**Aquiplicity 2025 - Motion Detector User Manual**

Welcome to Aquiplicity 2025 - Motion Detector! This fun and handy web-based tool lets you upload an MP4 video, pick a starting point, and watch as it highlights motion with a cool red overlay. Whether you’re analyzing security footage, studying a dance move, or just curious about what’s changing in your video, we’ve got you covered. Let’s dive in and explore how to use it!

**What Is This Tool?**

Imagine you’ve got a video, and you want to see where things move or change over time. This tool takes your MP4 video, compares up to 300 frames starting from a point you choose, and shows you the differences with a translucent red overlay on the first frame. It’s like giving your video a superpower to reveal motion!

**Getting Started**

No installation needed—just open the index.html file in your favorite web browser (we recommend Chrome or Firefox for the best experience). You’ll see a clean interface ready to welcome your video.

**What You’ll See**

* Top Marquee: A scrolling message explaining the basics.
* Controls Area: Buttons and sliders to play with.
* Thumbnail Strip: A little sidebar for frame previews (it starts empty).
* Working Area: The main canvas where the magic happens, plus a status bar and progress indicator.

Placeholder Image: A screenshot of the initial interface with labels pointing to the marquee, controls, thumbnail strip, and working area.

**Step-by-Step Guide**

Let’s walk through how to use this tool together—it’s super easy!

**1. Upload Your Video**

* Where: Look at the top-left of the controls area for a button that says "Choose File" (it might look like a blank box depending on your browser).
* What to Do: Click it, pick an MP4 video from your computer, and hit "Open."
* What Happens: The tool loads your video, shows frame 25 on the canvas to give you a sneak peek, and updates the status to “Video loaded... Ready for motion detection.” You’ll also see a slider appear to pick your starting frame.

Tip: Only MP4 files work here, so if your video is in another format (like AVI or MOV), convert it to MP4 first using a free tool like Hand-Brake.

Placeholder Image: The interface after uploading a video, with the initial frame on the canvas and the "Start Frame" slider visible.

**2. Pick Your Starting Point**

* Where: In the controls area, find the “Start Frame” slider under a box labeled “Start Frame.”
* What to Do: Slide it left or right (0% to 100%) to choose where in the video you want to start checking for motion. The percentage and timestamp (like “01:23”) update as you move it.
* Why: This is your reference frame—everything after it will be compared to this moment.

Fun Fact: The timestamp guesses your video runs at 30 frames per second (FPS), so it’s an estimate. If your video’s FPS is different, the timing might be slightly off, but the motion detection still works great!

**3. Set the Motion Sensitivity**

* Where: Next to the “Start Frame” slider, there’s a “Difference % Threshold” slider (it starts at 15%).
* What to Do: Move it between 1% (super sensitive) and 100% (only big changes count). The number updates as you slide.
* What It Means: This controls how much a pixel has to change to be marked as “motion.” Lower numbers catch tiny shifts; higher numbers need obvious differences.

Try This: Start with 15% and adjust later if you see too much or too little red in the results.

**4. Detect Motion**

* Where: Find the green “Detect Motion” button in the controls area.
* What to Do: Click it when it’s active (it’s grayed out until a video loads).
* What Happens:
  1. The tool extracts up to 300 frames starting from your chosen point (you’ll see a progress bar).
  2. It compares each frame to your start frame, looking for changes based on your threshold.
  3. The canvas updates with your start frame plus a red overlay (30% see-through) showing where motion happened.
  4. The status bar keeps you posted (e.g., “Extracting 50 / 100 frames…” then “Motion detection complete…”).

Placeholder Image: The interface mid-detection, with a half-full progress bar and the status saying “Detecting changes across 300 frames…”

Patience Note: For longer videos or slower computers, this might take a few seconds. Grab a snack if it’s a big file!

**5. Check Out the Results**

* Where: The main canvas in the working area.
* What You’ll See: Your starting frame with red patches where motion was detected. The red is translucent, so you can still see the original image underneath.
* What It Means: Red areas show where pixels changed across the frames—perfect for spotting movement!

Cool Trick: Change the start frame or threshold and click “Detect Motion” again to tweak what you see.

**6. Save Your Work**

* Where: Below the canvas, there’s a “Save Result Image” button.
* What to Do: Click it after detection finishes.
* What Happens: Your browser downloads a PNG file named motion\_detection\_result.png with the start frame and red overlay.

Tip: Open the saved image in any photo viewer to share or study later!

7. Start Over (Optional)

* Where: The red “Reset” button in the controls area.
* What to Do: Click it anytime.
* What Happens: Everything clears—canvas, sliders, video—and you’re back to “Upload an MP4 video to begin.”

**Tips for Best Results**

* Video Length: Shorter videos (a few minutes) work fastest. For long ones, pick a specific section with the slider.
* Lighting: Videos with consistent lighting make motion easier to spot—big shadows might trick the tool.
* Threshold Play: If the red overlay is too faint, lower the threshold. If it’s covering everything, raise it.
* Browser: Use a modern browser and close extra tabs for smoother performance.

**Troubleshooting**

* “No video loaded” Message: Make sure you uploaded an MP4 file. Other formats won’t work.
* Button Grayed Out: The “Detect Motion” button stays disabled until a video loads successfully.
* Canvas Stays Blank: If the video doesn’t show up, it might be corrupted—try another file.
* Slow Performance: Big videos or older computers might lag. Try a shorter clip or lower the threshold.
* Error Messages: Check the status bar for clues (e.g., “Error extracting frames”). Reset and try again, or use a different video.

Still Stuck: Open your browser’s console (right-click > Inspect > Console) for detailed error messages, and feel free to share them with a tech-savvy friend!

Behind the Scenes

Curious how it works? Here’s the friendly version:

* The tool grabs frames from your video (up to 300) starting where you tell it.
* It compares each frame to the first one, pixel by pixel, using your threshold to decide what’s “different.”
* Changed pixels get marked red, and we layer them over the start frame with a see-through effect (30% opacity) using a clever canvas trick.

It’s all done in your browser—no internet needed!

**Have Fun!**

That’s it—you’re now a motion detection pro with Aquiplicity 2025! Play around, experiment with different videos, and enjoy seeing motion come to life. If you’ve got ideas to make this tool even better, we’d love to hear them.

Happy detecting!  
~ Mr. Tracy Rose