



# **Tutorial**

## **How to setup the Virus TI with Apple Logic 7**

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Here are a couple of tips and tricks on how to use the Virus TI together with Apple Logic Express or Pro. The aim of this Tutorial is to show you how to set up the Virus Control in Logic, and work in the most productive way.

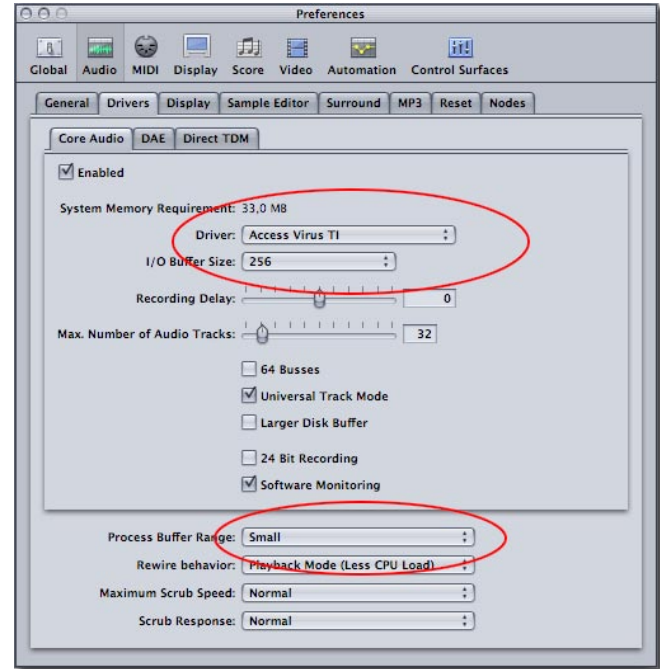
### 1 - Configure the audio preferences

Firstly, there are a few user-settings which are crucial in order to make the Virus TI work seamlessly in Logic.

Open **Preferences > Audio**, select the **Core Audio** tab and you will see the following page:

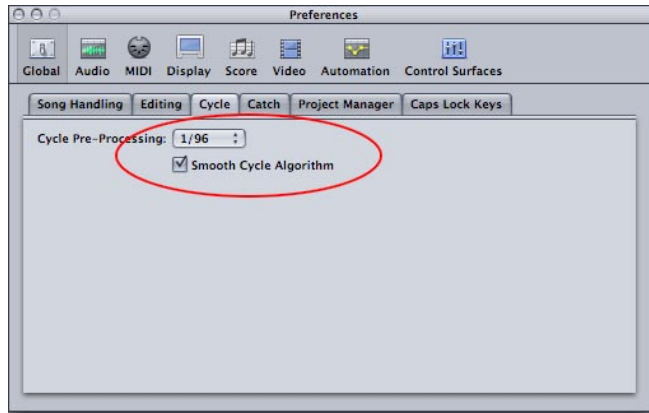
Setting the Driver to **Access Virus TI** will ensure that the TI is used as the main audio interface in Logic. Changing this setting is only necessary if you don't already use another audio interface. The Virus TI can communicate with the Virus Control plug-in in parallel to another audio interface, therefore it is not mandatory to use the TI as your main interface.

The process buffer range determines the latency of the Virus TI plug-in. It needs to be set to **Small** in order to achieve the best possible result. Note that this latency is independent of the audio driver's latency.



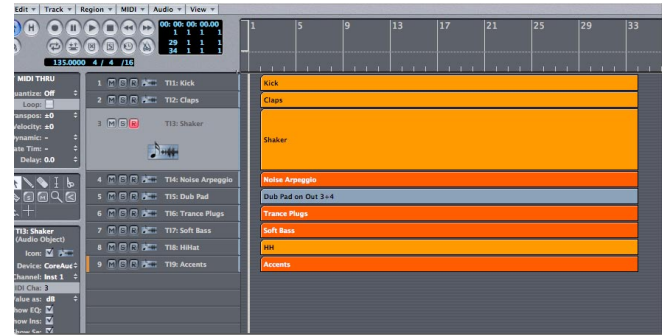
The **I/O Buffer Size** determines the latency of the audio system. Set it to a value of 512 Samples or smaller. 256 Samples is a good compromise between latency and processing power.

Next, go to **Preferences > Global Settings** and select the **Cycle** tab. Switch on Smooth Cycle Algorithm and set the pre-processing to **1/96**



## 2 - Load the tutorial song

“Virus TI Tutorial Song.Iso” is located in the same folder as this document. You’ll see an Arrangement page which contains 9 sequences set to control 9 MIDI channels, all of which feed into the Virus Control plug-in.



Press Play and you’ll hear a 32 bar multi-part arrangement coming out of your Virus. If you don’t hear anything, make sure that you’re using the correct outputs. The tutorial session is set to use **Output 1+2** - depending on your hardware configuration (and especially if you don’t use the Virus TI as your main sound card) you might need to adjust this setting in order to drive the correct pair of outputs.

As you can see, bar 1 is left intentionally empty. This is necessary in order to allow Logic to “settle in”, and especially important if you use arpeggiated patches like the one on MIDI channel 4 in our example (the one called “Noise Arpeggio”).

There is a song setting called **Playback Pre-roll** which is saved as a part of every individual song. Make sure that you switch it on in order to achieve optimal results. The setting can be found in **Song Settings > Audio**



ing the MIDI data. The Part numbers correspond with the MIDI channels respectively.

To achieve this, we use 16 audio instruments with different MIDI channels but identical Audio Channels to gain access to the 16 parts of the Virus Control.

### 3 - Examine how we have built the tutorial song

Logic is known for offering a variety of ways in which to achieve pretty much the same result. The following instructions work for us and we recommend that you adopt the same method in your own songs.

In contrast to many AU and VST plug-ins, you cannot instantiate 16 copies of the Virus Control plug-in to control the 16 Parts of the Virus TI. Just the one instance of the Virus Control plug-in allows you to communicate with all 16 parts of the Virus TI. It is therefore important that you take care to set the MIDI channels correctly, because these determine to which part you're send-



All Audio Objects you see here have the same Channel setting ("Inst 1" or "Instrument 1") but different MIDI Channel settings. Once you instantiate the Virus Control on one of these Audio

Instruments, all objects with the same Channel setting ("Inst 1") will immediately show the Virus Control plug-in to be instantiated as well - only their MIDI Channel settings distinguish them from each other. We, for instance, use MIDI channel 1 for the Kick, MIDI channel 2 for the Claps, MIDI channel 3 for the Shaker et cetera.

There are of course other ways to do this in Logic, for example by cabling several MIDI instruments with different MIDI channel assignments into one Audio Object; however we strongly recommend you not to do so, as we have found this method to be less efficient.

## 4 - Recording and playback

When working with Audio Interfaces and Plug-ins, latency is introduced. In general, the good news is that modern sequencers compensate for this latency once a track is played back. The bad news is that often you have to record your performance while feeling the latency, which most people consider to be rather uncomfortable.

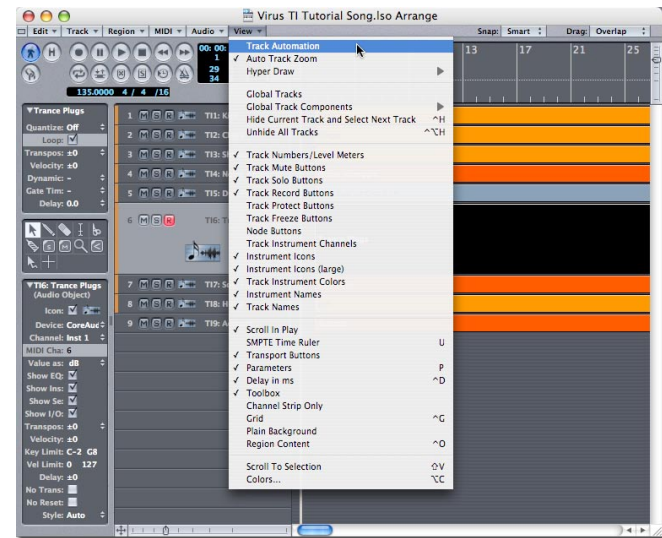
One advantage of the Virus TI's **analog outputs** is that once a part makes use of them, you will enjoy a lightning-fast response, similar to the zero-latency feature on some of the better sound cards.



While recording, we recommend that you switch the **Main Outs (Virus Control > Common Page)** of the part you are about to record to **Analog 1+2** instead of **USB**. This way, the audio data doesn't need to travel from the Virus TI into the Virus Control and from there to your audio interface; instead, it's being sent straight to the Virus' analog outputs. Once you have finished recording this particular track switch the Main Outs back to USB to allow this part to be fully latency-compensated.

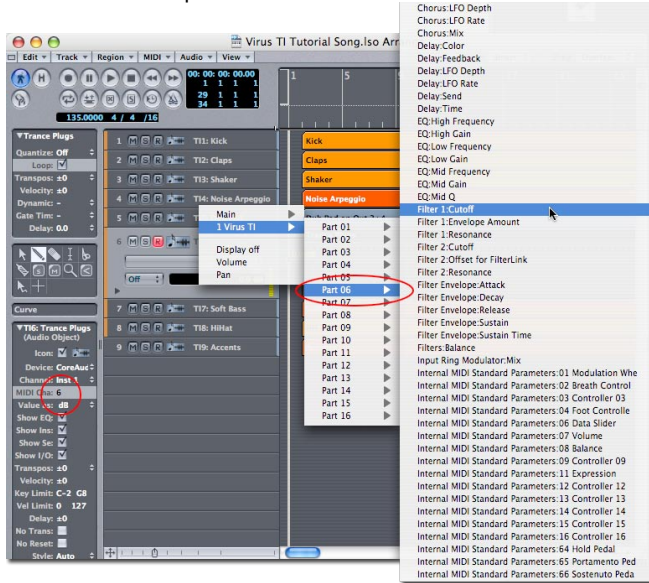
## 5 - Automation

The Virus TI enables you to automate pretty much every feasible parameter using Logic's parameter automation. First, enable the automation:



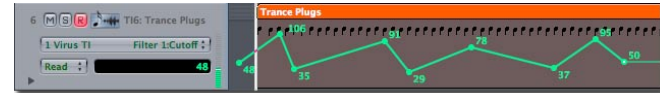
Now choose the parameter you want to automate. We recommend that you only create automation events with matching Virus TI / Instrument MIDI channels in order to avoid confusion.

The following track is in MIDI channel 6, therefore we choose to filter the cutoff of part 6.



After inserting some automation data, filter 1 cutoff starts to automate. Of course, you can also record movements by writing automation data and turning a knob on the Virus TI surface, or by changing a value on the Virus control.

For more details on automation events, see the Logic user manual.



## 6 - Mixing and Routing

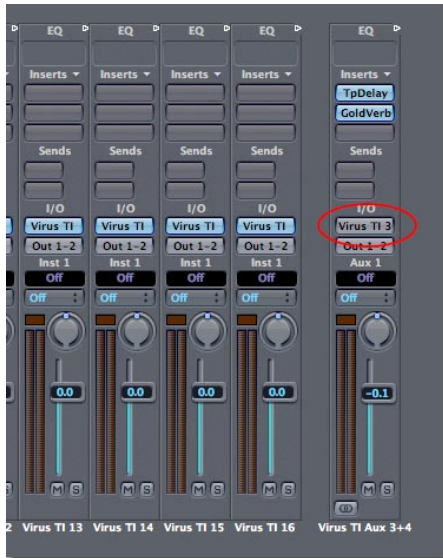
You might have already spotted that the Logic tutorial song uses the Virus Control mc. “mc” stands for Multi Channel. In order to make use of the additional audio channels you need to create an Aux object in Logic’s environment.

Track 5 of the Tutorial session (“Dub Pad”) sends it’s audio to **USB2** instead of **USB1**. As a result, the multi-channel version of the Virus Control plug-in can output this particular part on an Aux bus instead of the instrument’s main outs. You can switch the output assignment of a part in **Common > Output > Main Outs** drop-down menu as shown in Step Four.

Now have a look at the **Virus TI Aux 3+4** object in the Tutorial session. This object receives audio from the Virus Control plug-in. We instantiated two insert effects (Tape Delay and Gold Reverb) on this particular audio object to show how you can process individual Virus Control parts. Note that the Virus Control’s additional outputs only show up in the Inputs of the Aux Object

once you've instantiated the Virus Control plug-in as a multi-channel version.

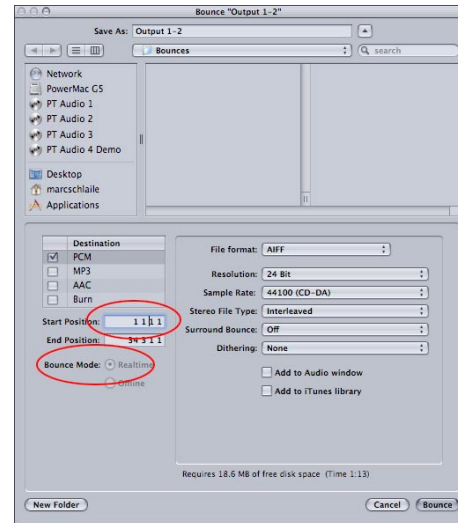
The multi-channel and stereo versions of Virus Control will convert their data between each other: to switch for instance from the stereo to the multi-channel version, simply instantiate the multi-channel version on the same audio instrument. This way, the multi-channel version will load up with the same patches and settings as you were using in the stereo version.



## 7 - Bounce to disk

Logic offers multiple ways to record a certain audio output to an audio file on your hard drive. **Freeze and Offline Bouncing are currently not supported using the Virus TI.**

In order to achieve a usable result without dropouts and crackling, you need to **Bounce To Disk** using the command in Logic's file menu which will open the following dialog box:





As you can see, the tutorial session starts on bar 2. We intentionally start bouncing from bar 1 in order to avoid undesirable side effects such as cut off transients at the very beginning of the sound file. **Bounce Mode must be set to Realtime.** We also recommend to set End Position a little later than the last note in order to avoid truncating any reverb tails.

**Note: The Freeze function in Logic doesn't work because it can't be set to execute in realtime. Freezing faster than real-time will result in crackles and other unwanted artefacts.**

**Hint: Leave a pre-roll of at least two bar to allow the system to sync all components. In other words, if your song starts playing at bar 3, bounce from bar 1. Also don't forget to include enough time to allow for any reverb or release tails to decay fully at the end of the selection you are about to mixdown!**

## General advice, tips and tricks

Try to avoid to start your song at positions lower than 1.1.1.1 - even though it is possible, we advise against it. Film-score producers should move the SMPTE start point of the movie back into the arrangement instead of positioning it on the first bar; that way, your VTR can rewind to the top of the film (and beyond) without Logic's song position becoming negative in value.



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