

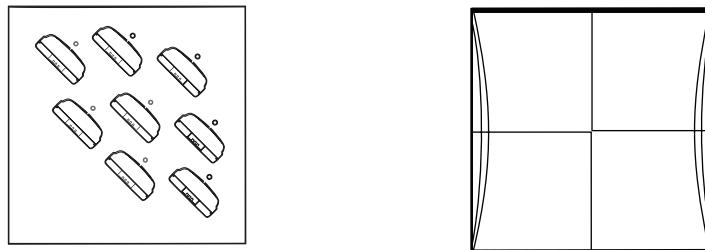
Installation Guide

BPC1 Battery Pack Charger

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1 General



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Figure 1. BPC1-AAA Charging Rack module and CR24 Power Supply.

The BPC1 Battery Pack Charger comes in two versions:

- BPC1-AAA Charging Rack Module for i75 Handset batteries.
- BPC1-ACA Battery Pack Charger for a51 Alarm Transmitter, a71 Alarm Transceiver and p71 Transceiver.

The BPC1 module is used together with the Power Supply for CR24. Each BPC1 module charges eight batteries simultaneously, and each Power Supply for CR24 can supply three BPC1 modules with all together twentyfour batteries.

IMPORTANT: Power Supply for CR24 is the only power supply that can be used together with the BPC1 Battery Pack Charger.

	BPC1 Battery Pack Charger	Power Supply for CR24
Supply voltage:	+5 V DC	85 – 286 V AC (47-63Hz)
Max current consumption when charging:	3.2 A per module	2 A
Max output current when shortcut:	5 A per module	12 A

Note: A label of the power rating, rated voltage, and rated current, is attached on the metal shield cover of the power supply.

2 Safety Rules

The Power Supply module connects to 85 – 286 V AC. Therefore extra caution should be taken during operation.

- For safety the covers must always be mounted during operation.
- The voltage safety cover has to be mounted on top of the voltage connector in the Power Supply module to prevent hazardous situations, like electric shock.
- Ensure that the Power Supply is grounded after installation, by measuring between the power supplies metal shield cover and an extraneous ground. The Power Supply unit can otherwise be live.
- When working with the units the mains power supply cable must always be disconnected. Note the following:

- for PERMANENTLY CONNECTED EQUIPMENT, a readily accessible disconnect device shall be incorporated in the building installation wiring;
- for PLUGGABLE EQUIPMENT, the socket-outlet shall be installed near the equipment and shall be easily accessible

The disconnect device shall disconnect both poles simultaneously.

- For continued protection against risk of fire only replace the fuse in the BPC1 with the same type and rating of fuse (5A ATAB Art. No. 210289).
- For BPC1-**AAA**: If the ambient temperature is 25° C (77° F) or lower the Power Supply CR24 can supply up to three charging racks (BPC1-AAA Charging Rack module or CR2 Charging Rack).
- For BPC1-**AAA**: If the ambient temperature is higher than 25° C (77° F) the Power Supply CR24 can supply up to two BPC1-AAA Charging Rack modules or three CR2 Charging Racks.
- For BPC1-**ACA**: If the ambient temperature is 25° C (77° F) or lower the Power Supply CR24 can supply up to three charging racks (BPC1-ACA Battery Pack Charger or PCR Charging Rack).
- For BPC1-**ACA**: If the ambient temperature is higher than 25° C (77° F) the Power Supply CR24 can supply up to two BPC1-ACA Battery Pack Chargers or three PCR Charging Racks.
- Suomi: Laite on liitettävä suojaamadoituskoskettimilla varustettuun pistorasiaan.
- Norge: Apparatet må tilkoples jordet stikkontakt.
- Sverige: Apparaten skall anslutas till jordat uttag.

3 Installation

- The units should be placed in a dry environment with a temperature range over 0° up to + 40° C.
- If the ambient temperature is 25° C (77° F) or lower, the Power Supply CR24 can supply up to three charging racks (BPC1 Battery pack Charger or CR2 Charging Rack).
- If the ambient temperature is higher than 25° C (77° F), the Power Supply CR24 can supply up to two BPC1 Battery Pack Chargers or three CR2 Charging Racks.
- The units should be mounted according to the arrows inside.
- Avoid mounting the BPC1 Battery Pack Charger module in a sunlit place. This can affect the charging capacity.
- The unit should be mounted on concrete or plaster walls only.
- The Power Supply CR24 should be mounted above or beside the charging modules (see [figure 2](#) on page 4) due to the generation of heat.

Delivery includes:

One Inlet accessory kit including;

- Cable supports and screws
- Rectangular assembly covers
- Clips

Required tools and material:

- Three-wired cable for the mains power with diameter 4-8.5 mm. Make sure that the used cable is grounded and approved for the current and voltage in question.
- Screwdrivers
- Cutting pliers
- Multimeter
- Screws and wall plugs for wall mounting. Make sure the screws and wall plugs are correct for the type of wall used. See example below.

Wall material	Wall plug	Screw diameter
Single plasterboard	Thorsman TP1	3.5-5 mm
Double plasterboard	Thorsman TP2	3.5-5 mm
Concrete	Thorsman TP2	3.5-5 mm

Examples of how to assemble the modules

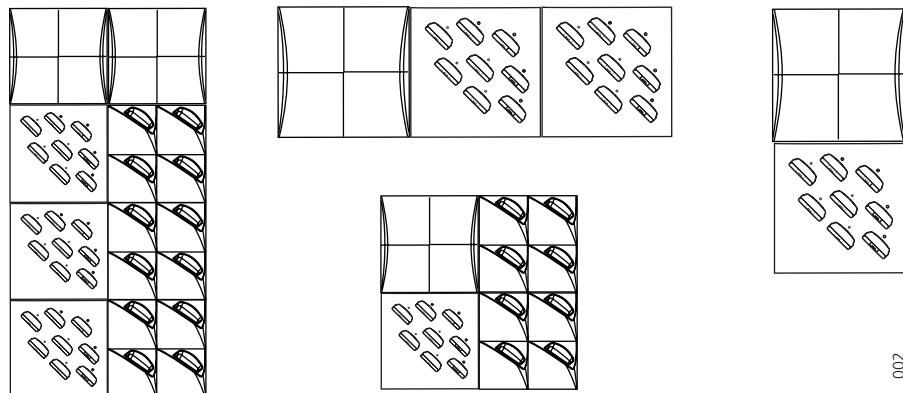


Figure 2. The figure shows four different ways to assemble the BPC1-AAA Charging Rack modules.

The BPC1-**AAA** Charging Rack module can be used together with the **CR2** Charging Rack. The BPC1-**ACA** Battery Pack Charger can be used together with the **PCR** Charging Rack. The Power Supply can also be placed apart from the charging modules.

3.1 Mounting

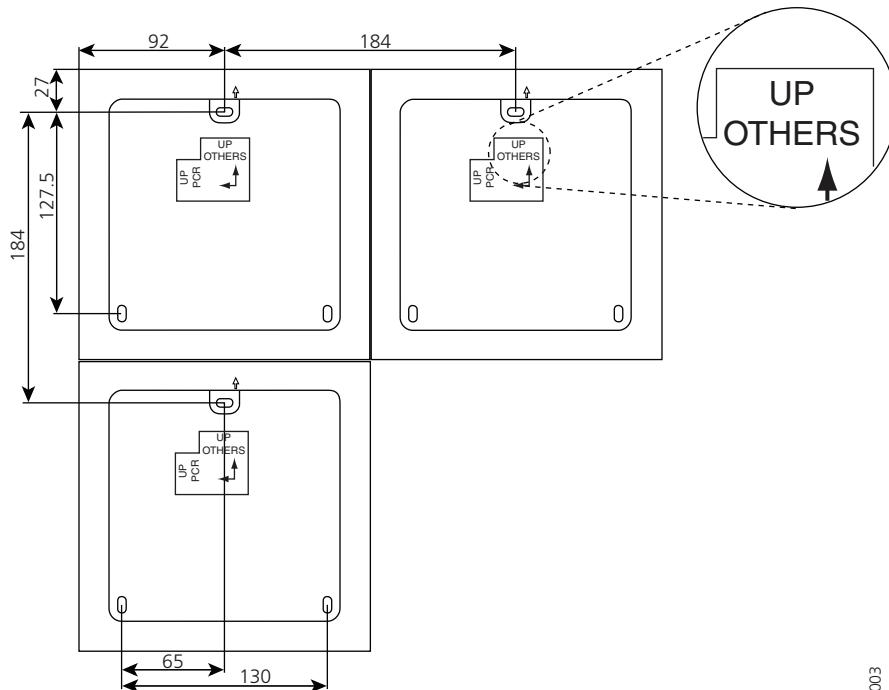


Figure 3. Mounting dimensions in mm. The modules should be mounted with the marking text, "UP OTHERS", upwards.

For wall fitting, preparation can be done in two ways:

- Measure and mark out the drill holes by using the dimensions in [figure 3](#). Drill and fasten the modules on the wall with three screws.
or
- Remove the covers, see [3.2 Removing Covers](#) on page 5 and mount together some of the modules, see [3.3 Mounting Units Together](#) on page 6. Hold the mounted modules

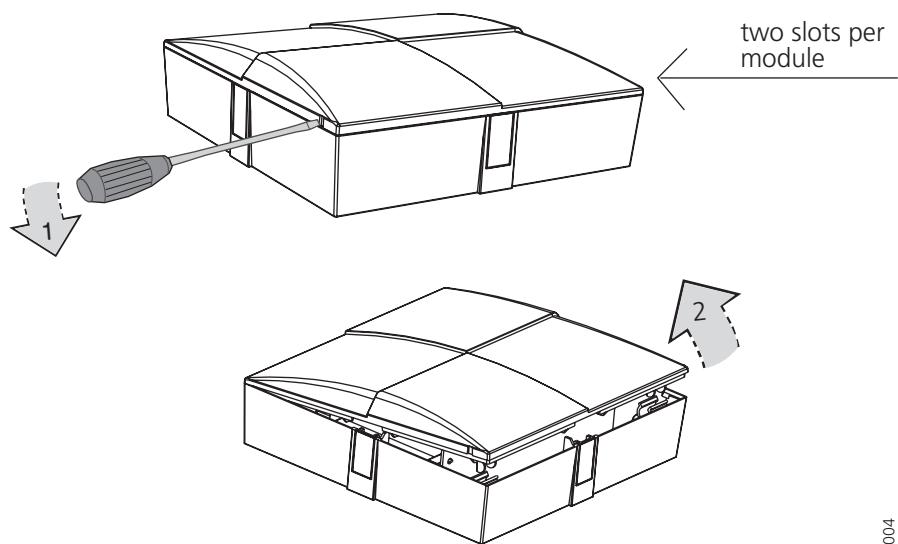
up against the wall and mark the location of the drill holes. Drill and fasten the modules on the wall with three screws.

Tip:

When you are planning the location of the modules, start to mount them in a height that makes it easy to reach the batteries.

3.2 Removing Covers

Power Supply Module

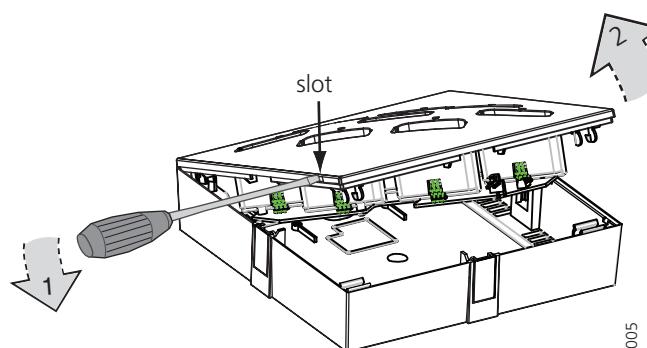


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Figure 4. Removing the cover from the Power Supply module.

- 1 Put a screwdriver onto the slots and slightly bend the cover upwards (1).
- 2 Lift up the cover in the direction of the arrow (2).

BPC1 Battery Pack Charger Module

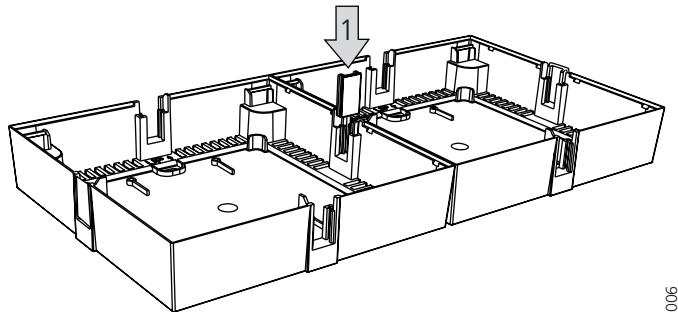


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Figure 5. Removing the cover from the BPC1-AAA Charging Rack module.

- 1 Put a screwdriver onto the slots and slightly bend the cover upwards (1).
- 2 Lift up the cover and slightly bend it upwards in the direction of the arrow (2).

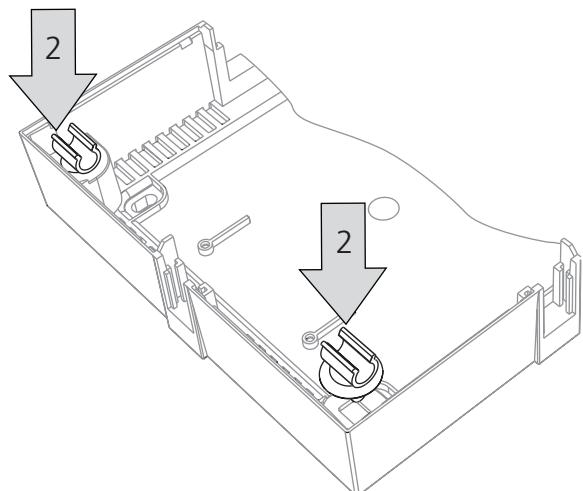
3.3 Mounting Units Together



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Figure 6. Mounting units together.

- 1 Fasten the two adjacent modules together with two rectangular assembly parts, which are provided in the parts bag. Place two covers in the adjoining slot (1).
Note: The modules must be placed with the marking text, "UP", upwards.
See [figure 3](#) on page 4.
- 2 Fasten each module on the wall with three screws, see [figure 3](#) on page 4.
- 3 Mount two clips (which are provided in the parts bag) in each module (2).



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Figure 7. Mounting of clips.

- 4 Mount rectangular covers (which are provided in the parts bag) at the openings where there are no adjacent modules (3), see [figure 8](#) below.
- 5 Fasten the cover's angled hooks on the holders (4).
- 6 Snap on the cover (5).

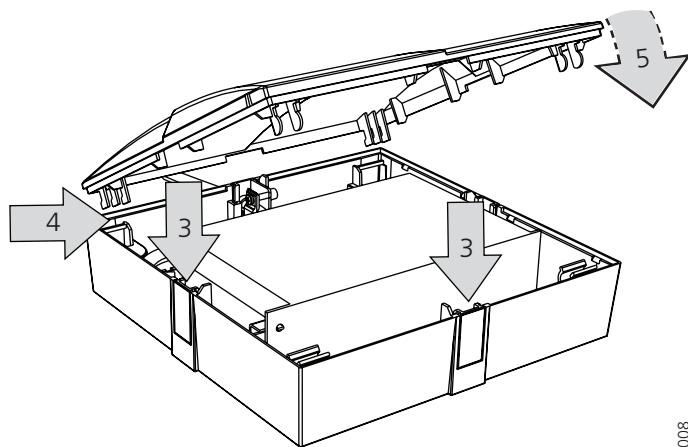


Figure 8. Mounting of rectangular covers and replacing the covers (BPC1-AAA).

4 Connection of Power Supply

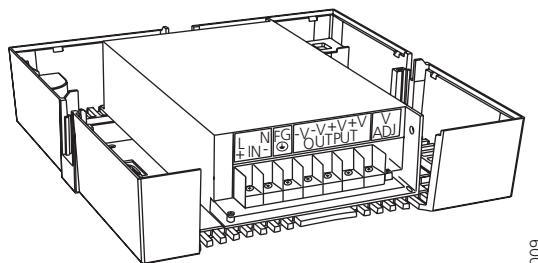


Figure 9. Power Supply module.

IMPORTANT: The Power Supply module connects to 100 - 250 V AC. When working with the units the mains power supply cable must always be disconnected. For safety the covers must always be mounted after an installation. The voltage safety cover has to be mounted on top of the voltage connector in the Power Supply module to prevent hazardous situations, like electric shock, see [figure 13](#) on page 9.

4.1 Connection of Mains Power Supply Cable (AC)

- 1 Unscrew the voltage safety cover.

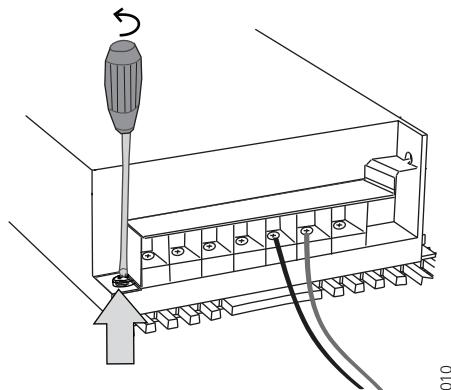


Figure 10. Removing the voltage safety cover.

- 2 Run the mains power supply cable through the cable support holder which is provided in the parts bag.

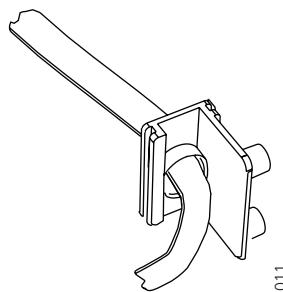


Figure 11. Mains power supply cable with cable support holder

- 3 Cut and strip the mains power supply cables.
- 4 Connect the mains power supply cable onto the indicated positions on the connector, see [figure 12](#).

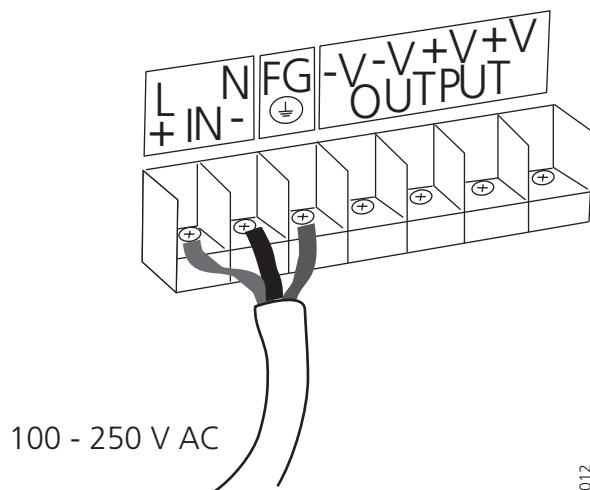
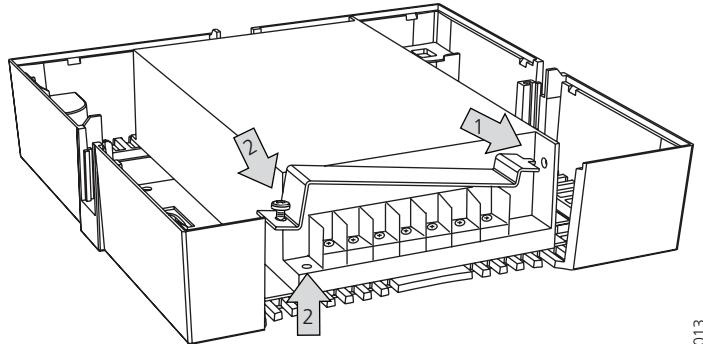


Figure 12. The mains power supply connection.

IMPORTANT: To prevent hazardous situations like electric shock, the voltage safety cover must always be mounted.

- 5 Mount the voltage safety cover on its position (1), fasten it with one screw (2), see figure 13.



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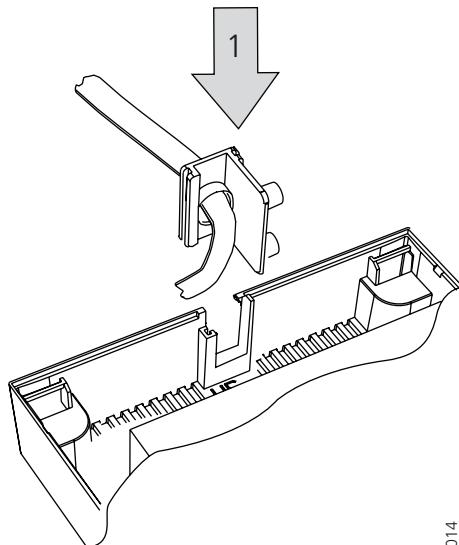
Figure 13. Mounting of the voltage safety cover.

4.2 Wiring Run

Mains Power Supply Cable (AC)

Note: To avoid cable break, make sure that the cable is not tight around the sharp edge of the power supply.

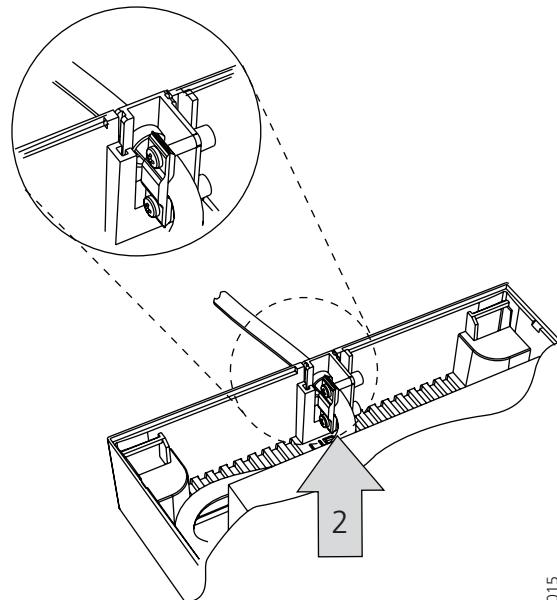
- 1 Mount the cable support holder at the opening, marking, "UP", on the Power Supply module, or opposite side depending on where the wall socket is placed and how the modules are fitted together (1).



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Figure 14. Mounting of the cable support holder.

- 2 Secure the mains power supply cable with two screws (2), which are provided in the parts bag.



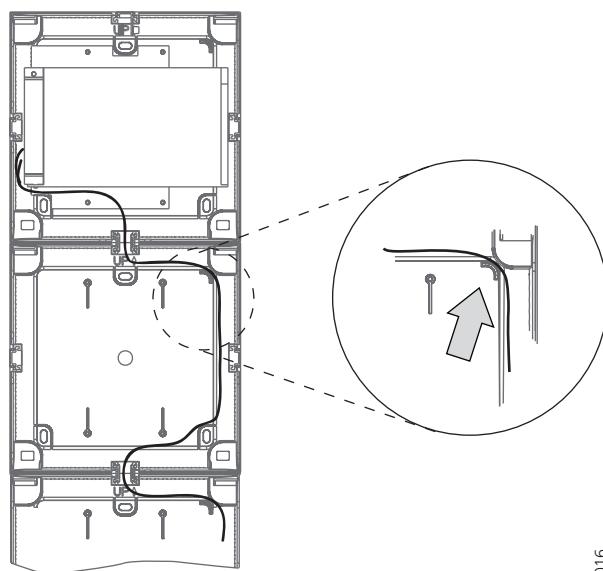
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Figure 15. Securing the mains power supply cable.

Supply Voltage Cable (DC)

The +5 V DC supply voltage cable is pre-assembled.

- 1 If possible run the +5 V DC supply voltage cable around the cable support, to avoid cable break. See [figure 16](#).



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Figure 16. +5 V DC supply voltage cable support.

4.3 Connection of Supply Voltage Connector

IMPORTANT: Power Supply for CR24 is the only power supply that can be used together with BPC1 Battery Pack Charger module.

Note: J100 is a polarised connector. If the connector is inserted the wrong way the charging will not work.

- 1 Connect the +5 V DC supply voltage connector to J100.

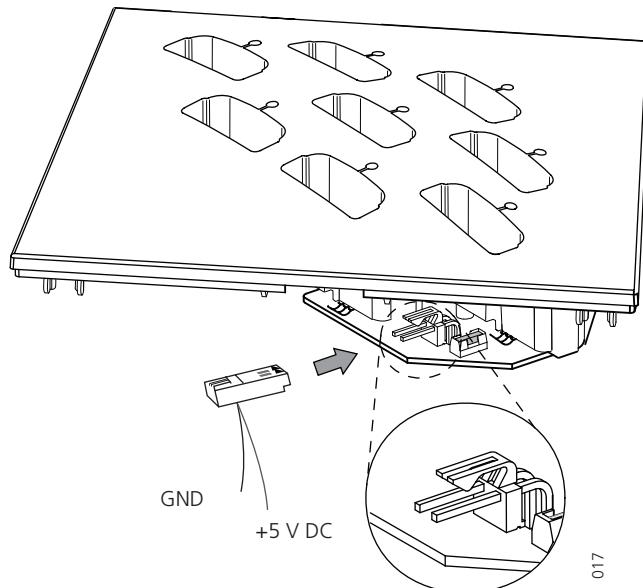


Figure 17. The figure shows position of connector J100 on BPC1-AAA.

- 2 Mount the covers, see [figure 8](#) on page 7.

5 Installation Test

IMPORTANT: To ensure that the Power Supply is grounded after installation, measure between the power supplies metal shield cover and an extraneous ground. The Power Supply unit can otherwise be live.

- 1 Connect the mains power supply cable to the wall socket.
- 2 Check that each charging slot starts charging by putting a battery in each charging slot. An orange LED indicates that the charging starts while a green LED indicates a fully charged battery.

6 Board Description

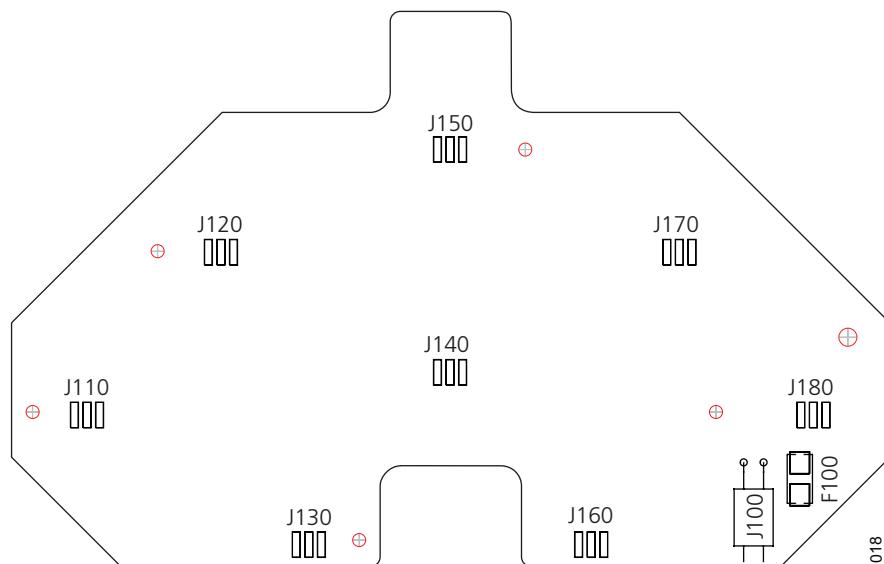


Figure 18. BPC1 Battery Pack Charger circuit board.

Connectors

J100	+5 V DC supply voltage
J110 – J180	Connection between charging slots and charging channels

Fuse

F100	5 A fuse for protection against risk of fire.
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7 LED indications

- OFF No charging, battery not inserted correctly.
- Orange Charging of battery.
- Green Battery fully charged.

When a battery pack is inserted in the BPC1 Battery Pack Charger the charging is indicated by an orange LED. It changes to a green LED when the battery pack is fully charged.

7.1 Indication of Faulty Batteries

If a faulty battery pack is inserted in the BPC1 Battery Pack Charger, it is indicated as fully charged immediately, i.e. the LED will not indicate charging. If you suspect a faulty battery pack, test it in another handset.

Document History

For details, see change bars in the document.

Version	Date	Description
A	2008-09-12	First version