

Numark

C3 USB PROFESSIONAL 19" MIXER WITH USB

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INTRODUCTION

Welcome to the C3USB professional 19" mixer with USB. Whether you are mixing traditional audio sources, such as turntables and CD players, or incorporating digital sources, such as laptops, the C3USB offers a variety of analog and digital input options designed to meet the needs of the modern DJ. In addition to its impressive input options, the C3USB features balanced Master XLR outputs and Master / Zone / Record RCA outputs for connecting the mixer to a wide array of speaker systems and audio recorders. The industrial-grade 19" 4RU rack-mountable design ensures that the C3USB can be easily incorporated into any existing mobile or club DJ setup.

We hope that the C3USB serves you well for many years to come.

Sincerely,

The People of Numark

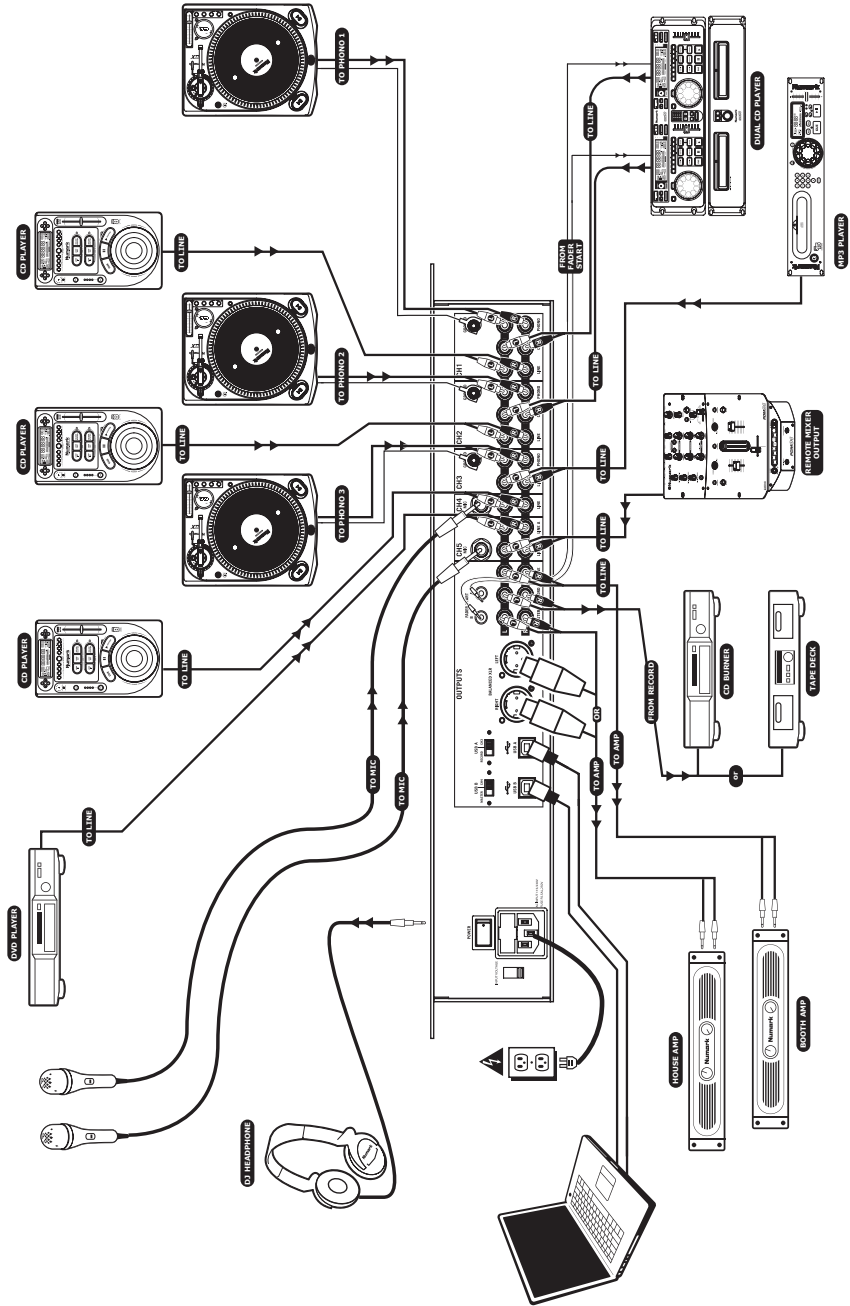
REGISTRATION

Please go to <http://www.numark.com> to register your C3USB. Registering your product ensures that we can keep you up-to-date with any last-minute product developments and provide you with world-class technical support, should you run into any problems.

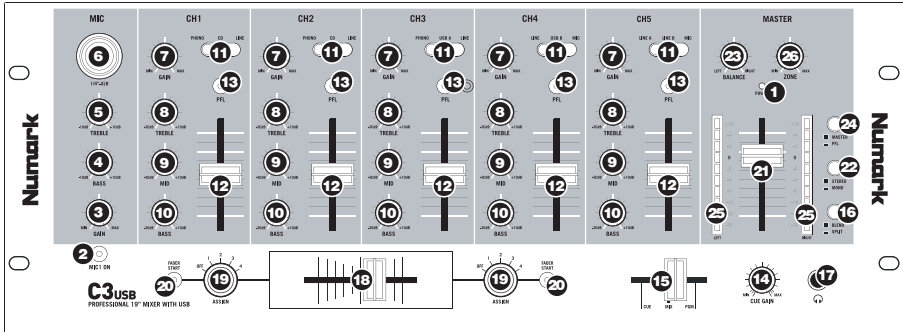
GROUND RULES

1. Make sure all items listed on the front of this guide are included in the box.
2. **READ SAFETY INSTRUCTION BOOKLET BEFORE USING THE PRODUCT.**
3. Study the connection diagram in this guide.
4. Place mixer in an appropriate position for operation.
5. Make sure all devices are turned off and all faders and gain knobs are set to "zero"
6. Connect all stereo input sources as indicated in the diagram.
7. Connect the stereo outputs to power amplifier(s), tape decks, and/or other audio sources.
8. Plug all devices into AC power.
9. Switch everything on in the following order.
 - audio input sources (i.e. turntables, CD players, etc.)
 - mixer
 - last, any amplifiers or output devices
10. When turning off, always reverse this operation by,
 - turning off amplifiers
 - mixer
 - last, any input devices

CONNECTION DIAGRAM



FRONT PANEL OVERVIEW



1. **POWER LED** – Illuminates when the mixer is on.
2. **MIC ON/OFF** – Mutes and unmutes the microphone signal. When muted (LED is off), the microphone signal will not be routed to the master mix.
3. **MIC GAIN** – Adjusts the volume of the microphone input.
4. **MIC BASS** – Adjusts the low (bass) frequencies of the microphone channel.
5. **MIC TREBLE** – Adjusts the high (treble) frequencies of the microphone channel.
6. **COMBO MICROPHONE INPUT** – This “combo” jack accepts XLR or 1/4” microphones.
7. **CHANNEL GAIN** – Adjusts the corresponding channel’s pre-fader audio gain.
8. **CHANNEL TREBLE** – Adjusts the high (treble) frequencies of the corresponding channel.
9. **CHANNEL MID** – Adjusts the mid-range frequencies of the corresponding channel.
10. **CHANNEL BASS** – Adjusts the low (bass) frequencies of the corresponding channel.
11. **INPUT SELECTOR** – Selects which input source will be routed to the corresponding channel.
 - Select “Phono” if you would like to route audio from a connected phono-level turntable.
 - Select “CD” or “Line” if you are using line-level devices, such as CD players, samplers, etc.
 - Select “USB” if you would like to route audio from a computer connected to the rear of the mixer via USB.
 - Select “Mic” if you would like to route audio from a microphone connected to the rear panel.
12. **CHANNEL FADER** – Adjusts the audio level sent to the Program mix.
13. **CUE BUTTON** – Routes the corresponding channel (post-gain, post-EQ, and pre-channel fader) to the Cue channel for previewing.
14. **HEADPHONE VOLUME** – Adjusts the volume level of the headphone output.
15. **HEADPHONE MIX** – Crossfades between Cue and Program in the Headphone channel. When all the way to the left, only channels routed to PFL will be heard. When all the way right, only the Program mix will be heard. Please note that this control only has an effect while the SPLIT / BLEND button is in the “Blend” position.
16. **SPLIT / BLEND BUTTON** – When this switch is in the down position, the headphone audio will be “split” such that all channels sent to CUE are mixed to mono and applied to the left headphone channel and the Program mix is mixed to mono and applied to the right channel. When the switch is in the up position, Cue and Program audio will be “blended” together.
17. **HEADPHONE JACK** – Connect your 1/4” headphones to this output for previewing and cueing.

Important: The volume should always be set at its lowest setting while connecting and disconnecting headphones to prevent damage to headphones and your hearing.
18. **REPLACEABLE CROSSFADER** – Blends audio between the channels assigned to the left and right side of the crossfader (see ASSIGN KNOB below).

Note: The crossfader is user-replaceable if it should ever wear out. Simply remove the facepanel and then remove the screws holding it in position. Replace the fader with a quality authorized replacement from your local Numark retailer only.
19. **ASSIGN KNOB** – Determines which channel will be routed to either side of the crossfader.

Note: Volume levels of channels not selected will be determined only by the individual channel sliders.

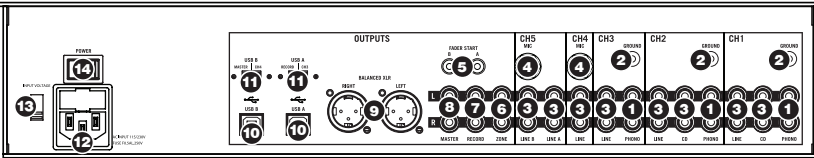
20. **FADER START** – When activated, the crossfader will send play and cue digital pulse commands to compatible fader-start devices connected to the rear panel. To take advantage of fader start, connect your mixer to a fader-start compatible device, using standard 1/8" stereo cables. When you move the crossfader toward the active channel, the attached device will start. When it is moved away, the device will cue (similar to pressing the cue button) or stop, depending on the device being used.
21. **MASTER FADER** – This control adjusts the output volume of the Program mix.
22. **STEREO / MONO** – Allows you to output the Program mix as a mono or stereo signal, depending on your application. Some amplifier or speaker systems may require a mono input.
23. **PANNING:** Adjusts the Program mix in the left-right panorama. As the knob is moved to the right, the left side of the signal is attenuated and vice versa.

Note: This setting affects Master, Record, and Zone outputs.

24. **METER ASSIGN** – Determines whether PFL or MASTER audio level is sent to the stereo LED meter.
25. **STEREO LEVEL INDICATOR** – Quickly and accurately tracks audio levels. The functionality of the level indicators is determined by the METER ASSIGN button.
 - **When using as a MASTER output meter,** set the crossover, equalizer and power amp inputs to avoid distortion at each step in the audio chain. Proper attention to the peak meter results in the punchiest possible sound without audible distortion.
 - **When used to adjust PFL levels,** PFL cue signal is sent to the meter through the CUE ASSIGN buttons. Accurately match channel levels with the Pre-fader gain and EQ controls before mixing them together.
26. **ZONE** – Controls the audio level of the Record / Zone outputs.

Tip: The Record / Zone outputs can be used to supply line-level audio to a lighting controller or sound-activated lighting system.

REAR PANEL OVERVIEW



1. **PHONO INPUTS** – Connect phono-level turntables to these inputs. Since these inputs provide additional amplification, connect *only* phono-level turntables; connecting line-level devices to these inputs could result in damage to your equipment (and your ears).
2. **GND** – If using phono-level turntables with a grounding wire, be sure to connect the grounding wire to these terminals. If you experience a low "hum" or "buzz", this could mean that your turntables are not grounded.

Note: Some turntables have the grounding wire built into the RCA connection and, therefore, nothing needs to be connected to the grounding terminal.
3. **LINE INPUTS** – Connect line-level devices, such as CD players, Tape Decks or Samplers, to these inputs.
4. **MICROPHONE INPUTS** – Connect 1/4" microphones to these inputs.
5. **FADER START CONNECTOR** – If you would like to use fader-start to automatically start and cue music from external devices via the C3USB crossfader, connect these outputs to your fader-start compatible device. You can use a standard 1/8" stereo cable to make this connection.
6. **RECORD OUTPUT (RCA)** – Connect this output to a CD burner or audio recorder. Alternatively, you may connect this output to an additional speaker system for mix monitoring. The level of this output is controlled with the ZONE knob on the top panel.
7. **ZONE OUTPUT (RCA)** – Connect this output to external monitoring device such as a PA system, powered monitors or a home stereo. Alternatively, you can connect this output to a CD burner or audio recorder. The level of this output is controlled with the ZONE knob on the top panel.
8. **MASTER OUTPUT (RCA)** – Connect this output to a PA system, powered monitors or a home stereo. The level of this output is controlled with the MASTER fader on the top panel.
9. **MASTER OUTPUT (XLR)** – Connect this low-impedance XLR output to a PA system or powered monitors. The level of this output is controlled with the MASTER fader on the top panel.
10. **USB** – These USB connections send and receive audio from a connected computer. The functionality of each port (send or receive) depends on the position of the corresponding USB SELECT switch.

11. **USB SELECT** – These switches determine the functionality of the USB ports.

USB A:

RECORD – Outputs the Record mix to your computer for recording purposes.

CH3 – Sends incoming audio from your computer to mixer’s Channel 3 (you will need to set the channel’s input selector switch to USB A).

USB B:

MASTER – Outputs the Master (Program) mix to your computer for recording purposes.

CH4 – Sends incoming audio from your computer to mixer’s Channel 4 (you will need to set the channel’s input selector switch to USB B).

12. **AC IN** – While the power is off, use the included power supply cable to connect the mixer to a power outlet.

13. **VOLTAGE SELECTOR** – This 2-position switch sets the AC input voltage for the speaker. U.S. users should set this switch to “100-120V” whereas U.K. and most European users will need to set this to “220-240V”.

14. **POWER SWITCH** – This switch turns the mixer on and off. When powering on, ensure that all input devices are connected to prevent damage to your equipment. Power the mixer on before powering on amplifiers and speakers and power off amplifiers before you power off the mixer.

USB OPERATION

The CM3USB is equipped with two USB ports which allow you to play content from your computer through the mixer, or record audio from the mixer directly into your favorite software application. The USB interface on your mixer works with your computer just like a standard USB sound card. In addition, the USB interface is class-compliant, so there are no special drivers or software to install; simply connect a USB cable from either or both USB ports to your computer and you are ready to go!

WINDOWS CONFIGURATION

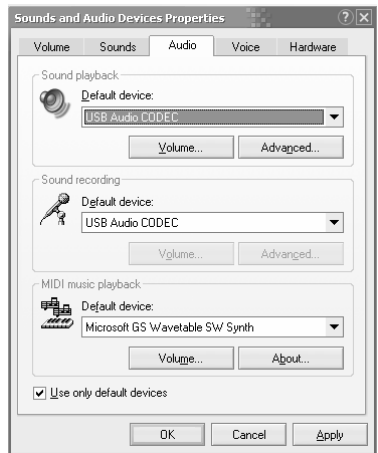
1. Turn on your computer and the C3USB.
2. Use a USB cable to connect one (or both) ports of the C3USB to your computer.
3. Windows will immediately recognize the mixer as a “USB Audio Device” or “USB Audio CODEC” and will automatically install any required system components.

To change system audio preferences in Windows, you will need to access the **Sounds and Audio Devices** properties, located in the **Control Panel**. To access audio device settings, click on the **Audio** tab.

The first time you connect the C3USB to your computer, the mixer will be automatically assigned as the Default (or “Preferred”) Device for sound playback on your computer. All of your computer’s sounds will be sent to the mixer channel indicated above the USB connection.

Note: If you have connected both USB ports to your computer, the ports will be numbered in the order they were connected. For example, if you connected USB A before USB B, USB A will appear as “USB Audio CODEC” and USB B will appear as “USB Audio CODEC (2)”.

- To send audio from your computer into the C3USB, select “USB Audio CODEC” in the **Sound Playback** field. This allows you to play audio from your computer into one of either of the mixer channels, depending on which USB port is used to make the connection.
- To send audio from the C3USB to your computer, select “USB Audio CODEC” in the **Sound Recording** field. This allows you to record your mix into your computer.



Note: If your sound playback or recording application does not have its own audio input and output settings (for example, Windows Sound Recorder, Windows Media Player or Apple iTunes), it will use the devices set in Sounds and Audio Devices. Please note that these settings are loaded upon application startup, so if you change device settings while the application is open, you will need to restart your application for the settings to take effect.

Tip: To prevent Windows from playing system sounds (beeps and bleeps) through the C3USB, we highly recommend disabling these by clicking on the **Sounds** tab and selecting **No Sounds** from the pull-down menu.

MAC CONFIGURATION

1. Turn on your computer and the C3USB.
2. Use a USB cable to connect one (or both) ports of the C3USB to your computer.
3. Windows will immediately recognize the mixer as a "USB Audio Device" or "USB Audio CODEC".

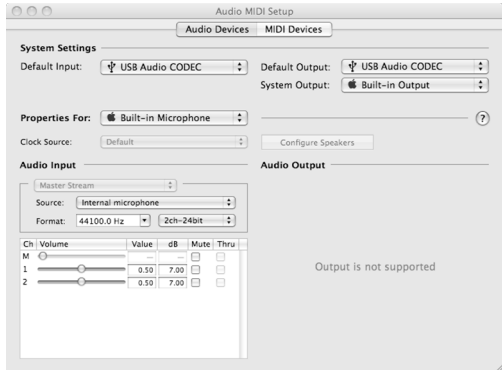
To change system audio preferences on a Mac, you will need to access the **Audio MIDI Setup** preferences located in **Applications ► Utilities**.

Note: If you have connected both USB ports to your computer, the ports will be numbered in the order they were connected. For example, if you connected USB A before USB B, USB A will appear as "USB Audio CODEC" and USB B will appear as "USB Audio CODEC (2)".

- To send audio from your computer into the C3USB, select "USB Audio CODEC" in the **Default Output** field. This allows you to play audio from your computer into one of either of the mixer channels, depending on which USB port is used to make the connection.
- To send audio from the C3USB to your computer, select "USB Audio CODEC" in the **Default Input** field. This allows you to record your mix into your computer.

Tip: We recommend leaving the **System Output** field set to **Built-in Output**. This ensures that system sounds (beeps and bleeps) will not sound through the mixer.

Note: If your sound playback or recording application does not have its own audio input and output settings (for example, Apple iTunes), it will use the devices set in Audio MIDI Setup. Please note that these settings are loaded upon application startup, so if you change device settings while the application is open, you will need to restart your application for the settings to take effect.



USING BOTH USB PORTS SIMULTANEOUSLY

Since the C3USB has 2 USB ports, you can attach a different computer to each USB jack or you can connect both jacks to a single computer. Each USB jack on the mixer will appear as a separate USB audio device to your computer. You can play two audio files simultaneously from one computer and send both of those audio streams to separate channels of your mixer by using two USB cables.

If you do this, we suggest using one of the many commercially available software programs that support multiple sound cards.

However, if you don't have software like that, you can use two separate software media players instead. To do this you need to start the first media player, then change the Preferred Audio Device to the second USB port, then start your second media player.

Note: Some applications (like Windows Media Player) will not allow you to have multiple instances running simultaneously. When you try to open a second file, the first one will stop playing and the second file will be loaded. To get around this, you can use different players to play the second file. For example, use Windows Media Player to play channel 1, and Musicmatch Juke Box player for channel 2.

Note: Please keep in mind that not all media players will "remember" what sound card they were using at the time of launch.

TROUBLESHOOTING

Problem: The computer did not recognize my mixer.

- The mixer is not turned on. Turn on your mixer.
- The USB cable is not connected. Connect the USB cable to your computer and mixer.
- You have already installed a USB Audio Device before. In that case, your mixer should work without any installation process. Just plug it in. You may have to change your computer's Default Sound Playback Device, however.
- You don't have the proper version of Windows or Mac OS. Make sure your OS is one that is compatible with this mixer. (For example, Windows 95 does not support USB, and will not work with this mixer).

Problem: The recording quality is poor.

- The word length and sample rate are not set to CD-quality in your recording software. Change the word length to 16-bit and sample rate to 44.1kHz for CD-quality results.
- The audio is distorting. Turn down the gain on your mixer to reduce the audio level.
- The audio level is too low. Increase the level until you see activity in the meter LEDs.

Problem: I'm trying to play one song into channel 2 and the other into channel 3, but they both get mixed together into only one channel.

- The Sound Playback Device was not set properly for one of your audio applications. Close one of the playback applications, then change your Preferred Sound Playback Device as described above, then re-open the application. Note that this technique will not work with all media players (for example, Real Player).
- Use a dedicated audio program that supports 2 sound cards.

Problem: The sound is coming out of my computer speakers instead of going to my mixer.

- The Sound Playback Device was not properly set. Close your audio playback application, then change your Preferred Sound Playback Device as described above, then re-open the application.

Problem: My computer's system sounds (beeps and bells) are going into my mixer.

- The Sound Playback Device is still set to your mixer. Change the Preferred Sound Playback Device as described above.
- Silence your computer's system sounds altogether by doing the following: Select Sounds and Audio Devices in the Control Panel and switch to the Sounds tab. Under Sound Scheme, Choose the No Sounds option and click OK.
- If you have a Mac, you didn't select "Play alerts and sound effects through Internal Speakers". See the Mac setup section for how to do this.

SPECIFICATIONS

Inputs	Line:	10Kohm input impedance 77mV rms sensitivity for 1.22V output
	Mic:	600 ohm input impedance unbalanced 1mv rms sensitivity for 1.22V output 70mV rms max input
	Phono:	47Kohm input impedance 1.2mV rms sensitivity @ 1KHz for 1.22V output

Output	Line:	9V rms max
	Headphone:	0.5W into 47 ohm
	Distortion:	less than 0.01%

Signal to Noise Ratio (maximum output) JIS-A weighted	Line:	Better than 98dB
	Mic:	Better than 86dB
	Phono:	Better than 81dB

Frequency response	Line:	20Hz-20KHz ±0.5dB
	Mic:	20Hz-15KHz ±0.5dB
	Phono:	±1dB except for controlled attenuation of -3dB @ 20Hz to reduce rumble and feedback

Channel equalizer	Bass:	+12/-32dB @ 60Hz
	Middle:	+12/-32dB @ 1.2KHz
	Treble:	+10/-28dB @ 15KH

DJ mic equalizer	Bass:	±10dB @ 100Hz
	Treble:	±10dB @ 15KH

Power consumption	11 Watt typical
	14.7 Watt with full headphone output

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