

# Puppetstrings

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## Version 1.0.7

- Variable Keyframe Rates per mapping. KF Rate in mapping is override for global Keyframe Interval. Set to 0 to use global setting
- Code Cleanups
- More Error Checking

## Version 1.0.6

- Rumble on Punch-In or Punch-Out
- Rumble on Start Record

## Version 1.0.5

- Posebone mappings will auto-mute now when recording.
  - When recording over previous keyframes with a lower keyframe rate, the non-keyframe frames will have keyframes deleted.
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## Instructions

### Setup

1. Plug in Controller.
2. In the 3D Viewport **N panel**, press **Enable Controller** – it should say *Controller Running*.

### Controls

- **Start Button**: Start the play control.
- **Back Button**:
  - When Playing: stops playback.
  - When Stopped: goes to start frame.

### Recording

- **Arm recording without punch** → records at all times.
- **Punch recording**:
  - Create markers in the timeline and choose them for punch points (pre-roll optional).
  - When punch is enabled (click the *arm circle* next to punch in), it always records in the punch area.
  - When no punch points are selected, recording happens at all frames.

### Options

- **Prevent Looping Animation**: Playback cancels at the final frame instead of looping.
- **Auto-Simplify**: Toggles render settings “Simplify” panel during recording or playback.
- **Controller FPS**: How often the controller is polled.

- **Keyframe Interval:** How often to record keyframes.
- **Smoothing (ms):** Time window for smoothing axis & trigger controls.
- **Debounce Time (ms):** Delay to prevent jittery button presses.

## Mappings

- **Mapping Set:** Group of key mappings. Needs at least one. If unchecked, the set has no effect.
  - **Button Mappings:** Specific key mappings. If unchecked, the mapping has no effect.
    - **Checkbox:** Enable this mapping for processing.
    - **Eye:** Show or hide mapping details.
    - **Button:** Axis or Button to map to.
    - **Object:** Object to apply mapping.
    - **Mapping Type:**
      - *Location / Rotation / Scale:* Axis to map is offered.
      - *Shape Key:* Lists available shape keys.
      - *Modifier / Data Path:* Still in development.
    - **Operation:**
      - *Direct Value:* Use value directly from controller.
      - *Curve:* Map controller value to a curve (extend with curve tools).
      - *Inverted Button:* 0 = On, 1 = Off.
      - *Inverted Axis:* Flips -1 to 1 → 1 to -1.
      - *Assignment Expression:* Write expression with `value` (start with =).
        - Example: `= value * 2`
      - *Easing:* Apply easing method at controller level before returning to script.
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## TODO

- Make a way to set smoothing per button.