

## Behringer TD-3-MO-BK

# Behringer TD-3-MO-BK Analog Bass Line Synthesizer User Manual

Model: TD-3-MO-BK

[Introduction](#)[Setup](#)[Operation](#)[Maintenance](#)[Troubleshooting](#)[Specifications](#)[Support](#)

## 1. INTRODUCTION

The Behringer TD-3-MO-BK is an analog bass line synthesizer designed to produce classic electronic music sounds. This manual provides detailed instructions for setting up, operating, maintaining, and troubleshooting your TD-3-MO-BK unit.

Please read this manual thoroughly to ensure proper use and to maximize the potential of your synthesizer.

The TD-3-MO-BK features an all-analog signal path, a 16-step sequencer, transistor wave-shaping circuitry, a built-in arpeggiator, and a 4-pole resonant lowpass filter. Its design is inspired by iconic predecessors, offering a unique blend of vintage sound with modern modifications.

## 2. SETUP

### 2.1 Unpacking

Carefully remove the TD-3-MO-BK from its packaging. Retain all packaging materials for future transport or storage. Verify that all components listed in the packing list are present.

### 2.2 Connections

Before connecting the power adapter, ensure all audio and MIDI connections are made. Use high-quality cables for optimal performance.

- **Power:** Connect the supplied power adapter to the DC IN jack on the rear panel and then to a suitable power outlet.
- **Audio Output:** Connect the AUDIO OUT jack to your mixer, audio interface, or amplifier using a standard 1/4-inch TS cable.
- **Headphones:** Connect headphones to the PHONES jack for private monitoring.
- **MIDI:** Use standard 5-pin DIN MIDI cables to connect the MIDI IN and MIDI OUT/THRU ports to your MIDI

controller, computer interface, or other MIDI devices.

- **USB:** Connect the USB port to your computer for MIDI over USB and firmware updates.
- **CV/Gate Inputs/Outputs:** Utilize the various CV (Control Voltage) and Gate inputs/outputs for integration with other analog synthesizers and modular systems. These include FILTER IN, FILTER FM IN, FILTER CV IN, ACCENT IN, SLIDE IN, GATE IN, CV IN, SYNC IN, ACCENT OUT, GATE OUT, CV OUT, FILTER OUT.

## 2.3 Initial Power On

After making all necessary connections, switch on the power. The unit will perform a brief startup sequence. Refer to the [Operation](#) section for details on basic functionality.

## 3. OPERATION

### 3.1 Front Panel Overview

The TD-3-MO-BK features a comprehensive front panel with various controls for sound shaping and sequencing. Familiarize yourself with the layout before proceeding.



Figure 3.1: Front Panel Layout of the Behringer TD-3-MO-BK.

This image displays the entire front panel of the Behringer TD-3-MO-BK synthesizer. The top section features various knobs for sound parameters like Tune, Cutoff, Resonance, Envelope, Decay, Accent, and Overdrive, along with input/output jacks for external control. The middle section includes controls for Tempo, Waveform selection, Track and Pattern Group selection, and the main Mode switch (Write, Play, Patt, Trk). The bottom section is dedicated to the 16-step sequencer, with buttons for Pitch Mode, Time Mode, step selection (1-8, 9-0), and functions like Start/Stop, Bar Reset, Accent, Slide, and Write/Next.

### 3.2 Sound Generation Controls

- **TUNE:** Adjusts the overall pitch of the oscillator.
- **CUTOFF:** Controls the cutoff frequency of the low-pass filter.
- **RESONANCE:** Adjusts the filter's resonance, emphasizing the cutoff frequency.
- **ENVELOPE:** Controls the amount of envelope modulation applied to the filter cutoff.
- **DECAY:** Sets the decay time of the envelope generator.

- **ACCENT:** Controls the intensity of accented notes.
- **LEVEL (HIGH/MID/LOW):** Selects the output level of the main oscillator.
- **SUB OSC:** Activates or deactivates the sub-oscillator, adding depth to the sound.
- **WAVE (Saw/Square):** Selects between sawtooth and square waveforms for the main oscillator.
- **SOFT ATTACK:** Modifies the attack characteristic of the sound.
- **NORMAL - DECAY - ACCENT:** Controls related to the envelope and accent behavior.
- **FILTER TRACKING:** Adjusts how much the filter cutoff tracks the played notes.
- **OVERDRIVE:** Adds distortion and saturation to the sound.
- **VOLUME:** Master output volume control.
- **MUFFLER:** A unique control for sound shaping, often related to tone or filter characteristics.

### 3.3 Sequencer Controls

- **TEMPO:** Adjusts the playback speed of the sequencer.
- **TRACK / PATTERN GROUP:** Selects the current track (I-IV) and pattern group (1-8).
- **MODE (WRITE/PLAY/PATT/TRK):** Selects the operational mode of the sequencer:
  - **WRITE:** For programming new patterns.
  - **PLAY:** For playing back sequences.
  - **PATT (Pattern):** For selecting and editing individual patterns.
  - **TRK (Track):** For arranging patterns into tracks.
- **START/STOP:** Initiates or halts sequence playback.
- **BAR RESET / CLEAR:** Resets the current bar or clears pattern data.
- **RAND:** Generates random patterns.
- **FUNCTION / NORMAL MODE:** Accesses secondary functions of buttons or returns to normal operation.
- **PITCH MODE:** Enters pitch editing mode for the sequencer.
- **TIME MODE:** Enters time editing mode for the sequencer.
- **STEP Buttons (1-8, 9-0):** Used for entering notes and parameters in the sequencer.
- **DEL / INS / CH / COPY / PASTE:** Functions for editing sequencer data.
- **TRANPOSE (DOWN/UP):** Shifts the pitch of the sequence.
- **ACCENT / SLIDE:** Adds accent or slide characteristics to individual steps.
- **SYNC:** Synchronizes the internal sequencer with external MIDI clock.
- **D.S.:** Data Save function.
- **WRITE/NEXT / TAP:** Saves the current pattern/track or used for tap tempo.
- **PATTERN SECTION (A/B, 100/200):** Selects different sections or banks of patterns.

### 3.4 External Connectivity Controls

- **FILTER IN / FILTER FM IN / FILTER CV IN:** Inputs for external control of the filter.
- **ACCENT IN / SLIDE IN / GATE IN / CV IN:** Inputs for external control of accent, slide, gate, and control voltage.
- **SYNC IN:** Input for external clock synchronization.
- **ACCENT OUT / GATE OUT / CV OUT / FILTER OUT:** Outputs for sending accent, gate, control voltage, and filter signals to other devices.

- **PHONES:** Headphone output.

## 4. MAINTENANCE

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### 4.1 Cleaning

To clean the unit, use a soft, dry cloth. For stubborn dirt, a slightly damp cloth with mild soap can be used, followed by a dry cloth. Do not use abrasive cleaners, solvents, or waxes, as these can damage the finish and controls.

### 4.2 Storage

When not in use for extended periods, store the TD-3-MO-BK in a cool, dry place, away from direct sunlight and extreme temperatures. It is recommended to use the original packaging for storage and transport to protect the unit from dust and physical damage.

## 5. TROUBLESHOOTING

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| Problem                    | Possible Cause                                                              | Solution                                                                                                                                                  |
|----------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| No sound output.           | Volume knob is down; incorrect audio connections; unit not powered on.      | Check VOLUME knob, ensure it's turned up. Verify all audio cables are correctly connected. Confirm power adapter is plugged in and unit is switched on.   |
| Sequencer not playing.     | Sequencer in WRITE mode; START/STOP not pressed; external MIDI clock issue. | Ensure MODE switch is set to PLAY. Press START/STOP button. If using external sync, check MIDI clock source and SYNC settings.                            |
| MIDI not responding.       | Incorrect MIDI connections; MIDI channel mismatch; USB driver issue.        | Verify MIDI IN/OUT connections. Check MIDI channel settings on both devices. For USB MIDI, ensure correct drivers are installed on your computer.         |
| Unexpected sound behavior. | Parameter knobs set incorrectly; external CV/Gate signals.                  | Check all sound generation knobs (TUNE, CUTOFF, RESONANCE, etc.). Disconnect external CV/Gate cables to isolate if the issue is from external modulation. |

## 6. SPECIFICATIONS

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**Model:** TD-3-MO-BK

**Type:** Analog Bass Line Synthesizer

**Oscillator:** 1 (Sawtooth, Square waveforms)

**Filter:** 4-pole Resonant Low-Pass Filter

**Sequencer:** 16-step, with Accent and Slide functions

**Connectivity:** MIDI In/Out/Thru (DIN), USB MIDI, Audio Out (1/4" TS), Phones (1/4" TRS), various CV/Gate In/Out.

**Dimensions:** 17.15 x 8.85 x 3.85 inches (approximate)

**Weight:** 3 pounds (approximate)

**Body Material:** Bass Wood

**Power:** External DC Power Adapter (included)

## 7. SUPPORT AND WARRANTY

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For technical support, warranty information, or service inquiries, please visit the official Behringer website or contact your authorized Behringer dealer. Keep your proof of purchase for warranty claims.

**Behringer Official Website:** [www.behringer.com](http://www.behringer.com)

Regularly check the Behringer website for firmware updates and additional resources for your TD-3-MO-BK.