

Master Off



Touch Screen  
to Continue

## Horizon Installer's Manual



[www.infparts.com](http://www.infparts.com)

1-800-362-6224

# Horizon

## Table of Contents

What's New.....	3
System Components.....	4
Installation Instructions.....	5
Software Setup.....	5
Screen Setup.....	5
Horizon System Setup.....	5
Entertainment Setup.....	7
Select Layout.....	7
Training the Universal IR Remote Control buttons.....	8
Lighting Setup.....	9
Change Name.....	10
Set Light Type.....	10
Dimming Rate.....	10
Setup Output.....	11
Climate Setup.....	13
Auto Climate Setup.....	13
Setup HVAC.....	14
Diagnostics.....	15
Re-Start TCP.....	16
Reset IOM.....	16
Exit.....	16
Setup Lightsync.....	17
Diagnose.....	18
Erase Cache.....	19
Show-Hide Options.....	19
Faults.....	20
Custom Logo.....	21
Suggested System Wiring Diagrams.....	22-25
Troubleshooting.....	27
IOM System Backup.....	28
TouchPanel Backup.....	28

**KEYPAD CODES QUICK REFERENCE: See page 28 for detailed instructions.**

**Here is a list of the keypad screen codes:**

8191-Enter Setup Menus

8670-Initiates Display Software Update when a USB stick is inserted

8671-Initiates IOM Software Update when a USB stick is inserted

1200, 1201, 1202, 1203-Initiates IOM configuration backup **save/load** when a USB stick is inserted.  
Up to four distinct configurations can be **saved/loaded** (1200 through 1203)

1300, 1301, 1302, 1303-Initiates Horizon V3 display configuration backup **save/load** when a USB stick is inserted.  
Up to four distinct configurations can be **saved/loaded** (1300 through 1303)

## **What's New...**

### **Touch Screens**

- High brightness, wide viewing angle screens with Capacitive touch greatly improves the display quality.
- Driver and Passenger screens are both 7" displays.
- Displays have NO RUBBER GASKETS to fall out!

### **Improved IR transmitter**

### **Upgrading a vehicle from SmartTouch 2.0 to Horizon**

- Replaces both the old 7" screen and the 4.3" screen with new 7" screens.
- Uses existing wiring and IOM already in your vehicle.

#### **And more...**

- Updated Graphics
- Improved Performance
- Upgraded system setup options.
- Ability to show or hide any unused button categories.
- Increased Current capacity on the Lighting channels.
- Upgraded 'Jumpstart' Logic to prevent false triggers.

# System Components

A: 7" Driver Screen



B: 7" Passenger Screen



C: Input/Output Module (IOM)



IOM (Covers removed)



## Included Accessories:

- Wire harnesses
- Universal Remote Control Transmitter
- Temperature Sensor (Thermistor)
- Intercom Speakers
- Intercom Microphones

## Optional Equipment:

- RGB Lighting Modules

# Installation Instructions

## Software Setup

All of the screens are identical and can be configured through software to be either a driver screen or a passenger screen. You can have as many passenger screens installed as you want, but only one screen per vehicle can be setup as a driver screen.

Information for the Lighting channels, Partitions, and the Climate setup is stored on the IOM. These channels can be configured using any of the touchscreens, and the data will be automatically shared between any other touchscreens attached to the system. Other settings that must be done on all screens individually are as follows:

Configuration that must be performed on each screen attached to the system:

- Selecting if a screen is a Driver Screen or a Passenger Screen.
- Showing or Hiding Individual Screens and Icons.
- Showing or Hiding Lock buttons for the Partitions and Intercom.

## Screen Setup

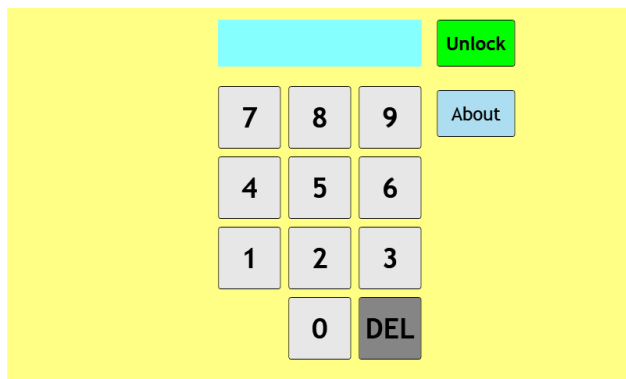


Figure 1: Unlock Screen

To enter Setup Mode, press and hold the top left corner of the screen on any page. A keypad will appear on the screen to allow you to unlock Setup Mode.

Enter the setup code '8191' and then press 'Unlock' to unlock the screen and enter setup mode.

Press the 'About' button to get System version information and serial numbers. No code is required.

(Note: To copy files from a USB drive onto the system, Insert a the USB drive. The same keypad will appear. Again, use code '8191' to enter file copy mode. Other options are '8670' to upload new software to the Touchscreen, or '8671' to upload new software to the IOM. See the Appendix for more information.)

## Horizon System Setup

Each option is described in detail in the following pages. Here is a quick overview:

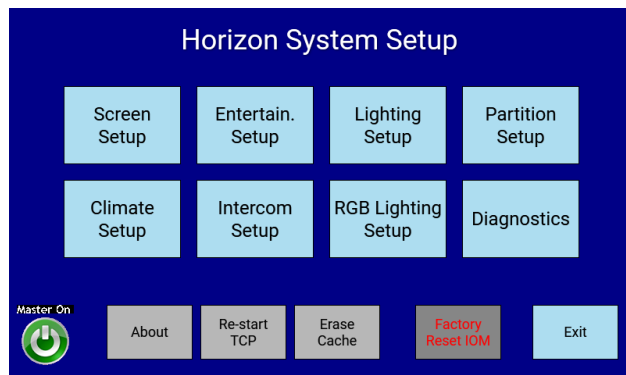


Figure 2: Horizon System Setup Screen

**Screen Setup** – Select if the screen is a Driver or Passenger screen, and select which button options display at the bottom of each screen.

**Entertainment Setup** – Select the remote control button layout and learn remote control commands.

**Lighting Setup** – Name and Configure lighting channels.

**Partition Setup** – Name the partition channels, and select which outputs they control.

**Climate Setup** – Setup HVAC fans and modes.

**Intercom Setup** – Allows you to enable Lock/Unlock controls for the intercom.

**RGB Setup** – Allows you to show or hide various options for attached LED lighting.

**Diagnostics** – Clear faults from channels.

**Master On/Off Button** – Turn the IOM Master Power On or Off.

**About** – System Information and Version Numbers.

**Restart TCP** – Restarts the Touchpanel without having to restart the entire system.

**Erase Cache** – Clear the graphics cache to fix any display issues after updates have been made.

**Factory Reset IOM** – Reset the IOM back to factory defaults. Removes all IOM customizations, such as lighting channel names, HVAC setup, Auto-Climate Setup, External Switch setup, etc. You should make a backup of all your settings before using this option.

**Exit** – Exit Setup mode / Return to normal mode.

## Screen Setup

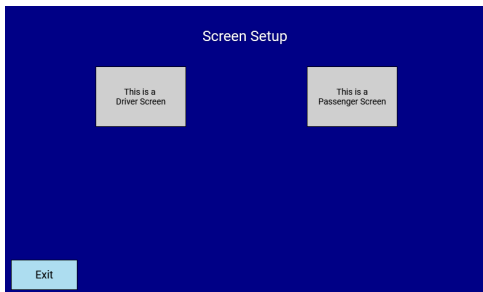


Figure 3: Driver / Passenger Screen Selection

This will allow you to choose whether the screen is a Driver screen or a Passenger screen. Only configure one screen as the Driver's Screen per vehicle. A system can have as many Passenger Screens as you want. The Driver's screen displays the Driver's Option Icon which allows Driver specific functions such as selecting the Theme, entering messages that will be displayed on the passenger screens, or remotely turning off the passenger screens.

The next setup screen is the Show/Hide Buttons screen. If there are options that are not installed on your vehicle, you can hide the associated pages and buttons that are displayed on the bottom of the touchscreen.

The options are to show or hide: InMotion, Entertainment, Lighting, Climate, Intercom, and Partition. For each option, there is a button that will allow you to 'Show' or 'Hide' that option. The 'Dim Screen' button cannot be hidden on the Passenger Screen. 'In Motion' and 'Options' cannot be hidden on the Driver's Screen. Any button that you chose to hide will be removed and the other buttons will be realigned to fill the space.

After making all of your selections, press the 'Finish' button. Several files will be copied, then select 'Finish and Wipe Cache' to complete the setup.

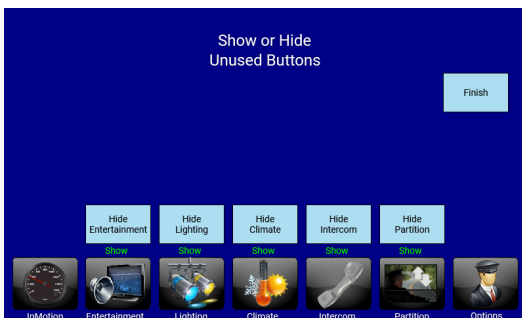


Figure 4: Driver Screen Options

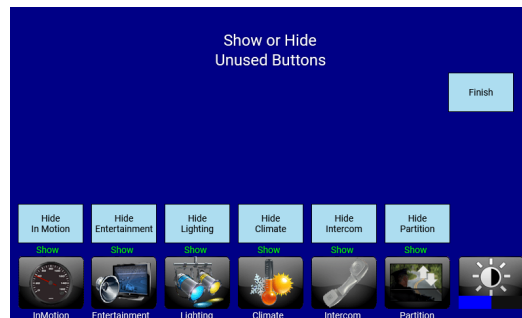


Figure 5: Passenger Screen Options

## Entertainment Setup

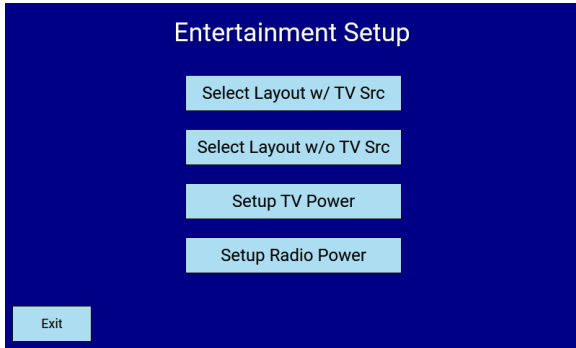


Figure 6: Entertainment Setup Screen

### Select Layout w/ TV Src

Six layouts are available for various remote controls. This option includes a TV Source button.

### Select Layout w/o TV Src

This option does not include the TV Source button.

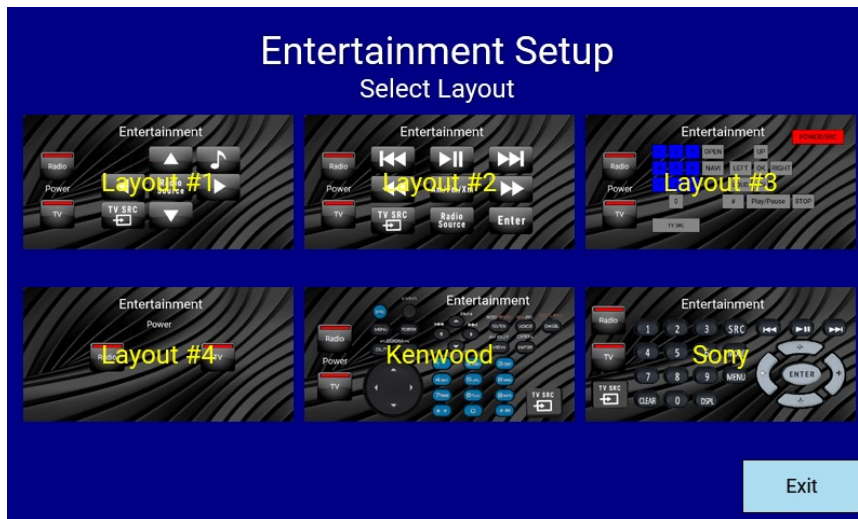
### Setup TV Power

If you do not have a TV installed in the vehicle, or the TV power is not controlled by the Horizon System, you can hide the TV Power button on all screens.

### Setup Radio Power

If you do not have a Radio installed in the vehicle, or the Radio power is not controlled by the Horizon System, you can hide the Radio Power button on all screens.

## Select Layout

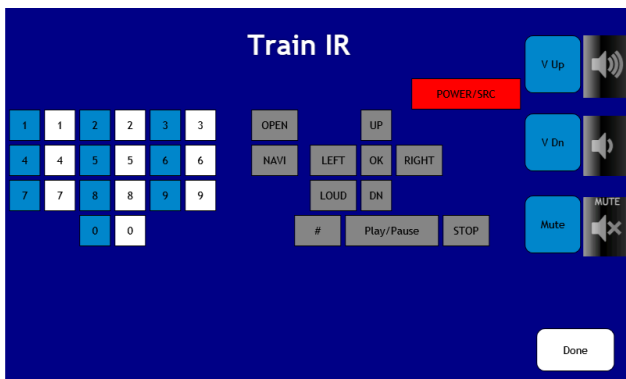
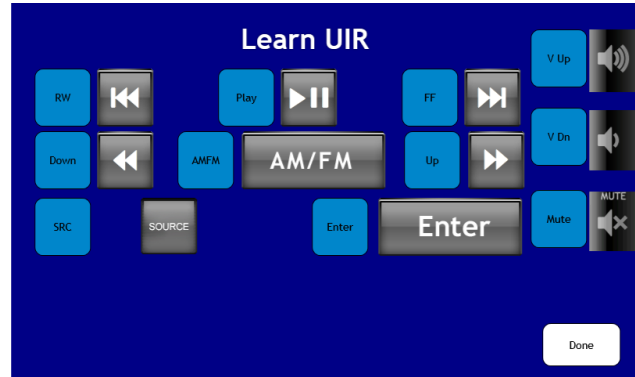
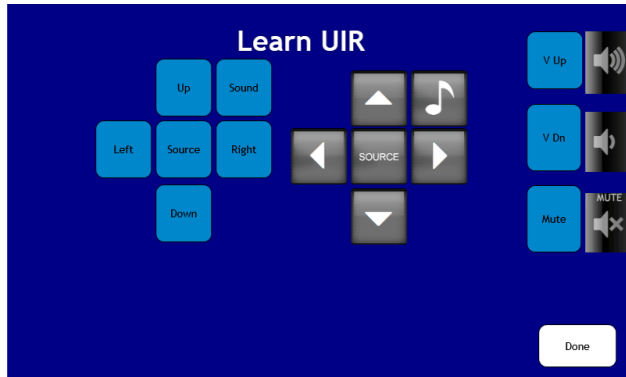


Press the desired layout to select it. The next screen will allow you to train the buttons for your remote. "Layout #2" and "Sony" are pre-programmed for a Sony remote control, but can be reprogrammed for any remote.

Each screen has connections for two IR transmitters. Transmitters can be attached to any or all of the screens in the vehicle. Every screen that has a transmitter attached to it will either have to be trained using the device's original remote control, or previously stored codes can be loaded via USB.



## Training the Universal IR Remote Control buttons



### Advanced:

**To re-use the learned commands on multiple vehicles with the same radio, the commands can be stored to a USB drive. After you have completed all of the training, insert a USB drive, and enter code '1309' and then 'Save Setup'. To load these codes onto another screen, use code '1309' and press 'Load Setup'.**

The blue buttons are the 'Learn' buttons, and the graphical buttons are the 'Send' buttons.

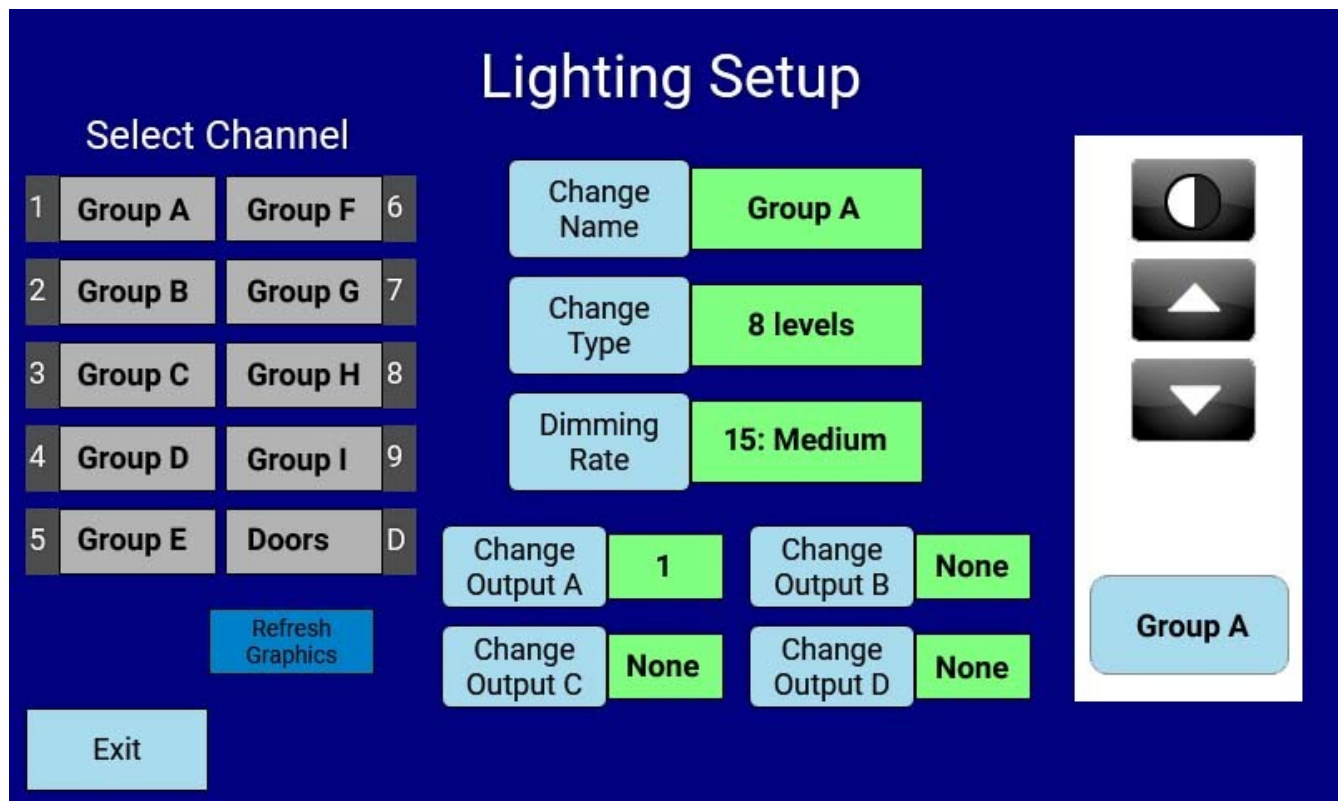
To teach the system a button, press the blue button. The button will turn light blue when it is waiting to learn a command. Aim the remote control at the IR receiver on the upper front of the touchpanel. When the system learns the button, the button will return to the original blue color. You can then press the corresponding 'Send' button to verify the button has been learned correctly.

When all of the buttons have been trained, press the 'Done' button.



## Lighting Setup

On the left side of the screen is a list of all the lighting channel groups. Press the button to select the channel group that you want to edit. When a channel group is selected, the middle of the screen will show the options for that group. The control on the right side will activate the channel, and will change depending on the 'Type' of the channel.



**Select Channel** – Channel groups one through nine can be renamed and reconfigured. 'Doors' allows you to configure which outputs are activated when the door switch is turned on. Pressing the channel name selects the channel group for configuration. The buttons in the middle will change to the selected channel, and the control on the right will activate the channel. To hide a channel, set all of the Outputs to 'None'.

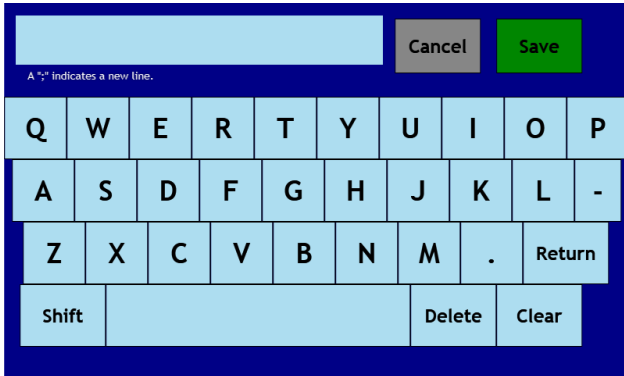
**Refresh Graphics** - Resets the graphics cache to correct any display issues after changing lighting settings.

**Change Name** – Brings up a keypad to change the displayed channel name.

**Change Type** – Changes the type of the output (ie. On/Off, Momentary, Levels)

**Dimming Rate** – Each channel can turn on and off at a fast or slow ramp rate.

**Change Output** – Each button can control multiple outputs.



## Change Name

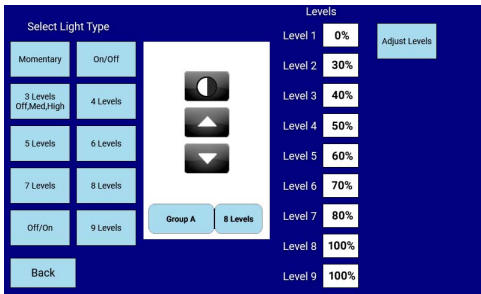
A keypad will be displayed and you can enter the new channel name.

- 'Clear' will remove all of the current text.
- 'Delete' will delete the last character.
- 'Return' will insert a new line. Line breaks are shown as a semicolon in the edit box.
- 'Shift' will switch to upper case letters.
- 'Cancel' will undo any modifications and return to the previous screen.

-'Save' will store the new channel name and return to the previous screen.

Once the name change is completed, the Touchscreen sends the new name to the IOM module. The IOM module will then store the new name, and then send it out to all of the other attached screens. It may take up to a minute for the new data to be displayed correctly on all devices.

## Set Light Type



**Momentary** - The outputs are ON only when the button is held.

**On/Off** - The outputs toggle between Full Off and Full On.

**3 Levels** – Off, Dimmed, or On

**4 Levels** – Off, 3 levels of Dimmed or On

**5 Levels** – Off, 4 levels of Dimmed or On

**6 Levels** – Off, 5 levels of Dimmed or On

**7 Levels** – Off, 6 levels of Dimmed or On

**8 Levels** – Off, 7 levels of Dimmed or On

**8 Levels** – Off, 7 levels of Dimmed or On

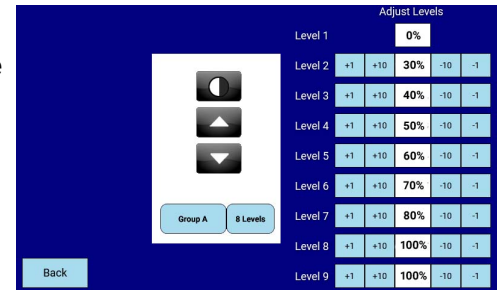
**9 Levels** – Off, 8 levels of Dimmed or On

**Off/On** – Same as On/Off, but the Output is inverted. (The Output is ON when the switch is OFF)

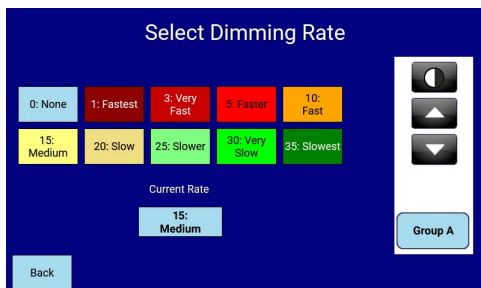
### Adjust Levels

If the type has levels, the Output levels are shown on the right side of the screen and can be adjusted up or down. Select 'Adjust Levels' to get to the adjustment page. A level cannot be set higher than the next level higher, or lower than the next level lower.

When you are done setting up the light type and adjusting the levels, select 'Back' to return to the main lighting setup screen.



## Dimming Rate



Dimming rate is the amount of time the light takes to go from On to Off or Off to On. The dimming rate can be adjusted between None, which is instant on/off, to very slow.

## Setup Output

**Setup Output A**

Selected Input Channel: Channel One

Current Output: 1

Assign a new output:

1 2 3 4 5 6 7 8 9

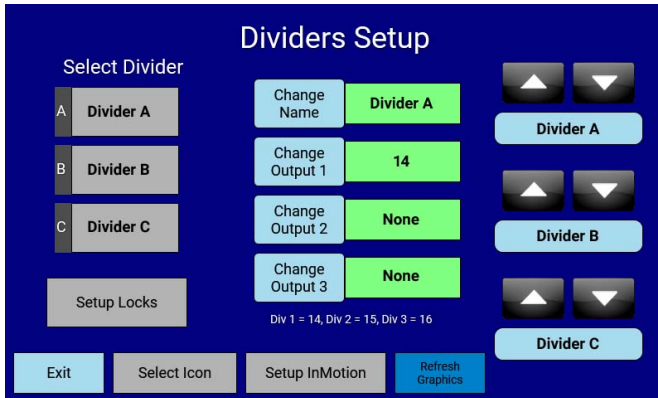
None

Exit

Each Button can control up to four outputs, labeled A through D. The default setup is for Channel One to Control Output One, but the Button number and the Output numbers do not have to match. Outputs can also be controlled by more than one button.

## Partition/Dividers Setup:

The Horizon system can control three configurable divider outputs. Each button can be given a custom name, and can control one, two, or all three outputs.



### Change Name

Each partition/divider can be given unique names. For example: 'Moonroof', 'Glass', 'Divider', 'Left Seat/Right Seat', or 'Curtains'. The names will be automatically shared with all other screens in the vehicle.

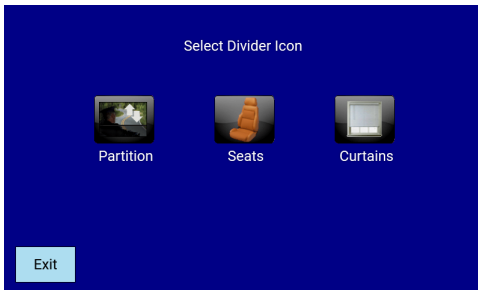
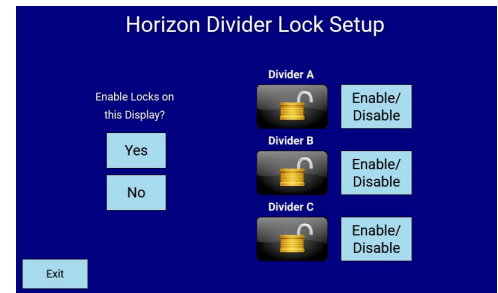
### Change Output

Each set of buttons can control either one, two, or three of the outputs. If a button controls multiple outputs, ensure that the total current draw remains below 25A.

## Setup Locks

Divider Lock buttons can be shown or hidden from any screen. For a party bus, the driver might want to be able to lock out the passengers control. For an executive vehicle, the passenger may want to be able to lock out the drivers control. Each screen in the vehicle must be configured individually for this option.

Each divider channel lock can be individually enabled or disabled.

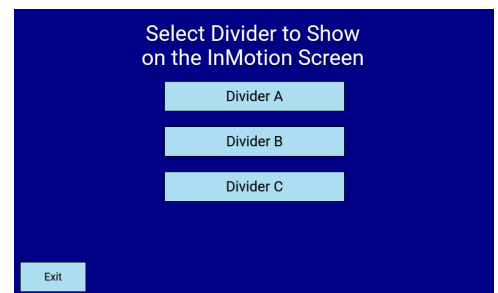


### Select Icon

You can change the divider Icon based on what the dividers are controlling. Options are Partition, Seats, or Curtains.

## Setup InMotion

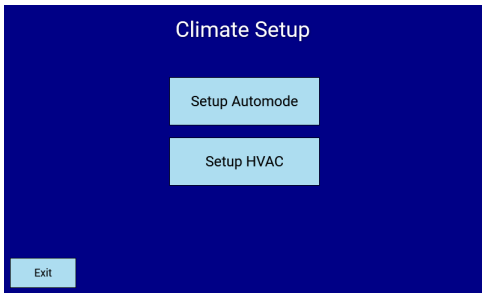
You can select which partition buttons will be displayed on the InMotion screen. This selection needs to be done on every screen that shows an InMotion page.



## Refresh Graphics

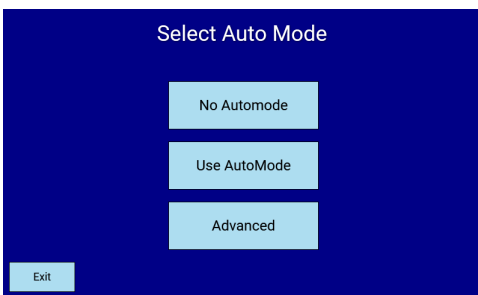
After making changes to the partition/divider setup, the graphics cache will automatically be cleared within a couple of minutes. This option allows you to clear the cache immediately.

## Climate Setup



**Setup Automode** – Allows you to show or hide the Auto Mode button.

**Setup HVAC** – Allows you to configure the HVAC operating modes.

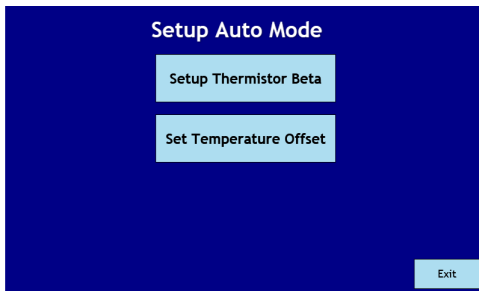


## Auto Climate Setup

**No AutoMode** – Hide the Auto Climate Controls.

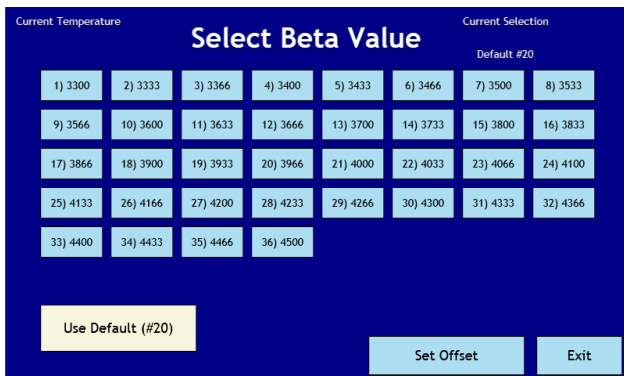
**Use AutoMode** – Display the Auto Climate Controls on the screen.

**Advanced** - xx



**Advanced** - When 'Use AutoMode' is selected, the following two configuration options are shown:

## Setup Thermistor Beta

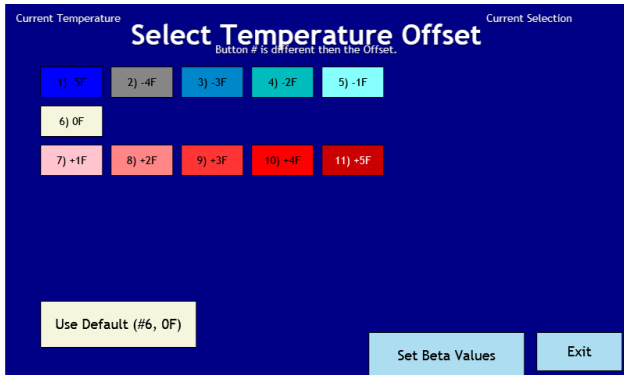


If you use the Thermistor that is shipped with the system, use the Default Value button.

Any NTC 10K Thermistor can be used with the system. Depending on the thermistor that you use, the Beta value may need to be adjusted. The Beta value is available from the Thermistor manufacturer. The default value for the factory supplied thermistor is 20) 3966. If you are using the supplied Thermistor, do not change this value.

Note: The button number is shown in the 'Current Selection' window, NOT the actual beta number.

## Set Temperature Offset



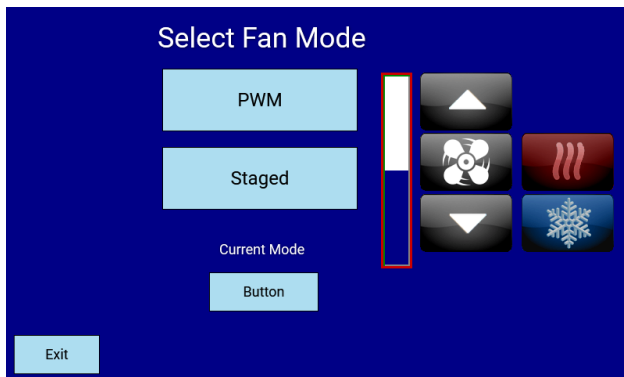
The measured temperature can be offset by up to plus or minus five degrees Fahrenheit.

Note: The button number is shown in the 'Current Selection' window, NOT the actual temperature offset.

## Setup HVAC

Blowers can be configured for either PWM or Staged output.

PWM allows smooth steps between fan speeds. The motors should be wired to the High speed connectors. Staged output turns on the outputs in steps, for 4 fixed speeds. This is used with motors that have High, Medium, and Low speed connections and fine speed control is not wanted.



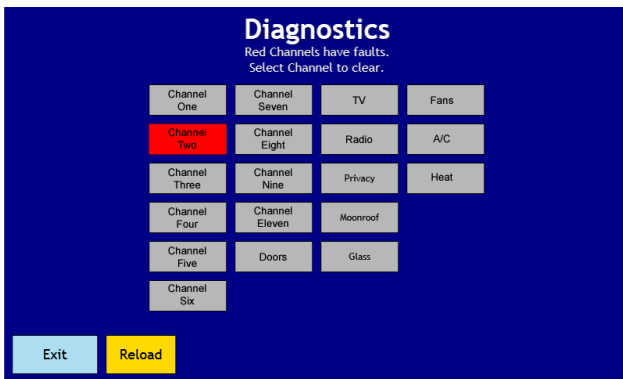
For both PWM and Staged modes, different fan outputs can be selected for when the AC is on, the Heat is on, or only the Fan is on.

The buttons on the right hand side of the setup screens allow you to test the system as you configure it.

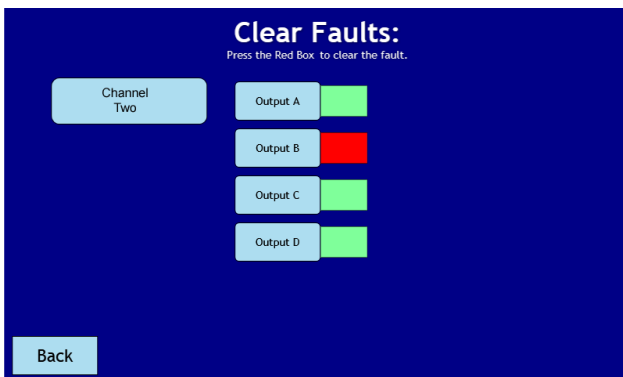
## Diagnostics

The IOM uses Smart FET technology instead of old fashion relay blocks and fuses. Every output channel is protected from Overloads and short circuits by the Smart FETs. Any channel that draws more than the allowed amount of current will automatically trip a fault for that channel. Any button that controls the faulted output will turn dark gray, and will be disabled until the fault is cleared. Clearing the fault is equivalent to replacing a blown fuse in a non-smart system. This means that no fuses are required, and they never have to be replaced.

Faulted channels can be cleared from either the Setup screen on the Passenger's Display or the Setup Screen on the Driver's display. If a channel is faulted, the cause of the fault must be fixed before clearing the fault. Therefore, the Driver is able to see that a channel is faulted, but must enter the setup menu to clear the fault.



When a fault has been triggered, it will show up as a red channel on the Diagnostics page. In this example, Lighting Channel Two has caused a fault. Press the button to see which output on Channel Two caused the fault.



The faulted output will show in red. Inspect the wires and devices that the output channel is attached to, and fix any issues. Then, to clear the fault, simply press the red button. The channel will be re-enabled, and the grayed out button will return to normal operation. If the channel faults again, there is still either a short circuit in the wiring, or the load attached is above the rating for the channel it is attached to.



## About

This will show the system version information. When troubleshooting issues, Infinite Innovations may ask you to retrieve this information. Also, before and after doing a firmware update you should take note of the reported versions. After an IOM update, you may have to re-load this page to see the updated version number. This may take a few seconds before it is updated.

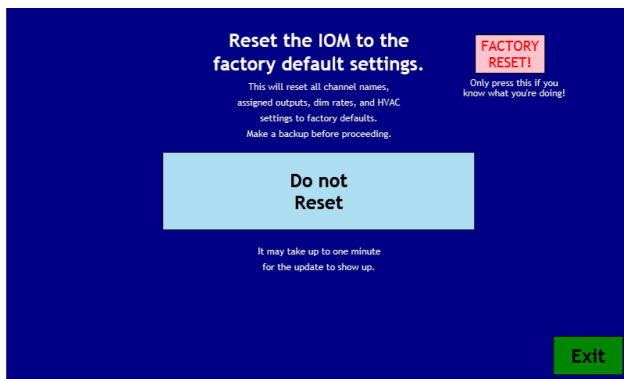
## Erase Cache

The graphics are stored in a Cache to increase the graphics performance of the system. Occasionally, the cache may get corrupted, or a Setup change may invalidate the data in the cache. This button clears all of the stored cache data. If the cache is wiped, it will be re-built automatically each time a screen is loaded. During this re-build, system performance will slow down. It will return to the normal speed the next time that the page is loaded.

## Re-Start TCP

This does a power on reset of this Touch panel. It is safe to do, and sometimes is required after certain setup changes.

## Reset IOM



This button resets the IOM back to the factory settings. If you have decided that you don't like the way that you have your vehicle configured, use this option to start over.

It is highly recommended that you backup your system configuration before using this option.

If your system is operating normally, do not use this option.

## Exit

This exits the setup screen, and returns the system to normal operation. If you are completely finished with the installation, you may want to use the 'Re-Start TCP' option, so that all setup codes are cleared, and so that you can verify the system functions as you expect.

## Setup Lightsync

To Enable or Disable the buttons for a Litesync RGB module, select 'Setup Litesync Controls'.

**'Shows Litesync controls'** - This will add a button to the lighting screen that takes you to the Litesync control page.

**'Hides Litesync controls'** - If your vehicle does not have a Litesync module, select this to hide the control buttons. The button is hidden by default.

## Diagnose

The IOM uses Smart FET technology instead of old fashion relay blocks and fuses. Every output channel is protected from Overloads and short circuits by the Smart FETs. Any channel that draws more than the allowed amount of current will automatically trip a fault for that channel. Any button that controls the faulted output will turn dark gray, and will be disabled until the fault is cleared. Clearing the fault is equivalent to replacing a blown fuse in a non-smart system. This means that no fuses are required, and they never have to be replaced.

From the setup menu, you can clear system faults. Any channel that turns red has a fault. Pressing the faulted channel will show you which output is faulted. Examine everything attached to the associated output, clearing any short circuits or damaged components. When the fault has been removed, press the red box next to the faulted output to clear the fault and re-enable the channel.

Faults can also be viewed from the In-Motion Screen, but the driver does not have the ability to clear the fault without the Setup Code. Faults can only be cleared from the setup page.

## **Erase Cache**

Clear the graphics cache to fix any display issues after updates have been made.

After the cache has been erased, the system will need to re-build each screen. The screen re-build is noticeably slower than normal operation, but the next time that screen is shown, it will redraw very quickly.

## **Show-Hide Options**

If an option is not installed on your vehicle, you can hide the control button from the Driver Screen. Just like on the Passenger Screen Show-Hide Options page, you must touch through each button and select 'Show' or 'Hide'. When all of the selections have been made, the system copies the selected files to show and hide the buttons.

When a button is hidden, an associated control on the InMotion page is also hidden.

## Faults

What is a fault?

Smart touch is unique in that there are no fuses. It is protected by software so that when there is an over current situation the system throws a fault and shuts down the associated circuit. When a fault occurs, the system will display a red warning (output fault) on the driver display. The associated circuit control button will be blacked out and will not operate.

How to reset a fault.

Faults are reset from the display screens. Enter setup mode by holding the upper left corner of the display for approximately 5 seconds. A keypad display will pop up. Type in the code 8191 then press unlock. The system will display a Horizon Setup Screen. Press the block labeled Diagnostics. The system will display a screen with all output blocks. If a fault has been detected the associated block will be red. Make note of what this block is labeled so if it repeats you know what output is causing the problem. Press the red block and the system will display another screen. Press the red block again to clear the fault. The Red block should turn green. Press the back button to go to the previous menu then press exit to go to the setup menu.

If your system continues to throw a fault on the same output you need to investigate to see what is drawing too much current and correct it as continued resetting can damage the system.

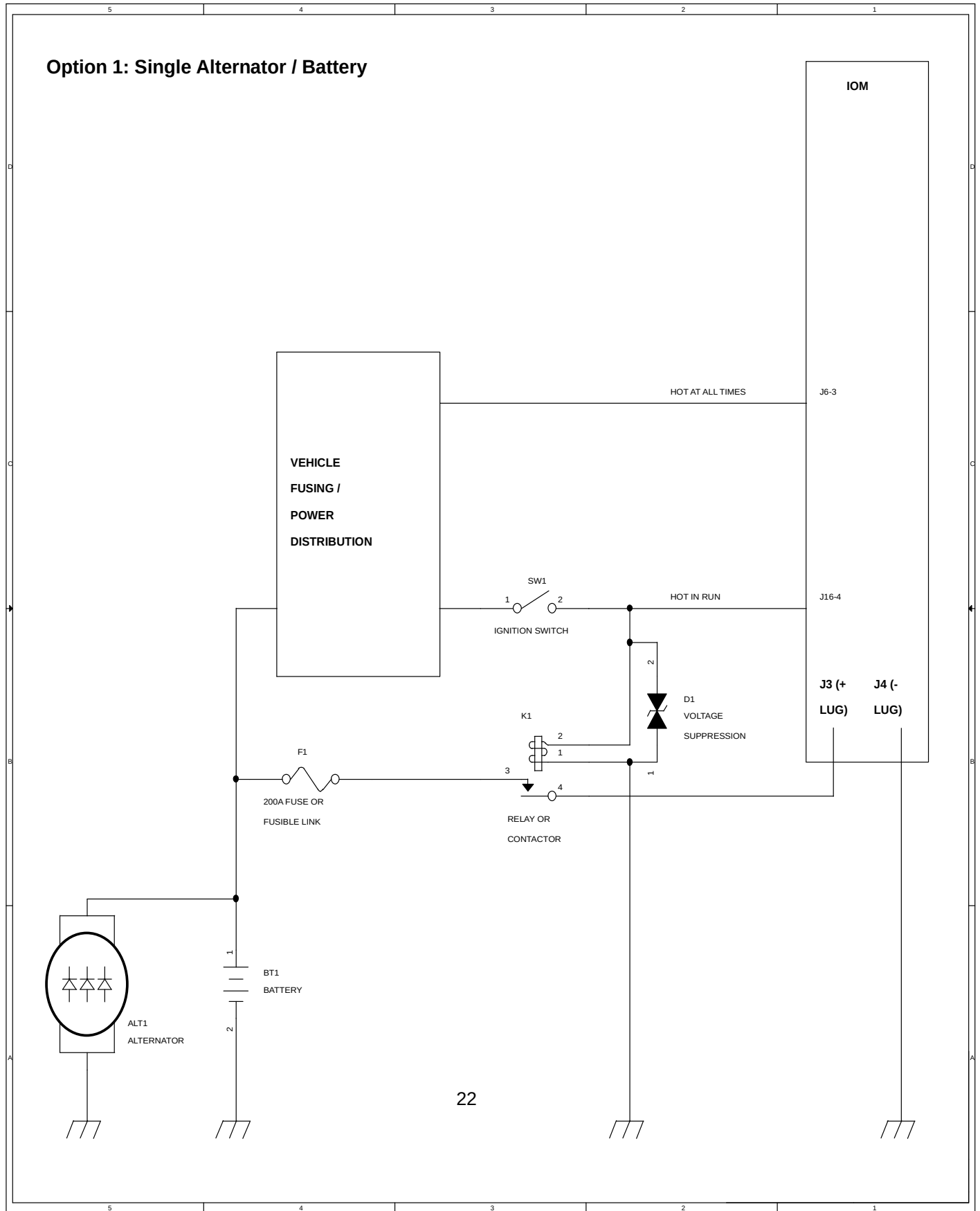
## Custom Logo:

### **Custom logo procedure for all Horizon displays, driver or passenger:**

1. Make sure you have a high quality image; it must be the correct size and format.
2. Use an image sizer to make sure that your finished image is 800 x 480 pixels in a GIF format and name it logo.gif
3. When you are done you should have an image file named logo.gif and the properties will have a size of 800 x 480.
4. Create a folder on your USB stick named custom.
5. Within the folder (custom) just created, create another folder named images. Save or drag and drop your image to this folder (images). Example file path: USB stick→custom→ images
6. With the display powered up insert the USB stick into the port on the display.
7. When the keypad pops up enter 1300 and then press unlock.
8. Choose the button that says LOAD SETUP.
9. After the image loads remove the USB stick
10. Touch through to the main screen then press and hold the upper left corner until the keypad pops up (approximately 5 seconds)
11. Enter 8191 and press unlock.
12. Press the ERASE Cache button, and then press the re-start TCP button.
13. The screen will re-start and it will load the new logo image.

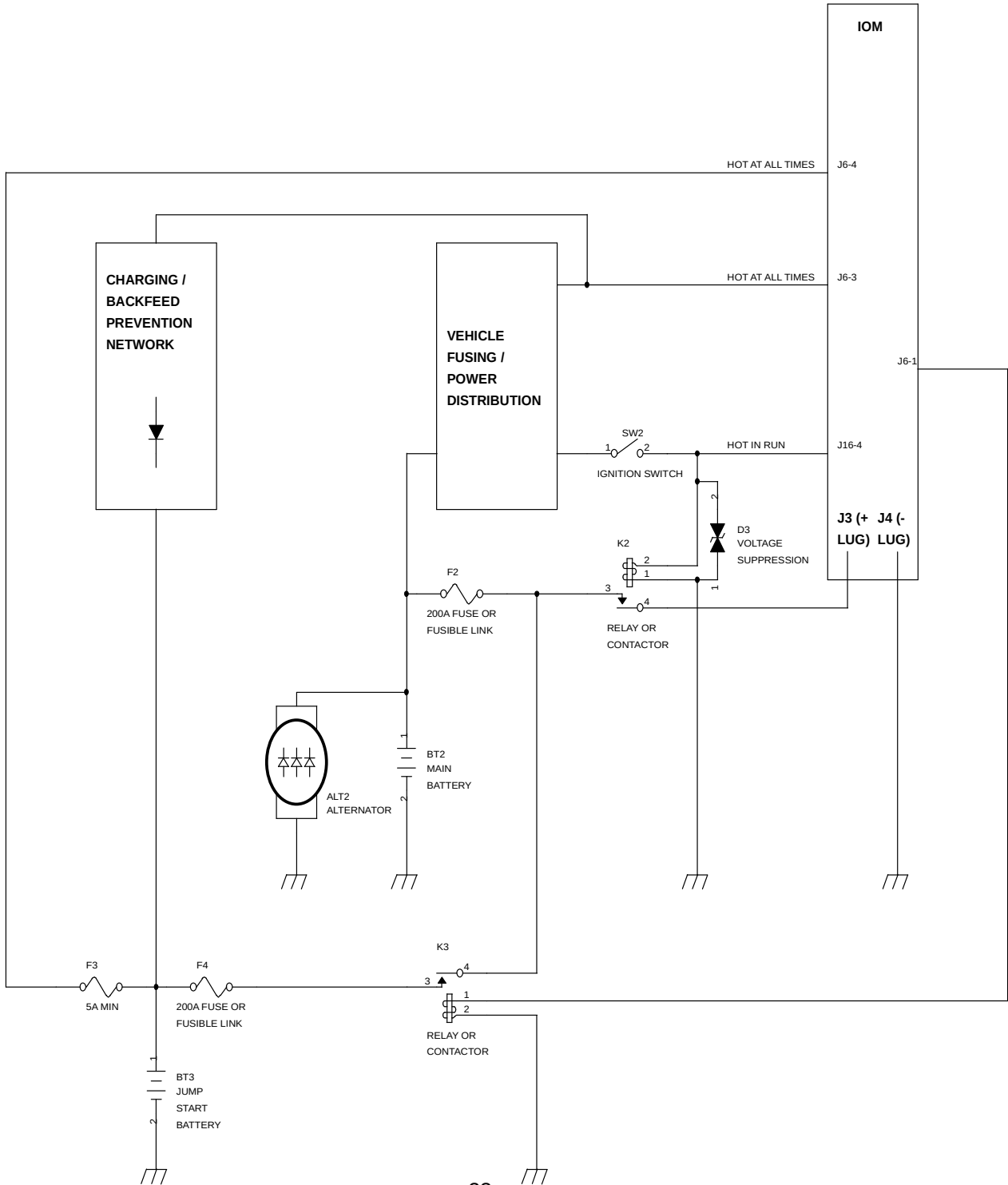
# Suggested System Wiring Diagrams

Option 1: Single Alternator / Battery

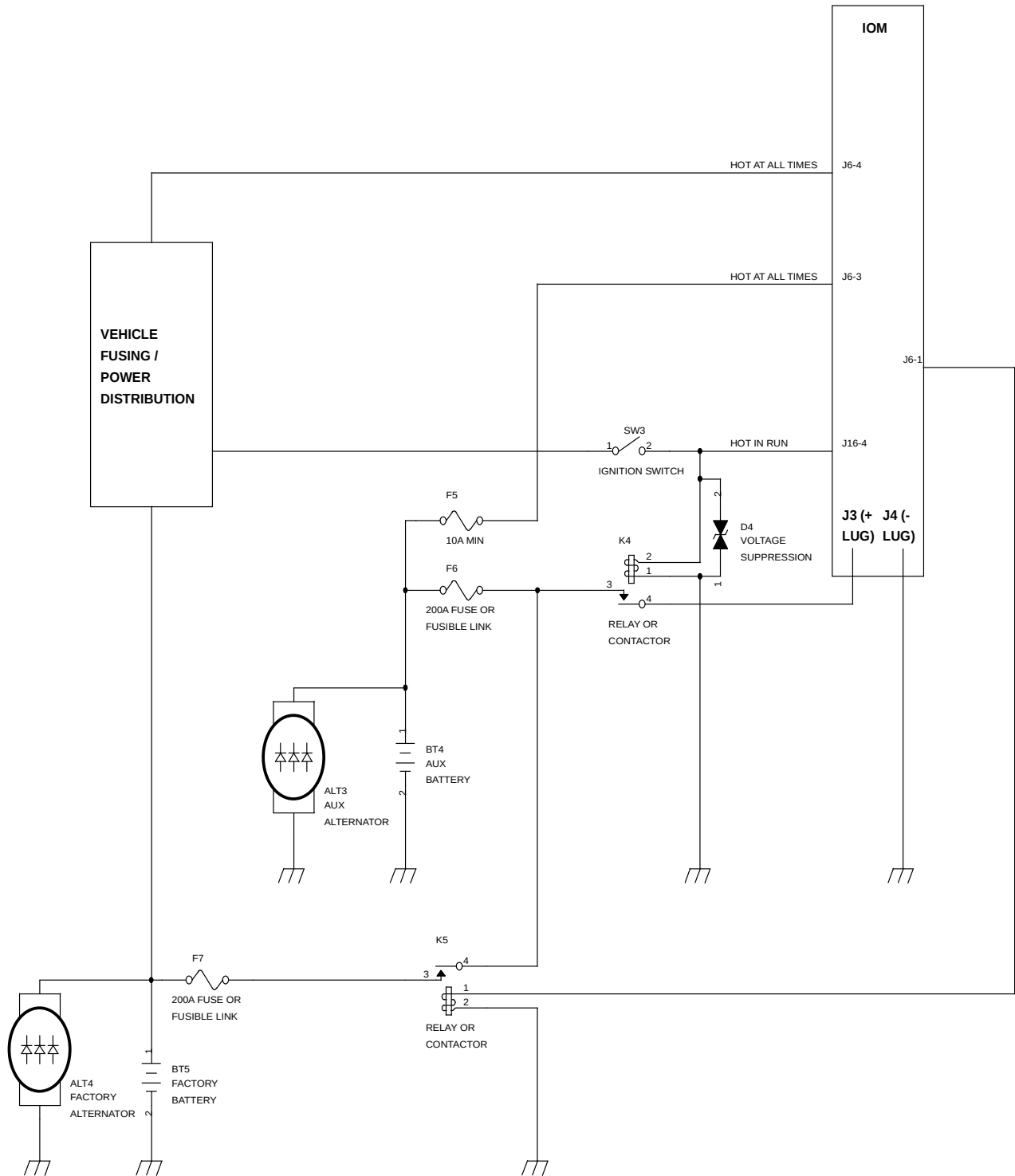




## Option 2: Single Alternator, Main Battery, Jump Start Battery



### Option 3: Dual Alternators / Batteries

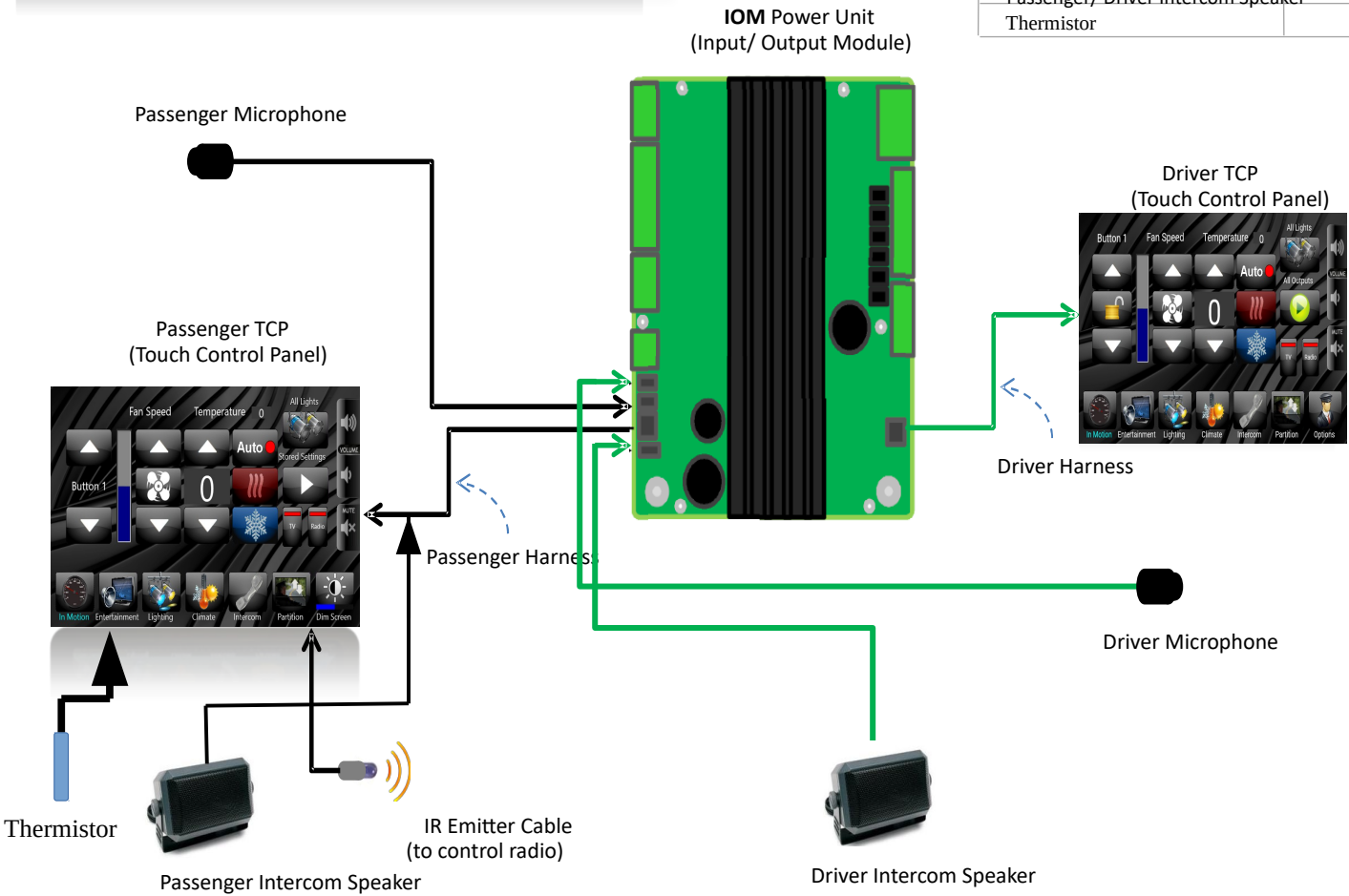


# Horizon V3 Cable Connections

## For use with Horizon V3 Harness Kit:

- Passenger Harness (with V3 Passenger adapter) - 30 ft
- Driver Harness (with V3 Driver adapter) - 15 ft

Horizon V3 System includes:	
IOM Power Unit	
Passenger TCP	
Driver TCP	
Passenger Harness (6 Conductor)	
Driver Harness (9 Conductor)	
Passenger Microphone Cable - 6 ft	
Driver Microphone Cable - 10 ft	
IR Emitter Cable	
Passenger/ Driver Intercom Speaker	
Thermistor	



## Troubleshooting:

### Touchscreen:

If the touchscreen calibration is off, when you touch the screen the wrong button might be activated. If this happens, you can re-calibrate the touchscreen.

### Touch Calibration Procedure

Note: You will need a USB flash drive/memory stick to perform the touch calibration.

#### Step 1: Create the Calibration File

1. On a windows based computer, create an **EMPTY** text file and name it touch.txt. (Empty means no characters are actually saved within the text document) This can be done by right clicking on the desktop, selecting new → Text Document.
2. Save the file, touch.txt, on your USB stick.

#### Step 2: Calibrate Screen

1. With the system powered **OFF**, insert your USB flash drive/memory stick into your screen display.
2. Turn system on. (**IMPORTANT NOTE: After system is turned on, if you do not start the calibration procedure within 30 seconds, you will exit this mode and have to repeat step 1 and re-save the touch.txt file to your USB flash drive/memory stick.**)
3. The display should come on with a message at the top of the display. (**IMPORTANT NOTE: Screen calibration is now being performed**). You may not be able to see the entire message.
4. Touch anywhere on the screen and a small red arrow will pop up on the display.
5. Touch the area indicated by the red arrow 3 times.
6. The arrow will move, touch the area indicated by the red arrow 3 times.
7. The arrow will move again, touch the area indicated by the red arrow 3 times.
8. Touch anywhere on the screen and the unlock screen will display.
9. Remove USB flash drive/memory stick, calibration procedure is complete.

## Horizon V3 Display Software Update Instructions

Note: You will need a USB flash drive/memory stick to download the software.

### Step 1: Download Software Files

1. Click the DOWNLOAD SOFTWARE UPDATE link on our website page for the Horizon V3 System.
2. Your computer/device will download a file called SoftwareUpdates.zip.
3. Click on the downloaded zip file and a window will open called file manager.
4. Drag and drop the folder shown in the window to your desktop. The folder is named SoftwareUpdates.
5. Connect your USB flash drive/memory stick to your computer/device and open the USB device folder. (If your computer does not automatically prompt you to open this folder, it can be found on most computers by going to your start menu, devices and printers and locating the USB storage device).
6. Open the desktop folder SoftwareUpdates. Select all files **within** the folder and transfer them to your USB flash drive/memory stick by dragging and dropping them into your device file folder.  
**(Important Note: You must *open* the SoftwareUpdates folder and select and transfer all the files from *INSIDE* the folder. Do not transfer the upper level folder named SoftwareUpdates or the system will not be able to find the update files).**
7. Using your computer, safely eject your USB flash drive/memory stick.
8. The software files will include updates for all of the following steps below. We recommend updating all units in one sitting.

### Step 2: Update Touch Screen

1. Insert your USB flash drive/ memory stick into the display with the system powered on.
2. System should display an unlock screen.
3. Enter code 8670 and press unlock.
4. System should automatically download firmware files and display unlock screen when completed.

### Step 3: Setup any displays being used as PASSENGER displays.

1. See **SCREEN SETUP on page 6 of this manual**. Follow the instructions. This will allow you to choose whether the screen is a Driver screen or a Passenger screen. Only configure one screen as the Driver's Screen per vehicle. A system can have as many Passenger Screens as you want.

## IOM System Backup:

Backing Up IOM setup information to a USB Drive.

Up to four different backups can be saved to one USB drive.

Use codes '1200', '1201', '1202', and '1203' to store various configurations.

Insert a USB drive into any Horizon V3 display. A keypad will pop up. Enter one of the '1200' codes.

Select 'Save Setup'. All of your configuration changes made to the IOM will be saved to the USB drive.

If your setup is ever changed incorrectly, or you need to send your IOM in for service, you will now have a backup of your setup.

When you want to load a saved setup, insert the USB drive that has the IOM backup on it . When the keypad pops up, enter the same code that you used when you saved it, and then select 'Load Setup'.

## Display Backup:

Backing Up Horizon V3 Display Setup information to a USB Drive.

Insert a USB drive into the display being backed up.

Enter code '1300', '1301', '1302', or '1303'

Select 'Save Setup' to save your screen setup.

To reload your setup, insert the USB drive that has the backup on it and enter the same code that you used to save, but select the 'Load Setup' button.

## KEYPAD CODES QUICK REFERENCE:

**Here is a list of the keypad screen codes:**

8191-Enter Setup Menus

8670-Initiates Display Software Update when a USB stick is inserted

8671-Initiates IOM Software Update when a USB stick is inserted

1200, 1201, 1202, 1203-Initiates IOM configuration backup **save/load** when a USB stick is inserted.

Up to four distinct configurations can be **saved/loaded** (1200 through 1203)

1300, 1301, 1302, 1303-Initiates Horizon V3 display configuration backup **save/load** when a USB stick is

inserted. Up to four distinct configurations can be **saved/loaded** (1300 through 1303)

Master Off



Touch Screen  
to Continue

# Horizon Operator's Manual



# Horizon

## Table of Contents

What's New.....	3
Automatic Temperature Control.....	3
Universal Remote Control.....	3
External Switches.....	3
System Components.....	4
Driver Screen Operation.....	5
Passenger Screen Operation.....	14
IOM (Input/Output Module).....	4
Start Screen.....	5
In Motion Screen.....	5
Entertainment Screen.....	5
Lighting Screen.....	6
Climate Screen.....	6
Divider Screen.....	6
Intercom Screen.....	7
In-Motion Screen.....	7
Options Screen.....	7
Rear Display Power.....	8
Select Theme.....	9
Enter Messages.....	10
Intro Line.....	11
Driver's Name.....	11
Message Line One.....	12
Message Line Two.....	12
Set the Clock.....	13
Passenger Screen Operation.....	14
Entertainment Page.....	14
Lighting Page.....	15
Lightshow Controls.....	15
Climate Page.....	16
Intercom Page.....	16
Partition Page.....	17

## **What's New...**

### **Touch Screens**

- High brightness, wide viewing angle screens with Capacitive touch greatly improves the display quality.
- Driver and Passenger screens are both 7" displays.
- Displays have NO RUBBER GASKETS to fall out!

### **Automatic Temperature Control**

- An external temperature sensor has been added to the displays. This allows for Automatic climate temperature control.

### **Universal Remote Control**

- A Infrared Receiver (IR) has been added to the displays. This allows the displays to work as a Universal Remote Control that controls any stereo or TV that comes with an infrared remote. See the "Entertainment Setup" instructions to activate this function.

### **Improved IR transmitter**

### **Upgrading a vehicle from SmartTouch 2.0 to Horizon**

- Replaces both the old 7" screen and the 4.3" screen with new 7" screens.
- Uses existing wiring and IOM already in your vehicle.

### **External Switches**

- Control any channel with external switches (sold separately), as well as from the touchscreens.

#### **And more...**

- Updated Graphics
- Improved Performance
- Upgraded system setup options.
- Ability to show or hide any unused button categories.
- Increased Current capacity on the Lighting channels.
- HVAC relay board (sold separately)
- Upgraded 'Jumpstart' Logic to prevent false triggers.

# System Components

## Driver's Screen



The Driver's screen provides full control over the Horizon system.

From the Driver's screen, you can select Themes, and also enter personalized messages to be displayed on the Passenger screen.

The Driver's Screen also provides options to lock out options or turn off the rear screen.

Depending on the options installed in your vehicle, certain screens and buttons may be hidden.

## Passenger's Screen



The passenger screen provides control of the Horizon system from the rear of the vehicle.

Multiple Passenger Screens can be installed in the same vehicle for additional control points.

## IOM (Input/Output Module)

The IOM is the main power distribution and control point for the Horizon system. It is not accessed during normal operation.



# Driver's Screen Operation

## Start Screen



When the system is powered on, the start screen will be displayed. Touching anywhere on the screen will take you to the Home Screen.

If you would like to turn the entire system off, press and hold the Master On button for five seconds. Press and hold again to turn the system back on.

The background image of this screen may be modified to a custom logo. Contact Infinite Innovations for assistance on customizing this screen.

If the voltage on either the Main or Auxiliary battery is too low or too high, an indicator will appear on this page. The system will turn off all of the attached loads when the battery voltage is not in the proper operating range.

## In Motion Screen



The bottom row of icons take you to the corresponding control page. These are the same as the controls on the Passenger screen with the following exception:

The 'Options' button on the bottom right only appears on the Driver's screen.

## Entertainment Screen



The Entertainment page controls the Power for your TV and Radio, and also acts as a universal remote control.

The contents of the entertainment page will vary depending on the radio setup and the number of remote control buttons that have been programmed.

If your vehicle is not equipped with a Universal Remote Control, this screen will only show TV and Radio Power buttons, or may be hidden entirely.

See the Installer's Manual (page 7) for instructions if you would like to change the Entertainment Screen to better match your vehicle.

## Lighting Screen



To control a light, the channel must first be selected. When a channel is selected, the background turns blue, and the Channel name appears in the upper control box.

If the channel is off when it is selected, it will turn on. If the channel is already on, the first touch will select the channel, and touching it again will turn it off.

If a channel is not configured for dimming, the upper control box will not show the up/down arrows.

The lighting channel names will show the names configured for your vehicle by the installer. See the Installer's Manual (page 9) for instructions if you would like to change the Lighting Channel names to better match your vehicle.

## Climate Screen



your vehicle is not configured for Auto Climate control, the Auto buttons will not be displayed. See the Installer's Manual (page 13) for instructions if you would like to change the Climate Mode to better match your vehicle.

## Divider Screen



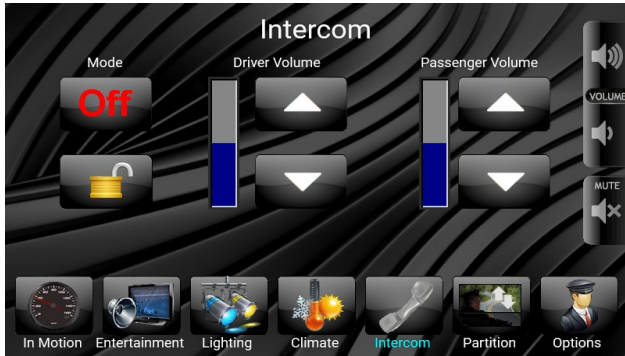
Depending on how your vehicle has been configured, the options on this page may vary. See the Installer's Manual (page 12) for instructions if you would like to change the Divider names to better match your vehicle.

The driver has the ability to 'Lock Out' the passenger from being able to control the partitions. Pressing the Lock Icon will lock or unlock the channel. When it is locked, the icon will turn red. The driver still has full control of the channels, even when the passenger is locked out.



## Intercom Screen

The intercom can be turned on and off from this screen. The Driver's Volume and the Passenger's Volume can be adjusted independently. Passengers also have the ability to adjust the Passenger Volume from the rear screen. If your vehicle is not equipped with an intercom, this page will be hidden.



## In-Motion Screen

The In-Motion screen allows you to quickly control most of the features directly from one screen. Depending on which options are installed in the vehicle, some of the controls may be hidden.



The All Outputs button allows for the pausing and resuming of a stored system "state", for example, lighting, climate, and fan speed settings. This "state" is recorded using the Store Settings button shown on the options screen below.

## Options Screen



From the Driver's Options screen, you can select a Theme(1.) to be displayed on the Passenger's screen. You can also enter a four line message(2.) that is displayed on the Passenger screen. The Dim Screen button(3.) is used to adjust the brightness. The Store Settings button(4.) records the current state of the system for recall at a later time. The Set Clock button(5.) is where the clock adjustments are made. The About button(6.) displays system hardware revision, software revision, and serial number information. To turn the System On or Off, press and hold the Master Power button.(7.)

## Rear Display Power

This allows the driver to temporarily disable the rear controls. The graphic will indicate whether the rear screen is on or off. If the screen is off and the ignition is cycled, the rear screen will default to back to on.



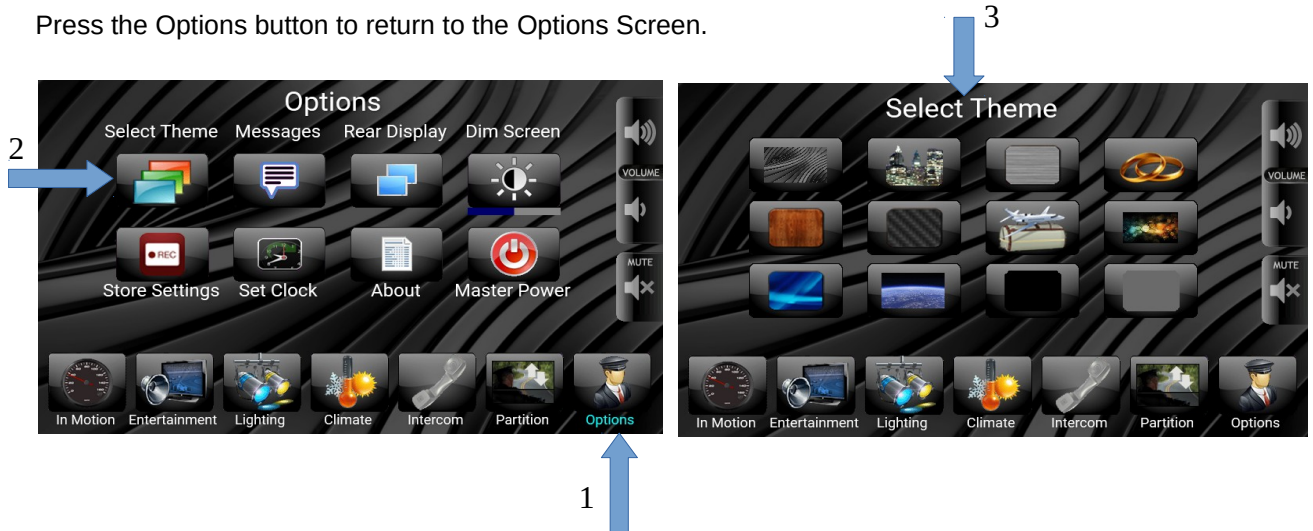


## Select Theme

You can select various themes depending on the type of event that your passengers are going to. The theme shown on the background of the Passenger screen is selected from the “Settings” page on the Driver’s screen.

- 1) From the Driver’ Screen, select the “Options” Icon.
- 2) On the “Options” page, select “Select Theme”
- 3) Choose a theme. The background of the page will preview the selected theme.

Press the Options button to return to the Options Screen.



The passenger screen will immediately change to the selected theme.

The first time that a theme is used in the vehicle, or if the vehicle configuration has been modified, the passenger screen may draw the screen slowly. The next time that the screen is drawn, it will be much quicker.

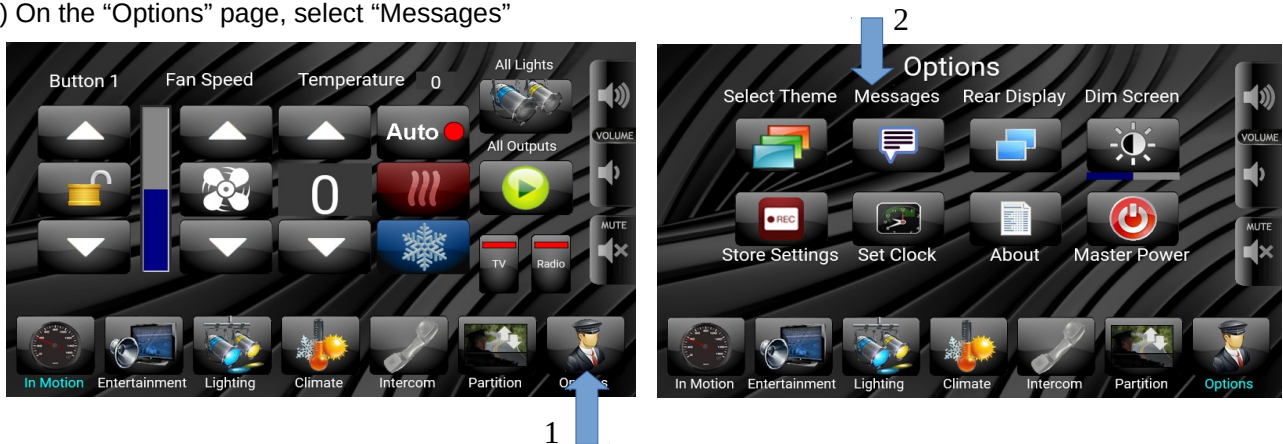
## Enter Messages

The driver can enter a four line message that will be displayed on the passenger screen. Each line can be selected from a generic list of greetings, or customized. The message is cleared every time the ignition is turned off.



Figure 7: Example of a message on the Passenger Screen.

- 1) From the Driver's Screen, select the "Options" Icon.
- 2) On the "Options" page, select "Messages"



## Intro Line



**Clear the Message** – Erases the first line. The other 3 lines remain unchanged.

**Enter custom Line** – Type in a custom first line.

**“Your Chauffeur’s name is” or “Your Driver’s name is”** - Uses the second line to enter the Driver’s name.

## Driver’s Name



Use the Keypad to enter the Driver's name. The Up arrow switches the keypad between lowercase to uppercase.

If you entered a Custom Intro for Line 1, this line does not have to be the drivers name. You can enter any text that you like.

## Message Line One

You can either select from a variety of pre-programmed messages, or enter a custom line.



## Message Line Two



## Set the Clock



Press the "+" or "-" button to adjust the time and date. The time is set from the Driver's display and is shown on all of the displays in the vehicle.



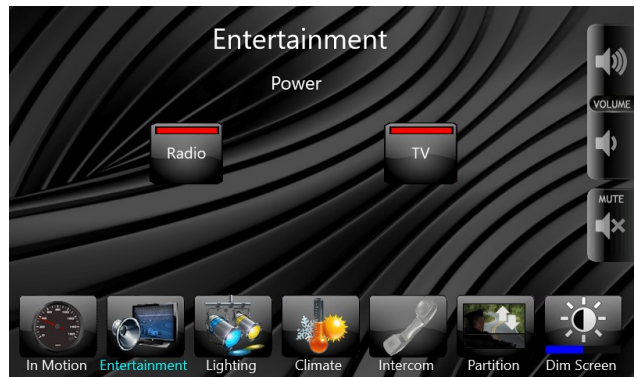
# Passenger Screen Operation

## In Motion Page



## Entertainment Page

Depending on the vehicle configuration, the appearance of the Entertainment page will vary, the first image shows radio controls while the second image shows power only controls. There are other layouts available. See the Installer's Manual (page 7) for instructions if you would like to change the Entertainment Screen to better match your vehicle.



The

'Power' buttons will turn the TV or Radio On or Off. If the power is on, the power button will be blue. If the power is off, the power button will be gray. The other buttons operate the Universal Remote Control function.

See the Installer's Manual (page 7) for instructions if you would like to change the Entertainment Screen to better match your vehicle.

## Lighting Page



In order to control a lighting channel, the channel must first be selected. The selected lighting channel will have a blue background, and the control box at the top will show the selected channel name.

If the channel is off at the time it is selected, it will turn on. If it is already on, it will stay on. Touching the blue button again will turn it off. When a channel is on and selected, the brightness can be adjusted using the up and down buttons. Some lights may be configured for multiple brightness settings, and some may only go from on to off.

If your vehicle is equipped with a Litesync RGB module, there will be an additional button that says 'Lightshow'.

See the Installer's Manual (page 9) for instructions if you would like to change the Lighting Channel names to better match your vehicle.

## Lightshow Controls

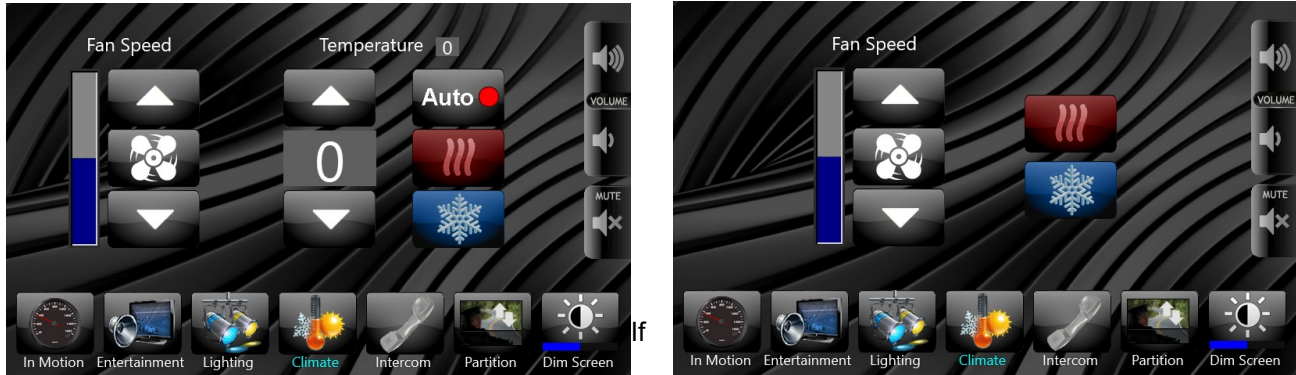


The Litesync module can be turned On or off from this screen. To change the pattern of the selected light show, use the Light Show Up and Down buttons. To increase or decrease the brightness of the RGB lights, use the Dimmer Up and Down buttons.





If your vehicle is equipped with multiple Litesync modules, they can be set to the same pattern by turning on the 'Sync Lightshow' button. If your vehicle only has one Litesync module, this button will be hidden.

See the Installer's Manual (page 9) for instructions if you would like to change the Lighting Channel names to better match your vehicle.

## Climate Page



If your vehicle is not configured for Auto Climate control, the Auto buttons will not be displayed.

-  – Turns the Air conditioning On or Off. When the A/C is on, the button will be highlighted.
-  – Turns the Heat On or Off. When the Heat is on, the button will be highlighted. Turning either the A/C or Heat on will turn the other one off.
-  – Fan speed can be manually adjusted.
-  – The desired temperature can be set, and the system will automatically control the fan, A/C, and Heat.

See the Installer's Manual (page 13) for instructions if you would like to change the Climate Mode to better match your vehicle.



## Intercom Page



The intercom can be turned on and off from this screen. The Adjustment of the Passenger Volume can also be done here. If your vehicle is not equipped with an intercom, this page will be hidden.

Passengers also have the ability to lock the intercom to ensure any conversation taking place remains private by isolating the driver.

**NOTE:** The Driver's display **MUST BE CONFIGURED** to hide the UNLOCK icon on the Driver's screen, or the Driver will have the ability to enable the intercom without the consent of the Passengers.

## Partition Page

The Horizon system can control three configurable divider outputs. Each button can be given a custom name, and can control one, two, or all three outputs.

See the Installer's Manual (page 12) for instructions if you would like to change the Divider names to better match your vehicle.

A default partition page setup is shown below, yours may differ depending on installation options.

