



Orchestra Intonation System

with

Automatic Real-Time Performance Intonation (ARPI™)

© 2024 Hans Adamson. All rights reserved. Art Vista™, INTONATOR™, and ARPI™ are trademarks of Art Vista Productions. The ARPI™ technology is protected by US Patent: US 7,807,908 B1. No part of the Licensed Material (as this term is hereinafter defined) may be reproduced or transmitted in any form or by any means for any purpose except as described in the End User License Agreement. VST is a trademark of Steinberg Media Technologies GmbH, registered in Europe and other countries.



Created by Hans Adamson

Special thanks to Amanda Seward, Bernard Schmidt, and Rickard Gustafsson for their support in the development of the Art Vista Orchestra Intonation System.

Index

End User License Agreement	3
User Manual	5
Art Vista™ Orchestra Intonation System	5
The Art Vista INTONATOR™ Plugin	5
The ARPI RECEIVER™	5
The Pre-Script	6
Instrument Compatibility Test	6
How It Works	6
Specifications and Requirements	7
PC Installation	7
Mac Installation	7
Activation	9
INTONATOR™ Controls	11
RECEIVER™ Controls	19
Pre-Recorded Phrases	21
Optimizing Performance	21
Important Notes	22
Compatibility	22
Getting Started	23
16-Track DAW Project Templates	23
CUBASE	23
REAPER	28
STUDIO ONE	32
LOGIC PRO	38
Installing the RECEIVER and Pre-Script	42
Instrument Compatibility Test Procedure	46

END USER LICENSE AGREEMENT

The following information represents the contractual conditions for the use by you, the final user (hereinafter, sometimes referred to as the "**Licensee**") of the Art Vista Productions Licensed Material.

By installing the Licensed Material on your computer, or by registration, or by downloading the Licensed Material, you are declaring yourself to be in agreement with the contractual conditions, so please read the following text carefully. If you are not in agreement with these conditions, you must not install or download the Licensed Material.

1. **Object of the Contract.** The object of the contract consists of the original programming utilized in the product, and photographs, graphics, and other images and editorial material, (including, but not limited to, the relevant usage instructions). These are described hereinafter as "**Licensed Material**," whether consisting of software programming, custom scripting, visual artwork, or editorial material, or any other material subject to copyright or patent protection.

2. **Scope of Use.** The Licensed Material is licensed, not sold. Subject to the Licensee's continuous compliance with this Agreement, Art Vista Productions grants the Licensee, for the duration of this contract, the nonexclusive, nontransferable license to use the Licensed Material for music production. Licensee may be required to activate or reactivate the Licensed Material or validate Licensee's membership. Licensee may use the Licensed Material to create musical compositions and recordings on a commercial and non-commercial basis without paying an additional license fee or providing source attribution to Art Vista Productions. Notwithstanding the above grant of rights, this license expressly forbids: resale, lease or lending or other re-distribution of the Licensed Material, or any protected elements thereof, either as it exists currently or within any modifications thereof; any re-distribution method of the Licensed Material, or any part thereof, through any means, including but not limited to, embedding into software or hardware of any kind, as part of any kind of musical instrument, synthesizer, virtual instrument, sample library, or sample base playback system or device; or any decompiling of the Licensed Material, and you agree not to reverse engineer or have reverse engineered the Licensed Material or any parts thereof, except that Licensee may embed the included Kontakt KSP scripts in Licensee's commercial products. You may not place the Licensed Material in a computer/sampler network to be accessed by multiple users unless you have acquired a license for each separate computer having access to the Licensed Material. This license permits only your personal use of the Licensed Material; you may install a second copy on a second computer for your exclusive use, provided that the second copy is not used at the same time as the Licensed Material is used on the primary computer. Licensee must take all reasonable steps necessary to protect the Licensed Material from distribution to third parties in violation of copyright laws, patent and other laws protecting intellectual property.

3. **Art Vista Productions' Rights over the Licensed Material.** Art Vista retains all rights, title, and interest in the Licensed Material. The Licensed Material is protected by copyright laws and international copyright treaties, U.S. patent laws, as well as other intellectual property laws and treaties. The original software programming, photographs, graphics, and other images and editorial material comprising the Licensed Material and the copyright and all other intellectual property rights thereto remain the property of Hans Adamson and Art Vista Productions. We put a lot of time and effort in our products and strive to keep the prices low. In order to continue making products and servicing you, we must be able to get a fair return on our efforts and must therefore enforce our copyright, patent and other rights against any form of piracy or other violation of our rights.

4. **Return Policy.** Please understand that all download sales are final and no refunds will be issued once a download transaction has begun.

5. **Limited Warranty/Limitation of Liability.**

TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, ART VISTA PRODUCTIONS DISCLAIMS ALL WARRANTIES AND CONDITIONS, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, WARRANTIES OF SATISFACTORY QUALITY, TITLE, AND NON-INFRINGEMENT, WITH REGARD TO THE LICENSED MATERIAL. TO THE MAXIMUM EXTENT PERMITTED BY LAW, NEITHER ART VISTA PRODUCTIONS, ITS SUPPLIERS, DEALERS, DISTRIBUTORS, NOR THE AGENTS OR EMPLOYEES OF THE FOREGOING WILL BE LIABLE FOR ANY INDIRECT, CONSEQUENTIAL, SPECIAL OR INCIDENTAL DAMAGES OF ANY SORT, (INCLUDING, WITHOUT LIMITATION, DAMAGES FOR LOST PROFITS, BUSINESS

INTERRUPTION OR LOSS OF DATA ARISING OUT OF THE USE OF THE LICENSED MATERIAL) WHETHER OR NOT SAME HAVE BEEN NOTIFIED OF THE POSSIBILITY OF SUCH DAMAGES, OR OF ANY CLAIM BY ANY OTHER PARTY.

6. General Terms.

- (a) All rights not expressly granted to Licensee hereunder are reserved by Art Vista Productions.
- (b) This license is effective for the period that you are permitted to use the Licensed Material, and is specified in the applicable license documentation (e.g. purchase receipt, sales order, or other purchase confirmation). Failure to comply with any provisions of this license will result in automatic termination of this license and may result in legal action. Upon termination, Licensee agrees to destroy all copies of the Licensed Material in Licensee's possession. In the event of termination, the following sections of this license will survive: 3, 5, and 6.
- (c) This license shall be governed by California law applicable to contracts fully negotiated, executed and performed therein. Only the California courts (state and federal) shall have jurisdiction over controversies regarding this license; any proceeding involving such a controversy shall be brought in those courts, in Los Angeles County, and not elsewhere.
- (d) You agree that this license contains the complete agreement between the parties hereto, and supersedes all other communication, relating to the subject matter of the license. Art Vista may modify this Agreement at any time, for example, to reflect changes to the law or changes to our Licensed Material. We will post notice of modifications to this Agreement. By continuing to use the Licensed Material after the revisions are in effect, you agree to be bound by the revised terms of the updated Agreement.
- (e) You acknowledge that you have read this license and understand it and agree to be bound by its terms and conditions.

User Manual

Art Vista™ Orchestra Intonation System - Introduction

The **Art Vista Orchestra Intonation System** is a 16-channel MIDI intonation system for Kontakt on PC and Mac computers. It consists of the “Art Vista INTONATOR™” plugin, the “ARPI RECEIVER™”, the “ARPI Pre-Script” in Kontakt script format, and PC and Mac project templates for Cubase, Reaper, Studio One, and Logic Pro. The system utilizes patented ARPI™ technology (Automatic Real-Time Performance Intonation,) emulating the intonation by live musicians playing variable-intonation instruments. It adds a realistic and emotional dimension to otherwise Equal Temperament orchestral performances created with sample libraries. The system works in the background analyzing the music as it is being played, automatically intonating the music in real-time. An optional stretch function is also provided to mimic intonation stretch, which is well documented in multiple studies of intonation in orchestra performances.

The ARPI technology is protected by US Patent: US 7,807,908 B1.

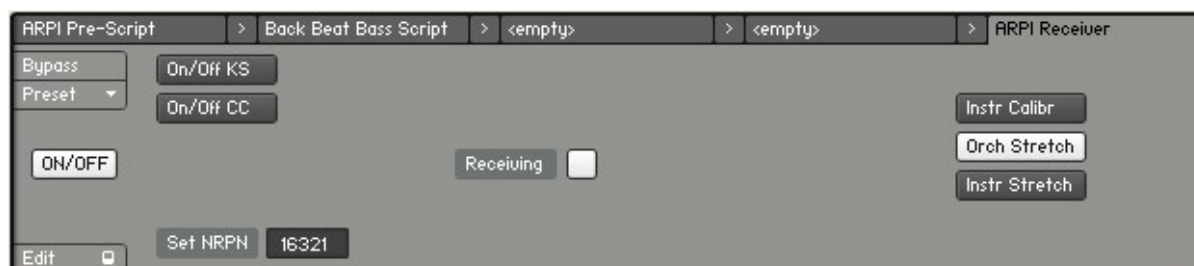
The Art Vista INTONATOR™ Plugin

The INTONATOR plugin works in two modes: the “melodic” mode and the “harmonic” mode. The melodic mode enhances directionality in melodies and in harmonic progressions while also providing consonance to perfect intervals. In the harmonic mode chord consonance is always prioritized over melodic intonation. When the “Auto” function is selected, the plugin will automatically switch between melodic and harmonic modes in real-time. An optional orchestra stretch function in five selectable steps is also available.



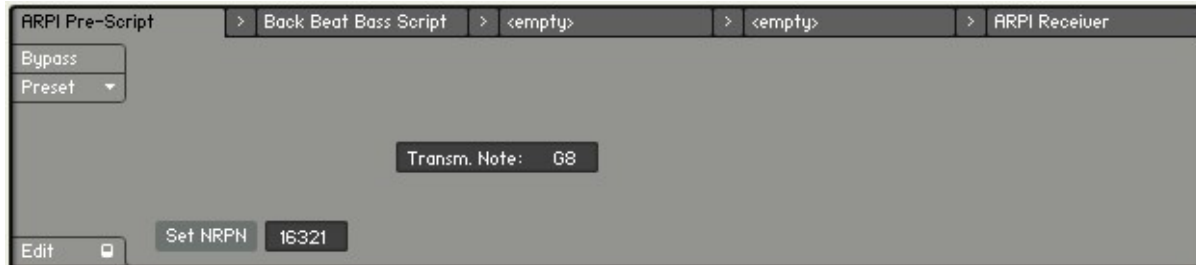
The ARPI RECEIVER™

The ARPI RECEIVER is loaded in the last script slot on each tonal Kontakt instrument. When it is switched on, it receives intonation data from the INTONATOR, and it intonates each instrument in relation to instruments on other tracks.



The Pre-Script

The Pre-Script is loaded in the very first slot of Kontakt's script bay. The "Transmitter Note" must be set to match the setting on the INTONATOR plugin. Instrument developers may include the Pre-Script code and the RECEIVER code in their instrument scripts, eliminating the need for free script slots. Instruments compatible with the Art Vista Orchestra Intonation System may display the "ARPI" compatibility logo. (See p. 22.)



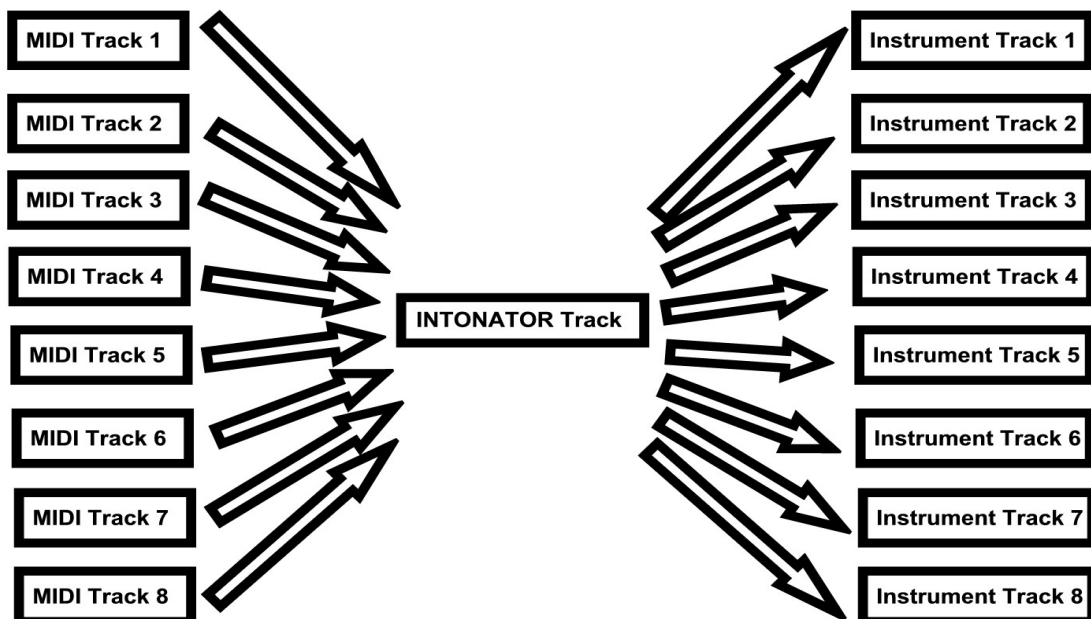
Instrument Compatibility Test

The system includes an "Instrument Compatibility Test" that can be used to test if a specific instrument is compatible and responds to the intonation signals from the Intonator plugin. (See p. 46.)

How It Works

The Art Vista INTONATOR plugin is loaded on a track in the DAW. It receives MIDI note information from one or multiple MIDI tracks. The MIDI data is analyzed, and intonation data is sent (embedded in a "transmitter note") on 16 MIDI channels. The Pre-Script intercepts the intonation data and translates it to NRPN data, which is passed on to the RECEIVER where the intonation change is applied at the start of each note.

The process is comparable to that of a real orchestra, where musicians listen to each other and intonate their instruments to resonate in consonance, or where an emotional quality is added by applying melodic intonation to leading tones. Below a schematic drawing of an eight channel setup:



Specifications

Description: Multi-channel intonation system.

Type of processing: MIDI.

Formats: VST3, AU, Native Instruments KSP.

Number of channels: 16.

Continuous Controller: Available through host automation.

NRPN: 16321 (default value, also user selectable.)

Requirements

PC: 64-bit Windows 10 or higher.

Mac: macOS Sonoma or higher.

Native Instruments Kontakt 7 or higher.

Access to two (2) free script slots in each Kontakt instrument.

Supported DAWs: Cubase 7, Reaper 7, Studio One 5, Logic Pro 11.

One MIDI note reserved for INTONATOR use in all channels.

Instruments must be ARPI compatible. Two (2) accessible, unoccupied script slots (See p. 42.)

Manual configuration of the Receiver, the Pre-Script and Instrument script(s) is required by the user.

PC Installation

1. Extract the downloaded zip archive and save the extracted folder “Art Vista Orchestra Intonation System” to your C:\ directory.
2. “**Art Vista Intonator.vst3**” (file) - Copy to your VST3 directory.
The default location is: C:\Program Files\Common Files\VST3
3. “**Art Vista**” (folder) - Copy to:
C:\Users\“User Name”\Documents\Native Instruments\Kontakt 7\presets\Scripts

Mac Installation

1. Extract the downloaded zip archive and save the extracted folder “Art Vista Orchestra Intonation System” to your ~Library/Audio/ folder.
2. “**Art Vista Intonator.vst3**” (file) – Copy the VST3 plugin to two (2) separate VST3 directories:
 - A. Users/your username/Library/Audio/Plug-Ins/VST3/
 - B. Library/Audio/Plug-Ins/VST3/
3. “**Art Vista Intonator.component**” (file) – Copy the AU plugin to two (2) separate directories:

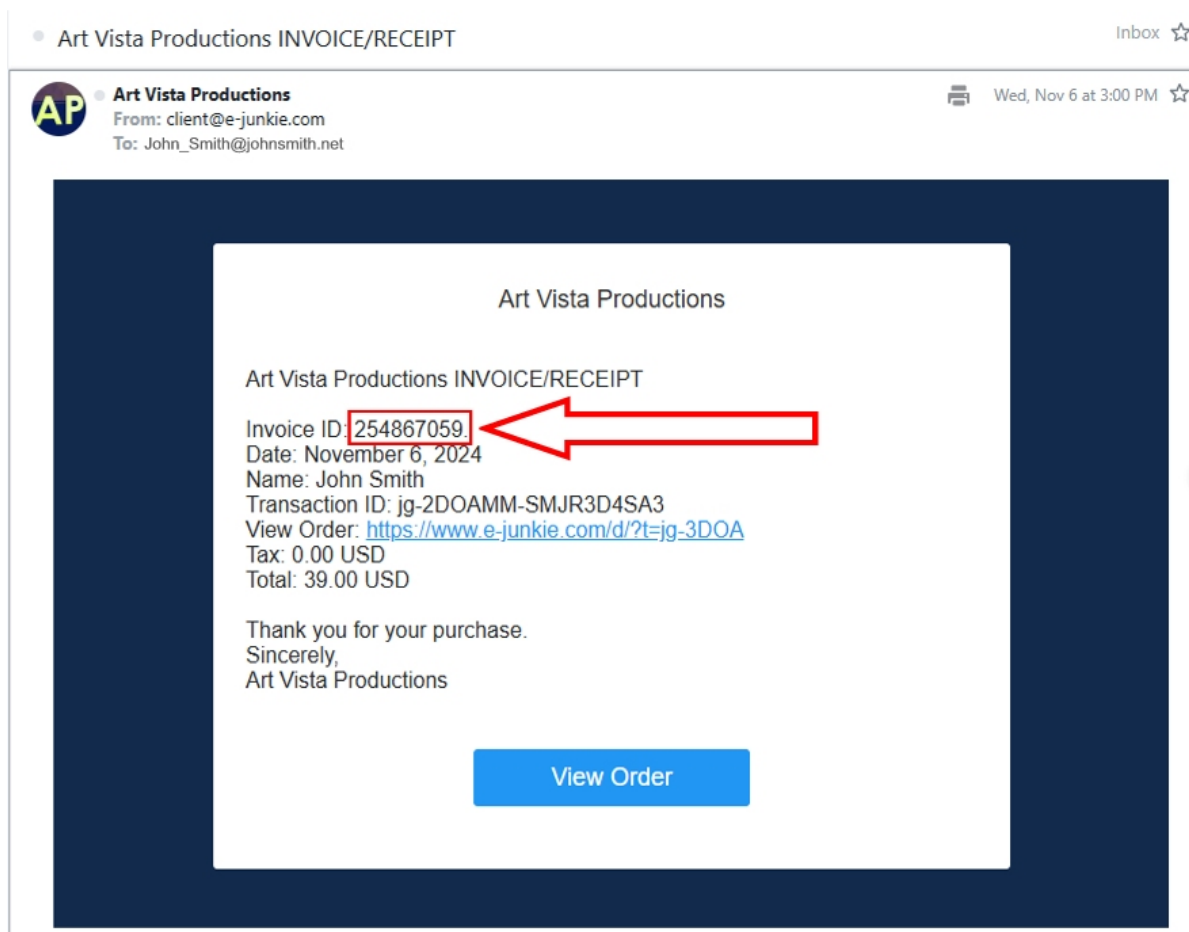
- A. Users/your username/Library/Audio/Plug-Ins/Components/
 - B. Library/Audio/Plug-Ins/Components/
4. **“Art Vista”** (folder) - Copy to: ~Documents/Native Instruments/Kontakt 7/presets/Scripts

Activation

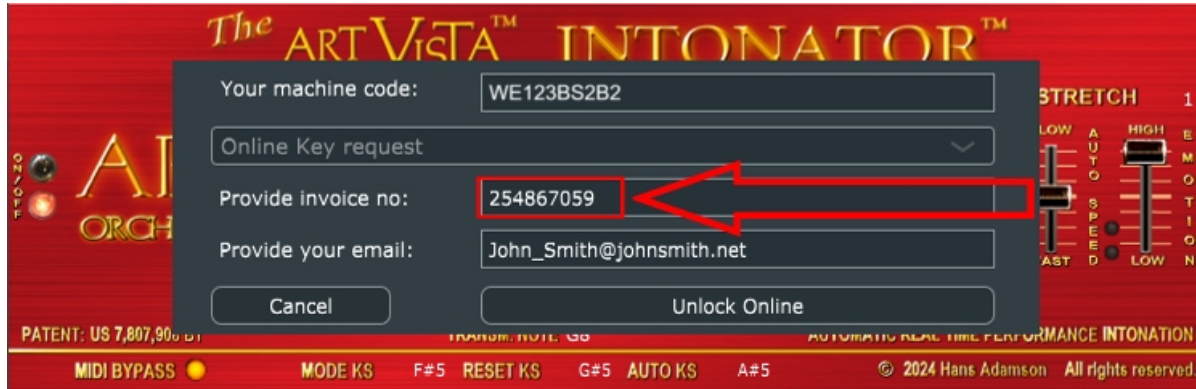
The first time a template is opened, the INTONATOR will display an activation/registration screen. From this screen you can activate the software online.



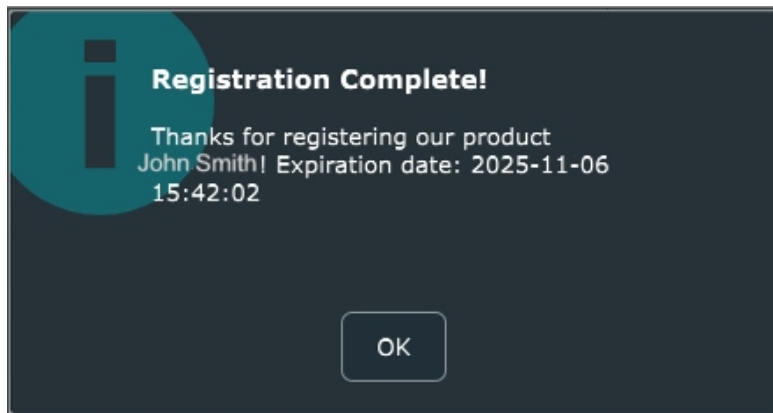
Open the email you received with the invoice #, and copy the number.



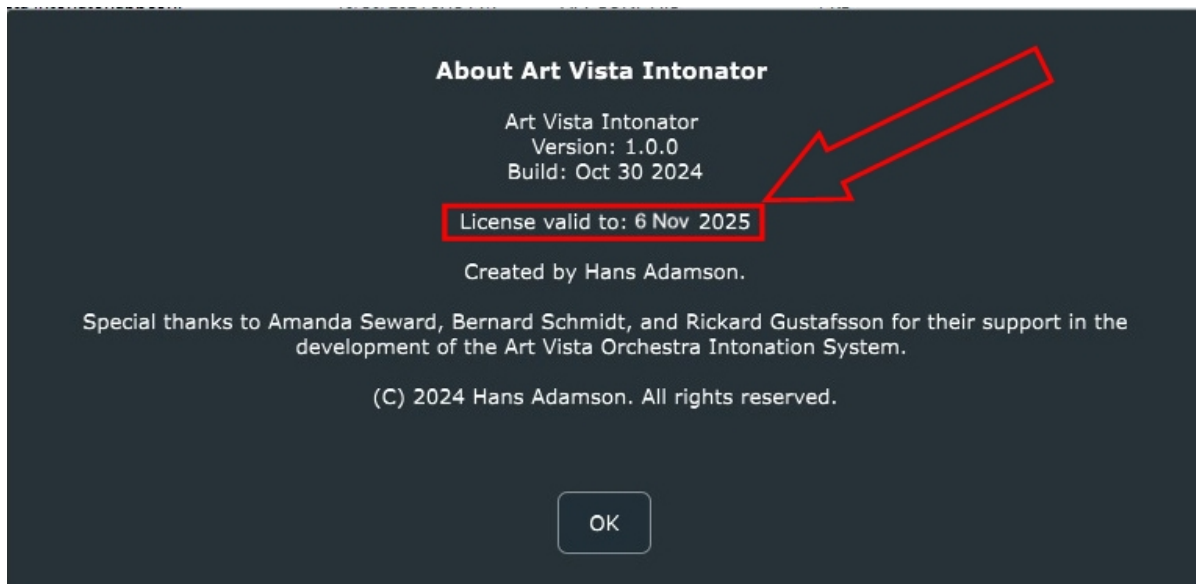
Paste the invoice number in the invoice box on the activation screen. Fill in your email address **exactly** as when you ordered the software, and click “Unlock Online.”



You will receive a message that the registration is complete, and the plugin will be unlocked. You may install and register the plugin on two different computers.



The expiration date for your subscription can also be found in the “About” window. Right-clicking (PC) or Control-clicking (Mac) on the interface will display a button to open this window. In addition, one week before the licensing period’s expiration you will be notified upon opening the plugin.



The Art Vista INTONATOR™ Controls

1. **ON/OFF** turns INTONATOR on or off for all channels.



2. **Transmitter Note** – the user selected “Transmitter Note” carries the intonation data from the INTONATOR plugin to the instruments.



3. **Transmitter Note Selector** – sets the “Transmitter Note” carrying intonation data from the INTONATOR plugin to the instruments. The “Transmitter Note” settings on INTONATOR and on the “Pre-Script” must match.



4. **MIDI Channel Selectors** activate intonation on individual MIDI channels. Please disable channels used for non-tuned percussion and any other instruments that are not mapped tonally. **Note: All active channels must have a Kontakt Instrument with a loaded Pre-Script and RECEIVER - if not, the DAW could crash.**



5. **Instrument Range** sets the tonal range for the instrument on each MIDI channel. By setting the active tonal range, keys used for keyswitches will not interfere with the process. Middle C = C3, C-2 = Midi note 0, G8 = MIDI note 127.



6. **Instrument Range - Low Note** sets the lowest note of each instrument's range. Click on the left note name to select the lowest playable note in the instrument on each channel. This is so keyswitches below will not interfere with the intonation calculations.



7. **Instrument Range - High Note** sets the highest note of each instrument's tonal range. Click on the right note name to select the highest playable note in the instrument on each channel. This is so keyswitches above will not interfere with the intonation calculations.



8. **Orchestral Mode** references the orchestra's open string tuning instead of the corresponding Equal Temperament tuning. When Orchestral Mode is OFF, Equal Temperament tuning is referenced for all notes.



9. **Auto Mode** enables INTONATOR to distinguish between melodic and harmonic content and automatically switch between the Melodic and Harmonic Mode in real-time.



10. **Melodic Mode** prioritizes emphasis of the directional quality of leading tones, while perfect intervals are kept consonant.



11. **Harmonic Mode** prioritizes overall consonance over leading tone intonation.



12. **Auto Speed** sets the note speed needed to trigger the Harmonic Mode when Auto Mode is enabled. If a slow speed is set, arpeggiated chords may be played and still trigger the harmonic mode. Using a "faster" setting arpeggiated chords will trigger the melodic mode.



13. **Emotion Strength** sets the intonation strength for leading tones in the Melodic Mode. When the green lamp comes on, the intonation is within a minimal “safe” range (2 cents) with less emotional impact. Increasing the Emotion Strength will exaggerate the leading quality of these notes, adding direction and intensity to the melody. At the lowest setting, no leading tone intonation is performed. By default, the “Emotion Strength” parameter is set to be controlled by MIDI CC112, but it may be changed to any other MIDI CC # in your DAW. (Please see p.27 (Cubase), p.31 (Reaper), p.35 (Studio One).)



14. **Reset Speed** sets the gap of silence (0.0 – 1.0 sec) required between notes to trigger a reset of the cached intonation data. At a very short setting, the intonation for each note is purged when there is a short gap between phrases. Higher settings allow the cached intonation data to remain without resetting also during longer gaps.



15. **Mode KS** enables keyswitching between the Melodic and the Harmonic mode.



16. **Mode KS Note** selects the note number for the harmonic/melodic mode keyswitch.



17. **Reset KS** enables keyswitching to perform a reset. When the Reset keyswitch note is played, the intonation data for previous notes is reset.



18. **Reset KS Note** selects the note for the Reset keyswitch.



19. **Auto KS** enables keyswitching of Auto Mode ON/OFF.



20. **Auto KS Note** selects the note for the Auto ON/OFF keyswitch.



21. **Stretch ON/OFF** activates stretch on all instrument RECEIVERS. Turning off “STRETCH” on INTONATOR turns off the common “Orchestra Stretch” in the system”. “Instrument Stretch” on individual instruments must be turned On/Off on the instrument’s RECEIVER.



22. **Stretch factor selector** selects the system-wide stretch strength (1-5), where “1” is the weakest and “5” is the strongest stretch.

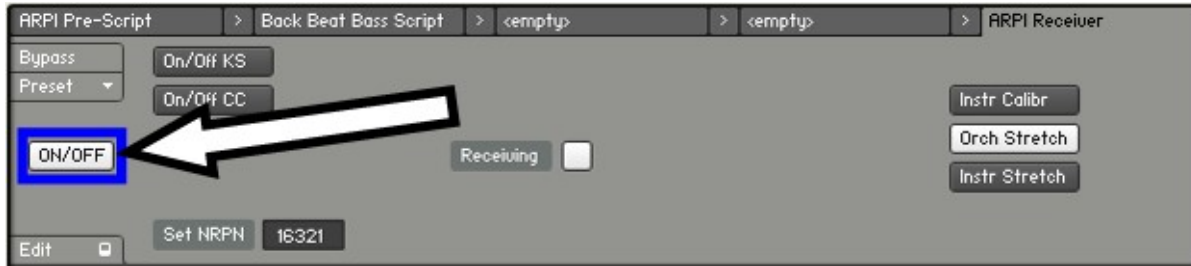


23. **MIDI Bypass** should be used **only** when using the **REAPER** DAW. Because of routing specific to **REAPER**, the MIDI Bypass must here be enabled to prevent double triggering of MIDI notes.



The ARPI RECEIVER™ Controls

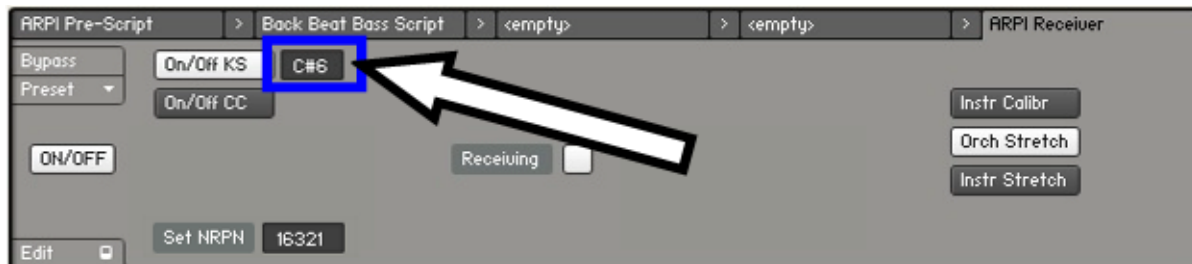
1. **On/Off switch** turns the RECEIVER ON/OFF.



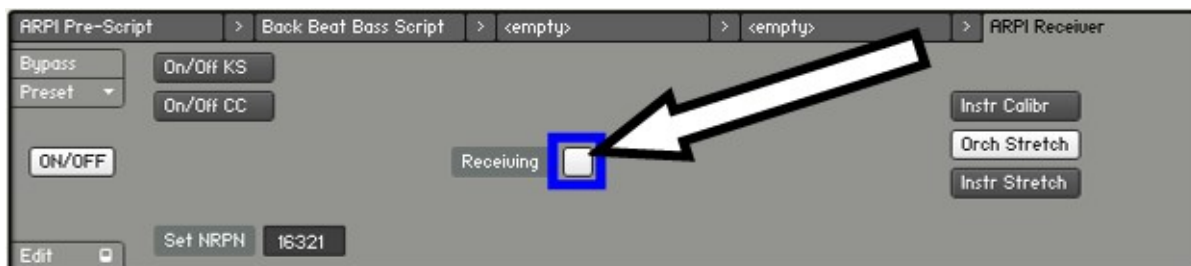
2. **ON/OFF KS** button activates RECEIVER ON/OFF keyswitching. This enables the use of a keyswitch to temporary disable the intonation correction for the instrument on the fly. This is useful if there is some content on a MIDI track that should remain in Equal Temperament.



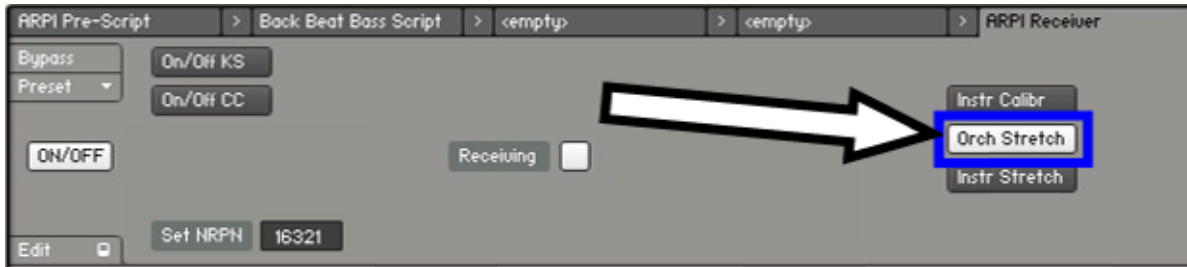
3. **Key selector** selects the keyswitch key for ON/OFF KS. When ON/OFF KS is activated, a track instrument's intonation can be turned ON/OFF on the fly by depressing the selected keyswitch key.



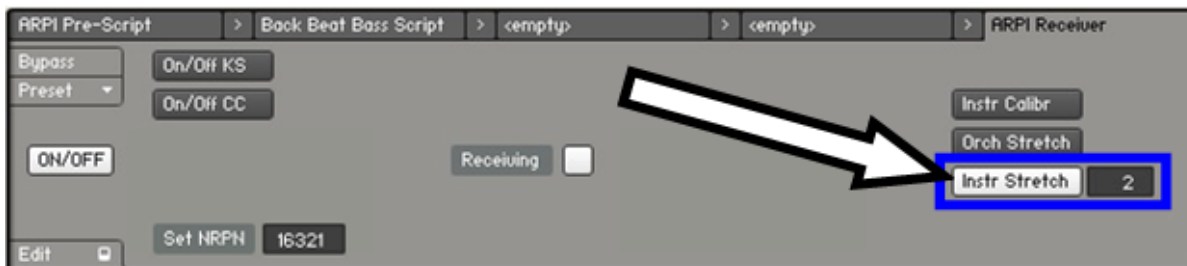
4. **Indicator lamp** - lights up when intonation data sent is received by the instrument. This verifies that your setup is working and the instrument is receiving intonation.



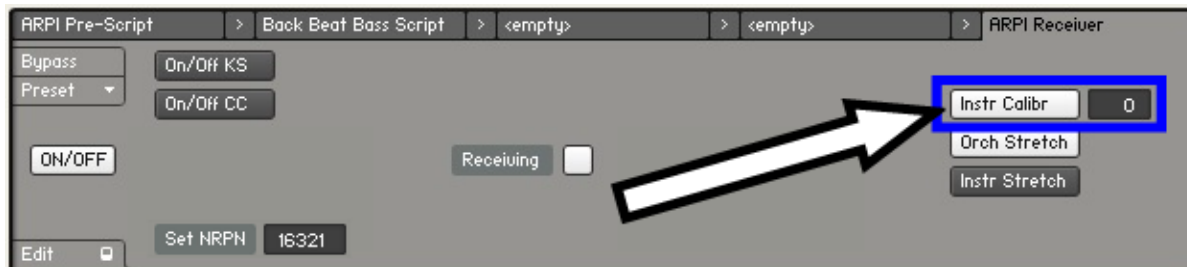
5. **Orchestra stretch** allows system stretch to be received on individual tracks. Orchestra stretch may be turned off centrally for all tracks from the INTONATOR interface. The RECEIVERS default to “Orch Stretch” ON, but no stretch will be performed unless “STRETCH” is also activated on the INTONATOR. Orchestra Stretch may be disabled for individual instruments on each RECEIVER.



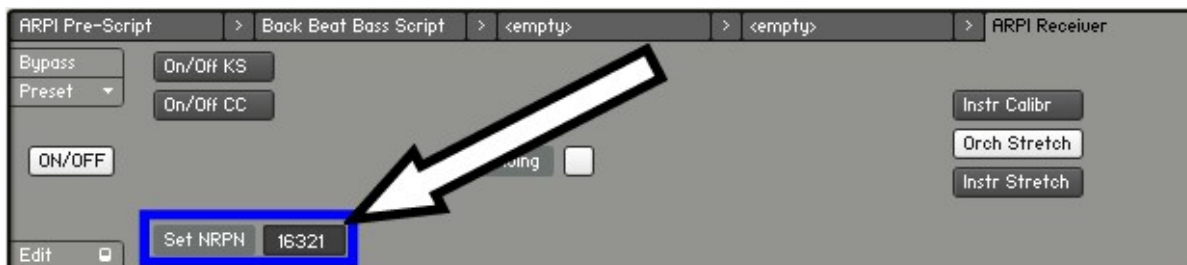
6. **Instrument stretch** activates a track stretch independent of the system stretch. A stretch factor (1-5) for individual instrument stretch can be selected.



7. **Instrument Calibration** allows for -2 to +2 cents tuning shift for instruments that are not tuned to concert pitch A 440 Hz.



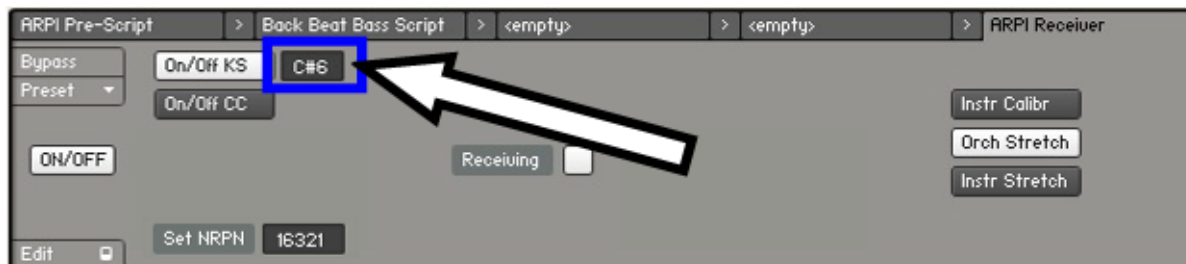
8. **Set NRPN** sets the internal NRPN data channel (default: 16321). If there is a conflict with other software or hardware using NRPN, the channel may be changed to any other channel between 0-16383. The NRPN must be set to the same channel number on the Pre-Script and the RECEIVER.



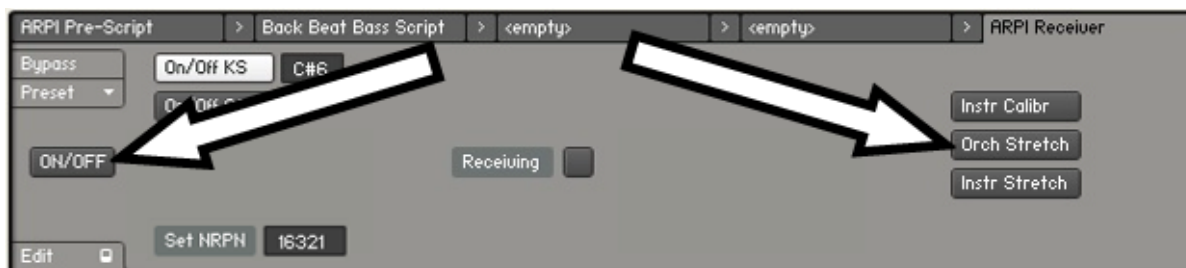
Note: When a MIDI channel is enabled on INTONATOR, the corresponding track must have an instrument loaded with the Pre-Script.

Pre-Recorded Phrases

Pre-recorded phrases and runs should not receive intonation to preserve their internal recorded natural intonation. If MIDI notes triggering pre-recorded phrases (or runs) exist on the same track as single MIDI notes, the track's RECEIVER™ may temporarily be turned OFF using keyswitching. The keyswitch mode is enabled when the “ON/OFF KS” is activated on the RECEIVER interface. The On/Off keyswitch key is user selectable.



If pre-recorded phrases have their own track, the track's RECEIVER can simply be turned off. The stretch function will also be disabled.



Note: A MIDI channel with pre-recorded phrases should always be enabled on INTONATOR's main interface. This will allow the pre-recorded phrases' MIDI note data to be included in the calculation of intonation for other tracks.

Optimizing Performance

The Art Vista Orchestra Intonation System may be used as a “set-and-forget” application, but the performance can be optimized through user control and awareness of how the system works. You could compare it to a “driverless car,” where human input will guarantee optimum performance. Two things affect performance: 1. The MIDI protocol is serial. 2. INTONATOR can only make intonation calculations based on the information it has already received.

The serial nature of the MIDI protocol means that each note coming down the line in the MIDI stream is processed individually in the order it arrives. For example, a triad where three notes are played simultaneously is processed as three sequential notes – one after the other. Playing a Third following the Root and the Fifth of the triad will always ensure a correct intonation of the Third. This is only necessary in cases where insufficient data is available for INTONATOR to make an accurate determination otherwise. Moving the Third of a chord a MIDI tick forward may allow the other chord notes to be included in the calculation. Similarly, the practice of allowing the lowest of simultaneous notes to register first will generally help the intonation algorithms.

Another way to actively influence the intonation process is to insert a reset (by keyswitch). This will erase the intonation data for previous notes stored in memory. Turning off the INTONATOR or a MIDI channel will reset both the previous intonations and the previous note information data. The INTONATOR may also be temporarily bypassed on individual tracks using a track RECEIVER's keyswitch ON/OFF mode.

Important Notes:

1. All MIDI channels enabled on the INTONATOR interface should have a Kontakt Instrument loaded with a Pre-Script - if not, the DAW could crash. If you want to include a non-Kontakt instrument, or a non-tuned Kontakt instrument, its MIDI channel should be disabled on the INTONATOR interface. Such instruments could also be set to a different MIDI port.
2. When using Reaper, go to Preferences\Automation and disable (uncheck) the option: "Automatically add envelopes."
3. The Transmitter Note must be set to the same note on the INTONATOR and the Pre-Script.

Compatibility

Compatible DAWs and instruments may display the "ARPI" (Automatic Real-time Performance Intonation) logo on their product page. Kontakt instruments are compatible if they have two (2) unoccupied, accessible, script slots and the instrument's proprietary script does not interfere with the intonation process. Art Vista offers all developers the open source code to integrate the Pre-Script and RECEIVER in their instrument script to eliminate the need for user-loaded scripts.



Getting started

16-Track DAW Project Templates

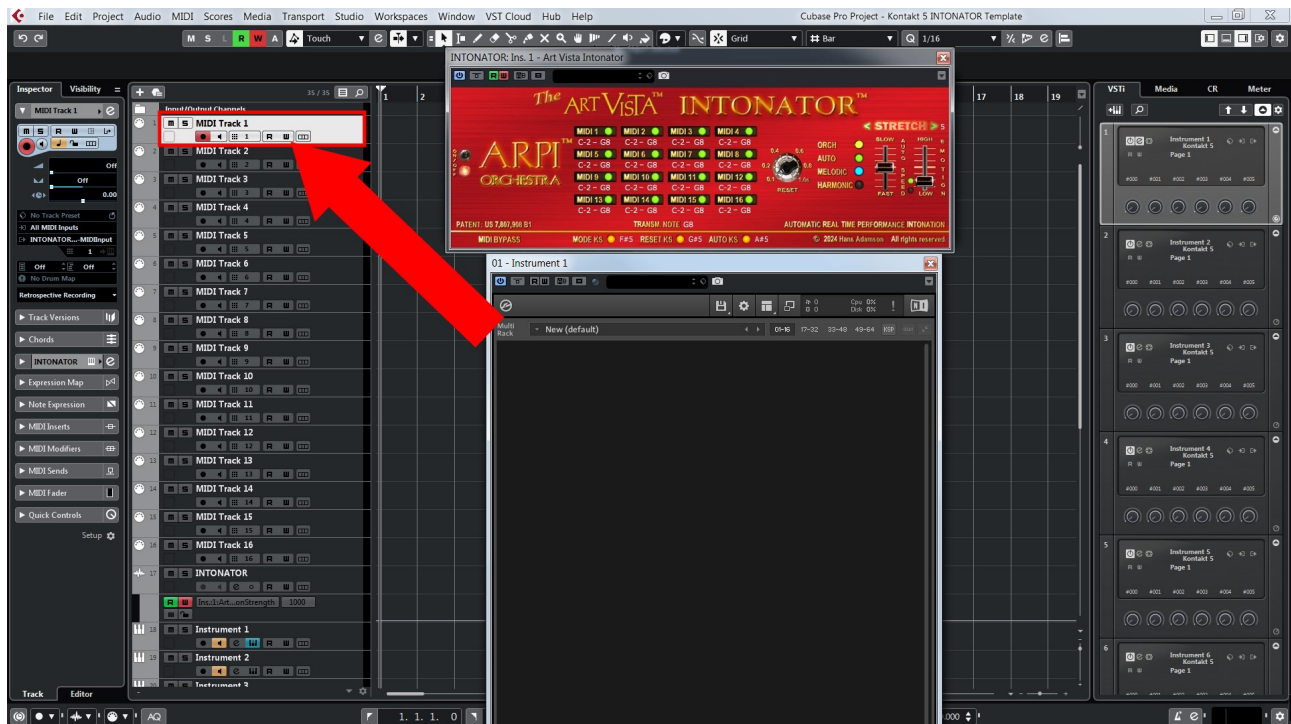
The Art Vista Orchestra Intonation System includes 16-track project templates for Reaper, Cubase, Studio One and Logic Pro. To familiarize yourself with the effect of the Intonator, load the “Instrument Compatibility Test” template for your DAW. The sinus-wave “Test Instrument” is the perfect instrument for testing the effect of the INTONATOR. This preset can also be used to test your current Kontakt sample libraries for compatibility. Also included is “Art Vista Back Beat Bass - Kontakt Edition”. This instrument shows how to install the two required Kontakt scripts. To create a new template, insert an instrument of your choice on each Instrument track and set the instrument MIDI channels. Load the Pre-Script in the first script slot and the RECEIVER in the last slot in each instrument. Set the same transmitter note on the Intonator and Pre-Script for each instrument. MIDI channels with non-tuned instruments must be disabled on INTONATOR’s interface. A separate MIDI port may be used for non-tuned instruments to free up channels for tuned instruments on the main MIDI port.

CUBASE

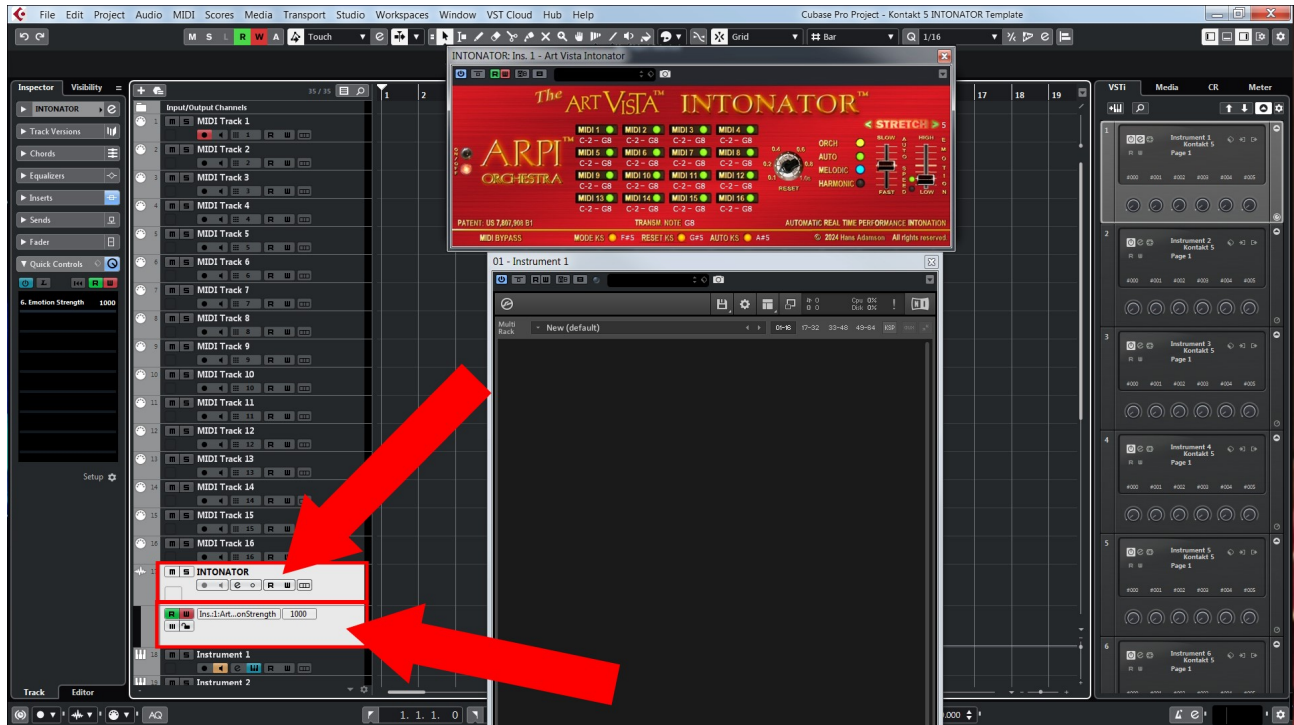
The factory template comes pre-loaded with an Equal Temperament “Kontakt Test Instrument” based on sine waves. Use this instrument to familiarize yourself with the intonation system and how it works. A full version of “Art Vista Back Beat Bass – Kontakt Edition” is also included as an example of how the Kontakt scripts should be installed.

To set up your own custom template, remove the test instrument from Kontakt and follow the instructions below.

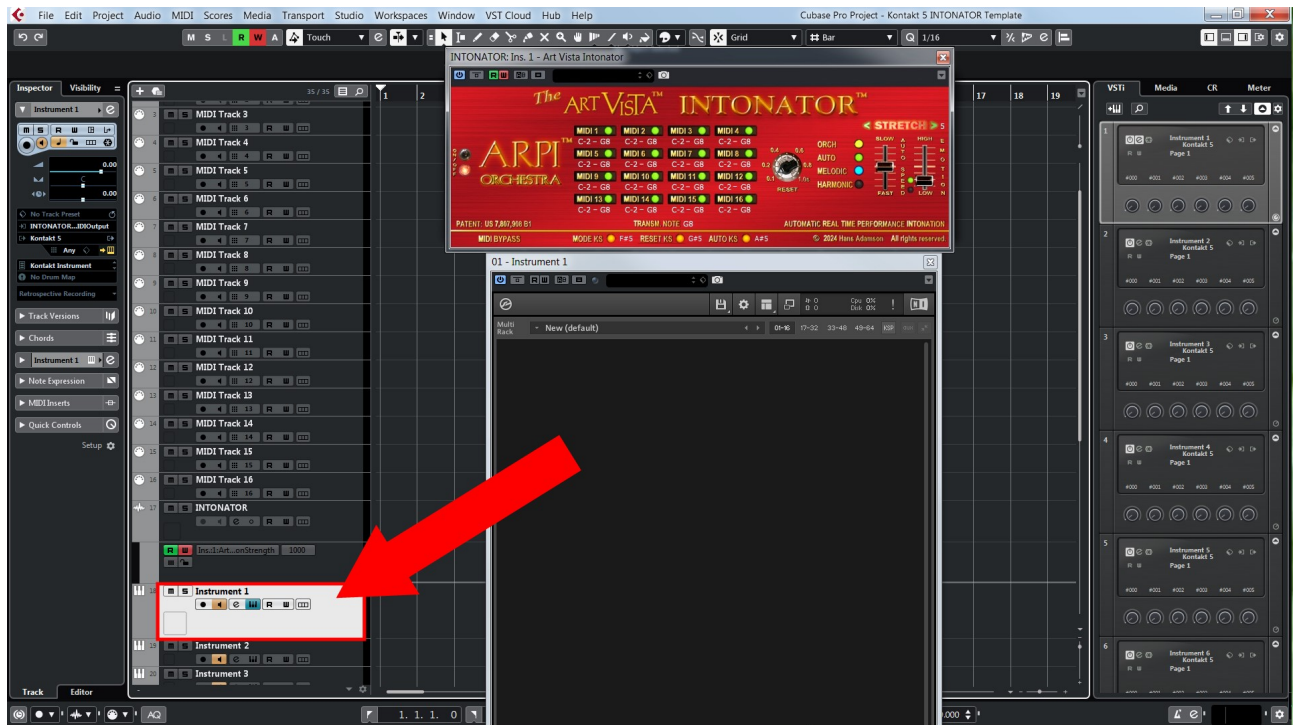
Arm MIDI Track 1 for recording without monitoring the MIDI tracks. The first 16 tracks are MIDI tracks. Track 17 is the INTONATOR track. Tracks 18-33 are Kontakt instrument tracks.



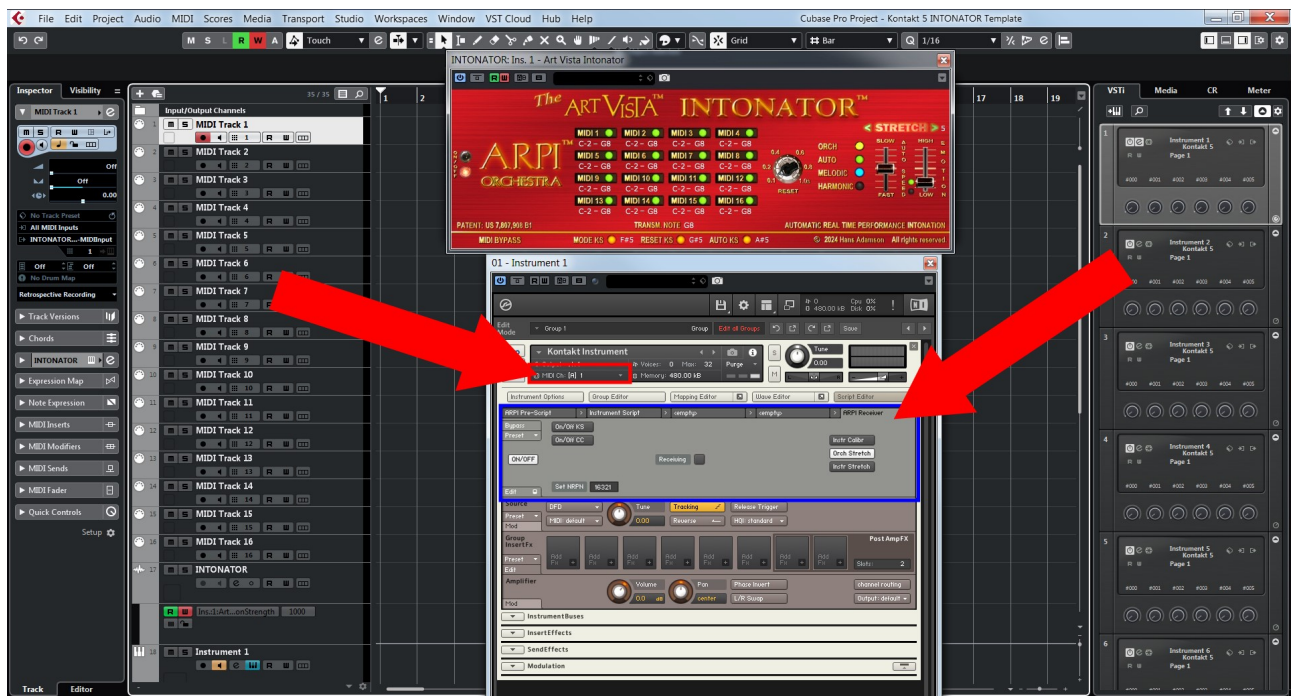
Below the INTONATOR on track17, is the INTONATOR “emotion” automation lane.



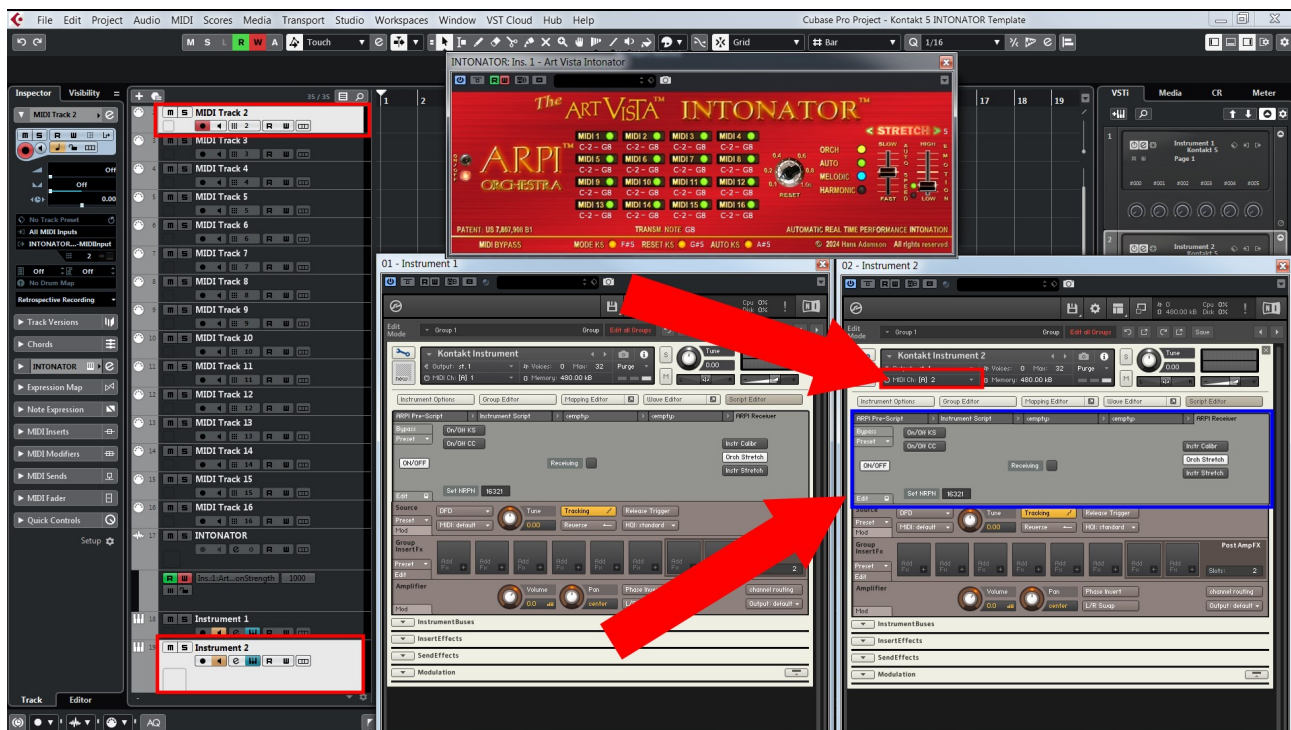
The 16 Kontakt instrument tracks start at track 18.



Load the first instrument onto track 18. Re-order the instrument's scripts, inserting the "ARPI Pre-Script" into the very first script slot and "ARPI Receiver" into the very last script slot. (See p. 42-45.) Set the instrument's MIDI channel to "1". Set the Transmitter Note on the "ARPI Pre-Script" to match the INTONATOR setting. Set the instrument's active key range on the INTONATOR. (See p. 12 -13, #5 - #7.)



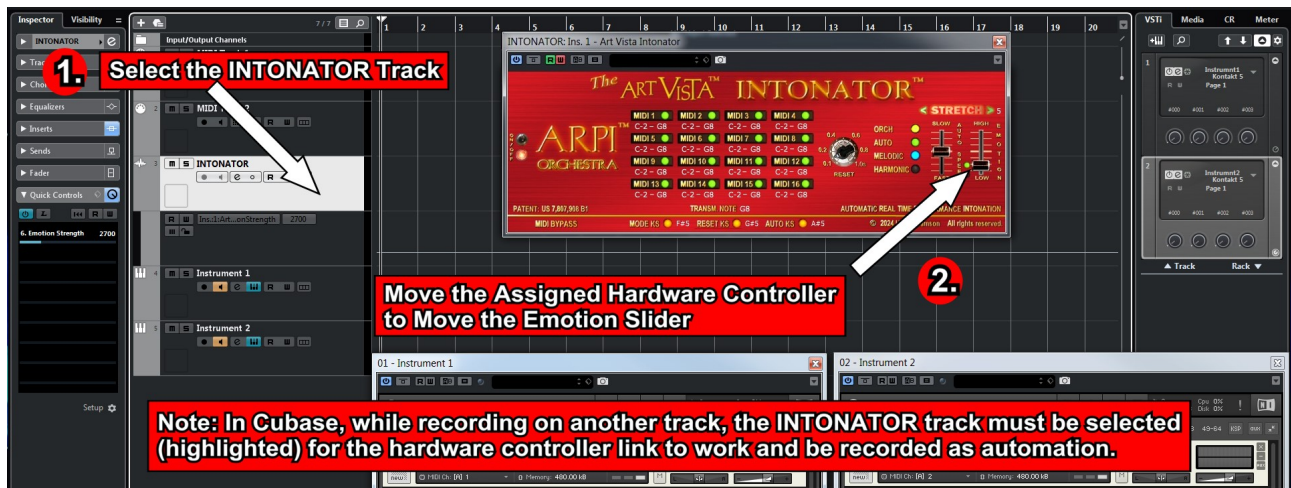
Load the next instrument onto track 19. Re-order the instrument's scripts, inserting the "ARPI Pre-Script" into the very first script slot and "ARPI Receiver" into the very last script slot. (See p. 42-45.) Set the MIDI channel to "2". Set the Transmitter Note on the "ARPI Pre-Script" to match the INTONATOR setting. Set the instrument's active key range for channel 2 on the INTONATOR. Repeat this procedure for each new tuned instrument that you load on the following tracks (3, 4, 5...16), setting the MIDI channel to consecutive numbers 3, 4, 5... etc. (See p. 12 -13, #5 - #7.)



You can test the setup by arming a track and checking that the track instrument RECEIVER's indicator lamp lights up intermittently when playing.



To use MIDI CC to control “Emotion strength”, the INTONATOR track must be selected.



Recording MIDI parts and Emotion Strength automation simultaneously.



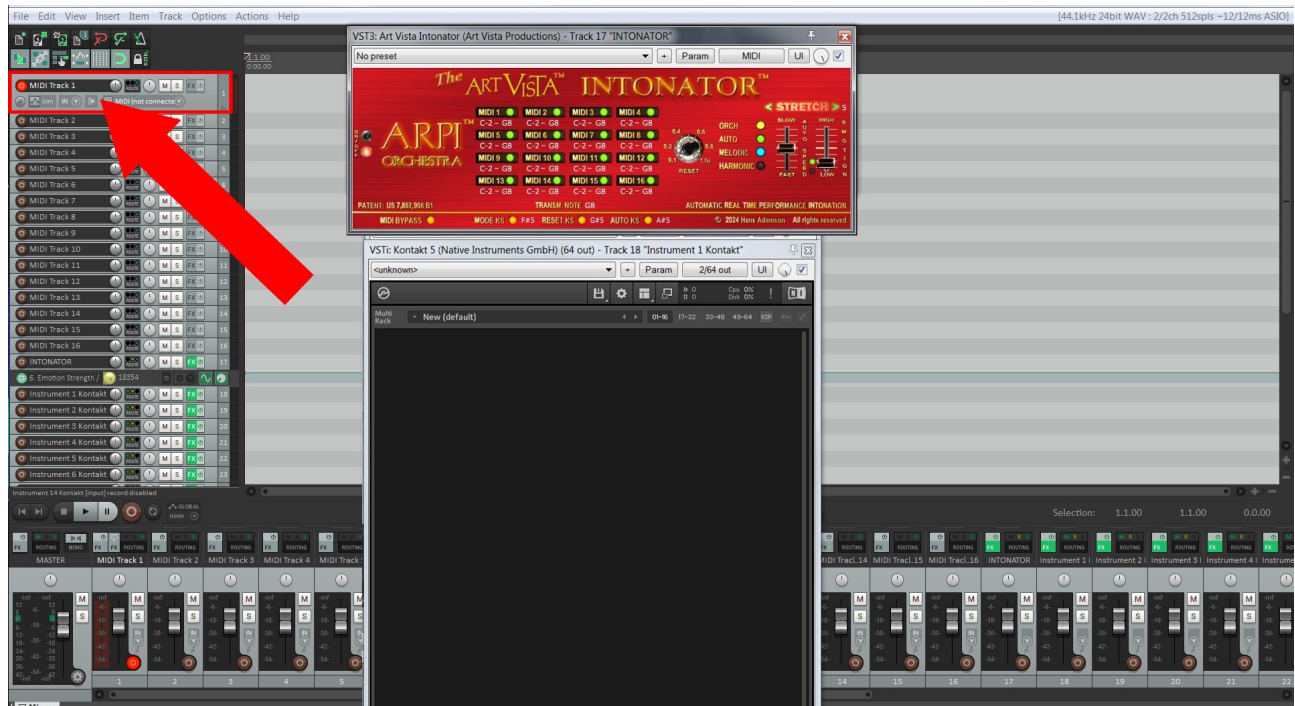
Note: By default, the "Emotion Strength" parameter is assigned to MIDI CC 112, but it may be changed to any other MIDI CC #. To change the "Emotion Strength" MIDI CC from CC 112 to a different MIDI CC #, please go to menu "Studio"\Studio Setup\Track Quick Controls. There you can change the MIDI CC # for the "Emotion Strength" parameter from CC 112 to any other CC #.

REAPER

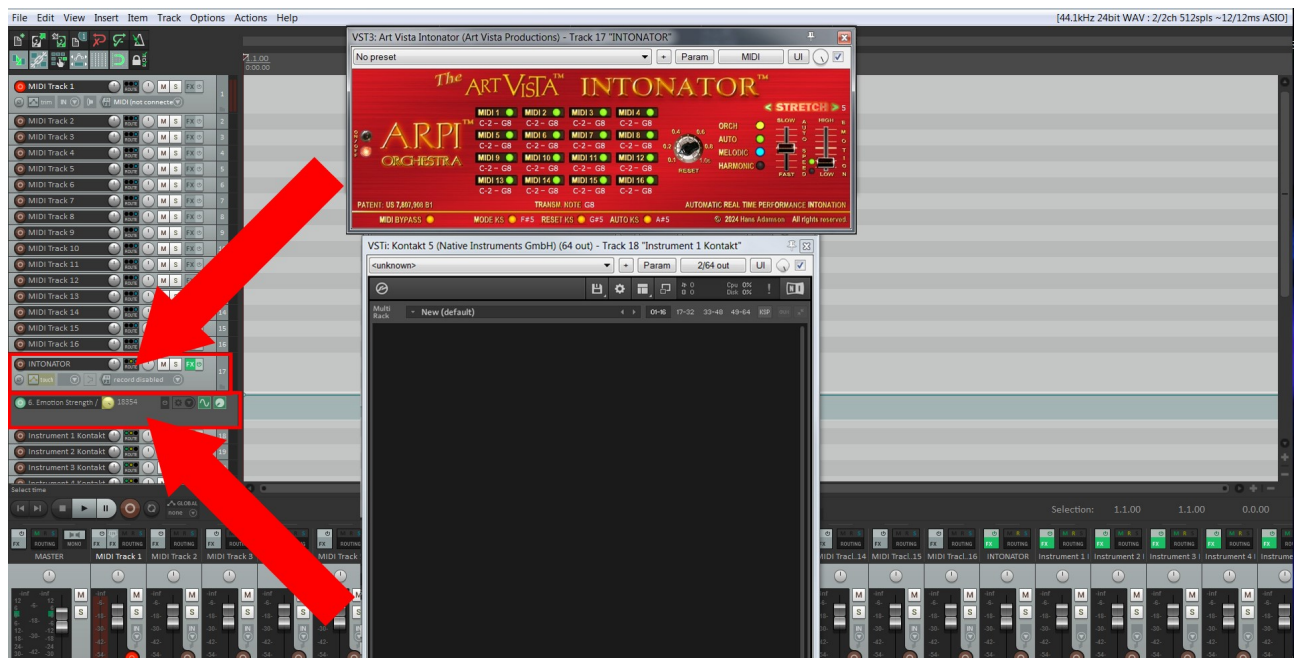
The factory template comes pre-loaded with a “Kontakt Test Instrument” based on sine waves. Use this instrument to familiarize yourself with the intonation system and how it works. A full version of “Art Vista Back Beat Bass – Kontakt Edition” is also included as an example of how the Kontakt scripts should be installed.

To set up your own custom template, remove the test instrument from Kontakt and follow the instructions below.

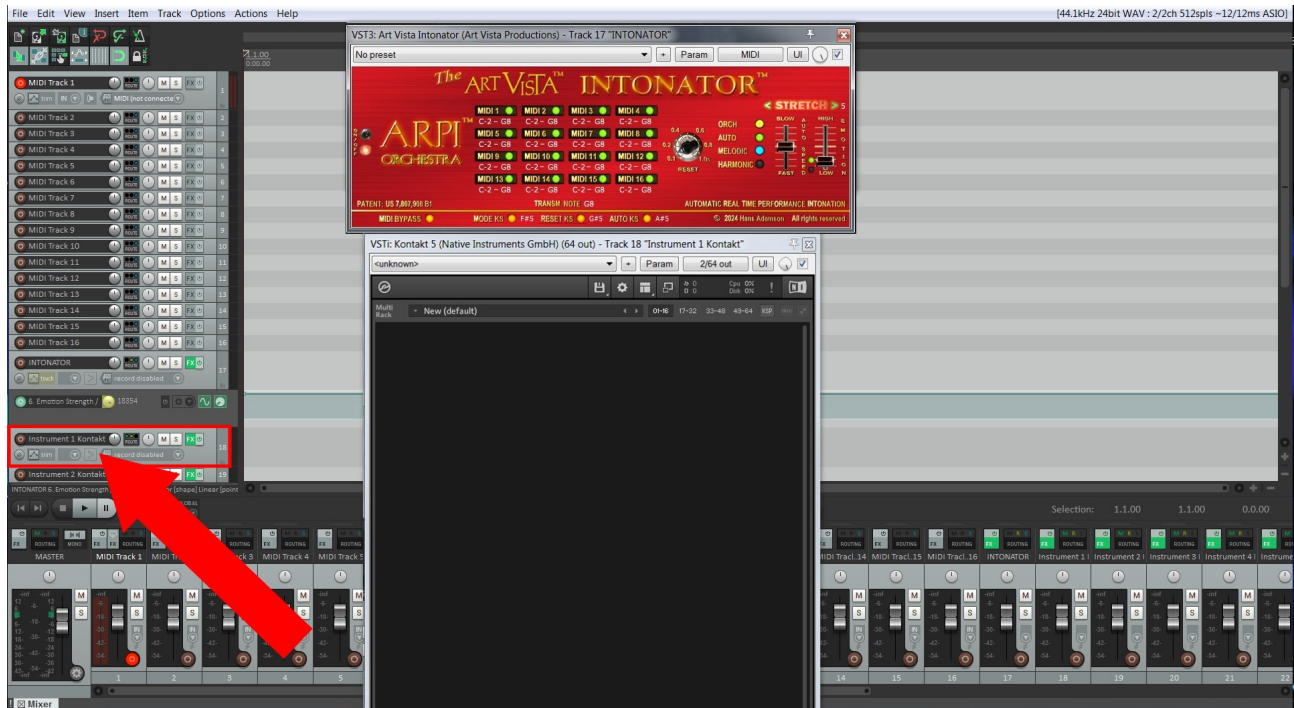
The first 16 tracks are MIDI tracks. Track 17 is the INTONATOR track. Tracks 18-33 are Kontakt instrument tracks.



Track 17 is the INTONATOR track, and immediately below is the INTONATOR “emotion” automation lane.



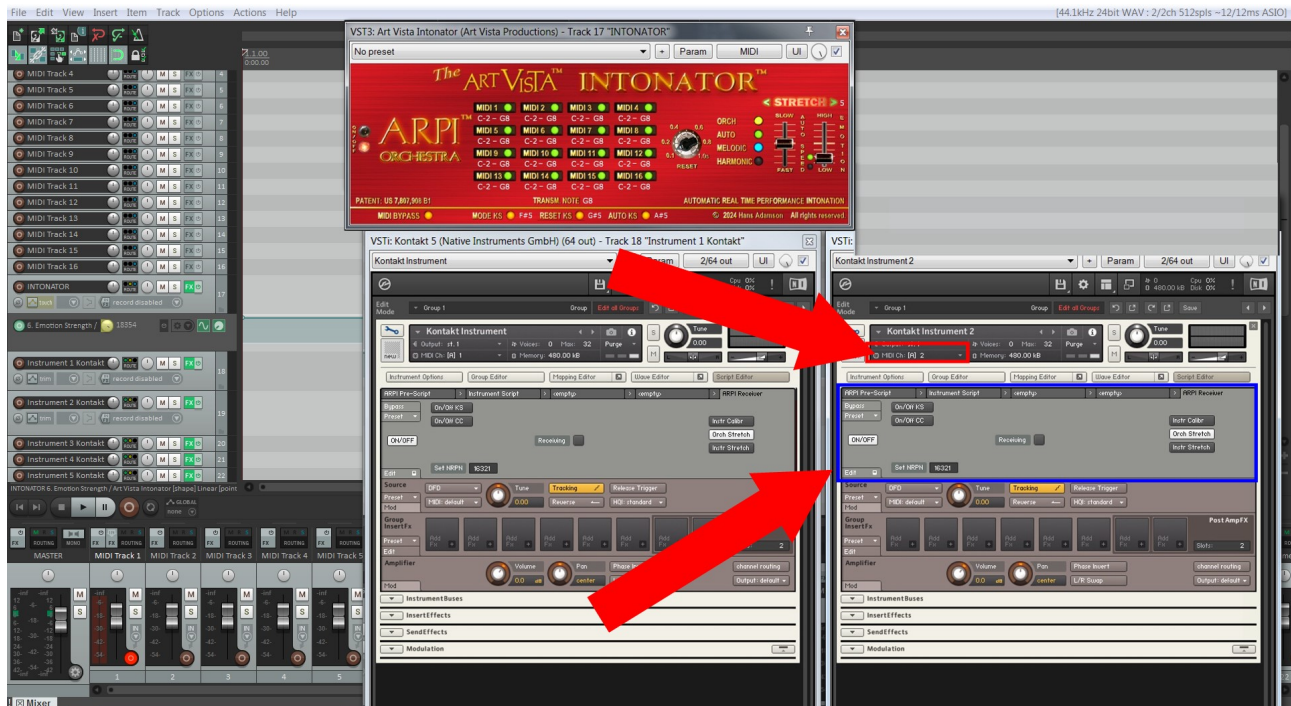
The 16 Kontakt instrument tracks start at track 18.



Load the first instrument onto track 18. Re-order the instrument's scripts, inserting the "ARPI Pre-Script" into the very first script slot and "ARPI Receiver" into the very last script slot. (See p. 42-45.) Set the instrument's MIDI channel to "1". Set the Transmitter Note on the "ARPI Pre-Script" to match the INTONATOR setting. Set the instrument's active key range on the INTONATOR. (See p. 12 -13, #5 - #7.)



Load the next instrument onto track 19. Re-order the instrument's scripts, inserting the "ARPI Pre-Script" into the very first script slot and "ARPI Receiver" into the very last script slot. (See p. 42-45.) Set the MIDI channel to "2". Set the Transmitter Note on the "ARPI Pre-Script" to match the INTONATOR setting. Set the instrument's active key range for channel 2 on the INTONATOR. Repeat this procedure for each new tuned instrument you load on the following tracks (3, 4, 5...16), setting the MIDI channel to consecutive numbers 3, 4, 5... etc. (See p. 12 -13, #5 - #7.)



You can test the setup by arming a track and checking that the track instrument RECEIVER's indicator lamp lights up intermittently when playing.

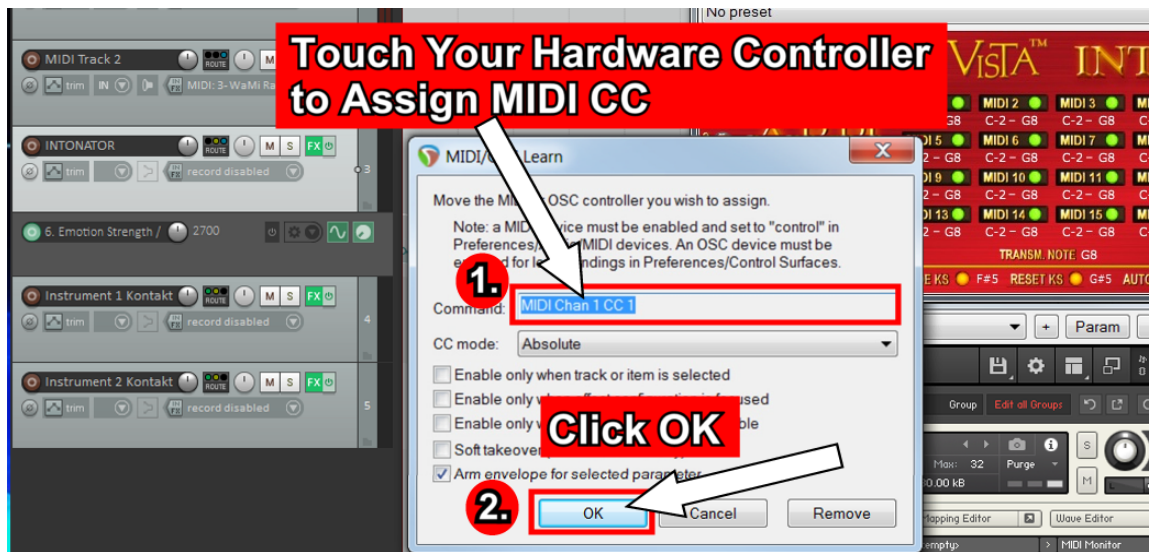


Note: By default, the "Emotion Strength" parameter is assigned to MIDI CC 112, but it may be changed to any other MIDI CC #. To change the "Emotion Strength" MIDI CC from CC 112 to a different MIDI CC #, please follow the instructions below:

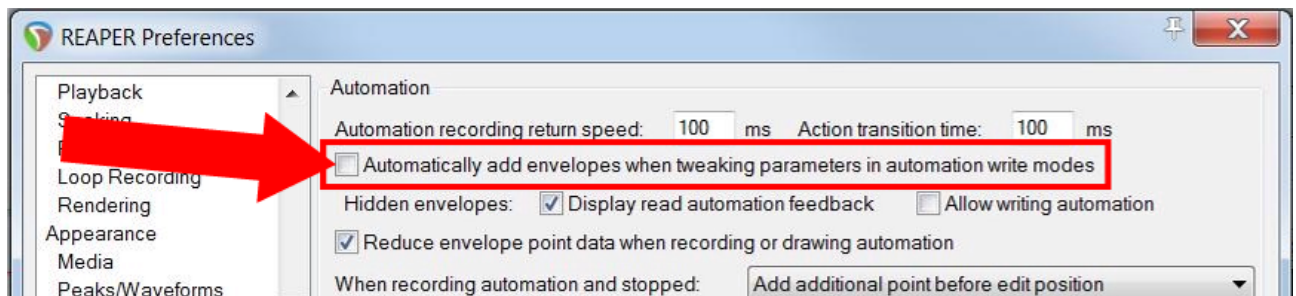
Open the MIDI Learn dialog.



Assign a new MIDI CC # by touching the MIDI controller you want to assign to Emotion Strength. Click OK.



Go to Preferences\Automation and disable (uncheck) the top option "Automatically add envelopes..." and click on "OK".

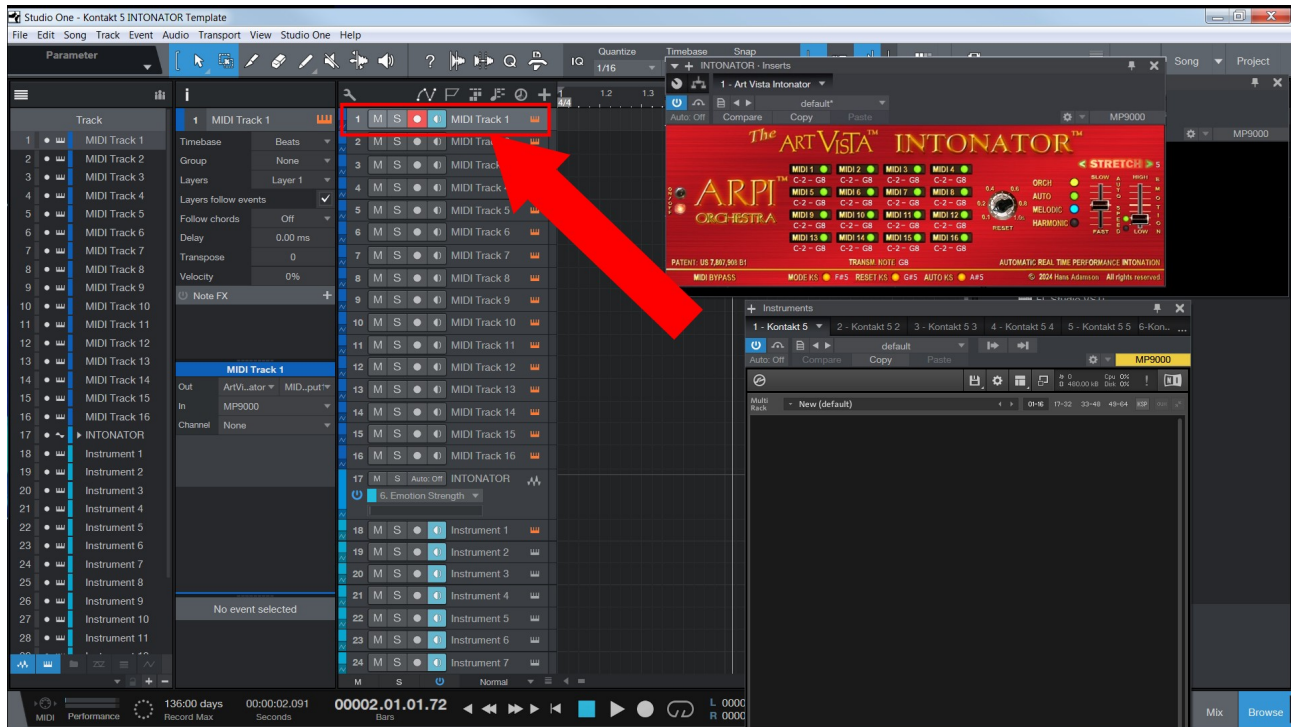


STUDIO ONE

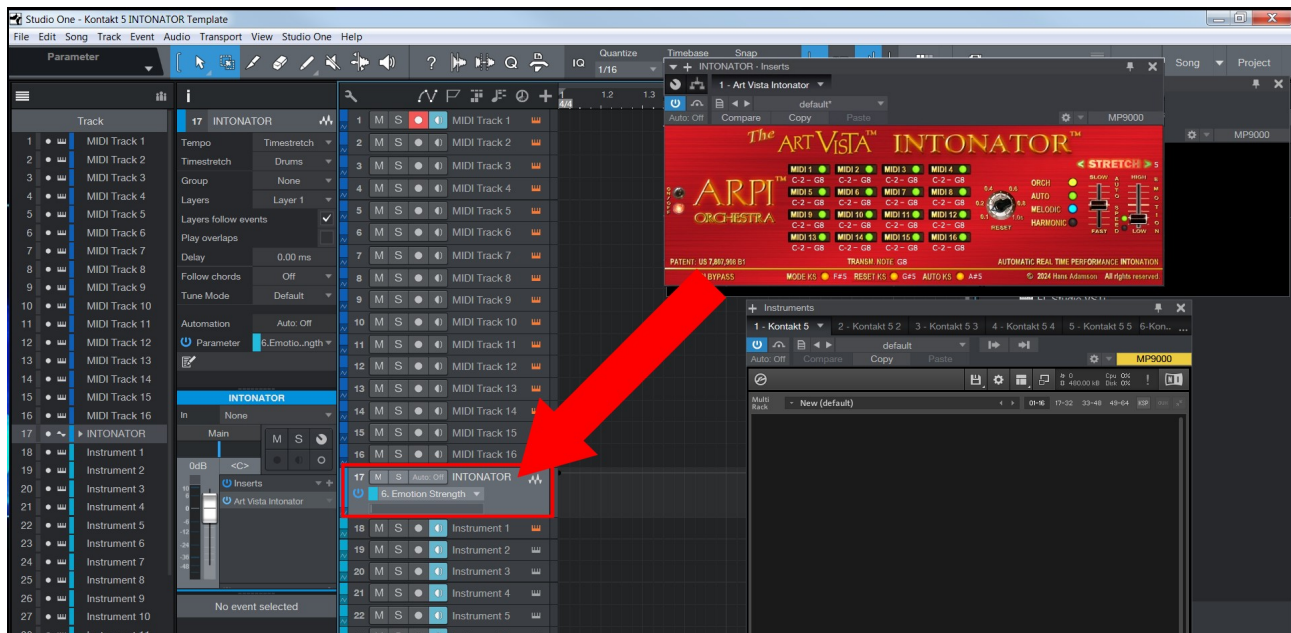
The factory template comes pre-loaded with a “Kontakt Test Instrument” based on sine waves. Use this instrument to familiarize yourself with the intonation system and how it works. A full version of “Art Vista Back Beat Bass – Kontakt Edition” is also included as an example of how the Kontakt scripts should be installed.

To set up your own custom template, remove the test instrument from Kontakt and follow the instructions below.

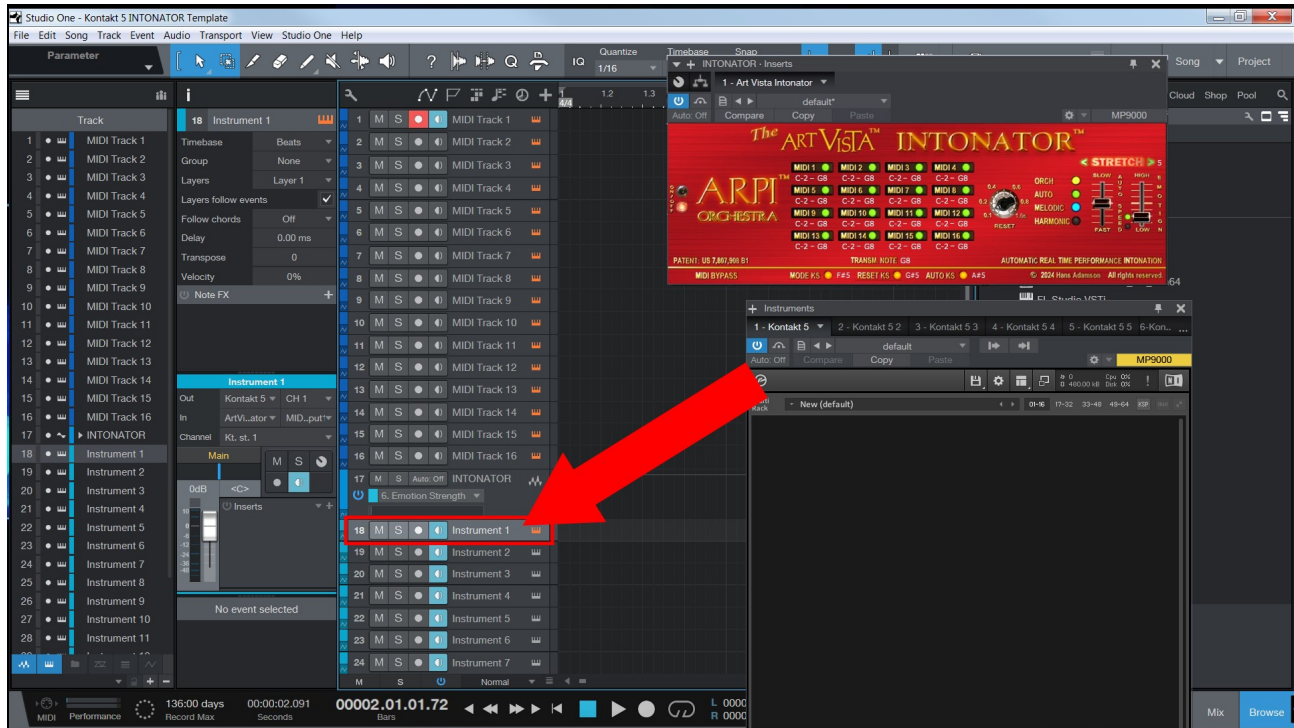
The first 16 tracks are MIDI tracks. Track 17 is the INTONATOR track. Tracks 18-33 are Kontakt instrument tracks.



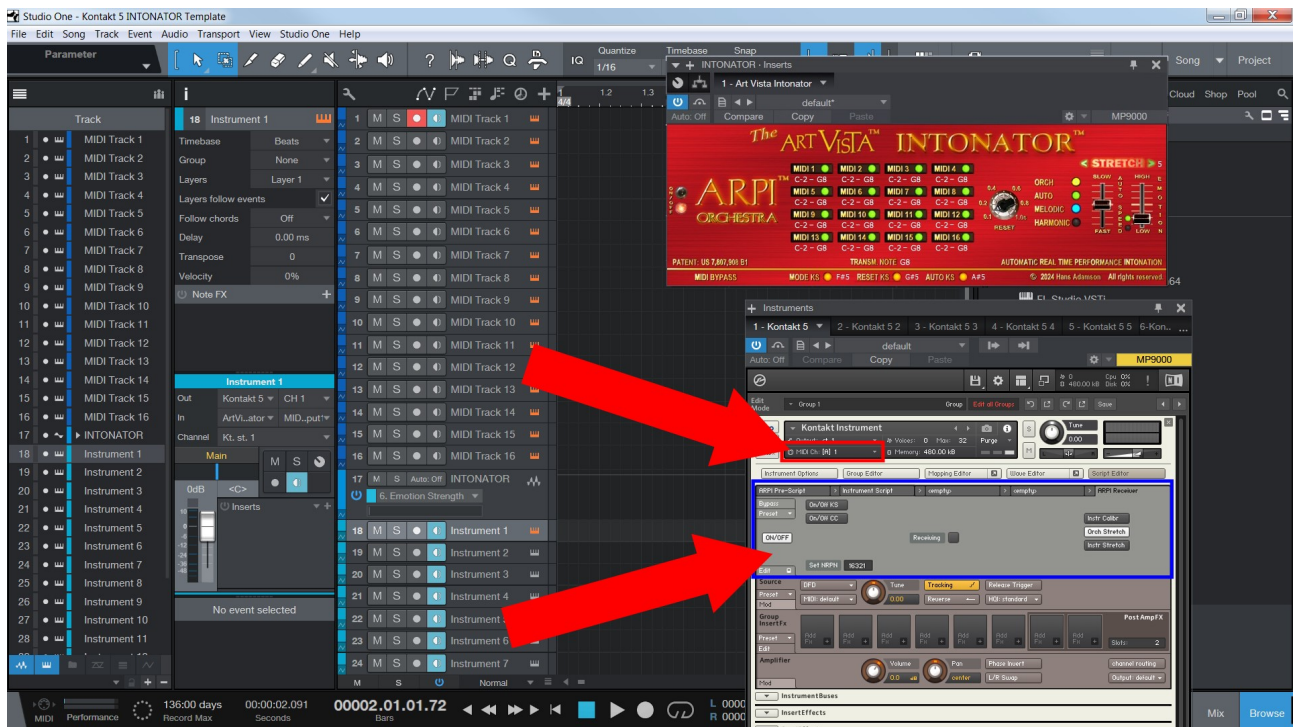
Track 17 is the INTONATOR track with the INTONATOR “emotion” automation lane.



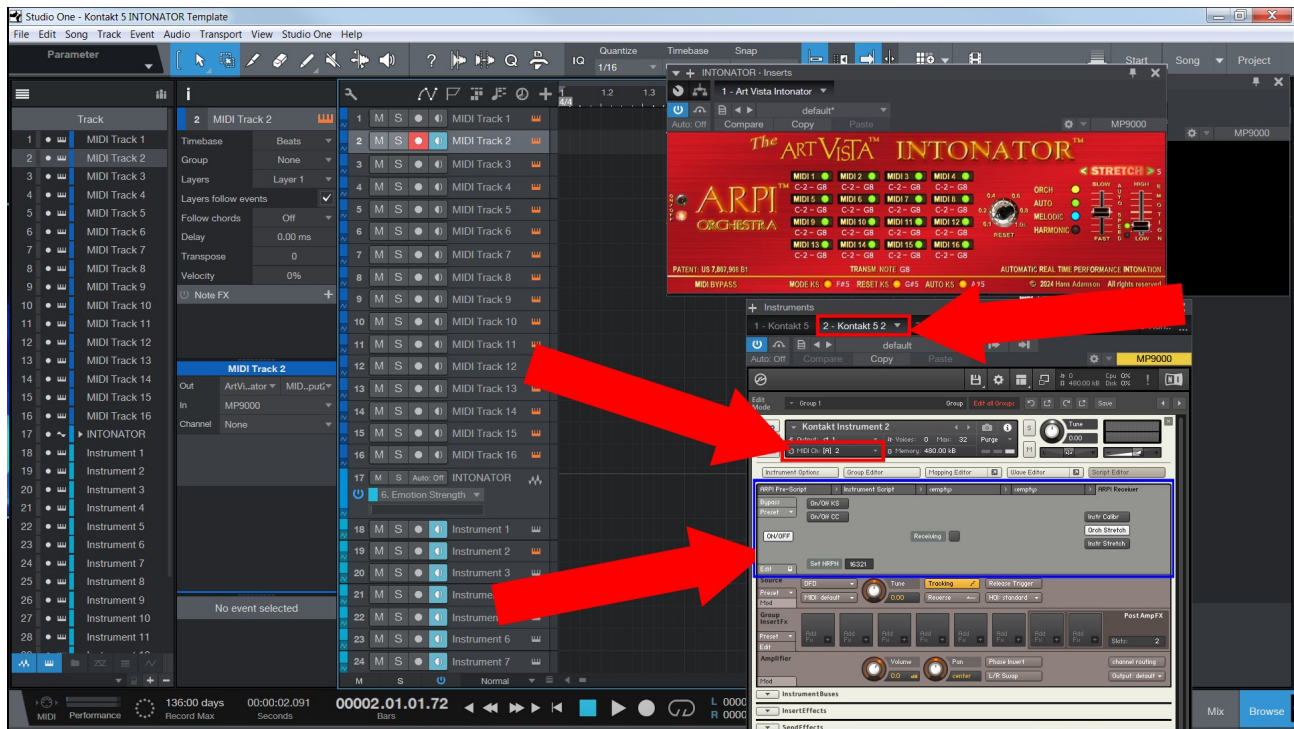
The 16 Kontakt instrument tracks start at track 18.



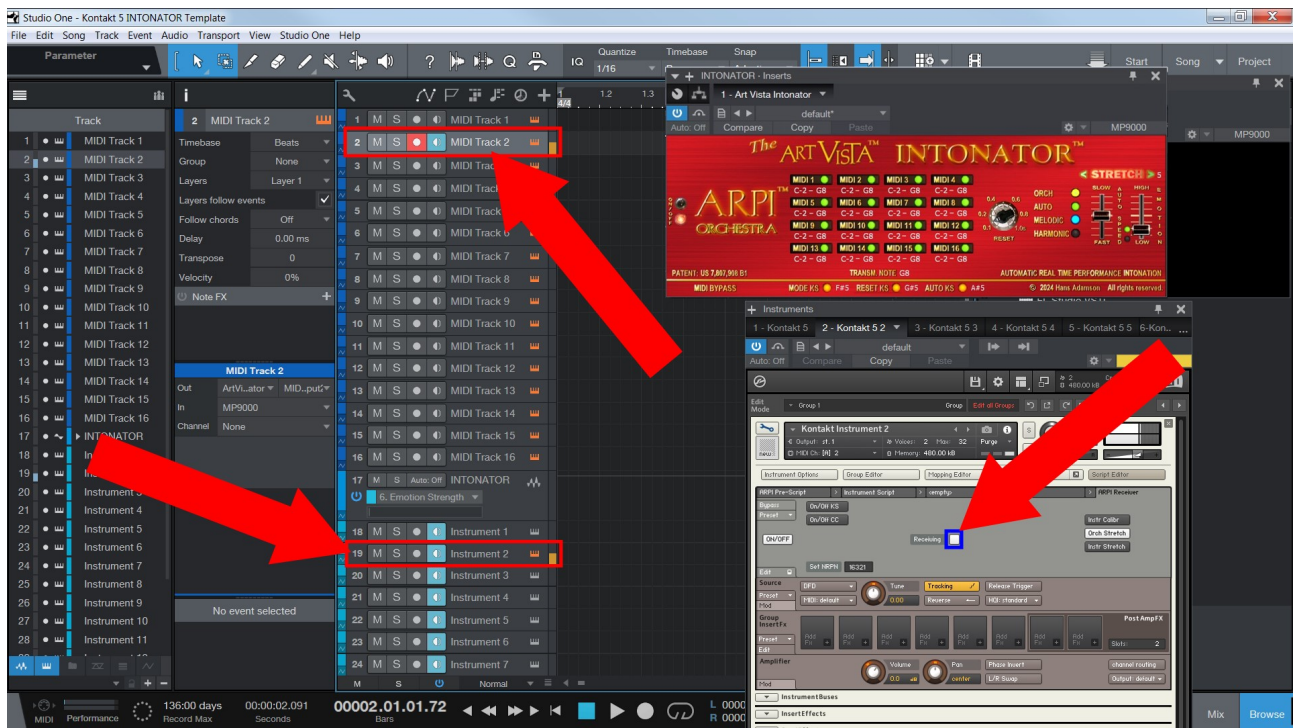
Load the first instrument onto track 18. Re-order the instrument's scripts, inserting the "ARPI Pre-Script" into the very first script slot and "ARPI Receiver" into the very last script slot. (See p. 42-45.) Set the instrument's MIDI channel to "1". Set the Transmitter Note on the "ARPI Pre-Script" to match the INTONATOR setting. Set the instrument's active key range on the INTONATOR. (See p. 12 -13, #5 - #7.)



Load the next instrument onto track 19. Re-order the instrument's scripts, inserting the "ARPI Pre-Script" into the very first script slot and "ARPI Receiver" into the very last script slot. (See p. 42-45.) Set the MIDI channel to "2". Set the Transmitter Note on the "ARPI Pre-Script" to match the INTONATOR setting. Set the instrument's active key range for channel 2 on the INTONATOR. Repeat this procedure for each new tuned instrument you load on the following tracks (3, 4, 5...16), setting the MIDI channel to consecutive numbers 3, 4, 5... etc. (See p. 12 -13, #5 - #7.)

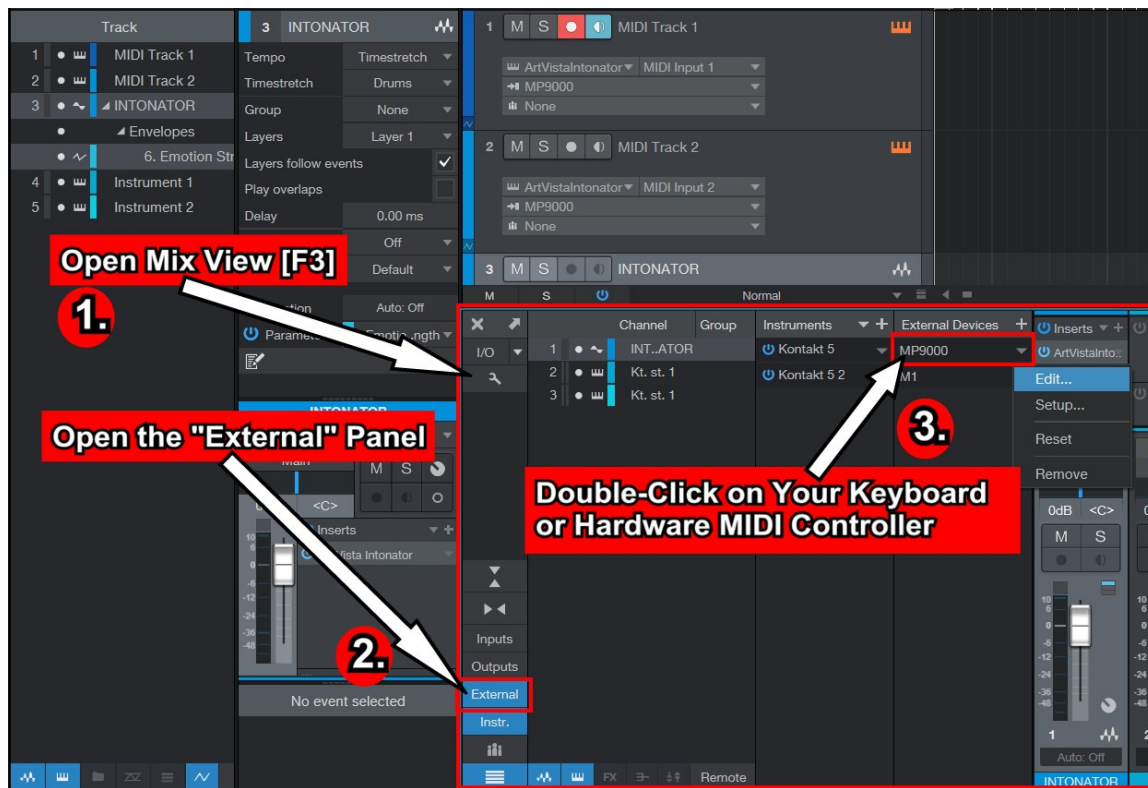


You can test the setup by arming a track and checking that the track instrument RECEIVER's indicator lamp lights up intermittently when playing.

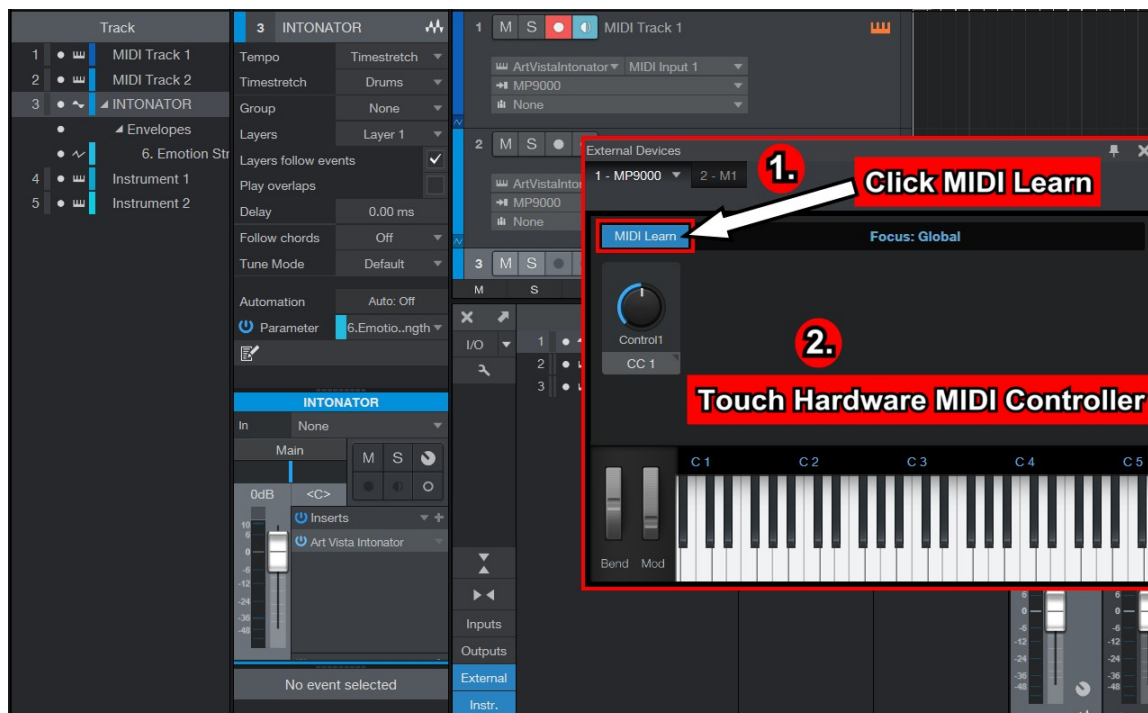


“Emotion Strength” is by default assigned to MIDI CC 112, but it may be assigned to any MIDI CC #. To do this, follow the steps below:

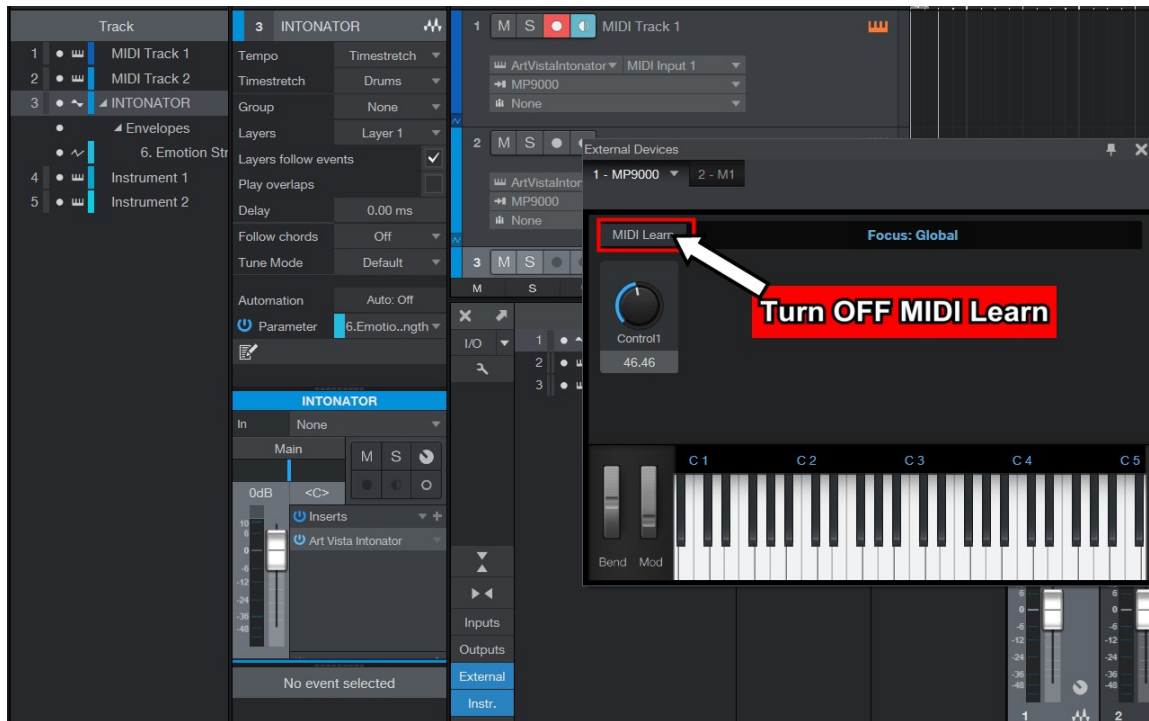
1. Use F3 to open your “Keyboard Settings”.



2. Click “MIDI Learn” and touch the hardware MIDI controller you want to use for Emotion Strength.



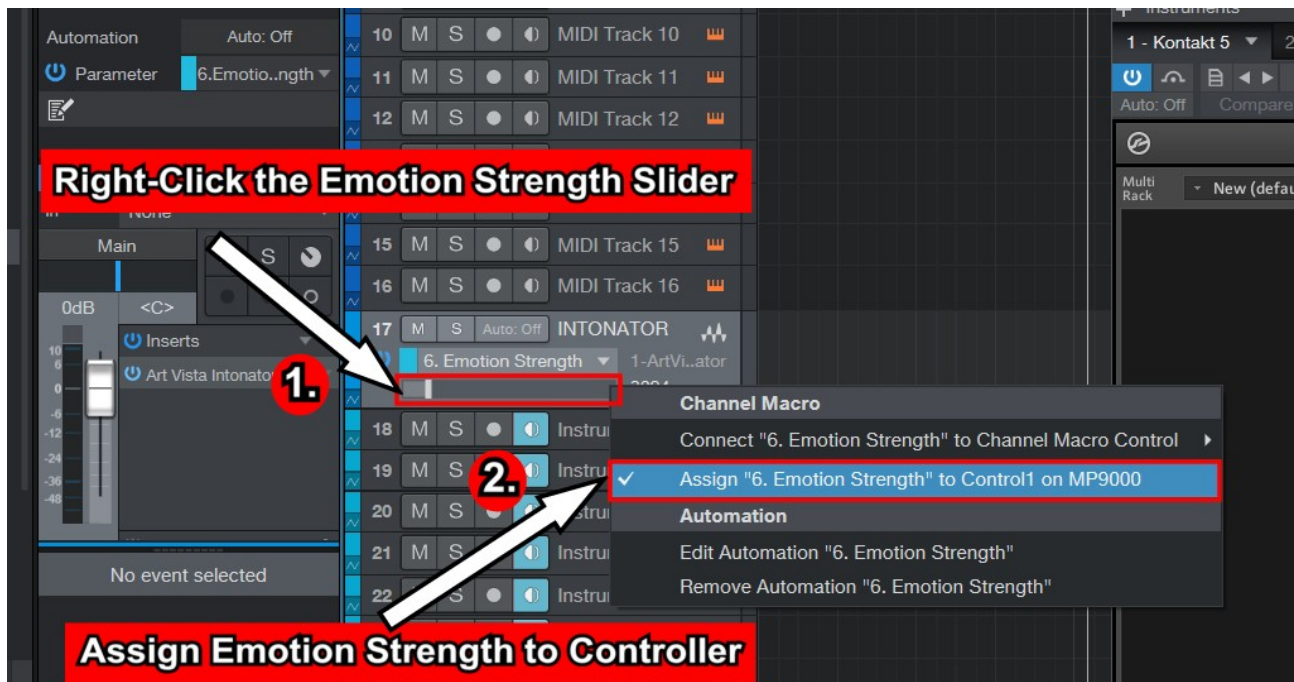
3. Turn OFF “MIDI Learn”.



4. Close the Keyboard and Mix View windows.



5. Right-click on the “Emotion Strength” slider and assign the parameter to a new MIDI CC # and controller.

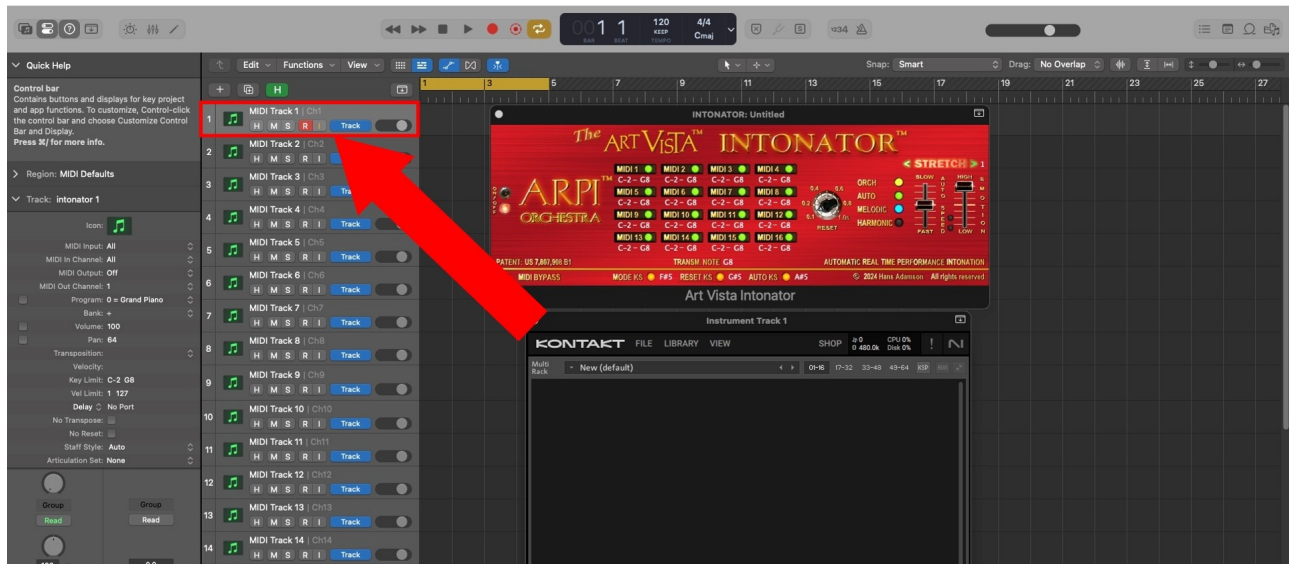


Logic Pro

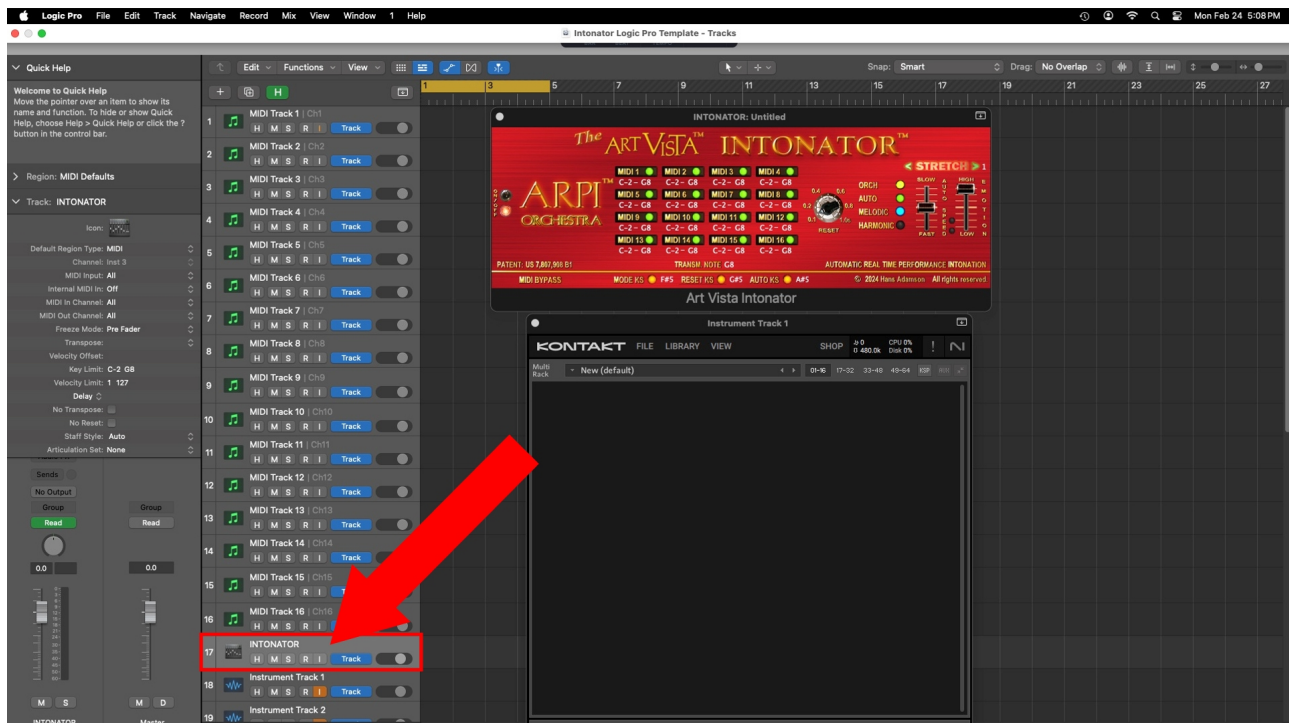
The factory template comes pre-loaded with a “Kontakt Test Instrument” based on sine waves. Use this instrument to familiarize yourself with the intonation system and how it works. A full version of “Art Vista Back Beat Bass – Kontakt Edition” is also included as an example of how the Kontakt scripts should be installed.

To set up your own custom template, remove the test instrument from Kontakt and follow the instructions below.

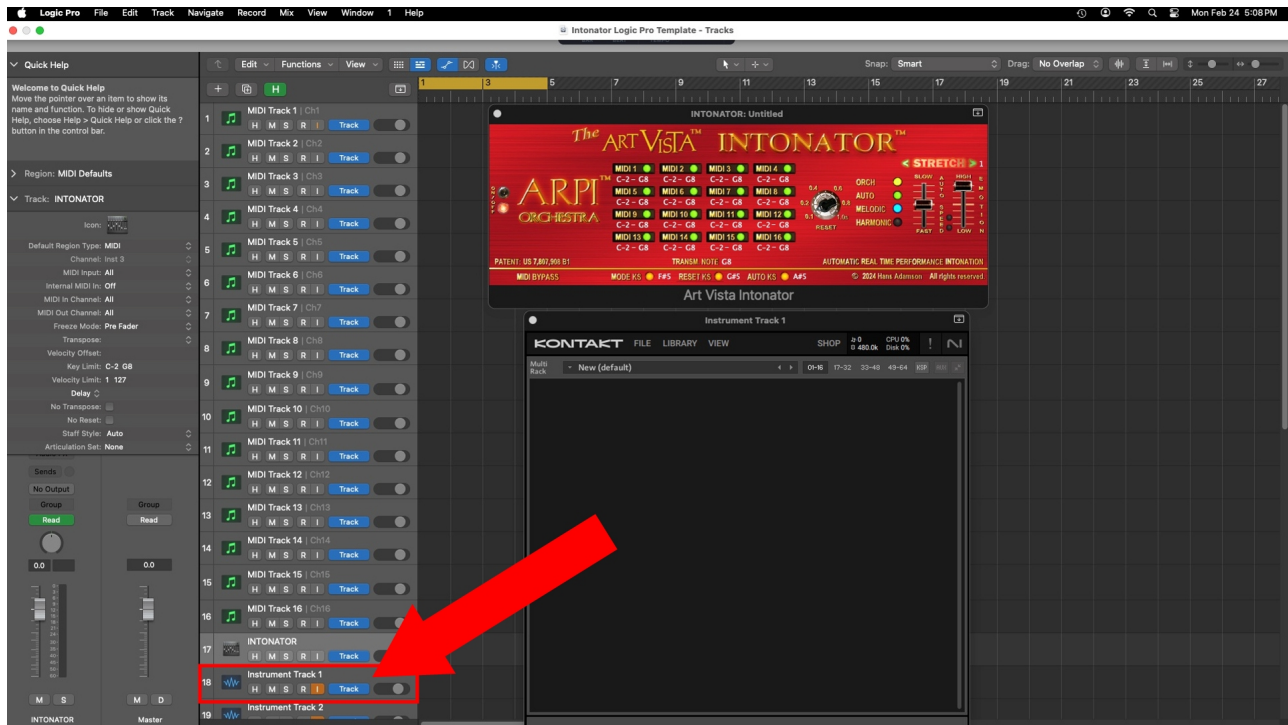
Arm MIDI Track 1 for recording. The first 16 tracks are MIDI tracks. Track 17 is the INTONATOR track. Tracks 18-33 are Kontakt instrument tracks.



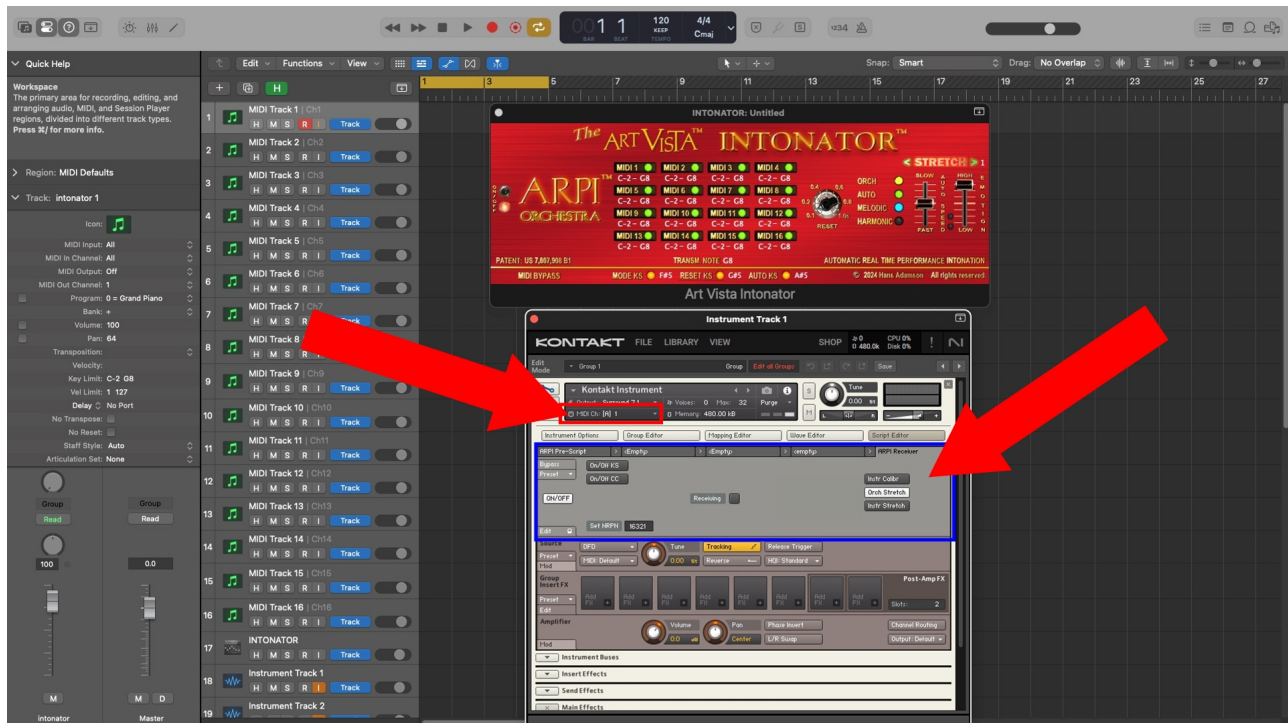
Below the INTONATOR on track17, is the INTONATOR track where the “emotion” parameter may be automated.



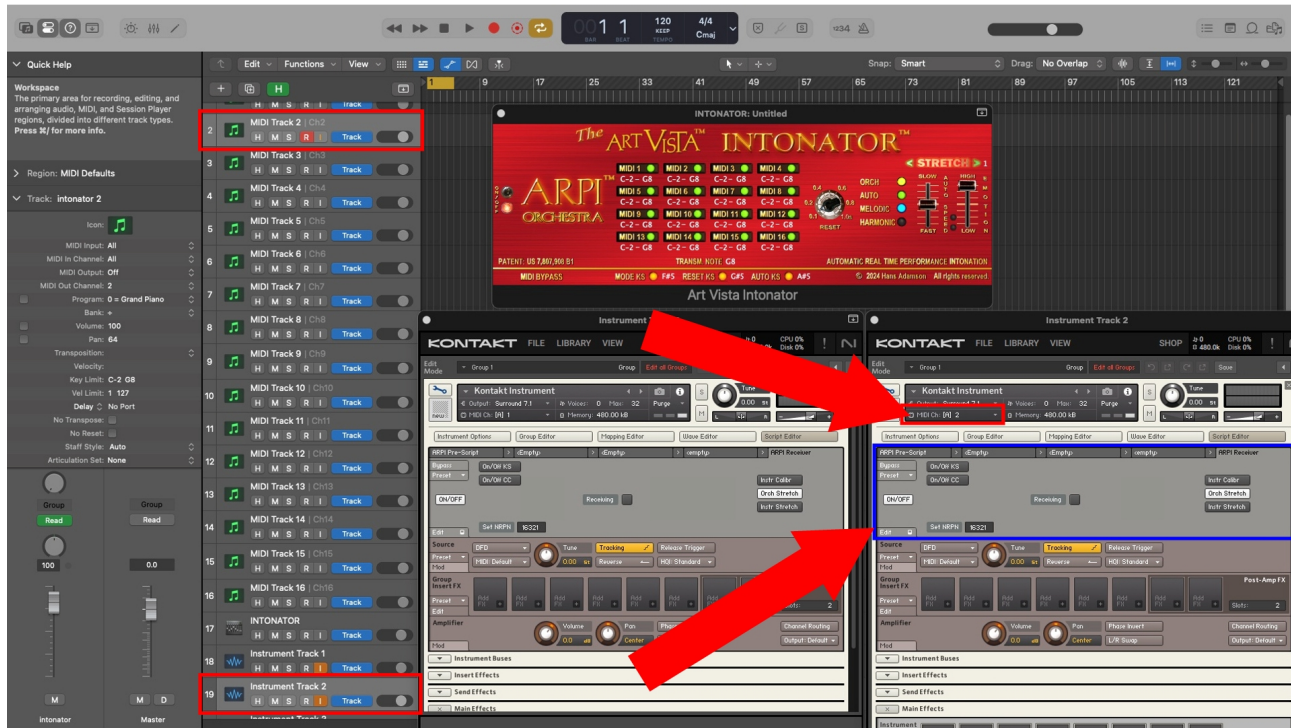
The 16 Kontakt instrument tracks start at track 18.



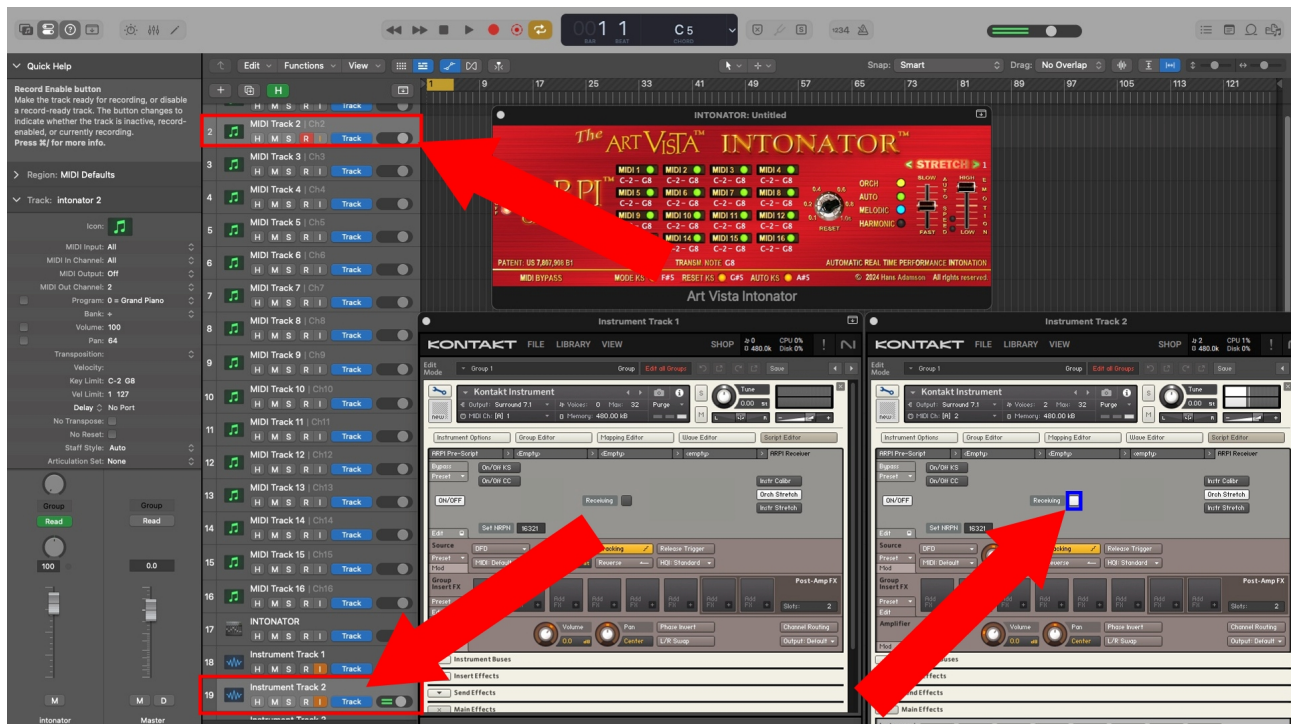
Load the first instrument onto track 18. Re-order the instrument's scripts, inserting the "ARPI Pre-Script" into the very first script slot and "ARPI Receiver" into the very last script slot. (See p. 42-45.) Set the instrument's MIDI channel to "1". Set the Transmitter Note on the "ARPI Pre-Script" to match the INTONATOR setting. Set the instrument's active key range on the INTONATOR. (See p. 12 -13, #5 - #7.)



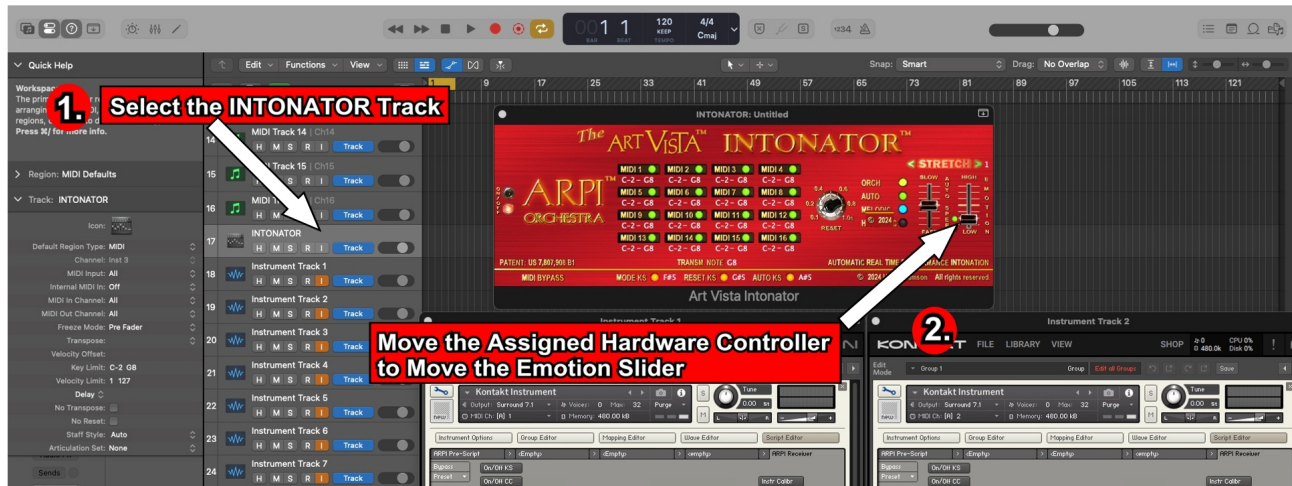
Load the next instrument onto track 19. Re-order the instrument's scripts, inserting the "ARPI Pre-Script" into the very first script slot and "ARPI Receiver" into the very last script slot. (See p. 42-45.) Set the MIDI channel to "2". Set the Transmitter Note on the "ARPI Pre-Script" to match the INTONATOR setting. Set the instrument's active key range for channel 2 on the INTONATOR. Repeat this procedure for each new tuned instrument that you load on the following tracks (3, 4, 5...16), setting the MIDI channel to consecutive numbers 3, 4, 5... etc. (See p. 12 -13, #5 - #7.)



You can test the setup by selecting a track and checking that the track instrument RECEIVER's indicator lamp lights up intermittently when playing.



To use MIDI CC to control "Emotion strength", the INTONATOR track must be selected.

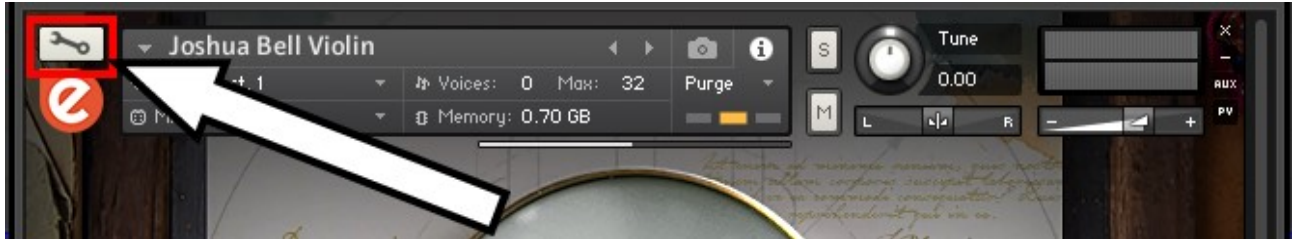


Note: By default, the "Emotion Strength" parameter is assigned to MIDI CC 112, but it may be changed to any other MIDI CC #.

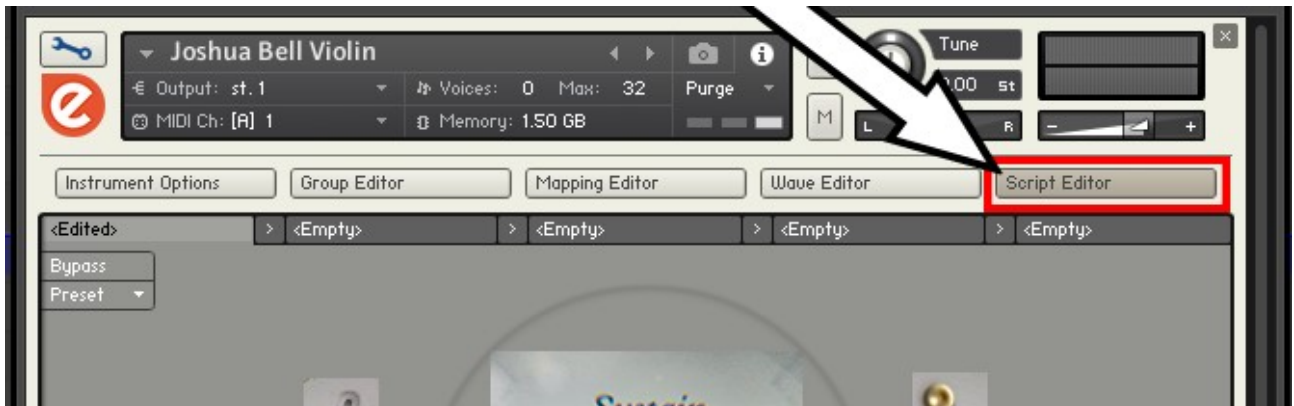
Installing the RECEIVER and Pre-Script in a Kontakt Player instrument.

It is necessary to install the “Pre-script” in the first script slot and the “RECEIVER” in the last script slot. So we must make place for them. If the main instrument script occupies the first slot, it must first be saved, and then be loaded in the second script slot. Take a look at the script configuration in the included “Art Vista Back Beat Bass” instrument for an example of this installation.

1. Click the “wrench” button in the upper left corner.



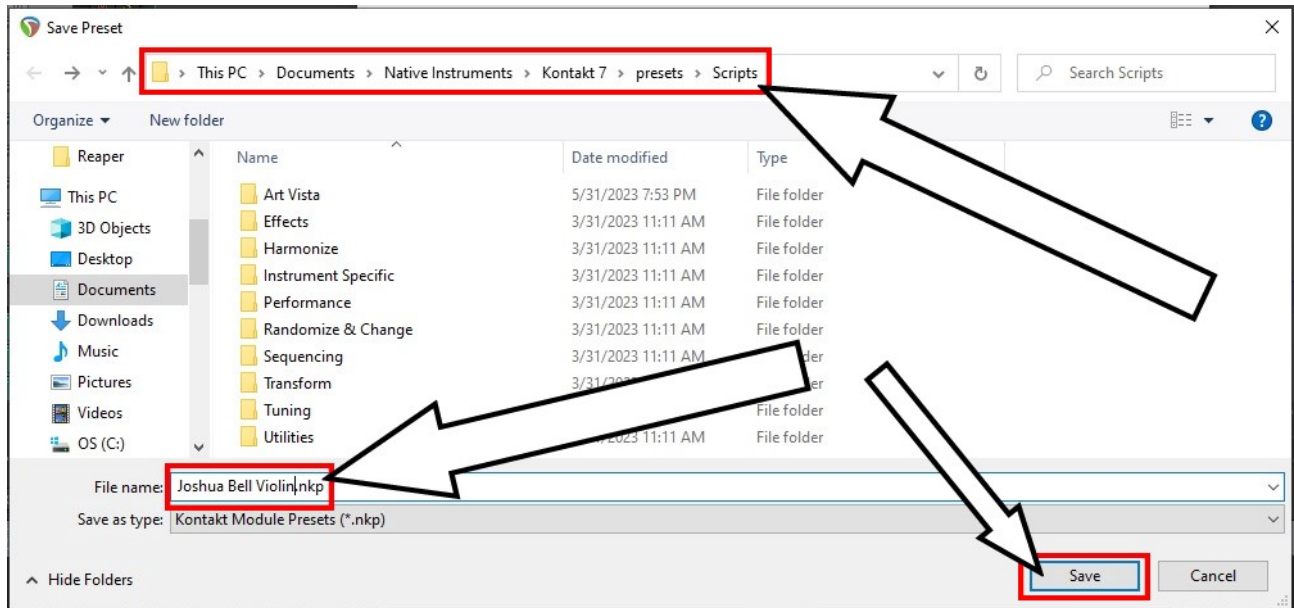
2. Open the Script Editor by clicking the lower right button.



3. Select the first script tab. Click the “Preset” button and choose “Save preset...”



4. Name the file and save it to the Kontakt “Scripts” folder.



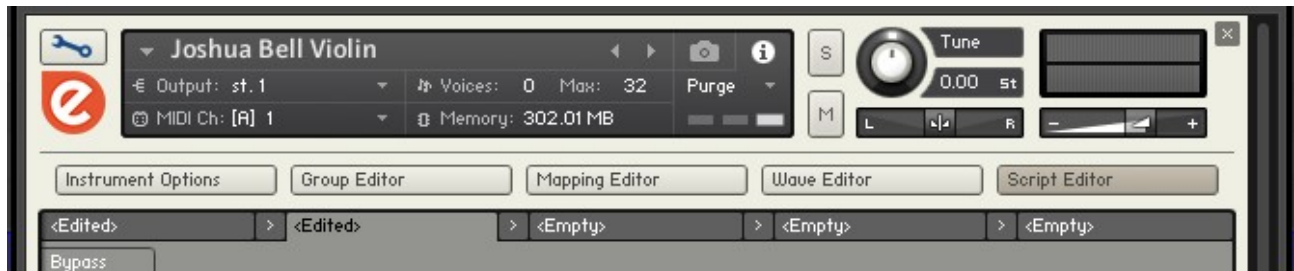
5. Select a tab with an empty script slot (not the first and not the last.)



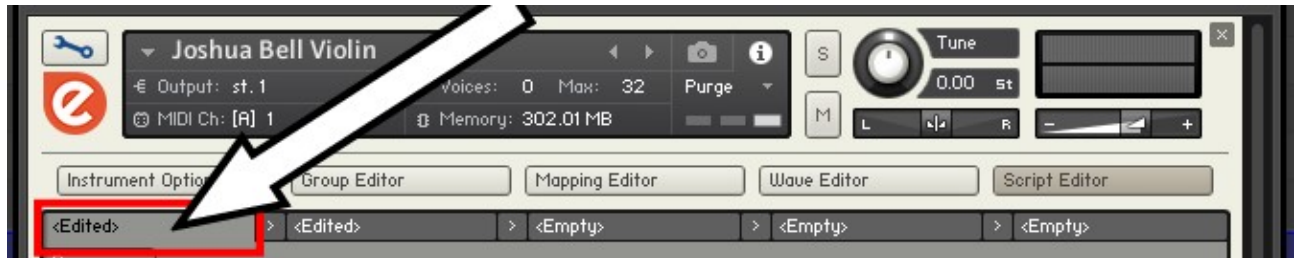
6. Click “Preset” and select the instrument script you saved in step 4.



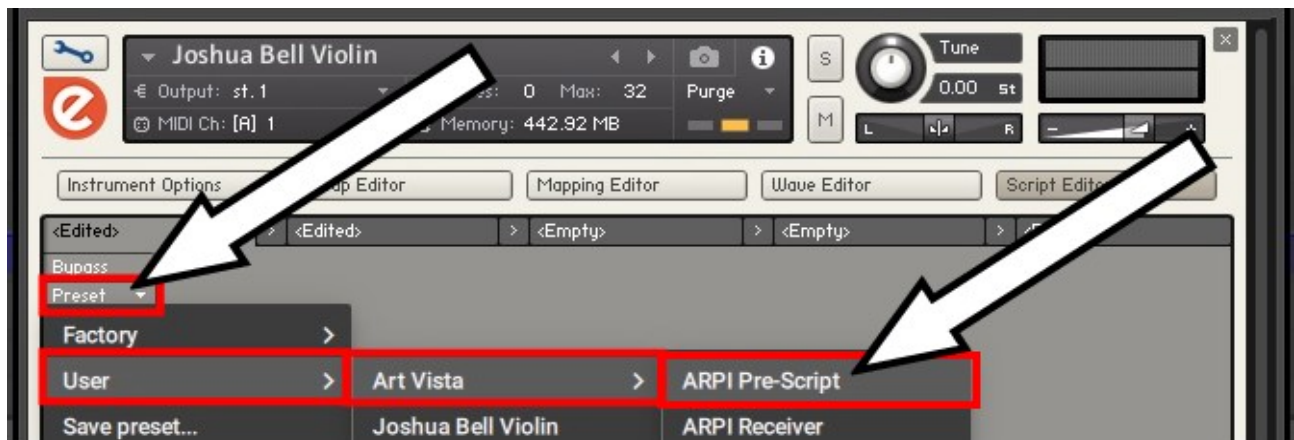
7. The instrument script is now copied to script tab 2.



8. Click to open script tab 1.



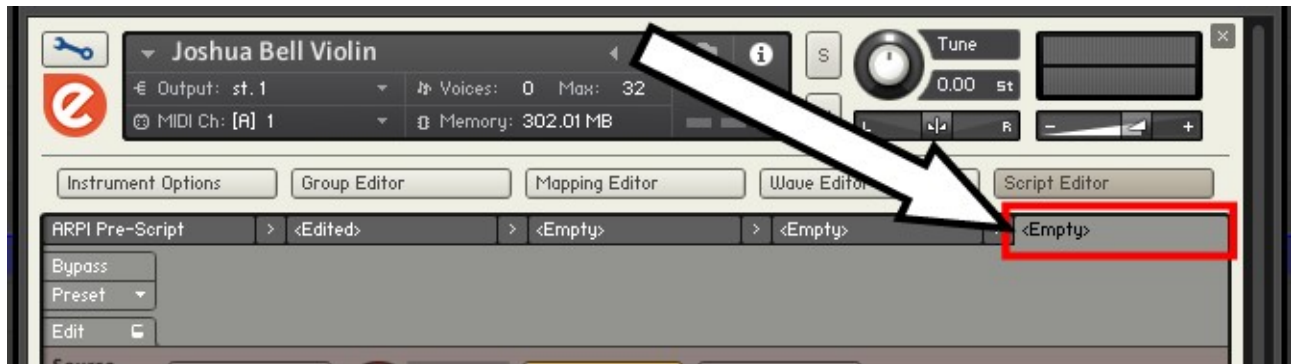
9. Click on "Preset" and select "ARPI Pre-Script" in the "Art Vista" folder.



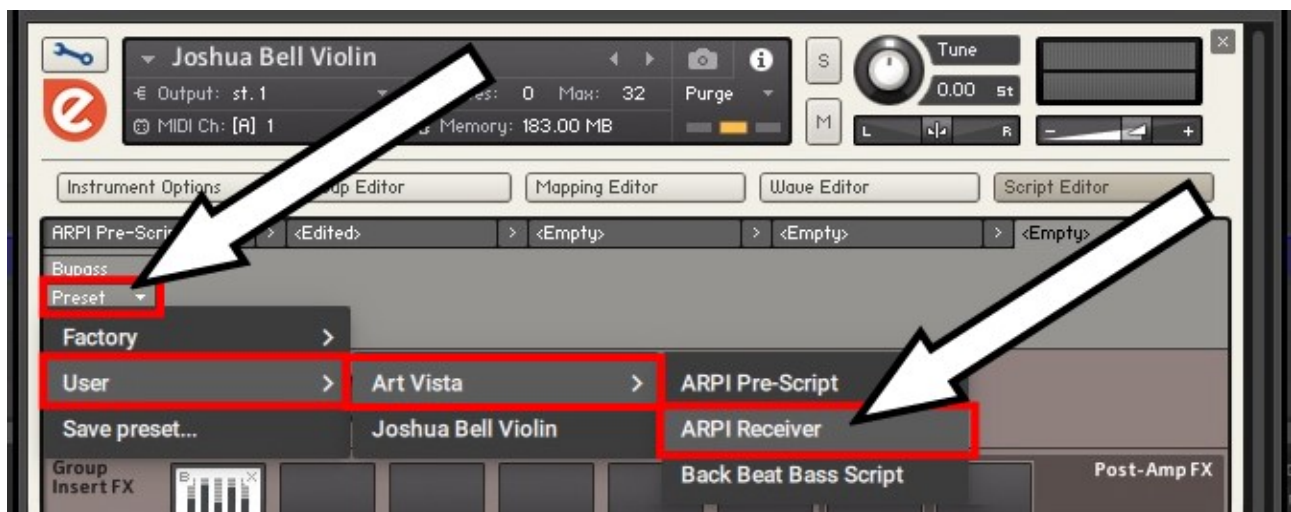
10. The Pre-Script is now loaded in the first script slot.



11. Select the last script tab.



12. Click on "Preset" and select "ARPI Receiver" from the "Art Vista" folder.



13. The Pre-Script and the RECEIVER have now been installed in the first and the last script slots, while the original instrument script has been moved to the second script slot.



Instrument Compatibility Test Procedure

1. Install the system as described above.
2. Navigate to 'Art Vista Orchestra Intonation System\Instrument Compatibility Test' and open the "Instrument Compatibility Test" template for your DAW.
3. Play the Compatibility Test MIDI sequence (pre-loaded) with the "Kontakt Test Instrument" to familiarize yourself with how to interpret the results.
4. The first of two tests is played: a D-Major scale, ending on C#.
5. While the last note (C#) is playing, the tuner plugin is displaying +20 cents.
6. Next, an arpeggiated chord is played D-A-F# and the notes D and A are released to allow the tuner to show the intonation of F#. The tuner is displaying -14 cents.
7. Replace the "Kontakt Test Instrument" on Instrument track 1 with the instrument you want to test.
8. Play the Compatibility Test MIDI sequence with the instrument you want to test.
9. The first of two tests is played: a D-Major scale, ending on C#.
10. While the last note (C#) is playing, the tuner plugin should display +20 cents, or around that value, depending on how accurate the instrument's default tuning is.
11. Next, an arpeggiated chord is played D-A-F# and the notes D and A are released to allow the tuner to show the intonation of F#. The tuner should display -14 cents, or around that value, depending on how accurate the instrument's default tuning is.

If the instrument displays these two intonations correctly, then it is compatible with the Art Vista Orchestra Intonation System, and the ARPI compatibility logo may be used. (See p. 23) If the instrument fails, reload the test template and run the test with the pre-loaded Kontakt Test Instrument. A test with the Kontakt test instrument should always show a compatible result. If not, check that the "Emotion" parameter on the Intonator is set to maximum using CC. If DAW MIDI CC control is enabled for the "Emotion" parameter, the fader on the INTONATOR interface will indicate the current received MIDI CC setting. Moving the on-screen fader with a mouse will not change the "Intonation" parameter, only the assigned MIDI CC knob will do this.

The Art Vista Orchestra Intonation System is subject to change without notice.