly inserted.
• Use the cable clamps on the rear panel of the Display to protect the connectors from traction and leverage.

6

• Make sure that the cable does not constitute an obstacle for persons moving around the room.
• Take care not to create knots in the cable; the minimum radius of bends in the cable is 2 cm.
• Prevent the cable from pulling and mechanical stress: this could cause the connectors to be pulled out and damaged.

After removing the protective caps from the fibre optic cable connectors and the panel connectors, insert the fibre optic connectors carefully, matching the numbers shown on each element *(Fig.4)*. Be very careful when handling optical fibres cable and connectors.
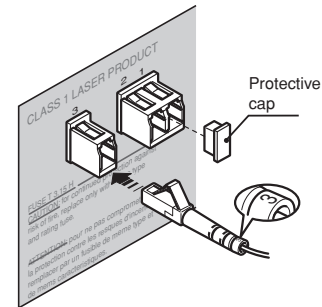

Fig.4

To restrain the fibre optic cable correctly use the screws, the spacer and the cable clamps supplied with the appliance.

To mount the DigiOptic™ Image Processor on an equipment rack use the screws and RH / LH supports supplied with the appliance. Unscrew the screws that secure the cover to the DigiOptic™ unit base, position the RH and LH supports and fix into place with the supplied screws. To secure the unit to the rack use the supplied screws *(Fig.5)*.
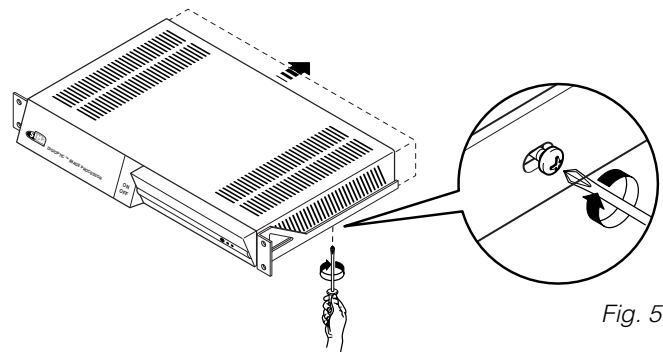

Fig. 5

Connect the cables from the video sources, the serial cable from the external control unit and the optical fibre cables for connection to the Display, to the rear panel of the DigiOptic™ Image Processor.

To obtain the best performance from the RTX system, connect the various signal sources using good quality cables designed for video applications (rated impedance 75 Ω).
Ensure that:
- the cables are routed in such a way that they do not present an obstruction to people moving around the room;
- the connectors are inserted carefully to avoid damaging the pins;
- the cables are not twisted or crushed;
- when disconnecting the cables the connectors are not violently pulled out of the sockets on the various units.

Video sources (television receivers, VCRs, DVD players, etc.) often feature several outputs. To obtain the best performance from your system, carefully choose which output to use. Generally, the type of signal offering the best picture quality is DVI-D, followed by RGB, Components, S-Video and Composite Video, in that order.
However, the RTX system is equipped with an excellent Video Decoder and Deinterlacer and therefore even inferior quality signals will produce high quality results.

Table 1 shows the types of signals usually available for the most common types of video sources and the corresponding input connectors to use on the DigiOptic™ Image Processor.

Table 1

DigiOptical Image Processor Connector	Video signal source connector		
Y (green)	Y	Y	Y
Cr (red)	P_R	R-Y	V
Cb (blue)	P_B	B-Y	U

VIDEO 1 2

These inputs should be connected to a Composite Video signal (CVBS) by means of a cable with an RCA connector.
The connector on the source is usually yellow and is frequently labelled VIDEO.
Although other types of signals are preferable (since they allow better picture quality), this is still the most common type of output, and nearly all television receivers, video-recorders, DVD players, video cameras, etc., are equipped with CVBS outputs.

S-VIDEO 3 4

These inputs should be connected to an S-Video signal by means of a cable with a 4-pin mini-DIN type connector.
The corresponding output on the source can be identified by the wording S-VIDEO or Y/C.
Almost as widespread as Composite Video, S-VIDEO is preferable because it offers a clearer and sharper picture.

COMPONENT / RGBS 5 6 7 8

These inputs are composed of three sets of 5 RCA connectors (5,6,7) and a set of 5 BNC connectors (8).
Each set of connectors is suitable for RGB and Component signals.
RGB signals can have the following synchronisations: composite sync on the green signal (RGsB), H+V Composite Sync, or separate H/V Sync.
Connect the R, G, B outputs of the source to the respective R, G, B inputs of the DigiOptic™ Image Processor (paying attention not to invert the positions) and any synchronisation signals to the HV input or the H and V inputs. When connecting the three sets of RCA connectors use the colours as a guide: connector R is red, G is green, B is blue, H/HV is white and V is black.
By using a suitable SCART to RCA (or BNC) connector adapter cable, an RGB video signal from a source equipped with an SCART connector can be connected to this input.
Component signals are connected to inputs Y, Cr and Cb, taking care to observe the correspondence with the outputs on the source.
Since the latter can be labelled in various ways, refer to *Table 1* to establish the correspondence between the various signals. The connector colours can also be of help, as shown in the

table. The video signals that can be connected to this input can have horizontal scanning frequencies of 15 kHz (standard video resolution), 32 kHz, or higher (progressive scanning video, high definition video).

Some sources provide the facility to choose between a progressive signal or an interlaced signal. Although in general a progressive signal is higher quality than an interlaced signal, it is often preferable to perform the deinterlacing operation on the RTX system rather than on the source because the RTX system is equipped with Faroudja's sophisticated directional correlation deinterlacing technology (DCDi™).

Progressive signals usually provide better quality than interlaced signals, but if the source features both progressive and deinterlaced signal outputs it is good practice to compare the quality of the pictures reproduced by the RTX system in the two cases: deinterlacing performed by the RTX system (thanks to Faroudja DCDi™ technology) is often more effective than that performed at the source (typically a DVD player).

RGB GRAPHICS 9 10

This input should be connected to an RGB-type video or graphic signal using a cable with a DB15HD type connector.

The signal source device (typically a personal computer or game console) must be able to provide separate H/V synchronisation or composite H+V.

The video or graphic signals that can be connected to this input can have horizontal scan frequencies (H-sync) of between 32 and 80 kHz and a vertical frequency (V-sync) of between 48 and 100 Hz. Image resolution can vary between 640x480 and 1600x1200 pixels (VGA, SVGA, XGA, SXGA, UXGA).

DVI-D 11

If your source is equipped with this type of output (increasingly present on the latest PCs) you can take advantage of the better picture quality by using the DVI-D input.

HDMI™ 12

With this input it is possible to integrate the optimal quality of a digital image with a multichannel audio signal.

The HDMI™ (High Definition Multimedia Interface) in fact integrates a multichannel audio signal with the uncompressed high definition video signal.

The interface also allows the exchange between the video source and the HT 300 LINK system of control data to optimise the quality of the projected image.

The HDMI™ input allows connection to video sources that use the HDCP (High-Bandwidth Digital Content Protection) protocol to protect their contents. This protocol is in fact incorporated in the definition of the HDMI™ technology.

Once the video source has been connected to the HDMI™ input, internal processing by the DIGIOPTIC IMAGE PROCESSOR separates the video information from the audio information. This information is then made available via an optical digital output with a female TOSLINK connector in accordance with the S/PDIF standard.

CONTROL (RS232)

The system can be controlled via a personal computer or home automation systems by means of the serial port: simply connect this input via a serial cable from an RS232 serial port. On request, SIM2 will send you a document containing the serial port settings and the list of main commands.
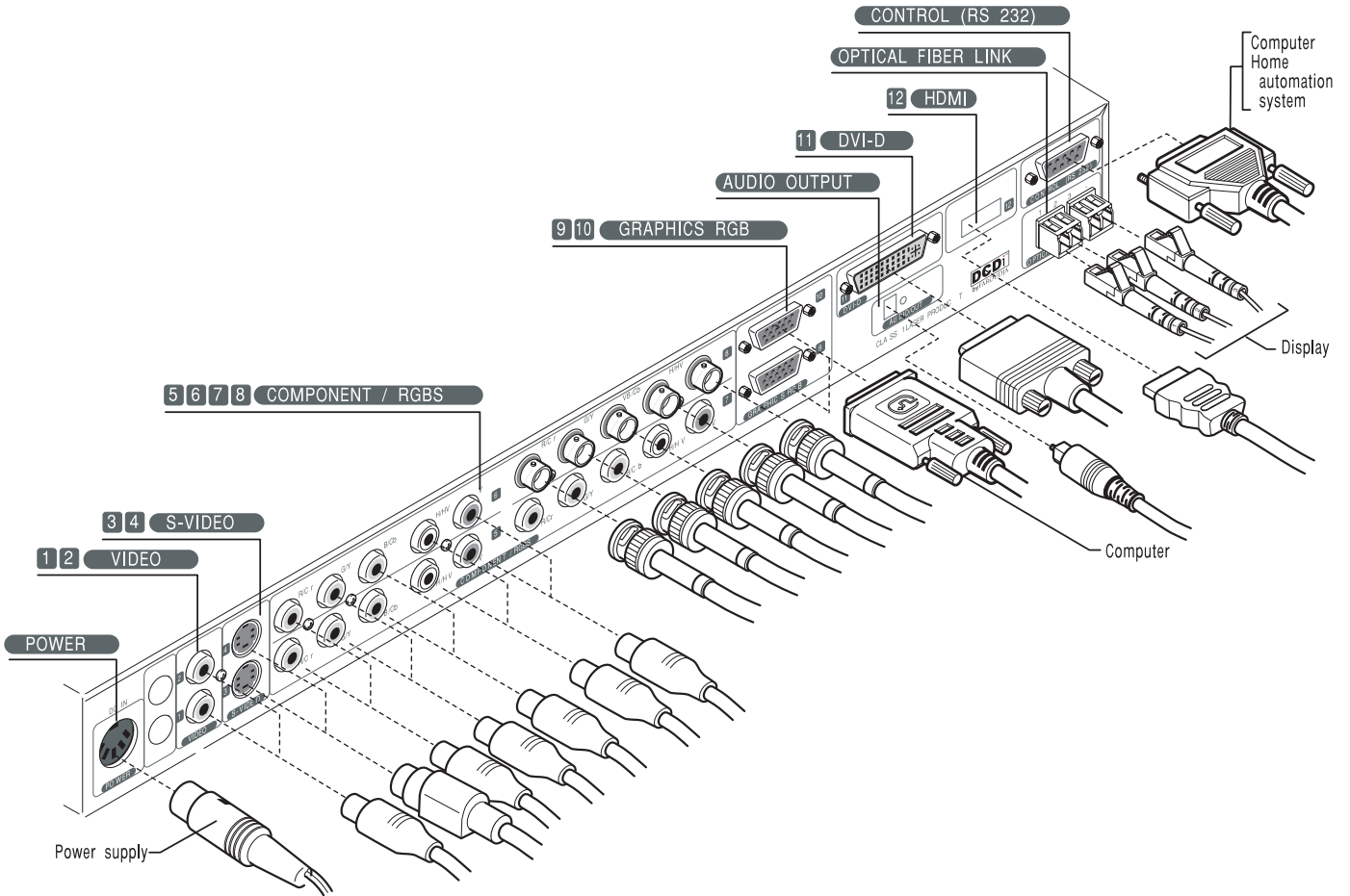
CONTROL (RS 232)

OPTICAL FIBER LINK

12 HDMI

11 DVI-D

Computer
Home
automation
system

AUDIO OUTPUT

9 10 GRAPHICS RGB

Display

5 6 7 8 COMPONENT / RGBS

3 4 S-VIDEO

1 2 VIDEO

Computer

POWER

Power supply

Fig. 6

9

4 SWITCHING ON AND OFF

The RTX system consists of the Display and the DigiOptic™ Image Processor (which is also the system control centre). The DigiOptic™ Image Processor sends commands to the Display and receives operating status information from the Display and function commands from the user. The system can be controlled from either the remote control (via the infrared sensors on the DigiOptic™ Image Processor and on the Display) or the keypad located on the rear of the Display. The two units have separate power supplies however: after connecting the unit to the electrical mains supply:

1) Set the two power switches to "I"; the DigiOptic™ Image Processor power switch is located on the external power supply unit *(Fig. 7a),* while the Display switch is on the rear panel *(Fig. 7b).*

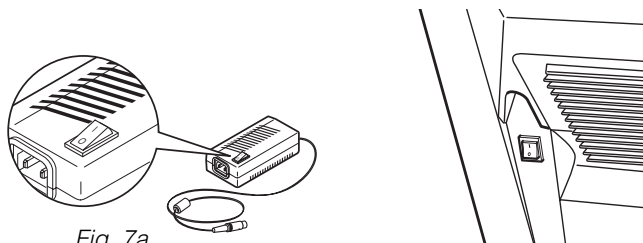2) Turn on the DigiOptic™ Image Processor by pressing the button on the front panel *(Fig. 7c).*
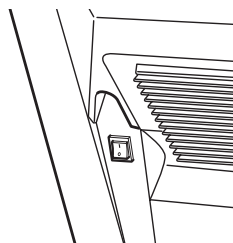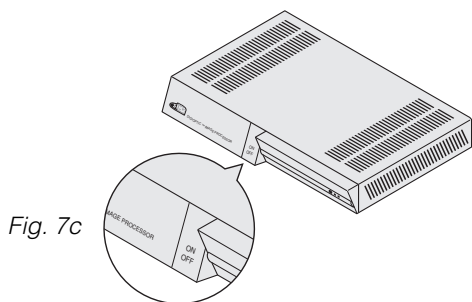

Fig. 7a

Fig. 7b

Fig. 7c

After a few seconds (system initialisation interval), the DigiOptic™ Image Processor and the Display assume stand-by mode.
System status information is provided by two LEDs (green and blue) on the front panel of the DigiOptic™ Image Processor, a blue and green LEDS on the rear of the Display.

Significant status signals are given in *Table 3.*

Table 3

Status	DigiOptic™ Image Processor		Display	
	Green LED	Blue LED	Front LED	Keyboard pad
Off	○	○	○	○
Initialisation	●	●	–	–
Stand-by	○	●	○	●
On	●	○	○	○
Cooling	☀	☀	–	–
Optical link not active	●	☀	●	●
Caution	☀	○	–	–
Error	○	☀	–	–

○ : Off   ● : On   ☀ : Flashing   – : Insignificant

If the "No optical link" or "Error" signals are active the system cannot be operated; if the "Warning" signal is active the system will operate but it may be unable to read certain input signals correctly.

SWITCHING ON FROM STAND-BY

Switching on the system *(Fig.8)*:
- from the remote control (keys 0-9)
- from the Display keypad (keys ↑ and ↓).

Typically, the picture will appear after 15-20 seconds. Pressing a key from 1-9 on the remote control selects the corresponding input; pressing 0 selects the input active at the time the system was last switched off.

If the system is switched on very soon after it was last switched off, the lamp may fail to come on because it is too hot. In this case just wait a few minutes to allow the lamp to cool.
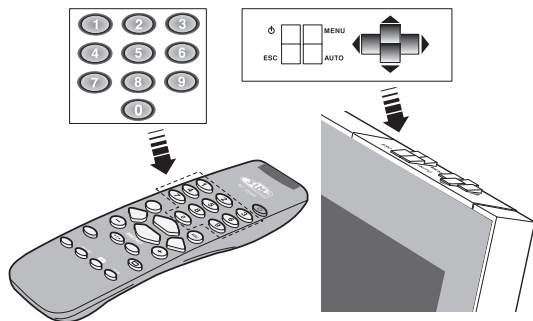
Fig. 8

In case the Display unit is shut down (for example due to a shut down of the Display unit by putting the switch in the "O" position or by accidentally unplugging the power cord cable) to re-boost the RTX system it is necessary to shut down the DigiOptic™ Image Processor and repeat the power-on procedure described in point 1 and 2.

Fig. 9

Switching the system off *(Fig.9)*:

• from the remote control (⏻ key)

• from the Display keypad (⏻ key).

If you wish to power off the system completely, wait at least one minute in stand-by before setting the mains power switches on the units to the "O" position or disconnecting the power supply cables. This is to allow the fans in the Display unit sufficient time to cool the lamp.
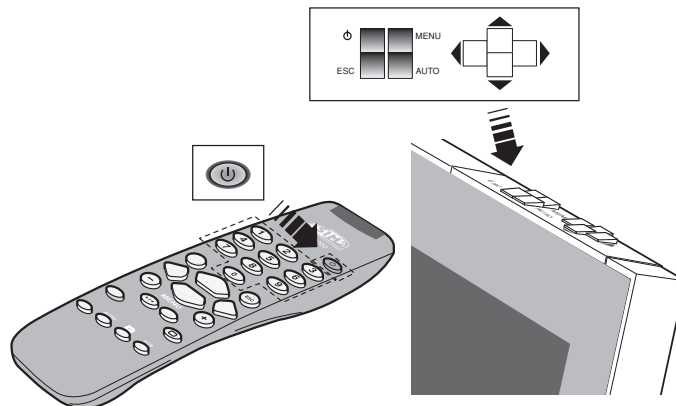
5 KEYPAD

The keypad on the back of the Display features eight keys providing the facility for complete control of the apparatus even without the remote control *(Fig.10)*.
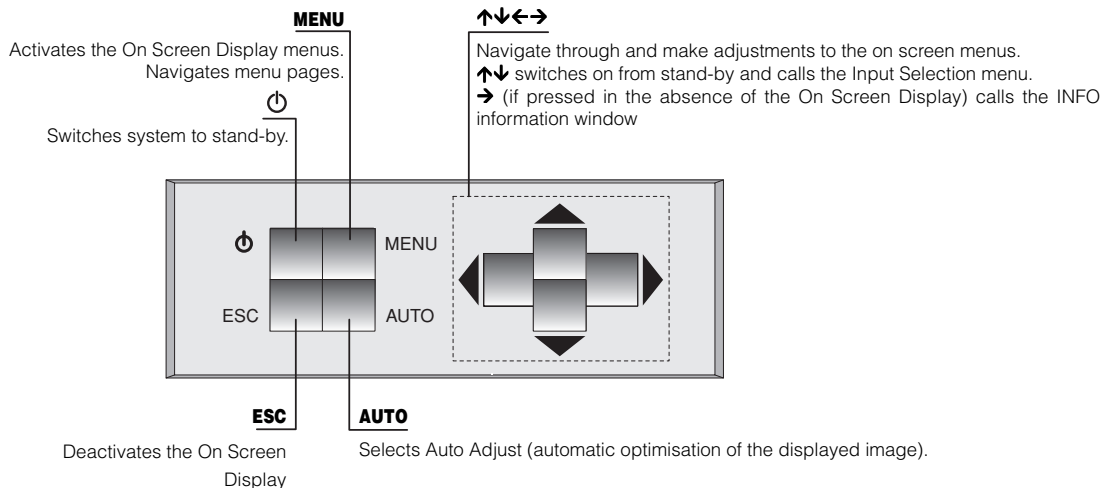
MENU
Activates the On Screen Display menus. Navigates menu pages.

↑↓←→
Navigate through and make adjustments to the on screen menus.
↑↓ switches on from stand-by and calls the Input Selection menu.
→ (if pressed in the absence of the On Screen Display) calls the INFO information window

⏻
Switches system to stand-by.

Fig. 10

ESC
Deactivates the On Screen Display

AUTO
Selects Auto Adjust (automatic optimisation of the displayed image).

11

6 REMOTE CONTROL

The remote control transmits commands to the system by infrared signals.
There are two infrared sensors, one at the front of the Display and one on the front panel of the DigiOptic™ Image Processor.
Avoid placing obstructions between the remote control and the infrared sensor at the front of the Display; this will impair the remote control performance.

The remote control requires four 1.5V AAA alkaline batteries. Insert the batteries, taking care to match the polarity, as indicated in the battery compartment in the handset *(Fig. 11)*. Change the remote control batteries if you experience difficulty in transmitting commands to the system.
Remove batteries from the remote control if it is to remain unused for a long period of time to avoid the risk of potentially harmful chemical leaks.
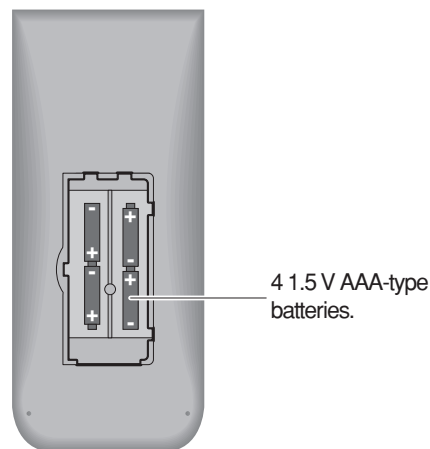
4 1.5 V AAA-type batteries.

Fig. 11

8 ON SCREEN MENU

All system functions can be activated from the keypad or remote control with the aid of a practical and comprehensive system of on screen menus.

INPUTS

The input selection menu (Inputs) is called by pressing 0 on the remote control and, when no other menu is displayed, using the ↑ and ↓ keys on the keypad. To select an input, scroll the list with the ↑ and ↓ keys until the desired input is highlighted, then press →.
Display of the input selection menu is terminated
by pressing the ESC key, or when the time allowed for displaying the on-screen menu has lapsed (set in the Set-up Menu).
Input 5 can accept RGB and YCrCb signals with a scan frequency up to 32Khz.
Inputs 6, 7 and 8 can receive RGB and YCrCb signals, at 15 kHz, 32 kHz or higher. The association between the input and the type of signal is made from the pull-down menu that appears on the right of the < symbol after pressing the ← key *(Fig. 12b)*.

Inputs

1	VIDEO 1	1	›
2	VIDEO 2	2	›
3	S-VIDEO 3	3	›
4	S-VIDEO 4	4	›
5	COMP/RGB 5	5	‹ YCrCb 32kHz ›
6	COMP/RGB 6	6	‹ RGBS 15kHz ›
7	COMP/RGB 7	7	‹ YCrCb ›
8	COMP/RGB 8	8	‹ YCrCb 15kHz ›
9	GRAPH RGB 9	9	›
10	GRAPH RGB 10	10	›
11	DVI-D 11	11	YCrCb ›
12	HDMI 12	12	

Fig. 12a

Inputs

1	VIDEO 1	1	›
2	VIDEO 2	2	›
3	S-VIDEO 3	3	›
4	S-VIDEO 4	4	›
5	COMP/RGB 5	5	‹ YCrCb 32kHz ›
6	COMP/RGB 6		■ RGBS 15kHz
7	COMP/RGB 7		■ RGBS
8	COMP/RGB 8		■ YCrCb 15kHz
9	GRAPH RGB 9		■ YCrCb
10	GRAPH RGB 10	10	›
11	DVI-D 11	11	YCrCb ›
12	HDMI 12	12	

Fig. 12b

Input 11 is capable of receiving YCrCb or RGB signals coming from DVI-D sources.
The selection should be made from the drop menu following the indications described above.

After selecting the source signal (by means of the ↑ and ↓ keys), press MENU+/MENU - to confirm and close the pull-down menu; the value you have just set will be displayed on the right of the ← symbol.
As with the other inputs, you can now select the input just set by pressing the → key.
During the short time it takes to find the signal, a box appears showing the signal requested. As soon as the signal is shown in the box additional information is displayed concerning the video standard (for video signals) or resolution (for graphic signals), and format.
Fom the SETUP menu it is possible to choose to visualize or not this information, for more details check the "SOURCE INFORMATION" in "MENU" section.

MAIN MENU

To access the main menu of the On Screen Display press the MENU key on the keypad or the MENU+ or MENU- key on the remote control.
The main menu is divided into four windows, PICTURE, IMAGE, SETUP and MENU, in which the various adjustments are grouped according to the frequency of use. Use ↑ and ↓ to select the line corresponding to the adjustment you wish to make *(Fig. 13)*.

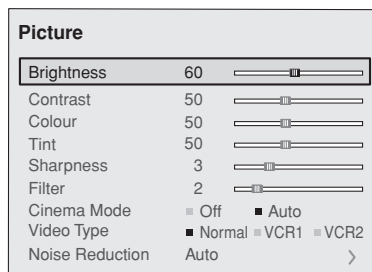| Picture		
Brightness	60	
Contrast	50	
Colour	50	
Tint	50	
Sharpness	3	
Filter	2	
Cinema Mode	▪ Off ▪ Auto	
Video Type	▪ Normal ▪ VCR1 ▪ VCR2	
Noise Reduction	Auto	›

Fig. 13

The various menus only offer the relevant adjustments in accordance with the type of input signal displayed (e.g. certain typical adjustments for video signals, not necessary for graphic signals, do not appear on the menus, and vice versa).

Some adjustments (e.g. BRIGHTNESS and CONTRAST) are associated with a numerical value that can be varied within the set limits using the keys ← / →. For others (e.g. VIDEO TYPE) you can choose among three options presented on the same ← / →).
Other adjustments (marked by the < symbol) provide submenus, which appear as a superimposed window in which the selection is made with the ↑ / ↓keys *(Fig. 14)*.

Image		
Aspect	‹	
Colour Temperature	‹	
Gamma Correction	‹	
Overscan	1	
Position		›
Y/C Delay	1	

Fig. 14a

Image		
Aspect	‹	▪ ‹ Normal
Colour Temperature	‹	▪ ‹ Anamorphic
Gamma Correction	‹	▪ ‹ Letterbox
Overscan		▪ ‹ Panoramic
Position		▪ ‹ Pixel to pixel
Y/C Delay		▪ ‹ User 1
		▪ ‹ User 2
		▪ ‹ User 3

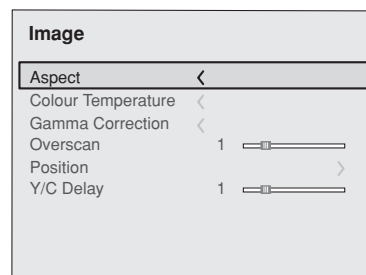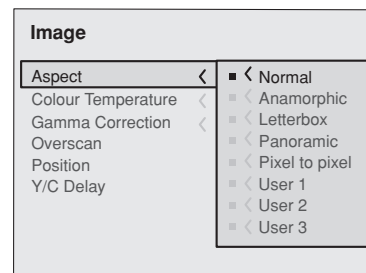*Fig. 14b*

These submenus are accessed by pressing the ← key, while exit and return to the upper level occurs by pressing MENU+/-.
Press ESC on the remote control or keypad to interrupt the menu display or wait for it to disappear automatically after the number of seconds set on the SETUP page.

PICTURE

This menu features the adjustments related to picture quality. Adjustments that are not available for a given input do not appear on the menu. *Table 4* summarises the adjustments available for each input. For a complete overview of the on-screen menus, consult the 'On screen menu layout' in the "Additional Information" section.

BRIGHTNESS

Use this control to adjust the image's black level without affecting white areas. Increasing the value will give more detail in darker parts of the picture. For correct adjustment it may prove useful to display the signal relative to the grey scale within which the black level and the level immediately above it must be separately identifiable. Alternatively use a scene composed of black objects alongside other dark coloured objects.

CONTRAST

Use this control to adjust the image's black level without affecting white areas.

To ensure correct adjustment, it may prove useful to display the signal relative to the grey scale, within which the white level and the level immediately below it must be separately identifiable. Alternatively use a scene composed of well-lit white objects surrounded by light coloured objects with lower level lighting.

COLOR

This control (also called Saturation) increases or decreases the picture colour intensity. When set to zero, colour images will be shown in black and white. Increasing the value, try to find the point at which the colours look natural: suitable references include skin tones and grass in landscape shots.

TINT

Controls the purity of the colours. Basically determines the red-green ratio of the picture.

Reducing the value will boost the red contents of the picture, increasing the value will boost the green tones. For this adjustment use skin tones or a test pattern image with colour bars as a reference.

SHARPNESS

Use this adjustment to increase and decrease 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 high value may result in a 'noisy' picture and the edges of objects may be unnaturally defined.

SHARPNESS MODE

This allows you to select the type of processing associated with sharpness adjustment. In the case of a progressive or interlaced video signal VIDEO mode is advisable; with PC graphic signals use GRAPHIC MODE.

FILTER

This allows you to select 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

In AUTO the deinterlacer recognises if the video signal source is a movie film (obtained from a Telecine device with 3:2 or 2:2 pull-down) and applies a deinterlace algorithm optimised for this type of signal.

If the video signal source is not identified as a film, or if you select NO the deinterlacer applies a Motion compensated algorithm optimised for video camera signals.

VIDEO TYPE

Activates a filter to improve stability of pictures from video recorders. To toggle between NORMAL, VCR1 mode and VCR2 mode press ⬤▬▶ on the remote control.

NOISE REDUCTION

This adjustments allows to choose the filter value for noise reduction purposes.

As soon as this option is selected on the menu, the image is divided in two parts.

In the left side the image is not altered by the filter, in the right part the filter is activated.

This allows you to compare the effect of the filter.

It is possible to deactivated the filter (NOT ACTIVE), to use the automatic adjustments (AUTO) or to manually select (MANUAL) the value suitable for the image with the VALUE adjustment.

In case of using the VALUE adjustement, it is enoght to select to cursor below and set the value with the ← / → keys of the remote control.

Associated to the NOISE REDUCTION there is the possibility to use the specific function (FLESH TONE CORRECTION) to make skin tone more natural. Often the use of noise reduction filter slightly degrades the image in those areas where skin tones are visible. With the use of this function it is possible to maintain an excellent image quality throughout the entire projected image.

Table 4

Adjustments	Video S-Video	RGBS 15kHz YCrCb 15kHz	RGBS	YCrCb	RGB Graphics	DVI-D HDMI™
Brightness	●	●	●	●	●	●
Contrast	●	●	●	●	●	●
Color	●	●	-	●	-	-
Tint	○	●	-	●	-	-
Sharpness	●	●	●	●	●	●
Mode Sharpness	-	-	●	●	●	●
Filter	●	●	-	-	-	-
Cinema Modo	●	●	-	-	-	-
Video Type	●	●	-	-	-	-
Noise reduction	●	●	-	-	-	-
Flesh tone correction	●	●	-	-	-	-

○ Present only if the Video Standard is NTSC

IMAGE

This menu features adjustments relating to picture position, aspect ratio, etc.

ASPECT

This adjustment allows you to change the dimensions and aspect ratio (relationship between width and height) of the displayed image. There are five preset aspects available and three personalised aspects (with user-settable parameters). You can select a different aspect for each source: the selected aspect ratio will be automatically called the next time the relative source is called.

You can also select the required aspect ratio by repeatedly pressing the ◀■▶ key, or by pressing ◀■▶ and a numerical key (1...8).

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: allows a 16:9 picture to be displayed correctly.

LETTERBOX: serves to display 4:3 letterbox image (with source signal having black bands above and below the picture) so that it fills the 16:9 screen and maintains the correct aspect ratio.

PANORAMIC: this aspect stretches the 4:3 image, slightly cropping the upper and lower parts.
Panoramic is ideal for displaying a 4:3 image on the 16:9 screen of the Display.

PIXEL TO PIXEL: this aspect displays the image as it is input without adapting it to the screen.
The image is projected in the centre of the screen and if its horizontal and/or vertical dimensions are smaller than the display, it is bounded by vertical and/or horizontal black bands.

USER 1, 2, 3: When none of the preset formulas are suitable, the User formulas are available, with the facility for continuous horizontal and vertical adjustment of picture size.

COLOR TEMPERATURE

Changes the colour balance of the image.
Colours can be adjusted towards the red end of the spectrum (low colour temperature values - expressed in degrees Kelvin) or the blue end (high values).
Colour temperature can be selected with three preset values: HIGH (corresponding to approx. 9000 degrees Kelvin), MEDIUM (approx. 8000 degrees Kelvin), LOW (approx. 6500 degrees Kelvin) and one PERSONAL setting controlled by the user with separate adjustments for RED, GREEN and BLUE.
In the personale color adjustment for all three colors it is possible to set an Offset value and Gain.
The Offset adjustments have an impact of the low IRE values, while the Gain adjustments impact of the higher IRE values.
Generally, the HIGH value is more suitable for displaying graphic images, MEDIUM and LOW for video images.
These adjustments are reserved for expert users since there is a risk of obtaining results that impair projected image quality.

GAMMA CORRECTION

Determines the system's response to the grey scale, emphasising or attenuating the different grades of brightness (blacks, dark, medium, light grey, whites) in the projected image.
The GRAPHICS setting is more suitable for computer images, while the FILM and VIDEO settings are more suitable for video images.

OVERSCAN

Remove noise around image. Some sources can produce a picture with noise along edges, thanks to the overscan function it is possible to drop such imperfections outside the projected area. The overscan value can be included between 0 (no overscan) and 32 (maximum value). The image maintains in any case the aspect.

POSITION

Use this adjustment to position the image vertically and horizontally. Determines the aspect ratio of the projected image. These parameters do not normally require adjustment because the system checks the input signal and automatically sets the most suitable values.

However, if the image is not perfectly centralised it may prove useful to request the system to repeat the input signal analysis and image positioning, calling the automatic control procedure from the AUTO button on the remote control or keypad. When this procedure is called it is helpful to have a white or light coloured background on the screen in the current picture.

FREQUENCY/PHASE

These adjustments, available for progressive signals and for signals from PC, ensure correspondence between the number of pixels making up the signal and the number of pixels making up the projected image.

These parameters do not normally require adjustment because the system checks the input signal and automatically sets the most suitable values.

However, if the image appears disturbed (loss of position within the equidistant vertical bands or instability and lack of sharpness on the narrow vertical lines) it may help to prompt the system to repeat the input signal analysis and determination of the best parameters by calling the automatic adjustment procedure with the AUTO key on the remote control or on the keypad.

If the automatic procedure fails to have the required effect, enter the frequency and phase values manually and approach the screen sufficiently to observe the effects of the adjustments.

Y / C DELAY

In the case of Video and S-Video signals, it may be necessary to correct horizontal colour misalignment within the projected image. For a given video standard (e.g. PAL or NTSC) the stored value does not normally require further fine-tuning, unless the source or connection cable has changed.

Table 5

Adjustments	Video S-Video	RGBS 15kHz YCrCb 15kHz	RGBS	YCrCb	RGB Grafico	DVI-D HDMI
			Inputs			
Position	●	●	●	●	●	-
Aspect	●	●	●	●	●	●
Frequency	-	-	●	●	●	-
Phase	-	-	●	●	●	-
Colour Temperature	●	●	●	●	●	●
Gamma Correction	●	●	●	●	●	●
Overscan	●	●	●	●	●	●
Y/C Delay	●	●	-	-	-	-

SETUP

The setup menu contains less frequently used adjustments that may be required during installation (e.g. On Screen Display language selection or the display of Test Patterns).

POWER ON

If active (AUTO) allows to power up the system directly from the power feeder, once the initializing phase is completed.
If not active (STAND-BY) once the initializing phase is completed the system remains in a stand-by mode waiting to receive the power on command from the remote control or the key pad.

TEST PATTERNS

Displays a series of five test patterns, useful for the installation of the Display.
Press ↓ and ↑ keys to browse pattern.
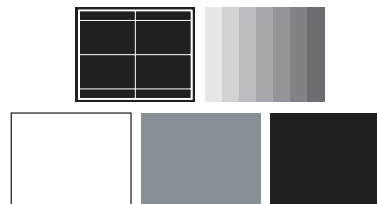
FACTORY DEFAULTS

Reconfigures the Display to original factory settings except Position, Orientation, Y/C Delay, Zoom and Focus.

```
              Confirm?
        ◀ No           Yes ▶
```

MENU

LANGUAGE

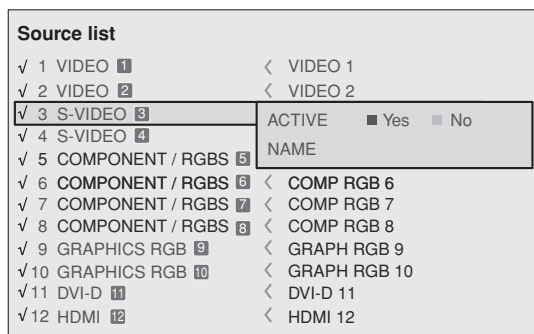Lists the languages available for the On Screen Display menus.

SOURCE LIST

In order for the RTX55H system to be more flexible, the following described functions allow to modify the input selection menu making it more user friendly.

The main window shows all the inputs available on the DigiOptic™ Image Processor.

If one or more inputs are not utilized, it is often helpful to blank them from the input list (accessed with the 0 key).

Once the input has been chosen, in the drop menu that appears by pressing the ← key, it is possible to activate the source *(Fig. 15)*.

The exclusion or activation of the source will automatically renumber the remaining active inputs.

```
Source list
√  1  VIDEO  ▣            〈  VIDEO 1
√  2  VIDEO  ▣            〈  VIDEO 2
√  3  S-VIDEO ▣
√  4  S-VIDEO ▣           ACTIVE    ■ Yes   ■ No
√  5  COMPONENT / RGBS ▣  NAME
√  6  COMPONENT / RGBS ▣  〈  COMP RGB 6
√  7  COMPONENT / RGBS ▣  〈  COMP RGB 7
√  8  COMPONENT / RGBS ▣  〈  COMP RGB 8
√  9  GRAPHICS RGB ▣      〈  GRAPH RGB 9
√ 10  GRAPHICS RGB ▣      〈  GRAPH RGB 10
√ 11  DVI-D ▣             〈  DVI-D 11
√ 12  HDMI ▣              〈  HDMI 12
```

Fig. 15

The inputs with an active video signal (visible in the input selection menu) are marked with a check symbol.

It can be also helpful to identify the input with a name chosen by the user (for example with the name of the connected source) rather than with the signal type.

Once chosen to have the input visible, in the drop menu, by selecting the Name option it is possible to rename the source in use.

This will make it easier to remember the source connected to a specific input. You can use up to 12 alphanumeric letters to name the source (for more details check the "Insert text" section)

Insert text

You will be able to insert text easily and rapidly by accessing the text insertion menu *(fig. 16)*
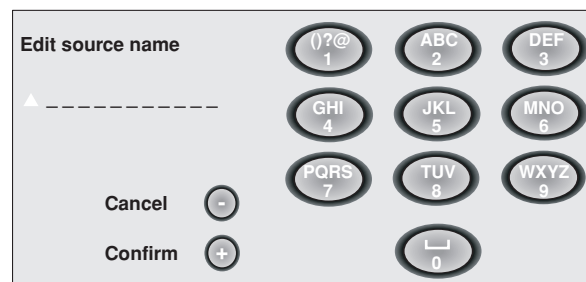

Fig. 16

The text insertion mode remains the same if text is being inserted for the first time or if a previously inserted name is being edited. The letter insertion can be done in any available position (represented by horizontal lines).

Use the → and ← keys to move between letters either left or right respectively.

Press the numeric key matching the letter *(Fig. 16)*, the first click of the key selects the first letter, the second click the second letter and so on.

The available letters are shown in the text insertion menu.

Once one letter has been inserted, to insert the following one it is necessary to move with the cursor in the next right position with the → key of the remote control, repeat this procedure to insert other letters.

Use the ↑ key to switch from small case to capital letters and vicÂ versa.

Any mistake can be deleted with the ↓ key once it has been positioned on the wrong letter.

Once the text insertion process is finished, it can be confirmed and saved by clicking the MENU+ key.

If you want to delete the modifications use the MENU- key of the remote control.

F1/F2 KEYS

This allows to assign different functions to the remote control keys, named F1 and F2.

The window is made of 4 options *(Fig.17)*, once for each line and by two columns showing the F1-F2 keys. The choice between F1 and F2 is made by the → and ← keys of the remote control; the function given to F1 and F2 is chosen with the ↑ and ↓ keys.

The function delivered by the key is memorized by the intersection on the line and column.
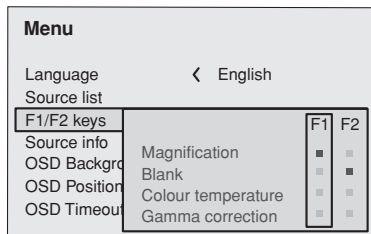
In the following window are described the 4 options.

```
Menu

Language        ‹  English
Source list
F1/F2 keys                        F1  F2
Source info     Magnification     ■   ·
OSD Backgr      Blank             ·   ■
OSD Position    Colour temperature ·  ·
OSD Timeout     Gamma correction  ·   ·
```

Fig.17

Magnification

Allows you to select the area to be viewed and then magnify the projected image. The degree of enlargement is selected in Zoom mode (identified by a magnifying glass in the centre of the image) using the ← and → keys. The area of the picture to be enlarged is selected in Pan mode (symbol in the centre of the picture) using the ↑ and ←, → arrow keys. You can toggle between Zoom and Pan mode by pressing the F1/F2 key on the remote control.

BLANK

Blanks the active video signal producing a completely black screen. Once pressed the key an indication of a few seconds on the OSD will confirm its activation. A click of any other key of the remote control allows to restore the previous settings.

Color temperature

The following click of the key (F1 or F2) allows to choose between the different color temperatures available. High, Mid, Low, User.

Gamma correction

The following click of the key (F1 or F2) allows to choose between the different gamma curves available.

SOURCE INFORMATION

When active (YES) each source change will show the information related to the signal. If not active (NO) there will be no information on the selected source.

OSD BACKGROUND

Determines the type of background for the On Screen Display.

OSD TIMEOUT

Use this adjustment to set the display time after which the On Screen Display will disappear.

OSD POSITION

Allows the On Screen Display to be positioned in a particular area of the projected image. The OSD can be positioned using the arrow keys for fine adjustments or keys 1...9 on the remote control to select one of 9 preset positions.

MEMORIES

The main parameters of the image may be saved in distinct groups of values (known as 'Memories'); these parameters can subsequently be applied all together by way of a single command.

There are 3 distinct Memories (Memory 1, Memory 2, Memory 3) for each of the 25 signal types managed:

1	VIDEO		
2	VIDEO		
3	S-VIDEO		
4	S-VIDEO		
5	COMP/RGB(YCrCb 15KHz)	5	COMP/RGB(RGB 15KHz)
5	COMP/RGB(YCrCb 32KHz)	5	COMP/RGB(RGB 32KHz)
6	COMP/RGB(YCrCb 15KHz)	6	COMP/RGB(RGB 15KHz)
6	COMP/RGB(YCrCb)	6	COMP/RGB(RGB)
7	COMP/RGB(YCrCb 15KHz)	7	COMP/RGB(RGB 15KHz)
7	COMP/RGB(YCrCb)	7	COMP/RGB(RGB)
8	COMP/RGB(YCrCb 15KHz)	8	COMP/RGB(RGB 15KHz)
8	COMP/RGB(YCrCb)	8	COMP/RGB(RGB)
9	GRAPHICS RGB		
10	GRAPHICS RGB		
11	DVI-D (RGB)		
11	DVI-D (YCrCb)		
12	HDMI		

making a total of 75 different available Memories.
The image parameters that can be saved/recalled by the Memories management system are the following:

Image
BRIGHTNESS
CONTRAST
COLOR
TINT
SHARPNESS
FILTER
SHARPNESS MODE
VIDEO TYPE
NOISE REDUCTION

Picture
ASPECT
COLOR TEMP. GAIN (R/G/B)
COLOR TEMP. GAIN OFFSET (R/G/B)
COLOR TEMP.
OVERSCAN
GAMMA

Some of these parameters may not be available for certain inputs or certain input signals, as indicated in Tables 4 and 5.
The menu page for the Memories management functions is activated by pressing the ■ key on the remote control or the ← key on the keypad (Fig.18).
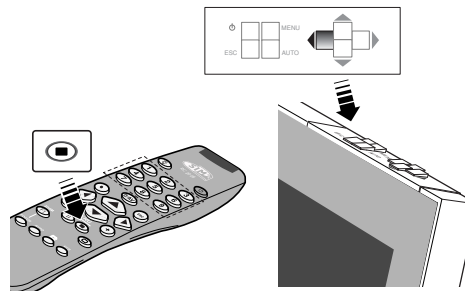

Fig.18

The operations that can be performed on each memory selected are described here below.

SAVE A MEMORY
To save the current values of the image parameters in Memory 1, use the ↑ and ↓ keys to move to line '1' and then open the pull-down menu by pressing the ← key (Fig.19). Then select the option 'Save current settings'. To confirm that the operation has been completed successfully, the message 'Current settings saved in Memory 1' is displayed at the bottom of the screen and the letter 'S' appears to the left of the memory name. The same procedure is used to save parameters in Memories 2 and 3.
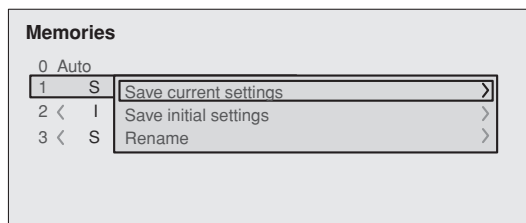

Fig.19

RECALL A MEMORY
To recall a Memory, select the desired line and press →. The parameters saved in the selected Memory will be applied to the image displayed and a message will appear to confirm the operation 'Memory 1 recalled'. The Memory recalled will be associated with the source and signal type, and will be automatically recalled every time that particular source and signal type combination is selected.

SAVE DEFAULT SETTINGS

To restore the original values to a previously modified Memory, select the line corresponding to the Memory in question and open the pull-down menu (← key). Then select the line 'Initial settings saved in Memory 1'. To confirm that the operation has been completed successfully, the message 'Memory 1 initialised' is displayed at the bottom of the screen and the letter 'I' appears to the left of the name of the memory.

RENAME A MEMORY

It is possible to assign a name to each Memory. To assign a name (with a maximum length of 12 alphanumeric characters) to a Memory, select the option 'Rename' from the corresponding pull-down menu. Enter the text following the procedure indicated in paragraph "SOURCE LIST".

RESTORE CURRENT SETTINGS

On entering the 'Memories' menu, a copy of the current settings is saved in a temporary menu (labelled with 0 - AUTO). Once one or more memories have been recalled, you can restore the settings that were effective at the moment the Memories menu was accessed by selecting 0 - AUTO. However, this operation must be completed before the 'Memories' menu page disappears (30 seconds after the last operation commanded from the remote control or the keypad). The next time it appears, the temporary memory will contain new information that takes into account any Memories selected the penultimate time the 'Memories' page was accessed.

Memory 0 (- AUTO) can be used even when you do not wish to enable the Memories management function for the signal currently in use. Once Memory 0 has been selected, when a source is chosen, the settings that were effective at the time the Memory was previously recalled will be automatically applied.

INFO

Displays the current status of the Display and information concerning the projected video/graphic signal.
This function is displayed on pressing [i] on the remote control (or, in the absence of the On Screen Display, the → key on the remote control).

QUICK MENU

The quick menus provide access to the main adjustments that affect image quality, without calling the main On Screen menus. BRIGHTNESS, CONTRAST, COLOUR, TINT, SHARPNESS and FILTER adjustments appear at the bottom of the screen one after the other when the ↑ and keys are pressed ↓.

MESSAGES

The following messages may appear during operation of the system:

No signal

The system does not recognise 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 that 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's 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 (e.g. a QXGA graphic signal) or when an input is supplied with an incompatible signal (after setting the components input to YCrCb 15kHz a progressive signal is connected).

9 MAINTENANCE

The units in the system do not require internal adjustments and do not contain any user-serviceable parts.
For replacement of the lamp or any other service requirements seek qualified technical assistance from your nearest Dealer.
A soft cloth is normally sufficient for cleaning the DigiOptic™ Image Processor or the Display. Use a slightly moistened cloth to remove more stubborn dirt. In this case, before proceeding switch off and disconnect the unit, and ensure that no liquid penetrates to the inside.
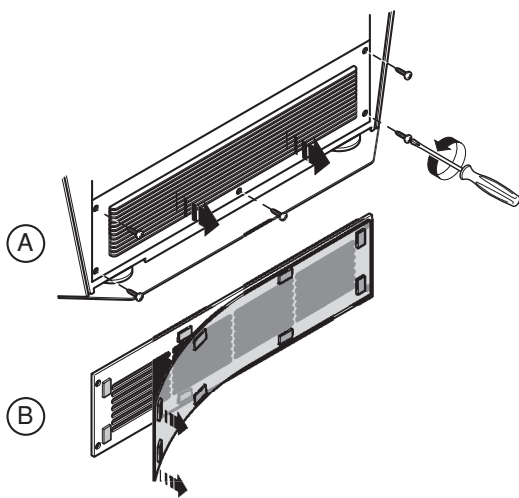
To clean the rear ventilation grille filter, remove the screws *(Fig.A)* that secure the grille to the rear panel (taking care not to damage the fibre optic cable) and remove the grille from the rear panel: remove the stickers *(Fig.B)* and the filter, taking care not to damage the filter. Clean the filter by shaking it vigorously to remove the dust or usinÁ a jet of compressed air; now refit the filter to the rear of the grille *(Fig.C)* and secure it by pressing on the adhesive stickers. At this point reposition the grille and secure it to the rear panel by means of the screws *(Fig.D)*.
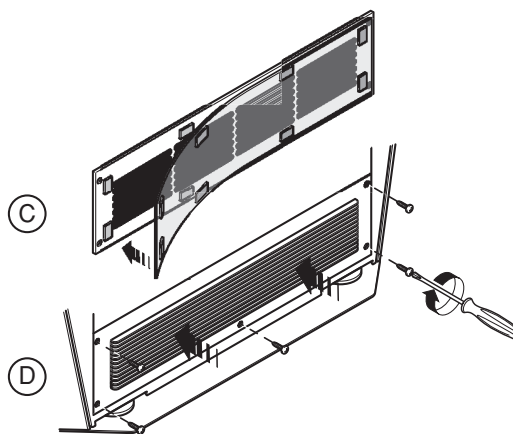
10 TROUBLESHOOTING GUIDE

No power (LEDs always OFF)

- Check that the units' power switches are set to I.
- Check that the power cables are correctly connected to the units' power sockets.
- Check the condition of the fuse located on the power socket on the rear of the Display.
- Replace the fuse located on the display power socket with an identical type (T 3.15A H).

- If the fuse blows repeatedly, seek technical assistance from your nearest Dealer.

Lamp fails to switch on

- Allow a few minutes between switching off and switching on again. This will allow the lamp to cool down sufficiently.
- If the lamp fails to illuminate - even though the unit has had time to cool down - seek technical assistance from your

nearest Dealer.
- Check the state of the connection by interpreting the code displayed by the system LEDs in accordance with Table 3.

No picture

- Check that the selected input is effectively connected to an active video or graphic source.
- Make sure the video or graphic signals supplied by the source are compatible with the technical specifications of the RTX system or, in particular, the selected input.
- Check the condition of the cables used to connect the DigiOptic™ Image Processor to the various sources.
- Check the state of the connection between the DigiOptic™ Image Processor and the Display.

Picture is disturbed, unstable or noisy

- Check compatibility of the video or graphic signals with the technical specifications of the system, and specifically, with the specifications of the selected input.
- Check the condition of the cables used to connect the DigiOptic™ Image Processor to the various sources.
- If the problem occurs on a terrestrial broadcast source signal, check that the receiver has been correctly tuned in and that the aerial system is in good working order.
- If the problem occurs in a video signal from a video-recorder, ensure that the videotape is an original "first generation" copy and that VCR mode is active in the PICTURE menu.
- Adjust the Sharpness parameter in the PICTURE menu to optimise the projected image.

Image incomplete along borders (vertical or horizontal)

- Check compatibility of the video or graphic signals with the technical specifications of the system, and specifically, with the specifications of the selected input.
- Recall the automatic image adjustment function by pressing the AUTO key on the remote control or the Display keypad.
- Adjust the horizontal or vertical position of the projected image using the IMAGE ADJUSTMENTS / POSITION menu.
- Adjust the width and height of the image, selecting Aspect in the IMAGE ADJUSTMENTS / ASPECT menu.

Picture too dark, too pale or unnaturally coloured

- Check compatibility of the video or graphic signals with the technical specifications of the system, and specifically, with the specifications of the selected input.
- Adjust the CONTRAST, BRIGHTNESS, COLOUR and TINT parameters in the PICTURE menu.
- If necessary, adjust COLOR TEMPERATURE and GAMMA CORRECTION (IMAGE menu).

Graphic image with poor quality vertical detail

- Check compatibility of the video or graphic signals with the technical specifications of the system, and specifically, with the specifications of the selected input.
- Press AUTO (on the remote or keypad) to execute automatic adjustments.
- Adjust FREQUENCY and PHASE parameters in the IMAGE menu to optimise vertical detail of the projected image.

Video image showing colour misalignment on vertical details

- Check compatibility of the video or graphic signals with the technical specifications of the system, and specifically, with the specifications of the selected input.
- Adjust Y/C DELAY settings in the IMAGE menu to reduce colour misalignment.

Remote control not working

- Check remote control battery power and correct polarity.
- Ensure the area between the infrared sensors (on the front panel of the DigiOptic™ Image Processor and the front of the Display) and the remote control is free from obstructions.
- Make sure the infrared sensors on the front panel of the DigiOptic™ Image Processor and at the front of the Display are not exposed to intense light levels.

11 ADDITIONAL INFORMATION

TECHNICAL SPECIFICATIONS

DISPLAY

OPTICAL

Optical system:	optical engine based on 1 DMD™ chip; sealed dust-proof housing
DMD™ panel:	TI HD2+ 0,8" 12° Dark Metal - 1280x720 pixels (aspect ratio 16:9)
Projection lens:	UltraWide angle F/2.4
Colour wheel:	6 segments (RGBRGB) - 9000 rpm max
Lamp:	120 W - 6,000 hours*
Picture size:	55": 1218x685 mm (48x27 in)
Brightness:	55": 350 cd/m^2

*average value measured in the laboratory under optimal conditions; can be reduced by improper use

ELECTRICAL

Input/Output:	3-channel fibre optic link
Control:	Panel (keypad), remote control

GENERAL

Power supply cable:	(EU, UK and US); length 2 m
Power sıpply:	100 to 240 Vac, tolerance +/- 10%, frequency 48 to 62 Hz
Consumption:	170 W max
Fuse:	T 3.15A H, 5 x 20 mm
Dimensions:	55": 1495 x 1218 x 421 mm (WxHxD)
Weight (approx.):	55": 85 kg
Operating Temperature:	10 to 35 °C
Transportation temperature:	-15 to 55 °C
Storage temperature:	-15 to 55 °C
Humidity:	20% to 95% non-condensing
Safety:	EN 60950, UL 60950
Electromagnetic compatibility:	EN 55022 Class B EN 55024 EN 61000-3-2 EN 61000-3-3
Transport:	IEC 68-2-31, IEC 68-2-32

DIGIOPTIC™ IMAGE PROCESSOR

ELECTRICAL

Input signals:
- 2 COMPOSITE VIDEO (CVBS)
  RCA type connectors, gold-plated
  1.0 V_{pp} / 75 Ω, negative synchronisation
- 2 S-VIDEO (Y/C)
  4-pin mini-DIN connectors
  - Y: 1.0 V_{pp} / 75 Ω, negative synchronisation
  - C: 0.286 V_{pp} / 75 Ω, [NTSC nominal burst level]
    0.3 V_{pp} / 75 Ω [PAL, SECAM nominal burst level]
- 4 COMPONENTS (Y/Cr/Cb/H/V) - RGBHV
  3 sets of 5 RCA connectors, gold-plated
  1 set of 5 BNC type connectors, gold-plated
  - Components signal
    - Y: 1.0 V_{pp} / 75 Ω, negative or 3-level synchronisation [HDTV]
    - Cr,Cb: 0.7 V_{pp} / 75 Ω
  - RGB signal
    - R,B: 0.7 V_{pp} / 75 Ω
    - G: 0.7 V_{pp} / 75 Ω, separate H/V Sync or H+V Sync 1.0 V_{pp} / 75 Ω, negative or 3-level synchronisation [HDTV]
    - H,V: positive or negative TTL, 0.3-5 V_{pp} / 1 kΩ
- 2 RGBHV (analogue RGB)
  female DB15HD connectors
  - R,B: 0.7 V_{pp} / 75 Ω
  - G: 0.7 V_{pp} / 75 Ω, separate H/V Sync or H+V Sync 1.0 V_{pp} / 75 Ω, negative or 3-level synchronisation [HDTV]
  - H,V: positive or negative TTL, 0.3-5 V_{pp} / 1 kΩ
- 1 DVI (digital RGB/YCrCb)
  DVI-D female connector
- 1 HDMI™
- 1 Optical Audio Output
  Toslink connector

Input/Output:	3-channel fibre optic link
Control:	Panel (keypad), remote control, via RS232 from PC or home automation devices

Horizontal frequency:	from 15 to 80 kHz (up to UXGA, 60 Hz)		Storage temperature:	-15 to 55 °C
Vertical frequency:	48 -100 Hz		Humidity:	20% to 95% non-condensing
Video standards:	automatically selected (PAL B, G, H, I, M, N, 60, SECAM, NTSC 3.58 and 4.43)		Safety:	EN 60950, UL 60950
			Transportability:	desktop equipment
High definition video:	ATSC HDTV (480p, 720p, 1080i, 1080p)		Electromagnetic	
Graphic standards:	VGA, SVGA, XGA, SXGA, UXGA		compatibility:	EN 55022 Class B
Deinterlacer:	Faroudja chipset, DCDi™, 3:2 pull down sequence conversion			EN 55024
				EN 61000-3-2
Colour temperature:	from 5000 to 9300 °K (three presets and one user settable)			EN 61000-3-3
			Transport:	IEC 68-2-31, IEC 68-2-32
Control:	infrared remote control, RS232 serial (DB9 connector, female)			

GENERAL

Power supply cable:	(EU, UK and US); length 2 m
Power supply:	100 to 240 VAC, tolerance ± 10%, frequency from 48 to 62 Hz
Consumption:	30W max
Dimensions:	483 x 55 x 200 mm (WxHxD); compatible with 19" rack
Weight (approx.):	2.5 kg
Operating Temperature:	10 to 35 °C
Transportation temperature:	-15 to 55 °C

LINK CABLE

Composition:	three 50/125 µm multimode optical fibre cables
Connectors:	LC type
Length:	20.0±0.2m
Diameter:	5 mm max
Tensile strength:	1200N*
Type Approval:	UL OFNP

*traction applied on outer cable, not on fibre cores or connectors.
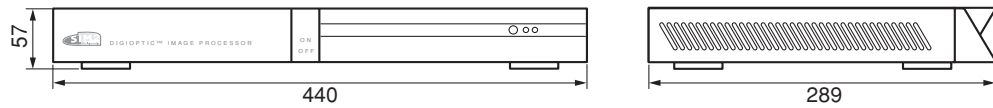
DISPLAY

RTX 55"H

1494
1218
685
1228
1188

425
250
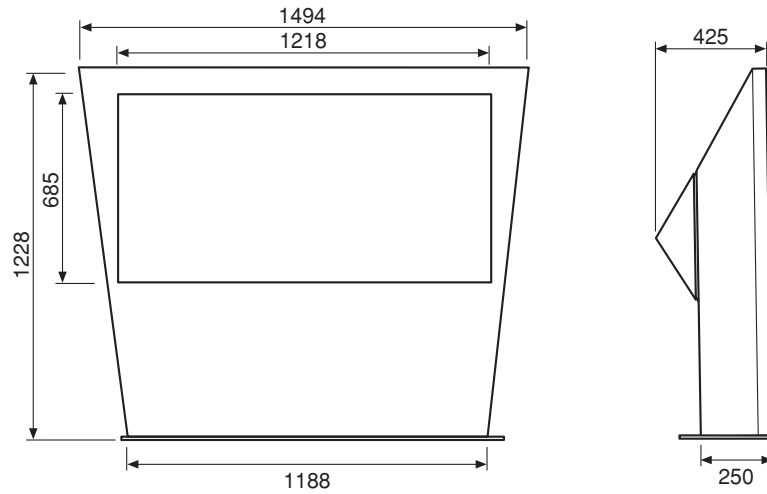
Unit of measure: mm
Scale 1:20

DIGIOPTIC™ IMAGE PROCESSOR

57

DIGIOPTIC™ IMAGE PROCESSOR
ON OFF

440

289

Unit of measure: mm
Scale 1:5

25

Picture

Video • S-Video [NTSC] YCrCb15kHz RGBS 15kHz

Brightness
Contrast
Color
Tint
Sharpness
Filter
Cinema Mode
Video Type
Noise reduction

Video • S-Video [PAL, SECAM]

Brightness
Contrast
Color
Sharpness
Filter
Cinema Mode
Video Type
Noise reduction

YCrCb

Brightness
Contrast
Color
Tint
Sharpness
Sharpness Mode

RGBS RGB Grafico DVI-D HDMI

Brightness
Contrast
Sharpness
Sharpness Mode

■ Not active ■ Auto ■ Manual

Flesh tone correction   ■ On ■ Off

Value
Flesh tone correction   ■ On ■ Off

Image

Video • S-Video

Aspect
Color Temperature
Gamma Correction
Overscan
Position
Y/C Delay

YCrCb 15kHz RGBS 15kHz

Aspect
Color Temperature
Gamma Correction
Overscan
Position

YCrCb RGB RGB Grafico

Aspect
Color Temperature
Gamma Correction
Overscan
Position
Frequency
Phase

DVI-D HDMI

Aspect
Color Temperature
Gamma Correction
Overscan

Aspect

Normal
Anamorphic
Letterbox
Panoramic
Pixel to Pixel
User 1
User 2
User 3

Horizontal
Vertical

Horizontal
Vertical

Horizontal
Vertical

Color Temperature

High
Medium
Low
User

Red Offset
Green Offset
Blue Offset
Red Gain
Green Gain
Blue Gain

Gamma Correction

Film
Video
Graphics

Setup

| Power ON |
| Test patterns |
| Initial settings |

| Auto |
| Stand-by |

Menu

| Language |
| Source list |
| F1/F2 keys |
| Source info |
| OSD background |
| OSD Position |
| OSD Timeout |

| English |
| Italiano |
| Français |
| Deusch |
| Español |
| Português |

■ Yes ■ No

	F1	F2
Magnification	■	■
Blank	■	■
Color temperature	■	■
Gamma correction	■	■

√	1	VIDEO 1	〈	VIDEO 1
√	2	VIDEO 2	〈	VIDEO 2
√	3	S-VIDEO 3	〈	S-VIDEO 3
√	4	S-VIDEO 4	〈	S-VIDEO 4
√	5	COMPONENT / RGBS 5	〈	COMP RGB 5
√	6	COMPONENT / RGBS 6	〈	COMP RGB 6
√	7	COMPONENT / RGBS 7	〈	COMP RGB 7
√	8	COMPONENT / RGBS 8	〈	COMP RGB 8
√	9	GRAPHICS RGB 9	〈	GRAPH RGB 9
√	10	GRAPHICS RGB 10	〈	GRAPH RGB 10
√	11	DVI-D 11	〈	DVI-D 11
√	12	HDMI 12	〈	HDMI 12

| Active | ■ Yes ■No |
| Name | 〉 |

Edit source name

▲ - - - - - - - - - - - -

()?@ 1	ABC 2	DEF 3
GHI 4	JKL 5	MNO 6
PQRS 7	TUV 8	WXYZ 9

Cancel ⊝

Confirm ⊕

⎵ 0

Memories

| **Memories** |
| 0 Auto |
| 1 〈 S MEMORY 1 〉 |
| 2 〈 S MEMORY 2 〉 |
| 3 〈 S MEMORY 3 〉 |

Save current settings	〉
Save initial settings	〉
Rename	〉

Edit memory name

▲ - - - - - - - - - - - -

()?@ 1	ABC 2	DEF 3
GHI 4	JKL 5	MNO 6
PQRS 7	TUV 8	WXYZ 9

Cancel ⊝

Confirm ⊕

⎵ 0

INDEX