



USER AND
INSTALLATION MANUAL

MANUALE D'USO E
INSTALLAZIONE

GEBRAUCHS-UND
INSTALLATIONSANLEITUNG

MANUAL DE USO E
INSTALACIÓN

PROJECTOR SVD 800 HD

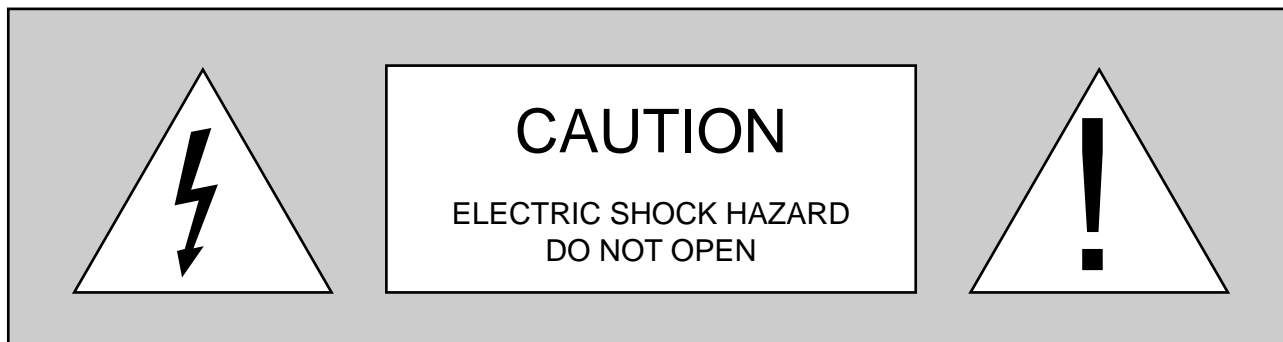
VIDEO PROJECTOR

INDEX

1-	WARNINGS	Page 3
	1.1 Safety and Regulations	4
2-	GENERAL INFORMATION	4
	2.1 Projector identification	4
	2.2 Power cabling	5
	2.3 Servicing	5
	2.4 Spare parts	5
	2.5 Cleaning the projector	5
	2.6 Cathode-ray tube phosphor burning	6
	2.7 Packing the projector	6
	2.8 Room lighting	6
	2.9 Back panel	6
3-	USER REMOTE CONTROL RC 3100	8
	3.1 Batteries	9
	3.2 RC 3100 User Remote Control	9
	3.3 Projector Power On	9
	3.4 Input selection	9
	3.5 Picture adjustment	9
	3.6 Screen format selection	10
	3.7 VCR button (Sync filter)	10
	3.8 Information (INFO)	10
	3.9 Muting video button	10
	3.10 Normalised button	10
	3.11 UPC button	10
	3.12 Freeze button	10
	3.13 Video Menu	11
	3.14 UPC converter	11
	3.15 Input Settings	12
	3.16 Blanking	12
	3.17 EHT NOISE RED	12
	3.18 WHITE MENU	13
	3.19 OPTIONS	13
	3.20 Working time	14
	3.21 OSD OPTIONS	14
	3.22 LOGO	15
	3.23 Installation menu	15
	3.24 How to enter the SERVICE MODE	15
4-	INSTALLATION	16
	4.1 Installation procedure	16
	4.2 Removing the cover	16
	4.2.1 Removing the top cover	16
	4.2.2 Removing the front panel	17
	4.3.1 Installation choice	17
	4.3.2 Desk-top front projection	17
	4.3.3 Desktop rear projection	18
	4.3.4 Ceiling front projection	18
	4.3.5 Ceiling rear projection	20
	4.4 Projection angle measurement	20
	4.5 Spacers	20
	4.5.1 Spacer changing	20
	4.5.2 Spacer table	21
	4.6 Projector centering	23
	4.7 Optical and electrical adjustments	23

4.8	Lens focus adjustment	Page 23
4.9	Mechanical centering of the tubes	24
4.10	Correct screen viewing (deflections inversion)	24
4.11	Convergence adjustment	24
5-	THE COMPLETE FUNCTION RC3000 REMOTE CONTROL	25
5.1	Complete function RC3000 remote control	25
5.2	Batteries	26
5.3	How the RC 3000 remote control works	26
5.4	Projector power on	26
5.5	Picture adjustment	26
5.6	Test patterns	27
5.7	White balance	28
5.8	MEMORY MANAGER	28
5.8.1	How to enter the memory manager	29
5.8.2	How to insert a label	29
5.8.3	How to change an aspect ratio (F)	29
5.8.4	Horizontal and vertical frequencies	30
5.8.5	How to store a new input signal	30
5.8.6	LOAD	30
5.8.7	COPY	31
5.8.8	MOVE	31
5.8.9	DELETE (DEL)	32
5.9	Installation types	32
5.10	Fine picture adjustments	32
5.11	Convergence (CONV)	32
5.11.1	PHASE	32
5.11.2	SHIFT	33
5.11.3	LINEARITY	33
5.11.4	Picture dimensions (SIZE)	33
5.11.5	SKEW	33
5.11.6	BOW	34
5.11.7	KEYSTONE	34
5.11.8	PINCUSHION	34
5.11.9	ZONE	34
5.12	How to reset the adjustments (RESET)	35
5.13	How to store the convergence adjustments (MEMO)	35
6-	TECHNICAL SPECIFICATIONS	36
7-	DISPLAY PERFORMANCE	37
8-	ELECTRICAL DATA	38
9-	MECHANICAL DATA	38
10-	TEMPERATURE AND HUMIDITY RANGE	38
11-	OPTIONAL ACCESSORIES	38
12-	STANDARD ACCESSORIES	38
13-	PIN ASSIGNMENT	39
14-	TROUBLESHOOTING	40
15-	FRENCH INSTRUCTION	41
16-	GERMAN INSTRUCTIONS	42

1 - WARNINGS



TO REDUCE THE RISK OF ELECTRIC SHOCK, DISCONNECT THE POWER SUPPLY CABLE BEFORE OPENING THE EQUIPMENT

There are no parts inside the projector that need adjusting by the user.

Qualified technicians must be called to perform extraordinary maintenance and adjustments.

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 in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communication. 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 determined 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.

Attention:

Before using this projector please read this manual through carefully and completely. This manual will provide you with the basic instructions for using the projector. Installation, preliminary adjustments and procedures which require the opening of the projector and contact with electrical components should be performed by qualified personnel. For continued safe and reliable operation, use only power cables supplied by the manufacturer. Adhere to all notes and warnings.

MAINS POWER

Mains power: 120-240Vac 48-62Hz +6%-10%
Max absorbed current: 4.2A

1.1 Safety and Regulations

A) Safety - conform to:

EN60950:
 Equipment for information technology including electric office equipment.
 Safety.

German Law (RoV) -1987:
 X-ray emission

USA Code of Federal Regulations: Title 21(21CFR)
 X-ray emission

B) Electromagnetic Compatibility - conform to:

EN 50082-1:
 Generic immunity law.

EN 61000-3-2:
 Limits for harmonic current emission

EN 55022:
 Limits and measuring methods of radio disturbance produced by information technology equipment.

EN 61000-3-3:
 Limits - Section 3 Limitation of Voltage Fluctuation and Flicker in Low Voltage Supply Systems for Equipment with Rated Current SYMBOL 163f "Symbol" 16A.

● **Warning**
SIM 2 Multimedia S.P.A declines all responsibility for damages to things and/or people caused by incorrect mechanical or electrical installation of the projector.

2 General information

The instructions detailed in this manual for the installation and normal operation of the project must be followed precisely.
Installation and preliminary adjustments must be performed by qualified service technicians.

2.1 Projector identification

The model and serial number are located on the projector's rear label *Fig. 1*.

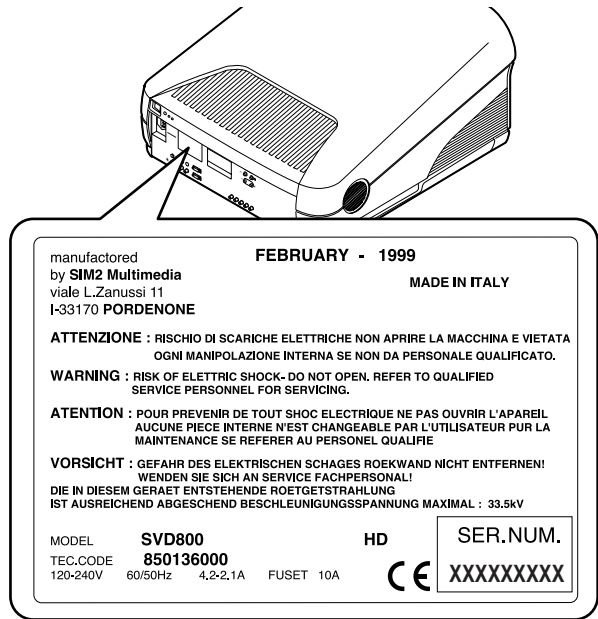


Fig. 1

Record the serial number in the space below and quote it each time you ask for information or technical assistance from SIM2 Multimedia SPA.

Mod. Serial number.....

Before operating the projector, read carefully the safety labels on the rear panel.

The lightning flash symbol on the label and the 33.5Kv indication are intended to advise the user that inside the projector there are components that can produce electric shock.

Warnings:
To avoid damages, fire or electric shocks do not expose this projector to the rain or damp. Qualified service personnel should service and adjust the projector's internal parts.

- Never put objects of any kind through the projector's ventilation slots as they might touch high voltage components or cause short circuits that could be a fire or electric shock hazard.
- Do not spill any liquid spill on the projector.
- If an object or liquid manages to get inside the projector, unplug it immediately and call for the assistance of qualified personnel.
- Do not attempt to use it as it could be dangerous or even worsen the damage.

- If the projector is not used for long periods of time or during storms, unplug the projector temporarily from the mains to avoid damaging the projector caused by lightning or temporary overcurrents.
- Do not stand the projector on unstable surfaces as it could drop causing serious damage.
- The projector has slots for ventilating the internal components - do not cover or block them.
- The projector should always be put on a solid, firm surface.
- The projector should not be made part of a fitted installation or closed unless there is sufficient ventilation.
- After technical assistance or repairs on the projector have been completed, ask the technician to carry out a safety check (all cables and components in the right position) and to make sure the projector is in proper operating conditions.

2.2 Power cabling

The projector's mains power device is shown in the picture Fig. 2.

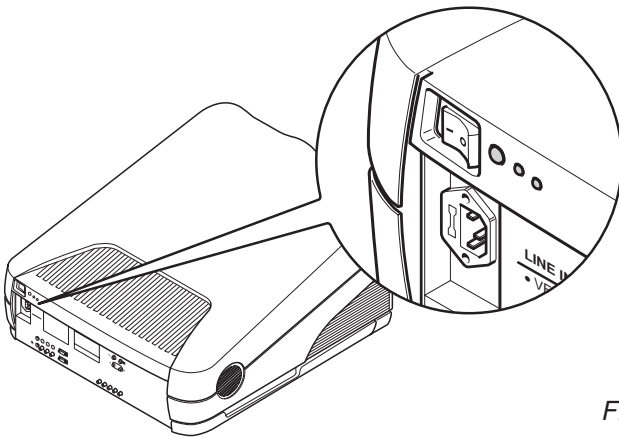


Fig. 2

The projector operates at the following mains values:

120-240Vac 50/60Hz 500W 4.2A RMS-MAX, as specified on the rear label.

The type of fuse used is a 10A, type T (delay).H (High breaking capacity)

Warning

The projector must be earthed.

If the power socket is not equipped with an earth pin, call your electrician who will install it and ensure its efficiency. To disconnect the cable pull it out with the plug. Do not pull the cable itself.

If you use an extension lead, make sure its rating is over 5A and is equipped with an earth wire.

2.3 Servicing

Servicing must be carried out by qualified technicians.

Do not attempt to service the projector without the proper technical knowledge. Opening the projector can expose personnel to potential hazards: high voltage and electric shock.

Unplug the mains cable and call for qualified service technicians in the following cases:

- when the power cable or plug is damaged
- when liquids, like rain or water, have got inside the projector
- when the projector is not working properly regardless of the fact the instructions for use have been followed correctly
- when the projector has fallen and/or its casing is damaged (broken)
- when there are noticeable variations in performance that cannot be corrected with the normal user controls.

Note: Modify only those parameters shown in the user's section of the instruction manual. If parameters or controls are modified that are not shown in the manual a realignment of the projector might become necessary and qualified service personnel might have to be called in.

2.4 Spare parts

Use only original SIM2 Multimedia spare parts

Using components different from the original spare parts could lead to:

- a deterioration in performance
- fire
- electric shock
- electrical damage
- other

2.5 Cleaning the projector

When we speak about projector cleaning we mean the outside of it. NO internal cleaning is necessary.

- Before you start cleaning the projector take the plug out of the mains.
- Do not use liquid or spray detergents.
- Stubborn stains can be removed with a cloth slightly dampened with a mild detergent solution.
- Never use strong solvents such as thinners, petrol, acetone or abrasive cleaners as they can damage the projector's paint.

- Avoid touching the lenses with your fingers, which would leave marks. Clean them as you would any ordinary photographic lens since they have an anti-reflection coating (use special lens cleaning paper or special photographic lens cloth with care).

Note: After 2000 hours working time it is essential to clean the outside of the lenses with a soft cloth to avoid scratching them.

Don't forget to cover the lenses when the projector is not going to be used for a long time.

2.6 Cathode-ray tube phosphor burning

One of the possible causes for burning could be when a static image of a computer or video recorder signal is projected for more than an hour.

The static image remains impressed on the screen even when the signal changes.

Whenever it is necessary to visualise a static image for more than one hour lower the contrast as much as possible (**CONTR** key).

The same problem arises when visualising an image in a different format for a long time. The smaller picture could remain impressed on the screen (for instance, visualising a 16:9 image on a 4:3 screen or vice versa). In this case we suggest reducing the contrast of the small picture as much as possible. These measures will reduce the risk of CRT phosphor burning. If possible, always use the same picture size.

Read the warranty enclosed with the product and consult your dealer or SIM2 qualified personnel.

2.7 Packing the projector

For the best protection pack the projector as it was originally packed at the factory.

For air freight shipping use metal or plastic straps to secure the box.

Always keep the original packing for any future necessity, such as moving or servicing the projector.

2.8 Room lighting

To get the best quality of the projected images the room should be reasonably dark.

2.9 Back panel

See Fig. 3

At the rear there is a panel with:

- Six buttons for total projector control
- Mains connection
- Power switch and fuse
- Input connections
- Safety labels

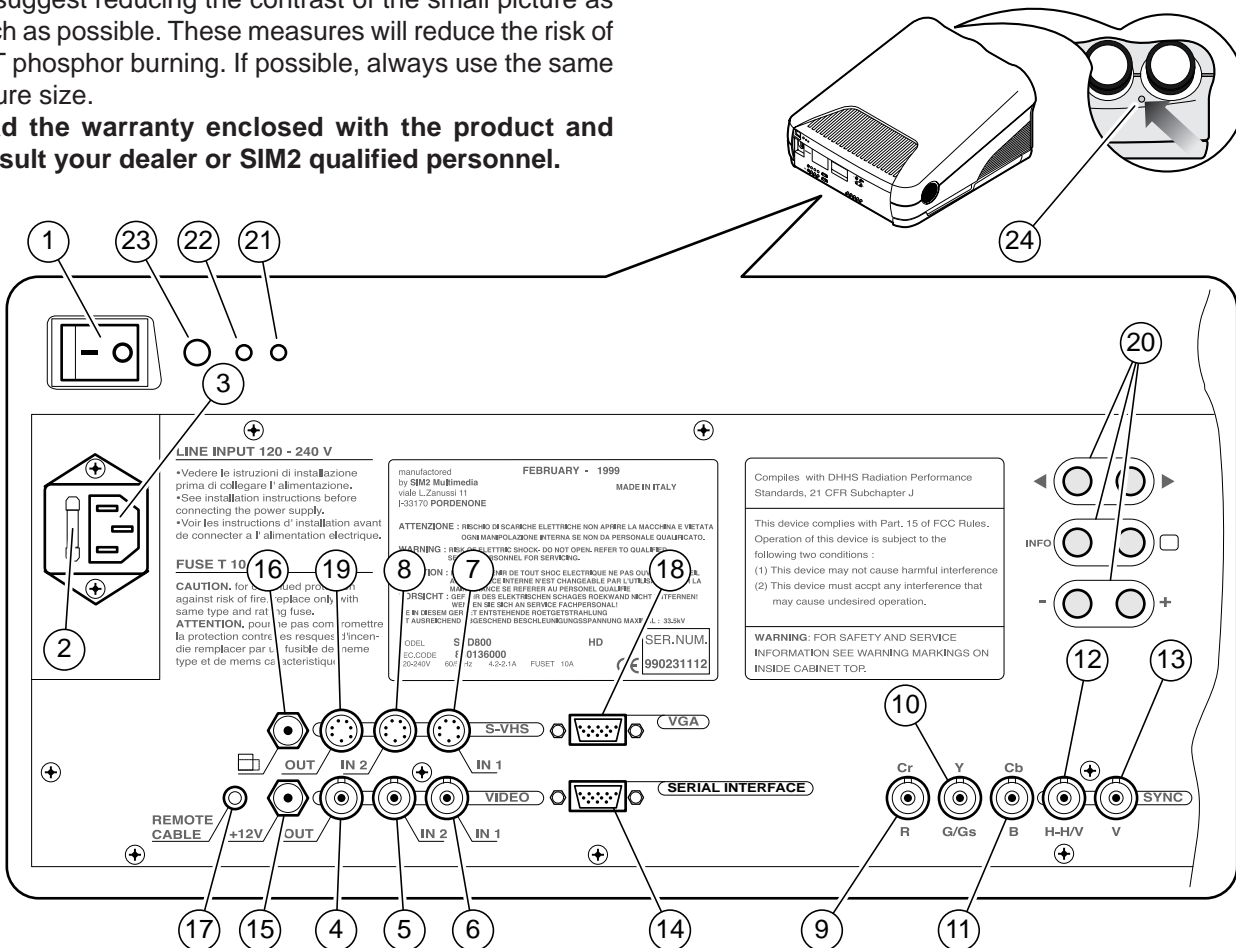



Fig. 3

● **THE FOLLOWING FUNCTIONS ARE ON THE PANEL:**

- 1- **Power switch.**
- 2- **Fuse holder.** The fuse type is 10A, T-H delayed.

Attention:

For continued protection against the risk of fire, replace only with one of the same type and rating.

- 3- **Mains power connector.** To connect the power cable 120-240Vac 48-62Hz
- 4- **Video output:** CVBS.
- 5- **Video 2: CVBS:** (Signal input).
- 6- **Video 1: CVBS:** (Signal input).
- 7- **S-VHS 1:** (Signal input).
- 8- **S-VHS 2:** (Signal input).
- 9- **Red BNC input (RGB input) or Cr (components input).**
- 10- **Green BNC input (RGB input) or Y (components input).**
- 11- **Blue BNC input (RGB input) or Cb (components input).**
- 12- **Sync H or H-V.** Horizontal synchro or composite synchro.
- 13- **Sync V.** Vertical synchronism.
- 14- **RS422 connector.** To connect and control the projector from a PC.
- 15- **+12V connector (output).** It has a +12V output when the projector is on. This output can activate a relay with a current less than 10mA. (for example, to enable a circuit for the automatic unwinding and rewinding of the motorised screen).
- 16- **Screen command.** It has +12V in output when the aspect ratio selected with the  button is **SMALL**. It is used to change screen dimensions automatically.
- 17- **Remote control cable input.** To connect the RC3000 remote control cable.
- 18- **VGA-SVGA signals input DB 15 connector**
- 19- **S-VHS output:** (signal output)
- 20- **Rear panel buttons:**

- Picture adjustment.** Each time you press a button you select one of the follow controls:
Contrast, Brightness, Colour-Hue, Peaking. Use the + and - buttons to modify the value of the selected control.

INFO Press this button to have the current projector settings (ref. INFORMATION paragraph).

- ◀▶ To modify the input selection sequentially; it starts the projector from the STAND-BY state.

21- **Led pilot light** (red=stand by - green=on).

22- **LED,** blinks (red) when signal from the remote control is received.

23- **Remote control signal receiver** (rear).

24- **Remote control signal receiver** (front).

3 USER REMOTE CONTROL RC 3100

RC 3100 is the User Remote Control for normal programme selection and analogue adjustments (once the projector is installed). The projector is controlled by the infrared ray remote control (I.R.) whose

maximum range is approximately 10 metres with new batteries.

The following figure describes the functions of the buttons on the User Remote Control.

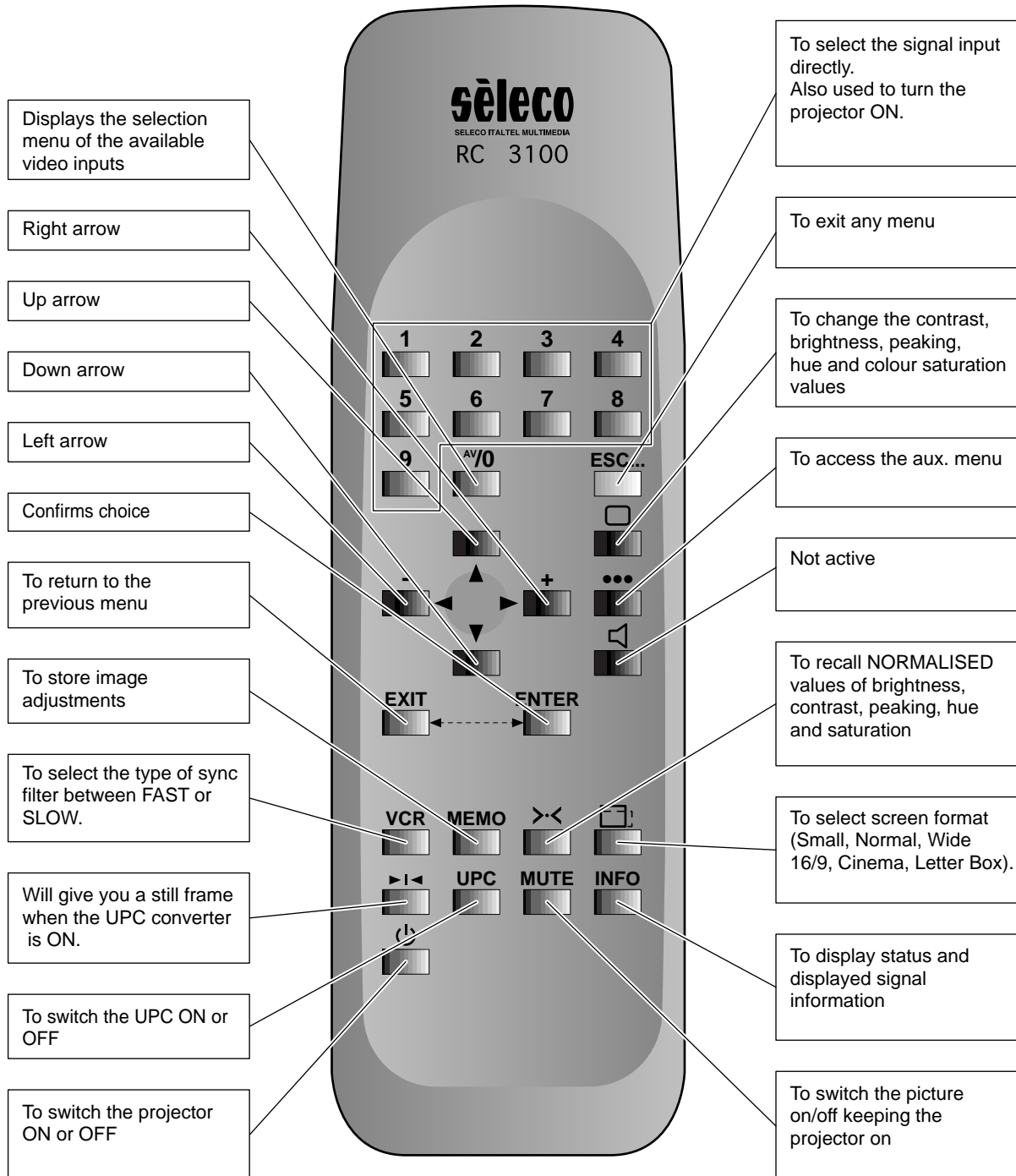


Fig. 4

3.1 Batteries

Handling the remote control and batteries:

- Avoid exposing the remote control to heat and humidity.
- When not using the remote control for a long period of time, remove the batteries.
- Do not use new and old batteries together or batteries of a different voltage or type.
- Do not drop or mishandle the remote control.
- Use the remote control within its operating range (about 10 metres and a 30° angle)

Note: The RC3100 remote control is powered by two AA batteries.

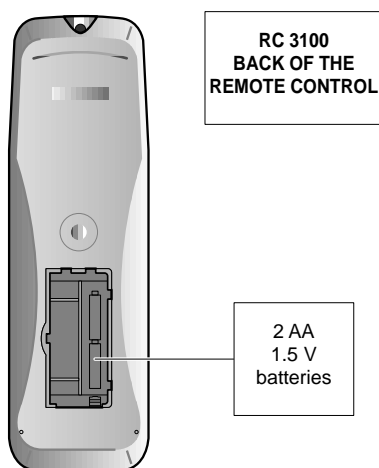



Fig. 5

3.2 RC 3100 User Remote Control

Read this chapter through carefully before altering any values or making any adjustments.

3.3 Projector Power On

- Press the mains switch. A red LED turns on on the **Stand-by** back panel, press  or one of the buttons 1÷9.
- The red LED becomes green ON.
- A white screen will appear with the following message:

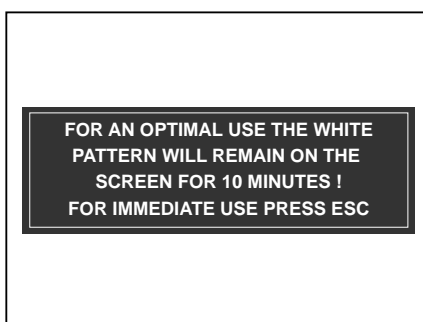



Fig. 6

- Always let the projector warm up for ten minutes after switching it on.
- The message will disappear temporarily after about 10 seconds and will then return for 5 seconds. This will be repeated at 40 second intervals.

- Press any button to eliminate the initial screen and to see the image immediately after having switched the projector on in the case, for instance, it has already been adjusted and warming up is unnecessary.
- Warm-up time can be modified and/or excluded, see par. 3.21 **OSD OPTIONS** page 14.
- To switch the projector off press  and then move the power switch to **OFF**.

3.4 Input selection

To select the input directly use a numerical button or: Press **AV/O**. The input menu will appear;

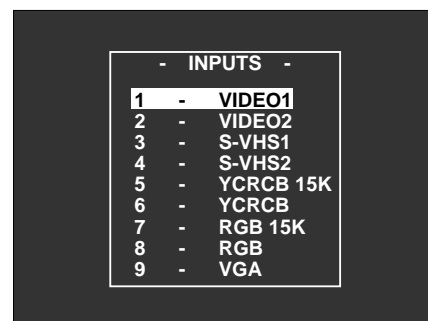







Fig. 7

Select the right input with the  up or  down arrows and press **ENTER**. The selected input selected will appear with a message on the screen.

Note: With the Y Cr Cb 15KHz signals use input 5
With the R G B 15KHz signals use input 7

3.5 Picture adjustment

To change the value of **CONTRAST, BRIGHTNESS, COLOUR, HVE (NTSC STANDARD) AND PEAKING**, press the  button sequentially. One of the five adjustments will appear. Press the  left or  right arrow to modify the value, press **MEMO** to store the new value.

N.B. MEMO should be pressed when one of the adjustment functions is displayed.



The stored values are specific for the bank in use and can be recalled with the   button.



Fig. 8

3.6 Screen format selection

To select the correct screen format: **(NORMAL, SMALL, LETTER BOX, CINEMA, WIDE).**



Press the  button. One of the previous screen formats will appear (for instance 16/9).




Fig. 9

Each time you press a button relative to the **AV** inputs, you are choosing one of the aspect ratios stored in the relative memory bank. In the memory banks (see: Memory Manager) you can store several setups with the same input signal but with different aspect ratios.

Each time the  button is pressed the same signal is displayed with a different aspect ratio (only if it has been stored in the relative memory bank). The possible aspect ratios are: **NORMAL (NORMAL=4/3); SMALL; LETTER BOX; CINEMA; WIDE.**

The message will disappear shortly afterwards.

Note: Only by selecting the **SMALL** aspect ratio format will you get +12V on the rear panel connector marked by , used to control the screen.

3.7 VCR button (Sync filter)

Press **VCR** to change the sync time constant. Whenever you press the **VCR** button you toggle the sync filter type from **FAST** to **SLOW** and vice versa.

Note: **FAST** is recommended for the **VCR**. **SLOW** is recommended for video signal broadcasting.

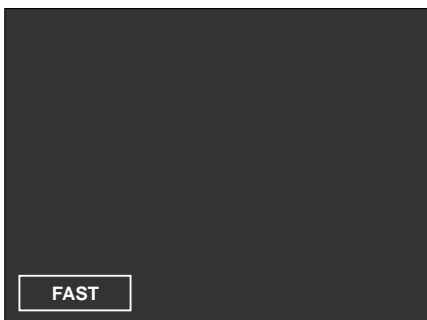


Fig. 10

3.8 Information (INFO)

The **INFO** menu displays information on a current input signal.

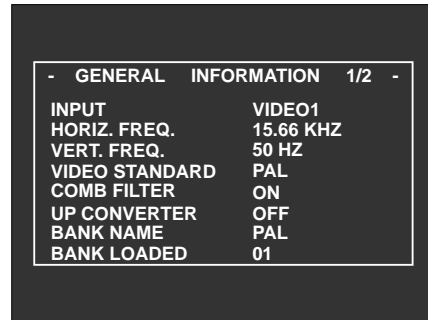


Fig. 11

Press **INFO** again. The second part of the information will be displayed relating to the image parameters and settings.

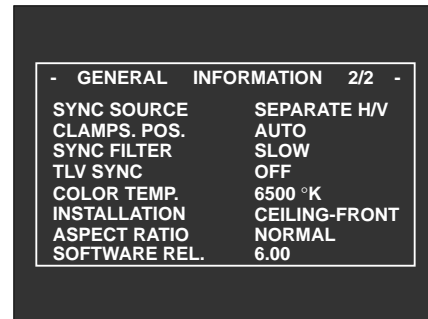



Fig. 12

Press a third time or **ESC** to exit.

3.9 Muting video button

Press **MUTE** for about 2 seconds. The picture will darken while the projector stays on; the picture will reappear immediately if you press the button again.

3.10 Normalised button


Press . The adjustments relative to contrast, brightness, colour saturation, hue and peaking, stored in the current bank, will be loaded automatically.

3.11 UPC button

Press **UPC**. It will turn on or off the converter that doubles the input signal lines.

Note: only on models with **UPC**.

3.12 Freeze button

Press . To have a still picture. When pressed again the picture will run normally.

This function is only active if the UPC converter is active.

3.13 Video Menu

Press **•••** . The MAIN MENU appears.

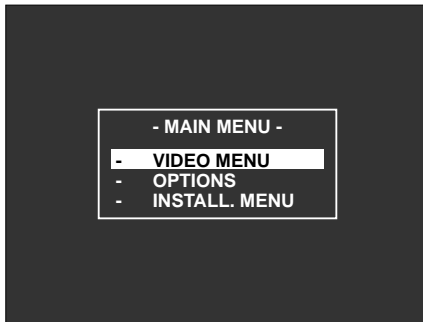


Fig. 13

Press **▲** or **▼** . Select VIDEO MENU.
Press **ENTER** . The VIDEO MENU appears

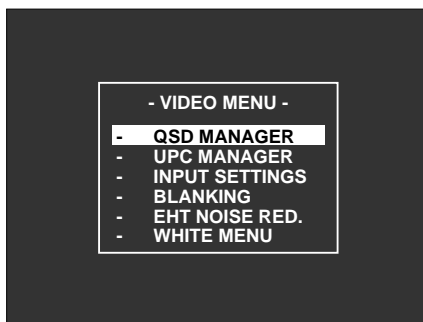


Fig. 14

Press **▲** or **▼** . Select **QSD MANAGER**.
Press **ENTER** . The QSD MANAGER appears.

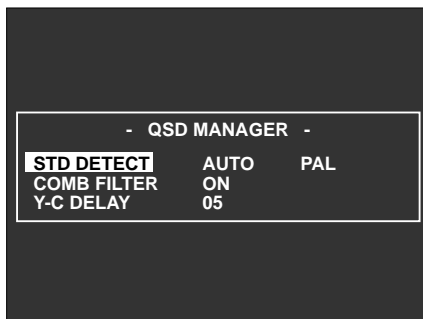


Fig. 15

STD DETECT allows you to force the standard from **AUTO** to **MANUAL**

Example: to force NTSC 3,58.

Press **◀** or **▶** . **MANUAL** appears, **ENTER**, **◀** or **▶**
NTSC 3,58, **EXIT**.

N.B.: Set on **AUTO** for normal use.

Press **▲** or **▼** .Select **COMB FILTER**,
Press **▲** or **▼** . Select **ON** or **OFF**

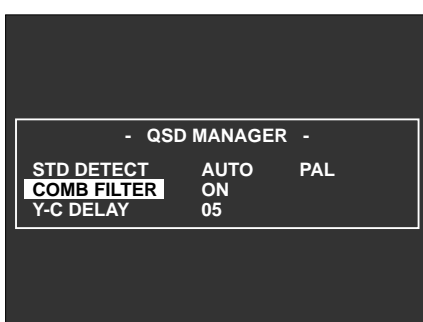


Fig. 16

The **COMB** filter increases separation between luminance and chrominance, avoiding colour overlapping, we recommend **ON**

Press **▲** or **▼** . **Y-C DELAY** appears

Press **◀** or **▶** to adjust, **EXIT**

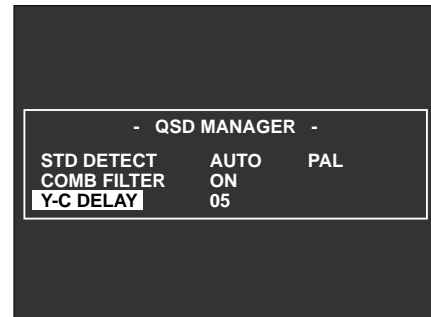


Fig. 17

The value is correct when the colour bars are displayed and they do not overlap.

3.14 UPC converter

It is possible to install a **UPC** converter (optional) inside the projector which will double the input signal lines for a better quality picture.

The **UPC** converter uses IQTV technology, offering great video image improvements such as: stability, noise reduction, less space between lines and increased contrast.

NOTE: To switch the converter on or off press the **UPC** button (see 3.11 page 10;)

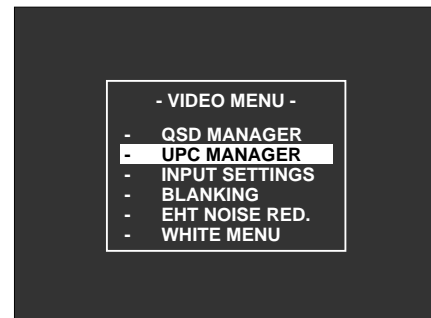


Fig. 18

Press **▲** or **▼** . Select, for example, **PROGRESSIVE**,
ENTER

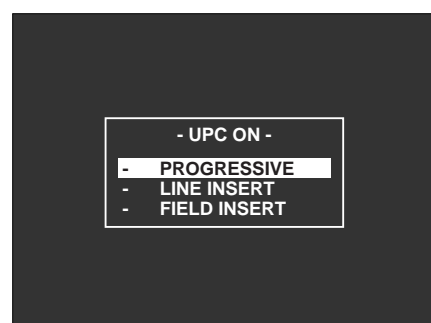


Fig. 19

3.15 Input Settings



Fig. 20

CLAMP POS

With this menu you can select the position of the CLAMP impulse on the external video signal.

To position the black level of a picture correctly (if the image brightness does not seem right), it might be necessary to modify the position.

This can be done on **AUTO** or **MANUAL**.

CLAMP POS AUTO

Automatic setting mode. Usually set on this position.

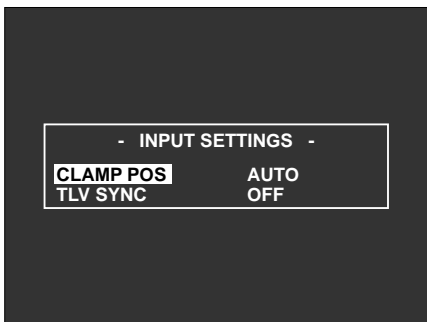


Fig. 21

Press ◀ or ▶ . Select **CLAMP POS MANUAL**

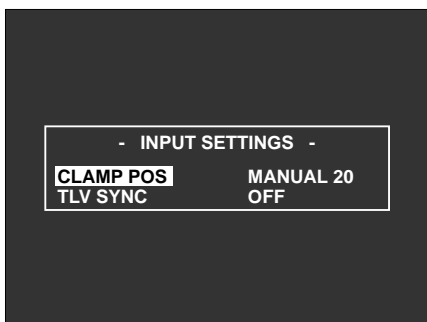


Fig. 22

Press **ENTER**.

Press ▲ or ▼. Adjust to get the right picture, **MEMO, ENTER, EXIT**.

TLV SYNC

With this menu you can synchronise signals with TRI-LEVEL synchronism. Selection is active only with horizontal frequency signals higher than 30 KHz.

Press ▲ or ▼. Select **TLV SYNC**.

Press ◀ or ▶ . **TLV SYNC ON** appears.

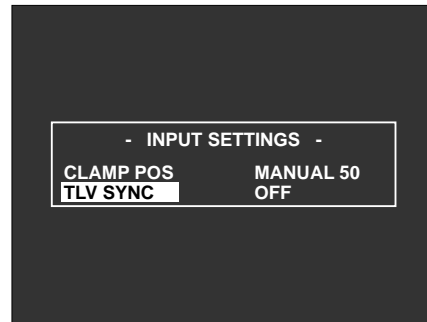


Fig. 23

Press **MEMO, ENTER, EXIT**.

3.16 Blanking

It eliminates the excess parts if the picture displayed is bigger than the screen.

Press ▲ or ▼ . Select **BLANKING**

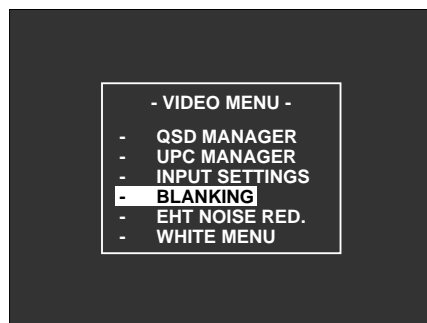


Fig. 24

Press **ENTER**. Select the part to adjust from **LEFT, RIGHT, UP, DOWN**.

Press ◀ or ▶ to adjust **LEFT, RIGHT**.

Press ▲ or ▼ to adjust **UP, DOWN**.

Press **MEMO, ENTER, EXIT**.

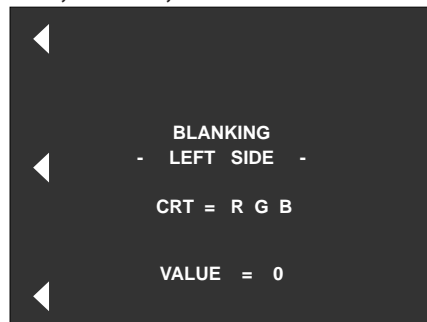


Fig. 25

3.17 EHT NOISE RED

This function eliminates interference on the EHT generator image (high voltage) with several horizontal and vertical frequency combinations.

Press ▲ or ▼ . Select **EHT NOISE RED, ENTER**

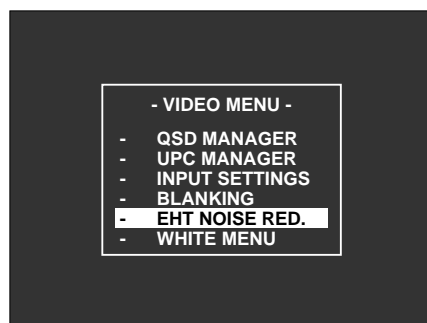


Fig. 26

Press ◀ or ▶ . Adjust to eliminate interference. Press **MEMO** , **ENTER**, **EXIT**.

Note: Adjust when the projector is synchronised and when there are either external or internal white patterns.

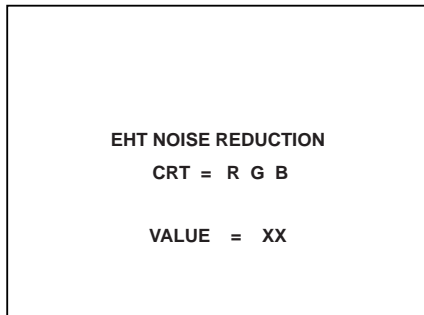


Fig. 27

3.18 WHITE MENU

With this menu you can select the WHITE temperature according to the application and input signal.

Press ▲ or ▼. Select **WHITE MENU**

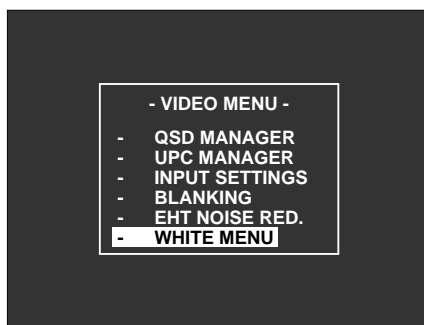


Fig. 28

Press ▲ or ▼. Select WHITE temperature.

3200°K Used only in broadcasting studios (artificial lighting)

6500°K Used with all types of lighting

9300°K Used to have pictures tending towards blue

USER For a personalised adjustment

BANK Allows a personalised adjustment for each bank

N.B.: 3200,6500,9300, USER are settings valid for all banks.

BANK is a setting for each bank and therefore also for each signal.

Press ▲ or ▼. Select **Set TO 6500**.

Press **ENTER**, **EXIT OR ESC**.



Fig. 29

3.19 OPTIONS

Press ●●● . The **MAIN MENU** appears

Press ▲ or ▼. Select **OPTIONS**, **ENTER**

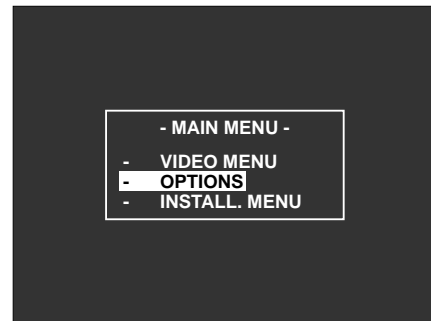


Fig. 30

Press ▲ or ▼. Select **MISCELLANEOUS**, **ENTER**

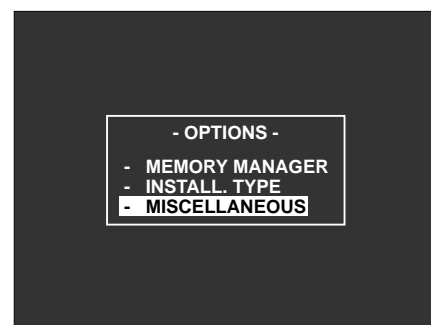


Fig. 31

This menu allows access to the various projector functions such as the timers, working time counter, ON SCREEN DISPLAY and the manufacturer's LOGO.

Press ▲ or ▼. Select **TIMER FUNCTIONS**, **ENTER**

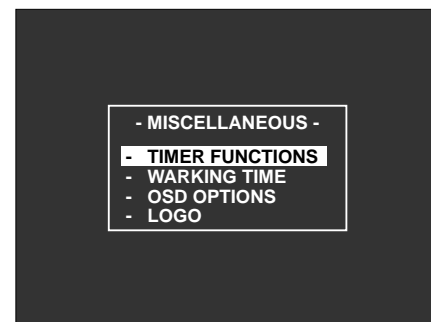


Fig. 32

When you select the timer functions menu you can set the current date and time, turn the timer on or off and set automatic daily switching on and off. The latter are separate functions used to turn the projector on/off on a certain day and at a certain time. The ON/OFF functions can be set separately.

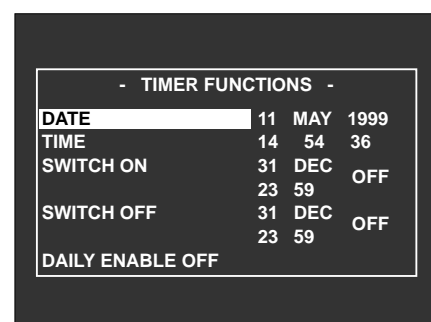


Fig. 33

The daily ENABLING item enables the projector to turn on and off automatically each day when ON is set.

Note: *The values on the right are only an example.*

- Press ▲ or ▼ . Select the item you wish to set and press **ENTER**
- Press ◀ or ▶ . Select the right item.
- Press ▲ or ▼ . To increase or reduce the value.
- Press **EXIT**. Select other items and then repeat from steps 2 to 4.
- Press **EXIT**. The projector will return to the previous menu.

3.20 Working time

Press ▲ or ▼ . Select **WORKING TIME**, **ENTER**

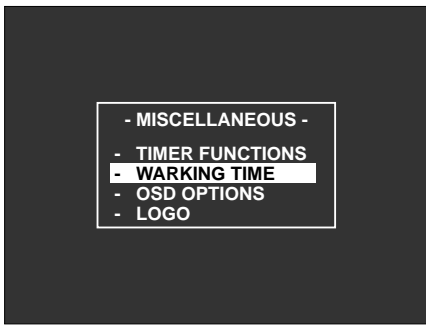


Fig. 34

To display the total working time of the projector and of each of the red, green and blue tubes.

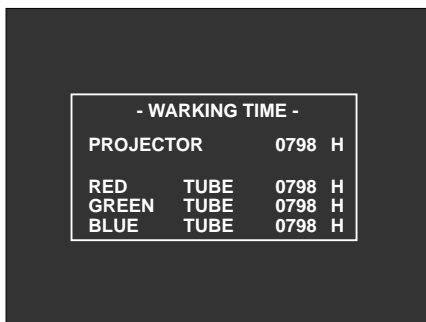


Fig. 35

Note: *Working time cannot be modified. TRC working time data can be reset when a damaged tube is replaced (which must be done by qualified personnel).*

3.21 OSD OPTIONS

This menu allows you to set the **MESSAGE TIME**, **MENU TIME**, **ON SCREEN DISPLAY** of the image, the colour of the On Screen Display and **WARM-UP** time.

The **MESSAGE TIME** item sets the time the messages are displayed on the screen, going from 2 to 9 seconds.

The **MENU TIME** item sets the time the menus are displayed on the screen going from 2 to 59 seconds.

The **OSD ON PICTURE** item displays the picture parameters on the screen (contrast, brightness, saturation and hue) when it is **ON**. If it is **OFF** they are not displayed.

The **OSD COLOUR** item sets the ON Screen Display colour choosing from GREEN, MONOCHROMATIC (white) and COLOURED (green and yellow).

The **WARM-UP TIME** item sets projector warm-up time which goes from 00 (excluded) to 59 minutes (Factory set at 10 minutes).

Press ▲ or ▼ . Select **OSD OPTIONS**

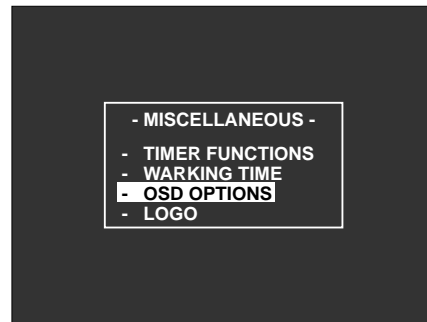


Fig. 36

Press **ENTER**.

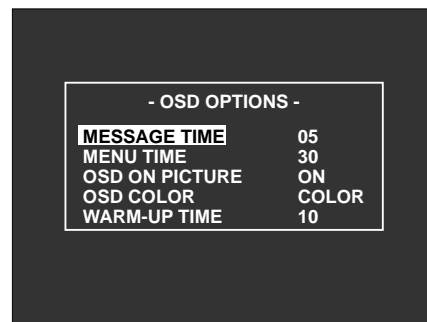


Fig. 37

Note: *The values given are factory set.*

- Press ▲ or ▼ . Select the right item.
- Press ◀ or ▶ . To increase or reduce the value.
- Press **EXIT** to exit

3.22 LOGO

Press ▲ or ▼ . Select **LOGO**, **ENTER** to enable or disable, **EXIT** to exit.



Fig. 38

3.23 Installation menu

THE ADJUSTMENTS DESCRIBED IN THIS PARAGRAPH MUST BE CARRIED OUT BY QUALIFIED PERSONNEL. ANY ADJUSTMENTS INCORRECTLY DONE CAN CAUSE A DETERIORATION IN PICTURE QUALITY.

3.24 How to enter the SERVICE MODE

Only by entering the **SERVICE MODE** will you be able to alter deflection dimensions, colour temperature, select the installation type, etc.

Press ●●● . The **MAIN MENU** appears
 Press ▲ or ▼ . Select **INSTALL MENU**

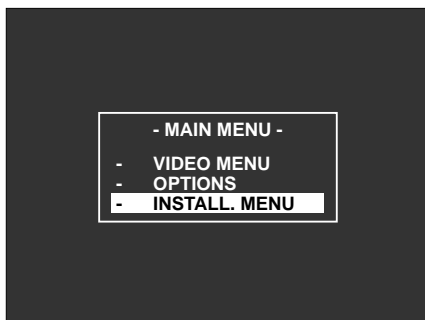


Fig. 39

Press the **EXIT** button seven times until **SERVICE MODE** appears on the screen.

Before you alter the settings check the following points:

- Mechanical centering of the video projector and tubes
- Lens focus

Note: *The protection mode is activated automatically when switching off.*

4 INSTALLATION

4.1 Installation procedure

In order to obtain the best performance from the projector, the following procedure has to be followed carefully and carried out by a technician.

Note: The projector is factory-set for front ceiling projection with a 90" screen, 4/3 format and a projector-screen distance of 284 cm., see Fig. 49, reference (D), page 19.

1. **Choose the installation type and read the instructions through carefully** (see: par. 5.9, **Installation Types**, page 32).
Determine the distance between the screen and the front of the projector.
Determine the projection angle (see: par. 4.4, **Projection Angle Measurement** page 20).
2. **Remove the top and front projector covers** (see: par. 4.2.1, **Removing the cover**, page 16).
3. **Insert the correct spacers** (see: par. 4.5.1, **Spacer Changing**, page 20).
4. **Prepare and install the screen.**
5. **Install the projector on the floor or on the ceiling and center the screen** (see: par. 4.6, **Projector centering**, page 23), maintaining the factory deflection settings.
6. **Carry out a precise focus adjustment acting on the lenses.** (see: par. 4.8, **Lens Focus Adjustment**, page 23).
7. **If the installation type is the same as the factory setting, go to step 11, otherwise continue.**
8. **Tilt the red and blue tubes until the three crosses are superimposed.** (see: par. 4.9, **Mechanical centering of the tubes**, page 24).
9. **Switch the projector off and disconnect the power cable.**
10. **Correct display on the screen** (see par. 4.11, page 24).
11. **Put the cover on the video projector.**
12. **Carry out a fine adjustment of the image with the remote control.** (see: par. 5, **THE RC3000 COMPLETE FUNCTIONS REMOTE CONTROL**, page 25).

4.2 Removing the cover

4.2.1 Removing the top cover

Loosen the 2 securing screws (A) and lift the cover up.

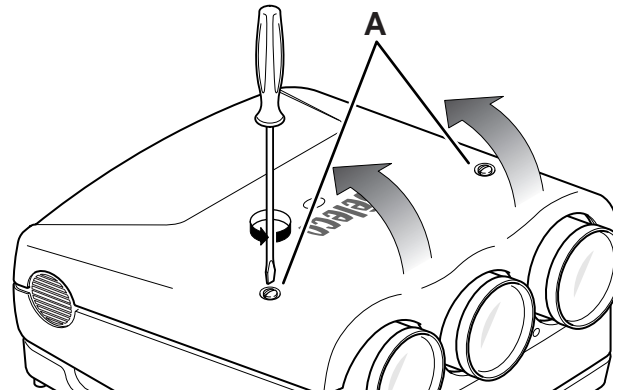


Fig. 40

To remove the top cover completely you must unscrew the two locking screws (B) close to the two pivots and the other two (C) securing the jointed rod to the cover.

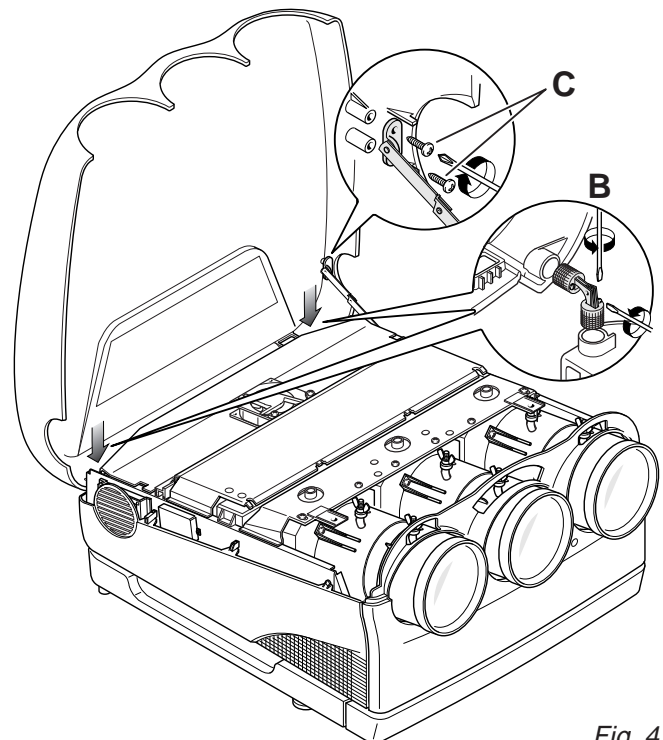


Fig. 41

4.2.2 Removing the front panel

Unscrew the two screws (D) on the left and right of the front panel. Unscrew the three screws (E) on the bottom and take the panel off. The position of the screws is shown by the arrows in Fig. 42.

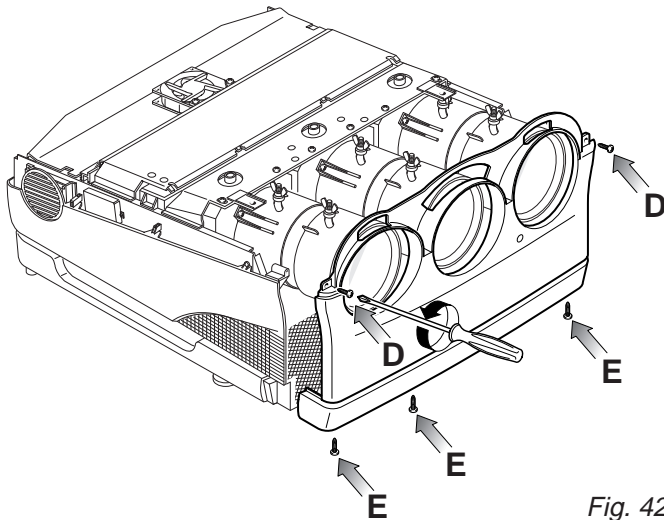


Fig. 42

4.3.1 Installation choice

Choose one of the following possible installation types (see: *Installation types*, page 32):

- **DESK TOP FRONT PROJECTION**
- **DESK TOP REAR PROJECTION**
- **CEILING FRONT PROJECTION**
- **CEILING REAR PROJECTION**

Attention:

Correct use of the spacers, as shown in the spacer tables, is mandatory for a perfect focus uniformity. Check that the projector is perfectly stable.

SIM 2 MULTIMEDIA S.P.A. declines all responsibility for damages to persons or things caused by incorrect or careless ceiling installation which must be effected by a qualified technician.

4.3.2 Desk-top front projection

Attention:

The bottom of the projector must be parallel with the floor. It is very important to know the correct projection angle.

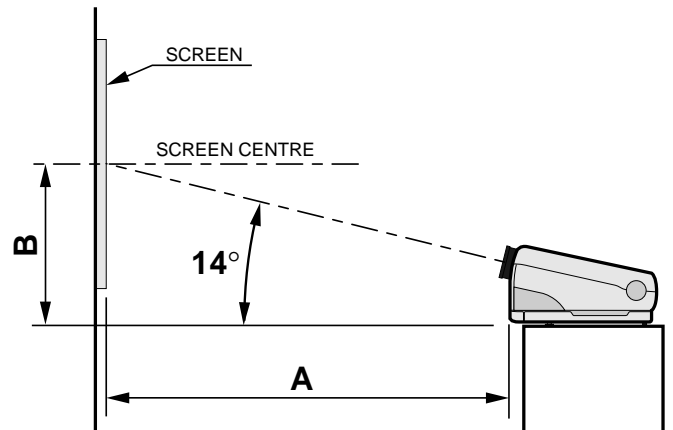


Fig. 43

The distance between the projector and the screen (depending on screen dimensions), is shown in the following table.

TABLE 1: FRONT PROJECTION

A = Distance between the front panel and the screen
 B = Distance between the projector's desktop line and screen centre.

SCREEN SIZE USEFUL AREA 4/3			A	B
Diagonal (Inches)	Width (cm.)	Height (cm.)	(cm.)	(cm.)
60"	121.9	91.4	186	72
80"	162.5	121.9	240	86
90"	182.9	137.2	266	95
100"	203.2	152.4	294	100
120"	243.8	182.9	348	116
150"	304.8	228.6	429	137
180"	365.7	274.3	510	158
200"	406.4	304.8	564	172
250"	508.0	381.0	700	208
300"	609.6	457.2	835	242

Note: For 16/9 screen formats, measure the width and refer to the nearest width value in the table.

If the size of the screen diagonal is not given in the table, dimension A (in cm) is determined as follows:

- Measure the screen diagonal and take the nearest value from the table.
- Calculate the ratio between the table value and the relative width.
- Multiply the value obtained by the actual screen width.

Example: Suppose we have a 105" screen diagonal. 100" is the nearest value in the table. The A/Width ratio is equal to 294/203.2=1.446. A 105" screen diagonal is 213.3 wide. So, the value of A is: 1.446x213.3=308.4 cm.

4.3.3 Desktop rear projection

For rear projection we recommend installing the projector with the axis of the green lens orthogonal to the screen plane; pay attention that the green lens be centered with respect to the screen (see: par. 4.6, **Projector Centering** page 23).

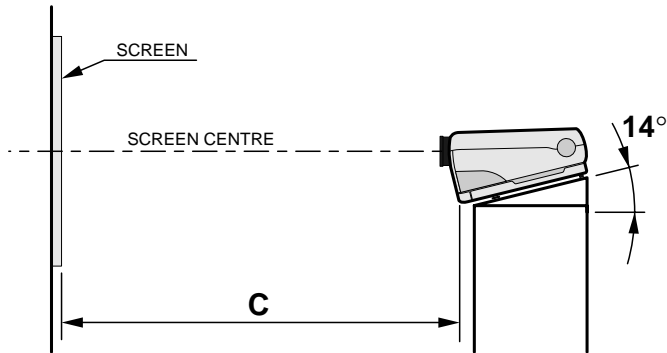


Fig. 44

By using Fresnel lenses for rear projection, it is mandatory to install the projector orthogonal to the centre of the screen to achieve maximum brightness and a better performance.

The distance between projector and screen is given in the following table.

TABLE 2: DESKTOP REAR PROJECTION

C = Distance between the front panel and the screen.

SCREEN SIZE USEFUL AREA 4/3			C (cm.)
Diagonal (Inches)	Width (cm.)	Height (cm.)	
60"	121.9	91.4	188
80"	162.5	121.9	243
90"	182.9	137.2	271
100"	203.2	152.4	299
120"	243.8	182.9	355
150"	304.8	228.6	439
180"	365.7	274.3	522
200"	406.4	304.8	578
250"	508.0	381.0	718
300"	609.6	457.2	857

- If the measurement of the screen diagonal is not in the table, **C** can be determined (in cm) as follows.
- Measure the screen diagonal and take the nearest value from the table.
- Calculate the ratio between value **C** and screen width in the table.
- Multiply the result by the actual screen width.

Example: Suppose we have a 105" screen diagonal. 100" is the nearest value in the table. The A/Width ratio is equal to $299/203.2=1.471$. A 105" screen diagonal is 213.3 wide. So, the value of A is: $1.471 \times 213.3=313.7$ cm.

Note: For 16/9 screen formats, measure the width and refer to the nearest width value in the table.

4.3.4 Ceiling front projection

Use the ceiling assembly kit (given with the projector) to install the projector on the ceiling and proceed as follows:

To attach the projector to a solid concrete block ceiling or brick ceiling drill 12mm dia. holes 65mm deep. Attach on the ceiling the big bracket included in the package using the four concrete anchors provided together with screws and washers, USING the outer holes on the bracket, and tighten to 25 Nm maximum torque.

WARNING: The installer must verify that the wall can support four times the full load (mounting bracket, hardware and electronics), the minimum thickness of the wall support has to be 10 cm.

For concrete blocks and brick walls, do not drill mounting holes into mortar joints, the distance between anchor and free edge of the support wall has to be more than 18 cm. **The bracket must be fixed very carefully.**

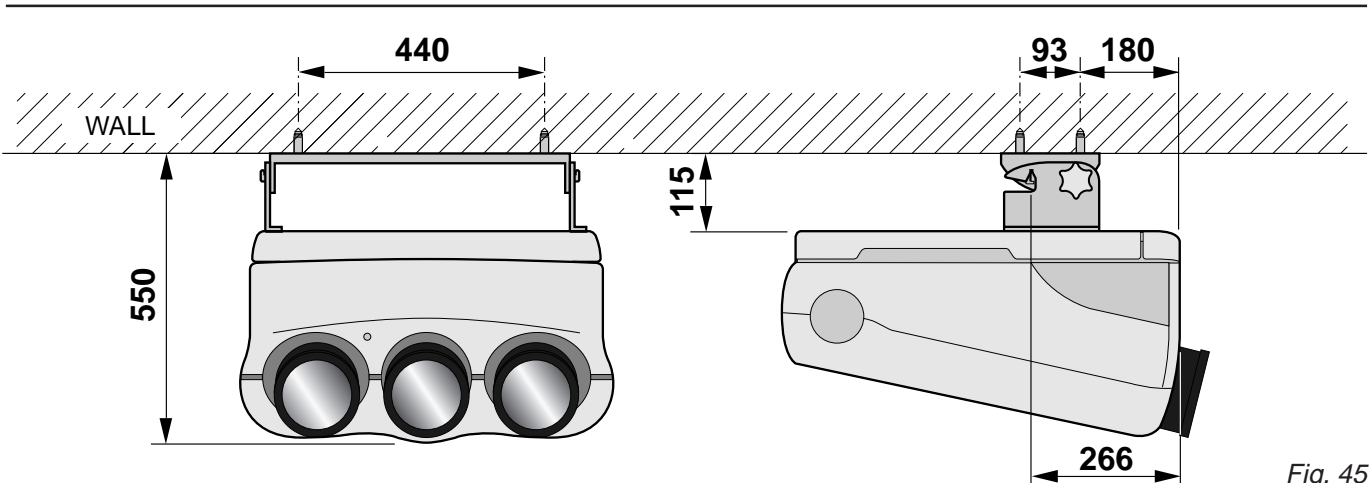


Fig. 45

Fix the bracket, included in the pack, to the ceiling with the four screws supplied.

Attention: The bracket must be fixed properly and be absolutely parallel with the screen

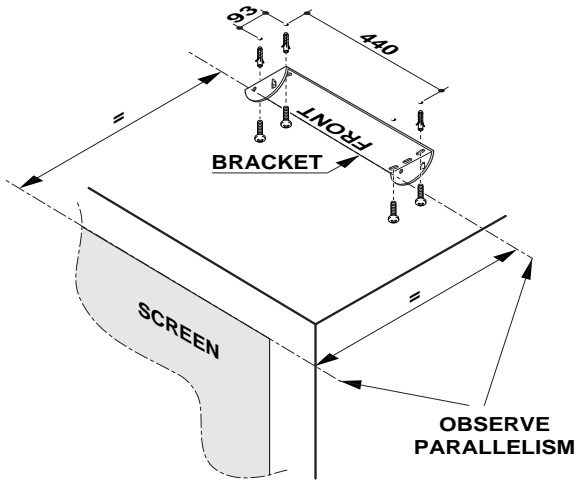


Fig. 46

Put the projector on a table in the vertical position (sideways)

N.B.: Take the two front feet off.
Remove the 2 screws and their washers, insert the left bracket and fix it, using the same screws and washers, as illustrated in the following figure.
Repeat for the right bracket.

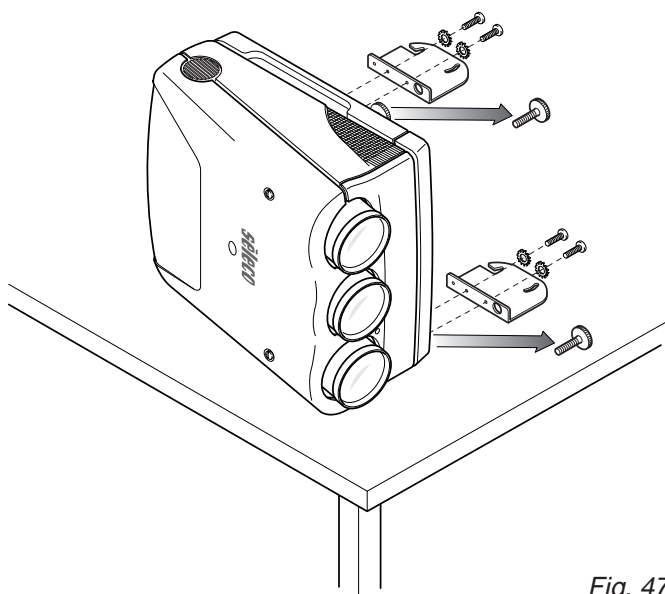


Fig. 47

Turn the projector upside down and hang on the ceiling with the assembly brackets

Tilt the projector to centre the vertical picture and screw the two securing screws (H)

Note: Insert the special curved washers between the ceiling bracket and the securing screws. For a correct installation the concave surface of the washer should be towards the bracket. For safety purposes, use only the assembly kit supplied.

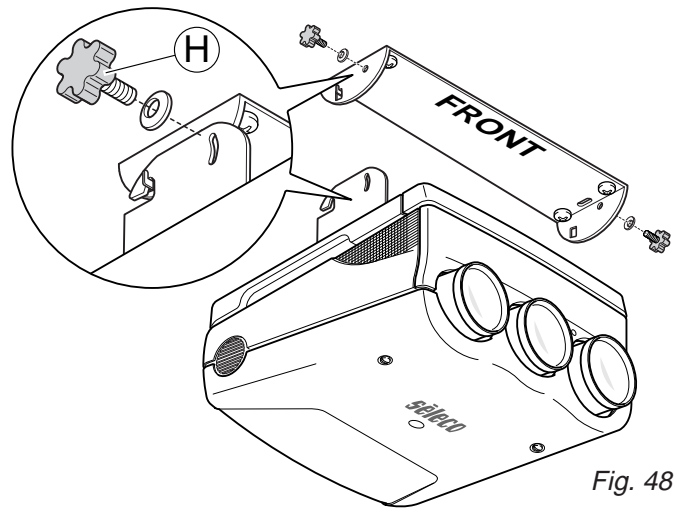


Fig. 48

Note: the tilting angle between the base plane of the projector and the lenses' axis should be 14°.

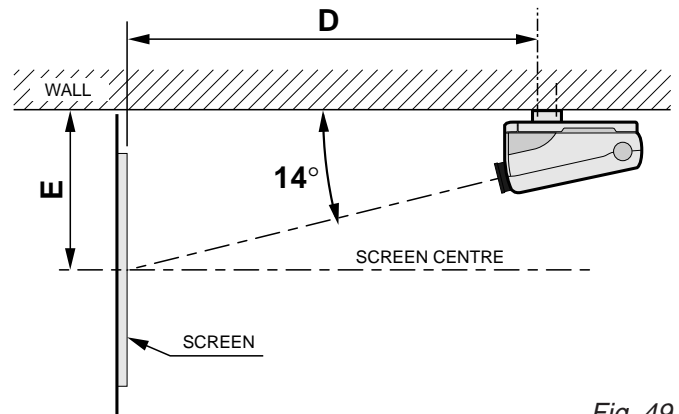


Fig. 49

TABLE 3: CEILING FRONT PROJECTION.

D = Distance between the line of the first hole of the assembly bracket and the screen.

E = Distance between the ceiling and the screen centre.

SCREEN SIZE USEFUL AREA 4/3			D	E
Diagonal (Inches)	Width (cm.)	Height (cm.)	(cm.)	(cm.)
60"	121.9	91.4	204	81
80"	162.5	121.9	258	95
90"	182.9	137.2	284	104
100"	203.2	152.4	312	109
120"	243.8	182.9	366	125
150"	304.8	228.6	447	146
180"	365.7	274.3	528	167
200"	406.4	304.8	582	181
250"	508.0	381.0	718	217
300"	609.6	457.2	853	251

Note: For 16/9 screen formats, measure the width and refer to the nearest width value in the table.

4.3.5 Ceiling rear projection

Rear projection installation is done by hanging the projector on the ceiling and following the instructions given for front installation.

4.4 Projection angle measurement

Use a goniometer to determine the projection angle. First of all, remove the projector's top cover and then use the surface shown in the figure as reference for the goniometer.

The reference surface has an angle of 14 degrees compared to the projector's base when it is perfectly level.

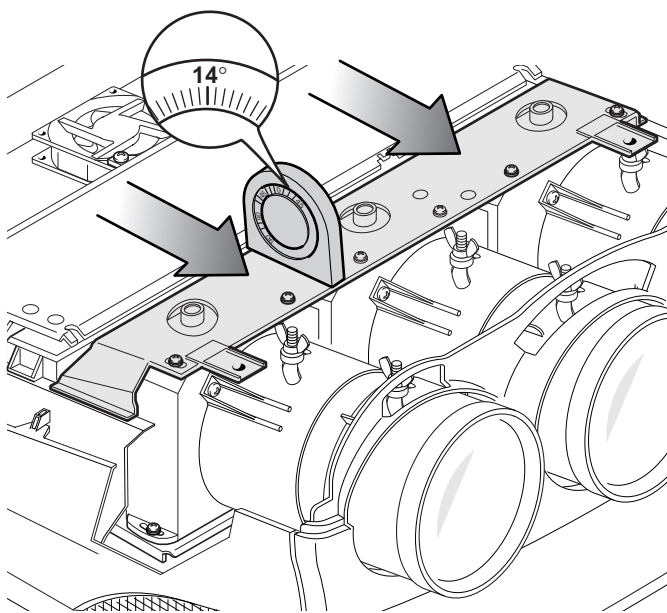


Fig. 50

4.5 Spacers

The projector uses some spacers for the "Scheimpflug" correction of the lenses' angle so as to achieve a perfect focusing uniformity over the entire screen surface.

The projector is factory set with spacers for a ceiling front installation with a 90" screen diagonal.

The projector is equipped with a complete set of optional spacers for screens ranging from 60" up to 300".

The spacers are mounted between the lenses and the assembling block surface where they are fixed with 4 screws.

More than one spacer might be needed to achieve proper adjustment.

Attention:

Correct use of the spacers, as shown in the tables, is of paramount importance for perfect focus uniformity.

4.5.1. Spacers changing

To change the spacers first of all remove the top cover and front panel.

Now slightly loosen the 4 screws (A) for each tube, change the spacers (B) Fig. 51 (see the spacers table) and then tighten the screws.

You can only see two screws in the figure because the other two are under the projection tube.

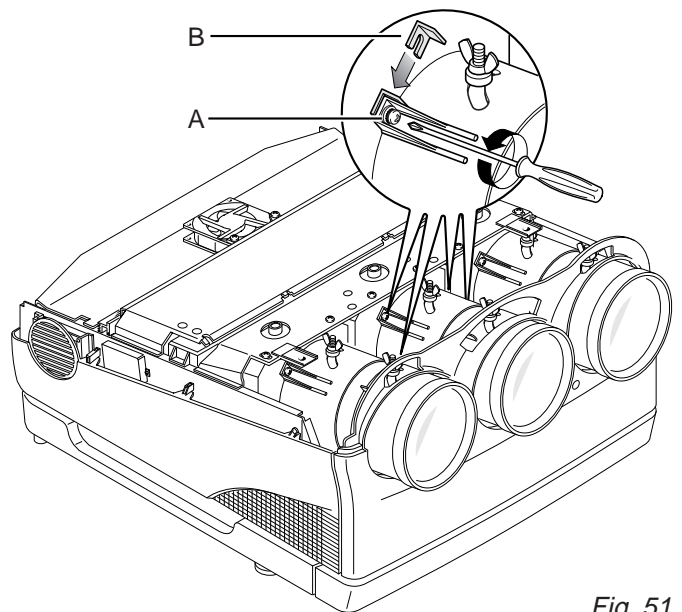


Fig. 51

For the different installation types there are different spacer combinations that have to be mounted.

Nota: The spacers have their thickness value expressed in millimetres and printed on them. The following pieces are included with the projector:

0.2 mm:	6 pieces
0.3 mm:	6 pieces
0.5 mm:	4 pieces
1 mm:	6 pieces
2 mm:	4 pieces

The 1mm (6 pieces), 0.3 mm (6 pieces) and 0.2 mm (2 pieces) spacers are used for the factory setting (90" 14°), while the others are inside the pack.

Note: The angle between the base of the projector and the axis of the tubes is mechanically fixed at 14°; so, if the projector is installed on a perfectly horizontal table or ceiling, projection angle will be 14°.

Fig. 52 shows where to install the spacers with the values given in the following table.

4.5.2 Spacers table

Front view of the CRT.

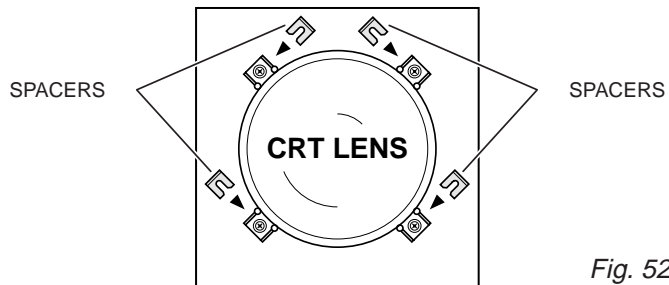
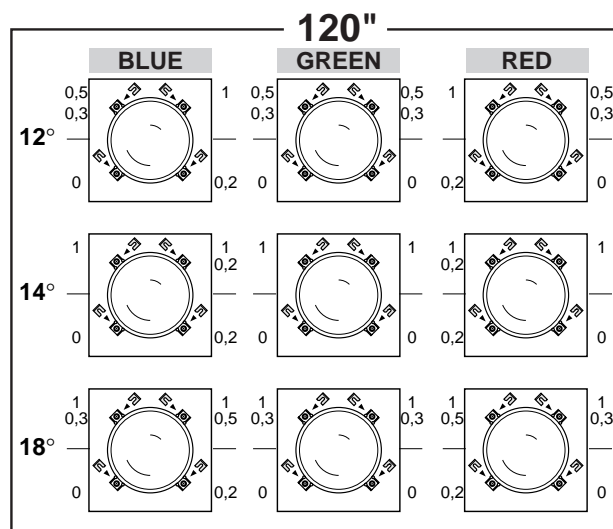
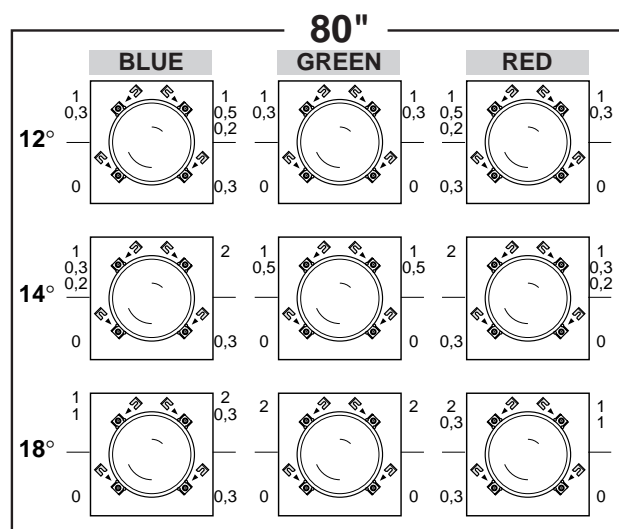
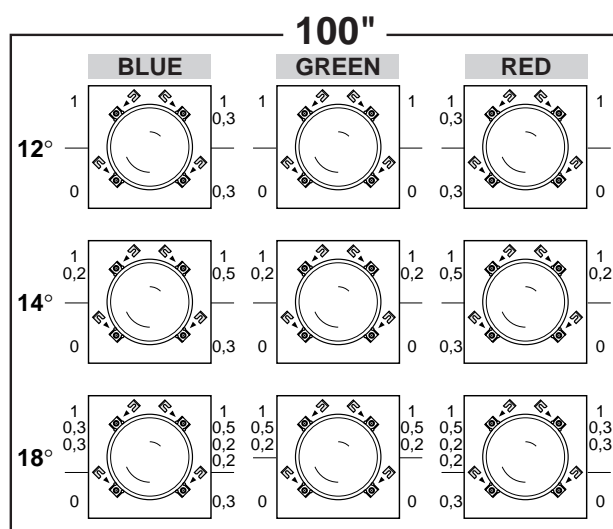
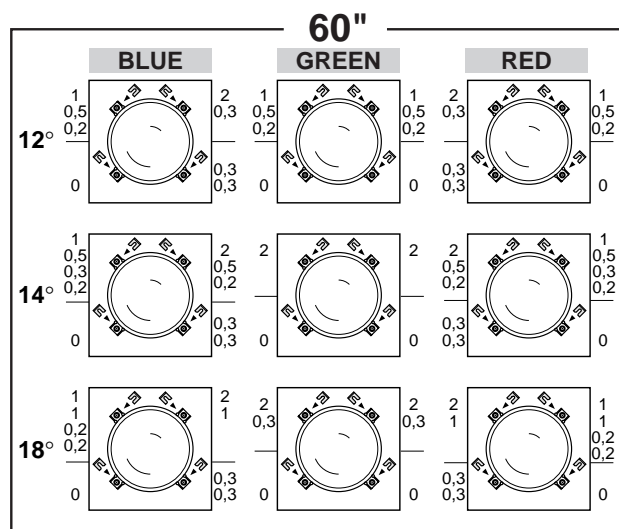
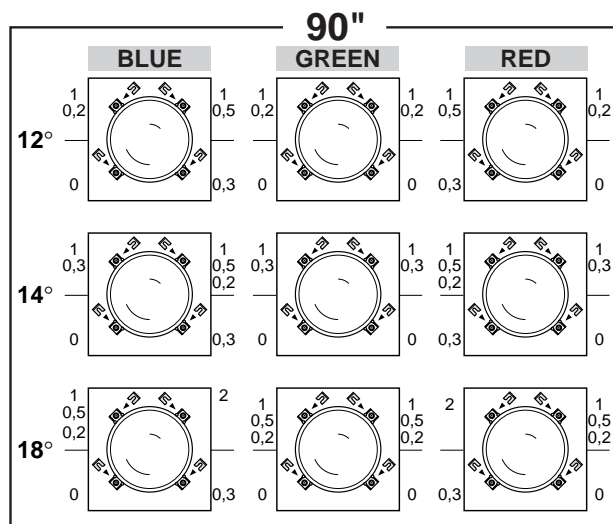
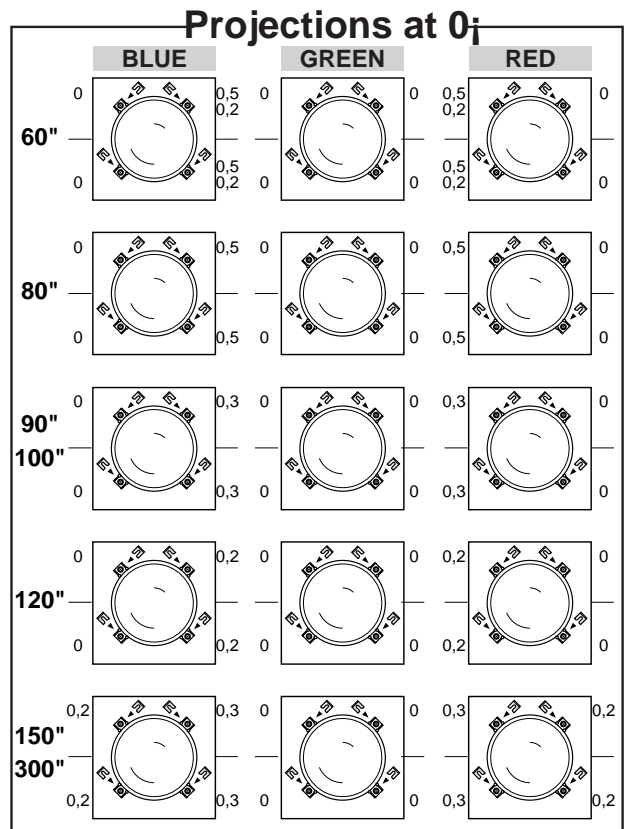
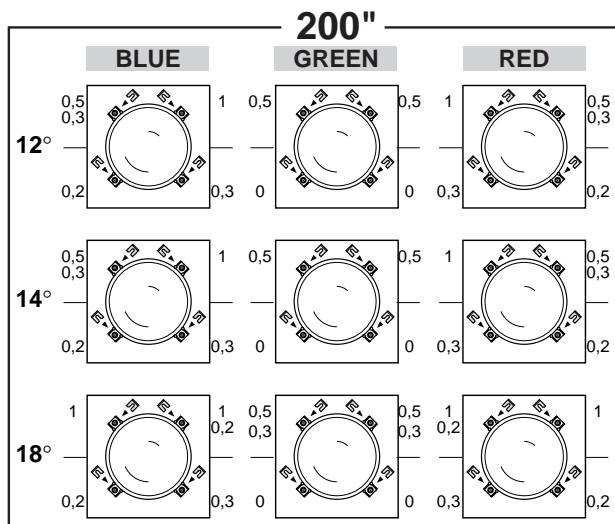
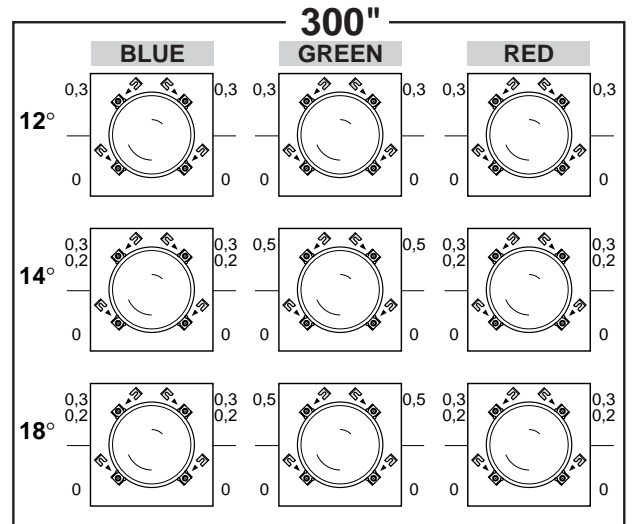
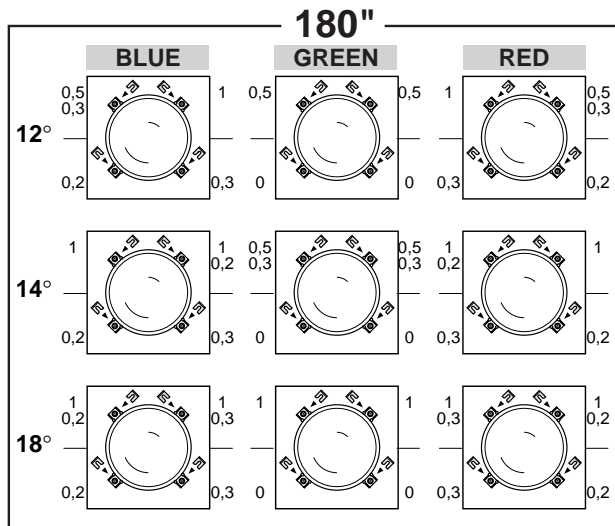
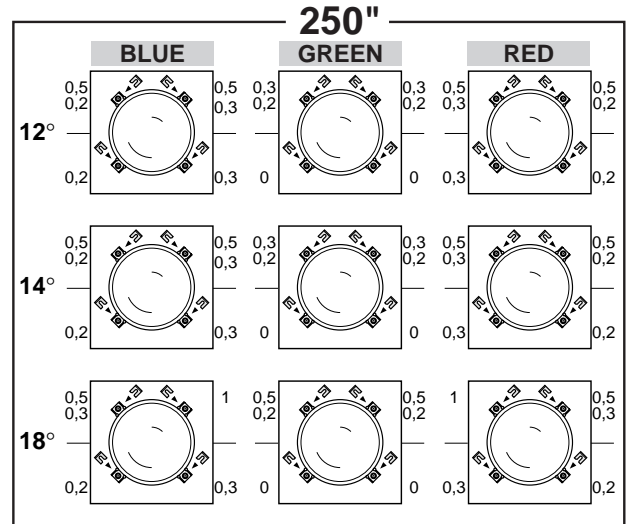
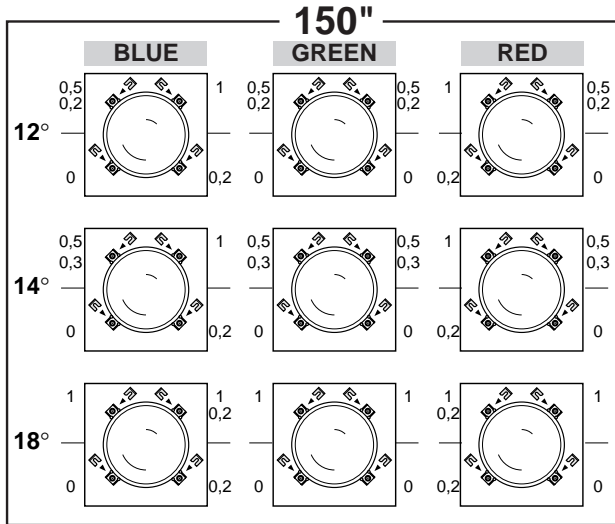


Fig. 52





4.6 Projector centering

The first step towards a good installation is centering the projector with respect to the screen. This can be done using two pieces of equally long cord, as illustrated in the following figure:

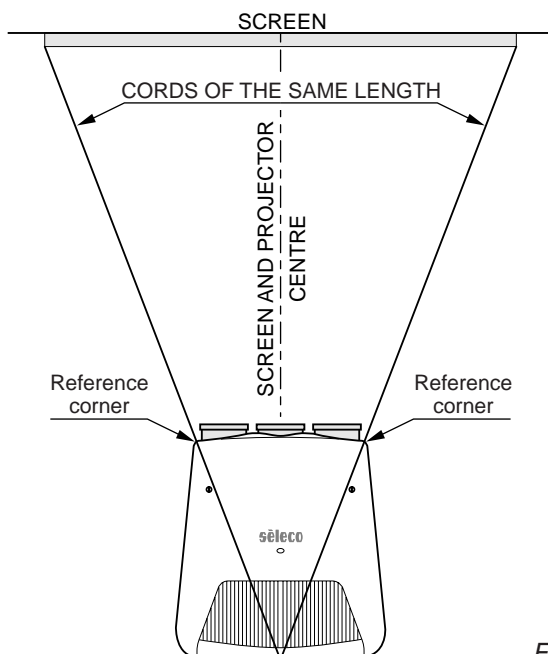



Fig. 53

It is necessary to check that the position of the two corners at the front of the projector is centred with respect to the position of the cords, as illustrated in the figure. Once you have done this you can be sure that the screen and the projector are orthogonal and centred, essential conditions for the best performance.

4.7 Optical and electrical adjustments

Turn the projector on with the main switch on the left of the rear panel; the red pilot light indicates the stand-by state.

If the projector remains in stand-by press the  button on the remote control or the ◀ or ▶ arrow buttons on the rear panel. The green pilot light indicates the projector is on.

To turn the projector off, press  or the main switch.

Proceed with installation using the internal test pictures. They can be used by pressing TEST on the complete functions remote control (RC3000) and selecting the most appropriate test signal.

4.8 Lens focus adjustment

Each lens must be focused individually with the tubes on, one at a time and following this procedure:

1. Select the **HATCH** test pattern by pressing the **TEST** button on the remote control. An external pattern signal can be used if you prefer.
2. Adjust with a low contrast (e.g. 30) and a medium-low background brightness (e.g. 40)
3. Turn the other tubes off using the push buttons **R,G,B**, on the remote control.
4. Loosen the wing screw (**B**) Fig. 54 of the green lens, turn the lens assembly either to the right or left to adjust the focus of the picture in the middle of the screen and then tighten the screw. (**B**).

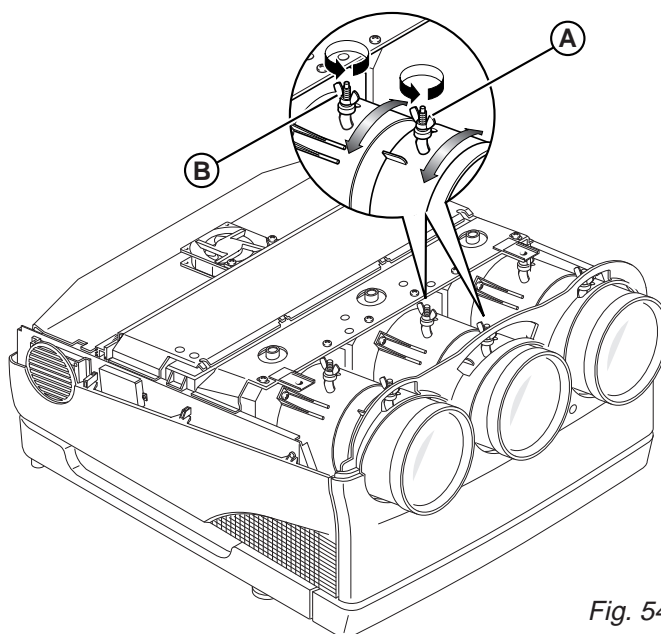


Fig. 54

5. Loosen the wing screw (**A**) of the green lens, turn the lens assembly either to the right or left to adjust the focus of the picture on the borders of the screen and then tighten the screw (**A**).
6. Look at the screen closely and check the result; repeat the adjustments if necessary.
7. Repeat steps 3, 4 and 5 for the red and blue lenses.

Attention:

DO NOT move the electrostatic focus adjustment potentiometers. They were factory-set and should only be adjusted by qualified personnel.

4.9 Mechanical centering of the tubes

For an installation different to factory setting (90") the mechanical centering of the red and blue tubes needs to be adjusted.

Select the **CROSS HATCH** signal with the remote control. Looking at the following figure, unscrew (only 2 turns!) the screws (A-B-C-D) of the red tube.

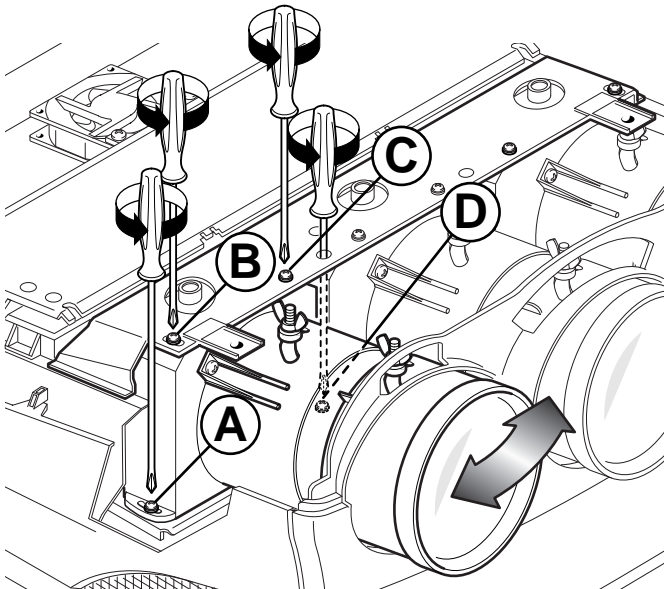


Fig. 55

Physically move the tube until the red cross is perfectly over the green. **Tighten the four screws when you have finished.**

Repeat this procedure again for the blue tube.

At this point it is necessary to recheck the focus of the red and blue.

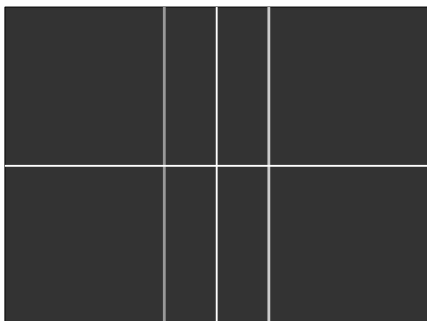


Fig. 56

4.10 Correct screen viewing (deflection inversion)

1. Switch the projector off.
2. Take the (A) cover off by unscrewing screw (B) See Fig. 57.

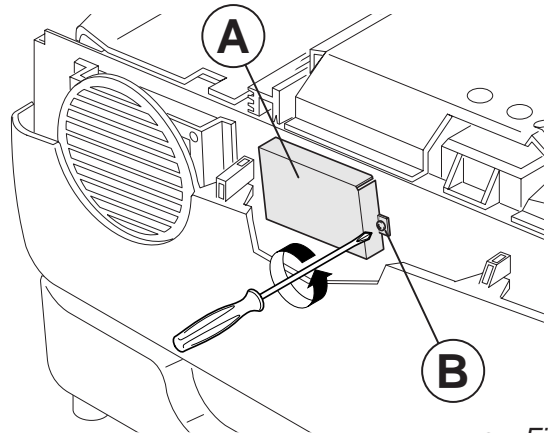


Fig. 57

3. If necessary modify the setting as shown in the following figures.

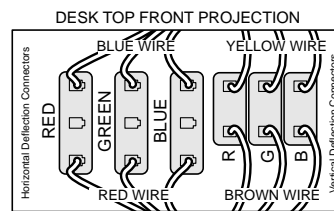


Fig. 58

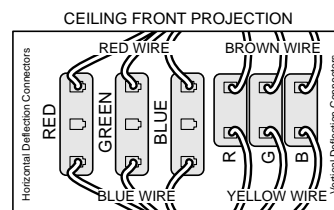


Fig. 59

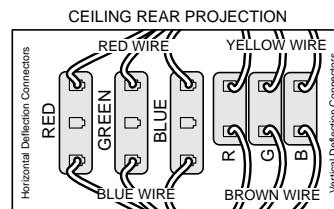


Fig. 60

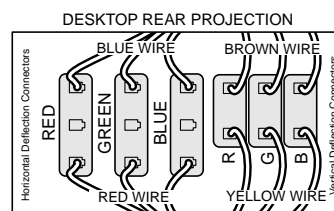


Fig. 61

N.B.: In the case of ceiling to floor installations or vice versa, see par. 5.11.3, *Linearity*, page 33.

4.11 Convergence adjustment

To adjust convergence you must read very carefully the chapter concerning convergence adjustment from the remote control, see par. 5.11, *Convergence*, page 32.

5 THE COMPLETE FUNCTION RC3000 REMOTE CONTROL

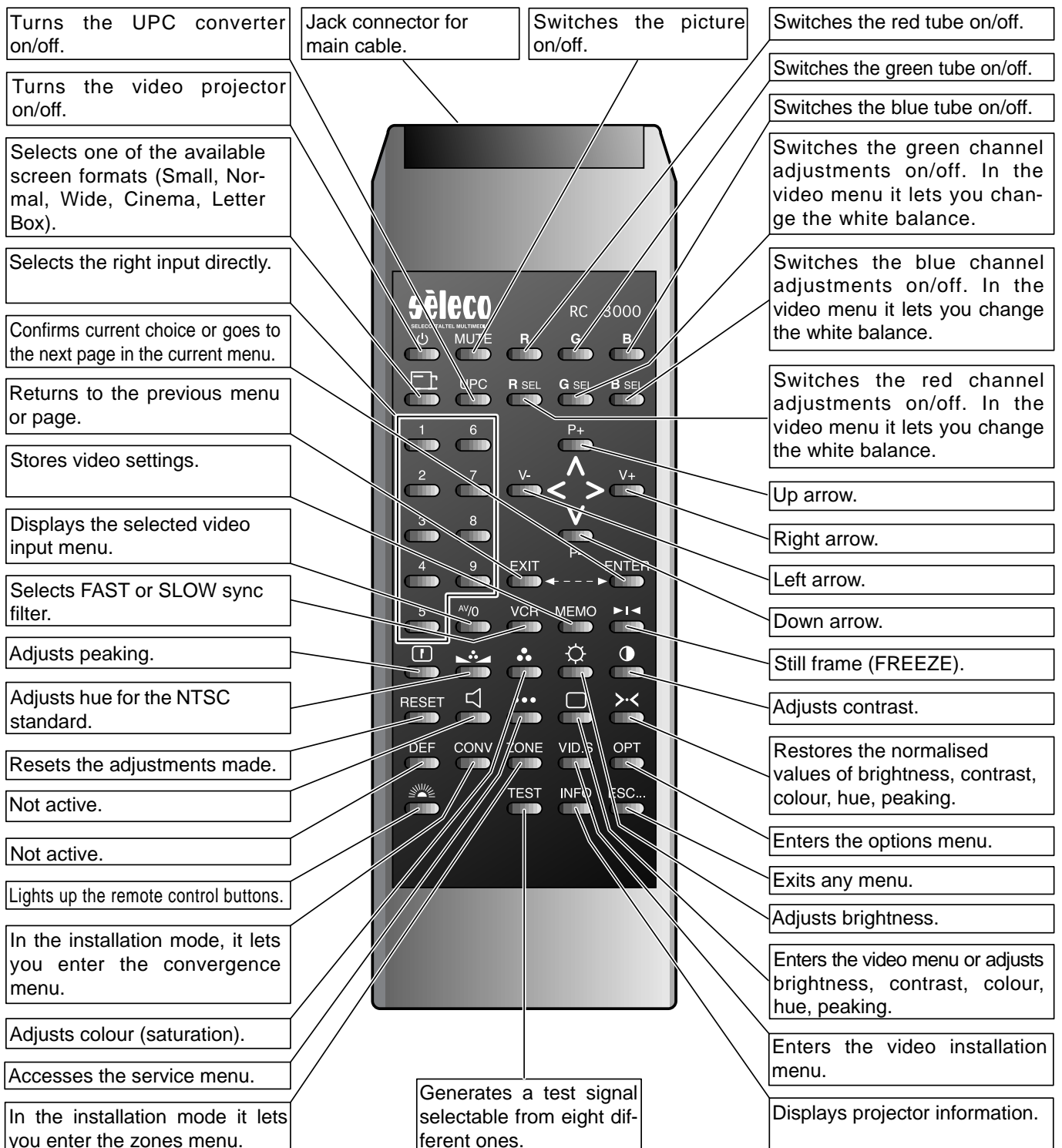
5.1 Complete function RC3000 remote control

There are two remote controls for the video projector. One, the RC3000, is a complete function remote control used to install the projector while the other one, the RC3100, is for normal use. Both control the projector with infrared rays. With the RC3000 remote control you can connect

via cable directly to the video projector's IR input so as to avoid any technical problems.

N.B.: (The cable is supplied with the projector. Standard length is 8m.).

The following pages explain the functions of the buttons on the RC3000 remote control.



5.2 Batteries

Handling the remote control and batteries:

- Avoid exposing the remote control to heat and humidity
- When not using the remote control for a long period of time, remove the batteries.
- Avoid using the RC 3000 remote control with the infrared control and service light on for a long time as battery life would then be reduced.
- Do not use new and old batteries together or batteries of a different voltage or type.
- Handle the remote control with care.
- Use the remote control within its operating range (about 10 metres and a 30° angle)

Note: The RC3000 remote control is powered by four AA 1.5 V batteries and one 9V battery, IEC6F22.

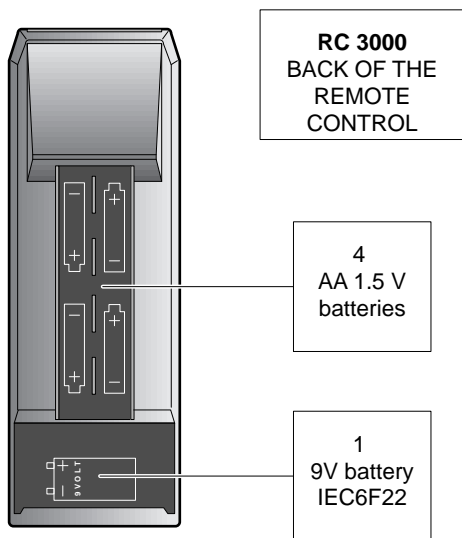



Fig. 63

5.4 Turning the projector on

Press the mains switch; the red stand-by LED on the rear panel turns on.

Press , or one of the buttons from 1÷9.

The red LED becomes green ON.

A white screen appears with the message indicated below.

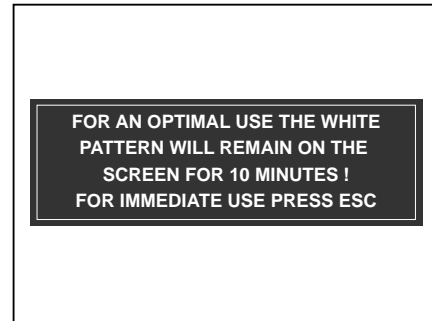



Fig. 64

Always leave the projector to warm up for ten minutes after switching it on.

The message disappears temporarily after about 40 seconds after which it reappears for 5 seconds at approximately 40 second intervals.

Press any key to exit from the initial screen and to see the picture immediately after having turned the projector on if, for instance, the adjustment has been completed and warming up is unnecessary.

WARM-UP time can be modified or excluded, *see par. 3.21 OSD OPTIONS, page 14.*

Press  to switch off and then move the power switch round to **OFF**.

5.5 Picture adjustment

To change the contrast, brightness, colour, hue and peaking directly you can use the following buttons:





Press . **CONTRAST**, selects the contrast setting.
Press  or  to change the value.



Fig. 65

Press . **BRIGHTNESS**, selects the brightness setting.



Press  or  to change the value.



Fig. 66




Press . **COL.** selects the colour setting.
Press  or  to change the value.



Fig. 67

5.3 How the RC 3000 remote control works

The following paragraphs describe the functions of the RC3000 remote control.

Press . HUE, selects the hue setting, only for NTSC signals
Press or to change the value.



Fig. 68

Press **MEMO** if you wish to store all the settings when one of the functions is displayed.

Press **ESC** to exit.

N.B.: If your press all the values stored in the displayed signal bank are recalled.

Press . PEAK, selects the peaking setting
Press or to change the value.

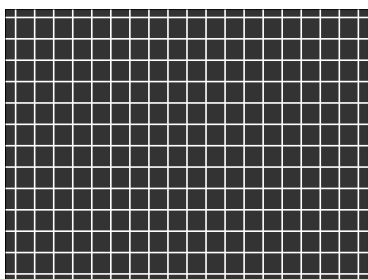


Fig. 69

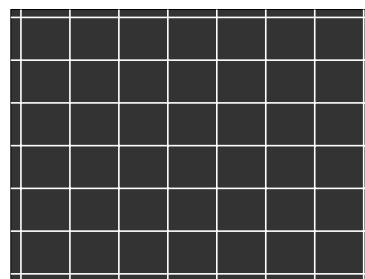
5.6 Test patterns

To select a test pattern press **TEST**. The following eight patterns will appear in sequence.
Press **ESC** to exit

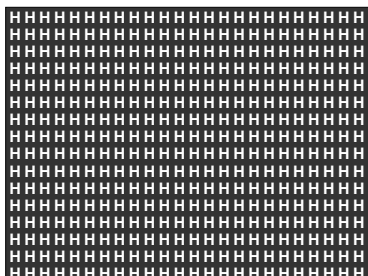
18X13 HATCH



9X7 HATCH



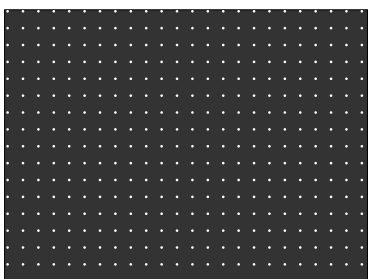
H CHARACTERS



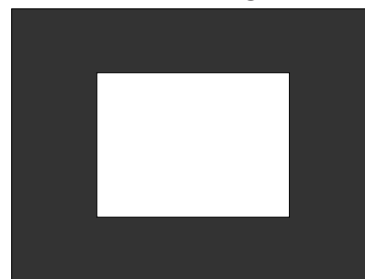
WHITE FIELD



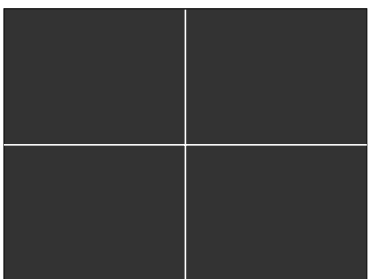
DOTS



WHITE WINDOW



CROSS



COLOUR BARS



Fig. 70

VIDEO MENU

Press **VID.S.** the **VIDEO MENU** appears.

To adjust the various sub menus see: *par. 3.13, VIDEO MENU, page 11.*



Fig. 71

5.7 White balance

To select one of the set colour temperatures (3200°K, 6500°K, 9300°K, USER, BANK) see *par. 3.18, WHITE MENU, page 13.*

N.B.: To adjust the white balance enter the **SERVICE MODE** (see *par. 3.24, page 15*).

Press **VID.S., ENTER.** The **VIDEO MENU** appears.

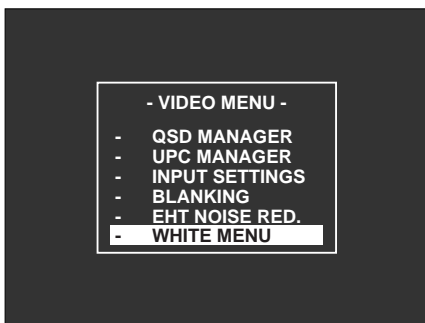


Fig. 72

Press **▲** or **▼**. Select **WHITE MENU, ENTER.** **WHITE MENU** appears



Fig. 73

Press **▲** or **▼**. Select **6500°K, ENTER**

Press **▲** or **▼**. Select **EDIT PRESET.**

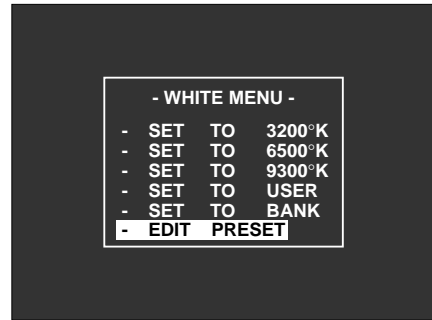


Fig. 74

Press **ENTER.** **WHITE BALANCE 6500 °K** appears

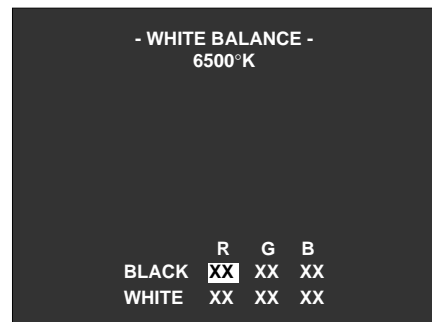


Fig. 75

Press **R,G,B.** Select the **BLACK** of the colour to adjust. Press **▲** or **▼** to adjust.

Press **Rsel, Gsel, Bsel.** Select the **WHITE** of the colour to adjust

Press **▲** or **▼** to adjust.

Press **MEMO** when adjusting is finished.

N.B.: When adjusting is finished, by pressing **EXIT** the message **MEMORIZE COLOUR TEMPERATURE?** appears, press **ENTER** to store.

- White balance can be adjusted with the contrast and brightness value in use.

- Whenever a picture adjustment is active on the screen like, for instance, **CONT**, white balance regulation is impossible. Press **EXIT**.

- By selecting **SET TO BANK** you can personalise the white for each current signal bank.

5.8 MEMORY MANAGER

With this menu see *Fig. 77* you can select, copy, move or delete a memory bank containing all the projector adjustments or to store new ones.

30 user presettable memory banks are available from (00÷29).

10 memory banks (30÷40) are factory-set for ceiling projection with a 90" 4/3 format screen. These banks can be copied (COPY) they cannot be loaded (LOAD), deleted (DEL) or moved (MOVE).

(F) indicates which ratio flag was stored by the user during the adjustments.

The **horizontal and vertical frequencies** are measured by the projector and stored in the relative memory bank each time you save an adjustment. When the projector is switched on the last memory bank used is recalled.

5.8.1 How to enter the memory manager

Enter the **SERVICE MODE**, see par. 3.24 page 15. Press **OPT. OPTIONS** appear

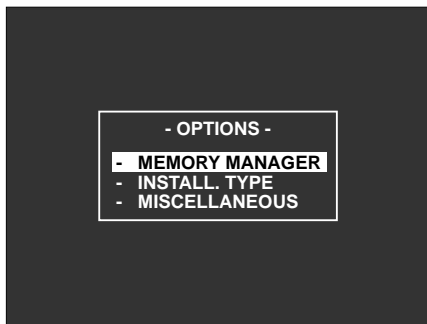


Fig. 76

Press **▲** or **▼**. Select **MEMORY MANAGER**, **ENTER**

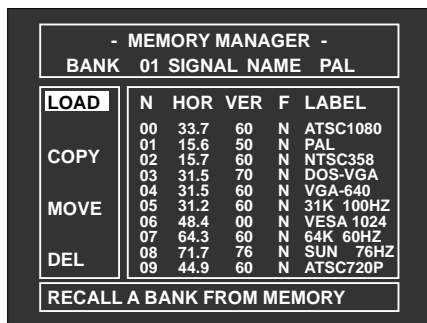


Fig. 77

-BANK 01: It indicates that bank 01 has been recalled. It is important when the input frequencies do not match those stored in the bank.

-N.: Bank number

-HOR: Horizontal frequency. It is measured by the software and stored in the label in the memory bank.

-VER: Vertical frequency. It is measured by the software and stored in the label in the memory bank.

-F: Flag. with this function you can change the video format: **Normal, Small, Letter box, Cinema, Wide.**

-LABEL: Name of the memory bank (label decided by the user).

5.8.2 How to insert a label

Press **◀** or **▶**. Select **LABEL**

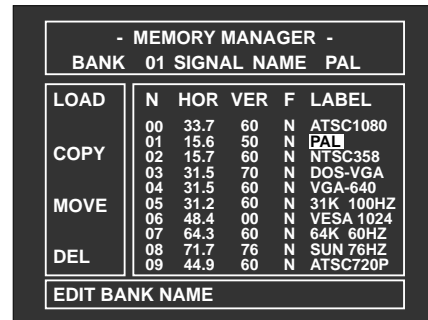


Fig. 78

Press **▲** or **▼** to select in which memory bank you wish to change the label.

Press **ENTER**. The LABEL will appear in green.

Press **▲** or **▼** to scroll the letters of the alphabet and use the **◀** left or **▶** right arrows to move to the next letter.

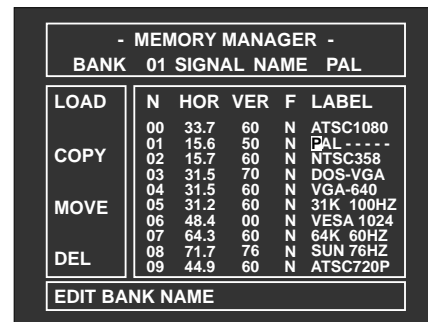


Fig. 79

When you have written the right name press **ENTER**, **ENTER**. The label will appear written in white with a message under the table.

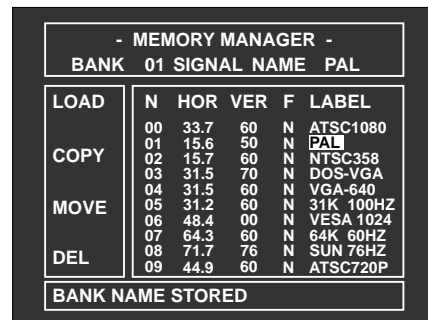


Fig. 80

5.8.3 How to change an aspect ratio (F)

Press **◀** or **▶**. Select **F**.

Press **▲** or **▼** to select in which memory bank you wish to modify the aspect ratio flag.

Press **ENTER**, the following figure will appear.

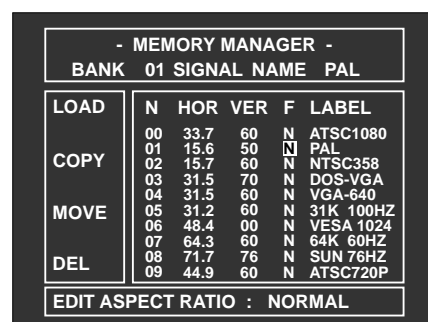


Fig. 81

Press **▲** or **▼**. Select the right ratio from among: **N (Normal)**, **S (Small)**, **L (Letter box)**, **C (Cinema)**, **W (Wide)**.

Press **ENTER** to confirm.

The following message will appear under the table: **EDIT ASPECT RATIO**.

5.8.4 Horizontal and vertical frequencies

The horizontal and vertical frequencies are measured by the projector and stored in the relative memory bank each time you store a change.

If the input signal does not match the frequency stored in the memory bank the software will automatically recall the memory bank with the frequency nearest to that of the input signal, in this order: horizontal frequency, vertical frequency, aspect ratio.

If the frequencies of the input signal are different from those stored in the memory bank, the software will not recognise the frequency and, if you store settings, it will ask to create a new memory bank.

5.8.5 How to store a new input signal

Press **MEMO** only after the convergence adjustments have been done, the following will appear:

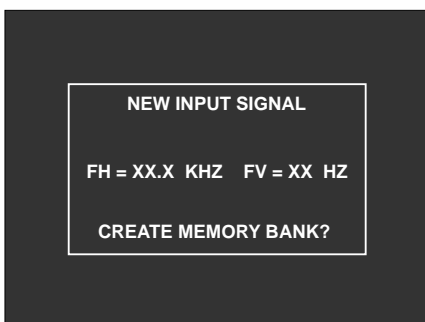


Fig. 82

Press **ENTER** and the following will appear:

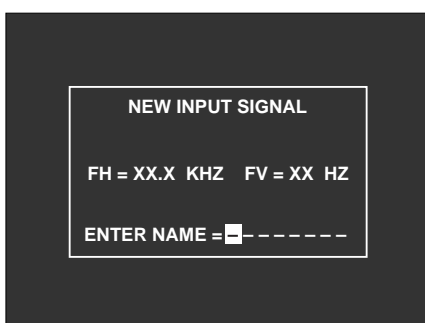


Fig. 83

Enter the label; see par. 5.8.2 page 29.

Press **ENTER** and the following will appear:

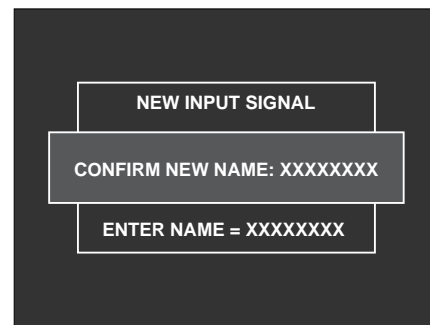


Fig. 84

Press **ENTER**. The menu will appear with the number of the bank where it is stored.

Press **ESC** to exit.

5.8.6 LOAD

This item on the MEMORY MANAGER menu allows the user to load and change a memory bank containing all the projector adjustments.

This is possible only if there is a match between the input frequencies and the frequencies stored in the memory bank.

Press **▲** or **▼**. Select **LOAD**, **ENTER**

Press **▲** or **▼**. Select a memory bank whose frequencies are like the current signal.

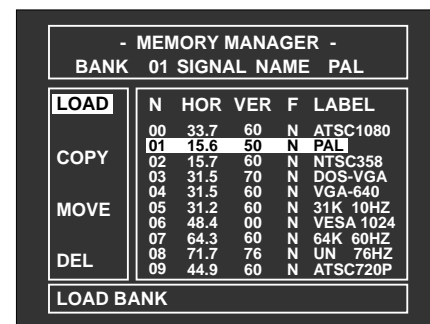


Fig. 85

Press **ENTER**.

The following message will appear under the table.



Fig. 86

If the input signal frequencies (horizontal and vertical) do not match the selected memory bank, the following message will appear under the table.



Fig. 87

5.8.7 Copy (COPY)

This function allows you to copy a memory location containing settings in another location.

Press **▲** or **▼**. Select **COPY**, **ENTER**.

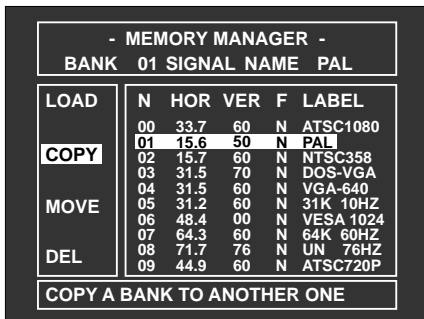


Fig. 88

Press **▲** or **▼**. Select a memory bank (from 00 to 29) to be copied.

Press **ENTER**. The following message will appear:



Fig. 89

Press **▲** or **▼**. Select the memory bank (from 00 to 29) where to copy the information.

Press **ENTER** to confirm. The following message will appear:



Fig. 90

Press **ENTER** to confirm. If the destination memory bank is free you will be asked to enter a name for the bank and the following message will appear:



Fig. 91

Press **▲** or **▼**. Select the characters of the name (label).

Press **◀** or **▶**. Change the cursor position. Repeat until the name is complete and then press **ENTER**.

The following message will appear:

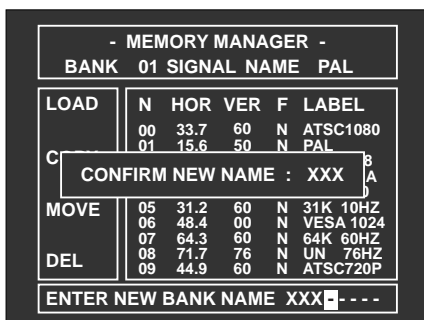


Fig. 92

Press **ENTER** to confirm.

Note: The copy will be made even if the horizontal and vertical frequencies do not match those of the video input signal.

5.8.8 MOVE (MOVE)

This function allows you to move a memory bank to another position on the list.

Press **▲** or **▼**. Select **MOVE**.

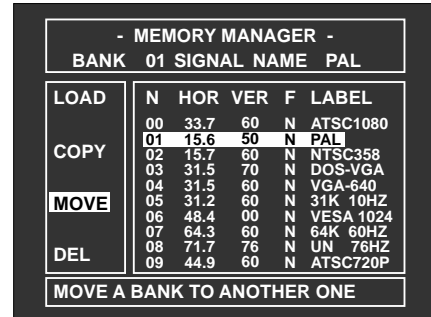


Fig. 93

Press **ENTER**. The following message will appear:



Fig. 94

Press **▲** or **▼**. Select the memory bank (from 00 to 29). Press **ENTER**. The following message will appear:



Fig. 95

Press **▲** or **▼**. Select a free destination memory bank (from 00 to 29).

Press **ENTER**. The following message will appear:



Fig. 96

Press **ENTER** to confirm. The following message will appear:



Fig. 97

Press **EXIT** to return to the previous menu.

Note: If the destination bank is not free the following message will appear:



Fig. 98

5.8.9 DELETE (DEL)

This function allows you to delete a memory bank.

Press **▲** or **▼**. Select the **DEL** function.

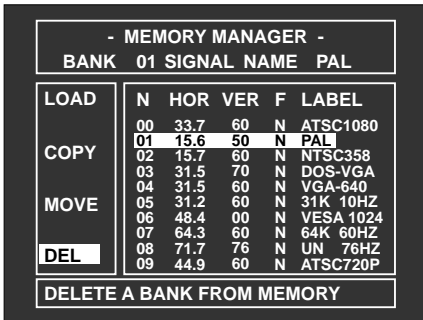


Fig. 99

Press **ENTER**. The following message will appear:



Fig. 100

Press **▲** or **▼**. Select the memory bank to be deleted and press **ENTER**.

The following message will appear:



Fig. 101

Press **ENTER** to delete the memory bank. The following message will appear:



Fig. 102

The cursor will return to the left of the menu.

If the memory bank you are deleting is the one in use, it will be deleted and the first bank with the same input signal frequency will be loaded.

5.9 Installation types

Enter the **SERVICE MODE**, see par. 3.24 page 15

Press **OPT**.

Press **▲** or **▼**. Select **INSTALL TYPE**, **ENTER** to confirm.

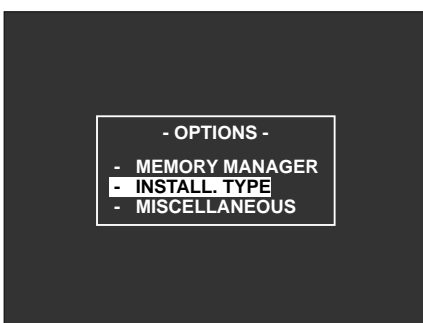


Fig. 103

Press **▲** or **▼**. Select the installation type. Press **ENTER** to confirm.

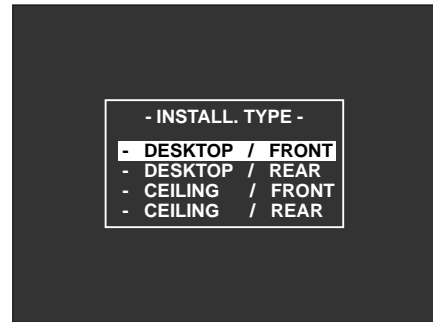


Fig. 104

Press **EXIT** to return to the previous menu.

In the case of ceiling to floor installations or vice versa, see par. 4.10 **Correct screen viewing**, page 24

5.10 Fine picture adjustments

This paragraph is very important to achieve a perfect fine adjustment of the projector once it has been installed. Read the following pages carefully.

Attention:

It is very important to synchronise the projector with the most frequently used input signals. The settings of each signal type must be stored in a memory bank.

5.11 Convergence (CONV)

Enter the **SERVICE MODE** see par. 3.24, page 15.

Press **CONV** (convergence adjustments).

In this way you can make all the adjustments necessary to align the image of the green, red and then the blue tube on the screen.

Press **EXIT**, **ENTER** to scroll the convergence adjustment menus in sequence.

Press **Rsel**, **Gsel**, **Bsel** to enable the colour to be adjusted.

5.11.1 PHASE

The **PHASE** control is enabled on external images.

If an internal test signal is selected and the phase is enabled, the current external signal is displayed automatically.

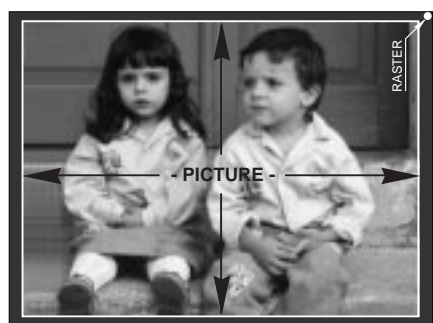


Fig. 105

Use this function to centre the external signal image with respect to the raster.

This adjustment is common to the three colours **R.G.B.**

Press **CONV**

Press ◀ or ▶ to centre the image on the screen.

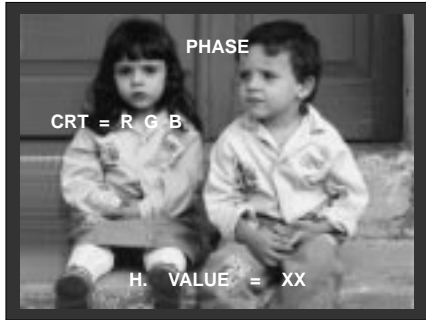


Fig. 106

N.B.: In the case of ceiling to floor installations or vice versa, press ▲ or ▼ to position V. VALUE=30, adjust P3 (LIN. PRESET) on PC 098 (vertical def.) for a good vertical linearity, press ▲ or ▼ for a fine adjustment.

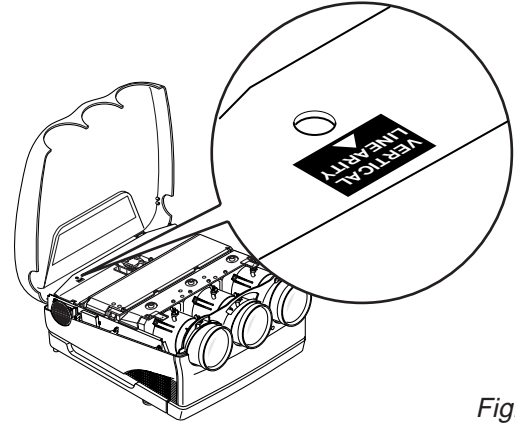


Fig. 109

5.11.2 SHIFT

This function allows you to shift the raster to the right, left, up or down.

Press ◀ or ▶, ▲ or ▼ to adjust.

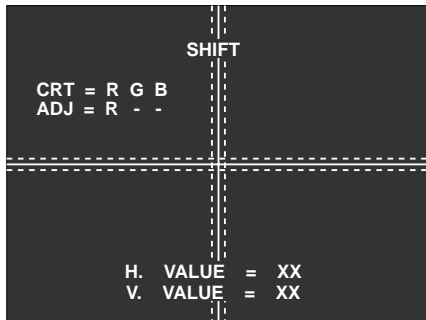


Fig. 107

5.11.4 Picture dimensions (SIZE)

Press ◀ or ▶, ▲ or ▼ to adjust.

This adjustment is common to the three colours **R.G.B.**

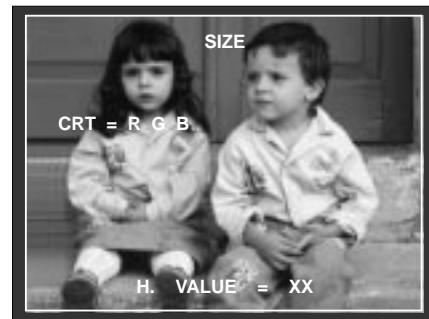


Fig. 110

5.11.3 LINEARITY

This function is used to modify the distance between the cross hatch lines until they are equal.

This adjustment is common to the three colours **R.G.B.**

Press ◀ or ▶ so that parts (a) are equal in width.

Press ▲ or ▼ so that parts (b) are equal in width.

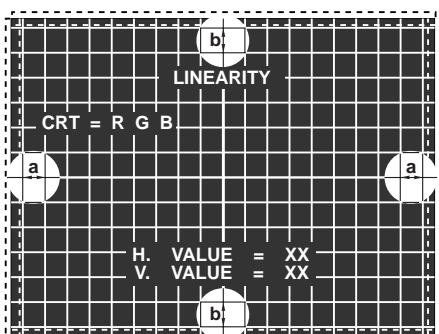


Fig. 108

Attention: Raster size is directly related to projector resolution. The bigger the raster is the greater the resolution will be.

5.11.5 SKEW

Press ◀ or ▶, ▲ or ▼ to adjust.

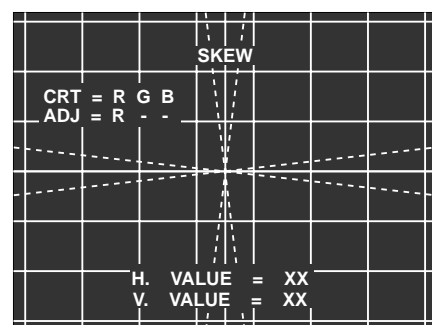


Fig. 111

5.11.6 BOW

Press ◀ or ▶, ▲ or ▼ to adjust.

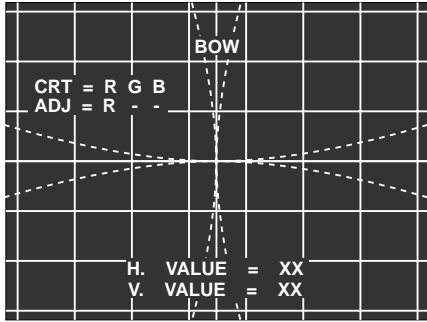


Fig. 112

5.11.7 KEYSTONE

Press ◀ or ▶, ▲ or ▼ to adjust.

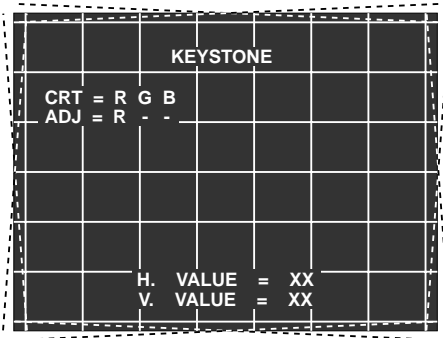


Fig. 113

5.11.8 PINCUSHION

Press ◀ or ▶, ▲ or ▼ to adjust.

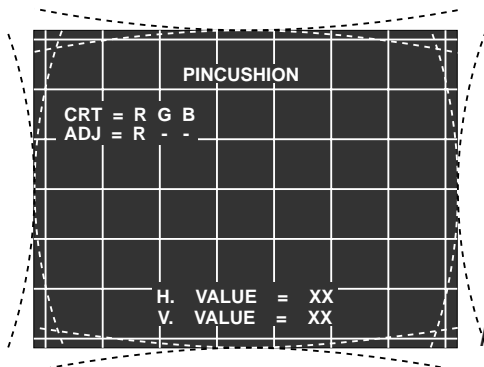


Fig. 114

5.11.9 ZONES

This function adjusts the red zones after having adjusted convergence and when the red and green lines converge.

Press **ZONE**. The **ZONE** menu appears.

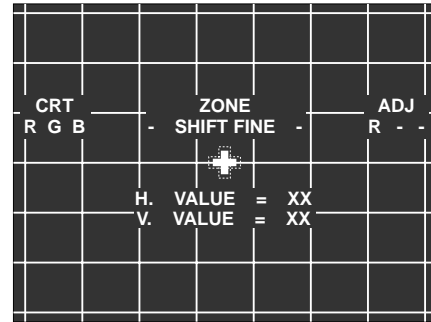


Fig. 115

This menu changes according to the zone you are adjusting.

Press **EXIT**, **ENTER** to scroll the **ZONE** menus in sequence.

Press **Rsel**, **Gsel**, **Bsel** to enable the colour to be adjusted. Press ◀ or ▶, ▲ or ▼ to adjust.

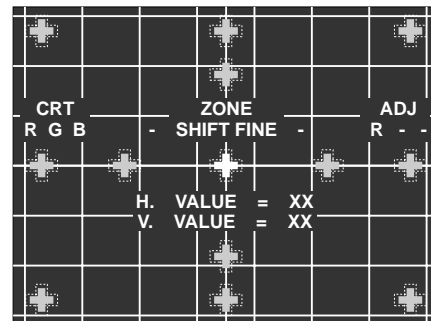


Fig. 116

5.12 How to reset the adjustments (RESET)

Note: *Resetting means setting all adjustment values at 50 that corresponds to zero. Starting from this value you can adjust up to 100 or down to 0.*

To reset adjustments read the following instructions carefully.

If you press the **RESET** button when you are in the convergence setups (**CONV**), you will reset the convergence parameters and those of the zones of the three colours **R.G.B.**.

If you press the **RESET** button when you are in the **ZONE** setups, you will reset the zone parameters of the three colours **R.G.B.**.

The following table shows which parameters are reset and in which menus.

RESET	RESET PARAMETERS	COLOURS
CONV	CONVERGENCE AND ZONE	ALL
ZONE	ZONE	ALL

N.B.: *After **RESET**, you can recall the previous values by loading the current bank from the **MEMORY MANAGER (LOAD)**, if the **MEMO** procedure has not been carried out.*

5.13 How to store the convergence adjustments (MEMO)

Press **MEMO**, the following will appear:

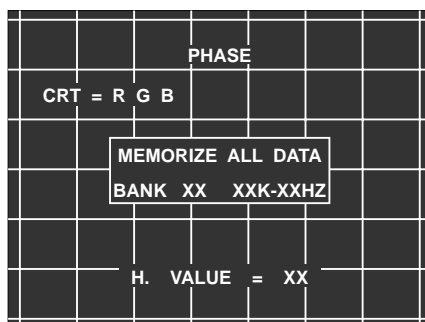


Fig. 117

press **ENTER**, the following will appear:

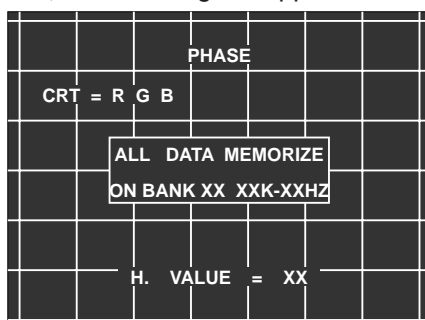


Fig. 118

Storing has now been completed on the current memory bank. Press **ESC** to exit.

6 TECHNICAL SPECIFICATIONS

6.1 Optical data

Projection system

- 3 projection tubes, 3 lenses
- Horizontal line system

6.2 Projection tube

- 7" monochrome tube, high brightness, liquid cooling, air lens coupling, electrostatic focusing.
- The external red and blue tubes are mechanically rotated.

6.3 Projection lenses

- High performance hybrid lenses
- Focal length is 135mm, number-f F/1.03 to infinity
- Focus adjustments: centre and borders
- Magnifying power: from 10x to 60x
- Resolution: more than 10 lp/mm at 50% MTF

6.4 Projected picture size

- 60-300 inches diagonally
- **Factory set at 90 inches**
- Convergence type: by remote control with zone adjustments

6.5 Brightness

- High brightness in output (100% white):
- 160 lumen ANSI (900 lumen at white peak).

6.6 Video resolution

- **RGB** input: 1280x1024 pixels
- **VIDEO** input: 800 TV lines
- HDTV input: 1080 TV lines

6.7 Colour temperature

- 3200,6500,9300 Kelvin degrees, user memory, plus personal memory on all banks.
- Colour temperature can be selected and adjusted by remote control.
- The projector is factory set at 6500°K.

6.8 Automatic cut off

- The projector automatically carries out controls for better colour temperature stability at set intervals.

6.9 Adjustments

- All projector adjustments, except for mechanical centering and focusing, can be done with the remote control.

6.10 Picture adjustments

- Contrast-brightness-colour saturation (only for standard PAL, SECAM, NTSC 4.43, NTSC 3.58)
- Hue (only for NTSC 4.43 and NTSC 3.58)
- Peaking

6.11 Geometric adjustments

- Size - Centering - Linearity - Skew - Bow - Keystone - Pincushion - Borders, Quarters, Corners.

6.12 Inner test patterns

- Crosshatch 18x13 - H characters - Dots - Cross - Crosshatch 9x7 - White field - White window - Colour bars.

6.13 Global adjustments and selections

- Window
- Dynamic H and V focus adjustment
- White balance adjustment
- Signal phase adjustment
- Selectable installation type
- Memory manager
- All parameters can be stored in 30 different labelled configurations.
- Load, copy, shift and delete functions of the memory banks.
- On-screen information, recallable by remote control or a button on the rear panel.
- On-screen display of the ON/OFF commands (only for contrast, brightness, saturation, peaking and hue).
- No. 10 different ceiling presetting configurations are available for copying.

7 DISPLAY PERFORMANCE

7.1 Flyback time

- **Horizontal** 2.4 μ s typ.
- **Vertical** 150 μ s typ.
- **R,G,B video bandwidth:** 75MHz, -3dB typical
- **Standard video bandwidth:** 5.5Mhz, -3dB typical
- **Warm up time (suggested):** 10 minutes

7.2 Synchronisation

- **Horizontal frequency range:**15/72 Khz - automatic hook-up
- **Vertical frequency range:**45 to 150Hz - automatic hook-up

7.3 Full function remote control mod. RC 3000

Operating mode:

- 1.- wired (using the 8 m/24ft cable supplied)
- 2.- wireless (max operating distance: 10m/30ft)

Functions:

All adjustments can be done using the remote control but the following can be directly accessed with a key:

- Switching ON/OFF
- Picture muting
- Still frame (freeze)
- Aspect ratio selection
- Single RGB tube power off
- VCR sync filter
- Normalised parameters
- Storable picture adjustments
- Picture adjustments
- Convergence deflection adjustment (installation mode)
- Zone adjustments (installation mode)
- Projector status info
- Video input selection
- Resettable adjustments (installation mode)
- Back lighting by pressing a dedicated button
- If no button is pressed, the light stays on for 20 seconds more.
- By pressing any button the counter is reset

7.4 User remote control mod. RC3100

Operating mode:

Wireless (max operating distance:10m/30ft)

Functions:

All adjustments can be modified using the remote control, some can be directly accessed with a key:

- Turning ON/OFF
- Still frame (freeze)
- Format selection
- Picture muting
- VCR sync filter
- Storable picture adjustments
- Normalised values recall
- Picture adjustment
- Video menu
- Projector status info
- Video input selection
- Options

7.5 Keyboard on the rear panel

Functions:

- Switching ON
- Input selection
- Picture adjustment
- Info menu

7.6 BNC RGB inputs

BNC connectors:

- R/Cr input 0.7 Vpp, 75 Ohm termination
- G input 0.7 Vpp, 75 Ohm termination, G with synchro/ Y: 1Vpp, 75 Ohm termination, G with synchro / Y: 1Upp, 750 Ohm termination negative synchro.
- B/Cb input 0.7 Vpp, 75 Ohm termination
- RGB video band: 75Mhz, -3dB
- Y Cr Cb band: 40Mhz - 3dB

7.7 Input synchro

H, H/V sync 75 Ohm termination

- a) Horizontal sync or composite sync 0.3-5Vpp, positive or negative
- b) Vertical sync: 0.3-5Vpp, positive or negative

7.9 Video inputs

CVBS 1 BNC composite video input connector, 1Vpp, 75 Ohm termination, negative sync.

CVBS 2 BNC connector, same levels as CVBS 1, 75 Ohm termination, negative sync.

S-VHS 1 4-pin MINI DIN connector, Y brightness signal, 1Vpp, 75 Ohm termination, negative sync.

C: chrominance signal
0.286 Vpp, NTSC 4.43,
NTSC 3.58 (burst level)
0.3 Vpp, PAL,
0.3 Vpp, SECAM

S-VHS 2 same levels as S-VHS 1, 75 Ohm termination, negative sync

Video input bandwidth 5.5 MHz-3dB

Standards, PAL, SECAM, NTSC 3.58, NTSC 4.43 with automatic switching

In the case of a bad input signal the standard can be forced by remote control.

- C.T.I. always active
- Peaking control
- Comb filter on/off selection.
- Luminance/Chrominance delay adjustment
- NTSC: hue adjustment

7.10 VGA connector

- D-sub 15 Pin connector
- R,G,B analogue input levels, 0.7 Vpp, 75 Ohm termination
- TTL LEVEL sync input level, positive or negative
- 75 Mhz -3dB video bandwidth

7.11 PC control

Through the RS422 interface the projector can be controlled by a PC with specific software.

PC connector: D-sub. 9 Pin

This input is compatible with the majority of computers like IBM, VGA, etc...

8 ELECTRICAL DATA

Input:	500W max (12W on stand-by)
Voltage:	120-240Vac 50-60Hz with power factor correction
Fuse:	10A TH

9 Mechanical data

Dimensions:

Width	620 mm / 24.4 inches
Height	340 mm / 13.38 inches
Depth	700 mm / 27 inches

Weight:

48.5 Kg / 77 lbs net

Packagng:

Reinforced cardboard, filled with anti-shock material and 4 handles for transportation

Packaging dimensions:

Width	806 mm / 31.73 inches
Height	515 mm / 20.27 inches
Depth	886 mm / 34.88 inches

10 TEMPERATURE AND HUMIDITY RANGE

Working	from 0 to +35°C
Humidity	from 10 to 90% not condensed.
Transportation and deposit	-10 to +55°C

11 OPTIONAL ACCESSORIES

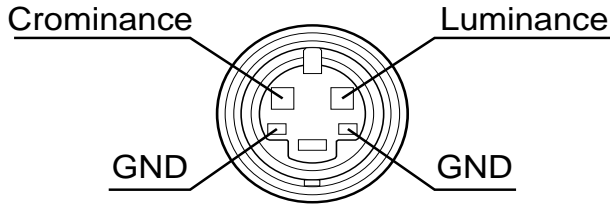
UPC

12 STANDARD ACCESSORIES

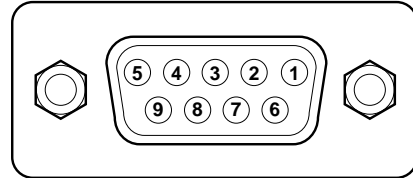
AC power cable (Europe, UK, USA-Canada)
Plastic lens caps
Lens spacers
RC-3000 full-function remote control with batteries
RC-3100 remote control with batteries
Remote control cable (8m)
Ceiling assembly kit
User and installation manual

13 PIN ASSIGNMENT

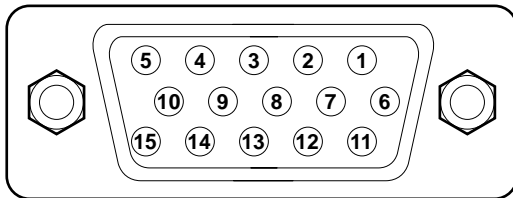
S VIDEO connector (4pin, mini-DIN)



RS-422A connector (female 9 pin D-sub)



VGA input
DB-15 female connector



No. pin	Signal
1	GND
2	Not used
3	Not used
4	$\overline{\text{TX}}$
5	TX
6	Do not use
7	Not used
8	$\overline{\text{RX}}$
9	RX

1	Red
2	Green
3	Blue
4	Not used
5	Not used
6	GND
7	GND
8	GND
9	Not used
10	GND
11	Not used
12	Not used
13	H / HV
14	V
15	Not used

RS 232 compatible connector (only for short distances)

No. pin	Signal
1	GND
2	Not used
3	Not used
4	TX
5	Do not use
6	RX
7	Not used
8	Do not use
9	Do not use

14 TROUBLESHOOTING

The pilot lights on the rear panel show the projector status.

	PILOT LIGHT	MEANING
ON indicator	Red light	Stand-by mode
	Green light	Normal operation
Remote control indicator	Blinking light	The projector is receiving commands from the remote control

In case of malfunctioning check the following table before asking for service help.

PROBLEM	CAUSES	REMEDY
The projector will not turn on	The ON push button has not been pressed The power cable is disconnected	Press the ON button Connect the power cable
No picture is displayed on the screen	The projector is switched off The input setting is wrong	If the LED is red it means the projector is on stand-by. Press a numerical key to switch it on. Ref. INPUT SELECTION
The picture is not properly displayed on the screen	The picture setup is wrong	Ref. PICTURE ADJUSTMENT
The message Fan Protection Detected switch off in 06 seconds appears on the screen	One or more fans have stopped	Check that the cooling fan ventilation holes are not clogged
The message ERROR ON 12C-bus board xxx device xxx appears on the screen	A communication error has been detected	Switch the projector off and then back on again. If the message persists contact a qualified technician
The message Convergence Overload Switch-Off in xxx seconds appears on the screen	Overcurrent has been detected on the convergence board	Reset the current memory bank and repeat installation. If the message persists contact a qualified technician
During normal operation the projector switches off	The projector is in the PROTECTION MODE	Ask for service

15 FRENCH INSTRUCTION

15.1 Procédure d'installation au plafond

ATTENTION:

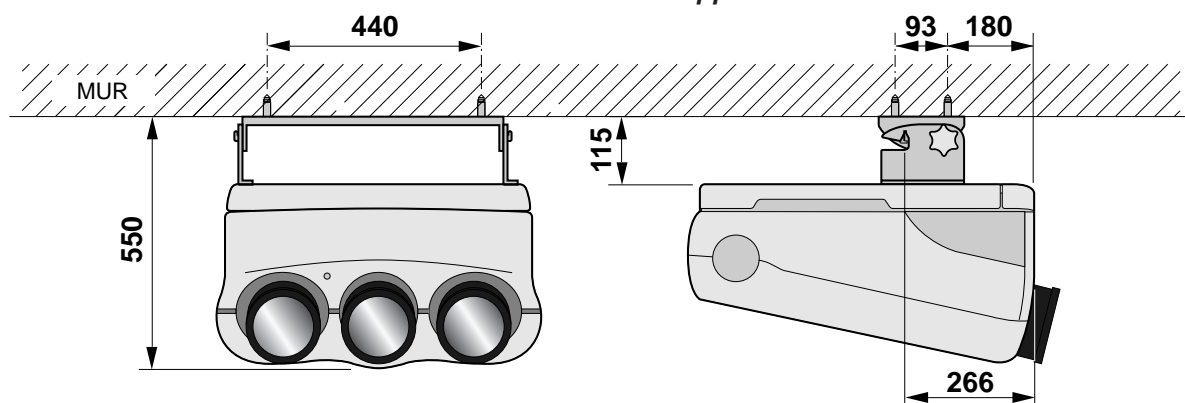
SIM 2 Multimedia décline toute responsabilité pour les dommages matériels et humains causés par une installation mécanique, au plafond, erronée ou négligée, toutes les opérations doivent être effectuées par un technicien qualifié.

ATTENTION:

Vérifiez que le projecteur ne glisse pas sur la surface où il repose.

ATTENTION:

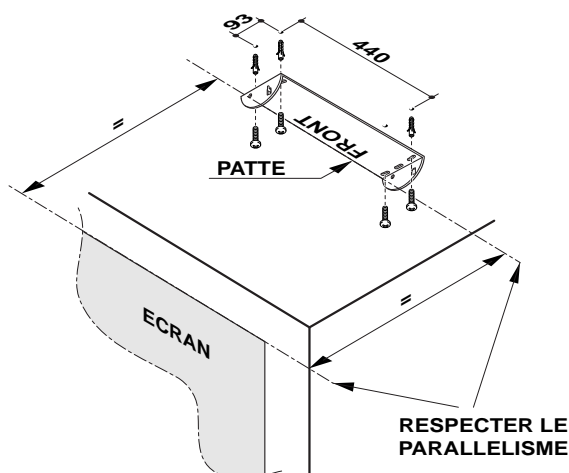
Le plafond doit être suffisamment solide pour pouvoir supporter le poids du projecteur.



En cas de murs réalisés avec des blocs de béton ou avec des briques, ne pas percer les trous nécessaires au montage dans les joints de mortier. La distance entre les éléments d'accrochage et la partie libre du mur de support doit être supérieure à 18 cm. La patte de fixation devra être fixée très soigneusement.

Fixer au plafond la patte de fixation se trouvant dans l'emballage avec les quatre vis fournies.

Attention: La patte de fixation doit être solidement fixée et être absolument parallèle à l'écran.



15.2 Projection frontale avec fixation du projecteur au plafond

Pour installer le projecteur au plafond, utiliser le kit de montage pour plafond (fourni avec le projecteur) et suivre les instructions ci-dessous. Pour fixer le projecteur à un plafond réalisé avec des blocs de béton ou avec des briques, effectuer un trou de 12 mm de diamètre et de 65 mm de profondeur à l'aide d'une perceuse. Fixer au plafond la grande patte de fixation se trouvant dans l'emballage en utilisant les éléments d'accrochage ainsi que les vis et les rondelles également fournis dans l'emballage. Pour cela, UTILISER les trous extérieurs de la patte et serrer avec un couple maximal de 25 Nm.

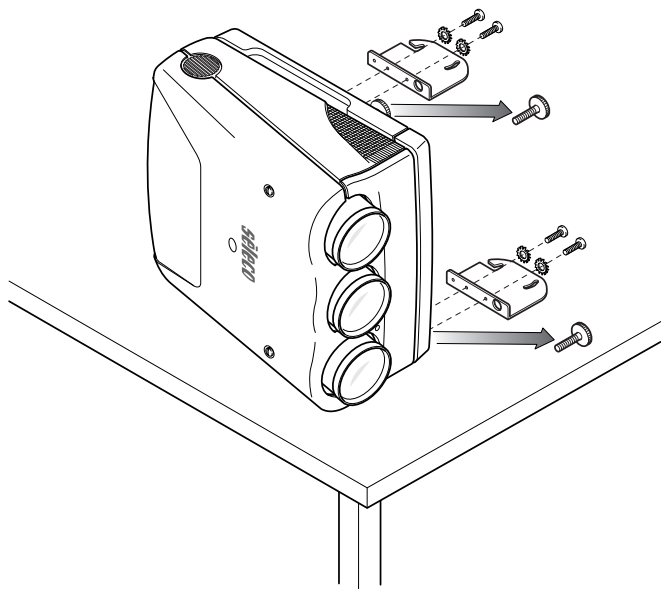
ATTENTION:

L'installateur devra vérifier si le mur peut supporter jusqu'à 4 fois le poids total (patte de fixation, hardware et partie électronique); l'épaisseur minimale du mur de support devra être de 10 cm.

Poser le projecteur sur une table en position verticale (le mettre sur le côté).

N.B.: Enlever les deux pieds avant.

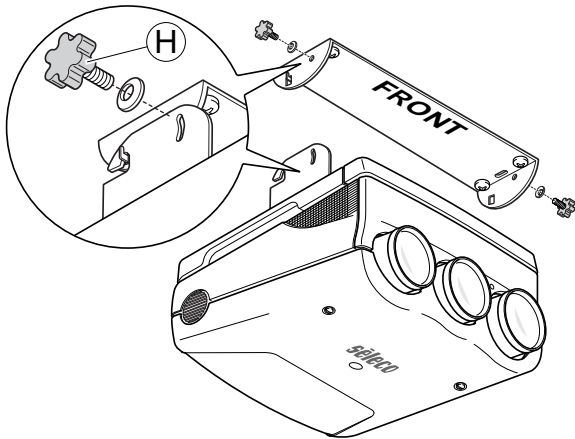
Enlever les 2 vis ainsi que les 2 rondelles, introduire le crochet gauche et le fixer en utilisant les mêmes vis et les mêmes rondelles comme indiqué dans le dessin ci-dessous. Répéter les mêmes opérations pour le crochet de droite.



Retourner le projecteur et le fixer au plafond au moyen des deux crochets.

Incliner le projecteur de manière à centrer l'image verticale et visser les deux vis de fixation (H).

Note: Introduire les rondelles arrondies spéciales entre le crochet et les vis de fixation. Pour une installation correctement effectuée, la partie concave de la rondelle doit être orientée vers la patte de fixation. Pour une installation faite en toute sécurité, n'utiliser que le kit de fixation fourni dans l'emballage.



Note: l'inclinaison entre le plan du projecteur et l'axe des verres doit être de 14°.

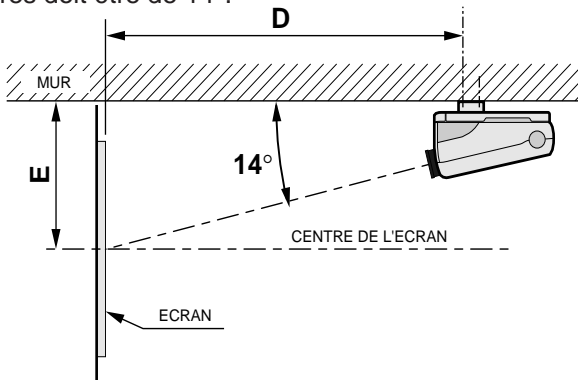


TABLEAU 3: PROJECTION FRONTALE AVEC FIXATION DU PROJECTEUR AU PLAFOND

D = Distance entre la ligne du premier trou de la patte de fixation et l'écran.

E = Distance entre le plafond et le centre de l'écran.

GRANDEUR ECRAN Aire utile 4/3			D	E
Diagonale (pouces)	Largeur (cm.)	Hauteur (cm.)	(cm.)	(cm.)
60"	121,9	91,4	204	81
80"	162,5	121,9	258	95
90"	182,9	137,2	284	104
100"	203,2	152,4	312	109
120"	243,8	182,9	366	125
150"	304,8	228,6	447	146
180"	365,7	274,3	528	167
200"	406,4	304,8	582	181
250"	508,0	381,0	718	217
300"	609,6	457,2	853	251

Nota: Pour des écrans format 16/9, mesurer la largeur et se référer à la largeur du tableau la plus proche.

15.3 Projection par l'arrière avec fixation du projecteur au plafond

L'installation pour la projection par l'arrière peut être effectuée en accrochant le projecteur au plafond et en suivant les instructions pour l'installation frontale.

L'utilisation des écartements corrects tels que montrés sur la table d'écartements, assure une parfaite uniformité de la convergence de la lumière. La rétro-installation peut-être faite en accrochant le projecteur au plafond. Dans ce cas, le projecteur doit être positionné en se référant en même temps à l'installation au plafond et à la rétro-installation.

Attention: Avant de mettre en marche le projecteur, veuillez lire soigneusement et entièrement cette notice. Elle vous fournira les informations de base pour l'utilisation du projecteur. Installation, réglages et procédures préliminaires qui requièrent l'ouverture du projecteur et le contact avec le composant électrique doivent être exécutées par le personnel de service. Pour préserver votre sécurité et réaliser des opérations fiables, utilisez seulement les câbles d'alimentation fournis par le fabricant. Conformez vous à toutes les instructions et à toutes les mises en garde.

15.4 Selection du voltage et cable d'alimentation

Le projecteur fonctionne avec une alimentation en 120-240 VAC, 50/60Hz, 500W, 4,2A RMS-MAX comme indiqué sur l'étiquette arrière.

15.5 Cet équipement doit être mis a la terre

Si la prise de courant de l'alimentation n'est pas équipée d'une fiche de terre, appelez votre électricien et munissez vous d'une ligne d'alimentation avec prise de terre et assurez vous de son efficience.

16 GERMAN INSTRUCTIONS

ACHTUNG: ÖFFNEN SIE NICHT UND NEHMEN SIE NIEMALS DIE HAUBE DES PROJEKTORS AB WEIL DARUNTER GEFAHRLICHE HOCHSPANNUNGEN, BIS 33 KVOLT, ANLIEGEN. WENN ERFORDERLICH, RUFEN SIE IMMER EINEN TECHNIKER.

SIM 2 Multimedia lehnt jegliche Verantwortung ab, für Schaden an Personen und Sachen, die durch Nichtbeachtung dieser Anweisung und der anderen, die in dieser Bedienungsanleitung enthalten sind, entstehen können.

16.1 Hinweis gemäß behördlicher Vorschriften

Die in diesem Gerät entstehende Röntgenstrahlung ist ausreichend abgeschirmt.

Beschleunigungsspannung maximal 33,5 KVolt.

Unsachgemässe Eingriffe, insbesondere Veränderungen der Hochspannung oder Auswechseln der Projektionsröhren, können dazu führen, daß Röntgenstrahlen in verstärktem Ausmasse auftreten.

Ein so verändertes Gerät entspricht nicht mehr der Zulassung und darf infolgedessen nicht mehr betrieben werden.

