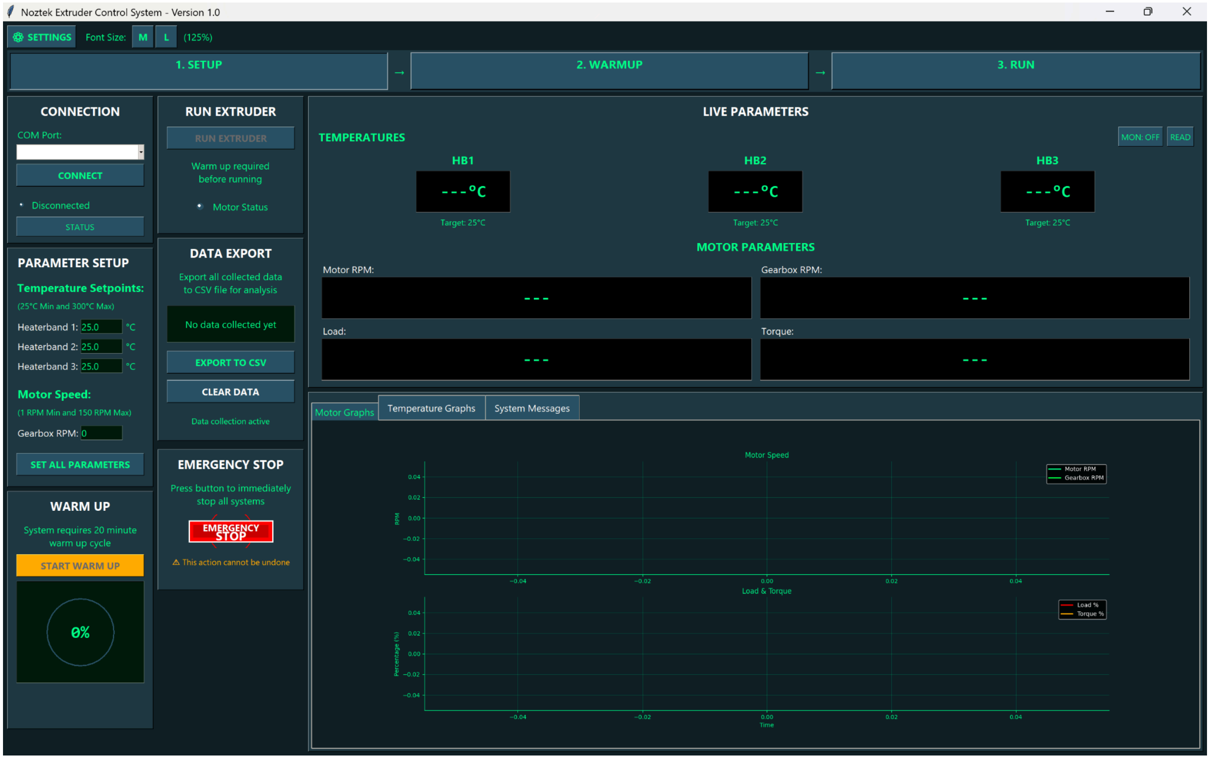
Noztek Nexus controller software manual

The Noztek Nexus is supplied with its own proprietary software, allowing you to remotely control the extruder from a PC or laptop. It features all the controls available on the extruder's touchscreen, with the added advantage of live data visualisation in graphs. You can also export detailed data on heating, motor speed, torque, and load after each extrusion run. This data enables you to analyse and identify the optimum settings for each material, helping you fine-tune and optimise future runs.



Noztek Nexus Controller Software: User Guide

1. Connecting the Extruder

Begin by connecting your extruder to your PC or laptop using the supplied A/B USB cable, then switch on the machine. Open the software and navigate to the Connection tab. Select the extruder's COM port from the dropdown menu (displayed as COM followed by a number, e.g. COM1), then press the Connect button. Once successfully connected, the status indicator will change from "Disconnected" to "Connected".

2. Setting Parameters

In the Parameter Setup section, you can set the target temperature values in Celsius for each heaterband individually (up to 300°C or 500°C depending on the model), as well as the motor speed from 1–150 RPM. When you are satisfied with your values, press the Set All Values button to confirm and save.

3. Warm-Up Cycle

Navigate to the Warm-Up section and press the Start Warm-Up button to begin the heating cycle. The heaters will now heat up to your set temperatures. Ensure you have entered the correct values according to your material guidelines—incorrect temperatures can cause mechanical damage to the machine. This warm-up is essential to ensure the barrel reaches the correct temperature before the motor can run safely. The motor will remain inactive until the warm-up is complete. You can track the warm-up progress via the timer percentage display, while live and set temperature values for each heaterband are shown in the Live Parameters section.

4. Running the Extruder

After a successful warm-up, press the Run Extruder button in the Run Extruder section. The extruder will first perform a quick check at low RPM to detect any issues. If a problem is found, the motor will stop and a troubleshooting message will appear in the System Message box. If all checks pass, the machine will become fully operational and begin extruding your material.

Once operational, you can monitor live motor speed, gearbox speed, load, and torque under Motor Parameters, in addition to the temperature values. While extruding, live graphs of motor parameters are available under the Motor Graphs tab, and temperature graphs under the Temperature Graphs tab.

5. Exporting Data

When you have finished your extrusion run and wish to export your data, press the Export to CSV button under the Data Export tab. This will generate a CSV file that you can save to your PC or laptop, containing all detailed information from your session.

6. Emergency Stop

If any problems occur during operation and you need to shut down the extruder immediately, press the Emergency Stop button under the Emergency tab. This will cease all processes and stop the extruder instantly.

7. Troubleshooting

If you experience any issues, check the System Messages tab (located next to the Temperature Chart tab). Any operational issues will be logged here with detailed information to assist with troubleshooting.