General
The SB-920P battery pack is a rechargeable battery for a CSM-1000 series bedside monitor.

Installation must be performed by qualified personnel.

Contact your Nihon Kohden representative for installation of the battery pack.

NOTE: Read this guide and the CSM-1000 series bedside monitor operator’s manual for handling and safety of the battery pack.

Composition

<table>
<thead>
<tr>
<th>Item</th>
<th>Supply Code/Code No.</th>
<th>Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>SB-920P battery pack</td>
<td>X162</td>
<td>1</td>
</tr>
<tr>
<td>Heat radiation sheet</td>
<td>6114-931334</td>
<td>1</td>
</tr>
<tr>
<td>Start date label</td>
<td>6124-034393</td>
<td>1</td>
</tr>
</tbody>
</table>

Symbols

The following symbols are used with this battery pack. The description of each symbol is shown in the table below.

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>!</td>
<td>General warning sign</td>
<td>!</td>
<td>Follow instructions for use.</td>
</tr>
<tr>
<td>!</td>
<td>Attention, consult installation guide</td>
<td>!</td>
<td>Do not disassemble or modify the battery pack.</td>
</tr>
<tr>
<td>!</td>
<td>Keep away from fire.</td>
<td>!</td>
<td>Do not short-circuit the battery pack.</td>
</tr>
<tr>
<td>!</td>
<td>Keep away from water.</td>
<td>!</td>
<td>Do not give impact to the battery pack.</td>
</tr>
<tr>
<td>❖</td>
<td>This way up</td>
<td>❖</td>
<td>Keep away from rain</td>
</tr>
<tr>
<td>!</td>
<td>Fragile</td>
<td>!</td>
<td>Stacking limit by number (“n” is the limiting number)</td>
</tr>
</tbody>
</table>

Safety Information

⚠️ WARNING A warning alerts the user to possible injury or death associated with the use or misuse of the instrument.

⚠️ WARNING Do not do the following to the battery. It may cause leakage, overheating, explosion and fire.
- Short-circuit the + and – terminals on the battery.
- Put the battery into fire or heat the battery.
- Disassemble or modify the battery.
- Give strong impact to or deform the battery.
- Use the battery on unspecified instruments.
- Charge the battery on unspecified instruments.
- Install the battery with the wrong polarity.
- Immerse the battery in liquid or get it wet.

⚠️ WARNING If the liquid inside the battery contacts the eyes, mouth or skin, do not rub the eyes, mouth or skin. Wash with clean water and see a physician immediately.
Parts Descriptions

SB-920P Battery Pack

- Date of first use
  Write the date of first use.
- Signal connector
- Power connector

Heat Radiation Sheet
Both sides of the heat radiation sheet are covered with a protective film. Text is printed on the protective film covering the adhesive side of the heat radiation sheet.

Heat Radiation Sheet

Start Date Label
Date of first use
Write the date of first use.

Preparation
Write the date of first use of the battery pack on the battery pack and the provided start date label.

Tightening Torque
To prevent loosening, damage or deformation of screws, tighten the screw with the specified torque. The following table shows the rated value for each screw.

<table>
<thead>
<tr>
<th>Nominal Diameter</th>
<th>Standard Torque (N•cm)</th>
<th>Tightening Torque (N•cm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>M2</td>
<td>18.6</td>
<td>15.7 to 20.6</td>
</tr>
<tr>
<td>M2.3</td>
<td>29.4</td>
<td>24.5 to 33.3</td>
</tr>
<tr>
<td>M2.6</td>
<td>41.2</td>
<td>36.3 to 47.0</td>
</tr>
<tr>
<td>M3</td>
<td>65.7</td>
<td>55.9 to 75.5</td>
</tr>
<tr>
<td>M4</td>
<td>152.9</td>
<td>130.3 to 174.4</td>
</tr>
<tr>
<td>M5</td>
<td>307.7</td>
<td>263.6 to 351.8</td>
</tr>
<tr>
<td>M6</td>
<td>521.4</td>
<td>445.9 to 595.8</td>
</tr>
</tbody>
</table>

Depending on where the screw is used, a different torque may be specified. Use the specified torque.

Installing the Battery Pack

NOTE: Turn off the CSM-1000 series bedside monitor and disconnect the power cord before starting installation.

1. Remove the heatsink cover.
The core unit has two different types.
When there is a top plate and top frame:
Remove the two screws and remove the heatsink cover.

2. Remove the battery cover.

When there is a top cover:
Remove the four screws and remove the heatsink cover.

Proceed to step 5 if installing a battery pack for the first time.
3. Remove the heat radiation sheet from the battery cover.

4. Remove the battery pack.
   1) Remove the battery pack from the battery case.
   2) Disconnect the signal connector by pressing in the latch indicated by the arrow.
   3) Disconnect the power connector by pressing in the latches indicated by the arrows.

5. Attach the battery pack.
   1) Connect the signal connector.
   2) Connect the power connector.
   3) Insert the battery pack into the battery case as shown.
   
   NOTE: To keep the battery pack from getting hot, insert it as shown. If the battery pack is inserted in the wrong direction, it gets hot and the life of the battery pack may be reduced.

6. Attach the heat radiation sheet to the battery cover.
   1) Remove the protective film (with text) from the adhesive side of the heat radiation sheet.
   2) Attach the heat radiation sheet to the metal plate of the battery cover.
   3) Remove the clear protective film.

   NOTE • Do not allow air bubbles to form when attaching the heat radiation sheet.
   • Do not forget to remove the clear protective film.

7. Attach the battery cover.
   
   NOTE: Make sure that no cables get caught.
8. Attach the heatsink cover.
   The core unit has two different types.
   When there is a top plate and top frame:
   Attach the heatsink cover and fix it with the two screws.

   ![Diagram of Top plate and Top frame with Heatsink cover]

   When there is a top cover:
   Attach the heatsink cover and fix it with the four screws.

   ![Diagram of Top cover with Heatsink cover]

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**Attaching the Start Date Label**

Attach the start date label on the bedside monitor. Replace the battery pack according to this date.

![Diagram of Start date label]

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**Checking the Operation**

Refer to the CSM-1000 series bedside monitor service manual.

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**Charging Time/Operating Time**

Refer to the CSM-1000 series bedside monitor operator’s manual.

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**Replacing the Battery Pack**

The battery may deteriorate depending on the usage condition, duration of use and storage environment. Periodically check the battery and replace it with a new one if an abnormality is found. When a “Battery Error” message appears, the battery might have a failure or be expired.

Contact your Nihon Kohden representative.

The warranty period is one year from date of delivery.

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**Disposal of the Battery Pack**

Before disposing of the battery pack, check with your local solid waste officials for details about recycling options or proper disposal in your area. The battery pack is recyclable. At the end of its useful life, under various state and local laws, it may be illegal to dispose of this battery into the municipal waste stream.

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**Specifications**

Type of battery: Nickel-metal hydride
Nominal voltage: 9.6 V
Nominal capacity: 2450 mAh
Rated capacity: 2250 mAh

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**Recommended Storage Environment**

The storage temperature and humidity affect the lifetime of the battery pack. Store the battery pack in the following environment.

- **Temperature:**
  - 1 month or less: -20 to +60°C (-4 to +140°F)
  - 3 months or less: -20 to +45°C (-4 to +113°F)
  - 12 months or less: -20 to +35°C (-4 to +95°F)

- **Humidity:** 20 to 85% RH (noncondensing)
- **Atmospheric pressure:** 500 hPa to 1060 hPa

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