

# Panasonic®

## Operating Instructions Attached Installation Instructions

### 使用說明書 另附安裝說明書

### Alkaline Ionizer For Household Use

### 電解水機 家庭用

Model No. **TK-AB50**



Thank you very much for purchasing our Alkaline Ionizer.  
感謝您選購Panasonic電解水機。

- Please read these instructions carefully before using this product, and save this manual for future use.
- Please carefully read the "Safety Precautions" (P.EN4 ~ EN7) of this Manual before use.
- Be absolutely sure to check that the purchase date has been entered on the warranty.
- Please keep in mind that the manufacturer of the product will not be responsible for any product malfunctioning or accidents resulting from the improper installation or operation of the product.
- 請在使用本產品之前仔細閱讀本說明書，並妥善保管本說明書以備日後使用。
- 請在使用之前仔細閱讀「安全注意事項」（TC4~TC7頁）。
- 保證書上的「購買日期」請務必填寫。
- 因安裝錯誤或不正確使用，而造成產品故障或發生事故時，本公司恕不負責。

**Use properly to economize on electricity**

**正確使用，節省用電**

We use NSF42 certified activated carbon.  
我們使用 NSF42 認證的活性碳。



COMPONENT / 成分

Activated carbon (APG-05TGA 60/200) manufactured by Kuraray Co.,Ltd. used in this product is Tested and Certified by NSF International against NSF/ANSI Standard 42 for material requirements only. (Check Date (2017.2.1))  
本產品使用的活性碳由 Kuraray Co.,Ltd. 製造的 (APG-05TGA 60/200) 物料需求由 NSF 國際通過 NSF/ANSI Standard 42 檢測和認證。  
(檢查日期(2017年2月1日))

English

中文 (繁體)

# Use Concealing Alkaline Ionizer

## **13 substances specified by JIS standards**

Free residual chlorine, turbidity, total trihalomethane, chloroform, bromodichloromethane, dibromochloromethane, bromoform, tetrachloroethylene, trichloroethylene, 1,1,1-trichloroethane, CAT (pesticide), 2-MIB (mold smell), soluble lead

## **Japan Water Purifier Association voluntary class 4 substances**

Iron (particulate form), Aluminum (neutral), Geosmin (mold smell), Phenols

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Confirmation

Installation

Using method

Maintenance and replacement

When necessary



English

# Safety Precautions

Please make sure to follow these instructions

In order to prevent accidents or injuries to the user, other people, and damage to property, please follow the instructions below.

■ The following charts indicate the degree of damage caused by wrong operation.

 <b>WARNING</b> Indicates serious injury or death.	 <b>CAUTION</b> Indicates risk of injury or property damage.
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■ The symbols are classified and explained as follows.

(The following are examples of symbols.)

 This symbol indicates prohibition.	 This symbol indicates requirement that must be followed.
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## **WARNING**

### Power cord and power plug



- **Do not use in a manner that exceeds the rating of the power outlet or connected equipment.**

(Connecting too many appliances to a power outlet may cause a fire due to heat generation.)

- **Do not damage the power cord or power plug.**

(It may cause a fire or electric shock due to short circuits, faulty insulation, deterioration or other.)

- Using staples (🔪) to secure it
- Damaging it
- Re-working it
- Bending it unnaturally
- Twisting it
- Pulling it
- Positioning it too close to a heating appliance
- Placing heavy objects on top of it
- Bundling it
- Pinching it
- Sandwiching it. etc.
- When removing the power plug from the power outlet, hold the molded part of the plug rather than the cord itself, and pull the plug free.
- If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.

- **Do not clip the power cord between the rails or the door of the drawer.**

(It may cause an electric shock, a fire, or short circuits due to damage of the power cord.)

- **Do not connect or disconnect the power plug with wet hands.**

(It may cause an electric shock.)



- **Use 220 V - 240 V AC voltage.**

(Doing so can lead to a smoking, a fire and/or electric shocks.)

- **Insert the power plug firmly.**

(Doing so can lead to a smoking, a fire and/or electric shocks.)

- Do not use a damaged plug or loose power outlet.

- **Remove the dust or other foreign matter on the power plug periodically.**

(If dust or other foreign matter is allowed to build up on the plug, moisture or other factors may lead to defective insulation which, in turn, may cause a fire.)

- Disconnect the power plug, and wipe it with a dry cloth.

- **This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.**

- **Children should be supervised to ensure that they do not play with the appliance.**

(Risk of accident or injury)

## **WARNING**

### Also pay attention to the following precautions:



- **Do not disassemble, repair or modify it yourself.**  
(Doing so can lead to a fire and/or electric shocks.)  
→ Please contact a dealer or subordinate service station of Panasonic for inspection or maintenance.
- **Do not use water sources other than qualified drinking water (such as tap water).**  
Except for removable substances, the Alkaline Ionizer cannot sterilize water or remove harmful substances, thus drinking such water may be harmful to your health (P.EN2).

### In case of abnormality or fault



- **Please stop use immediately and unplug the power plug.**  
(Doing so can lead to a smoking, a fire and/or electric shocks.)  
<Examples of abnormality and fault>
  - Abnormal sound during operation
  - Abnormal heat or deformation of the Alkaline Ionizer→ Please contact a dealer or subordinate service station of Panasonic for inspection or maintenance.

Confirmation

## **CAUTION**

### Existing conditions and health problems



- **People with kidney disease (users who have renal failure or who have difficulty in eliminating potassium from their systems) should not drink alkaline ion water.**  
(Doing so may cause health problems.)



- **People with the following conditions should consult a doctor before drinking alkaline ion water.**
  - People who is receiving medical treatment from a doctor
  - People with health problems or weakened constitution (People who is not feeling well)
  - People with kidney diseases other than renal failure or potassium elimination  
(Otherwise it may cause health problems.)
- **People in the following situations should consult a doctor before applying weak acidic water to their skin.**
  - People with sensitive skin
  - People susceptible to allergic dermatitis  
(Otherwise it may cause health problems.)
- **For the first time of use, drink only a small amount (1-2 cups per day) of “alkaline ion water (weak)”, and continue to drink about 2 weeks for the adaption of your body; afterwards, you can drink “alkaline ion water (mild)” or “alkaline ion water (strong)”.**  
(Drinking alkaline ion water with high alkalinity at first or drinking a large amount (more than 3 cups) of it may be harmful to the health.)

### Storing alkaline ion water and purified water



- **Use alkaline ion water or purified water immediately after it is produced, or when storing it for future consumption, pour into a clean sealed container, and consume it within 1 day if it is kept at room temperature or within 2 days if it is kept in the refrigerator.**  
(The Alkaline Ionizer removes sterilizers (such as chlorine) so the water may go bad over time, possibly causing health problems.)

### In case of abnormality



- **If you have drunk alkaline ion water and do not feel well as a result, or if the symptoms do not improve after continued use, stop drinking the water and consult a doctor.**  
(Otherwise it may cause health problems.)
- **If you have applied weak acidic water to your skin and you experience skin problems, stop use immediately, and consult a doctor.**  
(Otherwise it may cause health problems.)

English

# Safety Precautions

Please make sure to follow these instructions

## CAUTION

### About the main unit



- **Do not impose strong force or impact force to the piping part.**  
(It may cause water leakage due to the loosening of the piping connection part.)
- **Do not block the main spout or bend, twist, flatten, pull or clamp the hose.**  
(Doing so may cause water to leak, prevent the output of water or cause other malfunctioning.)
- **Do not connect the faucet's main spout and the drain outlet's front section of the Alkaline Ionizer with other equipment (such as water pipe, etc.).**  
(It may cause water leakage or other faults due to abnormal water pressure of the main unit.)

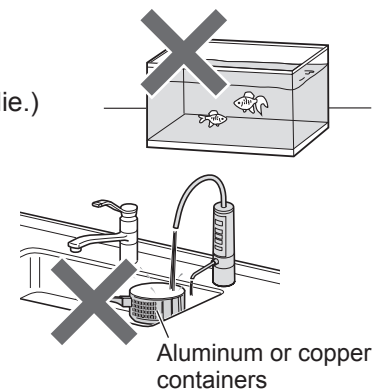


- **The main unit shall be used with the special faucet for Alkaline Ionizer and installation accessories.**  
(To avoid water leakage)
  - Do not use the main unit and the special faucet for Alkaline Ionizer without the installation accessories.
  - Do not reuse old hoses.
- **Please contact a dealer or subordinate service station of Panasonic for the installation and removal of the Alkaline Ionizer.**  
(Incomplete installation may lead to a fire, electric shock, accident or water leakage.)

### Alkaline ion water not applicable for drinking and its usage



- **Do not drink the following kinds of water:**
  - Weak acidic
  - Water which comes out of the drain outlet
  - Water flowing out of the main spout when the water signal indicator is blinking  
(Doing so may cause health problems.)
- **Do not take medicine with alkaline ion water.**  
(Doing so may cause health problems.)
- **Do not directly consume water whose pH level exceeds 10.**  
(Doing so may cause health problems.)
  - Consuming water which has a pH level of around 9.5 "alkaline ion water (strong)" (drinking water in daily life) is recommended. Keep the general amount of water consumed daily at around 0.5 liter to 1 liter.
- **Do not use alkaline ion water, acidic water, or purified water for the care of fish or other pets.**  
(The environment may change as a result, and the fish, etc. may die.)
- **Do not use aluminum containers that do not stand up to alkalis or copper containers that do not stand up to acids.**  
(Doing so may cause discoloration of the containers or damage them.)



- **When the Alkaline Ionizer begins to operate, the water residing inside the main unit will flow out.**  
(Otherwise it may cause health problems.)

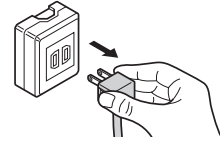
When starting use every day	Use after about 1 liter water flows out (about 30 seconds)	When the Alkaline Ionizer has not been used for 2 or more days	Use after about 10 liters water flows out (about 5 minutes)
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### Power plug



- **When unplugging the power plug from a power outlet, the plug should be held in hand.**

(To avoid electric shocks or fire hazards due to poor insulation)



### pH test liquid



- **Do not bring the pH test liquid near a naked flame.**  
(Doing so may cause it to ignite, causing a fire.)
- **Do not drink the pH test liquid or the water containing the test liquid or put in your eyes.**  
(Keep these liquids away from children.)  
(Doing so may cause health problems.)
  - If the reagent or water containing it has been accidentally swallowed, drink copious amounts of water; if it has made contact with your eyes, rinse thoroughly with clean water and, in either case, consult a doctor.
  - Place the cap on the test liquid container, and keep it out of the reach of infants and toddlers.

### Accidental ingestion



- **Do not leave the supplied accessories within reach of infants or toddlers.**  
(Doing so may result in accessories being swallowed by mistake.)
  - Consult a doctor immediately if you suspect that an accessory has been swallowed.
- **Do not allow infants and children to play with packaging material.**  
(It may cause suffocation.)

### Maintenance



- **Do not splash water or wash the main unit.**  
(It may cause an electric shock or malfunction.)

# Operating Precautions

## Water supply

- **Do not drink water in case of the following conditions.**
  - Water which is very turbid. Water containing a great deal of red rust. (Doing so may shorten the service life of the cartridge.)
  - Well water near sea coast. (Doing so may cause malfunction.)
- **To use in areas\* where the hardness of tap water is high, the slightly acidic water should be discharged for about 1 minute before using every day.** (Or the calcium will attach on the main spout and water run through path, which may lead to poor water run through condition.)
  - \* In areas where the hardness of water is high, the foaming state of soap is poor, and white matter (calcium) will attach to teapots and pots.
- **Due to the quality of tap water in the residential area, the pH level of the water may not be adjusted to the specified level.**

## Handling of pH test liquid (P.EN11, EN13)


- **Store the pH test liquid in a place without direct sunlight.** (Or it cannot make correct measurement due to color change.)
- **To dispose of the pH test liquid, dilute it with water before pouring it down the drain.**



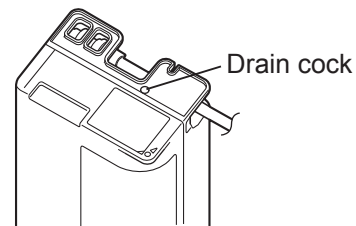
## Usage

- **Do not crash the main unit, control panel, outlet pipe or drain pipe of the Alkaline Ionizer with cutting board, cook pot or other heavy objects.** (To avoid the occurrence of fault)
- **Do not fasten the outlet pipe nut of the special faucet for Alkaline Ionizer with tools.** (To avoid the occurrence of damage or water leakage)
- **Do not put cook pot or other objects with high temperature close to the special faucet for Alkaline Ionizer.** (To avoid the occurrence of deformation and fault)
- **Do not place the main unit upside down.** (To avoid the occurrence of fault)
- **Do not block the drain outlet when using the Alkaline Ionizer.** (To avoid the occurrence of fault)

## Usage

- **Do not use the unit continuously for more than 30 minutes to generate alkaline ion water or acidic water.**
  - When the using time of the unit exceeds 30 minutes\*<sup>2</sup>, a "PI-PI-PI" warning sound will be made and the water supply will be automatically stopped to protect the Alkaline Ionizer.
  - \*<sup>2</sup> When using "alkaline ion water (strong)", "weak acidic" hydrogen adjustment mode; if the mode is "alkaline ion water (mild)", "alkaline ion water (strong)", the using time is about 15 minutes.
    - Please press  again after 3 minutes.
- **Do not place the main unit or piping part in freezing condition.** (To avoid the occurrence of damage, water leakage or fault)
  - The specification of this Alkaline Ionizer is not applicable for cold region.
  - When the main unit or piping part of the unit is frozen, please close the water stop valve, and contact a dealer or subordinate service station of Panasonic for handling.
- **Do not let the movable part or door of a lifting cabinet touch the outlet pipe.**
- **Do not spray insecticide to the main unit, water hose or other parts of the Alkaline Ionizer.** (Faults may occur.) In case of accidental spray, please wipe with wet cloth immediately.
- **When cooking rice with alkaline ion water, the rice will be softer if the pH level of the alkaline ion water is higher.** Please adjust the water volume or the strength level "alkaline ion water (weak) ~ (strong)" in accordance with your personal preference. (suggestion: pH level should be 9.0 or lower than 9.0) In addition, the specified pH level may not be reached due to the difference of region and the quality of water source. For water source that may lead to higher pH level, please use the "alkaline ion water (weak)" or "purified water" function. (P.EN16)
- **Do not take the drain cock off.** (Otherwise the water leakage inspector may not be responsive.)

The bottom of the main unit

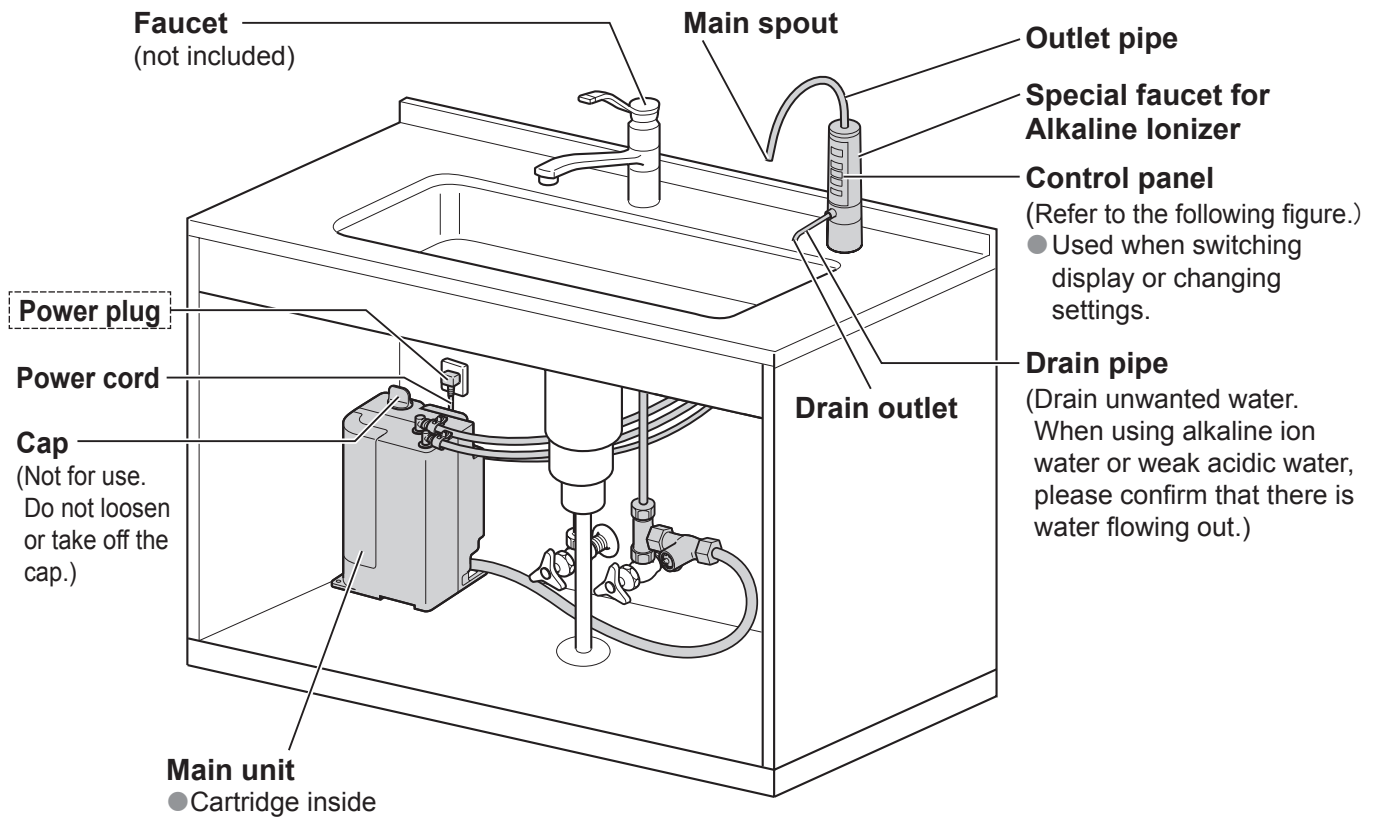




# Names of the Parts and Steps to Take Before Operation

- Accessory marked in    is in the deep place behind the rear panel of the sink, thus it may be invisible.

## Overall figure



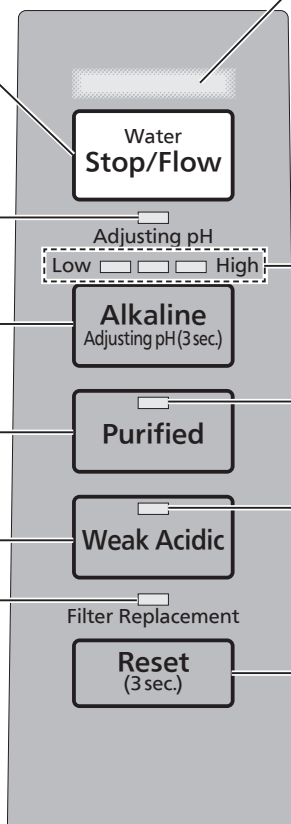
## Control panel

**Water Stop/Water Run Through Button**  
To supply or stop water  
(P.EN16, EN17)

**Hydrogen Adjustment Light (green)**  
Press Alkaline (about 3 seconds) and the indicating light will turn on; When it is difficult to increase the pH level, increase the electrolytic strength. (P.EN14)

**Water Quality Selector Buttons**  
Selects the water Quality.  
(P.EN14, EN16)

**Filter Replacement Light (green, red)**  
When the light is on, it indicates that the cartridge needs to be replaced. (P.EN19)



## Water Signal Indicator (blue, red)

- When drinkable water (alkaline ion water, purified water) flows out, the blue light will be on. When non-drinkable water (weak acidic water) flows out, the red light will be on. (P.EN16, EN17)
- In automatic cleaning (with water run through) state, the red light will flash. (P.EN22)
- In case of any water leakage in the main unit, the red light and blue light will alternately flash. (In such case, there will be no water flowing out and the buttons are unable to operate. (P.EN25))

**Water Quality Indicator Lights (alkaline ion water and purified water: green, weak acidic water: red)**  
They indicate the quality of water flowing out from the main spout. (P.EN16, EN17)

## Reset Button

Press after the replacement of cartridge.  
(P.EN19, EN21)

# Steps to Take Before Operation

## Installation 1

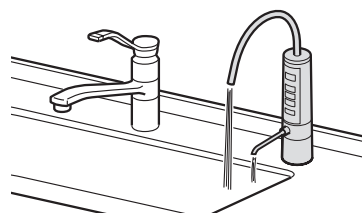
**Check the setup and accessories of the concealing alkaline ionizer**

P.EN11

## Installation 2

**Check after installation**

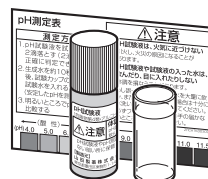
The air in the main unit is not completely exhausted, please drain the purified water for 5 minutes.



P.EN12

## Installation 3

**Measure and adjust the pH level of water**



P.EN12

~

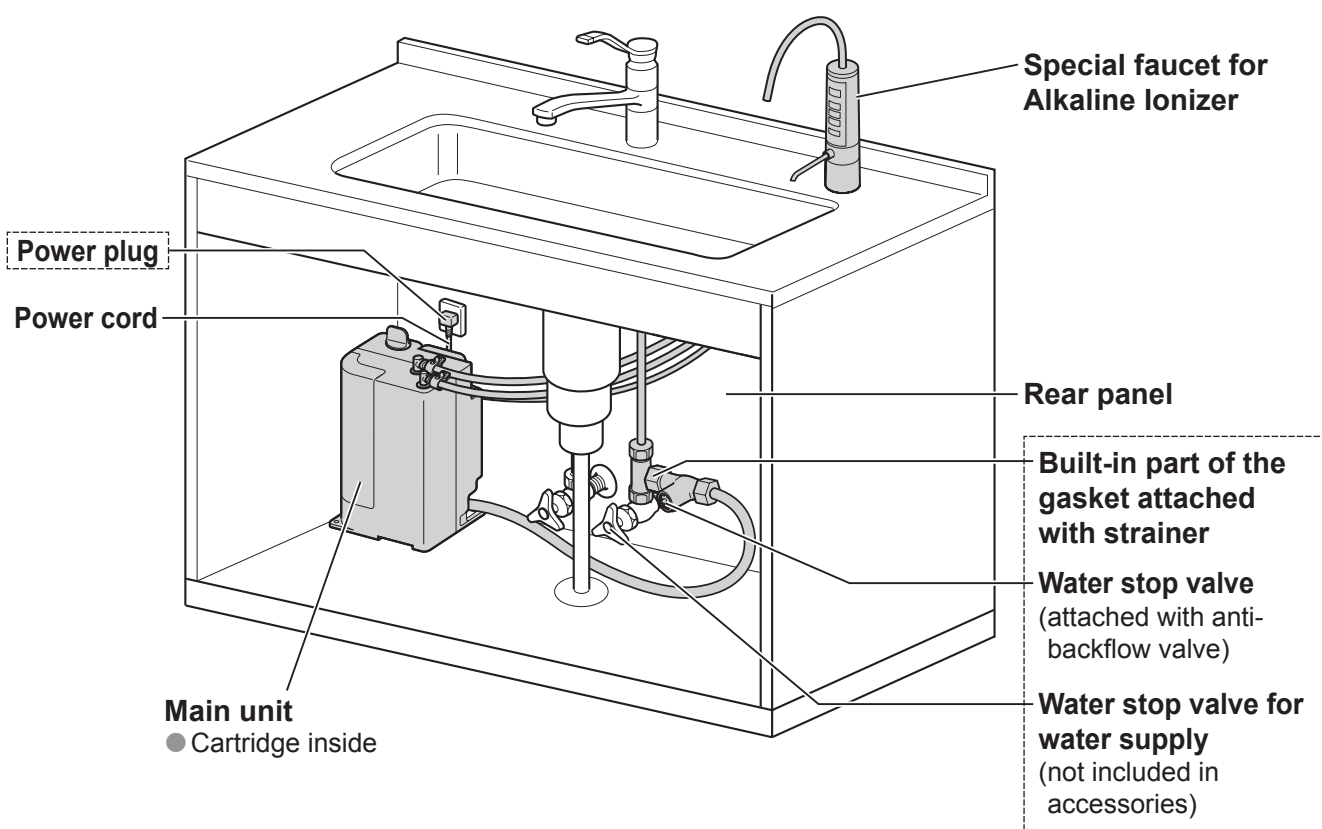
P.EN14

## Installation 1

# Check the setup and accessories of the concealing Alkaline Ionizer

- In case of any deficiency, please notify your dealer or subordinate service station of Panasonic.
- The main unit shall be installed under the sink and connected with the special faucet for Alkaline Ionizer.  
(Please check the position where the power plug, water stop valve and main unit are set.)
- The accessories marked with    are in the deep place behind the rear panel of the sink, thus they may be invisible.
- Please check that whether the accessories are complete.

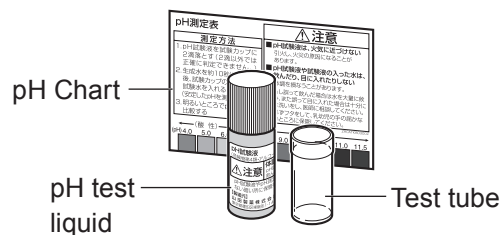
### Schematic diagram of installation completion



### Supplied Accessories

#### <For determination of pH level>

- pH test liquid** (attached with the pH Chart)
  - The test liquid is used to regularly measure the pH level standard.  
The acidic water with pH level of 4.0 or below will show the same color.
  - Main ingredients: Ethanol/methyl red/bromothymol blue/phenolphthalein



#### Installation instructions

- Please check whether all the items in the final check table (P.EN26 in installation instructions) have been ticked (finished).

## Installation 2 Check after installation

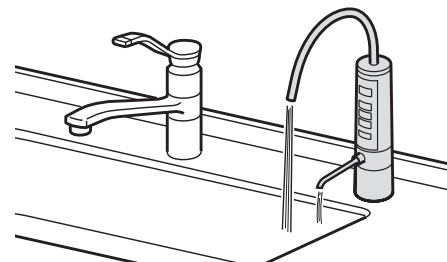
To exhaust the air in the main unit, the purified water shall be drained for 5 minutes.

To use the concealing Alkaline Ionizer (P.EN16)

① Press **Purified**.

② Press **Water Stop/Flow**.

- The blue water signal indicator will flash for about 20 ~ 30 seconds and then stabilize at on state.
- If the air in the main unit is not completely exhausted, the water flow will not be smooth.



## Installation 3 Measure and adjust the pH level of water

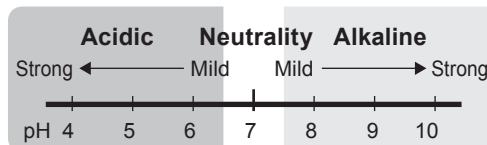
After the Alkaline Ionizer has been installed or after it has not been used for a prolonged period (generally, a week or more), be absolutely sure to measure the pH level, and check that it is within the "pH standard" before using the Alkaline Ionizer.

Remember to measure the pH level periodically (at least once a month).

### Note

#### ● What is the pH level (ion concentration)?

The pH level indicates the degree of alkalinity, neutrality or acidity of water (aqueous solutions), and stands for "hydrogen ion exponent."



#### ■ About pH level standard

- Check whether the alkaline ion water has reached to the range of "pH level standard".
- Please regularly use the pH test liquid to measure the level.  
(Standard check frequency: more than 1 time every month)

Water quality	Weak acidic	Alkaline ion water			Purified water
		Weak	Mild	Strong	
pH level standard	5 ~ 6.5	8 ~ 9	8.5 ~ 9.5	Between 9 ~ 10	Water that is not electrolyzed

## Procedure for measurement

What to have ready: pH test kit (supplied accessory)

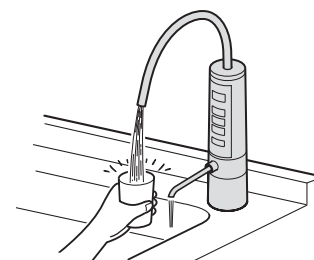
### 1 Put 2 drops of pH test liquid in to the test tube.

- The pH cannot be determined accurately any amount other than 2 drops.
- If the test water is placed before the pH test liquid is added, the two liquids may not be evenly mixed, leading to incorrect measurement.



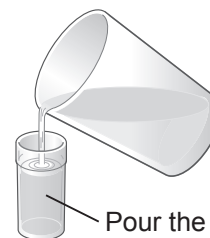
### 2 Run alkaline ion water or weak acidic water for approximately 10 seconds, then keep the sample water in a cup.

(In order to obtain a stable pH level)



### 3 Put the sample water into the test tube.

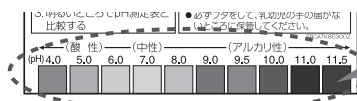
- If some of the test water is first collected in a glass and then poured into the test tube, it will be easier to align the level with the line inside the test tube.
- So long as the water inside the test tube is within 5 mm above or below the line, no problems will be posed in the pH level measurement: there is no need to adjust the level until it comes up to the exact level of the line.



Pour the water until it is near the line inside the test tube.

### 4 Under the enough light, compare the result with the pH Chart.

- The color of the test water will change as time passes. Compare its pH level against the pH Chart right away.

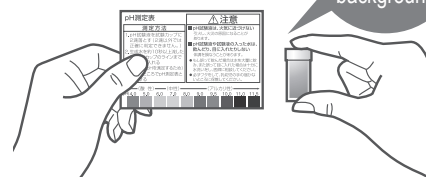


To compare it with the color of the water

In the brightness of the background

OK in this range

Water type	Alkaline ion water (strong)	Weak acidic
pH level standard	9 ~ less than 10	5 ~ 6.5



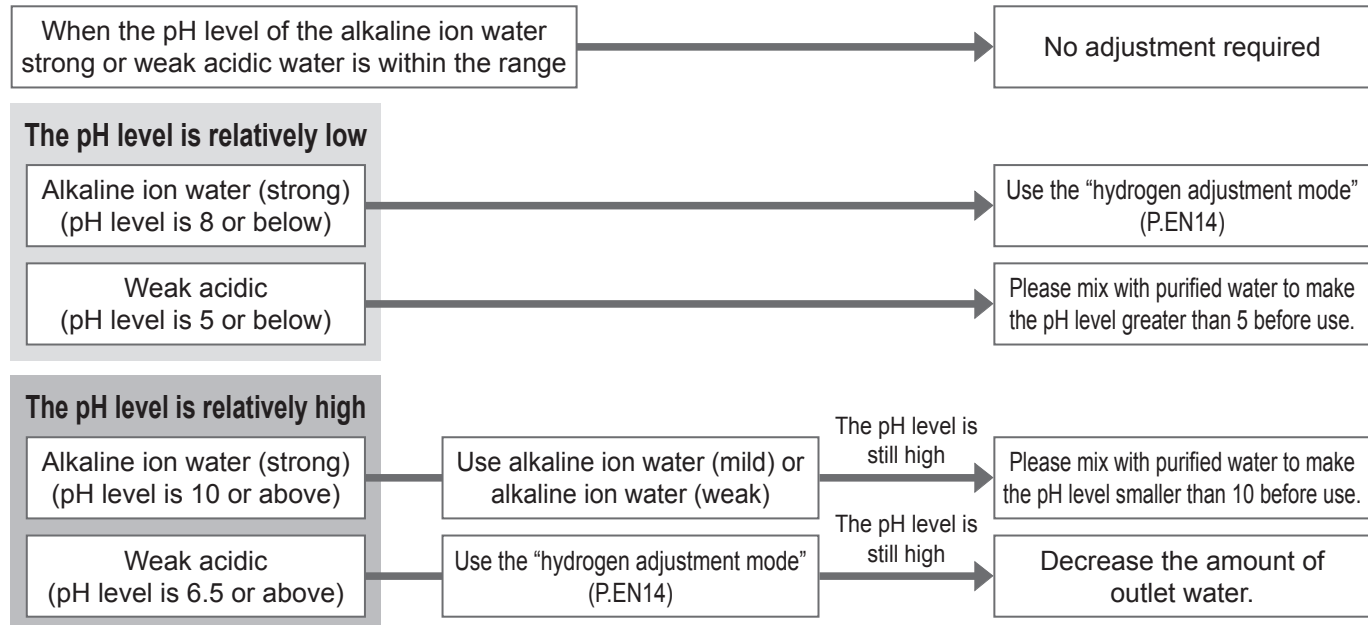
#### Notes

- If a new cartridge is used (for about 1 week), the pH level will be slightly higher, but this phenomenon is normal.
- For the determination of raw water, the color of test water will be different from that in the pH Chart due to the influence of the various ingredients in the water.
- Use of commercial litmus paper will lead to incorrect test.

## Installation 3 Measure and adjust the pH level of water (continued)

### When is adjustment necessary?

When the measurement results are beyond the range of “pH level standard”, adjustment shall be made. After the completion of adjustment, the pH level shall be measured again.



- When the cartridge is relatively new (in about 1 week), the pH level is likely to be slightly high. Please measure the pH level again after about 1 week.

### Reference: Different properties of alkaline ion water due to tap water source

Tap water in residential area	Water in hot spring area	Groundwater (water enrich with carbonic acid)	Water with low hardness*	Water in seaside or islands	Water with high hardness*
Properties of alkaline ion water	Difficult to become alkaline			Easy to become alkaline	

\* Hardness: Concentration of calcium and magnesium contained in the water.

- For determination of tap water, color change not shown in the pH Chart may appear due to the influence of the various ingredients in water.

### Increase the electrolytic strength (hydrogen adjustment)

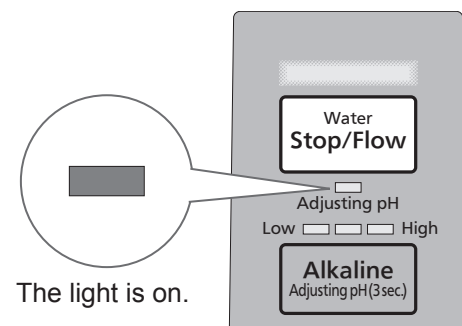
When it is difficult to increase the pH level, the electrolytic strength can be increased.

- Please use after the determined pH level is lower than the pH level standard.
- The “alkaline ion water (strong)” mode shall only be used when the pH level is not greater than 10.

Until the “PI-” warning sound is made,

**Press**  (about 3 seconds).

- The hydrogen adjustment light is in green.
- **To cancel the mode, press**  (about 3 seconds) until hearing a “PI-” sound.



# Selectable Water Quality Mode

Drinking water “alkaline ion water (weak) ~ (strong)” and “purified water”

Water quality selector buttons	Mode name	Drinking	Water quality	pH standard	Water outlet position
	Alkaline ion water (strong)	○ Daily drinking	Alkaline ion water	Between 9 ~ 10	Main spout
	Alkaline ion water (mild)	○ Chronic drinking		8.5 ~ 9.5	
	Alkaline ion water (weak)	○ First-time drinking		8 ~ 9	
	Purified water	○	Purified water	Not complete the electric decomposition	Main spout
	Weak acidic water	×	Weak acidic water	5.0 ~ 6.5	Main spout
				Filtered water with fewer impurities	

Installation

Using method

English

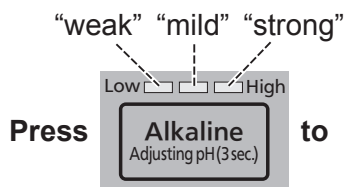
# Use of Concealing Alkaline Ionizer

## 1 Preparation

### ① Choose water quality.

- Store the previously used water quality.
- To change water quality, see below.

Alkaline ion water



### choose your preferred water quality.

- Every time you press **Alkaline Adjusting pH(3sec)**, a warning sound of "PI" will be made, and the pH level will change in the order of "weak" → "mild" → "strong".
- The pH level will increase by about 0.5 in the order of "weak", "mild", "strong". Applications of each strength are shown on the right.
- The water quality indicator light is in green.

Purified water



(A warning sound of "PI" will be made.)

- The water quality indicator light is in green.

Weak acidic water



(A warning sound "PI" will be made.)

- The water quality indicator light is in red.

## 2 Outlet water

### ① Press **Water Stop/Flow**.

### ② Before using, confirm the water signal indicator.

- After the water signal indicator is in blue and flashing, use after there are three warning sounds "PI, PI, PI" and the light is on.
- If the water is splashing, please tighten the water stop valve a little bit. (For the water pressure is relatively high.) (P.EN17)
- When the flow is lower than 1.0 L per minute, the water signal indicator will flash. When the flow is reduced to less than 0.8 L per minute and lasting for more than 1 minute, the water will not flow out. (For the water pressure is relatively low.) (P.EN17)
- The Alkaline Ionizer cannot operate stably unless the flow is more than 1.2 L per minute.

### Convenient using method

Mild

Rice cooking

Strong

Tea, dish cooking, hot pot, soup, etc.

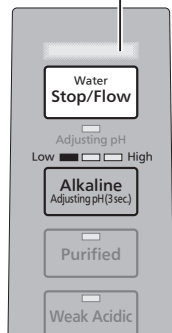
Baby milk or medicine

When washing your face with weak acidic water close to your skin

- Continuous warning sounds will be made. (To avoid accidental drinking due to carelessness)

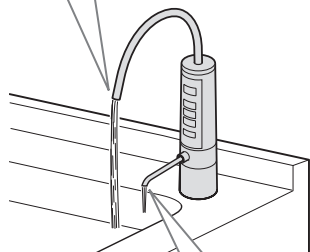


Water signal indicator (blue, red)



### Main spout

Alkaline ion water, purified water and weak acidic water will flow out.



### Drain outlet

Outflow of drained water (non-drinkable)

## Water signal indicator

### Blue

In preparation: **Flash** (about 15 seconds)  
 Drinkable: **Light up**

- Do not drink the water that flows out of the main spout when the water signal indicator is flashing. (The water is not applicable for drinking.)

### Red

In preparation: **Flash** (15 seconds)  
 Ready to use: **The light is on**

- The warning sound during water flowing can be muted.
  - Please conduct after water flowing is stopped.
  - Please press **Weak Acidic** until there is a warning sound of "PI-" (about 3 seconds).
  - Please press **Weak Acidic** again until there are the warning sounds of "PI, PI, PI, PI" (about 3 seconds), and the function of warning sound is enabled again.

## 3 How to turn off water

1 Press **Water Stop/Flow** again to turn off water running.

- The water run through will not stop right away (requires about 1 second). (To avoid great abrupt force applied to the piping)
- When using "weak acidic" function, the weak acidic water in the main unit will be drained from the main spout and drain outlet for about 5 seconds; afterwards, the water outflow will stop. (Automatic cleaning begins) (P.EN22)
  - After water outflow stops, return to the "purified water" state. (If the "priority mode of alkaline ion water" is set as follows, it will return to the "alkaline ion water (weak) to (strong)" mode chosen before the use of "weak acidic" mode.)

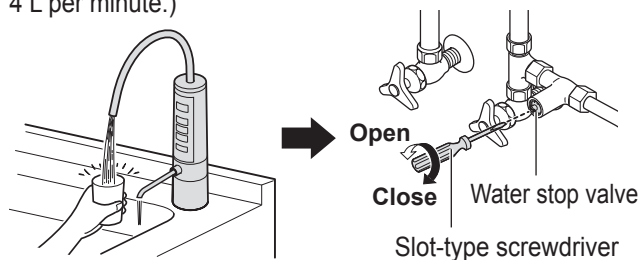
### As for the priority mode of alkaline ion water

When the water stops after using "purified water" or "weak acidic water", the water quality will recover to the alkaline ion water chosen by the last time. (Please conduct after stopping water outflow.)

→ Press **Purified** (about 3 seconds), then it will in the "priority mode of alkaline ion water". (The original setup will be recovered after pressing again for about 3 seconds.)

### Adjustment of water pressure

- When the water pressure is relatively high (Please tighten the water stop valve a little bit.)  
 To maintain the operation of normal functions, please adjust the water flow to about 1 cup of water (about 200 ml) per 3 seconds ~ 6 seconds. (So the filter flow is about 2.2 L ~ 4 L per minute.)



- When the water pressure is relatively low
  - When the cartridge is quite new and it takes more than 6 seconds to fill one cup of water even if the water stop valve is completely opened, the water pressure may be too low (lower than 100 kpa), and the filter replacement light (red) will flash.
  - If the water stop valve is too tight, the water signal indicator (blue) may be flashing rather than light up. Under this condition, the filter replacement light (red) may flash when the Alkaline Ionizer is in use, or the water flow at the main spout will stop.
    - Please open the water stop valve to increase water pressure.

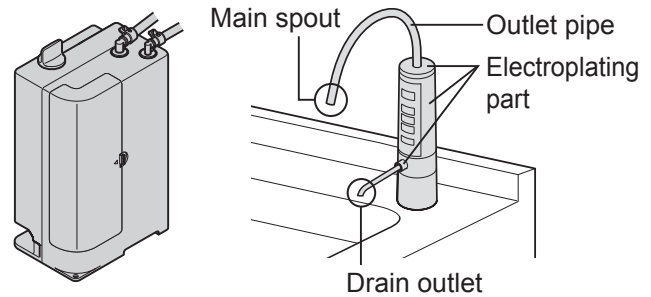
# Maintenance

## Daily repair and maintenance

### The main unit and the special faucet for Alkaline Ionizer

Dip a soft cloth in water and wring it out to wipe the Alkaline Ionizer.

- For dirt at the main spout or drain outlet, remove with cotton swab, etc.  
(If the water for cleaning use is splashed and attached to the main spout or drain outlet, it may result in dirt or daily microbes.)



### Important

- **Do not use detergent, cleaning powder, diluting agent, volatile oil, ethyl alcohol or kerosene, etc. In case of accidental use, please wipe with wet cloth right away to remove the detergent, etc. on the surface.**  
(Detergent mixed into the water run through may lead to resin crack, electroplating damage, electroplating or coating spalling, discoloration or deformation.)
- Detergent may lead to unsmooth outflow in the outlet pipe and result in fault.
- Do not use metal brush or other apparatus. (To avoid damage)

## CAUTION



- **Avoid bringing the main unit into contact with water by spraying it with water or washing.**  
(Otherwise, power leaks, electric shocks and/or trouble may result.)

# Replacing the Cartridge



**Replacement cartridge**  
Model: TK-AS45C1  
(P.EN31)

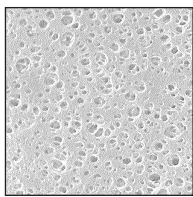
When the service life of the cartridge is to be expired or the purified water ability is reduced, please replace the cartridge with a new one.

## Filter replacement standard

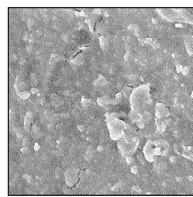
There are 4 kinds of change standards. If one of the following conditions is met, please replace the cartridge.

- The total run through water volume reaches 12 000 L.**
- The using time is about 1 year.**
- The flow of purified water or alkaline ion water suddenly decreases.  
(The cartridge is blocked.)**
- When there is smell or unpleasant smell**

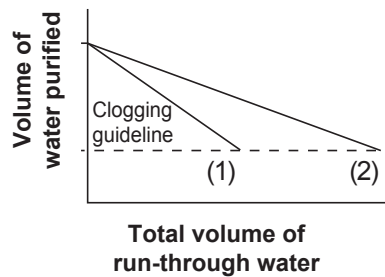
Inside the cartridge is a hollow fiber membrane filter for removing microscopic dirt. The cartridge's life will be shortened when the Alkaline Ionizer is used with a quality of water containing many clogging substances.



Hollow fiber membrane surface (new filter)



Clogged hollow fiber membrane surface



- (1) Water containing many clogging substances
- (2) Water with standard quality

## Filter replacement light turns red

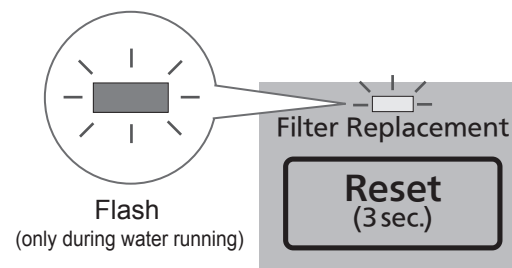
### ■ Use display light to confirm the time for filter replacement

- Use filter replacement light to confirm.
- Inform in accordance with the sum of water flow and the time of power on and the results of flow sensing.

#### The replacement time is approaching

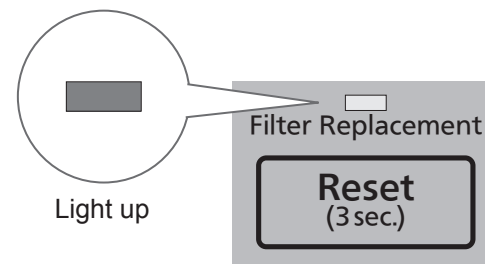
Please prepare a new cartridge.

- When the flow is reduced because of cartridge is blocked, etc.
- When the total run through water volume is more than 11 850 L but less than 12 000 L



#### Please replace

Replace if the filter replacement light is off but there is smell or odor. (The purified water ability is reduced.)



When the light is on, alkaline ion water or weak acidic water cannot be produced.

Maintenance and replacement

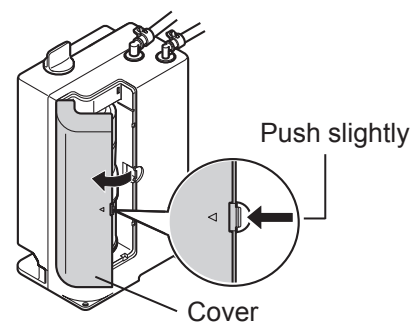
English

# Replacing the Cartridge (continued)

## Replacing method

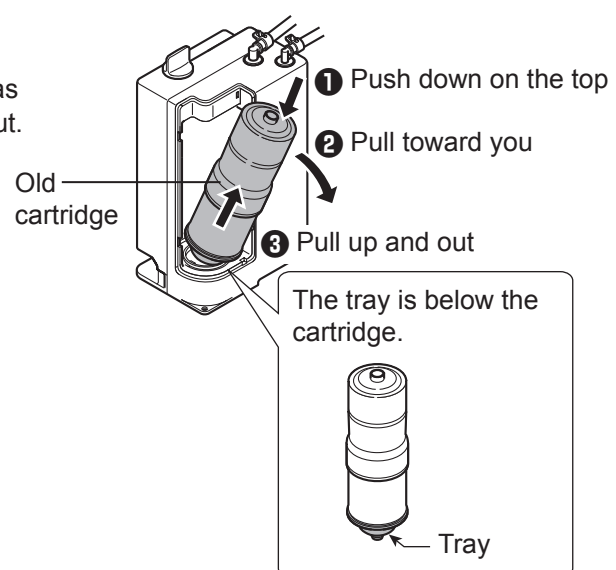
- Do not unplug the power plug when replacing the cartridge.  
(If the power plug is unplugged, the service life of the cartridge cannot be reset.)
- Do not replace the cartridge with the condition of main unit flat.
- Before replacing the cartridge, please close the faucet. After removing the cartridge, water run through should be stopped. (Or water will spill.)

### 1 Remove the cover.



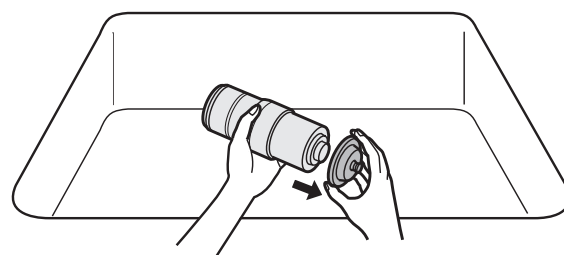
### 2 Remove the cartridge.

- Press down the cartridge from the top, pull it forward as shown in the figure, then the cartridge can be taken out.
- Take care since water will drip from the cartridge.  
Water may also emerge from the bottom of the make unit (this does not indicate that there is a leak).
- Please take out the cartridge with the tray.

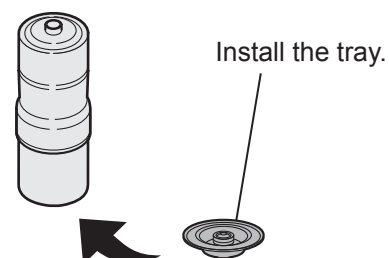


### 3 Remove the tray from the old cartridge.

- Please remove it in the kitchen sink.  
(Because the water inside the cartridge will flow out.)
- Do not discard the tray.

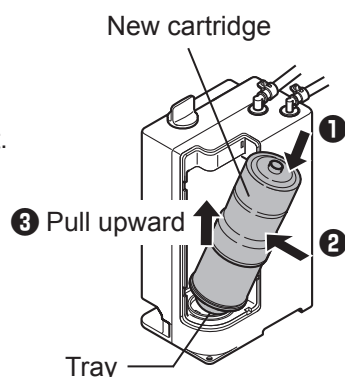


### 4 Install the tray on the new cartridge.



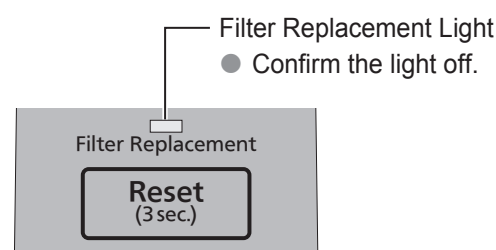
## 5 Install the new cartridge.

- Please confirm that the tray has been installed.
- Please be sure that the upper and lower directions are right.
- **After putting the cartridge in place, push it up.**



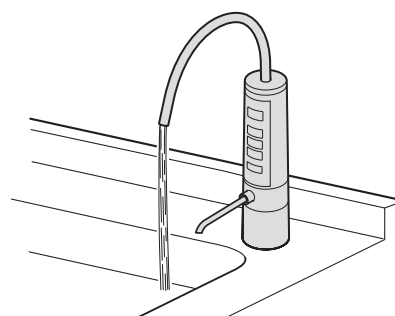
## 6 Press (for about 3 seconds).

- Please confirm that the filter replacement light is off.

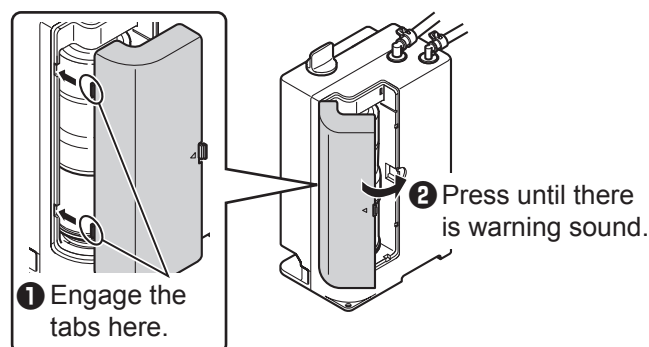


## 7 Choose and press run purified water through the main unit (for about 5 minutes).


- After water run through, the water signal indicator will be in blue and flashing for 20 seconds ~ 30 seconds.
- While water is running through the unit, check that water is not leaking from the area where the cartridge was installed.
- Steps to exhaust the air inside the cartridge.  
If the air is not exhausted, water can still easily dip from the main spout or the drain outlet even if the water flow is stopped.



## 8 Press to stop purified water put the cover back on.



### Important

- **Dispose of the used cartridge in accordance with the applicable ordinances in the area concerned.**  
(The material of the cartridge cover is ABS. Refer to "Specifications" for the type of the filter materials (P.EN30).)
- If the outflow has not been recovered after replacing the cartridge, it may be caused by the blocking of the gasket attached with strainer of the water stop valve. Please contact a dealer or subordinate service station of Panasonic.
- **If the cartridge is replaced before the filter replacement light (red) is flashing or on, please follow up step 6: press  until the warning sound "PI-" is made (about 3 seconds). [To display the correct replacing time]**

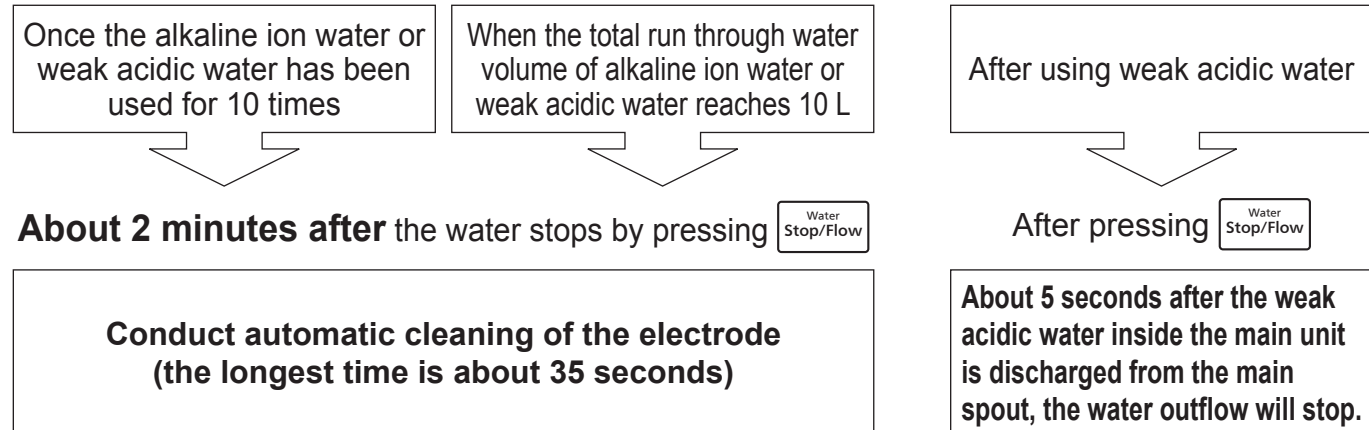
### Note

- When alkaline ion water is poured into a glass after the cartridge has been replaced, it may contain white bubbles: this is normal and does not indicate any trouble. (P.EN23)

# Automatic Electrode Cleaning

The inside of the main unit will be cleaned automatically under the following conditions.

**It will be cleaned automatically after each using.**



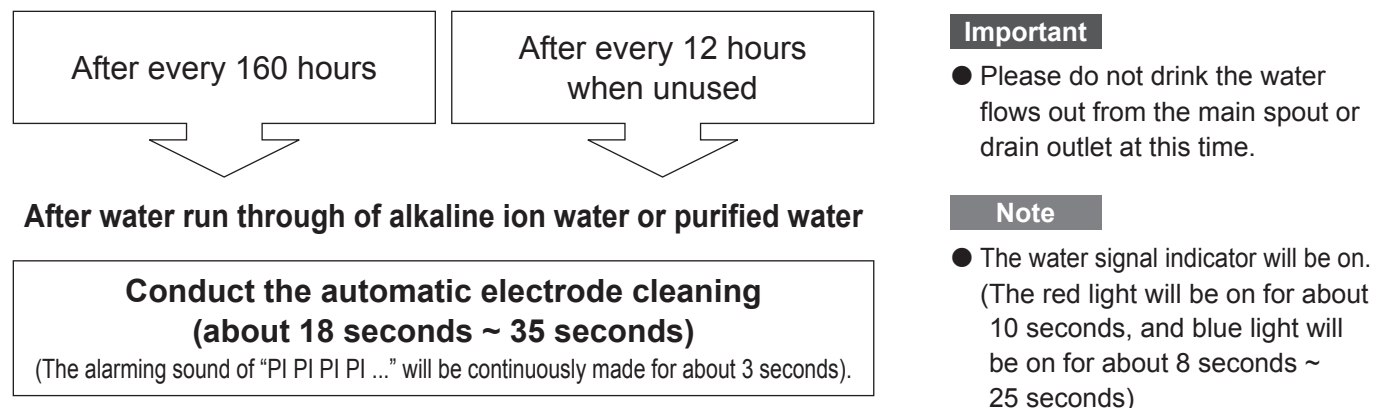
## Notes

- During and after the cleaning process, water may dip from the main spout and drain outlet in a short time, which is a normal phenomenon.
- After the automatic cleaning process, the flashing time of the water signal indicator will be longer (about 15 seconds) in the subsequent water run through (to discharge the water used for cleaning).

## Notes

- The water signal indicator will flash in red.
- When discharging the water, all the buttons on the control panel cannot be used.

## Automatic cleaning after using for a while



## Important

- Please do not drink the water flows out from the main spout or drain outlet at this time.

## Note

- The water signal indicator will be on. (The red light will be on for about 10 seconds, and blue light will be on for about 8 seconds ~ 25 seconds)

# When the Power or Water Supply Is Cut Off

## ■ When the power supply is cut off

- In case of power outage during using, the water outflow will stop. (Water run through cannot be provided.)
- After power on, the Alkaline Ionizer can be used as usual. (The "purified water" mode will be automatically recovered after power on.)

## ■ When the water supply is cut off

- Not available.
- If water supply stops when the Alkaline Ionizer is in operation, or the water outflow is reduced due to water supply failure, the solenoid valve (built in the main unit) will automatically closed after about 1 minute.
- After the water supply is recovered, please open the faucets except for the special faucet for Alkaline Ionizer, so the tap water (raw water) flow can discharge the air or dregs in pipes. The Alkaline Ionizer can be subsequently used as usual. (The service life of the cartridge may be greatly shortened if air or dregs enter the main unit.)

# Q&A

	Question	Answer
During use	What should I do when I'm not going to use the Main unit for a prolonged period (more than a week or so as a general guide)?	<ul style="list-style-type: none"> <li>● Remove the cartridge from the main unit, put it inside a plastic bag, remove the air from the bag and close it, and then store the bag in the refrigerator.</li> <li>● Disconnect the power plug.</li> <li>● Before re-using the Alkaline Ionizer, install the cartridge, re-connect the power plug, and run water through the main unit for about 3 minutes.</li> </ul> <p>If you are not going to use the Alkaline Ionizer for a month or more, the water inside the cartridge may have gone bad so it is recommended that you replace the cartridge.</p>
	Can ground water be used?	<b>No</b> , because the water quality of the ground water has relatively big differences. It is suggested to use tap water.
	What is the white powder that's deposited on the inside of the kettle and thermos flasks?	<b>It is the calcium from the water.</b> There is no problem if you drink the water, but if it bothers you, clean the containers concerned. If the white powder is not removed by cleaning, obtain some citric acid from a pharmacy, mix 50 g with 1 liter of water, leave to soak in the containers for 2 or 3 days, and then rinse the deposit off.
	Do I leave the Alkaline Ionizer's power on when I won't be using the Alkaline Ionizer?	<b>Leave the power on even while you're not using the Alkaline Ionizer.</b> One reason is so that the electrodes need to be automatically cleaned. Another reason is that the volume of all the water which has run through the Alkaline Ionizer will not be totalized if the Alkaline Ionizer is used with its power off and, as a result, the cartridge life will not be indicated correctly. <ul style="list-style-type: none"> <li>• The power consumption in the standby status is approximately 0.7 W.</li> </ul>
	Compared with the early time of using, why the pH level is relatively difficult to increase now?	<b>This may be caused by calcium sediment attached on the main unit, which reduces the electrolytic capacity of the Alkaline Ionizer.</b>
Alkaline ion water	What kind of water should babies be drinking?	<b>Water produced at the "Purified Water" setting is recommended for babies.</b> As babies are weaned, start using alkaline ion water gradually with the "alkaline ion water (weak)" (drinking water for new user) setting.
	What should I do if I get diarrhea or a rash after I start drinking alkaline ion water?	<b>Stop drinking alkaline ion water, and consult a doctor.</b> While consulting the doctor, say that: <ul style="list-style-type: none"> <li>• The alkaline ion water you've been drinking has more calcium, magnesium, sodium, potassium and other minerals than tap water.</li> <li>• The water you've been drinking has an alkalinity with a pH level of 8 to 9 (at the New Users setting).</li> </ul>
	How much calcium is contained in alkaline ion water?	<b>Due to electrolysis, there are 20 % to 30 % more calcium ions in alkaline ion water than in the source water.</b>
	What else can I do with alkaline ion water besides drinking it?	<b>You can use it for cooking, making rice, making tea or coffee just as you would with regular water. (P. EN16)</b>
	When alkaline ion water is poured into a glass, white bubbles are formed. What is this about?	<b>It means that air has become mixed in with the water inside the Alkaline Ionizer or that the bubbles (hydrogen gas) were formed during the process of electrolysis. Lots of bubbles may be formed after the Alkaline Ionizer has been installed or the cartridge replaced. There is no problem if you continue to use the Alkaline Ionizer.</b> <ul style="list-style-type: none"> <li>• The bubbles which form with acidic water are oxygen gas.</li> </ul>
	Why does alkaline ion water sometimes appear shiny?	<b>The same is also sometimes true of purified water.</b> It is due to the precipitation of the components (mainly minerals) which are dissolved in the water. There is no problem if you drink the water, but if it bothers you, use the Alkaline Ionizer at a reduced pH (ion concentration) level. The same kind of thing happens when the cartridge function has deteriorated, in which case replace the cartridge with a new one.
	What is the white stuff that floats in the water which is produced when ice made using alkaline ion water has melted?	<b>These are minerals contained in the water.</b> When water is frozen, the minerals solidify on the surfaces of the ice. There is no problem if you swallow the white bits.
	When I use alkaline ion water to cook rice, the rice becomes sticky. What can I do about this?	<b>The rice may be sticky or yellow depending on the amount of water and the type of rice and rice cooker used. Either reduce the pH (hydrogen ion concentration) level of the alkaline ion water or use the Alkaline Ionizer at the "Purified Water" setting.</b>
I have kidney trouble. Is it ok for me to drink alkaline ion water?	<b>Consult a doctor before drinking alkaline ion water.</b> While consulting the doctor, say that: <ul style="list-style-type: none"> <li>• The alkaline ion water you are thinking of drinking has more calcium, magnesium, sodium, potassium and other minerals than tap water.</li> <li>• The water you are thinking of drinking has an alkalinity with a pH level of 9.5 or so.</li> </ul>	

Maintenance and replacement

When necessary

English





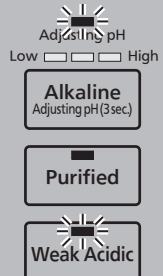

# Q&A (continued)

	Question	Answer
About water discharge and weak acidic water	Is it ok to drink the acidic water by accident?	<b>Please do not worry if the amount is little (about 1 cup).</b> But do not drink any more. In addition, please seek for doctors for advice in case of discomfort.
	Compared with the total flow, what are the proportions of water that flows out from the main spout and drain outlet respectively?	<b>The proportions are shown as follows.</b> <b>The water flows out from the main spout: about 80 %</b> <b>The water flows out from the drain outlet: about 20 %</b> While confirming the measurement, please conduct at the state of water running through. The water should be filled into the same container in the same time period for comparison. <ul style="list-style-type: none"> <li>• In the beginning of use, the water flows out from the drain outlet will slightly increase.</li> <li>• After the water outflow stops, there will be much water in the drain outlet due to the discharging of water in the main unit.</li> <li>• When the water flow is relatively little, the water flows out from the drain outlet will increase slightly.</li> </ul>
	Why the weak acidic water has an unpleasant smell? (Similar to the smell of swimming pool)	<b>This is due to the hypochlorous acid contained in the weak acidic water. Please directly use at ease.</b> Electrolytic reaction will make the chloride ions concentrate in weak acidic water, and hypochlorous acid will be generated as a result.
About hydrogen	How long will the produced hydrogen stay in the alkaline ion water?	<b>The molecular of hydrogen is very small, therefore, it will reduce by a half in 2 days even if it is placed in a closed container, such as PET bottle. In non-closed container, all the hydrogen will outflow in one day. For heated situation, the hydrogen will evaporate at the same time of boiling.</b>
	What is "hydrogen adjustment mode" ?	<b>If a water source whose pH is hard to improve is used, you can increase the pH level by increasing electrolytic force. At the same time, the output of hydrogen will increase.</b>
Cartridge	I want to replace the cartridge. What type should I use?	<b>Use the cartridge with the TK-AS45C1 model number. (P. EN19, EN29)</b>
	Why the filter replacement light is light up earlier than the replacing standard?	<b>The filter replacement light will light up when the run through water volume or water run through pressure reduces. (P.EN19)</b> Please confirm whether the water run through is insufficient due to low water pressure, or whether water pipe is damaged or squeezed. Additionally, due to the difference of water quality, the cartridge may be blocked before the specified time range. Please replace the cartridge in this case.
Others	What does a service life of 850 hours for the electrolyzer mean?	<b>It means the accumulated electrolysis time (including cleaning time) of the electrolyzer of this Alkaline Ionizer.</b> <b>If the average run through water volume is 30 L (3.2 L/min) in 1 day, it is equal to a service life of 10 years.</b> When the electrolyzer is powered-on, the electrode plate will be consumed. When all the water quality indicator lights are light up, and there are 5 warning sounds of "PI-", it means the service life of electrolyzer has been reached. Please contact a dealer or subordinate service station of Panasonic.



# Troubleshooting

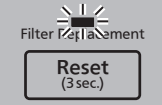




In case of suspected fault, please check the following conditions before sending the Alkaline Ionizer for inspection. In addition, if there is any abnormal condition, do not dismantle the Alkaline Ionizer by yourself. Please contact a dealer or subordinate service station of Panasonic for handling.


Phenomenon	Cause and method of disposal	Pages for reference
<p><b>Continuously flash without lighting up, or flash when in use.</b></p>  <p style="writing-mode: vertical-rl; transform: rotate(180deg);">Water signal indicator</p>	<ul style="list-style-type: none"> <li>● <b>Automatic cleaning will be conducted every 160 hours or if the Alkaline Ionizer is not used for 12 hours.</b> (The water signal indicator is in red and flashing. There is warning sound.) →Please perform continuous water run through for about 18 seconds ~ 35 seconds.</li> <li>● After the completion of cartridge installation or replacement, when the water has run through, the water signal indicator will flash for 20 seconds ~ 30 seconds, then it will light up. (“alkaline ion water” or “purified water”: blue; “weak acidic”: red) →Please perform water run through for about 10 L of purified water (about 5 minutes). (To discharge the air in the cartridge)</li> <li>● Whether the water flow is insufficient? (It has to be more than 1.2 L/min.) →Please open the water stop valve.</li> <li>● Have you pressed down two buttons at the same time? (The water quality indicator light of “weak acidic” flashes, when water runs through, the water signal indicator is in red and flashing.) →Please keep at the stop water status, press  and , and there will be a warning sound of “PI-”.</li> </ul>	<p>EN22</p> <p>—</p> <p>EN21</p> <p>EN17</p> <p>—</p>
<p><b>The display light is off in operation, and the water outflow stops.</b></p>	<ul style="list-style-type: none"> <li>● Has the Alkaline Ionizer been continuously used for more than 10 minutes at (“alkaline ion water (strong)” or “weak acidic” mode. If the hydrogen mode is used, the time of “alkaline ion water (mild)” or “alkaline ion water (strong)” shall be less than 10 minutes. In addition, in accordance with different water quality or environment, the water outflow will be stopped automatically to protect the Alkaline Ionizer. (A warning sound of “PI-PI-PI-” will be made.) →Please press  again after 3 minutes.</li> <li>● The flow is reduced due to the change of water pressure. (Has to be more than 1.2 L /min.) →Please use after choosing water quality again.</li> </ul>	<p>EN8</p> <p>EN16, EN17</p>
<p><b>Red light ⇔ blue light flashes alternately, and there is no water outflow. (The buttons cannot be operated.)</b></p>	<ul style="list-style-type: none"> <li>● There is water leakage in the main unit. →Please unplug the power plug and close the water stop valve, then contact a dealer or subordinate service station of Panasonic for handling.</li> </ul>	<p>EN9</p>
<p><b>After using “purified water” or “weak acidic” mode, the display light will change into “alkaline ion water (weak) ~ (strong)”</b></p> <p><b>When using “alkaline ion water” or “weak acidic” mode, the hydrogen adjustment light and “weak acidic” indicator light will flash, the “purified water” indicator light will light up and the water outflow will stop. (Buttons cannot be operated.)</b></p>  <p style="writing-mode: vertical-rl; transform: rotate(180deg);">Water quality indicator lights</p>	<ul style="list-style-type: none"> <li>● Is the priority mode of alkaline ion water selected? →To cancel this setup, please press  without water supply until there is the warning sound of “PI-”. (About 3 seconds)</li> <li>● In accordance with different water quality or environment, the water outflow will automatically stop to protect the Alkaline Ionizer. (A warning sound of “PI-” will be made for three times.) →It will automatically recover after about 30 minutes. If water runs through before the Alkaline Ionizer returns to normal mode, “purified water” will flow out. If it has not been recovered, please unplug power plug from the power outlet, then re-plug.</li> </ul>	<p>EN17</p> <p>—</p>

When necessary

English

# Troubleshooting (continued)

	Phenomenon	Cause and method of disposal	Pages for reference
Filter replacement light	<b>Filter replacement light (red) flashes.</b> 	<ul style="list-style-type: none"> <li>● Is the water stop valve too tight? →Please open the water stop valve.</li> <li>● The flow is reduced due to cartridge blocking. →It is not a fault. When the display light (red) is on, please replace cartridge.</li> </ul>	EN17  EN19
	<b>The display light (red) is on while the using time has not reached one year.</b>	<ul style="list-style-type: none"> <li>● If the using amount is relatively large, or the cartridge is blocked which lead to the decrease of the flow, even though the using time has not reached one year, the display light (red) will still light up. →it is not a fault, please replace the cartridge.</li> </ul> <p><b>When pressing , and the filter replacement light is changed from on status to flashing, it means the cartridge needs to be replaced due to block.</b></p>	EN19
	<b>The filter has been replaced, but the filter replacement light is still on.</b>	<ul style="list-style-type: none"> <li>● Have you pressed  ? →Please press the reset button, until there is a warning sound of “PI-”. (About 3 seconds)</li> <li>● Have you pressed  when the power plug is unplugged? →Plug power plug and press  until there is a warning sound of “PI-”. (About 3 seconds)</li> </ul>	EN20, EN21  EN20, EN21
Drain outlet	<b>There is no water flow when I use “alkaline ion water” or “weak acidic” mode.</b>	<ul style="list-style-type: none"> <li>● Is the drain pipe between the main unit and the special faucet for Alkaline Ionizer bent or squeezed? →Please check the drain pipe, and re-install it until there is water outflow.</li> </ul>	—
Others	<b>The filter replacement light flashes alternately between green ↔ red.</b>	<ul style="list-style-type: none"> <li>● Is the cartridge installed securely? →Please install it securely.</li> </ul>	EN20, EN21
	<b>None of the display light in the control panel is on.</b>	<ul style="list-style-type: none"> <li>● Has the power plug been unplugged? →Please plug the power plug.</li> <li>● Machine fault →Please unplug the power plug and contact a dealer or subordinate service station of Panasonic.</li> </ul>	EN9  —
	<b>All the water quality indicator lights suddenly flash or light up, and the button cannot be operated.</b>	<ul style="list-style-type: none"> <li>● The service life of the Alkaline Ionizer’s electrolyzer has been reached. (About 850 hours) (A warning sound of “PI-” will be made for five times.) →If the electrolysis time is over 850 hours, the electrode plate will be consumed and no electrolytic reaction can be made. Please contact a dealer or subordinate service station of Panasonic.</li> <li>● Machine fault →Please unplug the power plug and contact a dealer or subordinate service station of Panasonic.</li> </ul>	—  —
	<b>The unpleasant smell, taste or impurities cannot be removed.</b>	<ul style="list-style-type: none"> <li>● The filter capacity of the cartridge has reduced. →Please replace the cartridge.</li> </ul>	EN19 ~ EN21
	<b>The pH level cannot be increased.</b>	<ul style="list-style-type: none"> <li>● Please tighten the water stop valve to reduce flow.</li> </ul>	EN17

Phenomenon	Cause and method of disposal	Pages for reference
<b>The water flow is reduced, or the water cannot flow out.</b>	<ul style="list-style-type: none"> <li>● Is the water pressure too low? →It is not a fault. Please contact a dealer or subordinate service station of Panasonic.</li> <li>● Is the water stop valve too tight? →Please open the water stop valve.</li> <li>● Is the filter replacement light (red) on? →Please replace the cartridge.</li> <li>● Has the cartridge been installed? Is the tray under the cartridge correctly installed? →Please confirm that the tray has been installed.</li> <li>● Whether the power is off or the water supply is stopped? →Before power supply and water supply are recovered, please wait with patience.</li> <li>● Open water stop valve and replace cartridge, if the water flow cannot be increased, it may be caused by the block of the gasket attached with strainer near the water stop valve. →Please contact a dealer or subordinate service station of Panasonic.</li> </ul>	<p style="text-align: center;">—</p> <p style="text-align: center;">EN17</p> <p style="text-align: center;">EN19 ~ EN21</p> <p style="text-align: center;">EN20</p> <p style="text-align: center;">EN22</p> <p style="text-align: center;">—</p>
<b>The water which flows out is warm.</b>	<ul style="list-style-type: none"> <li>● The heat of the room temperature or the main unit will make the temperature of the water rising, therefore, the water flow is warm. →This phenomenon is not a fault, please let the water flow out.</li> </ul>	<p style="text-align: center;">—</p>
<b>After the water outflow stops, there will be drip in the main spout and the drain outlet.</b>	<ul style="list-style-type: none"> <li>● This is because of the switching method adopted by the water inlet. →This phenomenon is not a fault. Refer to “About dripping” (P.EN28)</li> <li>● This situation is mainly due to the air in the cartridge that has not been completely discharged. →Please flow out the about 10 L of purified water (about 5 minutes) to discharge the air.</li> <li>● Whether the automatic cleaning of the electrode is conducting? →It is not a fault. After automatic cleaning, the dripping phenomenon will exist in a short-term due to the effect of the gas generated in the electrolyzer. If it is a concern, please run water for about 2 cups.</li> </ul>	<p style="text-align: center;">—</p> <p style="text-align: center;">—</p> <p style="text-align: center;">EN22</p> <p style="text-align: center;">—</p>
<b>After stopping water outflow, some water will flow out from the drain outlet in a short time.</b>	<ul style="list-style-type: none"> <li>● The water flows out is the water residing in the piping. →It is not a fault.</li> </ul>	<p style="text-align: center;">—</p>
<b>The outlet water cannot be stopped right away after water run through.</b>	<ul style="list-style-type: none"> <li>● The water will not stop right away (about 1 second) after water run through. →To avoid great abrupt force applied to the piping. It is not a fault.</li> </ul>	<p style="text-align: center;">EN16, EN17</p> <p style="text-align: center;">—</p>
<b>The button cannot be used after using the “weak acidic” mode.</b>	<ul style="list-style-type: none"> <li>● The weak acidic water in the main unit will be discharged to protect the Alkaline Ionizer (about 5 seconds). →It is not a fault.</li> </ul>	<p style="text-align: center;">EN16, EN17</p> <p style="text-align: center;">—</p>
<b>There is condensed water in piping, let water drips from the pipe.</b>	<ul style="list-style-type: none"> <li>● In humid places, many drips of water may condense. →Please contact a dealer or subordinate service station of Panasonic to handle by covering the piping with heat isolation material.</li> </ul>	<p style="text-align: center;">—</p>
<b>There is no warning sound even if the “weak acidic” mode is used.</b>	<ul style="list-style-type: none"> <li>● Have you disabled the warning sound? →Under the status of the water run through is stopped, please press  until there is a warning sound of “PI, PI, PI, PI”. (About 3 seconds)</li> </ul>	<p style="text-align: center;">EN17</p>

Others

When necessary

English

# Troubleshooting (continued)

## About dripping

Because the faucet uses “the method of installing switch in the water inlet” (as shown below), the following conditions will happen, but they are not abnormal phenomena.

- After pressing the water stop/water run through button, the outlet water will not stop immediately, and the main spout and drain outlet will have dripping water.

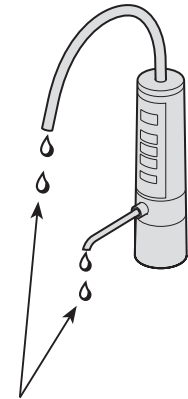
(In case of low water temperature (in winter or when the underground water is used) or if the air enters into the inside of the cartridge, this phenomenon will be relatively easy to happen.)

- During and after the automatic cleaning, the water residing in the faucet will flow out due to the bubbles generated by electrolysis.
- This phenomenon is also easy to happen when the water pressure is relatively high. At this time, please contact a dealer or subordinate service station of Panasonic.)

- Compared with the early use period, the amount of drip has increased.

(It is due to the clogging of the cartridge with the increase of the using time.

If it is a concern, the cartridge can be replaced. The dripping phenomenon will recover to that in the early use period when the water outflow stops.)

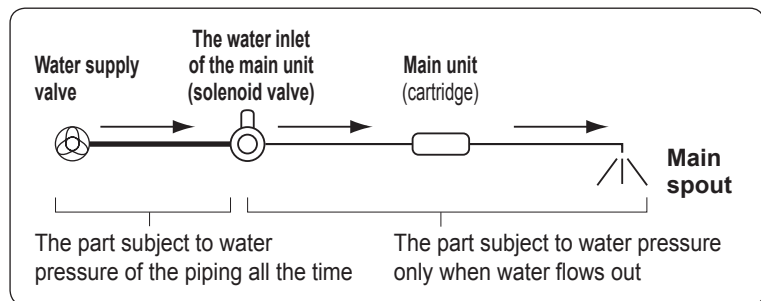


Normal phenomenon

- The so-called method of installing switch in the water inlet

In this method, the main unit (cartridge) bears water pressure only when water flows out.

Therefore, this method can avoid major damage caused by water leakage while the user is not at home.

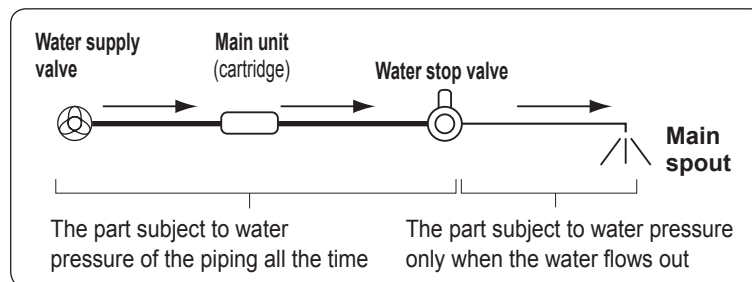


## Prohibited.

Please do not use piping that adopts the method of installing switch at the main spout.

- In the so-called method of installing switch at the main spout, the main unit (cartridge) is subject to water pressure all the time.

The water will stop immediately after pressing Water Stop/Flow in the method of installing the switch in the main spout.



# Optional Accessories

Please purchase from a dealer or subordinate service station of Panasonic.

## Consumables

- Replacement cartridge  
Model No.: TK-AS45C1

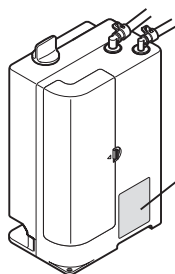


## Emergency treatment method

In case of abnormality (such as smell of burning, etc.), immediately stop the Alkaline Ionizer and unplug the power plug.

- If the Alkaline Ionizer is operated continuously under abnormal status, a fire or electric shocks may happen due to the phenomenon of heating, etc.
- Please contact a dealer or subordinate service station of Panasonic as soon as possible.
- When the power cord is damaged, it is required to be replaced by a dealer or subordinate service station of Panasonic to avoid hazard.

## Mark position of the manufacturing number



The manufacturing number is marked on this label.

When necessary

English

# Specifications

Rating	220-240 V ~ , 50 Hz, 0.5 A	
Power consumption	Approx. 45 W (approx. 1 W during standby)	
Materials	Main unit	ABS resin, platinum group metal, titanium
	Faucet	Polyethylene, stainless steel, POM resin
	Connecting pipe	Polyethylene, brass
Filter material	Non-woven fabric, granular activated carbon, ceramic, powdered activated carbon, hollow fiber membrane	
Filtration flow volume	2.2 liters/minute [When the water pressure is 100 kPa, and the temperature is 20°C] <b>(Note 1)</b>	
The lowest applicable dynamic water pressure	70 kPa	
Pressure of water used by Alkaline Ionizer (dynamic pressure)	70 kPa to 350 kPa	
Usable water service pressure (static pressure)	70 kPa to 750 kPa	
Electrolysis	Electrolysis method	Continuous electrolysis
	Output water volume (flow of water produced)	2.0 liters/min. [When the water pressure is 100 kPa, and the temperature is 20°C] 3.0 liters/min. [When the water pressure is 200 kPa, and the temperature is 20°C]
	Electrolytic capability selection	Alkaline: 3 levels; Acidic: 1 level
	Continuous operation capability	Approx. 30 minutes at room temperature <b>(Note 2)</b> (Alkaline ion water (strong) and weak acidic water is about 15 minutes) <b>(Note 3)</b>
	Electrolyzer life	Approx. 850 hours cumulative (ion water production time, cleaning time only)
	Electrolytic cleaning	Auto cleaning method (Cleaning time: about 35 seconds; Sewage discharging time: about 15 seconds)
Temperature of water used by Alkaline Ionizer	Under 35 °C	
Purification capacity <b>(Note 1)</b>	Free residual chlorine	12 000 liters <b>(Note 4)</b>
	Turbidity	12 000 liters <b>(Note 5)</b>
	Total trihalomethane	12 000 liters <b>(Note 4)</b>
	Chloroform	12 000 liters <b>(Note 4)</b>
	Bromodichloromethane	12 000 liters <b>(Note 4)</b>
	Dibromochloromethane	12 000 liters <b>(Note 4)</b>
	Bromoform	12 000 liters <b>(Note 4)</b>
	Tetrachloroethylene	12 000 liters <b>(Note 4)</b>
	Trichloroethylene	12 000 liters <b>(Note 4)</b>
	1,1,1-Trichloroethane	12 000 liters <b>(Note 4)</b>
	CAT (pesticide)	12 000 liters <b>(Note 4)</b>
	2-MIB (mold smell)	12 000 liters <b>(Note 4)</b>
	Soluble lead	12 000 liters <b>(Note 4)</b>
Substances other than above that can be removed.	Iron (particulate form)	Can be removed. <b>(Note 6)</b>
	Aluminum (neutral)	Can be removed. <b>(Note 6)</b>
	Geosmin (mold smell)	12 000 liters <b>(Note 6)</b>
	Phenols	12 000 liters <b>(Note 6)</b>
Components which cannot be filtered out	Iron dissolved in water, heavy metals (silver, copper, etc.), salt (seawater)	
Guide for time to replace cartridge	Approx. 1 year <b>(Note 7)</b>	
Main unit	Dimensions (width × depth × height)	170 mm (W) × 115 mm (D) × 300 mm (H)
	Weight	Approx. 2.4 kg (approx. 2.9 kg when full of water)
Faucet	Format	Attached faucet base: vertical type, single hole
	Mounting hole	Diameter: 35 mm to 38 mm
	Main spout	Rotary type
	Dimensions (turning radius × height)	171 mm × 310 mm (H)
Length of power cord	Power supply part: About 1 200 mm; Operation panel: About 940 mm	

- The above values are given for cartridge TK-AS45C1.
- All figures given are for a water temperature of 20 °C.
- This product cannot convert hard water into soft water.

**Note 1:** The water which can be used as alkaline ion water and acidic water is equivalent to about 92 % of the filtration flow volume.

**Note 2:** This period may be shorter depending on the water quality and usage environment.

**Note 3:** The time for alkaline ion water (mild) / (strong) in the mode of hydrogen adjustment is about 15 minutes.

**Note 4:** This value is for a removal rate of 80 % based on JIS S 3201 tests.

**Note 5:** This value is for a filtration flow volume of 50 % based on JIS S 3201 tests.



**Note 6:** This value is for a removal rate of 80 % based on specification standard tests (JWPAS B standards) stipulated by the Japan Water Purifier Association (JWPA).

Note that the removal of iron (particulate form) and aluminum (neutral) are not stipulated as part of purification capacity.

**Note 7:** This period applies when 30 liters of water are used a day. The standard of the changing time of filter material (cartridge) will have obvious differences due to the type of the filtered substance, used water volume, water quality, water pressure and other factors.

When necessary

English

Inspection		Check the Alkaline Ionizer you've been using for years!	
	<p>Are any of the following symptoms applicable?</p>	<ul style="list-style-type: none"> <li>• The indicator does not light up after inserting the power plug.</li> <li>• All the indicators on the control panel suddenly blink and the warning sound beeps for five times.</li> <li>• All the water quality indicator lights light up and the warning sound beeps for five times.</li> <li>• Some other trouble or failure has occurred.</li> </ul>	<p>Stop using immediately</p> <p>To avoid accident, please unplug the power plug from the power outlet, and please contact a dealer or subordinate service station of Panasonic to handle the issue.</p>
愛心檢查		請對長年累月使用的鹼性離子整水器進行檢查	
	<p>是否有這樣的現象？</p>	<ul style="list-style-type: none"> <li>• 將電源插頭插入後，顯示燈仍不會點亮</li> <li>• 操作面板的所有顯示燈突然閃爍，發出5次警告聲</li> <li>• 所有水質顯示燈突然亮燈，發出5次警告聲</li> <li>• 出現其他異常現象或故障</li> </ul>	<p>停止使用</p> <p>為避免發生事故，請從插座拔下電源插頭，並務必委託經銷商或Panasonic直屬服務站處理。</p>