

MIDI Thru5 WC

USER MANUAL V07

Hello, thank you for purchasing CME's professional product!

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: www.cme-pro.com/support/

IMPORTANT INFORMATION

- **WARNING**

Improper connection may cause damage to the device.

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CME provides a one-year standard Limited Warranty for this product only to the person or entity that originally purchased this product from an authorized dealer or distributor of CME. The warranty period starts on the date of purchase of this product. CME

warrants the included hardware against defects in workmanship and materials during the warranty period. CME does not warrant against normal wear and tear, nor damage caused by accident or abuses of the purchased product. CME is not responsible for any damage or data loss caused by improper operation of the equipment. You are required to provide a proof of purchase as a condition of receiving warranty service. Your delivery or sales receipt, showing the date of purchase of this product, is your proof of purchase. To obtain service, call or visit the authorized dealer or distributor of CME where you purchased this product. CME will fulfill the warranty obligations according to local consumer laws.

● **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 a 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

PACKAGE CONTENTS

1. MIDI Thru5 WC
2. USB Cable
3. Quick Start Guide

INTRODUCTION

MIDI Thru5 WC is a wired MIDI Thru/Splitter box with expandable wireless Bluetooth MIDI capabilities, it can completely and accurately forward the MIDI messages received by the MIDI IN to multiple MIDI Thru. It has five standard 5-pin MIDI THRU ports and one 5-pin MIDI IN port, as well as an expansion slot that can install a 16-channel bi-directional Bluetooth MIDI module. It can be powered via standard USB. Multiple MIDI Thru5 WCs can be daisy-chain to form a larger system.

Note: The Bluetooth MIDI expansion slot can be equipped with CME's WIDI Core (with PCB antenna), called the WC module. With the Bluetooth MIDI module installed, the MIDI Thru5 WC functions the same as CME's WIDI Thru6 BT.

MIDI Thru5 WC can connect all MIDI products with standard MIDI interface, such as: synthesizers, MIDI controllers, MIDI interfaces, keytars, electronic wind instruments, v-accordions, electronic drums, digital pianos, electronic portable keyboards, audio interfaces, digital mixers, etc. With an optional Bluetooth MIDI module, the MIDI Thru5 WC will connect to BLE MIDI capable devices and computers, such as: Bluetooth MIDI controllers, iPhones, iPads, Macs, PCs, Android tablets and mobile phones, etc.



1. USB Power

USB TYPE-C socket. Use a universal USB Type-C cable to connect a standard USB power supply with a voltage of 5V (e.g.: charger, power bank, computer USB socket, etc.) to supply power to the unit.

2. Button

This button has no effect when the optional Bluetooth MIDI module is not installed.

Note: After installing the optional WIDI Core Bluetooth MIDI module, certain shortcut operations are available. First, please confirm that the WIDI Core firmware has been upgraded to the latest version. The following operations are based on WIDI v0.1.4.7 BLE firmware version or higher:

- ♦ When the MIDI Thru5 WC is not powered on, press and hold the button and then power on the MIDI Thru5 WC until the LED light located in the center of the interface flashes slowly 3 times, then release. The interface will be manually reset to the factory default state.
- ♦ When the MIDI Thru5 WC is powered on, press and hold the button for 3 seconds and then release it, the Bluetooth role of the interface will be manually set to the "Force Peripheral" mode (this mode is used to connect to a computer or mobile phone). If the interface has previously been connected to other Bluetooth MIDI devices, this action will disconnect all connections.

3. 5-pin DIN MIDI Socket

- ♦ **IN:** One 5-pin MIDI IN socket is used to connect the MIDI OUT or MIDI THRU port of standard MIDI device to receive MIDI messages.
- ♦ **THRU:** Five 5-pin MIDI THRU sockets are used to connect to the MIDI IN port of standard MIDI devices, and forwards

all MIDI messages received by the MIDI Thru5 WC to all connected MIDI devices.

4. Expansion Slot (on the circuit board inside the product housing)

The optional WIDI Core module of the CME can be used to expand the 16-channel bi-directional wireless Bluetooth MIDI function. Please visit www.cme-pro.com/widi-core/ for more details on the module. Module needs to be purchased separately.

● LED Indicator

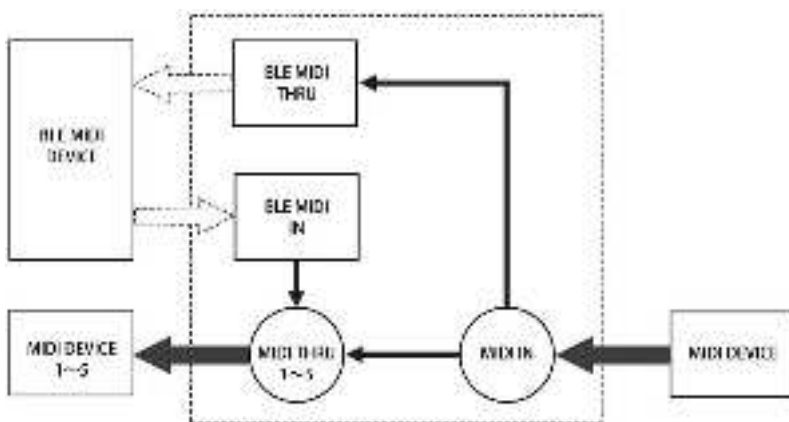
The indicators are located inside the product housing and are used to indicate various states of the unit.

- ◆ The green LED light near the side of the USB power supply
 - When the power supply is on, the green LED light will be lit.
- ◆ *The LED light located in the center of the interface (it will only light up after installing the WIDI Core)*
 - *The blue LED light flashes slowly: Bluetooth MIDI starts normally and waits for connection.*
 - *Steady blue LED light: Bluetooth MIDI has been successfully connected.*
 - *Fast blinking blue LED light: Bluetooth MIDI is connected and MIDI messages are being received or sent.*

- The light blue (turquoise) LED light is always on: the device is connected as a Bluetooth MIDI central to other Bluetooth MIDI peripherals.
- The green LED light indicates that the device is in firmware upgrader mode, please use the iOS or Android version of the WIDI App to upgrade the firmware (please visit the BluetoothMIDI.com page for the App download link).

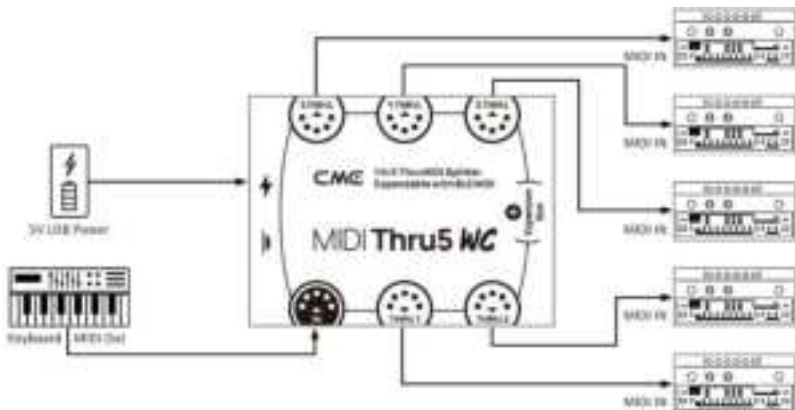
● Signal Flow Chart

Note: The part of BLE MIDI part is only valid after installing the WC module



CONNECTION

- Connect external MIDI devices to MIDI Thru5 WC



1. Power the unit through the USB port of the MIDI Thru5 WC.
2. Using a 5-pin MIDI cable, connect the MIDI OUT or MIDI THRU of the MIDI device to the MIDI IN socket of the MIDI Thru5 WC. Then connect the MIDI THRU (1-5) sockets of the MIDI Thru5 WC to the MIDI IN of the MIDI device.
3. At this point, the MIDI messages received by the MIDI Thru5 WC from the MIDI IN port will be fully forwarded to the MIDI devices connected to the THRU 1-5 ports.

Note: MIDI Thru5 WC has no power switch, just power on to start working.

● Daisy-chain multiple MIDI Thru5 WCs

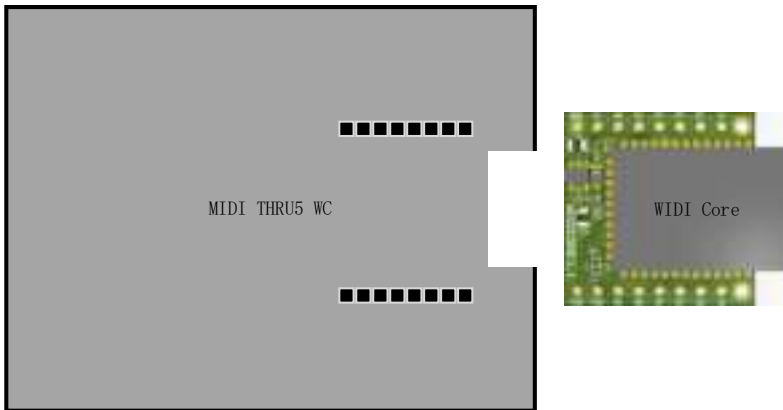
In practice, if you need more MIDI Thru ports, you can easily daisy chain multiple MIDI Thru5 WCs by connecting the MIDI Thru port of one MIDI Thru5 WC to the MIDI IN port of the next using a standard 5-pin MIDI cable.

Note: Each MIDI Thru5 WC must be powered separately (use of USB Hub possible).

EXPANDED BLUETOOTH MIDI

MIDI Thru5 WC can be equipped with CME's WIDI Core module to add bi-directional Bluetooth MIDI functionality over 16 MIDI channels.

- **Install WIDI Core to MIDI Thru5 WC**
 1. Remove all external connections from the MIDI Thru5 WC.
 2. Use a screwdriver to remove the 4 fixing screws at the bottom of the MIDI Thru5 WC and open the case.
 3. Wash your hands under running water and dry with a paper towel to release static electricity, then remove the WIDI Core from the package.
 4. Insert the WIDI Core into the socket of the MIDI Thru5 WC horizontally and slowly (at a 90-degree vertical angle from the top of the MIDI Thru5 WC motherboard) according to the direction shown in the figure below:



5. Put the mainboard of the MIDI THRU5 WC back into the case and fasten it with screws.

Please refer to <<MIDI Thru5 WC Optional Bluetooth MIDI Module Installation Guide>> for more details.

Note: *Wrong insertion direction or position, improper plugging and unplugging, live operation, electrostatic breakdown may cause the WIDI Core and MIDI Thru5 WC to stop working properly, or even damage the hardware!*

- **Burn the Bluetooth firmware for the WIDI Core module.**
 1. Go to the Apple App store, Google Play store or the [CME official website support page](#) to search for the CME WIDI APP and install it. Your iOS or Android device needs to support Bluetooth Low Energy 4.0 feature (or higher).
 2. Press and hold the button next to the USB socket of the MIDI Thru5 WC and power up the device. The LED light in the center of the interface will now be green and start to

blink slowly. After 7 flashes, the LED light will change from flashing red briefly to green, after which the button can be released.

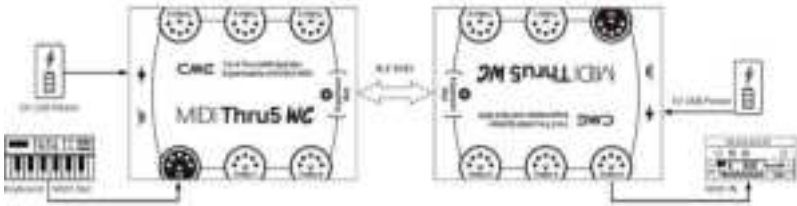
3. Open the WIDI App, the WIDI Upgrader name will be displayed in the device list. Click the device name to enter the device status page. Click [Upgrade Bluetooth Firmware] at the bottom of the page, select the MIDI Thru5 WC product name on the next page, click [Start], and the App will perform the firmware upgrade (please keep your screen on during the upgrade process until the entire update is complete).
4. After the upgrade process is completed, exit the WIDI App and restart the MIDI Thru5 WC.

BLUETOOTH MIDI CONNECTIONS

(WITH OPTIONAL WIDI CORE EXPANSION INSTALLED)

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

- Establish a Bluetooth MIDI connection between two MIDI Thru5 WC interfaces



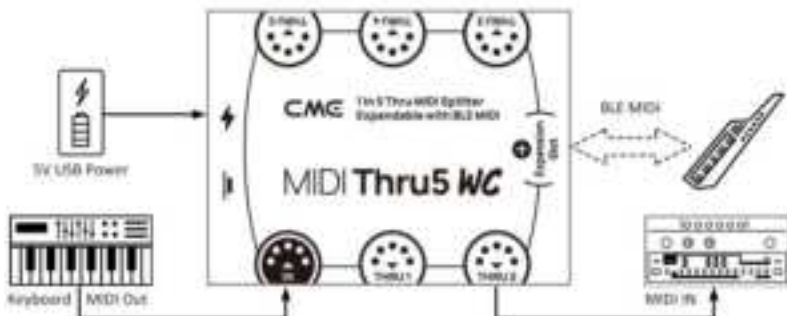
Video instruction: <https://youtu.be/Bhlx2vabt7c>

1. Power on the two MIDI Thru5 WCs with WIDI Core modules installed.
2. The two MIDI Thru5 WCs will pair automatically, and the blue LED light will change from slow flashing to solid light (the LED light of one of the MIDI Thru5 WCs will be turquoise, showing it acts as the central Bluetooth MIDI device). When MIDI data is being sent, the LEDs of both devices flash dynamically with the data.

Note: Automatic pairing will connect two Bluetooth MIDI devices. If you have multiple Bluetooth MIDI devices, please ensure you power them on in the right sequence or use WIDI groups to create fixed links.

Note: Please use the WIDI App to set the WIDI BLE role as "Force Peripheral" to avoid automatic connection with each other when multiple WIDIs are used at the same time.

- Establish a Bluetooth MIDI connection between a MIDI device with built-in Bluetooth MIDI and the MIDI Thru5 WC

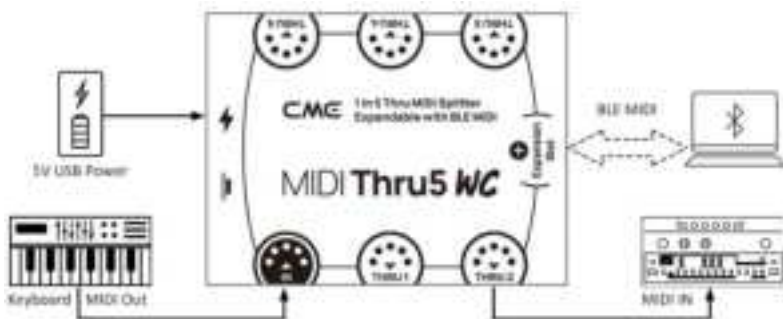


Video instruction: <https://youtu.be/7x5iMbzf0o>

1. Power on the MIDI device with built-in Bluetooth MIDI and the MIDI Thru5 WC with the WIDI Core module installed.
2. The MIDI Thru5 WC will automatically pair with the built-in Bluetooth MIDI of another MIDI device, and the LED light will change from slow flashing to solid turquoise. If there is MIDI data sent, the LED light will flash dynamically with the data.

Note: If the MIDI Thru5 WC cannot be automatically paired with another MIDI device, there may be a compatibility issue, please go to BluetoothMIDI.com to contact CME for technical support.

- Establish a Bluetooth MIDI connection between macOS X and MIDI Thru5 WC



Video instruction: <https://youtu.be/bKcTfR-d46A>

1. Power on the MIDI Thru5 WC with the WIDI Core module installed and confirm that the blue LED is blinking 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 MIDI Thru5 WC that appears under the device name list, click [Connect], the Bluetooth icon of the MIDI Thru5 WC will appear in the MIDI Studio window, indicating that the connection is successful. All setup windows can now be exited.

- Establish Bluetooth MIDI connection between iOS device and MIDI Thru5 WC

Video instruction: <https://youtu.be/5SWkeu2lyBg>

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

Note: *If the app you are using already has a Bluetooth MIDI connection function integrated, please connect the MIDI Thru5 WC directly on the MIDI setting page in the app.*

2. Power on the MIDI Thru5 WC with the WIDI Core module installed and confirm that the blue LED is blinking 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 midimitttr App, click the [Device] menu at the bottom right of the screen, find the MIDI Thru5 WC that appears in the list, click [Not Connected], and click [Pair] on the Bluetooth pairing request pop-up window, the status of MIDI Thru5 WC in the list will be updated to [Connected], indicating that the connection is successful. At this point midimitttr can be minimized and kept running in the background by pressing the iOS device's home button.
5. Open the music app that can accept external MIDI input and select MIDI Thru5 WC 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, you can create fixed pairs between your WIDI devices via WIDI Groups. Another option is to terminate Bluetooth on your iOS device when working with WIDI devices.

- **Establish a Bluetooth MIDI connection between Windows 10/11 computer and MIDI Thru5 WC**

Video instruction: <https://youtu.be/JyJTulS-g4o>

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 integrates this API, so it can connect directly to MIDI Thru5 WC or other standard Bluetooth MIDI devices.

There are alternative solutions for MIDI data transfer between Windows 10/11 Generic Bluetooth MIDI Drivers and music software via a software virtual MIDI interface driver.

WIDI products are fully compatible with the Korg BLE MIDI Windows 10 driver, which can support multiple WIDIs to connect to Windows 10/11 computers at the same time and perform bi-directional MIDI data transmission.

Please follow the exact instruction to connect WIDI with Korg's BLE MIDI driver:

1. Please visit the Korg official website to download the BLE MIDI Windows driver.
www.korg.com/us/support/download/driver/0/530/2886/
2. 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 WIDI BLE role as "Force Peripheral" to avoid automatic connection with each other when multiple WIDIs are used at the same time. If necessary, each WIDI 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 WIDI device. 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 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 WIDI in the Bluetooth list in Device Manager after connecting).
8. Follow steps 5 to 7 to connect other WIDI devices to Windows 10/11.
9. Open the music software, in the MIDI settings window, you should see the WIDI 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 desired WIDI as the MIDI input and output device.

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

- **Establish Bluetooth MIDI connection between Android device and MIDI Thru5 WC**

Video instruction: <https://youtu.be/0P1obVXHXYc>

Similar to 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. Most music apps have not implemented this feature for various reasons. Therefore, you need to

use an app specially designed to connect Bluetooth MIDI devices as a bridge.

1. Download and install the free app [MIDI BLE Connect]:
https://www.cme-pro.com/wp-content/uploads/2021/02/MIDI-BLE-Connect_v1.1.apk



2. Power on the MIDI Thru5 WC with the WIDI Core module installed and confirm that the 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 MIDI Thru5 WC that appears in the list, click [MIDI Thru5 WC], 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 MIDI Thru5 WC as the MIDI input device on the settings page to start using it.

- **Group connection with multiple WIDI devices**

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

Groups can be connected between 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.

1. Open the WIDI App.



2. Power on a MIDI Thru5 WC with the WIDI Core module installed.

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 MIDI Thru5 WC you want to connect to.

3. Set your MIDI Thru5 WC to the "Force Peripheral" role and rename it.

Note 1: After selecting the BLE role as "Force Peripheral", the setting will be automatically saved to the MIDI Thru5 WC.

Note 2: Click the device name to rename the MIDI Thru5 WC. The new name requires a restart of the device to take effect.

4. Repeat the above steps to set up all MIDI Thru5 WCs to be added to the group.
5. After all MIDI Thru5 WCs 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 MIDI Thru5 WCs to the central and peripheral positions.
9. Click "Download Group" and the settings will be saved in the MIDI Thru5 WC that is the central. Next, these MIDI Thru5 WCs will restart and automatically connect to the same group.

Note 1: *Even if you turn off the MIDI Thru5 WC, all group settings will still be remembered in the 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 MIDI Thru5 WC that is the central and click [Remove group settings].*

● Group Auto-Learn

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

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

1. Set all WIDI devices as "Force Peripheral" to avoid automatic pairing of WIDI devices with each other.

2. Enable "Group Auto-Learning" for the central WIDI device. Close the WIDI application. The WIDI LED light will slowly flash blue.
3. Turn on up to 4 BLE MIDI peripherals (including WIDI) to automatically connect with the WIDI central device.
4. When all devices are connected (the blue LED lights are 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 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.

SPECIFICATIONS

MIDI Thru5 WC	
MIDI Connectors	1x 5-pin MIDI Input, 5x 5-pin MIDI Thru
LED Indicators	2x LED lights (Bluetooth indicator light will only light up when the WIDI Core expansion module is installed)
Compatible Devices	Devices with standard MIDI sockets

MIDI messages	All messages in the MIDI standard, including notes, controllers, clock, sysex, MIDI timecode, MPE
Wired Transmission	Close to Zero Latency and zero Jitter
Power Supply	USB-C Socket. Powered by Standard 5V USB bus
Power Consumption	20 mW
Size	82.5 mm (L) x 64 mm (W) x 33.5 mm (H) 3.25 in (L) x 2.52 in (W) x 1.32 in (H)
Weight	96 g/3.39 oz

WIDI Core module (optional)

Technology	Bluetooth 5 (Bluetooth Low Energy MIDI), bi-directional 16 MIDI channels
Compatible Devices	WIDI Master, WIDI Jack, WIDI Uhost, WIDI Bud Pro, WIDI Core, WIDI BUD, standard Bluetooth MIDI controller. Mac/iPhone/iPad/iPod Touch, 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 MIDI Thru5 WCs with WC module based on Bluetooth 5 connection)
Range	20 meters/65.6 feet (without obstruction)
Firmware Upgrade	Wireless upgrade via Bluetooth using the WIDI App for iOS or Android
Weight	4.4 g/0.16 oz

Specifications are subject to change without notice.

FAQ

- **Can the MIDI Thru5 WC be powered by 5-pin MIDI?**
 - No. The MIDI Thru5 WC uses a high speed optocoupler to isolate the interference caused by the power supply ground loop between the MIDI input and the MIDI output, to ensure that the MIDI messages can be transmitted completely and accurately. So, it cannot be powered by 5-pin MIDI.
- **Can the MIDI Thru5 WC be used as a USB MIDI interface?**
 - No. The USB-C socket of the MIDI Thru5 WC can only be used for USB power.
- **The LED light of the MIDI Thru5 WC does not light up.**
 - Please check whether the computer USB socket is powered, or whether the USB power adapter is powered?

- Please check if the USB power cable damaged.
- When using a USB power supply, please check whether the USB power is turned on or whether the USB power bank has sufficient power (please choose a power bank with Low Power Charging mode for AirPods or fitness trackers etc.).
- **Can the MIDI Thru5 WC wirelessly connect to other BLE MIDI devices via the expanded WC module?**
 - If the connected BLE MIDI device conforms to the standard BLE MIDI specification, it can be connected automatically. If the MIDI Thru5 WC fails to connect automatically, there may be a compatibility issue, please contact CME for technical support via the [BluetoothMIDI.com](https://www.bluetoothmidi.com) page.
- **MIDI Thru5 WC cannot send and receive MIDI messages through the expanded WC module.**
 - Please check if the MIDI Thru5 WC Bluetooth is selected as the MIDI input and output device in the DAW software?
 - Please check if the connection over Bluetooth MIDI has been established successfully.
 - Please check if the MIDI cable between MIDI Thru5 WC and external MIDI device is connected correctly?
- **The wireless connection distance of the WC module of the MIDI Thru5 WC is very short, or the latency is high, or the signal is intermittent.**
 - MIDI Thru5 WC 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

Website: www.cme-pro.com/support/

