




Introduction

This document covers the steps required to set up an L-Acoustics DJ system to make it ready for calibration, and serves as a reference and troubleshooting document for on-site technicians.

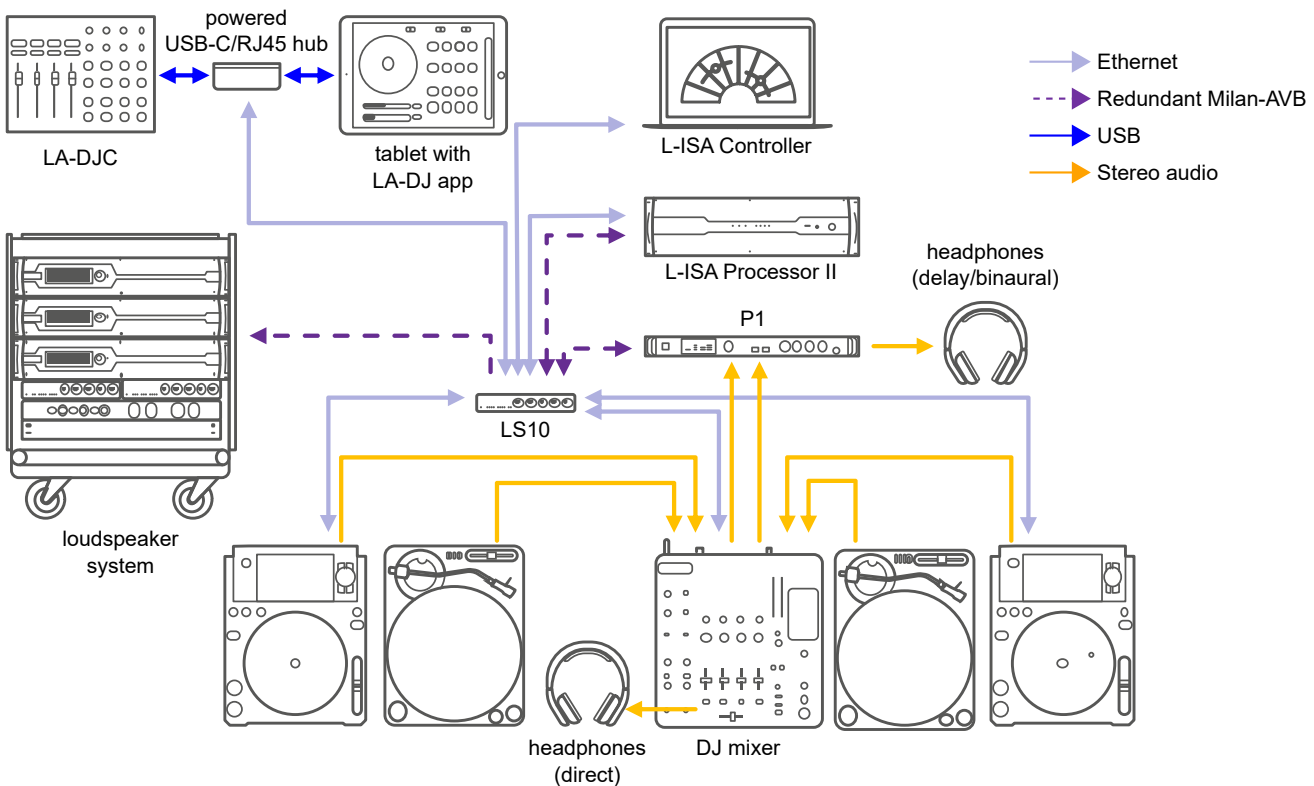
Symbols

The following symbols are used in this document:

-  This symbol indicates a potential risk of harm to an individual or damage to the product. It can also notify the user about instructions that must be strictly followed to ensure safe installation or operation of the product.
-  This symbol notifies the user about instructions that must be strictly followed to ensure proper installation or operation of the product.
-  This symbol notifies the user about complementary information or optional instructions.

System overview

L-Acoustics DJ system example



LA-DJC LED intensity

The LA-DJC has a medium LED intensity when powered through the USB connector.

If needed, power LA-DJC using a 5 V / 3 A power supply (not provided) to increase the LED intensity.

Audio signal flow

The main stereo output from the DJ mixer is connected to the Analog, AES/EBU, or Milan-AVB input 1 and 2 of the L-Acoustics P1.

The L-Acoustics P1 processes the incoming stereo signal and outputs eight audio channels via Milan-AVB to the L-ISA Processor II. These eight audio channels include the main stereo feed for source separation and processing, and complementary signals used to build the immersive bed.

The outputs of the L-ISA Processor II are then sent via Milan-AVB to the amplified controllers.

Control data flow

Control data is sent from the L-Acoustics DJ App to the L-ISA Controller session running on the control computer.

The controls in the L-Acoustics DJ App are MIDI-mapped to the LA-DJC.

Additional tempo synchronisation information can be provided using:

- Manual tap tempo in the L-Acoustics DJ App
- MIDI Machine Control (MMC) Clock
- Ableton Link

Software and firmware files

The L-Acoustics release pack includes:

- `L-Acoustics DJ yyyy.x App.tosc`: L-Acoustics DJ App file for TouchOSC
- `L-Acoustics DJ yyyy.x LA-DJC Config.ytx`: configuration file for LA-DJC
- `L-Acoustics DJ yyyy.x L-ISA Template.lisa`: L-ISA Controller template session file
- `L-Acoustics DJ yyyy.x P1.nwm`: LA Network Manager template session file

The latest versions of the L-Acoustics DJ release pack, L-ISA Studio, and LA Network Manager are available on the L-Acoustics website.

Audio setup

How to setup the DJ mixer for playback.

Audio source setup

Audio hosted on the DJ mixer is routed to the L-Acoustics P1. Connect the output of the DJ mixer to Inputs 1 and 2 of the L-Acoustics P1 using Milan-AVB, Analog, or AES/EBU.



P1 Media Player can also be used for audio playback.

Refer to the **P1 owner's manual**.

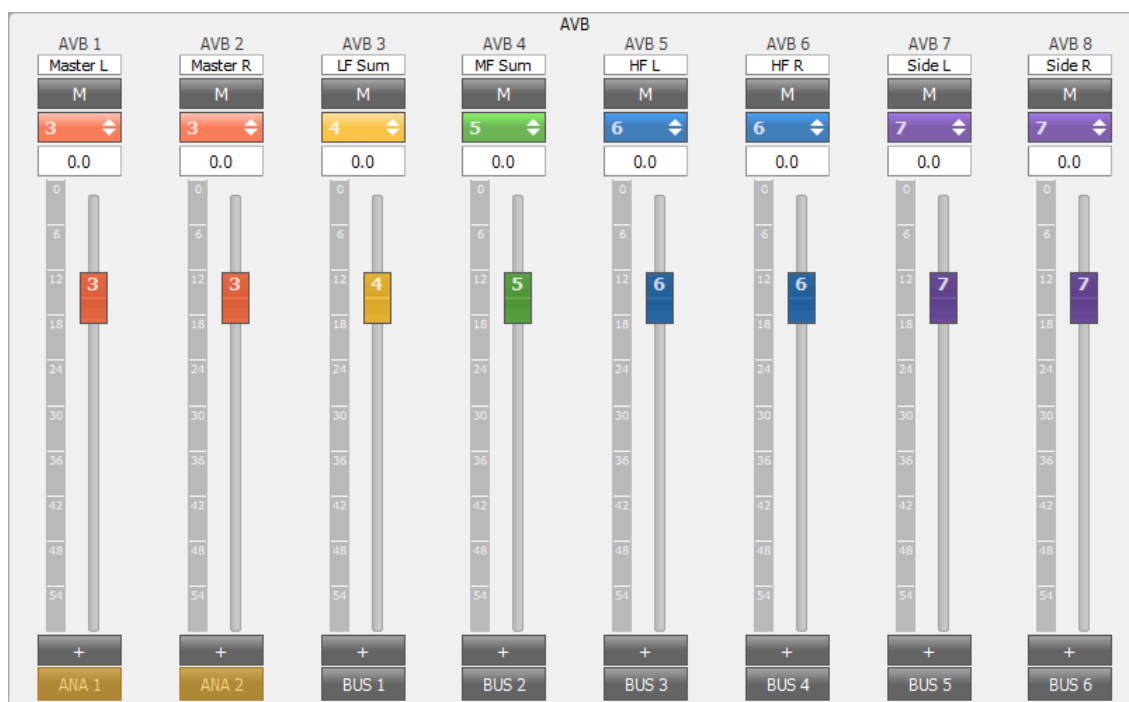
LA Network Manager setup

Prerequisite

Download the latest version of the L-Acoustics DJ release pack from the L-Acoustics website.

Procedure

1. In LA Network Manager, open L-Acoustics DJ yyyy.x P1.nwm.
2. In **Options**, select the appropriate network interface card.
3. Switch to **Online** mode.
4. Use the **Unit Matcher** to resolve matching issues between virtual and physical units.
5. If the output of the audio interface is not Analog, change the audio source for the AVB outputs 1 and 2:
 - a) Go to the **Tuning** page.
 - b) Select P1.
 - c) In the **Output** tab, assign the correct audio source for the AVB outputs 1 and 2 (AES 1-2, AVB 1-2, or MPL L/R).



Headphone CUE

During a DJ performance, the DJ uses the CUE function to pre-listen to audio tracks via headphones before sending them to the master output. This is essential for beatmatching and preparing transitions.

CUE without delay

Connect the headphones directly to the CUE output of the DJ mixer if responsiveness is the priority.

CUE with delay

Connect the headphones to the headphone output of P1.

Because of the system latency and source separation processing, additional delay may be required on this CUE signal to ensure correct synchronization between the headphones and the immersive monitor loudspeaker system.

In this configuration, the CUE output from the DJ mixer goes to Analog, AES/EBU, or Milan-AVB inputs 3 and 4 of the L-Acoustics P1. The signal is routed internally via the DSP buses 7 and 8 where the delay can be applied, to Analog or AES/EBU outputs 3 and 4, or to the P1 headphone outputs 1 and 2.

This delay time is set to 30 ms by default in the LA Network Manager template session but it may need to be increased or decreased depending on the system configuration. Refer to [Headphone CUE delay settings](#) (p.4).

An optional stereo signal such as the binaural output of the L-ISA Processor II can be sent to the headphone output of the L-Acoustics P1 with additional system delay compensation. Refer to [Binaural output settings](#) (p.5).

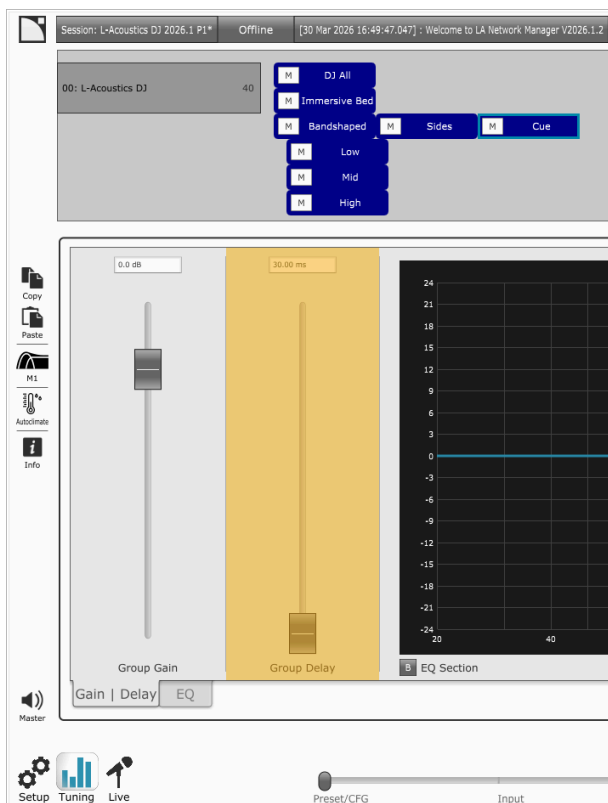


The added delay time increases button input latency on the DJ mixer.

Headphone CUE delay settings

Procedure

1. In LA Network Manager, open L-Acoustics DJ yyyy.x P1.nwm.
2. Go to the **Tuning** page.
3. Select the **Cue** group.
4. In **Group Delay**, set the desired delay time.



Binaural output settings

Procedure

1. In L-ISA Controller, open `L-Acoustics DJ yyyy.x L-ISA Template.lisa`.
2. Go to the **Settings** view.
3. In the **Routing** tab, assign **Binaural L** and **Binaural R** to the fifth and sixth output of an unused output stream, respectively.
4. Using Milan Manager, connect this output stream to P1.

L-ISA Controller setup

Prerequisite

Download the latest version of the L-Acoustics DJ release pack from the L-Acoustics website.

AVB settings

Using Milan Manager, connect the AVB Output Stream 1 of P1 to the AVB Input Stream 1 of the L-ISA Processor.

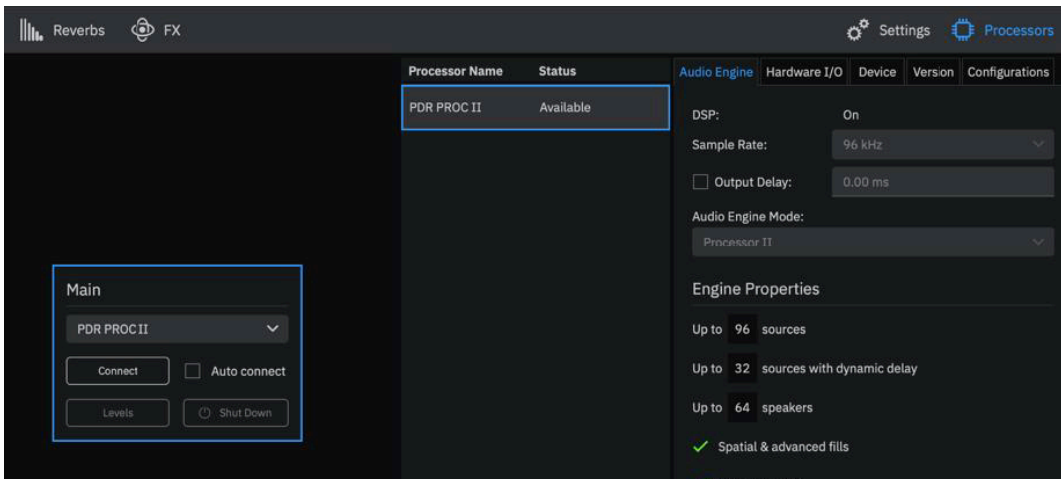


Make sure that the AVB clocking scheme is set up properly.

Connecting to the L-ISA Processor

Procedure

1. In L-ISA Controller, open `L-Acoustics DJ yyyy.x L-ISA Template.lisa`.
2. In the **Processors** view, connect to the L-ISA Processor. Make sure that the status of the L-ISA Processor is **Connected**.



Configuring the L-ISA Processor

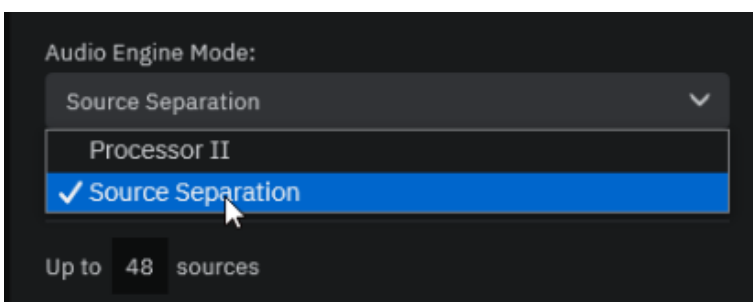
Procedure

1. In the Processor list, select the L-ISA Processor.
2. In the **Audio Engine** tab, select **Source Separation** for the **Audio Engine Mode**.

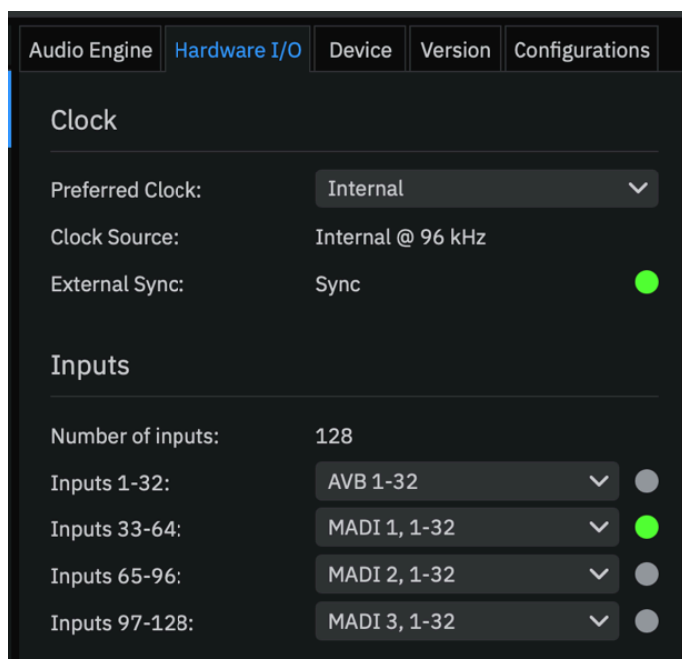


If **Source Separation** is not available, go to the **Version** tab and click **Update License**.

If **Source Separation** is still not available, then the L-ISA Processor is not licensed for L-Acoustics DJ. Contact your Certified Provider.



- In the **Hardware I/O** tab, select **AVB 1-32** for **Inputs 1-32**.



Configuring the source separation routing

Procedure

- Go to the **Settings** view.
- In the **Source Separation** tab, assign **Stereo left** to input 1 and **Stereo right** to input 2.

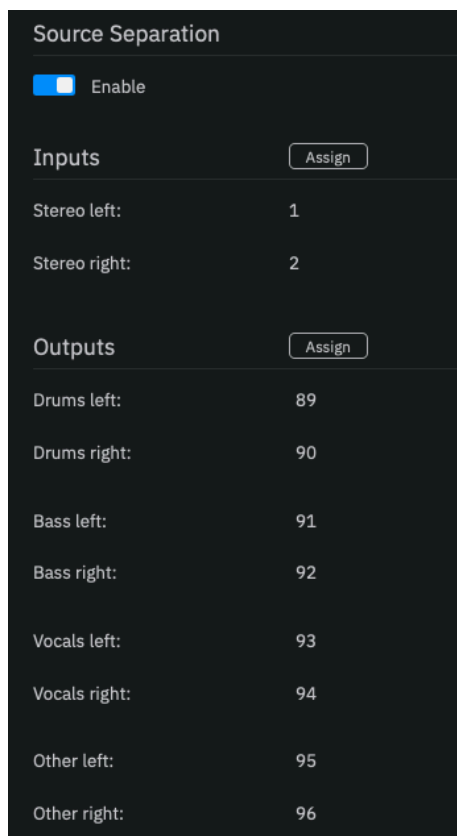


If the **Source Separation** tab is not available, then L-ISA Controller is not licensed for L-Acoustics DJ.

The L-Acoustics DJ license key is included in the email sent after purchase.

If the L-Acoustics DJ license key is not available, contact your Certified Provider.

- Assign the Outputs to channels 89 through 96. These channels are used for the separated stems.



Editing the OSC settings



The **This Machine** row is available in the template session for tests with TouchOSC running locally.

Procedure

1. In the **Settings** view, go to the **OSC** tab.
2. In the **Stage DJ App** row, enter the IP address of the device running the L-Acoustics DJ App.

ID	Device Name	IP Address	Device Rx Port	Fader Control	Receive From	Send To	Send Position	Format	Coordinates	Message Settings	Geometry Settings
1	This Machine	127.0.0.1	9000	None	ON	ON	Post FX	L-ISA			
2	Stage DJ App	192.168.1.231	9000	Levels	ON	ON	Post FX	L-ISA			
3	FoH DJ App	192.168.1.232	9000	None	ON	ON	Post FX	L-ISA			
4											



To enable volume control of the monitoring system through the L-Acoustics DJ App, make sure that **Fader Control > Levels** is selected for the **Stage DJ App** device.

Fader Control > Levels can only be activated for one OSC device.

3. The **FoH DJ App** row is available in the template session for an additional device running the L-Acoustics DJ App. If necessary, edit the IP address for this row, and add additional devices.


L-Acoustics DJ TouchOSC application setup

How to setup TouchOSC on a device.

Prerequisite

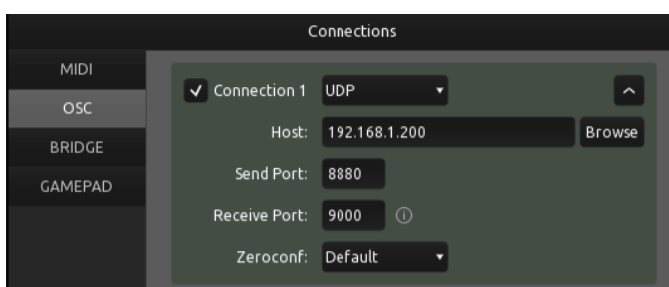
Download the latest version of the L-Acoustics DJ release pack from the L-Acoustics website.

Procedure

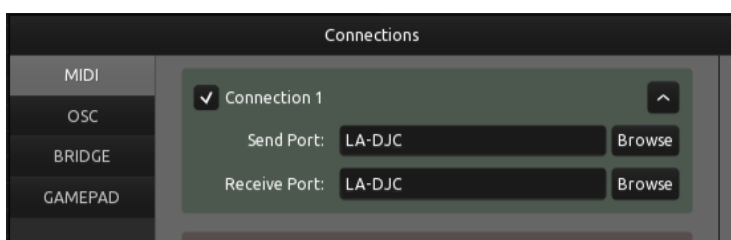
1. Open TouchOSC on the device.
2. In the top bar, tap or click  to open the **Connections** window.



3. In the OSC tab:



- a) Select **Connection 1** to activate it.
 - b) Set **Host** with the IP address of the control computer.
 - c) Set the **Send Port** to 8880.
 - d) Set the **Receive Port** to 9000.
 - e) Select **Default** for **Zeroconf**.
4. In the MIDI tab:



- a) Select **Connection 1** to activate it.
 - b) Select **LA-DJC** as both the **Send Port** and the **Receive Port**.
5. Tap or click **File > Open...** and open the L-Acoustics DJ yyyy.x App.tosc.
 6. In the top bar, tap or click the play button to switch to control surface mode.



Results

The **Moods** and **Effects** buttons are responsive and the TouchOSC visualizer receives source position data from L-ISA Controller.

Default left and right source positions

Default position for the left and right sources can be changed to match the loudspeaker layout.

Procedure

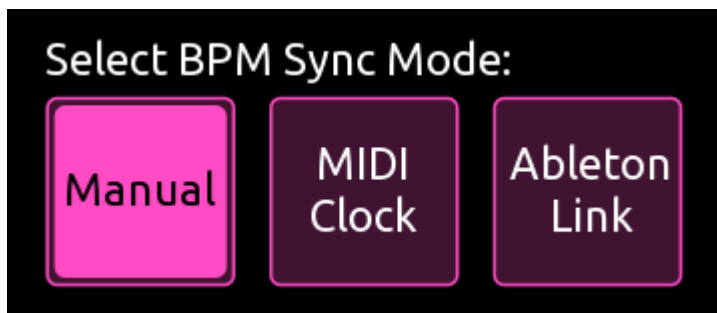
1. In L-ISA Controller, select sources 47 (**Default L position**) and 48 (**Default R position**) in the **Sources List**.
2. Move these sources to match the position of the left and right loudspeakers. Click **SNAP** to snap the selected source to the nearest speaker.

Results

Once changed, the updated default positions are taken into account in the L-Acoustics DJ App when a new mood or effect is activated.

BPM Sync Modes

L-ISA Controller can receive tempo information to synchronize the Moods and Effects to a BPM signal. The BPM Sync Mode can be changed from the L-Acoustics DJ App.

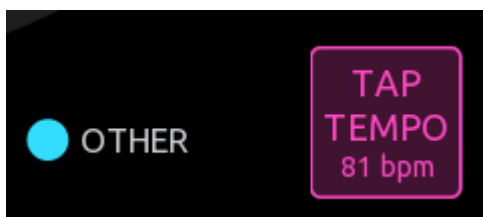


Manual tap tempo from the L-Acoustics DJ App

If the audio is hosted from a device that cannot automatically send tempo information, it is possible to tap the tempo using the L-Acoustics DJ App.

Procedure

1. In the L-Acoustics DJ App, go to the **Settings** view and select **Manual** as the **BPM Sync Mode**.
2. Go to the main view. The **Tap Tempo** button is now available. The button displays the current BPM and blinks in time with the set tempo.



3. Tap the **Tap Tempo** button repeatedly to set a new tempo.

Results

The new tempo is sent to the L-ISA Controller, and affects movement of the audio objects when using moods and effects in the L-Acoustics DJ App.

MIDI Machine Control Clock

MIDI Machine Control Clock (MMC) is a signal used to synchronize the tempos of different MIDI devices. L-ISA Controller supports incoming MMC signals from external devices such as a DJ mixer.

! MMC requires a compatible DJ mixer that supports MIDI clock and a physical USB connection between the DJ mixer and the device running L-ISA Controller.

Procedure

1. In the L-Acoustics DJ App, go to the **Settings** view and select **MIDI Clock** as the **BPM Sync Mode**.
2. In L-ISA Controller, go to the **Settings** view, and to the **MIDI** tab.
3. Select **MMC (MIDI Clock)** as the **Tempo Source**.
4. In **MIDI Interface**, select the relevant external device as the MMC source.

Results

The new tempo affects movement of the audio objects when using moods and effects in the L-Acoustics DJ App.

Ableton Link

Ableton Link is a protocol that synchronizes the timing of supported applications and devices. L-ISA Controller supports Ableton Link and can receive tempo information from external applications to synchronize the FX engine for the moods and effects of L-Acoustics DJ.

Link™ and Live™ are trademarks of Ableton AG.



Ableton Link requires a compatible DJ mixer that supports Ableton Link and a physical network connection between the DJ mixer and the device running L-ISA Controller.



The Ableton Link source and L-ISA Controller do not need to be on the same device as long as they are on the same network.

Procedure

1. In the chosen application or device, activate Ableton Link.
2. In the L-Acoustics DJ App, go to the **Settings** view and select **Ableton Link** as the **BPM Sync Mode**.

Results

Tempo information is shared between the source application or device and L-ISA Controller, and the new tempo affects movement of the audio objects when using moods and effects in the L-Acoustics DJ App.

What to do next

For more information, refer to the Ableton website.

LA-DJC configuration update

How to load the latest version of the controller configuration in LA-DJC.

Prerequisite

Download the latest version of the L-Acoustics DJ release pack from the L-Acoustics website.

Procedure

1. Connect LA-DJC to a computer using a USB cable.
2. Go to kilowhat.yaeltex.com.
3. Select **LA-DJC**.
4. Click **File** and select `L-Acoustics DJ yyyy.x LA-DJC Config.ytx`.
5. Click **Send to device**.
LA-DJC reboots with the updated configuration.

What to do next

In TouchOSC, select LA-DJC in the MIDI settings, and test the updated configuration with the TouchOSC file for L-Acoustics DJ. See [L-Acoustics DJ TouchOSC application setup](#) (p.9).