MINIWARE

MHP30
Mini Hot Plate Preheater

User Manual V1.1

Thank you for purchasing MHP30 Mini Hot Plate Preheater.
This user manual is based on MHP30 DFU:2.2, APP Sver:2.04.

Contents

01 Safety Statements

1.1 General Safety

- Use only certified power sources/adaptors from your region. (Please refer to P7 for specifications)
- Do not operate in humid environment.
- Do not operate in inflammable/explosive environment.
- Keep the surface of the product clean and dry.

1.2 Warnings

When using MHP30,

- Turn the power off when not in use or left unattended.
- When heated, hot plate temperatures will reach between 100℃~350℃ (212℉~662℉), please be careful.
- Please don't operate MHP30 when it's wet or it with wet hands, which may cause an electric shock.
- When heated, DO NOT touch or replace hot plate, to avoid being burnt.

1.3 Cautions

- MHP30 Mini Hot Plate Preheater is constructed with precision, dropping shall be avoided.
- After continuous use at 300℃ up to 40 minutes, the controller surface temperature will reach 50℃~60℃.
- While MHP30 is on, DO NOT remove/replace hot plate.
- For the first time using and reuse after long time storage, please preheat to at least 150°C for 3 minutes to dry the hot plate to ensure better performance. It is a normal phenomenon that the hot plate may generate a light smoke and steam due to the heating of heating elements.
- After heated, the hot plate's stainless steel heat insulation bracket may become yellowish, this is a normal phenomenon.

1.4 Liability Statement

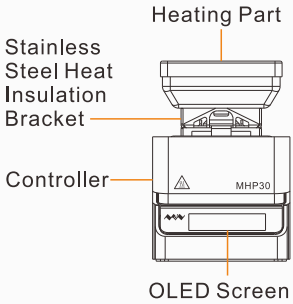
- Any damage of the product, or losses related to the product damage, if it's man-caused, or assumed to be man-caused, the liability will belong to the user.
- The user is responsible for any damage or loss caused by disassembling or modifying the product without permission.

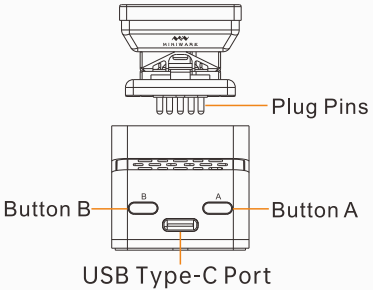
1.5 Working Condition

	Operating Conditions		Non-Operating Conditions
Temperature	+0℃~+50℃		-20℃~+60℃
Relative Humidity	High Temperature 40℃~50℃	0%~60%RH	5%~60%RH
	Low Temperature 0℃~40℃	10%~90%RH	5%~90%RH

02 Product Overview

2.1 Buttons and Interface





2.2 Specifications

Screen		OLED (96*16 dpi)
Power interface		USB Type-C (Also used for firmware upgrade)
Dimensions	Controller	L43mm*W35mm*H31mm
	Hot Plate	L31mm*W31mm*H28mm
Weight (Controller + Hot Plate)		82g

2.3 Operation Specifications

Heating Area	30mm*30mm
Temperature range	100-350°C
Temperature stability	3%
Power	60W (Max)
Input	PD Protocol (20V Max)

2.4 Light Indication

The true color light will change color with hot plate's temperature.

Light Color	Indication
Blue	Firmware upgrade
Red flash	Error, warning

Warning: Do not touch or replace hot plate after MHP30 is powered on to avoid burns!

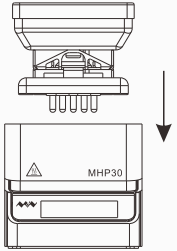
03 Power Selection

MHP30 supports power adapters in complied with PD protocol. It is suggested to use manufacturer's original standard PD power supply, or power supplies with input of 20V/65W Max (PD adapter with 20V 3A output) to ensure MHP30's best performance. DO NOT recommend power supplies with input power lower than 45W.

	Power	Operating Voltage
Heating Status	60W (Max)	20V (Max)
Standby Status	0.1W	20V (Max)

04 Operation

4.1 Installation



1) Insert the pins of hot plate into MHP30 controller;
2) Connect PD power supply to MHP30 with USB-C to C cable. After being powered on, the device will enter standby mode, please follow the operating instructions.

4.2 Default Settings

Default Temperature Unit	℃
Adjustable Temperature Range	100℃~350℃ (Max)
Preset Temperature M1	220℃
Preset Temperature M2	250℃
Preset Temperature M3	300℃

4.3 Basic Operation

4.3.1 Screen Interface

After power is on MHP30 will show bootup icon, then shows stanby mode in loops.

	Bootup icon, not modifiable.
	Personalized icon, modifiable; if not modified, it will display bootup icon by default.
	Heating & Parameter Setting Icon
	Heating Icon
	Parameter Setting Icon

4.3.2 Parameter Settings

(1) In standby mode, short press Button B to enter setting mode;

(2) In setting mode, short press Button A/B to select the items to be modified;

(3) Long press Button A to enter the modification mode. In the modification mode, short press Button A/B to select the values (long press Button A/B for quick adjustment);

(4) Once selection is completed, wait 5 seconds to automatically return to setting mode;

(5) After setting is completed, long press Button B to save the modified values and return to standby mode.

4.3.3 Menu Definitions

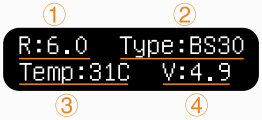
Parameters	Display	Definition	Description
M1 Temp		Preset Temperature M1	Preset temperature M1, range from 100~350℃ (212~662℉), default value 220℃
M2 Temp		Preset Temperature M2	Preset temperature M2, range from 100~350℃ (212~662℉), default value 250℃
M3 Temp		Preset Temperature M3	Preset temperature M3, range from 100~350℃(212~662℉), default value 300℃
Sleep Time		Standby Time	The time from idling to exit to standby mode after the controller is heated up; can be shut off (OFF) or set between 5~120 minutes, default value is OFF.
Backlight		Screen Backlight	Brightness, range between 1~10, default value 6.
Tilt Angle		Topple Detection	Heating will be stopped when controller detects toppling or falling down. This mode can be turned on (ON) or off (OFF); default mode is ON when the device is powered on.

4.3.3 Menu Interpretation

Parameters	Display	Definition	Description
Show Type		Display Voltage/Power	Select to display voltage (Volt) or power (Power); default display is voltage (Volt).
Volume		Volume	Volume of buzzer, ranges between 0~5, default value 3.
Temp Type		Temperature Unit	Select to display Celsius (Degrees C) or Fahrenheit (Degrees F), default display is Celsius (Degrees C).
Low Cur		Power Bank Wakeup	Power bank wakeup function (low current wakeup) can be turned on (ON) or off (OFF). Default mode is ON after power on. When the mode is turned on, the device may experience slight heating.
Restore		Restore Factory Settings	Restore factory settings.

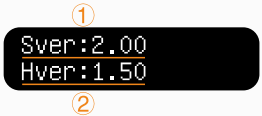
4.3.4 Product Information

In standby mode, long press Button A to check the basic information.



①	Internal resistance of hot plate
②	Model of hot plate
③	Device temperature
④	Input Voltage

In standby mode, long press Button B to check the version information.



①	Software Version
②	Hardware Version

In standby mode, if the internal temperature of hot plate is lower than 50°C, and controller without any operations for 3 minutes, MHP30 will enter sleep mode and the screen will go off. Short press any button to wake up the device.

4.3.5 Temperature Adjustment

When MHP30 enters standby mode after being powered on, short press Button A to enter heating mode. The screen display is as follows:

①	Hot plate temperature
②	In preset temperature M1
③	Input voltage
④	Heating time (MM:SS), short press Botton B to recalculate heating time
⑤	Up arrow indicates temperature heating up
	Down arrow indicates temperature falling down
	Wave pattern indicates constant temperature

MHP30 has two ways to adjust temperature:

1) Short press Button A to select preset temperature M1, M2 or M3, MHP30 will heat up to the preset temperature and enter constant temperature status automatically.

2) Long press Button A to modify the current preset temperature, short press Button A/B to decrease or increase the temperature values (long press Button A/B for quick adjustment). Release the button for 5 seconds to return to heating mode (the current preset temperature value will not be saved after power off).

Return to standby in heating mode:

1) When "SleepTime" function is turned on (default value is OFF), if MHP30 is idle longer than the preset standby time (custom range: 5~12 minutes) in heating mode, the device will display a "Time Out" warning and return to standby mode automatically.
2) When the device is in heating mode, long press Button B to exit heating and return to standby mode.

Sleep Mode in Standby:

If MHP30 is idle for 3 minutes in standby mode with the internal temperature of hot plate lower than 50°C, it will enter sleep mode and the screen will go off. Short press any button to wake up the device.

Warning: Do not touch or replace hot plate after MHP30 is powered on to avoid burns!

In heating mode, MHP30 buttons and function operations are as follows:

Function	Button	Operation Mode
Heating	Button A	In standby mode, short press Button A to start heating to the preset temperature M1 by default.
Select Preset Temperature	Button A	In heating mode, short press Button A to switch preset temperature M1/M2/M3.
Temperature Adjustment	Button A/B	In heating mode, long press Button A to enter temperature adjustment mode, short press Button A/B to decrease/increase current preset temperature (In constant temperature mode, long press the button for quick temperature adjustment.)
Recalculate Heating Time	Button B	In heating mode, short press Button B to recalculate the heating time.
Back to Standby Mode	Button B	In heating mode, long press Button B to exit and return to standby mode.

4.4 Configuration File

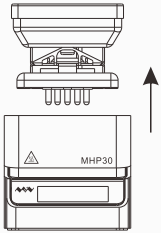
1) Connect MHP30 to computer with USB Type-C cable. A virtual disk will appear and the device enters USB mode;
2) Open the CONFIG.TXT file in the virtual disk to modify the device parameters.

Parameter definitions are as follows:

Parameters	Definitions	Default Setting	Adjustable Range
PrsetTemp1	Preset Temperature M1	220	100~350(°C) or 212~662(°F)
PrsetTemp2	Preset Temperature M2	250	
PrsetTemp3	Preset Temperature M3	300	
SleepTime	Standby Time	OFF	OFF or 5~120 (minutes)
Backlight	Backlight Brightness	6	1~10
ShowType	Display Voltage/Power	0	0 indicates displaying voltage (Volt), 1 indicates displaying power (Power)
Volume	Buzzer volume	3	0~5
LowCurrent	Power Bank Wakeup (low current mode)	1	0 indicates OFF, 1 indicates ON
TempType	Temperature Unit	0	0 indicates Celsius (°C), 1 indicates Fahrenheit (°F)

05 Mini Hot Plate

5.1 Installation and Replacement



1) Make sure the device is powered off before plugging or replacing the hot plate;
2) Unplug the hot plate directly for replacement, then plug the power pins into controller socket and secure the new hot plate;
3) Make sure the hot plate has been fully plugged into the controller before connecting to power supply or computer for operation. If the hot plate is not fully installed, there will be a red flicker after the device is powered on.

5.2 Maintenance of Hot Plate

1) Do not use rough, sharp materials or files to clean the surface of hot plate;
2) For the first time using and reuse after long time storage, please preheat to at least 150°C for 3 minutes to dry the hot plate to ensure better performance. It is a normal phenomenon that the hot plate may generate a light smoke and steam due to the heating of heating elements.
3) After heated, the hot plate's stainless steel heat insulation bracket may become yellowish, this is a normal phenomenon. User can clean the bracket with stainless steel detergent.
4) Don't leave MHP30 in high temperature heating state for a long time to avoid dry burning.

06 FAQ

Problem 1: No display on the screen after MHP30 is powered on.

Check 1: Make sure to use USB Type-C to Type-C cable and recommended PD power supply (no less than 45W high quality PD power supplies).

Check 2: Connect MHP30 to computer, see if computer has a USB connection or MHP30 enters DFU mode.

Problem 2: The temperature status diaplay random numbers.

Check 1: Means the machine is checking status, which is normal.

Check 2: Is the hot plate installed propely?

Check 3: Is the power cable in loose or defective contact?

Problem 3: MHP30 restarts automatically.

Check 1: Is it properly plugged into the power source?

Check 2: Is the voltage too low?

Problem 4: OLED displays “Low-Vot”.

Check 1: Whether the power parameters meet the use requirements.

Problem 5: OLED displays “No Hot Plate”.

Check 1:Is the hot plate installed propely?

Check 2: Is the power cable in loose or defective contact?

Problem 6: When MHP30 uses a mobile power supply, it can heat up normally, but power will shut down if maintaining a constant temperature.

Check 1: Whether the "LowCur" function in the menu is set as "ON".

Warning: When the "LowCur" function is set as “ON”, the device may experience slight heating.

07 Service

7.1 Standard Service

- One year of free warranty will be provided, if the damage was not caused by false manipulation by the user. Please contact your seller for warranty details.
- Hot plate are consumable products, once it's used, no replacement will be provided.

7.2 Firmware Update

DFU (Device Firmware Upgrade) software is a unique firmware upgrade software for e-Design products. User can easily upgrade product firmware via DFU software.

1. Visit www.miniware.com.cn and download the suitable MHP30 firmware to your PC;
2. Hold MHP30's Button A and connect MHP30 to your PC with USB Type-C data cable, enter DFU mode. A display of "DFU 2.2" will appear in MHP30's screen and a virtual disk will appear on your PC;
3. Copy the hex firmware to the root directory of that disk. When the extension of the firmware changes from ".hex" to ".rdy", disconnect USB and thus upgrade is completed.

7.3 Changing Bootup Icon

1. Create your own 96*16 pixel image save as BMP in single color bitmap, file name as "logoin.bmp";
2. Connect MHP30 to computer, and enter the virtual disk;
3. Copy the bmp file to the root directory of the virtual disk, remove the connection to complete.

08 Legal Statements

8.1 Disposal

Do not dispose this product with domestic waste

- This device complies with the WEEE Directive (this additional product label indicates that this electronic product must not be disposed of in household waste).
- Handling and recycle:Disposal of the product shall be manipulated according to laws and regulations in your area.

8.2 Statement of Fulfilling FCC Standard

This device fulfills part 15 of the FCC regulations Device must fulfill below 2 conditions:

(1) Device must not generate interference;

(2) Device must be able to resist any interferences on it, including interferences that could cause dangerous manipulation.

8.3 Statement of Fulfilling CE Standard

This product with CE logo on it fulfills related Euro Union laws and regulations.