

EnviR

The SmartR Monitor Monitor User Guide





Introduction

Thank you for making the decision to reduce your energy usage (and your energy bills). It's not all about cutting use, homes need energy to function, but identifying waste and cutting it, is one way of helping the planet by reducing our emissions of greenhouse gases.

Current Cost is the leading global provider of real time in-home energy monitors. As an innovative manufacturer we have successfully distributed over 1,500,000 products throughout the globe.

The Current Cost ethos is to empower consumers with real time information that helps them identify energy usage and its cost, enabling them to change energy awareness and habits. We don't want you to stop using...just wasting!

The beauty of the Current Cost energy monitor is that it shows how much energy you're using right now. The EnviR also illustrates how much it is going to cost you everyday and every month. It's easy; by making small changes you could receive some big savings.

Keep your EnviR monitor somewhere easy to observe and you'll soon realise how simple it is to save money, turn your appliances off standby or switch the light off when you leave the room and see how much this changes the reading. Check the display before you leave the house or go to bed...it's amazing how much energy you waste without realising.

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Before you get started – Safety and care of your EnviR monitor

It's important you observe some simple precautions before using the product.

The EnviR monitor does not require you to carry out any electrical wiring. However, the transmitter has to be installed at the meter near the electrical supply to your property.

If you have any doubt about how to install it safely do not attempt to install it yourself, but consult a qualified electrician.

Similarly, if you notice anything unusual about your electricity supply, such as loose wires, exposed cabling, burn marks or holes in the insulating materials or damage to your meter then **STOP** immediately and consult a qualified electrician.

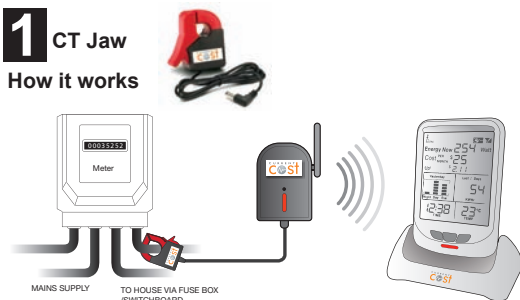
- X** Do not attempt to repair or service any part of the EnviR monitor. Contact our customer service department for assistance.
- X** Do not immerse the product in water, or any other liquids.
- X** Do not expose the product to heat, flame, steamy conditions or extreme cold.
- X** Do not open the equipment or touch any of its electronic circuitry.
- X** Do not hit, strike or drop the equipment. If the display gets broken take special care not to touch the liquid crystals.
- X** Do not use this product for any purpose other than for which it was intended.

Sensor Type

The Current Cost EnviR now comes with a choice of 2 sensor types:

1 CT Jaw

How it works



The EnviR monitor shows real time information; a wireless signal is sent every six seconds from a transmitter attached via a CT jaw to your meter and then to the display. This enables you to view your energy consumption easily, showing changes in power consumption when different electrical appliances are used.

Have you got everything?

In the Box: Contents of your box

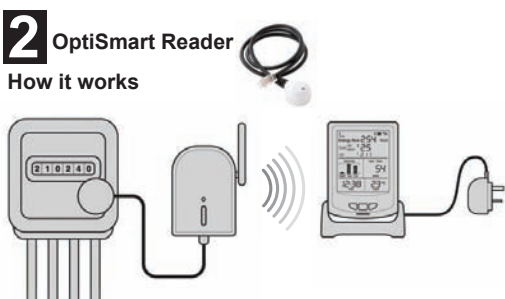
- EnviR Display
- S² Transmitter with CT Jaw
- Power Adapter for Display
- Instruction manual
- Data cable
- 1 year Warranty (option to extend online)



For installation instructions please refer to pages 7 - 10 and then 13 - 16

2 OptiSmart Reader

How it works

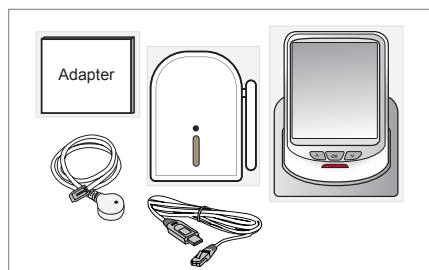


The EnviR monitor shows real time information; a wireless signal is sent every six seconds from a transmitter attached via an optical reader to your meter and then to the display. This enables you to view your energy consumption with 100% accuracy, easily showing changes in power consumption when different appliances are used.

Have you got everything?

In the Box: Contents of your box

- EnviR Display
- C² White OptiSmart Transmitter
- OptiSmart Reader
- Power Adapter for Display
- Instruction manual
- Data cable
- 1 year Warranty (option to extend online)



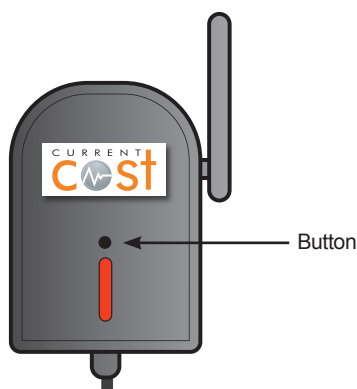
For installation instructions please refer to pages 11 - 16

OPTION**1****Setting up your EnviR -CT Jaw Monitor****Setting up your EnviR display**

- 1) The display power adapter should be connected to the round socket found in the base of the display unit.
- 2) Plug the display power adapter into a convenient wall socket.
- 3) The "Energy Now" value on the display will now show dashes. The EnviR energy monitor should be left powered on at all times to read energy correctly and run its clock.
- 4) Remove the plastic battery tab from the back of the black transmitter unit; the transmitter will now be activated.
- 5) If the display shows '0 Watts' the display has already been paired and is ready to use. If it shows dashes the display and transmitter need pairing. It is good practice to uniquely pair your display to avoid cross communication with a neighbours monitor.

Pairing the EnviR Display and Transmitter

- 1) Place the transmitter and the display in the same room.
- 2) On the front locate the recessed tuning button in the centre of the transmitter.



- 3) Using a used match, pen or similar, push and hold the recessed tuning button or until the LED on the transmitter has flashed **ONCE** only.
- 4) Upon releasing, the red LED on the transmitter will rapidly flash for a minute. If it doesn't, please try again.
- 5) Whilst the LED on the transmitter is flashing, press and hold the DOWN  button on the display until the LED on the display flashes.
- 6) When you release the button, the screen will show a tuning signal indicating the display is tuning to the transmitter. When your monitor and transmitter are tuned, the middle right of the display will show "240" (indicating UK domestic voltage).
- 7) Once the process is completed, your display will clear and then "0 watts" will appear. This usually takes 1 to 2 minutes. The aerial icon will appear indicating pairing has been successful.

'Sensible' software – Voltage Adjustment



The new 'Sensible' software found in the EnviR transmitter allows you to set your known voltage.

The default value shown on the display of 240 is correct for almost all homes in the UK and you do not normally need to change it. If you do wish to change it, for example you have a 220V private electricity supply, undertake the following steps:

- 1) Follow the steps 1 through to 6 for 'Pairing the EnviR Display and Transmitter.'
- 2) When you release the button the screen will show a tuning signal indicating the display is tuning to the transmitter. When your monitor and transmitter are tuning, the middle right of the display will show "240" (indicating UK domestic voltage).
- 3) At this point if you wish to adjust your voltage setting please undertake the following:
 - (i) Press and hold the recessed tuning button on the transmitter for 3 seconds and then release.
 - (ii) The display will now have changed and will indicate "250".
 - (iii) Repeat this process to select your known voltage (the range is from 200 to 260V starting at 240V).
 - (iv) Each press cycles the voltage shown on the display, so press as many times as you need to reach the voltage value you want to use - For example if you wished to set 200V you will need to repeat steps (i) and (ii) three times and the display will show 250, 260 and then 200.
- 4) Once completed, your display will clear and then "0 watts" will appear. This usually takes 1 to 2 minutes. The aerial icon will appear indicating pairing has been successful.

*Please note that the voltage shown on the display is used for the EnviRs internal calculations, this has nothing to do with the display power adapter. The power adapter is designed to work in all UK homes with no adjustment.

'Sensible' software – Pairing additional C² enabled Displays to the Transmitter

The new 'Sensible' software found in the EnviR transmitter allows you to set up additional C² enabled displays within the home. To pair additional displays please undertake the following steps:

- 1) Follow steps 1 and 2 for 'Pairing the EnviR Display and Transmitter.'
- 2) Using a used match, pen or similar, push and hold the recessed tuning button until the LED on the transmitter has flashed exactly **TWICE**.
- 3) Upon releasing, the red LED on the transmitter will rapidly flash for a minute (if it doesn't, please try again) indicating that the transmitter is now ready to pair with any additional C² enabled displays, at the same time as remaining paired with the existing EnviR display.
- 4) Whilst the LED on the transmitter is flashing, at the additional display(s) press and hold the DOWN  button on the display until the LED on the display flashes.
- 5) When you release the button on the additional display(s) the screen will show a tuning signal indicating the display(s) is tuning to the transmitter.
- 6) Once tuning is completed, all displays will clear and then "0 watts" will appear. This usually takes 1 to 2 minutes. The aerial icon will appear indicating pairing has been successful.

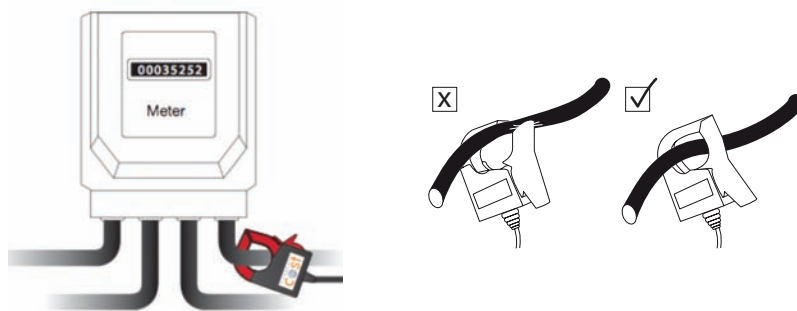
Fitting the Transmitter to your Meter

- 1) Now that the transmitter and display are paired plug the CT jaw into the middle socket on the underside of the transmitter. Take the black transmitter with its attached CT jaw to your mains meter.

This is often on an outside wall or in your garage, utility room or porch. If you live in a flat, it can often be found outside your front door in the communal staircase. The EnviR display unit may be left in any room you wish to see it, for example the hall or kitchen.

TIP: If you have one electricity meter, fit the sensor jaw as described below. If you have two electricity meters, choose the one, which supplies your household electricity, not the one which supplies your night storage heaters. If you do have a second meter you will need a second CT jaw to monitor this one.

- 2) Find the thick round wires connected to the electricity meter. The CT jaw should be placed around the live cable which runs from your meter to your fuse box, this is usually the fourth cable from the left.



IMPORTANT: When looking at the cables leaving the bottom of the meter, they should be fully insulated and you should not be able to see any of the cable conductor or core. **If you do see the live conductor, do not touch the cable and consult a qualified electrical installer for advice.**

- 3) Choose a place on the cables length where there is some room around and behind it. Encircle the cable with the jaw of the CT. Please note, it should not be "clamped" onto the cable. It is safe to ease the cable forwards to make room, provided this is done gently.
- 4) Place the transmitter in any suitable dry location, as high as possible where it will not fall within the length of its cable. As soon as this is done, the EnviR display will start to work. No electrical damage can occur to either the electrical installation or the transmitter by choosing the wrong cable.

Understanding the EnviR Display

When your EnviR display is properly installed you should see a screen similar to the image below:



- ➔ Indicates the number of sensor jaws installed. For most domestic situations this will be one
- ➔ The top line of the display shows you how much energy you're using right now. Test it out by switching a light on and off and watch the figures as they change
- ➔ Aerial icon confirms information is being read from the transmitter
- ➔ The second line down shows how much money you're spending. It will also change as you switch electrical goods on and off. The figures change automatically to show how much it cost you per day and per month - if you neglect to turn off your appliances
- ➔ The third line shows you how much you save when you turn an appliance off, or spend as you turn it on. It also shows you the equivalent decrease or increase in energy usage
- ➔ This graph shows you how much energy you have used between 7am - 3am during the previous day, 3pm to 11pm the previous evening and 11pm to 7am the previous night
- ➔ This shows you your accumulative energy in kWh and scrolls every ten seconds between the last day, the last seven days and the last 30 days. You can also scroll through these using the OK button
- ➔ The time and the temperature are displayed at all times.

Setting up your EnviR - OptiSmart Reader Monitor

Setting up your EnviR display

- 1) Unpack the product. Plug the display screen into its mains adapter, and plug the mains adapter into a wall outlet. The display screen will start working and probably show dashes instead of numbers.
- 2) Plug the wire from the OptiSmart reader into the white OptiSmart transmitter box. Rotate the aerial on the white OptiSmart transmitter to the upright position.
- 3) Remove the plastic battery tab from the back of the white OptiSmart transmitter unit; the transmitter will now be activated.
- 4) The Sensor's red light will start to flash every 6 seconds.
- 5) For the next step, you will need some information about your electricity meter. On its faceplate look for a label that says 'xxxx imp/kWh' and note the number.

Pairing the EnviR Display and Transmitter - Electronic Meter "Appliance 9" screen

- 1) Place the white OptiSmart transmitter and the display screen in the same room.
- 2) Using a used match, pen or similar, push and hold the small button in the hole on the front until the LED on the white OptiSmart transmitter has flashed once, then release.
- 3) The LED will start to flash faster for about a minute.
- 4) At the display, use the UP  or DOWN  buttons to reach the 'Appliance 9' screen. Now press and hold the DOWN  button until the display's red LED flashes, then release the button. The display screen 9 will pair to the transmitter. This will show 1000 (default imp/kWh)
- 5) If the number is different from the imp/kWh on the electricity meter, use a used match, ball pen or similar to press and release the small button in the hole on the sensor so that the number changes. Repeat until it represents the correct number. (The options are 500, 800, 1,000, 1,250, 1,600, 2,000, 3,200, 10,000, 12,000)

After about a minute, the transmitters LED will revert to flashing once every 6 seconds. The display's appliance 9 screen will now say 'DATA'. If the transmitter fast flashing stops before you are ready, do the Electronic Meter pairing again from Step 1.

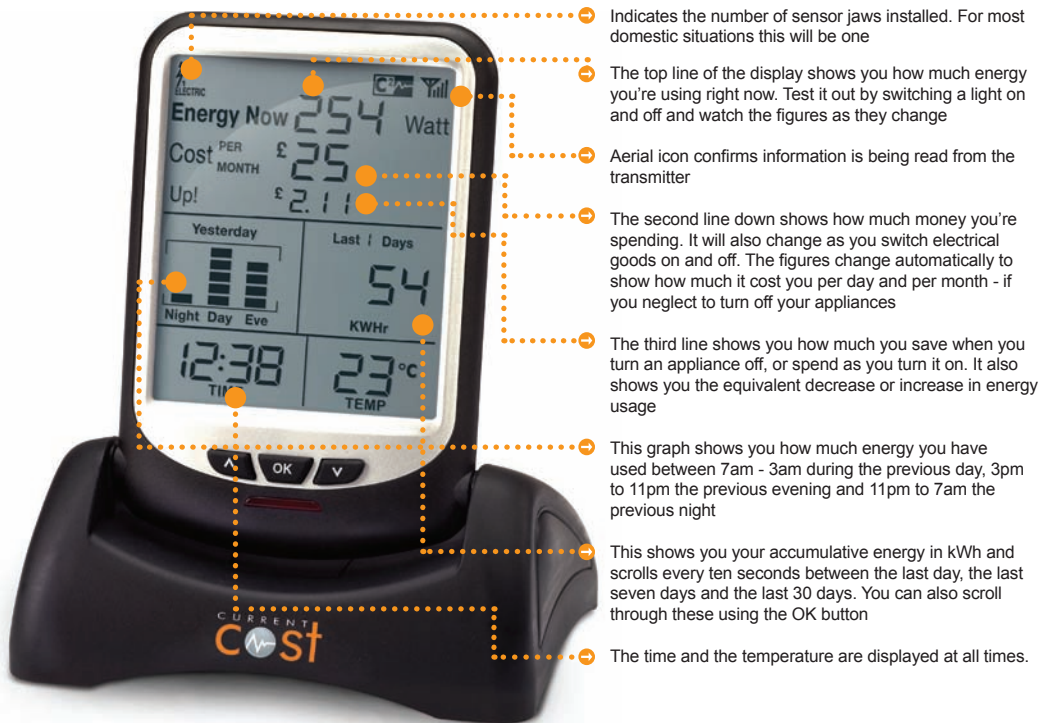
Display/Sensor Pairing 2 - Main Screen (Energy Now Data)

- 1) Place the white OptiSmart transmitter and the display screen in the same room.
- 2) Using a used match, pen or similar, push and hold the small button in the hole on the front until the LED on the white OptiSmart transmitter has **flashed three times**, then release.
- 3) The LED will start to flash faster for about a minute.
- 4) At the display, use the UP  or DOWN  buttons to reach the main screen (this is the screen that shows Temperature and Time). Now press and hold the DOWN  button until the display's red LED flashes, then release the button. The main display screen will pair to the transmitter, clear and then revert to normal operation.
- 5) After about a minute, the sensor LED will revert to flashing once every 6 seconds. The displays main screen will now show '0 Watts'. If the transmitter's fast flashing stops before you are ready; start from the beginning again.

At the property's Electricity Meter

1. Take the transmitter and its OptiSmart reader to the property's electricity meter. On the electricity meter, locate the flashing red LED labeled 'kWh'. Ignore any other flashing or steady LED's. Clean the area thoroughly around the correct flashing LED using a dry paper tissue.
2. Take the supplied adhesive base and remove the paper backing. Carefully align the hole in the circle so that the flashing LED shines clearly through the hole, and stick the base to the electricity meter. When you are happy that it is aligned, apply firm pressure to fix the adhesive.
3. Put the transmitter in a convenient place clear of metal surfaces, where its radio antenna can work effectively.
4. Take the OptiSmart reader, which is plugged into the transmitter, and carefully place it over the base. When the alignment is correct, the LED inside the optical reader will flash at the same time as the one on the electricity meter.

When your EnviR display is properly installed you should see a screen similar to the image below:



The following information applies to both sensor types:

Setting the Clock

To set the clock on the EnviR display

- Press and hold the OK  button until the LED flashes. (Approx. three seconds)
- The screen will clear and the clock hours will flash.
- Use the UP  and DOWN  buttons to alter the hours. (24-hour format)
- Once the correct hour has been selected press the OK  button.
- The minutes will now flash, use the UP  and DOWN  button to set the correct minutes.
- Push the OK  button, the display will return to normal operation.

Adjusting your electricity price

The EnviR display has been programmed with a default p/kWh unit rate. If you wish to change the unit rate please follow these steps:

- Push and hold the UP  button on the EnviR display until the LED flashes then release.
- Push the UP  or DOWN  button to change from pounds/pence to euros/cents.
- Press the OK  button to confirm.
- The price will then start flashing (i.e. c/p/kWh). Push the UP  or DOWN  button to adjust the pence/cents price of the electricity.
- Press the OK  button to confirm.
- Repeat this process to adjust the fraction of a pence/cents, i.e. 8.7p/c
- Press the OK  button to confirm and the EnviR display will resume normal operation.

Setting an additional rate

There are several electricity tariffs available, if you pay different kWh unit rates for electricity consumed, the EnviR display can be set up as follows.

- Press and hold the UP  and DOWN  buttons together until the LED flashes and release.
- Using the UP  and DOWN  buttons you can now select your low rate unit cost.
- Press the OK  button to confirm when the correct price has been set – if you don't change the cost, you will not see the time section.
- You will then see the clock flashing. Using the UP  and DOWN  buttons you can now set the time that your low rate starts. Press the OK  button to confirm when the time has been set.
- Using the UP  and DOWN  buttons you can set the time your normal rate starts. Press the OK  button to confirm when the time has been set.
- Normal operation will now resume.

IAMs – Individual Appliance Monitor

In-home, real-time individual appliance monitoring is a great addition to the Current Cost EnviR energy monitor. The IAM (individual appliance monitors) plug-in devices transmit to the display (the amount of Watts consumed and the associated cost.) The EnviR can record up to nine IAMs so you can discover the cost and usage of your electrical appliances in the home.

PC Connectivity

Using the Current Cost RJ45 to USB Data cable included in your pack, you can download data from your EnviR monitor to your PC. The ability to view and graph up to 7 years historical usage data will empower you to understand your energy behaviour and help you identify times where wastage is occurring.

Current Cost and its enthusiastic partners continue to develop various types of software, to provide the opportunity to analyse your usage over a period of time for both PC and Mac users. Understanding the pattern of your energy usage can help you to make informed decisions on the efficiency of your appliances, or help you to take advantage of off-peak times when electricity is cheaper.

Internet Bridge

The Current Cost Bridge device, allows you to send real time data energy usage to the Current Cost web portal and also the option to send to Google PowerMeter, by connecting your monitor to your broadband connection. With this device you no longer have to have your Current Cost display connected to your PC or laptop to send real time data information.

Fascias

Accessorise your Current Cost EnviR with a range of changeable fascias. The EnviR can now complement any room with a range of colours.

All accessories for the EnviR are available at www.currentcost.com

C² or S² Technology

Wherever you see the C² or S² logo, you know it's a member of a family of products that enables you to manage your energy consumption.

Look out for the logo on other Current Cost products as well as our partner organisations. When you buy a C² or S² product you can feel safe in the knowledge that it is of the highest standard and that it will communicate with your other C² or S² equipment.



Changes or modifications not expressly approved by the party responsible for Compliance could void the user's authority to operate the equipment.

Troubleshooting

Your Current Cost monitor should reach you in perfect condition. If you have connected it properly but can't get it to work, please check the following before contacting us for assistance.

Problem	Possible Cause	Solution
No display	Faulty display and/or display power supply	Contact supplier
Corrupted display (incomplete data)	Faulty display	Contact supplier
Alternating readings	Display picking up a signal from a neighbours' transmitter	Pair your transmitter and display again, see page 7
Data does not change	The clamp should not be placed around a multicore cable, but 1 exposed cable.	Refer to diagram on page 9
Costs reading seems excessively high or low	Correct tariff has not been set	Refer to page 13 – Adjusting your electricity price
Temperature gauge excessively high	Display too close to heat source	Choose a different location

If the information above has not resolved your problem either contact our Customer Service Team on **+44 (0) 1483 604517**

Alternatively visit www.currentcost.com/faq.html to find our "Frequently Asked Questions" page or www.currentcost.com/contact.html to contact a member of the Current Cost team.

Technical Information

Monitor Model: EnviR (Beta)

Product Size: 140mm x 170mm (base) x 105mm

Receiver: 433MHz SRD band

Sensor Coding Recognition: 10 channels (digital and analogue reception)

Subordinate Services: 24hr Clock / °C / PC Connectivity. All relevant CE approvals

Manufactured in China for Current Cost Ltd.



CE Approvals:

ETSI EN 300 220-2 V2.1.1(2006-04), EN 50371 2002, EN 301489-3 v1.4.1 2002-08, EN 60215:1989+A1:1992+A2:1994, IEC 60950-1:2001(1st Edition) and/or EN 60950-1:2001+A11:2004



(1) 15.105 statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.



How to contact us

By email: info@currentcost.com

By phone: 01483 604517

Further information is available at www.currentcost.com

