

HOW TO CORNER YOURSELF WITH GREAT SOUND

User manual Cornered CA280DSP
network amplifier

CA280DSP

Cornered Audio provide aesthetic sound to custom- and commercial installations where high-end performance and discreet, elegant design is needed. To get the best out of your Cornered system, please study this manual before installing.

Safety!

1. Read and keep these instructions.
2. Do not use this apparatus near water.
3. Clean only with a dry cloth.
4. Do not block any ventilation openings.
5. Do not install near any heat sources such as radiators or other heat producing products.
6. Use with provided power cord or similar
7. Refer all service to qualified personnel.

1.0 Warnings

- To reduce the risk of electric shock, do not expose this apparatus to rain or moisture.
- Do not expose this system/apparatus to dripping or splashing
- are placed on the apparatus.
- This apparatus must be connected to a mains socket outlet
- with earthing connection.
- To prevent electric shock do not remove top or bottom covers.
- No servicable parts inside.
- Check the voltage in your area and use the correct type of mains

1.1 Radio interference

This product has been tested and complies with the limits for the European Electro Magnetic Compatibility (EMC) directive. It also complies with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference from electrical equipment. This product uses radio frequency energy and, if not used or installed in accordance with these operating instructions, may cause interference to other equipment, such as radio receivers.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment causes harmful interference to radio or television reception, the user may be able to correct the interference by one or more of the following measures:

- Check if the affected unit complies with the EMC limits for immunity, (CE-labeled). If not, address the problem with the manufacturer or supplier.
- Consult the dealer or an experienced radio/TV technician for help.
- Reorient or relocate the antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

2. Remote Software

Go to: <https://www.dropbox.com/home/Cornered%20Pro%20audio%20shared%20folder/CA280DSP%20driver> to download control software for your CA280DSP

3. Rack mounting

CA280DSP can be mounted into a rack by attaching a small bracket (not supplied) to the holes in the side of the amplifier. Use a 4 mm diameter machine screw, ensuring that the length of the screw is suitable for the thickness of the rack shelf.

A dedicated rack mount shelf designed to hold two CA280DSP's is also available as accessory.

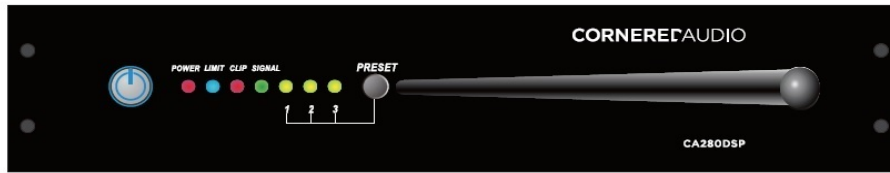
4. Operating voltage

CA280DSP is stable with voltage from 85 to 265V, but perform to specifications from 110 to 240 Volt. Always use the provided power plug. Use balanced source cables to avoid hum and interference when cables over 5 meters are used.

5. Service

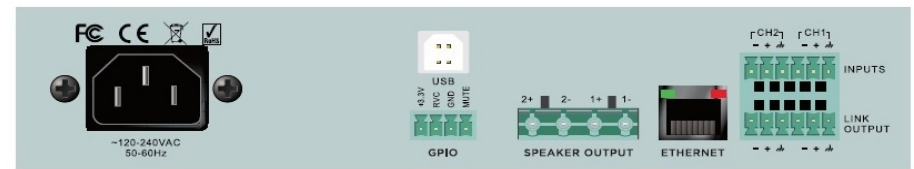
Spare parts for your CORNERED products are available through your local CORNERED distributor. In case you are not able to source spare parts locally, you can contact us directly at info@cornered.dk

6. Front and rear panel



Front - from left to right:

1. The large Standby/On LED to the left will show a red light when the unit is in stand-by mode.
2. The red Power LED shows that the unit is connected to power.
3. The blue Limit indicator will light up when the limiter is active - (determined by the limit setting)
4. The red clip LED will light up when amplifier is clipping
Preset 1, 2 and 3 is user made presets
5. Antenna for Wi-Fi set-up connection. (should always stand straight)



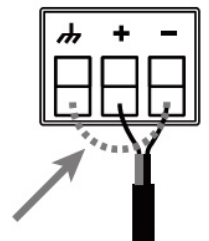
Rear - From left to right:

1. AC line input - Connect the included IEC power cable.
2. GPIO/Remote connector - Connect external control using the four-pole Phoenix connector.
3. Speaker outputs - Connect loudspeakers with nominal impedance of 2, 4, 8, 16 ohms or high impedance for 70/100V Mode. Cables up to 4 sq. mm is supported. Observe polarity to avoid low frequency cancellation.
4. Use ethernet connection for external control and set-up.
5. Balanced inputs with link using 3-pole Phoenix connectors.
Important! Observe polarity to avoid low frequency cancellation, especially if mixing to mono in the matrix.

Note: In Bridge mode - connect speaker cables to 1+ 2+

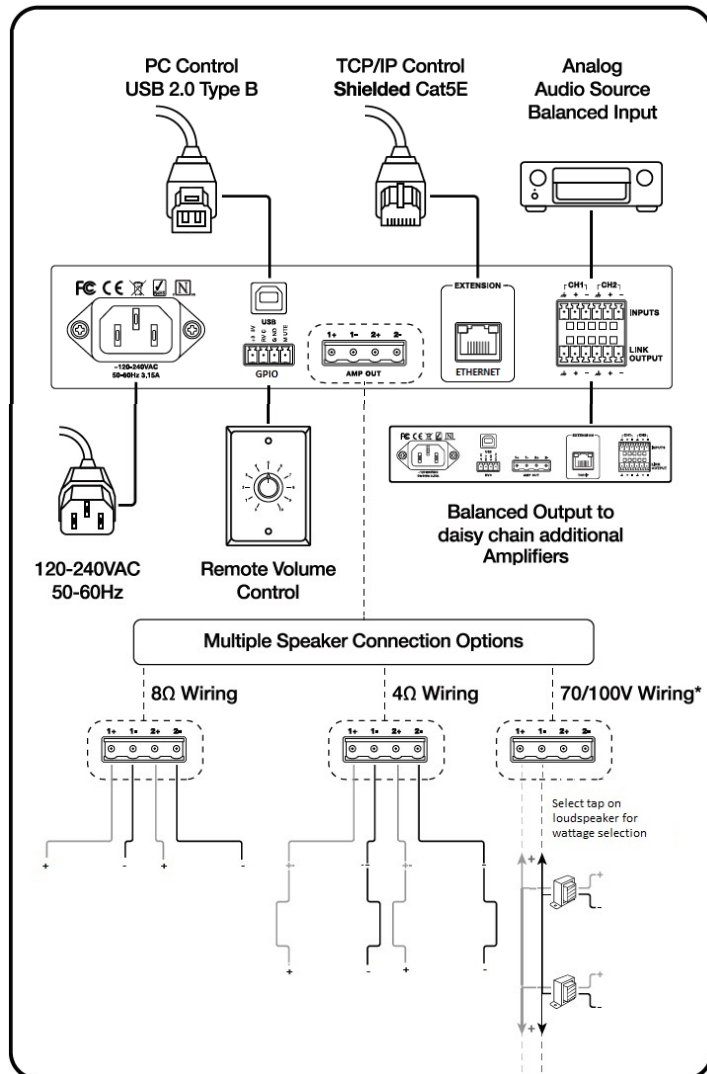
Balanced Input

If an unbalanced source input is used, ensure a jumper wire is connected between (-) and (g) on input Phoenix connector for each channel



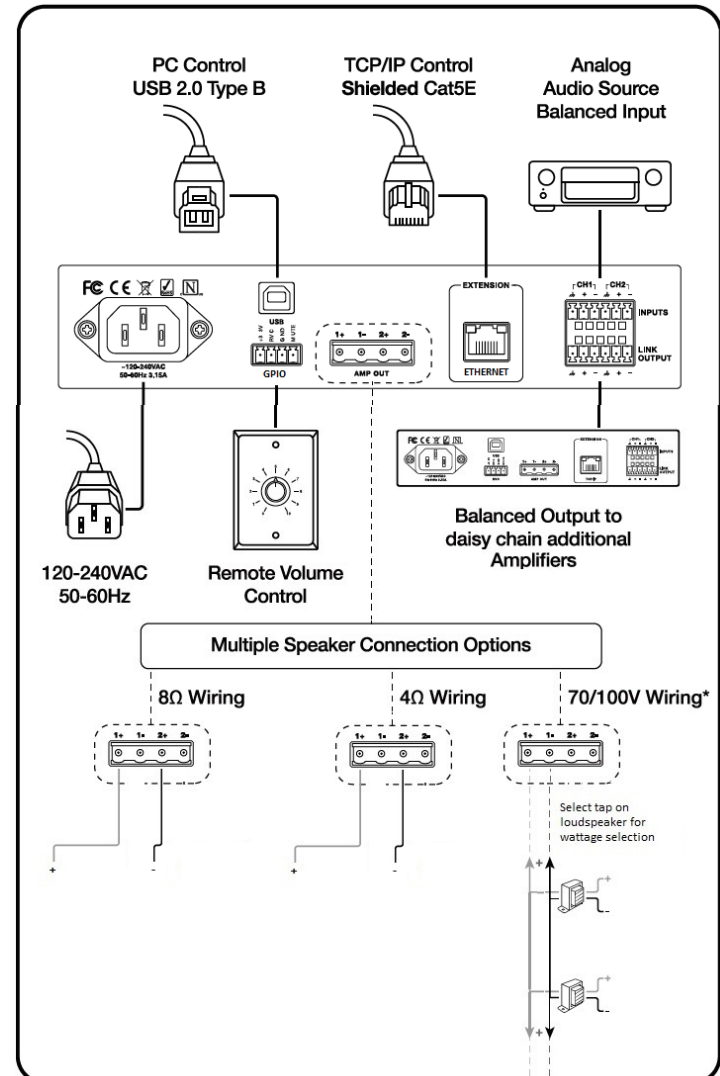
7.0 Connections

7.1 Wiring in 2-channel mode



* Use 1+ 1- for 70/100V direct drive. Select >16 ohm .

7.2 Wiring in bridge mode



*In bridge mode, use 1+ 2+ for 70/100V direct drive and 4/8ohm mode

8.0 Navigation bar

Navigation Bar - At top of all amp user interface screens you will see the main navigation bar

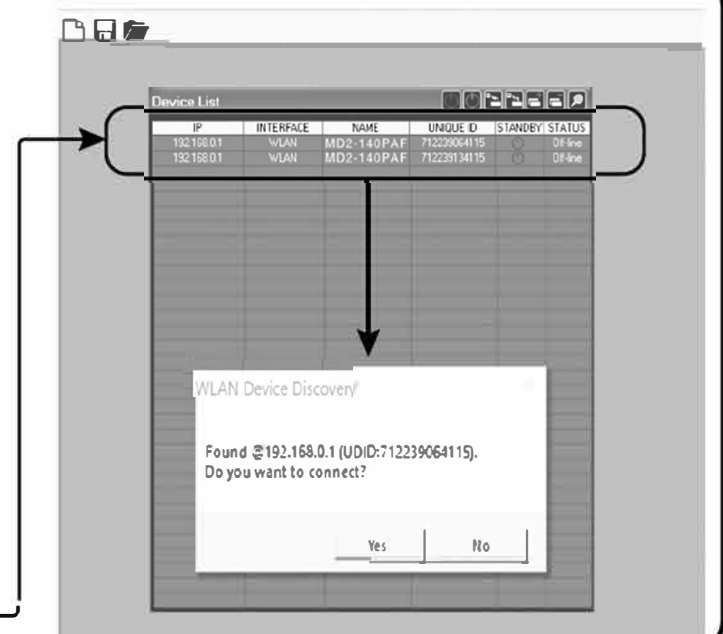


1. **Load, Save, Store, Recall, and Copy** settings to and from the amplifier
2. **Input and Output link check boxes** when checked, changes made in one input or one output are applied to both inputs or both output
3. **Level** Click to access the main screen. Select Drive mode 4Ω, 8Ω, 16Ω, 70V or 100V; select input source; channel routing; and gain levels. All audio tools for all channels are quick accessible via silver shortcut buttons in channel workflow
4. **L/R** Click to access controls for both input channels including - Gain, Noise Gate and EQ filters
5. **1 & 2** Click to access controls for output channels including EQ Filters, Gain, Compression, Limiter, and Dynamic Loudness
6. **SM** Click to access controls for Sound Masking signal. Enable and disable sound masking and adjust Masking EQ filters
7. **Settings** Update firmware, rename device, and adjust network settings
8. **Power Button** Toggle in and out of standby mode

Install Control Software and Connect to Amplifier

The connection to the amplifier for control and setup can be made via direct WiFi connection, Ethernet cable, or USB type B

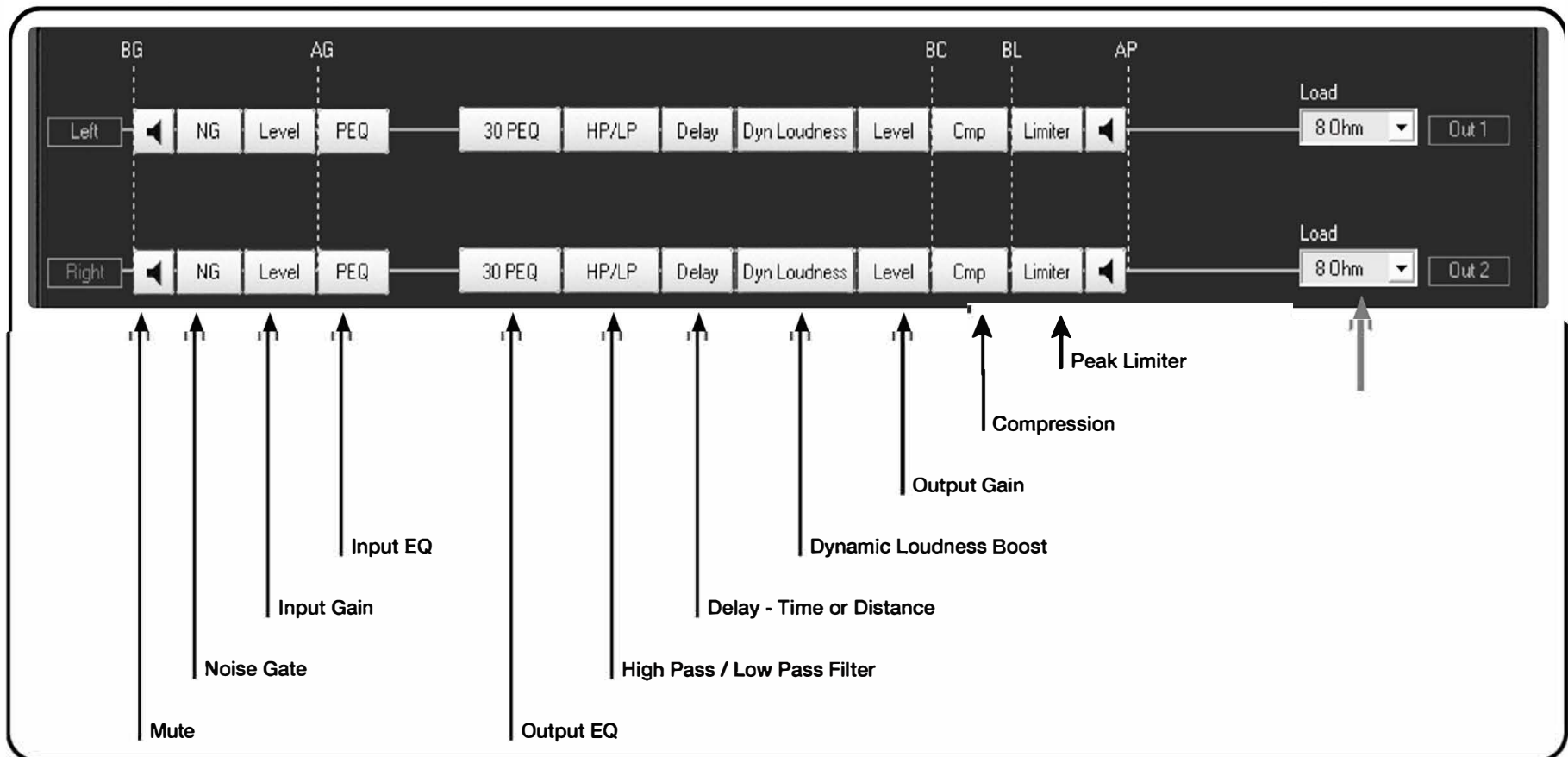
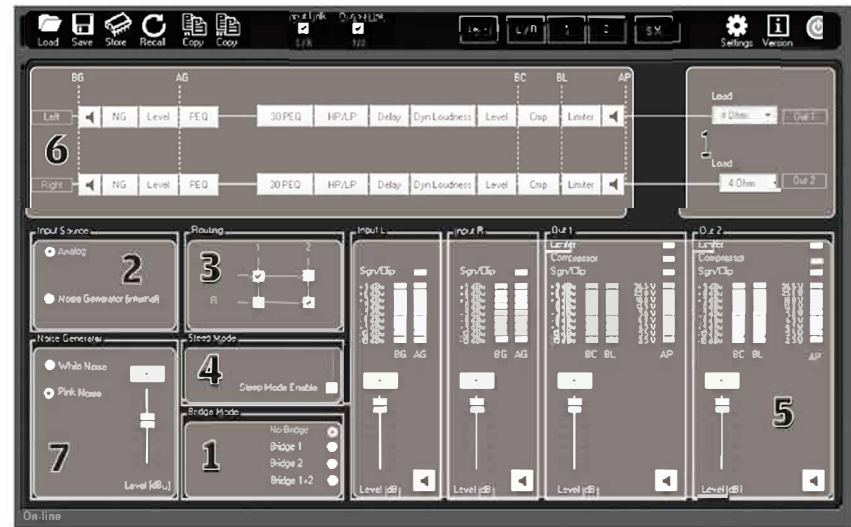
1. Download and install the control software on supported PC device from WWW.CORNERED.DK
2. Open software
3. To connect to amp direct via WiFi, search available WiFi networks and connect to "WiFi Net"
4. Wired LAN connection: select TCP/IP option (you may need to manually add device).
5. Direct USB connection: select USB option (you may need to manually add device)
6. Select device on drop down list and double click to open amplifier user



9.0 Basic amplifier functions

Basic Amp Functions are accessed from top menu LEVEL selection

1. Select **Bridge Mode** and **Load**
 - a. 4Ω/8Ω/16Ω (No Bridge)
 - b. 70V/100V (Bridge 1, 2, or 1+2)
2. **Select Input** Analog, or Sound Masking (Noise Generator internal)
3. **Routing** Route either input to either output
4. **Sleep Mode** Enable to allow amp to go into sleep mode after 1 hour inactivity
5. **Gain Controls** Adjust input and output levels
6. **Quick Access Buttons** Quickly navigate to specific setting adjustment
7. **Noise Generator** Test signal generator



10.0 Bridge mode

Note! When selecting "Bridge Mode", the Speaker Drive menu will appear. If you wish to run in 100V mode, select ">16ohm" in the load menu. Bridge 1 will send the signal from channel 1 to the bridge output. Bridge 2 will send the signal from channel 2 to the bridge output and bridge 1+2 will send the summed signal to the bridge output.



11.0 Loading and saving settings

11.1 Loading from and saving to PC

When loading and saving presets on your PC, click "Load" and "Save" in the menu.

11.2 Loading from and saving to Front Panel

When loading and saving from and to Preset 1, 2 and 3 on the front panel, click "Store" and "Recall" in the menu.

Note; loading presets from the front panel is only possible when the remote connection is disconnected!

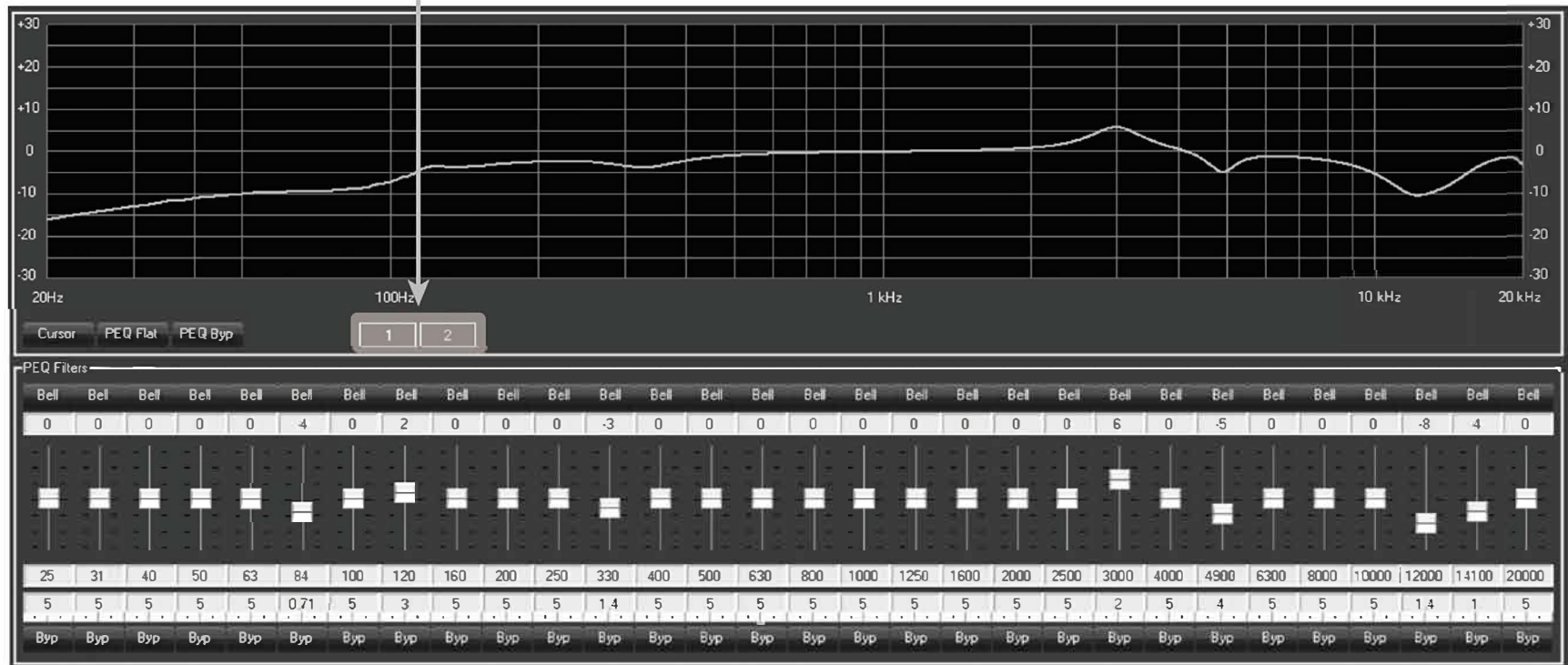
12.0 EQ settings

EQ settings can be fully customized. Click on "Bell" to change from Bell to High/Low Shelving, High/Low pass Q, Notch filter or All-pass filters.

Frequency and Q can be changed simply by clicking on the value and entering the desired value.

All filters can be by-passed individually by clicking on "ByP".

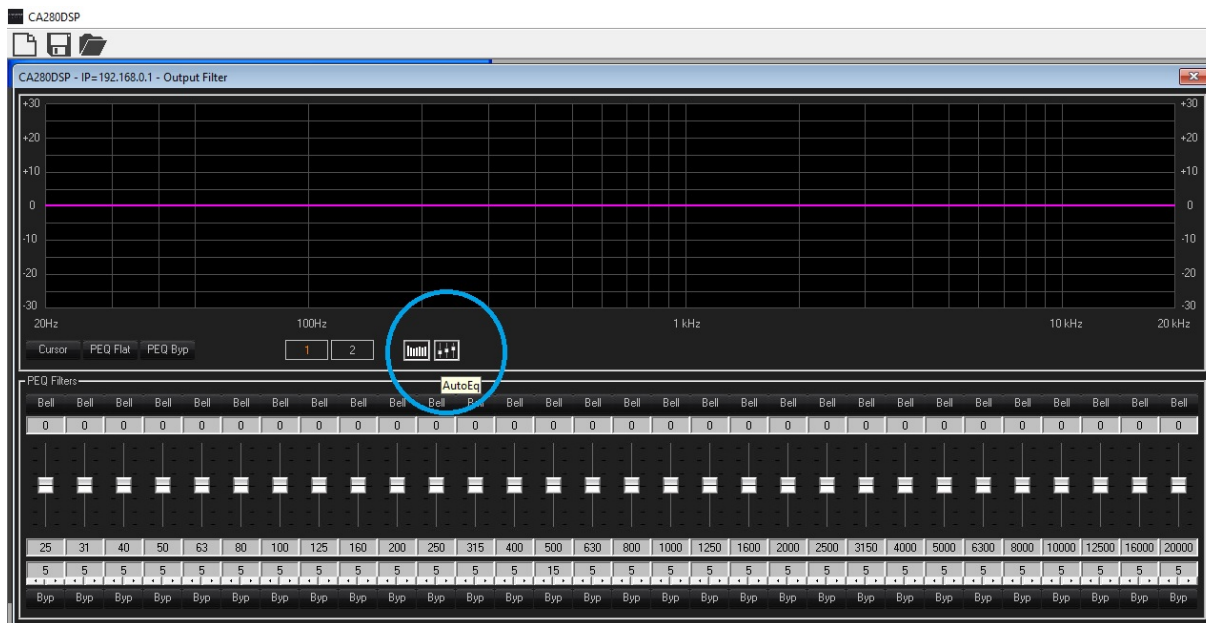
EQ settings can be made separately for each output channel, which is practical if you run a sub on one channel and top-boxes on the other.



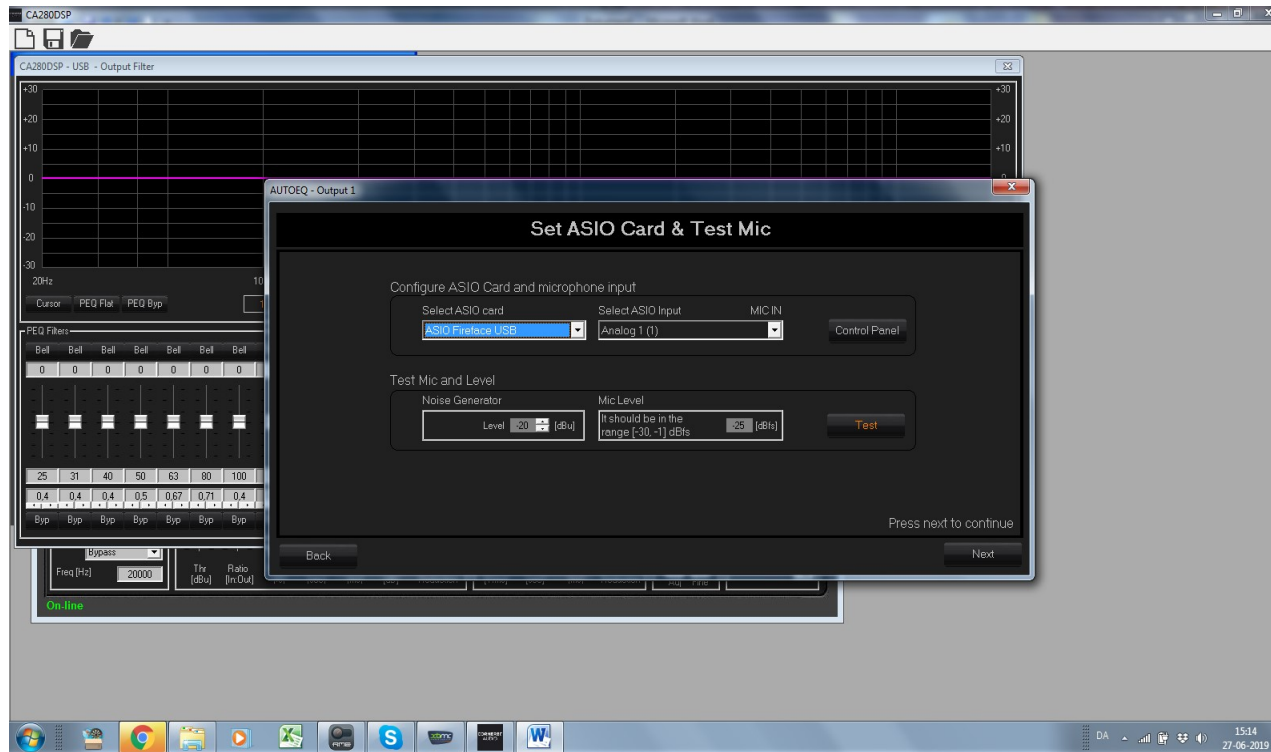
12.1 Auto EQ

With the PC's ASIO card and an external microphone, CA280DSP is capable of calculating and setting room EQ automatically. To enter the Auto EQ Wizard, do the following:

A: Click on the Auto EQ symbol marked below. The Auto EQ Wizard will appear. Read on-screen instructions and click "next".



B: Select ASIO card and Microphone from the drop down menu. Click "test".



C: Set Frequency range and PEQ filter gain (+ - 3 dB is recommended). Click "Start". The Auto EQ will sweep the room and calculate EQ settings with gain and Q. It will show the recommended EQ setting. Now check the settings by clicking on "verify". The RTA should then show an improved room response. If accepted, click "Apply"



D: To copy the EQ settings from output 1 to output 2, close the PEQ.

- Click “Copy Out” in the top menu.
- Select “Out1” to “Out2” and click “Confirm”.



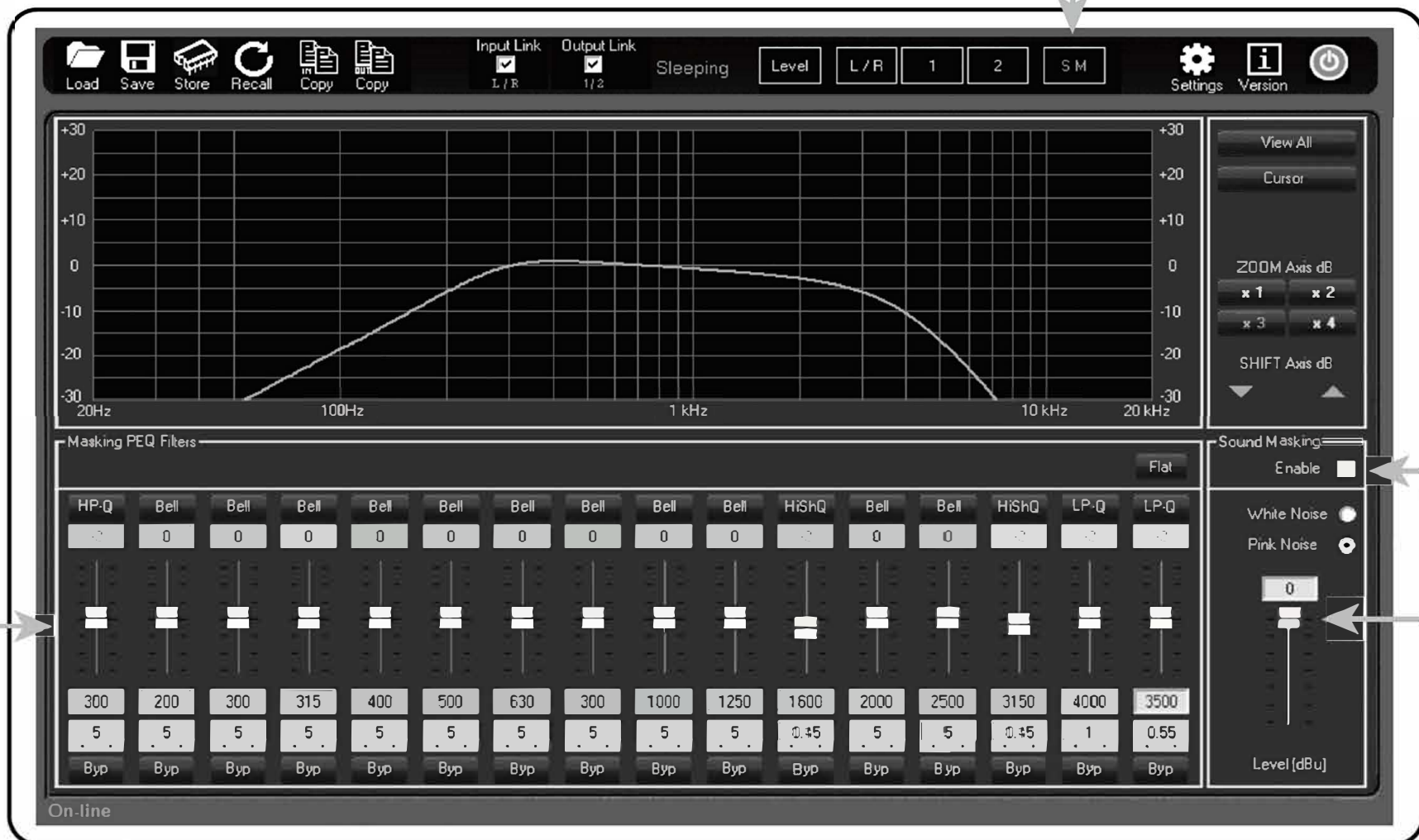
13: SM - Sound Masking

The amplifier includes a fully customizable Sound Masking generator.

To access Sound Masking features, click **SM** button on **Navigation Bar** :

The amplifier comes loaded with a default sound masking signal which can be customized as desired using 16 band Masking filters. It can be used simultaneously for background audio/paging and sound masking applications.

Turn on and adjust gain level. If installing a sound masking system into a new space, ideally you should gradually increase the level over a week or more until you have reached the desired setting.



Declaration of conformity

Manufacturer:

CORNERED Audio ApS
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DK - 2860 Søborg

Tel +45 4366 1088
cornered.dk

We, CORNERED Audio ApS,
declare under our responsibility that the following
product:

Cornered CA280DSP Type: Amplifier

...is in conformity with COUNCIL DIRECTIVE of 3 May 1989 on the approximation of the laws of the Member States relating to electromagnetic compatibility (89/336/ EEC) and has been manufactured in conformity with the following national standards that implement a harmonized standard:

EN 55013

Limits and methods of measurement of radio disturbance characteristics of broadcast receivers and associated equipment.

Limits and methods of measurement of radio disturbance characteristics of broadcast receivers and associated equipment.



Hans V. Madsen / Founder

Date: 01.06.2019

