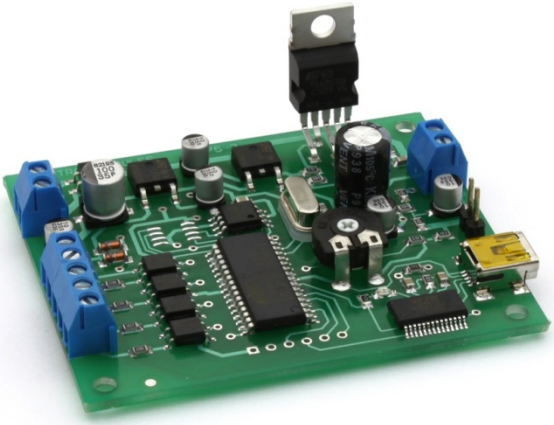
TM-76875

TRAINMODULES



Sound player

User's manual

5 998975 300773

© 2011 BioDigit Ltd.
All rights reserved. It is forbidden to reproduce and/or publish the contents of the present document in any form including electronic and mechanical design without the written permission of BioDigit Ltd.

Safety warning

During the operation of the device the specified technical parameters shall always be met. At the installation the environment shall be fully taken into consideration. The device must not be exposed to moisture and direct sunshine.
A soldering tool may be necessary for the installation and/or mounting of the devices, which requires special care.
During the installation it shall be ensured that the bottom of the device should not contact with a conductive (e.g. metal) surface!

Contents

Safety warning 1
Features and properties 2
Technical parameters 2
Short descriton 2
Wiring 2
First start-up of the device 3
Uploading sounds to the module 3
Guarantee and legal statement 5

Features and properties

- 7W power amplifier
- Low-level audio output
- 4 galvanically isolated control inputs
- USB interface for sound uploading
- Adjustable volume
- Non-volatile flash memory for sound sample
- Low power consumption

Technical parameters

Input supply voltage: 7-24V
Stand-by current: 20 mA
Maximal supply current: 100 mA
Dimensions: 66x56 mm
Maximum voltage for control inputs: 5-20V
Amplifier output power: 7W
Amplifier output impedance: min. 8 Ohm
Low-voltage signal output: 0-2,5V, asymmetric
Sample rate: 44100 Hz
Number of channels: 1 (mono)
Maximal sound length: 47,5 mp

Short description

The module plays various sounds that can be triggered via external inputs.
The sounds can be modified and uploaded by USB interface and a computer connection.

Wiring

Input supply (POWER): DC or AC supply input insensitive to polarity.

Control inputs (SND1-4): Each input has galvanic isolation, thus for input activation the module shall be provided with supply voltage. This voltage can be:

- output voltage of a remote control device
- own supply voltage

The input can be supplied by AC as well! The point marked „+" in the drawing is the common input point. In case the connection meets the drawing, input activation is performed by the connection of the input to the „-" pole.
Volume control: Volume is continuously adjustable using the potentiometer marked „VOLUME". A screwdriver can be used for adjustment.
"EXTERNAL AMPLIFIER", Low-level signal output: E.g. the Line level input of a Hi-Fi device or another amplifier can be connected to this point.
Loudspeaker output: Any >8 Ohm loudspeaker can be connected to this screwable terminal block.

First start-up of the device

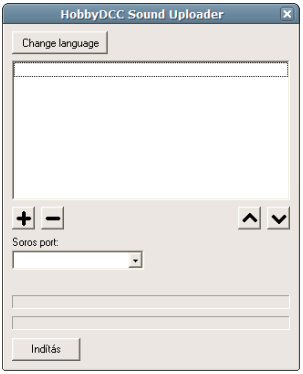
The device is available with an originally programmed sound, and it can be changed later. It is for checking the operation of the module after the first start-up, in case of proper operation.

Important! The inputs of the device have galvanic isolation (are totally independent of the module in electrical aspect) and are connected to the player by optical coupling. These inputs shall be used as if normal LEDs would be connected. No series resistor is required; the module contains it.

Uploading sounds to the module

1. Download the sound uploader utility from our website http://www.trainmodules.hu/: Modules -> Sound Player -> Downloads.
2. Start up the module (by external supply voltage connection)

3. Connect the module to the computer by the attached USB cable.
4. If required browse the USB uploading driver (can be downloaded from the appropriate website, at the product data sheet)
5. Run the utility program.
6. Select 115200 bit/s speed.
7. If the uploader is connected to the sound player correctly, the following screen will be displayed in the utility program:



8. The „+” button can be used for adding new sound files. Up and down arrows can be used to associate the played sounds and the activated outputs.
   The „-” button can be used to delete a file from the uploading list.
9. Click the „Start” button and wait with patience until the sound file is uploaded. The uploading time can take few minutes, depending on the length of the selected sounds.

The module totally erases its memory before each uploading, thus in case only one of the sounds is to be replaced, also the other ones shall be added to the list.

Guarantee and legal statement

Each parameter of the device will be submitted to comprehensive testing prior to marketing. The manufacturer undertakes one year guarantee for the product. Defects occurred during this period will be repaired by the manufacturer free of charge against the presentation of the invoice.

The validity of the guarantee will cease in case of improper usage and/or treatment.

Attention! By virtue of the European EMC directives the product can be used solely with devices provided with CE marking.

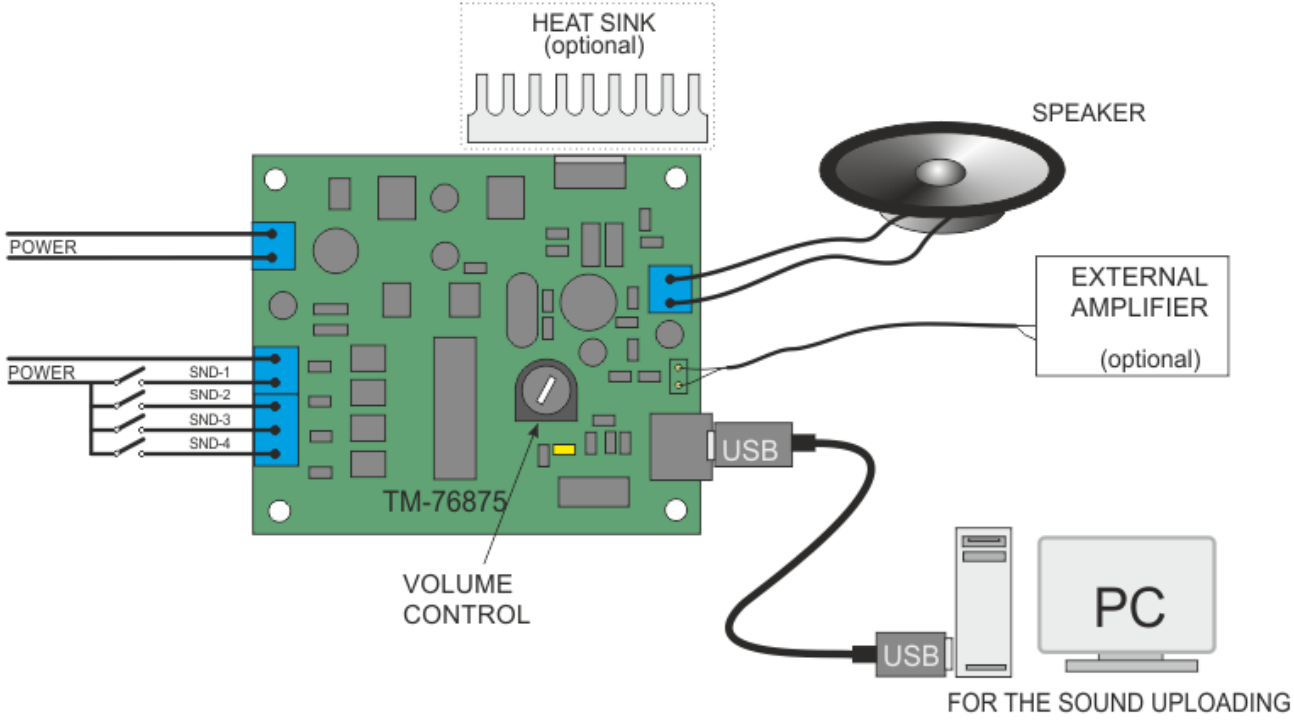
The mentioned standards and branch names are the trademarks of the firms concerned.

TrainModules – BioDigit Ltd
Kerepesi street 92.
H-1144, Budapest

Made in Hungary.

Tel.:+36 1 46-707-64
http://www.trainmodules.hu/

Figure 1.


HEAT SINK
(optional)
SPEAKER
POWER
POWER
SND-1
SND-2
SND-3
SND-4
EXTERNAL
AMPLIFIER
(optional)
USB
TM-76875
VOLUME
CONTROL
USB
PC
FOR THE SOUND UPLOADING