

# WIDI K.O.II USER MANUAL V01

#### Hello, thank you for purchasing CME's professional products!

Please read this manual completely before using this product. The pictures in the manual are for illustration purposes only, the actual product may vary. For more technical support content and videos, please visit this page: <a href="https://www.cme-pro.com/support/">www.cme-pro.com/support/</a>

This product is made to work with EP-series, K.O.II devices but is not an official teenage engineering accessory. Customer service and support are provided exclusively by CME.

## **IMPORTANT**

### Warning

Improper connection may result in damage to the device.

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#### Safety Information

Always follow the basic precautions listed below to avoid the possibility of serious injury or even death from electrical shock, damages, fire, or other hazards. These precautions include, but are not limited to, the following:

- Do not connect the instrument during thunder.
- Do not set up the cord or outlet to a humid place unless the outlet is specially designed for humid places.
- If the instrument needs to be powered by AC, do not touch the bare part of the cord or the connector when the power cord is connected to the AC outlet.
- Always follow the instructions carefully when setting up the instrument.
- Do not expose the instrument to rain or moisture, to avoid fire and/or electrical shock



- Keep the instrument away from electrical interface sources, such as fluorescent light and electrical motors.
- Keep the instrument away from dust, heat, and vibration.
- Do not expose the instrument to sunlight.
- Do not place heavy objects on the instrument; do not place containers with liquid on the instrument.
- Do not touch the connectors with wet hands

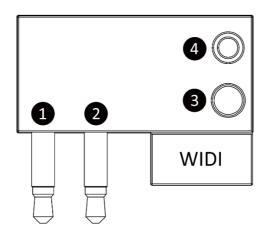
## PACKING LIST

- 1. WIDI K.O.II adapter
- Quick Start Guide

## INTRODUCTION

The WIDI K.O.II is a wireless Bluetooth MIDI adapter that adds bi-directional Bluetooth MIDI functionality to the teenage engineering's EP-133 K.O.II and EP-1320 Medieval. The WIDI K.O.II adapter has two 3.5mm (1/8") mini TRS MIDI Type-A jacks, as well as a push-button and a LED indicator. It supports up to 16 MIDI channels.





## WIDI K.O.II output jack

This 3.5mm (1/8") mini TRS jack connects to the TRS MIDI In port of the teenage engineering EP-133/1320, transmitting Bluetooth MIDI messages received from the WIDI K.O.II to the TE EP-133/1320 via the jack.

## WIDI K.O.II input jack

This 3.5mm (1/8") mini TRS jack connects to the TRS MIDI Out port of the teenage engineering EP-133/1320 to receive power and transmit MIDI messages to a connected Bluetooth MIDI device.

## Push button

This push button is used for specific shortcut actions:



- When the WIDI K.O.II is NOT powered on, press and hold the button, power on the WIDI K.O.II until the green LED flashes slowly 3 times, then releases it, the adapter will manually reset to the factory default.
- When the WIDI K.O.II is powered on, press and hold the button for 3 seconds and then release it, and the adapter will be manually set to "Force peripheral" mode. If the WIDI K.O.II has connected to other BLE MIDI devices, this will disconnect all connections.

#### 4 LED indicator

Video instruction: <a href="https://youtu.be/BvPyvInH9sA">https://youtu.be/BvPyvInH9sA</a>

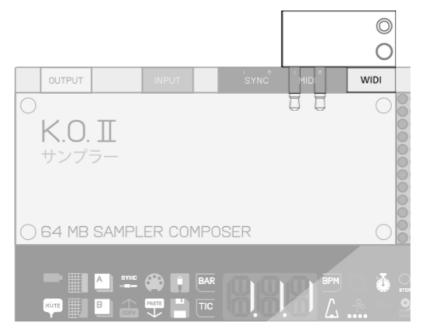
- Slow flashing dark blue: Bluetooth MIDI has started normally and is waiting to connect.
- Solid dark blue: the WIDI K.O.II is connected to another Bluetooth MIDI central as a Bluetooth MIDI peripheral role.
- Light blue (turquoise): the WIDI K.O.II is connected to other Bluetooth MIDI peripherals as a Bluetooth MIDI central role.
- Fast flashing blue or light blue: The WIDI K.O.II Bluetooth is connected and is receiving or sending MIDI messages.
- Solid green: the WIDI K.O.II is in firmware upgrade mode, please use the WIDI App (iOS or Android) to upgrade the firmware (Please visit: <u>CME official website support page</u> to get the App download link).

## CONNECT



 Add Bluetooth MIDI functionality to the teenage engineering EP-133/1320

Connect the two 3.5mm mini TRS jacks of the WIDI K.O.II into the MIDI I/O socket of the EP-133/1320. Turn on the EP-133/1320 and the WIDI K.O.II LED will be lit.



**Note:** When the WIDI K.O.II is fully plugged into the MIDI I/O socket of the EP-133/1320, the WIDI logo will be horizontally aligned with the MIDI logo.

- Upgrade the Bluetooth firmware for the WIDI K.O.II
- Please go to the Apple iOS Appstore, Google Playstore, or <u>CME official</u> website support page to search for the CME WIDI APP and install it.



Your iOS or Android device needs to support the Bluetooth Low Energy 4.0 feature (or higher).



- 2. Open the WIDI app and the WIDI K.O.II name will appear in the device list. Click the name of the device and follow the prompt to enter the firmware upgrade page. Then tap [Start], the app will perform a firmware upgrade (during the upgrade process, please keep your screen on until the update is completed).
- 3. After the upgrade is complete, exit the WIDI App and restart WIDI K.O.II.

**Note:** All WIDI products use the same Bluetooth connection method. Therefore, the following video instructions use WIDI Master as an example.

# Establish a Bluetooth MIDI connection between two WIDI K.O.II adapters

Video instruction: <a href="https://youtu.be/Bhlx2vabt7c">https://youtu.be/Bhlx2vabt7c</a>

- Power on two teenage engineering EP-133/1320 with WIDI K.O.II connected.
- The two WIDI K.O.II will pair automatically. The blue LED will change from slow flashing to solid light (the LED light of one of the K.O.II that automatically acts as Bluetooth central will be turquoise). If there is MIDI data to send, the LEDs of both devices flash dynamically during data transmission.



## Establish a Bluetooth MIDI connection between a music device with built-in Bluetooth MIDI and a WIDI K.O.II

Video instruction: <a href="https://youtu.be/7x5iMbzfd0o">https://youtu.be/7x5iMbzfd0o</a>

- 1. Power on a music device with built-in Bluetooth MIDI and a teenage engineering EP-133/1320 connected with WIDI K.O.II.
- 2. The WIDI K.O.II will automatically pair with the built-in Bluetooth MIDI of another music device, and its dark blue LED will change from a slow flashing to a solid turquoise. If the MIDI data is transmitted, the LED light will flash dynamically during data transmission.

**Note**: If the WIDI K.O.II cannot pair automatically with another MIDI device, there may be a compatibility issue, please go to <u>CME official website support page</u> and contact CME for technical support. Also check if your mobile device, another WIDI device or your operating system is not obstructing the automatic connection process. Make sure all other Bluetooth MIDI devices are turned off and/or the WIDI K.O.II is removed from the general Bluetooth device list of your mobile device or operating system. You can use the group auto-learn feature to create a fixed pairing as explained later in this manual.

## Establish a Bluetooth MIDI connection between macOS X and WIDI K.O.II

Video instruction: <a href="https://youtu.be/bKcTfR-d46A">https://youtu.be/bKcTfR-d46A</a>

- 1. Turn on the power supply of the teenage engineering EP-133/1320 with the WIDI K.O.II connected and confirm that the dark blue LED light is flashing slowly.
- 2. Click the [Apple icon] in the upper left corner of the Apple computer screen, click the [System Preferences] menu, click the [Bluetooth



icon], and click [Turn on Bluetooth], then exit the Bluetooth settings window.

3. Click the [Go] menu at the top of the Apple computer screen, click [Utilities], and click [Audio MIDI Setup].

**Note**: If you do not see the MIDI Studio window, click the [Window] menu at the top of the Apple computer screen and click [Show MIDI Studio].

4. Click the [Bluetooth icon] on the upper right of the MIDI Studio window, find the WIDI K.O.II that appears under the device name list, click [Connect], the Bluetooth icon of the WIDI K.O.II will appear in the MIDI Studio window, indicating that the connection is successful. All setup windows can now be exited. At this point, you can minimize MIDI Studio to run in the background (note: macOS will automatically disconnect Bluetooth MIDI after a period of time if no music software is running to optimize resource usage).

**Note:** MacOS 13 (and later) begins to provide auto-reconnecting to WIDI devices. After your MacOS device is paired with your WIDI device for the first time, they'll automatically reconnect every time you start up your WIDI device and the Bluetooth of your MacOS in the future. This feature may cause an unnecessary automatic reconnection between your MacOS and WIDI device. To avoid this, you can turn off Bluetooth on your MacOS when using your WIDI device, or remove your WIDI pairing on the general Bluetooth settings page.

## Establish a Bluetooth MIDI connection between your iOS device and WIDI K.O.II

Video instruction: <a href="https://youtu.be/5SWkeu2lyBg">https://youtu.be/5SWkeu2lyBg</a>

1. Go to the Appstore to search for and download the free app [midimittr].



**Note:** If the App you are using already has Bluetooth MIDI connection function, please connect WIDI K.O.II directly in the MIDI settings page in the App.

- 2. Turn on the power supply of the teenage engineering EP-133/1320 with the WIDI K.O.II connected and confirm that the dark blue LED light is flashing slowly.
- 3. Click the [Settings] icon to open the setting page, click [Bluetooth] to enter the Bluetooth setting page, and slide the Bluetooth switch to enable the Bluetooth function.
- 4. Open the midimittr App, click the [Device] menu at the bottom right of the screen, find the WIDI K.O.II that appears in the list, click [Not Connected], and click [Pair] on the Bluetooth pairing request pop-up window, the status of WIDI K.O.II in the list will be updated to [Connected], indicating that the connection is successful. At this point midimittr can be minimized and kept running in the background by pressing the iOS device's home button.
- Open the music app that can accept external MIDI input and select WIDI K.O.II as the MIDI input device on the settings page to start using it.

**Note:** iOS 16 (and higher) offers automatic pairing with WIDI devices. After confirming the connection for the first time between your iOS device and WIDI device, it will automatically reconnect every time you start your WIDI device or Bluetooth on your iOS device. This is a great feature, as from now on, you will no longer have to manually pair each time. That said, it can bring confusion for those who use WIDI App to only update their WIDI device and not use an iOS device for Bluetooth MIDI. The new auto-pairing can lead to unwanted pairing with your iOS device. To avoid this, please terminate Bluetooth on your iOS device or forget the existing pairing. You can create fixed pairs between your WIDI devices via WIDI



Groups.

## Establish a Bluetooth MIDI connection between Windows 10/11 computer and WIDI K.O.II

First, the music software must integrate Microsoft's latest UWP API interface program to use the Bluetooth MIDI universal driver that comes with Windows 10/11. Most music software has not integrated this API for various reasons. As far as we know, only Cakewalk by Bandlab and Steinberg Cubase 12 or higher integrates this API, so it can connect directly to WIDI K.O.II or other standard Bluetooth MIDI devices.

Of course, there are alternative solutions for MIDI data transmit between "Windows 10/11 Generic Bluetooth MIDI Drivers" and your music software via a software virtual MIDI driver, such as using the "Korg BLE MIDI driver". WIDI products are fully compatible with the Korg BLE MIDI Windows 10/11 driver, which can support multiple WIDIs to connect to Windows 10/11 computer at the same time and perform bi-directional MIDI data transmission. The specific setup procedure is as follows:

Video instruction: <a href="https://youtu.be/JyJTuIS-q40">https://youtu.be/JyJTuIS-q40</a>

- Please visit the Korg official website to download the BLE MIDI Windows driver.
  - www.korg.com/us/support/download/driver/0/530/2886/
- After decompressing the driver file with the decompression software, click the exe file to install the driver (you can check whether the installation is successful in the list of sound, video and game controllers in the device manager after installation).
- 3. Please use the WIDI App to set the BLE role of WIDI K.O.II as "Force Peripheral" to avoid automatic connection with each other when



multiple WIDI devices are used at the same time. If necessary, each WIDI device can be renamed (rename to take effect after restarting), which is convenient for distinguishing different WIDI devices when using them at the same time.

- 4. Please make sure your Windows 10/11 and the computer's Bluetooth driver have been upgraded to the latest version (the computer needs to be equipped with Bluetooth Low Energy 4.0 or 5.0).
- 5. Power on the teenage engineering EP-133/1320 with the WIDI K.O.II connected. Click Windows [Start] [Settings] [Devices], open the [Bluetooth and other devices] window, turn on the Bluetooth switch, and click [Add Bluetooth or other devices].
- 6. After entering the Add Device window, click [Bluetooth], click the WIDI K.O.II device name listed in the device list, and then click [Connect].
- 7. If it says, "Your device is ready", click [Finished] to close the window (you will be able to see the WIDI K.O.II in the Bluetooth list in Device Manager after connecting).
- 8. Follow steps 5 to 7 to connect other WIDI devices to Windows 10/11.

**Note:** The above steps are just to pair the WIDI K.O.II with Windows Bluetooth, and the connection status of the WIDI will change to [Not Connected] after briefly displaying [Connected]. Only when you open the music software in the next step, the connection status of your WIDI K.O.II will automatically change to [Connected].

9. Open the music software, in the MIDI settings window, you should see the WIDI K.O.II device name appearing in the list (the Korg BLE MIDI driver will automatically discover the WIDI Bluetooth connection and associate it with the music software). Just select the WIDI K.O.II as the MIDI input and output device.



**Note:** If you do not see the WIDI K.O.II device name in the MIDI settings window of your music software, please visit the Windows Connection Troubleshooting section of the WIDI Product Start Guide on the <a href="mailto:CME">CME</a> official website support page to see the solution, or email the <a href="mailto:support@cme-pro.com">support@cme-pro.com</a> for assistance.

In addition, we have developed WIDI Bud Pro and WIDI Uhost professional hardware solutions for Windows users, which can best meet the demanding requirements of professional users for ultra-low latency and long-distance wireless control. Please visit the relevant product webpage for details (<a href="https://www.cme-pro.com/widi-premium-bluetooth-midi/">www.cme-pro.com/widi-premium-bluetooth-midi/</a>).

## Establish a Bluetooth MIDI connection between your Android device and your WIDI K.O.II

Like the Windows situation, the music app must integrate the general Bluetooth MIDI driver of the Android operating system to connect with the Bluetooth MIDI device. Some music apps have not implemented this feature for various reasons. Therefore, you need to use some apps specially designed to connect Bluetooth MIDI devices as a bridge.

Video instruction: <a href="https://youtu.be/0P1obVXHXYc">https://youtu.be/0P1obVXHXYc</a>

Download and install the free app [MIDI BLE Connect]:
 https://play.google.com/store/apps/details?id=com.mobileer.example.
 midibtlepairing



2. Power on the teenage engineering EP-133/1320 with the WIDI K.O.II connected and confirm that the dark blue LED is blinking slowly.



- 3. Turn on the Bluetooth function of the Android device.
- 4. Open the MIDI BLE Connect App, click [Bluetooth Scan], find the WIDI K.O.II that appears in the list, click [WIDI K.O.II], it will show that the connection is successful. At the same time, the Android system will issue a Bluetooth pairing request notification, please click on the notification and accept the pairing request. At this point, you can press the home button of the Android device to minimize the MIDI BLE Connect App and keep it running in the background.
- 5. Open the music app that can accept external MIDI input and select WIDI K.O.II as the MIDI input and output device on the settings page to start using it.

#### Group connection with multiple WIDI devices

You can group multiple WIDI devices to achieve bi-directional data transmission up to [1-to-4 MIDI Thru] and [4-to-1 MIDI merge], and multiple groups are supported to use at the same time.

**Note**: If you want to connect other brands of Bluetooth MIDI devices in the group at the same time, please refer to the description of the "**Group Auto-Learn**" function below.

Video instruction: https://youtu.be/ButmNRj8Xls

- 1. Open the WIDI app.
- 2. Power on the teenage engineering EP-133/1320 with the WIDI K.O.II connected.

**Note:** Please remember to avoid having multiple WIDI devices powered on at the same time, otherwise they will be automatically paired one-to-one, which will cause the WIDI App to fail to discover the WIDI K.O.II you want to connect to.



3. Set the Bluetooth role of this WIDI K.O.II to the "Force Peripheral" role and rename it.

**Note:** Click the device name to rename the WIDI K.O.II. The new name requires a restart of the device to take effect.

- 4. Repeat the above steps to set up all WIDI K.O.II (or other WIDI devices) to be added to the group.
- 5. After all WIDI K.O.II (or other WIDI devices) have been set to "Force Peripheral" roles, they can be powered on at the same time.
- 6. Click the Group menu, and then click Create New Group.
- 7. Enter a name for the group.
- 8. Drag and drop the corresponding WIDI K.O.II to the central and peripheral positions.
- 9. Click "Download Group" and the settings will be saved in the WIDI K.O.II that is the central. Next, all WIDI K.O.II will restart and automatically connect to the same group.

**Note 1:** Even if you turn off the teenage engineering EP-133/1320 with the WIDI K.O.II connected, all group settings will still be stored in the memory of the WIDI K.O.II central. When powered on again, they will automatically connect in the same group.

**Note 2:** If you want to delete the group connection settings, please use the WIDI App to connect the WIDI K.O.II that is the central and click [Remove group settings].

**Note 3:** If you use an iOS 16 (and later) device for group setup, please turn off the Bluetooth switch on the iOS device after setup or forget the existing WIDI pairing to release the Bluetooth occupation caused by automatic reconnection.



#### Group Auto-Learn

The Group Auto-Learn function allows you to establish up to [1-to-4 MIDI Thru] and [4-to-1 MIDI merge] group connections between WIDI series products and other brands of Bluetooth MIDI devices. When you enable "Group Auto-Learn" for a WIDI device you want to operate as the central device of the group, the device will automatically scan and connect to all available BLF MIDI devices

Video instruction: https://youtu.be/tvGNiZVvwbQ

- 1. Set all WIDI devices as "Force Peripheral" to avoid automatic pairing of WIDI devices with each other.
- Enable "Group Auto-Learn" for the central WIDI device of your choice.
   Close the WIDI application. The WIDI LED light will slowly flash dark blue.

**Note:** If you use an iOS 16 (and later) device for Group Auto-Learn setup, please turn off the Bluetooth switch on the iOS device after setup or forget the existing WIDI pairing to release the Bluetooth occupation caused by automatic reconnection.

- 3. Turn on up to 4 BLE MIDI peripherals (including WIDI) to automatically connect with the WIDI central device.
- 4. When all peripheral devices are connected (The turquoise LED of the central and the LED of the peripherals are both on constantly. If there is real-time data such as MIDI clock being sent, the LED light will flash quickly), press the button on the WIDI central device to store the group in its memory. The WIDI central LED light is green when pressed and turquoise when released.



**Note:** iOS, Windows 10/11 and Android are not eligible for WIDI groups. For macOS, click "Advertise" in MIDI Studio's Bluetooth configuration.

# **TECHNICAL SPECIFICATIONS:**

Technology	Bluetooth 5 (Bluetooth Low Energy MIDI), bi-directional 16 MIDI channels
Connectors	3.5mm (1/8") mini TRS jack MIDI input and output
Compatible devices	WIDI Master, WIDI Jack, WIDI Uhost, WIDI Bud Pro, WIDI Core, WIDI BUD, standard Bluetooth MIDI controller. Mac/iPhone/iPad/iPod Touch/Vision Pro, Windows 10/11 computer, Android mobile device (all with Bluetooth Low Energy 4.0 or higher)
Compatible OS (BLE MIDI)	MacOS Yosemite or higher, iOS 8 or higher, Windows 10/11 or higher, Android 8 or higher
Wireless transmission Latency	As low as 3 ms (Test results of two WIDI K.O.II based on Bluetooth 5 connection)
Range	20 meters / 65.6 feet (without obstruction)
Firmware upgrades	Wireless upgrade via Bluetooth using the WIDI App for iOS or Android
Power supply	Powered via MIDI OUT, compatible with teenage engineering EP-133/1320 only



power consumption	37 mW
size	35.9 mm (L) x 31.6 mm (W) x 17.8 mm (H).
weight	13.8g / 0.49 oz

Specifications are subject to change without notice.

# FREQUENTLY ASKED QUESTIONS

- The LED light of WIDI K.O.II does not light up.
- Is the WIDI K.O.II and teenage engineering EP-133/1320 properly connected? Is the device powered on?
- Can the WIDI K.O.II connect wirelessly to other BLE MIDI devices?
- If the BLE MIDI device complies with the standard BLE MIDI specification, it can be connected automatically. If the WIDI K.O.II cannot connect automatically, there may be a compatibility issue, please contact CME for technical support through <a href="Mailto:CME official website-support page">CME official website-support page</a>.
- The connection between WIDI K.O.II to iOS or macOS is unstable or with noticeable latency.
- In most cases this issue occurs after updating the Bluetooth firmware
  of your WIDI device, or after upgrading your operating system. This
  can cause conflicts between the previous Bluetooth connection cache
  and the upgraded version. To solve this, open the Bluetooth settings



page of your iOS or macOS device, forget or remove the previous WIDI pairing and restart Bluetooth. Next establish a new connection with your WIDI device.

- The wireless connection distance is very short, or the latency is high, or the signal is intermittent.
- The WIDI K.O.II adopts Bluetooth standard for wireless signal transmission. When the signal is strongly interfered or blocked, the transmission distance and response time will be affected. This can be caused by trees, reinforced concrete walls, or environments with many other electromagnetic waves. Please try to avoid these sources of interference.

## CONTACT

Email: info@cme-pro.com

Web page: BluetoothMIDI.com