

# **PowaCycle**

*Electrically Assisted Pedal Cycles*



# **Coaster**

## Assembly Instructions

Version 4 – 24 Sept 2005

# Introduction

Thank you for buying a PowaCycle Coaster electric bike. We hope it brings you many hours of enjoyment.

For safe and compact shipping, we have despatched your PowaCycle Coaster part assembled. It therefore requires some assembly work before you can begin riding.

Please follow these instructions carefully. If you do not feel confident to assemble the bike yourself, we recommend you visit your local cycle store for professional help and advice.

## Contents

Before assembly, please check that you have all the parts below:

**Important:** A spare set of keys is supplied. Please keep these in a safe place as lost keys cannot be replaced.



Front Wheel



Battery Charger



Pedals



Keys (Power, Battery Lock)



Saddle & Battery



Main Cycle Frame

# Assembly Instructions

## Charge the Battery

Before assembling your PowaCycle, you should charge the battery. This will allow you to test the electrical connections during assembly. Remove the battery and charge it indoors. It may take up to 6 hours to fully charge the battery. When charged, the LED turns from red to green. Please note, the battery will deteriorate if it is left uncharged.

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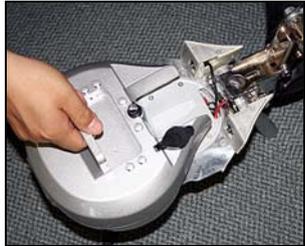
To release the battery turn the key in the battery to the open position – key aligns with symbol of a battery.

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A lever under the seat releases a lock, allowing the seat to be lifted forward on a hinge, this makes the battery more accessible.

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Slide the battery from the base housing.

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Open the cover on the battery socket and connect the charger connection plug. Plug the charger in to the mains supply and switch on. Charge indoors away from water and combustibles.

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## Fitting the Handlebars

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The handlebars are already attached to the frame via cables.

They now need to be inserted into the frame, then adjusted and secured.



Insert the handlebar stem into the frame as shown.



Align the handlebars with the rest of the bicycle, then use an Allen key or hexagonal tool to tighten them.

NOTE: We recommend that you make a final adjustment of the handlebars once the bike is fully assembled.

## Fitting the Saddle

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Insert the stem of the saddle and battery assembly into the frame. Align the saddle correctly with the frame and at the required height.

Then, fix it in place by tightening the lever at the top of the frame.

## Fitting the Wheel

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Remove the black plastic front fork protectors, which are part of the protective packing material.

We recommend that you turn the bicycle upside down, resting it on the handlebars and saddle.

Note: We suggest you remove the battery, to make the bike lighter, before turning it upside down. Also, you may need to adjust the saddle to make it more stable.

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Place the wheel between the forks, ensuring that the brake disc is on the same side as the Brake Caliper (coloured Red).

Then fasten the nuts and washers to each side of the wheel spindle, tightening them evenly. The wheel needs to spin freely, so avoid over tightening.

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## Fitting the Wheel – Brake Assembly

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With the cycle upside down, adjust the front disc brake mechanism. Use an Allen key (or similar), to release, adjust and retighten the brake cable, until the wheel spins freely and the brake operates effectively when applied.

If you are not confident to carry out these adjustments yourself, we suggest you consult your local cycle stockist.

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## Fitting the Pedals



Pedals are marked L and R, for the left and right hand side of the bicycle when it is facing forward. Screw each pedal into the appropriate pedal shaft by hand, and then tighten with a spanner to secure.

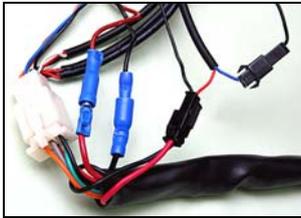
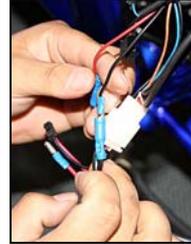
The pedals have a reverse thread and therefore need to be screwed in backwards.

## Making the Electrical Connections



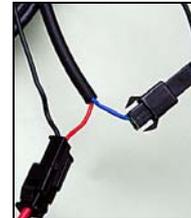
Join the electrical connectors from the frame to those from the battery housing.

Link the connections by matching the wire colours and clip shapes (see below).



*NOTE – The battery will need to be charged for this test to be carried out.*

Turn the key in the battery to turn the power on, then twist the throttle (ensure the back wheel is off the ground). The back wheel should rotate.



*Test the lights by pressing the red button on the handlebar.  
If the lights or the motor do not work then re check all connections.*



Once you have checked that the connections are correct, tidy the wiring by easing it into the gap in the frame, taking care not to break the connections.



## Fitting the Front Light



The front light is already secured to the frame via wires. Screw the front light bracket to the arch in front of the front fork, and then secure the light on the bracket.



## Completed PowaCycle Coaster



## Finally ...

Before mounting your cycle to ride, remember to check that:

- the battery is fully charged.
- the tyres are inflated to the correct pressure.
- the brakes are operating effectively.
- the handlebars are correctly adjusted and secure
- the seat is at the correct height for the user
- the lights are working
- all nuts and bolts are secure (including pre-assembled ones).

# Operation of the Coaster PowaCycle

## Overview

The PowaCycle Coaster is an electrically assisted bicycle that operates as a standard bicycle, with the assistance of a motor and battery.

The power provided supports the rider's own efforts, giving increased performance with less effort.

The Coaster has an independent throttle. This allows the user to choose whether or not to use the power and, if using it, to vary it according to requirements.

## Battery Charging, Care & Safety

Care of the battery is vital to maximise its long-term performance.

The battery must be removed from the bike for charging.

**Regular Use** – If you are commuting significant distances, it is advisable to recharge the battery before the return journey.

**Occasional Use** – Recharge the battery at least once a week, even if the cycle is unused.

Always recharge the battery after use.

Always charge the battery indoors.

Keep the battery away from water, to prevent shocks or shorting. When attached to the bicycle, it is safe to operate in wet conditions.

Do not cover the battery or charger.

Do not leave the battery permanently charging from the mains supply.

Only use the charger provided to charge the battery.

Do not use the battery to power anything other than the PowaCycle for which it was purchased.

Do not disassemble or modify the battery.

Do not expose the battery to fire or extreme temperatures.

Do not short circuit the battery.

Do not allow impact or force against the battery pack.

Dispose of the battery in a dedicated waste facility.

## **Additional Lights**

As an additional safety feature, we recommend that night users purchase independent front and rear lights that are NOT powered from the cycle battery. After a long journey, there is a risk that the cycle battery could be depleted, so lights could stop working.

## **Tyres**

Check the tyres regularly to ensure that the correct pressures are maintained (pressure ranges are shown on the sides of the tyres).

Do not over-inflate the tyres.

There are different types of pumps available for cycles. Ask your local cycle shop for the one best suited to your needs (do not use a garage forecourt air hose to inflate your tyres).

## **Brakes**

Make sure your brakes are adjusted correctly at all times.

Adjustment can be made at the wheel rim/brake mechanism with tools. Fine tuning of the brakes can be made via adjustable twist screws that are located at the join of the brake lever to the cable.

Replace the brake blocks when worn.

## **Power**

Switch on the power by turning the key in the battery. As soon as the rider begins to pedal, the motor supplies energy to support the cyclist's efforts. Power can also be supplied by the throttle. If the rider prefers to cycle without the assistance of the motor, he or she should leave the ignition off.

## **Gears and Bicycle Chain**

Change through the gears one at a time and only when the bicycle is being pedalled. To maintain performance, ensure that all the mechanical parts of the gears are lightly oiled (avoid getting oil deposits on the wheel rims). If the chain mechanism becomes dislodged, turn the pedals forward gently to engage it. If the chain becomes completely dislodged, re-engage it on the smallest gear cog.

## **Saddle**

For maximum comfort ensure that the saddle is both correctly adjusted and secure. Once set up correctly, the height of the saddle can be adjusted without tools. Loosen the lever at the top of the frame below the saddle to raise or lower the saddle. Once the saddle is at the required height, secure it by tightening the lever. Tighten or loosen the nut on the lever if required.

Do not attempt to adjust the lower bolt and nut fitting on the circular slot below the saddle. This is not intended for adjustment.

## **User Safety**

### **Cycle Helmets**

Although there is no legal requirement to wear a cycle helmet, we recommend that you do so for your safety. Wearing a cycle helmet has been proven to reduce the likelihood of head injuries.

### **Professional Maintenance**

We recommend that you have your cycle serviced by a professional cycle engineer at least once a year to ensure ongoing safe performance. Also, if you are unsure as to how to carry out a particular assembly procedure or adjustment, we recommend that you consult your local cycle shop.

## **Troubleshooting**

### **1 – Brakes not working effectively**

Check the distance between the brake blocks and the wheel rim.  
Check that the blocks are parallel with the wheel rim.  
Check for any wear on the brake blocks

Fine tuning to the brakes can be performed by the adjusters between the brake lever on the handlebars and the brake cable. Major adjustments are made at the brake blocks and you will need the appropriate tools. See brake assembly instructions.

## 2 – Motor not working

Check that the ignition has been switched on  
Check that the battery is properly inserted in its housing.  
Check that the battery is charged.  
Check if the electrical cables or connections has become dislodged.

## 3 – Light(s) not working

Check that the wiring is not broken.  
Check that the bulbs are inserted correctly.  
Check that all connections are made properly

## Warranty

### Information

- 1 – The frame – Has a warranty of two years.
- 2 – Other main parts – Have a warranty of one year.
- 3 – The battery – is covered by a 6 month warranty,  
*as battery life will be determined by user care.*
- 4 – Bulbs, brake blocks, tyres etc – Are regarded as consumables,  
therefore when replacements are required, these need to be  
purchased from your local cycle shop or store.



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