

# Instruction Manual



**ECO CART L16V/L20V/L30H**

**16/20/30 Bay Laptop Storage & Recharging Trolley  
With Power Management**

## User Instruction for model ECO CART L16V/L20V/L30H

Before proceeding check the contents and familiarise yourself with the internal layout of the cart.

### Contents:-

2 sets x front and rear door keys (located on top of cart).

4 x castors, 16 x bolts, 16 x washers located beneath the middle shelf inside the laptop storage area.

(Applicable to 16V and 20V models only)

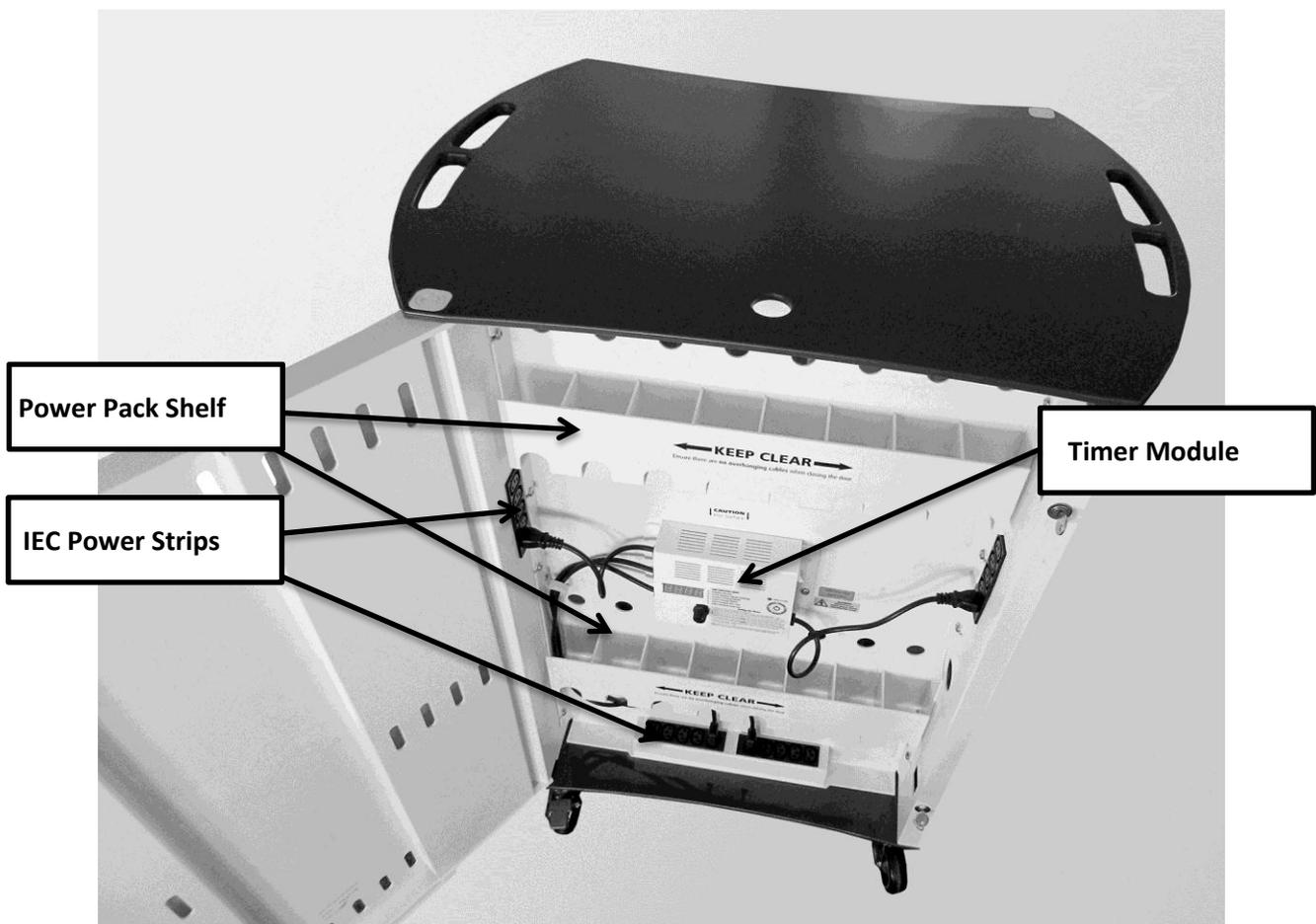
IEC adaptor leads - Quantity 16/20/30 x IEC to figure eight and clover leaf connectors located inside the laptop storage area.

Mains lead = 13amp plug – IEC connector located inside the power and adaptor storage area.

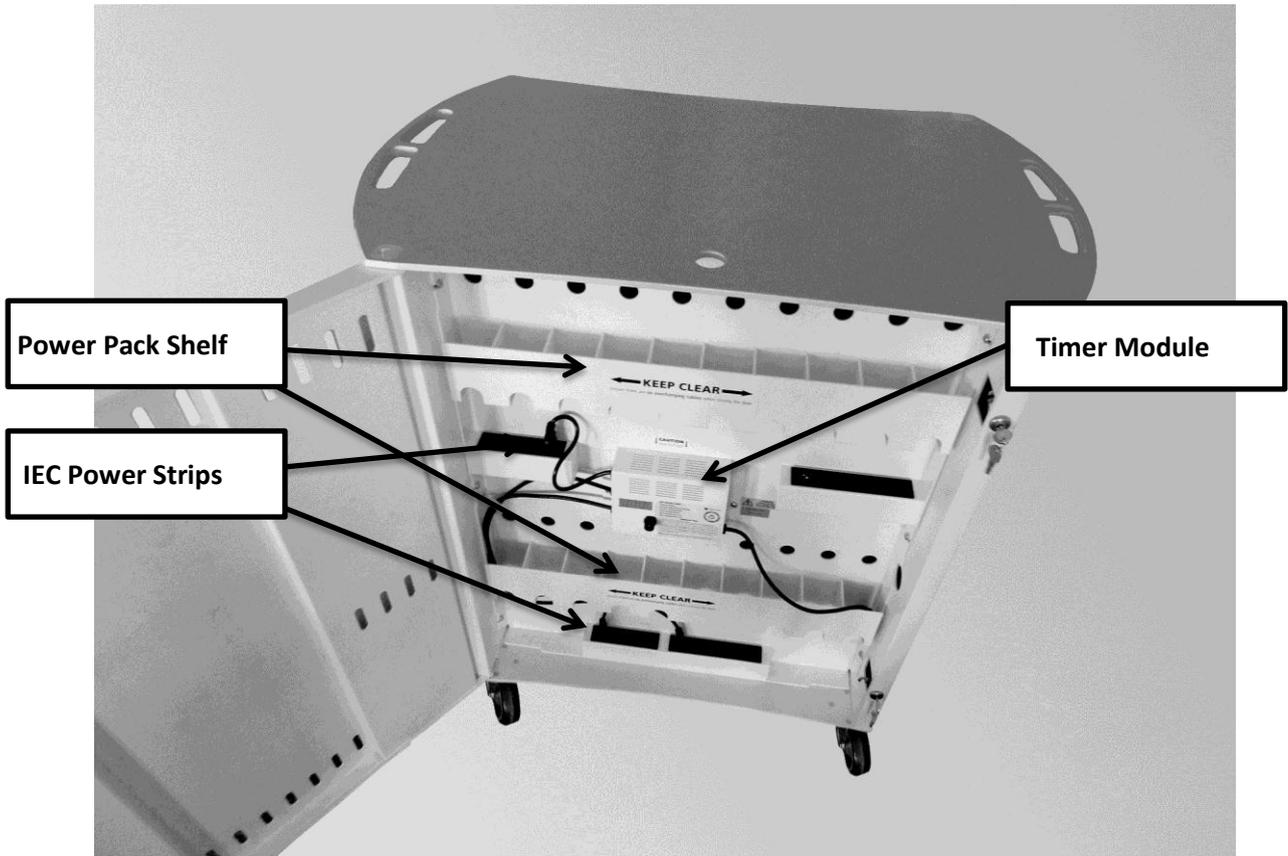
### Cart layout:-

Please refer to your model as below:-

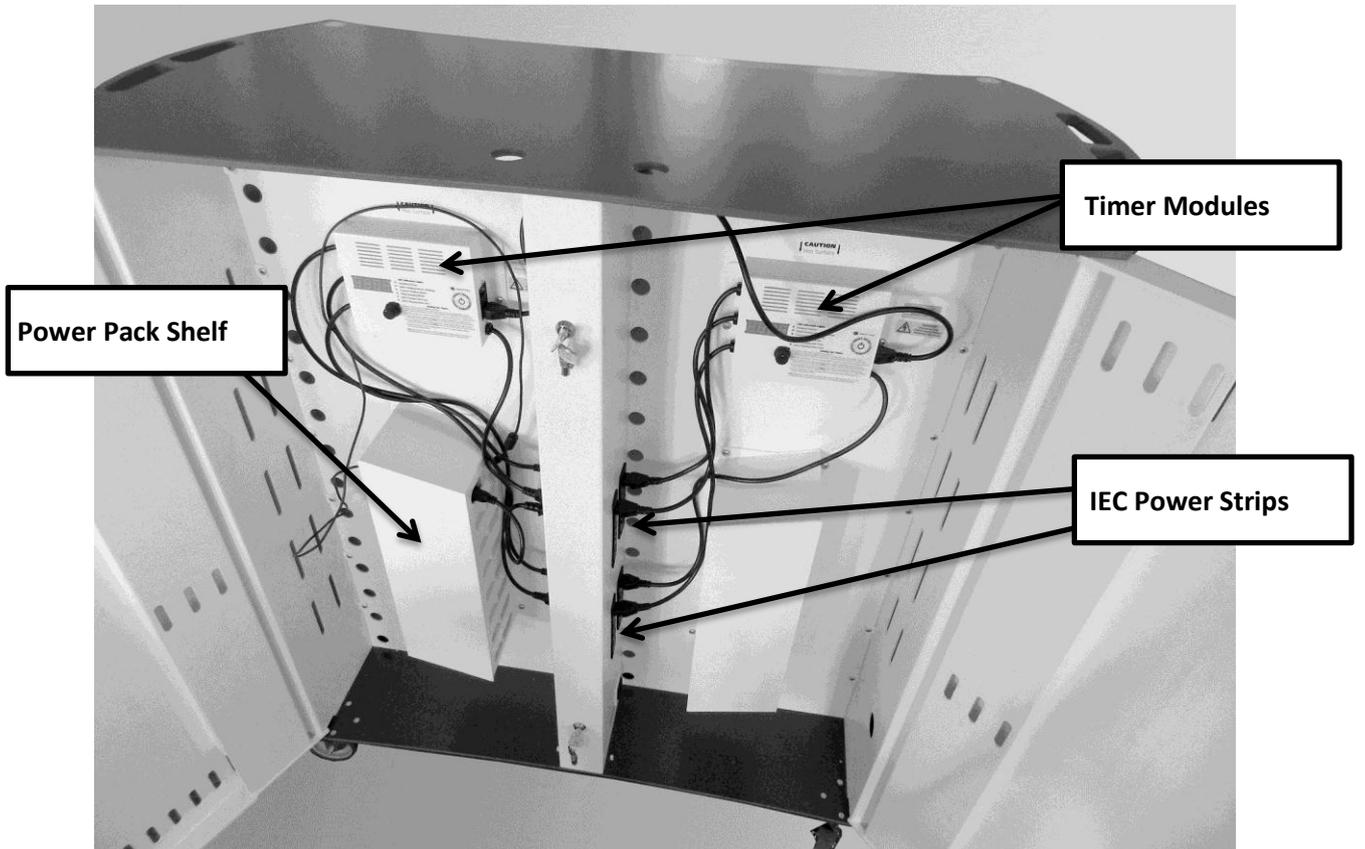
### ECO CART L16V



### ECO CART L20V



### ECO CART L30H



The **EcoCart™** charging trolley from Bretford is specifically designed for the storage and recharging of up to laptops. To assemble/configure your new **EcoCart™** charging trolley, simply follow the steps below...

**DO NOT CONNECT TO THE MAINS SUPPLY UNTIL STEPS 1-3 ARE COMPLETE**

**Step 1: Fitting the Castors – ECO CART L16V and L20V versions only**  
(ECO CART L30H model come with the castors already fitted)



**PLEASE NOTE:** Bretford advise this is a 2 person operation

1. Remove the castor pack from inside the laptop storage area. This will be strapped to the underneath of the middle laptop shelf
2. Turn the **EcoCart™** onto its top to reveal the 4 corner castor attachment plates on the base of the cart.
3. Position the castors above the 4 bolt holes in each corner of the cart, with the 2 locking castors at the front.
4. Place the washer provided over each of the M6 bolts provided, then push through the castor plate into the bolt holes below.
5. Tighten each bolt using an M10 spanner (not provided), then return the cart to an upright position

**IMPORTANT** - Ensure the bolts are fully tightened and the castors are securely fitted before returning the cabinet to an upright position. It is recommended the bolts are checked at regular intervals to ensure they remain fully tightened.

View our 'Attaching the castors guide' at [www.eco-carts.co.uk/help](http://www.eco-carts.co.uk/help).

**Step 2: Placing & connecting the power packs**



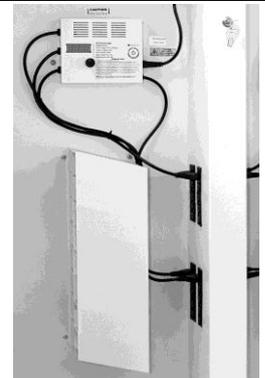
**ECO CART L16V & L20V**

← **ECO CART L16V & L20V Models**

Open the rear door to reveal 2 power pack shelves running along the top and bottom of the cart.

**ECO CART L30H Model** →

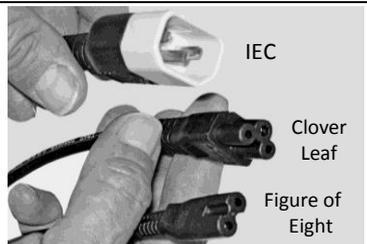
Open the rear doors to reveal the 2 power pack shelves centred in the left and right hand side compartments of the trolley below the timer modules, featuring 16 individual compartments in each shelf block.



**ECO CART L30H**

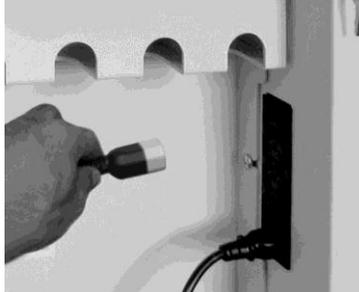
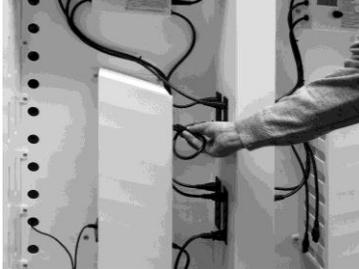
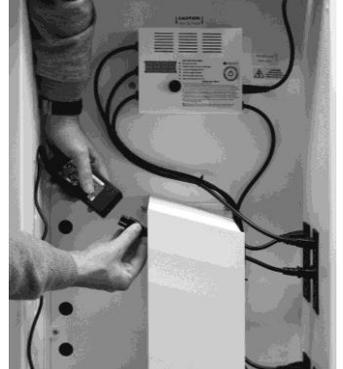


Remove the mains/3pin plug lead from the laptop power pack and store in a safe place.



All **EcoCart™** models are supplied with either 16/20/30 x IEC to figure of eight & 16/20/30 x IEC to cloverleaf cables to be connected into the laptop power pack & the IEC power strips. These will be found in the laptop storage area.

Firstly select the leads with corresponding connector for the power packs being used in the cart.

 <p><b>ECO CART L16V &amp; L20V</b></p>	<p>← <b>ECO CART L16V &amp; L20V Models</b></p> <p>Starting with the top power pack shelf and the corresponding top IEC power strips connect the IEC connectors into the IEC power strips. Then feed the power pack connecting lead up through the cut outs into the power pack compartments.</p> <p>Move to the lower power pack shelf &amp; repeat as above. Connect the remaining IEC connectors into the IEC power strips &amp; feeding the connecting leads into the power pack shelves above.</p>	
 <p><b>ECO CART L30H</b></p>	<p>← <b>ECO CART L30H Model</b></p> <p>Locate the left side, top power pack shelf and the corresponding top IEC power strip located on the centre pillar. Connect an IEC connector into the top IEC power strip and then feed the free end of the lead into the top power pack compartment. Continue this action until all 15 IEC leads on the left hand side are connected.</p> <p>Move to the right hand side of the cabinet and repeat the action above until all 30 IEC connectors are in place.</p>	
<p><b>NOTE:</b> Each IEC power strip should have one lead already in place, which is connected to the Timer Module.</p>		
 <p><b>ECO CART L16V &amp; L20V</b></p>	<p>Take a power pack and connect it to the IEC lead (now in the power pack shelf). Once connected slide power pack into the compartment.</p> <p>Repeat this action until all 16/20/30 laptop power packs are in place.</p>	 <p><b>ECO CART L30H</b></p>
 <p><b>ECO CART L16V &amp; L20V</b></p>	<p>Take the laptop connecting lead from the first compartment and feed it through the corresponding hole to the front of the cart.</p> <p>Repeat this action until all 16/20/30 laptop connecting leads are fed through.</p>	 <p><b>ECO CART L30H</b></p>
 <p><b>KEEP CLEAR</b></p> <p><b>ECO CART L16V &amp; L20V</b></p>	<p><b>WARNING: ECO CART L16V &amp; L20V Models</b></p> <p>Ensure the area in front of the power pack compartments is kept clear of cables to prevent trapping leads when closing the rear door.</p>	

### Step 3: Inserting and connecting the laptops



Move to the front of the **EcoCart™** and open the door to reveal the 16/20/30 laptop storage compartments.



**ECO CART L16V & L20V**

← **ECO CART L16V & L20V Models**

Select one of the laptop connecting leads previously fed through from the rear of the cart and feed it through the 2 corresponding cable management holes at the top of each shelf compartment.

Repeat this action until all 16/20 laptop connecting leads are in place.



**ECO CART L30H**

← **ECO CART L30H Model**

Select one of the laptop connecting leads previously fed through from the rear of the cart and pull it through to the front of each individual shelf compartment.

Repeat this action until all 30 laptop connecting leads are in place.



**ECO CART L16V & L20V**

← **ECO CART L16V & L20V Models**

Place the laptops into the individual compartments and rest to one side. Select the corresponding connecting lead and plug it into the laptop below.

Repeat these actions until all 16/20 laptop are connected.



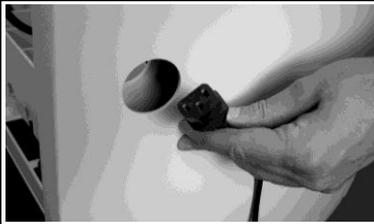
**ECO CART L30H**

← **ECO CART L30H Model**

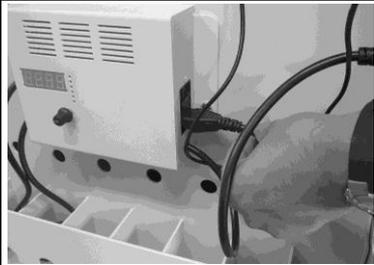
Connect the laptop charging lead into the laptop and then slide laptop neatly into the laptop compartment.

Repeat these actions until all 30 laptop are connected.

### Step 4: Connecting the EcoCart™ to the mains



Feed the IEC connector end of the supplied 2m mains lead through the hole in the side of the trolley.



**ECO CART L16V & L20V**

← **ECO CART L16V & L20V Models**

Plug the mains lead into the IEC socket on the side of the power module.

**ECO CART L30H Model** →

Plug the mains lead into the IEC socket located at the bottom of the centre pillar on the right hand side.



**ECO CART L30H**



Plug the trolley's mains lead in to a switched wall socket and switch ON.

Switch on the unit's own ON/OFF switch located above the mains lead input.

**IMPORTANT** - Ensure the wall socket switch is in the OFF position before connecting and removing the mains plug

**NOTE:** When the unit is first turned ON, or after the mains power has been switched off, the unit will automatically divert to constant charging mode. To set the 24 hour timer, refer to **Step 5 & 6** below.

## IMPORTANT



Before moving the unit, first ensure the mains lead is disconnected from the wall socket and wrapped around the provided cable winder.

# Energy Saving 24 Hour Timer

All **EcoCart™** models are fitted with an energy saving programmable 24 hour timer (ECO CART L30H models feature 2 individual timer units). Each timer features 2 timer options allowing you to set your unit to automatically start charging over 2 separate time periods in one 24 hour period. This could be from 6:30am to 8:30am ready for morning classes and then again at 12pm to 1pm ready for afternoon classes. The timer can also be set to charge your laptops during the evening or weekend to take advantage of off-peak energy supply hours, helping to reduce your electricity bills.

All ECO CART L30H models feature 2 individual timer units. Each of these units manages the charging time for 15 of the laptops charged inside the cabinet. This enables you to set the unit so that all 30 laptops charge at once or you can set different charging times for each set of 15 laptops. NOTE: Due to the built in power management system on the **EcoCart™**, all 30 laptops can be charged at one time without the risk of tripping your building circuits.

## Step 5: Setting the 24 hour Clock



First check the 24 hour clock is showing the correct time.

To adjust the time, press & hold the control knob in until the clock starts flashing (Minimum 10 seconds). Then turn the control knob until the correct time is reached & press the control knob in again to set.

## LED Indicator Lights Guide:



Charging	When this LED is ON, it indicates that the unit is receiving power and charging is in progress. When flashing the charging start time is set and charging will commence within 2-3 minutes.
Timed Charging (Flashing)	When this LED is flashing it indicates that a timer selection has been made.
<b>Timer 1: ON Time</b> (Flashing: This timer ON)	When this LED is flashing it indicates that the unit is charging and that Timer 1 is selected.
<b>Timer 1: OFF Time</b>	This LED is normally OFF and only comes ON when setting the Charging Finish time of Timer 1.
<b>Timer 2: ON Time</b> (Flashing: This timer ON)	When this LED is flashing it indicates that the unit is charging and that Timer 2 is selected.
<b>Timer 2: OFF Time</b>	This LED is normally OFF and only comes ON when setting the Charging Finish time of Timer 2.

## Step 6: Setting the Energy Saving 24 Hour Timer



To set **Timer 1** turn the knob to light the LED “Timer 1: ON Time” & push to select (indicator flashes). Turn the control knob until the desired charging **START** time is reached, then press again to set (stops flashing).



Then turn the knob to light the LED “Timer 1: OFF Time” & push to select (indicator flashes). Turn the control knob until the desired charging **FINISH** time is reached, then press again to set (stops flashing).

Repeat the steps above for **Timer 2**

**Note:** If you do not require a second charging session simply leave the ON/OFF times the same.

**NOTE:** Once you have set the desired charging start & finish times, this action does not need to be repeated unless you want to adjust these times. These pre-set times will be saved in the Timer Module.

### Constant Charging Mode:

To use the **EcoCart™** in constant charging mode set both timers ON/OFF times to the same time.

To commence charging turn the knob to the top “Charging Indicator” LED and simply press for ON and then press again to turn OFF. The LED display will present as fig 8 then settle to fig 2. ( See page 10 – LED Light Display Guide)  
When in constant charging mode the ‘Timed Charging’ LED will stop flashing.

# LED Light Display Guide

*Fig: 1*

		<p>This light combination indicates that NO charging is taking place.</p> <p>To start charging first check the unit is switched on then either press the knob for constant charging or set Timer 1 or Timer 2.</p>
		
		
		
		
		

*Fig: 2*

	<b>Charging in progress</b>	<p>This light combination indicates that the unit is in constant charging mode.</p>
		
		
		
		
		

*Fig: 3*

		<p>This light combination indicates that either Timer 1 or Timer 2 has been set, but the charging start time has not yet been reached. No charging is taking place at this point in time</p>
	<b>Timed Charging Mode On</b>	
		
		
		
		

*Fig: 4*

	<b>Charging in progress</b>	<p>This light combination indicates that the unit is charging for the period set by Timer 1</p>
	<b>Timed Charging Mode On</b>	
	<b>Timer 1 Charging Period Started</b>	
		
		
		

*Fig: 5*

	<b>Charging Passed</b>	<p>This light combination indicates that Timer 1 charging period has been selected but the unit is waiting for the Timer Module to reset</p>
	<b>Timed Charging Mode On</b>	
	<b>Timer 1 Charging Period</b>	
		
		
		

*Fig: 6*

	<b>Charging in progress</b>	<p>This light combination indicates that the unit is charging for the period set by Timer 2</p>
	<b>Timed Charging Mode On</b>	
		
		
	<b>Timer 2 Charging Period</b>	
		

*Fig: 7*

	<b>Charging Passed</b>	<p>This light combination indicates that Timer 2 charging period has been selected but the unit is waiting for the Timer Module to reset</p>
	<b>Timed Charging Mode On</b>	
		
		
	<b>Timer 2 Charging Period</b>	
		

*Fig: 8*

	<b>Charging Passed</b>	<p>This light combination indicates that the charging circuit is resetting which will take 2/3 mins. Please wait.</p>
		
		
		
		
		

LED Indicator KEY:	
	LED Light OFF
	LED Light ON
	LED Light Flashing

**NOTE:** If the time LED is not ON then NO charging is taking place. Unit needs to be turned ON to enable charging options to be selected.

## Frequently Asked Questions

### **Q. I have followed the configuration guidelines yet my laptops do not appear to be charging?**

#### **A. Is the unit in Timed Charging mode?**

Open the rear door of the cart to view the power module. View the LED display. (Refer to LED light Display guide on page 10. If fig.3 is displayed then a timed, charging period has been selected but the start time has not yet been reached. To start charging either reset Timer 1 or 2 to the required times or set both timers ON/OFF times to the same time to initiate constant charging. The LED display will present as fig.8 then settle to fig.2.

### **Q. The unit is not in Timed Charging Mode yet my laptops still do not appear to be charging?**

#### **A. Complete the checks below...**

- i.** Check the unit is plugged into a mains supply wall socket and that the socket is switched on
- ii.** Check that the mains socket is not faulty. Try connecting a known working piece of equipment e.g. radio
- iii.** Check there is a fuse in the mains plug
- iv.** Check the mains lead is correctly inserted into the cabinet.
- v.** Check that the On-Off switch on the cabinet is switched on, 1 pressed down = on
- vi.** Check that all other leads are correctly inserted into the cabinet and/or the laptops

*If the unit still isn't charging refer to the LED light display guide on page 10, before making a note of the LED display light combination lit on the power module and contacting your supplier or Bretford directly.*

### **Q. Some but not all of my laptops are charging?**

#### **A. i.** A fuse may need replacing

There are 4 IEC power strips in the rear of the unit, one on each side and two at the base. Each IEC power strip features a fuse compartment. There is also a fuse in the power module, located alongside the ON/OFF switch. Check if a fuse has blown, remove the fuse and replace with a 10a fuse if necessary.

- ii.** If no fuses need replacing, check that the laptops are charging correctly when plugged directly into a known working mains wall socket.

If **NO** then see your laptop's own handbook or contact your laptop supplier.

If **YES** make a note of the LED display light combination lit on the power module, then contact your supplier or Bretford directly

### **Q. The mains lead is damaged!**

- A. DO NOT CONTINUE TO USE!** Disconnect the mains lead from the wall socket and discard in compliance with the WEEE directive. Contact your supplier or Bretford for a replacement part.

### **Q. Can I use the unit to charge other items?**

- A.** This unit is designed for the storage and recharging of laptops only and you should not use this unit for recharging any other devices.

# Safety and Security Guidance

- This unit is designed for storage and re-charging of laptops only
- To avoid damage, please ensure that the laptops are inserted & removed by an adult or competent person
- All vents **MUST** be kept clear at all times, including allowing enough space between the back of the cabinet and the wall to ensure good air flow (50mm Minimum)
- This unit should be used with a switched wall socket **ONLY**
- **IMPORTANT** - Ensure the wall socket switch is in the 'off' position before connecting and removing the mains plug
- The cart is lockable to prevent opportunist theft only. For maximum security, the unit should be returned to a secure, alarmed area
- Ensure any excess laptop connecting leads are kept clear from the front of the power pack compartments to prevent trapping the leads between the power pack shelves and the rear door
- When opening or closing the doors ensure the cart is on a level surface
- As with all mobile products the unit should be manoeuvred with care, especially on inclines, by an adult or competent person
- To move the unit, first ensure the mains lead is disconnected from the mains and wrapped around the provided cable winder, **PUSH** using the handles, **DO NOT PULL**
- This unit is not designed to be wheeled outside or over uneven surfaces
- The mains lead should be checked regularly to ensure there is no damage to the plug, lead or connector. In the event of damage do not continue to use! Discard the mains lead in compliance with the WEEE directive and contact your supplier or Bretford for a replacement part
- Unless otherwise directed by Bretford Manufacturing Ltd, **DO NOT** remove the power module/timer unit. This action will invalidate the warranty
- Total current must **NOT** exceed 10A, only use 10A fuse in mains plug
- No single item of ICT equipment used with the unit should have a rated current consumption exceeding 5A
- All individual ICT chargers used in this cabinet should be fused/protected at 5A

**Mains Lead Safety:** When fitting the mains lead ensure that the IEC plug is correctly connected. Do not trap or run the mains lead or plug under the cart wheels - surplus lead should be wound around the provided cable winder on the side of the unit before moving. In the event of damage do not continue to use. Discard the mains lead in compliance with the WEEE directive and contact your supplier or Bretford for a replacement part.

## Connecting the Laptops

**IMPORTANT** - Ensure the wall sockets switch is in the 'off' position before connecting or removing the mains plug. Configure the unit as per the user manual - with the laptop's power packs stored in the compartments provided and the leads fed through to the front of the cabinet. When all laptops are connected and in place, plug the laptop cabinet into a switched mains supply & switch on. Switch on the unit's own On-Off switch to commence charging.

## 24 Hour Programmable Energy Saving Timer

The EcoCart is fitted with a 24 hour timer with 2 programmable options. If the cart appears to have stopped charging it may be that the unit has completed one of its pre-set timed charging cycles. To re-start charging, simply switch to the constant charging mode or re-set the timers. Unless a timer is set the cart will charge continuously until it is turned off manually.

## Compliance

The unit is tested & CE certified ensuring the highest levels of electrical/build safety and complies with the HSE October 2009 Manufacturing Guidelines on electrical safety.

## WEEE Directive

When the unit becomes redundant, it must be disposed of in compliance with the WEEE Directive 2005. Contact your Local Authority or supplier in the first instance

## Bretford Manufacturing Ltd

2 Etongate, 110 Windsor Road, Slough, Berkshire, SL1 2JA

**Tel:** +44 (0) 1753 53 99 55 **Fax:** +44 (0) 1753 53 94 78 **Email:** sales@bretforduk.com **Web:** www.bretforduk.com

Designed and manufactured in the UK by Bretford Manufacturing Ltd.

