SilverLeaf RV-C Control System
Training Manual

Newmar Corporation
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SCREEN ACCESS

Please be aware that not all of the following screens are available to the end user!

Some configuration screens require a password for access. **Password protected screens contain control settings that should only be changed by qualified individuals!** Changing these control settings to an improper setting can adversely affect the operation of the control system and may cause damage to the coach!

The following is a list of the control and system status screens available on the Newmar SilverLeaf Control System Touch Screen Display.

SYSTEM SPLASH SCREEN

The Splash Screen is displayed momentarily on system power up. This screen can also be selected for display as one of the screen saver selections found in the monitor configuration.
HOME SCREEN

Every control function can be accessed by pressing one of the Buttons on the Home Screen. The Home Screen also displays system status and warnings in order of priority. The following items are displayed and/or controlled from this screen:

HOME SCREEN WITH FLOOR HEAT OPTION

- Water Button – Pressing this button selects the Water Control Screen. (see Water Control Screen)
- Climate Button – Pressing this button selects the Climate Control Screens. (see Climate Control Screen)
- Temp Button (Standard Control) Pressing the Temp Button selects a screen that displays the outside ambient temperature. (see Temp Screen)
- Floor Button (Floor Heat Option) When the Floor Heat option is installed, the Floor Button will be displayed in place of the Temp Button. Pressing the Floor Button selects the Floor Heat Control Screen. This button is only displayed if the control system is configured for floor heat. (see Floor Heat Control Screen)
- Features Button – Pressing this button will select the Features Screens. (see Features Screens)

BUTTON FUNCTIONS

- Home Button – Pressing this Button returns you to the Home screen from the other control screens. The Home Button is not highlighted and is only operational from the other screens.
- AC Power Button – Pressing this Button selects the AC Power Screen. (see AC Power Screen)
- DC Power Button – Pressing this Button selects the DC Power Screen. (see DC Power Screen)
- Genset Button – Pressing this button selects the Genset Screen. (see Genset Screen)
- **Genset Button (Top Center)** – Pressing this button will manually start and stop the generator. The button indicator is highlighted when the generator is running. This button works the same as the Dash and other remote switches.

- **AUTOFILL Button** – Pressing this button will turn on the Auto Fill feature. The button indicator is highlighted when the Auto Fill is on.

- **PUMP Button** – pressing this button will turn the Water Pump on and off. The button indicator is highlighted when the pump is powered.

- **AUTOGEN Button** – Pressing this button will select the AGS screens. The button indicator is highlighted when the Auto Charger is enabled. (see AGS Screens below)

- **Block Heater Button** – Pressing this button toggles the Block Heater relay on/off. The button indicator is highlighted yellow when the load is being shed and blue when on.

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### STATUS DISPLAYS

- **Overall System Status** - “OK” if no errors or warnings are present. Warnings and Errors will be displayed in this area in order of priority.

- **Date/Outside Temperature/Time** – The system date, outside temperature and time are displayed in this area.

- **Tank Status** – The Fresh, and Holding tanks status is displayed as a percentage of “Full”. Both a bar graph representation and a numerical percentage are displayed.

- **DC Voltage** – Both the House Battery voltage and the Chassis Battery Voltage are displayed. There is also a Lightning Bolt icon that will illuminate when the isolator relay (Charge Bridge) is energized and connecting both battery systems together.

- **AC Power Source, Voltage and Current** –The AC Power Source (Shore/Generator/Inverter), as well as, the Voltage and Current (Amperage) for both AC power legs are displayed.
The AC Power Screen displays the AC Power Source, Line Voltage and Current (Amperage) usage, as well as, the AC Line Frequency (Hz).

The Ac Power Source is displayed for Shore Power; Generator or Inverter Power. The AC Amperage values are displayed both numerically and with horizontal bar graphs. The AC Voltage values are displayed numerically. The AC Line Frequency is displayed in Hertz (Hz). This screen also displays the maximum charge draw amps setting value, as well as, the inverter status. The Load Shed Management screen is selected from the Load Shed Button located on this screen. The Inverter can also be turned on and off from this screen, via the blank button to the right of the Inverter Status display.

The Load Management Screen displays the Shore Power Phase setting (Single Phase 30 Amps and less Service, Dual Phase 50 Amp Service) and allows you to change between the phase selections using the Change Button. The current Amp draw is displayed for both legs on this screen. The Load Status screen is selected from the Loads Button. The Load Settings Screen is selected from the Settings Button.

The Load Status Screen displays the electrical Shed status of all the AC powered devices that are controlled by the control system. This screen also displays the AC voltage and amperage usage for both power legs.
The first Load Setting screen configures the following settings:

- Phase Detection Manual / Automatic

Set to Manual for standard Transfer Switch. Set to Automatic for RV-C Transfer Switch. A RV-C Transfer Switch has the capability of automatically detecting Dual Phase (240 VAC) 50 Amp AC power based on the available AC power source.

- Default Phase Single Phase / Dual Phase
  Selects the default Phase setting for the Load Shedding function.

- Capacity Single Phase (Amperage)
  This setting sets the Load Shedding Amperage value for the Single Phase selection.

- Capacity Dual Phase (Amperage)
  This setting sets the Load Shedding Amperage value for the Dual Phase selection. This should normally be set 50 Amps.

The second Load Setting screen configures the following settings:

- Capacity Dual Phase (Amperage)
  This setting sets the Load Shedding Amperage value for the Dual Phase selection. This should normally be set 50 Amps.

- Load Shedding Enabled / Disabled
  Load Shedding Enabled allows the control system to shed (turn off) system configured AC powered devices in order to maintain a maximum phase capacity AC amperage usage.

- Generator Setting Enabled / Disabled
  This setting should be set to Enabled for proper Auto Gen operation.

- Charger 1 Shedding Enabled / Disabled
  This setting determines if the Battery Charger should be shed (turned off) with the other Load Shedding devices.
The Main DC Power Screen displays the Inverter / Charger status and allows access to the Magnum Setting Screens.

The Battery Icon has a vertical bar graph that indicates the battery charge level. The battery voltage value is displayed directly below the icon. The arrows between the Battery and Inverter Icons indicate the direction of the DC current flow. The DC current (amperage) value is displayed below the arrows. The Inverter/Charger status is displayed inside the Inverter Icon.

### DC POWER SCREENS MAGNUM SETTINGS SCREEN 1

The first Magnum Setting screen configures the following settings:

- **Inverter Status**: On / Off / Standby
- **Charger Status**: On / Off / Standby
- **Max Charging Current**: Amperage
  - This is the maximum amount of current the charger can output.
- **Load Sense Power**: Wattage
  - This is the Power Level (Search Watts Setting) required to activate (wake up) the inverter.

### DC POWER SCREENS MAGNUM SETTINGS SCREEN 2

The second Magnum Setting screen configures the following settings:

- **Charger Status**: On / Off / Standby
- **Max Charging Current**: Amperage
  - This is the maximum amount of current the charger can output.
- **Load Sense Power**: Wattage
  - This is the Power Level (Search Watts Setting) required to active (wake up) the inverter.
- **Max Charger Rate**: Percentage
  - This is the maximum % of AC current (amperage) used to recharge the batteries.
The DC Power (Settings) Magnum Status Screen displays the following Status Values:

- **Magnum Model/Version**
  This value is read from the inverter via the Inverter Module.

- **Battery Temperature**
  This value is read from the inverter battery temperature sensor via the Inverter Module.

- **Internal Temperature**
  This value is read from the inverter via the Inverter Module.

- **FET Temperature**
  This value is read from the inverter via the Inverter Module.

The Password Access Screen is displayed to provide access to advanced system configuration screens. The advanced configuration screens contain control settings that should only be changed by qualified individuals. Changing these control settings to an improper setting can adversely affect the operation of the control system and may cause damage to the coach.

The Magnum Advanced Settings Screen has the following Configuration Values:

- **Low Voltage Shutdown (DC Voltage)**

- **Battery Type**
  - Flooded / Gel / AGM / AGM2
  This should be set to match the physical battery type.

- **Battery Rating (AH)**
  This should be set to match total house battery power capacity.

- **Equalization Volts (DC Voltage)**
  This setting should match the manufacturer setting for the battery type.
The Magnum Advanced Settings Screen has the following Configuration Values:

- **Low AC Volts** (AC Voltage)
  This setting is the low AC Voltage (Brown Out) trigger point that will turn off the charger and turn the inverter on.

- **Absorption Volts** (DC Voltage)
  This is the DC Voltage that will be output when the charger is in Absorption Mode.

- **Absorption Time** (Hr)
  This is the amount of time that the charger will stay in Absorption Mode.

- **Float Volts** (DC Voltage)
  This is the DC Voltage that will be output when the charger is in Float Mode.

**GENSET SCREEN**

The Genset Screen displays the current Generator Status and control system run time.

Note: The system generator run time can be set to match the physical generator hour meter using the OnmiScope Service Tool.

The Start and Stop Buttons allow you to manually start and stop the generator. The Clear AGS Button allows you to clear the AGS Safety Lockout flag to reset the Auto Gen function.
The Water Screen on coaches equipped with the All Electric option displays the Fresh and Holding Tanks volume % full status. This screen also displays tank related faults, if any. The Water Pump Button turns the Water Pump on and off. The Auto Fill Button turns the Auto Fill function on and off.

The Water Screen for a coach equipped with an LP tank, displays and controls the same functions as the All Electric Water Screen with the addition of the LP tank % full status.
The Climate Screens are used to display the status and control the HVAC system. The Climate “All” Screen displays and provides global control of the Heating and Cooling for all of the HVAC zones.

Pressing the Heat or Cool Button activates all of the zones for the selected function at one time. The set points can be changed by pressing the associated up and down arrows or by dragging the associated circular temperature wheel to the desired set point.

The Heat or Cool Buttons will highlight and Icons will be displayed when the functions are active.

The Oasis control screen is only accessed from this screen.

The Leave function is also accessed from this screen. The Leave function allows you to set different temperature set-points to control the HVAC system when you leave the coach.

The Climate “LvRm” Screen displays the Heating and Cooling controls for Living Room zone. The Air Conditioner for cooling and both the Heat Pump and Oasis heating systems for the Living Room are controlled from this page.

The Climate “Kitch” Screen displays the Heating and Cooling controls for Kitchen zone. The Air Conditioner for cooling and only the Heat Pump for heating are controlled from the page. There is no Oasis heat available in this zone.
CLIMATE BATH SCREEN

The Climate “Bath” Screen only controls the Bathroom Oasis heating system. There is no Air Conditioner or Heat Pump available for this zone, therefore the Cool Button is not displayed on this screen.

CLIMATE BED SCREEN

The Climate “Bed” Screen displays the Heating and Cooling controls for Bedroom zone. The Air Conditioner for cooling and both the Heat Pump and Oasis heating systems for the Bedroom are controlled from this page.

CLIMATE OASIS SCREEN

The Oasis Screen is accessed from the Oasis Button displayed in the Climate All Screen. This screen controls the Oasis Burner and both AC Heating Elements. The Burner, AC #1 and AC #2 Buttons will highlight when active. This screen also displays the Oasis System operational Status and Faults.
TEMP SCREEN

The Temp screen is accessed by pressing the Temp Button located on the Home Screen. This screen displays the Outside Air Temperature and only exists on systems without the optional Floor Heat.

FLOOR SCREEN OPTIONAL FLOOR HEAT

The Floor Screen is accessed from the Floor Button located on the Main Screen. This screen controls the Floor Heat Zones by means of the slider bars or the up and down arrows and is only available on systems with the Floor Heat option. The higher the number, the longer the time interval the heat mats are energized. This screen also contains icons that show the heating mat status. When the icon is red the mat is in heat cycle and when the icon is grey the heat function is on but the mat is between heating cycles.
The Special Features Screens are used for system setup and diagnostics.

**FEATURES SCREENS SCREEN 1**

The additional screens are accessed via the Up/Down Arrows.

Special Features Screen 1 allows access to the following features:

- **Clock Button**
  Accesses the Clock Setup Screen

- **System Diagnostics Button**
  Accesses the System Diagnostics Screens

- **Monitor Configuration Button**
  Accesses the Monitor Configuration Screens

- **Auto Genstart Button**
  Accesses the Auto Genstart Configuration Screens

**FEATURES SCREENS SCREEN 2**

Screen 2 allows access to the following features:

- **View AC Power History Button**
  Accesses the AC Power History Screen

- **Auto Fill Configuration Button**
  Accesses the Auto Fill Configuration Screens

- **Warnings Configuration Button**
  Accesses the Warnings Configuration Screens

- **Tank Calibration Button**
  Accesses the Tank Calibration Screens

**FEATURES SCREENS SCREEN 3**

Screen 3 allows access to the following features:

- **Climate Configuration Button**
  Accesses the Climate Configuration Screens

- **TM102 Configuration Button**
  Accesses the TM102 Configuration Screen

- **Component Versions Button**
  Accesses the Component Versions Screen

- **View Splash Screen Button**
  Accesses the Splash Screen
FEATURES SCREENS  FLOOR HEAT OPTION SCREEN 1

This screen is the same as the Base System Screens

FEATURES FLOOR HEAT OPTION SCREEN 2

Floor Heat Option Screen 2 allows access to the following features:

- View AC Power History Button
  *Accesses the AC Power History Screen*
- Auto Fill Configuration Button
  *Accesses the Auto Fill Configuration Screens*
- Floor Heat Configuration Button
  *Accesses the Floor Heat Configuration Screen*
- Warnings Configuration Button
  *Accesses the Warnings Configuration Screens*

This screen has the optional Floor Heat Configuration Button

FEATURES FLOOR HEAT OPTION SCREEN 3

Floor Heat Option Screen 3 allows access to the following features:

- Tank Calibration Button
  *Accesses the Tank Calibration Screens*
- Climate Configuration Button
  *Accesses the Climate Configuration Screens*
- TM102 Configuration Button
  *Accesses the TM102 Configuration Screen*
- Component Versions Button
  *Accesses the Component Versions Screen*
Floor Heat Option Screen 4 allows access to the following features:

- Climate Configuration Button
  Accesses the Climate Configuration Screens
- TM102 Configuration Button
  Accesses the TM102 Configuration Screen
- Component Versions Button
  Accesses the Component Versions Screen
- View Splash Screen Button
  Accesses the Splash Screen
FEATURES CLOCK SCREENS

The Clock Screen is accessed by pressing the Clock Button from The Features Screen.

This screen displays the system time, outside temperature, system warnings/errors and allows you to access both the Alarm Clock and Countdown Timer functions.

Pressing the Alarm Button will take you to the Alarm Clock page. On this page are two scroll bars that allow you to set the time of day for the alarm. This page also contains a Back Button that returns you to the previous page, as well as, an up/down arrow that allows you to toggle the alarm between the Off, Once Only or Every Day settings and a Set Clock Button. The Set Clock Button takes you to Monitor Configuration page 1, which allows you to set the system time.

Pressing the Timer Button on the Clock Screen accesses the Countdown Timer screen. This screen has two scroll bars that allow you to set the countdown minutes and seconds. There is a Start Button on this screen that when pressed begins the countdown timer. This screen also has Back and Set Clock Buttons the same as the Alarm Clock screen.
FEATURES SYSTEM DIAGNOSTICS SCREEN 1

The first Systems Diagnostics Screen is accessed by pressing the System Diagnostic Button located on the Features Screens or from the “Prev” Button located on second Systems Diagnostics Screen. This Screen displays any system faults present on the control system.

FEATURES SYSTEM DIAGNOSTICS SCREEN 2

The second Systems Diagnostics Screen is accessed by pressing the Next Button located on the first Systems Diagnostics Screen or from the “Prev” Button located on third Systems Diagnostics Screen. This Screen displays communications status present on the control system.

FEATURES SYSTEM DIAGNOSTICS SCREEN 3

The third Systems Diagnostics Screen is accessed by pressing the Next Button located on the second Systems Diagnostics Screen. This Screen displays additional communications status present on the control system.

Pressing the Reset TM102 Button will reset the TM102 Module.
FEATURES  MONITOR CONFIGURATION SCREEN 1

The first Monitor Configuration Screen is accessed by pressing the Monitor Configuration Button located on the Features Screens or from the “Prev” Button located on second Monitor Configuration Screen. This Screen allows you to set the system time and date by pressing the associated up and Down Buttons.

FEATURES  MONITOR CONFIGURATION SCREEN 2

The second Monitor Configuration Screen is accessed by pressing the Next Button located on the first Monitor Configuration Screen or from the “Prev” Button located on third Monitor Configuration Screen. This Screen allows you to set the Day Time Display Setting by pressing the associated Up and Down Buttons.

FEATURES  MONITOR CONFIGURATION SCREEN 3

The third Monitor Configuration Screen is accessed by pressing the Next Button located on the second Monitor Configuration Screen or from the “Prev” Button located on fourth Monitor Configuration Screen. This Screen allows you to set the Night Time Display Settings by pressing the associated Up and Down Buttons.
FEATURES MONITOR CONFIGURATION SCREEN 4

The fourth Monitor Configuration Screen is accessed by pressing the Next Button located on the third Monitor Configuration Screen or from the “Prev” Button located on fifth Monitor Configuration Screen. This Screen allows you to set the following Monitor Functions:

- **Button Color** (Multiple Colors)
  Select using the Up / Down Arrows

- **Speaker** (Sound) (None, Click or Beep)
  Select using the Up / Down Arrows

- **Speaker Volume** (Off, Quiet, Normal or Loud)
  Select using the Up / Down Arrows

FEATURES MONITOR CONFIGURATION PASSWORD ACCESS

The Password Access Screen is to provide access to advanced system configuration screens. These screens contain control settings that should only be changed by qualified individuals.

FEATURES MONITOR CONFIGURATION SCREEN 5

The fifth Monitor Configuration Screen is accessed by pressing the Next Button located on the fourth Monitor Configuration Screen or from the “Prev” Button located on sixth Monitor Configuration Screen. This Screen allows you to set the following Display Settings:

- **OEM** Set to “Newmar”
  Select using the Up / Down Arrows

- **Video Camera Available** Set to “No” (Controls the onboard video port)
  Select using the Up / Down Arrows

- **Waste System Installed** Set to “None”
  Select using the Up / Down Arrows

- **Primary Furnace Installed** Set to “Oasis Basic”
  Select using the Up / Down Arrows
The sixth Monitor Configuration Screen is accessed by pressing the Next Button located on the fifth Monitor Configuration Screen or from the “Prev” Button located on seventh Monitor Configuration Screen. This Screen allows you to set the following Display Settings:

- **Transfer Switch Type** Set to “Generic” (Automatic if RV-C Communications Port Used) Select using the Up / Down Arrows
- **Inverter Model** Set to “Basic Magnum” Select using the Up / Down Arrows
- **Floor Heat Mats** Set to “0” if no Floor Heat Installed / Set to “3” if Floor Heat Installed Select using the Up / Down Arrows
- **Floor Heat Schedule** (None, 2 Time Zone or 4 Time Zone) Select Appropriate Setting using the Up / Down Arrows

The seventh Monitor Configuration Screen is accessed by pressing the Next Button located on the sixth Monitor Configuration Screen or from the “Prev” Button located on eighth Monitor Configuration Screen. This Screen allows you to set the following:

- **Power management Installed** Set to TM-250 Select using the Up / Down Arrows
- **Tile Heat System Installed** Set to TM-220 Timed – if Floor Heat is installed Select using the Up / Down Arrows
- **Autotemp AGS Installed** Set to Autotemp for Temperature Autogen Control Select using the Up / Down Arrows
- **Block Heater Instance** Set to 1 Select using the Up / Down Arrows
FEATURES MONITOR CONFIGURATION SCREEN 8

The eighth Monitor Configuration Screen is accessed by pressing the Next Button located on the seventh Monitor Configuration Screen or from the “Prev” Button located on ninth Monitor Configuration Screen. This Screen allows you to set the following Display Settings:

- Ambient Temp Instance: Set to “249”
  - Select using the Up / Down Arrows
- Air Cond. Model: Set to “Dometic / TM510”
  - Select using the Up / Down Arrows
- Video Switch Instance: Set to “0”
  - Select using the Up / Down Arrows

FEATURES MONITOR CONFIGURATION SCREEN 9

The ninth Monitor Configuration Screen is accessed by pressing the Next Button located on the seventh Monitor Configuration Screen. This Screen allows you to reset the display to the default settings or to restart (reboot) the display. Pressing the Reset to Defaults Button will set the display to the Factory Default settings. Resetting the display to the Factory Default settings will change any previously configured settings. Pressing the Restart HMS Button will reboot the display.

Generally a Restart is required after any setting changes have been made. In some cases the changes will take effect without a Restart.

You must confirm that you wish to actually Reset the Monitor.
The first Autogen Configuration screen is accessed by pressing the Autogen Configuration Button located on the Features Configuration Screen or by pressing the “Prev” Button located on the second Autogen Configuration screen. This screen allows you to change the following settings:

- **Safety Lock** Clear / Locked
  When set to Locked this function will inhibit the generator from automatically starting. This function is set to Locked when the Generator Hood is open. Opening the hood actuates the Safety Lock Switch that is mounted to the generator mounting frame. It may be necessary to reset this setting after accessing the generator. Press the associated button to change the setting.

- **Auto Charger** Enabled / Disabled
  When Enabled, this function automatically starts and stops the generator based on the Auto Charger Configuration Settings (Battery Voltage, Max Run Time, Top Off Voltage and Top Off Run Time). Please note that the generator will not automatically start if Shore Power is present. Press the associated button to change the setting.

- **Exerciser** Enabled / Disabled
  When Enabled this function will automatically run the generator based on the Exerciser schedule settings on AGS screen 4. This function will automatically start the generator regardless of the Shore Power status. Press the associated button to change the setting.

- **Auto Temp** Enabled / Disabled
  When Enabled this function will automatically run the generator based on the Auto Temp schedule settings on AGS screen 5. The Auto Temp function will automatically start the generator based solely on temperature. This function is not triggered by any HVAC system commands. Please note that the generator will not automatically start if Shore Power is present. Press the associated button to change the setting.
The second Autogen Configuration screen is accessed by pressing the Next Button located on the first Autogen Configuration screen or by pressing the “Prev” Button located on the third Autogen Configuration screen. This screen allows you to change the following settings:

- **Autocharger Start Volts** (DC Voltage)
  If the Auto Charger function is Enabled, this setting determines the voltage level that will automatically start the generator.
  When the house battery voltage drops below this value for approximately 2 minutes the generator will automatically start and run until the charger goes into Float Mode or the Autocharger Max Run Time setting time has expired.
  Select value using the Up / Down Arrows

- **Autocharger Max Run Time** (min Time Set)
  This setting controls the maximum time the generator will run when started by the Autocharger function.
  Select value using the Up / Down Arrows

- **Topoff Volts** (DC Voltage)
  This setting determines the voltage level that will automatically start the generator based on the Topoff Run Time settings.
  Select value using the Up / Down Arrows

- **Topoff Run Time** (min Time Set)
  This setting determines the amount of time before Quiet Time begins to automatically start the generator, if the Auto Charger function is Enabled and the house battery voltage is below the Topoff Volts setting.
  If these conditions are met, the generator will automatically start and run until Quiet Time begins.
  Select value using the Up / Down Arrows

The third Autogen Configuration screen is accessed by pressing the Next Button located on the second Autogen Configuration screen or by pressing the “Prev” Button located on the fourth Autogen Configuration screen. This screen controls the generator Quiet Time settings. During Quiet Time the generator is inhibited from running. If the generator is running in an Auto Gen function, the generator will stop running during Quiet Time. When Quiet Time expires, the generator will restart and complete the Auto Gen cycle if required.

The Quiet Time Function is disabled if the Quiet Time Begin and Quiet Time End setting are set to the same value.

This screens controls the following settings:

- **Quiet Time Begin** Time of Day
  Sets the Quiet Time start time
  Select value using the Up / Down Arrows

- **Quiet Time End** Time of Day
  Sets the Quiet Time end time
  Select value using the Up / Down Arrows
FEATURES AUTO GENSTART CONFIGURATION SCREEN 4

The fourth Autogen Configuration screen is accessed by pressing the Next Button located on the third Autogen Configuration screen or by pressing the “Prev” Button located on the fifth

Autogen Configuration screen. This screen allows you to change the following settings:

- **Exerciser Day of Week**
  - Select Day(s)
  - If the generator Exerciser function is Enabled, this setting selects the day(s) of the week to exercise the generator.
  - Select using the Up / Down Arrows

- **Exerciser Start Time**
  - Time of Day
  - If the generator Exerciser function is Enabled, this setting selects the start time to exercise the generator.
  - Select value using the Up / Down Arrows

- **Exerciser Run Time**
  - (Time Setting)
  - If the generator Exerciser function is Enabled, this setting selects the amount of time to exercise (run) the generator.
  - Select value using the Up / Down Arrows

FEATURES AUTO GENSTART CONFIGURATION SCREEN 5

The fifth Autogen Configuration screen is accessed by pressing the Next Button located on the fourth Autogen Configuration screen.

This screen allows you to change the following settings:

- **Auto Temp Set Point**
  - (Temperature Set Point)
  - The Auto Temp Set Point determines the temperature setting to automatically start the generator when the Zone 2 temperature rises above the set point for the time value set by the Auto Temp Delay Time. This setting is only active if the Auto Temp function is Enabled.
  - Select value using the Up / Down Arrows

- **Auto Temp Delay Time**
  - (min Time Setting)
  - This setting sets the amount of time to delay the generator from automatically starting after the Auto Temp Set Point temperature has been reached. This setting is only active if the Auto Temp function is Enabled.
  - Select value using the Up / Down Arrows

- **Auto Temp Deadband**
  - (Temperature Value)
  - When the Auto Temp feature is Enabled, this setting determines the dead band temperature value for Auto Temp Function. The Dead band Temperature is the temperature range that the room temperature must drop below the Auto Temp Set Point value in order to automatically stop the generator.
  - Select value using the Up / Down Arrows
FEATURES AUTOFILL CONFIGURATION SCREENS

The Password Access Screen is displayed to provide access to advanced system configuration screens. The advanced configuration screens contain control settings that should only be changed by qualified individuals.

FEATURES AUTOFILL CONFIGURATION SCREEN 1

The first Autofill Configuration screen is accessed by pressing the Autofill Configuration Button located on the Features Configuration Screen and entering the correct password or by pressing the “Prev” Button located on the second Autofill Configuration screen. This screen allows you to change the following settings:

- **Start Level**  (Numeric Percentage Value)
  This is the Fresh tank level setting to trigger the refill function. If the Auto Fill function is Enabled and the Fresh tank level drops below this value, the fill valve will open to refill the tank.
  Select value using the Up / Down Arrows

- **Stop Level**  (Numeric Percentage Value)
  This is the Fresh tank level setting to trigger the tank full function. If the Auto Fill function is Active and the Fresh tank level rises above this value for the Run After time setting, the fill valve will close to stop filling the tank.
  Select value using the Up / Down Arrows

- **Max Time Out**  (Numeric min Time Value)
  If the Auto Fill Function is Enabled and the Fresh Tank is not filling, this setting controls the amount of time the Fill Valve will be held on if the city pressure switch opens (no city pressure) or if the Fresh Tank is not filling fast enough. If the Fresh Tank does not fill fast enough, the system will assume that there is a plumbing leak and Disable the Auto Fill function.
  Select value using the Up / Down Arrows

- **Run After Minutes**  (Numeric min Time Value)
  This setting determines the number of minutes to hold the fill valve on after the Stop Level has been reached. The Run After function allows for pressure equalization in the Fresh tank after the fill level is reached. If this value is set to low, the tank level value will read below the Stop Level setting. If this value is set to high, the tank level value will read higher than the Stop Level or the tank will over flow.
  Select value using the Up / Down Arrows
The second Autogen Configuration screen is accessed by pressing the Next Button located on the first Autofill Configuration screen.

This screen allows you to change the following settings:
- `Run After Seconds` (Numeric sec Time Value)
  - This setting determines the number of seconds to hold the fill valve on after the Stop Level has been reached. The Run After function allows for pressure equalization in the Fresh tank after the fill level is reached. If this value is set to low, the tank level value will read below the Stop Level setting. If this value is set to high, the tank level value will read higher that the Stop Level or the tank will over flow.
  - Select using the Up / Down Arrows

The Floor Heat Configuration Screen is accessed by pressing the Floor Heat Configuration Button located on the Features Configuration Screen.

This screen is only applies to systems with the Floor Heat option.
- These selections set the floor heat zone names displayed on the “Floor” Screen.
- Depending on the HMS360 Touch Screen Display Software Version, this screen or a similar screen, may be located under the Climate Configuration Screens, not under the Floor Heat Configuration Screens.
- This screen allows you to change the following settings:
  - `Floor 1 Name` Set to Front
    - Select using the Up / Down Arrows
  - `Floor 2 Name` Set to Mid
    - Select using the Up / Down Arrows
  - `Floor 3 Name` Set to Rear
    - Select using the Up / Down Arrows
FEATURES FLOOR HEAT W/SCHEDULING CONFIGURATION SCREENS

FLOOR HEAT with 2 Time Schedule Screen 1 of 2
The Floor Heat Configuration Screen is accessed by pressing the Floor Heat Configuration Button located on the Features Configuration Screen. This screen is only applies to systems with the Floor Heat option.

These selections set the 2 time zones floor heat settings displayed on the “Floor” Screen. Depending on the HMS360 Touch Screen Display Software Version, this screen or a similar screen, may be located under the Climate Configuration Screens, not under the Floor Heat Configuration Screens. This screen allows you to change the following settings:

- Day Begin Time Setting
  Select using the Up / Down Arrows
- Night Begin Time Setting
  Select using the Up / Down Arrows
- Day Setting Floor Heat Setting
  Select using the Up / Down Arrows
- Night Setting Floor Heat Setting
  Select using the Up / Down Arrows

FLOOR HEAT with 2 Time Schedule Screen 2 of 2

The Floor Heat Configuration Screen is accessed by pressing the Floor Heat Configuration Button located on the Features Configuration Screen.

This screen is only applies to systems with the Floor Heat option. These selections set the floor heat zone names displayed on the “Floor” Screen. Depending on the HMS360 Touch Screen Display Software Version, this screen or a similar screen, may be located under the Climate Configuration Screens, not under the Floor Heat Configuration Screens. This screen allows you to change the following settings:

- Floor 1 Name Set to Front
  Select using the Up / Down Arrows
- Floor 2 Name Set to Mid
  Select using the Up / Down Arrows
- Floor 3 Name Set to Rear
  Select using the Up / Down Arrows
The Floor Heat Configuration Screen is accessed by pressing the Floor Heat Configuration Button located on the Features Configuration Screen.

This screen is only applies to systems with the Floor Heat option. These selections set the 2 time zones floor heat settings displayed on the “Floor” Screen. Depending on the HMS360 Touch Screen Display Software Version, this screen or a similar screen, may be located under the Climate Configuration Screens, not under the Floor Heat Configuration Screens. This screen allows you to change the following settings:

- AM/On Time Setting
  Select using the Up / Down Arrows
- AM/Off Time Setting
  Select using the Up / Down Arrows
- AM/On Setting Floor Heat Setting
  Select using the Up / Down Arrows

This screen is only applies to systems with the Floor Heat option. These selections set the 2 time zones floor heat settings displayed on the “Floor” Screen. Depending on the HMS360 Touch Screen Display Software Version, this screen or a similar screen, may be located under the Climate Configuration Screens, not under the Floor Heat Configuration Screens. This screen allows you to change the following settings:

- PM/On Time Setting
  Select using the Up / Down Arrows
- PM/Off Time Setting
  Select using the Up / Down Arrows
- PM/On Setting Floor Heat Setting
  Select using the Up / Down Arrows
The Floor Heat Configuration Screen is accessed by pressing the Floor Heat Configuration Button located on the Features Configuration Screen.

This screen is only applies to systems with the Floor Heat option. These selections set the floor heat zone names displayed on the “Floor” Screen.

Depending on the HMS360 Touch Screen Display Software Version, this screen or a similar screen, may be located under the Climate Configuration Screens, not under the Floor Heat Configuration Screens.

This screen allows you to change the following settings:

- Floor 1 Name Set to Front
  Select using the Up / Down Arrows
- Floor 2 Name Set to Mid
  Select using the Up / Down Arrows
- Floor 3 Name Set to Rear
  Select using the Up / Down Arrows
FEATURES WARNINGS CONFIGURATION SCREENS

FEATURES WARNINGS CONFIGURATION SCREEN 1

The first Warnings Configuration screen is accessed by pressing the Warnings Configuration Button located on the Features Configuration Screen or by pressing the “Prev” Button located on the second Warnings Configuration screen. This screen allows you to change the following settings:

- Fresh tank Warning (Numeric Percentage Value)
  A warning message will be displayed if the Fresh tank level drops below this value.
  Select value using the Up / Down Arrows

- Gray Tank Warning (Numeric Percentage Value)
  A warning message will be displayed if the Gray tank level drops below this value.
  Select value using the Up / Down Arrows

- Black Tank Warning (Numeric Percentage Value)
  A warning message will be displayed if the Black tank level drops below this value.
  Select value using the Up / Down Arrows

- Battery Warning (Numeric DC Voltage Value)
  A warning message will be displayed if the House Battery Voltage level drops below this value.
  Select value using the Up / Down Arrows

FEATURES WARNINGS CONFIGURATION SCREEN 2

The second Warnings Configuration screen is accessed by pressing the Next Button located on the first Warnings Configuration screen. This screen allows you to change the following settings:

- LPG Tank Warning (Numeric Percentage Value)
  A warning message will be displayed if the LP tank level drops below this value. This value should be set to 0% on coaches with the All Electric Option (No LP).
  Select value using the Up / Down Arrows
FEATURES TANK CALIBRATION SCREENS

The first Tank Cal screen is accessed by pressing the Tank Calibration Button located on the Features Configuration Screen and entering the correct password or by pressing the “Prev” Button located on the second Tank Cal screen. This screen sets the tank capacities for the coach with the following settings:

- **Fresh Tank Size** (Essex = 105 Gal, King Aire = 140 Gal)
  - Select value using the Up / Down Arrows
- **Gray Tank Size** (Essex = 65 Gal, King Aire = 80 Gal)
  - Select value using the Up / Down Arrows
- **Black Tank Size** (Essex = 45 Gal, King Aire = 60 Gal)
  - Select value using the Up / Down Arrows
The second Tank Cal screen is accessed by pressing the Next Button located on the first Tank Cal screen.

This screen is used to set the tank sensor Dry Calibration points.
The Dry Calibration point should only be set with tank empty or the sensor removed and exposed to atmospheric pressure.
This screen controls the following functions:
- Pressing the Fresh Dry Calibrate Button sets the Fresh Tank Sensor Dry-Point
- Pressing the Gray Dry Calibrate Button sets the Gray Tank Sensor Dry-Point
- Pressing the Black Dry Calibrate Button sets the Black Tank Sensor Dry-Point

This screen allows you to confirm or cancel setting the tank sensor dry point for the selected tank.
The first Climate Setting screen is accessed by pressing the Climate Configuration Button located on the Features Configuration Screen or by pressing the Left Up Arrow located on the third Climate Setting screen. This screen allows you to change the following settings:

- **Scheduling**
  This feature allows you to set different HVAC set points depending on the time of day.
  Select value using the Up / Down Arrows

- **Secondary Heat Mgmt**
  This setting determines how the Oasis Heating System is controlled.
  Select value using the Up / Down Arrows

The Password Access Screen is displayed to provide access to advanced system configuration screens. The advanced configuration screens contain control settings that should only be changed by qualified individuals.

- **Scheduling**
  This feature allows you to set different HVAC set points depending on the time of day.
  Select value using the Up / Down Arrows

- **Sec. Heat Mgmt**
  Set to Automatic
  This setting determines how the Oasis Heating System is controlled.
  Select value using the Up / Down Arrows

- **Heat/Cool Lockout**
  This setting determines if HVAC Heat and Cool commands can be issued at the same time in different zones. (EX: LvRm Heat & Kitch Cool)
  Select value using the Up / Down Arrows

- **Dehumidifier**
  Set to None
  This setting determines if a Dehumidification AC Unit is installed on the coach. This setting should be set to Installed only when a Dehumidification equipped A/C unit is installed on the coach.
  Select value using the Up / Down Arrows
FEATURES CLIMATE CONFIGURATION SCREEN 4

Climate Setting screen or by the Left Up Arrow on the fifth Climate Setting screen. This screen determines the Zone Labels that are displayed on the Climate control screens and has the following settings:

- **Zone 1 Name**
  - Set to LvRm
  - Select using the Up / Down Arrows
- **Zone 2 Name**
  - Set to Kitch
  - Select using the Up / Down Arrows
- **Zone 3 Name**
  - Set to Bath
  - Select using the Up / Down Arrows
- **Zone 4 Name**
  - Set to Bed
  - Select using the Up / Down Arrows

The fourth Climate Setting screen is accessed by pressing the Left Down Arrow on the first Climate Setting screen.

FEATURES CLIMATE CONFIGURATION SCREEN 5

pressing the Left Down Arrow on the third Climate Setting screen or by the Left Up Arrow on the sixth Climate Setting screen. This screen sets the Cool Source to the HVAC Zones.

- **Cool Instance 1**
  - Set to 1
  - Select using the Up / Down Arrows
- **Cool Instance 2**
  - Set to 2
  - Select using the Up / Down Arrows
- **Cool Instance 3**
  - Set to 0
  - Select using the Up / Down Arrows
- **Cool Instance 4**
  - Set to 4
  - Select using the Up / Down Arrows

The fifth Climate Setting screen is accessed by pressing the Left Down Arrow on the third Climate Setting screen.

FEATURES CLIMATE CONFIGURATION SCREEN 6

Climate Setting screen or by the Left Up Arrow on the seventh Climate Setting screen. This screen sets the Heat Source to HVAC Zones.

- **Heat Instance 1**
  - Set to 1
  - Select using the Up / Down Arrows
- **Heat Instance 2**
  - Set to 2
  - Select using the Up / Down Arrows
- **Heat Instance 3**
  - Set to 166
  - Select using the Up / Down Arrows
- **Heat Instance 4**
  - Set to 4
  - Select using the Up / Down Arrows

The sixth Climate Setting screen is accessed by pressing the Left Down Arrow on the fourth Climate Setting screen.
FEATURES CLIMATE CONFIGURATION SCREEN 7

The seventh Climate Setting screen is accessed by pressing the Left Down Arrow on the fifth Climate Setting screen or by the Left Up Arrow on the eighth Climate Setting screen. This sets the Temperature Sensors to the HVAC Zones.

- Temp Instance 1 Set to 1
  Select using the Up / Down Arrows
- Temp Instance 2 Set to 2
  Select using the Up / Down Arrows
- Temp Instance 3 Set to 248
  Select using the Up / Down Arrows
- Temp Instance 4 Set to 4
  Select using the Up / Down Arrows

FEATURES CLIMATE CONFIGURATION SCREEN 8

The eighth Climate Setting screen is accessed by pressing the Left Down Arrow on the sixth Climate Setting screen or by the Left Up Arrow on the ninth Climate Setting screen. This screen specifies the Oasis Zones to control from the HVAC Zone settings.

- Sec. Heat Instance 1 Set to 164
  Select using the Up / Down Arrows
- Sec. Heat Instance 2 Set to 0
  Select using the Up / Down Arrows
- Sec. Heat Instance 3 Set to 166
  Select using the Up / Down Arrows
- Sec. Heat Instance 4 Set to 167
  Select using the Up / Down Arrows

FEATURES CLIMATE CONFIGURATION SCREEN 9

The ninth Climate Setting screen is accessed by pressing the Left Down Arrow on the eighth Climate Setting screen. This screen is used to set the Primary Heat Zone control.

- Primary Heat Instance 1 Set to 1
  Select using the Up / Down Arrows
- Primary Heat Instance 2 Set to 0
  Select using the Up / Down Arrows
- Primary Heat Instance 3 Set to 0
  Select using the Up / Down Arrows
- Primary Heat Instance 4 Set to 4
  Select using the Up / Down Arrows
FEATURES TM102 CONFIGURATION SCREEN

The TM102 Flags screen is accessed by pressing the TM102 Configuration Button located on the Features Configuration Screen. This screen displays the active system functions.

FEATURES COMPONENT VERSIONS SCREEN

The Component Versions screen is accessed by pressing the Components Versions Button located on the Features Configuration Screen. This screen displays all of the RV-C Modules and their firmware versions found on the system.
### Newmar SilverLeaf Module Configuration Data & Screens

#### HMS360 Monitor

<table>
<thead>
<tr>
<th>Function</th>
<th>Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Block Heater Instance</td>
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<tr>
<td>Air Conditioner Model</td>
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<tr>
<td>Ambient Temperature Instance</td>
<td>249</td>
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#### TM229 (TM220 Series) Tile Heat

<table>
<thead>
<tr>
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<th>Setting</th>
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<tbody>
<tr>
<td>OEM Identifier</td>
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#### TM250 Load Manager

<table>
<thead>
<tr>
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#### TM510 (Dometic)

<table>
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<tbody>
<tr>
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<td>Outside Air Temp Instance</td>
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<td>Secondary Heat Boost Level</td>
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#### Zone Temp Display Source

<table>
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<tr>
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<tbody>
<tr>
<td>1</td>
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<td>Zone 2 Temp Instance</td>
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<tr>
<td>3</td>
<td>Zone 3 Temp Instance</td>
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<tr>
<td>4</td>
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#### Primary Source 3 Heat Pumps

<table>
<thead>
<tr>
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</thead>
<tbody>
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<tr>
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<tr>
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<td>Zone 3 Furnace Instance</td>
</tr>
<tr>
<td>4</td>
<td>Zone 4 Furnace Instance</td>
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#### Secndry Heat Source 3 Oasis

<table>
<thead>
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<th>Secndry Heat Source 3 Oasis</th>
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</thead>
<tbody>
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<td>Zone 1 Sec Heat Instance</td>
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<tr>
<td>3</td>
<td>Zone 3 Sec Heat Instance</td>
</tr>
<tr>
<td>4</td>
<td>Zone 4 Sec Heat Instance</td>
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</table>
### OA600 (Oasis)

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<td>Furnace Instance 2</td>
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<td>Furnace Instance 3</td>
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<td>167</td>
</tr>
<tr>
<td>Furnace Instance 5</td>
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<tr>
<td>Target Instance 2</td>
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<tr>
<td>Target Instance 3</td>
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<td>Target Instance 4</td>
<td>4</td>
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<td>Target Instance 5</td>
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<tr>
<td>Thermostat Instance 2</td>
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<tr>
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</tr>
<tr>
<td>Echo Instance 2</td>
<td>0</td>
</tr>
<tr>
<td>Echo Instance 3</td>
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<tr>
<td>Echo Instance 5</td>
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<tr>
<td>AC1 Load Instance</td>
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<tr>
<td>AC2 Load Instance</td>
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<tr>
<td>AC1 Load Amp</td>
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<td>AC2 Load Amp</td>
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<td>Auto Engine Heat</td>
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<td>AC1 Shed Monitor</td>
<td>11</td>
</tr>
<tr>
<td>AC2 Shed Monitor</td>
<td>12</td>
</tr>
</tbody>
</table>
### All Electric Option LPG Tank Set to Off

### LP (Standard) LPG Tank Set to On
AutoFill Configuration

Pump Status: Off
Fill Status: Off
Valve Status: Off
Pump 2 Status: Disabled

Last Fill: Running
Send Settled Settings
Refresh Data

Cancel Fill Pump Started
Enable Fill Bypass Detected
If Oil / Coolant Temp Depends
Set AutoTrig Timer to Off, 5-8 Hours

Pump Type: Internal
FRF Instance: 88

Pump Input Type: Momentary Switch
Pump Filler Type: Conventional
Bypass Detection: Ignite Bypass

Water Pressure: Must be Enabled and at least one tank to zero size
Headsup Detection: Enabled
Headsup Detection: No Headsup

LPG/Fuel Tank

Level: 73 / 100
Gallons: 14 Gal
Raw Counts: 231
Tank Size: 20

Set Tank Size

Use 0-90 Ohm Defaults
Use 240-35 Ohm Defaults
Manual Calibrate - Empty
Manual Calibrate - Full

Auto Temperature

Instance: 2
Trigger: 00 Deg
Time: 1.0 Min
### Tank Configuration - EXDP Tank Capacities

<table>
<thead>
<tr>
<th></th>
<th>Fresh</th>
<th>Black</th>
<th>Gray</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level</td>
<td>0 / 100</td>
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<tr>
<td>Gallons</td>
<td>0 Gal</td>
<td>0 Gal</td>
<td>0 Gal</td>
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<tr>
<td>Raw Counts</td>
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<td>0</td>
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<tr>
<td>Tank Size</td>
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<td>65</td>
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<tr>
<td>Empty</td>
<td>2.00</td>
<td>2.00</td>
<td>2.00</td>
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<tr>
<td>1/4</td>
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<td>4.00</td>
<td>4.00</td>
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<tr>
<td>3/4</td>
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<tr>
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<td>10.00</td>
<td>10.00</td>
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<td>CPI</td>
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### Tank Configuration - KGDB Tank Capacities

<table>
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<tr>
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<th>Fresh</th>
<th>Black</th>
<th>Gray</th>
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<tr>
<td>Gallons</td>
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<td>0 Gal</td>
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<td>Raw Counts</td>
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<tr>
<td>1/4</td>
<td>4.00</td>
<td>4.00</td>
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<td>3/4</td>
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<td>Full</td>
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<td>CPI</td>
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### Ambient Temperatures

<table>
<thead>
<tr>
<th>ID</th>
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<tbody>
<tr>
<td>249 [SA: 4D]</td>
<td>77.5 F [2]</td>
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<tr>
<td>164 [SA: CF]</td>
<td>-0.0 F [2]</td>
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<tr>
<td>167 [SA: CF]</td>
<td>-0.0 F [3]</td>
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<td>166 [SA: CF]</td>
<td>72.9 F [3]</td>
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<tr>
<td>1 [SA: 67]</td>
<td>-0.0 F [2]</td>
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<td>4 [SA: 67]</td>
<td>-0.0 F [3]</td>
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<td>2 [SA: 67]</td>
<td>-0.0 F [3]</td>
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</table>

### Product ID

| ID | Silverleaf TM223-1.13-V0.00000** |

### Last Diagnostic Message

- Running
- Last Acknowledgment: 0 - 0k
TM-250 RV-C Service Tool

- General Settings
- Load Status
- Temperatures

Load
1 2 3
4 5 6
7 8 9
10 11 12
13 14 15

Send Command

- Save For Cloning
- Clone From File
- Reboot

Product ID
SILVERLEAF-TM250-1.04-AC00000

Last Diagnostic Message
Running

Last Acknowledgment
0.0k
<table>
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<tr>
<td>phase_detection</td>
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<td>ats_instance_mode</td>
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<td>load_shed_interval</td>
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<td>gen_settling_enabled</td>
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**Product ID**

SILVERLEAF\*TM250-1.04-AC\*00000\**

**Last Diagnostic Message**

Running

**Last Acknowledgment**

0-0k
temp_instance_1  249
temp_instance_2  248
temp_instance_3  0
ambient_temp  - Zone 1  77.5
ambient_temp  - Zone 2  72.3
ambient_temp  - Zone 3  -459.4
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<td>sec_heat_boost_level</td>
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<td>compressor_wait</td>
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### TM-510 RV-C Service Tool

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<th>Zone 1 SEC Heat Instance</th>
<th>Zone 1 Compressor</th>
<th>Zone 1 Fan Instance</th>
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<th>Zone 1 Dehumidifier Installed</th>
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<th>Zone 2 SEC Heat Instance</th>
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**Product ID**

```
SILVERLEAF-TM510-1.03***
```

**Last Diagnostic Message**

```
Leg ? 16:9
```

**Last Acknowledgment**

```
0 · 0k
```
### Ambient Temperature
- Zone 1: -0.0
- Zone 2: -0.0
- Zone 3: N/A
- Zone 4: -0.0

### Thermostats and Schedules
- Zone 1: Zone 1
- Zone 2: Zone 2
- Zone 3: Zone 3
- Zone 4: Zone 4

### Dometic Link Diagnostics

### Product ID
SILVERLEAF™TM510-1.03***

### Last Diagnostic Message
Leg ? 16:9

### Last Acknowledgment
0 - Ok
### Ambient Temperatures

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### Product ID

ITR-OASIS™OASIS_B-1.08***

### Last Diagnostic Message

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Newmar SilverLeaf Control System
Diagnostic and Repair Procedures

RV-C Control System Introduction
The SilverLeaf Control System is a RV-C (CAN bus) based multiplex networked control system that uses multiple specialized control nodes (modules) to monitor and control the various systems in the RV. The RV-C network, in its simplest form, consists of a trunk cable made up of a twisted pair cable with 120 Ohm terminating resistors at each end of the trunk run. The nodes are connected to the network via drop cables attached to the trunk cable at any convenient location along the trunk. The trunk and drop cables provide the RV-C network communications. In its basic form, the RV-C network does not provide power for the nodes over the network. The power to the nodes is supplied by separate dedicated wiring.

The RV-C network scheme that Newmar employs for the SilverLeaf control system consists of multiple 4 conductor Trunk cable segments connected together by “Drop Tees”. The modules are connected to the network via Drop cables that plug directly into the tees. The Trunk segments are made up of a 2 wire twisted-pair communications cable along with separate 12 VDC power and ground wires bundled together into a single cable assembly. The Trunk cables are terminated with 4 pin mini-fit jr connectors on each end of the cable. The “Drop Tees” are either a single or multiple “Drop Tee”. The Tees have a mating mini-fit jr connector on each end with one or more drop mini-fit jr connectors along the adjacent edge. The beginning and end of the entire Trunk has a Terminating Resistor built into the last Drop Tee Board. The terminating resistors are required to assure proper communications across the network. The control nodes are interfaced to the network using Drop cables similar in construction to the Trunk cables. The standard drop cables have a 4 pin mini-fit jr connector for connection to the drop tees on one end with a 12 pin mini-fit jr connector for the node connection on the other end. Some of the drop cables also have additional wiring on the node end connector to accommodate other control interface functions. In this application the network provides both the communications and power to the nodes via the 4 pin connectors.

Currently there are two networked nodes that do not receive their power over the network. The TM-102 Total Coach Manager and the TM-502 Magnum Master are both constantly powered from separate fuses located on the Power Relay Board mounted on the back bulkhead of the Shore Power Electrical Compartment. The Power Relay Board is supplied with constant 12 VDC house battery power via a mini-breaker connected directly to the house battery bank. This circuit in not supplied from the Battery Disconnect power supply. All other nodes are powered over the network from a fuse located on the 12 VDC fuse panel mounted to the back bulkhead in the Shore Power Electrical Compartment. The network power is supplied from the Battery Disconnect power supply.

Refer to Newmar “RV-C Layout” drawing for a detailed network layout.
The Newmar control system consists of the following nodes (modules) and their mounting locations:

- TM-102 Total Coach Manager, Electrical Compartment, Transfer Switch, AC Power Status Communications, Holding Tanks, Generator Control, Water Pump Control, Auto-Fill Control, Charge Bridge (House and Chassis Battery Isolation Relay) Control, etc.
- TM-229 (TM-220) Tile Heat (Optional), DS #4 Compartment, Floor Heat Relays
- TM-250 Load Manager, ODS Bulkhead, DS #4 Compartment, Outside Temperature Sensor, Bathroom (Zone 3) Temperature Sensor and Block Heater Relay
- SPX-300 External Display, Water Works Compartment, Holding Tanks Fill Status %, Water Pump and Auto-Fill Control
- HMS-360 Touch Screen Display, Front Overhead, System Monitor and Control
- HMS-360 Touch Screen Display, Bedroom Overhead, System Monitor and Control
  Standard on King Aire – Optional on Essex
- TM-502 Magnum Master, DS #4 Compartment, Magnum Inverter Control
- TM-510 Dometic Interface, Front Overhead, Dometic HVAC System Control
- Oasis RV-C Node (OA-600), Oasis Compartment, Oasis Hydronic Heat Control
- RV-C Service Port Interface, Front Overhead & Electrical Compartment
  RV-C Network Interface Ports
**Diagnostic Procedures**

**Dead Operator Display**
- Verify that DC voltage is present with the correct polarity on the network cable (+DC BLK/WHT, -DC WHT/BLK Wires) at the display.

1. If correct power is present at the display.
   Then, cycle power at the display.

2. If splash screen does not appear briefly.
   Then, the display is most probably faulty.

3. If correct power is not present.
   Then supply correct power and reexamine display for proper operation.

**Missing Display Screens and Function Buttons**
- Generally, missing display screens and function buttons are caused by system errors generated from misconnections or node malfunctions.
  - Ex: Missing Auto Fill Button – Caused by Fresh Tank Sensor Failure.
- When missing display screens and buttons occur, determine if there are any systems faults displayed on the System Diagnostic Screens.
  Correct any systems faults and reexamine the display for any missing screens or functions.
- If certain screens or buttons are still missing or incorrect then verify that the Monitor Configuration and any related button function Configurations are correct.

**HVAC System Malfunction**
The HVAC System is controlled by three different RV-C Nodes depending on the particular function. The TM-510 Dometic Module controls the three roof Heat Pump/Air Conditioners Zones, the OA-600 Oasis Module controls the Living Room, Bathroom and Bedroom Furnace Zones and the TM-250 Load Manager provides the Temperature Sensors for the Outside and Bathroom Temperatures.

- It is important to determine if the fault lies in the SilverLeaf or the Dometic control system.
- If the Heat Pumps won’t run:
  1. Verify that the Zone(s) are calling for heat and that the set points are higher than the Zone(s) ambient temperature.
     If not, then adjust the settings accordingly.
  2. Verify that the outside temperature is above 40 degrees F. and that the system display for the outside temperature also reads above 40 degrees as well.
     The heat pumps will not run if the outside temperature is below 40 degrees F.
  3. Verify that AC power is available and that the circuit breakers are not tripped.
     Reset the breakers if tripped.
4. Verify that the Climate screens for the zones are not displaying “Wait” and that the white flame or fan icons are not displayed.
   If the icons are being displayed and the heat pump will not run, then the problem most likely is on the Dometic control side.

- If the A/Cs won’t run:
  1. Verify that the Zone(s) are calling for cool and that the set points are lower than the Zone(s) ambient temperature.
     If not, then adjust the settings accordingly.
  2. Verify that AC power is available and that the circuit breakers are not tripped.
     Reset the breakers if tripped.
  3. Verify that the Climate screens for the zones are not displaying “Wait” and that the white snowflake or fan icons are not displayed.
     If the icons are being displayed and the heat A/Cs will not run, then the problem most likely is on the Dometic control side.

Oasis System Issues

➢ It is important to determine if the fault lies in the SilverLeaf or the Oasis control system.

- If the Oasis Burner will not Light:
  1. Verify that the Oasis button is highlighted.
     If not, then press the Oasis button.
  2. If the Burner still does not light, then plug in the Oasis Remote Control in place of the SilverLeaf Control and set the Burner Switch to on.
     If the Burner still does not light, then the problem lies in the Oasis system.

- If the Oasis Burner will not stay On:
  1. Verify that the Oasis button is highlighted.
     If not, then press the Oasis button.
  2. If the Burner command turns off by its self, then verify that the software version for the OA600 (Oasis) Control Board is correct.
     If the software version is not correct, then update the software to the correct version.

- If the Oasis AC Heating Elements will not turn On:
  1. Verify that the AC #1 and or AC #2 buttons are highlighted either Blue (On) or Yellow (Shed).
     If not, then press one or both AC buttons.
  2. If either AC button is highlighted yellow, then the Oasis coolant is at temperature, the Heater Coil is shed or there is no AC power available.
     A. To determine if the Oasis coolant is at temperature, turn on a hot water tap until the water temperature drops. If the AC button turns blue, then the Heater coil is working correctly.
B. To determine if the Heater Coil is shed, go to the Load Shed screen and look at the AC Heat status. If the Heater Coil is shed, then change the shed configuration values to allow the Heater Coils to turn on.

C. To determine if AC power (Shore Power of Generator) is available, look at the AC power readings on the Home screen. If the Home screen indicates that there is AC power available, then verify that the main Oasis unit is turned on and that the AC circuit breakers are on.

Holding Tanks, Water Pump and Auto Fill Issues

- **If the Holding Tank Displays do not Read Correctly:**
  1. Verify that the Tank is empty, then go to the Tank Configuration screen and press the “Set Dry Point” button associated to that tank.
  2. If the Tank still does not read correctly, then verify that the TM102 Tank Configuration settings are correct. Including that the “CPI” setting is set to 10. Correct settings as required.

- **If the Water Pump turns off during Auto Fill:**
  1. Verify that the TM102 AutoFill Configuration “Do Not Turn Off Water Pump When Filling” check box is checked.
     - If not, check the box and verify that the pump no longer turns off during the Auto Fill cycle.

- **If the Water Pump will not Turn On:**
  1. Verify that the Water Pump button is highlighted Blue.
     - If not, then press the Water Pump button.
  2. If the button is highlighted, then verify that the Water Pump Relay (#3) on the 12V Relay Interface Board is energized.
     - If the relay is on, then the associated LED (#3) located on the bottom of the board will be lit.
     - If the LED is not lit, then verify that the wiring is correct (see appropriate wiring diagram). Also, verify that the relay can be energized by actuating the momentary switch (#3) on the relay board.
  3. If the relay will not energize manually, then check that DC power is available on the board.
     - If DC power is not available at the board, then supply the missing power and re-test.
  4. If there is DC power Available to the board and the relay will not energize, then replace the board.
  5. If the LED is lit, then verify that the Fuse is not blown and that it is in the correct location.
     - If the fusing is correct and the relay is energized, then the problem is in the pump or the wiring.

- **If the Auto Fill will not Fill:**
  1. Verify that the Auto Fill button is highlighted Light Blue.
     - If the button is not highlighted, then press the Auto Fill button and check if the tank is now filling.
2. Verify that the City Supply is connected and the supply valve is turned on.
   If City Supply is not available at RV connection point, then correct supply issue and check if the tank is now filling.

3. Verify that the Water Supply Valve in the Water Works Compartment is set to the Auto Fill position.
   If not, then set the valve to the appropriate position and check to see if the tank is now filling.

4. Verify that the tank is not filled to or above the Fill Value Configuration setting.
   If the tank level is above the set point, then change the set point to a higher value to fill the tank.

5. Verify that the Auto Fill Relay (#2) on the 12V relay Interface Board is energized.
   If the relay is on, then the associated LED (#2) located on the bottom of the board will be lit.

6. If the LED is lit, then verify that the Fuse is not blown and that it is in the correct location.
   If the fusing is correct and the relay is energized, then the problem is in the Solenoid Valve or the wiring (see appropriate wiring diagram).

7. If the LED is not lit, then verify that the relay can be energized by actuating the momentary switch (#2) on the relay board.
   If the relay will energize manually, then verify that the City Supply Pressure Switch is supplying +DC voltage to the TM102 Input #10.

8. If the pressure switch is not supplying +DC voltage, then verify that voltage is being supplied to the switch.
   If voltage is available to the switch, then verify that City Supply pressure is present at the switch.

9. If City Supply pressure is not available at the switch, then check that the switch is plumbed correctly.
   Correct any necessary plumbing issues and recheck pressure at switch.

10. If +DC voltage is present on the TM102 Input #10, then using the RVC Terminal Program IO function, verify that Input #10 is active.
    If the input is active, then the problem is most likely in the TM102.

11. If the TM012 appears to be faulty, then verify that the configuration is correct.
    If the configuration is correct, then replace the TM102.

12. If the LED is not lit and the relay will not energize manually, then verify that DC power is available on the board.
    If DC power is available to the board, then replace the board.

- **If the Auto Fill turns off without filling tank**
  1. Verify that all of the diagnostic procedures from the “If the Auto Fill will not Fill” topic have been completed.
     Correct for any of the previously listed issues restart the Auto Fill function.
  2. Verify that the Auto Fill configuration Timeout value is set to at least 5 minutes.
     If the configuration is not correct, then correct it and retest the Auto Fill function.
Note: The Auto Fill function will timeout if the tank does not fill fast enough. This is because the control system assumes that there is a leak in the tank fill plumbing and turns off the Auto Fill after the timeout interval.

Generator Issues

- **If the Generator will not Start from the remote switches**

  1. Verify that the Generator will start from the switch located on the generator housing.
     
     If the Generator will not start directly from the generator switch, then the problem resides in the generator. Correct the generator issue and retest.
  2. Verify that the Generator will start from the Touch Screen.
     
     If the Generator will not start, then verify that the Generator Harness is correctly connected at the TM-102 and the Generator. Correct the wiring as required, then retest that the Generator will start from the Touch Screen.
  3. If the Generator will start from the Touch Screen, then verify that the remote switch (Dash, etc.) wiring is correct and that the switch is supplying a ground signal to the TM-102 Input 2.
     
     Correct any generator wiring issues and retest the Generator remote start/stop functions.
  4. If the Generator will not start from the Touch Screen, and you have completed the previous test, then verify the TM-102 configuration.
     
     Correct the configuration as required and retest generator start/stop function.
  5. If the Generator still will not start, then the problem most likely is in the TM-102 Module.
     
     Replace the Module and retest the Generator start/stop function.

- **If the Generator will not start from the Touch Screen**

  1. See the previous section for corrective actions.

- **If the Generator will not Auto Start**

  1. Verify that the Generator Auto Start Function(s) are Enabled and the Trigger Point values are set correctly. Verify that the Safety Lock function is off and retest Auto Start Function.
     
     If the Generator Auto Start Function still fails, then see “If the Generator will not Start from the remote switches” section for corrective actions.