

Control system

This page will describe basic functionality of software used to control Smaragon system.

GUI

Main window consist of two frames. Macro controls (left) and individual motor controllers (right).



Motor controllers

All available axes are listed in this frame. User can freely move each motor within its software (hardware) limits. Position can be changed to absolute position or by relative position.

Macro controls

This frame includes all position and macros that can be achieved by Smaragon. If any macro or position is clicked all controls are disabled until macro or position is finished. User can interrupt macro at any time by clicking "**STOP ALL MOTIONS**" button or hitting **ESC** button.

- **Mounted nozzle** inform user which nozzle is currently selected. Since we don't have any sensors mounted, this value is also used for all macros.
- **Position** buttons are used to trigger "position macro".
- **Sub macro** buttons triggers macros to put mounted nozzle in to the holder (PNI) or take nozzle out from holder (TNO). This sub macros are using Mounted nozzle information to operate.
- **Macro** buttons are fully assembled macro from **Position, Sub macro and Macro**. In final application only those buttons should be used to operate Smaragon.

Main menu

Application -> **Macro creator** will open dynamic macro creator window described in [Dynamic macro creator](#).

Application -> **Exit** will exit application.

Routines -> **Check motor reference** will check if all the motors are referenced. User will be informed of result by small pop up window.