INSTRUCTION MANUAL

PA-90000 Series Bed

7B01005800A4



Preface

Thank you for purchasing the PA-90000 Series Bed.

This instruction manual describes precautions and how to safely use and operate the bed.

- •Before using this bed, please read this instruction manual to fully understand the safe and proper operating procedures.
- The correct operating procedures should be explained not only to the persons using the bed but also to caregivers.
- After reading this instruction manual, store it where it can be easily accessed for later reference.
- Users and/or carers are requested to report information about any serious incident related to this bed that occurs within the EU to the manufacturer and the regulating authority of the member country of residence. 'Serious incident' means any incident that directly or indirectly led, might have led or might lead to any the following:
 - a) The death of a user, carer or other person.
 - b) The temporary or permanent serious deterioration of a user's, carer's or other person's state of health.
 - c) A serious public health threat.
- The actual product purchased may differ from detailed descriptions given in this instruction manual due to product improvements.
- Values in the specification such as working range, dimensions, angles and mass are subject to normal manufacturing tolerances. Besides some exemptions, display purpose words such as "approximately", "about" etc. are omitted.
- For any queries, please feel free to directly contact Paramount Bed or your distributor.

PT. PARAMOUNT BED INDONESIA

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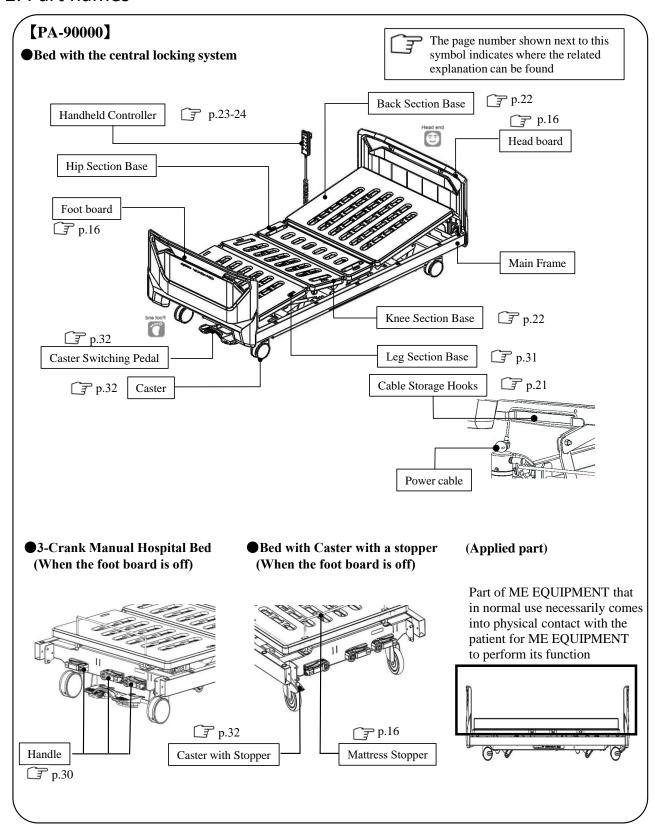
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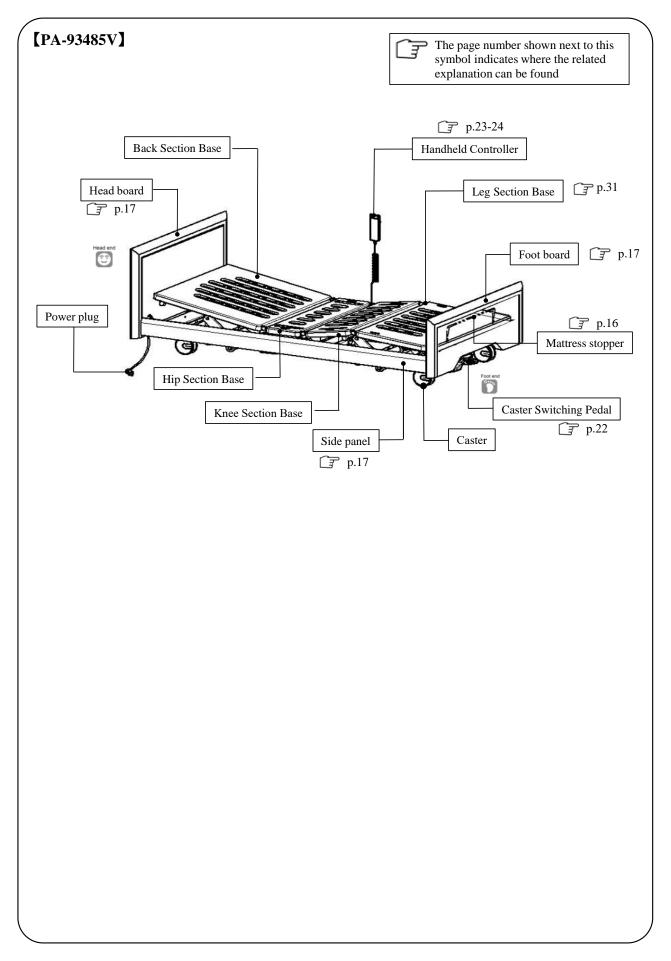
1 INTENDED USE AND PART NAMES

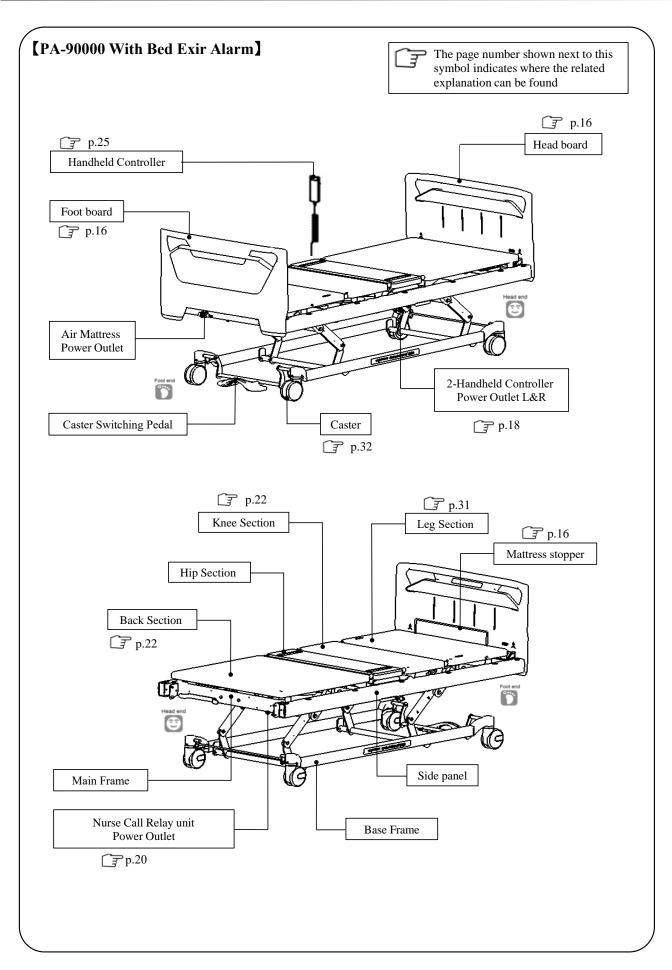
1. Intended use

- This bed is designed to be used for patient care in medical institutions and elderly care facilities.
- ※Please refer to the 「SPECIFICATION」 for the patient target groups and the intended users.
 Note: Application environment 1 and 2 in IEC 60601-2-52:2009

2. Part names







2 SAFETY PRECAUTIONS

- Be sure to read these safety precautions beforehand to ensure proper usage.
- The safety precautions described here are intended to ensure safe use of the product and prevent personal injury.

Precautions are classified as "WARNING", "CAUTION" to indicate the degree of hazard or injury that may result from improper use. **Both are important safety precautions that must be strictly observed.**

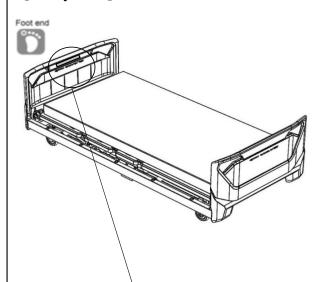
Details of the pictograms used are shown below. Be sure to fully understand these precautions before reading the instruction manual.

⚠ WARNING Indicates actions that may result in death or serious injury (broken bones, pressure or paralysis) if the indication is ignored. CAUTION Indicates actions that may result in light personal injury (bruises, wounds, or cuts) or property damage if the indication is ignored.

Among items described in SAFETY PRECAUTIONS, are especially important because ignoring them could result in serious life-threatening accidents. Be sure to read these notes and use the product safely and properly. Be especially careful to check patients who might act in unexpected ways or cannot maintain their posture independently.

*After reading this instruction manual, store it in a place that can be easily accessed for later reference.

[Safety label]



- Precautions requiring special attention by persons using the bed are affixed to the foot-end frame. Do not remove or deface the label.
- If the safety label is removed or defaced, replace it with a new one obtained from Paramount Bed or your distributor.









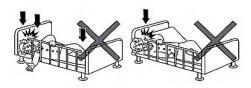




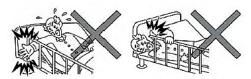


MARNING

 \blacksquare Do not put any body part (especially the head or neck) between a fold-down side rail or board and the raised base (\downarrow).



- When the head or neck enters the gap, the patient and or/user might not be able to withdraw, and there is a risk of injury.
- Due attention should be paid to patients who cannot maintain posture by themselves.
- Even when side rails are used, pay attention to prevent patients from falling of the bed.
 - A patient may fall off the bed through the gap between a board and fold-down side rail and get injured.
 - If a patient bends forward over a fold-down side rail, they may fall off the bed and get injured.
- Do not extend the head, hands, or feet outside of the bed.



- If the bed is operated with a body part (especially head or neck) placed in the gap, the part may get caught and injured.
- Do not put any body part (especially the head or neck) between a fold-down side rails and the base or mattress.
 - When the head or neck enters the gap, the patient might not be able to withdraw, and there is a risk of injury.
 - A hand or finger may get caught in the gap, resulting in injury.
- Do not insert a head (fingers) and between the bed's frame and section base during powered operation.



- The body part may get caught between the lowered base and the bed's frame or board and get injured.
- Lock the casters at all times except when moving the bed.



- The patient may be injured getting on or off the bed should it move.
- Unlock the casters when moving the bed.
- Before a patient gets on or off the bed, push down the safety stoppers of the side rail and completely fold down the side rail.



- The patient leg's could be caught by the side rail, causing the patient to fall off the bed or the patient's finger could be caught between the supportive bars, causing injury.
- When using IV hanger rod, pay attention to prevent tubes from getting caught by the side rail.



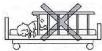
■ When folding the side rails, proceed slowly.



- The tubes could be squashed.
- Releasing the hands in the middle of the operation or slamming the rail down could cause injury or damage to side rail.

MARNING

■ Do not use with infants.

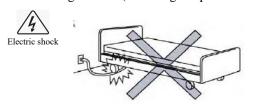


They may fall down through the space of a folddown side rail.

■ Do not allow dust to accumulate on the power plug.



- When dust adheres to the surface of the power plug, the moisture it holds will allow a current to flow, there will be a worsening of the insulation condition, and a risk of fire.
- Wipe away any dust accumulating on the power plug pins and mating surface using a dry cloth.
- Do not damage cables (including the power cable).



- Damage to cables may cause electric shock or a fire.
 - OPrevent cables from getting caught by the bed's movable parts.
- ODo not put heavy objects on cables or apply strong force
- ODo not place the bed on cables.
- Request repair (or replacement) for damaged cables.
- Do not trip over the power cable or cables of the handheld controller.
 - Damage plug or cable may induce leakage, and in turn, electric shock.
 - There is a risk of falling down and getting injured.
- Do not run cables (including the power cable) of the bed or other electric appliances under the bed.
 - The cables may get caught in a caster or movable part and damaged, causing a fire or electric shock.
- When adjusting the base angle or the bed height, pay attention to the patient's conditions.
 - If a patient on the bed moves when adjusting the base angle, they may fall from the bed and get injured.
 - Perform the adjustment while supporting the patient who cannot maintain posture by themselves. If you cannot watch the patient, flatten the base angle and lower the bed to the lowest position. If not, the patient may fall off the bed or caught in a space of a fold-down side rail or board and get injured.

∴WARNING

- Do not allow operation of the bed by a child aged 12 or under, or someone deemed incapable of comprehending the operation.
 - ●When a child aged 12 or under, or someone deemed incapable of comprehending the operation (such as someone having a cognitive illness) operates the handheld controller by themselves, there is a risk of unexpected injury such as the body becoming caught in the bed by mistake.
 - If there is a risk of such person touching the handheld controller, disconnect the power plug in order to prevent an accident caused by incorrect operation.
 - ●When a child aged 12 or under, or someone deemed incapable of comprehending the operation (such as someone having a cognitive illness) operates the handheld controller by themselves, there is a risk of unexpected injury caused by getting caught in the bed by mistake. (3-crank gatch bed only).
- When transporting a patient, attach the fold-down side rails.
 - There is a risk that the patient could fall from the bed and become injured.
 - Do not move the bed with holding the fold-down side rails. The side rails may get damaged or deformed.
- Use the bed in the proper orientation.



- Lying down on the bed with incorrect orientation of head end and foot end will result in an unnatural posture when the bed position is adjusted and this may cause injury.
- Do not perform an angle adjustment when the patient is lying face down.



- Bending the joints in the wrong direction may result in injury.
- There is a risk of injury due to falling of toppling from the bed.

■ Do not stand on the bed.



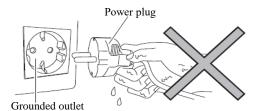
- There is a risk of injury caused by the person falling off the bed or falling down, or the bed could be damaged or deformed. Pay close attention to children.
- Do not use the bed for patients with a height of 146 cm or less, a weight of 40 kg or less, and a BMI of 17 or less.



- This product is not designed for patients with a height of 146 cm or less, a weight of 40 kg or less, and a BMI of 17 or less. A part of the body may get caught in a gap between the bed and side-rail, resulting in injury.
- Even when the side-rail are used, an infant or small child may fall off the bed through a gap between the bed and side-rail, resulting injury.

MARNING

■ Do not insert the power plug with wet hands.



There is a risk of electric shock due to short-circuiting.

- Do not spill liquids on the bed.
 - Do not spill liquids on the bed's electrical components, such as the motors, handheld controller, or nurse control panel, otherwise, there is a risk of malfunction. If liquids are accidentally split, unplug the power plug from the power outlet and contact your distributor.
- Do not use a mobile phone or other wireless device in the vicinity of the bed.
 - This may cause a malfunction of the bed.
- Do not repair or modify the bed or its components by yourself.
 - This may create unintended gaps or may cause malfunction, resulting in injury.
- Always unplug the power plug when using electronic medical equipment.

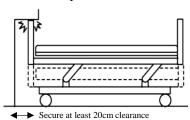


- Using electronic equipment (e.g. microwave or high-frequency medical equipment) at the same time
- When the bed will be used in conjuction with other medical equipment, check the safety considerations
- Do not attach a restraint belt to the main frame or side rails.
 - Operation in position such as with the back raised or the knee raised may squeeze the body and cause injury.
- Use the bed properly according to the patient's medical condition.
 - ●Improper use of the bed may adversely affect the patient's medical condition.

 Before the patient or a family member operates the bed, make sure that the doctor or nurses explain related details given in the instruction manual and proper usage to suit the patient's medical condition.
- When leaving the bed, lower the bed to the minimum height.
 - If a doctor, nurse, or attendant leaves the bed, lower the bed as much as possible according to the patient's condition because there is a slight chance that the patient may fall of the bed.
- To avoid the risk of electric shock, connect this equipment only to a power source providing protective earthing.

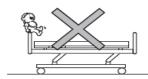
∕MARNING

■ When performing the height adjustment or inclination angle adjustment, pay attention not to hit the wall, beam, or power outlet on the wall.



When using the bed, make sure that the beds does not hit the wall beam, or power plug during the adjustment of the height or inclination angle. Make sure that there is a least 20cm clearances from the wall or beam.

■ Do not sit on a fold-down side rail, head board, or foot board.



● The patient may toppie or fall from the bed, or the bed could be damaged or deformed and result in injury.

■ Do not climb on the bed in the raised position.



● The patient may toppie or fall from the bed, or the bed could be damaged or deformed and result in injury.

■ The bed should not to be used by two or more persons.



●This bed is designed for use by one person. When used by two or more persons, they bed could be damaged and result in an injury. The maximum weight the bed can bear is 204kg for the bed with the expansion function and 138kg for the bed without the expansion function. If a doctor or nurse needs to get on the bed for a short time. Confirm the following condition beforehand.

OThe load to be applied to the bed is less than the maximum weight that the bed can bear.

•Bed with the expansion function: 204kg

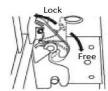
•Bed without the expansion function: 138kg

OThe base has been lowered and is flat

● If a doctor or nurse often gets on the bed, make sure to have the bed periodically inspected.

MARNING

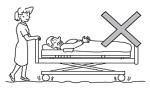
- Keep away from heaters.
 - Do not use heaters near the bed. Otherwise, the bed may be damaged or deformed, or even catch fire.
- Check around the bed before operating the bed.
 - ■A position operation could damage items locate around the bed, or could cause the bed to be damage or deformed.
- Be sure to use the stopper for the headboard and footboard.



- If the board is not mounted properly, the board may suddenly come off when a staff pushes (pulls) the board to move the bed or a patient grabs the board to support their body, resulting in injury. (see p.14)
- The angle of the leg section base should be adjusted by two or more persons.



- If the adjusment is done only by one person, their hand may get caught between the leg section base and main frame, resulting in injury. (see p.21)
- When moving the bed, watch your step.
 - You may hit your leg againts the caster switching pedal or caster operating step or your foot my get caught by a caster, resulting in injury.
- Avoid moving over uneven floors.



- It may result in a damaged or deformed bed or failure. If it is necessary, move the bed as slowly as possible.
- When operating the side rail releasing lever, pay attention not to allow the hands or fingers to get caught.



● There is a risk of injury as a result of being caught by the rotation parts of locking parts.

⚠CAUTION

- Hold the power plug body when unpluging.
 - When holding onto only the power cable and pulling it to disconnect the plug from outlet, the cable could be damaged and there is a risk of electrical shock.
- Always unplug the bed before cleaning.
 - There is a risk of electric shock or malfunction due to short circuit.
- Do not damage the handheld controller.



- There is a risk of electric shock or malfunction due to short circuit.
- When the handheld controller is damaged, request a repair (or replacement).
- Prevents patients from slipping off the bed.
 - When the back is raised or incline, the bed is set to the cardiac position, or a patient sits on the edge of the bed to get on or off, the patient may slip off the bed and get injured. The attendant should support the patient's body to prevent them for slipping off the mattress.
- Do not combine the bed with product other than the suitable products specified by Paramount Bed.
 - •For suitable product items directly mounted on the bed such as fold-down side rails and mattress, use suitable products that are specified by Paramount Bed. Using other product may create unwanted gaps, cause interference between products, or lower the product safety which may lead to an injury or bed failure.

⚠CAUTION

- Do not spray a spray type of insectiside directly on the bed.
 - Otherwise, there is a risk that the solvents contained in the insecticide could damage, discolor, or dissolve the bed casters or other resin parts. Pay due attention to this, otherwise, there is a risk of unexpected injury due to damaged or dissolve parts.
- Inspect the bed regularly
 - Depending on the frequency of use and the environment, the product will exhibit wear and deterioration. Regularly inspect for parts looseness, the operation of movable parts, and the precense of damage.
- Beds damage in accidents must be inspected and repair bed before re-use.
 - Beds damaged in earthquakes, fires, or floods, must be inspected and repaired by your distributor. Damaged electrically-operated bed may cause electric shock or fire due to a short circuit of electrical parts or an injury due to abnormal operation induced by deformation.

■ To avoid possible malfunctions, do not install the bed in the following locations.

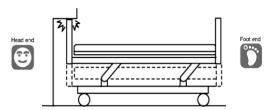
- Locations expose to direct sunlight
- Locations near heat sources such as a stove or heater
- •Locations which is heavily electrically charged such as near an MRI.
- Locations that has a high oxygen level
- •Locations exposed to excessive amounts of water vapor or oil vapor
- Locations that tend to be exposed to high temperatures, high humidity, low temperatures or dry conditions
 - *The optimum ambient conditions for the bed are as follows.

Temperature 5°C to 40°C / Humidity 20%RH to 90%RH / Atmospheric pressure 700hPa to 1060hPa.

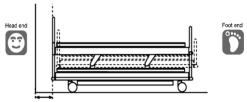
- ●Locations with large amount of dust, smoke, salt, sulfur, or corrosive substances
- Locations with poor ventilation
- Locations exposed to vibrations or shocks (including during transportation)
- •Locations where the floor is not strong enough
- •Locations where the floor is not level

⚠CAUTION

●When performing height or inclination angle adjustments, pay attention not to hit the wall, beam, or power outlet on the wall. The bed or wall may be damaged or deformed.



■When setting up the bed, make sure that there is at least 20cm clearances from the wall. The bed operations may damage objects located around the bed, or may cause the bed to be damaged or deformed.



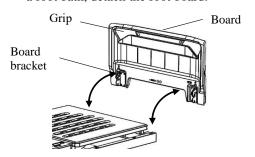
Secure at least 20 cm clearance from the wall.

4 ASSEMBLING THE BED (PA-90000)

1. Attaching /detaching the headboard and footboard

The head board and foot board can be attached or detached.

When washing patients hair, detach the head boad. When performing lower limb training or giving a foot bath, detach the foot board.

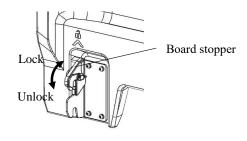


1. Attaching

Grasp the grip of the headboard or footboard, lift it, and mount it so that the board bracket engage with the mounting lugs on the bed. (The board stopper is automatically locked). Lightly lift the board and make sure that is locked.

2. Detaching

- Move the board stopper to unlock.
- •Grasp the grip of the board and detach it.

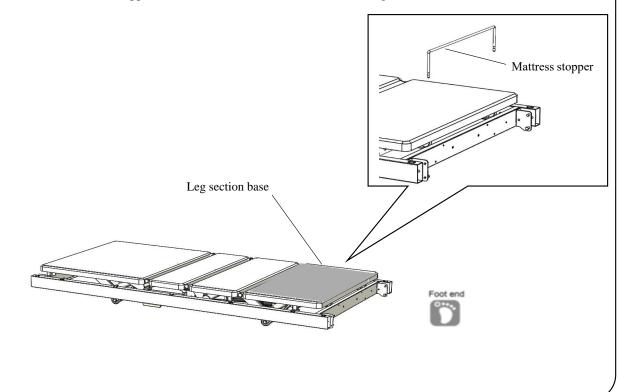




● When attaching the head board or foot board, make sure that the stopper is used. Otherwise, the board may disengage when the bed is moved, causing an injury due to toppling.

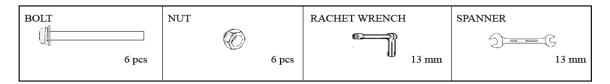
2. Attaching the mattress stopper

Insert the mattress stopper until does not come off as shown in the figure below.

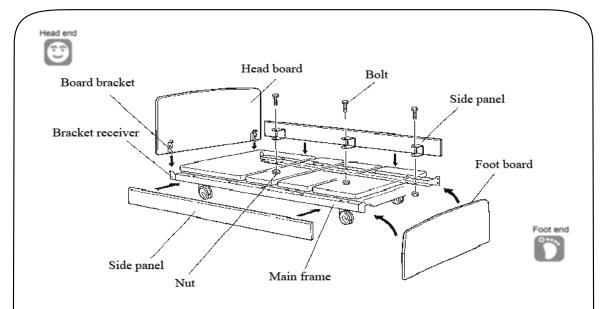


5 ASSEMBLING THE BED (PA-93485V)

1. Fitting component for assembly



2. Head board, foot board, side panel installation



- 1. Take side panel from carton box, attach it on both sides of main frame using bolt and nut.
- 2. Take head board and foot board from carton box, set board bracket to be able to fit with bracket receiver.

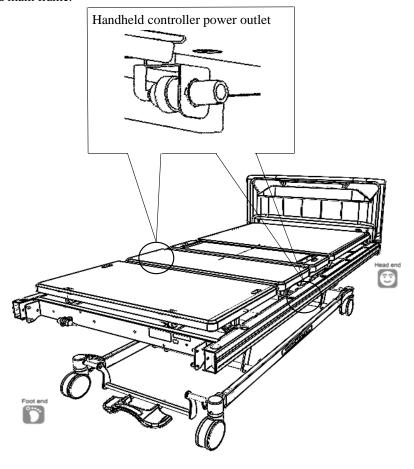
6 ASSEMBLING WITH THE BED EXIT ALARM (PA-90000)

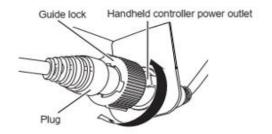
- 1. Attaching and detaching the handheld controller (RC-1850E)
- A handheld controller can be attached to this bed
- * For detail on the handheld controller, see p.29 to 33



- •Select a suitable combination of the bed and handheld controller. If the combination is not suitable, the bed could move unexpectedly, resulting injury or bed failure. (For the model number and shapes of the handheld controller, see p.29 to 33).
- ●Disconnect the power plug of the bed from the outlet and turn the battery off before attaching the handheld controller to the bed. If the handheld controller is inserted into the bed while the bed is plugged into the outlet, the bed could move unexpectedly, resulting in injury or bed failure.

There are handheld controller power outlets location one each on the foot end and on the left and right at the center of the bed main frame.







Insert or pull out the handheld controller straight.

<Attaching>

- 1. Insert the plug into the handheld controller power
- To prevent the plug from being disconnected, turn the guide lock clockwise to lock.

<Detaching>

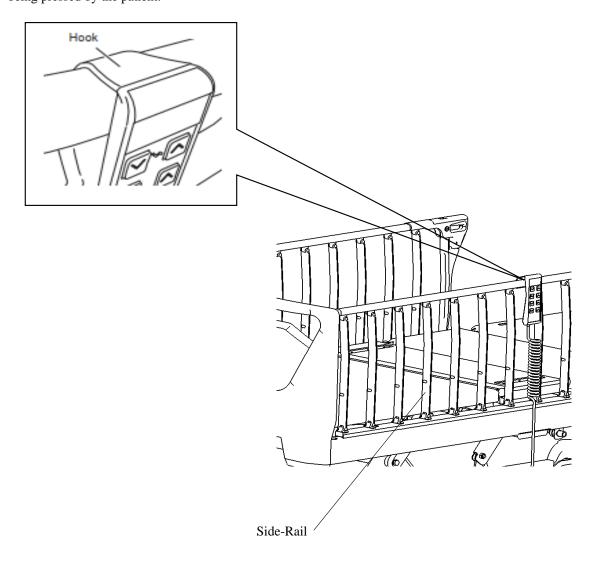
- Turn the guide lock counterclockwise to unlock.
- Pull out the plug.

6 ASSEMBLING WITH THE BED EXIT ALARM (PA-90000)

2. Handheld controller hook

The handheld controller of the type with a handheld controller and the optional handheld controller (RC-1850E) have a hook, when not usinf the handheld controller, hook it on the top of the hip sectio-end side rail.

Make sure that the operation buttons of the handheld controller face out in order to prevent them from being pressed by the patient.



6 ASSEMBLING WITH THE BED EXIT ALARM (PA-90000)

3. Connecting the bed communication cable (commercially available product)



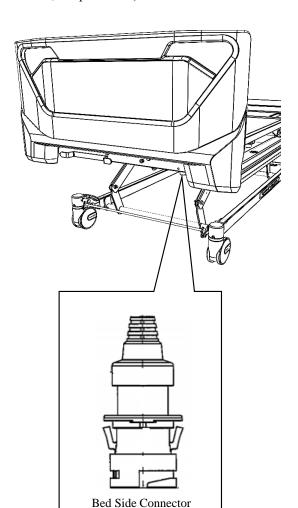
- Use a suitable bed communication cable. A nurse call may not be made or an equipment failure may occur when an unsuitable cable is used.
- Before moving the bed, disconnect the bed communication cable from the bed or the nurse call system on the wall. Furthermore, do not apply excessive force to the bed communication cable or run over it with the bed. A nurse call may not made due to an equipment or cable failure.



- Be sure to check the operation after connecting teh bed communication cable.
- For detail on the suitable bed communication cable and suitable nurse call system, contact Paramount Bed (see p.76) or your distributor.

Connecting to the nurse call system enables a nurse call to be made at the following times.

● When BED EXIT ALARM detects a change in the status of the patient (For details on BED EXIT ALARM, see p.38 to 41)



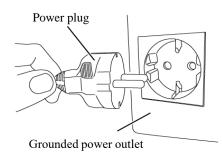
(8-pin Female)

<Connecting the cable>

1. Connect the bed communication cable (8-pin female) to the bed side connector of the bed.

CONNECTING TO THE POWER SUPPLY (ELECTRIC HOSPITAL BED ONLY)

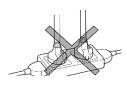
1. Power outlet



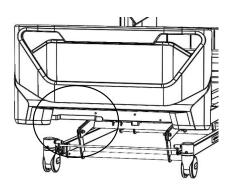
- Use a properly wired grounded outlet for each bed that meets the power consumption requirements of the bed. Also, firmly insert the power plug into the outlet
- When installing bed, place it where connecting and and disconnecting the power plug will not be blocked.
- After use, disconnect the power plug from the outlet. For a model with a battery, also turn the battery off.
- * The illustration uses a type C power plug for explanation.



Do not connect multiple cables to a single outlet. if other electrical equipment is plugged into the same outlet and the rated capacity of the outlet or extension cable is exceeded, the power cable and plug may overheat and cause fire.



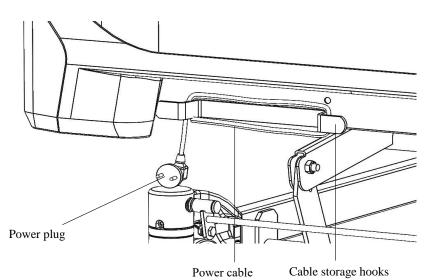
2. Using the cable storage hooks



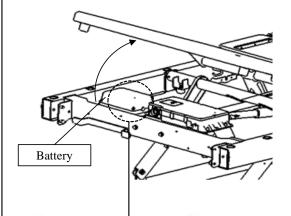
[Using the cable storage hooks when moving the bed]

• Wind the power cable onto the cable storage hooks when moving the bed.





3. Battery (PA-93**7N With Bed Exit Alarm)

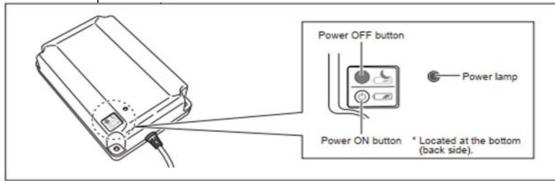


The battery is located under back section base at the head end of the bed.

* The illustration shows the bed with the head section raised and the headboard and open the back back raise.



When replacing the battery, please Attention to its orientation



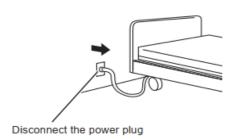
Power ON button (hold down for 4 seconds): Enables battery-powered operation. When using the bed for the first time or using it after storage, press the power ON button. When the power turns on, the power lamp flashes.

Power OFF button (hold down for 1 second): Disables battery-powered operation. When storing the bed, press the power OFF button to turn off the power



- By default, the power is off. Inserting the power plug into the outlet automatically turns the power supply on.
- When the power is turned on, the power remains on even if the power plug is inserted into or disconnected from the outlet. To stop battery-power operation, press the power OFF button.
- If the battery has been over-discharged, the power supply automatically turns off.

(Battery-powered bed opeation)



When the battery power in on, the bed can be operated by power from the battery while the power plug is not inserted into the outlet (or in the event of a power failure)



Do not operate the bed electrically during the emergency head down operation with the CPR lever of the bed. This may damage the motor.



- When the remaining battery is sufficient (after recharging for 2 hours), three up-and down movements can be performance for height adjustment while the safe working load is applied on the bed (at an ambient temperature of 25℃). However, the number of up-and down movements varies depending on the operating frequency and environment, and storage condition of the battery.
- If the battery operation of the bed is not possible, check the battery status (see p.24)

(Checking the battery status)

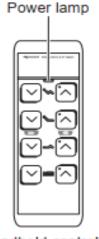
■ The battery status is displayed as shown in the table below.

Power status	Power lamp on the handheld controller	Battery status indicator	Battery status
The power plug is not inserted into the outlet or power failure is occurring	Lights in green	(blue)	Remaining battery power is sufficient
	Flashes green (on for 2 seconds → off for 2 seconds)	(blue)	Remaining battery power is low. Since bed operation may become impossible, stop using and recharge the battery immediately
	Flashes green (on for 0.1 seconds → off for 3.9 seconds)	(blue)	Remaining battery power is insuffcient on the handheld controller
The power plug is inserted into the outlet	Flashes green (on for 0.1 seconds → off for 3.9 seconds)		Battery is being recharged
	Lights in green	(yellow)	Battery recharging is completed

*) If an error occurs, the error status is displayed (flashes orange) preferentially

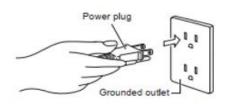


ullet To extend the battery life, recharge the battery as frequently as possible before the indicator shows that the remaining power is low or insufficient (see the table above).



Handheld controller

(Recharging the battery)



* The illustration uses a type B power plug for explanation.

Inserting the power plug of the bed into the outlet start recharging the battery. and recharging will complete automatically after 24 hours. the battery can be recharged regardless of whether the power in on or off.

When using the bed for the first time, recharge the battery before use.



- Normally use the bed with the power plug of the bed inserted into the outlet and the battery recharged.
- Repeated recharging after the battery power is used up results in early degradation of maximum capacity and a shorter life span. After battery-pow-red operation of the bed, recharge the battery when possible.
- If the indicator shows that the remaining power is low or insufficient (see p.45) soon after starting bed operation, even though the recharge in completed, it is time to replace the battery.

(Handling the battery)

■ Life

The battery life varies depending on the operating frequency and environment, and storage condition of the battery. Some batteries reach the end of their life in 2 to 3 years and almost all batteries reach the end of their life in 5 years, regardless of whether or not they are used.



- If the indicator show that the remaining power is low or insufficient (see p.24) soon after starting bed operation, even though the recharge is completed, it is time to replace the battery.
- Check regularly whether the bed can be battery-operated or whether the battery replacement time has been reached. replace a battery that has reached the replacement time.

■ Operating environment

It is recommended to use the battery at around 25°C. The performance of the battery varies depending on the ambient temperature and deteriorates to 85% at 0°C compared to the performance at 25°C.

Storage

The battery self-discharges slightly even when the battery is power off. When storing the bed, recharge the battery for 24 hours or more. disconnect the power plug of the bed, and power off the battery. This reduces the impact of excessive discharge on the lift. Note that it is recommended to store the bed at an ambient temperature of 25°C.

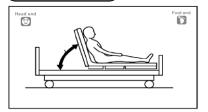
When storing the bed for a long period of time, recharge the battery for 24 hours or more once every 3 months. if the battery is not recharged, the battery capacity may deteriorate or the battery may become no longer rechargeable. Recharging the battery automatically turns the power supply on. When storing the bed again, power off the battery.

8 OPERATION OVERVIEW

Adjusting the angle of the back or knee section base and the height of the bed

- The angle of the back and knee section base and the height of the bed can be adjusted with no increments. (For operation procedures, see p.27-34)
- The angle of the leg section base can be manually adjusted in two levels. (see p.35)

Back raise



- Electric hospital bed

 The back section base angle can be electrically adjusted from 0⁰ to 70⁰.
- Manual hospital bed The back section base angle can be manually adjusted from 0⁰ to 75⁰.

Knee raise

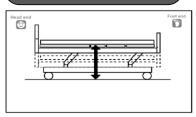


• Electric hospital bed

The knee section base angle can be electrically adjusted from 0^0 to 25^0 .

● Manual hospital bed The knee section base angle can be manually adjusted from 0^0 to 45^0 .

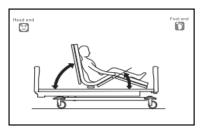
Height adjustment



- ●PA-93286, PA-93186, PA-93286N, PA-93186N, , PA-93287N, PA-93187N, PA-93485V The height from the floor to the base of the bed can be electrically adjusted from 290mm to 670mm.
- ●PA-93206N, PA-93106N, PA-93207N, PA-93107N, The height from the floor to the base of the bed can be electrically adjusted from 323mm to 703mm.
- ●PA-99286, PA-99186, PA-99286N, PA-99186N The height from the floor to the base of the bed can be manually adjusted from 330mm to 710mm.
- ●PA-93256, PA-93156, PA-99256, PA-99156
 The height from the floor to the base of the bed can be adjusted from 338mm to 718mm.
- ●PA-93296, PA-93196, PA-99296, PA-99196
 The height from the floor to the base of the bed can be adjusted from 345mm to 725mm.
- ●PA-99206N, PA-99106N

 The height from the floor to the base of the bed can be adjusted manually from 363mm to 743mm.

Head and knee coordinatio



1. Model (PA-93**5/ PA-93**6)

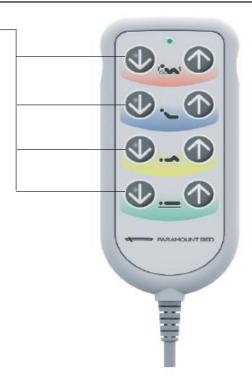
■ The angle of the back and knee section base and the height of the bed can be smoothly adjusted with no increments by using the handheld controller.

ACAUTION

- ●When a child aged 12 or under, or someone deemed incapable of comprehending the operation (such as someone having a cognitive illness) operates the handheld controller by themselves, there is a risk of unexpected injury such as the body getting caught in the bed by mistake.
- If there is a risk of such person touching the handheld controller, disconnect the power plug in order to prevent an accident by incorrect operation.

Operation procedure

Pressing the button adjust the bed, and releasing the button stop the adjustment, allowing you to adjust the bed to the desired position. Press two or more buttons simultaneously to stop the operation.



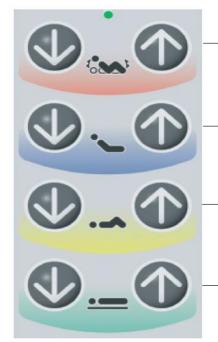


● Please avoid using the handheld switch for more than 10 minutes continuously. Prolonged use may cause the handheld switch to overheat up to 41.8°C, posing Potential burn hazard.

USING THE HANDHELD CONTROLLER (ELECTRIC HOSPITAL BED ONLY)

Operation buttons

Pressing the button adjust the bed, and releasing the button stops the adjusment, allowing you to adjust the bed to the desired position. Press the button ↑ to raise. Press the button ↓ to lower.



Back and knee UP and DOWN buttons

The back and knee section base angle can be adjusted simultaneously.

Back UP and DOWN buttons

The back section base angle can be adjusted.

Knee UP and DOWN buttons

The knee base angle can be adjusted.

Bed height UP and DOWN buttons

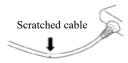
The bed height can be adjusted.



● Do not drop the handheld controller or pull the cable. The handheld controller may get damaged or deformed and operate incorrectly as a result. When the handheld controller is damaged, request a repair (or replacement).

Hook damage

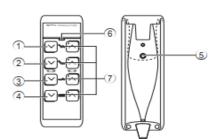




USING THE HANDHELD CONTROLLER (ELECTRIC HOSPITAL BED ONLY)

2. (PA-93**7N Series)

(Part names and function)



You can adjust the angle of the head and knee sections and the bed height with no increments with the handheld controller. The handheld controller is intended to be operated by patients. However, the function selection buttons (see p.27 to 29) are not intended to be used by patients.

*For detaching and attaching, see p. 18And 19

■ Operation buttons

- To raise the part to operate, press the △ button, And to lower it, press the ☑ button.
- 1 Head and knee coordination buttons

..... Adjust the angle of

The head/knee Sections.

2 Head buttons Adjust the angle of

The head section

3 Knee buttons Adjust the angle of

The knee section.

4 Height adjustment buttons

..... Adjust the bed height



- Press the operation button to operate the bed and release the button to stop the operation at its position.
- Press two or more operation and settings buttons simultaneously to stop the operation.
- If you stopped the operation by pressing two or more buttons simultaneously, remove your hands from all buttons to perform the operation again.

■ Setting button

(5) Setting button

..... Enables you to change the various settings with the operation button.

■ Indicator lamps

6 Power lamp

...... Indicates the power supply status for the bed.

On (green) :Normal power on status.

Off :The power plug or handheld controller plug is disconnected, or there is a power failure or

disconnection.

Flashing (orange) :Indicates a problem such as disconnection or contact with an object. Take action in

reference to "1. Troubleshooting" (see p.59 to 63)

*The lamp also flashes green depending on the remaining power off the battery (for detail, see p.24)

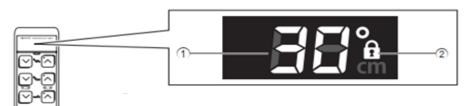
(7) Operation selection lamp

..... Indicate whether the operation button is enabled or disabled.

On (white) :Operation is enabled

Off :The power is off or the operation is disabled





① Angle/height/error code display

..... Displays the angle of the head and knee sections and the bed height during operation. If an error code is displayed, see p.62 Head angle indication: 0 to 70 (displayed in increments of 1)

Knee angle indication: 0 to 25 (indicated with a numerical value only for the upper/lower limit of the knee angle, and

becomes "-" otherwise).

Height indication : Displays the height described for "150mm

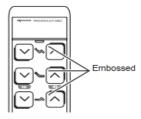
> single-wheel with resin cover" in the table below. (indicate in increments of 1cm)*

*1) If other than the 150mm single-wheel with resin cover casters are used, the height to the mattress deck top will be lower than the indicated value. (For the exact dimensions, see the table below)

125 mm, double-wheel with resin cover	290 to 670 mm
150mm, single-wheel with resin cover	323 to 703 mm



Identification embossing



2 Operation disabled state display

..... Flashes when the pressed operation button is disabled

(3) Wrench mark

..... When it is time to replace the handheld controller, the wrench mark is displayed in the setting mode. Contact Paramount Bed (see p.76) or your distributor

△ / Can be identified by touching the embossed operation buttons

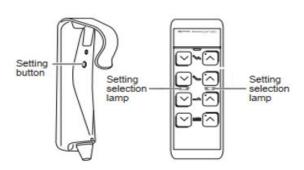
USING THE HANDHELD CONTROLLER (ELECTRIC HOSPITAL BED ONLY)

(Setting switching)



- Do not allow it to be operated by a person deemed incapable of understanding the operation (a child aged 12 or under or a person with dementia). If a person deemed incapable of understanding the operation operates the handheld controller by oneself, the body may get caught in the bed by mistake, resulting in accidental injury. When such a person runs the risk of operating the handheld controller by oneself, you can use one of the following procedures to limit operation and decrease the chance of accident caused by incorrect operation.
- Note that if you do not press any button for 20 seconds after pressing the settings button, the settings will not be completed and return to their original setting. The bed may operate unexpectedly, resulting in injury.

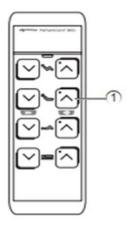
■ Switching to the setting mode



Press the settings button on the back of the handheld controller to turn on the setting selection lamp on the front, and to enable configuring various settings with the function selection buttons.

When you have changed the settings, press the settings button again to confirm the settings. If you do not press the settings button, the settings will not be confirmed.

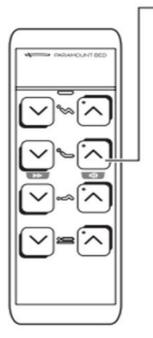
■Function selection buttons



① Operation sound button[p.32]

■ Setting each operation of the bed

You can change the settings for SOUND.



Setting the operation sound

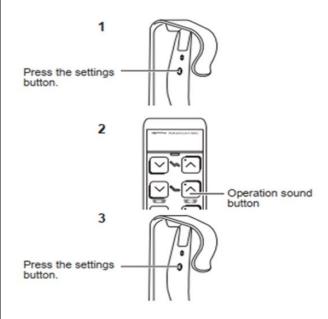
You can unmute or mute the operation sound that is emitted by pressing the operation button of the handheld controller.

Brightness of the setting Selection lamps

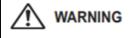
Dark: Mute Bright: Unmuted

USING THE HANDHELD CONTROLLER (ELECTRIC HOSPITAL BED ONLY)

■ Setting procedure



- 1. Press the settings button
- Press the function selection button for the setting you wan to change. The setting selection lamps is switched
- 3. Press the setting button. This completes the setting.



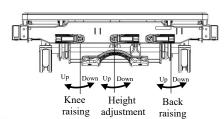
When the setting is completed, press the settings button on the back of the handheld controller again to confirm the setting. If you do not press the setting button, the changed setting is not confirmed and you may be injured by unexpected movement of the bed.



Settings specified using function selection buttons and in the notification function are not canceled even after a power failure or if the power plug or handheld controller plug is disconnected.

1. Handle operation (3-Crank Manual Hospital Bed)

■ Use the handle mounted on the frame to raise or lower the back or knee section base and adjust the bed height.

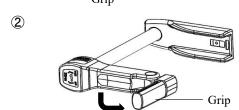


- ① Grip part a of the handle to be operated and pull it out to the end.
- ② Raise the grip to 90 degrees, hold the grip, and turn the handle.



- ①
 Grip
- or bed height.Turn the handle counterclockwise to lower the back, knee, or bed height.

Turn the handle clockwise to raise the back, knee





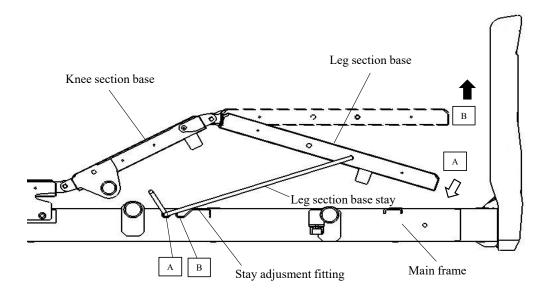
- Using the handle without completely pulling it out may cause a failure. Be sure to pull it out completely before use.
- After use, be sure to press the handle into the original position. If it is out, it may catch people's leg, causing an injury.
- Do not place your leg on the handle. You may fall down and get injured or the handle may break.
- Use one handle at a time. Turning two handles at the same time may result in an injury because hands crush into each other.

2. Adjusting the angle of the leg section base

- The angle of the leg section base can be manually adjusted in two levels. The angle of the leg section base must be adjusted by at least two persons.
 - Normally, the leg section base stay is at position **A**. Adjustment to the **B** position should be performed when the knee section base is raised.
 - ●When moving in the **B** direction, hold the end of the leg section base and lift it. The leg section base stay slides toward the foot end. Slowly lower the leg section base when the desired angle is achieved.
 - lacktriangle When moving in the A direction, apply one hand to the leg section base stay, hold the end of the leg section base with the other hand, and lift it a little. Then, lower the leg section base so that the les section base stay enters A.

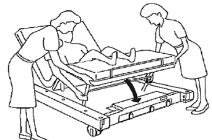


lacktriangle When returning the knee section base to the horizontal condition, be sure to return the leg section base stay to the normal position $\bf A$.





● The leg section base angle should be adjusted by at least two persons from the both sides. If only one person attempts to adjust the angle, the person may get caught between the leg section base and main frame and get injured.

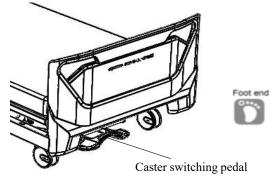


3. Locking the casters



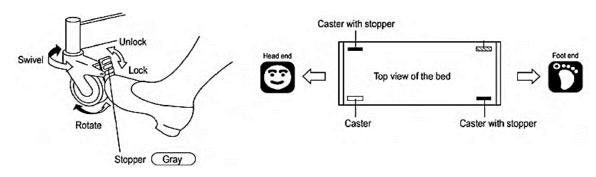
•Lock the casters at all times except when moving the bed. The patient may be injured getting on or off the bed should it move.

- Central locking system
- The casters can be locked or unlocked by operating switching pedal on the foot end.



- Locking the four wheels The casters are locked by depressing the caster switching pedal.
- Unlocking the four wheels The casters are unlocked by raising the caster switching pedal.

- Diagonal locking system
 - Use the stopper to lock or unlock the casters.
 - Stoppers are on two casters on opposing corners of the bed. When locking, be sure to lock both of the two casters.
 - Depressing the stopper locks the swiveling and rotation of the casters.
 - Prior to locking, be sure that the caster is not out of the bed frame.
 - To unlock, press the upper part of the stopper with the toe.





Do not forcibly move the bed when the casters are locked. It may break the bed.



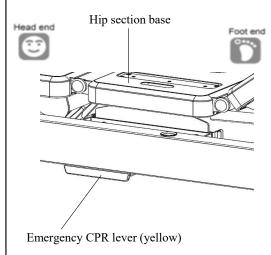
Inspect the casters regularly. Depending on the frequency of use and the environment, casters will exhibit wear and deterioration. (Height-temperature and height hummidity condition may NOTE! accelerate the deterioration). In case of declined function of the stoppers or discoloration or crack on the wheel, request repair or after-sales service.

4. Emergency CPR (back-lowering) function

In case of an emergency or a power failure, the raised back section base can be quickly returned to flat status.



•During the emergency CPR operation, make sure that the patient's head, arms, feet, or other body parts have not entered the gap between the back section base and the frame. There is a risk of getting caught, resulting in injury.



< Emergency CPR procedure >

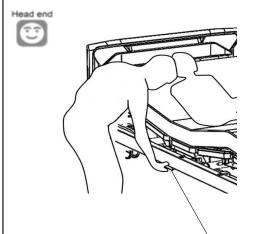
- 1. Place one hand on the side of the back section base and pull the emergency CPR lever (yellow). Levers are located on both sides of the bed under the hip section base and either lever can be used.
- 2. Keep pulling the lever until the back section base returns to flat status. If you release the emergency CPR lever halfway through, the back-lowering operation is stopped).



• Depending in the patient's weight, the back section base may not be lowered. In such a case, lightly push NOTE! down the back section base.

< Operation after emergency CPR >

Power on status: back-raising and back lowering can be operated using the buttons on the handheld controller or nurse control panel.



Emergency CPR lever (yellow)

5. Bed Exit Alarm (PA-93**7N)

Features

- This function measures load changes on the bed with sensors built into the bed and notifies the status of a patient who may fall off or fall down.
- The following notification functions can be used with BED EXIT ALARM. BED EXIT ALARM causes an alert when it detects the patient's movement. Also a notification can be made to the nurse call system by connecting it to the nurse call wall plate with a bed communication cable.
 - EDGE OF BED
 - LEFT BED
 - MONITORING

For connecting to the nurse call system and details on handling, see "Connecting the bed communication cable" (see p. 20).

■ If a power failure occurs, all bed functions including BED EXIT ALARM stop, so the patienr status cannot be notified by BED EXIT ALARM. If necessary, connect the power plug of the bed to an emergency power supply.



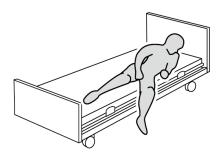
- This product is just an assisting device to detect out-of-bed and does not guarantee safety. A false notification or absence of notification may occur depending on the motion or lying position of the patient. We assume no responsibility whatsoever for any damages resulting from an accident, etc.
- The bed communication cable may not be suitable depending on the type of nurse call system. For details, contact Paramount Bed (see p. 120) or your distributor.
- To use BED EXIT ALARM, you need to set the notification function settings.
- Before using BED EXIT ALARM for the first time after the bed is installed, make sure that notification is made correctly before use.
- If notification is not made or any other errors occur, stop using BED EXIT ALARM and check the bed and bed communication cable, by referring to "1. Troubleshooting" on p. 59 to 63

№ WARNING

- Notification is not made during bed operation (e.g., head up, height adjustment) even if the patient gets out of the bed or sits up on the bed. Furthermore, getting into or out of the bed during bed operation may cause the patient to fall off or fall over, resulting in injury. If you consider that the patient may get in or out of the bed during bed operation, set Overall lockout or Patient lock-out.
- Before using BED EXIT ALARM, set the notification function properly. If the settings are not correct, detection may not work and notification may not be made, and the patient may fall off or fall over, resulting in injury. Even when the settings are correct, detection may not work and notification may not be made in the following cases.
 - If it takes 4 minutes or more for the patient to get out of the bed or sit up on the bed
 - If the patient gets out of the bed or sits up on the bed after a heavy object (which weighs more than half the patient's weight) is placed on the bed
 - If the patient who is lying at the foot end of the bed sits up (SIT-UP function)



● If the patient sits up while placing his or her hand or elbow on the top of the head end of the bed (SITUP function)



- When using BED EXIT ALARM, use it at a temperature between 15°C and 30°C and humidity between 30% RH and 75% RH. The detection accuracy may decrease, notification may not be made, and the patient may fall off or fall over, resulting in injury.
- Do not place objects such as furniture and fixtures between the bed and floor. Detection may not work and the patient may fall off or fall over, resulting in injury.

⚠ WARNING

- If the patient does not stay in bed without moving for 5 seconds or more after returning to the bed, detection may not work, notification may not be made, and the patient may fall off or fall over, resulting in injury.
- If the patient does not stay in bed without moving for 5 seconds or more after bed operation, detection may not work, notification may not be made, and the patient may fall off or fall over, resulting in injury.
- This bed is designed for use on patients weighting equal to or more than 40 kg. Do not use BED EXIT ALARM on patients less than 40 kg.
- Set the weight according to the weight of patient. If the setting is not correct, detection may not work.

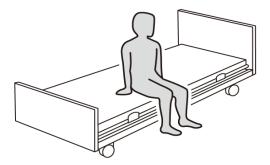


- If the notification functions are not set correctly, an accidental notification may be made.
- Notification may be made in the following cases. In such a case, turn off or pause notification.
 - •If a person other than the patient gets into or out of the bed.
 - If the patient rolls over to the foot end of the bed.
 - •If an object of 3 kg. or heavier is removed from the bed.
 - If the board is detached from the bed.
 - If the weight is applied to the footboard.
- The larger the angle of the head section is, the higher is the possibility that the SIT-UP no tification function will detect a slight movement such as rolling over and will make notification, even when the patient does not sit up.

EDGE OF BED

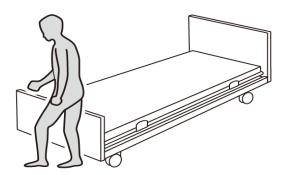
When the patient sits down on the edge of the bed and body weight is applied to the floor, notification is made through the nurse call system.

- To avoid repeated notifications, notification is made at the following times (or when the following conditions are met).
 - •If the patient gets out of the bed within 4 minutes after sitting down on the edge of the bed, notification is made only when the user first sits down on the edge of the bed.
 - •If the patient gets out of the bed after 4 minutes or more have passed after sitting down on the edge of the bed, notification is made.
 - •If the patient sits down on the edge of the bed and then lays down in the bed again, notification is made if the user sits down on the edge of the bed again even within 4 minutes.
- To avoid repeated notifications, notification is made at the following times (or when the following conditions are met).



LEFT BED

If the patient gets completely out of bed, notification is made through the nurse call system.



MONITORING

If the patient is out of bed for longer than the set period, notification is made through the nurse call system. The setting period can be selected from 1 minute, 3 minutes, 5 minutes, 10 minutes, and 30 minutes.

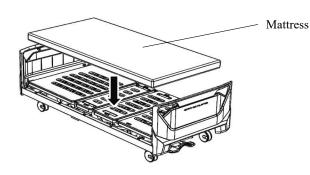




/!WARNING

- Do not use the bed when the mattress is not a placed. The body part (fingers of hands or legs) may get caught in the gap between the mattress bases, in air holes on the mattress base, resuting in
- ●Be sure to use a mattress of dimensions specified by Paramount Bed, described below. If an unsuitable mattress is used, patients could get caught between the mattress and side rail and get injured. Unsuitable mattresses exert a burden on the bed and may induce a failure.
- Compatible Mattresses Paramount Bed







Width	Length	Thickness
830 (for PA-931**,PA-991**)	1,910 to 2,000	90 to 150
910 (for PA-932**,PA-992**)	1,910 to 2,000	90 to 150

COCOCIA RIRAKU FLOW:

Model codes: KE-911AH/KE-913AH/KE-917AH/KE-919AH

PA-93**7N only.

EVERFIT LIGHT:

Model codes: PE-9001/PE-9101/PE-9011/PE-9111/PE-9002/PE-9102/PE-9012 and PE-9112

Model codes: PE-7001/PE-7002/PE-7011 and PE-7012

PE-6000 Series:

Model codes: PE-6001/PE-6101/PE-6002/PE-6102/PE-6011/PE-6111/PE-6012/and PE-6112



For more information about mattress specification and any queries, please feel free to contact Paramount Bed or your distributor.

1. Suitable products table

/ WARNING

- •Use suitable products after confirming that the combination with the bed is correct. Using the bed with the wrong combination of suitable products could result in injury or could damage the products. The part number of each suitable products is written on the safety label and on the carton box.
- Do not use suitable products other than specified in this instruction manual. This may create unintended gaps or may damage or deform the product, resulting in injury.
- Make sure that there is nothing in the accessories attachment holes, when mounting the suitable products. If there are obstacles in the option attachment holes, you cannot mount the accessories, and the patient may fall off the bed or get caught in the gap, resulting in injury.



Suitable products may be changed due to specification changes or combinations. In addition, some suitable products may not be listed in the table due to new release or discontinuation of sales. For any queries on suitable products, contact Paramount Bed (see p.51) or your distributor.

Suitable product*1)*2)	Model No.*1)	Reference page
IV pole	KC-56A, KC-56B, EC-562	44
Battery	PAB250T	45-46
Oxygen cylinder holder	PC-5038	48
Drain bag holder	PC-5123	49
Traction frame	PC-5068	-
Collapsible bedside rail	PS-0232	50
Nurse call relay unit*3)	NU-1610E, NU-1620E, NU-1640E, NU-1640EN, NU-1660E, NU-1860E	-

^{*1)} These products may not be available in some countries or regions. For details, contact Paramount bed (see p.51) or your distributor.

^{*2)} In some countries or regions, some of the medical device or its accessories fall under the category of medical devices. For details, contact Paramount Bed (see p.76) or your distributor.

^{*3)} PA-93**7N only.

2. IV pole

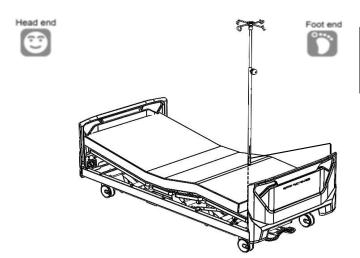
This IV pole is designed to be attached to the medical device when giving an intravenous drip to a patient.



- Do not move the bed with holding the IV pole. The IV pole may break causing injury.
- Do not use the IV pole as a support to stand up. The IV pole may come off or break, causing an injury due to falling down.
- When using the IV pole, do not put a hand or arm between the base or side rail and the IV pole. The hand or arm may get caught and get injured.
- Each hook's load capacity because it may damage the hook, resulting in an injury



● Length adjustment of the sliding pipe should be kept within 70cm. If the sliding pipe is pulled out too much, it may come off, resulting in an injury or damage.



Model no.

KC-56A, KC-56B, EC-562



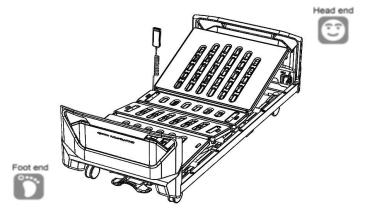
- Be sure to read the instruction manual attached to the IV pole as well.
- The description in the respective instruction manual may be different from the description in this manual due to changes in specification. In case of any question, contact your distributor.

3. Battery (PAB250T/ PA-93**6N)

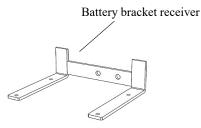
This battery is intended to provide power to the medical device when the external power supply is not available.

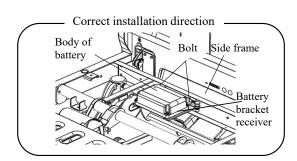
MARNING

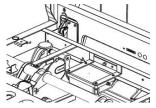
- When connecting the battery cable, unplug the power plug and confirm the patient not on the bed. There is a risk of injury due to accidental operation or electric shock due to a short circuit.
- Install battery on the foot side of main frame.
 For old product, battery is installed on head frame.



2. Pay attention to direction of battery bracket receiver and it's installation.

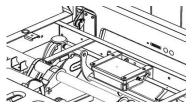




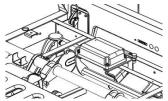


If installing with incorrect bracket direction.

Incorrect installation direction



If bracket installation direction is correct but battery installation position is incorrect.

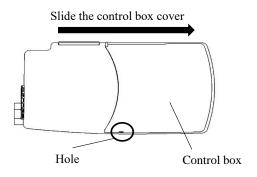


If bracket installation direction and battery installation position is incorrect.



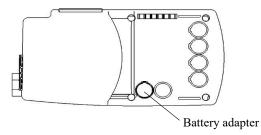
• If installed with incorrect direction, interfence with central pedal and foot frame stay will occur, the body of battery and cable may be damaged.

Battery cable must be connected to the control box to use the battery.



- 1. Set minus driver in the hole of side on the control box and slide the control box cover to open it.
- 2. Connect the battery cable to the battery adapter of the control box.
- 3. Attach the control box cover.

<After opening the control box cover>



ACAUTION

- Incorrect operation in disregard of the details given below will result in personal injury or damage due to leakage, fire, explosion, electric shock, or rupturing.
 - O Do not disassemble the battery case or built-in battery.
 - O Do not incinerate the battery unit.
 - O Do not recharge the battery other than with suitable control box of the bed.
 - O Do not use the battery unit with equipment other than the suitable bed.
 - O Do not subject the battery unit to impact.
 - O Do not recharge the battery unit or operate the bed with the bed turned upside down.
- When the battery reaches the end of its life span, change it immediately. Continual usage of expired battery may cause leakage or fire. Furthermore, please check time to relace as below;
 - O A life of the battery span about 2 or 3 years. The battery indicator flash or turn off the light even the battery charging for more than 12 hours, please change the battery.
 - O When you change the battery, please contact Paramount Bed or your distributor.

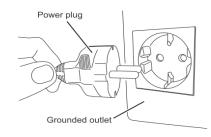
■ The battery is an auxiliary power supply for operating an electrically operated table when not connected to a power outlet.

[Operating the table on battery power]

● The table is powered by the battery when the power plug is not connected to the power outlet or during a power failure.

[Recharging]

Recharging starts as soon as the table power plug in plugged into the power outlet.





- The battery should be charged (for more than 24 hours) immediately after purchase.
- The battery is optional. For detail on the model number, contact Paramount Bed or your distributor.

[Battery life]

- The battery is not designed to be recharged after being totally discharged. Repeatedly recharging the battery from zero charge will reduce its operating life. Always recharge the battery after operating the table on battery power.
- If the table is equipped with a battery, and the table is stored for long periods of time, the battery must be full charged every 3 months. It may cause damage to the battery or discrease it life.



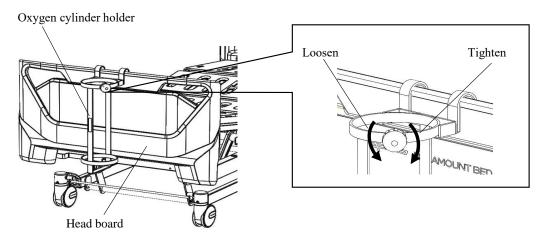
● The battery life will vary depending on the usage frequency, usage conditions and storage conditions. Regardless of whether the battery is used, its life will start to drop off after a few years.

4. Oxygen cylinder holder (PC-5038)

This oxygen cylinder holder is made for attaching to the medical device to use the oxygen cylinder.

∕MARNING

- Make sure that the knob bolt is firmly tighten. There is a risk of insufficient oxygen supply.
- ■When using the oxygen cylinder, take care to prevent it from coming into contact with any objects in the vicinity of the bed. There is a risk of an injury by damage of a flow meter or an oxygen cylinder if the cylinder comes into contact with another object.
 Load capacity is 15kg. Do not insert the oxygen cylinder exceeding the load capacity because it may damage the oxygen cylinder holder, resulting in injury.
- The oxygen cylinder holder can be used by hanged on the headboard.
- 1. Hang the oxygen cylinder holder on the headboard.
- 2. Loosen the knob bolt on the oxygen cylinder, and then slowly insert the oxygen cylinder into the holder from the top.
- 3. Firmly tighten the knob bolt to fasten the oxygen cylinder



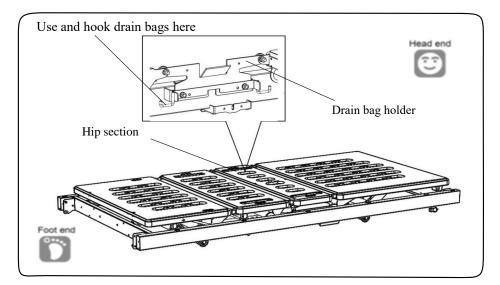


For any quaries, please feel free to contact Paramount Bed or your distributor

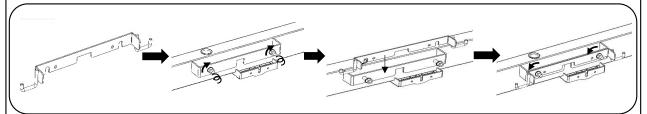
5. Drain bag holder (PC-5123)

This drain bag holder is designed for hanging drain bags.

The drain bag holder are located one each on the left and right at the bottom of hip section. (2 location in total).



1. Attaching



- Prepare the 1pcs drain bag holder.
- Loosen 2 nut a little bit on left and right side.
- Attach drain bag holder from the upside.
- Fix the nut and make sure the installation is corrected.

2. Detaching

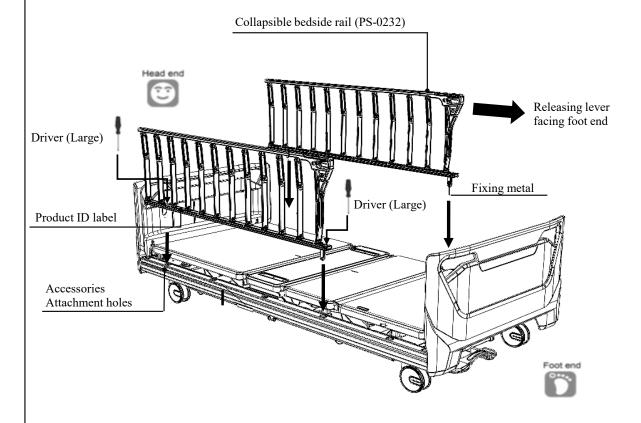
• For detaching drain bag holder, reverse the procedure above.

△WARNING

- When using the drain bag holder, tighten the nut firmly and do not install the drain bag holder while the patient is on the bed. There is a risk that hip section may fall and resulting in injury.
- Do not apply a load of 3kg or more to an drain bag holder. This may damage or deform the drain bag holder.
- When hanging a drainage bag, take care to prevent the bag from coming into contact with the floor.

6. Collapsible bedside rail (PS-0232)

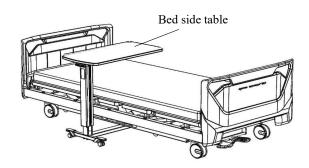
This collapsible bedside rail is intended to be fit on bed side to use, prevent patients and bed clothing falling off from bed.



- 1. With releasing lever facing toward foot end, install side rail fixing metals to accessories attachment holes.
- 2. Make sure to tighten the fixing bolts.
- 3. Please check the side rail being fixed firmly, before usage.



 Please attach and lock firmly. Otherwise, side rail may come off abruptly, resulting in injury, or damage side rail. Bed side table is used for having meals or doing something on the bed.



Model no. KF-282 PF-3100A, PF-3110A PF-3120A, PF-3130A



● Remove the table from the bed when performing positioning operations of the bed. Otherwise, the patient may get caught between the table and bed and get injured.



- •Be sure to read the instruction manual attached to the bed side table as well.
- The description in the respective instruction manual may be different from the description in this manual due to changes in specifications. In case of any question, contact your distributor.

Over bed table is used for having meals or doing something on the bed.



Mattress base width	Suitable over bed table
910	KF-83*LA/LB/LC
910	KF-813
830	KF-83*SA/SB/SC
830	KF-814



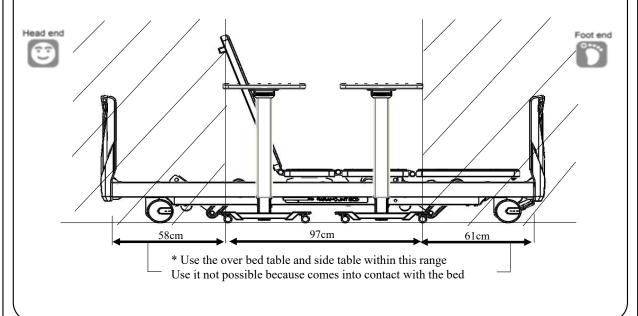
Remove the table from the bed when performing positioning operations of the bed. Otherwise, the patient may get caught between the table and bed and get injured.

●Be sure to read the instruction manual attached to the bed side table as well.

The description in the respective instruction manual may be different from the description in this manual due to changes in specifications. In case of any question, contact your distributor.

ACAUTION

The following figure shows the over bed table and side table usage range (the shaded areas cannot be used). Use the over bed table and side table within this range. Using the over bed table and side table outside the range shown in the figure below may cause damage to or deformation of the over bed table and side table. Note that when the side rail and grip for the bed are used (attached), the over bed table cannot be used in the vicinity of the highest bed height.





• For any queries, please feel free to contact Paramount Bed or your distributor.

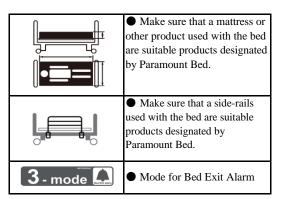
15 PRODUCT SYMBOL DEFINITIONS

■The symbols below are used for the product.

Symbol	Description
	●Indoor use symbol
	●Electrical waste
[ji]	● See the instruction manual
	●Read the instruction manual
\sim	●AC input
	●Protective ground terminal
SN	●Serial number
ISO 22196 for KOHKIN	●KOHKIN SIAA mark
+ 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1	●The medical bed for adults.
	●Product weight
<u>^</u>	●Safe working load
	●Maximum patient weight
+	●Total weight including load capacity
#	●Model number
IPx4	●Protection code
(€	●CE mark

Symbol	Description
	● Take care to prevent the patient's head from getting caught in the gap between side rails and the bed.
	● Take care to prevent neck from getting caught between side-rails and board.
0	● Take care to prevent body parts from getting caught in the moving parts on the bed.
	●Take care to prevent patient's hand and foot from getting caught between side-rails and the bed.
	●Do not lean over a side-rail
LOT	●Lot number
†	● Type B applied part ● Applied parts are considered to be: Upper frame section, Controllers, Side-rails, Headboard and Footboard
UDI	● This a 2D code (GS1 Data Matrix) that encodes the UDI (Unique Device Identifier) required by the Unique Device Identification System designed to adequately identify device through distribution and use.
***	Manufacture *It may be called "Legal Manufacturer" or "Brand Owner" etc. *The symbol is not applicable in the country of origin.
	●Country of manufacture (made in Indonesia) ●Manufacturing site *In the country of origin, the site acts as the manufacturer. ●Date of manufacture (YYYY-MM-DD)
MD	● Medical device (This product is a medical device or an accessory for medical device in Europe, and may be such a device in some countries and regions depending on their regulations. An accessory for medical device is required to be labeled as "Medical Device" under medical device regulations in Europe).
EC REP	● Authorized representative in the European community * Either of the symbols is used

15 PRODUCT SYMBOL DEFINITIONS



■ Handheld Controller (RC-1850E)

Symbol	Descrption
V % A	Head and knee coordinated up/down
✓ ~	Head up/down
V • ^	Knee up/down
	Height up/down
ÞÞ	Fast
	Operation sound
*	Setting
	Date of Manufacture (YYYY-MM-DD)
•••	Manufacture *It may be called "Legal manufacture" or "Brand Owner" etc.
\\J_\	Country of manufacture (Made in Japan)
#	Model number

■Battery

Symbol	Descrption
	Power off
	Power on
)Xa	Indicates products covered by the EU directive on the Batteries Directive (2006/66/EC)

Symbol	Description
X	Indicates product covered by the EU directive on waste electrical and electronic equipment (WEEE)>
UDI	This is 2D code (GS1 data matrix) that encodes the UDI (Unique Device Identifier) required by the Unique Device Identification System designed to adequately identify devices through distribution and use.
[]i	Refer to the instruction manual
SN	Serial number
LOT	Lot number
MD	Medical device (This product is a medical device or an accessory for medical device in some countries and regions depending on their regulations. An accessory for medical device is required to be labeled as "Medical Device" under medical device regulation in Europe).
(€	CE mark
EC REP	Authorized representative in the European community * Either of the symbols is used

Symbol	Descrption
Pb	Indicates products covered by the Act the Promotion of Effective Utilization of Resources in Japan
<u> </u>	Caution: Indicates that there are handling note. Refer to the attached document.

16 REGULAR INSPECTION AND DAILY MAINTENANCE

■ Lubrication (if there is abnormal noise)

• Lubrication is needed if there is abnormal noise. Please feel free to contact Paramount Bed or your distributor to be lubricated.



Water adhesion to the bed or mattress, or moisture may cause corrosion, abnormal noise or contamination. If water adheres to the bed or mattress, wipe off immediately.

■ Bed unit

- To clean the bed, use a cloth that has been soaked in diluted detergent and wrung out well, then wipe off any residual detergent with a cloth soaked in water and wrung out well. Finally, use a dry cloth to wipe the bed to ensure it is dry.
- To wash the bed using water, pour water on the bed to wash out stains. Finally, use a dry cloth to wipe the bed to ensure it is dry.
- To disinfect the bed, always dilute detergents used as specified below and follow the instructions described in the instruction manual.

76.9% - 81.4% ethanol for disinfection

0.05% - 0.2% benzalkonium chloride (e.g. Osvan)

0.05% - 0.2% benzethonium chloride (e.g. Hiamine)

0.05% chlorhexidine gluconate (e.g. Hibitane)

0.02% - 1.0% sodium hypochlorite (e.g. Milton)

● The bed should be disinfected before a different patient uses the bed.

CAUTION

• Do not use volatile cleaning fluids (such as paint thinner, benzene or gasoline) and cresol. Discoloration or deterioration could result.







- Do not use disinfectant other than those specifed. There is a risk of damage or deterioration.
- After cleaning the bed detergent, be sure to wipe any residual detergent with a cloth soaked in water and wrung out well. Otherwise, there is a risk of damage to the plastic parts.
- When a washing the bed with water, do not pour water from under the base cover. There is a risk of malfunction.
- Do not wash the bed by a bed washer or high-pressure water. There is a risk of malfunction.



The product cannot be used with an ozone sterilizer or an autoclave sterilizer, etc.

16 REGULAR INSPECTION AND DAILY MAINTENANCE

For safety in use, inspect the product regularly, at least once a year. The product exhibits wear and deterioration according to the frequency and conditions of use. Inspect for loose parts, the operation of moving parts on the bed, and the presence of damage regularly. When an irregularity has been noticed or when a detailed inspection is desired, contact Paramount Bed or your distributor.

	Operation details	Inspection items
	Back-raise operation (p.26)	Proper operation can be achieved.
	Back-raise operation (p.20)	There must not be any strange noises.
	Warranai a anamati an (n. 26)	Proper operation can be achieved.
	Knee-raise operation (p.26)	There must not be any strange noises.
	Hi-lo operation (p.26)	Proper operation can be achieved.
	m-10 operation (p.20)	There must not be any strange noises.
Bed unit		There must not be any scratches and
Dea unit		deformation at the mattress base, frame or any
		other parts.
	Miscellaneous	There must not be any deformation, damage, or
	Wiscendieous	detachment of bumpers, resin parts or elastic
		parts.
		There must not be any peeling of labels, and
		the text must be legible.
Board	Board mounting condition (p.16)	The board stopper must be locked properly
Domu	Board mounting condition (p. 10)	There must not be any remarkable rattling.
		There must not be any strange noises when the
		bed is travelling.
	Travelling	There must not be any strange vibration when
	Travelling	the bed is travelling.
		Proper operation can be achieved.
Caster		The operation must not be unusually difficult.
Caster	Caster locking operation (p.36)	The bed must not move when the caster are
		locked.
		The bed must move smoothly when the locked
		is released.
		When is steering position, swiveling of the
		steering caster must be locked.
		Cable must not get tangled in the bed.
Electrical part		Plugs and cables must have no scratches or
_	Visual check of electrical parts	damage.
(Electrical bed only)		There must not be any scratches and damage on
		the handheld controller.

∕\WARNING

- Do not wash the padding. There is a risk of padding degradation.
- Do not use a mattress washer, an ozone sterilizer or autocrave apparatus. There is a risk of damage, deterioration or degradation.
- Do not leave any blood, urine, sudor or sebum on the mattress. Clean dirt frequently with neutral detergent or soap. If left untreated, the surface material may degrade, smell or stain may result.
 - The smell that is left during use may be neutralized with mouthwash.
 - If the mattress is stained, wipe off throughly with oxydol (3% hydrogen peroxide).
 - Use thrombolytic agent, if it is difficult to clean blood. In that case, try using it on the end of the firtsly, because there is a risk of discoloration or deterioration.
- Do not use volatile cleaning fluids (such as paint thinner, benzene or gasoline) and cresol. Discoloration or deterioration could result.
- Do not use disinfectant other than those specified. There is a risk of damage or deterioration.

■ Mattress unit

- When the mattress get dirty or the persons who use the mattress change, be sure to clean and disinfect both surface of the mattress in accordance with the procedures specified in steps 1 to 4 below. At this time, take care not to bend the mattress.
- Remove any soiling (blood, excreta, etc.)
- Wipe the mattress using a cloth that has been soaked in commercially available soapor neutral detergent diluted with water, and wrung out well.
- Disinfect the mattress by using disinfectant.
 - 0.05% 0.2% benzalkonium chloride (e.g. Osvan)
 - 0.05% 0.2% benzethonium chloride (e.g. Hiamine)
 - 0.05% chlorhexidine gluconate (e.g. Hibitane)
 - 0.02% 1.0% sodium hypochlorite (e.g. Milton)
- Leave the mattress to dry out naturally on the bed or in another location. However, do not dry in the sun.
- Clean and disinfect the mattress regularly
- Do not wash the mattress
- Take care not to soak the padding.

ACAUTION

Do not unzip the fastener and do not remove the cover when cleaning and disinfecting the mattress. Do not unzip the fastener while the mattress is in use. The fastener is provided so that the cover can be repaired or replaced if it damaged.



● The product cannot be used with an ozone sterilizer or an autoclave sterilizer, etc.

1. Model (PA-93**5/PA-93**6)

- Problems may not always indicate faults. Check the following once again before requesting repair.
- If the problem persists after taking corrective actions, stop using the bed immediately, disconnect the power plug from the outlet, and contact Paramount Bed or your distributor for repair.
- Bed damaged in earthquakes, fires, floods or other incidents must be inspected and repaired by Paramount Bed or your distributor. Otherwise, there is a risk of electric shock or fire due to short circuit or current leakage from electrical parts, of injury due to malfunctioning caused by deformation of the bed.

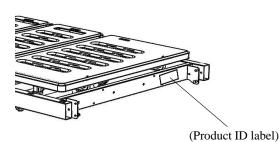
Problem	Check	Corrective action	Refer- ence page
	Check if the power plug is plugged into the outlet.	Plug the power plug into the outlet.	21
The bed does not move even when the handheld controller buttons are pressed.	The power plug is plugged into the outlet but the bed still does not move.	 Unplug the power plug from the outlet and plug it in again. Plug another electrical device into the outlet to check that power is available. 	21
	Check if the power plug is plugged into the outlet.	●Plug the power plug into the outlet.	21
The POWER Lamp on the handheld controller is OFF.	Check if the handheld controller lock function is off.	 Press the lock button to switch the handheld controller lock function OFF 	· —
	The power plug is plugged into the outlet but the POWER lamp on the handheld controller is OFF.	 Unplug the power plug from the outlet and plug it in again. Plug another electrical device into the outlet to check that power is available. 	_
The bed cannot be positioned correctly.	Check if there is nothing in the moving parts on the bed.	Remove any obstacles.	_
The bed cannot be moved.	Check if the casters are locked.	Unlock the caster.	36
The board will not come off.	Check if the board is locked.	●Unlock the board stopper	16

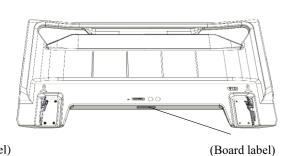
• When requesting repairs or contacting Paramount Bed or your distributor, please provide the number on the product ID label.

Product lifetime

The lifetime of this equipment is typically eight (8) years. Lifetime is defined as the period during which the product will maintain the specified performance and safety, provided it has been maintained and operated in conditions of normal use in accordance with the requirements in this instruction manual.

■ Product ID label locations







2. Model (PA-93**7N)

Troubleshooting

- Problem may not always indicate faults. Check the following once again before requesting repair.
- If the problem persists after taking corrective action, stop using the bed immediately, disconnect the power plug from the outlet, turn the battery off and then contact Paramount Bed (see p.76) or your distributor for repair.
- If the bed is damaged in an earthquake, fire, flood, or any other incident, contact Paramount Bed (see p.76) or your distributor for inspection or repair. Electric shock or fire my occur due to a short circuit or current leakage from electrical components or malfunction may occur due to deformation of the bed, resulting in injury.
- If a failure or error occurs, an error code may be displayed on of the display panel of the handheld controller Check the error code. (See p. 62-63).

Symptoms and status	Check	Corrective action	Reference page
Handheld controller.	Is the power plug inserted into the outlet.	Insert the power plug into the outlet.	21
	The power plug is inserted into the outlet but the bed still does not operate.	 Disconnect the power plug from the outlet and insert it in again. Plug another electrical device into the outlet and check that power is available. 	21
	Are two or more handheld controller. Plugged into the handheld controller power outlet.	If two or more handheld controllers are plugged into the handheld controller power outlets, the bed does not operate. Insert only one.	18-19
	Is the power plug inserted into the outlet?	Insert the power plug into the outlet.	21
The power lamp on the handheld controller is off.	The power plug is inserted into the outlet, but the power lamp on the handheld controller is off.	 Disconnect the power plug from the outlet and insert it in again. Plug another electrical device into the outlet and check that power is available. 	21
	Is the handheld controller plug disconnected from the handheld controller power outlet.	Insert the handheld controller plug into the handheld controller power outlet.	18-19
	Is the power plug inserted into the outlet?	Insert the plug into the outlet.	21
Call is not made even when the nurse call auxiliary button is	Is the bed communication cable disconnected from the bed the urse call wall plate?	Firmly connected the bed communication cable.	20
pressed.	Are the nurse call system and bed communication cable suittbale for the bed.	For detail on the suitable nurse call system and suitable bed communication cable, contact Paramount Bed.	-

Symptoms and status	Check	Corrective action	Reference page
	Is the power plug disconnected?	Insert the power plug into the outlet. If the power plug is not inserted into the outlet, you cannot use BED EXIT ALARM.	21
	Is the bed communication cable disconnected from the bed or the nurse call wall plate?	Firmly connect the bed communication cable.	20
	Are the nurse call system and bed communication cable suitable for the bed?	For details on the suitable nurse call system and suitable bed communication cable, contact Paramount Bed (seep.76) or your distributor.	-
Notification is not made even though, for	Are there any obstacles between the bed and floor?	Remove any objects.	_
example, the patient is out of bed.	Is the weight of the patient 40 or more?	BED EXIT ALARM is intended to be used for a user of at least 40 kg. so a user less than 40 kg. may not be detected.	40
	Are the notification settings configured properly?	Configure the notification settings properly.	32
	Is the "MONITORING" function selected?	If "MONITORING" is selected, notification is not made when the patient gets out of the bed, sits down on the edge of the bed, or sits up.	41
	Did the patient get out of the bed or sit up slowly?	If it takes 4 minutes or more for the patient to get out of the bed or sit up, notification may not be made.	24
Notification is not made even though the patient is sitting on the edge of the bed.	Is the patient sitting on the edge of the bed and applying body weight to the floor?	If body weight is not applied to the floor, notification may not be made.	41
	Is the patient's sit-up motion significant enough?	If the patient's upper body motion is insignificant, notification may not be made. This is not a failure. If notification is not made even though the patient raises the upper body to some extent, turn off notification once and then turn it on again.	32
Notification is not made even though the patient sat up (type with BED EXIT ALARM only).	Did the patient sit up while his or her head is positioned at the foot end of the bed?	If the patient sat up while his or her head is positioned at the foot end of the bed, detection may not work. After getting the patient to lie down with his or her head positioned at the head end of the bed, turn off notification once and then turn it on again.	24
	Did the patient sit up by propping themselves up with a hand or elbow at the head end of the bed?	If the patient sits up by propping themselves up with a hand or elbow at the head end of the bed, notification may not be made.	24

Symptoms and status	Check	Corrective action	Reference page
	Are the notification settings configured properly?	Configure the notification settings properly.	32
	Is an object of 3 kg or more removed from the bed?	If an object of 3 kg or more is removed from the bed, notification may be made. In such a case, turn off or pause notification.	
Notification is made even though the patient did not perform actions	Did a person other than the patient get into or out of the bed?	If a physician, nurse, or visitor gets on or out of the bed, notification may be made. In such a case, turn off or pause notification.	39 and 40
such as getting out of the bed (type with BED EXIT ALARM	Is a board detached?	If a board is detached, notification may be made. In such a case, turn off or pause notification.	
only).	Is weight applied to the footboard?	If weight is applied to the footboard, notification may be made. In such a case, turn off or pause notification.	
	Is the angle of the head section large?	The larger the angle of the head section is, the higher is the possibility that the SIT-UP detection function makes notification with a slight movement even though the patient does not sit up.	40
Notification is made earlier than the specified monitoring time.	Was the monitoring time setting changed while the patient is out of bed?	Turn off notification and then set the monitoring time again while the patient is lying on the bed.	32

Error codes

* Error code list:

If a failure occurs, an error code may be display panel of the handheld controller, chek the error code.

Problem	Power lamp flashing rate	Error code	Cause	Corrective action
		U0	You are holding down an operation button when turning on the power.	Release the button you are holding down.
		U1	The load on the bed exceeded the safe working load.	Check that the load on the bed is within the safe working load.
		O1	Operation of the bed is restricted by an obstacle, etc.	Make sure that operation of the bed is not restricted by an obstacle, etc.
			A communication error is occurring.	Check the cable for scratches and other damage.
				Full insert the plug of handheld controller cable.
		U2		Before using equipment such as electronic medical equipment, disconnect the power plug of the bed from the outlet.
Pressing a button on				If the plug of the handheld controller is wet, dry it and then insert back into the outlet.
the handheld controller	Slow Flashing		The load on the bed exceeded the safe working load.	Check that the load on the bed is within the safe working load.
causes the power lamp	orange (1- second interval)		Operation of the bed is restricted by an obstacle, etc.	Make sure that operation of the bed is not restricted by an obstacle, etc.
to flash orange.		U3	The bed is operating for a long time intermittently.	Wait for 20 to 30 minutes and then check the operation, if the error code is displayed again, contact Paramount Bed or you distributor.
			A bed operation button is held down while operating the CPR lever.	Release the operation button you are holding down.
		U4	A bed operation exceeded the maximum continues operating time.	Wait for 20 to 30 minutes and then check the operation, if the error code is displayed again, contact Paramount Bed or you distributor.
		U5		Turn the power back on and then turn on notification for the Bed Exit Alarm, if the error code is displayed again, contact Paramount Bed or your distributor.
		U9	You are holding down a button.	Release the buttom you are holding down.
The power lamp on the handhled	Fast flashing	H0/H1/H 3/H5/H7/ H8		Disconnect the power plug from the outlet, chek that the power lamp on the handheld controller is turned off, and then insert the power plug back into the outlet.
controller is flashing orange all the time.	orange (0.2- second interval)	Н2	The bed operation exceeded the maxmimum continuous operating time.	Disconnect the power plug from the outlet and leave the bed for 20 to 38 minutes, There is a possibility that a circuit to protect the electrical components against overheating was activated. This is not a failure.

Problem	Power lamp flashing rate	Error code	Cause	Corrective action
		Н0	There is a possibillity that a sensor for the BED EXIT ALARM has falled.	Turn the power back on and then turn on notification for the BED EXIT ALARM, if the error code is displayed again, contact Paramount Bed or your distributor.
		H1/H4/H 5/H7	There is a possibillity that a sensor for the BED EXIT ALARM has falled.	Turn the power back on and then check the operation. If the error code is displayed again, contact Paramount Bed or your distributor.
The power lamp on the handheld controller is flashing orange all the time.	Fast lashing orange (0-2 second interval)	Н2	There is a possibillity that the control box has falled.	Check that the load on the bed is within the sfe working load, if the load on the bed is high, reduce the load and turn the power back on , and then check the operation, if the error code is displayed again, contact Paramount Bed or your distributor.
uic uiic.		НЗ	There is a possibillity that the actuator has falled.	Check that the load on the bed is within the safe working load, if the load on the bed is high, reduce the load and turn the power back on, and then check the operation, if the error code is displayed again, contact Paramount Bed or your distributor.
		Н8	There is a possibillity that the control box has falled.	If the error code is displayed also after turning the power back on, contact Paramount Bed.



If the problem persists after taking the corrective action above, contact Paramount Bed (see p.76) or your distributor.

18 LONG-TERM STORAGE

- The following precautions should be noted when the bed is not in use for extended periods of time.
 - 1. Lay the back and knee section base flat.
 - 2. Lower the bed to the lowest position.
 - 3. Do not place objects other than mattress on the bed.
 - 4. Do not place anything on the mattress.
 - 5. Store the bed in a low-dust environment away from extreme temperatures or humidity. Store the bed at a temperature between -10°C and 50°C, humidity between 20%RH and 90%RH.
 - 6. Do not lean the bed againts a wall; store it level on the floor.
 - 7. For electrically-operated bed, be sure to disconnect the power plug from the power outlet and coil the power cable on a cable storage hook (see p.21)



● Inspect the product regularly at least once a year, even if it is during storage.

Bed disposal

When the PA-90000 series bed has reached the end of its usable life, discard it according to local standards.

19 SPECIFICATIONS

Family name			PA-90000 Series					
Product name			Electric Hospital Bed					
	Mod	del no.	PA-93286	PA-93186	PA-93256	PA-93156	PA-93296	PA-93196
	Quantity	y of motors			3 m	notors		
n re	A	uto contour			Mot	orized		
atic	В	ack raising			Mot	orized		
Operation procedure		nee raising			Mot	orized		
	,	ght adjusment			Mot	orized		
P		voltage/frequency		A	C 100-240V ₊		0Hz	
		otal length				8mm		
		Total width	1,040mm	960mm	1,040mm	960mm	1,040mm	960mm
2	Mattı	ress base width	910mm	830mm	910mm	830mm	910mm	830mm
Dimensions		otal height		,072[+20,-10]mm	740[+20,-10] to 1			1,127[+20,-10]mm
iens	Mattres	s base height (1*)			338[+20,-10] to			725[+20,-10]mm
)ir				m dia.	125m			nm dia.
		Casters	Double-wheel caster		Single-wheel caster		Single-wheel caster	
			(Central loc	king system)		king system)	(Diagonal lo	ocking system)
		er cable length)0mm		
		ct weight	114kg	102kg	112kg	100kg	110kg	98kg
rial	Hea	d/foot boards		HDPE resin molding				
Material		Base		Made of steel, powder coating (some parts are resin mold items)				
\boxtimes		Main frame	Mad	e of steel, pov	wder coating		re resin mold	items)
		ing load (*2)				(2000N)		
		se inclination angle			0° to 7	0° [<u>+</u> 7]°		
Kn	ee section ba	se inclination angle			0°to 25	5° [<u>+</u> 2.5]°		
	Height adj	ustment range	380mm					
Opera	ation guarante	ee Temperature	5 to 40°C					
(conditions	Humidity	20 to 90%RH					
	Actuator type		Linear actuator (DC motor)					
	Power Back-raising		170VA max.					
	consumption Knee-raising		170VA max.					
COII	Î	Height adjustment	285VA max.					
	Dut	y cycle			2min. (stop ti		,	
	Serv	rice life	8 years (base	ed on Paramo	unt Bed data)	, excluding c	onsumable ite	ems such as
	Serv	100 1110	caster					

^{*1)} The mattress base height indicates the height from the floor to the mattress base surface.

^{*2)} Safe working load: Maximum load with which the bed can be operated. (The total load of user's weight and incidental items including the mattress and suitable products).

^{*3)} Time to protect electrical parts from overheating when the bed is used continuously for duty cycle (2min).

Family name				PA-90000 Series			
Product name				Electric H	lospital Bed		
Model no.			PA-93286N	PA-93186N	PA-93206N	PA-93106N	
	Quantity	of motors		3 m	otors		
no re		uto contour		Mote	orized		
Operation procedure	В	ack raising		Mote	orized		
per		nee raising		Mote	orized		
)		ht adjusment		Mote	orized		
F		voltage/frequency		AC 100-240V <u>+</u>	-10%V/50/60Hz		
		otal length		215	8mm		
	Т	otal width	1040mm	960mm	1040mm	960mm	
S	Mattr	ess base width	910mm	830mm	910mm	830mm	
ion	Т	otal height	692[+20,-10] to 1	,072[+20,-10]mm	725[+20,-10] to	1,105[+20,-10]mm	
Dimensions	Mattress	s base height (1*)	290[+20,-10] to	670[+20,-10]mm	323[+20,-10] to	703[+20,-10]mm	
)im			125m	m dia.	150n	nm dia.	
Д		Casters	Double-wheel caster		Single-wheel caster		
			(Central loc	king system)		cking system)	
	Powe	er cable length	2,500mm				
	Produ	ct weight	119kg	106kg	119kg	106kg	
1	Hea	d/foot boards	HDPE resin molding				
Material	S	Side panel	PVC				
/at		Base	Made of steel, powder coating (some parts are resin mold items)				
~	N	Iain frame	Made of steel, powder coating (some parts are resin mold items)				
	Safe work	ing load (*2)	204kgf (2000N)				
Ва	ck section bas	se inclination angle	0° to 70° [<u>+</u> 7]°				
Kı	nee section bas	se inclination angle	0° to 25° [±2.5]°				
	Height adj	ustment range	380mm				
Oper	ation guarante	ee Temperature	5 to 40°C				
	conditions	Humidity	20 to 90%RH				
	Actua	ntor type	Linear actuator (DC motor)				
			Small sealed lead acid battery				
	Battery	Type/quantity			1.2 Ah) x 2		
Rating		24 VDC/1.2 Ah					
	Back-raising				A max.		
	Power nsumption	Knee-raising		170V	A max.		
	isumpuon	Height adjustment		285V	A max.		
	Dut	y cycle	2min. (stop time: 18min (*3)				
	Serv	rice life	8 years (based on P	Paramount Bed data)	, excluding consum	able items such as	

^{*1)} The mattress base height indicates the height from the floor to the mattress base surface.

^{*2)} Safe working load: Maximum load with which the bed can be operated. (The total load of user's weight and incidental items including the mattress and suitable products).

^{*3)} Time to protect electrical parts from overheating when the bed is used continuously for duty cycle (2min).

19 SPECIFICATIONS

	Family 1	name	PA-90000 Series				
Product name			Electric Hospital Bed				
Model no.			PA-93287N	PA-93187N	PA-93207N	PA-93107N	
	Quantity of	f motors		3 motors			
nc e	Auto	contour		Mot	orized		
Operation procedure	Back	c raising		Mot	orized		
per occ		e raising			orized		
O Id		adjusment		Mot	orized		
	Tota	l length		215	8mm		
		al width	1040mm	960mm	1040mm	960mm	
S.	Mattress	s base width	910mm	830mm	910mm	830mm	
Dimensions		ıl height	692[+10,-20] to 1			1,105[+10,-20]mm	
ens	Mattress ba	ase height (1*)	290[+10,-20] to	670[+10,-20]mm	323[+10,-20] to	703[+10,-20]mm	
)im			125m			nm dia.	
	C	asters	Double-w	heel caster	Single-w	heel caster	
			(Central lock	king system)	(Central lo	cking system)	
		able length		330	00mm		
	Product v		130kg	122kg	130kg	122kg	
ıl	Head/f	oot boards		HDPE res	sin molding		
Material	Sid	e panel			VC		
Mat		Base		el, powder coating			
7		n frame	Made of ste	el, powder coating		n mold items)	
	Safe working				(2000N)		
	Head up	Inclination angle	0° to 70° [<u>+</u> 7]°				
	ricad up	Require time	33 seconds				
	Vnoo un	Inclination angle	0° to 25° [<u>+</u> 2.5]°				
	Knee up	Require time	8 seconds				
	. 14 /1	Range	380mm				
Hei	ight up/down	Require time	30 second	s (34 seconds if the	patients weight exc	eeds 100kg)	
_		Temperature	10 to 40°	C (when using BE)	D EXIT ALARM: 1	15 to 30°C)	
	ation guarantee conditions	Humidity		30 to	90%RH		
(Conditions	Air pressure	620 to 1,060hPa				
	Actu	ator type		Linear actuat	or (DC motor)		
	Power supply	voltage/frequency		AC 100-240V+	-10% V/ 50/60Hz		
		Back-raising	200VA max				
	Down	Knee-raising	155VA max				
nts	Power consumption	Height adjustment	255VA max				
one	Consumption	Back & Knee-		2053	'A max		
ub		raising		293 V	A Illax		
00	Maximum con	tinuous operating		2 min (down	tima:38 min)*3		
ical		ime	2 min.(downtime:38 min)*3				
Electrical components		erating			or Less*4		
Ele	Fuse	Control box		3.A, delay type, into			
	Battery	Type	Sma	all sealed lead acid b		.2 Ah)	
	specification	Rating			h (10 hour rate)		
	Materials	Handheld		sin moalding, Rear			
Materials controller				POM resin molding,			
			0 (1 1	D (D 1 1 4	a) avaluding consu	mable items such as	
	Service	lifo	8 years (based on	Paramount Bed data	a), excluding consu	mable hems such as	

^{*1)} The mattress base height indicates the height from the floor to the mattress base surface.

^{*2)} Safe working load: Maximum load with which the bed can be operated. (The total load of user's weight and incidental items including the mattress and suitable products).

^{*3)} Time to protect electrical parts from overheating when the bed is used continuously for duty cycle (2min).

^{*4)} Base on the internal metrics

19 SPECIFICATIONS

	Fami	ly name	PA-90000 Series
Product name		ict name	Electric Hospital Bed
	Model no.		PA-93485V
	Quantity	of motors	3 motors
n e	A	uto contour	Motorized
atic	В	ack raising	Motorized
Operation procedure	K	nee raising	Motorized
O	Heig	ht adjusment	Motorized
P	ower supply v	oltage/frequency	AC 100-240V <u>+</u> 10%V/50/60Hz
	T	otal length	2,134mm
S	T	otal width	1,160mm
ion	Mattr	ess base width	910mm
ens	T	otal height	761[+20,-10] to 1,141[+20,-10]mm
Dimensions	Mattress	Mattress base height (1*) 290[+20,-10] to 670[+20,-10]mm	
		Casters 125mm dia. Double-wheel caster (Central locking system)	
	Powe	er cable length	2,500mm
	Produc	ct weight	145kg
.1	Hea	d/foot boards	Wood
Material	\$	Side panel	Wood
Лаt		Base	Made of steel, powder coating (some parts are resin mold items)
_	N	Main frame Made of steel, powder coating (some parts are resin mole	
		ing load (*2)	204kgf (2000N)
		se inclination angle	0° to 70° [±7]°
Kn		se inclination angle	0° to 25° [<u>±</u> 2.5]°
		ıstment range	380mm
Opera	ation guarante	ee Temperature	5 to 40°C
	conditions Humidity		20 to 90%RH
	Actuator type		Linear actuator (DC motor)
	Power	Back-raising	170VA max.
	sumption	Knee-raising	170VA max.
COL	-	Height adjustment	285VA max.
	Duty	y cycle	2min. (stop time: 18min (*3)
	Serv	ice life	8 years (based on Paramount Bed data), excluding consumable items such as
	Serv		caster

^{*1)} The mattress base height indicates the height from the floor to the mattress base surface.

^{*2)} Safe working load: Maximum load with which the bed can be operated. (The total load of user's weight and incidental items including the mattress and suitable products).

^{*3)} Time to protect electrical parts from overheating when the bed is used continuously for duty cycle (2min).

Family name				PA-90000 Series				
Product name				Manual Hospital Bed				
Model no.			PA-99286	PA-99186	PA-99256	PA-99156	PA-99296	PA-99196
ion ure	Back	raising			Ma	ınual		
Operation procedure	Knee	e raising			Ma	ınual		
Op prc	Height	adjusment			Ma	nual		
	Tota	l length			2,15	58mm		
	Tota	al width	1,040mm	960mm	1,040mm	960mm	1,040mm	960mm
suc	Mattress	base width	910mm	830mm	910mm	830mm	910mm	830mm
nsic		l height	732[+20,-10] to 1	,112[+20,-10]mm	740[+20,-10] to 1	,120[+20,-10]mm	747[+20,-10] to	1,127[+20,-10]mm
Dimensions	Mattress ba	ase height (1*)	330[+20,-10] to	710[+20,-10]mm	338[+20,-10] to	718[+20,-10]mm	345[+20,-10] to 725[+20,-10]mm	
Di			125mm dia.		125mm dia.		125mm dia.	
	Ca	asters	Double-wheel caster		Single-wheel caster		Single-wheel caster	
			(Central loc	(Central locking system) (Central locking system)		(Diagonal lo	ocking system)	
	Product v	veight	112kg	101kg	112kg	101kg	109kg	97kg
ial	Head/f	oot boards	HDPE resin molding					
Material	I	Base	Made of steel, powder coating (some parts are resin mold items)				items)	
M	Mai	n frame	Mad	Made of steel, powder coating (some parts are resin mold items)				items)
	Safe working	(load (*2)	204kgf (2000N)					
Ba	ck section base i	nclination angle	0° to 75° [±7.5]°					
Kn	ee section base i	nclination angle	0° to 45° [<u>+</u> 4.5]°					
	Height adjustment range		380mm					
Oper	Operation guarantee Temperature		5 to 40°C					
	conditions	Humidity	20 to 90%RH					
	Service life		8 years (base caster	ed on Paramo	unt Bed data)	, excluding c	onsumable ite	ems such as

^{*1)} The mattress base height indicates the height from the floor to the mattress base surface.

^{*2)} Safe working load: Maximum load with which the bed can be operated. (The total load of user's weight and incidental items including the mattress and suitable products).

Family name			PA-90000 Series			
Product name			Manual Hospital Bed			
	Model	no.	PA-99286N	PA-99186N	PA-99206N	PA-99106N
on	Back	k raising		Ma	ınual	
Operation procedure	Knee	e raising		Ma	nual	
Op	Height	adjusment		Ma	nual	
	Tota	ıl length		2,15	58mm	
	Tota	al width	1,040mm	960mm	1,040mm	960mm
suc	Mattress	s base width	910mm	830mm	910mm	830mm
nsic	Tota	al height	732[+20,-10] to 1	,112[+20,-10]mm	765[+20,-10] to	1,145[+20,-10]mm
Dimensions	Mattress ba	ase height (1*)	330[+20,-10] to	710[+20,-10]mm		743[+20,-10]mm
Di			125mm dia.		150mm dia.	
	C	asters	Double-wheel caster		Single-wheel caster	
			(Central locking system) (Central locking sys		cking system)	
	Product v	weight	112kg	101kg	112kg	101kg
77	Head/f	oot boards	HDPE resin molding			
eria	Sid	e panel	PVC			
Material	I	Base	Made of steel, powder coating (some parts are resin mold items)			
		n frame	Made of steel, powder coating (some parts are resin mold items)			
	Safe working	g load (*2)	204kgf (2000N)			
Ba	ick section base i	nclination angle	0° to 75° [<u>+</u> 7.5]°			
Kr	Knee section base inclination angle		0° to 45° [±4.5]°			
Height adjustment range		380mm				
Oper	Operation guarantee Temperature		5 to 40°C			
	conditions	Humidity	20 to 90% RH			
	Service life		8 years (based on P caster	aramount Bed data),	excluding consuma	ble items such as

^{*1)} The mattress base height indicates the height from the floor to the mattress base surface.
*2) Safe working load: Maximum load with which the bed can be operated. (The total load of user's weight and incidental items including the mattress and suitable products).

Model PA-93**5/ PA-93**6						
Environmental conditions	Range					
Environmental conditions	When transported or stored	When in use				
Temperature	-10 to 50°C	5 to 40°C				
Humidity	20 to 90%RH	20 to 90%RH				
Air pressure	700 to 1,060hPa	700 to 1,060hPa				

Model PA-93**7N						
Environmental conditions	Range					
Environmental conditions	When transported or stored	When in use				
Tomponotuno	-10 to 50°C	10 to 40°C (when using BED				
Temperature	-10 to 30 C	EXIT ALARM: 15 to 30°C)				
Humidity	30 to 90%RH	30 to 75%RH				
Air pressure	620 to 1060hPa	620 to 1060hPa				

Patient	User weight (min-max)	40kg to 138kg
	Minimum user height	146cm
	Minimum user body	17
	mass index (BMI)	
group		13 years of age or older
	Supported age range	*Do not use the bed for children (aged 12 or under) or patient
		weighing more than 138kg
Intended fisers		Health care workers, patients, relative of patient, and maintenance
		staff
Clinical benefitt		Patient comfort
		Quality patient care and efficient care provision

•Essential performance

Function to support the body of patient, Emergency CPR (back lower) function.

• Frequently used function

Back-raising, knee-raising, height adjustment, side rail raising and lowering operation.

• Classification and Standards

The electrical hospital bed is designed and manufactured according to the following equipment classification and standards.

•Classification as medical device in Europe : Class 1

•Safety standards applied : IEC 60601-1:2005+AMD1:2012+AMD2:2020

: IEC 60601-1-2:2014+AMD:2020 : IEC 60601-2-52:2009+AMD1:2015 : EN 60601-1:2006+A12:2014 : EN 60601-1-2:2015+A1:2021 : EN 60601-2-52:2010+A1:2015

•Electric shock protection : Class 1, Type B

For the PA-90000 Series, special attention is required to EMC-related safety.

Install, operate and use bed in accordance with the following information.

Bed is intended for use in the electromagnetic environment specified by "electromagnetic disturbance" of bed. The following abnormality may occur if using bed in unintended environment.

*The function for supporting patient's weight does not maintain.

∕NWARNING

- If using the other specified accessories, transducers and cable as a replacement part for internal components, except for transducers and cables sold by the manufacturer of bed, there is a risk of increasing the emissions or reducing the immunity of bed.
- ●Use portable RF transciever more than 30 cm away from any part of bed (including peripheral equipment such as antenna cable and external antenna). If it is used within 30 cm, the bed performance may degrade.
- •Bed cannot be used with adjacent to or stacked with other equipment. If it must be used adjacent to or stacked with other equipment, make sure to monitor that it can operate properly in the location where bed is used.

Bed is intended for use in clinic, restricted medical facilities, hospital (except near high-frequency surgical instrument, RF shielded room for magnetic resonance). Users or customers must use bed in this environment. Bed is device that suitable to used in hospital due to emission characteristics. If it used in housing environment, the equipment may not provide adequate protection againts wireless radio frequency transciever. The user may need to take mitigation measures such as relocating or redirecting the device.

No.	Cable	Maximum length [m]	Remarks
1	AC power cable (PA-93**6/N)	4.6	Without shield
2	Handheld controller cable (PA-93**6/N)	1.4	Without shield
3	AC power cable (PA-93**7N)	3.5	Without shield
4	Handheld controller cable (PA-93**7N)	0.6	Without shield

Guidance and Manufacturer's Declaration - Electromagnetic Emissions

The PA-90000 Series is intended for use in the following electromagnetic environment. The customer or user of the PA-90000 Series should make sure it is used in such an environment.

Emission test	Compliance	Electromagnetic Environment - Guidance
RF emissions CISPR 11/EN 55011	Group 1	The PA-90000 Series uses RF energy only for its internal functions. Therefore, its RF emissions are low and are not likely to cause any interference with nearby electronic equipment.
RF emissions CISPR 11/EN 55011	Class A	
Harmonic emissions IEC 61000-3-2/EN 61000-3-2	Class A	The PA-90000 Series is suitable for use in all establishments other than domestic and those directly connected to the public low-voltage power supply network
Voltage fluctuations/flicker emissions IEC 61000-3-3/EN 61000-3-3	Complies	that supplies buildings used for domestic purposes.

19 SPECIFICATIONS

Guidance and Manufacturer's	Declaration	- Electromagnetic	Immunity

The PA-90000 Series is intended for use within healthcare facility environment. Users or customers must use bed in this environment.

Immunity test	IEC 60601-1-2/EN 60601-1-2 Test level	Compliance level		
Static electricity discharge (ESD) IEC 61000-4-2 /EN 61000-4-2	Contact discharge: ±8kV Air discharge: ±2kV, ±4kV, ±8kV, ±15kV	Contact discharge: ±8kV Air discharge: ±2kV, ±4kV, ±8kV, ±15kV		
Electrical fasttransient/burst IEC 61000-4-4 /EN 61000-4-4	±2kV Power supply line	±2kV Power supply line		
1 IBC 51000-4-3		Line - line: $\pm 0.5 kV$, $\pm 1.0 kV$ Line - ground: $\pm 0.5 kV$, $\pm 1.0 kV$, $\pm 2.0 kV$		
Power Frequency Magnetic Fields IEC 61000-4-8 /EN 61000-4-8	30 A/m	30 A/m		
Voltage Dips	0% UT: 0.5 cycles Phase: 0°, 45°, 90°, 135°, 180°, 225°, 270°, 315°	0% UT: 0.5 cycles Phase: 0°, 45°, 90°, 135°, 180°, 225°, 270°, 315°		
IEC 61000-4-11 /EN 61000-4-11	0% UT: 1 cycle 70% UT: 25/30 cycles Single phase: 0°	0% UT: 1 cycle 70% UT: 25/30 cycles Single phase: 0°		
Short interruptions IEC 61000-4-11 0% UT: 250/300 cycles /EN 61000-4-11		0% UT: 250/300 cycles		
Proximity Magnetic Fields IEC 61000-4-39 134.2 khZ, 50% Pulse at 2.1 kHz, 65A/m 13.56 MHz, 50% Pulse at 50kHz, 7.5 A/m		134.2 kHz, 50% Pulse at 2.1 kHz, 65 A/m 13.56 MHz, 50% Pulse at 50 kHz 7.5 A/m		

Guidance and Manufacturer's Declaration - Electromagnetic Immunity

The PA-90000 Series is intended for use in an electromagnetic environment that used wireless RF transciever. Electromagnetic interference can be prevented by maintaining the minimum distance between RF transciever and PA-90000 series depend on the maximum output and frequency of the communication device as recommended below.

Immunity test	IEC 60601-1-2 /EN 60601-1-2 Test level	Compliance level (V/m)	Band (MHz)	Service	Modulation	Maximum power (W)	Distance (m)
	27V/m 385MHz	27	380-390	TETRA 400	Pulse modulation 18Hz	1.8	0.3
	28V/m 450MHz	28	430-470	GMRS 460, FRS 460	FM±5kHz deviation 1kHz sine	2	0.3
	9V/m 710MHz 9V/m 745MHz 9V/m 780MHz	9	704-787	LTE Band 13,	Pulse modulation 217Hz	0.2	0.3
Enclosure port to RF wireless	28V/m 810MHz 28V/m 870MHz 28V/m 930MHz	28	800-960	GSM 800/900, TETRA 800, iDen 820, CDMA 850, LTE Band 5	Pulse modulation 18Hz	2	0.3
communications equipment IEC 61000-4-3 /EN 61000-4-3	28V/m 1720MHz 28V/m 1845MHz	28	1700-1990	GSM 1800; CDMA 1900; GSM 1900; DECT; LTE Band 1, 3, 4, 25; UMTS	Pulse modulation 217Hz	2	0.3
	28V/m 1970MHz						
	28V/m 2450MHz	28	2400-2570	Bluetooth, WLAN 802.11 b/g/n RFID 2450, LTE Band 7	Pulse modulation 217Hz	2	0.3
	9V/m 5240MHz 9V/m 5500MHz 9V/m 5785MHz	9	5100-5800	WLAN 802.11 a/n	Pulse modulation 217Hz	0.2	0.3

Guidance and Manufacturer's Declaration - Electromagnetic Immunity

The PA-90000 Series is intended for use in the following electromagnetic environment. The customer or user of the PA-90000 Series should make sure it is used in such an environment.

Immunity test	IEC 60601-1-2 /EN 60601-1-2	Compliance level	Electromagnetic Environment - Guidance
Conducted	Test level 3V 0.15MHz-80MHz	3V 0.15MHz-80MHz	Field intensity from the fixed DE transmitter
disturbance induced by RF fields IEC 61000-4-6 /EN 61000-4-6	6V in ISM bands between 0.15MHz- 80MHz 80%AM at 1kHz 80% AM at1kHz	6V in ISM bands between 0.15MHz- 80MHz 80% AM at 1kHz 80% AM at1kHz	Field intensity from the fixed RF transmitter determined by a field investigation of the magnetic field must be lower than the compliance level of the respective frequency band. Near devices with the following symbol, interference could occur.
Radioactive RF electromagnetic field IEC 61000-4-3 /EN 61000-4-3	3V/m 80MHz-2.7GHz 80% AM at 1kHz	3V/m 80MHz-2.7GHz 80% AM at 1kHz	

a. The intensity of a magnetic field from fixed transmitters such as a radio (mobile/radio) telephone base station, land mobile radio, amateur radio, AM and FM radio broadcasting, and TV broadcasting cannot be theoretically predicted accurately. To determine the electromagnetic environment for a fixed RF transmitter, consider investigating the electromagnetic field in the location where the bed is used. If the intensity of the magnetic field in the location where the PA-90000 Series is used exceeds the above RF compliance level, make sure to monitor if the PA-90000 Series operates appropriately. If abnormal movement is found, take additional measures as needed, such as changing the direction or position of the PA-90000 Series.

b. These guidelines are not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

20 AFTER-SALES SERVICE

1. When requesting repairs

First check the items described in "16. TROUBLESHOOTING" (p.58-63) in this instruction manual. If the problem persists, disconnect the bed power plug from the power outlet and contact Paramount Bed or your distributor.

- Details necessary when requesting repair
 - Product name, model number
 - •Product ID label number (see p.58)
 - Date of purchase
 - •Details of fault or problem (please provide as much detail as possible)
 - ·Your name, organization, address, and phone number
- Consumable parts

Casters, handheld controller are consumable parts.

2.Minimum stock availability period

Paramount Bed keeps replacement parts (necessary to maintain bed performance) in stock for at least 8 years after the discontinuation of production.

3. Questions regarding after-sales service

For any queries, please feel free to contact Paramount Bed or your distributor. Website: https://www.paramount.co.jp/english/



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The SIAA mark is displayed on products for which quality management and information have been published in the guidelines of Society of International sustaining growth for Antimicrobial Articles based on results evaluated according to the ISO22196 method.

Inorganic antimicrobial agent/kneading: Head board, foot board. JP0122394A0002Y

