A-1001 Sipper/Temperature Control System



Instruction Manual

PN : 435066-001

Version : 1.0.0

Table of Contents

Safety Information **1**

Package Contents **1**

Unpacking **2**

Description **3**

Installation **4**

Placement 4

Install thermostatic single sample holder 4

Connect the power cord 4

Connect the constant temperature control cable 5

Connect the injection pipe 5

Symbols and Conventions **6**

Specifications **6**

Getting Started **8**

Turn the instrument power on 8

Tips for using the touch screen 8

Touch screen operation 8

Press 8

Long press 8

Slide 8

Using the instrument **9**

Main Interface 9

Operating **11**

Temperature Control 11

Start temperature control 11

Stop temperature control 11

Sipper 12

Start sipper 12

Recycling samples 12

Cleaning the flow cuvette 13

Stop injection/recycling/cleaning 14

System settings **14**

Set display brightness 14

Turn automatic standby on/off 14

Turn beep on/off when pressing the button on/off 14

Language selection 15

Safety Information

Please follow the guidelines below, and read this manual in its entirety to ensure safe operation of the unit.

We recommends against the use of A-1001 Constant Temperature/Automatic Injection System.

	· Do not open the device. · Disconnect the device from the mains supply before carrying out maintenance work or changing the fuses. · The inside of the device is a high-voltage area Danger! · Do not use the device if it is damaged, especially if the main power cable way is in any damaged or defective. · Repairs may only be carried out by the service technicians from your authorized contractual partners. · The device must be connected to a power outlet that has a protective ground connection. · If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.
	· Do not allow any liquid to enter into the device. · Do not operate the device in a hazardous location or potentially explosive environment.

Package Contents

Configuration list of A-1001

Description	Quantity
Constant Temperature/Automatic Injection Controller	1PC
10mm Single Cell Holder with Constant Temperature	1PC
10mm Flowing Quartz Cuvette	1PC
Sample Chamber Baffle (including constant temperature interface, injection hole)	1PC
Silicone Pipe with Limit Ring（1m，Inner hole diameter：φ2，Outer diameter：φ4）	1PC
Silicone pipe（700mm，Inner hole diameter：φ2，Outer diameter：φ4）	1PC
Constant Temperature Control Cable	1PC
Power Cord (CH Plug)	1PC
Instruction Manual	1PC

Configuration list of A-1101

Description	Quantity
Automatic Injection Controller	1PC
10mm Single Cell Holder	1PC
10mm Flowing Quartz Cuvette	1PC
Sample Chamber Baffle (including injection hole)	1PC
Silicone Pipe with Limit Ring（1m，Inner hole diameter：φ2，Outer diameter：φ4）	1PC
Silicone pipe（700mm，Inner hole diameter：φ2，Outer diameter：φ4）	1PC
Power Cord (CH Plug)	1PC
Instruction Manual	1PC

Configuration list of A-1201

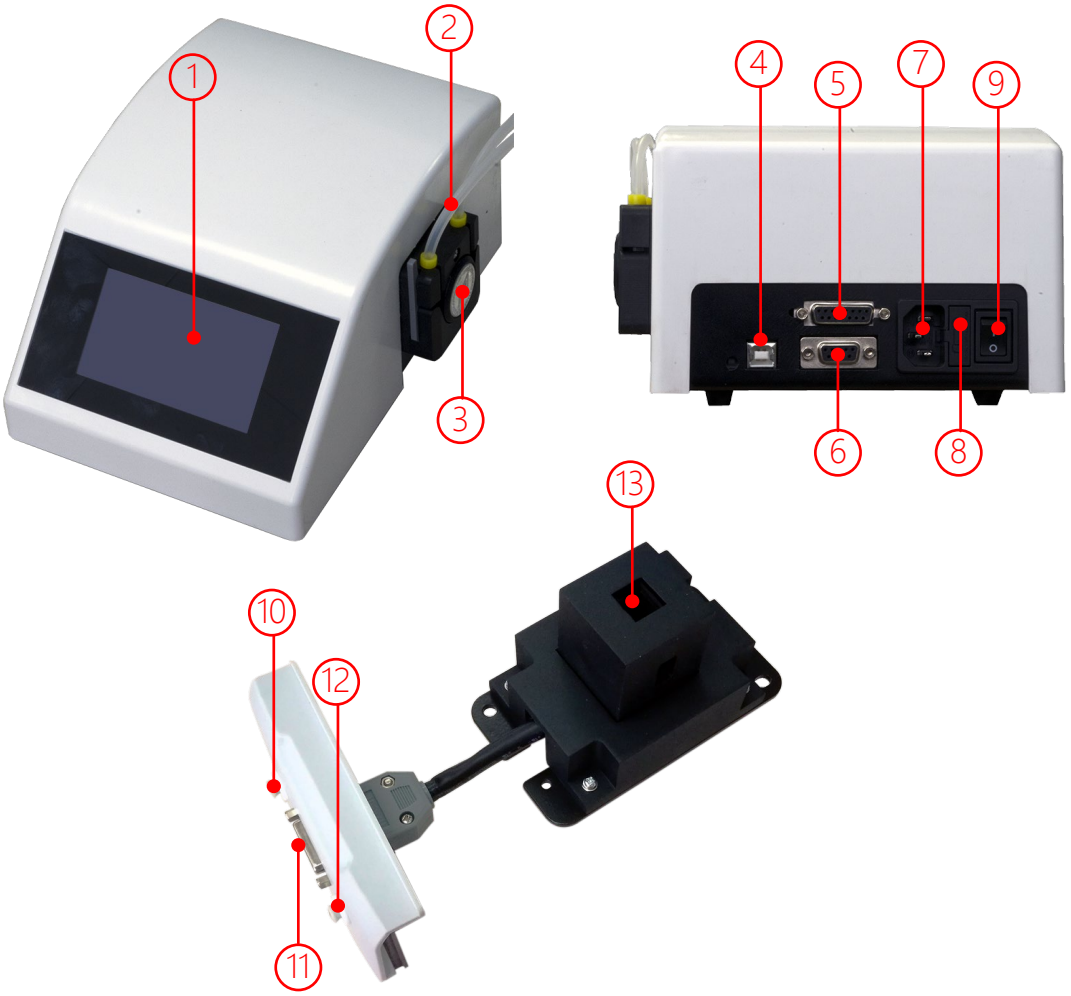
Description	Quantity
Constant Temperature Controller	1PC
10mm Single Cell Holder with Constant Temperature	1PC
Sample Chamber Baffle (including constant temperature interface)	1PC
Constant Temperature Control Cable	1PC
Power Cord (CH Plug)	1PC
Instruction Manual	1PC

Unpacking

Open the package, according to carefully check the packaging packing list items, if found inside the packaging are missing or damaged items please contact your local MAPADA office and authorized contractual partners.

Description

The A-1001 series Constant Temperature/Automatic Injection Controller is specially developed to meet the needs of some applications of our UV/Vis spectrophotometer. It is divided into 3 models according to different functions. Model A-1001: Sipper with Temperature Control, model A-1101: Sipper, model A-1201: Temperature Control.



1 – Touch Screen	2 – Injection Pipe
3 – Peristaltic Pump	4 – USB Port
5 – Constant Temperature Control Port	6 – Serial Port
7 – Power Inlet	8 – Fuse Seat
9 – Power Switch	10 – In Hole
11 – Constant Temperature Control Interface	12 – Out Hole
13 – Thermostatic Single Sample Holder	

Installation

Placement

Place the instrument on the stable table carefully.

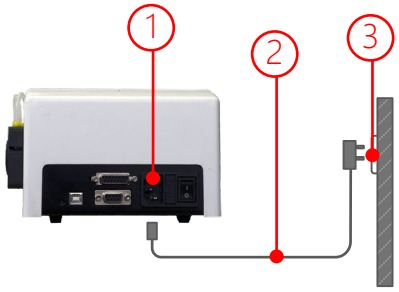
Install thermostatic single sample holder

Turn off the power of the instrument. Remove the original sample holder, and remove the original door insert. As shown in the figure, attach the thermostatic sample holder and tighten the two screws shown by the arrows.



Connect the power cord

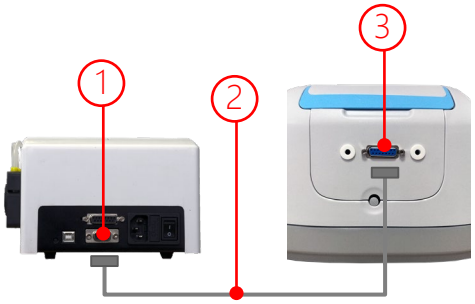
Check to confirm instrument power switch is turned off. Plug the female of the power cord into the power inlet of the instrument and plug the male into the power outlet.



1 – Power inlet	2 – Power cord
3 – Power outlet	

Connect the constant temperature control cable

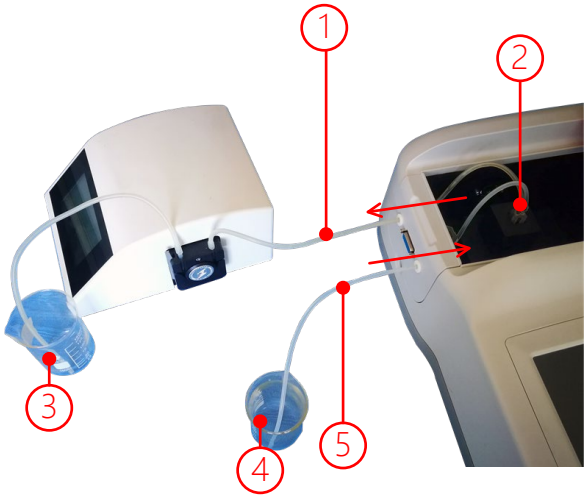
The instrument is turned off. As shown in the figure, insert one end of the constant temperature control cable into the thermostat interface on the outside of the spectrophotometer door insert and the other end into the constant temperature control interface on the back of the controller.



1 – Constant Temperature Control Port	2 – Constant Temperature Control Cable
3 – Constant Temperature Control Interface	

Connect the injection pipe

As shown in the figure, insert the output end of the injection pipe (label 1) through the in hole of the cover and insert the injection end of the flow cuvette (label 2). One end of the sample discharge pipe (label 5) is connected to the sample end of the flow cuvette (label 2), and the other end is passed through the sample hole of the cover plate.



1 – Injection Pipe	2 – Flowing Cuvette
3 – Sample Container	4 – Waste Collection Container
5 – Sample Discharge Pipe	

Symbols and Conventions

The following chart is an illustrated glossary of the symbols that are used in this manual.

	**CAUTION** This symbol indicates a potential risk and alerts you to proceed with caution.
	**CAUTION** This symbol indicates the presence of high voltage and warns the user to proceed with caution.
	**CAUTION** This symbol indicates risks associated with hot surfaces.

Specifications

Model	A-1001	A-1101	A-1201
Function	Sipper with Temperature Control	Sipper	Temperature Control
Temperature Range	10~90℃（0.1℃ interval adjustable）	——	10~90℃（0.1℃ interval adjustable）
Temperature Control Accuracy	±0.1℃	——	±0.1℃
Temperature Control appointment time	0.5~10h（0.5h interval adjustable）	——	0.5~10h（0.5h interval adjustable）
Injection Speed	1~8ml/min（0.5ml/min interval adjustable）	1~8ml/min（0.5ml/min interval adjustable）	——
Continuous Injection Time	1~300s（1s interval adjustable）or Manual stop	1~300s（1s interval adjustable）or manual stop	——
Sample Recycling Time	1~300s（1s interval adjustable）or Manual stop	1~300s（1s interval adjustable）or manual stop	——
Cleaning Time	1~300s（1s interval adjustable）or Manual stop	1~300s（1s interval adjustable）or manual stop	——
Sample Holder	10mm Single Cell Holder with Constant Temperature	10mm Single Cell Holder	10mm Single Cell Holder with Constant Temperature
Display	4.3 Inch TFT Color Touch Screen		
Communication Interface	Serial port（RS232）×1，USB-B×1		
Language	10 language switching（English，French, German, Spanish, Portuguese, Italian, Russian, Chinese, Japanese, Korean）		
Power Supply	100~240V AC，50~60Hz，60VA	100~240V AC，50~60Hz，25VA	100~240V AC，50~60Hz，35VA
Size	186mm (W) ×237mm (D) ×121mm（H）	186mm (W) ×237mm (D) ×121mm（H）	167mm (W) ×237mm (D) ×121mm（H）
Weight	2.8kg	2.3kg	2.5kg

Getting Started

The following chart describes the basic operation of the instrument.

Turn the instrument power on

Switch on the power on the back of the instrument to start.

Note: Do not turn the instrument on and off continuously and quickly. Wait at least 30 seconds before turning the instrument back on, otherwise the electrical and mechanical systems may be damaged.

Tips for using the touch screen

The entire screen can be activated by touch. To make a selection, use your finger or a capacitive stylus to press or slide the screen. Press or slide the buttons, terms, and icons on the screen to make selections, inputs, and actions.

Note: Do not press a screen with a sharp object (such as a ballpoint pen tip). Do not place any objects on top of the screen to avoid damaging or scratching the screen.

Touch screen operation

Press

Click the button on the touch screen, the icon, etc. to achieve the corresponding operation function.

Long press

When modifying the setting parameters, long press the **<**,**>** icon on the touch screen to continuously change the setting value.

Slide

When modifying certain setting parameters, press and slide the icon to a position to change the setting value.

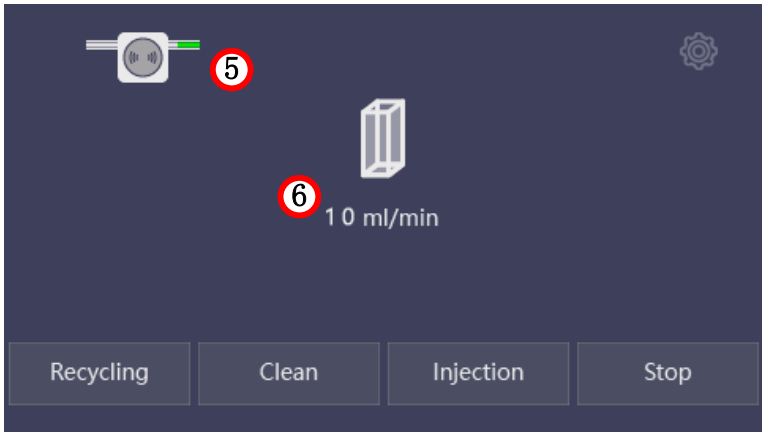
Using the instrument

Main Interface

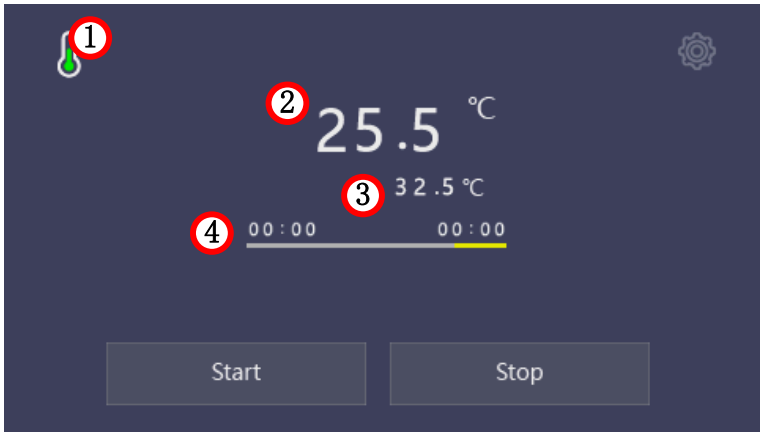
The main interface is divided into two parts, the left part is the temperature control area, and the right part is the injection control area.



A-1001



A-1101



A-1201

①	Constant temperature control state
②	Current temperature
③	Set temperature
④	Appointment time process
⑤	Sipper control state
⑥	Sipper speed
Start	Temperature control start
Stop	Stop temperature control
Recycling	Recycle the sample in the flow cuvette after the end of the measurement
Clean	Cleaning the flow cuvette
Injection	Inhale the sample into the flow cuvette
Stop	Stop sipper/recycling/cleaning

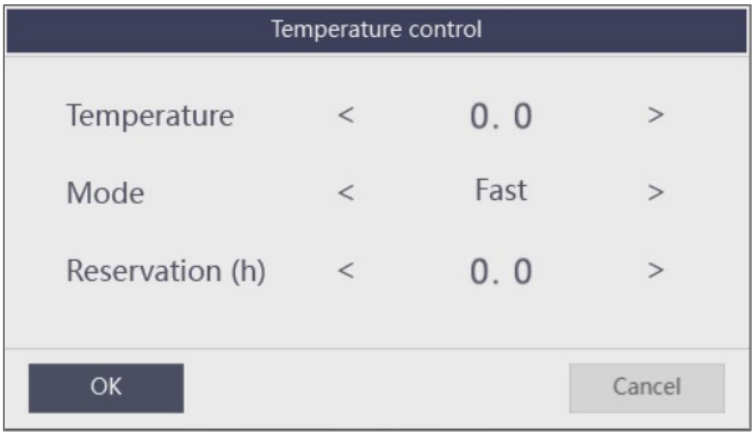
	System parameter setting

Operating

Temperature Control

Start temperature control

Main interface, Press the button **Start** on the left to pop up the temperature control parameter interface, press the button **<** , **>** to set the temperature control parameters according to the requirements. Press the button **OK** , the temperature control module start working. Press the button **Cancel** to return to the main interface.



Temperature	Set temperature, range: 10 ° C ~ 90 ° C, 0.1 ° C interval adjustment
Mode	The way to control the temperature, Slow: Rise/Lower temperature slowly, no overshoot (for biometrics) Medium: Rise/Lower temperature in medium speed, small overshoot Fast: Rise/Lower temperature quickly, larger overshoot.
Reservation	Waiting for a period of time to start rising/lowering temperature, range: 0.5~10h, 0.5h interval adjustment or set to "-" no reservation.

Stop temperature control

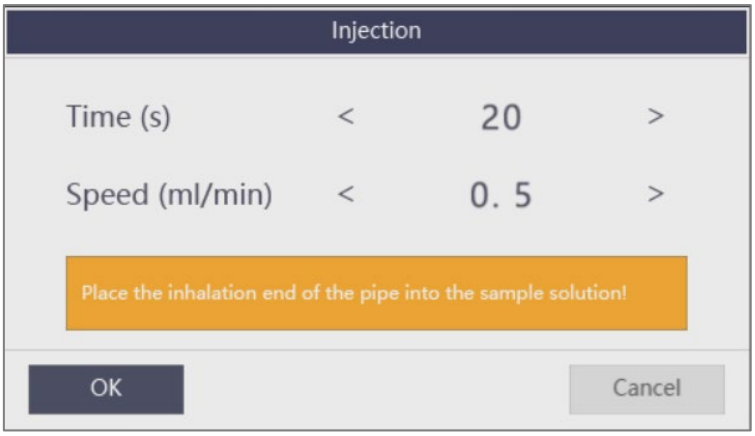
Main interface, if temperature control is turned on, press the button **Stop** on the left to

end the temperature control.

Sipper

Start sipper

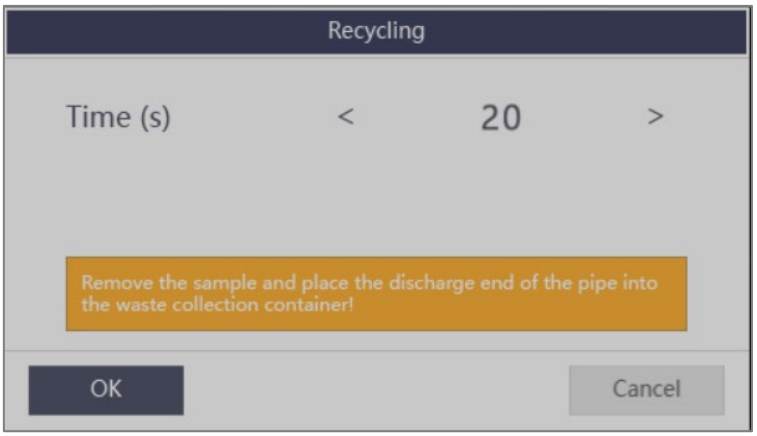
1. Place the suction end of the silicone tube in the sample solution;
2. Main interface, press the button **Injection** on the right to pop up the injection control parameter interface, press the button **<** , **>** to set the injection parameters according to the requirements. Press the button **OK** to start the injection and reach the set time (or Press the button **Stop**) to finish; press the button **Cancel** to return to the main interface.



Time	Single injection time, range: 1 ~ 300s, interval 1s adjustment or set to "-" continuous injection until manual stop.
Speed	Sample inhalation speed, range: 1 ~ 8ml / min, interval 0.5 ml / min adjustment.

Recycling samples

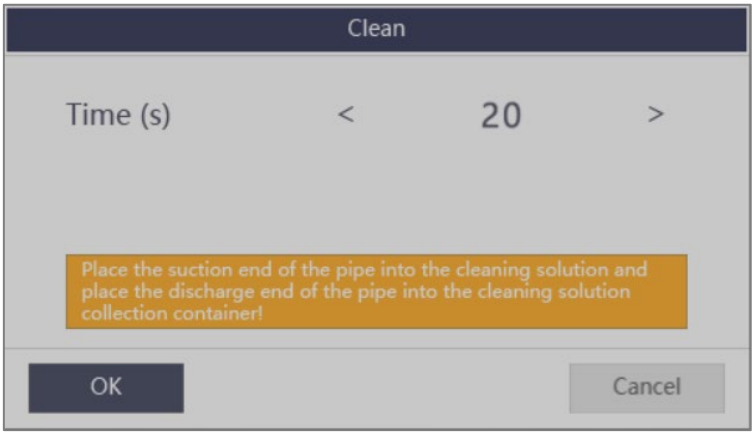
1. Place the discharge end of the silicone tube in the waste collection container;
2. Main interface, press the button **Recycling** on the right, pop-up recycling control parameter interface, press the button **<** , **>** to set the injection parameters according to the requirements. Press the button **OK** to start recycling, reach the set time (or press the button **Stop**) end. Press the button **Cancel** to return to the main interface.



Time	Time for single sample recycle, range: 1 ~ 300s, interval 1s adjustment or set to "-" continuous injection until manual stop.

Cleaning the flow cuvette

1. Place the suction end of the silicone tube in the cleaning solution;
2. Main interface, press the button **Cleaning** on the right to pop up the cleaning control parameter interface, press the button **<** , **>** to set the injection parameters according to the requirements. Press the button **OK** to start recycling, reach the set time (or press the button **Stop**) end. Press the button **Cancel** to return to the main interface.



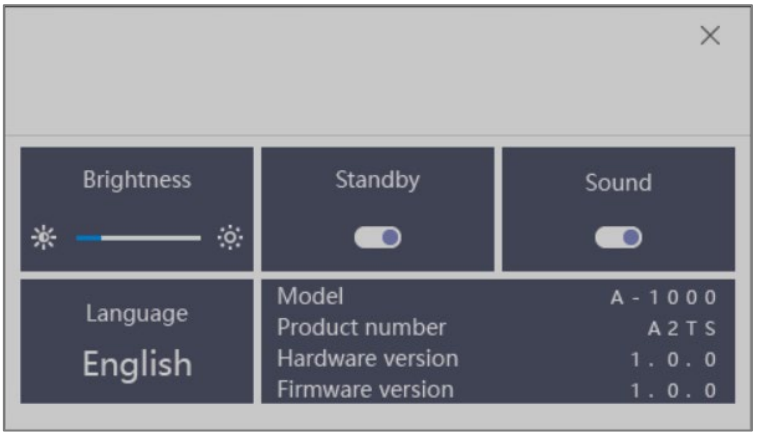
Time	Single cleaning time, range: 1 ~ 300s, interval 1s adjustment or set to "-" continuous injection until manual stop.

Stop injection/recycling/cleaning

Main interface, if the injection/recycling/cleaning is in progress, press the button **Stop** button on the right to end.

System settings

The main interface, press the icon  to enter the system settings interface,



Set display brightness

Press the icon  ,  on the Brightness tab to decrease/increase the display brightness.

Turn automatic standby on/off

Standby mode means that the instrument automatically reduces the brightness of the display when there is no operation for a period of time to save energy and extend the life of the display. Press the icon  on the standby tab to turn it on/off.

Turn beep on/off when pressing the button on/off

Press the icon  on the sound tab to turn the beep sound on/off.

Language selection

The instrument supports 10 language switching (English, French, German, Spanish, Portuguese, Italian, Russian, Chinese, Japanese, Korean), press on the language parameter on the language label, pop up the language selection window, slide up and down to select Language, press the button **OK** to switch to the target language.

