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Loudspeaker 8 Ω/5 kΩ

13765-00

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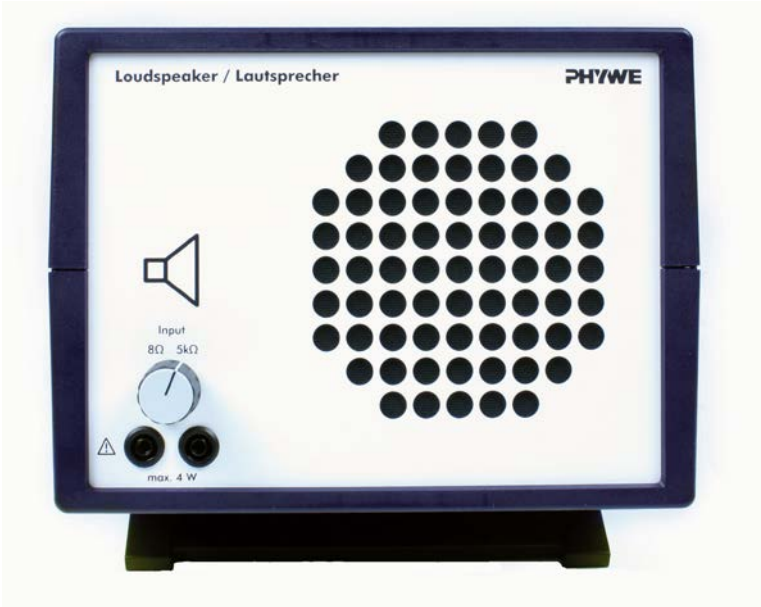

Fig. 1: Loudspeaker 8 Ω/5 kΩ, 13765-00

Operating instructions

CE The unit complies with the corresponding EU guidelines.

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1 SAEFTY PRECAUTIONS

Attention!

- Carefully read these operating instructions completely before operating this instrument. This is necessary to avoid damage to it, as well as for user-safety.
- When setting the unit up, it must be ensured that the ventilation slots of the unit are not covered or blocked.
- Take care that no liquids or objects enter in through the ventilation slots.
- Only use the instrument in dry rooms in which there is no risk of explosion.
- Only use the instrument for the purpose for which it was designed.
- Protect the instrument from dust, moisture and vapours. Only clean it in voltage-free state with a slightly moistened, lint-free cloth. Aggressive cleaning agents and solvents are unsuitable.
- Do not operate if there are visible signs of damage to the unit.
- Do not open the unit.
- Excessive sound levels can lead to hearing damage.

2 PURPOSE AND DESCRIPTION

The loudspeaker 13765-00 is particularly useful as a noise source in demonstration experiments and for the acoustic verification of electrical signals in the audio frequency range. The uses to which the 5 kΩ input can be put include the direct connection of audio amplifier circuits, such as those, for example, which can be built using various teaching systems.
The unit is accommodated in an impact resistant plastic housing. A retractable carrying handle is recessed into the cover of the housing. The same part is also recessed in the base so that the unit can be set in the sloped position when it is opened out. Four rubber feet ensure that no slipping occurs.
The unit can be stacked with other equipment with the same housing - the rubber feet fit into indentations in the lower unit, keeping the stacked equipment in position.
When in use the sloped position should only be used on the uppermost unit in the stack.

3 EXPLANATION OF THE SYMBOLS

Caution!
Potentially harmful situation (damage of property)
Generally dangerous spot
Follow operating instructions

4 HANDLING

There is one pair of 4mm safety sockets on the front panel for the connection of the loudspeaker. The rotary control switch is used to select an input impedance of 8 Ω or 5 kΩ. The low impedance input is connected directly to the loudspeaker, whereas the high impedance input leads through an audio transformer to the loudspeaker. The input is selected which provides the best matching to the nominal terminating resistance of the signal source.
The matching transformer reduces the input voltage at the loudspeaker by the factor 0.04. A voltage of 0.04 V (effective) at the 8 Ω input corresponds to a voltage of 1 V (effective) at the 5 kΩ input.

Achtung!

When changing the input impedance (in particular from 8 Ω to 5 kΩ), bear in mind that, due to the matching transformer, the sound volume will be considerably higher, which may cause hearing damage.
For the input the electrical input power should not exceed 4 W, because otherwise the transformer may be damaged.

5 NOTES ON OPERATION

This high-quality instrument fulfills all of the technical requirements that are complied in current EC guidelines. The characteristics of this product qualify it for the CE mark.

This instrument is only to be put into operation under specialist supervision in a controlled electromagnetic environment in research, educational and training facilities (schools, universities, institutes and laboratories).
This means no mobile phones etc. are to be used in the near vicinity. The individual connecting leads must not be longer than 2 m.
The Instrument can be influenced by electromagnetic charges and other electromagnetic phenomena in such way, that it works no longer within the given specifications. The following measures reduce or prevent disturbing influences: Avoid carpeted floor ensure potential equalization, perform the experiments on conductive and grounded surfaces, use screenings and screened cables and do not work with high frequency emitters (radios, mobile phones etc.) in the immediate vicinity. After a total blackout, carry out a "Reset" (new start) of the complete system.

6 TECHNICAL DATA

Response range	
Input 8 Ω	30 Hz...20 kHz
Input 5 kΩ	200 Hz...15 kHz (±0.25 dB)
Maximum Electrical load	4 W
Maximum input voltage	
Input 8 Ω	6V (effective)
Input 5 kΩ	25V (effective)
Loudspeaker impedance	8 Ω
Input impedance of transformer	5 kΩ
Insulation	double insulated (conforms to Class of Protection 2)

7 WASTE DISPOSAL

The packaging mainly consists of environmentally-friendly materials that should be returned to the local recycling stations.

Do not dispose of this product with normal household waste. If this unit needs to be disposed of, please return it to the address that is stated below for proper disposal.

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