T200

Super Cardioid Dynamic Microphone

Owner's Manual

Introduction

Thank you and congratulations on your purchase of the Miktek T200 Kick drum microphone. You work hard to give a better than average performance, so you demand a better than average microphone to reproduce the sound of your drums. Miktek T Series microphones offer way above average sound and build quality, impressing the most discriminating engineers and artists. Featuring cutting edge capsule designs that are perfectly matched to Miktek's proprietary output transformers; the T Series microphones produce a modern, yet truly classic sound, well suited to today's contemporary performers.

In the following sections of this manual you will find a description of the T200's features, step-by-step set-up and operating instructions along with detailed specifications. In addition, we've also included some basic miking fundamentals for typical live sound and recording applications. To some of us these may seem very basic. However, at Miktek we want to encourage young or new engineers to use our microphones, or at least to read our manuals and learn something about recording and live sound. We know you're serious about your sound because you purchased an outstanding audio instrument, and at Miktek, we're serious about providing superior products and service to our customers. We appreciate your patronage and hope you enjoy using your microphone as much as we enjoy making them.

Sincerely,

Michael Ketchell - Managing Director

T200 Features

- Dynamic Kick Drum Microphone
- Neodymium Magnet
- Super Cardioid Pickup Pattern
- Custom Miktek Transformer
- Package with Protective Case and Mic Clip

Description

The Miktek T200 super cardioid, dynamic microphone features a custom designed, neodymium capsule element offering extremely clear and articulate sound reproduction of low toms, acoustic bass, and of course, kick drum. The T200's frequency response is full and robust and is perfect for reinforcing bass drums in live sound applications.

Incorporating an inductor circuit in the audio path, the T200 features a phase-coherent low frequency boost, offering a tight bass response that is smooth and even with the frequency response of the microphone. Plus, the capsule's unique labyrinth design providesthe capsule's unique labyrinth design provides precise pattern control and maximum gain and maximum gain before feedback, so your kick cuts through the PA with clarity and distinction. The deep and honest response makes the T200 kick drum mic ideal for studio applications. With high SPL capabilities the T200 can easily accommodate the loudest drummers and can even be used to mic up loud bass guitar amps. The T200's steel grill and die cast body ensure durability and reliability night after night. The T200 can be set upon a traditional mic stand using the included holder. The ultra stelth, dark gray finish make the T200 an attractive complement to any drum kit. The Miktek T200 kick drum microphone will reproduce the sound of your bass drum faithfully, delivering a solid foundation to any live or studio performance.

Understanding Polar Patterns

Perhaps the most important aspect of using your T200, or any other microphone, is to understand its polar pick up pattern. Every microphone has a characteristic polar pattern that determines how well it accepts or rejects signal coming from various areas around the microphone capsule. There are many types and variations of polar patterns but the three most common are omnidirectional, bidirectional or figure-eight and unidirectional or cardioid. Omnidirectional microphones pick up sound from everywhere, producing the same frequency response regardless of where the sound source originates (in front of the mic, behind it, to the side, etc.). A bidirectional or figure-eight microphone picks up sound directly from the front and back while rejecting the sound at the sides. In contrast, cardioid mics are specifically designed to accept the sound coming from directly in front, and to reject sound coming from behind or from the sides. The T200's capsule provides a super cardioid polar pattern with an even tighter pick-up pattern. While omni and bidirectional microphones are very useful for a variety of applications, the majority of miking situations in live sound applications require unidirectional or cardioid microphones. When positioned correctly, the cardioid pattern allows you to pick up more of the sound you want and less of the sound you don't want. In live sound situations, the polar pattern greatly determines how

prone a particular microphone is to inducing feedback. Feedback is that nasty howling sound that occurs when a mic is placed too close to a loudspeaker—the signal from the loudspeaker is fed into the mic, then into the loudspeaker, then into the mic, over and over. The super cardioid pick-up pattern allows for better separation of instruments on stage and more control over feedback in live sound reinforcement.

Stand Mounting the T200

The T200 can be mounted to any standard microphone stand using the included mic stand holder. If you are using a US standard 5/8-inch mic stand, remove the Euro adapter by unscrewing it from the mic holder. Loosen the thumb screw and slide the microphone into the holder, then re-tighten the thumb screw.

Microphone Placement

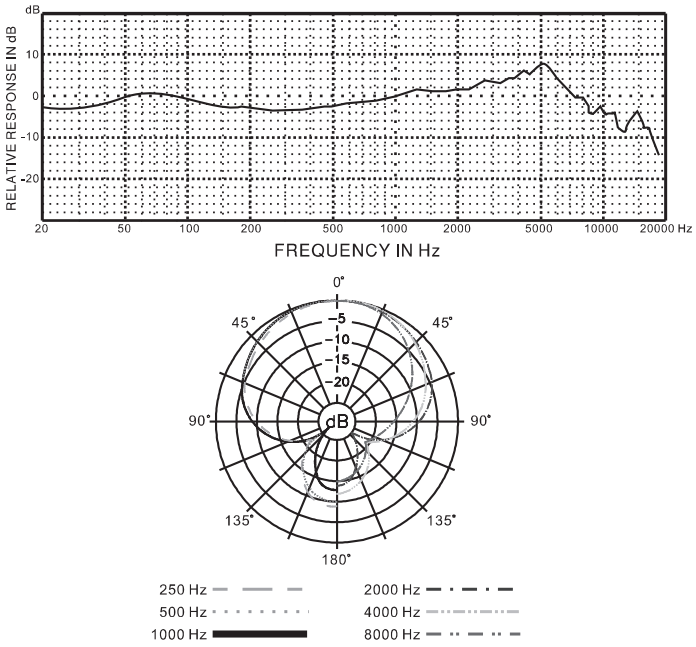
To help maximize the quality of your performance, you must pay careful attention to the placement of your T200, and specifically, how it is positioned for the instrument that you're miking. As you become more experienced in miking techniques, you'll quickly realize the microphone placement is critical to getting the sound you want while maximizing gain before feedback. When placing the mic around any instrument or sound source, take notice of the position of the front of house and monitor loudspeakers. In general, it's good practice to set the microphone behind the main or front of house PA speakers to avoid feedback from those speakers. Also, be conscious of nearby monitor loudspeakers to avoid feedback on stage. When using the T200 on kick drum, the microphone can be placed in or outside the drum, with the capsule pointed straight on or at an angle with the drumhead. Positioning the microphone inside the kick drum, pointing at the beater head can also offer more attack and "click" to your sound. When miking drums, it is good practice to position the T200 so that it's pointing at the area that's at a distance of about 1/3rd of the drum's diameter from the inside of the rim. From there the microphone can be positioned to taste.

Setting Up the Signal Level

In order to get a good signal, first be sure that the T200 is connected to a mixer or recorder input that is microphone level. Most quality mixers, mic pre's and recorders provide microphone inputs with a mic trim ("Trim" AKA Mic Gain or Level) control. The purpose of the mic trim control is to set a good signal level and minimize any noise associated with the mic inputs electronics. A good mic pre will also have a Clip or Peak LED to show you when the input is at overload; the level which distortion begins to occur. To set a good clean level, set the T200 up in front of the desired sound source and slowly turn up the mic trim until you see the Clip LED light up. Then, turn the trim control down until the LED does not light any more. On most microphone inputs, the best setting is when the trim control is turned up as high as possible without lighting the PEAK LED.

The Proximity Effect

All cardioid or uni-directional microphones exhibit a phenomenon known as "proximity effect". The proximity effect is the increase in low frequency response a microphone exhibits as it is moved closer to the sound source. Vocalists tend to love this effect since when they get really close to the mic they get that "FM radio", big bass sound. Just as on a vocal, you can use the proximity effect to adjust their tonal response of the bass drum you're miking. The key to developing the best mic technique is experimentation, along with awareness of the general principle that, the closer your T200 is to a signal source, the greater the bass response. The proximity effect's bass lift is caused by the amount of pressure present at the ports that are used to create the directional pattern. Since omnidirectional microphones do not have ports, they do not have proximity effect.



T200 Polar Pattern

T200 Specifications

Type	Dynamic
Polar Pattern:	Super Cardioid
Frequency Response:	50Hz - 10KHz
Impedance:	150 Ohms
Length:	5.85 inches
Width:	2.3 inches
Depth:	2.3 inches
Net Weight:	0.65 pounds

Specifications subject to change.

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