

CMG

Wireless MIDI Interface User's Manual

Model: **WIDI-XU**


WIDI
WIRELESS MIDI

Read "Precautions" on page 5 before use



Please read this manual carefully before use.
Please keep this manual for reference.

Thank you for choosing CME WIDI-XU wireless MIDI interface.

Please keep all the important information here.

Attach your invoice or receipt here.



for reference

<u>Purchase date</u> _____	<u>Serial Number</u> _____
<u>Dealer's name and addr.</u> _____	
<u>Dealer's tel.</u> _____	

Warning:

- Improper connection may cause damage to the device.

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The Package List

Please check all the items in your WIDI-XU package:

- The WIDI-XU product 1 pcs
- User's manual 1 pcs

Special Message Section

This product utilizes batteries or an external power supply (adapter). Do NOT connect this product to any power supply or adapter other than the one described in the manual, on the product, or specifically recommended by CME.

Warning: Do not place this product in a position where anyone could walk on, trip over, or roll anything over power or connecting cords of any kind. The use of an extension cord is not recommended! If you must use an extension cord, make sure that the cord has the ability to handle maximum current needed by this product. Please consult a local electrician when possible.

This product should be used only with the components supplied or recommended by CME. When used with any components, please observe all safety markings and instructions that accompany the accessory product.

Specifications Subject To Change:

The information contained in this manual is believed to be correct at the time of printing. However, CME reserves the right to change or modify any of the specifications without notice or obligation to update existing units.

This product, either alone or in combination with an amplifier and headphones or speaker(s), may be capable of producing sound levels that could cause permanent hearing loss. DO NOT operate for long period of time at a high volume level or at a level that is uncomfortable. If you experience any hearing loss or ringing in the ears, you should consult an audiologist.

Some CME products may have stands and/or accessory mounting fixtures that are either supplied with the product or as optional accessories. Some of these items are designed to be dealer assembled or installed. Please make sure that stands are stable and any optional fixtures (where applicable) are well secured BEFORE using.

Stands supplied by CME are designed for the respect products only. No other uses are recommended.

Notice:

Service charges incurred due to a lack of knowledge relating to how a function or effect works (when the unit is operating as designed) are not covered by the manufacturer's warranty, and are therefore the owners' responsibility. Please study this manual carefully and consult your dealer before requesting service.

Environmental Issues:

CME strives to produce products that are both user safe and environmentally friendly. We sincerely believe that our products and the production methods used to produce them, meet these goals. In keeping with both the letter and the spirit of the law, we want you to be aware of the following:

Battery Notice:

This product MAY contain a small non-rechargeable battery which (if applicable) is soldered in place. The average life span of this type of battery is approximately five years. When replacement becomes necessary, contact a qualified service representative to perform the replacement.

This product may also use "household" type batteries. Some of these may be rechargeable. Make sure that the battery being charged is a rechargeable type and that the charger is intended for the battery being charged.

When installing batteries, do not mix batteries with new, or with batteries of different type. Batteries MUST be installed correctly. Mismatches of incorrect installation may result in overheating and battery case rupture.

Warning:

Do not attempt to disassemble, or incinerate any battery. Keep all batteries away from children. Dispose of used batteries promptly and as regulated by the laws in your area. Note: Check with any retailer of household type batteries in your area for battery disposal information.

Disposal Notice:

Should this product become damaged beyond repair, or for some reason its useful life is considered to be at an end, please observe all local, state, and federal regulations that relate to the disposal of products that contain lead, batteries, plastics, etc. If your dealer is unable to assist you, please contact CME directly.

FCC INFORMATION (U.S.A)

1. **IMPORTANT NOTICE: DO NOT MODIFY THIS UNIT!**

This product, when installed as indicated in the instructions contained in this manual, meets FCC requirements. Modifications not expressly approved by CME may void your authority, granted by the FCC, to use the product.

2. **IMPORTANT:** When connecting this product to accessories and/or another product use only high quality shielded cables. Cable(s) supplied with this product **MUST** be used. Follow all installation instructions. Failure to follow instructions could void your FCC authorization to use this product in the USA.

3. **NOTE:** This product has been tested and found to comply with the limits for a Class B Digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used according to the instructions found in the user's manual, may cause interference harmful to the operation of other electronic devices. Compliance with FCC regulations does not guarantee that interference will not occur in all installations. If this product is found to be the source of interference, which can be determined by turning the unit "OFF" and "ON", please try to eliminate the problems by using one of the following measures:

Relocate either this product or the device that is being affected by the interference.

Utilize power outlets that are on different branch (circuit breaker or fuse) circuits or install AC line filter(s).

In the case of radio or TV interference, relocate/reorient the antenna. If the antenna lead-in is 300 ohm ribbon lead, change the lead-in to co-axial type cable.

If these corrective measures do not produce satisfactory results, please contact the local retailer authorized to distribute this type of product. If you cannot locate the appropriate retailer, please contact CME.

The above statements apply **ONLY** to those products distributed in the USA.

PRECAUTIONS

IMPORTANT

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 follows:

- 1 Read and understand all the instructions.
- 2 Always follow the instructions on the product.
- 3 Before cleaning the product, always unplug it from the computer. When cleaning, use a soft and dry cloth. Do not use gasoline, alcohol, acetone, turps or any other organic solutions; do not use liquid cleaner, spray cleaner or too wet cloth.
- 4 Do not use the product near water or moisture, such as bathtub, washbasin, washing pool in the kitchen or similar places.
- 5 Do not place the product in an unstable position where it might accidentally fall over.
- 6 Do not jam sinks or holes of the product; those sinks or holes are used for air circulation to prevent the product from overheating. Do not place the product near heat sink or any places with poor air circulation.
- 7 Do not place anything on the product.
- 8 Do not insert anything in the product, which may cause fire or electrical shock. Do not splash any kind of liquid to the product.
- 9 Do not disassemble the product in case of accidental electrical shock.
- 10 Always take the product to a qualified service center in need of repair. You will cause yourself in danger if you open or remove the cover, and improper assembly may cause electrical shock in the future use.
- 11 Unplug the product and take it to a qualified service center if anything in the listed below happens:
 - 1) Any liquid get into the product.
 - 2) The product gets rain or water splash.
 - 3) The product does not work properly after following all the instructions regarding to the trouble shootings.
 - 4) The product falls down or gets broken.
 - 5) The product functions poorly.
- 12 Do not use the product when thundering; otherwise the thundering may cause long-distance electrical shock.
- 13 Do not use the product when there is a gas leak nearby.
- 14 Switch off the product when inside or near aircraft. The use of RF

- product in aircraft is illegal. It may be dangerous to the operation of the aircraft.
- 15 Do not use the product on the ground without the permission of the ground crew in the airport.
 - 16 Observe 'Turn off the RF communication device such as Mobile Phone' signs, such as those near stores of fuel, chemicals or explosives.
 - 17 The operation of some medical electronic devices, such as hearing aids and pacemakers, may be affected if the product is used next to them. Observe any warning signs and manufacturer's recommendations.
 - 18 Please do not use the product near any precision instrument, which may cause noise or abnormal operation to the product.
 - 19 Switch off the product at a refueling point, such as a petrol station, even if you are not refueling your own car.
 - 20 Do not store or carry flammable or explosive materials in the same compartment where a radio transmitter, such as the product, is placed.
 - 21 Electronic vehicle systems, such as anti-lock brakes, speed control and fuel injection systems are not normally affected by radio transmissions. The manufacturer of such equipment can advise if it is adequately shielded from radio transmissions. If you suspect vehicle problems caused by radio transmissions, consult your dealer and do not switch on your WIDI-X8 until it has been checked by qualified approved installers.

Efficient Use

For optimum performance with minimum power consumption, note the following:

- ◆ The product has an internal antenna. Do not cover part of the internal antenna of the product with your hands, which may affect the communication quality.

Radio Frequency Energy

- ◆ The product is a low-power radio transmitter and receiver. When it is turned on, it intermittently receives and transmits radio frequency (RF) energy (radio waves). The system that handles the communication controls the power level at which the product transmits.

Exposure To Radio Frequency Energy

- ◆ The product is designed not to exceed the limits for exposure to RF energy set by national authorities and international health agencies. * These limits are part of comprehensive guidelines and establish permitted levels of radio wave exposure for the general population. The guidelines were developed by independent scientific organizations such as ICNIRP (International Commission on Non-Ionizing Radiation Protection) through periodic and thorough evaluation of scientific studies. The limits include a substantial safety margin designed to assure the safety of all persons, regardless of age and health, and to account for any variations in measurements. *Examples of radio frequency exposure guidelines and standards that the product is designed to conform to:

- ICNIRP, "Guidelines for limiting exposure to time-varying electric, magnetic, and electromagnetic fields (up to 300 GHz)-International Commission on Non-Ionizing Radiation Protection (ICNIRP)". Health Physics, vol. 74. pp, 494-522, April 1998.
- 99/519/EC Council Recommendation on the limitation of exposure to the general public to electromagnetic fields 0 Hz-300 GHz, Official Journal of the European Communities, July 12, 1999.
- ANSI/IEEE C95.1-1992. "Safety levels with respect to human exposure to radio frequency electromagnetic fields, 3kHz to 300 GHz". The Institute of Electrical and Electronics

Engineers Inc., New York, 1991.

- FCC Report and Order, ET Docket 93-62, FCC 96-326, Federal Communications Commission (FCC), August 1996.
- Radio communications (Electromagnetic Radiation Human Exposure) Standard 2003, Media Authority.

★ **Please keep this manual in the safe place.**

Caution:

Setting Up

- Do not connect the product when thundering.
- Do not set up the cord or outlet to a moist place, except for that the outlet is specially designed for moist places.
- Do not touch the naked part of the cord or the connector.
- Always follow the instructions carefully when setting up the product.
- Avoid using an extended USB cable; if a extended USB cable must be used, please choose a good and short one.
- Do not use an USB hub to connect the product.
- Make sure the computer USB port has proper power supply.

WARNING:

- Do not expose the product to rain or moisture, to avoid fire or electrical shock.

Other Precautions:

- Keep the product away from electrical interface sources, such as fluorescent light and electrical motors.
- Keep the product away from dust, heat and vibration.
- Do not expose the product to sunlight.
- Do not place heavy objects on the product; do not place containers with liquid on the product.
- Do not touch the connectors with wet hands.
- Central Music Co. is not responsible for any damage or data loss caused by improper operation to the product.
- All the pictures and the LED display in the manual are used for demonstration; they may be different from the real instrument.

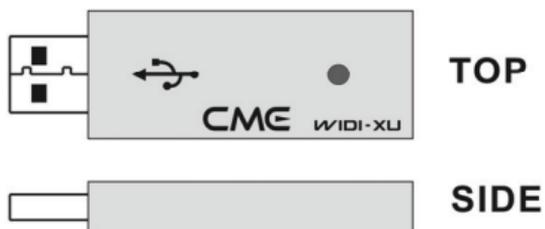
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- Other names and brands belong to the respective owners.

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1 Features

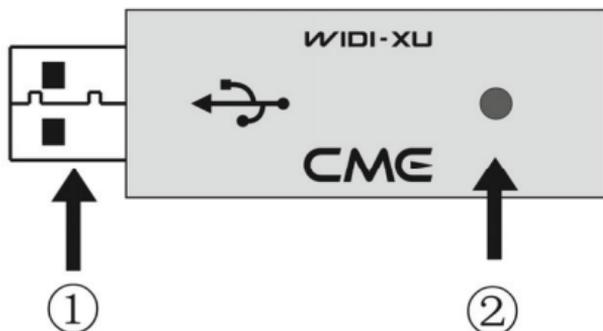


- Professional WIDI products with all the functions.
- The working band is 2.4GHz ISM.
- Bi-directional MIDI data transfer.
- 64 radio channels for MIDI data transfer, with manual or automatic radio channel setting mode.
- Manual switching for one-to-multi communication (auto finding and selecting).
- Compatible with other WIDI products such as WIDI-X8.
- USB↔RF route mode.
- USB class compliant for Windows XP/Vista and Mac OS X, supporting hot plug.
- When connected to computer via USB, this product will be automatically recognized as the “USB Audio Device”, fully support MIDI data stream, compatible with Cakewalk, Sonar, Cubase etc.
- USB port power supply.
- Indicator for both signal and power.
- Low power consumption, high speed, powerful error correction with automatic notes-off and on-line detection.
- Continuous working for more than 20 hours with the battery power supply.
- Maximum wireless transfer distance is 80m (262 feet) without obstacle.
 - RF means wireless transfer (Radio frequency)
 - Specifications and appearance are subject to change without notice.

2 System Requirement

- Another WIDI compatible product (or built-in WIDI compatible product) such as UF50/60/70/80, WIDI-X8 or another WIDI-XU.
- GM compatible sound card.
- Computer with 366MHz or faster with available USB port.
- Windows XP/Vista or Mac OS X.
- Cakewalk, Sonar, Cubase or other music software.
- The less obstacles, the better performance.
- Avoid using bluetooth or other RF device to minimize interference.

3 Operation



Note:

① USB

The USB connector is plugged the USB connection of the computer and power supply.

② Indicator

It is a 2-color indicator, red for power indicator and green for signal indicator.

3.1 Power Supply

The product is powered by USB port.

After starting your computer, connect the product to the computer USB cable.

If it is the first time the product is connected to the computer, the Windows will automatically install the device driver. Follow the

instructions for driver installation. When asked for the device driver, please let the Windows automatically search the driver. When the installation is completed, the product will show in the system device list as the "USB Audio Device".

If it is the first time the product is connected to the Macintosh, the Mac OS will automatically install the device driver. When the installation is completed, the product will show in the "MIDI & Audio Setup" as the "WIDI-XU".

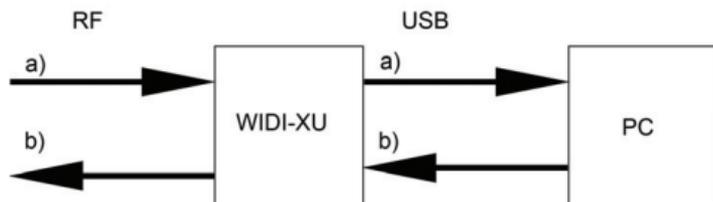
If the device is already installed but disabled, just enable it, and the power indicator (red) is on.

3.2 Wireless Connection

When you plug the product to the computer USB port and the device driver is properly installed (enabled), the product will automatically search for another available WIDI device to make wireless connection. When the wireless connection is established, the signal indicator (green) is on.

3.3 Signal Route

The route mode is: USB \leftrightarrow RF.



Note:

a): WIDI-XU is used as the receiver to receive the wireless MIDI data from the sender such as another WIDI-XU, and transfer the MIDI data to the computer. In your music software, please choose "USB Audio Device" as the MIDI input device.

b): WIDI-XU is used as the sender to get the computer MIDI data, then convert them to wireless signal and send them out for other WIDI devices to receive. In your music software, please choose "USB Audio Device" as the MIDI Output device.

3.4 Channel Selecting

Each WIDI-XU can be set to one from 64 channels for MIDI data transfer. Suppose one pair of the WIDI devices use one channel, up to 32 pairs of WIDI devices can be used at the same place.

The channel selecting of WIDI XU is something like WIDI-X8, you can manually set the channel, automatically synchronize to another channel or auto find and set channel. To do so, you need to send system command to the WIDI-XU via MIDI messages.

The system commands are essentially standard MIDI system exclusive messages (sysx, F0 ... F7). You can edit and sent those sysx in your music software like Cakewalk, etc. See appendix 1 for more about the MIDI system exclusive messages.

There is another simple way to send the system commands, that is, you can use the WIDI Control.EXE program, which you can download from the CME international website.

◆ **Selecting A Channel**

System command data: **F0 00 20 63 00 07 02 02 10 nn F7**

Set the WIDI-XU to channel nn, nn is a hex number from 01 to 40, in dec the data range is 1-64, see appendix 2 for more detail.

WIDI Control operation: Select a channel, then click "Set Channel".

◆ **Auto Finding**

System command data: **F0 00 20 63 00 07 02 02 10 50 F7**

By using this command, the WIDI-XU will automatically search and find an available WIDI device and establish communication. The signal indicator (green) will be on when the communication is established.

WIDI Control operation: Click "Auto Search".

◆ **Auto Changing To Another Channel**

System command data: **F0 00 20 63 00 07 02 02 10 5F F7**

By using this command, the WIDI-XU will automatically search and find an available channel, and set itself and another WIDI device to this channel. When the two WIDI devices change to the new channel, both the signal indicators (green) will be on.

WIDI Control operation: Click "Auto Change".

◆ **Enable RF**

System command data: **F0 00 20 63 00 07 02 02 10 6F F7**

This command will enable the wireless transmission.

WIDI Control operation: Click "RF ON".

◆ **Disable RF**

System command data: **F0 00 20 63 00 07 02 02 10 60 F7**

This command will disable the wireless transmission.

WIDI Control operation: Click "RF OFF".

Note:

For proper communication, each pair of the WIDI devices should use the same channel, and different pairs use different channels.

The WIDI system supports up to 32 pairs of WIDI devices to be used at the same place. When several pairs of WIDI devices are used at the same place, please use the channel number 1-32.

An available WIDI device means this WIDI device does not establish communication with another one.

WIDI devices include WIDI-X8, WIDI-XU, WIDI-EK, etc.

3.5 Removal Of The Product

If you finish using the product, please remove it from your computer in the proper way as below:

- Close the music software that uses the product.
- Stop the "USB Audio Device" from windows device manager.
- Unplug the product from the computer.

4 Automation

4.1 Automatic Communication Establishing

- Automatic establishing communication when powered on.
When the product is powered on, it will automatically search and find another available WIDI device and establish communication. When the communication is established, the signal indicator (green) will be on.
- Automatic establishing communication when channel changed
When the channel is changed (either manually or automatically), the product will automatically establish communication. When the communication is established, the signal indicator (green) will be on.

4.2 Automatic Notes Off

In either one of the following cases, the system will automatically send the "All Notes Off" and "All Sound off" MIDI messages to stop the sound from the tone generator.

- Bad signal with data loss.
- During the communicator the sender is switched off.
- Radio channel changed.

4.3 On-line Detection

After powered on the WIDI system will automatically detect the on-line status. The green indicator will show the communication status.

5 Notice

- Before launching Cakewalk or other music software, make sure the product is properly connected the computer, otherwise the music software cannot find the MIDI device.
- Close the music or audio software before removing the product.
- Stopping the product in the OS before unplug it from the computer, which is better than unplugging it directly.
- Remove all the obstacles and un-wanted RF devices near the product.
- When the signal indicator (green) flashes, it means there is interference, and if the indicator flashes fast, it means too much interference stops the communication. To get a good communication, the green indicators on both sides should be on.
- If many pairs of WIDI products are used at the same place, please limit the channel settings to 1-32 for best communication quality.

6 Appendix

6.1 System Control Messages

#	Name	MIDI data	Usage
1	Channel select	F0 00 20 63 00 07 02 02 10 nn F7	Set channel to nn, nn range 01-40(hex), for 1-64(dec)
2	Auto search	F0 00 20 63 00 07 02 02 10 50 F7	Auto find an available WIDI device and establish communication
3	Auto select	F0 00 20 63 00 07 02 02 10 5F F7	Auto find an available channel then set its own channel and another WIDI channel to it.
4	Enable RF	F0 00 20 63 00 07 02 02 10 6F F7	Enable the RF send/receive function
5	Disable RF	F0 00 20 63 00 07 02 02 10 60 F7	Disable the RF send/receive function

6.2 Channel List

nn	Freq	nn	Freq	nn	Freq	nn	Freq
01	1	11	17	21	33	31	48
02	2	12	18	22	34	32	50
03	3	13	19	23	35	33	51
04	4	14	20	24	36	34	52
05	5	15	21	25	37	35	53
06	6	16	22	26	38	36	54

07	7	17	23	27	39	37	55
08	8	18	24	28	40	38	56
09	9	19	25	29	41	39	57
0A	10	1A	26	2A	42	3A	58
0B	11	1B	27	2B	43	3B	59
0C	12	1C	28	2C	44	3C	60
0D	13	1D	29	2D	45	3D	61
0E	14	1E	30	2E	46	3E	62
0F	15	1F	31	2F	47	3F	63
10	16	20	32	30	48	40	64

The logo consists of the letters 'CME' in a bold, white, sans-serif font, centered within a black rounded rectangular background.

CME

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