

Timecode Shows

Mtc/Ltc Sync + Cues That Fire On Position

This guide covers external timecode sync: lock DjMirror Pulse to MTC (timecode over MIDI) or LTC (timecode as an audio signal), monitor the lock, and run any action when the timeline crosses a cue mark going forward (HH:MM:SS:FF). It is the standard way to sync visuals and...

DjMirror Pulse User Manual Series

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Related guides: automation tied to the wall clock instead is the [Programming Schedule](#); the musical beat grid is covered in [Audio Setup & Beat Sync](#); the license requirement is in [License & Activation](#).

Chapter 1: The Example: A 30-Minute Playback Show

Position	Cue name	Action
00:00:00:00	Top of show	style → <i>Opener</i> , dmxScene → <i>Welcome</i>
00:05:12:00	First peak	dmxScene → <i>Dance floor</i>
00:14:00:00	Speech	artist → the host, layerVisibility → marquee ON
00:28:30:00	Finale	style → <i>Peak</i>
00:29:55:00	Blackout	dmxScene → <i>Chill</i>

The source here is a theater playback machine sending LTC over an audio cable (right channel), with MTC as a backup.

Chapter 2: Concepts In Two Minutes

- **Source modes:** **Disabled**, **MTC only (MIDI)**, **LTC only (audio)**, **Automatic (MTC + LTC)** and **Manual (internal)**. Manual is a rehearsal clock inside the app (Play, Pause, seek) that needs no external gear.
- **Cues fire only when the timeline crosses them going forward.** Scrubbing backward, pausing, or jumping **more than 8 seconds** past a cue never fires it. Frames follow the **active frame rate** (in Manual mode: 24, 25, 29.97 or 30 fps).
- **The same 14 actions** as the Programming Schedule and the controllers — see the [action reference](#). A cue has an optional **Name**, hours / minutes / seconds / frames (frames 0–29), an action with its target and value, and its own **Active** switch.
- **Source and device choices are not saved.** Select the MIDI input, audio input and channel again on each computer. The cues themselves are saved with the show and can be exported to a JSON file.
- **Dedicated lines.** MTC needs its own MIDI input; LTC needs its own audio input and channel (0 = left or mono, 1 = right). Never use the input you use for music analysis — the panel says so at the bottom.

Chapter 3: Step By Step

Step 1 – Lock to the source (5 min)

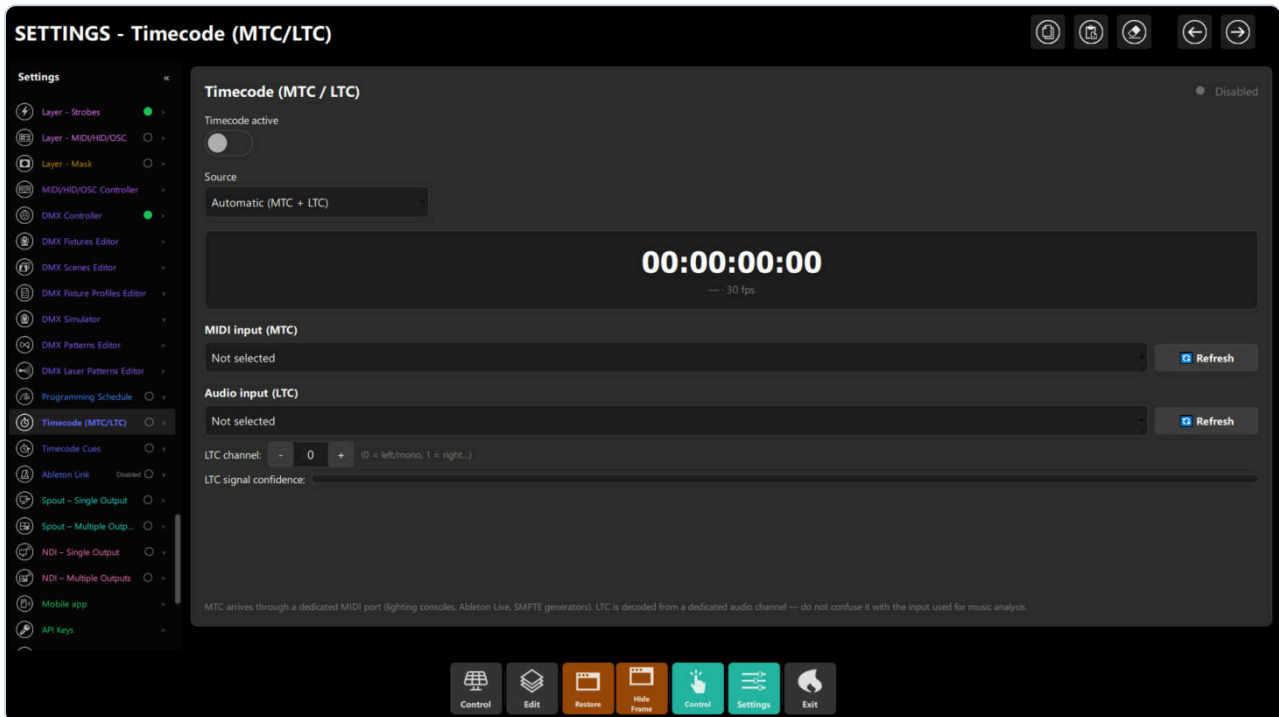


Figure 1: Settings → Timecode (MTC/LTC) — the master switch, Source, the running time display, the MIDI and audio inputs, the LTC channel and the LTC confidence bar.

1. Open **Settings** → **Timecode (MTC/LTC)** and turn **Timecode active** on.
2. **Source:** choose **Automatic (MTC + LTC)** for a redundant rig, or the single mode you actually feed.
3. Pick the **MIDI input (MTC)** that carries MTC and the **Audio input (LTC)** that carries the LTC signal (press **Refresh** if a device is missing). Set the **LTC channel** to match the cable. Only the inputs relevant to the selected mode are shown.
4. Watch the monitor: a running **HH:MM:SS:FF**, a line with the source and frame rate, a status of **Locked to MTC/LTC**, and a steady, high **LTC signal confidence** bar. If you see **No signal**, check the cable and the device first, then the settings.

Step 2 – Place cues (10 min)

1. Open **Settings** → **Timecode Cues**, turn **Active cues** on and press **New cue**. A new cue starts at **0:0:0:0** with a **style** action.
2. For each cue set the **Name** (optional, but you will thank yourself later), the hours / minutes / seconds / frames, and press **Edit** to choose the action, its target and value. Keep the cue's **Active** switch on.
3. Reorder with **▲/▼** and delete with the bin button.

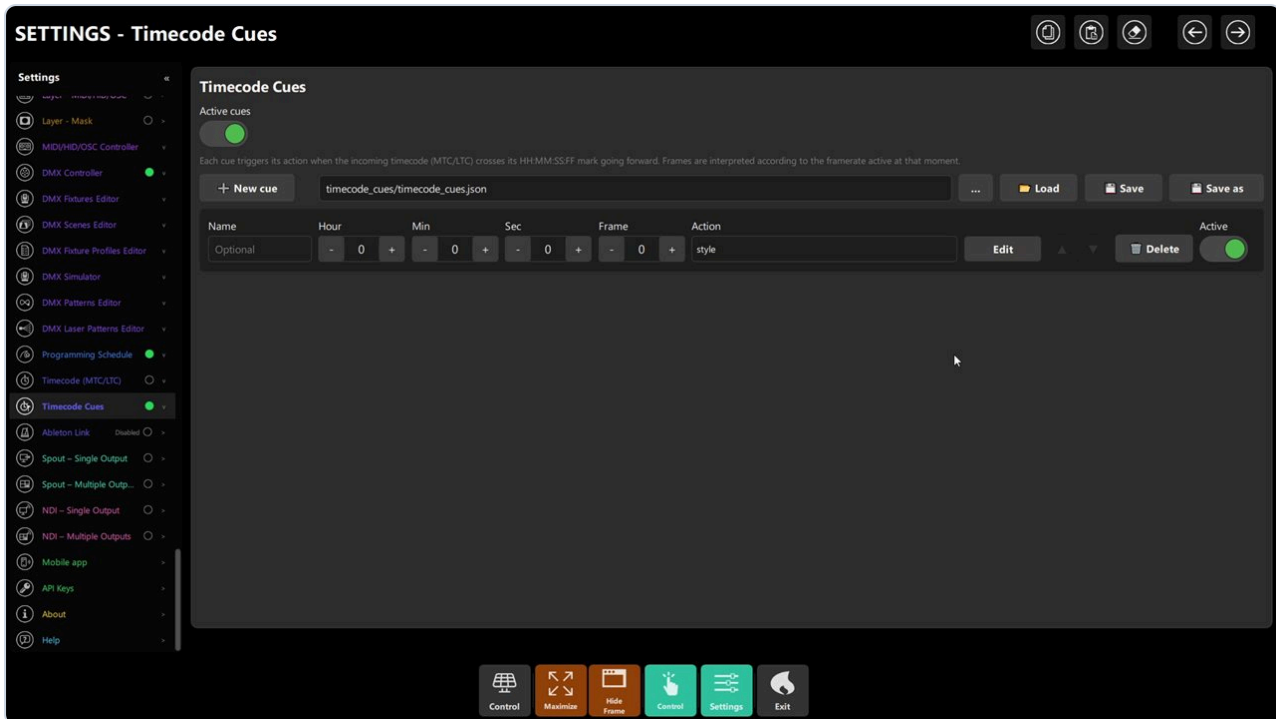


Figure 2: the cues editor — master switch, New cue, the JSON file row and the per-cue time steppers.

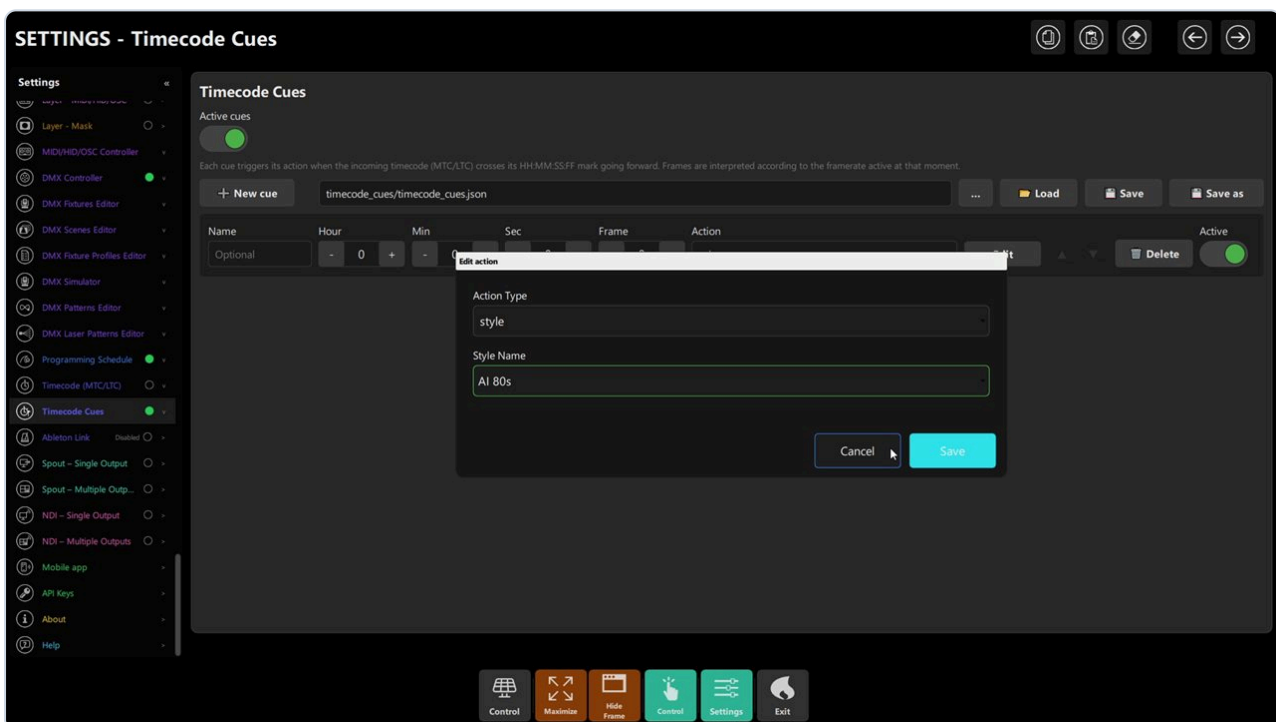


Figure 3: the same Edit dialog as the Programming Schedule — action type plus the live list of targets (here, a style).

4. Respect the physics: keep cues a few seconds apart and put nothing critical within 8 seconds after a point where the playback rig can jump.

Step 3 – Rehearse without the rig (5 min)

1. Set **Source** to **Manual (internal)**, press ► **Play**, drag the **Timeline** or use **Go to** for an exact **H:M:S:F**.
2. Play through the cue marks going forward — each one fires once. Seeking back over a cue that already fired does nothing, which is correct.

3. **Save** writes `timecode_cues/timecode_cues.json`; **Load** and **Save as** let you keep one file per venue.

Chapter 4: Pre-Show Checklist

1. Source is the show source — not **Manual** left over from rehearsal.
2. The status shows **Locked**, the confidence bar is steady, and the frame rate matches the playback rig.
3. **Active cues** is on and every cue's own **Active** switch is on.
4. A full run was done once (Manual or dress rehearsal): every cue fired, and the finale and blackout were confirmed.

Chapter 5: Troubleshooting

Symptom	Likely cause	Fix
No signal or Disabled	Wrong source mode, device or cable	Match the mode to the feed; Refresh ; pick the inputs again; check cables
LTC keeps losing lock	Wrong channel or weak level	Set the channel (0/1) to the cable; raise the feed level; watch the confidence bar
A cue never fires	Master or cue switch off, or the timeline jumped past it by more than 8 s	Turn both on; avoid locating past cues; space cues away from jump points
A cue fires twice	The timeline looped back over the mark	Forward crossings only, by design — check the playback is not re-crossing
Frames are misaligned	Frame rate differs from the rig	Match Manual frame rate or the rig's fps (24/25/29.97/30)
Inputs are empty on a new PC	Source and device choices are not saved	Select the inputs again; the cues travel in the JSON file
Load fails	The file is not a cues file	It must be JSON with an entries list; read the status (Could not read: / Invalid JSON...)
A cue's action does nothing	Its target was renamed or deleted	Edit the cue and pick the target again

More: [Troubleshooting](#).

Chapter 6: Quick Recipe Card

- **Source:** MTC, LTC, Automatic or Manual (for rehearsal). Dedicated inputs; LTC channel 0 or 1; **Refresh**.
- **Monitor:** `HH:MM:SS:FF` plus **Locked** plus the confidence bar. Match the rig's frame rate.
- **Cues:** Name + H/M/S/F + one of 14 actions; forward crossings only; 8 s re-arm window; two switches (master + cue).
- **Save** one JSON per venue (`timecode_cues/`); re-select inputs on each machine.