


# Time Remap Fun

You're almost done with this lesson, so let's get crazy: We're going to use Time Remapping to make a glass of milk dance.

1 Open Comps > 14-Time Remap\*starter, which contains a super-slo-mo shot of a glass of milk being dropped. RAM Preview it or hold down  (Alt) and double-click it to open it in a QuickTime player. Scrub back and forth through the shot to get a feel for it.

Your task will be to alter the way this clip plays back to make it start playing in real time, slow down to a stop after it hits the table, then dance back and forth from there.

2 Select Milk Drop.mov, then select Layer > Time > Enable Time Remapping. Time Remap keyframes will appear in the Timeline panel at the beginning and end of the clip. Let's set some additional Time Remap keyframes to mark important frames in the original clip:

• Scrub the time indicator while watching the Comp viewer, looking for the frame just before the glass appears (around 02:06). In the Timeline panel, click on the hollow diamond between the keyframe navigator arrows to set a keyframe here. The diamond will turn gold. Note the time readout under the Switches column; this keyframe is remembering the frame number of the source.

• Scrub until the glass hits the table, around 04:13. Add another Time Remap keyframe here.

• Scrub until the splashing milk strikes a nice pose, such as when the lower splash rebounds off the table around 05:15. Set another keyframe.

• Pick one more good pose – such as around 07:05 – and set one more keyframe. These should be enough to have some fun with.

2 Scrub to find interesting points in time in the footage (top) and place Time Remap keyframes at these points (above). The time readout under the Switches column indicates the frame of the source footage. Footage courtesy Artbeats/Ultra Motion.



Hollow diamond  
between KNA's



5:00 the end

Ctrl+2

INFO PANEL

3 Move the current time indicator to around 05:00, and press **N** to end the work area here. Then press **Home**, and zoom in a bit on the timeline. Make sure the Info panel is visible; press **⌘ 2** (**Ctrl 2**) if it isn't.

CTRL+2

4 Delete the first Time Remap keyframe, and drag the remaining ones back so that the first keyframe you created (around 02:06 in the original clip) is now at 00:00 in the comp.

4 The time before the glass appears is boring, so delete the first Time Remap keyframe at 00:00. Click on Time Remap to select the remaining keyframes, and drag them back until the first keyframe you created is now at 00:00. (Add the **Shift** key after you start dragging and the keyframe will snap to the time indicator.)

SHIFT key PARK and 1st KF, delete it — AFTER  
Select all KFs —

5 Our next idea is to make this drop appear as if it was happening at normal speed – even though the original footage was shot in slo-mo. To speed up playback, you need to reduce the amount of time between Time Remap keyframes.

Make sure all of the remaining Time Remap keyframes are still selected, then **Shift**+click on the first one to deselect just it. Drag your second keyframe to 00:10 in time. The Info panel will confirm where you are dragging it.

RAM Preview; the glass will drop fast, then slow down as soon as it hits the table – in other words, as soon as it crosses your second keyframe. Since you have not changed the spacing between the second keyframe and those after it, the clip will continue to play from here at its unaltered speed.

SHIFT + CLICK on it

5 Deselect the first keyframe, and drag the others so that they start at 00:10 in the comp (right). The Info panel will confirm the time as you drag (below). Note that the value of this keyframe is 04:13 – that's the frame of the source footage that will play at this time.

02:06 to 04:13 = 2 seconds 8 frames

to get to 00:10

in 11 frames we squeeze 68

Need to zoom in on frames by  
TNS ← TNE (move very close to TNS)

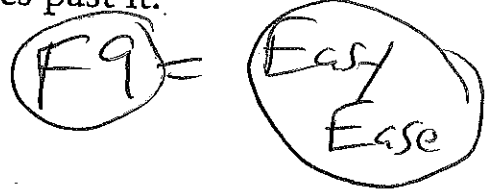
6 Now we want to slow down the milk splash until it stops, frozen at its first pose:

- **Shift**+click on the second keyframe to deselect it; the other Time Remap keyframes should remain selected.
- Increasing the time between Time Remap keyframes will slow down playback. Drag the remaining keyframes later in time, until the third keyframe is around 02:00 in the overall timeline.
- Deselect the third keyframe, and slide the fourth keyframe later to 05:00. Playback will now be slowed down from the second keyframe onwards.
- Select the third keyframe only, and press **F9** to apply Easy Ease to it. This will cause the playback speed to slow down as it approaches this keyframe, stop while on it, then speed up again as it moves past it.

▽ tip

### Speed Shift

Although Time Remapping plus Frame Blending can create that play fast/play slow trick you see in commercials and music videos, bear in mind that big-budget productions shoot on high-speed film for better quality slow motion.



6 Your timeline should look like this after Step 6. By applying Easy Ease to the third keyframe, playback will slow to a stop at this keyframe, then pick up speed again.

RAM Preview to check your progress so far. The milk splash will slow down until it encounters the third keyframe, then resume playing again. (We've already enabled frame blending for you, so playback shouldn't look *too* rough...)

**7** Time to make the milk dance by playing backward. To do that, we need to create a Time Remap keyframe that stores an earlier time than that stored by a previous keyframe.

- Select the second keyframe, which stores a source time of 04:13 when the glass first hit the table. Copy it.
- Move the current time indicator to 03:00 (past the keyframe where the milk was splashing), and Paste.

RAM Preview, and absorb for a moment what is going on: Playback is initially fast, slows down to a stop, plays backward (retracing its steps to an earlier Time Remap keyframe), then resumes in the forward direction as playback progresses to the last Time Remap keyframe you created in step 2.

**7** By pasting an earlier Time Remap keyframe after a later one, you can re-order time so that playback backs up, then goes forward again.

**8** The Graph Editor gives a more pictorial view of what is happening to the clip's playback over time. A steep slope means fast playback; a downward slope means playing in reverse.

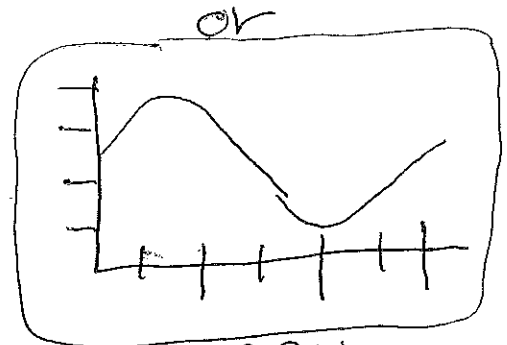
8 To see what's going on in a graphical manner, select Time Remap, and type **Shift F3** to open the Graph Editor. Click on the eyeball icon along the bottom and make sure Show Selected Properties is enabled. Then click on the icon to its right (Choose Graph Type) and make sure either Auto Select Graph Type or Edit Value Graph is selected.

The white graph line indicates how time is progressing during this composition. It starts at just past 2 seconds into the clip (the first keyframe you created in step 2), moves very quickly to just past 4 seconds into the clip, moves more slowly to 05:15 (where it encounters the keyframe with Easy Ease applied), then plays in reverse (arcs downward) to just past 4 seconds. The upward slope after this keyframe indicates playback is going forward again.

Then click on the Choose Graph Type button again and select Show Speed Graph. Move your cursor along the graph and you'll get a reading for the velocity of the layer at that point in time. When viewing either graph type, you can toggle on Graph Type > Show Reference Graph; the gray line that appears will show you the other graph type for comparison.

This composition, up to this point in time, is saved in **Comps\_Finished > 14-Time Remap\_so far**. Feel free to continue from here by turning off the Graph Editor and further manipulating the Time Remap keyframes, or have fun applying time remapping to your own footage.

SHIFT + F3

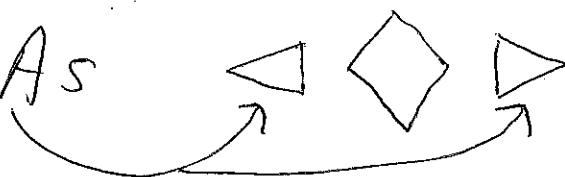


GRAPH  
EDITOR  
icon

Right next  
to CTI  
when  
CTI is  
Home

LAST  
icon

KNA's



Keyframe  
Navigation  
Arrows

8 To see what's going on in a graphical manner, select Time Remap, and type **Shift F3** to open the Graph Editor. Click on the eyeball icon along the bottom and make sure Show Selected Properties is enabled. Then click on the icon to its right (Choose Graph Type) and make sure either Auto Select Graph Type or Edit Value Graph is selected.

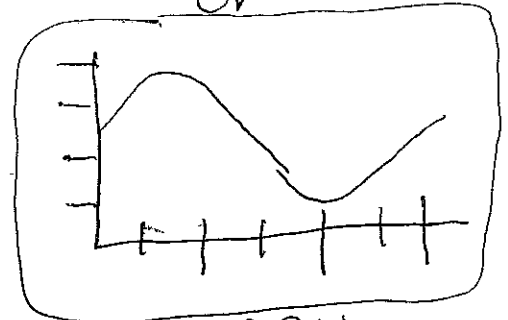
The white graph line indicates how time is progressing during this composition. It starts at just past 2 seconds into the clip (the first keyframe you created in step 2), moves very quickly to just past 4 seconds into the clip, moves more slowly to 05:15 (where it encounters the keyframe with Easy Ease applied), then plays in reverse (arcs downward) to just past 4 seconds. The upward slope after this keyframe indicates playback is going forward again.

Then click on the Choose Graph Type button again and select Show Speed Graph. Move your cursor along the graph and you'll get a reading for the velocity of the layer at that point in time. When viewing either graph type, you can toggle on Graph Type > Show Reference Graph; the gray line that appears will show you the other graph type for comparison.

This composition, up to this point in time, is saved in **Comps\_Finished > 14-Time Remap\_so far**. Feel free to continue from here by turning off the Graph Editor and further manipulating the Time Remap keyframes, or have fun applying time remapping to your own footage.

SHIFT + F3

or

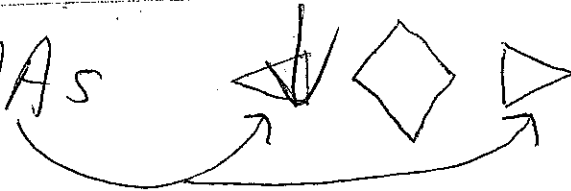


GRAPH  
EDITOR  
icon

Right next  
to CTI  
when  
CTI is  
Home

LAST  
icon

KNAS



Keyframe  
Navigation  
Arrows