

## General

The MFB-522 is a drum-machine that uses fully analogue sound sources. Most of its nine instruments can be edited in real-time using onboard controls. In addition, the bass drum, clap and tom/conga sounds are available in two respectively three variations per pattern. MFB-522 offers 72 rhythms, each with corresponding fill-ins as well as eight memory locations for songs. The sequencer also offers a separate accent-track, three shuffle intensities and can be synchronized to an external MIDI-clock.

## Set-up and connections

Connect the external power-supply to the **Power**-jack. **MIDI-In** allows you to connect a MIDI-keyboard, a MIDI-trigger-pad or a sequencer. **Stereo Out** is the main line-level analogue output. Use this output to connect the MFB-522 to an amplifier, a mixing desk or an audio-interface. In addition, bass drum, snare drum, clap and hi-hat offer four individual outputs. When connected, these instruments are automatically subtracted from the **Stereo Out**. Now, use the **On/Off** switch to turn on the MFB-522.

## Instruments

Use the white buttons (1/**BD** ... 8/**HH**) to manually trigger the instruments. Sound variations and instruments that share a channel with another instrument, like short bass drum, rimshot, short clap, high tom/conga and clave, can be played by holding **Shift** and pressing the corresponding white button. All instruments offer individual level controls. The following parameters are also available:

**Bass Drum** – **Tune** sets the bass drum's basic pitch. **Decay** controls the release length of the sound. **Tone** adjusts the intensity of the attack phase. When selected directly, the bass drum responds to the set decay time. When triggered holding **Shift**, the bass drum has a fixed, short decay.

**Snare Drum** - **Noise** sets the volume of the sound's noise part. **Tone** controls the balance between a low and higher snare sound. The snare drum shares a channel with the **Rimshot** (**Shift**). Both sounds cannot be played simultaneously.

**Clap** - **Attack** sets the width of the individual claps. **Filter** adjusts the color of the sound, ranging from muffled to crisp. **Decay** controls the release time for the noise-part, adding a reverb-like flavor to the sound. Played directly, the sound lasts longer and contains four claps. Triggered using the **Shift** button, the sound is shorter and consists of two claps.

**Tom/Conga** – Toggle between the tom and conga sounds. Both instruments cannot be played simultaneously. Although, this is a single instrument, the sound source offers three pitches per pattern (low/mid/high). **Tune** sets the spreading of the pitches. **Decay** controls the sound duration.

**Cowbell** - **Decay** controls the sound duration. **Tune** continuously detunes one of the two tone generators of this sound source. The cowbell shares a channel with the **Clave** (**Shift**). Both sounds cannot be played simultaneously.

**Cymbal** - **Tone** allows manipulating the sound of the attack phase. **Decay** controls the release length of the sound. **Tune** sets the overall tuning for cymbal, cowbell and hi-hat.

**Hi-hat** - **Decay** controls the sound duration for the open hi-hat.

All instruments can be triggered via the MIDI-input, using the following note-numbers:

B0 (35) = BD short	C1 (36) = BD long
C#1 (37) = Rimshot	D1 (38) = SD
D#1 = Clap short	E1 (39) = Clap long
F1 (40) = Cowbell	F#1 (41) Hi-hat
G1 (42) = Clave	G#1 (43) = Hi-hat
A1 (44) = Low Tom/Conga	A#1 (45) Open Hi-hat
B1 (46) = Mid Tom/Conga	C2 (47) = Mid Tom/Conga
C#2 (48) = Cymbal	D2 (49) = Hi Tom/Conga

All instruments are also available two octaves above the listed values (B2 to D4).

## Sequencer

Press **Play** to start and stop the sequencer. **Tempo** sets the tempo. **Fill** toggles between playing only the basic one-bar-rhythm (left LED lid) or alternating between the basic rhythm and the fill-in (right LED lid).

The 72 rhythms (pattern) are divided into groups of eight, i.e. 1–8, 11–18, 21–28 and so on. For the selection of the first eight patterns, press and hold **Rhythm** and use the white buttons to select a memory location. To select patterns with a two-digit-memory-location, press and hold **Rhythm** and type in the memory location on the white buttons, e.g. 3 + 6 for pattern 36.

The selected rhythm will be displayed when pressing **Rhythm**. Switching rhythms can be done on the fly – a new selected pattern will start playing after the running pattern is completed.

## Programming Patterns

Prior to recording, select the pattern you wish to program. Programming can be performed while the sequencer is stopped or in playback-mode. In case, a rhythm already exists in the selected memory location, it can be erased by holding **Rec** and **Rhythm** for at least one second.

Now, set the instruments as follows:

Press and hold **Rec** and select an instrument using the white buttons, e.g. button 1/**BD**. Release **Rec** to start. The 16 LEDs now display the bass drum track. Use the eight white buttons to set or delete the odd sixteenth steps (1, 3, 5 etc.). Even steps (2, 4, 6 etc.) can be accessed by pressing **Shift**. Here, the white buttons only set even steps on the track. Releasing **Shift** automatically switches back to the odd steps.

The selection of the alternative instruments short bass drum, rimshot, short clap, high/mid-tom/conga and clave is carried out by holding **Rec** and pressing the white button twice or three times (tom/conga). To switch back to the standard instrument, reselect the instrument track.

The accent-track is programmed like an instrument. Select this track by pressing **Rec** and **Shift**. Accents are possible for every step but always affect all instruments. By pressing **Shift** twice, it is also possible to set “negative” accents that reduce volume.

A pattern can be set to play less than sixteen steps. Hold **Rec** and press **7/OH** and **8/HH** simultaneously. Now, release **Rec**. While the sequencer is running, it is now possible to specify (and to remove a border) by pressing any white key. This border will **not** be displayed.

### **Song-Playback**

The MFB-522 offers eight memory locations for songs that can each contain up to 64 rhythms. To select a song for playback, press **Song** with one of the white buttons (eight buttons=eight songs). Now, press **Play** to start.

### **Recording a Song**

Select a song first and start song programming by pressing **Rec**. Now, you can numerically enter a pattern sequence, pattern by pattern. First, always select whether you want to use the one-bar basic rhythm or the same pattern with fill-in. Next, select the first rhythm by using the white buttons and confirm your choice by pressing **Song**. Repeat this scheme for the following patterns. Complete and save the song by pressing **Rec**.

### **Shuffle**

The MFB-522 offers three global shuffle intensities. Upon switching the unit on, the shuffle function is inactive. To activate, repetitive press **Shift** and **Play** and cycle through: Shuffle 1, Shuffle 2, Shuffle and No shuffle. Using this function during playback will not immediately switch the shuffle-mode but on the next bar. The shuffle setting is not stored with the pattern. It needs to be reset whenever restarting the unit.

### **Setting the MIDI-Channel**

To set the MFB-522's MIDI-channel press and hold **Shift** and **Fill**. Now, select the channel using the **Tempo** knob. The selected channel is indicated by the LEDs 1-16. Store the channel by releasing **Shift** and **Fill**.

### **MIDI-Clock**

The MFB-522 receives the MIDI-commands start, stop and MIDI-clock when set to external synchronization. When set to internal synchronization, these commands are ignored. To switch between internal and external synchronization modes, press **Play** while switching the unit on. The mode will **not** be displayed.



**Owner's manual**

**Drum-Machine  
MFB-522**