



# Automated Video Redaction User Guide

## INTRODUCTION

VIEVU's Automated Video Redaction (AVR) module is the next generation, fully-hosted, cloud evidence redaction system. This guide describes how to operate the VIEVU Automated Video Redaction (AVR) tool. Additional support material is available at [www.viewu.com/viewu-solution-support](http://www.viewu.com/viewu-solution-support)

## CONTACT US

If you need assistance or have any questions, contact us by phone at 888-285-4548 or email [support@viewu.com](mailto:support@viewu.com).

# TABLE OF CONTENTS

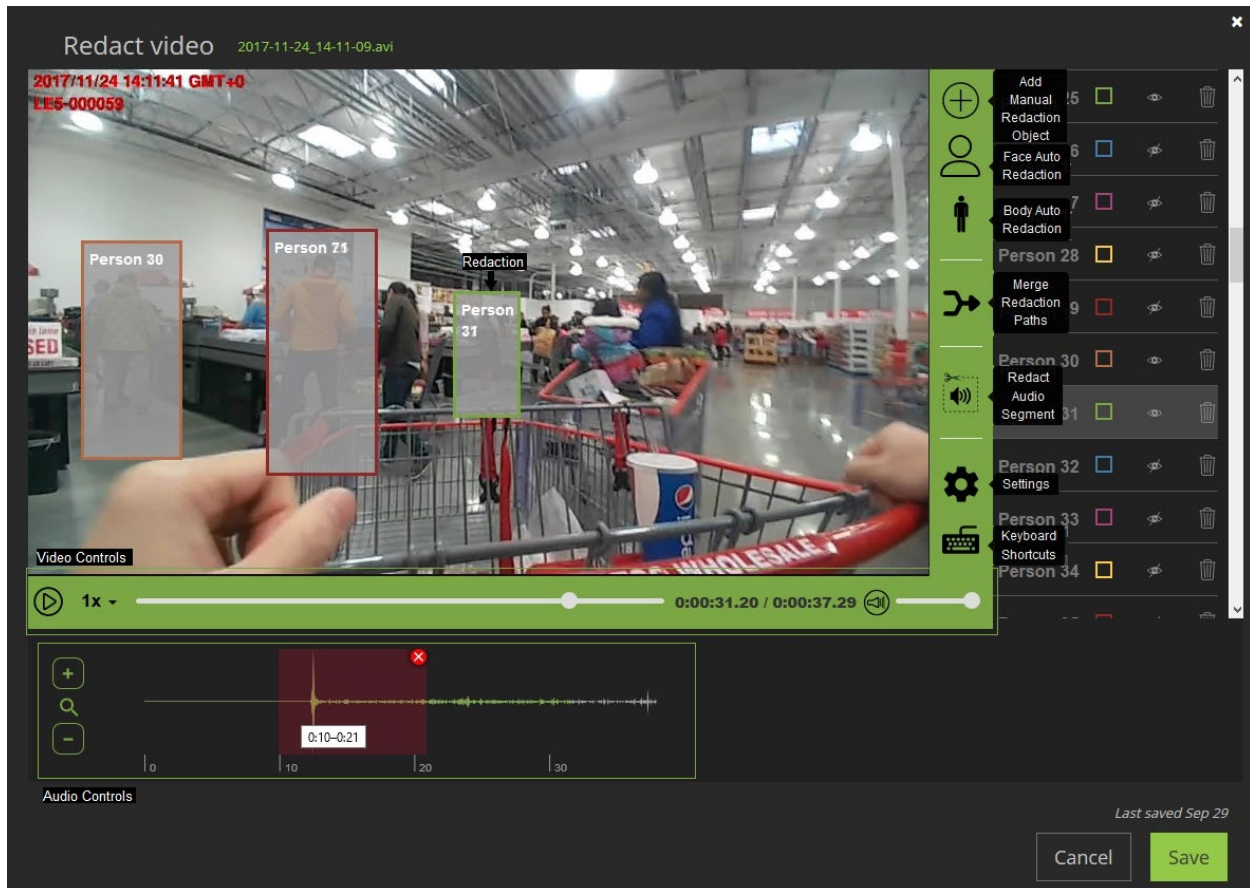
OVERVIEW .....	4
GETTING STARTED .....	5
SEARCH FOR AND LOAD A VIDEO .....	5
Searching for a Video .....	5
Loading a Video.....	7
THE REDACTION PROCESS.....	9
ADD AND EDIT REDACTION.....	9
Adding New Redaction .....	9
Redacting People from a Video .....	10
Selecting a Specific Time Frame .....	12
Thumbnail Preview .....	13
Using the Timecode Counter .....	14
Adjusting the Playback Speed .....	15
Editing Existing Redactions .....	15
Adjusting Automated Redaction.....	17
Redacting Multiple Faces Or Bodies.....	17
Merging Redaction Paths .....	17
Adding Manual Redaction.....	19
Changing the Transparency and Styles of Redaction Boxes .....	20
Redacting Audio .....	22
Adding a Beep Tone to Redacted Audio.....	24
SAVE REDACTED VIDEOS.....	25
Saving Videos .....	25
Generating Videos.....	25
KEYBOARD SHORTCUTS .....	27

<b>USING KEYBOARD SHORTCUTS .....</b>	<b>27</b>
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# OVERVIEW

The Automated Video Redaction (AVR) technology provided by VIEVU Solution is optimized for body-worn or dashboard camera footage, which faces unique challenges based on movement, poor lighting, and low resolution. The VIEVU AVR system employs an advanced algorithm to automatically detect and track faces and other identifiers which can then be easily blurred or otherwise redacted. This system can transform a formerly time-intensive task, previously restricted to video specialists, into an automated function that department officers and security professionals can perform themselves.

Figure 1 shows an example of the Video Redaction window in action.



**Figure 1**

- Add Manual Redaction – Allows you to add a redaction manually.
- Face Auto Redaction – Automatically adds a redaction wherever a face appears in the video.
- Body Auto Redaction – Automatically adds a redaction wherever a body appears in the video.
- Merge Redaction Paths – Combines 2 redactions into a single redaction.
- Redact Audio Segment – Redacts audio from the video.
- Settings – Allows you to select options for using the tool.
- Keyboard shortcuts – Displays a list of the keyboard shortcuts that are available to users of the tool.
- Video Controls – Allows you to control playback of video.
- Audio Controls – Allows you to adjust the audio associated with the video.

# GETTING STARTED

This section describes how to load a video into the redaction tool.

## Search for and Load a Video

To redact a video, you will first find it in VIEVU Solution. Searching for a video involves defining search criteria that will help you identify the video. These search criteria are created from a combination of filters, where each filter matches any or all of the following attributes of the video:

- The username assigned to the video
- The serial number of the camera used to record the video
- The Identifier of the evidence item
- The create date of the video
- The date the video was uploaded to VIEVU solution
- The category assigned to the video
- Any tags assigned to the video
- A report number associated with the video
- The event number associated with the video
- The unit the video belongs to
- If the video is locked down
- If the setting for the video never delete attribute
- The filename of the video in VIEVU Solution
- A comment associated with the video
- If the video is shared

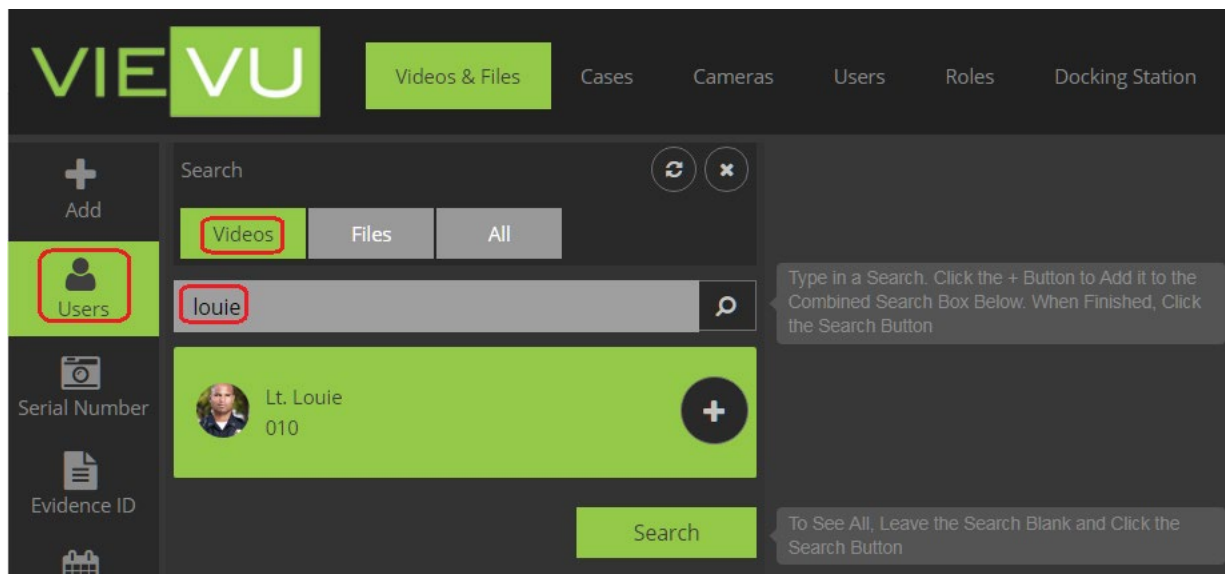
For example, if you know who the video is assigned to and the date that it was uploaded to VIEVU Solution, you may create a *User* filter and an *Upload Date* filter and add these to your search criteria. This will narrow down your search results to only videos uploaded by a single user over the selected date range.

## Searching for a Video

How to find your video and prepare it for redaction.

➔ To find the video to redact:

1. From the VIEVU Solution main window, select **Videos and Files**.
2. The videos and files search criteria are displayed.
3. Ensure that **Videos** is selected from the buttons at the top of the **Search** window.
4. Select a filter option from the toolbar on the left side of the screen (for example, **Users**).
5. Enter a user name (or user ID), into the search box that is displayed (Figure 2).

**Figure 2**

6. Matching filter results are displayed.
7. Click on the Plus Sign (+) icon displayed next to any matching filter results.
8. The filter is loaded into your search criteria ().

**Figure 3**

9. Select additional criteria from the toolbar on the left and click on the + sign icon to add more filters to search criteria.

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**Note:** You can keep adding more filters to your search criteria with the result of drilling down deeper and deeper into your data.

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10. Click the **Search** button to display the videos matching the search criteria.
11. The videos matching your search criteria are listed to the right of your search (Figure 4).

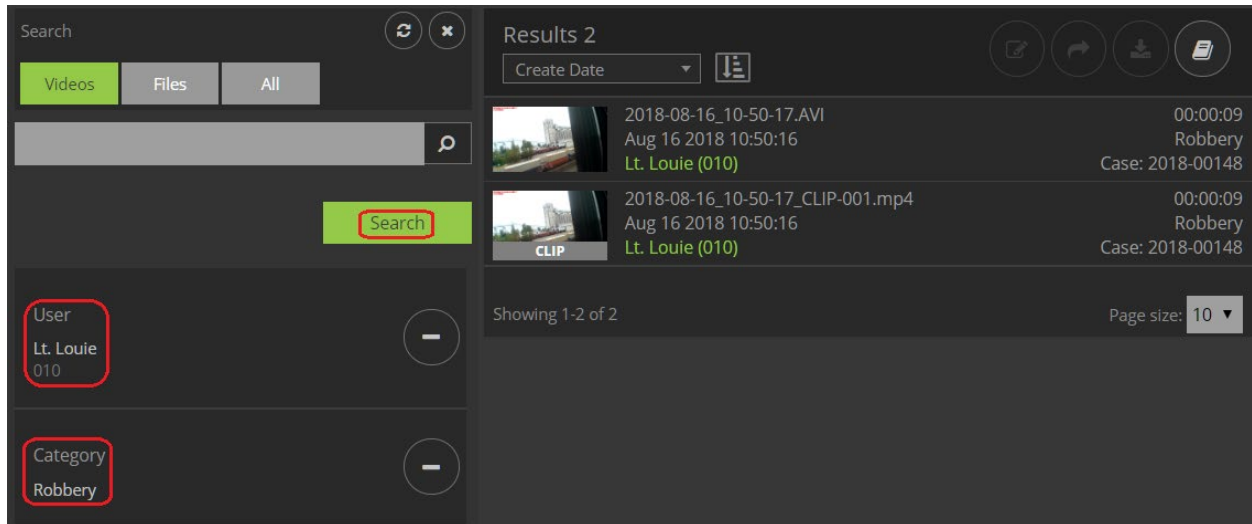


Figure 4

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**Note:** To search for all videos, leave the search criteria empty and click the **Search** button.

In the **Page size** field at the bottom of the first page of results, select **10**, **20**, or **50** from the drop-down menu to adjust the number of videos/files listed on each page.

You may order your results using the sort box to the top left of your search results.

---

## Loading a Video

Once you have located a video to redact, you will need to load it into the AVR tool.

➔ To load a video into the AVR tool:

1. Click anywhere within the borders of a listed video.
2. The video details are displayed in a window to the right of the search results (Figure 5).

The screenshot shows the VIEVU web application interface. The top navigation bar includes links for Videos & Files, Cases, Cameras, Users, Roles, Master Log, User History, Reports, and Settings. The left sidebar contains various filters and search options. The main area displays a list of video evidence items. A yellow callout box points to a video item in the list, and another points to a redaction icon in the toolbar.

**Results 69**

File Name	Duration	Category	Case
2017-11-24_14-40-28.AVI	00:00:36	Contact	Case:
2017-11-24_11-41-29.AVI	00:00:36	Arrest	Case:
2018-01-31_19-32-42.AVI	00:09:59	Ticket	Case: 2018-00002
2018-01-31_19-32-44.AVI	00:09:55	Ticket	Case:
2018-01-31_19-32-46.AVI	00:09:52	Ticket	Case:
2018-01-31_19-32-50.AVI	00:09:46	Ticket	Case:
2018-01-31_19-33-18.AVI	00:09:15	WALKING STOP	Case:
2018-01-31_19-33-22.AVI	00:09:11	Work Related	Case:
2018-01-31_19-33-30.AVI	00:09:00	VIEVU	Case:
2018-02-01_22-59-00.AVI	00:06:41	VIEVU	Case: 2017-00154

Click anywhere inside the selection to display the video in the evidence details window.

**Redaction icon**

Figure 5

- Click on the **Redaction** icon.

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**Note:** Only users with Redaction privileges will see the Redaction icon displayed on their toolbar.

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- The video is loaded into the AVR tool.



# THE REDACTION PROCESS

This section describes how to use the redaction tool.

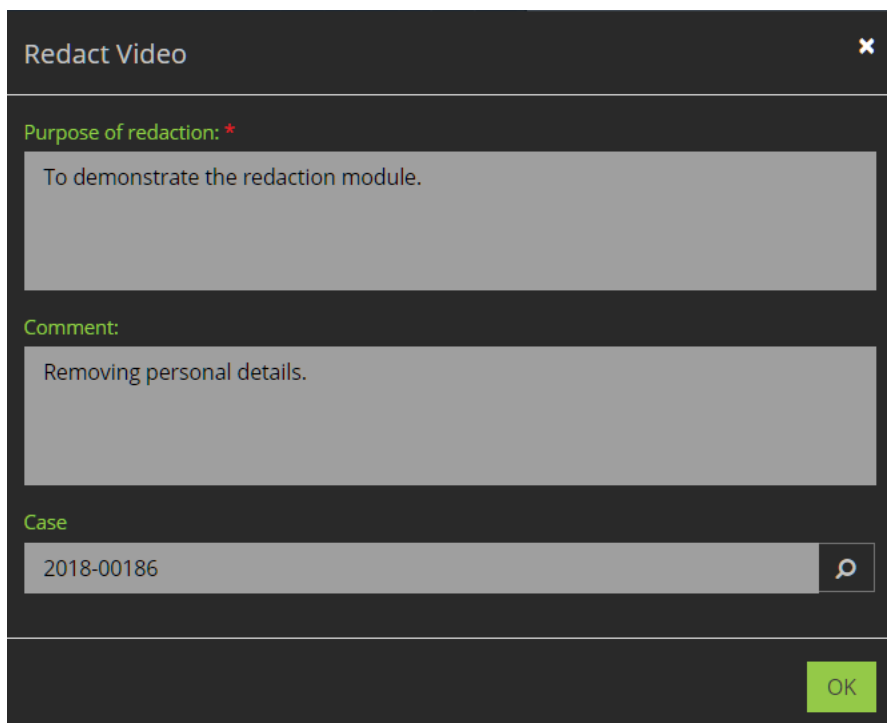
## Add and Edit Redaction

How to use add and redact videos.

### Adding New Redaction

➔ To add a video for redaction:

1. Display the details of a video.
2. Click the **Redaction** icon on the right-side toolbar, beneath the video window.
3. The first time this video is loaded into the redaction tool, a **Redact Video** window is displayed requesting the following information (Figure 6):
  - The Purpose of the redaction (required)
  - A **Comment** (optional)
  - A **Case** associated with the redacted video (optional)



Redact Video

Purpose of redaction: \*

To demonstrate the redaction module.

Comment:

Removing personal details.

Case

2018-00186

OK

Figure 6

4. When you are finished entering the required and optional information, click **OK**.
5. The video is loaded into the redaction tool.
6. When the video has loaded, the first frame of the video window is displayed (Figure 7).

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**Note:** Depending on the size of the video, the video loading process can take some time. Wait for both video and audio to load before continuing this process.

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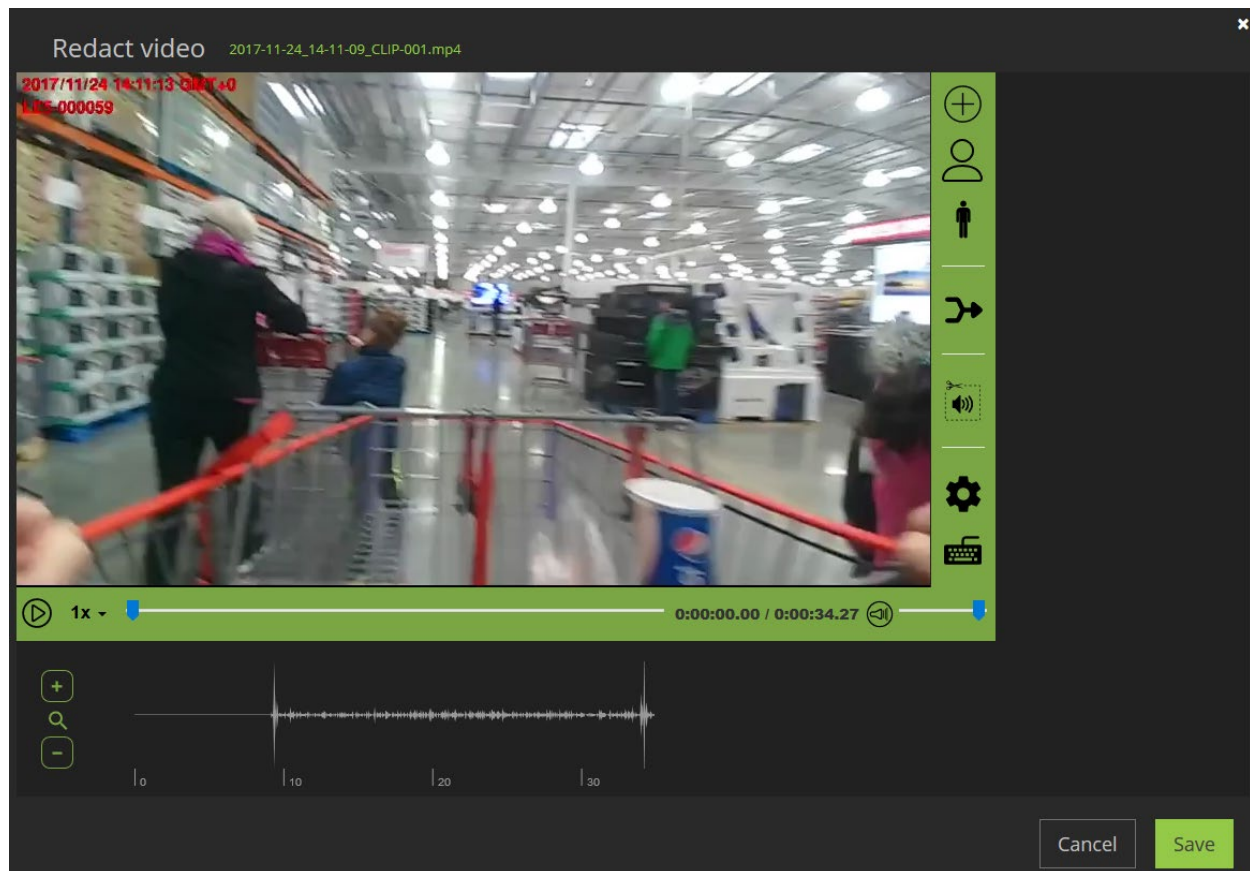


Figure 7

## Redacting People from a Video

You are able to redact people in a video by searching for faces or searching for bodies.

➔ To identify people in a video:

1. From the right-side toolbar, click the *Face* (or the *Body*), icon to detect people for redaction (Figure 8).

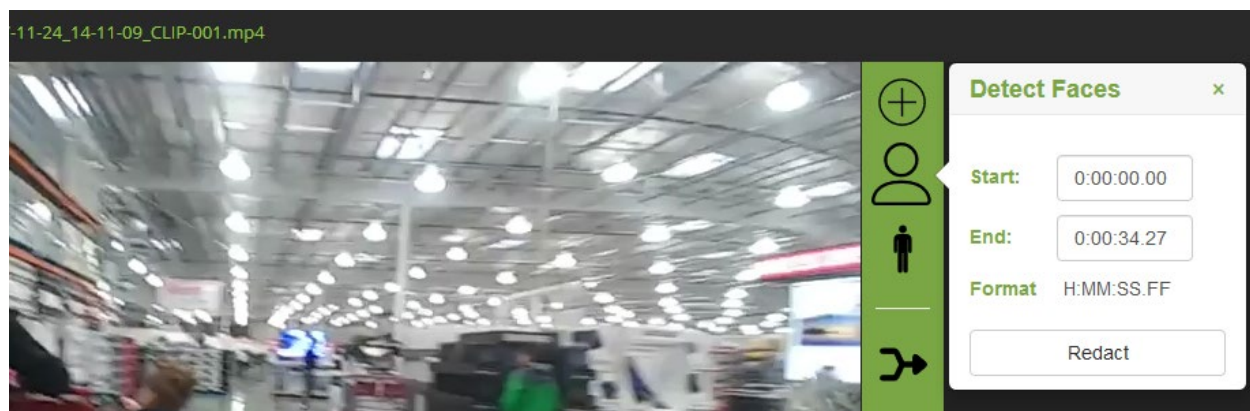


Figure 8

2. The **Detect Faces** (or **Detect bodies**), window pops out to the side.
3. Click the **Redact** button to auto-detect faces (or bodies), within the entire video.

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**Note: The facial detection algorithm allows users to automatically and accurately detect small faces providing rigorous facial detection from great distances.**

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4. A status bar is displayed as the system searches the video for faces (Figure 9).

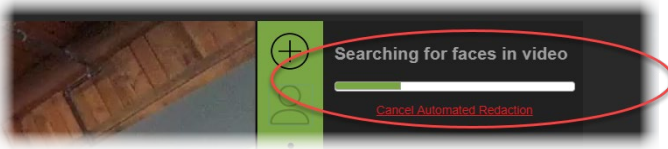


Figure 9

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**Note: You can cancel the auto-redaction process at any time by clicking the link beneath the status bar.**

---

5. The faces (or bodies), that are detected (labeled as **Person 1** through **Person n**), are listed along the right side of the Redact video window (Figure 10).

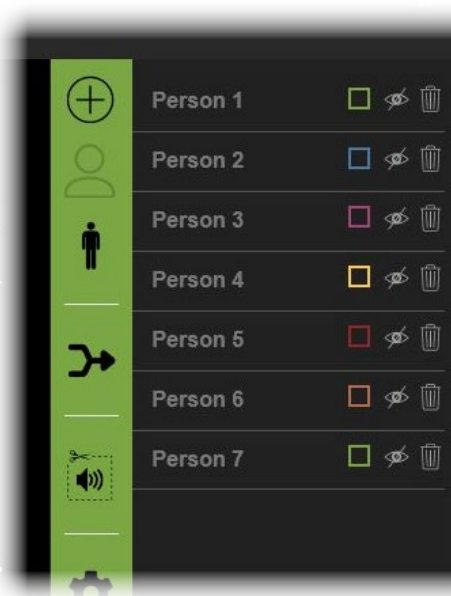



Figure 10



6. Three icons are displayed next to each numbered person in the list (Figure 11).



Figure 11

7. These icons represent the following:

-  A **Square Box** icon, the color of which represents the color of the redaction box used in the video for that person.

-  An **Eye** icon with a line through it. The line is toggled **Off/On** with a mouse click. When you toggle the line **Off**, the redaction box is visible in the video. With the line toggled **On**, the redaction box is *not* visible in the video.
-  A **Trash Can** icon you can click to completely remove the selected redaction from the video.

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**Note:** The process for detecting bodies is exactly the same as that used for detecting faces. You can use both of these features within the same video.

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## Selecting a Specific Time Frame

With longer videos, the auto-detection feature can be somewhat time-consuming. Because of this, you may not want to run the automated face or body redaction process on the entire video. To shorten the process, you can select a specific time frame within a video in which to perform automated redaction. You can redact both faces and bodies in this manner.

➔ To set up a time frame within a video for automated facial redaction:

1. On the Redact Video window, click the *Face* (or *Body*) icon. A pop-out menu is displayed (Figure 12).

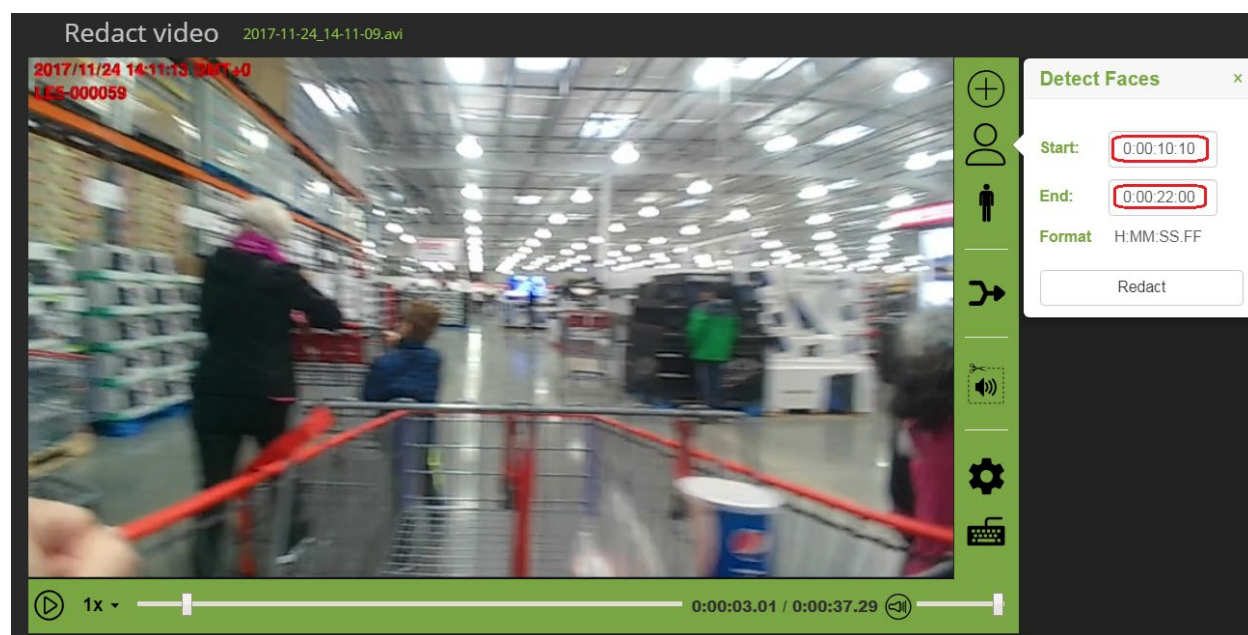


Figure 12

2. Enter the **Start** and **End** times within the video for the redaction to occur.
3. Click the **Redact** button when finished.
4. The Status Bar displays the progress while automatic facial redaction is run on the specified time frame.

---

**Note:** You can cancel the auto-redaction process at any time by clicking on the link beneath the status bar.

---

➔ To redact multiple time frames within the same video:

1. Repeat the process for selecting a time frame.

- Each previous redaction time frame is listed above the **Start** and **End** fields (Figure 13).

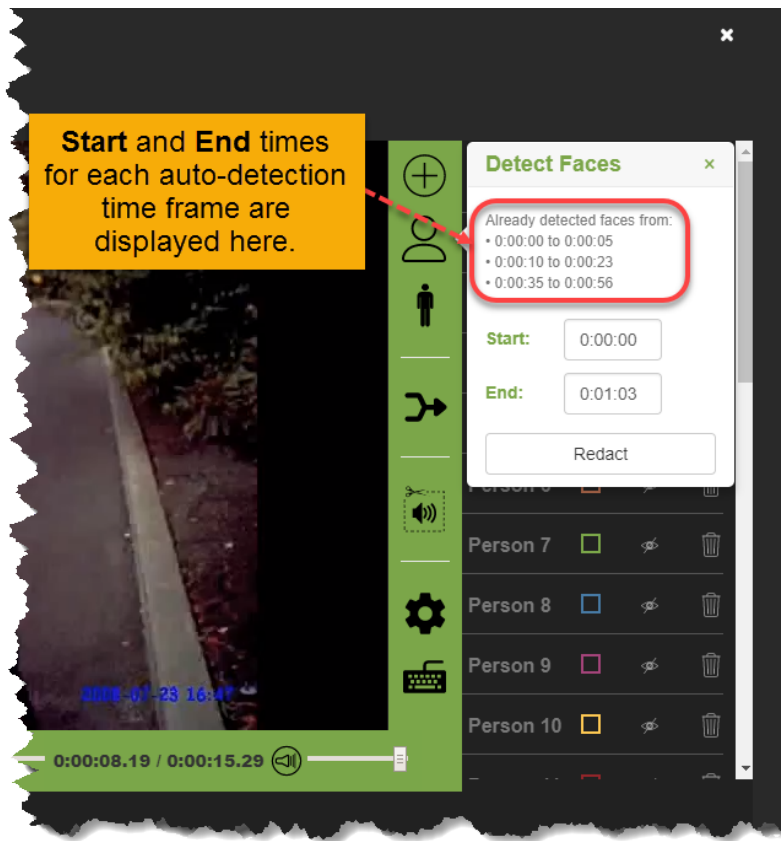


Figure 13

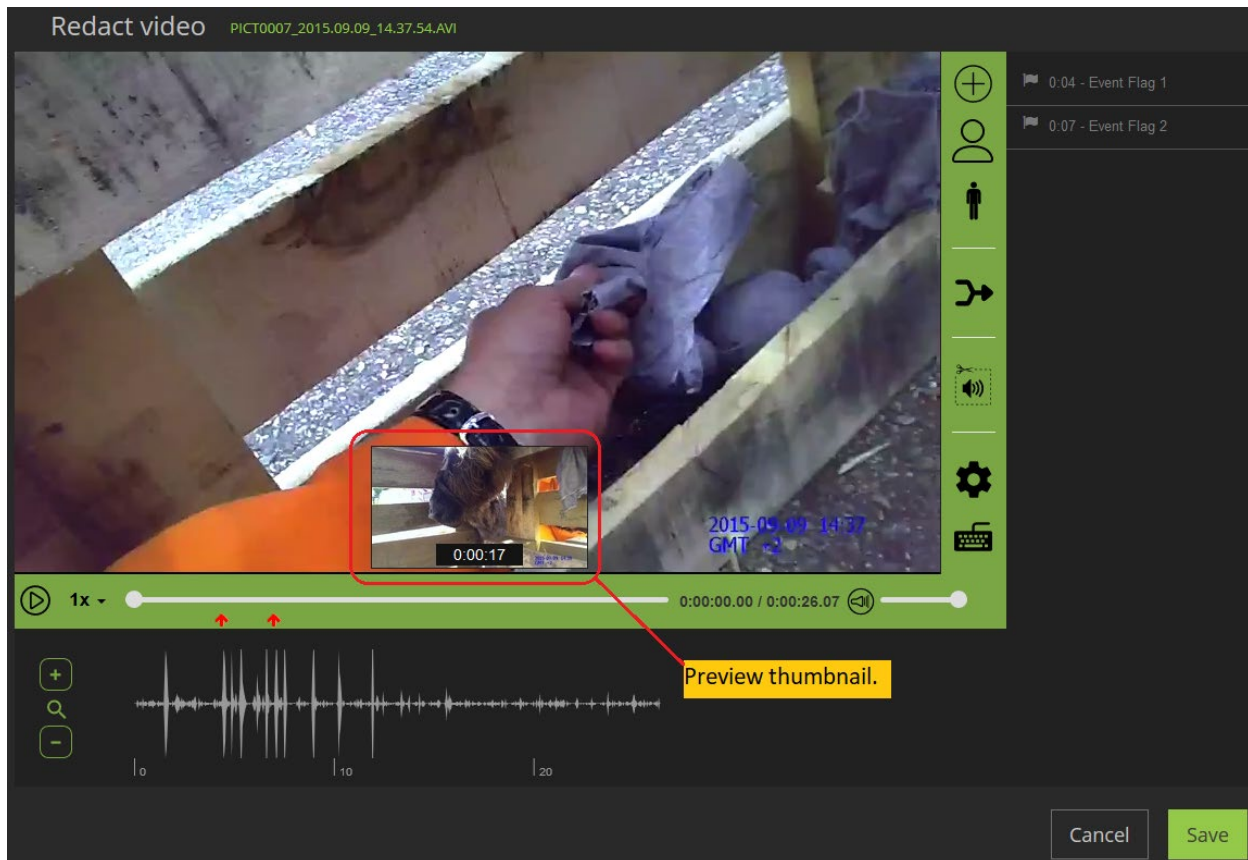
## Thumbnail Preview

The redacted video window provides a thumbnail preview image from anywhere within the entire video. You can use the normal video player controls to navigate through the video. Alternatively, you can use the keyboard shortcuts described in Table 1.

➔ To see a thumbnail preview:

- Float your mouse cursor over the video time line without pressing any mouse buttons.
- The thumbnail image with its video timestamp is displayed (Figure 14).



**Figure 14**

3. When you click the left mouse button, the video moves to the position currently shown in the thumbnail image.

## Using the Timecode Counter

A key feature for editing videos in the redaction video player is the Timecode Counter. This can be extremely helpful for determining your precise location within a video.

➔ To determine the exact frame of a redaction video:

1. The video counter beneath the Redact Video window shows the exact frame of the video being displayed. (Figure 15).

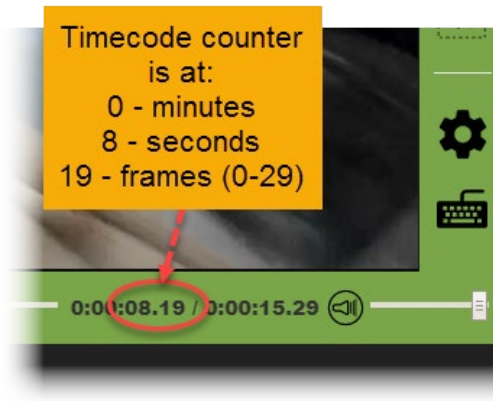


Figure 15

## Adjusting the Playback Speed

From the Redact Video window, you can adjust the speed of the video playback to make the video run faster or slower. This can be helpful when navigating videos. There are 5 different video speeds you can set using the drop-down list directly to the right of the **Play** button.

➔ To adjust the playback speed:

1. On the Redact Video window, click the **1x** indicator next to the **Play** button.
2. A drop-down list is displayed, (Figure 16).

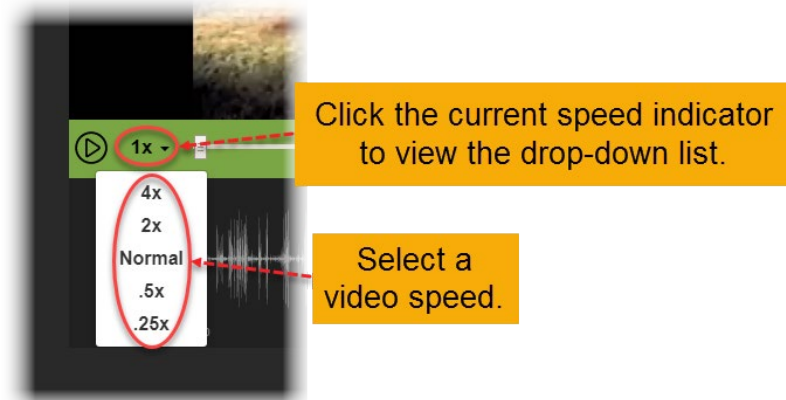


Figure 16

3. Select **Normal** for one times speed, **2x** for two-times speed, **4x** for four-times speed, **.5x** for half-speed, and **.25x** for one-quarter speed.

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**Note:** Alternatively, you can use the (1-5), keyboard shortcuts to adjust the playback speed, (as described in Table 1).

---

## Editing Existing Redactions

You may need to continue working with a video that was previously loaded into the AVR module. You will need to find the original video file in VIEVU Solution, then click on the *Redaction* icon to open the video in the redaction module.

➔ To edit existing redactions:

1. Find the original video in VIEVU Solution, display its details and click on the **Redaction** icon.
2. The redaction window is displayed, and previous redactions are displayed on the left-hand side of the window (Figure 17).

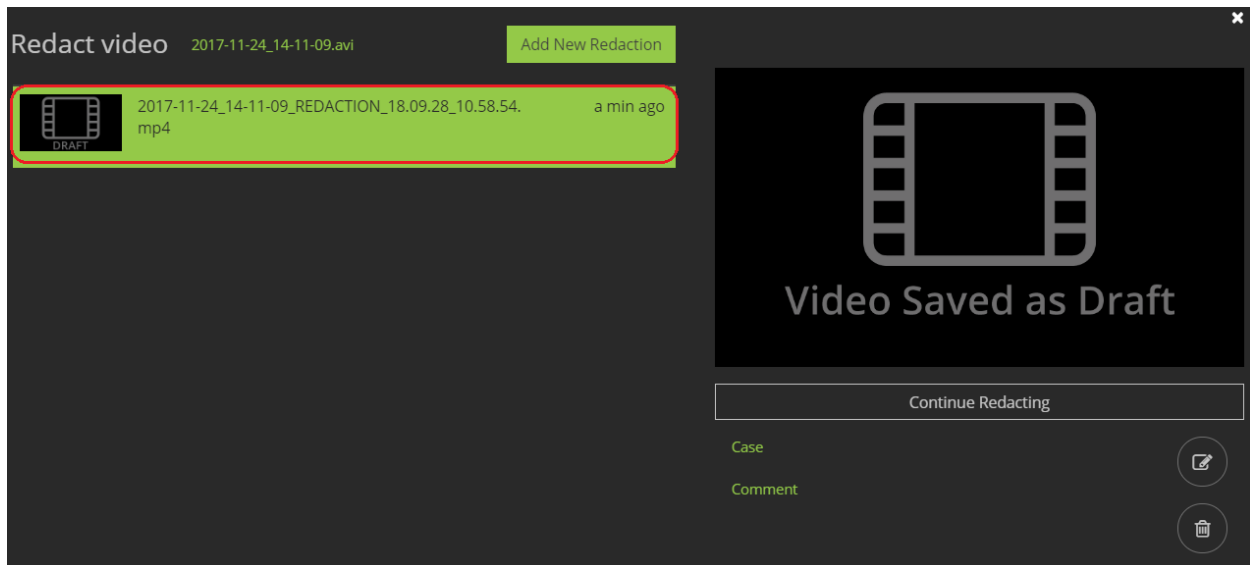


Figure 17

3. Click anywhere within a redacted video line item to select the video to edit.
4. Click the **Continue Redacting** button just below the Video window.
5. When the redacted video is finished loading, you can continue the redaction process at usual.

➔ To edit existing redacted video details:

1. Click anywhere within the redacted video line item to select the video to edit.
2. Click the *Edit Redacted Video Details* icon on the right-side toolbar.
3. The **Edit Redacted Video Details** window is displayed (Figure 18).

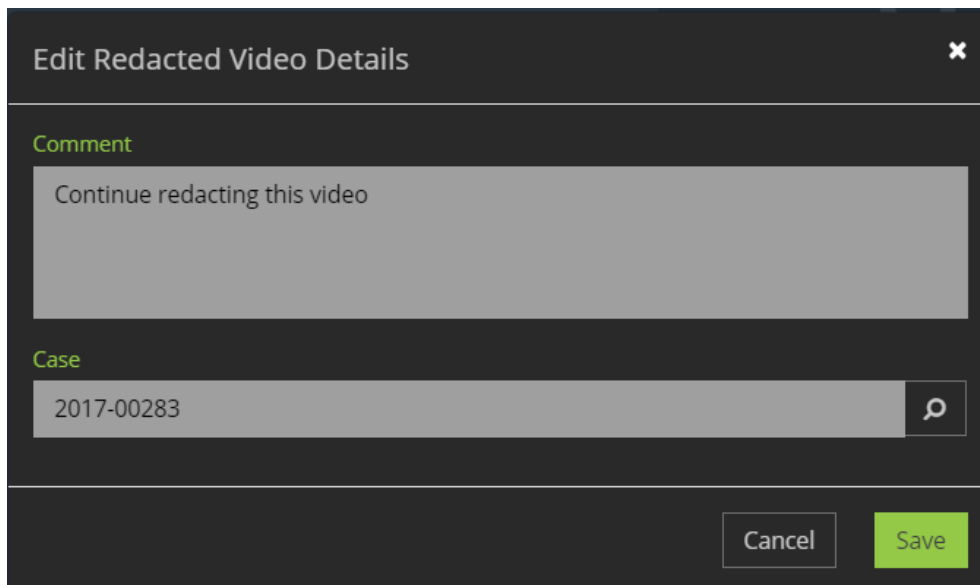


Figure 18



4. Edit or add to any descriptive comments for the video into the **Comment** field.
5. Edit or enter a Case Number in the **Case** field.
6. When finished, click **Save**.

## Adjusting Automated Redaction

You are able to adjust the redaction boxes that are created from an automatic redaction.

➔ To adjust the redaction box shown on a video:

1. Use the mouse to adjust the redaction box size and/or location in the video by hovering near the outside of the box.
2. A white double-arrow appears.
3. Use the arrow to resize the box, by clicking on the border you wish to adjust.
4. To move the box, click and hold inside the box and drag to the desired location.

---

**Note: Since each redaction box adjusts for one frame only, you may need to adjust the size and position of the box numerous times throughout the video as the action progresses.**

---

## Redacting Multiple Faces Or Bodies

When using the automated redaction with multiple faces or bodies:

- The automated redaction process redacts all faces (or bodies), in the video.
- The automated redaction should recognize multiple people and assign each individual person their own number and color.
- Adjust automated redactions as described by the Adding Manual Redaction section of this guide.

---

**Note: Depending on the length of the video, the Automated Facial Redaction process can sometimes take several minutes. You can cancel the Automated Facial Redaction process at any time during the redaction by clicking the link beneath the status bar.**

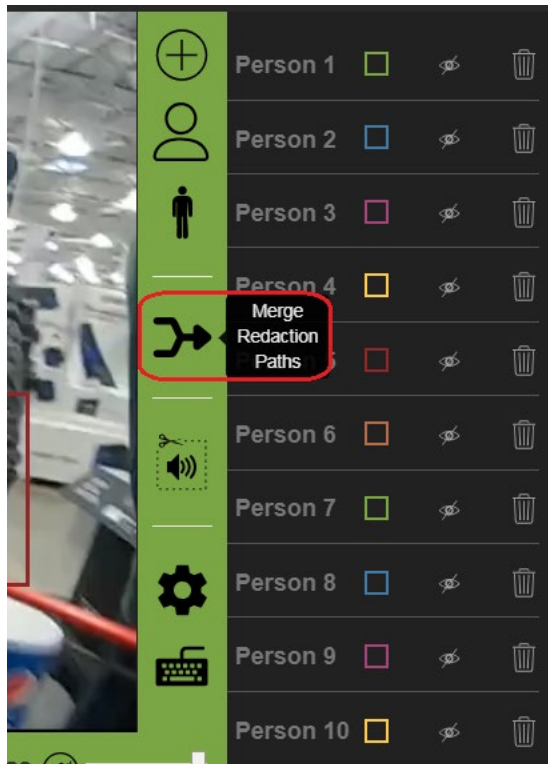
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## Merging Redaction Paths

If the program detects multiple faces when it is visibly clear that the detected faces are actually images of the same person, you can combine images into the same redaction path.

➔ To combine images into the same redaction path:

1. From the toolbar on the right side of the Redact Video window, click the **Merge Redaction Paths** icon (Figure 19).



**Figure 19**

2. A popup window displays all the redactions paths that are available to merge.
3. Select the paths to be merged by checking all the boxes you want to merge into a single path (Figure 20).

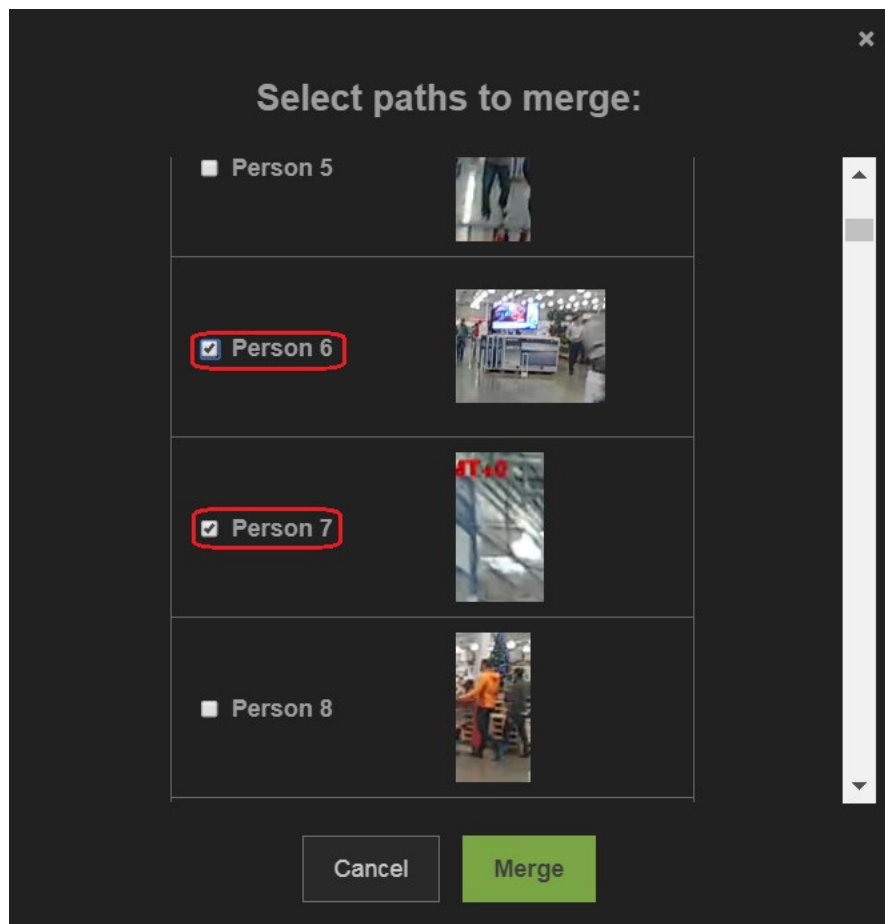


Figure 20

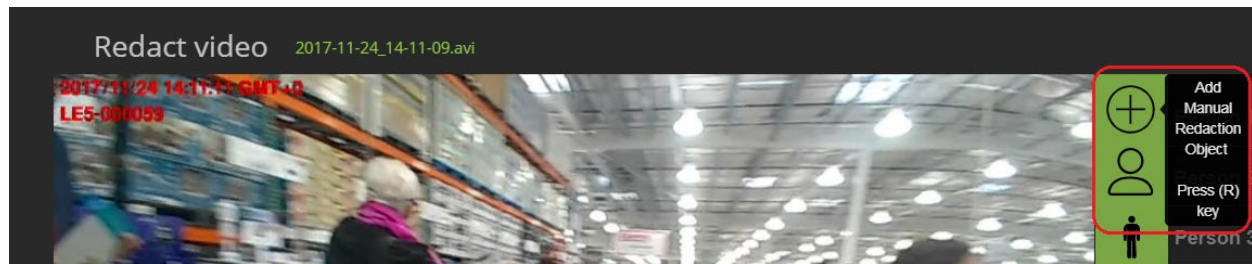
4. Click the **Merge** button at the bottom of the window.
5. The redactions you selected are combined into a single redaction and given the name of the first selected redaction path.

## Adding Manual Redaction

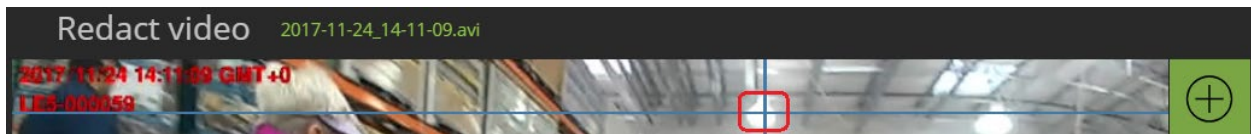
If automatic redaction does not recognize all faces (or bodies), in your video, you are able to manually redact the video.

➔ To manually redact a person or object that automated redaction missed:

1. Click the **Add Manual Redaction Object** icon, located in the right-side toolbar of the Redact Video window.



2. A crosshair is displayed in the Video window.



**Note:** Alternatively, you can press the R key on your keyboard to start manual redaction. Press Esc to exit manual redaction. Refer to the “Keyboard Shortcuts” section Table 1, for several time-saving shortcuts.

**The crosshair is the color that will be applied to the redaction box.**

3. Use the mouse to click and hold on the center of the crosshair and move it across the Redact video window to form a box over the person or object.
4. Move and resize the box until you are happy that it covers the image you wish to redact.
5. When you release the mouse button, you are requested to identify if the object is a **Person**, **Vehicle** or a **Custom** object.
  - If **Custom** is selected enter a name for the redaction object type. (Figure 21).

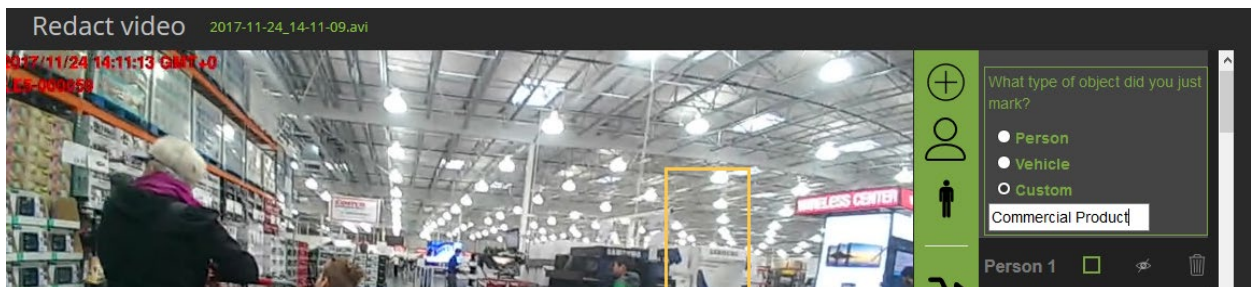


Figure 21

6. The redaction is complete.
7. Once you have created a redaction, you can move or resize the box as needed.
8. Play through the remaining video to, adjust the box such that it follows the object you are redacting.

**Note:** Using the keyboard shortcuts, you can quickly jump forward or backward in time to adjust the redaction box as necessary. Refer to the Keyboard Shortcuts section at the end of this document for several time-saving shortcuts.

## Changing the Transparency and Styles of Redaction Boxes

This feature allows you to adjust the transparency and the look of the boxes used to set up video redaction. Redaction Transparency and styles settings are applied during the editing of a video.

- Select transparency between options a clear box and a solid gray box.
- Choose from 4 different redaction styles: **Pixelate**, **Mask**, **Smooth**, and **Solid**.

➔ To adjust the transparency of redaction boxes:

1. Load a video into the redaction tool.
2. From the Redact Video screen, click on the **Settings** icon (Figure 22).

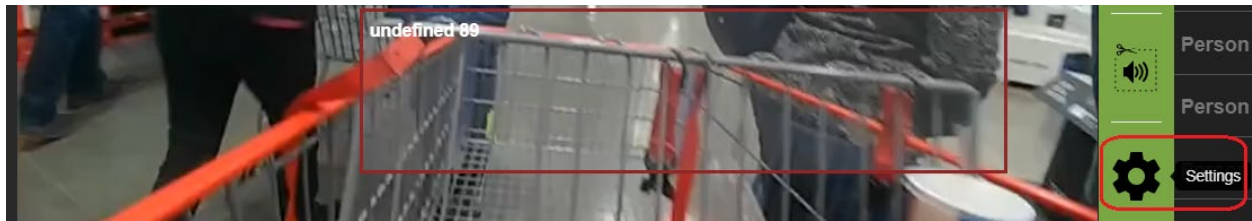


Figure 22

3. The **Settings** window is displayed (Figure 23).

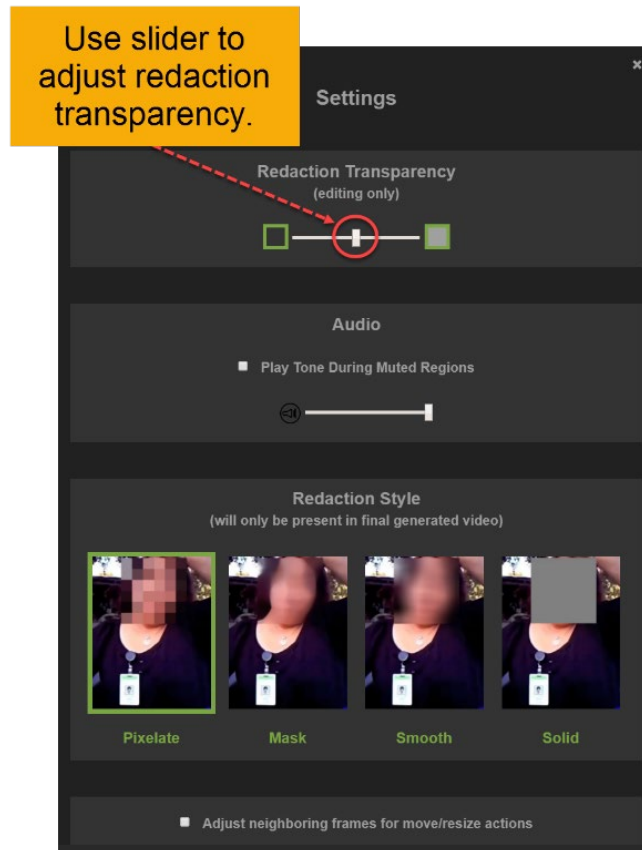


Figure 23

4. Move the **Redaction Transparency** slider right or left to adjust the transparency of redaction boxes during the editing process.

➔ To select a redaction styler:

1. From the Redact Video screen, click the **Settings** icon.
2. The Settings window is displayed
3. Examples of each redaction style are provided in the Settings window (Figure 24).

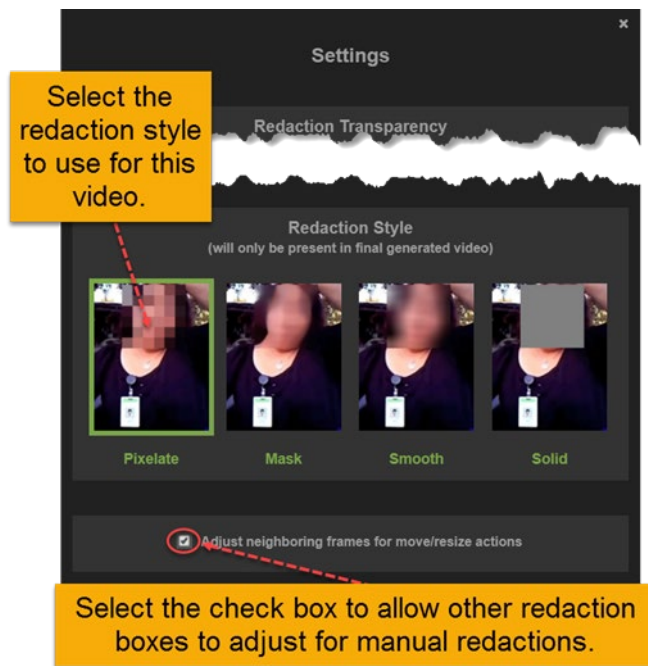


Figure 24

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**Note:** The redaction styles are not visible within the video until after you generate a final video.

---

4. At the bottom of the Settings window, select the **Adjust neighboring frames for move/resize actions** check box to allow the other redaction boxes within the video to adjust to your manual settings.
5. Save and close the window to apply your redaction adjustments to the video.

## Redacting Audio

You can use manual audio redaction tools to adjust the audio in your redacted video.

➔ To redact audio from a video:

1. Load and play a video into the redaction tool.
2. The audio feed display changes from white to green as the video plays (Figure 25).



Figure 25



Click the *Redact Audio Segment* icon (Figure 26).

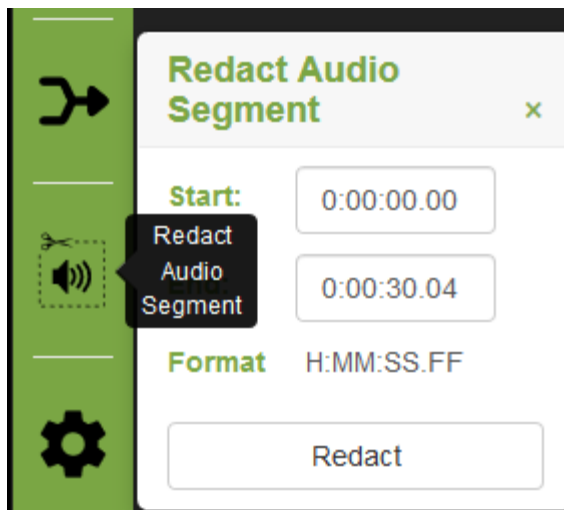


Figure 26

3. A slider icon is displayed over the audio segment.
4. Using the mouse, click and hold to highlight the audio area to be redacted (Figure 27).

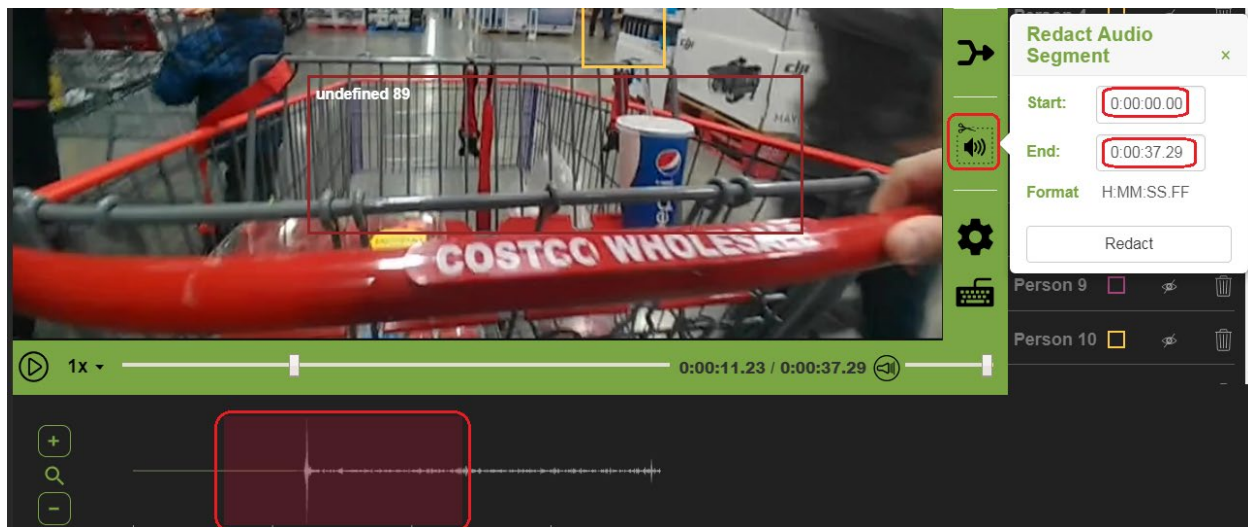


Figure 27

5. Alternatively, if you know the exact time(s) on the video for the audio segments you want to redact, you can use the **Redact Audio Segment** popup window to define **Start** and **End** times (in mm:ss format) for each redaction.
6. With a redacted audio segment selected, you are able to:
  - Move the segment, by clicking inside the segment and dragging the segment to any position on the timeline with your mouse.
  - Resize the segment by clicking on either edge and dragging the mouse left or right across the timeline.
  - Remove the redacted audio segment box from the audio segment, by clicking on the **X** in the top right-hand corner of the segment.



➔ To get a closer, more detailed, and accurate look at the audio feed:

1. Use the **Zoom** icon, located to the left of the audio display to zoom in and out of the audio display. The plus button (+) zooms in and the minus button (-) zooms back out.

---

**Note: Redacted audio is muted completely for the selected sections unless a beep tone is selected. See Adding a Beep Tone to Redacted Audio for details.**

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## Adding a Beep Tone to Redacted Audio

You can also add a beep tone that will play during the redacted audio portions of the video. This can be a useful reminder that audio has been redacted, and that the audio doesn't just go silent at the point where redaction has occurred.

➔ To add a beep tone during playback:

1. Load a video into the redaction tool.
2. From the Redact Video window, click the **Settings** icon on the right-side toolbar.
3. The Settings window is displayed (Figure 28).

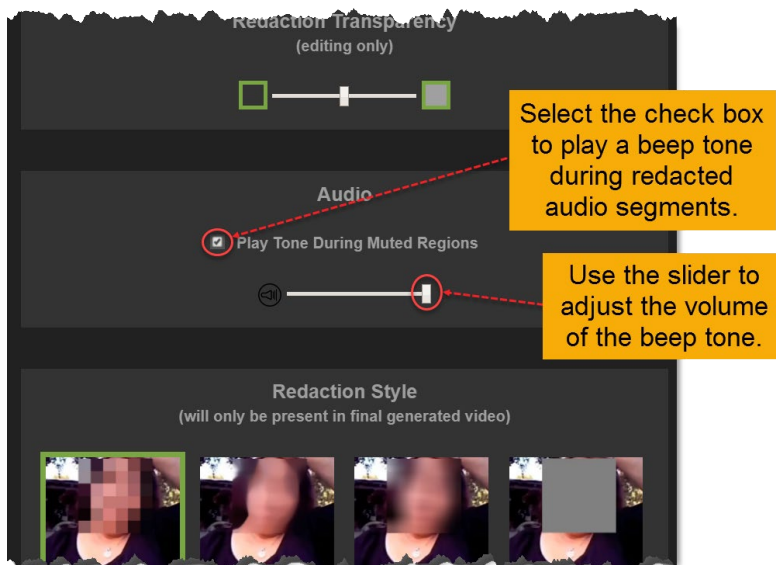


Figure 28

4. Select the **Play Tone During Muted Regions** check box.
5. Adjust the **Volume Slider** to control the volume of the redaction beep tone.



6. When redacted audio is played, a steady tone will be played over the video.

## Save Redacted Videos

When finished with redaction you will want to save your work.

### Saving Videos

You can manually save the video redaction progress as a draft at any time and come back to it later.

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**Note: The Redaction progress is also automatically saved every 5 minutes to avoid losing any changes.**

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➔ To save the redaction as a draft:

1. Click the **Save** button at the bottom of the Redact video window.
2. The popup window is displayed (Figure 29).

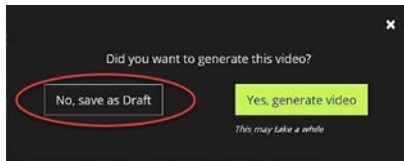


Figure 29

3. Click the **No, save as Draft** option.
4. The redacted videos list is displayed where your newly created video is preselected.
5. From this point, you can add additional comments, add video to a case, or continue editing video.

### Generating Videos

When you have finished redacting a video you may generate a new video that can be shared with other people.

➔ To save the redaction as a VIEVU Solution video:

1. Redact a video using the redaction tool.
2. When you are finished with both video and audio redaction, click the **Save** button at the bottom of the Redact video window.
3. The popup window is displayed (Figure 30).
4. From this popup, select the **Yes, generate video** option.

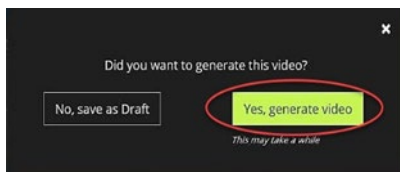


Figure 30

5. A Generating Video window is displayed (Figure 31).

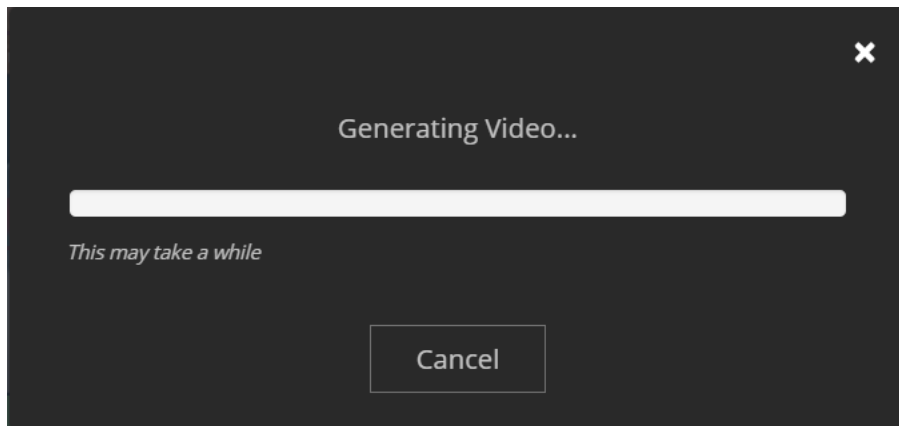


Figure 31

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**Note:** You may cancel video generation at any time and be returned to the redaction tool.

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6. When the redaction is complete, **Redacted Video is Ready** is displayed on the progress bar.
7. Click **OK** to return to the redacted videos list where your newly created video is preselected.
8. From this point, you can edit, download, share, copy, or delete the redacted video, or create a new redaction.

# KEYBOARD SHORTCUTS

The keyboard can be used to access many of the features of the redaction tool.

## Using Keyboard Shortcuts

From the video redaction window, you can click the **Keyboard Shortcut** icon to display a complete list of the shortcuts. The Keyboard Shortcuts are described in Table 1.

➔ To see a list of available keyboard shortcuts:

1. Click on the keyboard icon to the bottom right of the video (Figure 32).

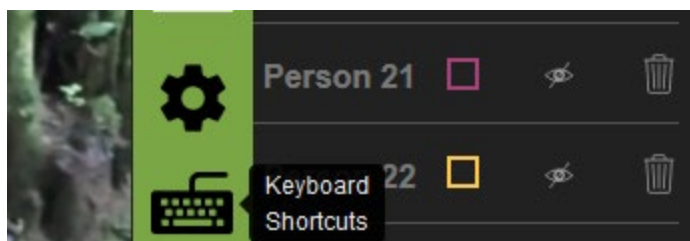


Figure 32

2. A list of keyboard shortcuts is displayed (Figure 33).

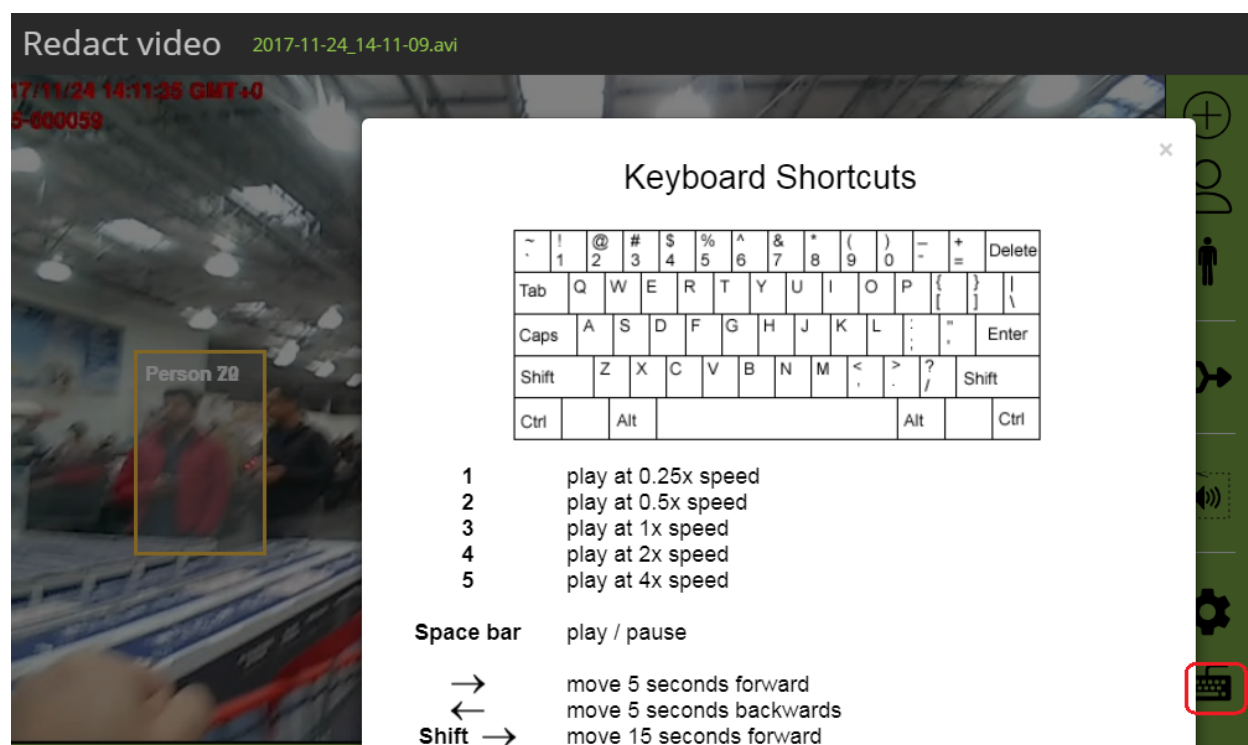


Figure 33

**Note: Use the Keyboard Shortcuts (Table 1), to substantially increase the speed and productivity with which you can edit and administer video files.**

The available shortcuts are shown in Table 1.

Table 1

Key	Action
<b>1</b>	Play video at 0.25x speed
<b>2</b>	Play video at 0.5x speed
<b>3</b>	Play video at 1x speed
<b>4</b>	Play video at 2x speed
<b>5</b>	Play video at 4x speed
<b>Spacebar</b>	Play / Pause video
<b>→</b>	Move video 5 seconds forward
<b>←</b>	Move video 5 seconds backwards
<b>Shift →</b>	Move video 15 seconds forward
<b>Shift ←</b>	Move video 15 seconds backwards
<b>D</b>	Move video 1 frame backward
<b>Shift + D</b>	Move 5 video frames backward
<b>F</b>	Move video 1 frame forward
<b>Shift + F</b>	Move 5 video frames forward
<b>G</b>	Play video for 0.5 seconds, then pause
<b>H</b>	Play video for 1 second, then pause
<b>J</b>	Play video for 3 seconds, then pause
<b>K</b>	Play video for 5 seconds, then pause
<b>V</b>	Rewind video 0.5 seconds, then play at quarter speed
<b>B</b>	Rewind video 1 second, then play at quarter speed
<b>N</b>	Rewind video 3 seconds, then play at quarter speed
<b>M</b>	Rewind video 5 seconds, then play at quarter speed
<b>R</b>	Add manual redaction object, switch to manual redaction
<b>Esc</b>	Exit manual redaction