

Use of BioEra Pro software with Neurobit equipment for realtime signal monitoring

For version 2.3.102 of the application, or newer.

Installation

1. Please insert BioEra license key into USB port of your computer.
2. Run the main installer file (bioera-pro-X.X.X-full-win.exe) and next the upgrade, if available (bioera-pro-X.X.X-upgrade-win.exe). During the setup proceed in accordance with messages showing on the screen.
3. BioEra appearance and work can be flexibly adjusted to many different applications. BioEra designs are block diagrams, which define signal processing and presentation. Our free designs for BioEra can be downloaded from:
http://www.neurobitsystems.com/download/Neurobit_designs_for_BioEra.zip.

The content of the archive should be unzipped in "design" subfolder of BioEra folder, preserving folder structure stored in the archive.

Introduction to use

1. Run the software, selecting "BioEra Pro" item of "BioEra Pro" submenu in system menu. At the first time some default design (for biofeedback) opens. There is a design window and a chart window; other windows may also appear.
2. In BioEra main menu (shown in design window) select "System/Load design" option and choose a design file (from design subfolder of BioEra main folder). For example, if you use Optima 2 device, it may be Neurobit\Optima2\EEG-MONITOR-2channels.bpd intended for 2-channel EEG monitoring with analysis of basic frequency bands.
3. A short description of the design can be shown with "Info/About design" menu option.
4. Apply EEG electrodes for monitoring of 2 signals and turn on Neurobit Optima device. There are the design window, a chart window with EEG signals (with applied 1Hz high-pass filter, by default) and a chart window for frequency analysis.

If necessary, size and position of each window can be adjusted.

5. In order to verify or modify device configuration or test connection impedances, select "Tools/Device selection - manual" from BioEra main menu, click "Neurobit settings" tab and next click Open button.

When everything is OK, close device settings window and click OK button in "Device selection window".

6. Measurement session can be started with Start icon below main BioEra menu (or with Session/Start menu option). After a while, running diagrams should appear in chart windows.

Session can be stopped with Stop icon below main BioEra menu (or with Session/Stop menu option).

7. In this example design, signals are stored in EDF file archives\eeg-monitor-2channels.edf (path relative to main BioEra folder), by default, and each session overwrites it.

In order to change file name, double click EDF element in design window before a session. Property window of that element will appear. Write down another name in File field. You can also turn off Overwrite option there. After such changes click OK.

(The EDF file is accessible for other applications, when BioEra session is stopped.)

8. If necessary, you can adjust properties of other design elements, similarly as for EDF element mentioned above. For example, double click element labeled as "Raw EEG" (formally Polygraph element), which shows signals in upper chart window. Then you can change "Time range", "Amplitude range", "Display mode" and other properties of the Polygraph window. Confirm changes with OK or Apply button.

WARNING: After confirmation of such changes during measurements the session (and possible recording in file) starts from the beginning.

9. If necessary, you can modify design structure, removing, adding and connecting elements in design window. After gathering some skills you can also create your own designs from scratch.

10. Design changes (including design structure, element properties, as well as device settings) can be stored in file with Design/Save or "Design/Save as" option from the main menu.

When you change our designs, it is recommended not to overwrite their original files, but rather save the changes in new (renamed) design files.

11. Technical support of BioEra manufacturer, Proatech LLC:

<http://www.bioera.net/support/> (forum) and

<http://www.bioera.net/support/contact.jsp> (contact form).