USER'S MANUAL

ORIGINAL INSTRUCTIONS

HYDRO MODULE UNIT (HMU)

HMU140KXZE1
HMU280KXZE1

USER'S MANUAL **ENGLISH**

ANWENDERHANDBUCH **DEUTSCH**

MANUEL DE L'UTILISATEUR **FRANÇAIS**

MANUAL DEL PROPIETARIO **ESPAÑOL**

ISTRUZIONI PER L'USO **ITALIANO**

GEBRUIKERSHANDLEIDING **NEDERLANDS**

KULLANIM KILAVUZU **TÜRKÇE**

MANUAL DO UTILIZADOR **PORTUGUÊS**

РУКОВОДСТВО ПО ЭКСПЛУАТАЦИИ U **РУССКИЙ**

PODRĘCZNIK UŻYTKOWNIKA **POLSKI**

※ Please refer to the manual provided with WIRED REMOTE CONTROL (RC-EX3H)
※ Weitere Informationen finden Sie in der mit der KABEL-FERNBEDIENUNG (RC-EX3H) mitgelieferten Bedienungsanleitung.
※ Veuillez-vous reporter au manuel fourni avec la TÉLÉCOMANDE FILAIRE (RC-EX3H)

※ Consulte el manual suministrado con el MANDO A DISTANCIA ALÁMBRICO (RC-EX3H)
※ Consultare il manuale in dotazione con TELECOMANDO CABLATO (RC-EX3H)
※ Raadpleeg de handleiding meegeleverd met de BEDRADE AFSTANDSBEDIENING (RC-EX3H)

※ Lütfen KABLOLU UZAKTAN KUMANDA (RC-EX3H) ile birlikte verilen kılavuza bakınız.
※ Consulte o manual fornecido com o CONTROLO REMOTO COM FIOS (RC-EX3H)
※ Пожалуйста, обратитесь к руководству, которое поставляется с ПРОВОДНЫМ ПУЛЬТОМ ДИСТАНЦИОННОГО УПРАВЛЕНИЯ (RC-EX3H)

※ Należy zapoznać się z podręcznikiem dołączonym do PRZEWODOWEGO ZDALNEGO STEROWANIA (RC-EX3H)

CE EAC UKCA

This product complies with following directives/regulations

EU		GB	
MD	2006/42/EC	SMR S.I.	2008/1597
LVD	2014/35/EU	EER S.I.	2016/1101
EMC	2014/30/EU	EMC S.I.	2016/1091
RoHS	2011/65/EU	RoHS S.I.	2012/3032
Ecodesign	2009/125/EC	Ecodesign S.I.	2020/1528

CE and UKCA marking is applicable to the area of 50 Hz power supply

Ce climatiseur est conforme aux directives suivantes.
Machines 2006/42/CE
Basse tension 2014/35/UE
CEM 2014/30/UE
Équipements sous pression 2014/68/UE
RoHS 2011/65/UE
Écoconception 2009/125/CE
La marque CE s'applique aux régions alimentées en courant de 50 Hz.

Diese Klimaanlage erfüllt die folgende Richtlinie.
Maschinen 2006/42/EC
Niederspannung 2014/35/EU
EMV 2014/30/EU
Druckgeräte 2014/68/EU
RoHS 2011/65/EU
Ökodesign 2009/125/EC
Die CE-Marke gilt für Bereiche mit einer Netzstromversorgung von 50 Hz.

Questo condizionatore d'aria è conforme alla seguente direttiva.
Macchinario 2006/42/CE
Bassa tensione 2014/35/UE
EMC 2014/30/UE
Apparecchiature a pressione 2014/68/UE
RoHS 2011/65/UE
Ecodesign 2009/125/CE
Il marchio CE è applicabile alla fascia di alimentazione 50 Hz.

Este aire acondicionado cumple con la siguiente directiva.
Máquinas 2006/42/CE
Baja tensión 2014/35/UE
EMC 2014/30/UE
Equipos a presión 2014/68/UE
RoHS 2011/65/UE
Ecodiseño 2009/125/CE
La indicación CE sólo corresponde al área de suministro eléctrico de 50 Hz.

Deze airconditioner voldoet aan de volgende richtlijn.
Machine 2006/42/EC
Laagspanning 2014/35/EU
EMC 2014/30/EU
Drukapparatuur 2014/68/EU
RoHS 2011/65/EU
Ecodesign 2009/125/EC
CE-markering is van toepassing op het gebied met een netstroom van 50 Hz.

Este ar condicionado está em conformidade com as seguintes directivas.
Máquinas 2006/42/CE
Baixa tensão 2014/35/UE
EMC 2014/30/UE
Equipamentos sob pressão 2014/68/UE
RoHS 2011/65/UE
Concessão ecológica 2009/125/CE
A marca CE aplica-se à zona de fornecimento de energia a 50 Hz.

Ten klimatyzator jest zgodny z następującymi dyrektywami.
Dyrektywa maszynowa 2006/42/WE
Dyrektywa niskonapięciowa 2014/35/UE
Dyrektywa EMC 2014/30/UE
Dyrektywa o urządzeniach ciśnieniowych 2014/68/UE
Rozporządzenie RoHS 2011/65/EU
Rozporządzenie w sprawie ekoprojektu 2009/125/WE
Oznaczenie CE ma zastosowanie do systemów zasilanych prądem o częstotliwości 50 Hz.

MCD012A001
202208

Thank you very much for your purchase of hydro module unit produced by Mitsubishi Heavy Industries. Please read through this manual before using the product and use the product appropriately according to the instructions in the manual. After you have read the manual, store it with the warranty certificate in a safe place.

This Product contains fluorinated greenhouse gases.
Do not vent R410A into the atmosphere: R410A is a fluorinated greenhouse gas with a Global Warming Potential (GWP) = 2088.
Refer to a label on outdoor unit for the weight of fluorinated greenhouse gas and CO_2 equivalent.

The emission sound pressure level from each Indoor and Outdoor unit is under 70 dB(A).
This appliance is intended to be used by expert or trained users in shops, in light industry and on farms, or for commercial use by lay persons.

SAFETY PRECAUTIONS

ENGLISH

- **Please read these "SAFETY PRECAUTIONS" before starting to use this product and use the product appropriately according to the instructions.**
- **The precautions provided here are classified into "⚠ DANGER" and "⚠ CAUTION". The "⚠ DANGER" sections describe potentially hazardous situations that may lead to serious outcomes such as death and serious injuries if the product is mishandled. Note, however, that depending on the situation, the items listed in the "⚠ CAUTION" sections do also have the potential of causing serious outcomes. Both warnings and cautions provide you important information related to safety ; please make sure to observe them.**
- **The symbols used throughout the main text of this manual have the following meaning.**

⚠ △ marks mean danger, alarm, and caution. The specified prohibited item is described in the triangle. The left mark means "Shock hazard alarm".

○ marks mean prohibited items. The specified prohibited item is described in the circle or in the vicinage.

● marks mean compulsory action or instruction. The specified prohibited item is described in the circle. The left mark means "Earth is needed".

The user's manual should be read carefully.

There is information included in the user's manual and/or installation manual.

A service personnel should be handing this equipment with reference to the installation manual.

- **After you have read the manual, always store it where other users can refer to at any time. If a new owner takes over the system, make sure to pass this manual.**

⚠ DANGER

Strict compliance of the domestic laws must be observed when disposing the appliance.

Do not use means to accelerate the defrosting process or to clean, other than those recommended by the manufacturer.

The appliance shall be stored in a room without continuously operating ignition sources (for example: open flames, an operating gas appliance or an operating electric heater).

Do not pierce or burn.

Be aware that refrigerants may not contain an odour.

The appliance shall be stored in a well-ventilated area where the room size corresponds to the room area as specified for operation.

The staff in servicing operations must hold the national qualification or other relevant qualifications.

This unit should be installed in rooms which exceed the floor space specified in installation sheets of indoor/outdoor unit.

Refer to the installation sheet.

INSTALLATION PRECAUTIONS

⚠ DANGER

Make sure to have the installation done by your dealer or a specialist.

If you install by yourself and the unit is not properly installed, water leakage, electric shock, fire and injuries caused by the drop of the unit may occur.

The preventive measures that the density of leaked refrigerant does not exceed the limit is necessary in case of installing the unit in a small room.

The leakage of refrigerant may cause oxygen deficiency accident. Consult your dealer for the measures.

⚠ CAUTION

Make sure to perform grounding work.

Do not connect grounding wire to any gas pipe, water pipe, conductor rods or telephones. Incomplete grounding may cause electric shock through leakage of electricity.

Make sure to mount a leakage breaker.

Otherwise electric shock may occur. Please consult your dealer or a specialist for the mounting.

Do not mount where flammable gas leakage can happen.

If leaked gas stagnates in the unit, the gas may cause fire.

Make sure to layout the drain pipe so that the water is completely drained.

Otherwise, water may leak and wet household goods.

Do not shut off the power supply immediately after stopping the operation.

Wait at least 5 minutes, otherwise there is a risk of water leakage or breakdown.

OPERATION PRECAUTIONS

⚠ DANGER

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.

Cleaning and user maintenance shall not be made by children without supervision.

Do not make the room too cold.

It may be cause of deconditioning or health disorder.

Do not insert fingers or sticks into the air outlet.

It may cause injuries because of the fan rotating at high speed.

If the unit has been submerged under water due to a natural disaster such as flood or typhoon, consult your dealer before using it again.

If you use it as it stands, it may lead to failure, electric shock or fire.

If any abnormal symptom (scorched flavor etc.) is found, cut off the power and stop the operation.

Then consult your dealer.

If you use it as it stands, it may lead to failure, electric shock or fire.

One of the causes of poor cooling or poor heating may be refrigerant leakage. Please consult your dealer.

If the repair requires additional refrigerant, determine the service with the service staff. The refrigerant of hydro module unit is not toxic.

Normally the refrigerant does not leak. But if it leaks and contacts fire such as fan heater, space heater or cooking heater, it may produce toxic chemicals.

When a child or sick person who may need help uses it, nearby people should take care of them sufficiently.

When the hydro module unit is stopped by some abnormal condition, the motion sensor control, or other, it could affect health condition or cause accident.

⚠ CAUTION

Do not use for particular purpose such as the storage of food, animals and plants, precision apparatus and arts etc.

Storage goods may degrade.

Do not operate the button with wet hand.

It may cause electric shock.

When a burning appliance is used together with the unit, ventilate frequently.

If ventilation is not sufficient, it may cause oxygen deficiency accident.

Make sure that the unit installation foundation is not damaged due to long-term use.

If it is left to stand, the unit may fall down causing injury.

Do not wash the unit with water, nor place a vase with water on the unit.

It may cause electric shock or ignition.

Before cleaning, make sure to stop operation and cut off the power.

Make sure to use proper size of fuse.

Using steel wire or copper wire may lead to failure or fire.

Do not store a flammable spray etc. near the unit, nor blow directly to the unit.

It may lead to fire.

Before maintenance, make sure to stop operation and cut off the power.

When the unit isn't used for a long-term, cut off the power.

The accumulation of dirt may lead to heat generation or fire. But, before resuming the operation, turn on the unit for six hours beforehand to save harmless.

Do not place any other electric appliances or household goods below or around the hydro module unit.

Dripping from the unit may lead to failure or contamination.

Do not clean the inside of the indoor unit by yourself. Make sure to consult your dealer or user inquiry counter specified by our company.

If you select incorrect detergent or improper method, resin parts may be damaged and lead to water leakage. If the detergent is dropped on the electric component or motor, it may lead to failure, smoking or ignition.

Do not place objects on the outdoor unit, nor mount on it.

It may lead to injuries resulting from dropping or falling.

During the operation or maintenance, do not use an unstable footrest.

It may lead to injuries resulting from falling.

During thunderstorm, stop the operation and turn off the switch.

A lightning strike may lead to failure.

After several seasons of operating, inspections and maintenances are required except routine care and cleaning.

Accumulated dirt or dust inside the indoor unit may cause odor, water leakage through the clogging of water discharging pipe for dehumidification. Specialized information and skills are required for inspections and maintenances. Therefore contact your dealer.

Do not place any object around the outdoor unit, nor allow fallen leaves to pile up.

Fallen leaves may induce insects and worms in them, and they may lead to failure, ignition or smoking by touching electric components.

Do not use with front panel removed.

Otherwise, it may lead to injuries.

Do not operate or stop the unit by using the power supply switch.

It may lead to fire or water leakage.
If auto restart is set effectively, the fan may rotate suddenly causing injuries.

Do not strain the remote control cord.

A part of core wire may be cut off causing electric leakage.

Do not use water heater etc. near the indoor unit or remote control.

If a Vapor-generating appliance is used near them, it may lead to water drop causing electric leakage or short circuit.

Do not place objects under the unit which must avoid being exposed to water.

Over 80 percent humidity or the clogging of drain pipe may damage them through dew dropping.

When the refrigerant leaked accidentally, turn off the stove, or other, and ventilate air sufficiently.

Do not expose yourself directly to radiator or any other heating device for a long time.

It may cause low temperature burn injury.

Do not set water temperature too high when under-floor heating application is used.

It may cause low temperature burn injury.

The quality of circulating water shall be as specified in the DATA BOOK for hydro module unit.

Do not perform any change of protective device itself or its setup condition.

The forced operation by short-circuiting protective device of pressure switch and temperature controller or the use of non specified component can cause fire or burst.

PRECAUTIONS FOR RELOCATION OR REPAIRING

⚠ CAUTION

Never perform any modification. Contact your dealer for repairing.

Improper repairing may lead to water leakage, electric shock or fire. Normally the refrigerant does not leak. But if it leaks and contacts fire such as fan heater, space heater or cooking heater, it may produce toxic chemicals. When repairing refrigerant leakage, determine the service with the service staff that the repair has been finished without fault.

If it is required to relocation and reinstall the unit, consult your dealer or a specialist.

Improper installation of hydro module unit may cause water leakage, electric shock and/or fire.

Before repairing or checking indoor unit, be sure to turn off “Indoor unit power supply breaker”.

It can result in electric shock or injury due to rotation of indoor unit fan if you perform check or repair with the “Indoor unit power supply breaker” turned on.

Place the panels removed for repairing or checking on the stable spot.

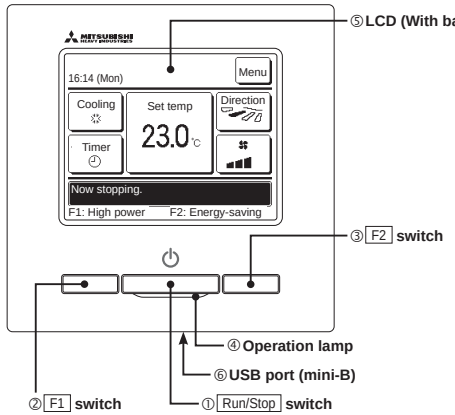
Otherwise, dropping or falling may lead to injury.

PRECAUTIONS FOR WASTE DISPOSAL

Your hydro module unit may be marked with this symbol. It means that waste electrical and electronic equipment (WEEE as in directive 2012/19/EU) should not be mixed with general household waste. Air conditioners including hydro module unit should be treated at an authorized treatment facility for re-use, recycling and recovery and not be disposed of in the municipal waste stream. Please contact the installer or local authority for more information.

NAMES AND FUNCTIONS OF REMOTE CONTROL BUTTONS < WIRED REMOTE CONTROL (RC-EX3H) >

NAMES AND FUNCTIONS OF SECTIONS ON THE R/C (OPERATING SECTION)



Touch panel system, which is operated by tapping the LCD screen with a finger, is employed for any operations other than the ① Run/Stop, ② F1 ③ F2 switches.

① Run/Stop switch

One push on the button starts operation and another push stops operation.

② F1 switch ③ F2 switch

This switch starts operation that is set in F1/F2 function setting.

④ Operation lamp

This lamp lights in green (yellow-green) during operation. It changes to red (orange) if any error occurs.
Operation lamp luminance can be changed.

⑤ LCD (With backlight)

A tap on the LCD lights the backlight.
The backlight turns off automatically if there is no operation for certain period of time.
Lighting period of the backlight lighting can be changed.
If the backlight is ON setting, when the screen is tapped while the backlight is turned off, the backlight only is turned on. (Operations with switches ①, ② and ③ are excluded.)

⑥ USB port

USB connector (mini-B) allows connecting to a personal computer.
For operating methods, refer to the instruction manual attached to the software for personal computer (remote control utility software).

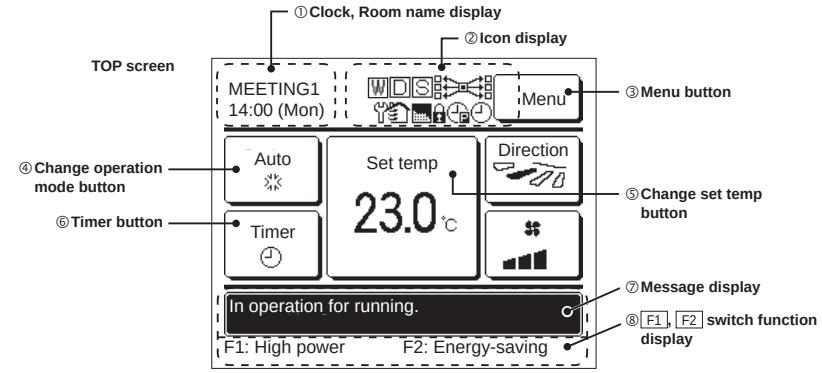
NOTE

- When connecting to a personal computer, do not connect simultaneously with other USB devices. Please be sure to connect to the computer directly, without going through a hub, etc.

NAMES AND FUNCTIONS OF REMOTE CONTROL BUTTONS < WIRED REMOTE CONTROL (RC-EX3H) >

NAMES AND FUNCTIONS OF SECTIONS ON THE R/C (DISPLAY)

* All icons are shown for the sake of explanation.



① Clock, Room name display

Displays the current time and the room name.

② Icon display

Each icon is displayed when one of following settings is going on.

- When the demand control is effective.
- When setting is made from the sub R/C.
- When the central control (Option) is running.
- When the periodical inspection is necessary.
- When the Permission/ Prohibition setting is made.
- When the weekly timer is set.
- When the peak-cut timer is set.
- When HMU is connected.

③ Menu button

When setting or changing other than the following ④-⑥, tap the menu button. Then menu items are displayed, select one and set.

④ Change operation mode button

Displays the operation mode which is selected currently. Tap this button to change the operation mode.

⑤ Change set temp button

Displays the temperature which is set currently. Tap this button to change the set temperature.

⑥ Timer button

Displays simplified contents of the timer which is set currently. (When two or more timers are set, contents of the timer which will be operated immediately after is displayed.)
Tap this button to set the timer.

⑦ Message display

Status of hydro module unit operation and messages of the R/C operations etc. are displayed.

⑧ F1, F2 switch function Display

Displays the function that is set for each F1, F2 switch. The function for these switches can be changed in F1/F2 function setting.

UNIT SPECIFICATIONS

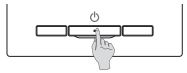
Item	Description
Product dimensions	120 (W) x 120 (H) x 19 (D) mm (not including protruded section)
Weight	0.20 kg
Power source	DC 18 V
Power consumption	0.6 W
Usage environment	Temperature: 0 to 40 °C
Material	Casing: ABS

HOW TO OPERATE < WIRED REMOTE CONTROL (RC-EX3H) >

ATTENTION

- In order to protect both hydro module unit and outdoor unit keep the power supply on for six hours before initial operation. (The crank case heater is energized in order to heat up the compressor.) Do not turn off the power supply. (Power is distributed to the crankcase heater, even if the compressor is stopped. This keeps the compressor warm, and prevents failures caused by accumulation of liquid refrigerant.)

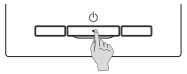
RUN

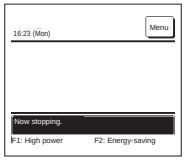


1 Push the Run/Stop switch.

Operation lamp (green) lights and operation starts.

STOP





1 Press the Run/Stop switch while the unit is in operation.

The operation lamp turns off and the operation stops.

When the operation stops, all operation buttons on the screen turn off. When the set lighting time of backlight is counted up, the backlight turns off.
When the screen is tapped, the backlight lights, and all operation buttons are displayed.

NOTE

- Do not shut down the power supply immediately after the stop of operation. It should be waited for more than 5 minutes till the residual operation time of drain motor is counted up. Otherwise, it could cause water leakage or breakdown.

ADVICE

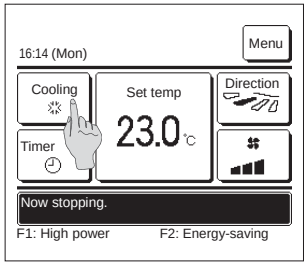
- A message “Invalid request” may be displayed when a button is pushed. This is not a fault but it is because the button operation is set to the “Disable”.
- The unit starts to operate initially with the following settings after the power on. These settings can be changed as desired.
  - Central control …… OFF
  - Operation mode …… With auto mode: Auto cooling
  - …… Without auto mode: Cooling
  - Set temp …… 23.0°C
- In the following cases, a message “Operation mode is invalid.” is displayed and it changes to the pump operation, because operation modes are not matched.
  - ① When Heating (including auto heating) is selected for Operation mode while using an OU for cooling only.
  - ② When Heating is selected for Operation mode while controlling multiple units including units allowed for both cooling and heating and units for cooling only.
  - ③ When different operation modes are selected between IUs which are connected to a OU that do not allow mixed operation of cooling and heating.

ATTENTION

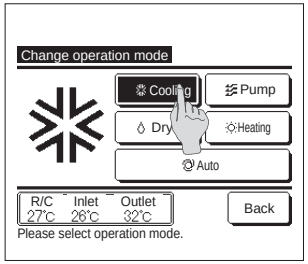
- The display of “Operation mode is invalid.” flashes and the operation is switched to “Pump” in the following case because the operation modes do not match.
- When other indoor units are operating in different modes.
- Do not turn the hydro module unit system on/off frequently.
- Do not use sharp objects to press the remote controller switches.

HOW TO OPERATE < WIRED REMOTE CONTROL (RC-EX3H) >

CHANGE OPERATION MODE



1 Tap the Change operation mode button on the TOP screen.



2 When the Change operation mode screen is displayed, tap the button of desired mode.

The operation mode changes, and the display returns to the TOP screen. Icons displayed have the following meanings.

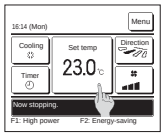
Cooling **Pump**

Dry * **Heating**

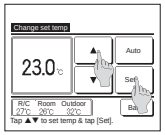
Auto *Invalid for HMU

- Operation modes which cannot be selected depending on combinations of IU and OU are not displayed.
- When the Auto is selected, the cooling and heating switching operation is performed automatically according to indoor and outdoor temperatures.

CHANGE SET TEMP



1 Tap the Change set temp button on the TOP screen.



2 When the Change set temp screen is displayed, select the temperature as desired with using ▲ ▼ buttons.

3 After selecting the set temp, tap the Set button. The display returns to the TOP screen.

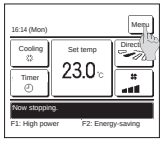
- For allowable temperature setting ranges, refer to the range setting of set temp.

*1: Do not set the temperature lower than 7 °C in cooling mode.
If the remote control is set lower than 7 °C, it will automatically be set to 7 °C.

*2: Do not set the temperature lower than 25 °C (or 30 °C) in heating mode, even though it can be set 15 °C - 25 °C. It may cause protection stop depending on the situation.
The minimum set temperature (25 °C or 30 °C) depends on outdoor temperature. (See “OPERATION RANGE”, P.13)

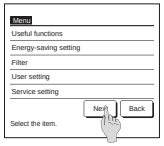
- If the Auto is selected for the set temp, the set temp display shows “0”. Temperature can be adjusted higher or lower with using ▲ ▼ buttons. Note that Auto is not displayed and cannot be set when SC-SL2, SC-SL3, or SC-SL4 is connected.
- If the Back button is tapped without tapping the Set button, the selected set temp is invalidated and the display returns to the TOP screen.

OPERATIONS ON MENU SCREENS

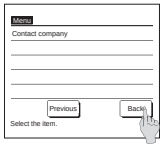


1 Tap the Menu button on the TOP screen.

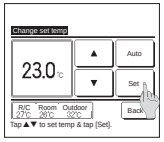
Main menu screen is displayed.
When a desired menu item is tapped, setting screen for each item is displayed.
When there are two or more pages, the Next button is displayed at the leading page and the Previous button is displayed at the last page. The Next and Previous buttons are displayed on pages in between.



2 When the Next button is tapped, next main menu screen is displayed.

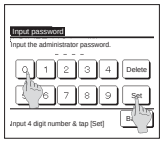


3 When the Back button is tapped, the display returns to the TOP screen.



4 When the Set button is displayed on the setting screen for each item, tapping this button confirms the setting.

■ If you tap Back without tapping the Set button, the settings made will not be applied, and the display returns to the original screen.



5 When an item is referenced to Administrator password, the Input password screen is displayed after selecting the menu.

Enter the administrator password (4-digit number) and tap the Set button.
When the password is unknown or wrong, the setting cannot be changed.

ADVICE

- The administrator password is provided so that these operations and settings are restricted to administrators/managers only (such as the owner of the building).
- For the administrator password at the factory setting, refer to the Installation Manual.

When your administrator password is forgotten, initialize the password by referring to the Installation Manual.

CAUTIONS FOR EACH SETTING SCREEN

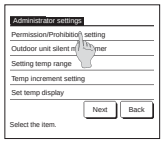
- When returning to the screen mentioned below from each setting screen, operate the following buttons or switches.
  ■ Return to Main screen … Menu button
  ■ Return to the last previous screen … Back button
  ■ Return to TOP screen … Run/Stop switch
- When the Back button is tapped without tapping the Set button on the way of setting, contents of the setting are invalidated, and the display returns to the last previous screen. If the Run/Stop switch is pushed on the way of setting, contents of the setting are invalidated, the setting mode is terminated and the display returns to the TOP screen.
- If no button is operated for approx. 5 minutes on the way of setting each item, the display returns to the TOP screen automatically. Contents of the setting on the way become invalid.
- Message “Invalid request” may be displayed when a button is pushed. This is not a fault but it is because the button is set to the Prohibition.
- It is necessary to stop the hydro module unit by pushing the Run/Stop switch before starting the following settings.
- If the Set button is tapped on the menu screen while the hydro module unit is operating, the message “Invalid request.” is displayed.
  ■ Select the language ■ Energy-saving setting ■ Administrator settings

HOW TO PERFORM THE TIMER OPERATION < WIRED REMOTE CONTROL (RC-EX3H) >

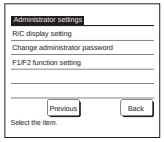
ADMINISTRATOR SETTINGS [ADMINISTRATOR PASSWORD]

1 Tap the Menu button on the TOP screen and select User setting ⇒ Administrator settings.

The administrator password input screen is displayed.
Enter the administrator password.

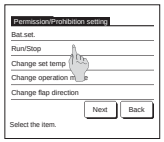


2 When the administrator setting menu is displayed, tap a desired item.



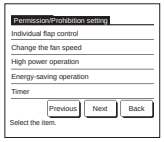
■Permission/Prohibition setting

1 Tap the Menu button on the TOP screen and select User setting ⇒ Administrator settings ⇒ Permission/Prohibition setting. The Permission/Prohibition setting menu is displayed.



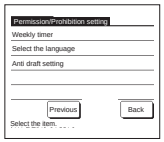
2 Following items can be selected, and the Permission or Prohibition can be set for them.

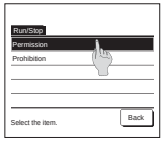
If the Permission is set, the operation is accepted.
If the Prohibition is set, the message “Invalid request” is displayed for 3 seconds.
Some items may require the administrator password.



■ Operation with Prohibition setting

① Bat.set.	...Can set to permit/prohibit all items from ② to ⑬ at once.
② Run/Stop	...Run/Stop operation is prohibited.
③ Change set temp	...Change set temp operation is prohibited.
④ Change operation mode	...Change operation mode operation is prohibited.
⑤ Change flap direction	...Invalid when HMU is connected.
⑥ Individual flap control	...Invalid when HMU is connected.
⑦ Change the fan speed	...Invalid when HMU is connected.
⑧ High power operation	...Invalid when HMU is connected.
⑨ Energy-saving operation	...Invalid when HMU is connected.
⑩ Timer	...Timer setting operation is prohibited.
⑪ Weekly timer	...Administrator password is required for these settings.
⑫ Select the language	...Administrator password is required for this selection.
⑬ Anti draft setting	...Invalid when HMU is connected.





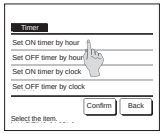
3 Tap Permission or Prohibition for each item.

THE SELECTION OF TIMER MODE

ADVICE

- The Clock setting must be made when the Set ON timer by clock or Set OFF timer by clock is used.

1 Tap the [Menu] button on the TOP screen and select [Useful functions] ⇒ [Timer].



2 Tap a desired item on the Timer menu.

- Set ON timer by hour
- Set OFF timer by hour
- Set ON timer by clock
- Set OFF timer by clock
- Confirm

When the timer is set, the [Confirm] button is displayed.
The button is not displayed unless the timer is set.

■ Operation of each timer

- Sleep timer
  Stops the operation of the unit when the amount of time set has elapsed since the start of the operation. When the setting is enabled, this timer will activate whenever any operation starts.
- Set ON timer by hour
  When the set time elapses, the hydro module unit starts.
  Operating conditions at the start of operation can be set.
  Operation takes place once at each setting.
- Set OFF timer by hour
  When the set time elapses, the hydro module unit stops.
  Operation takes place once at each setting.
- Set ON timer by clock
  The hydro module unit starts at the set time.
  Operating conditions at the start of operation can be set.
  Only one day (Once) operation or operation Everyday can be set.
- Set OFF timer by clock
  The hydro module unit stops at the set time.
  Only one day (Once) operation or operation Everyday can be set
- Weekly timer
  On timer and Off timer on weekly basis can be set.

■ Setting of each timer can be combined. Allowable combination settings are as shown below.

Allowable combination setting (○: Allowed, ×: Prohibited)

	Sleep	OFF: Hours	ON: Hours	OFF: Clock	ON: Clock	Weekly
Sleep		×	×	○	○	○
OFF: Hours	×		×	×	×	×
ON: Hours	×	×		×	×	×
OFF: Clock	○	×	×		○	×
ON: Clock	○	×	×	○		×
Weekly	○	×	×	×	×	

If a prohibited combination setting is made, a message “The combination can't be accepted” is displayed for 3 seconds.

■ Priority order of the timer settings (①→③) is as follows.

① Set OFF timer by hour/clock, weekly OFF timer
② Sleep timer
③ Set ON timer by hour/clock, weekly ON timer

■ On the TOP screen, the timer is displayed from the earliest one out of OFF time of the sleep timer, ON time and OFF time.

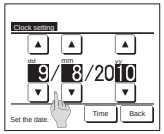
HOW TO PERFORM THE TIMER OPERATION < WIRED REMOTE CONTROL (RC-EX3H) >

SETTING THE TIME

■Clock setting

You can set and correct the current date and time.

1 Tap the [Menu] button on the TOP screen and select [User setting] ⇒ [Initial settings] ⇒ [Clock setting].

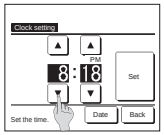


2 The “Clock setting” screen is displayed.

Set the “dd/mm/yy” with the [▲] [▼] buttons.
Tap the [Time] button after the setting.

■ The “clock setting” is necessary for the following settings.

- Peak-cut timer
- Set ON timer by clock, Set OFF timer by clock
- Weekly timer
- Outdoor unit silent mode timer
- Filter sign reset, Setting next cleaning date



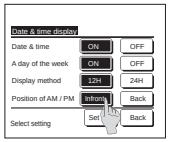
3 Set the “hour : minute” with the [▲] [▼] buttons on the clock setting screen.

Tap the [Set] button after the setting.
To change “dd/mm/yy” tap the [Date] button.

■Date & time display

You can set and correct the date & time display.

1 Tap the [Menu] button on the TOP screen and select [User setting] ⇒ [Initial settings] ⇒ [Date & time display].

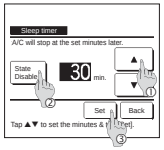


2 The Clock setting screen is displayed.

Tap [OFF] / [ON] for the Date and time.
Tap [OFF] / [ON] for A day of the week.
Tap Display method “12H or 24H”.
[12H] Hours … If it is 3:50 PM, it displays “3:50PM”.
[24H] Hours … If it is 3:50 PM, it displays “15:50”.
Set the position of AM/PM.
Set [Infront] ... “PM3:50” is displayed.
Set [Back] ... “3:50PM” is displayed.

3 Tap the [Set] button after the setting.

SLEEP TIMER MODE



1 **Tap the Menu button on the TOP screen and select Energy-saving setting ⇒ Sleep timer. The Sleep timer screen is displayed.**

2 **Select a desired time with ① ▲ ▼ buttons. Setting range: 30 to 240 minutes, at 10-min intervals.**

3 **Tap the ② State button to switch between "State Enable" and "State Disable".**

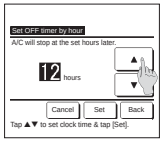
- "Enable": operation stops at the set time every time.
- "Disable": the sleep timer does not operate.
  Unless the Sleep timer is used, set at the "State Disable".

4 **After the setting, tap the ③ Set button. The display returns to the Energy-saving setting menu screen.**

OFF TIMER MODE

■Set OFF timer by hour
When the set time elapses, the hydro module unit stops.

1 **Tap the Menu button on the TOP screen and select Useful functions ⇒ Timer ⇒ Set OFF timer by hour.**

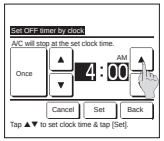


2 **The Set OFF timer by hour setting screen is displayed.**
Select desired hours to stop operation with the ▲ ▼ buttons.
Range of setting time: 1 to 12 hours (at 1-hr intervals)

3 **Tap the Set button after the setting.**

■Set OFF timer by clock
Stops the operation of the unit at the set clock time.

1 **Tap the Menu button on the TOP screen and select Useful functions ⇒ Timer ⇒ Set OFF timer by clock.**



2 **The Set OFF timer by clock setting screen is displayed.**
Select a desired time to stop operation (5-min intervals) with the ▲ ▼ buttons.

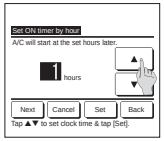
3 **Tap the Set button after the setting.**
The Set OFF timer by clock can be operated one day (Once) or everyday.
If it is operated everyday, tap the Once / Everyday button to change the display to "Everyday".

HOW TO PERFORM THE TIMER OPERATION < WIRED REMOTE CONTROL (RC-EX3H) >

ON TIMER MODE

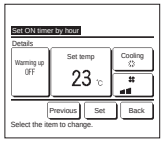
■Set ON timer by hour
When the set time elapses, the hydro module unit starts.

1 **Tap the Menu button on the TOP screen and select Useful functions ⇒ Timer ⇒ Set ON timer by hour.**



2 **The Set ON timer by hour setting screen is displayed.**
Select desired hours for the period to start operation by timer with the ▲ ▼ buttons.
Range of setting time: 1 to 12 hours (at 1-hr intervals)

3 **When operating conditions at the start of operation are set, tap the Next button. (☞4)**
When operating conditions are not set, tap the Set button.

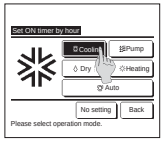


4 **Set the following operating conditions.**
① Warming up ON/OFF (the Main R/C only)
② Operation mode … ☞5
③ Set temp … ☞6

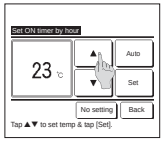
■ Warming up setting can be made with the main R/C only.
■ Set the operation mode before setting the set temperature.

ADVICE **Warming up**

- To warm up the room temperature closed to the set temperature at the set start time of the operation, the microcomputer estimates the start time of the operation based on the last warming up operation and starts the operation 5 to 60 minutes earlier.
- When the warming up is turned ON, set the timer at one hour earlier or more than the start operation by timer.
  If it is set in less than one hour, a message "Warming up cancelled" is displayed on the screen. (This is used as the Set ON timer by hour and clock.)



5 **Tap a desired operation mode.**
If the No setting button is tapped, it starts operation at the last action. (☞4)

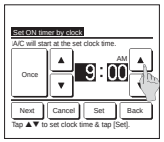


6 **Select a desired temperature (at 1°C intervals) with the ▲ ▼ buttons. Or tap the Auto button and select the auto temp setting.**
Tap the Set button after the adjustment. (☞4)
When the No setting button is tapped, "--°C" is displayed, and it starts operation at the last setting temperature.

7 **After setting the desired contents at the screen of the step 4 on the previous page, tap the Set button.**
Operation will start at set hours later.

■Set ON timer by clock
Starts the operation of the unit at the set clock time.

1 **Tap the Menu button on the TOP screen and select Useful functions ⇒ Timer ⇒ Set ON timer by clock.**



2 **The Set ON timer by hour setting screen is displayed.**
Select a desired time to start operation (5-min intervals) with the ▲ ▼ buttons.

3 **When operating conditions at the start of operation are set, tap the Next button to set operation conditions.**
The operation conditions can be set the same way as the Set ON timer by hour settings.
If operating conditions are not set, tap the Set button.
The Set ON timer by clock can be operated one day (Once) or everyday.
If it is operated everyday, tap the Once / Everyday button to change the display to “Everyday”.

HOW TO PERFORM THE TIMER OPERATION < WIRED REMOTE CONTROL (RC-EX3H) >

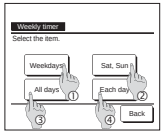
WEEKLY TIMER MODE

You can set four on timer and off timer operations for each day of the week.

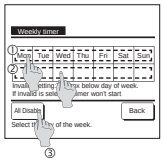
ADVICE

- The Clock setting must be made when the weekly timer is used.
- The weekly timer can be set from the main R/C only.

1 **Tap the Menu button on the TOP screen and select Useful functions ⇒ Weekly timer.**
Enter the administrator password if the administrator password input screen is displayed.
■ There are cases that the Input password screen is displayed by the Permission/Prohibition setting.

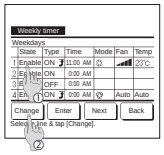


2 **When the screen to select the setting range, select a day of the week to be set.**
① Weekdays : Monday - Friday
② Sat. Sun : Saturday, Sunday
③ All days : Monday - Sunday
(☞5)
④ Each day : Moves to the day of the week setting screen. (☞3)

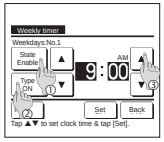


3 **When a desired day of the week ① is tapped on the display, contents of current setting for the day are displayed. (☞5)**

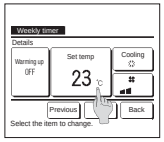
4 **For the holiday setting, tap the block ② under the day to switch between “⊘” (the holiday setting) and “(Blank)” (reset).**
Timer does not operate on the day set as holiday.
Two or more holidays can be set.
■ To enable the timer on the day set as holiday, it is necessary to reset the holiday setting.
When tapping ③ “All Disable” button, the timer does not operate on all days of the week.
When the timer is used, be sure not to set “All Disable”.



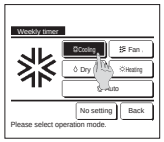
5 **Screen to check contents of current setting is displayed.**
When the contents are changed or new setting is added, select a ① setting line No. and tap the ② Change button.



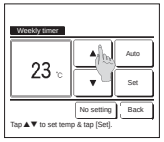
6 **Detail setting screen for the timer setting contents is displayed.**
① Tap the State button to switch between “State Enable” and “State Disable”.
② Tap the Type button to switch between the “OFF timer” and the “ON timer”.
③ Select a desired time (at 5-min intervals) with the ▲ ▼ buttons.
④ In case of “ON timer” when the Next button is tapped, operating conditions at the start of operation can be set. (☞7)



7 **Set the following operating conditions.**
① Warming up ON/OFF
(Operation starts 5 to 60 minutes earlier in order to warm up the room temperature closed to the set temp at the set start time of operation.)
② Operation mode …☞8
③ Set temp …☞9
■ Set the operation mode before setting the set temperature.



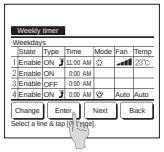
8 **Tap a desired operation mode.**
When the No setting button is tapped, it operates with the same operation mode at the last action. (☞7)



9 **Select a desired temperature (at 1°C intervals) with the ▲ ▼ buttons. Or tap the Auto button to select the Auto temp setting.**

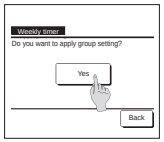
Tap the Set button after the selection. (☞7)
When the No setting button is tapped, "--°C" is displayed, and it starts operation at the last setting temperature.

10 **After setting desired contents at the screen of 7, tap the Set button.**



11 **Display the setting contents check screen. To register the setting, tap the Enter button.**

(1) In case of group setting (2-①Weekdays, 2-②Sat/Sun, 2-③All days setting), move to the group setting screen. (☞12)
(2) In case of the individual setting (2-④Each day setting), save the setting and move to a day of the week selection screen. (☞3)

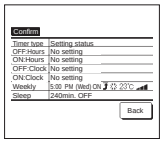


12 **Display the group setting acknowledge screen. Tap the Yes button and save the setting.**

The display changes to a day of the week setting check screen after saving. (☞3)
When making the setting after changing a day of the week, repeat the setting from the step 3.

CONFIRMATION OF CURRENT TIMER SETTING

■**Confirm**



1 **When you tap the Confirm button on the Timer menu screen, the contents of the current timer settings are displayed.**

■ When the warming up is set, " ℑ " is displayed in front of the operation mode on confirmation screen.

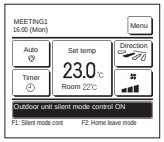
HOW TO OPERATE IN SILENT MODE < WIRED REMOTE CONTROL (RC-EX3H) >

SILENT MODE

The OU is controlled with priority on quietness. You can start/stop the silent mode control with a single tap of a button. Silent mode control must be set to the F1 or F2 switch. Use the Outdoor unit silent mode timer to set the start and end time.

1 **When you press the F1 (F2) switch, the administrator password input screen is displayed.**

After you enter the password, the silent mode control will start.



2 **During silent mode control, "Outdoor unit silent mode control ON" will be displayed on the message display.**

3 **When you press the F1 (F2) switch during silent mode control, the display changes to the administrator password input screen. After you enter the password, the silent mode control will terminate.**

■ Silent mode control will not be disabled even if you press the Run/Stop switch.
Terminate the control with the F1 (F2) switch.

■ This operation is to select enable/disable of silent mode control. You cannot start the operation with the F1 (F2) switches.
Start the operation with the Run/Stop switch.

■ When the sub R/C is set, the silent mode control cannot be used.

■ During silent mode control, operation with maximum capacity is not allowed.

FOR COMFORTABLE USE

Keep moderate room temperature
Too much cooling or heating is not good for your health. It will also waste the electricity.

Block direct sunlight and prevent draft
Block direct sunlight with blinds and curtains during cooling. Close the windows and doors except when ventilation is necessary.

If you feel cold underneath your feet during heating
If the ceiling is so high that the warm air flow does not circulate underneath your feet, it is recommended to use a circulator. Consult your dealer for more detail.

Stop the operation and turn the power supply off if there are any possibility of lightning strikes during a thunderstorm.
Lightning strikes may lead to the failure of hydro module unit.

FREEZING PREVENTION

Even if not used in winter, hydro module unit and outdoor unit should be energized to prevent freezing.
If hydro module unit is not used for a long period, drain the circulating water and turn off the power.

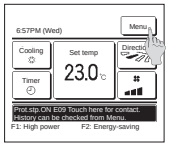
INSPECTION DISPLAY, STANDBY, ROOM TEMPERATURE AND BACK UP DISPLAY

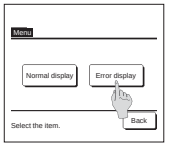
< WIRED REMOTE CONTROL (RC-EX3H) >

WHEN THE UNIT PROTECTION STOP IS INDICATED

CONTACT COMPANY & ERROR DISPLAY

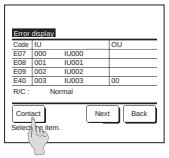
If any error occurs on the hydro module unit, the “Unit protection stop” is indicated on the message display. Take the following measures, stop the operation and consult your dealer.





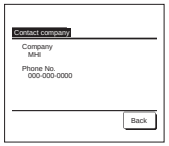
1 The “Unit protection stop” is displayed on the message display.

Tap the Menu button.
When the Normal display and Error display button is displayed, tap the Error display button.



2 Contents of error are displayed.

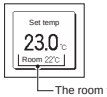
After checking the error contents (Code), tap the Contact button.
Or tap the Normal display button on the previous screen and select the “Contact company” on the menu screen and tap it.



3 Company information (Name and phone No. of contact) is displayed.

This is displayed when it has been preset by your dealer.

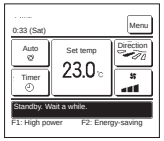
ROOM TEMPERATURE DISPLAY



The room temperature display

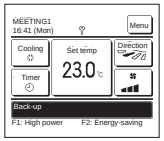
If room temperature display setting is activated, room temperature is displayed on the remote control display.

STANDBY WAIT A WHILE DISPLAY



The message “Standby. Wait a while.” may be displayed (maximum of 30 minutes) on the R/C during the first operation following a breaker power on or power loss.
This does not indicate a failure; it is caused by the cooling machine oil protect control that is activated in order to protect the compressor.
Please wait until the message “Standby. Wait a while.” disappears.

BACK UP DISPLAY



When any error occurs on the OU but its operation is continued as an emergency measure, the message of “Back-up” will be displayed.
When the “Back-up” is displayed, contact dealer/company shown as the Contact company immediately for checking.
■ If the operation is continued without checking, it could result in breakdown.

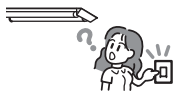
TROUBLE SHOOTING

Check the following items before requiring service.

THE UNIT DOES NOT WORK AT ALL

Is the power supply switch turned off?

Is there a blackout or is the fuse blown?



Is the leakage breaker activated?

Dangerous. Immediately turn off the power supply switch, and contact your dealer.

POOR COOLING

- **Is the direct daylight coming into the room?**
- **Are there any unexpected heat sources in the room?**
- **Are there too many people in the room?**

If, after checking the items above, the hydro module unit still does not operate normally or in the next cases, stop operating and contact your dealer.

- If the fuse and breaker blow frequently.
- If water drips at cooling/dehumidifying operation.
- If the operation or operation noise is abnormal.
- If the “unit protection stop“ is indicated.

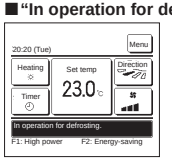
The phenomena mentioned below is not malfunction.

The hydro module unit system sounds as if water is draining from it.	Sounds of rustling or gurgling may be heard when the operation is started, when the compressor is activated/deactivated during operation, or when the operation is stopped. These are the sounds of the refrigerant flowing through the system.
Sounds of rustling or gurgling may be heard from a stopped indoor unit.	These sounds can be heard when the hydro module unit system is performing automatic control.
The indoor pump does not stop even when the operation is stopped in heating mode.	The indoor unit pump may continue operating for 5 minutes in order to remove remaining heat in the indoor unit. **CAUTION Do not turn off the power supply until the pump stops.**
The hydro module unit system cannot start operating again immediately after stopping.	During the first 3 minutes after stopping operation, it is not possible to perform cooling or heating operation even if the ON/OFF button is pressed to indicate “operation.” This is because a circuit for protecting the compressor is activated (the pump is operating during this period).
The outdoor unit discharges water or steam during heating operation.	Water or steam is discharged during defrosting operation which removes frost built up on the surface of the heat exchanger in the outdoor unit in heating mode.
The outdoor unit fan is not running even when the system is in operation.	The fan speed is automatically controlled according to the ambient temperature. It may be stopped in high ambient temperature in case of heating, and in low ambient temperature in case of cooling. Also, the fan is stopped during defrosting operation. **CAUTION The fan will suddenly begin to operate even if it is stopped. Do not insert finger and/or stick.**
Slapping sounds are heard.	These sounds are generated when plastic components are expanded or shrunk by the heat and rubbed with each other.
Hissing sounds are heard when the operation is stopped or during defrost operation.	These sounds are generated when the refrigerant valve inside the hydro module unit is activated.
The hydro module unit starts operation automatically as soon as the power supply is turned on.	In case the automatic restart function is enabled, and when the power supply recovers, the system restarts the operation automatically as same condition as before power supply is cut. ☞ See page 13
The setting temperature cannot be changed.	If changing the set temperature is prohibited on the remote control, it is not possible to change the temperature setting even ▼ or ▲ is pressed. ☞ See page 7
Even if the wired remote control is operated, “central control” light only flashes and doesn’t operate.	Is not “central controlling” or “center” displayed? If controlled with a separately purchased center console etc., the unit cannot be operated by the remote control.

PREPARATION OF HEATING

CASES WHEN “IN OPERATION FOR DEFROSTING” IS DISPLAYED

■“In operation for defrosting.” display



When frost forms on the OU, the heating performance will decrease. This will cause the unit to automatically switch to defrost operation, and hot water from the IO will stop.
The message “In operation for defrosting.” will be displayed on the message display. After the defrost operation has completed, “In operation for defrosting.” will disappear, and the unit will switch back to its normal heating operation.

HEATING OPERATION

- **Heat pump type**
  Heat pump type heating applies the mechanism that draws the heat from the outside air to warm up the room by means of the refrigerant.
- **Defrost operation**
  During heating operation, frost will be formed on the outdoor unit if the temperature outside the room drops. If left alone, the heating efficiency decreases. In order to deal with this, the operation is automatically switched to defrost operation to remove the frost. During the period, the air flow of hydro module unit and outdoor unit is stopped and “heating defrost” is displayed.
- **Outer air temperature and heating capacity**
  The heating efficiency of hydro module unit decreases as the outside temperature becomes lower. If the capacity of hydro module unit for heating is not sufficient, please use other heating device.
- **Time required until the room temperature increases**
  Hydro module unit circulates warm water to warm the entire room, so it takes a while to rise up the room temperature. It is recommended to start operation earlier on a very cold day.

AUTO RESTART <WIRED REMOTE CONTROL>

NOTICE

An auto restart function, which is disabled at the factory setting, is applicable to the remote control. Consult your dealer.

■ **What is auto restart**

- When a power failure occurs or the power supply is turned off, the function allows the system to automatically resume operation with the remote control setting made set before the power failure when the power supply recovers. If the system is stopped before power failure it remains stopped after the power recover.
- Note that in the following cases it is needed to set again with the remote control.
  ① Timer setting is cancelled. But the sleep timer recovers after power failure recovers. When recovering from a power failure, holiday setting will override the weekly timer setting. And time setting returns to default. To return to original setting, after time setting, execute “holiday cancel”.

CAUTION

Make sure to stop the operation before turning off the power supply when the auto restart function is enabled. (If the power supply is turned off while the system is operating, the indoor unit pump will start immediately when the power supply is turned on. In addition, the outdoor unit starts operating 3 minutes after the power supply is turned on.)

INSTALLATION, RELOCATION, AND INSPECTION MAINTENANCE

Please observe the following points in order to use the hydro module unit in a safe and comfortable manner.
Make sure to request your dealer for installation, and do not attempt to do by yourself.

INSTALLATION LOCATION

Is the system installed on a wall which durable enough to hang the hydro module unit?
Avoid the place where operation noise cause problems to your neighbors.

ELECTRICAL WORK

⚠**Caution : Make sure to perform grounding work**
Do not connect the ground wire to any gas pipe, water pipe, or wires of lightning conductors and telephones. If the ground work is not good, it may lead to electric shock.

⚠**Caution : A leakage breaker is necessary depending on the installation environment.**
If it is not mounted there, it may lead to electric shock.

Only qualified specialists of electrical and grounding work can do these works according to “electric equipment technical standards”.

■ Is the wiring designated for the hydro module unit?
■ Is the remote control mounted correctly?

- In the case of exposed wiring, is the wiring fixed with the attached screw?
- Is the attached remote control clamps used for fixing the remote control cord?
- Is the remote control mounted at a height where children cannot reach?

RELOCATION

⚠ **Warning : Make sure to consult a dealer or specialist if it is required to relocate and reinstall the hydro module unit.**
If the hydro module unit is installed incorrectly, water leakage, electric shock and/or fire may occur. Note that an installation fee will be charged for relocation and installation.

INSPECTION MAINTENANCE

Normally the efficiency of the hydro module unit will become lower after a while, because dirt accumulates inside the system. This occurs gradually in around 3 years of use, depending on the condition of use and surrounding environment. It is thus necessary to conduct inspection maintenance in addition to regular maintenance. We recommend you to consult the dealer from whom you purchased the system and make a contract for periodical inspection. (charged).

OPERATION RANGE

CAUTION Please use the system in the following operation range. If the system is operated outside this range, the protection controls may be activated to prevent malfunction.

Condition / Operation	Circulating water temperature (HMU outlet)	Temperature outside the room	Humidity inside the room
Cooling operation	**Only HMU connection:** **Approx. 7 to 25°C** **Mixed use: Approx. 14 to 19°C**	**Only HMU connection:** **Approx. 15 to 46°C** **Mixed use: Approx. 15 to 46°C**	**Approximately 80% or less** Long operation under high humidity may leads to waterdrop under the HMU.
Heating operation	**Only HMU connection:** **Approx. 25 (or 30) to 55°C** **Mixed use: Approx. 25 (or 30) to 40°C**	**Only HMU connection:** **Approx. -20 (or -10) to 32°C** **Mixed use: Approx. -20 (or -10) to 20°C**	

(Note) Operation range may differ depending on models. Please check the catalog.

MAINTENANCE AND INSPECTION GUIDELINE OF MAIN PARTS OF HYDRO MODULE UNIT AND OUTDOOR UNIT

This table indicates the details of regular inspection items and their intervals (inspection interval), and the timing of parts replacement under a normal use condition. If the equipment falls into a certain category specified by the laws and regulations of each country, conduct the maintenance and inspection according to the specified rules too. As to the preventive maintenance, the regular inspection interval is indicated as the "inspection interval," and the predicted interval of the "implementation of cleaning and adjustment" or "implementation of parts replacement and repair" according to the result of the regular inspection is indicated as the "maintenance interval." As to the cleaning and adjustment, the timing is set to prevent the deterioration of parts and the degradation of performance. As to the parts replacement and repair after the inspection, the timing is set by estimating the operation time or use time, when the wear-out failure period is reached.

Explanation of symbols

●: Conduct the cleaning and adjustment according to the inspection result
▲: In case of abnormality after inspection, replace or repair the corresponding part.
◆: Conduct the periodic replacement (consumable components)
: Random failure
: Wear-out failure

[Mainly indoor parts and built-in components]

***The distinction between the indoor and outdoor assumes the air conditioner for a store and a multiple-air conditioner including hydro module unit for a building. This may vary depending on the configuration of the unit.**

Part Name		Regular Inspection			Preventive Maintenance*				Remarks
Part Name		Details of Inspection	Inspection Method	Criteria <Standard>	Details of Maintenance	Inspection Interval	Maintenance Interval (Used Hours/Duration)	Elapsed Years 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	
Structural component	Decorative panel (design part)	- Check of dirt and scratch	Visual inspection	- There should be no extreme dirt, scratches, or deformation	- Cleaning with neutral detergent, paintwork by repair coating	Every year Before the air-conditioning season	8 years	▲	Cleaning object item
	Frame, bottom plate, etc.	- Check of rust and peeling off of the heat insulation material - Check of peeling off and floating of paint coating	Visual inspection	- There should be no extreme rust or damage of heat insulation material	- If the heat insulation material is peeled off, repair and stick it - Paintwork by repair coating		8 years	▲	Cleaning object item
	Vibration-proof rubber	- Check of deterioration and hardening of rubber	Visual and audible inspection	- Vibration insulation function should not be impaired	- Replace it when deteriorated or hardened		10 years	▲	
Drain system parts	Drain pan	- Check the clogging of foreign matters and the flow of drain water - Check of peeling off and floating of paint coating	Visual inspection	- There should be no drainage clogging - There should be no abnormal rust generation and hole opening	- Cleaning of drain pan, inclination check - Repair coating or replace the drain pan depending on the problem level		8 years	▲	Cleaning object item
Refrigerant system parts	Piping in the unit	- Sympathetic vibration, contact, and corrosion of the piping in the unit - Sympathetic vibration and contact of capillary tube	Visual inspection Visual inspection	- There should be no abnormal sympathetic vibration, sound, or corrosion - There should be no abnormal sympathetic vibration or contact wear	- Replace it or readjust the piping when extremely corroded - Replace it or readjust the piping when extremely worn		20,000 Hr	▲	
	Electronic expansion valve	- Operation check - Operation sound by power on/off (pressure check)	Tactile inspection Audible and tactile inspection	- Circulation of refrigerant should be felt - There should be driving sound and temperature change	- Replace it when locking occurs		20,000 Hr	▲	
Electric and electronic parts	Electric component box	- Circuit insulation resistance check - Terminal part, connector looseness check	500 V mega Driver, visual inspection	- The resistance value should be 1 MΩ or more - There should be no looseness at the connecting part - There should be no deposited foreign matter - There should be no abnormal display	- Clean with a brush in case of extreme dust adhesion - Replace it if the resistance value is 1 MΩ or less - Retighten or reinsert it if there is looseness		25,000 Hr	▲	
	Transformer	- Output voltage measurement	Tester	- Output voltage should be within a specified value	- Replace it if there is voltage abnormality		10 years	▲	
	Temperature sensor	- Open, short circuit, earth, appearance check	Tester, visual inspection	- Should be of a specified resistance value - There should be no cracking or discoloration	- Replace it in case of disconnection and short circuit		5 years	▲	
	Remote control switch	- Check the controllability by the operation	Visual inspection	- LCD should display as operated	- Replace it in case of failure of the following capability of control and the display		25,000 Hr	▲	
Water system parts	Thermal insulation	- Check of deterioration and hardening of thermal insulation	Visual and audible inspection	- Thermal insulation function should not be impaired	- Replace it when deteriorated or hardened		10 years	▲	
	Pump	- Sound audibility check	Audible inspection	- There should be no abnormal sound generation	- When abnormal sound is loud, replace the pump		20,000 Hr	▲	
	Flow switch	- Operation check	Tester	- ON-OFF should operate normally	- Replace it in case of malfunction		20,000 Hr	▲	
	Heat exchanger	- Water leakage	Visual inspection	- There should be no leakage.	- Repair or replace it when gas and/or water leakage is detected		5 years	● ● ● ● ●	

Note 1) Random fault is an unexpected failure which occurs before the wear is progressed, within the service life of the parts and equipment. It is difficult to establish a technological measure against the random fault. At the moment, statistical handling is the only measure against the random fault.

Note 2) The elapsed year marked with * assumes the operating time as 10 hours/day and 2500 hours/year in a normal operating condition without frequent start/stop. This may vary according to the operating condition. Please check the calculation basis of the elapsed year when making a maintenance contract.

Note 3) illustrates the estimated timing when the wear-out failure starts and how the failure rate increases as the time passes.

Explanation of symbols

●: Conduct the cleaning and adjustment according to the inspection result
▲: In case of abnormality after inspection, replace or repair the corresponding part.
◆: Conduct the periodic replacement (consumable components)

: Random failure
: Wear-out failure

[Mainly **outdoor** parts and built-in components]

***The distinction between the indoor and outdoor assumes the air conditioner for a store and a multiple-air conditioner including hydro module unit for a building. This may vary depending on the configuration of the unit.**

Part Name		Regular Inspection			Preventive Maintenance*			Elapsed Years														Remarks
Part Name		Details of Inspection	Inspection Method	Criteria <Standard>	Details of Maintenance	Inspection Interval	Maintenance Interval (Used Hours/Duration)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Structural component	Guard, etc.	- Check of peeling off and floating of paint coating - Check of fractures and cracks of plastic parts	Visual inspection	- There should be no extreme rust generation, cracks, fracture, etc.	- Paintwork by repair coating - Replace it if there is any damage, such as cracks and fracture.	Every year Before the air-conditioning season	8 years								▲								Cleaning object item
	Frame, bottom plate, etc.	- Check of rust and peeling off of the heat insulation material - Check of peeling off and floating of paint coating	Visual inspection	- There should be no extreme rust or damage of heat insulation material	- If the heat insulation material is peeled off, repair and stick it - Paintwork by repair coating		8 years								▲								Cleaning object item
	Vibration-proof rubber	- Check of deterioration and hardening of rubber	Visual and audible inspection	- Vibration insulation function should not be impaired	- Replace it when deteriorated or hardened		10 years										▲						
Ventilation system parts	Fan Fan casing	- Visual check of vibration and balance - Check of dust adhesion and appearance	Visual inspection Visual inspection	- Should not be in an extremely vibrating condition - There should be no extreme rust or deformation	- Replace it in case of vibration and extreme unbalance - Clean with a brush or wash with water in case of extreme dust adhesion		10 years										●						
	Fan motor	- Sound audibility check - Insulation resistance measurement	Audible inspection 500 V mega	- There should be no abnormal sound generation - The resistance value should be 1 MΩ or more	- When a bearing sound is loud, replace the bearing - When the resistance value is 1 MΩ or less, replace the motor		20,000 Hr								▲								
	Bearing	- Regular lubrication is required	Audible inspection	- There should be no abnormal sound generation	- Replace parts regularly		15,000 Hr						◆					◆					Consumable components
Refrigerant system parts	Compressor	- Sound audibility and vibration at the start-up, operation, and stop - Insulation resistance measurement (after energizing the manufacturer designated time) - Looseness of terminals and contact of wiring	Visual, audible, and tactile inspection 500 V mega Driver, visual inspection	- There should be no abnormal sound or vibration - The resistance value should be 1 MΩ or more - There should be no looseness or contact	- Replace it if abnormal - Replace it if the resistance value is 1 MΩ or less - Retighten. Correction of wiring path		20,000 Hr								▲								
	Air heat exchanger	- Check the clogging and damage due to foreign objects - Gas leakage	Visual inspection Gas detector	- There should be no clogging or damage - No leakage should be detected	- Wash the air inflow side in case of clogging - Repair or replace it when gas leakage is detected		5 years					●				●		●		●	●	●	Cleaning object item Due to atmospheric dirt
	Piping in the unit	- Sympathetic vibration, contact, and corrosion of the piping in the unit - Sympathetic vibration and contact of capillary tube	Visual inspection Visual inspection	- There should be no abnormal sympathetic vibration, sound, or corrosion - There should be no abnormal sympathetic vibration or contact wear	- Replace it or readjust the piping when extremely corroded - Replace it or readjust the piping when extremely worn		20,000 Hr								▲								
	Electronic expansion valve	- Operation check - Operation sound by power on/off (pressure check)	Tactile inspection Audible and tactile inspection	- Circulation of refrigerant should be felt - There should be driving sound and temperature change	- Replace it when locking occurs		20,000 Hr								▲								
	Electromagnetic valve, four way switching valve, etc.	- Operation and insulation performances of electromagnetic valve, four way switching valve, etc. - Corrosion, abnormal sound	500 V mega Visual and audible inspection	- The resistance value should be 1 MΩ or more - There should be no abnormal sound or corrosion	- Replace it if the resistance value is 1 MΩ or less		20,000 Hr								▲								
	Container, etc.	- Corrosion of accumulator, oil separator, etc.	Visual inspection	- There should be no abnormal corrosion	- Repair coating in case of corrosion generation		20,000 Hr								▲								
	Protection device (security parts) Pressure shutoff device	- Operation pressure, gas leakage, insulation resistance	Pressure gauge, etc.	- Operate it at a setting value - Observe the rules specified by the laws and regulations	- Replace it if it does not operate within the permissible range of setting values		25,000 Hr										▲						
	Protection device (security parts) Fusible plug	- Appearance check (swelling of fusible alloy)	Visual inspection	- The fusible alloy should be in a normal position	- Replace the device if fusible alloy is swelling out of the normal position		15,000 Hr						▲						▲				

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◆: Conduct the periodic replacement (consumable components)

: Random failure
: Wear-out failure

Part Name		Regular Inspection			Preventive Maintenance*			Remarks
Part Name		Details of Inspection	Inspection Method	Criteria <Standard>	Details of Maintenance	Inspection Interval	Maintenance Interval (Used Hours/Duration)	Elapsed Years 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
Electric and electronic parts	Crankcase heater	- Conductivity check - Insulation resistance measurement - Appearance check	Tester 500 V mega Visual inspection	- It should be in a conducting state - The resistance value should be 1 MΩ or more - There should be no abnormality	- Replace it if it is not in a conducting state - Replace it if the resistance value is 1 MΩ or less	Every year Before the air-conditioning season	8 years	◆	Consumable components
	Anti-freezing heater	- Conductivity check - Insulation resistance, appearance check	Tester 500 V mega, visual inspection	- It should be in a conducting state - The resistance value should be 1 MΩ or more, there should be no abnormality	- Replace it if it is not in a conducting state - Replace it if the resistance value is 1 MΩ or less		20,000 Hr	▲	
	Electric component box (including inverter)	- Circuit insulation resistance check - Terminal part, connector looseness check	500 V mega Driver, visual inspection	- The resistance value should be 1 MΩ or more - There should be no looseness at the connecting part	- Clean with a brush in case of extreme dust adhesion - Replace it if the resistance value is 1 MΩ or less - Retighten or re-insert it if there is looseness		25,000 Hr	▲	
	Electrolytic capacitor	- Capacitor (electrolytic) appearance check	Visual inspection	- There should be no liquid leakage or deformation	- Appearance check, replace it if there is liquid leakage				
	Smoothing capacitor	- Measurement of electrical capacitance and insulation resistance - Appearance check	Electrostatic instrument, 500 V mega Tester	- Should be of specified volume or more - The resistance value should be 1 MΩ or more	- Replace parts regularly - Replace it if the resistance value is 1 MΩ or less		10 years	◆	Consumable components
	Terminal block	- Terminal part screw looseness, deposit of dirt	Driver, visual inspection	- It should not be loose - There should be no deposited foreign matter	- Retighten it if it is loose. - Clean with a brush in case of deposited foreign matter adhesion		25,000 Hr	▲	
	Electrical component (including boards, etc.)	- HIC board short circuit check - Visual check of dirt adhesion to the board, etc. - Self-diagnosis mode, appearance check	Tester Visual inspection Visual inspection	- Should be of a specified resistance value - There should be no deposited foreign matter - There should be no abnormal display	- Replace it if it is outside the specified resistance value - Clean with a brush in case of deposited foreign matter adhesion - Replace or correct the part		25,000 Hr	▲	
	Pressure sensor, temperature sensor	- Open, short circuit, earth, appearance check	Tester, visual inspection	- Should be of a specified resistance value - There should be no cracking or discoloration	- Replace it in case of disconnection and short circuit		5 years	▲	
	Switch, etc. (including FFB, ELB) Electromagnetic switch Overcurrent relay Auxiliary relay, etc.	- Operation, appearance check - Rough contact surface	Visual inspection Visual inspection	- There should be no deformation - It should operate as prescribed, there should be no deformation - There should be no deformation or discoloration	- Replace it in case of malfunction, deformation, and discoloration		25,000 Hr	▲	
	Switching power source transformer	- Output voltage measurement	Tester	- Output voltage should be within a specified value	- Replace it if there is voltage abnormality		10 years	▲	
	Cooling fan	- Insulation resistance, abnormal sound generation	500 V mega, audible inspection	- The resistance value should be 1 MΩ or more, there should be no abnormal sound	- Replace it if the resistance value is 1 MΩ or less - Replace it in case of fan lock		20,000 Hr	▲	
	Fuse	- Appearance check	Visual inspection	- There should be no deformation or discoloration	- Replace it when it is shutdown		10 years	◆	Consumable components

Note 1) Random fault is an unexpected failure which occurs before the wear is progressed, within the service life of the parts and equipment. It is difficult to establish a technological measure against the random fault. At the moment, statistical handling is the only measure against the random fault.

Note 2) The elapsed year marked with * assumes the operating time as 10 hours/day and 2500 hours/year in a normal operating condition without frequent start/stop. This may vary according to the operating condition. Please check the calculation basis of the elapsed year when making a maintenance contract.

Note 3) illustrates the estimated timing when the wear-out failure starts and how the failure rate increases as the time passes.

EU DECLARATION OF CONFORMITY

We **MITSUBISHI HEAVY INDUSTRIES THERMAL SYSTEMS, LTD.**
2-3, Marunouchi 3-chome, Chiyoda-ku,
Tokyo, 100-8332, Japan

declare under our sole responsibility that the apparatus referred to in this declaration conforms with the following directives.

Description of apparatus: Indoor unit
Model name:

Conformity model list

[Indoor Unit]

Category
HMU Series

[Outdoor Unit]

Category
FDC - KXZXE1 Series
FDC - KXZE2 Series

Relevant EU Directives :
Machinery Directive 2006/42/EC
Applied Standards :
EN 60335-1
EN 60335-2-40

Authorized representative in EU :
MHIAE SERVICES B.V.
Herikerbergweg 238, Luna ArenA, 1101 CM Amsterdam, Netherlands
P.O.Box 23393 1100 DW Amsterdam, Netherlands

Note : About the detail of Conformity model, see EU DECLARATION OF CONFORMITY sheet included in a package

UK DECLARATION OF CONFORMITY

We **MITSUBISHI HEAVY INDUSTRIES THERMAL SYSTEMS, LTD.**
2-3, Marunouchi 3-chome, Chiyoda-ku,
Tokyo, 100-8332, Japan

declare under our sole responsibility that the apparatus referred to in this declaration conforms with the following directives.

Description of apparatus: Split Type Air Conditioner
Model name:

Conformity model list

[Indoor Unit]

Category
HMU Series

[Outdoor Unit]

Category
FDC - KXZXE1 Series
FDC - KXZE2 Series

Relevant GB Directives :
Supply of Machinery (Safety) Regulations 2008 (S.I. 2008/1597)
Applied Standards :
EN 60335-1
EN 60335-2-40

Authorized representative in GB :
MITSUBISHI HEAVY INDUSTRIES AIR-CONDITIONING EUROPE, LTD.
5 The Square, Stockley Park, Uxbridge, Middlesex, UB11 1ET, United Kingdom

Note : About the detail of Conformity model, see UK DECLARATION OF CONFORMITY sheet included in a package

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