

# trio

User manual

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# Welcome

Welcome to your new Trio. You've taken that all important first step towards complete control of your home energy use.

Your Trio will help you manage and visualise your energy – helping you on the way to optimum efficiency and maximum cost savings.

In this document you'll find everything you need to quickly and simply set up and start using your display. You'll also find out more information about how the display works, how it can help you and how you can identify ways to save energy (and money).

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## Status codes

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# Your Trio Display

## What's in the box?

Your Trio package contains the following items:


- Trio Energy Display
- Display stand
- Micro-USB power supply

## Powering the Display

Your Trio Display can be powered using the supplied power supply or with 3 x AAA (R03, LR03) non-rechargeable batteries.

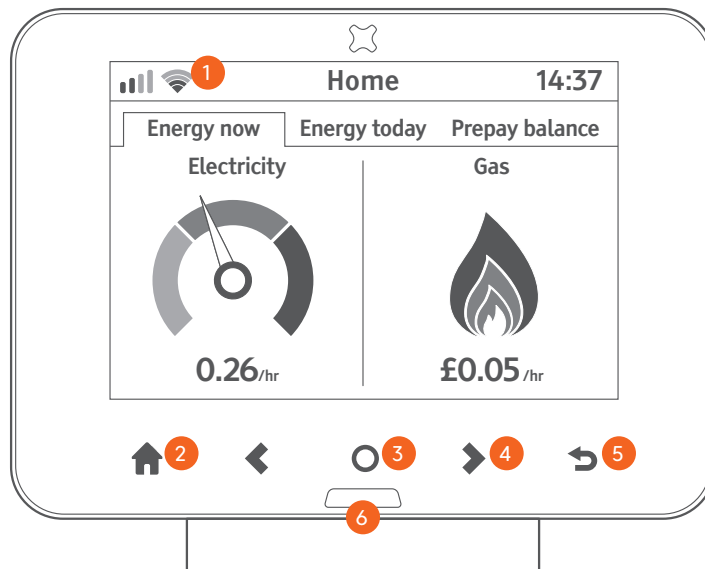
Do not use any other power supply with this Display. The supplied power supply is not suitable for use with any other USB device (not a USB data cable).

It is not recommended to use batteries for a prolonged period.

To replace batteries, slide the stand downwards and then pull it away. Insert the batteries, as marked on the inside case. Re-attach the stand and the Display will show the battery symbol  at the top of the screen.

*Do not use rechargeable batteries in this Display.*

## Energy display overview



- (1) The banner bar allows you to check the smart meter(s) signal strength, and WiFi signal strength (if fitted).
- (2) Press to enter Menu whilst on **Home** screen. Press to return to **Home**.
- (3) Press to select or to switch between options.
- (4) Use the buttons to navigate around the screen and move between **Energy now**, **Energy today** and **Prepay balance** (if applicable) tabs.
- (5) Press to return to the previous screen.
- (6) The LED at the bottom of the Display shows your electricity usage (GREEN for low, AMBER for medium or RED for high).

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# What does it mean?

## See what you're using

Your Trio Display makes your electricity and gas consumption visible, taking the guesswork out of understanding how much your home uses - both right now and historically.

## What is a kWh?

Electrical and gas energy consumption is measured in kilowatt hours (**kWh**) - traditionally known as 'units'.

As items within the home consume energy during the day, the kWh total increases.

A **kW** (or kilowatt) is the rate at which energy is being consumed, so using 1.5kW for 1 hour would result in 1.5kWh of energy consumed.

## It's about now ...

In the same way your car shows how fast your car is travelling, the electricity speedometer on the left of the Home screen shows how much electricity your home is consuming now.

Similarly, the flame shows you how much gas has been consumed within the past 30 minutes.

The electricity speedometer is updated every few seconds and the gas flame every 30 minutes.

To make it even easier to understand the rate of consumption, the Trio can show the rate of consumption in cost per hour (£) and energy or power (kW).

For example, if the Display says £0.15 for the rate of electricity consumption, then this means that if the rate remained the same it would cost 15p for the next hour.

## Less is more

The lower the hourly rate of consumption, the less it will cost and the more you can save.

A typical medium sized house will use approximately 3100 kilowatt hours of electricity per year\*, or approximately 5p per hour.

1 Watt of electricity running 24 hours a day costs around £1.30 a year. Therefore at bedtime, if your display is showing approximately 200 Watts, this will costing appropriately £260 a year. This is approximately 40% of average electricity bill. Reducing this by 70W, would save over £90.

The gas flame should be off when your boiler and cooker have not been used for 30 minutes.

*\*Source: <https://www.ofgem.gov.uk/gas/retail-market/monitoring-data-and-statistics/typical-domestic-consumption-values>*

## How can I use less?

Look for appliances around the home that are not always being used and can be switched off.

Often it's items such as a games console, sound system or even a clock radio in the spare room. Experiment with switching appliances off and see what affect that has on the electricity usage.

Other ways to save include having less water in the kettle (only boil what you intend to use), lowering the temperature on the washing machine, or turn down your thermostat by 1 °C - this could save £75 per year\*.

*\*Source: <http://www.energysavingtrust.org.uk/home-energy-efficiency/energy-saving-quick-wins>*

## What is normal?

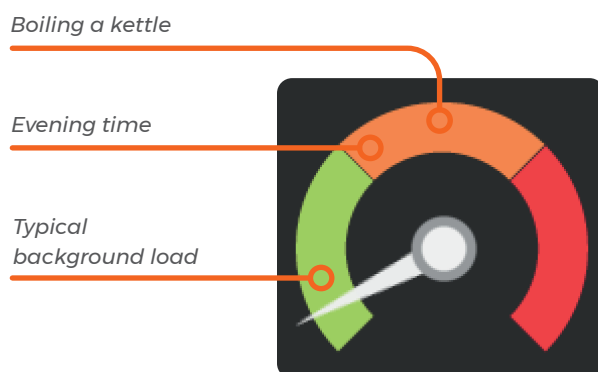
Don't worry if now and again the usage is high - this can be normal.

Your electricity usage varies as things are switched on and off in your house.

Electricity usage can be low (green), medium (orange) or high (red). Boiling a kettle for example will mean for a short period of time your house usage will be medium (orange); in the evening or morning time it might also be medium (orange)- this is perfectly normal.

If you have electric or storage heating, then it is possible to see high usage (red) when the heating is being used.

During other periods the usage should be low (green), especially when you are heading to bed.



Depending on your smart meter, the maximum rate of consumption the dial can show can be adjusted. See 'Advanced' on page 28



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# Getting started

## Meter connection

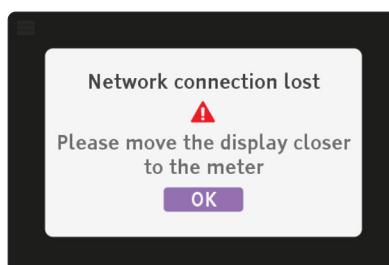
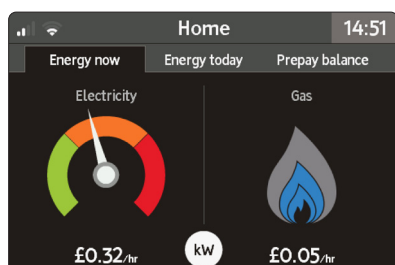
Each time the Display is turned on it will show **Connecting to smart meter...** for up to 5 minutes while the Display connects to the smart meter(s) in your home.



Should the screen show **No Network** then you will need to contact your energy provider to complete the installation.

If the screen shows **Lost Network**, then you may need to move the Display closer to your smart meter(s) to re-establish the connection.

You can check the strength of the signal to the smart meter(s) by looking at the  and  icons in the top left hand corner of the screen



## Connection established

Once your Display has successfully established a connection to your smart meter(s), your Trio will show the current consumption for electricity and recent gas usage.

If your Display loses connection to the smart meter(s), then it will show the alert above. Try moving the Trio closer to the smart meter(s) to re-connect.

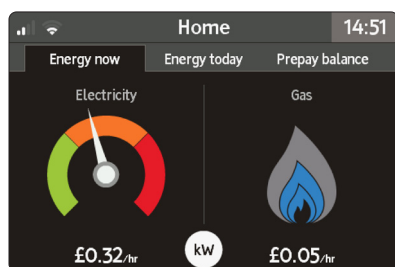
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# Home screen



## Overview

The **Home** screen is broken down into two or three tabs, depending on whether you have electricity or gas in credit or pre-payment mode.

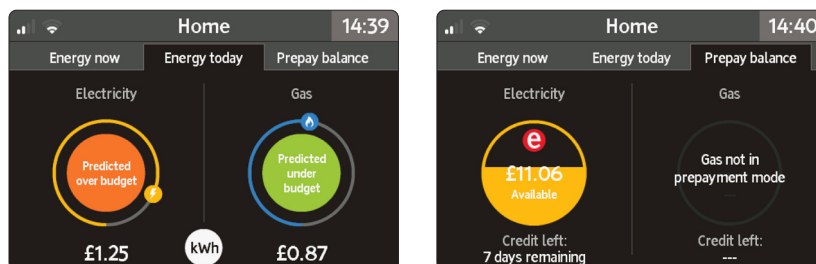
When your Trio is powered on, it will automatically show the **Home** screen once connected to the smart meter(s).



You can also, at any time, press the  button return to the **Home** screen. Your meter and WiFi (where applicable) signal status is shown in the top left of the screen.

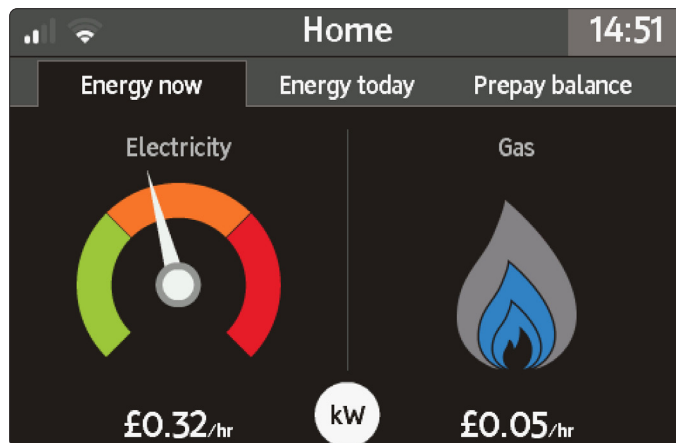
Use the   buttons to switch between the **Energy now**, **Energy today** or **Prepay balance** (when in prepay mode) tabs.

When you next return to the **Home** screen from other screens, the previously selected tab will automatically be shown.




When you next return to the **Home** screen from other screens, the previously selected tab will automatically be shown.


## Energy now



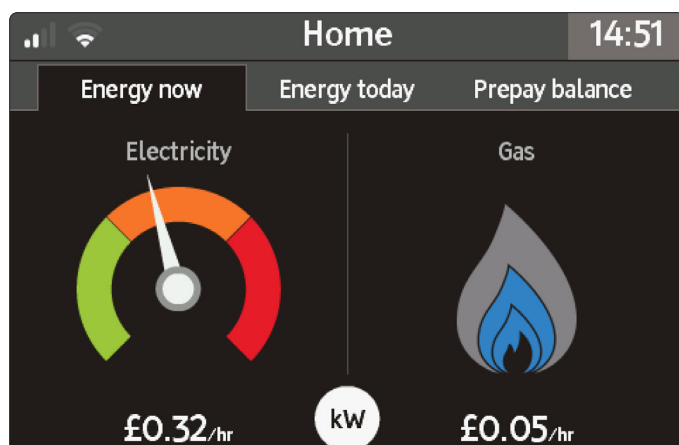
The **Energy now** screen is divided in half, with the left side being about **Electricity** consumption now and the right about **Gas** consumption.

Depending on your smart meter configuration, only the available energy types will be shown - the gas flame will not be shown if you do not have a gas smart meter, for example.

This is the default screen shown when the Display has started up, when the  button has been pressed or when the Display has not been used for a period of time.

Pressing the  button will change the values from being shown in cost as £/hr and power as kW.

## Electricity (left)



The dial on the left (only available when you have an electricity smart meter) shows the current rate of energy use for your home.

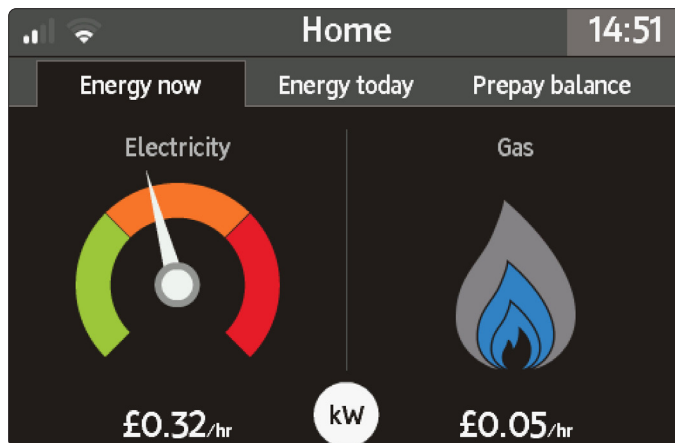
As your home uses more or less energy, the dial will move up and down.

The dial is divided into three zones - green, amber and red. As the dial moves between the zones, the colour of the button on the top of the display will change to match.

This means you can quickly see if your home is using a little or a lot of electricity from a distance or at times when the screen has dimmed or turned off overnight.

The current rate of consumption can be shown in cost as **£/hr** (default) or energy as **kW**.

## Gas (right)

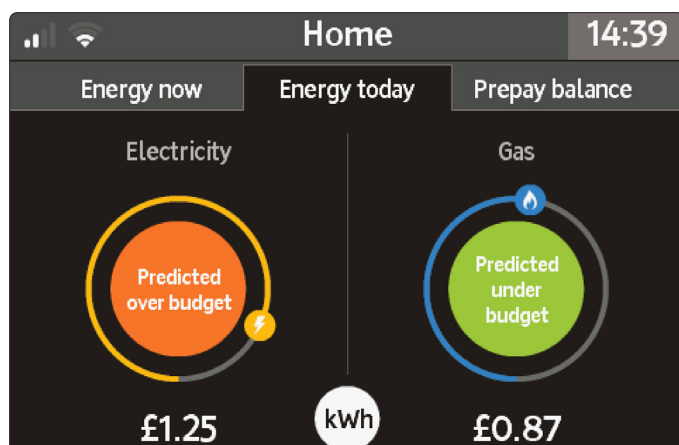


The gas flame indicates the recent consumption rate of gas for the home (where available). The usage readings are taken every half an hour.

As more gas is consumed, the blue flame will increase in size.

Due to readings being taken every half an hour, the flame shows recent gas consumption and may not show when gas is no longer being consumed.

## Energy today



The **Energy today** screen shows the total consumption so far today for **Electricity** and **Gas**.

If you have set a budget for each fuel type (see **Settings**), then the Display will predict - based on previous consumption for the same day of the week - if the total consumption today will be within budget. For example if today is Tuesday we look at the four previous Tuesdays and average out the usage and cost.

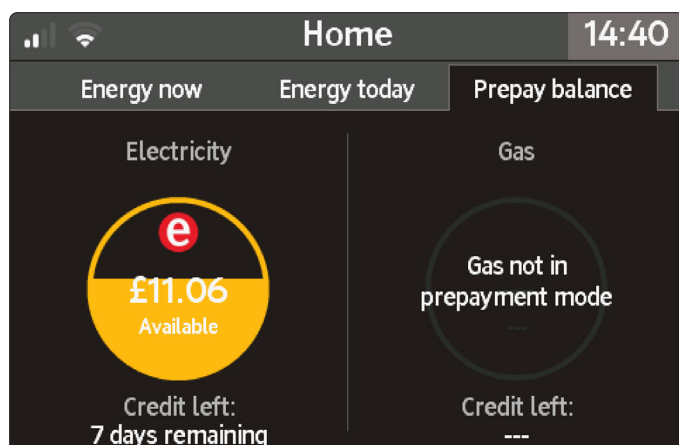
As energy is consumed, the small yellow dot (for electricity) and blue dot (for gas) will orbit around the

budget prediction to show how much of the daily budget has been consumed so far today, starting and ending at the bottom. The total cost shown includes any daily standing charges that form part of your tariff.

The budget prediction is shown in green if predicted to be under budget, amber if over budget is expected or red if the budget has already been consumed.

Press the **○** button to change between total cost and energy. The budget can be set within the **Settings > Budgets** menu.

## Prepay balance



*This screen is only shown if one or more prepayment meters are installed.*

The **Prepay balance** screen shows the current available credit for prepayment meters.

**Electricity** is on the left and **Gas** on the right.

The circle will indicate the credit available (from £20 down to £0) and whether **Emergency credit** is available or in use.

You can change the level at which you'll be notified on screen that your credit is running low under **Settings > Advanced > Low credit setting**.

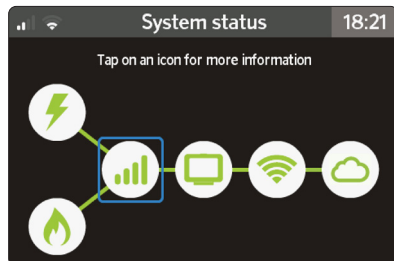
If the grey **e** symbol is shown, you can activate your emergency credit by pressing **⬆ > Prepay > Activate emergency credit**

A green **e** symbol is shown when you have activated emergency credit but it has not yet been used.

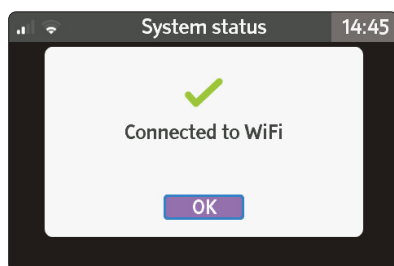
A red **e** symbol is shown when emergency credit is already in use.

## System status

This screen can be accessed via the **Menu**..



Use the ◀ ▶ buttons to select any of the icons and then ○ to view more information on the different parts of the smart metering system.



**The icons show the following:**

- ⚡ Status of the electricity meter (where fitted)
- 🔥 Status of the gas meter (where fitted)
- 📶 Signal status between the Display and the smart meters  
- this is also shown in the top left of the screen
- 💻 This display (always green)

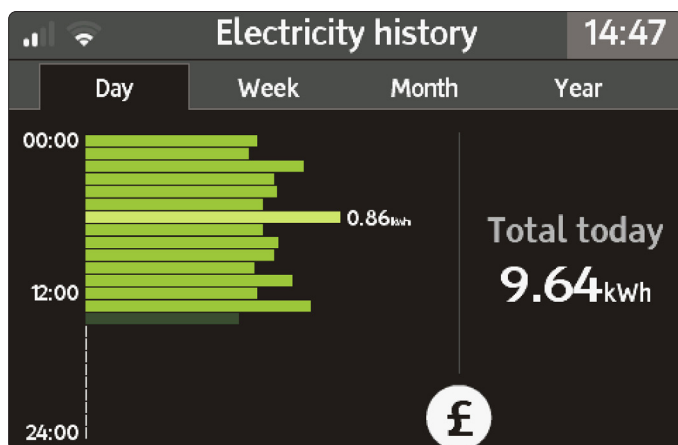
If the optional WiFi module has been fitted, then the following will also be shown:

- 📶 Signal status to the local WiFi network - this is also shown in the top left of the screen
- ☁ Connection status to the Cloud service



# History screens

## Electricity history



By selecting **Electricity usage** from the **Menu** screen, you can see your recent usage.

### Day tab

The screen initially shows the current usage for today in energy (**kWh**), divided in to the 24 hours of the day.

Each bar represents a one hour period and is shown in green. The lightest green bar shows the highest hourly period for today and the darkest green bar shows the current hour or incomplete period.

The highest hourly period (lighter green) will always display the usage for that hour, the figure is shown to the right of the bar (0.86kWh in the example shown above).

Your Display learns your normal usage each day of the week, and this is shown by a dot for each hour.

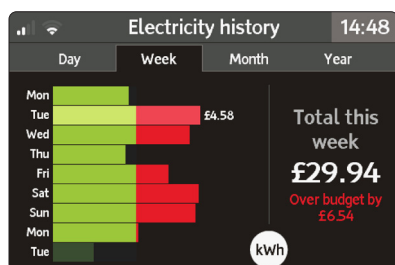
Pressing the **○** button will change the values from being shown in cost as £/hr and energy as kWh.

The total for today is shown inclusive of any daily standing charge. This means at midnight the total may be greater than £0.00, even if no electricity has been used. The bars exclude any daily standing charge.

### Week tab

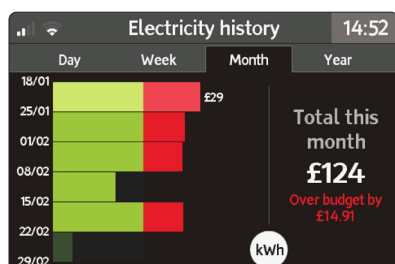
The week tab shows the electricity usage for this week and the previous 8 days. The bars include any daily standing charge.

If a budget has been set (**Settings > Budget**), then when in cost view (£) the days when the budget was exceeded are shown with the extra cost highlighted in red.



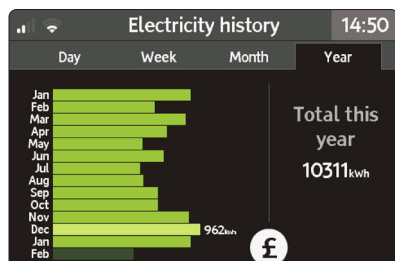
### Month tab

This shows the previous weeks in the same way as the week tab. The bars include any daily standing charge.



### Year tab

The final view is the Year tab which shows the previous 13 months of usage. As with the week and month tabs, you can see months that were above and below the budget. The bars include any daily standing charge.



## Gas history

The same historical views are available for gas consumption.

## Seasonal adjustment

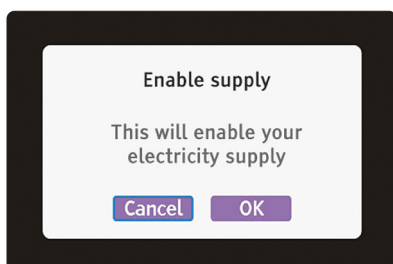
The budgets are seasonally adjusted to take in to account higher energy use during the winter months and less during the summer.

This can be disabled under **Settings > Budget**.

## Prepay (prepayment meters only)

### Enable supply

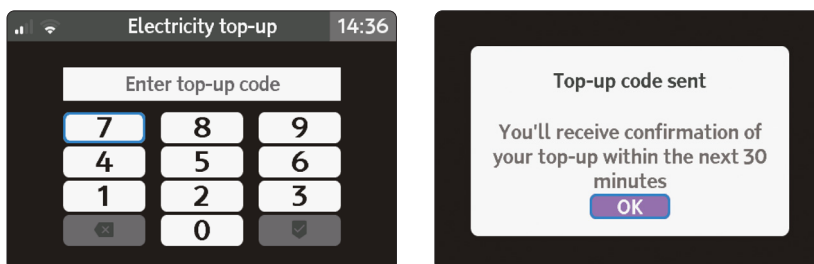
On some meters, the electricity supply can be enabled (restored) from the Trio without having to press a button on the meter. If your meter supports this capability, it will automatically appear in the Prepay menu when the supply is ready to be enabled.



Unfortunately, for safety reasons, gas meters cannot be enabled (restored) from the Trio.

### Top-up

The Trio can be used to top-up the meter(s). In the Prepay menu select Top-up, if both meters are in prepayment mode, then select the fuel to top-up.



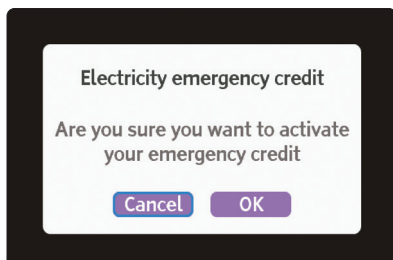
Once the code has been entered and sent, a confirmation screen will appear.

Once the code has been accepted by the meter a confirmation will appear, including a spoken alert. It may take up to 30 minutes for the confirmation to appear. If the top-up is rejected the confirmation will explain why it was rejected.

*Please note If you have top-up via another source, then this will not generate a top-up alert message on your Trio.*

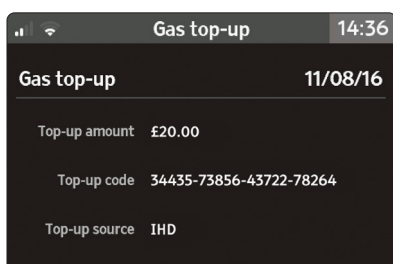
## Activate emergency credit

If emergency credit is available, it will appear in the Prepay menu.



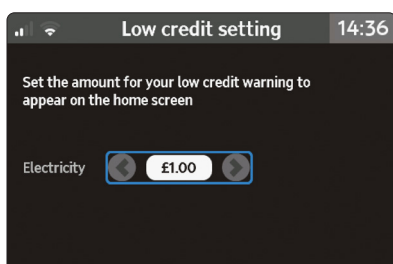
## Top-up history

View the top-up history for your prepayment meters here. Only the fuel/s in prepayment mode will be available. Selecting a top-up will provide more details



## Low credit alert

The low credit alert setting is designed to warn you that your balance is low. The setting cannot be set below the amount on the meter.



The amount can be changed for each fuel by selecting the appropriate fuel and entering a value. Only fuels in prepayment mode are shown, for example, the image above only electricity is in prepayment mode.

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# Messages

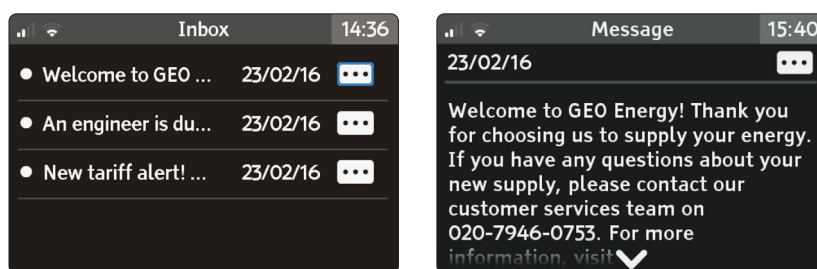
## Inbox

Your energy provider(s) may send you messages via your smart meter(s) and these will be shown in the Inbox.

When a new message is received you will also receive a notification on the screen and a sound. (The notifications can be changed under **Settings > Sound & Alerts**.)

If a message has not yet been read, it will be shown in bold and have a marker to the left.

Use the ◀ ▶ buttons to select a message. Press the ○ button to view the message in full.



## Reading a message

Select **Open** from the options menu to read a message.

If the message is longer than the space available, use the ◀ ▶ buttons to view the rest of the message.

Some messages require confirmation or acceptance - use the ◀ ▶ buttons to switch between options and the ○ button to select.


## Deleting messages

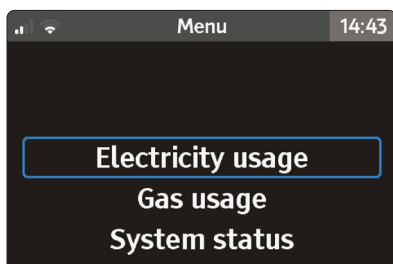
You can delete a message by selecting **Delete** from the options menu.

The delete option will appear greyed out if the message requires confirmation or acceptance.

# Menu

## Overview

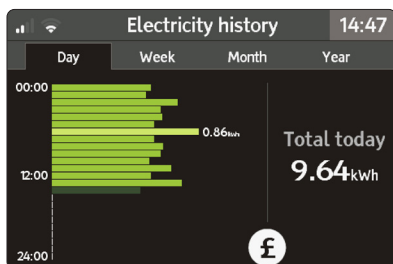
The main menu can be accessed by pressing the  button whilst on the home screen.






Use the   buttons to move through the menu items and then press  to access the menu item. Press the  button to go back a level.

## Electricity usage

Explore recent electricity consumption in the **Electricity history** screen (when available).



Use the   buttons to move through the Day, Week, Month and Year tabs. Press  to change the values from being shown in cost as £/hr and energy as kW.

See “Electricity history” on page 17.

## Gas usage history

Explore recent gas consumption in the **Gas history** screen (when available).

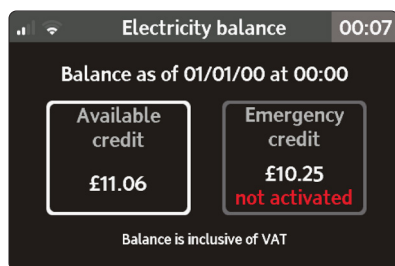
This works in the same way as electricity history.

See “Gas history” on page 19.

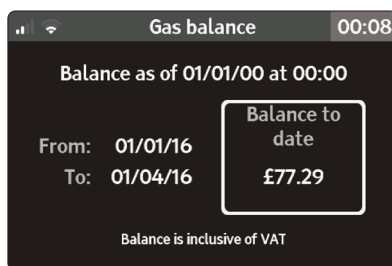
## Meter Balance

Look at the current balance of energy used for electricity or gas since the last bill or to view your pre-payment balance.

Use the ◀ ▶ buttons for **Electricity** or **Gas** and press ○ to select.



*Meter balance for pre-payment*

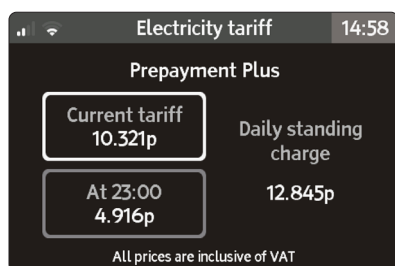


*Meter balance for credit billing*

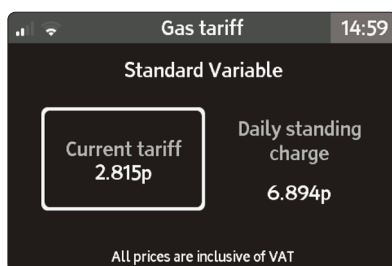
Use the ↩ button to return to the **Menu** screen.

## Prepay

Look at the current and next electricity and gas prices and any other daily charges that may apply.



*Example tariff with variable charges*



*Example of standard rate tariff*

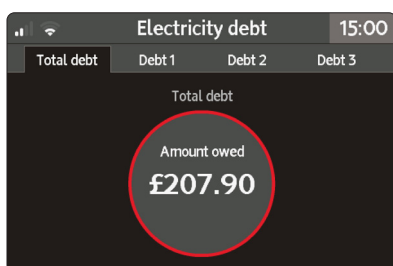
The screen shows the current chargeable unit of electricity or gas with any daily charges that may apply, excluding any applied discounts. If you're on a variable tariff, then the upcoming rate is shown. If you do not have a standing charge the Trio will not display this part of the text.



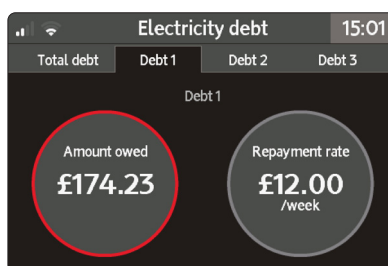
## Debt

If you have a pre-payment meter and you have any outstanding debt with your energy provider, this will be shown with a breakdown of the charges and recovery rate. Only the appropriate debt screens are shown, so if you only have debt related to debt 2 tab, then only this tab will be shown along with the Total debt screen.

Total debt refers to the combined total of all debts owed.



Combined debt



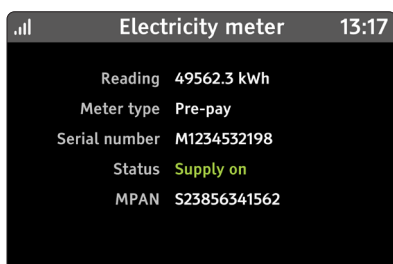
Detailed debt with recovery rate

## Inbox

View messages that have been sent by your energy provider(s).  
See “Messages” on page 22.

## Meters

View details of your electricity or gas meter and the current meter reading.



## Support

Contact details for your energy provider(s), (which may include a telephone number and email address).

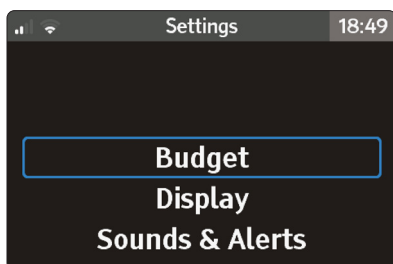
## Settings

See “Settings” on page 26.

# Settings

## Overview

The **Settings** menu can be reached from the main Menu.

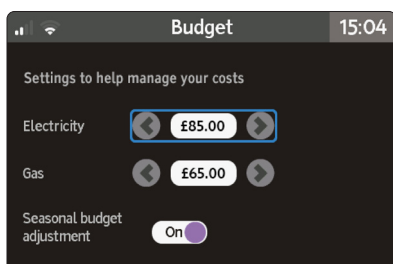


Use the ◀▶ buttons to change the setting selection and press ○ to view or change the selected setting.

## Budget

Your Trio Display has been designed to help you track your energy usage and meet the budgets you set.

If you're paying by direct debit enter the amount you pay per month for each fuel.



For example, £65 total direct debit per month, electricity being £35 and gas £30, you should Enter £35 into electricity budget and £30 into gas.

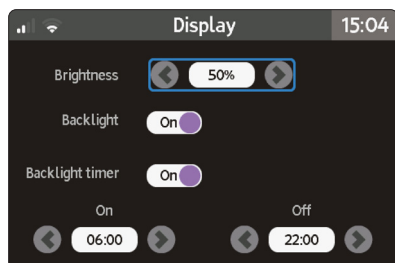
### Seasonal budget adjustment

Your Trio can adjust your budget to reflect seasonal variation in consumption.

It is typical to use less energy in the summer months compared to the winter months.

## Display

Use this setting screen to change the display settings for your Display.



### Brightness

Set the brightness of the screen. This affects all screens. Adjust the brightness by pressing the ◀ or ▶ to change.

### Backlight

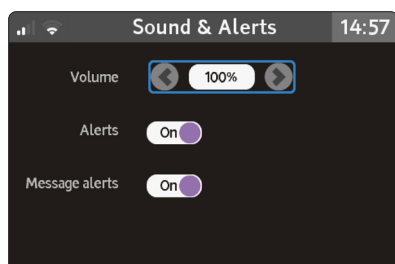
When set to **ON**, the Display screen will be on at all times (unless backlight timer is on). When **OFF**, press any button to wake after five minutes of inactivity.

### Backlight timer

When set to **ON**, the screen will be on between the times selected. When off, press any button to wake.

## Sounds & Alerts

Change the volume of warning tones and when you hear them.



### Volume

This sets the volume of all sounds. Adjust the volume by pressing the ◀ or ▶ to change.

### Alerts

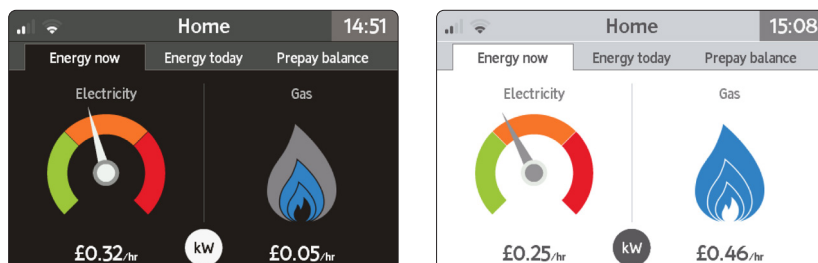
Set to **ON** if you wish to receive audible and visual notifications of new alerts.

### Message alerts

Set to **ON** if you wish to receive audible notification for new messages.

## Colour theme

Select between **Dark** and **Light** colour themes



## WiFi network

See 'Online setup' on page 30 for setting up and managing the WiFi network (if the WiFi module fitted).

## Online setup

Please see See "Online setup" on page 30. for setting up online services (if module fitted).

## Advanced

The advanced features include:

### Device info

Information including the serial number and software version of your Trio. You may need this information when contacting your energy provider.

### Usage level

The electricity dial can be scaled to match the typical usage levels of your home.

Select from one of the following options to set the maximum reading the dial can show:

- **Meter** - set to meter default values.
- **Low** - homes with low electricity usage.
- **Medium** - homes with average electricity usage.
- **High** - homes with higher than average electricity usage.

*This option is always available when you have an electricity smart meter.*

The dial thresholds between green to orange, and orange to red are changed as below in the table.

Usage level setting	Green/orange threshold	Orange/red threshold	Maximum
Low	1.2kW	6kW	12kW
Medium	1.9kW	9.3kW	18kW
High	2.5kW	11.5kW	24kW

**Low credit setting**

Use the buttons to set the minimum available credit before you receive an on-screen notification.

This is only shown if you have a pre-payment meter.

**Reset device**

Use this screen to remove all your user settings including budgets, alerts and credit warning level, WiFi settings and all consumption.

**Reset settings**

Clears all system settings including budget, display, colour theme, sounds/alerts, WiFi, and usage levels.

**Reset data**

Clears all historic consumption data and totals, including user messages and alerts. This can be used if you are moving house (and leaving the Trio) and want to clear this data.

**Reset all**

Performs both Reset settings and Reset data.

**Engineer**

This screen is for installation engineer use only.

# Online setup

## About the WiFi module

The WiFi module has been provided to plug into your Trio Touch button display. This will give you access to your energy data within your energy app.

### Compatibility

- This WiFi Module is compatible with:
- Trio Touchbutton

It cannot be used on any other Trio.

## Installation

### What you will need:

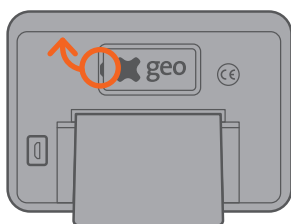
- The Wifi Module
- A small flat bladed screwdriver

### Instructions

If your Trio has been supplied with the optional WiFi module, or you have received this subsequently, please follow the instructions below to insert the new module.

#### 1 Removing the blank plate

Make sure the Display is disconnected from the power supply and any batteries are removed, then remove the panel from the rear of the display (use a small flat bladed screwdriver and lever up from the left-hand side gently).



#### 2 Inserting the WiFi module

Take the WiFi module out of its packaging. Make sure the module is the right way up (see image). When inserting, place the left-hand side down first, then push down (without excessive force) on the right-hand side until it clicks into place.

If the WiFi network and menu item is not visible in the settings menu, then the Wifi Module is not present or has not been inserted incorrectly.

#### 3 Connecting your Trio to your App

Please follow the instructions in your energy app.

## Connect to WiFi network

Your energy display will need to be connected to a local WiFi network to enable cloud services.

### Access WiFi settings screen

- Press the  button whilst on the **Home** screen
- Scroll down the menu to **Settings** and press 
- Scroll down to **WiFi Network** and press 
- Press  to turn on the WiFi module
- Select **Set up network**

### Connection methods

There are three different ways to connect to a local WiFi access point:

- Scan for the network and connect manually (preferred method)
- Use another WiFi device - such as smartphone or laptop - and connect to the Display
- Use the WPS button on your broadband router

Follow the on-screen instructions to connect using one of the methods above.

## App & Account registration

Your energy provider may provide you with a smart phone app or other online service to view your energy usage remotely.

During the registration of the energy app, you will be required to enter a **Secure code** (sometimes called Linking code).

Select **Online setup** from the **Settings** menu and the screen will display a new secure code after a short time.



Read the instructions on the screen and within your energy app to complete the process.


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# Troubleshooting

## FAQs

### My Display is not showing any readings

This could be because your display is out of range and not communicating with the smart meter.

You can check the signal strength by pressing the  button once whilst on the home screen then selecting **System status** from the menu.

If the display cannot communicate with the smart meter, it will show **Connecting to smart meter ...** when the Display is turned on.

If the display shows **Lost network** or **Not commissioned**, then contact your energy provider.

### Why has my Display's screen turned off?

Your Display may be off for a number of reasons:

Under **Settings > Display**, if you have selected the **Backlight** to be off or the **Backlight timer** setting to be on, then the screen will switch off when you are not using it (or it is scheduled to be off). Press any button and the screen should come back on.

See 'Display' on page 27 for more information on the **Display** settings.

If the Display is being powered by batteries, then it may be that they have run flat. Either connect your Display using the supplied power adapter or replace the batteries.

The Display will run for approximately 4 hours whilst on batteries allowing you to carry it around the home to learn how different appliances work. It is not intended for prolonged use.



### Why can't I see WiFi network or Online set up in the Settings menu?

The optional WiFi module may not have been fitted, or has not be inserted correctly. See the *Online set up* section for further details.

### I seem to be missing symbols on my keyboard

When entering network name or WiFi password I seem to have symbols missing.

To get the first symbol page select the **0-9** key which gives the first set of symbols. Select the Caps lock key to get the second set.

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# Status codes

Your Display may show an status code when there is a problem.

Code(s)	Status	Resolution
1 ... 3	Display problem	Your Display has developed a fault. Please remove and re-insert the power supply or contact your utility provider.
20, 21, 22, 23	Connection error	Display unable to communicate with the meter networks. Try moving the Display closer to the smart meter(s) or contact your utility provider.
28	Electricity meter problem	Display is connected to the electricity meter, but not receiving all data. If the problem persists, contact your utility provider.
29	Gas meter problem	Display is connected to the electricity meter, but not receiving all data. If the problem persists, contact your utility provider.
30	WiFi module not found	WiFi module problem (if fitted). Please remove and re-insert the module.
31 ... 38	WiFi problem	WiFi module unable to communicate properly. Please check your local WiFi network and check your Display's settings. (See <a href="#">Settings</a> > <a href="#">WiFi network</a> )
24, 25, 26	Meter network data problem	Display is connected to the meter network, but not receiving all data. If the problem persists, contact your utility provider.
40-44	Cloud problem	Display is waiting for cloud data service, please wait.

See [Menu](#) > [Support](#) for contact details.

[www.geotogether.com](http://www.geotogether.com)

For any help or support  
please contact your supplier



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