

WeatherHub2 Quick Start Guide

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1 Introduction

The following quick start programming guide provides basic instructions for connecting your WeatherHub2 to your weather station and router and the Internet.

Note: Ambient Weather uses the terms WeatherHub2 and MeteoHub interchangeably. WeatherHub2 is the complete product, including the Linux computer (SheevaPlug), 4 HB SD card and operating system. The operating system is referred to as MeteoHub, developed by www.MeteoHub.de.

Note: The WeatherHub2 Network Storage Link has been programmed by Ambient Weather before you receive it. For warranty replacement, please contact Ambient Weather directly. Ambient Weather warranties this product for 1 year.

The unit has been tested thoroughly before shipping.

2 Packing List

The packing list is as follows:

1. WeatherHub2 Linux Computer (SheevaPlug)
2. WeatherHub2 AC adaptor
3. 4.0GB SD Card (programmed)
4. Ethernet Cable
5. WeatherHub2 CD

3 Connections



Note: Never plug in or unplug the SD card when the WeatherHub2 is powered up. This can damage the SD card. Always make sure the device power is disconnected.

Connect the WeatherHub2 Linux Computer as follows:

1. Connect the Ethernet cable from the **Ethernet Port** on the back of the WeatherHub2 to your router.
2. Insert the **SD Card** provided into slot on the side of the WeatherHub2. The pins on the SD card face upwards.
3. Connect the USB cable (provided with the weather station or purchased separately) into the **USB Port** on the side of the WeatherHub2 and into the weather station.

4. communication port. If you have a weather station with a serial port, you will need a USB converter and serial cable available here:

<http://www.ambientweather.com/cousbto9sead.html>

and

<http://www.ambientweather.com/secoca6.html>

5. Connect the AC power adaptor to the WeatherHub2. The unit will turn on and the top status light will turn solid on after approximately one minute.
6. After about 1 minute, **Ethernet** lights should both be solid on. The WeatherHub2 is now ready to use.

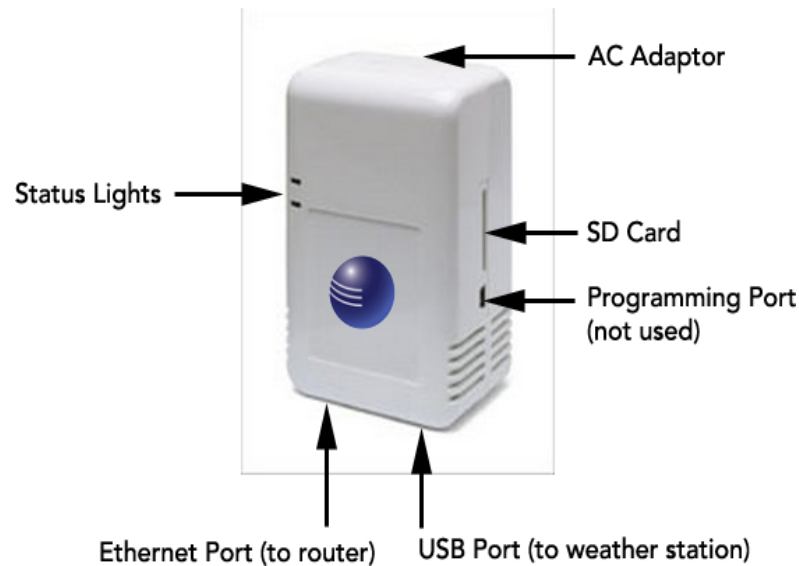


Figure 1

4 IP Addressing

The WeatherHub2 is programmed from the factory for dynamic addressing (or DHCP). This allows to you to address the unit from any computer on your network without modifying the IP address.

However, since it is dynamic, you will have to determine the address that was assigned to the unit.

To determine this address, load and install the IPScan tool provided on the CD. You can also download it here:

<http://www.download25.com/install/free-ip-scanner.html>

For Mac and Linux users, visit:

<http://www.angryip.org/w/Download>

Select the **Start Scanning** button. After the scan is complete, locate IP address associated with the Host Name **METEOPLUG (or METEOHUB)**. In the example figure below, the IP address was assigned to 192.168.1.77.

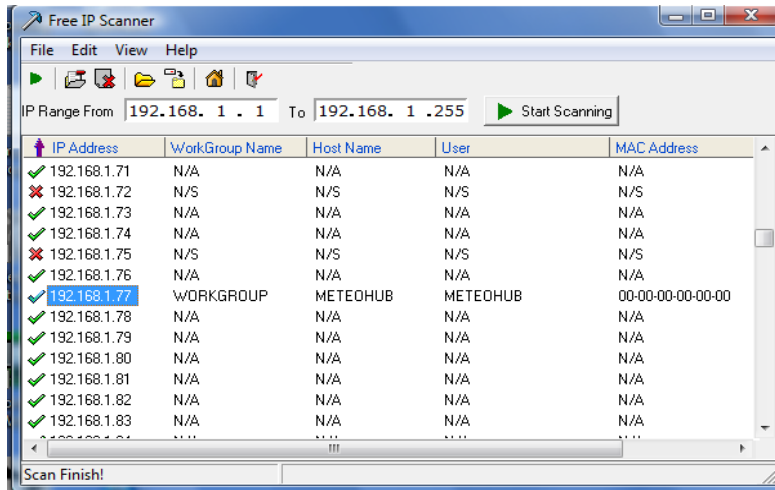


Figure 2

Store this information in a safe place for warranty service!

MAC:
System-ID (case sensitive):
Activation Code (case sensitive):

5 Browser Access

Enter this IP address into your web browser. In the example above, this would be `http:// 192.168.1.77`

When prompted for the Username and Password, enter:

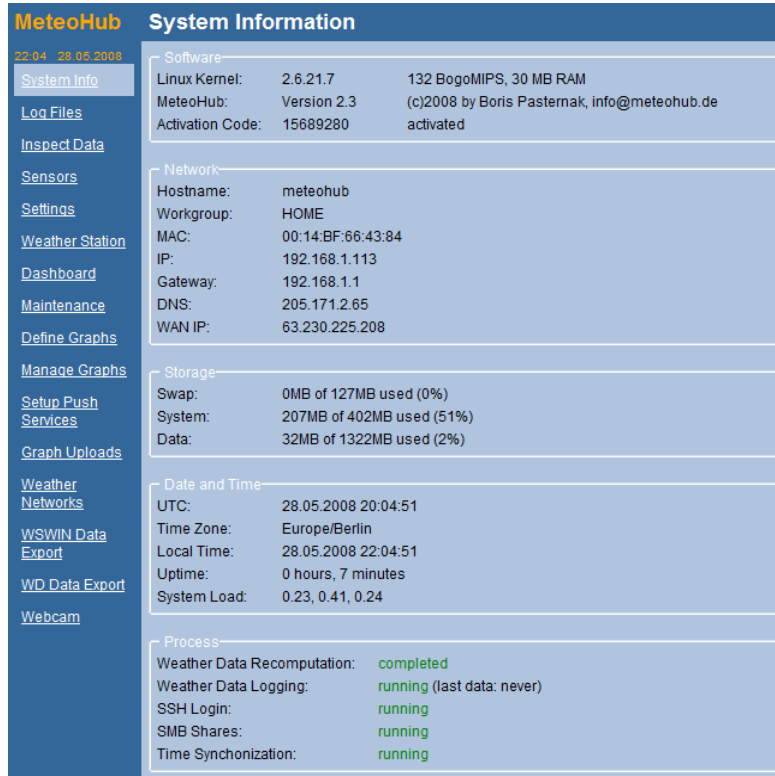
Username: meteohub

Password: meteohub

6 System Info

From the Menu Bar, select **System Info**. Record the **Mac Address and System-ID** for warranty purposes.

From the Menu Bar, select **Maintenance**. Record the **Activation Code** for warranty purposes.



MeteoHub System Information
 22:04 28.05.2008

Software
 Linux Kernel: 2.6.21.7 132 BogoMIPS, 30 MB RAM
 MeteoHub: Version 2.3 (c)2008 by Boris Pasternak, info@meteohub.de
 Activation Code: 15689280 activated

Network
 Hostname: meteohub
 Workgroup: HOME
 MAC: 00:14:BF:66:43:84
 IP: 192.168.1.113
 Gateway: 192.168.1.1
 DNS: 205.171.2.65
 WAN IP: 63.230.225.208

Storage
 Swap: 0MB of 127MB used (0%)
 System: 207MB of 402MB used (51%)
 Data: 32MB of 1322MB used (2%)

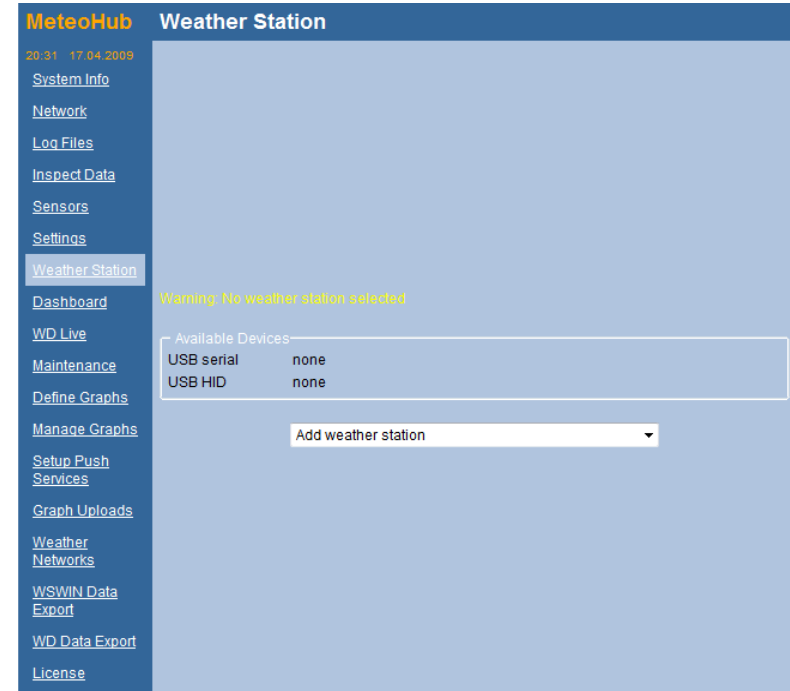
Date and Time
 UTC: 28.05.2008 20:04:51
 Time Zone: Europe/Berlin
 Local Time: 28.05.2008 22:04:51
 Uptime: 0 hours, 7 minutes
 System Load: 0.23, 0.41, 0.24

Process
 Weather Data Recomputation: **completed**
 Weather Data Logging: **running** (last data: never)
 SSH Login: **running**
 SMB Shares: **running**
 Time Synchronization: **running**

Figure 3

7 Weather Station Settings

From the side Menu bar, select **Weather Station**.
 Select your weather station type and then **Save**.



MeteoHub Weather Station
 20:31 17.04.2009

Warning: No weather station selected

Available Devices:

USB serial	none
USB HID	none

Add weather station

Figure 4

Name: Enter any name for your weather station (optional). This is helpful if you have more than one weather station.

Type of Connection: Choose the USB and the type of USB connection (example, USB HID) if applicable. You will be prompted for the type of USB connection if your weather station has multiple revisions.

For other non-critical settings on this page, visit www.meteohub.de to download the full manual. Select **Save** when complete.

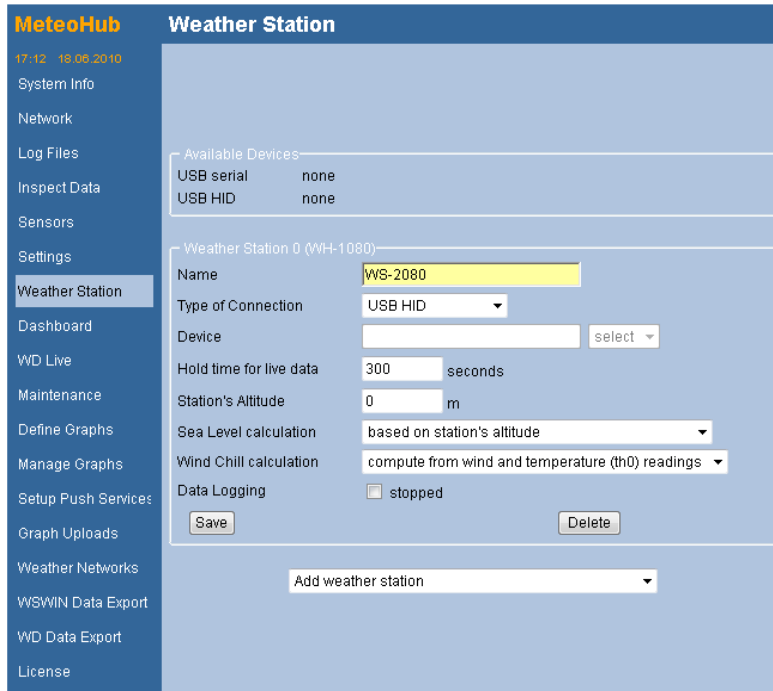


Figure 5

8 Sensor Settings

From the Menu Bar, select **Sensors**. Select the appropriate sensors for your system and add any additional sensors not listed.

Entering a **Name** for your sensor is optional.

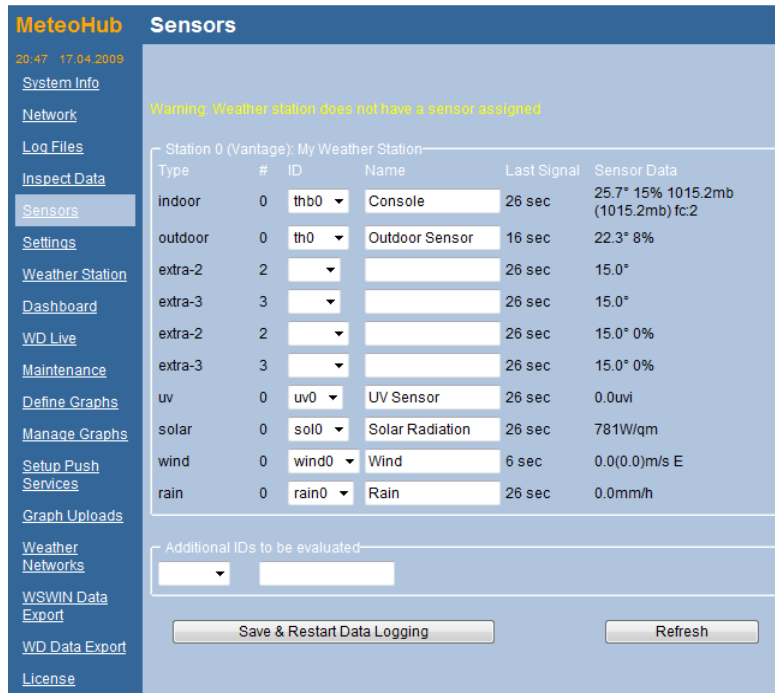
In general, weather stations have the following default sensor IDs:

Type	ID	Description
Indoor	thb0	t=temperature (indoor) h=humidity (indoor) b=barometer 0=no specific channel number Most weather stations have the indoor temperature, humidity and barometer built into the console.
Outdoor	th0	t=temperature (outdoor) h=humidity (outdoor) 0=no specific channel number All of the weather stations include an outdoor temperature and humidity sensor. The default is no channel number.
UV	uv0	uv=ultra-violet radiation 0=no specific channel number Most weather stations do not include a UV sensor and is optional.
Solar	sol0	sol=solar radiation 0=no specific channel number Most weather stations do not include a Solar Radiation sensor and is optional.
rain	rain0	rain=rain gauge 0=no specific channel number
wind	wind0	wind= anemometer 0=no specific channel number

Note that you can define multiple channel numbers if your weather station has more than one of each sensor (example, channel 1,2,3 outdoor temperature, or th1, th2, and th3). In most cases, these sensors are optional.

For some weather stations, this may take a while for the sensors to report in.

website, please reference the MeteoHub user manual (referenced in the appendix).



MeteoHub Sensors

20:47 17.04.2009

System Info
 Network
 Log Files
 Inspect Data
Sensors
 Settings
 Weather Station
 Dashboard
 WD Live
 Maintenance
 Define Graphs
 Manage Graphs
 Setup Push Services
 Graph Uploads
 Weather Networks
 WSWIN Data Export
 WD Data Export
 License

Warning: Weather station does not have a sensor assigned

Station 0 (Vantage): My Weather Station

Type	#	ID	Name	Last Signal	Sensor Data
indoor	0	thb0	Console	26 sec	25.7° 15% 1015.2mb (1015.2mb) fc:2
outdoor	0	th0	Outdoor Sensor	16 sec	22.3° 8%
extra-2	2			26 sec	15.0°
extra-3	3			26 sec	15.0°
extra-2	2			26 sec	15.0° 0%
extra-3	3			26 sec	15.0° 0%
uv	0	uv0	UV Sensor	26 sec	0.0uvi
solar	0	sol0	Solar Radiation	26 sec	781W/qm
wind	0	wind0	Wind	6 sec	0.0(0.0)m/s E
rain	0	rain0	Rain	26 sec	0.0mm/h

Additional IDs to be evaluated:

Save & Restart Data Logging Refresh

Figure 6

9 Weather Networks

Once all of the sensors have reported in, Select **Weather Networks**.

The following example details the steps for registering your weather station with Weather Underground. For more detailed information on publishing to other servers, including your own

10 Weather Underground Registration

1. To sign up your station with Weather Underground, visit: <http://www.wunderground.com/wxstation/signup.html>
2. Enter your Weather Underground Station ID and Password.
3. Select the Weather Underground checkbox.
4. Enable rapid fire to update up to the second data.
5. Select **Save**
6. Enter the appropriate sensors you entered on the Sensor page for reporting to the weather servers. If the sensor list is not displayed, make sure you select **Save** first.
7. Select **Save to complete the registration**.

MeteoHub Upload of local weather data to Weather Networks

21:31 17.04.2009
 System Info

Network
 Log Files
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 WD Live
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 Weather Networks
 WSWIN Data Export
 WD Data Export
 License

Scheduler for upload of data for Weather Networks has been setup.

Selection of Weather Networks:

Weather Network	Additional Information
<input type="checkbox"/> HETWEERACTUEEL	file=heweeraetueel.txt
<input type="checkbox"/> Wetterpage24	file=wetterpage24.txt, date=time="standard"
<input type="checkbox"/> Wetterpool	file=wp_werte.txt, mode=WSWIN
<input type="checkbox"/> Reglowetter	ID <input type="text"/>
<input type="checkbox"/> Wetterspiegel	ID <input type="text"/> xt
<input type="checkbox"/> Meteoclimatic	ID <input type="text"/> .txt, date=CET
<input type="checkbox"/> CWOP	ID <input type="text"/>
<input type="checkbox"/> APRS	ID <input type="text"/> Server :14590#-1
<input type="checkbox"/> WEDAAL	ID <input type="text"/> Password <input type="text"/>
<input type="checkbox"/> Windfinder	ID <input type="text"/> Password <input type="text"/>
<input type="checkbox"/> Sauerlandwetter	ID <input type="text"/> Password <input type="text"/>
<input type="checkbox"/> AWEKAS	ID <input type="text"/> Password <input type="text"/>
<input type="checkbox"/> Wetterarchiv	ID <input type="text"/> Password <input type="text"/>
<input type="checkbox"/> HAMWeather	ID <input type="text"/> Password <input type="text"/>
<input checked="" type="checkbox"/> Weather Underground	ID KAZPHOEN11 Password *****

Weather Underground in "rapid fire" mode. Frequency: every 5 seconds

WeatherBug ID

Selection of sensors to be used:

Outdoor Temperature	th0 (Outdoor Sensor)	Pressure	thb0 (Console)
Outdoor Humidity	th0 (Outdoor Sensor)	Wind	wind0 (Wind)
Dew Point	th0 (Outdoor Sensor)	Rain	rain0 (Rain)
UV Index	uv0 (UV Sensor)	Solar	sol0 (Solar Radiation)
Indoor Temperature	thb0 (Console)		
Temp. #2	<input type="text"/>	Temp. #3	<input type="text"/>
Temp. #4	<input type="text"/>	Temp. #5	<input type="text"/>
Temp. #6	<input type="text"/>	Temp. #7	<input type="text"/>

Frequency of Updates:
 Update every 5 Minutes

Upload data for Weather Networks via FTP

Save

Figure 7

MeteoHub Maintenance

01:10 19.05.2009

System Info
 Network
 Log Files
 Inspect Data
 Sensors
 Settings
 Weather Station
 Dashboard
 WD Live
 Maintenance
 Define Graphs
 Manage Graphs
 Setup Push Services
 Graph Uploads
 Weather Networks
 WSWIN Data Export
 WD Data Export
 License

Authorization

New Password
 New Password
 Activation Code 27905120 Save

Manage Settings

Restore Settings Load File Browse...
 Backup Settings Save File
 Reset Settings Reset
 Application Data Backup Restore

System Control

Aggregated Weather Data Recompute
 Data Logging Process Start Stop
 MeteoHub System Reboot Shutdown
 Scheduled Reboot never
 Language File Update

System Maintenance

Clone System Clone Makes a copy of the USB-Stick that drives MeteoHub to a fresh USB-Stick in slot "Disk 1". System shuts down when finished.
 Software Update (Web) Install Browse...
 Software Update (File) Install

Figure 8

11 Power Down Precautions



Note: It is important to perform a graceful shutdown of the WeatherHub2. Failure to perform this procedure when power is removed from the device may corrupt the SD Card.

1. Select the **Maintenance** panel from the menu.
2. Under **System Control, MeteoHub System**, select the **Reboot** button. Carefully watch the blue light on the WeatherHub2. When the blue light flashes off, quickly unplug the WeatherHub2 from power. If you wait too long (you have several seconds to unplug), the system will reboot again.
3. This WeatherHub2 is designed to be an “always on” unit. We do recommend a UPS in the event of a power interruption.

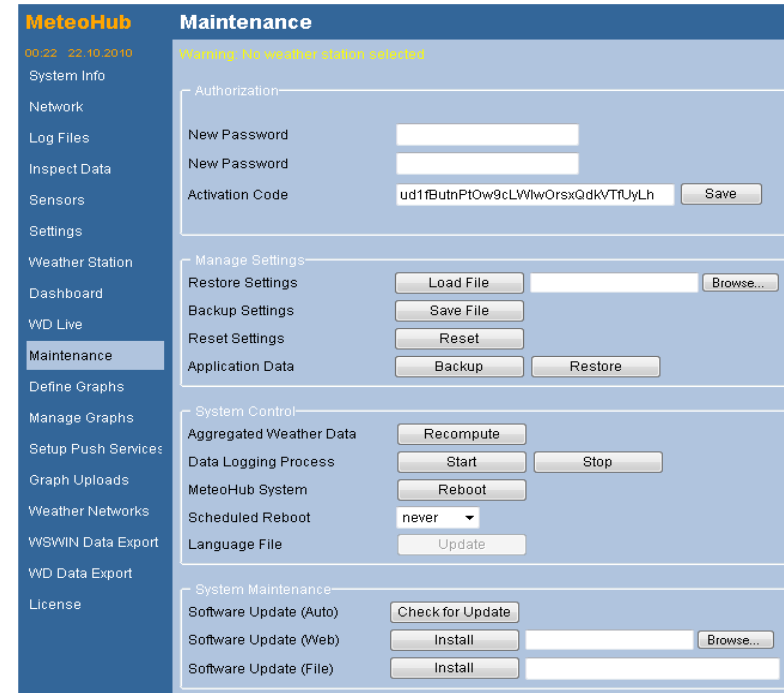


Figure 9

12 More Information

MeteoHub is a Copyright of Boris Pasternak, all rights reserved. Please visit www.meteohub.de for firmware and manual updates.

Note: Ambient Weather has licensed the WeatherHub2 for one weather station. For additional weather station licenses, visit www.meteohub.de

For technical assistance, please email info@meteohub.de



Ambient Weather
 6845 W. Frye Road
 Chandler, AZ 85226
 TEL 480-283-1644 ● FAX 480-346-3381
 www.AmbientWeather.com

Questions or comments about this manual? We are always striving to improve our documentation. Please send your comments to support@ambientweather.com.

13 Liability Disclaimer

The electrical and electronic wastes contain hazardous substances. Disposal of electronic waste in wild country and/or in unauthorized grounds strongly damages the environment.

Reading the "User manual" is highly recommended. The manufacturer and supplier cannot accept any responsibility for any incorrect readings and any consequences that occur should an inaccurate reading take place.

This product is designed for personal use as indication of weather conditions. This product is not to be used for medical purposes or for public information.

The specifications of this product may change without prior notice.

This product is not a toy. Keep out of the reach of children.

No part of this manual may be reproduced without written authorization of the manufacturer.

Ambient, LLC WILL NOT ASSUME LIABILITY FOR INCIDENTAL, CONSEQUENTIAL, PUNITIVE, OR OTHER SIMILAR DAMAGES ASSOCIATED WITH THE OPERATION OR MALFUNCTION OF THIS PRODUCT.

14 Warranty Information

Ambient, LLC provides a 1-year limited warranty on this product against manufacturing defects in materials and workmanship.

This limited warranty begins on the original date of purchase, is valid only on products purchased and only to the original purchaser of this product. To receive warranty service, the purchaser must contact Ambient, LLC for problem determination and service procedures.

Warranty service can only be performed by Ambient, LLC. The original dated bill of sale must be presented upon request as proof of purchase to Ambient, LLC.

Your Ambient, LLC warranty covers all defects in material and workmanship with the following specified exceptions: (1) damage caused by accident, unreasonable use or neglect (lack of reasonable and necessary maintenance); (2) damage resulting from failure to follow instructions contained in your owner's manual; (3) damage resulting from the performance of repairs or alterations by someone other than an authorized Ambient, LLC authorized service center; (4) units used for other than home use (5) applications and uses that this product was not intended.

This warranty covers only actual defects within the product itself, and does not cover the cost of installation or removal from a fixed installation, normal set-up or adjustments, claims based on misrepresentation by the seller or performance variations resulting from installation-related circumstances.

