Digital voice recorder

EDIC-mini LCD

Operation manual

Version 05.08.29

Contents

Introduction

Thank you for purchasing the Edic-Mini LCD digital voice recorder (DVR). Prior to operation, read the operation manual thoroughly.

Purpose

Voice recorders of the Edic-mini LCD series are professional devices intended for making high quality recording of voice messages into built-in flash-memory. You can playback recorded messages using headphone and save them in your computer as standard audio files.
Voice recorders feature extremely small dimensions and weight, long record time (varies with the model up to 600 hours), standby operation (up to 1000 hours), and highly sensitive built-in microphone with a wide dynamic range. Due to the absence of moving parts, the DVR functions even under the conditions of strong vibration, dustiness, and low temperatures.
The supplied USB adapter provides high-speed data exchange between the DVR and the computer (1.5 Mb). The software supplied on the CD makes it possible to save the recorded messages as standard audio files, set the DVR parameters, and control admission to the DVR functions. You may use your DVR for message recording, as well as a flash-disc at the same time, to store and transfer data of any format.
For the user's convenience, while operating the DVR, there is a push-button manipulator (joystick) and a liquid-crystal display to indicate all the information needed, including a built-in timer and a real time clock.
The DVR has a Voice Activating System (VAS) which effectively compresses pauses in messages therefore increasing the actual recording time. The pause length can be restored at further file processing with the software supplied.

Delivery set

- Edic-Mini LCD digital voice recorder
- Headphone
- USB adapter
- CD with software
- 2 batteries
- Operation manual
- Guarantee card

Basic technical and functional features

1.Available recording time in ExtraLongPlay mode (modified 2-bit ADPCM sample rate 8 kHz, 16 Kbit/s).

Index	Record time	Built-in flash memory size
560	560 min.(9.3 hours)	64 MB
1120	1120 min. (18.6 hours)	128 MB
2240	2240 min.(37.3 hours)	256 MB
4480	4480 min. (74.6 hours)	512 MB
8960	8960 min. (149.3 hours)	1 GB
17920	17920 min. (298.6 hours)	2 GB

The DVR features a SuperExtraLongPlay mode (modified 2-bit ADPCM, sample rate 4 kHz, 8 Kbit/s), which increases the recording time twice as much as regards the data in the table.

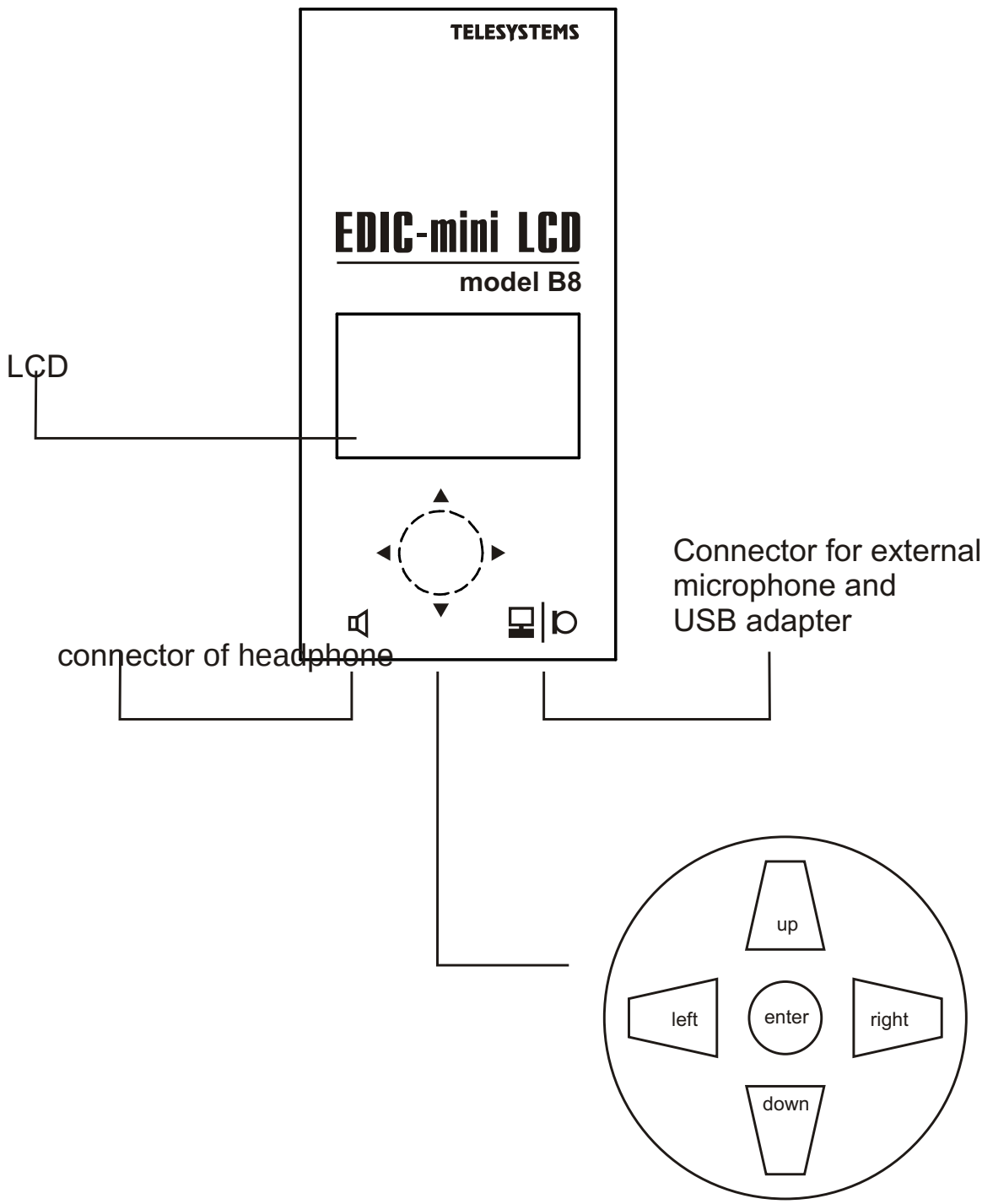
- Supply voltage: 2.7-3.2 V;
- Operating temperature: -20- +50°C (68-122F);
- Maximum bandwidth:
    - at playback on PC: 100-6000 Hz;
    - at playback through the earphone: 100-3800 Hz;
- Sample rate: 16000, 8000, 4000 Hz;
- Codec capacity: 16 bits;
- Signal/noise ratio: 72 dB;
- Quality, formats and density of data record:
  Without compression (linear), sampling rate is 16 kHz, 256 Kbit/s, k=16
  Without compression (linear), sampling rate is 8 kHz, 128 Kbit/s, k=8
  Without compression (linear), sampling rate is 4 kHz, 64 Kbit/s, k=4
  Logarithmic compression, sampling rate is 16 kHz, 128 Kbit/s, k=8
  Logarithmic compression, sampling rate is 8 kHz, 64 Kbit/s, k=4
  Logarithmic compression, sampling rate is 4 kHz, 32 Kbit/s, k=2
  Modified 4-bit ADPCM, sampling rate is 8 kHz, 32 Kbit/s, k=2
  Modified 2-bit ADPCM, sampling rate is 8 kHz, 16 Kbit/s, k=1
  Modified 4-bit ADPCM, sampling rate is 4 kHz, 16 Kbit/s, k=1
  Modified 2-bit ADPCM, sampling rate is 4 kHz, 8 Kbit/s, k=0.5
  where *k* is the coefficient, showing how many times the maximum recording time decreases when record quality increases.
- Automated Voice Activation System (VAS);
- Antialiasing median program filter;
- Recording in the linear and circular modes (in the circular mode, the buffer size is set in per cent of total memory size);
- Built-in microphone sensitivity: 7-9 m.;
- 8 user sets of record parameters (profiles);
- Random record delete;
- Real time clock;
- Battery charge indicator;
- USB interface with a PC, data exchange speed: 1.5 Mb;

- Reliable data storage in flash-memory: over 10 years;
- Consumption in Standby mode with the indicator on: 0.14 mA;
- Consumption in Standby mode with the indicator off: 0.016 mA.

		Antialiasing	
Sample rate, kHz	**Compression**	**On**	**Off**
16	no	3.6 mA	2.8 mA
8	no	3.4 mA	1.8 mA
4	no	3.3 mA	1.6 mA
16	log1-16	3.4 mA	3.4 mA
8	log1-16	3.3 mA	1.9 mA
4	log1-16	3.3 mA	1.5 mA
8	ADPCM2,4	3.2 mA	2.5 mA
4	ADPCM2,4	3.2 mA	1.6 mA

With the VAS on and the signal below equils the threshold, consumption does not exceed 0.2 ma. At playback the consumption is 5-7 m A in all modes.

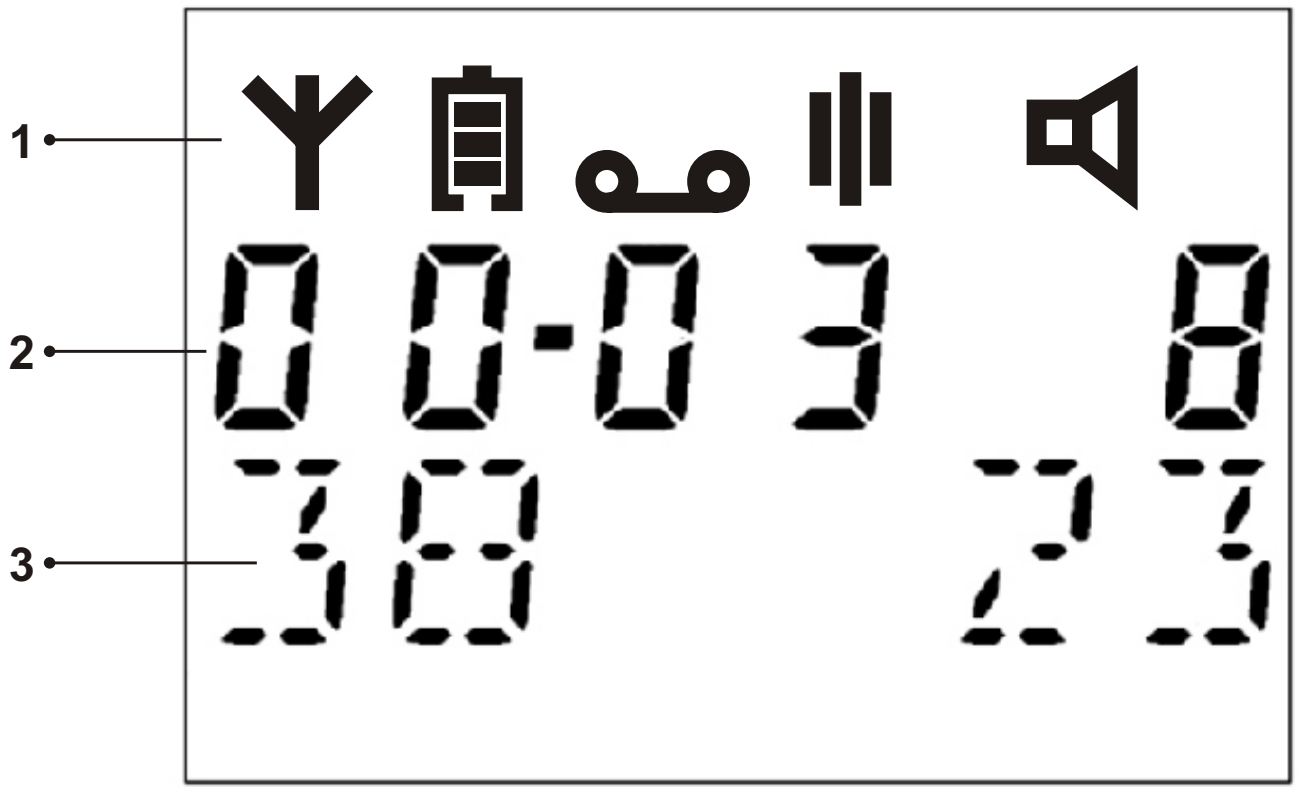
DVR overview



EDIC-mini LCD B8 overview

Push-button joystick

Display Symbols



1 - Symbol line
2 - Numeric line
3 - Alphabetic line

- Indication of the DVR connection to PC by means of the USB adapter.
- Battery charge indicator;
- Record mode indicator;
- Standby mode indicator;
- Playback mode indicator

DVR Operating

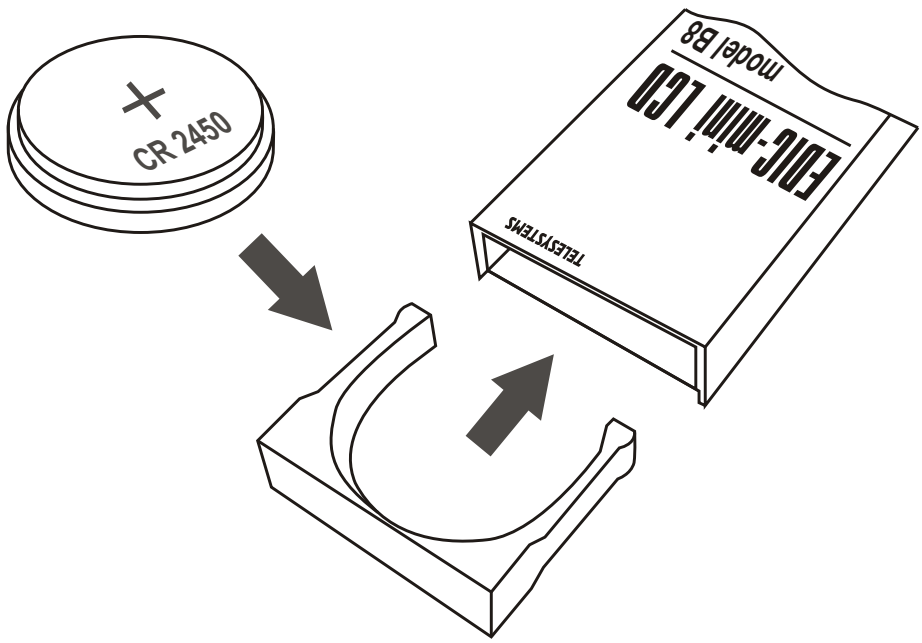
Prestarting procedures

Battery installation

We do recommend that only the batteries, produced by well known manufacturers should be used in the DVR. In this case you may expect your DVR to work continuously. Other battery types of the same dimension-type may provide less DVR operation time in Record and Playback modes, even if they are called compatible and announced to have better features.
When inserting the battery, make sure you have checked the polarity.

Warning!

Special attention should be paid to polarity while inserting the battery: the positive battery contact is to be upward (the top side of the DVR is where the joystick and the display are).



If the battery is inserted properly, the DVR will execute self-testing, and you will see the total memory capacity and firmware version on the display, then all the LCD elements will be indicated for a moment. After that you will see the following information on the display:
- In the symbol line battery charge indicator and mode symbol (Stop mode);
- In the numeric line the current time (hours and minutes), the separator blinks at a 2-second interval. (Fig. 1)

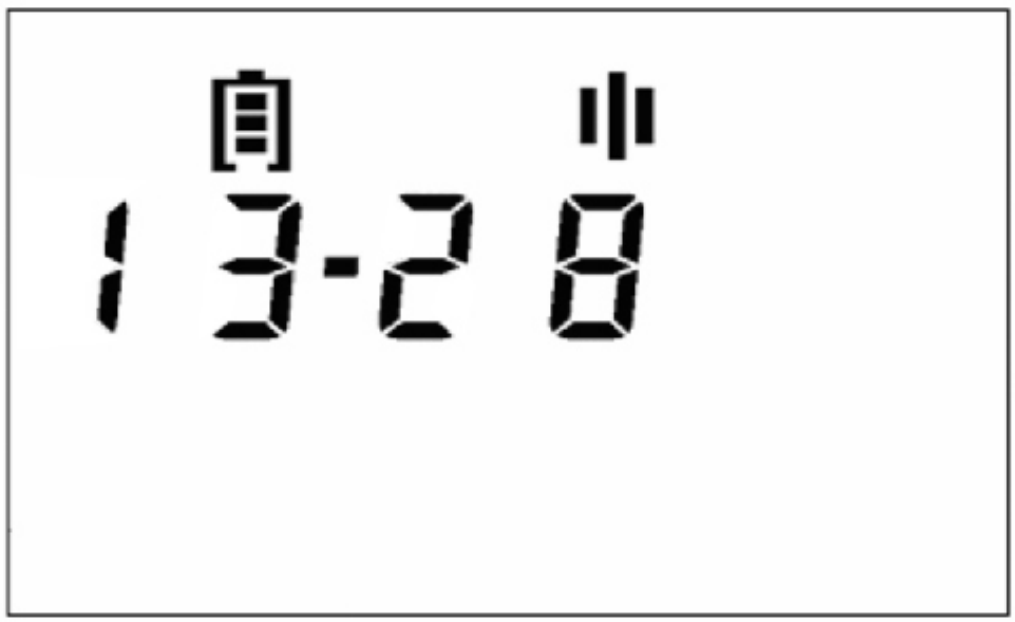


Fig.1

The DVR is in the Standby mode and ready to work. If let without a push-button activity for a minute, the DVR goes to Sleeping mode and the LCD display goes off. Push the joystick up to switch back it on.

Battery replacement
Battery charge indicator shows how much battery life is left.
If the battery is fully charged, the battery indicator border and three lines inside will be shown on the display

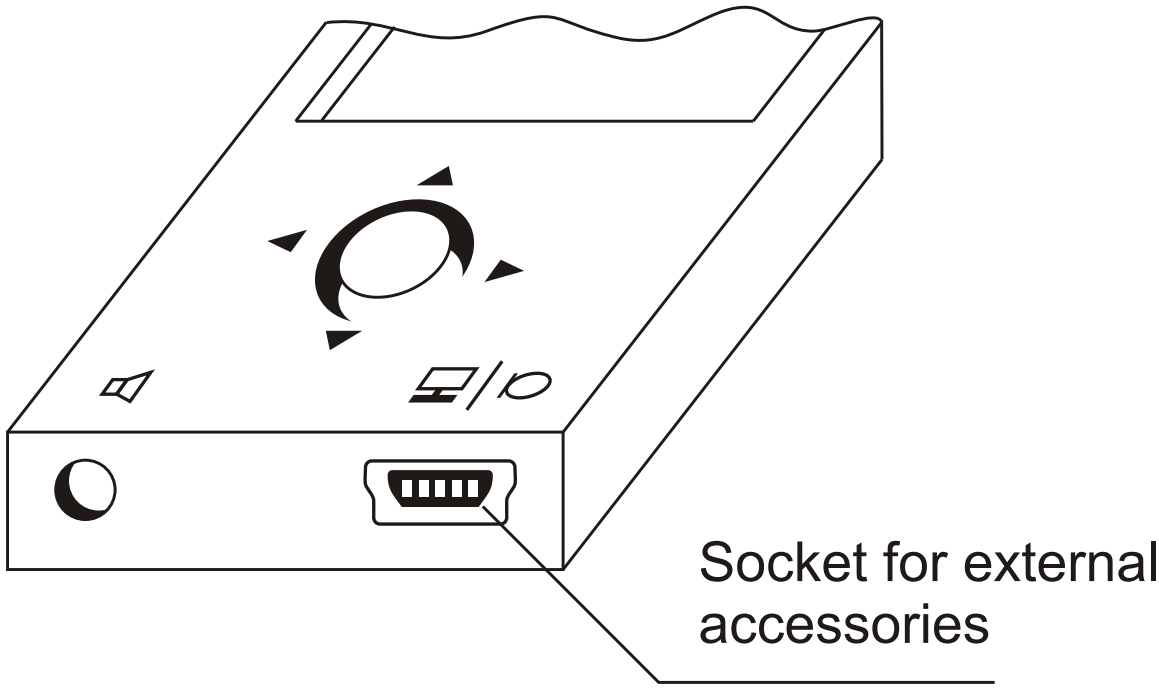
Battery is fully charged

Battery is discharging

Battery is discharged

If there is only the battery border on the display, it means that the battery is discharged and should be replaced. When the battery is discharged, the DVR does not react to the pressing or pushing of buttons, and the display remains off.
You can replace the battery without switching off the DVR. At that it can work for some seconds without the battery. Thus, if the battery is replaced fast enough, the built-in real time clock does not reset.

Earphone and remote control connection
The headphone and remote control can be connected through the headphone connector on the side part of the case. You should fully insert the headphone plug into the connector.



Operating Modes

You can select a mode with the push-button manipulator (joystick) in accordance with the diagram. (See the control chart at the end of the manual).
If it is left without a push-button activity for a minute, the DVR switches to the Energy-saving mode and the LCD display goes off.
Push the button up to switch it back on.

Record mode (REC)
To start the Record mode, press the button once or twice, depending on settings made when connecting to the PC.
On the display you will see:
In the symbol line battery charge indicator and mode symbol;

In the numeric line on the left: net recording time (hours and minutes), the separator blinks at a 2-second interval; on the right: the current profile number;
In the alphabetic line on the left: the percentage of available memory, on the right: the number of the recording being made. (Fig. 2)

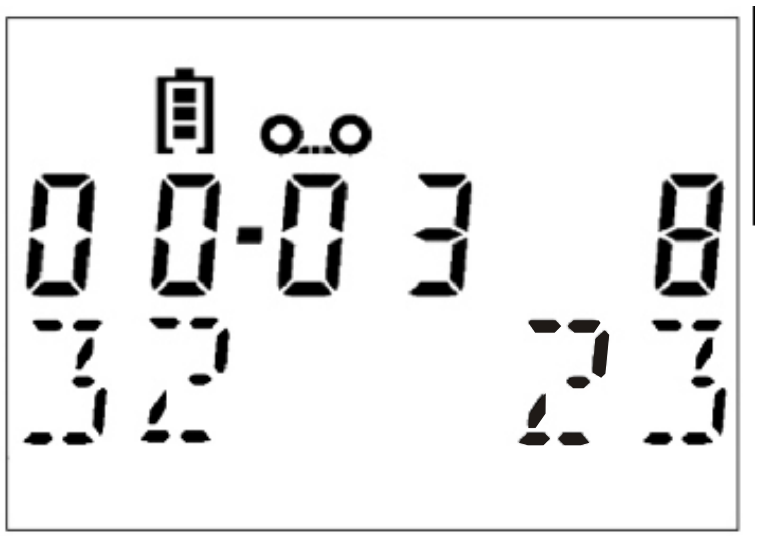
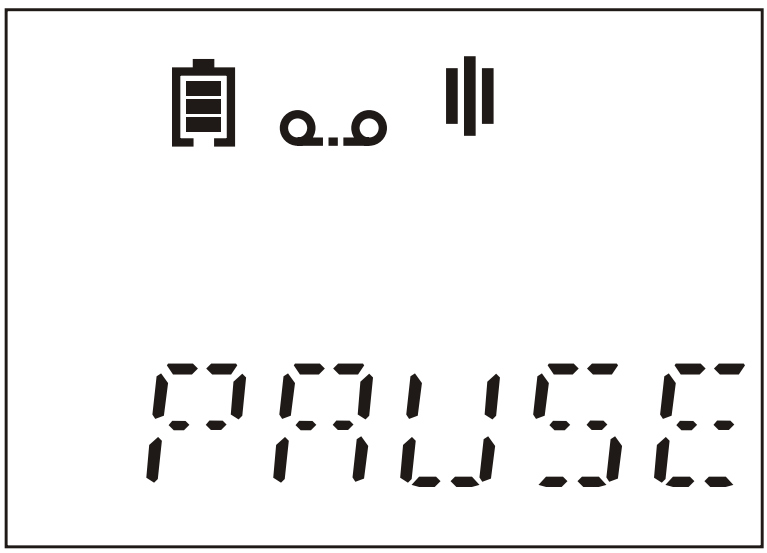


Fig.2

Push the joystick up to pause recording, PAUSE will appear on the display.



To continue recording, press the button once again.
If you push the joystick down, recording will stop, the DVR will go to Standby mode.
If trere is no more free memory,the DVR will automatically go to Sleeping mode.
Recording may be saved either in the cycle buffer mode or in the line messages mode. The DVR can provide some memory size to the cycle buffer. (See Profile setting)

Warning! *When recording into the cycle buffer (cycle record), the DVR will start recording into the record beginning (i.e. deleting the previously recorded data), as soon as the provided memory space comes to the end. The time of the current record will go on, but the remaining memory size will stay constant on the display.*
Each recording made is marked with the time and date by means of the built-in real time clock.
You may adjust your DVR (see Setup mode) to record in the VAS mode. This will allow you to compress the pauses in messages efficiently therefore the available recording time increases. Using this system saves memory in pauses, but stores information about time intervals. The pause length can be restored at further file processing with the