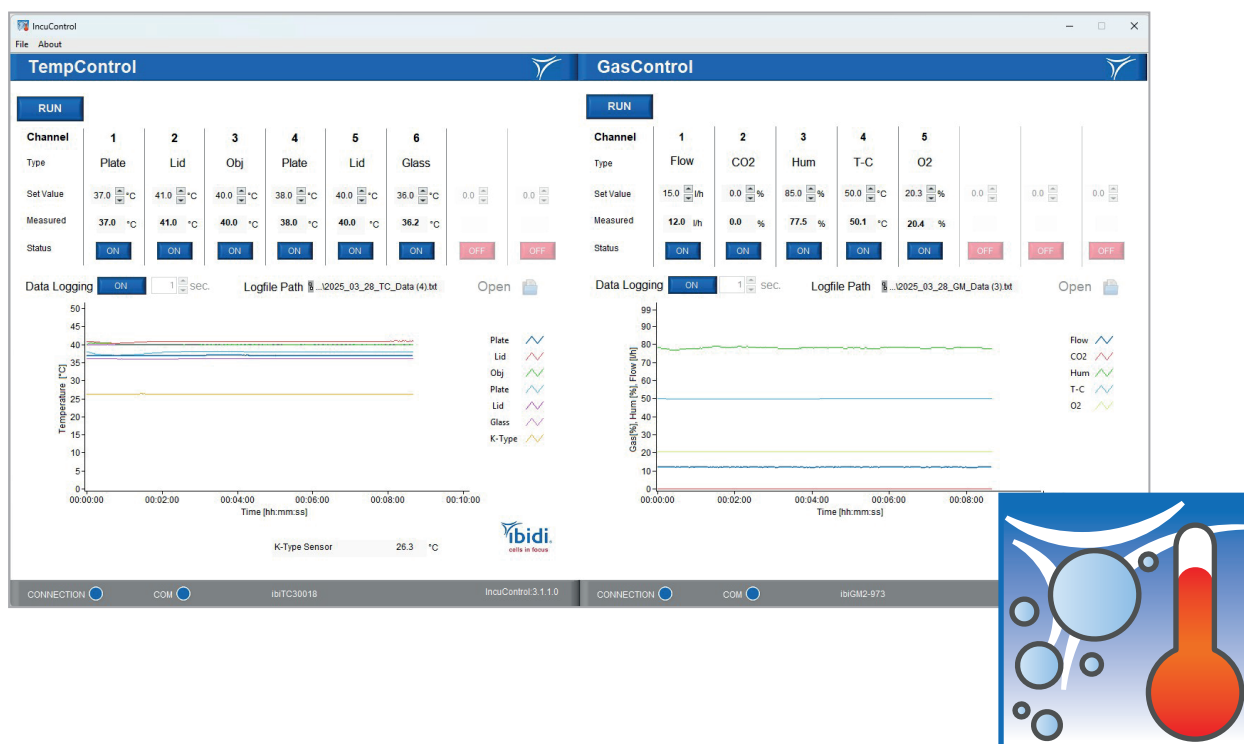


Instruction Manual

IncuControl Software Version 3.1.1.0



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1 Introduction

The IncuControl software provides all functionalities for the full control of the ibidi Heating and Gas Incubation System that are available on the controller itself. Additionally, it provides monitoring functions to view and log the data of the actual run. ibidi provides the IncuControl software with the Temperature Controller of the ibidi Heating System and the Gas Mixer of the ibidi Gas Incubation System, which both have an USB interface for computer control.

IncuControl includes two modules: one for controlling the Temperature Controller and one for the Gas Mixer. Both can be run separately or simultaneously in the same window.

2 Installation and Compatibility



NOTE – It is recommended to first deinstall any previous versions of the IncuControl from your computer, before installing the newest one.

The IncuControl version 3.1 (3.1.0.0 – 3.1.x) can be used with Microsoft Windows 10 and higher versions (64 bit only).

It is compatible with all versions of the ibidi Stage Top Incubators that have been produced since 2013.

To install IncuControl on your computer, proceed as follows:

1. Scan the QR code placed on the controllers and download the installer package. You can also access the files at <https://ibidi.com/instrument-software/201-incucontrol-software.html>.
2. Unpack the setup package on your hard disk.
3. Run the “IncuControl_Setup.exe” and follow the installation wizard. Please make sure that you have administrator rights.
4. Wait until the installation is completed.
5. Install needed certificates, following the instructions in the *ibidi Certification Manager* window.
6. Confirm driver installation and wait until it is completed.
7. Finally, restart the computer.
8. Open the program by double-clicking on the IncuControl desktop icon.

3 Starting the Software

When starting the software, the welcome screen appears (Figure 1). After starting the program, all components connected to the controllers are automatically recognized and initialized.

It provides two drop-down menus, one for the Gas Mixer and one for the Temperature Controller. A blue color of the LED-style indicators next to the drop-downs indicates that the devices are ready for operation. If one of the components is not needed, the respective Gas Mixer or Temperature Controller can individually be deselected in the drop-down menu. Alternatively, select one of the connected devices from the drop-down list.

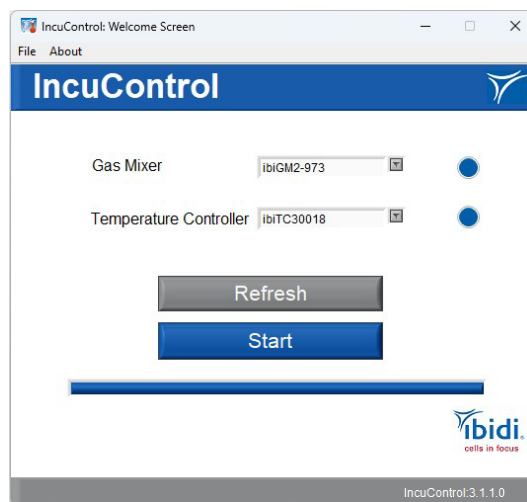


Figure 1: IncuControl welcome screen.

Click the “Start” button to open the ibidi IncuControl main page (Figure 2). Depending on the selection above, one or both modules will open in a separate window. Click the “Refresh” button in case the connection status of the components has changed before clicking the “Start” button.

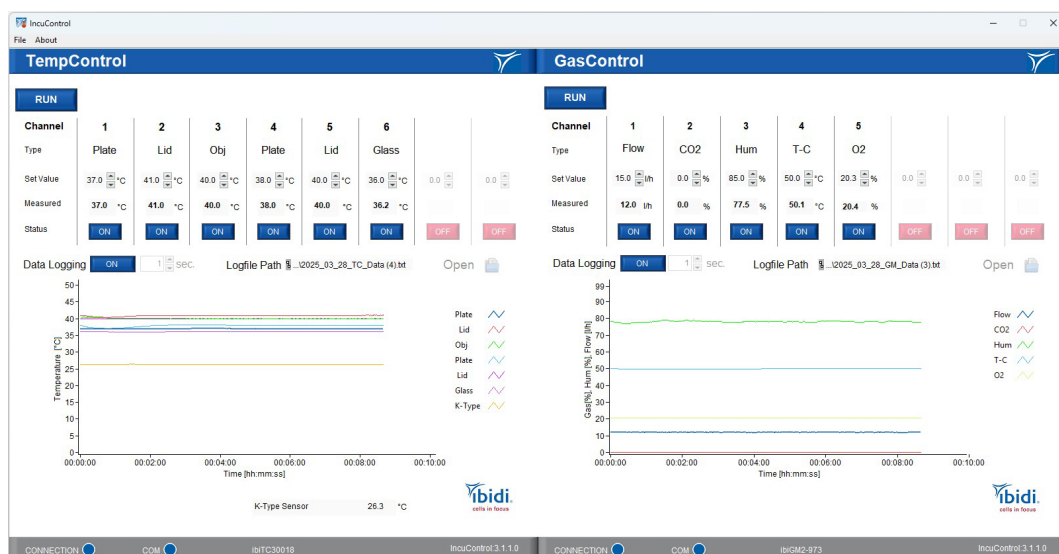


Figure 2: Main window with TempControl module and GasControl module.

4 TempControl Module

The TempControl module can control up to 8 channels, depending on the Temperature Controller used (Figure 3). Please see for channel information in the respective controller instructions.

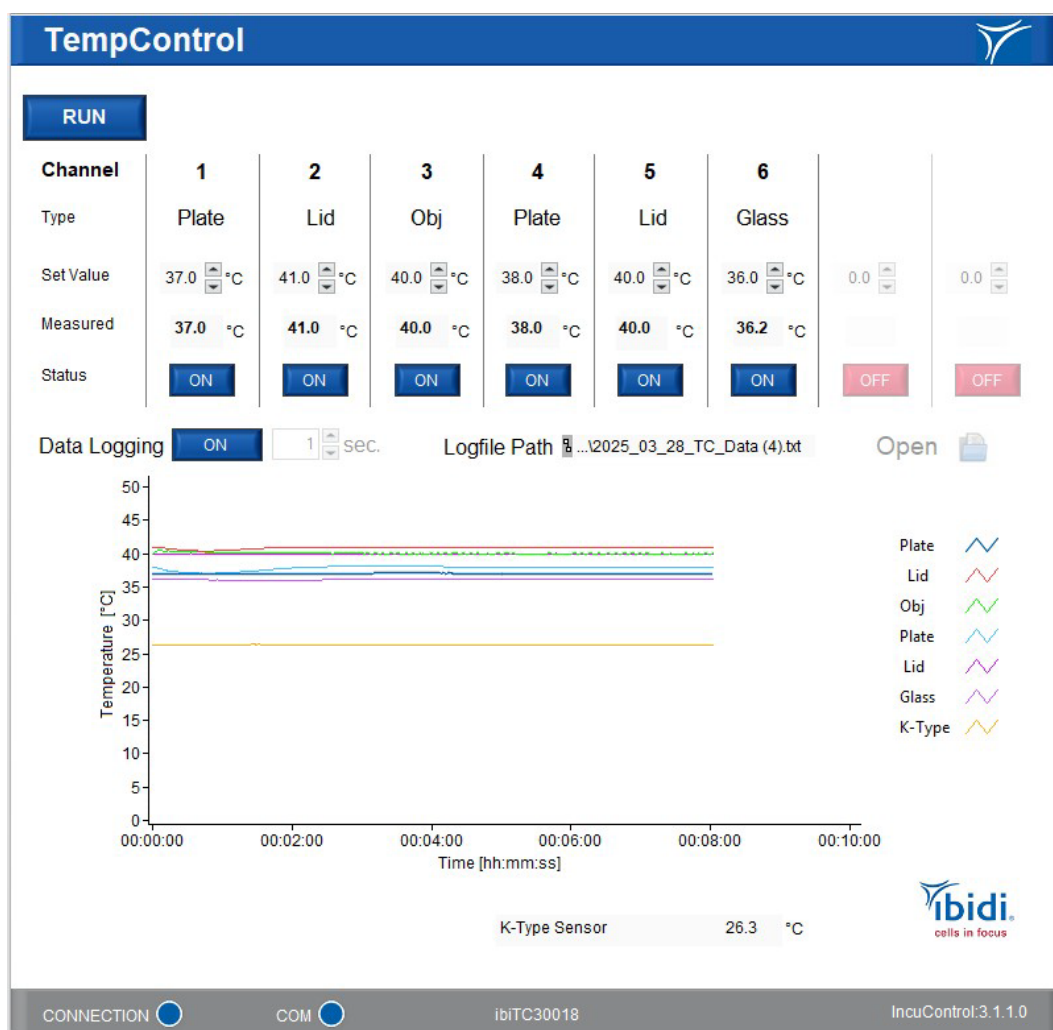


Figure 3: Main window with Temperature Controller module dialog.

The functions of the TempControl module are:

- The “RUN”/“STOP” button in the upper left corner of the window starts or stops the operation of the device. When the button shows “RUN”, the system is in operation. Clicking the “RUN” button stops operation. When the button shows “STOP” the system is not in operation. Clicking the “STOP” button starts operation.
- Under “Set Value”, the set temperature for each channel is shown and can be changed.
- Under “Measured”, the actual temperature of the respective component is shown.
- Under “Status”, the “OFF”/“ON” button turns the individual channel on or off.
- Under “K-Type Sensor”, shown below the graph, the currently measured temperature of the external temperature sensor is displayed.
- Under “Data Logging”, data recording can be started or stopped by using the “OFF”/“ON” button. When recording, the button will change to “ON” and the data will be shown in the graph window. The details are explained in [Section 6](#).
- The LED-style indicator at “CONNECTION” at the bottom of the window indicates the connection of the software to the Temperature Controller. A blue light indicates that the software has identified the Temperature Controller. A red light indicates missing connection.
- The LED-style indicator at “COM” indicates communication status of the software with the Temperature Controller. A blue light indicates that that the software is able to communicate with the Temperature Controller. Otherwise the light turns red.

5 GasControl Module

The GasControl module can control up to 8 channels, depending on the Controller used (Figure 4). Please see for channel information in the respective controller (Gas Mixer) instructions. The Gas Mixer is available in two versions, the ibidi Gas Incubation System for CO₂ and the ibidi Gas Incubation System for CO₂ and O₂.

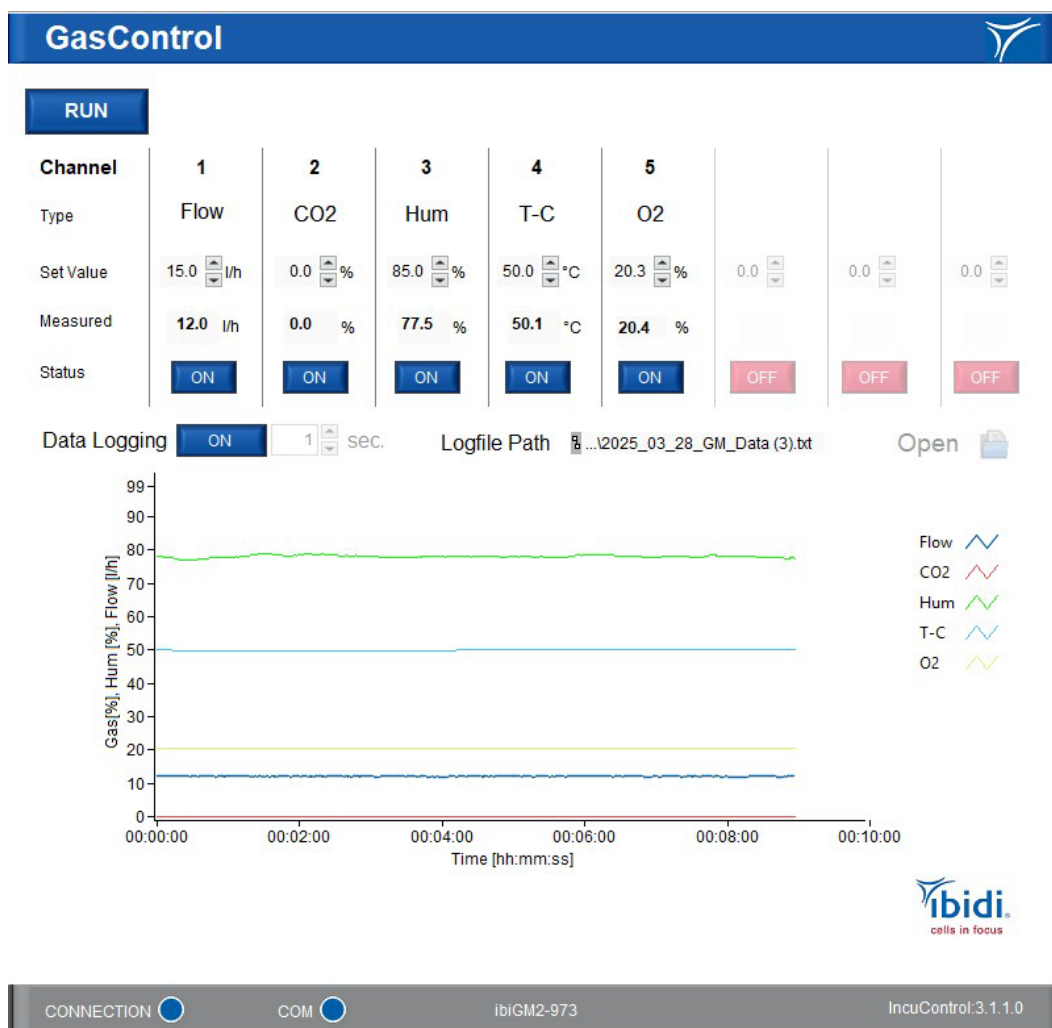


Figure 4: Main window with Gas Control module dialog.

The functions of the GasControl module are:

- The “RUN”/“STOP” button in the upper left corner of the window starts or stops the operation of the device. When the button shows “RUN”, the system is in operation. Clicking the “RUN” button stops operation. When the button shows “STOP”, the system is not in operation. Clicking the “STOP” button starts operation.
- Under “Set Value”, the set value for each channel (gas flow rate, CO₂ concentration, humidity, temperature of the Humidifying Column, and O₂ concentration (optional)) is shown and can be changed.
- Under “Measured”, the actual value of the respective channel is shown.
- Under “Status”, the “OFF”/“ON” button turns the individual channel on or off.
- The values of “T-C” indicate the set and measured temperature of the Humidifying Column.
- Under “Data Logging”, data recording can be started or stopped by using the “OFF”/“ON” button. When recording, the button will change to “ON” and the data will be shown in the graph window. The details are explained in [Section 6](#).
- The LED-style indicator at “CONNECTION” at the bottom of the window indicates the connection of the software to the Gas Mixer. A blue light indicates connection. A red light indicates missing connection.
- The LED-style indicator at “COM” indicates communication status of the software with the Gas Mixer. A blue light indicates communication with the Gas Mixer. Otherwise the light turns red.

6 Data Logging

To log data over time, click on the “Open” button to the right of “Data Logging”. A window will open to set a file name and location for data saving. Then click on the “OFF”/“ON” button next to “Data Logging”. When recording, the button will change to “ON”. The recording will start immediately and will be visible in the graph window. If you do not choose your own filepath, the data will be saved in the default folder. The default file name includes the date of the recording and the type of controller (TC for Temperature Controller and GM for Gas Mixer). Data will not be overwritten by future recordings.



NOTE – Use the “Open folder” button to get to the logfiles in the default folder (e.g.: C:\Users\ibidi\AppData\Local\Temp\IncuControl). In case of a computer crash unsaved logging data can also be found in this folder.

The “Open folder” button on the right side opens the folder where the last logfile was saved. It is possible to change the logging interval by changing the numeric value in the box next to “Data Logging”. The number will determine the time interval in seconds between the recorded time points. The smallest possible interval is 1 s.

The data will be stored in plain text format and can be viewed in a text editor.

The axis scaling can be changed by clicking on the minimum or maximum value and typing in the desired value in hh:mm:ss format. This will change the axes to your preference. The axes can be automatically scaled by checking the “autoscale Y” or “autoscale X” option in the dropdown menu accessible through a right click on the axes. Further options for graph display and export to excel files and graph images are accessible through a right click within the graph field.

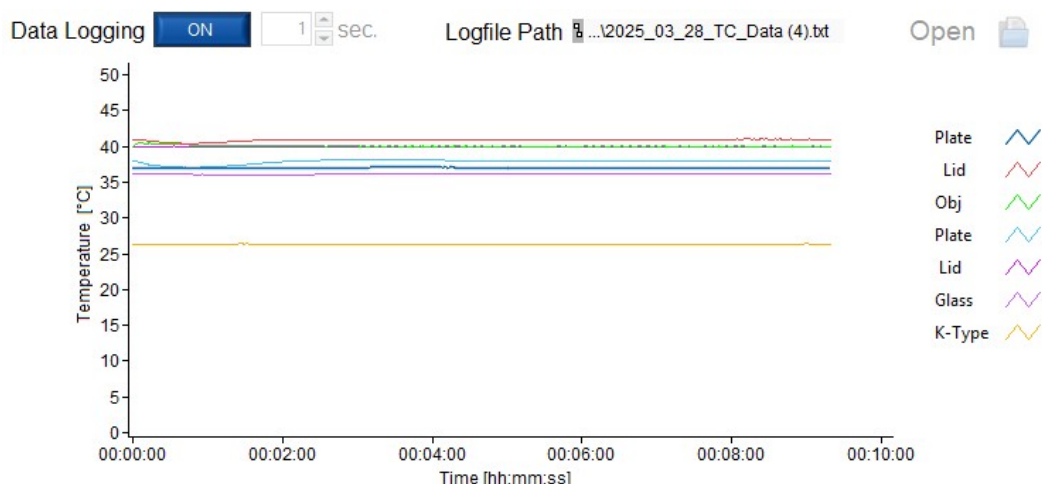


Figure 5: Logging menu.

7 The use of ibidi Software

Prohibitions on the use of ibidi software:

The following actions are prohibited:

- Copying software for other than backup purposes
- Transferring or licensing of the right to use software to a third party
- Disclosure of confidential information regarding software
- Modification of software



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