

*Basic notions for voice recording on an arrangement.*



*Introduction to Reaper by Ambrogio Riva*

## **Premise**

*On various singing forums I have seen a lot of enthusiasm and listened to talented singers.*

*However, voice recording and mixing sometimes was not up to their talent.*

*Of course, there are many details to take care of to obtain a good result, especially instruments, environment acoustic treatment, software, editing and effects, and mix.*

*For each of these aspects there are manuals, courses and readings on the internet.*

*For what concerns the software used to record and mix, currently I believe that it is practically essential to use a sequencer that manages the virtual effects in real time.*

*A sequencer allows you to easily manage a number of audio tracks and for example to select the best parts of voice recording or to enrich the arrangement by adding other instruments.*

*Freeware effects for all types of treatment are now available (eq, comp, reverb, limiter, etc.) GUI and wu-meter and lead that enable you to intervene more effectively.*

*A sequencer also allows you to use not just effects, but also virtual instruments: synth, piano, drums, strings, basses, guitars to improve the quality for example of a midi arrangement.*

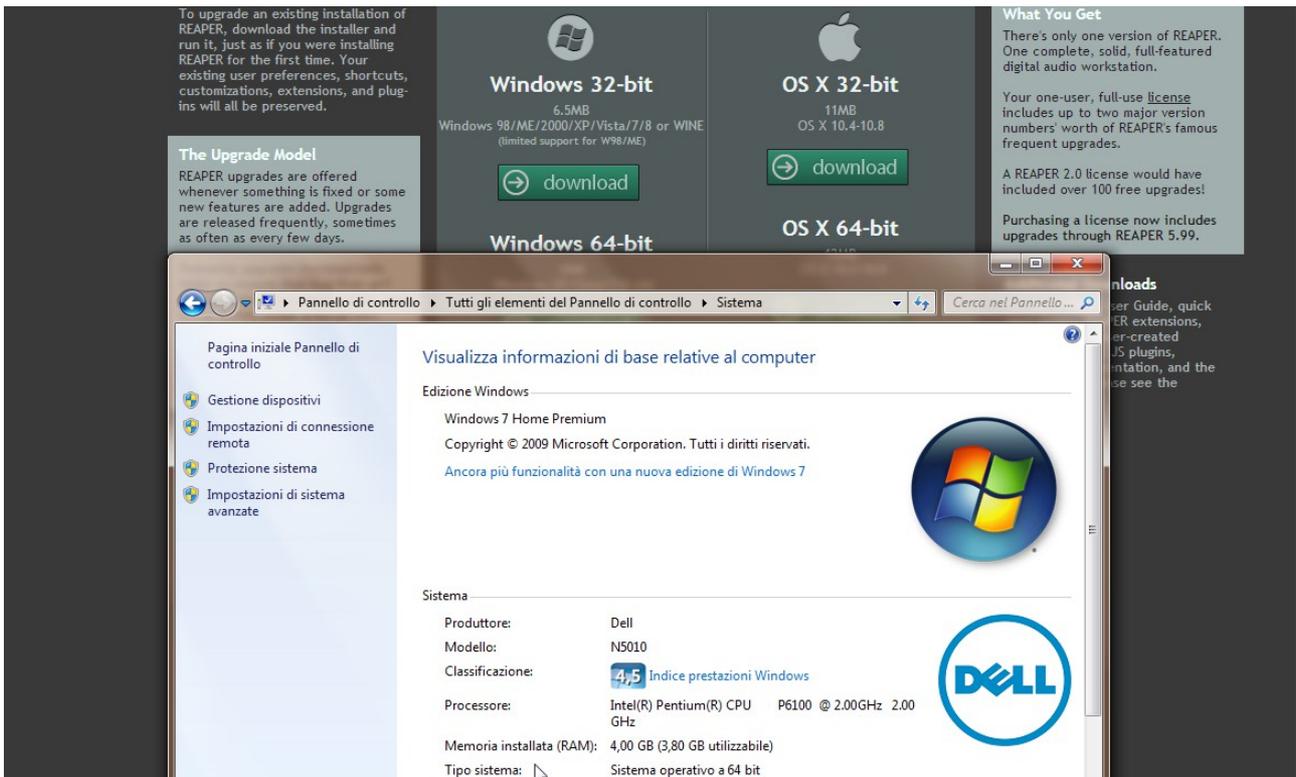
*Reaper allows you to do all this with high standard features and functionality. It also enables a full evaluation without any limits of use before buying the license.*

*To install Reaper open the page [www.reaper.fm](http://www.reaper.fm) and select download.*

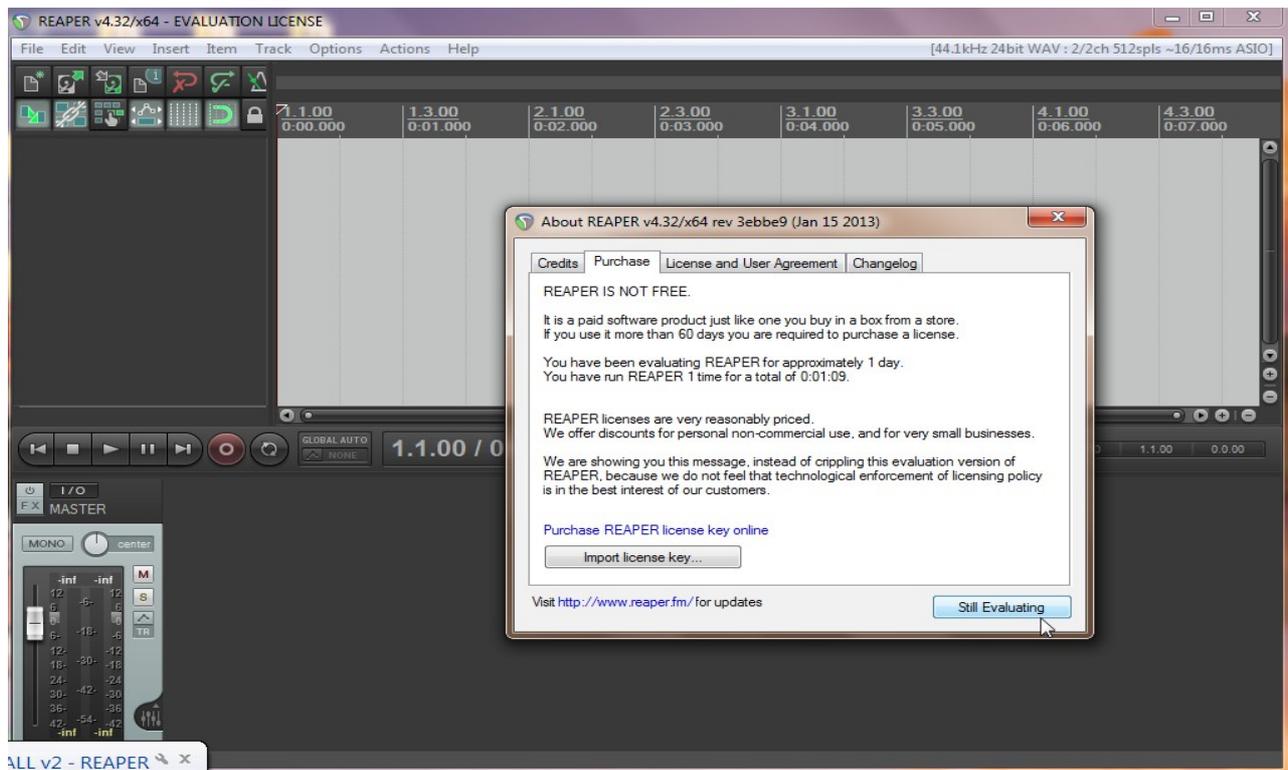


The screenshot shows the website [www.reaper.fm](http://www.reaper.fm). The header includes the Reaper logo and the text "REAPER Digital Audio Workstation". Navigation links include Home, About, Purchase, Resources, and Forum. A "Latest Version is: 4.32 January 15, 2013" section features a prominent green "download" button. Below the header, a "What is REAPER?" section describes the software as a complete multitrack audio and MIDI recording, editing, processing, mixing, and mastering environment. It lists various use cases such as recording audio and MIDI, layering tracks, editing recordings, and using hundreds of effects. A central image displays the Reaper software interface with multiple tracks and a mixer. At the bottom, there are sections for "REAPER 4" and "Ease of Use".

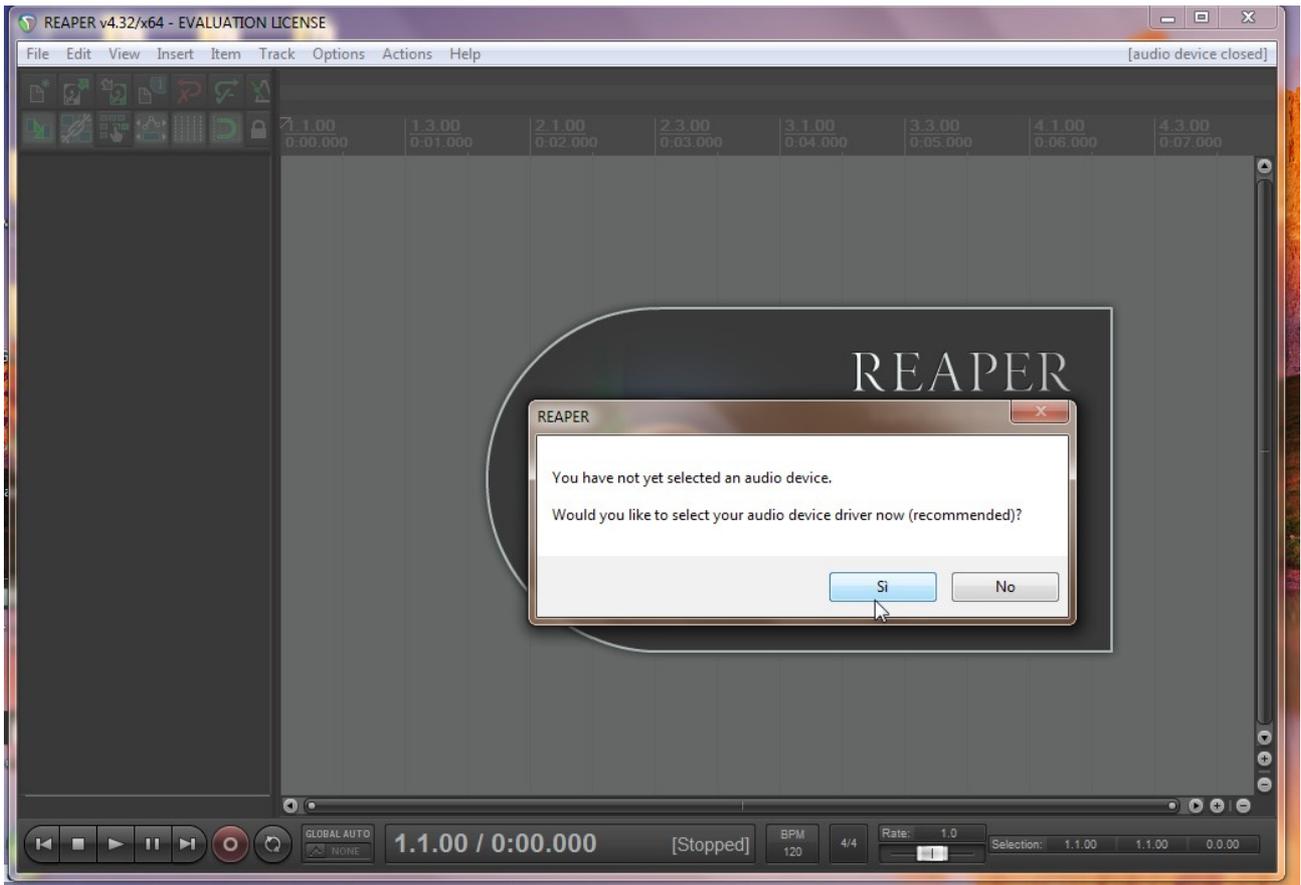
*For those who use Windows 7 or higher check if your operating system is 64-bit ( Control Panel > System )*



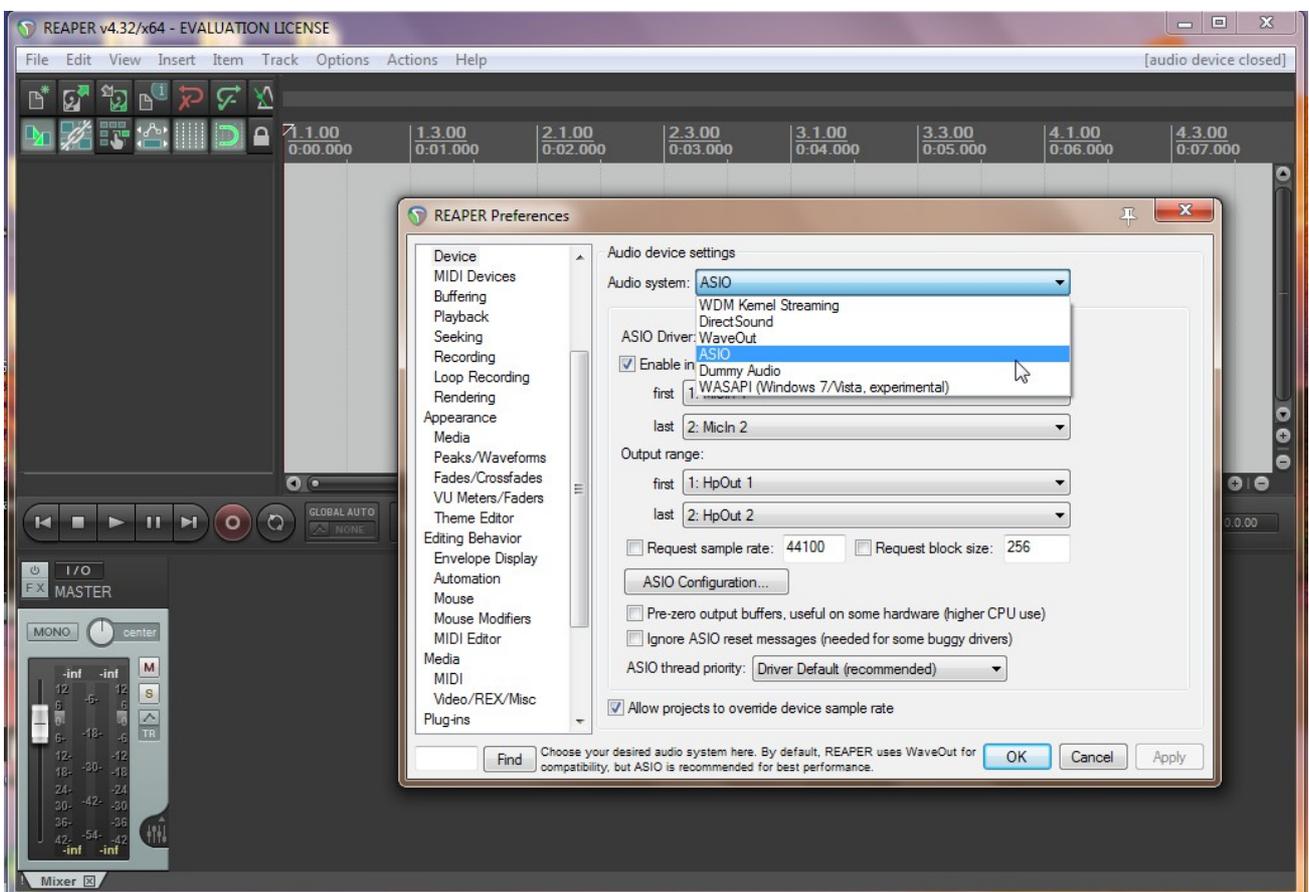
*Reaper is not freeware for personal use but the purchase of the license has very limited costs. In any case it is possible to use it for at least 60 days using the " evaluation" option.*



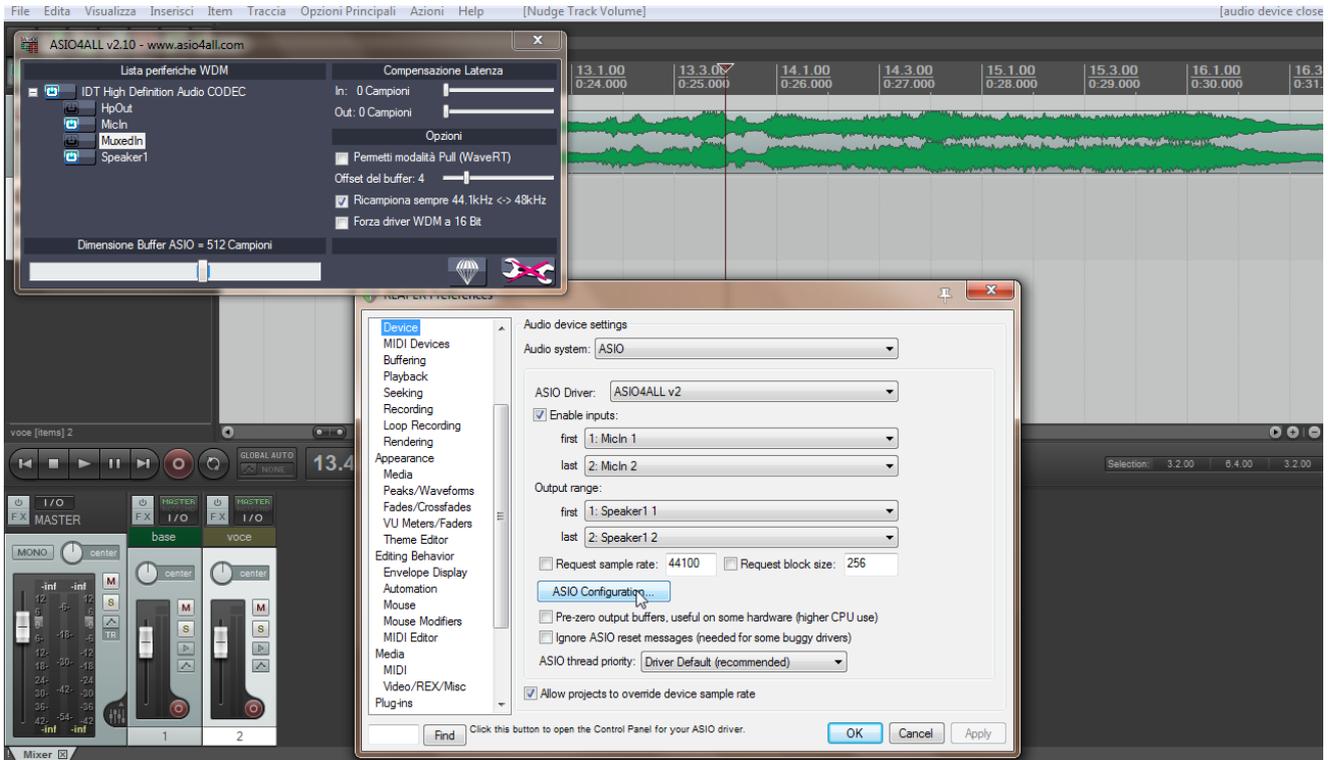
When you first start up the program, it asks you to configure the sound card.



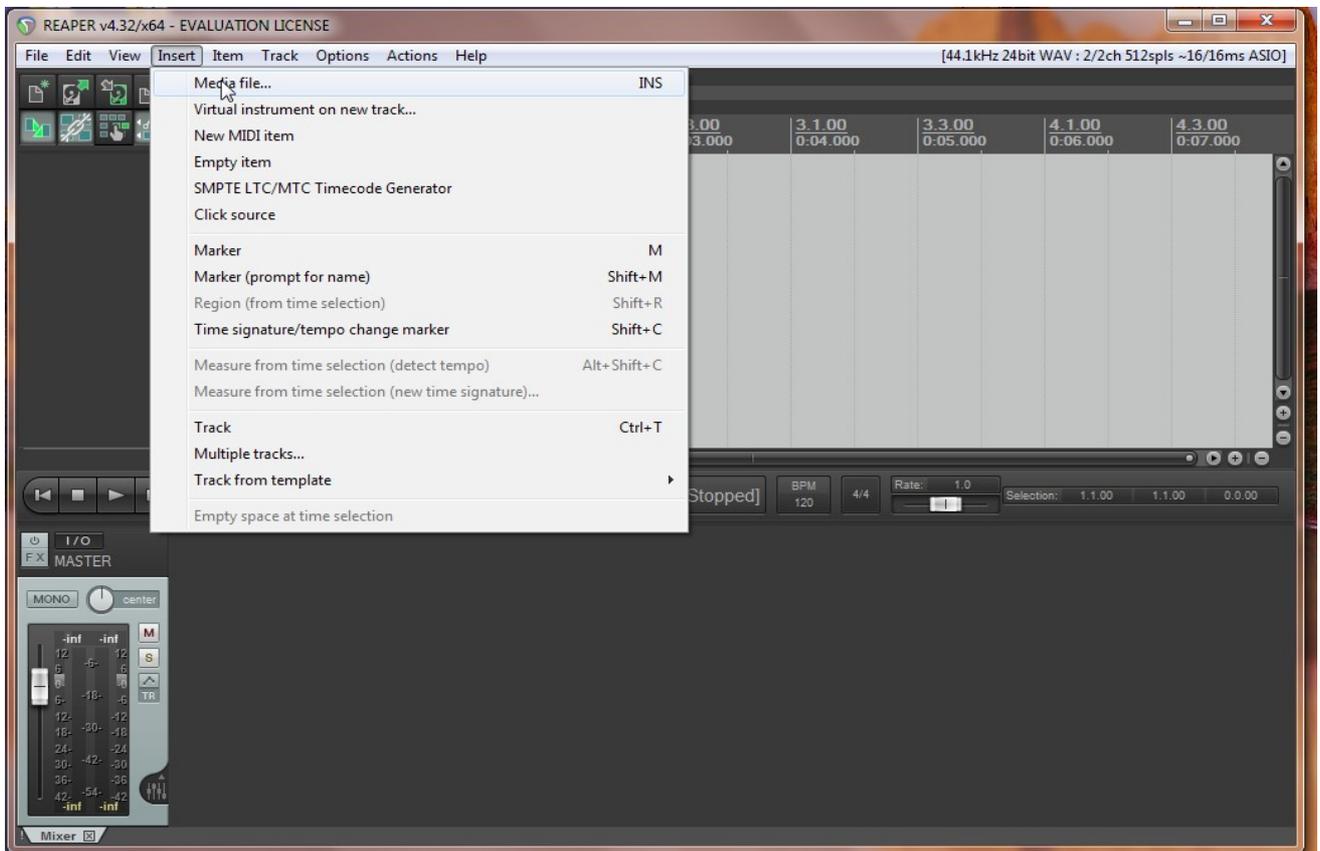
In the absence of a professional sound card, drivers asio4all must be installed to use ASIO



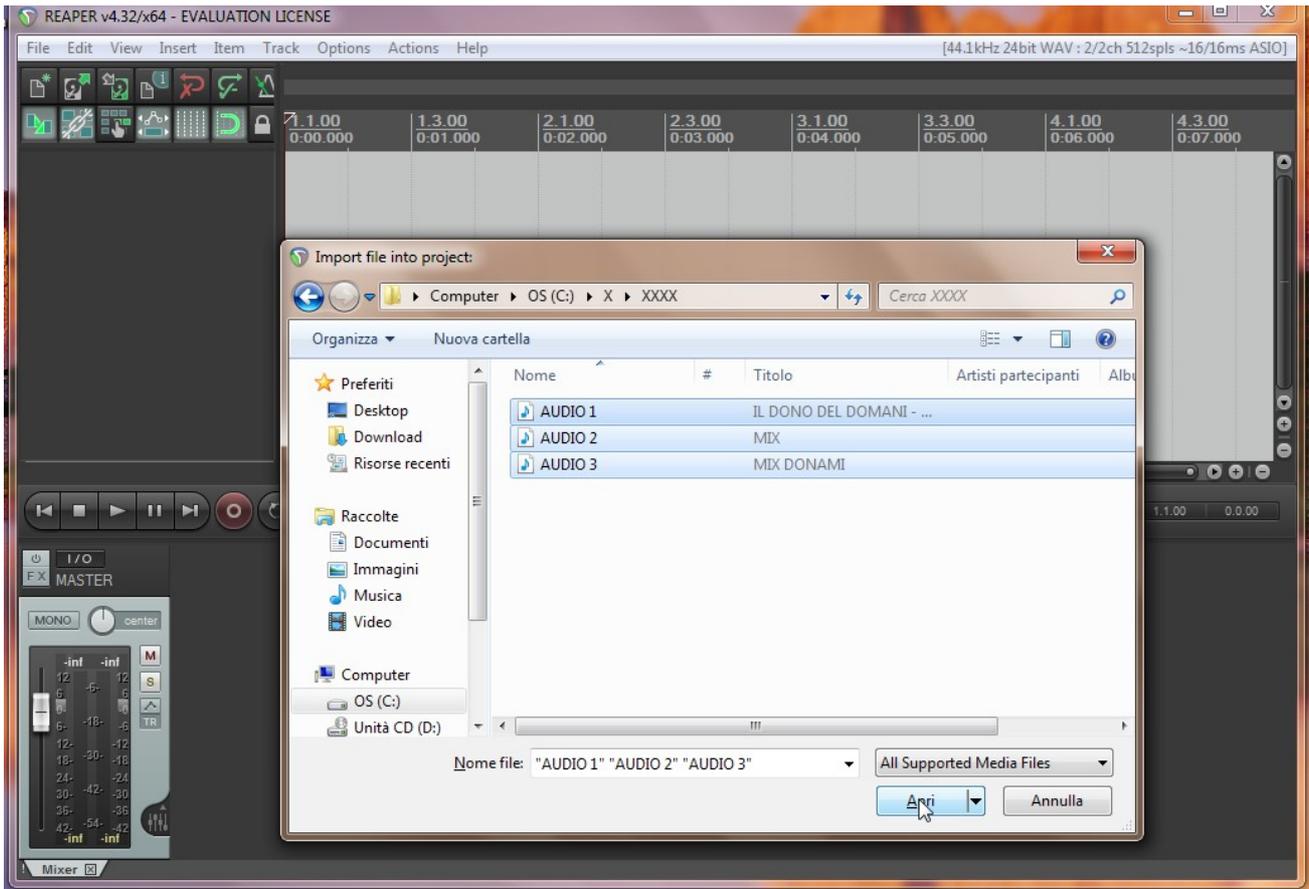
Using Driver asio4all in PREFERENCES menu, select " ASIO configuration " for the control panel, click on the wrench, click " + IDT High Definition " and set inputs-outputs: if you do not hear the sound or fail to record you have to try to change settings here.



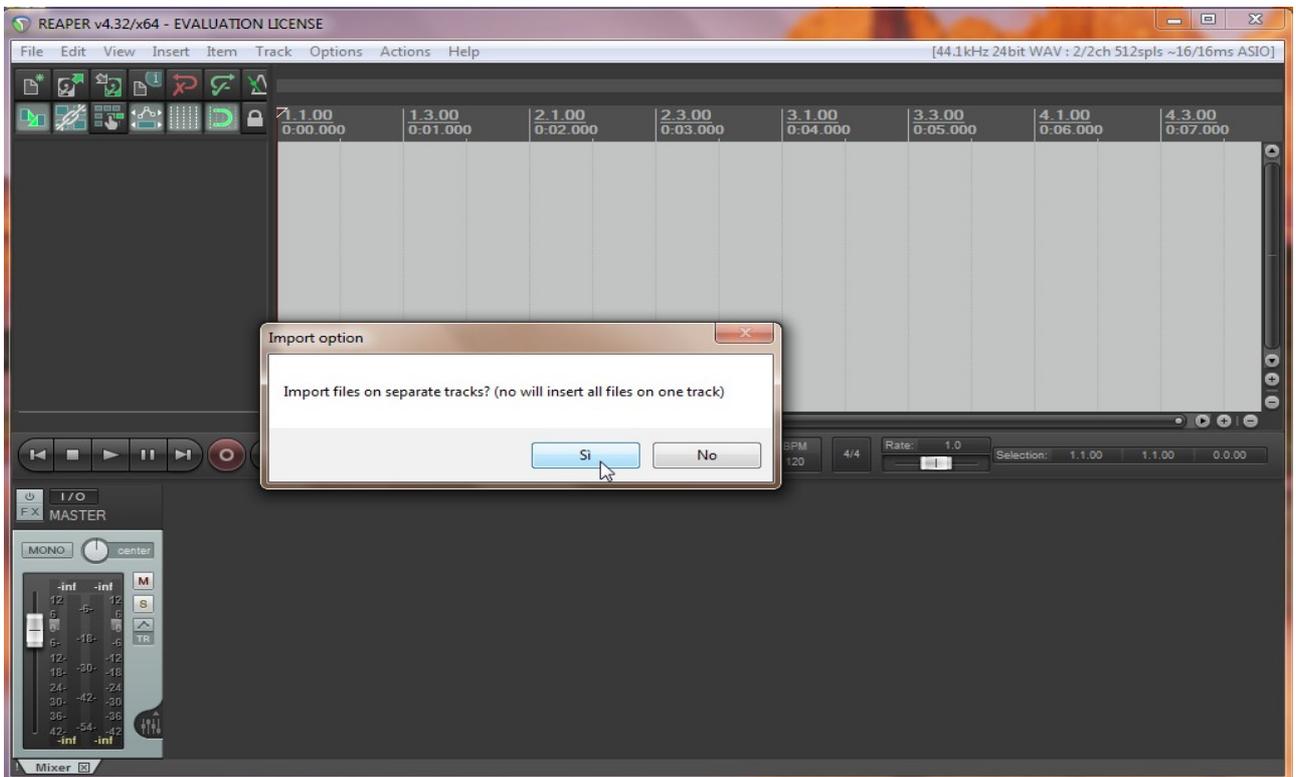
To insert an audio file ( eg the arrangement. ) choose " INSERT > MEDIA FILES "



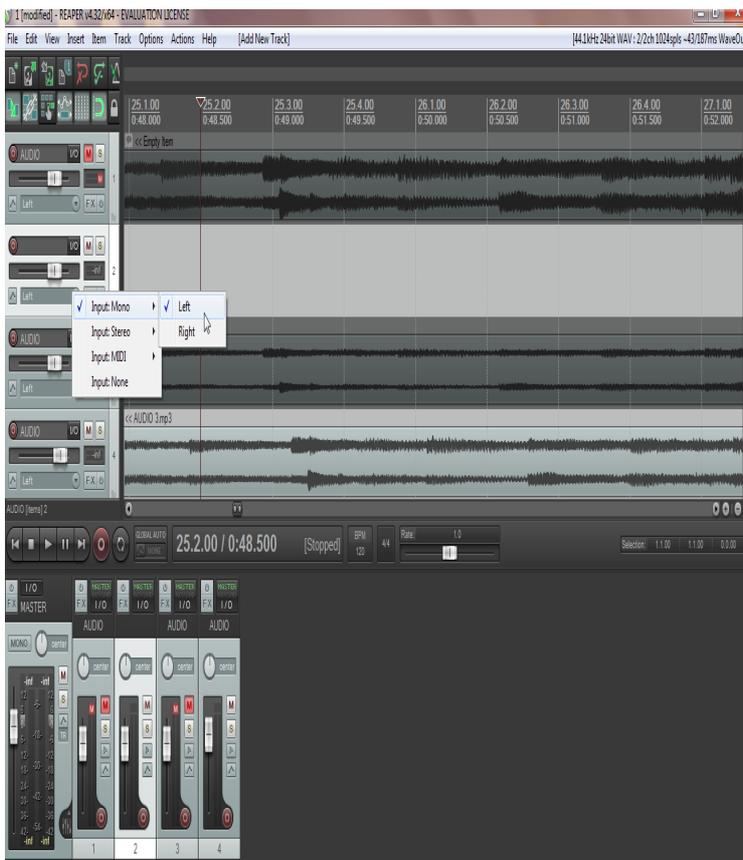
*To import multiple files select them all and drag them directly into the window of Reaper.*



*In case of multiple audio files import answer yes to put them on different tracks.*

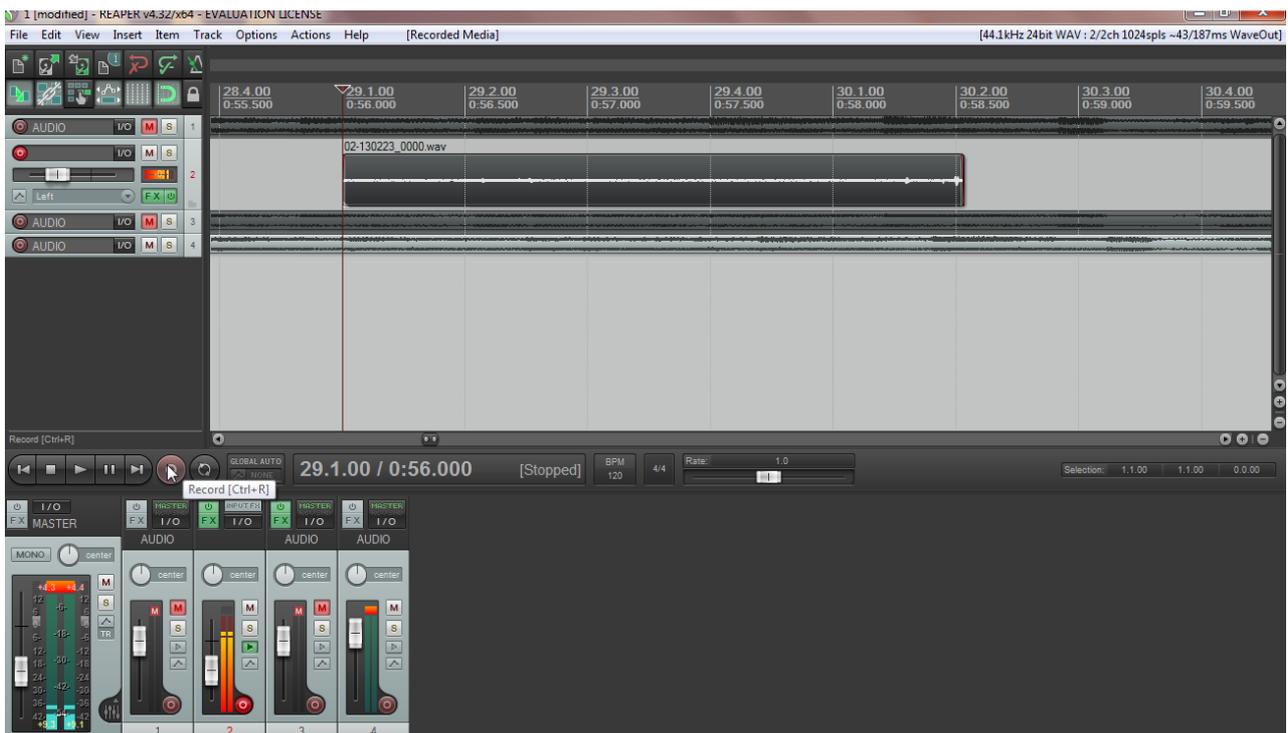


*For voice recording from microphone insert a new track and set a mono ( L or R ) as mono input. To understand which channel ( L or R ) the mic is connected to you'll have to look at the signal level.*

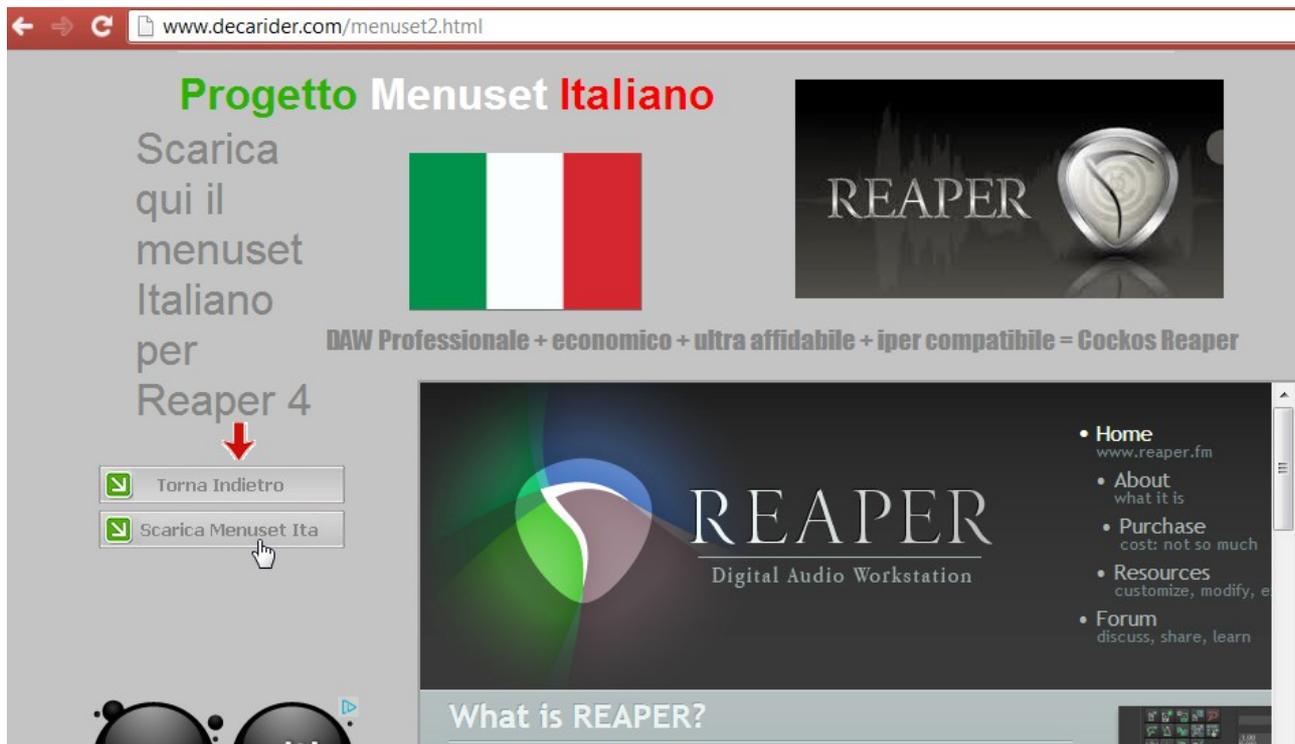


*So " arm " the track with the button with the red circle ( record armed ).*

*To start the recording, at this point, press the " big " red button near the playback controls of the sequencer, see below " record " or use the keyboard shortcuts ( Ctrl + R )*

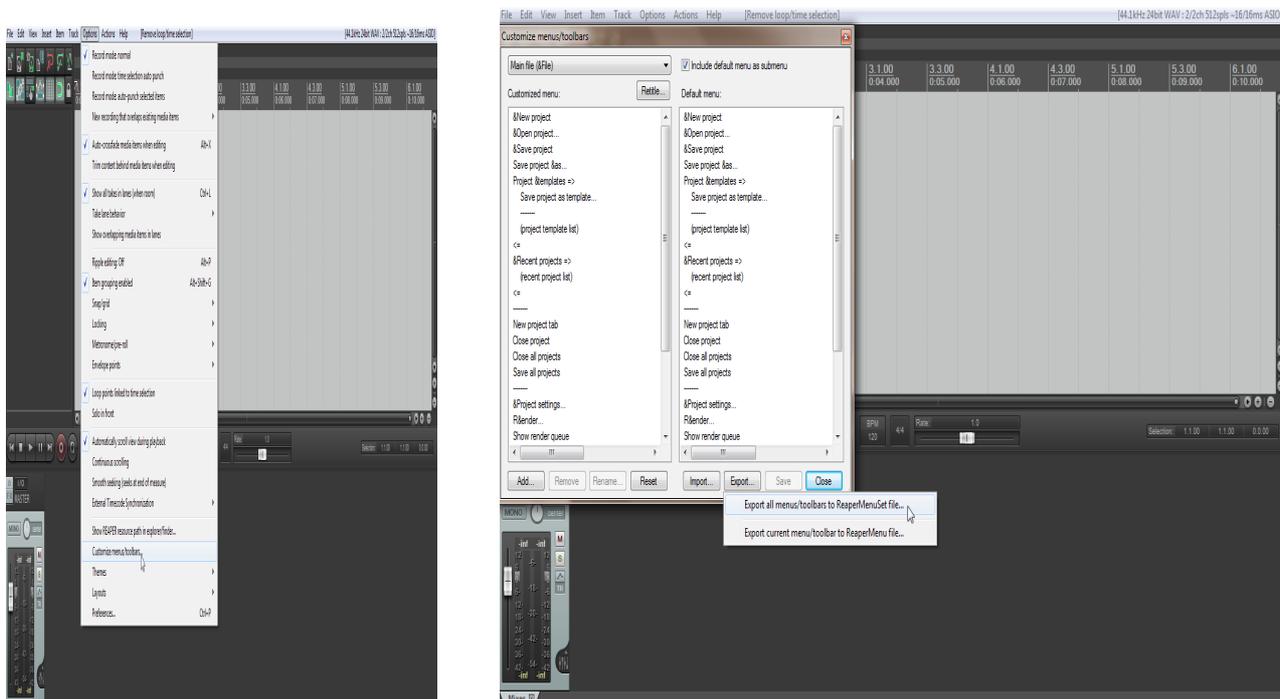


It is important to "be at ease" with the sequencer so for those who prefer to have, for example, at least a part of the menu in Italian (the full translation is not available) you can find it here: [www.decarider.com/menuset2.html](http://www.decarider.com/menuset2.html)

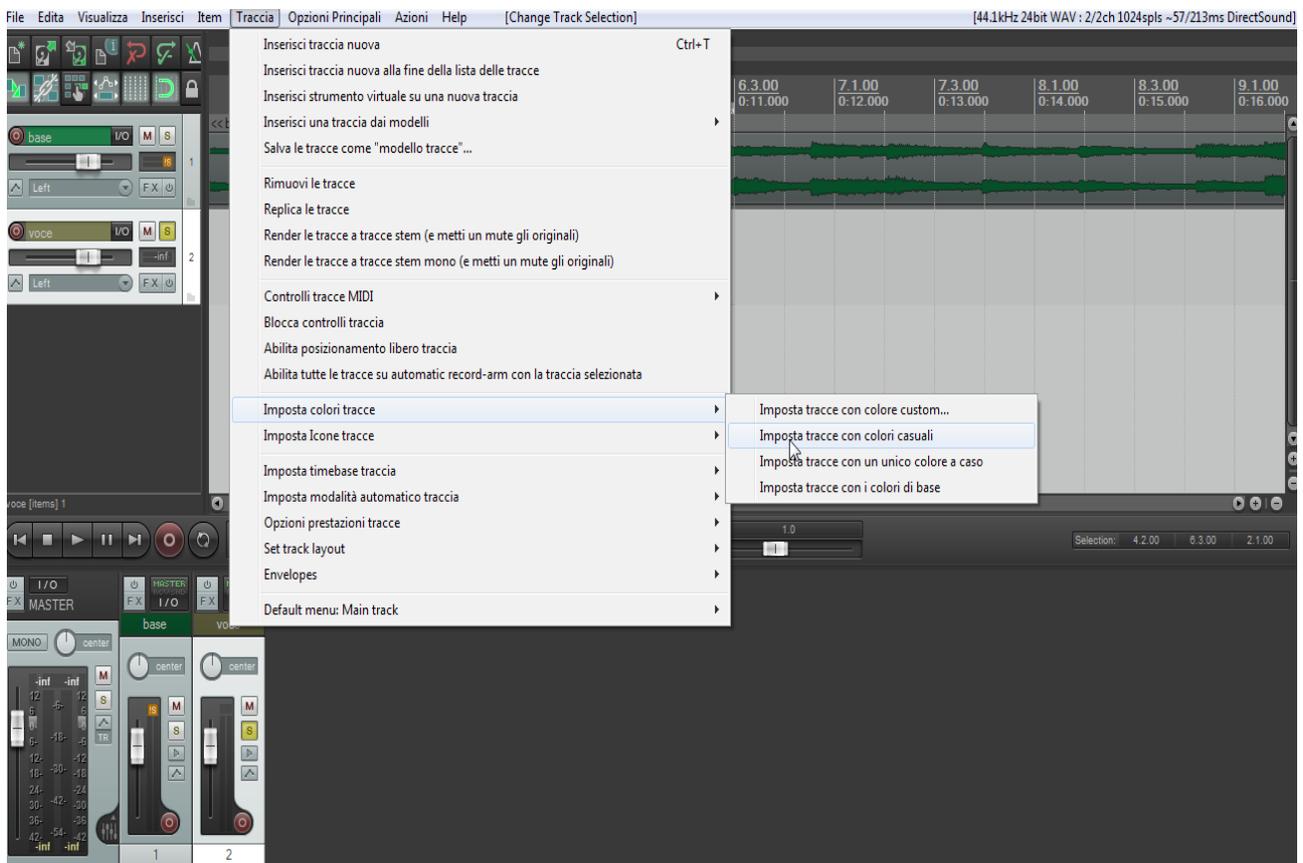


To install the Italian menu follow these steps:

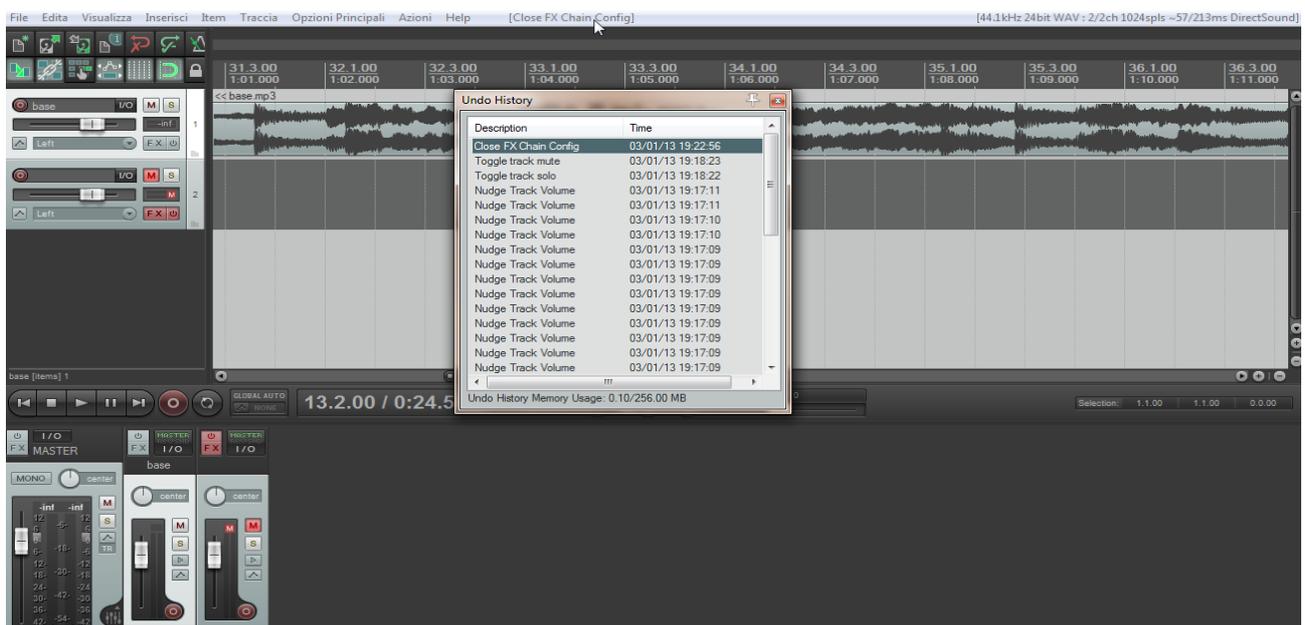
- 1) select the menu "OPTIONS" > "CUSTOMIZE MENUS / TOOLBARS"
- 2) to store the original menu choose "Export All Menus / Toolbars" and save the file
- 3) then load with "IMPORT ALL MENUS / TOOLBARS..." the file MENUSET



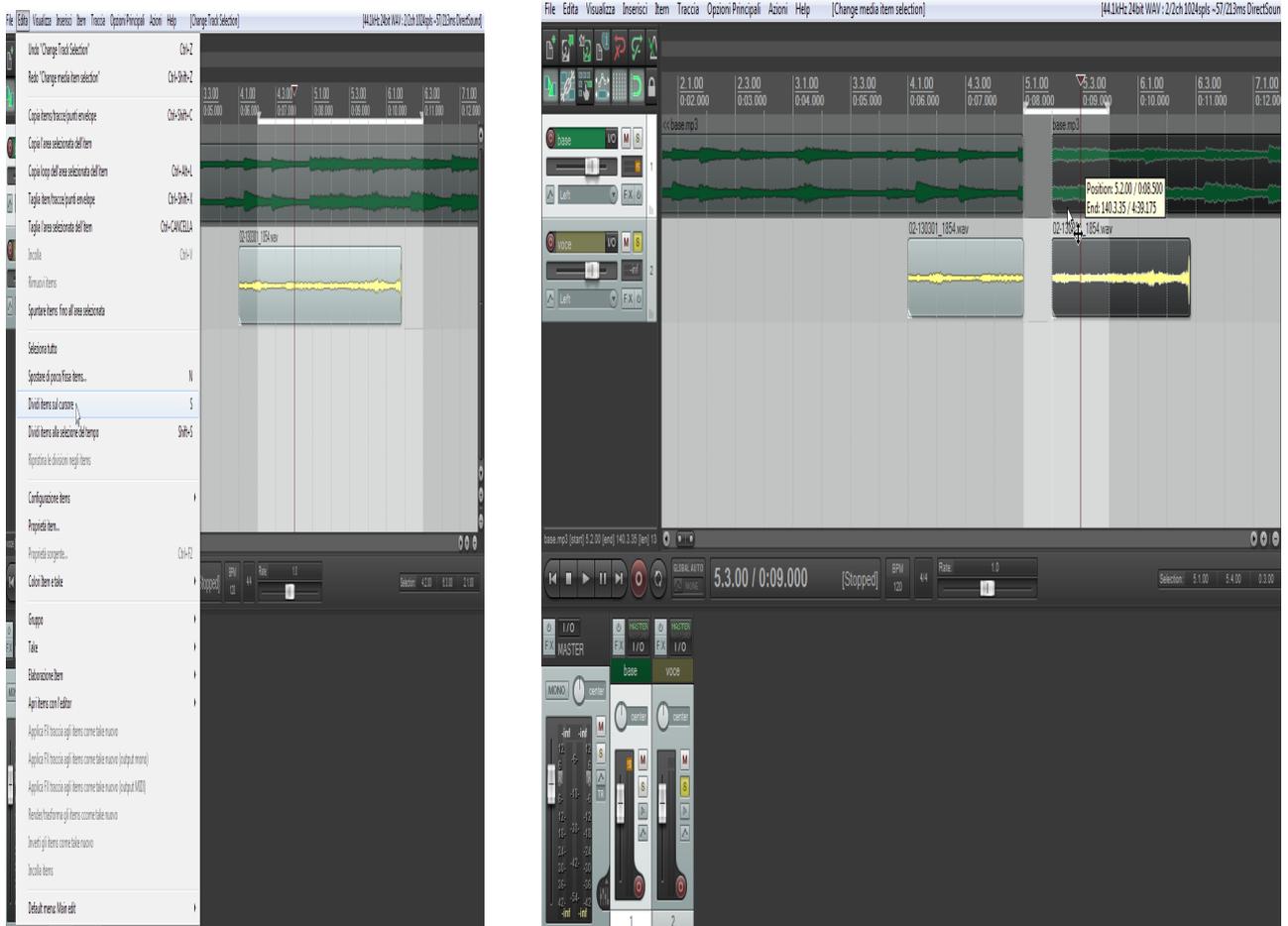
Another useful option when working with several files is to color the traces of different colors to differentiate drum parts from instrumental ones, vocal ones from choirs. Select the tracks and if you have set the Italian menu set "SET TRACKS COLORS " will be active.



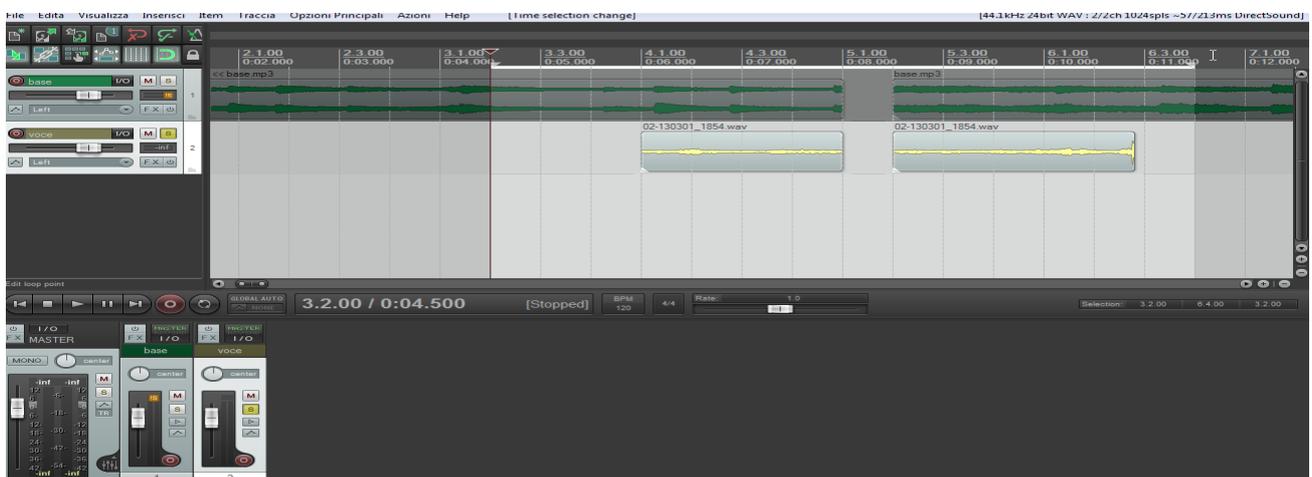
This course does not want to explain all the characteristics of Reaper but, for example, just to show the power and the care with which it was developed. On the toolbar it is available the UNDO MULTIPLE command ( see mouse ) to go back all at once up to the beginning of the changes.



*If several voice recordings are made on a single arrangement, to choose the best parts put the arrow in the exact spot, select one or more tracks and use the " DIVIDE ITEMS ON ARROW " command. Then the individual parts of the track can be moved both horizontal and vertical, copied, and eventually deleted.*



*To set up the left-right selection (the white bar below) simply click on the time bar with the left button of the mouse and drag the arrow towards left or right. If you want to turn off the snap (not to be bound to the measures in the selection) select the green icon in a semicircle (the one located on the left of the lock) or use the keyboard shortcut < ALT + S >*



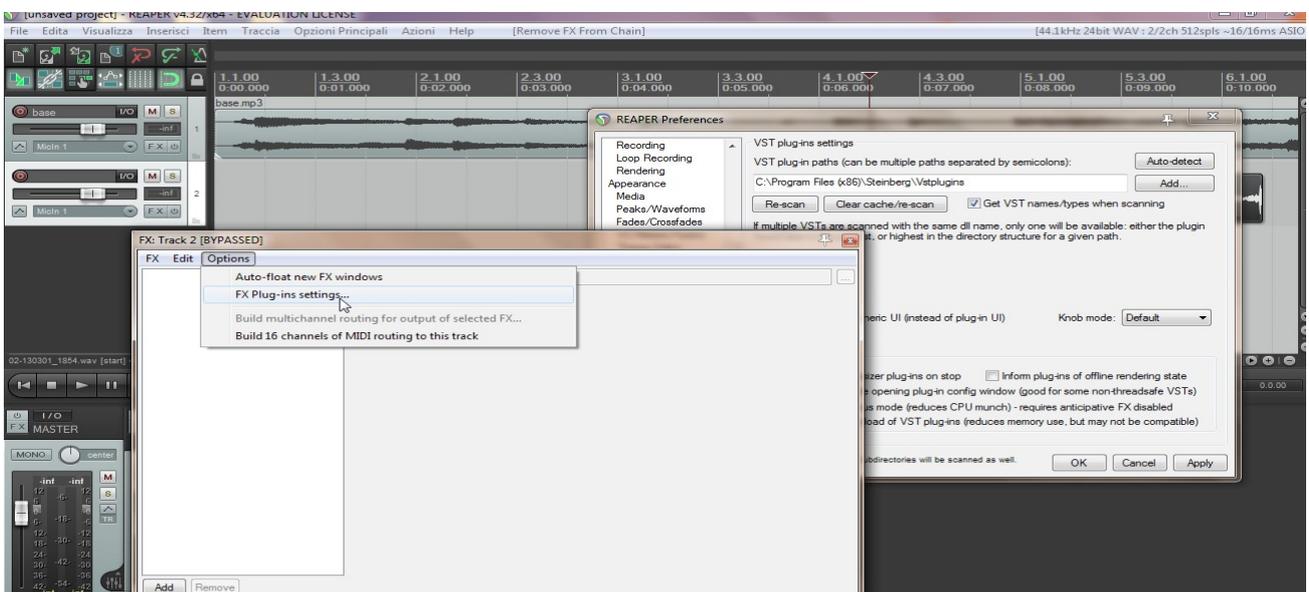
On each track you can insert virtual effects in real time, many of which have already been installed with the program. Others are freely downloadable from the internet in "VST". There is a wide variety of plug-ins: reverb, saturators, comp-limiter, EQ, chorus etc.



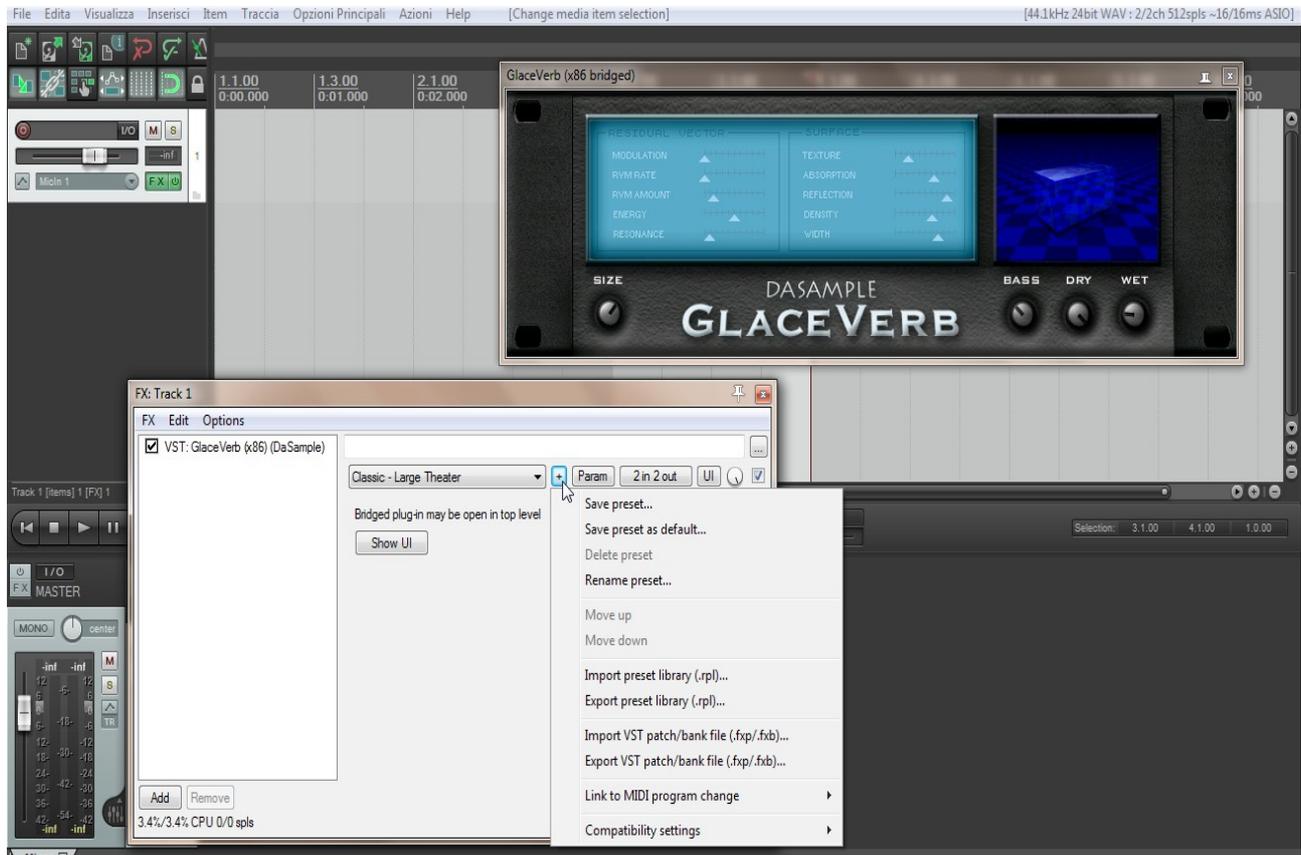
Once downloaded and installed the effects by clicking the "FX" button of a track you can access the window highlighted below on the left where you can select the effects (FX button) and modify them (edit).

The first time, however, we have to set the options to tell Reaper in which folder they have been installed.

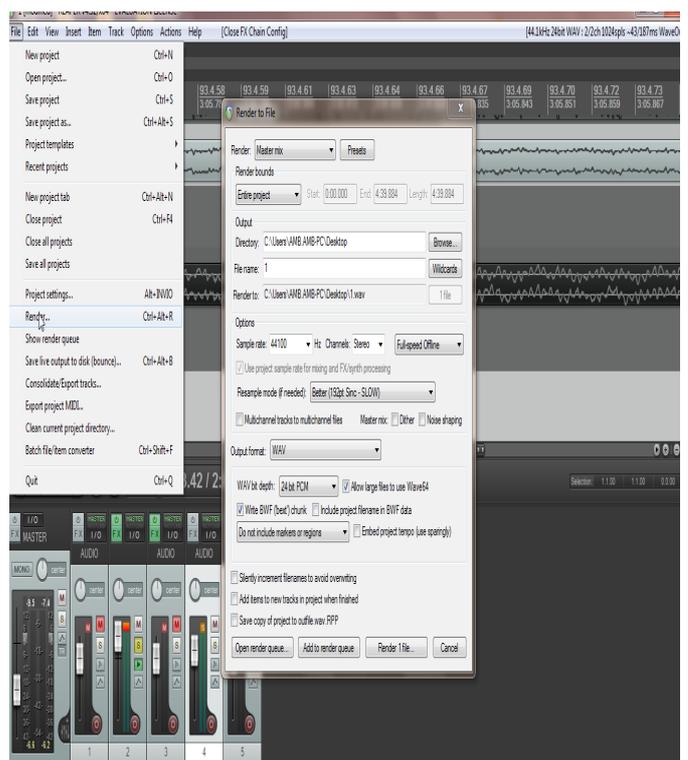
Choosing "options" the subfolder "preferences" opens up, here we must select the "VST plug-in patch" folder on the computer (eg "C:\program files (x86)\steinberg\vstplugins") and click "RE-SCAN".



Once inserted the effect on the track, set up the various options and listen to the changes as the song flows. Once obtained the desired result it is recommended to save the preset by clicking the + button to add it to the list of presets already available to the left of the button + (before you can scroll through the presets already available to carry out only minor changes)



We are at the end of this brief introduction to Reaper. Now, we may have learned how to import one or more tracks, record a voice in an empty track, choose the best take and attach effects. After having set up the volume to balance the arrangement with the vocal track you can run the render or export a stereo audio track of our project using the "RENDER TO FILE" command



### ***Recording of a vocal track to be sent to an external partner.***

*If you are good singers you may be asked to record "at home" and then send the file.*

*To work "remotely" you should, however, pay attention to these simple rules:*

- 1) before recording, place the arrangement at the beginning of the project (time 00:00)*
- 2) while recording, use closed headphones (or even simple earphones) to listen to the arrangement and prevent its sound to be recorded with your voice.*
- 3) try to limit the "echo" of the recording room, especially if you use a condenser microphone: it may be sufficient to place with the back towards an open closet full of clothes and put a couple of panels with wool rock of high density and high thickness packed in plastic bags behind the microphone as well as a thigh carpet on the floor.*
- 4) no effect should be applied to the track and, unless otherwise indicated, perform the render (export) in WAV format, 24-bit mono, 44.1 kHz sample rate (or ev. 48 kHz)*
- 5) even if you have recorded a short part in the middle of a track, the render must be always started from the beginning (time 0:00) in order to then synchronize it with the arrangement.*
- 6) If you have recorded multiple tracks (eg. A second voice) remember to always send separate tracks.*

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*Herein links to programs and sites are present: access to sites and programs downloading and installing is at your own risk and I am not liable for any damage or any problem. This information is provided free of charge and for illustration, the applicability of the various operating systems cannot be ensured.*

*In any case please refer to the websites of the different companies for more detailed and complete information.*

***Ambrogio Riva*** Valfurva, 21/8/2015