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HELIX

AMPLIFY

2

CORE

SERIES

206 DSP

6-channel ampli ier with 8-channel DSP

User Manual

Congratulations!

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Dear Customer,

Congratulations on your purchase of this innovative and high-quality HELIX product.

Thanks to more than 35 years of experience in research and development of audio products the HELIX AMPLIFY 206 DSP sets new standards in the range of digital amplifiers.

We wish you many hours of enjoyment with your new HELIX AMPLIFY 206 DSP.

Yours,
AUDIOTEC FISCHER

General instructions

General installation instructions for HELIX components

To prevent damage to the unit and possible injury, read this manual carefully and follow all installation instructions. This product has been checked for proper function prior to shipping and is guaranteed against manufacturing defects.

Before starting your installation, disconnect the battery's negative terminal to prevent damage to the unit, fire and / or risk of injury. For a proper performance and to ensure full warranty coverage, we strongly recommend to get this product installed by an authorized HELIX dealer.

Install your HELIX AMPLIFY 206 DSP in a dry location with sufficient air circulation for proper cooling of the equipment. The amplifier should be secured to a solid mounting surface using proper mounting hardware. Before mounting, carefully examine the area around and behind the proposed installation location to insure that there are no electrical cables or components, hydraulic brake lines or any part of the fuel tank located behind the mounting surface. Failure to do so may result in unpredictable damage to these components and possible costly repairs to the vehicle.

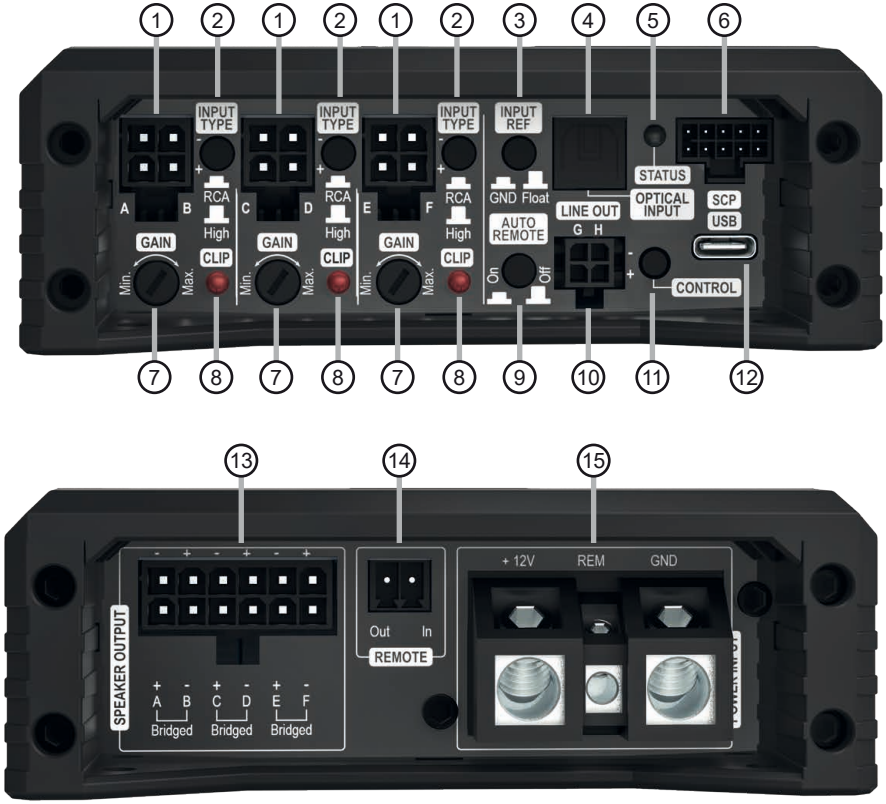
General instruction for connecting the HELIX AMPLIFY 206 DSP amplifier

The HELIX AMPLIFY 206 DSP amplifier may only be installed in vehicles which have a 12 Volts negative terminal connected to the chassis ground. Any other system could cause damage to the amplifier and the electrical system of the vehicle.
The positive cable from the battery for the complete system should be provided with a main fuse at a distance of max. 30 cm from the battery. The value of the fuse is calculated from the maximum total current input of the car audio system.

Use only suitable cables with sufficient cable cross section for the connection of HELIX AMPLIFY 206 DSP. The fuses may only be replaced by identically rated fuses (3 x 25 A) to avoid damage of the amplifier.

Prior to installation, plan the wire routing to avoid any possible damage to the wire harness. All cabling should be protected against possible crushing or pinching hazards. Also avoid routing cables close to potential noise sources such as electric motors, high power accessories and other vehicle harnesses.

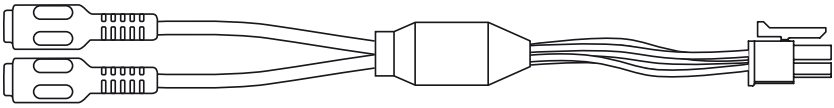
Connectors and control units



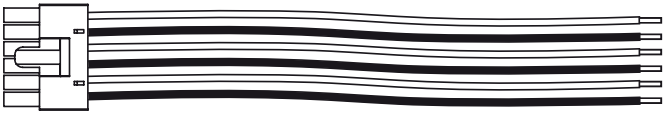
1. **Signal inputs high- or lowlevel**
   Page 20, point 2
2. **Input type switch**
   Page 20, point 1
3. **Input reference pushbutton**
   Page 24, point 14
4. **Digital optical input**
   Page 21, point 3
5. **Status LED**
   Page 26, point 1
6. **SCP (Smart Control Port)**
   Page 26, point 2
7. **Gain control**
   Page 22, point 7
8. **Clipping LED**
   Page 26, point 3
9. **Auto remote switch**
   Page 21, point 4
10. **Line outputs**
    Page 23, point 11
11. **Control pushbutton**
    Page 26, point 4
12. **USB-C input**
    Page 22, point 6
13. **Speaker outputs**
    Page 23, point 10
14. **Remote in- and output**
    Page 24, point 13 & page 23, point 12
15. **Power & Remote connector**
    Page 21, point 5

Fig. 1: Overview connection cables

1.1: Connection cable for signal inputs A/B, C/D & E/F (high- & lowlevel)



1.2: Connection cable for speaker outputs A to F



1.3: Connection cable line output G & H (Line Out)

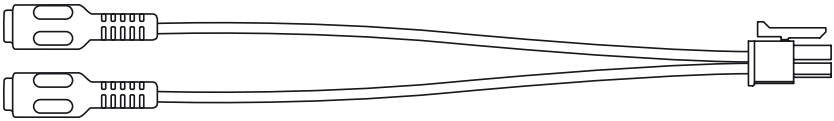
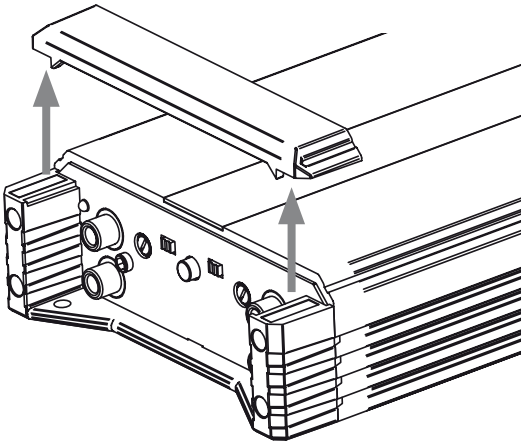


Fig. 2: Removal of cover panel for easier access to connectors and control units



CAUTION!

Do not lift the device by the cover panels to avoid damage.

Two strong magnets securely attach the cover panel to the heatsink. To remove it, simply pull the panel vertically upward. After completing all connections and settings, reattach the panel, ensuring it is properly aligned and seated without tilting.

Configure the HELIX AMPLIFY 206 DSP as follows

Caution: Carrying out the following steps will require special tools and technical knowledge. In order to avoid connection mistakes and / or damage, ask your dealer for assistance if you have any questions and follow all instructions in this manual (see page 17). It is recommended that this unit will be installed by an authorized HELIX dealer.
For better access to the connectors and control units, we recommend to remove the amplifier's cover panels, as shown on page 19, fig. 2.

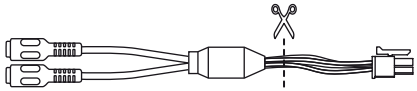
1. **Adjusting the input voltage range and input impedance (ADEP.3) of the analog inputs**
   ATTENTION: This setting must be made before initial operation to prevent damage to the amplifier or the connected sound system.
   The amplifier's analog input channels can be driven in pairs with either lowlevel (RCA / Cinch) or highlevel (speaker wires) signals from the head unit / radio. To ensure optimal signal quality, the input voltage range and impedance (ADEP.3) for each channel pair must be set according to the signal type used, using the Input Type pushbuttons (page 18, point 2).
   RCA: Select this setting when connecting the amplifier´s analog inputs with RCA / Cinch cables (lowlevel signals) from the head unit / radio. The input voltage range in this mode is 1 to 8 Volts.
   High: Choose this setting if you are using highlevel signals. This is necessary when the preconnected device does not have RCA / Cinch outputs, such as factory car radios or OEM headunits. In this mode, the signal is transmitted via the speaker wires, and the input voltage range is 2 to 16 Volts.

2. **Connecting the signal inputs (high- or lowlevel)**
   The signal inputs of the amplifier (A/B, C/D and E/F; page 18, point 1) can be connected to the signal source using the supplied connection cables (page 19, fig. 1, point 1.1).
   Each input can be assigned to any output using the DSP PC-Tool software.
   We recommend the following channel assignment if a common car radio will be connected to the amplifier:
   Channel A = Front left
   Channel B = Front right
   Channel C = Rear left
   Channel D = Rear right

   Actually it is not mandatory to use all signal inputs. If only two channels will be connected we recommend to use the channels A and B. Make sure that the polarity is correct. If one or more connections have reversed polarity it may affect the performance of the amplifier.
   The input sensitivity of each channel pair can be optimally adjusted to the signal source using the respective gain control (page 18, point 7).

   a. **Connecting pre-amplifier / lowlevel- / Cinch/RCA signals**
      The RCA /Cinch outputs of the signal source (e.g. aftermarket radio) can be connected directly to the signal inputs A/B, C/D or E/F using the supplied connection cables (page 19, fig. 1, point 1.1). The automatic turn-on circuit does not work when using the lowlevel signals. In this case one of the remote inputs (REM or REMOTE In) must be connected to activate the amplifier.

   b. **Connecting highlevel signal (speaker wires)**
      If your signal source (e.g., OEM radio or OEM amplifier) does not have RCA outputs, you can connect the speaker outputs to the amplifier's analog signal inputs. To do this, cut off the RCA /Cinch connectors from the supplied connection cables and use them as adopters for the speaker wires.



      Connect the signal source to the A/B, C/D and / or E/F inputs of the amplifier using the modified connection cables.
      The amplifier is equipped with our proprietary ADEP.3 circuit (Advanced Diagnostics Error Protection 3rd generation) which ensures that the car radio detects the amplifier

as a speaker and thus neither any function of the radio (e.g. fader) will be deactivated nor any error log in the CPU of the car will be created.

When using highlevel signals, neither of the remote inputs (REM and / or REMOTE In) needs to be connected, as the amplifier will automatically turn on once a loudspeaker signal is applied.

Attention: Only use the supplied connection cables for installation (page 19, fig.1, point 1.1).

Note: The amplifier can operate with either lowlevel (RCA / Cinch) or highlevel signals. Simultaneous use of both signal types on one channel pair may cause damage to the signal source.

Example: Channel pair A/B is operated with highlevel signals, while channel pairs C/D and E/F are supplied with lowlevel signals.

3. **Connecting a digital signal source in SPDIF format**

If you have a signal source with a digital optical output you can connect it to the amplifier using the appropriate input (Optical Input). The sampling rate must be between 12 and 96 kHz. The input signal is automatically adapted to the internal sample rate.

In standard configuration the manual activation via an optional remote control is configured. Alternatively you can activate the automatic turn-on feature in the DSP PC-Tool software under the “Signal Management (IO)” tab in the “Source Configuration” sub-menu.

The automatic turn-on circuit does not work when the digital input is used. Therefore it is mandatory to connect one of the remote inputs (REM or REMOTE In).

Important: The signal of a digital audio source often does not contain any information about the volume level. Keep in mind that this will lead to full level on the outputs of the HELIX AMPLIFY 206 DSP and your connected amplifiers. This may cause severe damage to your speakers. We strongly recommend to use an optional remote control for adjusting the volume level of the digital signal input!

Note: The amplifier can only handle uncompressed digital stereo signals in PCM format with a sample rate between 12 kHz and 96 kHz.

4. **Configuration of the remote input**

This setting is only required when connecting the signal source using highlevel signals.

The amplifier will turn on automatically when driven by a highlevel signal or when a signal is applied to one of the remote input terminals (REM / REMOTE In). The auto remote switch (page 18, point 9) allows to deactivate the automatic turn-on feature. The feature should be deactivated if there are e.g. noises while switching on / off the amplifier.

On: Activation via highlevel signal is enabled (by default).

Off: Activation via highlevel signal is disabled.

Note: If the automatic turn-on function is deactivated it is mandatory to use one of the remote input terminals to power up the amplifier! The highlevel signal will be ignored in this case.

5. **Connection to power supply & remote**

ATTENTION: Make sure to disconnect the battery before installing the HELIX AMPLIFY 206 DSP!

Make sure of correct polarity.

+12 V: Connector for the positive cable.

Connect the +12 V power cable to the positive terminal of the battery. The positive wire from the battery to the amplifiers power terminal needs to have an inline fuse at a distance of no more than 12 inches (30 cm) from the battery. The value of the fuse is calculated from the maximum total current input of the whole car audio system (206 DSP = max. 93 A at 12 V power supply). If your power wires are short (less than 1 m / 40”) then a wire gauge of 10 mm² / AWG 8 will be sufficient. In all other cases we strongly recommend gauges of 16 - 25 mm² / AWG 6 – 4!

GND: Connector for the ground cable. The ground wire should be connected to a common ground reference point (this is located where the negative terminal of the battery is grounded to the metal body of the vehicle) or to a prepared metal location on the vehicle

chassis, i.e., an area cleaned of all paint residues. The cable should have the same gauge as the +12 V wire. Inadequate grounding causes audible interference and malfunctions.
REM: The remote input is used to switch on and off the amplifier if lowlevel signals or the digital input are / is used.
If the connected highlevel signal source does not activate the “automatic turn-on” function or the amplifier is to be deliberately switched on and off only via a remote signal, this input must be assigned. The remote wire should be connected to the remote output / automatic antenna (aerial positive) output of the head unit / car radio.
Alternatively, you may use the additional remote input (REMOTE In; page 18, point 14). Both inputs are internally linked and provide the same function. This input does not need to be assigned if a highlevel signal is used.
We do not recommend controlling the remote input via the ignition switch to avoid pop noise during turn on / off.
To deactivate the “automatic turn-on” function read the description on page 21 in point 4 “Configuration of the remote input”.

6. **Connecting the PC & first start-up**
The USB-C input (page 18, point 12) enables the connection of the amplifier to a personal computer and its free configuration with our DSP PC-Tool software using the provided USB cable.
Please note: It is not possible to connect any USB storage devices.
Before you connect the AMPLIFY 206 DSP to a computer for the first time, download the **latest DSP PC-Tool software** (at least version 6) from our homepage. The software and a comprehensive knowledge base can be found at **www.audiotec-fischer.com**.
It is advisable to check regularly for software updates so that the device is always up to date. We strongly recommend to carefully read the DSP PC-Tool knowledge base before using the software for the first time in order to avoid any complications and failures.
Important: Make sure that the amplifier is not connected to your computer before the software and USB driver are installed!

In the following the most important steps how to connect and the first start-up are described:
1. Download the **latest version of the DSP PC-Tool software** (available on our website **www.audiotec-fischer.com**) and install it on your computer.
2. Connect the amplifier to your computer using the USB cable that is included in delivery. If you have to bridge longer distances please use an active USB extension cable with integrated repeater.
3. First turn on the amplifier and then start the software. The operating software will be updated automatically to the latest version if it is not up-to-date.

7. **Adjustment of the input sensitivity of the analog signal inputs**
ATTENTION: It is mandatory to properly adapt the input sensitivity of the AMPLIFY 206 DSP to the signal source to achieve the best possible signal quality and avoid damage to the amplifier. It is also mandatory to adjust the input voltage range and the input impedance (ADEP.3) of the signal inputs to the output voltage of your signal source (page 20, point 1).
The input sensitivity of each channel pair (A/B, C/D and E/F) can be optimally adapted to the signal source using the respective gain control (page 18, point 7).

These controls are not volume controls; they are solely for adjusting the amplifier´s gain.

The gain control ranges are:
Highlevel: 2 - 16 Volts
RCA / Cinch: 1 - 8 Volts

The three Clipping LEDs (page 18, point 8) serve as monitoring tool.

Attention: Do not connect any speakers to the outputs of the amplifier during this setup and switch off any connected amplifiers.

To adjust the input sensitivity, please follow the steps below for each channel pair (A/B, C/D and E/F) in sequence:

1. Turn on the amplifier.
2. Adjust the volume of your radio to approx. 90 % of the maximum volume and play back a suitable test signal – ideally our specially developed “IGS – Input Gain Setup” signal, which can be found under “Audio Test Tracks” in the DSP PC-Tool or downloaded from www.audiotec-fischer.com.
3. Normally, the Clipping LED is off and only lights up if one of the analog inputs is overdriven.
   Now increase the input sensitivity by turning the Gain control clockwise until the Clipping LED lights up.
4. Now turn the control counterclockwise until the Clipping LED turns off again.
5. Repeat this process for each channel pair.

8. Configuration of the internal DSP

IMPORTANT: The general DSP settings should be conducted with the DSP PC-Tool software before using the amplifier for the first time. Now you are able to configure your AMPLIFY 206 DSP with our intuitive DSP PC-Tool software. Useful hints for the correct setting can be found in our knowledge base at www.audiotec-fischer.com.

Caution: We highly recommend to set the volume of your car radio to minimum position during first start-up. Additionally no devices should be connected to the amplifier. Especially if the AMPLIFY 206 DSP will be used in fully active applications, a wrong setup can destroy your speakers right away.

9. Optional: Analyzing the input signal

When using highlevel signals at the analog signal inputs, we recommend analyzing the input signal with the Advanced Input Signal Analyzer (AISA) in the DSP PC-Tool. This helps detect and correct factory-set equalization, time alignment, or allpass filters if present.

Information on the AISA can be found in the extensive Knowledge Base on our website **www.audiotec-fischer.com**.

10. Connecting the loudspeaker outputs

The loudspeaker outputs can be connected directly to the wires of the loudspeakers. Never connect any of the loudspeaker cables with the chassis ground as this will damage your amplifier and your speakers. Ensure that the loudspeakers are correctly connected (in phase), i.e., plus to plus and minus to minus. Exchanging plus and minus causes a total loss of bass reproduction. The plus pole is indicated on most speakers.

The impedance of each channel must not be less than 2 Ohms (4 Ohms in bridged mode), otherwise the amplifier protection will be activated.

Attention: Solely use the supplied connection cable with the 12-pin plug and flying leads for connecting the speaker outputs (page 19, fig. 1, point 1.2). Connecting wires of unused speaker outputs must be insulated against short circuits.

11. Optional: Connecting the line outputs G & H

The two pre-amplifier outputs (LINE OUT G & H) can now be connected to the RCA / Cinch inputs of the external amplifiers using appropriate cables (RCA / Cinch cables).

The outputs provide a maximum output voltage of 8 Volts RMS. When using one of these outputs, it is essential to use the remote output (REMOTE OUT) to switch on an additionally connected amplifier, as otherwise interference noise may occur.

Attention: Solely use the supplied connection cable for connection (page 19, fig. 1, point 1.3)

12. Optional: Connecting the remote output

The remote output (page 18, point 14) is used for turning on / off amplifiers that are connected to the line outputs of the AMPLIFY 206 DSP. Therefore connect the remote output of the AMPLIFY 206 DSP to the remote input of your amplifiers to switch it on and off via the internal DSP without interfering signals. The remote output is activated automatically as soon as the booting process of the DSP is completed. Additionally this output will be turned off during the “Power Save Mode” or a

software update process.
Important: Never use a different signal than the remote output of the AMPLIFY 206 DSP to activate a connected amplifier!

13. **Optional: Connecting the additional remote input**
The AMPLIFY 206 DSP provides, in addition to the remote input located at the power supply connections (REM; page 18, point 15), an additional remote input (REMOTE In; page 18, point 14).
Both inputs are internally linked and serve the same function. Therefore choose the input that is most accessible for your installation. For further details on the function of the remote input, please refer to section 5 “Connection to power supply & remote” on page 21 under “REM”.

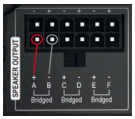
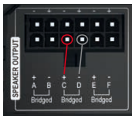
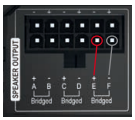
14. **Optional: Configuration of the input reference**
In some cases, it may be necessary to adjust the signal ground of the signal inputs.
This can be done using the input reference pushbutton (page 18, point 3).
Float: In this switch position, the signal ground is separated from the vehicle’s ground by a differential amplifier. This is usually the best setting in most vehicles to prevent interference noise, e.g. from the alternator.
GND: The signal ground is tied together with the vehicle’s ground. This setting should be selected if noise occurs in the “Float” position.

15. **Sound tuning**
Now you can create your sound setup. Information about sound tuning can be found in our extensive knowledge base at **www.audiotec-fischer.com** or contact your local HELIX dealer.

Bridging speaker outputs A - F

The AMPLIFY 206 DSP allows the output channels to be bridged. By bridging two output channels, you create a more powerful single channel. This is ideal for driving a speaker with higher power requirements – for example, a subwoofer. When bridging, the positive output of the first channel and the negative output of the second channel of a channel pair are combined.

Channel pair and connection overview:

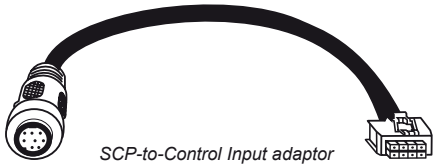
Channel pair	Positive connection (+)	Negative connection (-)	
A/B	A +	B -	
C/D	C +	D -	
E/F	E +	F -	

IMPORTANT:

- Ensure that the speaker impedance in bridged mode is not less than 4 Ohms
- Use only the channel pairs A/B, C/D & E/F
- Never connect both positive or both negative outputs of a channel pair together

1. **Status LED**
   The Status LED indicates the operating mode of the amplifier and of its memory.
   Green: Amplifier is ready for operation.
   Orange: Power Save Mode is active.
   Red: Protection Mode is active. This may have different root causes. The HELIX AMPLIFY 206 DSP is equipped with protection circuits against over- and undervoltage as well as overheating. Please check for connecting failures such as short-circuits or other wrong connections. If the amplifier is overheated the internal temperature protection switches off the remote and signal output until it reaches a safe temperature level again.
   Red / green slow flashing: No operating software installed. Connect the amplifier to the DSP PC-Tool software and confirm the automatic update of the operating system. You will find the latest version of the DSP PC-Tool software at www.audiotec-fischer.com.
   Red / green fast flashing: The currently selected sound setup memory is empty. A new setup has to be loaded via the DSP PC-Tool software or switch to a memory position with existing sound setup.

2. **SCP (Smart Control Port)**
   This multi-functional input (page 18, point 6) is used to connect HELIX accessory products, such as a remote control, which allows the user to adjust several features of the amplifier. Depending on the type of remote control, at first its functionality has to be defined in the “Remote Control” menu of the DSP PC-Tool software.
   Attention: If the accessory product does not have a NanoFit connector, a SCP-to-Control Input adaptor (Art-Nr. M141313) is optionally available from your specialist dealer.



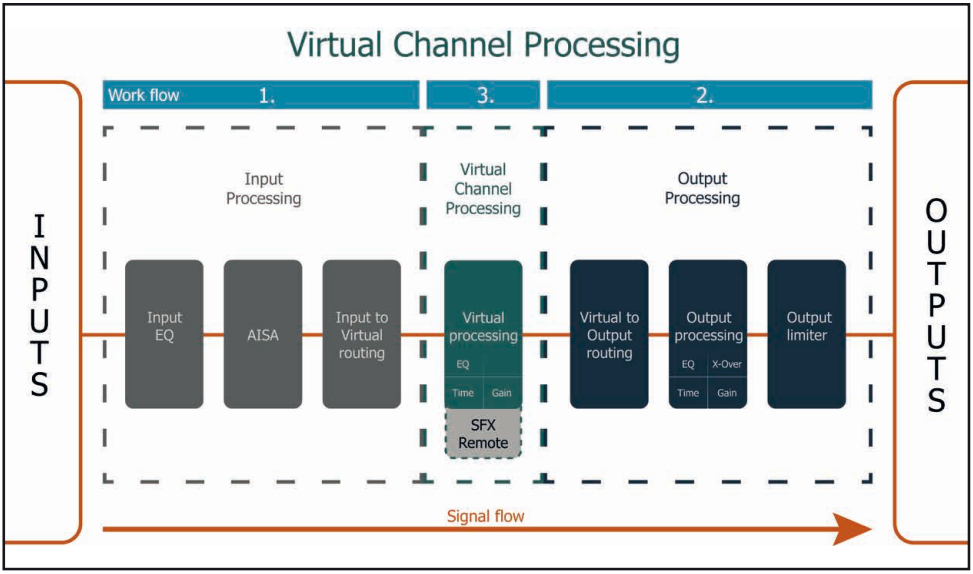
SCP-to-Control Input adaptor

3. **Clipping LED**
   Normally, the Clipping LEDs are off and only light up if one of the analog inputs is overdriven.
   On (red): One of the analog signal inputs is overdriven. Reduce the input sensitivity using the respective Gain control until the LED goes out. Instructions on how to reduce the input sensitivity are described on page 22, point 7.

4. **Control pushbutton**
   The AMPLIFY 206 DSP provides 10 internal memory locations for sound setups. The Control pushbutton allows the user to switch between two memory positions. These can be defined in the DSP PC-Tool. In addition a device reset can be made by pressing the button for a longer period.
   1. Setup switch: Press Control pushbutton for 1 second. The memory locations one and two are defined by default. Switching is indicated by a single red flash of the Status LED. Alternatively, the optional URC.3 remote control can be used for switching. To switch between all internal memory locations, optional accessories like the DIRECTOR display remote control or CONDUCTOR are required.
   2. Device reset: Press pushbutton for five seconds. This completely erases the internal memory and is indicated by a continuous red glowing and constant green flashing of the Status LED.
   Attention: After erasing the setups from memory the AMPLIFY 206 DSP will not reproduce any audio output until the device is updated via the DSP PC-Tool software.

Virtual Channel Processing (VCP)

The HELIX AMPLIFY 206 DSP offers Virtual Channel Processing (VCP), a multi-stage signal processing concept that enables the perfect configuration of complex sound systems, opening up completely new possibilities for sound tuning.



The VCP extends the scope of the device by an additional layer of processed channels, which is located between the inputs and outputs. A total of eight additional processed virtual channels and eight processed output channels are available.
This virtual channel layer offers several advantages, especially in complex system configurations.

The main advantages of this concept are:
- Cross-channel group equalizers that affect several output channels simultaneously
- Multi-way speaker configuration of DSP sound effects (SFX)
- Additional features such as Rear Attenuation

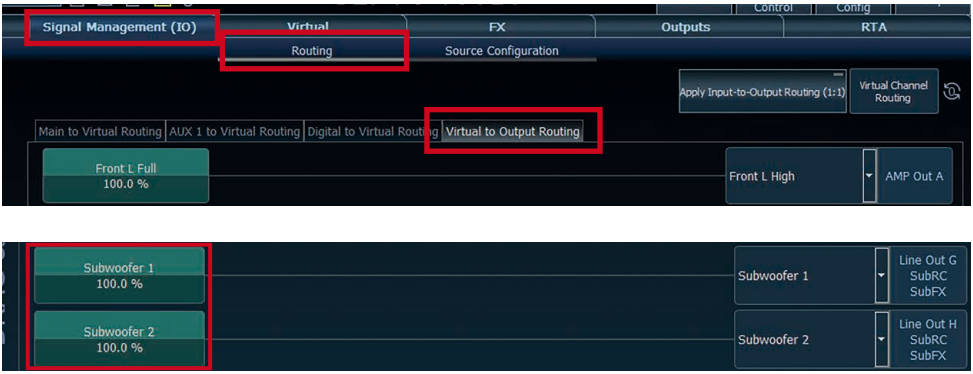
For further information on the VCP and its configuration, please refer to our Knowledge Base at **www.audiotec-fischer.com**.

Configuration of a subwoofer remote control

In order to configure a subwoofer remote control, specific settings have to be made in the DSP PC-Tool. First, the appropriate remote control must be activated in the “Remote Control” tab and then configured, depending on the model.

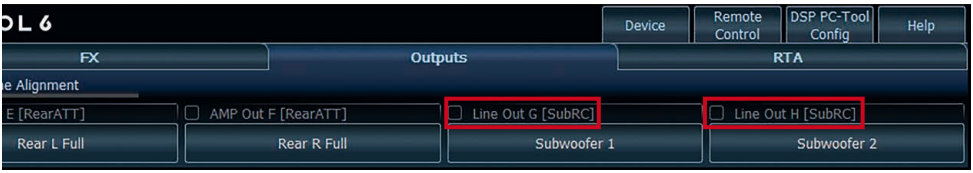
The subwoofer remote control is tied to the output channels that are supplied with one of the two virtual subwoofer signals (“Subwoofer 1” or “Subwoofer 2”) in the “Virtual to Output Routing” matrix. This can be any combination of output channels.

In the following example these are the pre-amplifier outputs / Line Out G and H:



Note: Please note that an input signal must be assigned to the two virtual subwoofer signals “Subwoofer 1” and / or “Subwoofer 2” in the other routing matrices.

The subwoofer control is then also displayed in the “Outputs” menu next to the name of the channel as [SubRC]:



Beside the unique DSP sound effects the AMPLIFY 206 DSP provides a bunch of system and DSP features.
In the “Device” menu of the DSP PC-Tool software individual settings can be made for several of these system features.

URC Setup Switch Configuration
The ACO provides ten internal memory locations for sound setups instead of the common two.
By using an optional URC remote control or the Control pushbutton (page 18, point 11) it is possible to toggle between two of the ten memory locations. These two memory locations can be determined in the “URC Setup Switch Configuration”. The memory locations one and two are preassigned by default. To switch between all internal memory locations, the optionally available remote controls DIRECTOR and CONDUCTOR are recommended.

Remote Output Configuration
This function controls if the remote output (which switches on and off the connected amplifiers) will be temporarily deactivated during a sound setup switch. This function is activated (ON) by default.

Turn On & Off Delay
This function allows to determine the delay time with which the integrated DSP is switched on and off. The factory setting is 0.2 seconds. The delay time should only be modified if there are e.g. noises while switching on / off the amplifier.

Power Save Mode
This function is activated by default and is used to reduce the power consumption of the amplifier if no music signal is detected for a certain period of time.
When power save mode is active, the internal amplifier stages and the remote output (REMOTE Out) are automatically switched off. Once a music signal is detected again, the device returns to normal operation within approximately 2 seconds. The function can be switched on or off using the DSP PC-Tool software. If it is activated, the switch-off delay can be freely set in the range from 10 to 600 seconds. The default delay time is 60 seconds.

Technical data

Power RMS (≤ 1% THD+N @ 14.4 V)	
- @ 4 Ohms	6 x 100 Watts
- @ 2 Ohms	6 x 190 Watts
- bridged @ 4 Ohms	3 x 380 Watts
Max. output power per channel*	Up to 240 Watts RMS @ 2 Ohms Up to 480 Watts RMS @ 4 Ohms bridged
Amplifier technology	Class D
Inputs	6 x RCA / Cinch or 6 x Highlevel speaker input 1 x Optical SPDIF (12 - 96 kHz) 2 x Remote In
Input sensitivity	RCA / Cinch: 1 - 8 Volts Highlevel: 2 - 16 Volts
Input impedance	RCA / Cinch: 4.8 kOhms Highlevel: 9 - 33 Ohms or 20 kOhms with ADEP.3
Outputs	6 x Speaker output 2 x RCA / Cinch 1 x Remote Out
Output voltage RCA / Cinch	8 Volts
Frequency range	20 Hz - 22,000 Hz
DSP resolution	64 Bit
DSP power	295 MHz (1.2 billion MAC operations/sec.)
Sampling rate	48 kHz
DSP type	Audio signal processor
Signal converters	A/D: BurrBrown 24 Bit D/A: AKM 24 Bit
Signal-to-noise ratio (A-weighted)	Analog input: 99 dB @ full power Digital input: 102 dB @ full power
Distortion (THD @ 1 kHz, 1 W into 4 Ohms)	< 0.005 %
Distortion (THD+N @ 1 kHz, 1 W into 4 Ohms)	< 0.02 %
Damping factor	70
Operating voltage	10.5 - 16 Volts (max. 5 sec. down to 6 Volts)
Power rating	DC 12 V ⎓ 93 A max.
Idle current	1,100 mA
Max. remote output current	500 mA
Operating temperature range	-40° C to +70° C
Fuse	3 x 25 A LP-Mini-fuse (APS)
Additional features	ADEP.3 circuit, Smart Control Port, Auto remote switch, 32 Bit CoProcessor
Dimensions (H x W x D)	40 x 263 x 114 mm / 1.58 x 10.35 x 4.49”

*One channel driven (≤ 10 % THD+N @ 14.4 V)

Warranty disclaimer

The warranty service is based on the statutory regulations. Defects and damage caused by overload or improper handling are excluded from the warranty service. Any return can only take place following prior consultation, in the original packaging together with a detailed description of the error and a valid proof of purchase.
Technical modifications, misprints and errors excepted! For damages on the vehicle and the device, caused by handling errors of the device, we can't assume liability.

Correct disposal of this product

This symbol means the product must not be discarded as household waste, and should be delivered to an appropriate collection facility for recycling. Follow local rules and never dispose of the product with normal household waste. Correct disposal of old products helps prevent negative consequences for the environment and human health.

Regular notes

This product has been issued a CE marking. This means that the device is certified for use in vehicles within the European Union (EU).

This product has been issued an UKCA marking. This means that the device is certified for use in vehicles within the United Kingdom.

This product has been issued an EAC marking. This means that the device is certified for use in vehicles within the Eurasian Customs Union.

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