

Defibtech RBC-1000 Battery Pack Charging Station for the Defibtech RMU-1000 and RMU-2000 Automated Chest Compression Systems



User Manual

*This document is a supplement to the Defibtech
RMU-1000 and RMU-2000 ACC User Manuals.*

**ELECTRONIC
DISTRIBUTION**

RAC-U1512EN-BH rev B

Notices

Defibtech shall not be liable for errors contained herein or for incidental or consequential damages in connection with the furnishing, performance, or use of this material.

Information in this document is subject to change without notice. Names and data used in the examples are fictitious unless otherwise noted.

Limited Warranty

The “Limited Warranty” shipped with Defibtech ACC products serves as the sole and exclusive warranty provided by Defibtech, L.L.C., with respect to the products contained herein.

Copyright

Copyright © 2023 Defibtech, L.L.C.

All rights reserved. No part of this documentation may be reproduced or transmitted in any form by any means without the express written consent of Defibtech, L.L.C.

Patents

For patent information, see www.defibtech.com/patents.

Contents

1	Introduction	1
1.1	Overview	1
2	Safety Information	1
2.1	Warnings	1
2.2	Cautions	3
3	The RBC-1000 Battery Charging Station	4
4	Setup Instructions	5
4.1	Connecting the Power Cord	5
4.2	Charging the Battery Pack	5
4.3	Removing the Battery Pack After Charging	6
4.4	Post-Charging and Storage	6
5	Troubleshooting	7
6	Disposal	8
6.1	Notice to European Union Customers	8
7	Cleaning and Disinfecting	9
8	Maintenance	10
8.1	Repair Parts Availability Policy	10
9	Specifications	11
10	Glossary of Symbols	12
10.1	On-Device Indicator Icons	12
10.2	Other Symbols	12
11	Contacts	14

This page intentionally left blank.

1 Introduction

This User Manual provides information to guide operators in the use and maintenance of the Defibtech RBC-1000 Battery Pack Charging Station.

1.1 Overview

The Defibtech RBC-1000 Battery Pack Charging Station is an optional accessory that charges the RBP-1000 lithium ion battery pack used to power Defibtech RMU-1000 and RMU-2000 Automated Chest Compressors (ACCs).*

It is a stand-alone item, intended for indoor use only and can charge up to two battery packs simultaneously and independently. The Battery Pack Charging Station consists of the charging stand, an AC adapter, and a power cord. The AC adapter provided and used with the Battery Pack Charging Station is the same AC adapter as that used to power the ACC's Compression Module. Refer to the RMU-1000 or RMU-2000 ACC User Manual for battery pack and AC power adapter specifications.

2 Safety Information

This chapter includes a list of warning and caution messages that relate to the Defibtech RBC-1000 Battery Pack Charging Station and its accessories. Many of these messages are repeated elsewhere in this User Manual and on the ACC or its accessories.

WARNING: Conditions, hazards, or unsafe practices that may result in serious personal injury or death.

CAUTION: Conditions, hazards, or unsafe practices that may result in minor personal injury, damage to the RBC-1000 Battery Pack Charging Station, or loss of data.

2.1 Warnings



All users must read these instructions for use before using the Battery Pack Charging Station.



Do not use in the presence of flammable gases or anesthetics. Use care when operating close to oxygen sources (such as bag-valve-mask devices or ventilator tubing). Turn off gas source or move away from patient, if necessary.



Do not use the Battery Pack Charging Station in a hyperbaric oxygen chamber. Failure to follow this warning may cause explosion or fire.

* Essential performance.

Warnings (continued)



Use only the AC adapter and power cord supplied with the Battery Pack Charging Station. Using other AC adapters or power cords may cause unsafe conditions.



To avoid the risk of electric shock, this equipment must only be connected to a supply mains with protective earth.



Do not charge a battery pack which is damaged, discolored or has leakage. It may cause overheating, explosion or fire.



Do not cover up the Battery Pack Charging Station when it is in use.



If the battery pack, AC adapter, and/or stand becomes too hot to touch or otherwise appears faulty, immediately disconnect the power cord from the AC outlet, attach a "Do not use" or "To be repaired" label on the Battery Pack Charging Station and contact your local distributor or Defibtech representative.



Care should be taken to maintain the condition of the power cord. Do not forcibly bend or place heavy objects on the power cord. If the power cord is damaged, do not use it.



Do not sterilize the RBC-1000 Battery Pack Charging Station or its accessories.

2.2 Cautions



Only charge a Defibtech-specified rechargeable battery pack for use with the RMU-1000 or RMU-2000 ACC in the Battery Pack Charging Station. If an unspecified battery pack or a non-rechargeable battery is charged, it may cause overheating, explosion, fire or leakage.



Do not disassemble or modify the Battery Pack Charging Station. It may cause overheating, fire, electrical shock or injury.



For details on handling the battery pack and AC adapter, refer to the label and the RMU-1000 or RMU-2000 ACC User Manual.



The Battery Pack Charging Station stand is made for indoor use and is not water/dust proof or resistant. Do not place the charger stand in locations that are extremely hot or cold, dusty or dirty, very humid or vibrating. If the Battery Pack Charging Station stand is exposed to any of these conditions, it may cause fire or injury.



Do not allow metallic objects to contact the metal contacts of the Battery Pack Charging Station stand. Do not touch the Battery Pack Charging Station stand metal contacts when the power cord is plugged into AC power outlet.

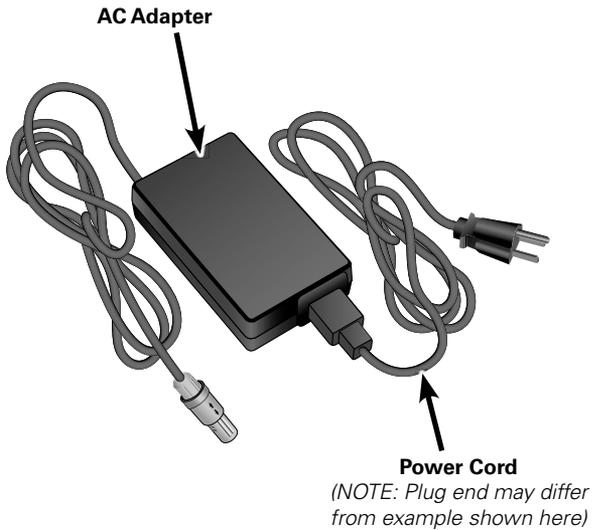
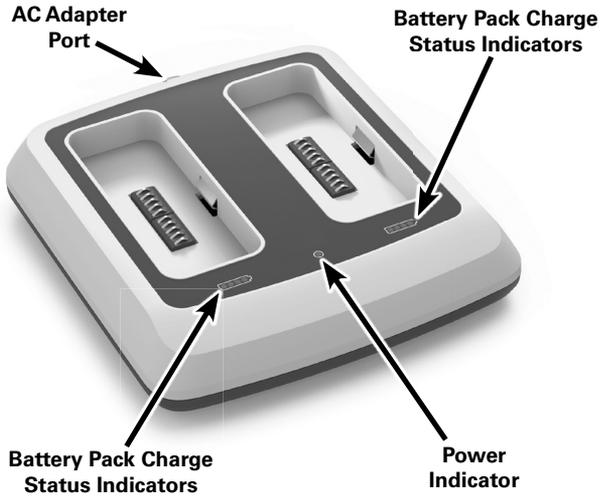


Do not drop the Battery Pack Charging Station stand or apply a mechanical shock to it.



Do not store or use the Battery Pack Charging Station stand outside of the specified conditions.

3 The RBC-1000 Battery Pack Charging Station



4 Setup Instructions

4.1 Connecting the Power Cord



Use only the AC adapter and power cord supplied with the Battery Pack Charging Station. Using other AC adapters or power cords may cause unsafe conditions.



To avoid the risk of electric shock, this equipment must only be connected to a supply mains with protective earth.

1. Place the charging stand near an accessible AC power outlet on a level surface.
2. Ensure that the power cord supplied is correct for your AC power outlet.
3. Connect the AC adapter cord to the battery charging stand then connect the power cord to the AC adapter and plug the power cord into an AC outlet on the wall.
4. When AC power is supplied to the Battery Pack Charging Station, the Power Indicator lights up green, indicating power is being supplied to the system.

4.2 Charging the Battery Pack

It takes about 2 hours to charge a new fully-depleted battery pack, 3 hours if charging two new fully-depleted battery packs. The charging time differs depending on operating environment.

1. Confirm that the Power Indicator is green. **Note:** If the Power Indicator is not green, check all cords and connections.
2. Before inserting any battery pack into the Battery Pack Charging Station, ensure that the date is within the battery pack's useful life specifications.
3. Insert the battery pack into the battery pack slot, pushing firmly until the battery clicks into place.
4. Upon initial battery pack insertion, the Battery Pack Charging Station displays the battery pack's current status for 3 seconds. If the battery has less than 20% charge remaining, the Battery Pack Charge Status Indicator will be red (either blinking slowly or solid).
5. The charging process begins immediately. Throughout the charging process, additional Battery Pack Charge Status Indicators will become solid green. When charging is complete, all four Battery Pack Charge Status Indicators will be solid green.
Note: Refer to the Troubleshooting section of this document should other indicators be present.

Note: The battery packs charge independently, so it is possible to start charging another battery pack by repeating the above charging steps, as necessary.

4.3 Removing the Battery Pack After Charging

It is recommended that the battery pack should be fully charged before putting it back into use unless it is required for emergency use.

1. Pull the battery pack up from the Battery Pack Charging Station stand.
2. Confirm that the battery pack is sufficiently charged by pressing the “check” button on the bottom of the battery pack. See the RMU-1000 or RMU-2000 User Manual for additional details.
3. If the battery pack does not have sufficient capacity, ensure that an AC adapter is available for use with the ACC.

Note: Leaving a battery pack in the Battery Pack Charging Station after it has reached a fully-charged state will not damage the battery pack or the Battery Pack Charging Station.

4.4 Post-Charging and Storage

When the battery pack is fully charged, all four Battery Pack Charge Status Indicators will be solid green.

1. To cut off the power to the Battery Pack Charging Station, disconnect the power cord from the wall AC outlet.
2. While not using the Battery Pack Charging Station stand, store it in a clean and dry environment.
3. When not using the AC adapter and power cord, refer to the RMU-1000 or RMU-2000 ACC User Manual for storage instructions and specifications.

Note: To extend the useful life of the Battery Pack Charging Station stand and AC adapter, it is recommended to remove the power cord from the AC wall outlet when the Battery Pack Charging Station is not in use.

5 Troubleshooting

Note: If the following actions do not solve the problem, attach a “Do not use” or “To be repaired” label or similar on the Battery Pack Charging Station and contact your local distributor or Defibtech representative.

<i>Symptom/Observation</i>	<i>Possible Cause/Criteria</i>	<i>Action</i>
The Power Indicator is not lit	No power or AC adapter and/or power cord malfunction	<ul style="list-style-type: none"> • Confirm that power is being supplied to the Battery Pack Charging Station from the AC source. • Check that the AC adapter and power cord are firmly connected.
	Charging stand malfunction	Contact your local distributor or Defibtech representative.
Any Battery Pack Charge Status Indicator is quickly blinking red	Battery pack and battery charger stand communication not established	<ul style="list-style-type: none"> • Place battery pack in other slot to charge. • Clean the battery contacts. • Clean the Battery Pack Charging Station contacts. • Replace the battery pack with a new one.
	The battery is too hot	Put the Battery Pack Charging Station and battery pack in a cool place. Charging automatically starts when the battery pack gets cool. Remove the source of overheating.
	There is a malfunction with the battery or charger	Contact your local distributor or Defibtech representative.
Any Battery Pack Charge Status Indicator is amber (yellow)	The battery has reached the end of its useful life.	Replace the battery pack with a new one.

6 Disposal



Dispose of the Battery Charging Station according to your local laws and your facility's guidelines for waste disposal. Otherwise, it may affect the environment.



If there is a possibility that the product may have been contaminated with infection, dispose of it as medical waste according to your local laws and your facility's guidelines for medical waste. Otherwise, it may cause infection.

Refer to the RMU-1000 or RMU-2000 ACC User Manual for disposal of other items.

6.1 Notice to European Union Customers



The crossed-out wheeled bin symbol  on this product indicates that this equipment is included in the scope of the directive 2012/19/EU on Waste Electrical and Electronic Equipment (WEEE) and of the national decree(s) which transpose provisions of such directive.

At the end of its lifetime, this product can only be disposed of in compliance with the provisions of the above mentioned European directive (and as amended) as well as with the corresponding national regulations. Severe penalties are possible for unauthorized disposal.

Electrical and Electronic Equipment (EEE) may contain polluting components and hazardous substances the accumulation of which could pose serious risk for the environment and human health. It is for this reason that local Administrations provide regulations which encourage reuse and recycling, and prohibit the disposal of WEEE as unsorted municipal waste and require the collection of such WEEE separately (at specifically authorized treatment facilities). Manufacturers and authorized distributors are required to supply information about a safe treatment and disposition of the specific product.

You may also return this equipment to your distributor when purchasing a new one. As for reuse and recycling, notwithstanding the limits imposed by the nature and the use of this product, the manufacturer will do his best to develop recovery processes. Please contact the local distributor for information.

7 Cleaning and Disinfecting



Before cleaning or disinfecting the Battery Pack Charging Station stand, disconnect the AC adapter's power cord from the AC outlet. Failure to follow this instruction may result in electrical shock and Battery Pack Charging Station malfunction.

The following are important guidelines must be adhered to when cleaning the device:

- To clean the Battery Pack Charging Station, use a soft cloth dampened with one of the following recommended cleaning agents:
 - Soapy water
 - Hydrogen peroxide
 - Isopropyl alcohol (70 percent solution)
 - Chlorine bleach (30 ml/liter water)
- Do not immerse the Battery Pack Charging Station in fluids or allow fluids to enter the unit.
- Do not spray cleaning solutions directly on the unit or its connectors.
- Please note that none of the items provided with the RBC-1000 Battery Pack Charging Station (including the Charging Station itself) are sterile or require sterilization.



Do not sterilize the RBC-1000 Battery Pack Charging Station or its accessories.

8 Maintenance

The Battery Pack Charging Station stand is designed for minimal maintenance. Refer to the RMU-1000 or RMU-2000 ACC User Manual for maintenance of the AC adapter and power cord. When the charging station has not been used, has been dropped or otherwise as required by local protocol, it is recommended that periodically:

<i>Item</i>	<i>Verification</i>	<i>Action</i>
Battery Pack Charging Station	Visual inspection	<ul style="list-style-type: none">• Is clean and dry• No parts are damaged or rattling
Power Cord	Visual inspection	The cord jacket is not dirty, damaged, or torn
Power-on	Functional	Remove the battery pack from the battery pack slot, connect the power cord and check that the Power Indicator illuminates
Charging	Functional	When the battery pack is inserted in the battery pack slot, the Battery Pack Charge Status Indicators illuminate

8.1 Repair Parts Availability Policy

The Battery Pack Charging Station stand, AC adapter, and power cord contain no user-serviceable parts.

9 Specifications

Power Requirements

Line voltage:	100 to 240 V
Line wattage:	100 W
Line frequency:	50/60 Hz
Power input:	50 VA or less

Charging Time*

Less than 2 hours if charging one Battery Pack
Less than 3 hours if charging two Battery Packs

Environment (Operating Conditions)

Temperature:	0 to 40°C (32 to 104°F)
Humidity:	30 to 90% (non-condensing)

Environment (Storage and Transport Conditions)

Temperature:	-20 to +70°C (-4 to +149°F)
Humidity:	10 to 90% (non-condensing)

Electromagnetic Compatibility

IEC 60601-1-2:2014

Safety Standard

IEC 60601-1/A1:2012

Type of protection against electrical shock: CLASS I EQUIPMENT
Degree of protection against harmful ingress of water: IPX0 (non-protected)

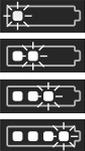
Physical

Dimensions:	6.7 x 7.0 x 1.5 inches (17 x 17.8 x 3.8 cm)
Weight (stand):	15 ounces (0.43 kg)

*typical, new battery, at 25°C

10 Glossary of Symbols

10.1 On-Device Indicator Icons

<i>Symbol</i>	<i>Meaning</i>
	Battery charging.
	Battery charged (charging is complete; all LEDs are solid green).

10.2 Other Symbols

<i>Symbol</i>	<i>Meaning</i>
	Caution, consult accompanying documents.
 www.defibtech.com	Consult operating instructions.
 24VDC ---	Connection point for AC Adapter. Only use the AC Adapter supplied with the RBC-1000 or the Defibtech ACC.
	Temperature limitation.
	Handle with care.
	Handle with care.
	Keep dry.
	Do not damage or crush.
	Do not expose to high heat or open flame. Do not incinerate.

Symbol	Meaning
	Meets the requirements of the European Medical Device Directive.
	Conformity to product safety testing requirements.
	Follow proper disposal procedures.
	Follow proper disposal procedures.
	Manufacturer.
	Serial number.
	Catalogue number.
IPX0	No special protection. Refer to IEC 60529 for further information.
	Authorized European Representative.

11 Contacts



Defibtech, L.L.C.
741 Boston Post Road, Suite 201
Guilford, CT 06437 USA

Tel.: 1-(866) 333-4241 (Toll-free within North America)
1-(203) 453-4507

Fax: 1-(203) 453-6657

Email:

sales@defibtech.com	(Sales)
reporting@defibtech.com	(Medical Device Reporting)
techsupport@defibtech.com	(Service and Repair - USA and territories only)
intl@defibtech.com	(Service and Repair - Outside of USA)