COMPACTVIEW HMR-15

USER MANUAL

© 2005 3D perception AS All rights reserved.
The copyright of this document is the property of 3D perception AS. The document is supplied on the express terms that it is to be treated as confidential. No part of this document may be reproduced or transmitted in any form or by any means, electronic or mechanical for any purpose, without the express written permission of 3D perception AS. The information in this document is subject to change without notice and is provided 'AS IS'.

ProSelecta View :: Compare :: Select - www.ProSelecta.com

TABLE OF CONTENTS

1. BEFORE YOU START 1
1.1 Projector pack 1
1.2 Accessories 1

2. INTRODUCTION 2
2.1 Optional Modules 2
2.2 Lens 3

3. SAFETY 4
3.1 Safety 4
3.2 Safety Instructions 4

4. BEFORE SET-UP AND USE 5
4.1 Overview 5
4.2 Rear Connector Panel 6

5. SET-UP 7
5.1 Load CompactDesigner/CompactControl to PC 7
5.2 Connect control interface 7
5.2.1 Connecting multiple projectors 8
5.3 Set functionality codes for projectors 9
5.4 Set computer source for projectors 13

6. FOCUS AND ZOOM 14
6.1 Focus 14
6.2 Zoom 14

7. MOUNTING THE PROJECTOR 15
7.1 To a Ceiling Mount 15
7.2 To a Tabletop 16

8. USING THE PROJECTOR 17

8.1 Projector On/Off 17
8.2 Signal Source 17

9. MAINTENANCE 18

10. LAMP REPLACEMENT 19
10.1 Remove old lamp 19
10.2 Insert New Lamp 20

11. SERVICE INFORMATION 21

12. TECHNICAL DATA 22
12.1 Warping and edge blending specifications 22
12.2 Projector specifications 23

13. LIMITED WARRANTY, 'FCC STATEMENT' AND 'TRADEMARKS COPYRIGHT' 24

14. CONTACT US 26

1. BEFORE YOU START

Thank you for choosing a 3D perception **COMPACTVIEW HMR-15** projector

1.1 Projector pack

Please take a few minutes to ensure that your **COMPACTVIEW HMR-15** projector pack contains the following items.

COMPACTVIEW HMR-15 Projector

Cables

VGA male Blue - VGA male Blue, 2m
DVI-I male White - DVI–I male White, 2m
Communication Cable 6' spiral with RJ12 connectors
Power cord, 3m (European)
Power cord, 3m (US)

1.2 Accessories

Please refer to our website at www.3d-perception.com

2. INTRODUCTION

The **COMPACTVIEW HMR-15** projector is the ultimate in high-resolution projectors when projection on to flat, curved or double curved screens with multiple projectors is the requirement.

The **COMPACTVIEW HMR-15** is unique in that it is purchased as an empty unit and users select from a list of Optional Modules (see details below) and purchase only those functionalities that they require. An activation code is then supplied for each projector and must be loaded prior to use (see chapter Set up).

The **COMPACTVIEW HMR-15** projector is compatible with most data and video sources, both analogue and digital and provides the user with outstanding features such as:

- High resolution
- High brightness
- High contrast
- Colour control
- Gamma correction
- CompactControl interface
- Compact, low weight
- Low noise
- Single Chip DLP technology
- Desktop and ceiling-mountable

This user guide contains important information about safety precautions and the set-up and use of the projector.

Please read the manual carefully before you operate the projector.

2.1 Optional Modules

Optional modules within CompactView HMR-15 offer the following unique functions:

Module ID	Functionality
KK100	Basic activation module
KK200	Colour matcher
KK300	Seamless edge-blending for fl at screens
KK350	Seamless edge-blending for curved screen
KK400	Image warping for fl at screens
KK450	Image warping for curved screens
KK500	Active to passive decoder
KK600	Megawall for 2 projectors
KK650	Megawall for 4 projectors (UXGA compatible)
KK700	Wireless LAN

2.2 Lens

3 lens options are available

Lens ID	Specifications
PL115	1.15 – 1.34: 1 wide zoom lens
PL140	1.38 – 1.61:1 intermediate zoom lens
PL180	1.8 – 2.1:1 long throw zoom lens

NOTE: The specifications and functionality of the product, as detailed in this manual, may change without prior notice.

3. SAFETY

3.1 Safety

This device complies with relevant safety regulations for data processing equipment for use in an office environment.

Before using the projector for the first time, please read the safety instructions thoroughly.

3.2 Safety Instructions

Use only the cables and cords supplied with the projector or original replacement cables. Using other cables or cords may lead to malfunction and permanent damage of the projector

Only open the projector to change the lamp. The projector contains no other user serviceable parts. Refer all repairs to qualified personnel only.

When changing the lamp always replace it with a lamp of the same type and rating.

Make sure that no objects enter into the vents and openings of the projector. Do not spill any liquids on the projector or into the vents or openings of the projector.

Do not look into the projection lens when the projector is switched on. The strong light may permanently damage sight.

Place the projector on a stable surface, or mount it securely using an approved ceiling-mount.

Do not drop the projector.

Always operate the projector horizontally. Operating the projector in other positions may reduce the lamp life significantly, and may lead to overheating, resulting in malfunctioning.

Always allow ample airflow through the projector. Never block any of the air vents. Never cover the projector in any way while it is running. Allow for sufficient distance to walls and ceilings to avoid overheating.

The projector is designed for indoor use only. Never operate it outdoors.

Do not operate the projector outside its temperature and humidity specifications, as this may result in overheating and malfunctioning.

Only connect the projector to signal sources and voltages as described in the technical specification. Connecting to unspecified signal sources or voltages may lead to malfunction and permanent damage of the projector.

4. BEFORE SET-UP AND USE

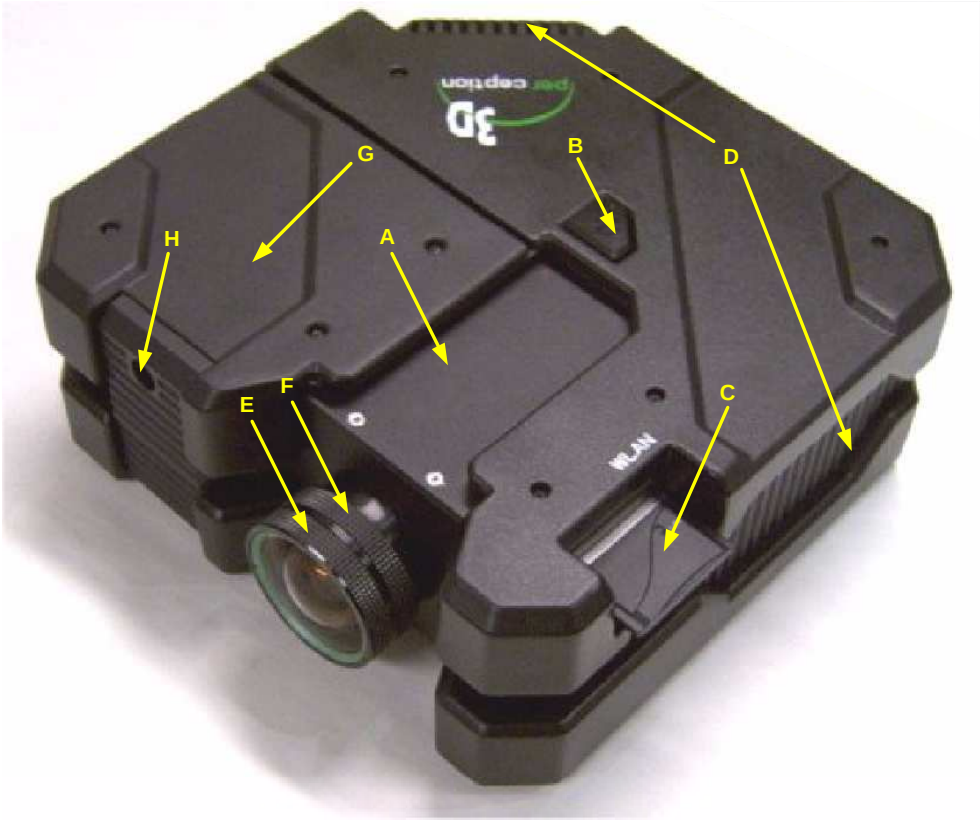
Be sure you have read the Safety Instructions in chapter 3 before proceeding with the set-up and use of the **COMPACTVIEW HMR-15** projector.

Unpack the supplied parts and familiarize yourself with the various components.

Remove the lens cap from the projection lens. If you switch the projector on with the lens cap in place, the lens cap may melt, damaging not only the lens cap itself, but also the projection lens and surrounding parts.

Familiarize yourself with the **COMPACTVIEW HMR-15** projector before switching on.

4.1 Overview



A. Ceiling Mount housing

B. On/Off Button

C. Wireless LAN (Optional)

D. Ventilation

E. Focus ring

F. Zoom ring (optional lens)

G. Lamp housing

H. Fixing screw for lamp housing

4.2 Rear Connector Panel

A. Analogue RGB In - Red

B. Analogue RGB In - Green

C. Analogue RGB In - Blue

D. Analogue RGB In – Horizontal and Composite Sync

E. Analogue RGB In - Vertical Sync

F. Stereo control input

G. Ventilation

H. VGA – Analogue RGB In. The standard analogue computer graphics interface

I. DVI - Digital RGB. For low noise computer and video image..

J. RS232 Control chain In

K. RS232 Control chain Out

L. LAN. Provides access to control and monitoring over a Local Area Network

M. Main power connector

5. SET-UP

The first time the **COMPACTVIEW HMR-15** is switched on, a message will appear on the screen requesting a valid license key (activation code) for the projector. The message box will also indicate the following details for the projector:

Address
Software version
IP address

The following procedures now require completion before the **COMPACTVIEW HMR-15** projector is ready for use.

1. Load CompactDesigner/CompactControl to PC
2. Connect control interface
3. Set functionality codes for projectors
4. Set computer source for projectors

5.1 Load CompactDesigner/CompactControl to PC

If CompactDesigner or CompactControl software has not yet been loaded to the PC designated as the control PC for the projection theatre, then load it now.

NOTE: CompactDesigner or CompactControl software will only be required to be loaded once for a projection theatre, regardless of the number of projectors in the theatre.

5.2 Connect control interface

Connect the Control PC (running CompactDesigner or CompactControl) to the projectors RS232 In port (A). The supplied 6 lead cable plugs into the Control PC's serial port using a RJ12 6 pin to serial DB-9 female adapter.

Alternatively connect to either LAN (B)

or Wireless LAN (C)

5.2.1 Connecting multiple projectors

Multiple projectors may be connected together in a 'daisy chain' by one of the following methods:-

1. By cable
2. By LAN
3. By WLAN (Optional)

5.2.1.1 By cable

Connecting multiple projectors together by cable is achieved by using the input and output RS232 ports on each projector. The first projector is connected to the control PC via the RS232 In port (A) as described above. Then another 6 lead cable connects between the RS232 Out port (B) and the RS232 In port (A) of the next projector. This 'chain' can be extended up to the theoretical limit of 255 projectors.

5.2.1.2 By LAN

Connect all projectors via the LAN port (C) to the same LAN as the control PC (running CompactDesigner or CompactControl) is connected.

5.2.1.3 By WLAN (Optional)

Only applicable if Optional module KK700 has been purchased

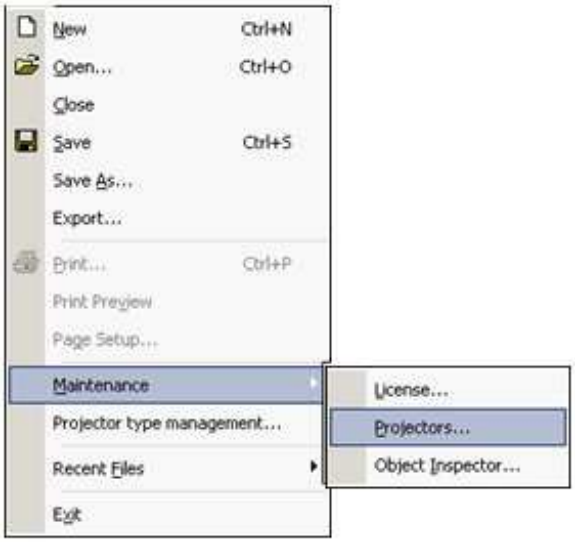
To be developed

5.3 Set functionality codes for projectors

Complete the following steps within CompactControl for each **COMPACTVIEW HMR-15** introduced into the theatre.

Step 1

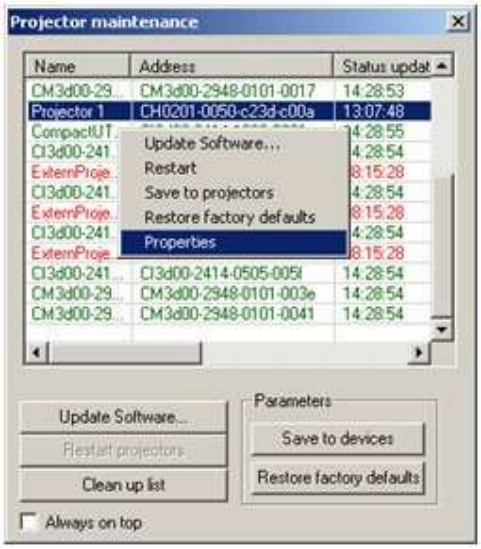
Select Projectors on the drop-down menu under Maintenance under the main File menu



Step 2

On the Projector maintenance dialogue box click right on the desired projector and select Properties from the drop-down menu.

NOTE: The address of all CompactView HMR-15 projectors will commence with the characters CH.



Step 3

If the IP address and Subnet mask are set automatically (default option), the DHCP standard protocol will be used to assign the address.

If the IP address and Subnet mask are to be set manually, it is recommended that users consult with their own network administrator.

Step 4

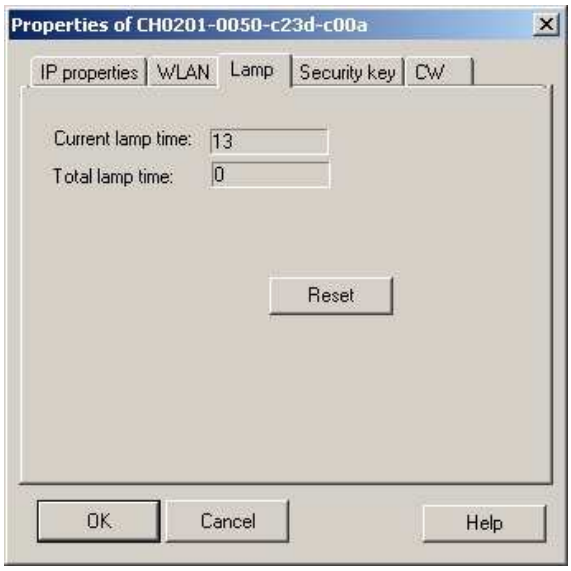
Only applicable if Optional module KK700 has been purchased

WLAN
(To be developed)

Step 5

Check the Lamp time is indicated showing the projector is switched on.

NOTE: This dialogue page can also used to reset the lamp time to zero in the event that the lamp unit has to be replaced.



Step 6

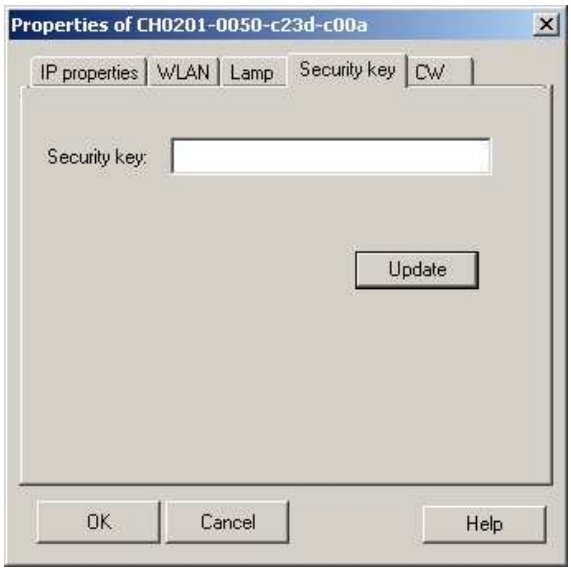
Enter the unique Security key for the projector.

(The security key for each projector can be obtained by e-mail from 3D perception. Send the projector address [CH….] of each projector to any of the sales staff, support staff or to info@3d-perception.com or support@3d-perception.com)

Press "Update" once and then press “OK”. This will register and activate the optional modules purchased.

Note: You will not see any notification or warnings when you press the "update" button

Wait for 30 seconds and the projector will then start to scan for source.



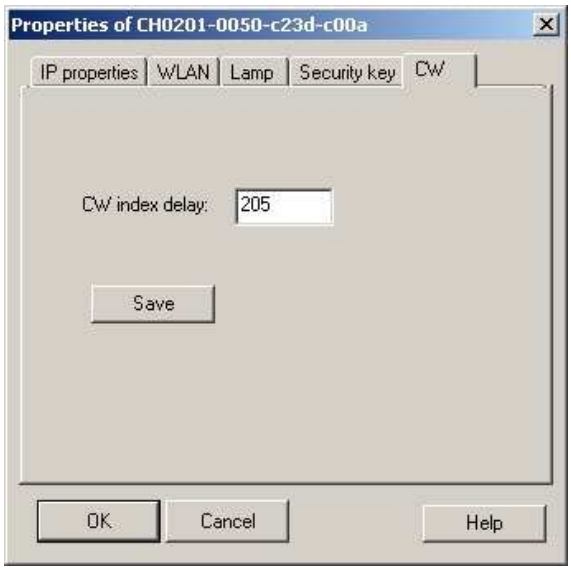
Step 7

CW (Colour Wheel)

This dialogue page will indicate the colour wheel index delay.

NOTE:

1. Changing the colour wheel index delay will not improve or adjust the colour on the projector.
2. Changing the colour wheel index delay should only be performed by a qualified technician.

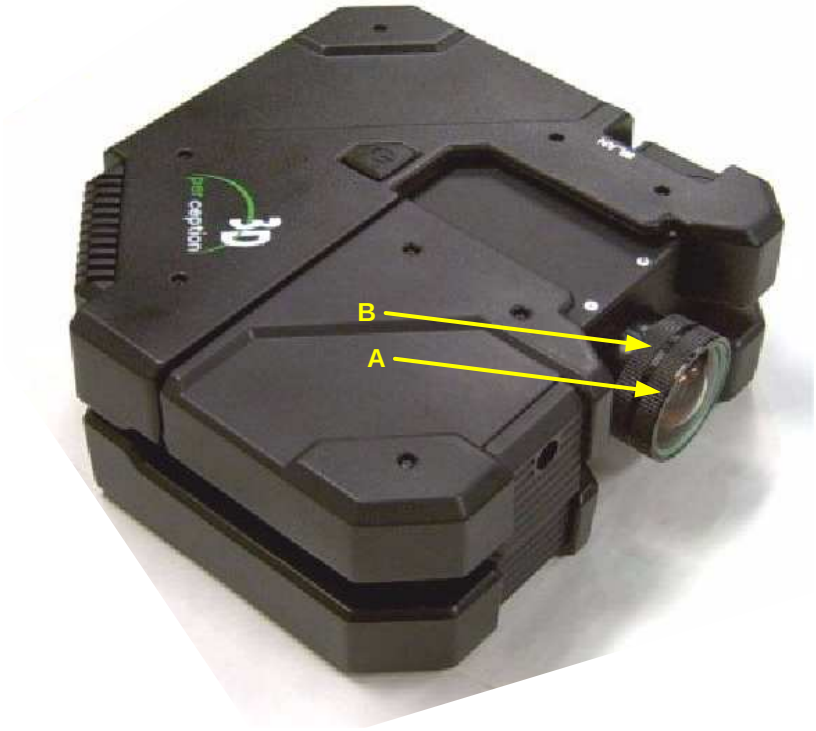


5.4 Set computer source for projectors

The projector may be connected to up to 3 computer sources simultaneously, using the Analogue RGB inputs at (A) and (B) and the Digital RGB input at (C).

Connect the power cord (D) .

6. FOCUS AND ZOOM



6.1 Focus

Turn the Focus ring (A) on the projection lens to get a correctly focused image.

6.2 Zoom

Turn the Zoom ring (B) on the projection lens to zoom In and Out. (This is only available on the optional intermittent and long throw lens.)

If the desired image size cannot be achieved by adjusting the zoom ring, relocate the projector nearer or farther away from the projection screen and re-try.

NOTE: The focus and zoom adjustment rings are deliberately stiff and difficult to move. If adjustment is required then a certain amount of pressure must be used.

7. MOUNTING THE PROJECTOR

7.1 To a Ceiling Mount

The projector can be ceiling mounted using any approved UL tested/listed ceiling mount fixture with a minimum weight capacity of 12 kg (26 lbs).

The ceiling mount obtainable through 3D perception (as illustrated below) is only approved for **COMPACTVIEW HMR-15** projectors.

For proper ventilation, the minimum distance from the ceiling/rear wall should be 30 - 50 cm, (12 - 20 inches).

The specifications and functionality of the product may change without prior notice.

A Locking screw for vertical adjustment
B Slide
C Housing for slide (1 on top and 1 on under side)

7.2 To a Tabletop

Although the projector is not equipped with adjustable legs it may be sited directly onto a tabletop, however, this is only recommended for temporary use or for demonstration purposes. It is not recommended for permanent installation such as in a simulator.

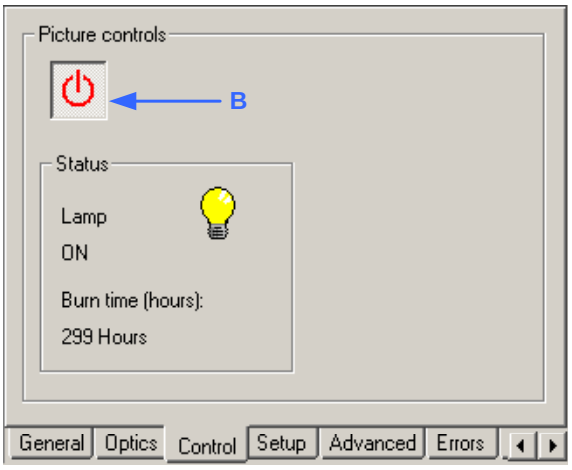
8. USING THE PROJECTOR

After set-up, switch on all equipment.

8.1 Projector On/Off

To switch the projector On, firmly press the POWER button on the top of the projector (A) or the remote control button (B) on the Control dialogue page in CompactControl.

The STATUS indicator (C) will turn green when the projector is switched On and yellow when the projector is switched to standby.

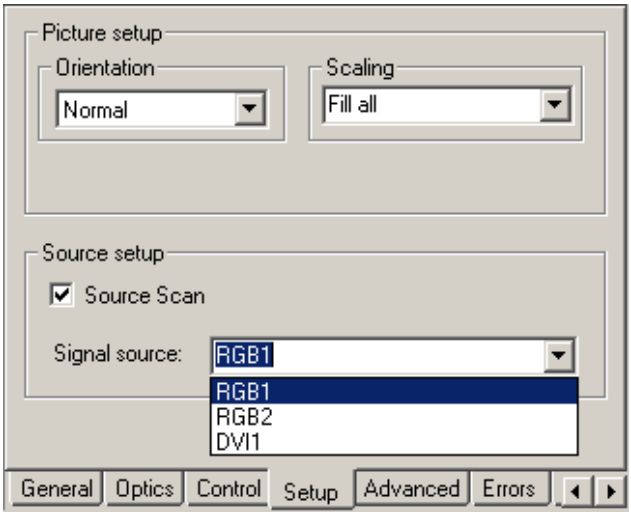


To switch the projector Off, firmly press the POWER button on the top of the projector (A) or the remote control button (B) on the Control dialogue page in CompactControl.

8.2 Signal Source

When only one source is connected, the projector will auto-detect that source. If more than one source is connected, the projector will display the source with the highest priority according to the following list:

- RGB 1
- RGB 2
- DVI 1



9. MAINTENANCE

The projector may from time to time require cleaning.

Only the exterior of the projector may be cleaned. Use a damp cloth. Make sure no liquids enter the inside of the projector.

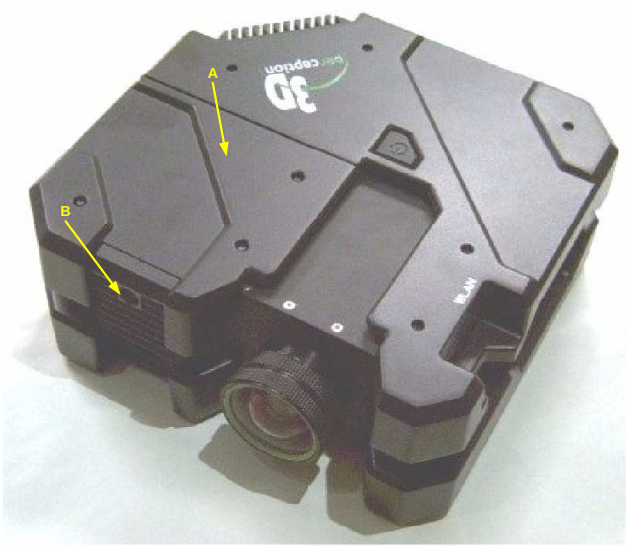
With the exception of when changing a lamp, never open the projector, as this will void any warranties. Refer all service and repair work to qualified personnel.

10. LAMP REPLACEMENT

Always replace the lamp with the same type and rating.

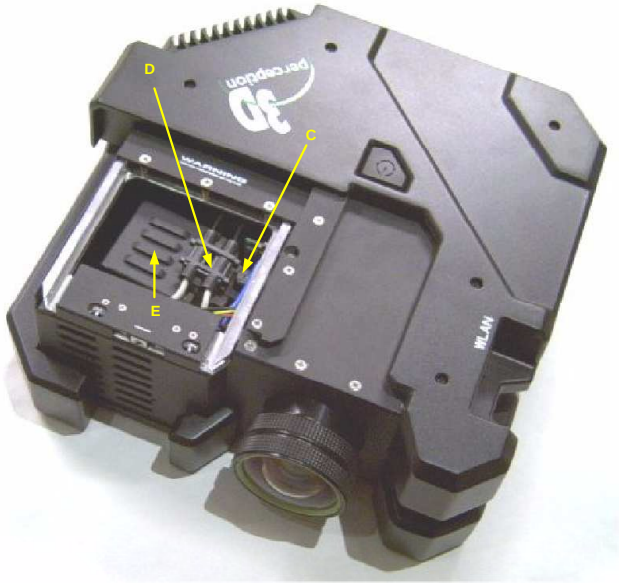
10.1 Remove old lamp

Remove the cover of the lamp housing (A) by undoing the fixing screw (B) and sliding the cover forward..



Undo the locking screw (C) and disconnect the wiring element (D).

Remove the lamp unit (E).

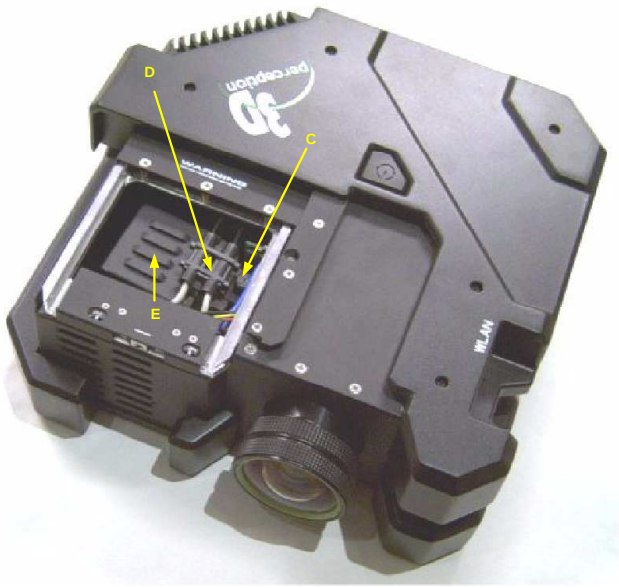


10.2 Insert New Lamp

Replace the lamp unit (E).

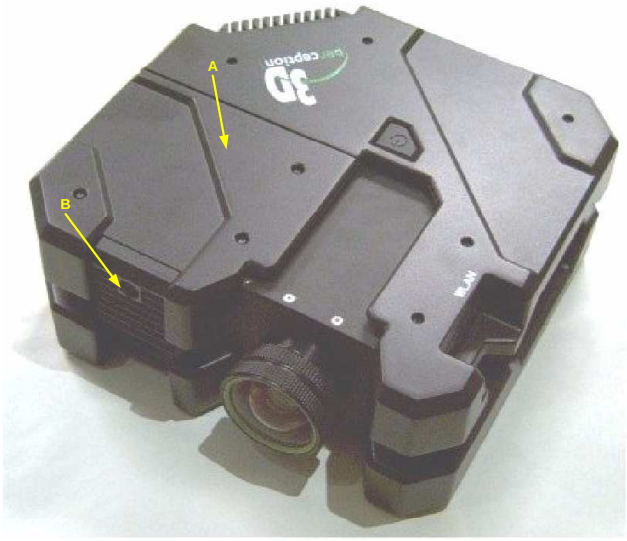
Re-connect the wiring element (D).

Fasten the locking screw (C)



Slide the cover of the housing unit (A) back into position.

Re-fasten the fixing screw (B)



NOTE: It is most important to ensure that the cover of the lamp housing is correctly sited back in its slot. If it is not firmly back in position then the projector will not power up.

11. SERVICE INFORMATION

This product contains no user-serviceable parts.

If the product fails to function as expected complete the following steps:

1. Check that all connections are properly made, and that the power cord is properly connected.

2. Check that the projector, the video and the computer sources are all switched on.

3. Check that the circuit breaker and the mains fuse is intact.

4. Try changing the cables and cords in case of a bad or intermittent connection (cables and cords may break over time).

In the event that none of the above checks resolve the product failure, please contact your reseller. You should prepare a description of the symptoms of the failure you experience, including the projector number and serial number as printed on the label attached to the projector.

12. TECHNICAL DATA

12.1 Warping and edge blending specifications

Warping
Non-linear image mapping from 50% to 200%
Processing latency from 50 µs to 12 ms dependent on mapping level
Total latency 250 line period
Automatic and manual options
Up to 100 geometrical control points (compliant with curved screen requirement)
Up to 5th order approximation between geometrical control points

Soft edge blending
Multi-sided non-linear blending from 2% to 100% of total image
Alpha adjustable from 0 to 4 in overlapped areas
Gamma adjustable from 0.25 to 4 in overlapped areas
Up to 5 geometrical control points (compliant with curved screen requirement)

Colour
Individual RGB adjustments of ±20% in addition to native adjustment capabilities
Primary colour calibration (optional extra for use with CompactUTM)
Input offset and Input gain adjustments

Gamma
Individual RGB adjustments from 0.25 to 4 in addition to native adjustment capabilities

12.2 Projector specifications

Resolution (native)	1024 x 768
Technology	DDR – Double Data Rate DMD™ Module DLP™ by Texas Instruments
Compatibility	For PC's, Macs, SGI and other workstations
Computer interface	UXGA, SXGA+, SXGA, XGA and SVGA
Inputs	1 VGA 15 pin DSUB (Analogue RGB) 1 DVI (Digital RGB) 5 BNC (Analogue RGB)
Remote control	via CompactControl: 2 x RS232 1 x Ethernet 10 Base-T WLAN (optional)
Aspect ration (native)	4:3
Contrast (black on/off)	2500:1
Brightness level	1100 – 1600 ANSI lumens
Noise level	
Dimensions	290mm x 290mm x 115mm
Weight	4.5 kg
Power	90-260 VAC, 50-60Hz, 300W
Wide zoom lens	1.15 – 1.34:1
Intermediate zoom lens	1.38 – 1.61:1
Long throw zoom lens	1.8 – 2.1:1
Conformance	UL, CE, FCC Class A
Temperature (operating)	0-40℃ / 32-104℉, 0-1500 m / 0-4950 ft 0-35℃ / 32-95℉, 1500-3000 m / 4950-9900 ft
Temperature (storage)	-20 - +60℃ / -4 - +140℉
Humidity (operating)	20-90% RH, non-condensing
Humidity (storage)	10-95% RH, non-condensing

13. LIMITED WARRANTY, 'FCC STATEMENT' AND 'TRADEMARKS COPYRIGHT'

Limited Warranty

Except as otherwise stated herein, 3D perception warrants that a **COMPACTVIEW HMR-15** projector is free from defects in parts and labour under normal use during the warranty period. The warranty period means the 24-month period from the date of purchase of a **COMPACTVIEW HMR-15** projector.

During the warranty period, 3D perception will, at its option and in its sole discretion, repair or replace defective parts, including replacement of the entire **COMPACTVIEW HMR-15** projector, at no additional charge to the Customer. However, the Customer is responsible for all shipping and insurance costs incurred in returning any **COMPACTVIEW HMR-15** projector to the Customer which does not require any repair or replacement work, as determined by 3D perception in its sole discretion. This limited warranty does not extend to any 3D perception product that has been damaged as a result of accident, misuse, or abuse. Nor does it extend to the use of parts not manufactured or sold by 3D perception, by unauthorised modification of a **COMPACTVIEW HMR-15** projector, or as a result of servicing by unauthorised personnel. This limited warranty extends only to the Customer, and is not transferable or applicable to any other third party or user, including any one who purchases a used **COMPACTVIEW HMR-15** projector. Any person asserting a claim under this limited warranty must establish to 3D perception' satisfaction the date of purchase and that a **COMPACTVIEW HMR-15** projector was purchased new.

Other warranty and liability limitations

Aside from this standard published warranty, 3D perception makes no warranty of any kind, express or implied, including without limitation, those of merchantability and of fitness for a particular purpose. Without limiting the generality of the foregoing, any description of a **COMPACTVIEW HMR-15** projector is for the sole purpose of identifying it, is not part of the basis of any bargain, and does not constitute a warranty that the item sold shall conform to that description. The use of any sample or model is for illustrative purposes only, it is not part of the basis of any bargain, and it is not to be construed as a warranty that a **COMPACTVIEW HMR-15** projector will conform to the sample or model.

No affirmation of fact or promise made by 3D perception shall constitute a warranty that a **COMPACTVIEW HMR-15** projector will conform to the affirmation or promise. 3D perception makes no warranty that the goods are free from claims of infringement of patents, trademarks, or copyrights. This limited warranty shall be the exclusive remedy. 3D perception shall not be liable to customers or others for incidental, consequential, or special damages, or lost profits. Under no circumstance shall 3D perception liability or customer's remedy for damages against 3D perception exceed its cost for a **COMPACTVIEW HMR-15** projector.

Procedure for claims
Any and all questions or claims concerning a **COMPACTVIEW HMR-15** projector shall be made to 3D perception authorised personnel through the VAR from whom the **COMPACTVIEW HMR-15** projector was purchased. In no case shall a **COMPACTVIEW HMR-15** projector be returned without first securing the authority of 3D perception or its authorised personnel. Any damages to, defects in, loss of, non conformities in, or any other claim concerning a **COMPACTVIEW HMR-15** projector which could be discovered by inspection upon delivery must be reported to the delivering carrier, and in writing to 3D perception at: the following address, promptly and in no event later than thirty (30) days after delivery.

3D perception AS
Solbråveien 41
P.O. Box 455
N-1373 Asker
Norway

In the case of any such claim, inspection shall be promptly arranged with 3D perception or it's authorised personnel, and where appropriate, representatives of the carrier. Any other claim or action respecting the condition or conformity of a **COMPACTVIEW HMR-15** projector or any other matter affecting a **COMPACTVIEW HMR-15** projector must be submitted in writing to 3D perception promptly upon discovery and in no event later than expiration of the Warranty Period. Any part of a **COMPACTVIEW HMR-15** projector which is subject of any claim shall be set aside and protected, without further processing or use, until 3D perception or its authorised personnel have an opportunity to inspect it and advice the Customer of the disposition, if any to be made thereof. Failure to give timely written notice of any claim shall bar any remedy.

Technical advice
3D perception, or its authorised personnel, may furnish technical advice with reference to the use of a **COMPACTVIEW HMR-15** projector, but there is no obligation to furnish such advice. If any advice or assistance is furnished, it shall be given and accepted at Customer's risk, 3D perception shall not be responsible or liable for the advice or assistance given or the results thereof.

FCC Statement
A **COMPACTVIEW HMR-15** projector has been tested and found to comply with the limits for a 'Class A' digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when it is operated in a commercial environment. A **COMPACTVIEW HMR-15** projector generates, uses and can radiate radio frequency energy and, if not used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of a **COMPACTVIEW HMR-15** projector in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at own expense.