INSTRUCTION MANUAL



Nor282

Power Amplifier

Norsonic

Nor282 Instruction Manual – February 2026
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If you wish to communicate with us, please feel welcome.

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Nor282

Power Amplifier

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Introduction

Congratulations on your new purchase of a Norsonic Nor282 amplifier! This guide will help you get up and running quickly.

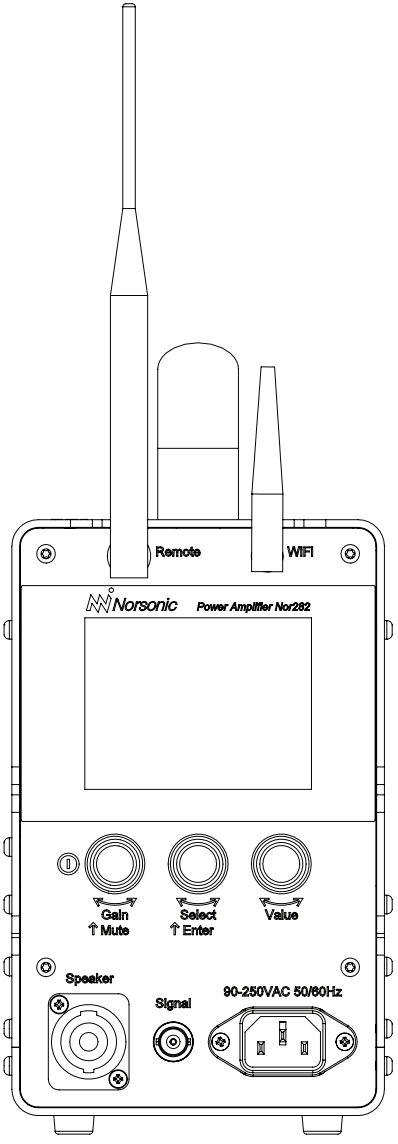
We hope you'll enjoy using the device as much as we enjoyed creating it.

Important information

Please read all safety, precaution and storage information before use. These sections contain vital information to maintain safety and warranty.

Failing to follow these precautions may damage the batteries, void the warranty conditions and/or lead to hazardous situations. There are **NO** user-serviceable parts inside.

Servicing is required when the unit has been damaged in any way, such as power failure, battery failure or any plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the unit has been exposed to rain or moisture, does not operate normally, or has been dropped.



Safety instructions

Read these instructions.

- Follow all warnings and safety instructions.
- This is an IP 20 rated device. Do not use the power amplifier in rain, moisture or dusty environment.
- Never block the ventilation.
- Keep the amplifier out of corrosive atmosphere and do not use it in a hazardous area.
- Clean the amplifier with dry cloth only.
- Do not place the amplifier near any heat sources such as radiators, heat registers, stoves, or other apparatus that produce heat.
- The internal battery is a LiFePO4 type. The battery can only be replaced by Norsonic authorized service personnel. Make sure it is recycled properly if it is going to be replaced.
- Make sure the instrument and any accessories are not damaged before use.
- Only use attachments/accessories allowed or specified by Norsonic AS.
- Unplug this instrument during lightning storms or when unused for long periods of time.
- Never use mechanical damaged units.
- Refer all servicing to qualified service personnel.

Caution!
Never expose the Nor282 to temperatures outside maximum operation temperature range; -10 to +35 °C /Maximum storage temperature range is -20 to +35 °C. Room temperature is recommended for long time storage.

Always fully charge the batteries before storage. Recharge batteries fully every third month for long time storage.

Shipment of the unit via air in accordance with IATA / UN 3481, PI 967 Section I, Lithium ion batteries contained in equipment. See IATA standard for labelling the parcel and to acquire latest information about shipment instructions.

NOTE: Damaged batteries or mechanical damaged units are strictly prohibited to be shipped as airfreight or brought onto a plane as hand luggage or checked in luggage.

Overview



- **Remote connector** – removable antenna for single-button mute remote control.
- **WiFi connector** – removable WiFi antenna.

Display section
See next page.

Gain/Mute/Power
- Rotate to adjust gain.
- Short press to mute/ unmute.
- Long press to power up/down.

Speaker connector

Select/Enter/Menu
- Rotate to select which setting to change.
- Short press to access additional settings and confirm settings.
- Long press to access menu.

Value
- Rotate to change selceted value.

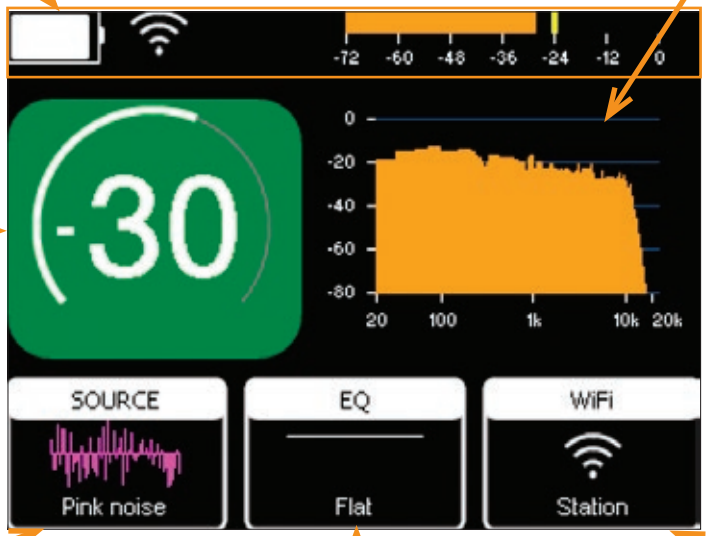
Mains power
– accepts 90 to 250 VAC at 50/60 Hz. The mains may be plugged in and out at any time.

Signal connector
Line-In for external signal sources. Can also be used as a Line-Out tap.

Display section

Status bar
- Battery indicator, with charging and mains power indication.
- WiFi indicator (signal strength).
- Power Amplifier status indicator (standby, short-circuit, thermal).
- WiFi client connected indicator.
- Output level indicator.

Signal spectrum / selection settings
- Shows FFT of signal after EQ and before output attenuation.
- Or additional settings for the selected parameter.



Gain control
- Output level in dB.
- Red when muted.

SOURCE – Signal source selection
Choose between a varity of source signals, including noise types and wifi mode.

EQ – Equalization selection
Choose between several factory presets or custom setups.

WiFi – Wifi mode selection
Connect to a wifi network or set up an access point.

Understandig the user interface - Quick start guide

Your new Nor282 is designed to provide you with all relevant information in one display.

At the bottom of the display, the three main settings are displayed:

Signal **SOURCE**, **EQ** preset and **WiFi** mode.

The three control knobs below the screen have dedicated functions. Each knob controls a rotary encoder with pushbutton functionality.

The leftmost knob controls **GAIN** and **MUTE** and will let you adjust the gain/mute settings in any display state. This knob also serves as the power on/off switch.

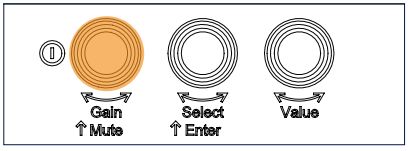
The middle knob, **SELECT**, allows you to highlight either of the three main settings, which in turn may be changed by the rightmost knob, **VALUE.** The highlight colour is yellow.

When either of **SOURCE**, **EQ** or **WiFi** is selected (highlighted in yellow), the signal spectrum display will be replaced by a settings window. Additional settings are available by pushing **ENTER**.

Powering on/off the amplifier

Push and hold **MUTE/POWER** to power on/off the amplifier. When the amplifier is off, a short push on the knob will cause the amplifier to display its battery state briefly.

The display will always stay on when the mains power is plugged in, even after shutting it down and/or charging is completed. Press and hold the leftmost knob to power up the Nor282 from this state.



Mute and Gain

The *Gain/Mute* state is always clearly visible on the Nor282 by red and green colors. The leftmost knob **GAIN/MUTE/POWER** is dedicated to control exactly these function in any state.

To mute or unmute the Nor282, press and release the **MUTE** knob.

NOTE that the actual mute/unmute timing is when the knob is released from a short push.

To adjust the output level, rotate **GAIN** clockwise to increase the level, anti-clockwise to decrease. By default, the gain increases or decreases in 1 dB steps. The gain ranges from 0 dB to -72 dB.

The Nor282 will remember your gain setting when powering on/off. However, it will always be muted (Noise off) when turning the amplifier on.



NOTE: The level step may be changed in the menu system according to your preference.

Examples

Select Pink Noise



1: Initial state after power on.



2: To change noise type to pink noise, rotate **SELECT** until the **SOURCE** setting is highlighted in yellow.



3: Use **VALUE** to select pink noise. The signal changes instantly.



4: Rotate **SELECT** so no frames are highlighted to see the FFT spectrum of the noise signal (not needed).

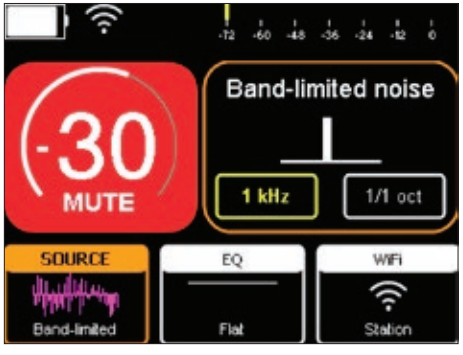


5: Push **MUTE** to enable output.

Select band-limited pink noise for 500 Hz 1/1 octave band



1: Rotate **SELECT** until **SOURCE** is highlighted and rotate value to select band-limited noise.



2: Push **ENTER** to access the settings window.



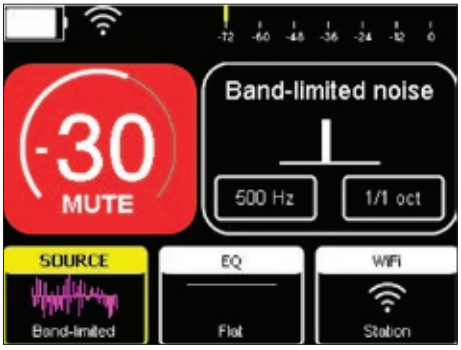
3: Rotate **SELECT** to highlight the rightmost of the two settings, controlling the fractional band resolution.



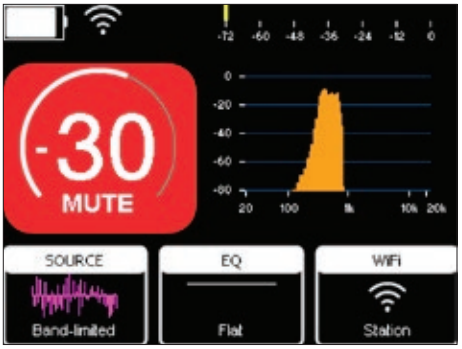
4: Rotate **VALUE** until 1/1 oct is displayed.



5: Rotate **SELECT** to highlight the center frequency setting and turn **VALUE** until 500 Hz is displayed.



6: Exit the settings window by pushing **ENTER**.

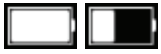


7: Rotate **SELECT** until none of the three main setting are highlighted (**SOURCE, EQ, WiFi**) and verify that the spectrum is correct.

Symbols reference

The status bar will provide information through status symbols. Below is a quick reference:

Power/battery



The battery status is indicated by continuous bar from 100 % to 0 %.



The battery indicator turns red when the battery capacity is below 20 %.



The lighting symbol indicate that the Nor282 is connected to mains power.



Orange color and step-wise toggeling bar level indicates that charging is in progress.



The charging process is in cell balancing mode. See page 20 for more detailed description.



This symbol indicates that cell balancing process is finished and battery fully charged.



Temperature symbol indicates battery temp is too low or too high to charge.

Amplifier related symbols.



The amplifier is temporarily powered down.



The amplifier is temporarily powered down due to over-temperature.



The amplifier is powered down due to short-circuit protection. Requires restart.

Wifi connectivity



Access point mode is active



Connected to a wifi network. Also indicates signal strength.



Wifi network not available

Operation modes

Standalone with remote control

The amplifier may be used standalone, only connected to a loudspeaker. A wide range of source signals are available for standalone use, and the equalizer have several presets available. The Nor282 supports adjusting the equalizer directly on the unit.

The larger remote antenna may be mounted, and the accompanying remote may be used to mute and unmute the amplifier by pushing the button. The remote control operates at frequencies well suited to penetrate through thick walls.

External signal generator

The Nor282 will allow legacy sound level meters to provide signal to the amplifiers via the Signal connector. Set **SOURCE** to *Line* and set input sensitivity to the desired level. The signal input level will be indicated in the status bar along with the output level.

NOTE: The BNC Signal connector may also be used as an output. From the factory, the Nor282 is configured as Line In. The setting may be changed in the menu system.

NOTE: The BNC input sensitivity is selectable. The standard noise output from Nor140 is 1 VRMS. Nor282 may optionally be configured to 10 VRMS input sensitivity for sources with higher output levels. Be sure to mute your amplifier before changing this setting.

WiFi mode

The greatest benefit of your new Nor282 is experienced when pairing it with a modern Norsonic sound level meter like Nor145 and/or Nor850 building acoustics software. Setting **SOURCE** to *WiFi* and connecting them to the same network will allow the SLM or Nor850 software to control all parameters of the amplifier directly, like gain, mute and signal type. The Building Acoustic mode on Nor145 will automatically mute/unmute the amplier in level and reverberation time measurements.

When connected to Nor850 software, the amplifier also supports special signals like ESS (exponentially swept sine) for impulse response measurements. Automatic calculation of EQ is also available from Nor850, along with a full graphic representation of the EQ.

Power and battery

The Nor282 is equipped with a high capacity LiFePO4 battery. The chemistry is not the same as the lithium-ion technologies found in handheld devices and offers longer lifetime and less environmental impact.

When generating pink noise into a Nor283 / Nor276 dodecahedron 90 minutes of continuous operation is to be expected. Using other signals, such as pure tones, may drain the battery more rapidly. There is no limitation to the operating time when connected to mains power.



Charging the battery

To charge the battery, connect the amplifier to a mains outlet. If the amplifier is powered off, it will automatically enter charging mode. Charging can be performed while the unit is powered off, powered on, or under load.

When the mains cable is connected, the display remains illuminated at all times.

During charging, the battery level indicator is shown in orange. When charging is complete, the indicator changes to grey, indicating that the unit has entered cell balancing mode. The duration of the cell balancing process depends on the condition of the battery pack and may take some time.

If the amplifier needs to be used, the balancing process can be interrupted. It will resume automatically the next time the unit is connected to mains power.

Proper cell balancing is essential to ensure maximum operating time. An unbalanced battery pack may result in reduced operating time. Once the cells are fully balanced, the battery indicator turns white.

The battery charge symbol remains illuminated as long as the mains power is connected.

NOTE: The battery will not be charged if the temperature is below 5 °C or above 35 °C. This is indicated by a temperature sign inside the battery symbol. Charging will resume once the battery has reached normal temperature. The amplifier will still operate as normal on both battery and mains.



Battery care

The Nor282 battery will provide many years of operation when following some basic guidelines.

If the battery is discharged to below 20% (red battery indicator) the battery should be recharged within one to three days.

Using the amplifier outside the intended main purpose may reduce battery life:

- Using loudspeakers with lower impedance than Nor276/Nor283.
- Extensive use of high RMS power signals like pure-tone sines above -3 dB gain level.
- Disabling the loudspeaker protection filter, see *"Protection filter" on page 30*.

The battery will drain slightly over longer periods of time. Therefore, it is highly recommended to fully charge the battery before storage and periodically recharge the Nor282 every third months to avoid damaging or reducing the battery health.

The Nor282 keeps track of the battery health. To view the current health of your battery, please see "About" on page 29. The battery health is indicated as a percentage of the rated capacity.

NOTE! The battery is not user replaceable and will need to be serviced by qualified Norsonic personnel. The battery is an integral part of the power amplifier. The Nor282 will not operate properly if the battery is removed. This will void the warranty

Temperature and fan

The amplifier is equipped with a fan to cool the internals under heavy load. The fan may operate in low speed or high speed. When charging, the fan will normally run. The likelihood of a running fan is higher if the amplifier operates with mains connected.

To avoid noise contribution from the amplifier when performing interrupted noise measurements, the fan is automatically suspended for 8 seconds when the amplifier is muted.

Settings

This section provides details about the different settings available.

Source selection

OFF



No signal is generated and the power amplifier is automatically put to standby.

White noise



Equal amount of energy pr frequency (intensity 0 dB/octave).

FFT spectrums will appear flat (0 dB/octave), while fractional octave bands will show 3 dB increase pr octave.

Pink noise



Equal amount of energy pr octave interval (intensity -3 dB/octave), also referred to as 1/f noise.

FFT spectrums show that the intensity is decreasing with frequency, while fractional octave bands will appear flat.

Brown noise



Half energy pr octave interval (intensity -6 dB/octave), also referred to as Brownian noise or red noise.

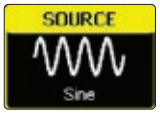
Band-limited noise



Pink-noise filtered in fractional octave bands. Selectable bandwidth 1/3 or 1/1 octave.

NOTE: Any EQ-setting is overridden in band-limited mode.

Sine



Sinusoidal signal. Quick-select any 1/3 octave band center frequency or choose any integer sine frequency.

WARNING: Use sinusoidal signal with care and do not use levels higher than -3 dB for long periods (> 30 sec).

STIPA noise



STIPA noise generated according to IEC 60268:2022, edition 5.

Line



Line input using the Signal BNC on the front panel. Selectable sensitivity 10 VRMS or 1 VRMS.

WiFi mode



A sound level meter (Nor145 or Nor150) or computer software like Nor850 controls the amplifier. When no device is connected, the power amplifier will enter standby until a new connection is made.

Equalizer selection

The Nor282 has a built-in 31-band graphic equalizer optimized for noise signals with steep band edges. Several equalizer presets are available for Norsonic loudspeakers. Flat mode will provide the loudest unweighted sound pressure level, while the equalizer presets are designed to help reduce adjacent band difference for building acoustic applications.

Flat



The equalizer is disabled. No signal processing is applied except the loudspeaker protection filter, see *"Protection filter" on page 30*.

NOTE: When using other signals than noise, the EQ may introduce significant phase effects due to the very steep band transitions. In cases where one uses ESS signals or other types of deterministic signals, the EQ should be set to Flat.

Factory presets



Several factory preset for Norsonic loudspeakers. The purpose is to flatten out the frequency response to achieve an adjacent band difference less than N dB. The cost is a reduction in total sound power output, but mainly in the lower-mid frequency range.

User presets



Three user customizable presets.

When either of the user preset are active, it may be adjusted by pushing **ENTER**. **SELECT** will thereafter control which band to adjust, and **VALUE** will change the band level. A band may also be turned completely off by pushing the **VALUE** knob.

The equalizer range is basically from 0 dB to -24 dB. In rare cases where positive gain on any band is useful, a master gain will attenuate corresponding to the highest band gain above 0. As an example, if a single band (say 500 Hz) is adjusted upwards to +3 dB and all others reside at 0 dB, it will correspond to doing -3 dB on all bands except the 500 Hz band. Another example: If all bands are set at +2 dB, the output level is exactly the same as if all bands are at 0 dB.

Turning bands off provides an attenuation of about 70 dB or more. In the loudspeaker presets, bands below 50 Hz and above 5 kHz are turned off. Bands that are turned off are indicated in red.

NOTE: On most Sound Level Meters, consider that the band transitions is much wider than the transitions on the Nor282. Attenuating a single 1/3 octave band while measuring in 1/3 octave bands may show little difference on the SLM – try attenuating also the adjacent bands.

WiFi selection

The Nor282 has built-in WiFi enabling connectivity with other instruments and computers. Three options are available:

- WiFi is turned off.
- Nor282 may connect to an access point / router.
- Nor282 may set up its own network so other devices can connect to it.

For the best performance, the Nor282 is connected to a separate router using Station mode. When selecting a new WiFi mode using **VALUE**, a slight delay ensures that the mode is not changed immediately.

WiFi OFF



The WiFi is simply turned off.

Access point



Access point mode allows other devices to connect to a WiFi network configured by the Nor282. The network name (SSID) is by default 'Nor282-[serial-number]', protected by the passkey string 'norsonic'. To see the passkey, push **ENTER** when **WiFi** is selected and *Access Point* is active.

A webserver is running while in *Access Point* mode. After connecting to the Nor282 wifi network with a computer or phone, typing in the IP-address displayed on your Nor282 will direct you to a webpage where network and passkey may be selected.

Station mode



In *Station* mode, the Nor282 will connect to a WiFi network access point or router distributing its network name (SSID).

To connect to a network, use either the webserver described above under Access Point, or follow the below description.

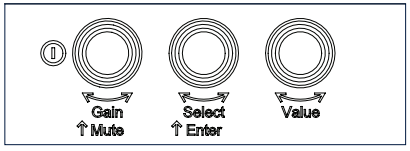
Start by using **SELECT** to highlight WiFi. Use **VALUE** to choose *Station*. If a network has previously been configured, the Nor282 will attempt to connect to this network. If the network is not available or reachable, it will show "Waiting for: [SSID]".

To connect to a new WiFi network, start by pushing **ENTER**. For a about a second, the info screen will show "Refreshing..", and then display a list of available networks as shown below. A lock symbol indicates that the network is protected with encryption and needs a passkey. Rotate **SELECT** to choose the desired network, then press **ENTER** to accept.



If the network does not require a passkey, simply rotate **SELECT** until Connect is selected, then press **ENTER**. Otherwise, the following controls are available:

- Rotate **SELECT** to move cursor position indicated by yellow.
- Press **VALUE** to toggle through numbers, upper- and lowercase letters and symbols
- Rotate **VALUE** to scroll through the entire character set





When the passkey is complete, rotate **SELECT** to highlight Connect and press **ENTER**.

If the passkey is incorrect, the Nor282 will report Waiting for [network name]. Otherwise, it will connect and obtain an IP -address.

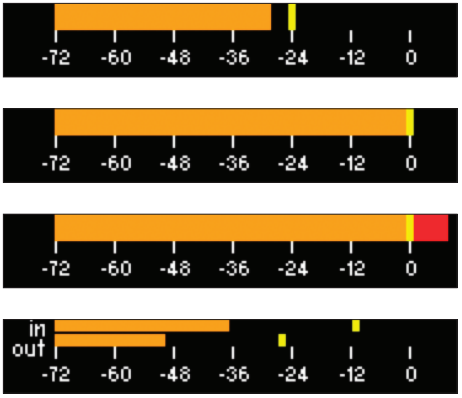


NOTE: WiFi channel 13 is not allowed in some parts of the world. The Nor282 will attempt to automatically determine if channel 13 is allowed, but in some situations, it might not appear on the network list. The Nor282 support the 2.4 GHz WiFi band only.

Level indication

Level bar

The Nor282 provides an output level indicator. The level bar shows the instant peak signal level fed to the power amplifier, a peak hold indicator, and an overload/clip indicator.



The orange bar represents the instant peak value of the signal fed to the amplifier. The yellow line is a max hold indicator. The red field indicates overload and amplifier clipping.

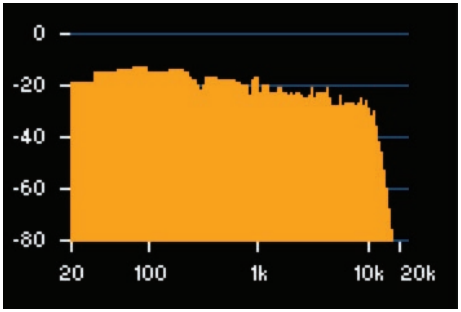
When using Line Input as source, the bar is divided in two. The upper bar indicates the input level. The red field indicates a digital overload/clipping of the input, causing heavy distortion on the signal. The lower bar functions the same way as the single bar, providing the output level fed to the power amplifier.

Note that the level indicator stops at 0 dB, while some headroom is still left until clipping and overload is evident. For high noise output levels (pink and white) it will seem as the amplitude variations stops. However, clipping and overload does not occur until indicated by the red overload field.

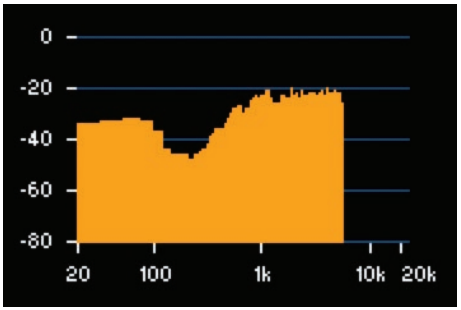
NOTE: As noise is a random gaussian process there is a chance of infinitely high levels. This may be observed as occasional events of clipping when the highest gain settings are used for the noise signal types.

FFT spectrum

When none of the three settings are selected using **SELECT**, the settings window is not visible and a live FFT spectrum is shown. The spectrum indicates the levels of the signal before attenuation by the **GAIN** stage, but after loudspeaker protection filter and the equalizer. The frequency resolution for low frequencies are limited. The spectrum may prove useful when applying equalization.



Pink noise with flat eq. The loudspeaker protection filter limits high-frequency content above the 10kHz 1/3 octave band and below the 50Hz 1/3 octave band. The filter is clearly visible in the high-frequency range, while the low-frequency roll-off is barely visible due to the FFT resolution.



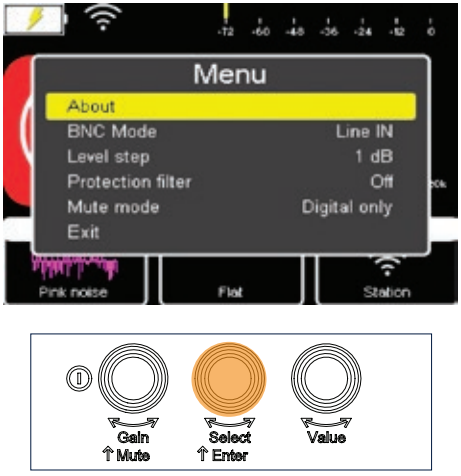
EQ preset Nor276 < 4 dB and loudspeaker protection filter enabled. Note the valley at around 250 Hz and the steep cut-off above the 5 kHz band.



Applied EQ, disabled bands in red.

Advanced settings menu

Some advanced settings are available in the *Menu system*. To access the menu system, press and hold **ENTER** (middle button). Select different menu items by rotating **SELECT**. To exit, rotate **SELECT** until *Exit* is highlighted and push **ENTER**.



Push and hold **ENTER** *to enter the Menu system*

About

To access the about screen, use **SELECT** to highlight *About* and push **ENTER**.

The about screen shows the current software version installed, the serial number of your device, software version of the WiFi module and Battery health.

Battery health is reported as a percentage of the rated capacity.

To exit the about menu, simply push **ENTER**.

Check for updates

To check for updates, ensure you are connected to a WiFi network with internet access. When the *About* display is active, rotate **SELECT** to show the updates page. Press **ENTER** to check and follow further instructions.

Pair remote

Please turn down gain or disconnect loudspeaker!

When the *About* display is active, rotate **SELECT** until Pair remote display is shown.

To pair the remote control, press the **SELECT** button to start pairing. Follow the instructions on the Nor282 display. Press and release the button on the remote hand switch. Repeat the press and release. The amplifier output will turn on and off when pairing is complete.

BNC mode

The Nor282 offers to swap the BNC connector from an input to an output. To enable this feature, use **SELECT** to highlight BNC Mode and rotate **VALUE** to choose between Line IN and Line OUT. When Line OUT is selected, the signal fed to the power amplifier is also fed to the BNC Connector. Line Input is then disabled as a Source alternative.

Level step

The *Level step setting* allows you to select between a range of level steps for the **GAIN** encoder. By default, each click on the **GAIN** rotary encoder represents 1 dB increase or decrease. Available steps are 1, 3, 5, 6 and 10 dB.

Select Level step using **SELECT** and cycle through the options by rotating **VALUE**.

Protection filter

The Nor282 is delivered with a digital filter for loudspeaker protection enabled. The filter will limit the frequency range below the band edge of the 50Hz 1/3 octave band and above the band edge of the 10 kHz 1/3 octave band. The filter ensures that the Nor282 will not overload or damage the Norsonic range of loudspeakers under normal use, and saves energy potentially wasted because of the loudspeakers frequency response. The filter also protect the amplifier from overheating due to high frequency signals.

We recognize that in some special cases, users might want to disable this default filtering. For those cases, it is possible to choose between two alternative options in addition to the default:

1. BP 50Hz – 10 kHz - the default filter.
2. HP 16 Hz – High pass filter eliminating frequencies below 16 Hz
3. Off – No filter enabled

When changing to one of these options, the Nor282 will warn that the warranty might be void on your device. If at any time the default loudspeaker protection filter is deactivated, the Nor282 will store information about the filter change available to authorized service personnel.

Frequency reponse plots - see *"Specifications" on page 32*

To change the setting, highlight *Protection filter* using **SELECT**. Push **ENTER**, and a warning display will appear. Use **SELECT** to select *Accept* and push **ENTER** to confirm that you understand the implication of possible

warranty violation. Use **SELECT** to choose between the options, push **ENTER** to confirm. Use **SELECT** to navigate to *Done* and push **ENTER** to return to the main menu.



WARNING: Never use Gain above -6 dB for signals with signal content above 5 kHz and disabled protection BP-filter.



Mute mode

When delivered the Nor282 is configured to mute the output digitally. This is normally sufficient and allows instant mute/unmute.

In cases where the background noise level is extremely low, the background noise from the Nor282 may make a difference. This may be activated by changing *Mute* Mode from *Digital only* to *Complete*. A *Complete* mute will also put the power amplifier in standby, causing the background noise from the amp to be reduced even further. The drawback is a slight delay when unmuting the Nor282. Change the mute mode by highlighting *Mute* mode and rotate **VALUE**.

Specifications

Acoustic output power:
>123 dB re. 1pW if connected to a Nor283
>120 dB re. 1pW if connected to a Nor276

Protection: Short-circuit and over-temperature protected

Line signal connector: Speakon NL4MP

Input connector: BNC

Input sensitivity: 1.0 Vrms / 10 Vrms

Input impedance: 47 kΩ//220 pF

Equalizer: +6 to -24 dB (1dB step) in 1/3 octave bands from 20 Hz - 20 kHz

Noise types: Pink, White, Brown, 1/1 and 1/3 octave bandpass noise, Sine, STIPA and external via BNC or WiFi.Swept sine is supported from Nor850

Wi-Fi: 802.11b/g/n - 2.4Ghz band ex channel 13. Supports Infrastructure and Access Point

Temperature range (Operating / Storage / Charging):
-10 to +35 °C / -20 to +35 °C / 5 to 35 °C.
Charging is aborted if outside temp range. Not consistent.

Humidity: (Operating, Storage and Charge); 20-90% Non-condensing

Enclosure class: IP20

Dimensions / Weight: (DxWxH):
240 x 120x 256 (mm) / 5.1 kg

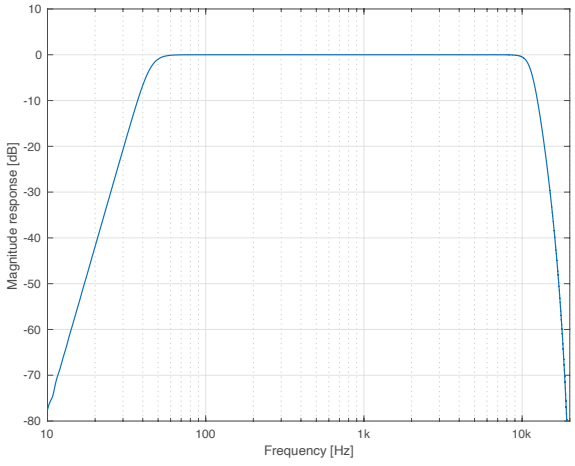
Mains: 90-250 Vac 40-60 Hz

Battery operating time:
90 minutes at full power using pink noise signal when connected to Nor283 / Nor276 Dodecahedron speaker

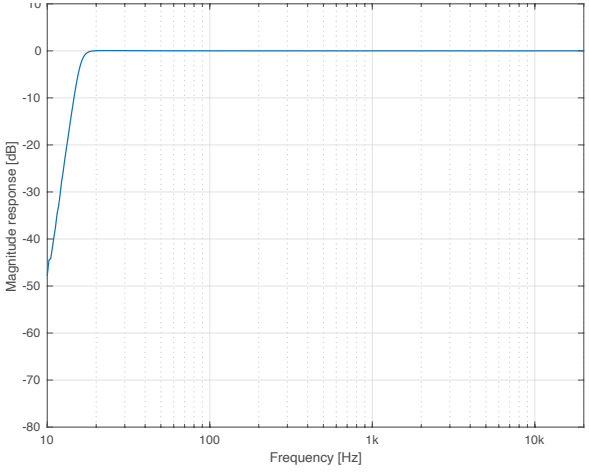
Battery type / Capacity: 48V LiFePO4, (Lithium Iron Phosphate) / 288 Wh

Recharge time: 2.5 h

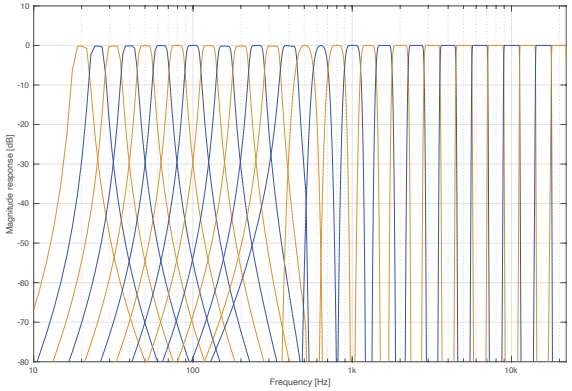
Frequency response (With protection filter on):



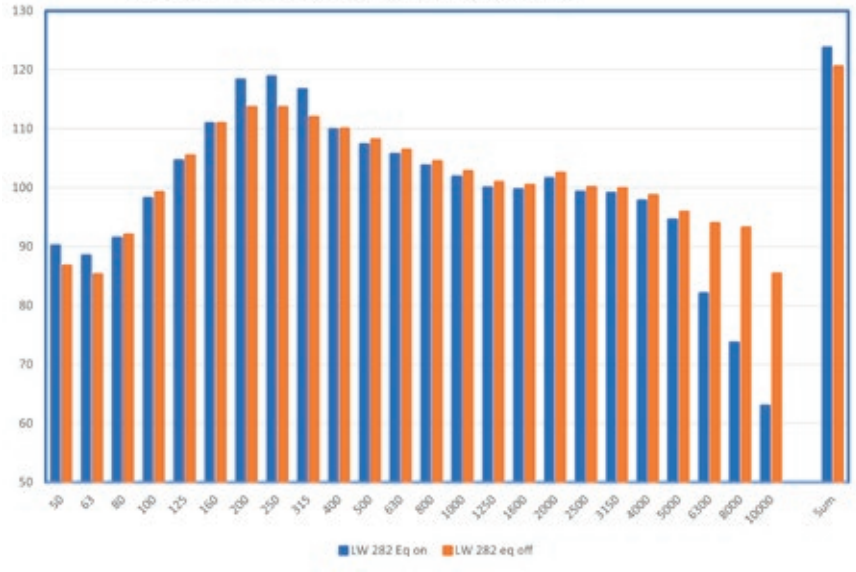
Frequency response (HP only):



EQ bands frequency response:



Sound power level, Nor282 power amplfier and Nor283 speaker



CE conformity standards:
EMC EN-55032-2015+A11+A1-2020
EN-55035-2017+A11-2020
EN 301 489-1 V2.2.3
EN 301 489-17 V3.2.4

Radio spectrum efficiency:
EN 300 328 V2.2.2

Safety and health:
EN 62368-1 :2014+A11:2017
IEC 62311:2007 / EN 62311:2008,
EN 61010-1:2010/A1 2019

Accessories included:
Mains cable, WiFi and remote antennas, remote handswitch

WALTEK
TESTING · CERTIFICATION · INSPECTION

UN38.3 测试概要
Test summary of UN38.3

电池或电池组说明 Description of cell or battery:	测试实验室名称及联系信息 Name and contact information of the test laboratory:
型号 Model No.: IFR32700 名称 Name: 磷酸铁锂电池 Lithium LiFePo4 battery 类型 Type: Lithium ion battery 额定值 Rating: 48V, 6Ah, 288Wh 形状 Description: 近长方体 Almost Cuboid 质量 Mass: Approx. 2.37Kg	名称 Name: 深圳沃特检验集团有限公司 Waltek Testing Group Co., Ltd. 地址 Address: 中国广东省东莞市厚街镇莞太路厚街段 77 号 No. 77, Houjie Section, Guantai Road, Houjie Town, Dongguan City, Guangdong, China 电话 Tel No.: +86-769-2267 6998 邮箱 Email: info@waltek.com.cn 网址 Website: www.waltek.com.cn
电池、电池组或生产厂商名称及联系信息 Name and contact information of cell, battery, or product manufacturer: 名称 Name: 深圳市东星电池有限公司 SHENZHEN EASTAR BATTERY CO.,LTD 地址 Address: 深圳市罗湖区深南东路鸿昌广场 905 RM905, HONGCHANG PLAZA, SHENNAN ROAD EAST, LUOHU, SHENZHEN, CHINA 电话 Tel No.: +86-0755-22214426 邮箱 Email: sales1@eastarbattery.com 网址 Website: /	唯一的试验报告识别号码 A unique test report identification number: WTX20S12100847B001 测试报告签发日期 Issue date of the test report: 2021-01-20 参考所使用的《测试和标准手册》的修订版及其修订 Reference to the revised edition of the Manual of Test and Criteria used and to amendments thereto: Revision 6/Amend.1
签字人姓名和职务 Name and title of Signatory: 秦林伟 Derek Qin 项目经理 Manager 签发日期 Issue Date: 2021-01-20	试验结果表 List of tests conducted and results: 高度模拟 Altitude Simulation: Pass 热测试 Thermal Test: Pass 振动 Vibration: Pass 冲击 Shock: Pass 外部短路 External short circuit: Pass ☒撞击/ Impact ☐挤压/Crush: Pass 过充电 Overcharge: Pass 强制放电 Forced discharge: Pass

深圳沃特检验集团有限公司
Waltek Testing Group Co., Ltd.

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Declaration of Conformity

We, Norsonic AS, Gunnersbråtan 2, N-3409 Tranby, Norway, declare under our sole responsibility that the product:

Power Amplifier Nor282

to which this declaration relates, is in conformity with the following standards or other normative documents

Standards	:	EN-55032-2015+A11+A1-2020, EN-55035-2017+A11-2020
Safety	:	EN 61010-1:2010/A1:2019 Portable equipment and pollution category 2
Safety and health	:	EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 + AC:2011, EV 62311:2008
EMC	:	EN 301 489-1 V2.2.3, EN 301 489-17 V3.1.1
Radio spectrum efficiency	:	EN 301 908-2 V3.2.4, EN 302 328 V2.2.2
RoHS	:	Directive 2011/65/EU, 2015/863/EU
WEEE	:	Directive 2012/19/EU

This product has been manufactured in compliance with the provisions of the relevant internal Norsonic production standards. All our products are tested individually before they leave the factory. Calibrated equipment – traceable to national and international standards – has been used to carry out these tests.

This Declaration of Conformity does not affect our warranty obligations.

Tranby, October 2022

Jens Petter Ringvold
Chief Engineer



Norsonic

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Norsonic AS supplies a complete range of instrumentation for acoustics – from sound calibrators, microphones and preamplifiers; via small handheld sound level meters to advanced, yet portable, real time analysers, but also spectrum shapers, building acoustics analysers and complete community, industry and airport noise monitoring systems. Contact your local representative or the factory for information on our complete range of instrumentation.