

# LDK 4502

## HD TRIAX BASE STATION

Supporting our LDK 4000 Elite and LDK 8000 Elite series cameras, our HD triax base station is the perfect interface between your HD cameras and the rest of your acquisition system.



Grass Valley™ base stations are optimized for HD video and optional simultaneous SD video and audio from the camera, as well as modules for video monitoring, intercom, external video, teleprompting, and control signals. You can insert or remove optional modules at any time, making it possible to change a base station's configuration on a day-to-day basis.

The LDK 4502 is a heavy-duty base station with state-of-the-art technology, which has never been available in such small chassis—yet still provides the quality and functionality you expect from high-quality broadcast products.

### Making the Most of Your Infrastructure

Based on our advanced triax HD transmission system, which was developed from our Emmy® Award-winning triax transmission system, the LDK 4502 and the camera attached to it are compatible with industry-standard triax cables. This compatibility enables you to reuse the existing, reliable, and valuable cables that you already own.

The triax HD transmission system offers video transmission and remote control of cameras up to a distance of 1,200 meters (3,900 feet) and beyond using standard 14 mm (0.55") triax cables, and up to 2,400 meters (7,800 feet) using the Grass Valley Triax Repeater.

### Compact, Compatible, Intuitive

With its compact design, the LDK 4502 is only 2 RU high to minimize rack space utilization. Low power consumption and efficient internal cooling eliminate the need for space between adjacent units. And the available sliding rails give you easy access to the back panel.

To maximize your infrastructure investment, our base stations are compatible with all existing components of the Grass Valley C2IP camera control system.

What's more, the modular concept of our base stations make them ideal for any type of application, including studio or mobile field production or for HD or SD production.

The operational settings of the base stations are accessible through their

menus and from your operational control panels.

In addition to the operational menu, you can activate their installation and service menus by pressing a switch behind the front panel of the base station. This protects the more vulnerable settings from accidental changes.

### Damage-Protected Connector Panel

The ears on either side of the back panel of the base stations protect all connectors from damage, including the triax connector. The triax connector itself can easily be mounted at different angles to suit all mounting requirements.

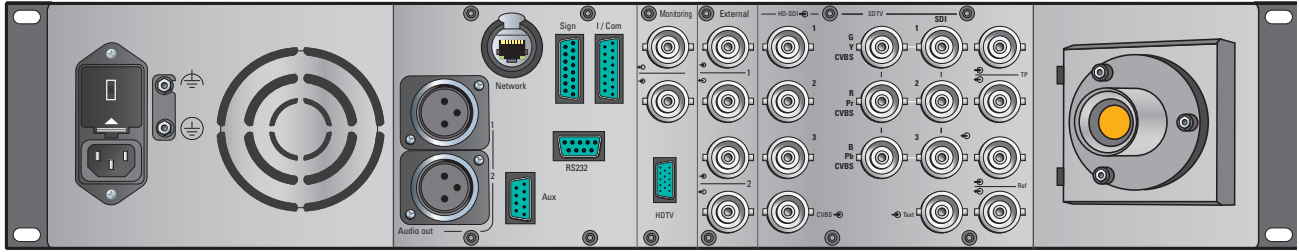
### Modularity Means Flexibility

The modular design of the LDK 4502 makes it a cost-effective fit for all applications. You can expand its functionality by simply adding new modules, quickly exchange modules for service, or swap modules among camera base stations. Modules are available for: monitoring, audio and advanced intercom, engineering intercom, and external video input.

## KEY FEATURES

- Compact 2 RU high, 19" base unit
- Modular design ensures flexibility
- HD and optional simultaneous high-quality SD outputs
- Teleprompting signal handling
- Compatible with Grass Valley C2IP camera control system components
- No cooling spacers needed when mounted in rack
- Use with triax HD transmission system supporting triax cable lengths up to 1,200 meters (3,900 feet) with cable-length indication; up to 2,400 meters (7,800 feet) with the Grass Valley Triax Repeater
- Heavy-duty, low-power design ideal for rental houses and mobile units

## DAMAGE-PROTECTED CONNECTOR PANEL



## SPECIFICATIONS

### HD Base Station LDK 4502 HD Triax

#### General

**Dimensions (WxHxD):** 438 (19" rack) x 88 (2 RU) x 510 mm (17.2 x 3.5 x 20.1 in.)

**Operating temperature:** 0°C to +45°C (+32°F to +113°F)

**Storage temperature:** -20°C to +70°C (-4°F to +158°F)

**Operating humidity:** Max. 90% (non-condensing)

**Shock resistance:** Max. 10G (transport), max. 2G (operating)

**Altitude max.:** 15,240 m (50,000 ft.)

**Weight:** 17.0 kg (37.5 lbs.) fully equipped with options

#### Connectors

**Teleprompter in:** BNC 1x (loop-through output), 1.0 Vp-p, 75Ω (triax cable 25% of max. spec)

**Reference in:** BNC 1x (loop-through output), 1.0 Vp-p, 75Ω D tri-level sync or SD black burst

**HD-SDI out:** BNC 3x, 0.8 Vp-p, 75Ω, SMPTE 292M, 1080i/720p at 59.94/50 Hz

**Text out:** BNC 1x, 1.0 Vp-p, 75Ω (VBS)

**Composite video out:** BNC 1x, 1.0 Vp-p, 75Ω (CVBS, w/ or w/o text, for viewing purposes)

**Signaling in/out:** D-sub 15-pin, male; preview, green tally (call), dry contact; yellow tally (iso), dry contact; red tally (on-air), dry contact; remote audio level control (22-64 dB), DC

#### Auxiliary in/out:

- D-sub 9-pin, female; An0, 0-5 VDC in, output on camera head; An1, 0-5 VDC in
- 16:9 < 0.8 VDC in, 4:3 > 2.4 VDC in; private data in/out, 2.4 kB TTL (RS-232)
- RS-232
- D-sub 9-pin, male (RXD, TXD, DTR, DSR, RTS, CTS)

**Control data:** 4-pin, male (Series 9000, 2-wire control bus)

**Control data:** RJ-45 connector for Ethernet C2IP

#### Optional Modules

##### Power Module

**LDK 4510/xx /10:** for HD Triax Base Station LDK 4502

**Power requirement:** AC 115V/230V ±15%, 47 to 63 Hz

**Power connector:** IEC type, 3-pin male

**Power consumption:** 470 VA or 270 Watts max. with studio head; 360 VA or 210 Watts max. with port. head

##### Triax Module

**LDK 4521/xx:** Fischer /10; Tri-Lock /20; ARD /30; Lemo4E /40; LemoBBC /50; Lemo3T /60

##### External Video

**LDK 4530/xx:** Analog input module /10; digital/analog (switchable) /40

**Analog in/out:** BNC 2x, 1.0 Vp-p, 75Ω (loop-through) (C) VBS

**SDI in:** BNC 2x, 0.8 Vp-p, 75Ω, SMPTE 259M, ITU-R, BT.601 OR

##### SD Output for HD Module

**LDK 4531/30: SDI out:** BNC 3x, 0.8 Vp-p, 75Ω, SMPTE 259M, ITU-R, BT.601

##### Analog out:

- BNC 3x, R, G, B or Y, Pr, Pb, or 3x CVBS (menu selection)
- RGB /Y, Pr, Pb out: 3x 0.7 Vp-p, 75Ω
- CVBS out: 3x 1.0 Vp-p, 75Ω

**Frequency response:** 0.1 to 5.75 MHz (+0.5 dB/-1 dB)

**K factor:** Less than 2%

#### 2 ch. Audio & 2/4-wire Intercom

##### LDK 4540/10

**Audio out:** XLR-3 2x, 0/+6 dBu (±1.5 dB, max. 18 dBu, 600Ω, gain max. 70 dB)

- Frequency response: 40 Hz to 15 kHz, (+1/-3 dB, 1 kHz, -10 dBu output level)

- Distortion: Less than 0.5% (100 Hz / 1 kHz, +6 dBu out, 600Ω)

- S/N ratio: 58 dB (unweighted RMS)

##### Intercom in/out:

- D-sub 15-pin, female (program in, production in/out, engineering in/out)

- In: 0 or 6 dBu (max. 6 or 12 dBu)

- Out: 0 or 6 dBu (±2 dB, max. 12 dBu)

- Frequency response: 150 Hz to 6 kHz (1 kHz, -10 dBu output level)

- Distortion: Less than 2% (1 kHz, +12 dBu level)

##### Engineering Intercom

**LDK 4541/xx:** XLR-5 (female) /10; Tuchel 6-pin /20; Tuchel 5-pin /30; XLR7 (female) /40

**Intercom out:** 6 dBu, ±2 dB, max. 12 dBu, 25-400Ω

**Frequency response:** 150 Hz to 6 kHz, ±3 dB (0 dB, 1 kHz, -10 dBu output level)

**S/N ratio:** 46 dB (unweighted RMS)

**Phantom power:** +12 VDC (±1V), menu selectable

##### Monitoring

##### LDK 4560/20

**PXM video out, WFM video out:** BNC 2x, 1.0 Vp-p, 75Ω, SMPTE 274M or SMPTE 296M (depending on acquisition format); R, G, B or Y (menu selection) with HD tri-level sync

**Analog HDTV out:** VGA-type D-connector, 15-pin, female, with R, G, B, H-sync and V-sync

## ORDERING INFORMATION

Please contact your authorized Grass Valley representative.

[www.grassvalley.com/sales](http://www.grassvalley.com/sales)

## CUSTOMER SUPPORT & PROFESSIONAL SERVICES

Our customer support and professional services offerings ensure optimal system performance and maximize uptime. These services include call centers staffed around the clock, commissioning, professional training courses, and technical maintenance programs and service agreements.

[www.grassvalley.com/support](http://www.grassvalley.com/support)