

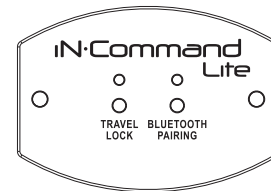
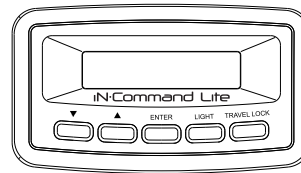
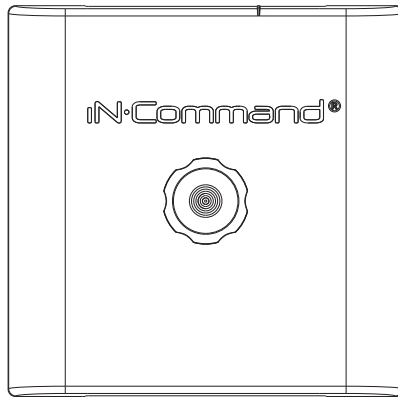
iN·Command[®]

CONTROL SYSTEMS

Lite

RV CONTROL AND MONITORING SYSTEM

Installation and Operation Manual



Patent # 9,679,644

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.

• TABLE OF CONTENTS

TABLE OF CONTENTS	3
INTRODUCTION	4
Thank You!	4
Features	4
Precautions	4
Packing List.....	4
INSTALLATION	5
Tools and Supplies.....	5
Disconnecting the Battery	5
Selecting the Mounting Location.....	5
Mounting the Display Commander (DC)	5
Mounting the Switch Plate (SP)	5
WIRING	6
APP SETUP MENU LIST	7
TRAVEL LOCKOUT (SAFETY)	8
TROUBLE SHOOTING	9
SWITCH PLATE BUTTONS	10
DISPLAY COMMANDER BUTTONS	10
SPECIFICATIONS	11
Federal Communications Commission (FCC) Statement	11
MOBILE DEVICES:	12
Pairing Mobile Device to DC/SP	13
NCS50DC/SP FIRMWARE UPDATE*	15
EDIT AND RESET FLOOR PLAN	16

• 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 iN-Command Lite for maximum enjoyment.

• Features

Features of iN-Command Lite system:

- Simultaneous control by one Android Device or one iOS Device
- Control one Light zone
- Control Awning
- Control Electric Slides
- Control Jacks (non-automatic function)
- Monitor Battery Voltage with Low Voltage Alert

• 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.

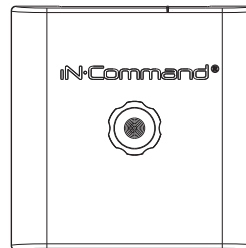
The front of this unit should only be cleaned with a slightly damp cloth. Do not use cleaning products.

• Use Recommended Accessories.

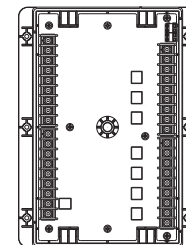
TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK AND ANNOYING INTERFERENCE, USE ONLY THE RECOMMENDED ACCESSORIES.

• Packing List

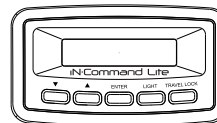
(1) Cover, (1) Thumb Screws



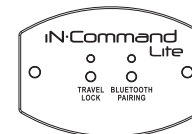
(1) Body Control Module (BCM)



(1) Display Commander (DC)



(1) Switch Plate (SP)



• INSTALLATION

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

• Tools and Supplies

You will need the following:

- Phillips screwdriver
- #2 square drive bit
- Wire cutters and strippers
- Electrical tape
- Volt meter/test light
- Crimping tool
- Fork Crimp connectors
- 10 gauge wire for power and slide connections
- 14 and 18 gauge wire for all other connections
- Two #8 PH (0.164" x 0.5") screws for the DC
- Two #8 PH (0.164" x 0.5") screws for the SP
- Six #8 PH (0.164" x 1.0") screws for the BCM
- Minimum of 24 gauge wire required to Connect DC To 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.

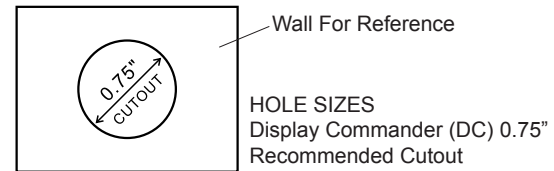
• Selecting the Mounting Location

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

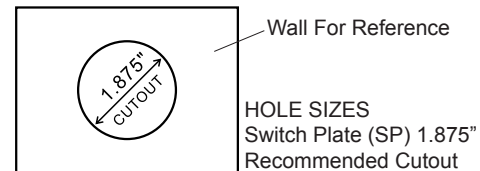
• Mounting the Display Commander (DC)

- Cut/Drill hole, allowing space below for future programming and behind for ventilation
- Route wires through the hole and connect
- Attach rear plate with screws
- Check and ensure correct operation
- Snap main unit into plate
- Mount the unit using two #8 PH (0.164" x 0.5") screws



• Mounting the Switch Plate (SP)

- Cut/Drill hole, allowing space below for future programming and behind for ventilation
- Route wires through the hole and connect
- Check and ensure correct operation
- Mount the unit using two #8 PH (0.164" x 0.5") screws



• WIRING

The wiring diagram depicts all the wiring connections required for proper operation of the unit.

The TX (transmit) and RX (receive) connections at each device are crossed (crossover cable).

BODY CONTROL MODULE (BCM) CONNECTIONS

PIN NO.	WIRE GAUGE	DESCRIPTION
1	10 AWG	M1 OUT 12V (12V FOR M1 EXTEND)
2	10 AWG	M1 IN 12V (12V FOR M1 RETRACT)
3	10 AWG	M2 OUT 12V (12V FOR M2 EXTEND)
4	10 AWG	M2 IN 12V (12V FOR M2 RETRACT)
5	10 AWG	M3 OUT 12V (12V FOR M3 EXTEND)
6	10 AWG	M3 IN 12V (12V FOR M3 RETRACT)
7	10 AWG	M4 OUT 12V (12V FOR M4 EXTEND)
8	10 AWG	M4 IN 12V (12V FOR M4 RETRACT)
9	10 AWG	M5 OUT 12V (12V FOR M5 EXTEND)
10	10 AWG	M5 IN 12V (12V FOR M5 RETRACT)
11	10 AWG	M6 OUT 12V (12V FOR M6 EXTEND)
12	10 AWG	M6 IN 12V (12V FOR M6 RETRACT)
13	10 AWG	M7 OUT 12V (12V FOR M7 EXTEND)
14	10 AWG	M7 IN 12 V (12V FOR M7 RETRACT)
15	16 AWG	TRAVEL LOCK 12V IN
16	14 AWG	LIGHT GROUP 12V IN
17	14 AWG	LIGHT GROUP GND
18	14 AWG	LIGHT GROUP 12V OUT
19	14 AWG	LIGHT GROUP SWITCH INPUT 12V
20	10 AWG	MOTOR 7 GND OUT (M7 IN)

PIN NO.	WIRE GAUGE	DESCRIPTION
21	10 AWG	MOTOR 7 12V OUT 30 AMP (M7 OUT)
22	10 AWG	MOTOR 6 GND OUT (M6 IN)
23	10 AWG	MOTOR 6 12V OUT 30 AMP (M6 OUT)
24	10 AWG	MOTOR 5 GND OUT (M5 IN)
25	10 AWG	MOTOR 5 12V OUT 30 AMP (M5 OUT)
26	10 AWG	MOTOR 4 GND OUT (M4 IN)
27	10 AWG	MOTOR 4 12V OUT 30 AMP (M4 OUT)
28	10 AWG	MOTOR 3 GND OUT (M3 IN)
29	10 AWG	MOTOR 3 12V OUT 30 AMP (M3 OUT)
30	10 AWG	MOTOR 2 GND OUT (M2 IN)
31	10AWG	MOTOR 2 12V OUT 30 AMP (M2 OUT)
32	10 AWG	MOTOR 1 GND OUT (M1 IN)
33	10 AWG	MOTOR 1 12V OUT 30 AMP (M1 OUT)
34	10 AWG	CHASSIS GND (IN)
35	10 AWG	MOTOR FEED 12V (IN)
36	10 AWG	BCM 12V (IN)
37	24 AWG	12V OUT (CONNECT TO DC)
38	24 AWG	TX (CONNECT TO DC RX)
39	24 AWG	RX (CONNECT TO DC TX)
40	24 AWG	GND OUT (CONNECT TO DC)

• APP SETUP MENU LIST

One light group and seven motor functions can be added or removed via a downloadable App from Google and Apple stores.

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.

ITEM	SELECTION
Light Group 1	No, Yes
Motor 1	No, Yes
Motor 2	No, Yes
Motor 3	No, Yes
Motor 4	No, Yes
Motor 5	No, Yes
Motor 6	No, Yes
Motor 7	No, Yes

• TRAVEL LOCKOUT (SAFETY)

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

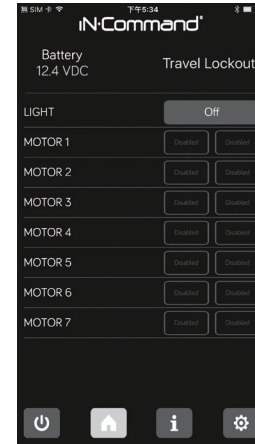
When the Brake on the vehicle is activated, iN-Command will lock out (disable) all motorized functions. If the Switch Plate (SP) is installed, the Travel Lock LED will be solid red.

If the DC is installed, Travel Lock text will appear.

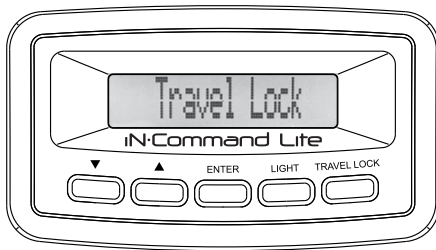
Mobile devices will display Travel Lockout in Orange text and motor functions will cease to actuate and Disabled will appear on the buttons.

The light control will continue to function.

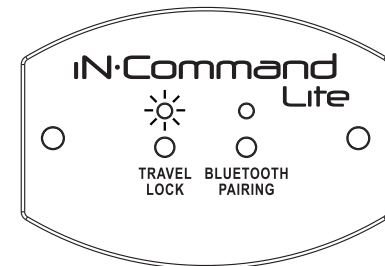
To turn the Travel Lock off press the “Travel Lock” button on the Display Commander or Switch Plate inside the RV.



Travel Lock on a handheld device app



Travel Lock on the Display Commander



Travel Lock on the Switch Plate

• TROUBLE SHOOTING

Symptom	Solution
Display Commander (DC) will not turn ON	Verify the BCM is powered on.
	Check main fuse in Distribution Panel.
	Check 12V+ on wire to DC (RED wire).
	Check Ground wire to DC.
No power to the Body Control Module (BCM)	Check if the Red power LED is off,
	Check the fuse in the Distribution Panel.
	Check 12V+ on wire at pin 36. Check Ground wire at pin 34.
	Cycle power to the BCM and DC.
	Ensure the wires to the BCM and DC are connected and there is 12V.
DC screen flashing on and off after installation	Ensure the wires to the BCM and DC are not damaged or pinched.
	Ensure the Battery is charged.
	Cycle power to the BCM and DC.
	Ensure wires are making contact with pins and 12V+ is present.
Light Group is not working.	Check 12V+ at Pin 16.
	Check fuse in the Distribution Panel.
Motor functions are not working	Check 12V+ at pin 35.
Travel Lock is on	Ensure 12V+ is removed from Pin 15.
Functions not operating from DC or App and App shows 0V	Check to ensure RX & TX wires connected properly.

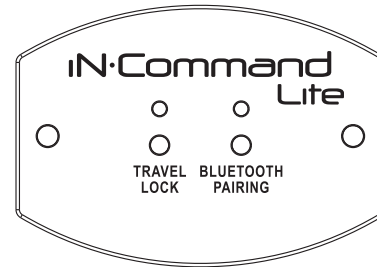
If an issue is unable to be resolved using the above methods, contact ASA Electronics Technical Support at 1-877-845-8750 or email them at info@asaelectronics.com

• SWITCH PLATE BUTTONS

The SP (Switch Plate) has 2 buttons on the front of it.
From left to right, they are:

- Travel Lock
- Bluetooth Pairing

The Travel Lock button turns off the Travel Lock function when the light is flashing red. The Bluetooth Pairing button is used to pair and unpair the mobile app to and from the SP.

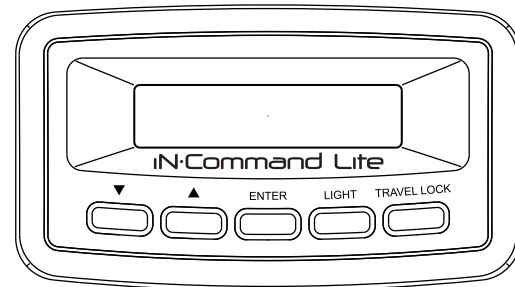


• DISPLAY COMMANDER BUTTONS

The DC (Display Commander) has 5 buttons on the front of it.
From left to right, they are:

- Down
- Up
- Enter
- Light
- Travel Lock

The Down button navigates down through the Function Menu. The Up button navigates up through the Function Menu. Enter button is used to engage motor functions, pair mobile app, and execute menu commands. The Light button turns on/off the light group with a quick press and release. Press and hold the Light button to turn the display back light on/off.



• SPECIFICATIONS

NCS50DC (Display Commander)

Operating Voltage	12VDC
Maximum Current Draw	200mA@12VDC
Minimum Operating Voltage	9VDC
Maximum Operating Voltage	16VDC

NCS50 (Body Control Module)

Operating Voltage	12VDC
Maximum Current Draw	1A@12VDC
Minimum Operating Voltage	9VDC
Maximum Operating Voltage	16VDC

NCS50SP (Switch Plate)

Operating Voltage	12VDC
Maximum Current Draw	200mA@12VDC
Minimum Operating Voltage	9VDC
Maximum Operating Voltage	16VDC

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	3.8" (W) x 1.2" (D) x 2.1" (H)
Switch Plate	3.2" (W) x 1.2" (D) x 2.3" (H)

• Federal Communications Commission (FCC) Statement

15.21

You are cautioned that changes or modifications not expressly approved by the part responsible for compliance could void the user's authority to operate the equipment.

15.105(b)

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.

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:

- Reorient or relocate the receiving antenna.
- 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.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- 1) this device may not cause harmful interference and
- 2) this device must accept any interference received, including interference that may cause undesired operation of the device.

FCC RF Radiation Exposure Statement:

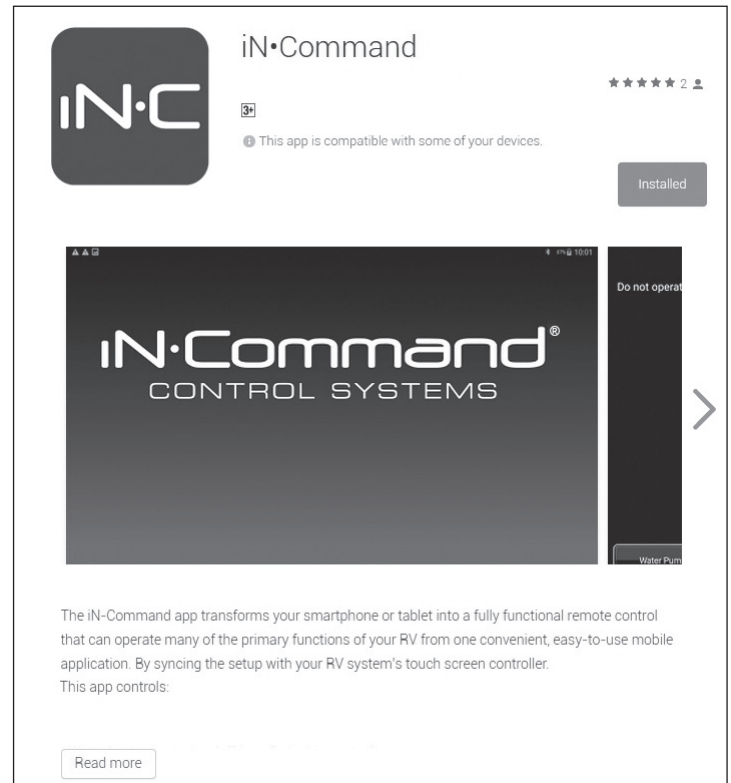
- 1.This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
- 2.This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment.
- 3.This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.

- MOBILE DEVICES:

iN-Command Lite is able to pair to Android and iOS devices via the mobile App.

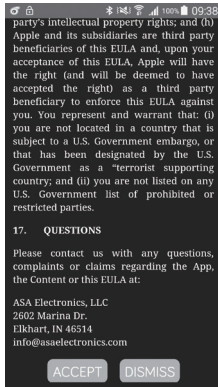
Visit the Google Play and Apple App stores on your mobile device to download and use the iN-Command Lite App.

Only One mobile device is able to be paired with iN-Command Lite.



• Pairing Mobile Device to DC/SP

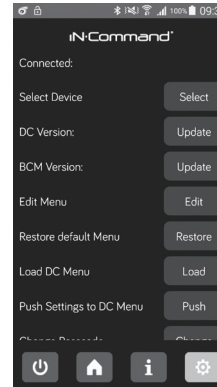
1. Open NCS Lite application on device.



2. Press the gear cog to enter the settings page.



3. Press "Select" button to connect the SP or DC.



4. Press device name to connect.

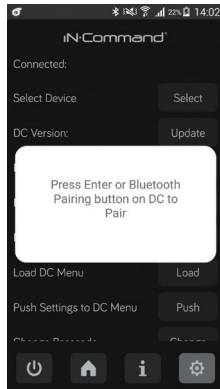


5. Remote device will show pairing message.

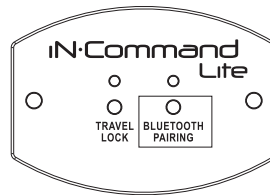
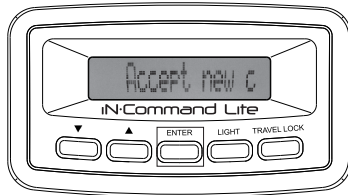
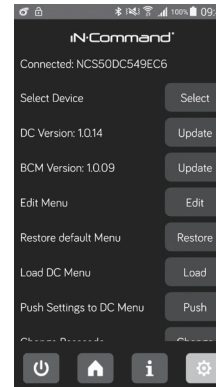
The SP will flash a blue light.

The DC will flash "Accept new device on display"

Press "ENTER" or "BLUETOOTH PAIRING" button to Pair.



6. If connection is successfully established, setting page will show connected device name and versions.



To connect NCS50DC/SP with another device.

NCS50SP :

Long press "BLUETOOTH PAIRING" button for 7~10 seconds to unpair device. If unpairing is successful, NCS50SP will flash blue light twice. repeat steps 2~7 for connecting another device

NCS50DC:

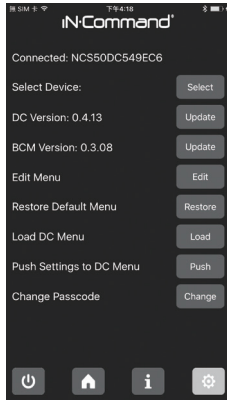
In DC Menu, select unpair device and press the enter button. A message of "ARE YOU SURE?" will appear. Press "ENTER" button Again.

ON APP:

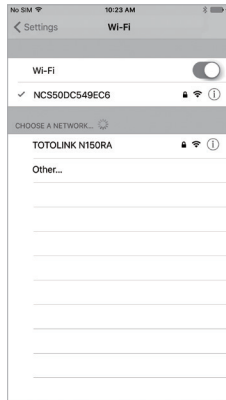
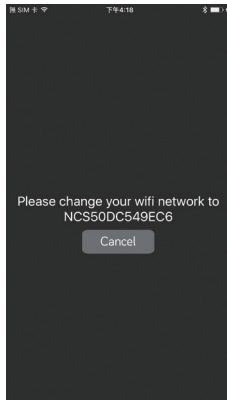
When powering down the App select the box to "Unpair Device"

• NCS50DC/SP FIRMWARE UPDATE*

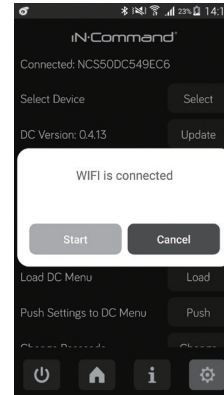
1. Press "Update" button to update NCS50DC/NCS50SP.



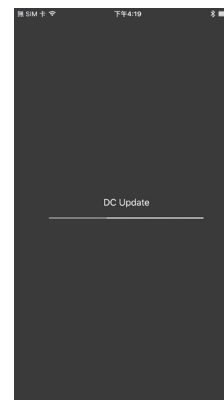
2.1 For iOS: In Wi-Fi Settings, connect to Wi-Fi network shown on app. Password is "1234567890".



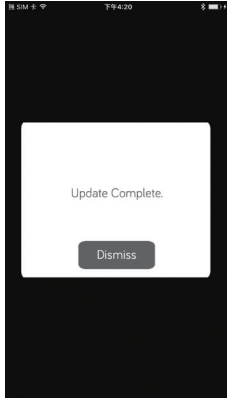
2.2 For Android: Wait for Wi-Fi connection, then press start button.



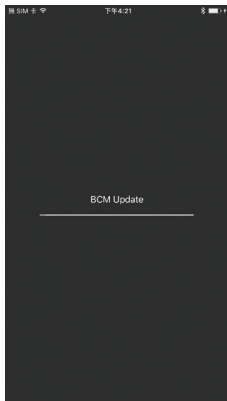
3. For iOS : Once connected to network, go back to app, App will automatically start firmware update.



4. App will display "Update complete" once firmware is update
Press Dismiss button. DC/SP will reboot with new firmware.



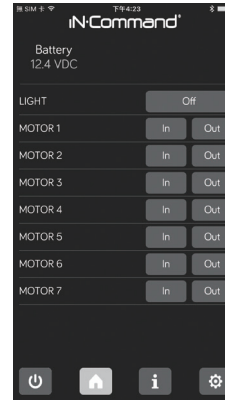
5. BCM update: Press update button next to BCM version.
BCM update will begin automatically.



**** DO NOT LEAVE APP ONCE
UPDATE HAS STARTED****
Update will take 10 minutes.

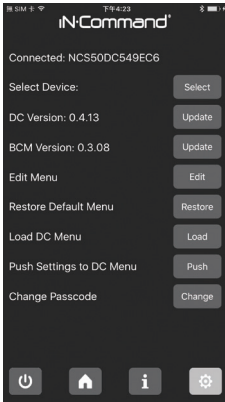
• EDIT AND RESET FLOOR PLAN

1. From the Apps Home Page, press the gear cog at the lower right corner to enter the Settings Page.

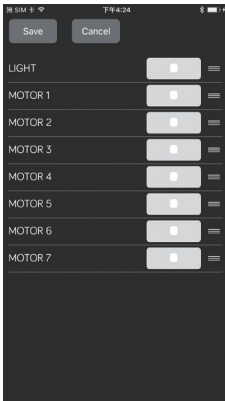


2. From the Settings Page, you can "Edit Menu", "Load Default Menu",
"Load DC Menu" and "Push Settings to DC Menu".

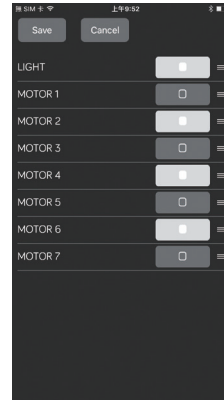
3. To Edit the floor plan, press the Edit button.



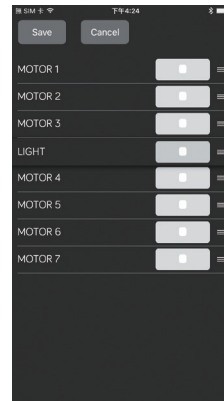
4. In the Edit Menu, you can add or remove functions, reposition function and edit the text for the function.



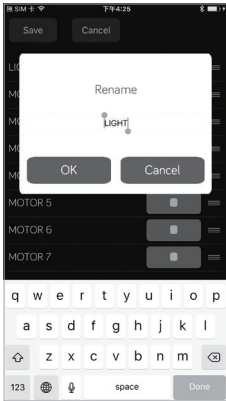
5. To add or remove functions, press the box next to the function.



6. To reposition a function, press and hold the "≡" icon next to the function. Drag to move the function to a new location. The "Light" function is shown as an example.



- To edit the text, press on the function text. A device rename window will open. Press "OK" after completing text editing. (The text box is Limited to 12 characters)



- Once changes have been made, press the Save button at the top of the page.
- After the floor plan has been edited, the new floor plan settings can be pushed to the DC/SP. Press "Set" Push Settings to DC Menu".
- After the new floor plan settings have been pushed to the DC/SP, another device can retrieve edited floor plan by pressing the "Load" button next to "Load DC Menu".
- To go back to the default floor plan settings, press the "Load" button next to " Load Default Menu ".



2602 Marina Drive • Elkhart, IN 46514

www.asaelectronics.com

www.jensenvdirect.com

©2015 ASA Electronics LLC.