Timecode Triggering

VERSION 8.X

By Arran Rothwell-Eyre December 2014

with Additions by Dave Green & Ciaran Abrams

Timecode Triggering

Timecode triggering and playback within Ai allows you to have frame accurate playback of the video elements of your show to ensure show critical playback occurs at just the right time, giving a tighter, more dynamic feel as well as a show that can be reproduced perfectly every time.

When using Timecode in Ai, it can either be run fully locked to the master timecode signal, in which case if the clock signal is interrupted or stopped, then the playback of the video will stop. Alternatively, it can be run in freewheel mode which means that the master clock controls the playback of the media, but if it is interrupted or stops, then the clip will switch to the internal clock and keep playing until it then receives the master signal again.

Timecode itself is represented by a series of numbers, for instance: 02:34:17:03 which when read from left to right reads as 2 hours, 34 minutes, 17 seconds and 3 frames. To assign a timecode trigger to a specific clip, you can either enter the value directly in the performance page or from within the right click properties of a specific media in your media banks.

Here we can see media tiles on the Performance page showing their assigned timecode trigger values:
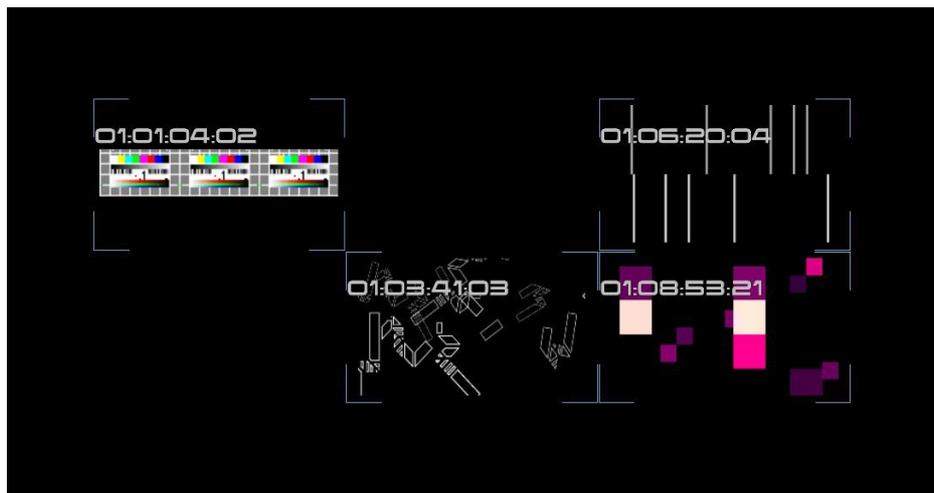
When on the performance page, pressing the Home key will show each media tiles assigned timecode trigger. An individual tiles timecode value can easily be adjusted by using the following keyboard shortcuts:

- **page up / down** adjusts frames
- **shift + page up / down** adjusts seconds
- **alt + up / down** adjusts minutes
- **shift + alt + page up / down** adjusts hours.

Alternatively, if you'd rather enter your chosen timecode value with a keyboard, right click a specific tile and halfway down the Cell Properties panel on the left, there is a value box that you can use either the mouse or the keyboard to adjust.

Once timecode triggers have been assigned to media, it is necessary to then make a few decisions as to how your timecode will be operating within Ai. Open up the System Settings window, the second section is devoted to Midi and is where we can make any system changes related to midi timecode such as the method , source and running mode. here we can see the different options given by the buttons both unchecked and checked:


- **Master Device** : select the master midi device for timecode.
- **Show Time Code Widget** : hides or displays the timecode widget within the Ai interface.
- **Time Code Active** : allows timecode to function within Ai.
- **Use LTC Timecode :** disabled – MTC is clock source, active - LTC port is clock source.
- **Free Wheel Time Code :** disabled – exclusively use master clock for playback, active – switch to internal clock when master clock is interrupted.
- **Use System Clock As Tc :** uses the onboard system clock as the timecode master.
- **Time Code Base Rate :** Set the base rate at which your timecode system is running.

The following image shows the timecode widget as seen in the Ai interface , on the left we see the widget when it is deactivated, recognised by the red border and on the the right the active widget, recognisable by the blue border. Both show the current value of timecode below them, as well as visually in rings making up the widget itself which build up as time increases.
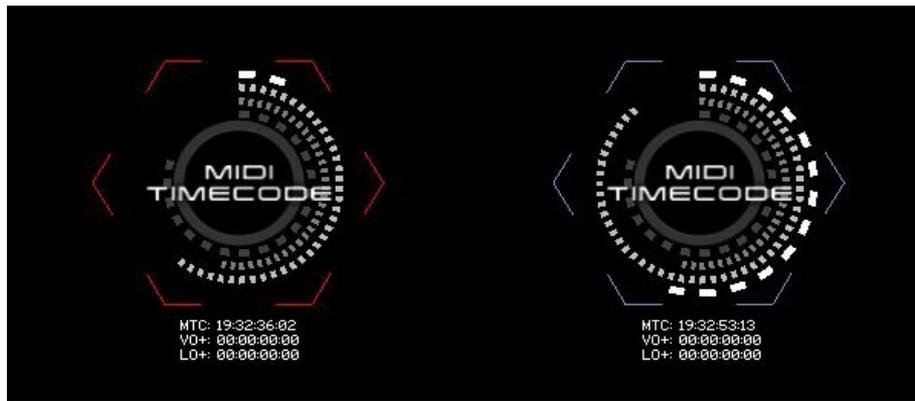
The timecode widget can be activated either by selecting the option from within the system settings window or by using the mouse to click on the widget itself in the main Ai interface.

Timecode can also be selected as a playmode for layers – allowing you to playback any media without needing a predetermined trigger, but still receive the benefit of being frame locked for playback. To set this for a layers playback mode choose MTC from the playback modes list.
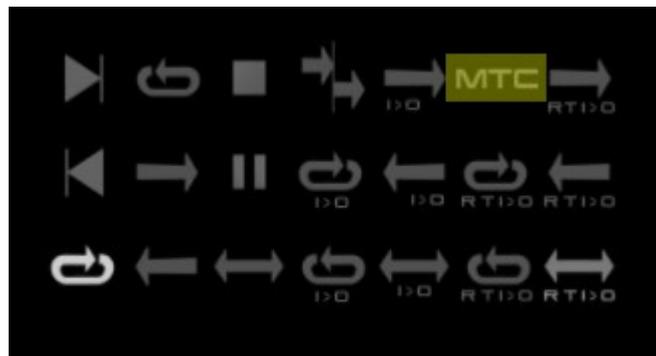
Within the layer personality it is also possible to find some ArtNet controls related to timecode. When using Ai in file and folder mode clip playing mode, channel 73 adjusts the offset in hours, 74 adjusts minutes ,75 adjusts seconds and 76 and adjusts frames. Ai needs to be set in 80 or 100 channel mode for this to function.

Now that we have had a look at all of the related features, lets have a look over what is involved in making use of timecode triggering within Ai. Whether you want to trigger a single piece of media to one screen or several pieces at the same time to multiple fixtures, the process is fairly simple:

Procedure for triggering clips with timecode:

1. Layer lock each clip in the clip properties (right click on media tile) if you wish to Timecode trigger to a certain layer.
2. Set each clip to MTC play mode if you wish to lock the clip to the MTC clock in the clip properties. (right click on media tile)
3. Set your Timecode Trigger times in the clip properties. (right click on media tile)
4. Make sure your System Settings/Midi timecode options are set appropriately.

Procedure for triggering to multiple fixtures simultaneously with timecode:

1. Fixture lock each clip you wish to trigger with timecode to the relevant fixture (select fixture, select clip, then ctrl click clip).
2. Layer lock each clip in the clip properties if you wish to TC trigger to a certain layer.
3. Set each clip to MTC play mode if you wish to lock the clip to the MTC clock in the clip properties.
4. Set your Timecode Trigger times in the clip properties.
5. Buddy all of your clips which you wish to trigger simultaneously together (shift click to multi select and then ctrl B, or enter manually in clip properties)
6. Make sure your System Settings/Midi timecode options are set appropriately.

Once you have gone through the relevant process, you can then show the timecode widget, activate it and then once timecode is sent to your machine, your clips will playback at the appropriate times.