

rtpUMP by KissBox RTP-MIDI / Network UMP driver

rtpUMP is a MIDI driver application which provides connection between Windows and macOS applications and MIDI network devices. It supports both RTP-MIDI and the new MIDI Manufacturer's Association Network UMP protocol.

Installation on Windows machines

Before installing rtpUMP, it is highly recommended to uninstall other RTP-MIDI drivers, typically :

- KissBox RTP-MIDI driver
- Tobias Erichsen's rtpMIDI application
- Tobias Erichsen's loopMIDI application

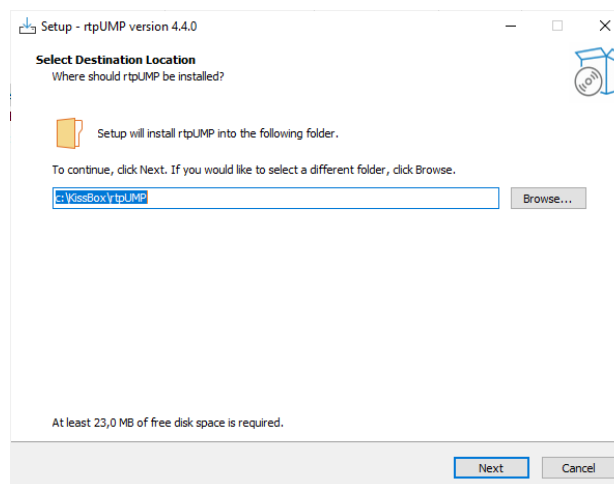
Ports created by these applications may conflict with ports created by rtpUMP if they are in parallel with rtpUMP.

If you want to keep older RTP-MIDI drivers on your system, make sure that there is no MIDI port with a same name that the ports created within rtpUMP driver. If two different applications are using the same names for their ports, this will lead to instability and possible crashes.

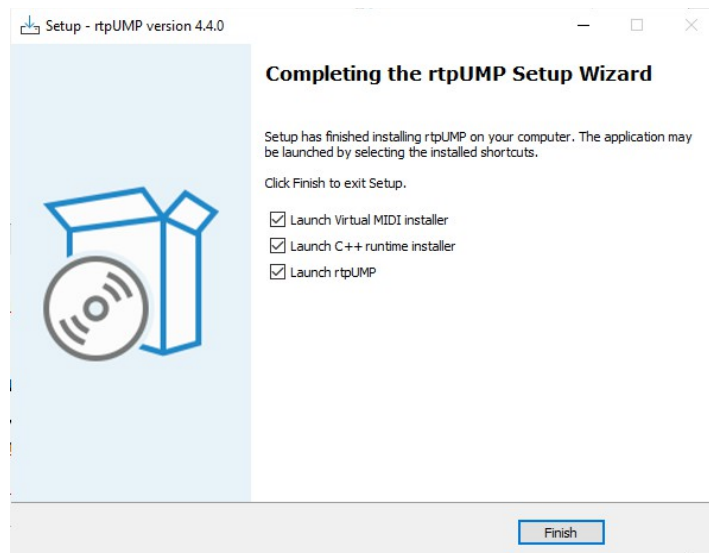
Using Windows installer

KissBox provides an installer which performs automatically the various operations required to install the driver and the main application on Windows.

Download the installer from KissBox website and double click on rtpUMP_Setup.exe to launch the installer.



Follow the instructions from the installer and wait until the completion dialog is displayed. It is recommended to keep all the boxes checked if you have any doubts (it will reinstall some components eventually)

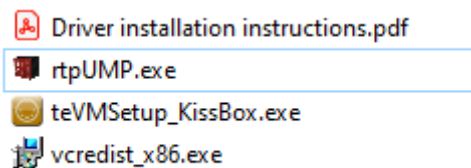


Manual installation on Windows

On some machines, the Windows installer fails without a known reason. In this case, you can install the application manually, following these steps :

Download the zip file called « rtpUMP manual installation files » on KissBox website.

Open the file and copy the whole content on your hard disk.



Double click on teVMSetup_KissBox.exe to launch the system driver installer.

Follow instructions from the installer (you need to have administrator rights to install the driver).

Double click on vcredist_x86.exe to install Microsoft Visual C runtime. Wait for the end of installation.

Copy rtpUMP.exe application in the directory of your choice on your machine to finish the installation.

Installation on macOS machines

rtpUMP does not need or install system drivers on macOS, as macOS allows to create virtual MIDI ports from an application. Consequently, rtpUMP is a standard application, which can be copied anywhere on your Mac.

To install rtpUMP on your Mac, just download the application file from KissBox website and unzip it in the directory you want on the Mac.

Note that the first time rtpUMP starts on the Mac, you may get a warning from Mac OS, telling that the application can not be verified and can not be opened. In that case, follow these steps :

- Open « System settings »

- Click « Privacy and Security »
- Scroll down to « Security ». You should see a message telling that rtpUMP has been blocked
- Click on « Open anyway »
- Start again rtpUMP application
- When the warning appears again, the « Open » button becomes visible and you can now launch rtpUMP

Once the warning has been displayed one time and you have given authorization to launch rtpUMP, the security setting is stored in macOS. The next time you launch rtpUMP, it will start like any other authorized app.

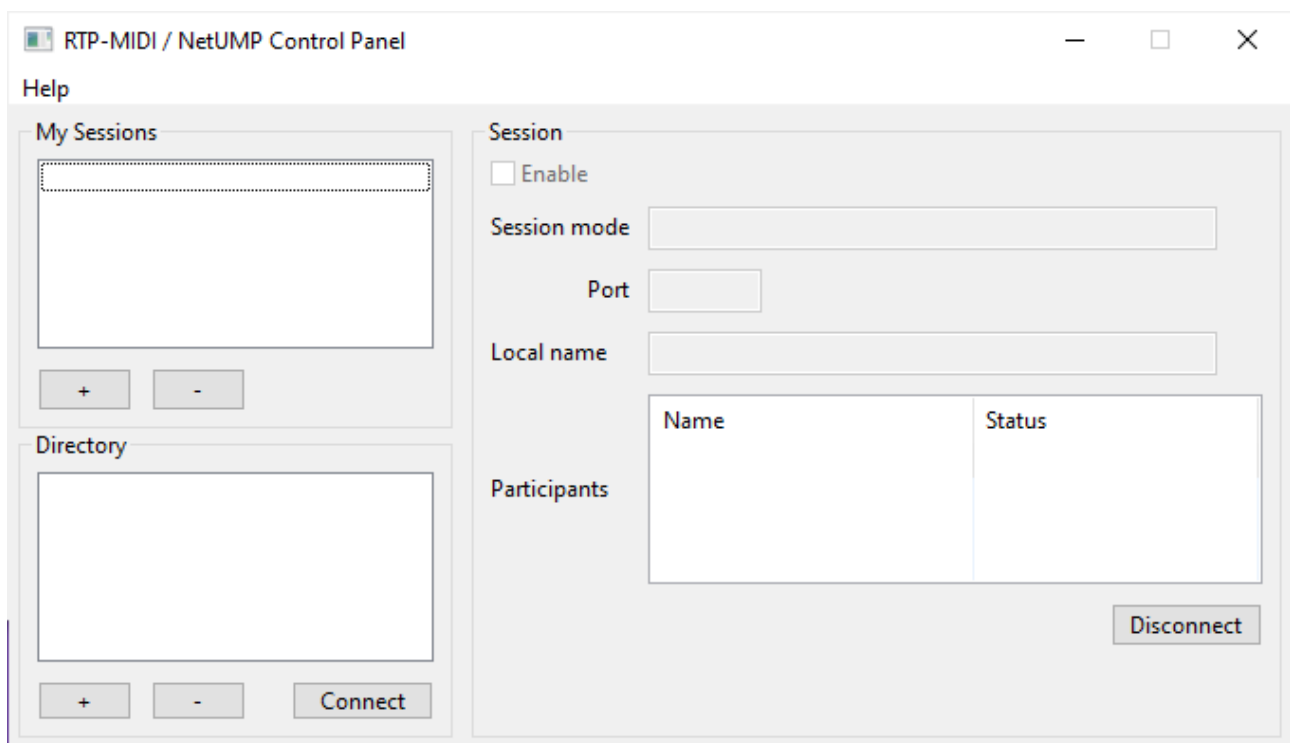
Note that the user interface of the Mac version is the same as the Windows version, so instructions provided below apply also the macOS.

Creating sessions

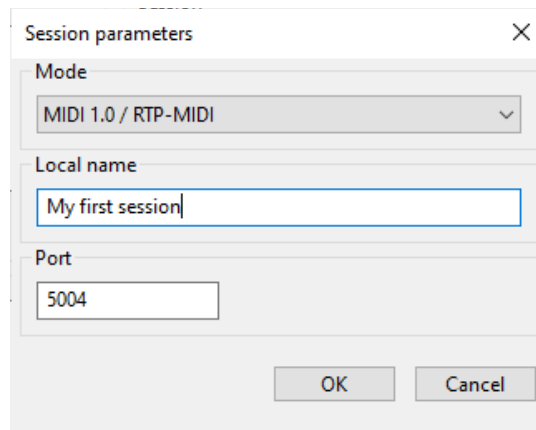
A session represents a MIDI endpoint (MIDI IN + MIDI OUT) for MIDI applications running on the computer. The session name is the MIDI port name for the MIDI applications. A session is also associated with the protocol to be used (RTP-MIDI or NetUMP) with a remote participant.

Note that the « session » concept has been chosen here in order to keep the same wording as in Apple's MIDI Network and RTP-MIDI driver for Windows.

Launch rtpUMP application. When started for the first time, there is no configuration data available, so the various lists will be empty.



Click on « + » button under the « My Sessions » list to open the Session edition dialog.



Select the protocol to be used by the session to connect with a remote participant. Following modes are available :

- MIDI 1.0 / RTP-MIDI : uses RTP-MIDI for MIDI 1.0 communication. UMP messages are not supported in this mode.
- MIDI 1.0 / NetUMP : uses NetUMP protocol for MIDI 1.0 communication. Messages exchanged on the network uses MIDI 1.0 UMP packets (UMP message types 1, 2 and 3)

« Local name » allows to name both the session AND the system MIDI port. Each session name **must be unique**. It is also recommended not to use any special character as some MIDI applications may not like them.

Port number is the **local** UDP port associated with the session. Note that ports are not opened until the session is activated, so it is possible to create multiple sessions with the same port number as long as they are not used at the same time.

RTP-MIDI sessions use two consecutive ports (so choosing port 5004 will also use port 5005 for example).

Activating a session

Once created, each session can be activated or deactivated independently from the others. When a session is activated :

- the corresponding MIDI endpoint is created within Windows. The session appears then as a MIDI IN / OUT peripheral with the session name within MIDI applications
- the network resources for the session are allocated. The local UDP port is then opened

To activate a session : select the session you want to activate in the « My sessions » list. The corresponding session parameters are displayed on the right side of the window. Check then the « Enable » checkbox to activate it.

If any issue is encountered during the activation (like a UDP port already used), a message box is displayed and the session remains inactive.

Of course, it is not possible to edit the parameters of a session once it has been activated.

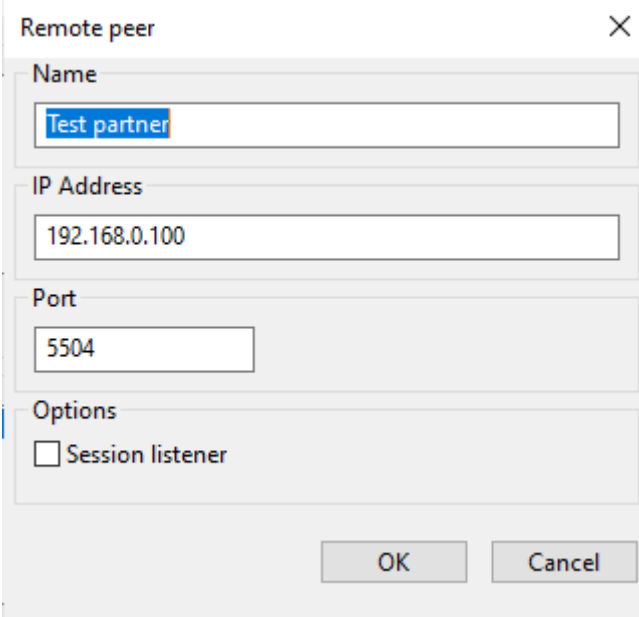
To deactivate a session, select it in the list and uncheck the « Enable » checkbox. The related resources are then freed.

Creating remote peers

Sessions only define local parameters for a MIDI endpoint. They must be associated with a remote partner (peer) in order to exchange MIDI / UMP messages. Any session can be associated with any remote peer declared, but a session can only be associated with one peer at a time.

To declare a peer, click on the « + » button below the Directory list, in order to open the

remote partner dialog.



Remote peer

Name

Test partner

IP Address

192.168.0.100

Port

5504

Options

Session listener

OK Cancel

The partner name is only used for information being displayed on the control panel. It can then be completely different from the real name or network name of the remote device.

IP Address field shall contain the IPv4 address of the remote device (IPv6 is not yet supported)

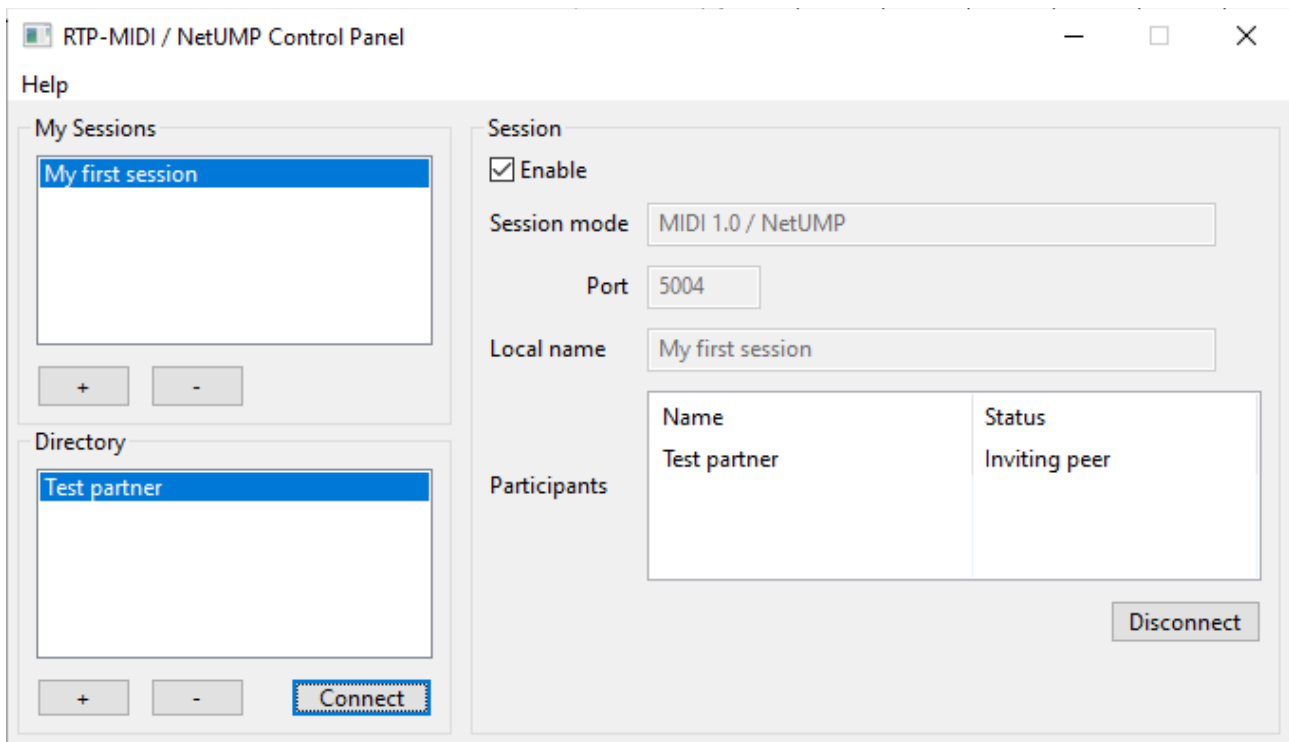
Port field shall contain the remote port number to which invitations will be sent.

« Session listener » option is used to create a passive session. Such a session will wait to be invited by a remote partner. In that case, remote IP address and remote port number values are ignored.

Connecting a session to a remote partner

Communication between a session and a remote partner requires to « connect » them.

Select both the session and the remote peer you want to connect over the network (remember that a session can only be connected to **one** remote partner at a time). Click then on the « Connect » button.



You will then see the status of the connection in the Participants list.

Status « Inviting peer » is displayed as long as the invitation process is not completed. No UMP communication is possible in that state.

Once the remote partner has accepted the invitation, status will change to « Connected ». MIDI / UMP communication becomes then possible between the two systems.

Disconnecting remote peer from a session

Once a session is connected to a remote peer, it will remain connected until :

- the remote partner quits « properly » the communication by sending a communication end message. In that case, user needs to click again on « Connect » button if he wants to open again the communication channel between the two devices
- the remote partner does not answer anymore (in case of a crash for example). In that case, an alert message is displayed to inform user about the problem. However, the driver will try to re-establish the communication cyclically, until the user wants to disconnect
- User wants to disconnect the session from the remote partner. In that case, a message is sent to remote partner to inform it that the communication will stop.

To close an active communication channel between a session and a remote partner (whatever the communication status) :

- Select the session you want to control in the session's list, then click on the remote partner in the participant's list.
- Click then on « Disconnect » button.

The session then disappears from the participants' list.