



# ATC User's Guide V2

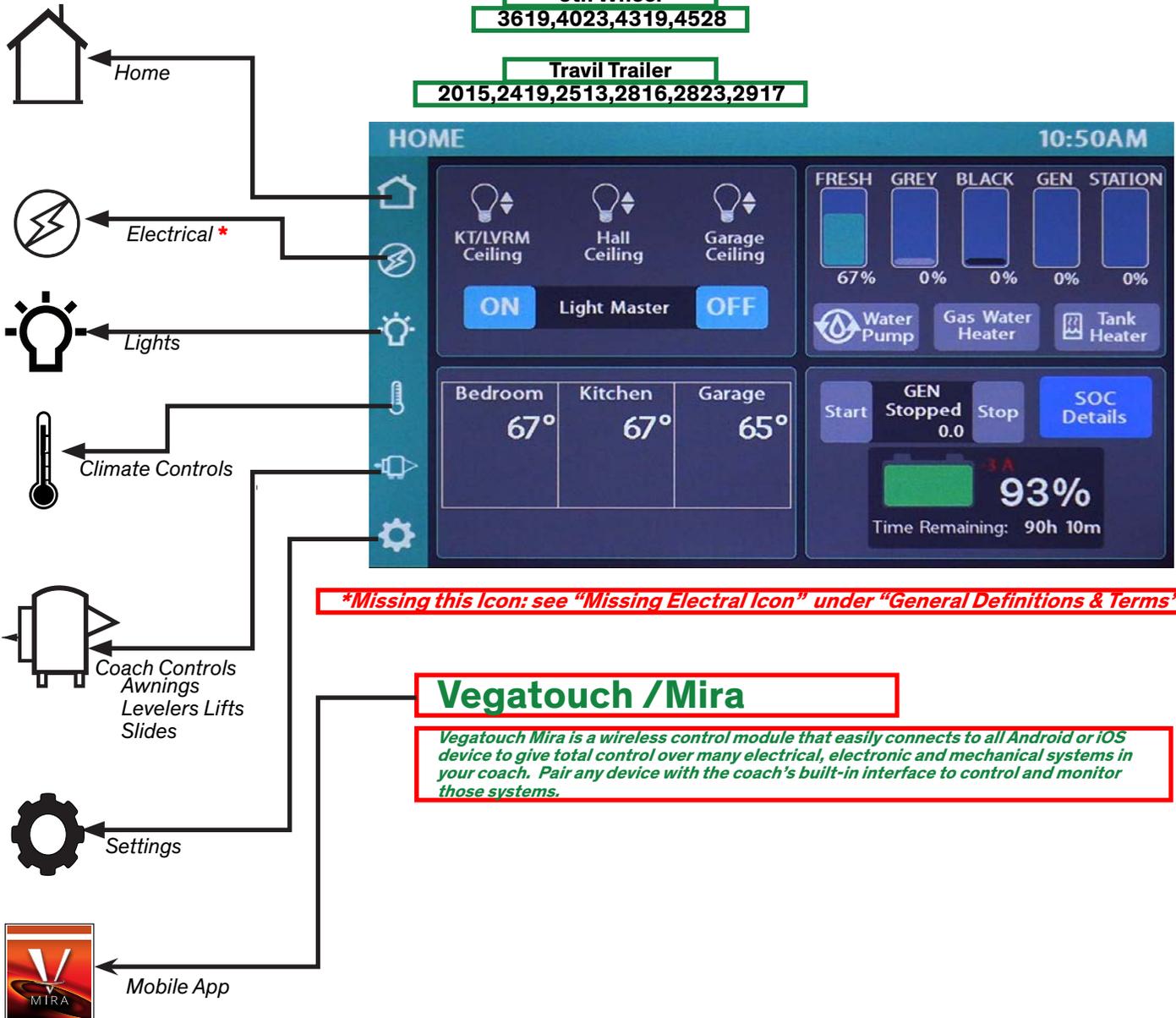
## 700 Series Units

5th Wheel

3619,4023,4319,4528

Travil Trailer

2015,2419,2513,2816,2823,2917



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## Disclaimer

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# Firefly

## Integrations

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# ATC User's Guide V2

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## General Definitions & Terms

### Access to levelers

see : Coach Controls

### Climate Control

The (heating / cooling) system in this manual will refer to these as “Climate Control.” However, comprehensively for any option these areas will to a space. It includes various systems, technologies, and methods used to maintain a comfortable indoor environment regardless of external conditions.

### Constant Output

Constant outputs are any circuit that has continuous feed and are protected by Firefly's over-current detection software.

### Control Panel name is G12

see : G12 Control Panel in the Glossary.

### Equalizer system

see : Coach Controls (Equalizers and Levelers are synonymous)

### General Information

The Firefly screen is programmed to “Go to Sleep” after a period of time. Simple tap the screen to cause it to wake up. If the screen does not wake up then check your coaches 12 volt system to ensure that it hasn't been turned off. . Firefly's screen is powered by the coaches 12volt system. See “Auto Dimming Selection” for more information.

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# ATC User's Guide V2

## General Definitions & Terms

### Missing Electrical Icon



If the coach has no electrical options that are monitored by Firefly's devices, this icon will be missing from the menu bar. See "Menu Bar" in the ATC Glossary for examples of the "Menu Bar".

### Navigation Icon



A navigation icon is utilized to transition individuals to another screen and isn't intended for controlling physical objects.

### Navigation Tip

Tap any icon from the "Navigation Menu" located on the left side of the screen to select your desired page. The currently selected page will always be listed in the top left corner of the screen. See "Menu Bar" in the "ATC Glossary".

### System Faults

#### Network Diagnostics Fault



The red triangle icon will appear in the screen header with an exclamation point inside when a fault condition is present. Tap the triangle to navigate to the "Network Diagnostics" screen for specific fault information.

#### Over-current Fault



The red triangle icon will appear in the screen header with a lightning bolt inside when an over-current fault condition is present. Selecting the Lightning Bolt triangle on any screen will navigate you to an intermediate warning screen. See: "Over-Current warnings page".

#### Over-current Temporary Fault

An intermediate over-current condition may occur during a process that requires the user to use continuous pressure to run a circuit such as an awning. If during this process the icon flashes red or turns red then you have had an over-current condition. With these type of circuits to reset them simply release the icon and the circuit is automatically reset.

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### Home Page Lighting

### Main lighting Zones

On the home screen you can control three different lighting area. These lighting areas include the Kitchen and living Room , all Hall lights and finally the Garage ceiling lights. Tap to toggle your desired light(s) On/Off or Press and Hold icons with arrows to adjust the brightness Up/Down.

### Main Lighting Control

To control all lights individually throughout the unit select this icon



### Light Master

The (L)ight (M)aster is a central control icon that allows you to set up a predetermined lighting schema. To store this schema including the brightness levels, simply turn on individually the lights as you would prefer them including the brightness levels. Then cycle them off using the LM's OFF icon. Any lights that can be controlled by the LM will cycle off and all of there relative brightness dispositions stored. In other words if a light was on and dimmed down several steps when cycling the LM's icon to OFF will not only shut off all lights under the LM's control but store each ones last disposition. Once the LM's OFF icon has been cycled you may now use the LM "ON" icon to restore your predetermined lighting schema back on.

### Troubleshooting Tip: Light Master

Since the LM OFF icon both shuts the lights off and stores the last disposition of your lights, if you select the "Light Master" OFF icon twice in a row you are essentially clearing the "Light Master"'s data and storing all the lights in an OFF status. To restore the function of the LM's simply repeat the above instructions.

How to override individual light controls and turn on all lights controlled by the LM simultaneously - Press and hold the LM's "ON" icon until all the lights controlled by the LM turn on. This will also override any dimness setting. NOTE: If you cycle them off using the LM's OFF icon this will become your new predetermined lighting schema.



## Home Page Basics

### Tank System Overview

#### Network or Over-current Fault

A red triangle icon will appear in the screen header when a fault condition is present. Select either icon to begin debugging the fault. See: "System Faults" in "General Definitions and Terms" for specific fault information.

The holding tanks are broken down into two distinct areas. The first area is dealing with the water system and the second area is dealing with the fuel system. Within the water system they are further broken down into three separate tanks, fresh, grey and black. As an option in ATC coaches they may have a fifth tank. If there isn't a fifth tank the fourth tank is used both for generator fuel and a fueling station. If the coaches has the optional 5th tank is used for refueling only. See "Tank System Details" for further information on reading levels and what they mean.

#### Temperature Display

This area of the screen displays the ambient temperature in different areas of the unit. To control the change the temp in the different area of the unit select the climate control on the left side of the screen this will switch you to the "Climate" control screens.

 **Furnace is on when you see this emblem**

 **AC is on when you see this emblem**

#### Generator Display (optional)

The Generator display will show the total number of generator hours accumulated as well as the current operating status. See "Generator Messages and Warnings" for a list of these statuses. Generator hours are saved to the system, not to the generator itself. For a full explanation of generator hours and to set them See: "Setting the Gen hours". To manually start the Generator select and hold the "Start" icon until it turns green. To Manually "Stop" the generator – select the stop icon. Before manually starting the generator see "Generator Messages and Warnings".

#### Water Pump and Heater Controls

The water pump, Gas Water Heater and tank heaters may be toggled on or off on this screen. The icon will change colors to indicate the selected unit has been turned On.



### Tank System Details

Since this unit comes with both the water tanks and a separate set of fuel tanks the firefly system has two separate measuring system to track fluid levels.

### Water System :Tank Probe System

This ATC unit is equipped the what is commonly called a Tank Probe System. This system's standard readings are 0%, 33%, 67% and 100%. Each probe is positioned at a particular tank level 1/3(33%), 2/3(67%), and 100% respectively. As the fluid content of a tank rises and covers each probe, a signal is passed to the display for that tank.

### Fuel Tanks

The Gen and Station tanks are fuel tanks. The Gen tank is specifically for supplying the generator with fuel. The Station tank is for re-fueling toys. These tanks use a float based fuel detection system that passes along the tank levels in 10% increments.

**Note: if the coach does not have a fifth tank then the Gen tank serves the dual purpose of supplying the generator and as a remote fueling station.**



**Note: The AGS system will be disabled when a manual start or stop is detected. A manual start is allowed 90 seconds to complete before suspending the starting process with the error message "Fault". When a manual start is selected the number of retries are set up on the AGS screen.**

### Generator Display Area

**Note: If your coach did not come with the Generator option then the Gen. Status along with the Gen. Start and Stop icon will not be available. See: "Alternate Generator Display"**



### Generator Display Area Details

This area contains a limited snap shot of the current state and rate of discharge of the battery (batteries). If the current discharge is becoming critical then it is suggested that the owner immediately initiate the a run cycle of the generator or hook up to shore power if available.

**Warning : Before Starting the generator see : Generator Messages & Warnings under General Electrical terms.**

This is the generator display on the home page and it has limited controls for the generator system. For the full set of controls refer to the "Auto Gen Start Settings" page.

#### Generator Status Area

Between the Start icon and the Stop is the generator current condition Status display. See : "Generator Messages and Warnings" under "General Electrical Terms".

#### Generator Start & Stop

The Generator "Start" and "Stop" controls on this page are to facilitate the unit's owner charging the Batteries or powering the unit without going into the "Electrical" screen. An owner may from "Home" screen select the "Start" Icon to immediately initiate the Generator. Also from this screen the Owner may also interrupt the generator by selecting the "Stop" icon. Warning: If the generator is started or stopped from these controls, the AGS control will be disabled until re-enabled through the AGS system screen. See: Enable/Disable under "Electrical:AGS"

See :TruState Details for further information . NAV

This page displays the battery(or batteries) current state. Here you can monitor if the battery is being charged or is being discharged. Other things of note are the amount of Amp hours, remaining Amp hours, state of charge and time remaining. Both the state of charge are reflected back to the general generator status page.



#### Alternate Generator Display



Note: If your coach did not come with the Generator option then the Gen. Status along with the Gen. Start and Stop icon will not be available.

If a generator was not included in the unit then this icon will jump to "TruState Details" Page



### Electrical System Overview

During a units manufacturing certain electrical option may or may not be included. The electrical system of an ATC unit may have the following options or combination of these options; a monitored-Transfer Switch\* Option, Inverter, and/or Generator. These options are generally installed by the OEM. Listed below are the electrical options that may have been included from the OEM.

### Understanding your Electrical “L”anding “Z”ones

When selecting the  on Firefly’s Home page depending on this coaches electrical options your initial electrical page will change. The initial Electrical page is your Electrical (L)anding (Z)one. Each of these LZ’s will be different and based on your particular coaches factory OEM options. Hence, before proceeding ensure you are aware of your coaches custom electrical options. If you are unsure of all of your custom electrical options check with your OEM for the full set of Electrical options that came with this unit.

**Note: Within these LZ’s there are three distinct areas on each Electrical page , Shore Power or Generator, EMS and inverter**

To help determine your path through your electrical section check the options your unit has installed.

-  Monitored\* - Transfer Switch Option
-  Inverter Options ( Cotek -or- Progressive )
-  Generator

**\*See: Monitored-Transfer Switch vs Non-monitored Transfer Switch in General Electrical Terms**



# Firefly Integrations

## Electrical Landing Zone Options

There are six main LZ's within the electrical pages and each of these LZ's will be different and based on your particular coaches factory OEM electrical options. Select your Electrical landing zone based on which electrical options that have been installed in your unit when it was manufactured. Once the main LZ has been selected, proceed to the page that reflects this LZ. This will be your initial electrical page within the Firefly system. Hence, before proceeding ensure you are aware of your coaches custom electrical options. If you are unsure of all of your custom electrical options check with your OEM for the full set of Electrical options that came with you unit.

### E. Landing Zone 1 Monitored (T)ransfer (S)witch with Gen with Inverter

*Note: Not all transfer switches communicate with Firefly's network. If the installed transfer switch does not communicate with Firefly's monitoring system then EMS will not be effective and will be dropped from your Initial your landing zone.*

#### LZ1 -Cotek Inverter

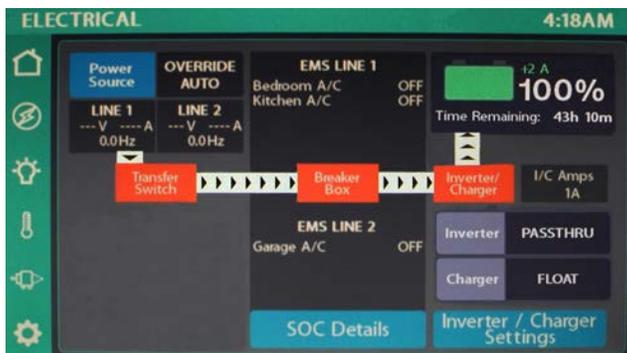


#### LZ1 -Progressive Inverter



### E. Landing Zone 2 Monitored (T)ransfer (S)witch Without Gen with Inverter

#### LZ2-Cotek Inverter



#### LZ2-Progress Inverter





## Electrical Landing Zone Options

### E. Landing Zone 3 Non-monitored (T)ransfer (S)witch With Gen and Inverter

#### LZ3-Cotek Inverter



#### LZ3-Progress Inverter



### E. Landing Zones 4 Non-monitored Transfer Switch and no generator with Inverter

*Note: In LZ-4 only the inverter is being monitored by Firefly's system.*

#### LZ4-Cotek Inverter



#### LZ4-Progressive Inverter



*Note: With this option this is your only electrical page when selecting the Electrical icon on the Home page.*





## Electrical Landing Zone Options

### E. Landing Zones 5 Monitored Transfer Switch/No Gen. No inverter

*Note : With this option, because the \*Transfer Switch is the units only option, the Landing Zone for the electrical from the home screen is the following Electrical page.*



*\*Transfer Switch Defined in the Electrical Terms*

### E. Landing Zones 6 Non-monitored Transfer switch with Generator Only

*Note : With this option, because the it is a \*non-monitored transfer switch with generator as the units options, the Landing Zone for the electrical from the home screen is the "Auto Gen Start Settings" page.*



*\*non-monitored Transfer Switch Defined in the Electrical Terms*



## Electrical Landing Zone 1

Monitored (T)ransfer (S)witch with Gen with Inverter

### LZ1 - Cotek Inverter

For a full list of Statuses See : "Cotek" under "Inverter Statuses".

charging ability

#### Electrical Source

The electricity is either sourced from shore or a generator. This status will read Shore if the unit is plugged into an external power source and you have a transfer switch. From this page the generator may be started and stopped. It also contains the Generator Status. Also tapping the AGS Settings icon will direct you to the "A"uto "G"enerator "S"tart page.

**EMS: Energy Management System**  
see :Energy Management System

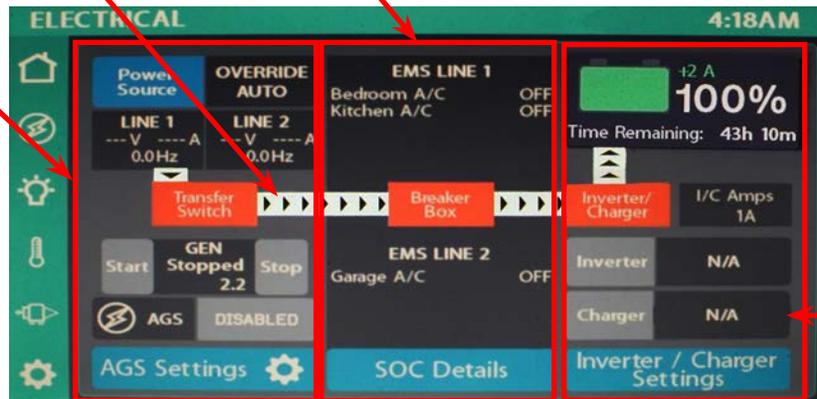
#### Power Flow

See "Power flow" under "General Electrical Terms".

#### Battery Condition

See: Battery SOC (charge/discharge rate on Home page)

For a full list of conditions see: "Transfer Switch Conditions" under "General Electrical Terms".



### LZ1 -Progressive Inverter

For a full list of Statuses See : "Progressive" under "Inverter Statuses".

No charging ability

See: "Transfer Switch Conditions"



#### Generator Controls and Disposition

See "Generator Display Details" under "Home screen Basics".

**Warning :** Before Starting the generator see : "Generator Messages and Warnings" under "General Electrical Terms".



#### Standard Navigation Icons

This page allows navigation to any of the following depending on the unit's options.

- AGS Settings icon : See Electrical AGS
- SOC Details icon :See "State of Charge :SOC"
- Inverter Settings icon: See "ATC Inverter Options"



## Electrical Landing Zone 2

Monitored (T)ransfer (S)witch Without Gen with Inverter

This option utilizes a \*monitored transfer switch that allows the coach to be plugged into standard 120/220 volt power called “Shore” power. When plugged into Shore power the display will read Shore and have power direction lines flowing from the line 1 and/or Line 2. If the unit is plugged into a 30 amp single line system then only line 1 will show results. Otherwise If the unit is plugged into a two leg system both line 1 and line 2 will reflect the voltage, amperage and the power cycles (Hertz) being carried.

### LZ2 - Cotek Inverter

charging ability

For a full list of Statuses See : “Cotek” under “Inverter Statuses”.

#### Transfer switch condition

For a full list of conditions see: “Transfer Switch Conditions” under “General Electrical Terms”.



### LZ2- Progressive Inverter

No charging ability



See “Electrical - Inverters”, “Progressive Inverter”.

For a full list of Statuses See : “Progressive” under “Inverter Statuses”.

#### Standard Navigation Icons

This page allow navigation to any of the following depending on the unit’s options.

- SOC Details icon :See “State of Charge :SOC”
- Inverter Settings icon: See “Electrical Inverters”



## Electrical Landing Zone 3

### Non-Monitored Transfer Switch with Gen and Inverter

This is the Landing Zone if this unit has a non-monitored (T)ranfer (S)witch (see Transfer Switch Function in the “Electrical Terms”. Since the TS is not monitored your landing zone does not have the SOC Details icon and must be navigated to through the Home Screen. See Generator Display Details.

### LZ3 - Cotek Inverter

For a list of messages and warnings please see “Generator Messages and Warnings” under “General Definitions and terms”.

See : “Electrical - Inverters”

#### Generator Controls and Disposition

See “Generator Display” under “Home screen Basics”.

#### Navigates to

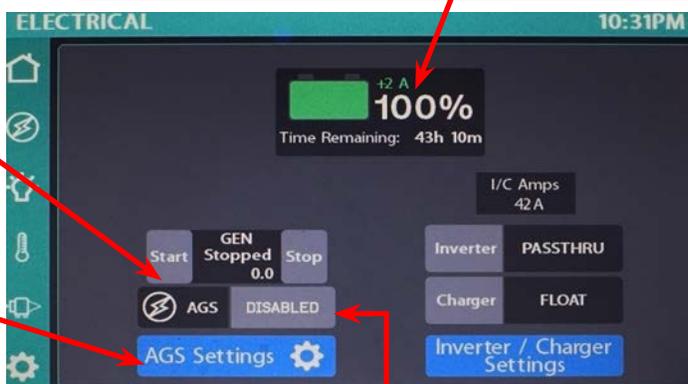
#### “Auto Gen Start Settings”

See “Electrical AGS” section for further information on the AGS system.

*Only enable AGS if your coach is in a well-ventilated area.*

#### Battery Condition

For more information please see “Battery SOC Charge -Discharge Rate” under “Home Screen Basics”.



#### AGS Status

Show the current status of the AGS system. See Electrical:AGS for a complete overview of the AGS System.

### LZ3 - Progressive Inverter

This page allow navigation to any of the following depending on the unit’s options.

- AGS Settings : See Electrical AGS
- SOC Details :
- Inverter /Charger



#### Electrical Inverters page

Selecting this icon will bring up an Electrical page that has no charge functions. See “Electrical Inverters” the “Progressive Inverter” area.



## Electrical Landing Zone 4

Non-Monitored (T)ransfer (S)witch/ No (G)enerator

When Navigating from the Home page using the  electrical icon and the unit has not been fitted with a monitored transfer switch then this will be the Initial electrical screen if the unit has the generator option and one of the two inverter options.

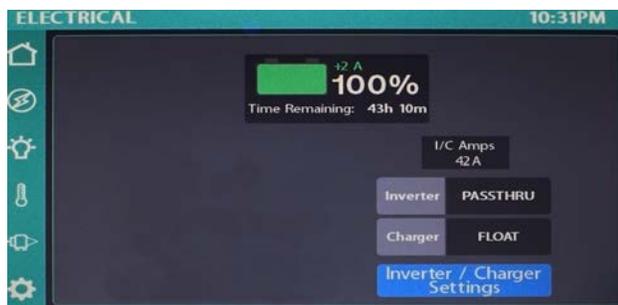
### LZ-4 Cotek Inverter

See : "ATC Inverter Options" under "Electrical - Inverters"

#### Inverter Status

#### Charger Status

This icon has numerous states including Disabled , waiting, pass thru and float.



#### Charger Settings Page

This icon will take you to the "Inverter/Charger Settings" screen. For a more detailed description of the Cotek inverter see: "Electrical Inverters" .

### LZ-4 Progressive Inverter

#### Progressive Inverter Without Generator Option

*Note: This is the Initial electrical screen if the unit does not have the generator option and has a progressive inverter.*





## Electrical Landing Zones 5

Monitored Transfer Switch/No Gen. No inverter

With this option the unit has the ability to connect to Shore Power via a monitored transfer switch but no factory installed inverter. Generally when Shore Power is available the unit will have an EMS system. For further information on the EMS see: "Energy Management System".



See: "Home Screen Basics" page for manually Starting and Stopping the Generator. Please refer the home page for more information on these control icons and status window between them.



## Electrical Landing Zones 6

Non-Monitored Transfer switch with Generator Only

### No OEM Installed Inverters

If the coach has only the generator option and does not have a monitored Transfer switch and no inverter when selecting the  electrical navigation icon on the home page the “Auto Gen Start Settings” Page will be displayed. Please see “Electrical:AGS” for full description of the generator control options.



***Warning : Before Starting the generator see : Generator Warnings under General Electrical terms.***



# Firefly Integrations

## Electrical - Inverters

### ATC Inverter Options

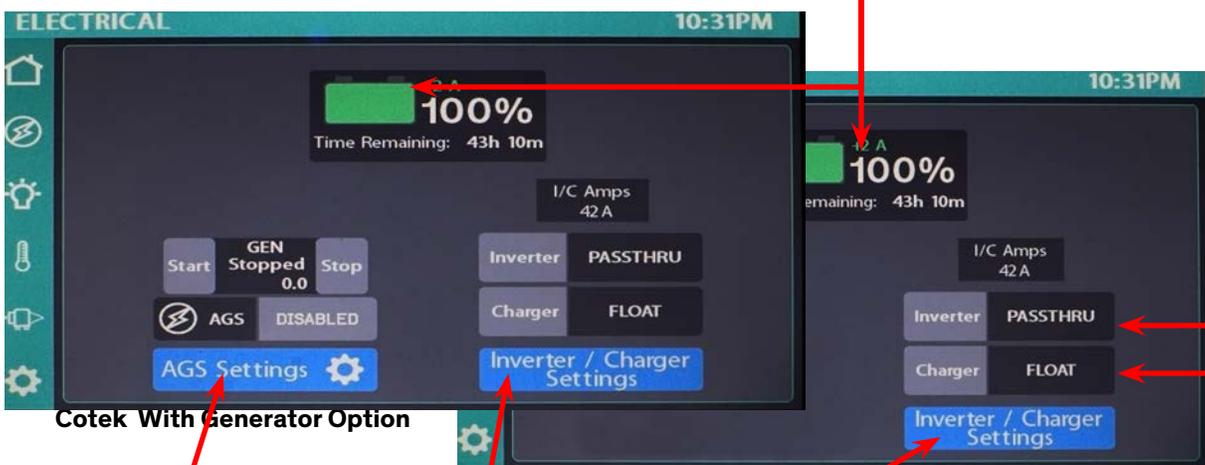
The ATC 700 series have two options when it comes to inverters. Option one is the Cotech inverter which has the charging feature and the other option is the Progressive does not support charging. If you have the Progressive inverter see “Progressive Inverter” under “Electrical - Inverters”.

### Cotech Inverter

The Cotech inverter has both inverter and charging capabilities. Selecting the electrical icon on the Home page brings up the Gen Status and Inverter Status/Navigation page. Please check with the units OEM to establish which inverter came with this unit. The inverter draws power from the battery and changes it to 120v for use running appliances.

### Battery SOC

As on the home page this page displays the the current state of charge and also allows the repeat functions of the home page when Starting and Stopping the Generator. However a significant addition to this page is the AGS status and navigation to the AGS Control screen, inverter status, Charger status and navigation to the Inverter and Charger control screen.



Cotech With Generator Option

Cotech Without Generator Option

*For a list of Statuses see : "Inverter Statuses"*

### AGS Settings

See:Electrical AGS

### Charger Settings Page

This page allow you to see any faults and control most aspects of the Cotech charger.

The charger side of the inverter routes excess energy that is being received from either shore power or the generator to charge the battery.



### Progressive Inverter

The Progressive inverter has no charge capabilities and therefore has no charging options. The Progressive inverter has a limited of 1000w continuously. Therefore any continuous draw over 8.3 amp will become an over current situation. Note: surge power allowed is up to 2000 watts.



This is the Initial electrical screen if the unit does not have the generator option and has a Progressive inverter.

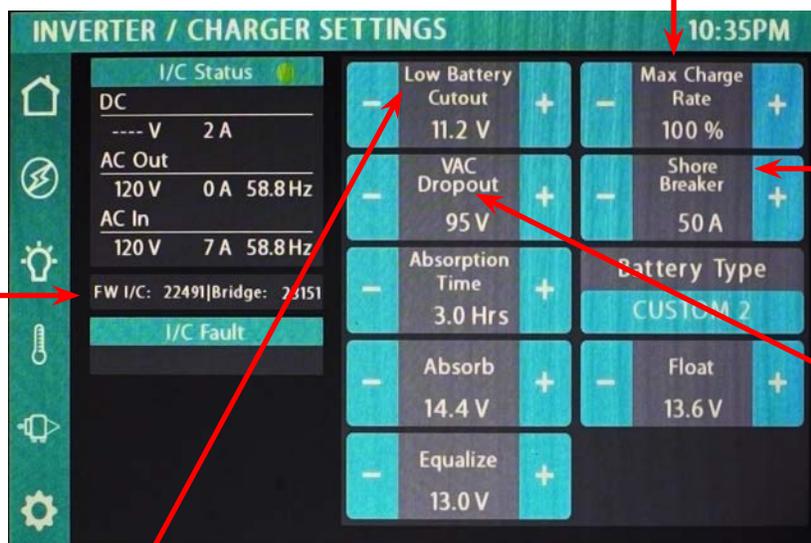


If this unit has charging capabilities, then it is imperative before proceeding to change the charger settings to know the manufactures specifications of the battery (batteries) included in the unit. The “Charger Settings” page allows control over most aspects of the charging process. This page also displays the status of your Inverter/charger if connected to the firefly system.

**Warning: Before proceeding to modify any of these figures a thorough knowledg of your charger and battery specifications is required. Charging batteries with the wrong settings can be dangerous and/or cause permanent damage to them.**

### Controlling Charging Functions

This area shows the health of the inverter’s DC system in volts and amps. Further it also shows the units AC usage in volts, amps and Hertz.



### Max Charge Rate

The capacity at which the Charger charges the batteries.

### Shore Breaker

Set this number to the size of your shore breaker.

### Battery Type Setting

This setting should be set by your units OEM.

**Warning: the battery type is crucial to how the battery is handled and must be set before setting any other parameters.**

### Vac Dropout

Whenever the AC voltage drops below this setting the inverter switches from shore power to inverting battery power.

### Low Battery Cutout

Low Battery Cutout - Low battery cutout is an inverter feature that disconnects the battery from supplying power to the load when the voltage drops below a certain level. This helps to prevent the battery from being deeply discharged, which can damage the battery.

### Firmware Revision Numbers

This area displays the current (F)irm (W)are (I)nverter (C)harger’s revision number and the bridge device’s FW revision number. The bridge is a device that allows Firefly’s system to communicate to the Inverter/ Charger .

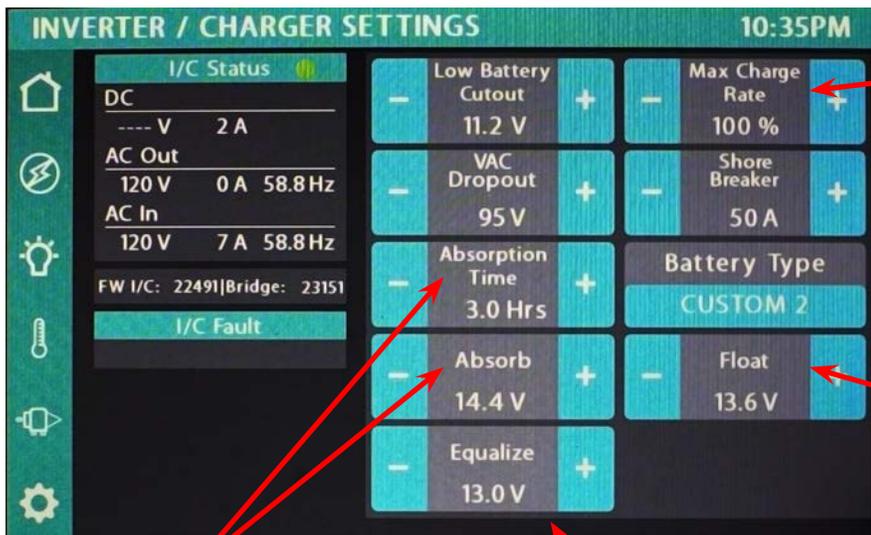


**Warning:** Before proceeding to modify any of these figures a through knowledge of your charger and battery specifications is required. Charging batteries with the wrong settings can be dangerous and/or cause permanent damage to them.

### Controlling Charging Functions

#### Low Battery cutout

This feature is designed to cut-out the battery if battery is being discharged too low. If set properly, this feature will help prevent batteries from being discharge too low. Check with the units OEM or battery manufacturer for specific settings.



#### Max Charge Rate

This is the maximum power set aside to charge the batteries based upon the total available power to the coach. Check with the batteries OEM or the coaches manufacturer for this setting.

#### Float

After the battery has recharged to the Absorption voltage set-point and held there for a predetermined amount of time the "Float" state is then entered. Once the "Float" state is entered in most instances a small but constant charge is applied to the batteries to maintain there charge at the chosen voltage.

#### Absorb Time & Absorb

When the battery has recharged to the Absorption voltage set-point, constant-voltage regulation is used to maintain battery voltage at the Absorption set-point. The battery is allowed to come to a full state of charge at the Absorption voltage set-point. The battery will remain in the Absorption charging stage for a predetermined amount of time- (The "Absorb Time"), before transitioning to the Float stage.

#### Equalize

See Equalize warning before performing this task. Some batteries can develop a resistance to charging to its maximum ability. Equalization is a process that forces a higher charge than is normal into a battery or a bank of batteries break that resistance that has buit up and allow them to reach there maximum charge voltage again.

#### Equalize warning

**Warning:** Equalizing batteries is a process whereby an overcharge is applied to bring them all into alignment. Therefore it is imperative to perform this task with extream caution.



# Firefly Integrations



## Energy Management System

The (E)nergy (M)anagement (S)ystem provides prioritized activation and shedding of loads that require AC power based on the amount of AC power available. When a request is made to enable an AC load (e.g. HVAC is trying to activate an aircon), EMS first determines whether there is adequate current available to enable the load. If sufficient current exists, the load is activated. When multiple AC loads are requested at the same time, they are enabled in order of priority as long as sufficient current remains available.

If there is not enough current available to enable all requested AC loads, those with lower priority will be shed. Likewise, if multiple AC loads are active and the amount of current available decreases, loads will be shed until the amount of available current matches or exceeds the current required by non-shed loads - with the lowest priority loads being shed first.

Firefly's EMS can operate on one or two lines (phases). When using two lines, each line can support up to 16 loads. When the second line is not in use (such as when connected to single phase power), all loads will be applied to the first line - up to 32 loads.

Each load will have a priority level ranging from zero (highest priority) to 13 (lowest priority). The highest priority loads will always be activated first and the lowest priority loads will always be shed first. If a load is enabled and pending that has a higher priority than other active loads, the lower priority loads will be shed so the higher priority load can be activated. Active loads with the same priority level as pending loads will not be shed.

Two loads being applied to the same line will be activated in a staggered fashion (in case of over-current on startup), but two loads being applied to separate lines can be activated simultaneously.

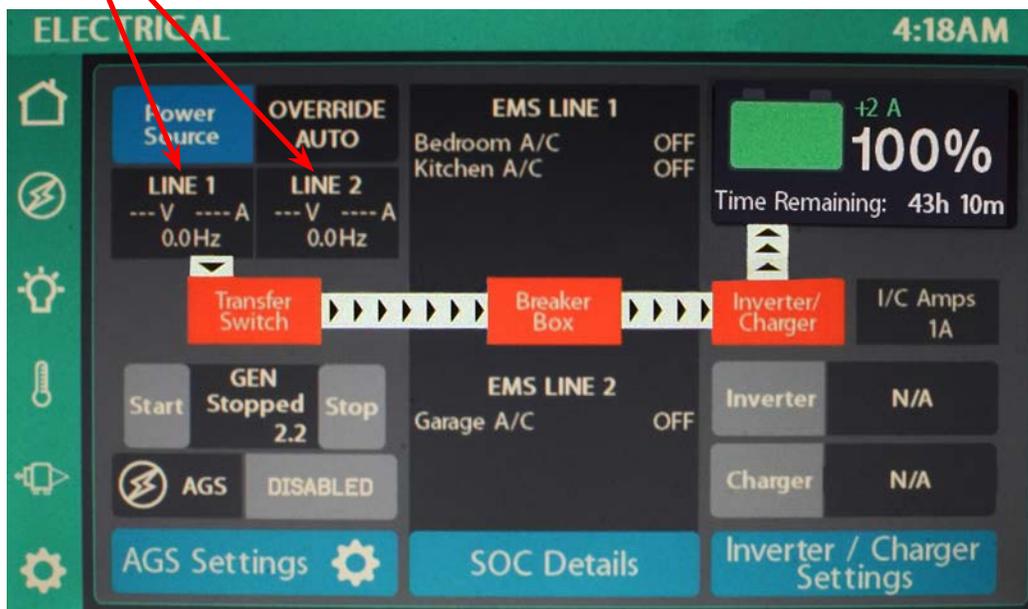
**Note: EMS is in effect only when shore power is connected or the Generator is running**

### EMS Line Monitoring

The EMS lines being monitored

### EMS Statuses

- OFF
- ON
- Shed
- Disabled





### Auto Generator Start Settings Page

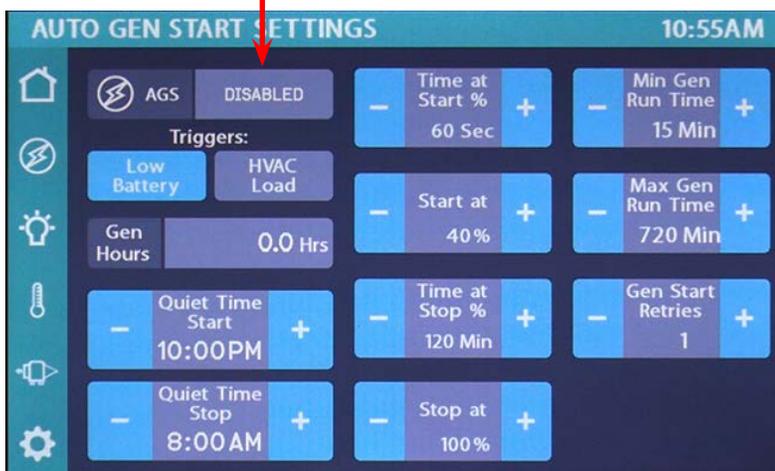
**Warning: Only enable AGS if your coach is in a well-ventilated area.**

The AGS setting page is either Enabled or Disabled. Fundamentally this is a safety feature that prevents the Automatic settings from being executed while it is Disabled. Enabling the Auto Generator start Settings allows this page's generator controls to be in effect. These controls will start and stop the generator automatically until AGS Settings are Disabled". To see a full list of AGS reasons this page will automatically be "Disabled" see : "Generator Messages and Warning" under "General Definitions and Terms".

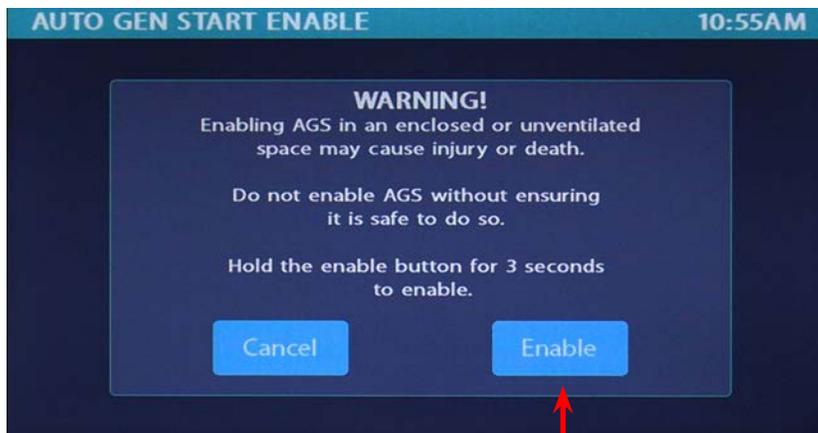
### Enabling/Disabling - AGS

Select the "Enable" / "Disable" to manually control the state of the AGS setting page. When Disabled all start functions within the AGS page will no longer be in effect. The generator will not start until "Enable" is reinstated. Selecting "Enable" also requires an additional confirmation step.

*See "AGS Disabling Events" for why your AGS will automatically become disabled.*



### Generator Enable-Warning



To Complete the process read the warning then select and hold the "Enable" icon for 3 seconds.



### Auto Generator Start Settings Page

Once the AGS setting page is “Enabled” it will control all aspects of starting and stopping a generator cycle based on customized trigger settings.

#### Triggers

See “Selecting the triggers”

#### Time at Start %

The generator will start when the “Start at %” setting is reached for this specified amount of time.

#### Start at % (capacity)

The generator will start when the voltage drops to this level for the amount of time specified earlier.

#### Gen Hours



Displays hours or generator run time See: “Setting Gen Hours”

*Note: These hours are saved to the system, not to the generator itself.*

#### Quiet Time Start & Stop Range

To reduce noise during certain hours of the day or night set the “Quiet Time”. Quiet Time takes priority over all gen. run settings.

- Use the Start +/- buttons to select the starting point for Quiet Time, the hours that your generator will not run.

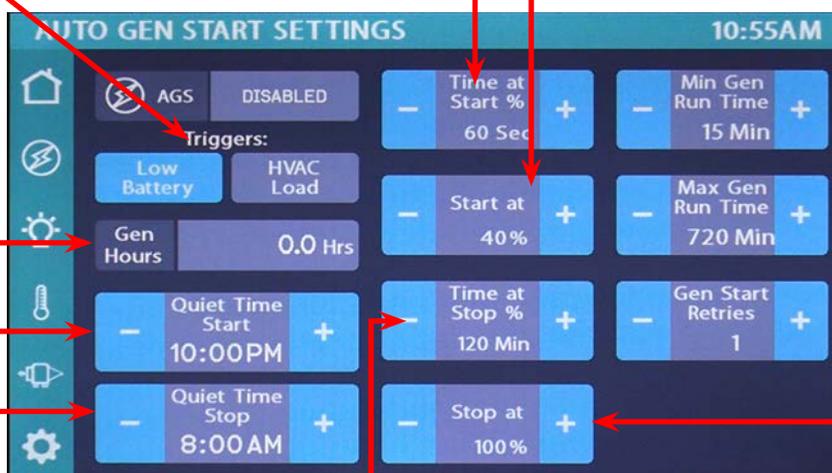
Use the Stop +/- buttons Select the point for Quiet Time, the hours that your generator will be allowed to begin running.

#### Time at Stop %

Time at Stop % - The generator will shut off when the “Stop at %” voltage level is reached for this specified amount of time.

#### Stop % at (capacity)

Stop at % (capacity)- The generator will shut off when this value is reached for the “Stop %” level specified earlier.



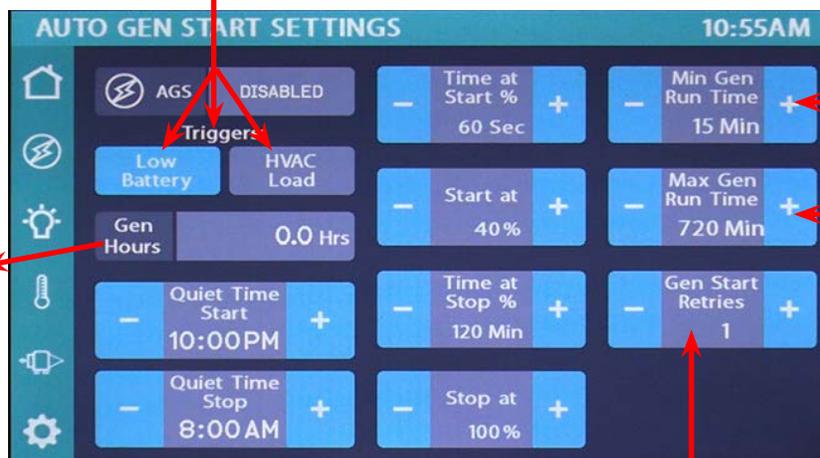


### Selecting the triggers

Automatically starts the generator using specified voltage settings (Low Volts) or when A/C or Heat Pump starts (HVAC). Select one or both triggers. If no triggers are selected, AGS will not start the generator.

### Minimum/Maximum Gen Run Time

Use the +/- buttons to set the Minimum/maximum amount of time that your generator will run once it has started.



### Setting the Gen Hours

Displays hours or generator run time. To reset select and hold the "Gen Hours" icon.

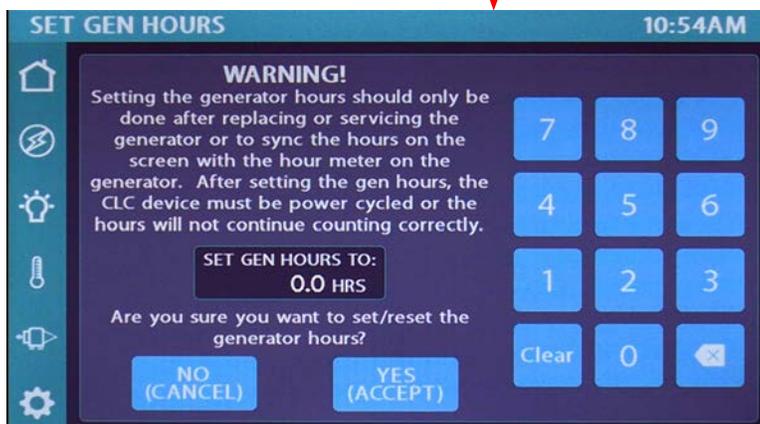
### Gen Start Retries

Use the +/- buttons to set the number of times that the generator will retry to start.

### Set Gen Hours

Set the number of hours the generator has run by using the numeric keypad icons. If the generator keep track of its total run time on the unit then these number will need to be taken from the units display and manually entered here. Type in the required gen hours and tap Yes to accept and exit.

**Note: These hours are saved to the firefly system, not the generator itself.**



### Firefly tip:

Since generators require an oil change after X hours many coach owners use this time to track how long the generator has been run by the firefly system since its last oil change. Once a set number of hours have been reached and the oil change is performed, time is reset back to zero for the next oil change.



## State of Charge : SOC

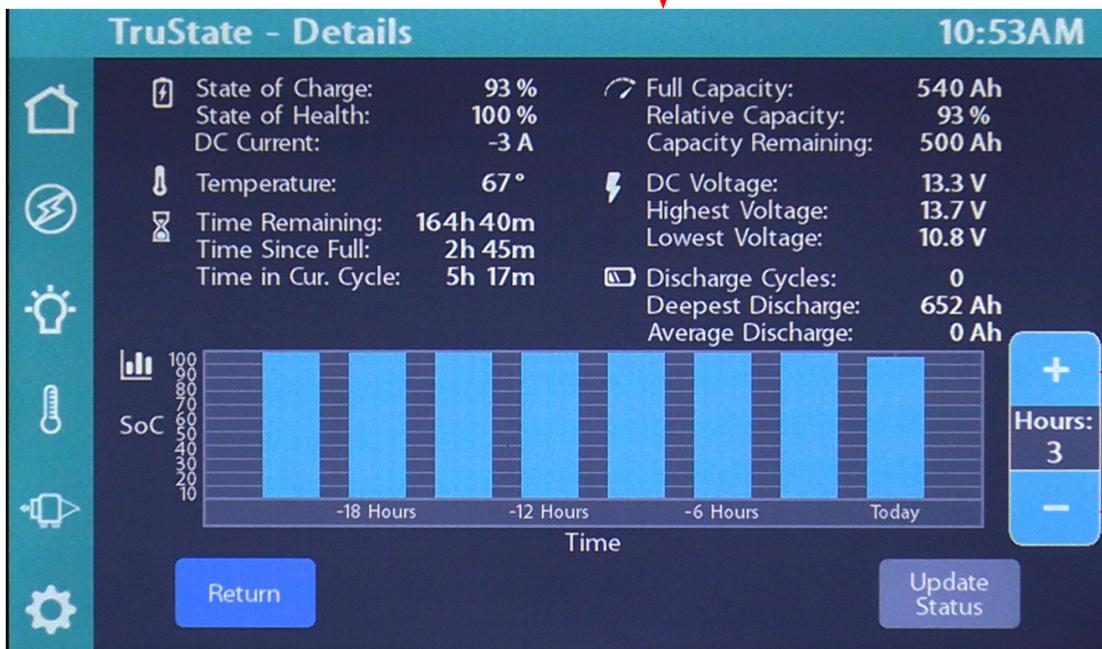
### TruState - Details

Many factors go into maintaining a units battery bank at its optimum. The “TruState” is a device that communicates with Firefly’s system and tracks very accurately the health and “S”tate “O”f “C”harge of a units battery bank. The SOC panel may be accessed either from the home screen or through the electrical icon, if available.



### NAV SOC (S)tate (o)f (C)harge

The (S)tate (o)f (C)harge icon when selected will navigate you to the “TruState - Details” page. This page displays the battery(or batteries) current state. Here you can monitor if the battery is being charged or is being discharged. Other things of note are the amount of Amp hours, remaining Amp hours, state of charge and time remaining. Both the state of charge are reflected back to the general generator status page.



### Time tracking within SOC

By selecting the “+” or the “-” the number of past hours or past days will be displayed in the SOC chart. This is particularly helpful if trying to track down a significant power event. Armed with this data changes could be made to the generator start and stop times depending of peek usage time.



This screen will control the lighting for the entire unit. Tapping a light icon will toggle the light on/off.

### Light Master

The (L)ight (M)aster is a central control icons that allows you to set up predetermined lighting schema for the interior of the unit.

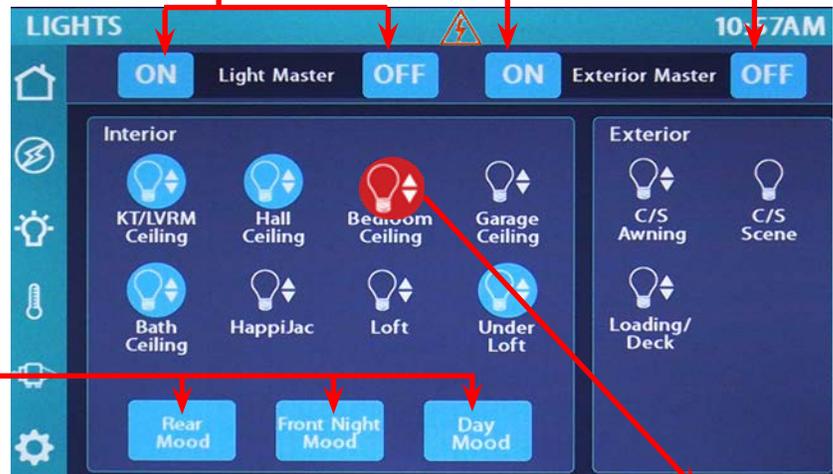
### Exterior Master

The (E)xterior (M)aster is a central control icons that allows you to set up predetermined lighting schema for exterior of the unit.

### Lighting Mood Presets

There are three preset lighting moods to select one simply tap one of the three icons.

*See "Detailed Lighting Moods" for more information on these settings in the Glossary.*



*See: Over-current Fault*

### Dimming the Lights

There are two type of lights dimmable and non-dimmable. Lights with an UP/down arrow are dimmable. To dim a light simply select and hold the light you wish to dim. This will cause the light to cycle through its dim settings. Remove your finger from the light icon and tap to turn the light off. This will store its settings so that when it is turned back on it will keep it new brightness level

### Storing your Master Settings

To store either schema including the brightness levels, simply turn on individually the lights as you would prefer them including the brightness levels. Then cycle them off using the LM's or EM's OFF icon. Any lights that can be controlled by the LM will cycle off and all of there relative brightness dispositions stored. In other words if a light was on and dimmed down several steps when cycling the LM's icon to OFF will not only shut off all lights under the LM's control but store each ones last disposition. Once the LM's OFF icon has been cycled you may now use the LM "ON" icon to restore your predetermined lighting schema back on.

### Troubleshooting Tip: Light Master

Since the LM OFF icon both shuts the lights off and stores the last disposition of your lights, if you select the "Light Master" OFF icon twice in a row you are essentially clearing the "Light Master"'s data and storing all the lights in an OFF status. To restore the function of the LM's simply repeat the above instructions.

How to override individual light controls and turn on all lights controlled by the LM simultaneously - Press and hold the LM's "ON" icon until all the lights controlled by the LM turn on. This will also override any dimness setting. NOTE: If you cycle them off using the LM's OFF icon this will become your new predetermined lighting schema.

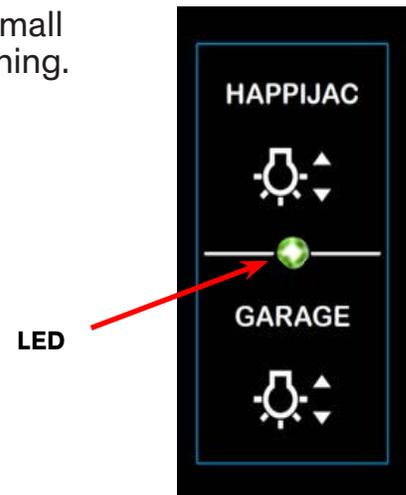


## Manually controlling lights via Wall Switch Panels

The switch panels will be located throughout your coach. To manually turn a light on/off press the light emblem on the switch.



While pressing the light bulb emblem a small LED will flash indicating that it is functioning.



*SSP17 switch panel*

If the indicator light does not flash and remains dark see: "Replacing Switch Panel Batteries".



## Climate Control Display

### Zone Controls

In this unit you have three main zones, Bedroom, Kitchen and Garage. Each zone has individual climate read out and temperature controls. In each zone you may or may not have an AC unit or a furnace. This will depend on unit number or custom building requirements of the unit. Even though the unit has different zones the AC and Furnace can not be run simultaneously in different zones. This is considered a conflict and if two different climate controls are selected then which ever is the first one will override the second conflicting selection. When selecting AC or Furnace the selection that normally will take priority is the first one. However, given a few moments between selections or by switching in and out of the Climate Control screen the last selection will take priority otherwise the first selection take priority.

### Current Selected temperature

Zone	Current Temp	Mode	Speed	System	Status
Bedroom	66°	Cool	High	AC	No Faults
Kitchen	77°	Cool	High	Furnace	No Faults
Garage	78°	Cool	High	Furnace	No Faults

### Selecting Ambient room temperature

Use the Up and Down icons to Arrows to select your desired temperature.

This area simply displays current conditions in different zones within the unit. Each zone that can be controlled is displayed with an icon

### Fan- Only mode

To initiate the Fan only ensure that no heating or cooling is selected. Then select the fan speed High or Low icon without selecting the any other climate mode. This will initiate the fan. To shut off the fan select the Auto icon. This will not only turn off the fan, but also allow the system to automatically select the fan speeds for optimum cooling.



AC is on when you see this emblem



Furnace is on when you see this emblem



## Climate Control Display

### Heating and Cooling Auto Mode

In this mode, either A/C or the furnace will automatically run to keep your desired temperature consistent. Fan speeds will be adjusted automatically. If the Auto fan is selected during a heating or cooling cycle the high or low speed is automatically selected. If fan is in Auto mode and the temperature strays beyond three degree of the selected temperature then high speed is mode is selected otherwise "Low" speed is selected.

### Cooling Mode



Selecting the "Cool" icon enables the A/C. The A/C will run until the current temp reaches your desired temp and then shut off. The cooling mode graphic will only display when the A/C unit is running. Depending on the brand of cooling unit installed the shutting off cycle may last up to 5 minutes.



### Heating Mode

Selecting the Furnace icon will run until the current temp reaches your desired temp and then shut off. The Flame graphic will only display when the Furnace is running. Once the desired temperature is reached the furnace is shut down. It will continue to cycle until deselecting the Furnace Icon. At the end of each cycle the furnace may enter a short cooling cycle as it shuts down.

CLIMATE CONTROL		10:57AM	
Home	Bedroom	Kitchen	Garage
	66°	77°	78°
Temp	67°	67°	66°
Mode	Cool	Cool	Cool
Fan Speed	High	High	High
	Low	Furnace	Furnace
	Auto	Auto	Auto
	No Faults	No Faults	No Faults

Current zone temperature, Climate mode graphic and Fan Speed indicator (H or L).

Tip: If you would prefer that your temperature readouts be in Celsius go to the **Settings** page and tap **Temperature Units** to change units between **Celsius** and **Fahrenheit**.  
**See: Setting Temperature Units.**



## Climate Control Display

**Cool** – Tap to enable *Cool* mode. When enabled, the A/C will run until the ambient temperature reaches the set temperature and then shut off. It will continue to cycle until *Cool mode* is turned Off by tapping the *Cool* button again.

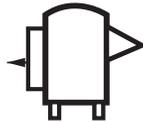
**Furnace** – Tap to operate the Furnace. It will run until the current temp reaches the set temp and then shut off. It will continue to cycle until *Furnace mode* is turned Off by tapping the *Furnace* button again.

The screenshot shows the 'CLIMATE CONTROL' app interface at 10:57 AM. It features a grid for three rooms: Bedroom, Kitchen, and Garage. Each room has a current temperature, a setpoint, and a mode selection. The 'Cool' mode is selected for all rooms, and the 'Furnace' mode is selected for the Kitchen and Garage. The 'Auto' mode is selected for the Bedroom. The 'High' and 'Low' fan speed options are visible for the 'Cool' mode, and the 'Auto' option is visible for the 'Furnace' mode. A red box highlights the 'Cool' and 'Furnace' buttons, and a black box highlights the 'Auto' button.

Room	Current Temp	Setpoint	Mode	Fan Speed	Fault Status
Bedroom	66°	67°	Cool	High	No Faults
Kitchen	77°	67°	Furnace	Low	No Faults
Garage	78°	66°	Furnace	Low	No Faults

**Auto** – Tap to put the system into *Auto* mode. The system will Heat or Cool automatically to keep the area temperature consistent.

If the fans are in **Auto** mode, **High** and **Low** speeds will be determined by the temperature. If the ambient temp is 5° or more above or below the set temp the fan will run at **High** speed. If there is less than a 5° spread the fan speed will be set to **Low**. Manually setting the fan speed to either **High** or **Low** will cause the fan to stay at that speed until it is manually changed to something different. This will be true even if the system goes into **Cool** mode or **Heat** mode.

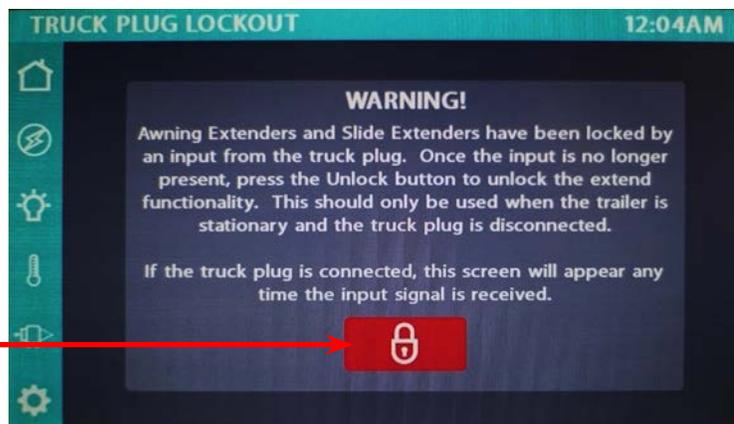


### Towing Vehicle Plug Lockout & Warning Screen

This is a special state that the system goes into if the towing vehicle is plugged into the Unit and there is any change of state of the towing vehicles braking system. If the Firefly system detects any breaking this will cause the Coach Controls screen to be locked out. Since the "Coach Controls" screen is "locked out" all the functionality for Slides, Awnings, bed lifts and levers will be locked out when the truck plug is connected. Once the towing vehicle is unplugged, tap Unlocked to use the navigate to the Coach Controls screen. Once the Unit is unplugged from the towing vehicle the Plug lockout will no longer interrupt the Coach Controls. However, if the warning screen does appear, verify that the coach is unplugged and not prepared to move before overriding the Lock out by selecting the Unlock icon.

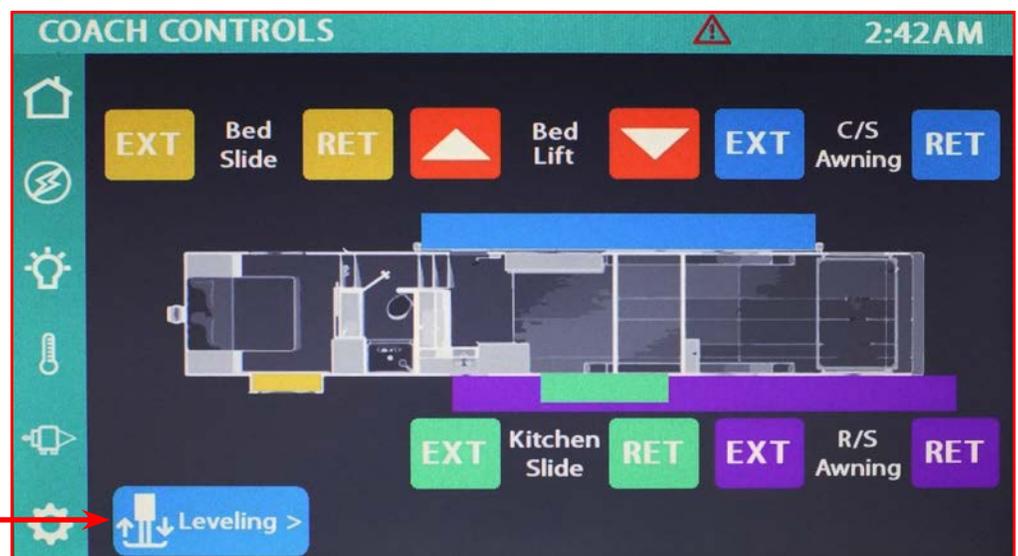
#### Unlock

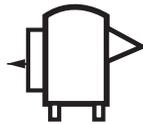
Selecting the Unlock icon will causes the system to navigate to the "Coach Controls" page.



#### Leveling the Coach

If the coach has the leveling option this icon when selected will navigate you to the "Equalizer System" page.





### Slide / Lift Options

The Slide and lifts are OEM options. Each unit may have a combination of options or may have none depending on the OEM's specifications when built. The R/S and C/S nomenclature stands for Road side and Curb Side respectively. Each control icon is color coded to the particular for the option it controls

### 5th Wheel Series

#### Bed Slide

Select and hold either the EXT icon next to Bed Slide to extend the Bed slide or the RET icon to retract the bed.

#### Bed Lift

Select and hold either the "Up" icon next to Bed Lift to raise the bed or the "Down" icon to Lower the bed into place.

#### Awning

Select and hold the EXT icon or the RET icon to extend or retract the awning. Based on your unit options you may have a (C)urb (S)ide and/or (R)oad Side Awning.

#### Kitchen Slide

Select the EXT icon next to Kitchen Slide to extend the Bed slide or the RET icon to retract the bed.

#### Leveling the Unit NAV

Select this icon to take you to the "Equalizer System" Page.

*Note: This selection will only be available on units with levelers.*

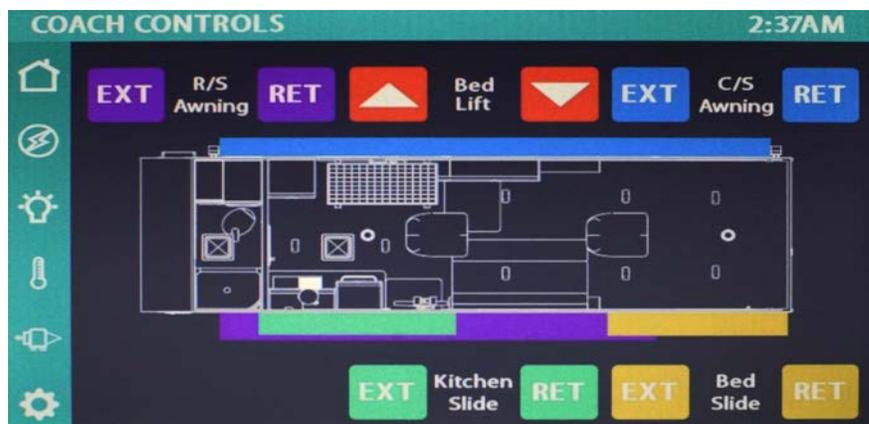


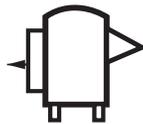
### Travel Trailer Series

The optional slides on the travel trailer are laid out in much the same way as the 5th Wheel coach. Follow the instruction for the 5th wheel to operate any slide options installed by the OEM. If your Travel Trailer has the optional Electronic leveling system the Coach Controls page will also show the Leveling Icon just as the 5th Wheel Series.

Slide button temporarily RED

*See: Over-current Temporary Fault*





### Equalizer systems

#### Auto Level

Select the "Auto Level" icon to start the automatic leveling function. To stop the auto leveling function tap the "Auto Level" icon again to stop and cancel the leveling function. The button status will change reflecting the operation has stopped. The corresponding red operational lights will illuminate to indicate which jacks have been extended and will stay illuminated until the jacks have been retracted.

#### All Retract

Tap the All Retract icon to fully retract all leveling jacks.

#### Equalizer System Status

Status Indicators – Red lights will indicate the status of the Equalizer leveling system.



Up /Down arrows work the jacks in pairs.

#### Manual Jack Controls

Press and Hold the arrows to Raise/Lower the leveling jacks as needed. A single arrow will operate the jacks in pairs. For example, to Lower the Front of the coach, pressing and holding the Front Down arrow will lower the Front jacks equally. Lift your finger to stop their travel.



## Settings

**Network Diagnostics**  
Select icon to navigate to "Network Diagnostics"

**Screen Brightness Control**  
To adjust Firefly's screen levels drag the slider left or right to decrease or increase the bightness levels.

**Cleaning Mode**  
Disables touchscreen functionality (15 seconds) for the purpose of disinfecting.

**Auto Dimming next page**

**Paring the Wireless switches**  
Select icon to Navigate to the "Wireless Switches" page.

**Paring to a Smart Phone**  
Select the "Mobile App" icon and proceed to "VegaTouch Mira Section"

**Setting Temperature units**  
Tap to select between Fahrenheit and Celsius.

**GUI Version**

**Logic Controller Version**

**See Setting Clock next page**

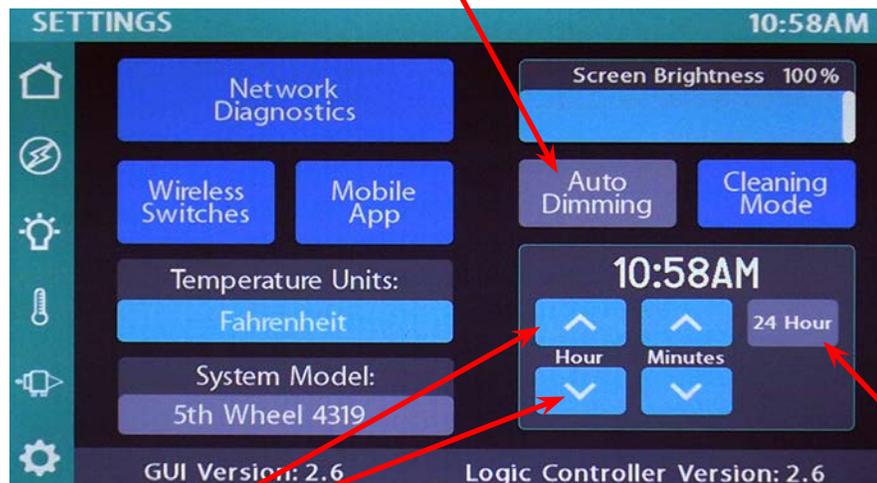
**Unit Model and Floor plan display**  
*Since Firefly's control panels are centered around the System model it is of extreme importance for the correct model to be displayed here. If this does not reflect the proper unit model then the firefly system may not function properly.*

In almost all instances the GUI # and the Version # should match. If any issues arise that are being difficult to correct with normal debugging, please make sure that these two numbers match. If these number don't match and your firefly system is not functioning correctly please note them before calling Firefly's Technical Support.



### Auto Dimming Selection

When Auto Dimming is enabled, the screen will enter sleep mode after 60 seconds of inactivity. Tap anywhere on the screen to wake it up. Please note that even if Auto Dimming has been disabled, the screen will still enter sleep mode after 4 hours of inactivity during daytime hours (5am – 10:59pm) and after 15 minutes of inactivity during nighttime hours (11pm-4:59am) as the result of a built-in screen saver that cannot be disabled.



### Setting Clock

Tap the buttons to set the time

### Setting Time Keeping period

Switches the clock between 24 hours and am/pm mode. or choose 12 or 24-hour time.



# Firefly Integrations

## Settings

### Pairing Wireless Switches

#### Location Pairing

Wireless switch panels are paired by selecting on the screen the icon that relates to the switches label. Each switch has a corresponding letter code on the screen and this letter code is also on the units "System Diagrams". Then based on which type of unit you have (5th wheel or Travel Trailer) review that diagram for your switch pairing letter and location.

Select area that you wish to pair.

#### Pairing Panel

Once the area of the unit is selected the Pairing Page is displayed. Select the "Start Pairing" icon to continue.

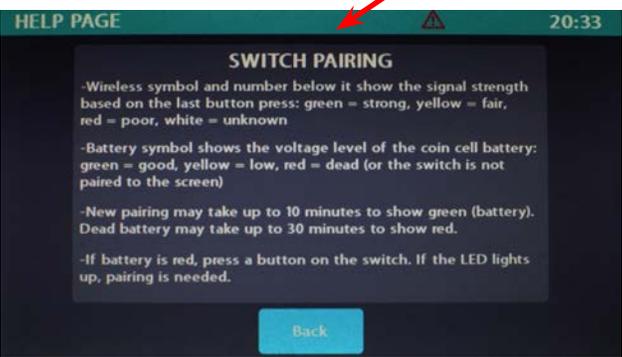


*See: Finishing Switch Pairing*

#### Signal Strength Color Codes

The color-coded Wireless Graphic and Signal Strength Value will identify the status of a wireless switch panel.

- Green – Over 100 (Strong)
- Yellow – 85-100 (Medium)
- Red – Less than 85 (Weak)



#### Wireless Graphic with Zero Signal

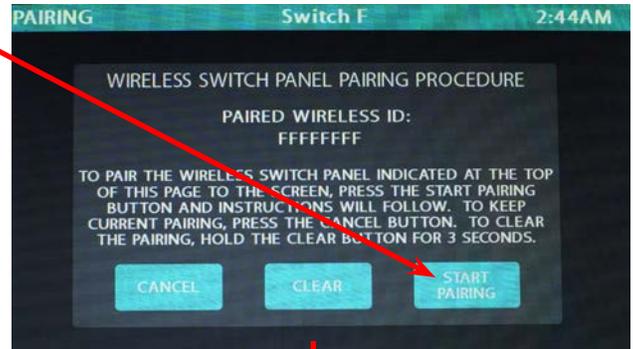
It is likely that the battery inside your switch panel needs replaced. The wireless switch panel in your coach will illuminate a green LED whenever a button is pressed. If the LED on your switch panel does not illuminate when you press a button on your switch, you will need to replace the 2032 coin cell battery. Refer to "Replacing Switch Battery"



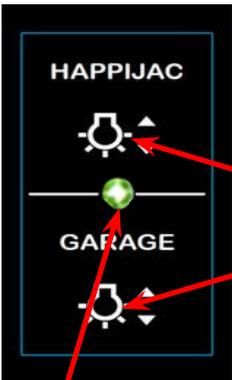
### Finishing Switch Paring

#### Starting the Pairing Process

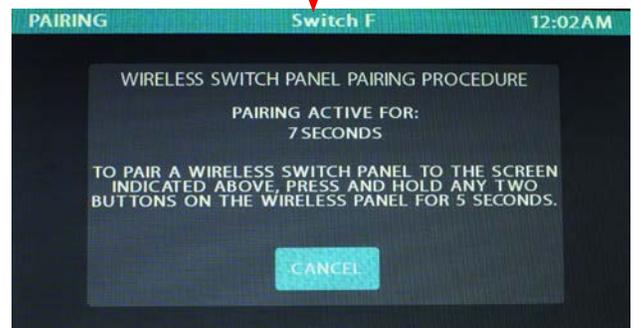
Select the "Start Pairing" icon. Once it is selected a 30 second count down is started to complete the pairing process. On the wireless switch, press and hold any 2 buttons on the switch panel simultaneously for 5 seconds.



#### Wireless switch



Press and hold together



#### Wireless Status (light) Indicator

If the LED on your switch panel does not illuminate when you press a button on your switch, you will need to replace the 2032 coin cell. Refer to "Replacing Switch Battery"

*If a new battery will not fix the issue, you might need to repeat the pairing process.*

#### Pairing Confirmation Screen



#### Pairing Confirmation Screen

After holding the two button on the wireless switch after a few moments the Paring confirmation Screen should Automatically appear, indicating pairing was successful. Once Pairing has completed tap the Done icon to return to the Unit View of the Wireless switches screen.

*It may take up to 10 minutes for the battery switch indicator to turn Green, but the switch should work instantly once paired. If it fails to work, press and hold the Clear Switches button for 5 seconds then tap Clear from the Warning screen before attempting the pairing process again.*

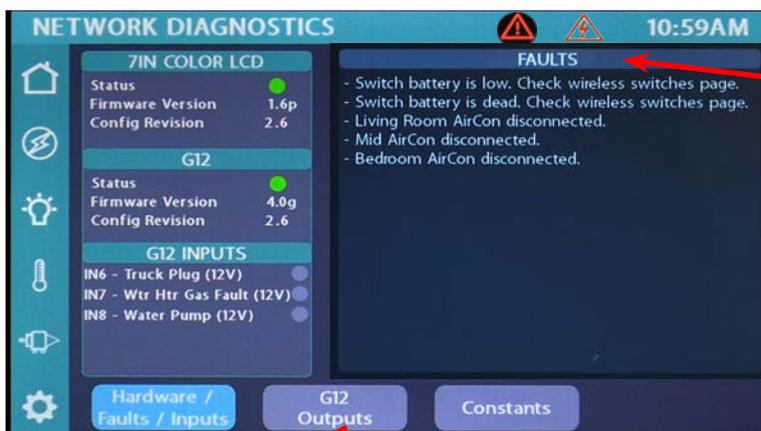


## Network Diagnostics

This initial screen will show the status of the firefly touchscreen and the G12 control panel inputs. It will also list any current faults the system is experiencing. The Default entry page to your Network Diagnostics is “Hardware/Faults/Inputs” as you can see by the highlighted icon. To navigate to other diagnostics screens use the “G12 outputs” or the “Constants” icon.

### Hardware / Faults / Inputs (Default Screen)

For a detailed description of the G12 Control Panel see: “G12 Control Panel” within “ATC Glossary”.



### Firmware & Faults

This screen will show the status of the “7in Color LCD” and “G12” Control Panel, and list any faults the system is experiencing. Included in these area are the firmware versions and Config Revision numbers. Select an icon at the bottom of the screen to view your desired diagnostics screen.

**Warning:** The “Config Revision” numbers normally match between the “7in Color LCD and the “G12”. If these numbers don’t match this may cause network disruptions.

### G12 Outputs

The G12 Output icon will : This screen will display all currently active G12 and outputs. Active circuits will have bright green indicator and circuit with an over-current will show a red indicator.

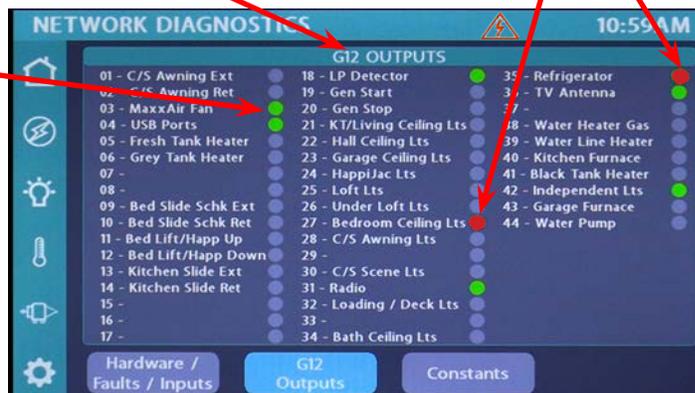
### over-current Faulted circuit

see :Over-current Fault

### Operating/Monitoring Lights

This panel display all the units current operating circuits and what state it is in.

Green = working properly  
Red Light = Over current detected  
Blue = Not detected(unused)



### Clearing Faults

To clear the faults, navigate to each faulted control and tap them to reset. Note – you’ll notice that their buttons have turned red and will remain that way until cleared. For more information on clearing faults see: Resetting Other over-current Faults.



### Constant Outputs

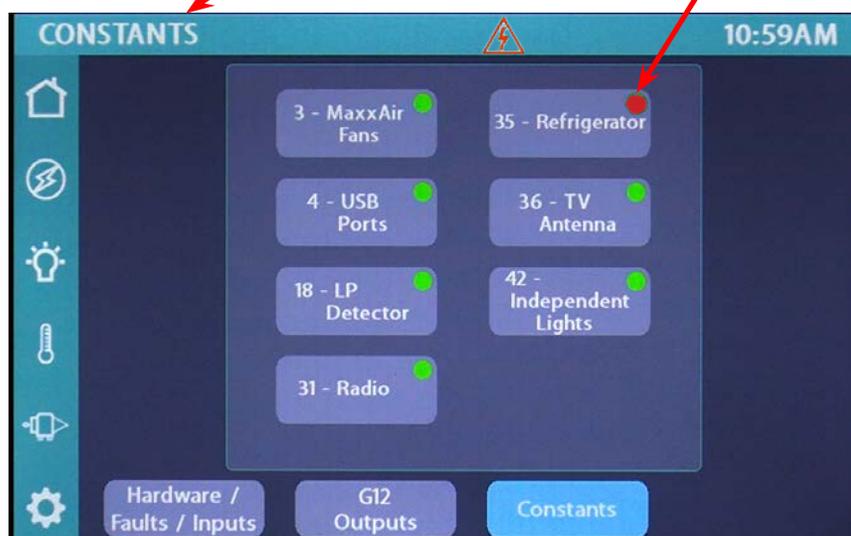
Select the “Constants” icon to bring up the The “Contstants” page which has an icon for each 12v constant circuit. If an over-current condition has occurred on one of the 12v circuits, the indicator will change from green to red.



### Select Constant icon

Tap on the Constants icon to see the status of all constant 12V circuits.

Constant 12v circuit over-current Faulted circuit



. There is a page in the network diagnostics that has buttons for each Constant output that send a reset command to that output. As such, the fault notification will only appear on screens with diagnostics. If triggered by this kind of control, the fault graphic will remain until the output has been reset.

### Resetting Constant Loads

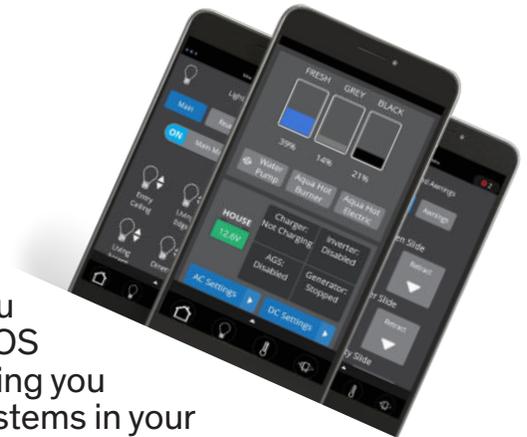
To reset the over-current condition select the 12v circuit icon that has the red indicator. Once Selected the 12v circuit will be reset and the red indicator will then be set back to green.



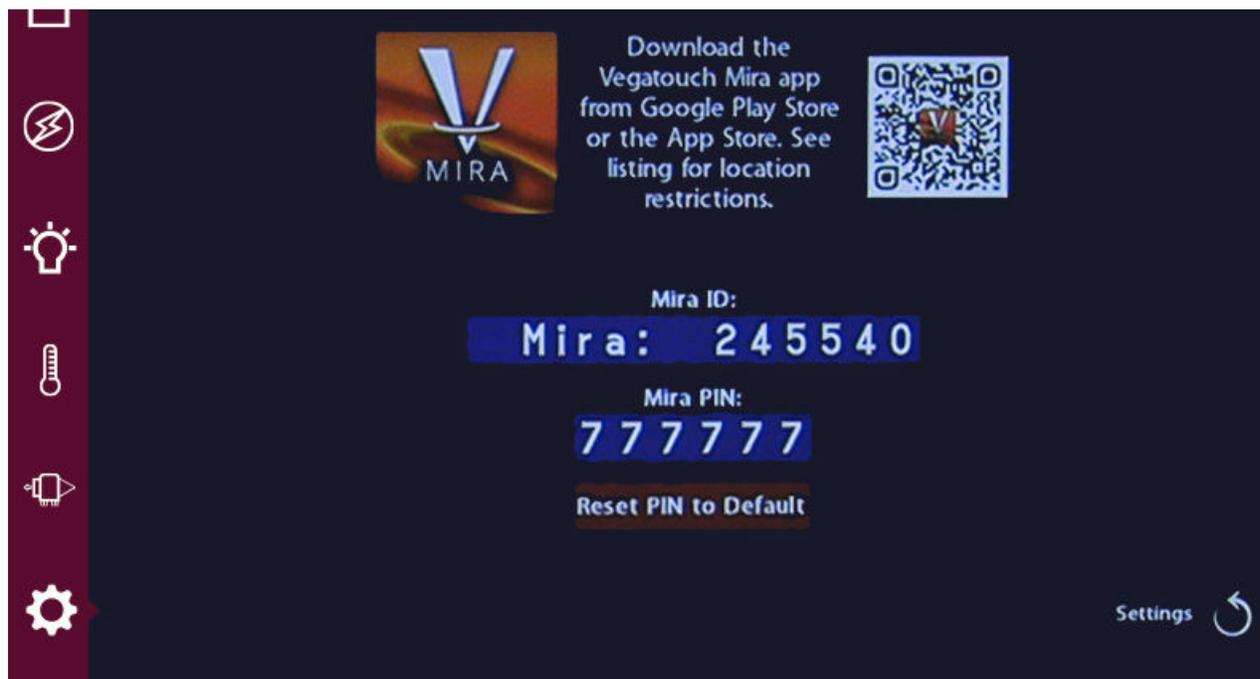
**Firefly**  
Integrations



## Vegatouch Mira



Vegatouch Mira allows you to connect most Android or iOS devices to your Firefly system giving you greater flexibility for operating the systems in your coach. Pair a device with the coach's built-in interface to monitor and control your coach from inside or outside the unit. Scan the QR code for a link to download the APP to your device, and then use the Mira ID and Mira Pin to pair your device to the Firefly system.



See :Pairing Mobile Device



**Notice:** Before proceeding turn on Bluetooth. See: "Enabling Bluetooth" for more information.

### Download App

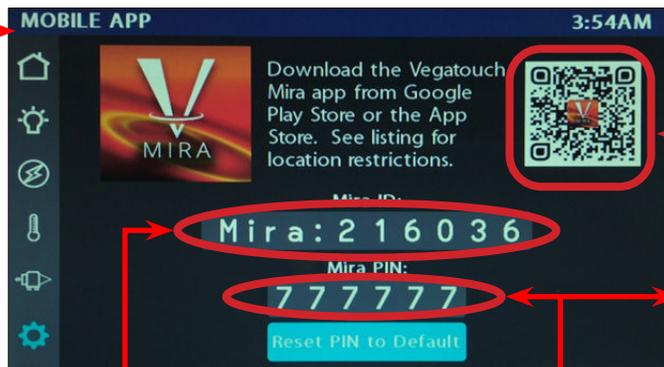
Begin by downloading the app. either by using the QR code on the Firefly Screen or going to an apps download site. Once the download has finished install the app.

### Firefly screen Navigation

On the Firefly display panel navigate via the setting icon to the page with "Mobile App" icon. Selecting this icon will open the "Mobile App" pairing screen.

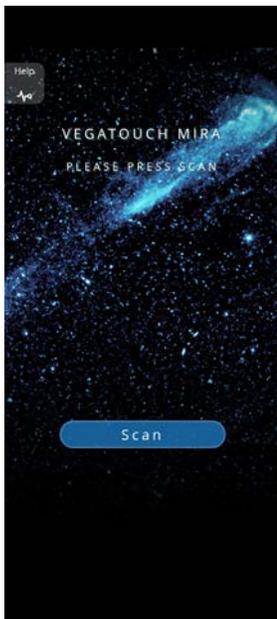
### Pairing Mobile Device

Begin pairing Firefly system by running the app and following the following four step process.



Mira pin  
Default MIRA  
PIN 777777

#### Step 1) Tap Scan



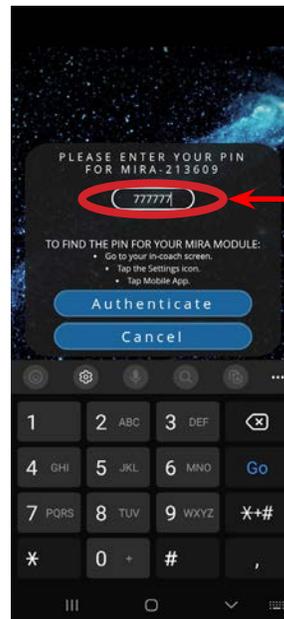
Tapping the scan icon will find any available Firefly systems nearby.

#### Step 2) Tap Matching ID



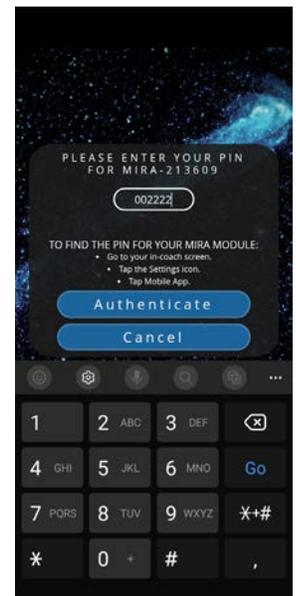
Select the matching Mira ID.  
(List is scrollable)

#### Step 3) Complete Linking



Enter default Mira pin then select **Authenticate**

#### Step 4) Reset PIN



Enter a secure unique Pin then select **"Authenticate"**

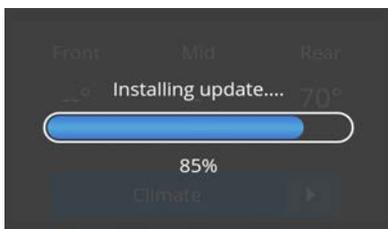
Tap the **ID #** that matches the one for your Mira Module. Enter the PIN number from the **Settings** page on the screen and press **Authenticate** to connect to the system. You will need to change the Pin number when prompted. Enter your new number a second time to verify, and then tap **SET PIN** to save.



### App Home Screen

After all updates have been applied the screen will default to the Firefly home page. To see all information on the Home page, place a finger on the page and slide it up or down. **On tablets this may not be necessary.**

### Installing an Update

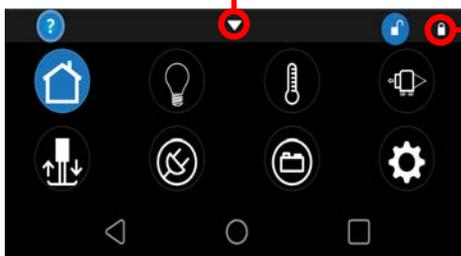


If this is the first time the App has been run you may see this screen pop up after entering your Pin. It may also pop up if an update has been recently released for the App. Once the update has finished loading the Home screen should come up.

### Navigation Bar :Open

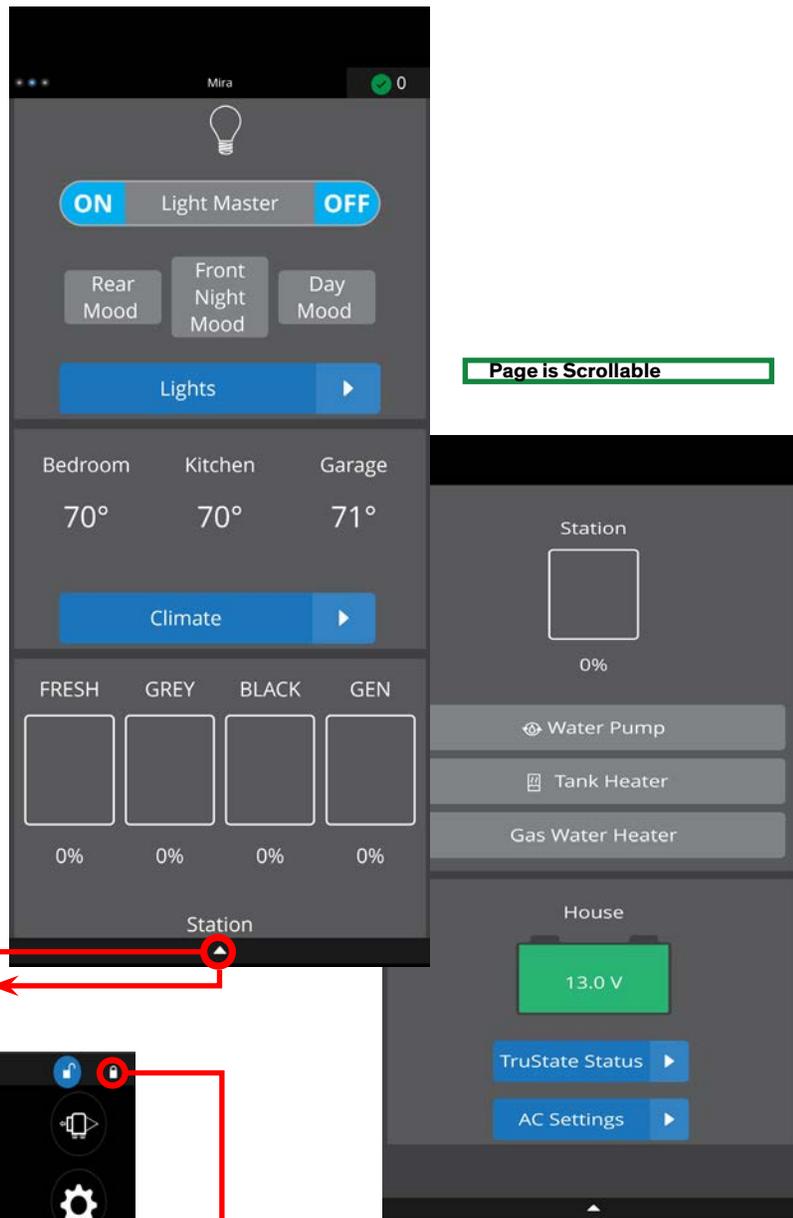
To bring up the Navigation bar (Menu) select the small triangle at the extreme bottom of the screen

### Navigation Bar :Close



### Navigation Bar :Locking in Open

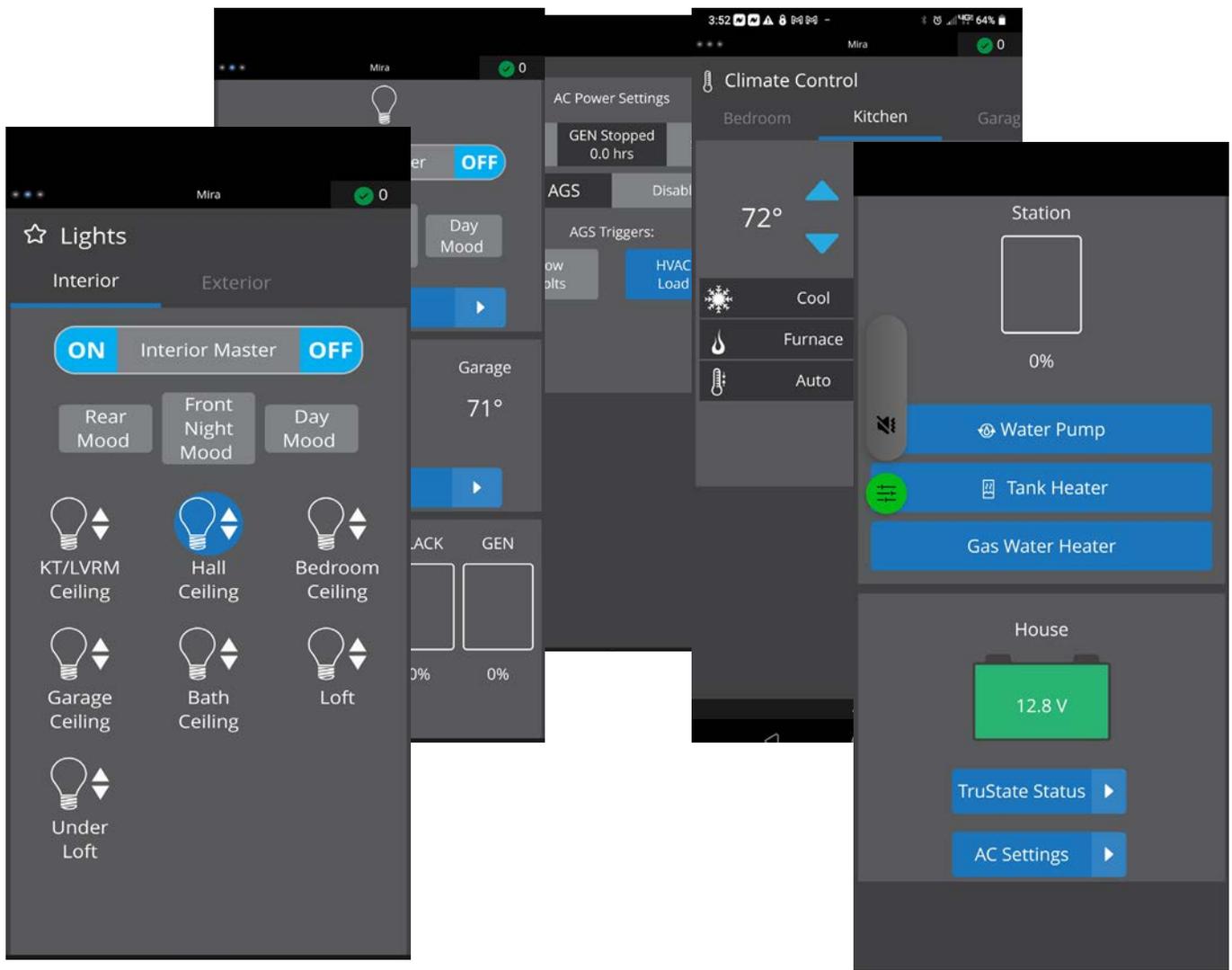
To bring up the Navigation bar (Menu) select the small triangle at the extreme bottom of the screen





### Mira Navigating Various App Pages

Once you open up the Mira App and connect it to your system you will find that the App gives you access to all the functions on your touchscreen. Since the App screen size may vary as it will work on most Apple or Android devices, you may notice the App layout is different than the touchscreen (as seen below) but you will have the same functionality. Since the App and the screen control the same functions you can find more detailed information for any of the App functions in the Screen sections of the manual.





**Firefly**  
Integrations



## Vegatouch Mira

### Mira Navigating : Awnings

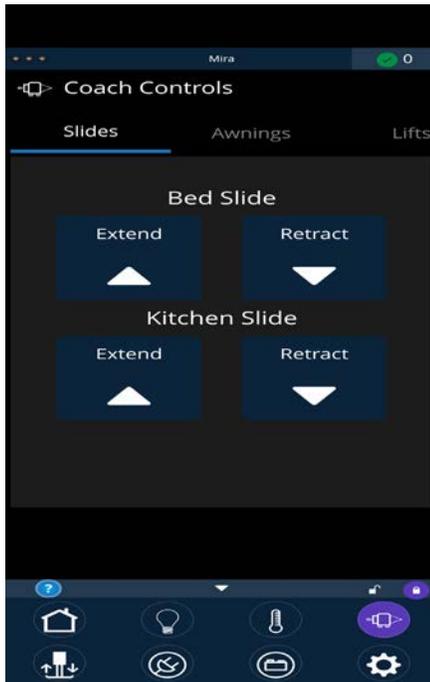
Access the Awning and slides by tapping this navigation icon.



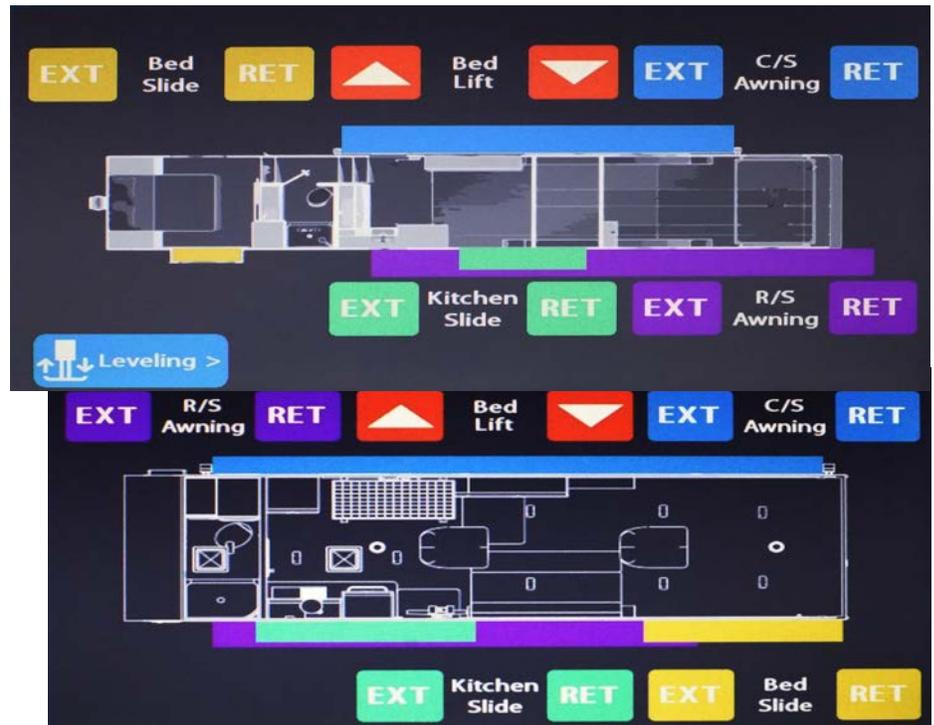
Warnings screen will appear. Read and confirm the warning



After confirming the warning the Awning / slide controls will open.



### 700 Series 5th Wheels



### 700 Series trailers



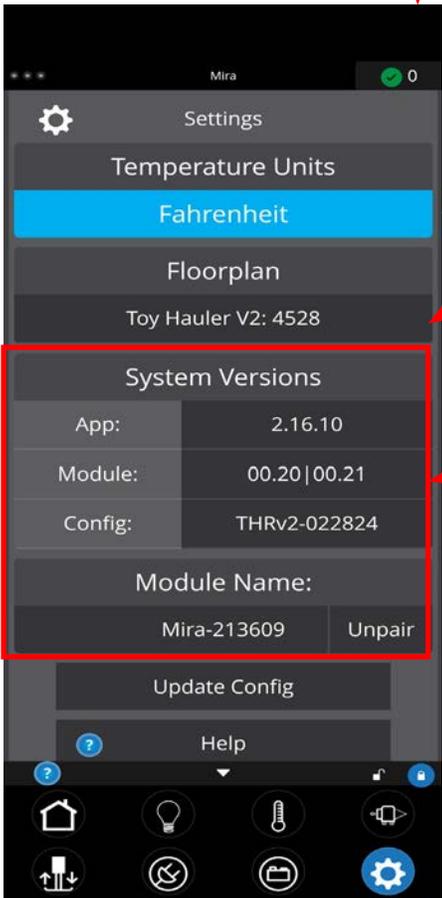
## Mira Navigating :Settings

### Accessing Mira Settings Page



Mira Settings Page

Mira Settings Page Scrolled to bottom

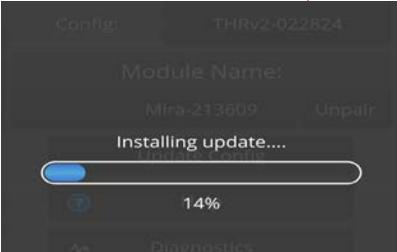
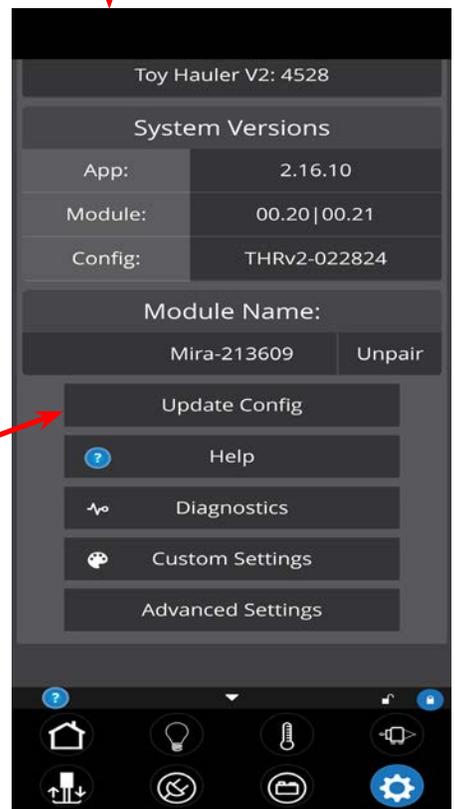


Tap the Temperature Units selection to choose between Fahrenheit and Celsius.

Model and Floor plan of your Coach. This manual covers all of the ATC - V2 700 series.

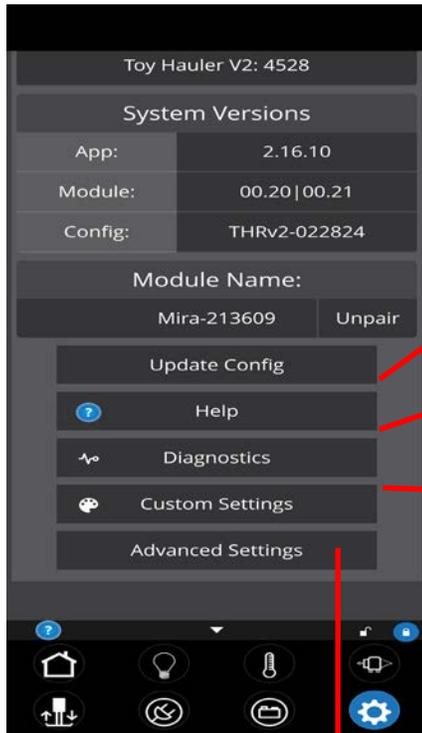
System Information and Mira name

"Update Config" to update Mira App latest Version





### Mira Settings :Unpairing Phone



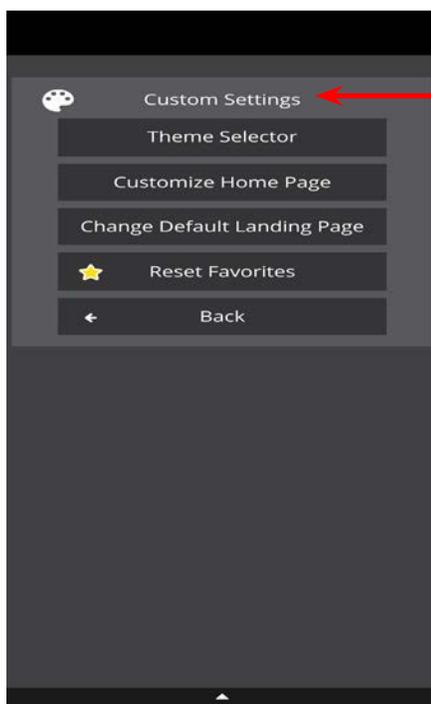
To unpair smart device select the "Unpair" icon

See "Mira Navigating: Help Topics"

Opens "Diagnostics tools" Screen on Smart device.

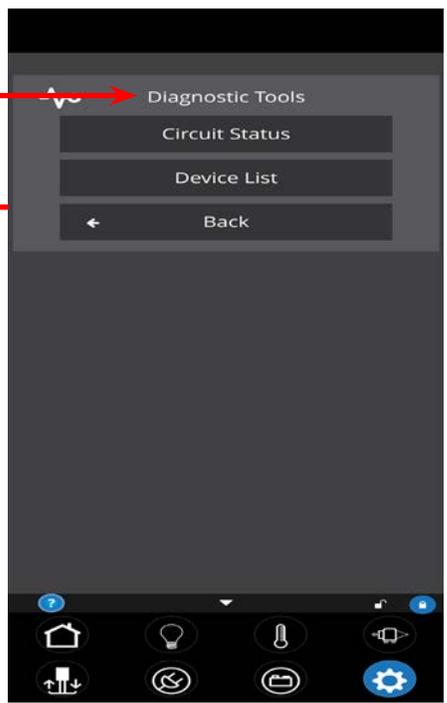
Opens "Custom Settings" Screen on Smart device.

See "Mira Navigating: Advanced Settings"



See "Mira Navigating: Diagnostic Tools"

See "Mira Navigating: Custom Settings"





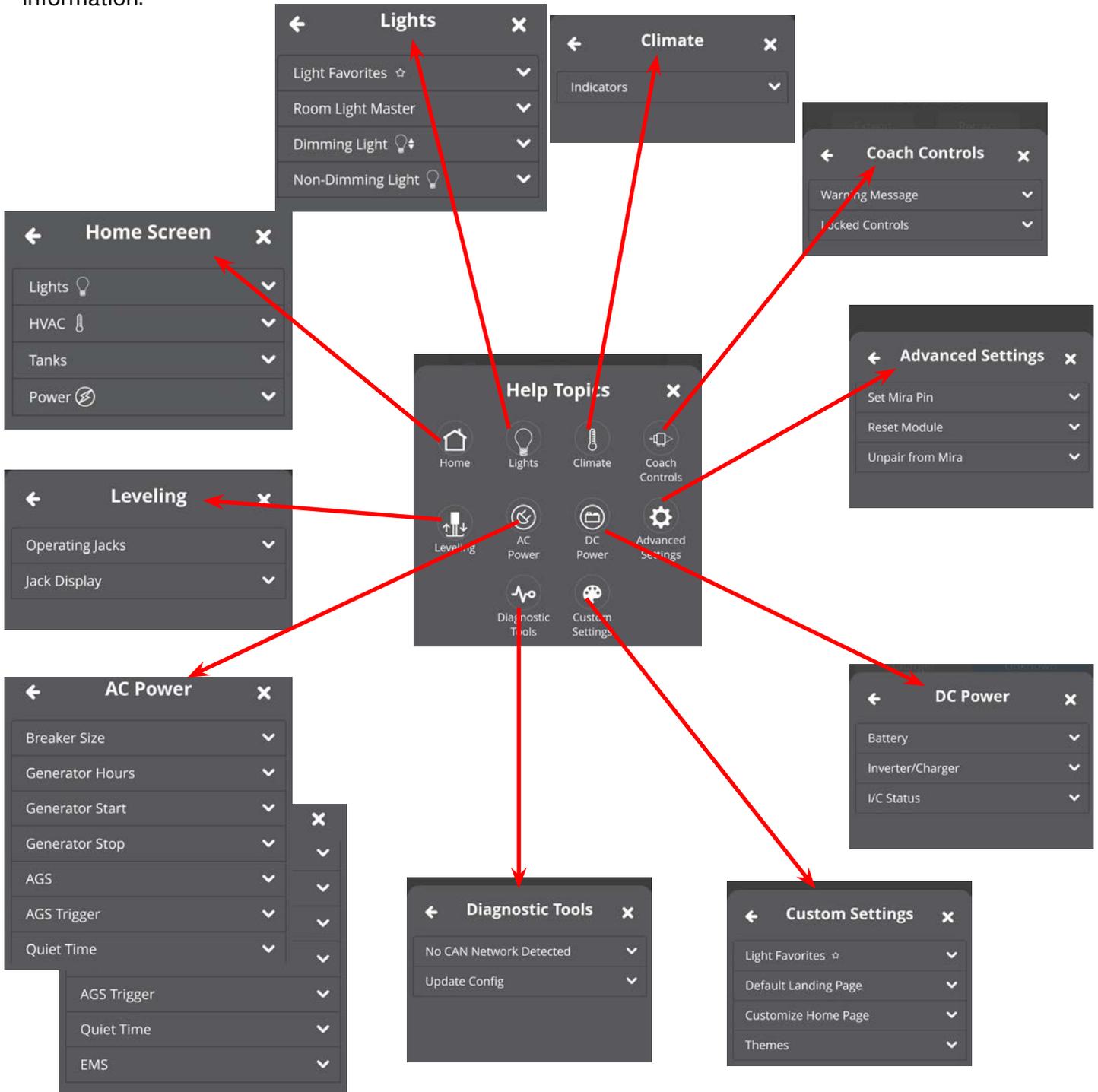
# Firefly Integrations



## Vegatouch Mira

### Mira Navigating : Help Topics

Within the help topics area are numerous icons that once selected opens various screens on almost all aspects of the app. Once an icon has been selected use the down arrow to drill down further for specific information.



List is scrollable

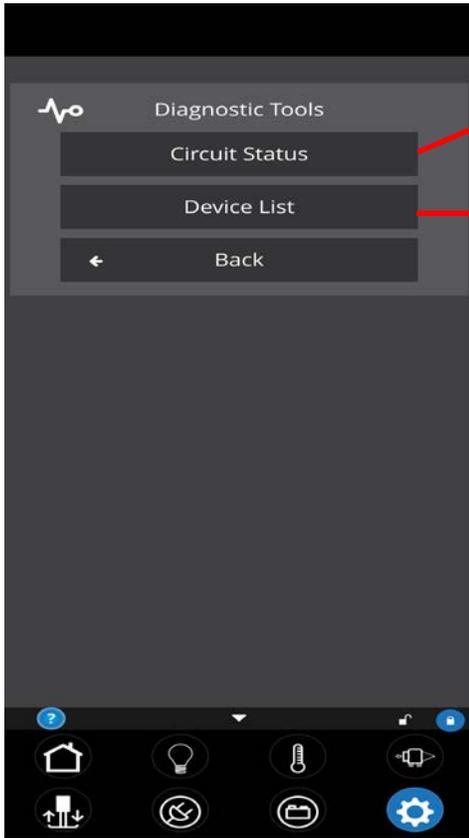


## Mira Navigating : Diagnostics Tools

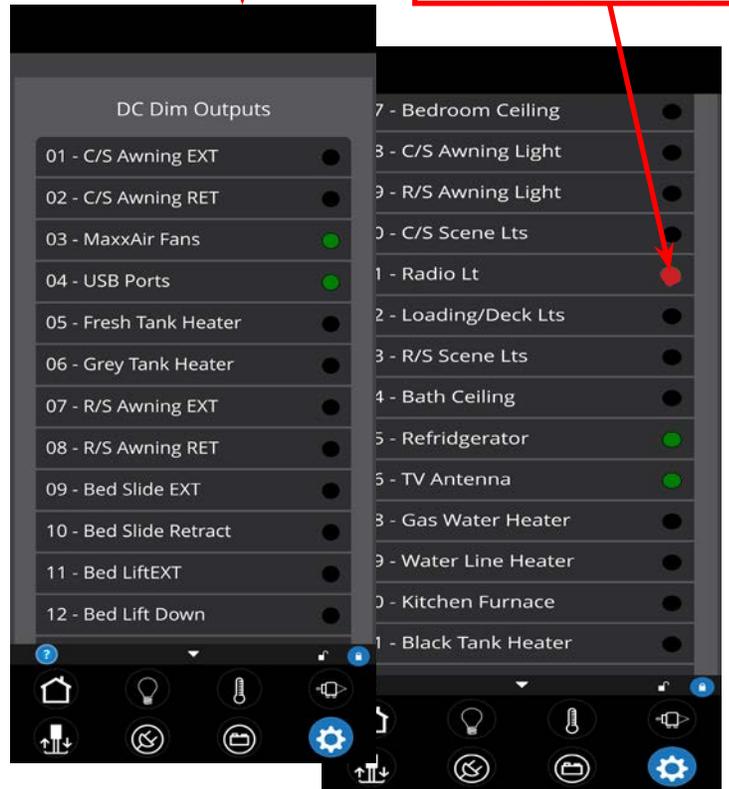
Primarily used for troubleshooting with service tech.

Select Circuit Status Icon to display "DC Outputs" Pages

See: Overcurrent Faults



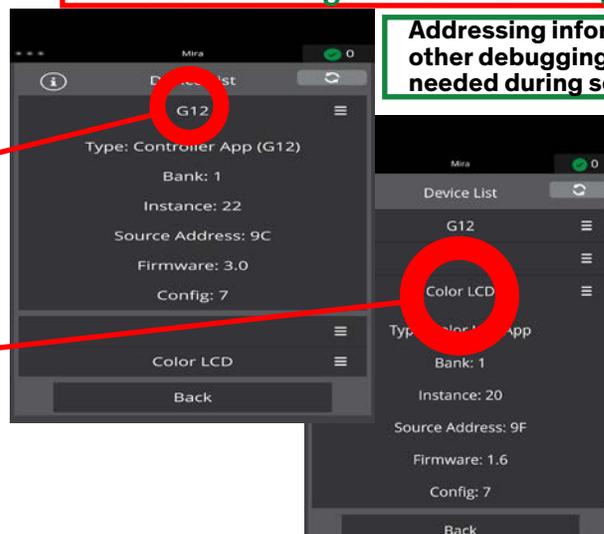
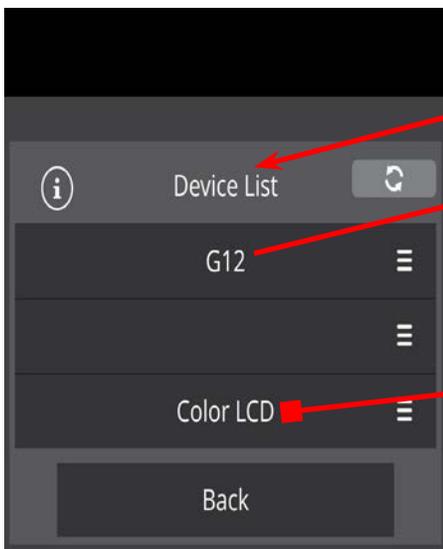
Diagnostic Tools page



Circuit Status Screens

## Mira Settings :Device List Pages

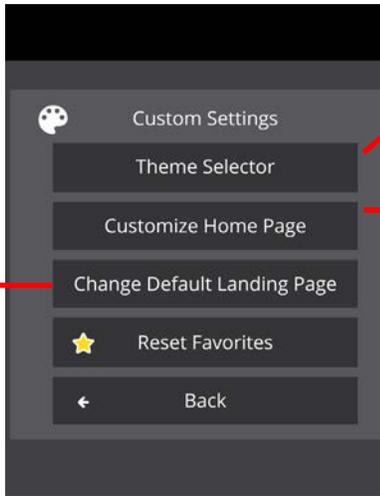
Addressing information and other debugging information needed during service calls.





### Mira Navigating : Custom Settings

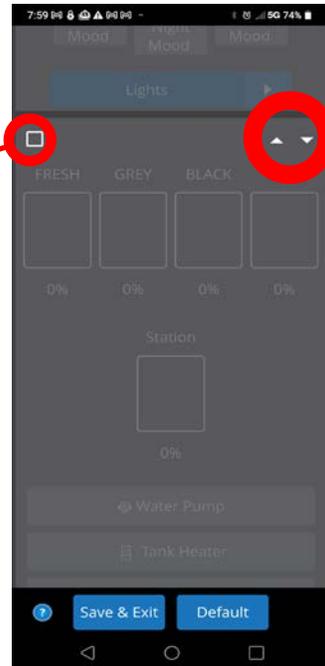
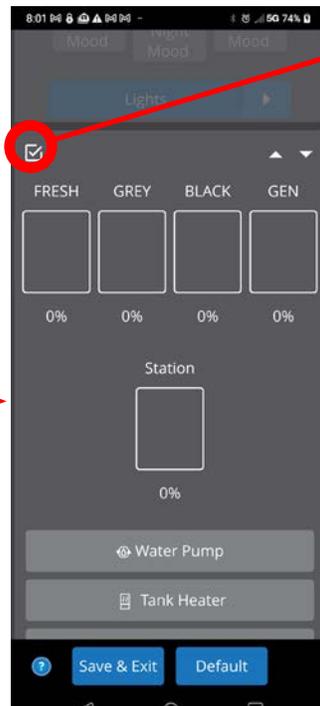
Customizing the home page allows the user to select which pages are to be displayed and the order of significance.



Custom Settings Page

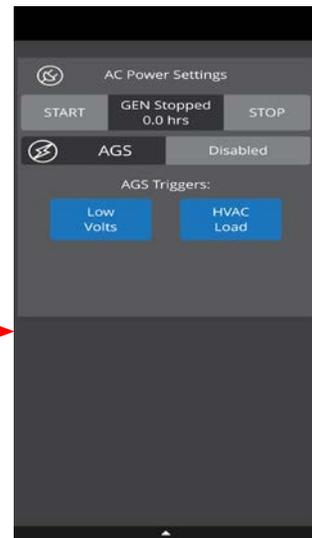
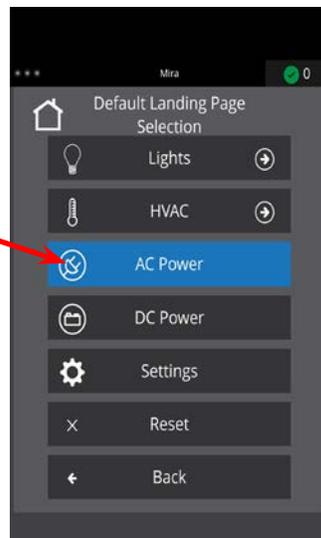
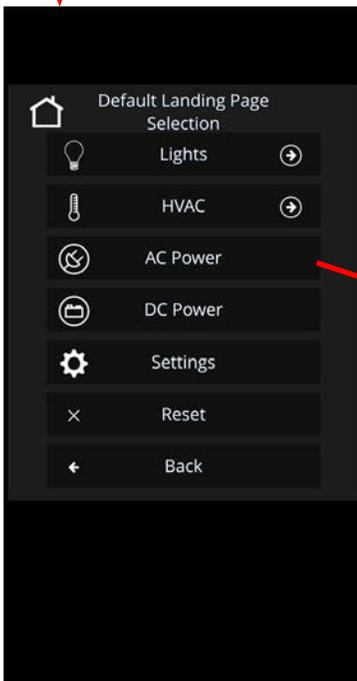
See "Mira Navigating: Custom Themes"

Use the Up/Down arrows to move sections up or down.



Once unchecked this part of page is removed from the Home page.

### Changing your Apps Initial Landing Page



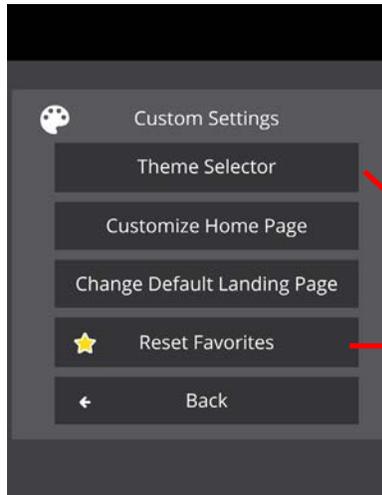
Once the App has been cycled this will be your New default landing page .



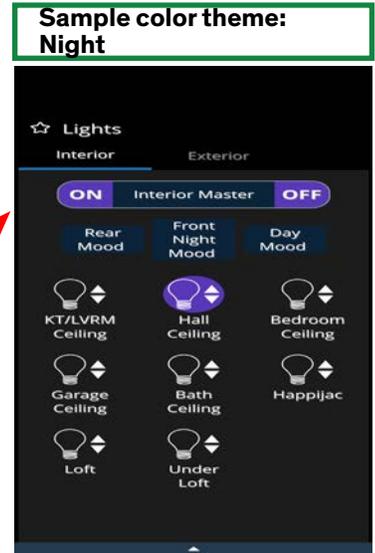
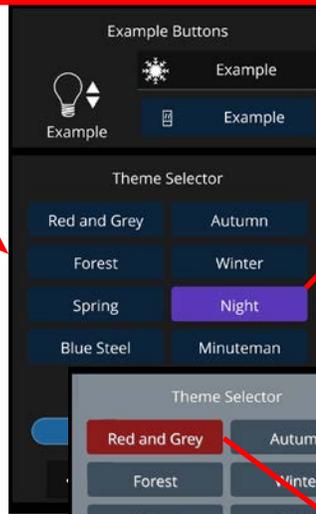
### Mira Navigating : Custom Themes

Theme selection allow the user to modify the colors of the App for personal preferences. There is also a night setting for more subdued colors for darker situations.

### Modifying your Apps color Themes



To change your color theme select the "Theme Selector" icon.



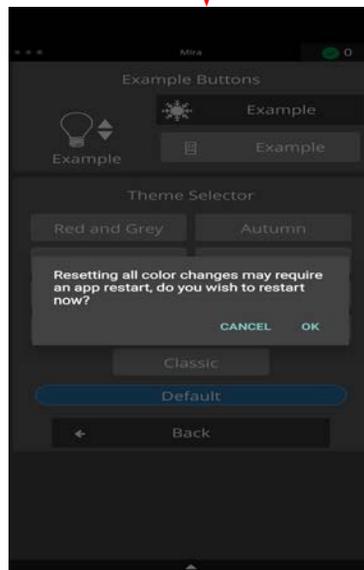
### Sample color theme: Night

### Resetting to Default values



Click Yes to reset all Favorites, click No to Cancel including menu changes and any color themes. For the reset to take effect it may require the app to be restarted.

### Reverting to default colors



To change the theme of the App select your choice from the listed options. Choosing the "Default" icon will cause a warning page to be displayed and that the app will restart. Tap Ok to accept the change.



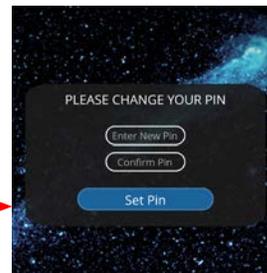
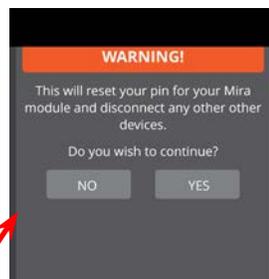
### Mira Navigating: Advanced Settings

All of the advanced features are dealing with the Mira module connection either via the software or the Mira module itself. This area does three basic functions. Firstly it allow the user to set a new PIN number. Secondly, the user can force a hard reset of the Mira Module and lastly the user can force the app to unpair from the coach system.



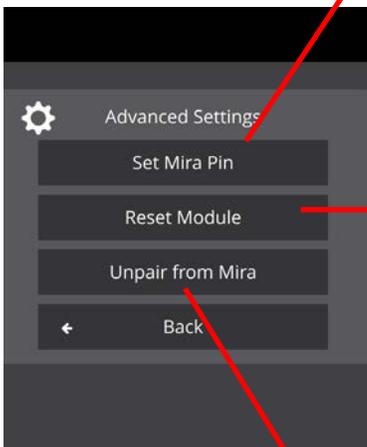
Mira Module

### Resetting your PIN



Once the two Pins have been entered select the Set pin icon to update the mira system.

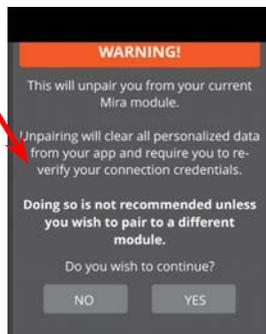
### Resetting your APP



Selecting the "yes" icon will cause the Mira Module to do a hard reset.



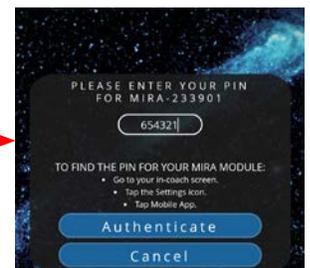
### Unpair from Coach system



Selecting the "yes" icon, will cause the Mira App to disconnect from the Mira system.



Refer to "Installation of Vegatouch Mira" step 2.



Refer to "Installation of Vegatouch Mira" step 4.



# Firefly Integrations



## Vegatouch Mira

### Enabling Bluetooth

For the Firefly system to connect with a smart device Bluetooth must be enabled. These instructions are separated for iOS and Android devices.

#### iOS Setup

Bluetooth permissions are required for your device to connect to the module. Click Ok to enable permissions. Your App will not work without Bluetooth enabled.



#### Location Services Required

To enable Location Services on your Apple device:  
1. Go to settings/Privacy & Security/Location Services.  
2. Make sure that Location Services is ON.

### Android Setup

#### Turn On Bluetooth

If your Bluetooth is not Enabled go to your Device Settings and Enable it. Your App will not work without Bluetooth enabled.

#### Nearby Devices

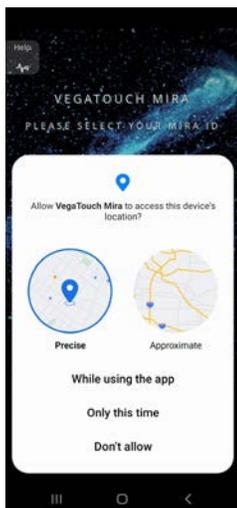
Make sure that Nearby Devices are Allowed under your Settings/Apps/Vegatouch Mira/App Permissions.



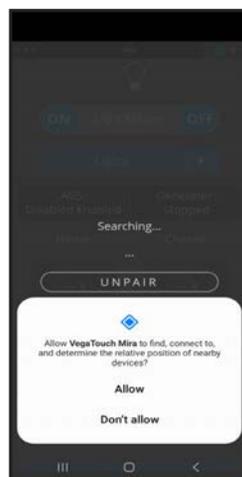
Permissions Help Screen



Enable Bluetooth



Location Services Required



Nearby Devices Permission request

#### Location Services Required

Make sure that your Location setting is Enabled. Mira will need to be allowed access to your location. Choose **“Change to precise location.”**



## General Electrical Terms

### AGS Disabling Events

- AGS will be disabled by the Firefly system for any of the following reasons
- Any Non-AGS (manual) “Start” or “Stop” detected.
- Any change of state of the Truck Plug input
- The set number of retries is reached without starting the generator. See “Gen Start Retries”

**Warning : Only enable AGS if your coach is in a well ventilated area.**

### Battery Configuration

Multiple battery types including Gel, lead acid and Lithium can be configured to work within the Firefly’s system. This should be done by the OEM at the time of installation.

### EMS

The (E)nergy (M)anagement (S)ystem is a proprietary software system that provides prioritized activation and shedding of loads that require AC power based on the amount of AC power available. When multiple AC loads are requested at the same time, they are enabled in order of priority as long as sufficient current remains available, lower priority will be shed. Likewise, if multiple AC loads are active and the amount of current available decreases, loads will be shed until the amount of available current matches or exceeds the current required by non-shed loads - with the lowest priority loads being shed first. See “Energy Management System”.

Firefly’s EMS can operate on one or two lines (phases).

When using two lines, each line can support up to 16 loads and a single line 32 loads.

When the second line is not in use (such as when connected to single phase power), all loads will be applied to the first line - up to 32 loads.

### Generator Messages and Warnings

There are a standard set of messages and warnings that are available. Your Unit may have two or more of the following.

- Stopped
- Starting
- Running
- Priming
- Fault
- Stopping

**Warning : Before Starting the generator make sure it is in a well ventilated area.**

### General Electrical Terms

#### Inverter Statuses

##### Cotek Inverter status

Off  
Invert  
Passthru  
APS only  
Sense  
Wait  
Load

##### Cotek Charger status

Off  
Not Charging  
Bulk  
Absorption  
Overcharge  
Equalize  
Float  
Constant

##### Progressive

Enable  
Disabled

#### Power Flow

The “Electrical Landing zone Options” page will display the power flow if your unit has certain options installed during its’ manufacturing. The Power flow direction will change depending on whether the unit is hooked to shore power or the generator is running. If neither Shore power or the generator is being used power flow will not be displayed.



### General Electrical Terms

#### Shore Power

Shore Power is routed through a units Transfer Switch and will not allow a the generator to create feedback onto the Electrical grid.

#### SOC - Trustate

This page displays the battery (or batteries) current state.

**“TrueState” is a State of Charge device that tracks at a very accurately the current state of a units batteries.**

#### Transfer Switch Type

##### Monitored

A Monitored-Transfer Switch is a feature that allows the coach to be connected to Shore Power and is also connected to the Firefly network. This allow the firefly system to display and control connection priorities and allows the engagement of the Energy Management System.

##### Non-monitored or Standard

The Standard Transfer Switch is a feature that allows the coach to be connected to Shore Power but does not have the capability to be connected to an automated control system such as the firefly network.

#### Transfer Switch Functions

The TS will not allow power to be run back on to the shore line. When the unit is plugged into Shore the power display will read Shore and have power direction lines flowing from the line 1 and Line 2 to the different areas the power is being directed. These legs will show the voltage, amperage and the power cycles (Hertz) being carried.

#### Transfer Switch Conditions

Shore  
No Shore  
30 Amp Shore (see: Shore Breaker)  
50 Amp Shore (see: Shore Breaker)  
Generator (If generator is Available)

### General Electrical Terms

#### Over-current Faults

An over-current condition is when a circuit draws more than it is allowed. If this situation keeps reoccurring then this could mean that an issue has arisen that needs intervention.

An over-current on a standard momentary (press and hold) control, the button will turn red when that output has had an over-current fault. When this happens, the over-current fault graphic will appear in the screen header. However, releasing the button will send an off message to the circuit which will reset the circuit and clear the over-current fault, so the user will most likely be unable to access the warning page for more information.

The following outputs have this implementation:

- All Awning Extends
- All Awning Retracts

An over-current on a standard dimming or non-dimming light will cause the circle behind the light bulb graphic to turn red.

On a standard toggle icon (like a water pump), the icon will turn red when that output has had an over-current fault. See: “Pump and Heater Controls”.

When this happens, an over-current fault graphic will appear in the screen header. Pressing this graphic will take the user to a screen that explains what the over-current fault is, how to find which output has been shut off, and how to reset that output. If triggered by this kind of control, the fault graphic will remain until the output has been reset.



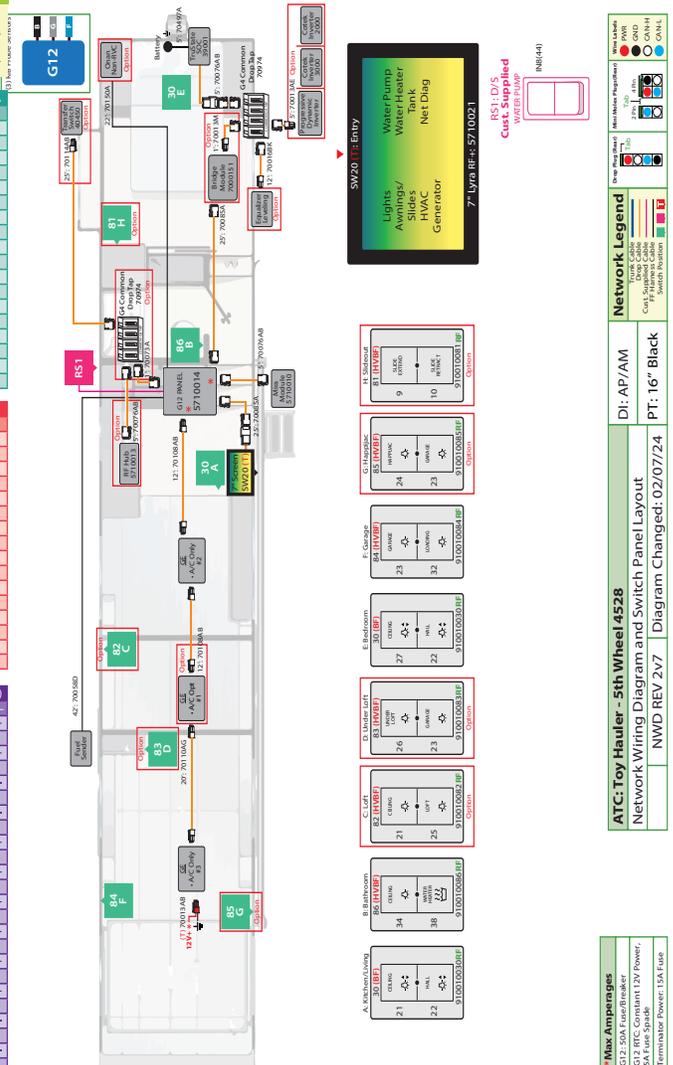
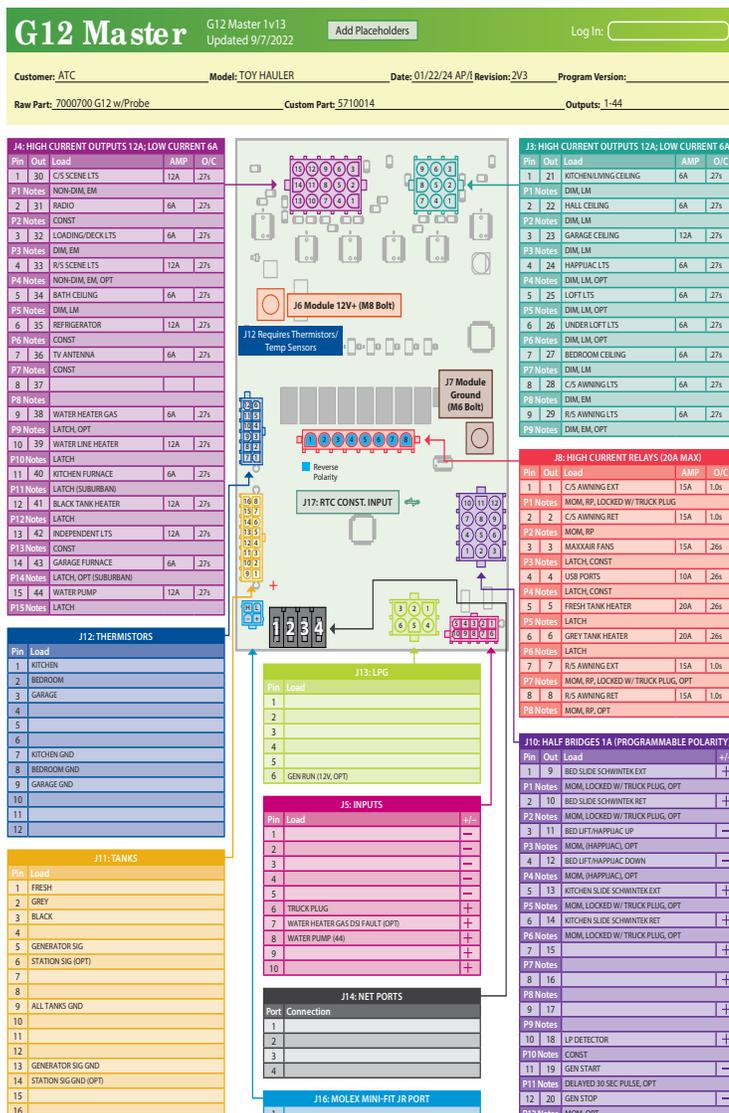
## 5th wheel Diagram

Please contact our Tech Support team for current system diagrams.

Phone: 574-825-4600

Email: Support@Fireflyint.com

## 5th Wheel Network Wiring Diagram





# Firefly Integrations

# System Diagrams

## Travel Trailer Diagram

Please contact our Tech Support team for current system diagrams.

Phone: 574-825-4600

Email: Support@Fireflyint.com

**G12 Master** G12 Master 1v13 Updated 9/7/2022 Add Placeholders

Customer: ATC Model: TOY HAULER Date: 01/22/24 AP/L Revision: 2V3

Raw Part: 7000700 G12 w/Probe Custom Part: 5710014

Pin	Out	Load	AMP	O/C
1	30	C/S SCENE LTS	12A	.27s
P1 Notes		NON-DIM, EM		
2	31	RADIO	6A	.27s
P2 Notes		CONST		
3	32	LOADING/DECK LTS	6A	.27s
P3 Notes		DIM, EM		
4	33	R/S SCENE LTS	12A	.27s
P4 Notes		NON-DIM, EM, OPT		
5	34	BATH CEILING	6A	.27s
P5 Notes		DIM, LM		
6	35	REFRIGERATOR	12A	.27s
P6 Notes		CONST		
7	36	TV ANTENNA	6A	.27s
P7 Notes		CONST		
8	37			
P8 Notes				
9	38	WATER HEATER GAS	6A	.27s
P9 Notes		LATCH, OPT		
10	39	WATER LINE HEATER	12A	.27s
P10 Notes		LATCH		
11	40	KITCHEN FURNACE	6A	.27s
P11 Notes		LATCH (SUBURBAN)		
12	41	BLACK TANK HEATER	12A	.27s
P12 Notes		LATCH		
13	42	INDEPENDENT LTS	12A	.27s
P13 Notes		CONST		
14	43	GARAGE FURNACE	6A	.27s
P14 Notes		LATCH, OPT (SUBURBAN)		
15	44	WATER PUMP	12A	.27s
P15 Notes		LATCH		

Pin	Load
1	KITCHEN
2	BEDROOM
3	GARAGE
4	
5	
6	
7	KITCHEN GND
8	BEDROOM GND
9	GARAGE GND
10	
11	
12	

Pin	Load
1	FRESH
2	GREY
3	BLACK
4	
5	GENERATOR SIG
6	STATION SIG (OPT)
7	
8	
9	ALL TANKS GND
10	
11	
12	
13	GENERATOR SIG GND
14	STATION SIG GND (OPT)
15	
16	

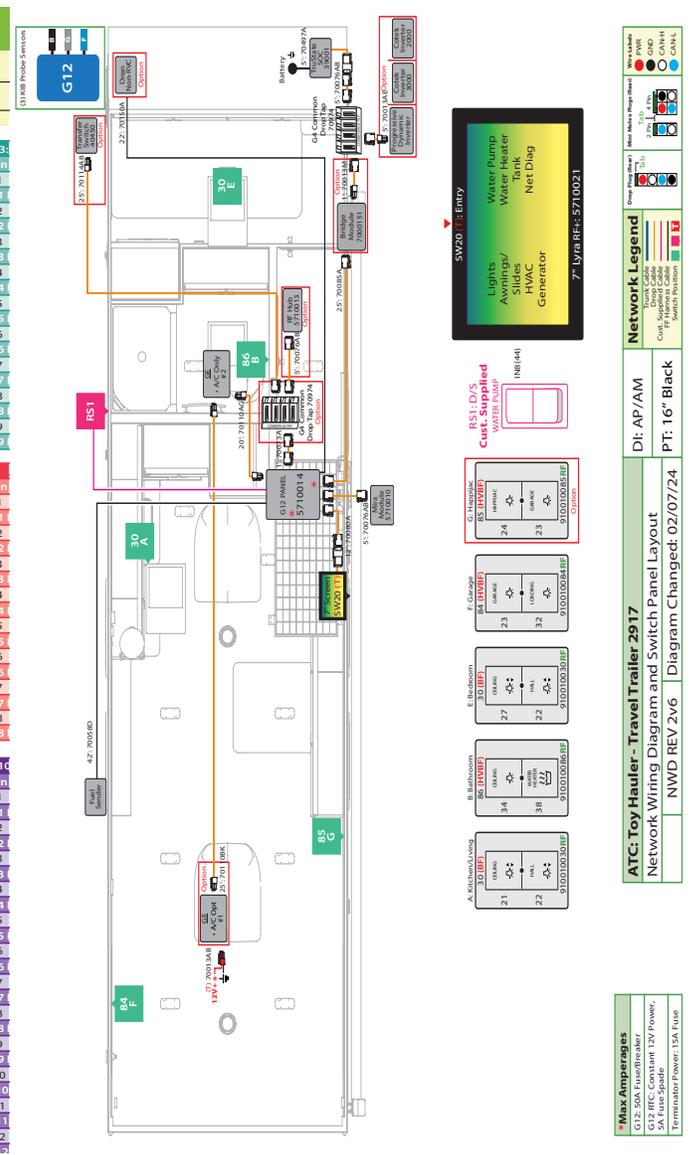
Pin	Load
1	
2	
3	
4	
5	
6	GEN RUN (12V, OPT)

Pin	Load	+/-
1		
2		
3		
4		
5		
6	TRUCK PLUG	
7	WATER HEATER GAS DSI FAULT (OPT)	
8	WATER PUMP (44)	
9		
10		

Port	Connection
1	
2	
3	
4	

J16: MOLEX MINI-FIT JR PORT

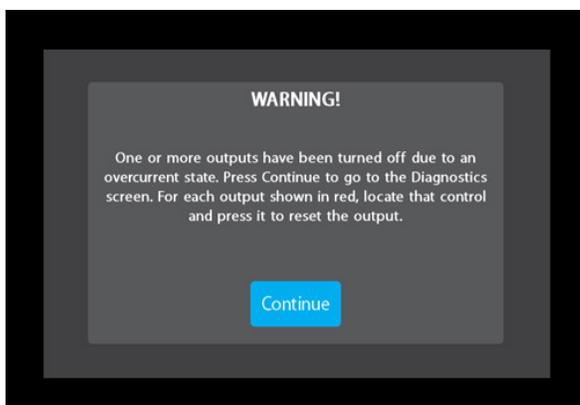
## Travel Trailer Network Wiring Diagram



### Resetting Other over-current Conditions

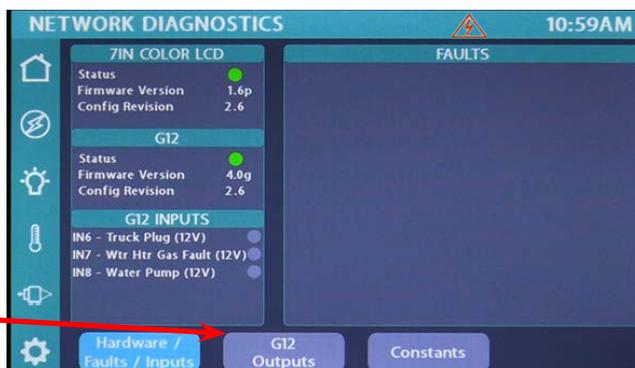
During an over-current condition the over-current fault icon ⚡ will appear in the screen header. Selecting this warning icon will take the user to the over-current warnings screen. Selecting continue on this screen will then forward the user to the Network Diagnostics page where the user can continue the process of resetting the circuit.

Once on the “Network Diagnostics” page select the icon labeled “G12 outputs”. This will then open the Network Diagnostics “G12 Outputs” page. Review all the listed G12 circuits for a red indicator. In this example the “Bedroom Ceiling Lts” has had an over-current.



Over-current warnings screen

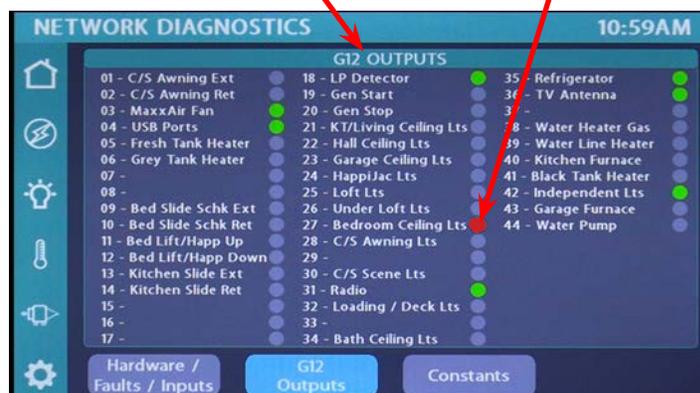
Select G12 Outputs Icon to see all of the G12 Outputs circuits



### Completing Circuit Reset

To complete the reset once you have tracked down the exact circuit find the page in the system that controls that circuit. In this example it is the “Lights” page. Navigate to that page and select the circuit (in this example “Bedroom Ceiling” highlighted in red). This will reset the circuit and shut off the red indicator.

Over-current Fault “Bedroom Ceiling Lts”



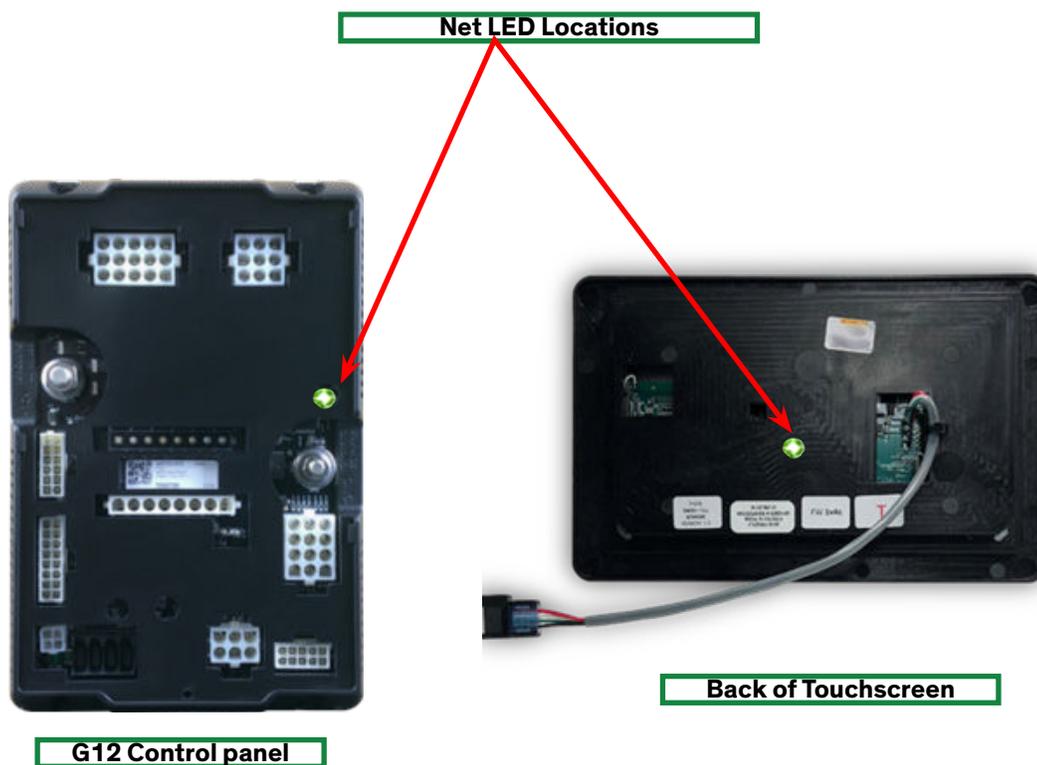


### G12 Control Panel

Your G12 control panel provides power to many of the circuits in your coach. These panels receive commands from the main touchscreen or from the App, and activate or deactivate circuits based on those commands.

### Networking Status LEDs

Your G12 Control Panel and touchscreen are connected via your coach's RV-C network. Each component will have a NET LED that is used to show network status. If a NET LED is displaying anything other than solid green and some of the panel's functions are not working, please contact your manufacturer for Technical Support.

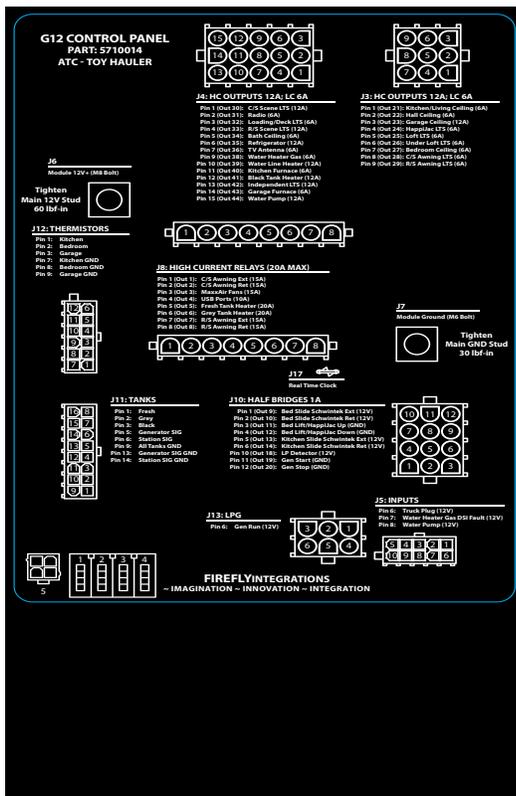


RV-C is a communications protocol based on the Controller Area Network bus. The protocol is used in recreation vehicles to allow house and chassis components to communicate. RV-C is used for control, coordination, and diagnostics, in a multi-vendor environment.



## The Black Label

Every circuit controlled by the G12 control panel is listed on the Black Label. This is usually mounted or kept near the G12.



## Detailed Lighting Moods

Description/Area	Rear Mood	Front Night Mood	Day Mood
Kitchen/Living Ceiling	20%	20%	100%
Hall Ceiling	20%	20%	100%
Garage Ceiling	Off	100%	N/A
Happijac LTS	Off	100%	N/A
Loft LTS	Off	Off	100%
Under Loft LTS	20%	100%	N/A
Bedroom Ceiling	N/A	20%	100%
Bath Ceiling	100%	20%	100%

## Navigation Bar

Below are examples of the two possible navigation bars you may experience as you use the Firefly touchscreens. If your unit does not have any electrical options that interface directly with the Firefly system then you will not have the electrical icon. 

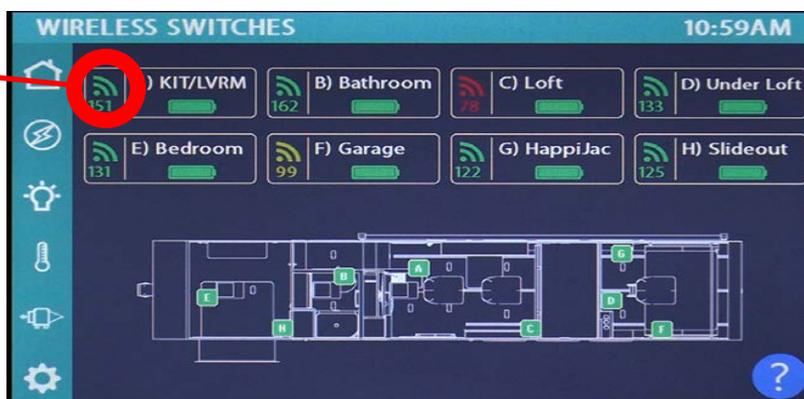


## Wireless Graphic with a Zero reading

During the pairing process the switch panel in your coach will illuminate a green LED whenever a button is pressed. If the LED on your switch panel does not illuminate when you press a button on your switch or the RF signal indicator on your screen is weak or zero then you may need to replace your the 2032 coin cell battery in the switch.

### Signal Indicator

Wireless Graphic with a Zero reading – It is likely that the battery inside your switch panel needs replaced. The wireless switch panel in your coach will illuminate a green LED whenever a button is pressed. If the LED on your switch panel does not illuminate when you press a button on your switch, you will need to replace the 2032 coin cell battery. For more info see: “Signal Strength Color Codes”.



## SSP17 switch panels

Your coach uses SSP17 switch panels to control lighting. Each time a button is pressed, the Operational LED will illuminate green to indicate that the command has been sent to the touchscreen. If you press a switch panel button and the operational LED does not illuminate, you’ll need to change the battery. See “Replacing Switch Panel Batteries”.



SSP17 switch panel

### Replacing Switch Panel Batteries

SSP17 switch panels use wireless RF technology to communicate with the Firefly touchscreen. These switches are powered by a 2032-coin cell battery. Simply use your fingers to pry the switch panel away from the wall-mounted backplate to access the battery compartment on the back of the switch.

Once you replace the battery, check the switch before placing it back on the wall by pressing a button and verifying the LED flashes. Once you have verified the battery is Okay, then place the switch back on the wall by lining the switch panel up with the backplate and apply pressure to snap the switch panel back into place.



Location of the 2032 Coin Battery



Back of SSP17 Switch Plate

### Vegatouch Mira module

Vegatouch Mira Pictured is Vegatouch Mira wireless control module that easily connects to any Android or iOS device to give total control to many electrical, electronic and mechanical systems in your coach. Pair most smart device's with the coach's built-in interface to control and monitor those systems.



*Vegatouch Mira module*

### Network Status Indicators

The NET LED on your Mira module can change color in different situations. Use the following key to determine the operational status of your module.

**Panel Network Status Indicator – Applies to any device with a network indicator\***

-  Fast flashing Green Light (4 times/sec) – Device is attempting to make initial connection.
-  Slow flashing Green Light (1 time/sec) – Device was online but has been offline for at least 5 sec.
-  Solid Green – Device is connected to network and is communicating properly.
-  Solid Red – Device has gone offline and is not connected to a network.
-  Alternating Red & Orange – Device has gone offline and is trying to re-connect (within 30 sec).
-  Alternating Green & Orange – Device is currently online but has gone offline 2 or more times.

\*The NET LED for Mira and Eclipse modules will always flash green regardless of network status.