

PHILIPS

REF 900-103

RESPIRONICS

Portable Oxygen Concentrator
Smart Charger/Recalibrator

The Smart Charger/Recalibrator is an external, smart battery charger that can recharge a battery and recalibrate its fuel gauge. This recalibration enables the battery to calculate a highly accurate estimate of remaining battery life, shown on the battery fuel gauge, even as the battery ages.

Package Contents

The following items are included with your Smart Charger/Recalibrator. If any of the items shown below are missing, contact your home care provider.

- Smart Charger/Recalibrator
- DC power supply with input cable
- AC power cord
- This instruction guide (not shown)

Warning: Use only Philips Respironics batteries with this device.

Cautions:

- Do not open the charger or power supply case. There are no user-serviceable parts inside.
- Do not expose the charger or power supply to water or conductive liquids; this is not a sealed case.
- Replace a battery if it fails to charge or if you notice a decrease in capacity.
- Inspect the power cord for signs of damage. Discontinue use and replace if damaged.
- Use only the power supply provided with the charger.

Recharging Time

If the battery is depleted, it takes approximately 4 1/2 hours to fully charge.



Setting Up Your Charger/Recalibrator

1. Place the charger unit on a flat, level surface away from sources of heat and moisture.
2. Plug the cable from the DC power supply into the back of the charger and connect the power supply to an electrical outlet using the AC power cable that came with your unit.

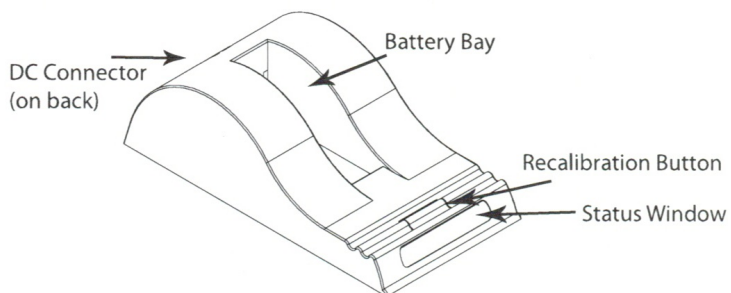


Figure 1. Battery Charger/Recalibrator

Charging a Battery

1. Place the battery into the battery bay making sure that the 5-way connector is fully seated, as shown in Figure 2.
2. In the status window, the FLASHING GREEN LED will light showing that it is charging. When the battery is fully charged, the LED will turn solid green.



Figure 2. Battery Inserted in Battery Charger/Recalibrator

LED Color Indicators

When a battery is inserted in the battery charger, an LED in the status window will tell you the status of the battery.

Flashing Green:	Battery is currently charging.
Solid Green:	Battery is fully charged and may be removed.
Flashing Blue:	Battery is currently in recalibration mode.
Solid Blue:	Battery fuel gauge has finished recalibration and is fully charged.
Flashing Red:	Battery fuel gauge is in need of recalibration.
Solid Red:	Error -- battery cannot be charged. Please call your home care provider.

Checking the Battery Fuel Gauge

The battery uses four lights as a fuel gauge. The fuel gauge accuracy in normal use is typically $\pm 1.5\%$. To check the fuel gauge, press the PUSH button on the battery (not the button on the battery charger).

4 Lights:	75% to 100% full
3 Lights:	50% to 75% full
2 Lights:	25% to 50% full
1 Light:	10% to 25% full
Light Blinks:	Less than 10% full -- recharge battery.

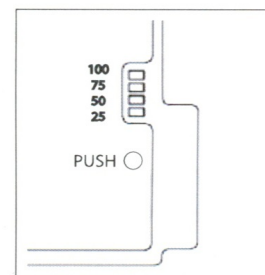


Figure 3. Battery Fuel Gauge

What is Recalibration? Why is it Needed?

The battery's fuel gauge is a highly accurate estimate of the life remaining in the battery. To calculate this estimate, the system must know the battery's full point and empty point. This is not as easy as it sounds because as a battery ages, the amount of available capacity shrinks. So every time you charge it, the full point gets slightly lower. Likewise, the empty point changes as well. Recalibration resets the fuel gauge as the battery gets older, resulting in the best possible estimate of remaining life.

If your battery needs to be recalibrated, you will see a FLASHING RED LED in the charger's status window when you put it in the battery bay for recharging. The time required to recalibrate the battery ranges from 14 to 20 hours. For this reason, you may want to keep a spare battery on hand.

Additional batteries are available for purchase. For more information, contact your home care provider.

Note: Recalibration takes less time if the battery is fully charged.

Caution: During recalibration, the Battery Charger/Recalibrator heats up and the fan runs to cool the unit. The most common cause of recalibration failure is overheating. Please do not use the charger in direct sunlight or near heat sources.

How to Recalibrate your Battery

If the battery fuel gauge needs recalibration, when you insert the battery in the charger, a FLASHING RED LED will appear. If the LED does not flash red when you put the battery in the charger, it does not need to be recalibrated and it will recharge automatically.

If the FLASHING RED LED appears, you have two options: to only charge the battery (and postpone recalibration), or to recalibrate the fuel gauge and charge the battery. *The recalibration cycle is much longer than a charge cycle, so if you need the battery soon, you may want to postpone recalibration for a later time.*

- To recharge the battery and postpone recalibration, take no further action because the charger will automatically begin to charge the battery. The FLASHING GREEN LED will light up to indicate that the battery is charging.
- To recalibrate the battery while charging it, press the Recalibration Button on the front of the charger (shown in Figure 1). This will cause the FLASHING BLUE LED to appear, indicating that the battery is undergoing the recalibration cycle. There may be a short delay before recalibration begins. When the battery is fully calibrated and fully charged, the SOLID BLUE LED will light up.

Note: Recalibration is initiated each time the button is pressed, so do not press the recalibration button part way through the recalibration cycle, because this would cause recalibration to begin again.

Specifications - Charger/Recalibrator

Weight: 8 oz. (235 g)

Dimensions: 2.25 in. x 7 in. x 3.5 in. (58 mm x 180 mm x 92 mm)

Mating Connector: 5-blade standard battery connector

Communications: System Management Bus Rev 1.0, Smart Battery Data Specification Rev 1.0,
Compliances: and Smart Battery Charger Specification Rev 1.0 compliant

Specifications - Power Supply

Weight: 17.6 oz. (500 g)

Dimensions: 4.6 in. x 1.5 in. x 2.4 in. (119 mm x 38 mm x 60 mm)

Input: 100 to 240 VAC, 50/60 Hz

Output: 24 V, 2.5 A

Disposal

Dispose of the device in accordance with local regulations.

How to Contact Philips Respironics

For additional information about your device system, call the Philips Respironics Customer Service department at 1-800-345-6443 (US and Canada only), or 1-724-387-4000.

Manufactured for:

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