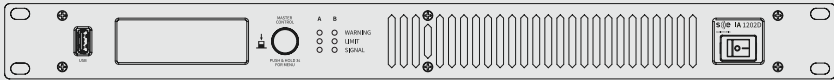




AUDIOTECHNIK

I-LINE

IA 1202D POWER AMPLIFIER



MANUAL

THANK YOU FOR CHOOSING S)))e AUDIOTECHNIK.

We are happy to be the solution for your sound reinforcement needs with our professional loudspeaker systems. The system you have purchased is based on more than 20 years of experience as a speaker manufacturer and more than 40 years as a speaker developer. **SE AUDIOTECHNIK** products are compact, easy to use, modular and reliable.

Please, take the time to carefully read this manual and follow its instructions. It will allow you to get the most out of your product under safe operating conditions and suggest some care instructions leading to long-term endurance. Keep this manual in a safe place for further reference!

If you find any mistakes or have further questions or suggestions, please contact us at **info@se-audiotechnik.de**.

For more information about **SE AUDIOTECHNIK** products, visit our website **<https://se-audiotechnik.de> (DE/EN)** or **<https://se-audiotechnik.com> (CN)**. There you will also find the latest updates to manuals, firmware, software and technical documents for additional support.

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The content of this document is subject to change without prior notice to improve reliability, function, design or otherwise.

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IMPORTANT SAFETY INSTRUCTIONS

GRAPHICAL SYMBOLS THAT MAY BE FOUND ON THE PRODUCT



The lightning bolt triangle is used to alert the user to the risk of electric shock.



The exclamation point triangle is used to alert the user to important operating or maintenance procedures and instructions.



The CE mark indicates the conformity with the relevant EU directives for safety, health and environmental protection. See the Manufacturer 's Declaration section.



Symbol indicating that the equipment is for indoor use only.



Symbol for conformity with Directive 2002/96/EC and Directive 2003/108/EC of the European Parliament, on waste electrical and electronic equipment (WEEE).

GRAPHICAL SYMBOLS IN THIS MANUAL



Symbol for important safety information related with the risk of electric shock.



Symbol to alert you about important operating or maintenance instructions.



Symbol for important concepts and information for a better understanding of the functioning of the product.



Symbol for practical tips and ideas useful to ensure the correct use of the product and improve its operation.

The products described in this manual have been engineered and manufactured to ensure your personal safety. However, **IMPROPER USE CAN RESULT IN POTENTIAL ELECTRICAL SHOCK, FIRE HAZARD AND OTHER HEALTH RISKS.** Always follow the basic precautions listed here to avoid the possibility of serious injury or even death from electrical shock, short-circuiting, damages, fire or other hazards. These precautions include, but are not limited to, the following items in this chapter.



ELECTRICAL SAFETY PRECAUTIONS



DO NOT EXPOSE ANY OF THIS EQUIPMENT TO RAIN OR MOISTURE, DRIPPING OR SPLASHING LIQUIDS. OBJECTS FILLED WITH LIQUIDS, SUCH AS VASES, SHOULD NOT BE PLACED ON THIS APPARATUS.



TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT ATTEMPT TO OPEN ANY PART OF THE UNIT. THERE ARE NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



EQUIPMENT DESCRIBED IN THIS MANUAL REQUIRE AC POWER SUPPLY. TO COMPLETELY DISCONNECT THEM FROM THE AC MAINS, DISCONNECT THE POWER SUPPLY CORD PLUG FROM THE AC RECEPTACLE. THE MAINS PLUG OF THE POWER SUPPLY CORD SHALL REMAIN READILY OPERABLE.

OVERHEATING PRECAUTIONS



DO NOT PLACE THIS PRODUCT IN DIRECT SUNLIGHT OR NEAR ANY HEAT SOURCE TO PREVENT OVERHEATING. PROTECTION MAY BE APPLIED AND POWER WILL BE REDUCED UNTIL THE TEMPERATURE RETURNS TO SAFE VALUES. THE SYSTEM MAY SHUT DOWN IF MAXIMUM OPERATING TEMPERATURE IS PERMANENTLY EXCEEDED. ALWAYS ENSURE PROPER AIR CIRCULATION AND PROVIDE SUFFICIENT SHADE. OVERHEATING MAY CAUSE DAMAGES AND LEADS TO POTENTIAL ELECTRICAL SHOCK, FIRE HAZARD AND OTHER HEALTH RISKS.

NOISE EXPOSURE PRECAUTIONS



PRODUCTS DESCRIBED IN THIS MANUAL CAN RADIATE HIGH SOUND PRESSURE LEVELS (SPL), WHICH CAN LEAD TO IRREVERSIBLE HEARING DAMAGE. SE AUDIOTECHNIK RECOMMENDS TO RESPECT THE TIMES OF EXPOSURE TO HIGH SPL.

Noise level (dBA)	85	94	97	112	127
Max. recommended exposure time per 24 hours	8 hrs.	1 hr.	30 min.	56 sec.	1 sec.

Noise exposure recommendations according to US National Institute for Occupational Safety and Health (NIOSH).

IMPORTANT SAFETY INSTRUCTIONS

- Keep these instructions and heed all warnings.
- Read and Follow thoroughly all instructions.
- Use the product only for the purpose intended by the manufacturer.
- Use the product only if you are familiar with the product and its application.
- Observe applicable rules and regulations at the place of use.
- Do not use this apparatus near water.
- Clean only with a dry cloth. Disconnect the device from the AC outlet before cleaning. Do not use paint thinners, solvents, cleaning fluids, or chemical-impregnated wiping cloths.
- Do not block any ventilation openings.
- Install in accordance with the manufacturer's instructions.
- Do not install near any external heat sources such as radiators, heat registers, stoves or other apparatus that produce heat.
- When installing in an amplifier rack in combination with other amplifiers, ensure adequate ventilation and installation in accordance with regulations and standards.
- Do not defeat the safety purpose of the grounding-type plug. A grounding-type plug has two blades and a third grounding prong. The third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- Unplug this apparatus during lightning storms or when unused for long periods of time.
- Use the mains plug to disconnect the apparatus from the mains.
- 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.
- Servicing must be done by qualified service personnel only. This is required when the product has been damaged in any way, such as liquid has been spilled or objects have fallen into the apparatus, power-supply cord and plug damages, the apparatus has been exposed to rain or moisture, does not operate as intended, or has been dropped.
- Do not insert your fingers, hands or any other objects into any gaps or openings of the device.
- When this product reaches its end of life, take it to a collection point designated by local authorities. The separate collection and recycling of your product at the time of disposal will help conserve natural resources and ensure that it is recycled in a manner that protects human health and environment.

SPECIFIC SAFETY INSTRUCTION FOR THE USE OF ELECTRICALLY POWERED EQUIPMENT



SPEAKER CABLES CONNECTED TO POWER AMPLIFIERS CAN CARRY SIGNALS WITH HIGH VOLTAGE AND CURRENT. TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT TOUCH ANY OF THE CABLE'S CONNECTORS WHILE AMPLIFIERS ARE WORKING AND CONNECTED TO THE MAINS. ALWAYS ENSURE THAT CABLES, PLUGS AND CONNECTORS ARE IN A GOOD CONDITION.



ALWAYS FOLLOW THE RULES AND REGULATIONS ESTABLISHED BY THE AUTHORITIES, PROFESSIONAL ASSOCIATIONS AND APPLICABLE STANDARDS FOR THE USE OF ELECTRICALLY POWERED EQUIPMENT.



THE USE OF LOUDSPEAKER POWER AMPLIFIERS AS WELL AS THE ASSEMBLY AND INSTALLATION OF LOUDSPEAKER SYSTEMS MAY ONLY BE PERFORMED BY AUTHORIZED, TRAINED AND CERTIFIED PERSONNEL.

PACKAGE CONTENTS

The packaging of the **IA 1202D POWER AMPLIFIER** includes:

- 1 Amplifier
- 1 AC power cord with connector
- 1 Safety Instruction/Manual link
- 1 QC PASS card
- 1 Warranty card

Please inspect your product packaging before unboxing it. If it has been damaged during shipping, unbox the product and check for any visual damage before using it. Notify the shipping company immediately and contact your SE AUDIOTECHNIK dealer or support center for help and assistance.

Finally, save the shipping carton as evidence for the possible claim, which can be requested only by you. We also recommend to keep all the packing materials and contents for transportation and storage.

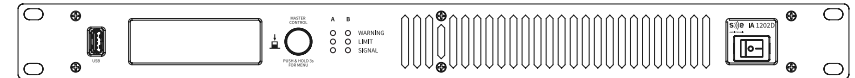


Figure 1. IA 1202D Installation Amplifier.

INTRODUCTION

The IA 1202D is a powerful 2-channel installation amplifier with a high level of efficiency. It delivers up to 2 x 1,800 watts into 2 ohms or up to 1x 3,600 watts into 4 ohms in bridged mode. Thanks to the SE AUDIOTECHNIK amplifier architecture, the IA 1202D can be used in demanding installations with high power requirements as well as in live sound applications. The integrated DSP and preset library enable simple integration and system configuration. This allows to create perfect sound reinforcement solutions flexibly and modularly with little effort.

The IA 1202D amplifier has a USB port on the front, which can be used to update the firmware and speaker library and expand its functionality. System and user settings can also be saved. The SE AUDIOTECHNIK DSP platform ensures future-proof signal amplification. The amplifier features digital AES/EBU and analogue inputs and outputs for maximum flexibility and signal quality. Speakers can be connected to the amplifier via speakON® and Phoenix connectors. The bridge mode makes it possible to combine the power of both channels, for example to drive high-performance subwoofers.

FEATURES

Easy handling

Every parameter of the IA 1202D can be set using a touch dial and an LCD display. Factory device and speaker presets help to set up the system. Updates and backups can be made via the USB port.

Signal processing

The IA 1202D features the proven SE AUDIOTECHNIK DSP platform and offers the option of adjusting the level, EQ, and delay settings for system tuning. The integrated presets already take over a large part of the basic settings for various setups.

Flexible connections

Audio signals can be connected via the digital AES/EBU and analogue inputs and outputs. Speakers are connected via speakON® or Phoenix. The Phoenix analogue input is also particularly practical for installation applications.

Sound quality

Thanks to the extensive dynamic range, the linear frequency response and the high signal-to-noise ratio, the IA 1202D pro audio amplifier impresses with an authentic and powerful sound projection with up to 2x 1,800 watts at 2 Ω or 1x 3,600 W (BTL) at 4 Ω.

INTENDED USE

The IA 1202D installation amplifier is a professional amplifier solution for indoor sound reinforcement where a higher output is required. The amplifier can also be used to drive loudspeakers with high power requirements, such as subwoofers. Thanks to the SE AUDIOTECHNIK amplifier architecture and the integrated speaker library, this amplifier can be easily integrated into SE AUDIOTECHNIK systems. This means that the amplifier can also be used for mobile applications. The amplifier can be operated in DUAL CHANNEL, LINKED (stereo) or BRIDGE MODE.

IA 1202D AMPLIFIER OVERVIEW

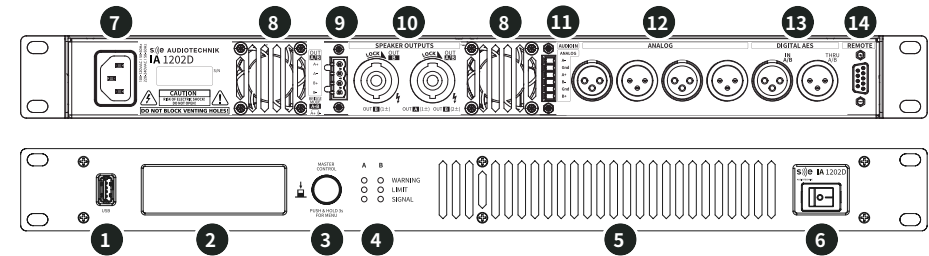


Figure 2. IA 1202D amplifier front and back panel.

- | | | | |
|---|----------------------------------|----|--|
| 1 | USB-Port for updates and backups | 8 | Fan |
| 2 | LCD Screen | 9 | Speaker Outputs Phoenix Connector Channel A/B and Bridge Mode (A+,B-) |
| 3 | Rotary Push Encoder | 10 | Speaker Outputs speakON® Connectors Output A/B (Out A: 1±, Out B: 2±) and Output B (A+,B-) |
| 4 | LED Signals | 11 | Analog Audio Inputs Phoenix Connector Balanced Input A and balanced Input B |
| 5 | Ventilation Opening | 12 | Analog Audio Inputs/Outputs XLR Connectors Balanced Input/Output A and balanced Input/Output B |
| 6 | Power Switch | 13 | Digital (AES/EBU) 2-Channel Audio Input/Output |
| 7 | AC Power Connector | 14 | Remote D-Sub connector |

OPERATION AND HANDLING

IMPORTANT HANDLING INFORMATION

- For optimal use, it is recommended to install the device in either a fixed or portable 19" rack.
- If the device is not installed in a rack, attach rubber feet to the underside of the housing.
- Ensure that there is at least 30 cm of space at the rear of the amplifier to allow for sufficient air circulation.
- Avoid using the device in a confined or poorly ventilated location, and do not block the air intake/ventilation opening under any circumstances.
- If the device is installed in a rack with doors, ensure there is active cooling or sufficient space for adequate ventilation. If neither is possible, leave the rack door open.
- It is important to avoid placing the device on its side or upside down.
- Inadequate ventilation may cause overheating, resulting in damage to the unit, fire or other hazard.
- Do not rest your weight on the device or place heavy objects on it, and avoid the use of excessive force on the buttons, switches or connectors to prevent injuries or device damage.
- Condensation can occur in the device due to rapid, drastic changes in ambient temperature when the device is moved from one location to another, or air conditioning is turned on or off, for example. Using the device while condensation is present can cause damage. If there is reason to believe that condensation might have occurred, leave the device for several hours without turning on the power until the condensation has completely dried out.
- Rapidly turning the unit on and off in succession can cause it to malfunction. After turning the unit off, wait for more than five seconds before turning it on again.
- Do not use this device for any other purpose than driving loudspeakers!

WIRING

Passive loudspeakers can be connected to the IA 1202D amplifier using either speakON® NL4 connectors or Phoenix connectors. The IA 1202D amplifier allows for the use of two separate loudspeaker cables for Channel A and Channel B, or one loudspeaker cable for both channels using all pins of a speakON® NL4 connector. Please refer to the illustration below:

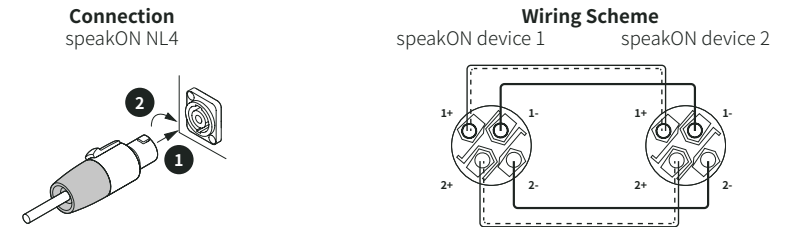


Figure 3. SpeakON® NL4 plug-in and link cable connection.

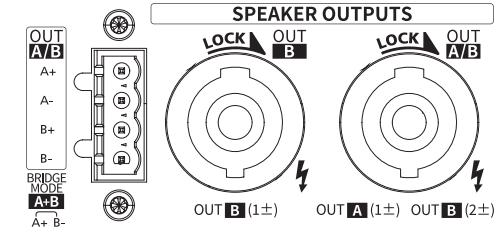


Figure 4. SpeakON® NL4 speaker and phoenix output connection.

It is recommended to use cables with at least 18 AWG conductor size. For long cable lengths, the maximum conductor size is 14 AWG. Those wires must be assembled by a qualified technician.

- 1 Plug in the speakON® cable plug into the speakON® socket.
- 2 Turn the speakON® cable plug clockwise until it is locked.

Additionally, IA 1202D is equipped with XLR-3 connectors to input and pass analog and digital (AES) audio signals. They follow the plug-in and configuration scheme below:

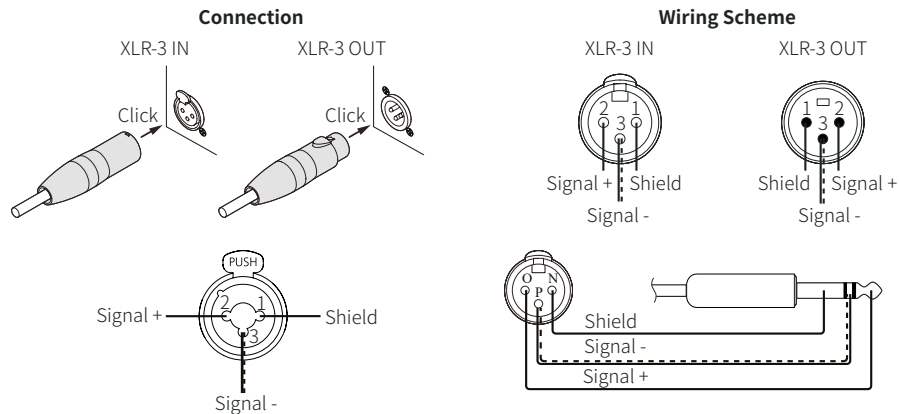


Figure 4. XLR-3/TRS plug-in and WIRING SCHEME.

To ensure correct and safe behaviour of the device, make sure that the amplifier and the connected speakers are matched in terms of rated power and impedance. As a general rule, the rated power of the amplifier should be significantly higher than the rated load capacity of the loudspeaker. If possible, a factor of two should be aimed for. Remember that the total impedance is reduced by daisy-chaining, so take the amplifier's capabilities into account.

In addition, both mechanical and thermal protective measures should be taken when using passive loudspeakers. SE Audiotechnik drivers are designed to minimise the load on the suspension components at higher excursions. However, these protective measures ensure the correct behaviour of the device, its care and safety and can maximise the performance of the entire system.



The mechanical protection of a loudspeaker controls the excursion of the cone, so its physical limits are not exceeded. This can be done by filtering the signal below the safe range of the loudspeaker.

Thermal protection controls the energy of the loudspeaker in the long term, keeping its temperature under safe levels. This is achieved by limiting the RMS voltage applied, where the maximum allowable value is its average power handling. This protection depends also on the time constants selected to trigger and release the limiter.



If equalization is needed, it is recommended to reduce levels in the undesired frequency ranges, instead of boosting the desired ones. This guarantees maximum dynamic range.



SE AUDIOTECHNIK I-Line amplifiers have integrated presets for simple and safe operation with SE AUDIOTECHNIK loudspeakers.

IA 1202D AMPLIFIER OPERATION

The IA 1202D power amplifier is equipped with a built-in 48 kHz/24 bit DSP processor, that provides controlled signal processing and limiting. This DSP core is fed by dual-range inputs to improve the SNR, and is easy to operate thanks to the rotary control encoder with push button, and the 4x20 symbol alpha-numeric LCD screen.

This section details the key features of the DSP firmware, whose adjustable parameters and features include input level, multiple EQs and filters, delay, polarity/phase and bypass options. In addition, a variety of Factory Presets (F) are included for easy setup of different systems. With the ability to create User Presets (U), the IA 1202D is highly customisable for any application.

The power amplifier is controlled by a rotary push encoder and a 4x20 alphanumeric LCD screen. Further chapters explain the menu operation and features. Several cursors & symbols are used throughout the menu structure:

- The first line of each screen is the specific name or title of the given screen.
- The cursor ">" marks the current point of action.
- When editing preset names, the cursor "←" indicates deleting function.
- The symbol "*" highlights the selection of a given preset or setting. It also indicates that the editing of a specific parameter is activated.
- The symbol "L" indicates the lock state of the amplifier and thus, that the editing of any parameter is not allowed. This symbol appears only when this is activated, and only in the **Overview** screen.

The amplifier is operated through a series of menus and functions. These are divided into different sub-sections. The most important settings are made in the DSP settings and system settings menus. There are direct access points for functions that are frequently required during operation.

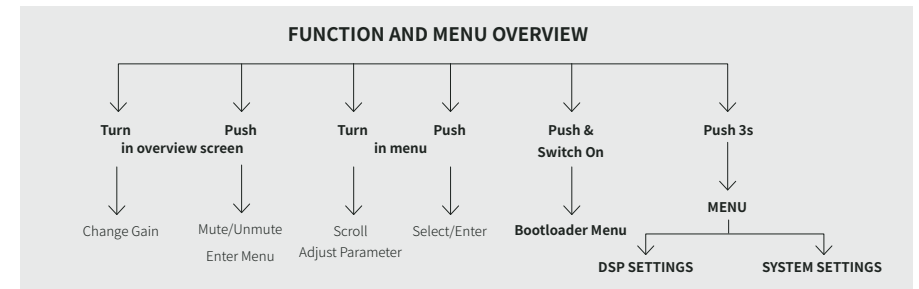


Figure 5. DSP firmware functions and menus.



Please note that the illustrations of the menu items and functions are indicative and may vary depending on the firmware version. The concept of operating the amplifier remains unaffected in this case.



If a screen has several pages, you can simply scroll through the entries using the rotary push encoder.

OVERVIEW SCREEN

The Overview screen is the default screen displayed on the amplifier's LCD screen and provides a variety of information:

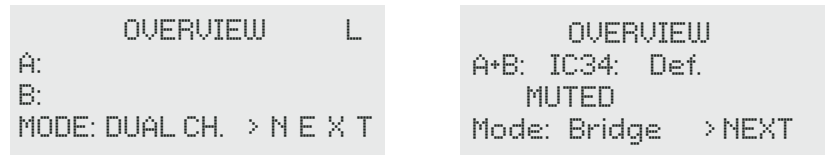


Figure 6. IA 1202D amplifier **OVERVIEW SCREEN** (left: Dual Channel mode; right: Bridge mode).

- The letter „L“ in the top right-hand corner indicates that the amplifier is locked. When the amplifier screen is locked, the letter „L“ is displayed in the top right-hand corner of the overview screen.
- The output level of the amplifier is displayed in the second and third row. When the limiter threshold is reached and gain reduction is applied to the signal, „LIM“ appears at the end of the scale. The backlight of the screen flashes to alert you. When the channels are muted, the level meters are replaced with the text „MUTED“.
- The mode of operation is displayed on the bottom left of the screen.
- When clipping occurs, the level is replaced with the text „INPUT CLIP“ and the backlight of the amplifier flashes to draw your attention.

Other actions from the Overview screen include: Turning the rotary push encoder to adjust both channel output levels by the same amount. The change delta in dB is displayed.

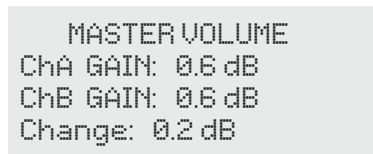


Figure 7. IA 1202D amplifier: Change output levels for all channels by turning the rotary push encoder and set **MASTER VOLUME**.

Press the rotary push encoder to mute or un-mute all channels. When muting is active, the words „muted“ are displayed on the screen.

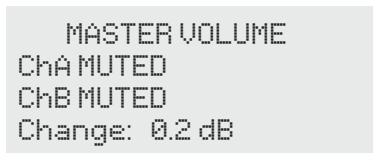


Figure 8. IA 1202D amplifier: **MUTE OR UN-MUTE** all channels by pressing the rotary push encoder.

Press and hold the rotary push encoder to enter the MENU. When the screen is unlocked, a „>“ arrow will appear, allowing you to navigate to the next screen, which displays the currently active presets for each channel.



Figure 9. IA 1202D amplifier: Standard **CHANNEL OVERVIEW**

Clicking „Next“ one or two more times will take you to the individual output level adjustments for both channels A and B. Here you can adjust the output gain for each channel, or mute the channel. Clicking „Next“ from the Channel B Output view will return to the Overview screen.



Figure 10. IA 1202D amplifier: **CHANNEL PRESET INFO**

MAIN MENU

To enter the amplifier menu, press and hold the rotary push encoder for 3 seconds. A menu will appear on the LCD screen.

```

MENU
> DSP Settings
  System Settings
  Exit
  
```

Figure 11. IA 1202D amplifier: **DSP** and **SYSTEM SETTINGS** menu.

This menu gives you access to two types of settings: DSP settings and system settings. DSP settings include channel presets, filters, EQ, and delay, while system settings control power amplifier operation.

DSP SETTINGS

```

DSP SETTINGS
> Back
  Channel: A
  Channel: B
  Both Channels
  Output Mode
  Exit
  
```

Figure 12. IA 1202D amplifier: **DSP MENU**.

INPUT SENSITIVITY

The input sensitivity menu lets you change the reference sensitivity of the amplifier. There are two options to choose from:

- Pro Audio reference level (+4 dBu or ~1.23 V)
- Consumer device reference level (-10 dBV or 0.316 V)

```

SENSITIVITY
Back
> +4 dBu
-10 dBV
  
```

Figure 13. IA 1202D amplifier: DSP menu, **Input Sensitivity**.

INPUT ROUTING

The Input Routing menu is where you can define how your input signals are routed. There are several options available:

- Stereo
- Inv. Stereo (Inverse Stereo). This setting swaps A & B inputs
- Mono (A+B). The level is reduced by -6 dB to compensate for summation
- Mono A
- Mono B

```

INPUT ROUTING
Back
> Stereo
  Inv Stereo
  Mono (A+B)
  Mono A
  Mono B
  
```

Figure 14. IA 1202D amplifier: DSP menu, **INPUT ROUTING**.

CHANNEL A / B

The menus for Channel A and Channel B are exactly the same and include signal controls that are specific to each channel. However, only Channel A is shown here to illustrate its contents.

```

CHANNEL A
> Back
  Preset
  Input Level
  Highpass Filter
  Lowpass Filter
  Phase Inversion
  EQ 1
  EQ 2
  EQ 3
  EQ 4
  EQ 5
  Bypass User
  Delay
  Reset User Params
  
```

Figure 15. IA 1202D amplifier: DSP menu, **CHANNEL DSP SUB-MENU**.

PRESET

The Preset menu allows you to load loudspeaker presets. These presets are divided into two basic types.

- Factory presets: Marked with an “F” letter at the right side of the preset name
- User presets: Marked with an “U” letter at the right side of the preset name.

Currently loaded preset is marked with a “*” star symbol.

```
CHANNEL A PRESET
Back
> IC 32: DEFAULT F*
IC 34: DEFAULT F
IC 32: SE BAR U
IC 34: NAME IT U
IC 34: 123456 U
EMPTY: USER 1 U
EMPTY: USER 2 U
```

Figure 16: IA 1202D amplifier: DSP menu, CHANNEL PRESET LIST.

The preset names are always organized to indicate the corresponding loudspeaker model. This is to ensure that you can easily tell if your User Preset has the correct factory settings.

Factory presets are the default configuration of each speaker system, with factory-predefined filter and limiter settings. User presets are created by saving additional user adjustments on top of the factory presets, creating an additional layer.

- User HP filter settings
- User EQ settings
- User Delay settings

PRESET LOADING

To load a preset, simply select the desired preset and click the rotary push encoder. A dialogue will appear on the screen to either load the preset, save the preset or go back. If you wish to save a preset, this can only be done in the user preset area. Once you have selected ,Load Preset ‘, the preset will be loaded into the DSP and a message reading ,Preset Loaded! ‘ will briefly appear on the screen. To return to the previous menu, simply select ,Back ‘ and click the rotary push encoder.

```
FACTORY PRESET
IC 34: DEFAULT
Back
> Load Preset
```

Figure 17: IA 1202D amplifier: DSP menu, CHANNEL PRESET LOADING.

PRESET SAVING

To save a preset, just select one of the existing or empty User Preset locations and click the rotary push encoder. A dialogue similar to that for loading a factory preset will appear on the screen, except that there is an additional option to save the preset.

```
USER PRESET
EMPTY: USER 1
Back
Load Preset
> Save Preset
```

Figure 18: IA 1202D amplifier: DSP menu, CHANNEL USER PRESET SAVING.

Clicking on ,Save Preset ‘ will display a dialogue for you to enter a preset name. You can edit the last 9 symbols to create a note or name for your preset. To edit the name, simply click on it with the rotary push encoder. Choose the desired letter by scrolling the controller and clicking. To delete a character, select the ,← ‘ symbol and click. To complete the editing of the name, choose the space symbol and click twice.

```
SAVE USER PRESET
> IC 34: _USER_1_ ←
Back
Save
```

Figure 19: IA 1202D amplifier: DSP menu, CHANNEL USER PRESET NAMING.

To save the preset, select Save and click the rotary push encoder. Once you ‘ve done this, a message will appear on the screen confirming that your preset has been saved.

PRESET INFORMATION

If you press and hold the selected preset for three seconds, a message will appear showing various information about the preset, such as date, version and author.

```
PRESET INFORMATION
> Back
IC 32: DEFAULT F
Date: 20240401
Version: 1.4
Author: 01
```

Figure 20: IA 1202D amplifier: DSP menu, CHANNEL PRESET INFORMATION.

INPUT GAIN/LEVEL

Use the Input Level menu to check the input signal level of the corresponding channel. You 'll be able to see the level at the input stage of the signal chain. The IA 1202D amplifier can accept input levels up to +20 dBu.

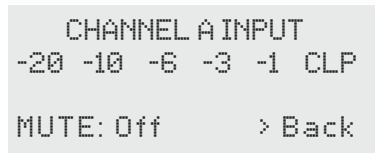


Figure 21: IA 1202D amplifier: DSP menu, **CHANNEL INPUT GAIN/LEVEL**.

The menu shows the input level in dBFS after it has been converted to the digital domain for DSP. You 'll see corresponding level thresholds when the level is equal to -24, -12, -6, -3, and -1 dBFS. To avoid input clipping, set your levels based on the program material and leave at least 6 dB of headroom for the loudest peaks. The nominal input level should be around -12 dB.

If clipping does occur, you 'll see ,CLP ' at the end of the meter scale. To prevent hard-clipping and signal distortion, it 's best to avoid high input levels. Instead, use a professional line level signal (ref. +4dBu) to increase the signal-to-noise ratio.

By scrolling the rotary push encoder you can choose between 2 options:

- MUTE. When you select this option, you can change the mute status of the channel output from Off to On. Simply click to exit or confirm.
- Back. Returns to the corresponding channel menu.

HP/LP FILTER

This is where the HP/LP Filter menu is used to set the high pass (low cut) or low pass (high cut) filter settings for selected channels.

Three main parameters can be changed:

- Type. Either HPF (high-pass filter) or LPF
- Filter Order: User can select between 12dB/Octave or 24 dB/Octave filter slopes.
- Frequency: User can select the cut-off (-3dB) point of the filter up to 150 Hz.

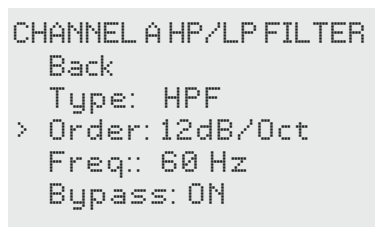


Figure 22: IA 1202D amplifier: DSP menu, **CHANNEL HP/LP FILTER**.

PHASE INVERSION

The phase inversion menu allows you to invert the signal phase for the relevant channel. This is a function also known as polarity reverse. You 'll find two available settings:

- Normal. In phase setting.
- Inverted. In this setting phase/polarity is inverted (180° phase shift for all frequencies).

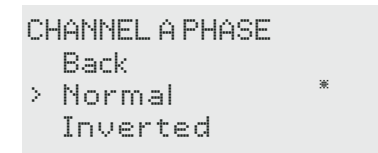


Figure 23: IA 1202D amplifier: DSP menu, **CHANNEL PHASE INVERSION**.

EQUALIZERS (EQ 1 TO EQ 5)

The amplifier channels of the IA 1202D each have their own EQ section, which consists of 5 freely configurable equalizer units. You can set the following parameters depending on the chosen type of EQ.

- Type
- Gain
- Center/Edge Frequency
- Quality/Slope
- Bypass

To modify the equalizer parameters, go to the appropriate equalizer menu and modify the parameters. You 'll notice that each equalizer band can be bypassed individually,

Let us take an example of Parametric Equalizer. Four different parameters can be edited in this case:

- Bypass: On – the equalizer band is bypassed. Off – the equalizer band is active.
- Gain: Allows to change the boost/cut of the frequency band by +/- 10 dB.
- Frequency: Allows to change the center or edge frequency (for High-shelf and Low-shelf) of the band.
- Quality: The opposite of the bandwidth. Higher Q values mean narrower bandwidth (for parametric equalizers only).

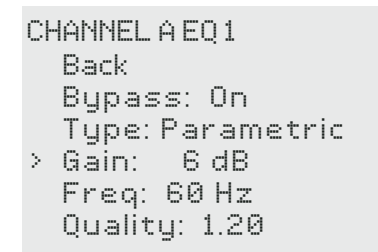


Figure 24: IA 1202D amplifier: DSP menu, **CHANNEL EQS**.

BYPASS USER EQ

In this menu, you have the option to bypass all the EQ settings you've made in a channel. The bypass remains active until you re-activate the equalizer in this menu.

```

CHANNEL A BYPASS UEQ
  Back
> Bypass  all   *
  Enable  all
  
```

Figure 25: IA 1202D amplifier: DSP menu, CHANNEL BYPASS USER EQ.

DELAY SETTINGS

In the Delay section, you can apply a signal delay to the relevant channel, using three different states of delay configuration:

- Bypassed (If the channel delay is bypassed only system latency is shown)
- Single (Minimum delay of 1 sample)
- Double (Minimum delay of 2 samples)

For more information about delay settings please refer to section „Delay Settings“.

```

CHANNEL A DELAY
  Back
> Samples: 650
  Time: 13.54 ms
  Distance: 4.64 m
  
```

Figure 26: IA 1202D amplifier: DSP menu, CHANNEL DELAY.

In chosen channels Delay menu you can see and adjust the delay of the channel in 3 different ways:

- Samples: (1-700 in Single mode and 2-1400 in Double)
- Time: Delay in milliseconds (ref. to 48 kHz)
- Distance: Delay in meters (ref. to $c=344$ m/s)

The Channel Delay menu shows the total system introduced latency including delay, system latency & look-ahead limiter. Just keep in mind that the IA 1202D amplifier has a fixed minimum latency of 52 samples (1.07 ms). Depending on the loaded preset, look-ahead limiter latency is added to the channel delay, which can be up to 2 ms (96 samples). With this feature, you are always aware of the total system latency.

RESET USER PARAMS

The Reset User Params menu allows to reset all current channel user DSP settings such as:

- HP Filter
- Equalizers
- Delay
- Input Gain
- Phase Inversion

```

Reset Channel A User
Parameters?
  <DLY, EQ, Filters
  Phase Inversion>
  Back
> Reset
  
```

Figure 27: IA 1202D amplifier: DSP menu, CHANNEL PARAMETER RESET.

BOTH CHANNELS

The Both Channels section allows to perform certain operations for both channels simultaneous

```

BOTH CHANNELS
  Back
> Link Channels
  Load Preset
  Bypass User EQ
  Reset User Params
  
```

Figure 28: IA 1202D amplifier: DSP menu, Operation of both channels at once.

LINK CHANNELS

IA system amplifiers enable the linking of parameters for both channels. This allows for easier and faster operation when the settings in both channels need to be identical. Currently available parameters include:

- HP/LP Filter.
- User EQ.
- Delay.
- Or All of above.

```

LINK CHANNELS
  Back
> HP Filter
  User EQ
  Delay
  All
  
```

Figure 29: IA 1202D amplifier: DSP menu, LINK PARAMETERS that should be identical for both channels.

LOAD PRESET

In a similar way as presets are managed and loaded for individual channels Load Preset enables you to load the same preset in both channels at once. Currently only Loading of both channels is supported. The presets you 've loaded will be shown with an ,A ' or ,B ' next to the preset type. If the same preset is active in both channels, it will be marked with a star symbol ,* '.

```
BOTH CHANNEL PRESET
Back
> IC 32: DEFAULT F
IC 34: F
SMX 12: 1234 F
IC 32: SE Bar U
IC 34: Lounge UA
IC 32: Lounge UB
```

Figure 30: IA 1202D amplifier: DSP menu, Link Parameters, **LOAD PRESET** for both channels.

BYPASS USER EQ

This menu allows to bypass all set QEs in both channels at once.

RESET USER PARAMS

This menu allows to reset user DSP settings for both channels at once.

OUTPUT MODE

IA 1202D can be used either in Dual Channel mode or Bridge mode. The selected mode of operation will be displayed in the overview screen.

```
OUTPUT MODE
Back
> Dual Channel *
Bridged
```

Figure 31: IA 1202D amplifier: DSP menu, set **MODE OF OPERATION (OUTPUT MODE)**.

DELAY SETTINGS

The IA system amplifiers have a maximum delay memory of 1400 samples. SE AUDIOTECHNIK came up with the ,shared delay ' concept to allow each channel to have three different delay settings, depending on the location of the loudspeakers.

- Bypassed: No delay available for the channel
- Single: "Single Mode" delay with latency up to 700 samples (1 sample minimum latency).
- Double: "Double Mode" delay configuration up to 1400 samples (2 samples minimum latency). Only one channel can have this configuration. The other one is bypassed.

```
DELAY SETTINGS
Back
> CH A CH B
Double< Bypass
```

Figure 32: IA 1202D amplifier: DSP menu, set **CHANNEL DELAY MODE**.

The Delay Settings menu allows you to change the delay parameters for each channel. Just keep in mind that the look-ahead function in the peak limiter can introduce latency up to 48 samples, depending on the preset. Please note that this is not reflected in the table.

Channel Status		Delay Range			Delay (ms)	
Channel A	Channel B	Samples	Milliseconds	Meters	Built-In	Total
Bypassed	Bypassed	0	0	0	1.07	1.07
Single Delay	Bypassed	1	0.021	0.0072	1.07	1.091
		to	to	to		to
Single Delay	Single Delay	700	14.583	5.002		15.653
Bypassed	Single Delay					
Dual Delay	Bypassed	701	14.604	5.009	1.07	15.674
Bypassed	Dual Delay	to	to	to		to
		1400	29.167	10.004		30.237

Table 1: IA 1202D amplifier: DSP menu, **DELAY RANGE**.

SYSTEM SETTINGS

The System Settings menu allows you to set various amplifier parameters and access various system functions.

```

SYSTEM SETTINGS
  Back
> LCD Backlight
  LCD Brightness
  Reset
  HW/SW Information
  Lock
  Menu Timeouts
  Exit
  
```

Figure 33: IA 1202D amplifier: **SYSTEM SETTINGS MENU**.

LCD BACKLIGHT

The LCD Backlight menu lets you change the settings for the LCD screen backlight. There are two options:

- Auto Off, which will turn-off the backlight after set period of time. Onselection of this setting a dialogue appears where the timeout can be set with a maximum value of 60 seconds.
- Always On, which sets the backlight to be always on.
-

```

LCD BACKLIGHT
  Back
> Auto off
  Always on
  
```

Figure 34: IA 1202D amplifier: System Settings menu, set **BACKLIGHT** behavior.

LCD BRIGHTNESS

The LCD Brightness menu enables to set the brightness of the LCD screen.

```

LCD BRIGHTNESS
  Back
>    9 [0-15]
  
```

Figure 35: IA 1202D amplifier: System Settings menu, set **LCD BRIGHTNESS**.

RESET

The Reset menu allows to reset system settings such as:

- LCD Backlight settings
- LCD Brightness
- Lock settings

```

RESET SYSTEM
  SETTINGS?
> No <Back>
  Yes
  
```

Figure 36: IA 1202D amplifier: System Settings menu, **RESET SYSTEM SETTINGS**.

HW/SW INFORMATION

On this screen, you can find all the details about your amplifier, such as its firmware and hardware versions, and even its name. You can change the name if you like.

```

HW/SW Information
  Back
  HW:  02 V010000
> SW:  02 V010202
  PLIB: 02 V010203
  AMP IA1202D
  
```

Figure 37: IA 1202D amplifier: System Settings menu, **HARDWARE AND SOFTWARE INFORMATION**.

LOCK

In the Screen lock menu you can set automatic screen locking settings:

- Automatic Lock. This feature locks the amplifier screen after a set timeout. Once you select this option, a dialogue will appear asking you to set the automatic lock timeout [2-60 seconds].
- Lock Now. This option will lock the screen instantly. The selected settings of (Automatic Lock or No Lock) are kept.
- No Lock. This option will disable automatic lock function.

```

SCREEN LOCK
  Back
> Automatic Lock  *
  Lock now
  Never Lock
  
```

Figure 38: IA 1202D amplifier: System Settings menu, set **LOCK** function.

MENU TIMEOUT

With this menu, you can set how long you want it to be displayed in seconds. If you don't do anything, the amplifier will hide the menu and return to the overview screen.

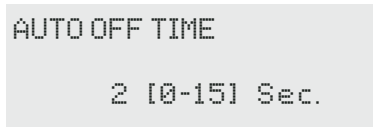


Figure 39: IA 1202D amplifier: System Settings menu, set **MENU OFF TIME**.

QUICK ACCESS FUNCTIONS

SCREEN LOCKING/UNLOCKING

If you have configured the amplifier to automatically lock the screen, the amplifier will lock the screen after the timeout period that you have specified. You can tell it is locked by the letter ‚L‘ in the top right hand corner of the overview screen. To unlock the amplifier, press and hold the rotary push encoder for 3 seconds.

QUICK OUTPUT LEVEL CHANGE

When the amplifier is in the overview screen and unlocked, turning the rotary encoder acts as a Quick Level Change or Master Level control. This is a quick way to change the output level of both channels simultaneously. The offset or level change will also be displayed on the screen.

QUICK MUTE

If you're on the Overview screen, muting both channels is as easy as quickly turning and pressing the rotary push encoder. This feature allows for a quick and convenient way to mute the amplifier outputs. Unmuting works in the same way.

BOOTLOADER MENU

The IA 1202D installation amplifier has a user-friendly bootloader menu that enables you to update the amplifier, restore complete settings from a backup file, and create system or user backups.

To access the bootloader, simply press and hold the encoder button while switching on the amplifier. Once you release the encoder, the bootloader will be loaded and you can perform an update if an update file is available on the USB stick or in the IA1202D directory. Don't worry, it's easy! If data is detected, the amplifier will prompt you to carry out an update. Once you confirm, the old version is deleted and the new version is stored.

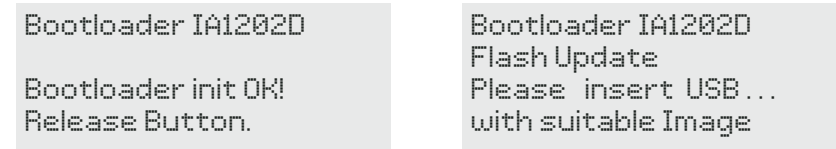


Figure 40: IA 1202D amplifier: **BOOTLOADER**, left: Start Screen, right: Bootloader waiting for USB stick containing update image.

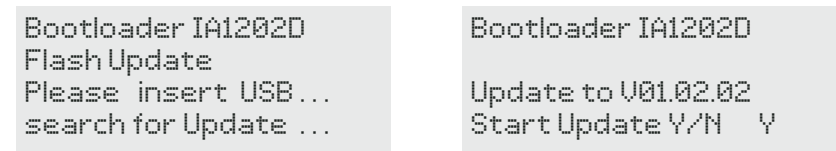


Figure 41: IA 1202D amplifier: **BOOTLOADER**, left: Bootloader searches for update file on USB stick, right: Bootloader waiting for confirmation to start update process.

If the update process is interrupted, for example, due to a power failure or accidental shutdown of the amplifier, then don't panic: the bootloader will be loaded the next time the amplifier is powered up, and the update process can continue.

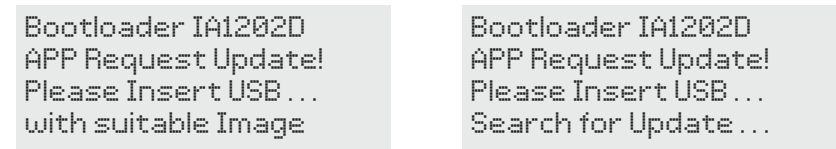


Figure 42: IA 1202D amplifier: Bootloader, **INTERRUPTED UPDATE PROCESS**, left: Bootloader informs about necessary update, right: Bootloader searches for update files on USB stick.

The duration of the update process may vary depending on the size and number of data, such as presets. Once the update is complete, the amplifier will return to its operating mode, and you 'll be good to go!

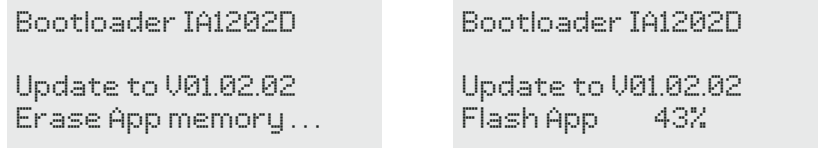


Figure 43: IA 1202D amplifier: Bootloader, **UPDATE PROCESS**,
left: first, app memory is deleted, right: second, App is flashed on the amplifiers memory.

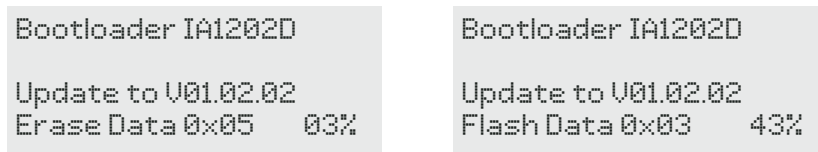


Figure 44: IA 1202D amplifier: Bootloader, **UPDATE PROCESS**,
left: third, data blocks are reased, right: fourth, data blocks are flashed on the amplifiers memory.

Once the application (Firmware) has been successfully installed, the current version and its installation date will be displayed on the screen.

```
APP: 02 V010202 00
      01.04.2024 22:22
```

Figure 44: IA 1202D amplifier: Bootloader, **APP VERSION INFORMATION**.

Bootloader can do even more: When you press the encoder, a Service Menu will appear. In Vegas Mode, the product name is displayed and the LED flashes. You can adjust the mode 's intensity using the encoder. Press the encoder again to exit the menu.

```
SERVICE MENU
> Vegas Mode
  Info Page
  Set Time
  Memory Backup No
  Flash-Update Yes
  EXIT/RUN SELECTED
```

Figure 45: IA 1202D amplifier: Bootloader, **SERVICE MENU**.

Additionally, there is an Info Page. On the information page, you can easily find the hardware version (HW), bootloader version with date, and serial number (SN) of the amplifier. Simply turn the encoder to move to the next page, where you 'll also see the processor ID. Furthermore, the identification number of the external flash is displayed. You will also find the version and date of the application on the next page.

```
HW: 02 V010000 F105
BL: 02 V010200 00
      01.04.2024 12:42
SN: C08090000 S:01/00
CPUID: 0x412FC231
IDCODE: 0x13090418
Flash ID: BA 60 15
```

Figure 46: IA 1202D amplifier: Bootloader, **INFO PAGE**.

Set Time: The time and date can be set here. Press the encoder to confirm.

```
Set Time
01:04.2024  16:23
Current:
01.04.2024  16:23.08
```

Figure 47: IA 1202D amplifier: Bootloader, **SET TIME MENU**.

Memory backup: This allows you to back up the memory. To do this, disable Flash-Update first. Then insert the USB stick. The backup is automatically performed. After a successful backup, the content in the backup folder must be dragged to the flash path on the USB stick to restore it. Use your computer to perform this step. Kepp in mind that the entire flash content including the application will be saved. A maximum of 999 backups can be stored on a single memory stick.

```
Bootloader IA1202D
Memory Backup
Backup File No.: 901
Backup Application
```

```
Bootloader IA1202D
Memory Backup
Backup File No.: 901
Backup Flash 06 53%
```

Figure 48: IA 1202D amplifier: Bootloader, **BACKUP PROCESS**;

The complete flash (APP and Data Blocks) will be stored to the attached USB stick.

```
Bootloader IA1202D
Memory Backup
Backup File No.: 901
Backup Done
```

```
Bootloader IA1202D
Memory Backup
01.04.2024  16:32:18
```

Figure 49: IA 1202D amplifier: Bootloader, **BACKUP PROCESS**;

#You will be informed by the Bootloader about the success of the backup.

It is possible to give the amp a name in the application. If no name is specified, the backup will be numbered. To create a backup and flash it to another amplifier, a computer is required to move the data to the IA1202D reference folder. If flash and backup is enabled, the amplifier will be backed up first and then the new version will be flashed. The standard folder names are: IA1202D and for the backup: IA1202D_backup



Upon starting the amplifier, the installed firmware version is briefly displayed on the screen, enabling a quick check of the firmware version.

FACTORY PRESETS

IA 1202D provides factory presets for easy system integration and setup. Please keep in mind that the preset library on your product may differ from the list below, and SE AUDIOTECHNIK may periodically expand the available presets. To stay up-to-date with new versions and updated documentation, please visit the SE website regularly.

SPEAKER MODEL	PRESET NAME	NAME IN AMP	PRESET DESCRIPTION	Ω NOM.	No. SPKRS
FLAT	FLAT	Flat: Def.	General purpose linear preset		
SMX 12		SMX12: Mon.	Standard Monitor Preset.	8	4
SMX 12		SMX12: FOH 80	Full-Range preset to be combined with B-Line subwoofers in 80Hz mode.	8	4
IC32		IC32: Def.	Default preset for IC 32.	16	8
IC34		IC34: Def.	Default preset for IC 34.	8	4
IC38X		IC38X: Def.	Default preset for IC 38X.	4	2
L65	Default 120Hz	L65: Def. 120	Default preset with 120Hz nominal highpass. To be used in arrays with 3 or more units. Can be used with B-Line or L-Line subwoofers in 120Hz mode.	12	
L65 FS	120 Hz	L65FS: Def. 120	Default preset with nominal lowpass at 120Hz. To be used with L 65 in 120Hz mode. Recommended SUB:TOP ratio is 1:3-4 depending on application. Can also be used with L 35.	8	4
L35	Default 120Hz	L35: Def.	Default preset with 120Hz nominal highpass. To be used in arrays with 3 or more units. Can be used with additional subwoofers in 120Hz mode.	16	8
L35	Downfill 120Hz	L35: DownF 120	Downfill preset with 120Hz nominal highpass. To be used as downfill array extension together with L 65.	16	8
L35	Downfill 400Hz	L35: DownF 400	Downfill preset with 400Hz nominal highpass. To be used as downfill array extension together with L 65. Phase matched to Mid-High section of L 65.	16	8
L35 FS	120 Hz	L35FS: Def. 120	Default preset with nominal lowpass at 120Hz. To be used with L 35 in 120Hz mode. Recommended SUB:TOP ratio is 1:3-4 depending on application.	8	4



WHEN USING THE AMPLIFIER IN BRIDGED MODE, IT 'S IMPORTANT TO TAKE NOTE OF THE CHANGED OUTPUT POWER AND MINIMUM LOAD IMPEDANCE. ALWAYS MAKE SURE THAT THE LOUDSPEAKERS ' LOAD CAPACITY MATCHES THE POWER PROVIDED BY THE AMPLIFIER. ALSO, PLEASE KEEP IN MIND THAT THE MAXIMUM NUMBER OF SPEAKERS THAT CAN BE CONNECTED MAY DIFFER FROM THE MAXIMUM NUMBER OF SPEAKERS SPECIFIED IN THE GIVEN PRESET LIST. IT 'S IMPORTANT TO ADHERE TO CURRENT STANDARDS AND REGULATIONS WHEN CONNECTING LOUDSPEAKERS TO POWER AMPLIFIERS.

SPEAKER MODEL	PRESET NAME	NAME IN AMP	PRESET DESCRIPTION	Ω NOM.	No. SPKR
COX 8 mkII/ COX 8 WP	Default	COX8: 80	Default preset with 80Hz nominal highpass. To be used as stand-alone full-range system or with B-Line sub-woofers in 80Hz mode.	8	4
COX 8 mkII/ COX 8 WP	Full Range	COX8: FR	Default preset with 80Hz nominal highpass. To be used as stand-alone full-range system.	8	4
COX 12 mkII/ COX 12 WP	Default	COX12: 80	Default preset with 80Hz nominal highpass. To be used as stand-alone full-range system or with B-Line sub-woofers in 80Hz mode.	8	4
COX 12 mkII/ COX 12 WP	Full Range	COX12: FR	Default preset with 60Hz nominal highpass. To be used as stand-alone full-range system.	8	4
B15	60	B15: 60	Default preset with nominal lowpass at 60Hz.	8	4
B15	80	B15: 80	Default preset with nominal lowpass at 80Hz.	8	4
B15	120Hz	B15: 120	Default preset with nominal lowpass at 120Hz.	8	4
B15	120Hz Cardioid	B15: 120 Card.	Default preset for rear-facing unit with nominal lowpass at 120Hz. Designed for 2:1 cardioid setups.	8	4
B21	60 Hz	B21: 60	Default preset with nominal lowpass at 60Hz.	8	4
B21	80Hz	B21: 80	Default preset with nominal lowpass at 80Hz.	8	4
B21	120Hz	B21: 120	Default preset with nominal lowpass at 120Hz.	8	4
B21	120Hz Cardioid	B21: 120 Card.	Default preset for rear-facing unit with nominal lowpass at 120Hz. Designed for 2:1 cardioid setups.	8	4
B18/B18 WP	60 Hz	B18: 60	Default preset with nominal lowpass at 60Hz.	8	4
B18/B18 WP	80Hz	B18: 80	Default preset with nominal lowpass at 80Hz.	8	4
B18/B18 WP	120Hz	B18: 120	Default preset with nominal lowpass at 120Hz.	8	4
B18/B18 WP	120Hz Cardioid	B18: 120 Card.	Default preset for rear-facing unit with nominal lowpass at 120Hz. Designed for 2:1 cardioid setups.	8	4
M3 MAX/ M3 MAX WP	Default 100Hz	MF3PM: Def.	Default preset with 100Hz nominal high-pass.	32	6

Table 2: IA 1202D amplifier: PRESET LIST.

SPECIFICATIONS

IA 1202D AMPLIFIER	
ELECTRICAL	
Type	Class-D, Switched Mode Power Supply
Channels	Two
Rated Output Power (1kHz, THD: <1%) ¹	2x 1,800 W @ 2 Ω 2 x 1,200 W 1 x 3,600 W (BTL) @ 4 Ω 2 x 800 W 1 x 2,400 W (BTL) @ 8 Ω
Minimum load impedance	2 Ω (Stereo) 4 Ω (BTL)
Frequency response (±1 dB) ²	20 Hz to 20 kHz
Damping factor	> 500
Input impedance	10 kΩ balanced/unbalanced
Maximum input level	+22 dBu
SNR Line In to Spk out	97 dB
Noise Floor (A-weighted @4 dBu sensitivity)	-57 dBu
Channel crosstalk	76 dB
THD+N	< 0.1% @ 1 W, 1 KHz; < 0.3% @ 1 dB below rated power
DSP	48 kHz/24 bit DSP processor, Processing latency: 1.1 ms
Protection	Short circuit, overheating, overcurrent
Cooling	Sensor controlled fan, Front-to-back air flow
Power efficiency	Up to 84%
Power consumption	Idle: 35 W, Full power: 1,200 W
Operating voltage range	100 – 240 VAC 50/60 Hz
HARDWARE	
Screen	LCD, 4x20 symbol alpha-numeric
User controls	Control encoder with push-button, Power On
Input signal connectors	XLR-line-level inputs and link outputs, XLR AES/EBU input and output, Phoenix MSTP inputs
Output signal connectors	Neutrik SpeakON® NL4 outputs, Phoenix Contact MSTB 4-pin
Power connector	IEC-60320 C14
SOFTWARE	
DSP Features	Levels, Param. EQ, Delay, Phase, Input Sensitivity, RMS & Peak Limiter, Power Limiter (IA 1202D), IIR/FIR Filtering
Configuration handling	Loading of factory presets provided by SE, Saving and recalling of user presets
Monitoring	Temperature
MECHANICAL	
Product dimensions [H x W x D]	44 x 483 x 256 mm / 1 RU
Net weight	5 kg
Packaging dimensions [H x W x D]	143 x 588 x 380 mm
Total weight	7.6 kg
Cabinet	Aluminium front panel, steel body
Rack mounting	Four frontal 6 mm holes
Operating temperature range	[0°C ; 40°C]
Storage temperature range	[-40°C ; 70°C]

¹ According to IHF-A-202² „Flat“ Preset

All product specifications are subject to change without notice.

Table 3: IA 1202D amplifier: SPECIFICATIONS.

PRODUCT DRAWINGS

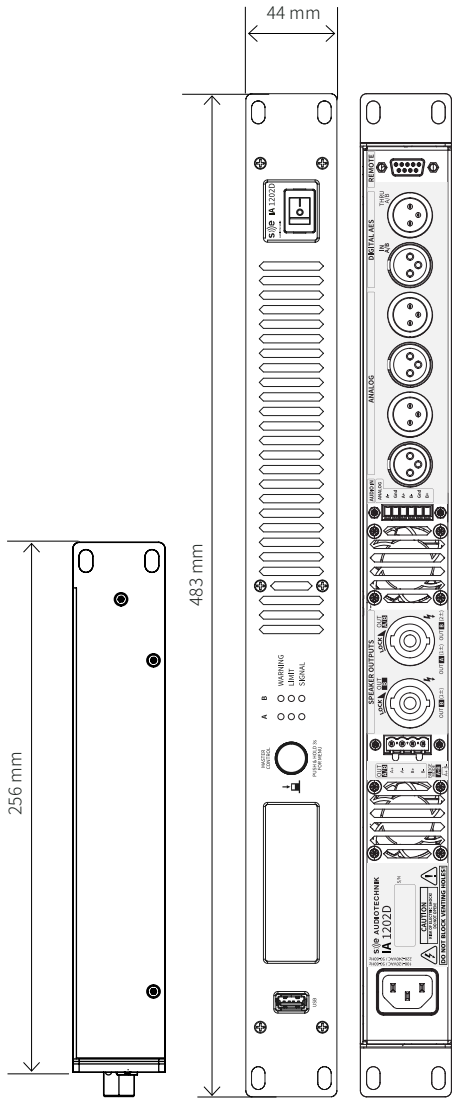


Figure 50: IA 1202D amplifier: MECHANICAL DRAWINGS.

MANUFACTURER'S DECLARATIONS

WARRANTY

SE AUDIOTECHNIK gives a warranty of 4 years on SE AUDIOTECHNIK products. The warranty period begins with the purchasing date. The warranty applies to material or production defects that occur. Defective components or products will be repaired or replaced free of charge by SE AUDIOTECHNIK at its own sole and exclusive discretion during the warranty period.

NOTE

SE AUDIOTECHNIK does not guarantee the uninterrupted and fault-free operation of the products.

The warranty does not apply:

- For wear parts and natural abrasion.
- For damage, defects or malfunctions caused by improper use or use for other than the intended purpose.
- For damage, defects and malfunctions caused by the use of force or environmental conditions.
- For unauthorized repair efforts.

REQUESTING WARRANTY SERVICES

The request for warranty service can be submitted to SE AUDIOTECHNIK or to the dealer from whom the SE AUDIOTECHNIK products were purchased.

In order to claim warranty service, you must provide proof of purchase and allow SE AUDIOTECHNIK to examine the warranty claim (e.g. sending in the products, examination at an authorized partner). Without proof of purchase, the provision of a warranty service can be rejected.

IMPORTANT NOTE

Your statutory warranty rights are not affected by this warranty. Furthermore, this warranty has no influence on any agreements you may have concluded with a dealer.

LIMITATION OF LIABILITIES

SE AUDIOTECHNIK is not liable for personal injury, material damage or claims resulting from inappropriate, dangerous or incorrect use of the products.

DECLARATION OF CONFORMITY

This device complies with the essential requirements and other relevant specifications of the directives of the countries in which the product is sold. The detailed declaration and the list of these directives and harmonized standards are provided on the website <https://se-audiotechnik.de> or <https://se-audiotechnik.com>.

Included are all product variants, as long as they comply with the original technical design and have not been subsequently modified mechanically, electrically or in their original condition.

CORRECT DISPOSAL OF PRODUCTS (ELECTRICAL WASTE)

SE AUDIOTECHNIK products must not be disposed of with other waste at the end of their service life to avoid possible harm to the environment or human health.

Private users can contact either the dealer from whom they purchased the products or the local authority for information on environmentally friendly disposal. Commercial users can contact their supplier, if they have any questions about disposal.

DECLARATION ON WEEE POLICY

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