COLIBRI STEREO DIGITAL VOICE RECORDER

Technical Description

Operation Manual

INTRODUCTION

This Operation Manual is intended to study the operation principle of the Kolibri product (hereinafter the product) for its proper maintenance, as well as to provide information on the conditions of storage and transport.

The device should be maintained by those who:

- studied this Operation Manual;
- have expertise in operating PC in Microsoft Windows operating system.

1. DESCRIPTION AND CHARATERISTICS OF THE PRODUCT

1.1. COMPOSITION OF THE PRODUCT

The device includes:

- Voice Recorder;
- USB port cable charger;
- Software on microSD card;
- Adapter to conncet microSD card to the PC.

1.2. OVERLOOK

Digital Voice Recorder provides high quality of voice recording in stereo mode; including complicated acoustic environment. The device features high sensitivity of microphones and battery life of at least 10 hours in Record Mode depending on sampling rate.

Information recorded on the digital Voice Recorder is protected by digital signature, which makes it possible to identify whether the recorded voice information has been modified.

Also, information can be scrambled using a binary 128-bit key. In this case, data structure does not change, but while listening, there will be only noise heard instead of speech. The contents of the file does not give information on the key it was scrambled with.

This Voice Recorder provides Timer Recording. There have been implemented two types of timers, which are:

- Daily Timer to set daily record start time and record stop time
- Schedule Timer to set time and date of record start and stop time
- Note: Please remember that when using timer, the time from the start to the end of the timer cannot exceed total recording time of ~ 15 hours.

These service functions can be activated using software after they have been recorded onto the micro SD card and the Recorder has been initialized using microSD card installed in the Recorder's slot.

1.3. TECHNICAL CHARACTERISTICS OF THE PRODUCT

- Dimensions: 86 x 54 x 2 mm (thickness may vary depending on the model)
- Weight: 17 grams.
- Dynamic range: 80 dB.
- Frequency band: depends on clock frequency.
- Power supply: built-in lithium-polymer rechargeable battery.
- Built-in battery capacity: 120 - 180 mA/h.
- Recording duration with built-in battery: at least 15 hours at clock record frequency 32 kHz.
- Battery life in Power Saving Mode: more than 2,000 hours.
- Charging: Connect the product to the USB port of the PC, using supplied cable charger.
- Charging time: 2 hours.
- Verification of the recorded file
- Built-in protection against unauthorized information reading.
- Option to automatically record by two timers.
- Recording format: WAVE PCM stereo 8kHz, 16kHz, 32kHz, 44.1kHz.
- Maximum total recording duration: depending on the memory capacity
- Reading speed is determined by the type of microSD card.

2. PRODUCT DESIGN

2.1. VOICE RECORDER DESIGN

The product is manufactured in the form of a thin rectangular plate, the width and height of which conform to ISO / IEC 7810 ID-1 credit card form factor. Plate thickness depends on the execution type. There are built-in microphones, a microcontroller, nonvolatile memory, a lithium-polymer rechargeable battery and an adapter to connect microSD card inside the product.

Voice Recorder's appearance is shown in Figure 1:

Control of the operation modes and status monitoring is carried out using two buttons.

3. OPERATING THE PRODUCT

3.1. GETTING STARTED

To start operating the product, go through the following steps:

• Take the product out of the package. Check the product for mechanical damage or any swelling of the rechargeable battery.

• Carefully read the instructions.

• Install Software onto the PC.

• Charge the rechargeable battery using the supplied cable charger.

• Write the configuration onto the microSD card using the supplied software and then onto the Recorder by inserting the microSD card and pressing the left button.

3.2. VOICE RECORDER MODES

To view the Recorder's status, use Status Button. If you press the Status button, Status Control LED lights up for a while. LED color corresponds to the mode the Recorder is in at the moment.

The list of modes and their corresponding LED colors are specified in the Table below:

LED color	Mode
N/A	Battery is discharged
Green	Standby Mode, microSD card connected. Recorder is ready to start operating.
Red	Voice Recorder is in Record Mode. Information from the Mic is being recorded onto microSD card.
Blue	MicroSD is off. Maximum energy saving.

To activate Record Mode, insert microSD card into the card holder (connector) and press the Record button (left). The LED flashes, its color changing in the following order: Red → green → off.

To stop recording, press the Record button, the LED flashes, its color changing in the following order: red → off → red → off.

To listen to the recorded information, pull out the microSD card from the connector, insert it into the adapter, connect it together with the adapter to the PC, start the software shell and listen to the recording.

3.3. RECORDER'S BATTERY CHARGING

To charge the built-in battery, insert a supplied adapter (cable charger) instead of a microSD card and connect it to the USB port of the PC.

After 15-30 seconds, the green LED will flash.

Charging takes approximately 1-2 hours. After this time, the LED will go out. After that, disconnect the charger from the USB port, and then from the Recorder.

In case of complete discharge of the rechargeable battery, charge it and re-write configuration onto the Recorder.

3.4. CHANGING THE RECORDER'S CONFIGURATION

- To change configuration and work with the data recorded onto the microSD card, connect the card to the PC with Windows OS using adapter.
- To do this, follow these steps:
- • Insert microSD card with the adapter into the PC.
- • Change configuration using software.
- • Quickly remove the microSD card from the PC, insert it into the Recorder and press the left button. The LED will flash first in red, then blue and then will go off. Configuration has been recorded successfully.

4. TECHNICAL MAINTENANCE OF THE PRODUCT

4.1 General Recommendations

Technical Maintenance of the device should be carried out at least once every two months and should include rechargeable battery charging and product functional check in accordance with this Operation Manual.

4.2 Safety Measures

All the operations with the product should be performed by the qualified staff who have studied this Operation Manual.

5. STORAGE

The product should be stored packed in heated and ventilated areas at temperature from 5° C to 40° C and relative humidity up to 80% at a temperature of 25° C, at no vapors of chemically active components in these premises.

6. TRANSPORTATION

The product can be transported by private means of transport of any type in transport package. When transporting the product, the measures should be taken to avoid displacement of package with the product in the vehicle body.

Transportation of the packaged product may take place at ambient temperature of minus 20°C to 60°C.

After transporting, the product must be kept at operating temperature conditions for 6 hours.

7. ENVIRONMENTAL REQUIREMENTS

Disassembly, recycling and destruction of the product can be carried out by any method. This however must not be applied to lithium rechargeable battery. Lithium battery is subject to disposal by the licensed organizations.

8. WARRANTY

The manufacturer guarantees that the product complies with the technical requirements provided the customer observes operating conditions, as well as transport and storage conditions, set in the specifications.

Warranty period - 2 years from the date of issue. Issue date is to be confirmed by the corresponding record in the passport. With the loss of passport, product warranties become invalid.

In the event of failure of the product during warranty period, provided the customer observed maintenance requirements as well as transportation and storage conditions of the Manual, the supplier is obliged to eliminate failure free of charge and take measures to avoid these defects in all subsequent items.

Average operating lifetime (before write-off) - 5 years.