

EasyTouch RV  
Operations Manual  
For all RV thermostats

With revision 1.0.6.0 firmware and above

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## Main Screen

1. **WIFI indication:** Dark blue=no connection, Red=no internet, Green=OK
2. **Weather indication:** Available only when WIFI is connected. Weather data and images are updated when you press the screen or connect in WIFI or Bluetooth. Press to show more information.
3. **Inside temperature:** Shows ambient temperature supplied by the remote temperature sensor or the internal temperature sensor, depending on the system used. See the information screen to determine which is used in your system.
4. **Zone selection:** Available only on thermostats with zones. Press to change zone.
5. **Mode selection:** Press to select menu. Turn thermostat off or on and change the heating or cooling mode.
6. **Fan speed selection:** Press to select fan speed menu. Most thermostat offer full automatic, manual and cycled fan speed selection. Cycled and auto fans selections turn on and off with the compressor or heat pump.
7. **Settings:** Press to select additional options like scheduling, brightness, day/night modes, temperature units and more.
8. **Cool to and Heat to temperatures:** Press to change the temperature set point.
9. **Information:** Press to show thermostat specific information screen.
10. **Outside air temperature:** Available only when weather or an outside sensor is available.



## Mode Selection

1. **System power:** Turn on or off system power.
2. **Zone power:** Zone thermostats only. Press to turn this zone off while allowing other zones to remain active.
3. **Mode selected:** Selected mode appears in white text while other available modes appear in green. Press the icon to change the mode.



## Fan Selection

1. **Zone affected:** This is automatically selected based on the zone you are viewing in the main screen.
2. **Fan speed selected:** Fan speeds can be manual, cycled, off, or automatic. Fan icons are blue for automatic fan operation and white for manual operation.
  - Automatic: The fan speed will run only with a cooling or heating cycle and vary speed with the inside temperature.
  - Cycled fan: The fan will run only with a cooling or heating cycle at the selected speed.
  - Manual: The fan will always run the fan at the selected speed.



**Fan Note 1:** Some fan speed selections may not be available for all modes or thermostats.

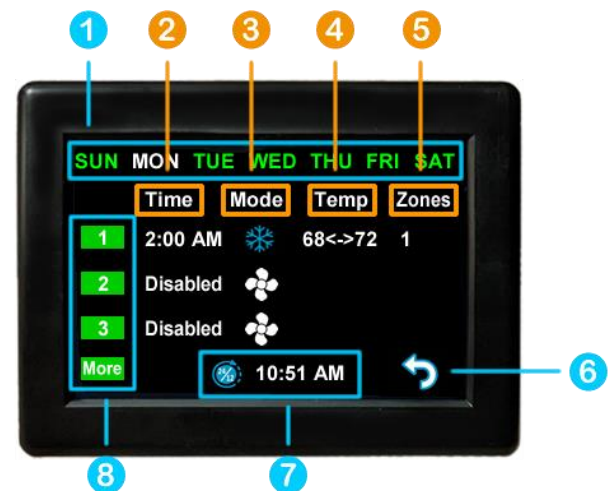
**Fan Note 2:** This setting does not control the furnace fan. If you find the air conditioner or heat pump fan is running when only the furnace should be running, be sure the fan is not set for an operating state such as manual or auto low.

**Fan Note 3:** Fan will run with the furnace on some systems when the heat pump is active, and the unit is in heat assist mode. Check the info screen to see if heat assist is active.

3. **Return to main screen:** Goes back to main screen.

## Schedule Main Screen

1. **Day of week:** Day selected is shown in white. Press another day to select it from the days at the top of the screen. The current day will be selected when entering this screen.
2. **Event time:** The time of day an event will occur.
3. **Mode:** The mode that the thermostat will change to when the event occurs.
4. **Set point:** The temperature set point(s) that will be set when the event occurs.
5. **Zones affected:** On multi-zone thermostats only.
6. **Go back:** Return to the previous menu.
7. **12/24-hour format and time of day:** Press to change from 12 to 24-hour format.
8. **Event number:** Press the event number to make changes to an event. Press more to see additional changes for the day selected. Up to 6 events per day may be set.



## Local Weather and Local Time

Outside air temperature and a local weather icon is displayed on the main screen whenever WIFI is available. Tapping the icon will reveal more detailed weather information of the last received weather data.

A valid location and an internet connection on the thermostat are required to retrieve weather data. Local time data also requires valid location data. Location is saved in the thermostat when a Bluetooth connection is made from a smart device with its location services enabled. Location is preserved through power losses or device restarts.

New weather data is retrieved when there is a screen press or when a connection from a smart device is made, along with the above prerequisites.

Time is pulled in when a Bluetooth or WiFi connection is made from the app. Also, an internet connection on the thermostat will grab the time so long as there is a valid saved location. If power is interrupted or the device is restarted, it will go out to the internet to grab the current time when the internet connection is re-established, without app interaction.

## Status and Fault Messages

Status and fault message will appear on the main screen as necessary. Faults available will depend on the thermostat model. *Table 1* shows the potential messages and their meaning.

| Message Text               | Description                                                                                                                                                                                                                      |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NO ZONE RESPONSE</b>    | The thermostat lost communication with the control board.                                                                                                                                                                        |
| <b>NO CONTROL RESPONSE</b> |                                                                                                                                                                                                                                  |
| <b>BAD OUTSIDE SENSOR</b>  | The Outside air sensor connected to the control board is out of range.                                                                                                                                                           |
| <b>BAD FREEZE SENSOR</b>   | The freeze sensor connected to the control board is out of range.                                                                                                                                                                |
| <b>FREEZE DETECTED</b>     | A freezing condition has been detected on the inside coil. Operation will resume once the condition is cleared.                                                                                                                  |
| <b>BAD HUMID SENSOR</b>    | The humidity sensor is out of range or not responding.                                                                                                                                                                           |
| <b>NO AC POWER</b>         | An AC power loss was detected by the control board.                                                                                                                                                                              |
| <b>INVALID CONFIG</b>      | Heat sources configured are not valid.                                                                                                                                                                                           |
| <b>LOW DC VOLTAGE</b>      | The DC voltage at the control board is below the acceptable limit.                                                                                                                                                               |
| <b>BAD INDOOR SENSOR</b>   | The room sensor inside EasyTouch RV has failed open/disconnected or shorted.                                                                                                                                                     |
| <b>BAD ROOM SENSOR</b>     | The control board connected sensor is outside the range or not responding.                                                                                                                                                       |
| <b>INSIDE COIL SENSOR</b>  | The control board connected sensor is outside the range or not responding.                                                                                                                                                       |
| <b>OUTDOOR COIL SENSOR</b> | The control board connected sensor is outside the range or not responding.                                                                                                                                                       |
| <b>HP OVER TEMP</b>        | The heat pump inside coil sensor is measuring a temperature that is too high. This is usually caused by poor airflow through the coil.                                                                                           |
| <b>LOW REFRIGERANT</b>     | The control board has detected a low refrigerant condition. This is usually because the temperature differential between the inside and outside coils is too small or too large. Typical results should be less than 25°F (14°C) |
| <b>OVERRIDE ACTIVE</b>     | The heat pump could not keep up with demand so the gas heat is now being used for heating.                                                                                                                                       |
| <b>AUX HEAT ENABLED</b>    | The two-hour timer of the Auto Gas Changeover logic is active.                                                                                                                                                                   |

*Table 1 - Status Message Description*

## Settings Screens

The settings screens allow for further configuration and control of the thermostat. It is a paged system that you can navigate through to see all available settings. Each setting button can be tapped to configure the related settings. **Note: Not all settings may be available depending on your EasyTouch RV model. If you do not see the graphic image, then it is not available for your system.**



Settings Button

### Navigation

Use these buttons to flip through all the available settings or return to the main screen.



Previous Settings Page



Back to Main



Next Settings Page

### System Help

This screen displays a QR code that can be scanned to provide information about thermostat operation and troubleshooting from the Micro-Air website. It also shows the current thermostat firmware revision and the thermostat serial number. The first three digits of the serial number reflect the model number of your thermostat.



Help Button

### Day/Night Mode (Screen Saver)

Tap this icon to switch between Day or Night mode. Day mode will dim the display down to the Sleep Level set in the *Display Brightness* settings, after 30 seconds of no screen presses. Night mode will turn the backlight completely off after 30 seconds of no screen presses. The display will brighten again after a screen press to the Active Level set in the *Display Brightness* settings.



Day Mode



Night Mode



Brightness Button

### Display Brightness

This screen allows you to set the Active and Sleep brightness levels that are used by the *Day/Night Mode (Screen Saver)* settings. Tap the associated up and down arrows to change their level.

### Schedule – Edit, Enable or Disable

There are two Schedule buttons with sub-writings “Schedule” or “Enable/Disable”. Tap the enable/disable button to turn the schedule on or off. Tap the schedule button to modify the schedule. See section *Schedule Screens* for more details.



Schedule Button

### WiFi Information

This screen allows you to monitor the state of your WiFi connection to the thermostat. SSID and Password fields show the saved credentials that the thermostat is always attempting to find and connect to. Tap the password field to reveal the password.

The Router, Strength, and Internet fields show the state of the WiFi connection. The MAC address of the thermostat is also shown at the bottom. See section *Connecting to a New WiFi Network* for more details about using WiFi.



Wi-Fi Button

## Home/away

This setting changes from a home memorized set of settings to an away memorized set of settings. It is like having two different thermostats, one while you are at the RV and one for when you are not. Each can be set with a completely different set of modes, schedules, set points and fan speeds to customize the operation with a single button press.

## Bluetooth (Account) Password Reset

The app uses your account password to securely access the thermostat in Bluetooth. Anytime the account password changes, you must also reset the password in the thermostat using the Bluetooth password reset button. Apps will not allow access to the thermostat from Bluetooth if the passwords do not match.



Bluetooth Password Reset

## Temperature Reading Adjustment

This setting allows you to calibrate the Inside temperature reading with an offset. For example, if the inside temperature reads 72°F (22.2°C) and you feel it is 75°F (24°C), you can use the up and down arrows on this page to increment the offset to +3°F (+1.8°C).



Temperature Reading Adjustment

## Hysteresis

This setting determines the difference in temperature required between setpoint and inside temperature before a heating or cooling cycle will begin. This is helpful to prevent short cycling in large spaces or spaces with high thermal loss, by running a cycle for longer amounts of time. This offset is applied to all logic that involves setpoint operations, such as auto modes, auto gas changeover, etc. See Table 2 for an operational example.



Temperature Gap Button

| Inside Temperature (°F) | Heating Setpoint (°F) | Heating Gap Setting (°F) | System Operation         |
|-------------------------|-----------------------|--------------------------|--------------------------|
| 69                      | 68                    | 3                        | None                     |
| 66                      |                       |                          | None                     |
| 65                      |                       |                          | Heating Cycle Begins     |
| 67                      |                       |                          | Heating Cycle Continues  |
| 69                      |                       |                          | Heating Cycle Terminates |

Table 2 - Temperature Gap Operational Example

## Measurement Units (Fahrenheit/Celsius)

This setting determines how to display temperatures on the thermostat. Tap the Units button to toggle between Fahrenheit and Celsius.



Units Button

## Touchscreen Calibration

The EasyTouch RV touchscreen is calibrated at the factory to accurately interpret your touch presses. Pressing the Touchscreen Calibrate Button will allow you to recalibrate the touch press area. Follow the on-screen prompts to calibrate the touchscreen.



Touchscreen Calibrate Button

## Restart

This setting will turn the thermostat off and then on as if removing and restoring power. Tap the Restart button and follow the on-screen prompts to confirm.



Restart Button

## Reset All

This setting will reset certain settings in the thermostat back to factory defaults. Some thermostats offer options to which settings to return to defaults. Tap the Reset All button and follow the on-screen prompts to choose what you would like to reset.



Reset All Button

## Setup

This setting is used to configure your thermostat's operational settings and is slightly different for each EasyTouch RV model. Some thermostats display how the air conditioner control board configured. Others allow configuring what modes are valid. Tap the Setup button to see what configurations are available.



*Switches Button*

## Auto-Generator Start (AGS)

(Dometic zone systems only). This setting enables or disables the generator start feature on systems equipped with a separate generator start board and other AGS hardware.



*AGS Enable Button*

## Furnace/Aqua Icons

Most RV systems have auxiliary heat modes in the form of a “forced-air” gas furnace or hydronic heat. EasyTouch RV or the associated control board treats these as the same output and so you can tap the Furnace/Aqua button to toggle between what icons to display for this operational mode. This selection changes how you view the furnace selection to the water drop symbol and is cosmetic in most thermostats. The 350 model should be set appropriately since there is some function associated with the selection for this thermostat.



*Furnace/Aqua Button*

## Schedule Screens

The schedule supports 7 day per week scheduling of events. Events can include changes to the set point or mode of operation for one or more zones. *Figure 1* shows the main schedule screen.

The smart device application also offers a method to copy days. Once a schedule is set for one day, it can be copied to any other day.

### (1) Day of the Week

Day of the week is selected from the days along the top of the screen. The day selected appears in white.

### (2) Scheduled Events

Events are numbered 1 to 6 along the left side of the display. Tap an event to edit it and advance to the schedule edit screen, shown in *Figure 2*. Tap “more” to see events 4, 5, and 6.

### (3) System Time

System time is displayed along the bottom. Tap the time to change from 12-hour to 24-hour time format. A “--:--” is shown when time has yet to be set. See section

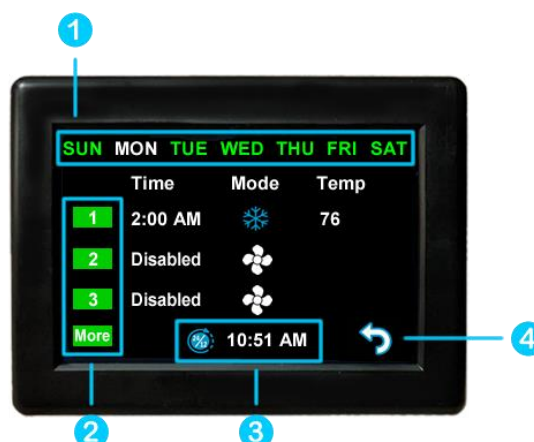


Figure 1 - Main Schedule Screen

*Local Weather and Local Time*

for setting up the system time.

(4) [Back](#)

Tap the back arrow to return to the last screen.

Figure 2 shows the edit screen when an event is tapped as shown in (2) *Scheduled Events* on the main schedule screen. The event on the main screen and action time in the edit screen will show disabled until a time is set. Press “Disabled” (1) at the top of the screen to show a gray box around the disabled selection. Use the up and down arrows to make a change. The up and down arrows change to full color once a selection is made. Use the back arrow (2) to save any changes and leave the screen.



Figure 2 - Schedule Edit Screen (Disabled Event)

Figure 3 shows the schedule edit screen once a valid time is set for the event.

1. Set the event time by selecting hours, minutes or AM/PM.
2. Set the desired mode by tapping the mode button.
3. Tap the hours, minutes, AM/PM or the set point to select an editable parameter, then use the red and blue arrow buttons to make a change.
4. Tap the zone number to enable/disable the zone you want this event to affect. A green box will draw around zones the event is enabled for. EasyTouch RV models that are not zone controls will not have this feature and will always be enabled when a valid Action Time (1) is used.

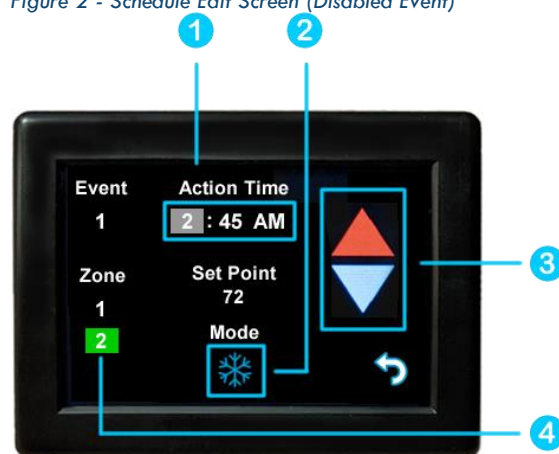


Figure 3 - Schedule Edit Screen (Enabled Event)

## Create and Enable a Schedule

- Tap the edit schedule button as described in the *Schedule – Edit, Enable or Disable* section in settings, to enter the main schedule screen, shown by Figure 1.
- Ensure that a valid (3) *System Time* is shown. Tap the day you want to set up a schedule for, then the event you want to edit, all shown by Figure 1. Tapping the event will take you to the edit schedule screen, shown by Figure 3.
- Tap the Action Time, Setpoint and Mode to make edits to what you want your event to do. Tap the zone you want this event to occur in if shown.
- Tap the back button and repeat for any other events and any other days.
- Tap the back button once again to return to the settings screen and this will save your schedule. Activate the schedule by pressing the schedule button with the “Enabled/Disabled” subtext as described in the *Schedule – Edit, Enable or Disable* section in settings.

## Smart-Device Application Features

### Restart Thermostat

This Bluetooth only feature allows resetting the display just as if you removed and restored power.

## Calibrate Touchscreen

It is normally not necessary to recalibrate the touchscreen. This selection prompts the user to press the four corners of the display then test the calibration using three diagonal marks. This feature is only available from Bluetooth as being at the thermostat is required.

## Check for Updates

Checks to see if any updates are available for the thermostat. The smart device application must have internet and the thermostat must be connected to WiFi with a green WiFi symbol. Tap Check for Updates and follow the prompts.

\*Beta updates may be available from time to time, but these are for people working with Micro-Air in testing them. Some features may not work as expected. The current version firmware can be restored by checking for updates again.

## Notifications

Notifications provide a way for the user to monitor the temperature in the space using notification limits. Limits are set by connecting to the thermostat in the app, selecting the settings gear, and then selecting notifications. A minimum and maximum allowed temperature can be set. *Table 3* shows an example of operation with an 80°F maximum temperature set. Notification will be sent for each degree it rises above the maximum temperature. If the temperature drops, no notification will be sent unless the temperature exceeds the last maximum temperature again (82 in the example). If the temperature drops two degrees below the set maximum, (78 in the example) it will again alert for each degree above the set maximum. This behavior helps avoid nuisance notifications to your smart device.

| Temperature (°F) | Action                             |
|------------------|------------------------------------|
| 80               | Send first notification            |
| 81               | Send another notification          |
| 82               | Send another notification          |
| 81...79          | Temperature drops, no notification |
| 78               | Max temp resets                    |
|                  |                                    |

*Table 3 - Push Notifications Operation Example*

## Edit WiFi Settings or Connect to WiFi

This is where you will make the connection from the thermostat to the internet. See section *Connecting to a New WiFi Network* for details on how to use this feature. The app must be connected to the thermostat over Bluetooth to see this option.

## Appendix A: Working Wirelessly

This thermostat may be operated remotely using either Bluetooth or WiFi. All connectivity is performed through the EasyTouch RV App on a smart device. The app is downloaded from the Google Play store or Apple App store. The first time the app is opened, it will ask to create an account. Create your account and follow the prompts to connect your thermostat.



EasyTouch RV App icon

Bluetooth is a limited range method to connect, typically used when near the thermostat. The thermostat can be connected to an internet-connected network, where you can then access the thermostat from anywhere you have an internet connection with the app.

If a second user is going to use the thermostat remotely, they **MUST** use the same account and password that the first user assigned to the thermostat. Each thermostat can only be assigned to a single account, but many users can control the thermostat if they use the same account.

### First Connection Steps

**Note: An internet connection on your smart device is necessary for these steps.**

1. EasyTouch RV uses BLE which is a special implementation of Bluetooth. It is not necessary to “Pair” the thermostat with the phone, but an account must be created for operation. Ensure that Bluetooth is enabled, and that the app has Bluetooth and location services permissions. Android users must also have locations services turned on.
2. Start the app on your smart device. The app will open and if you have not entered your account information, it will ask you to create an account and enable permissions. Enter your name, email, and a password at the prompts. The system will send a confirmation email to your inbox. Enter the number in the confirmation email when asked.
3. Once the account is created, the application may ask to add a device. If your thermostat is powered, it will show in the list to be added to your account. Select the device and enter a name for it. This name is used to identify and connect to it in the future.
4. If you added a control, the app will ask if you want to connect it to WiFi now. Enter your SSID (network name) and password of the network you want to connect the thermostat to.

### Adding a Thermostat to Your Account

Follow the next steps if the account process does not add a control or a second thermostat is to be added.

1. Press the settings gear and “Add Device”.
2. The nearby thermostat(s) should be listed in the new selection window. These are the thermostats heard over Bluetooth. Select the device and enter a name for the device.
3. Press OK and the screen will return to the settings menu (Android) or the selection screen (Apple). Android users should press the back button to get to the selection screen.
4. Select the device name to open the thermostat screen.

### Connecting to a New WiFi Network

You can connect to the thermostat from anywhere using the app when the thermostat is connected to an internet source. The internet source **must** be a 2.4GHz network to connect to EasyTouch.

1. Connect to the thermostat in Bluetooth (Apple) and press the settings gear.
2. Select WiFi Setup from the settings window.
3. Connect to a network:
  - a. The SSID (network name) will say “searching” then switch to “select”. Tap “select” to choose from a network the thermostat can hear.
    - i. Alternatively, enter the SSID manually (case sensitive)
  - b. Enter the password (case sensitive).
4. Press OK and the screen will return to the selection screen. The thermostat will reset, and a green WiFi symbol will appear on the thermostat screen if the connection was successful.
5. With a green WiFi symbol, you can now connect to the thermostat from anywhere using the app over the internet.

### Updating The EasyTouch RV Thermostat

Ensuring you have the latest thermostat software is key to having all the latest features.

1. Ensure the thermostat is connected to WiFi with a green WiFi symbol.
2. Connect to the thermostat and press the settings gear, then tap Check for Updates.
3. Follow the prompts to update the thermostat or ensure that you already have the latest software.

### Refresh configuration:

This is a temporary feature that resets the saved configuration on the phone if a change is made at the thermostat. This will be removed later. If you experience a difference between the phone modes available and the thermostat modes, press this button to fix the issue.

## Appendix B: Troubleshooting

The most common problems during installation are not matching the wires correctly or properly mating the wires. The first step should always be to recheck the instructions and make sure the wires are joined and seated properly.

The second most common problem is not knowing the thermostat operation. If the system is running a heating or cooling cycle, the set point will turn red for heating and blue for cooling. When the thermostat turns white, the heat pump, heat strip and furnace should all be off. The fan may continue to run for a while after the cycle completes. If a fan is left in manual mode, it will not shut off.

### WiFi Troubleshooting

#### *Blue WiFi Icon*

- SSID (Network name) and password are both case sensitive.
- Be sure you are connecting to a 2.4 GHz network and not a 5GHz or 6GHz network.
- Set the security to WPA2 and TKIP+AES if you are having trouble.
- The thermostat has a limit of 31 characters for the SSID and 50 for the password.
- Ensure the number of devices limit for the network is not full.
- Ensure the WiFi source is not out of range or metal partitions blocking the signal.
- Try a guest network or mobile hotspot that may have reduced restrictions.
- Reset the router to renew the DHCP lease.
- If you are in a metal enclosure, try moving the router or thermostat a few inches (even if temporary) and trying again.
- If using MAC filtering, add the thermostat to the allowed devices list.
- Try assigning a DHCP reservation to the thermostat MAC address.

#### *Red WiFi Icon*

- The router must have an internet connection
- Server may be down, check back later.
- Be sure there is no firewall in the router blocking the incoming messages (port 8883, MQTT). Place the thermostat IP into the DMZ settings to bypass any firewalls.

## EasyTouch RV Knowledge Bank – More Information

Visit our knowledge bank at [http://www.micro-air.com/kb\\_easytouch\\_rv.cfm](http://www.micro-air.com/kb_easytouch_rv.cfm) for the latest resources for setup, operation, and troubleshooting, as well as our main website for contacting us for support.

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Follow proper safety practices. If in doubt, consult a professional RV technician.