**MusicLab MIDIoverLAN CP Driver
for Windows 2000/XP Version 2.2.1**

# User's Manual

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## Introduction

This document describes **MusicLab's MIDIoverLAN CP Driver**, which allows to perform MIDI communications between several computer over Local Area Network. The driver provides up to **16 network In/Out** devices decorated as **NetPort** 1...16. Also these can be independently configured as local pipe devices (**LocPipe** 1...16).

**MIDIoverLAN CP driver** is DirectMusic WDM driver. It presents new generation of previous **MIDIoverLAN+** products.

**MIDIoverLAN CP driver** provides Network MIDI Devices (**NetPorts**) allowing to use several computers connected together via local network. In other words, it can receive/transmit MIDI events from/to remote computers via local network. Using MusicLab MIDIoverLAN CP Driver you can easily:

1) synchronize sequencers on several computers;
2) play music using your sound devices located on different computers in a time (i.e. run GigaStudio on dedicated computer and connect it to your sequencer without annoying necessity of using traditional MIDI interfaces);
3) play jam sessions on several computers;
4) record music played back on remote computer;

In any case listed above you could setup your studio connections without traditional MIDI cables wherever possible!

Why do you need **MIDIoverLAN CP Driver**? You need it because **MIDIoverLAN CP Driver** is all-in-one solution for communication between MIDI applications and computers via local network with multi-client device access to its own devices.

**MIDIoverLAN CP Driver** is fully compatible with appropriate **Mac OSX** version.

## **History...**

## MIDIoverLAN CP driver version 2.2.1

Standby mode support is added.
Improved MIDI Monitor visualization.
Advanced error logging is added.
Some minor bugs are fixed.

## MIDIoverLAN CP driver version 2.2

Separately controlled port IN/OUT midi devices.
MIDI monitor component is added.
Windows 2000 SP4 is now supported.

## MIDIoverLAN CP driver version 2.1

Fixed bugs sometimes resulting in BSOD appearance.

## MIDIoverLAN CP driver version 2.0

The driver supports **MS DirectMusic** technology.
Improved overall performance.

## MIDIoverLAN CP driver version 1.02

To troubleshoot issues new ability to write driver boot log is added.

## MIDIoverLAN CP driver version 1.01

Fixed bug regarding driver initialization at boot.

## MIDIoverLAN CP driver version 1.0

Initial release.

## <u>System requirements</u>

**MINIMUM** Windows 2000 SP4: Pentium III 500 MHz, 128 MB RAM.

TCP/IP protocol installed for LAN devices functionality

Microsoft™ DirectX™ 9.0

## <u>Installation</u>

MIDIoverLAN CP Driver version 2.2.1 is implemented as full-featured time-restricted (untill registered) **Standard** edition**.** Trial period - 14 days.

Any MIDIoverLAN CP driver device can be shared between up to 4 client MIDI applications.

Installation of **MIDIoverLAN CP driver** for **Windows 2000/XP** is easy. Simply doubleclick on **molcp_v22_setup.exe** file you've downloaded. Setup application will install MIDIoverLAN CP Driver onto your computer in several easy steps:

1)  Follow onscreen instructions.

2)  On each warning screen that driver "...has not passed Windows Logo testing..." click "Continue anyway" button.

3)  After installation process has successfully finished the MIDIoverLAN CP Driver is almost ready to work: If you have purchased full version of the product, register it having entered keyfile (mlcp.key) having invoked Configuration panel and then reboot computer.

## Configuration

Open **Start->Programs->MusicLab->MIDIoverLAN CP** folder and doubleclick on "**Configuration Panel**" icon.
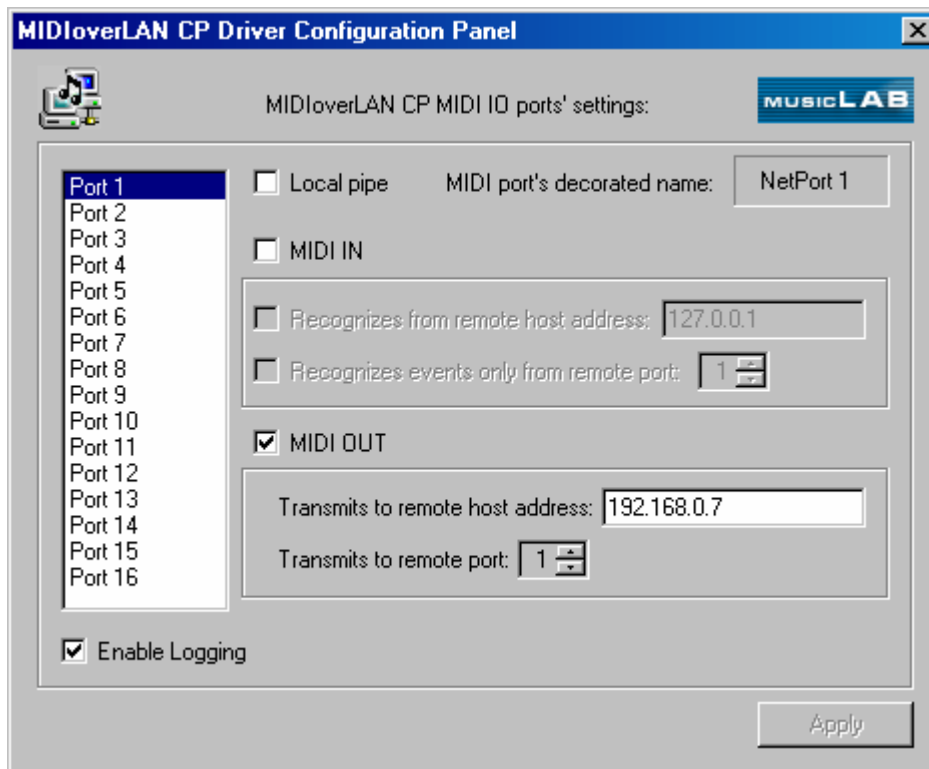


**Figure 1**

To Enable / Disable driver's ports just check / uncheck <MIDI IN> and/or <MIDI OUT> check boxes. Note those both (IN and OUT) driver's ports can be enabled / disabled independently.

To switch any Port mode to local one check the <Local pipe> box. So the Port OUT device will be disconnected from network and connected directly to its IN device. In this mode both IN and OUT are always enabled. To avoid confusion ports in different modes have different display name (shows in the upper right corner of the configuration frame).

The following settings are accessible in the network mode ONLY:

**IN device network configuration** (if enabled)

1) when check boxes of the "MIDI IN" rectangle are both disabled (unchecked) the Port IN device will receive MIDI events from ANY hosts (IP addresses) and from ANY OUT Port numbers.

2) when check box <Recognizes from remote host address> is enabled (checked) you must specify this IP address on the right (for instance, 192.168.0.5). Now the Port IN device will receive MIDI events just from host 192.168.0.5 and from ANY its OUT Port numbers.

3) when check boxes are both enabled (checked) you must also specify remote Port number (for instance, 5). So the Port IN device will now receive MIDI events just from host 192.168.0.5 from its OUT Port 5.

You can use any variations of the settings described above.

**OUT device network configuration** (if enabled)

1) In the <Transmits to remote host address> edit box you must specify IP address of the host-recipient (assume 192.168.0.7).
2) In the <Transmits to remote port> up-down box you must also specify remote port number you want to transmit MIDI events for (for instance, 1). So any events you send via OUT Port 1 will be recognized at host 192.168.0.7, IN Port 1 (just if the appropriate port is configured to recognize events from source host).
3) To transmit events for any hosts in range of 192.168.0.1 ... 192.168.0.254 just specify broadcast address 192.168.0.255.

Note that OUT Port CANNOT be configured to transmit to ANY remote Port number.

**Using MIDI monitor**

This driver version provides MIDI monitor component which works with the driver and allows to visualize MIDI events activity at the driver level.

The upper row of leds presents input NetPorts (1... 16 left to right) and lower row – output NetPorts in the same order. Dark grey leds reflect NetPorts which are currently disabled, whereas dark red – enabled ones. Whenever some MIDI event is being transferred through the driver appropriate led will blink with light red:

However MIDI monitor can reflect incoming MIDI events even for **disabled** input NetPorts. In this case appropriate led will blink with light grey. It is useful in configuring the driver:

Configuring the driver you can see that MIDI monitor's input leds blinks but there's no input events from appropriate MIDI input in a MIDI sequencer. In most cases it means that incoming events are being filtered and lost because of improper NetPort "MIDI IN" settings. In this case appropriate input led will blink as follows:

**Note: MIDI monitor doesn't show MIDI activity in "Local pipe" port mode.**

Whenever Windows system is loaded MIDI monitor will appear as the icon in the System Notification Area (System Tray). To get monitor's window visible just doubleclick on the icon. The window will appear on the screen as top most window. None of other windows can hide MIDI monitor window except context menus. However if MIDI monitor window will hinder you can just close MIDI monitor window clicking "**X**".

**Applying new settings**

Since you have finished Port configuration you should apply new settings clicking the <Apply> button. If the button is greyed you didn't change (or returned to current) settings.

Once you've clicked the <Apply> button system "Arrow" cursor becomes "HourGlass" for several seconds and the button <Apply> becomes greyed again.

In some cases (whenever driver devices still stay in use) you will be prompted to reboot computer. To avoid the necessity to reboot computer close all MIDI applications (release drivers giving them a chance to be successfully restarted) before trying to apply new settings.

**Product registration**

Using <About> button you can register product and thus remove trial time limitation.

## Troubleshooting

In some cases after installation you cannot find MIDI devices the driver provides. It means the driver initialization failed for some reason.

To check the driver open **Device Manager** (My Computer->Properties->Hardware_tab->Device Manager). If the driver was not loaded successfully, you can see expanded <**Sound, video and game controllers**> branch containing <**MIDIoverLAN CP MIDI Device**> "leaf" with exclamation sign... That's the object to troubleshoot!

If you suspect the driver works incorrectly, reveals its malfunction, open driver's Configuration Panel and enable logging checking appropriate box ("Enable logging") and apply. Since it's done, all the driver components will record any error messages to the appropriate .log files.
To view .log files use "**Start->Programs->MusicLab->MIDIoverLAN CP Driver->View .log files**". Any information written into these .log files will help to troubleshoot the driver. Then you could send log file to our supportbox (supportbox@musiclab.com) and help us solve the problem.

**If you have firewall installed on your computer, to get MIDIoverLAN CP working it is not necessary to turn firewall off. Instead you just have to configure it to pass network packets through UDP port 11000.**

**MIDIoverLAN and Windows Firewall**

The following shows how to configure Windows Firewall (**MS Windows XP SP2**) to get the driver worked. Actually you can do this using either of the following methods:

1) just turn Windows Firewall off;

2) configure Windows Firewall to pass MIDIoverLAN network events.

The first method is more simple but very unsafe. It migth be a risk. Thus we choose the second method. To configure Windows Firewall you should do several following steps:
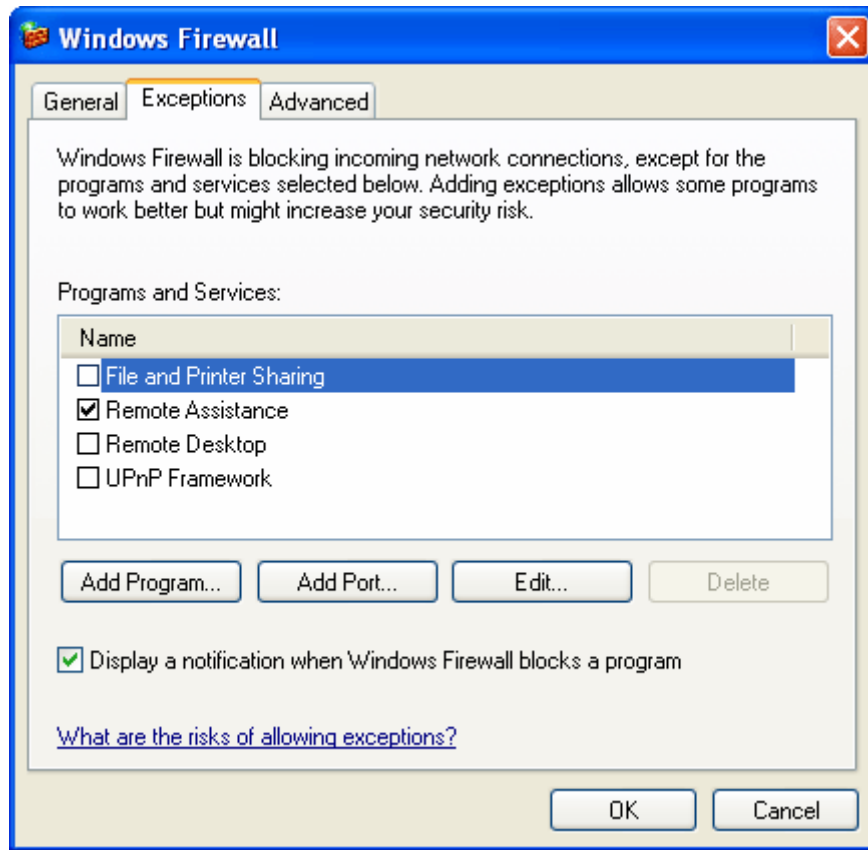
**Step 1:** Open Control Panel (Start->Settings->Control Panel) and doubleclick on Windows Firewall icon:



Here you can see a fragment of Windows Firewall configuration window you've just opened:
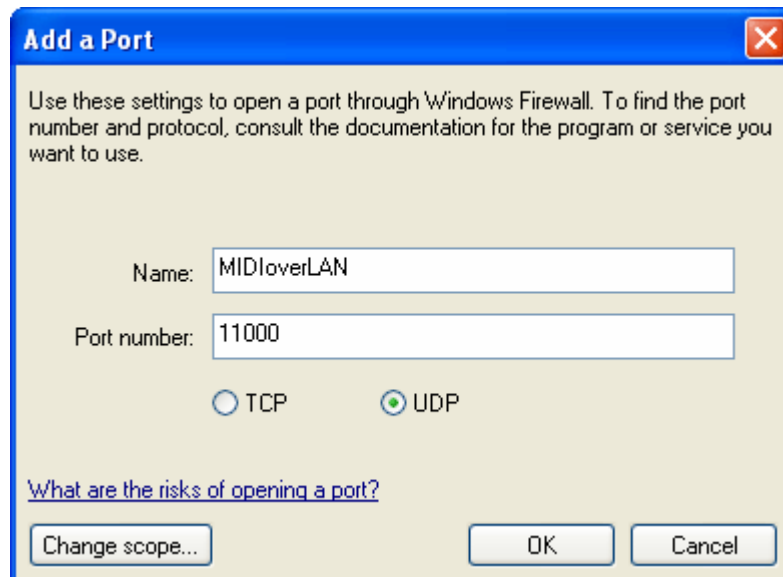
**Step 2:** Select **Exceptions** tab:
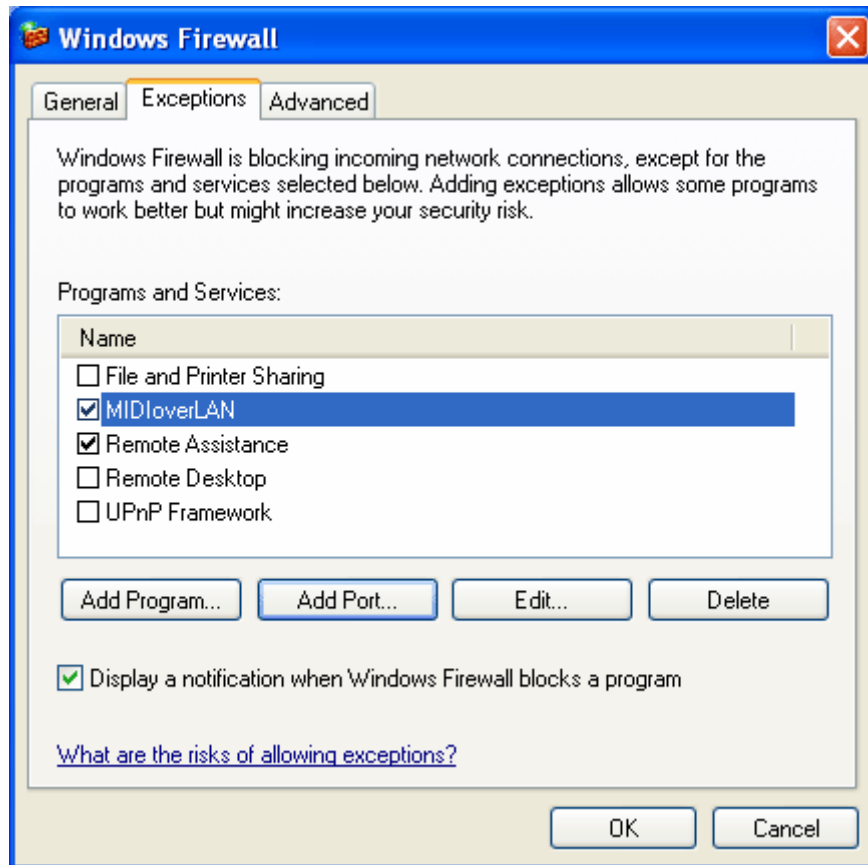


Windows Firewall by itself doesn't know how to get the driver as a program worked, consequently we shouldn't use <Add Program> method. Instead, we choose <Add Port> method.

**Step 3:** Click **Add Port** button to add MIDIoverLAN UDP port permission:



On the picture above you can see how to fill out **Add a Port** window fields. Don't remember to select UDP protocol by radiobuttons under **Port number** field. Then click **OK**.

Now Windows Firewall Exceptions tab has our new entry named "MIDIoverLAN".



Checked box on the left of MIDIoverLAN entry (selected on the picture) means this "exception" we've just created is active (if we uncheck it Windows Firewall will begin to block the driver again).

Now click **OK** button and you're done.

## Uninstallation

To uninstall the driver you should open Start Menu -> Settings -> Control Panel -> Add/Remove Programs. Select <**MusicLab MIDIoverLAN CP Driver**>, click **Change/Remove** button. You can also invoke uninstallation utility by opening **Start->Programs->MusicLab->MIDIoverLAN CP** folder and clicking on "**Uninstall**" icon.

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