3B SCIENTIFIC® PHYSICS



Wide-Band Loudspeaker U8432770

Instruction sheet

02/09 ALF



1. Safety instructions

The wide-band loudspeaker can generate extremely high volumes of sound. Please note that high sound pressures may cause temporary or even permanent hearing damage.

Be careful to select a suitable volume.

2. Description

The wide-band loudspeaker serves as a sound source for acoustics experiments in the frequency range from 60 Hz to 23 kHz.

The instrument is a two-channel loudspeaker with a 5½" woofer and a ½" tweeter. It has an exceptionally broad uniform-power frequency range from 60 Hz to 23 kHz.

The loudspeaker incorporates an overload protection circuit with automatic reset function to protect the tweeter.

3. Technical data

Frequency range: 60 Hz to 23 kHz (-10 dB) Power capacity: 100 W (as per IEC 268-5)

 $\begin{array}{lll} \mbox{Impedance:} & 4 \ \Omega \\ \mbox{Tweeter:} & \mbox{$2^{\prime\prime}$ diam.} \\ \mbox{Woofer:} & 5 \ \mbox{$12^{\prime\prime}$ diam.} \\ \mbox{Crossover frequency:} & 5000 \ \mbox{Hz} \\ \end{array}$

Connection: 4 mm safety jacks
Dimensions: 225 x 150 x 142 mm³
Weight: 1.8 kg approx.

1 Sine wave generator U8533550 1 Transformer (230 V, 50/60 Hz) U8475430-230 or

4. Additionally recommended equipment

1 Transformer (115 V, 50/60 Hz) U8475430-115

5. Operation

 Do not connect the loudspeaker to a DC power source.

Any base that is likely to experience even slight vibration is not suitable for mounting a loudspeaker.

- Be sure to mount your speaker on a solid, stable and level base.
- Do not use this apparatus near water.
- Make sure that no objects or liquids get through the openings into the loudspeaker.
- Do not block any ventilation openings.
- Connect the low-frequency loudspeaker to the sine wave generator.
- Set all the output controls of the sine wave generator to zero (full left position).
- Connect the sine wave generator via the transformer to the mains supply.
- Adjust the sine wave generator to obtain the desired output (frequency and amplitude).

If you let your loudspeaker run at or near its power limit, the integrated protective circuitry may temporarily disconnect the tweeter. In this case, there is no danger of causing permanent damage.

 Lower the amplitude to allow the tweeter to automatically come online again.

6. Maintenance

Maintenance is required if the unit has been damaged in any way, liquid has been spilled or objects have fallen into the apparatus, if the unit has been exposed to rain or moisture, is not operating normally or has been dropped.

- Refer all service to qualified service personnel.
- Clean only with a dry cloth.