



Battery Replacement Procedure for A11H

This procedure contains instructions for replacing the battery pack that is installed in the UPS main unit.

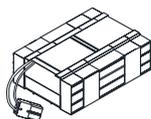
When the battery pack arrives, check the model number shown in the packaging box.

UPS	Battery Pack		Voltage
	MODEL No.	Mass	
A11H102*	BPA11H102A00	Approx. 6 kg	24V
A11H152*	BPA11H152A00	Approx. 9 kg	36V
A11H202*011US A11H202*011USTW A11H202*111USTW	BPA11H202A00 BPA11H202A01	Approx. 12 kg	48V
A11H302*011US A11H302*011USTW A11H302*111USTW	BPA11H302A00 BPA11H302A01	Approx. 16 kg	60V

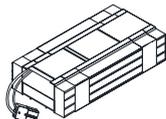
※The packaging box is used to send back the used battery pack, so do not dispose it.

<Appearance of battery pack>

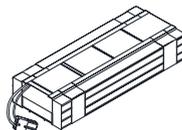
A11H102
Battery pack



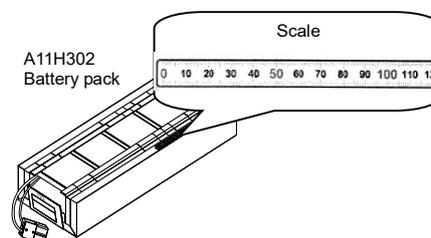
A11H152
Battery pack



A11H202
Battery pack



A11H302
Battery pack



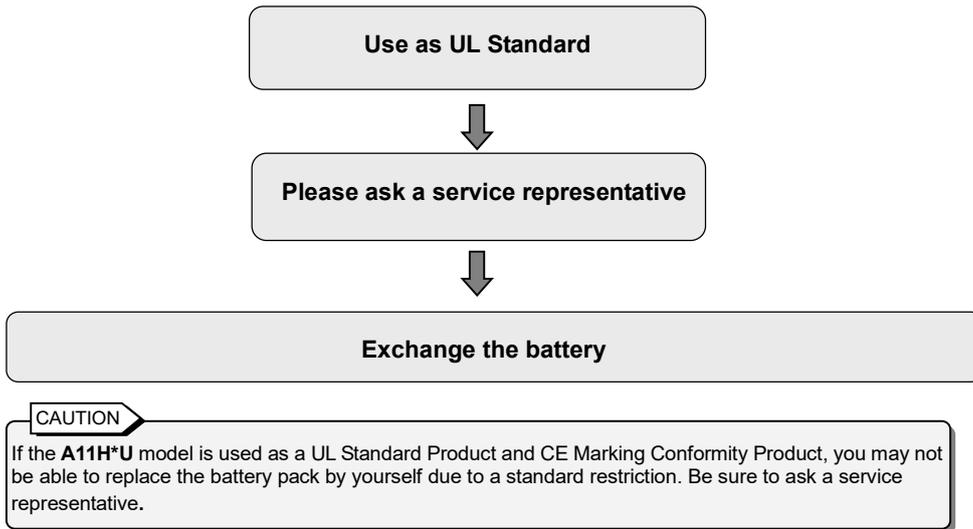
Note on battery replacement

- ※It is not covered by our warranty if the damage is caused by an agent other than our company during replacement. When replacing the battery performed by an agent other than our company, shall be responsible for the damage done.
*Damage includes damage to equipment and load equipment, data damage and loss profits. However, it is not only limited to these.
- A11H battery pack is especially designed for our UPS. Do not use a non-specified battery. Also, do not mix old batteries to new one or use batteries with different manufacturing date. It may cause battery life shortage, leakage and heat generation.

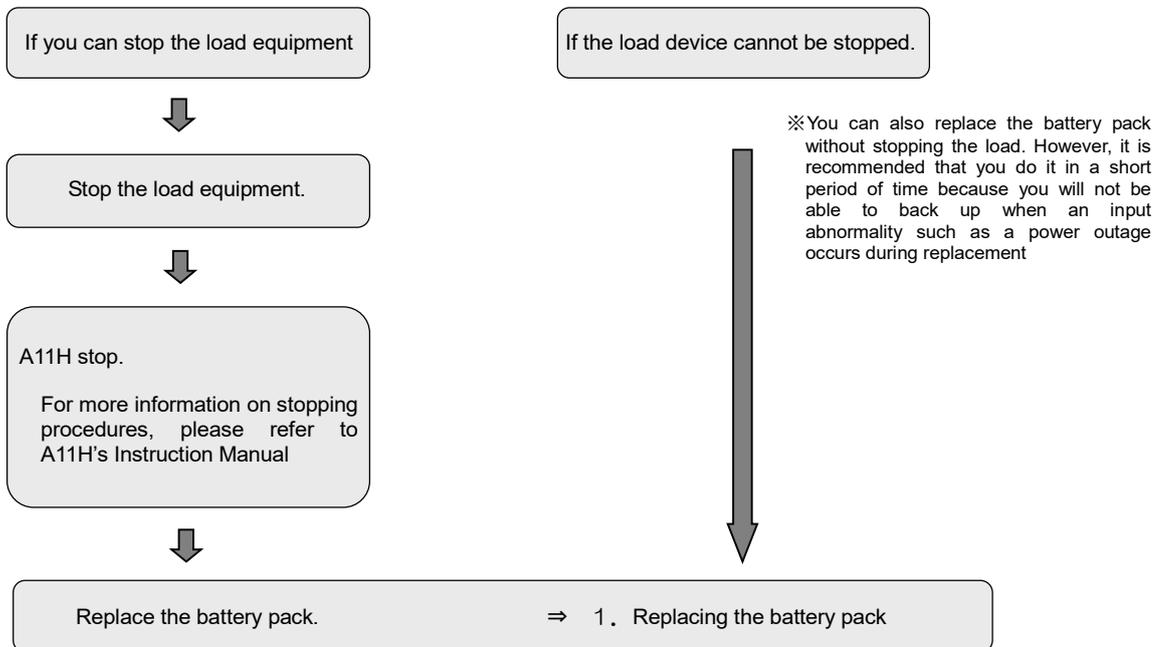
⚠ CAUTION

- Please replace the battery periodically. Batteries that have expired the replacement period may cause a fire.
- The weight of the battery pack is shown in the table. Please wear insulated gloves, safety shoes when replacing the battery. Be careful not to injure yourself; dropping it into your feet or pich your hands when handling the battery pack. Bodily injury may occur if not properly handled. Replacing the battery for A11H302 model should be done by two or more people. Please protect your back to avoid back pain.
- The voltage that is listed in the table above is always occuring on the battery terminal, so do not touch them with your hands or short-circuit them. There is a risk of electric shock or injury. Also, for safety, use insulation method, such as attaching vinyl tape to the used battery pack connector.
- To safely replace the battery pack, please refer to the A11H instruction manual.

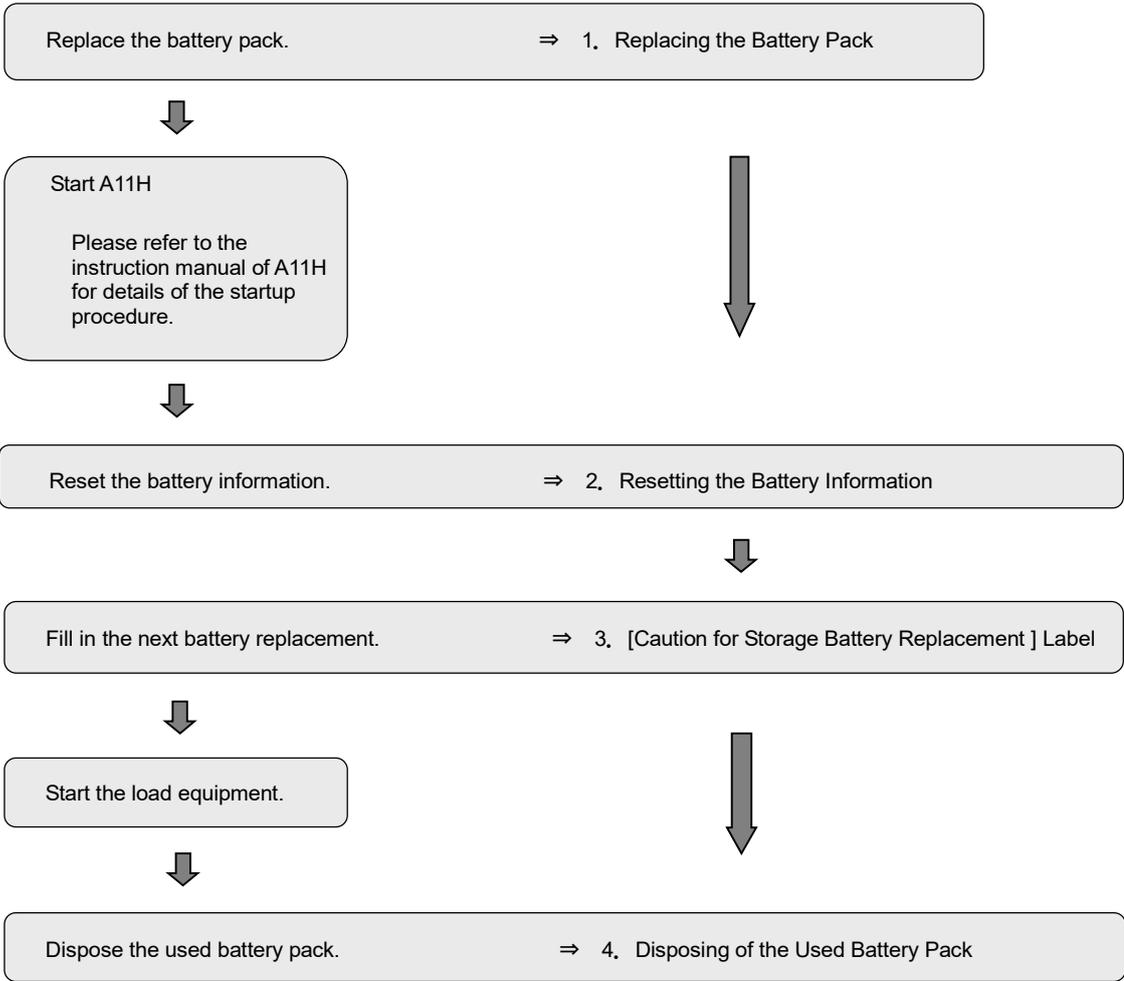
① Check the state of usage



② Replace the battery pack with the following procedure depending on the state of the load device connected to the A11H.



Continued on page 3.



Handling Precautions for Battery Pack

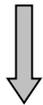
- (1) If the battery pack is defective, discontinue use and contact the retailer or our company.
- (2) Battery storage and charging of the battery
 - Battery disintergrate during storage, so please use as soon as possible.
 - Store the battery in a dry place where the temperature is low.
 - During storage, please charge once at least every 6 months (storage temperature: 25°C) and before use.
 - Please charge with the UPS charger. Refer to A11H Owner's Manual "Charging the UPS"
- (3) Battery Transportation and Handling
 - As a rule, avoid abnormal vibrations or shock during transportation.
 - Do not use a battery pack that has been accidentally dropped, or a battery pack that has been strongly impacted.

1. Replacing the Battery Pack

Replace the battery pack with the following steps.

- ① Remove the UPS front cover.
- ② Remove the one screw on the right side of the battery cover and remove the battery cover.

When it is not used as a UL Specification



- ④ Unplug the battery connector.
- ⑤ Pull out the battery pack.

When it is used as a UL Standard.
(Authorized person only)



- ③ Set the Forced Bypass Switch to "Bypass" side.

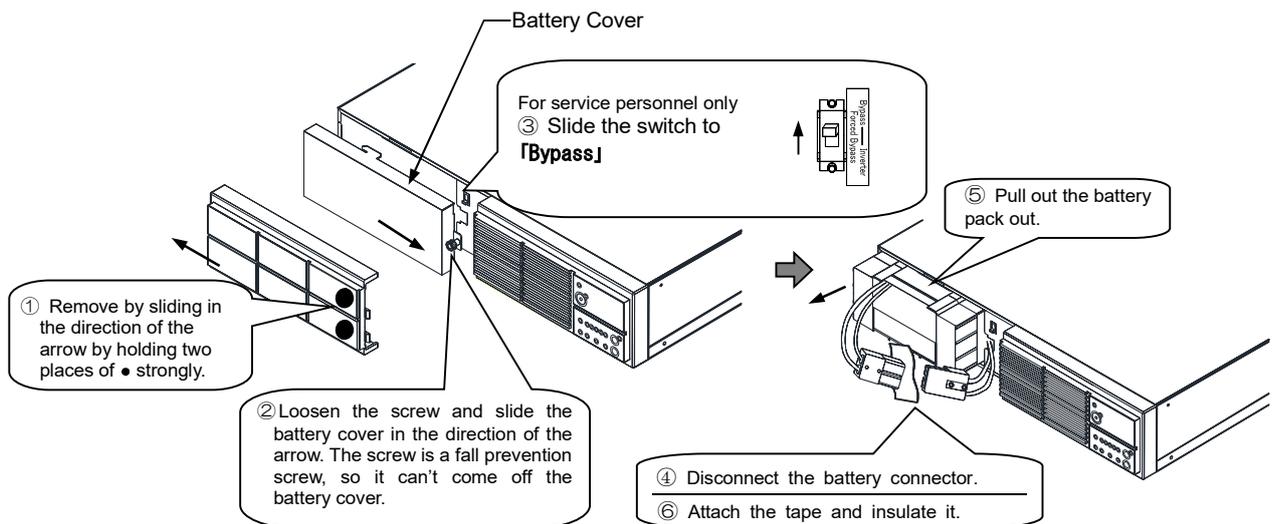


Procedures ③、⑨ and ⑩ are required for UL Standards

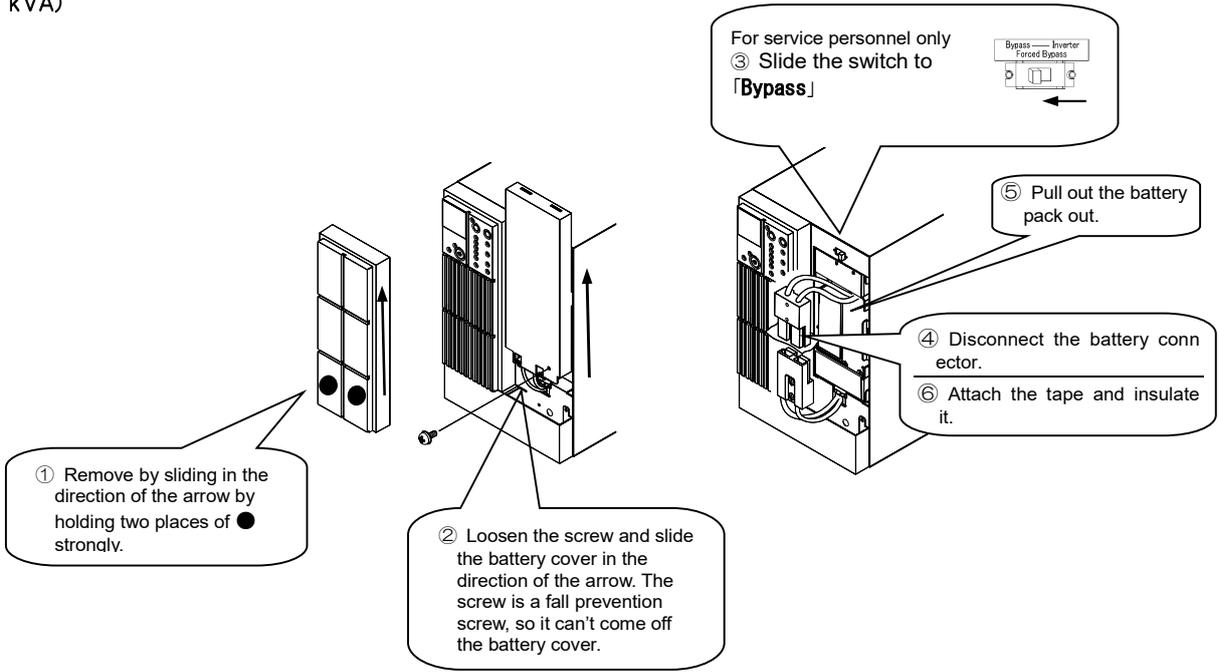
⚠ Caution

The weight of the battery pack is shown in the table on page 1. The battery pack does not have a drop stopper. Pull the battery pack slowly, hold the bottom with both hands, and be careful not to drop it. Also, be careful not to pinch your hands when dealing with battery packs.
The A11H302 battery pack has a scale at the top shown on page 1. When the scale is seen, keep the bottom part supported with both hands, and be careful not to drop it.

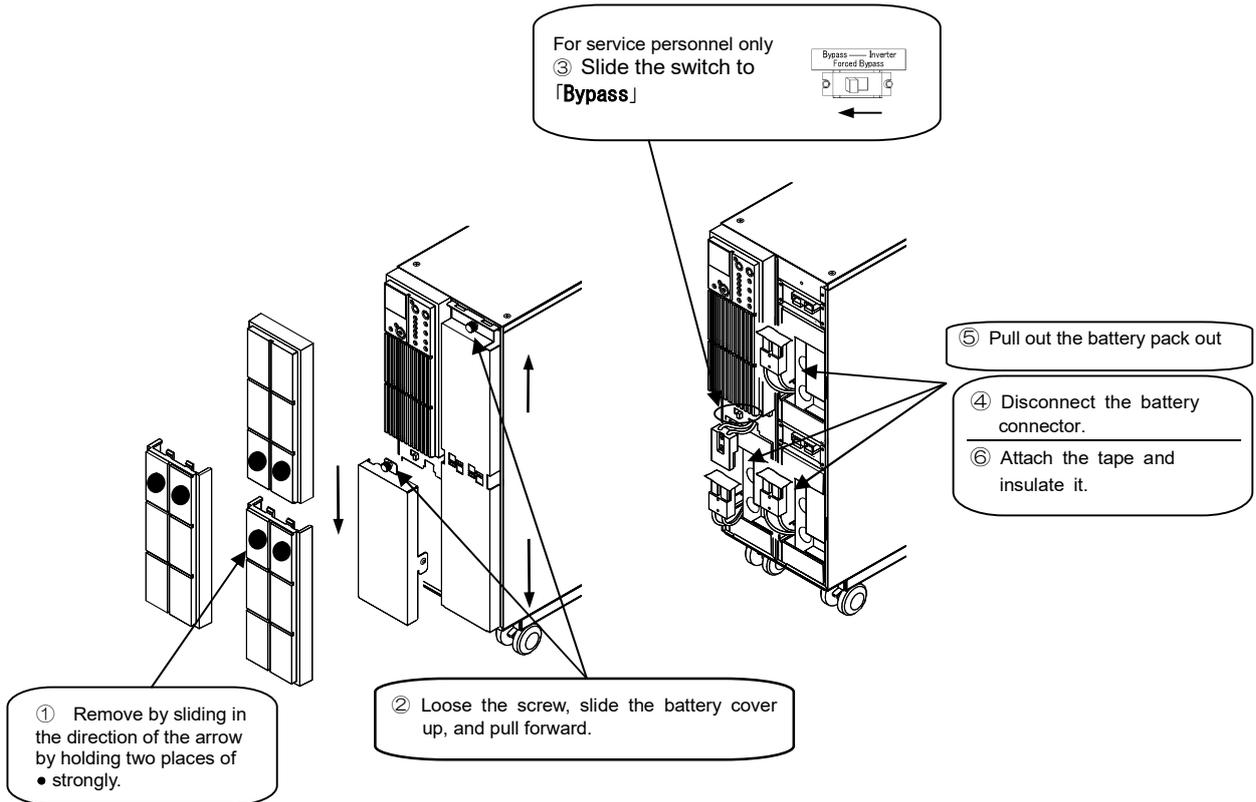
For Rack Type



**For Tower Type
(1 kVA)**

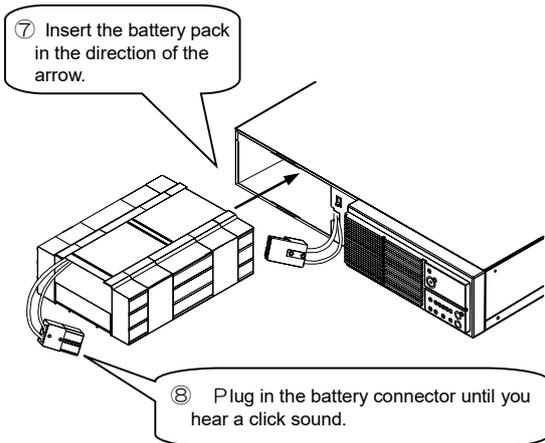


(2kVA /3kVA)



- ⑥ Remove the tape from the battery connector on the new battery pack and attached it to the used battery pack connector.
- ⑦ Insert the new battery pack into the UPS.
- ⑧ Plug in the battery connector.

For Rack Type



⚠ Caution

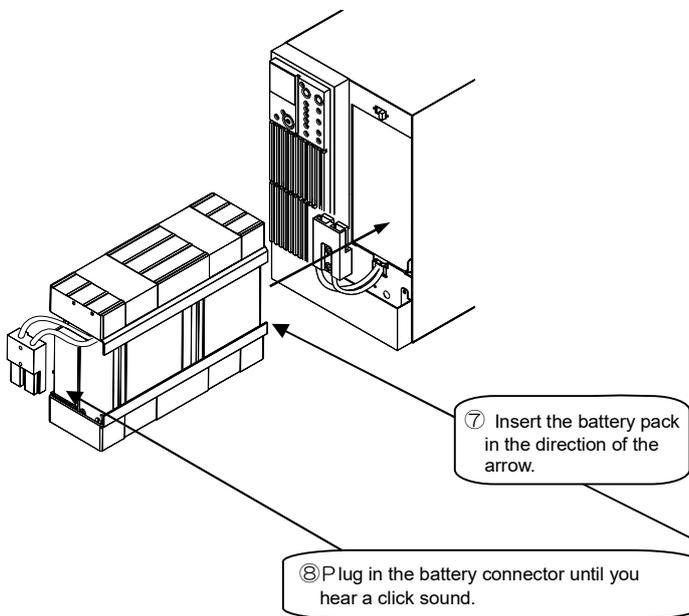
- Do not force to insert the battery connector if it is in a different orientation. Damage to the connector may cause electric shock.
- Be careful not to pinch your hands when securing the cover.

The diagram shows the case of A11H102.
The size of the battery pack depends on the model.
Please see the size on page 1.

If you have an additional battery module, replace the battery after ⑧.

For Tower Type
(1 kVA)

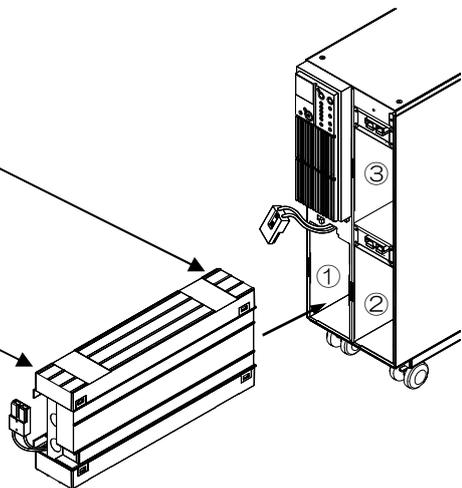
(2kVA /3kVA)



Types of Battery Pack	Where to insert
BPA11H202A00	①
BPA11H202A01	②, ③
BPA11H302A00	①
BPA11H302A01	②, ③

※ ③ is exclusively used by A11H202*111USTW and A11H302*111USTW.

If you have an additional battery module, replace the battery after ⑧.

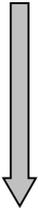


The diagram shows the case of A11H202.
The size of the battery pack depends on the model.
Please see the size on page 1.

When it is not used as a UL Standard.

When it is used as a UL Standard (for service personnel)

When it is used as a UL Standard and CE Marking Conformity Product (for service personnel)



⑨ Set the switch **Forced Bypass** to 「Inverter」 side.

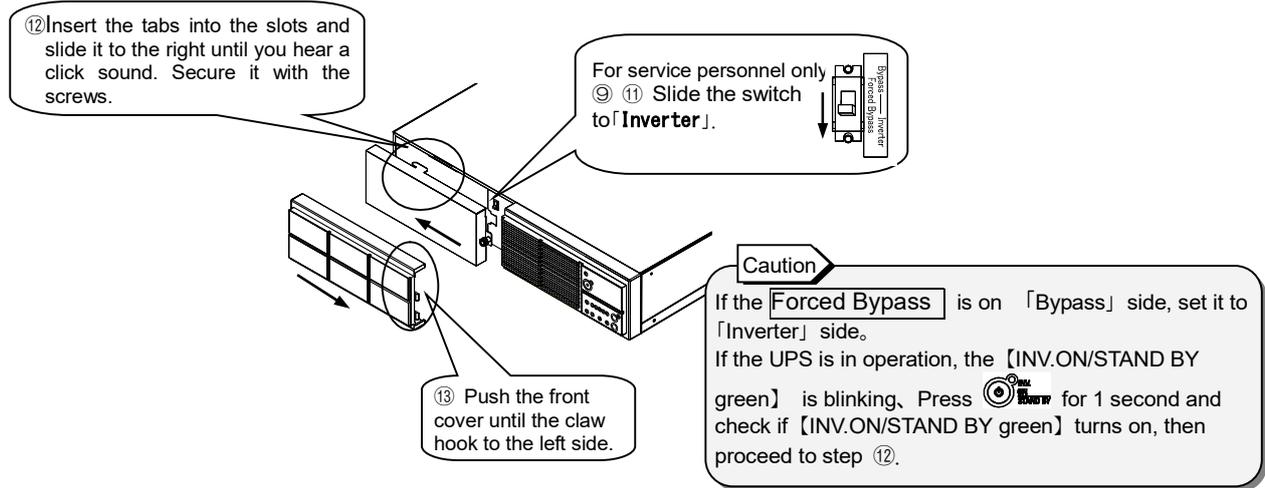
⑩ Make sure that LED [OUTPUT green] and [INV.ON/STAND BY green] on the front panel are blinking.
Press  for over a second.

⑪ Confirm the switch **Forced Bypass** is on the 「Inverter」 side, the LED [OUTPUT green] and [INV.ON/STAND BY green] on the front panel are lit (when the UPS is in operation).

⑫ Install the battery cover.

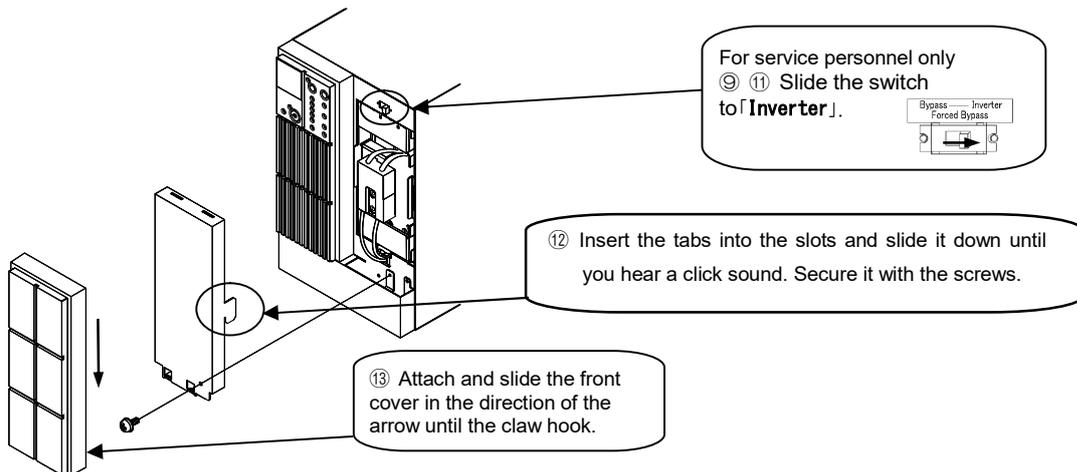
⑬ Fit the front cover

For Rack Type

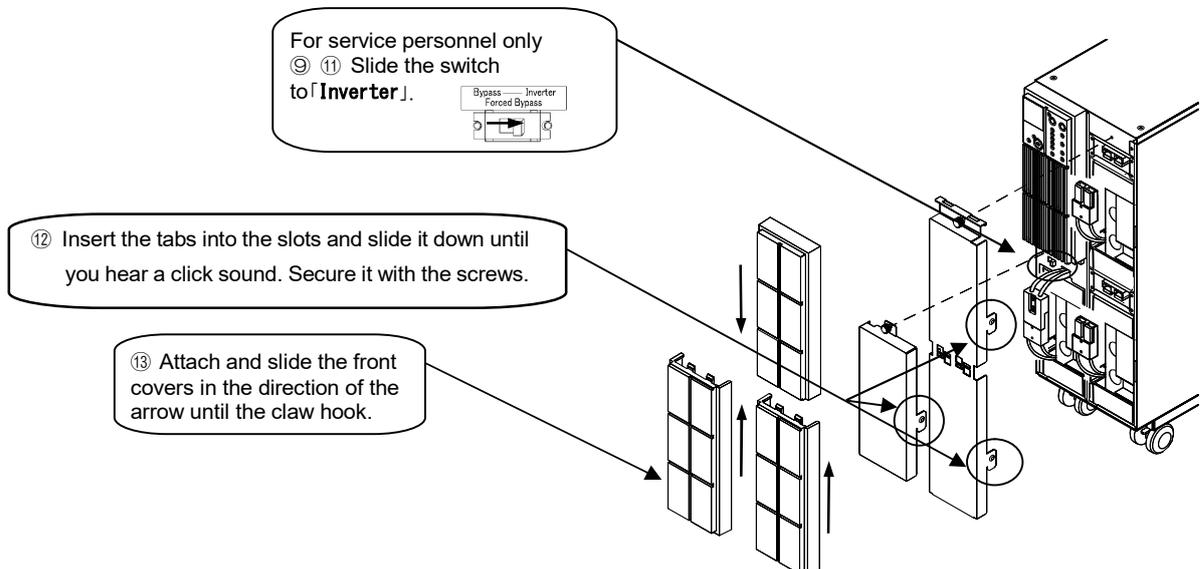


For Tower Type

(1 kVA)



(2kVA / 3kVA)



2. Resetting the Battery Information

Reset the Battery information after replacing the battery installed in the UPS. The following actions will reset all battery information (such as expected battery lifetime, battery operating time, power outage count, etc.): If you have additional batteries, do so after replacing all the battery packs.

- ① Make sure the UPS is in the following state.

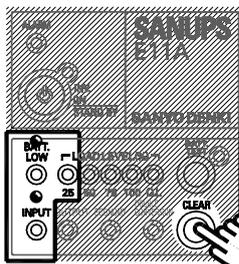
The MAIN SW on the back side is set to 「ON」※1
 [INV.ON/STAND BY green] and [OUTPUT green] are not blinking. ※2

Reset the battery information after replacing the battery. If you do this incorrectly, the battery life warning will not display correctly.

POINT

- ※1 can be operated either 「ON」 or 「OFF」 state.
 ※2. If blinking, the [Forced Bypass] switch is set to 「Bypass」. Set it to 「Inverter」 and operate again.

- ② Press for 3~4 seconds and release it when the buzzer alarms.



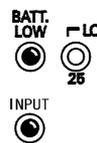
Press 3 ~ 4 seconds and release it when the buzzer rings 「beep, beep」

UPS is in user setting mode

Buzzer: 「beep, beep」

: Either [BATT. LOW] or [25] is blinking or both

: [INPUT] Blinking



: Off
 : Blinking } Indicator.

- ③ Promptly press the (3 second or less) several times until the five LEDs enclosed by are in the blinking pattern as shown in the figure.

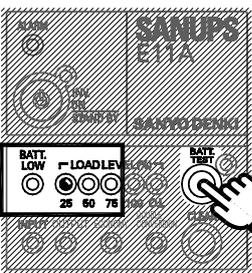


Press promptly

POINT

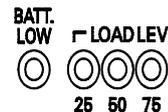
Every time you press or the blinking pattern changes. If you push too far and slip through the LED blinking pattern you want to select, press repeatedly until the LED blinking pattern you want to select again appear.

- ④ Promptly press the (3 second or less) several times until the four LEDs with are in the blinking pattern shown in the figure.



Press promptly

Example : LED blinking pattern when set the setting value to reset



Setting Value	LED blinking pattern	Details
Do not reset	● ○ ○ ○	Do not reset
Reset	○ ● ○ ○	Reset Battery Information

Initial Setting

Reset the battery information (expected battery lifetime, battery operating time, power outage count, battery life LED indication) after replacing the battery.

- ⑤ Press **CLEAR** for 3~4 seconds and release it when the buzzer alarms.



Press 3 ~ 4 seconds and release it when the buzzer rings 「beep, beep」

Please release it as soon as the buzzer alarms 「beep, beep」, it means that the setting is saved in the UPS and resume to normal operation.
After resetting, the setting are automatically returned to 「Do not reset」

Caution

If [BATT. LOW] is still blinking, the battery information is not reset correctly. Please reset it again.

3. Filling in the 「Caution for Storage Battery Replacement」 Label

- ① Please fill in the 「Caution for Storage Battery Replacement」 label that is attached to the UPS body for the next replacement date (month/year).
- ② Fill in the blank in the second row for the next replacement date (month/year).

Check the right table for the battery replacement period corresponding to the ambient temperature environment where the UPS will be installed and fill in the month and year of the next replacement in the 「Caution for Storage Battery Replacement」 label. Please write using marker that is hard to erase such as oil proof pen or permanent marker pen. The date in the first row is assumed as the month and year when the battery was replaced.

Ambient Temperature	Expected Battery Life	Battery replacement Period
25°C	5年	4.5年
30°C	3.5年	3年
35°C	2.5年	2年
40°C	1.7年	1.5年

Example of filling in the label with Ambient temperature of 25°C.

To be replaced on January 2015 ⇒ the next replacement period is after four years and 6 months from the date of replacement: 2019year 6month → 「JUN.」「2019」

「Caution for Storage Battery replacement」 Label

Cautions for storage battery replacement
バッテリー交換についての注意

The storage battery used for this unit has the specific service life.
装置に使用しているバッテリーには寿命があります。
The standard battery replacement interval is 4.5 years (when operated at 25°C).
標準的なバッテリー交換周期は4.5年です。(動作周囲温度 25°C時)
It is recommended to replace the battery earlier than the above reference interval.
早めのバッテリー交換をおすすめします。

Next battery replacement date:
次回のバッテリー交換予定

		1st 1回目
JUN.	2019	2nd 2回目

Note that the service life of the storage battery is shortened as the ambient temperature increases.
周囲温度の上昇に伴いバッテリーの寿命が短くなることにご注意ください。

00733680-01

Fill in

※Please fill in with marker that is hard to erase such as oil proof pen.

- ③ If the second row is already filled in, write the replacement date in a memo and attached it in a visible place that is easy to see but will not be a hindrance to UPS intake exhaust fan.

About Battery Recycling

The batteries used in this product are lead type batteries which are a reusable resource. Please cooperate in the recycling when replacing or disposing the used batteries. Dispose the used batteries according to the instructions. To dispose the used batteries, contact your nearest sales representative, an authorized industrial waste handling company, or repack them in their original packaging box and send them to your supplier. (An extra charge is required)



End of the procedure for replacing the battery pack.

Usage of the “Caution for Storage Battery Replacement” label

The “Caution for storage battery replacement” label is used to display the next battery replacement date after replacing the battery.

Refer to the supplied UPS Instruction Manual for details of battery replacement.

Perform step 1 as follows.

1. Entering the next battery replacement date (Year and Month).

Check the table below for the battery replacement period corresponding to the ambient temperature environment where the UPS will be installed. The date of the next replacement is the date of the month and year when the battery was replaced. Fill in the next replacement date using an indelible pen such as a permanent marker.

Average Ambient Operating Temperature	Expected Battery Lifetime	Battery Replacement Period
25°C (77°F)	5 years	4.5 years
30°C (86°F)	3.5 years	3 years
35°C (95°F)	2.5 years	2 years
40°C (104°F)	1.7 years	1.5 years

Note. The temperature may greatly affect the service life of the battery as shown in the table above. To secure safe operation, always replace the battery earlier than the specified period.

Example) When the ambient temperature of the UPS is 25°C environment;

If the battery is replaced on January 2015, the battery should be replaced on June 2019 next time.

“Cautions for storage battery replacement” label

Cautions for storage battery replacement
バッテリー交換についての注意

The storage battery used for this unit has the specific service life.
 装置に使用しているバッテリーには寿命があります。
 The standard battery replacement interval is 4.5 years (when operated at 25°C).
 標準的なバッテリー交換周期は4.5年です。(動作周囲温度 25°C時)
 It is recommended to replace the battery earlier than the above reference interval.
 早めのバッテリー交換をおすすめします。

Next battery replacement date:
 次のバッテリー交換予定

	/		1st 1回目
JUN.	/	2019	2nd 2回目

Note that the service life of the storage battery is shortened as the ambient temperature increases.
 周囲温度の上昇に伴いバッテリーの寿命が短くなることにご注意ください

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This label is attached on the body of the UPS.

Space

Enter the next battery replacement month and year in two spaces using a permanent marker as shown in the figure.