

USER MANUAL

vLinkTM Series

Models:

VLNK-Z3

VLNK-RLS

VLNK-U



CODE 3[®]
A PUBLIC SAFETY EQUIPMENT COMPANY



Contents:

Introduction-----	2
vLink Remote Mounted Antenna-----	3
Z3 Siren Application-----	6
Schematic Z3 Version-----	9
RLS Siren Application-----	10
Schematic RLS Version-----	13
Universal Application-----	14
Schematic Universal Version-----	17
Connecting to vLink-----	18
iOS Products-----	18
Android Products-----	20
Customizing Settings and Security----	23
RLS and Z3 Versions-----	23
Universal Version-----	25
Specifications-----	26
Compliance and Approvals-----	27
Troubleshooting Guide-----	28
Example Installations and Tips-----	29
Warranty-----	30
Product Returns-----	30

IMPORTANT:

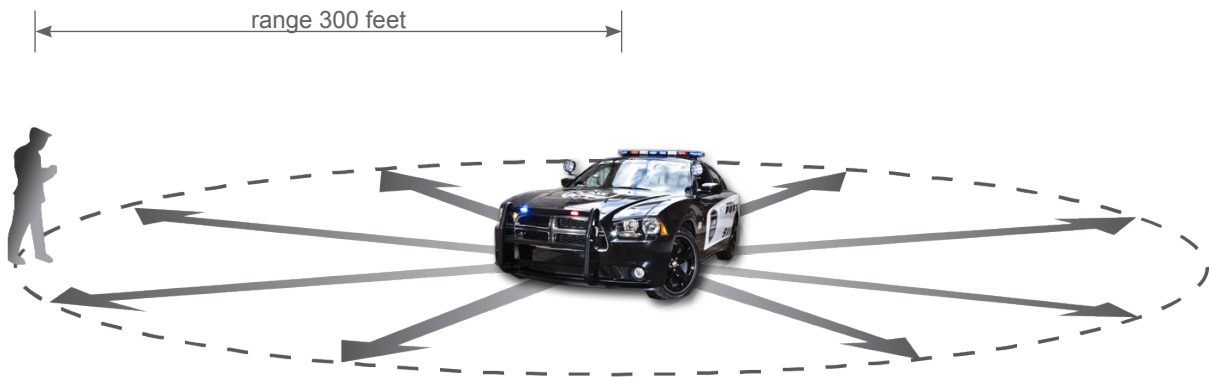
Read all instruction and warnings before installing and using.

INSTALLER: *This manual must be delivered to the end user of this equipment.*

Note: For more up-to-date User Manual, check C3vLink.com

INTRODUCTION

The vLink system takes advantage of the Wi-Fi capability of your Smartphone and allows you to control your Emergency Warning Light system up to 300 feet from the vehicle. The purpose of this document is to aid in the setup and installation of the vLink system, and to provide instructions for its proper configuration and operation. Also, refer to the Installation/User Manuals for the Z3 or RLS Siren and other products installed in conjunction with the vLink.



REMOTE MOUNTED ANTENNA

1



10' Long ultra low loss antenna coax cable.

2

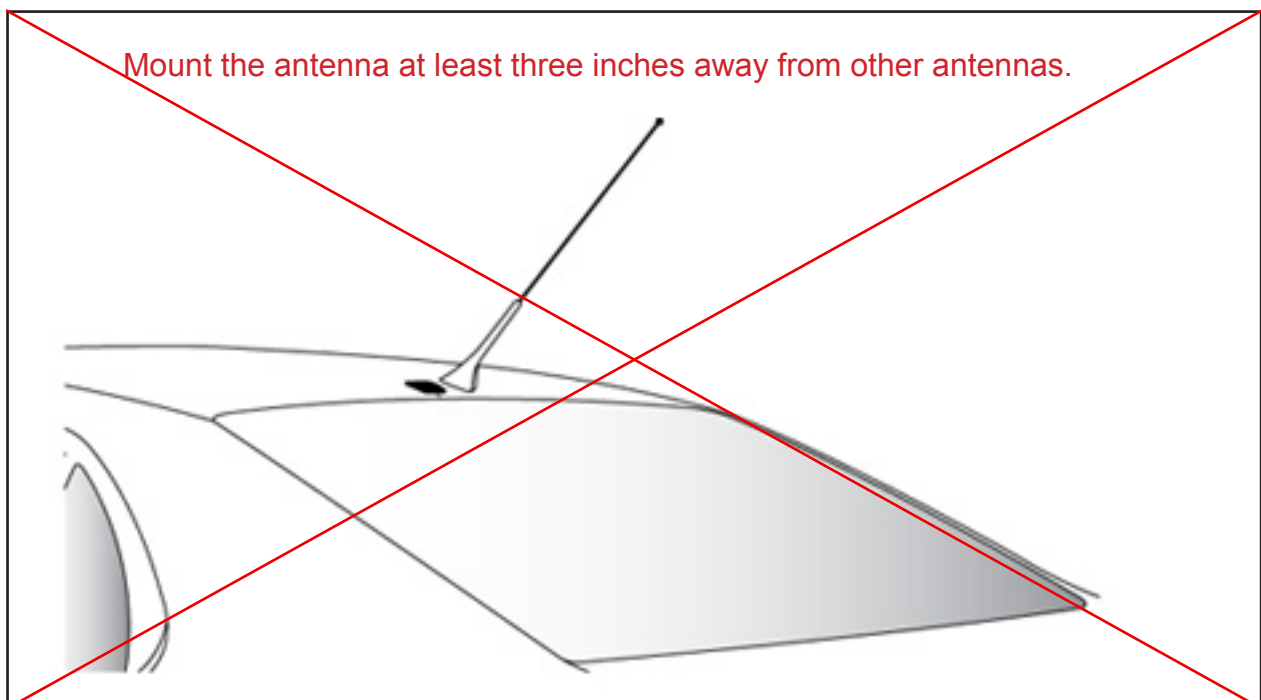


Remote mounted antenna

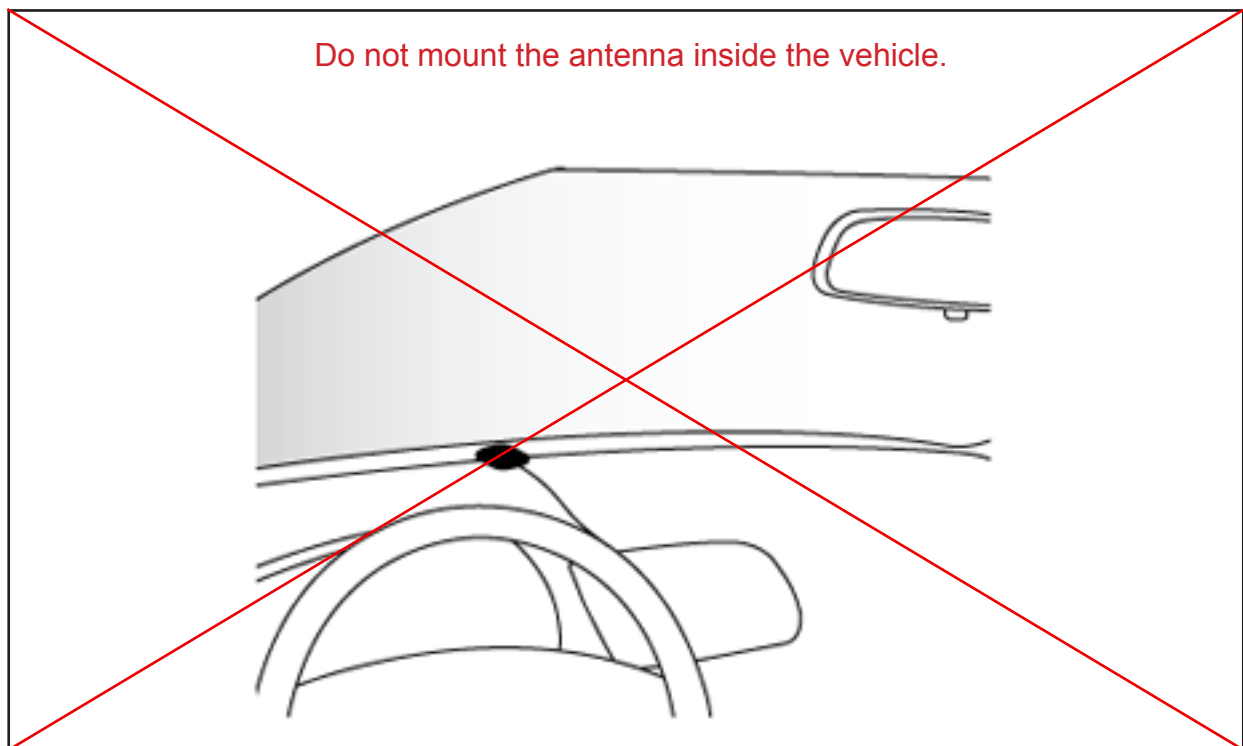
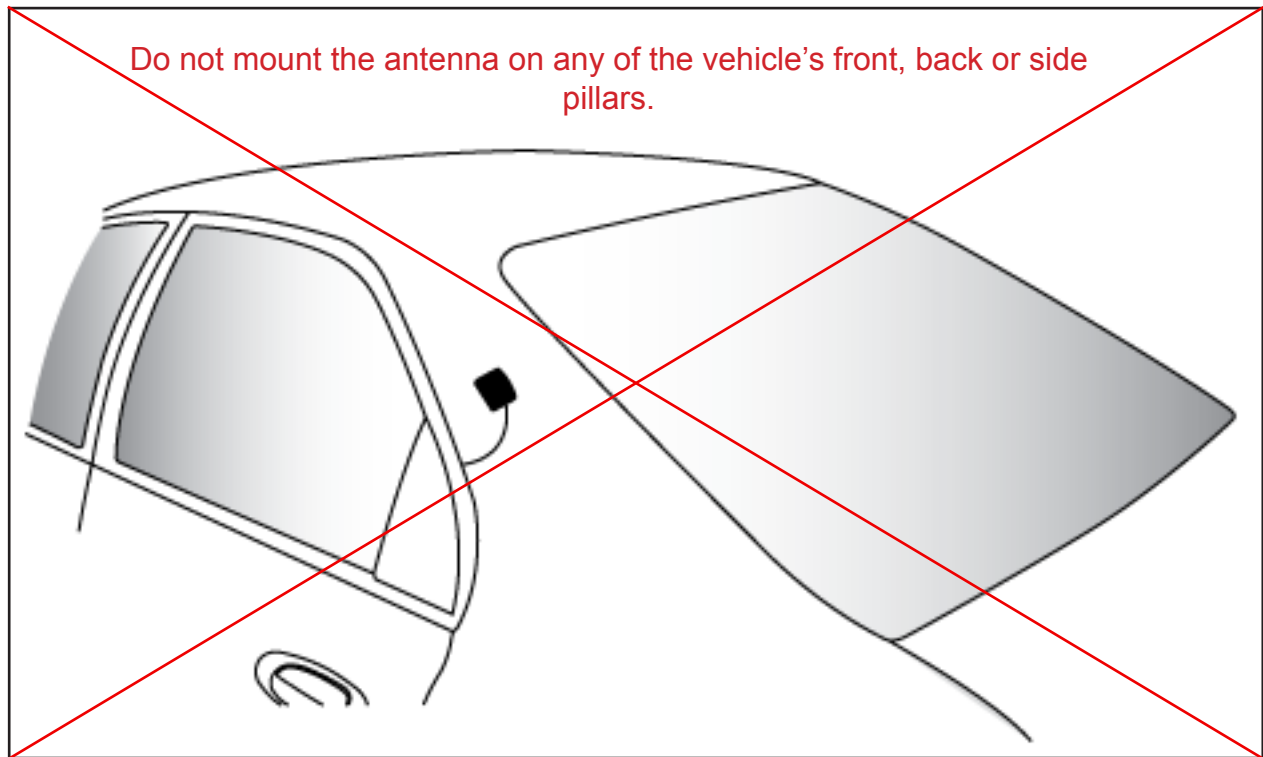
Mounting Location

For best performance, the antenna should be mounted on the roof of the car.

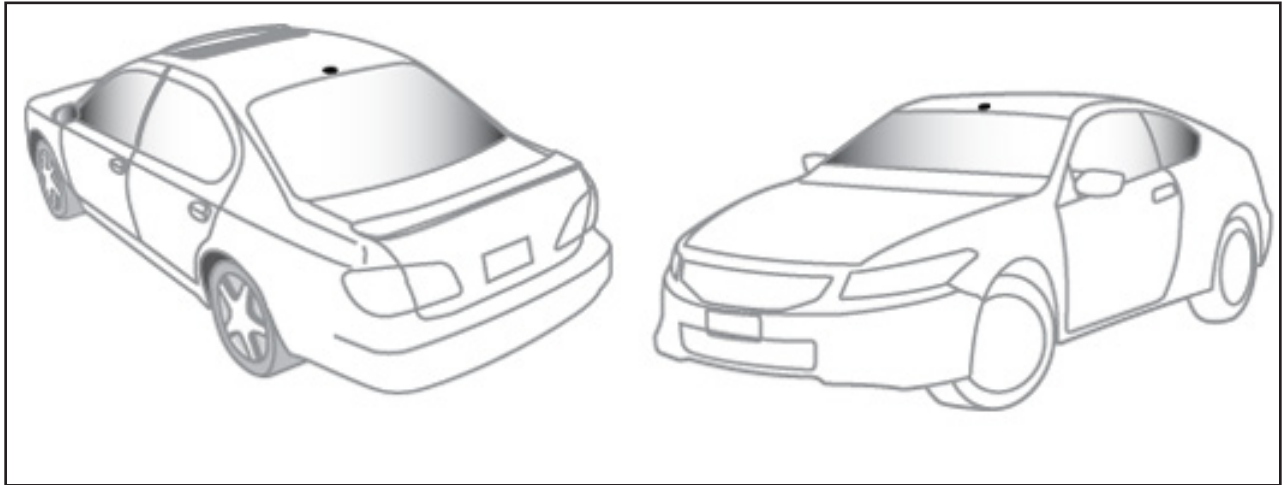
Select a location on the roof of the vehicle that has the fewest obstructions to the view of the antenna. The antenna cable is 10 feet long, make sure your selected mounting location will allow you to route the cable to the location where you plan to mount the vlink box.



REMOTE MOUNTED ANTENNA (cont.)



REMOTE MOUNTED ANTENNA (cont.)



You will need to drill a 5/8" hole in the roof at the location you selected. In order to avoid metal shavings being left inside your headliner, place a small container inside the headliner underneath where the hole will be drilled to catch any metal shavings.

Z3 SIREN APPLICATION

Unpacking & Pre-Installation

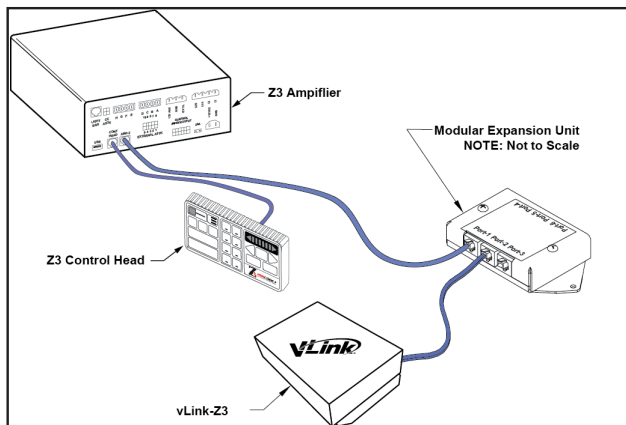
After unpacking the vLink, carefully inspect the unit and associated parts for any damage that may have been caused in transit. Report any damage to the carrier immediately.

Contents of vLink™ Z3 package:

- ① vLink Z3 controller
- ② Communications cable
- ③ Power cable
- ④ vLink app for Z3 siren menu screen
- ⑤ Coax antenna cable
- ⑥ Remote mounted antenna

Installation & Mounting

The vLink Controller may be mounted in various locations in the vehicle. When selecting a mounting location, also consider the wiring requirements. Be certain that the vLink controller is securely fastened to the vehicle in a location that will not cause a hazard or injury to the occupants in case of accident.



All devices should be mounted in accordance with the manufacturer's instructions and securely fastened to vehicle elements of sufficient strength to withstand the forces applied to the device. Ease of operation and convenience to the operator should be the prime consideration when mounting the siren and controls. Adjust the mounting angle to allow maximum operator visibility. Do not mount the Hand-Held Controller in a location that will obstruct the drivers view. Mount the Hand-Held Controller mounting base in a convenient location to allow the operator easy access. Devices should be mounted only in locations that conform to their SAE identification code as described in SAE Standard J1849. For example, electronics designed for interior mounting should not be placed underhood, etc. Controls should be placed within convenient reach* of the driver, or if intended for two person operation, the driver and/or passenger. In some vehicles, multiple control switches and/or using methods such as "horn ring transfer" which utilizes the vehicle horn switch to toggle between siren tones may be necessary for convenient operation from two positions.

**Convenient reach is defined as the ability of the operator of the siren system to manipulate the controls from their normal driving/riding position without excessive movement away from the seat back or loss of eye contact with the roadway.*

Connections

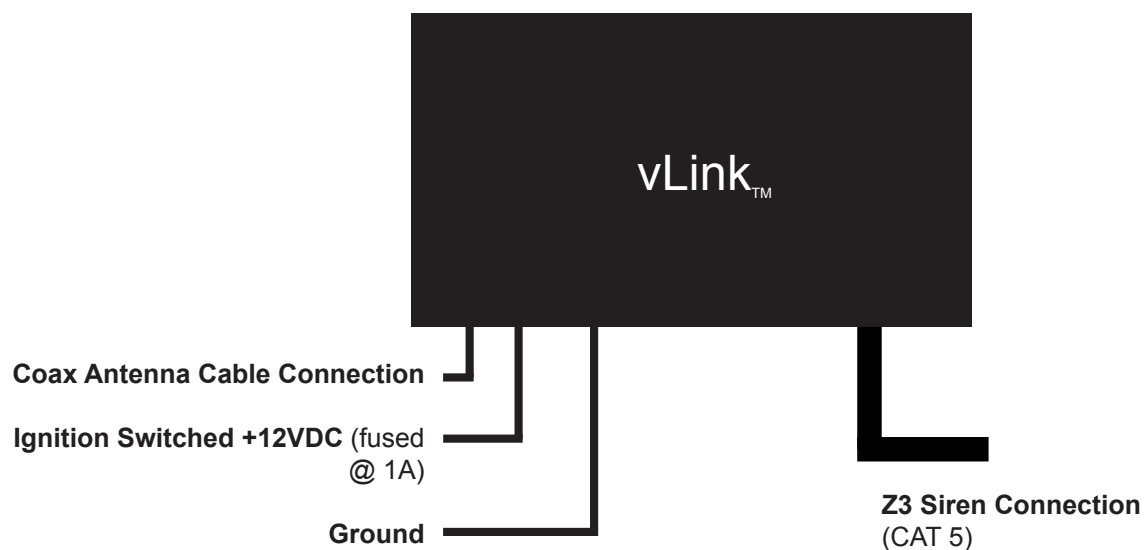
Wiring varies according to which model variant of vLink you are installing. In all cases, +12VDC power and system ground connections must be routed to the location where the vLink controller will be mounted. Using the supplied Power Cable assembly, connect the red wire to a +12VDC Ignition Power source that is fused at 1A. It's important that the vLink be powered from an Ignition switch power source so that a Power On Reset occurs each time the vehicle is started. Connect the black wire to vehicle ground at a point that offers a low resistance path to the battery's negative terminal.

Route the control cable from the vLink Controller to the Z3 Siren and connect per the User Manual. For

Z3 installations, route the CAT5 cable from the vLink Controller to the Z3. Connect the CAT5 cable to the "AMP-2" port on the Z3.

When all connections are made, turn on the vehicle's ignition and continue on page 18.

Typical Wiring for vLink-Z3



Z3 Default Menu Screen

Initial activation of your Z3 vLink app will show the screen below.

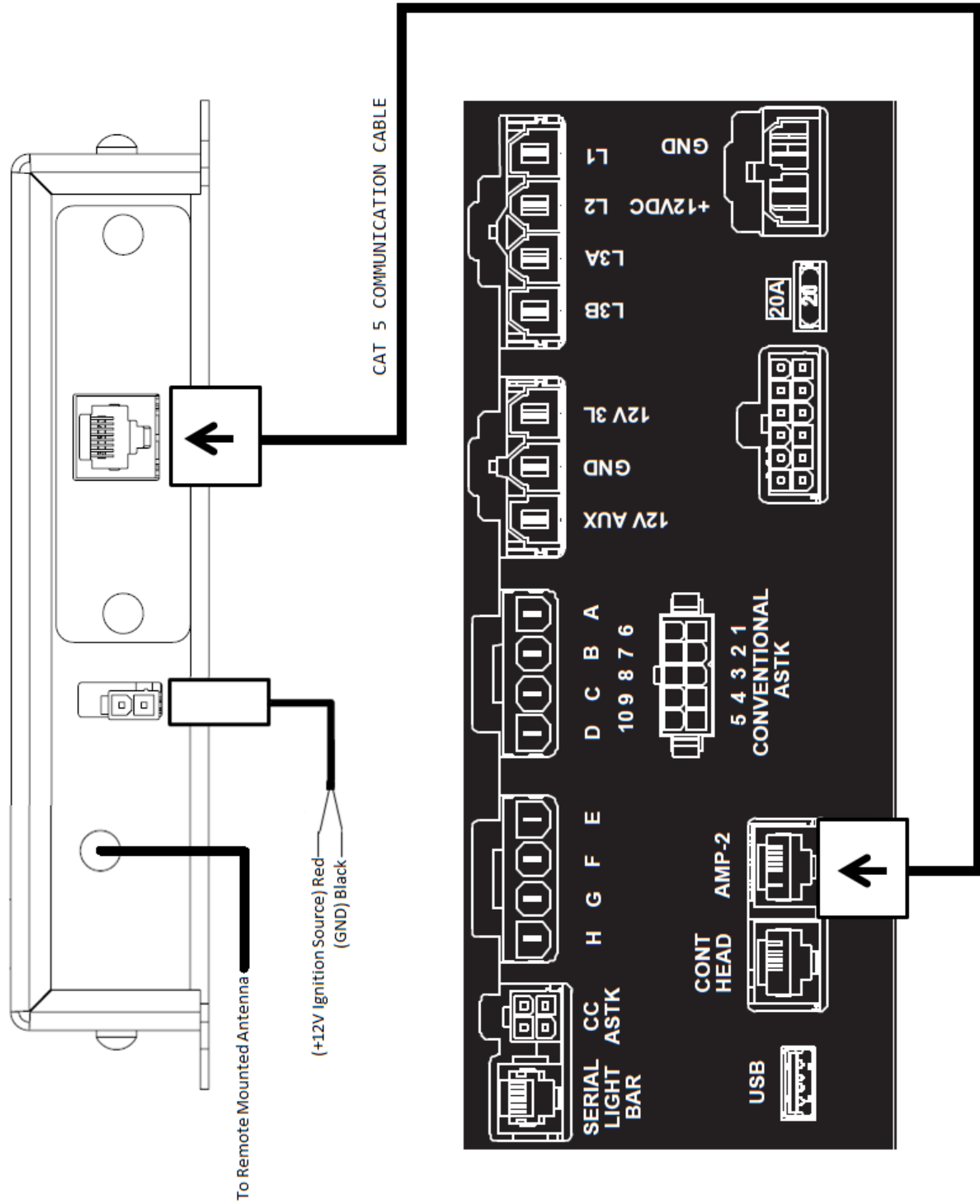


Z3 Control Button

Pressing the Z3 Control button activates the Z3 Virtual Control Head



continue on to page 18



RLS SIREN APPLICATION

Unpacking & Pre-Installation

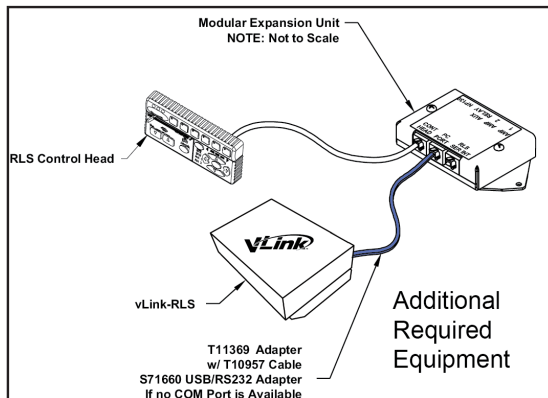
After unpacking the vLink, carefully inspect the unit and associated parts for any damage that may have been caused in transit. Report any damage to the carrier immediately.

Contents of vLink™ RLS package:

- ① vLink RLS controller
- ② Communications cable
- ③ Power cable
- ④ vLink app for RLS siren menu screen
- ⑤ Coax antenna cable
- ⑥ Remote mounted antenna
- ⑦ Modular expansion unit

Installation & Mounting

The vLink Controller may be mounted in various locations in the vehicle. When selecting a mounting location, also consider the wiring requirements. Be certain that the vLink controller is securely fastened to the vehicle in a location that will not cause a hazard or injury to the occupants in case of accident.



All devices should be mounted in accordance with the manufacturer's instructions and securely fastened to vehicle elements of sufficient strength to withstand the forces applied to the device. Ease of operation and convenience to the operator should be the prime consideration when mounting the siren and controls. Adjust the mounting angle to allow maximum operator visibility. Do not mount the Hand-Held Controller in a location that will obstruct the driver's view. Mount the Hand-Held Controller mounting base in a convenient location to allow the operator easy access. Devices should be mounted only in locations that conform to their SAE identification code as described in SAE Standard J1849. For example, electronics designed for interior mounting should not be placed underhood, etc. Controls should be placed within convenient reach* of the driver, or if intended for two person operation, the driver and/or passenger. In some vehicles, multiple control switches and/or using methods such as "horn ring transfer" which utilizes the vehicle horn switch to toggle between siren tones may be necessary for convenient operation from two positions.

**Convenient reach is defined as the ability of the operator of the siren system to manipulate the controls from their normal driving/riding position without excessive movement away from the seat back or loss of eye contact with the roadway.*

Connections

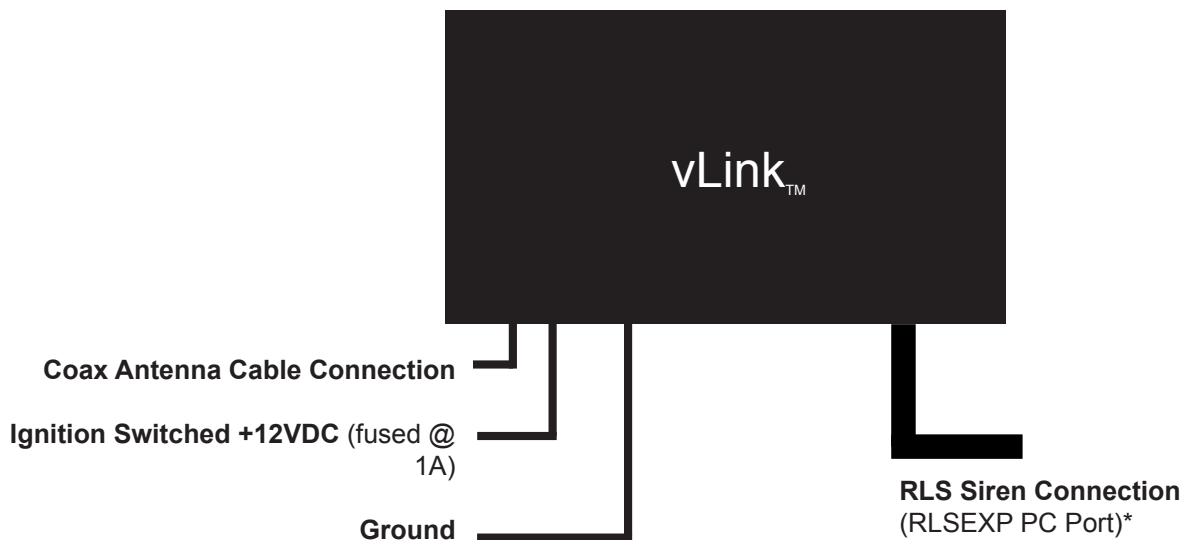
Wiring varies according to which model variant of vLink you are installing. In all cases, +12VDC power and system ground connections must be routed to the location where the vLink controller will be mounted. Using the supplied Power Cable assembly, connect the red wire to a +12VDC Ignition Power source that is fused at 1A. It's important that the vLink be powered from an Ignition switch power source so that a Power On Reset occurs each time the vehicle is started. Connect the black wire to vehicle ground at a point that offers a low resistance path to the battery's negative terminal.

Route the control cable from the vLink Controller to the RLS Siren and connect per the User Manual. The

RLS installation will require the use of the RLSEXP Modular Expansion Unit and a T11940 Modular Cable. Route the T11940 cable from the vLink to the PC Port on the RLSEXP. Connect the RLSEXP to the RLS Siren using the cables provided with the kit.

When all connections are made, turn on the vehicle's ignition and continue on page 18.

Typical Wiring for vLink-RLS



*RLS Modular Expansion Unit and T11940 cable required.

RLS Default Menu Screen

Initial activation of your RLS vLink app will show the screen below.



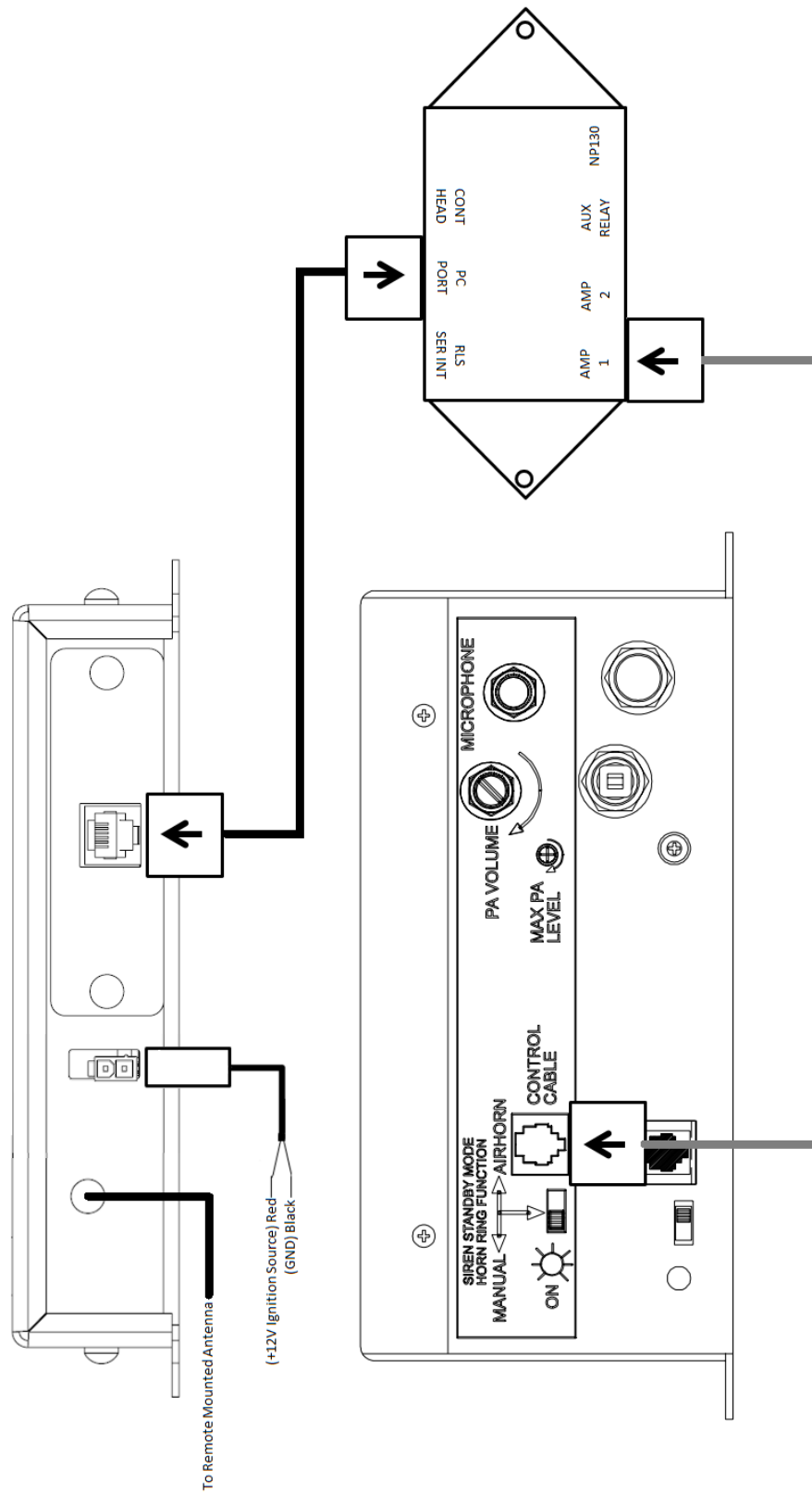
RLS Control Button

Pressing the Control button activates the RLS Virtual Control Head.



continue on to page 18

RLS VERSION SCHEMATIC



UNIVERSAL APPLICATION

Unpacking & Pre-Installation

After unpacking the vLink, carefully inspect the unit and associated parts for any damage that may have been caused in transit. Report any damage to the carrier immediately.

Contents of vLink™ Universal package:

- ① vLink Universal controller
- ② Communications cable
- ③ Power cable
- ④ vLink app for Universal menu screen
- ⑤ Coax antenna cable
- ⑥ Remote mounted antenna



Installation & Mounting

The vLink Controller may be mounted in various locations in the vehicle. When selecting a mounting location, also consider the wiring requirements. Be certain that the vLink controller is securely fastened to the vehicle in a location that will not cause a hazard or injury to the occupants in case of accident.



All devices should be mounted in accordance with the manufacturer's instructions and securely fastened to vehicle elements of sufficient strength to withstand the forces applied to the device. Ease of operation and convenience to the operator should be the prime consideration when mounting the siren and controls. Adjust the mounting angle to allow maximum operator visibility. Do not mount the Hand-Held Controller in a location that will obstruct the drivers view. Mount the Hand-Held Controller mounting base in a convenient location to allow the operator easy access. Devices should be mounted only in locations that conform to their SAE identification code as described in SAE Standard J1849. For example, electronics designed for interior mounting should not be placed underhood, etc. Controls should be placed within convenient reach* of the driver, or if intended for two person operation, the driver and/or passenger. In some vehicles, multiple control switches and/or using methods such as "horn ring transfer" which utilizes the vehicle horn switch to toggle between siren tones may be necessary for convenient operation from two positions.

**Convenient reach is defined as the ability of the operator of the siren system to manipulate the controls from their normal driving/riding position without excessive movement away from the seat back or loss of eye contact with the roadway.*

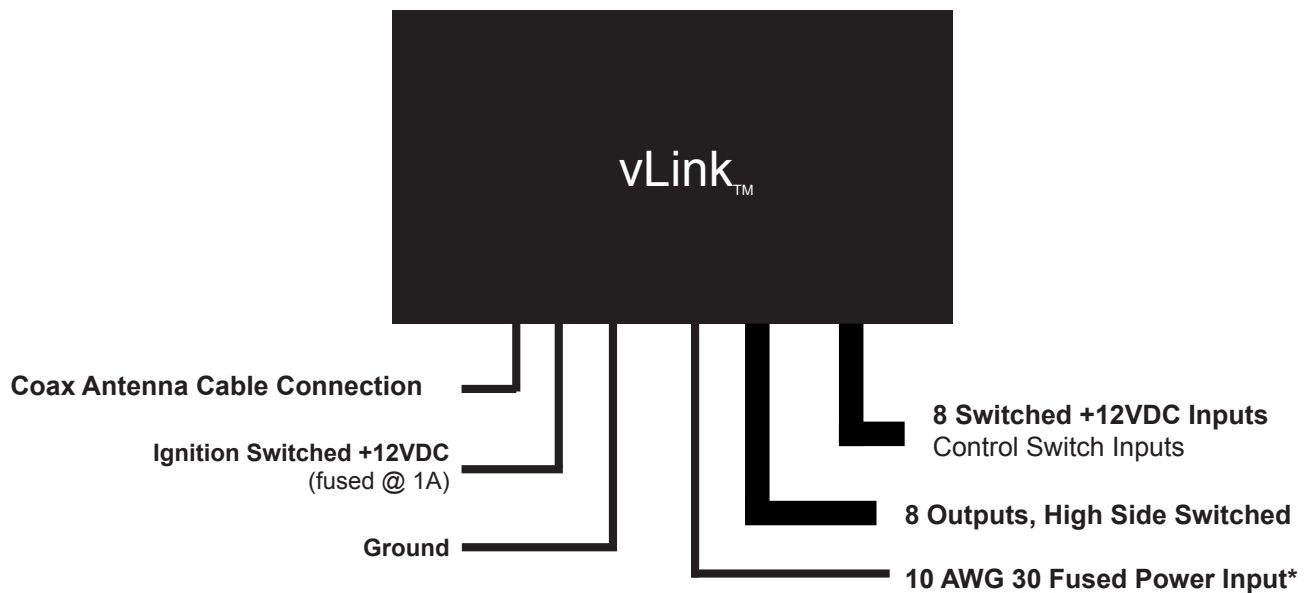
Connections

Wiring varies according to which model variant of vLink you are installing. In all cases, +12VDC power and system ground connections must be routed to the location where the vLink controller will be mounted. Using the supplied Power Cable assembly, connect the red wire to a +12VDC Ignition Power source that is fused at 1A. It's important that the vLink be powered from an Ignition switch power source so that a Power On Reset occurs each time the vehicle is started. Connect the black wire to vehicle ground at a point that offers a low resistance path to the battery's negative terminal.

When all connections are made, turn on the vehicle's ignition and continue on page 18.

Consult lightbar user manual for applicable control switch inputs and connect accordingly.

Typical Wiring for vLink-Universal



*Route the red 10AWG wire to a high current +12VDC power source. You may extend this wire by splicing a longer section of like wire as necessary. It's very important that this wire be protected by a user supplied fuse installed near the +12VDC source. The fuse rating should be about 125% of the total current for all outputs combined but must not exceed 30A.

Universal Default Menu Screen

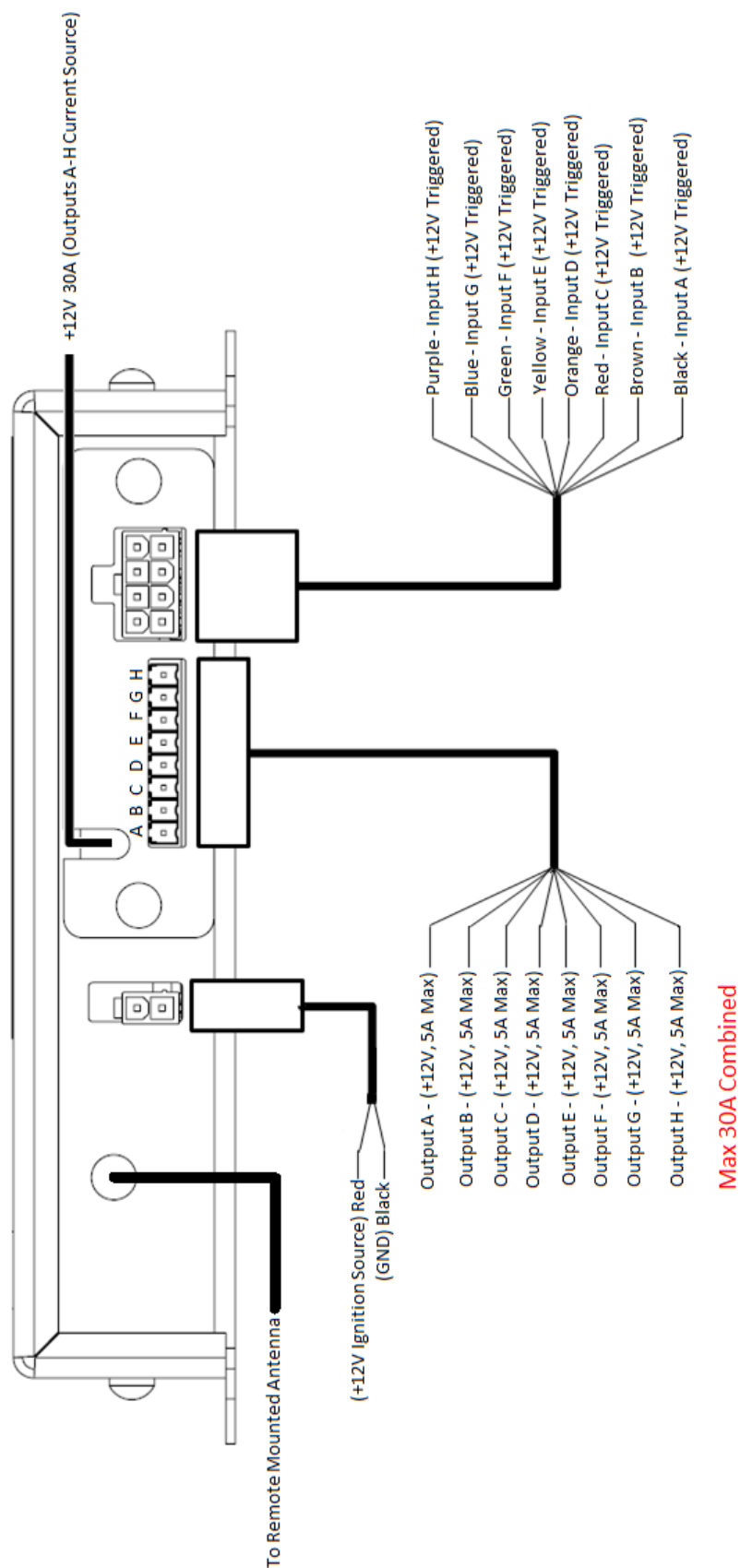
Initial activation of your Universal vLink app will show the screen below.



The vLink Universal version Setup button takes you to the settings screen as described beginning on page 20

continue on to page 18

UNIVERSAL SCHEMATIC

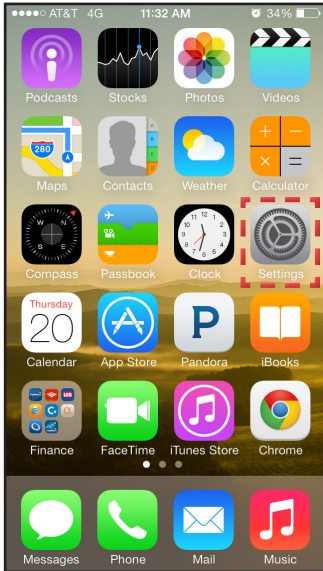


Connecting to vLink

iOS Products (iPhone and iPad)

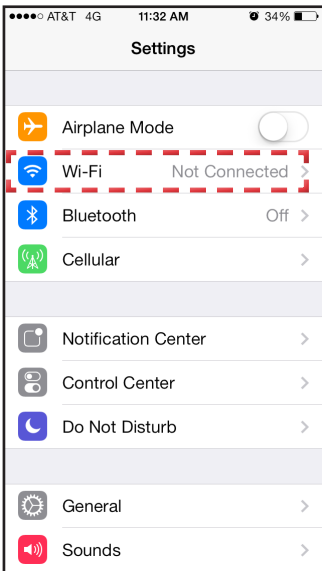
Make sure your iPhone is upgraded to the latest software which is currently iOS 7 and then continue with the following steps which will show you how to connect to vLink and save the app to you home screen.

1



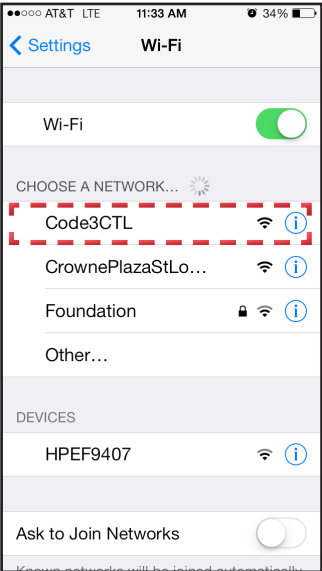
Select the Settings application

2



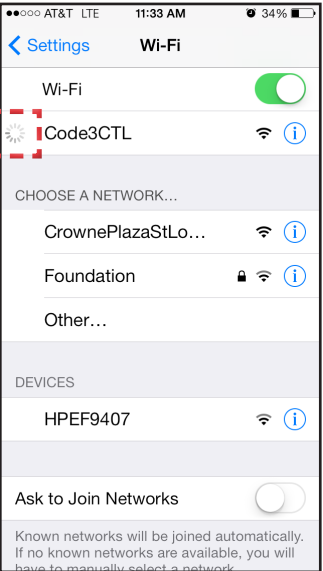
Tap on Wi-Fi to view available networks

3



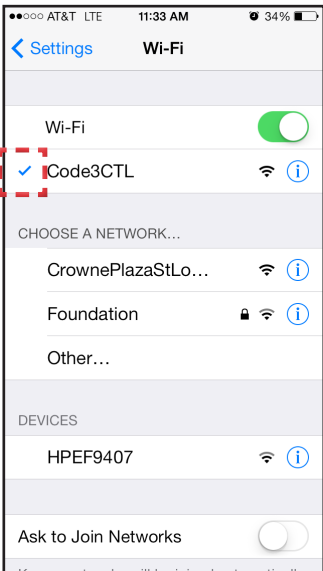
Tap on Code3CTL from the list of networks

4



Your phone is connecting to Code3CTL

5



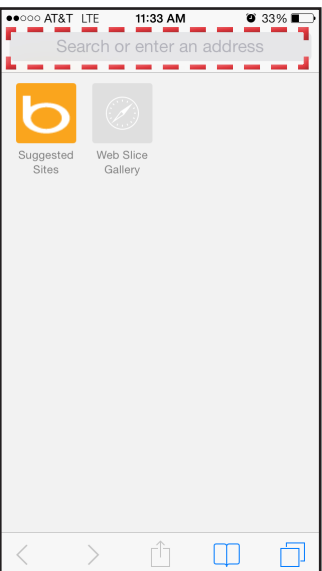
You are now connected to Code3CTL Press the Home Button

6



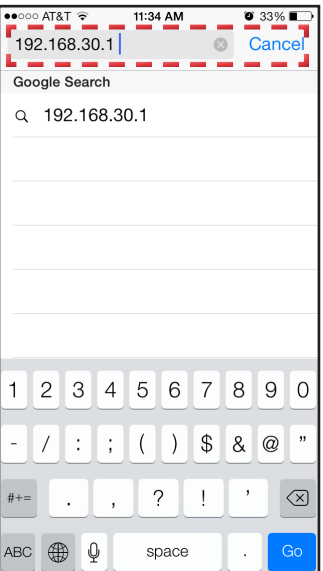
Select the Safari application

7



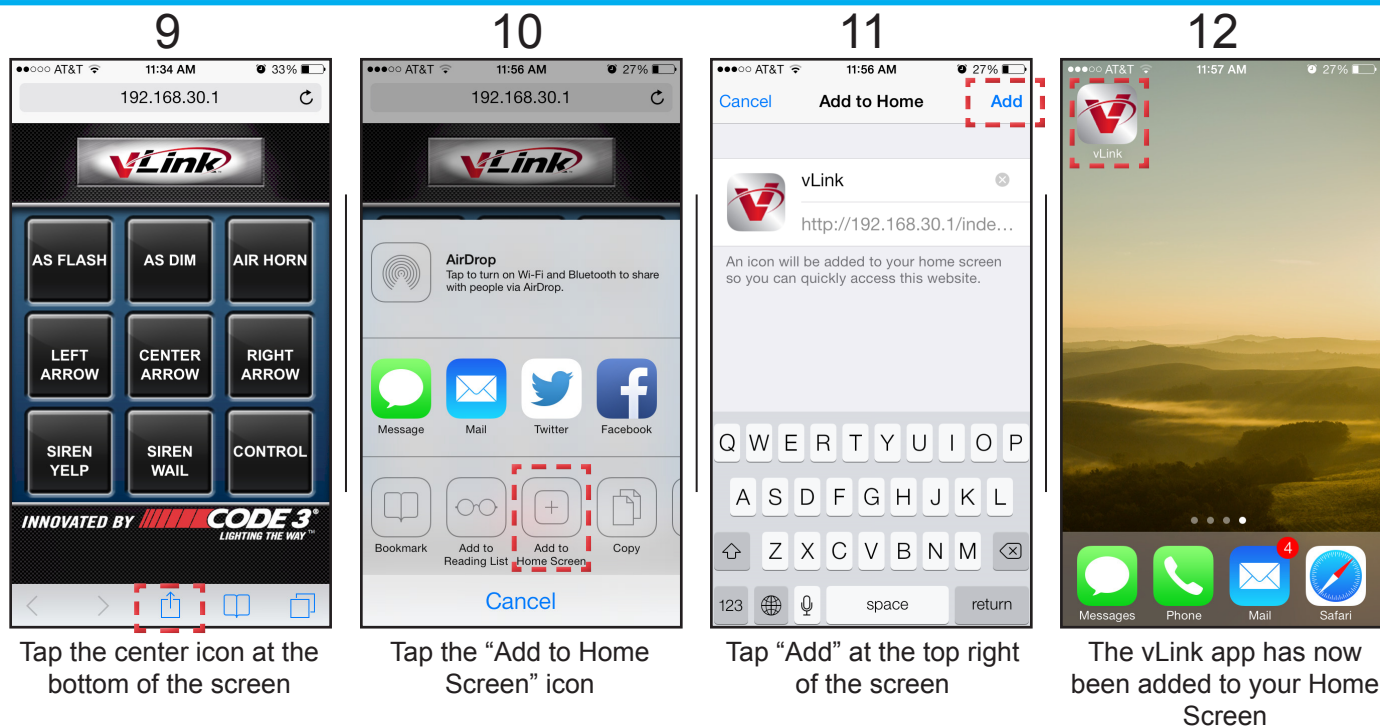
Tap on the URL entry location

8



Enter 192.168.30.1 and then tap GO





PLEASE CONTINUE ON PAGE 22 TO SETUP SECURITY FOR YOUR VLINK AND CUSTOMIZE SETTINGS

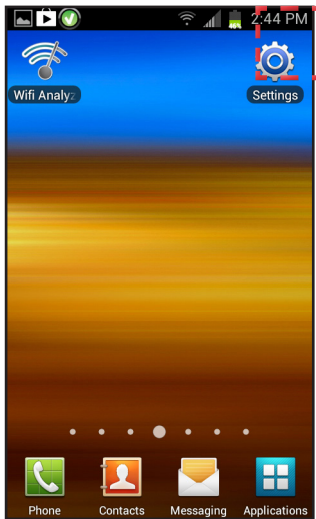


Any electronic device may create or be affected by electromagnetic interference. After installation of any electronic device, operate all equipment simultaneously to insure that operation is free of interference.

Android Products

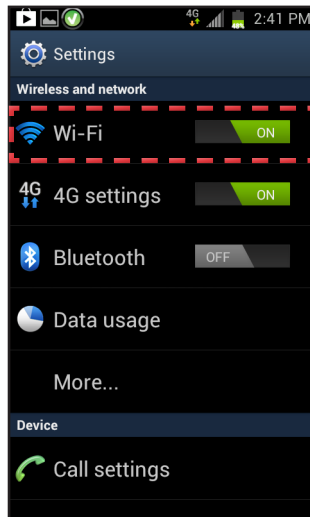
The instructions below will take you through the necessary steps to connect to vLink and save the app to the homescreen on your android phone.

1



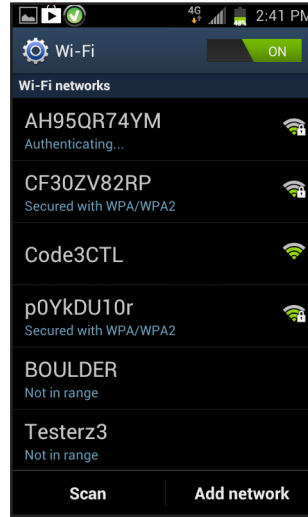
Select the Settings application

2



Tap on Wi-Fi to view available networks

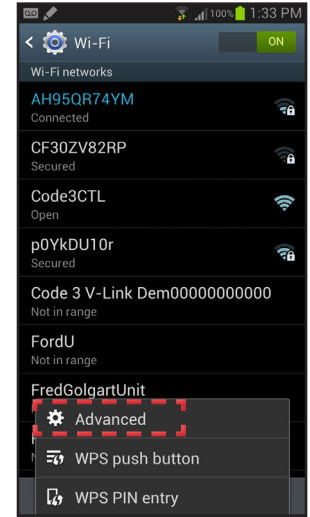
3



Select the list icon at the bottom of your screen

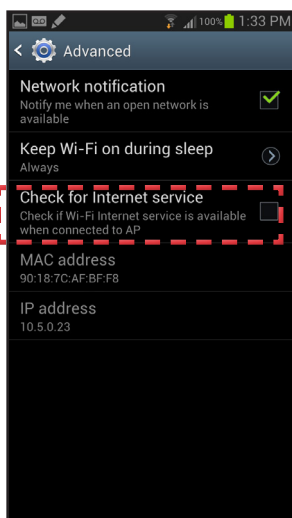


4



Tap on advanced

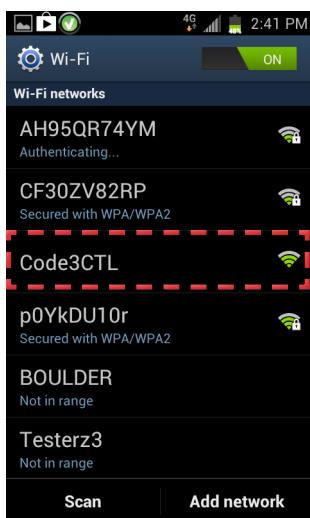
5



Make sure this option is not selected. Now hit the back button

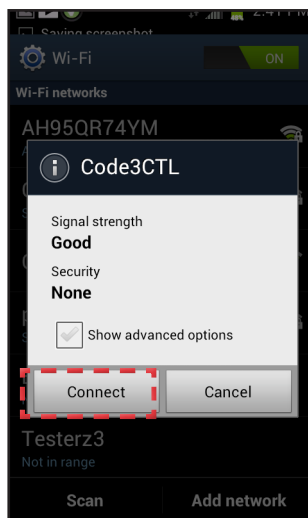


6



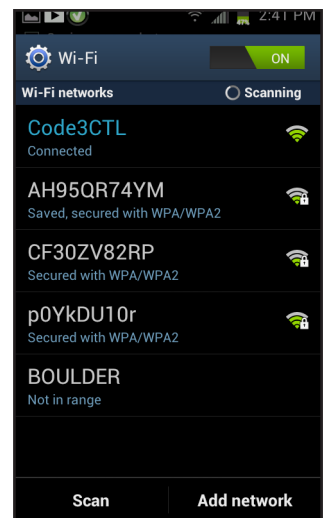
Tap on "Code3CTL"

7



Tap connect

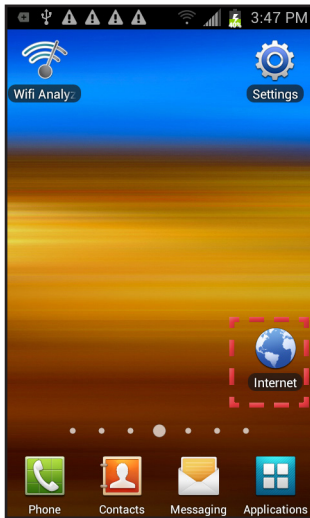
8



You are now connected to Code3CTL Press the Home Button

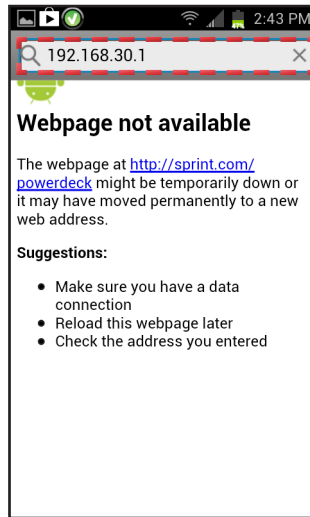


9



Select the Internet browser application

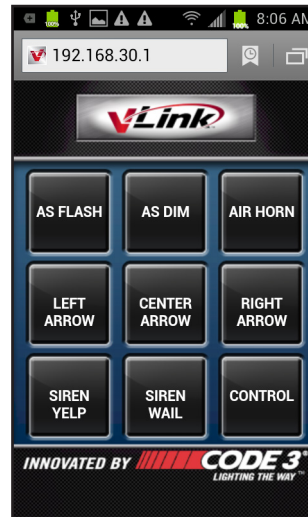
10



Enter 192.168.30.1 and then tap enter



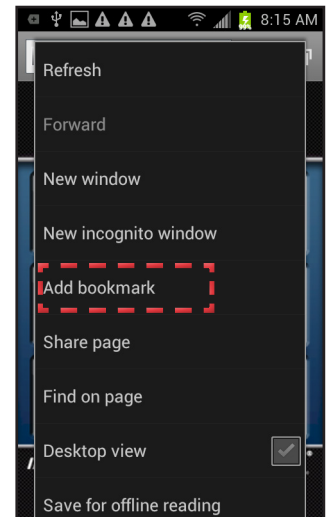
11



Select the list icon at the bottom of your screen

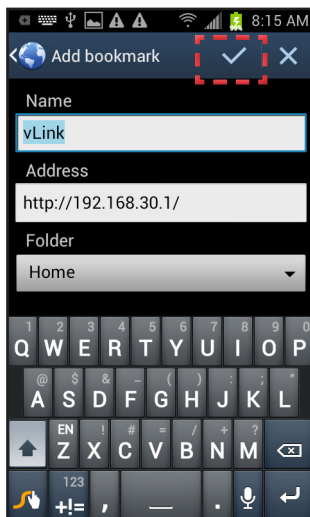


12



Tap "Add bookmark"

13



Tap the checkmark to save

14



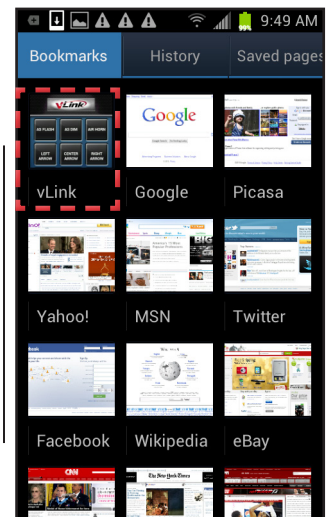
The bookmark has been added

15



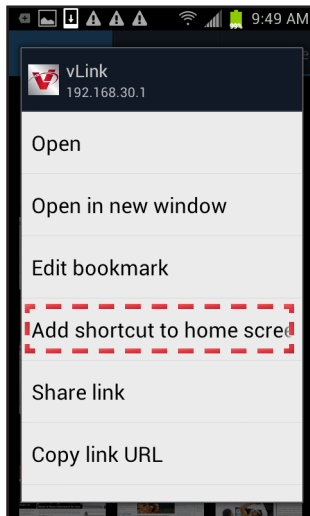
Tap the bookmarks icon at the top right of your screen

16



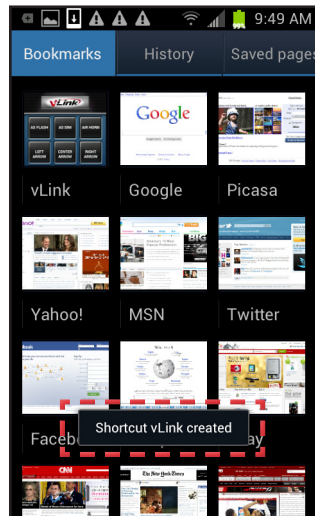
Find the vLink bookmark you just created. Now tap and hold the bookmark

17



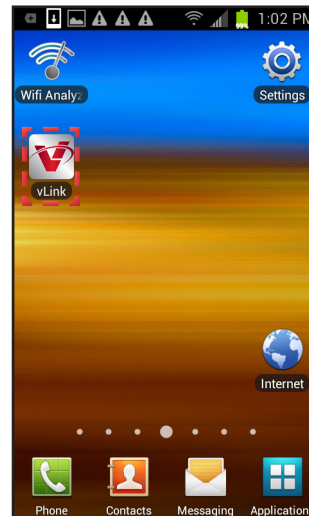
The options list will appear.
Select "Add Shortcut to
home screen"

18



A shortcut has now been
added to your home
screen

19



Tap the vLink icon to begin
using vLink

PLEASE CONTINUE ON PAGE 23 TO SETUP SECURITY FOR YOUR VLINK
AND CUSTOMIZE SETTINGS

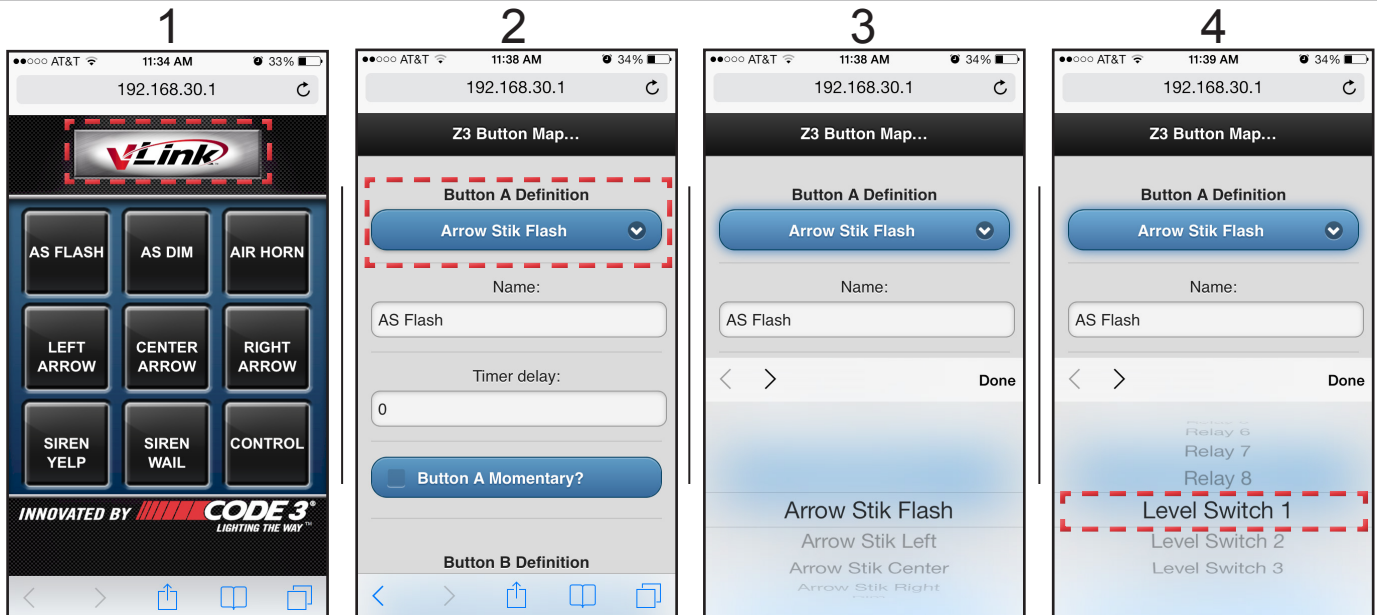


Any electronic device may create or be affected by electromagnetic interference. After installation of any electronic device, operate all equipment simultaneously to insure that operation is free of interference.

Customizing vLink Settings and Security (iOS and Android)

Z3 and RLS Versions (Z3 Version shown, RLS are configured the same)

The following instructions will take you through the steps required to setup security and make changes to vLink's settings.

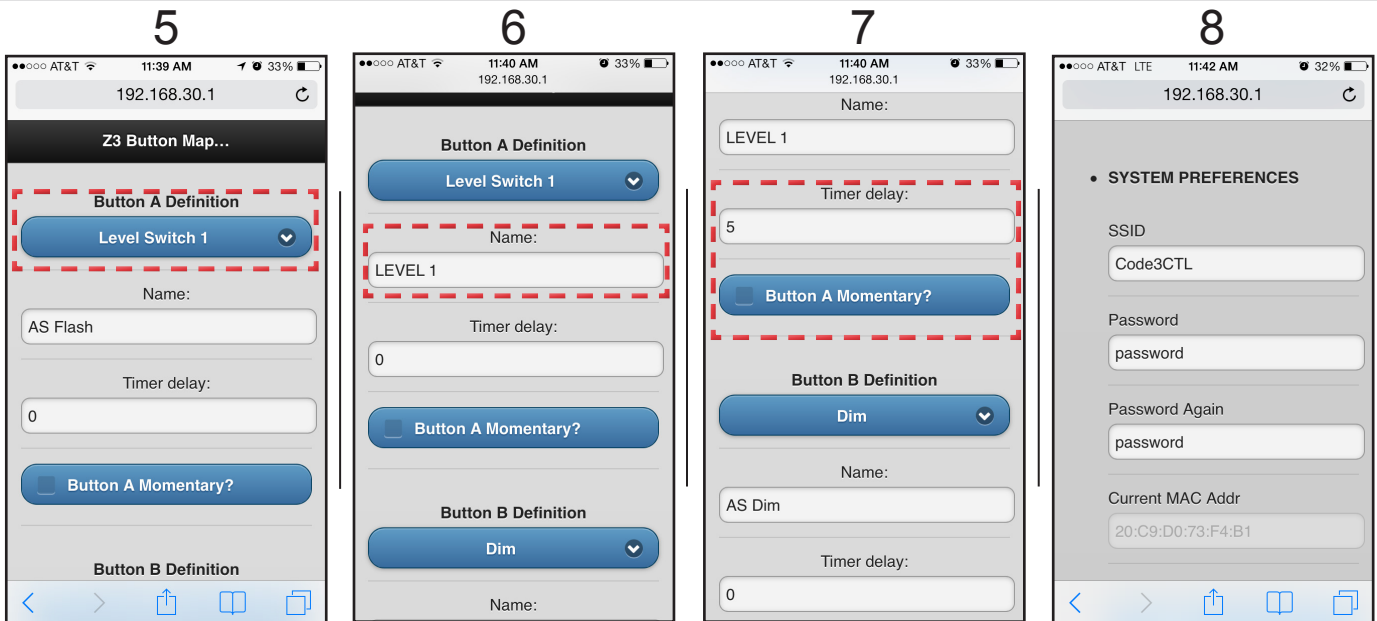


Tap on the vLink icon within 10 seconds of loading to enter into settings

Each button has a drop-down list of available functions. Tap the drop-down list for button A

You can now see the available functions to select. Scroll down to Level Switch 1.

Select Level Switch 1 and then tap done.



Now Level Switch 1 has been set for Button A.

The change the name for Button A, enter it into the Name: field. I chose to set it to "LEVEL 1"

Each button can be set as time latched (seconds) or momentary. Leave Timer Delay set to 0 for regular latched operation

Scroll down to SYSTEM PREFERENCES.

NOTE: IMAGES TAKEN USING IPHONE, MENUS ON ANDROID DEVICES WILL LOOK DIFFERENT

9

• SYSTEM PREFERENCES

SSID
NewName

Password
NewPassword

Password Again
NewPassword

Current MAC Addr
20:C9:D0:73:F4:B1

Restore Factory Defaults?
☐ Yes

Set a new network name (SSID) and password. I chose "NewName" for the network name and "NewPassword" for password

10

NewName

Password
NewPassword

Password Again
NewPassword

Current MAC Addr
20:C9:D0:73:F4:B1

Restore Factory Defaults?
☐ Yes

Submit Changes

Select submit changes to save any changes you may have made

11

If you changed the network name, go back into Wi-Fi settings on your phone and connect to the new name then open the vLink app on your home screen to start using vLink

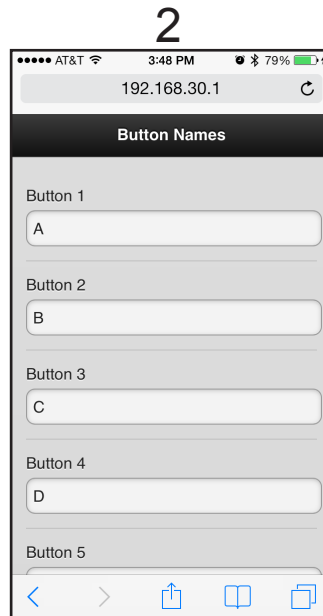
NOTE: IMAGES TAKEN USING IPHONE; MENUS ON ANDROID DEVICES WILL LOOK DIFFERENT

Universal version

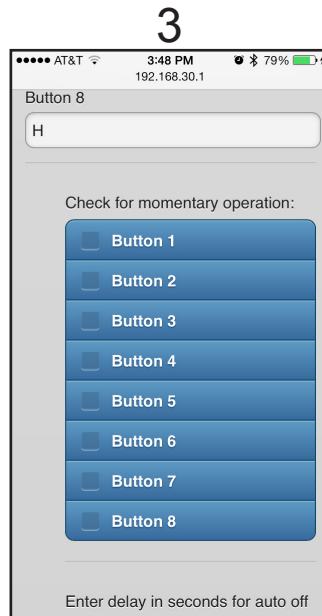
The following instructions will take you through the steps required to setup security and make changes to vLink's settings.



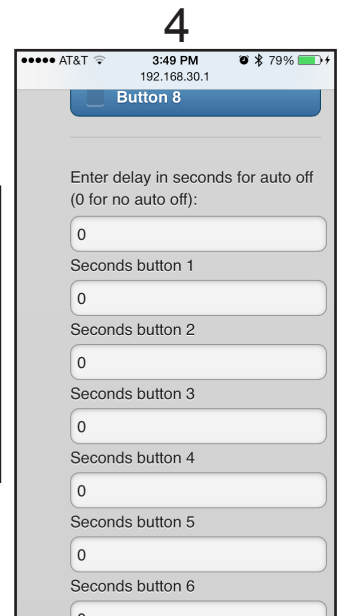
Tap on the Settings button on the bottom right of the menu



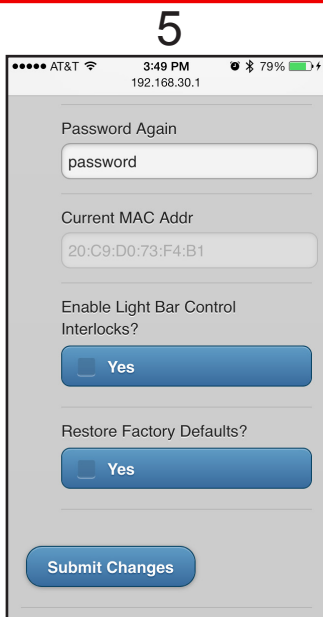
Each of the 8 buttons can be re-named by your choosing



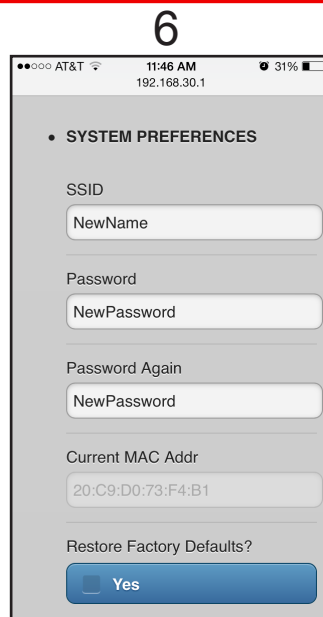
Each button can be set as momentary.



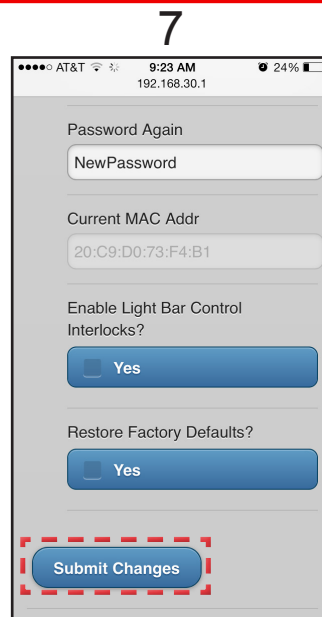
Additionally each button can be set as time latched (seconds). Leave timer delay set to 0 for regular latched operation



The center row of buttons can be set for arrowstik operation, which only allows one of the three buttons to be on at a time



Set a new network name (SSID) and password. I chose "NewName" for the network name and "NewPassword" for password



Select submit changes to save any changes you may have made

8

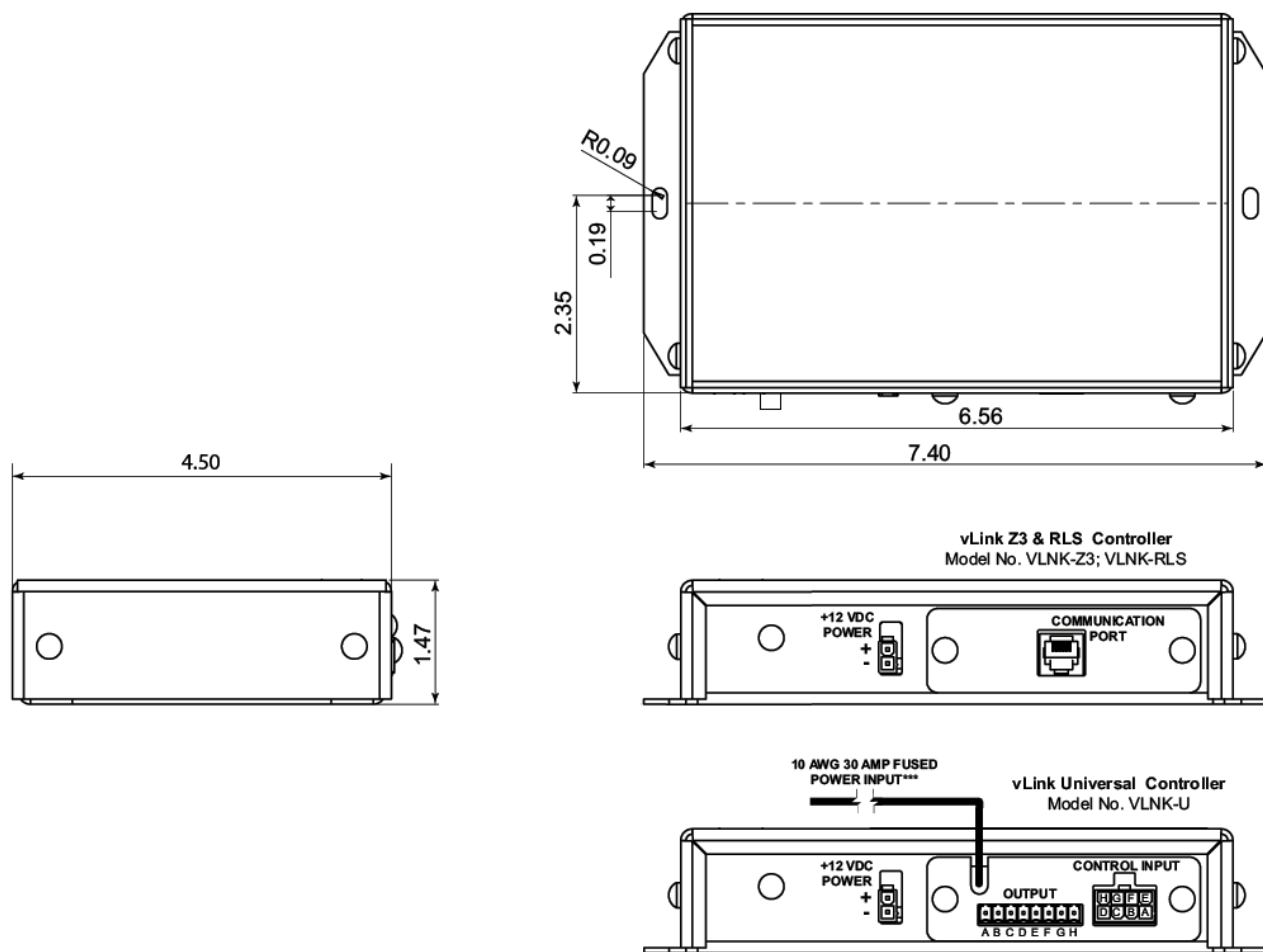
If you changed the network name, go back into Wi-Fi settings on your phone and connect to the new name then open the vLink app on your home screen to start using vLink

NOTE: IMAGES TAKEN USING IPHONE, MENUS ON ANDROID DEVICES WILL LOOK DIFFERENT

Technical Specifications:

Unit Weight:	.84 lbs (.38 kg)
Packaged Weight:	~1.6 lbs (.8 kg)
Input Voltage:	10 to 16VDC
Operating Current:	<.14 A @ 13.8VDC*
Approvals:	FCC (USA), IC (Canada), ETSI (Europe) Certified
Inputs:	8**
Input Control Current:	<.01A @ 13.8VDC nominal
Outputs:	8**
Output Current:	5A Max per output (30A combined total all outputs)

Dimensions:



*Excluding output load current for Universal Output version

**Universal Output version only

***Route the red 10AWG wire to a high current +12VDC power source. You may extend this wire by splicing a longer section of like wire as necessary. It's very important that this wire be protected by a user supplied fuse installed near the +12VDC source. The fuse rating should be about 125% of the total current for all outputs combined but must not exceed 30A.

Compliance and Approvals

Contains FCC ID: W70MRF24WG0MAMB

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.

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.

To satisfy FCC RF exposure requirements for mobile and base station transmission devices, a separation distance of 20 cm or more should be maintained between the antenna of this device and persons during operation. To ensure compliance, operation at closer than this distance is not recommended. The antenna(s) used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Canada - Contains IC: 7693A-24WG0MAMB

The MRF24J40MB module has been certified for use in European countries. The following testing has been completed:

Test standard ETSI EN 300 328 V1.7.1 (2006-10):

- Maximum Transmit Power
- Maximum EIRP Spectral Density
- Frequency Range
- Radiated Emissions

Test standards ETSI EN 301 489-1:2008 and ETSI EN 301 489-17:2008:

- Radiated Emissions
- Electrostatic Discharge
- Radiated RF Susceptibility

Troubleshooting Guide

Problem	Probable Cause	Remedy
I cannot connect to my vLink.	- Attempting to connect to the wrong vLink. - Attempting to connect to a vLink that has the password set. - vLink already in use.	Several factors could cause this. Be certain that you are attempting to connect to the vLink network; in a shop environment, check that others within range have not connected.
I start to connect, but the phone asks me for the SSID and a password.	vLink SSID and password have been set by user.	SSID and password are required info to connect. This is normal.
Each time I try to connect to vLink a screen pops-up which says login.	This is seen on the Apple iPhone. Apple auto login feature is set to on.	Go to the apple settings utility and edit the vLink network settings by turning off the auto login option.
During the setup process, when I type in the IP address, the vLink main menu (as shown in the manual) never loads.	- Phone is not connected to the vLink network. - vLink address is being typed wrong.	Check to be certain that you are connected to the vLink network. Check to be sure that you are typing the correct ip address "192.168.30.1".
I have successfully completed the setup process and tested the vLink with my system installation, but while demonstrating it later, I couldn't connect.	You may not have completed the setup process by entering a unique password. Under this condition, others would be able to join your vLink. Note: only one phone at a time may be connected to vLink. So, if someone else connects to your vLink, you will not be able to connect.	Turn the vLink OFF/ON and then quickly connect. Once connected, complete the setup process by creating a unique ssid and password.
I have changed my vLink password from the default "password" to "password1" but I've found that others can still join my vLink.	Your unique password cannot include any form of the default password "password".	Change the SSID and password to something that is unique and meaningful to you.
Even though my car is off, I can still connect to my vLink.	vLink is not powered from a switched ignition power source.	Correct wiring connection.
When I push the air horn button, the air horn locks on and I have to push the button again to turn the airhorn off.	The air horn button is not configured as a momentary switch.	Enter configuration mode and check the momentary box for the air horn button.
I can join the network on my VLNK-U. Why don't I get an output when I energize any of the switches?	+12VDC is not connected to the 30A input terminal	Using a 10AWG wire terminated with an appropriately sized ring terminal and user supplied fuse, connect +12VDC to the terminal stud on the VLNK-U circuit board.

Example Installation Photos

WARRANTY

Code 3®, Inc.'s emergency devices are tested and found to be operational at the time of manufacture. Provided they are installed and operated in accordance with manufacturer's recommendations, Code 3®, Inc. guarantees all parts and components (except the lamps) to a period of 1 year, LED Lighthouse modules to a period of 5 years (unless otherwise expressed) from the date of purchase or delivery, whichever is later. Units demonstrated to be defective within the warranty period will be repaired or replaced at the factory service center at no cost.

Use of lamp or other electrical load of a wattage higher than installed or recommended by the factory, or use of inappropriate or inadequate wiring or circuit protection causes this warranty to become void. Failure or destruction of the product resulting from abuse or unusual use and/or accidents is not covered by this warranty. Code 3®, Inc. shall in no way be liable for other damages including consequential, indirect or special damages whether loss is due to negligence or breach of warranty.

CODE 3®, INC. MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY INCLUDING, WITHOUT LIMITATION, WARRANTIES OF FITNESS OR MERCHANTABILITY, WITH RESPECT TO THIS PRODUCT.

PRODUCT RETURNS

If a product must be returned for repair or replacement*, please contact our factory to obtain a Return Goods Authorization Number (RGA number) before you ship the product to Code 3®, Inc. Write the RGA number clearly on the package near the mailing label. Be sure you use sufficient packing materials to avoid damage to the product being returned while in transit.

*Code 3®, Inc. reserves the right to repair or replace at its discretion. Code 3®, Inc. assumes no responsibility or liability for expenses incurred for the removal and /or reinstallation of products requiring service and/or repair; nor for the packaging, handling, and shipping; nor for the handling of products returned to sender after the service has been rendered.

Problems or Questions? Call The Technical Assistance HOTLINE - (314) 996-2800



Code 3, Inc.
10986 N. Warson Road
St. Louis, Missouri 63114-2029—USA
Ph. (314) 426-2700 Fax (314) 426-1337
www.code3pse.com

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