



HVAC Advanced Products Division

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How to Guide for PAR-21MAA

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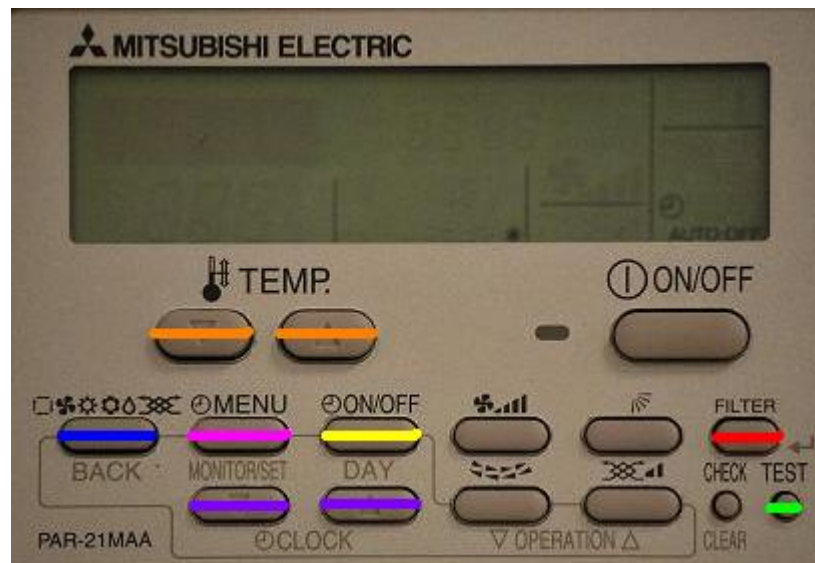
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How to change 208/230V on the PAR-21MAA Controller

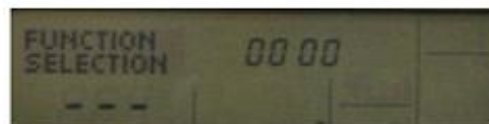
Description: This function is to change the incoming voltage setting to match the buildings incoming voltage. The default setting is 208 volts. If this is not set correctly, there could be excessive noise from the indoor blower.



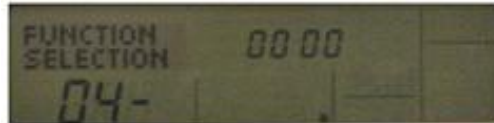
Step 1: Press the filter (**Red**) button and test (**Green**) button at the same time for two seconds



Step 2: Wait for a few seconds until the small dashes start to flash then press the clock (**Purple**) buttons to change refrigerant address to 00 then press the clock on/off (**YELLOW**) button then the clock (**Purple**) buttons to change unit number to 00



Step 3: Press the mode (**Blue**) button then wait for a few seconds until the big dashes start to flash then press the temperature up/down (**Orange**) button to change mode number to 04 for power voltage menu.

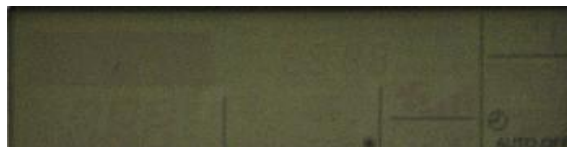


Step 4: Press menu (**Pink**) button then the temperature up/down (**Orange**) button to change the setting number to 1 for 230v and 2 for 208v then



Step 5: Press the mode (**Blue**) button, the numbers will flash. When the numbers stop flashing the setting is set.

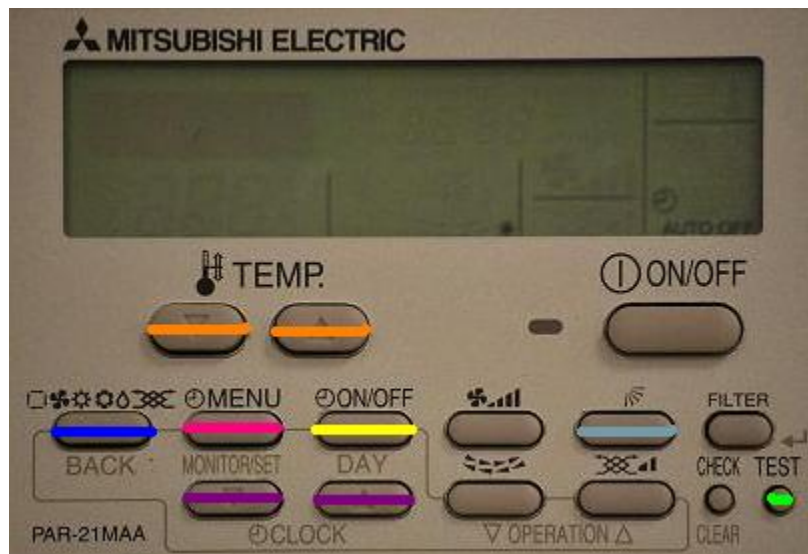
Step 6: Press the filter (**Red**) button and test (**Green**) button at the same time for two seconds to return to the normal screen.



R410A P-Series Indoor Fan Cycle Off in Heat or Cool Mode with PAR-21MAA Controller

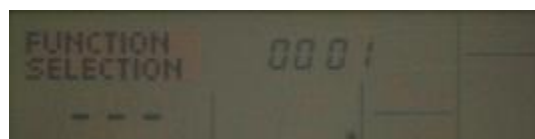
Description: This option is only for the P-Series equipment. What this function allows you to do is to shut the fan down when the system is satisfied.

****If this function is used it is recommended that the room temperature be sensed at the wall controller****



Step 1: Press the Airflow Up/Down (Grey) button and test (Green) button at the same time for two seconds

Step 2: Wait for a few seconds until the small dashes start to flash then press the clock (Purple) buttons to change refrigerant address to 00 then press the clock on/off (YELLOW) button then the clock (Purple) buttons to change unit number to 01



(Follow this to turn the fan on/off in heating)

Step 3: Press the Back (**Blue**) button and wait until the big dashes start to flash then press the Temperature Up/Down (**Orange**) button to change mode number to 25 for heating. Then the Timer Menu (**Pink**) button then the Temperature Up/Down (**Orange**) button to change the setting number to 2 for the fan to turn off and 1 to keep the fan running.



Step4: Then press the Back (**Blue**) button until the number stop flashing now it is set

(Follow this to turn the fan on/off in cooling)

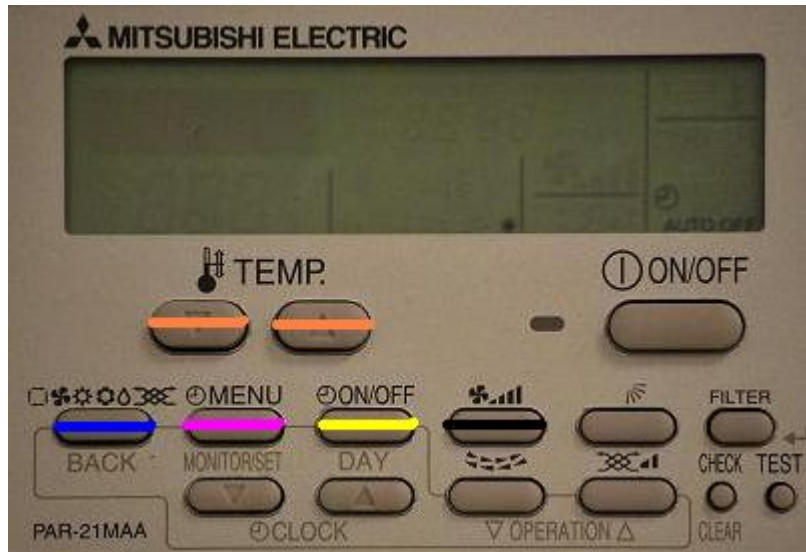
Step 4: press the Back (**Blue**) button then wait for a few seconds until the big dashes start to flash then press the Temperature Up/Down (**Orange**) button to change mode number to 27 for cooling then the Timer Menu (**Pink**) button. Then the Timer Menu (**Pink**) button then the Temperature Up/Down (**Orange**) button to change the setting number to 2 for the fan to turn off and 1 to keep the fan running.



Step 5: press the Airflow Up/Down (**Grey**) button and test (**Green**) button at the same time for two seconds to get back to normal display



How to set temperature limits on the PAR-21MAA Controller



Step 1: Press and hold Mode (Blue) and timer On/Off (Yellow) for 2 seconds, this will get you in the “Function Selection Mode”.



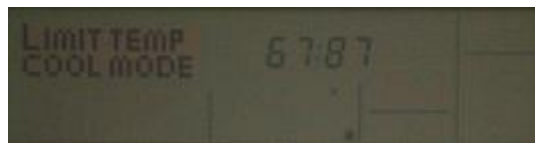
Step 2: Press Mode (Blue) until “Function Selection” is displayed



Step 3: Press Timer Menu (Pink) button until “Limit Temp Function” is displayed.



Step 4: Press Timer On/Off (Yellow) to select “limit cool, limit heat, limit auto, or off”



Step 5: Press Fan Speed (Black) to select the lower or upper limit you want to change

Step 6: Press Temperature (Orange) to change the limit to the desired limits

Step 5: Press and hold Mode (Blue) and Timer On/Off (Yellow) for 2 seconds to exit the “Function Selection Mode”.



Now the end user will only be able to set the temperature as high or as low as the limit.



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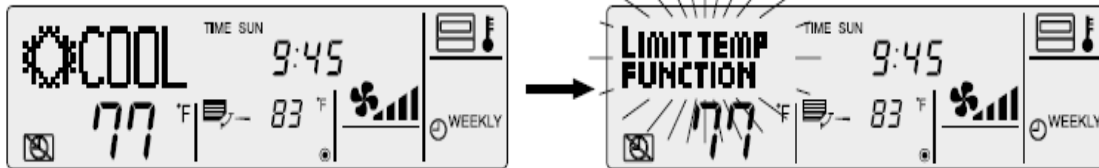
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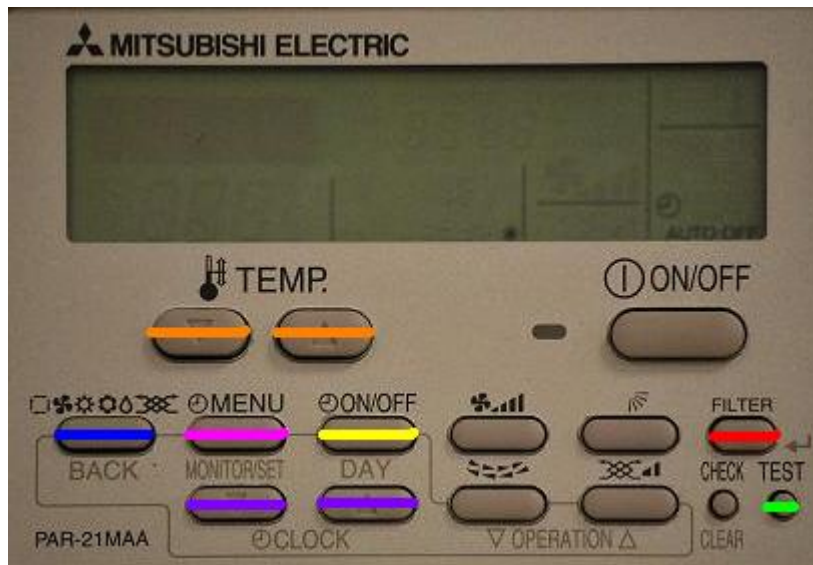
Even if someone who feels hot tries to press remote the controller's buttons to lower the temperature below 76 °F, or lower...

LIMIT TEMP FUNCTION blinks and the command is not accepted.



How to Sense Temperature on the PAR-21MAA Controller

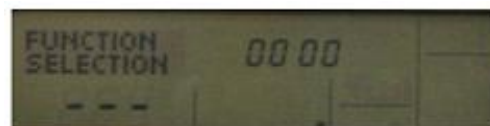
Description: From factory the unit sense temperature from a thermistor in the indoor unit. There are a few options on how to and where to sense the temperature at. The most common are at the indoor unit and on the controller.



Step 1: Press and hold Filter (Red) and test (Green) for 2 seconds, this will get you in the function selection mode.



Step 2: Press Clock (Purple) until to set the refrigerant address to 00. Press timer On/Off (Yellow) to get the other dashes to flash, then Clock (Purple) to change the unit number to 00



Step 4: Press Mode (Blue) to have the dashes in the lower left hand side of the controller to flash.

Step 5: Press Temp (Orange) to set up the dashes on the bottom left side of screen until you get 02.



Then press Timer Menu (Pink) to move to the right number and press Temp (Orange) until you get the setting desired from the chart below. Press Mode (Blue) to save changes.



Step 6: Press Filter (Red) and Test (Green) for two seconds to return to the normal mode.

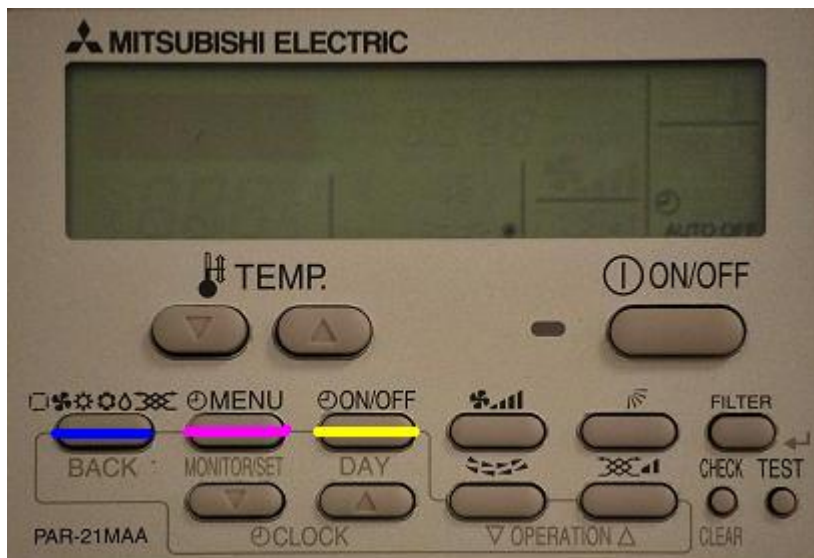


Indoor temperature detecting	Average data from each indoor unit	2	1
	Data from the indoor unit with remote controllers		2
	Data from main remote controller		3

How to set up weekly timer for the PAR-21MAA Controller

Description: The weekly timer can be set up for 8 different settings per day for the 7 days in the week. At the end of this how to guide there is a table you can print out to document the setting you put in the controller.

****As with all timers, the clock function must be enabled****



To set the controller for Weekly Timer you need to:

Step 1: Press and hold Mode (Blue) and Timer On/Off (Yellow) for 2 seconds, this will get you in the function selection mode.



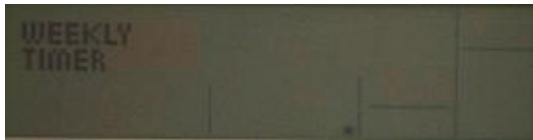
Step 2: Press Mode (Blue) until "Mode Selection" appears on the screen



Step 3: Press Timer Menu (Pink) until the screen displays “Timer Mode”

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Step 4: Press Timer On/Off (Yellow) until the screen displays “Weekly Timer”



Step 5: Press and hold Mode (Blue) and Timer On/Off (Yellow) for 2 seconds to return to normal display.



How to set up the weekly timer:

- **Make sure that “Weekly” is displayed on the right side of the screen, if not refer to being of how to guide**
- **Press Timer Menu (Pink) button until “Timer Set” is displayed**
- **Press Timer On/Off (Yellow) button until the desired day is displayed (Sunday-Saturday)**
- **Press the operation buttons to set the desired operation number for that day (1-8) this allows 8 different settings per day to be set.**
- **Press the Clock (Purple) buttons to set the desired time (24 hour time only offered)**
- **Press the On/Off (Brown) button to select whether to start or stop the unit at the time selected for that period**
- **Press the Temp (Orange) buttons to select the desired temperature for the time and period**
- **Press Filter (Red) button to confirm and save all settings for that period.**
- **Repeat the above steps to set up for the week.**

Set up Matrix

Op No.	Sunday	Monday	...	Saturday
no1	<ul style="list-style-type: none"> • 8:30 • ON • 73 °F 			
no2	<ul style="list-style-type: none"> • 10:00 • OFF 	<ul style="list-style-type: none"> • 10:00 • OFF 	<ul style="list-style-type: none"> • 10:00 • OFF 	<ul style="list-style-type: none"> • 10:00 • OFF
...				
no8				

- Setting contents -
Starts the air conditioner at 8:30 with the temperature set to 73 °F.

- Setting contents -
Stops the air conditioner at 10:00.

NOTE: With the weekly timer, it is not possible to designate an operation mode. The air conditioner will be operated in the current selected mode. (Cool, Dry, Heat, or Auto)

- * This function is not possible if the clock function is disabled by the function setting.
- * The day of the week and time are not displayed if the clock function is disabled by function selection
- * This setting is not possible if the simple or auto off timer has been selected.



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● **Weekly timer setting procedure**

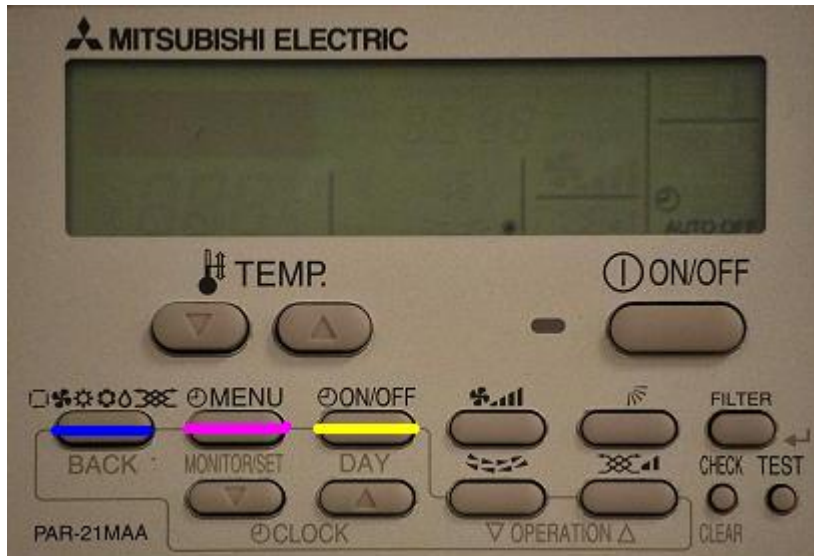
To facilitate weekly timer setting, it is recommended that the settings (day of the week, time, operation (on/off)) you are going to make be entered in the setup table shown below.

Weekly timer setup table (up to 8 patterns can be set for each day of the week, 56 patterns in total for a week)

Operation No.		Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	no 1	Time setting						
		On/off setting						
		Temperature						
2	no 2	Time setting						
		On/off setting						
		Temperature						
3	no 3	Time setting						
		On/off setting						
		Temperature						
4	no 4	Time setting						
		On/off setting						
		Temperature						
5	no 5	Time setting						
		On/off setting						
		Temperature						
6	no 6	Time setting						
		On/off setting						
		Temperature						
7	no 7	Time setting						
		On/off setting						
		Temperature						
8	no 8	Time setting						
		On/off setting						
		Temperature						

How to setup the Simple Timer on the PAR-21MAA Controller

****As with all timers, the clock function must be enabled****



To set the controller for Simple Timer you need to:

Step 1: Press and hold Mode (Blue) and Timer On/Off (Yellow) for 2 seconds, this will get you in the function selection mode.

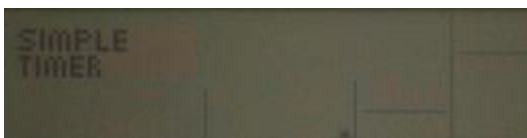


Step 2: Press Mode (Blue) until "Mode Selection" appears on the screen



Step 3: Press Timer Menu (Pink) until the screen displays "Timer Mode"

Step 4: Press Timer On/Off (Yellow) until the screen displays "Simple Timer"



Step 5: Press and hold Mode (Blue) and Timer On/Off (Yellow) for 2 seconds to return to normal display.



How to set up the Simple Timer:

Step 1: Make sure “Simple Timer” is displayed on the screen (if not follow steps above)

Step 2: Press G to select “Timer Set Enter”

Step 3: Press I to select “Start time only” or “Stop time only”

Step 4: Press the Clock (Purple) buttons for desired time (the time can be set up to 72 hours in 1-hour increments)

Step 5: Press the Filter (Red) button to confirm settings.

- * When using only the start timer or stop timer, make sure that “– –” is displayed for the timer you are not going to use.
- * To cancel the time you have set, press the check button to display “– –”, and then press the filter button to confirm it.
- * When using both the start and stop timers, carry out step 2 to set both the start and stop times.



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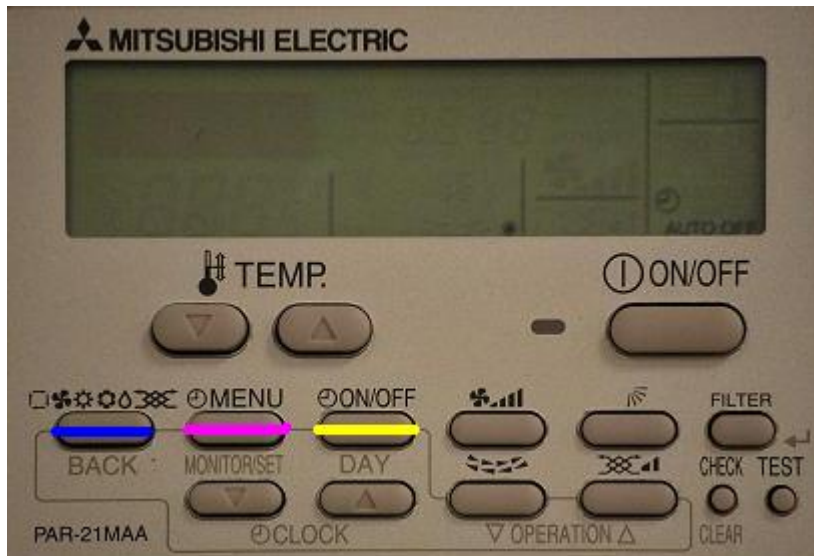
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* It is not possible to set the same time for both the start and stop times.

How to turn the timer OFF on the PAR-21MAA Controller

Description: This function turns off any and all timers.



Step 1: Press and hold Mode (Blue) and Timer On/Off (Yellow) for 2 seconds, this will get you in the function selection mode.



Step 2: Press Mode (Blue) until "Mode Selection" appears on the screen



Step 3: Press Timer Menu (Pink) until the screen displays "Timer Mode"



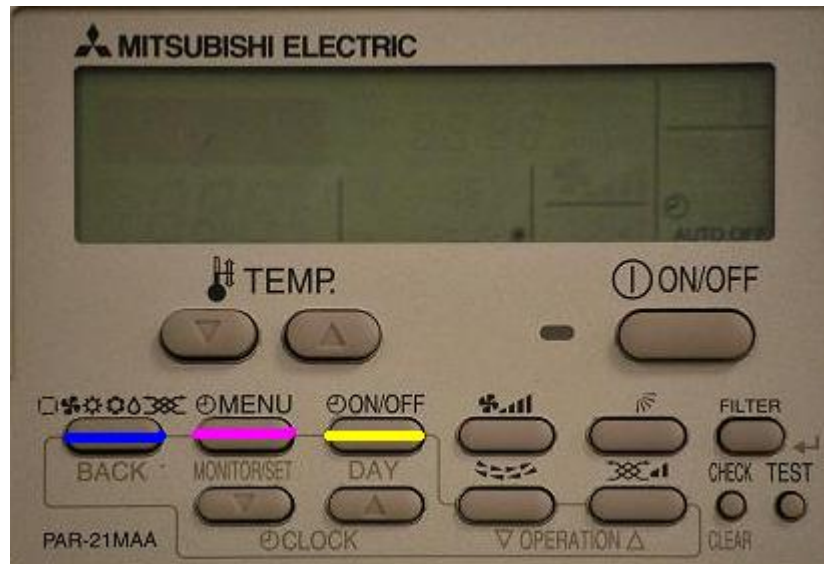
Step 4: Press Timer On/Off (Yellow) until the screen displays “Timer Mode Off”



Step 5: Press and hold Mode (Blue) and Timer On/Off (Yellow) for 2 seconds to return to normal display.



How to Set Temperature Display on or off PAR-21MAA Controller



Here are the 5 Steps to setting it up:

Step 1: Press and hold Mode (Blue) and Timer On/Off (Yellow) for 2 seconds, this will get you in the function selection mode



Step 2: Press Mode (Blue) until "Disp Mode Setting" is displayed



Step 3: Press Timer Menu (Pink) until "Room Temp Disp Select" is displayed

Step 4: Press Timer On/Off (Yellow) until On or Off is displayed.



Step 5: Press and hold Mode (Blue) and Timer On/Off (Yellow) for 2 seconds to exit the function selection mode

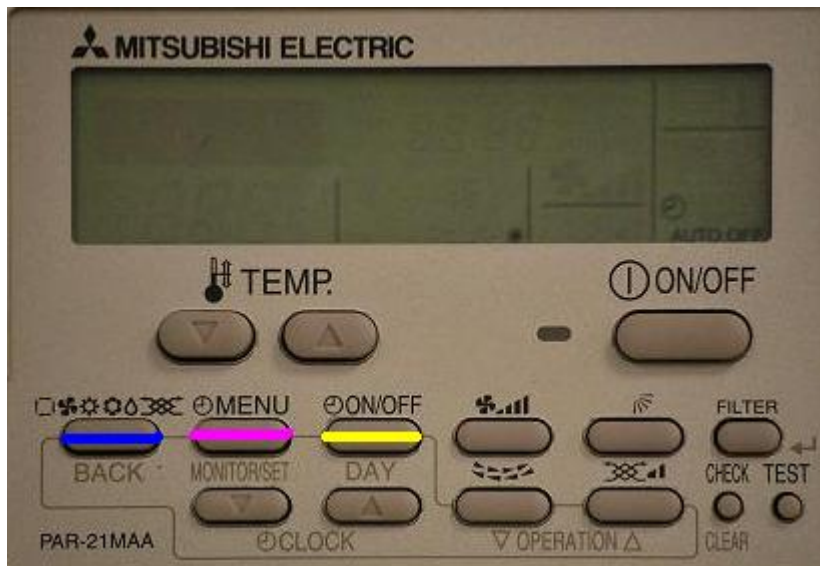


Example



How to change from Fahrenheit to Celsius with PAR-21MAA Controller

Description: This function allows for the controller to read temperature either in Celsius or Fahrenheit.



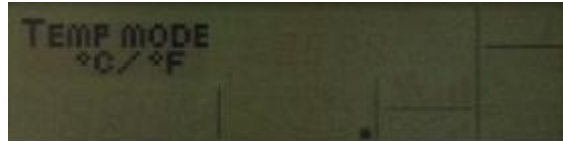
Step 1: Press and hold Mode (Blue) and Timer On/Off (Yellow) for 2 seconds, this will get you in the function selection mode



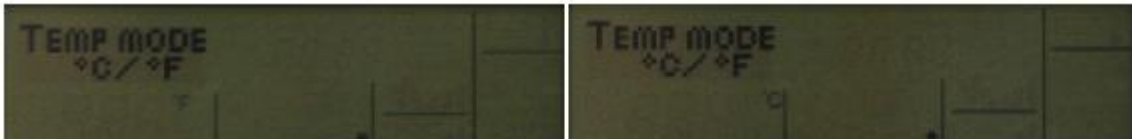
Step 2: Press Mode (Blue) until "Disp Mode Setting" is displayed



Step 3: Press Timer Menu (Pink) until “Temp. Mode C/F” is displayed



Step 4 Press Timer On/Off (Yellow) to select “F” (Fahrenheit) or “C” (Celsius)



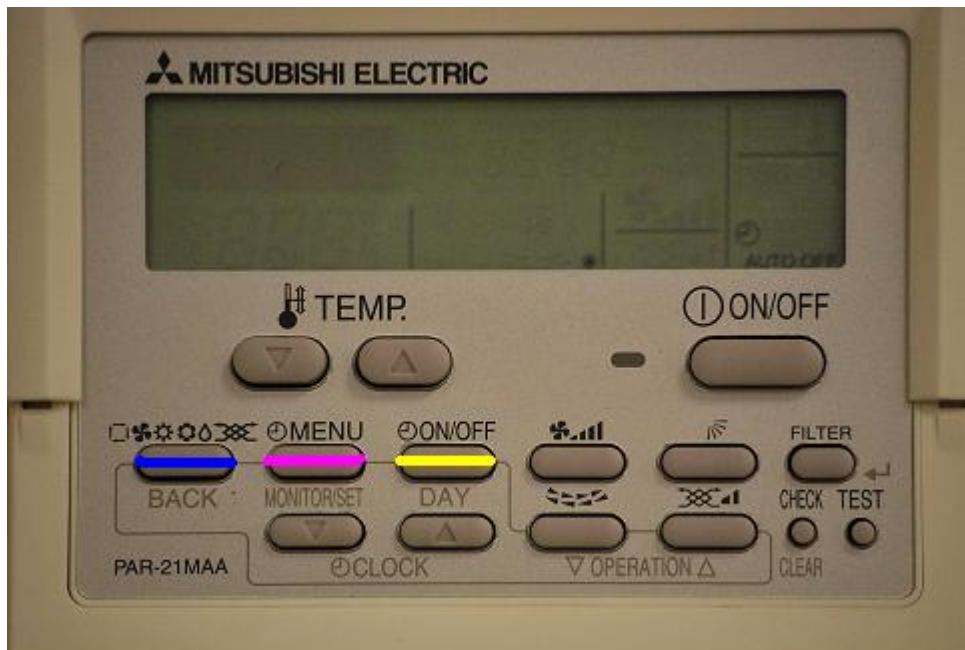
Step 5: Press and hold Mode (Blue) and Timer On/Off (Yellow) for 2 seconds to exit the function selection mode



How to turn the Clock function On or Off on the PAR-21MAA Controller

Description: The clock function allows the time to be displayed on the screen of the controller. If any of the timers are going to be used the clock function must be ON before the timers will work.

- **The clock will ONLY display in 24 hour format***



Step 1: Press and hold Mode (**BLUE**) and Timer On/Off (**YELLOW**) for 2 seconds, this will get you in the function selection mode.



Step 2: Press Mode (**BLUE**) until “Mode Selection” is displayed



Step 3: Press Timer Menu (PINK) until “Clock On/Off” is displayed depending on what is set already.

Step 4: Press Timer On/Off (YELLOW) until “On” or “Off” is displayed (Selection depending if you want the clock on or off)



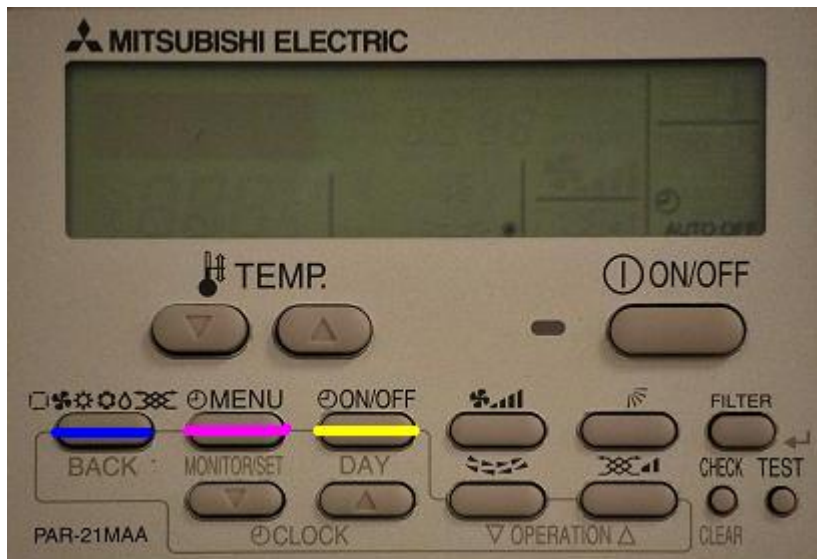
Step 5: Press and hold Mode (BLUE) and Timer On/Off (YELLOW) for 2 seconds to return to the normal display



Auto Cooling/Heating display settings for the PAR-21MAA Controller

Description: This function allows the customer to see what mode (HEAT or COOL) the system is in while the system is in the AUTO mode. For an example, see bottom of the page.

Auto mode must be enabled for this function to work



Step 1: Press and hold the mode (Blue) and the timer On/Off (Yellow) 2 seconds, this will get you in the function selection mode



Step 2: Press Mode (Blue) until "Disp Mode Setting" is displayed

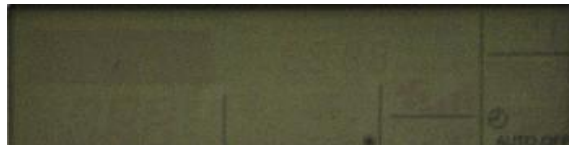


Step 3: Press Timer Menu (Pink) until "Auto Mode Disp C/H" is displayed.

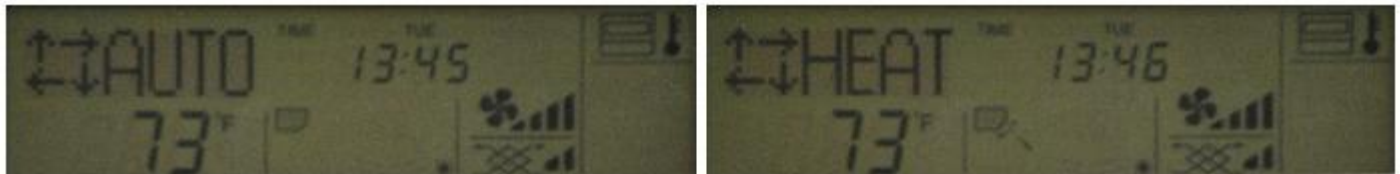
Step 4: Press Timer On/Off (Yellow) until “On” or “Off” is displayed. What is displayed is going to be your selection.



Step 5: Press and hold the Mode (Blue) and the Timer On/Off (Yellow) to exit the function selection mode.



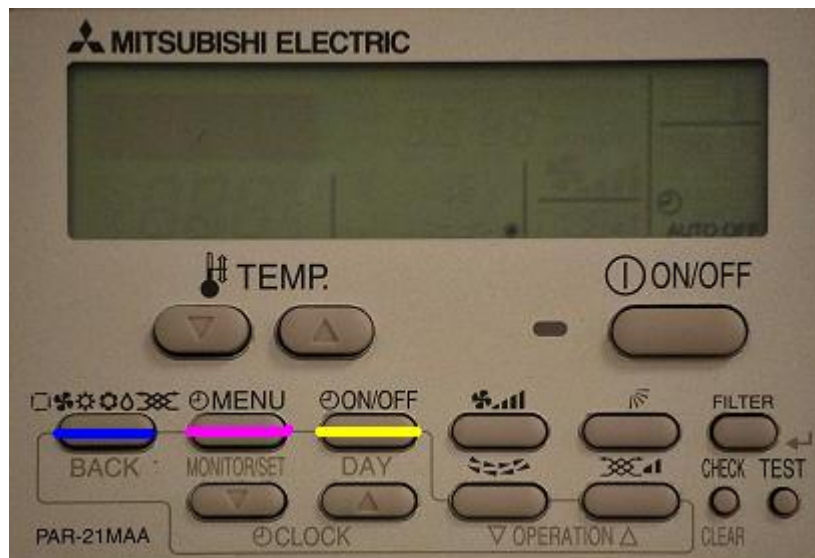
Example



How to set up for Auto with PAR-21MAA Controller

Description: The AUTO function allows the customer to have a set temperature and the system will switch between heat and cool on its own when needed to maintain the set temperature.

****There is a three degree swing between set point and system change over****



Step 1: Press and hold Mode (Blue) and timer On/Off (Yellow) for 2 seconds, this will get you in the “Function Selection Mode”.



Step 2: Press Mode (Blue) until “Function Selection” is displayed



Step 3: Press Timer Menu (Pink) until “Select Auto Mode” is displayed

Step 4: Press Timer On/Off (Yellow) to select “Off” (not used) or “On” (to be used)



Step 5: Press and hold Mode (Blue) and Timer On/Off (Yellow) for 2 seconds to exit the “Function Selection Mode”.

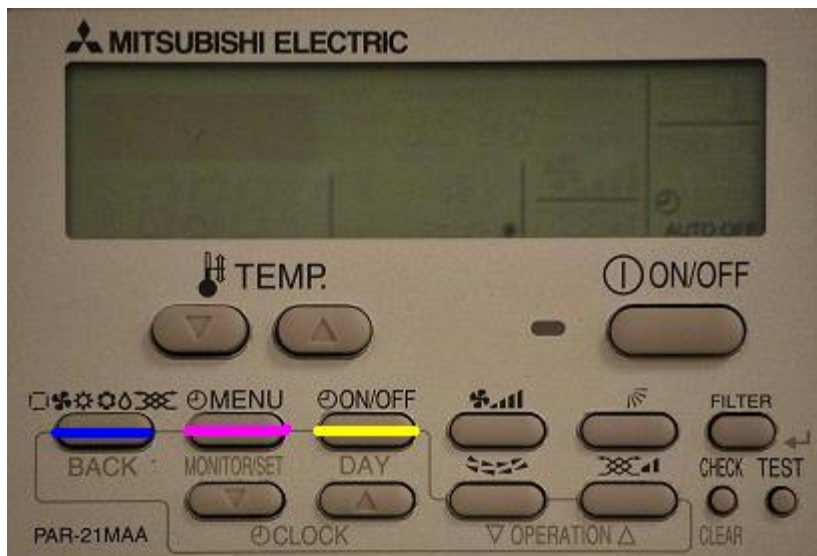


*****Now when pressing the mode button you will get an auto symbol if selected “On” or you will not get an AUTO symbol if you selected “Off”*****

How to set up Auto off timer on the PAR-21MAA Controller

Description: The Auto Off timer begins counting down when the air conditioner starts, and stops the air conditioner when the set time has expired. The time on the AUTO OFF timer can be set in a range of 30 minutes to 4 hour in 30 minute increments.

****To use the Auto Off feature you must enable the feature first. To enable Auto Off follow steps below, if already enabled jump to “How To Set Auto Off.****



Step1: Press and hold the Mode (Blue) and Timer On/Off (Yellow) for 2 seconds, this will get you in the “Function Selection Mode”



Step 2: Press Mode (Blue) until “Mode Selection” displays on the screen.



Step 3: Press Timer Menu (Pink) until the screen displays “Timer Mode”



Step 4: Press Timer On/Off (Yellow) until the screen display “Auto Off Timer”



Step 5: Press and hold Mode (Blue) and Timer On/Off (Yellow) for 2 seconds to return to the normal display.



How to set up the Auto Off

Step 1: Press and hold Timer Menu (Pink) until “timer Set” is displayed.

Step 2: Press the Clock Buttons (Purple) for the desired time (30 minutes to 4 hours in 30 minute increments)

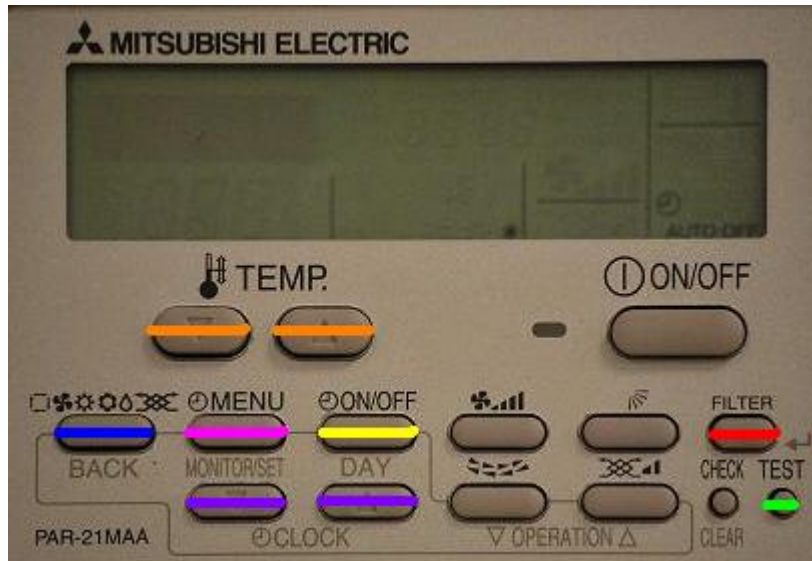
0:30 ↔ 1:00 ↔ — ↔ 3:30 ↔ 4:00

Step 3: Press Filter (Red) to confirm settings.

Step 4: Press Mode (Blue) to complete the setting procedure.

How Change the Filter Timer on the PAR-21MAA Controller

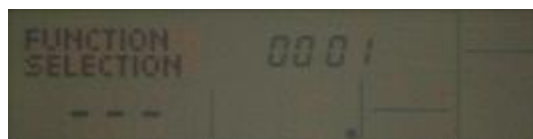
Description: The “Clean Filter” flash is based on a time limit and not when the filter is dirty. Follow the instructions below to help guide you on changing the time limit for the filter sign.



Step 1: Press the filter (**Red**) button and test (**Green**) button at the same time for two seconds



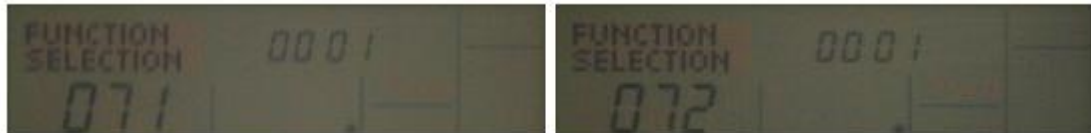
Step 2: Wait for a few seconds until the small dashes start to flash then press the clock (**Purple**) buttons to change refrigerant address to 00 then press the clock on/off (**YELLOW**) button then the clock (**Purple**) buttons to change unit number to 01



Step 3: Press the mode (**Blue**) button then wait for a few seconds until the big dashes start to flash then press the temperature up/down (**Orange**) button to change mode number to 07 for filter sign menu.



Step 4: Press menu (**Pink**) button then the temperature up/down (**Orange**) button to change the setting number to 1 for 100 hours, 2 for 2500 hours, and 3 for the 'clean filter' indicator not to ever display.



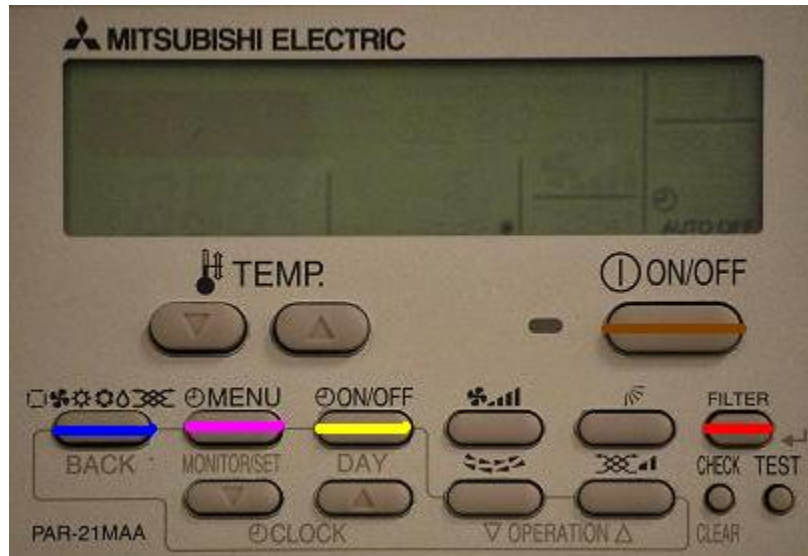
Step 5: Press the mode (**Blue**) button, the numbers will flash. When the numbers stop flashing the setting is set.

Step 6: Press the filter (**Red**) button and test (**Green**) button at the same time for two seconds to return to the normal screen.



How to lock the PAR-21MAA Controller

Description: With the lock function enabled it can lock all of the buttons on the controller or all of the buttons except the Power On/Off button. With the lock function disabled all buttons function.



Step 1: Press and hold Mode (Blue) and Timer O/Off (Yellow) for 2 seconds, this will get you in the function selection mode.



Step 2: Press Mode (Blue) until “Function Selection” is displayed



Step 3 Press Timer Menu (Pink) until “Locking Function” is displayed

Step 4: Press Timer On/Off (Yellow) to select “Off” (not used) “no1” (locks all buttons except the On/Off button) “no2” (locks all buttons including the On/Off button)



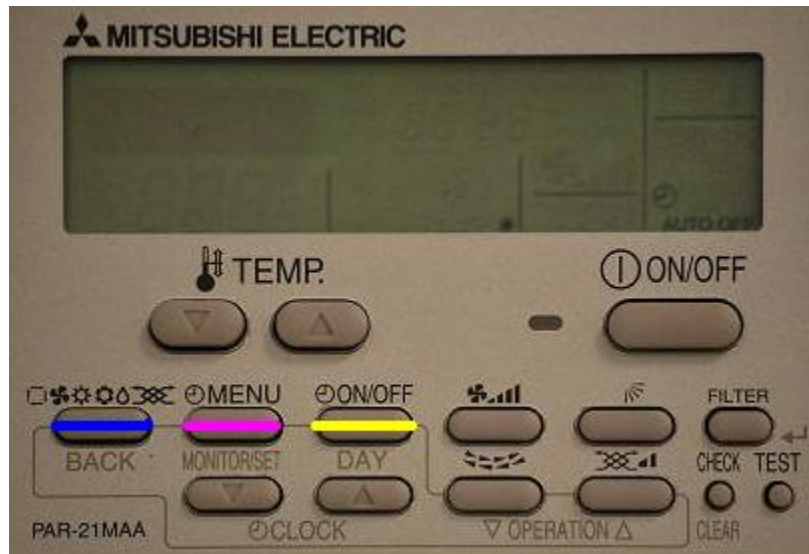
Step 5: Press and hold Mode (Blue) and Timer On/Off (Yellow) for 2 seconds to exit the function selection mode



Step 6: Now the controller is set up for locking. To lock or unlock the controller, press and hold the filter (Red) and the on/off (Brown) buttons for two seconds and the controller will be locked and the display will show “function” with a slash through it.

How to set controller up for Main and Sub on the PAR-21MAA Controller

Description: If you have one system or a group of systems and would like to have two controllers on the system you have to setup the two controllers, one as “Main” and one as “Sub”.



Step 1: Press and hold Mode (**BLUE**) and Timer On/Off (**YELLOW**) for 2 seconds, this will get you in the function selection mode.



Step 2: Press Mode (**BLUE**) until “Mode Selection” appears on the screen



Step 3: Press Timer Menu (**PINK**) until “Controller” appears on the screen

Step 4: Press Mode (**BLUE**) to select “Controller Main” or “Controller Sub”

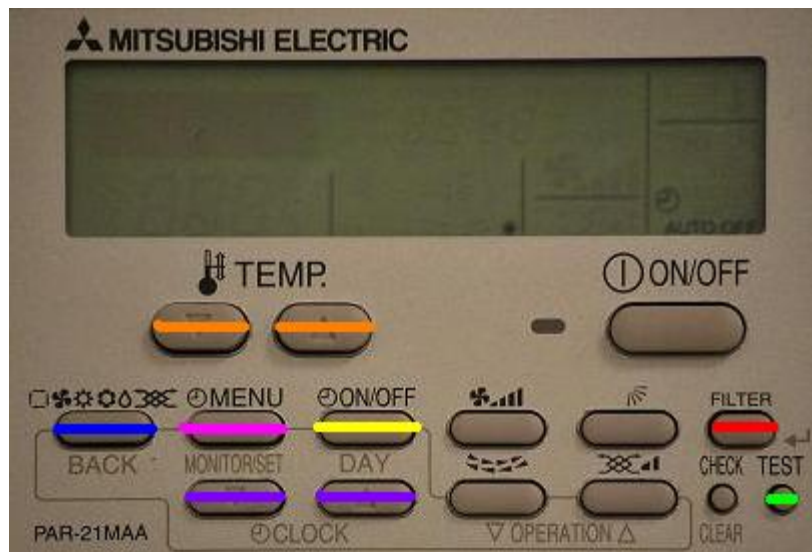


Step 5: Press and hold Mode (BLUE) and Timer On/Off (YELLOW) to return to the normal display.



How to set power failure auto-recovery on the PAR-21MAA Controller

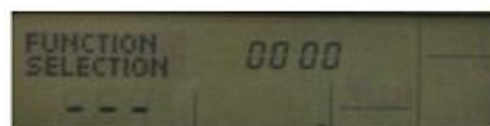
Description: This function is to allow the unit to restart in the mode and the set point the system was in when the power failed. You may also need to switch a dipswitch on the outdoor unit, see the outdoor unit's service manual.



Step 1: Press and hold filter (Green) and test (Red) at the same time for 3 seconds.



Step 2: Wait for a few seconds until the small dashes start to flash then press the clock buttons (Purple) to change refrigerant address to 00 then press the Clock On/Off (Yellow) button then the Clock buttons (Purple) to change unit number to 00



Step 3: Press the Mode (**Blue**) button then wait for a few seconds until the big dashes start to flash then press the Temperature Up/Down (**Orange**) button to change mode number to 01.



Step 3: Press Timer Menu (**Pink**) button then the Temperature Up/Down (**Orange**) button to change the setting number to 1 to disable the auto recovery and 2 to enable auto recovery.



Step 4: Press the Mode (**Blue**) button until the number stop flashing now it is set.

Step 5: Press and hold Filter (**Red**) and Test (**Green**) at the same time for 3 seconds to return to normal screen.

