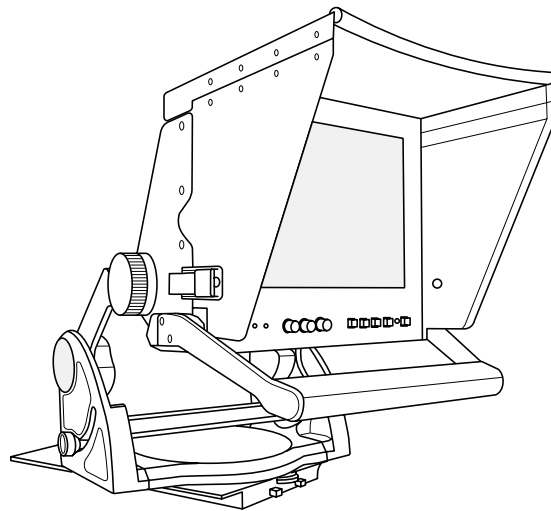


User's Guide

3922 496 30991 February 2008 v1.0



LDK 4025

8-inch LCD viewfinder



Declaration of Conformity

We, Grass Valley Nederland B.V., Kapittelweg 10, 4827 HG Breda, The Netherlands, declare under our sole responsibility that this product is in compliance with the following standards:

- EN60950 : Safety
- EN55103-1: EMC (Emission)
- EN55103-2: EMC (Immunity)

following the provisions of:

- a. the Safety Directives 73/23//EEC and 93/68/EEC
- b. the EMC Directives 89/336/EEC and 93/68/EEC

FCC Class A Statement

This product generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause interference to radio communications.

It has been tested and found to comply with the limits for a class A digital device pursuant to part 15 of the FCC rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment.

Operation of this product in a residential area is likely to cause interference in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.

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Website

Visit the Grass Valley public website to download the latest user's guide updates and additional information about your broadcast product:

www.thomsongrassvalley.com

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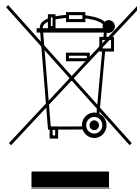
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End-of-life product recycling



Grass Valley's innovation and excellence in product design also extends to the programs we've established to manage the recycling of our products. Grass Valley has developed a comprehensive end-of-life product take back program for recycle or disposal of end-of-life products. Our program meets the requirements of the European Union's WEEE Directive and in the United States from the Environmental Protection Agency, individual state or local agencies.

Grass Valley's end-of-life product take back program assures proper disposal by use of Best Available Technology. This program accepts any Grass Valley branded equipment. Upon request, a Certificate of Recycling or a Certificate of Destruction, depending on the ultimate disposition of the product, can be sent to the requester.

Grass Valley will be responsible for all costs associated with recycling and disposal, including freight, however you are responsible for the removal of the equipment from your facility and packing the equipment ready for pickup.

For further information on the Grass Valley product take back system please contact Grass Valley at + 800 80 80 20 20 or +33 1 48 25 20 20 from most other countries. In the US and Canada please call 800-547-8949 or 530-478-4148. Ask to be connected to the EH&S Department. In addition, information concerning the program can be found at:

www.thomsongrassvalley.com/environment

Important information

Read this information carefully before installing this equipment and retain them for future reference. Read and comply with the warning and caution notices that appear in the manual. Any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

Safety Summary

This information is intended as a guide for trained and qualified personnel who are aware of the dangers involved in handling potentially hazardous electrical/electronic equipment. It is not intended to contain a complete list of all safety precautions which should be observed by personnel in using this or other electronic equipment.

The installation of this equipment involves risks both to personnel and equipment and must be performed only by qualified personnel exercising due care.

During installation and operation of this equipment, local building safety and fire protection standards must be observed. Before connecting the equipment to the power supply of the installation, the proper functioning of the protective earth lead of the installation needs to be verified.

Whenever it is likely that safe operation is impaired, the apparatus must be made inoperative and secured against any unintended operation. The appropriate servicing authority must then be informed. For example, safety is likely to be impaired if the apparatus fails to perform the intended function or shows visible damage.

Warnings

Warnings indicate danger that requires correct procedures or practices to prevent death or injury to personnel.

- Do not modify this equipment;
- Installation of this equipment must only be performed by qualified personnel;
- Do not use any accessories other than those recommended by the manufacturer;
- In case of an emergency ensure that the power is disconnected;
- Mount equipment so that power lead can be accessed to disconnect power;
- Any interruption of the protection conductor inside or outside the apparatus, or disconnection of the protective earth terminal, is likely to make the apparatus dangerous. Intentional interruption is prohibited;
- Use only fuses of the type and rating specified;
- To prevent fire or shock hazard, do not expose the unit to rain or moisture;
- There are no user serviceable parts inside. Refer servicing to qualified personnel only or contact your local Grass Valley representative;
- Observe local building safety, fire protection and electrical installation standards during installation and operation of this equipment;
- Before connecting the equipment to the power supply of the installation, verify the proper functioning of the protective earth lead;
- Whenever it is likely that safe operation is impaired, the apparatus must be made inoperative and secured against any unintended operation.

Cautions

Cautions indicate procedures or practices that should be followed to prevent damage or destruction to equipment or property.

- Do not subject the unit to severe shocks or vibration;
- Do not expose the unit to extremes of temperature;
- To prevent risk of overheating, ventilate the product correctly;
- Connect the product only to a power source with the specified voltage rating.

Wichtige Hinweise

Lesen Sie bitte diese Hinweise genau bevor Sie diese Apparatur installieren und erhalten Sie Sie für künftiges Nachslagen. Beachten und Lesen Sie alle mit "Achtung" und "Vorsicht" gekennzeichneten Warnhinweise.

Änderungen haben zur Folge, dass die Garantie ungültig wird und der Benutzer für etwaige durch die veränderte Ausrüstung verursachte Störungen haftbar gemacht werden könnte.

Sicherheit (Zusammenfassung)

Diese Informationen sind als Leitfaden für qualifiziertes Fachpersonal gedacht, das die Gefahren beim Umgang mit potenziell gefährlicher elektrischer/elektronischer Ausrüstung kennt. Es handelt sich dabei nicht um eine vollständige Zusammenstellung aller Sicherheitsvorkehrungen, die beim Gebrauch dieser oder anderer elektronischer Geräte zu beachten sind.

Die Montage, Wartung und Instandsetzung dieser Ausrüstung ist mit Risiken für Personal und Ausrüstung verbunden und darf nur von qualifiziertem Personal vorgenommen werden, wobei mit der nötigen Sorgfalt vorzugehen ist.

Beim Einbau und Betrieb dieser Ausrüstung müssen die örtlichen Gebäudesicherheits- und Brandschutzvorschriften beachtet werden. Vor dem Anschluss der Ausrüstung an die Stromversorgung der Anlage muss überprüft werden, ob der Schutzleiter intakt ist.

Wenn eine Beeinträchtigung des sicheren Betriebs wahrscheinlich ist, muss das Gerät außer Betrieb gesetzt und gegen ungewollten Betrieb gesichert werden. Dann muss der zuständige Kundendienst benachrichtigt werden. Eine Beeinträchtigung der Sicherheit ist zum Beispiel dann wahrscheinlich, wenn das Gerät nicht wie vorgesehen funktioniert oder einen sichtbaren Schaden aufweist.

Vorsicht

Mit "Vorsicht" wird auf eine Gefahr hingewiesen, die korrekte Arbeits- oder Verfahrensweisen erfordert, um Tod oder Verletzung zu verhindern.

- An dieser Ausrüstung dürfen keine Änderungen vorgenommen werden;
- Die Montage dieser Ausrüstung darf nur von Fachpersonal vorgenommen werden;
- Es sollen nur von den Hersteller empfohlene Zubehöre verwendet werden;
- Bei Eintreten eines Notfalls unbedingt die Stromzufuhr abschalten;
- Ausrüstung so montieren, daß das Netzkabel zum Abschalten der Stromzufuhr zugänglich ist;
- Jede Unterbrechung des Schutzleiters innerhalb oder ausserhalb des Geräts oder Trennung der Schutzleiter-anchlussklemme Könnte das Gerät fegefährlich machen. Eine absichtliche Unterbrechung ist untersagt;
- Es dürfen nur Sicherungen des vorgeschriebenen Typs und Nennwerts verwendet werden;
- Um Feuer oder Schlaggefahr vorzubeugen, soll das Produkt nie an Regen oder Feucht ausgesetzt werden;
- Dieses Produkt enthält keine Anwenderteile. Reparatur und Wartung nur von qualifiziertem Fachpersonal vornehmen lassen oder nehmen Sie Kontakt auf mit Ihrem Grass Valley Vertretene;

-
- Beim Einbau und Betrieb dieser Ausrüstung müssen die örtlichen Gebäudesicherheits- und Brandschutzvorschriften beachtet werden;
 - Vor dem Anschluss der Ausrüstung an die Stromversorgung der Anlage muss überprüft werden, ob der Schutzleiter intakt ist;
 - Wenn eine Beeinträchtigung des sicheren Betriebs wahrscheinlich ist, muss das Gerät außer Betrieb gesetzt und gegen ungewollten Betrieb gesichert werden.

Achtung

Mit "Achtung" werden Arbeitsanweisungen gekennzeichnet, die zu befolgen sind, um eine Beschädigung oder Zerstörung der Ausrüstung bzw. von Eigentum zu verhindern.

- Dieses Produkt darf nicht an extremen Stöße oder Zittern ausgesetzt werden;
- Dieses Produkt darf nicht an extremen Temperaturen ausgesetzt werden;
- Um einer Überhitzungsgefahr vorzubeugen, ist das Produkt korrekt zu belüften;
- Das Produkt darf nur an eine Stromquelle mit der vorgeschriebenen Nennspannung angeschlossen werden.

Installation notices

For proper installation the following NEC articles should be noticed:

Regarding communication circuits:

- Installation of equipment (NEC article 800.18).

Regarding radio and television equipment:

- Avoid contact with conductors of other systems (NEC article 810.13);

Provide extensive, separate clearance requirements for indoor and outdoor locations (NEC article 810.18).

Chapter 1

Installation

1.1 Introduction

The LDK 4025 is a high quality HDTV LCD viewfinder. Its light-weight construction, multi-format compatibility and its wide horizontal and vertical viewing angle make the LDK 4025 a perfect match for studio and OB applications.

The 8.4-inch diagonal screen size makes fast and accurate focussing easy. Pictures are accurately reproduced with high color precision. The compact design allows for great operator flexibility with much wider panning and tilting angles compared to CRT based viewfinders.

The LDK 4025 viewfinder is designed for the Grass Valley LDK 8000 series HDTV cameras and accomodates all required HDTV frame rates.

1.2 Viewfinder support bracket

The supplied support bracket is required to mount the viewfinder on top of a Xpander/SuperXpander. Refer to user's guide of the Xpander/SuperXpander for the installation instructions for the bracket.

1.3 Mounting the viewfinder



Caution

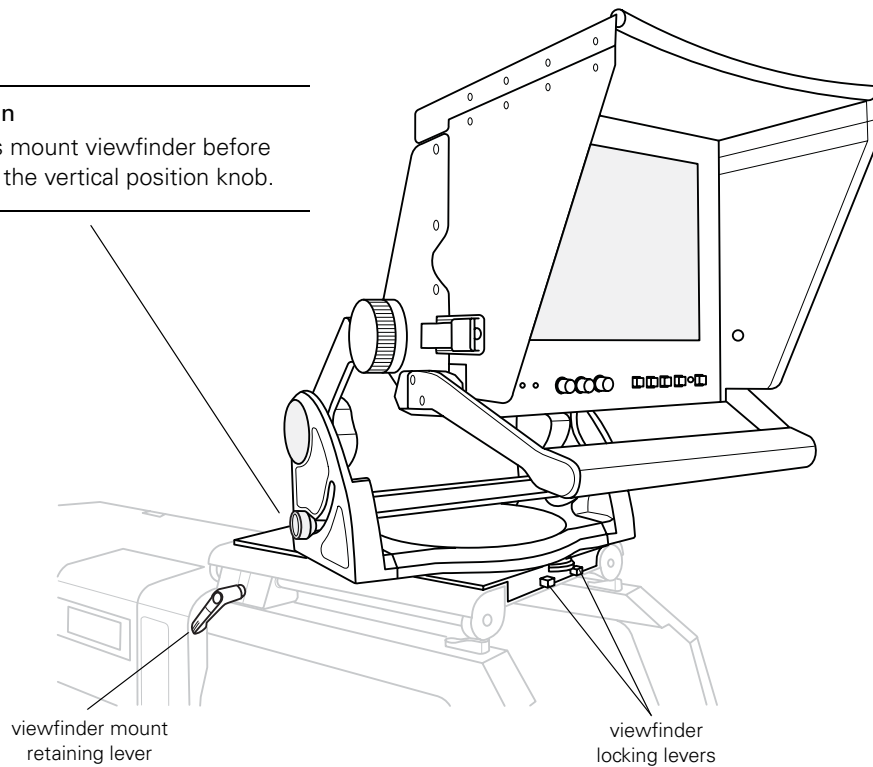
Switch off power of the SuperXpander before mounting the viewfinder.

Figure 1-1. Mounting the viewfinder



Caution

Always mount viewfinder before pulling the vertical position knob.



To mount the viewfinder on top of the SuperXpander proceed as follows:

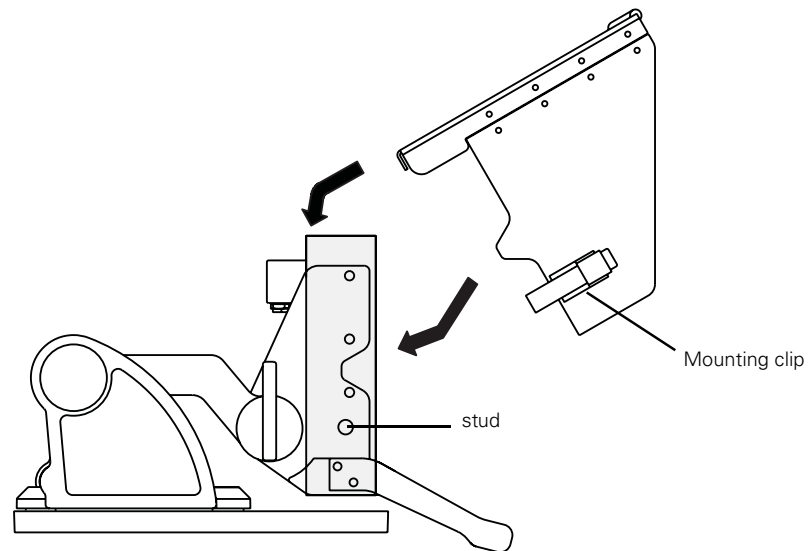
1. Release the retaining lever on the viewfinder support and slide the viewfinder towards the rear of the SuperXpander; fasten the lever.
2. Slide the viewfinder along the rails on top of the SuperXpander until it can go no further.
3. Push both viewfinder locking levers inwards and slide the viewfinder until it firmly engages the connector.
4. Release the locking levers and ensure they click into the lock position (completely outwards).

1.4 Attaching the sunhood

To attach the sunhood to the viewfinder proceed as follows:

1. Hook the top of the sunhood onto the back of the viewfinder casing.

Figure 1-2. Attaching a sunhood



2. Open the mounting clips at the left and right side of the sunhood.
3. Swing the sunhood down and fit the positioning flaps at both sides into the recesses of the bracket.
4. Lift the mounting clips and hook them behind the round studs on the viewfinder frame. Close the clip by pushing it down until it clicks.

Chapter 2

Adjusting

2.1 Positioning

The viewfinder can be easily positioned to adapt to any viewing angle and situation. There are four position adjustments:

- backwards and forwards,
- tilt,
- lift, and
- rotate.

2.1.1 Backwards and forwards

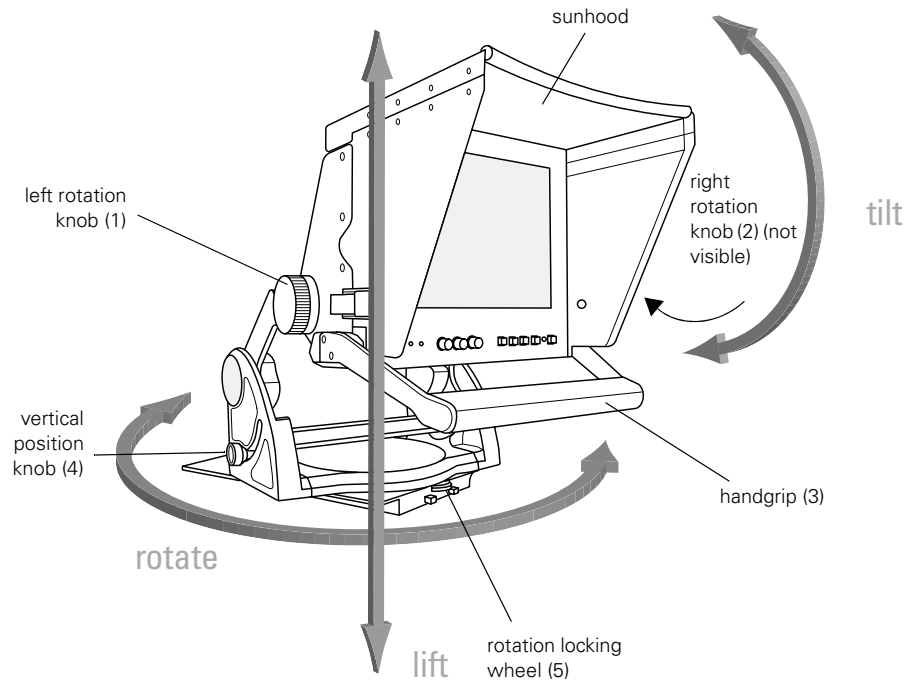
1. Loosen the viewfinder mount retaining lever on top of the SuperXpander.
2. Slide the viewfinder support mount along the rails until it is in the desired position.
3. Tighten the viewfinder retaining lever on top of the SuperXpander.

2.1.2 Tilt

The viewfinder can be tilted very low when the camera is in a high position:

1. Hold the left rotation knob (1) with your left hand and loosen the right rotation knob (2) with your right hand.
2. Tilt the viewfinder to the desired angle using the handgrip (3).
3. Fasten the right rotation knob (2) to fix the position.

Figure 2-1. Positioning the viewfinder



2.1.3 Lift

1. Pull out the vertical position knob (4) with your left hand and lift the handgrip (3) with your right hand.
2. The vertical position can be set to four fixed positions with the vertical position knob (4).
3. Choose the desired position and release the knob until it clicks.

2.1.4 Rotate

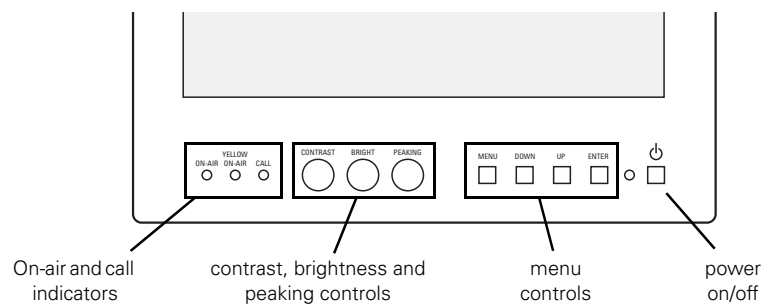
The unit can rotate 90 degrees to the right and 180 degrees to the left. When rotated to the left the viewfinder can be used to set up the lens while still observing the viewfinder picture.

1. Loosen the rotation locking wheel (5) and use the handgrip (3) to rotate the viewfinder.
2. Fasten the rotation locking wheel (5) to fix the position.

Chapter 3

Operation

3.1 Controls and indicators



Power switch

This switch is used to switch the power supply in the viewfinder on or off. A green LED near the switch indicates that the unit is switched on.



Note

The power to the viewfinder is supplied by the Xpander/SuperXpander. When the camera is switched off the viewfinder receives no power even when the power switch is on.

Brightness control

Controls the brightness level of the viewfinder display.

Contrast control

Controls the contrast level of the viewfinder display.

Peaking control

Controls the level of peaking that is applied to the viewfinder display.

Menu controls

The **Menu**, up, down and **Enter** controls are used to open an on-screen menu, navigate and select items.

On Air indicator

The red LED lights to indicate that the camera is currently on air.

ISO indicator

The yellow LED lights to indicate that the camera is currently in ISO mode.

Call indicator

The green LED lights to attract attention when CALL is activated.

3.2 Menu

Push the **Menu** button to open the viewfinder's control menu. It is superimposed on the video image on the screen. Push again to turn the menu off. The following options are available:

< Contrast >

Displays the image contrast ratio (from -100 to +99).

< Bright >

Displays the image brightness level (from -100 to +99).

< Peaking >

Displays the detail level (sharpness) of the picture (from -4 to +14).

< Box On/Off >

Turns the custom box on or off. The custom box is a superimposed rectangular box that can be used for framing and focussing purposes. Its position, size and color can be set.

< Box Posi H >

Sets the horizontal position of the custom box on the viewfinder screen (from 0 to 1023).

< Box Posi V >

Sets the vertical position of the custom box on the viewfinder screen (from 0 to 767).

< Box Size H >

Sets the horizontal size (width) of the custom box (from 0 to 1023).

< Box Size V >

Sets the vertical size (height) of the custom box (from 0 to 767).

< Box Color >

Sets the line color of the custom box. Options are: White, Black, Red, Blue, Magenta, Green, Yellow and Cyan.

< Menu Posi >

Sets the menu position on the viewfinder screen. Options are: Center, Upper-Left, Upper-Right, Down-Left and Down-Right.

< System >

Displays system parameters such as communication status, firmware and software version information.

< Set default >

Activate to reset all values of the viewfinder to the factory default settings.

3.3 Cleaning

**Note**

Always turn off the viewfinder before cleaning the screen.

Use a soft and dry cloth (preferably microfiber tissue) to clean the viewfinder screen. Wipe gently and do not apply strong pressure as this may damage the screen.

Chapter 4

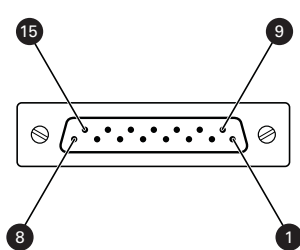
Specifications

4.1 Technical specifications

Item	Value
General	
Dimensions (L X W X H)	433 x 297 x 244 mm (17.0 x 11.7 x 9.6 in) with sunhood and mounting kit.
Weight (approx.)	2.2 kg (4.9 lbs)
Operating temperatures	0 to +45 °C (32 to +113 °F)
Storage temperatures	-25 to +70 °C (-13 to +158 °F)
Power supply	+10.5 to 17 VDC
Power consumption (typical)	20 W (supplied by the Xpander/SuperXpander)
LCD	
Diagonal size	8.4 inch (213 mm)
Colour depth	3 x 8 bits color
Total display	1024 x 768 pixels (4:3 aspect ratio)
Active image area	1024 x 576 pixels (16:9 aspect ratio)
Viewing angle	170° horizontal/vertical
Pixel size	0.165 mm (0.0065 in)
Coating	Antireflective layer
Performance	
Brightness	260 Cd/m ²
Contrast ratio	400:1
Color temperature	6500 K
Supported formats	720p59.94, 720p50, 1280i59.94, 1280i50, 1080@24sF, 1080@23.98sF
Input signals	Y, Pr, Pb (Sub-D connector to suit SuperXpander and Xpander)
Operational	
Controls	Brightness, contrast and peaking
Indicators	Tally light (front), dual On-Air, Call signal
Supplied accessories	Sunhood, mounting kit, user's guide

4.2 Connectors

Figure 4-1. Viewfinder connector



15-pin male Sub-D connector

- | | |
|---------------------------------|---------------------------------|
| 1. VF Video (Y) | 9. VF Video (Y) return |
| 2. n.c. | 10. VF (Pr/Pb) video return |
| 3. VF Video (Pb) | 11. VF Power (+15 VDC) |
| 4. VF Power return | 12. VF Power return |
| 5. Shield | 13. Shield |
| 6. VF Power (+15 VDC) | 14. VF Video (Pr) |
| 7. Data (I ² C-SCL) | 15. Data (I ² C-SDA) |
| 8. Data (I ² C-INTN) | |

4.3 Dimensions

