

LSDJ-MC2 LittleSoundDJ Midi-Converter V1.4

I take no responsibility for any bugs or damage caused by building or using the LSDJ-MC2!!!

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<http://www.firestarter-music.de/lsdj/>

## Introduction

The LittleSoundDJ Midi-Converter (LSDJMC2) makes your LittleSoundDJ (LSDJ) midi capable and you can also synchronize your LSDJ or Nanoloop (1.x and 2.x) to every Midi-Clock signal which is generated by sequencers or drum-computers..etc.

## Function

It has 5 different LED's and 4 buttons with which you can read all states and set all possible functions. The LED's are named like the following:

LED D2(green)	=	nanosync-led
LED D3(green)	=	lsdjsync-led
LED D4(green)	=	full-led
LED D5(green)	=	compatible-led
LED D6(red)	=	data-led

They are also 4 Buttons:

Button 1 is the 'Mode\_Button'

With this button you can change the modes for the LSDJMC2.

Button 2 is the 'Learn Button'

With this button you can start the Midi-Learn\* function and change the latency for the Synchronize Mode.

Button 3 is the 'Plus Button'

With this button you can start the synchronizing without a Midi-Start signal and you can 'push' the internal Clock-Counter to correct the synchronisation.

Button 4 is the 'Minus Button'

With this button you can 'pull' the internal Clock-Counter to correct the synchronisation.

The Plus and Minus buttons can also be used to change the Instrument in LSDJ. ( +1 or -1 )

After powering ON, you see the self-test where all LED should flash in 'K.I.T.T'-style.

Then it shows the actual latency state and the actual Midi-Channel.

Finally there is only the lsdjsync-led on. Now you are in the LSDJ-Synchronize Mode. From there you can change to your preferred mode.

You have 4 different main-modes which you can easily change with Button 1.

Those Modes are:

1. **Nanoloop Synchronize** (indicated with the nanosync-led)  
In this mode you can synchronize your nanoloop sequencer with your favourite midi-sequencer or drumcomputer. The synchronizing starts with a Midi-Start Command, stops with a Midi-Stop Command and synchronizes with the Midi-Clock command. Those commands are normally send out by starting/stopping your midi-sequencer.  
After the synchronizing started a green LED is flashing with every beat and the red LED is on. You can start the synchronizing with the 'Plus Button' aswell if you connect to the interface to a already started system. Then you press the 'Plus Button' right in the 1<sup>st</sup> beat and correct it then completely by pushing the plus or minus button. This works like synchronizing a record to another with pushing the record.  
Check the nanoloop manual to see how to synchronize it to midi-signals.

2. **LSDJ Synchronize** (indicated with the Isdjsync-led) 2  
In this mode you can synchronize your LSDJ sequencer with your favorite midi-sequencer or drumcomputer. The synchronizing starts with a Midi-Start Command, stops with a Midi-Stop Command and synchronizes with the Midi-Clock command. Those commands are normally send out by starting/stopping your midi-sequencer. After the synchronizing started a green LED is flashing with every beat and the red LED is on.  
You can start the synchronizing with the 'Plus Button' aswell if you connect to the interface to a already started system. Then you press the 'Plus Button' right in the 1<sup>st</sup> beat and correct it then completely by pushing the plus or minus button. This works like synchronizing a record to another with pushing the record .  
Check the Isdj manual to see how to synchronize it to midi-signals.  
**Attention: For 100% good synchronisation the LSDJ has to be in 'slave' mode and NOT in 'midi' mode!!!!**

In LSDJ or Nanoloop synchronize modes, all Midi-Events except of Start/Stop and Clock are filtered out. This provides stability in bigger Midi-Setups.  
With both synchronize modes you can also change their latency if you think that they are not 100% synchronized to your sequencer or other gear you are using. Then you easily press Button 2 (best with a stopped sequencer) and with this you can change one of the 4 latency states. When pressing Button 2, you will see for one second (red LED on for 1 second) in which latency state you are. Then start your sequencer again and see, if it is synchronized now. If not, change the latency again...Your favourite latency-state is stored in the internal memory and it is still saved after a power-off.

3. **Full-Midi** (indicated with the full-led)  
This mode is only for LSDJ-Versions higher/after than V3.0.3!!  
In this mode you can play the LSDJ with any midi-keyboard or sequencer.  
You can play notes from C-3 to B-7 which are 5 octaves in total. To play notes, all 16 midi-channels are supported which you can select with the midi-learn\* function.  
In Full-Midi Mode you can change the Instrument of the LSDJ in 3 different ways:
- A. With the standard 'program-change' midi-command.
  - B. With the Pitch-Bend Wheel. Pitch Bend up increases the instrument and pitch-bend down decreases the instrument.
  - C. With the Plus/Minus buttons for increasing and decreasing.
- They are 32 instruments supported ( LSDJ-Instruments 00 - 20 ).  
Another function is to change the play-mode. That means if you want only to play  
monophonic( PULSE-Channel 1 or WAVE channel),  
polyphonic ( PULSE-Channel 1 and PULSE-Channel 2)  
or both PULSE-Channels parallel monophonic.
- You have 2 possibilities to change these modes:
- A. With the Midi-Controller 70  
Controller 70 Value 0 = monophonic ( PULSE-Channel 1 or WAVE-Channel)  
Controller 70 Value 1 = polyphonic ( PULSE-Channel 1 and PULSE-Channel 2)  
Controller 70 Value 2 = monophonic both PULSE-Channels parallel
  - B. With the Modulation Wheel  
MOD-Wheel 0% = monophonic ( PULSE-Channel 1 or WAVE-Channel)  
MOD-Wheel 50% = polyphonic ( PULSE-Channel 1 and PULSE-Channel 2)  
MOD-Wheel 100% = monophonic both PULSE-Channels parallel

For the Full-Midi LSDJ mode you should use your LSDJ with the following settings:

Keyboard mode.  
Tempo = higher than 200 gives the best results.  
Groove set to 1/1  
Create a new empty Chain and there create a new empty Phrase.

Choose the same Chain in Song mode for Channel PU1, PU2, WAV and NOI.  
Could look like this then in Song Mode:

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	PU1	PU2	WAV	NOI	
00	1A	1A	1A	1A	(1A can be every empty Chain like 00, 20, 3F..)

Then press start that the sequencer starts.  
From now on you should be able to play the notes and use all the Midi-Functions.  
You get nice 'flanger'-like results if you use 'monophonic both PULSE-Channels parallel' and change the fine tune of the instrument.

4. **Compatible-Midi** (indicated with the compatible-led)  
This mode is only for LSDJ-Versions from V2.0.2 to V3.0.0 !!  
Be sure, that the LSDJ is in 'keyboard' mode, before you change to the compatible mode. Else your octaves might be assigned wrong.

In this mode you can play the LSDJ with every midi-keyboard or sequencer.  
You can play notes from C-3 to B-7 which are 5 octaves in total. To play notes, all 16 midi-channels are supported which you can select with the midi-learn\* function.  
In Full-Midi Mode you can change the Instrument of the LSDJ with the Pitch-Bend wheel: Pitch Bend up increases the instrument and pitch-bend down decreases the instrument.  
You can also change the instrument by pressing the Plus/Minus buttons.  
Another function is to change the play-mode.  
You got 3 different play modes:  
monophonic( PULSE-Channel 1 or WAVE channel),  
monophonic( PULSE-Channel 2 or WAVE channel),  
or both PULSE-Channels parallel monophonic.

You have 2 possibilities to change these modes:

A. With the Midi-Controller 68

Controller 68 Every Value is switching between the 3 states in this row:  
1.monophonic( PULSE-Channel 1 or WAVE-Channel)  
2.polyphonic ( PULSE-Channel 1 and PULSE-Channel 2)  
3.monophonic both PULSE-Channels parallel  
...and back to 1.

B. With the Modulation Wheel

Every Mod-Wheel State ( 0% , 50% , 100% ) is just switching like the following:  
1.monophonic ( PULSE-Channel 1 or WAVE-Channel)  
2.polyphonic (PULSE-Channel 1 and PULSE-Channel 2)  
3.monophonic both PULSE-Channels parallel  
...and back to 1.

For the Compatible-Midi LSDJ mode you should use your LSDJ with the following settings:  
Keyboard mode.  
Tempo = higher than 200 gives the best results.  
Groove set to 1/1  
Create a new empty Chain and there create a new empty Phrase.  
Choose the same Chain in Song mode for Channel PU1, PU2, WAV and NOI.  
Could look like this then in Song Mode:

	PU1	PU2	WAV	NOI	
00	1A	1A	1A	1A	(1A can be every empty Chain like 00, 20,3F..)

Then press start that the sequencer starts.  
From now on you should be able to play the notes and use all the Midi-Functions.

You get nice 'flanger'-like results if you use 'monophonic both PULSE-Channels parallel' and change the fine tune of the instrument.

\*

### Midi-Learn Function

You can activate the midi-learn function with button 2 in full-midi and in compatible-midi mode. The red LED is turned on now and the LSDJ-MC2 is waiting for a Midi-Note command.

You can send this command by pressing a key on the midi-keyboard or by playing a note with your sequencer. The LSDJ-MC2 recognizes on which channel this note have been played and stores the channel in it's memory, which is still saved after a power-off.

The red LED is flashing 3 times and shows the channel at the same time on the green LED.

It is binary coded and you can decode it with following Table:

	nanosync-led	lsdjsync-led	full-led	compatible-led
Channel 1	off	off	off	off
Channel 2	off	off	off	on
Channel 3	off	off	on	off
Channel 4	off	off	on	on
Channel 5	off	on	off	off
Channel 6	off	on	off	on
Channel 7	off	on	on	off
Channel 8	off	on	on	on
Channel 9	on	off	off	off
Channel 10	on	off	off	on
Channel 11	on	off	on	off
Channel 12	on	off	on	on
Channel 13	on	on	off	off
Channel 14	on	on	off	on
Channel 15	on	on	on	off
Channel 16	on	on	on	on

Have loads of fun with the LSDJ-MC2!

Please feel free to ask any question, give any comments, and/or feedback (good or bad).

At the moment i use all functions that are possible with the LSDJ and Nanoloop, but feel free for any feature requests.

You can get all new information at the LSDJ-MC2 Group:

<http://launch.groups.yahoo.com/group/lsdjmc2/>

and on the LSDJ-MC2 Project page:

<http://www.firestarter-music.de/lsdj/>

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