

# **PowaCycle<sup>TM</sup>**

***Electrically Assisted Pedal Bikes***



## **Milan 2**

### Assembly Instructions And User Guide

Version 1 – 12 Sept 2006

## Introduction

Thank you for buying a PowaCycle Milan2 electric bike. We hope it brings you many hours of enjoyment.

For safe and compact shipping, we have despatched your PowaCycle Milan2 part assembled. It therefore requires some simple assembly work before you can begin riding.

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. Some assembly details may vary due to the recent product improvements.

## Contents

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



Battery Charger with plug and dedicated charger socket



Pedals – left and right



Main Cycle Frame folded in its protective wrapping

# 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. Normally charging takes from 6 to 8 hours to fully charge the battery, however the first charge can take up to 12 hours. When charged, the LED turns from red to green. Please note - the battery will deteriorate if it is left uncharged. Begin by removing the battery from the frame.



A lever at the base of the saddle column releases it, allowing the hinged saddle to be lifted clear out of the path of the battery, making it accessible for removal.



Lift the handle on the battery and slide the battery from the base housing. The battery can now be connected to the charger.



Charge the battery away from water or combustible material. Connect the round-ended charger plug to the battery socket. Plug the charger into a 220/240V mains supply and switch it on at the plug. For the first charge allow up to 12 hours, thereafter only 6-8 hours are needed.

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## Fitting the Handlebars

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The handlebars are already attached to the frame via cables. They must be inserted into the frame as shown at least the minimum depth marker line.



Align the handlebars 90 degrees to the forks.



Finally, use an Allen key or hexagonal tool to tighten the handlebars in place.

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

## Fitting the Pedals

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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.

## Checking Brakes

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### Safety Check

As a standard precaution check that the brakes are working effectively, that brake blocks are clear of the wheels and evenly aligned. Wheels should turn freely until brakes are applied. As with all new cables some stretching will occur with use so adjustment should be carried out as soon as needed.

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To tighten the brakes, a nut is fixed to the brake mechanism, holding the wire cable. Loosen this nut to allow you to pull the cable through and take up any slack. Then re-tighten the nut. Check that the wheel spins freely and the brake operates effectively when applied.

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Fine adjustments to the brake tensions can be made via adjustment controls located at the junction of the brake lever and cable.

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## Completed PowaCycle Milan2



### 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 (not included) are working
  - all nuts and bolts are secure (including pre-assembled ones).
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# Operation of the Milan2 PowaCycle

## Overview

The PowaCycle Milan2 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.

## 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 charge the battery indoors after use.
- Do not handle the charger or battery with wet hand or charge in a wet area or an area exposed to water splash.
- 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 whilst charging.
- 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 with 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.

## Lights

We recommend that users purchase and fit independent front and rear lights.

## 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 pressing the switch on the battery. The Milan2 can be operated as a “pedelec”. This means that, as soon as the rider begins to pedal, the motor supplies energy to support the cyclist’s efforts. If the rider prefers to cycle without the assistance of the motor, he or she should turn the power off.

## Throttle

In order to use the throttle power, the red button on the handle bar must be pressed (this activates the throttle) and then the throttle (located on the right handle bar) can be used.

## Mechanical Adjustment

The tightening torque of the handlebar stem, seat post and front wheel shall not be less than 18NM. The torque of the wheel axles shall not be less than 30NM.

## 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.

## 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 you have your cycle serviced by a professional cycle engineer at least once a year to ensure ongoing safe performance. If you are unsure as to how to carry out an 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 that none of the electrical cables and connections has become dislodged.

# 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 – 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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