

KORG Legacy Collection

Virtual Instruments/Effects Plug-ins w/MS-20 Controller



KORG Legacy Collection
MS-20 Controller
Owner's manual

KORG

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Precautions

Location

Using the unit in the following locations can result in a malfunction.

- In direct sunlight
- Locations of extreme temperature or humidity
- Excessively dusty or dirty locations
- Locations of excessive vibration
- Close to magnetic fields

Power supply

Be sure to turn the power switch to OFF when the unit is not in use.

Interference with other electrical devices

Radios and televisions placed nearby may experience reception interference. Operate this unit at a suitable distance from radios and televisions.

Handling

To avoid breakage, do not apply excessive force to the switches or controls.

Care

If the exterior becomes dirty, wipe it with a clean, dry cloth. Do not use liquid cleaners such as benzene or thinner, or cleaning compounds or flammable polishes.

Keep this manual

After reading this manual, please keep it for later reference.

Keeping foreign matter out of your equipment

Never set any container with liquid in it near this equipment. If liquid gets into the equipment, it could cause a breakdown, fire, or electrical shock. Be careful not to let metal objects get into the equipment.

THE FCC REGULATION WARNING (for U.S.A.)

This equipment 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 installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Unauthorized changes or modification to this system can void the user's authority to operate this equipment.

CE mark for European Harmonized Standards

CE mark which is attached to our company's products of AC mains operated apparatus until December 31, 1996 means it conforms to EMC Directive (89/336/EEC) and CE mark Directive (93/68/EEC).

And, CE mark which is attached after January 1, 1997 means it conforms to EMC Directive (89/336/EEC), CE mark Directive (93/68/EEC) and Low Voltage Directive (73/23/EEC).

Also, CE mark which is attached to our company's products of Battery operated apparatus means it conforms to EMC Directive (89/336/EEC) and CE mark Directive (93/68/EEC).

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Thank you for purchasing the KORG Legacy Collection. To ensure trouble-free enjoyment of the Legacy Collection's full potential, please read this manual carefully and use the system only as directed.

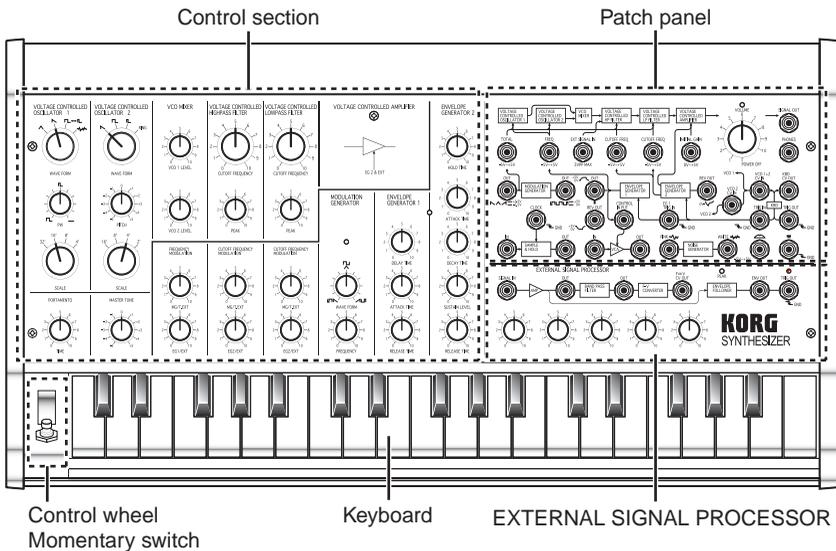
Main features

This reproduces the original MS-20 at 84% of its original size (with the addition of a velocity-sensitive mini-keyboard), and is a USB-MIDI controller dedicated to controlling the MS-20 software. You can use the controller's knobs and patching facilities to control the MS-20 software in realtime.

Front and rear panel

Front panel

The front panel is laid out in the same way as the original MS-20. When the controller is connected to your computer, you can use the keyboard, control wheel, and momentary switch to perform. You can also use the front panel knobs, switches, and patch panel to directly edit the MS-20 software.



Keyboard

This is a 37-note velocity-sensitive mini-keyboard. You can adjust the velocity response by editing the velocity curve in the COMBINATION page of the Legacy Cell software synthesizer.

Control wheel

By making connections in the patch panel you can use this wheel to control different parameters.

Momentary switch

By making connections in the patch panel you can use this switch as a clock signal for the envelope generator or Sample & Hold.

Control section

Here you can control the original parameters of the MS-20.

For details, refer to the “KORG Legacy Collection MS-20/Polysix/Legacy Cell Owner’s Manual” and “MS-20 Owner’s Manual” provided on the included CD-ROM.

Patch panel/EXTERNAL SIGNAL PROCESSOR (ESP)

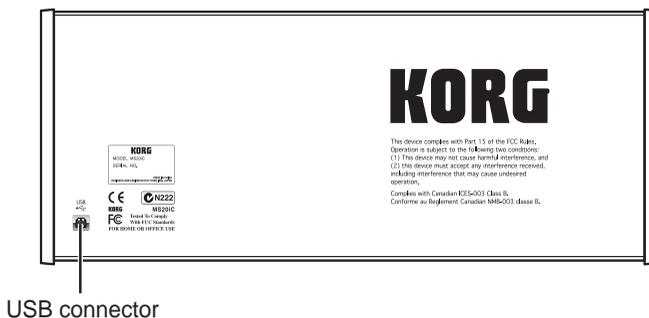
Here you can use the included patch cords to patch the signals.

When you patch a signal, that patching is reflected in the MS-20 software, and a patch cord appears in the screen.

For details on using the patch panel, refer to the “MS-20 Owner’s Manual” and “MS-20 Setting Examples” provided on the included CD-ROM.

- ⚠ **Never input an external audio signal or trigger signal to the patch panel jacks or the EXTERNAL SIGNAL PROCESSOR jacks. Doing so will cause malfunctions. Use the included patch cords to patch only within the panel of the MS-20 Controller.**

Rear panel

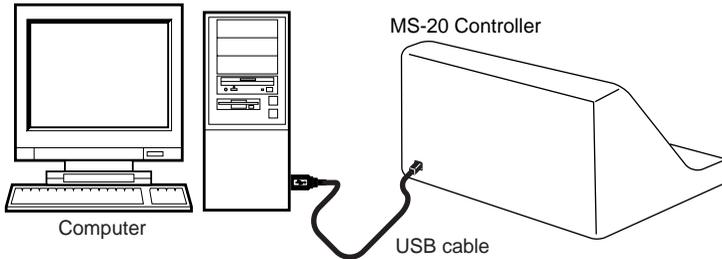


USB connector

Use a USB cable to connect this to your computer.

Connections

Use the included USB cable to connect the USB connector located on the rear of the MS-20 Controller to the USB connector of your computer.



⚠ The MS-20 Controller is bus-powered; it obtains its electrical power from the connected computer. However if you are using it with a computer that has a limited power supply, or with a bus-powered hub to which multiple devices are connected, the MS-20 Controller may not be able to obtain enough power. (In this case, a dialog box will appear on your computer.) If this occurs, you'll need to use a self-powered hub (one that has an external power supply).

Installing and the setting USB-MIDI Driver

If your computer is running Windows XP, you will install the KORG USB-MIDI driver for Windows XP.

If your computer is running Mac OS X, you will use the standard MIDI driver provided by Mac OS X.

Windows XP – Installing the KORG USB-MIDI Driver

note The first time the MS-20 Controller is connected to the USB port of your computer, the standard Windows USB-MIDI driver will be installed. In order to use the full capabilities of the MS-20 Controller, you'll need to reinstall the KORG USB-MIDI Driver, which is a native driver for the MS-20 Controller. The reinstallation procedure is described below.

⚠ In order to install or uninstall a driver in Windows XP, you must be logged on as an Administrator. For details, contact your system administrator.

⚠ You must make settings in Windows to allow installation of unsigned drivers. (See p. 12 “Allowing the installation of drivers that have not been digitally signed”)

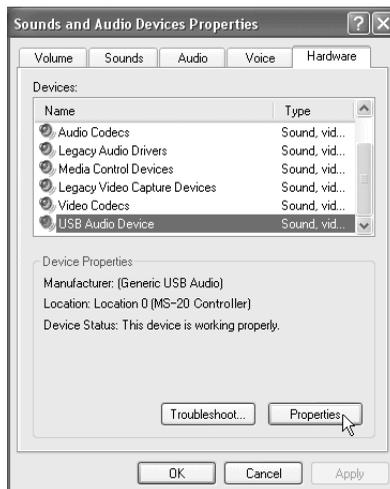
- ⚠ This MIDI driver is only for Windows XP. It cannot be used in Windows 95/98/Me/2000.
 - ⚠ The native driver must be installed for each USB port you use. If you connect the MS-20 Controller to a different USB port than the port used when installing the native driver, you'll need to install the native driver once again using the same procedure.
- 1 Use a USB cable to connect the MS-20 Controller to your computer. Windows will detect that the MS-20 Controller is connected.



Then the standard driver will be installed automatically.



- 2 In the task bar, click the [Start] button and then [Control Panel] to open the Control Panel. From the Control Panel, select "Sounds and Audio Devices," and then click the [Hardware] tab. From the list of devices, select [USB Audio Device]. In the "Device Properties" area below the list, make sure that MS-20 Controller is shown and click [Properties].



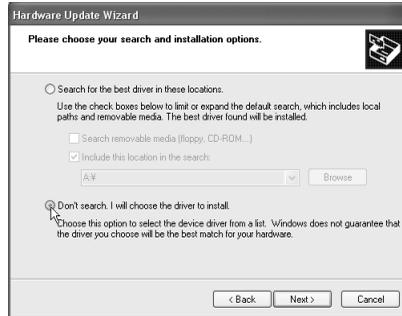
- 3 The “USB Audio Device Properties” dialog box will appear. Click the [Driver] tab, and then click [Update Driver...].



- 4 The “Hardware Update Wizard” will appear. In the “What do you want the wizard to do?” area, click “Install from a list or specific location” and click [Next>].



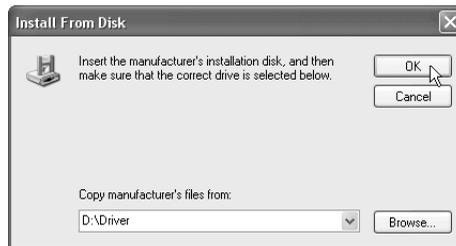
- 5 In “Please choose your search and installation options,” be sure to select “Don’t search. I will choose the driver to install.” Then click [Next>].



- 6 The screen will indicate “Select the device driver you want to install for this hardware.” Click [Have Disk...].

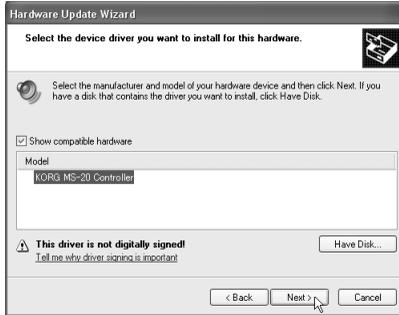


- 7 You will be asked for a file name. Insert the included CD-ROM into the CD-ROM drive, type “D:\Driver” to specify the folder in which the KORG USB-MIDI driver is located, and click [OK].



- ⚠ The above explanation assumes that your CD-ROM drive is drive D, but this may be different on your computer. For example, if your CD-ROM drive is drive E, you would substitute “E:” for “D:” in the folder name shown here.

- 8 Make sure that KORQ MS-20 Controller is shown as the model, and click [Next>] to begin installing the driver.



- 9 A dialog box may appear during this process, warning you that the driver has not been digitally signed. Click [Continue Anyway].



- 10 When a dialog box informs you that installation has been completed, click [Finish]. If you are asked to restart Windows, select [Yes] to restart your computer.



Uninstalling the KORG USB-MIDI Driver

- 1 In the taskbar, click the [Start] button and then [Control Panel] to open the Control Panel.
From the Control Panel, select [Sounds and Audio Devices Properties], and click the [Hardware] tab.
From the list of devices, select MS-20 Controller and click [Properties].



- 2 The "KORG MS-20 Controller Properties" dialog box will appear. Click the [Driver] tab, and then click [Uninstall].



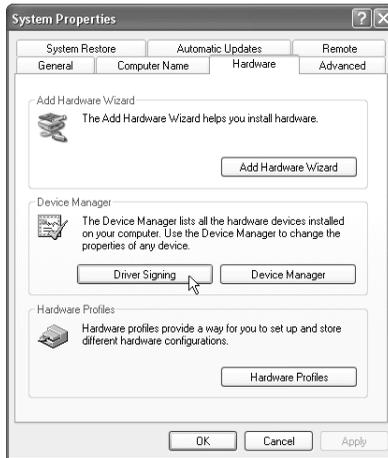
- 3 A confirmation dialog box will appear. Click [OK].



Allowing the installation of drivers that have not been digitally signed

You will be unable to install the KORG USB-MIDI Driver if your computer is set to prohibit the installation of drivers that have not been digitally signed. Here's how to change this setting so that you will be able to install the driver.

- 1 In the taskbar, click the [Start] button and then [Control Panel] to open the Control Panel.
From the Control Panel, select [System] and click the [Hardware] tab. Then click [Driver Signing].



- 2 You will be unable to install the driver if “What action do you want Windows to take?” is set to [Block]. select either [Ignore] or [Warn], and click [OK].
If necessary, you can change this setting back after you've installed the driver.



Mac OS X – Setting the USB-MIDI Driver

- 1 Use a USB cable to connect the MS-20 Controller to your computer. The computer will automatically detect the MS-20 Controller.
- 2 Choose Application Folder → Utility Folder, and double-click “Audio MIDI Setup” to start it up.
- 3 Click the “MIDI Devices” tab, and verify that the MS-20 Controller is displayed.



- 4 Close “Audio MIDI Setup.”

MIDI port settings

In the Settings → “MIDI Settings” dialog, select either [Native] MS-20 Controller or MS-20 Controller 1 as the choice for MIDI Devices “Device 1”, “Device 2”, or “Device 3.”

For details on how to make these settings, refer to “Setup” (p. 3) in the KORG Legacy Collection MS-20/Polysix/Legacy Cell owner’s manual.

Connection with the MS-20 and Legacy Cell

The available device selection will be only [Native] MS-20 Controller; the connection will always be a Native-mode connection.

When connected to the MS-20, you can use the panel knobs and switches to control the MS-20 software. The state of the LEDs will be synchronized with the MS-20 software. All MIDI messages sent from the MS-20 Controller are sent on MIDI channel 1 (fixed).

When connected to Legacy Cell and you’re using the MS-20 as the synthesizer, the controller will operate in the same way as when connected to the MS-20.

Connection with the Polysix and WAVESTATION

The available device selection will be only MS-20 Controller 1; the connection will always be a Generic-mode connection.

The software will respond to the wheels and keyboard of the MS-20 Controller, and you can use the knobs to control parameters for which a CC# is assigned by the default settings of the software.

 You can also use the MS-20 Controller with any of the other plug-ins, but since it will be functioning as a Generic mode controller in these cases, the panel LEDs will not be synchronized with the state of the plug-in you are controlling.

Main Specification

- Controllers: 37-note velocity-sensitive mini-keyboard, rotary knobs × 32 (of these, one includes a rotary switch), rotary switches × 4, patch jacks × 35, control wheel × 1, momentary switch × 1
- Connectors: USB connector
- Power supply: USB bus-powered
- Power consumption: approximately 60 mA (maximum 120 mA)
- Dimensions (W × D × H): 478 mm × 229 mm × 200 mm (18.82" × 9.02" × 7.87")
- Weight: 3.9 kg (8.60 lbs.)
- Included items: USB cable, patch cables × 10

Appearance and specifications of this product are subject to change without notice. (As of March 2004)

MIDI controller chart

The following CC#s are assigned to the parameters of the MS-20 software and the knobs of the MS-20 Controller. These MIDI messages will be transmitted on MIDI channel 1 (fixed).

	Parameter Name	#CC No. (hex)	Remarks
VCO1	WAVE FORM	77 (4Dh)	
	PW ADJUST	14 (0Eh)	
	SCALE	15 (0Fh)	
VCO2	WAVE FORM	82 (52h)	
	PITCH	19 (13h)	
	SCALE	22 (16h)	
VCO MASTER	PORTAMENTO	5 (05h)	
	MASTER TUNE	18 (12h)	
	FREQ MOD MG/T.EXT	12 (0Ch)	
	FREQ MOD EG1/EXT	93 (5Dh)	
VCO MIXER	VCO1 LEVEL	20 (14h)	
	VCO2 LEVEL	21 (15h)	
HPF	CUTOFF FREQUENCY	28 (1Ch)	
	PEAK	29 (1Dh)	
	CUTOFF MOD MG/T.EXT	30 (1Eh)	
	CUTOFF MOD EG2/EXT	31 (1Fh)	
LPF	CUTOFF FREQUENCY	74 (4Ah)	
	PEAK	71 (47h)	
	CUTOFF MOD MG/T.EXT	85 (55h)	
	CUTOFF MOD EG2/EXT	79 (4Fh)	
MG	WAVE FORM	76 (4Ch)	
	FREQUENCY	27 (1Bh)	
EG1	DELAY TIME	24 (18h)	
	ATTACK TIME	23 (17h)	
	RELEASE TIME	26 (1Ah)	
EG2	HOLD TIME	25 (19h)	
	ATTACK TIME	73 (49h)	
	DECAY TIME	75 (4Bh)	
	SUSTAIN LEVEL	70 (46h)	
	RELEASE TIME	72 (48h)	
ESP	SIGNAL LEVEL	11 (0Bh)	
	LOW CUT FREQUENCY	88 (58h)	
	HIGH CUT FREQUENCY	89 (59h)	
	CV ADJUST	90 (5Ah)	
OTHERS	THRESHOLD LEVEL	91 (5Bh)	
	WHEEL	1 (01h)	
	MOMENTARY SW	---	Corresponds to Channel Pressure.
	OUTPUT VOLUME	7 (07h)	

 If you change the CC# assignments of MS-20 software, there will no longer be a one-to-one correspondence between the software and the MS-20 Controller.

IMPORTANT NOTICE TO CONSUMERS

This product has been manufactured according to strict specifications and voltage requirements that are applicable in the country in which it is intended that this product should be used. If you have purchased this product via the internet, through mail order, and/or via a telephone sale, you must verify that this product is intended to be used in the country in which you reside.

WARNING: Use of this product in any country other than that for which it is intended could be dangerous and could invalidate the manufacturer's or distributor's warranty.

Please also retain your receipt as proof of purchase otherwise your product may be disqualified from the manufacturer's or distributor's warranty.

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