IMPORTANT NOTE:
Read this manual carefully before installing or operating your wired remote controller. Make sure to save this manual for future reference.

MODEL:
KJR-120G1/TFBG-E(5V) (For high wall models)
KJR-120G2/TFBG-E(12V) (For Duct/Cassette/Floor ceiling models)
- This manual gives detailed description of the precautions that should be brought to your attention during operation.

- To ensure the correct service of the wired controller, read this manual carefully before using the unit.

- Keep this manual after reading for future reference.
1. SAFETY PRECAUTION

- Read the safety precautions carefully before installing the unit.
- Stated below are important safety issues that must be obeyed.

| WARNING | Means improper handling may lead to personal death or severe injury. |
| CAUTION | Means improper handling may lead to personal injury or property loss. |

**WARNING**

Please entrust the distributor or professionals to install the unit.
Installation by other persons may lead to imperfect installation, electric shock or fire.
Adhere to this installation manual.
Improper installation may lead to electric shock or fire.
Reinstallation must be performed by professionals.

Do not uninstall the unit randomly.
Random uninstalling may lead to abnormal operation, heating or fire of the air condition.

**NOTE**

1. Do not install the unit in a place vulnerable to leakage of flammable gases. Once flammable gases are leaked and left around the wire controller, fire may occur.
2. Do not operate with wet hands or let water enter the wire controller. Otherwise, electric shock may occur.
3. The wiring should adapt to the wire controller current. Otherwise, electric leakage or heating may occur and result in fire.
4. The specified cables shall be applied in the wiring. No external force may be applied to the terminal. Otherwise, wire cut and heating may occur and result in fire.
2. INSTALLATION ACCESSORY

Select the installation location
Don’t install at the place where cover with heavy oil, vapor or sulfureted gas, otherwise, this product would be deformed that would lead to system malfunction.

Preparation before installation

1. Please confirm that all the following parts you have been supply.

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Qty.</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Wire controller</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Installation and owner’s manual</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Screws</td>
<td>3</td>
<td>M4X20 (For Mounting on the Wall)</td>
</tr>
<tr>
<td>4</td>
<td>Wall plugs</td>
<td>3</td>
<td>For Mounting on the Wall</td>
</tr>
<tr>
<td>5</td>
<td>Screws</td>
<td>2</td>
<td>M4X25 (For Mounting on switch box)</td>
</tr>
<tr>
<td>6</td>
<td>Plastic screw bars</td>
<td>2</td>
<td>For fixing on switch box</td>
</tr>
<tr>
<td>7</td>
<td>Battery</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>The connection cable</td>
<td>1</td>
<td>(Optional)</td>
</tr>
</tbody>
</table>

2. Prepare the following assemblies on the site.

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Qty.(embeded into wall)</th>
<th>Specification (only for reference)</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Switch box</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Wiring Tube(Insulating Sleeve and Tightening Screw)</td>
<td>1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
2. INSTALLATION ACCESSORY

WIRED CONTROLLER INSTALLATION PRECAUTION

1. This manual provides the wired controller installation method. Refer to the wiring diagram in this installation manual to wire the wired controller with the indoor unit.

2. The wired controller works in a low voltage loop circuit. Do not connect directly to 208/230V and 460V. Do not wire this kind of wire into a loop. Wiring clearance between the configured tubes should range 11.81–19.69 inches (30–50 cm) or above.

3. The shielded wire of the wired controller must be properly grounded.

4. Upon finish the wire controller connection, do not employed tramegger to detect the insulation.
3. INSTALLATION METHOD

1. Wired Remote Controller Dimensions

![Diagram showing dimensions of the wired remote controller.]

- 120mm (4.7”)
- 18.5mm (0.7”)
- 46mm (1.8”)
- 83.5mm (3.3”)
- 123mm (4.8”)
- 62mm (2.4”)

Fig 3-1

2. Wiring Connection Diagram

![Diagram showing the wiring connection diagram.]

- Insert of the mainboard CN40
  - red
  - black
  - yellow
  - brown

- Wire controller
  - 4-Core Shield Cable, the length is decided by installation

- Indoor unit mainboard

Fig 3-2
3. INSTALLATION METHOD

3. Wiring figure

- Connect the female joint of the wires group from the mainboard with the male joint of the connective wires group. (See Fig. 3-3(A))
- Connect the other side of the connective wires group with the male joint of the wires group leads from the wire controller. (See Fig. 3-3(A))
3. INSTALLATION METHOD

- Install the Adapter Board and the Display Board on the High Wall (See the Appendix for instructions).
- Connect the female joint of the wires group from the adapter board with the male joint of the connective wires group. Next, connect the other side of the adapter board with the displayboard. (See Fig.3-3(B))
- Connect the other side of the connective wires group with the male joint of the wires group leads from the wire controller. (See Fig.3-3(B))

4. Wire controller upper part Remove

- Insert a flat screwdriver into the slots in the lower part of the wire controller (2 places).
- Remove the upper part of the wire controller (Fig.3-4)

**NOTE:** The PCB is mounted in the upper part of the wired controller. Be careful not to damage the board with the screwdriver.

5. Fasten the wire controller back plate

- For surface mounting, fasten the back plate on the wall with the 3 screws (M4x20) and plugs. (Fig.3-5)
3. INSTALLATION METHOD

- For switch box mounting, fasten the back plate on the switch box with 2 screws (M4x25) and fasten it on the wall with 1 screw (M4x20). (Fig.3-6)

![Diagram of switch box mounting](Fig 3-6)

**NOTE:** Place on a flat surface. Be careful not to distort the wire controller’s back plate by over-tightening the mounting screws.

6. Battery installation

![Diagram of battery installation](Fig 3-7)

- Place the battery in the unit and ensure the positive side of the battery is in accordance with the polarity markings. (See Fig.3-7)
- Set the correct time before operating. Batteries in the wired controller can maintain the correct time during a power failure. When the power is restored and the displayed time is not correct, replace the battery.
3. INSTALLATION METHOD

7. Wire the indoor unit

There are three methods:
1. from the rear;
2. from the bottom;
3. from the top;

4. Notch the part for the wiring to pass through with a nipper tool.
3. INSTALLATION METHOD

**NOTE:** **DO NOT** allow water to enter the remote control. Use the trap and putty to seal the wires.

![Diagram of Putty and Trap installation](image)

**Fig 3-8**

8. **Reattach the wire controller’s upper part**

- While adjusting and mounting the upper case, avoid clamping the wiring during installation. (Fig 3-9)

![Diagram of Wire Controller installation](image)

**Fig 3-9**

**IMPORTANT:** All the pictures in this manual are for illustration purposes only. Your wire controller may differ slightly.
4. APPENDIX
INSTALL THE WIRE CONTROLLER KIT

1. Open the front panel.

2. Disconnect the wire from the main controller board.
4. APPENDIX
INSTALL THE WIRE CONTROLLER KIT

3. Identify the components. From left to right, the wired controller, convert board and the display board.

4. Identify connections on the Display Board.
   - CN201 is the display board connection to the main board wire (on the display board).
4. APPENDIX
INSTALL THE WIRE CONTROLLER KIT

- CN101 is the display board connection to the convert board wire (on the display board).

5. Uninstall the display board from the front panel. Keep the display board holder.
4. APPENDIX
INSTALL THE WIRE CONTROLLER KIT

6. Carefully bend and break off the rectangular section (upper left section with two diagonal holes) from the display board.

\[\text{Break off rectangular section}\]

**NOTE:** Break off the upper left hand rectangle (section with the two holes marked with a red rectangle).

7. Replace the old display board (for the New Display board provided) and secure with the clips. To uninstall the clips, push the clips inward.

**NOTE:** There are 4 clips just above the numeric display (88) which run the length of the holder.
8. Before assembling mounting back on the Front Panel, remove the display board’s screen cover.

9. Connect the Wires to the Adaptor Board.
   a. Connect the wire coming from the Display board to the Convert Board (this connection consists of 5 wires).
4. APPENDIX
INSTALL THE WIRE CONTROLLER KIT

b. Connect the wire coming from the Wired Remote Controller to the Convert Board (this connection consists of 4 wires).

10. Once the ports are connected, install the cover.

11. Mount the new display board and convert board to the Front Panel.
12. Connect the wired remote controller to the display board and the convert board.

13. Connect the wire from the main controller board (see Fig 3-2).
## 5. SPECIFICATION

<table>
<thead>
<tr>
<th>Specification</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Input voltage</strong></td>
<td>DC 5V/DC 12V</td>
</tr>
<tr>
<td><strong>Ambient temperature</strong></td>
<td>23<del>110°F (-5</del>43°C)</td>
</tr>
<tr>
<td><strong>Ambient humidity</strong></td>
<td>RH40%~RH90%</td>
</tr>
</tbody>
</table>

### Wiring specifications

<table>
<thead>
<tr>
<th>Wiring type</th>
<th>Size</th>
<th>Total length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shielded vinyl cord or cable</td>
<td>0.029 in-0.74mm (0.75-1.25mm²)</td>
<td>≤66 ft (20m)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>≤164 ft (50m)</td>
</tr>
</tbody>
</table>
6. FEATURE AND FUNCTION OF THE WIRED CONTROLLER

Feature:
- LCD display.
- Malfunction code display: displays the error code (helpful for servicing)
- 4-way wire layout design.
- Room temperature display.
- Weekly Timer

Function:
- Mode: choose Auto-Cool-Dry-Heat-Fan
- Fan speed: Auto-Low-Med-High
- Swing(on some models)
- Swing Timer Day off/Del Confirm Back/Turbo Copy/ Follow me
- Mode
- Fan speed (Lock)
- Weekly Timer
- Follow me
- Child Lock
- LCD Display
- Clock
- Panel function (on some models)
7. WIRED CONTROLLER DISPLAY

1. Operation mode indicator
2. Fan speed indicator
3. Left-right swing indicator
4. Up-down swing indicator
5. Faceplate function indicator
6. Main unit and secondary unit indicator
7. Follow me function indicator
8. Turbo/Auxiliary Heat function indicator
9. °C / °F indicator
10. Temperature display
11. Lock indicator
12. Room temperature indicator
13. Clock display
14. On/Off timer
15. Timer display
8. WIRED CONTROLLER BUTTONS

1. Mode
2. Power
3. Adjust
4. Fan Speed
5. Swing
6. Timer
7. Day Off/Del
8. Copy/Follow me
9. Back/Turbo
10. Confirm
9. PREPARATORY OPERATION

Set the current day and time

1. Press **TIMER** for 3s or more. The timer displays flashes.

2. Press + or − to set the date. The selected date flashes.

3. Date setting is complete and the time setting is ready after pressing **TIMER** or if nothing is pressed in 10 seconds.

4. Press + or − to set the current time. Press repeatedly to adjust the current time in 1 minute increments. Press and hold to adjust the current time.

   ex. Monday AM 11:20

5. The setting is complete after pressing **TIMER** or if no button is pressed for 10 seconds.
10. OPERATION

To start/stop operation

Press the Power button.

To set the operation mode

Operation mode setting

Press MODE to set the operation mode.
(Heat function is invalid for cool only type unit)

Room temperature setting

Press + or – to set the room temperature. Indoor Setting Temperature Range:
62~86°F (17~30°C)/62~88°F (17~31°C)(depending on models).
10. OPERATION

Fan speed setting

Press FAN SPEED to set the fan speed.

**NOTE:** This function is unavailable in the AUTO or DRY modes.

Room temperature sensor selection

Press FOLLOW ME to select whether the room temperature is detected at the indoor unit or at the wired controller.

**NOTE:** When the FOLLOW ME function indication appears, the room temperature is detected at the wire remote controller.
10. OPERATION

Child lock function

Press **LOCK** for 3 seconds to activate the **CHILD LOCK** feature and lock all buttons on the wired controller. Press again for 3 seconds to deactivate.

**NOTE:** When the child lock function is activated, the lock image appears.

kepad tone setting

Press **SWING** and **TIMER** simultaneously for 3 seconds to disable the keypad tone. Press the buttons again for 3 seconds to enable the keypad tone.

°C & °F scale selection (on some models)

Press **BACK** and **COPY** simultaneously for 3 seconds to alternate the temperature display between the °F & °C scale.
10. OPERATION

Turbo/Auxiliary Heat function (on some models)

- Press **TURBO** to activate/deactivate the Turbo/Auxiliary Heat function. The turbo function sets the unit to reach the user’s present temperature in the shortest amount of time possible.
- When the user presses **TURBO** in the **COOL** mode, the unit sets to the highest fan speed setting to jump–start the cooling process.
- When the user presses **TURBO** in the **HEAT** mode, for units with **AUX. HEAT**, the AUX. HEAT activates and jump–starts the heating process.

Lift panel function (only for some cassette specific panel)

1. When the unit is off, Press the Mode button long to activate the lift panel function. The \[\text{ }\] mark will flash.

2. Press the button \[\text{+}\] and \[-\] to control the lift and drop of the panel. Pressing the \[\text{+}\] button can stop the panel, while it is dropping. Pressing the \[-\] button can stop the panel, while it is lifting.
10. OPERATION

Swing function
(For the unit with left & right auto swing function only)

1  Up-Down swing

Press the **Swing** button to start up-down swing function. Press it again to stop. When the Up-Down swing function is activated, the 🎹 mark appears.

2  Left-Right swing

Press the **Swing** button long to start Left-Right swing function. Press it again to stop. When the Left-Right swing function is activated, the 🎹 mark appears.
10. OPERATION

Swing function
(For the unit without left & right auto swing function models)

Up-Down airflow direction and swing

- Use SWING to adjust the up and down airflow direction.
  1. Every time the user presses SWING, the louver swings six degrees.
  2. Press and hold SWING for 2 seconds, it changes to the UP–DOWN SWING mode. Press SWING again to stop.
     When the Up-Down swing function is activated, the mark appears. (Not applicable to all the models)

- The operation can refer to the following instructions for the unit with four Up-Down louvers can be operated individually.
  1. Press the Swing button to activate the Up-Down adjusting louver function.
     The mark will flash. (Not applicable to all the models)
  2. Pressing the button “+” or “-” can select the movement of four louvers. Each time you push the button, the wire controller select in a sequence that goes from: (the icon means the four louvers move at the same time.)

3. And then use Swing button to adjust the Up-Down airflow direction of the selected louver.
11. TIMER FUNCTIONS

WEEKLY timer
Use to set the operating times for each day of the week.

On timer
Use to start the air conditioner operation. The timer operates and the air conditioner operation starts after the time has passed.

Off timer
Use to stop the air conditioner operation. The timer operates and the air conditioner operation stops after the time has passed.

On and Off timer
Use to start and stop the air conditioner operation. The timer operates and the air conditioner operation starts and stops after the time has passed.
11. TIMER FUNCTIONS

To set the On or Off TIMER

1. Press **Timer** to select the **Day On** or **Day Off**.

2. Press **Confirm** and the Clock display flashes.

3. Press + or – to set the time. After the time is set, the timer starts or stops automatically.

4. Press **Confirm** again to finish the settings.
11. TIMER FUNCTIONS

To set the On and Off TIMER

1. Press **Timer** to select the [Day On Off].

2. Press **Confirm** and the Clock display flashes.

3. Press the button + or - to set the **On timer** and then press **Confirm**.

4. Press + or - to set the **Off timer**.

5. Press **Confirm** to finish the setting.
12. WEEKLY TIMER

1 Weekly timer setting

Press Timer to select the week and press Confirm.

2 Day of the week setting

Press + or − to select the day of the week and then press CONFIRM.

3 ON timer setting of timer setting 1

Press + and − to select the setting time. The setting time, mode, temperature and fan speed appear on the LCD. Press CONFIRM to enter the setting time process.
12. WEEKLY TIMER

IMPORTANT: Up to 8 scheduled events can be set on one day. Various events can be scheduled in either MODE, TEMPERATURE and FAN speeds.

4 Time setting
Press + and – to set the time then press CONFIRM.

5 Operation mode setting
Press + and – to set the operation mode then press CONFIRM.

6 Room temperature setting
Press + and – to set the room temperature then press CONFIRM.
NOTE: This setting is unavailable in the FAN or OFF modes.
12. WEEKLY TIMER

7 Fan speed setting

Press + and – to set the fan speed then press CONFIRM.

NOTE: This setting is unavailable in the AUTO, DRY or OFF modes.

8 Different scheduled events can be set by repeating steps 3 through 7.

9 Additional days, in a one week period, can be set by repeating steps 3 through 8.

NOTE: The weekly timer setting can be returned to the previous step by pressing BACK. The current setting is restored. The controller will not save the weekly timer settings if there is no operation within 30 seconds.
12. WEEKLY TIMER

WEEKLY timer operation

To start

Press Timer to select the Week, and then the timer starts automatically.

To cancel

Press Power to cancel the timer mode.

The timer mode can also be canceled by changing the timer mode using Timer.

To set the DAY OFF (for a holiday)

1. After setting the weekly timer, press CONFIRM.

2. Press + or – to select the day of the week.
12. WEEKLY TIMER

3 Press DAY OFF to create an off day.

The WE mark is hidden

ex. The DAY OFF is set for Wednesday

4 Set the DAY OFF for other days by repeating the steps 2 and 3.

5 Press BACK to revert to the weekly timer.

● To cancel, follow the same procedures used for setup.
● NOTE: The DAY OFF setting is cancelled automatically after the set day has passed.

Copy out the setting in one day into the other day.
● A scheduled event, made once, can be copied to another day of the week. The scheduled events of the selected day of the week will be copied. The effective use of the copy mode ensures the ease of reservation making.

1 In the weekly timer, press CONFIRM.

2 Press + or – to select the day to copy from.
12. WEEKLY TIMER

3 Press COPY, the letters CY appear on the LCD.

4 Press + or – to select the day to copy to.

5 Press COPY to confirm.

The WE mark flashes quickly

ex. Copy the setting of Monday to Wednesday

6 Other days can be copied by repeating steps 4 and 5.

7 Press CONFIRM to confirm the settings.

8 Press BACK to revert to the weekly timer.
12. WEEKLY TIMER

Delete the time scale in one day.

1. During the weekly timer setting, press CONFIRM.

2. Press + and – to select the day of the week and then press CONFIRM.

3. Press + and – to select the setting time want to delete. The setting time, mode, temperature and fan speed appear on the LCD. The setting time, mode, temperature and fan speed can be deleted by pressing the DEL (day off).

ex. Delet the time scale 1 in saturday
13. FAULT ALARM HANDLING

If the system does not properly operate except in the aforementioned cases or the aforementioned malfunctions are evident, investigate the system according to the following procedures.

<table>
<thead>
<tr>
<th>NO.</th>
<th>MALFUNCTION AND PROTECTION DEFINITION</th>
<th>DISPLAY DIGITAL TUBE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Communication error between wired controller and indoor unit</td>
<td>F0</td>
</tr>
<tr>
<td>2</td>
<td>The faceplate is abnormal</td>
<td>F1</td>
</tr>
</tbody>
</table>

Please check the indoor unit’s error display and review the owner’s manual if other error codes appear.

14. TECHNICAL INDICATION AND REQUIREMENT

EMC and EMI comply with the CE certification requirements.
The design and specifications are subject to change without prior notice for product improvement. Consult with the sales agency or manufacturer for details.