

# Digital voice recorders of EM Tiny+, Tiny16+ series

*Short operation manual*

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## Purpose

Voice recorders of the Edic-mini Tiny(16)+, series are professional devices intended for making high quality record of voice messages into built-in flash memory. The recordings can be further uploaded onto the PC. These voice recorders feature really unique characteristics (the world's smallest size, maximum autonomy, high acoustic sensitivity etc). The recorders are marketed as personal means of documenting audio information providing protection against fake records as well as unauthorized access to records. Recorders designed for home use by mass consumers.

The EMPlus program located in the built-in memory is used to operate the recorder. SoundProcessor program is designed to process the transferred records and to facilitate the conversion of records to text. The programs operate under Windows XP (SP2, SP3) / Vista / 7 / 8 / 10.

Model	Power supply	Dimensions, mm	Weight, g
Tiny+ A77	Li-Pol 105mA/h rech.batt	29x15x12	7
Tiny+ A81	Li-Pol 500 150mA/h rech.batt	78x13x13	19
Tiny+ A83	Li-Pol 800 mA/h rech.batt	38x18,5x23,5	26
Tiny+ B73	LR43 battery	46x14x6	6
Tiny+ B74**	CR2016 battery	57x28x3,5	7
Tiny+ B76	CR2016 battery	37x25x6	16
Tiny+ B80	CR2450 battery	48x32x7	16
Tiny16+ A75	Li-Pol 150mA/h rech.batt	77x27x4	13
Tiny16+ A78	Rech.batt	41x29x8	9
Tiny16+ A79	Rech.batt	53x73x17	112
Tiny16+ A82	Li-Pol 500 150mA/h rech.batt	90x13x13	21
Tiny16+ S78	Li-Pol 150mA/h rech.batt; solar battery	41x29x8	9

\* take into account that the autonomy specified is for 8kHz/8 bit mode, when sample rate or capacity is higher autonomy is lower (for 16kHz/16 bit roughly twice for models with rechargeable batteries, four times for models with batteries).

\*\* case made of fiberglass

Autonomy*, h	Signal-to-noise, dB	Sensitivity, m	Sample rate, kHz	Frequency band, Hz
55	65	12	8; 11;16;22	100-10000
210	65	12	8; 11;16;22	100-10000
200	65	12	8; 11;16;22	100-10000
10	65	12	8; 11;16;22	100-10000
25	65	12	8; 11;16;22	100-10000
25	65	12	8; 11;16;22	100-10000
190	65	12	8; 11;16;22	100-10000
70	80	15	8; 10;13,3;20	100-10000
70	80	15	8; 10;13,3;20	100-10000
1680	80	15	8;10;13,3;20	100-10000
140	80	15	8;10;13,3;20	100-10000
75	80	15	8; 10;13,3;20	100-10000

Record time in 8kHz/uLaw mode – 150h (300h; 600h; 1200h; 2400h - depending on model index: 150HQ, 300HQ, 600HQ, 1200HQ, 2400HQ)

Interface: USB 2.0

Operating temperature range: 0...+50°C

Operation life: 3 years (The manufacturer reserves the right to refuse in repair after the expiration of recorder operation life).

**Note!** It is recommended not to use mode 22kHz for recording on to recorders with battery, because operation in this mode requires very large currents. Often batteries are not designed for such currents and the recorder records much less time than the one specified. Accordingly recording time in the mode 22kHz depends greatly on the battery quality. If this mode is needed, please use batteries which designed to work not with watches but with technique.

# Main features

- Voice Activating System (VAS)
- Timers: Once and Daily
- Linear and circular recording
- Built-in clock, calendar
- Password protection of the records
- Built-in digital markers provides protection from modification of records
- Control and indication: switch and LED

## Operating the recorder

For recorders with battery first set the battery in the recorder. LED will flash three times and then will light for 40 seconds. After LED extinction the recorder is ready for operation.

**Attention!** *When installing batteries, observe the polarity (see marking on the recorder's case). Inappropriate installing of battery may lead to failure of the recorder system, which is not covered by the Warranty. Do not store the recorder for a long time with a battery inserted, as the battery may leak and lead to recorder failure, and that is not covered by the Warranty.*

For recorders with rechargeable battery, first charge the battery. To do this, gently and without strain follow the correct polarity, connect the recorder to the USB adapter, which is in the delivery set, aligning the mark on the recorder with the one on the adapter. Connect the adapter to the USB port of the PC or charger device, e.g. of a mobile phone, with the output voltage of 5V and a USB connector. During charging, the LED flashes rarely (interval of 5 seconds), and after charging has been completed, it starts flashing frequently. Full charging takes approximately 2.5 hours.

**Please note:** *In order to avoid deep discharge and related damage of the rechargeable*

*battery, the recorder must be charged at least once a month. The failure of the battery due to its deep discharge is a violation of the rules of operation. In case of a complete battery discharge, the procedure to restore the operation of the Recorder described in full operation manual.*

### **Important!**

*To prevent deep discharge and related damage of the rechargeable battery, disconnect USB adapter from the Recorder after disconnecting adapter from PC. Use only the USB adapter included in the delivery set. Using the USB adapter of third party may cause the recorder's malfunction.*

## Starting the record

The recorder switches to operation mode after the Switch has been shifted to ON. The LED flashed five times and recording starts. After the transition to operation mode, the green LED of the recorder makes two series of flashes, the number of flashes indicating:

Number of flashes	Battery charge level (1st series)	Free memory capacity (2nd series)
1	80 - 100%	75 - 100%
2	20 - 80%	50 - 75%
3	2 - 20%	25 - 50%
4		1 - 25%

To stop the recording shift the Switch to OFF position. The LED will flash for 10-12 seconds and then the record stops.

## Record playback

Turn the Recorder to OFF position and wait until the LED turns off. When connecting recorder to the PC please comply with strict order: first connect USB adapter to the recorder, next connect adapter to the PC port (disconnection order: first disconnect the USB adapter from the PC, then recorder from the adapter). Red and green LEDs blink briefly on the adapter. Windows recognizes a new removable drive, which contains two files: EMPlus.exe and emplus.srv. Run "EMPlus.exe" program.

During first connection there will be an offer to install program to your PC. After accepting short and full operation manuals, EMPlus and SoundProcessor programs and manuals will be installed to the hard drive.

Run "EMPlus.exe" program from recorder or hard drive.

Choose connection type USB 2.0 HS. The content of the recorder is on the left side of the window. Select the desired record and click Play on the bottom of the left panel. To upload right click on the selected record and choose «Copy to default folder» from the context menu. The record will be converted to WAV to be displayed at the right panel.

## Reset

In case of rechargeable battery operation error press the Reset button with sharp thing (match or toothpick). For the recorders with batteries: remove and install battery again in a few seconds. For the recorders with external supply: shut down and then turn on the power supply.

Detailed information about operation and capabilities of the recorders see in Full operation manual.

# Warranty

The manufacturer undertakes warranty repair liabilities for 1 year from the date of purchase, but no longer than 2 years from the date of manufacture of the product (warranty does not cover batteries). Paid repair is provided within recorder's operation lifetime (3 years). Other rules are regulated by the Law «On Protection of Consumers' Rights».

We are always grateful for any comments and proposals regarding our products, as well as the detailed description of the conditions and causes that led to failure. We appreciate time and skills of our customers, and if the problem is not that complicated, we do not mind if you try to solve the problem yourself. If the attempt to repair was fairly neat, you do not lose your warranty. In case of major breakdowns and mechanical damage to the recorder, your warranty will be terminated. Our products have no seals. If you are experiencing problems with the use of our products, we recommend the following:

- Go to [www.ts-market.com](http://www.ts-market.com) and see a list of common problems (FAQ section) and their solutions. Perhaps there is a solution to your problem.
- If the problem persists, contact technical support at [support@ts-market.com](mailto:support@ts-market.com) with the detailed description of your problem, the conditions it appeared, the exact product name according to the passport, firmware, software, operating system, and other relevant information. The better you describe the problem, the sooner it is resolved. E-mail correspondence is most effective because it preserves history and minimizes misunderstanding. You will receive a response to your request by e-mail within 24 hours (excluding weekends and holidays).

# Technical Support

Technical support is available by e-mail: [support@ts-market.com](mailto:support@ts-market.com)

We are constantly working to improve the software and documentation. You can always download the latest version of the software for free and get information on products on our website: <http://www.ts-market.com>.