MFB-Tanzbär

User Manual

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Content:

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 advaced 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).
- 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 lenght (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

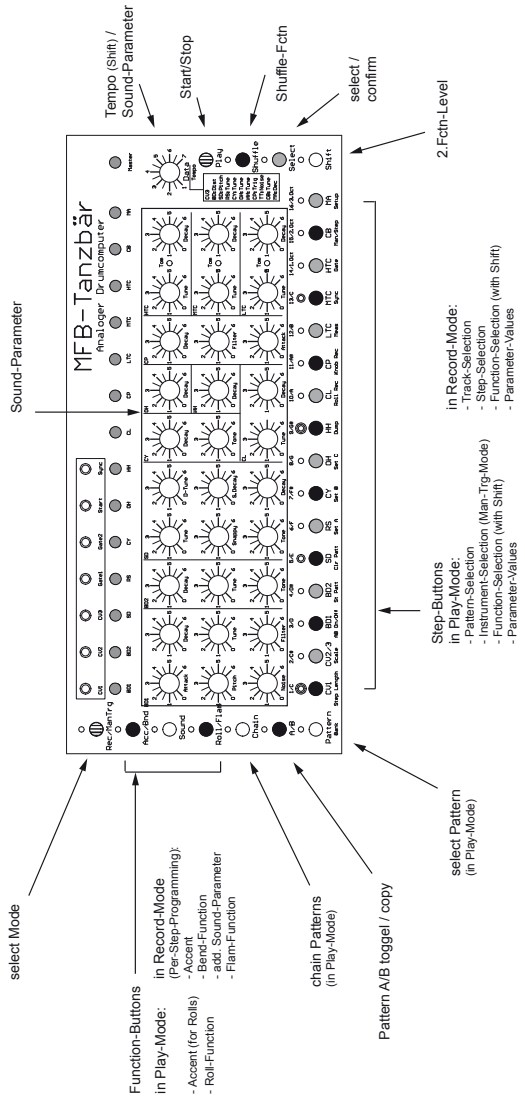
- MIDI clock
- Sync signal (clock) and start/stop input or output; output clock divider

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 date 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.

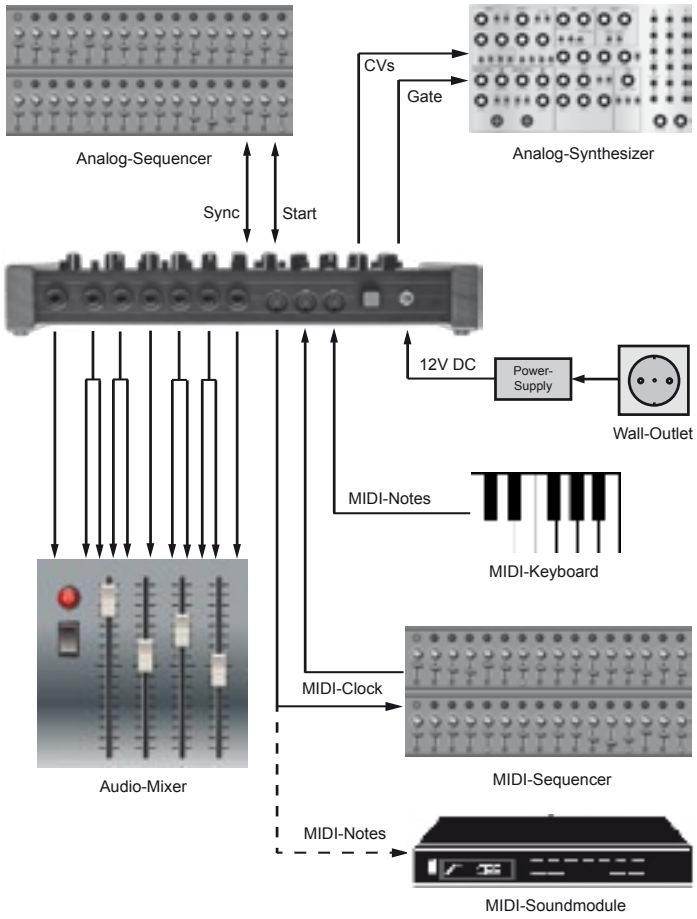
- BD Out left: Bassdrum1, right: Bassdrum 2
- SD/RS Out left: Snaredrum, right: Rimshot
- HH/CY Out: left: Open/Closed Hihat, right: Cymbal
- CP/Clap Out: the attack transients are spread across the stereo field
- TO/CO Out: three Toms / Congas spread over the stereo field
- CB/CL Out: left: Clave, right: 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 clock signal

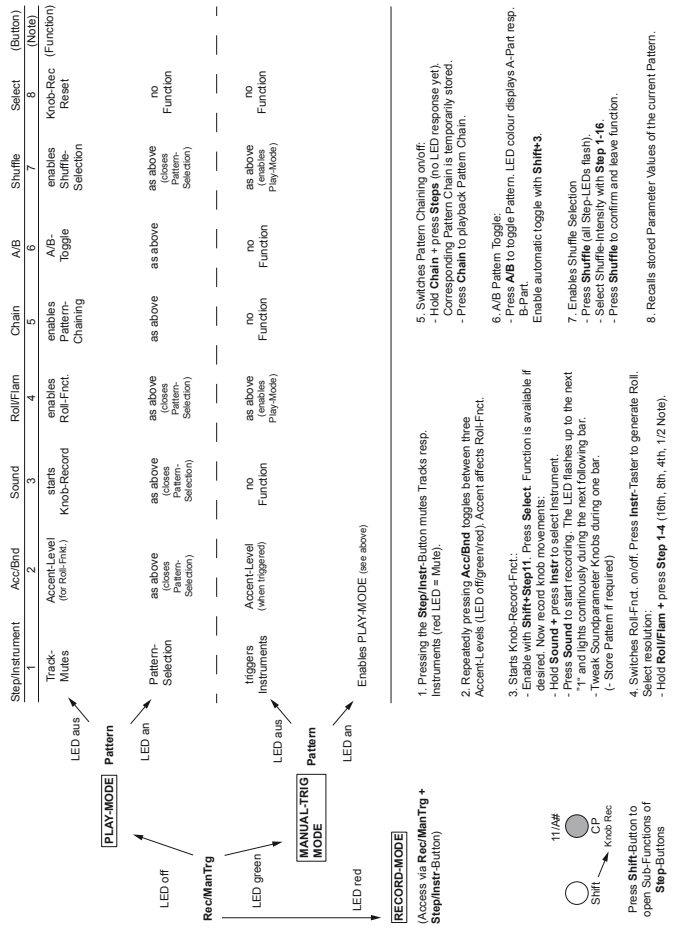
To explore most of Tanzbär's features, you will need nothing but the power connection and the main audio out.



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.



Manual Trigger Mode

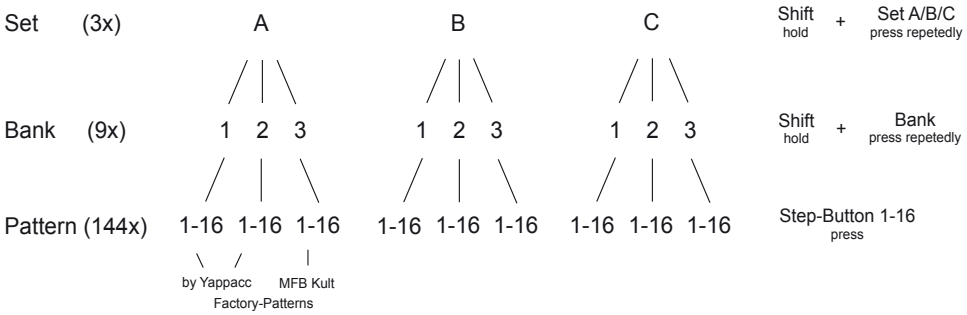
Audition of sounds

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 Yapacc, 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. on page 9).

- 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.

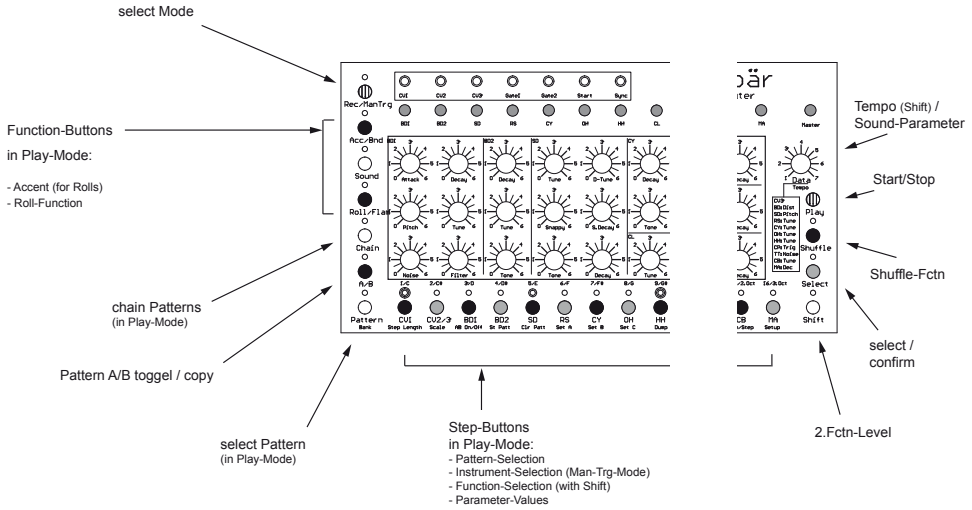
Please note: After powering up, Tanzbär has to be set to PLAY MODE in order to play patterns back (press **Rec/ManTrig***,* **LED** *has to be* **OFF***). Then select a pattern (press* **Pattern***,* **Step** *button, please see above).*

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 (please see page 23).

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”.

4. 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 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 (please see page 18).

5. 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.

6. 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 betwen both parts, please hold **Shift** + **Step 3** (AB on/off).

7. 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.

8. Select Button

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

When using the 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 function 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 — Distorion 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 — Volaume decay time
- Data — Pitch / sound colour of OH and HH

CL Claves

- Tune — Pitch
- Decay — Volume decay time

CP Claps

- Decay — 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, simultanously 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, simultanously 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, simultanously 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.

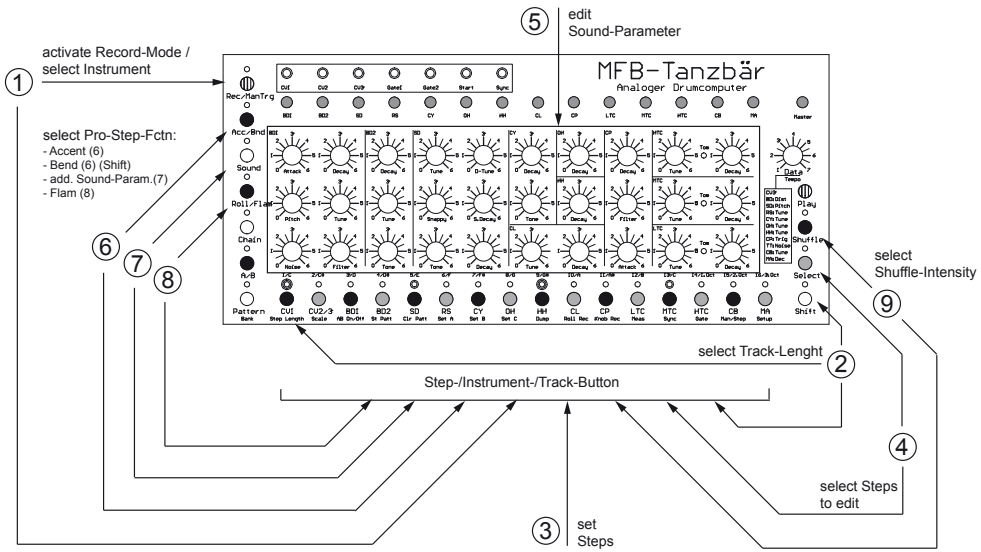
Record mode selection:

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 t o use it as an orientation – all required programming steps will be covered in detail in the following section.



After selecting the appropriate Record Mode – Step Record Mode in this case – we will go ahead.

Programming a Pattern

First, please select an empty pattern (please see page 10). Then let‘s go:

Select instrument and set steps:

- Hold **Rec/ManTrg** button + press **Instrument** button.
  This enables Record Mode and selects the desired instrument/track.
  The instrument/track LED lights up green.
- Press **Step** buttons to set steps. Their LEDs light up red. Hitting a selected **step** again disables the step. If you set a step corresponding to the instrument/track button (green LED), the step lights up orange. So you can still identify the selected instrument.
- To enable another instrument/track, please hold **Rec/ManTrg** again and press another **instrument** button.

Individual sound parameter settings per step

Enhance your pattern with individual sound parameter setting per step.

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 allready 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 (please see page 23).

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 synthesizer 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 Lengh**t (Step LEDs fashing 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 lenght 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 synchronized 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; page 22).
- Press **Select** to confirm the function.

Start/Stop Impuls/Level-configuration

Some drum computers and sequencers transmit or require a short voltage pulse for start and stop (e.g. Urzwerg, SEQ-01/02), others a constant voltage level (e.g. Roland TR-808, Doepfer). Tanzbär‘s start/stop socket can be set to these needs. The settings can be accessed via the Setup menu:

- Hold **Shift** + press **Setup (Step 16)**. The Setup menu is enabled. Flashing LEDs 1 to 10 show sub functions.
- Press **Step 9**. The function toggles between:
  - ”impulse“ = red LED and
  - ”level“ = green LED.
- 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. Urzwerg, 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 setings, 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 Assignements

Midi Implementation		
Control Change	**No**	**VALUE**
BD1_ATTACK	2	0..127
BD1_DECAY	64	0..127
BD1_PITCH	65	0..127
BD1_TUNE	3	0..127
BD1_NOISE	4	0..127
BD1_FILTER	5	0..127
BD1_DIST	6	0..127
BD1_TRIGGER	66	0..127
BD2_DECAY	8	0..127
BD2_TUNE	9	0..127
BD2_TONE	10	0..127
SD_TUNE	11	0..127
SD_D-TUNE	12	0..127
SD_SNAPPY	13	0..127
SD_SN_DECAY	67	0..127
SD_TONE	14	0..127
SD_TONE_DECAY	68	0..127
SD_PITCH	69	0..127
RS_Tune	88	0..127
CY_DECAY	70	0..127
CY_TONE	15	0..127
CY_TUNE	71	0..127
OH_DECAY	72	0..127
HH_TUNE	73	0..127
HH_DECAY	74	0..127
CL_TUNE	16	0..127
CL_DECAY	17	0..127
CP_DECAY	75	0..127
CP_FILTER	18	0..127
CP_ATTACK	76	0..127
CP_TRIGGER	77	0..127

Control Change	No	VALUE
HTC_TUNE	19	0..127
HTC_DECAY	20	0..127
HTC_NOISE_ON_OFF	78	0..127
HTC_TOM_CONGA	79	0..127
MTC_TUNE	21	0..127
MTC_DECAY	22	0..127
MTC_NOISE_ON_OFF	80	0..127
MTC_TOM_CONGA	81	0..127
LTC_TUNE	23	0..127
LTC_DECAY	24	0..127
LTC_NOISE_ON_OFF	82	0..127
LTC_TOM_CONGA	83	0..127
TOM_NOISE	84	0..127
CB_Tune	85	0..127
CB_Decay	86	0..127
MA_Decay	87	0..127
Set Select	0	0..2
Track Delay CV1	89	0..127
Track Delay CV23	90	0..127
Track Delay BD1	91	0..127
Track Delay BD2	92	0..127
Track Delay SD	93	0..127
Track Delay RS	94	0..127
Track Delay CY	95	0..127
Track Delay OH	96	0..127
Track Delay HH	97	0..127
Track Delay CL	98	0..127
Track Delay CP	99	0..127
Track Delay LTC	100	0..127
Track Delay MTC	101	0..127
Track Delay HTC	102	0..127
Track Delay CB	103	0..127
Track Delay MA	104	0..127

Note On	Note	Velocity
CV1	36..72	-
CV23	36..72	0..127
BD1	36	0..127
BD2	37	0..127
SD	38	0..127
RS	39	0..127
CY	40	0..127
OH	41	0..127
HH	42	0..127
CL	43	0..127
CP	44	0..127
LTC	45	0..127
MTC	46	0..127
HTC	47	0..127
CB	48	0..127
MA	49	0..127

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