Owner Manual

AQUASTYLUS
Chilled Water Fan Coil
Convertible Type
CFEA Series 50/60 Hz

50 Hz Models
Cooling Only
CFEA 04 C0M1
CFEA 06 C0M1
CFEA 08 C0M1
CFEA 10 C0M1
CFEA 12 C0M1
CFEA 14 C0M1
CFEA 16 C0M1
CFEA 20 C0M1

Cooling/Heating
CFEA 04 CEM1
CFEA 06 CFM1
CFEA 08 CBM1
CFEA 10 CHM1
CFEA 12 CJM1
CFEA 14 CJM1
CFEA 16 CKM1
CFEA 20 CLM1

60 Hz Models
Cooling Only
CFEA 04 C0M2
CFEA 06 C0M2
CFEA 08 C0M2
CFEA 10 C0M2
CFEA 12 C0M2
CFEA 14 C0M2
CFEA 16 C0M2
CFEA 20 C0M2

Cooling/Heating
CFEA 04 CEM2
CFEA 06 CFM2
CFEA 08 CBM2
CFEA 10 CHM2
CFEA 12 CJM2
CFEA 14 CJM2
CFEA 16 CKM2
CFEA 20 CLM2

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General Information

General Information

Congratulations on your choice of a Trane chilled water fancoil system. These systems have been carefully designed and manufactured under strict **Trane Worldwide Quality Standards** to provide you with years of comfortable, convenient cooling or heating/cooling with a minimum of service.

This Owner Manual is given as a guide to start-up, operation and periodic maintenance by the user of CFEA chilled water fancoil system. It does not contain the full service procedures necessary for the continued successful operation of this equipment. The services of a qualified service technician should be employed, through the maintenance contract with a reputable service company.

Read it completely before doing anything with your air conditioning system.

About this Manual

Cautions appear at appropriate places in this instruction manual. Your personal safety and the proper operation of this machine require that you follow them carefully. The Trane Company assumes no liability for the inappropriate usage of the unit.

About the Unit

These CFEA units are assembled, pressure tested, dehydrated, charged and run tested before shipment. The information contained in this manual applies to CFEA units are designed to operate in cooling mode only and in cooling or heating modes.

Trane CFEA series of chilled water fancoil systems offer three styles of installation: floor, low wall and under ceiling with both LCD wireless remote control or wired control. Trane CFEA series provide flexibility and savings. **Note:** For model CFEA14, CFEA16 and CFEA 20, there are only two styles of installation: under ceiling and low wall.

Reception

On arrival, inspect the unit before signing the delivery note. Specify any damage of the unit on the delivery note, and send a registered letter of protest to the last carrier of the goods within 72 hours of delivery. Notify the dealer at the same time.

The unit should be totally inspected within 7 days of delivery. If any concealed damage is discovered, send a registered letter of protest to the carrier within 7 days of delivery and notify the dealer.

Warning

Warnings are provided at appropriate places in this manual to indicate to installers, operators and service personnel of potentially hazardous situations which, if not avoided, COULD result in death or serious injury.

Caution

Cautions are provided at appropriate places in this manual to indicate to installers, operators, and service personnel of potentially hazardous situations which, if not avoided, MAY result in minor or moderate injury or malfunction of the unit.

Your personal safety and the proper operation of this unit require that you follow them carefully. The Trane Company assumes no liability for installations or servicing performed by unqualified personnel.

Warranty

Warranty is based on the general terms and conditions by country. The warranty is void if the equipment is modified or repaired without the written approval of The Trane Company, if the operating limits are exceeded or if the control system or the electrical wiring is modified.

Damage due to misusage, lack of maintenance or failure to comply with the manufacturer's instructions, is not covered by the warranty obligation. If the user does not conform to the rules described in Owner Manual, it may entail cancellation of warranty and liabilities by The Trane Company.

Important

These instructions do not cover all variations in systems, nor do they provide for every possible contingency to be met.
Should further information be desired or should particular problems arise which are not covered sufficiently for the purchaser's purposes, the matter should be referred to your authorized Trane dealer.
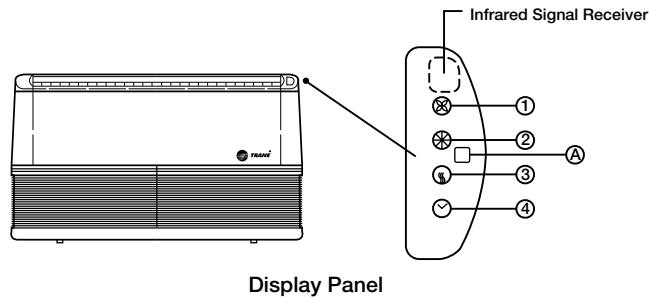
Contents

Control Operation

Infrared Remote Control Unit Display and One-touch Control Switch

Infrared Signal Receiver

Display Panel

Four lamps on the unit show operating status.

1. FAN Lamp
This lamp lights when the fan is operating.

2. COOLING Lamp
This lamp lights when the unit is in COOL or DRY mode of operation.

3. HEATING Lamp
This lamp lights when the unit is in HEAT mode of operation, or heater ON in the HEAT mode of AUTO mode (light does not function on units without electric heat)

4. TIMER Lamp
This lamp lights when the system is being controlled by the timer.

One Touch Control Switch (A)
This button is used for adjusting operation without remote control unit.

• This press switch is for selecting the system mode of operation FAN → COOL → DRY → (HEAT) → (AUTO) → OFF (HEAT and AUTO are available only in Cooling/ Heating Modes)
• Fan speed will operate in AUTO mode; temperature setpoint will be maintained at 24°C.

Note: This press switch is started from COOL mode (If the system is off) and operated sequencely as above (If the system is on).
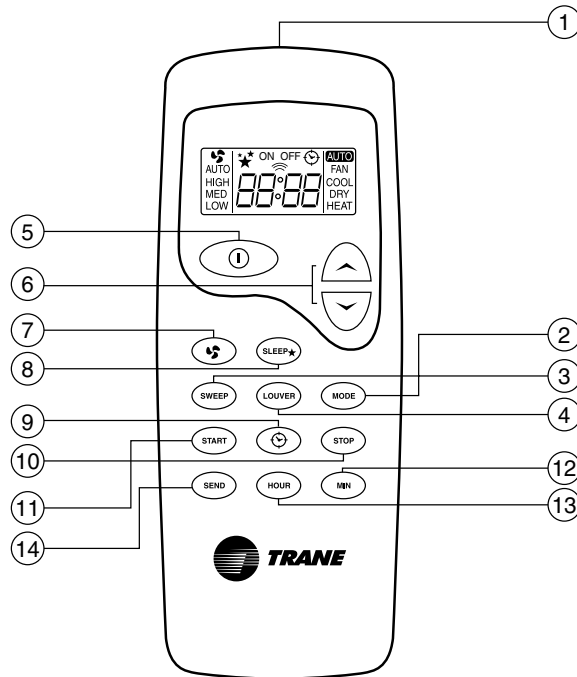The One-Touch Control mode is cancelled by the signal of the remote control unit.

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Wireless Remote Control

Infrared Remote Control Name and function of buttons

1. **Infrared signal transmitter**
   Transmits the signal to indoor unit.
2. **MODE Button**
   Press this button to select system operating modes. In cooling only system, a mode is selected in a sequence as FAN, COOL, DRY and back to FAN. In cooling and heating system, a mode is selected in a sequence as FAN, COOL, DRY, HEAT, AUTO and back to FAN.
3. **SWEEP Button**
   Press this button to activate sweep motor to distribute air flow (not available in all models).
4. **LOUVER Button**
   Press this button to adjust the direction of air flow.
5. **POWER Button**
   Press this button to start operation. Press the button again to stop operation.
6. **Temperature Setting Button**
   TEMP ▲ : Press this button to increase the set temperature.
   TEMP ▼ : Press this button to decrease the set temperature.
7. **FAN Button**
   Press this button to select fan speed.
8. **SLEEP Button**
   Press this button to control temperature while sleeping.
9. **CLOCK Button**
   This button is used to set the clock. If button is pressed during 18.00 hrs. to 6.00 hrs., it will turn on the back light. If there is no button pressed within 3 seconds, the back light will be turn off.
10. **STOP Button**
    Press this button to set the OFF timer.
11. **START Button**
    Press this button to set the ON timer.

12. **MIN Button**
    This button is used to set the minute.
13. **HOUR Button**
    This button is used to set the hour.
14. **SEND Button**
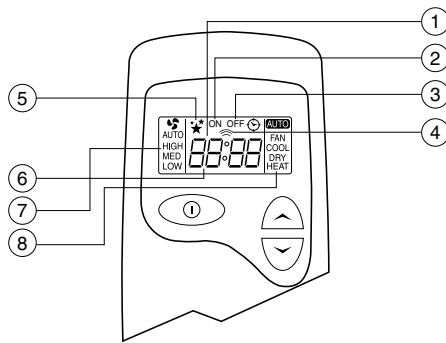   This button is used to confirm the programming on the remote unit to the fan coil unit.

Battery: Two AAA batteries are used in this remote control unit.

Wireless Remote Control

Indicators on Infrared Remote Control

1. Clock
Displays the current time when the handset is under POWER OFF status.

2. Timer START
The time set for timer on operation is indicated.

3. Timer STOP
The time set for timer off operation is indicated.

4. Transmission Indicator
This transmission indicator lights when remote control transmits signals to the indoor unit.

5. SLEEP Mode
Displayed by pressing the SLEEP button. Press the SLEEP button again to disappear.

6. Temperature Setting
Displays the temperature setting (15°C to 30°C) When the handset is under POWER ON status.
Note : No temperature setting display when FAN Mode is selected.

7. Fan Speed
Displays the selected fan speed. Fan speed level, low (LOW), medium (MED), high (HIGH), auto (AUTO) will be indicated.

8. System Mode
Displays the current operation mode. In cooling only (FAN, COOL or DRY). In cooling and heating system (FAN, COOL, DRY or HEAT).

System Operating Selection

FAN Only System Operation
- Press POWER button (the display panel shows the previous settings).
- Press MODE button to select the system operating mode, FAN mode will be shown on the display.
- Press FAN button to select any fan speed. The FAN display will show LOW, MED, HIGH or AUTO according to fan speed level, low, medium, high and auto.

COOLING System Operation
- Press POWER button (the display panel shows the previous settings).
- Press MODE button to select the COOL operating mode, "COOL" mode will be shown on the display.
- Press either TEMP ▲ or TEMP ▼ button to set the desired room temperature. Temperature set range is 15°C to 30°C.
- Press FAN button to select any fan speed. The FAN display will show LOW, MED, HIGH or AUTO according to fan speed level, low, medium, high and auto.

DRY System Operation
- Press POWER button (the display panel shows the previous settings).
- Press MODE button to select the DRY operating mode, "DRY" mode will be shown on the display.
- Press either TEMP ▲ or TEMP ▼ button to get the desired room temperature setting at the indication. Temperature set range is 15°C to 30°C.
Note : Fan speed cannot be changed when DRY Mode is selected.

HEATING System Operation (Heating/Cooling Models)
- Press POWER button (the display panel shows the previous settings).
- Press MODE button to select the HEAT operating mode, "HEAT" mode will be shown on the display.
- Press either TEMP ▲ or TEMP ▼ button to set the desired room temperature. Temperature set range is 15°C to 30°C.
- Press FAN button to select any fan speed. The FAN display will show LOW, MED, HIGH or AUTO according to fan speed level, low, medium, high and auto.

AUTO System Operation (Heating/Cooling Models)
- Press POWER button (the display panel shows the previous settings).
- Press MODE button to select the AUTO operating mode, "AUTO" mode will be shown on the display.
- Press either TEMP ▲ or TEMP ▼ button to set the desired room temperature. Temperature set range is 15°C to 30°C.
- Press FAN button to select any fan speed. The FAN display will show LOW, MED, HIGH or AUTO according to fan speed level, low, medium, high and auto.
- The system will automatically switch between cooling mode and heating mode to maintain desired temperature setting.

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Wireless Remote Control

Setting Clock
To set clock, press CLOCK button until CLOCK symbol ⊕ is blinking. The current time value can be set by pressing HOUR or MIN (minute) button.

Note : During the clock symbol is blinking (the time valve has not been changed), if there are no other buttons pressed within 10 seconds, the LCD display will return to show setting temperature when the handset is under POWER ON status, or to show current time value when the handset is under POWER OFF status.

Timer Operation
Once you select the timer operation, the settings are saved in the remote control. Thereafter, the air conditioner will start operating under the same conditions when you simply push the POWER button of the remote control.

Setting STOP Timer
You can set the STOP timer to stop the unit automatically at any desired time up to 24 hour ahead.
- Press STOP button to set time to turn the unit OFF. The OFF symbol is starting to blink.
- Press HOUR or MIN buttons to change the time (pass this step, if no time change is required).
  At this stage, if there are no other buttons pressed within 10 seconds, the LCD display will return to show setting temperature or current time valve. No setting is changed.
- Press SEND or STOP buttons to transmit the signal to the air conditioner. The set time will stop blinking.
- The unit will stop automatically at set time of OFF timer.
- To cancel the STOP timer, press STOP button again.

Setting START Timer
You can set the START timer to start the unit automatically at any desired time up to 24 hour ahead.
- Press START button to set time to turn the unit ON, the ON symbol is starting to blink.
- Press HOUR or MIN buttons to change the time (pass this step, if no time change is required).
  At this stage, if there are no other buttons pressed within 10 seconds, the LCD display will return to show setting temperature or current time valve. No setting is changed.
- Press SEND or START buttons to transmit the signal to the air conditioner. The set time will stop blinking.
- The unit is now standby for starting automatically at set time of START timer.
- To cancel the START timer, press START button again.

Note : In case of power failure, the START/STOP timer will be automatically cancelled as there is no electricity in the air-conditioner. (But the set time on the remote unit is still displayed due to the batteries). If any button or the remote unit is pressed when the electricity is back to normal, this feature will be re-activated.
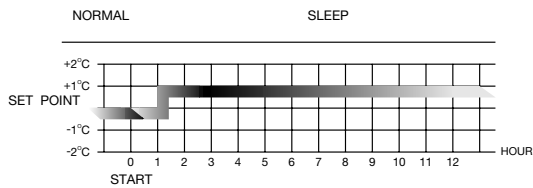
Wireless Remote Control

SLEEP Mode
This feature automatically adjusts the temperature setting to provide increased comfort and save energy (The SLEEP display on LCD will disappear after 1 hour).

COOLING Mode
- Press SLEEP button, one hour after pressing, the air conditioner will automatically raise the set temperature by 1°C.

SLEEP (COOLING MODE)

By pressing SLEEP button, the unit will operate at SLEEP FUNCTION it will automatically return to normal operation when the air-conditioner is switched off and on again.

NORMAL   SLEEP

+2°C
+1°C
SET POINT
-1°C
-2°C
0 1 2 3 4 5 6 7 8 9 10 11 12   HOUR
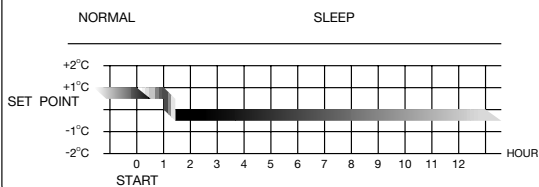START

HEATING Mode
- Press SLEEP button, one hour after pressing, the air conditioner will automatically reduce the set temperature by 1°C.
(The SLEEP display on LCD will disappear after 1 hour).

SLEEP (HEATING MODE)

By pressing SLEEP button, the unit will operate at SLEEP FUNCTION it will automatically return to normal operation when the air-conditioner is switched off and on again.

NORMAL   SLEEP

+2°C
+1°C
SET POINT
-1°C
-2°C
0 1 2 3 4 5 6 7 8 9 10 11 12   HOUR
START

SWEEP Operation
The **SWEEP** function will operate in either **cooling** or **heating** mode to rapidly distribute conditioned air into the room.
- The supply air grille will be fully closed when the unit is off.
- When the unit is turned on, the grille will open to the fully open position.
- After the unit has been turned on, pressing the **SWEEP** button will sweep the supply air grille back and forth to rapidly distribute and cool (or heat) the room.
- If the unit is in **SWEEP** mode, pressing the sweep button will return the grille to the fully open position.
- Press the **POWER** button while the unit is in operation, will turn off the unit and the supply air grille will automatically close.
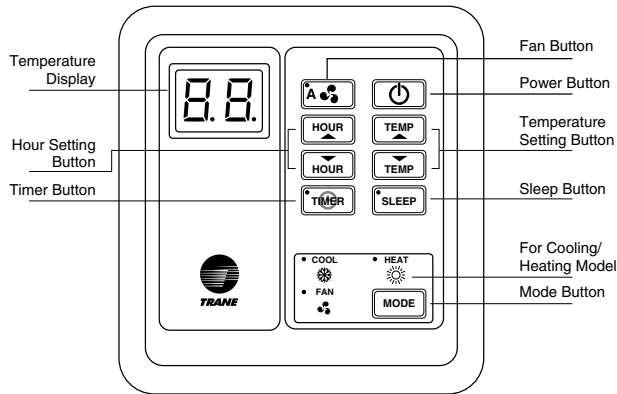
LOUVER Operation
The direction of the airflow can be controlled.
- Press LOUVER button to adjust the angle of the blade to control the direction of the air flow.

Note : The sweep and louver operations are optional functions of CFEA04-CFEA08. These operations are not available in the models that have cooling capacity more than 24,000 Btu.

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Wired Control

Temperature Display

Hour Setting Button

Timer Button

Fan Button

Power Button

Temperature Setting Button

Sleep Button

For Cooling/ Heating Model

Mode Button

SLEEP (COOLING MODE)

By pressing SLEEP button, the unit will operate at SLEEP FUNCTION it will automatically return to normal operation when the air-conditioner is switched off and on again.

SLEEP (HEATING MODE)

By pressing SLEEP button, the unit will operate at SLEEP FUNCTION it will automatically return to normal operation when the air-conditioner is switched off and on again.

1. Fan
Three fan speed (high, medium, low) can be selected. The fan speed can also be put in AUTO fan mode. It will be changed automatically from high to medium and low according to the difference between room and setting temperature.

2. Power On/Off
Press POWER button will turn on/ off the air conditioner. When turned on, it will operate according to the last program setting.

3. Temperature Setting
The temperature can be set in the range of 15°C - 30°C.

4. Sleep
The facility to raise up the setting temperature 1°C (in Cool mode) for the purpose of comfort and energy saving.

5. Operating Mode
Press MODE button to select system operating modes. The air conditioner can be put in 2 modes (COOL and FAN) for cooling only model. And 3 modes (COOL, HEAT and FAN) for cooling/heating model.

6. Timer
The facility to turn on/off the air conditioner is 15 hours in advance.
TIMER OFF To set timer off by pressing TIMER button during air conditioning is on, TIME LED will blink and will show last hour time setting in blinking light. Pressing HOUR ▲ or HOUR ▼ to increase or decrease hour digit (between 1 to 15 can be set).
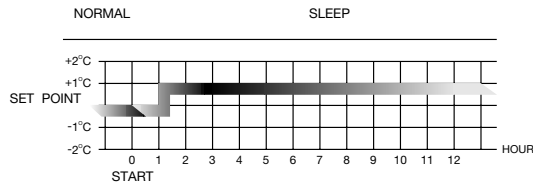**TIMER ON** Using same procedure to set timer off except press TIMER button during air conditioner is off.

7. Toggle °C/°F
The facility to change Temperature Display from °C to °F or from °F to °C. By pressing TEMP+ and TEMP- button at the same time for 5 seconds.
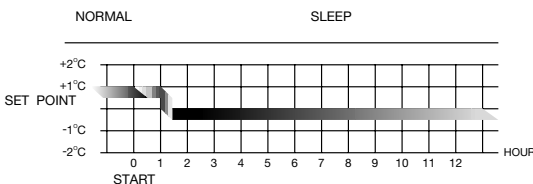
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System Operation

Notes:
- If TIMER LED is off, HOUR ▲ and HOUR ▼ button do not function.
- If TIMER LED is on, pressing HOUR ▲ and HOUR ▼ button will change display time setting to show hour set left with blinking light. If press HOUR ▲ and HOUR ▼ button will change display to new time setting.
- If the air conditioner stops by power failure, setting of timer on/off will be cancelled.
- If POWER button is pressed during setting if timer, setting of timer on/off will be cancelled and remote will turn on/off air conditioner as normal.
- If TIMER button is pressed again during setting of time (TIMER LED is lit), setting time will be cancelled.

Display Unit
The following LEDs are used to indicates the status,
A LED (in Fan Button) shows when the fan speed is put in AUTO mode,
SLEEP LED shows the system is put in sleep mode,
TIMER LED shows when set the timer on/off. FAN/COOL/HEAT LED shows the operating mode of the air conditioner.

Temperature Display (7-segment LED, 2 digits) show
- The room temperature.
- The setting temperature while blinking.
- "RE", show the room sensor is open or short circuit.
- "FE" show the freeze sensor is open or short circuit.
- "HF" show the heating system is supposed to be fail. (For Cooling/Heating model)
- "Fr" show the evaporator coil is freeze.

When press the Fan Button to select the fan speed. The display show the status below.
- "F3" show the fan speed is high.
- "F2" show the fan speed is medium.
- "F1" show the fan speed is low.
- "FA" show the fan speed is put in AUTO mode.

System Features
1. **Watchdog**
   There is a circuit in the system to watch the operation of the microprocessor.
2. **Non-Volatile Memory (Auto Restart)**
   After power interruption, the control will resume its operation with same setting parameters except those related to the time.
3. **Pre-heat/Post-heat (Heat Model)**
   The facility to prevent the fan coil blowing cold draught when the indoor coil temperature is low.
4. **Freeze Function (Optional)**
   The facility to stop the compressor if the indoor coil temperature is below 0°C.

Operating Precautions
This system must be installed properly by a qualified installer in accordance with installation instructions.

- Temperature setting is adjusted **back** and **forth**.
- **ON/OFF** switch is turned **ON** and **OFF**.
- Room temperature reaches the set point.
- Power failure.

Once any of the above conditions occurs, the **anti-recycle timer** will start preventing the operation of the outdoor unit for approximately 3 minutes.

Freeze Protection
The system is protected against low indoor coil temperatures. Under certain conditions, the "COOL/DRY" LED will blink indicating the protective function has been activated. There is no need to adjust the system.

Stop the air conditioner at once if any the following occurs:
- The power cord is too hot to be touched by hand.
- The insulation of the power cord is exposed at any point
- The fuse is blown or circuit breaker trips frequently.
- The functions of the switches are inaccurate.

Operating air conditioner safety.
- Do not insert a bar or similar object into the supply air outlet. In particular, advise small children not to insert anything in the grille.
- Do not pour water directly on the air conditioner to clean it. If the air conditioner is operating as wet, grounding may occur, damaging the unit.
- Adjust the air flow so it does not blow directly on room occupants.
- Do not use flammable sprays near the air conditioner because of danger of fire.
- Do not use a steel or copper wire in place of fuses.

System Operation

- Do not inspect or service the air conditioner while it is operating. Turn off the power supply before doing any inspection or service work.
- The power cord should be kept away from furniture with sharp corners. It may cause fire or electric shock.
- When the air conditioner will not used for a long time, be sure to turn **OFF** the power supply.
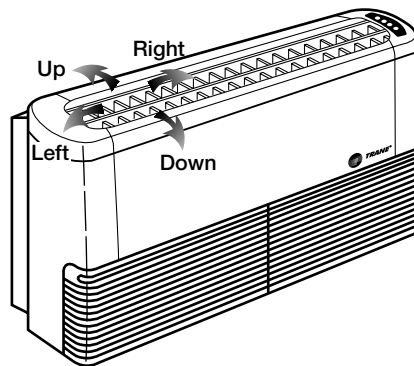
If you have any questions or problems with your air conditioning system, please consult your nearest **Trane** dealer.

Adjust Air Flow Direction
- The supply air grille may be adjusted **left, right, up** or **down** manually.
- Adjust the air flow direction properly, otherwise, it may cause discomfort and make the room temperature uneven.
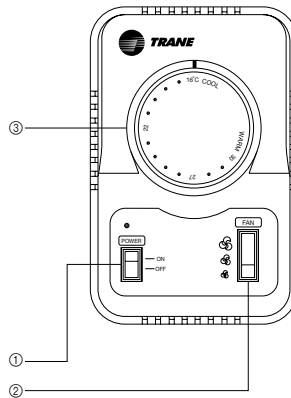
Adjust Air Flow Direction (with sweep option)
- The sweep motor will sweep the supply air grille **upward** and **downward.**
- For **left** and **right** air flow, the supply air grille can be adjusted manually.

Electronic Room Thermostat

1) **Power Button**
   Push power button to ON position to turn on the air condition, and push to OFF position to turn off the air condition.

2) **Fan Button**
   Three fan speed (high, medium, low) can be selected by push the button to the desired position.

3) **Temperature Setting**
   Temperature setting can be set in the range of 16°C - 30°C by rotating the temperature setting knob to the position ▌.
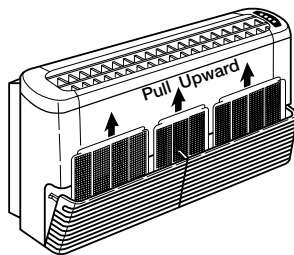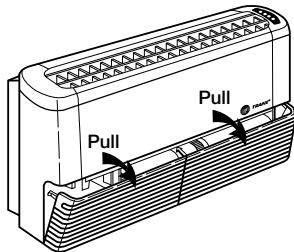
Maintenance

Regular Maintenance
Be sure to disconnect the power before inspection or maintenance of air conditioner.

1. Cleaning the air filter
Air flow is reduced and cooling efficiency impaired if the filter is clogged. Be sure to clean the filter every two weeks during the cooling season.
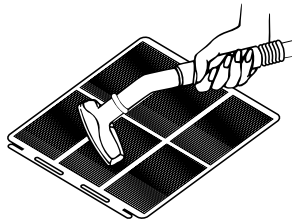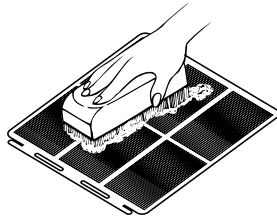
1.1 How to remove the air filters
- Remove each return air grille by pushing down and pulling forward.
- Remove each air filter frame from the return air grille.

1.2 How to clean the air filter
Wash away dust from the air filter with clean water or vacuum it with an electric vacuum cleaner.

Note: Once the air filter is washed, dry it completely before returning it to its original position.
After cleaning, be sure to return it to its original position.

Cautions
- Do not wash the air filter in water that is over 40°C or it may shrink.
- Do not expose the air filter to fire.
- Do not expose the air filter to direct sunlight for a long time.
- Clean the air filter more frequently when the air is very dirty.

2. Cleaning the front panel
Do not pour water directly on the front panel to clean it. Dust or wipe it lightly with a soft cloth. If it is very dirty, use a soft cloth soaked in water or neutral detergent.

Cautions
- Do not use water over 50°C to clean the front panel or it may become discolored.
- Do not use benzine, gasoline, thinner, polishing compound, machine oil, etc. when cleaning the front panel, or paint may peel off, or it may become deformed or damaged.

3. Maintenance before prolonged idle period
- Operate the fan for about half a day to dry the inside of the unit.
- Stop the air conditioner and disconnect the power by turning off the safety breaker.
- Clean the air filter and return it to its original position.

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Troubleshooting

Before calling for service, please check the following.

The air conditioner does not operate at all:
- Check if the control ON/OFF switch is "OFF". Turn the switch to ON.
- Check whether the fuse has been blown or circuit breaker thrown. Set the ON/OFF Control Switch to OFF, and turn on the circuit breaker or replace to a new fuse.
- Check whether the power supply is interrupted. Wait until the power is resupplied and then operate the air conditioner.

Cooling is insufficient:
- Check whether the air filter is clogged. Clean it.
- Check whether the thermostat setting is too high. Set the thermostat to lower temperature.
- Check whether windows or doors are opened. If opened, close them.
- Check whether there are sources of heat in the room, cooling is less effective.

- Check whether the return air grille or the supply air grille on the indoor unit and outdoor unit are blocked. If they are blocked, remove obstacles to permit air passage properly.
- Check whether the fan speed is set at low. Set the fan switch from "LOW" to "MED" or "HIGH"

Heating is insufficient:
- Check to see if the air filters are clogged with dust or debris. Clean the air filters.
- Check to see if the thermostat setting is too low. Set the thermostat a higher temperature.
- Check to see if windows or doors are open. If they are open, close.
- Check to see if the return air grille or the supply air grille on the indoor unit are blocked. If they are blocked, remove obstacles to permit air passage properly.
- Check to see if the fan speed is set at low setting. Set the fan switch from "LOW" to "MED" or "HIGH"

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Notes

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Since The Trane Company has a policy of continuous product and product data improvement,
it reserves the right to change design and specifications without notice.