

User's Guide

3922 496 30011
version 3

LDK 4019/10
7-inch High-brightness HDTV Viewfinder

Declaration of Conformity

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

- EN60065 : 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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About This Manual

Purpose of this manual

The purpose of this manual is to present a global description of how to operate the viewfinder. Consult the Operator's manual of your camera as required during and after the installation process.

This manual is an integral part of the service policy. It ensures that you will be able to install your viewfinder to meet the requirements of your environment. The manual provides first line service information so that suitably qualified service personnel can detect and repair faults, normally by module replacement.

Because of the complexity of some of the components, second line service can only be carried out at the specially equipped service centres and information concerning second line maintenance is not supplied in this manual.

Intended audience

The manual is intended as a guide to those with a working knowledge of camera systems and installation techniques. The first line detection and repair of faults requires a general knowledge of test and measurement techniques. The guide is so designed that it can be used as well to the viewfinder, as well a simple procedural guide to those who wish to setup and start shooting immediately, and as a reference work to be consulted as required during the lifetime of the viewfinder.

Service policy

The LDK 4019/10 is a sophisticated viewfinder containing state-of-the-art electronic components which are designed to provide long-life operation without the need for maintenance. With this in mind, the service policy of Thomson Multimedia Broadcast Solutions endeavours to ensure that help will be quickly on hand in the unlikely event of anything going wrong. The guiding principles of the Thomson Broadcast Solutions first line maintenance philosophy are speed and cost effectiveness. First line maintenance is dedicated to keeping your viewfinder operational, despite a fault, by replacement boards and the replacement of minor mechanical parts by the user.

CAUTION

- ▲ Without additional protection the LDK4019/10 is protected according to safety specification EN60529 up to level IPX3 (spraying water). Exposure to splashing or jetting water can result in harmful effects.

Packing/Unpacking

Inspect the shipping container for evidence of damage immediately after receipt. If the shipping container or cushioning material is damaged, it should be kept until the contents of the shipment have been checked for completeness and the unit has been checked mechanically and electrically.

The shipping container should be placed upright and opened from the top. Remove the cushioning material and lift out the contents.

The contents of the shipment should be checked against the packing list. If the contents are incomplete, if there is mechanical damage or defect, or if the unit does not perform correctly when unpacked, notify your Thomson Multimedia Broadcast Solutions sales or service centre within eight days. If the shipping container shows signs of damage or stress, notify the carrier as well.

If the unit is being returned to Thomson Broadcast Solutions for servicing, try to use the containers and materials of the original packaging. Attach a tag indicating the type of service required, return address, model number, full serial number and the return number which will be supplied by your Thomson Broadcast Solutions service centre.

If the original packing can no longer be used, the following general instructions should be used for repacking with commercially available materials:

- Wrap unit in heavy paper or plastic.
- Use strong shipping container.
- Use a layer of shock-absorbing material around all sides of the unit to provide firm cushioning and prevent movement inside container.
- Seal shipping container securely.
- Mark shipping container FRAGILE to ensure careful handling.

Storage

The unit may be stored (non-operating condition) in environments within the following limits:

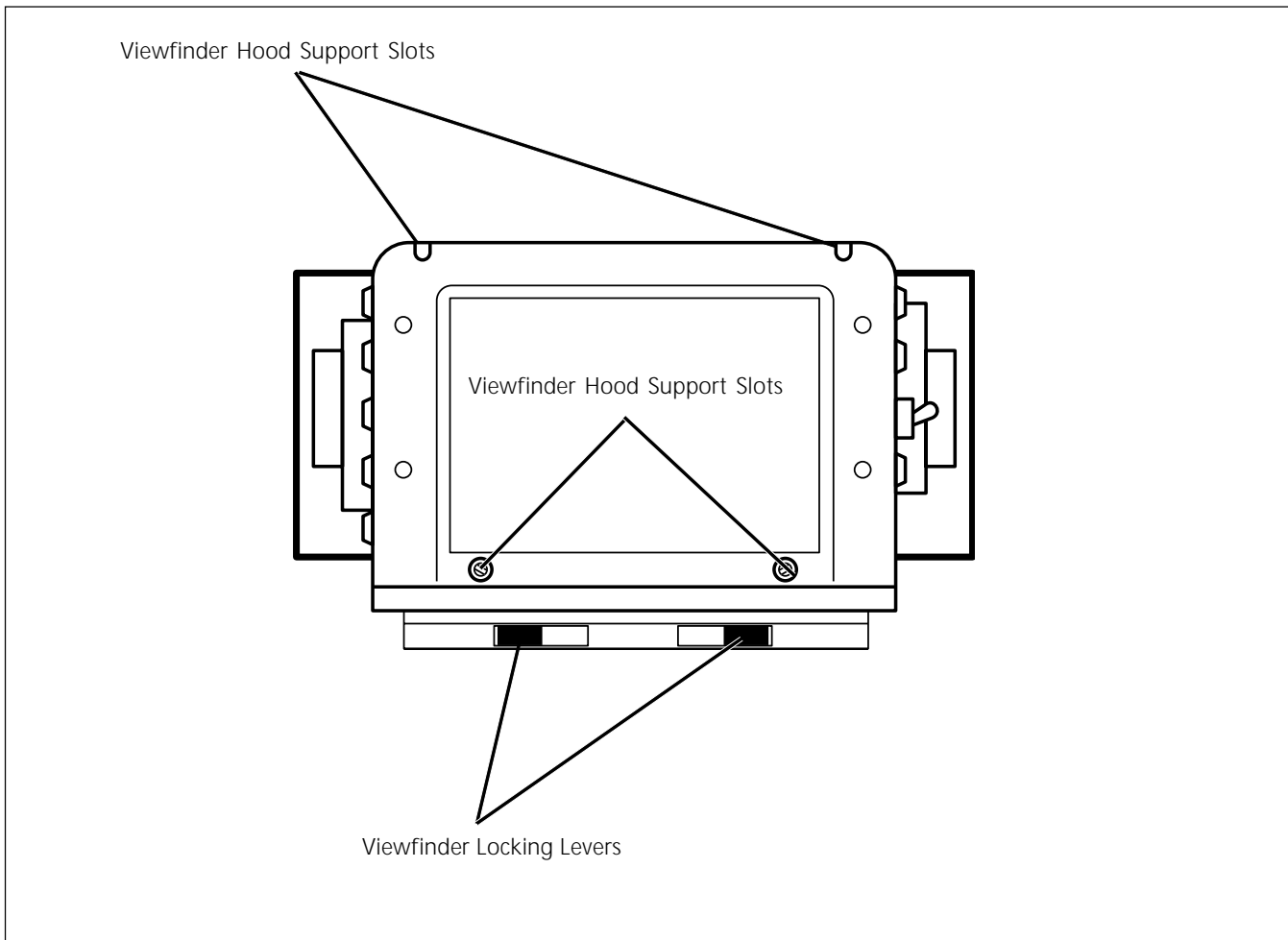
Temperature: -20 to +50 degrees C

Humidity: Up to 90%

Altitude: 50,000 feet

When stored, the unit should be protected from temperature extremes which may cause condensation, and should also be protected from high levels of dust.

Installation



The 7-inch HDTV high-brightness viewfinder, LDK 4019/10, is intended for use with the LDK6000 HDTV camera. The viewfinder is mounted on the SuperXpander (LDK 4482) or on the 7-inch viewfinder support (LDK 6517).

CAUTION

Before connecting, make sure that the power is switched off.

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

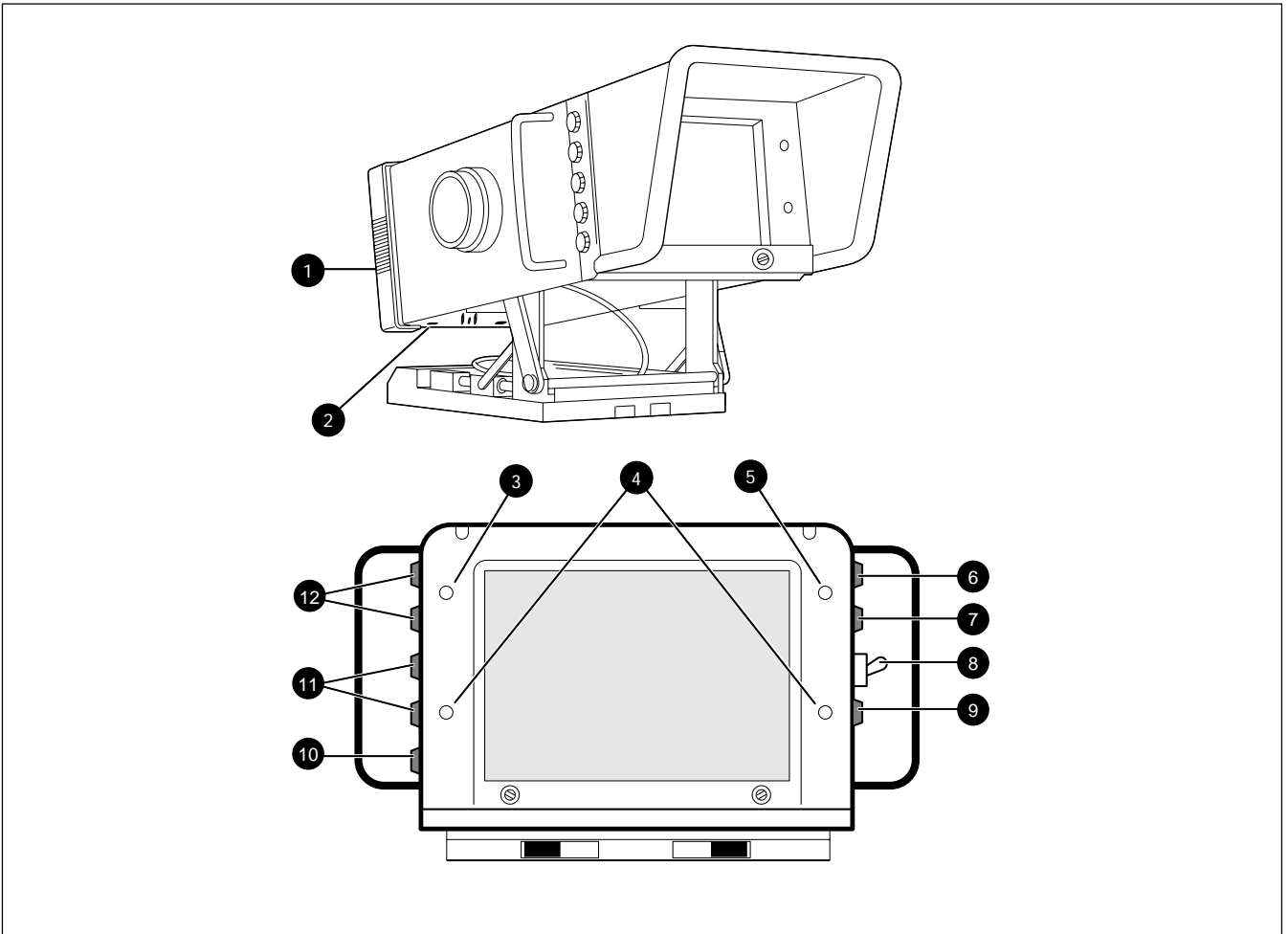
- Slide the viewfinder along the rails on top of the camera until it can go no further.
- Push both locking levers inwards and slide the viewfinder **▲** until it firmly engages the connector.
- Release the locking levers and ensure they click into the lock position.

To attach the viewfinder hood to the viewfinder proceed as follows:

- Clip the hood onto the slots on top of the viewfinder.
- Swing it down and attach it to the support knobs on the front of the viewfinder by pushing the two hood locking

knobs outwards.

- Let go of the hood locking knobs and ensure that the hood clips into place.



1 Red On-air Lamps

These two red tally lamps on either side of the back of the viewfinder light when the camera picture is on-air.

2 Power Switch

This switch is used to switch the high voltage power supply in the viewfinder on and off. The supply to the viewfinder is supplied from the camera. When the camera is switched off the viewfinder receives no power even when the power switch may be on.

3 ISO LED

This yellow LED lights to indicate that the camera signal is being used though not necessarily on-air.

4 On-air LEDs

These red LEDs light to indicate that the camera is on-air.

5 Call LED

This green LED lights to attract the cameraman's attention.

6 Brightness Control

Controls the brightness of the viewfinder display.

7 Aperture Correction Control

This control varies the amount of aperture correction applied to the viewfinder signal when the aperture correction switch is in the ON position.

8 Aperture Correction Switch

This switch is used to switch the aperture correction of the viewfinder signal on and off.

9 Contrast Control

Controls the contrast of the viewfinder display.

10 Cursor Frame Selection

Selects the cursor frame mode for display on the viewfinder:

Off	=	Deactivated
#	=	Lines
□	=	Box
Off	=	Deactivated

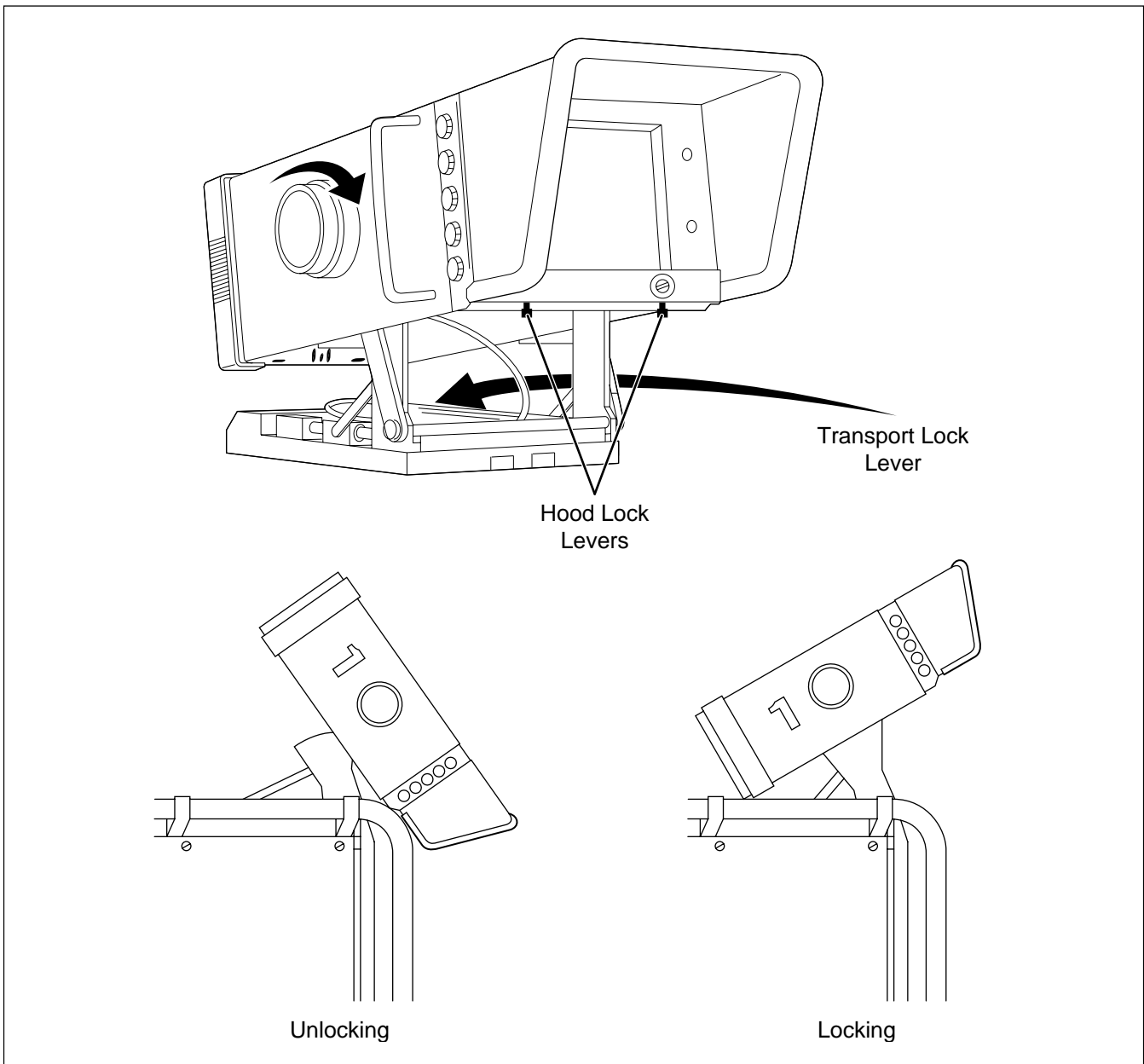
11 Cursor Line Control

Shifts the horizontal cursor lines in a vertical direction.

12 Cursor Line Control

Shifts the vertical cursor lines in a horizontal direction.

Positioning the Viewfinder



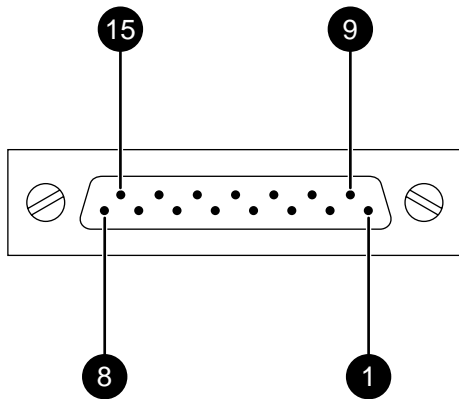
To swing out viewfinder

- Unlock the transport lock lever.
- Turn both unlocking knobs marked FIXED/FREE simultaneously in the FREE direction and pull up the back of the viewfinder.
- The viewfinder is now unlocked. Tilt or swing out the viewfinder into the desired position.

Locking the viewfinder

- Rotate the two unlocking knobs marked FIXED/FREE simultaneously in FREE direction and push the back of the viewfinder down all the way.
- Hold the two unlocking knobs in the FREE position and push down the viewfinder until it clicks into place.
- Lock the transport lock lever.

Viewfinder Connector



15-pin male D-connector

1. Video
2. Video R-Y
3. Video B-Y
4. +12 V return
5. Shield
6. +12 V
7. -
8. -
9. Video ground
10. Video ground R-Y / B-Y
11. +12 V
12. +12 V return
13. Shield
14. On-air lamp +12V = on / 0V = off
15. -

Specifications

Systems

1920x1080i60, 1920x1080i59.94
1920x1080i50, 1920x1080i48,
1280x720p60, 1280x720p59.94
1280x720p50
automatic switching
aspect ratio 16:9, 14:9, 4:3, 2.37:1
picture zoom (~1.3x)

Power Supply

+10.5 Vdc to +17Vdc

Power Consumption

Max: 26W

Luminance

Peak luminance 2200 Cd/m²

Aperture

Switchable, boost at 12.5MHz with 0 - 6dB (variable)

Video input signal

Nom. 1Vpp (+6dB/-3dB) VBS
Input impedance 75 Ohm ±5%
Video B/W 30 Mhz/0-3dB

Environmental conditions:

Operating temp.: -20 to +45 °C
Non-operating temp.: -25 to +70 °C
Operating humidity: 93% (non condensing)

Dimensions

