

User Guide

Variable Refrigerant Flow (VRF) System Wired Remote Controller

Model Numbers: TVCTRLTWRWD02T
TVCTRLTWRWD02A

SAFETY WARNING

Only qualified personnel should install and service the equipment. The installation, starting up, and servicing of heating, ventilating, and air-conditioning equipment can be hazardous and requires specific knowledge and training. Improperly installed, adjusted or altered equipment by an unqualified person could result in death or serious injury. When working on the equipment, observe all precautions in the literature and on the tags, stickers, and labels that are attached to the equipment.

Introduction

Read this manual thoroughly before operating or servicing this unit.

Warnings, Cautions, and Notices

Safety advisories appear throughout this manual as required. Your personal safety and the proper operation of this machine depend upon the strict observance of these precautions.

The three types of advisories are defined as follows:

⚠ WARNING

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠ CAUTION

Indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury. It could also be used to alert against unsafe practices.

NOTICE

Indicates a situation that could result in equipment or property-damage only accidents.

Important Environmental Concerns

Scientific research has shown that certain man-made chemicals can affect the earth's naturally occurring stratospheric ozone layer when released to the atmosphere. In particular, several of the identified chemicals that may affect the ozone layer are refrigerants that contain Chlorine, Fluorine and Carbon (CFCs) and those containing Hydrogen, Chlorine, Fluorine and Carbon (HCFCs). Not all refrigerants containing these compounds have the same potential impact to the environment. Trane advocates the responsible handling of all refrigerants-including industry replacements for CFCs such as HCFCs and HFCs.

Important Responsible Refrigerant Practices

Trane believes that responsible refrigerant practices are important to the environment, our customers, and the air conditioning industry. All technicians who handle refrigerants must be certified. The Federal Clean Air Act (Section 608) sets forth the requirements for handling, reclaiming, recovering and recycling of certain refrigerants and the equipment that is used in these service procedures. In addition, some states or municipalities may have additional requirements that must also be adhered to for responsible management of refrigerants. Know the applicable laws and follow them.

⚠ WARNING

Proper Field Wiring and Grounding Required!

Failure to follow code could result in death or serious injury. All field wiring **MUST** be performed by qualified personnel. Improperly installed and grounded field wiring poses **FIRE** and **ELECTROCUTION** hazards. To avoid these hazards, you **MUST** follow requirements for field wiring installation and grounding as described in NEC and your local/state electrical codes.

WARNING

Personal Protective Equipment (PPE) Required!

Failure to wear proper PPE for the job being undertaken could result in death or serious injury. Technicians, in order to protect themselves from potential electrical, mechanical, and chemical hazards, MUST follow precautions in this manual and on the tags, stickers, and labels, as well as the instructions below:

- Before installing/servicing this unit, technicians MUST put on all PPE recommended for the work being undertaken. ALWAYS refer to appropriate MSDS sheets and OSHA guidelines for proper PPE.
- When working with or around hazardous chemicals, ALWAYS refer to the appropriate MSDS sheets and OSHA guidelines for information on allowable personal exposure levels, proper respiratory protection, and handling recommendations.
- If there is a risk of arc or flash, technicians MUST put on all PPE in accordance with NFPA 70E or other country-specific requirements for arc flash protection, PRIOR to servicing the unit.

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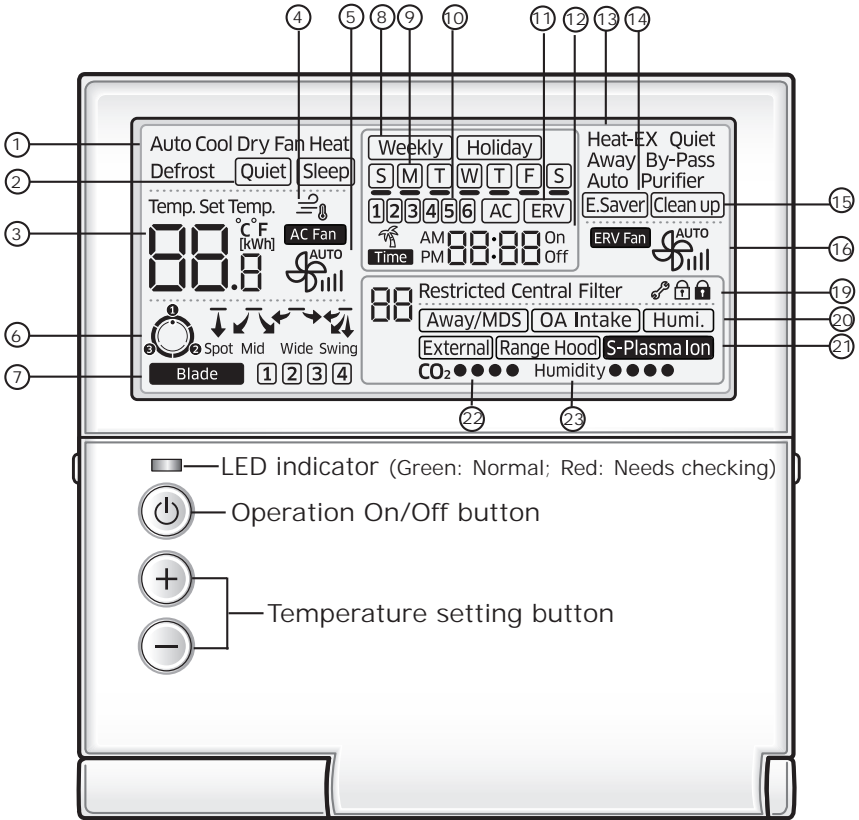
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





Display and Buttons

Figure 1. Display elements and cover buttons



Note: You can turn the unit On/Off or set the desired temperature without opening the cover of the wired remote controller.

Table 1. User interface elements classified and described

Classification	Indicator	Description
Unit functions	1 Auto Cool Dry Fan Heat Defrost	Displays unit operation
	2  Quiet/Sleep	Displays quiet/sleep operation
	3 Temp. Set Temp.  C F SWHI	N/A
	4 	Displays discharge temperature control
	5 AC Fan Speed 	Displays AC fan speed
	6  Spot Mid Wide Swing	Displays air flow direction
	7 Blade 	Displays blade selection for adjusting air flow direction
Schedule functions	8 Weekly Holiday	Displays weekly schedule/holiday setting
	9 	Displays current or scheduled day
	10 	Displays schedule number
	11 AC	Displays scheduled device selection
	12  AM 88:88 On PM 88:88 Off	Displays current time/daylight savings time/scheduled time
Ventilator (ERV) related functions	13 Heat-EX Quiet Away By-Pass Auto Purifier	N/A
	14 E.Saver	N/A
	15 Clean up	N/A
	16 ERV Fan 	N/A
	17 	N/A

Display and Buttons

Table 1. User interface elements classified and described (continued)


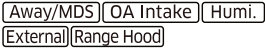



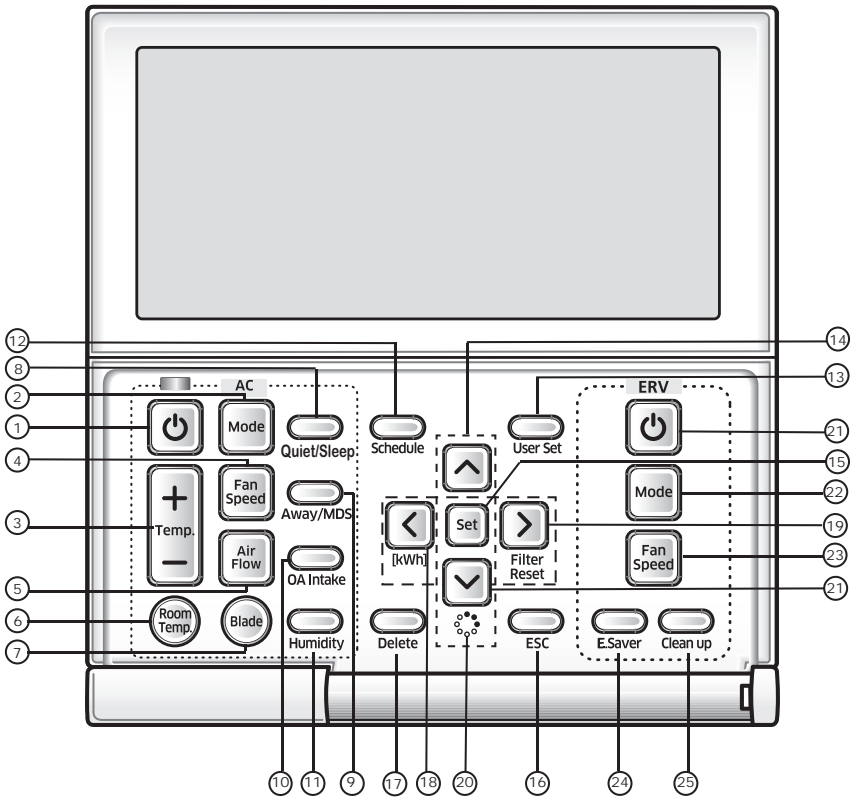
Classification		Indicator	Description
Common functions	18	Restricted Central Filter	Displays invalid operation/central control/filter cleaning (filter cleaning period)
	19		Displays check/partial locking/full locking
	20		Displays away/motion detector sensor/outdoor air supply intake/humidifying/external interconnection control/range hood Note: Some of these features are not active.
	21		N/A
	22		N/A
	23		N/A

Figure 2. Buttons



Display and Buttons

Table 2. Buttons classified and described


























Classification	Button		Function	
Unit functions	1		Operation On/Off	Turns the unit operation On/Off
	2		Mode	Selects the desired unit operation
	3		Temperature setpoint	Sets the desired temperature setpoint
	4		Fan speed	Changes the unit fan speed
	5		Air flow	Changes the air flow direction
	6		Room temperature	Displays the current indoor temperature
	7		Blade	Selects a blade for individual control
	8		Quiet/Sleep	Selects Quiet or Sleep operation for the unit
	9		Away/Motion detection sensor (MDS)	Detects when an area is unoccupied, when the unit needs to be automatically turned off, sets the Away operation
	10		OA Intake	N/A
	11		Humidity	N/A

Table 2. Buttons classified and described (continued)

Classification	Button		Function
Special functions	12  Schedule	Schedule	Selects the schedule setting function
	13  User Set	User Set	Selects the detailed setting functions
	14  Navigational	Navigational	Moves between items or changes the item value
	15  Set	Set	Saves new settings
	16  ESC	ESC	Returns to general mode from schedule and detailed setting screens
	17  Delete	Delete	Cancels/removes the schedule setting
	18  (KWH)		N/A
	19  Filter Reset	Filter Reset	Turns off the Filter light. After cleaning the filter, press the Filter Reset button. The Filter light will turn off. It will turn on again when the next filter cleaning is scheduled.
	20  ✓		N/A
	Ventilator (ERV) related functions	21  Power	
22  Mode			
23  Fan Speed			
24  ESaver			
25  Clean up			
Note: If you press a button that controls a function not supported by the indoor unit, the Restricted light appears on the display.			

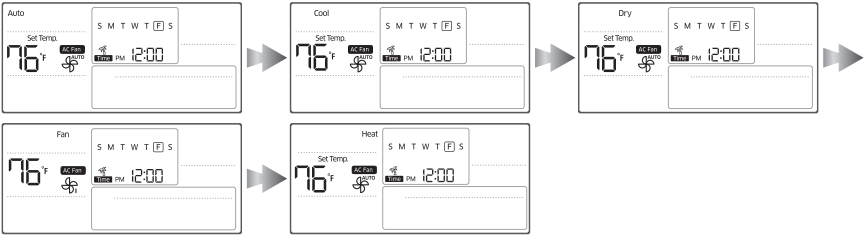
Operation

Turning On/Off the Indoor Unit

Press the **Power** button [] to turn the unit on/off.

Changing Operating Modes

Press the **Mode** button [] to select the desired operation.



Note: The system may not respond to the remote control signal if the building is currently operating in a mode that is in conflict with the mode you are requesting (for example, a request for cooling when the building is currently heating, or vice versa).

Operating Mode Descriptions

Auto

In Auto mode, the unit will automatically set the temperature and fan speed to maintain the selected temperature. If the indoor temperature is too high, a cooling breeze is generated until the room returns to a comfortable level. As the room cools, the fan slows down and maintains a gentle airflow.

Cool


Cool mode is frequently used and you can freely control the temperature, fan speed, and air flow direction in cool mode.














If you select Heat mode while the unit is in Cool mode, the Cool mode request is canceled.

Dry

The unit in Dry mode acts like a dehumidifier by removing moisture from the indoor air.

Fan

In Fan mode, you can ventilate the area. Press the **Fan Speed** button [] to select the desired fan speed. The table below summarizes the allowed fan speed selections on unit operating mode.

Auto	 (Auto)
Cool	 (Low),  (Medium),  (High),  (Auto)
Dry	 (Auto)
Fan	 (Low),  (Medium),  (High)
Heat	 (Low),  (Medium),  (High),  (Auto)

Heat

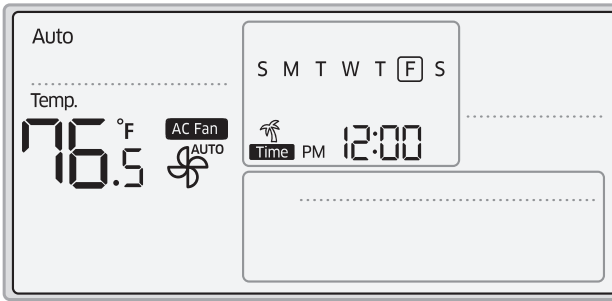
While the unit is in Heat mode, be aware of the following:

- There may be a delay before the fan begins running to avoid generating a cold breeze.
- The defrost indicator (❄️) will appear when frost is being removed from the outdoor unit. When the defrost function is completed, the defrost indicator disappears.
- If you stop heating operation, the fan will continue running for a period of time to cool the unit.
- If you select Cool mode while the unit is in Heat mode, the Heat mode request is canceled.

Viewing the Current Indoor Temperature

Note: The temperature setpoint appears on the display under normal conditions. “Set Temp.” will appear above the temperature setpoint.

To view the current indoor temperature, press the **RoomTemp.** button [🏠]. The current indoor temperature will appear on the display and “Temp.” will appear above the temperature, as shown in the following example.



After 3 seconds, the display will revert back to displaying the temperature setpoint.

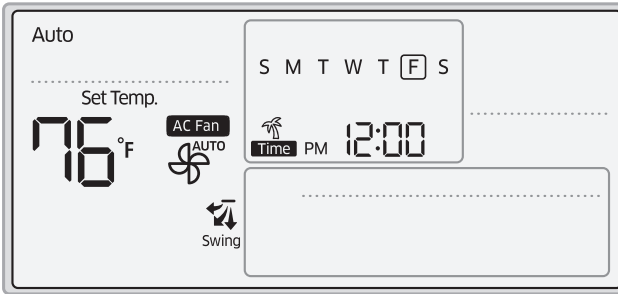
Note: If the wired remote control was configured during installation to normally display the current temperature, the display will show “Temp.” above the temperature at all times. If you press the **RoomTemp.** button, the Restricted light will appear to indicate that the current indoor temperature is already being displayed.

Operation

Changing Settings and Functions

Temperature Setpoint

Press the +/- button to change the desired temperature setpoint for the room.




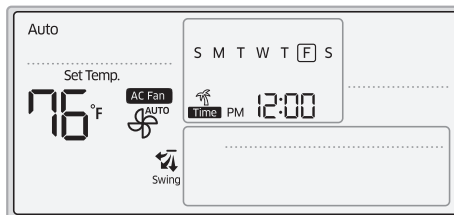
Note: The temperature setpoint cannot be adjusted when the unit is operating in Fan mode.

Auto	Adjust the desired temperature by 1°F within the range of 65-86°F
Cool	Adjust the desired temperature by 1°F within the range of 65-86°F
Dry	Adjust the desired temperature by 1°F within the range of 65-86°F
Fan	Cannot change the desired temperature
Heat	Adjust the desired temperature by 1°F within the range of 65-86°F

Air Flow


Note: The Air Flow function is available only with high-wall and convertible ceiling/floor indoor units.

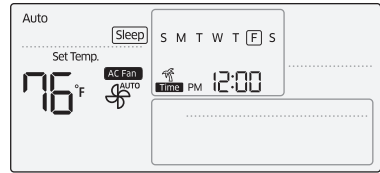
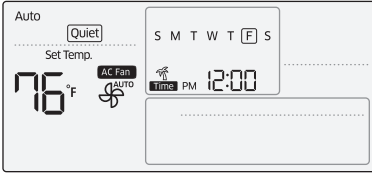
1. Press the **Air Flow** button  to tilt the blade up or down.
2. When the blade reaches the desired position, press the **Air Flow** button again. The up/down tilting of the blade will stop and the blade angle will remain in its current position.



Quiet/Sleep

The Quiet function reduces operating noise. The Sleep function automatically turns the unit off after six hours of operation.

Press the **Quiet/Sleep** button  until the desired operation appears on the display: **Quiet**, **Sleep**, or both **Quiet** and **Sleep**.



Refer to the following list for the functions that are available in the various operating modes:

If the unit supports both **Quiet** and **Sleep** functions:

- In *Auto* or *Dry* mode, select **Quiet** or **Cancel**.
- In *Cool* or *Heat* mode, select **Quiet**, **Sleep**, **Quiet and Sleep**, or **Cancel**.
- In *Fan* mode, these functions are restricted.

If the unit supports only the **Quiet** function:


- In *Auto*, *Cool*, *Heat*, or *Dry* mode, select **Quiet** or **Cancel**.
- In *Fan* mode, this function is restricted.

If the unit supports only the **Sleep** function:

- In *Cool* or *Heat* mode, select **Sleep** or **Cancel**.
- In *Auto*, *Dry*, or *Fan* mode, this function is restricted.

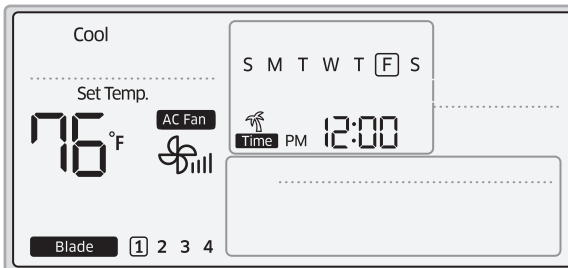
Blade Selection

The Blade Selection function allows you to select specific blades for the Air Swing function.

1. Press the **Blade** button  to toggle between blades 1–4. The number that corresponds to the selected blade will blink.

Note: If the unit is *Off* or if the unit is a model that has no blades, the *Restricted* light will appear. If the unit has only one blade, as in the high-wall unit, the *Restricted* light will appear if trying to select more than one blade.

2. Press the **Air Flow** button to select the up/down direction of the selected blade.



Operation

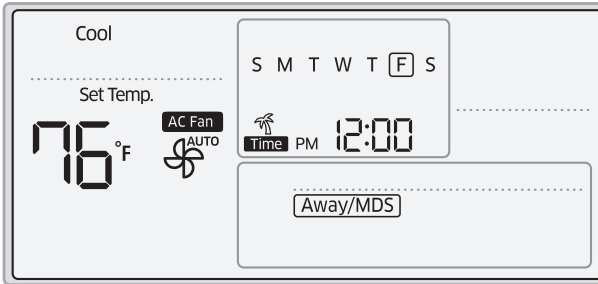
Away Function/Motion Detection Sensor

The Away function automatically turns off the power to the unit after running the energy savings operations for a designated period of time.

Note: The Away function is available only for the global duct model.

The Motion Detection Sensor automatically turns off the power to the unit when the room is unoccupied. It is an optional accessory that is available only for some models.

1. To enable either of these functions, press the **Away/MDS** button. **Away/MDS** appears on the displays and the motion detection operation begins.
2. To cancel either of these functions, press the **Away/MDS** button again.



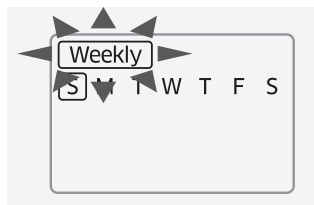
Scheduling

Scheduling Events

To create a weekly schedule, follow the procedure in this section.

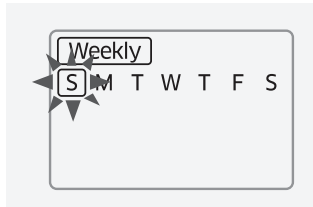
Notes:

- Throughout the scheduling process, use the left/right arrow buttons to cycle forwards or backwards through each section of settings. Use the up/down arrow buttons to scroll through the options in a section.
 - To exit scheduling and return to the standard display, press the **ESC** button.
 - If Centralized Control is set, it is possible to set up a weekly schedule, but the unit will not operate according to the schedule.
 - The standard display, with no events scheduled, appears as shown:
1. Press the **Schedule** button. **Timer** is displayed. Press the up/down arrow buttons to select **Weekly** from the options of **Weekly** and **Holiday**. An outline will appear around "Weekly."



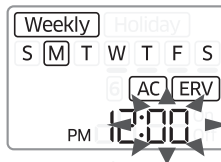
2. Press **>** to advance to days of the week. The icon for each day will flash, one at a time. Stop at the day you want to schedule for the first event.

- Press the up/down arrow buttons to select the day. An outline will appear around the selected day. In the example below, Saturday has been selected.

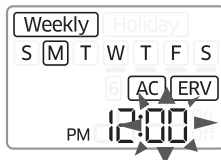


Note: If a selected event is to apply to more than one day, select other days of the week by the same method.

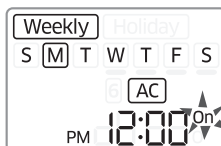
- To continue to the next section, press > until you have advanced through the days of the week. Since **AC** is the only choice, press > again to advance to the next section. **AM** or **PM** will flash.
- Press the up/down arrow to choose between **AM** or **PM**.
- Press > to advance to the hour section. The hour will flash.



- Press the up/down button to set the hour at which the event is to occur.
- Press the > button to advance to the minute section. The minutes will flash.

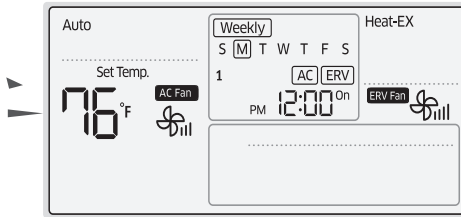


- Press the up/down button to set the minutes at which the event is to occur.
- Press the > button to advance to the On/Off section, which refers to whether the unit will turn on or off. The On/Off icon will flash.
- Press the up/down button to choose between **On** or **Off**.
If **Off** is chosen, the additional sections are not available for setting. Press **SET** to confirm the scheduled event. If **On** is chosen, continue with the procedure.



Operation

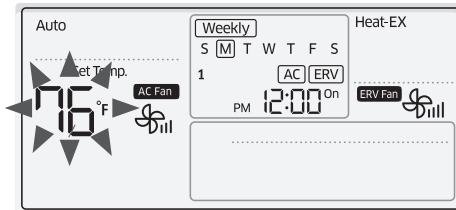
12. Press **>** to advance to the operating mode section. The **Auto** mode icon will flash.



13. Press the up/down arrow to select an operating mode (**Auto**, **Cool**, **Dry**, **Fan**, or **Heat**).

14. Depending on the unit model, **Auto** and **Heat** may not be available as mode options.

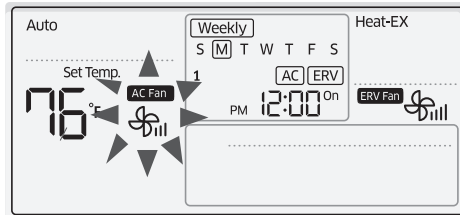
15. Press the **>** button to advance to the temperature setpoint section. The temperature setpoint will flash.



16. Press the up/down arrow to change the temperature in increments of 1°F (1°C).

Note: If you selected fan mode operation in the previous step, the temperature setpoint is not available to schedule for the event.

17. Press **>** and advance to fan speed. The fan speed icons will flash.

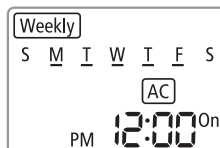


18. Press the up/down arrow to change the fan speed (**Low**, **Medium**, **High**, **Auto**).

Note: This option is available to schedule for the event if the unit is operating (**On**) and the operating mode is in **Cool**, **Fan**, or **Heat**.

19. Press the **Set** button to save the scheduled events.

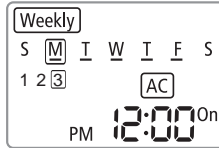
The screen indicates the days of the week that have scheduled events by an underline below the day icon. The example below shows 5 days (Monday–Friday) that have scheduled events.



Note: To set up more events, follow the same procedure as you did for setting the first event. A maximum of 6 events can be scheduled per day.

When a day with a scheduled event is selected, the event is represented by a number on the display. The example below shows that Monday has three events.

When an event is selected, an outline appears around the number. The example below shows "3" as the current selection. The settings that appear on the wired remote display are for the current selection.



20. Press the **ESC** button to exit scheduling.

Scheduling Holidays

Note: Schedule a holiday simply deletes all events from a day that has scheduled events.

1. Press the **Schedule** button. **Weekly** flashes on the display.
2. Press the up arrow. **Holiday** will flash.
3. Press **>** to advance to the icon for the day that is to have a holiday scheduled.
4. Press the **set** button to save the holiday. The underline no longer appears under the selected day icon.

Deleting an Event

To delete an event:

1. Advance through the schedule sections and options as you did for setting up the schedule.
2. When you arrive at the event number that you want to cancel, press the **Delete** button.

Notes:

- To cancel a holiday, select a day that has events scheduled, press the **ESC** button.
 - To cancel all events from the wired remote control, press and hold the **Delete** button for 5 seconds. Use this feature cautiously; the events cannot be restored.
3. Press the **Set** button to save the weekly schedule cancellation.
 4. Press the **ESC** button to exit from scheduling.

User Settings

This section discusses user settings that are available in the wired remote controller.

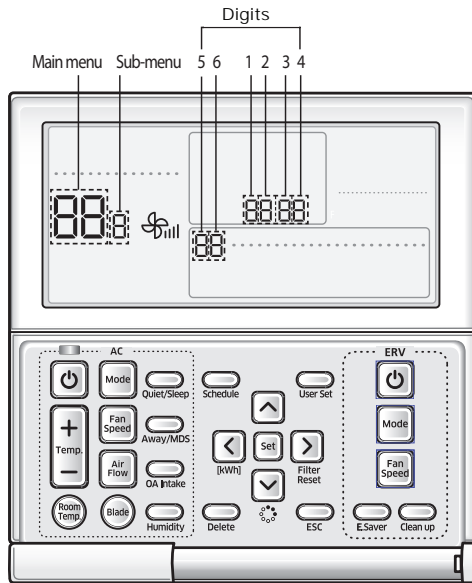


Table 3. Wired Remote Controller User Settings

Main menu	Sub-menu	Functions		Digit	Default	Range	Unit
1	N/A	Auto stop time setting/checking		1,2	0	0-12 hours	1 hour
2	N/A	Temperature limits (°F)	Lower Limit	1,2	61	61-86°F	1°F
			Upper Limit	3,4	86	65-86°F	1°F
3	N/A	All locking		1	0	0-unlock, 1-lock	-
		Lock of partial button	On/Off lock button	2	0	0-unlock, 1-lock	-
			Mode selection lock button	3	0	0-unlock, 1-lock	-
			Temperature setting lock button	4	0	0-unlock, 1-lock	-
			Fan speed selection lock button	5	0	0-unlock, 1-lock	-
			Schedule setting lock button	6	0	0-unlock, 1-lock	-
4	1	Current temperature setting (year, month, date)		1,2/ 3,4/ 5,6	10/01/01	00-99/1-12/1-31	YY, MM, DD
	2	Current time setting (day, hour, minute)		Day/ AM/ PM/ 1,2/ 3,4	Friday/ PM/12/00	Sun-Sat/AM-PM/ 0-12/0-59	Day, hour, minute

Main menu	Sub-menu	Functions		Digit	Default	Range	Unit
5	1	Summer time use and setting methods	Use of summer time (Y/N)	1	0	0-not used, 1-use	-
			Summer time application method	2	0	0-Weekly, 1-daily	-
	2	Summer time use (weekly) Start (? month, ? th Sunday)	1,2/4	03/F	1-12 month/ 1-4,F (last week)th week	-	
	3	Summer time use (weekly) End (? month, ? th Sunday)	1,2/4	10/F	1-12 month/ 1-4,F (last week)th week	-	
	4	Summer time use (daily) Start (? month, ? th Sunday)	1,2/ 3,4	03/22	Jan-Dec/1-31st day	Month, date	
5	Summer time use (daily) End (? month, ? th Sunday)	1,2/ 3,4	09/22	Jan-Dec/1-31st day	Month, date		
6		Backlight time setting/checking		1,2	5	0-30 sec	1 sec
		Use of LED (Green) (Y/N)		3	1	0-not used, 1-used	-
		Use of LED (Red) (Y/N)		4	1	0-not used, 1-used	-
0		Reset to user mode defaults (except current time)		1	0	0-not used, 1-reset	-

User Settings Procedure

Use the following procedure to change user settings in the wired remote controller

1. Click the **User Set** button to access the user settings. The User Set mode is selected and the Main Menu displays.
2. Refer to [Table 3](#) (Wired Remote Controller User Settings) to select the desired menu.
3. Press the up/down button to select a main menu number. Press the **>** button to enter the sub-menu screen.
4. Press the up/down button to select a sub-menu number. Press the **>** button to enter the data setting screen.
5. When you enter the data setting screen, the current setting displays. Refer to the chart of the data setting.
6. Press the up/down button to change the settings. Press the **>** button to move to the next setting.
7. Press the **Set** button to save the setting and exit to the sub-menu screen.
8. Press the **ESC** button to exit to the standard display.

Notes:

- Use the left/right arrow buttons to advance through digits 1–6.
- To exit the sub-menu without saving the setting, press the **ESC** button.

Changing a User Setting (Example)

This example demonstrates how to use the wired remote control to set the current time:

1. Press the **User Set** button. The Main Menu appears.
2. Press the up/down button to select number **4**, which sets the current time.
3. Press the **>** button to select **Year, Month, Date** from the sub-menu.
4. Press the up/down button to select number **1**. Modify the year/month/date settings.
5. Press the **>** button to advance to the **Year**.
6. Press the up/down button to select the year (00-99).
7. Press the **>** button to advance to the **Month**.
8. Press the up/down button to select the month (01-12).
9. Press the **>** button to advance to the day of the month.
10. Press the up/down button to select the date (01-31).
11. Press the **Set** button to save the year, month, and date. The setting are applied and you can exit to the sub-menu.
12. In the sub-menu, select **day, AM/PM, hour, minute**.
13. Press the up/down button to select number 2. Modify the day, AM/PM, hour, minute settings.
14. Press the **>** button to advance to **Day**.
15. Press the up/down button to select the day (Sunday-Saturday).
16. Press the **>** button to advance to **AM/PM**.
17. Press the up/down button to toggle between AM and PM.
18. Press the **>** button to advance to **Hour**.
19. Press the up/down button to select the hour (01-12).
20. Press the **>** button to advance to **Minute**.
21. Press the up/down button to select the minute (00-59).
22. Press the **Set** button to save the settings.
23. Press the **ESC** button to exit to the standard display.

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