

MULTI VARIABLE Casette

MV-CxxBI



"Original instructions"

IMPORTANT NOTE:

Read this manual carefully before installing or operating your new air conditioning unit. Make sure to save this manual for future reference.

Contents

1 Safety Precautions	
2 Outline of the Unit and Main Parts	3
3 Operation of remote controller	4
3.1 Buttons on remote controller	4
3.2 Introduction for icons on display screen	4
3.3 Introduction for buttons on remote controller	5
3.4 Function introduction for combination buttons	9
3.5 Operation guide	10
3.6 Replacement of batteries in remote controller	10
4 Troubleshooting and Maintenance	13
4.1 Troubleshooting	13
4.2 Routine Maintenance	14



This marking indicates that this product should not be disposed with other household wastes throughout the EU. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, please use the return and collection systems or contact the retailer where the product was purchased. They can take this product for environmental safe recycling.

R32: 675

Please read this operating manual carefully before operating the unit.



Appliance filled with flammable gas R32.



Before use the appliance, read the owner's manual first.



Before install the appliance, read the installation manual first.



Before repair the appliance, read the service manual first.

The figures in this manual may be different with the material objects, please refer to the material objects for reference.

The Refrigerant

- To realize the function of the air conditioner unit, a special refrigerant circulates in the system. The used refrigerant is the fluoride R32, which is specially cleaned. The refrigerant is flammable and inodorous. Furthermore, it can leads to explosion under certain conditions. But the flammability of the refrigerant is very low. It can be ignited only by fire.
- Compared to common refrigerants, R32 is a nonpolluting refrigerant with no harm to the ozonosphere. The influence upon the greenhouse effect is also lower. R32 has got very good thermodynamic features which lead to a really high energy efficiency. The units therefore need a less filling.

WARNING:

Do not use means to accelerate the defrosting process or to clean, other than those recommended by the manufacture. Should repair be necessary, contact your nearest authorized Service Centre.

Any repairs carried out by unqualified personnel may be dangerous.

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.

Appliance shall be installed, operated and stored in a room with a floor area larger than "X"m² (see table 1).(only applies to appliances that are not fixed appliances)

Appliance filled with flammable gas R32. For repairs, strictly follow manufacturer's instructions only.

Be aware that refrigrants not contain odour.

Read specialist's manual.









1 Safety Precautions

MARNING!	This mark indicates procedures which, if improperly performed, might lead to the death or serious injury of the user.
⚠ CAUTION!	This mark indicates procedures which, if improperly performed, might possibly result in personal harm to the user, or damage to property.

/ WARNING!

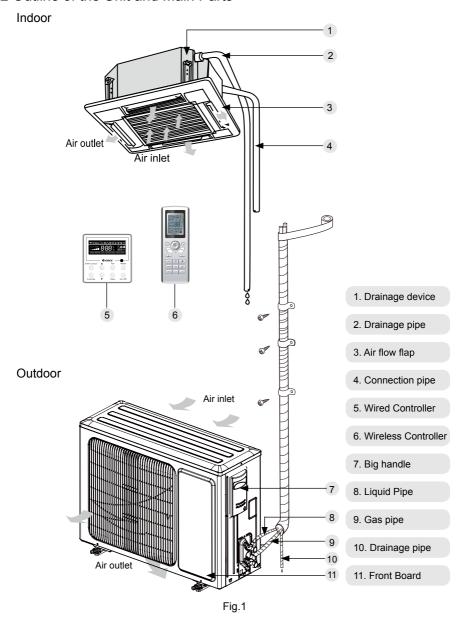
- (1). Installation should be left to the dealer or another professional. Improper installation may cause water leakage, electrical shock, or fire.
- (2). Install the air conditioner according to the instructions given in this manual. Incomplete installation may cause water leakage, electrical shock, or fire.
- (3). Be sure to use the supplied or specified installation parts. Use of other parts may cause the unit to come to lose, water leakage, electrical shock, or fire.
- (4). Install the air conditioner on a solid base that can support the weight of the unit. An inadequate base or incomplete installation may cause injury in the event the unit falls off the base.
- (5). Electrical work should be carried out in accordance with the installation manual and the national electrical wiring rules or code of practice. Insufficient capacity or incomplete electrical work may cause electrical shock or fire.
- (6). Be sure to use a dedicated power circuit. Never use a power supply shared by another appliance.
- (7). For wiring, use a cable length enough to cover the entire distance with no connection. Do not use an extension cord. Do not put other loads on the power supply, use a dedicated power circuit. (Failure to do so may cause abnormal heat, electric shock or fire.)
- (8). Use the specified types of wires for electrical connections between the indoor and outdoor units. Firmly clamp the interconnecting wires so their terminals receive no external stresses. Incomplete connections or clamping may cause terminal overheating or fire.
- (9). After connecting interconnecting and supply wiring be sure to shape the cables so that they do not put undue force on the electrical covers or panels. Install covers over the wires. Incomplete cover installation may cause terminal overheating, electrical shock, or fire.
- (10). If any refrigerant has leaked out during the installation work, ventilate the room. (The refrigerant produces a toxic gas if exposed to flames.)
- (11). After all installation is complete, check to make sure that no refrigerant is leaking out. (The refrigerant produces a toxic gas if exposed to flames.)
- (12). When installing or relocating the system, be sure to keep the refrigerant circuit free from substances other than the specified refrigerant (R32), such as air. (Any presence of air or other foreign substance in the refrigerant circuit causes an abnormal pressure rise or rupture, resulting in injury.)
- (13). During pump-down, stop the compressor before removing the refrigerant piping. If the compressor is still running and the stop valve is open during pump-down, air will be sucked in when the refrigerant piping is removed, causing abnormal pressure in the freezer cycle which will lead to breakage and even injury.

- (14). During installation, attach the refrigerant piping securely before running the compressor. If the compressor is not attached and the stop valve is open during pump-down, air will be sucked in when the compressor is run, causing abnormal pressure in the freezer cycle which will lead to breakage and even injury.
- (15). Be sure to establish an earth. Do not earth the unit to a utility pipe, arrester, or telephone earth. Incomplete earth may cause electrical shock, or fire. A high surge current from lightning or other sources may cause damage to the air conditioner.
- (16). Be sure to install an earth leakage breaker. Failure to install an earth leakage breaker may result in electric shocks, or fire.
- (17). 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.
- (18). Children should be supervised to ensure that they do not play with the appliance.
- (19). 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.
- (20). This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

CAUTION!

- (1). Do not install the air conditioner in a place where there is danger of exposure to inflammable gas leakage. If the gas leaks and builds up around the unit, it may catch fire.
- (2). Establish drain piping according to the instructions of this manual. Inadequate piping may cause flooding.
- (3). Tighten the flare nut according to the specified method such as with a torque wrench. If the flare nut is tightened too hard, the flare nut may crack after a long time and cause refrigerant leakage.

2 Outline of the Unit and Main Parts



3 Operation of remote controller

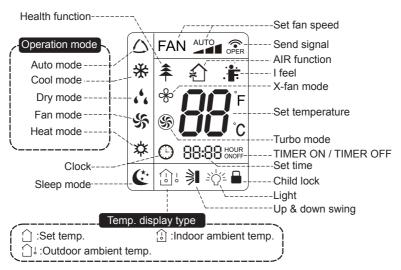
3.1 Buttons on remote controller



- 1 ON/OFF button
- 2 MODE button
- 3 +/- button
- 4 FAN button
- 5 I FEEL button
- 6 ♣ button
- 🕜 🏠 button
- 8 🔰 button
- 9 CLOCK button
- TIMER ON/TIMER OFF button
- X-FAN button

 Note: X-FAN is the same with BLOW
- 12 TEMP button
- 13 TURBO button
- SLEEP button
- 15 LIGHT button

3.2 Introduction for icons on display screen



3.3 Introduction for buttons on remote controller

Note:

- This is a general use remote controller, it could be used for the air conditioners with multifunction; For some function, which the model doesn't have, if press the corresponding button on the remote controller that the unit will keep the original running status.
- After putting through the power, the air conditioner will give out a sound. After that, you can operate the air conditioner by using remote controller.

1 ON/OFF button

Press this button can turn on or turn off the air conditioner. After turning on the air conditioner, operation indicator "()"on indoor unit's display is ON (green indicator. The colour is different for different models), and indoor unit will give out a sound.

2 MODE button

Press this button to select your required operation mode.



- After selecting auto mode, air conditioner will operate automatically according to ambient temperature. Set temperature can't be adjusted and will not be displayed as well. Press "FAN" button can adjust fan speed. Press " \$\frac{1}{3}\textbf{\textit{ }}\text{" button can adjust fan blowing angle.
- When selecting dry mode, the air conditioner operates at low speed under dry mode. Under dry mode, fan speed can't be adjusted. Press " ⇒ " button to adjust fan blowing angle.

Note:

- For preventing cold air, after starting up heating mode, indoor unit will delay 1~5 minutes to blow air (actual delay time is depend on indoor ambient temperature).
- Set temperature range from remote controller: 16~30°C; Fan speed: auto, low speed, medium speed, high speed.

3 +/- button

- Press "+" or "-" button once increase or decrease set temperature 1°C.
 Holding "+" or "-" button, 2s later, set temperature on remote controller will change quickly. On releasing button after setting is finished, temperature indicator on indoor unit will change accordingly. (Temperature can't be adjusted under auto mode)
- When setting TIMER ON, TIMER OFF or CLOCK, press "+" or "-" button to adjust time. (Refer to CLOCK, TIMER ON, TIMER OFF buttons) When setting TIMER ON, TIMER OFF or CLOCK, press "+" or "-" button to adjust time. (Refer to CLOCK, TIMER ON, TIMER OFF buttons)

4 FAN button

Pressing this button can set fan speed circularly as: auto (AUTO), low(A), medium (A), high (A).



Note:

- Under AUTO Speed,IDU fan motor will adjust the fan speed (high, medium or low speed) according to ambient temperature.
- Fan speed under dry mode is low speed.

5 I FEEL button

Press this button to start I FEEL function and ": "will be displayed on the remote controller. After this function is set, the remote controller will send the detected ambient temperature to the controller and the unit will automatically adjust the indoor temperature according to the detected temperature. Press this button again to close I FEEL function and ": "will disappear.

- Please put the remote controller near user when this function is set. Do not put
 the remote controller near the object of high temperature or low temperature in
 order to avoid detecting inaccurate ambient temperature.
- When I FEEL function is turned on, the remote controller should be put within the area where indoor unit can receive the signal sent by the remote controller.

6 ♣ button

Press this button to set HEALTH function ON or OFF. After the unit is turned on, it defaults to HEALTH function ON.

This function is applicable to partial of models.

7 ♠ button

Press this button to select AIR function ON or OFF. (Only available for some models)

8 🔋 button

Press this button can select up&down swing angle. Fan blow angle can be selected circularly as below:

- When selecting " > ", air conditioner is blowing fan automatically. Horizontal louver will automatically swing up & down at maximum angle.
- When selecting " ⇒ , ⇒ , air conditioner is blowing fan at fixed angle. Horizontal louver will send air at the fixed angle.
- Hold "¾"button above 2s to set your required swing angle. When reaching your required angle, release the button.

Note:

9 CLOCK button

Press this button to set clock time. "O" icon on remote controller will blink. Press "+" or "-" button within 5s to set clock time. Each pressing of "+" or "-" button, clock time will increase or decrease 1 minute. If hold "+" or "-" button, 2s later, time will change quickly. Release this button when reaching your required time. Press "CLOCK" button to confirm the time. "O" icon stops blinking.

Note:

- Clock time adopts 24-hour mode.
- The interval between two operation can't exceeds 5s. Otherwise, remote controller will guit setting status. Operation for TIMER ON/TIMER OFF is the same.

10 TIMER ON / TIMER OFF button

TIMER ON button

"TIMER ON" button can set the time for timer on. After pressing this button, "O" icon disappears and the word "ON" on remote controller blinks. Press "+" or "-" button to adjust TIMER ON setting. After each pressing "+" or "-" button, TIMER ON setting will increase or decrease 1min. Hold "+" or "-" button, 2s later, the time will change quickly until reaching your required time.

Press "TIMER ON" to confirm it. The word "ON" will stop blinking. "O" icon

Press "TIMER ON" to confirm it. The word "ON" will stop blinking. "O" icon resumes displaying. Cancel TIMER ON: Under the condition that TIMER ON is

started up, press "TIMER ON" button to cancel it.

TIMER OFF button

"TIMER OFF" button can set the time for timer off. After pressing this button," "icon disappears and the word "OFF" on remote controller blinks. Press "+" or "-" button to adjust TIMER OFF setting. After each pressing "+" or "-" button, TIMER OFF setting will increase or decrease 1min. Hold "+" or "-" button, 2s later, the time will change quickly until reaching your required time.

Press "TIMER OFF" word "OFF" will stop blinking. "O" icon resumes displaying. Cancel TIMER OFF. Under the condition that TIMER OFF is started up, press "TIMER OFF" button to cancel it.

Note:

- Under on and off status, you can set TIMER OFF or TIMER ON simultaneously.
- Before setting TIMER ON or TIMER OFF, please adjust the clock time.
- After starting up TIMER ON or TIMER OFF, set the constant circulating valid.
 After that, air conditioner will be turned on or turned off according to setting time.
 ON/OFF button has no effect on setting. If you don't need this function, please use remote controller to cancel it.

11 X-FAN button

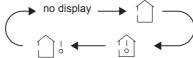
Press this button under cool and dry mode to start up x-fan function, and "%" icon on remote controller will be displayed. Press this button again to cancel x-fan function, and "%"icon will disappear.

Note:

- When x-fan function is on, if the air conditioner is turned off, indoor fan will still operate at low speed for a while to blow the residual water inside the air duct.
- During x-fan operation, press X-FAN button to turn off x-fan function. Indoor fan will stop operation immediately.

12 TEMP button

By pressing this button, you can see indoor set temperature, indoor ambient temperature or outdoor ambient temperature on indoor unit's display. The setting on remote controlleris selected circularly as below:



- When selecting " \(\bigcap \)" or no display with remote controller, temperature indicator on indoor unit displays set temperature.
- When selecting " with remote controller, temperature indicator on indoor unit displays indoor ambient temperature.

• When selecting " with remote controller, temperature indicator on indoor unit displays outdoor ambient temperature.

Note:

- It's defaulted to display set temperature when turning on the unit. There is no display in the remote controller.
- Only for the models whose indoor unit has dual-8 display.
- When selecting displaying of indoor or outdoor ambient temperature, indoor temperature indicator displays corresponding temperature and automatically turn to display set temperature after three or five seconds.

13 TURBO button

Under COOL or HEAT mode, press this button to turn to quick COOL or quick HEAT mode. "\$\mathbb{G}\$ " icon is displayed on remote controller. Press this button again to exit turbo function and "\$\mathbb{G}\$" icon will disappear.

14 SLEEP button

Under COOL, HEAT mode, press this button to start up sleep function. " icon is displayed on remote controller. Press this button again to cancel sleep function and " icon will disappear.

15 LIGHT button

3.4 Function introduction for combination buttons

Child lock function

Press "+" and "-" simultaneously to turn on or turn off child lock function. When child lock function is on, " icon is displayed on remote controller. If you operate the remote controller, the " icon will blink three times without sending signal to the unit.

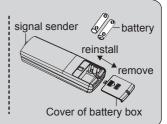
Temperature display switchover function

3.5 Operation guide

- **1.** After putting through the power, press "ON/OFF" button on remote controller to turn on the air conditioner.
- **2.** Press "MODE" button to select your required mode: AUTO, COOL, DRY, FAN, HEAT.
- **3.** Press "+" or "-" button to set your required temperature. (Temperature can't be adjusted under auto mode).
- 4. Press "FAN" button to set your required fan speed: auto, low, medium and high speed.
- **5.** Press " " button to select fan blowing angle.

3.6 Replacement of batteries in remote controller

- Press the back side of remote controller marked with "
 , as shown in the fig, and then push out the cover of battery box along the arrow direction.
- Replace two 7# (AAA 1.5V) dry batteries, and make sure the position of "+" polar and "-" polar are correct.
- 3. Reinstall the cover of battery box.



NOTICE

- During operation, point the remote control signal sender at the receiving window on indoor unit.
- The distance between signal sender and receiving window should be no more than 8m, and there should be no obstacles between them.
- Signal may be interfered easily in the room where there is fluorescent lamp or wireless telephone; remote controller should be close to indoor unit during operation.
- Replace new batteries of the same model when replacement is required.
- When you don't use remote controller for a long time, please take out the batteries.
- If the display on remote controller is fuzzy or there's no display, please replace batteries.

Table 1

Number	Error code	Error
1	E1	Compressor high pressure protection
2	E2	Indoor anti-freeze protection
3	E3	Compressor low pressure protection, refrigerant lack protection and refrigerant colleting mode
4	E4	Compressor high discharge temperature protection
5	E5	AC over-current protection
6	E6	Communication error
7	E7	Mode conflict
8	E8	Anti-high temperature protection
9	E9	Full water protection
10	F1	Indoor ambient temperature sensor is open/short circuited
11	F2	Indoor evaporator temperature sensor is open/short circuited
12	F3	Outdoor ambient temperature sensor is open/short circuited
13	F4	Outdoor condenser temperature sensor is open/short circuited
14	F5	Outdoor discharge temperature sensor is open/short circuited
15	C5	Jumper cap malfunction protection
16	EE	Loading EEPROM malfunction

Note: If there're other error codes, please contact qualified professionals for service. When the unit is connected with the wired controller, the error code will be simultaneously shown on it.

(2). Instructions to the Error Indicating Lamps on the Panel of the Cassette Type Unit.

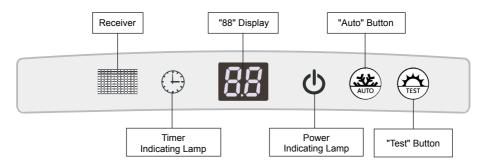


Fig.40

◆ Power and ON/OFF Indicating Lamp:

It goes red when the unit is powered on while it goes white when the unit is started.

◆ Timer Indicating Lamp:

Timer indicator on indoor unit will be on when timer ON is set under off status and timer OFF is set under on status.

◆ "88" Display:

When there is no error, the dual-8 nixie tube display the set temperature. After receiving the command of displaying indoor ambient temperature from the remote controller, the dual-8 nixie tube displays indoor temperature for 3s and then resume to display the set temperature. If there is error, error code will be displayed. If there's multiple error, error codes will be displayed in turn.

"Auto" button: It's used for turning on or turning off the unit. When use this button to turn in the unit, the unit is under auto mode

"Test" button: It's only used for the test units. This button is only valid within 3mins after the unit is energized.

NOTE:

- (1) If the light of indoor unit is turned off, when operating the remote controller to send command, the display will be on for 3s and then off.
- (2) When the wired controller is connected, the indoor unit display is invalid and the unit won't receive the remote control command.

4 Troubleshooting and Maintenance

4.1 Troubleshooting

If your air-conditioning unit suffers from abnormal operation or failure, please first check the following points before repair:

Table 10

Failure	Possible Reasons	
The unit cannot be started.	 The power supply is not connected. Electrical leakage of air-conditioning unit causes tripping of the leakage switch. The operating keys are locked. The control loop has failure. 	
The unit operates for a while and then stops.	 There is obstacle in front of the condenser. The control loop is abnormal. Cooling operation is selected when the outdoor ambient temperature is above 48°C. 	
Poor cooling effect.	 The air filter is dirty or blocked. There is heat source or too many people inside the room. The door or window is open. There is obstacle at the air intake or outlet. The set temperature is too high. There is refrigerant leakage. The performance of room temperature sensor becomes worse 	
Poor heating effect	 The air filter is dirty or blocked. The door or window is not firmly closed. The set room temperature is too low. There is refrigerant leakage. The outdoor ambient temperature is lower than -5°C. Control loop is abnormal. 	

Note: After carrying out the check of the above items and taking relevant measures to solve the problems but the air-conditioning unit still does not function well, please stop the operation of the unit immediately and contact the local service agency designated by Sinclair. Only ask professional serviceman to check and repair the unit.

4.2 Routine Maintenance

Only a qualified service person is allowed to perform maintenance.

Before accessing to terminal devices, all power supply circuits must be disconnected.

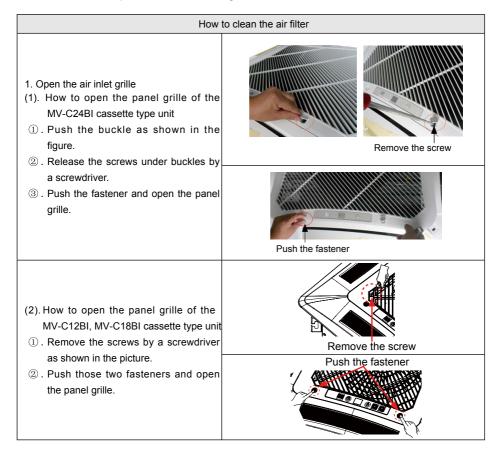
Do not use water or air of 50°C or higher for cleaning air filters and outside panels.

Notes:

- ①. Do not operate the air conditioner with the filter uninstalled, otherwise dust would come into the unit
- ② . Do not remove the air filter except for cleaning. Unnecessary handling may damage the filter.
- ③ . Do not clean the unit with gasolene, benzene, thinner, polishing powder or liquid insecticide, otherwise it would cause discoloration and deformation of the unit.
- ④ . Do not wet the indoor unit in case of electric shock or fire hazard.

Increase the frequency of cleaning if the unit is installed in a room where the air is extremely contaminated.(As a yardstick for yourself, consider cleaning the filter once a half year.)

If dirt becomes impossible to clean, change the air filter.



2. Disassemble the air inlet grille Open the air inlet grille at 45°, raise it and remove the grille.	
Disassemble the filter screen Draw out the filter screen and remove it.	
Disassemble the air purifier Remove the air purifier after removing the fixed screws on it.	Filter screen Filtering element Support
5. Clean the filer screen Clean the filer screen by a vacuum cleaner or wash it by flashing water. If the oil stain on the filter can not be removed or cleaned up, wash it by warm water meld with the detergent. Dry the filer in the shadow. Note: Never use hot water over 45°C in case of color fading or turning yellow. Never dry it by fire so as to prevent the filter caught fire or deformation.	
6. Reset the filer	The same as step 3
7. Install the grille well	The same as step 1 and 2

NOTE CONCERNING PROTECTION OF ENVIRONMENT



This product must not be disposed of via normal household waste after its service life, but must be taken to a collection station for the recycling of electrical and electronic devices. The symbol on the product, the operating instructions or the packaging indicate such disposal procedures. The materials are recyclable in accordance with their respective symbols. By means of re-use, material recycling or any other form of recycling old appliances you are making an important contribution to the protection of our environment. Please ask your local council where your nearest disposal station is located.

INFORMATION CONCERNING USED REFRIGERANT MEDIUM

This unit is containing fluorinated gases included in the Kyoto protocol. The maintenance and the liquidation must be carried out by qualified personnel.

Type of refrigerant: R32

The quantity of the refrigerant: please see the unit label.

The value GWP: 675 (1 kg R32 = 0,675 t CO2 eg)

GWP = Global Warming Potential



Appliance filled with flammable gas R32.

In case of quality problem or other please contact your local supplier or authorized service center.

Emergency number: 112

PRODUCER

SINCLAIR CORPORATION Ltd. 1-4 Argyll St. London W1F 7LD Great Britain

www.sinclair-world.com

This product was manufactured in China (Made in China).

REPRESENTATIVE

SINCLAIR Global Group s.r.o. Purkynova 45 612 00 Brno Czech Republic

TECHNICAL SUPPORT

SINCLAIR Global Group s.r.o. Purkynova 45 612 00 Brno Czech Republic

Tel.: +420 800 100 285 Fax: +420 541 590 124

www.sinclair-solutions.com info@sinclair-solutions.com

