



ableton ag | schönhauser allee 6-7 | 10119 berlin germany | telefon +49 30 2887630 | telefax +49 30 28876311 | www.ableton.com | kontakt@ableton.com

Ableton Max for Live Production Guidelines

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Technical Checklist:

- Frozen Devices, all file dependencies included
- Compatibility with OSX and Windows
- Device Parameters must be stored and recall correctly when loading a preset
- Device does not spill into Undo history
- Check and set Device latency
- All parameters in Device UI can be MIDI mapped and automated
- Device parameters are labeled in a meaningful way
- Automation parameters are named consistently
- Parameters map to control surfaces in the right order
- Keep verbose output in Max window to a minimum
- Device parameters have info text in English
- Device user interface needs to work with different Live skins
- No secret URL links in main User Interface
- Device should withstand stress-test
- Frozen tracks with a MFL device sound the same as unfrozen playback
- Disabled parameters in device UI should be grayed out

Presentation Checklist:

- Instruments and effects should produce sound when loaded
- Try to keep UI size and pop-ups to a minimum
- Presets or example Live Sets help others to learn the purpose of your device
- Clean programming and code documentation helps others understand your device

Notes for updating existing devices



Frozen Devices, all file dependencies included

Reason: Max for Live devices that have dependencies may break when self-containing a Live Set or moving the device amxd.

How to check:

- Load device, open the MFL Editor and check if device is frozen (bottom left side in editor window)
- Safety-check: Load device on another computer, Cmd+click (Mac) or right-click (Windows) on the device's title bar and select "Open Max window" to check for errors

Compatibility with OSX and Windows

All devices should work on Mac and PC so that a Live Set using the MFL device is cross-platform compatible.

Note: Max external objects that are not included in the standard Max distribution need to be compiled separately for Mac and PC platforms by their developers. If your device uses a Max external that is not part of the standard Max distribution, you'll need to be sure that the object is available for both platforms (the site www.maxobjects.com is a good source of information).

Device Parameters must be stored and recall correctly when loading a preset

Devices that don't save their parameters with a Live Set are of limited use. Also, devices that use samples or video files need to store the file path in a Live document.

How to check:

- Load device, change parameters and save Live Set.
- Open saved Live Set and verify that parameter settings are recalled correctly

Device does not fill Live's Undo history

Some devices that use internal modulations may create a very large number of undo events, which essentially renders Live's Undo function useless.

How to check:

- Load device, enable all modulations and start Live's playback
- Perform an action in Live to create an undo event (e.g. create an empty MIDI track)
- While Live is running, check that the Edit menu shows "Undo Insert MIDI Track" as the last Undo entry.

Check and set Device latency

Max for Live allows setting "Defined Latency" in the patch inspector. Live compensates for this latency on playback. To make sure that your device plays in sync with the rest of the Live Set, it may be required to set the correct device latency.

How to check for audio effect device latency:

- Load device and group it into an Audio Effect Rack.
- Create an additional empty chain in the Audio Effect Rack.



- Turn Pan of both chains to left and right
- Play audio clip with visible transients and record track output to new audio track.
- Check if left and right side align.

How to check for instrument device latency:

- Load device and group into an Instrument Rack
- Create an additional chain and drop Operator into second chain.
- Turn Pan of both chains to left and right
- Set instruments to short attack and release time
- Play MIDI notes and record track output to new audio track.
- Check if Operator and MFL device outputs on left and right side align

All parameters in Device UI can be MIDI-mapped and automated

Device parameters in the UI should be MIDI-mappable to allow users to control parameters with a MIDI controller.

How to check:

- Load device, enable MIDI Map Mode (Cmd+M/Mac; Ctrl-M/Windows) and check that all device parameters have a color overlay
- Compare to other built-in Live devices, if necessary

Fix:

- Use MFL objects like `live.dial` and `live.numbox` in the device UI
- Make sure `live.` objects are set to “Automated and Stored”

Device parameters are labeled in a meaningful way

The device parameters should be labeled in a meaningful way so that anyone who loads the device for the first time can immediately understand the purpose of each parameter.

Automation parameters are named consistently

By default, automation parameters in new MFL devices are called `live.numbox[1]` or `live.dial[3]`. These default parameter names should be changed to meaningful names (ideally the parameter name as displayed within the UI itself), so that a user can identify them easily in the list of automation parameters.

How to check:

- Load device, switch to Arrangement View and open the list of automation parameters for the track that contains the device.

Parameters map to control surfaces in the right order

When selecting a device in Live, the device parameter automatically map to knobs on a hardware control surface like an Akai APC-40, Novation RemoteSL or M-Audio Axiom. The “Order” attribute in a parameter inspector defines the order in which parameters are mapped to the 8 knobs of the control surface. The first 8 knobs should map to the most important parameters of a device.



Keep verbose output in Max window to a minimum

Some programmers use extra verbose output during development to debug their device. In Live Sets with many different MFL devices, it becomes more difficult to recognize a device error when other devices populate the Max window with unnecessary verbose output. Please make sure to remove any unnecessary print before publishing the device.

How to check:

- Load device, Cmd+click (Mac) or right-click (Windows) on the device's title bar and choose "Open Max Window"

Device parameters have Infotext in English

Info texts on device parameters show in Live's built-in Info View on the bottom left side. They help users to understand the meaning of individual functions of the device. Please try to provide Infotext for device parameters.

How to check:

- Load device and mouse-over parameters to check that Infotext shows up correctly in Live's Info View.

Device user interface needs to be readable in different Live skins

Many Live users utilize different Live skins to adopt to different surroundings like stage lighting or studio. Please make sure that your device works with darker and brighter Live skins.

How to check:

- Load device, open the Look/Feel tab in Live' Preferences, and select different Live skins from the pull-down menu

Note: Device colors can be adjusted to the current Live skin colors via [live.colors]

No secret URL links in main user Interface

URLs within a Max for Live device UI will open a browser, even when clicked accidentally. As a Live user, particularly when performing on stage, opening the browser can result in severe dropouts.

Please avoid URLs in the main device interface and place any author credentials or URLs within the patch so it is only visible when in patch edit mode.



Device should withstand stress-test

MFL device performance and timing should be measured in a Live Set within a musical context if possible.

How to check:

- Load several instances of your device
- Add additional MFL devices or Suite instruments
- Automate some parameters in your MFL device

Note: If parameter automation causes high CPU load, then try enabling “Defer Automation Output” in the parameter inspector, or try higher values for “Update Limit”.

Frozen tracks with a MFL device sound the same as unfrozen playback

How to check:

- Load MFL device into Track 1 and create a simple clip
- Create an additional audio Track 2 and route the audio from Track 1 into Track 2
- Play clip in Track 1 and record audio into Track 2
- Freeze Track 1, play both Track 1 and 2 and compare output on both tracks

Disabled parameters in device UI should be grayed out

When certain parameters in a device UI are unavailable, then the color of those UI elements should be changed to suggest that the elements are grayed out.



Presentation

Instruments and effects should produce sound when loaded

Instruments should be set up to produce some sort of default sound that is representative of the instrument. In case of sample-based instruments, it's worth including a sample file.

Effects should at least pass through audio, ideally by applying the effect to the source signal.

Try to keep UI size and pop-ups to a minimum

Pop-up windows may cause key focus problems and work against the one-window workflow in Live. We suggest to keep the device UI as concise as possible without breaking out into additional windows.

Presets or example Live Sets help others to learn the purpose of your device

Please try to provide a simple Live Sets or presets that showcase your device to help other users to understand the purpose and characteristics of your device.



Notes on updating existing devices

Live treats Max for Live devices in a similar way as sample files. Live Sets reference a Max for Live device (amxd); the device is not contained within the Live Set.

If you create a Live Set with a specific device and later change that device, the Live Set may not play back correctly. To assure that a Live Set always plays back correctly, please freeze your MFL devices and save the Live Set as a self-contained Project (see the section called *Collecting External Files* in the Live manual).

Live stores parameter values for each live.[x] parameter (live.dial, live.toggle, etc) that is set to “Automated and Stored” or “Stored Only”. Live identifies the live.[x] parameter in a MFL device by the parameter’s “Long Name.” Changing the “Long Name” of any live.[x] object will break value recall for this parameter.

As a device builder, please note:

When providing an update of a previously published Max for Live device, avoid changing the “Long Name” of any live.[x] object.

If you do make significant changes to the device, we recommend publishing the amxd with a different file name, e.g. by appending a version number to the file name.