860-00222-00 Rev A
April 2015

MicroVu HD™

Operation Guide

Compact HD Law Enforcement In-Car Video System

Table of Contents

Section - 1 Introduction

The MicroVu HD is an extremely compact law enforcement in-car digital video event recording system. MicroVu HD provides up to1080p High-Definition video recording and a powerful array of features to capture video and audio evidence while also collecting useful information such as a date/time stamp, location, and more.

The MicroVu HD is designed for incredibly easy and unobtrusive use, from its initial installation to unprecedented automatic login & recording capabilities.

This Operation Guide is designed to get you up and running quickly. For integration within the VuVault™ back office software, please refer to Section 2. For integration with Digital Ally's VuLink™ in-car wireless link, please consult the "*VuLink Operation and Installation Guide."*

MicroVu HD™ Features

- Entire system is only 4" long, 3" wide and 1" high.
- RFID Login option to instantly log in.
- One-button Record Start/Mark/Record Stop.
- Patented VuLink capability: Flip on your lights, siren, etc. to automatically trigger recordings on the MicroVu HD & simultaneously start a FirstVu HD Officer-worn video system.
- Internal G-Force sensor to automatically trigger recordings & capture data in case of a crash or impact.
- Recordings can be started with the 2.4GHz DWM-800 wireless microphone, VuVault GO mobile app or a FirstVu HD body cam using the VuLink wireless in-car video link from up to 200 feet away.
- VuVault GO mobile App compatibility: Add incident notes & tag events, play video recordings, display a live view, monitor remaining data storage space, and more.
- High Quality 1080p or 720p Video – H.264 codec - up to 30 frames per second.
- Enhanced low-light recording capability plus Wide Dynamic Range (WDR) video capture, which provides dual –exposure (one dark, one light) blended together to retain detail in both light and dark segments.
- Encoded videos may easily be viewed on standard PC video player software or VuVault GO enabled mobile device.
- Saves Metadata along with Video.
- Up to 60 Seconds Pre-Event Record – Capture events before pressing record.
- Instant Record ON while in Standby Mode.
- User can insert a 'Mark' during a recording which records to Metadata.
- Covert Mode Button on the unit turns off all LED indicators.
- Secure 32GB of event record memory.
- Software upgradeable by microSD Card or via PC-USB cable connection.
- Integrated GPS with back-office interactive mapping.
- Wireless data transfer.
- Live streaming capability.

Software Updates

Log on to www.digitalallyinc.com/tech-support.php 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.

Standard Parts List

Part Number 001-00720-00

Part Number		Description
050-10179-00		MicroVu HD Main Recorder w/Mounting Kit
002-05095-00		DWM-800 System, Includes Wireless Microphone, Charging Cradle, Mounting Bracket, and Lapel Microphone.
Call Digital Ally to select options		FirstVu HD Body Camera System 11 or 48 inch Camera Cable With Audio Mute Switch or Audio Always On (No Mute Switch)
001-0950-00		VuLink In-Car Wireless Video Link System for FirstVu HD Body Camera System
001-0951-00		RFID Programming Unit with USB Cable for PC
002-05120-00		RFID Card
006-0030		Visor Mount for MicroVu HD
363-00073-00		microSD Card, 32GB
002-05161-00		Secure Panel Lock Key
008-0100		Cable, USB 2.0 Type A to Mini-B, 3.3 ft.
002-05149-00		Safety Lanyard Kit, 9”

Optional Accessories List

Part Number		Description
002-0028-00		SD Card Reader with USB Cable for PC
004-09058-00		Back Seat Microphone for DWM-800, 20ft. 2.5mm plug

Section - 2 Device Configuration – VuVault

The MicroVU HD contains a default configuration and can be used immediately. For full functionality it must be reconfigured by activating the device using Digital Ally's ***VuVault***™ back-office software.

Default Configuration

If the unit has never been activated, it will use the following default settings:

- Central Standard Time (UTC-6)
- Date format: Month/Day/Year
- Time format:12-hour
- Daylight Saving enabled
- 1920x1080p record size/high record quality
- 30 frames per second
- Pre-Event disabled
- Pre-Event Audio disabled

Using VuVault to Activate your MicroVu HD

NOTE *You must be running VuVault Version 4.7 (minimum) to configure and activate a MicroVu HD device.*

VuVault is used to manage MicroVu HD settings as well as activate your device for use within the system.

Before you can configure your MicroVu HD for use within VuVault, the serial number must be added into the system. Select ***Admin>Devices>Advanced>Add Device*** to add your device into VuVault.

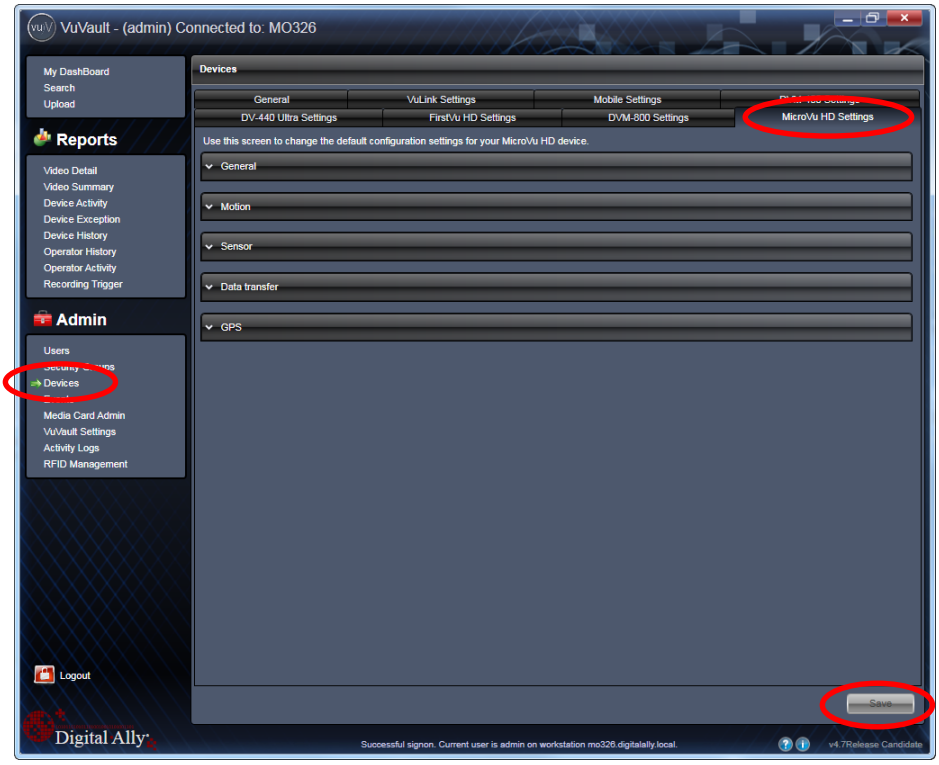
Enter your device serial number and assign it a name within the system. When done, select ***Close***, then ***Save***.

For more information consult the *VuVault Administrator's Guide "Adding Devices"* section.

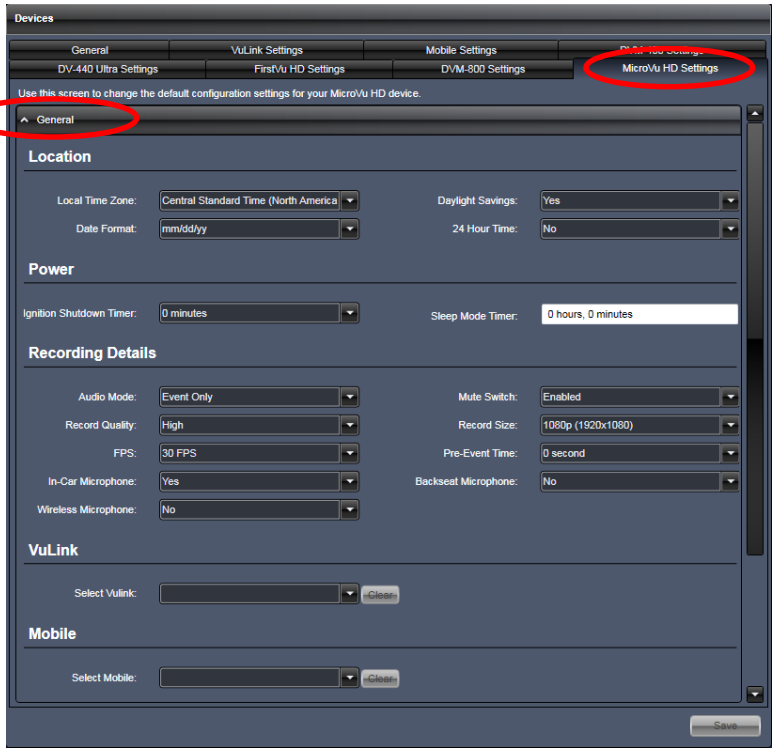
A configuration field will be available in the ***Admin>Devices*** tab within VuVault once a valid MicroVu HD serial number has been added into the system. These global settings will define how all users will interface with the MicroVu HD.

To create a unique configuration for a specific MicroVu HD device, select ***Admin>Devices>Advanced,*** *find the specific MicroVu HD serial number, and click* ***Settings.*** *Choices made in this area will apply to this device only.*

Click on each sub-heading to reveal the available configuration options. When done, press ***Save***.



MicroVu HD Settings - General



Location

Below are the configuration items for localization which are provided to address Date/Time settings and display formats.

Local Time Zone

The local time zone is used to adjust the device when synchronizing to the Greenwich Mean Time. During device configuration, the local time from the PC real time clock will be used, and Central Standard Time is set by default.

The date and time is set by the factory prior to shipment. However, you must also enter the correct UTC offset when configuring the device so that the time zone can be set properly. For example, USA Central Standard Time =UTC -6. If using VuVault™, the date & time are automatically synced to your computer during activation.

PST = Pacific Standard Time (UTC - 8 hours)
MST = Mountain Standard Time (UTC - 7 hours)
CST = Central Standard Time (UTC - 6 hours)
EST = Eastern Standard Time (UTC - 5 hours)
AST = Atlantic Standard Time (UTC - 4 hours)
ALST = Alaskan Standard Time (UTC - 9 hours)
HST = Hawaiian Standard Time (UTC - 10 hours)

Daylight Saving

When set to *Yes*, Daylight Saving setting time will be automatically adjusted for the configured Local Time Zone. If this is disabled, time will not be adjusted for Daylight Saving.

*Settings: No, **Yes** [default]*

Date Format

The date format displayed on the event recordings is selected through this setting.

*Settings: **mm/dd/yy** [default]; yy/mm/dd; dd/mm/yy*

24 Hour Time

This time format allows the device to be configured in a 12-hour format or a 24-hour format.

*Settings: **No** [default], Yes*

Power

Power to the MicroVu HD is controlled through your vehicle's ignition. There are no manual controls for powering the unit on and off. When ignition is switched on, the boot-up process will begin. The driver-facing status indicators will flash in sequence until boot-up is complete. When the Blue LED is lit steadily the unit is in Standby and is ready for use.

The Power operation is configurable and specifies how the MicroVu HD will operate when the vehicle ignition is turned to the ON or OFF positions. Two parameters control the power operation in order as follows:

Ignition Shutdown Timer

The Ignition Shutdown Timer specifies the amount of time the MicroVu HD 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 the system will follow the operation for the Sleep Mode Timer configuration.
2. With Ignition Shutdown Timer enabled, and the system is not recording, all LED Indicators will turn off, but MicroVu HD will remain fully powered until the Timer expires. When the timer expires, the system will then follow the operation for the Sleep Mode Timer (if enabled).
3. During an active record, the unit 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 and operate according to the Sleep Mode Timer configuration.
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.

Sleep Mode Timer

When the vehicle ignition goes from ON to OFF the MicroVu HD will first follow the operation for *Ignition Shutdown Timer* and then the operation for *Sleep Mode Timer* configuration. The *Sleep Mode Timer* configuration specifies the length of time the system will remain in a reduced power consumption mode before completely powering off.

During Sleep Mode:

1. High power devices are put to sleep or shut down.
2. All indicators will be turned off.
3. No Event Record Start Trigger is available when the system is in Sleep Mode.
4. The MicroVu HD will remain in Sleep Mode until the timer expires, then it will completely power off.
5. If the vehicle ignition switches to the ON position before the Sleep Mode Timer expires, the system will wake up to the full power state and be ready to record within a few seconds.

The MicroVu HD will draw a maximum of 291mA of current during Sleep Mode. Typically, a new or strong vehicle battery will provide enough current to power the MicroVu HD in Sleep Mode for 5 days without discharging the battery. The vehicle's battery current rating, battery age, and other equipment that remains powered on when the vehicle ignition is off will affect the maximum consecutive days the MicroVu HD should remain in Sleep Mode. The following table can be used as a general guideline for determining the Sleep Mode setting; actual results may vary:

Table 2-4: *Estimated number of days a vehicle can remain in Sleep Mode before draining the vehicle battery.*

Battery C20 Rating *(Ah)*	No Additional or Minimal Load *(days)*	Additional Load *(days)*
45	5 - 6	2 - 4
80	9	7-8
100 and greater	11	11

Complete Vehicle Power Loss

During an event record, if vehicle power is completely lost to the MicroVu HD system, the MicroVu HD will switch to the internal battery to end the event record to prevent data corruption, and then power off after 60 seconds.

If the MicroVu HD is not recording when vehicle power is completely lost, the MicroVu HD automatically make a 60 second recording using the internal backup battery, then power down completely.

Recording Details

Audio Mode

The Audio Mode determines how audio will be recorded to your device.

- ***Disabled:*** No audio will be recorded.
- ***Enabled (w/o Pre-Event):*** Audio is recorded during the event but not recorded during pre-event.
- ***Enabled:*** Audio is recorded during the recorded event and during the configured *pre-event time*.

*Settings: Disabled, E**nabled (w/o Pre-Event)** [default], Enabled*

Mute Switch

Enables use of the Mute Switch on the device. *This setting is not available if Audio Mode is set to Disabled.*

*Settings: **Enabled** [default], Disabled*

Record Quality

The Record Quality parameter allows the video compression bit rate to be adjusted. Digital video is compressed by taking out data that remains constant from each frame, and only storing data that actually changes. This allows videos with still backgrounds to be much smaller than they would be if the background had to be present in every single frame.

The *bit rate* is the number of bits that can be used in one second of video. The higher the *record quality*, the higher the bit rate and the size of the event files. The default setting is "*high"* for a good mix between video qualities and upload time, but can be lowered or raised to adjust quality and storage space.

Table 2-5: *Video Quality Guide (Mbps = Megabits per Second)*

Record Size	Record Quality			
	Standard	Medium	High	Super High
1080p (1920x1080)	2 Mbps	4 Mbps	8 Mbps	12 Mbps
720p (1280x720)	1 Mbps	2 Mbps	4 Mbps	8 Mbps
VGA (640x480)	0.5 Mbps	1 Mbps	2 Mbps	4 Mbps

Record Size

Allows you to select the video resolution for your MicroVu HD video recordings. The higher the setting, the better the video quality, and the larger the size of the event files.

*Settings: VGA (640x480), 720p (1280x720), **1080p (1920x1080)** [default]*

FPS (Frames Per Second)

This parameter sets the number of frames per second the MicroVu HD will record. The higher the setting, the better the video quality, and the larger the size of the event files.

*Settings: 5, 10, 15, **30fps** [default]*

Pre-Event Time

The Pre-Event Time option allows you to set the amount of time for the pre-event buffer. The MicroVu HD will buffer the last 0-60 seconds of audio and

video so it can be recorded during a record event. If set for 0 seconds, pre-event function will be disabled.
*Settings: **0,** 6, 12, 18, 24, 30, 60 **se**conds [default = 0 seconds]*

In-Car Microphone

Enables the MicroVu HD to record from the In-Car Microphone.
*Settings: **Yes** [default], No*

Backseat Microphone

Enables the MicroVu HD to record from the Backseat Microphone.
*Settings: Yes, **No** [default]*

Wireless Microphone

Enables the MicroVu HD to record from the Wireless Microphone.
*Settings: Yes, **No** [default]*

VuLink

Select VuLink

Assign a VuLink™ device serial number for use with your MicroVu HD. A VuLink™ wireless link is required (*see the "VuLink Operation and Installation Guide", or call Digital Ally Inc. Technical Support for more information).*

VuVault GO

Select VuVault GO

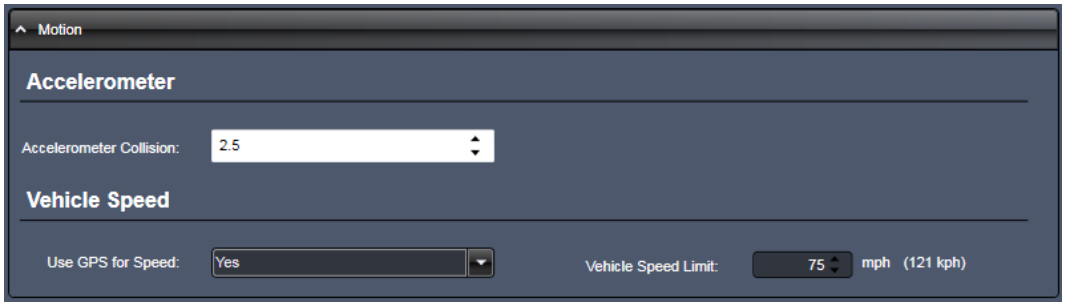
Assign a *VuVault GO* SSID for use with your MicroVu HD from the list of VuVault GO devices as configured in VuVault in the *VuVault GO* Settings tab.

Motion

Accelerometer

Accelerometer Collision

The MicroVu HD has an accelerometer built-in which can be used to trigger an Event Record when the set G-Force levels indicate that a collision has occurred. Use this setting to configure the threshold for this trigger. This trigger can be disabled by setting the Accelerometer Collision level to zero.



Vehicle Speed

Use GPS for Speed

The MicroVu HD will detect vehicle speed using the built-in GPS system.
*Settings: **Yes** [default], No*

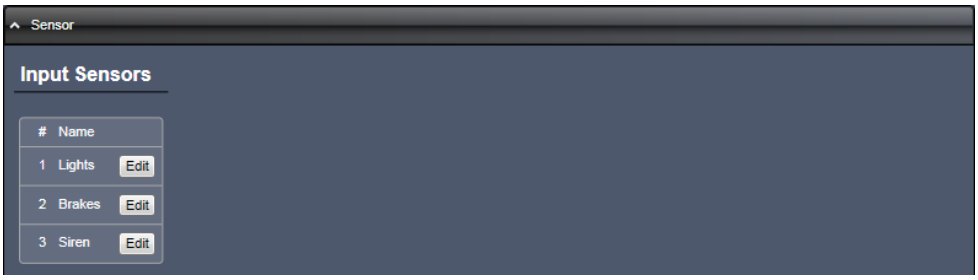
Vehicle Speed Limit

This parameter sets the threshold for excessive speed. When the Vehicle Speed Trigger Source is enabled and the speed exceeds the value of this parameter, an Event Record will be triggered.
*Settings: 1-199 mph [default = **75**]*

Sensors

Input Sensors

The MicroVu HD main cable allows external connection to the vehicle triggers. The input sensors can be connected to various devices to trigger an event recording, or to only register the device activity in the metadata.
Use the Edit button to name the sensor to match the wiring configuration and to select whether the sensor will be used as an *Event Trigger* or *Sensor Only*.

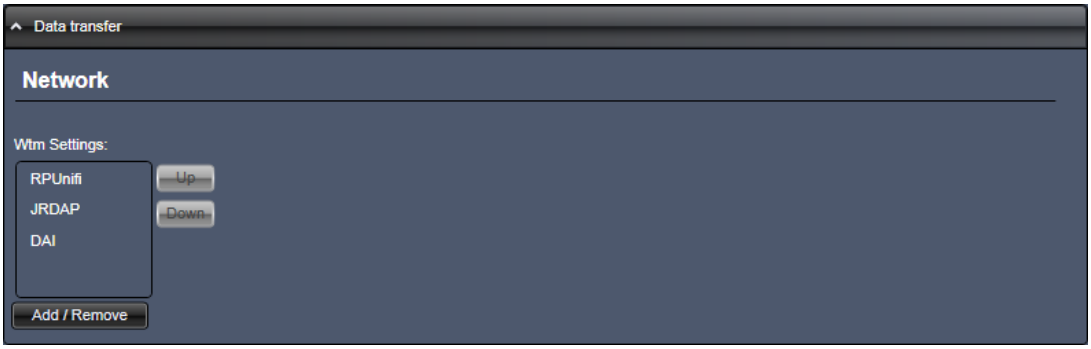


Data Transfer

Network

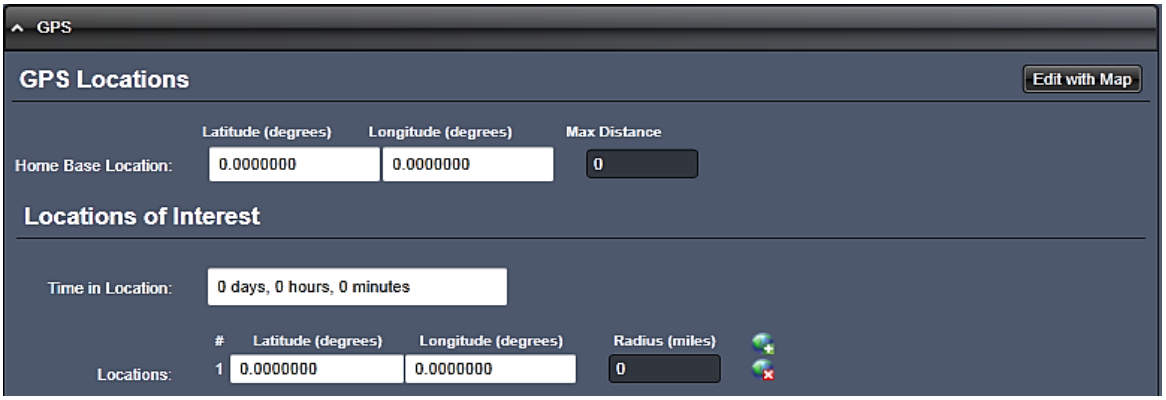
Wtm Settings

Use this parameter to select the Wireless Access Point(s) that your MicroVu HD will use to communicate with the network. The Wireless Access Points must be configured in the *VuVault Settings / Wtm Server* page. While powered on and in *Standby Mode*, the MicroVu HD will attempt to find a WAP and wirelessly transfer data every 2 minutes.

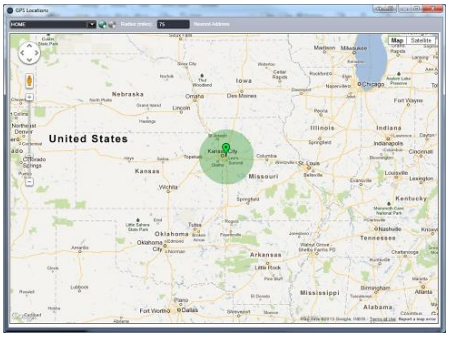


GPS

The GPS information displays the route traveled during the course of a recording on an interactive map. It includes path traveled, current position of the vehicle during playback, location and details of the starting and stopping points and any marks in the video. It can also display the heading and any unauthorized zones that are setup. Below are configuration items which can be enabled for a GPS location to trigger an Event Record.



GPS Locations



If a Home Base Location has been configured, the MicroVu HD will begin recording when the defined distance from home base has been exceeded. Once the duration of the event ends, subsequent record events will be triggered as long as the vehicle remains outside the home base radius. The coordinates can be manually entered, or use the "*Edit with Map*" button to use Google Maps to easily create the home base radius.

Latitude

The vehicle home base latitude coordinate in an integer decimal format (i.e.; 38.89171).

Longitude

The vehicle home base longitude coordinate in an integer decimal format (i.e.; -94.670956).

Max Distance

This is the distance in miles that the vehicle can travel from the home base. If the vehicle travels beyond the specified distance, an event record will be triggered. A value of zero (0) disables this event trigger.

Locations of Interest

Locations of interest are geographical areas identified by latitude, longitude and a radius using the GPS antenna. These areas are generally considered restricted or off limits. If the vehicle enters, or remains in a location of interest for a configurable amount of time, the MicroVu HD will automatically start a recorded event. Up to 19 different Locations of Interest can be configured. Below are the configurable items:

- **Time in Location**
  Enter the allowable time in this location before an event recording is triggered (days, hours and minutes). The minimum time in a location of interest before an event is triggered is 1 minute. To disable all unauthorized zones set the time to 0 days, 0 minutes, and 0 seconds.
- **Latitude**

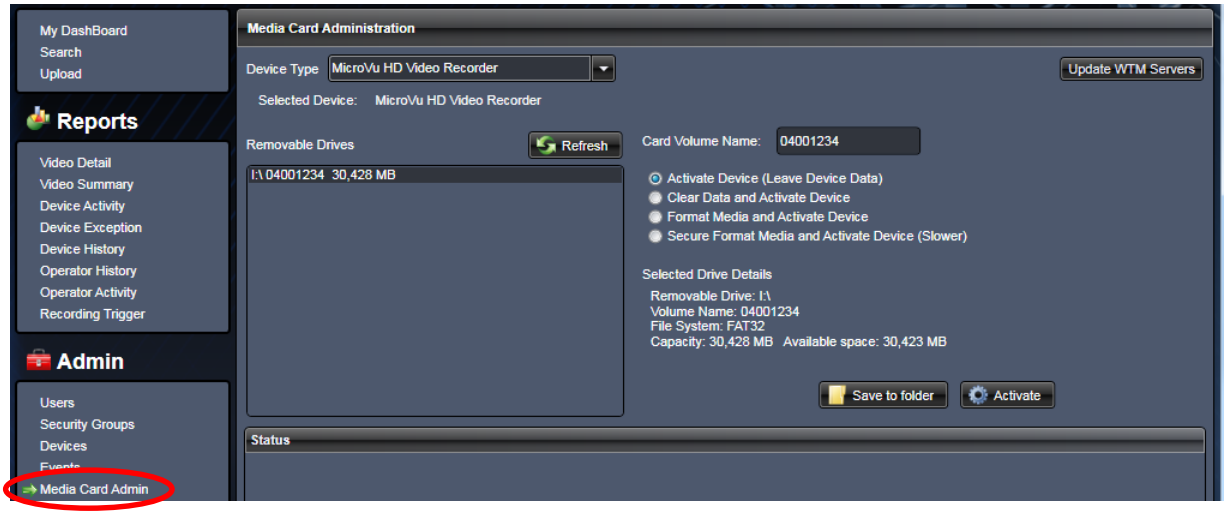
Enter the location(s) latitude in an integer decimal format (i.e.; 38.89171). To disable a location, the latitude, longitude, and radius parameters must all be zero.

- **Longitude**
  Enter the location(s) longitude in an integer decimal format (i.e.; -94.670956). To disable a location, the latitude, longitude, and radius parameters must all be zero.
- **Radius (miles)**
  Enter the radius of the unauthorized location in miles. To disable an unauthorized location, the latitude, longitude, and radius parameters must all be zero.

Once the desired settings have been entered, click Save and proceed below to activate your device.

Activating your MicroVu HD within VuVault

The *Media Card Administration* function is used to erase, format, and activate the microSD Card to be ready for use with VuVault and the MicroVu HD. During activation, the file “deviceconfig” will be written to the SD Card. This file contains all of the VuVault configuration data for the MicroVu HD.
The MicroVu HD can alternatively be activated by connecting to a VuVault computer via the USB port in the access panel of the unit.



If activating via USB cable, make sure the MicroVu HD is powered on and in Standby mode. If you are using the SD Card method, power OFF your MicroVu HD before removing the card from the unit.

1. Select *Media Card Admin* from the Admin navigation bar.

2. Select the correct *Device Type* from the available options. You must select “MicroVu HD Video Recorder”.

3. Click the Refresh button to detect the microSD Card connected to a card reader, or the MicroVu HD via USB from the available removable drives.

4. Select the drive letter assigned to the MicroVu HD or SD Card.

5. Note the *Card Volume Name* field. If there is a current volume name, it will show up automatically. If not, it will default to the serial number of the MicroVu HD. This can be changed according to customer preference to whatever is deemed most appropriate.

6. Choose from one of four options to activate the device:

   - **Activate Device (Leave Data Intact)** – *this option activates the MicroVu HD by writing the "deviceconfig" file to the microSD Card. No existing video events located on the microSD Card are altered.*

   - **Clear Data and Activate Device** – *this option erases any data on the microSD Card and activates it for use with the MicroVu HD.*

   - **Format Media and Activate Device** – *this option erases any data on the microSD Card, formats the card (quick format), and activates it for use with the MicroVu HD.*

   - **Secure Format Media and Activate Device (Slower)** – *this option overwrites data on the microSD Card with zeroes for a secure erase, formats the card, and activates it for use with the MicroVu HD.*

Always ensure that all important data has been uploaded to the system before deleting it from the MicroVu HD.

7. Click the **Activate** button. The *Status* field will indicate when the process has completed.
   VuVault will create a file named "deviceconfig" and place into the root folder of the MicroVu HD (or *microSD Card*).

8. Your MicroVu HD will reboot when the USB cable is removed from the unit. If activating by *microSD Card*, the new configuration will load when the MicroVu HD has finished rebooting.

The MicroVu HD is now activated and ready for use. For more information consult the VuVault Administrator's Guide *Media Card Administration* section.

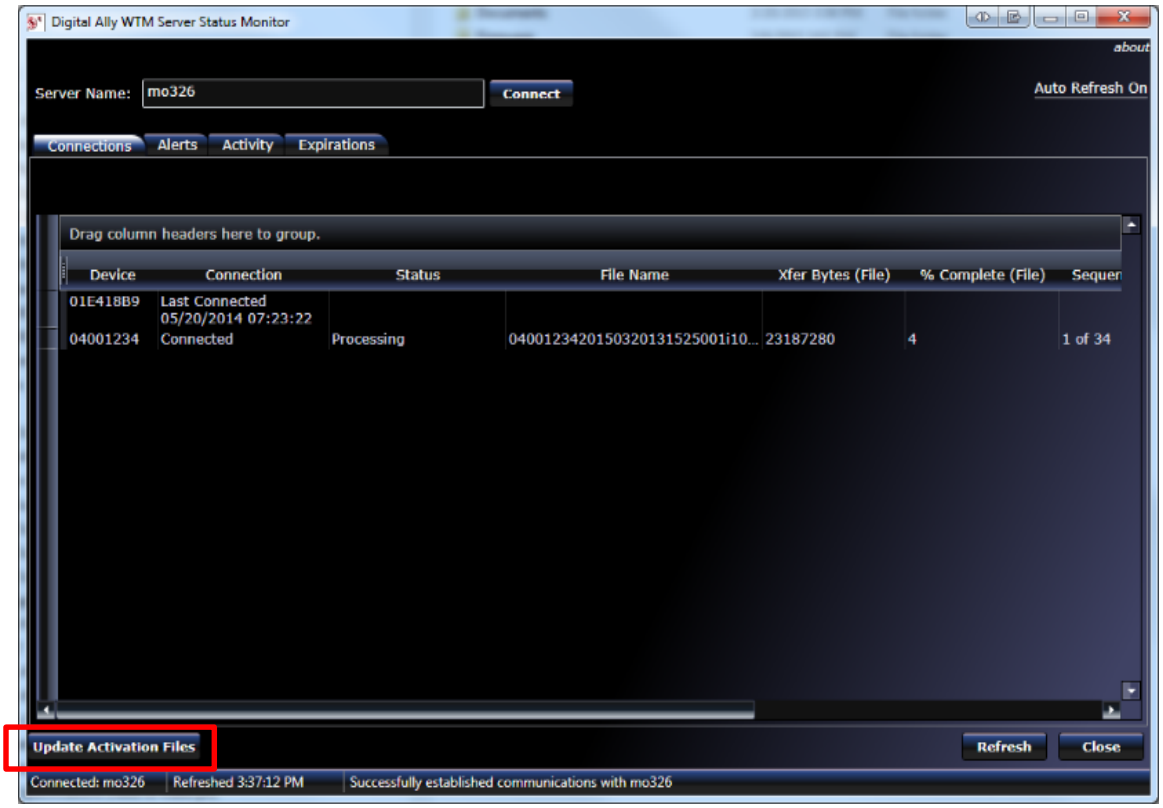
Updating the Configuration using Wifi

To be able to wirelessly update the configuration, your MicroVu HD must be configured for wireless file transfer operation and have already successfully uploaded videos to the VuVault server. Consult the VuVault Wireless Server Setup Guide for more information.

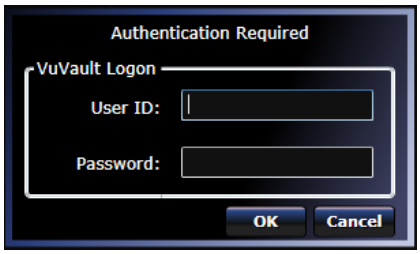
1. After making your configuration selections in VuVault, click 

.

2. Open the Digital Ally WTM Server Status Monitor software *(Start Menu > Programs > Digital Ally > WTM Status Monitor*).
3. Click the Update Activation Files button.



4. Enter the VuVault User ID and Password, then click OK.



5. The ‘deviceconfig’ file will be automatically extracted from VuVault and wirelessly transferred to the MicroVu HD the next time it connects to the Wireless Access Point. The MicroVu HD will first upload any existing videos, then transfer the configuration.
6. The new configuration will take effect almost immediately after the file is transferred and the Wifi session ends.

Section - 3 Operation

MicroVu HD Features

1	Audio Mute
2	Covert Button
3	Record Start / Mark / Record Stop
4	Status Indicator LED's
5	Camera Lens
6	USB / microSD Card Access Panel
7	Secure Panel Lock

System Status Indicator Operation Chart

	Red	Blue	Green
Powering 'ON'	Sequential flash		

Standby (Ready to Record)		**ON**	
Audio Recording Enabled (Event or Pre-event)			**ON**
RFID Log In Successful	**Fast Sequential Flash Ending with 3 GREEN Flashes**		
RFID Log Out Successful	**Fast Sequential Flash Ending with 3 BLUE Flashes**		
RFID Warning (Card Not Programmed)	**Fast Sequential Flash Ending with 3 RED Flashes**		
Covert Mode	**All Indicators Off**		
Recording in Progress	**ON**	**ON**	**ON**
WiFi Communication in Progress	**Sequential flash**		
Acknowledgement		**Fast Double Flash**	
Error	**Fast Flash in Unison**		
Memory Alerts			
30 Minutes or less remaining		**Continuous Slow Flash**	
Memory Full		**Continuous Fast Flash**	

User Login with RFID Card

Logging In

Users who have been assigned a Username in VuVault and who have a configured Digital Ally RFID Card can log in to the MicroVu HD by simply touching the face of the card briefly to the area beneath the driver-facing LED indicators. The MicroVu HD will confirm the login by rapidly flashing all 3 LEDs in sequence, ending with 3 Green flashes.

Logging Out

The User will remain logged in to the MicroVu HD until the same user logs out by swiping their card again. The MicroVu HD will confirm the logout by rapidly flashing all 3 LEDs in sequence, ending with 3 Blue flashes.
The user will be automatically Logged Out when the vehicle ignition is turned off.

Error when Logging In

If a Login attempt is made using a RFID Card that has not been properly programmed for use with the MicroVu HD, the LEDs will rapidly flash in sequence and end with 3 Red flashes.

Video Recording

Start a Manual Recording

Once the MicroVu HD is powered on and in Standby Mode, press and release the *Record Button* at any time. The Red LED status indicators on the front and back MicroVu HD will be lit continuously during the recording. If Pre-Event has been enabled through the device configuration, the unit will automatically include up to 60 seconds of video and audio prior to the event record trigger.

Stop Recording

Press and hold the *Record Button* for a minimum of 1 second to stop an active recording.

Memory Alert

The Blue status indicator will begin flashing slowly when the memory only has about 30 minutes of recording time remaining. If the memory is completely full, the Blue LED will flash rapidly.

Marking Events

Once a recording has been initiated, markers can be placed in the recording to indicate when important events take place. This is done by momentarily pressing the Record button, being careful to not hold the button long enough to stop the recording. Additional marks can be placed at any time during the recording.

Audio Recording

The MicroVU HD contains a built-in microphone. Audio can be muted or activated by changing the position of the mute switch. Audio is active when the switch is in the green position Green is showing). Audio is muted when the switch is in the opposite position. The audio mode must also be enabled within the device configuration. The Mute Switch can be disabled by the administrator in the MicroVu HD configutation settings.

Section - 4 Uploading Files

Uploading Files using VuVault

Video Upload Option 1: Wi-Fi

A properly configured MicroVu HD provides automated file transfer via 802.11n through your wireless access point and network. After successfully uploading recorded events, the MicroVu

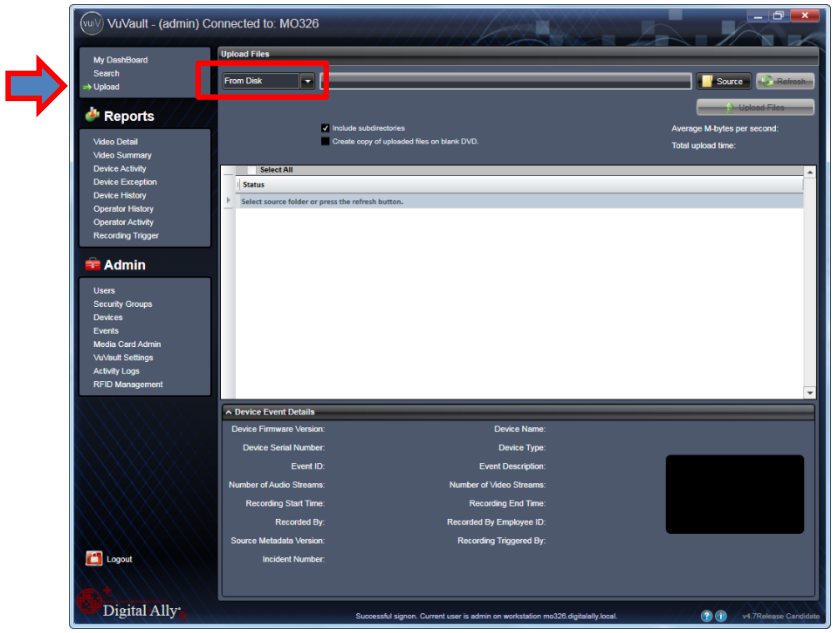
HD will automatically delete the files from its memory. The driver-facing LED indicators will flash in sequence while the MicroVu HD is actively transferring video files to your computer.

NOTE *A VuVault Wireless Server must be configured to use the wireless transfer feature (see Method A: Wireless Server Installation in the "VuVault Wireless Server Setup Guide" for setup instructions).*

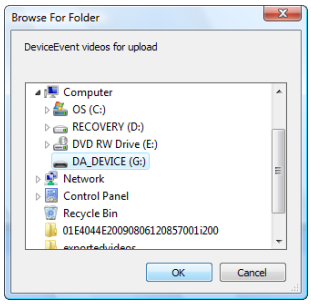
Video Upload Option 2: USB Port method

To upload video files from the MicroVu HD, plug the supplied USB cable into the VuVault computers USB port and insert the other end of the cable into the MicroVu HD USB port. Make sure your device is powered on.

1. Select *Upload* from the Main navigation bar and select *From Disk.*

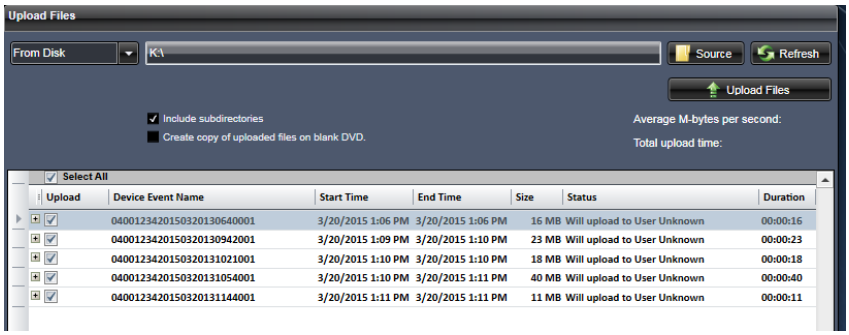


2. Click the **Source** button. A dialogue box will appear allowing you to select the location of your MicroVu HD.



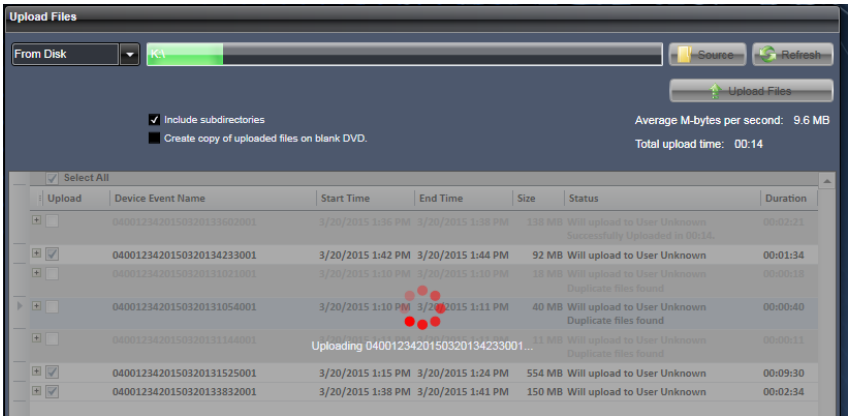
   The system will verify the files to be uploaded. If event files are being uploaded from a device that is not recognized by the system, the user will be prompted to add them with the built-in *Add Device Wizard* by clicking on ***Define Device*** in the lower right-hand corner of the Device Event Details pane. Please refer to the VuVault User's Guide *Add Device Wizard* section for further details.

3. Once the files have been verified, the system will automatically list and select all of the files for upload. If you don't wish to upload all available records, uncheck the ***Select All*** checkbox and then check the box next to each record you want to upload. The default *File Server* and *Share Location* are displayed. If additional file servers have been defined, select the desired destination using the dropdown menu. Click the ***Upload Files*** button to begin uploading data to the system.



If desired, the selected files can also be backed up to a DVD during the upload process. VuVault supports disc spanning, so if the total size of the files in the source location exceeds the space available on a single disc, the user will be prompted to insert additional discs until all of the files have been copied.

4. A progress bar will move from left to right, and details of the upload process will be displayed in the window.



5. After the upload process finishes, the uploaded files will be available for viewing in the *My Dashboard*, and *Search* screens. For more information, consult the *VuVault User's Guide.*

Video Upload Option 3: microSD Card

The microSD Card can be removed from the MicroVu HD and inserted into a memory card adapter. When the MicroVu HD is powered off or in standby, remove the microSD Card and replace it with a new microSD Card, or upload the event files from the original microSD Card into VuVault and re-install the card when finished.

VuVault Upload procedure for the microSD Card is the same as Option 2: USB Port Method above, but in this case you must select the microSD Card as the Source.

NOTE *Do not remove the microSD Card while the MicroVu HD is recording. This will result in corrupted, unusable video files. Please consult the VuVault User's Guide for upload instructions. If the MicroVu HD is powered on, All 3 LED's will flash rapidly when the microSD Card is removed.*

Uploading Files directly to a Computer using a USB Cable

Using the supplied USB cable, connect your MicroVu HD to a computer using the USB port behind the access panel. Turn the vehicle ignition on to power up the unit. After the boot-up process has completed the MicroVu HD will appear on the computer as a removable storage drive. Double click on the drive and the video file folders will be listed. You may then drag and drop the files to your PC or open a selected folder to play back the .avi files using Windows Media Player.

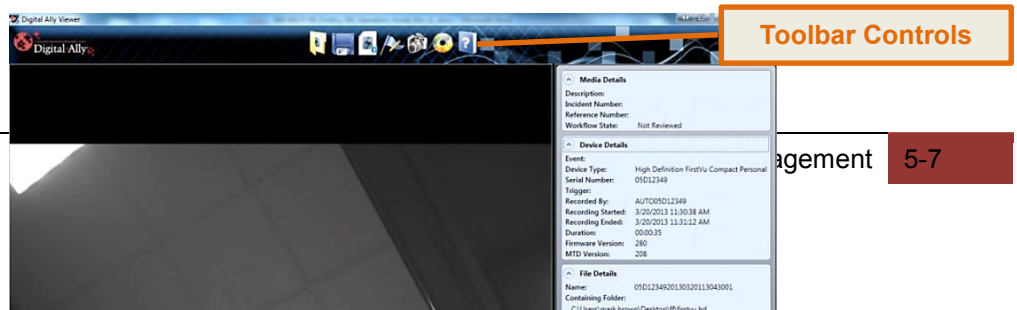
Section - 5 Video Playback and Management

Using VuVault

VuVault is Digital Ally's robust back-office video management solution. The VuVault media player can be opened by double-clicking on a video entry in *My Dashboard* or *Search* screens, or by selecting *Play* from the right-click menu. For more information about using the VuVault player, please consult the *VuVault User's Guide.*

Using the Digital Ally Viewer

The *Digital Ally Viewer* is a user-friendly software package to allow basic playback of video, audio, and metadata files, as well as many advanced features. The Digital Ally Viewer installer is located on your product DVD. Once installed, open the program by double clicking on the Digital Ally Viewer icon, or by selecting the program from the *Start Menu>Programs>Digital Ally>Digital Ally Viewer.* Once opened, the program will prompt you to navigate to your video storage location and select a video.



Toolbar Controls


Browse Media: Browse and select event files (.mtd) to playback.


Save Media: Save changes or segment a video event. Segmenting the video allows you to create a new video without altering the original video.


Media Details: Displays the details of the media file and allows adding additional information.


Edit Marks: Add/Edit Marks or Notes to the video event.


Image Capture: Save a snapshot of a frame of video.


Burn to CD/DVD: Create a data disc or movie DVD of the video event using this wizard. Simply follow the on-screen prompts to back up your recorded event.


Help: Displays help information and software version.

Playback Controls


Previous Mark: Click to skip to the Previous Mark.


Rewind: Click and hold to rewind.


Play/ Pause: Click to begin playback or pause video.


Fast Forward: Click and hold to Fast Forward.


Next Mark: Click to skip to Next Mark.


Start Over / Repeat: Click to Restart video from the beginning or Repeat playback.

Playback Speed Control: Adjust the Playback Speed (4x, 2x, 1x, 1/2x, 1/4x).

Playback Slider bar

The **Playback Slider bar** allows you to move forward or backward in the video event very quickly by dragging the slider.

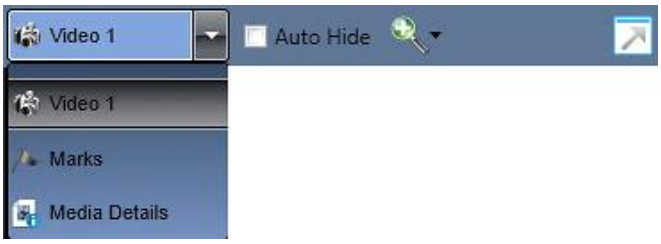
Beginning of Video Flag: The Green Flag indicates the Beginning of the video event.

Start of Recording Flag: The Black Flag indicates the Start of video recording and any added Marks.

End of Video Flag: The Red Flag indicates the End of the video event.

View Selection and Options

The **View Selection** drop down box allows you to select the information that is displayed in each window such as **Video 1, Marks,** and **Media Details**. Point the mouse to the top of each window to display the following drop down bar. Then point on the window heading to display the View Selection drop down box.



Full Screen View: Click on the Full Screen icon or Double Click in the window to display full screen.

Auto Hide Window: Click this icon box to display or hide the view selection options.

Video Zoom Window: The video display window can be resized by using the slider bar.

Window Size Adjustment: You may increase or decrease the size of each field by hovering your mouse on the vertical divider between the two display windows.

Select Screen Layout: Select this button located on the bottom of the screen next to the playback controls to customize your view from a list of preset layouts.

Section - 6 Support & Troubleshooting

Firmware Updates

Log on to www.digitalallyinc.com/tech-support.php 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 updates.

Firmware Update Instructions

The MicroVu HD requires a specific filename to perform a firmware update. The filename for the MicroVu HD firmware is 'firmware.r'. If the firmware file is not found, the MicroVu HD will not perform the update. The firmware is available from the Digital Ally Technical Support web site mentioned above. Place the firmware file in your computer desktop.

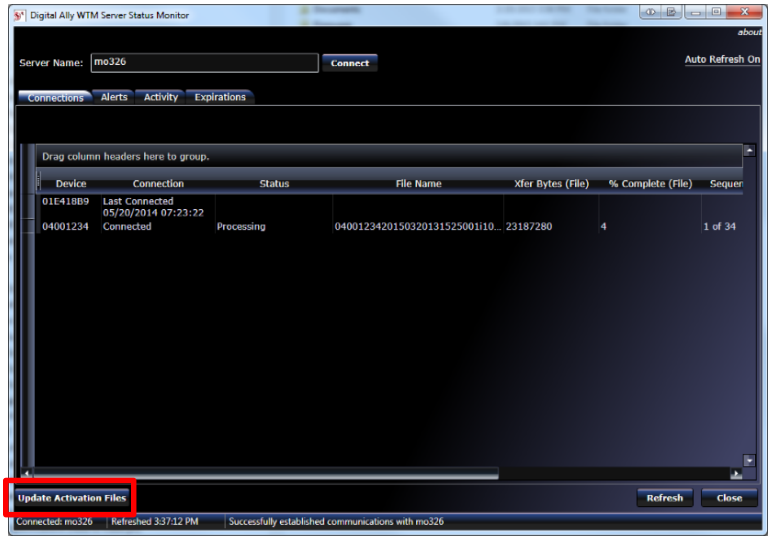
Manual Method

1. The MicroVu HD should be powered on and in STANDBY (only the solid BLUE status indicator) before proceeding.
2. Open the external SD card slot access door on the MicroVu HD and remove the microSD Card. Place it in a card reader connected to your computer.
3. Copy the "firmware.r" image file from your computer to the microSD Card. The filename must not be changed from "firmware.r".
4. Using the removable media features of the computer system, safely remove the SD card from the computer.

   CAUTION: BEFORE PROCEEDING PLEASE NOTE THE FOLLOWING, ONCE THE EXTERNAL CARD HAS BEEN INSTALLED, DO NOT REMOVE POWER TO THE MICROVU HD AND DO NOT REMOVE THE microSD Card UNTIL THE PROCESS IS COMPLETE AS NOTED IN THE FOLLOWING INSTRUCTIONS.
5. Open the microSD Card slot access door on the MicroVu HD.
6. Install the microSD Card into the microSD Card slot of the MicroVu HD.
7. The MicroVu HD will begin performing the firmware update.
8. The MicroVu HD driver-facing LED indicators will flash in sequence during the firmware update process. Once the mirror goes back to Standby condition (solid Blue status indicator) the MicroVu HD has been updated and is ready. The firmware file will be automatically removed from the microSD Card.

Wireless Method

7. Your MicroVu HD must be configured for wireless file transfer operation and already be successfully uploading videos to the VuVault back office. Consult the *VuVault Wireless Server Setup Guide* for more information.
8. Open the Digital Ally WTM Server Status Monitor software *(Start menu>Programs>Digital Ally>WTM Status Monitor*).
9. Copy the "firmware.r" file into the MicroVu HD Updates folder. This folder will be located in a subfolder in the WTM folder that receives uploaded video files. Place the file in the *Working>Updates>MicroVuHD* folder.



10. Click the Update Activation Files button.
11. The firmware file will be wirelessly transferred to the MicroVu HD the next time it connects to the wireless access point. The new firmware will automatically install without the need to reboot the MicroVu HD.

SD Card Maintenance

It is recommended that the microSD Cards be periodically defragmented or formatted. The frequency is dependent on usage, with a recommendation of every 2 to 3 months for typical usage. With high usage, more frequent maintenance may be required.

Formatting Requirements

MicroSD Cards used in the MicroVu HD should be formatted as a FAT32 file system with allocation block size of 64k bytes.

SD Card Requirements

The MicroVu HD supports 8GB, 16GB, 32GB, Minimum Class 10, commercial grade microSD Cards purchased from Digital Ally.

Performing a Reset

Open the access panel and use a small device such as a paper clip or eye-glass screwdriver to press the recessed reset button that is located to the right of the microSD Card. Reference the illustration for the reset button location.

Product Repair

The MicroVu HD should be returned to Digital Ally Inc. for service. The warranty may be voided if the device is opened by any unauthorized individual. Please contact Digital Ally to obtain an authorized 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 the MicroVu HD. Any user serviceable items can be purchased directly through Digital Ally.

Section - 7 Warranty Information

STANDARD LIMITED WARRANTY
MicroVu HD Compact HD Law Enforcement In-Car Video System

We warranty that our Compact HD Video System, Model MicroVu HD, will be free from defects in workmanship and material for a period of 24 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.

Extended Warranty Plan: Any and all Warranties must be purchased prior to the expiration of any previous warranties. These must be purchased directly from Digital Ally, Inc. for a period no less than one year and not to exceed three years.

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

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

This equipment complies with the FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 cm 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.