INSTRUMENTS MANUFACTURED AT LABORATORIES

A Personal Electrocardiomonitor

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Received October 8, 2010

Abstract—A device for clinical and domestic applications in cardiological studies is described.

DOI: 10.1134/S0020441211020072

Fig. 1. Outward appearance of the device.

A personal cardiomonitor intended for clinical or domestic applications has been designed at the Siberian Federal University. Its main characteristics are as follows, the number of leads is up to 12, and the acquisition time varies from 1.5 to 2.0 min. The device is energized from a small-size storage battery. Samples of all electrocardiosignals are stored in a flash memory. The device is equipped with an alphanumeric display and control buttons of operation modes. Electrocardiosignals are processed by a program to generate text recommendations for patients. For example, when the pulse is more than 90 min^{-1} and the tooth *R* of the electrocardiogram is absent, the following recommendation is outputted on the display: *Please, measure*

blood pressure (BP), and, if it is lower than 90/60, send for an ambulance. If the BP is higher than the above value, it is recommended to visit a cardiologist. Signs of pathologies and recommendations are formulated by qualified medical personnel.

The outward appearance of the device is shown in the figure. Its overall dimensions are $185 \times 100 \times 35 \text{ mm}$.

ACKNOWLEDGMENTS

This work was supported by the Krasnoyarsk Regional Scientific and Scientific–Technological Activity Foundation, project no. KF-61.