V300 Body-Worn Camera User Guide

May 2021

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Revision E

Copyrights

Firmware updates

Motorola Solutions is committed to the continual testing and improvement of our firmware. As new revisions become available, these updates will be made available to your agency; fees may apply depending on your licensing agreement.

Manufacturer contact information

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415 E. Exchange, Allen, TX 75002-2616
Customer Service: 1-800-605-6734
Customer Service web portal: **https://support.watchguardvideo.com/**

Send us your suggestions

We want to hear from you. Tell us about your experience and how you are using the V300. We will do our best to accommodate any suggestions you may have in future revisions. International customers, please contact your local distributor.

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FCC and IC notices

This equipment complies with Part 15 of the FCC rules and Industry Canada license-exempt RSS standard(s). This equipment should only be used with the antenna supplied by Motorola Solutions Video. Any changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

Motorola Solutions **V300** contains the following IDs:

FCC ID YJV-VST400
IC ID 9073A-VST400

Motorola Solutions WiFi base contains the following IDs:

FCC ID YJV-VST500
IC ID 9073A-VST500

Cet appareil est conforme à la Partie 15 des règlements de la FCC et Industrie Canada exempts de licence standard RSS. Cet appareil doit être utilisé uniquement avec l'antenne fournie par Motorola Solutions. Tout changement ou modification non expressément approuvée par le fabricant pourrait annuler l'autorité de l'utilisateur de faire fonctionner l'appareil.

Motorola Solutions **V300** contient les identifiants suivants:

FCC ID: YJV-VST400
IC: 9073A-VST400

Motorola Solutions WiFi base contient les identifiants suivants:

FCC ID YJV-VST500
IC ID 9073A-VST500

The device complies with Part 15 of the FCC rules and Industry Canada license-exempt RSS standard(s) subject to the following two conditions:

1. The device may not cause harmful interference.
2. The device must accept all interference received, including interference that may cause undesired operation.

Cet appareil est conforme à la Partie 15 des règlements de la FCC et Industrie Canada exempts de licence standard RSS soumis aux deux conditions suivantes:

1. Cet appareil ne peut causer des interférences nuisibles.
2. Cet appareil doit accepter toutes les interférences reçues, y compris les interférences qui peuvent perturber le fonctionnement.

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

Conformément à la réglementation d'Industrie Canada, cet émetteur radio ne peut fonctionner à l'aide d'une antenne d'un type et maximum (ou moins) Gain approuvé pour l'émetteur par Industrie Canada. Pour réduire le risque d'interférence avec d'autres utilisateurs, le type d'antenne et son gain doivent être choisis afin que la puissance isotrope rayonnée équivalente (PIRE) ne dépasse pas ce qui est nécessaire pour une communication réussie.

The radio transmitters IC: 9073A-5 have been approved by Industry Canada to operate with the antenna types listed below with the maximum permissible gain and required antenna impedance for each antenna type indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

Antenna type (radio transmitter): Motorola Solutions part number WGP02541, 4.6 dbi gain, 50 Ohm impedance.

Ces émetteurs radios IC: 9073A-VST500 ont été approuvés par “Industry Canada” pour fonctionner avec les types d'antennes énumérés ci-dessous avec le gain maximal admissible et l'impédance d'antenne requise pour chaque type

d'antenne indiqué. Les types d'antennes ne figurant pas dans cette liste, ayant un gain supérieur au gain maximum indiqué pour ce type, sont strictement interdits pour une utilisation avec cet appareil.

Type d'antenne (émetteur radio): Motorola Solutions part number WGP02451, 4.6 dBi gain, 50 Ohm impedance.

The antennas used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Les antennes utilisées pour cet émetteur ne doivent pas être co- Les antennes utilisées pour cet émetteur ne doivent pas être co-localisées ou fonctionner conjointement avec une autre antenne ou un autre émetteur.

CE Declaration of Conformity

In accordance with the requirements of Radio Equipment Directive 2014/53/EU, Annex III, Module B, section 3 (c), Motorola Solutions declares that the radio equipment has been designed in accordance with harmonized standards and a full review of the equipment against the requirements of the following standards has been conducted. We confirm that the equipment is fully within the scope of these standards.

ETSI EN 301 489-17, V3.1.1: 2017

ETSI EN 300 328, V2.1.1: 2016

EN 55024:2010

EN 55032:2012/AC:2013

EN 62311:2008

IEC 62368-1:2018

Contents

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Introduction to the User Guide

Welcome to the V300 Body-Worn Camera User Guide. This guide walks you through the basics of using your V300 to collect video and audio evidence.

About this document

This guide covers the basic components and operation, including:

- First Steps to using V300
- Docking, charging, provisioning, and uploading
- Removing the V300 battery
- The Function button
- Uploading events from the V300 USB base, WiFi base, and Transfer Station II
- Associating a recording group with a V300 Camera
- Wearing the V300 Camera
- Powering on and off
- LCD display
- Recording evidence
- Security
- Categorizing events
- Pre-event and Record-After-the-Fact® (RATF)

The guide also includes a section on recording groups and how V300 Camera and the WiFi base work within a local recording group network.

Note: *This user guide covers the basic use of the V300. If you have a question that is not covered in the user guide, contact Customer Service.*

What's New with the V300 Camera

The V300 Camera is the next generation of the body-worn camera. Features include:

- Upload from USB Docking Base using the V300 USB Service
- Upgrade the V300 firmware from the WiFi base and the USB Docking Base
- Periodic recording alerts
- Synchronized playback with 4RE / V300 evidence for linked events
- User-replaceable, stand-alone battery that allows 24 hr shifts with same camera
- Electronic turret that allows +15/-20 degrees adjustment
- Wi-Fi and Bluetooth enabled
- Transfer Station II
- 120 dB Wide Dynamic Range (WDR) that better resolves details in bright versus dark lighting situations
- Reduced fisheye effect
- 8 MP back-illuminated HDR, WDR image sensor that realizes high picture quality in the visible light regions
- Dual microphones
- Stores 24 - 36 hours of events with maximum resolution and 30 frames per second with 128 GB of storage
- Works with other V300 Cameras to form a recording group

- V300 Camera elevates your data security with encryption at rest and in transit
- A rating of IP67 from the International Electrical Commission means that the camera can survive a drop into fresh water up to 1 meter (3 feet 3 inches) deep and for up to 30 minutes.
- SmartControl smartphone app where you can categorize tags

Buttons:

1 Function button
2 Status LED
3 Lens and sensor
4 Display Backlight
5 Dual microphones
6 Recording LED
7 Record Start/Stop
8 Power button

Related documents and information

For subjects related to your Motorola Solutions system that are not covered by the V300 Camera User Guide, see the following documents:

- *4RE® In-Car Video User Guide*
- *Evidence Library (EL)*
- *Transfer Station II Quick Start Guide*

Transfer Station II, WiFi base, and USB base

The V300 Camera needs a second generation transfer station, WiFi base, and /or USB base. You can dock either the stand-alone battery in the bases or dock the camera and battery together. Docking both lets you charge and upload at the same time. Docking a spare battery lets you have a second battery available when needed. The camera and battery only dock in one direction.

You can upload from the car with the WiFi base and the USB base

Prerequisites

The following prerequisites are required to use all of the features:

- **USB Upload** and **V300 USB Service** require V300 Camera Version 2.0.3.27 or higher
- **USB upload** requires a Transfer Station II to provision the V300 Camera to the agency; after it is provisioned / paired with the agency the USB base can upload recorded events to EL
- **USB upload** requires that your **Primary Domain Name** is set in the Evidence Library Config under **V300 Network Defaults > Mobile Network Settings**
- **Periodic alert** requires V300 Camera firmware version 2.0.3.27 or higher to work

V300 components require these reserved IP addresses:

- **192.168.99.x** (USB and WiFi base)
- **192.168.98.x** (SmartControl)
- **192.168.97.x** (reserved for future use)

If you assign your in car network any of these IP address ranges, you will have communication issues

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Getting Started

In this section...

Using V300 Camera Overview

The Motorola Solutions V300 Camera serves as a Digital Video Recorder (DVR) to capture, process, and store video and audio evidence. Connect the camera to Evidence Library (EL) to configure it and upload video for evidence management.

The V300 Camera works with other V300 Cameras and the in-car 4RE DVR (if present) to form a recording group (page 56).

Note: *The V300 cannot pair as part of a group with the VISTA cameras in the same car. You can combine the videos of V300, VISTA WiFi and VISTA XLT video captures for the same event in EL.*

Reserved IP addresses

V300 components require these reserved IP addresses:

- **192.168.99.x** (USB and WiFi base)
- **192.168.98.x** (SmartControl)
- **192.168.97.x** (reserved for future use)

If you assign your in car network any of these IP address ranges, you will have communication issues.

First Steps

For best results, before using your V300 Camera for the first time:

1. Fully charge the camera and removable battery.
2. Ensure the camera software is current using Evidence Library (EL).

To charge the camera:

- Dock the camera in a Transfer Station II, WiFi base, or USB base.

Note: *The camera battery charges any time it is docked. A blinking LED means camera is charging. A solid green LED on any of the bases means the battery is fully charged.*

To configure the camera:

1. Dock the camera in a Transfer Station II.
2. Using EL, create and/or assign a configuration and an officer to the docked V300 Camera.

When the configuration is applied, the screen displays **Checked out to** on the first line and the **officers name** on the second line. The camera reboots to apply the configuration and displays the same information then transitions to an idle screen.

See the Evidence Library Online Help for more information.

Removing V300 Camera Battery

You can remove the V300 battery and charge it separately from the camera. If you use a spare battery this ensures you never run out of power.

Note: *No events can be uploaded if the camera is not docked.*

To remove the battery:

1. Power off the camera.
2. Slide the silver bar on the back of the camera to the left.
3. Pull straight down on the battery. Do not lift out.

To replace the battery, slide it into the tracks and push it in until it clicks.

V300 Buttons

V300 has four **buttons**:

- **Function** (top)

  Press and Hold the **Function button** (1) for **Covert Mode**. When tagging an event, use the Function button to select a category.

- **Display Backlight**

  Press the **Display Backlight** (2) button to:

  - Turn on the backlight for the Display
  - See the camera status or review categories for an event recording
  - Press and hold to start momentary mute

- **Record Start/Stop**

  Press the **Record Start/Stop** (3) button to start or stop a recorded event

- Power

  Press and release the **Power** (4) button on the bottom of the camera to power V300 on or off

Buttons:

1 Function
2 Display Backlight
3 Record Start/Stop
4 Power

V300 LCD Display

The LCD display shows:

- **Battery status backlight**

  The V300 battery charge lasts up to 12 hours, depending on your configuration. The camera display shows the icon and the percentage of battery remaining.

- **Storage status** (1)

  When recording in HD format, V300 can store about 36 hours of maximum-resolution events or up to about 200 hours at low resolution. As the storage on the camera fills, the storage icon fills and the percentage increases (1) until storage is full.

- **Number of events** (2) on the camera
- **Recording status** and **Recording length** (3, 4)

  The REC icon (3) shows whether the V300 is recording. The time shows the recording length (4).

- Assigned **officer name** (5)

  Officer with the camera checked out.

- Current **day** (6)**, date** (7), and **time** (8)

  V300 sets its internal date and time from Evidence Library.

- **Camera ID** (9) or **serial number**

  The ID defaults to the camera serial number but you can change the number in EL when you check out the camera.

- **LCD display icons:**

1 Storage status-used meter
2 Percent of storage used
3 Bluetooth symbol
4 WiFi hotspot icon
5 WiFi base connection strength (how strong the V300 Camera connection is to the WiFi base)
6 GPS icon
7 Battery percentage remaining
8 Battery meter showing how much battery is used

Error messages

If an error appears on the V300 display screen the top LED flashes red to show an error condition.

Press the **Backlight button** to acknowledge the error. The LED may then turn solid **amber** until the error is cleared by the camera. If it does not clear on it's own, reboot the camera.

Wearing the V300 Camera

The V300 Camera uses magnets to secure the mounts to your clothing.

Warning! *Do not wear the Magnetic Chest Mount (Universal Chest Mount) near sensitive medical equipment or implants such as pacemakers or other magnetically programmable medical devices.*

Wear the V300 on your clothing and vest where it is most comfortable, convenient, and secure. Ensure that the lens is not obstructed and that it is aimed at the horizon (page 24).

Center chest mount

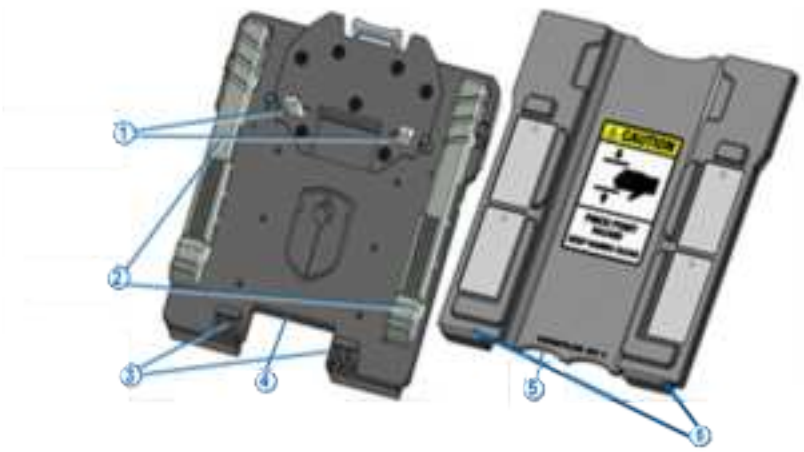
The mount is made to fit ideally over the buttons or zipper in the center of your chest. You can also wear it over your pocket or on the protective vest or jacket.

The magnets are strong with 65 pounds of pressure when snapped together.

To use the chest mount:

1. Separate the under-shirt bracket from the over-shirt bracket :
   a. Hold the under-shirt bracket in one hand with the thumb on top and the two middle fingers on the bottom.
   b. Raise the levers on both sides.
   c. While holding the levers up, pull the brackets apart.
2. Match the anchor tabs and camera slots on the over-shirt bracket with the back of the camera—keeping the magnets apart. You can attach the V300 Camera before or after the mount is in place.
3. Place the under-shirt bracket under your shirt where you want to wear your camera.
4. Line up the anchor slots and place the over-shirt against the under-shirt bracket, with your shirt between them. (These will **snap together forcefully**.)

The magnets on both brackets line up automatically, securing the mount to your shirt.



1 Brackets
2 Levers on both sides
3 Anchor tabs
4 Over-shirt bracket
5 Under-shirt bracket
6 Camera slots

***Caution: WATCH YOUR FINGERS**! Because of the strength of the magnets, separating the brackets requires some effort. Realigning the brackets causes them to snap together forcefully. Keep your hand flat and keep your fingers away from the snap-to area.*

MOLLE vest mount

The MOLLE vest mount uses hooks to anchor the mount over two rows of loops on the MOLLE vest.

***Tip:** Install the mount on the vest before you connect the camera to the mount.*

1 Back of the mount
2 Front of the mount
3 Forked end goes on bottom row of loops, over the sewn seam
4 Support loop hooks that go on top row of loops
5 Upper two hooks that slide over top row
6 Camera tabs to seat the camera in the mount

To use the MOLLE vest mount:

1. Determine which two rows of loops on the MOLLE vest you want to use to mount the V300 Camera.
2. Slide the forked end down over the sewn seam, on the lower of the two rows, between the two loops until the hook is engaged below the seam.

   You may need to slightly twist the mount to help the hook slide over the seam.
3. Fold the fabric between the two rows so that the support loop hooks engage two loops on the upper row of loops.
4. Slide the upper loop hooks down over the two loops, straightening the fabric between the rows, to fully seat the mount.

   The forked end should be fully engaged with the seam on the lower row of loops. The hooks should be fully engaged with two loops on the upper row of loops.
5. Align the V300 Camera with the two tabs on the bottom of the mount and snap the camera in to the mount.

To unmount the camera

1. Pull straight up on the camera and battery.
2. Lift out the V300 camera and battery.

V300 Camera Field of View

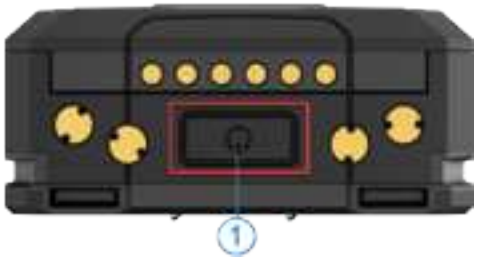
The V300 Camera **Field of View** can be configured in Evidence Library (EL) for individual officers. The 130-degree wide-angle lens adjusts vertically +15° / -20°. The camera angle is based on where the camera is worn and is set in EL. The graphic below shows the difference of views for +15°, 0°, and -20° for a camera worn in the middle of the chest.

Electronic turret adjustment

You can adjust the electronic horizon on the SmartControl app. Adjust the camera with horizon adjustment function on the smartphone app.

Power On and Off

Use the **Power** button to power the Motorola Solutions V300 Camera on and off. The **Power** button is the rectangle on the bottom of V300.



Power on

To power on the camera:

- Press and release the **Power** button (1).

The camera goes through its booting and information sequences. When it is ready to use, the display shows the number of events in storage and displays a solid green LED light on the top. The camera vibrates or plays an ascending tone sound (depending on your configuration).

Power off

To power off the camera:

- Press and release the **Power** button.

  The camera prompts you to press the **Power** button again.

After you press the **Power** button the second time, the screen shows **SHUTTING DOWN** and the green LED turns off. Descending tones sound (depending on your configuration).

Forcing power off

Warning! *Avoid forcing the V300 to power off. Forcing the camera to power off can result in data corruption.*

If the V300 stops responding to commands (or if Technical Services instructs you to), remove the battery to force the camera to power off.

If you force the camera to power off, the V300 may show **System Recovery** on the screen at the next boot. Allow the camera up to 10 minutes to complete the storage verification process.

Starting and Stopping a Recorded Event

Use the **Record Start/Stop** button on the front of the camera to start or stop a recorded event.

If your Motorola Solutions V300 is a member of a recording group, the camera can start or stop a recorded event automatically. Another group member can alert that it has started or stopped an event (page 55).

Tip: *You can start or stop an event from the SmartControl app.*

Both LEDs on the camera are red when recording, except when in Covert Mode. In Covert Mode, they are both off. When stopped, the **Status** (top) LED is green and the front LED is off.

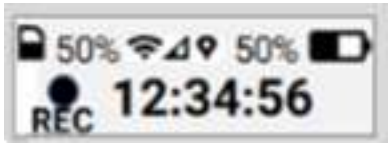
1 Status LED
2 Recording LED
3 Record Stop/Start

Starting a recorded event manually

To manually start a recorded event on the V300 press the **Record Start/Stop** button.

The display shows **RECORDING**. The dot above **REC** in the display begins to blink and shows the recording length. The camera LEDs appear solid red.

As the recorded event continues, the display shows the length increasing every second and the storage indicators updating.



Stopping a recorded event manually

To manually stop a recorded event on the V300:

1. Press the **Record Start/Stop** button.
2. Press the **Record Start/Stop** button a second time within 5 seconds to stop an event.

Important! *The V300 can be configured in EL to NOT allow manual event stop.*

On the camera the display and the front red LED turn off and the top LED turns green.

After a recorded event stops, if your configuration requires event categorization, the event categorization sequence starts (page 29).

Tip: *Your V300 automatically starts an event whenever any member of the local recording group reports that it started a group event. To STOP the group event, press the Record Start/Stop button twice within 5 seconds.*

Covert Mode

In **Covert Mode** the V300 Camera makes no sound and is dark. The display backlight can light up on demand, depending on your configuration. The camera can still vibrate in Covert Mode (depending on the configured alert notifications). All V300 functions operate the same way in Covert Mode as they do in normal mode.

Note: *Whether Covert Mode is available is configurable by your administrator.*

Enter Covert Mode

- Press and hold the **Function** button for **5 seconds** to transition to Covert Mode.

The camera vibrates and the display shows **COVERT**.

The display changes from black on white to white on black during Covert Mode. All content on the display is the same in Covert Mode as in normal mode.

You can enter Covert Mode using the SmartControl smartphone app (page 92).

Exit Covert Mode:

- Press and hold the **Function** button for **5 seconds** to end Covert Mode (LEDs on, display backlight on).

You can exit Covert Mode with the SmartControl smartphone app.

Momentary Muting of the Audio

Note: *A configuration setting in Evidence Library controls whether you can mute your Motorola Solutions V300 Camera during a recorded event.*

Muting audio

To temporarily suspend recording of audio by muting the microphone:

1. Press and hold the **Backlight** button to briefly mute the audio. Audio resumes when you release the button.

   Note: *Your administrator must set the configuration to allow muting.*

   The display shows **MUTED** while you hold down the **Backlight** button and **REC** in a smaller font.

2. Release the **Backlight** button.

Tip: *You cannot mute the audio while you are categorizing a recorded event. After you finish categorizing, you can again mute the audio.*

Categorizing a Recorded Event

Note: *Event categorization is set up in the V300 Camera configuration in Evidence Library (EL). Your agency sets the categories.*

To categorize a recorded event:

1. Stop the event manually or allow the camera to stop the event automatically.

   The **Backlight** turns on and the display shows the default **Category** on top, if not in **Covert Mode**. The prompt times-out in 30 seconds if tagging is not required.
2. Press and release the **Backlight** button as many times as needed to move through the list of event categories, one at a time.
3. Press the **Function** (top) button when the event category you want to select appears on the display.

The display shows **Saved** in small type and the event category in large letters below saved. The camera vibrates when the category is saved. One long tone sounds with a vibration (depending on your alert configuration).

If another recorded event starts (manually or automatically) while the camera is in the middle of the event categorization sequence, the camera saves the event category as unknown and starts a new event. You can complete categorizing the recorded event in EL. Or, if the event has not been uploaded, you can complete the categorization on the camera or in SmartControl.

Note: *V300 always adds a tag to an event if you do not tag the event. For example, NO TAG or UNCATEGORIZED is applied.*

Categorizing an event on the camera in a recording group

If your camera is a member of a recording group that connects with a 4RE DVR, the camera can automatically accept an event category from the 4RE DVR group member as its own category. Any category selected directly on the V300 overrides the 4RE category.

If your V300 is connected to the SmartControl smartphone app, you can categorize an event using SmartControl and add secondary event tags. Any category selected on SmartControl overrides a 4RE category. If you categorize an event on both the camera and the smartphone app, the last selected category, regardless of the device, is applied to the event (page 81).

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Docking the V300 Camera

In this section...

Docking the V300 Overview

Dock the V300 to recharge the battery, upload evidence, and update firmware. You can dock the V300 from:

- WiFi base (charge and upload from) (page 34)
- Transfer Station II (charge and upload from) (page 33)
- USB base (charge and upload from) (page 35)

Note: *The camera and battery can only dock in one direction on the bases. Do not remove the camera from the battery while charging. You can damage data / evidence on the camera.*

You can dock the V300 Camera with the battery or dock the stand-alone battery in any of the available bases. Use the WiFi base or USB base for incidental charging during your shift. Charging in a vehicle base (WiFi or USB), without the vehicle running, can impact the vehicle battery and can slow charging in warmer temperatures.

Caution: *If the ambient temperature gets too hot (40° C / 104° F) the battery may stop charging.*

While docked, you can:

- Charge the battery
- Upgrade firmware for the V300 Camera from Transfer Station II and WiFi base
- Upload recorded events from Transfer Station II
- Upload recorded events from the WiFi base and watch the progress on the 4RE
- Upload recorded events from the USB base
- Define a Record-After-the-Fact® (RATF) event
- Request a state capture from Transfer Station II for troubleshooting

Note: *The V300 must interact with Evidence Library (EL) to be customized for your agency. For that interaction to take place, the camera must be docked in a Transfer Station II, a WiFi base, or USB base with access to EL.*

Periodic configuration updates

If you have automatic updates enabled in Evidence Library, the V300 Camera queries for configuration updates every 10 minutes, when docked. If it finds a change, it updates the configuration.

Docking the V300 in a Transfer Station II

Important! *Set up and configure the Transfer Station II for use with Evidence Library (EL). See the Evidence Library Online Help and the Transfer Station II Quick Start User Guide.*

When you dock the V300 Camera and battery in a Transfer Station II:

- The V300 stand-alone battery charges
- The V300 Camera time and date synchronize with the Evidence Library (EL) system
- The V300 checks every 30 minutes for a firmware upgrade

Caution: *The V300 sets its internal date and time from the EL computer. If the computer date and time is set incorrectly, the camera will be set incorrectly, and your video evidence will be marked with the incorrect date and time.*

1 Stand-alone battery

2 V300 Camera and battery

3 Slot ID

Note: *Slot ID stickers are included with the Transfer Station II, if you choose to use them.*

4 Slot ID

5 Individual slot power LEDs

6 Transfer Station II power LEDs

While docked:

- The camera communicates to the EL software that it has recorded events to upload. The Transfer Station II can upload from eight cameras simultaneously.
- EL sends commands and requests to the camera:
  - Mark any imported recorded events as import confirmed

    Events confirmed as imported are immediately unprotected. This makes the storage space available to be reused.
  - Update the configuration
  - Stage a firmware upgrade

    After staging, the upgrade is immediately applied to the camera.
  - The WiFi base firmware can be downloaded to the V300 camera while docked in the Transfer Station II

When you undock the camera and battery from the Transfer Station II, they are ready for normal operation.

Docking the V300 in a WiFi Base

You can dock the V300 Camera in one direction only. The camera pairs with that base and with any other V300 Cameras that pair with the same WiFi base.

When you dock the camera and battery in a WiFi base that is connected to Evidence Library (EL), the camera communicates to EL that it has recorded events to upload.

Note: *The camera must be configured to upload events directly to EL from the WiFi base. See your EL online help.*

- Recorded events are uploaded to EL
- EL sends commands and requests to the camera as applicable:
- Mark any imported recorded events as import confirmed

  The events confirmed as imported are immediately unprotected. This makes the storage space available to be reused.
- Stage a firmware upgrade

  After staging, the upgrade is immediately applied to the camera.

  The camera checks every 30 minutes for a firmware upgrade.

The camera is ready for operation when you undock it from the WiFi base.

Important! *IP address 192.168.99.x is reserved for USB and WiFi bases.*

USB Docking and Upload

Note: *For* ***USB Upload*** *and* ***V300 USB Service*** *to work, you must be running V300 Version 2.0.3.27 or higher.*

You can dock your V300 Camera in the **USB Docking Base** to establish a connection to Evidence Library (EL). The V300 can upload events when docked in the USB base. You need a Transfer Station II to provision the V300 to the agency, then you can upload events.

Important! *For USB upload to work ensure that your* ***Primary Domain Name*** *is set in the Evidence Library Configuration under* ***V300 Network Defaults > Mobile Network Settings****.*

Docking the V300 Camera with the USB base:

- Sets time
- Transfers events
- Provides Customer Service with debugging information
- Checks every 30 minutes for a firmware upgrade
- Checks every 10 minutes for a configuration update
- Establishes a connection to EL

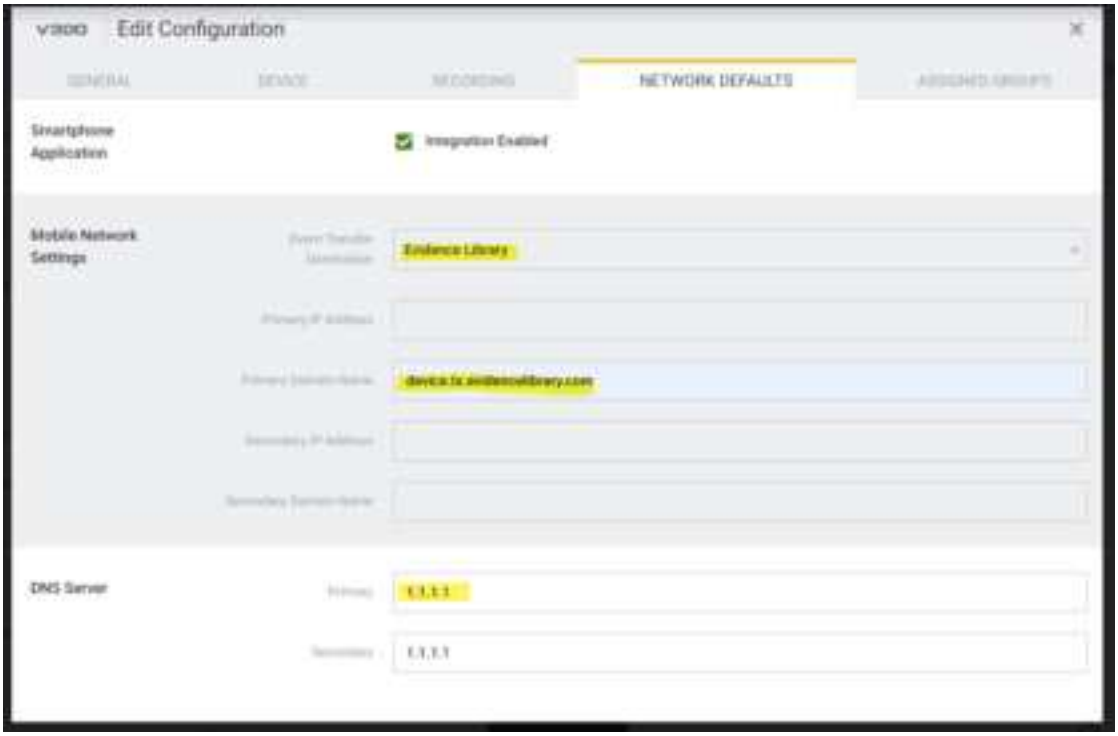
Important! ***USB upload*** *requires a Transfer Station II to provision the V300 Camera to the agency.*

Provision V300 for USB base upload

V300 has to be provisioned in the **Network Defaults** tab of EL to upload recorded events to EL from the USB base.

1. Open the **V300 Network Defaults** configuration tab in EL.
2. Go to **Mobile Network Settings**.
3. Ensure that **Event Transfer** is set to Evidence Library.
4. Ensure that your **Primary Domain Name** is populated with the domain name of your EL instance. Contact your system administrator if you do not know the name.

5. Ensure that the **Primary IP field** is populated in the **DNS Server** section. Contact your system administrator if you do not know the address.



Important! *If any of the information is missing, upload from the USB base will not work.*

V300 USB Service

Motorola Solutions provides the **V300 USB Service** (page 37) that you can download to your Windows PC / Mobile Data Computer (MDC) in your car. The MDC allows you to connect to EL and upload events from your V300 Camera using the USB base.

Important! *IP address 192.168.99.x is reserved for USB and WiFi bases.*

Downloading V300 USB Service

After downloading **V300 USB Service** to your Windows PC / MDC, you can use it to upload events from your V300 Camera to Evidence Library (EL).

Note: *Evidence Library contains a link to the* ***V300 USB Service*** *for download.*

Download the software:

1. Go to **https://www.motorolasolutions.com/en_us/video-security-analytics/body-worn-cameras/wga00640-usb-dock.html**
2. Select V300 USB Dock Client application to download the application to your computer.
3. Install the **V300 USB Service**.

4. Click **Next**.

5. Select the **I accept the terms in the License Agreement** button.

6. Select your installation folder and click Next.

7. Select the default installation folder or set your own folder and then click **Next**.

8. Click **Install**. Click **Back** to change anything or click **Cancel** to exit the wizard.

   The **Please Wait** window appears while the Wizard is installing the tool.

   If you have any applications open that interfere with the application, the **Files in use** window appears.

9. Select the **Automatically close applications** button and then click **OK**.

   The **Installing V300 USB Service** window appears. It could take several minutes to install.

   When the service has finished installing the **Completing the V300 USB Service Setup Wizard** window appears.

10. Click **Finish**.

    You are now ready to start using the service.

Using the V300 USB Service UI

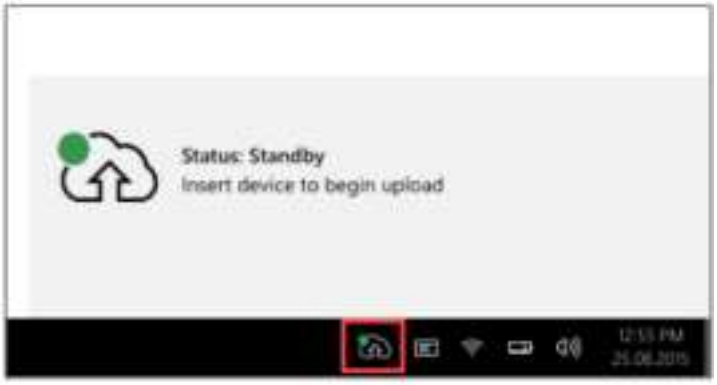
1. Click the **V300 USB Service icon** on your desktop to open the application.

The icon shows on the right side of the taskbar, next to the up arrow.

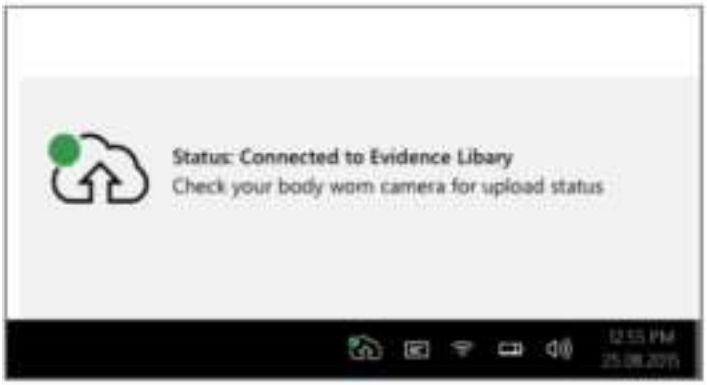
2. Click the **V300 USB Service icon** on the taskbar to open your initial window.

   After you install the tool, the **V300 USB Service** opens on your Windows PC / MDC.

3. Click the tray icon.

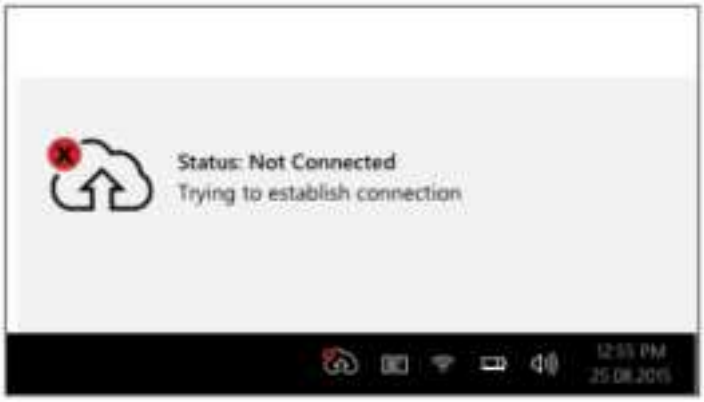


USB Service runs in the background on the system tray.



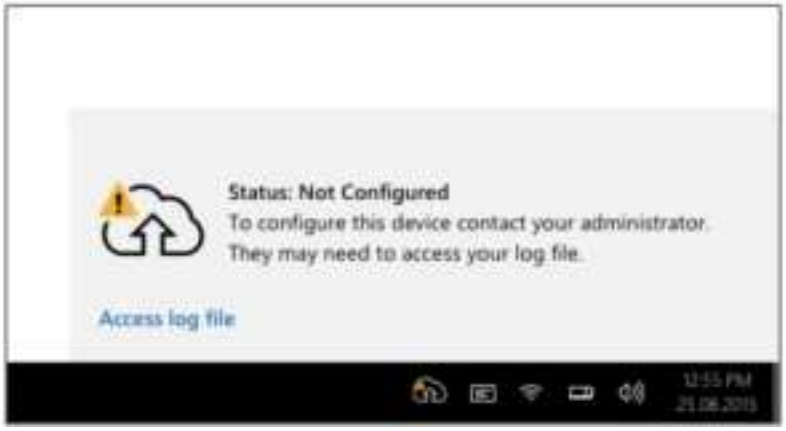
The system trays shows that you are connected.

4. Click the icon with the red X.



You are not connected to EL. If you are not connected to EL, undock the V300 and then redock it.

5. Try to connect to EL



This status shows you are not configured.

If you are not configured, click the **Access log file** link. The link opens the log file in a Notepad window. This file can inform your administrator and Customer Service about the details of your issue. If you are not configured, you will need to reconfigure your Evidence Library **Network Defaults** (page 35) for the V300 to upload from the USB base.

6. Click anywhere outside the applet window to close it.

Icons for the USB Service

Connected or Standby

Not connected

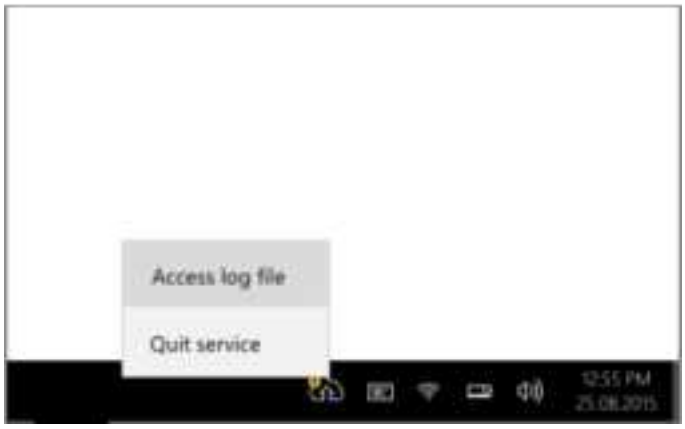
Connected but not configured. Contact your system administrator.

V300 USB Service not connected

You can right click the **V300 USB Service** icon on the taskbar to find out the status. Right click the **V300 USB Service** icon to bring up **Access your log file** or **Quit service**.

In general, you can use the **Quit service** option to keep your camera in the dock just for charging. When you select this option, the background service switches into an inactive state and the tray app exits.

If you are not configured, review your **Network Defaults** settings (page 35) in Evidence Library before trying again. To start the app again, relaunch the **V300 USB Service** UI to connect and upload.



Charging the Battery

A full charge in the transfer station or WiFi base can take up to 6 hours. The battery can run for approximately 12 hours on a full charge, depending on the configuration and video resolution.

Dock the camera with battery or just the stand-alone battery in the WiFi base, USB base, or the Transfer Station II.

Tip: *Before using the camera for the first time, fully charge the battery and configure the camera.*

Motorola Solutions recommends that you use the V300 USB base (plugged into an outlet) or the transfer station inside your agency when fully charging the battery.

Charging a battery in a vehicle that's not running can impact the vehicle battery. For the best battery life and fastest charging times, charge the V300 in a cool environment.

Important! *If the ambient temperature gets too hot (40° C / 104° F) the battery may stop charging. Do not leave the camera and battery in a hot car.*

Camera charging display

While the V300 is charging:

- The screen remains on the Event count

When the camera is fully charged:

- The display scrolls CHARGE COMPLETE once, then returns to the Event-count screen
- The display shows 100% and a fully-filled Battery Charge icon on the Event-count screen
- The green LED displays a steady light
- Two tones sound

Low battery, camera shutdown

If a battery error is issued, shut down the V300 Camera. This can leave 2 to 4 minutes of run time before the camera runs out of power. Switch to your backup, charged battery.

Associating V300 Camera with a Recording Group

When you dock your V300 in a WiFi base, the camera pairs with the base. This pairing allows the camera to associate with the local recording group (page 55) that includes other V300 Cameras and (if present) the 4RE DVR. A recording group is typically associated with a vehicle.

Note: *You can pair multiple cameras with the same WiFi base. You cannot pair with VISTA cameras.*

Assigning a Configuration and Officer and Checking Out

Important! *Before using the camera for the first time, fully charge and assign a configuration and officer to the camera.*

Depending on how your agency assigns its cameras, you may need to configure and assign the camera each time it is checked out.

To configure the camera:

1. Dock the camera in the WiFi base or Transfer Station II connected to a computer with access to the Evidence Library (EL).
2. Create and then assign a configuration and an officer to the docked camera using EL.

Caution: *If you have the battery with attached camera docked, ensure that you remove them together. Undocking one without the other can damage your data.*

As a configuration is applied to the camera, the display shows CONFIG. The configuration update alert sounds when the update is finished. The camera vibrates when the update completes.

Note: *If automatic configuration updates are enabled, V300 checks every 10 minutes to see if there is a change to the configuration.*

V300 Camera configuration

You can only create a V300 configuration in EL.

Some of the configuration properties you can set up for the V300 include:

- Agency or department name
- Time zone
- Officer name and badge ID
- Device ID
- Network preferences
- Officer preferences for indicators
- Recording group interaction
- Recording preferences
- Power and storage-saving preferences
- Event tags

See your *EL Online Help* for more information.

Upload Events

The V300 can upload directly to Evidence Library (EL) Cloud. You can upload recorded events from your V300 while it is docked in:

- Transfer Station II

  Events upload automatically from a camera in the Transfer Station II.

- WiFi base

  Events upload automatically from V300 if the WiFi base is connected to Evidence Library (EL).

  The camera must be configured to upload events to EL from the WiFi base.

- USB base

  You can upload recorded events automatically depending on the settings in EL. While the camera is uploading from a USB base, you can monitor its upload progress on the camera or in EL.

Important! *Events that you have categorized as critical events are always uploaded first.*

Monitor event uploading

You can monitor the upload progress in Evidence Library.

Record-After-the-Fact® events

Use Evidence Library to define and request a RATF event from a docked camera configured with Record-After-the-Fact (RATF) (page 53) enabled. V300 Camera generates the RATF event and uploads it while docked.

Clearing video out of camera storage

Once the V300 has successfully uploaded its recorded events to evidence storage, the camera no longer protects that storage space. It can be used for future recorded events.

For more information

See your *Evidence Library Online Help*.

Understanding tricolor LEDs on each Transfer Station II slot

The Transfer Station II has a tricolor LED for each slot that provides information about what is happening in that slot (1). These LED lights (1) let you know the upload progress, charging status, and any fault conditions.

1 Network activity indicator

2 Charge indicator

Charging			Linking		
Green	Solid	Battery charged	Green	Solid	Connected to Ethernet
Green	Flashing	Battery charging	Green	Flashing	Data uploading
Red	Solid	Error condition	Red	Solid	Error condition
Amber	Solid	Camera docked	Amber	Off	Backend not connected from transfer station link

Upgrading V300 Firmware

You can push new firmware upgrades to the V300 Camera while it is docked in the Transfer Station II, WiFi base, or USB base, (depending on your configuration).

Important! *Do not remove the battery while the upgrade is in progress.*

- **WiFi base**

  Evidence Library can push an upgrade automatically when the V300 is docked in a WiFi base, if the WiFi base has access to EL.

- **USB base**

  EL can push an upgrade automatically when the V300 is docked in a USB base, if the USB base has access to EL.

When an upgrade is pushed to the camera, the firmware is first **staged** on the camera, then the upgrade is **applied**.

To upgrade the V300 firmware:

1. Dock the camera in a WiFi or USB base or a Transfer Station II with access to EL.

   If an upgrade is needed, EL notices and pushes the upgrade automatically.

   V300 checks EL every 30 minutes for firmware upgrades.

2. Keep the camera docked while upgrading.

Warning! *DO NOT REMOVE the camera from the dock while its new firmware is being applied. Removing the camera from the dock during the upgrade can cause the camera to stop functioning. The camera cannot perform any other function, including uploading video, while it is upgrading its firmware.*

While the **upgrade is being staged** on the camera, the LCD display shows **DO NOT INTERRUPT** (2) under the **upgrade bar** (1). Do not undock or disturb the camera above the bar.

1 Upgrading
2 Do not interrupt (do not remove the camera)

When the **upgrade has finished applying**, the camera sounds the ready alert (depending on your alert notification selections). You can safely undock the camera.

Upgrading WiFi Base Firmware

The Motorola Solutions V300 Camera automatically pulls firmware upgrades for the WiFi base from Evidence Library (EL) when the V300 is docked in a Transfer Station II.

Note: *Evidence Library can be set up to push new firmware automatically For instructions, see your Evidence Library Online Help. The camera checks every 30 minutes to see if a new firmware upgrade is available.*

WiFi base upgrade

To upgrade the WIFI:

1. Dock the V300 in the Transfer Station II.
2. Upload events.

   If an upgrade is available, EL pushes the firmware upgrade after the upload completes.
3. Remove the V300 and dock it in the WiFi base.

   The base upgrade occurs automatically.
   a. The **amber LED blinks quickly**.
   b. When the upgrade is complete the **amber LED blinks slowly**.
4. Power cycle the in-car system so that the upgrade will take effect immediately.

Note: *If you undock the camera before the upgrade is complete, the camera downloads the upgrade the next time the camera is docked. The upgrade does not take effect until the download is complete and the in-car system powers up.*

If the camera is undocked after the upgrade and then quickly redocked, the ***amber LED*** *no longer shows. If the upgrade is already complete, no upgrade occurs. Return to step 4.*

If the ignition is turned off, without completing the upgrade, the next time the camera is docked, the upgrade process begins again

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Using Pre-Event and Record After the Fact® (RATF)

In this section...

Pre-Event and Record After The Fact® (RATF) Overview

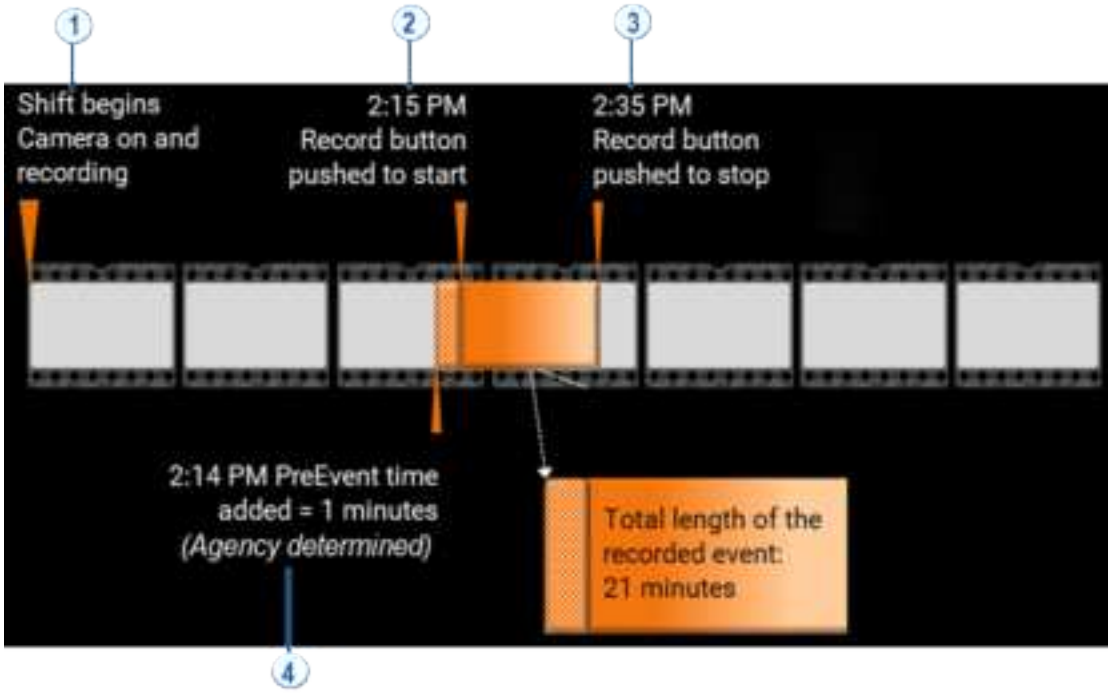
Pre-Event Capture lets you add up to two minutes of video before a recorded event. **RATF** lets you continuously capture and save video. You may want to capture part of an event that was not recorded as part of the original recorded event. Because the V300 Camera continuously records, you can capture that part of the event. When either **Pre-Event** or **RATF** are enabled, the camera continuously captures and saves video when it is powered on. You enable both in Evidence Library (EL). See the *Evidence Library Online Help* for more information.

Pre-Event Capture

Pre-Event supported values are none, 15 secs, 30 secs, 1 min, and 2 mins. You can configure Pre-Event to include audio. You can have audio for the event but not for Pre-Event. The evidence is always written to storage.

As shown in the graphic, you start a recorded event at 2:15 PM and stop it at 2:35 PM. With a **Pre-Event Capture** time configured for one minute, the recorded event includes video recorded from 2:14 PM to 2:35 PM.

Note: *Pre-Event only works if your camera is continuously recording.*



1 Shift begins. Camera on and recording
2 Record button pushed to start
3 Record button pushed to stop
4 2:14 PM PreEvent time added = 1 minute (Agency determined)

Audio

Audio is NOT included with pre-event video unless your agency enables Force Microphone On (page 54). Typically, the V300 only begins to record audio when you start a recorded event.

Record-After-the-Fact® (RATF)

Enabling RATF lets you continuously capture and save video you can use to generate a RATF event. You enable RATF in Evidence Library (EL).

The V300 works as a DVR and camera combination to record events. When you start and stop a recording (manually or automatically), the camera protects the segment between the recording start and stop as the recorded event.

Generating a RATF event

Any time the V300 is docked in the WiFi base, and there is network connectivity to EL, V300 can generate a RATF. Use EL to send a manual request to the camera to generate and retrieve a RATF event.

See the *Evidence Library Online Help* for more information about generating a RATF from the V300 Camera.

Storage

When you enable RATF, the camera continuously overwrites the oldest unprotected (nonrecorded event) area in storage with any newly captured video or recorded events. This process continues until all unprotected video is overwritten with recorded events or RATF. Then you must upload recorded events to EL to free up storage space before you can continue to use the camera.

Audio

Audio is **not** typically included in the saved video when RATF is enabled. The V300 only begins to record audio when a recorded event is started.

You can include audio whenever the camera is capturing and saving video if you enable the **Force Microphone On** feature (page 54).

Force Microphone On

The **Force Microphone On** feature lets you capture audio whenever the V300 Camera is capturing and saving video. Audio is **NOT** typically included in pre-event video or Record-After-the-Fact® events.

Force Microphone On is set by your Administrator in the configuration settings of Evidence Library.

Using V300 in a recording group

In this section...

Recording Group Overview

When you dock V300 in the WiFi base, the camera pairs with the base. This pairing lets the camera associate with other V300 Cameras as a local recording group.

The decision to create an event for the group recording is made by each device in the local recording group network. This is called **Distributed Multi-Peer Recording**™. Starting a recorded event on one device alerts the other devices in the group through the WiFi base that there has been a change in recording status on that device. In response, the other devices in the group can start recording the event, each according to its own configuration. Recordings from the individual cameras are uploaded and automatically linked in evidence management software for viewing and sharing.

Recording Group Members

A recording group consists of a network of devices communicating with each other whenever one of them changes its recording status. Although a recording group is typically linked to a vehicle, the V300 Cameras can form their own recording group. A local recording group may include:

- Up to eight V300 Cameras
- One WiFi base
- 4RE DVR, firmware version of 4.0.7 or later
- SPS

V300 Camera functions

As part of the local recording group network, the V300 Camera:

- Pairs with the WiFi base

  After docking (page 32) and pairing the cameras with the WiFi base, the pairing associates the cameras with the local recording group.

  Note: *You can have a maximum of eight cameras in a recording group with one WiFi base.*

- Initiates group recordings

  The V300 notifies the WiFi base that it started a recorded event. The WiFi base then uses the group network to notify the other group members that V300, has started an event. The other group members can join the group by starting their own recorded events.

- Responds to group-recording starts or stops by other group members

  Through the recording group network, the WiFi base is notified by other group members when they start or stop a group recording. The base then notifies the cameras and a camera can start or stop its own recorded event with the recording group.

Tip: *If the 4RE DVR or V300 Cameras are members of the same recording group, 4RE can initiate group event starts, stops, and categorization and V300 can join in on the group actions depending on the EL configuration.*

Important! *If a V300 moves out of range of its associated recording group network, it does not receive notifications of group recording starts and stops until it is back in range.*

V300 provides a wireless access point (hotspot) for the SmartControl smartphone application. For information about connecting the SmartControl application, See *SmartControl* on page 81.

Smart Power Switch (SPS)

As part of the local recording group network, the SPS:

- Functions as the central connection point for a recording group

  Through the switch, the devices connect together to form a network, letting the 4RE DVR and/or V300 Camera group members communicate with each other.

- Intelligently manages power within the local recording group network

  The SPS can detect the status of the devices in the network, whether they are powered on or have powered themselves off after finishing event upload or charging. When the switch detects that the devices in the local recording group network no longer need power, it shuts down any remaining devices connected to the local network, including itself.

- Functions as the local network DHCP server for the local recording group network and other devices connected to it (for example, wireless radio)

The SPS is **required** to form a recording group. There can only be one Smart Power Switch in a recording group.

4RE DVR

Note: *The 4RE DVR must be at firmware version 4.0.7 or later to participate in a recording group.*

If your agency uses the 4RE DVR as part of a local recording group network, the 4RE DVR:

- Initiates group recordings

  4RE uses the group event network to inform the other group members when it starts an event. The other members can join by starting their own recorded events.

- Stops group recordings

  Only the 4RE DVR can stop all recorded events that are part of the group event at the same time.

- Responds to group-recording starts by other group members

  Through the group event network, the 4RE DVR is informed by other group members when they start a recorded event. 4RE can then join the group by starting its own recorded event.

- Passes on its event categorization to other members' recorded events in the group recording

  The category you assign on the 4RE to a recorded event is passed to other group members' recorded events. The other group members can choose to categorize their own recorded events, overriding any category passed to them by 4RE.

- Shares **Covert Mode** entry and exit with other group members

  Other members can choose to enter or exit **Covert Mode**.

There can only be one 4RE DVR in a recording group.

For more information about the 4RE DVR and group recordings, see the *4RE DVR In-Car Video User Guide*.

Important! *The 4RE DVR is **not** required to form a recording group.*

Group Events

The collaboration of V300 Cameras or of V300 Cameras and the 4RE DVR creates a group event. Each device in the same recording group creates individual recorded events of the same incident. This shows the individual event from different perspectives to create a more comprehensive view of an incident.

When a group event is uploaded to Evidence Library, the individual events are automatically linked together.

V300 Camera behavior

What happens when:

- You try to manually start a recorded event on V300 just after it automatically starts an event as part of a group event?

  If you press the **Record Start/Stop** button within 10 seconds of the automatic group event start, V300 asks you to confirm that you want to STOP the recorded event with your **Record Start/Stop** button press. If you do not press the **Record Start/Stop** button again **within 5 seconds**, the camera continues recording the event as part of the group event.

  If you press the button a second time within 5 seconds, the camera stops recording the event.

- The V300 Camera that initiated the group event moves out of range during the group event?

  All the devices in the recording group keep recording an event until the 4RE stops the group event or each individual member stops its own event, each according to its configuration. The initiating device moving out of range does not affect the other devices' ability to start, stop, and categorize their own events.

  The V300 Camera that went out of range keeps recording the event until it is manually stopped. A device moving out of range does not affect its ability to start, stop, and categorize its own events.

- The group event is stopped while the V300 that is part of that group event is out of range?

  The out-of-range V300 Cameras keep recording the event until it is manually stopped or moves back into range of the recording group network.

  When the V300 that is still recording an event moves back into range, it is informed that its associated group has stopped the group event. It can then stop its own event, according to its configuration

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About the Features of the V300 Camera

In this section...

V300 Camera Features Overview

The V300 Camera functions as a camera and a DVR (Digital Video Recorder) combination. It captures, processes, and stores video and audio evidence. You can dock the V300 in any one of three bases:

- WiFi base (upload, charging, and firmware upgrade)
- Transfer Station II (upload, charging, and firmware upgrade)
- USB base (upload and charging)

The camera can be paired with the WiFi base to associate with other V300 Cameras to form a recording group (page 55).

This chapter gives you background information that helps you take advantage of all of Transfer Station II special features.

Recording Reminder Alert

You can configure your V300 Camera to give you **Recording Reminder Alerts** (periodic alerts) when recordings go long. This reminds you that you are still recording and keeps you from having recordings with a lot of information not important to the event. This is set up in the configuration in EL for the V300 Camera.

See your Evidence Library Online Help and for more information.

Note: *Periodic alert requires V300 firmware version 2.0.3.27 or higher to work.*

See *Recording Reminder Alert* on page 71.

Periodic configuration updates

If you have automatic updates enabled in Evidence Library, the V300 Camera queries for configuration updates every 10 minutes, when docked. If it finds a change, it updates the configuration.

V300 Camera Components

The Motorola Solutions V300 is a body-worn HDR camera with Bluetooth, Wi-Fi, and GPS. The HDR camera sensor is separate from the camera DVR. V300 components include:

- Dual microphones
- Buttons:
  - **Function** (top)
  - **Power** (bottom)
  - Display **Backlight** button (side)
  - **Record** Start/Stop (front)
- Top **Status LED**
- User-replaceable **battery**
- **Storage** capacity for V300 is 24-36 hours at max resolution and frame rate
- Ultra-wide dynamic range image sensor that:
  - Maintains rich colors at all light levels
  - Increases low-light sensitivity
  - Vertically adjusts the 130-degree wide-angle lens +15° / -20°
- Images have less digital noise and low-light performance is improved
- Captures a balanced image

V300 Components:

1 Function button
2 Status LED
3 Lens and sensor
4 Display backlight button
5 Dual microphones
6 Recording LED
7 Record Start/Stop
8 Power button

Microphone

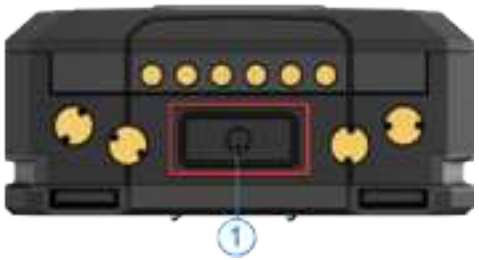
The digital microphone records CD-quality sound. Depending on the configuration applied to the camera, the microphone continuously records audio (default setting).

Buttons

V300 has four buttons that control the camera functionality.

Power button

Use the **Power** button (1) only to power the camera on or off. The **Power** button is on the bottom of the camera (page 24).



See *Power On and Off* on page 24.

Record Start/Stop button

Use the **Record Start/Stop** button to start or stop a recorded event (page 26). The **Record Start/Stop** button is on the front of the camera. You can also use Record Start/Stop to interrupt the info sequence.

Function button

The **Function** (top) button controls:

- Covert Mode
- Tagging an event
- Display of event tags

Display Backlight button

The **Display Backlight** button is on the right side as you look at the front of the camera.

The screen backlight turns on when you power up the camera until it reaches the ready screen.

The screen backlight turns on when you power off the camera and remains on until the camera powers off.

Use the **Display Backlight** button for multiple functions. Turn the display backlight on with one button press to:

- Show the camera status on the display
- Step through the status sequence:
  - Press the Backlight button a second time, while backlight is on, to start the display of the status sequence
  - Press the Backlight button while in status sequence, to advance to the next item in the sequence (At end of sequence, it starts over)
  - End the sequence of status information on the display
    - The Backlight turns off about 8 seconds after going through all of the info screens
    - The Record button interrupts the status sequence
- Mute the audio momentarily (page 28)
- Toggle event tags when categorizing events

V300 display

The display on the V300 shows icons and messages to indicate the status of the camera. The icons show in the top half of the display. The messages show in the 8-character area on the bottom half of the display. If a message is longer than 8 characters, the message scrolls. The display is on the top of the camera.

The display informs you of:

- **Status LED**

  Lets you know immediately if you are recording.

- **Battery status**

  As the charge level decreases, the amount of fill in the **Battery Charge** icon decreases.

- **Current recording length**

  The recorded event length shows as HH:MM:SS, for example, **1:23:59**. It only shows time elapsed not pre-event time.

- **Date and time**

  The date shows as an abbreviation for the month with a 1- or 2-digit day of the month, for example, **NOV 3**.

- **Event categories**

  Each category shows as you cycle through the list, for example, **Domestic**. If the item is longer than the window screen, the item scrolls. The list of categories is configured in Evidence Library (EL).

- **Number of recorded events in storage**
- **Officer name**
- **Recording status**

  The **REC** icon (●**REC**) shows when the camera is recording.

- **Saved storage total**

  The saved storage total shows as a decimal value in GB, for example, **11.07 GB**.

- **Storage status**

  As the camera storage fills with recorded events, the **Storage Used** meter fills with bars and the **Storage Percentage** increases.

- **Upload status**, if docked in the Transfer Station II, USB base, or the WiFi base

  The upload status shows the number of events uploaded out of the total number of events to upload. Critical events upload first.

- **Wi-Fi or GPS signal status**

  The **Wi-Fi Signal Strength** icon shows the status of the V300 Camera Wi-Fi connection with the WiFi base.

Display in different modes

- When the camera is not recording, the default message shown on the display is the number of recorded events in storage.
- When the camera is in Covert Mode and not recording, the default message shown on the display is **Covert Mode**.
- When the camera is recording, the default shown on the display is the recording length.

Feedback Indicators

Apart from the displays, the V300 Camera can provide feedback on the status using:

- Tones
- Vibration
- Red and green LEDs

All of these feedback indicators are configurable in Evidence Library. You can set up the tones and vibration to alert with:

- Tone only
- Vibration only
- Tone and vibration together
- No tone or vibration

You can configure the brightness level of the LEDs or set them to adjust automatically depending on the time of day. They are dimmed from 8 pm to 8 am if you choose this option.

Note: *If you place the camera in Covert Mode, no tones sound and the LEDs do not light.*

V300 Camera User-Removable Battery

With the user-removable battery, you can extend your shift by having a replaceable battery charging in the car. The battery can get from 10 - 12 hours on a shift depending on the configuration. The replaceable battery can extend that time for another 10-12 hours. The V300 battery recharges to 100% in about 4 hours.

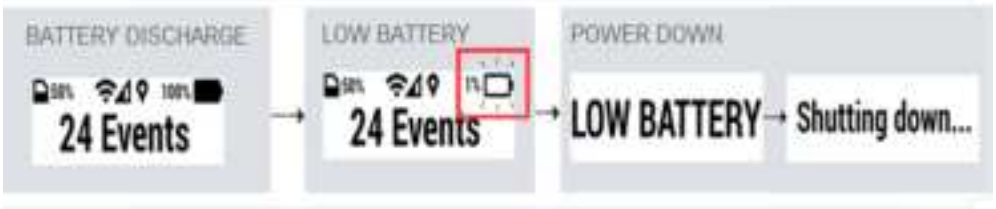
When the battery is getting close to shutting down:

- An audio chime plays and the battery icon blinks when the battery gets close to a critical level.

Note: *These alarms depend on your officer preferences.*

- Start watching the battery icon when it gets to 2%. When the battery icon gets to 1% replace your battery. When the icon starts blinking the LCD displays LOW BATTERY and the camera starts a shutdown procedure.

Note: *Keep an eye on the battery percentage.*



Caution: *Ensure that you* ***shutdown*** *the camera before pulling the battery out. You can damage data by not shutting down the camera.*

Weather can affect charging the camera. Extreme hot or cold temperatures can shut down battery charging. The ambient temperature range for charging is 0° C / 32° F to 40° C / 104° F. At the lowest and highest temperatures, charging can stop.

V300 Camera Battery Maintenance

You may need to clean your battery and camera contacts if your camera shows any of these signs,

- Random rebooting or random power off
- The battery percentage on the display abruptly reports 0% battery life remaining
- The V300 will not power on or off outside of the dock

Random rebooting or random power off

The V300 powers off or reboots when docked or undocked or other shock type events occur. An abrupt reboot causes the camera to initiate a *System Recovery* message. The recovery can take up to 10 minutes to complete, depending on how much evidence is on the camera. Contamination on the battery or camera contacts can cause these symptoms. Follow the cleaning instructions for the battery provided here.

Battery percentage reports at 0% battery life remaining

V300 camera battery life indicator on the LCD display is showing 0% battery life remaining. This typically occurs at power on or when undocked from charging and upload station or base. *Low Battery* may show briefly on the camera display. Contamination on the battery contacts can cause these symptoms. Follow the cleaning instructions for the battery provided here.

V300 will not power on or off

The camera powers up when docked but after it is removed from the dock the power button is unresponsive or must be held for an extended time. Follow the cleaning instructions for the battery and camera provided here.

Causes for these problems

Root cause analysis has proven that contaminated battery contacts on both the battery and camera contacts prevent good electrical connection. Contamination can encompass many foreign materials such as accumulated residue from, surface disinfectants or sanitizers, dirt, fibers, liquids, food and other non conductive material on the contact surfaces. These can cause intermittent connection to the battery.

Corrective actions

To clean the battery and camera contact surfaces:

- Remove the battery from the camera.
- Clean the battery and camera contacts with a fine tipped cotton swab and isopropyl alcohol (rubbing alcohol) with at least a 70% alcohol concentration.

Precision Tipped Cotton Swabs are available through online retailers.

Note: *Never apply the alcohol directly to the battery or camera contacts in an uncontrolled manner.*

- Gently clean all of the contact surfaces to remove debris.

Important! *Do not use bleach, solvents or cleaning sprays to clean or disinfect your battery and camera contacts.*

Resolutions and repair procedures

If cleaning the battery and camera contacts does not lead to full functionality, isolate the source by changing out the battery with a working battery.

- If replacing the battery resolves the issue, re-clean the battery and camera contacts
- If re-cleaning does not resolve the issue, contact Customer Service to replace the battery
- If replacing the battery does not resolve the issue, re-clean the camera contacts
- If re-cleaning does not resolve the issue, contact Customer Service to replace the camera

See the Motorola Solutions Technical Notification (MTN), MTN-0134-20-NA issued 09/2020 at:

https://www.motorolasolutions.com/en_us/support/technical-notifications.html

Contact customer service at 1-800-605-6734.

Video, Audio, and Subtitle Evidence

The V300 works as a DVR and camera combination to collect evidence in a recorded event. A recorded event is a unique, protected segment composed of:

- Video
- Audio
- Subtitles

Video

The V300 records a single compressed video stream using h.264 high-profile compression. Depending on the configuration applied to the camera, the video quality can be:

- High Dynamic Range function (HDR) (not available at 60 frames-per-second)

  HDR synthesizes different exposure conditions into an image so that bright and dark data can be seen at the same time. Lets you capture brilliant colors even when video is taken against bright light for video imaging and still imaging.
- High Definition (HD), **1080p**, at a rate of 30 frames-per-second, 1920 by 1080 pixels
- High Definition (HD), **720p**, at a rate of 30 frames-per-second, image resolution of 1280 by 720 pixels

Image distortion correction

The V300 camera lens sensor corrects image distortion. It reduces the fisheye effect from the wide-angle lens.

Audio

The V300 records CD quality audio with dual microphones. Depending on the configuration applied to the camera, it can:

- Continuously record audio
- Only record audio during recorded events

Subtitles

Subtitles are the text information that can be overlaid on the video. Subtitles can include:

- Officer name
- Date and time
- Device ID

- Microphone on or off
- GPS location

Tip: *The subtitles are always included with the video and audio in a recorded event. Using Evidence Library, you can turn them off or on.*

For more information...

See *Record-After-the-Fact® (RATF)* on page 53

See *Pre-Event Capture* on page 52

See *Assigning a Configuration and Officer and Checking Out* on page 44

See *Upload Events* on page 45

See *Using V300 in a recording group* on page 55

Recording Reminder Alert

The V300 Camera notifies you at regular intervals that it is still recording an event. Configure **Recording Reminder Alert** in Evidence Library (EL) to remind you periodically that V300 is recording an event. The reminders include:

- Tone

  This tone sounds the same as the checkout tone. It sounds one time and occurs at the interval set in the EL configuration from 0 to 60 minutes.

- Vibrate

  Vibrate occurs at the interval set in the EL configuration from 0 to 60 minutes.

The default **Recording Reminder Alert** is 0 seconds or disabled.

Note: *Recording Reminder Alert requires V300 firmware version 2.0.3.27 or higher to work.*

Data and Video Encryption

The V300 Camera system supports data and video encryption at rest and in-transit. The data on the SD Card in the camera is not readable if removed. Also, you cannot write to it or erase it. To read the data on the SD Card, contact Customer Support.

The evidence uploaded to Evidence Library is encrypted.

Storage

The V300 Camera stores 24 to 36 hours of HD video at 1080 pixels. The camera uses a 128 GB SD Card.

When you need to free up storage space on the camera, upload recorded events (page 45) from the camera to Evidence Library (EL).

The V300 display shows a **Storage used** icon and **percentage** (50%) used for protected recorded events. As the camera records events and its storage fills, the **Storage Used** icon fills with black and the percentage increases.

1 Storage used

2 Storage percentage

Low storage and full storage messages

When the camera is about 10 minutes away from running out of storage space, it alerts you with:

- Two short tones and/or a vibration (depending on your alert configuration settings)
- Slow-blinking red LED and **Storage Used** meter and icon on the display

When the camera storage is full, it alerts you with an error condition alert:

- Fast-blinking red LED
- Three short tones and/or a vibration (depending on your alert configuration settings)
- **FULL** message on the display

Warning! *If storage fills completely, the camera stops recording new video.*

GPS

The V300 Camera includes a built-in Global Positioning System (GPS). V300 uses the GPS feature to apply:

- Accurate timestamps to recorded events

  These timestamps allow Evidence Library (EL) to synchronize playback between events (video and/or audio) from the V300 Cameras and a 4RE DVR.

- GPS location coordinates to the V300 recorded events

The fix status, longitude, latitude, speed, and time of day information is sent to the Metadata service each second so that it can be included in the event data. The speed information is compared to the configured maximum speed to determine if the vehicle has exceeded the excessive speed trigger. If it has, a message is sent to the Event service to determine if an event should be started.

Note: *The GPS feature can be disabled in your EL configuration.*

WiFi base

The Motorola Solutions V300 includes built-in Wi-Fi (802.11n).

You can dock the V300 Camera and battery or just the stand-alone battery in the WiFi base. The camera pairs with the base to:

- Associate with a local recording group

  The WiFi base acts as the Wi-Fi access point (802.11n) for the V300 Camera to connect to the local recording group network. The broadcast range for the WiFi base depends on its current environment. The WiFi base typically associates with two cameras at one time, but can associate with up to eight cameras.

- Upgrading the Wi-Fi base is similar to upgrading the V300 Camera . The V300 retrieves the WiFi base upgrade file just as it retrieves the upgrade file for the camera.
- Update firmware
- Upload recorded events from storage (with an Evidence Library connection)
- Charge the camera battery

  For example, you can have a second battery charging in the base while your first battery is on the camera.

Note: *Charging in a vehicle base can be slower in warmer temperatures and can impact the vehicle battery.*

Important! *Battery charging can shut down at ambient temperatures greater than 40° C / 104° F.*

LEDs for WiFi base

Two LEDs on the front of the WiFi base show power connection status. The LEDs are light-sensitive and adjust to the ambient light.

1 Charge indicator

2 Network activity indicator

Charging LED

LED	State	WiFi base state
No light		Powered off
Red	Solid	Charge error
Red	Blinking	Error condition Pairing not successful
Red	Blinking	Error condition
Green	Solid	Fully charged
Green	Blinking	In shutdown or wireless upload timeout period

The left LED on the WiFi base blinks green when it successfully pairs with a V300. The LED blinks red if the pairing was not successful.

Note: *If you get a solid red light, try undocking and redocking your camera and battery. If solid red appears repeatably, contact Customer Service.*

Network Activity LED

LED state	State	WiFi base state
Off		Connected to Distributed Multi-Peer Recording upload server (EL)
Amber	Solid	Not connected to camera or upload server
Amber	Blinking	Activity with upload server (EL)
Green	Solid	Connected to camera (Wi-Fi connection)
Green	Blinking	Activity with camera (Wi-Fi connection)

If two cameras are paired with the same WiFi base, and one is docked, the WiFi base LEDs show the state of the **docked** camera.

Connections

The WiFi base has connections for a Wi-Fi antenna cable and a provided custom power and data cable on the back.

Setting up the WiFi base

Typically, the WiFi base and the Distributed Multi-Peer Recording are installed in the vehicle by your agency installation technicians. For more information about installing the V300 system equipment in the vehicle, see the *4RE Vehicle Installation Instructions*.

Remote upgrade Wi-Fi base

The upgrade file for the WiFi base is downloaded while the V300 Camera is docked in the transfer station.

After you place the camera in the WiFi base, the camera associates, then the power LED fast blinks amber while the upgrade is copied to the base. The power LED then slow blinks amber signaling a pending upgrade. To apply the upgrade, power cycle the Wi-Fi base.

V300 Camera display

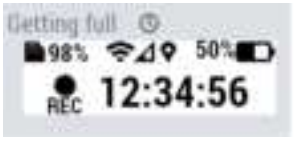
When V300 is paired with the WiFi base, the camera display shows a **Wi-Fi Signal Strength** icon ( ) that indicates the strength of the Wi-Fi signal coming from the WiFi base.

Infrequent Screens Seen on the V300 UI

The UI screens shown here do not appear frequently or are of very short duration.

Disk full

When the camera has less than 2% of storage available, the SD card element flashes (1 second ON, 1 second OFF). After the camera fills completely, any attempt to record is blocked and the screen displays **FULL.**



Upload events

CRITICAL EVENTS are uploaded.

CRITICAL COMPLETE is displayed for 5 seconds after critical events are uploaded.

COMPLETE is displayed for 5 seconds when all events are uploaded. The display then returns to the READY or Charging screen.

Charge the battery

In the dock the battery icon takes the whole screen (if not uploading). When charging the battery icon fills progressively until charged. The flash symbol and green LCD blink while charging.

Discharge the battery

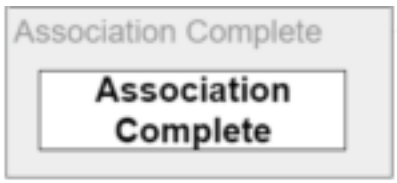
If you are close to low battery, the battery icon starts blinking until it reaches critical level. LCD displays LOW BATTERY for 5 seconds and starts a shutdown of the camera.

Charge temperature

If the battery is above 40° C / 104° F for an extended period, the battery can stop charging. If the temperature is below 0° C / 32° F for an extended period, the battery can stop charging.

Associate with a group

When the V300 has successfully associated with the WiFi base, the screen displays **Association Complete** for 2 seconds. The V300 displays **Associated** for 2 seconds after undocking, to indicate that **Group Recording** is enabled.



Error code

When an error appears, the screen displays a number. If after you reboot the **Error Code** remains, contact technical support and give them the **Error Number**.

Transfer Station II, WiFi base, and USB base LEDs

The LEDs in the WiFi base brightness depends on the time of day. The display dims from 8 pm to 8 am.

Power LED indicators

Use Case	Transfer Station II	WiFi base	USB base
Powered on standby	Power LED green solid	Power LED green solid	Power LED green off
Camera/Battery docked, charging	Power LED green blinks until 100% charged	Power LED green blinks until 100% charged	Power LED green blinks until 100% charged
Camera/Battery docked, finished charging	Power LED green solid	Power LED green solid	Power LED green solid
Camera/Battery docked, charge error	Power LED red solid	Power LED red blinks	Power LED red blinks
Associate success	N/A	Power LED green blinks 3 times	N/A
Associate error	N/A	Power LED red blinks 3 times	N/A
Error	N/A	Power LED red blinks 1 second on, 1 sec off	Power LED red blinks
Base shutdown	N/A	Power LED green blinks until off	N/A
Base firmware upgrade	N/A	Power LED amber blinks 250 milliseconds (ms) on, 250 ms off	N/A
Base firmware upgrade Pending	N/A	Power LED amber blinks 500 ms on, 500 ms off	N/A
SPS firmware upgrade staged	N/A	Power LED amber blinks 1 sec on, 1 sec off	N/A
SPS firmware upgrade pending	N/A	Power LED amber off	N/A

Activity LED indicators

Use Case	Transfer Station II	WiFi base	USB base
Wireless connected, if no camera docked	N/A	Activity LED green WiFi LED blinks with WiFi Activity	N/A
Wireless disconnected	N/A	Activity LED green WiFi LED off	N/A
Camera docked	Activity LED amber solid	Activity LED green WiFi LED off	N/A
Backend server connected, if camera docked	Activity LED green solid	Activity LED amber solid Upload LED green solid	N/A
Upload in progress, if camera docked	Activity LED green blinks	Activity LED amber blinks Network upload activity on ethernet interface	N/A
Backend server disconnected or Error, if camera docked	Activity LED red	Activity LED off Upload LED off	N/A

1	Power
2	Networking

Transfer Station II front LED indicators

Use Case	Transfer Station II
Power good	Main Power LED green solid
Power fail	Main Power LED red solid
Backend server connected, transfer station link detected	LED amber green
Backend server not connected, transfer station link not detected	Link LED off
No MAC Address	Main Power LED red blinks

SmartControl

In this section...

Supported versions

SmartControl runs on any Android phone running Android 6 or higher.

SmartControl Overview

SmartControl is the companion smartphone app for the Motorola Solutions V300 Camera . It lets officers view evidence and tag videos on the phone.

The SmartControl app makes V300 functionality available on your smartphone:

- Review recorded events
- Categorize recorded events
- Add secondary tags
- Start and stop recorded events
- Adjust camera LEDs
- Enter and exit Covert Mode
- Set Officer Preferences
- Live stream video
- Start and Stop a recording
- Enter and exit Covert Mode
- Adjust the field of view

Important! *IP address 192.168.98.x is reserved for SmartControl.*

Your V300 Camera must be at version 2.0.0.12 or higher to work.

Note: *To ensure that all features work fully, ensure the firmware on your V300 Camera and the SmartControl application on your Android device are up to date with the most recent versions.*

Get the SmartControl app

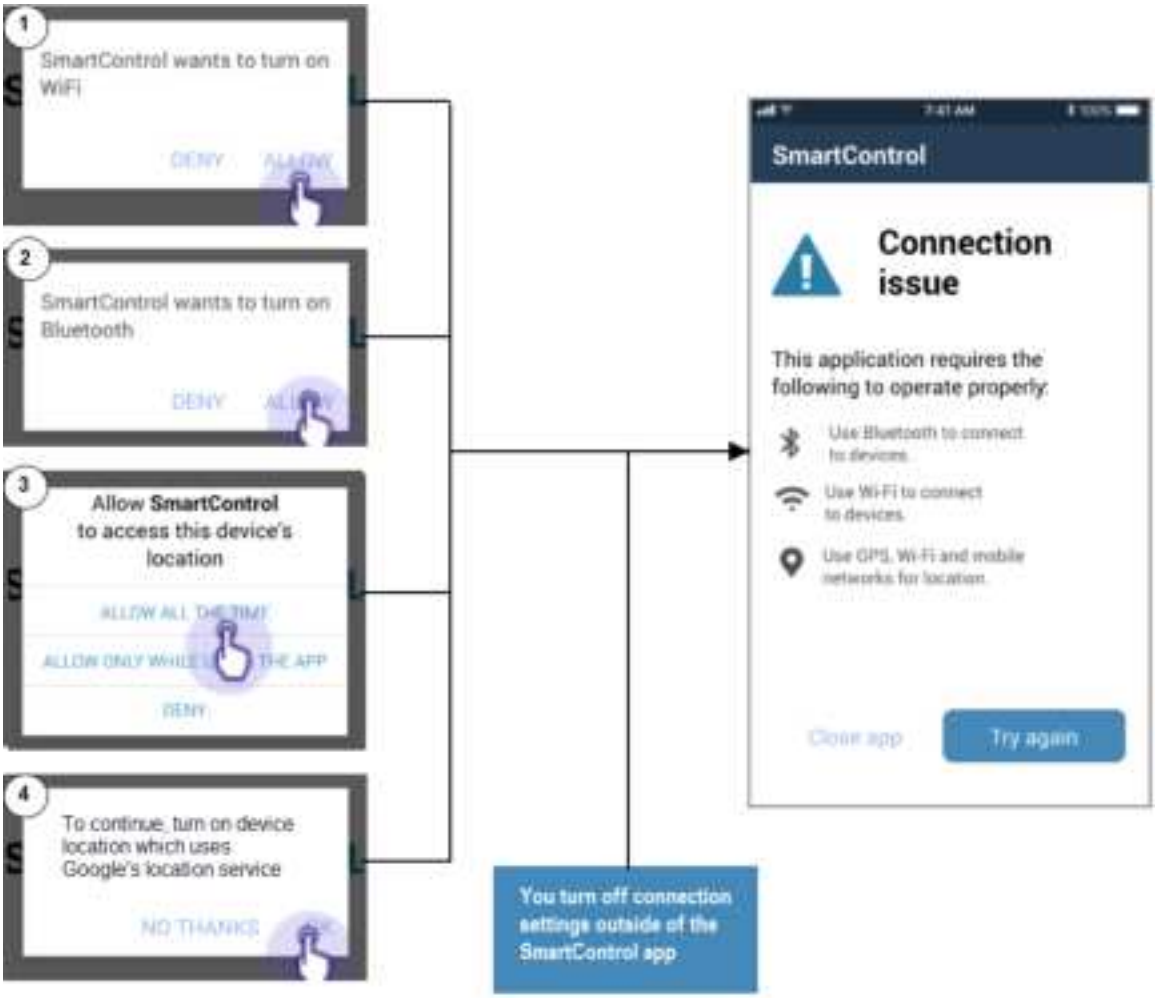
Go to the Google Play Store and search for **SmartControl**. The app icon appears for you to download.

Download the app and get started using SmartControl. The direct link to SmartControl is

https://play.google.com/store/apps/details?id=com.motorolasolutions.camera.smartcontrol

Enabling SmartControl

SmartControl requires Wi-Fi, Bluetooth, and GPS services to be turned on to operate properly. When you start the app you're asked to enable all three.



If you close the application or turn off connections outside of the app, SmartControl will not work. You can either select **Close app** or **Try again**.You can use one of these three methods to connect:

- Use **Try Again** to try and reconnect
- Close the application and enable the Wi-Fi, and GPS through Android directly then reconnect
- Close the application and relaunch it

Just closing the application and reopening will not reinstate the connections.

1 SmartControl wants to turn on—**ALLOW**

2 SmartControl wants to turn on Bluetooth—**ALLOW**

Allow SmartControl to access this device's location—**ALLOW**

3 If you decline the location access a second time, Try Again does not work. You have to reset location access outside the app in your phone.

4 To continue turn on device location which uses Google's location service—**OK**

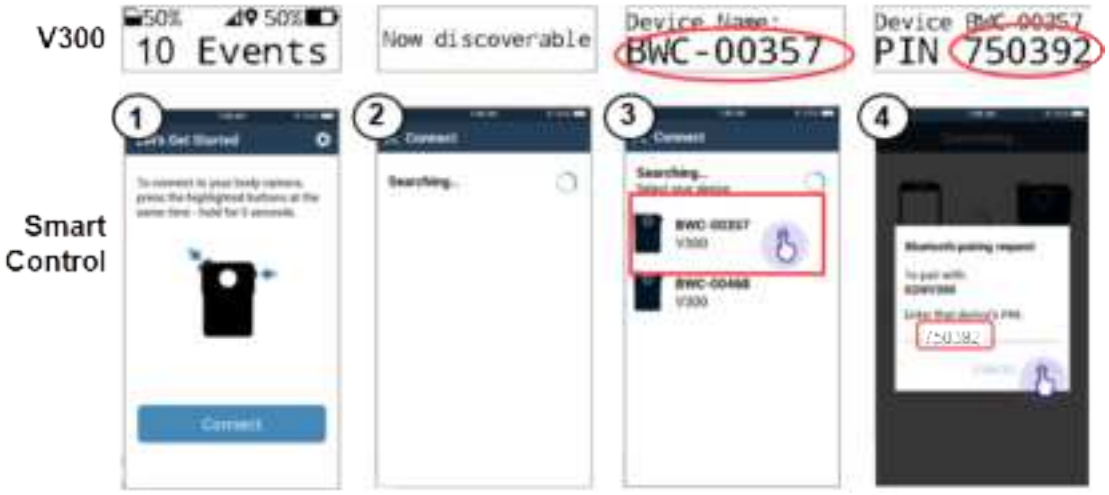
Connecting to SmartControl

You must check out your V300 Camera from Evidence Library to connect the camera to SmartControl, depending on your agency configuration.

Important! *SmartControl runs on any Android smartphone running Android 6 or higher.*

To activate:

- Press the **Function** (top) button and the **Display backlight** button on the camera at the same time and hold for 5 seconds



1 All previous device pairing information is cleared when you start the process. Any events in memory will still be on the camera.

2 SmartControl is searching for a camera to connect to. It only takes a few seconds to search for the connection. (Searching times out after 30 seconds. Try again if this happens.)

3 The app finds any close camera. Check the screen on the V300 UI for your camera name. Touch the area with the camera ID on the screen to select your camera.

4 Enter the Pin number shown on the V300 on the line provided for the Bluetooth pairing in SmartControl.

5,6 SmartControl searches and establishes the Bluetooth connection. When SmartControl finds the connection, the app automatically proceeds.

7 SmartControl searches and establishes the WiFi connection. (Depending on the phone and Android version, you may be asked if you want to connect to the WiFi hotspot.)

8 The home screen appears. Since this camera had 10 events in memory, the events display on the screen. If the camera doesn't connect or if there is an error, the app sends you back to number one (1) and you start over.

Caution: *The Samsung A10s running Android 10 and Sony Xperia L4 device running Android 9 may have trouble pairing with SmartControl. It does not recognize the ID number and responds as invalid pin. Try it again and it should work.*

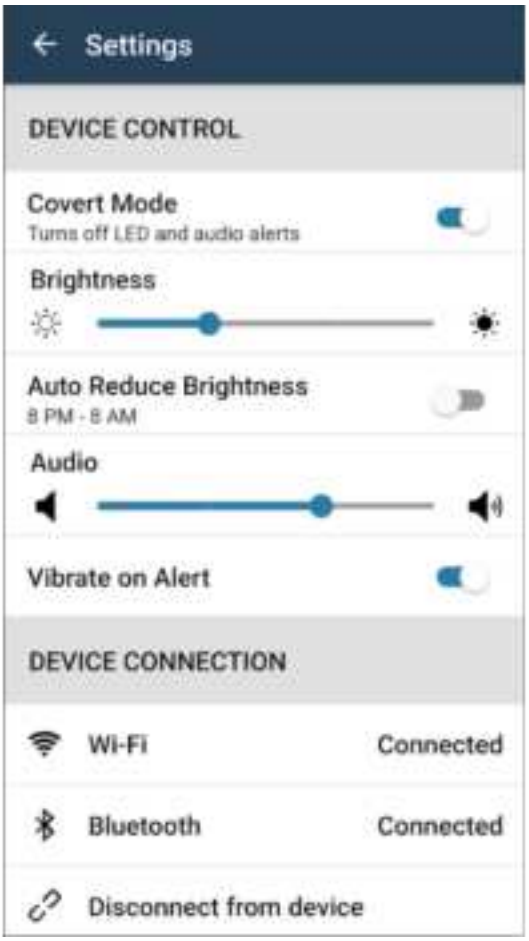
Settings

Settings lets you:

- Set Officer Preferences
  - Covert Mode
  - Brightness
  - Auto Reduce Brightness
  - Audio
  - Vibrate on Alert
- See the state of your device connections
- Disconnect from device (V300 Camera)

Scrollable after **Disconnect from Device**, (not shown):

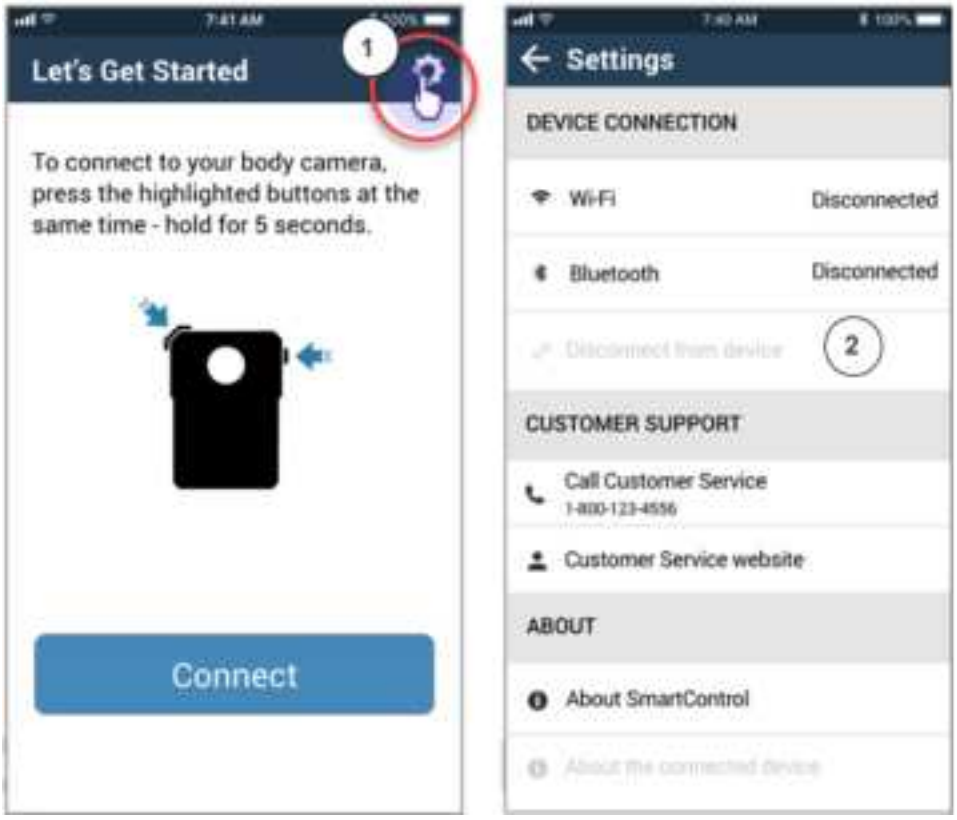
- Customer support phone number
- Customer support website link
- About SmartControl
- About Connected Device



Accessing settings when not connected

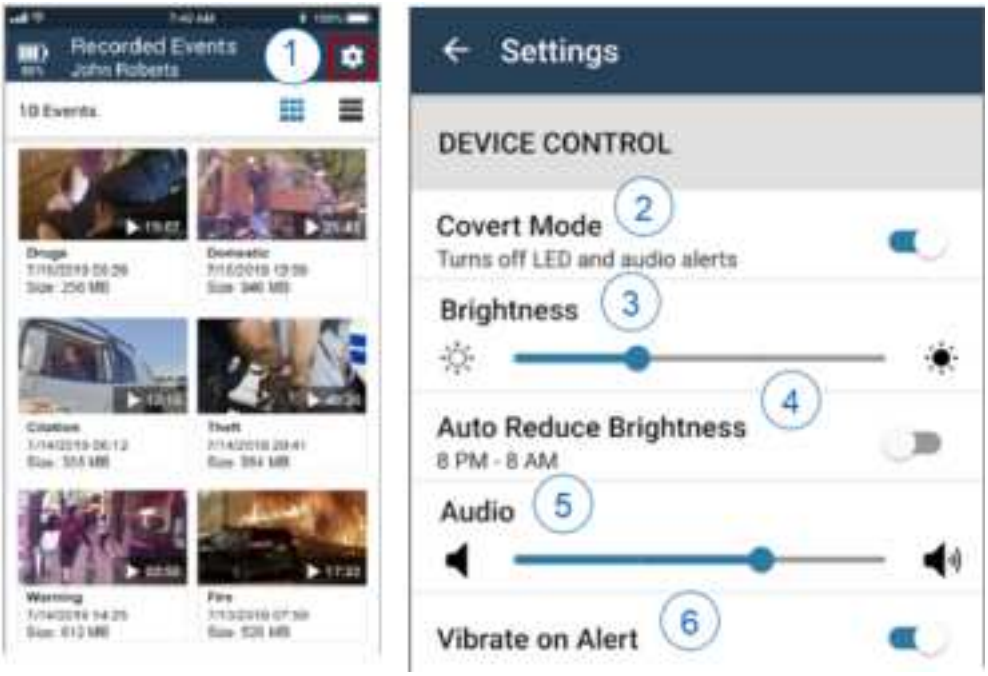
You can view the settings screen when you are not connected to the app. You can see that Wi-Fi and Bluetooth are disconnected. You can also see how to contact Customer support.

1. Tap the settings button at the top right of the app to access the settings screen.
2. Information about your application appears. The Wi-Fi and Bluetooth are disconnected and some settings are grayed out because you are not connected to the V300. The Customer support contact information is shown.



SmartControl Officer Preferences

Tap the Settings icon to access the SmartControl **Officer Preferences** in the **DEVICE CONTROL** screen.



1 **Settings icon**. Tap to bring up the settings.

2 Turn **Covert Mode** on or off

3 Set the **Brightness** of your screen

4 Sets Brightness to dim from 8 pm to 8 am, based on the time on your V300 Camera

5 Set the volume of your tones

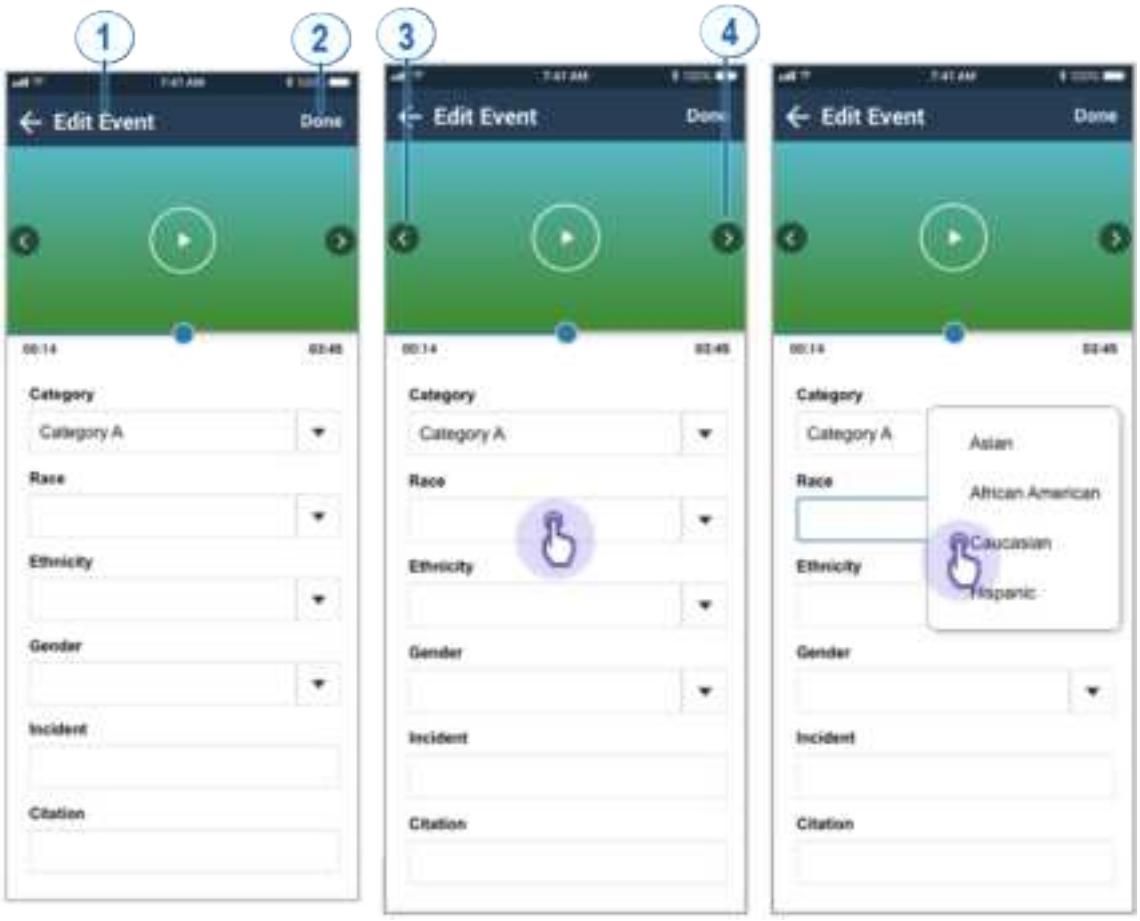
6 Turn **Vibrate on Alert** on or off

Categorizing an event

You can use the SmartControl app to categorize a recorded event on your smartphone. After you stop recording on the V300, you can categorize an event.

Category tagging is accessible from the recorded events screen.

You can categorize an event immediately after stopping a recording. You can also categorize an event by selecting an event from a recorded events screen.



1 Goes back to the recorded event screen

2 Done goes to the recorded event screen

3 If there is more than one event, the back arrow goes to the previous event on the screen. If there is only one event, this arrow doesn't go anywhere.

4 If there is more than one event, the forward arrow goes to the next event on the screen. If there is only one event, this arrow doesn't go anywhere.

For tagging after a recording is stopped, the **Recording complete** event-tagging screen appears automatically.

1 Select a category tag (set by your agency)

2 Select a value

3 The tag is synchronized with V300

4 Tag synchronization is successful

5 Tapping **Done** takes you back to the recorded events screen

Live Video Streaming

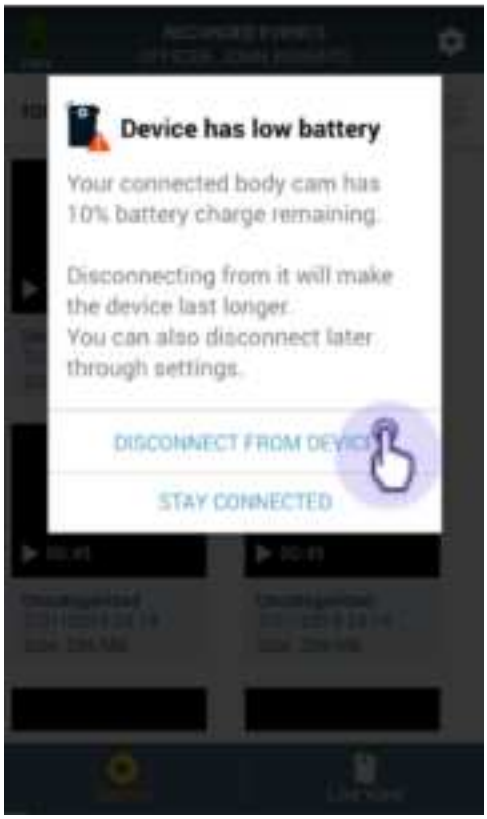
You can use the live view on the smartphone to:

1. View the live video stream from the V300 Camera and Start an event
2. Turn On or Off Covert Mode
3. View the live video stream from the V300 and Stop the event
4. Adjust the view on the camera. You can adjust 15° up and 20° down.

Low battery on V300 Camera

From anywhere in the SmartControl app, when the V300 battery reaches 10% or lower, the app interrupts with a warning. If you select **STAY CONNECTED**, the phone returns to the previous screen. If the V300 Camera reaches a certain level, it shuts down automatically. You can select **DISCONNECT FROM DEVICE** and insert a new battery into the camera. Then you go through the start up procedure again page 84.

Disconnecting from the camera makes the device last longer. You can also disconnect later through settings.



Starting a State Capture

You can request that your V300 Camera perform a state capture and save it to the V300 for use by Motorola Solutions technical services.

To start a state capture:

1 Tap **About Connected Device**
2 Tap **Perform state capture**
3 The **State capture initialized** message appears