

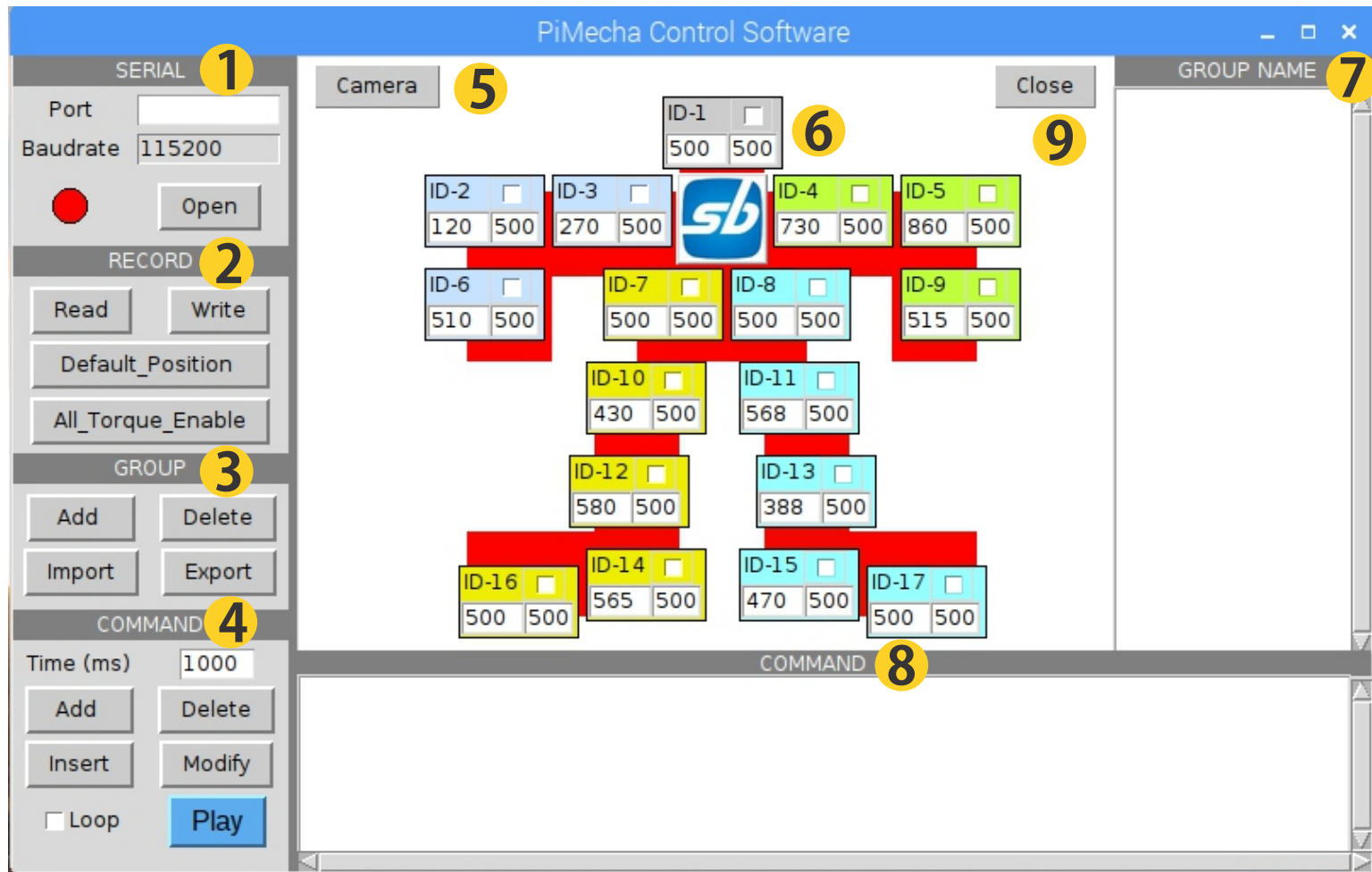
PiMecha Software

Instruction Manual

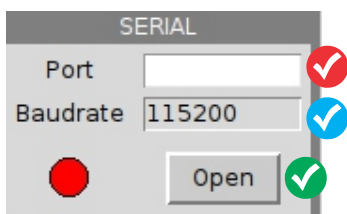


PiMecha Controlling Software

Instruction Manual

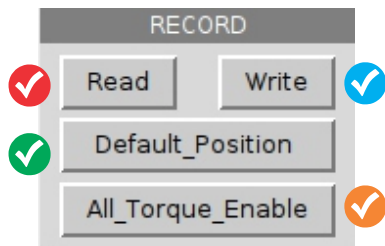


1 Serial



- ✓ Enter your port no. in this section.
If connected through GPIO, enter **"ttyS0"**
Else if connected through USB, enter **"ttyUSB0"**
- ✓ Baud Rate shall remain constant as **115200 bps**
- ✓ Open or Close Port

2 Record



- ✓ Read the values of the current position of the motors and update them to the servo section (Refer to point no. 6)
- ✓ Write button will enable you to write the servo section (Refer to point no. 6) values to the servo.
- ✓ Default position button will allow you to set the default standing position of the **PiMecha**. You can change the default position values through the code.
- ✓ All torque enable button is used to jam the movement of all the motors. Although you can select the individual servo also from the servo section (Refer to point no. 6) to enable or disable the torque.

3 Group



To move or play with **PiMecha**, you must create groups. The groups is a collection of various commands or movements that will let you give actions to the motors.

- ✓ Add button will let you create a group. The created group name will be displayed in the Group name section (Refer to point no. 7)
- ✓ Delete button will delete the selected group.
- ✓ Import button will allow you to import your group
- ✓ Export button allows you to export a created group and share them with your peer.

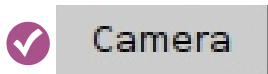
4 Command



Any group created by you, will need some commands in it. The command section has 4 buttons to let you control various actions to start playing with **PiMecha**.

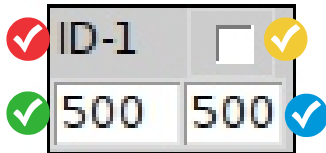
- ✓ **Time field** is the time lapse in milliseconds between the 2 lines of command.
- ✓ **Add button** allows you to add the commands to the selected groups, and is displayed in the command section (Refer to point no. 8). You must select a group and then press read button from Record section to read the current servo position and then press add button. This will add the latest read values of the servo.
- ✓ **Delete button** helps you to delete any selected line of the command entered in the command section.
- ✓ **Insert button** will let you insert a new command above the selected command line.
- ✓ **Modify button** would allow you to modify any selected command line.
- ✓ **Loop checkbox** holds the functionality to let you play the commands in a loop for infinite no. of times.
- ✓ **Play button** will play the set of commands entered in the command section (Refer to point no. 8) of the selected group. You can stop the action any time using the same button ('Stop' will be displayed)

5 Camera



- ✓ The camera module of **PiMecha** will be initialised when you click on this button. A new frame will pop up giving you 2 options. You can take pictures and record videos. In case you do not have the camera mounted, error will be thrown.

6 Servo Section



A graphical user interface for configuring a servo motor. It consists of a 2x2 grid of input fields. The top-left field contains the text 'ID-1' and is marked with a red checkmark icon. The top-right field contains an unchecked checkbox and is marked with a yellow checkmark icon. The bottom-left field contains the number '500' and is marked with a green checkmark icon. The bottom-right field contains the number '500' and is marked with a blue checkmark icon.

This section consists of 17 servo motor boxes. Each box holds 4 different values.

- ✓ Servo ID
- ✓ Enable/Disable torque check
- ✓ Position value
- ✓ Time value

7 Group Name



A text input field with a grey header bar containing the text 'GROUP NAME'. Below the header is a large, empty white rectangular area for entering text. A vertical scrollbar is visible on the right side of the input area.

The created groups are listed in this section. you can select any group to add commands to it.

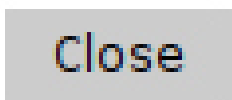
8 Command



A single-line text input field with a grey header bar containing the text 'COMMAND'.

The commands that are added after the selection of the group are listed in this section.

9 Close Button



A rectangular button with a grey background and a thin black border. The word 'Close' is written in the center in a blue, sans-serif font.

This will close your entire software. This feature here is provided if you wish to close the software running on your 4" touch screen