



OHM

orientation voice beacon

Orientation voice beacon ELVOS OHM represents the new generation of the information and orientation devices for visually impaired. The voice message is triggered either with a remote controller by the blind person or by the built-in automatic controller or control bus. The ELVOS OHM beacon helps visually impaired people to find correct direction and gives useful information about the surroundings.

Main features:

- voice messages are stored in SD/MMC flash card in the standard format MPEG 1/2 layer 3 (MP3)
- users may easily create or change voice messages with common software and simple card reader connected to a PC
- powerful class D amplifier provides low consumption
- remote control operating range is 50 -100 m in a free space.
- there are many oprional fetures available which allows wide range of applicatons
- the beacon may be supplied from common mains 230V AC or low voltage 12V DC
- the beacon is very small and may be placed almost anywhere

OHM beacon description:

SD/MMC card files management:

- THe OHM beacon supports SD and MMC cards 64MB to 2 GB. The card shall be formatted to the file system FAT32. Files in MP3 format are stored in the root directory (the system does not support subdirectory structure).
- Flle size and message length is limited only by the card capacity. According to the input port configuration there may be up to 128 messages stored in the card in the files named 001.mp3 to 128.mp3.
- The device uses files of type MPEG 1/2 layer 3, maximum bitrate 128 kbps mono or 64 kbps stereo (reproduction only mono). The recommended setting is 64 kbps mono.
- After turning on the start.mp3 file is played automatically (if present at the card). This feature has two aims: first, proves full functionality of the beacon and second, allows the volume setting even without remote controller VPN01.
- Users may create or change voice files any time with quite common software and card reader connected to a PC. You may find suitable software at http://audacity.sourceforge.net/.
- There is one studio recording and message digitizing of the text delivered by the customer included in the beacon price.
- Normally, the #1 command (playing file 001.mp3) is used for giving direction beep and basic information, the #2 command (playing file 002.mp3) is used for additional, detailed information, the #3 command is used for public transport vehicles.

The beacon may be optionally extended by following features:

- timer repeatedly triggering additional message (normally file 005.mp3) in the period adjustable within 15s ... 5 min range. This feature may be extended with the clock module with weekly schedule, allowing switching messages according to the opening hours etc. The basic function (messages #1 and #2) is still available.
- relay with power switch 230V/10A, which may be activated by some command combination and control additional devices (light or sound signal, electric doors etc.).
- External control interface module with up to 9 optically isolated inputs/outputs, allowing switching messages according to the external device operation (escalators, automatic doors, lifts etc.) or control external devices according to the remote controller command. Interface cables may be up to 1 km long and have excellent interference resistance.
- There is one dedicated ATMEL AVR processor available, which can be programmed according to the customers demands and allows wide extension of beacon applications.
- The ELVOS OHM beacon may be supplied also from the low voltage source 10...16 V DC/AC with no special stability requirements.
- External speaker with built-in antenna allows using OHM beacon even at installations where is not enough space for normal installation or where is necessary to hide the speaker. The external speaker is connected with a tuned coaxial cable of maximum length of 10m (the length shall be an integer multiple of 1,3 m). All parameters remain unchanged.

The OHM beacon operating procedures:

1. Opening of the beacon:

- Remove cover strips with the flat screwdriver. There are four screws under the strips, after removing them open the upper part of the housing (with antenna and speaker).
- In the lower part of the housing, there is the main board with all beacon electronic components. Never remove the board from the housing! Mounting holes for fixing the beacon to the wall or construction are outside the sealed area.
- Both parts of the housing are connected by three cables two for the speaker and one for remote control receiver antenna, which are connected by clamp terminals (marked "REPRO" and "ANT". The cable is released by pushing an orange button on the top side of the terminal.
- For cable connecting press the orange button, insert the cable into the terminal as deep as possible and release the button.

2. Supply cable connecting

- The ELVOS OHM acoustic beacon is the class II electrical device with double isolation.
- The 230V mains cable is led through the gland at the bottom side of the beacon. In order to achieve covering parameters, the cable shall be round, with diameter 5 10 mm.
- The 230V mains is to be connected to the terminals marked "230V" .
- For cable connecting press the orange button, insert the cable into the terminal as deep as possible and release the button.

3. ON indicator:

• The green ON indicator is located at the right part of the board.

4. Removing/inserting of the SD/MMC card

- The SD/MMC card holder is located at the rear left part of the board (marked "SD KARTA").
- First, switch off the beacon (for example, by removing the fuse). The fuse is at the safe voltage circuit separated from the mains.
- Slide the card out of the holder rightwards.
- The correct card orientation is marked on the board. Insert the card to the bottom of the holder.
- Switch on the beacon again.

5. Volume setting

- The volume setting regulator (marked "HLASITOST") is located in rear right part of the board beside the speaker terminal.
- You can use the start message for the initial volume setting.

6. Fuse replacement:

- The fuse is located at the front right part of the board, by the mains transformer. Its value is T 1A.
- The fuse is in the low voltage part at the secondary side of the mains transformer. there is not necessary to disconnect the beacon from the mains for the fuse replacement.
- Always use equal type and value of the fuse!

7. The timer period setting (optional):

• The timer period regulator is located in right part of the board (marked "ČASOVAČ"). The timer period is adjustable within the 15 s...5 min range.

8. Digital clock module (optional):

- This module is located in front-left part of the board. Time is indicated on the LCD display, all settings - clock and weekly schedule - can be done with three buttons. Red indicator shows relay ON.
- The MANUAL button switches the relay to the ON/OFF/controlled state. Detailed description: see time module instruction manual.

9. External device control module (optional):

- This module is located in front-left part of the board. There is line of terminals located at the edge of the board for connecting external devices (escalators, switches etc.).
- Special software supporting external devices operation is programmed in the dedicated Atmel AVR processor.

10. Closing of the beacon:

- Connect the mains cable and antenna to the respective terminals. Be sure that all wires are put into the bottom of the terminal and clamped firmly.
- Close the beacon. Be sure that cables are not jammed under the speaker magnet and both parts of the housing fit together.
- Mount fixing screws and tighten firmly.
- Place cover strips into slots.

Technical parameters:

Dimensions:	w160 x h160 x l75 mm
Mounting holes displacen	nent: 146x146 mm
Weight:	1500 g
Operating temperature ra	nge: -20+60° C
Supply (mains):	230V AC
Consumption	0,5 VA idle, max. 14 W active
Supply (low voltage):	12V (10 16 V) AC/DC
Current drain:	20 mA idle, max. 1 A active
Covering:	IP64

Orientation voice beacon ELVOS OHM performs requirements of standards ČSN EN 60065:2003, ČSN EN 55103-1:1998 and ČSN EN 61000-6-3.

Conformity evaluation was appreciated by TUV CZ s.r.o., Novodvorská 994, 142 21 Praha 4 - Inspection body No. 4002, inspection certificate No. 2499/90/06/BT/IC/E, dated 16.1.2007.