Amplifier Operating Instructions

The enclosed USB cable can be used to operate the amplifier from the +5V power supply of an USB port of a computer. Connect that cable to the left power socket labeled **+5V DC**. In such a set-up, the amplifier is switched on by turning the **POWER SOURCE** switch to the left hand side.

For higher playback volumes, this kind of power supply might be insufficient and an external voltage of 12…36 V DC should be used instead. This could be any DC power adapter providing 12 or 24 V DC at 0.5A (2.1 mm coaxial connector). For portable applications, appropriate lead-acid batteries could be used (e.g. two or three Panasonic Rechargeable Sealed Lead-Acid Batteries LC-R12/R2PG, 12V, 7.2Ah). In this set-up, the amplifier is switched on by turning the **POWER SOURCE** switch to the right hand side.

The 12…36 V DC rail is protected against invalid polarity. However, never connect a voltage higher than +5.5V to the **5V DC** socket! Higher voltages or a wrong polarity would damage the device.

If the power supply is arranged properly, the green LED (**POWER**) on the amplifier should light. The red over-modulation LED (**OVER**) indicates clipping. Clipping occurs when the power supply voltage is not high enough to reproduce the input signal at a given volume precisely. So, if the red LED lights, the signal will be distorted. In this case, the playback volume should be reduced or the power supply voltage could be increased (up to 36V).

Specifications

- Output power at 4 ohm : 10W (the maximum output power depends on the power supply voltage)
- Frequency range (+-1dB) : 1 ... 125 kHz
- Slew rate : 8V/µsec
- Power supply : 5V DC +-10% (max output power 2W)
  connector : 2.4 mm
  or
  12...36V DC (max output power : 1.5W @12V, 10W @36V)
  connector : 2.1 mm
- Additional features: speakon connector, Volume control, Overload indicator
- Rugged aluminium housing
- Physical dimensions (W/H/D) in mm : 84*35*190
- Weight : 300g

Playback Settings for DAQ boards in the Avisoft-RECORDER software

When using a National Instruments DAQ device with a 12-bit D/A converter (such as the DAQCard 6062E), it is important to select the "12 bit int" format option from the command Play/Device… Otherwise, the 16 bit .wav file samples would be clipped and produced strong distortions.
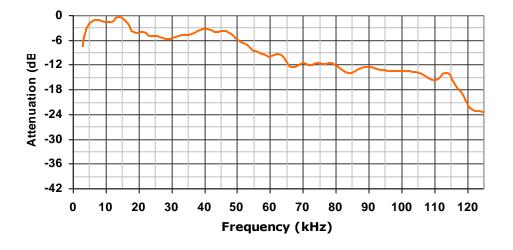
To run the RECORDER NI software (rec_ni.exe), it is necessary to install the NiDAQ driver software with the option "Microsoft Visual C/C++" activated. Otherwise, you might get an error message that indicates that the file nidex32.dll is missing.

Ultrasonic Speaker ScanSpeak   #60102

Specifications

- Frequency range : 1 - 120 kHz
- Impedance : 4 ohm
- Sensitivity : 94.5 dB / 2.83V / 1m
- Max output power level in conjunction with the amplifier below (operated from 36V DC) : >100 dB at 1m distance
- Effective cone area : 8 cm2
- Rugged aluminium housing
- Speakon connector
- Tripod mount 5/8"
- Physical dimensions (W/H/D) in mm : 125*125*75
- Weight : 1 kg

Frequency Response