

Tribe Hub

Installation and user manual

Read all instructions carefully before use and keep for future reference

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Document information

Version control




Date	Version number	Description	Issued by
06/12/2019	1.0	Tribe Hub Installation & User Manual	Lightsource Labs Holdings Ltd

Document purpose

To provide installation and commissioning instructions for the Tribe Hub.

Symbols used and their meanings

Important information has been highlighted throughout this section using symbols and warning notices.

Symbol	Meaning
	Warning
	See relevant section
	Take note of this information

Warning notices

Hazard level	Consequences	Likelihood
 DANGER	Death/serious injury (irreversible)	Immediate risk
 WARNING	Death/serious injury (irreversible)	Potential risk
 CAUTION	Minor injury (reversible)	Potential risk
 DAMAGE	Damage to property	Potential risk

Contact

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1 Safety instructions

1.1 Intended use

- The Tribe Hub is intended for the monitoring of energy usage in your home. DO NOT use this product for any purpose other than that for which it is intended.
- The Tribe Hub is suitable for indoor use only.
- The Tribe Hub is not intended for mobile use such as in vehicles.

1.2 Installation safety instructions

- Read all instructions before installing the Tribe Hub.
- Ensure cardboard packaging and transport securing devices etc. have been removed completely.

1.2.1 Installation recommendation



The tasks described in this manual may be performed by **Tribe registered persons** who must have the following certified training and knowledge:

- Training to operate the Tribe Hub.
- Training of the installation, commissioning and use of electrical devices.
- Knowledge of all applicable standards and directives within the state/country the product is to be installed in.
- Knowledge and adherence to this manual and all the safety precautions specified within.

1.2.2 Electrical safety



- There is a risk of electric shock if the system is installed or serviced without disconnecting the electrical supply.
- Always switch off the mains electrical supply before installation.
- It is recommended to have the electrical connections inspected regularly and this remains solely the client's responsibility to ensure electrical safety.
- All electrical connections must be checked when the system is prepared for first-time use to ensure cables are installed correctly and connections are made properly.
- 220 – 240V AC (single-phase) is required. Maximum supply fuse rating of 6A Miniature Circuit Breaker (MCB) and local isolation point to the Tribe Hub, suitable rated for the supply is required.



- Always comply fully with the wiring regulations and laws within the local state/country.
- The unit must be wired behind an appropriate circuit breaker with overcurrent protection.

1.2.3 Installing the Current Transformers (CTs)



- DO NOT install CTs when current is flowing in the sensed circuit.
- Always terminate the CT cable in the correct Tribe Hub port prior to energising a supply.
- It is best to install, change and/or alter any CT with the Low Voltage apparatus isolated.

1.2.4 Site and environment



To prevent hazards that arise from the installation site and environment, the following rules must be observed:

- The location for installation must comply with operating conditions requirements:
 - Working temperatures must not exceed 0°C – 50°C / 32°F – 122°F.
 - The atmosphere must not be toxic or potentially explosive.
 - The floor must be dry to reduce the risk of accidents.
 - There must be sufficient airflow.
 - The location must not be in direct sunlight.
- A minimum space of 100mm is required in all directions.
- Avoid locations in close proximity to other building services.
- DO NOT mount on flammable construction materials or in areas with highly flammable materials.



1.3 Operation safety instructions

WARNING

- Read all instructions before installing or using the Tribe Hub.
- Children shall not install or operate the Tribe Hub.
- DO NOT make changes to the system e.g. removing parts or fitting unapproved parts.
- DO NOT use the product if damaged.
- DO NOT use damaged current transformers or cables.

1.4 Servicing and repair safety instructions

WARNING

- DO NOT attempt to open, repair or service any parts.
- Only the manufacturer may open and service equipment and replace components.
- Install and operate equipment only as specified by the manufacturer.
- Unauthorised or improper installation, tampering, replacement of components, cleaning or operation may damage the system, impair functionality and put persons at risk.

1.5 Maintenance safety instructions

DANGER

- Clean the outside of the equipment only. Use a dry, clean cloth.
- DO NOT use abrasive agents or solvents to clean the product.
- DO NOT immerse any parts in water or any other liquid.
- DO NOT expose the product to heat, flame or extreme cold or place in direct sunlight.

SAVE THESE INSTRUCTIONS



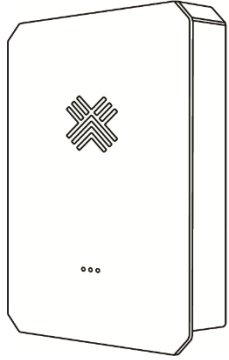
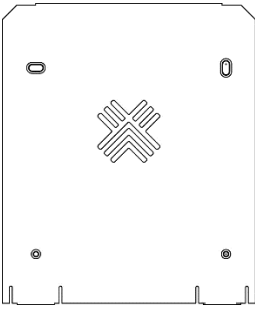
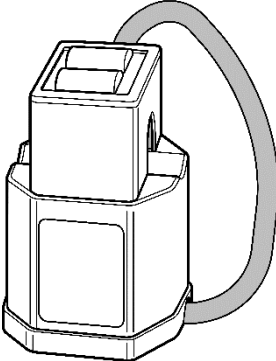
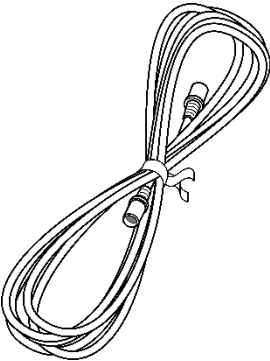
2 Product overview

The Tribe Hub is an energy monitoring solution. It is designed for easy installation, operation and maintenance. Once installed, the Tribe Hub is configured through a mobile app that is downloadable from the Google Play Store or Apple App Store.

2.1 Grid connections

The Tribe Hub is compatible with single-phase grid connections.

2.2 What is included with the Tribe Hub solution?

Components			
			
Tribe Hub	Mounting bracket	Current Transformer (x6)	Extension cables (x6)

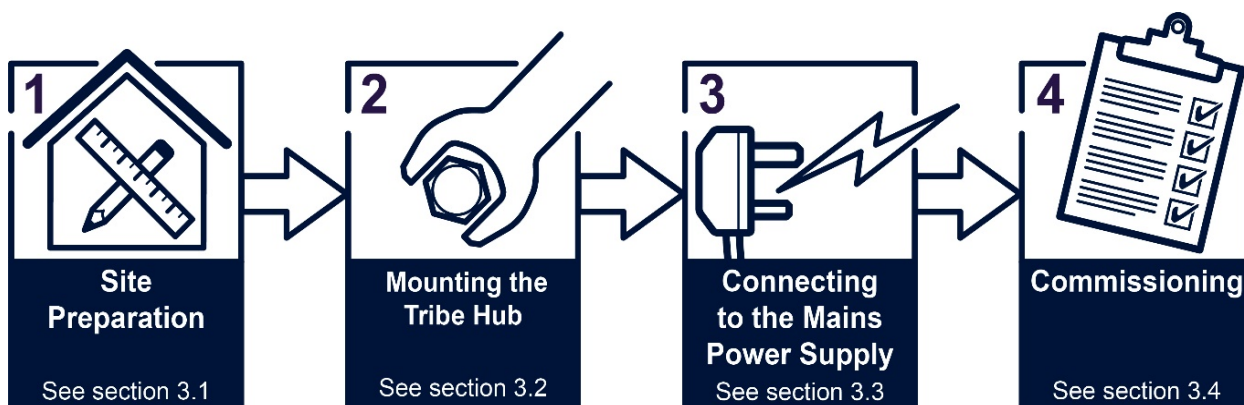


2.3 Technical specifications

Item	Details
Dimensions	210 x 266 x 46mm
Weight	1519g
Working temperature	0°C – 50°C
Storage temperature	-20°C – 80°C
IP rating	Intended for Indoor use only
Electrical supply characteristics	220 – 240V AC (single-phase)
Connectivity	Ethernet 100BASE-T RS485 Wi-Fi 2.4 GHz 4G
Compliance with Standards and Directives	CE, RCM, RoHS-II



3 Installation process



- The Tribe Hub requires an AC connection from a local isolation point and must meet local codes.
- The supply must be by a suitably selected cable with an appropriate cross-sectional area.
- The Tribe Hub and Current Transformers (CTs) should be installed within 1.5m-2m of the main distribution board.
- To optimise performance, avoid installing the Tribe Hub in locations that are exposed to the sun for extended periods.
- DO NOT install the Tribe Hub in locations with sustained high or low temperatures.

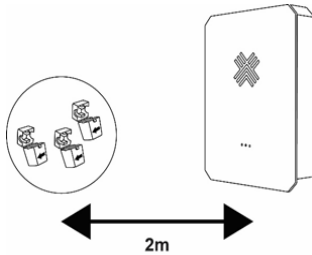


3.1 Site preparation

3.1.1 Unpacking

Remove all packaging and have the Tribe Hub, Current Transformers and any cables supplied ready for installation. Ensure that all components are undamaged. If a component appears damaged in any way, do not install and contact the supplier you purchased the product from with your original proof of purchase for a replacement.

3.1.2 Location requirements



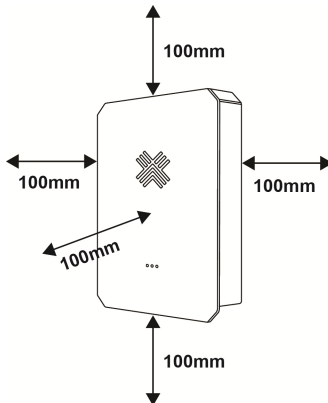
Mount at a distance of 1.5-2 metres from the point of grid connection to the property.

The Tribe Hub is suitable for indoor installation only.

Note:

- Maximum CT cable length must not exceed **3m** (1m plus 2m extension).
- The communication cable between the Tribe Hub and inverter should not exceed **100m**.

3.1.3 Minimum space requirement



A minimum space of **100 millimetres** is required in **all directions**.

Avoid locations in close proximity to other building services.

3.1.4 Temperature requirement



Working temperatures must not exceed **0°C – 50°C / 32°F – 122°F**.

3.1.5 Electrical requirements



220 – 240V AC (single-phase) supply required. Maximum supply fuse rating of 6A Miniature Circuit Breaker (MCB) and local isolation point to the Tribe Hub, suitable rated for the supply is required.



Comply fully with the wiring regulations and laws within the local state/country.

3.2 Mounting the Tribe Hub

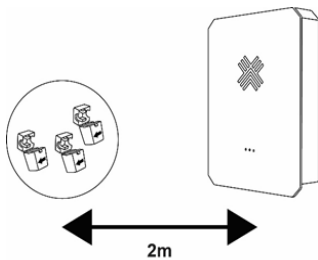


DO NOT mount on flammable construction materials, in areas with highly flammable materials, or in any potentially explosive environments.

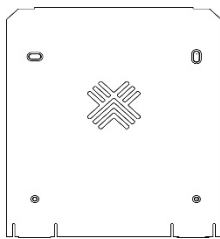
DO NOT mount the Tribe Hub horizontally or upside down.



Always read the Safety instruction in section 1 before installing Tribe. Installation must be completed by a competent person who is registered with Tribe. See **section 1.2.1** for more information.

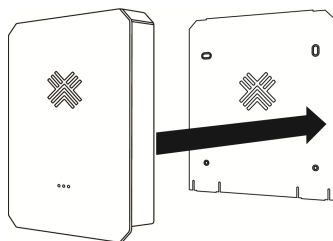


1. Locate the Tribe Hub within 1.5-2 meters of the CT allocation so that all CTs can be successfully installed.



2. Use the supplied mounting bracket plate only.

Use 4 screws and wall plugs for mounting. They must be at least 6mm in diameter.



3. Mount the Tribe Hub on a vertical, suitably solid surface, free from defects.

At least 100mm clearance is required in all directions for installation.

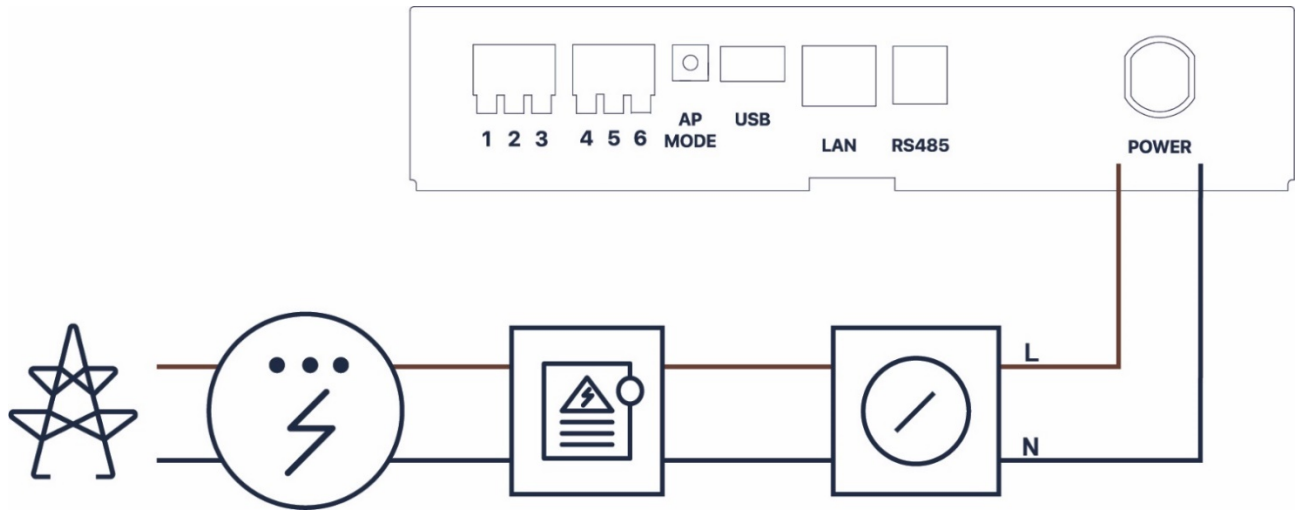
Once mounted, the Tribe Hub is ready for connecting to the mains power supply – see section 3.3.

3.3 Connecting to the mains power supply

Connect the mounted Tribe Hub to the mains voltage via a local isolation point in accordance with the connection diagram supplied.

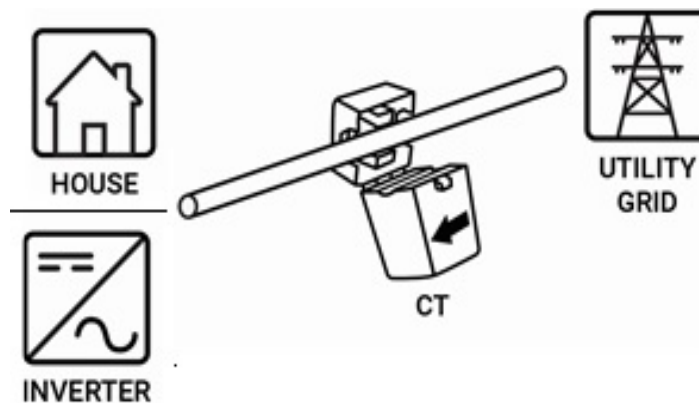


The supply fuse rating should not be greater than a 6A Miniature Circuit Breaker (MCB) and local isolation point to the Tribe Hub, suitable rated for the supply and as per the supply diagrams below is required.



Single-phase supply

Once connected to the mains, connect each of the required CTs. The arrow on each CT must face away from the electrical grid supply for all allocations, as shown.



CT Connections



It is important to check that all CTs are operational and measuring the correct power values. Measuring loads do not automatically mean that the power values are correct. Incorrect installation of the CT could lead to incorrect power values and false monitoring of data.



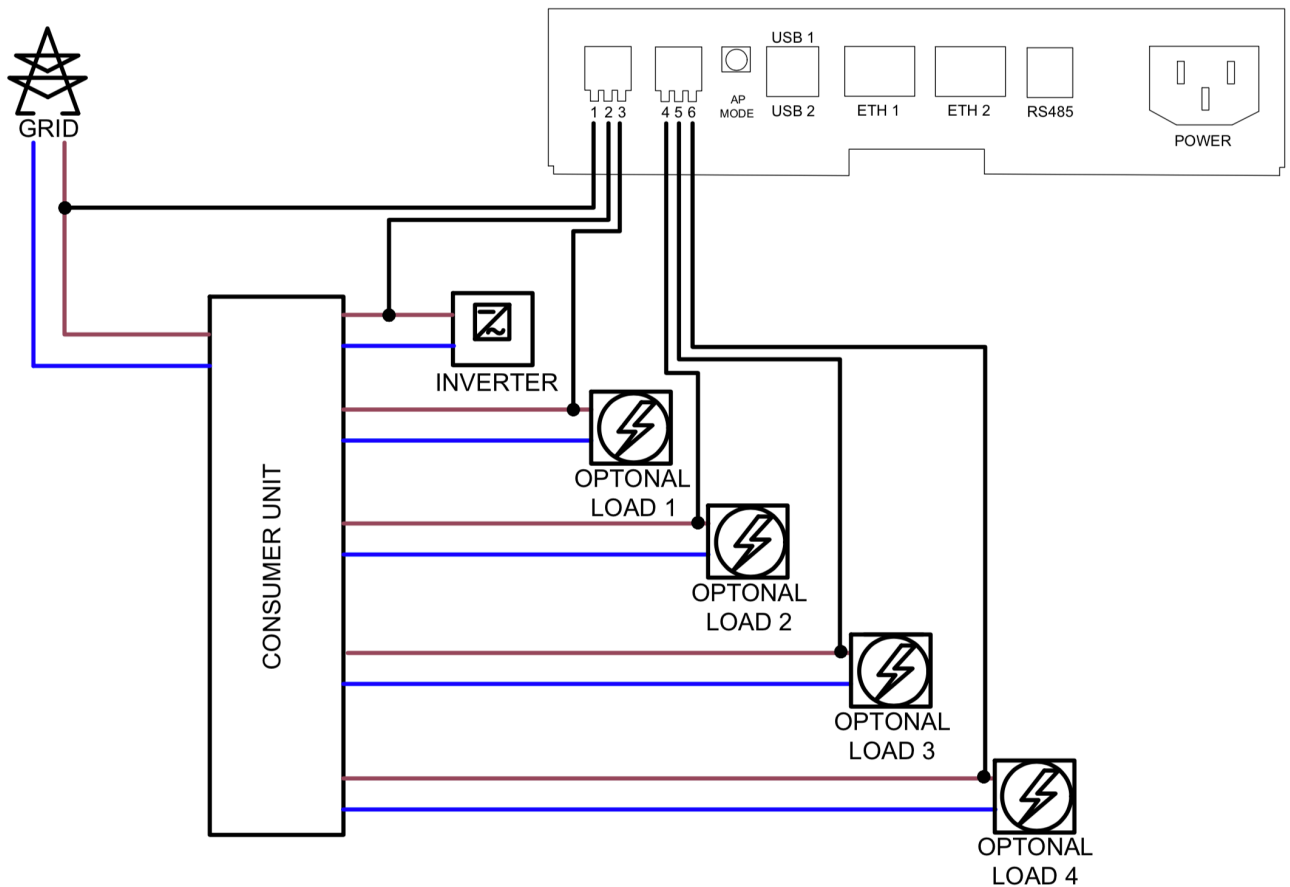
Safety notes



- All electrical connections must be checked when the Tribe Hub is prepared for first-time use to ensure cables are installed correctly and connections are made properly.
- The installation must be performed according to the national safety regulations and completed by a competent tribe registered electrician.

3.3.1 Installation and connection diagram

Connect according to the relevant diagram below for the installation type.



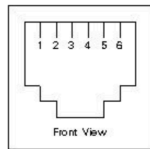
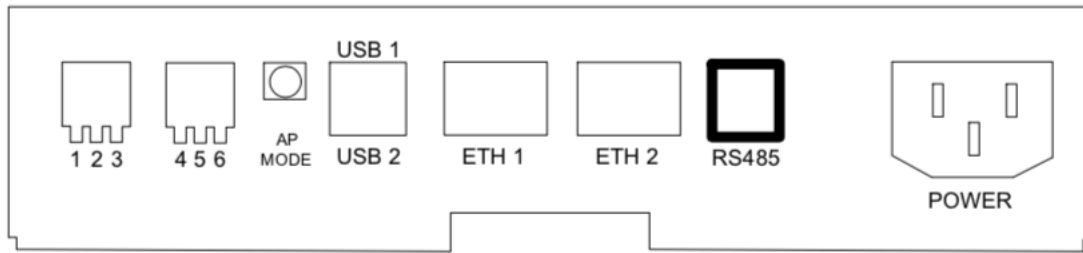
Single-phase diagram with 6 CTs

3.4 Connection to inverters

Check with Tribe at Go-Tribe.com for inverter manufacturer compatibility before installation of a Tribe Hub.

Communication connection between the Tribe Hub and inverter is made via either the "ETH 1" LAN (RJ45) or "RS485" RS485 (RJ11) ports.





Pin No.	Function
1	N/A
2	N/A
3	RS_485 A
4	RS_485 B
5	N/A
6	N/A

Invertor connections



3.5 Commissioning

To commission the system, it is necessary to install and follow the step-by-step guide in the **Tribe Installer App** on your mobile phone or tablet.



See section 4 for details on downloading the Tribe Installer App.

3.5.1 Installing the Current Transformers (CTs)

Attach CT clamps on a length of straight cable and hold in place with plastic ties.

In particular if you are using multiple optional load installations, colour-code or label each CT to identify the correct port for each terminal.

DANGER

- **Risk of electrocution: DO NOT** install CTs when current is flowing in the sensed circuit.
- **Risk of electrocution:** Always terminate the CT cable in the correct port prior to energising a supply.

WARNING

- **Low Voltage (LV) apparatus:** It is best to install, change or alter any CT with the LV apparatus isolated.
- **Noise:** If there is a buzzing noise from the CT, it has not been terminated correctly or there is a break in the wiring. Isolate the supply and then check the CT and the wiring.
- **Polarity:** All arrows on the CT clamps **must** point away from the grid supply. The installer App will validate and confirm this. It is also recommended to use a clamp meter as well.

3.5.2 Testing the grid

Use a clamp meter to confirm the values and flow.

When testing the grid:

1. Power flow should display as a positive value when generation equipment is switched off, CT clamps are securely installed and arrows on the CTs are pointing away from the electrical grid supply.
2. The positive value should increase when placing a demand load on the supply.
3. If there is not a positive reading, then one or more CT arrows are not pointing away from the grid supply.



3.5.3 Testing generation equipment/optional loads

Use a clamp meter to confirm the values and flow. Testing generation equipment should display a negative value in the Tribe App. Testing optional loads should display a positive value.



Risk of electrocution: Switch off generation equipment first!

1. **Switch the generation equipment off.** Securely install a CT clamp with the arrow pointing away from the grid supply.
2. **Switch the generation equipment on.** In the Tribe App, the power flow should display:
 - ✓ **Generation Equipment:** A negative (-) value
 - ✓ **Optional Loads:** A positive (+) value
3. The CT arrow is **not** pointing away from the grid supply and must be corrected if the Tribe App displays:
 - ✗ **Generation Equipment:** A positive (+) value
 - ✗ **Optional Loads:** A negative (-) value



4 Installing and using the Tribe App

The Tribe App is a necessary component of the Tribe Hub, including to commission the system.

The App can be downloaded from the Google Play Store for Android phones or from the Apple Store for iOS phones. Search for 'Tribe Installer App'.

When the App has been installed, ensure any updates available have also been installed. Then sign in using your registration details and follow the instructions provided.



5 Maintenance

5.1 General maintenance

The Tribe Hub is maintenance free. However, if a fault occurs or if you believe the hardware and/or software are not performing correctly, then please contact the original installer.

Use of unauthorised third parties will void your warranty.

5.2 Cleaning

- Clean the outside of the equipment only. Use a dry, clean cloth.
- DO NOT use abrasive agents or solvents to clean the product and associated parts.
- DO NOT immerse any parts in water.

5.3 Changing location

Changing location of the Tribe Hub is not recommended. Should this become necessary, contact the original installation company for any requirements regarding relocation of the unit or any of the associated accessories.

 **DAMAGE**

- Removal of or tampering with any components by unauthorised third parties may cause damage and detrimental changes to the Tribe Hub. This will also void the warranty.



5.4 Troubleshooting

The table below lists the most common problems and the solutions to them.

Problem	Possible Cause	Possible Solution
The system does not power on.	Supply cable is incorrectly connected to the Tribe Hub.	Verify that the supply cable is connected and check the connections are as per the connection diagram in section 3.3.1.
	Switched fuse spur and/or circuit breaker is not powered on.	Check fuses and power on the switched fuse spur and/or circuit breaker.
No real time measurements in one or more CT meters.	CT is not connected correctly to the CT meter.	Check the cable connecting the CT to the meter.
	CT is not closed fully.	Close the CT correctly.
The meter measurement values are incorrect.	CT is pointing in the wrong direction.	Adjust the CT to point in the correct direction as shown in the connection diagram in section 3.3.1.
	CT cables are connected to the wrong terminals of the meter.	Adjust the CT to point in the correct direction as shown in the connection diagram in section 3.3.1.
	CT is not fitted to the correct supply cable.	Check CT and fit to the correct supply cables as shown in the connection diagram.
No IP address shown in the Tribe App	The monitor had a previously working internet connection but has now lost that connection to the internet.	Power cycle the Tribe Hub by switching the device off and on again.
		If the power cycle does not solve the issue, re-enter the WiFi details within the Tribe App.
	Internet connection is down.	Check and resolve the internet connection.
An error is shown when saving the WiFi details.	The WiFi details are incorrect.	Check the WiFi details with the customer and update the WiFi settings within the setup page.
	The internet connection is down.	Check the internet connection and power cycle the Tribe Hub.
	Firewall rules are blocking communication.	Check the firewall rules.



5.5 Support contact details

If a problem cannot be solved then please call support using the details below:

United Kingdom:

Lightsource Labs Holdings Ltd.
Translation & Innovation Hub
Imperial College
80 Wood Lane
London W12 0BZ

Australia:

Lightsource Labs Australia PTY Ltd.
Level 10
420 George Street
Sydney
NSW 2000
au@go-tribe.com



6 Guarantee

6.1 Tribe Hub

Lightsource Labs Australia Pty Ltd (ABN 22 625 305 295) trading as Tribe warrants that your Tribe Hub will operate in accordance with its published specifications for a period of five (5) years after the installation of the Tribe Hub, as evidenced by the date on your invoice from a Registered Installer (defined below).

6.2 Authorised channel partners and registered installers

Tribe will honour the warranty if:

- You purchased your Tribe Hub from Tribe directly or through an authorised Channel Partner.
- Your Tribe Hub was installed by an installer that has been registered by Tribe (Registered Installer).
- You hold an active subscription to the Tribe Hub.

If any of the above are not satisfied, Tribe will not honour the warranty, which will be considered void.

6.3 Scope of warranty

This warranty applies to your Tribe Hub only. Tribe does not provide any warranty in relation to installation of your Tribe Hub.

6.4 Making a warranty claim

If you believe your Tribe Hub is defective, you may contact Tribe using the contact details below. If Tribe determines, at its sole discretion, that your Tribe Hub requires replacement, a Replacement Authorisation (RA) will be issued.

No Tribe Hub will be accepted as defective without the issue of an RA.

An RA will only be issued under the following conditions:

- You have contacted Tribe and outlined your concerns with your Tribe Hub.
- The Tribe Hub is not functioning within published specifications.
- You or a Registered Installer has made a good-faith effort to troubleshoot any installation problems.
- A Tribe support representative has confirmed in writing that there is a possible defect.

Once an RA is issued, a Tribe support representative or a Registered Installer will visit your premises to inspect your Tribe Hub. At this time, the Tribe support representative or Registered Installer will make an assessment and either fix or replace your Tribe Hub. Any repair or replacement under warranty will be at no charge to you.



6.5 Limitations of warranty

To the extent permitted by law, this warranty is void if your Tribe Hub is found to be:

- Damaged by an extraneous cause such as fire, water, lightning, electrical surge etc.
- Accidentally or intentionally misused, mishandled, abused or neglected
- Not purchased from Tribe directly or from an authorised Channel Partner
- Not installed by a Registered Installer
- Not installed or maintained in accordance with the accompanying documentation
- Modified by someone other than Tribe or an approved representative of Tribe
- Repaired or serviced by someone other than Tribe or an approved representative of Tribe
- Used in a manner or for a purpose for which the Tribe Hub was not intended

If at any time following issue of an RA, we determine that your warranty is void, we may charge you a reasonable fee in respect of any work by us to fix or replace your Tribe Hub.

Except as specifically stated in this document, all conditions, warranties, terms, undertakings, duties, rights or obligations expressed or implied by law (including the Competition and Consumer Act 2010 and Consumer Rights Act 2015, 'Consumer Law'), custom, trade usage or otherwise in any way relating to your Tribe Hub are hereby wholly excluded to the extent permitted by law.

THE FOLLOWING STATEMENT APPLIES IF YOU ARE A 'CONSUMER' UNDER THE CONSUMER LAW:

The benefits given to you in this warranty are in addition to any other rights and remedies you have under the Consumer Law and other laws. Our goods come with guarantees that cannot be excluded under the Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure. By stating these rights, Tribe does not vary or extend the remedies otherwise available to you.

A replacement Tribe Hub may be new or reconditioned.

6.6 Prohibited use

Tribe Hubs are not designed, intended or authorised for use in any applications involving:

- Life-support; or
- Any application in which the failure of the Tribe Hub could create or contribute to personal injury or death.



7 Disposal

As part of Lightsource Labs Holdings' continued commitment to helping the environment, we reserve the right to use quality recycled components to keep down customer costs and minimise material wastage.

Please dispose of packaging carefully and dispose of old products in accordance with the European Directives.

The European Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE) requires that old household electrical appliances must not be disposed of in the normal unsorted municipal waste stream.

Old appliances must be collected separately in order to optimise the recovery and recycling of the materials they contain and reduce the impact on human health and the environment.



The crossed out 'wheeled bin' symbol on the product reminds you of your obligation that when you dispose of the appliance it must be separately collected. Consumers should contact their local authority or retailer for information concerning the correct disposal of their old appliance.





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