

# NINJAM

Realtime Music Collaboration Software

## NINJAM User Guide

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## **What is NINJAM**

What is NINJAM?

NINJAM is open source (GPL) software to allow people to make real music together via the Internet. Every participant can hear every other participant. Each user can also tweak their personal mix to his or her liking. NINJAM is cross-platform, with clients available for Mac OS X, Linux, and Windows. REAPER (our digital audio workstation software for Windows and OS X) also includes NINJAM support (ReaNINJAM plug-in).

NINJAM uses compressed audio which allows it to work with any instrument or combination of instruments. You can sing, play a real piano, play a real saxophone, play a real guitar with whatever effects and guitar amplifier you want, anything. If your computer can record it, then you can jam with it (as opposed to MIDI-only systems that automatically preclude any kind of natural audio collaboration).

Since the inherent latency of the Internet prevents true realtime synchronization of the jam, and playing with latency is weird (and often uncomfortable), NINJAM provides a solution by making latency (and the weirdness) much longer.

Latency in NINJAM is measured in measures, and that's what makes it interesting.

The NINJAM client records and streams synchronized intervals of music between participants. Just as the interval finishes recording, it begins playing on everyone else's client. So when you play through an interval, you're playing along with the previous interval of everybody else, and they're playing along with your previous interval. If this sounds pretty bizarre, it sort of is, until you get used to it, then it becomes pretty natural. In many ways, it can be more forgiving than a normal jam, because mistakes propagate differently.

Part tool, part toy, NINJAM is designed with an emphasis on musical experimentation and expression.

How does NINJAM work?

NINJAM uses OGG Vorbis audio compression to compress audio, then streams it to a NINJAM server, which can then stream it to the other people in your jam. This architecture requires a server with adequate bandwidth, but has no firewall or NAT issues. OGG Vorbis is utilized for its great low bitrate characteristics and performance. Each user receives a copy of other users audio streams, allowing for each user to adjust the mix to their liking, as well as remix later. This uses more bandwidth than having a server encode a single stream, but has numerous benefits (including lower server CPU use and the client having the full multichannel data for later use).

NINJAM can also save all of the original uncompressed source material, for doing full quality remixes after the jam.

### **WEBSITE:**

<http://www.cockos.com/ninjam>

## Intro

*This guide is for windows XP, Vista, 7, 8.*

### Software used in the guide:

Ninjam v0.06 (official client)

Reaper v4.31

Poulin VST for guitar

Cubase 5.1

Asio4all driver

Windows 7 x64

### Hardware Requirements:

A laptop or desktop computer with **Windows** installed.

A fast internet connection like ADSL.

For best audio quality you'll need an ASIO supported audio card (USB, firewire, PCI or PCI-E)



### Useful websites

[http://wiki.cockos.com/wiki/index.php/NINJAM\\_Documentation](http://wiki.cockos.com/wiki/index.php/NINJAM_Documentation)

[http://wiki.cockos.com/wiki/index.php/Reaper\\_Documentation](http://wiki.cockos.com/wiki/index.php/Reaper_Documentation)

<http://www.cockos.com/ninjam/>

<http://www.reaper.fm/>

<http://ninbot.com/>

<http://www.asio4all.com/>

<http://www.guitarampmodeling.com/>

<http://www.guitarbackingtrack.com/>

<http://bedroomproducersblog.com/free-vst-plugins/>

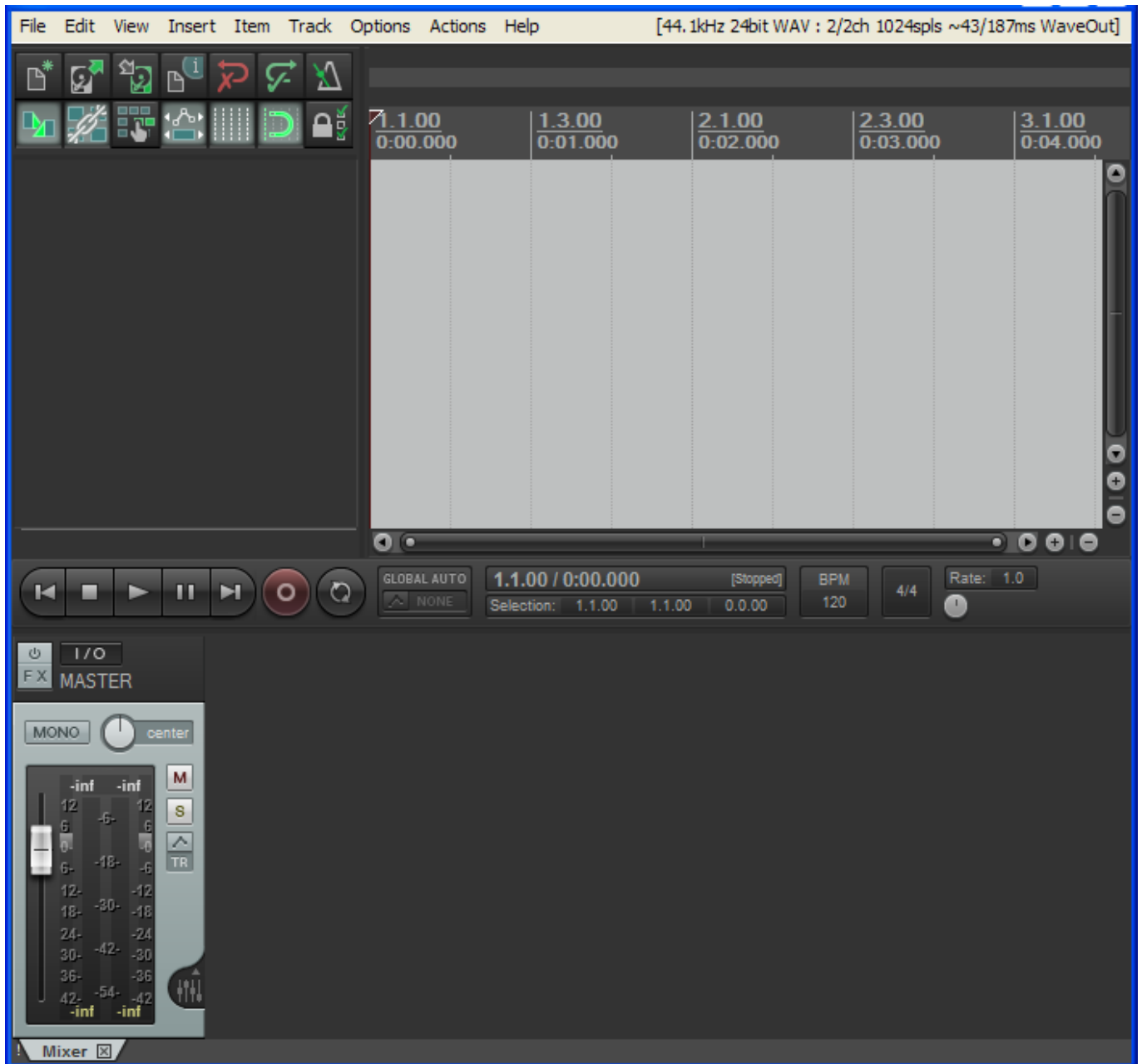
<http://vstplanet.com/>

<http://www.kvraudio.com/>

## Using Reaper & ReaNinjam plugin

Reaper is a Digital Audio Workstation for Windows & OS X that also provides native NINJAM support and allows you to use VST/VSTi/ReWire/MIDI hardware/etc with NINJAM. REAPER also can import NINJAM sessions directly for remixing/editing. Using Reaper instead of the official Ninjam client, gives you more versatility, sound control and tons of features. You can download it from: [www.reaper.fm](http://www.reaper.fm)

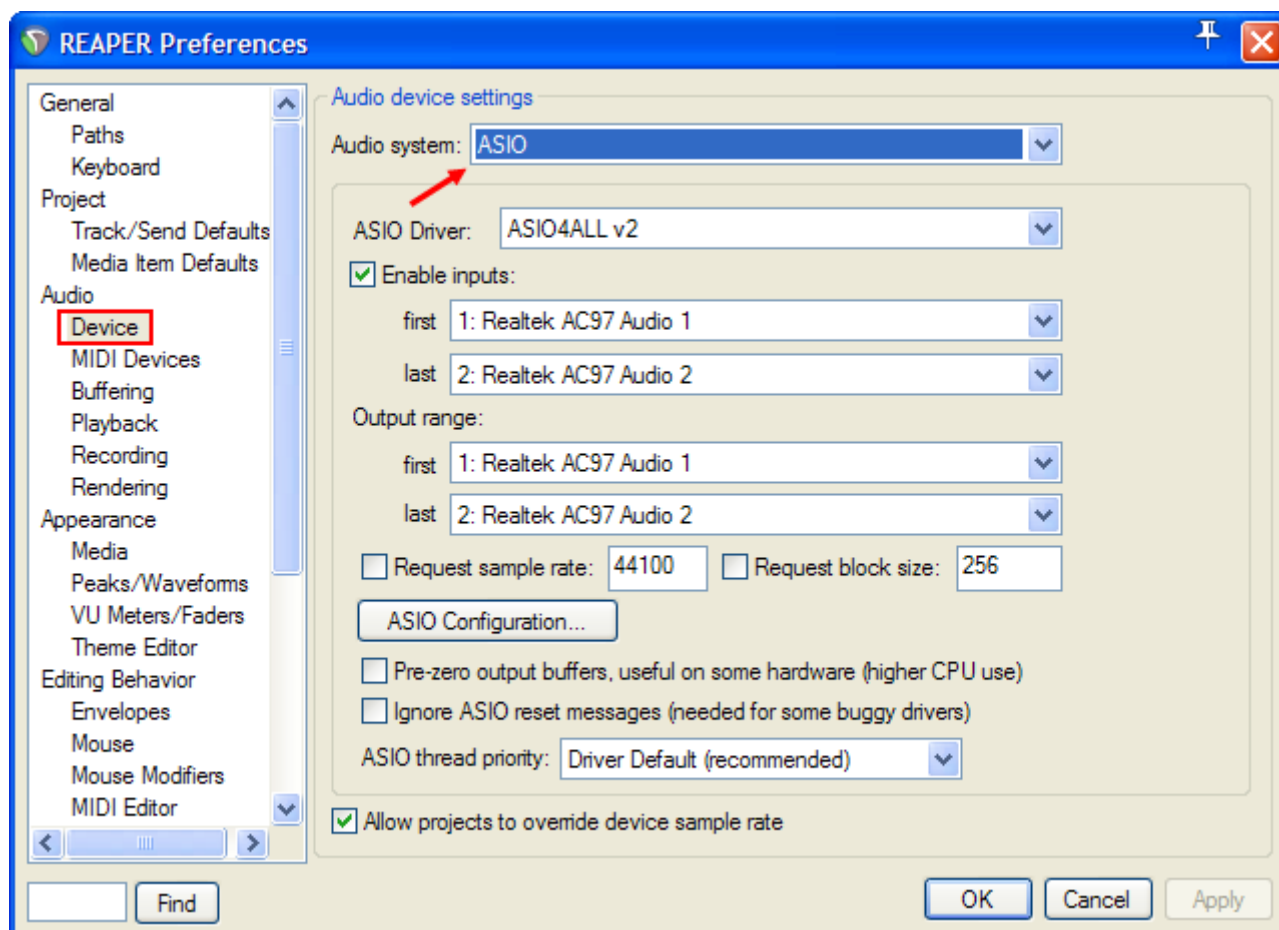
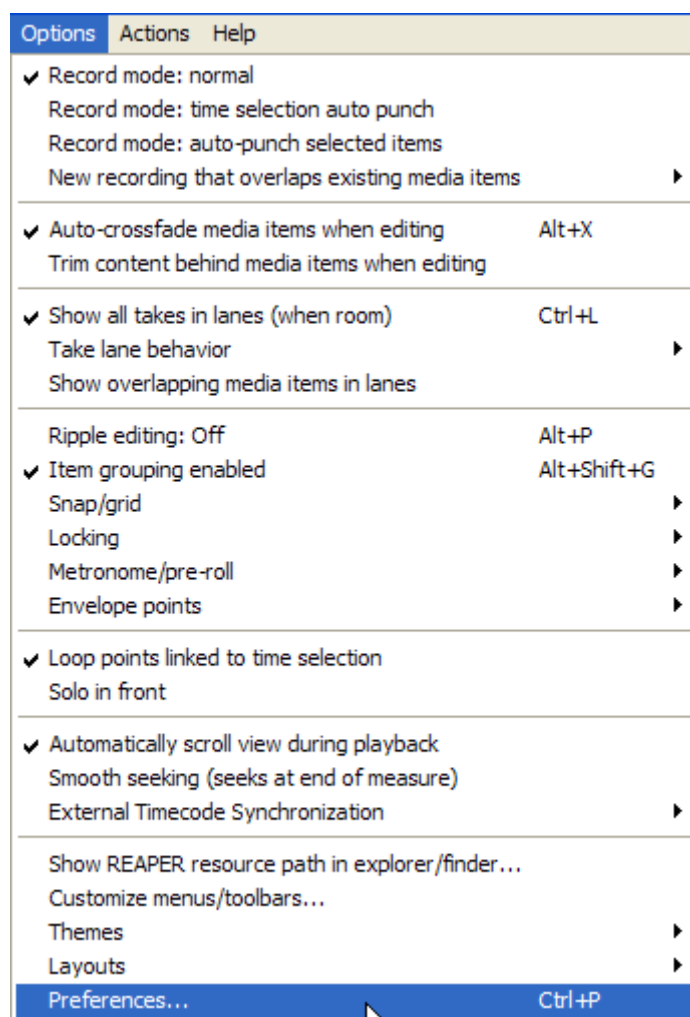
During installation of Reaper, make sure you check the option: “Audio processing plug-ins”



### Select Audio Device

Because of lag in computer audio, it is recommended the use of an ASIO audio card, the type of PCI, firewire or USB audio interface. In case you don't have that type of audio card, you can use your PC's onboard audio card, however with poor sound quality. In that case it's recommended you download and install the free [Asio4All](http://www.asio4all.com) driver from: [www.asio4all.com](http://www.asio4all.com)

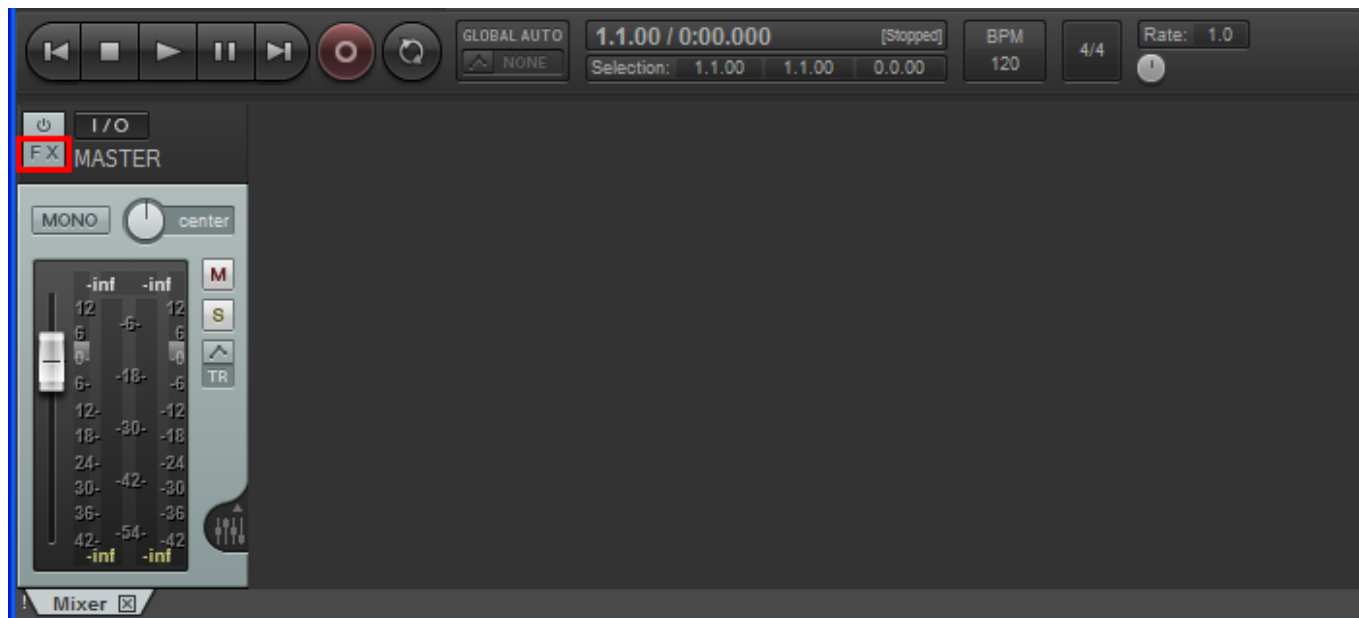
After installation, open Reaper, go to preferences and select your audio card. It always must be ASIO.



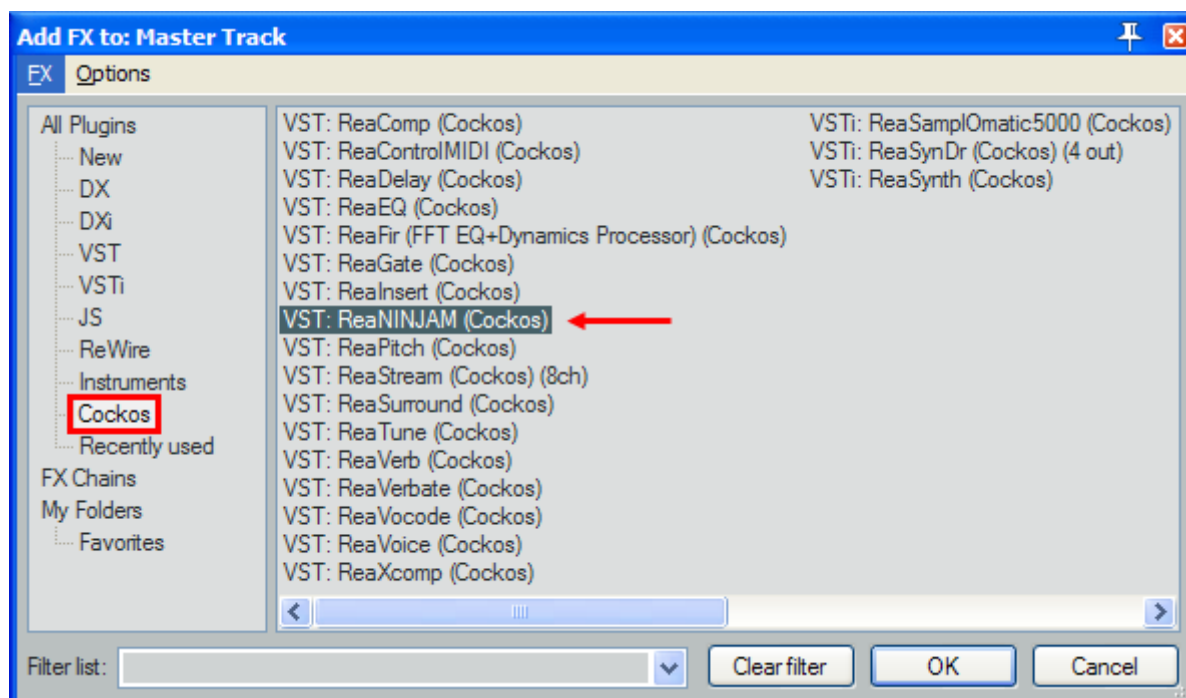
In the field **ASIO Driver** select your Audio card or select “**ASIO4ALL v2**” if you use your PC’s onboard audio card and have installed Asio4all drivers.

## Load Ninjam into Reaper

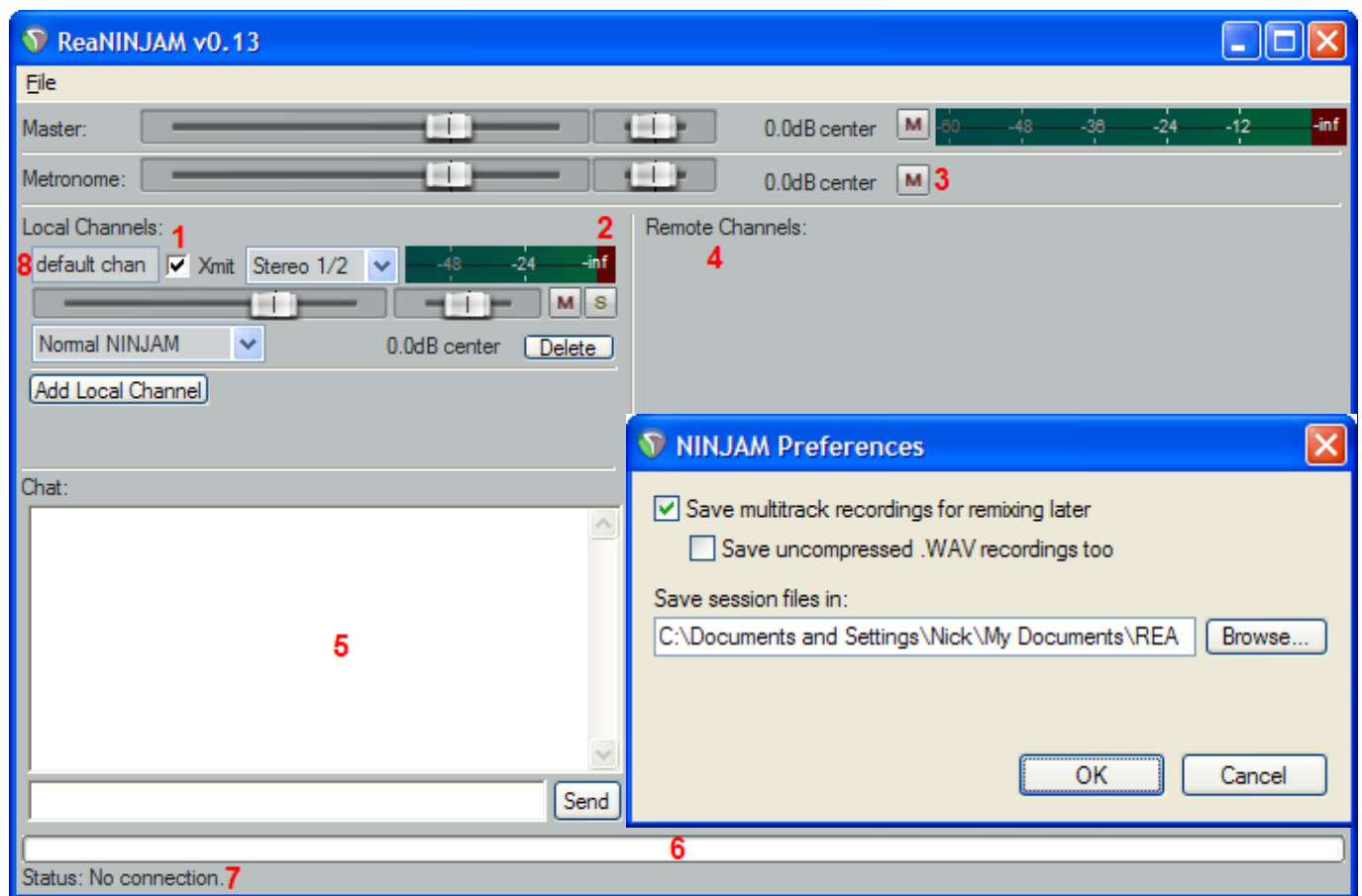
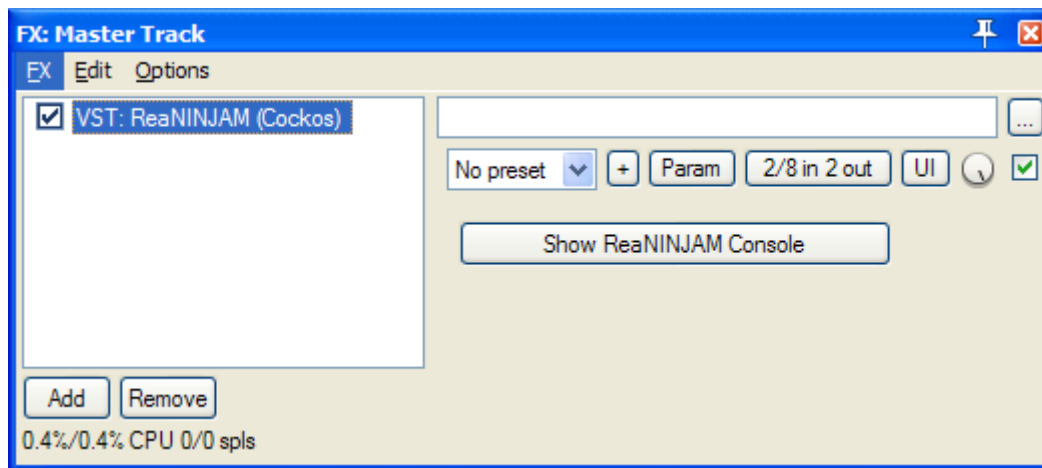
Press the **FX** button in **master** channel.



A new window will appear. In the left pane select **Cockos** and in the right pane: **VST: ReaNINJAM (Cockos)**



Two windows will pop-up. You can close the *FX: Master Track* and leave the window: [ReaNinjam v0.13](#)

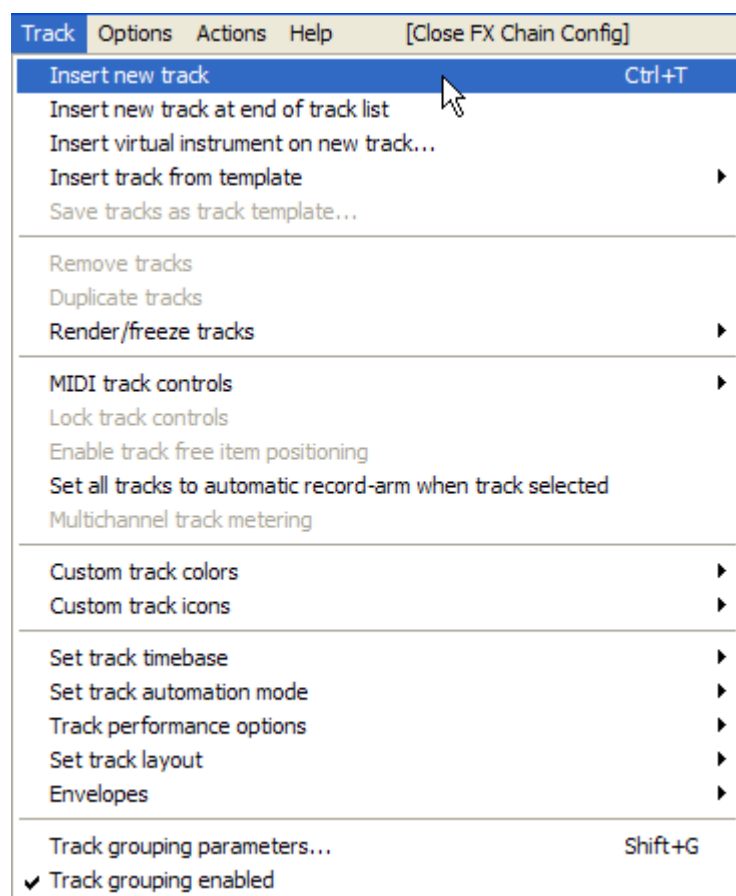


1. By checking this box you transmit your sound to ReaNinjam.
2. Level meter. Make sure it stays about **-12db** and never hits red.
3. Metronome mute button. Every server transmits a metronome click relatively to its bpm setting.
4. The area where the other players of a server appear, as a list of channels.
5. This area is for server messages and chat between players.
6. This Bar shows the bpi/bpm cycle of the server.
7. Status bar with useful info like: connection status, bpm, bpi, server name.
8. Name of your channel. You can type anything here, your name, what you play, etc.

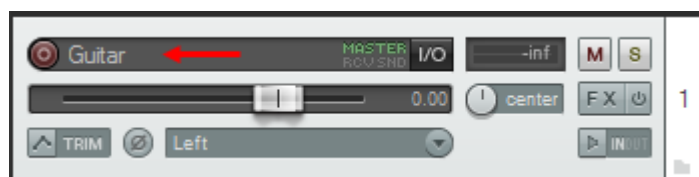
Open Ninjam preferences from **file** menu and check “[Save multitrack recordings for remixing later](#)” if you want to save the jam into hard drive. If you check “[save uncompressed .WAV](#)” the jam will be saved in large WAV audio files & you’ll need a lot of free hard disk space. In “[Save session files in](#)” field, choose a folder location for saving the jams.

## Creating a track in Reaper

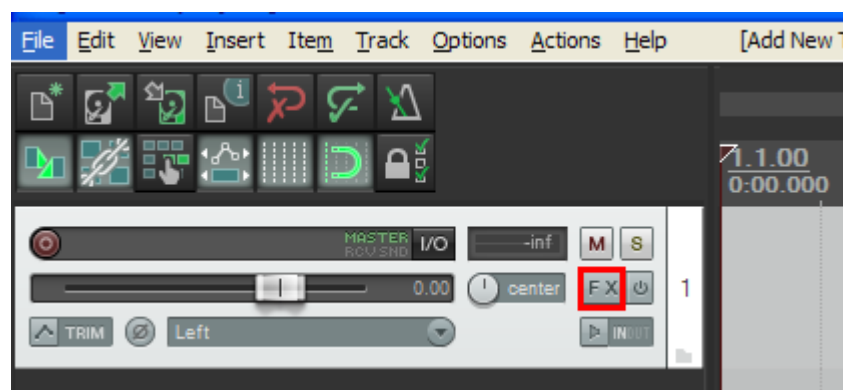
Next step is to create a track in Reaper and assign to it a microphone, a guitar or bass with a vst plugin, a midi keyboard, electronic drums or anything else you like.



To name your track double click the blank field and type what you want (guitar in my case).

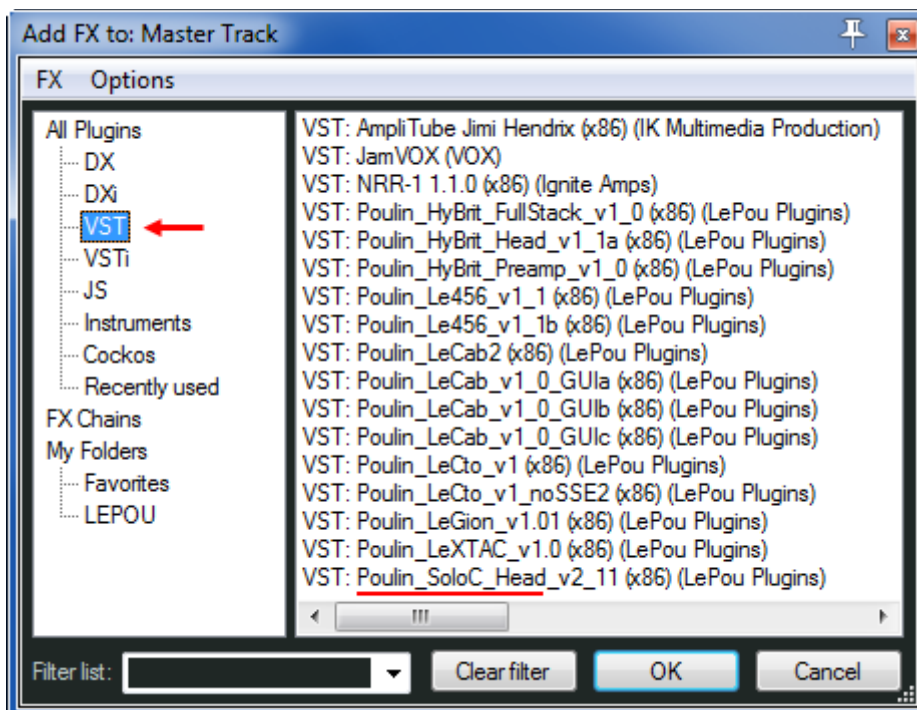


If you want to load a VST plugin for electric guitar, bass or vst effect for vocals, then press the **FX** button in the track (same procedure applies for midi instruments).





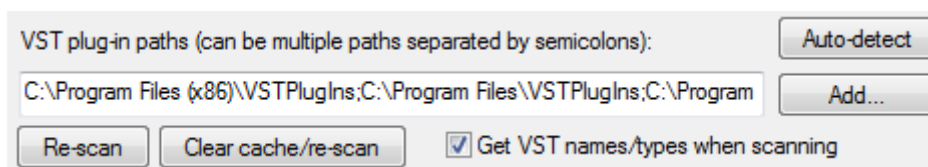
In the left pane select VST or VSTi and in the right pane, select your VST plugin. The dedicated interface of the VST plugin will pop-up, so that you can select or modify your sound.



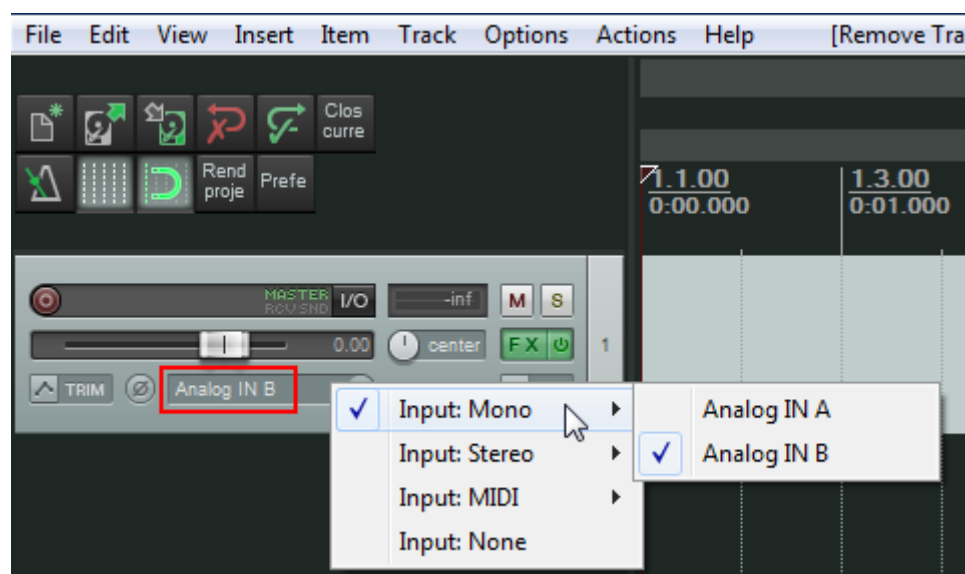
In my example i selected a VST plugin for electric guitar.



If Reaper don't detect a VST you have installed, then add its folder location in Reaper. Open Preferences and click VST menu in left pane.



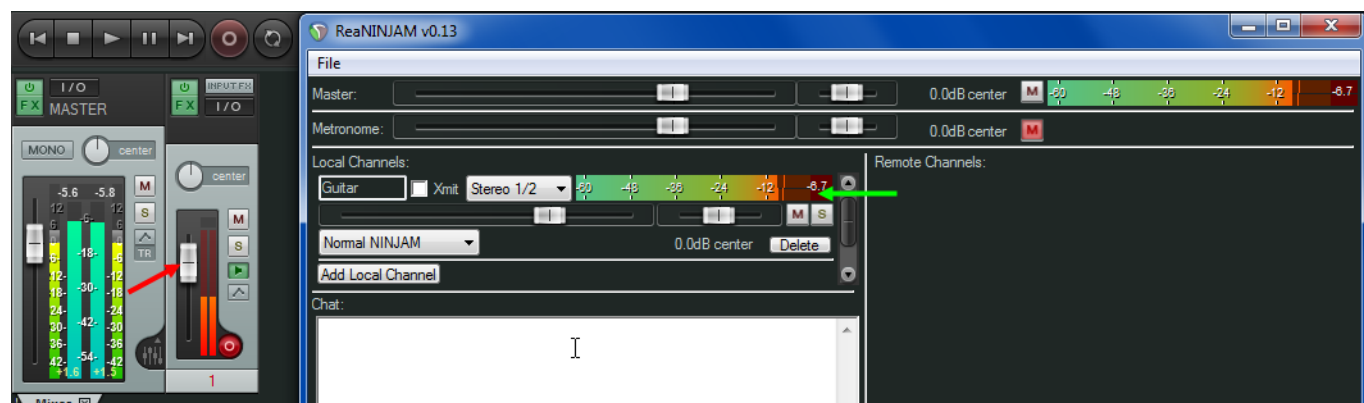
It is very important to select the **input** of your sound. If you connected your guitar cable to left or right input in your audio card, make sure you select it in your **track's input**. In my case it's the Right input, labeled Analog B as shown in photo. To select INPUT, left click in the area shown in photo & the input menu will appear. Same method is required for other instruments, microphones and midi also.



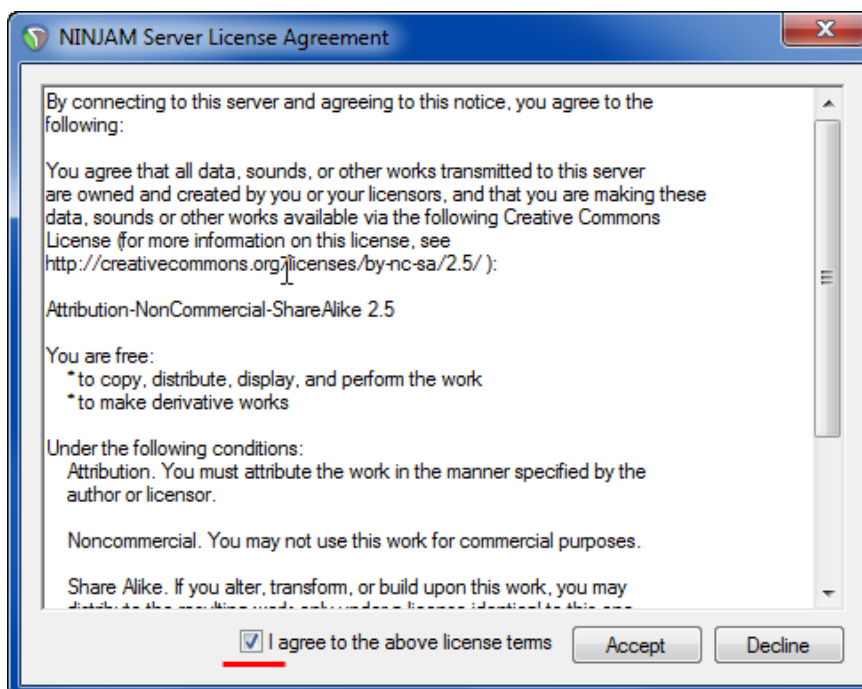
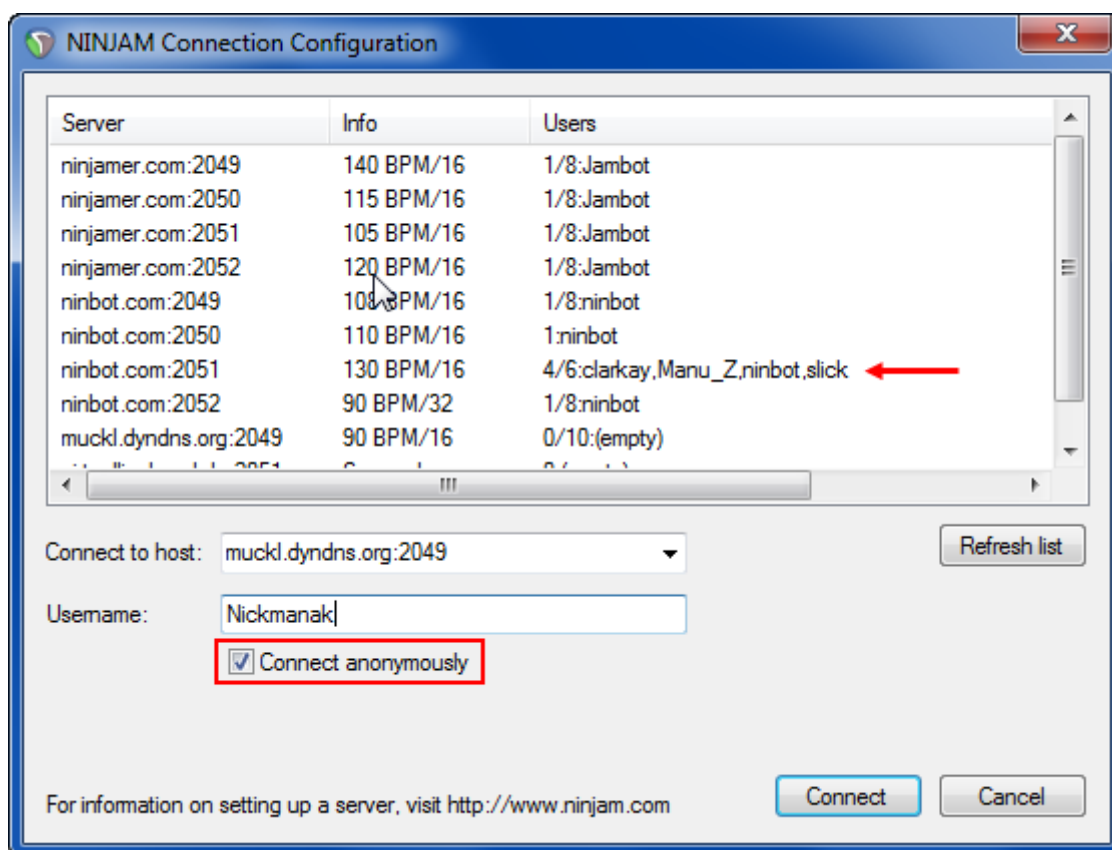
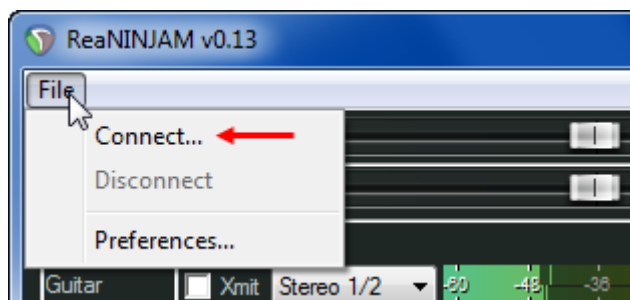
Next step is to activate **monitor** and **record** button as shown. Play your instrument and watch for the signal indicators to light up.

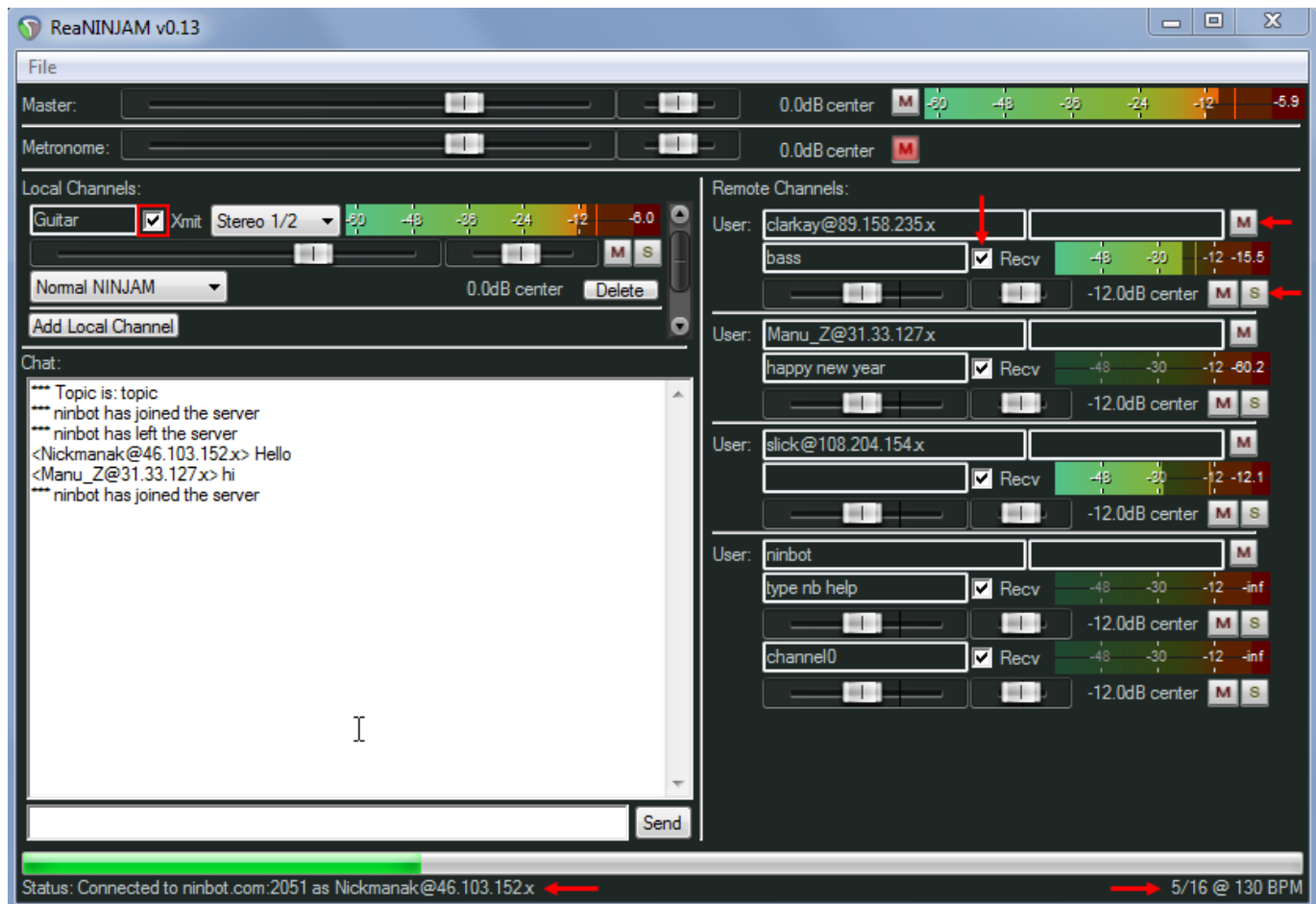


If your channel inside **ReaNINJAM v0.13** has signal activity, then your setup is ready.



**Save** your setup in Reaper by clicking **Ctrl+S**. To connect to a server, in ReaNINJAM window click **File > Connect**. **Check** the option “Connect anonymously”, type a username & select a server from the list. The server list has some info about every server’s address, bpm, bpi, user capacity and the usernames of people currently playing live jams. Check the *agree to license terms* box, click accept and you are connected!





### Useful tips when connecting to a server

- Before entering a server, uncheck your channel's **xmit** checkbox, so that you don't disturb the other players, in case you need to setup your sound first, tune your instrument, browse vst presets etc.
- Use headphones if you use microphone for vocals or in front of instruments, amplifiers etc. and switch-off your pc speakers, or else echo and other noise will occur.
- If you want to mute or solo a player, press the corresponding buttons as shown in photo. Uncheck a player's Receive (**Recv**) checkbox if you want to disable his transmission to you.
- Adjust each player's volume by moving the individual sliders.
- If your channel's level meter hits red, then you must lower your signal from your audio card or from the track in Reaper and NOT from the slider inside ReaNINJAM window. Make sure it stays about -12db.

### Chat commands

- !vote bpm 130 *starts a vote for tempo change, e.g. 130 bpm*
- !vote bpi 16 *starts a vote for bpi change, e.g. 16 bpi*
- /clear *clears all text in chat window*
- /msg Nickmanak@73.112.55.XX message *sends a private message to another player*

### Websites that list servers

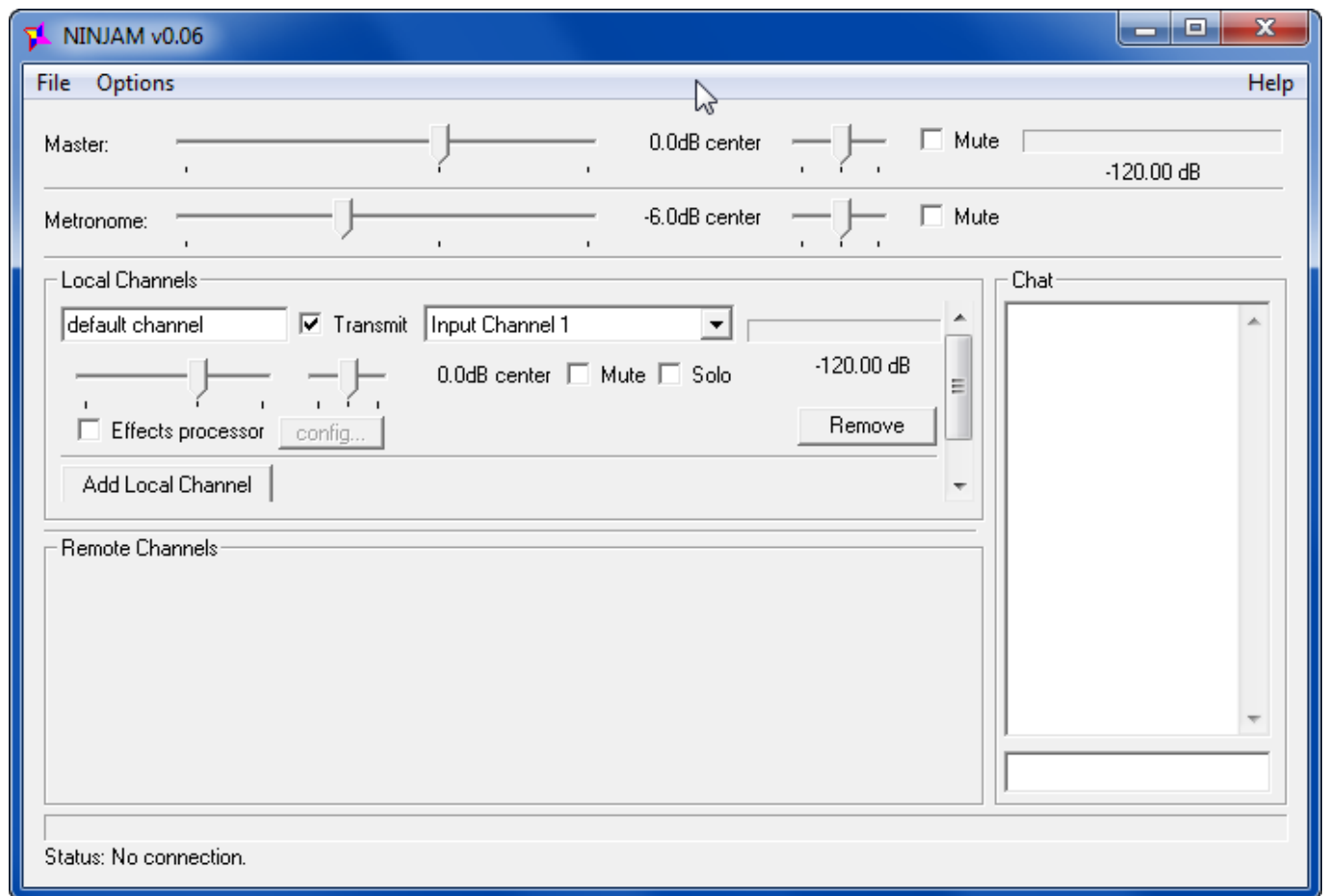
- <http://autosong.ninjam.com/server-list.php>
- <http://ninjam.dyndns.org/>
- <http://ninbot.com/>
- <http://ninjamer.com/>

Some servers record online jams and save remixed copies in their servers, usually in mp3 format. Locations to find such files are:

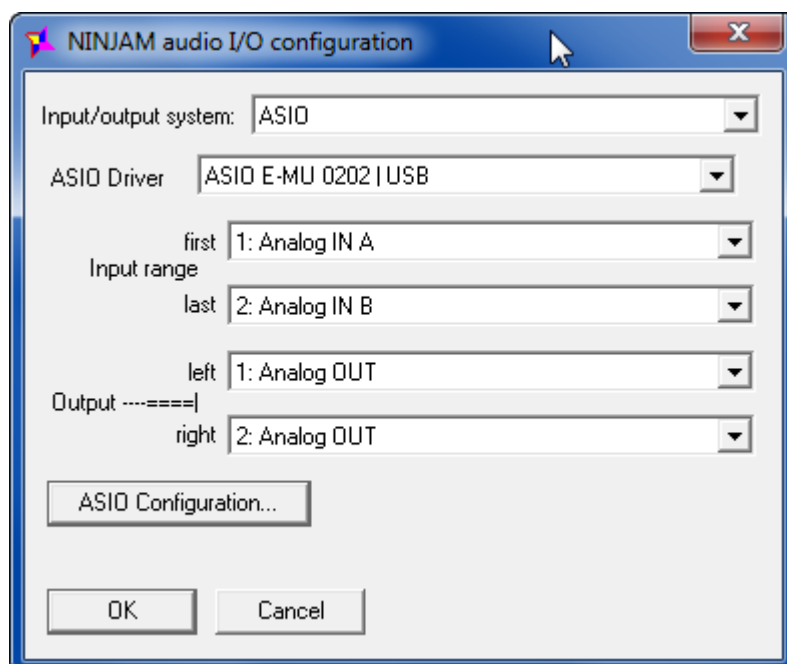
- <http://www.archive.org/details/ninjam>
- <http://ninbot.com/play>

## Using official Ninjam client

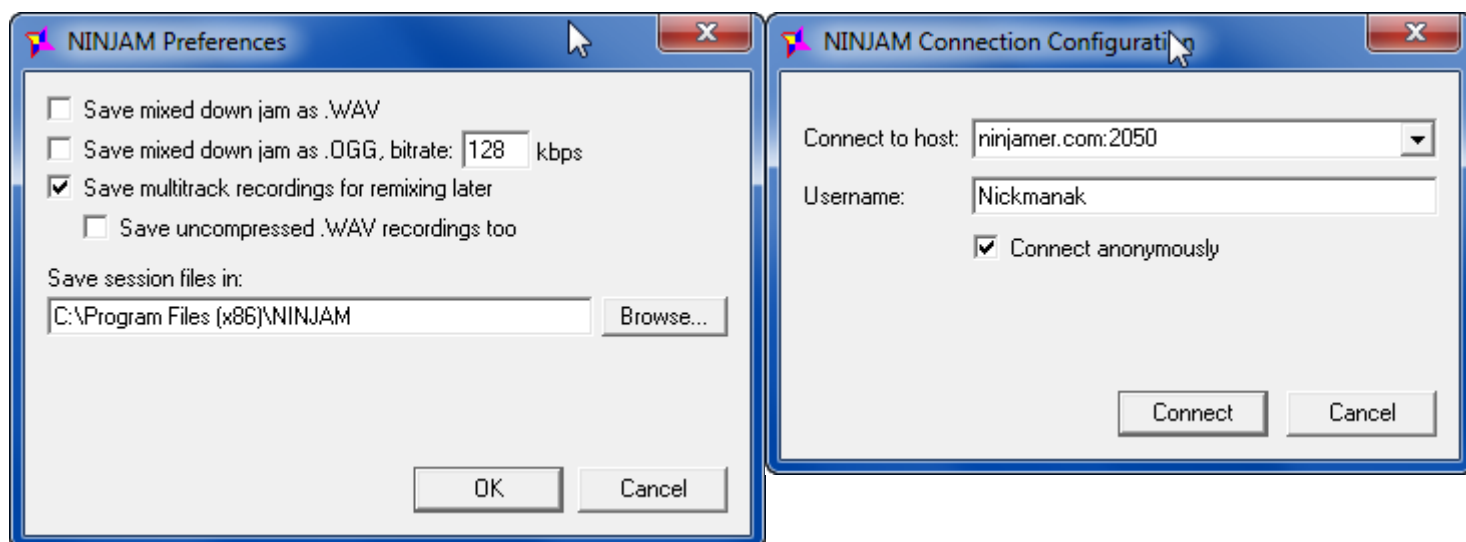
Download and install official Ninjam client.



Click Options > Audio configuration  
Select **ASIO** in “input/output system” field.  
Select your ASIO Driver in the field below.



Click Options > Preferences and check the options you want for saving your jam into hard drive.



Click **File > Connect**

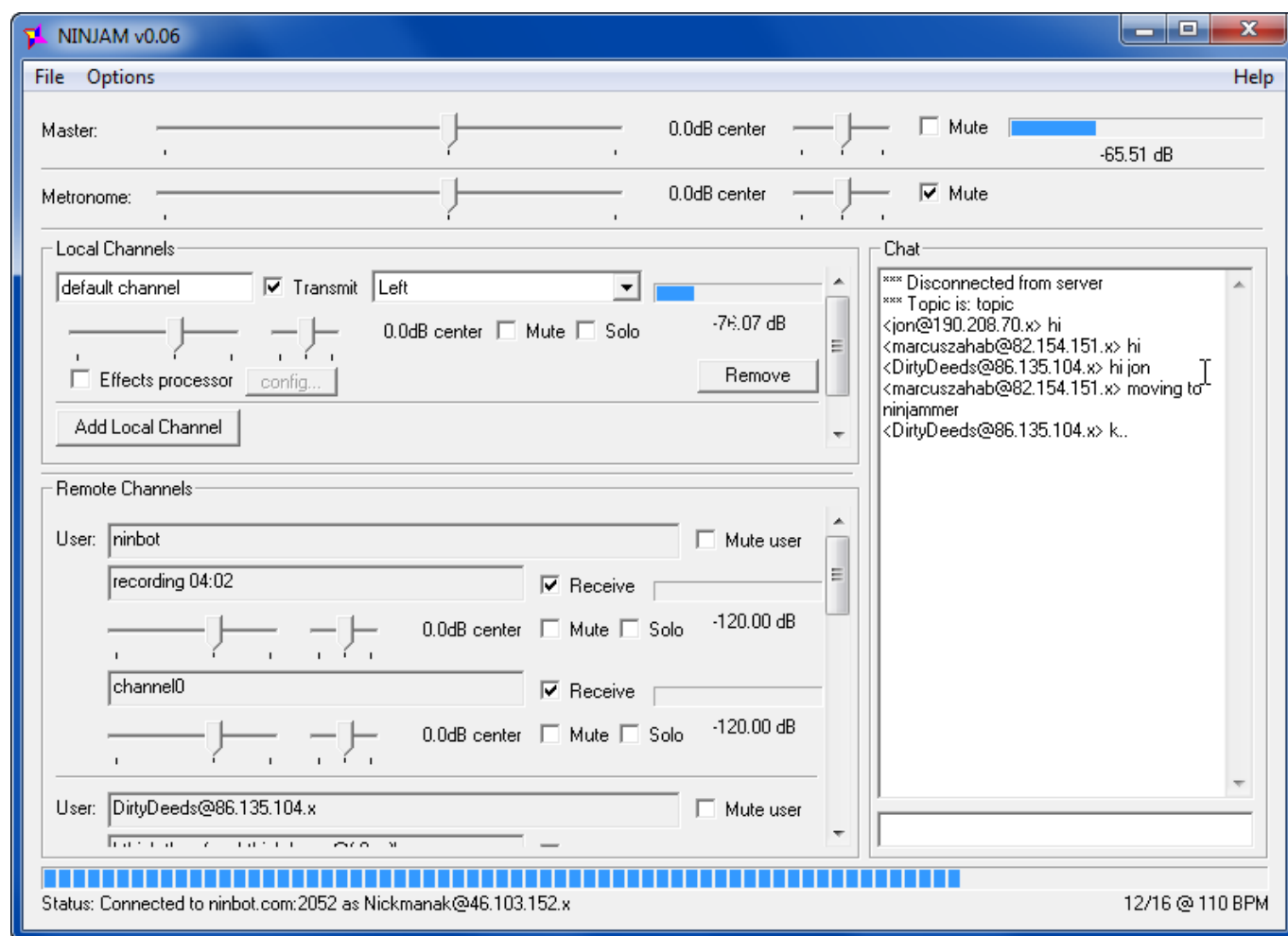
Check option: “Connect anonymously”

Type a **username**

Type the name of the server manually (there is no auto server list here, like Reaper).

Same functions apply here, as described in previous pages for ReaNinjam in Reaper.

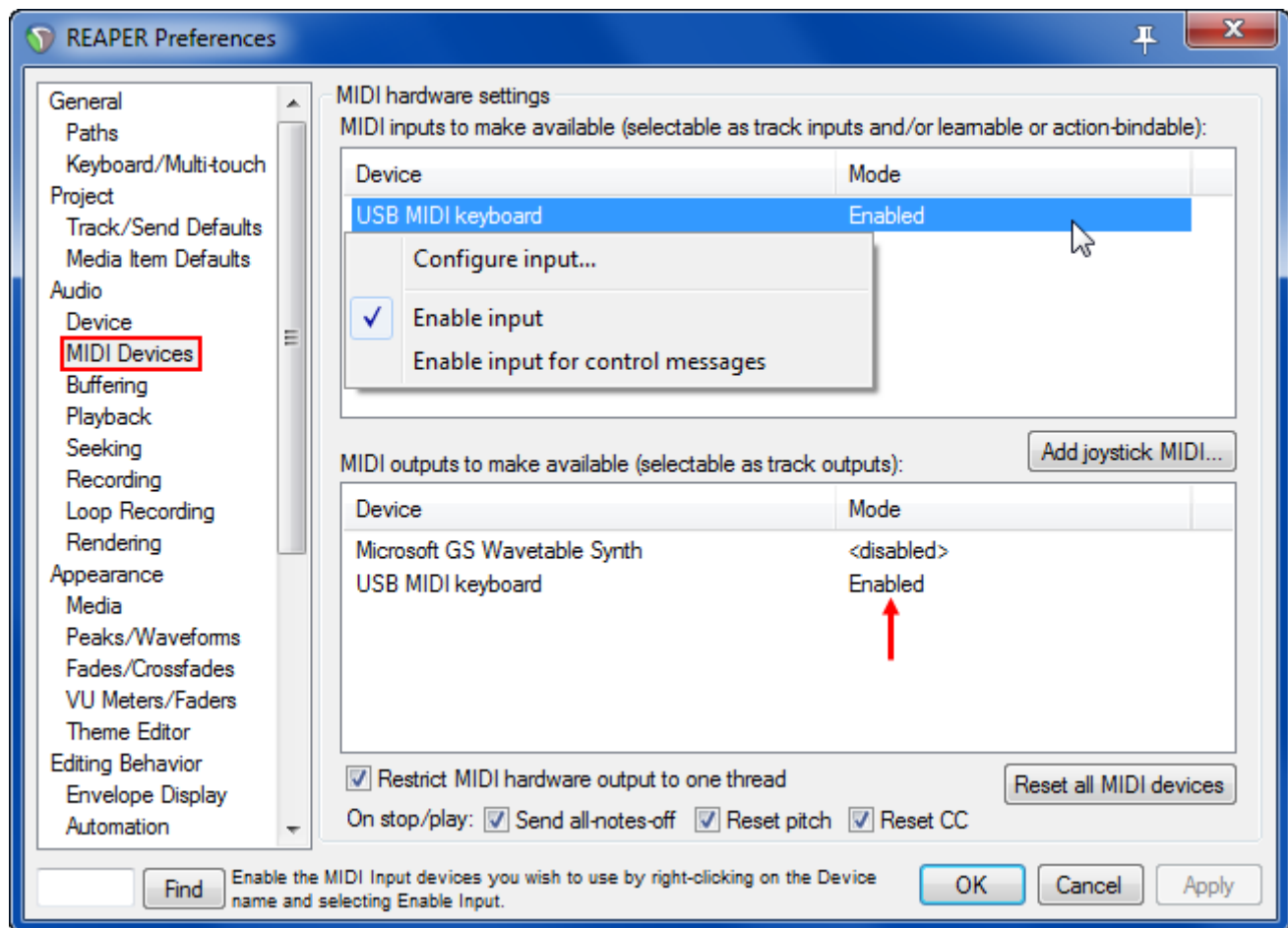
Ninjam client has built-in effects that can be used by checking the option “Effects processor” and clicking “config”.



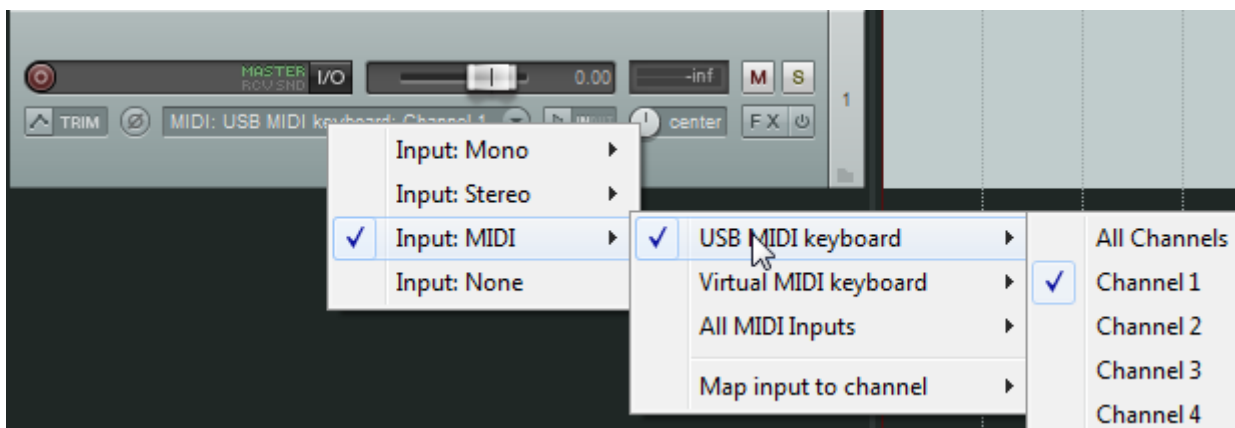


## Using MIDI

First connect your midi device (e.g. usb keyboard), install its driver (if required) and then start Reaper. Open **Preferences** in Reaper and select **MIDI Devices** from left pane. Right-click the label of your midi keyboard and select **Enable input**. Do the same in the window below, for midi output.



Create a track in Reaper as described previously, and select **Midi input** for that track.



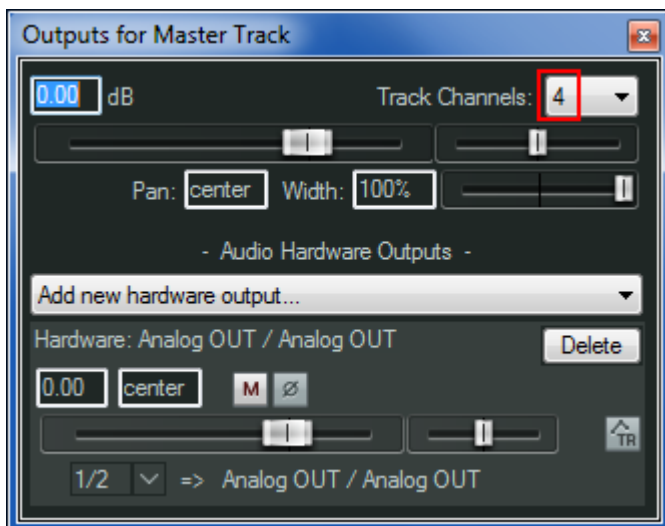
Last step is to **activate** monitor button and Record arm button for that track.

## Using 2 Ninjam Channels

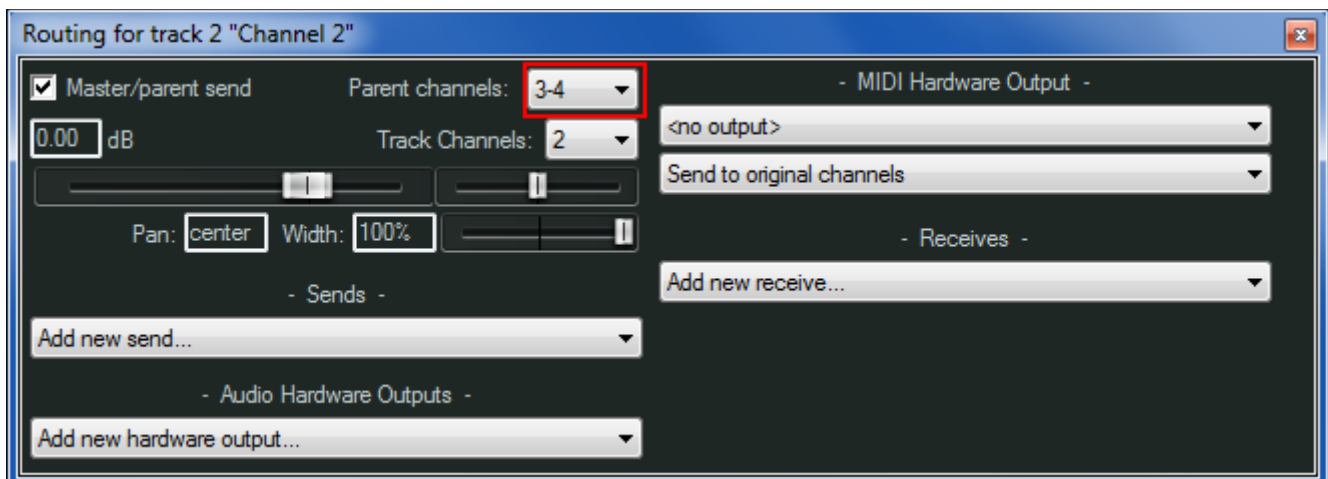
Create 2 tracks in Reaper. Press I/O button in **Master** track.



In “Track Channels” select 4

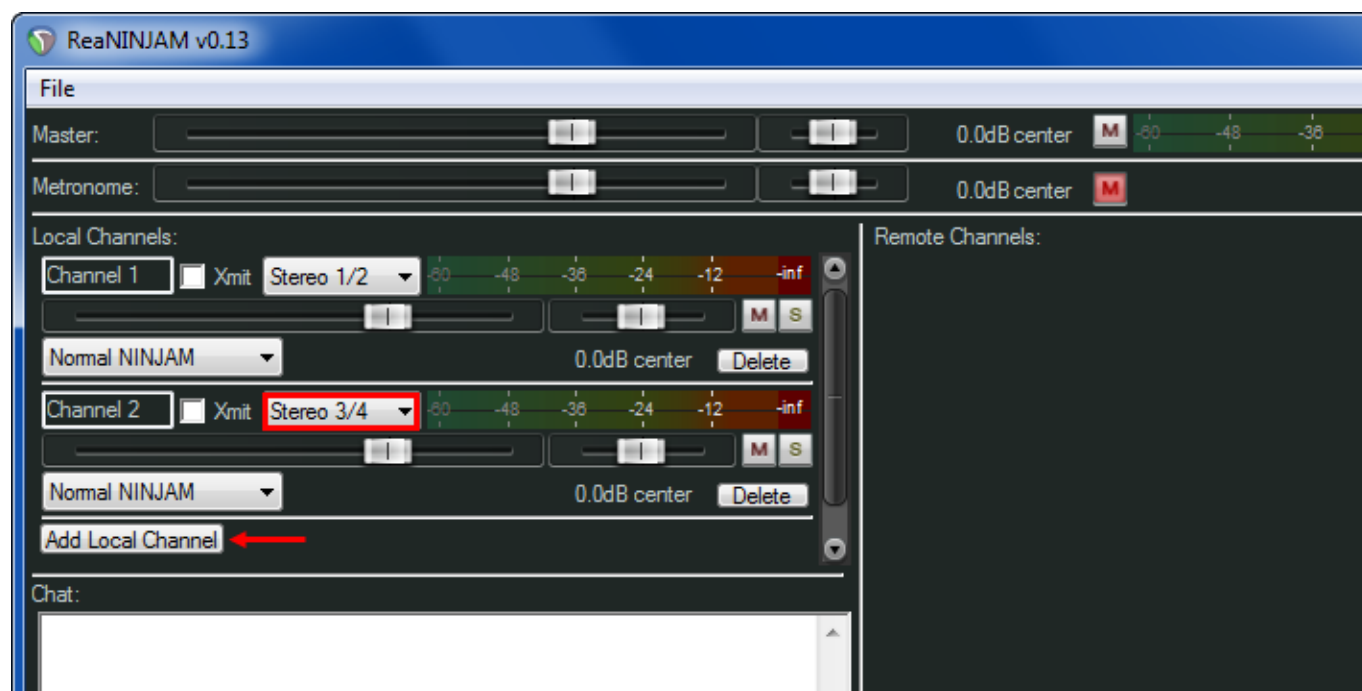


Press I/O button on **2nd track** (channel 2) and select “Parent channels” 3-4





In [ReaNINJAM](#) window click **Add Local Channel**  
In the new channel select **Stereo 3/4** as shown in photo.



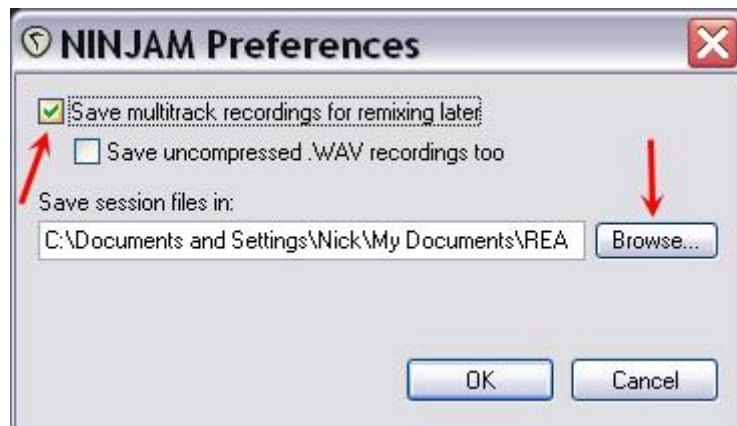
Two separate channels in Ninjam are useful when you want to play different sounds in each channel. You can load a drum machine in track 1 and play the bass in track 2. You can load an audio backing track and sing vocals in the 2nd track.

For server bandwidth reasons it's recommended that you don't use more than 2 Ninjam channels.

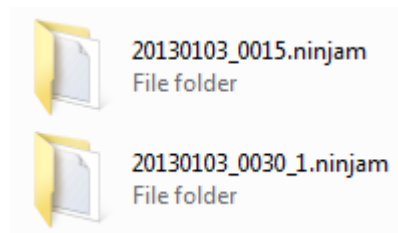
Concerning Reaper, you can create more than 2 tracks if you want and route their audio signal to any of the 2 ReaNinjam channels.

## Save jam in Hard Drive & remix yourself

If you want to save a jam in your hard drive and remix it later, select this option in ReaNinjam or Ninjam client preferences and set a folder for saving.



After a jam, browse to that folder and see the various folders created. Every time you connect and play to a server, a folder is created with the date and time you were connected. If you uncheck a player's receive checkbox when playing to a server, his audio part won't be saved in the folder.



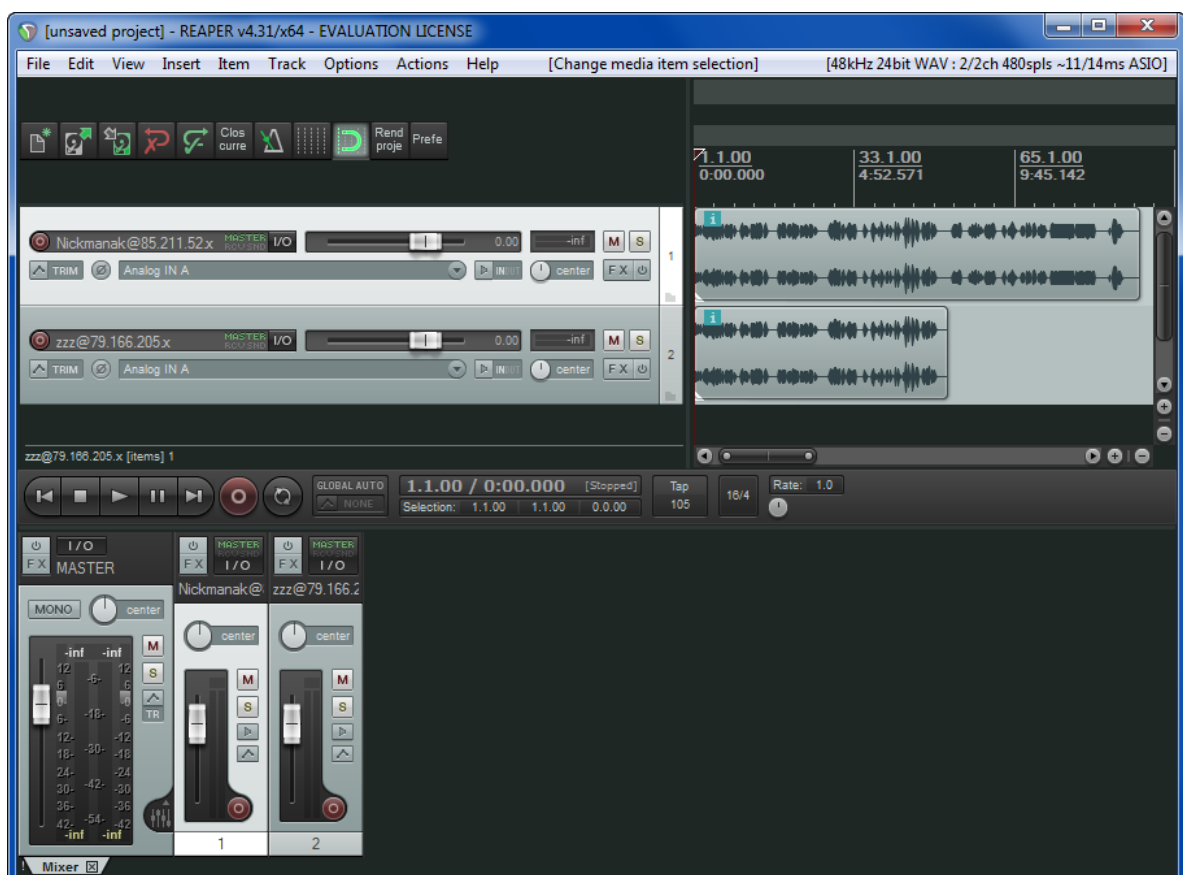
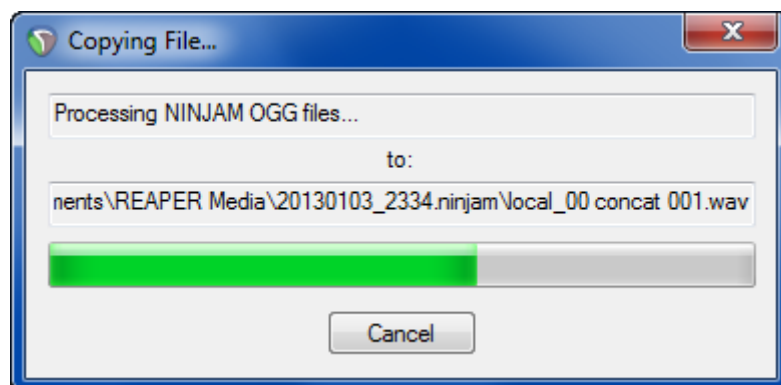
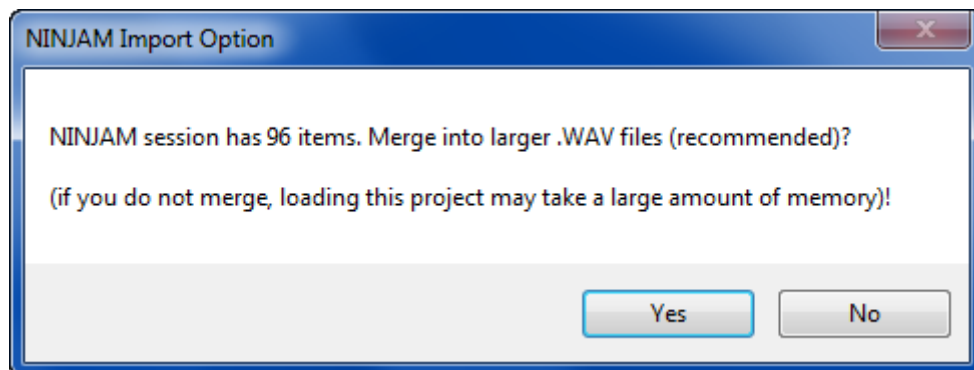
Open a jam folder & see the smaller folders and a file named [CLIPSORT](#).



Open Reaper and with mouse DRAG the [clipsort.log](#) file inside Reaper & an import window pops.

If you click **Yes** a process window will appear & Reaper will **merge** all the individual audio files of the jam, into large WAV files. Depending on your computer, the number of players & the duration of the jam, this process may take some time and use large disk space.

If you click **No** Reaper will create tracks for each player but the audio of each track will be in many small audio parts. You need enough RAM to use this option.



## How to setup your own server

- Download server software from ninjam website. It's in zip archive and it doesn't need installation.
- Extract the contents of the zip file into an empty folder. Rename this folder (e.g. **My\_Ninjam\_Server**) without blank spaces.
- Move that folder to C:\Program files or anywhere else you like.
- Open the folder and then open the file **example.cfg** with a text editor like **notepad**.
- Copy all contents to a blank notepad and save in **.txt** format under a name you like (e.g. **server.txt**).
- Close example.cfg and make some adjustments to **server.txt** file.
- Any line that starts with **#** its disabled, so it's a way to disable a command or write comments.
- After all tweaks **SAVE & rename the extension of your file from server.txt to server.cfg**

I describe only the necessary tweaks for the beginner (my comments are in red color).

**Port 2049** choose between 2049–2052. Only one port is allowed

# limit connections of normal users to 10

**MaxUsers 6** defines how many users can connect to your server

**ServerLicense cclicense.txt** Pop-up window with license, when a user connects. You can edit the license text which is inside the server folder

#anonymoususers yes or no, or multi (to allow multiple users of the same name from the same IP)

**AnonymousUsers yes** If you type yes, any user can connect to your server without password

**AnonymousUsersCanChat yes** If you type yes, any anonymous user can chat to your server

**AnonymousMaskIP yes** with yes, server shows just the nn.nn.nn.x instead of full IP

**ACL 10.0.0.0/8 deny** if you can't connect to your server from the same pc, disable this line with #

#user/password/permissions sets

**User name password \*** set username & password for the server Admin

**User name password CBTKRM** If you make a private server, here you can set each member's username, password & privileges. CBTKRM are: allow Chat, Bpm/bpi, Topic changing, Kicking, Reserved slot, Multiple logins. You can use any letter of CBTKRM or combinations (e.g. CB, CTK, KRM).

**DefaultTopic** write a text after the command to set a topic in your server

**DefaultBPM 110** sets the tempo of the server in bpm

**DefaultBPI 16** Sets the Beats Per Interval of the server. Type from 2-64

# voting system:

**SetVotingThreshold 50** sets threshold to 50%. 50 means 50% of total users needed for a voting to pass. Can be 1-100%, or >100 to disable.

**SetVotingVoteTimeout 180** sets timeout in seconds before votes are reset.

## Open port in your router

You must open the port you defined in [server.cfg](#) (2049, 2050, 2051 or 2052)

To learn how to open your router's port, visit this website:

<http://portforward.com/>

## Starting your server

Open a **cmd** (command prompt) window and change directory with **CD** command.

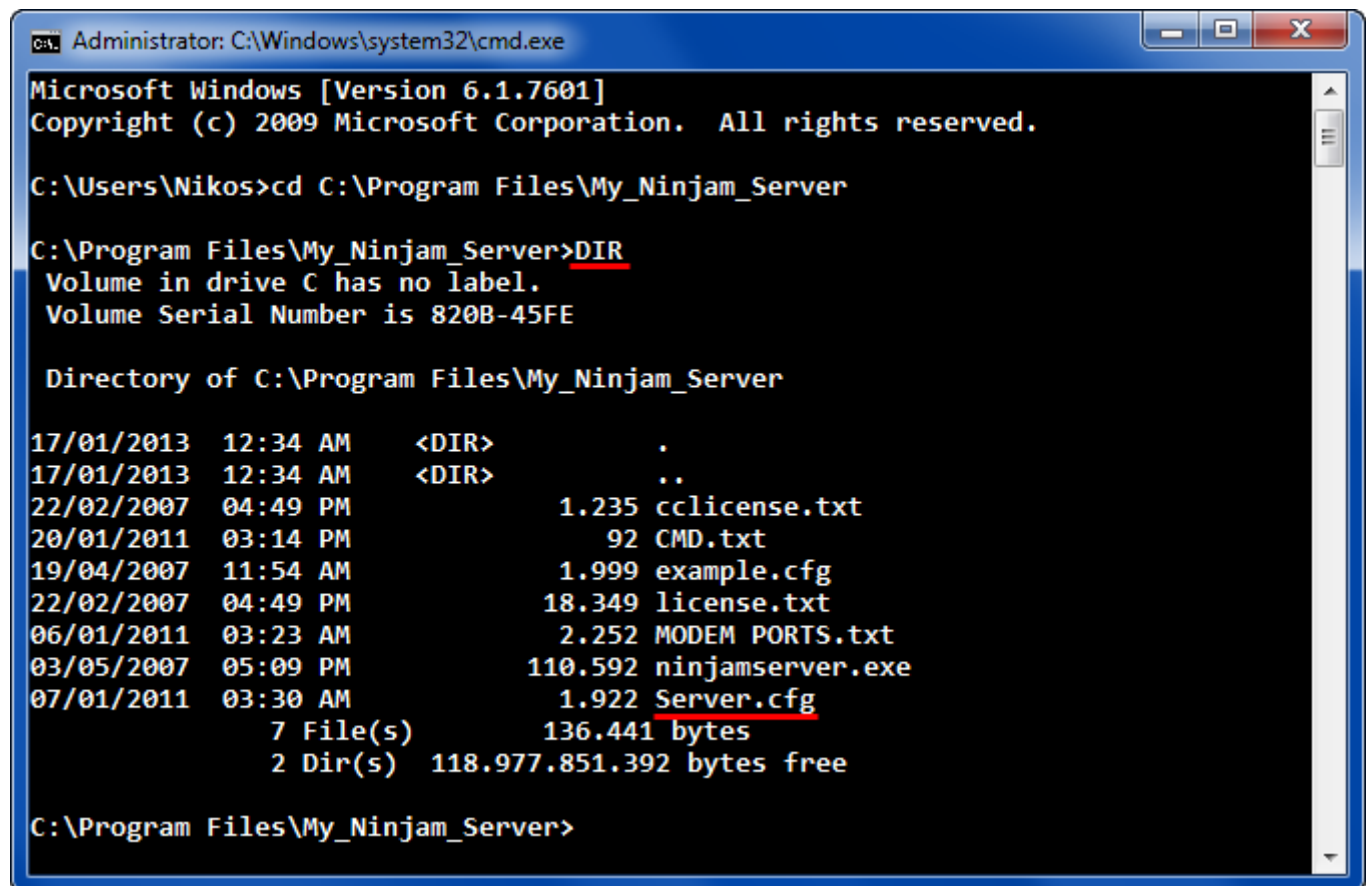
If the server folder (e.g. **My\_Ninjam\_Server**) is in **C:\Program Files** then type in cmd:

**CD C:\Program Files\My\_Ninjam\_Server**

If you are inside the server folder, type **DIR** and check the contents.

If ok type:

**ninjamserver.exe Server.cfg**



```
Administrator: C:\Windows\system32\cmd.exe
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

C:\Users\Nikos>cd C:\Program Files\My_Ninjam_Server

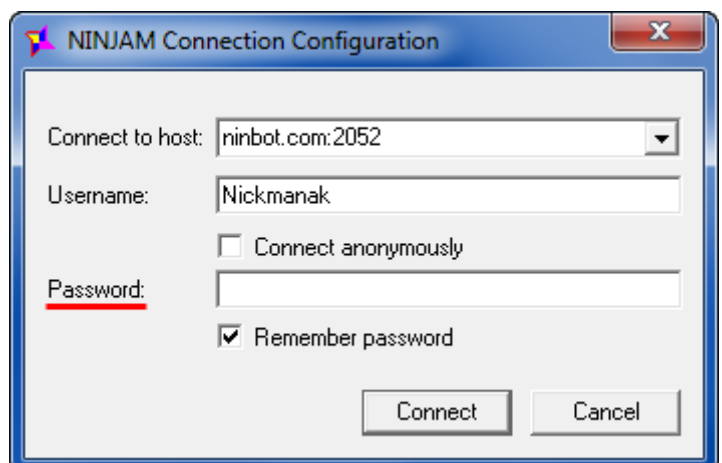
C:\Program Files\My_Ninjam_Server>DIR
Volume in drive C has no label.
Volume Serial Number is 820B-45FE

Directory of C:\Program Files\My_Ninjam_Server

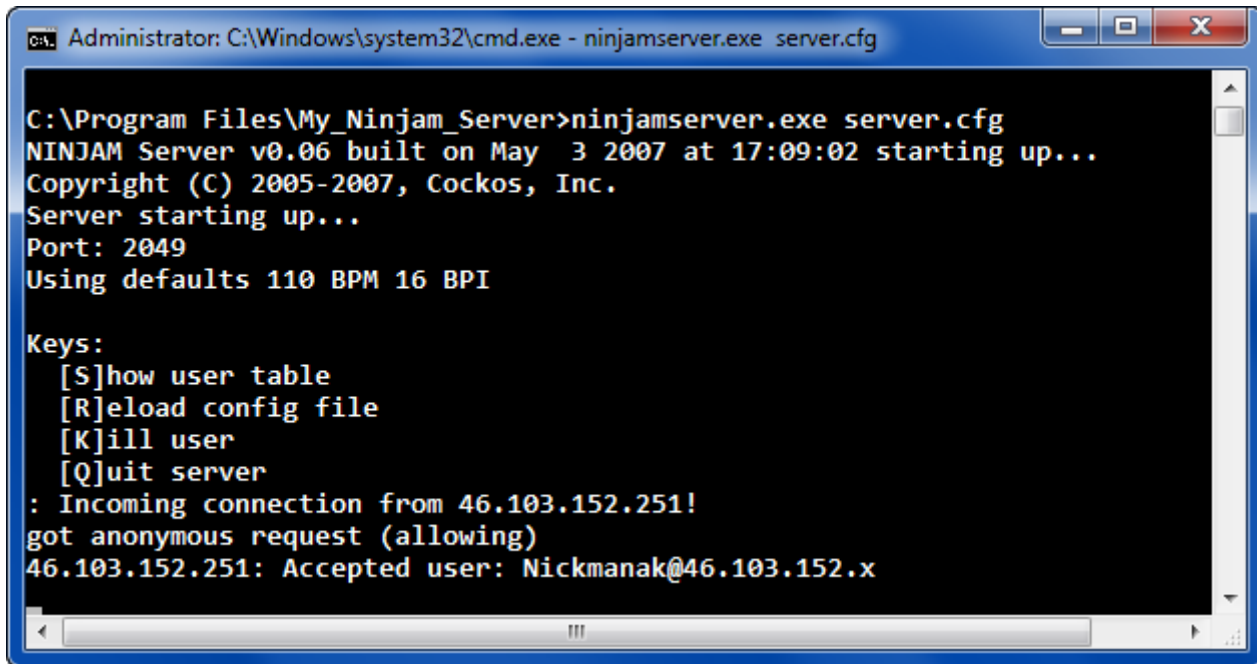
17/01/2013  12:34 AM    <DIR>          .
17/01/2013  12:34 AM    <DIR>          ..
22/02/2007  04:49 PM         1.235 cclicense.txt
20/01/2011  03:14 PM           92 CMD.txt
19/04/2007  11:54 AM         1.999 example.cfg
22/02/2007  04:49 PM        18.349 license.txt
06/01/2011  03:23 AM         2.252 MODEM PORTS.txt
03/05/2007  05:09 PM       110.592 ninjamserver.exe
07/01/2011  03:30 AM         1.922 Server.cfg
              7 File(s)        136.441 bytes
              2 Dir(s)  118.977.851.392 bytes free

C:\Program Files\My_Ninjam_Server>
```

If you want to connect as ADMIN or member (in a **private** server), **uncheck** “**Connect anonymously**” & type the username and password you set in your server.cfg



Your server is up and running as you can see in the cmd window (you leave the cmd window open).



```
Administrator: C:\Windows\system32\cmd.exe - ninjamserver.exe server.cfg

C:\Program Files\My_Ninjam_Server>ninjamserver.exe server.cfg
NINJAM Server v0.06 built on May 3 2007 at 17:09:02 starting up...
Copyright (C) 2005-2007, Cockos, Inc.
Server starting up...
Port: 2049
Using defaults 110 BPM 16 BPI

Keys:
[S]how user table
[R]eload config file
[K]ill user
[Q]uit server
: Incoming connection from 46.103.152.251!
got anonymous request (allowing)
46.103.152.251: Accepted user: Nickmanak@46.103.152.x
```

### Find your IP

Visit this or similar website to find what is your IP.

<http://www.whatismyip.com/>

Take your IP and add the server.cfg port :2049 at the end. So you have for e.g. 85.211.52.15:2049

Anyone that wants to connect to your server must type 85.211.52.15:2049 in the field:

"Connect to host" in Ninjam client & ReaNinjam.

If you set usernames and passwords in server.cfg then if someone wants to connect, must type his username & password (uncheck connect anonymously option).

### I want to connect to my server from the same PC that the server is running

If you can't connect to your server as described above, first step is to find your local IP address.

Open a cmd and type

[ipconfig /all](#)

Write down the IP ADDRESS or IPv4 ADDRESS number as listed & add :2049 at the end.

In "Connect to host" field you will type that number x.x.x.x:2049 to connect and play.

If you want to connect as ADMIN, type the username and password you set in your server.cfg (see photo in page 21).

### Admin commands in Ninjam server

Inside cmd window press the following letters in keyboard to execute a command:

[S] list with connected users

[R] reload server.cfg if you made changes

[K] kicks a user from the server

[Q] terminates the server

### Other commands:

/bpi 16

/bpm 120

/msg user message

/kick user

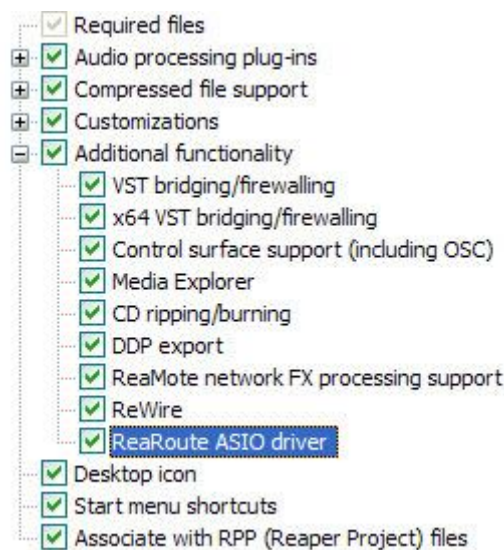
## Using other DAW for Ninjam

You can use other DAW for Ninjam like: Cubase, Ableton, Sonar, FL Studio, synth workstations etc. The following guide is about [Cubase 5](#) but with slight modifications can be used on other DAW as well. *(Reaper skin in this tutorial is from version 3)*

This method requires **both** Reaper and Cubase to be running, so it will be demanding in cpu and ram.

Reaper has it's own Asio driver called [ReaRoute ASIO driver](#) which functions as a virtual audio driver and provides communication between Reaper and other audio software.

When you install Reaper for the 1st time this option is unselected by default. In that case you reinstall Reaper and select the option "ReaRoute ASIO driver".



### IMPORTANT

ReaRoute driver won't work if you use different bit versions of the 2 DAW.

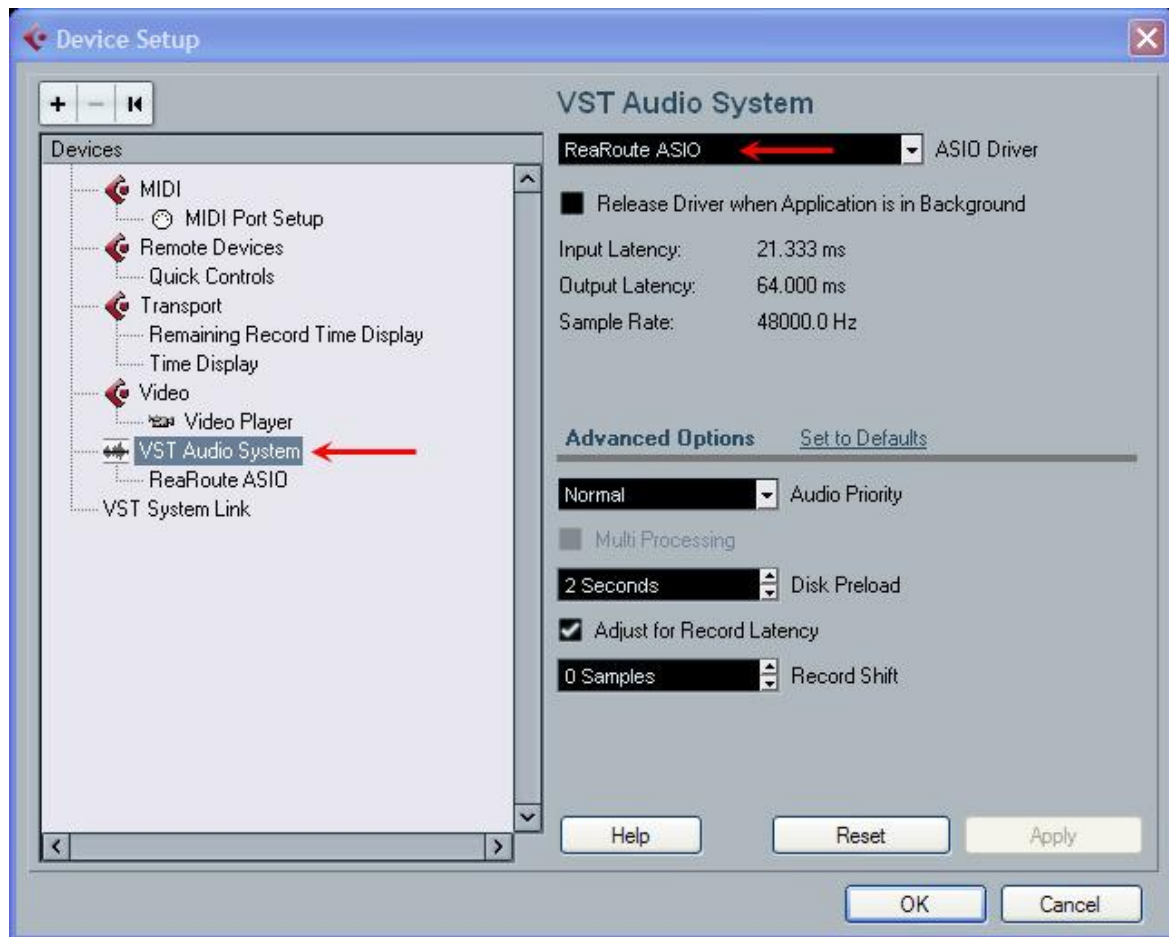
Meaning that Reaper 64bit **won't** work with Cubase 32bit version & vice versa. Both Cubase & Reaper must be the same type.

**ALWAYS** start Reaper first, so that ReaRoute driver can load in the background & the other audio software can detect it.

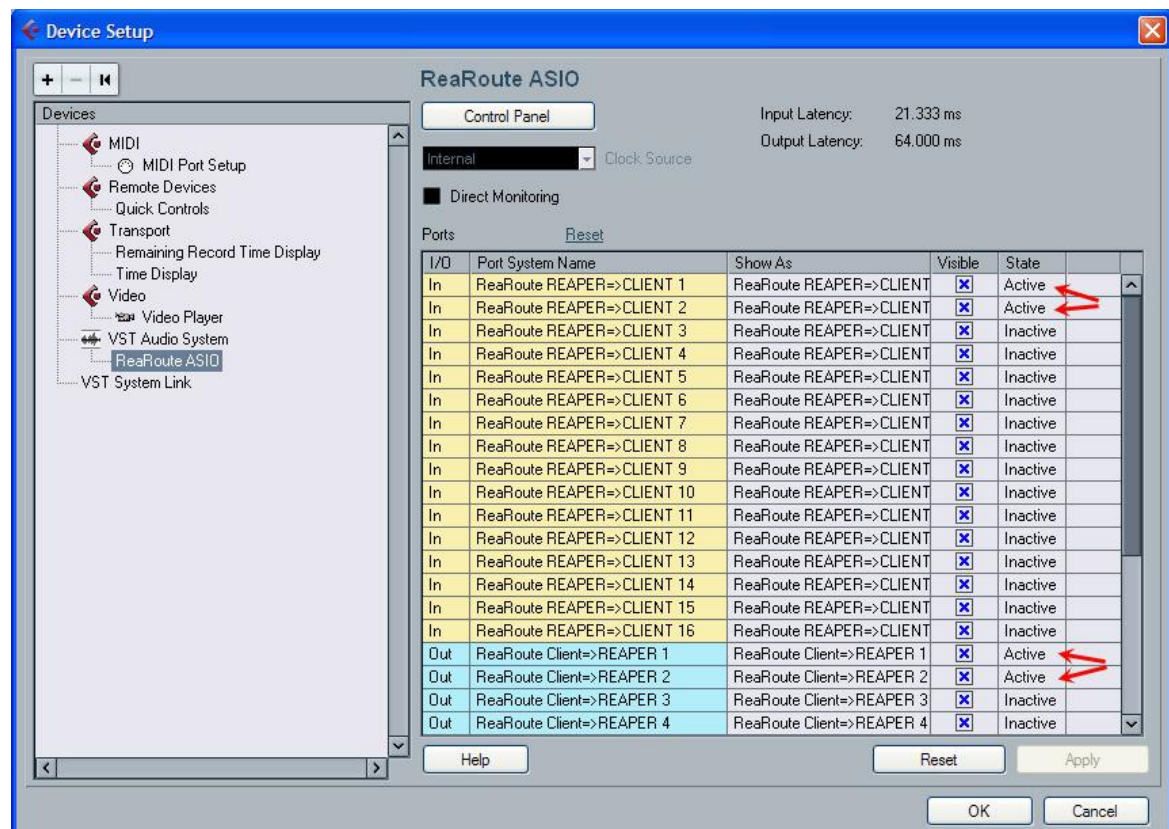
Next start [Cubase](#) and go to menu [Devices](#) and select [Devices Setup](#).

Select VST Audio System in left pane and for ASIO driver select [ReaRoute ASIO](#) as shown in next photo.





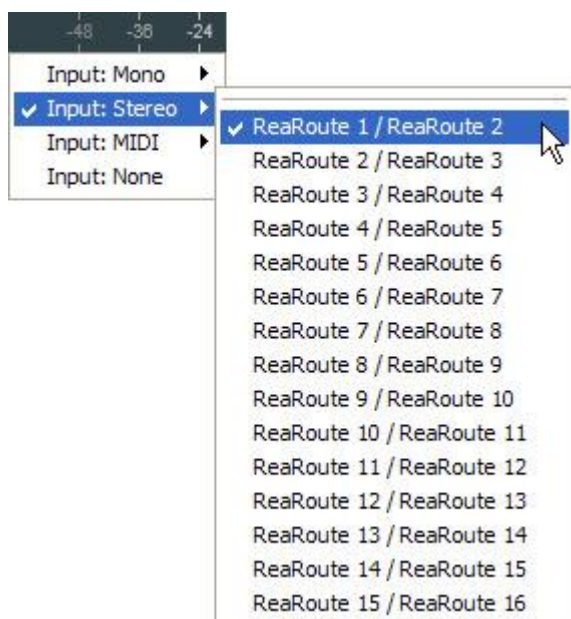
In the left pane select **ReaRoute ASIO** (under VST Audio System) and locate the 2 ports that send audio from Cubase to Reaper. Their status must show **active**.





Go to Reaper and create a new track by pressing **CTRL+T**

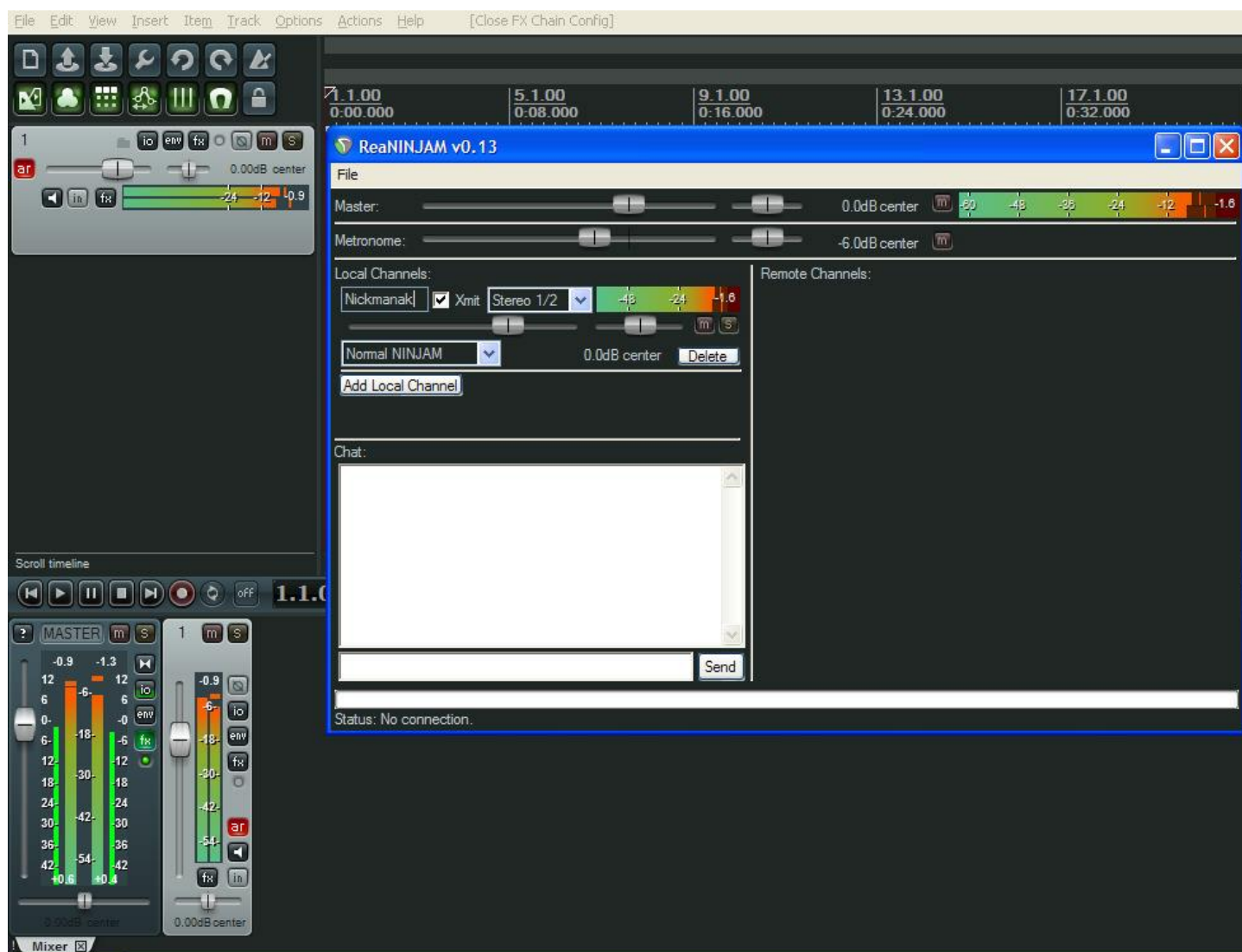
Left click for **track input** and select **Stereo ReaRoute 1 / ReaRoute 2**. This means that you will receive stereo audio signal from Cubase into Reaper. You can select other input depending on the situation (e.g. mono audio or midi).



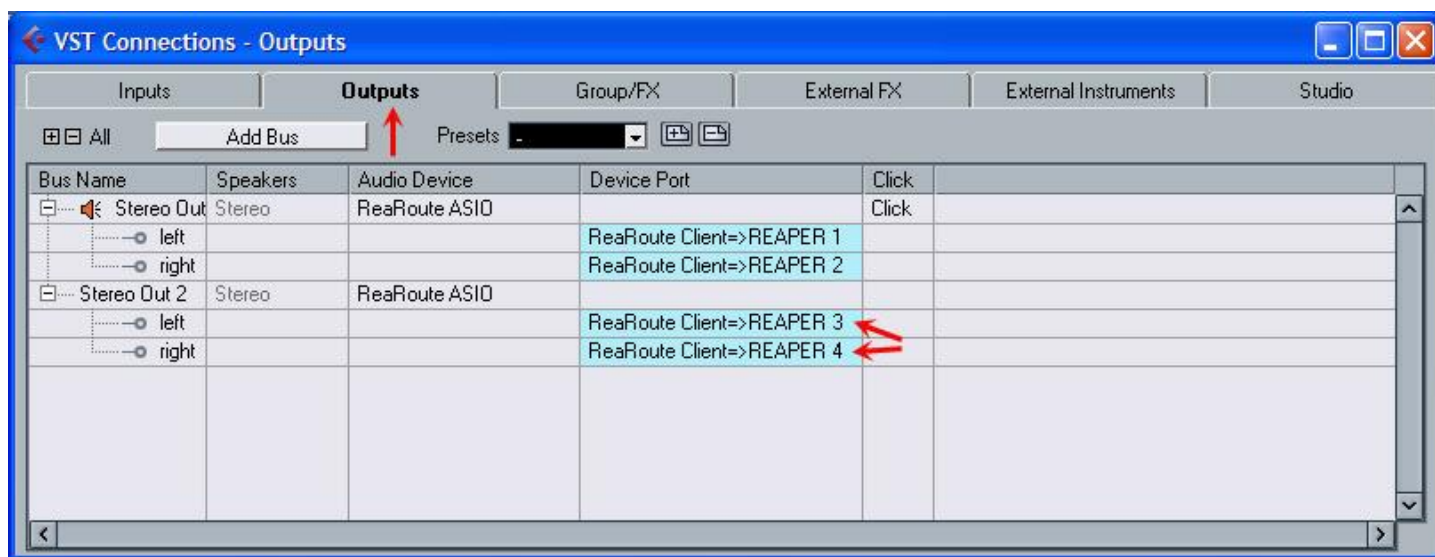
On your Reaper track enable **monitor** & **arm record** as shown in photo.

Next, load and setup **ReaNinjam** in Reaper's Master track, as described in previous pages of the guide.

The photo below shows Cubase, where you created a stereo track, loaded an audio file and started playback. The audio is transmitted inside Reaper through ReaRoute and finally to ReaNinjam, as you can see in the following photos.



Next tutorial shows how to create more tracks in Cubase that sends audio in separate Reaper tracks.  
In Cubase press **F4** and then press **Add Bus** for adding another stereo Output.



In Cubase select a track and in the left settings (photo below) change the numeration:

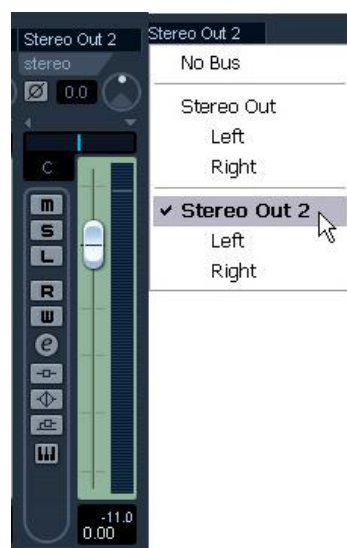
First track: No Bus & Stereo Out

Second track: No Bus & Stereo Out **2**

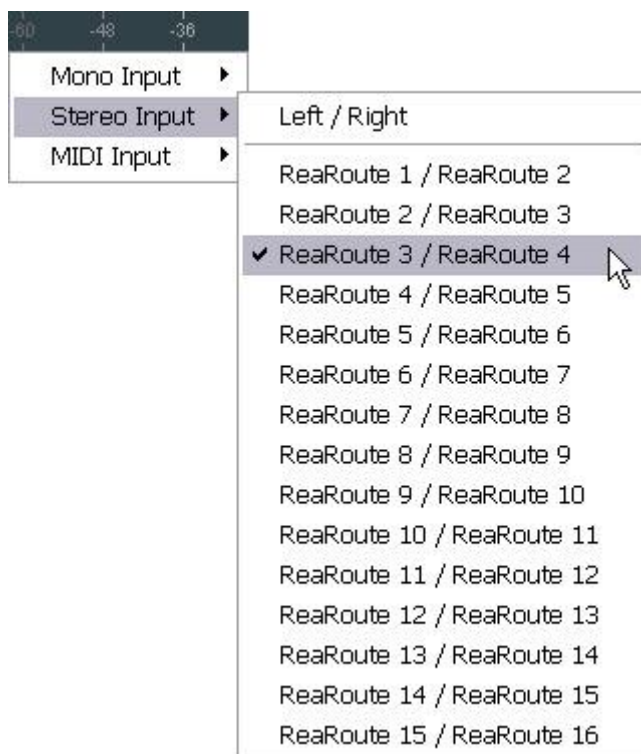
Third track: No Bus & Stereo Out **3** etc.



If you have **midi** tracks in Cubase or using VST Plugins then you will modify only the Stereo Output.  
You must do this from the mixer window (F3) and not from the main window (photo below).



In **Reaper** create a 2nd track and choose for input: **ReaRoute 3 / ReaRoute 4** so that it matches the **3/4** output you created in Cubase.



Enable in both Reaper tracks **monitor & record arm** buttons. Start playing in Cubase and check the audio that is transmitted inside Reaper tracks and ReaNinjam.



You can create 2 channels in **ReaNinjam** (read previous pages) and route the 2 tracks of Cubase into these channels via the 2 Reaper tracks, so that they are independent.



## Session Mode in Ninjam

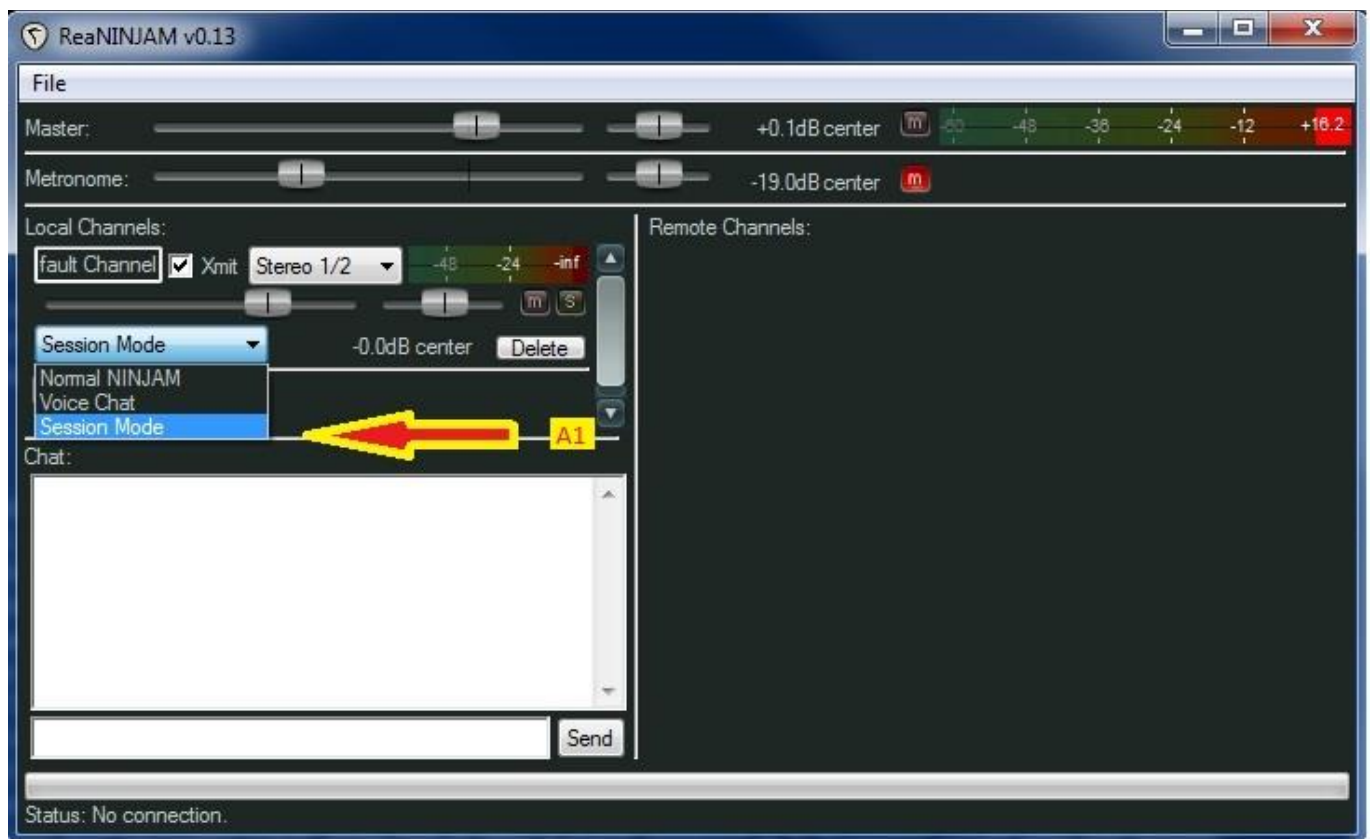
Ok so we had it for a while but it's not used much, maybe because many are not sure how to or what it does so this hopefully shine some light on Session Mode.

First I will explain what it is and how to use, then explain the diagrams below.

Session Mode is like a Blank Rewritable CD which lasts as long as the users want. So imagine a friend had a bunch of rewritable cdr's and when you heard a beep you started playing at 120bpm and he recorded all of you on a separate CDR's, then at the end he played all the CDR's back to you all simultaneously. But say the Drummer messaged up at say 1 minute into recording, now imagine if the friend said "hey it's rewritable I can start recording you again from 1 minute", so the drummer played and corrected his mistake. Now Imagine REAPER was that Friend and the CDR was in fact a NINJAM Channel set to Session Mode.

But instead of a friend playing and controlling the CDR's you can just click PLAY on the REAPER window at any starting point of what's been recorded and hear everyone else's CDR's at the same time, this is how Session Mode Works.

So to use Session Mode you first need too enable it on the ReaNINJAM Window shown below, remember this though, once enabled to use Normal NINJAM again you must switch it back to Normal or in a Normal NINJAM others won't hear you. See A1 in Diagram 1.



Now that your set to Session Mode you need to know how to use it.

Below in the Diagram 2 the first things you need to know is (J) in the diagram 2, this is the PLAY button in REAPER, when in Session Mode to start all's audio (CDR's) you must click play. Soon as you click play NINJAM Session Mode is Recording any Audio you make in REAPER.

### What is the Measure Bar?

You need to understand the Measure Bar at the top of diagram 2 which looks like a Ruler. On diagram 2 it shows 1.1.00, 5.1.00, 9.1.00 and so on, these are Bars, a bar consist of 4 Beats or 1/1. 1.1.00 too 5.1.00 would be in NINJAM a bpi 16.

## How to Setup a Looped Range on the Measure Bar

You see here in diagram 2 that at (A) we have 2 small triangle shapes, this depicts the Looped Area which is Enabled using (G) in diagram 2.

You can set this looped area by clicking and holding the mouse button on the ruler at the start then drag and hold the mouse to the end of your desired looped area, or you can Enter the Start of the Loop in (D) left then the end of the Loop in (D) right.

(E) shows how many Bars you have Looped.

The Loop Range is important as you can see in (B) that there is a bunch of recordings instead of one like the rest, this is where it has looped 3 times and I replayed the part each loop. Then I clicked on 1 part from the 3 loops that I liked best and this part is then played.

Sometimes when playing a warm up or few repeats are needed to play it right.

So once you have set the looped area you want, then Enable it using (G) in diagram 2.

## The Transport Control Panel

The Transport Control Panel are basically the play, stop, forward, rewind and record buttons.

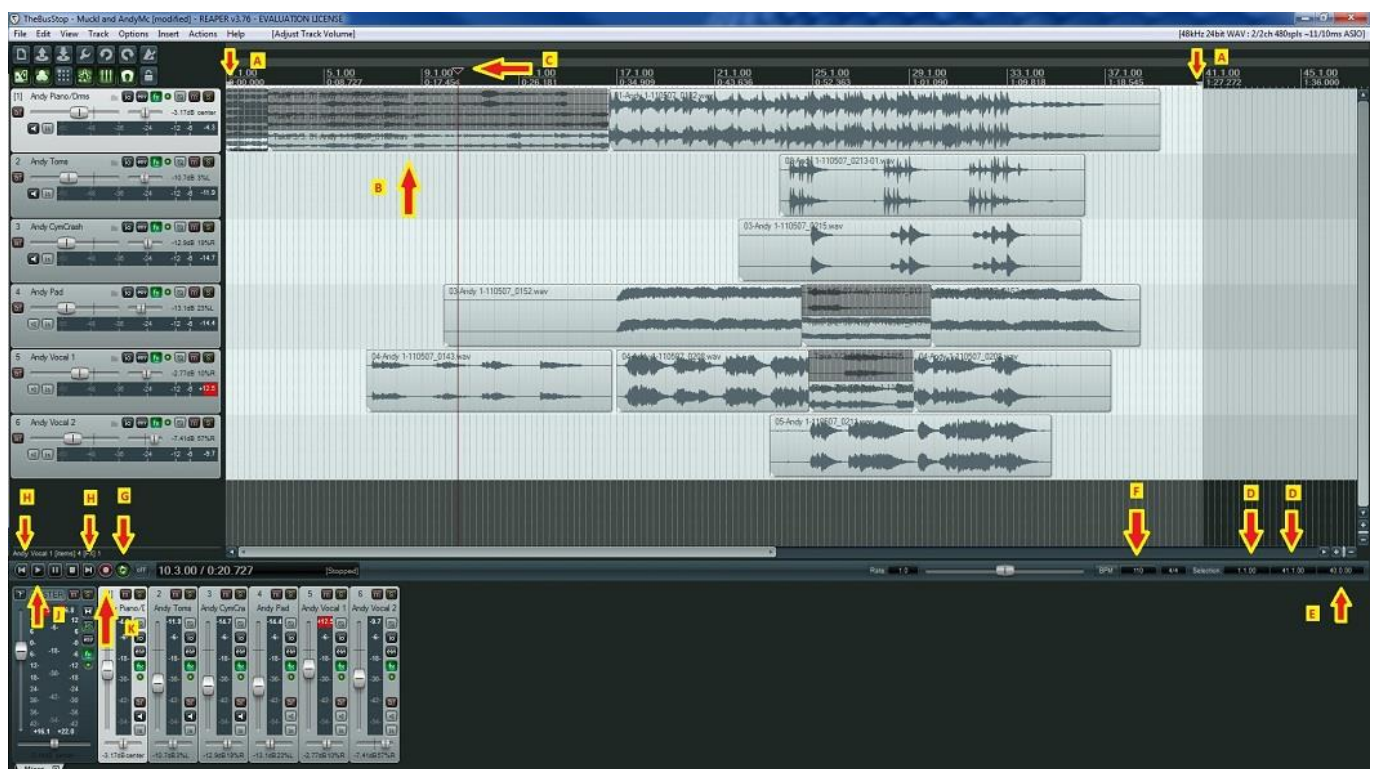
You have the (H) buttons which move (C) the starting point for play or record to the Start of the Measure Ruler or End of your records.

(J) is the PLAY button, if you don't click this in Session Mode you will not hear anything, but if you just leave it playing without looping an area then it could still be playing up to 50 minutes but everyone else stopped playing at say 5 minutes so you will only be hearing silence. So in this case just click (H) on the left to go back to the start.

(K) is the RECORD button, for others to hear you in session mode you only need to press the (J) PLAY button and make some noise then if you say "BOO" at 5.1 then everyone will hear you say boo at 5.1 when they play that measure. However if you then play past 5.1 and make no noise then the "BOO" will be erased, so anything you want to keep you need to use the (K) RECORD button.

(G) as mentioned previously is to Enable the Looped Area of (A)

Further along to the right on the Transport Panel you will see (F) which is the BPM, now in session mode you need to Mute the NINJAM Metronome then Click OPTIONS on the REAPER window and select Metronome Enable. Now you want to set the BPM to the BPM you and your friends in the Server agree too. If your not sure just ask "What's Session BPM?".



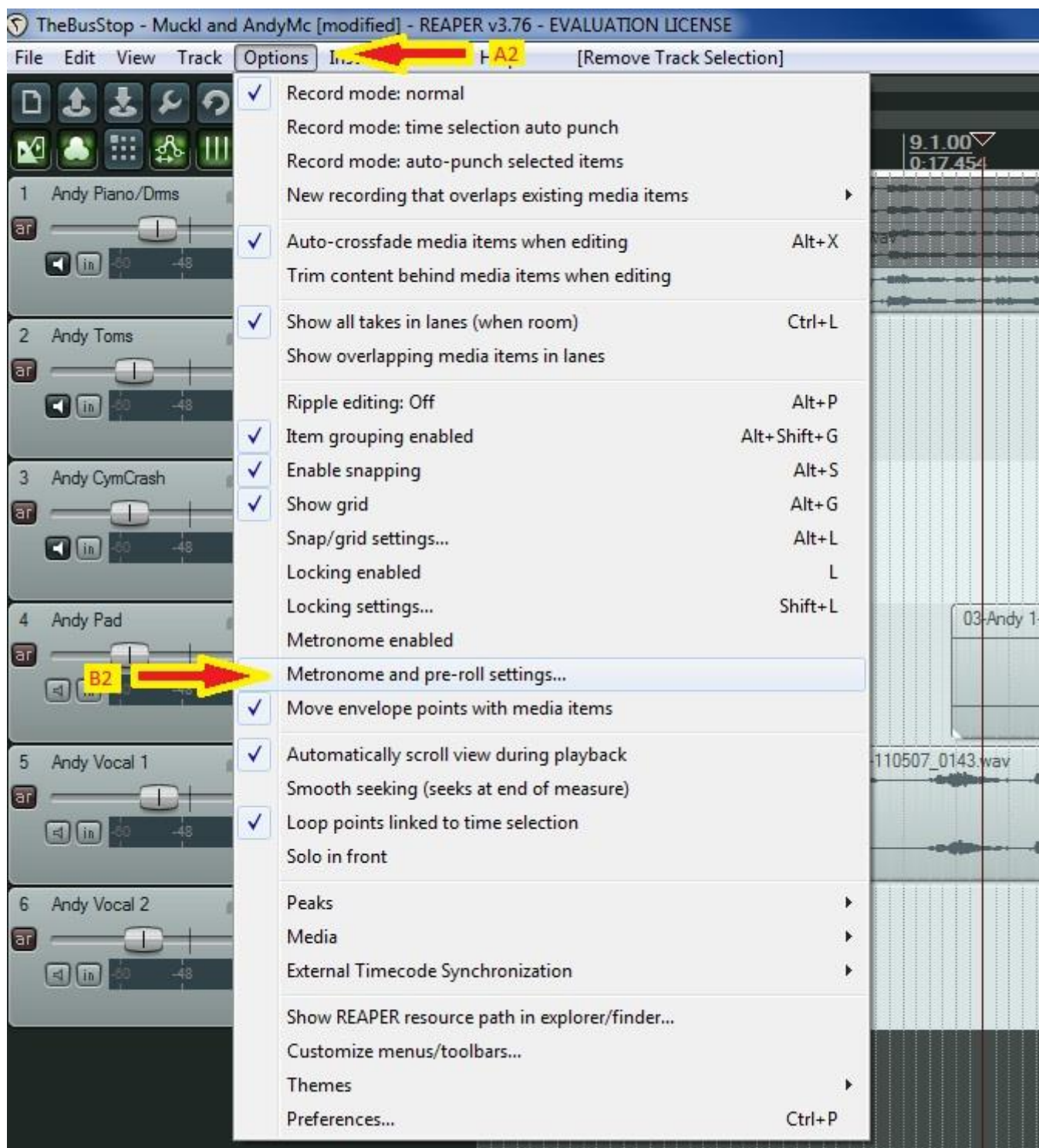
So for a quick short reference of what needs setting for Session Mode.

Session Mode (A1-Diagram 1)

REAPER BPM (F)

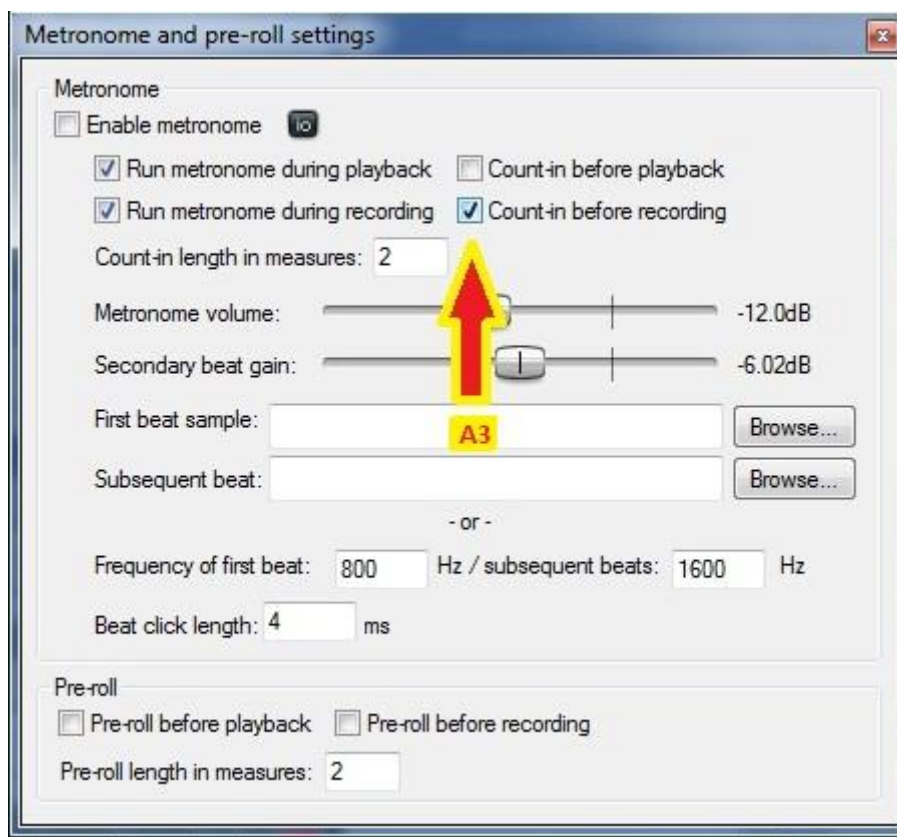
PLAY BUTTON (J)

Also other settings which will help, it will be much easier having the Metronome Count you in 8 beeps before you start recording, this can be set by going to Options (A2) in Diagram 3, then too Metronome and pre-roll settings... (B2) in Diagram 3.





Another window will appear called Metronome and pre-roll settings, in this you will see Count-in before Recording (A3) in Diagram 4. Tick this, there is also an option above, this won't be needed but if you have a metronome play for 8 beats every time you click play then check if this is ticked.



\*Session mode guide by: [AndyMc](#)

A recorded session can be downloaded through the following link:

<http://dl.dropbox.com/u/4755397/How%20To%20Session%20Mode/TheBusStop%20-%20Muck1%20and%20AndyMc.mp3>

More about session mode in the following link:

<http://forum.cockos.com/showthread.php?t=9227&highlight=session+mode>