

**BrainChild  
XH12 PID  
Controller  
and  
Paperless  
Recorder**



# BrainChild XH12 PID Controller and Paperless Recorder User Guide

[Home](#) » [BrainChild](#) » BrainChild XH12 PID Controller and Paperless Recorder User Guide 

## Contents

- [1 BrainChild XH12 PID Controller and Paperless Recorder](#)
- [2 Product Usage Instructions](#)
- [3 FEATURE](#)
- [4 Package](#)
- [5 Mounting Plate](#)
- [6 LED](#)
- [7 LCD Display](#)
- [8 3-Key Operation](#)
- [9 Operation Mode](#)
- [10 Data Configuration/ Analysis](#)
- [11 Error Code](#)
- [12 Battery Charge](#)
- [13 XH12 FAQ](#)
- [14 Documents / Resources](#)
  - [14.1 References](#)
- [15 Related Posts](#)

**BrainChild**

**BrainChild XH12 PID Controller and Paperless Recorder**



### Specifications:

- Data Logger with external sensor probe
- Battery: Rechargeable Li-ion 3.7V/1500mA installed
- Mounting Plate/Fixed Sticker, Screws/Anchors, Quick User Guide included
- Flashing Red/Green LED for device status indication
- Real-time temperature or humidity information display

### Product Usage Instructions

#### Mounting the Data Logger:

- **Back/Front Plate:** Attach or fix the plate to any metal area using the magnetic base.
- **Bracket + XHLogger:** Place the XHLogger into the mounting bracket.
- **Hanging Hole:** Hang it on a wall mounting screw.
- **Adhesive Tape:** Remove adhesive sticker on the back of the plate and attach it to the wall.
- **Mounting Screw Hole:** Fix it by fastening the mounting screws.

#### Data Logger Indicator Lights:

- **Flashing Red/Green LED:** Indicates device startup and recording monitoring mode respectively.
- **Flashing Red LED:** Indicates errors and alarms triggered.
- **Red LED Blinking:** Connection interruption alert.

#### Data Logger Display Symbols:

- **The symbol:** Indicates unit recording and will flash during delayed recording.
- **Battery capacity:** Displayed proportionally.
- **Remaining memory capacity:** Displayed proportionally.
- **The wrench symbol:** Indicates errors occurred.

- **ALM bar & ALM:** Indicate temperature/humidity alarm conditions.
- **Max/Min temperature/humidity values:** Displayed.

Tech Support:

[service@brainchild.com.tw](mailto:service@brainchild.com.tw)

XH12 QSG ENv1.0, 2024-05-23



### Action Buttons:

- **Action START:** Short press to start recording, long press (>3 secs) for sleeping mode.
- **Action SCROLL:** Short press to toggle screen views.
- **Action STOP:** Long press (>3 secs) to stop recording or press & hold for specific functions.

### FEATURE

- Set Logging of statistical data of temperature & humidity
- Wireless configuration, monitoring; set parameter & download report via Wi-Fi
- M.K.T. Mean Kinetic Temperature calculation
- USB/ Battery power supply



### Package

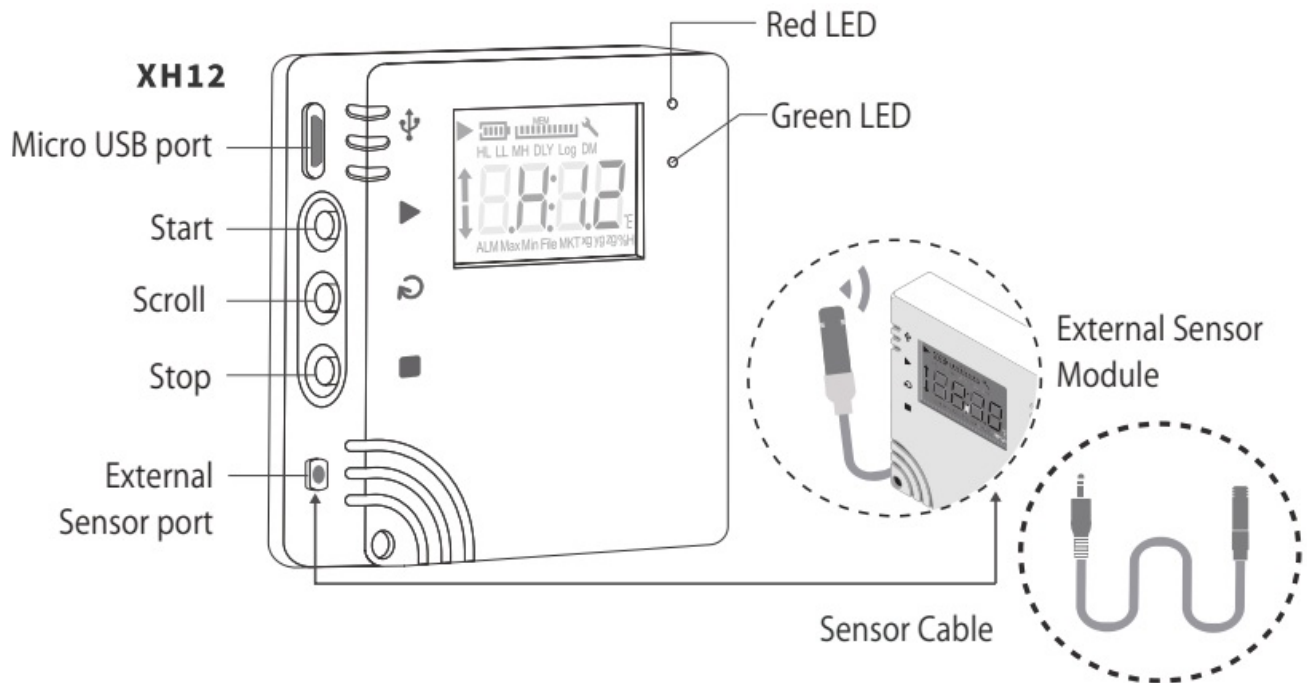
- Data Logger x 1

XH12 Battery Installed

(3.7V/ 1500mA Li-ion)

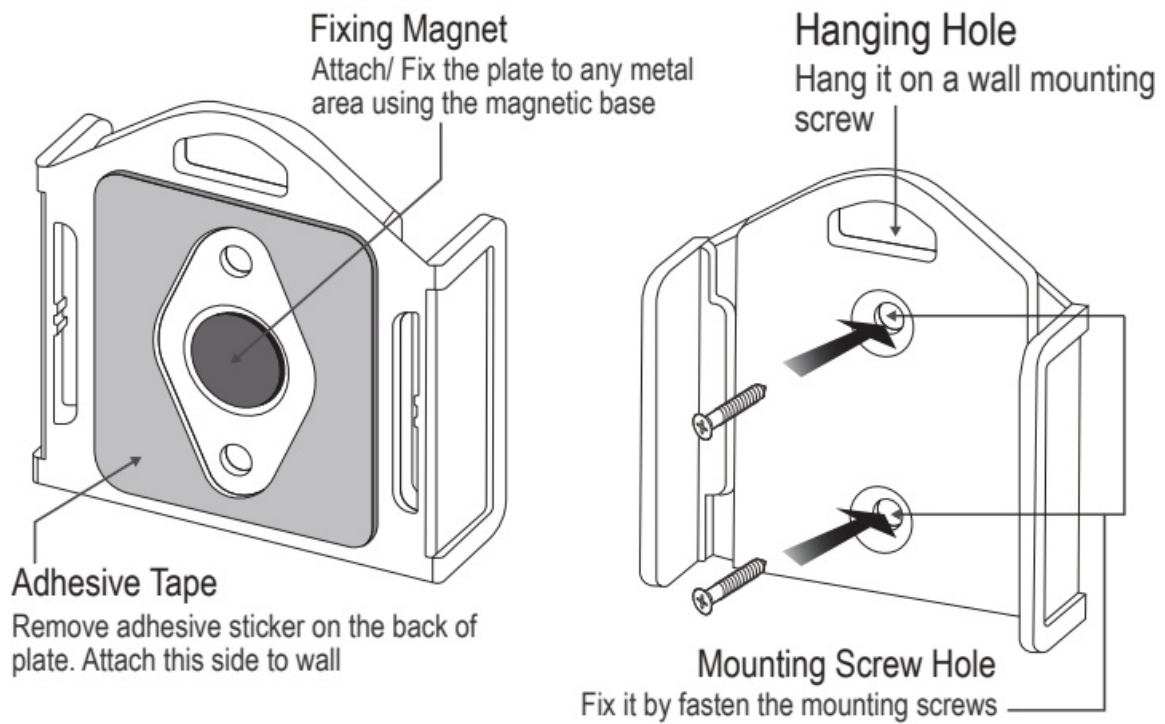
(Rechargeable Li Battery)

- Mounting Plate/ Fixed Sticker x 1
- Screws/ Anchors x 2
- Quick User Guide x 1
- External Sensor Probe x 1

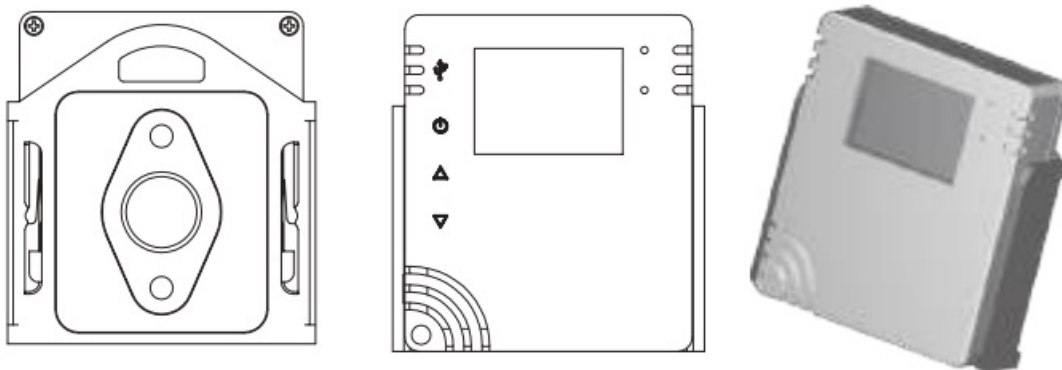


## Mounting Plate

## Back/ Front Plate



- Bracket + XHLogger Place the XHLogger into the mounting bracket

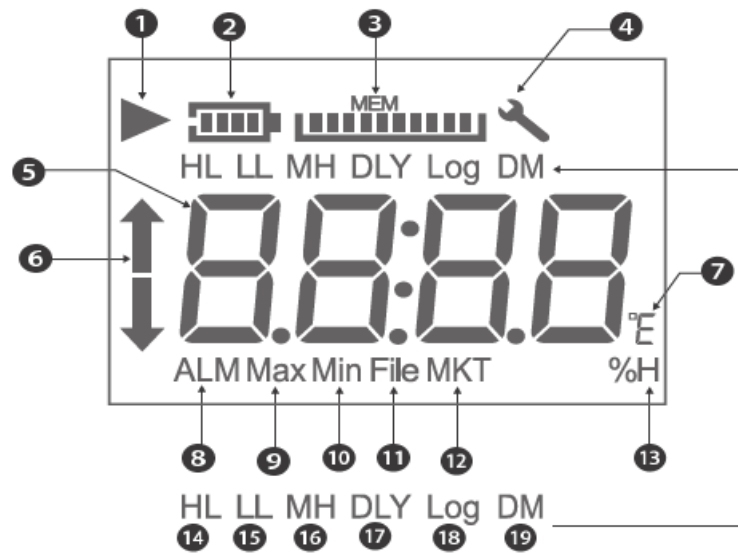


## LED

- Flashing Red/ Green LED, indicating devices startup successfully
- Flashing Green LED, indicating working in recording monitoring mode
- Flashing Red LED, indicating errors occurred, alarms triggered
- Red LED blinking 3 times & off continuously, when the connection is interrupted



## LCD Display



1. The symbol indicates unit recording. Recording will start only when the timer matching settings. Flashing indicates delayed recording, pending for scheduled tasks.

The symbol will disappear after logging completed.

2. Battery capacity displayed in proportion

3. Remaining memory capacity displayed in proportion

4. The wrench indicates errors occurred, disappears when confirms no error occurred.

5. Real-time temperature or humidity info.

6. ALM bar: When temperature/humidity reaching the alarm condition, HL (High Limit) or LL (Low Limit)

7. Temperature Unit °C/ °F

8. ALM: When temperature/humidity value reaching the alarm triggering condition

9. Max. temperature/humidity Value

10. Min. temperature/humidity Value

11. MKT: Mean Kinetic Temperature Calculation

12. File: Total number of files

13. %H: Relative Humidity %

14. HL: High Limit

15. LL: Low Limit

16. MH: month/ hour








17. DLY: Delay Time

18. Log: Log interval




19. DM: date/ minute

Please refer to User Manual, Configuration & Data Analysis, for more information.

### 3-Key Operation

Action	Description
START  – Short press	Reconnection
START  – Long press more than 3 secs	Start recording
SCROLL  – Short press	Toggle screen views
STOP  – Long press more than 3 secs	Stop recording after logging; Sleeping mode before logging
SCROLL  + STOP  – Long press	Registration/ Pairing
STOP  – Press & Hold for 5 times	Reset

## Operation Mode

Start Recording	Description
Immediate (PC)	Immediate recording after unplugging the USB at USB mode when setting the XH through DLV
Button (XH12)	Long Press START  key for more than 3 secs when setting the XH through DLV whether to connect the USB or not
	The button mode also working with <Start Delay>, long press START  key for more than 3 secs. When reaching the start delay time, it will automatically start recording
Specific Time (PC)	Start recording when reaching the specific time, when setting the XH through DLV whether to connect the USB or not
Stop Recording	Description
None	Stop by DLV software only (via USB interface)
Button	Long press STOP  key for more than 3 secs at logging mode, or stop by DLV software
Specific Time	When reaching the stop time, it will automatically stop recording, or stop by DLV software

## Data Configuration/ Analysis

Download DLV, the Data Logger Viewer software, from the manufacturer's website. The PC Software can be used for configuration of the data logger, viewing and analysing of historical data.

**NOTE:** \*Recording has been locked by default factory settings, please reset time zone firstly & time interval.

## Wi-Fi Pairing




DLV/ Wi-Fi Pairing Video



## Sensor > New

Quick and easy wireless pairing



- Take one XH12 which is new to the system

(If this XH device used before, already paired wireless before, press the third button, STOP  key, more than 3 secs for 5 times, thus clear the previous Wi-Fi setting)

- Open the DLV software on your PC via micro USB port. Go to <Sensors> on the top menu.
- Press and hold sync the 2&3 keys,  Scroll+  Stop, for 3 secs. rEG registration steps will appear.
- Wi-Fi setting screen appeared on DLV, follow the sequence steps to complete wireless pairing.
- Press <Finish> after pairing successfully. Go to <Sensors> list-page, the connected Wi-Fi already discovered on the page.



**Sensor > New > SSID/PWD > Next > rEG > Finish**



Please follow the below steps:

1. Make sure your PC is equipped with WiFi function and turn it on.
2. Make sure the WiFi is connected to a proper hotspot.
3. Fill in the below fields for the hotspot.
4. Press button 'Next'.

Input ID/ Password

WiFi

SSID: g12345

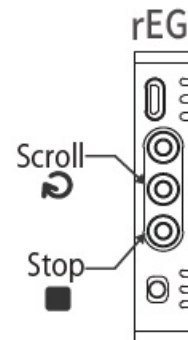
Password: ●●●●●●●●●●

Please follow the below steps:

1. Take one sensor which is new to this system.
2. XH12 Press and hold keys 2&3 at the same time until the word rEG appears and then release. The LCD display will display "Con1" and "Con2" in sequence.
3. Inspect the below list and see if the new sensor is detected and listed.
4. Repeat steps 1 ~ 3 for the remaining new sensors and then press button 'Finish'.

rEG step

No.	Model	S/N
When match none shown none listed		



Please follow the below steps:

1. Take one sensor which is new to this system.
2. XH12 Press and hold keys 2&3 at the same time until the word rEG appears and then release. The LCD display will display "Con1" and "Con2" in sequence.
3. Inspect the below list and see if the new sensor is detected and listed.
4. Repeat steps 1 ~ 3 for the remaining new sensors and then press button 'Finish'.

No.	Model	S/N
1	XH12	XH202405141202

Finish pairing  
Press <Finish> to Exit



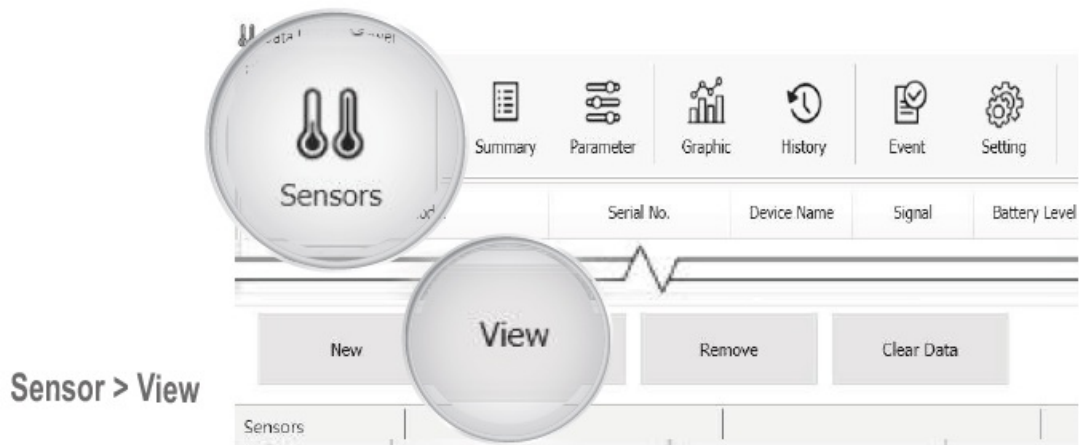
15	10.2	02034010020	10204010020	100%	10	25.8°C	51.8%RH	Normal	Connected (WiFi)
Item	View	Reset	Clear Data	Sensor List					

## DLV Quick Activation

**Step 1:** Connect the XHLogger to PC, micro-USB plug of the USB cable into the PC USB port.  
Use only USB data file transfer cables to collect data for analysis

**Step 2:** The Sensor list will renew newly discovered devices, click <View> of new items

**Step 3:**  
Go to <Parameter> set your local time zone



Sensor > View


**Step 4:** Set <Log Interval>, the number must not be zero

**Step 5:** Press <Save> after all settings applied



Parameter > Time Zone

Parameter > Log Interval

- Connect the XHLogger to your PC via USB transfer cable
- Install Data logger viewer to your PC
- Double click on DLV logo 
- Go to Parameter > Time Zone > Save
- Set correct time zone/ log interval
- Save the setting to initialize recording







## Error Code

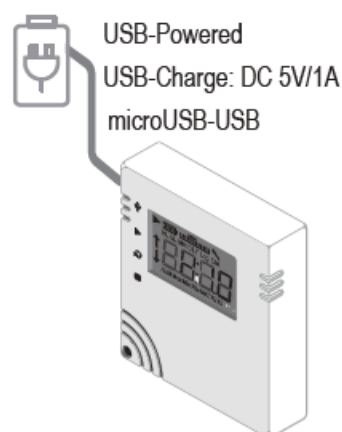
Code	Reason
<b>Er01</b>	Wi-Fi module abnormal disconnection, failed to start, please restart or reset
<b>Er02</b>	DLV registration failure, please finish registration and pairing again
<b>Er03</b>	Login failed, please check if ID/Password is correct, Wi-Fi signal as stable
<b>Er04</b>	Failed to connect to DLV, please check if Wi-Fi disconnected or DLV turned off.
<b>Er05</b>	Wireless AP failed to connect, please check if the router is working properly.
<b>Er06</b>	Sensor failure, please contact your local dealer or the original manufacturer Firstly check whether the external sensor is connected correctly firmly
<b>Er07</b>	Device time-stamp not available, device timer abnormal. Please connect to the DLV to synchronise the time.
<b>Er08</b>	The total files exceeds 100 and the memory is full. Please clear all file data
<b>Er09</b>	Start recording without setting parameters, logging interval lerror, setting/ configuration error. Please reset. Go to Parameter > Data logging

 An error symbol will appear when any error occurred

## Battery Charge

The XH12 uses a rechargeable battery; when receiving the brand new product, before usage for the first time, please charge the new device to full level via USB port. Use one microUSB-USB cable, connecting USB port to power supply DC5V/1A. When the device completely no power, less than 20%, the totally charging time to fully charged takes around 4 hr to finish with connecting to DC5V/1A charging adapter. For normal usage, recharge the device every 2 to 3 months.

Battery Level with 0-4	
	4 scales: Power 100%
	3 scales: Power 80%
	2 scales: Power 60%
	1 scale: Power 40%
	0 scale: Power < 40%
	Frame Blinking: Power < 20%



## XH12 FAQ

### Frequently Asked Tech Support Questions

How do I start recording immediately?

Short press the START button. For long-term recording, press and hold the START button for more than 3 seconds to enter sleeping mode before logging.

How can I start recording at a specific time?

Start recording at a specific time by setting up the XH through DLV. Press and hold the START button for more than 3 seconds when reaching the start delay time to automatically begin recording.

Frequently Asked Tech Support Questions After successfully pairing DLV with XH12, do I need to keep DLV software opening to stay connection?

For normal usage, the XH12 will keep connection with DLV, also sending data back to DLV continuously. When the XH12 cannot find DLV, it will try to search DLV and the LED screen will display Er04, which will make battery draining fast. Even power saving mechanisms exist, it is recommended to keep the connection between DLV and XH12 all the time.

During pairing processing, cannot find any XH12 device on the list?

Press the STOP button 5 times, and wait until rSt displayed on LED to clear pairing setting on this device. Manually operate the pairing procedure again. Enter and make sure pairing networking SSID and password correct. Before pairing again check Wi-Fi and networking environment, whether the signal too weak on the location. Also avoid turning phone hotspot to replacing Wi-Fi which cause networking connection unstable. Please note that it is required to run program under windows 10 OS or above.

Will the connection between DLV and XH12 failed after when the DHCP assigns a new IP address?

Under normal network circumstances, DLV and XH12 use the same domain for connection. When IP address on the computer changed DLV will still search and update the link automatically.

When the error code, Er05, is shown on XH12 LED?

Er05 occurs when XH12 cannot connect to the paired Wi-Fi so please check the network device firstly and then restart the DLV software and confirm that IP domain of DLV is the same as setting before.

How to reconnect the device with DLV software again?

The device has been paired successfully before yet if the device unexpected disconnection problems occur the user can try to pair again to establish the connection between XH12 and DLV. Press the STOP button 5 times, and wait until rSt displayed on LED to clear pairing setting on this device. Manually operate the pairing procedure again.

The DLV is activated and finished pairing but my XH12 cannot work properly?

The first step to activate DLV is to click on the device name go to Parameter firstly to reset Log Interval, Time Zone. Set Log Interval not zero HMS and set current Time Zone. Save and Exit.

How to change the DLV language interface?

To change the DLV language, click on the device name and go to Setting on the top menu. On the General tab, change Language field and Exit the program. Launch the DLV again, the new language interface will start. If you have any other tech problems, please contact us and provide the serial number on the sticker from the back of the device.

## Documents / Resources



[BrainChild XH12 PID Controller and Paperless Recorder](#) [pdf] User Guide  
XH12 PID Controller and Paperless Recorder, XH12, PID Controller and Paperless Recorder, Controller and Paperless Recorder, Paperless Recorder

## References

- [User Manual](#)

[Manuals+](#), [Privacy Policy](#)

This website is an independent publication and is neither affiliated with nor endorsed by any of the trademark owners. The "Bluetooth®" word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. The "Wi-Fi®" word mark and logos are registered trademarks owned by the Wi-Fi Alliance. Any use of these marks on this website does not imply any affiliation with or endorsement.