

# OPERATING INSTRUCTIONS AND SYSTEM DESCRIPTION FOR THE

## AUDIS-01D/16

### AUDIO MONITOR With THRESHOLD Control



VERSION 1.6  
npi 2020

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## 1. Safety Regulations

**VERY IMPORTANT: Instruments and components supplied by npi electronic are NOT intended for clinical use or medical purposes (e.g. for diagnosis or treatment of humans), or for any other life-supporting system. npi electronic disclaims any warranties for such purpose. Equipment supplied by npi electronic must be operated only by selected, trained and adequately instructed personnel. For details please consult the GENERAL TERMS OF DELIVERY AND CONDITIONS OF BUSINESS of npi electronic, D-71732 Tamm, Germany.**

- 1) **GENERAL:** This system is designed for use in scientific laboratories and must be operated by trained staff only. General safety regulations for operating electrical devices should be followed.
- 2) **AC MAINS CONNECTION:** While working with the npi systems, always adhere to the appropriate safety measures for handling electronic devices. Before using any device please read manuals and instructions carefully.  
The device is to be operated only at 115/230 Volt 60/50 Hz AC. Please check for appropriate line voltage before connecting any system to mains.  
Always use a three-wire line cord and a mains power-plug with a protection contact connected to ground (protective earth).  
Before opening the cabinet, unplug the instrument.  
Unplug the instrument when replacing the fuse or changing line voltage. Replace fuse only with an appropriate specified type.
- 3) **STATIC ELECTRICITY:** Electronic equipment is sensitive to static discharges. Some devices such as sensor inputs are equipped with very sensitive FET amplifiers, which can be damaged by electrostatic charge and must therefore be handled with care. Electrostatic discharge can be avoided by touching a grounded metal surface when changing or adjusting sensors. **Always turn power off when adding or removing modules, connecting or disconnecting sensors, headstages or other components from the instrument or 19" cabinet.**
- 4) **TEMPERATURE DRIFT / WARM-UP TIME:** All analog electronic systems are sensitive to temperature changes. Therefore, all electronic instruments containing analog circuits should be used only in a warmed-up condition (i.e. after internal temperature has reached steady-state values). In most cases a warm-up period of 20-30 minutes is sufficient.
- 5) **HANDLING:** Please protect the device from moisture, heat, radiation and corrosive chemicals.

## 2. AUDIS-01D/16

The AUDIS-01D/16 is a digital acoustic monitor in a small desktop cabinet with a built-in loudspeaker and two audio modes. In PITCH mode the voltage input signal is converted to a tone, and in NOISE mode the signal is highpass filtered to monitor the noise. A THRESHOLD function (in NOISE mode) can be used for masking the noise of the baseline.

### 2.1. Description of the Front Panel and Operation

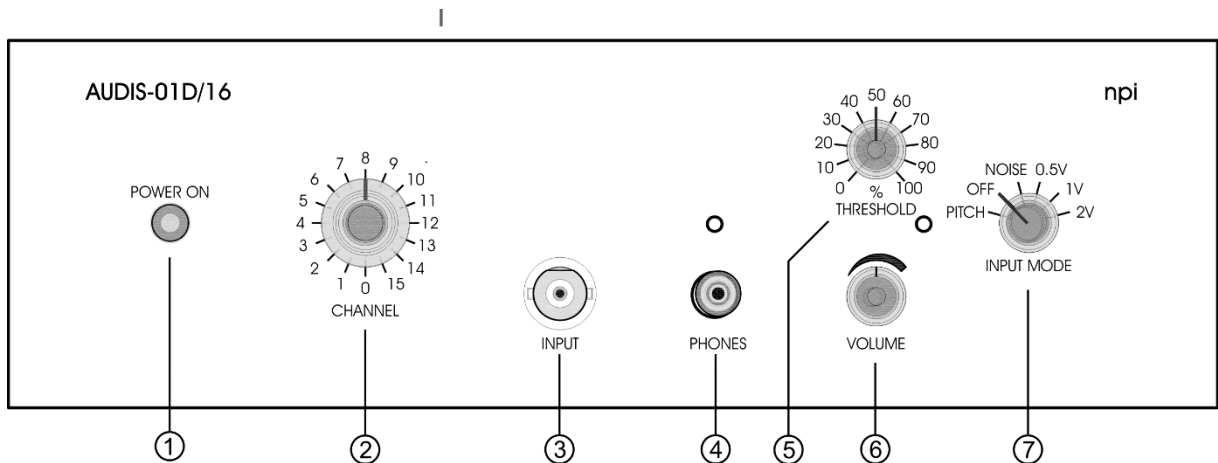


Figure 1: AUDIS-01D/16 front panel view

In the following description of the front panel elements each element has a number that is related to that in Figure 1. The number is followed by the name (in uppercase letters) written on the front panel and the type of the element (in lowercase letters). Then, a short description of the element is given.

#### (1) POWER ON LED

This LED indicates that an AC power supply is connected and the POWER ON switch at the rear panel is set to ON position.

#### (2) CHANNEL select switch (only in 16 channel version)

16-position switch for selecting the input channel connector (rear panel) to be monitored.

#### (3) INPUT connector

BNC connector for connecting the input signal (single channel version only)

#### (4) PHONES connector

Stereo jack connector for PHONES or an external amplifier (e.g. active speakers).

#### (5) THRESHOLD potentiometer

Potentiometer for setting the THRESHOLD in % of the value set by INPUT MODE switch #6 (0.5 V, 1 V, 2 V). For example, if the INPUT MODE switch #6 is set to 2 V and the THRESHOLD potentiometer is set to 50%, the resulting THRESHOLD for monitoring the OUTPUT signal will be at 1 V, i.e. only signals greater than 1 V will be converted into a sound (NOISE).

**(6) VOLUME potentiometer**

Potentiometer for setting the VOLUME of the internal speaker or HEAD PHONES connected to PHONES #3. Turning clockwise will turn up the sound.

**(7) INPUT MODE switch**

Switch for selecting the INPUT MODE.

**PITCH:** The voltage of the INPUT signal is converted into a tone with a frequency equivalent to the amplitude of the INPUT voltage.

**OFF:** The audio monitor is switched OFF.

**NOISE:** The voltage of the INPUT signal is high pass filtered, amplified and transduced to a sound.

**2 V, 1 V, 0.5 V:** The audio monitor works in NOISE MODE with THRESHOLD function. 100% THRESHOLD is set to the selected value (2 V, 1 V or 0.5 V) (see also #4).

**2.2. Description of the Rear Panel**

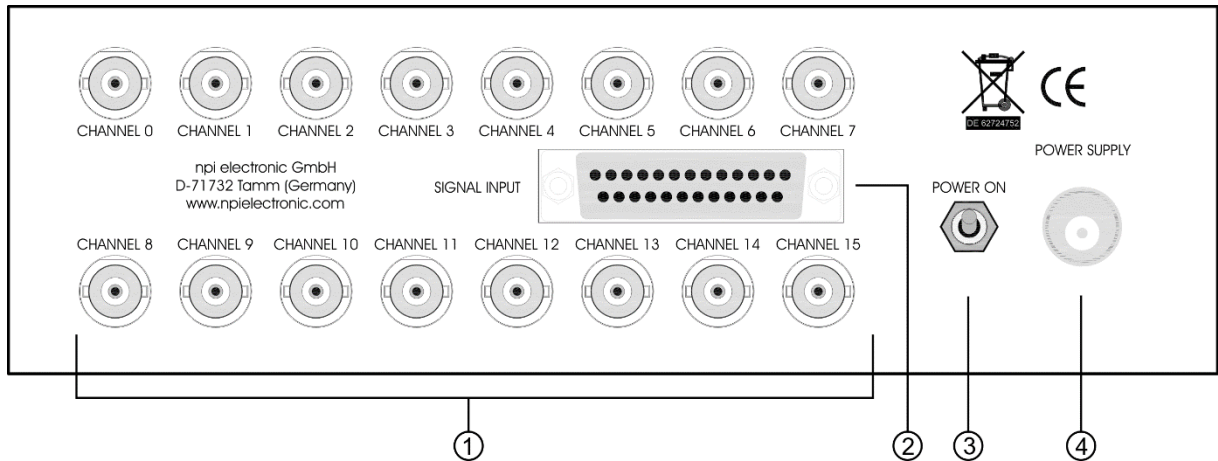


Figure 2: AUDIS-01D/16 rear panel view

**(1) INPUT BNC connectors (only in 16-channel version)**

16 BNC connectors for 16 input signals. The signal to be monitored acoustically is selected by CHANNEL select switch at the front panel.

**(2) SIGNAL INPUT connector (optional: only in version for EXT-16DX amplifier)**

D-Sub connector for connecting 16 input signals e.g. from the EXT-16DX amplifier

**(3) POWER ON switch**

Switch to power up the system.

**(4) POWER SUPPLY connector**

An external AC power supply (15 V...18 V AC, 1 A min) is connected here.

### 3. Technical Data

|                     |   |
|---------------------|---|
| AUDIO MODE:         | PITCH / NOISE / THRESHOLD, selected by rotary switch with OFF position      |
| THRESHOLD:          | RANGE and FINE control, range: 0.5 V, 1 V or 2 V max.                       |
| INPUT:              | BNC connectors, impedance 100 k $\Omega$ , high-pass filtered in NOISE mode |
| Voltage RANGE:      | $\pm 10$ V  |
| VOLUME Control:     | volume of the speaker, one-turn potentiometer                               |
| HEAD PHONES:        | 3.5 mm stereo jack audio connector, 1 k $\Omega$ , 1 V max.                 |
| Size:               | front panel 12 HP (60.6 mm) x 3U (128,5 mm), 7" (175 mm) deep               |
| Power Requirements: | 15 V...18 V AC, 1 A min<br>(external AC Power Supply included)              |
| Dimensions:         | (W x D x H) 225 x 210 x 85 mm <sup>3</sup>                                  |