

ROLLER BALL

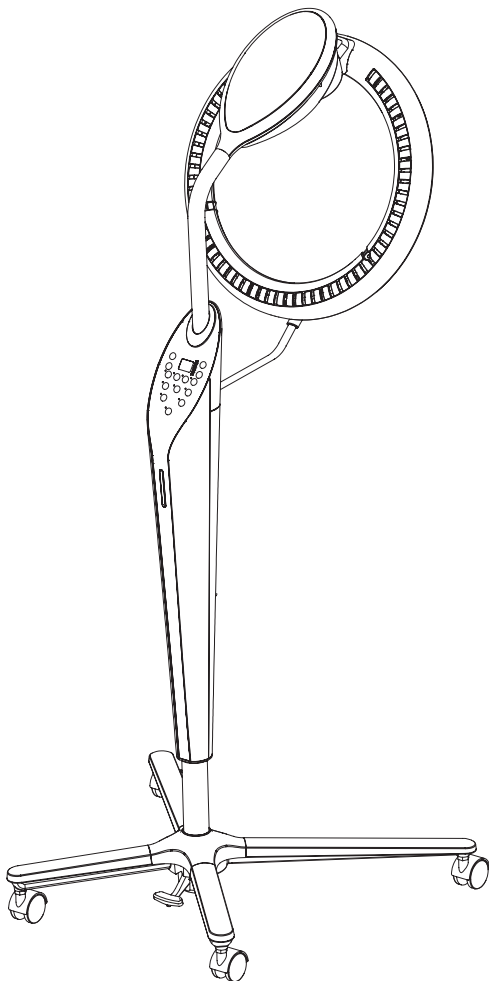


Model

AK—S 2 3 S

AK—S 2 3 S F

Operating Instructions



Thank you for purchasing our product. Please read through this manual and this note carefully before installing or using. These instructions provide important information for correct usage of the product to avoid personal injuries or property damages against you or your clients.

This product is intended for the exclusive use in hair salon or esthetic salon for their treatment and service, and must be operated or handled by the qualified/professional hairdressers or by their staff under the supervision of hairdressers.

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IMPORTANT SAFETY INSTRUCTIONS

When using electrical appliances, especially when children are present, basic safety precautions should always be followed, including the following:

Before Using the Product

Carefully read through the Safety Precautions and use the product correctly. Furthermore, to use the product safely, be sure to perform the daily inspection following the procedures described in the Guidance on Daily Inspection (page 22). In case the product is continually used without performing daily inspections, product failures or accidents may occur.

Precautions stated here are for the purpose of the following:

Ensuring safe use of the product and preventing harm and damage to yourself and other persons.

Each of the precautions identifies an important item concerning safety. Be sure to observe the instructions.

We are not responsible for injuries and damage to the user and other persons should an accident occur due to failure to comply with these precautions. If this is the case, the persons who use the product without observing the safety precautions will bear responsible for the injuries and damage.

The following section provides detailed explanations of the precautions. Fully understand the meaning before reading the body text.



DANGER

Failure to heed this warning and improper handling may result in critical risks that could lead to death or serious physical injury.



WARNING

Should this indication be neglected and should the product be handled improperly, the possibilities of fatal injuries or serious physical injuries are impending.



CAUTION

Should this indication be neglected and should the product be handled incorrectly, there are the possibilities of minor physical injuries, mild physical disorders, or material damages.



Indicates the general prohibited behaviors.



Indicates the prohibition of water splashing and use in a water location.



Indicates the prohibition of disassembly, repair, or modification.



Indicates the need for paying attention to electrification.



Indicates enforcement or instructions for general user behavior.



Indicates the instruction to disconnect the power plug from the outlet.



Indicates the need for paying attention to high temperatures.



Indicates the need for paying attention to bursting.



WARNING

Never touch the inside of the main unit.



Never touch the inside of the product. There is a possibility of electric shock. For maintenance and service of the product, be sure to contact our After-Sales Service Division.

IMPORTANT SAFETY INSTRUCTIONS

READ ALL INSTRUCTIONS BEFORE USING. KEEP AWAY FROM WATER.



DANGER

Warning concerning Power Supply.



Always unplug this appliance immediately after using.

Do not water the equipment.



Do not place or store appliance where it can fall or be pulled into a tub or sink. Do not use while bathing. Do not place in or drop into water or other liquid. Do not reach for an appliance that has fallen into water. Unplug immediately.



WARNING

To reduce the risk of burns, electrocution, fire, or injury to persons:

Warning concerning Power Supply.



An appliance should never be left unattended when plugged in.



Be sure to turn off the power to the main unit each time the work is completed.

Be sure to disconnect the power plug before moving the product.

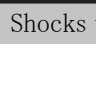


If the blades or the area near the blades of the power plug are contaminated with waste hair or chemical agent, wipe the area thoroughly with a dry cloth.

Disconnect the power plug before fixing up the equipment.



Be sure to disconnect the power plug when fixing the equipment. Do not do this with wet hands. Neglecting this warning may result in an electrical shock or injuries.



Shocks to the equipment in operation.

Do not expose the equipment to shocks or impacts during operation. Neglecting this warning may result in falling of the equipment, thus causing electric shock, fire, breakage, or injuries.

Do not step on or lean over the main unit or the stand.



The stand is provided with casters. Falling of the equipment may result in an electric shock, fire, or damage.

Do not operate the equipment in a tilted state.



Incorrect detection by the infrared temperature sensor may cause abnormal heating of the customer head. In addition, falling of the equipment may result in electric shock, fire, or damage.

Do not allow the hair or the skin of the customer to contact the heater guard.



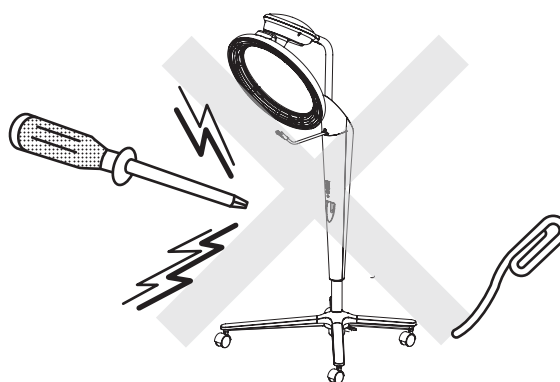
Be careful to avoid allowing the hair or the skin of the customer to contact the heater guard while the customer dozes during operation or after using the roller ball. Neglecting this warning may result in a burn injury.



Never drop or insert any object into any opening.



Do not insert a metal object, such as a pin or the like, into the ring to remove dust accumulated in the slit, etc., when fixing the roller ball. Neglecting this warning may result in an electrical shock or ignition caused by an electrical short circuit.



IMPORTANT SAFETY INSTRUCTIONS



WARNING

Be sure to execute the daily check.



Execute the daily check according to the Guidelines for Daily Inspection described in this manual (p. 22). Improper use or operation of the equipment may result in injuries or accidents including burns.

Never disassemble or repair the equipment by yourself.



Persons other than the repair engineer must not disassemble, repair, or modify the equipment. Neglecting this warning may cause ignition or abnormal operation resulting in physical injuries.

Close supervision is necessary.



Close supervision is necessary when the appliance is used by, on, or near children or invalids.

Handling of Power Cord.



Keep the cord away from heated surfaces.

Do not use attachments not recommended by the manufacturer.



Use this appliance only for its intended use as described in this manual. Do not use attachments not recommended by the manufacturer.



Connect this appliance to a properly grounded outlet only. See Grounding Instructions.

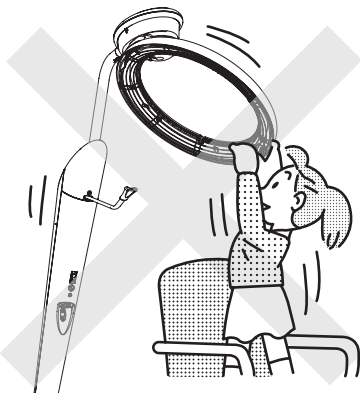


Never operate this appliance if it has a damaged cord or plug, if it is not working properly, if it has been dropped into water. Return the appliance to a service center for examination and repair.

Do not allow a child to touch the roller ball.



Do not allow a child to touch the roller ball. Neglecting this caution may cause falling, deformation, or breakage of the roller ball resulting in a burn injury.



Do not touch hot surfaces of the appliance.



Do not touch hot surfaces of the appliance. Use the upper shaft.

Do not use outdoors.



Do not use outdoors or operate where aerosol (spray) products are being used.

Never block the air openings.



Never block the air openings of the appliance or place it on a soft surface, such as a bed or couch, where the air openings may be blocked. Keep the air openings free of lint, hair, and the like.

IMPORTANT SAFETY INSTRUCTIONS



CAUTION

Handling of Power Cord.



When disconnecting the power plug, do not hold it at the cord, but pull it off while holding the plug part at the end.



Be sure to use the power cord in the state where it is fixed on the main unit with the screws furnished (see page 7). Neglecting this caution may result in fire or electric shock.



If the power cord or the power plug is damaged or when engagement with the wall outlet is loose, do not use the cord or the plug.



Do not move the main unit by holding the power cord. Do not damage, break, forcibly bend, twist, pull, or bundle the cord. Furthermore, putting a heavy object on the cord, jamming of the cord in objects, or modifying the cord will damage the cord resulting in fire or electric shock.

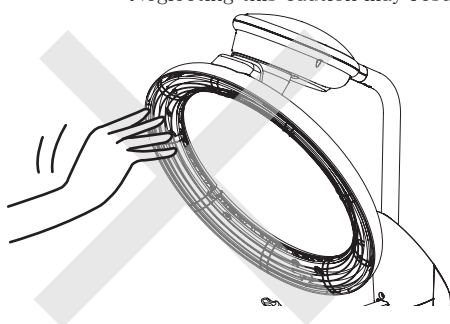


When moving the main unit, be sure to do this after disconnecting the power plug. The power cord may tangle, thereby resulting in falling or breakage of the equipment.

Do not touch the ring during operation or right after the use.



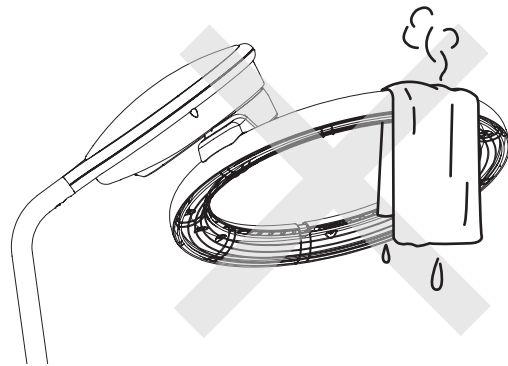
Do not touch the ring, including the heater, heater guide, reflection plate, etc., during operation or right after the use of the roller ball. Neglecting this caution may result in burn injuries.



Do not dry a towel on the rotation ring.



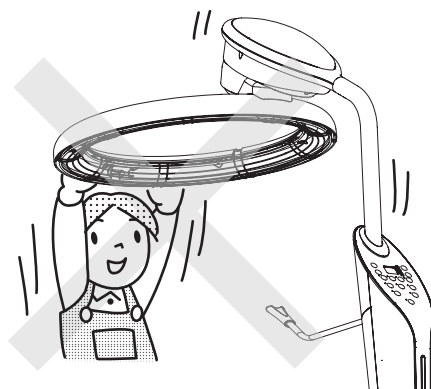
Do not dry a wet towel, etc., on the rotation ring of the roller ball. Neglecting this caution may result in burning of the towel.



Do not suspend from a shaft or a stand.



Do not go up or suspend from the shaft or the stand of the roller ball. Neglecting this caution may cause falling, tumbling, or breakage of equipment resulting in injuries.



IMPORTANT SAFETY INSTRUCTIONS



CAUTION

Do not move the equipment by holding it at the ring or the nape bar.



Do not move the equipment by holding it at the ring or the nape bar. Neglecting this caution may cause tumbling, deformation, or breakage of the equipment resulting in injuries. Be sure to move the equipment by holding it at the upper shaft when moving it.



Do not operate the equipment in a tilted state.



Do not operate the equipment in a tilted state. Wrong detection of the infrared temperature sensor may cause abnormal heating of the customer head, or tumbling of the equipment may cause breakage of the equipment, fire, electric shock hazard, injuries, etc.

Think of the physical condition of the customer.



The head of the customer will become warm due to the heater during operation. Should the customer experience discomfort or feel sick, stop using the equipment. Particular attention should be given to those who are likely to feel dizzy, have high blood pressure, or are being treated by a doctor, and there is concern about the physical condition.

Use the polyethylene cap.



For the practice using the hot two-bath type waving agent or the acidic dye-fixing agent (acidic color), use the regular polyethylene cap. Since the polyethylene cap can transmit infrared rays, the infrared temperature sensor can correctly measure the hair temperature, thereby enabling correct temperature control.

Do not apply the equipment to the waving agents designated for use under normal temperatures.



Do not apply the equipment to cold two-bath type waving agents. Neglecting this caution may cause skin disorders including a rash.



Do not expose the ring to shocks.



Do not expose the ring to shocks. Neglecting this warning may result in bursting of the heater. Pay careful attention to the handling of the equipment.

Do not allow the chemicals to adhere to the heater.



Use the equipment while paying attention not to allow the chemicals to adhere to the heater. Neglecting this caution may result in breakage of the heater due to deterioration.

SAVE THESE INSTRUCTIONS

GROUNDING INSTRUCTIONS

This appliance must be grounded. In the event of an electrical short-circuit, grounding reduces the risk of electric shock by providing a path of low resistance for the electric current. This appliance is equipped with a cord having a grounding wire with a grounding plug. The plug must be plugged into an outlet that is properly installed and grounded in compliance with all local codes and ordinances.



DANGER

Improper use of the grounded. In the event of an electrical short-circuit, grounding reduces the risk of electric shock. Check with a qualified electrician or service personnel if you are in doubt as to whether the product is properly grounded. Do not modify the plug provided with the appliance, if it will not fit the outlet, have a proper outlet installed by a qualified electrician.

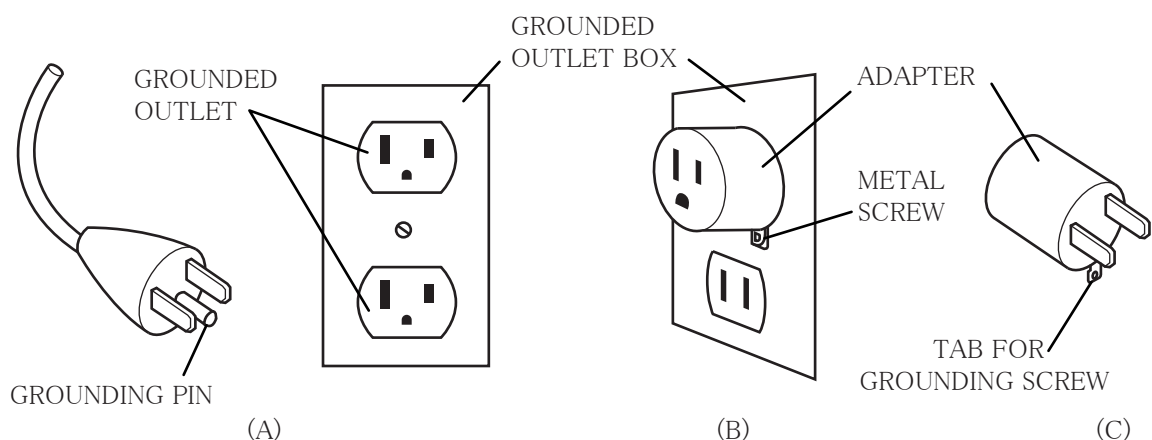
If repair or replacement of the cord or plug is necessary, do not connect the grounding wire to either flat blade terminal. The wire with insulation having an outer surface that is green with or without yellow stripes is the grounding wire.

This appliance is for use on a nominal, 120-volt circuit and has a grounding plug that looks like the plug illustrated in sketch A of Figure 1. A temporary adapter, which looks like the adapter illustrated in sketches B and C of Figure 1, may be used to connect this plug to a 2 pole receptacle as shown in sketch B of Figure 1 if a properly grounded outlet is not available. The temporary adapter should be used only if a properly grounded outlet (sketch A of Figure 1) can be installed by a qualified electrician. The green rigid ear, lug, or the like extending from the adapter must be connected to a permanent ground such as a properly grounded outlet box cover. Whenever the adapter is used, it must be held in place by the screw.

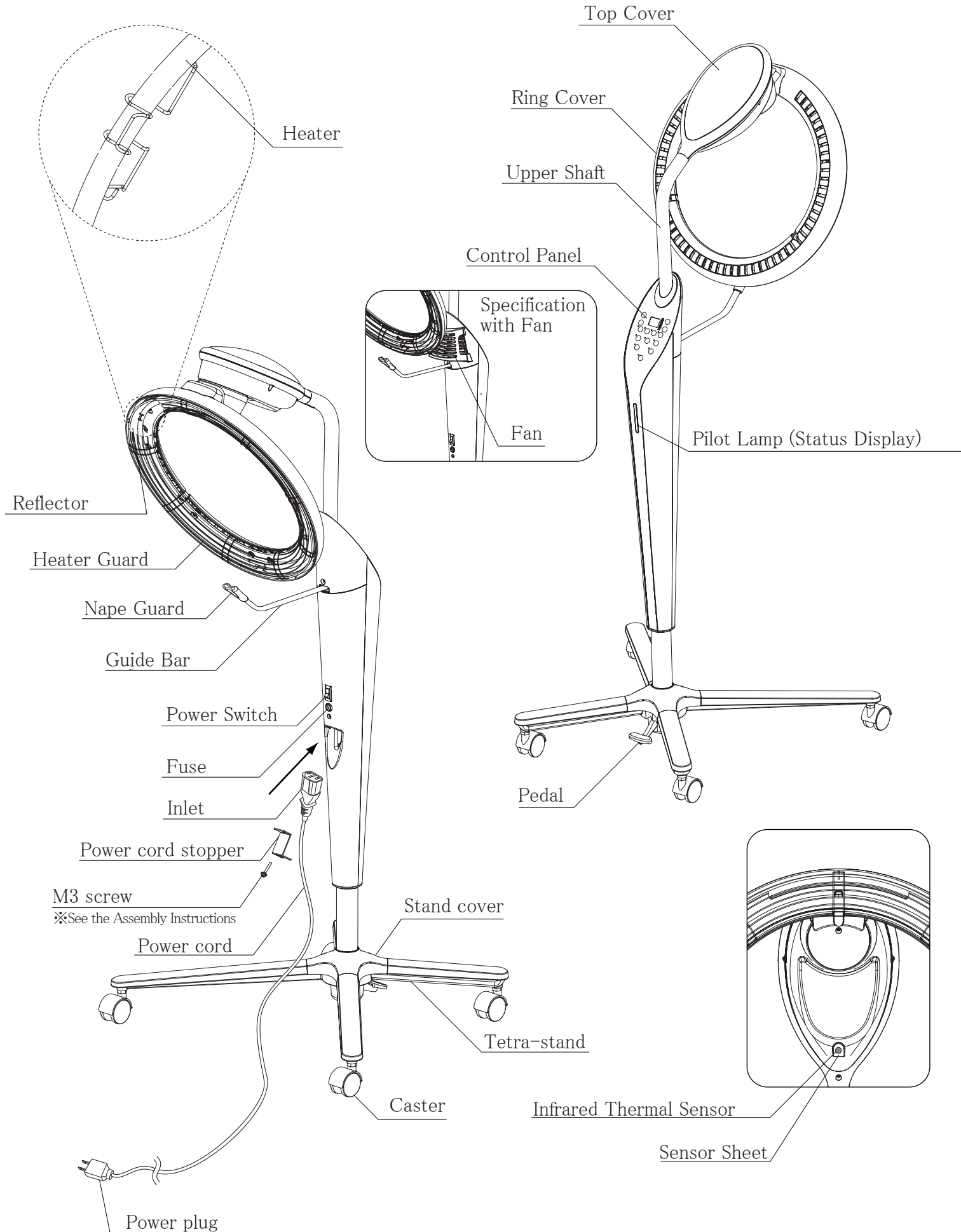
This appliance is for use on a circuit having a nominal rating of 120-volt and is factory equipped with a specific electric cord and plug to permit connection to a proper electric circuit. Make sure that the appliance is connected to an outlet having the same configuration as the plug. No adapter should be used with this appliance. Do not modify the plug provided if it will not fit the outlet. Have a proper outlet installed by a qualified electrician. If the appliance must be reconnected for use on a different type of electric circuit, the reconnection should be made by qualified service personnel.

If it is necessary to use an extension cord, use only a three-wire extension cord that has a three-blade grounding and three-slot receptacle that will accept the plug on the appliance. Replace or repair a damaged cord.

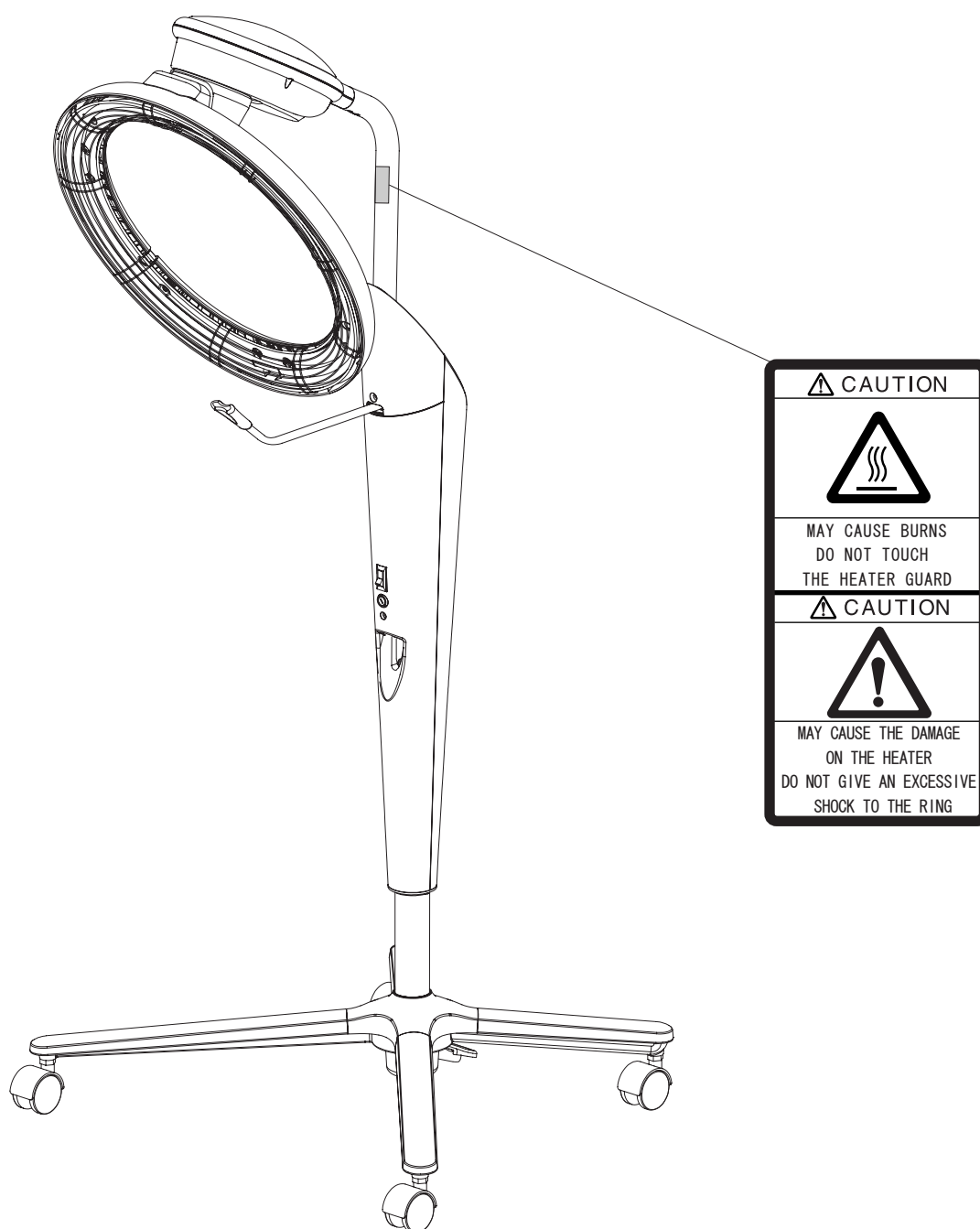
Figure1 <Grounding Plugs>



Name of Each Part



Location of Warning Label



Accessories

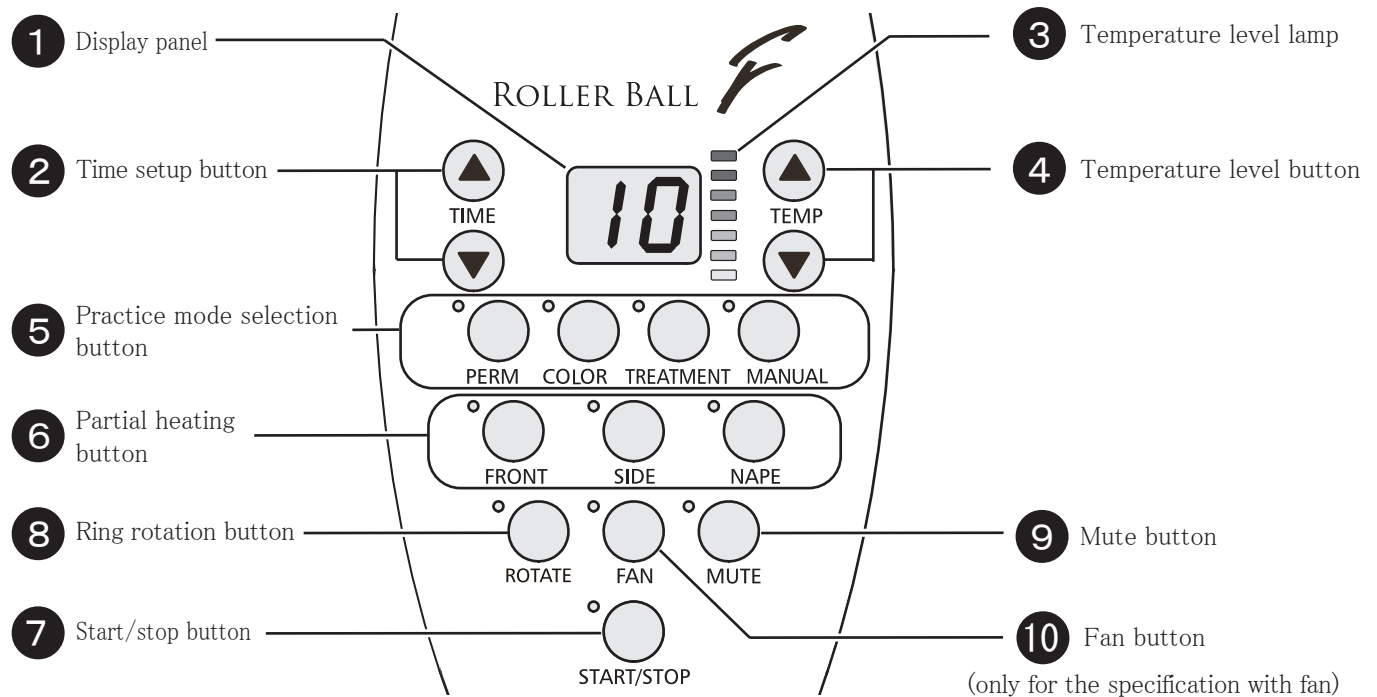


Operation Manual: 1 copy



Assembly Instructions Manual: 1 copy

Control Panel

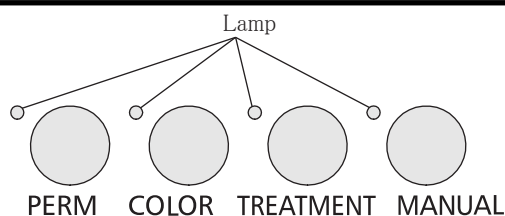


Description of Keys and Indications

<p>1 Display Panel</p> <div data-bbox="193 1272 320 1406"> <p>(Example)</p> </div> <ul style="list-style-type: none"> - Display the preset operation time. - Display the remaining time. - Display the elapsed time after the completion of operation. <div data-bbox="193 1429 320 1563"> <p>(Example)</p> </div> <ul style="list-style-type: none"> - Display the error state. <div data-bbox="193 1574 320 1709"> <p>(Example)</p> </div> <ul style="list-style-type: none"> - Display the cooling operation remaining time. <p>※Example shows the cooling operation remaining time is 1 minute.</p>	<p>2 Time Setup Button</p> <ul style="list-style-type: none"> - Use the button when changing the setup time. <div data-bbox="836 1305 916 1373"> </div> <p>Each press of the (UP) or the (DOWN) button changes the time in units of a minute. Pressing and holding the button changes the time continuously in units of five minutes.</p> <div data-bbox="836 1429 916 1496"> </div> <p>* Max setup time: 60 minutes.</p>														
<p>3 Temperature Level Lamp</p> <ul style="list-style-type: none"> - Display the temperature level that is set out by the temperature level button. <p>[How to Identify the Display Color]</p> <table border="0"> <tr> <td></td> <td>Red</td> </tr> <tr> <td></td> <td>Red</td> </tr> <tr> <td></td> <td>Orange</td> </tr> <tr> <td></td> <td>Orange</td> </tr> <tr> <td></td> <td>Yellow</td> </tr> <tr> <td></td> <td>Yellow</td> </tr> <tr> <td></td> <td>Green</td> </tr> </table> <p>The lamp illuminates for each 3°C (5.4°F) from the bottom lamp (Green = 34°C, 93.2°F). The lamp at the top (Red = 52°C, 125.6°F) shows the maximum temperature.</p>		Red		Red		Orange		Orange		Yellow		Yellow		Green	<p>4 Temperature Level Button</p> <ul style="list-style-type: none"> - Use the button to change the temperature level. <div data-bbox="836 1888 916 1955"> </div> <p>Each press of the (UP) or the (DOWN) button changes the temperature level by one step. The level can be set in seven steps.</p> <div data-bbox="836 2011 916 2078"> </div>
	Red														
	Red														
	Orange														
	Orange														
	Yellow														
	Yellow														
	Green														

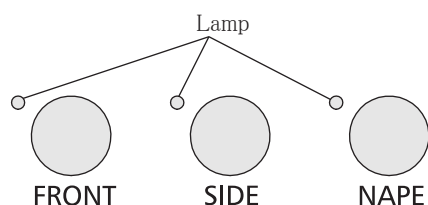
Description of Keys and Indications

5 Practice Mode Selection Buttons and Lamps



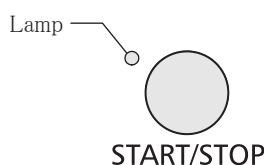
- A mode can be selected by pressing the appropriate button. To memorize the changed setup as the standard setup, press and hold the button chosen at present for one second or longer. (See the section "Changing and Memorizing the Mode Setup" on page 18.)

6 Partial Heating Buttons and Lamps



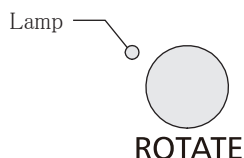
- The part to be heated can be chosen by pressing the appropriate button. (See the section "Partial Heating" on page 17.)

7 Start/Stop Lamp and Lamp



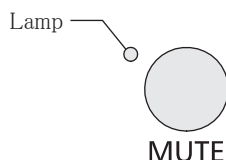
- Press this button to start the operation of each mode. While the equipment is in operation, the button functions as the stop (interruption) button.

8 Ring Rotation Button and Lamp



- Use the button to stop or rotate the ring at a desired position.
* Only for the manual mode

9 Mute Button and Lamp

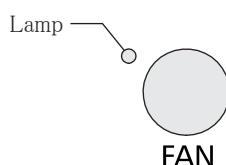


- Use this button to enable the buzzer sound to alert the operator to button operation and the completion of the operation processes or to disable (mute) the sound.
* Once the button is chosen, the state of the sound chosen will be maintained until MUTE is pressed again.

Sound enabled: The MUTE lamp is off.
Sound disabled: The MUTE lamp is on.
* The error sound will not be turned off.

10 Fan Button and Lamp

* Only for the specification with fan



- Use this button to enable (ON) or disable (OFF) the air blowing from the fan.

- The cooling operation will be executed for two minutes after completing the COLOR, PERM, or TREATMENT modes. In addition, air blowing from the fan is possible even during the practice.

Outline of Modes

Description of Modes

Mode	Use
PERM (Hot 2-bath system)	Use the mode for the heated treatment of the hot 2-bath type waving agent. Adjust the mode according to the hair condition, chemicals used, permanent make-up techniques, etc.
COLOR (Acidic dye fixing agent)	Use the mode for the acceleration of heating of the acidic dye fixing agent. Adjust the mode according to the hair condition, hair agents used, techniques, etc.
TREATMENT	Use the mode for the acceleration of heating of the hair treatment. Adjust the mode according to the hair condition, treatment agents used, etc.
MANUAL	This is the primary mode enabling use that fits the shop's unique techniques. The mode can also be used for partial permanent treatment or partial dyeing.

Default Setup of Modes

Mode	Standard Setup						Temperature Control System
	Temp. Level	Time	Heating Position	Rotation	Cooling Time	Fan Operation (during cooling operation) * Only for the specification with fan	
PERM (Hot 2-bath system)	3(40°C, 104°F)	8 min.	Front Side Nape	ON	Specification w/ Fan: 2 min. Specification w/o Fan: 1 min.	ON	Control with the infrared temperature sensor.
COLOR (Acidic dye fixing agent)	4(43°C, 109.4°F)	10 min.	Front Side Nape	ON	Specification w/ Fan: 2 min. Specification w/o Fan: 1 min.	ON	
TREATMENT	4(43°C, 109.4°F)	10 min.	Front Side Nape	ON	Specification w/ Fan: 2 min. Specification w/o Fan: 1 min.	ON	
MANUAL	3(40°C, 104°F)	8 min.	Front Side Nape	ON	Specification w/ and w/o Fan: 1 min.	OFF	Control according to the programmed time control

Temperature control with infrared temperature sensor

In PERM ((hot 2-bath type permanent), COLOR (acidic dye fixing agent), and TREATMENT modes, the customer's hair temperature is directly measured with the infrared temperature sensor to control and keep the temperature at the preset level.

Temperature level and preset temperature

The temperature level indication shows the temperatures with an increment of 3°C (5.4°F) in the order of 34°C(93.2°F), 37°C(98.6°F), 40°C(104°F), 43°C(109.4°F), 46°C(114.8°F), 49°C(120.2°F), and 52°C(125.6°F) from the bottom lamp (green) to the top lamp (red).

* Since the manual mode controls the ON and the OFF time of the heater, the temperature may slightly fluctuate according to room temperatures.

Heating position

The heater of the rotating ring can be set to OFF only when it passes the designated part.

The part of FRONT, SIDE, or NAPE whose lamp illuminates on the operation panel will be heated.

Example: Press the FRONT button to turn off the lamp, and the heater will be OFF when the ring passes the front part while the ring is rotating.

Error Indication

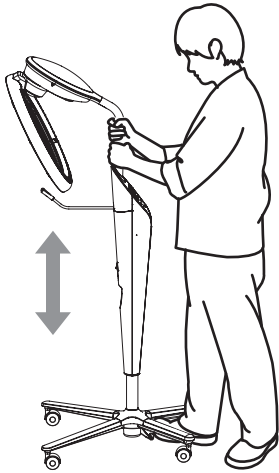
- If an indication showing the error condition of the main unit appears on the timer indicator, take adequate action according to the following table.
- In the error state, the condition indication (pilot) lamp will blink.

Indication	Symptom	Actions to be Taken
The E0 indication and the current remaining time indication will blink alternately.	After three minutes has elapsed from operation start, the temperature at the customer's head becomes considerably higher than the preset temperature.	Check if the customer's head position is set away from the heater. If it is, reset it at the correct position. (See page 13.) If the position is correct, check if the sensor seat is dirty. If it is contaminated by chemicals, etc., wipe it off completely. Then, turn on the power again, and operate the equipment with the head set at the correct position. If the above-stated actions do not rectify the symptom, contact the dealer or our company directly.
	Alternately, the head is not heated at all.	Contact the dealer or our company directly.
The E1 indication and the current remaining time indication will blink alternately.	The customer's head is misaligned or the temperature at the head decreased.	Check the customer's head position. After a while, the error will be canceled when the customer's head temperature reaches the preset temperature.
The E2 indication blinks.	The ring movements are awkward.	If the same symptom exists even when the power is turned off and on again, contact the dealer or our company directly.
The E3 indication blinks.	The temperature at the customer's head is considerably high.	Contact the dealer or our company directly.
The E8 indication blinks.	The main unit is slanted by 30 degrees or over or it is down. Alternatively, a strong shock is applied to the main unit.	Turn off the power and keep the main unit in vertical position. If the error appears again, contact the dealer or our company directly.

Setting

Be sure to observe the correct directions for use to make the most of the performance of the roller ball and to ensure comfortable use by the customer.

Operation Procedures of the Product



Be sure to use the both hands to adjust the height.

Materials of Cap Used

Use a polyethylene cap for perm, color and treatment mode operations.

By using a polyethylene cap, the hair can be heated efficiently to the set temperature, and the infrared thermo sensor will measure and control the temperature of the hair.

Use the manual mode if the cap is not used or if a cap other than the polyethylene cap is used. If the perm, color or treatment mode is selected, the temperature cannot be measured well with the infrared thermo sensor, causing an error code (E0, E1) to appear on the display panel. If an "error code" appears, follow the instructions on [P20].

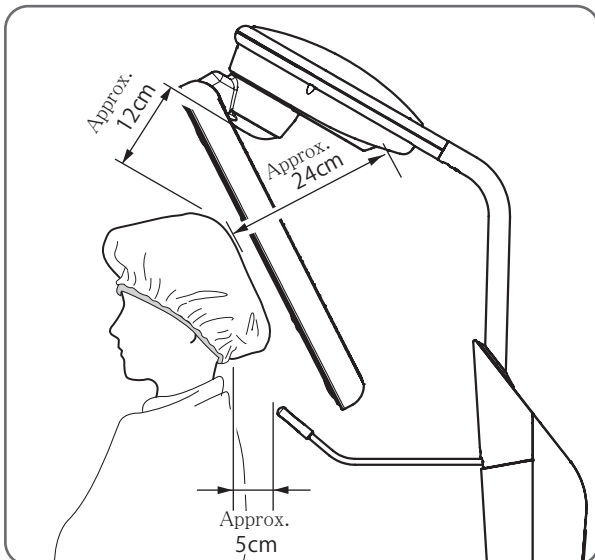


Use of a cap other than the polyethylene cap in perm, color, and treatment mode may cause abnormal temperature rise. When using a cap other than the polyethylene cap, use the manual mode.

Safe Rotation Function of Ring

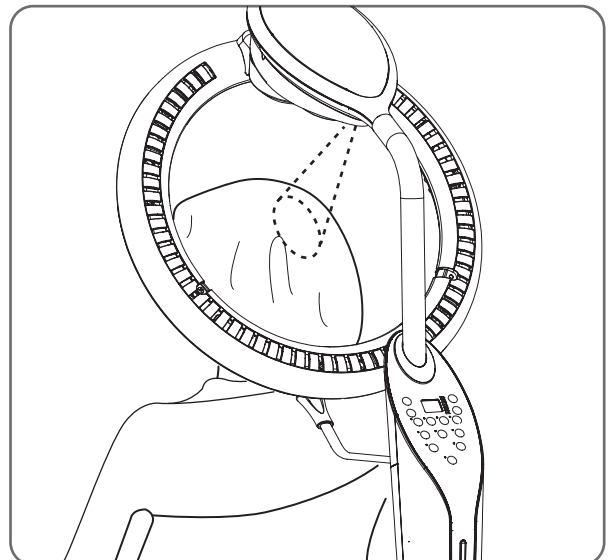
Should the customer's body or clothing become jammed between the main unit and the ring during operation, the rotation clutch mechanism of the ring will be initiated to prevent danger.

Correct Setting Position



Approx. 12 cm to the top of the head from the roller ball rotation fulcrum and approx. 24 cm from the infrared temperature sensor window (approx. 5 cm between the nape stop and the nape).

Setting the Roller Ball in Correct Position



Position the nape stop 5 cm away from the customer's nape and set it at the center of the nape.

Move the chair up or down according to the seating height of the customer or move the roller ball main unit up or down with the elevation pedal to adjust the height.



If the head of the customer is misaligned from the beginning of the operation, an alarm will sound about three minutes after initiation of operation, and the error code **E0** will be displayed.

⚠ CAUTION

If the customer feels sick while using the roller ball, immediately stop using the equipment.
(The far infrared rays from the roller ball will not affect the human body at all, but the customer may feel sick due to the heat if the customer is in poor health.)

Setting

Alarm notifying misalignment of head position



If an alarm sound is initiated, tell the customer to move back into the correct position.

(For the PERM, COLOR, and TREATMENT modes)

Misaligned position alarm!)))



When the equipment is operated with the customer in the correct position, the infrared temperature sensor directly measures the customer's head temperature to control it to the preset temperature. If the customer's head position continues to be in a significantly deviated position during operation, the sensor will detect the deviation to initiate the alarm warning of the misalignment. In this state, the condition indicator lamp will blink, and the current remaining time and the **E1** display will blink alternately on the timer display.

If the misaligned head position warning alarm is left unattended, no correct temperature control is possible, resulting in an undesired finish. If the warning alarm is initiated, be sure to tell the customer to move back into the correct position. When the customer's head is in the correct position, the error state is cancelled.

Customer's head temperature may take a while to reach the preset temperature. To quickly cancel the **E1** error, follow the instructions given in below <How to deal with an error> and restart the operation.

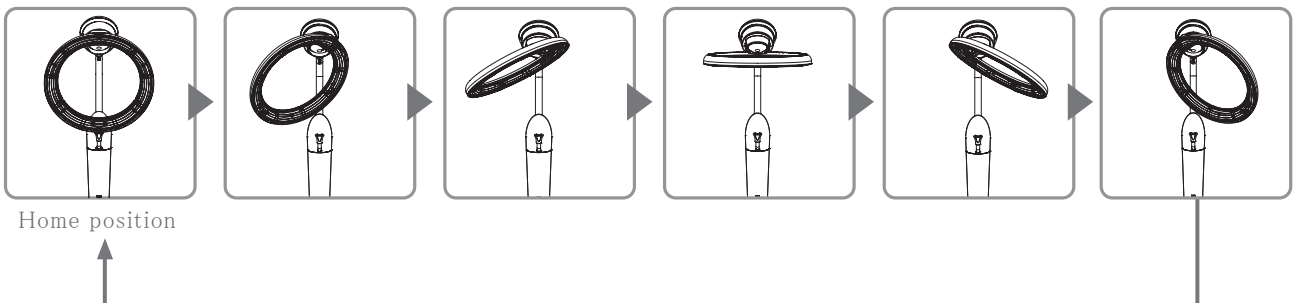
<How to deal with an error>

If **E0** or **E1** error occurred, follow the below instructions.

Press Start/Stop button to stop the operation. Reset the customer's head position to the correct position.

Press Start/Stop button again to restart operation. If the error still appears, turn off the power, unplug the unit, and contact the nearest dealer or our company directly.

Ring Rotation



<Rotational Operation of Ring>

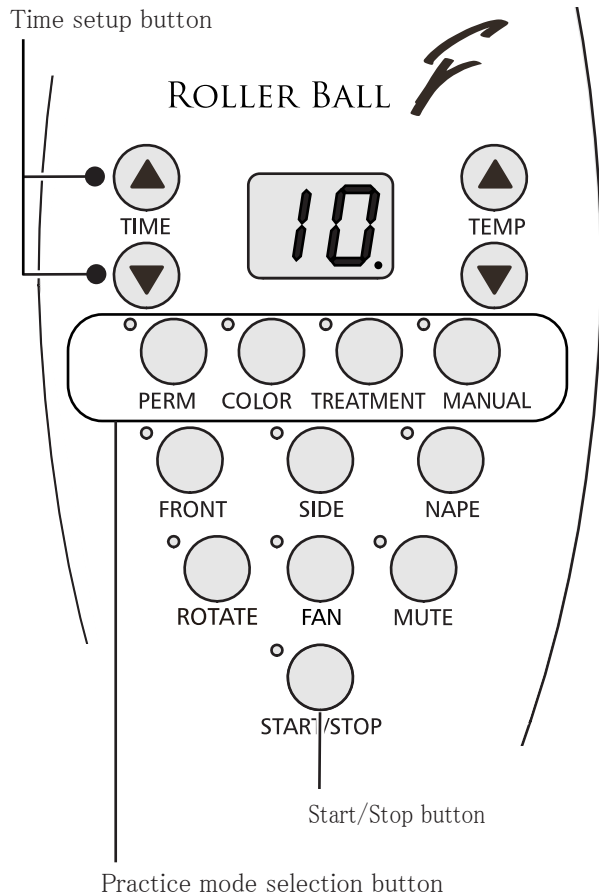
In the COLOR, PERM, and TREATMENT modes, the ring rotates about four times per minute over the customer's head.

The rotation of the ring not only enables the entire part of the customer's head to be warmed evenly, but makes the customer feel that the heating is mild.

Information

The ring may sometimes wobble during rotation, but this is not a failure.

Operation Procedures




Returning the equipment to the home position for another new use during the

When the equipment is to be used anew for another customer within five minutes after interrupting the operation, there is no problem in selecting the desired mode anew without changing any setups. When the equipment is used after returning to the home position, complete the following procedures:

1. With the equipment in the interrupted state, press and hold the time setup ▽ button until the display time reaches 0.
2. Press the Start/Stop button twice.

- 1 Set the respective parts of the Roller Ball in the correct position.
If the parts of the main unit are not set in the correct positions, the equipment will not operate correctly. (See page 11.)
- 2 Turn on the power switch.
When the power switch is pressed, all of the indicator lamps will illuminate for one second, and then only the practice mode lamp will blink, showing the state of waiting for mode selection.
- 3 Choose a mode.
Press the mode selection button according to the menu when executing a practice illuminates the mode indicator chosen and displays the standard setup item (temperature level, time, etc.). Check the setup.

 Changing the setup should be done according to the hair condition of the customer, chemicals used, practice, etc.
- 4 Press the Start/Stop button.
Press the Start/Stop button to rotate the ring and to initiate operation under the selected conditions (temperature level, time, heating position). At this time, the pilot lamp (condition indication) will illuminate.
- 5 During Operation

During operation, the Start/Stop button illuminates, the selected mode and the decimal point of time indication blink at intervals of one second, and the remaining time is displayed.



The heater is hot. Never touch the heater even when it is not glowing.

Information

The head part of the product uses gears. The sliding friction noise of the gears fluctuates in terms of the tone quality and sound volume of the products.

Operation Procedures

[Changing the conditions during operation]

Setup conditions excluding mode change can be changed during the operation.

※For the setup of ring rotation and stop, the setup condition can be changed only for manual mode.

[Interrupting the operation]

Press the Start/Stop button during operation to stop ring rotation and heater control, and the Start/Stop lamp blinks. The pilot lamp (condition indication) changes to blinking from illumination.

During interrupted operation, the setup condition can be changed. When the mode is changed, the operation mode shifts to the changed mode, and the operation is in the standby state.

Press the Start/Stop button within five minutes after interrupting the operation to resume operation. If the Start/Stop button is not pressed within five minutes, the mode will reset to the mode before starting operation.

[Warning of Head Position Misalignment]

(For COLOR, PERM, and TREATMENT modes)

When correct radiation becomes not possible due to the misalignment of the customer's head position during operation, the infrared temperature sensor detects the situation to initiate the warning electronic alarm at intervals of 30 seconds. Tell the customer to move back into the correct position. If the operation is continued with the head position misaligned, the expected finish may not be achieved.

6

Cooling

When the preset time has elapsed and the time indication is zero (0), the cooling operation will be implemented.

Specification w/o Fan

The equipment will enter the cooling process for one minute.

- * During the cooling operation, the ring will rotate when the heater is OFF.
- * No cooling operation is executed for the ring-fixed operation in manual mode.

Specification w/ Fan

The equipment will enter the cooling process for two minutes. During the cooling operation, cold air will be blown from the fan.

- * In manual mode, the fan will not operate during the cooling process, and as is the case with the specification w/o fan, the cooling time is one minute.

7

Timeout

When the preset time has elapsed and the time indication shows 0, the electronic alarm indicating a timeout will be initiated, and the heater and the pilot lamp will go OFF. The ring will stop at the home position.

[Counting the retention time]

After the timeout, the retention time will be indicated by a blinking lamp.

[Memory Function]

The retention time after timeout is displayed up to 60 minutes. When the Start/Stop button is pressed during this time, the setup that was used last will be displayed. (This function is useful when checking the preset time and the practice result in comparison.) The memorized data becomes invalid when the mode is changed.

8

After completing the operation, be sure to turn off the power switch.

Rotation and Stopping of Ring during Operation

Only for the Manual Mode

Operation	State of Ring Rotation Button during Operation	
	For regular use (Ring rotation button: ON)	For use where the ring rotation is stopped under the manual mode (Ring Rotation button: OFF)
During operation	The ring rotates. The heater is ON.	The ring stops at the position of the manual mode stop. The heater is ON.
When the operation is interrupted	The ring stops at the position when the button is pressed. The heater is OFF.	The ring remains in the stop state. The heater is OFF.
When the operation is resumed in five minutes after interruption	The ring starts to rotate. The heater is ON.	The ring remains in the stop state. The heater is ON.
During cooling time	The ring rotates. The heater is OFF.	*The cooling time is not provided for the fixed operation under the manual mode.
After cooling time	The ring rotates to the stop position and stops there. The heater remains to be OFF.	

Partial Heating

When either of the heating positions (FRONT, SIDE or NAPE) is turned off, the temperature control is subject to the ON/OFF control of heater according to the programmed time.

The temperature control with the infrared temperature sensor will not be executed.

1

Set the respective parts in the correct position.

If the parts of the main unit are not set in the correct positions, the equipment will not operate correctly.
(See page 13.)

2

Choose a mode.

Press the practice mode selection button after turning on the power switch. At this time, check the temperature level and the time set for the selected practice mode.

3

Choose a heating position.

Press a partial heating button (FRONT, SIDE or NAPE).

*The heater of the rotating ring can be set to OFF only when it passes the designated part.

4

Press the Start/Stop button.

Press the Start/Stop button to rotate the ring under the selected conditions.

Changes and Memory of Mode Setups

1.Method for changing and memorizing the mode setups

The standard setups displayed when the mode selection button is pressed can be changed. Even after turning off the power, the setups remain in memory.

*During the operation or interrupted operation, the setups will not remain in memory.

1. Choose the mode whose setup is to be changed with the mode selection button.
2. Change the setup for temperature, time, or heating position.
3. Press and hold the mode button for one second or longer. An electronic beep sound will be initiated, and saving of the setup is completed.
4. Releasing the finger from the mode button completes the setup.
5. Turn on the power again and check that the setup has been changed.

2.Initializing the Setups

Initialization is a process that resets the modified setups of the respective modes to the default setup values. (Factory setup: see page 11.)

1. Turn on the power while pressing the Start/Stop button.
 2. An alarm sound will be initiated after one second, and the mode setup is initialized.
 3. Releasing the finger from the Start/Stop button will complete the initialization.
- Check if the initialization is completed.

Indication During Operation and Inputs From Buttons

Mode and Operation		START/STOP	PERM COLOR TREATMENT MANUAL	TEMP	TIME	FRONT SIDE NAPE	ROTATE	FAN ※Option
Power ON	LampIndication	1 sec → OFF	1 sec → Blink	1 sec → OFF	1 sec → OFF	1 sec → OFF	1 sec → OFF	1 sec → OFF
	ButtonInput	×	○	×	×	×	×	×
Before Operation	LampIndication	Blink	Selected mode 					
	ButtonInput	○	○	○	○	○	Manual only ○	○
During Operation	LampIndication		Selected mode 		 Count down			
	ButtonInput	○	×	○	○	○	Manual only ○	○
During Interruption	LampIndication	Blink	Selected mode 		Blink			
	ButtonInput	○	○	○	○	○	Manual only ○	○
Cooling	LampIndication	Blink	Selected mode 	O F F	Blink Count down	O F F		
	ButtonInput	○	×	×	○	×	×	○
Completion	LampIndication	Blink	O F F	O F F	Blink Count up	O F F		O F F
	ButtonInput	○	×	×	×	×	×	×

Note: Items marked with the "○" accepts input via buttons, while items marked with the "×" do not accept input via buttons.

Note: The elapsed time after finishing the operation (cooling time) will be counted up to 60 minutes. Press the START/STOP button to reset the conditions to those at the time of START.






Before Asking for Repair

When a problem cannot be rectified even if an inspection is made according to the table shown below, immediately stop using the equipment, turn off the power switch, disconnect the power plug, and immediately contact the nearest dealer or our company directly.

Phenomenon	Check Point	Countermeasures
The power cannot be turned on (No indication on the control panel)	Is the power plug correctly inserted into the wall outlet?	Insert the power plug firmly into the wall socket.
	Is the power switch turned on?	Set the power switch to the ON position.
	Is the fuse on the distribution panel or the breaker switch in the shop in the ON position?	Set the fuse on the distribution panel or the breaker switch to the ON position.
	Is the fuse (located at the lower side of the main unit) blown?	Turn off the power switch, and contact the nearest dealer or our company directly.
	Is the problem rectified when the power plug is disconnected and then inserted again?	Immediately stop using the equipment, turn off the power switch, disconnect the power plug, and then immediately contact the nearest dealer or our company directly.
There is an odd smell from the heater.	Is a chemical adhered to the heater or the reflection plate?	If dust, dirt, or chemicals adhere to the heater or the reflector plate, the fouling will cause a transient fire and will emit smoke. When the amount of fouling is minute, the smoke will stop when the fire burns out, causing no damage to the product. If the fouling is substantial or the smoke does not stop, turn off the power switch and contact the nearest dealer or our company directly.
There are clicking sounds from the ring.	—	The reflection plate or the heater will expand when hot, or contract when cooled. The clicking sounds occur because of friction during expansion or contraction. This is not a failure.
There is friction noise from the product while the ring is rotating. The sound volume or the tone quality sometimes differs in a same product.	—	The head part of the product uses gears. The sliding friction noise of the gears fluctuates in terms of the tone quality and sound volume by products. The fluctuation in tone quality and the friction noise are not failures.
The ring wobbles during rotation.	—	The head part of the product uses a motor. The ring may wobble due to vibrations of the motor, which is not a failure. Furthermore, the level of wobbling differs depending on the product.
The temperature level must have been lowered than before.	Is the sensor seat contaminated?	Remove the contamination on the surface of the sensor seat according to the Section "Care and Cleaning" on page 21. If the problem is not be remedied, turn off the power switch and contact the nearest dealer or our company directly.
The heater will not glow red. *Depending on the control state of the heater, the heater may be observed as it is off.	Has the temperature around the heater increased?	When the air around the heater is warm, the heater has not failed. If the temperature has not risen, stop using the equipment, turn off the power switch, disconnect the power plug, and immediately contact the nearest dealer or our company directly.

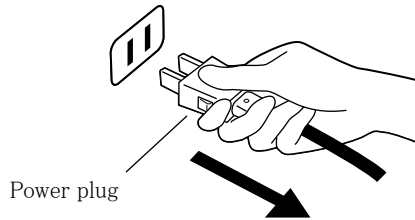
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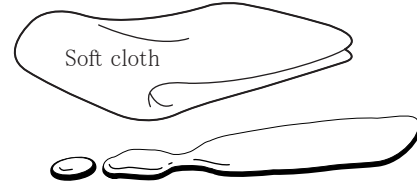
Phenomenon	Check Point	Countermeasures
The  indication illuminates.	Check if the customer's head position is set away from the heater. (See page 13.)	Turn off the power and keep the customer's head position. If the error appears again, contact the nearest dealer or our company directly.
The  indication illuminates.	Check if the customer's head position is set away from the heater. (See page 14.)	Turn off the power and keep the customer's head position. If the error appears again, contact the nearest dealer or our company directly.
The  indication illuminates.	Check if the ring crushed the other appliance or the wall.	Turn off the power and keep the ring free. If the error appears again, contact the nearest dealer or our company directly.
The  indication illuminates.	Check if the customer's head position is set away from the heater.	Turn off the power and keep the customer's head position. If the error appears again, contact the nearest dealer or our company directly.
The  indication illuminates.	Is main unit slanted by 30 degrees or over or is it down? Alternatively, has the main unit experienced a strong shock?	Turn off the power and keep the main unit in as vertical position. If the error appears again, contact the nearest dealer or our company directly.

USER MAINTENANCE INSTRUCTION

Be sure to disconnect the power plug from the wall socket for maintenance and cleaning of the equipment.



Splashing of water on the control panel or metal parts may result in equipment failure or rusting. Immediately dry the equipment with a soft cloth.

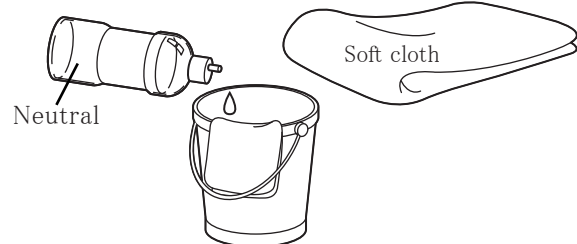


The equipment should not be exposed to moisture and water.

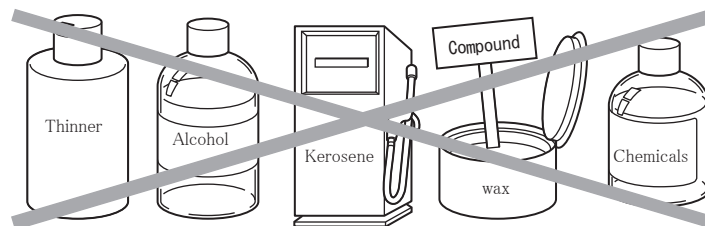
The plastic, plated, or painted parts should be wiped with a dry and soft cloth.



When fixed contamination or oil adheres to the equipment, wipe it off with a cloth dampened with a water-diluted neutral detergent.



Never use volatile chemicals such as thinner, alcohol, gasoline, and kerosene; detergents containing organic materials; acidic-, alkaline- or chlorine-based detergents; and wax containing abrasive compound, sponge, scrubber, etc.



Consumable Supplies

The consumable supplies imply parts that are subject to abrasion, deterioration, change in appearance, or breakage through use. If a part has been worn significantly or deteriorated, or if it is broken, the parts must be inspected or replaced. Immediately stop using the equipment, turn off the power switch, disconnect the power plug, and immediately contact the nearest dealer or our company directly.

Repair or replacement of parts shall be executed under the warranty or may incur a fee.

(*The level and timing of wear, deterioration, or breakage differ according to the operation environment or conditions of the customer.) In addition, regarding the parts that can be replaced by the customer, it is not necessary for the customer to bear the basic charge and the technical fee, but the customer is requested to bear the shipping fee separately. For any questions regarding the replacement procedures, please contact the nearest dealer or our company directly.

● Consumable Parts (The following parts must be purchased since they are excluded from the warranty.)

Any other servicing should be performed by an authorized service representative.

☐ Power cord ☐ Caster

Guidelines for Daily Inspection



WARNING

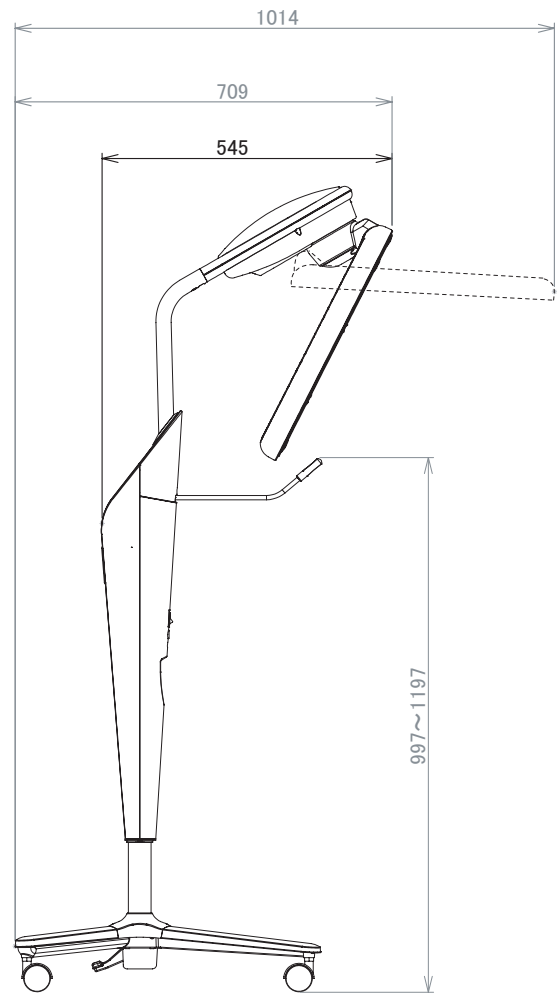
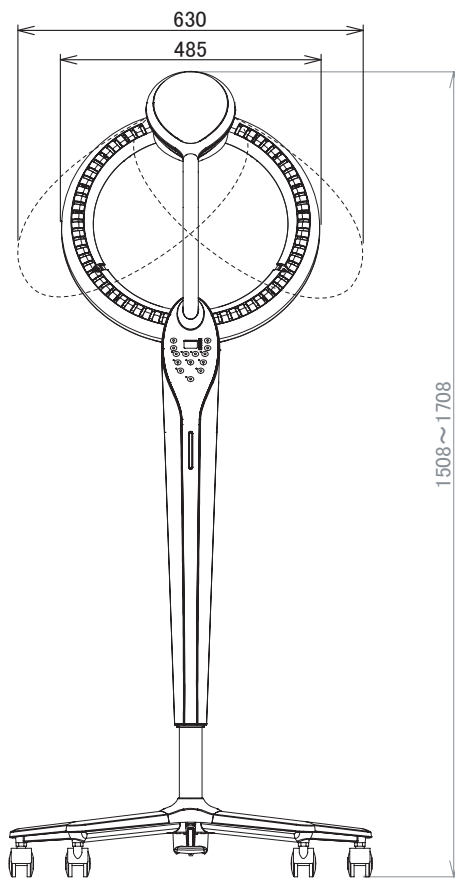
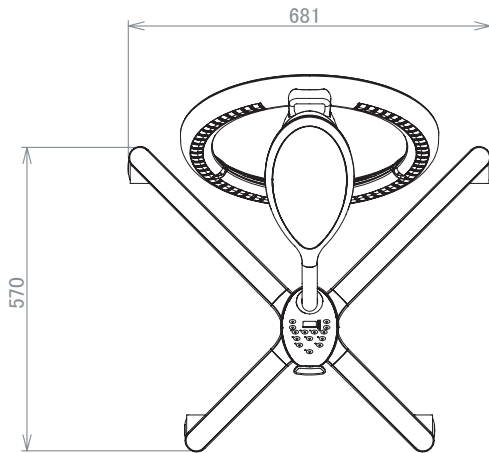
Be sure to execute daily inspection according to the following guidelines. Continued use without executing the daily inspection may result in failure or accidents.

To use the product safely, be sure to execute the following inspections.

■ Daily Inspection Items (Pre-Operation Check)

Inspection Item	Inspection Procedures	If the inspection result is unacceptable
<input type="checkbox"/> Check for any deformation, breakage, or deterioration on the power plug or the power cord.	Check before operating the product: <input type="checkbox"/> There is no deformation breakage or deterioration on the power plug or the power cord. Check while the product is in operation: (which is limited to the case that there is no deformation breakage or deterioration on the power plug or the power cord) <input type="checkbox"/> The power plug or the power cord may be heated as it is deteriorated. Check if the power plug or the power cord is hot to the touch while the product is in use.	There is a possibility of electrical shock or burn injury due to fire or electrical leakage. Since some parts must be replaced, immediately stop using the equipment, turn off the power switch, disconnect the power plug, and immediately contact the nearest dealer or our company directly.
<input type="checkbox"/> Check if there is no breakage or deterioration on exterior parts.	Visually check the entire product and check for any breakage or deterioration of the exterior parts, etc.	Restrictions in bringing out the expected functions of the product may result in accidents (injuries including burns). Immediately stop using the equipment, turn off the power switch, disconnect the power plug, and immediately contact the nearest dealer or our company directly.
<input type="checkbox"/> Check that the power switch operates correctly and the lamps on the control panel illuminate.	There shall be no problem, such as jamming of the power switch, when the switch is operated. In addition, check that all of the lamps illuminate right after turning on the power switch.	If the equipment is used with the power switch functioning improperly, failures such as unexpected shutdown of power during operation may occur. Furthermore, in the state that the lamps on the control panel do not illuminate, the product may not be used correctly because the setup state cannot be confirmed. If this is the case, immediately stop using the equipment, turn off the power switch, disconnect the power plug, and immediately contact the nearest dealer or our company directly.
<input type="checkbox"/> Check for any cracks or breakage on the heater.	Check the casters visually.	A crack or breakage may result in electrical shock or a burn injury due to fire or electrical leakage. Since the parts must be replaced, immediately stop using the equipment, turn off the power switch, disconnect the power plug, and immediately contact the nearest dealer or our company directly.
<input type="checkbox"/> Check for any rattling in the head unit.	Raise the upper shaft when assembling the equipment, and check that the two fixing screws are not loose.	If the screws are loose, retighten. If rattling cannot be rectified by retightening the screws, contact the nearest dealer or our company directly.
<input type="checkbox"/> Check for any rattling pipes in the extension unit.	Check that the two screws fixing the upper main unit and the extension pipe are not loose when assembling the equipment.	If the screws are loose retighten. If rattling cannot be rectified by retightening the screws, contact the nearest dealer or our company directly.

Specifications



Model No.	AK-S23S	AK-S23SF
Weight	15.6kg	
Safety device	Inclination sensor Rotation clutch mechanism Power supply fuse	
Rated voltage	AC120V	
Frequency	50/60Hz	
Rated power	980W	985W

*Specifications are subject to change without notice.