Special Surveillance Equipment

Development and Production

Catalogue

ENDOACUSTICA

TECNOLOGIE PER LA SICUREZZA E LA SORVEGLIANZA

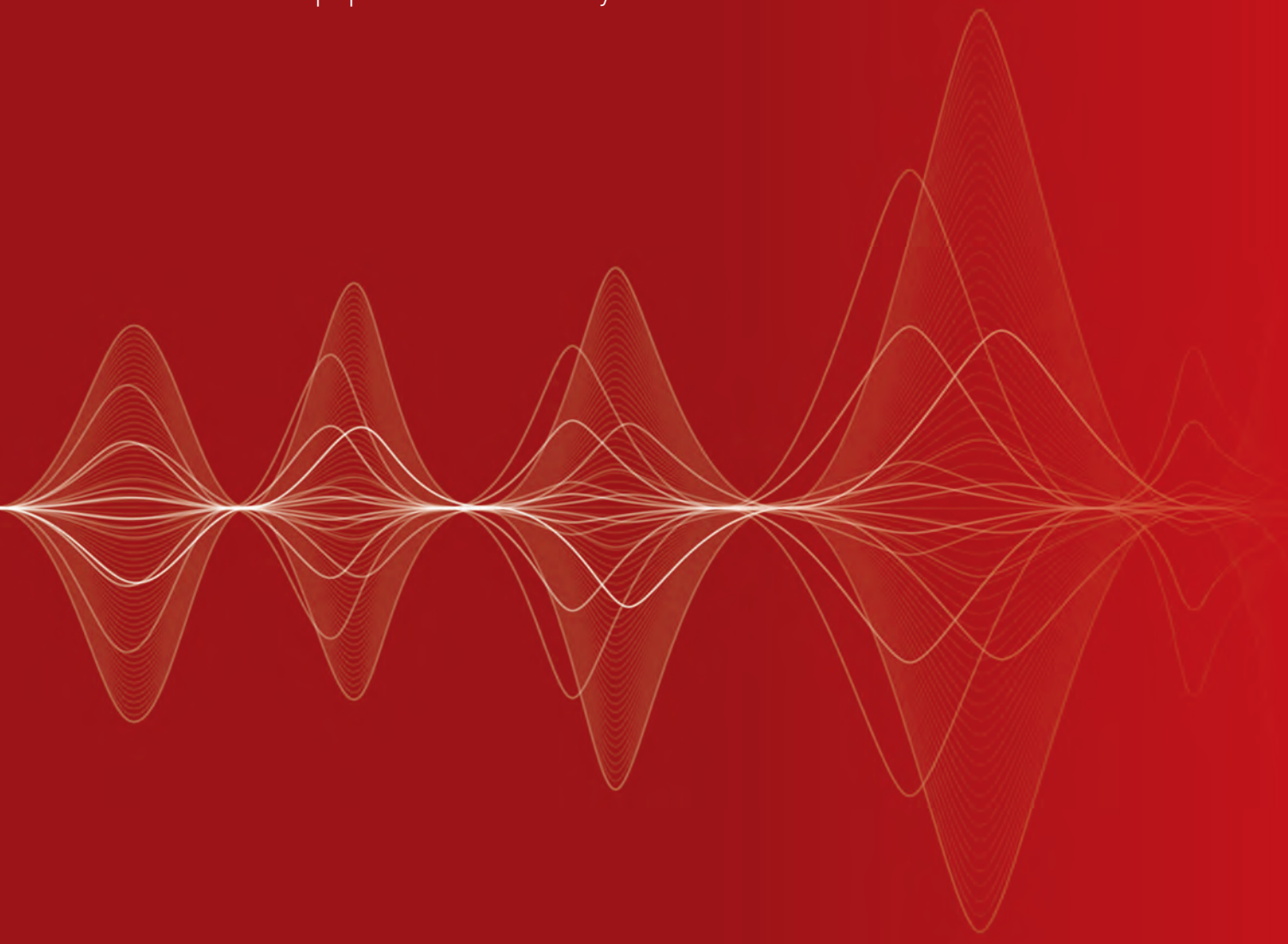
AUDIO SURVEILLANCE SYSTEMS

AUTONOMOUS POWER SUPPLY UNITS

ADDITIONAL EQUIPMENT

AUDIO SURVEILLANCE SYSTEMS

- Multifunctional Audio Transmitters
- Digital and Analog Audio Transmitters
- Camouflaged Audio Transmitters
- Universal Sets of Audio Transmitters
- Stethoscopes (Through Wall Listening Systems)
- Wired Audio Surveillance Systems
- Receivers
- Digital IC Recorders
- Additional Equipment for Audio Systems



ENRMTK 500 Multifunction Audio Transmitter

ENRMTK 500 is designed to transmit audio data obtained via room acoustic and telephone line.

The main feature of this device is the possibility to select operation mode and functions (in any combination) using internal selectors or via the remote control unit (RCU) (must be ordered separately).

Available Models

ENRMTK 500DU – audio transmitter with the remote control.
ENRMTK 500DDU – audio transmitter with digital encryption of the channel and remote control.

Basic Functions and Operating Modes

- **Acoustics or telephone line monitoring (via connection of external wired microphone or external inductive sensor).**
- **Opened and encrypted RF link «Delta modulation». The encrypted RF link eliminates the possibility of unauthorized interception of audio signal.**
- **Control of the transmitter's output power. Low output power increases device's operating time and makes it difficult to detect it. The increased output power can increase coverage range.**
- **On/Off switching of VOX function, which activates the transmitter if the signal occurs from the source. It is used to save power and increase operating time from the battery.**
- **On/Off switching of the remote control function allows to operate the device remotely.**
- **On/Off switching of the transmitter from the remote control.**

The product can transmit audio information from a microphone or a stethoscope sensor:
- ENRMTK-A wired microphone is designed to monitor the acoustic environment;
- ENRMTK-S stethoscope piezoceramic sensor is designed to monitor the acoustic information through building construction elements (walls, ceilings, etc.).

Transmitter with Sensors

DPK 010 Remote Control

Specifications

Operating frequency range, MHz	416.5-423.5
Frequency stabilizer	crystal control
Modulation	WFM/GMSK
Output power, mW	100/450
Current consumption, mA (at 100/450mW)	100/500
Power supply	Li-Ion battery BL-5C (3.7V)
Operating time in the transmitting mode from the internal battery (at 100/450mW), h	8/2, not less than
DC Input (800mA), V	5–15

The following versions of the transmitter and delivery sets

	Functions				Sensors		Battery
	Min/max power	Analog/ digital	RX	VOX	ENRMTK -A	ENRMTK -C	Li-Ion
ENRMTK 500DU	●		●	●	●	optional	●
ENRMTK 500DDU	●	●	●	●	●	optional	●

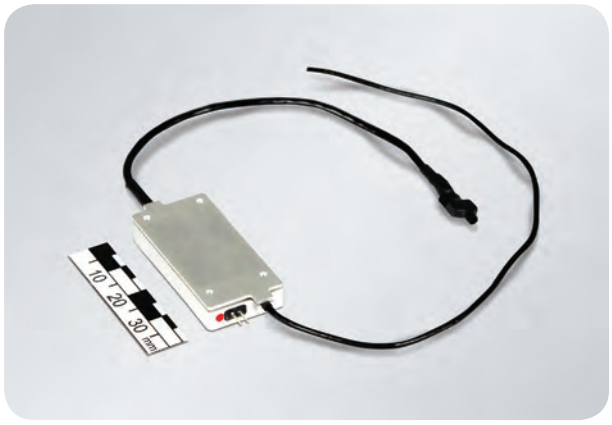
ENRMD 100 Compact Wireless Digital Transmitter

The product is designed to transmit audio data via RF link.

The product has inputs to connect external power supply, antenna and external microphone.

The transmitter has high output power. The output power depends on the supply voltage.

Audio data is transmitted to the audio receivers.



Specifications

Frequency range, MHz	416.5–423.5
Modulation	GMSK
Output power, mW	100, not less
Current consumption at 3V voltage, mA	110, not more
Supply voltage, V	2.7–4.2
Battery	1.5AA x 3

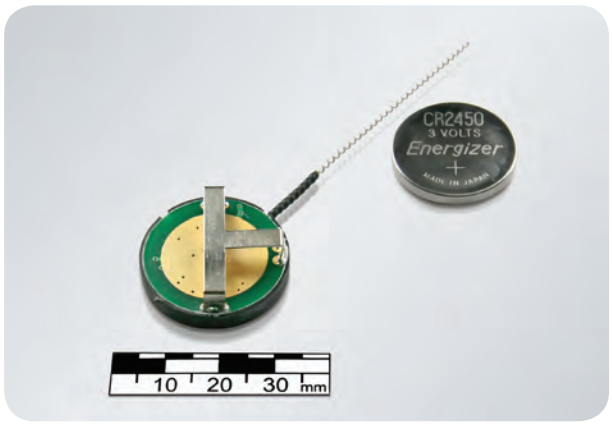
ENRMK 012 DISK Audio Transmitter

ENRMK 012 is designed to transmit audio data via RF link.

The product is designed as a surface-mounted PCB (printed circuit board) secured with plastic cover. Battery compartment is situated on the reverse side of the PC board. The product has a built-in microphone and an external antenna.

The device begins operating once the battery is installed.

Audio data is transmitted to the audio receivers.



Specifications

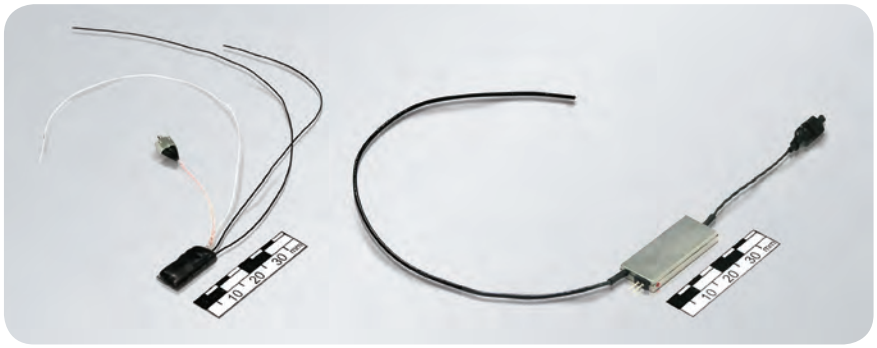
Operating frequency range, MHz	416.5– 423.5
Frequency stabilizer	crystal control
Modulation	WFM
Frequency range, kHz	0.3–6
Output power, mW	5, not less than
Power supply	CR 2450, 3V
Current consumption, mA	6, not more than
Operating time (from one battery), hours	40, not less than

ENRMK 073, ENRMK 122, Audio Transmitters

Audio transmitters are designed to transmit audio data via RF link. Products are universal basic modules for covert radio transmitting devices.

The transmitter ENRMK 073 is designed as PCB covered with protective compound.
It has flexible outputs to connect external power supply source, external microphone and flexible external antenna.

The transmitter ENRMK 122 is made in small metal case with flexible outputs to connect external power supply device, external microphone and flexible external antenna. This transmitter can be upgraded with remote control function.



RMK 073 RMK 122

Specifications

	ENRMK 073	ENRMK 122
Frequency range, MHz	416.5–423.5	
Modulation	WFM	
Supply voltage, V	2–6	2–3
Output power, mW	1–25	100, not less than
Current consumption, mA	5–30	80, not more than

ENRMK 121 MODULE-MS Audio Transmitter (Vehicle Version)

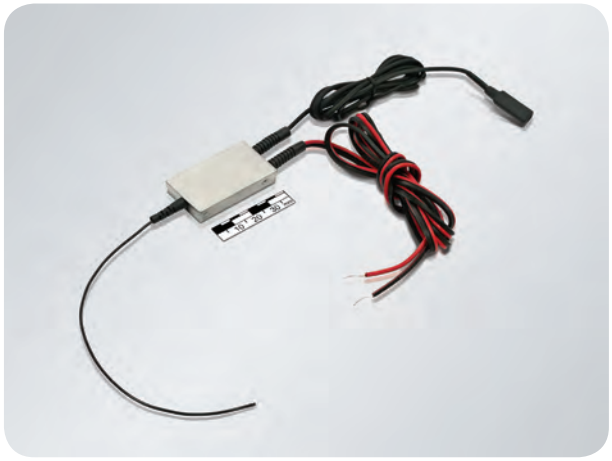
The device is designed to transmit audio data via RF link from mobile objects with on-board power system.

The audio transmitter has metal case, external microphone (cable length of up to 1m), flexible external antenna and output for connection to power supply (on-board of the vehicle).

The product is protected from polarity reverse.

In order to add a remote control function, the unit may work with the remote control receiver ENKDK 003, and remote control unit.

Audio data is transmitted to the audio receivers.



Specifications

Frequency range, MHz	416.5-423.5
Frequency stabilizer	crystal control
Modulation	WFM
Audio signal frequency range, kHz	0.3-6
Output power, mW	400, not less than
Supplied voltage, V	5-15
Current consumption (at supplied 5/12/15V), mA	220/120/100

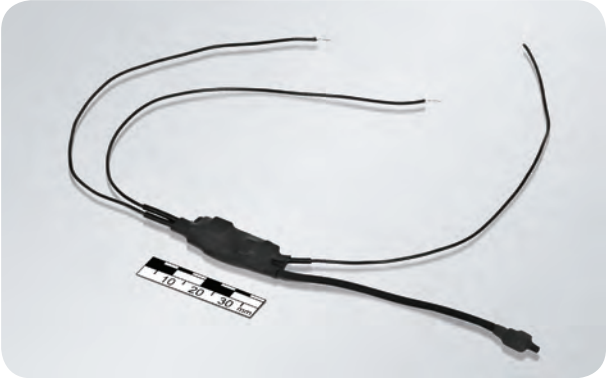
ENRMK 141
Mains DC Audio Transmitter with Mains Power Supply 220V

The transmitter is designed to transmit the acoustics and audio data via RF link.

The product has a shape of a rectangular PCB, covered with a shrink wrap. The unit has an external microphone with a flexible cable, flexible outputs for connection to mains line and flexible external antenna.

The product is powered by mains line 220V.

Audio data is transmitted to the audio receivers.



Specifications

Frequency range, MHz	416.5–423.5
Frequency stabilizer	crystal control
Modulation	WFM
Audio signal frequency range, kHz	0.3-6
Output power, mW	15, not less
Power supply	220V, 50Hz
Current consumption (at 220V +/-10%), mA	15, not more

ENRMK 191
STICKER Miniature Portable Audio Transmitter

ENRMK 191 is designed to transmit the acoustics and audio data via RF link.

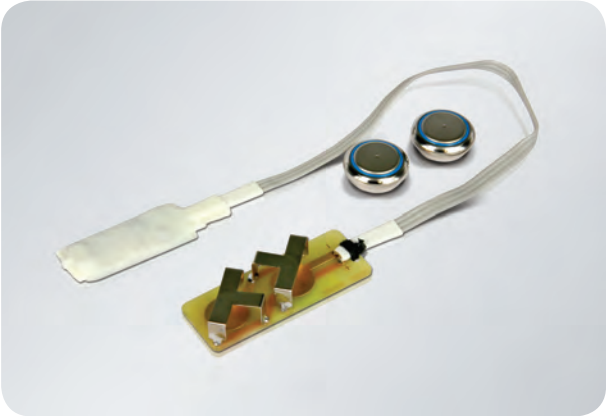
Features

- High output power.
- Small size.
- Flexible modular design.
- Convenient for camouflage.
- High quality of acoustic signal.
- Easy battery replacement.

The product consists of two small size modules (transmitter and microphone with amplifier, and battery container), connected by a flexible cable that functions as antenna.

The product is designed for body-worn application: the flexible modules to be placed inside the outfit.

Audio data is transmitted to the audio receivers.



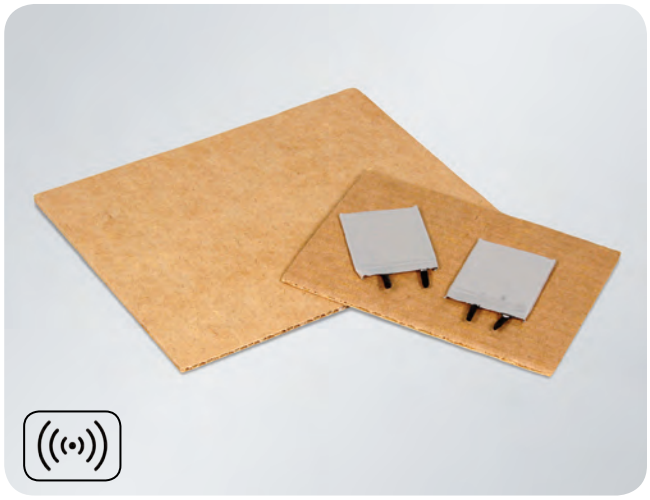
Specifications

Frequency range, MHz	416.5–423.5
Frequency stabilizer	crystal control
Modulation	WFM
Power supply	2 x 1.5 V625
Supply voltage, V	2.2–3.3
Output power, mW	30
Current consumption (at power supply of 3V), mA	30, not more

CAMOUFLAGED AUDIO TRANSMITTERS

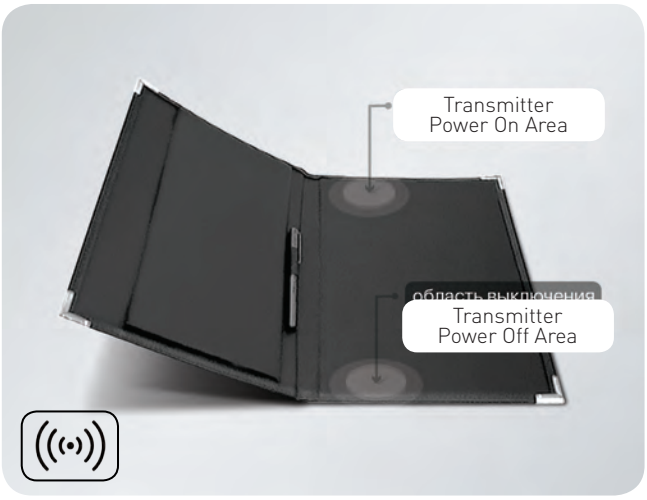
ENCARDBOARD

- Analog/digital.
- Built-in batteries.
- Wireless battery charge.
- Covert magnetic power switch.
- Remote control function is optional.
- Output power 5–7mW.
- Time of continuous operation not less than 1000h.



ENFOLDER

- Analog/digital.
- Built-in batteries.
- Wireless battery charge.
- Covert magnetic power switch.
- Remote control function is optional.
- Output power 7–10mW.
- Time of continuous operation not less than 720h.



ENBASKET

- Analog/digital.
- Built-in batteries.
- Wireless battery charge.
- Covert magnetic power switch.
- Remote control function is optional.
- Output power 10mW.
- Time of continuous operation 200–1000h.

ENCALCULATOR

- Analog/digital.
- Built-in batteries.
- Wireless battery charge.
- Covert magnetic power switch.
- Remote control function is optional.
- Output power 5–7mW.
- Time of continuous operation not less than 100h.

CAMOUFLAGED AUDIO TRANSMITTERS

ENWALLET

- Analog/digital.
- Built-in batteries.
- Wireless battery charge.
- Covert magnetic power switch.
- Output power 100mW.
- Time of continuous operation not less than 10h.

ENBELT

- Analog/digital.
- Built-in batteries.
- Wireless battery charge.
- Covert magnetic power switch.
- Output power 100mW.
- Time of continuous operation not less than 5h.

VEHICLE USB ADAPTER

- Analog.
- Power supply 12V.
- Output power 100mW.
- Time of continuous operation is unlimited.

THREE SOCKET MULTI PLUG

- Analog.
- Power supply 220V (50-60Hz).
- Output power 15mW.
- Time of continuous operation is unlimited.

POWER STRIP

- Analog/digital.
- Power supply 220V (50-60Hz) or built-in batteries.
- Covert magnetic power switch.
- Remote control function is optional.
- Output power 15mW.
- Time of continuous operation, h:
  - unlimited (220V);
  - 24 (built-in battery).

CAMOUFLAGED AUDIO TRANSMITTERS

ENPEN

- Analog.
- Built-in batteries.
- Wireless battery charge (optional).
- Output power 7mW.
- Time of continuous operation 6h.

ENMARKER

- Analog.
- Built-in batteries.
- Wireless battery charge (optional).
- Covert magnetic power switch.
- Output power 10mW.
- Time of continuous operation not less than 20h.

ENCIGARETTE PACK

- Analog.
- Built-in batteries.
- Wireless battery charge (optional).
- Covert magnetic power switch.
- Output power 5mW.
- Time of continuous operation not less than 18h.

ENKEY FOB

- Analog.
- Built-in batteries.
- Wireless battery charge (optional).
- Output power not less than 100/30mW.
- Time of continuous operation not less than 2/6h.

ENMAESTRO-ZS
The Audio Surveillance Set Includes Digital and Analog Audio Transmitters, Receiver and Recorder

The set is designed for audio surveillance via digitally encrypted RF link. It has possibility of remote control implementation.

The set includes analog and digital audio transmitters, and audio receiver with recorder ENMAESTRO–ZS.

The audio data is transmitted to the multi-channel receiver with "Delta Modulation" decryption. The received audio data is recorded to the professional digital recorder.

This set can be used in both stationary and mobile (in vehicle, portable and body-worn) applications.

Content

1. ENRMTK 500 DDU multifunctional audio transmitter 500mW with "Delta Modulation" encryption and the remote control (DU) function (2 pcs.).
2. External microphone ENRMTK-A (2 pcs.).
3. Stethoscope piezoceramic sensor ENRMTK-S (2 pcs.).
4. Multi-channel remote control ENDPK 010 (2 pcs.).
5. Wireless microphone ENRMK 141 "AC mains" (2 pcs.).
6. Wireless microphone with crystal control frequency stabilizer ENRMK 073ML "Satellite" (3 pcs.).
7. Miniature audio transmitter RMK 122 (3 pcs.).
8. Module -MS ENRMK 121 (2 pcs.).
9. The audio transmitter ENRMK 191 "Sticker" (3 pcs.).
10. Compact audio transmitter with digital encryption RMD 100 (2 pcs.).
11. Compact audio transmitter with digital encryption ENRMD 100 camouflaged in belt "Belt D" (2 pcs.).
12. Multiple channel receiver with "Delta Modulation" decoder and built-in audio recorder PRK 040 DR (2 pcs.).
13. Digital mono recorder "Papyrus -Micro" (2 pcs.).
14. Headphones (2 pcs.).
15. Magnetic-based antenna MA 420 (SMA) (2 pcs.).
16. Flexible Antenna AG- 1 (2 pcs.).
17. Battery 3.7V, 2.5A/h (2 pcs.).
18. Battery 3.7V, 850mAh (2 pcs.).
19. The battery 1.5V silver- zinc (12 pcs.).
20. The battery 1.5V AA (8 pcs.).
21. Battery Nokia BL-5C (2 pcs.).
22. Container for battery V625U (2 pcs.).
23. Container for AA batteries (2 pcs.).
24. Battery charger for lithium batteries (2 pcs.).
25. Network stabilized adapter 12V/1.5A (2 pcs.).
26. Power adapter from the vehicle on-board system (2 pcs.).
27. Packing case (1 pc.).
28. User's guide (1 copy).
29. Passport (1 copy).

ENRSK 010
Radio Stethoscope

The unit is designed to monitor the acoustic data via building construction elements (wall, ceiling, etc.) with transmission of the obtained intelligence via crystal-controlled radio channel.

The radio stethoscope is designed in a thin cylindrical case with flexible external antenna and built-in power supply frame. The product is mounted on a solid surface with the use of glue or mastic.

Reception of audio intelligence is available with the use special receivers.

Features

- Small dimensions.
- Li battery.
- High-sensitivity piezoceramic sensor.

Specifications

Sensor sensitivity, V/g	15, not less
Pass band at 6dB irregularity of amplitude-frequency response, kHz	0.2–6
Frequency, MHz	416.5–423.5
Frequency control	Crystal
Output power, mW	5–7
Modulation	WFM
Power supply, V	3 (1 x CR2450)
Time of continuous operation, h	50, not less
External antenna, mm	160

ENSS 021
Stereo Stethoscope

Stereo stethoscope is designed to monitor the audio data via construction elements of the building (wall, ceiling, floor etc.).

Features

- Stereo mode.
- High-sensitivity piezoceramic sensor.
- Attenuator.
- Volume control.
- Balance control.
- Batteries can be easily replaced.
- Portable.

Sensors have a metallic intact case and flexible cable to connect to the amplifier. The sensors are based on the piezoelectric ceramic elements.

The amplifier is designed in the metal case, it has volume and balance control, attenuator, power and battery indicators. The front panel has headphones and external recorder connectors.

Special low-noise amplifiers and additional compressor are used to improve the quality of the dynamic range of audio signals.

Stethoscope Sensors

Amplifier

Specifications

Sensor sensitivity, V/g	15, not less
Dynamic range of the amplifiers, dB	60, not less
Frequency dependent attenuation, dB	15
Sound forge between channels, dB	40, not less
Stereo balance control, dB	+/-6, not less
Current consumption, mA	25, not more
Power supply (internal/external), V	4 x AA 1.5 / 9

ENKPL-SD
Audio Data Transmitting System via 220 V Mains

Audio data transmitting system is designed to monitor room's acoustic and transmit obtained data via 220V mains at subcarrier frequencies.

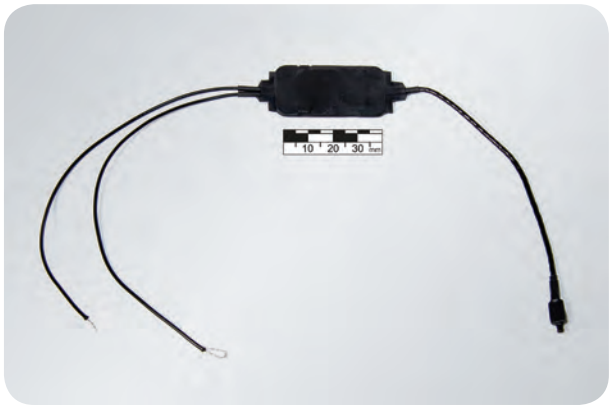
It has digital encryption of channel.

The transmitter is designed as the frameless module with flexible outstanding microphone and outputs for connection to the 220V mains. The transmitter is connected parallel to the 220V mains.

The receiver is designed in the metal case. It has connectors for headphones, 220V mains, microphone (can be used to connect recorder as well) and external power supply. The front panel has volume controls, which serve also as a power switch, frequency tuning tumbler and plug for headphones.

The receiver has built-in «Delta Modulation» decoder.

The receiver can be connected to external magnetic antenna, which enables reception of an audio data near the power lines or the power electric switchboards without contact connection to the 220V mains line.



Transmitter

Receiver

External Magnetic Antenna

Specifications

Frequency range, MHz	1.6–2.4
Modulation	GMSK
Transmitter	
Current consumption from the 220V mains, mA	20, not more
Output power, mW	200, not less
Power supply, V	220 (50Hz)
Receiver	
Sensitivity (at signal/noise ratio of 10dB), mkV	10, not less
Power supply (internal/external), V	4 x 1.5AAA / 6 (DC 100mA)
Operating frequency range with the magnetic antenna, MHz	1.7 +/-0.1 or 2.2 +/-0.1

ENPM 010, ENPM 018
Wired Microphones

The devices are designed to transmit audio data via double-wire unshielded line to the distances up to 5km.

The wired microphones are designed in cylindrical metal case.

ENPM 010 can be produced also with heat-shrink tubing covering.

There is connection pad on one of the ends of the cylinder to connect microphone to the wire. An audio input is located at the opposite side.

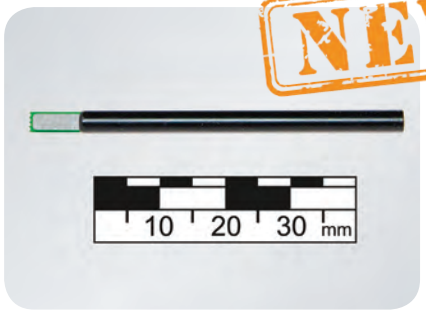
SELECTOR A8 is recommended to be used with the microphones.

Any audio recorder equipped with microphone or line input may be used with ENPM 010 or ENPM 018.

The devices have high audio quality and is capable to operate in harsh acoustic environment.

ENPM 010
in cylindrical metal case

ENPM 010
with heat-shrink tubing covering



ENPM 018

ENPM 018

ENPM 018 Features

- Microphone can be used with acoustic tube (length upto 1m).
- ENPM 018 is protected from short cuts, even when it is connected without load.
- Microphones can be used with any polarity.
- ENPM 018 can be used in audio monitoring systems with supply voltage 12 – 24V.
- ENPM 018 has lower current consumption, that allows to operate via up to 10km wire without additional amplifiers.

Specifications

	ENPM 010	ENPM 018
Supply voltage, V	10-13	10-24
Current consumption, mA	12, not more	7, not more
Output power of audio signal, mW	250, not less (at Rn = 620Ohm)	250, not less (at Rn = 1kOhm)
Audio frequency range, Hz	500-5500	500-5500
Recommended length of double-wire unshielded line, km	0.25	1
Maximum length of double-wire unshielded line, km	1	5

ENPRK 040DR Multi-Channel Receiver

The multi-channel receiver ENPRK 040DR is designed to receive audio data from the transmitters with WFM or GMSK modulated. It operate at the 416-421MHz frequency range.

ENPRK 040DR have «Delta Modulation» decoder and built-in audio recorder.

Features

- 10 channels. Settings and saving of the frequency is done with the help of the buttons on the main panel.
- Squelch function.
- High sensitivity and selectivity.
- Built-in «Delta modulation» decoder, which switches on automatically when digital signals with «Delta modulation» appear.
- Built-in audio recorder with recording duration from 9 to 19 hours, depending on the selected quality of the recording. Optionally recording time can be increased up to 38 hours. The recorded data are saved to the built-in FLASH-memory. The recorded audio data can be protected with a PIN-code from an unauthorized downloading.
- Low power consumption (internal Li-PO battery of 3.7V, 720mAh).
- Possibility to connect an external power supply.
- Mini USB connector for charging.
- User-friendly.

The multi-channel receiver is compatible with transmitting devices (with WFM modulation or «Delta modulation).

Specifications

Frequency range, MHz	416.0–421.0
Frequency step, kHz	25
Number of channels	10
Modulation	GMSK, WFM
Sensitivity (at signal/noise ratio of 10dB), mV	0.5, not less
Audio recorder	built-in, external output
Power supply:	
- internal	3,7 (720mA*h)
- external	5 +/-5%
Current consumption at a moderate sound level, mA	80, not more
Operating time, h	6, not less
Recording time when operating from external power supply (at sampling rates 32/16kHz), h	9 / 19

NEW

ENPRK 050 Universal Receiver

Universal receiver ENPRK 050 is designed to receive audio data from analog and digital transmitters.

New Features

- Recording of the received audio data on a memory card in WAV format.
- Universal battery container that allows to use both 3xAA batteries and Li-ON battery.
- OLED-display.
- Real time clock.

Features

- 16 channels. Settings and saving of the frequency is done with the help of the buttons on the main panel.
- Squelch function.
- High sensitivity and selectivity.
- Built-in «Delta modulation» decoder, which switches on automatically when digital signals with «Delta modulation» appear.
- Built-in audio recorder.
- Playback function of the recorded audio data.
- WAV recording format.
- Up to 250 hours of the recording from an external power supply.
- Operating modes settings from the menu.
- Charging USB device.
- Line output.

The universal receiver ENPRK 050 is designed in metal case with OLED-display.

The OLED-display of the receiver reflects battery status, date, time and mode of the built-in audio recorder. It also displays main parameters, such as the frequency, channel and signal level.

The built-in audio recorder settings can be adjusted from the menu on the OLED-display.

The universal receiver ENPRK 050 is compatible with audio transmitters that operate at 416-421MHz frequency range.

Specifications

Frequency range, MHz	416.0–421.0
Frequency rtep, kHz	25
Number of frequency channels	16
Sensitivity (at signal/noise ratio of 10 dB), mV	0.5, not less than
Power supply, V:	
- Internal	3.7 (1400 mAh)
- External	5 +/- 5%, USB
Current consumption (at a moderate sound level), mA	350, not more than
Operating time, h	6, not less than
Memory card	SD
Recording time (at external power supply), h	250, not more than

ENPAPYRUS III
Digital Audio Recorder

Digital audio recorder ENPAPYRUS III is a professional voice recorder designed for high quality recording under harsh acoustic environment.

Two Versions
- ENPAPYRUS III has metal case.
- ENPAPYRUS III TITAN has reinforced titanium case that protects the device from electromagnetic fields and audio recorders jammers.

ENPAPYRUS III allows recording of meetings, negotiations and interviews inside building as well as outside using built-in or external microphone. Built-in microphone can record within 5m radius inside the building and within 1-2m radius outside in urban conditions.

ENPAPYRUS III has prolonged time of continuous recording (up to 153h) compared to other ENPAPYRUS series recorders. ENPAPYRUS III has remote control function.

Digital audio recorder ENPAPYRUS III best suits to: • Law enforcement authorities for
creating protocol during special operations, in police's cars and etc.
- Security services • Emergency services (fire brigades,
ambulance, rescue services) during rescue operations
- Professional services (law, medical, business, journalism and etc.) for recording of meetings, consultations and interviews.

Features

- User-friendly.
- Up to 153h of continuous recording.
- Use of built-in or external microphone.
- Recording in noisy environment.
- VOX function.
- "Invisible" for the kinematic audio recorders locators.
- Protected against audio recorder's jammer.
- Protection against unauthorized download or interception.
- Built-in clock and timer.
- Switching on the recording by preset timer.
- Manual or automatic turning on/off of the audio recording (according to the sound level – VOX function or preset time – 8 independent timers).
- Wireless remote control of basic functions of digital audio recorder (only when external microphone is connected).
- Audio recording in a loop.
- User PIN-code.
- Color indicator of the battery condition and operating mode.
- High quality audio recording.
- Ultra-low energy consumption.
- Recordings authentication.

ENPAPYRUS III is user-friendly. The recording is switched on with one switch. Front panel contains the control button, which allows to check the operating mode and battery charge level.

Wireless remote control is used to check the charging process of the battery and set up the operation modes.

Audio data are recorded to the built-in memory. Wide dynamic range of the recorded signals allows recording even in the noisy environment.

Recording Modes

- Until the memory is full – recording is done until the memory of audio recorder is full. Once memory is full recording stops automatically;
- Loop recording mode – Once the memory is full recording continues overwriting previously recorded files.

Quality Levels of Recording

- High (sampling rate of 32kHz, recording time up to 76h).
- Medium (sampling rate of 16kHz, recording time up to 153 h).

Built-in Li-Ion battery provides more than 153 hours of continuous recording. Charging of built-in battery is done automatically when connected to PC or charger. LED-indicator shows charging state.

Recorded data can be downloaded and played back only via ENPAPYRUS TOOL software. In this case, digital audio recorder ENPAPYRUS III has to be connected to the PC and the memory files have to be downloaded to the hard drive (audio files are saved in the «wav» format). Recorded files are downloaded to the hard disk drive of PC via USB-USB-micro cable. Files in the memory of audio recorder can be protected against unauthorized downloading with PIN-code.

Configuration of the recording quality, VOX-function, recording timers and remote control function can be done while connected to the PC.

Software has capability to provide authentication of the records with confirmation of absence of any changes made to the audio file and confirmation that the recording was made by the selected audio recorder.

Digital audio recorder ENPAPYRUS III is delivered in plastic case for easy transportation and convenient storing.

ENPAPYRUS III TITAN in Titanium Case

ENPAPYRUS III

Specifications

Size of built-in memory, GB	4
Sampling rate, kHz	32/16
Recording time, h	76/153
Time of continuous operation in recording mode from fully charged battery, h	153, not less
ADC, Bit	12
Dynamic range, dB	82
Power supply	built-in Li-Ion battery
Current consumption in recording mode (with fully charged battery), mA	10, not more
Downloading time of recording from full memory, min	80, not more

ENPAPYRUS-MICRO Compact Digital Audio Recorder

Compact digital audio recorder provides high-quality audio recording.

ENPAPYRUS-MICRO has metal case. ENPAPYRUS-MICRO TITAN has reinforced titanium case that protects the device from electromagnetic fields and audio recorders jammers.

Audio recorder has built-in microphone. The ENPAPYRUS records to the built-in memory. Downloading of the recorded data to PC is done via USB-cable.

Features

- User-friendly.
- Miniature design.
- Wide dynamic range of recording signals.
- VOX function.
- «Invisible» for the audio recorders locators.
- Protection against unauthorized download or interception.
- Protected against audio recorder's jammer.
- Built-in timer.
- Recording timer.
- Cyclic audio recording.
- User PIN-code.
- Color indicator of battery state.
- Configuration of the recording parameters from PC.
- Built-in Li-PO battery.
- Recording authentication.
- Can be easily camouflaged device.

Digital Audio Recorder
ENPAPYRUS-MICRO TITAN

Digital Audio Recorder
ENPAPYRUS-MICRO

Digital Audio Recorder
ENPAPYRUS -MICRO
(OEM Model)

Audio Recorder ENWALLET

Audio Recorder ENBELT

Audio Recorder ENCIGARETTE PACK

Audio Recorder
VEHICLE USB-ADAPTER

Specifications

Built-in memory size, MB	512	1024
Recording time (depends on the recording quality), h:		
- 32kHz	9.5	19
- 16kHz	19	38
Dynamic range, dB	82	
Battery	Li-PO	
Current consumption (recording mode), mA	6	10
Operating time, h	20	15
Time of data downloading to the PC, min.	40	80

ENDPK 010
Remote Control Unit

ENDPK 010 is designed to transmit remote control commands.

The device is designed in a metal case with LED display to control mode, a connector for external antenna and control buttons.

The LED indicator provides the information about the channel number, command transmission and state of the battery.

The remote control does not have a power switch. The standby mode is activated automatically 15-20 seconds after the last operation.

Functions

- Switching on/off of the transmitter.
- Channel selection.

Specifications

Frequency (preset by manufacturer), MHz	151 +/-5
Modulation	FM
Output power, mW	600
Power supply	3 x AAA 1.5V

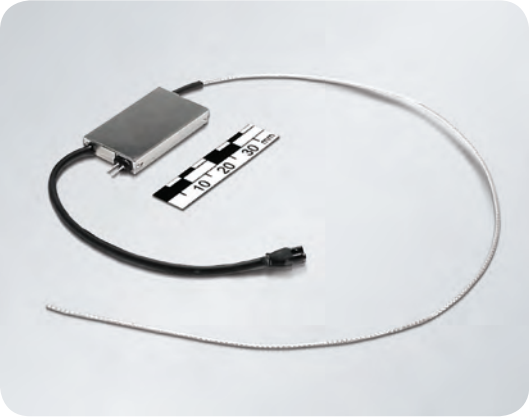
ENKDK 003 Receiver of the Remote Control Commands

ENKDR 003 is designed to receive commands from the remote control unit.

The product is available in a metal case or OEM, has a flexible external antenna, power cable and connector for power connection. The receiver can be used without casing (without power connectors and load connectors) to control low output power transmitting devices.

The receiver has an individual digital code.

The receiver is designed to work together with the remote control ENDPK 010.



Specifications

Frequency (defined by crystal oscillator), MHz	145-155
Sensitivity, mcV	0.2, not less
Bandwidth, kHz	15
Power supply, V	2.5-15
Current consumption (3V):	
- standby mode, mcA	120, not more
- operating mode, mA	4, not more
Current load (standard package), mA	1000

Wireless Charger for Audio Transmitters

The device is designed for fastly charging of Li-PO batteries of audio transmitters without the necessity cable connection.

Features

- Qi standard.
- Indication of charging and end of charging.
- Overload protection.
- Short circuit protection.
- Overheat protection.
- High voltage protection.

Specifications

Power supply	USB
Input voltage, V	5
Output current, A	1
Rated input voltage, V	5
Connector	micro USB

SELECTOR-A8 8-Channel Audio Selector

Selector-A8 is designed for simultaneous operation of up-to 8 wired microphones. It provides independent switching of microphones for recording and listening through headphones and the management of the audio recorders.
The SELECTOR-A8 significantly simplifies the work with the wired microphones, has an ergonomic design, user-friendly and informative interface. Built-in battery allows to use SELECTOR-A8 without connection to 220V mains.
The SELECTOR-A8 is compatible with all types of the recording devices that have line input for recording. The device is user-friendly and it does not require any special training.

Features

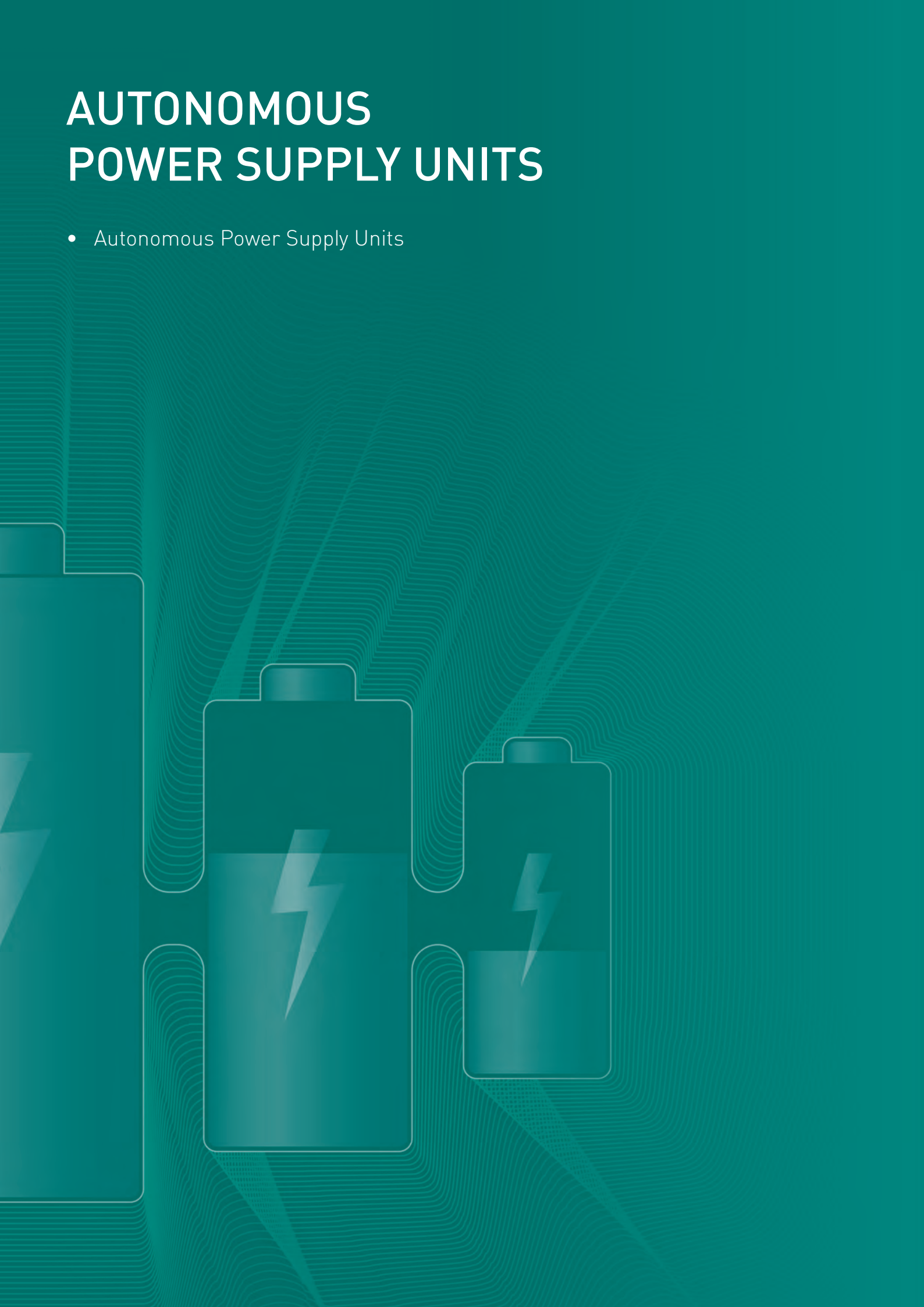
- Switching between 8-wired microphones.
- Compatibility with wired microphones PM 010 and PM 018.
- Signal level indication.
- Indication of the selected channel.
- Digital control.
- Independent switching of the recording channels and listening through headphones.
- Recording control.
- High quality sound.
- Control of the current consumption of wired microphones (12, 16, 20 and 24V).
- Protection against short circuit.
- System of automatic adaptation (tuning) to the length of wire.

Specifications

Number of channels	8
Voltage, V	12
Impedance, Ohm	600
Input signal level, mW	250
Number of point-to-point channels	8
Signal level of point-to-point channels, mW	250
Signal level of recording channel, mW	250
Power supply, V:	
- internal	7.5-15 (1A)
- external	battery Li-PO 680mA*h; 3.7
Continues operation from the battery, h	2, up to

AUTONOMOUS POWER SUPPLY UNITS

- Autonomous Power Supply Units



ENBAP 1280 Stand-Alone Power Supply Unit: Light-weight, Ultra-High Capacity, All-Weather

Features

- Waterproof design.
- Absence of memory effect.
- 30% less weight compare to equal capacity lead-acid battery.
- Ability to operate at extremely low temperatures.
- Absolutely accurate indication of the battery level.

- Built-in lithium iron phosphate rechargeable battery (LiFePO4): 12.8V, 78.4Ah.

- Built-in charger:
  - wide range of input voltage: from 10 to 30V DC;
  - protection against reverse polarity;
  - battery charges fully at a room temperature within 15 hours.

- Stabilized output voltage:
  - 12V, 10A;
  - 24V, 5A;
  - short circuit protection.

- Extended duration of autonomous operation:
  - the possibility to parallel set up several BAPs .

- Smart battery status monitoring system:
  - measurement of current and voltage of every battery element;
  - calculation of the remaining charging/ operating time under various load conditions;
  - balancing of the battery elements;
  - battery elements protection from overcharge and full discharge;
  - the battery temperature control;
  - information is displayed on the LED indicator.

- A wide range of operating temperatures from -50 to +50 °C.

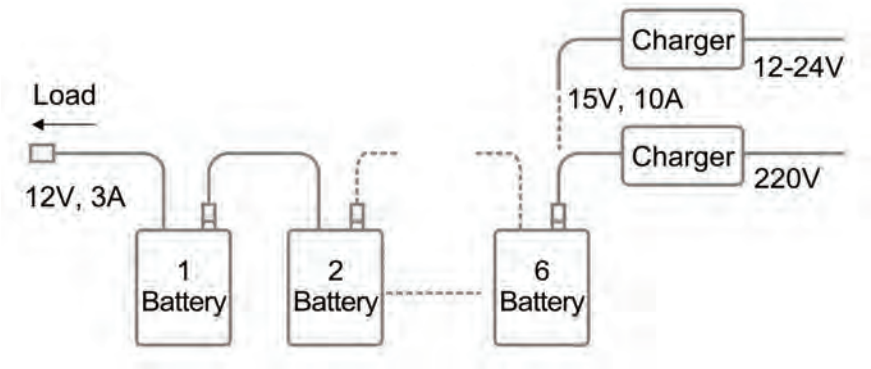
- Automatic built-in battery warm-up system.

- Automatic cooling system.

- Reinforced case for transportation.

ENECHELON
All Weather Universal Battery with Step-Up Function Based on Li-PO Rechargeable Battery

- Designed for autonomous power supply to the devices with 12V power consumption:
  - remote video control systems
  - communication systems
  - security systems and etc.
- Ideal for in the field implementation.
- To increase operating time it is possible to connect more then one battery in the step-up mode.
- There is special connecter for the connection of the second battery or the charge on the body of the battery.
- In the "step-up" mode all the batteries work independently.
- If one of the batteries stop operating it won't cause any disruptions the power supply of the connected unit.
- Possible to use as a back up CPU.
- Balancing system of the build-in accumulators allows to fully use capacity of each battery and prolong use of the whole battery system.
- Unique technology of measuring of charge and discharge of the accumulators GAS GAUGE allows to show precise level of the battery charge despite change of the power consumption and temperature.
- It is possible to charge up to 6 connected batteries at the same time from AC or vehicle charger.
- Short circuit protection in the load with automatic self-recovery.
- Protection against reverse polarity.
- Charge level indication.



Specifications

Max. capacity of the build in battery, Ah	6000
Nominal output power, V	11.1
Range of output voltage, V	9.0-12.6
Maximum continuous output current, A	3
Maximum peak output current (not longer than 1 second), A	10
Input power voltage in the charging, V	15-19
Maximum current consumption in the charging mode, A	1.4
Charging time of a fully discharged built-in battery, h	5.5 not more then
Temperature range in the operation mode, deg. C	from -30 to +55
Temperature range in the charging mode, deg. C	from 0 to +50
The recommended number of the connected modules	from 2 to 6
Performance	up to IP68
Weight, kg	0.8
Size, mm	165 x 72 x 37

ADDITIONAL EQUIPMENT

- Antennas
- Power Supply Units

SPECIAL collinear ANTENNAS With Spring Insert

The antennas are designed and ideally suit for use in mobile robotic systems and remote control units.

- Operating frequency from 300 MHz to 6 GHz.
- Antenna gain from 8 to 12 dBi.
- Connectors type:
- standard N-type and SMA;
- individual order TNC and BNC.
- Directional pattern round.

Features

- Mechanical strength.
- Ability to bend up to 90°.
- Ability to install on mobile vehicles.
- Resistant to mechanical shocks and vibrations.
- Do not require installation on a metal base.
- Ability to change parameters in accordance with the customer's specification.

SPECIAL ANTENNAS With Spring Insert

The antennas are designed and ideally suit for use in mobile robotic systems and remote control units.

- Operating frequency from 800 MHz to 2.4 GHz.
- Antenna gain from 1 to 2 dBi.
- Connectors type:
- standard N-type and SMA;
- individual order TNC and BNC.
- Directional pattern round.

Features

- Mechanical strength.
- Ability to bend up to 90°.
- Ability to install on mobile vehicles.
- Resistant to mechanical shocks and vibrations.
- Do not require installation on a metal base.
- Ability to change parameters in accordance with the customer's specification.

ENSHDA 1100
REPLICA
Flat Dipole Antenna

- Operating frequency 900-1400 MHz.
- Antenna gain 2 dBi.
- Connectors type SMA.
- Directional pattern 360°.
- Do not require installation on a metal base.

ENSA 1100
GRID
Directional Antenna

- Operating frequency 900-1800 MHz.
- Antenna gain 6 dBi.
- Connectors type SMA.
- Directional pattern 70°.

Antenna
Flat Miniature

- Operating frequency 900-1400 MHz.
- Antenna gain 2 dBi.
- Connectors type SMA.
- Directional pattern 180°.
- Allows installation on a metal base.

ENF-type Antenna

- 120MHz band (70MHz band at 900MHz).
- The frequency range is 900, 1000–1400MHz (optional).
- 4dBi gain.
- SMA-male connector.
- Circular pattern.
- Vertical polarization.
- Does not require a metal base.
- Allows installation on a metal base.

NEW

ENSHARK
Magnetic Based Antenna

Antenna is designed for joint usage with receivers and transmitters of CORDON line products.
Antenna is designed as a standard vehicle antenna in the “shark fin” style. Has an elegant appearance without the hallmarks of a special antenna.
Connection to the equipment is provided via a flexible cable with SMA-connector.
Magnetic mount makes it easy to install the antenna on the trunk or on the car roof.

- Operating frequency 1365-1395 MHz.
- Antenna gain 3 dBi.
- Connectors type SMA.
- Directional pattern round.
- Connection cable length 3m.

ENMA 1100
Antenna
On Magnetic Base

- Operating frequency 900-1400 MHz.
- Antenna gain 2 dBi.
- Connectors type SMA.
- Directional pattern 360°.
- Do not require installation on a metal base.
- Spring insert.

POWER SUPPLY UNITS BASED ON LI-PO RECHARGEABLE BATTERIES


ENABP-1


ENABP-3,
ENABP-4

	ENABP-1	ENABP-3	ENABP-4
Power supply (output), V	3.7	11.1	3.7
Battery capacity, Ah	2.5	2.25	7.0

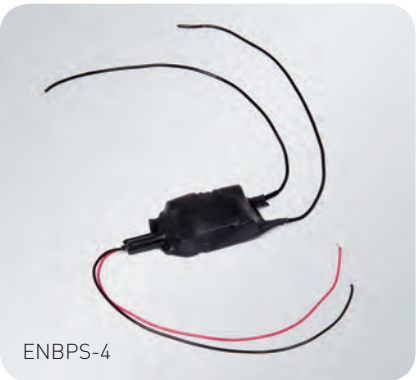
VEHICLE SWITCHING POWER SUPPLY UNITS

	ENBPA
Power supply, V	
- input	12
- output	3
Load current, mA	300

220 V MAINS POWER SUPPLY UNITS


ENBPS-1


ENBPS-2


ENBPS-4

	ENBPS-1	ENBPS-2	ENBPS-4
Power supply, V			
- input	220	220	220
- output	3	3	5
Load current, mA	40	80	1000

220 V MAINS CHARGERS (FOR LI-PO BATTERIES)


ENSZU-1


ENSZU-2


ENSZU-3


ENSZU-4

	ENSZU-1	ENSZU-2	ENSZU-3	ENSZU-4
Battery charge current, A	1.0	2.0	3.0	4.0
Input power supply, V	220	220	220	220
Output power supply, V	4.2	4.2	4.2	4.2

AUTOMATIC CHARGERS (FOR LI-PO BATTERIES) WITH BUILT-IN CHARGE REGULATION FUNCTION

ENZU-1

ENZU-3

	ENZU-1	ENZU-3
Power supply (input), V	5–12	15
Battery charging time, h	5, not more than	7, not more than

ENDOACUSTICA
TECHNOLOGIE PER LA SICUREZZA
E LA SORVEGLIANZA

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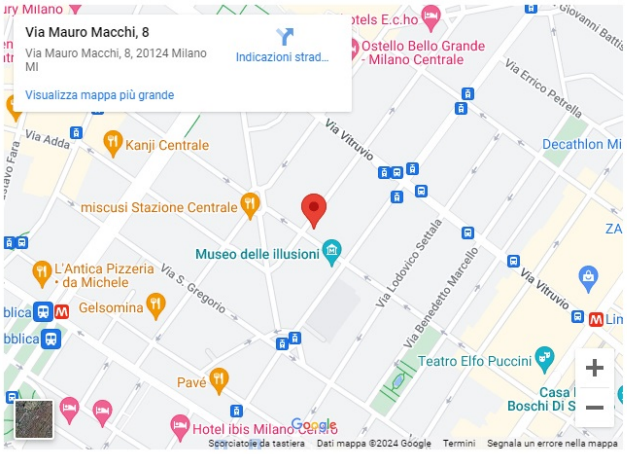

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