



Operation and Installation Guide



In-Car Video Link for *First*  **HD**™

Table of Contents

| | |
|--|------------|
| SECTION - 1: BEFORE YOU BEGIN | 1-1 |
| OVERVIEW OF FEATURES | 1-1 |
| INSTALLATION TOOLS NEEDED | 1-1 |
| CAUTIONS AND NOTES | 1-1 |
| SPECIFICATIONS | 1-1 |
| PARTS AND OPTIONAL ACCESSORIES LIST..... | 1-2 |
| SECTION - 2: INSTALLATION INSTRUCTIONS | 2-1 |
| STEP 1: PREPARE THE VEHICLE | 2-1 |
| STEP 2: POWER, IGNITION, AND GROUND CONNECTIONS..... | 2-2 |
| STEP 3: VULINK TRIGGER CONNECTIONS..... | 2-2 |
| STEP 4: VULINK INSTALLATION..... | 2-3 |
| SECTION - 3: MODEL-SPECIFIC WIRING DIAGRAMS | 3-1 |
| DVM-100 / DVM-400 | 3-1 |
| DVM-500PLUS / DVM-750..... | 3-2 |
| DVM-800 / DVM-LIVE | 3-3 |
| DV-440ULTRA | 3-4 |
| DVM-250PLUS OR DVM250 (WITH INTERFACE BOX)..... | 3-5 |
| MICROVU HD..... | 3-6 |
| GENERIC INPUT SOURCE | 3-7 |
| SECTION - 4: VULINK CONFIGURATION | 4-1 |
| USING VUVAULT TO CONFIGURE YOUR VULINK AND FIRSTVU HD | 4-1 |
| <i>Configuring VuLink</i> | 4-2 |
| <i>Activating VuLink</i> | 4-3 |
| <i>Assigning Your FirstVu HD to a VuLink Device</i> | 4-4 |
| <i>Activating FirstVu HD within VuVault</i> | 4-5 |
| USING CONFIGURATION MANAGER TO CONFIGURE YOUR VULINK AND FIRSTVU HD..... | 4-5 |
| <i>Installing the Software</i> | 4-6 |
| <i>Configuring VuLink</i> | 4-6 |
| <i>Saving your Settings</i> | 4-8 |
| DVM-800, DVM-250, AND DVM-250PLUS DEVICE CONFIGURATION | 4-9 |
| SECTION - 5: OPERATION | 5-1 |
| POWER CONTROL | 5-1 |
| TESTING THE SYSTEM | 5-1 |
| COVERT MODE | 5-1 |
| VULINK™ LED STATUS INDICATORS..... | 5-2 |
| FIRSTVU HD™ LED STATUS INDICATOR..... | 5-2 |
| SECTION - 6: SUPPORT | 6-1 |
| FIRMWARE UPDATES | 6-1 |
| PERFORMING A RESET | 6-1 |
| TROUBLESHOOTING | 6-2 |
| PRODUCT REPAIR | 6-2 |
| SECTION - 7: WARRANTY INFORMATION | 7-1 |
| SECTION - 8: CONTACT INFORMATION | 8-1 |
| SECTION - 9: REGULATORY | 9-1 |

Section - 1: Before you Begin

Overview of Features

- Automatically start recordings on your *Firstvu HD™* using the same triggers as vehicle video systems, regardless of whether the unit is mounted or worn.
- Simultaneously start recordings with your vehicle video system, whether started manually on either system or automatically triggered.
- Eliminate distraction and the need to continuously record or remember to press record.

Installation Tools Needed

- Wire Strippers
- Tools to remove vehicle trim
- Wire Crimpers
- Digital Volt Meter

Cautions and Notes

Please read and follow the instructions and precautions in this installation guide when installing VuLink.

- For assistance, a qualified installation technician or mechanic should be consulted.
- To prevent electrical shorts or breakage in the wiring and cabling, do not allow wiring and cabling to be pinched behind trim pieces, panels, or other physical objects.
- Do not run wires or cables in areas where they may become damaged by heat from the engine or the exhaust system.
- Do not install any wiring in the deployment path of any air bags.
- When installing the cables or making wire connections, it is recommended you leave a little 'slack' in the cable connections to allow for service loops so the connections do not get pulled or accidentally disconnected.
- We recommend at least 2 feet of distance between VuLink and that of other systems which may carry a signal for transmit and/or receive.


Specifications

| | |
|-----------------------|--|
| OPERATING VOLTAGE | 8-30VDC |
| CURRENT DRAW | 250mA Maximum |
| MAX TRANSMIT POWER | 10dBm |
| TRANSMIT RANGE | 50ft typical |
| WEIGHT | 55.4g (0.12 lbs.) |
| OPERATING TEMPERATURE | -30° to +60° C |
| STORAGE TEMPERATURE | -40° to +80° C |
| DIMENSIONS | 23mm (0.9in.)(D) x 91mm (3.6in.)(W) x 61mm (2.4in.)(H) |

Parts and Optional Accessories List

VuLink Standard Package (001-0950-00)

The table below outlines the parts that are included with the VuLink package.

| Part Number | Image | Description |
|--------------|---|---|
| 006-08257-00 |  | VuLink Main Assembly |
| 008-01456-00 |  | Cable, VuLink Base, 15ft |
| 002-05141-00 |  | Fuse Kit, In-line 2A |
| 860-00199-00 |  | VuLink Quick Reference Guide |
| 008-0100 |  | Cable, USB 2.0 Type A to Mini-B, 3.3 ft. |
| 050-10148-10 |  | Mounting Kit, Velcro qty. 2, 1"x1.5" |
| 914-00001-00 |  | Electronic Files (preloaded on VuLink device) <ul style="list-style-type: none"> • Mini Configuration Manager / Viewer • Operation Guide (PDF) • Quick Reference Guide (PDF) |

Section - 2: Installation Instructions

Step 1: Prepare the vehicle

1. VuLink is typically mounted on the windshield near the roofline area. Plan a safe path for the *base cable* from the windshield area to your power source and remove necessary body trim pieces. Remove front passenger side threshold.



2. Pull the door seal away.



3. Remove the passenger side front interior A-pillar cover.



4. Remove the passenger side kick panel & pull back the carpet to expose the vehicle chassis.



Step 2: Power, Ignition, and Ground Connections

Remove 6 to 7 inches of the outer jacket at the bare end of the base cable. The **Red** wire of the base cable should be connected to the vehicle constant +12VDC through the supplied fuse kit. Connect the **Blue** wire to the ignition switch where +12VDC is only present when the vehicle ignition key is in the ON position. The **Black** wire connects directly to the vehicle's chassis. Secure all cables and in-line fuse housing using Velcro or standard tie wraps as required. Consult **Figure 3-2** below.



NOTE To ensure stable operation, power and ground should be directly connected to the vehicle battery.

Step 3: VuLink Trigger Connections

Consult the [Section 3](#) diagrams for your specific video system or generic input trigger connection. VuLink has two input trigger options for you to choose from.

NOTE If installing VuLink to be used only with MicroVu HD, do not connect the VuLink trigger wires. The MicroVu HD triggers are used instead.

The **Orange** wire is an *active high trigger input* which is tied to a switched +12VDC source when the desired trigger is active. This wire is usually tied to the emergency light bar controller output. The **Brown** wire is an *active low trigger input* which is tied to a switched 0VDC source when the desired trigger is active. This wire is used with the DVM-800 and DVM-250Plus and is typically tied to the IF box output alarm. The **WHITE** wire is the VuLink output trigger. When you press the record button on your FirstVu HD, VuLink will apply a 1 second +12VDC signal on this wire.

Make the connections as shown in the table below:

Figure 3-2: VuLink Base Cable Connections

| Wire Color | Function | Connection |
|--|---------------------------|--|
| RED | Battery | Connect to +12VDC battery terminal (Use Fuse kit) |
| BLACK | Ground | Connect to vehicle chassis ground |
| BLUE | Ignition | Connect to +12VDC switched ignition |
| WHITE | Trigger OUT | Consult the diagrams in Section 4 for your installation. This wire connects to the video system input sensor. |
| Choose one of the two input trigger options below | | |
| BROWN | Trigger IN Active LOW | For the DVM-250, connect to BROWN wire of I/F box. Optional GND (active LOW) trigger. |
| ORANGE | Trigger IN Active HIGH | For DVM-100/400/250Plus/440Ultra/500Plus/750 , connect to +12VDC when the emergency light bar is active (or any other desired +12VDC trigger). For DVM-800 connect to DVM Wireless Microphone Trigger Output (Green). |

Step 4: VuLink Installation

Plug the base cable into the connector on the side of VuLink. Prep the windshield glass with alcohol to remove any dirt or debris. Using the included Velcro kit, attach VuLink to an unobstructed location on the windshield below the roofline. To avoid possible interference from other vehicle equipment, do not mount VuLink near other vehicle antennas.

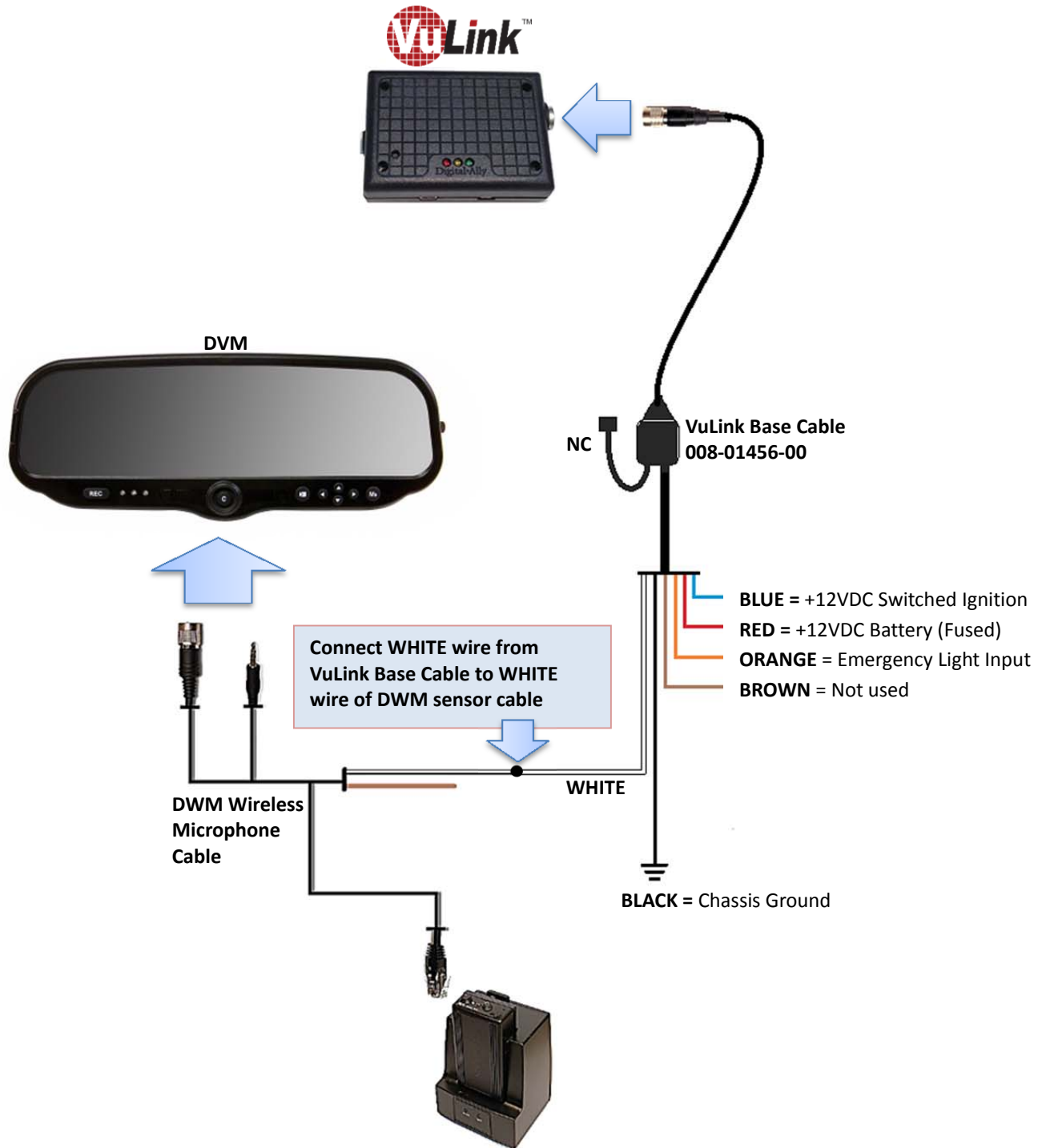
NOTE

The GREEN power LED will be illuminated as long as it is receiving battery power, regardless of the ignition switch position.



Section - 3: Model-Specific Wiring Diagrams

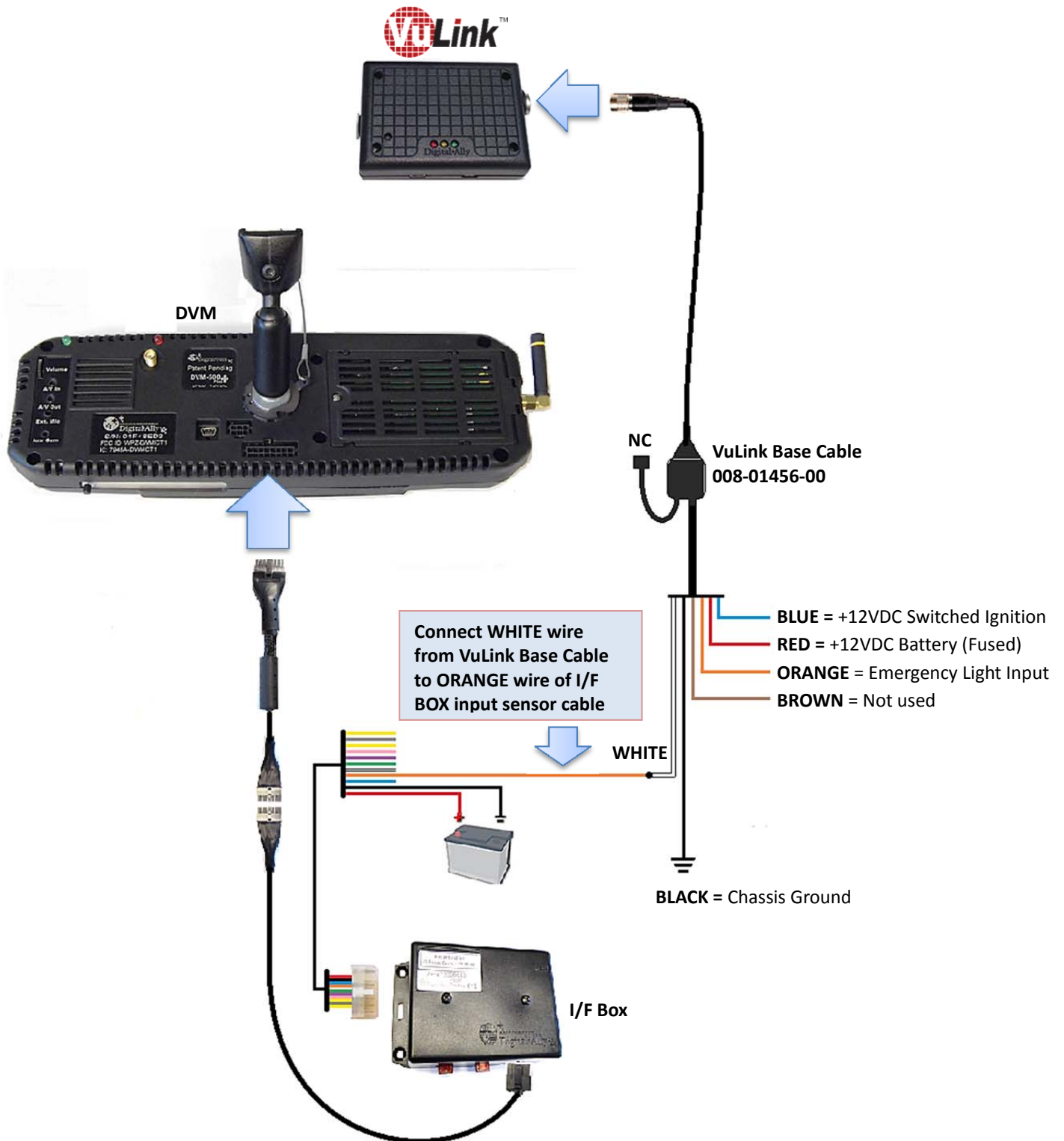
DVM-100 / DVM-400



NOTE

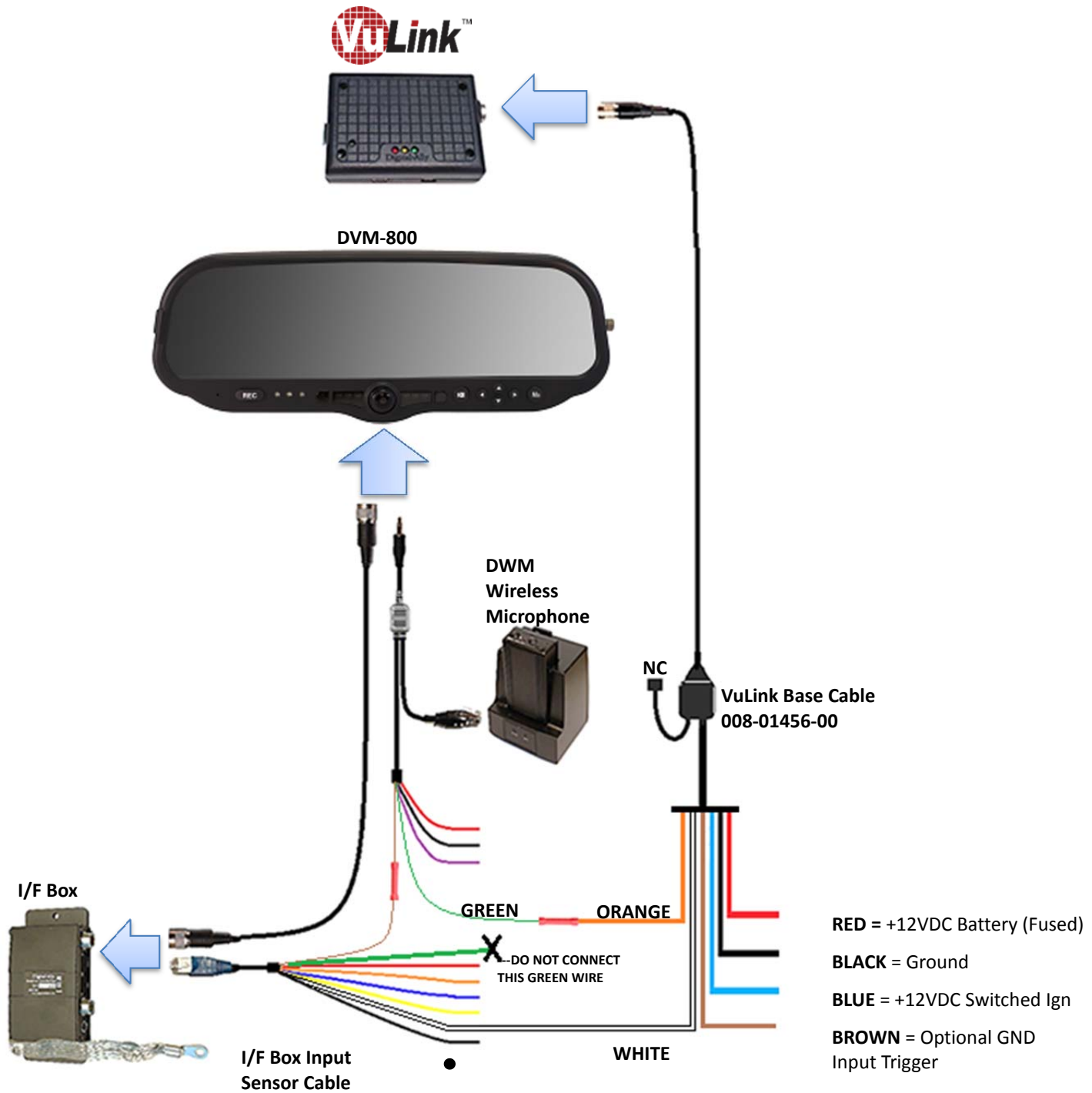
The DVM-100/400 models do not have an output alarm sensor. Therefore, VuLink cannot trigger the FirstVu HD to automatically record if the RECORD BUTTON is pressed on the front of the DVM, or if the WIRELESS MICROPHONE is used to initiate a recorded event.

DVM-500Plus / DVM-750



NOTE The DVM 500plus/750 models do not have an output alarm sensor. Therefore, VuLink cannot trigger the FirstVu HD to automatically record if the RECORD BUTTON is pressed on the front of the DVM, or if the WIRELESS MICROPHONE is used to initiate a recorded event.

DVM-800 / DVM-LiVE

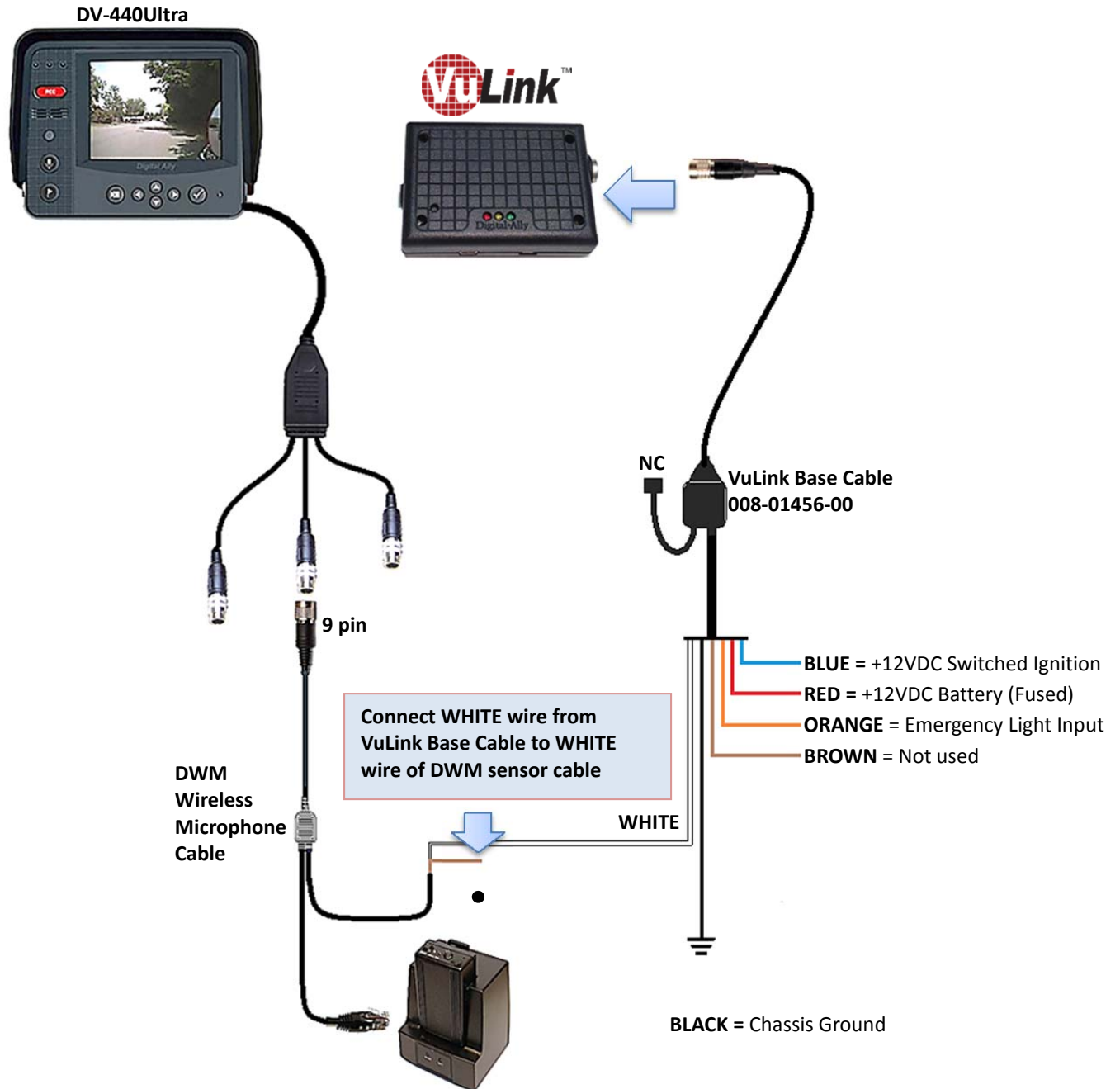


1. Connect ORANGE wire from VuLink Base Cable to GREEN wire of the DWM Wireless Microphone (microphone trigger out)
2. Connect WHITE wire from VuLink Base Cable to WHITE wire of I/F box input sensor cable (Sensor 5)

NOTE

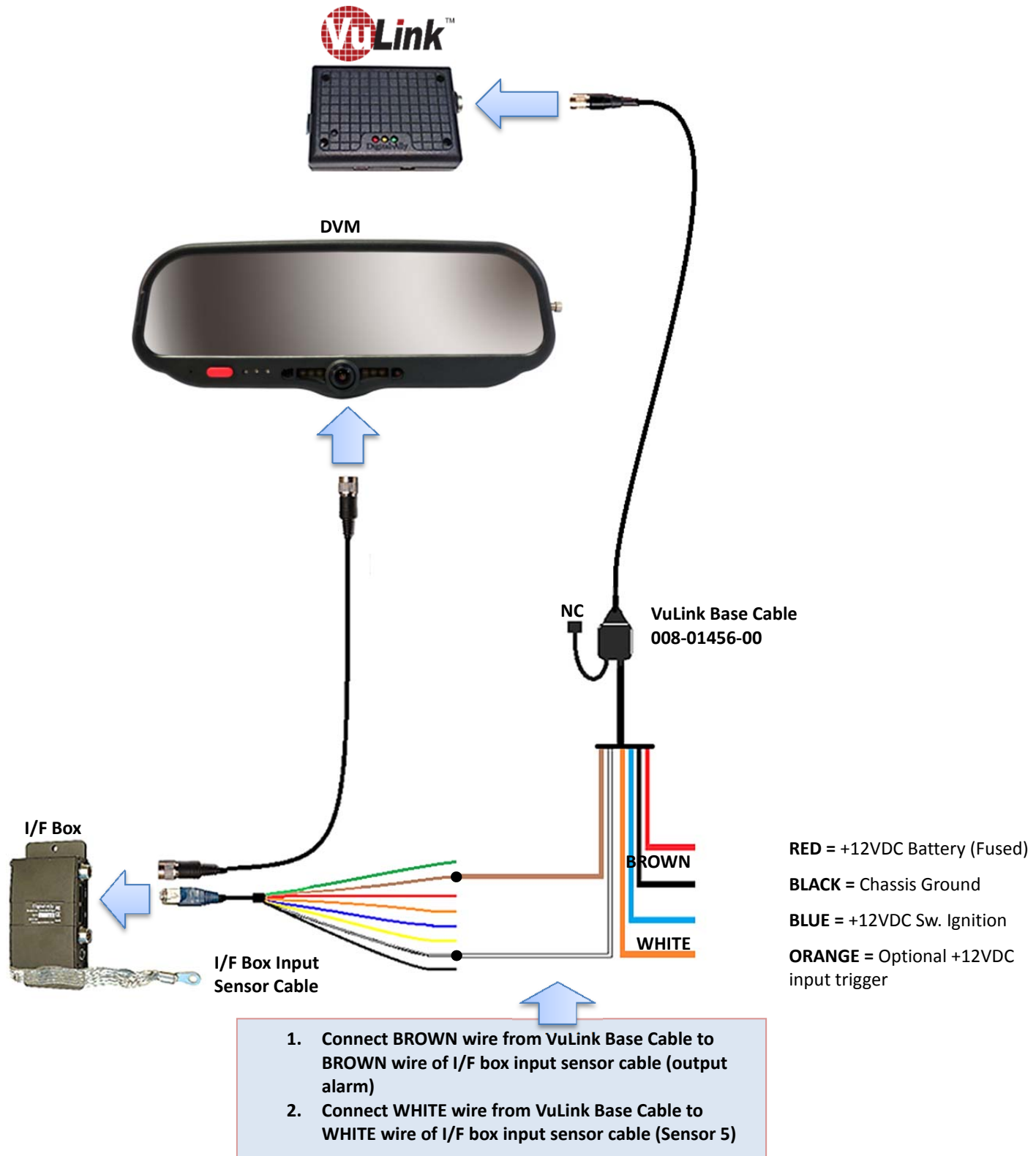
If adding VuLink to an existing DVM-800 Installation, cut the GREEN wire coming from the I/F Box Input Sensor Cable before connecting the DWM GREEN wire to the VuLink ORANGE wire.

DV-440Ultra



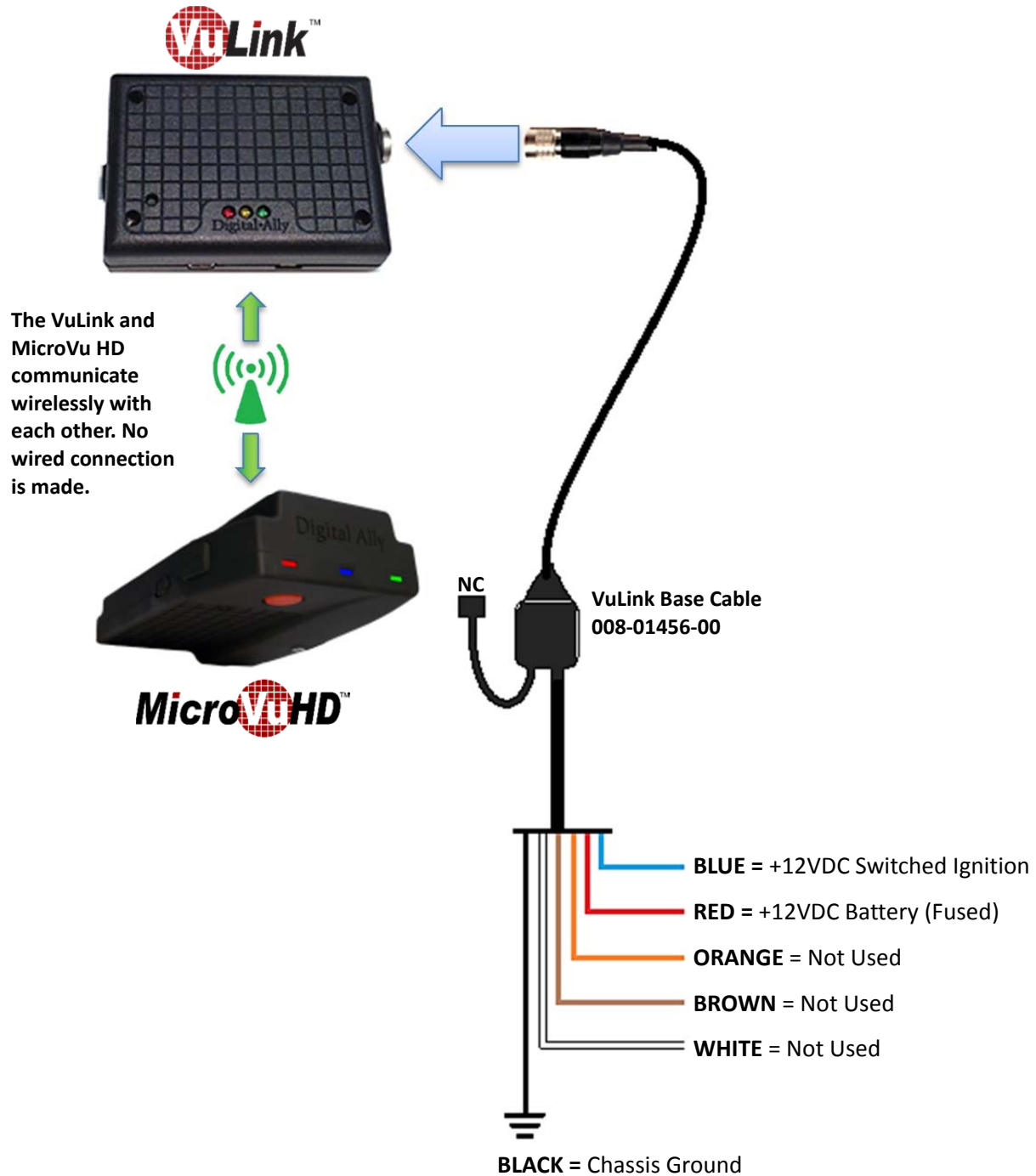
The DV-440Ultra does not have an output alarm sensor. Therefore, VuLink cannot trigger the FirstVu HD to automatically record if the RECORD BUTTON is pressed on the front of the unit, or if the WIRELESS MICROPHONE is used to initiate a recorded event.

DVM-250Plus or DVM250 (with interface box)



MicroVu HD

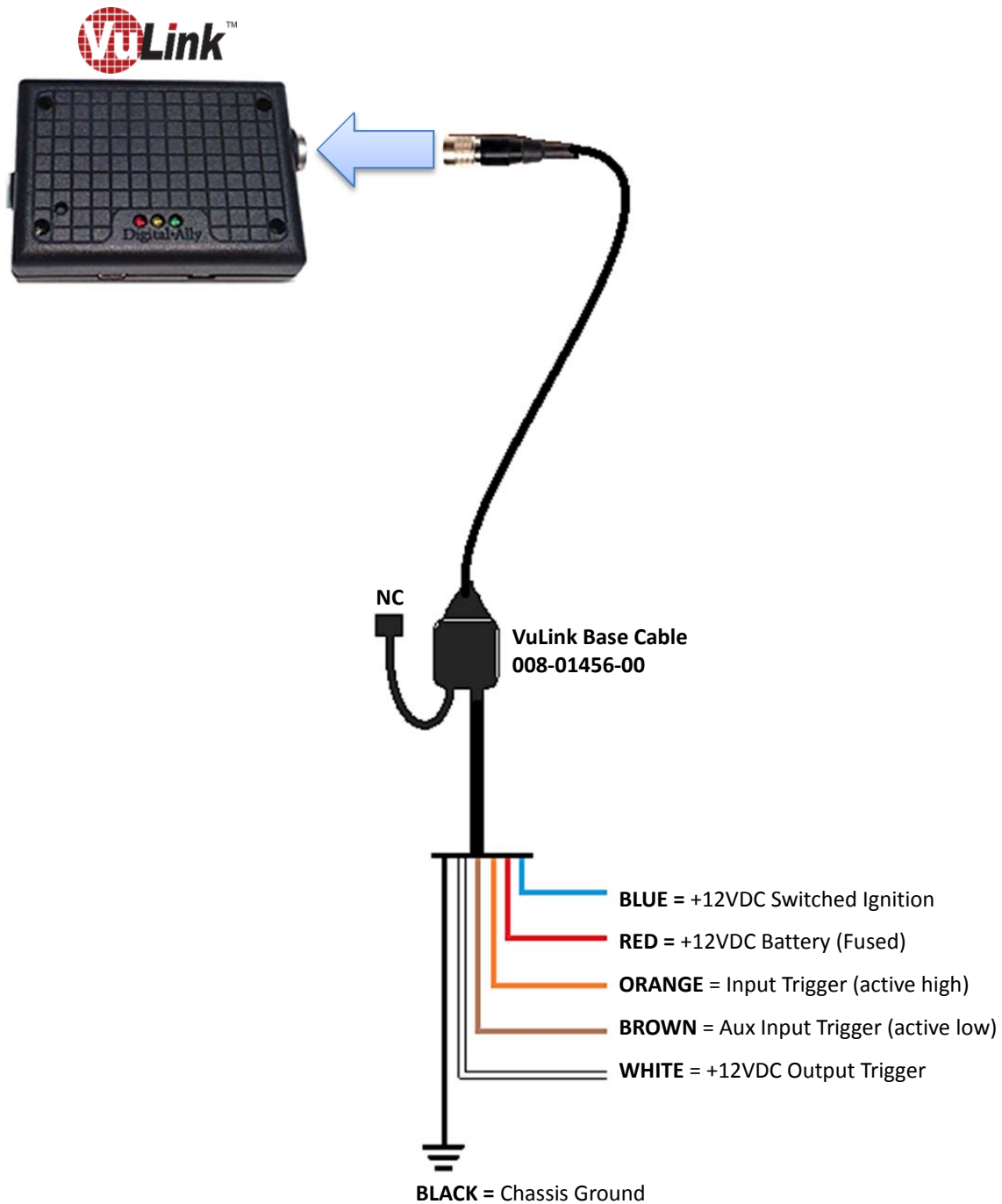
When using VuLink with a MicroVu HD, the VuLink is only wired to the Vehicle Power, Ground, and Ignition. The MicroVu HD provides all event triggers to VuLink based on its own sensor input connections. Triggering between the MicroVu HD and the FirstVu HD is provided through wireless communication with VuLink.



Generic Input Source

Using this method, an in-car video system is not required. Your FirstVu HD may be wirelessly activated by connecting VuLink to any vehicle input sensor. Use the Orange wire if connecting to the emergency lights or other +12VDC trigger. Or, use the Brown wire if connecting to an active low (0VDC) input trigger.

The White wire can be used to trigger an auxiliary device when the FirstVu HD record button is pressed.



Section - 4: VuLink Configuration

VuLink must be configured prior to use. Configuration for VuLink is determined by the configuration files that are transferred to the device from Digital Ally's **VuVault™** back-office software or the **Mini Configuration Manager** software.

Using VuVault to Configure your VuLink and FirstVu HD

If you are using *VuVault™* to manage your devices, follow the instructions beginning on this page to configure and activate VuLink.



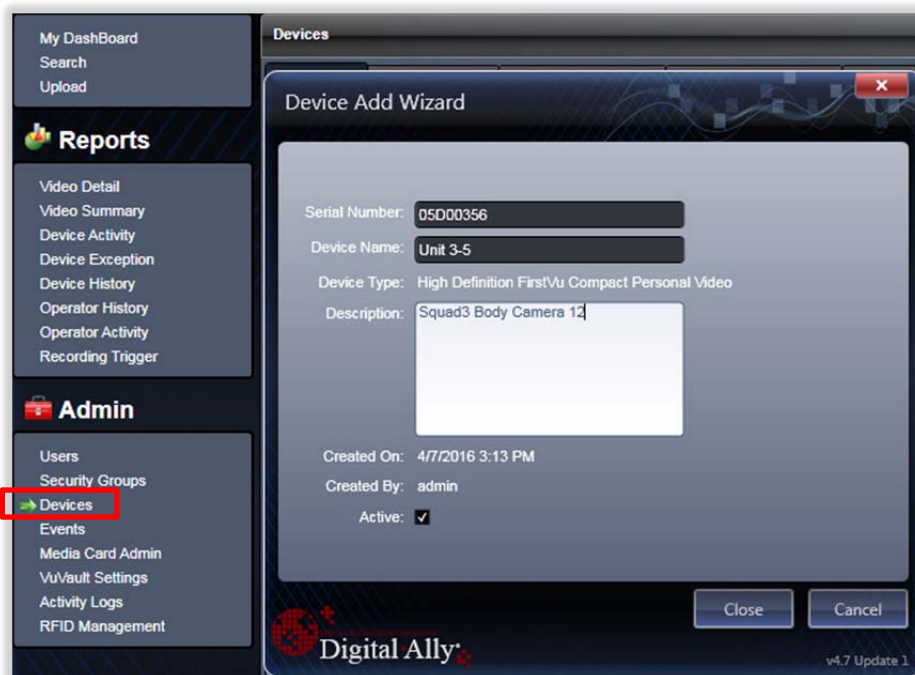
If you are not using VuVault to manage your devices, skip to page [4-5](#) to configure your device.

NOTE

You must have VuVault version 4.5 or above to configure and activate a VuLink device. **MicroVu HD requires VuVault 4.7 or above.** VideoManagerII and previous versions of VuVault will not work with VuLink.

Log on to <http://www.digitalallyinc.com/login.cfm> and register for an account to be an authorized user. By registering you will be able to download all the latest Product Guides, Firmware/Software updates and will be notified of future upgrades. VuVault is used to manage VuLink settings as well as activate your device for use within the system.

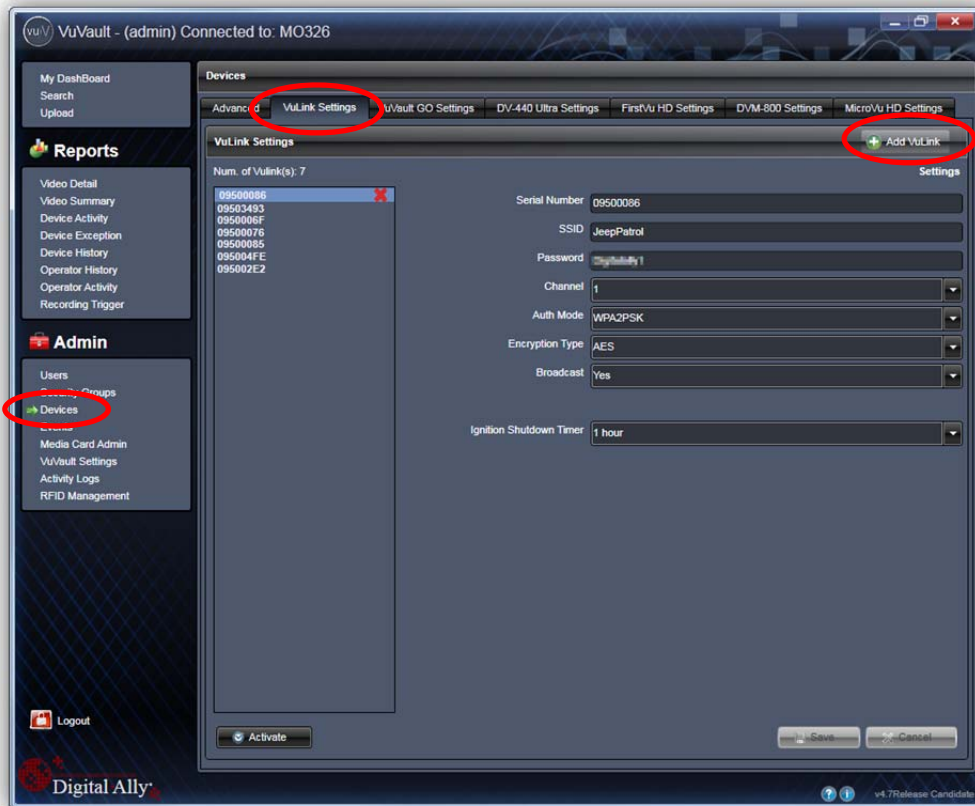
Before you can configure VuLink for use within VuVault, the serial numbers for your FirstVu HD devices must be added into the system. Select *Admin > Devices > Add Device* to add your devices into VuVault. Type in your device serial numbers and assign a name within the system. When done, select *Close*, then *Save* (for more information consult the *VuVault Administrator's Guide* "Adding Devices" section).



Configuring VuLink

VuLink is a secured 802.11n 2.4GHz wireless access point which your FirstVu HD's will use to communicate with your in-car video system and/or auxiliary sensors (such as lights, siren, etc.). The wireless configuration parameters are located in the **Admin>Devices>VuLink Settings** tab.

To begin, select **Add VuLink**. After you have made your selections, press **Save**. Repeat this procedure for all of your VuLink device serial numbers.



Network

Serial Number

Each VuLink device has a unique 8 digit serial number printed on the unit. Enter the serial number here without the dash (*example 0950-0076 would be entered 09500076*).

SSID

The SSID is the wireless network name. This parameter specifies the VuLink SSID that your FirstVu HD's will be authorized to connect to. It is recommended that each VuLink device is assigned a unique SSID. The SSID may be up to 10 digits in length.

Password

This parameter specifies the password or security phrase required to connect to VuLink.

Channel

This parameter specifies the wireless channel that your FirstVu HD's will use to connect to VuLink.

Settings: Channels 1 to 11

Authentication Mode

This parameter specifies the security authentication required by VuLink.
Settings: WPAPSK, **WPA2PSK** [default]

Encryption Type

This parameter specifies the wireless encryption protocol required by VuLink. If selecting *WPA2PSK* as the authentication mode, choose AES as the encryption type. If selecting *WPAPSK* as the authentication mode, choose TKIP as the encryption type.
Settings: TKIP, **AES** [default]

Broadcast

Choose whether or not to broadcast the SSID. Broadcasting allows computers with wireless cards to find the network by browsing, and may help whenever troubleshooting the system. Disabling the broadcast of the SSID prevents browsing to find the network.
Settings: On, **Off** [default]

Ignition Shutdown Timer

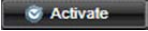
The *Ignition Shutdown Timer* specifies the amount of time the VuLink remains fully powered when the vehicle ignition goes from ON to OFF.

Settings: 0 to 50 minutes, **1 hr**, 2 hrs, 4 hrs, 8 hrs, 12 hrs, 24 hrs, and Unlimited [default = **1 hour**]

During the Ignition Shutdown Time:

1. If configured to 0 minutes; the *Ignition Shutdown Timer* is disabled, and VuLink will shut down when ignition is turned off.
2. If the FirstVu HD is not recording, all LED Indicators will turn off, but VuLink will remain fully powered until the timer expires.
3. During an active record, the FirstVu HD will continue recording and the system status indicators will operate normally until the recording ends.
4. If the *Ignition Shutdown Timer* has not expired, the unit will allow an event record start from any of the available Event Record Start Triggers. If a recording begins, the system indicators will operate normally until the recording ends.
5. Once the *Ignition Shutdown Timer* expires, the system will stop an active recording.
6. If the vehicle ignition is turned ON before the timer expires, the *Ignition Shutdown Timer* is cancelled and will start over again when the ignition is turned off.

Activating VuLink

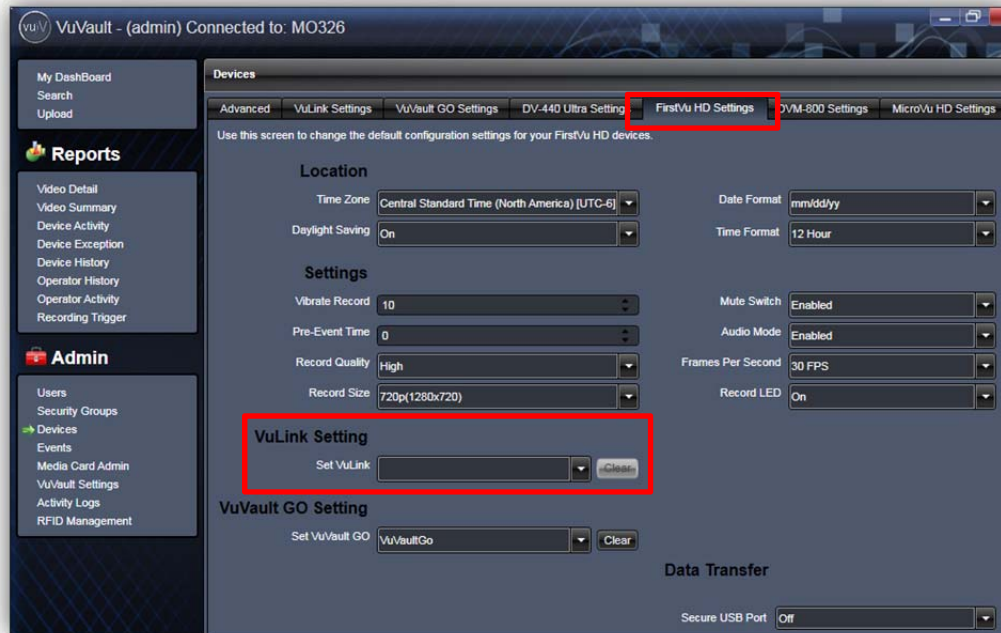
After your desired settings have been entered, attach VuLink to your computer using the supplied USB cable. Your computer will recognize VuLink as a removable disk drive. Press the  button. You'll then be prompted to choose a location to save the configuration file named "*deviceconfig*". Save this configuration file onto your VuLink device. After the file has been transferred to the VuLink, it may be unplugged from your computer.



Assigning Your FirstVu HD to a VuLink Device

Method A: Global VuLink Setting Method

Using this method, all of your FirstVu HD's will associate to a single VuLink device serial number. Go to **Admin>Devices>FirstVu HD Settings** tab, use the drop down arrow under *VuLink Setting* to assign a VuLink serial number to your FirstVu HD. When done, press **Save**.



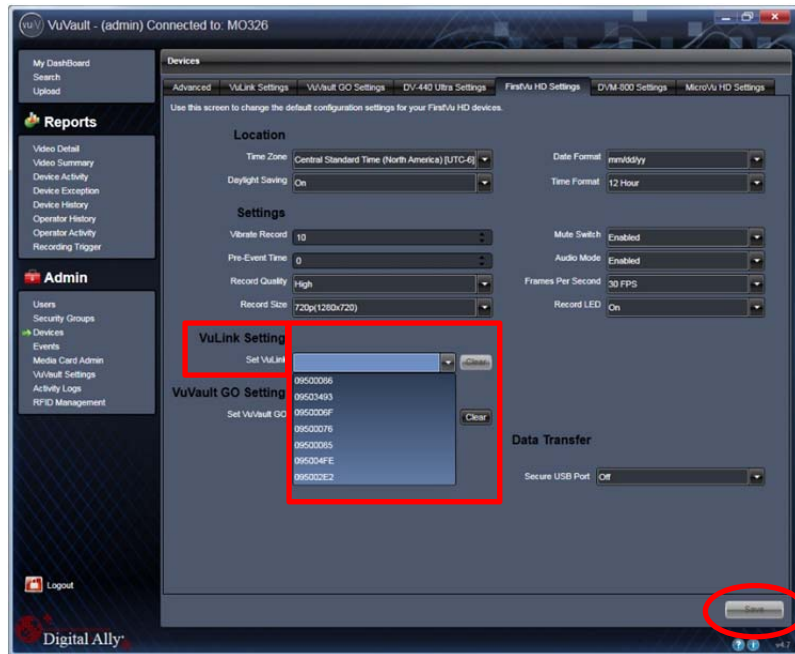
Method B: Unique VuLink Setting Method (preferred method)

In most cases, you will want to assign each FirstVu HD in your fleet to a different VuLink device. Using this method, unintentional triggers will not occur if two fleet vehicles are in close proximity to each other.

To make a unique VuLink association for each FirstVu HD, go to **Admin>Devices>Advanced** and select the FirstVu HD device you wish to assign. Select **Settings**.



You may now override the default device settings. Check the box next to **VuLink Setting** and select a VuLink serial number to assign to your FirstVu HD device. When done, press **Save**.



Activating FirstVu HD within VuVault

After you have assigned your FirstVu HD to a Vulink device serial number, proceed to **Admin>Media Card Admin** to activate your FirstVu HD. Before activation, be sure to upload any existing videos into VuVault.

1. Turn on your FirstVu HD & plug it into your computer using the supplied USB cable.
2. Select FirstVu HD as the device type. Click *Refresh* and the FirstVu HD will be displayed as a removable drive.
3. Highlight the drive with your mouse.
4. Select **Activate**. When done, unplug your FirstVu HD.
5. All done! Your FirstVu HD is now ready for use with VuLink.

Using Configuration Manager to Configure your VuLink and FirstVu HD

VuLink must be configured prior to use. Configuration for VuLink is determined by the configuration file that is saved to the device from Digital Ally's VuVault™ back-office software, **or** by using the *Mini Configuration Manager* supplied on the internal memory.



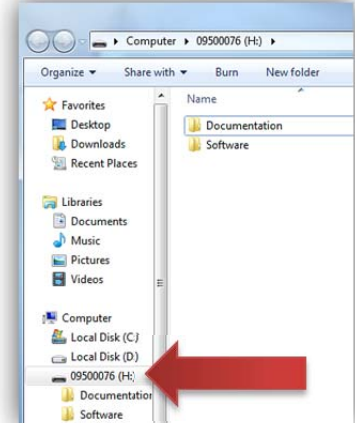
Using VuVault™ to manage your devices is preferred, but not required. If you are not utilizing VuVault, follow the instructions in this section to configure and activate your device using the stand-alone *Mini Configuration Manager* software.

NOTE

Using this method, you will assign all of your FirstVu HD's to a single VuLink by creating a configuration file. To set up multiple VuLink configurations, repeat the following process for each VuLink device and save the new configuration file to VuLink and associated FirstVu HD's.

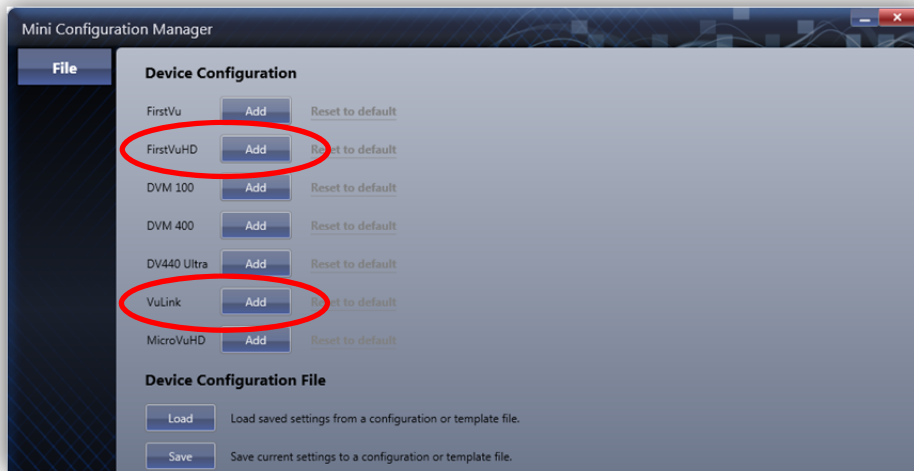
Installing the Software

1. Your VuLink is preloaded with software and documentation files located on its internal memory. Plug VuLink into a computer using the included USB cable to access these files.
2. The **Documentation** folder contains the Operation Guide and Quick Start Guide. The Software folder contains the Digital Ally *Mini Configuration Manager* and *Basic Viewer* software.
3. Open the **Software** folder and run the *Digital Ally Viewer* installer. This will install all necessary files to your computer.



Configuring VuLink

Open the *Mini Configuration Manager*. Press the *Add* button to display the list of available options for VuLink, and press the *Add* button next to FirstVu HD.



Select the *VuLink* tab. VuLink is a secured 802.11n, 2.4GHz wireless access point which your FirstVu HD's will use to communicate with your in-car video system and/or auxiliary sensors (such as lights, siren, etc.). After you have made your selections, return to the *File* tab to save your settings.



Settings

Serial Number

Your VuLink device has a unique 8 digit serial number printed on the unit. Enter the serial number here without the dash (*example 0950-0076 would be entered 09500076*).

SSID

The SSID is the wireless network name. This parameter specifies the VuLink SSID that your FirstVu HD's will be authorized to connect to. The SSID may be up to 10 digits in length.

Password

This parameter specifies the password or security phrase required to connect to VuLink.

Channel

This parameter specifies the wireless channel that your FirstVu HD's will use to connect to VuLink.

Settings: 1 to 11, 1 [default]

Authentication Mode

This parameter specifies the security authentication required by VuLink.

Settings: WPAPSK, WPA2PSK

Encryption Type

This parameter specifies the wireless encryption protocol required by VuLink. If selecting *WPA2PSK (preferred)* as the authentication mode, choose AES as the encryption type. If selecting *WPAPSK* as the authentication mode, choose TKIP as the encryption type.

Settings: TKIP, AES

Broadcast

Choose whether or not to broadcast the SSID. Broadcasting allows computers with wireless cards to find the network by browsing. Disabling the broadcast of the SSID prevents browsing to find the network.

Settings: On, **Off** [default]

Ignition Shutdown Timer

The *Ignition Shutdown Timer* specifies the amount of time VuLink remains fully powered when the vehicle ignition goes from ON to OFF.

Settings: 0 to 50 minutes, **1 hr**, 2 hrs, 4 hrs, 8 hrs, 12 hrs, 24 hrs, and Unlimited [default = **1 hour**]

During the Ignition Shutdown Time:

7. If configured to 0 minutes; the *Ignition Shutdown Timer* is disabled, and VuLink will shut down when ignition is turned off.
8. If the FirstVu HD is not recording, all LED Indicators will turn off, but VuLink will remain fully powered until the timer expires.
9. During an active record, the FirstVu HD will continue recording and the system status indicators will operate normally until the recording ends.
10. If the *Ignition Shutdown Timer* has not expired, the unit will allow an event record start from any of the available Event Record Start Triggers. If a recording begins, the system indicators will operate normally until the recording ends.
11. Once the *Ignition Shutdown Timer* expires, the system will stop an active recording.
12. If the vehicle ignition is turned ON before the timer expires, the *Ignition Shutdown Timer* is cancelled and will start over again when the ignition is turned off.

Saving your Settings

From the *File* tab, review your FirstVu HD settings and verify they are correct. For more information on FirstVu HD settings, consult the *FirstVu HD Operation Guide*. To complete the activation, you must write the configuration file named “*deviceconfig*” to your FirstVu HD **and** Vulink devices. Once the file is written, the devices can communicate wirelessly.

Saving your FirstVu HD settings

1. Plug in your FirstVu into the computer using the supplied USB cable. Your computer will recognize it as a removable drive and the serial number will be displayed.
2. From the *File* Tab, Select *Save*. You’ll be prompted to select the location of your FirstVu HD device. You may also wish to back up the configuration file to a location on your computer’s hard drive. The configuration file named “*deviceconfig*” will be saved.



3. After saving the file, reboot your FirstVu HD and unplug the USB cable. The FirstVu HD is now ready to be used with VuLink.

Saving your VuLink Settings

1. Connect VuLink to your computer through the supplied USB cable. Your computer will recognize it as a removable drive and the serial number will be displayed.
2. From the *File* Tab, Select *Save*. You’ll be prompted to select the location of your Vulink device. You may also wish to back up the configuration file to a location on your computer’s hard drive. The configuration file named “*deviceconfig*” will be written to VuLink.



3. Unplug the USB cable and go to [Section 2](#) to install VuLink in your vehicle.

DVM-800, DVM-250, and DVM-250Plus Device Configuration

If you have a Digital Ally DVM-800, or DVM-250 series video system, you must assign the VuLink output trigger to an IF box input sensor. Using this configuration, the FirstVu HD will be enabled to trigger device recordings and have a customized trigger name. From your **VuVault** or **Configuration Manager Settings** tab, enable the desired sensor to be used with VuLink. This customized name will become a searchable parameter if using VuVault.

1. Go to the *IF Box Input Sensors* section. Select the **Sensor 5** row (or any unused sensor input) and press **Edit**.

| # | Name | Type | Detection | Threshold | Record Ends By | Event Cameras | LCD |
|---|---------------------|------------------|-------------|-----------|----------------|--------------------------------------|-----------|
| 1 | Reverse | Event Trigger | High to Low | Standard | Sensor | External #1 and External #2 | On |
| 2 | Lights | Event Trigger | High to Low | Standard | Sensor | Internal Road Facing and External #1 | On |
| 3 | Brakes | Event Trigger | High to Low | Standard | Sensor | External #1 and External #2 | On |
| 4 | Vss | Event Trigger | Pulse | Standard | Record Button | Use Default Cameras | No Action |
| 5 | Sensor 5 | Triggered Sensor | Low to High | High | Record Button | Use Default Cameras | On |
| 6 | Wireless Microphone | Disabled | Low to High | High | Record Button | Use Default Cameras | On |

2. Select a name for the Sensor #5 VuLink sensor. Make the changes to this sensor input as listed in the table below. When done, press **Save**.

| Parameter | Required User Setting |
|----------------|-------------------------|
| Name | Type a custom name here |
| Type | Triggered Sensor |
| Detection | Low to High |
| Threshold | High |
| Record Ends By | Record Button |
| Event Cameras | Use Default Cameras |
| LCD | On |

Name: VuLink
 Type: Triggered Sensor
 Detection: Low to High
 Threshold: High
 Record Ends By: Record Button
 Event Cameras: Use Default Cameras
 LCD: On

6 Wireless Microphone Disabled Low to High High Record Button Use Default Cameras On Edit

Drag and drop the blocks to set the camera, LCD, and output alarm priority, highest to lowest from left to right.

#1 Reverse #2 Lights #3 Brakes #4 Vss #5 VuLink Internal Events Pre-event #6 Wireless Micropt

Save

3. You will need to re-activate your DVM with the new device configuration. Consult your device Operation Guide for activation instructions.

Section - 5: Operation

Power Control

Power to VuLink is controlled through your vehicle's ignition. There are no manual controls for powering the unit on and off. When ignition is cycled, the boot-up process will begin. The red and yellow status indicators will flash until boot up is complete. When ignition is turned off, VuLink will enter low power standby mode. The Green LED will continue to be illuminated when ignition is off.

Testing the System

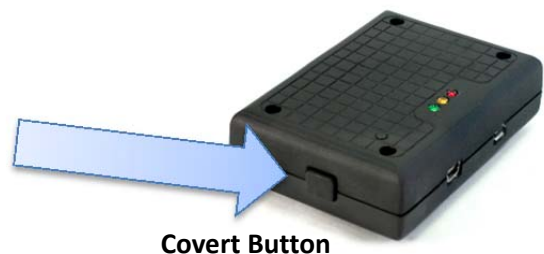
1. The Green status indicator will be illuminated whenever battery power is present, regardless of the ignition switch position.
2. Turn on your vehicle's ignition. The yellow and red status indicators will blink sequentially as VuLink is booting up.
3. Once the boot-up process is complete, the Yellow status indicator will flash as VuLink tries to establish a wireless connection with your configured FirstVu HD's.
4. When a wireless link is established, the Yellow status indicator on VuLink will remain lit as long as the FirstVu HD is within range. Typical range is 50ft.
5. The Yellow status indicator will also remain illuminated on the FirstVu HD.
6. Power on your *In-Car Video* system (ICV).
7. Start a recorded event by activating your emergency lights.
8. The Red status indicator on VuLink will turn on to indicate the event is being recorded. The Red status indicator on the FirstVu HD and ICV should also turn on indicating that they are also recording.

NOTE Whenever VuLink is connected to a FirstVu HD and the system is actively recording, all 3 VuLink status indicators will remain illuminated.

9. After 10 seconds, press the RECORD STOP button on your ICV to stop the recorded event. Press the stop button on your FirstVu HD. All Red status indicators on the ICV, VuLink, and FirstVu HD will turn off.
10. Press the record button on your FirstVu HD to start a new recording. All Red status LED's on VuLink, FirstVu HD, and ICV will illuminate to indicate the system is recording.
11. Press the RECORD Stop button on your ICV to stop the recorded event. Press the stop button on your FirstVu HD. All Red status LED's on the DVM, VuLink, and FirstVu HD will turn off.

Covert Mode

Press & hold the *covert button* on the left side of VuLink for a few seconds to temporarily turn off all status LED's until the next power cycle. Press the covert button again to return to normal LED mode.



VuLink™ LED Status Indicators

| | GREEN | YELLOW | RED |
|---------------------------------|-------|--------------------------|-----|
| Battery Power present to VuLink | ON | -- | -- |
| Power-on Sequence | ON | <i>Alternating Flash</i> | |
| Searching for Wireless Link | -- | <i>Flash</i> | -- |
| Wireless Link Established | -- | ON | -- |
| Record in Progress | -- | -- | ON |
| Covert Mode | OFF | OFF | OFF |
| Ignition Off | ON | OFF | OFF |
| Firmware Upgrade | ON | <i>Alternating flash</i> | |

FirstVu HD™ LED Status Indicator

The FirstVu HD yellow status LED will be illuminated whenever a wireless link is established with VuLink. For a complete list of status indicators, consult the *FirstVu HD Operation Guide*.

| | GREEN | YELLOW | RED |
|---------------------------|-------|--------|-----|
| Wireless Link Established | -- | ON | -- |

Section - 6: Support

Firmware Updates

IMPORTANT! Before proceeding with the firmware update described below, make sure the vehicle's ignition is turned on.

1. Get the latest software by logging on to <http://www.digitalallyinc.com/login.cfm> and register for an account to be an authorized user. By registering you will be able to download all the latest firmware/software updates and will be notified of future upgrades.
2. Download and unzip the VuLink firmware file.
3. Connect the computer to the VuLink using the supplied USB cable and, using Windows Explorer, navigate to the VuLink drive.
4. Copy the firmware file to the root directory of the VuLink.
The file name is: *firmware.r*
5. Right-click on the VuLink drive and select Eject, then disconnect the USB cable from the device. The Green LED indicator should be on and the Yellow and Red indicators will alternately flash while the new firmware is being installed. Wait for this operation to complete.
6. Re-connect the USB and open the *dvminfo* file to verify the new firmware version.
7. Eject the VuLink drive and disconnect the USB cable.



Performing a Reset

Using a small device such as a paper clip or eye-glass screwdriver, press the recessed reset button that is located as shown to the right. After a reset occurs, VuLink will determine if a firmware file is present and read the *deviceconfig* file for changes.



Troubleshooting

| Symptom | Resolution |
|--|--|
| Green Status indicator not lit | <ul style="list-style-type: none"> • Verify the power cable connector is connected to VuLink. • Verify there are no breaks, pinches, or cuts in the wiring or cable harness. • Check the wiring and voltage levels to the red and black wires on the VuLink cable harness. Should be constant 12VDC measured across these two wires. |
| Red/Green status indicators do not blink when ignition is applied | <ul style="list-style-type: none"> • Verify the power cable connector is connected to VuLink. • Verify there are no breaks, pinches, or cuts in the wiring or cable harness. • Check the wiring and voltage levels to the blue and black wires on the VuLink cable harness. Should be constant 12VDC measured across these two wires when ignition is active. • Reset the system |
| Yellow light is always blinking / FirstVu HD will not connect to VuLink | <ul style="list-style-type: none"> • FirstVu HD is out of range or turned off. • FirstVu HD and/or VuLink not properly configured. Verify device configurations in Section 4. • Reset the system. • Contact technical support if problem persists. |
| Poor wireless range | <ul style="list-style-type: none"> • Ensure VuLink is properly mounted and no other vehicle antennas or obstructions are nearby. • FirstVu HD battery may be low. Replace FirstVu HD battery. |

Product Repair

VuLink should be returned to Digital Ally for service. The warranty may be voided if the device is opened by any unauthorized individual. Please contact Digital Ally to obtain a Return Materials Authorization (RMA). It is helpful and will expedite the process if you have your unit's serial number available at the time of your call.



All In-Warranty and Out-of-Warranty service must be performed by Digital Ally, Inc. There are no user serviceable parts inside of VuLink.

Section - 7: Warranty Information

We warranty that VuLink™ will be free from defects in workmanship and material for a period of 12 months from the date of purchase by the original purchaser. If any defect is discovered through normal and proper use of the unit during this period, the defect will be repaired or the unit will be replaced at our factory or at one of our authorized service centers at no cost to the purchaser. The purchaser must return the defective unit to the factory or one of our authorized service centers, freight prepaid. We will pay for shipping charges for the return of the unit.

This warranty applies only to defects in a unit's internal electronic components and circuitry, and is void as to units that have been opened without prior authorization, have experienced unauthorized repairs, or have had unauthorized modifications. This warranty does not cover the following:

- Normal wear and tear on the unit such as batteries, frayed cables or wires, broken connectors, or scratched or broken cases.
- Damage caused by operator abuse or neglect.
- Damage caused by incorrect use of the unit, carelessness, unauthorized alterations to the unit, improper storage of the unit or unauthorized service, installation or repairs made to the unit.
- Damage caused by fire, flood, lightning, vandalism, collision, acts of God, or other events beyond the reasonable control of Digital Ally, Inc. or the purchaser.
- Damage to external parts of the unit such as buttons, wires, and cables, etc.
- Damage from use of the unit in hostile operating environments.

We reserve the right to charge for repairs to a unit during the warranty period made necessary because of any of the foregoing causes at our standard rates for repair of units not under warranty.

The purchaser assumes all risk of use from its purchase and use of the unit. Harmful personal contact with a unit might occur in the event of violent maneuvers, collisions, or similar circumstances, even if the unit was properly installed and used. We are not responsible for, and we specifically disclaim any liability for injury caused by a unit in such circumstances.

THIS WARRANTY IS GIVEN IN LIEU OF ALL OTHER WARRANTIES. THERE ARE NO WARRANTIES THAT EXTEND BEYOND THIS STATEMENT. ALL IMPLIED WARRANTIES ARE DISCLAIMED, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY, NON-INFRINGEMENT, FITNESS FOR A PARTICULAR PURPOSE, AND WARRANTIES IMPLIED FROM A COURSE OF DEALING, COURSE OF PERFORMANCE OR USAGE OF TRADE. THE PURCHASER'S SOLE AND EXCLUSIVE REMEDY FOR A WARRANTY CLAIM WILL BE THE REPAIR OR REPLACEMENT OF A UNIT.

Section - 8: Contact Information



9705 Loiret Blvd

Lenexa, KS 66219

Website: www.digitalallyinc.com

Support E-Mail: support@digitalallyinc.com

Sales E-Mail: sales@digitalallyinc.com

Phone: 913-814-7774

Fax: 913-814-7775

Sales / Support Toll Free: 1-800-440-4947



* Specifications subject to change without notice.

Section - 9: Regulatory



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 user equipment and VuLink.
- Connect the user equipment into an outlet on a circuit different from that to which VuLink is connected.
- Contact Digital Ally technical support.

This equipment complies with the FCC and Industry Canada RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20cm between the radiator and any part of your body.

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

The CE Mark is a European marking of conformity indicating that a product complies with the essential requirements of the applicable European laws or Directives with respect to safety, health, environment, and consumer protection.

Changes or modifications not expressly approved by Digital Ally, Inc. could void the user's authority to operate the equipment.