DCP-24

ORDERCODE D2080



Highlite International B.V.

Vestastraat 2
6468 EX Kerkrade
The Netherlands

SHOWELECTRONICS FOR PROFESSIONALS

Congratulations!
You have bought a great, innovative product from DAP Audio.
The DAP Audio DCP-24 brings excitement to any venue. Whether you want simple plug-&-play action or a sophisticated show, this product provides the effect you need.

You can rely on DAP Audio, for more excellent audio products.
We design and manufacture professional audio equipment for the entertainment industry.
New products are being launched regularly. We work hard to keep you, our customer, satisfied.
For more information: iwant@dap-audio.info

You can get some of the best quality, best priced products on the market from DAP Audio.
So next time, turn to DAP Audio for more great audio equipment.
Always get the best -- with DAP Audio !

Thank you!

DAP Audio DCP-24 Product Guide

Warning 2
Unpacking instructions 2
Safety-instructions 2
Operating determinations 4
Return procedure 4
Claims 4

Description 5
Features 5
Overview Front side 5
Overview Back side 6

Installation 6

Set Up and Operation 7
System test 7
Input setup 7
Output setup 9
Loading and saving files 12
Access level 13
Software version 13

Digital Speaker Manager software Installation 14
Software installation 14
Connecting a single DCP-24 with your PC 19
Making a connection between your PC and DCP-24 19

Software Operation 20
The Main menu 20
The In A menu 22
The In B menu 23
The Out 1 menu 24
The Out 2 menu 26
The Out 3 menu 26
The Out 4 menu 26

Connection Cables 27

Maintenance 28

Troubleshooting 28

Product Specifications 29

WARNING

FOR YOUR OWN SAFETY, PLEASE READ THIS USER MANUAL CAREFULLY BEFORE YOUR INITIAL START-UP!

Unpacking Instructions
Immediately upon receiving this product, carefully unpack the carton and check the contents to ensure that all parts are present, and have been received in good condition. Notify the dealer immediately and retain packing material for inspection if any parts appear damaged from shipping or the carton itself shows signs of mishandling. Save the carton and all packing materials. In the event that a fixture must be returned to the factory, it is important that the fixture be returned in the original factory box and packing.

Your shipment includes:
- DAP DCP-24
- All control edit software
- USB cable (140cm)
- 6Vdc/800mA power adapter
- User manual

WARNING



CAUTION!

Keep this system away from rain and moisture!



SAFETY INSTRUCTIONS

Every person involved with the installation, operation and maintenance of this system has to:
- be qualified
- follow the instructions of this manual



CAUTION! Be careful with your operations.
With a dangerous voltage you can suffer
a dangerous electric shock when touching the wires!



Before you initial start-up, please make sure that there is no damage caused by transportation. Should there be any, consult your dealer and do not use the system.

To maintain perfect condition and to ensure a safe operation, it is absolutely necessary for the user to follow the safety instructions and warning notes written in this manual.

Please consider that damages caused by manual modifications to the system are not subject to warranty.

This system contains no user-serviceable parts. Refer servicing to qualified technicians only.

IMPORTANT:

The manufacturer will not accept liability for any resulting damages caused by the non-observance of this manual or any unauthorized modification to the system.

- Never let the power-cord come into contact with other cables! Handle the power-cord and all connections with the mains with particular caution!
- Never remove warning or informative labels from the unit.
- Never use anything to cover the ground contact.

- Do not insert objects into air vents.
- Do not connect this system to a dimmerpack.
- Do not switch the system on and off in short intervals, as this would reduce the system's life.
- Only use system indoor, avoid contact with water or other liquids.
- Avoid flames and do not put close to flammable liquids or gases.
- Always disconnect power from the mains, when system is not used. Only handle the power-cord by the plug. Never pull out the plug by tugging the power-cord.
- Make sure you don't use the wrong kind of cables or defective cables.
- Make sure that the signals into the mixer are balanced, otherwise hum could be created.
- Make sure you use DI boxes to balance unbalanced signals; All incoming signals should be clear.
- Make sure that the available voltage is not higher than stated on the rear panel.
- Make sure that the power-cord is never crimped or damaged. Check the system and the power-cord from time to time.
- Avoid flames and do not put close to flammable liquids or gases.
- Before connecting or disconnecting the power cord, make certain the ON / OFF switch is in the OFF position.
- Before switching on or off make certain the sound system's amplifiers are off or turned down: this will avoid signal peaks, which are annoying and sometimes dangerous (particularly for speaker enclosures).
- Avoid installing your equipment very near radio or TV sets, mobile phones, etc., as these can cause RF (radio frequency) interference.
- When connecting the other parts of your sound system, watch out for the so-called "ground loops".
- The best way (even if not always feasible) to avoid ground loops is to connect the electric ground of all the equipment to a single central point ("star" system). In this case, the central point can be the mixer.
- To avoid or solve hum and buzzing troubles, try different combinations of lifting grounds on units that are supplied with ground lift switches or make sure all chassis are connected to earth ground, either through the A.C. power cord ground or by the front panel rack mount screws.
- Before changing your grounds around, always turn your amplifiers down.
- Keep this user's manual for future consultation. Also remember that the device will get a better price on the secondhand market if (as well as being in good condition) it has its original documentation and packaging.
- Always operate the unit with the AC ground wire connected to the electrical system ground.
- Do not drive the inputs with a signal level bigger, than required to drive the equipment to full output.
- Please turn off the power switch, when changing the power cord or signal cable, or select the input mode switch.
- Sometimes, when you want to send one signal to more than one amplifier, you should use a signal distributor.
- Extreme frequency boosts in connection with a high input signal level may lead to overdriving your equipment. Should this occur, it is necessary to reduce the input signal level by using the INPUT control.
- To emphasize a frequency range, you don't necessarily have to move its respective sliding control upward; try lowering surrounding frequency ranges instead. This way, you avoid causing the next piece of equipment in your sound path to overdrive. You also preserve valuable dynamic reserve ("headroom")
- For replacement use fuses of same type and rating only.
- Prevent distortion! Make sure that all components connected to the DCP-24have sufficient power ratings. Otherwise distortion will be generated because the components are operated at their limits.
- Avoid ground loops! Always be sure to connect the power amps and the mixing console to the same electrical circuit to ensure the same phase!
- If system is dropped or struck, disconnect mains power supply immediately. Have a qualified engineer inspect for safety before operating.
- If the system has been exposed to drastic temperature fluctuation (e.g. after transportation), do not switch it on immediately. The arising condensation water might damage your system. Leave the system switched off until it has reached room temperature.
- Repairs, servicing and electric connection must be carried out by a qualified technician.
- WARRANTY: Till one year after date of purchase.

OPERATING DETERMINATIONS

This system is not designed for permanent operation. Consistent operation breaks will ensure that the system will serve you for a long time without defects.

If this system is operated in any other way, than the one described in this manual, the product may suffer damages and the warranty becomes void.
Any other operation may lead to dangers like short-circuit, burns, electric shock, etc.

You endanger your own safety and the safety of others!

Improper installation can cause serious damage to people and property !

Connection with the mains

Connect the device to the mains with the power-plug.
Always pay attention, that the right color cable is connected to the right place.

International	EU Cable	UK Cable	US Cable	Pin
L	BROWN	RED	YELLOW/COPPER	FASE
N	BLUE	BLACK	SILVER	NUL
⏚	YELLOW/GREEN	GREEN	GREEN	EARTH

Make sure that the device is always connected properly to the earth!

⚠ Return Procedure ⚠

Returned merchandise must be sent prepaid and in the original packing, call tags will not be issued. Package must be clearly labeled with a Return Authorization Number (RMA number). Products returned without an RMA number will be refused. Highlite will not accept the returned goods or any responsibility. Call Highlite 0031-455667723 or mail aftersales@highlite.nl and request an RMA prior to shipping the fixture. Be prepared to provide the model number, serial number and a brief description of the cause for the return. Be sure to properly pack fixture, any shipping damage resulting from inadequate packaging is the customer's responsibility. Highlite reserves the right to use its own discretion to repair or replace product(s). As a suggestion, proper UPS packing or double-boxing is always a safe method to use.

Note: If you are given an RMA number, please include the following information on a piece of paper inside the box:
1) Your name
2) Your address
3) Your phone number
4) A brief description of the symptoms

Claims

The client has the obligation to check the delivered goods immediately upon delivery for any short-comings and/or visible defects, or perform this check after our announcement that the goods are at their disposal. Damage incurred in shipping is the responsibility of the shipper; therefore the damage must be reported to the carrier upon receipt of merchandise.
It is the customer's responsibility to notify and submit claims with the shipper in the event that a fixture is damaged due to shipping. Transportation damage has to be reported to us within one day after receipt of the delivery.
Any return shipment has to be made post-paid at all times. Return shipments must be accompanied with a letter defining the reason for return shipment. Non-prepaid return shipments will be refused, unless otherwise agreed in writing.
Complaints against us must be made known in writing or by fax within 10 working days after receipt of the invoice. After this period complaints will not be handled anymore.
Complaints will only then be considered if the client has so far complied with all parts of the agreement, regardless of the agreement of which the obligation is resulting.

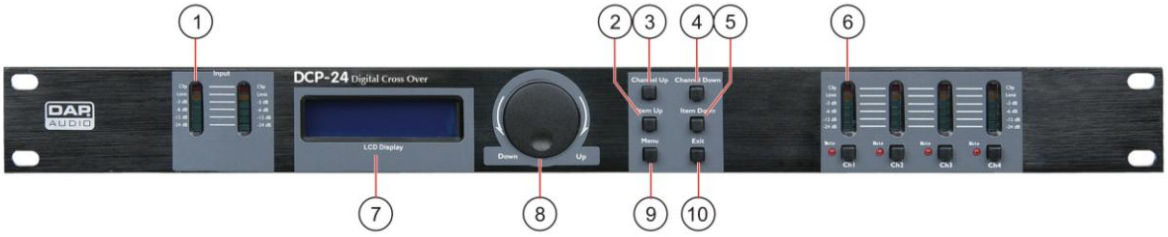
Description of the device

Features

The DCP-24 is a 2-in, 4-out digital crossover
- 48 KHz, 64Bits Sample rate
- 10 parametric filters per input and output
- USB interface with included user-friendly software
- Engineered and assembled in Europe

The DCP-24 is a very complete 2 in- 4 output digital speaker manager. Even if you are not an audio engineer you can easily setup this unit with the included software that you can connect to a PC or Mac with the onboard USB interface. It has 10 PEQ's at the in- and outputs and various types of filters to manage any kind of speaker or speaker system. Furthermore it has all features you need like phase invert, limiters and delays. Clear in and output meters in combination with the LCD display gives you all the necessary information in one overview. Our engineers will keep working on presets for the DAP speaker ranges to help you get a good start for your personal DAP audio system. Those presets can be downloaded at www.dap-audio.info or ask your local dealer. The DCP-24 is suitable for PA, line arrays and audio installations, as well as sound distribution networks.

Overview



1) Input LED indicator
Indicates the input level. Make sure the Clip led only lights up occasionally. The limit led will light up if the internal limiter is actually limiting the signal.

2) Item Up button
Pressing the Item up button allows select a parameter for editing in forward direction.
Input channels:
Gain – Lowpass – Highpass – PEQ1 – PEQ2 – PEQ3 – PEQ4 – PEQ5 – PEQ6 – PEQ7 – PEQ8 – PEQ9 – PEQ10 – Limiter – Link.
Output Channels:
Gain – Mixer -Lowpass – Highpass – PEQ1 – PEQ2 – PEQ3 – PEQ4 – PEQ5 – PEQ6 – PEQ7 – PEQ8 – PEQ9 – PEQ10 – Limiter - Phase – Link.

3) Channel Up button
Pressing the Channel up button allows you select an input or output channel for editing in forward direction: In A – In B – Out 1 – Out 2 – Out 3 – Out 4.
If two channels are linked, both channels can only be selected and edited together. E.g. if the display shows "Out 12" output channel 1 and output channel 2 are linked.

4) Channel down button
Pressing the Channel up button allows you select an input or output channel for editing in reverse direction: In A – In B – Out 1 – Out 2 – Out 3 – Out 4. If two channels are linked, both channels can only be selected and edited together. E.g. if the display shows "Out 12" output channel 1 and output channel 2 are linked.

5) Item down button
Pressing the Item down button allows select a parameter for editing in reverse direction.
Input channels:
Link – Limiter – PEQ10 – PEQ9 – PEQ8 – PEQ7 – PEQ6 – PEQ5 – PEQ4 – PEQ3 – PEQ2 – PEQ1 – Highpass - Lowpass – Gain.
Output Channels:
Link – Phase - Limiter – PEQ10 – PEQ9 – PEQ8 – PEQ7 – PEQ6 – PEQ5 – PEQ4 – PEQ3 – PEQ2 – PEQ1 – Highpass - Lowpass – Mixer - Gain.

6) Output LED indicators + mute switches
Indicates the output level. Make sure the Clip led only lights up occasionally. The limit led will light up if the internal limiter is actually limiting the signal. Pressing the mute button will mute the corresponding input indicated by the channel's mute LED.

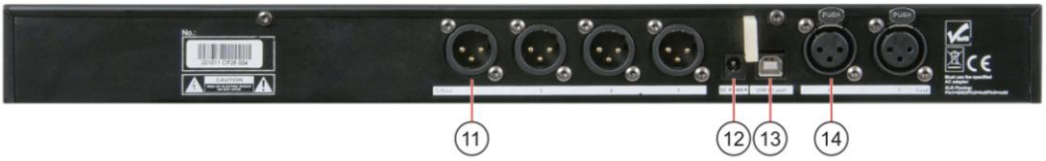
7) LCD display
To display functions and operating status.

8) Jog-wheel
Dialing the Jogwheel allows you to change parameters.
Clicking the Jogwheel allows you to enter or confirm.

9) Menu button
Pushing the Item down button allows you to select one of the following menus for editing:
Load – Save – Access level – Version info

10) Exit button
To leave the last menu/step you were in.

Backside



11) Output Sockets
XLR male balanced output.

12) DC Power connector
This connector is meant for the connection of the supplied 6Vdc/800mA power adapter. Use the supplied adapter only.

13) USB port
USB port for linking the unit with your computer.

14) XLR Input Sockets
XLR female balanced input.

Installation

Remove all packing materials from the DCP-26. Check that all foam and plastic padding is removed. Screw the equipment into a 19" rack. Connect all cables.

Always disconnect from electric mains power supply before cleaning or servicing.
Damages caused by non-observance are not subject to warranty.

Set Up and Operation

Before plugging the unit in, always make sure that the power supply matches the product specification voltage. Do not attempt to operate a 120V specification product on 240V power, or vice versa.
Install this device on a flat surface, not bend or curved.
Do not supply power before all components of the system are set up and connected properly.

Make sure to power-up your DCP-24before your power amplifiers are switched on in order to avoid loud transients, which could damage your speakers or annoy your audience.

System test

After connecting all cables, you should run a system test. Press all Mute-buttons in order to mute all outputs. Activate the HF-outputs first. In case of wrong cabling, High Frequency (HF) audio signals will come out of bass-speakers that cannot be harmed this way. Vice versa, the Low Frequency (LF) audio signals would destroy your HF-speakers.

Input setup

Press the Channel Up button to select the channel you wish to edit. In the example below, input channel A is selected.



Adjust the gain by dialing the **jogwheel (8)**. Push the **Item up (2)** button to proceed with the next item. In our example the Lowpass filter.



Adjust by dialing the **jogwheel (8)**. You can switch the lowpass filter off by dialing the **jogwheel (8)** clockwise until the frequency passes 20kHz. Click the **jogwheel (8)** to change the filter type.



Select the type by dialing the **jogwheel (8)**. You can choose from: But(terworth) 6dB, Bes(sel) 6dB, But(terworth) 12dB, Bes(sel) 12dB, L(inkwitz) R(iley)12dB, But(terworth) 18dB, Bes(sel) 18dB, But(terworth) 24dB and Bes(sel) 24dB. Once selected the correct filter type, click the **jogwheel (8)** to return to the lowpass filter frequency (for (re)adjusting) or push the **Item up (2)** button to proceed with the next item, in our example, the Highpass filter.



Adjust the highpass frequency by dialing the **jogwheel (8)**. You can switch the highpass filter off by dialing the **jogwheel (8)** counterclockwise until the frequency passes 20Hz. Click the **jogwheel (8)** to select a filter type.



Select the type by dialing the **jogwheel (8)**. You can choose from: But(terworth) 6dB, Bes(sel) 6dB, But(terworth) 12dB, Bes(sel) 12dB, L(inkwitz) R(iley)12dB, But(terworth) 18dB, Bes(sel) 18dB, But(terworth) 24dB and Bes(sel) 24dB. Once selected the correct filter type, click the **jogwheel (8)** to return to the lowpass filter frequency (for (re)adjusting) or push the Item up button to proceed with the next item, in our example, the parametric EQ 1.



Adjust the frequency by dialing the **jogwheel (8)**. Click the **jogwheel (8)** to proceed with the next parameter.



Adjust the gain by dialing the **jogwheel (8)**. Click the **jogwheel (8)** to proceed with the next parameter.



Adjust the Q factor by dialing the **jogwheel (8)**. Click the **jogwheel (8)** to proceed with the next parameter.



Select the filter type by dialing the **jogwheel (8)**. Click the **jogwheel (8)** to proceed with the next parameter.



Switch the currently selected parametric EQ on or off by dialing the **jogwheel (8)**. Click the **jogwheel (8)** to proceed to the next parameter. Or push the **item up button (2)** to select the next item. In our case PEQ 2



Adjust the PEQ 2 parameters in the same way as described for PEQ 1. Repeat this for PEQ 3 to PEQ 10 if desired.

Pushing the **Item up (2)** button after PEQ-10 is selected, let's you adjust the limiter parameters for input A.



Adjust the limiter threshold by dialing the **jogwheel (8)**. Click the **jogwheel (8)** to proceed with the next parameter.



Adjust the limiter release time (in ms) by dialing the **jogwheel (8)**.

IMPORTANT!
Enabling the limiter on a specific output also changes the way in which the level is displayed on the corresponding LED VU meter: The level shown on this meter is no longer the "absolute" output level, but the level of the signal at -24dB, -12dB, -6dB, -3dB compared to the limiter's threshold (orange limit LED), no matter what the threshold value is.

Now you've completed setting up input channel A. If the input channels are not linked, you have to push the **channel up (3)** button and set up input channel B the same way as shown for channel A.

Output setup

Select output 1 by pushing the **Channel Up (3)** button or the **Channel Down (4)** button. If you are only able to select Out 12 and Out 34, all 4 channels are linked. If you want to adjust all 4 output channels separately, you'll have to unlink the channels (see page 11).



Adjust the gain by dialling the **jogwheel (8)**. Pushing the **Item Up (2)** button allows you to proceed with the next item, in our example the mixer.



Adjust the mix volume for input A by dialling the **jogwheel (8)**. Pushing the **Item Up (2)** button allows you to proceed with the mixer menu. Note: the mix menu is only enabled if the input channels are not linked.



Adjust the mix volume for input B by dialling the **jogwheel (8)**. Push the **Item Up (2)** button to proceed with the Delay setup.



Click the jogwheel (8) to adjust the "delay" in mm, inch or ms. Then adjust the delay time by dialling the

jogwheel (8). Push the **Item Up (2)** button to proceed with the Low Pass filter menu.



Adjust the cut off frequency by dialling the **jogwheel (8)**. Click the **jogwheel (8)** to proceed with the next parameter.



Select the filter type by dialling the **jogwheel (8)**. Push the **Item Up (2)** button to proceed with the High Pass Filter menu.



Adjust the cut off frequency by dialing the **jogwheel (8)**. Click the **jogwheel (8)** to proceed with the next parameter.



Select the type by dialling the **jogwheel (8)**. You can choose from: But(terworth) 6dB, Bes(sel) 6dB, But(terworth) 12dB, Bes(sel) 12dB, L(inkwitz) R(iley)12dB, But(terworth) 18dB, Bes(sel) 18dB, But(terworth) 24dB and Bes(sel) 24dB. Once selected the correct filter type, click the **jogwheel (8)** to (re)adjust the lowpass frequency, or push the **Item up (2)** button to proceed with the next item, in our example, PEQ 1.



Adjust the gain by dialing the **jogwheel (8)**. Click the **jogwheel (8)** to proceed with the next parameter.



Adjust the Q factor by dialing the **jogwheel (8)**. Click the **jogwheel (8)** to proceed with the next parameter.



Select the filter type by dialing the **jogwheel (8)**. Click the **jogwheel (8)** to proceed with the next parameter.

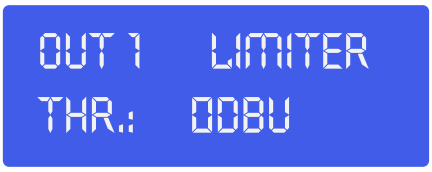


Switch the currently selected parametric EQ on or off by dialing the jogwheel. Click the jogwheel to confirm and proceed to the next parameter. Or push the **item up button (2)** to proceed with the next item. In our case PEQ 2



Adjust the PEQ 2 parameters in the same way as described for PEQ 1. When finished, pushing the **item up (2)** button let's you adjust the PEQ 3, PEQ 4, PEQ 5, PEQ 6, PEQ 7, PEQ 8, PEQ 9 and PEQ 10 parameters.

Pushing the **item up (2)** button after PEQ-10 is selected, allows you to adjust the limiter parameters for input A.



Adjust the limiter threshold by dialing the **jogwheel (8)**. Click the **jogwheel (8)** to proceed with the next parameter.



Adjust the limiter release time by dialing the **jogwheel (8)**. Push the **item up (2)** button to proceed with the next item.

IMPORTANT!
Enabling the limiter on a specific output also changes the way in which the level is displayed on the corresponding LED VU meter: The level shown on this meter is no longer the "absolute" output level, but the level of the signal at -24dB, -12dB, -6dB, -3dB compared to the limiter's threshold (orange limit LED), no matter what the threshold value is.



Select normal or inverted phase by dialing the **jogwheel (8)**. Push the **item up (2)** button to proceed with the next item.



Select link on or off by dialing the **jogwheel (8)**.



Now you've completed setting up output channel 1, you have to use the **channel up (3)** button and set up the other output channels by using the **item up (2)** button, the **item down (5)** button and **jogwheel (8)** as described for output channel 1.

Loading and saving files

Pressing the **menu (9)** button once, opens the load menu.



Dialing the **jogwheel (8)** allows you to select one of the 50 user presets. Clicking the **jogwheel (8)** will load the currently selected preset. The bottom row in the display displays the preset's name.



If you want to continue loading the preset. Select Yes by dialing the **jogwheel (8)**. Confirm by clicking the **jogwheel (8)**. Now your preset is loaded.

Pushing the menu **(9)** button twice let's you enter the save menu.



Dialling the **jogwheel (8)** allows you to select a location (1 – 50) to store your current settings. Clicking the **jogwheel (8)** will save the current settings in the selected location. The system will ask you give a name to the preset name.



Select a character in the cursor position by dialling the **jogwheel (8)**, clicking the **jogwheel (8)** confirms the character selected and moves the cursor to the next character to edit. Pushing the **exit (10)** button erases the last confirmed character. Once the name is set up, push the **menu (9)** button again.



If you want to continue storing the preset. Select Yes by dialling the **jogwheel (8)**. And confirm by clicking the **jogwheel (8)** (otherwise push the **exit (10)** button). Now your preset is saved in the selected location.

Access level menu

Push the **menu (9)** button three times, to enter the access level menu. This menu allows you to protect your settings by a password.



Rotate the **jogwheel (8)** to change the access level to locked. Confirm by clicking the **jogwheel (8)**.



If desired, change the password by dialling and clicking the **jogwheel (8)**. If the password is set, confirm your password by pushing the **menu (9)** button twice.

Software version menu

By pushing the **menu (9)** button four times, the display will show the software version of your DCP-26.



Digital Speaker Manager software installation

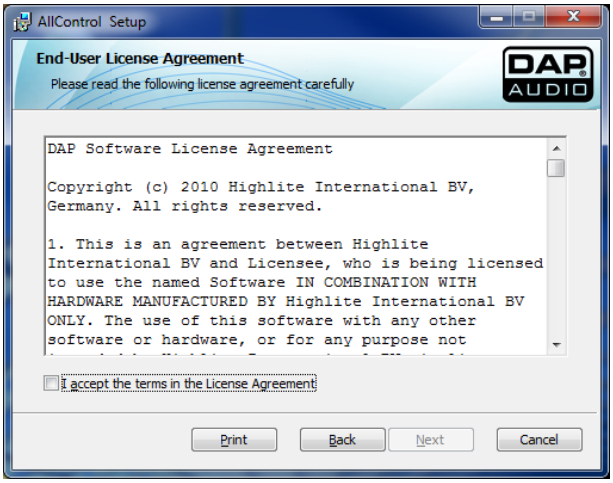
Software Installation

If the CD doesn't start automatically, open the CD and double click the **setup.exe** icon.

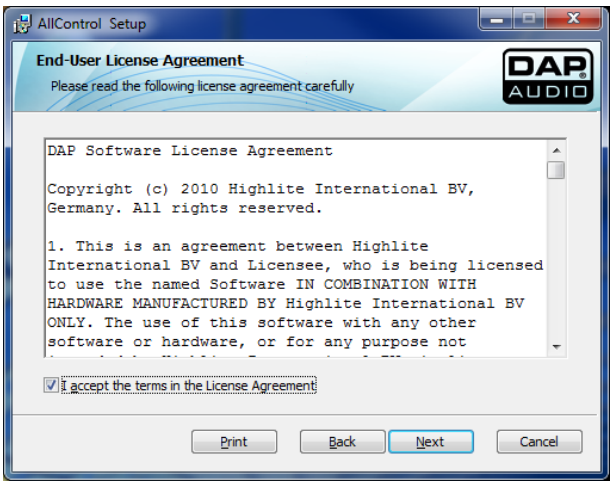
Now the setup window as shown in the figure below will pop up.



Click the next button.



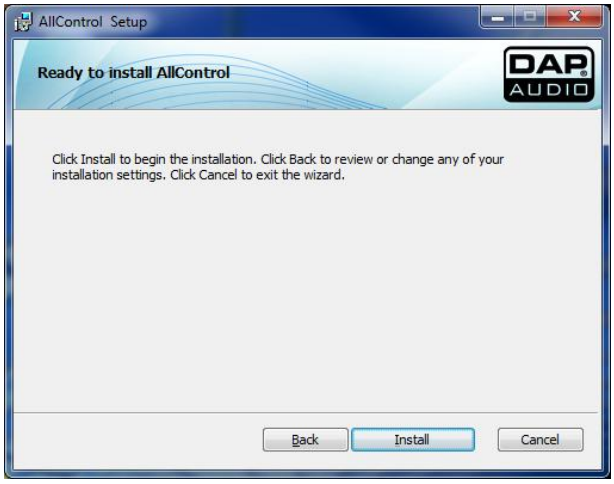
Accept the terms by clicking the confirmation box.



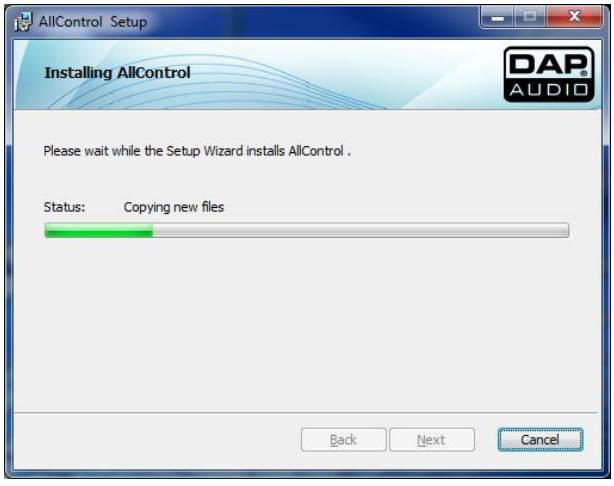
Now click the Next button.



If you're ok with the installation path (recommended), click the next button.



Click the install button.



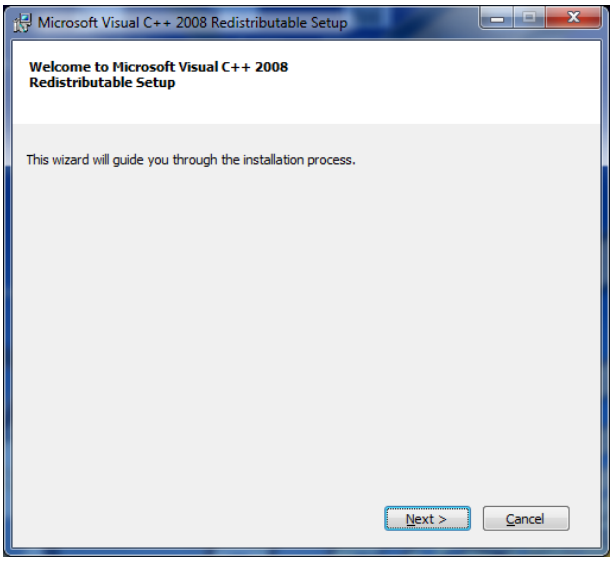
Wait until the next screen pops up.



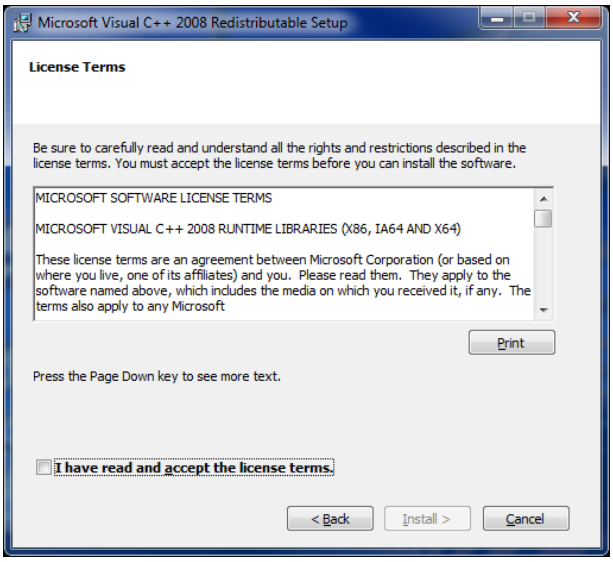
Make sure to check the confirmation box to install Microsoft VisualC++Runtime.



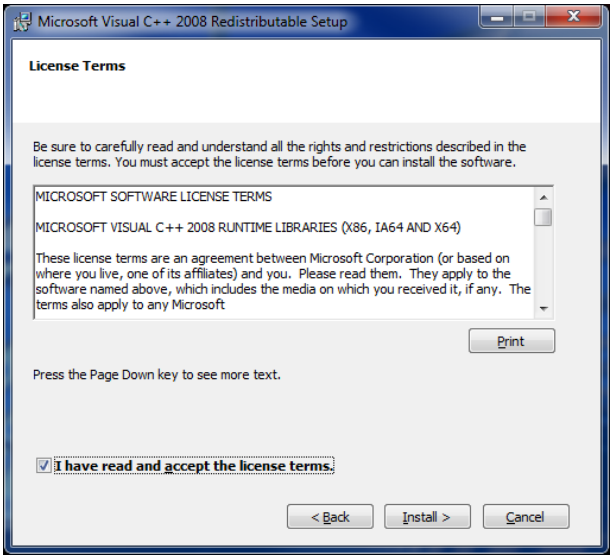
Click the finish button in order to install the VisualC++Runtime program.



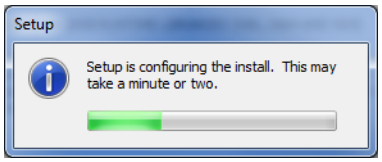
Click the next button.



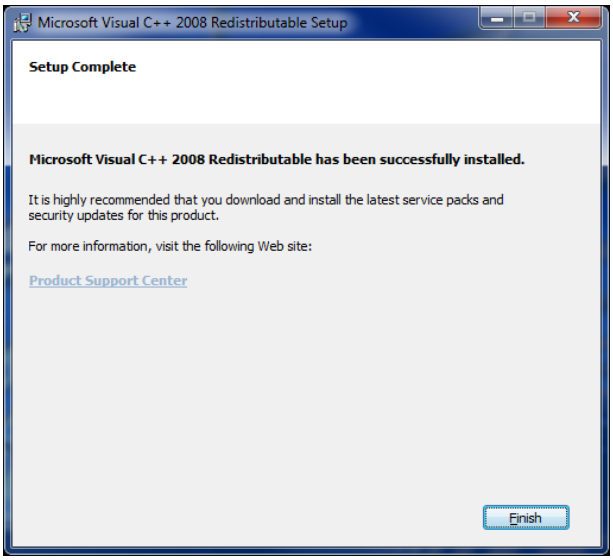
Check the confirmation box to accept the license terms.



Click the Install button.



Wait until the installation is finished.



Now you've successfully installed the DAP All control software which can be used to manage and edit - your sound s for the DAP DCP-24, DCP-26 and/or DCL-22.

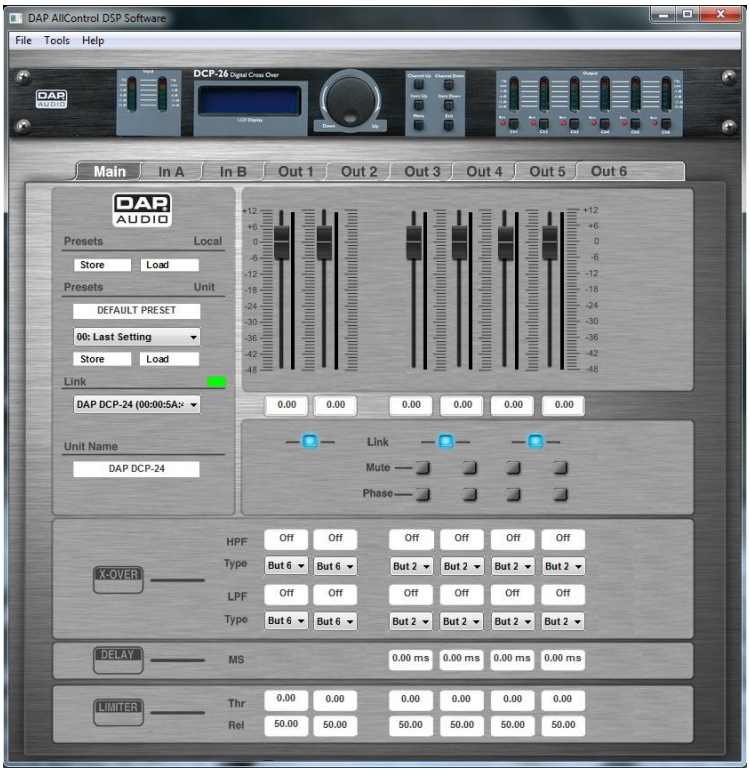
Connecting your DCP-24 with your PC

Use the supplied USB cable to connect your DCP-24 with your PC.



Making a connection between your PC and DCP-24

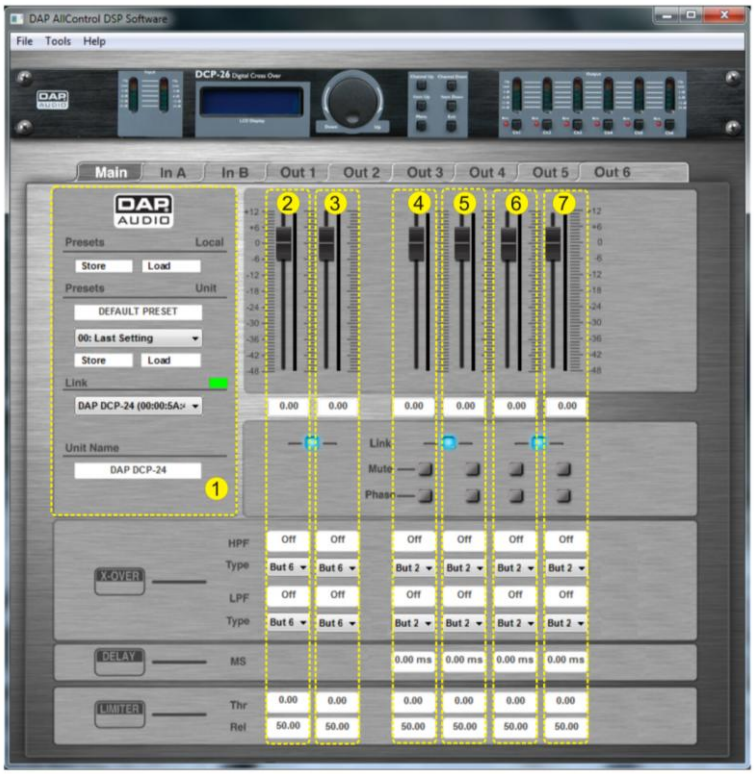
Connect your DCP-24 to your PC using the included USB cable. Start the All Control software. The software starts searching the device and automatically recognizes if the device connected is a DCP-24, a DCP-26 and/ or a DCL-22.



Software operation

The All control software, gives you up to 9 menus, in case of the DCP 24 we have access to 7 menus:
A. Main
B. In A
C. In B
D. Out 1
E. Out 2
F. Out 3
G. Out 4

A. The Main menu



The main menu gives you an overview of all settings. We can divide the main screen in 9 zones:

1. System zone
The system zone displays from top to bottom:
The local preset's **store** button allows you to store the current settings which are both in the all control software's working memory, to your computer's hard disk or other storage medium.
The local preset's **load** button allows you to load a preset from your computer's hard disk or other storage medium into the all control software's working memory.
The Unit preset's **store** button allows you to store the current settings which are both in the all control software's working memory, to your computer's hard disk or other storage medium.
The local preset's **load** button allows you to load a preset from your DCP-24's memory the all control software's working memory.
The local preset's **store** button allows you to store a preset from the all control software's working memory directly into one of the DCP-24's presets.
In case more than one device is connected to the all control software, the **link** box allows you to select a device for editing.
The **unit name** box shows the name of the unit which you are currently editing.

2. Input A zone
The input A zone gives you an overview of all the settings for input channel A. You can change all parameters by typing in the value boxes, clicking buttons and dragging faders. For in depth editing, we suggest using the In A menu.

3. Input B zone
The input B zone gives you an overview of all the settings for input channel B. You can change all parameters by typing in the value boxes, clicking buttons and dragging faders. For in depth editing, we suggest using the In B menu.

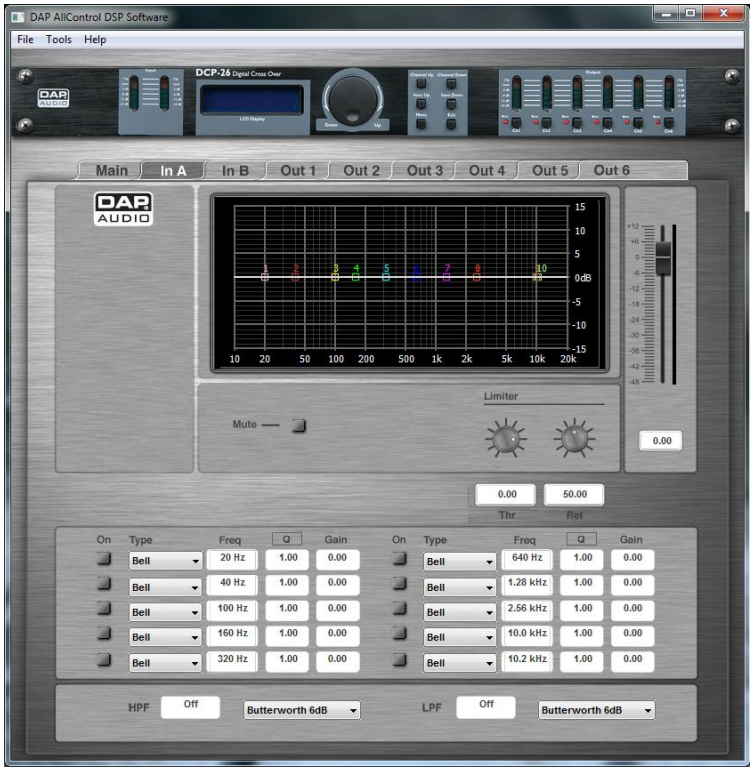
4. Output 1 zone
The output 1 zone gives you an overview of all the settings for output 1. You can change all parameters by typing in the value boxes, clicking buttons and dragging faders. For in depth editing, we suggest using the Out 1menu.

5. Output 2 zone
The output 2 zone gives you an overview of all the settings for output 2. You can change all parameters by typing in the value boxes, clicking buttons and dragging faders. For in depth editing, we suggest using the Out 2 menu.

6. Output 3 zone
The output 3 zone gives you an overview of all the settings for output 3. You can change all parameters by typing in the value boxes, clicking buttons and dragging faders. For in depth editing, we suggest using the out 3 menu.

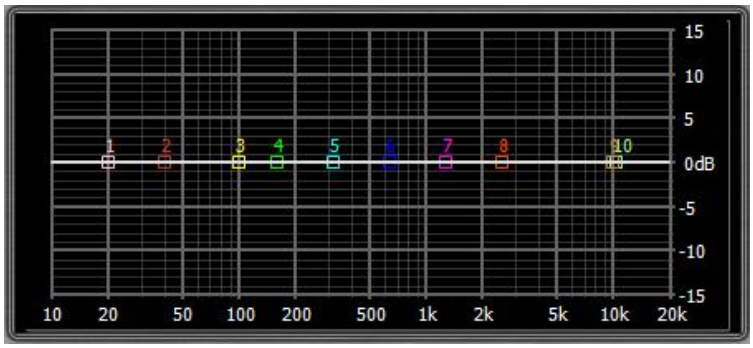
7. Output 4 zone
The output 4 zone gives you an overview of all the settings for output 4. You can change all parameters by typing in the value boxes, clicking buttons and dragging faders. For in depth editing, we suggest using the out 4 menu.

B. In A menu

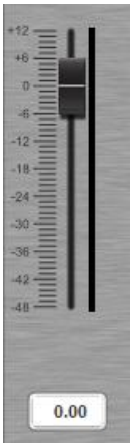


Display

Displays the frequency curve of the corresponding channel. It is also possible to edit an EQ's frequency and gain by clicking and dragging the EQ points 1 -10.



Gain fader + Channel VU meter



The gain fader shows the actual channel gain setting. The text block beneath the gain fader shows the exact gain value. Allows you to adjust the overall gain of each output channel. Adjust the gain by typing the value in the box or by clicking and dragging the fader.
Range: -48dB to +12dB

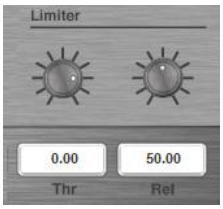
Next to the fader is the channel VU-meter which shows the output level of this channel.

Mute



Clicking the mute button allows you to mute the corresponding channel.

Limiter



You can change the limiter settings by typing the value directly into the boxes
Or by setting the knobs using your mouse.
Threshold range: -48dB to +12dB.
Release time: 1ms to 100ms

IMPORTANT!
Enabling the limiter on a specific output also changes the way in which the level is displayed on the corresponding LED VU meter: The level shown on this meter is no longer the "absolute" output level, but the level of the signal compared to the limiter's threshold (0 dB point), no matter what the threshold value is.

PEQ



Both input channels have up to ten parametric EQ's. Each parametric equalizer can be configured as an Allpass, Bell, High shelving, Low shelving or a Notch filter.

Select the filter type using the roll down menu.

Adjust the gain, frequency and Q factor by typing the value in the box.
The gain and frequency can also be adjusted by clicking and dragging the EQ points in the display.
Range frequency: 20Hz to 20kHz
Range Q factor: 0,20 to 25
Range gain: -12dB to +12dB

Switch the filter on or off by clicking the On button.

High Pass Filter and Low Pass Filter



Each input has a Lowpass and a Highpass filter which can be configured as a: But(terworth) 6dB, Bes(sel)6dB, But(terworth) 12dB, Bes(sel) 12dB, L(inkwitz) R(iley)12dB, But(terworth) 18dB, Bes(sel) 18dB, But(terworth), 24dB and Bes(sel) 24dB

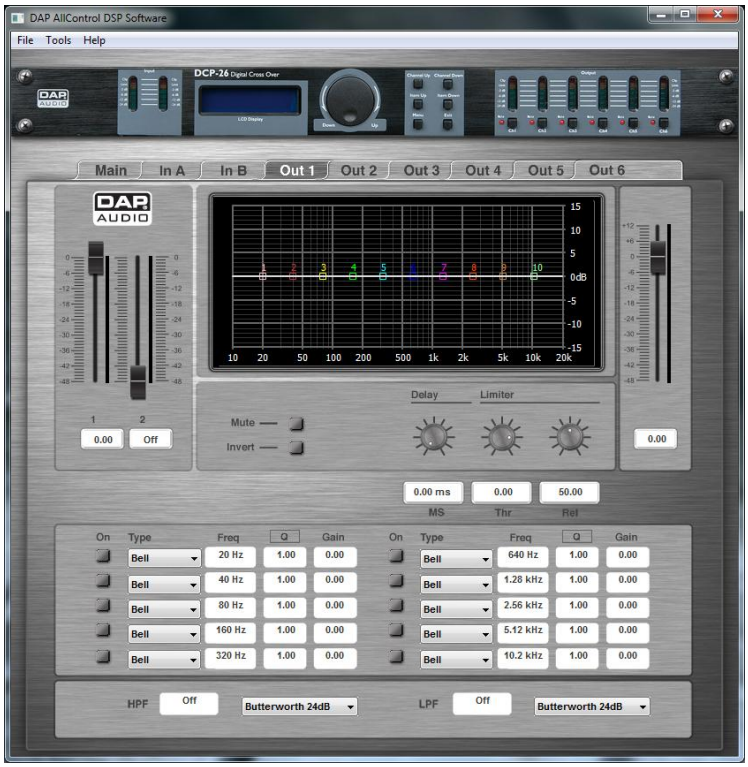
Select the filter type using the roll down menu.

Adjust the frequency by typing the value in the box. The LPF and HPF can be switched off by typing "**off**" in the value box.

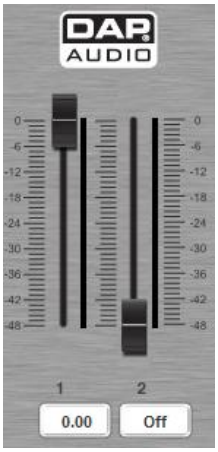
C. In B menu

See B: In A menu.

D. Out 1 menu



Input mixer + VU meters



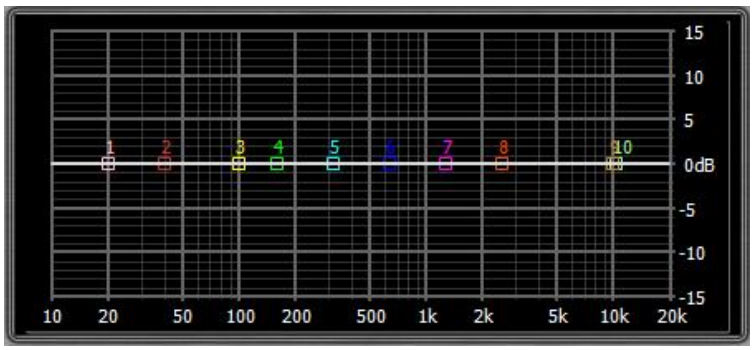
The input mixer allows you to make a mix of both input channels.
The faders show the actual gain settings. The value box beneath the fader shows the exact gain value. Adjust the gain by typing the value in the box or by clicking and dragging the fader.
Range: -48dB to 0dB
Mute a channel by typing "**off**" in the value box.

The VU meters next to the faders show the input levels for each input.

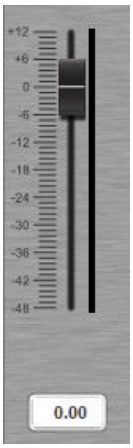
Note: The mixer is not active if the input channels are linked.

Display

Display the frequency curve of the channel. It is also possible to edit an EQ's frequency and gain by clicking and dragging the EQ points 1 -10.



Gain fader + VU meter



The gain fader shows the actual gain setting. The text block beneath the gain fader shows the exact gain value. The gain fader allows you to adjust the overall gain of each output channel. Adjust the gain by typing the value in the box or by clicking and dragging the fader.
Range: -48dB to +12dB

The VU meter next to the fader shows the output level of this channel.

Mute



Clicking the mute button allows you to mute the corresponding channel.

Invert



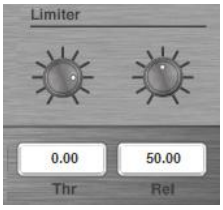
Clicking the invert button allows you to invert the phase of the corresponding channel**.**

Delay



You can change the delay time by typing the value directly into the value box
Or by dialing the delay time knob using your mouse.
Delay time: 1ms to 5ms

Limiter



You can change the limiter settings by typing the value directly into the boxes or by setting the knobs using your mouse.
Threshold range: -48dB to +12dB.
Release time: 1ms to 100ms

IMPORTANT!
Enabling the limiter on a specific output also changes the way in which the level is displayed on the corresponding LED VU meter: The level shown on this meter is no longer the "absolute" output level, but the level of the signal compared to the limiter's threshold (0 dB point), no matter what the threshold value is.

PEQ



Both input channels have up to ten parametric EQ's. Each parametric equalizer can be configured as an Allpass, Bell, High shelving, Low shelving or a Notch filter.
Select the filter type using the roll down menu.

Adjust the gain, frequency and Q factor by typing the value in the box clicking and dragging the fader. The gain and frequency can also be adjusted by clicking and dragging the EQ points in the display.

Range frequency: 20Hz to 20kHz
Range Q factor: 0,20 to 25
Range gain: -12dB to +12dB

Switch the filter on or off by clicking the On button.

High Pass Filter and Low Pass Filter



Each output channel has a Lowpass and a Highpass filter which can be configured as a:
But(terworth) 6dB, Bes(sel)6dB, But(terworth) 12dB, Bes(sel) 12dB, L(inkwitz) R(iley)12dB, But(terworth) 18dB, Bes(sel) 18dB, But(terworth), 24dB and Bes(sel) 24dB

Select the filter type using the roll down menu.

Adjust the frequency by typing the value in the box. The LPF and HPF can be switched off by typing "**off**" in the value box.

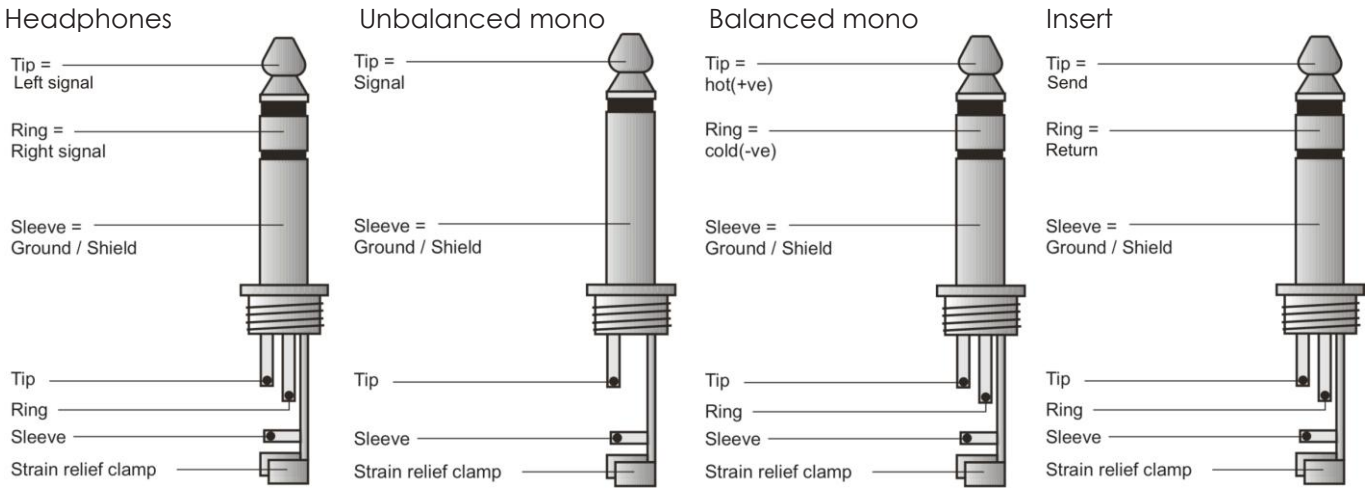
E. Out 2 menu
See D: Out 1 menu.

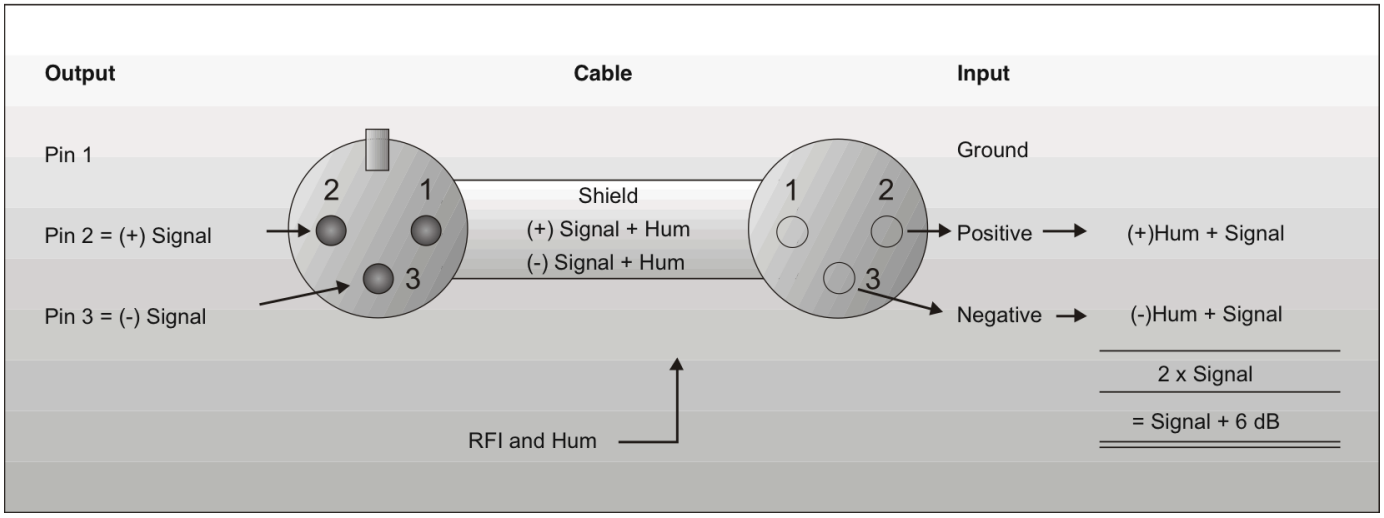
F. Out 3 menu
See D: Out 1 menu.

G. Out 4 menu
See D: Out 1 menu.

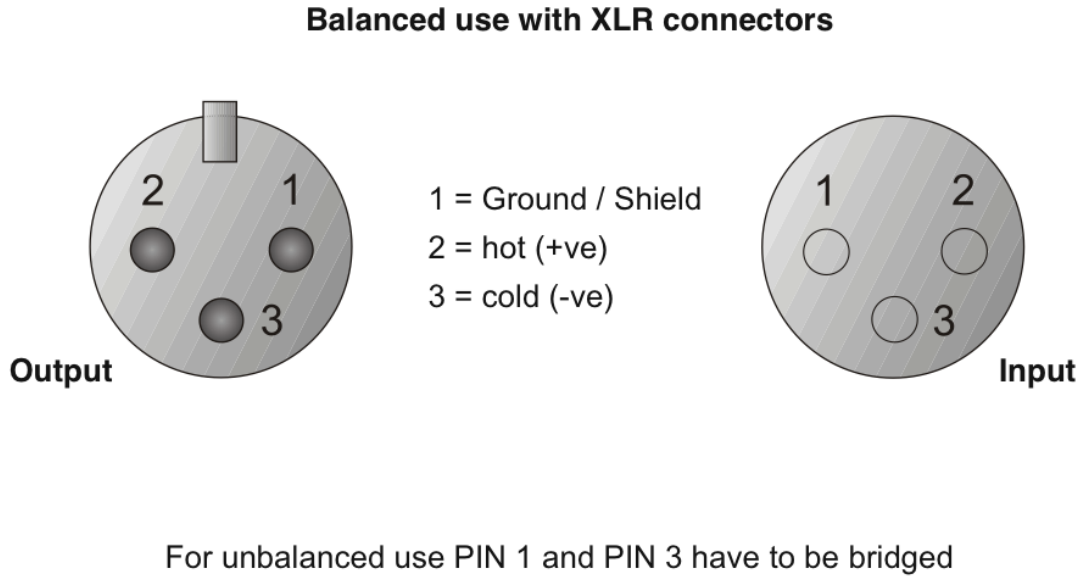
Connection Cables

Take care of your cables, always holding them by the connectors and avoiding knots and twists when coiling them: This gives the advantage of increasing their life and reliability.
Periodically check your cables. A great number of problems (faulty contacts, ground hum, discharges, etc.) are caused entirely by using unsuitable or faulty cables.





Compensation of interference with balanced connections



Maintenance

The DCP-24 crossover requires almost no maintenance. However, you should keep the unit clean. Disconnect the mains power supply, and then wipe the cover with a damp cloth. Do not immerse in liquid.
Keep connections clean. Disconnect electric power, and then wipe the audio connections with a damp cloth. Make sure connections are thoroughly dry before linking equipment or supplying electric power.

Troubleshooting

Dap Audio DCP-24

This troubleshooting guide is meant to help solve simple problems.
If a problem occurs, carry out the steps below in sequence until a solution is found. Once the unit operates properly, do not carry out following steps.

1. If the device does not operate properly, unplug the device.
2. Check the power from the wall, all cables etc.
3. If all of the above appears to be O.K., plug the unit in again.
4. If you are unable to determine the cause of the problem, do not open the DCP-26, as this may damage the unit and the warranty will become void.
5. Return the DCP-24 to your Dap Audio dealer.

Product Specifications

Model: DAP Audio DCP-24

DSP:

Sample rate:	48 kHz, 64 bits NXP (Philips) DSP,

Inputs:

Input impedance:	10 kOhm balanced
Max input voltage:	+22 dBu
Input dynamic range:	110 dB
Input selection:	Any Input can be mixed to any output
Input Gain Control:	-50 dB to +12 dB in 0,25 dB steps

EQ Sections on each Input and Output

EQ selections:	Allpass, Bell, High Shelf, Low Shelf, Notch

Input EQ:

Type:	10-bands EQ.
EQ Selections:	Allpass, Bell, High Shelf, Low Shelf, Notch
EQ Frequency Selection:	20 to 20.000 Hz in 1 Hz steps on all EQ's
Allpass EQ:	Q from 0.20 to 25 in 0,1 steps
Bell EQ (PEQ):	Q from 0.20 to 25 in 0,1 steps EQ gain form -12 dB to +12 dB in 0,25 dB steps
Low Shelf (SEQ):	Shelf slope from 3 dB/oct to 25 dB/oct in 0,1 dB/oct steps Low Shelf gain form -12 dB to +12 dB in 0,25 dB steps
High Shelf (SEQ):	Shelf slope from 3 dB/oct to 25 dB/oct in 0,1 dB/oct steps Low Shelf gain form -12 dB to +12 dB in 0,25 dB steps
Notch Filter:	Q from 10 to 50 on 0,1 steps

Outputs:

Output Impedance:	100 Ohm balanced
Max output voltage:	+9 dBu
Output Gain Control:	-50 dB to +12 dB in 0,25 dB steps
Frequency Response:	20 – 20,000 Hz, (-0.1 dB)
Dynamic range:	114 dB
Output delay:	Channel independent from 0 to 5 mS
Output delay steps:	21 µS steps from 0 to 5 mS

Output EQ:

Type:	10-bands EQ, same as Input EQ

Crossovers:

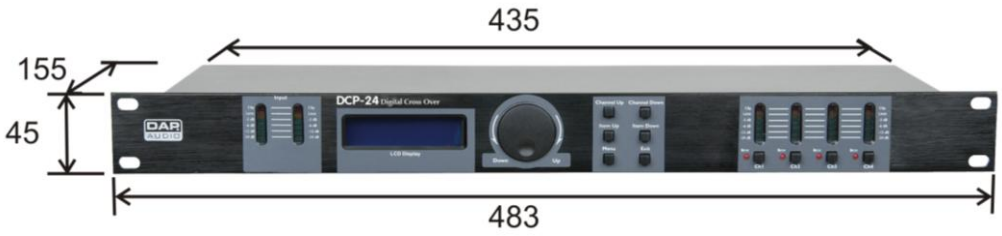
Types:	Linkwitz Riley, Bessel and Butterworth
Slopes:	6, 12, 18, 24 dB/octave
Crossover frequencies:	20 to 20.000 Hz in 1 Hz octave steps Crossovers available at Input and Output sections

Limiter:

Threshold points:	-50 to +9 dBu in 0,25 dB steps
Attack time:	Zero Attack Time Limiter
Release times:	1 = shortest, 100 = endless long, in steps of 1.

Miscellaneous:

Memory Storage:	50 User presets
Mute:	All Output channels can be individually muted
Display:	2x 16 dot matrix characters
Latency:	1,27 mS
USB Interface:	Back
Power Supply:	6V DC, adapter included for 230 Volt AC, 50/60 Hz
Power Consumption:	4 Watt
Power Switch:	Back
Dimensions (W x H x D):	483 x 45 x 158 mm
Net weight:	1.9 kg



Design and product specifications are subject to change without prior notice.

CE

Website: www.Dap-audio.info
Email: service@highlite.nl



© 2011 Dap Audio.