

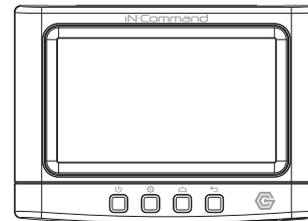
# iN·Command<sup>®</sup>

CONTROL SYSTEMS

## NCSP35

RV CONTROL AND MONITORING SYSTEM

### Installation and Operation Manual





## Important Safety Information



Read the iN-Command Manual, and these warnings and instructions carefully before using this product. Failure to follow the use instructions in this owner's manual, or improper use of the Mobile Application, Display Commander and/or Body Control Module, could result in personal injury, including death.

### **Do not operate while vehicle is being driven.**

The Mobile Application, Display Commander and/or Body Control Module should not be used while the vehicle is being driven. Use of the Mobile Application, Display Commander and/or Body Control Module while the vehicle is being driven is dangerous and may cause personal injury or property damage.

### **For adult use only.**

The Mobile Application, Display Commander and Body Control Module are intended for adult use only, and are not to be used by persons under the age of 18. Use by children may cause personal injury or property damage.

### **Operate only when you have a clear line of sight.**

Do not operate any moving parts (including, but not limited to, awnings, jacks and slides), unless you have a clear line of sight to the moving part. The Mobile Application, Display Commander or Body Control Module may be used only if you are giving instructions to, and receiving instructions from, another person at least age 18 or older who can clearly see the moving part. Failure to follow these instructions may result in serious personal injury or property damage.

### **Do not operate under the influence of alcohol or drugs.**

Do not operate the Mobile Application, Display Commander or Body Control Module while under the influence of alcohol or drugs. Doing so may result in personal injury or property damage.

### **Avoid moisture.**

To reduce the risk of fire or electric shock, do not expose this equipment to rain or moisture.

### **Use recommended accessories.**

To reduce the risk of fire or electric shock and annoying interference, use only the recommended accessories.

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## • INTRODUCTION

### • Thank You!

Thank you for choosing iN-Command. We hope you will find the instructions in this owner's manual clear and easy to follow. If you take a few minutes to look through it, you'll learn how to use all the features of your new NCSP35 for maximum enjoyment.

### • Features

Features of iN-Command system include:

- Simultaneous control by up to three Android Devices and one iOS Device
- Control two zones of Interior Lighting
- Monitor all water tank levels
- Control and monitor the Water Heater (switches between LP or AC)
- Control and monitor the Water Pump
- Control Awning
- Control Electric Slides
- Control Jacks (non-automatic function)
- Monitor Battery Voltage with Low Voltage Alert
- HVAC

### • Precautions

#### • Use the Proper Power Supply.

This product is designed to operate with a 12 volt DC, negative ground battery system (the standard system in a North American vehicle).

#### • Use Authorized Service Centers.

Do not attempt to disassemble or adjust this precision product; contact a professional for assistance.

#### • Avoid Moisture.

To reduce the risk of fire or electric shock, do not expose this equipment to rain or moisture.

#### • Avoid Cleaning Products.

The front of this unit should only be cleaned with a slightly damp cloth. Do not use cleaning products.

### • Use Recommended Accessories.

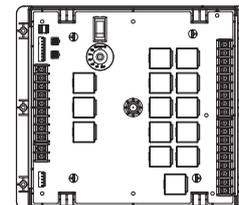
TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK AND ANNOYING INTERFERENCE, USE ONLY THE RECOMMENDED ACCESSORIES.

### • Packing List

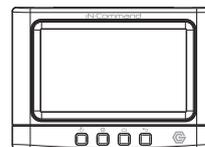
(1) Cover, (1) Thumb Screws



(1) Body Control Module (BCM)



(1) Display Commander (DC)



## • INSTALLATION

It's a good idea to read all of the instructions before beginning the installation. We recommend having your NCSP35 installed by a reputable RV dealership

### • Tools and Supplies

You will need these tools and supplies to install your NCSP35 :

- Phillips screwdriver
- #2 square drive bit
- Wire cutters and strippers
- Electrical tape
- Volt meter/test light
- Crimping tool
- Fork Crimp connectors
- Minimum of 24 gauge wire required to connect DC to BCM
- 10 gauge wire for power and slide connections
- 14 and 18 gauge wire for all other connections
- Four #8 PH (0.164" x 0.75") screws for the DC
- Six #8 PH (0.164" x 1.0") screws for the BCM

### • Disconnecting the battery

To prevent a short circuit, be sure to turn off 12V power and remove the negative (-) battery cable prior to installation.

### • Selecting the Mounting Location

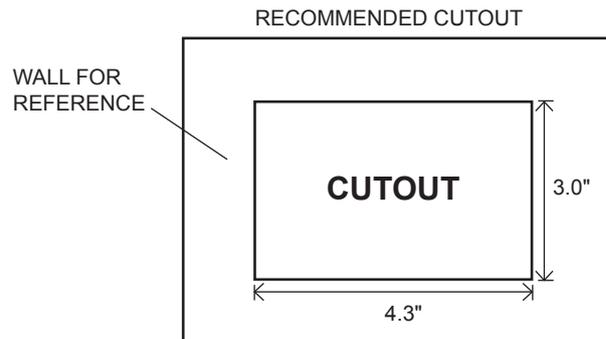
Select a mounting location, taking care to avoid the following:

- Places exposed to heat-radiating appliances such as electric heaters
- Adjacent to other equipment that radiates heat
- Under thermostats
- Poorly-ventilated or dusty places
- Moist or humid locations

### • Mounting the Display Commander (DC)

- Use the mounting hole diagram to measure and cut a mounting hole, allowing space below for future programming and behind for ventilation
- Route power and transmit wires through the hole and connect
- Check and ensure correct operation
- Mount the unit using four #8 PH (0.164" x 0.75") screws
- Attach Trim ring

CUTOUT FOR DISPLAY COMMANDER (DC)



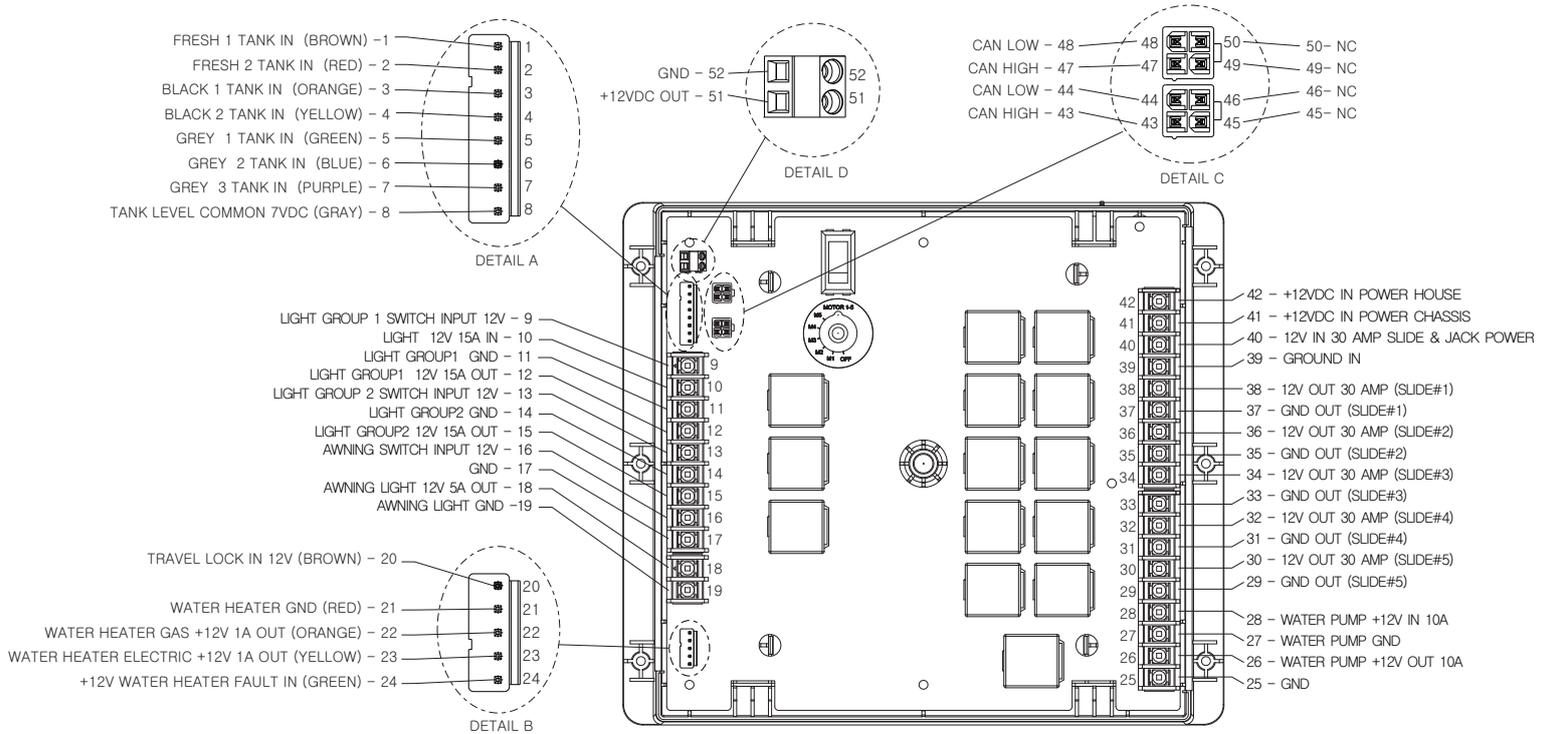

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**NOTE:** Before cutting the mounting hole, make sure the area behind the mounting location is clear of wires, fuel and vacuum or water lines; ensure there is at least a 2.75" clearance below the Display Commander to allow for programming by USB stick.

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## • WIRING

The Wiring Diagram Depicts All The Wiring Connections Required For Proper Operation Of The Unit.  
Body Control Module (BCM) Connections



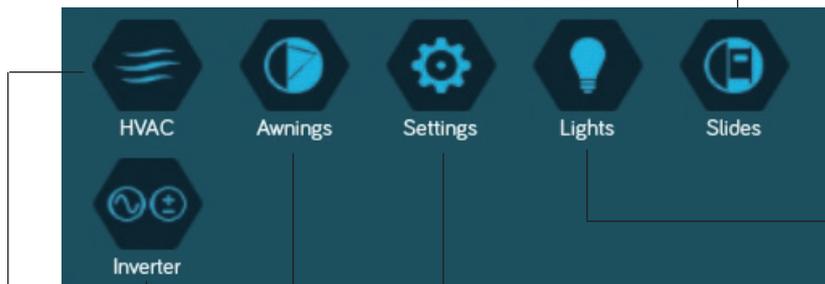
- **BCM AND DC WIRING DIAGRAM**

## • SETUP MENU LIST

Tanks, light groups, and motor functions can be added or removed.

Motor functions may include slides, awnings, jacks, or any motor that may be controlled with a momentary switch.

Refer to the Wiring Diagram and Terminal List when installing new equipment. The BCM may not include relays for non-OEM functions. Basic automotive 1505 relays (12VDC Coil, 40/30A 14VDC Contact) can be purchased for installation and repair.



Slides	
Slide 1	In, Out
Slide 2	In, Out
Slide 3	In, Out
Slide 4	In, Out
Slide 5	In, Out

Lights	
Light Group 1	No, Yes
Light Group 2	No, Yes
Awing Light	No, Yes
Dimmer Light 1	No, Yes
Dimmer Light 2	No, Yes
Dimmer Light 3	No, Yes

Settings	
Bluetooth	Scan
Wi-Fi	On, Off, Scan, Add
Date & time	Edit
Edit	-
Passcode	Setting
Brightness	Up, Down
Calibration	Set
System Reset	Floor Plan , Factory
Information	Information notes
Software	DC/App/BCM Updat
Administration	-

Awnings	
Awning Light	No, Yes
Awning 1	In, Out
Awning 2	In, Out

HVAC (Zone1, Zone2, Zone3)	
Mode	On, Off, Fan, Cool, Heat, Auto
Vent	Open, Shut
Vent Fan	Off, Low, Medium, High
Schedule	Start time, Stop time

Inverter
-

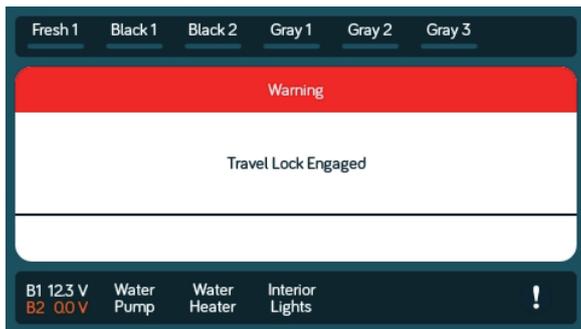
## • TRAVEL LOCKOUT (Safety)

iN-Command is equipped with a Safety Lockout feature to ensure certain system functions are unavailable during transit.

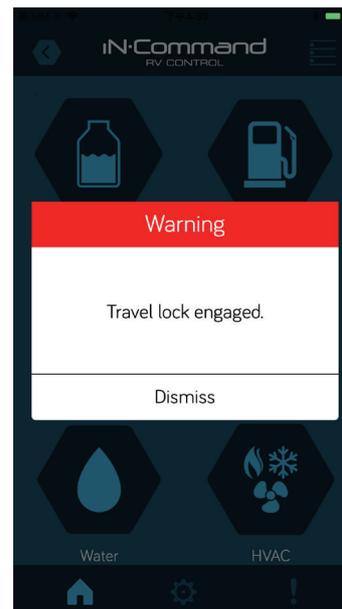
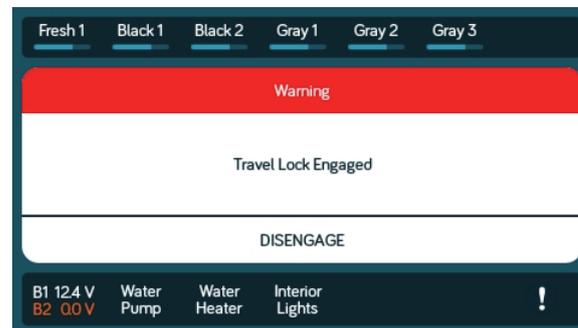
When the Brake Signal (Towable) or Ignition (Motorized) is activated, the iN-Command will lock down all motorized functions. The Display Commander (DC) and mobile devices will also display "Travel Lock Engaged" and the affected buttons will cease to activate.

The lights, water pump, water heater, and sensors will continue to function.

To turn the Travel Lock off, press "DISENGAGE" on the Display Commander (DC), inside the RV, once the brake signal has been removed.



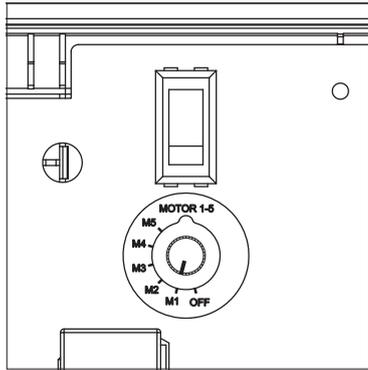
Travel Lock on the Display Commander



## • OVERRIDE SWITCHES\*

The Body Control Module has an override switch and knob. The knob below the switch corresponds to a motor function made by the Display Commander and Handheld Devices App. The switch and knob actuate all the motor functions on the RV.

To use the override switches, locate the switch on the BCM. Turn the knob underneath the switch to select the component. Press up or down on the switch. The switch is momentary and will activate the component only while pressed in either direction.

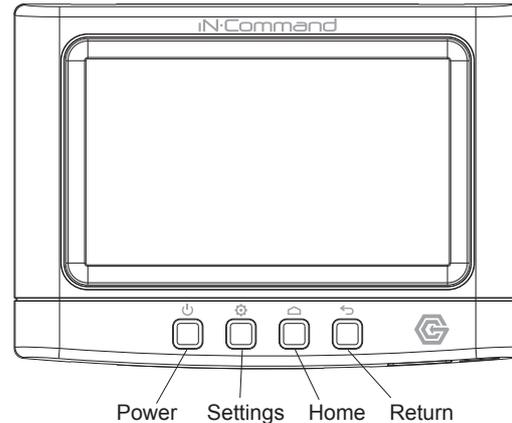


## • DISPLAY COMMANDER BUTTONS

The DC (Display Commander) has 4 buttons on the front of it. From left to right, they are:

- Power
- Settings
- Home
- Return

The Power Button turns the DC on and off (long press) and revives it (short press). The settings button takes you to the settings page. The Home Button returns you to the Home page. The Return Button returns you to the previous page.



## • SPECIFICATIONS

### **Display Commander (DC)**

Operating Voltage	12VDC
Maximum Current Draw	1.5A@9VDC
Minimum Operating Voltage	9VDC
Maximum Operating Voltage	16VDC

### **Body Control Module (BCM)**

Operating Voltage	12VDC
Maximum Current Draw	4A@12VDC
Minimum Operating Voltage	9VDC
Maximum Operating Voltage	16VDC

### **NCSP35 System**

EPROM Non-Volatile Memory	YES
Bluetooth Version	4.0 BLE

### **General**

Body Control Module	14.9" (W) x 10.4" (D) x 1.8" (H)
Display Commander	5.2" (W) x 3.8" (D) x 1.5" (H)

## • FCC NOTES

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**WARNING!** Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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**NOTE:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

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### **IMPORTANT NOTE:**

To comply with the FCC RF exposure compliance requirements, the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. No change to the antenna or the device is permitted. Any change to the antenna or the device could result in the device exceeding the RF exposure requirements and void user's authority to operate the device.

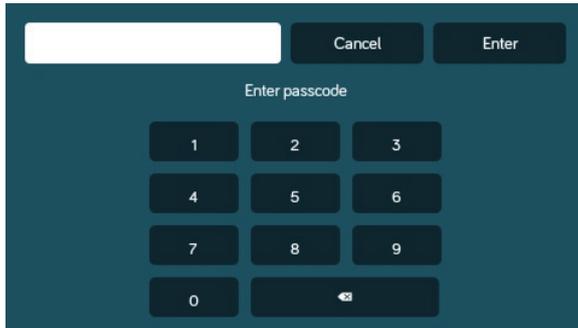
This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

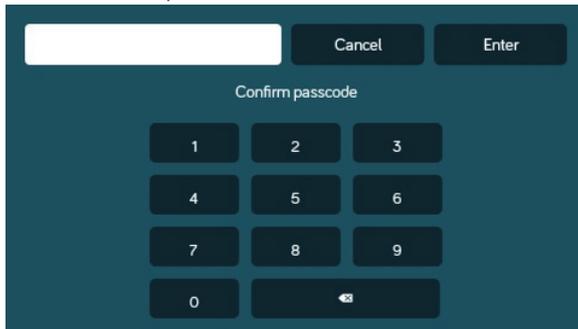
## • PASSCODE PROTECTION

A passcode is required to access the system.

On the first time use of the system, the user is required to enter and confirm a new passcode.



Confirm the new passcode.



## • SETTINGS

From the Menu screen you can:

- Edit iN-Command function text
- Reposition functions
- Enable/disable functions
- See the status of iN-Command
- Connect devices with Bluetooth
- Change the passcode
- Reset the floor plan
- View iN-Command's Legal documents and customer support information.

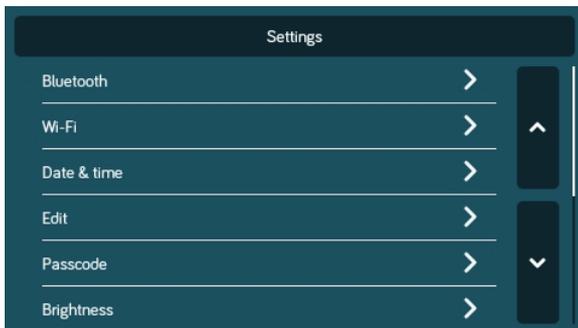
The Setup button is used by the manufacturer.

### • Text Editing\*

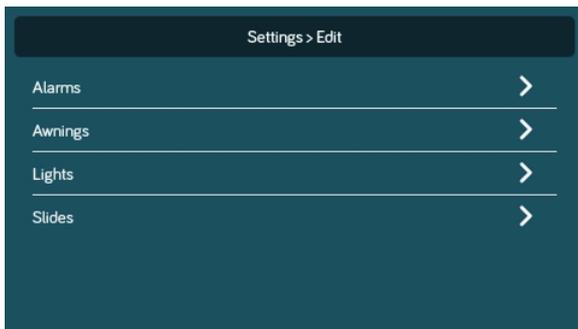
1. Select "Settings"



2. Press "Edit" to enter Edit page



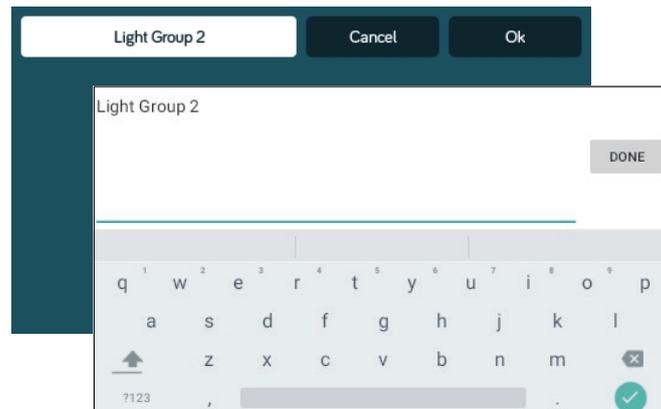
3. Select the function to edit.



4. Long press the intended text, e.g., "Light Group 2"



5. Use the keyboard to edit the name, then press "Ok"



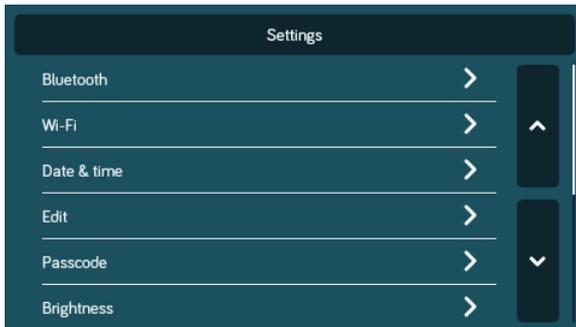
**Note: Editing the text on the DC will not change the text on a device's App.**

## • Scroll List Editing

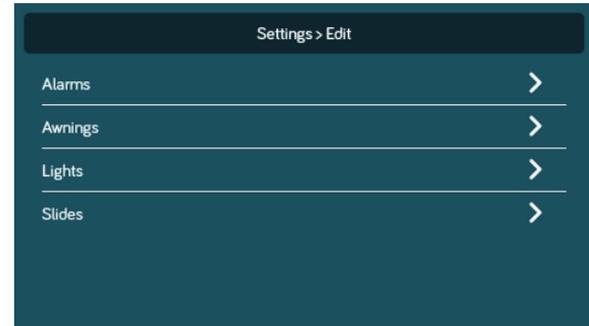
1. Select "Settings"



2. Press "Edit" to enter Edit page



3. Select the function to edit.



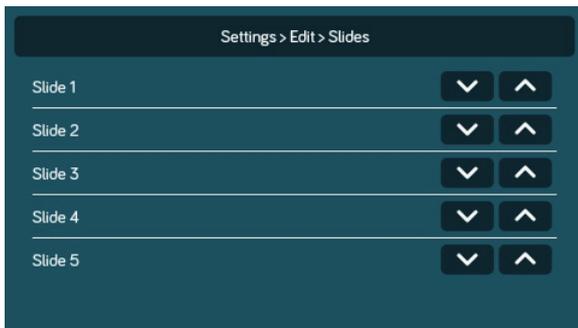
4. Use the Up and Down arrows next to the function to move the item in the list.



• **Slides**

Slides can added to the system.

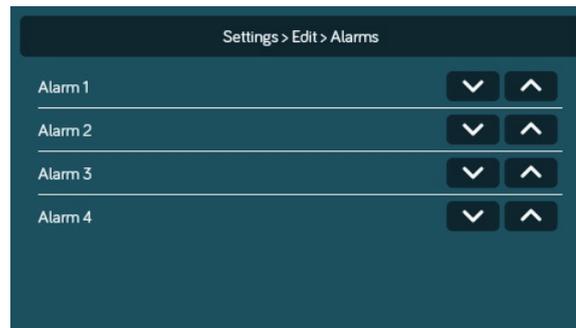
Note: Desired devices need to be correctly wired to the BCM to function.



• **Alarm Inputs**

Alarm can added to the system.

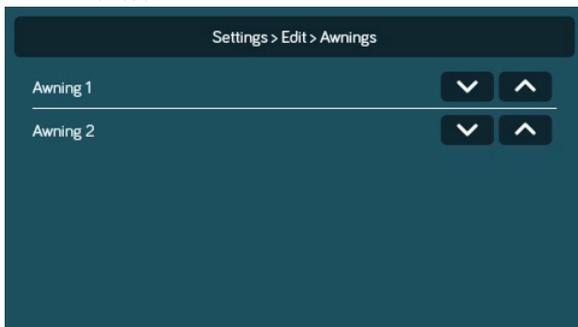
Note: Desired devices need to be correctly wired to the BCM to function.



• **Awning**

Awning can added to the system.

Note: Desired devices need to be correctly wired to the BCM to function.

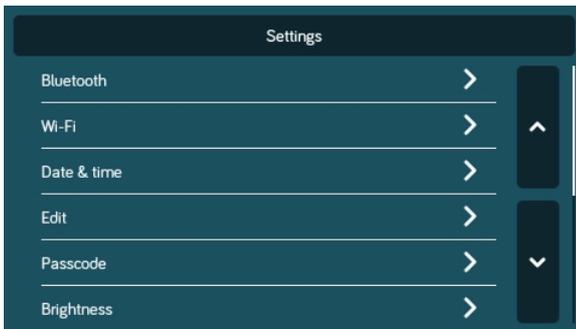


• **Passcode**

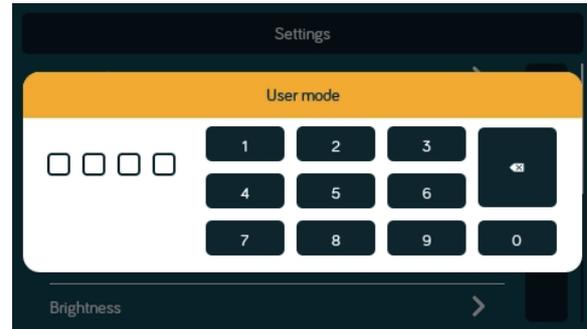
1. Select “Settings”.



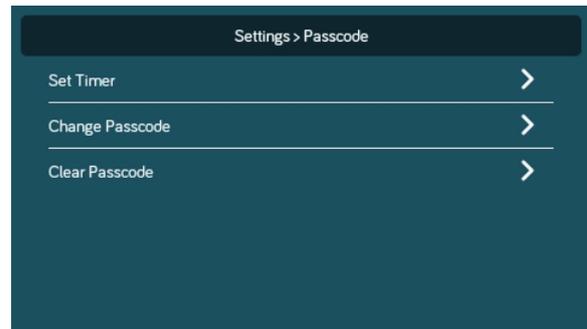
2. Press “ Passcode” to enter passcode setup.



2.1 Enter the correct passcode to proceed.

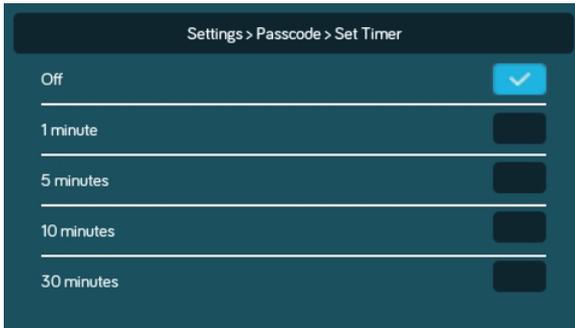


3. The passcode setup window will open.

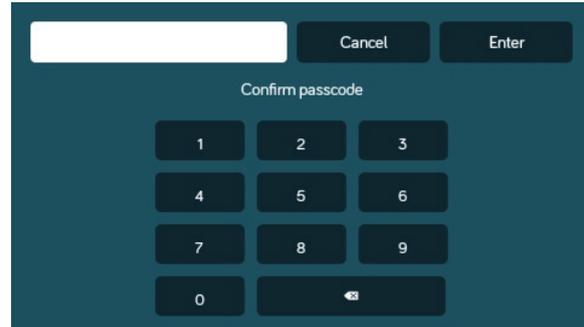


• **Set Passcode Timer**

Press the “Set Timer” select the idle time to activate the passcode protection.

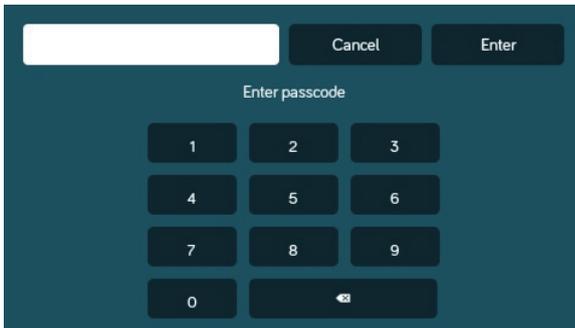


3. Confirm new passcode.



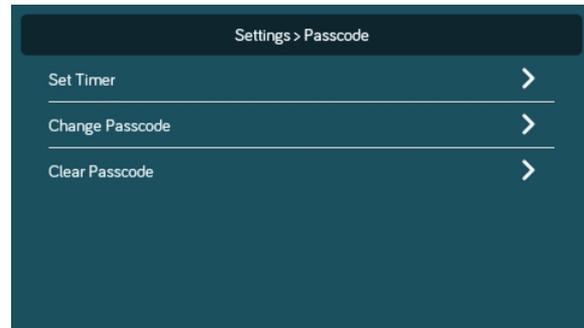
• **Change Passcode**

1. Press the “Change Passcode” button to change to a new passcode.
2. Enter the new passcode



• **Clear Passcode**

Press the “Clear Passcode” to clear the passcode. This will restart the App, take the user to the End-User License Agreement, and have the user setup a new passcode.



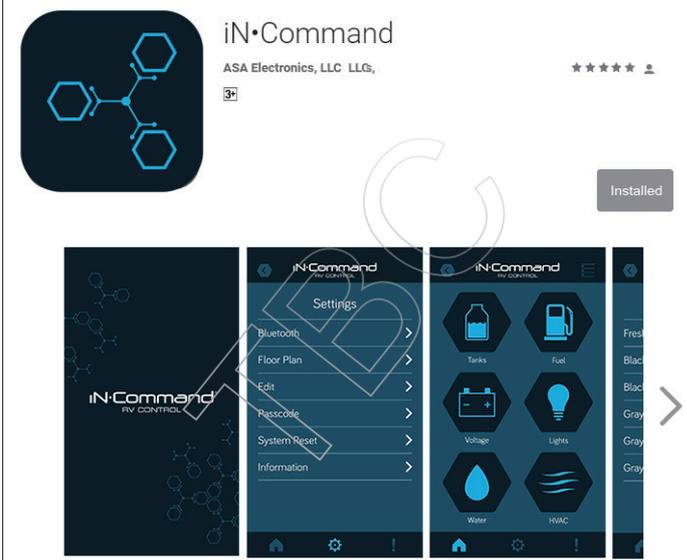
## • MOBILE DEVICES:

iN-Command is able to pair to Android and iOS devices using the iN-Command App.

Visit the Google Play and Apple App stores on your mobile device to download and use the iN-Command App.

Seven mobile devices are able to be paired iN-Command at one time, but only 1 iOS and 3 Android devices are able to be actively paired at the same time; meaning, 3 Android devices and 1 iOS device can all actively control the iN-Command functions.

To use another device not actively paired to iN-Command, 1 device needs to shut down its iN-Command App to allow another device to actively pair. To do this simply select the power button on the App, shut down the App in the device's settings menu, or press "DISCONNECT" on the DC's Connections page.



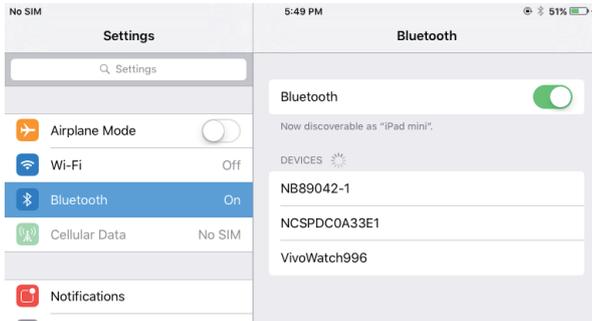
The screenshot displays the iN-Command app interface. At the top, the app icon is shown, followed by the name 'iN-Command', the developer 'ASA Electronics, LLC, LLC', and a 5-star rating. Below this is a grid of control buttons: Bluetooth, Floor Plan, Edit, Passcode, System Reset, Information, Tanks, Fuel, Voltage, Lights, Water, and HVAC. A large 'Installed' button is visible on the right. The interface is dark-themed with blue accents.

The iN-Command app transforms your smartphone or tablet into a fully functional remote control that can operate many of the primary functions of your RV from one convenient, easy-to-use mobile application. By syncing the setup with your RV system's touch screen controller, iN-Command of your RV.

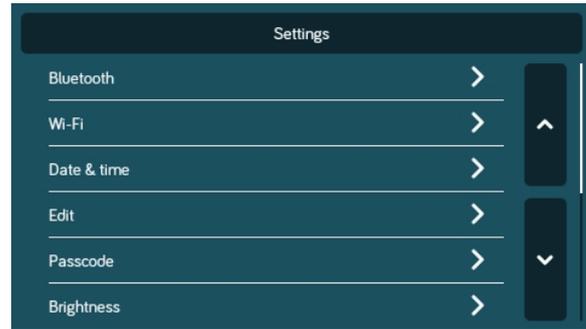
This app controls:

## • Pairing Mobile Device to DC

1. Enable "Bluetooth" in the system settings of the mobile device



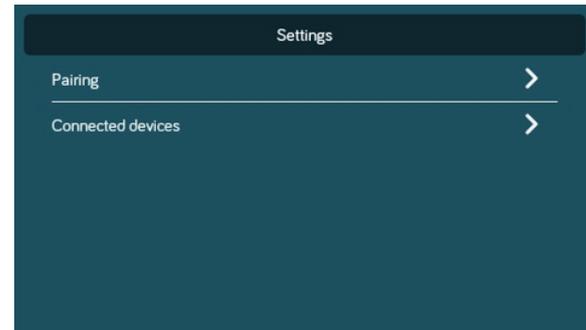
2.1 Select the " Bluetooth " tab.



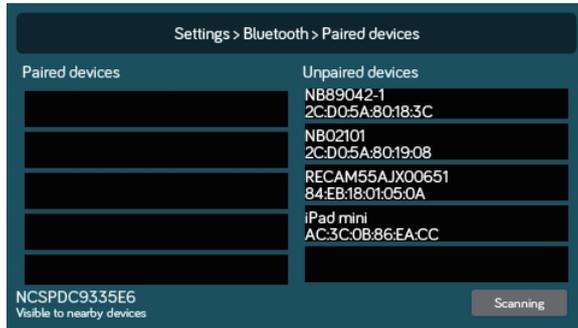
2. From the DC Home Page, select "Settings"



2.2 Select "Pairing" to pair devices and view current paired devices.



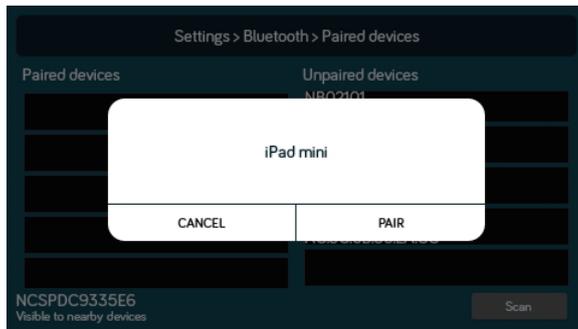
2.3 Press Scan to start scanning for Unpaired devices.  
Locate the mobile device in the Unpaired Device list.  
Select the device by pressing it.



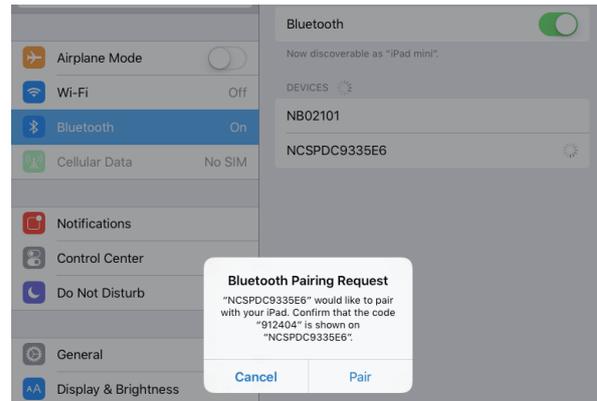
2.5 A Bluetooth Pairing request will appear on the DC and mobile device.  
2.6 Press "PAIR" on the DC.



2.4 A Popup with the device name will appear on the display.  
Press "PAIR"



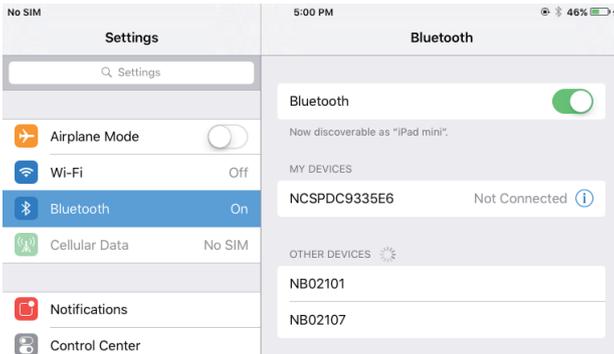
2.7 Press "Pair" on the mobile device.



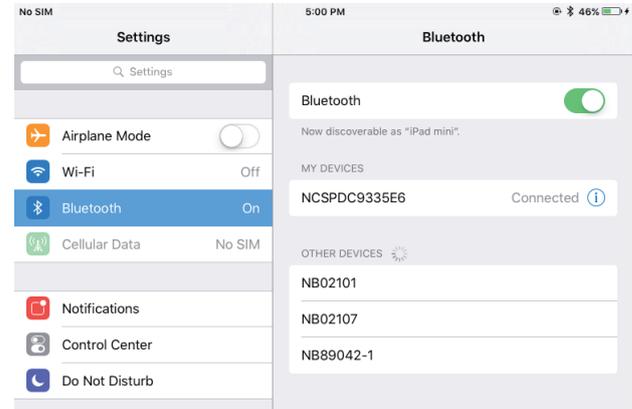
2.8 The mobile device will be displayed in the "Paired devices" list on the DC



2.9 The DC will be displayed on the mobile device list in the format " NCSPDCXXXXX". Press the DC on the mobile device to connect with it.

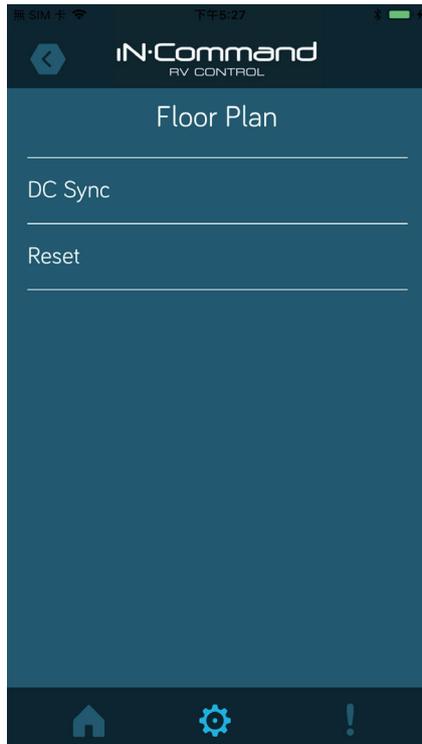


2.10 The mobile device now shows that the DC is connected.



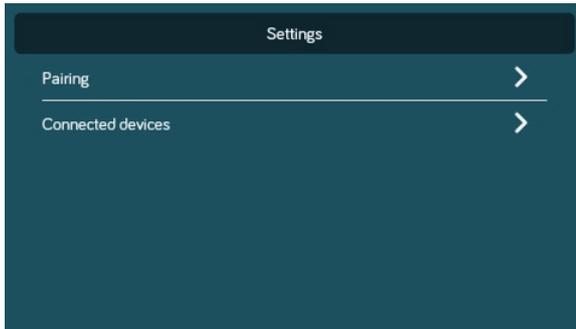
#### 4. Reset Floor Plan

Press the "Reset" button in the Menu page to load the floor plan configuration from the DC. The current settings will be lost/replaced.



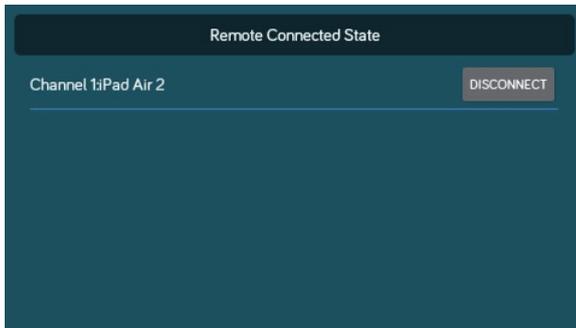
## • CHECKING ACTIVE BLUETOOTH SESSION

1. Select "Connected devices".



\* To disconnect a handheld device, press "DISCONNECT", or simply shut down the device's App. This function is used to disconnect a device that is not actively being used, and to allow another device to be connected.

2. The page shows information of current active Bluetooth devices.



## • HVAC

From the HVAC page, you can control the Heating, Ventilation and Air conditioning functions in the RV.

With iN-Command, you can control up to 4 HVAC zones and schedule times for the HVAC function to be active.

### •Vent Fans

The Vent Fans for each zone can be opened, closed, and change the fan speed.



### •AC Cooling

1. Select the desired Zone. Press the "Mode" button to switch to "Cool" mode.
2. Use the "Set" up and down arrows to set the desired temperature for the zone.
3. Press the "Fan" button to switch between Low,High and Auto fan speeds.



### •Fan Only Mode

1. To have just the AC fan operating in a zone, select the desired Zone, then press the "Mode" button to switch to Fan mode.
2. Press the "Fan" button to switch between Low and High fan speeds.

## •Heating

1. Select the desired Zone. Press the "Mode" button to switch to "Heat" mode.



2. Press the "Source" button to select between Gas and Electric. (Available Heat sources depend on Floor Plan)
3. Use the "Set" up and down arrows to set the desired temperature for the zone.
4. Press the "Fan" button to switch between Off, Low, High and Auto. (Off is not available in Electric Heat Source.)

## •Auto

Auto Mode will automatically switch between Cool and Heat modes to reach the desired Set temperature. (Heat Mode is only available in Zones with Heat Mode selected on Floor Plan).



1. Select the desired Zone. Press the "Mode" button to switch to "Auto" mode.
2. Use the "Set" up and down arrows to set the desired temperature for the zone.
3. Press the "Fan" button to switch between Off, Low, High and Auto.

## •HVAC Schedule

The Schedule function allows you to set a temperature and choose a start and stop for when you want the HVAC function to operate.

1. Press the "Clock" icon at the bottom right corner of the HVAC home screen to enter the Schedule page.



2. Use the "Set" up and down arrows to set the desired temperature.
3. Use the " Start" and "Stop" arrows to set the time frame that you want the HVAC function to operate.
4. Choose schedule 1 or 2 on HVAC zone Home Page.



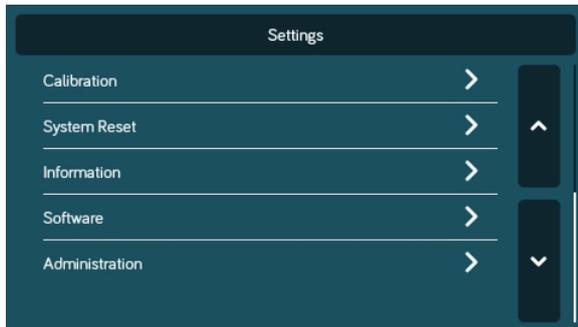
## • SOFTWARE UPDATE\*

Software updates include floorplan redesigns and App version updates.

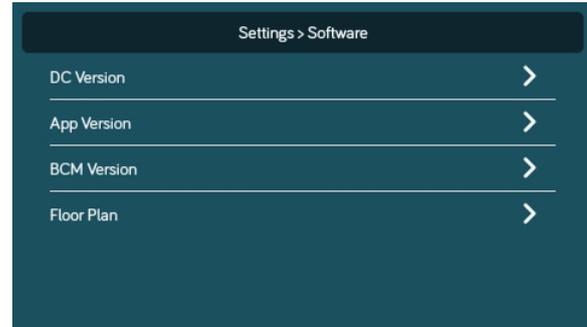
1. Insert USB drive loaded with updated software into the USB port at the bottom of the DC.
2. Select "Settings" enter the Settings page.



3. In the Settings page, select the "Software" tab.



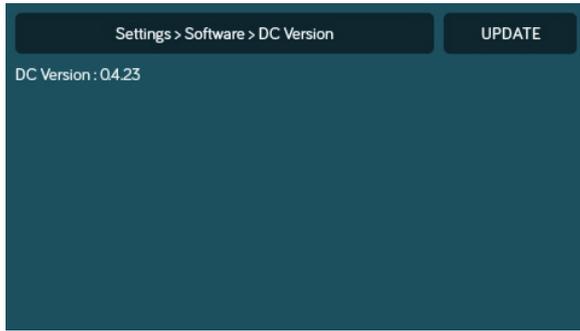
4. In the software page, you can choose to update the Floor Plan, DC Version, App Version and BCM Versions.



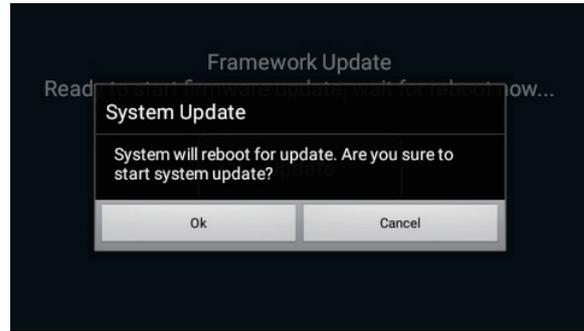
The system will look for specific file names for software updates.

- File name: "NCSP3-DC VXXXX.zip" > DC OS update (xxxx is the version number)
- File name: "ncspdcap\_vxxxx.apk" > DC App update (xxxx is the version number)
- File name: "NCSPDC3Vxxxx.bin" > BCM update (xxxx is the version number)

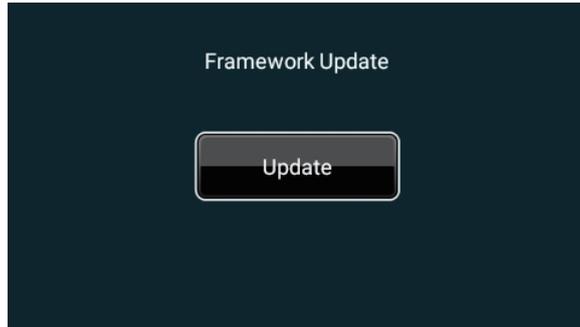
6. Press the DC Version to update the DC OS sytem.  
Press "UPDATE"



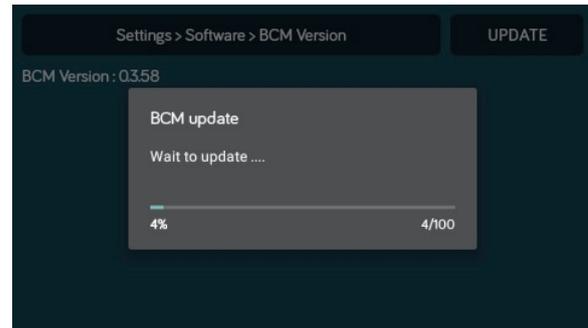
8. Press "Ok" to continue.



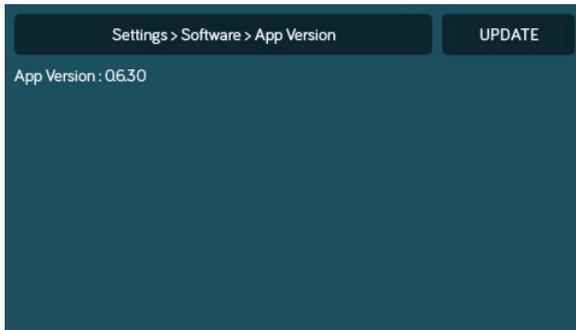
7. Framework update, Press"Update"



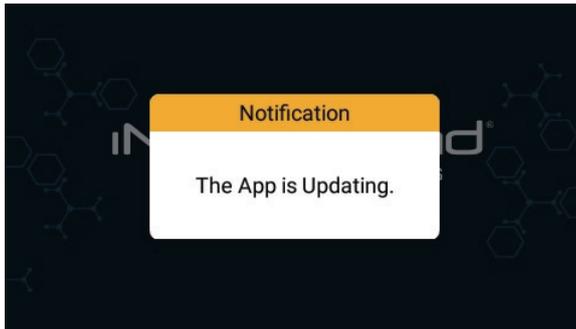
9. Press the BCM Version to update the BCM system.  
Press "UPDATE"



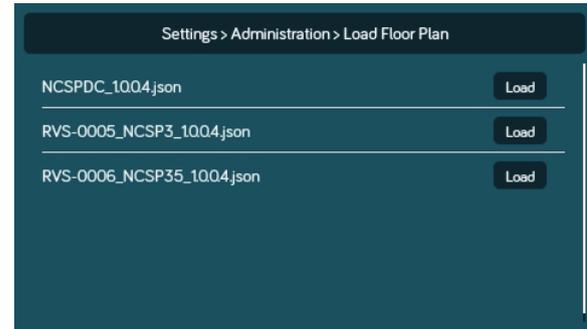
10. Press the App version to update the DC App.  
Press "UPDATE"



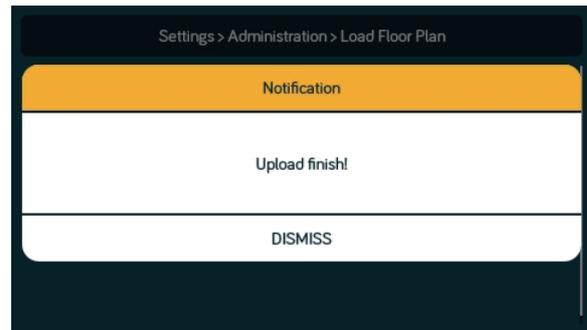
11. Waiting for Update.



12. Press the Floor Plan to select a floor plan.  
Press "Load" to select the floor plan.



13. Press "DISMISS" to confirm selection.



\* If a software update is needed, go to  
<http://www.asaelectronics.com//in-command>

\*\* If there is a software issue, Call ASA Electronics Technical Support at 1-877-845-8750 or email them at [info@asaelectronics.com](mailto:info@asaelectronics.com).

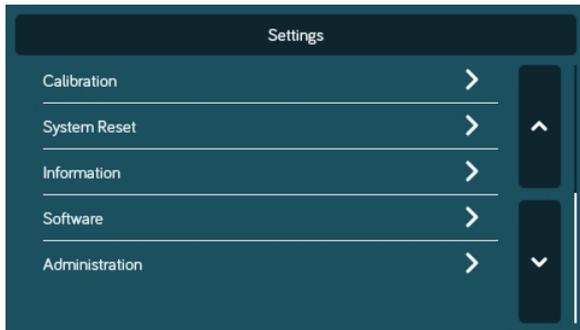
## • RESET: FLOOR PLAN

Rest to Floor Plan to remove customization, or reset to factory settings.

1. Select "Settings".

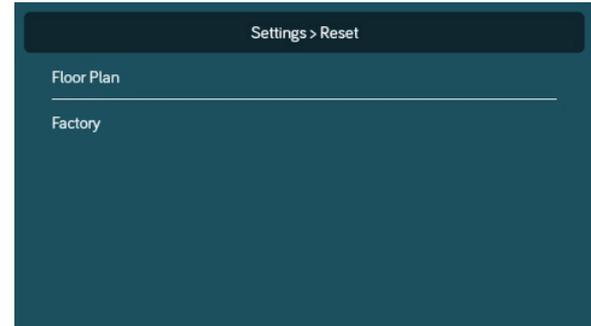


2. Select "System Reset" in the Settings page.

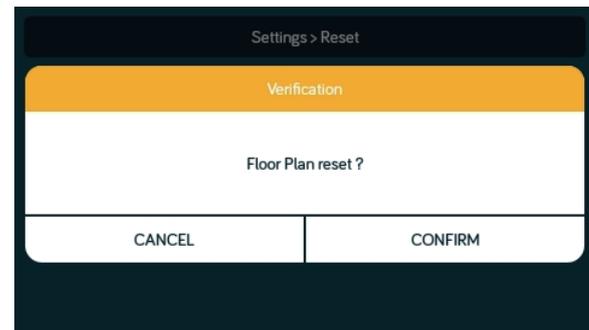


3. Select one of the two options. (Floor Plan of Factory) to restore to a previous state. Current settings will be lost.

- a. **Floor Plan:** restores to previous floor plan settings from RV manufacturer.
- b. **Factory:** restores to default settings from ASA electronics.



3. Confirm for floor plan to complete update.

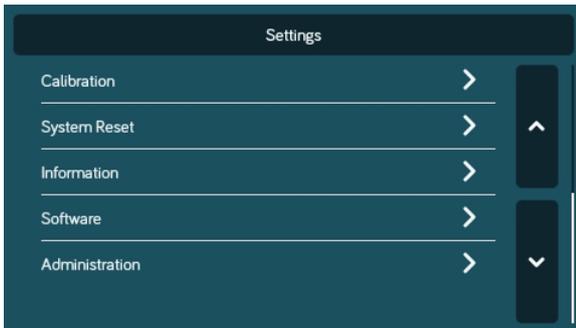


## • TOUCH SCREEN CALIBRATION

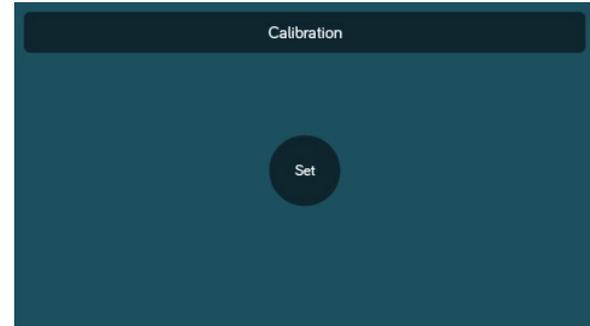
1. Select "Settings".



2. Select "Calibration".



3. To calibrate the Touch Screen, select "Set". Follow the instructions. The DC will restart after calibration.



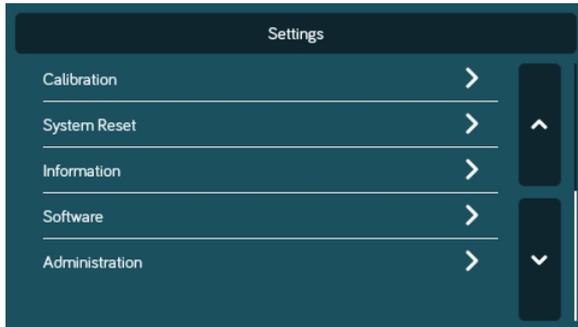
4. Touch the center of the cross.



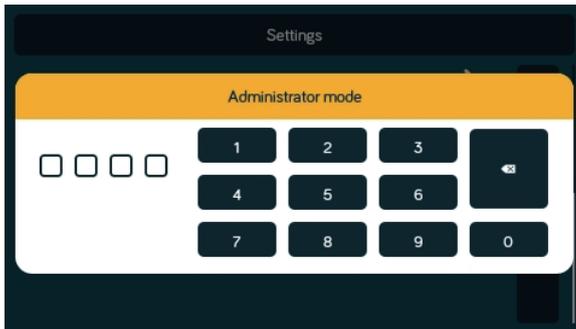
## • SYSTEM CALIBRATION\*

From the admin page, the App Date can be deleted, the Generator Hour Meter can be set, and the Water Tanks can be calibrated.

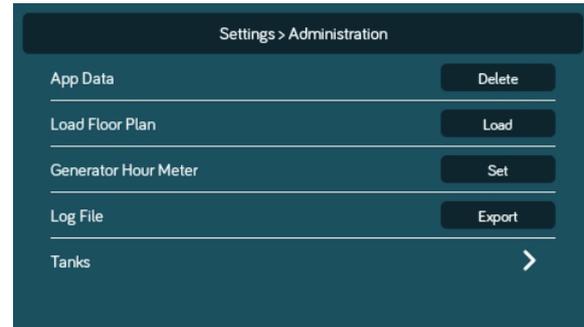
1. From the Settings page, press "Administration".



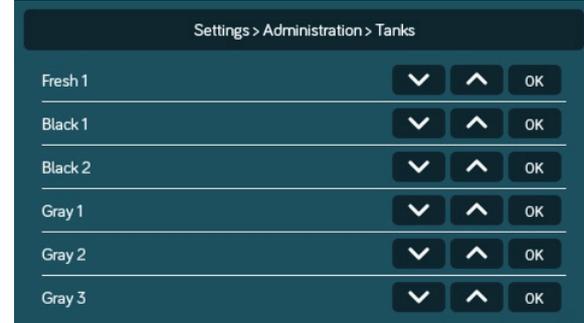
2. Select "Calibration".



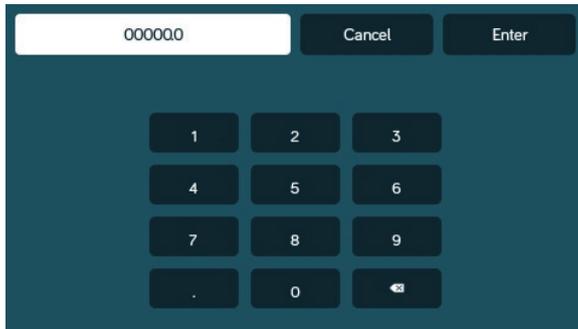
3. Make Selection.



4. Select "Tanks" to set resistor reference value for every tank.



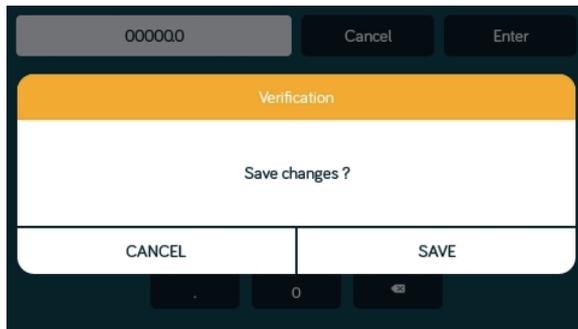
7. Press the Generator Hour Meter "Set" button to set the meter time.



\* The system is calibrated by the manufacturer and should only be accessed for troubleshooting.

\*\* The Admin Passcode is used by the manufacturer for programming and troubleshooting purposes. Should there be a calibration issue, call ASA Electronics Technical Support at 1-877-845-8750 or email them at [info@asaelectronics.com](mailto:info@asaelectronics.com).

8. Press the App Date "Delete" button to clear current App date.  
**Note: This will remove the floor plan settings from the RV Manufacturer.**



## • TROUBLESHOOTING

Symptom	Solution
Display Commander (DC) will not power on or no front panel operation	Check for +12VDC on Positive (+) input on back of the DC.
	Check for Ground on Negative (-) input on back of the DC.
	Check fuse in Distribution Panel.
	Try cycling power with the power button.
No Power to the Body Control Module (BCM)	Check for +12VDC on pin 42.
	Check for Ground on pin 39.
	Check fuse in Distribution Panel.
DC screen flashing on and off after installation	Disconnect power wires from the back of the DC.
	Shut off all power to the DC and BCM.
	Reconnect power wires to the DC.
	Return power to the DC and BCM
	Press Reset button on the BCM
Motor Functions do not activate	Check for +12VDC on pin 41. Ensure the relay activates.*
*Relay not activating	Replace the relay with one from an unused circuit. See label on BCM cover for relay identification
DC shows 0V and no functions activate from DC	Check to ensure 4 pin RV-C cable is connected to the back of the DC and to the BCM.
	Check for shorts in RV-C cable and for loose pins in the connection.

For additional troubleshooting, call ASA Electronics Technical Support at 1-877-845-8750, email [info@asaelectronics.com](mailto:info@asaelectronics.com) or visit our website <http://www.asaelectronics.com/in-command>.









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