

PLEASE READ

This manual is provided as a free service by Projector.com.

We are in no way responsible for the contents of the manual. We do not guarantee its accuracy and we do not make any claim of copyright. The copyright remains the property of their respective owners.

ABOUT PROJECTOR.COM

Projector.com (<http://www.projector.com>) is your review and buying guide resource for DLP and LCD video projectors.

Visit the site to read the latest projector news and reviews, read and comment on projector specifications, download user manuals and much more.

USER GUIDE

IMPACT 24

Not actual front page

801.100B
USG/024/AE-B
14.06.95

USER GUIDE

IMPACT 24

TABLE OF CONTENTS

INTRODUCTION	5
MAIN FEATURES	5
SUPPLIED MATERIAL	6
OPTIONAL MATERIAL	6
SETTING UP THE LCD PANEL	7
COMPUTER	8
MOUSE	9
AUDIO AND VIDEO	10
USING THE LCD PANEL	11
REMOTE CONTROL	11
FRONT PANEL	13
CONNECTORS	13
FEATURES	14
MENU SYSTEM	19
PRACTICAL HINTS AND TIPS	24
MAINTENANCE	26
SERVICE	26
TECHNICAL DATA	27
CONNECTORS	30
FCC STATEMENT	32
ENVIRONMENTAL STATEMENT	33
SERVICE INFORMATION	34
CONNECTION LAYOUT	35
(Rear Foldout)	

This publication is printed on recycled paper.

The information contained in this user guide is preliminary, and the products described herein are subject to change without prior notice..

1 INTRODUCTION

The LCD panel is a state of the art projection device that can be connected to most computer and video sources.

The ability to display a multitude of colors simultaneously, makes it the ideal choice for presenting computer generated text and graphics, as well as displaying live video.

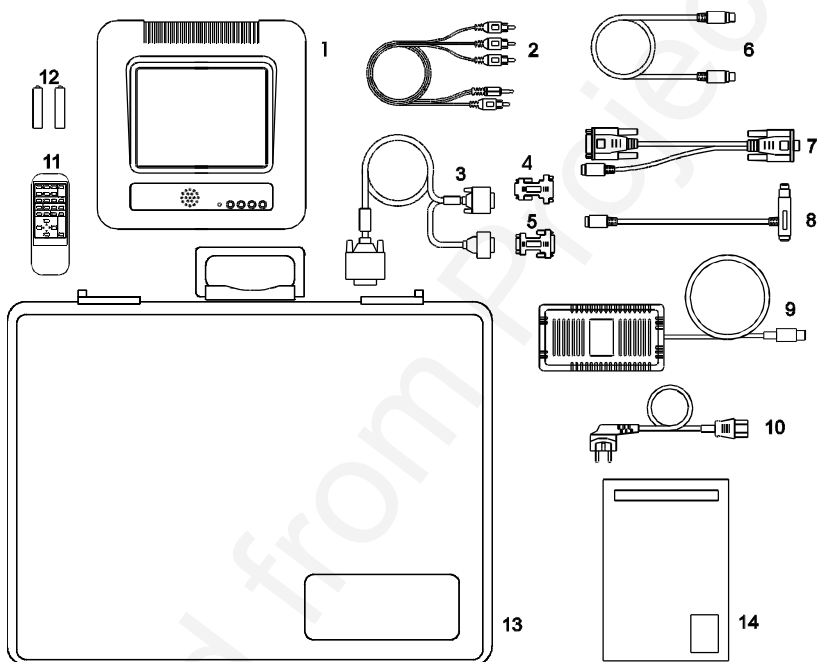
Applications include presentations, software training, educational use, advertising, information boards and other situations where a small or large audience shares information.

2 MAIN FEATURES

- **PC, MAC and SVGA compatible**
- **Built in Video**
- **Multistandard NTSC/PAL/SECAM**
- **Correct PAL/SECAM aspect ratio**
- **16.7 million colors**
- **BatMouse™, infrared remote mouse**
- **On Screen Display (OSD)**
- **On Screen Pointer**
- **Menu control**
- **User settings memorized**
- **Correct VGA text**
- **Infrared remote control**
- **Housing footprint fits OHP glass exactly**
- **Low weight**
- **Intelligent Safecool system**
- **False light blocking**
- **4 meters Y-cable**

3 SUPPLIED MATERIAL

A complete set includes the following components :



- | | |
|-----------------------------|-----------------------------|
| 1. LCD Panel | 8. Mouse Adapter Mac |
| 2. AV Cable | 9. Power -5, 12, 5 V |
| 3. VGA Cable | 10. Power Cable |
| 4. Cable-Adapt. MACII mon | 11. BatMouse Remote Control |
| 5. Cable-Adapt. MACII comp. | 12. Batteries |
| 6. Mouse Cable | 13. Attaché Case |
| 7. Mouse Adapter seriell | 14. User Guide |

4 OPTIONAL MATERIAL

Optional cables and adapters are available for special computer sources.

5 SETTING UP THE LCD PANEL

Switch off all equipment before connecting the components. Be aware of static electricity that may build up, especially in the dry season and when operating on synthetic carpets. Discharge any static electricity by touching a metallic surface before you start.

Place the LCD panel on top of a transmissive overhead projector (OHP). Select a high intensity type projector, for instance 400 W halogen or metal-halide. Best results are obtained in a dimmed room with no direct sunlight shining in.

The following are guidelines for first time set-up:

Connect the cables and power supply as described below (see rear foldout).

Attach power to the LCD panel, turn the overhead projector and computer on. If you are going to use a mouse, make sure to power the LCD panel first. For more information on set-up see the following sections on *Computer/Mouse/Audio and Video*.

5.1 COMPUTER

Connect the LCD panel, computer, monitor and power supply as shown in the rear foldout.

Connect cable (4) between the LCD panel and the computer. Use the Y-split on the computer end to connect the monitor.

If you have a Macintosh, EGA, CGA or NEC computer, insert applicable adapters (7) and (8) as described in the table below.

Connect the power supply to the LCD panel (6).

APPLICABLE ADAPTERS:

COMPUTER	ADAPTER
VGA	None
EGA/CGA	EGA/CGA (option)
MACII c../n../LC/ Quadra/Powerbook/ Duo etc.	MACII (640 x 480) (included)
NEC 9801	NEC 9801(option)

TO SET UP FROM THE REMOTE CONTROL:

STEP	OPERATION
1	Press RESET for default settings
2	Press MENU, then select TUNE and adjust with cursor keys
3	In the menu, select POSITION, press the LEFT key, then adjust with cursor keys
4	Press MENU again to close the menu
5	Adjust CONTRAST and BRIGHTNESS as desired

5.2 MOUSE

See the rear foldout when setting up.

Connect the mouse to the LCD panel using the appropriate adapter (9) as described in the table below. Then connect the adapter (9) to the mouse cable at the computer end. Finally, connect the mouse cable to the LCD panel (5).

For the computer to recognise the mouse, connect the mouse before power is applied.

A Y-split is provided with the PC and MAC adapters that enables parallel use of the local computer mouse and the remote mouse. The local and remote mice should however not be operated simultaneously, as this may lead to unpredictable positioning of the mouse pointer.

If you have a Macintosh, make sure to connect your Mac mouse adapter via the keyboard.

The PS/2 adapter does not have a Y-split.

APPLICABLE ADAPTERS :

MOUSE	ADAPTER
Microsoft 2 key compatible (9 pin serial port)	PC
PS/2 compatible mouse	PS/2
Macintosh ADB-bus mouse	MAC

USING THE REMOTE CONTROL BATMOUSE:

STEP	OPERATION
1	Control mouse pointer directly with the cursor keys
2	Press LEFT to activate (emulates the left mouse key)
3	Press DRAG to tag an object, move it using the cursor keys, then press DRAG again (or wait 5 seconds) to release the object.
4	Press RIGHT if your application requires emulation of the right mouse key.

The centre key of three-key mice is not emulated.

If double-click does not work properly, try to adjust the double-click rate within the computer application in use.

5.3 AUDIO AND VIDEO

Connect the LCD panel to a video source as shown in the rear foldout.

Use a TV set as a local video monitor if desired (the data monitor may not be used as a video monitor).

Connect the AV cable (3) to the AUDIO and VIDEO connectors on the LCD panel. Then connect the AV cable to the audio out connectors and video out connector on the video source.

S-VIDEO, often referred to as S-VHS, may be connected using an optional S-VIDEO cable.

Connect external speakers (1) as shown. The internal speaker is switched off when external speakers are connected.

For added boost, an external amplifier may be connected to the speaker output (1).

Connect the microphone (2) to the panel as shown.

APPLICABLE CABLES:

SOURCE	CABLE
S-VIDEO	S-VIDEO (4 pin mini DIN connector)
VIDEO	AV cable (RCA jacks)
AUDIO	AV cable (RCA jacks and 3.5 mm jack)
MICROPHONE	Microphone cable (3.5 mm jack)
SPEAKER	Speaker cable (3.5 mm jack)

TO SET UP FROM THE REMOTE CONTROL:

STEP	OPERATION
1	Press S-VIDEO or VIDEO depending on input used
2	If necessary, press MENU, then POSITION correctly
3	If necessary, in the MENU under PICTURE, adjust COLOR saturation and TINT.
5	Select audio source in the SOUND menu. Close the menu.
4	Adjust CONTRAST, BRIGHTNESS and VOLUME

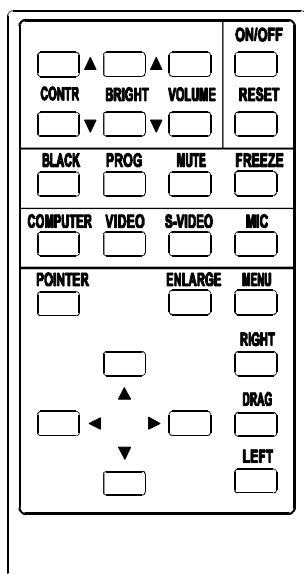
6 USING THE LCD PANEL

The LCD panel has a set of connectors and controls that you need to know in order to operate the device correctly.

6.1 REMOTE CONTROL

The infrared remote control (RC) is the main user interface to the device. The RC is used to set the LCD panel correctly (to get the best possible viewing conditions) and to control the presentation.

The figure shows the different keys of the remote control.



Set-up should be done once with the application(s) you are running most frequently. Allow some minutes for the equipment to warm up before adjusting. Most settings will automatically be memorized individually for each source for future use.

The 'MEM' column in the tables below indicates whether the setting is memorized for each source. For a detailed overview, see the *Features* section.

REMOTE CONTROL KEYS:

CONTROL	FUNCTION	MEM
CONTR	Contrast (ratio between light and dark colors)	YES
BRIGHT	Brightness (whiteness)	YES
VOLUME	Sound volume control	YES
ON/OFF	Turns the panel on/off	NO
RESET	Defaults to standard settings	NO
BLACK	Blackens the screen	NO
PROG	This key may be programmed to one of the menu controls	YES
MUTE	Switches sound on and off	NO
FREEZE	Holds the image displayed	NO
COMPUTER	Selects computer as source	YES
VIDEO	Selects composite video as input source	NO
S-VIDEO	Selects S-VIDEO as input source	NO
MIC	Toggles microphone on and off	NO
POINTER	Applies a cursor controlled pointer	NO
ENLARGE	Doubles the image vertically	NO
MENU	Invokes the menu system	NO
CURSORS	The four cursor keys control the computer mouse	NO
RIGHT	This key emulates the right mouse key	NO
DRAG	This key emulates the drag function	NO
LEFT	This key emulates the left mouse key and is also used to execute menu commands	NO

6.2 FRONT PANEL

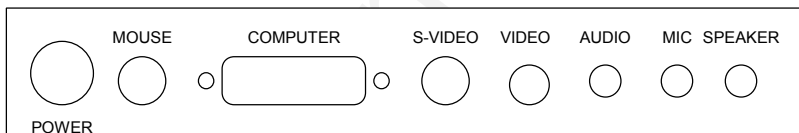
The front panel keyboard consists of a subset of the remote control keys.



CONTROL	FUNCTION
TUNE	Adjusts the stability of the image
BRIGHT	Adjusts the brightness (whiteness) of the image
RESET	Defaults to factory settings
ON/OFF	LED activity indicator

6.3 CONNECTORS

All connectors are positioned on the right hand side of the LCD panel. See the technical data section for pinouts of the various connectors.



Do not connect any other devices with similar plugs to the connectors of the LCD panel, as this voids any warranty and may cause permanent damage to the device.

CONNECTOR	FUNCTION
POWER	Low voltage power supply
MOUSE	Universal mouse connector
COMPUTER	Combined connector for analog and digital RGB
S-VIDEO	S-VIDEO (S-VHS) video input
VIDEO	Composite video input
AUDIO	Stereo sound input
MICROPHONE	Microphone input
SPEAKER	Stereo speaker output

7 FEATURES

The LCD panel has a variety of different features implemented. This chapter explains each feature in detail.

INTELLIGENT SAFECOOL SYSTEM

The fan operation is controlled by the overhead projector light (OHP). This safety feature ensures that the fan is always operating as long as the OHP is turned on. When the OHP is turned off, the fan automatically stops to minimize noise. The power supply must be attached to the panel for the fan to work properly.

SET-UP MEMORY

The user controlled set-up, that usually is done when the panel is connected to a new computer, is automatically memorized for future use. The set-up information is stored in a non-volatile memory approximately 5 seconds after the last key is pressed.

The memory can store 40 different sources/modes. Several sources are predefined, while the remaining are available for customer set-up of sources. See the TECHNICAL DATA section for compatibility.

Custom sources are stored only if their sync pattern differs from any of the previous selections. The panel automatically selects a new memory location.

Most settings are stored individually for each mode, including contrast, brightness, tune etc. See the remote control table above.

SVGA

SVGA in 800x600 mode is compressed both horizontally and vertically to 640x480 resolution. This feature is convenient when displaying irregular images (like pictures, scanned images and coarse graphics).

Regular images (patterns, text and fine line graphics) may look distorted due to the downsizing. In this case, we recommend setting up the computer in 640x480 mode for a precise image.

VGA TEXT

VGA text is compressed correctly from 720x400 to 640x400 mode when the image is positioned correctly. The characters maintain their shape, as every ninth pixel is dropped horizontally between each character. Selecting MCGA in the menu will deactivate the text compression.

BUILT IN SPEAKER

A small monitor speaker is built into the LCD panel. The speaker is good for local monitoring, but we recommend external speakers when using the LCD panel in a presentation. Using external speakers will disconnect the internal speaker.

MULTISTANDARD TV SYSTEMS

The LCD panel incorporates a unique multistandard video decoder that works with all major TV systems. NTSC, PAL and SECAM are automatically detected. See the TECHNICAL DATA section for TV system compatibility. (The PAL M and N systems are not covered).

PAL/SECAM ASPECT RATIO

The NTSC system maps directly in a 640 x 480 resolution display. The PAL and SECAM systems need aspect ratio conversion to fit correctly. The LCD panel automatically adapts to NTSC, PAL and SECAM formats and adjusts the aspect ratio accordingly.

ON SCREEN DISPLAY (OSD)

The OSD is an information system that in plain text echoes your RC and MENU selections on screen in real time. The OSD information is displayed in the lower left corner of the screen. The OSD feature may be set visible or hidden through the menu system.

See also the *Menu System* chapter.

MOUSE

The remote control (RC) employs a unique mouse functionality that enables full mouse control of your PC, PS/2 or Macintosh computer. By default, the cursor keys of the remote control emulate the mouse.

The LEFT and RIGHT keys emulate the left and right keys on a standard two-key mouse (for Macintosh, only the left key is used).

The DRAG key is used to emulate the click-and-hold action. To move an object, position the mouse cursor, press DRAG to tag the object, position the object as desired using the cursor keys, then press DRAG again to

release the object. DRAG is automatically released 5 seconds after the last key is pressed.

POINTER

The pointer is a red spot applied to the projected image, and can be moved freely around using the cursor keys. Activating POINTER will deactivate the MOUSE function (as the same cursor keys are used). The POINTER is a toggle function.

The pointer may be used with any application, including live video, for focusing attention.

The pointer may not be used when the MENU is active. The pointer must also be switched off when controlling the mouse.

ENLARGE

The ENLARGE function doubles the image vertically. Pressing the ENLARGE button repeatedly will display the enlarged upper part, enlarged lower part and then go back to normal (not enlarged). ENLARGE is not active when displaying S-VIDEO, VIDEO or SVGA. Pressing RESET will bring ENLARGE back to normal.

FREEZE

Press the FREEZE button on the RC to lock the image displayed. This feature is useful if you want to make changes locally on your computer that should not be presented to the audience. It is also useful for freezing live video images when showing video. Press FREEZE once more to resume on-line operation. Any other key pressed will also release FREEZE.

BLACK

Use the BLACK key on the RC, if you temporarily want to suspend the display of images. The BLACK key is a toggle function, and the screen goes black when activated. Blanking the image is done using the ON/OFF key. Any key pressed will release BLACK.

PROG

This key may be programmed to one of the menu functions of your choice. In the menu, select option and then press PROG. This option is now memorized, and available (when not in the menu) directly from the PROG key on the remote control, until a new programming is performed.

CONTRAST

The contrast of an image is defined as the relation between dark and light colors. An image of high contrast is often regarded as 'hard', as compared

to the 'soft' feeling of a low contrast image. Low contrast is recommended for long term viewing, while high contrast is used to enhance details. Use the CONTR keys on the remote control (RC) to adjust the contrast. Also see *Brightness*. The contrast setting is stored individually for each mode.

BRIGHTNESS

The brightness is the amount of white in an image. The brightness is adjusted to the ambient lighting conditions. Usually, a bright, low contrast image is preferred. Use the BRIGHT keys to adjust brightness. See also *Contrast*. The brightness setting is stored individually for each source.

VOLUME

The sound volume is controlled using the VOLUME up and down keys.

MUTE

The sound is switched on and off using the MUTE key. Pressing VOLUME up or down will also release MUTE.

COMPUTER

The computer image is displayed when pressing the COMPUTER key. This is the power on default setting.

S-VIDEO

The S-VIDEO source is selected with this key.

VIDEO

The composite video source is selected with this key.

MIC

The MIC key toggles between the microphone input on and off. When on, the MIC is overlaid the AUDIO input (unless sound is muted).

MENU

The menu system is invoked using the MENU key. The menu system gives access to basic setup functions that are seldom used. See the separate *Menu System* chapter for details.

MUTE

Pressing this key will toggle sound on and off. Adjusting volume will also release mute.

ON/OFF

This switch controls the operation of the panel. When switched on, all functions are active. When switched off, the automatic fan control is still operating, but the image is turned white. The ON/OFF switch is a toggle key.

ON/OFF may also be used to blank the screen.

RESET

This feature enables standard settings of most controls (see the 'MEM' column in the remote control description, where YES also indicates a standard setting). RESET will only reset the mode active.

A fundamental master reset may be performed by pressing all four front panel keys simultaneously for approx. 5 seconds. All settings will return to factory defaults, so do not perform a master reset unless it is really required. This operation will also erase all custom sources and modes that have been memorized.

8 MENU SYSTEM

The menu system was developed to gain access to functions not often used, as opposed to frequently used features that are directly available through the RC.

Press the MENU key on the RC to invoke the menu system. When the menu is active, the cursor keys are used to navigate between options (and can therefore not be used for mouse control etc. at the same time). The LEFT key is used to activate an option.

The PROG key may be assigned to most of the menu options.

Toggle functions (like OSD ON/OFF) are tagged when active and untagged when not active.

Increase/decrease functions (like TUNE and FREQUENCY) are adjusted using the cursor keys. OSD is used to indicate the actual setting.

The MENU key is toggling the menu on and off. The menu is also switched off after one minute of no action. The last position in the menu is maintained during a session, but it is reset during power off. Most selections are memorized, unless otherwise noted.

The main menu selections SETUP, SOUND and PICTURE are explained in detail below.

Features only available with some sources are shown in light *italic* characters, while generally available functions are shown in bold characters.

THE SETUP MENU SELECTIONS:

SETUP	SOUND	PICTURE
TUNE POSITION INVERSE FREQUENCY <i>MAC LC</i> LANGUAGE > OSD HIDE ABOUT		

TUNE

This feature is used to stabilize the image. An untuned image can be seen as sideways instability or 'swimming'. The TUNE function has no effect in VIDEO mode.

POSITION

Due to minor variations in graphic cards, the horizontal and vertical position may need adjustment. Select POSITION, then press LEFT and use the cursor keys.

VGA text mode (720 x 400) is correctly displayed when the image is positioned appropriately.

INVERSE

This option inverts the image. This setting is not memorized.

FREQUENCY

This setting is usually not changed by the user. It is however provided in case of adaptation to special graphic cards that are close to one of those in the compatibility list. Generally, an incorrect frequency setting can be observed as an image too wide or too narrow, combined with vertical, unstable bands.

In SVGA mode (compressed 800 x 600) the frequency is set to fit the 800 pixels wide image in 640 positions horizontally.

MAC LC

The MACII series of computers are equipped with slightly different graphic interfaces that need manual setup on the RC to work correctly. Default is the MACII standard interface of 640 x 480 resolution. Pressing the MAC key toggles between the MACII LC 640 x 480 mode and the standard mode. An erroneous setting will typically be seen as an image too wide or too narrow, as well as vertical unstable bands.

LANGUAGE

A selection of languages is available for the menu options.

OSD HIDE

The OSD may be switched on or off as desired. This setting only affects the remote control operations, not the menu system. This setting is not memorized.

ABOUT

The LOGO image is displayed when ABOUT is selected. ABOUT is a toggle function. This setting is not memorized.

The LOGO is the image that is shown at power up and when a computer is not connected or not switched on.

The menu software revision is displayed in the OSD field when ABOUT is selected.

THE SOUND SELECTIONS :

SETUP	SOUND	PICTURE
	SOURCE > MONO TREBLE BASS BALANCE	v ALL VIDEO S-VIDEO COMPUTER

SOURCE

This controls how AUDIO follows the source. This setting is not memorized (power up defaults to ALL).

ALL

This setting enables sound regardless of source displayed.

VIDEO

This function enables sound only when VIDEO is displayed.

S-VIDEO

This setting enables sound only when S-VIDEO is displayed.

COMPUTER

This function enables sound only when COMPUTER is displayed.

MONO

Select MONO if the audio source is not stereo, in order to get sound in both external speakers.

TREBLE

Select TREBLE, then adjust using cursor keys.

BASS

Select BASS, then adjust using cursor keys.

BALANCE

Select BALANCE, then adjust using cursor keys.

THE PICTURE SELECTIONS :

SETUP	SOUND	PICTURE
		<div> PALETTE > REAR <i>MCGA</i> <i>COLOR</i> <i>TINT</i> </div> <div> v 16.7M 32K 512 </div>

PALETTE

Usually, the palette is set to display the maximum number of colors available, regardless of application. Some uses may however be better off with a reduced set of colors, or if special effects like 512 colors on live video is desired.

Select between 16.7 M, 32K or 512 colors.

REAR

The REAR mode is used for rear projection , i.e. projection from the back of a screen, mirroring the image.

MCGA

Select MCGA if desired when displaying MCGA (320 x 200) graphics. Deselect MCGA when displaying DOS text. Only applicable in TEXT or MCGA mode.

COLOR

Adjust COLOR saturation using the cursor keys. Only applicable when video is connected.

TINT

This controls the hue of an image, and is only active in video.

9 PRACTICAL HINTS AND TIPS

This is a list of what to do when things go wrong. Check the symptoms carefully if you experience any problem. The cure may be at your hands!

Always press the RESET key and observe that the LED on the LCD panel is flashing. This indicates that the LCD panel receives signals from the remote control.

The LCD image is completely white

- Check if the cables are connected and that power is on (LED on front panel)
- Check the ON/OFF key on the remote control

The LCD image is completely black

- Check the ON/OFF switch
- Check the BLACK switch
- Check COMPUTER/S-VIDEO/VIDEO source selection

The LCD image is too dark or too light

- Check the CONTRAST and BRIGHTNESS settings
- Try the RESET key

Some colors are unstable or flickering

- Try to adjust the CONTRAST, BRIGHTNESS or possibly TUNE

The whole LCD image appears unstable or misplaced

- Try to adjust the TUNE or POSITION
- Alternatively, you are most probably connected to an incompatible computer or video card. See the Features section for frequency adjustment and positioning

The cooling fan is not working

- The fan operation is controlled by the overhead projector light. Is the OHP turned on ?
- Check that the power supply is attached
- Do not use the LCD if the fan appears defective, as overheating may occur

Text is not displayed correctly

- Try to position the image horizontally
- Check the MCGA setting in the menu

The remote control is not working

- Check if the batteries need replacement
- Be sure to point at the projection screen or directly at the IR eye in the front of the LCD panel
- You may be too far away from the panel (max. distance 6 m/ 20 feet)

Only the LOGO is displayed

- Check if the selected source is connected and powered on

There is no sound

- Check the sound source in the SOUND menu
- Check if audio is connected

The mouse is not working

- Remember to connect the mouse cables before the computer is switched on
- Check if the mouse cable and adapter are properly connected

Video is black and white only

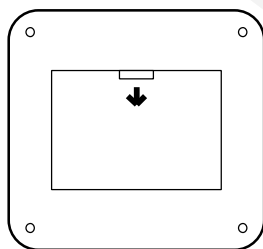
- Check the COLOR setting in the PICTURE menu
- Check if the TV system is compatible with the system of your country. (see Technical Data)

10 MAINTENANCE

From time to time, the housing and protection glasses may be cleaned with a dampened, non abrasive cloth, possibly using a mild detergent to remove spots.

The upper protection glass is not removable, as it only needs cleaning from the outside (the inside is sealed to the LCD module).

The lower protection glass can be removed for cleaning. Place the unit upside-down on a soft cloth to avoid scratches. Using two fingers, press the protection glass out of the guide rail and slide out. Be careful not to touch or to drop any objects inside the housing. Replace the glass after cleaning.



11 SERVICE

This product contains no user serviceable parts. Attempts to modify mechanics or electronics inside the housing will violate any warranties, and may be hazardous.

If for any reason the product fails to work properly, first check the previous chapter on hints and tips. If things still do not work, please contact your dealer for technical support. Prepare a list of the symptoms you observe to make the diagnosing easier for your dealer. Remember to include all cables and power supply when returning the goods.

If the problem cannot be solved by the dealer, please see the service information printed on the last page.

12 TECHNICAL DATA

The technical data may change without prior notice in order to improve the product performance.

The apparatus is designed for indoor use and should not be operated outside the general environmental limits, as this may lead to permanent damage and violation of any warranties.

GENERAL ENVIRONMENTAL LIMITS

STORAGE TEMPERATURE	-20 ~ 60 C (-4 ~ 140 F)
STORAGE HUMIDITY	10 ~ 90 percent relative humidity, non condensing
OPERATING TEMPERATURE	10 ~ 40 C (50 to 104 F)
OPERATING HUMIDITY	20 ~ 80 percent relative humidity

Allow for a slow acclimatization, after storing at extreme temperatures and humidities, to avoid condensation. Should condensation appear, operate for some time on an OHP, as the heat generated will evaporize the water.

DISPLAY UNIT

Full color (RGB) unit connecting directly to external video sources.

SIZE	310 x 310 x 40 mm 12.2 x 12.2 x 1.6 inch
WEIGHT	2200 grams 4.9 pounds
POWER	20 W (max.)
LCD CELL	Active matrix TFT stripe configuration
COLOR RESOLUTION	16.7 million
RESPONSE TIME	30 ms
CONTRAST RATIO	100:1
PIXEL RESOLUTION	640 x 480 x 3 (RGB)
SCREEN DIAGONAL	8.4 "
MOUSE COMPATIBILITY	Microsoft two key compatible serial (9 pin) PS/2 compatible two key Macintosh ADB compatible one key
VIDEO FREQUENCY	25 ~ 40 MHz
HORIZONTAL SYNC	15 ~ 50 kHz
VERTICAL SYNC	60 ~ 100 Hz (VGA) 56 ~ 72 Hz (SVGA) 50 ~ 60 Hz (VIDEO) 66 Hz (MACII)
NTSC SYSTEM	M, 4.43 NTSC
PAL SYSTEM	B, G, H, D, I
SECAM SYSTEM	B, G, H, D, I, K1, L
COMPUTER INPUT	0 ~ 0.7 Vpp
VIDEO INPUT	0 ~ 0.7 Vpp
S-VIDEO INPUT	0 ~ 0.7 Vpp
AUDIO INPUT	1 V RMS
MICROPHONE INPUT	10 mV RMS (electret)
SPEAKER OUTPUT	2x3 W in 8 ohms
DEFECTIVE PIXELS	Maximum 25 (black, red, green or blue)
APPROVALS	FCC, Class A, Subpart J, Part 15, pending

POWER SUPPLY

Primary switched universal type AC to DC converter.

INPUT VOLTAGE	100 to 250 VAC
OUTPUT VOLTAGES	+5VDC, +12VDC, -5VDC
CONNECTOR	5 pin DIN male
APPROVALS	TÜV, UL, CSA, N, S, D, FI

REMOTE CONTROL

Infrared wireless remote control.

BATTERIES	2 pcs LR03/AAA 1.5V penlight
RANGE	6 m 20 feet

COMPATIBILITY

The unit is predefined for the following interfaces. In addition, the user can configure the panel for other interfaces with a total maximum of 40 definitions altogether (predefined and user defined).

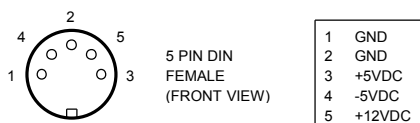
MODE	V FREQ	RESOLUTION
VGA, MCGA	60,70,72	640 x 480 640 x 400 640 x 350 720 x 400 (text, compressed)
SVGA	56,60,72	800 x 600 (compressed)
EGA	60	640 x 200 640 x 350
CGA	60	640 x 200
MACII	66	640 x 480
NEC 9801	60	640 x 400
NTSC	60	640 x 480
PAL	50	640 x 480 (aspect ratio corrected)
SECAM	50	640 x 480 (aspect ratio corrected)

13 CONNECTORS

The pinouts of all external connectors are described.

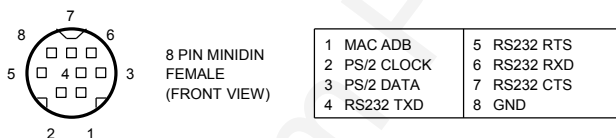
POWER

This connector feeds regulated DC power to the panel.



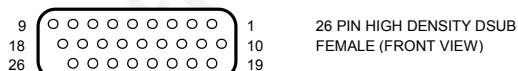
MOUSE

This connector is used for mouse control.



COMPUTER

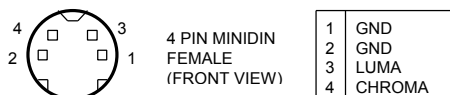
This connector relays all sync and data signals from the computer to the panel and back again to the CRT monitor.



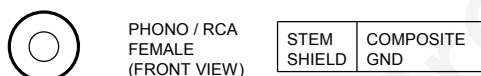
1	ANALOG R IN	10	ANALOG R GND IN	19	HSYNC IN
2	ANALOG G IN	11	ANALOG G GND IN	20	C/VSYS IN
3	ANALOG B IN	12	ANALOG B GND IN	21	DIGITAL GND
4	NOT USED	13	NOT USED	22	PCID0
5	NOT USED	14	NOT USED	23	PCID1
6	NOT USED	15	NOT USED	24	DIGITAL GND
7	ANALOG R OUT	16	ANALOG R GND OUT	25	HSYNC OUT
8	ANALOG G OUT	17	ANALOG G GND OUT	26	VSYS OUT
9	ANALOG B OUT	18	ANALOG B GND OUT		

S-VIDEO

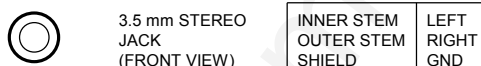
This connector is used as S-VHS video input.

**VIDEO**

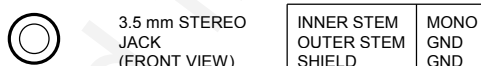
This connector is used as composite video input.

**AUDIO**

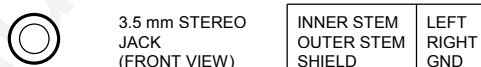
This connector is used for stereo sound line input.

**MICROPHONE**

This connector is used for mono microphone input.

**SPEAKER**

This connector is used for stereo sound output.



14 FCC STATEMENT

This equipment has been certified to comply with the limits for a Class A computing device, pursuant to Subpart J of Part 15 of FCC rules. Only peripherals (computer input/output devices, terminals, printers, etc.) certified to comply with the Class A limits may be attached to a computer that complies with Class A limits. When connecting to a peripheral device, a shielded input/output cable is required to ensure compliance with FCC rules. The shielded cable that must be used is supplied with the equipment. Operation with non-certified peripherals or non-shielded cables is likely to result in interference to radio and TV reception.

INSTRUCTIONS TO USER

This equipment generates and uses radio-frequency energy and, if not installed and used in accordance with the instruction manual, may cause interference to radio and television reception. It has been tested and found to comply with the limits for a Class A computing device in accordance with the specifications in Subpart J of Part 15 of the FCC rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause 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 the receiving antenna.

Relocate the computer with respect to the receiver.

Plug the equipment to a different outlet so that equipment and receiver are on different branch circuits.

Fasten cables using mounting screws to ensure adequate EMI control.

You may require the following booklet from the Federal Communications Commission (FCC) : "How to identify and resolve radio and TV interference problems", available from the U.S. Government Printing Office, Washington, DC 20402, Stock No. 004-000-00345-4.

15 ENVIRONMENTAL STATEMENT

This product is manufactured to minimize the stress and pollution of the surroundings. Where possible, recyclable materials are used.

ITEM	RECYCLING / HANDLING
PACKAGING	Only recyclable materials are used
MECHANICS	Only recyclable plastics and metal is used. Recycling codes are moulded in the plastic. Metal parts are painted aluminium and steel.
ELECTRONICS	No CFC is used during manufacture. No components that require special handling are used.
LCD MODULE	The liquid does not contain toxic or cancer causing materials. No special ventilation is needed when handling a broken cell. Use gloves and wash your hands afterwards to avoid any irritation to skin. The module is largely made up of glass, so handle broken units carefully to avoid wounds.

16 SERVICE INFORMATION

In cases where a problem cannot be solved by the assistance of your dealer, please call the following number to get an **RMA** (Return Authorization Number) :

+47 69 34 01 55 (Norway)

To return the defective unit, package well (preferably using the original packaging material), enclose a copy of your sales receipt and a description of the problem you experience, and ship **prepaid** to :

Customer Service Department

RMA

P.B. 345

N1601 FREDRIKSTAD

NORWAY

Be sure to include your RMA number on the outside of the shipping box, as units without this number will be returned to sender without processing.

17 CONNECTION LAYOUT

The foldout shows how to connect the LCD panel to the different audio, video and computer sources.

801.100B
USG/024/AE-B
14.06.95

PLEASE READ

This manual is provided as a free service by Projector.com.

We are in no way responsible for the contents of the manual. We do not guarantee its accuracy and we do not make any claim of copyright. The copyright remains the property of their respective owners.

ABOUT PROJECTOR.COM

Projector.com (<http://www.projector.com>) is your review and buying guide resource for DLP and LCD video projectors.

Visit the site to read the latest projector news and reviews, read and comment on projector specifications, download user manuals and much more.