



# Böhm Digital Drums MIDI clock

## User's Manual

With this modification the DD will respond to the following MIDI commands: start, stop and clock.

### **RED PUSHBUTTON**

When pushed once, the DD is in learn-mode and the LED will start flashing slowly. By sending MIDI note on commands (from any channel) it is possible to change the MIDI clock divide factor.

*Note: If the DD won't recognise the incoming note-on command, this might be because the keyboard or sequencer is sending in the so called running status mode. Please dial the pitchbend or modwheel and hit the desired key again afterwards.*

note number	key	divide factor
36	C 2	1
37	C#2	2
38	D 2	3
39	D#2	4
40	E 2	5
41	F 2	6
..	..	..
71	B 4	36

Most sequencers (like CuBase) will send MIDI clock commands 24 times per quarter note. The best divide factor on the DD for those sequencers to use is 1 (key C2, note number 36).

Also fill/break-in can be used by MIDI. But a MIDI channel has to be learned first by the DD. Press the red pushbutton just like learning the divide factor. The LED will flash slowly, now press key C5 (note number 72). The LED will start flashing faster. Now the MIDI channel can be learned by sending a note-on command to the DD from the desired MIDI channel. The D1 key (note number 26) can now be used to control the fill button and the D#1 (note number 27) can be used to control the break button.

Also the B1 key (note number 35) can be used to force a MIDI start message. Some sequencers only sent MIDI start messages at the beginning of a song, this can be very annoying when working on a specific part of a song since that part often needs to be repeated over and over again until it is correct. Playing the B1 key on the very first step of a part will force a MIDI start for the DD so the rhythm will play. This option has been tested on CuBase 3.1 (Atari) and VST/24 (Windows). I can't say if it will work correctly on all sequencers. For the final recording of a song I advise always to use the normal MIDI start for the highest accuracy of timing.

If you want to cancel the MIDI response of the fill/break button and the force MIDI start option because it is taking one complete MIDI channel, you can deselect the option by pressing the red pushbutton and hitting key C#5 (note number 73).

After a MIDI start message the DD needs a while to initialize itself for receiving a sync clock signal. That's why it is programmed to wait 2 bars before syncing to the clock signal. It is possible to change that to 4 bars in case that's more convenient to work with. Pressing the red pushbutton and hitting D5 (note number 74) will set a wait time of 2 bars, hitting D#5 (note number 75) will set a wait time of 4 bars.

*Sometimes it takes the DD one extra bar to sync to the clock signal, unfortunately there is nothing I can do about that. It's a technical problem caused by the DD itself.*

All settings are kept in memory, even if the drummachine is switched off. There is no internal battery.

Enjoy!

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