

MFB-Tanzbar Analog Drum Machine



# MFB-Tanzbar Analog Drum Machine User Manual

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# MFB-Tanzbär

**MFB-Tanzbar Analog Drum Machine**



## OVERVIEW

Thank you from us at MFB. First of all we would like to thank you for purchasing Tanzbär. We appreciate your choice very much and hope you will have lots of fun with your new instrument.

### What is Tanzbär ("Dancing Bear")?

Tanzbär is a drum computer, featuring a real, analog sound generation and a very sophisticated, pattern-based step sequencer. It sports some advanced circuitry of the MFB drum units MFB-522 and MFB-503, as well as some features that are completely new to MFB instruments.

What exactly is going on inside Tanzbär? This is a brief overview of its functions:

#### Sound generation:

- 17 drum instruments with up to 8 tweakable and storable parameters.
- Level pots on all drum instruments, plus master volume (not storable).
- Individual outs (in pairs except claps).
- Simple synthesizer with one parameter each for lead and bass sounds.

#### Sequencer:

- 144 patterns (on 3 sets resp. 9 banks).
- 14 tracks triggering the drum instruments.
- 2 tracks for programming note events (output via MIDI and CV/gate).
- The combination of step number (1 to 32) and scaling (4) allows all kinds of time signatures.
- A/B pattern toggle
- Roll/Flam function (multiple triggering)
- Chain function (chaining patterns – not storable).

- Track mute function

The following functions can be programmed on each track (drum instrument):

- Track length (1 – 32 steps)
- Shuffle intensity
- Track shift (micro delay of entire track via MIDI controller)

The following functions can be programmed on each step (drum instrument):

- Step on/off
- Accent level
- Sound setting of current instrument
- Bend (pitch modulation – only DB1, BD2, SD, toms/congas)
- Flam (multi-trigger = flam, rolls etc.)
- Additional sound parameter (on selected instruments)

The following functions can be programmed on each step (CV tracks):

- Step on/off (output via MIDI note-on and +/-gate)
- Pitch with 3 octave range. Output via MIDI notes and CV
- Accent level (on bass track only)
- 2nd CV (on bass track only)

## **Operation Modes**

### **Manual Trigger Mode**

- Triggering instruments via step buttons and/or MIDI notes (with velocity).
- Access to sound parameters via knobs or MIDI controller.

### **Play Mode**

- Pattern selection
- Access to sound parameters via knobs
- Access to play functions (A/B pattern toggle, roll, fill, and mute function, plus some more)

### **Record Mode**

- Programming a pattern in one of three available modes (Manual, Step, or Jam mode)

### **Synchronisation**

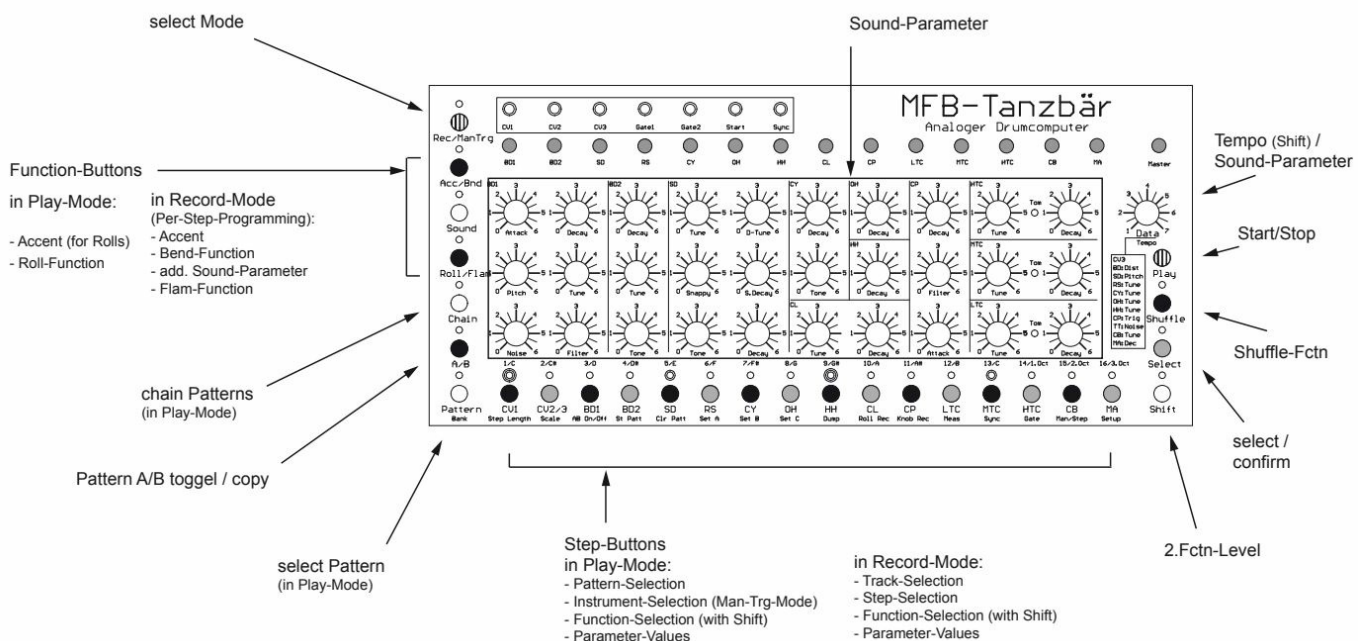
- MIDI clock
- Sync signal (clock) and start/stop input or output; output clock divider

Not bad, uh? Of course, it was not possible to place a dedicated knob or button for each function on the front panel. Sometimes, a second function level and some button combinations are necessary to access all features. To ensure that you and your Tanzbär will become friends really soon, we advise you to read this manual carefully. This will be the best and easiest way to explore your Tanzbär thoroughly – and there is pretty much to be explored. So we beg you: please bother to read (and understand) this f... manual.

## The User Interface

As has just been mentioned, most of Tanzbär's buttons cover more than one single function. Depending on the selected mode, the function of the buttons may change. The following figure will show you which modes and functions are related to certain buttons.

Please note that this is just an overview. You may use it mainly as an orientation guide. The complete set of functions and the necessary operating steps will be explained later in the text. Please feel free to read on.



## CONNECTIONS AND INITIAL OPERATION

### Rear panel connectors

### Power

- Please connect the 12V DC wall wart here. Power up/down Tanzbär using the ON/OFF switch. Please pull the power supply from the wall outlet if you do not use the Tanzbär anymore. Please use only the included power supply or one with exactly the same specifications – no exceptions, please!

### MIDI In1 / MIDI In 2 / MIDI Out

- Please connect MIDI devices here. MIDI keyboards and drum pads should be connected to MIDI In 1. MIDI In 2 handles MIDI clock data exclusively. Via MIDI out, the Tanzbär transmits note data of all tracks.

### Audio Outs

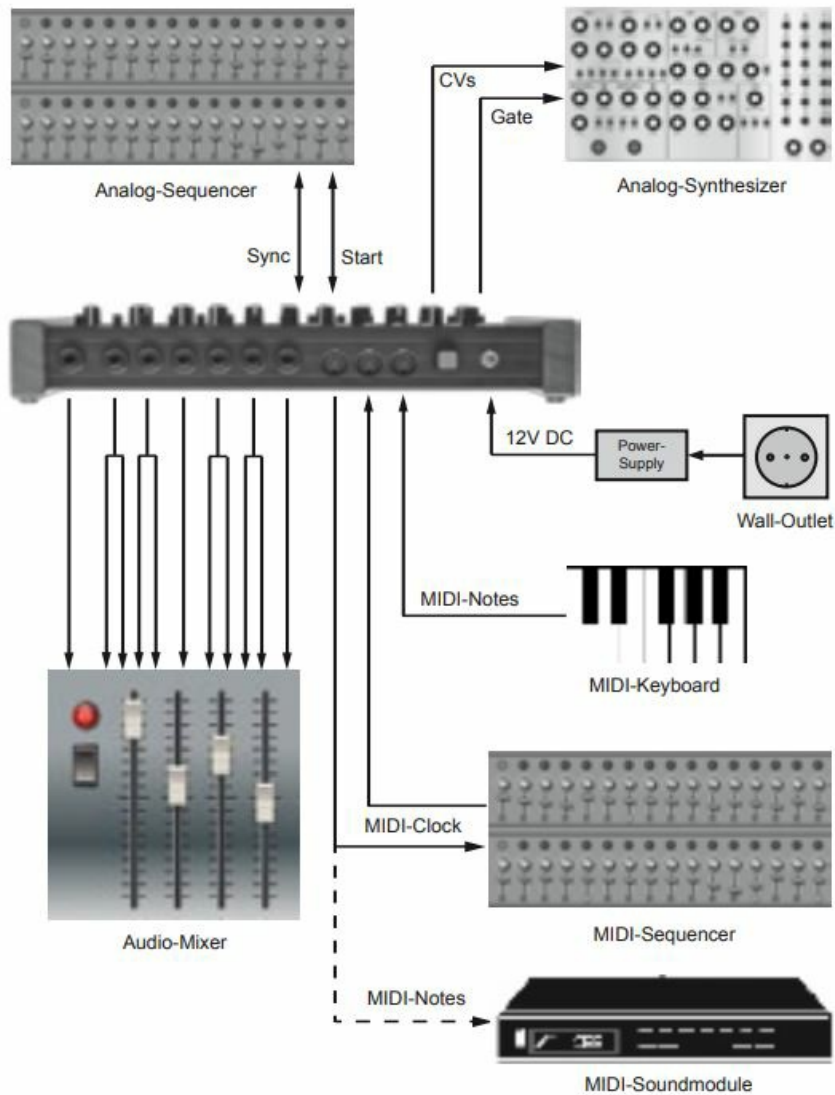
- Tanzbär features one main audio out and six additional instrument outs. The latter are stereo jacks which put out two instrument signals each – one on each channel (except the Clap – this is a stereo sound). Please hook up the outputs with insert cables (Y-cables). For Clap, please use a stereo cable. If you plug a cable into an instrument out, the sound is cancelled from the main out. Please connect Tanzbär's main out to an audio mixer, soundcard, or amp, before you power Tanzbär up.
  - BD Out left: Bassdrum1, right: Bassdrum 2
  - SD/RS Out left: Snaredrum, right: Rimshot
  - HH/CY Out: left: Open/Closed Hihat, right: Cymbal
  - CP/Clap Out: the attack transients are spread across the stereo field
  - TO/CO Out: three Toms / Congas spread over the stereo field
  - CB/CL Out: left: Clave, right: Cowbell

### **Top panel connectors**

On Tanzbär's top panel you will find its CV/gate interface. It outputs control voltage (CV) and gate signals of both note tracks. Next to this, a start/stop signal and a clock signal is transmitted or received here.

- CV1: Output of pitch-CV track 1 (lead synthesizer)
- CV2: Output of pitch CV track 2 (bass synthesizer)
- CV3: Output of filter-control CV track 3 (bass synthesizer)
- Gate1: Output of gate signal track 1 (lead synthesizer)
- Gate2: Output of gate signal track 2 (bass synthesizer)
- Start: Sends or receives start/stop signal
- Sync: Sends or receives a clock signal

To explore most of Tanzbär's features, you will need nothing but the power connection and the main audio out.



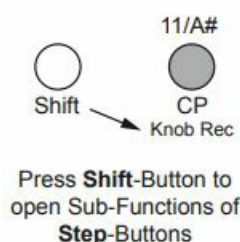
## PLAY/MANUAL TRIGGER MODE

First of all let's check out some demo patterns to give you an idea of what Tanzbär can do. At the same time we will learn how to "perform" on the Tanzbär, that is, playing patterns, modifying them and tweaking sounds. To play back and tweak pre-programmed sounds and patterns, we need the PLAY/f0 MANUAL TRIGGER MODE. To program patterns we will go into the Record Mode which we will explore later on. The following figure shows an overview of the Play Mode and its functions.

Please note that this is just an overview. You may use it mainly as an orientation – all the necessary operating steps are covered in detail in the following text. So please read on carefully.

1. Pressing the Step/Instr-Button mutes Tracks resp. Instruments (red LED = Mute).
2. Repeatedly pressing Acc/Bnd toggles between three Accent-Levels (LED off/green/red). Accent affects Roll-Funct.
3. Starts Knob-Record-Funct.:
  - Enable with Shift+Step11. Press Select. Function is available if desired. Now record knob movements:
  - Hold Sound + press Instr to select Instrument.
  - Press Sound to start recording. The LED flashes up to the next "1" and lights continuously during the next following bar.
  - Tweak Soundparameter Knobs during one bar. (- Store Pattern if required)
4. Switches Roll-Funct. on/off. Press Instr-Taster to generate Roll. Select resolution:

- Hold Roll/Flam + press Step 1-4 (16th, 8th, 4th, 1/2 Note).
5. Switches Pattern Chaining on/off:
- Hold Chain + press Steps (no LED response yet). Corresponding Pattern Chain is temporarily stored.
  - Press Chain to playback Pattern Chain.
6. A/B Pattern Toggle:
- Press A/B to toggle Pattern. LED colour displays
  - A-Part resp.
  - B- Part. Enable automatic toggle with Shift+3.
7. Enables Shuffle Selection
- Press Shuffle (all Step-LEDs flash).
  - Select Shuffle-Intensity with Step 1-16.
  - Press Shuffle to confirm and leave function.
8. Recalls stored Parameter Values of the current Pattern.



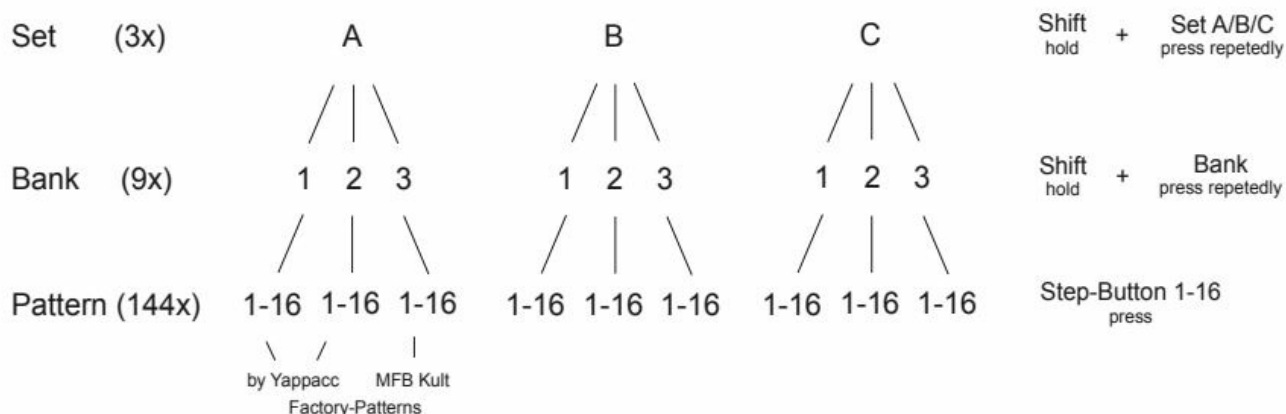
## Audition of sounds

Right after powering up, Tanzbär's MANUAL TRIGGER MODE is active. The LED "Rec/ManTrig" constantly lights up green. Now you can trigger the sounds with the Step/Instrument buttons. You can also tweak all sounds with their dedicated parameter controls.

## Play Mode

## Pattern Memory

Tanzbär's pattern memory uses three sets (A, B and C) of three banks each. Each bank contains 16 patterns which makes 144 patterns in total. Set A is packed with factory patterns. Banks 1 and 2 contain great beats made by the Berlin based techno wizard Yappacc, Bank 3 sports the original patterns of the "MFB Kult" drummachine. Sets B and C are waiting for your own great creations. If desired, the content of Set A can be overwritten.



## Pattern Selection

To select patterns, PLAY MODE or MANUAL TRIGGER MODE has to be active. The LED Rec/ManTrig should be OFF or constantly GREEN (please refer to fig.

- Hold Shift + press Set A button. Set A is selected.
- Hold Shift + press Bank button. The Bank button toggles between Bank 1 (green), 2 (red) and 3 (orange).
- Press Step button. If you press Step 1, pattern 1 is loaded etc. Red Step LEDs show used patterns. The currently loaded pattern lights up orange.

When the sequencer is running, a pattern change is always performed on the next down-beat of the following bar.

## Pattern Playback

Start/stop the sequencer\

- Press Play. The sequencer starts. Press Play again and the sequencer stops. This also works when Tanzbär is synced to MIDI-clock.

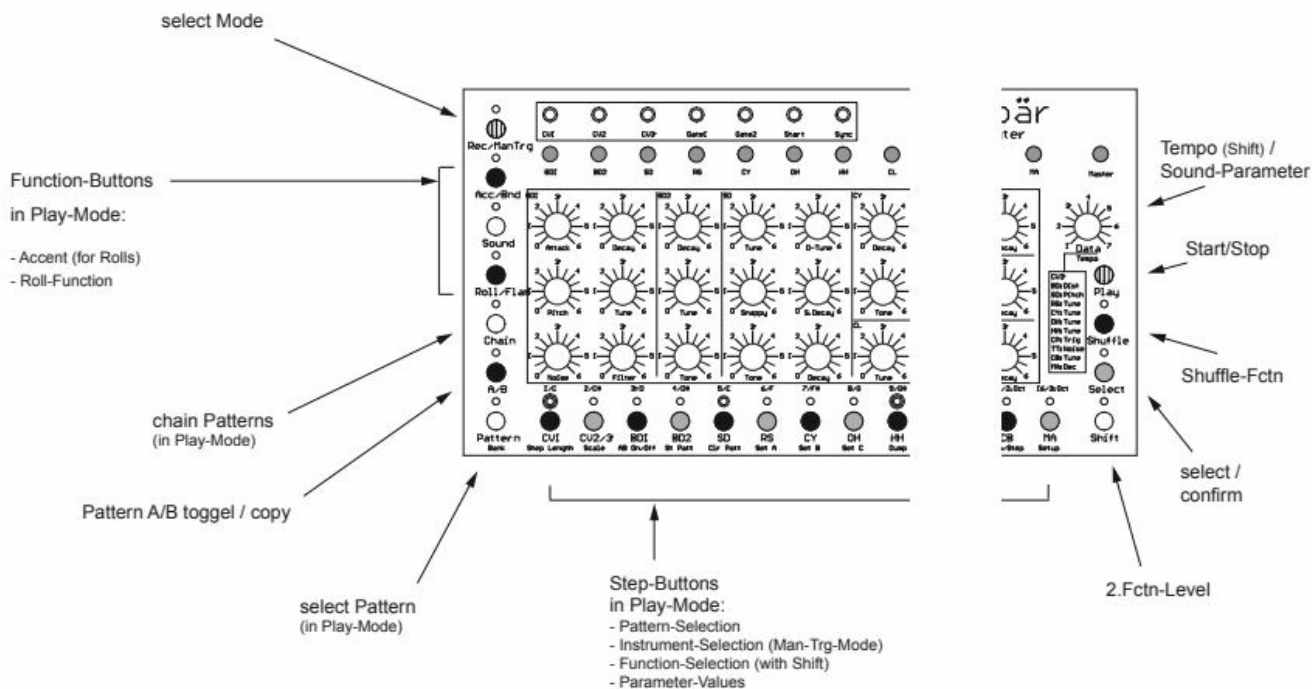
Please note: After powering up, Tanzbär has to be set to PLAY MODE in order to play patterns back (press Rec/ManTrig, LED has to be OFF). Then select a pattern (press Pattern, Step button, please see above).

## Adjust Tempo

- Hold Shift + move the Data knob.

To avoid tempo skipping, the tempo change is performed at the very moment when the knob position matches the previous tempo setting. As soon as you release the Shift button, the new tempo is stored. There is no tempo readout on Tanzbär. The values range of the knob cover approx. 60 BPM to 180 BPM. In Play Mode (Rec/ManTrig LED OFF), you can not only play existing patterns back, you can also tweak them "live" in several ways. In this mode, Tanzbär's buttons open up certain dedicated functions. The following figure shows the functions of all relevant buttons. In the following text, these functions will be explained in detail.





## 1. Mute Function

In PLAY MODE, all instruments can be muted using their corresponding Step/Instrument button (e.g. Step 3 = BD 1, Step 7 = Cymbal etc.). The LED of a muted instrument lights up red. When the pattern is stored, active mutes will also be stored. The store function is covered on page 23.

## 2. Accent Function

Sets accents on three different levels. The Acc/Bnd button toggles between the three levels (LED off/green/red). In Play Mode, the Accent level affects the Roll function (see below).

## 3. Tweak sounds / knob record function

In PLAY MODE (LED Rec/ManTrig off) all sound parameters can be edited using their f0 dedicated knobs. As soon as a pattern is loaded from memory, the current parameter f0 setting differs from the current knob setting. If desired, you can record knob tweakings within one bar into the sequencer. This is done with the Knob Record function. It is enabled with Shift + Step 11 and can be used in PLAY MODE, if so desired.

### To record knob movements:

- Hold Shift + press CP/KnobRec to enable Knob Record function.
- Press Play to start sequencer.
- Hold Sound + press Instrument button to select an instrument.
- Press Sound again. The Sound LED flashes until the downbeat of the next bar is reached. Then it lights up constantly over the duration of one pattern playing back.
- While the pattern is running, tweak the desired Parameter knobs. The movements are recorded over one bar/pattern playback.
- If another take is required, simply press Sound again and tweak the knobs.
- If you would like to record the parameters of another instrument, please hold Sound
- + press an Instrument button to select the new instrument. Then press Sound to start the recording. You do not have to stop the sequencer at any time.

To save your knob performance permanently, you have to save the pattern

You do not have to engage the knob record function for each new "take" and instrument by hitting Shift + CP/KnobRec. Once enabled, you may use it over and over again until you disable the function. If you turn a knob for more than one bar while "knob recording", the previous recording will be overwritten. If you do not like the result, simply reload the parameter setting, stored in the pattern, by hitting Select. This always helps when you are not happy with a knob recording "take".

## **Roll Function**

### **Play Rolls:**

No, we are not talking about role plays or some type of scones here, rather about jams... Please enable PLAY MODE, if you have not already. Press Roll/Flam to enable the Roll function. Start the sequencer since the effect will only be audible when the sequencer is running. When you are now pressing a Step/Instrument button, the corresponding instrument gets multi-triggered. This function is also known and popular as "note repeat". The resolution of the triggers can be set to four different values. They depend on the Scale setting (please refer to page 22). To change the resolution, please hold Roll/Flam. The Step buttons 1 – 4 start flashing. Press one of the Step buttons to select the roll resolution.

### **Roll Record:**

This is a kind of an "add on" feature to the Roll function. When Roll Record is enabled, a roll is played again in each new pattern loop, even when you release the Step/Instrument button. By holding down Shift and the corresponding Instrument button, the rolls will be erased again.

To enable the Roll Record function:

- Hold Shift + press Roll Rec (Step 10).
- Press Roll Rec (Step 10) again. The button toggles between Roll Record off (LED green) and Roll Record on (LED red).
- Press Select to confirm and close the function.

Steps recorded with the Roll Record function can be edited in Step Record Mode just like any other steps

## **Chain function (chain patterns)**

Chain up to 16 patterns "live" with the Chain function:

- Hold Chain + Step buttons to select the desired sequence of patterns. Please note that there is no LED reference at this moment.
- Press Chain again to enable / disable the Chain function. The LED lights up red when Chain is active.

## **A/B Pattern Toggle**

Press the A/B button to "fire up" a second pattern part (if available). The LED changes its colour. Patterns with more than 16 steps contain necessarily a B-part. To enable automatic toggle between both parts, please hold Shift + Step 3 (AB on/off).

## **Shuffle Function**

Hold Shuffle + press one of the Step buttons to select one of the 16 available shuffle intensities. In Play mode, shuffle affects all instruments in the same way.

## Select Button

Sets edited parameter values back to the values that are stored within the current pattern.

When using functions 1 to 8 while the pattern selection is active (Pattern LED lights), the corresponding function will be performed according to the way described above. In some cases, the pattern selection will be closed. Please see figure on page 9. The same goes for access of these functions in MANUAL TRIGGER MODE.

## SOUND ENGINE

In this chapter, we would like to introduce the sound generation and its parameters.

### Instruments

All drum sounds can be edited directly using the controls of each instrument. In addition to that, the Data knob shares an additional parameter for most of the instruments. It can be accessed as soon as the instrument is selected.

### Hidden Parameter "Sound"

In Record Mode (and only in Record Mode), some instruments feature another "hidden" parameter that can be accessed via Sound button and Step buttons. If this parameter is available on an instrument, the Sound-LED flashes after Rec/ManTrg has been pressed. More on this later in the chapter Record Mode.

### BD 1 Bassdrum 1

- Attack Level of attack-transients
- Decay Volume decay time
- Pitch Time and modulation intensity of pitch envelope
- Tune Pitch
- Noise Noise level
- Filter Sound of noise signal
- Data Distortion level
- Sound Selects 1 of 16 different attack transients

### BD 2 Bassdrum 2

- Decay Time of volume decay (up to steady tone)
- Tune Pitch
- Tone Level of attack-transients

### SD Snaredrum

- Tune Pitch of tone 1 and tone 2
- D-Tune Detune of tone 2

- Snappy Noise level
- S-Decay Decay time of noise signal
- Tone Blends signals of tone 1 and tone 2
- Decay Volume decay time of tone 1 and tone 2
- Data Modulation intensity of pitch envelope

#### RS Rimshot

- Data Pitch

#### CY Cymbal

- Decay Volume decay time
- Tone Blends both signals
- Data Pitch / sound colour

#### OH Open Hihat

- Decay Volume decay time
- Data Pitch / sound colour of OH and HH

#### HH Closed Hihat

- Decay Volume decay time
- Data Pitch / sound colour of OH and HH

#### CL Claves

- Tune Pitch
- Decay Volume decay time

#### CP Claps

- Decay time of "reverb" tail
- Filter Sound colour
- Attack Level of attack-transients
- Data Number of attack-transients
- Sound 16 different attack transients

#### LTC Low Tom / Conga

- Tune Pitch
- Decay Time of volume decay (up to steady tone)
- Sound Step button 12 toggles between tom and conga. Step button 13 enables a noise signal.

- Data Noise level, simultaneously for all three toms/congas.

### **MTC Mid Tom / Conga**

- Tune Pitch
- Decay Time of volume decay (up to steady tone)
- Sound Step button 12 toggles between tom and conga. Step button 13 enables a noise signal.
- Data Noise level, simultaneously for all three toms/congas

### **HTC High Tom / Conga**

- Tune Pitch
- Decay Time of volume decay (up to steady tone)
- Sound Step button 12 toggles between tom and conga. Step button 13 enables a noise signal.
- Data Noise level, simultaneously for all three toms/congas.

### **CB Cowbell**

- Data 16 different tunings
- Sound Time of volume decay

### **MA Maracas**

- Data Time of volume decay

### **Bass Synthesizer/CV 3**

- Data Filter cutoff or CV 3 value

In addition to the parameters mentioned above, each instrument has a volume control that cannot be programmed. The same goes for the master volume control. Just in case you might be wondering why the volume knobs seem to have a little inertia to them – this is to avoid unwanted level changes.

## **RECORD MODE – PROGRAMMING PATTERNS**

Finally, it is time to create your own patterns. The capabilities are vast and partly pretty complex so we are still asking for your attention (and patience, of course).

- **The different Record Modes**

The sequencer features three different modes to program patterns. They all have different functions:

- **Manual Mode**

Manual Mode will not record any sound parameters. These always have to be tweaked manually.

- **Step Mode**

Step Mode (factory setting) allows programming of different sound parameter settings per step.

- **Jam Mode**

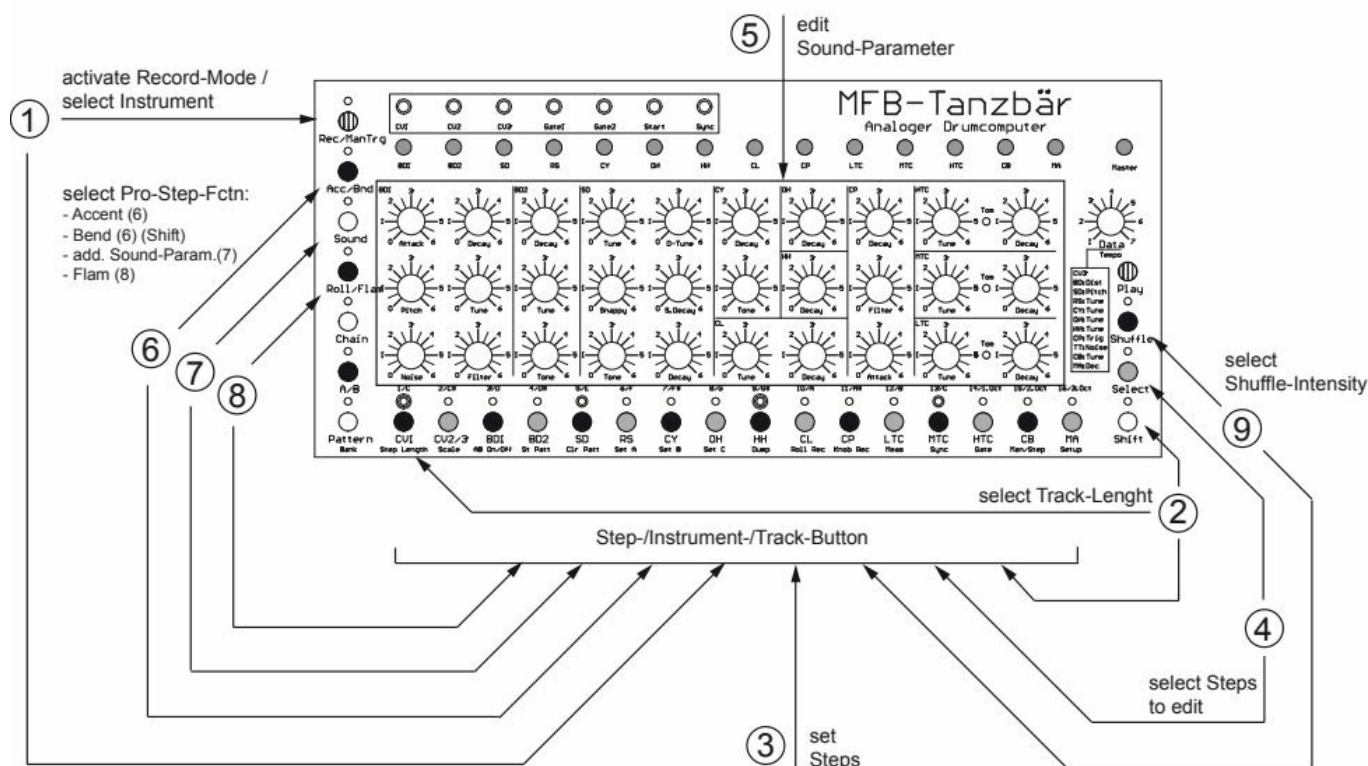
Jam Mode is basically the same as Step Mode. In contrast to Step mode, you can alter a parameter value on all steps of an instrument/track "live" and simultaneously without changing or leaving the Record mode. In Step mode, you would first have to select all steps with the Select button to perform the same trick. In case that live programming and editing at the same time is what you are striving for, the Jam Mode will do a good job. Usually, the Step Mode is your first choice to create patterns with.

### • Record mode selection:

To select the Record Mode of your choice:

- Hold Shift + press Step 15 button (CB – Man/Step). The button toggles between:
  - Manual mode: (LED = green)
  - Step Mode: (LED = red)
  - Jam Mode: (LED = orange).
- Press the flashing Select button. The selected mode becomes active.

The programming procedure is the same for all Record modes. The following figure on page 18 shows a brief overview of all Step Record Mode functions. The numbers show one possible and useful way to create a fully featured pattern. Please note that this figure is just an overview. You may want to use it as an orientation – all required programming steps will be covered in detail in the following section.



This feature is not available in Manual Mode. Here, all steps have identical soundsettings, corresponding to the current knob settings. Individual accent levels and flams/rolls can be programmed. Please see below.

Now, we will describe in detail how to program individual sound settings per step in Step or Jam Mode:

### Step selection and step programming

We are currently watching a track with several active steps (red LEDs), e.g. BD 1 (green BD 1 LED).

- Hold Select + press step(s) (if not already selected). The step LED(s) flash(es).
- Turn parameter knob(s) of the selected instrument (here BD1).

- Press Select to confirm parameter changes (step LED(s) light up continuously again).
- To create different sound settings on other steps, simply repeat the procedure

To store the settings permanently, store the edited pattern

### **Copy steps**

To keep things fast and easy, you may copy the settings of one step to other steps:

- Hold Select + press a step. The sound setting of this step has now been copied.
- Set more steps. The new steps will have the same sound settings.

### **Using the hidden sound parameter**

The instruments BD 1, Toms/Congas as well as Cowbell offer one more sound parameter that can only be accessed in Step/Jam-Record Mode. If Record mode is enabled and one of the instruments BD 1, Toms/Congas or Cowbell is selected, the Sound LED flashes. To change the parameter value:

- Press Sound (LED lights constantly). Some step buttons will flash green. Every step visualises a parameter value.
- To select a value, press one of the flashing step buttons (colour changes to red).
- Press Sound to confirm value entry. The Sound LED starts to flash again.

### **Programming additional Functions per Step**

Use the following functions to enhance your pattern even more. We are still working on a track, e.g. BD 1 (green BD 1 LED) with some set steps (red LEDs). The sequencer is still running.

#### **Accent**

Each step in a track can have one of three accent levels:

- Press Acc/Bend button. The function toggles between the three accent levels (LED off = soft, green = medium, red = loud).
- Press an already active step to apply the selected accent level (step LED off).
- Press step again to enable step again (step LED lights up red again).

If you want to apply the same accent level to several steps at once:

- Select several steps (see „Select Steps“).
- Press Acc/Bend button to select accent level.
- Press Select again to confirm function.

#### **Bend**

This function "bends" the pitch of an instrument up or down. As well as the accents, it can be applied to individual (active) steps of an instrument. It generates e.g. typical D&B bass drums. The effect might only be audible with

longer decay settings. Bend works on BD 1, BD 2, SD, LTC, MTC and HTC.

- Hold Shift + press Acc/Bnd to enable the Bend function. The LED flashes (This is a sub-function, accessed by using the shift button).
- Press desired (already active) step. The step-LED goes off.
- Adjust Bend intensity with Data knob. Please note: effect is not yet audible!
- Press desired step again to apply the function. It is now becoming audible. (LED lights up red again).
- Go for more steps if desired: press Step, turn Data, press Step again.
- If you like the result:
  - Hold Shift + press Acc/Bnd to close function.

## **Flam**

This function creates flams resp. drum rolls on individual (already active) steps.

Please note: This function is not available on the tracks "Clap", "CV 1" and "CV 2/3".

- Hold Roll/Flam (step LEDs flashing green) + press Step button to select one of the 16 flam patterns.
- Press (already active) Step(s) (green LED). The colour changes to orange and the flam pattern becomes audible.
- To select another flam pattern, again hold Roll/Flam button (step LEDs flashing green) + Step button to select another flam pattern.
- Press again (already active) Step(s) to apply the new flam pattern.  
If you like the result:
- Press Roll/Flam to close function.

## **Programming Synth- resp. CV/Gate Tracks**

On tracks CV1 and CV2/3 you can program note events. These notes are sent out via MIDI and Tanzbär's CV/gate interface. Next to this, both tracks "play" two very simple synthe-sizer voices. They are a good help to monitor the note tracks without the need of external equipment.

**This is how to program the CV1 track (CV2/3 works the same way):**

- Hold Rec/ManTrg + Instrument/track button CV1 to select track.
- Set Steps. The internal lead synthesizer plays the steps with identical length and pitch.

**To program notes on the CV1 track:**

- Hold Rec/ManTrg + press Instrument/track button CV1 to select track.
- Press Sound button (LED red).
- Press Step buttons 1 – 13. They select notes between "C" and "c".
- Press Step buttons 14 – 16. They select the octave range.
- Each time you press steps 1 to 13 subsequently, the sequencer moves on one step further. A 16th note sequence is generated.



- A/B sets a mute step.
- Select connects several steps to longer note values.
- Pattern moves one step forward.
- Shift moves one step backwards.

### **Accents and CV 3 on Bass Track:**

The bass track (Rec/Man/Trg + CV2) is programmed the same way. Additionally, you can apply accents. These are programmed the same way as on the drum tracks (see above). With CV 3 you can control the filter cutoff frequency of a suitably equipped synthesizer. To program CV 3 values, please select steps on track CV 2 and use the Data knob to enter values. It works the same way as the step-by-step parameter programming on the drum tracks.

### **Shuffle function**

When using the shuffle function in Record Mode, each track can have its individual shuffle intensity:

- Hold Rec/ManTrg + press Instrument/track button to select instrument/track.
- Press Shuffle (Step LEDs light up green).
- Press Step 1 – 16 to select shuffle intensity.
- Press Shuffle again to close shuffle function.

When used in Play mode, the shuffle function works globally and affects all tracks in the same way.

### **Step Length (Track Length)**

The track length is determined in Record Mode. Each track can have its individual track length between 1 and 16 steps. This is a cool way to generate grooves made up of poly-rhythms.

- Hold Rec/ManTrg + press Instrument/track button to select instrument/track.
- Hold Shift + press Step Length (Step LEDs flashing green).
- Press Step 1 – 16 to select track length.
- Press Select to confirm setting.

### **Scaling and Pattern Length**

Up to now, we have been programming patterns with 16 steps and 4/4 scales. With the help of the following functions, you will be able to create triplets and other "odd" time signatures. Usually, these settings should be performed before you start programming steps, but since they are a bit more special, we have placed their description in this chapter.

These functions are global settings, meaning they affect all tracks in the same way. Since the Record Mode affects individual tracks only, we have to make these settings in PLAY MODE. The Rec/ManTrg LED has to be OFF.

### **Scale**

Selects the time signature and note values. Available values are 32nd, 16th triplet, 16th, and 8th triplet. This determines the number of beats within a bar resp. a pattern length of 32, 24, 16 or 12 steps. With patterns of 24 or 32 steps, a B-part will be automatically created. Since the time required to play back one bar is the same in all

scale settings, at a scale setting of 32 the sequencer runs exactly twice as fast as at it does at a scale setting of 16.

### **To program the scaling:**

- Hold Shift + press Scale (Step LEDs 1 – 4 flashing green).
- Press Step 1 – 4 to select scale
- (Step 1 = 32nd, Step 2 = 16th triplet, Step 3 = 16th, Step 4 = 8th triplet).
- Step flashes orange.
- Press Select to confirm setting.

### **Measure**

Here you can determine the number of steps of a pattern.

This function has to be programmed after setting the scale. By using step numbers different from the scale parameter (e.g. scale = 16th-triplet and measure = 14) you can create all kinds of „odd“ beats. To create e.g. a 3/4 beat, use scale = 16 and measure = 12. Waltz is still very popular, especially with elderly people — your target group, it seems safe to assume.

### **To program the measure value:**

- Hold Shift + press Meas (Step LEDs 1 – 16 flashing green).
- Press Step 1 – 16 to select the step number. The step flashes orange.
- Press Select to confirm setting.

### **Copy A-Part to B-Part**

As soon as you have created a pattern with a length of 16 steps at maximum, you can copy this "A"-part onto the (still empty) "B"-part. This is an easy way to create variations of existing patterns.

- To copy the A-part onto the B-part, simply press A/B button in Record Mode.

### **Store Patterns**

Patterns can be stored within the currently selected bank.

Please note: There is no undo function. So please be careful and think twice before storing...

- Hold Shift + press St Patt. The current pattern is shown by a green flashing LED. Used pattern locations are indicated by an LED flashing red. On empty pattern locations LEDs stay dark.
- Press Step button to select pattern location (LED lights up red constantly).
- Press Shift to abort the store function.
- Press Select to confirm the store function.

### **Clear Current Pattern**

- Hold Shift + press Cl Patt. The pattern currently active will be cleared.

Please note: There is no undo function. So please be careful and think twice...

## MIDI FUNCTIONS

The three MIDI ports are used to connect MIDI devices to Tanzbär. MIDI keyboards, controllers, and drumpads should be connected to MIDI In 1. MIDI In 2 is mainly for MIDI synchronisation (MIDI clock). Tanzbär's MIDI channel settings are fixed and cannot be altered. Track CV 1 sends and receives on channel 1, track CV 2 sends and receives on channel 2, and all drum tracks send and receive on channel 3. Synchronisation with external devices via MIDI clock MIDI clock is always transmitted and received. No additional settings have to be performed.

Synced to an external MIDI clock source, Tanzbär can always be started and stopped using its Play button. It starts/stops exactly at the downbeat of the next following bar without going out of sync.

### Output of sequencer steps as note commands

The note output can be enabled globally. You will find this function in the setup menu.

- Hold Shift + press Setup (Step 16). The setup menu is active now. The flashing LEDs 1 – 10 visualise the available sub menus.
- Press Step 8 button. Note output is enabled.
- Pressing Step 8 again toggles between on (green) and off (red).
- Press Select to confirm the function.

### Receiving MIDI notes and velocity to trigger drum instruments

#### Drumsound expander function

Tanzbär has to be set to MANUAL TRIGGER MODE (Rec/ManTrg LED green) to work as a drum sound expander. MIDI note numbers and a MIDI channel (from #3 to #16) can be applied to drum instruments using a „learn“ function. Starting at step 3 (BD 1), an instrument LED flashes when waiting for an incoming MIDI note. A MIDI note, now transmitted to Tanzbär, will be applied to the instrument. Tanzbär automatically switches to the next instrument (BD 2). As soon as all instruments are assigned to a MIDI note, the Select LED flashes. Press Select to confirm and store the data entry and close the function. Leave the function without saving the data entry by pressing Shift. In this case, the setting is only active until Tanzbär is powered down.

When all drum instruments are assigned to MIDI notes resp. a MIDI channel this way, Tanzbär can be played as a drum module by using a keyboard, a sequencer, or drum pads. In Play Mode, you can play live drums to a programmed pattern.

#### Real Time Record

When Roll Record is active as well, the incoming MIDI notes are recorded into Tanzbär's sequencer. This way you may record patterns in realtime. The Roll Record function is described on page 12.

#### Send and receive MIDI SysEx dumps

The pattern content of the current bank can be transferred as MIDI dump.

- Hold Shift + press Dump (Step 9) to start the dump transfer.

Receiving SysEx data is always possible without enabling any function. If SysEx data is received, the current pattern bank will be overwritten. In case of SysEx malfunction, all step buttons will flash red. We advise you to use the following SysEx transfer applications: MidiOx (Win) and SysEx Librarian (Mac).

MidiOx users please note: The dump transmitted to MidiOx must have exactly the size of 114848 Bytes, otherwise MidiOx will show an error message.

## **MIDI Controller**

Tanzbär receives MIDI controller data for most of its functions and parameters. You will find a MIDI controller list in the appendix of the manual (page 30). To receive MIDI controller data, MIDI channel 10 is always used.

## **Track Shift**

Tracks can be micro shifted resp. delayed in fractions of ticks by using MIDI controllers. This may create interesting rhythmic effects. Please use MIDI controller 89 to 104 to program the track shift

## **CV/GATE-INTERFACE / SYNC**

Thanks to its CV/gate and sync interface, Tanzbär is compatible with many vintage synthesizers, drum computers, and sequencers. Sequences, programmed on tracks CV 1 and CV 2/3, are transmitted via Tanzbär's CV/gate sockets.

## **Inverting Gate Signals**

The output gate signals (Gate 1 and Gate 2) can be inverted independently:

- Hold Shift + Gate (Step 14). Step 1 and Step 2 flash green.
- Press Step 1 or Step 2 to invert the gate signals of track 1 resp. track 2 (red LED = inverted).
- Press Select to confirm the operation.

## **Sync/Start Sockets**

These sockets send or receive an analog clock resp. start signal to synchronize Tanzbär with vintage drum computers and sequencers. Please note that the clock signal generated by Tanzbär is transmitted via the programmed shuffle intensity. A pretty unique feature as far as we know. Because of technical reasons, gate, clock, and start/stop signals have a voltage level of 3V. So they might not be compatible with all vintage machines.

## **Sync/Start In and Output**

This function determines whether the sockets Start/Stop and Clock work as inputs or outputs.

- Hold Shift + Sync (Step 13). Step 13 flashes green.
- Press Step 13 to set up these sockets as inputs or outputs (red LED = input).
- Press Select to confirm the function.

**Please note:** If these sockets are set up as inputs, Tanzbär will be synchro-nized resp. "slaved" to an external

clock source. The Play button will have no function in this case.

## **Clock Divider**

Tanzbär's clock output features a clock divider. Its settings can be accessed via the Setup menu. Flashing LEDs 1 to 10 show its sub functions.

- Hold Shift + press Setup (Step 16). The Setup menu is enabled. Flashing LEDs 1 to 10 show sub functions.
- Press Step 5. The function toggles between:
  - "divider off" = LED green (clockrate = 24 ticks / 1/4 note / DIN-sync)
  - "divider on" = LED red (divider value = selected scale value;
- Press Select to confirm the function.

## **SETUP FUNCTIONS**

The Setup menu is located "under" the Step 16 button. Here you will find some functions to set up your Tanzbär. Some of them you already know, the others will be described here.

### **To open up the Setup menu:**

- Hold Shift + press Setup (Step 16). The Setup menu is enabled. Flashing LEDs 1 to 10 show sub functions.

### **To select Setup functions:**

- Press Step buttons 1 – 10. The corresponding LED flashes, which shows an enabled setup function.

### **To enter values:**

- Press flashing Step button. The function toggles between up to three different values, showed by LED = off, red or green.

### **To cancel function:**

- Press Shift.

### **To confirm the function:**

- Press flashing Select button. The value is stored and the Setup menu closed.

### **The following Setup functions are available:**

- **Step button 1: Midi Trigger Learn**
  - Please refer to page 24.
- **Step button 2: Tuning the internal synthesizer**
  - When this function is enabled, the internal synthesizer plays a steady tone at a pitch of 440 Hz. You can tune it using the Data knob. The tuning affects both voices (lead and bass).

- **Step button 3: Lead Synth on/off**
  - Disable the internal lead synthesizer e.g. when using the CV/Gate track 1 to control external synthesizers.
- **Step button 4: Bass Synth on/off**
  - Disable the internal bass synthesizer e.g. when using the CV/Gate track 2/3 to control external synthesizers.
- **Step button 5: Sync Clock Divider**
  - Sync clock divider:
    - LED off = divider disabled (24 ticks per 1/4th note = DIN sync),
    - LED on = Scale (16th, 8th triplets, 32nd etc.).
- **Step button 6: Mute Group**
  - This function is related to the mute function in Play Mode. When active, both bass drums are muted as soon as you mute one of them.
    - LED off = function off
    - red = BD 1 mutes BD 2
    - green = BD 2 mutes BD 1
- **Step button 7: Clear current Pattern Bank**
  - Press Step 7 twice to clear the currently active pattern bank.
    - Be careful, there is no undo function!
- **Step button 8: MIDI-note send on/off**
  - The sequencer transmits MIDI notes on all tracks.
- **Step button 9: Start/Stop Impulse/Level**
  - The function toggles between
    - "impulse" = red LED (e.g. Urzwerk, SEQ-01/02) and
    - "level" = green LED (e.g. TR-808, Doepfer).
- **Step button 10: Factory Reset**
  - Resets Tanzbär to its factory default settings. First, the Step button flashes green, press
- **Step 10 again to confirm the function. Hit Select to store the factory settings permanently**

This function affects only the global settings, not the pattern memory. User patterns will not be overwritten or deleted. If you wish to reload the factory patterns, you have to transfer them via MIDI-dump into the Tanzbär. The factory patterns can be downloaded from the MFB website.

## APPENDIX

### MIDI-Implementation

### MIDI-Controller Assignments


Midi Implementation			Control Change	No	VALUE	Note On	Note	Velocity
Control Change			No	VALUE				
			HTC_TUNE	19	0..127	CV1	36..72	-
			HTC_DECAY	20	0..127	CV23	36..72	0..127
BD1_ATTACK	2	0..127	HTC_NOISE_ON_OFF	78	0..127			
BD1_DECAY	64	0..127	HTC_TOM_CONGA	79	0..127	BD1	36	0..127
BD1_PITCH	65	0..127				BD2	37	0..127
BD1_TUNE	3	0..127	MTC_TUNE	21	0..127	SD	38	0..127
BD1_NOISE	4	0..127	MTC_DECAY	22	0..127	RS	39	0..127
BD1_FILTER	5	0..127	MTC_NOISE_ON_OFF	80	0..127	CY	40	0..127
BD1_DIST	6	0..127	MTC_TOM_CONGA	81	0..127	OH	41	0..127
BD1_TRIGGER	66	0..127				HH	42	0..127
			LTC_TUNE	23	0..127	CL	43	0..127
BD2_DECAY	8	0..127	LTC_DECAY	24	0..127	CP	44	0..127
BD2_TUNE	9	0..127	LTC_NOISE_ON_OFF	82	0..127	LTC	45	0..127
BD2_TONE	10	0..127	LTC_TOM_CONGA	83	0..127	MTC	46	0..127
						HTC	47	0..127
SD_TUNE	11	0..127	TOM_NOISE	84	0..127	CB	48	0..127
SD_D-TUNE	12	0..127				MA	49	0..127
SD_SNAPPY	13	0..127	CB_Tune	85	0..127			
SD_SN_DECAY	67	0..127	CB_Decay	86	0..127			
SD_TONE	14	0..127						
SD_TONE_DECAY	68	0..127	MA_Decay	87	0..127			
SD_PITCH	69	0..127						
RS_Tune	88	0..127	Set Select	0	0..2			
			Track Delay CV1	89	0..127			
CY_DECAY	70	0..127	Track Delay CV23	90	0..127			
CY_TONE	15	0..127	Track Delay BD1	91	0..127			
CY_TUNE	71	0..127	Track Delay BD2	92	0..127			
			Track Delay SD	93	0..127			
OH_DECAY	72	0..127	Track Delay RS	94	0..127			
HH_TUNE	73	0..127	Track Delay CY	95	0..127			
HH_DECAY	74	0..127	Track Delay OH	96	0..127			
			Track Delay HH	97	0..127			
CL_TUNE	16	0..127	Track Delay CL	98	0..127			
CL_DECAY	17	0..127	Track Delay CP	99	0..127			
			Track Delay LTC	100	0..127			
CP_DECAY	75	0..127	Track Delay MTC	101	0..127			
CP_FILTER	18	0..127	Track Delay HTC	102	0..127			
CP_ATTACK	76	0..127	Track Delay CB	103	0..127			
CP_TRIGGER	77	0..127	Track Delay MA	104	0..127			

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## Documents / Resources

 <p>MFB-Tanzbär User Manual</p>	<p><a href="#">MFB MFB-Tanzbar Analog Drum Machine</a> [pdf] User Manual</p> <p>MFB-Tanzbar Analog Drum Machine, MFB-Tanzbar, Analog Drum Machine, Drum Machine, Maschine</p>
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## References

- [User Manual](#)

[Manuals+](#), [Privacy Policy](#)

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