




# LD Systems LDDSP44K 4-Channel DSP Amplifier with Dante User Manual

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## LD Systems LDDSP44K 4-Channel DSP Amplifier with Dante



**YOU'VE MADE THE RIGHT CHOICE!**

We have designed this product to operate reliably over many years. LD Systems stands for this with its name and many years of experience as a manufacturer of high-quality audio products. Please read this User's Manual carefully, so that you can begin making optimum use of your LD Systems product quickly.

You can find more information about LD-SYSTEMS at our Internet site [WWW.LD-SYSTEMS.COM](http://WWW.LD-SYSTEMS.COM)

## **PREVENTIVE MEASURES**

1. Please read these instructions carefully.
2. Keep all information and instructions in a safe place.
3. Follow the instructions.
4. Observe all safety warnings. Never remove safety warnings or other information from the equipment.
5. Use the equipment only in the intended manner and for the intended purpose.
6. Use only sufficiently stable and compatible stands and/or mounts (for fixed installations). Make certain that wall mounts are properly installed and secured. Make certain that the equipment is installed securely and cannot fall down.
7. During installation, observe the applicable safety regulations for your country.
8. Never install and operate the equipment near radiators, heat registers, ovens or other sources of heat. Make certain that the equipment is always installed so that it is cooled sufficiently and cannot overheat.
9. Never place sources of ignition, e.g., burning candles, on the equipment.
10. Ventilation slits must not be blocked.
11. Keep a minimum distance of 20 cm around and above the device.
12. Do not use this equipment in the immediate vicinity of water (does not apply to special outdoor equipment – in this case, observe the special instructions noted below. Do not expose this equipment to flammable materials, fluids or gases. Avoid direct sunlight!
13. Make certain that dripping or splashed water cannot enter the equipment. Do not place containers filled with liquids, such as vases or drinking vessels, on the equipment.
14. Make certain that objects cannot fall into the device.
15. Use this equipment only with the accessories recommended and intended by the manufacturer.
16. Do not open or modify this equipment.
17. After connecting the equipment, check all cables in order to prevent damage or accidents, e.g., due to tripping hazards.
18. During transport, make certain that the equipment cannot fall down and possibly cause property damage and personal injuries.
19. If your equipment is no longer functioning properly, if fluids or objects have gotten inside the equipment or if it has been damaged in another way, switch it off immediately and unplug it from the mains outlet (if it is a powered device). This equipment may only be repaired by authorized, qualified personnel.
20. Clean the equipment using a dry cloth.
21. Comply with all applicable disposal laws in your country. During disposal of packaging, please separate plastic and paper/cardboard.
22. Plastic bags must be kept out of reach of children.
23. Please note that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

### **FOR EQUIPMENT THAT CONNECTS TO THE POWER MAINS**

24. CAUTION: If the power cord of the device is equipped with earthing contact, then it must be connected to an outlet with a protective ground. Never deactivate the protective ground of a power cord.
25. If the equipment has been exposed to strong fluctuations in temperature (for example, after transport), do not switch it on immediately. Moisture and condensation could damage the equipment. Do not switch on the equipment until it has reached room temperature.
26. Before connecting the equipment to the power outlet, first verify that the mains voltage and frequency match

the values specified on the equipment. If the equipment has a voltage selection switch, connect the equipment to the power outlet only if the equipment values and the mains power values match. If the included power cord or the power adapter does not fit in your wall outlet, contact your electrician.

27. Do not step on the power cord. Make certain that the power cable does not become kinked, especially at the mains outlet and/or power adapter and the equipment connector.
28. When connecting the equipment, make certain that the power cord or power adapter is always freely accessible. Always disconnect the equipment from the power supply if the equipment is not in use or if you want to clean the equipment. Always unplug the power cord and power adapter from the power outlet at the plug or adapter and not by pulling on the cord. Never touch the power cord and power adapter with wet hands.
29. Whenever possible, avoid switching the equipment on and off in quick succession because otherwise, this can shorten the useful life of the equipment.
30. **IMPORTANT INFORMATION:** Replace fuses only with fuses of the same type and rating. If a fuse blows repeatedly, please contact an authorized service centre.
31. To disconnect the equipment from the power mains completely, unplug the power cord or power adapter from the power outlet.
32. If your device is equipped with a Volex power connector, the mating Volex equipment connector must be unlocked before it can be removed. However, this also means that the equipment can slide and fall down if the power cable is pulled, which can lead to personal injuries and/or other damage. For this reason, always be careful when laying cables.
33. Unplug the power cord and power adapter from the power outlet if there is a risk of a lightning strike or before extended periods of disuse.

#### **CAUTION:**

To reduce the risk of electric shock, do not remove the cover (or back). There are no user-serviceable parts inside. Maintenance and repairs should be exclusively carried out by qualified service personnel.

- The warning triangle with the lightning symbol indicates dangerous uninsulated voltage inside the unit, which may cause an electrical shock.
- The warning triangle with an exclamation mark indicates important operating and maintenance instructions.
- **Warning!** This symbol indicates a hot surface. Certain parts of the housing can become hot during operation. After use, wait for a cool-down period of at least 10 minutes before handling or transporting the device.
- **Warning!** This device is designed for use below 2000 meters in altitude.
- **Warning!** This product is not intended for use in tropical climates.

#### **CAUTION! HIGH VOLUMES IN AUDIO PRODUCTS!**

This device is meant for professional use. Therefore, commercial use of this equipment is subject to the respectively applicable national accident prevention rules and regulations. As a manufacturer, Adam Hall is obligated to notify you formally about the existence of potential health risks.

Hearing damage due to high volume and prolonged exposure: When in use, this product is capable of producing high sound-pressure levels (SPL) that can lead to irreversible hearing damage in performers, employees, and audience members. For this reason, avoid prolonged exposure to volumes in excess of 90 dB.

**NOTE:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this

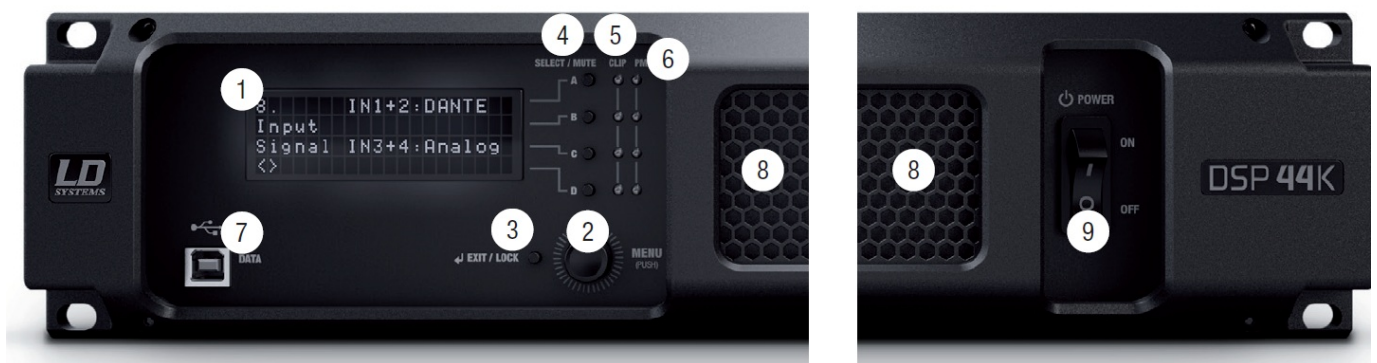
equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

## INTRODUCTION

The LD Systems® DSP 44 K and DSP 45 K are designed to meet the very highest audio demands in terms of performance and functional reliability. The professional 4-channel power amplifiers feature an extensive range of DSP functions (DSP 44 K with Dante™ interface), delivering stunning performance and uncompromising sound quality with an output of 1,200 watts per channel and 2 x 2,400 watts bridged. The high-efficiency Class H topology with switching power supply and power factor correction (PFC) provides a wide dynamic range and excellent impulse fidelity. The power amplifiers are equipped with a soft starter and comprehensive circuitry protection, including DC, overcurrent, thermal and short circuit protection. Additional protection is provided by two limiters preventing power supply overload and power amplifier clipping, as well as by both temperature-controlled fans. These ensure exceptional operational safety even under extreme conditions. The 24-bit DSP allows precise control with FIR and IIR filters, parametric EQ, crossover, delay, RMS and peak limiters. User-configurable loudspeaker presets with password protection enable fast set-up. Both power amplifiers sport a menu-driven 4-line display and rotary encoder with a push-button switch for easy configuration. The Dante™ interface (in the DSP 44 K) allows instant integration in Dante™ networks, while the software included enables computer control and monitoring. The LD Systems® DSP 44 K and DSP 45 K power amplifiers are housed in a dual rack space all-steel chassis and weigh just 7 kg. They provide balanced Neutrik® XLR inputs, speakON® output connectors plus USB and Ethernet ports. The preset library ensures optimum performance and safe operation of LD Systems® loudspeakers.

## CONNECTIONS, OPERATING AND DISPLAY ELEMENTS



### 1. DISPLAY

Multi-functional LC screen for display of speaker presets, audio signal level and channel mute. It also shows menu items in the edit menu, allowing system settings to be made as required.

### 2. MENU / ENTER

Combined push-and-turn dial to access the edit menu and select and edit individual menu items.

### 3. EXIT / LOCK

EXIT: Press the button briefly to move up one level in the menu structure to the main display (more than once if necessary).

LOCK: Press and hold the button for about 5 seconds to lock the controls and prevent unintentional and

unauthorized changes being made. To deactivate the lock, press and hold the MENU dial for approximately 3 seconds.

#### 4. **SELECT / MUTE A – D**

**SELECT:** Briefly press the relevant button to select the desired channel in the edit menu.

**MUTE:** Press and hold the relevant button for about 3 seconds to mute the selected channel and for about 3 seconds to unmute it.

#### 5. **CLIP**

The CLIP LED display lights up when the relevant amp channel is operated in the upper threshold range. Brief illumination of the LED is uncritical here. In order to protect the system, an excessive signal level is gently down-regulated by the integrated limiters. If the CLIP LED lights up for a prolonged period or permanently, reduce the volume level.

#### 6. **PMS (POWER MANAGEMENT SYSTEM)**

The PMS is an electronic protection system that permanently monitors the main amp parameters so as to only draw from the power supply the amount of current required to maintain safe operation (monitoring of signal input, capacity, temperature, current). The PMS LED lights up in the following situations:

During the power-up process until the amp is fully functional. The outputs are muted at the same time.

Due to unfavorable operating conditions, the internal temperature rises to near the point when the system would automatically shutdown to prevent overheating. Here the system takes control, restricting current so as to maintain operational continuity at the power level which the amp is capable of withstanding at that particular moment.

Excessive mains current consumption. This only occurs either under laboratory conditions during protracted sinusoidal signal testing using dummy loads or in conditions of prolonged acoustic feedback. Here the PMS takes control to avoid any damage to the speakers and to prevent the mains breaker from tripping or the fuses blowing.

#### 7. **DATA**

The USB interface enables management and control of the DSP amp via LD Systems OCS software (can be downloaded free of charge on the product page at [WWW.LD-SYSTEMS.COM](http://WWW.LD-SYSTEMS.COM))

#### 8. **VENTILATION GRILL**

In order to avoid overheating of the device, ensure that the ventilation grill is not covered and that air can circulate freely.

#### 9. **POWER ON/OFF**

On/off switch for device's power supply.



#### 10. **POWER CABLE**

Permanently attached power cable with CEE 7/7 mains plug.

#### 11. **LINE INPUT IN CH 1–4**

Balanced line inputs for channels 1 to 4 with 3-pin XLR sockets (female). Control by unbalanced cables is also possible but balanced signal transmission is preferable due to the higher level of noise immunity.

Balanced pin connections: Pin 1 = shield, Pin 2 = +, Pin 3 = –

Unbalanced pin connections: Pin 1 & 3 = shield & -, Pin 2 = +

## 12. **LINK CH 1–4**

Balanced line outputs for channels 1 to 4 with 3-pin XLR sockets (male). The sockets for the CH 1 to 4 line outputs are connected in parallel with the relevant input sockets IN CH 1 to 4.

## 13. **OUTPUT CH A – CH D**

SpeakON speaker outputs for channels A to D. To avoid damage to the equipment, make sure that the total impedance of the connected speakers is at least 2 ohms.

Socket assignment OUT CH A/B: plus 1 & minus 1 = CH A / plus 2 & minus 2 = CH B

Socket assignment OUT CH B: plus 1 & minus 1 = CH B

Socket assignment OUT CH C/D: plus 1 & minus 1 = CH C / plus 2 & minus 2 = CH D

Socket assignment OUT CH D: plus 1 & minus 1 = CH D

In Bridge mode, the channel pairs CH A / CH B and CH C / CH D are linked to create higher-performance mono amps. The line input for Bridge A/B is XLR socket IN CH 1, for Bridge C/D the line input is XLR socket IN CH 3. In Bridge mode, the minimum impedance for connected speakers is 4 ohms.

Socket assignment OUT CH A/B BRD: plus 1 & minus 2

Socket assignment OUT CH C/D BRD: plus 1 & minus 2

## 14. **ETHERNET**

The Ethernet interface enables management and remote control of the DSP amp via LD Systems OCS software (can be downloaded free of charge on the product page at [WWW.LDSYSTEMS.COM](http://WWW.LDSYSTEMS.COM))

## 15. **DANTE™ (DSP 44 K only)**

The Dante™ interface allows loss-free and interference-free transmission of digital audio signals over long distances using commonly available CAT5e (or better) Ethernet cables (Primary = Network 1, Secondary = Network 2).

## 16. **HOUSING FAN**

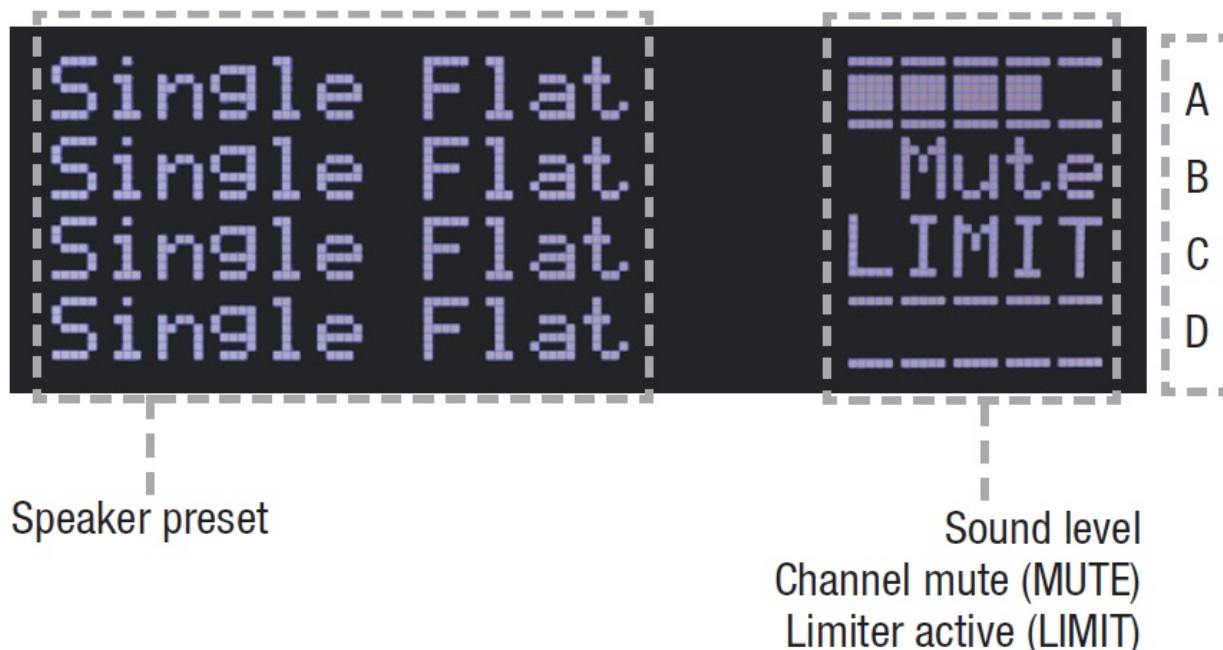
In order to avoid overheating of the device, ensure that the fan is not covered and that air can circulate freely.

# **OPERATION**

## **MAIN DISPLAY**

When the amp is switched on, the model name of the device and “Initializing Dante” (DSP44K only) appear briefly, then “Press A – Mute all” for a few seconds. In order to permanently mute all outputs at this point, press SELECT / MUTE button A to the right of the display briefly for as long as “Press A – Mute all” is shown. “All Muted” then briefly appears on the display. During the power-up process, all outputs are always muted and the PMS display LEDs for channels A to D light up. After the power-up process, the PMS display LEDs turn off and the main display appears showing the following information: speaker preset and audio level, channel mute (Mute), or amp limiter activate LIMIT) for channels A to D.





**NOTE:** Up to 80 so-called amp presets are available for the internal storage of individual settings in menu items 1 to 7 and 9 (see “ADVANCED MENU”). Only menu item 8 Input Configuration (analog / Dante, DSP44K only) cannot be saved as an amp preset. Here the setting has to be made separately.

#### MENU ITEM 1 – SPEAKER PRESET (Speaker Select)

Three libraries are available from which to select a speaker preset.

1. LD SYSTEMS: Presets for selected LD SYSTEMS speakers.
2. User: presets which can be created by the user (only using LD Systems OCS software).
3. Flat: three presets in which the audio signal is not processed by the internal DSP (01 Single Flat, 02 2Ways Flat, 03 Bridge Flat).

Briefly press the MENU dial to access the device settings selection menu and then turn the dial to select menu item 1. Spk. Sel. off. Now press one of the buttons SELECT A to D to open the desired preset library for the relevant channel. To do this, turn the dial to move the arrow to Library, confirm by pressing the dial, select the desired library by turning the dial and confirm again by pressing the dial. In order to load a speaker preset, turn the dial to move the arrow to the bottom line of the display, select the desired speaker preset by turning the dial and then press the dial. To confirm, press the dial until Yes appears in the bottom line and then press the dial again. In order to select and edit one of the other channels A to D, turn the dial to move the arrow to Output Channel, press the dial, select the desired channel by turning the dial and confirm by pressing the dial once again (further steps as described above). When speaker presets are loaded, the data of the previously loaded preset is overwritten. In order to return to the main display, briefly press the EXIT / LOCK button, several times if necessary.

```
1.  A:Single Flat
   Spk. B:Single Flat
   Sel. C:Single Flat
   <>  D:Single Flat
```

```
Select Speaker
Output Channel:A
>Library:Flat
01:Single Flat
```

```
Select Speaker
Output Channel:A
Library:Flat
>01:Single Flat
```

```
Change of
Speaker Preset
Are you sure?
>Yes
```

#### MENU ITEM 2 – GAIN

Set the gain of channels A to D from -60dB to +12dB. Briefly press the MENU dial to access the device settings selection menu and then turn the dial to select menu item 2. Gain off. Now press one of the buttons SELECT A to D and make the desired setting in the relevant channel by turning the dial (turn slowly for fine adjustment and quickly for rough adjustment). Press the dial to activate. In order to select and edit one of the other channels A to D, turn the dial to move the arrow to the desired channel, press the dial and make the settings as described

above. In order to return to the main display, briefly press the EXIT / LOCK button, several times if necessary.

```
2.   A:  0.0dB-----
Gain B:  0.0dB=====
    C:  0.0dB=====
<>  D:  0.0dB-----
```

```
2.   A:  0.0dB-----
Gain B:  0.0dB=====
    C:  0.0dB=====
    D:  0.0dB-----
```

```
2.   A:  0.0dB-----
Gain >B: 0.0dB=====
    C:  0.0dB=====
    D:  0.0dB-----
```

### MENU ITEM 3 – CHANNEL MUTE (Mute)

Mute channels A to D. Briefly press the MENU dial to access the device settings selection menu and then turn the dial to select menu item 3. Mute off. Now press one of the buttons SELECT A to D and make the desired setting in the relevant channel by turning the dial (Mute On/Mute Off). Press the dial to activate. In order to select and edit one of the other channels A to D, turn the dial to move the arrow to the desired channel, press the dial and make the settings as described above. In order to return to the main display, briefly press the EXIT / LOCK button, several times if necessary.

```
3.   A:Off
Mute B:Off
    C:Off
<>  D:Off
```

```
3.   A:On
Mute B:Off
    C:Off
    D:Off
```

```
3.   A:On
Mute >B:Off
    C:Off
    D:Off
```

### MENU ITEM 4 – POLARITY

Set the polarity of channels A to D.

Briefly press the MENU dial to access the device settings selection menu and then turn the dial to select menu item 4. Pol. off. Press one of the buttons SELECT A to D and make the desired setting in the relevant channel by turning the dial (Normal (+) = polarity not inverted, Invert (-) = polarity inverted). Press the dial to activate. In order to select and edit one of the other channels A to D, turn the dial to move the arrow to the desired channel, press the dial and make the settings as described above. In order to return to the main display, briefly press the EXIT / LOCK button, several times if necessary.

```
4.   A:Normal[+]
Pol. B:Normal[+]
    C:Normal[+]
<>  D:Normal[+]
```

```
4.   A:Invert[-]
Pol. B:Normal[+]
    C:Normal[+]
    D:Normal[+]
```

```
4.   A:Invert[-]
Pol. >B:Normal[+]
    C:Normal[+]
    D:Normal[+]
```

### MENU ITEM 5 – DELAY

Set the channel delay for channels A to D.

Briefly press the MENU dial to access the device settings selection menu and then turn the dial to select menu item 5. Delay-off. Now press one of the buttons SELECT A to D and make the desired setting in the relevant channel by turning the dial (delay is displayed in meters and milliseconds, delay up to max. 138 ms, 25°C = reference temperature – setting for reference temperature via LD Systems OCS software). Press the dial to activate. In order to select and edit one of the other channels A to D, turn the dial to move the arrow to the desired channel, press the dial and make the settings as described above. In order to return to the main display, briefly press the EXIT / LOCK button, several times if necessary.

```
5.   A: 0.00m 0ms
Delay B: 0.00m 0ms
25°C C: 0.00m 0ms
<>  D: 0.00m 0ms
```

```
5.   A: 1.72m 5ms
Delay B: 0.00m 0ms
25°C C: 0.00m 0ms
    D: 0.00m 0ms
```

```
5.   A: 1.72m 5ms
Delay >B: 0.00m 0ms
25°C C: 0.00m 0ms
    D: 0.00m 0ms
```

### MENU ITEM 6 – PARAMETRIC EQUALIZER

12-band parametric equalizer for channels A to D.

Briefly press the MENU dial to access the device settings selection menu and then turn the dial to select menu



item 6. PEQ off. Press one of the buttons SELECT A to D to make the desired setting in the relevant channel. Turn the dial to select the desired equalizer band 1 to 12 in order to edit, then confirm by pressing the dial (Band 1 = Low Shelf, Band 2–11 = Bell, Band 12 = High Shelf). Now you can edit the filter quality (Q), frequency (Freq.) and gain (Gain) of the selected band according to preference by moving the arrow to the relevant position, pressing the dial to confirm and making settings by turning the dial. Press the dial to activate. In order to select and edit one of the other channels A to D, press EXIT once, move the arrow to the desired channel, press the dial and make the settings as described above. In order to return to the main display, briefly press the EXIT / LOCK button, several times if necessary.

6. A:----- PEQ B:----- C:----- <> D:-----	Out A01_LShelf Q :0.7 Freq.:1000Hz Gain :0.0dB	Out A:1_LShelf >Q :0.7 Freq.:1000Hz Gain :0.0dB	Out A:1_LShelf Q :0.7 >Freq.:1000Hz Gain :0.0dB
--	---	--	--

Out A:1_LShelf Q :0.7 Freq.:1000Hz >Gain :0.0dB
--

## MENU ITEM 7 – INPUT ROUTING

Route inputs 1 to 4 to channels A to D.

Briefly press the MENU dial to access the device settings selection menu and then turn the dial to select menu item 7. Input Route off. Now press one of the buttons SELECT A to D and make the desired setting in the relevant channel by turning the dial (route inputs 1–4, 1 + 2 , 3 + 4). Press the dial to activate. In order to select and edit one of the other channels A to D, turn the dial to move the arrow to the desired channel, press the dial and make the settings as described above. In order to return to the main display, briefly press the EXIT / LOCK button, several times if necessary.

7. A:1 ----- Input B:2 ===== Rout C:3 ===== <> D:4 -----	7. A01 ----- Input B:2 ===== Rout C:3 ===== D:4 -----	7. A:1 ----- Input B:2 ===== Rout C:1+2 ===== >D:3+4 =====
---	--	---

## MENU ITEM 8 – INPUT SIGNAL

Set the input signal (analogue, DANTE – LD DSP44K only).

Briefly press the MENU dial to access the device settings selection menu and then turn the dial to select menu item 8. Input Conf. off. Press one of the buttons SELECT A to D to make the desired setting in the relevant input pair by turning the dial (input 1 + 2, input 3 + 4). Press the dial to activate. In order to select and edit the other input pair, turn the dial to move the arrow to the desired pair, press the dial and make the settings as described above. In order to return to the main display, briefly press the EXIT / LOCK button, several times if necessary.

8. IN1+2:Analog Input Signal IN3+4:Analog <>	8. IN1+20Analog Input Signal IN3+4:Analog	8. >IN1+2:DANTE Input Signal IN3+4:Analog
---	---	---

## MENU ITEM 9 – OUTPUT CONFIGURATION

Set the output configuration (Single, 2-Way active, Bridge).

Briefly press the MENU dial to access the device settings selection menu and then turn the dial to select menu item 9. Outp. Conf. off. Press one of the buttons SELECT A to D and set the desired output configuration for the relevant channel pair by turning the dial. Press the dial. Turn the dial until Yes appears in the bottom line and then press again to confirm. In order to select and edit the other channel pair, turn the dial to move the arrow to the desired pair, press the dial and make the settings as described above. When the output configuration is changed, the data of the previously loaded preset is overwritten. In order to return to the main display, briefly press the EXIT / LOCK button, several times if necessary.

9. A:Single Outp. B:Single Conf. C:Single <> D:Single	9. A:Single Outp. B:Single Conf. C:Single D:Single	Change of Outp.Conf will reset speaker Are you sure? No	9. A:2-Way active Outp. B:2-Way active Conf.>C:Bridge >D:Bridge
--	---	--	--

## ADVANCED MENU

Press and hold the MENU dial for about 3 seconds to get to the advanced menu. Select the desired menu item by turning the MENU dial (note position of arrow) and confirm by pressing the dial. The menu item Amp Preset is for managing the amp presets, while the menu item Amp Setup allows an individual amp name to be entered, as well as the IP address and a password if required. The temperature of the individual amp channels can be viewed as a percentage under the menu item Amp Temperature, while Amp Info provides the serial number, firmware version and operation time.

### Amp Preset – Load Amp Preset

In order to load a saved amp preset from the internal memory, select the menu item Load Amp Preset by turning the MENU dial and confirming by pressing the dial. Now select the amp preset to be loaded by turning the dial once again and confirm by pressing the dial. In the subsequent dialogue, turn the dial to select “Yes” and confirm by pressing the dial. In order to return to the main display, briefly press the EXIT / LOCK button twice.

>AMP Preset AMP Setup AMP Temperature AMP Info	>Load AMP Preset Save AMP Preset Factory Settings	Load AMP Preset >00Global Flat	Change of AMP Preset will change Setup! Are you sure? Yes
---	---	-----------------------------------	--

### Amp Preset – Save Amp Preset

Up to 80 presets are available for internal storage of individual settings in menu items 1–7 and 9. Only menu item 8 Input Signal (analogue / Dante, DSP44K only) cannot be saved as an amp preset. Here the setting has to be made separately. Make the settings in menu items 1 to 7 and 9 as required then select the menu item Save Amp Preset in the advanced menu and select an empty preset (Empty) by turning the dial. Confirm by pressing the dial and enter the characters for the preset name one by one by repeated turning and pressing of the dial (15 characters maximum). To save the preset, press the SELECT / MUTE button D. In order to return to the main display, briefly press the EXIT / LOCK button twice.

>AMP Preset AMP Setup AMP Temperature AMP Info	Load AMP Preset >Save AMP Preset Factory Settings	Save AMP Preset >01[Empty]	Please enter a name: 01>Preset 1 (press D to save)
---	---	-------------------------------	--

### Amp Preset – Factory Settings

To return the amp to its factory settings, select the menu item Factory Settings, press the MENU dial, turn the dial to select “Yes” in the following dialogue and confirm by pressing the dial. Speaker presets in the LD SYSTEMS library are preserved, password request is set to disabled and the password is reset to 0000 (four zeros).

>AMP Preset AMP Setup AMP Temperature AMP Info	Load AMP Preset Save AMP Preset >Factory Settings	This will restore to factory settings Are you sure? Yes	*Restoring AMP...
---	---	--	-------------------

### Amp Setup – Name

To give the amp an individual name, select the menu item Name, press the MENU dial and enter the characters of the name one by one by repeated turning and pressing of the dial (10 characters maximum). When the tenth character has been entered, press the dial once again to confirm entry.

```
AMP Preset
>AMP Setup
AMP Temperature
AMP Info
```

```
>Name:NoName
IP:192.168. 1. 3
Password:disable
```

```
Name>Amp 1 >
IP:192.168. 1. 3
Password:disable
```

### Amp Setup – IP address

To manually assign an IP address to the amp, select the menu item IP and press the MENU dial. Now the number can be entered for the first of four number blocks by turning the dial. Confirm entry by pressing the dial, then the number for the second block can be entered. Proceed in the same way to enter the numbers for blocks three and four.

```
AMP Preset
>AMP Setup
AMP Temperature
AMP Info
```

```
Name:NoName
>IP:192.168. 1. 3
Password:disable
```

### Amp Setup – Password

In order to protect the amp from unwanted and unauthorized access, the password request can be enabled and a 4-digit number can be set as the password. Select the menu item Password, press the MENU dial, turn the dial to select “enable” and confirm by pressing the dial. Now the number can be entered for the first digit by turning the dial. Press the dial to confirm this entry and then set the second digit. Proceed in the same way to enter the numbers for digits three and four. Password entry is now requested before it is possible to access the amp menu. To disable the password request, select “disable” and confirm by pressing the dial.

```
AMP Preset
>AMP Setup
AMP Temperature
AMP Info
```

```
Name:NoName
IP:192.168. 1. 3
>Password:disable
```

```
Name:Amp 1
IP:192.168. 1. 3
Passwordenable
```

```
Enter Password
00 0 0 0
```

### Amp Temperature

The temperature of the individual amp channels can be viewed as a percentage under the menu item Amp Temperature. Select the menu item Amp Temperature and press the MENU dial (0% = low temperature, no danger to the system, 100% = high temperature, the PMS (Power Management System) takes over control and regulates the power supply). In order to return to the main display, briefly press the EXIT / LOCK button twice.

```
AMP Preset
AMP Setup
>AMP Temperature
AMP Info
```

```
AMP Temp. A: 0%
B: 0%
C: 0%
D: 0%
```

### Amp Info

The menu item Amp Info provides the serial number, firmware version and operation time in hours and minutes. Select the menu item Amp Info and press the MENU dial. In order to return to the main display, briefly press the EXIT / LOCK button twice.

```

Amp Preset
Amp Setup
Amp Temperature
>Amp Info

```

```

Serial No:
Firmware:
Oper.Time:

```

## TECHNICAL DATA

TECHNICAL DATA		
Model number:	LDDSP44K	LDDSP45K
Product type:	DSP controlled amplifier	DSP controlled amplifier
Type:	4-Channel	4-Channel
Rated output power (1 kHz @ 2 Ohm):	4 x 1200 W	4 x 1200 W
Rated output power (1 kHz @ 2,7 Ohm):	4 x 1500 W	4 x 1500 W
Rated output power (1 kHz @ 4 Ohm):	4 x 1200 W	4 x 1200 W
Rated output power (1 kHz @ 8 Ohm):	4 x 675 W	4 x 675 W
Rated output power (Bridge @ 4 Ohm):	2 x 2400 W	2 x 2400 W
Rated output power @ 70 V Mode :	4 x 1200 W	4 x 1200 W

Rated output power @ 100 V Mode:	2 x 2400 W	2 x 2400 W
Output circuitry:	Class H	Class H
Frequency response +/- 1dB:	10 Hz – 22000 Hz (depending on preset)	10 Hz – 22000 Hz (depending on preset)
THD:	< 0,05 % @ 1 kHz (depending on preset)	< 0,05 % @ 1 kHz (depending on preset)
Gain:	32 dB (depending on preset)	32 dB (depending on preset)
Protection circuits:	Over-current, soft-start, DC, thermal overload, short circuit, multiband peak limiter, RMS limiter, SMPS overload limiter, output clip limiter	Over-current, soft-start, DC, thermal overload, short circuit, multiband peak limiter, RMS limiter, SMPS overload limiter, output clip limiter
Controls:	Push encoder; 4 direct access buttons; exit/ lock button ; Power Switch	Push encoder; 4 direct access buttons; exit/ lock button ; Power Switch
Indicators:	4 line LC Display with backlight	4 line LC Display with backlight
AD/DA converter sampling frequency:	48 kHz	48 kHz
AD/DA converter resolution:	24 Bit	24 Bit
Dynamic range:	104 dB	104 dB

Maximum delay / Channel:	input: 48m(141ms) / output: 1m(3ms)	input: 48m(141ms) / output: 1m(3ms)
DSP Functions:	FIR and IIR filters, parametric EQ, crossover, I/O delay, RMS and Peak limiters, input matrix, password protected loudspeaker presets	FIR and IIR filters, parametric EQ, crossover, I/O delay, RMS and Peak limiters, input matrix, password protected loudspeaker presets
Line inputs:	4	4
Line input connectors:	Neutrik XLR	Neutrik XLR
Line through:	4	4
Line through connectors:	Neutrik XLR	Neutrik XLR
Loudspeaker outputs:	4	4
Speaker output connections:	Speakon	Speakon
Digital audio interface:	DANTE™ (Digital Audio Network Through Ethernet)	
Cooling:	two temperature-controlled fans	two temperature-controlled fans
Operating voltage:	Switching power supply, 100-240 V AC, 50-60Hz	Switching power supply, 100-240 V AC, 50-60Hz
Power consumption @ full load:	1900 W	1900 W



Ambient temperature (in operation):	0°C – 40°C	0°C – 40°C
Relative humidity (in operation):	<80% (non condensing)	<80% (non condensing)

Width:	482 mm	482 mm
Height:	89 mm	89 mm
Depth:	320 mm	320 mm
Weight:	7.9 kg	7.9 kg
Features:	4-channel DSP controlled, Smart 19"/ 2U housing, active PFC, Dante™ Interface, Ethernet , USB front port, LD Systems loudspeaker preset library, computer control software	4-channel DSP controlled, Smart 19"/ 2U housing, active PFC, Ethernet, USB front port, LD Systems loudspeaker preset library, computer control software

## MANUFACTURER'S DECLARATIONS

### MANUFACTURER'S WARRANTY & LIMITATIONS OF LIABILITY

You can find our current warranty conditions and limitations of liability at: [https://cdn-shop.adamhall.com/media/pdf/Manufacturers-Declarations-LDSYSTEMS\\_DE\\_EN\\_ES\\_FR.pdf](https://cdn-shop.adamhall.com/media/pdf/Manufacturers-Declarations-LDSYSTEMS_DE_EN_ES_FR.pdf). To request warranty service for a product, please contact Adam Hall GmbH, Adam-Hall-Str. 1, 61267 Neu Anspach / Email: [Info@adamhall.com](mailto:Info@adamhall.com) / +49 (0)6081 / 9419-0.

### CORRECT DISPOSAL OF THIS PRODUCT

(valid in the European Union and other European countries with a differentiated waste collection system) This symbol on the product, or on its documents indicates that the device may not be treated as household waste. This is to avoid environmental damage or personal injury due to uncontrolled waste disposal. Please dispose of this product separately from other waste and have it recycled to promote sustainable economic activity. Household users should contact either the retailer where they purchased this product, or their local government office, for details on where and how they can recycle this item in an environmentally friendly manner. Business users should contact their supplier and check the terms and conditions of the purchase contract. This product should not be mixed with other commercial waste for disposal.

### FCC STATEMENT

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation

### CE Compliance

Adam Hall GmbH states that this product meets the following guidelines (where applicable): R&TTE (1999/5/EC) or RED (2014/53/EU) from June 2017  
Low voltage directive (2014/35/EU)

EMV directive (2014/30/EU)

RoHS (2011/65/EU)

The complete declaration of conformity can be found at [www.adamhall.com](http://www.adamhall.com). Furthermore, you may also direct your enquiry to [info@adamhall.com](mailto:info@adamhall.com)

## Documents / Resources

	<p><a href="#">LD Systems LDDSP44K 4-Channel DSP Amplifier with Dante</a> [pdf] User Manual LDDSP44K, 4-Channel DSP Amplifier with Dante, LDDSP44K 4-Channel DSP Amplifier with Dante, Amplifier with Dante</p>
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## References

- [Eventtechnik Lösungen | Adam Hall Group](#)
- [LD Systems® | Your Sound. Our Mission.](#)
- [cdn-shop.adamhall.com/](http://cdn-shop.adamhall.com/)

Manuals+.