



SMART MOTOR DEVICES

<http://www.steppmotor.biz>

BxSD program

Manual

2015

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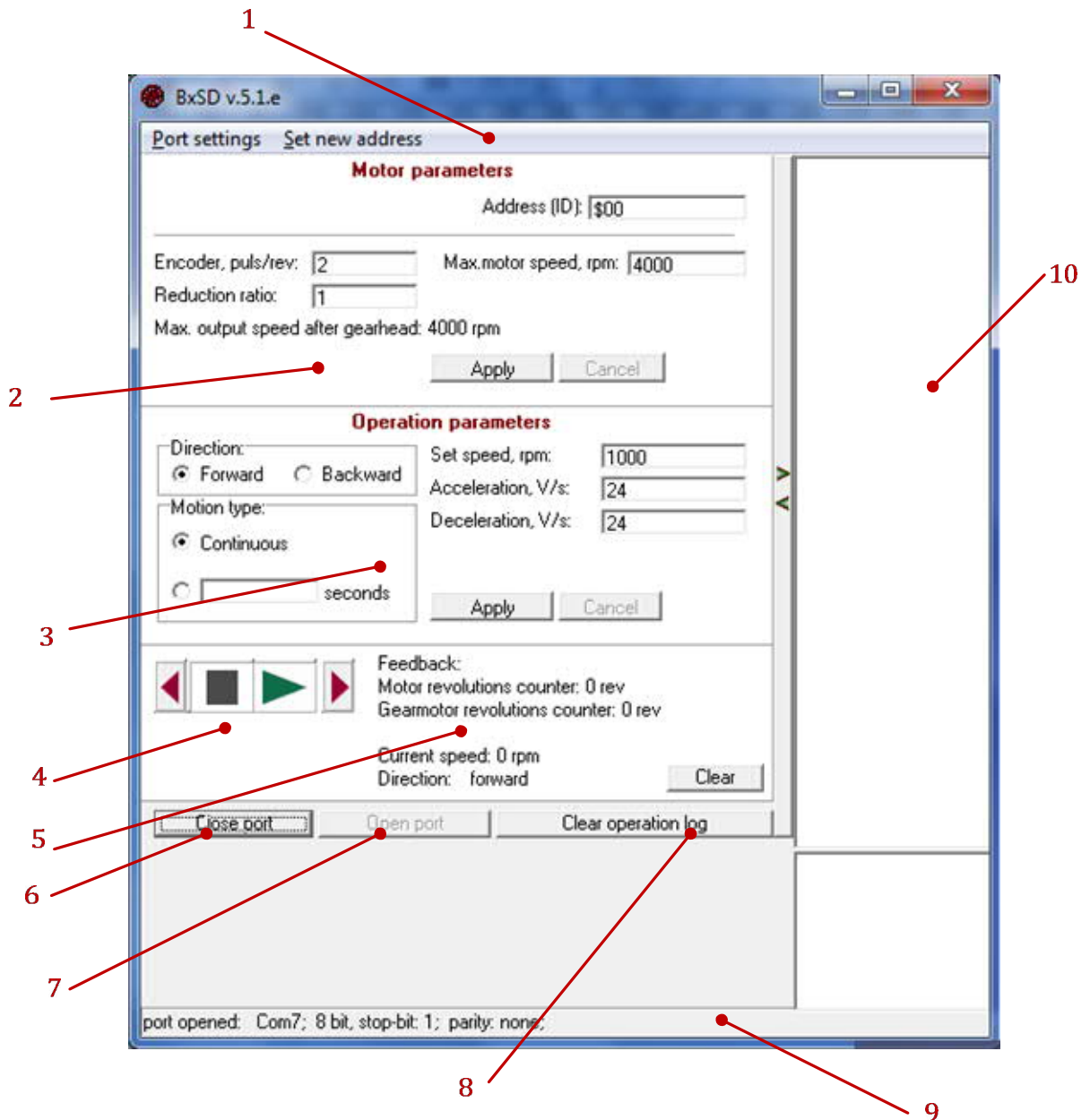
1. Program assignment

BxSD program is intended for controlling BMSD and BLSO controllers operation. Program uses COM-port of personal computer to load commands to the controller.

There is an ability to set reduction ratio, speed, acceleration/deceleration, direction.

The latest versions of the program is available on our web-site <http://stepmotor.biz/downloads.htm>. Download the file `bxsD_program.rar`, save it on a computer hard drive and unpack files.

2. User interface



Picture 1. User interface of BxSD program

1 – Main menu:

“Port settings” – Com-port operation settings;

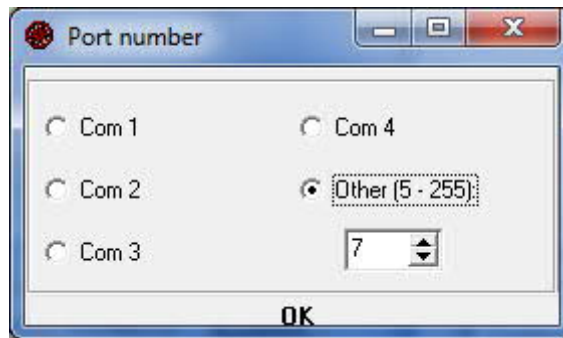
“Set new address” – controller new address setting.

- 2 – Motor parameter settings: controller address; encoder resolution; reduction ratio; maximum motor speed.
- 3 – Operation parameters: direction; motion type; speed; acceleration; deceleration.
- 4 – Control buttons: start; stop; change direction.
- 5 – Feedback: if the motor has encoder or if it is brushless motor with Hall sensors here feedback information will be written: motor revolution counter, current speed and direction.
- 6 – Close port button – close communication port.
- 7 – Open port button – open communication port.
- 8 – Clear operation log button – clear window of responses from the controller.
- 9 – Status bar shows Com-Port information
- 10 –The response window of the controller.

3. Port selection and setup

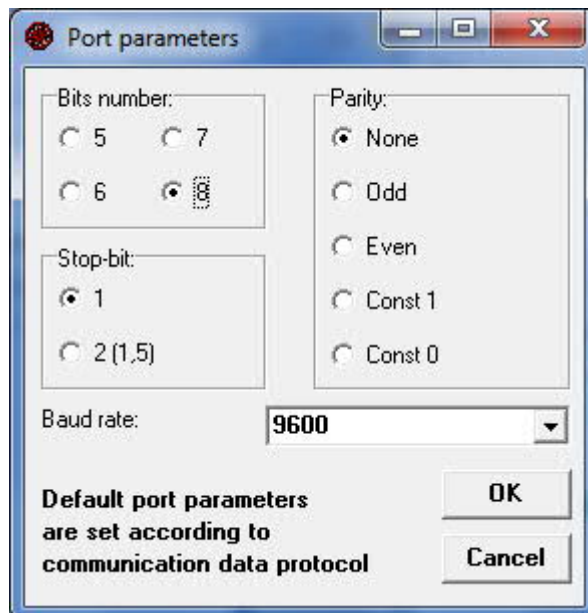
Port parameters in program are set in accordance with communication protocol of controllers BMSD and BLSD (Baud rate – 9600bps; parity – none; bits number – 8; stop-bit – 1).

It is necessary to set number of COM-Port that is used by controller. Select in main menu “Port settings” ->> “Port number” (picture 2).



Picture 2. “Port number” window

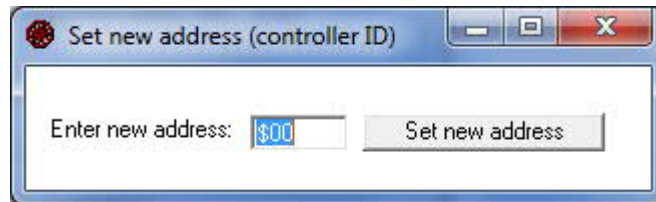
If it is necessary port settings can be changed in menu: “Port settings” ->> “Port parameters” (picture 3). On default port settings fully meet communication settings for BMSD and BLSD controllers.



Picture 3. "Port parameters" window

4. New address of the controller setting

Controllers BMSD and BLSD by default have address 0xFF. If controller has such address it ignores all commands except changing address command. Address can be set in menu "Set new address", "Set new address" window will appear (picture 4).

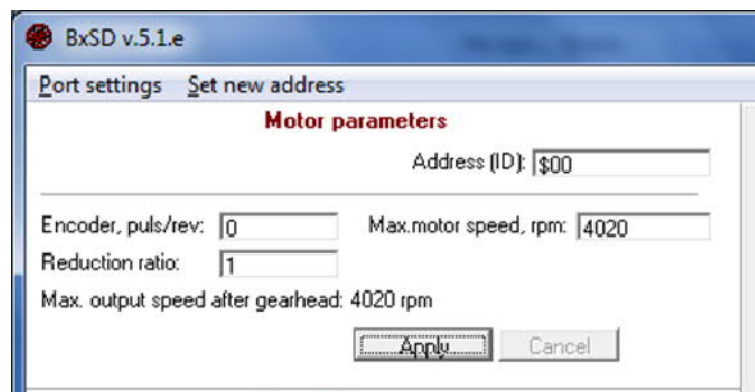


Picture 4. "Set new address" window

In the window new address should be written (from 00 to FE), then click "Set new address" button. In the response window (10) "To save new address press the button on the controller" text will appear. You should press START/STOP button on the controller, new address of the controller will be accepted. Then you can close "Set new address" window.

5. Program usage

In "Motor Parameters" all parameters should be set (picture 5).



Picture 5. "Motor parameters" settings

First of all controller address should be set in "Address (ID)" window.

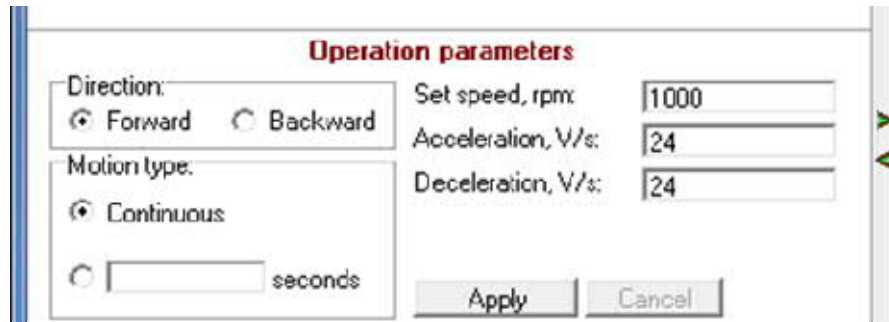
If you use DC brush motor with encoder or brushless motor with hall sensors you need to write number of pulses per revolution in "Encoder, puls/rev" window. If you use DC brush motor without encoder – 0 puls/rev should be set.

In the "Max. motor speed, rpm" window maximum motor speed should be written.

If you use motor with gearbox In "Reduction ratio" window the reduction ratio of the gearbox should be written. If you don't use gearbox – 1 should be written in this window.

After all motor parameters setting it is necessary to click "Apply" button.

In "Operation parameters" motor parameters during work should be set (picture 6).



Picture 6. "Operation parameters settings"

In "Direction" settings start direction of the motor is marked.

In "Motion type" you can select continuous motion or motion for a certain period of time. Time can be written in the window.

In "Set speed" window operation speed of the motor should be written.

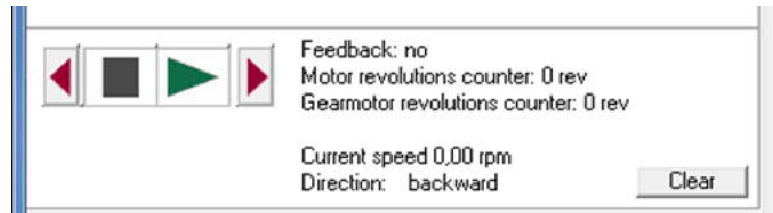
In "Acceleration" window acceleration should be set, unit of measure [V/s].

In "Deceleration" window deceleration should be set, unit of measure [V/s].

After all parameters have been set it is necessary to click "Apply" button.

Parameters can be changed during motor operation, it is necessary to change the value and click "Apply" button.

After all parameters have been set you can start the motor using control buttons (Picture 7).



Picture 7. Control buttons and feedback information

Start button – starts motor operation with parameters in "operation parameters".

Stop button – stops the motor



Change direction buttons – change direction during motor operation

Also you can see feedback information if you have DC brush motor with encoder or brushless motor with Hall sensors. If you have DC brush motor without encoder you will see only current speed that will be equal to set speed (in operation parameters) and motor direction.

"Clear" button will clear all feedback information.