Criteria for choosing an instrument organization architecture
for electropunctural diagnostics and therapy
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The choice of architecture for building a hardware-software complex is really important when creating devices for electropuncture diagnostics and therapy. The fact is that the capabilities of these devices are constantly expanding, and this feature must be taken into account when choosing a specific architecture. Both standalone and complex diagnostic and therapeutic devices are produced. Thus, the general structure of the blocks is seen, which are implemented autonomously or in aggregate.

All modules (diagnostics, endogenous and exogenous therapy, medical selector) are connected by a bi-directional internal bus with a control processor, which, if necessary, receives commands from a computer (via USB or RS-232) and sends diagnostic results and other data to a PC. At the same time, the complex provides a connector for connecting external devices (s) to the exchange bus. The diagnostic module can operate in diagnostic modes according to the Voll method, segmental mode, VRT. The exogenous therapy module includes blocks of electropuncture therapy, magnetic and color therapy, and others. A frequency synthesizer can be added to this module to generate pulses of the required duration. The outputs of the modules are connected through the switching unit to the foot and hand electrodes, to the active electrode for electropunctural diagnostics, to the system of sensors and to the magnetic inductor "belt" for therapy or diagnostics. In case of autonomous operation, the control and display panel (LCD) is provided in the device.

As can be seen from the physical formulation of the problem (Fig. 1), the hardware-software complex for electropunctural diagnostics and therapy implies a block architecture (logically).
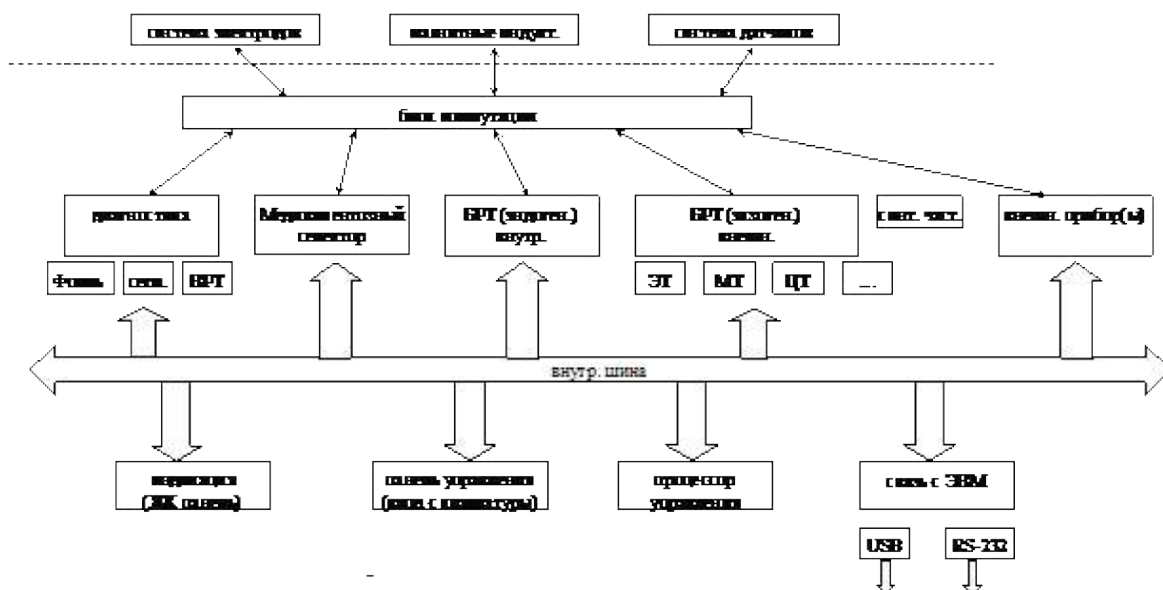
Rice. one.Block diagram of the diagnostic and therapeutic hardware-software complex

The common criterion for all devices is the power consumption,

voltage sources and other known electrical parameters of circuits and microcircuits. However, all implemented devices used the same microcircuit power supply circuit. And it seems reasonable to use this well-proven power scheme in future projects as well. The determining factor is indicators such as:

1) the amount of memory on the board;

2) the amount of program memory and data memory in the control microcontroller (processor);

3) the number of used and required outputs of registers, controllers, external memory;

4) the required and real speed of memory chips, controllers;

5) the presence of the necessary interface devices, such as: serial interfaces SPI / IIC, USART, USB, CAN, LIN; PWM (PWM); SSP; DAC; ADC.

Belykh I.A., Gotovsky Yu.V. Criteria for choosing an architecture for organizing devices for electropunctural diagnostics and therapy // X

" IMEDIS ",

2004, vol. 2 - C.387-389