

# TASCAM

## TRACKPACK 4x4

Complete Bundle for the Recording Novice



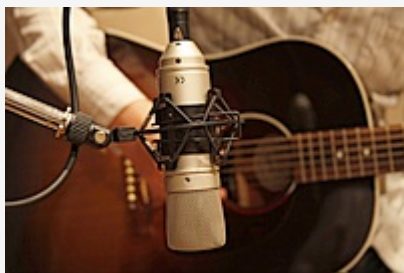
A high-quality recording is necessary to translate the artistic perfection and sonic realism of a performance. Additionally, stereo recording techniques using multiple microphones further enhance the audio experience.

TRACKPACK 4x4 is the perfect system to easily create professional stereo recordings from multi-channel sources with everything required – audio interface **US-4x4**, two **TM-80** microphones, and two sets of **TH-02** headphones.

Create a recording of your favourite acoustic guitar using two condenser microphones for direct and ambient signals. Make a 4-channel stereo recording of a performance with two guitars using both microphone and instrument inputs. Utilize the two condenser microphones for a vocal and piano recording. Or record a drum kit in stereo using the two condenser microphones.

TRACKPACK 4x4 can capture any performance in stunning stereo clarity right out of the box.

## Recording an acoustic guitar with two TM-80 microphones



Place one microphone about 20 cm from the sound hole of the guitar. This is referred to as the 'on-mic' position. Make sure the microphone diaphragm is parallel to the guitar. If the sound is too boomy, shift the microphone away from the sound hole and closer to the bridge.

Place the second microphone about 5 feet in front of the guitar, and at a height of 5 feet off the floor. This is referred to as the 'off-mic' position. Make sure the diaphragm is facing the guitar. Another option is to have someone play the guitar while you place the mic where the guitar sounds the best in the room.

Connect the microphones to the balanced inputs on the US-4x4, then turn-on the **+48V** switch to supply phantom power. The TM-80 microphones require phantom power for operation.

Create two tracks in your DAW software in order to record each mic on its own track. Adjust the recording levels by using the **GAIN** controls of the US-4x4. Gradually increase the level without lighting the **PEAK** LED. Setting the DAW software to record standby allows you to check the level from the computer.

While in standby mode, listen to the sound of each microphone. You may need to make fine adjustments to the positions of the microphones. The closer the mic is to the sound source, the larger and more dynamic the low-pitched tones become. This phenomenon is called proximity effect. On the contrary, the farther away the microphone is, the smaller and milder the sound becomes.

After the mics are placed, start recording. Whether you choose to monitor the performance through headphones or not, the balance of the on-mic and off-mic can be changed later.

Another option is to use two mics as a 'stereo pair' in both the on-mic and off-mic positions. Using four mics in this manner provides a rich, fuller stereo sound. The capsules are placed as close together as possible – one mic is panned left, and the other panned right.

## Recording a vocal performance while playing an acoustic guitar



In some cases, vocals and instruments are recorded separately. Here we will explain an example of how to use two mics to capture the live feel of a vocal and guitar performance.

For the guitar, place the mic in the 'on-mic' position as described previously. For the vocal, place the second mic about 20 cm from the mouth (a commercially available pop-guard is recommended to reduce p-popping).

Note that the vocal microphone can pick up the sound of the guitar as well as the vocal. To reduce the sensitivity to the guitar, adjust the angle of the microphone as pictured. The TM-80 microphone has a directional pickup pattern (cardioid), and turning the front of the mic away from the guitar will lessen the sensitivity to and volume of the guitar.

## Recording a piano

The stereo recording of an acoustic piano exemplifies the sonic quality and overall beauty of the instrument. Basically, a stereo pair of microphones is used for recording a piano performance. Connect the left microphone to IN1 and the right one to IN2. We recommend you to create one track in the DAW software and set it to stereo.



In most cases, a grand piano is recorded with its lid open.

There are several ways to effectively record the piano, but here we will focus on recording the piano from a short distance. By opening the lid and placing a microphone outside of the piano, you can record the entire sound of the piano including sounds reflected by the lid. On the right from the player's side (open side of the lid), place the left and right microphones with a distance of 20 cm or around between them. Leave a space of 20 cm or around from the edge of the piano. By placing the microphone at half the height of the lid, the microphone can pick up sounds including reflected ones well. Due to the structure of the piano, the left microphone picks up a large portion of high-pitched tones.

Set the input levels while the piano is being played, and start recording. Check the recording to determine if the mic positions need adjusted – for a more pronounced attack, move the microphones closer. For more of a room sound, move the microphones further away. To enhance the stereo effect and increase the width, increase the distance between the two microphones.



Additional mics can be used in combination with the TM-80 mics for on-mic recording of the piano. Two more mics placed under the lid and closer to the strings is used for a clearer sound. Also, placing mics under the piano and close to the sound board is used for yet another quality of the piano's sound.

## Recording drums

There are many ways to record drums, but here we will focus on using two TM-80 microphones for a stereo track. The typical drum kit consists of a bass drum, snare drum, hi-hat cymbals, one or more tom drums, and other cymbals (crash, ride, etc). It is important to capture the drums and cymbals in balance.

Often, a pair of microphones are seen positioned above the drum kit. These situations are usually multi-microphone recordings where all drums and cymbals have their own track. When using just a pair of microphones, it is better to place them in front of the drum kit for a balanced sound.



As shown in the picture, place two microphones spaced approximately 20 cm apart at the height of the bass drum. Because the snare drum is off-center, place the pair of mics so that the bass drum and snare drum are aligned in the center of the pattern (as pictured) for a balanced stereo sound – the bass drum and snare drum are reproduced in the center of the stereo field.

Set the input levels and check the recording. The mics can be adjusted upward to reduce the bass drum in the track – or moved lower to increase the response of the bass drum.

You can add two additional mics specifically for on-mic recording of the the bass and snare drums. This technique will provide a tighter drum kit sound. In this case, place the stereo mics above the drum kit to capture cymbal sounds and other drums as well.

### Listen to a sound example for US-4x4 and TM-80

**Here's a sound sample (link to [soundcloud.com](https://www.soundcloud.com))** of music created with a Tascam US-4x4 audio interface and Tascam TM-80 microphones. The track includes acoustic guitar and vocals and has been produced by the Japanese composer Masaku Murata.

He used three TM-80s for the acoustic guitar: two were placed in front of the guitar, one pointing at the center and the other one pointing at the bridge. The third TM-80 was placed farther away for ambience.

Vocals were picked up by a fourth TM-80. For mixing, Murata used Sonar Platinum with its included plugins and ProChannel effects. No additional plugins were used for the mix.

Design and specifications subject to change without notice.

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