

GARRITAN



GPO4

Garritan Personal Orchestra 4.0

A R I A
E N G I N E

www.garritan.com

A Guide to
GARRITAN
PERSONAL ORCHESTRA®
Version 4





A User's Guide to
GARRITAN
PERSONAL ORCHESTRA® Version 4

Including the ARIA™ Player
And including ProjectSAM sounds

Copyright © 2011 by Garritan Corp. All rights reserved.

This guide written by: Gary Garritan and Tom Hopkins

Produced by:	Gary Garritan
Director of Programming:	Tom Hopkins
ARIA Engine Development:	Plogue Art et Technologie Inc.
Additional Programming:	Eric Patenaude, Jeff Hurchalla
Document Editing:	Jim Williams, David Sosnowski and the Extraordinary Team of Beta Testers
MIDI Programming:	Markleford Friedman
Art Direction:	James Mireau
Project Management:	Max Deland
Select Brass Samples:	Project SAM



Garritan Personal Orchestra® is a registered trademark of Garritan Corp. Use of the Garritan Personal Orchestra® library and the contents herein are subject to the terms and conditions of the license agreement distributed with the library. You should carefully read the license agreement before using this product. The sounds presented in Garritan Personal Orchestra® are protected by copyright and may not be distributed, whether modified or unmodified. The Guide to Garritan Personal Orchestra and instrument lists contained herein are also covered by copyright. ARIA™ is a trademark of Garritan and Plogue Art et Technologie, Inc. Finale is a trademark of MakeMusic, Inc., Steinway™ is a trademark of Steinway & Sons, Endless Wave is a trademark of Conexant, Inc., and any other trademarks of third-party programs are trademarks of their respective owners. No part of this publication may be copied, reproduced, or otherwise transmitted or recorded, for any purpose, without prior written permission from Garritan Corporation. The information contained herein may change without notice and does not represent a commitment on the part of Garritan Corporation.

Garritan Personal Orchestra

Garritan Corporation
P.O. Box 400, Orcas, WA 98280 USA

Visit us on the World Wide Web at: www.garritan.com



Table of Contents

Welcome to the ARIA Player.....	6
Garritan Personal Orchestra At a Glance.....	7
What is Garritan Personal Orchestra.....	8
Uses for Garritan Personal Orchestra.....	8
End User License Agreement.....	9
What the Personal Orchestra Package Includes.....	10
How to Use This Manual.....	10
Further Documentation.....	11
Specifications & Computer System Requirements.....	12
Regarding Soundcards & Speakers.....	14
INSTALLATION & ACTIVATION.....	18
Quick Reference Installation.....	18
Quick Reference Activation.....	20
ARIA PLAYER BASICS.....	22
Getting Around the ARIA Player Interface.....	24
Using ARIA Player as a Standalone.....	26
Using ARIA as a VST, AU, or RTAS Plug-in.....	26
Notation Version of Garritan Personal Orchestra.....	28
PLAYING GARRITAN PERSONAL ORCHESTRA INSTRUMENTS.....	29
Basic Performance Controls (Brass, Winds, and String Instruments).....	30
The Real-Time Control System (Brass, Winds, and Strings).....	30
1. Modulation Wheel Control (Volume and Expression for Sustain Instruments).....	31
2. Note Velocity (Attack for Sustain Instruments/ Volume for Percussive Instruments).....	33
3. Sustain Pedal (Legato for Sustain Instruments / Sustain for Percussive Instruments).....	33
Auto-Legato & Sustain Pedal Legato.....	35
4. Keyswitching (Changing Articulations and Techniques In Real Time).....	36
5. Additional Performance Controls.....	37
Putting It All Together for a Real-Time Performance.....	39
Building Sections from Individual Instruments.....	40
PERSONAL ORCHESTRA INSTRUMENTS & PERFORMANCE CONTROLS.....	43
An Overview of the Orchestra.....	44
The String Instruments.....	45
The Woodwind Instruments.....	52
The Brass Instruments.....	55
The Percussion Instruments.....	61
The Keyboard Instruments and the Harp.....	65
Chart of Performance Controllers.....	71
Quick MIDI Controller Reference Chart.....	72

ENSEMBLE PRESETS.....	75
Loading Ensemble Presets.....	76
List of Ensemble Presets.....	77
DIRECTORY OF INSTRUMENTS IN PERSONAL ORCHESTRA.....	79
The Woodwind Instruments.....	80
Flutes.....	80
Oboes & English Horn.....	82
Clarinets.....	83
Bassoons.....	84
The Brass Instruments.....	85
French Horns.....	85
Trumpets.....	88
Trombones.....	91
Tubas.....	93
The Percussion Instruments.....	94
Pitched & Non-Pitched Orchestral Percussion.....	94
The Keyboard Instruments and the Harp.....	97
Harps.....	97
Keyboards (Steinway Piano, Celesta, Pipe Organ).....	98
The Solo String Instruments.....	100
Solo Violin.....	100
Solo Viola.....	103
Solo Cello.....	104
Solo Double Bass.....	107
The String Section Instruments.....	108
1st Violin Section.....	108
2nd Violin Section.....	110
Viola Section.....	112
Cello Section.....	113
Double Bass Section.....	116
Full String Section.....	117
Choir Lite.....	118
CODA.....	119
Conclusion.....	120
Getting Help.....	121
The Garritan Community.....	122
Acknowledgments.....	123
Downloadable Sounds and Other Garritan Products.....	124
Free Interactive Orchestration Course.....	126



Welcome to Personal Orchestra

We have all cherished the sound of a symphony orchestra. Orchestral music is everywhere around us—in the movies, on television, in interactive games, live performances, on the radio and in public venues. It is hard to escape the power and influence of orchestral music. What makes orchestral music so expressive and vibrant is its wide variety of instruments. Each and every instrument has a unique sound capable of expressing the entire range of human emotion. When played together, the instruments blend into a wonderful symphony of sound.

Sometimes we might even wonder how it feels to conduct an orchestra or how our music would sound in the hands of a capable orchestra. New computing and sampling technology now makes this possible. With Personal Orchestra the grandeur of a symphony is at your command.

Personal Orchestra has become a standard in the industry and has brought digital orchestration within reach of almost all musicians. We are pleased to offer this fourth edition with the new ARIA sample engine, new instruments (including the renowned Project SAM Brass), and new programming.

Garritan Personal Orchestra is a dynamic library that is evolving and growing. Please check our website at www.garritan.com for the latest up-to-date information, updates, FAQs, troubleshooting, helpful hints, and tutorials.

My goal is to bring the power and majesty of a full symphony orchestra into the hands of any musician who wants to enhance his or her music. It is my hope that Personal Orchestra will enable you to make great music and that it will enrich your life.

Yours in music,

Garritan Personal Orchestra At a Glance

- **A Complete Orchestra at your fingertips**—Garritan Personal Orchestra is an award-winning orchestral library that has become the industry standard. Affordable, easy-to-use, and comprehensive, it includes all the major instruments of the orchestra—strings, brass, woodwinds, percussion, and keyboards.
- **Highest Quality Orchestral Instruments**—Personal Orchestra includes the highest quality collection of orchestral instruments ever sampled. Quality instruments such as a Steinway® grand piano, Stradivari and Guarneri violins, concert harps, celesta, concert pipe organ, and many other fine instruments.
- **No Sampler Required**—The entire orchestral library is integrated with the ARIA Player and works as a virtual instrument. No need to purchase a separate sampler. The Garritan ARIA Player features the Conexant® Endless Wave™ technology for hard disc streaming
- **Easy to Use**—Create great sounding orchestral music quickly and easily. Just load your instruments and play. Standardized controls allow you to become familiar with the library quickly and master all the instruments easily. Play articulations in **real time** and get expressive human-sounding performances. Express your musical ideas fast and with minimal effort.
- **Ensemble Making**—Garritan Personal Orchestra provides individual instruments from which you can build your own ensembles and sections the way you want. Construct solos, duos, trios, quartets, chamber groups, ensembles, sections, or a full symphony orchestra.
- **Notation Integration to Play from the Score**—You can create great-sounding orchestrations directly from the score of supported notation programs. Check your notation program for integrated support for Garritan Personal Orchestra.
- **Universal Format**—Supports all popular formats, Mac and PC, as a standalone program or as a plug-in (VST, RTAS, and OSX AudioUnits), and works with supported notation programs. An entire orchestra can be loaded on a single desktop or laptop computer.
- **Suited for Everybody**—Professional film composers can use this collection for quick orchestral sketches and capturing creative ideas. Hobbyists can use it for adding orchestrations to their tracks. Educators and students can use it for scoring projects or studying orchestration. Imagine orchestrating at the beach, or on a plane, or anywhere!



What is Personal Orchestra?

Garritan Personal Orchestra is state-of-the-art software that reproduces the sounds of a symphony orchestra. It has set the standard for orchestral sample libraries.

At its core, Garritan Personal Orchestra contains samples of many meticulously recorded orchestral instruments. Personal Orchestra integrates a uniquely powerful and high-performance specialized software sampler designed by Plogue Art et Technologie Inc. More than just sampling, the ARIA instrument player includes specially tailored acoustic programming designed to reproduce the sounds of real orchestral instruments.

The included ARIA player can work as a standalone or as a plug-in for most major sequencing audio programs and supported notation programs.

Uses for Garritan Personal Orchestra

- Music composition and arrangement
- Home and project recording studios to provide symphonic orchestral sounds
- A tool with which to learn orchestration in schools, music colleges and conservatories
- Working on scores and parts before committing to a real orchestra
- When accompaniment is needed for practice
- Rehearsal before a performance
- Live performance
- A portable instrument for playing with friends or on stage

Our goal is to bring the rich sound of an orchestra to as many musicians as we can with the highest degree of realism possible on current home computer hardware. We believe, however, that no matter how technologically advanced software instruments may become, no virtual simulation can ever replace a real orchestra. It is our hope that this software orchestra will lead people to consider working with real orchestras and real musicians.



End User License Agreement

Please read the terms of the following software licensing agreement before using this software. By installing and loading these products on your computer you acknowledge that you have read this license agreement, understand the agreement, and agree to its terms and conditions. If you do not agree to these terms and conditions, do not install or use the sounds contained herein. This is the complete agreement between you and Garritan Corporation that supersedes any other representations or prior agreements, whether oral or in writing.

An important thing to understand is that YOU ARE OBTAINING A LICENSE FOR YOUR USE ONLY—THE SOUNDS DO NOT BELONG TO YOU. The implications are described below. The sounds, samples and programming in the Garritan Personal Orchestra remain the sole property of Garritan Corp. and are licensed (not sold) to you. **There are no refunds once installed and registered.**

What You May Do: You may use these sounds in recordings, music productions, public performances, and for other reasonable musical purposes within musical compositions. You may use these sounds in your own musical compositions as much as you like without any need to pay Garritan Corporation or obtain further permission. If you do use these sounds, we ask that you include the following credits in any written materials or credits accompanying your music that utilizes material from Garritan Personal Orchestra (CD booklet, film credits, etc.): *“Instrument samples used in this recording are from Garritan Personal Orchestra”*—or a similar credit where practicable. You are allowed a maximum of four (4) installations per purchase.

What You May Not Do: The enclosed sounds may not be re-used in any commercial sample library or competitive product. You are absolutely forbidden to duplicate, copy, distribute, transfer, upload, download, trade, or loan this software or any of the contents in any way to anyone. You may not redistribute this product in whole or in part through an archive, collection, through the Internet, a binaries group, newsgroup, or any type of media, or through a network. You may not resell the product without written permission from Garritan and payment of an additional fee. The sounds and samples contained within this software may not be edited, modified, digitally altered, re-synthesized, or manipulated without direct written consent from Garritan Corporation.

Disclaimers and Conditions: A right to use Garritan Personal Orchestra is granted to the original end-user only, and this license is not transferable unless there is written consent from Garritan Corporation and payment of an additional fee. The sounds of Garritan Personal Orchestra will only work with the bundled Garritan ARIA Player and will not work with any other sampler. Licensor will not be responsible if the content does not fit the particular purpose of the Licensee. Please make sure before installing this item that it meets your needs, as there are no refunds. Information contained herein is subject to change without notice and does not represent a commitment on the part of Garritan Corporation. The sounds are licensed “as is” without warranties of any kind. Neither Garritan Corporation, nor any agent or distributor, can be held responsible for any direct or indirect or consequential loss arising from the use of this product in whatever form. The ARIA Player is covered by the installer’s End User License Agreement and is incorporated by reference. The terms of this license shall be construed in accordance with the laws of the United States of America and the State of Washington. The user agrees to read the manual before seeking technical support and to make sure his or her system meets or exceeds the recommended requirements. Garritan Personal Orchestra may not be returned for any reason other than manufacturing defects. Again, there are no refunds once installed and registered.



What the Personal Orchestra Package Includes

The Personal Orchestra package includes the following:

- The “Garritan ARIA Player” installer file that contains the ARIA Player software and the ARIA User’s Manual in PDF form. *
- The “Garritan Personal Orchestra 4” installer file that contains the Garritan Personal Orchestra 4 sound library and Personal Orchestra User’s Guide in PDF form.
- If you have not received an Activation Keycard by e-mail, a unique serial number is provided so that you can register the product and receive a keycard. Don’t lose this—store it in a safe place! You may have received this serial number through a reseller if you ordered a download version through them.

* **Note:** Please make sure to get the latest ARIA Player update. Periodic updates are always being made. Log into your account at www.garritan.com to get the very latest.

Before you begin installation, make sure you have read the End User License Agreement in the preceding pages. By installing the software you are indicating you agree to the terms of the license.

How to Use This Manual

The goal of this manual is to help you learn how to use the various instruments contained in Garritan Personal Orchestra and use the controls to play the instruments. Although many dislike reading manuals, if you wish to get the most out of this new library it is essential to read this manual. Doing so will help you understand how to use this software library. The operation of many of the essential features is not obvious and we realize many are not music technologists.

The ARIA Player has a separate manual that can be found in the same directory as this file. Please refer to the separate ARIA Player User’s Guide to find out how to register, activate, and use ARIA. The ARIA User’s Guide is an important part of the documentation.

We’ll do our best to make it easy for you to use this manual and to provide information about the various instruments, playing techniques, and modes of control. And, of course, by no means can playing orchestral music or specific techniques be taught from this or any other manual. Individual study and research will enhance your ability to use this library.

You can refer to this manual whenever you wish. It is provided in digital form as an Adobe Acrobat document file (also known as a PDF) that can be viewed on a computer monitor or printed. If you do not have the Adobe Acrobat Reader, it is available free from www.adobe.com. A digital manual is eco-friendly and can be easily updated. If you need to have a paper copy, you can print this document or order one at www.lulu.com. A printed copy can be a handy reference.




The easiest way to obtain the information you seek is to use the Bookmarks pane along the left side of this PDF document. By opening the Bookmarks pane, you can go to the various topics from the section names. With a PDF document, you can also zoom in to make the page larger to see more details or zoom out to see multiple pages at once.

Further Documentation and Resources

For the latest information, including additional documentation and updates, visit our support pages at www.garritan.com/support. There you can find updated information provided after the manual was written, corrections or additions to this manual, FAQ pages with answers to common questions, suggestions from the users of Garritan software, and news about upcoming Garritan releases. Please also refer to the separate ARIA Player manual that contains important information about using the ARIA Player. You can also visit the Garritan Forums for up-to-date information at: www.garritan.com/forum.html.

Specifications & Computer System Requirements

The following table lists the computer and hardware requirements for using Garritan Personal Orchestra. You can use Garritan Personal Orchestra on most modern personal computers that meet the specifications listed below. These specifications provide the minimum standards. For optimal functioning, we recommend you have a powerful enough computer with a fast CPU (Core 2 Duo or more recommended), a fast hard drive, and a sufficient amount of RAM. Please also observe the system requirements of your host application, notation program, and/or sequencing program, if applicable. See the Garritan forum or website if you are looking for recommendations or more information.

Computer System Requirements		
<i>Computer</i>	<i>Operating System</i>	<i>Hardware</i>
Windows PC	Microsoft Windows 7 Microsoft Windows XP (SP3 required) Microsoft Windows Vista 32 Microsoft Windows Vista 64  	<ul style="list-style-type: none"> • Core 2 Duo CPU or better recommended • 1 GB Minimum, 2 GB RAM recommended to play complex or large orchestrations. There is a direct correlation between the number of instruments that can be loaded and the amount of available RAM. • 3 GB of free hard drive space • Hard drive speed of at least 7200 RPM preferred • Internet connection for download version, DVD-ROM drive required for boxed version installation • Monitor with 1,024x768 resolution or better • A sound card compatible with ASIO 2 • Keyboard: A MIDI interface may be required if you are using a MIDI keyboard. Many keyboards now use USB. The Mod Wheel on the keyboard controls volume so make sure to move it up to an audible level. If you do not have a Mod Wheel, then have the ability to assign the controller within your music program or sequencer. • High-quality speakers and amplifier, or high-quality headphones. • Internet connection for downloads, updates, and online registration.
Mac	Mac OS X 10.6 minimum 	<ul style="list-style-type: none"> • Mac Intel CPU or better, Mac OS X10.6 minimum • 2 GB RAM recommended to play complex or large orchestrations. There is a direct correlation between the number of instruments that can be loaded and the amount of available RAM. • 3 GB of free hard drive space • Hard drive speed of at least 7200 RPM preferred • Internet connection for download version, DVD-ROM drive required for boxed version installation • Monitor with 1,024x768 resolution or better • A sound card compatible with Core Audio • A MIDI interface may be required if you are using a MIDI keyboard. Many keyboards now use USB. The Mod Wheel on the keyboard controls volume so make sure to move it up to an audible level. If you do not have a Mod Wheel, then have the ability to assign the controller within your music program or sequencer. • High-quality speakers and amplifier, or high-quality headphones. • Internet connection for downloads, updates, and online registration.

If you are using Garritan Personal Orchestra within a host music program (such as a notation program, DAW, and/or sequencing program), there may be additional resource requirements. Please also observe the system requirements of your host application, if applicable. The demands of various other processing software (including the sequencer, audio and effects processors, other plug-ins, and so on) can affect functionality.

Updating to the Latest Version

Be sure to check the Garritan website for any possible updates that have occurred since the time your software was manufactured. Software is frequently updated and a more recent version may be available. After the library has been installed, it needs to be activated. You are given a 30-day grace period for each library before activation is required, but it is recommended that you activate as soon as possible.



Regarding Sound Cards, Audio & MIDI Interfaces

The quality of the audio interface will have a significant effect on the quality of the sound you will hear from Garritan Personal Orchestra. It will also have a substantial effect on performance (both latency and polyphony). Therefore, a good sound card is one of the most important components in optimizing the sound and performance of Garritan Personal Orchestra.

In theory, any audio or sound interface that the manufacturer supports for your operating system and computer, and that has good drivers, should work. However, you are unlikely to get the best sonic results from a sound card designed for computer games or system sounds. Most computers come with a consumer-grade sound card, and we recommend that you get a good quality sound interface beyond the one built into your computer. Older SoundBlaster sound cards (that do not support multiple sample rates) and gamer-oriented or home system sound cards may be problematic. It is not possible for us to test all built-in or third-party sound cards, and some interfaces do have problems on some platforms, so please see the specifications page on the Garritan website if you are considering buying a new sound card to run Garritan Personal Orchestra.

A low-latency audio interface with ASIO 2.0 or WDM/WaveRT drivers (Windows) or Core Audio drivers (Mac) is required for Personal Orchestra to work as a standalone program. These drivers are normally installed with the audio interface, or the most recent versions can be acquired from the manufacturer's website. Contact the manufacturer of your interface for more information.

Any MIDI interface the manufacturer supports for your system should work with Garritan Personal Orchestra.

Please note:

When Garritan Personal Orchestra is running as a plug-in, it uses the audio driver selected by the host's setup. If the host (typically your sequencer or notation program) is set up properly and works well, then the ARIA Player plug-in should pass through the same audio and MIDI setup. For this information, please refer to your sequencer's, notation program's, or host's manual.

Regarding Speakers, Amplification, and Headphones

Amplifiers and speakers or headphones are needed to listen to the audio output that Garritan Personal Orchestra produces through the computer's audio or sound card(s).

The quality of the audio amplifiers and speakers is extremely important; there is little point in expending a great deal on a high-end computer system and audio interface but using inferior personal computer speakers.

Regarding 64-bit Computing

Garritan Personal Orchestra with the ARIA Player is 64-bit compatible and takes full advantage of the new 64-bit operating systems, processors, and hardware that are now available. The Garritan ARIA Player is also fully 32-bit compatible. At the time of this writing, 64-bit computing is gaining popularity, but 64-bit hosts, audio, and MIDI drivers have not fully penetrated the entire market. To be true 64-bit the entire audio path must be 64-bit, including sampler, host, operating system, audio, and MIDI hardware. As hosts, operating systems, and hardware become 64-bit enabled, Garritan Personal Orchestra will work with those 64-bit platforms. Please also consult the Garritan website for further information and updated recommendations.

**INSTALLATION
and ACTIVATION**





Quick Reference Installation

Below is just a quick reference for installing Garritan Personal Orchestra. For a complete reference and guide to installing the ARIAPlayer, please refer to the separate ARIA User's Guide included with Garritan Personal Orchestra.

Installing Garritan Personal Orchestra is a three-part process:

3 Steps for Installing Garritan Personal Orchestra:

- **Step 1. ARIA Installation**
- **Step 2. Sound Library Installation**
- **Step 3. Activation**

Installing the ARIA Player and the sound library are now two separate processes. ARIA first is installed, then the Personal Orchestra sound library.

PC Setup: To begin, extract the contents of the zip file you downloaded to a folder of your choosing, then click on the .exe application icon and follow the on-screen prompts. If you have the DVD version just double-click the .exe file.

Mac Setup: To begin, open up the mpkg installer from the installation zip file and follow the on-screen prompts. If you have the DVD version, double-click on the installer icon.

You will be given the option to install several components:

- **Standalone** will load the Garritan ARIA Player as its own software program. You can play instruments, record basic MIDI, and render audio files.
- **VST Plug-in** will let you load Garritan ARIA Player as a VST plug-in to use with sequencers such as Cubase, Sonar, and Reaper, as well as notation programs such as Finale.
- **AU Plug-in** (Mac only) will let you load Garritan ARIA Player as an Audio Units plug-in within hosts such as Logic and Digital Performer.
- **RTAS Plug-in** will let you use Garritan ARIA Player in Pro Tools M-Powered, LE, and HD.

Once you have selected your plug-in installation options, you can specify which parts of the library you want installed. We recommend you install the entire library.

At this point, you can sit back and let the installer do the work. If you have the download version, you can delete the extraction folder once Garritan Personal Orchestra is successfully installed. Before doing so, however, we suggest you make a backup copy of the installation zip file and put it in a safe place. If anything happens to your computer, you can reinstall Garritan Personal Orchestra from the discs or the backup file.

IMPORTANT!

Please do not cancel setup after installation begins, otherwise a partial, broken installation may result.

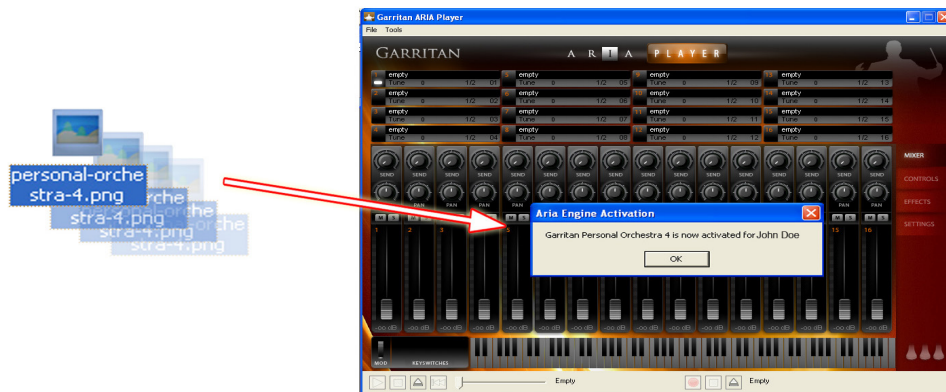
Quick Reference Activation

Garritan Personal Orchestra features an innovative Drag and Drop authorization system. Upon launching Garritan Personal Orchestra for the first time you will be asked to activate it. Clicking yes will launch your browser and bring you to the www.garritan.com website. Here are the steps to activate Garritan Personal Orchestra:



- Create an account on www.garritan.com if you have not already done so, and log in to your account. (**Note:** If you have purchased Garritan Personal Orchestra directly through Garritan you already have an account and received a keycard.)
- A unique serial number is provided by your reseller (if you did not buy direct), so that you can register the product and retrieve your activation keycard PNG image. Follow the on-screen instructions to enter your serial number and proceed to download your keycard.
- Save the keycard PNG to your desktop and launch the ARIA Player in standalone mode.
- With ARIA Player's screen open, literally click and drag the PNG icon from the desktop onto the ARIA Player screen. You will see the successful authorization!

Drag and Drop Keycard PNG Icon from the Desktop onto the Garritan Personal Orchestra ARIA Player



Alternative: Drag and Drop from your Browser

Another method would be to drag and drop the personalized keycard PNG image from your browser (when logged into your account) onto the ARIA Player. Dragging and dropping your keycard may not work with all browsers and you should first try the previous method.

Another Alternative: Use the File Menu

You can also go to the File Menu, open the PNG file from there, and ARIA will activate.

IMPORTANT!

For more information about activating the ARIA Player and Garritan Personal Orchestra Instruments, please refer to the ARIA User's Manual.



**ARIA PLAYER
BASICS**



Getting Around the ARIA Player Interface



1. The **active instrument** light shows you which instrument's parameters you are changing. Click this area on another instrument to change the focus of the controls.
2. The **instrument display** features a drop-down menu for loading that appears when the field is clicked.
3. **MIDI channel assignment** is quick and clear.
4. **Tuning controls** help you to control fine tuning.
5. **Stereo output assignment** allows you to route instruments to as many as 16 unique stereo output channels when ARIA runs as a plug-in.
6. **Per-instrument sends** let you apply the perfect amount of reverb to each instrument.
7. **Mute and solo** buttons allow you to silence or solo the individual channels so you hear only certain parts in a mix.
8. **A keyboard** shows the range of notes that can be played on that instrument (indicated by the white notes), keyswitches in pink, and the selected keyswitch in beige.

9. **Keyswitch window** displays the active keyswitch.
10. **Graphical faders** give you a quick idea of an instrument's presence in the mix. The faders respond to *CC#7* commands.
11. **Window Selection** allows you to select between the Mixer, Controls, Effects, and Settings windows.
12. **Ensemble Presets** allow you to quickly load instrumental groups and ensembles. Please refer to the section on Ensembles later in this manual for a list of presets.

For more information about the features of the ARIA Player, please refer to the separate ARIA User's Manual.



Using the ARIA Player

Once installed and activated, you can load Garritan Personal Orchestra into the ARIA Player. There are several ways to use Garritan Personal Orchestra with the ARIA Player: you can play it “live” as a standalone application, as a plug-in within a sequencer, or with a supported notation program.

Using ARIA as a Standalone

If you have installed the standalone version of the ARIA Player, you can find it in your Applications folder or Program menu. ARIA will attempt to determine the best audio playback configuration to use on your machine. You can access ARIA’s playback system from the Tools > Preferences menu.

To use a MIDI keyboard with Garritan Personal Orchestra, make sure to have the device drivers installed and the unit turned on before starting the ARIA Player Standalone. Your MIDI control device should appear in the MIDI Input Devices menu of the Preferences dialog.

The Ensemble Manager allows you to use preconfigured or user-created templates, such as a small chamber group or a large symphonic orchestra. Using existing templates or creating your own can save a lot of setup time. You can also load instruments yourself and use the File>Save command. The File>Save As Default command will automatically load all settings and instruments that are currently present each time you start the program.

The Standalone program also features a MIDI and audio recording system located on the bottom of the screen. With these controls you can load existing MIDI files for the ARIA Player to play back as well as record yourself playing live.

Using ARIA as a VST, AU, or RTAS Plug-in

Depending on your system and the options you selected at installation, you may have one or more of these plug-in formats available.

Configuring VST

At installation you will be prompted for the vstplugins folder directory. The installer will attempt to locate an existing vstplugins folder, or you can specify your own. You can always

find the VST in the Garritan/ARIA Player/VST directory. The VST plug-in ends in a .dll extension. In your host's VST plug-in configuration menu, ensure that the specified installation directory is included in the list of VST directories. You may need to re-scan the folders to have ARIA Player VST appear in the list of software instruments.

From there, just load the ARIA Player and go! You will find the VST listed as ARIA Player VST.dll, which contains a single stereo output, and ARIA Player Multi VST.dll, which allows you to assign up to 16 stereo outputs.

Important Notes for PC Users:

To use the ARIA Player with more than one VST application, you need to manually copy the ARIA Player VST_x86.dll, installed into the chosen folder during installation of the library, to the appropriate VST-compatible host application's VST folder. Please refer to your particular application's user's guide and the Garritan support site for more information.

Regarding 64-bit hosts: Some hosts have one common VST folder for both x64 and 32-bit plug-ins; please only use the version of the plug-in that is native to your host, *e.g.* for the x64-bit version of Sonar, use the ARIA Player VST_x64.dll. Mac OSX has standard folders for both VST and Audio Units plug-ins and does not require this extra step.

Configuring AU (Audio Units—Mac Only)

The ARIA Player will install into the default Mac OSX AU plug-ins folder, after which it will be readily available to your applications.

Configuring RTAS (Pro Tools systems only)

The ARIA Player will automatically install the RTAS plug-in to its proper location to work with Pro Tools.

For more information about using the ARIA Player, please refer to the ARIA User's Manual.



Notation Version of Garritan Personal Orchestra

Garritan Personal Orchestra contains a separate Notation folder with instruments that are programmed with important differences that make them more compatible with the way supported notation programs such as Finale™ handle MIDI data.

The programming differences are:

- **Legato mode**—controlled by CC#68 rather than CC#64. This difference applies to all sustaining string and wind instruments.
- **Pitchbend range**—extended to +/-12 semitones for all instruments.
- **Keyswitches**—All notation version keyswitches consistently reside in the bottom octave of the MIDI spec (between C-2 and B-2) for all instruments.

PLAYING
Garritan Personal Orchestra
INSTRUMENTS



Playing Garritan Instruments

Garritan provides stellar tools to transform high-quality instrument sounds into stunningly realistic performances. The ARIA Player offers an easy, intuitive, and standardized control system to enable you to play and shape the orchestral instrument sounds, either in real-time or through a sequencer or notation program. The controls for one family of instruments generally carry over to other sections so that you feel at home with the entire soundset, and the system is streamlined so that you can make great music quickly. With a little practice, you can perform several tasks simultaneously, as a real musician does, so you can hear the musical results as you play. This chapter introduces you to the performance controllers that offer you a wide range of possibilities for musical expression.

Basic Performance Controls (Brass, Wind, and String Instruments)



The Real-Time Control System: (for Brass, Winds, and Strings)

With a MIDI keyboard it is possible to start making music within minutes of installing GPO. The four basic controls are shown above. Play the keyboard with your right hand. The sharpness of an instrument's attack is controlled by how hard you strike the key. With your left hand, use the modulation wheel to control dynamics and special keyswitch notes that will alter the playing style of the samples (like turning brass mutes on and off). The sustain pedal connects the notes, allowing you to make slurs and legato transitions.

In addition to these four basic controls, Personal Orchestra features other controls for greater control over your instruments, all of which are user-adjustable. Automatic Variability imparts subtle changes in tuning and timbre. Portamento controls let you continuously glide between notes like string or trombone players. With this controller-based approach, you play your articulations in real time in much the same manner as a real player does.

Note:

Instruments that do not sustain their sounds, such as pianos and drums, follow the General MIDI convention using note velocity for dynamics and sustain pedal for sustains.

1. Modulation Wheel Control (Volume and Expression for Sustain Instruments)



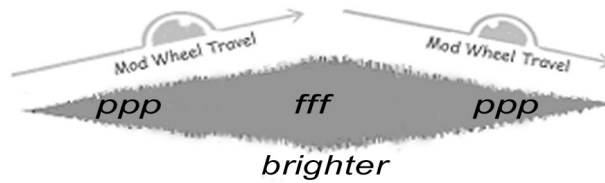
Shaping Dynamics & Playing Expressively

One thing that makes an orchestra sound great is dynamic contrast. Every phrase and the notes themselves have unwritten dynamics and nuances that players interpret. Without dynamics, music lacks its depth of expression. Dynamics and expression in Garritan Personal Orchestra are achieved through the Mod Wheel. Normally, this controller is mounted on the left side of the keyboard and is played with the left hand. With Personal Orchestra, the Mod Wheel simultaneously controls both Volume (*ppp* to *fff*) and Timbre (brightness or tone) for all non-percussive instruments. Especially with the brass instruments, louder levels produce a brighter sound.

Get to Know Your Mod Wheel for expressive, sustaining instruments like winds and most strings!

The Mod Wheel controls the dynamic ebb and flow of volume and timbre changes. In the case of a sequencer, make sure to record a nudge of the Mod Wheel at the beginning of every MIDI track so that GPO instruments will start with the correct volume upon playback. Remember that in GPO the Mod Wheel is not a “set and forget” controller. It is intended to be used as an expressive controller that is in nearly constant motion shaping the volume and timbre of a passage. It is analogous to the air being blown through a wind instrument or a bow being drawn across the strings in a string instrument.

You will discover that using the Mod Wheel Control adds a new dimension of feeling and expression to your performances, making them all the more believable. Try experimenting with the Mod Wheel to develop control over the dynamics. As you play a melody, attempt a gradual crescendo or decrescendo, instead of going suddenly from soft to loud or loud to soft.



As shown above, the Modulation Wheel allows you to simulate a surging crescendo/diminuendo

Exercise:

Play a melody with your right hand only and notice that there is little variation at all. It doesn't sing as it should. Now imagine how you would sing the tune. Where is the peak of the phrase? Where would you make a crescendo and a diminuendo? Now, as you play the melody, attempt those crescendos or decrescendos with the Mod Wheel. Listen to the effect as you make gradual changes, adjusting the dynamics to suit your musical sensibilities.

IMPORTANT!

Even though instruments in ARIA Player load with a default value. It is always best to record Mod Wheel data at the beginning of every MIDI sequence track in order to start with the correct initial volume.

Note:

In addition to the Mod Wheel (CC#1) GPO will also respond to breath control (CC#2) and MIDI expression (CC#11) to control the function of expressive volume/timbre. Be careful to use only one at a time or the data between these controllers will cause interference. It is not necessary for the user to take any steps to activate these extra controllers. They are always active.

In typical General MIDI soundsets, the Mod Wheel is used for its typical function to add modulation or vibrato to the sounds.

2. Note Velocity (Attack for Sustain Instruments/ Volume for Percussive Instruments)



Virtually all keyboards made today support a feature called “Note Velocity” that refers to how hard you strike a given key. The harder you press down a key, the harder and sharper the attack. The more gently you hit the key, the softer the attack.

Applying proper accentuation brings clarity and emphasis to the notes being played. It also shapes the rhythm and flow of a piece of music. The degree of force you apply to the keys will vary depending on the instrument selected and the musical context. With brass and woodwinds, accents are made by “tonguing” to emphasize certain notes. With strings, notes are emphasized by how hard the player digs the bow into the string. Whenever you feel that a note should be accented, do it by striking the key harder.

It is important to note that this control relates to attack strength (for the most part) independent of volume. Most instruments in Garritan Personal Orchestra (brass, woodwinds and most strings) have volume controlled by the Mod Wheel. So, don’t always try to play notes louder by banging on the keyboard, or the result may be a heavily accented note that you did not intend. Percussive instruments (including the piano and pizzicato strings) do use note velocity for volume and volume-related timbre changes, in addition to attacks. The Mod Wheel won’t do anything for those instruments.

3. Sustain Pedal (Legato for Sustain Instruments / Sustain for Percussive Instruments)



Legato—Playing Smoothly and Evenly

So far, we have focused on aspects of performance that are controlled with your fingers, but an important part of your performance comes from your foot. Most keyboards include a sustain pedal. Instruments that can play sustained notes (string sustains, woodwinds, and brass) use the sustain pedal to activate the legato playing techniques. “*Legato*” literally means connected and directs the performer to play smoother transitions between notes instead of accenting each one.

Legato is achieved by holding the sustain pedal down for the desired group of notes. Whenever you depress the sustain pedal, the attack portion of the sample is removed to create much smoother transitions between notes. Just like note velocity accents notes to make them sound detached, the legato feature blends notes into an unbroken seamless musical phrase. To get an idea of what the legato sustain function does, consider the following illustration. This is what the waveform of a musical phrase may look like when played on a typical sampler:



Notice how disconnected the notes are. Using the Sustain pedal removes the attack portion of the sample and connects the notes for a smoother sounding effect. Using Mono Mode makes sure there are no overlaps. The result is a phrase that sounds like a real legato phrase.



In the case of brass and woodwind instruments, notes are tongued when you have your foot off the sustain pedal. Slurs between notes occur when you hold down the pedal. For section strings, *détaché* notes are activated when the sustain pedal is up and legato notes are triggered when the pedal is down. You can also depress the sustain pedal to emulate same-string note changes which are used in rapid scale passages. Some instruments, such as the harp and triangle, use the sustain pedal to switch between the standard full decay of notes and damped notes. For instruments actually possessing sustain pedals (pianos), it functions as you would expect.

Note:

Strings, brass, and woodwinds can also be used with the Auto-Legato feature as an alternative to using the sustain pedal. This feature automatically detects note overlaps and applies changes to the attack and decay characteristics of the note transitions. Auto-legato is located in the Control tab on the ARIA Player.

Choosing Between Auto-Legato and Sustain Pedal Legato (CC#64)

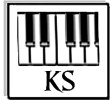
Since Garritan Personal Orchestra gives two choices for legato creation, the question arises: Which should I use? The answer is, “It depends.” Here are the main differences so that you can make an informed choice. Auto-Legato is the most convenient method to use and can give good results when it is applied to take advantage of its intended design, but has some limitations. Those limitations are related to the way it handles polyphony. Its detection of overlapping notes and automatically stopping the first of the overlapping notes in favor of the second means that it functions in what is commonly known as “mono mode.” This gives automatic transition control and the ability to do easy trills but it can only play one note at a time. This means it works well with any single line parts. It won’t work for polyphonic parts where more than one note is played at a time. This means it is best applied to individual instrumental parts like solos or section parts that don’t use divisi or otherwise split the section into playing chords from a single MIDI track.

In contrast, using CC#64 is more flexible and can potentially give superior results but requires more work on the part of the user. It is up to the user to place the CC#64 “switch” data in the MIDI tracks as needed. It is also up to the user to precisely determine note overlaps since the amount of note overlap won’t be automatically determined as with Auto-Legato. This gives the user great flexibility in adjusting the sound of the note transitions but requires considerable attention to detail to get the best results. Usually, a combination of carefully chosen note overlaps, CC#64 switching, and CC#21 (release/decay) data will allow the user to craft the smoothest legato note transitions. Sometimes in section string parts it may even be advisable to avoid using CC#64 and just overlap the notes to best effect. It all depends on the type of transition the user desires. Experimentation is the key.

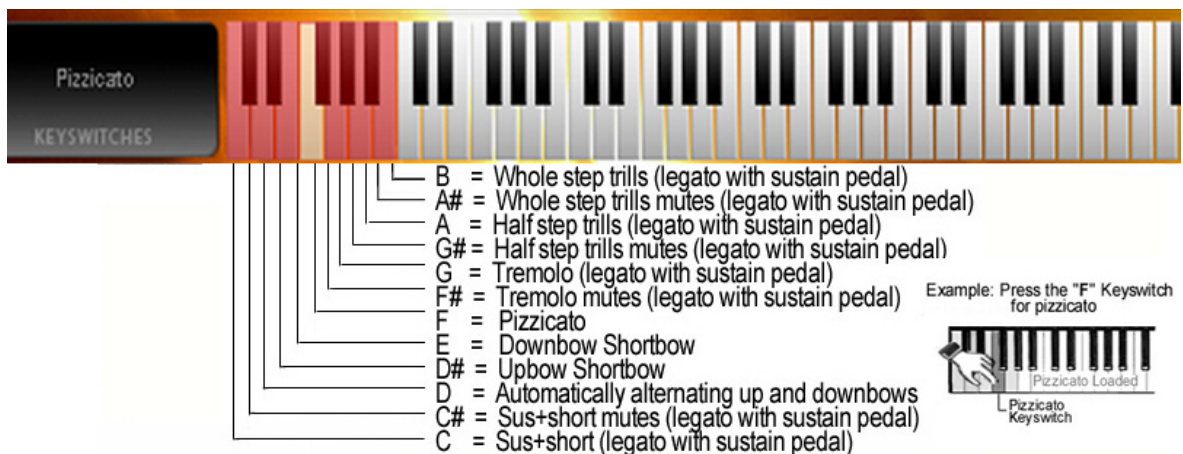
Most users will probably find themselves using a combination of the two types of legato, the choice dictated by the requirements of the track and the specific instruments being used in the composition. In the case of single line parts the user may wish to begin by using the convenient Auto-Legato and changing the approach to CC#64 only if Auto-Legato is insufficient for the desired results. If polyphonic parts are needed then CC#64 is the correct choice.

One more thing to keep in mind: The MIDI controller CC#102 switches Auto-Legato on and off (0=off, 127=on.) This lets you place data in your tracks to activate Auto-Legato conveniently for single lines and turn it off for manual control during polyphonic or special case situations.

4. Keyswitching (Changing Articulations and Techniques In Real Time)



Keyswitching is a feature that allows you to change articulations quickly while playing. With a simple touch of a key located on the keyboard below the normal range of the instruments, you can move between different playing styles of an instrument without having to load multiple patches in multiple slots in the ARIA player. Many instruments in Garritan Personal Orchestra have Keyswitch patches, denoted “KS” next to their name. When you press a key in the Keyswitch area, the ARIA Player loads the corresponding articulation into the playing area of the keyboard. The Keyswitched notes are displayed on the player keyboard in yellow and brown. All patches load using the first Keyswitch as the default. Keyswitches remain active until another Keyswitch message is received. When the appropriate note on the Garritan Personal Orchestra ARIA Player is pressed, it automatically switches to the corresponding articulation. Here is an example of a typical Keyswitch layout for section strings:



KEYSWITCHES

- B = Whole step trills (legato with sustain pedal)
- A# = Whole step trills mutes (legato with sustain pedal)
- A = Half step trills (legato with sustain pedal)
- G# = Half step trills mutes (legato with sustain pedal)
- G = Tremolo (legato with sustain pedal)
- F# = Tremolo mutes (legato with sustain pedal)
- F = Pizzicato
- E = Downbow Shortbow
- D# = Upbow Shortbow
- D = Automatically alternating up and downbows
- C# = Sus+short mutes (legato with sustain pedal)
- C = Sus+short (legato with sustain pedal)

Example: Press the "F" Keyswitch for pizzicato

Keyswitch Tips:

- Always put the Keyswitching note for the particular instrument 'before' the first note of the articulation you want to play, not at the same time!
- If you transpose your score, you must be sure not to transpose the KS notes!! Any transposition to these notes will change (or eliminate) their function.
- Although it may be tempting to use your mouse to trigger one of the displayed Keyswitches in the ARIA Player, it is seldom recommended. The Player's graphic representations of keys, wheels, and knobs are primarily there for auditioning sounds.

5. Additional Performance Controls:



In addition to the four basic performance controls, there are many other ways you can fine tune your Personal Orchestra performances.



Pitch Bend Wheel: This control bends the pitch of a note. You can add scoops, slides, or drops to solo strings or the trombone at the beginning or ending of notes and passages.



Automatic Variability Controls: These controls automatically create tuning and timbre variability from note to note. The VAR 1 knob controls intonation with random tuning variations, adjustable from a few cents to an entire semitone. The VAR 2 knob introduces random variations in timbre quality by adjusting a filter on the instrument. The combination of both controls provides a more human result in the quality of the sound. The VAR 1 and VAR 2 controls can also be adjusted or varied throughout a piece by using MIDI controllers CC#22 and CC#23, respectively.



Portamento Control: This control lets you slide from one note to another. It is particularly helpful with some instruments, such as the trombone and the strings. There is a knob that adjusts the portamento for instruments that use this function. Additionally, MIDI controller CC#20 can be assigned to an external MIDI fader or drawn as graphic data in your sequencer of choice. Portamento is off by default. In general, slides between smaller intervals require greater values than slides between larger intervals. It is best to draw the data manually (for any specific notes that require slides) in your sequencer or to assign this feature to a separate hardware controller (CC#20) for real-time control.



Length Control: The default length is the natural release/decay length of the sample. As you adjust MIDI controller CC #21, the length of the release/decay of the sample can be varied over a useful range. This can be used along with MIDI note length data and velocity strength to give a wider variety of articulation types ranging from very short and light to accented and forceful. With strings this can help simulate bow strokes from light *sautille* to strong *marcato*. It can also give control of note releases in legato situations by lengthening releases for smoother overlaps. With *pizzicato* patches, very short values can give the impression of a damped pizzicato. With wind instruments, very short staccato notes can help create the illusion of double and triple tonguing.



Vibrato Control: Non-vibrato (NonVib) solo woodwind and brass instruments have vibrato control. There are two vibrato controllers: Aftertouch (controls vibrato intensity) and Controller CC#17 (controls vibrato speed). Using these controls, vibrato can be added to a solo part with natural variations in entrance timing, speed variations, and intensity.

- **Hidden Aftertouch (aka Channel Pressure) Vibrato Intensity:** Many keyboards send Aftertouch data when finger pressure on a key is varied while the key is held. Aftertouch data is used to adjust the vibrato intensity of a non-vibrato instrument. This controller data can also be “drawn” into MIDI tracks manually.
- **Vibrato Speed Controller CC#17:** This controller, when used in conjunction with Aftertouch, will vary the vibrato speed. CC#17 can be assigned to an available slider or knob on a hardware keyboard to give real-time control. This controller data can also be “drawn” into MIDI tracks manually.

It is important to be aware that the vibrato features do not apply to any instruments with naturally recorded vibrato in the samples (such as string instruments). Instruments that have vibrato control will display a knob labeled “VibSpd(CC17)” in the Instrument Controls on the Controls tab of the interface.

Note:

M-Audio and some other keyboards often use CC#131 as a substitute for Aftertouch when the keyboard model doesn't have Aftertouch sensitivity built in. A programmable slider on the keyboard can be assigned to CC#131 and the keyboard will output Aftertouch data.



Hidden Pitchbend Defeat Controller, CC#19: This controller is used on sustained string samples and the trombone to aid the creation of portamento effects when going from detached (non legato) playing to legato playing. This controller switches the instrument to a layer that does not respond to pitchbend data. This gives you the flexibility to draw pitchbend data between two notes that only affects the second note of the pair when carefully placed CC#19 data has also been added to the track. This can be used to help solve certain kinds of portamento problems.



Hidden Playable Trills/Wider Interval Tremolo Controller, CC#15 (Strings): The Solo String Keyswitch instruments use CC#15 to control an alternative switching system for trills on Keyswitch notes G# and A. The standard Keyswitches (G# thru B) give you control over half-step and whole-step trills, plus their muted counterparts. The CC#15 controller extends trill intervals from a half-step to as wide as a major third using the following:

- 0-32 = half step
- 33-64 = whole step
- 65-96 = minor third
- 97-127 = major third

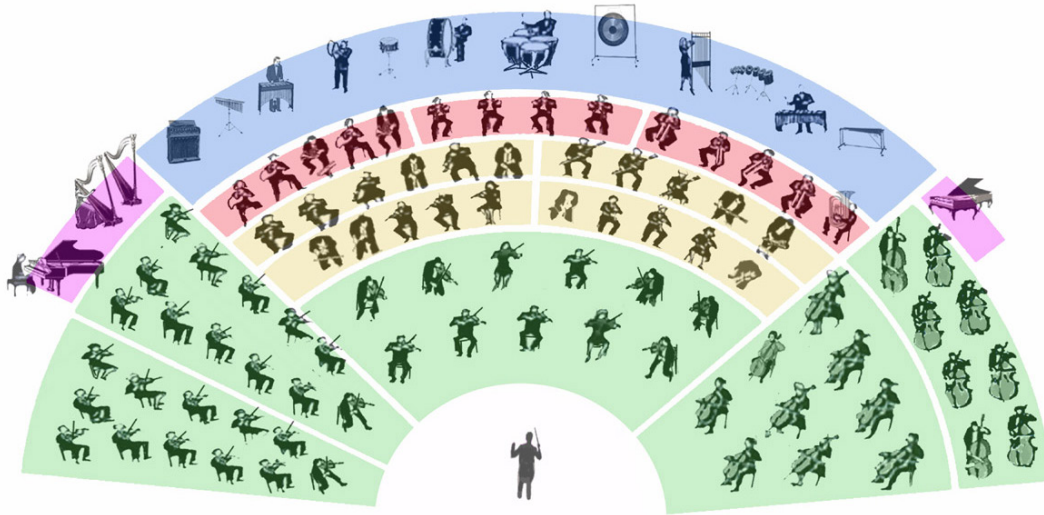
There are advanced controls for the various instruments detailed in the following sections.

Putting It All Together for a Real-Time Performance

The basic system is to use your right hand to control the attack of each note, use the Mod Wheel in the left hand to control dynamics, and the sustain pedal with your foot to connect the notes. It couldn't be easier! With the more advanced controls you can fine tune your performance. This approach lets you play your articulations in real time in much the same manner as a player of the actual instrument does.

Using your hands and feet to perform the different tasks simultaneously requires some coordination. The key is to start simple and to realize that you do not have to do it perfectly the first time. The best way to learn is to practice playing just the notes with one hand. Learn the fingerings for the notes and apply the accents where appropriate. Once you are acquainted with the notes and the accentuation scheme, gradually add the other controllers. For example, play a melody with the right hand. After a few practice runs try riding the Mod Wheel for expression too. Then add the sustain pedal for legato phrasing. Soon you'll develop coordination, and by combining the different controls in real-time you'll have an unlimited amount of expressive capabilities. Once you get the hang of it, you can play almost anything that comes to your musical imagination. Create ensembles of your choosing with individual instruments. By using the real-time performance controls to play each instrument expressively, the final result can be extraordinary.

Building Sections from Individual Instruments



In orchestral scores, composers often write multiple parts for one type of instrument to achieve chords and harmony. With the larger sections, such as the strings, there can be many players on a single part. However, each individual player will still have his or her unique style and phrasing.

With Garritan Personal Orchestra, it is possible to simulate the individual players in an orchestra through a process called *Ensemble Building*. You build instrumental sections, one instrument at a time, exactly the way you want. You can position the players in almost any arrangement on the stage. You can play separate lines or play in unison, you can add more section instruments progressively for a climax, and do *divisi* lines. You can change the layout for a symphony orchestra, a baroque orchestra, or a chamber orchestra. Smaller groups such as concerto layouts, duos, trios, and quartets are also possible.

This is a unique and intuitive approach to MIDI orchestration. When you create a section from separate instruments performed and recorded individually, with variations in timing and expression, achieving a very realistic performance becomes much easier.

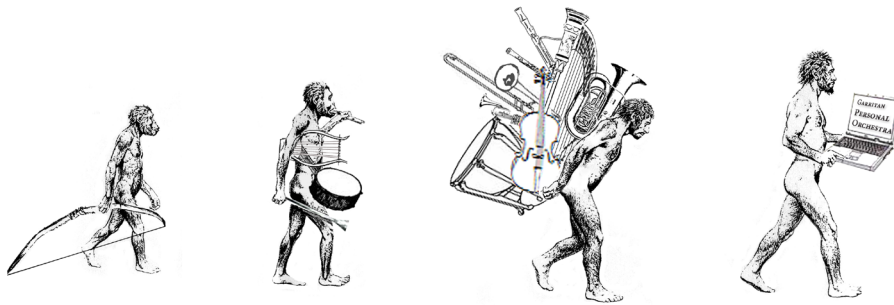
Garritan Personal Orchestra includes a great number of instruments that can be employed as individual players in a section environment. Most instruments (brass, woodwinds, and solo strings) have derivative ensemble player (Plr) instruments. These are solo instruments designed for building ensemble sections. The Plr instruments can be used to create custom-sized ensembles while keeping

resource demands to a minimum. Ensemble instruments are panned to slightly different seating positions but can be changed according to the wishes of the user. The ensemble player (Plr) instruments do not share samples with each other and can therefore be played together without phasing problems (avoid mixing Solo and Plr patches of the same instrument, however). Personal Orchestra's large string section patches can often be convenient to use rather than building a large string section of your own. Nevertheless, multiple solo Plr string instruments will also allow you to create string sections of various sizes.

Example:

If you want a Horn section, load in the first, second and third player (Plr) horns to get your section. A second set of Plr horns will provide the fourth, fifth and sixth players. The “overlays” can also be used to make the section sound even bigger with greater control over brightness at louder levels. Thus, you can create your section playing in unison, playing separate parts or playing divisi with unique expression and phrasing from each loaded instrument.

When you start building sections from separate instruments, with all the instruments playing individually, it will sound incredibly realistic. To learn more see the Ensemble Building tutorials on the Garritan website at www.garritan.com.



Garritan Personal Orchestra
INSTRUMENTS &
PERFORMANCE CONTROLS





Overview of the Orchestra

The orchestra as we know it today took centuries to evolve. Since the first cavemen learned how to produce sound, musicians have organized themselves into groups. An orchestra is a group of instrumentalists who play music together. The term is commonly used to describe a large ensemble composed of strings, woodwinds, brass, and percussion. The word “orchestra” itself derives from the Greek and refers to the semi-circular space in the front of the theater where performers stood. In a modern orchestra, the players are seated in a semi-circle facing the audience and the conductor.

The combining of instrumentalists into string, brass, woodwind, and percussion sections is a relatively recent development in the evolution of the orchestra. Early orchestras first emerged over 400 years ago. They were often just an *ad hoc* group of musicians getting together and playing whatever instruments they had at hand. Small orchestras later accompanied operatic and theatrical performances and also played for royalty and the noble classes. In the 1600s and 1700s, the evolution of instruments accelerated and by the nineteenth century, the variety and number of musical instruments led to the need for a conductor. The golden age of the orchestra was born, and the orchestra finally emerged from its supporting role into prominence. As cities grew, the demand for musical performances increased. Concert halls were built throughout Europe and North America to showcase the orchestra. People traveled for miles to see and hear an orchestra. Composers began writing longer, more complex works for larger and more varied groups of instruments. With a wider array of instrumentation and a growing body of musical works, the orchestra continued to flourish. By the twentieth century some orchestras consisted of more than 100 full-time professional musicians. Today, most of the world’s major cities have their own symphony orchestra, which has become a symbol of cultural pride. The finest orchestras tour foreign countries and serve as musical “ambassadors” for their respective countries. Contemporary composers write orchestral music for television, film, and interactive media, as well as the concert hall.

There are four main families of musical instrument in the modern orchestra: the strings, the woodwinds, the brass, and the percussion. Instruments within each family share common attributes and produce their sounds in a similar fashion. The strings are played with a bow or are plucked; the brass and woodwinds are blown; and the percussion instruments are struck.

STRING INSTRUMENTS



The strings consist of four instruments—violin, viola, cello, and double bass—and are grouped into sections bearing the names of the instruments. The string instruments look very similar, but differ in size and tone. Violins have the highest voices and the brightest tone, basses have the lowest voices and darkest tones, and the cellos and violas fall in between. The string instruments all have four strings and produce sound the same way; by drawing a bow across the strings or by plucking with the fingers.

THE STRING FAMILY



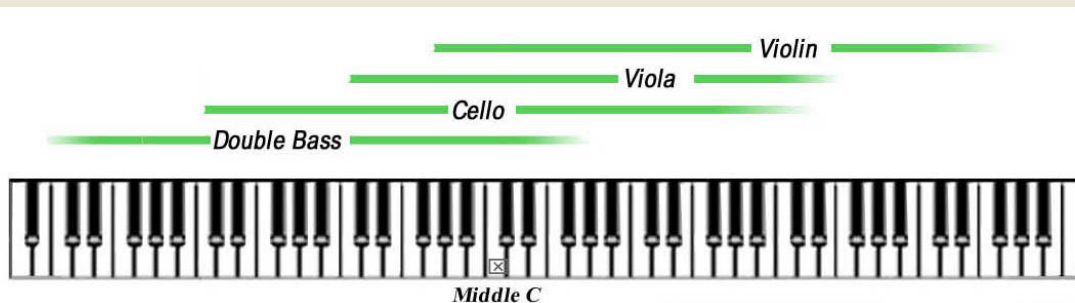
The four individual strings of each string instrument are each tuned as follows:



Note: Bases sound an octave lower than written.

PITCH RANGES—STRING INSTRUMENTS

It is important to be aware of the range (the highest and lowest notes available) of each instrument. Each string instrument has a particular pitch range. The chart below shows the typical ranges of the individual string instruments as they correspond to a piano keyboard. Virtuoso players can often play beyond the typical upper range of the instrument.



THE EXQUISITE STRING INSTRUMENTS IN PERSONAL ORCHESTRA

The string instruments in Garritan Personal Orchestra includes a pair of Stradivari, a Guarneri, several Gaglianos, two Pierrays, two Montagnana cellos, a Testore, a Pallota viola, a Calcanius, a Klotz, a Vaillant, and a Betts, all of which were made in the seventeenth century. Visit www.garritan.com for a complete list of the string instruments in this collection. Amazingly, these string instruments have lasted hundreds of years and still have such a powerful and beautiful sound. The string instruments in the Garritan Personal Orchestra library are collectively worth millions of dollars, although the true value of any fine string instrument is in its sound, which is priceless. The sounds of these exquisite stringed instruments are now at your command.



Pictured above: A few of the actual String Instruments Sampled in this Library. Stradivarius, Guarneri, Gagliano, Montagnana and Pallotta

Playing Personal Orchestra Strings:

Aside from being sampled from some of the world’s finest instruments, the string patches in Garritan Personal Orchestra are programmed in a way that allows for playability and customization. The solo patches of each member of the string family are included in the library as well as keyswitch patches. The keyswitch patches incorporate the most commonly used string articulations into one patch, with the articulations activated by a key outside the playable range of the instrument. Aside from the standard solo patches and keyswitch patches, Garritan Personal Orchestra includes multiple player (Plr) instruments, each programmed in a way that allows you to build custom string sections. These Plr instruments are useful in creating unison and divisi lines where control over each instrument in the section is desired. There are buildable ensembles for each member of the string family. For more information on ensemble building, see the previous section on “Building Sections from Individual Instruments” in this manual.

Garritan Personal Orchestra also includes prebuilt string sections for every member of the strings family. These section samples include sustained/legato, pizzicato, trills, tremolo, muted, and short bow articulations. There are also keyswitch instruments that combine these articulations into one patch. The articulations in the keyswitch patches are activated by a key outside the normal range of these instruments. Also included in Personal Orchestra are full section patches that include all string family instruments grouped together as a way to audition sounds without loading each instrument

section separately. Aggressive patches for the short bow and sustained string patches are included for when a more aggressive sound is needed. These patches should be used when a brighter or harder articulation is desired as the sound of the attack is greater with these instruments.

In order to obtain the best results when using Garritan Personal Orchestra it is imperative to use the built-in programming for the samples. While the samples are certainly playable without understanding the programming behind them, it is only when the programming is understood and utilized that your string solo and ensemble passages will truly come alive. Listed here is the programming included in Personal Orchestra's solo and ensemble string samples and how it is activated with common MIDI controllers.

Basic Controls

Velocity – Attack and Volume (non-sustain only)

Velocity is used to control the initial 'note on' attack strength on all sustained/legato solo and ensemble string patches. This attack represents how hard the bow strikes the string. Velocity is also used to control volume/timbre on short bow and pizzicato patches.

Modulation Controller CC#1 – Volume (sustain only)

This controller is used to control the volume and timbre characteristics of all sustained/legato solo, ensemble, section and full string patches. Playable with your keyboard's Mod Wheel or external controller surface. Can also be drawn in your sequencer tracks by hand.

Legato Controller CC#64 – Legato

This controller is used to create legato lines. You can use an external sustain pedal to control the legato function or it can be entered in your sequencer by hand. Pedal up (CC#64, value 0-63) is detache, pedal down (CC#64, value 64-127) for legato. Alternatively, you could use the Auto-Legato feature.

Portamento Controller CC#20

This controller is used to create portamento during legato passages based on note intervals and CC value. The closer the notes the higher the portamento value used. Inversely, the larger the interval between notes, the lower the portamento value used. Notes further than an octave apart typically do not use portamento. This controller can be used only in conjunction with legato playing when the sustain pedal controller is active.



Length Controller CC#21

This controller is used to shorten or lengthen the release/decay of the samples. When used with the short bow patches, this controller is useful for creating the effect of marcato articulations or can inversely give the effect of lighter bowstrokes in a sautille fashion. When using this controller with sustained strings, higher values of CC#21 can be useful for getting smoother legato lines by increasing note overlap due to sample release times being increased. Most instruments load with this controller set to a moderate level by default.

Variability Controllers CC#'s 22 & 23

CC# 22 controls the intonation of the notes and is useful during repeated note phrases. This control should be used in moderation. CC# 23 controls variations in timbre-volume for the solo and ensemble patches and is useful in repeated note phrases to reduce the appearance of the 'machine gun' effect.

Additional Programming:

Hidden Pitchbend Defeat Controller CC#19

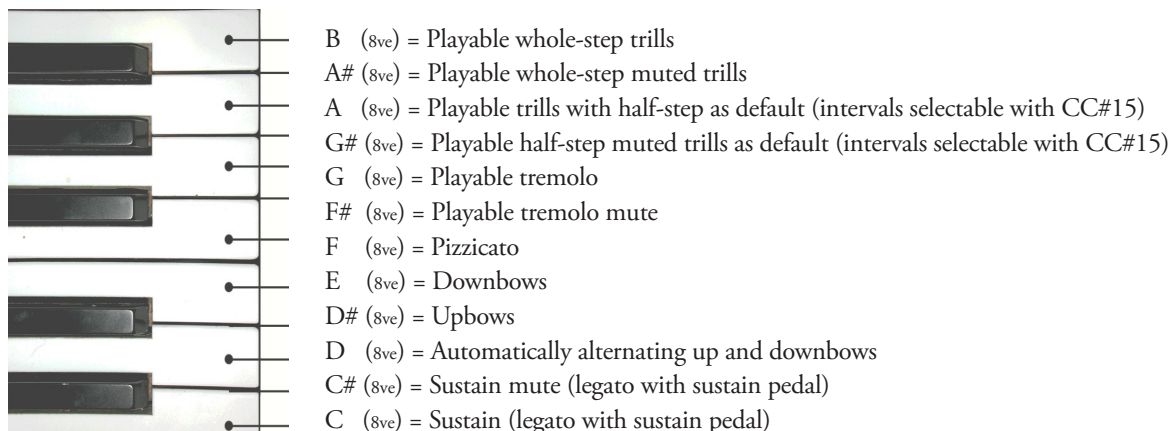
This controller is used on all sustained string samples to aid the creation of portamento effect when going from detached (non-legato) playing to legato playing. This controller switches to a layer that does not respond to pitchbend data. This gives the user the flexibility to draw pitchbend data between two notes, but only having an effect on the second note of the pair when carefully placed CC#19 data has been added to the track. This helps solve certain kinds of portamento problems.

Hidden Playable Trills/Bow Noise Controller CC#15 & 16

This controller has two functions that are patch specific. When used with the AG (aggressive) short bow patches this controller controls bow noise and can be used to add 'grit' to the sound of the patch. The Solo keyswitch strings use CC#15 to control an alternative switching system for trills on keyswitch notes G# and A. The standard keyswitches (G# thru B) give the user control over half-step and whole-step trills plus their muted counterparts. The CC#16 controller extends switching to intervals from a half-step to as wide as a major third using the following values:

- 0-32 = half step
- 33-64 = whole step
- 65-96 = minor third
- 97-127 = major third

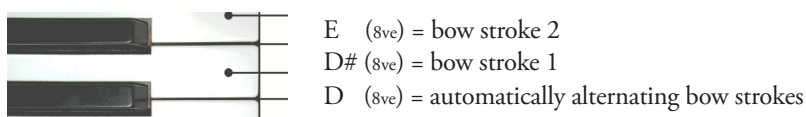
Keyswitch Assignments for the Solo String Keyswitch patches:



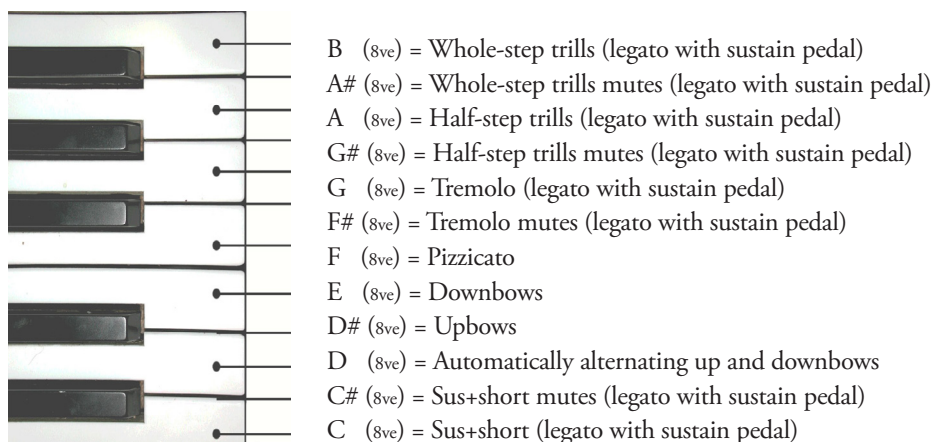
Keyswitch Assignments for Solo and Section String Keyswitch patches:

Note:

When using the short bow patches in Garritan Personal Orchestra, there are hidden keyswitches that allow the user to use the precise bow direction needed. If control over bow direction is needed or desired, this is attainable with these keyswitches. The mapping for this function is as follows::












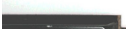


Keyswitch assignments for the Section and Full String Keyswitch patches:



Note:

The keyswitch assignments will vary depending on instrument. Solo string keyswitch assignments are similar, with the exception of the tremolos and trills which are “playable” and do not contain the extra CC#15 controller for larger intervals.

	•	B (8ve) = “Playable” whole-step trills (legato with sustain pedal)
	•	A# (8ve) = “Playable” whole-step trills mutes (legato with sustain pedal)
	•	A (8ve) = “Playable” half-step trills (legato with sustain pedal)
	•	G# (8ve) = “Playable” half-step trills mutes (legato with sustain pedal)
	•	G (8ve) = “Playable” tremolo (legato with sustain pedal)
	•	F# (8ve) = “Playable” tremolo mutes (legato with sustain pedal)
	•	F (8ve) = Pizzicato
	•	E (8ve) = Downbows
	•	D# (8ve) = Upbows
	•	D (8ve) = Automatically alternating up and downbows
	•	C# (8ve) = Sus+short mutes (legato with sustain pedal)
	•	C (8ve) = Sus+short (legato with sustain pedal)

* (8ve) represents the octave (always below the range of the instrument).

- **Pitch Bend**

This controller can be used to add ‘scoops’ or ‘drops’ to the solo violin at the beginning or ending of notes or passages. Especially useful for fiddling. Can be used in conjunction with the portamento controller (CC# 20).

More information about the string instruments in Personal Orchestra including specific tutorials can be found at www.garritan.com.

THE WOODWIND INSTRUMENTS



The Woodwind family consists of a wide variety of instruments, each with its own unique sound. These instruments include varieties of flutes, oboes, clarinets, and bassoons. Quality woodwind instruments sampled in Personal Orchestra include Haynes flutes, Selmer clarinets, and Heckel bassoons.

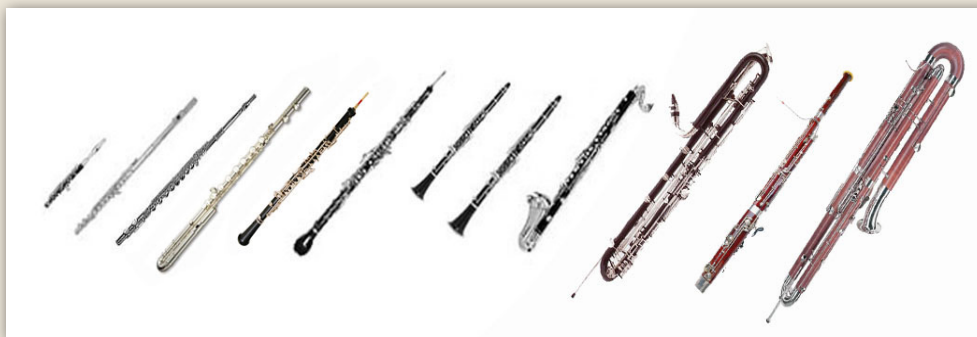
Most of the woodwind instruments really are made of wood and some are made of metal (the flutes, historically, were made of wood but are now made with metal). Woodwind instruments produce their sound by having air blown through a hollow tube. Holes along the length of the body are opened or closed using the fingers (or small pads that are part of a keyworks mechanism), producing varying pitches. With the exception of the flute family, woodwind instruments require reeds to produce their sound.

Whereas the four members of the string family produce sounds in a similar fashion, woodwinds produce their sound differently from one another. As a result, the bassoon has a very different tone than a flute and neither resembles the sound of a clarinet.

THE WOODWIND FAMILY

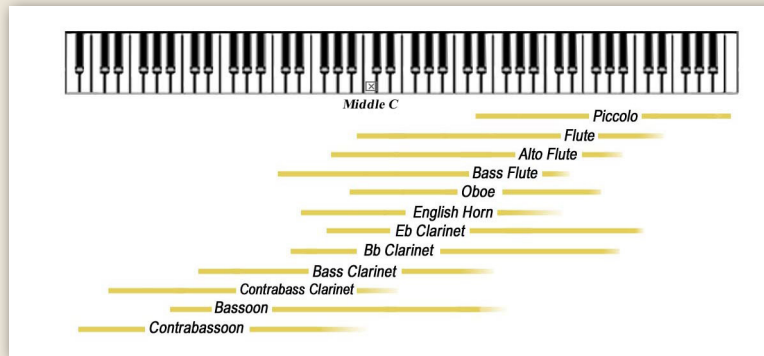
The woodwind instruments in Garritan Personal Orchestra:

Pictured left to right: Piccolo, Concert Flute, Alto Flute, Bass Flute, Oboe, English Horn, Eb Clarinet, Bb Clarinet, Bass Clarinet, Contrabass Clarinet, Bassoon, Contrabassoon.



PITCH RANGES – WOODWIND INSTRUMENTS

The chart below shows some of the typical ranges of the individual woodwind instruments as they correspond to a piano keyboard. These ranges are not absolute and virtuoso players can often play beyond the typical upper range of the instrument.



Playing Personal Orchestra Woodwind Instruments:

The wind instrument samples in Garritan Personal Orchestra are expressive and beautiful. Whether you choose to use them in a solo context, in small intimate ensembles, or in vast orchestral pieces, they are built to suit your every need quickly and painlessly. Included in the library are solo and ensemble versions of all the major instruments in the wind instrument family with some surprises that you would expect from larger, more expensive libraries. For playability, there are keyswitch versions of the flute and piccolo.

In order to obtain the best results when using Garritan Personal Orchestra it is imperative to use the built-in programming for the samples. While the samples are certainly playable without understanding the programming behind them, it is only when the programming is understood and utilized that your woodwind passages will truly come alive. Listed here is the programming included in Personal Orchestra's solo and ensemble woodwind samples and how it is activated with common MIDI controllers.

Basic Programming:

Velocity – Attack

Velocity is used to control the initial 'note on' attack on all sustained/legato solo and ensemble woodwind patches. This attack represents how forcefully the instrument is played. Note: Velocity is only active on the pedal 'up' layer of the instrument. The pedal 'down' layer has no attack on the note start.

Modulation Controller CC#1 – Volume/Timbre

This controller is used to control the volume and timbre characteristics of all sustained/legato solo and ensemble woodwind patches. Playable with your keyboard's mod wheel or external controller surface, or can also be drawn in your sequencer by hand.

Slurred/Legato Controller CC#64

This controller is used to create properly articulated tongued and slurred lines. You can use an external sustain pedal to control the slur (legato) function or it can be entered in your sequencer by hand. Pedal up (CC#64 0-63) is tongued, pedal down (CC#64 64-127) for slurred (legato). Alternatively, the Auto-Legato feature can be used.

Portamento Controller CC#20

This controller is used to create portamento during legato passages based on note intervals and CC value. The closer the notes, the higher the portamento value used. Inversely, the larger the interval between notes, the lower the portamento value used. Notes further than an octave apart typically do not use portamento. This controller can be used only in conjunction with legato playing when the sustain pedal controller is active.

Length Controller CC#21

This controller is used to shorten or lengthen the release/decay of the samples. This controller can be used to improve emulation of double and triple tonguing in the woodwinds. Most instruments load with this controller set to a moderate level by default.

Variability Controllers CC#'s 22 & 23

CC# 22 controls the random variability of intonation of the notes and is useful during repeated-note phrases. This control should be used in moderation. CC# 23 controls random variations in timbre for the solo and ensemble patches and is useful in repeated-note phrases to reduce the appearance of the 'machine gun' effect.

Additional Programming:**Hidden Vibrato Intensity Controller (Aftertouch)**

Many of the non-vibrato solo woodwinds have a hidden vibrato intensity controller to allow the user to apply the level of vibrato to the instrument. The intensity controller controls the level of vibrato. This controller does not apply to the instruments that contain natural vibrato and only applies to instruments that have a non-vibrato choice (shown NV). This controller has also been added to some instruments that do not normally have vibrato (the clarinet or

French horn) to be used along with the Vibrato Speed controller CC# 17. This controller can be drawn in by hand or can be activated with a keyboard that has Aftertouch sensitivity.

Vibrato Speed Controller CC# 17

This controller, when used in conjunction with the vibrato intensity controller, will vary the vibrato speed of those instruments that normally contain no vibrato. As before, this would not affect instruments that have natural vibrato and will apply only to non-vibrato patches (shown NV) to be used along with the Vibrato Intensity Controller (aftertouch).

Keyswitch Assignments for the Woodwinds Keyswitch patches:

There are only two keyswitch patches in the woodwind library, the flute and piccolo flute. This allows the user to switch between the natural vibrato and non-vibrato choices of these instruments on the fly. These keyswitches are as follows:



(8ve) represents the octave (always below the range of the instrument).

Note:

The keyswitch assignments will vary depending on instrument.

More information about the woodwind instruments in Personal Orchestra, including specific tutorials, can be found at www.garritan.com.

THE BRASS INSTRUMENTS



The brass instruments in a modern orchestra include variations of the French horn, the trumpet, the trombone, and the tuba. Each possesses a unique color and range, from the bright piercing sound of the trumpet to the deep, dark tones of the tuba. The brass section is typically seated between the woodwind and percussion sections.

Similar to the woodwind instruments, sounds are produced by air being blown into a bowl- or funnel-shaped mouthpiece connected to a hollow metal tubing that terminates in a bell. Holes in the tubes are opened and closed by valves or a slide, which produce changes in pitch. The vibrating lips of the player have the same function as the reeds in the woodwind instruments.

THE BRASS FAMILY

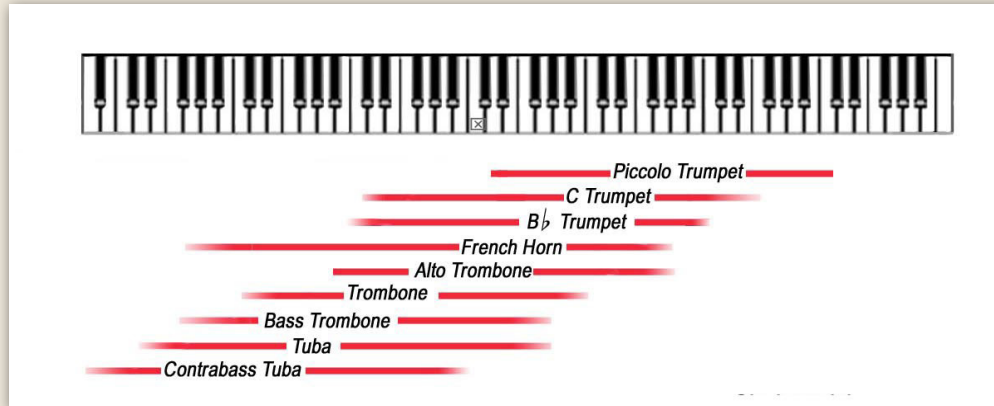
The brass instruments in Garritan Personal Orchestra:



Pictured left to right: Piccolo Trumpet, Bb Trumpets, French Horn, Tenor Trombone, Alto Trombone, Bass Trombone, Tuba, and Contratuba.

PITCH RANGES – BRASS INSTRUMENTS

The chart below shows the typical ranges of the individual brass instruments as they correspond to a piano keyboard. These ranges are not absolute and virtuoso players can often play beyond the typical upper range of the instrument. Good brass players can also play pedal tones. Pedal tones are the lowest possible notes playable with any given fingering and take a great deal of control to produce.



Playing Personal Orchestra Brass Instruments:

The brass in Garritan Personal Orchestra have been exquisitely captured and allow for a very dynamic brass section in your MIDI orchestration. In addition to the standard solo patches included in Personal Orchestra, there are also ensemble patches that allow the MIDI orchestrator to custom size his brass section to meet the need of the composition. In addition to these ensemble instruments there are brass overlays and mutes as well as aggressive patches. The overlays are used to create a larger brass sound while the aggressive patches are useful in adding a punch to the brass section by increasing the hardness of the attack. For more information about the ensemble building feature of Garritan Personal Orchestra, see the previous section on “Building Sections from Individual Instruments” in this manual.

In order to obtain the best results when using Garritan Personal Orchestra it is imperative to use the built-in programming for the samples. While the samples are certainly playable without understanding the programming behind them, it is only when the programming is understood and utilized that your brass passages will truly come alive. Listed here is the programming included in Personal Orchestra’s solo and ensemble brass samples and how it is activated with common MIDI controllers.

Basic Programming:

Velocity – Attack

Velocity is used to control the initial ‘note on’ attack strength on all sustained/legato solo and ensemble brass patches. This attack represents how forcefully the player releases the air column to begin the note.

Modulation Controller CC#1 – Volume/Timbre

This controller is used to control volume and timbre characteristics of all sustained/legato solo and ensemble brass patches. Playable with the Mod Wheel or external controller surface, or can also be drawn in your sequencer by hand.

Legato Controller CC#64

This controller is used to create properly articulated tongued and slurred lines. You can use an external sustain pedal to control the legato function or it can be entered in your sequencer by hand. Pedal up (CC#64 0-63) is tongued, pedal down (CC#64 64-127) for legato. Alternatively, the Auto-Legato feature can be used.

Portamento Controller CC#20

This controller is used to create portamento during legato passages based on note intervals and CC value. The closer the notes, the higher the portamento value used. Inversely, the larger the interval between notes, the lower the portamento value used. Notes further than an octave apart typically do not use portamento. This controller can be used only in conjunction with legato playing when the sustain pedal controller is active.

Length Controller CC#21

This controller is used to shorten or lengthen the release or decay of the samples. This controller is useful for creating *Sforzando* articulations when using the aggressive brass patches or for getting a staccato sound. It can also be valuable in helping to create convincing double and triple tonguing passages.

Variability Controllers CC#'s 22 & 23

CC# 22 controls the intonation of the notes and is useful during repeated-note phrases. This control should be used in moderation. CC# 23 controls variations in timbre/volume for the solo and ensemble patches and is useful in repeated-note phrases to reduce the appearance of the ‘machine gun’ effect.



Additional Programming

Hidden Vibrato Intensity Controller (Aftertouch):

Many of the non-vibrato solo brass instruments have a hidden vibrato intensity controller to allow the user to apply the level of vibrato to the instrument. The intensity controller controls the level of vibrato. This controller does not apply to the instruments that contain natural vibrato and only applies to instruments that have a non-vibrato choice. This controller has also been added to some instruments that do not normally have vibrato (French horn and clarinet) To be used along with the Vibrato Speed controller CC# 17. This controller can be drawn in by hand or can be activated with a keyboard that has aftertouch sensitivity.

Vibrato Speed Controller CC# 17:

This controller, when used in conjunction with the vibrato intensity controller, will vary the vibrato speed of those instruments that normally contain no vibrato. As before, this would not affect instruments that have natural vibrato and will apply only to non-vibrato patches. To be used along with the Vibrato Intensity Controller (Aftertouch.)

Hidden Pitchbend Defeat Controller CC# 19

This controller is used on the solo trombone samples to aid in the creation of portamento when going from detached (non legato) playing to legato playing. This controller switches to a layer that does not respond to pitchbend data. This gives the user the flexibility to draw pitchbend data between two notes, but only affect the second note of the pair when carefully placed CC#19 data has been added to the track. This helps solve certain kinds of portamento problems.

Saturation Controller CC# 16

This controller is used in conjunction with the aggressive brass patches (denoted AG) to add more forcefulness and 'grit' to the sound of these patches.

Pitch Bend

This controller can be effectively used with the solo trombone patches to create 'scoops' or 'drops' at the beginning of notes or passages. Can be used in conjunction with the other portamento controllers (CC# 20 & 19).

Keyswitch Assignments for the Brass Keyswitch patches:

Keyswitches in the brass give the user the ability to switch between open and muted versions of the instruments. These keyswitches are as follows:



D (8ve) = Muted

C (8ve) = Open

(8ve) represents the octave (always below the range of the instrument).

Note:

The keyswitch assignments will vary depending on instrument.

The Overlays:

The brass instruments have “Overlay” instruments, sampled at the *f* or *ff* level that can be layered with the solo and ensemble instruments to achieve a fuller, more massive section sound. The trumpets, trombones, and tubas each have one Overlay instrument and the French horns have two. In general, the Overlay instruments can be used to:

- **Add "body" and resonance to the sound of a brass section.** This can affect the apparent size of the section—making it sound larger.
- **Increase the contrast in timbre from soft to loud.** The contrast increases as you add more Overlay. The soft end of the spectrum becomes mellower, the loud end becomes brighter and brassier.
- **Give the impression of a larger section size** while using fewer resources, consuming fewer instrument slots within a Personal Orchestra instance.
- **Give greater control over strong articulations.** The French horns have two Overlay instruments (*f* and *ff*) because the horns often require a large range of timbre variation in typical orchestral writing. The combination of Solo and Player (Plr) instruments with either or both Overlays can create a large variety of characteristics.

More information about the brass instruments in Garritan Personal Orchestra, including specific tutorials, can be found at www.garritan.com.



Project Sam Brass:

This newest version of Garritan Personal Orchestra now has more brass instruments. A number of Project SAM brass samples are now included. Project SAM produces the most respected orchestra brass samples on the market. Included are samples from SAM Horns, SAM Trombones, SAM Trumpets and SAM Solo Sessions. Known for their ambient, cinematic sound, Project SAM Brass instruments are regularly used in film, TV and music. For Personal Orchestra, the Project SAM brass sections and solo instruments were streamlined and programming modified to blend with the other Personal Orchestra instruments and were then optimized for the ARIA player.



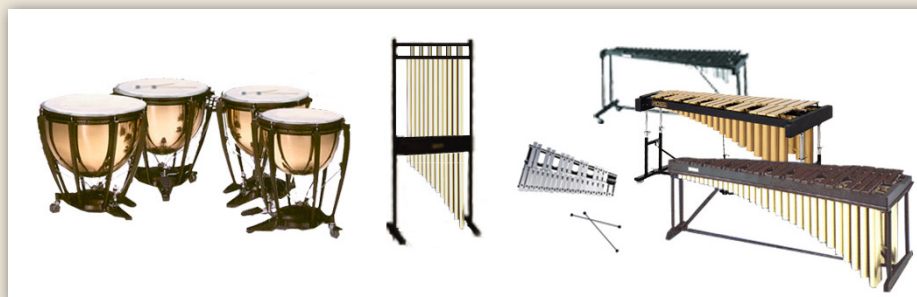
THE PERCUSSION INSTRUMENTS



The Percussion instruments are often the loudest members of the orchestra and are seated at the back of the orchestra. The instruments of the percussion family are played by being hit, shaken, or scraped. Percussion literally means “hitting of one body against another.” The percussion section provides a variety of rhythms and tonal textures in an orchestra. It is also the most varied section, and since there are many different percussion instruments, players often master a variety of instruments.

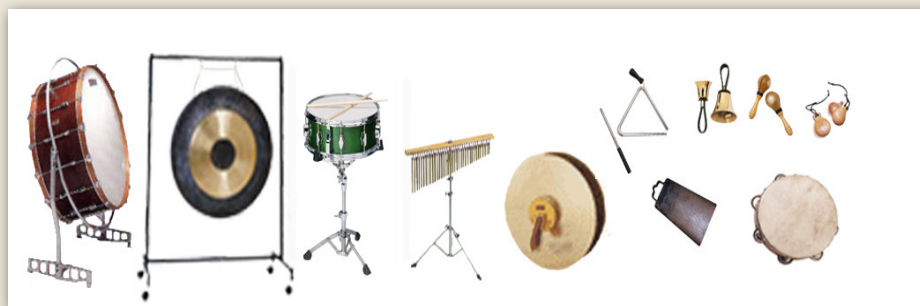
THE PERCUSSION FAMILY

The **pitched** percussion instruments in Personal Orchestra:



Pictured left to right: Timpani, Tubular Bells, Glockenspiel, Xylophone, Vibraphone, Grand Concert Marimba.

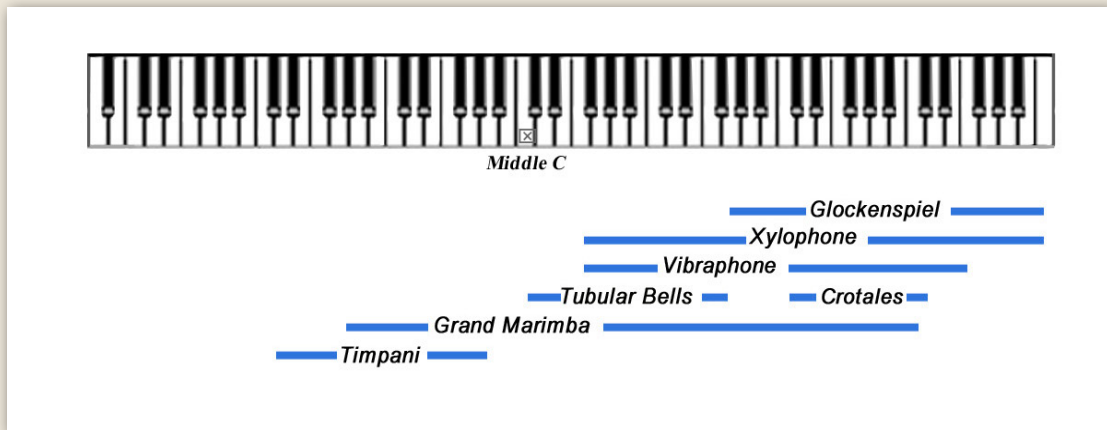
Some of the **unpitched** percussion in Personal Orchestra:



Pictured left to right: Bass Drum, Gong, Snare Drum, Mark Tree, Orchestral Cymbals, Triangle, Cowbell, Maracas, Tambourine, Castanets

PITCH RANGES – PITCHED PERCUSSION INSTRUMENTS

Percussion instruments are divided into two groups: pitched and unpitched. Unpitched instruments have an indefinite tone—like a hand clap or thud—such as the bass drum, snare drum, maracas, cymbals, or gong, to name but a few. Pitched instruments, such as the xylophone, timpani, marimba, tubular bells, and others, play specific pitches. The chart below shows the ranges of the individual pitched percussion instruments as they correspond to a piano keyboard. Unlike the other instruments of the orchestra, these ranges are absolute, and players cannot usually play beyond the range of the instrument.



Playing Personal Orchestra Percussion Instruments:

Garritan Personal Orchestra places a varied collection of percussion instruments at your disposal. Almost all of Personal Orchestra’s percussion instrument patches are keyswitch instruments with the exception of the cymbals, wind machine, and the basic orchestral percussion combo patch. The combo patch combines the commonly used orchestral percussion into one patch.

The programming in Personal Orchestra’s percussion is not as involved as that as of the sustained instruments due to the nature of these instruments. Some of these controllers are universal across all percussion instruments while some pertain to select instruments or types of instruments.

Basic Programming:

Velocity – Attack Volume

All percussion instruments included in Garritan Personal Orchestra use velocity for attack and volume control.

Length Controller CC# 21 – Sample Length

This continuous controller allows the user to manually adjust sample release/decay time. This controller is not available for all percussion instruments.

Modulation Controller CC#1– Percussion Roll Volume (for actual recorded rolls)

The modulation control for the percussion instruments that use it works in a similar manner as the sustained instruments. There are four percussion instruments in Personal Orchestra that use the mod wheel for rolled crescendos/decrescendos when the proper note is played. These are the cymbals, snare drum, and bass drum. The wind machine also uses mod wheel control of volume. The more mod wheel data applied to these instruments the louder the ‘roll.’

Controller CC# 64 – Damping

In most other instruments in Personal Orchestra this controller is used either for legato or note sustaining. Percussive instruments use the sustain pedal for standard sustain while in “Pedal mode 2.” The vibraphone adds a second instrument choice that can function in standard “Pedal mode 1,” at the expense of keyswitching.

Variability Controllers CC#’s 22 & 23

CC# 22 controls the intonation of the notes and is useful during repeated-note phrases. This control should be used in moderation. CC# 23 controls variations in timbre/volume for the affected percussion patches and is useful in repeated note phrases to reduce the appearance of the ‘machine gun’ effect. **Note:** *Not all percussion instruments use these controllers.*

Instrument-Specific Programming:**Bass Drum:****Controller CC#20 – Bass Drum Fundamental**

Although the bass drum is an instrument of indefinite pitch, its tone is very deep and booming and capable of being adjusted. The bass drum in Personal Orchestra has an adjustable fundamental that is controlled by a knob designated “BDFund” in the controller section of the ARIA Player. This control can add a great deal of energy to extremely low frequencies, so use it with care.

Controller CC#16 – Aggressive Brightness

Advancing this controller can give the impression of harder beaters being played aggressively.

Vibraphone:

Controller CC#20 – Attack

This controller controls the vibraphone’s attack speed. This allows continuous control of the vibraphone’s attack speed from hard to ‘bowed’ attacks. This controller will be labeled as ATTACK on the ARIA Player interface.

Controller CC#22 – Tremolo Level

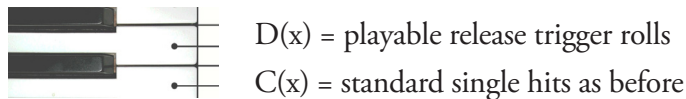
For the vibraphone this controller controls the level of tremolo. This controller is to be used in tandem with CC# 23, tremolo speed. This controller will be labeled as TRMLEV on the ARIA Player interface.

Controller CC#23 – Tremolo Speed

This controller allows for continuous control of the vibraphone’s tremolo speed. This controller is to be used in tandem with CC# 22, tremolo level. This controller will be labeled as TRMSPD on the ARIA Player interface.

The Keyswitch Percussion Instruments:

As discussed earlier, almost all of Personal Orchestra’s percussion patches are keyswitch instruments. The instruments load defaulted to single hits, but when the “D” keyswitch is activated the notes play followed by a release trigger of the same note making it possible to play single note ‘rolls.’ These rolls can be played in real time and timing and speed can be varied according to need. When using this function, it is recommended that the variability controllers are used as well to reduce the ‘machine gun’ effect. Exceptions to this are instruments that normally do not play rolls. These keyswitch patches are activated as follows:



In addition to this, the timpani patch in Personal Orchestra has left- and right-hand samples that allow the user to play in rolls. The left and right hand samples are the same pitches, but an octave apart.

More information about the percussion instruments in Personal Orchestra including specific tutorials can be found at www.garritan.com.

THE KEYBOARD INSTRUMENTS AND THE HARP



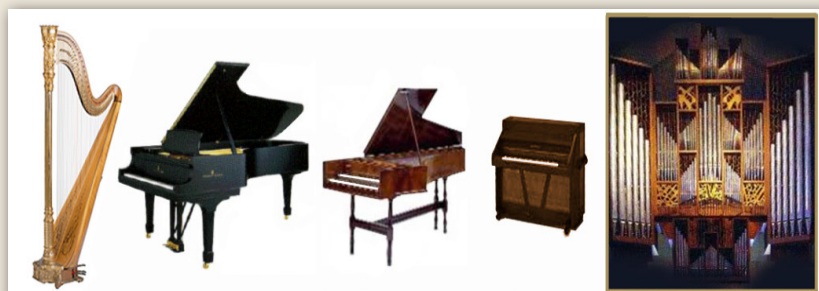
The harp is an ancient instrument that dates back to antiquity. Many keyboard instruments evolved from the harp. The harp consists of a series of strings stretched over a triangular frame. The harp is played by plucking the strings with the fingertips. The concert harp has seven pedals, each one representing a note of the scale. The pedals adjust the length of the strings, with all its octaves, either a semitone up or down. The harp can have a range of up to seven octaves. Harps are known for rapid arpeggiated runs and glissandi that create distinctive color. The two harps that are included in the Garritan Personal Orchestra collection are a Venus Grand Concert harp and a Wurlitzer Concert harp, circa 1920s.

Various keyboard instruments are often included in orchestras. Keyboards have a standard chromatic key arrangement of black and white keys playing notes a semitone apart. Keyboards have been with us for over 600 years - first appearing in organs and later in clavichords, harpsichords and pianos.

In Garritan Personal Orchestra, high-quality keyboard instruments were sampled. A Steinway® Concert Grand Piano was sampled at two dynamic levels (Steinway® name used by permission). The harpsichord is a double manual French harpsichord, built by Hubbard, and the celesta was manufactured by Mustel. The Concert Pipe Organ is a German Baroque pipe organ built by Rudolf von Beckerath. It has three manuals and pedals, containing 11 individual stops.

THE KEYBOARDS AND HARP

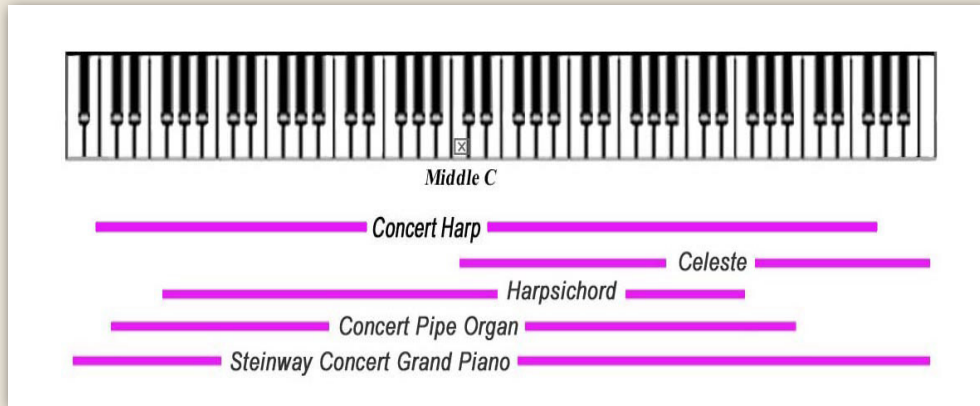
Keyboards and Harps in Garritan Personal Orchestra:



Pictured left to right: Concert Grand Harp, Steinway® Concert Grand Piano, Harpsichord, Celeste, Rudolf von Beckerath Concert Pipe Organ.

PITCH RANGES – KEYBOARD AND HARP INSTRUMENTS

The keyboards can have the widest range in an orchestra. The chart below shows the ranges of the keyboard instruments of Personal Orchestra as they correspond to a piano keyboard.



Playing the Personal Orchestra Keyboard & Harp Instruments:

It has been said that the keyboard and harp instruments included in Garritan Personal Orchestra could stand alone in libraries of their own. It is true that these instruments are among the finest quality and complete this library’s vision of offering an orchestra for every musician.

THE STEINWAY GRAND PIANO

This is perhaps the easiest instrument to play in Garritan Personal Orchestra. The programming is the easiest to grasp and allows for a fully functional concert piano experience. An 88-note MIDI keyboard is recommended to play all the notes. Included in Garritan Personal Orchestra is a Steinway Grand piano patch as well as two piano duo instruments that are meant for duo-piano pieces, as well as a lite version of the full piano patch when instrument auditioning is needed. For those who wish to have a more detailed concert grand piano, the separate Authorized Steinway Virtual Concert Grand Piano library may be of interest. The Authorized Steinway Virtual Concert Grand Piano was developed in partnership with Steinway & Sons and provides many more features than the piano in Personal Orchestra. For more information about the Authorized Steinway Virtual Concert Grand Piano go to www.garritan.com.

Basic Programming:

Velocity – Note Attack and Volume

The piano's note attack and volume are controlled by velocity. You have the full spectrum of dynamics attainable through this controller from *ppp* to *fff*.

Sustain Pedal Controller CC#64

When using the Sustain Pedal Controller you are able to play the piano with sustains, just like a real piano. This controller will only work when with the Standard instruments. Notion instruments use CC#68 instead.

THE HARPSICHORD

The harpsichord's programming is also simple yet effective. On top of the simple programming, all the 'stops' are available on one patch through a keyswitch.

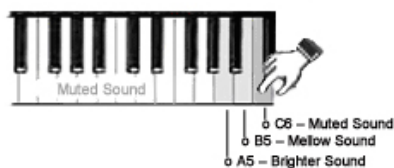
Basic Programming:

Velocity – Note Attack and Volume

The harpsichord note attack and volume is controlled by velocity. You have the full spectrum of dynamics attainable through this controller from *ppp* to *fff*.

The Harpsichord Keyswitch Assignments:

The harpsichord uses a keyswitch to select among its different stops. The instrument loads defaulted to the 8' Stop. The A(5) = 8' Stop, B(5) = 8' + 4' Stop and C(6) = Buff Stop. Below are the keyswitch assignments and what stops they represent:





THE HARPS

Because of the way a harp is played, Garritan Personal Orchestra offers different types of harp patches. There are the standard chromatic harp instruments for single plucked notes, the glissando harps to emulate harp glissandos, the harp harmonics patches for harp effects to add realism, and the harp keyswitch instruments so that the user has access to all these types of patches in one convenient instrument.

Basic Programming:

Velocity – Note Attack and Volume

The harp's note attack and volume are controlled by velocity. You have the full spectrum of dynamics attainable through this controller from *ppp* to *fff*.

Sustain Pedal Controller CC# 64 – Damping

When using the sustain pedal controller in legato mode you can dampen the plucked notes of the chromatic harp by inserting pedal down data into your sequencer or when playing live.

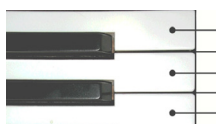
Additional Programming:

Glissando Harp - MIDI Data Packets:

The Glissando Harp instrument maps notes to the white keys of the keyboard and uses MIDI data packets to emulate the pedal positions of a harp. The white keys of the keyboard can be “strummed” to achieve realistic glissandi. The Glissando MIDI data files contain a wide range of harp scales and chord types in all keys that will allow you to play runs and glissandi. They are easy to use: just copy a packet to a secondary track with the same MIDI channel as the harp. Place each packet slightly in advance of the position of the desired scale or chord change. Glissandi played from the keyboard will change automatically at the packet position.

The Harp Keyswitch Assignments:

E (8ve) = Harmonics



D (8ve) = Glissando harp

C (8ve) = Chromatic harp

THE CONCERT PIPE ORGAN

The organ does not use velocity to control the volume/timbre characteristics of the instrument. Since the pipe organ is controlled by wind pressure from the bellows, this works quite well and lends to a more satisfying experience when playing live. The numerous organ patches in Personal Orchestra all have a unique and particular sound. Extra controls have been added to the pipe organ instruments to increase tonal possibilities. Using the programming listed below you should be able to create convincing organ pieces quickly and efficiently.

Basic Programming:

Velocity – Note Attack

Velocity only controls the note attack on the organ.

Modulation Controller CC# 1 – Volume/Timbre

The modulation controller (MW) controls the volume and timbre dynamics of the organ. This affords greater dynamic control of the organ. This controller can be played in live or drawn in a sequencing program.

Organ Fundamental Controller CC# 20

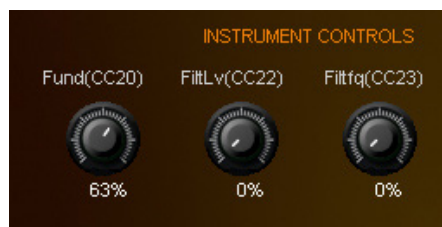
This controller controls the fundamental strength of the organ patches, and is especially useful in the pedal stops. This controller works similarly to the Bass Fundamental controller for the Bass Drum. This controller will be labeled FUND on the ARIA Player interface.

Organ Filter Strength Controller CC# 22

This controller, when used in conjunction with CC# 23 (filter frequency), allows the user to boost certain frequencies of the organ. This controller will be labeled FILTLV in the ARIA Player.

Organ Filter Frequency Controller CC# 23

This controller, when used in conjunction with CC# 22 (filter strength), allows the user to boost certain frequencies of the organ. This controller will be labeled FILTFQ in the ARIA Player.





THE CELESTA AND GLASS ARMONICA

These two instruments share similar programming but give entirely different sounds. The celeste is a beautiful bell sounding instrument while the rare glass armonica is a sound unique unto itself.

Basic Programming:

Velocity – Note Attack

Velocity only controls the note attack on the celeste and glass armonica.

Sustain Pedal Controller CC# 64 – Damping

When this controller is used in legato mode, it acts to dampen the notes played on the celeste and glass armonica.

Chart of Performance Controllers in Personal Orchestra

The following chart gives the name, abbreviation, and a brief description of the MIDI performance controllers in the Instrument Directory.

PERFORMANCE CONTROLLERS	
SusLeg	Sustain Pedal legato control
Sus (sus)	Sustain Pedal for normal sustain control
SusDp	Sustain Pedal with damping control
MW	Mod Wheel Expression Control
Vel	Note Velocity for Accents and Attack
Vel (vol)	Note Velocity for Volume control
VAR 1	Automatic variability of intonation
VAR 2	Automatic variability of timbre
ALT	Up and down bowstrokes controlled with the sustain pedal or keyswitch
Length	Sample release time
KS	Keyswitching
Vib	Vibrato control
BDF	To control the fundamental of the bass drum
AG	Aggressiveness of tone or bow stroke
At	Attack envelope speed
FD	Strength of the fundamental
TL	Tremolo level
TS	Tremolo speed
FL	Filter gain level
FF	Filter center frequency
VC	Vibrato Control for Solo Strings
Plr	Player Instrument. Note: Plr instruments are lighter versions and do not share samples with each other but must not be used with the solo instruments from which they are derived to avoid phasing problems; e.g. don't use Flute 1 Plr1*, Plr2*, or Plr3* with Flute Solo instruments.



Quick MIDI Controller Reference Guide for Personal Orchestra

CC #	Description	Use	Instruments Affected
1	Modulation	Controls the volume/timbre of “expressive” instruments.	All “Expressive” sustained instruments. Does not affect most percussion, keyed, harp, short bow, or pizzicato string instruments.
2	Breath	Alternate controller for volume/timbre of “expressive” instruments.	Mirrors cc#1. All “Expressive” sustained instruments. Does not affect most percussion, keyed, harp, short bow, or pizzicato string instruments.
7	Volume	Turned off by default.	Volume controller CC# 7 used for static volume changes (in contrast to modulation control CC #1 which is used for dynamic volume/timbre changes).
10	Pan	Turned off by default.	Since all the instruments in Personal Orchestra are pre-panned based on their place in the orchestra, this is turned off by default. If you wish Personal Orchestra to respond to automated panning adjustments sent by your controller or sequencer you must turn this option on.
11	MIDI Expression	Alternate controller for volume/timbre of “expressive” instruments.	Mirrors cc#1. All “Expressive” sustained instruments. Does not affect most percussion, keyed, harp, short bow, or pizzicato string instruments.
15	Hidden Trills Interval Controller (KS solo strings)	Controls the interval of the trills when using the Solo String KS patches.	All Solo String KS patches. This controller gives an alternate way of choosing the interval with an extended range (beyond the key-switches.) Values as they relate to trill intervals: 0-32 = half step 33-64 = whole step 65-96 = minor third 97-127 = major third
16	Aggressive Controller (strings/brass as well as bass drum)	Controls bow noise, high frequency content, and saturation	This controller also adjusts bow noise in the aggressive string patches as well as a more forceful sound to the aggressive brass and bass drum patches. Can be used to add more forcefulness and ‘grit’ to these patches’ sound.

CC #	Description	Use	Instruments Affected
17	Vibrato Speed Controller (solo woodwinds and brass)	Used to control vibrato speed on affected solo woodwind and brass instruments.	Used to control vibrato speed with certain solo woodwinds and brass instruments, even ones like French horn and clarinet that do not normally use vibrato in standard practice. Note: This only affects Non-Vibrato (NV) patches. This controller does not affect true vibrato instruments. Note: Aftertouch controls vibrato intensity in these instruments.
19	Hidden Portamento Aid – pitchbend disabled layer	Defeats pitchbend so that pitchbend data can be used effectively between abutted or overlapped sustain pedal-up notes where standard portamento (cc#20) will not function.	All string instruments, as well as the trombone. Used during passages that move from detache to slurred/legato phrasing.
20	Portamento	Adds portamento to notes depending on interval and controller data added.	All “Expressive” sustained instruments. Used during legato/slurred passages. Only works in legato mode (sustain pedal down.)
	Bass Drum Fundamental Shown: BDFUND	Controls the strength of the lowest frequencies.	Adds low frequency strength to the Bass Drum as well as most Organ patches.
	Attack Speed Shown: ATTACK (vibraphone only)	Continually adjustable attack speed controller. Adjustable from hard to ‘bowed’ attacks.	Adjustable attack speed controller on the vibraphone KS patch.
21	Length	Controls the decay/release time of the sample.	Controls the decay/release time of most instruments in Personal Orchestra. Especially useful with the Short Bow instruments to give shorter bow strokes. This is also useful for legato string section passages to smooth transitions with higher values. Can be applied to help create double- and triple-tonguing in the brass.
22	Variability 1 (VAR 1)	Sets random variations in tuning from note to note.	On most wind, string, and some percussion instruments, this is used to introduce note-to-note variations in intonation. Used during repeated-note passages to help prevent the ‘machine gun’ effect.
	Frequency Filtering Shown: FILTLV (organ)	Controls filter strength.	For all pipe organ patches this is used for filter strength. This control is to be used along with CC#23.
	Tremolo Level Shown: TRMLEV (vibraphone)	Continuously variable tremolo control.	When used with Personal Orchestra’s vibraphone, controls the tremolo level. To be used with CC#23.



CC #	Description	Use	Instruments Affected
23	Variability 2 (VAR 2)	Sets random variations in instrument timbre from note to note.	On most wind, string, and some percussion instruments, this is used for timbre variations. Again, useful for repeated-note passages to prevent the 'machine gun' effect.
	Filter Center Frequency Shown: FILTFQ Filtering (organ)	Also used to control the center frequency for filtering.	For all Organ patches this is used to control the center frequency of the filter. Used along with CC# 22.
	Tremolo Speed Shown: TRMSPD (vibraphone)	Continuously variable tremolo speed control.	For vibraphone, this controller is used to control the tremolo speed. To be used with CC# 22 to control tremolo levels and speed.
64	Sustain/Legato Damping (percussion)	Controls legato switching, damping, and standard sustain.	Controls legato mode on all sustained string, brass, and woodwind instruments. Will also control damping on those percussion instruments that use this function and has standard sustain pedal behavior on instruments like the piano, celesta, some vibraphone choices, harpsichord, and glass armonica. Note: Legato mode can also be accomplished by using the Auto-legato feature.
After-touch	Hidden Vibrato Intensity Controller	Controls vibrato intensity for affected woodwind and brass solo patches.	Used to control vibrato intensity with certain solo woodwinds and brass instruments, even ones like French horn and clarinet that do not normally use vibrato in standard practice. Note: Only affects Non-Vibrato (NV) patches. This controller does not affect instruments actually recorded with vibrato. Some controller keyboards (e.g. M-Audio) allow the user to assign cc#131 to the function of aftertouch. The keyboard will output Aftertouch data when a slider assigned to cc#131 is moved.
Velocity	Velocity	Controls "note on" velocity for all instruments in Personal Orchestra.	Controls the initial attack strength of all "Expressive" Mod Wheel controlled instruments in Personal Orchestra. Note: For all "Percussive" (keyed, percussion, or non sustained patches) this controls volume/timbre.
Pitch Bend	Pitch Bend	Allows a note's pitch to be shifted in a controlled manner (usually to a maximum of two semitones up or down).	This controller is useful for instruments like strings and trombone where note slides are common. This controller is used to create 'scoops' or 'drops' at the beginning or end of a note or passage. Can be used with trombone to simulate slide movements during sustained notes. Can be used along with cc#19 to solve difficult portamento situations.

ENSEMBLE PRESETS



Ensemble Presets

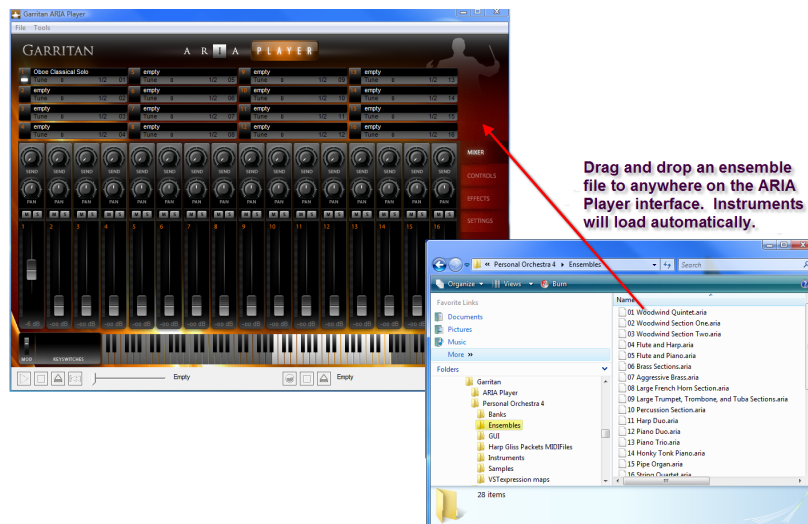
The Personal Orchestra installation includes a folder/directory called “Ensembles” that contains a collection of useful, pre-configured instrumental combinations for the convenience of the user. Loading Ensemble presets can give you a quick “head start” to setting up a group of instruments. Each file loads a selection of instruments (e.g. String Quartet) along with pan, level, and other settings. The Ensembles folder can be found in this location: /Garritan/Personal Orchestra 4/Ensembles.

Loading Ensemble Preset Files

In standalone mode there are two ways to load Ensemble files:

- Load from the File menu (File/Load)
- Drag and Drop

When ARIA is used as a plug-in from within a host program, the Drag and Drop method must be used to load ensemble files. This can be done as follows: With the ARIA player interface displayed, open the “Ensembles” folder/directory to display the numbered collection of ensemble files. Using the mouse button, click and hold on the file you wish to load. Drag it to the ARIA interface and release the mouse button. The instruments and their configurations will load automatically.



Note that in Standalone mode the supplied ensemble files can be customized and saved by the user. The user can also design and save custom ensemble files by loading the ARIA player with instruments; configuring level, pan, send, and other settings as desired; and saving them as “.aria” files in the File menu (File/Save As.)

LIST OF ENSEMBLE PRESETS

Ensemble Name:	Instruments Included:
01 Woodwind Quintet	Flute Solo KS, Oboe 1 Modern Solo, Bb Clarinet Solo, Bassoon 1 Solo, French Horn 1 Solo
02 Woodwind Section One	Flute Solo KS, Oboe 3 Modern Solo, Bb Clarinet Solo, Bass Clarinet Solo, Bassoon 1 Solo
03 Woodwind Section Two	Flute Solo KS, Oboe 1 Modern Solo, Oboe 2 Modern Solo, Bb Clarinet Plr1, Bb Clarinet Plr2, Bass Clarinet Solo, Bassoon 1 Solo, Bassoon 2 Solo,
04 Flute and Harp	Flute Solo KS, Harp 2 KS
05 Flute and Piano	Flute Solo KS, Steinway Piano
06 Brass Sections	French Horn 1 Plr1 KS, French Horn 1 Plr2 KS, French Horn 1 Plr3 KS, French Horn Overlay f, French Horn Overlay ff, Trumpet 1 Plr1 KS, Trumpet 1 Plr2 KS, Trumpet 1 Plr3 KS, Trumpet Overlay, Trombone Plr 1 KS, Trombone Plr 1 KS, Trombone Plr 3 KS, Bass Trombone 1 Solo, TBone Overlay, Tuba 1 Solo, Tuba Overlay
07 Aggressive Brass	French Horn 1 Solo AG, French Horn Overlay f AG, Trumpet 1 Solo AG, Trumpet Overlay AG, Trombone Solo AG, TBone Overlay AG, Tuba 2 Solo AG, Tuba Overlay AG
08 Large French Horn Section	French Horn 1 Plr1 KS, French Horn 1 Plr2 KS, French Horn 1 Plr3 KS, French Horn 2 Plr1, French Horn 2 Plr2, French Horn 2 Plr3, French Horn Overlay f, French Horn Overlay ff
09 Large Trumpet, Trombone & Tuba Sections	Trumpet 1 Plr1 KS, Trumpet 1 Plr2 KS, Trumpet 1 Plr3 KS, Trumpet Overlay, Trombone Plr1 KS, Trombone Plr2 KS, Trombone Plr3 KS, TBone Overlay, Tuba 1 Solo, Tuba 2 Solo, Tuba Overlay
10 Percussion Section	Bass Drum, Timpani KS, Snare KS, Cymbals, Percussion Toys KS, Xylophone KS, Glockenspiel KS, Celesta, Tubular Bells KS, Vibraphone (Standard Ped), Marimba KS
11 Harp Duo	Harp 1 KS, Harp 2 KS
12 Piano Duo	Steinway Piano Duo1, Steinway Piano Duo2
13 Piano Trio	Violin 1 Solo KS, Cello 3 Solo KS, Steinway Piano
14 Honky Tonk Piano	Steinway Piano Duo1, Steinway Piano Duo2
15 Pipe Organ	Baroque Plenum Reed Pedal, Baroque Plenum Pedal, Baroque Plenum Reeds, Baroque Plenum, Brustwerk All Stops, Cornet, Flutes, Full Organ, Haupt Mix, Hauptwerk All Stops, Prinzival, Scharf IV, Symphonic
16 String Quartet	Violin 1 Solo KS, Violin 2 Solo KS, Viola Solo KS, Cello 3 Solo KS
17 Brass Quintet	Trumpet 1 Solo KS, SAM Trumpet Solo KS, French Horn 1 Solo KS, Trombone Solo KS, SAM Tuba Solo KS



LIST OF ENSEMBLE PRESETS	
18 Chamber Orchestra	Violin 1 Solo KS, Violin 2 Solo KS, Violin 3 Plr1, Violin 3 Plr2, Violin 3 Plr3, Viola Plr1, Viola Plr2, Viola Pizz Solo, Cello 1 Solo KS, Cello 2 Solo KS, Cello 3 Solo KS, Double Bass Plr1, Double Bass Plr2, Double Bass Pizz Solo, French Horn 1 Solo KS, French Horn 2 Solo
19 String Sections	Violins 1 KS, Violins 2 KS, Violas KS, Cellos KS, Basses KS
20 String Sections-VlnL_R	Violins 1 KS, Violins 2 KS, Violas KS, Cellos KS, Basses KS
21 Aggressive String Sections	Violins 1 Sus+Short AG, Violins 1 Short Bows KS AG, Violins 2 Sus+Short AG, Violins 2 Short Bows KS AG, Violas Sus+Short AG, Violas Short Bows KS AG, Cellos Sus+Short AG, Cellos Short Bows KS AG, Basses Sus+Short AG, Basses Short Bows KS AG
22 Aggressive String Sections VlnL_R	Violins 1 Sus+Short AG, Violins 1 Short Bows KS AG, Violins 2 Sus+Short AG, Violins 2 Short Bows KS AG, Violas Sus+Short AG, Violas Short Bows KS AG, Cellos Sus+Short AG, Cellos Short Bows KS AG, Basses Sus+Short AG, Basses Short Bows KS AG
23 All String Sections & Solos	Violins 1 KS, Violins 2 KS, Violin 1 Solo KS, Violin 2 Solo KS, Violin 3 Solo KS, Violas KS, Viola 1 Solo KS, Cellos KS, Cello 1 Solo KS, Cello 2 Solo KS, Cello 3 Solo KS, Basses KS, Double Bass 1 Solo KS
24 All String Sections & Solos - VlnL_R	Violins 1 KS, Violins 2 KS, Violin 1 Solo KS, Violin 2 Solo KS, Violin 3 Solo KS, Violas KS, Viola 1 Solo KS, Cellos KS, Cello 1 Solo KS, Cello 2 Solo KS, Cello 3 Solo KS, Basses KS, Double Bass 1 Solo KS
25 Lush Strings	Violins 1 Lush, Violins 1 Lush Mutes, Violins 2 Lush, Violins 2 Lush Mutes, Violas Lush, Violas Lush Mutes, Cellos Lush, Cellos Lush Mutes, Basses Lush, Basses Lush Mutes
26 Lush Strings - VlnL_R	Violins 1 Lush, Violins 1 Lush Mutes, Violins 2 Lush, Violins 2 Lush Mutes, Violas Lush, Violas Lush Mutes, Cellos Lush, Cellos Lush Mutes, Basses Lush, Basses Lush Mutes
27 Strings, Harp, Perc	Violins 1 KS, Violins 2 KS, Violin 3 Solo KS, Violas KS, Viola Solo KS, Cellos KS, Cello 3 Solo KS, Basses KS, Double Bass Solo KS, Harp 2 KS, Basic Orch Percussion, Percussion Toys KS
28 Strings, Harp, Perc - VlnL_R	Violins 1 KS, Violins 2 KS, Violin 3 Solo KS, Violas KS, Viola Solo KS, Cellos KS, Cello 3 Solo KS, Basses KS, Double Bass Solo KS, Harp 2 KS, Basic Orch Percussion, Percussion Toys KS

Note:


Strings that are identified with “VlnL_R” in the file name offer an alternative seating arrangement that places 1st violins on the left and 2nd Violins on the right.


**DIRECTORY OF
Garritan Personal Orchestra
INSTRUMENTS**



THE WOODWIND INSTRUMENTS		
ARIA name:	Description:	
FLUTES:		
Alto Flute Solo	Principal Alto Flute. The Alto flute plays a fourth lower than a conventional flute. Made by Mönnig	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Alto Flute Plr1*	Associate Ensemble Instrument for building ensembles, 1st player in an ensemble derived from the Principal Alto Flute Instrument	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Alto Flute Plr2*	Associate Ensemble Instrument for building ensembles, 2nd player in an ensemble derived from the Principal Alto Flute Instrument	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Alto Flute Plr3*	Associate Ensemble Instrument for building ensembles, 3rd player in an ensemble derived from the Principal Alto Flute Instrument	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Bass Flute Solo Vib	Principal Bass Flute played with vibrato. Plays one octave lower than a conventional flute	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Bass Flute Solo NV	Principal Bass Flute played without vibrato. Plays one octave lower than a conventional flute	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length, Vib
Bass Flute Plr1*	Associate Ensemble Instrument for building ensembles, 1st player in an ensemble derived from the Principal Bass Flute Instrument	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Bass Flute Plr2*	Associate Ensemble Instrument for building ensembles, 2nd player in an ensemble derived from the Principal Bass Flute Instrument	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Bass Flute Plr3*	Associate Ensemble Instrument for building ensembles, 3rd player in an ensemble derived from the Principal Bass Flute Instrument	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Flute Solo Vib	Principal Solo Flute. Played Vibrato, Made by Haynes	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Flute Solo NV	Principal Solo Flute. Played Non Vibrato	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length, Vib
Flute Solo KS	A keyswitch version of the Flute Solo instrument	SusLeg, MW, Vel, Port, VAR 1, VAR 2, KS, Length, Vib
	<ul style="list-style-type: none"> • C2 = Vibrato • D2 = Non-vibrato • E2 = Flutter 	

THE WOODWIND INSTRUMENTS


ARIA name:	Description:	
FLUTES:		
Flute Solo Flutter	Principal Solo Flute. Played flutter tongue	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Flute Plr1*	Associate Ensemble Instrument for building ensembles, 1st player in an ensemble derived from the Principal Flute Instrument	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Flute Plr2*	Associate Ensemble Instrument for building ensembles, 2nd player in an ensemble derived from the Principal Flute Instrument	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Flute Plr3*	Associate Ensemble Instrument for building ensembles, 3rd player in an ensemble derived from the Principal Flute Instrument	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Piccolo Vib Solo	Principal Piccolo played with vibrato, Plays one octave higher than a conventional flute. Made by Hammig	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Piccolo NV Solo	Principal Piccolo played without vibrato	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length, Vib
Piccolo Solo KS	A keyswitch version of the Piccolo solo instrument	SusLeg, MW, Vel, Port, VAR 1, VAR 2, KS, Length, Vib
	<ul style="list-style-type: none"> • C3 = Vibrato • D3 = Non-vibrato • E3 = Flutter 	
Piccolo Flutter	Principal piccolo played flutter tongue	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
<p>* Plr instruments do not share samples with each other but must not be used with the solo instruments from which they are derived to avoid phasing problems; e.g. don't use Flute 1 Plr1*, Plr2*, or Plr3* with Flute Solo instruments. The same applies to all Plr instruments listed below.</p>		


THE WOODWIND INSTRUMENTS		
ARIA name:	Description:	
OBOES AND ENGLISH HORN:		
English Horn 1 Solo	Principal English horn. Also referred to as a cor anglais or alto oboe. Plays a fifth below an oboe and sometimes played by the third oboist.	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
English Horn 2 Solo	2nd English horn (cor anglais) with a different tone and more pronounced vibrato. Made by Loree	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
English Horn 1 Plr1	Associate Ensemble Instrument for building ensembles, 1st player in an ensemble derived from the Principal English Horn Instrument	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
English Horn 1 Plr2	Associate Ensemble Instrument for building ensembles, 2nd player in an ensemble derived from the Principal English Horn Instrument	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
English Horn 1 Plr3	Associate Ensemble Instrument for building ensembles, 3rd player in an ensemble derived from the Principal English Horn Instrument.	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Oboe 1 Modern Solo	Principal Solo Oboe	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Oboe 2 Modern Solo	2nd Solo Oboe with a little more vibrato. Made by Püchner	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Oboe 3 Modern Solo	3rd Solo Oboe with a slightly different tone and more pronounced vibrato	SusLeg, MW, Vel, Port, VAR 1, VAR 2
Oboe 1 Modern Plr1	Associate Ensemble Instrument for building ensembles, 1st player in an ensemble derived from the Principal Oboe Instrument	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Oboe 1 Modern Plr2	Associate Ensemble Instrument for building ensembles, 2nd player in an ensemble derived from the Principal Oboe Instrument	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Oboe 1 Modern Plr3	Associate Ensemble Instrument for building ensembles, 3rd player in an ensemble derived from the Principal Oboe Instrument	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Oboe Classical Solo	4th solo oboe. Older vintage instrument with a different tone quality	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length

THE WOODWIND INSTRUMENTS


ARIA name:	Description:	
Oboe D'Amore	Solo Oboe D'Amore	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length

THE WOODWIND INSTRUMENTS

ARIA name:	Description:	
CLARINETS:		
Bass Clarinet Solo	Principal Bass Clarinet. Plays one octave lower than a conventional clarinet. The 3rd clarinetist often will play the bass clarinet when needed	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length, Vib
Bass Clarinet Plr1	Associate Ensemble Instrument for building ensembles, 1st player in an ensemble derived from the Principal Bass Clarinet Instrument	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Bass Clarinet Plr2	Associate Ensemble Instrument for building ensembles, 2nd player in an ensemble derived from the Principal Bass Clarinet Instrument	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Bass Clarinet Plr3	Associate Ensemble Instrument for building ensembles, 3rd player in an ensemble derived from the Principal Bass Clarinet Instrument	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Bb Clarinet Solo	Principal Solo Bb Clarinet. Made by Buffet	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length, Vib
Bb Clarinet Plr1	Associate Ensemble Instrument for building ensembles, 1st player in an ensemble derived from the Principal Bb Clarinet Instrument	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Bb Clarinet Plr2	Associate Ensemble Instrument for building ensembles, 2nd player in an ensemble derived from the Principal Bb Clarinet Instrument	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Bb Clarinet Plr3	Associate Ensemble Instrument for building ensembles, 3rd player in an ensemble derived from the Principal Bb Clarinet Instrument	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Contrabass Clarinet Solo	Principal Contrabass Clarinet. Plays an octave lower than the bass clarinet	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Eb Clarinet Solo	Principal Eb Solo Clarinet. Plays four notes higher than the Bb Clarinet.	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length, Vib

THE WOODWIND INSTRUMENTS		
ARIA name:	Description:	
BASSOONS:		
Bassoon 1 Solo	Principal Solo Bassoon. Made by Heckel	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length, Vib
Bassoon 2 Solo	2nd Bassoon. A different Bassoon with a different tone	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length, Vib
Bassoon 1 Plr1	Associate Ensemble Instrument for building ensembles, 1st player in an ensemble derived from the Principal Bassoon Instrument.	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Bassoon 1 Plr2	Associate Ensemble Instrument for building ensembles, 2nd player in an ensemble derived from the Principal Bassoon Instrument	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Bassoon 1 Plr3	Associate Ensemble Instrument for building ensembles, 3rd player in an ensemble derived from the Principal Bassoon Instrument	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Bassoon 2 Plr1	Associate Ensemble Instrument for building ensembles, 1st player in an ensemble derived from the 2nd Bassoon Instrument.	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Bassoon 2 Plr2	Associate Ensemble Instrument for building ensembles, 2nd player in an ensemble derived from the 2nd Bassoon Instrument	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Bassoon 2 Plr3	Associate Ensemble Instrument for building ensembles, 3rd player in an ensemble derived from the 2nd Bassoon Instrument	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Contrabassoon 1 Solo	Principal Contrabassoon. Plays one octave lower than a conventional bassoon and lower than any instrument in the orchestra	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length, Vib
Contrabassoon 2 Solo	2nd Contrabassoon. Has a wider note range and a different tone quality. Made by Schreiber	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length, Vib

THE BRASS INSTRUMENTS


ARIA name:	Description:	
FRENCH HORNS:		
French horn 1 Solo	Principal Solo French Horn	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length, Vib
French horn 1 Solo KS	A keyswitch version of the French Horn 1 Solo instrument <ul style="list-style-type: none"> • C0 = Open • D0 = Mutes 	SusLeg, MW, Vel, Port, VAR 1, VAR 2, KS, Length, Vib
French horn 1 Solo AG	The same as French Horn 1 Solo but with a more aggressive sound	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length, Vib, AG
French horn 1 Plr1*	Associate Ensemble Instrument for building ensembles, 1st player in an ensemble derived from the Principal French Horn Instrument	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
French horn 1 Plr1 KS*	A keyswitch version of French Horn 1 Plr1 <ul style="list-style-type: none"> • C0 = Open • D0 = Mutes 	SusLeg, MW, Vel, Port, VAR 1, VAR 2, KS, Length
French horn 1 Plr2*	Associate Ensemble Instrument for building ensembles, 2nd player in an ensemble derived from the Principal French Horn Instrument	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
French horn 1 Plr2 KS*	A keyswitch version of French Horn 1 Plr2 <ul style="list-style-type: none"> • C0 = Open • D0 = Mutes 	SusLeg, MW, Vel, Port, VAR 1, VAR 2, KS, Length
French horn 1 Plr3*	Associate Ensemble Instrument for building ensembles, 3rd player in an ensemble derived from the Principal French Horn Instrument	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
French horn 1 Plr3 KS*	A keyswitch version of French Horn 1 Plr3 <ul style="list-style-type: none"> • C0 = Open • D0 = Mutes 	SusLeg, MW, Vel, Port, VAR 1, VAR 2, KS, Length
French horn 2 Solo	2nd French Horn. A different French Horn with a different tone quality	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length, Vib




THE BRASS INSTRUMENTS


ARIA name:	Description:	
FRENCH HORNS:		
French horn 2 Solo AG	The same as French Horn 2 Solo but programmed for a more aggressive sound	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length, Vib, AG
French horn 2 Plr1*	Associate Ensemble Instrument for building ensembles, 1st player in an ensemble derived from the 2nd French Horn Instrument	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
French horn 2 Plr2*	Associate Ensemble Instrument for building ensembles, 2nd player in an ensemble derived from the 2nd French Horn Instrument	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
French horn 2 Plr3*	Associate Ensemble Instrument for building ensembles, 3rd player in an ensemble derived from the 2nd French Horn Instrument	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
French Horn Solo Mute	Principal French Horn played with a Straight Mute (Sordino)	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length, Vib
French Horn Plr1* Mute	Associate Ensemble Instrument for building ensembles, 1st player in an ensemble derived from the French Horn Muted Instrument	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
French Horn Plr2* Mute	Associate Ensemble Instrument for building ensembles, 2nd player in an ensemble derived from the French Horn Muted Instrument	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
French Horn Plr3* Mute	Associate Ensemble Instrument for building ensembles, 3rd player in an ensemble derived from the French Horn Muted Instrument	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
French Horn Overlay f	A different Solo French Horn played forte and intended to be layered with other horns to create a fuller section sound	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
French Horn Overlay f AG	The same as French Horn f Overlay but programmed for a more aggressive sound	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length, AG
French Horn ff Overlay	A different Solo French Horn played fortissimo and intended to be layered with other horns to create a brassier section sound	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
SAM French Horn Plr 1 KS	Associate Ensemble Instrument for building ensembles, 1st player in an ensemble derived from the SAM French Horn Solo KS instrument <ul style="list-style-type: none"> • C0 = Open • D0 = Mutes 	SusLeg, MW, Vel, Port, VAR 1, VAR 2, KS, Length, Vib

THE BRASS INSTRUMENTS


ARIA name:	Description:	
FRENCH HORNS:		
SAM French Horn Plr 2 KS	Associate Ensemble Instrument for building ensembles, 2nd player in an ensemble derived from the SAM French Horn Solo KS instrument <ul style="list-style-type: none"> • C0 = Open • D0 = Mutes 	SusLeg, MW, Vel, Port, VAR 1, VAR 2, KS, Length, Vib
SAM French Horn Plr 3 KS	Associate Ensemble Instrument for building ensembles, 3rd player in an ensemble derived from the SAM French Horn Solo KS instrument <ul style="list-style-type: none"> • C0 = Open • D0 = Mutes 	SusLeg, MW, Vel, Port, VAR 1, VAR 2, KS, Length, Vib
SAM French Horn Section KS	Keyswitched French Horn Section (4 horns) <ul style="list-style-type: none"> • C-1 = Open • D-1 = Mutes 	SusLeg, MW, Vel, Port, VAR 1, VAR 2, KS, Length
SAM French Horn Solo KS	Keyswitched SAM solo French Horn <ul style="list-style-type: none"> • C0 = Open • D0 = Mutes 	SusLeg, MW, Vel, Port, VAR 1, VAR 2, KS, Length, Vib
* Plr instruments do not share samples with each other but must not be used with the solo instruments from which they are derived to avoid phasing problems; e.g. don't use French horn 1 Plr1*, Plr2*, or Plr3* with French horn 1 (solo). The sale applies to all Plr instruments listed below.		


THE BRASS INSTRUMENTS		
ARIA name:	Description:	
TRUMPETS:		
Trumpet 1 Solo	Principal Solo C Trumpet	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length, Vib
Trumpet 1 Solo KS	A keyswitch version of the Trumpet 1 Solo instrument <ul style="list-style-type: none"> • C2 = Open • D2 = Mutes 	SusLeg, MW, Vel, Port, VAR 1, VAR 2, KS,
Trumpet 1 Solo AG	The same as Trumpet 1 Solo but programmed for a more aggressive sound	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length, Vib, AG
Trumpet 1 Plr1*	Associate Ensemble Instrument for building ensembles, 1st player in an ensemble derived from the Principal Trumpet Instrument	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Trumpet 1 Plr1* KS	A keyswitch version of Trumpet 1 Plr1 <ul style="list-style-type: none"> • C2 = Open • D2 = Mutes 	SusLeg, MW, Vel, Port, VAR 1, VAR 2, KS,
Trumpet 1 Plr2*	Associate Ensemble Instrument for building ensembles, 2nd player in an ensemble derived from the Principal Trumpet Instrument	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Trumpet 1 Plr2 KS*	A keyswitch version of Trumpet 1 Plr2 <ul style="list-style-type: none"> • C2 = Open • D2 = Mutes 	SusLeg, MW, Vel, Port, VAR 1, VAR 2, KS,
Trumpet 1 Plr3*	Associate Ensemble Instrument for building ensembles, 3rd player in an ensemble derived from the Principal Trumpet Instrument	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Trumpet 1 Plr3* KS	A keyswitch version of Trumpet 1 Player 3 <ul style="list-style-type: none"> • C2 = Open • D2 = Mutes 	SusLeg, MW, Vel, Port, VAR 1, VAR 2, KS,
Trumpet 2 Solo	2nd Solo Trumpet. A different trumpet with a brighter sound than Trumpet 1	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length, Vib

THE BRASS INSTRUMENTS		
ARIA name:	Description:	
TRUMPETS:		
Trumpet 2 Plr1*	Associate Ensemble Instrument for building ensembles, 1st player in an ensemble derived from the 2nd Trumpet Instrument	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Trumpet 2 Plr2*	Associate Ensemble Instrument for building ensembles, 2nd player in an ensemble derived from the 2nd Trumpet Instrument	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Trumpet 2 Plr3*	Associate Ensemble Instrument for building ensembles, 3rd player in an ensemble derived from the 2nd Trumpet Instrument	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Trumpet Piccolo NV Solo	Piccolo Trumpet played with no vibrato. Made by Bach	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length, Vib
Trumpet Piccolo V Solo	Piccolo Trumpet played with vibrato	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Trumpet Solo Straight Mute	Principal Trumpet played with a Straight Mute (Sordino)	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length, Vib
Trumpet Plr1 Straight Mute*	Associate Ensemble Instrument for building ensembles, 1st player in an ensemble derived from the Muted Trumpet Instrument	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Trumpet Plr2* Straight Mute	Associate Ensemble Instrument for building ensembles, 2nd player in an ensemble derived from the Muted Trumpet Instrument	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Trumpet Plr3* Straight Mute	Associate Ensemble Instrument for building ensembles, 3rd player in an ensemble derived from the Muted Trumpet Instrument	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Trumpet Overlay	A different Solo Trumpet played forte and intended to be layered with other trumpets to create a fuller section sound.	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length


THE BRASS INSTRUMENTS		
ARIA name:	Description:	
TRUMPETS:		
Trumpet Overlay AG	The same as Trumpet Overlay but programmed for a more aggressive sound	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length, AG
SAM Trumpet Plr1* KS	Associate Ensemble Instrument for building ensembles, 1st player in an ensemble derived from the SAM Trumpet Solo KS instrument <ul style="list-style-type: none"> • C2 = Open • D2 = Mutes 	SusLeg, MW, Vel, Port, VAR 1, VAR 2, KS, Length, Vib
SAM Trumpet Plr2* KS	Associate Ensemble Instrument for building ensembles, 2nd player in an ensemble derived from the SAM Trumpet Solo KS instrument <ul style="list-style-type: none"> • C2 = Open • D2 = Mutes 	SusLeg, MW, Vel, Port, VAR 1, VAR 2, KS, Length, Vib
SAM Trumpet Plr3* KS	Associate Ensemble Instrument for building ensembles, 3rd player in an ensemble derived from the SAM Trumpet Solo KS instrument <ul style="list-style-type: none"> • C2 = Open • D2 = Mutes 	SusLeg, MW, Vel, Port, VAR 1, VAR 2, KS, Length, Vib
SAM Trumpet Section KS	Keyswitched Bb Trumpet Section (3) <ul style="list-style-type: none"> • C2 = Open • D2 = Mutes 	SusLeg, MW, Vel, Port, VAR 1, VAR 2, KS, Length
SAM Trumpet Solo KS	Keyswitched SAM solo Bb trumpet <ul style="list-style-type: none"> • C2 = Open • D2 = Mutes 	SusLeg, MW, Vel, Port, VAR 1, VAR 2, KS, Length, Vib
SAM Picc Trumpet Solo KS	Keyswitched SAM solo piccolo trumpet <ul style="list-style-type: none"> • C2 = Open • D2 = Mutes 	SusLeg, MW, Vel, Port, VAR 1, VAR 2, KS, Length, Vib


THE BRASS INSTRUMENTS


ARIA name:	Description:	
TROMBONES:		
Bass Trombone 1 Solo	Principal Bass Trombone. Made by Bach	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length, Vib
Bass Trombone 2 Solo	2nd Bass Trombone. A different bass trombone with a brighter tone	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length, Vib
Bass Trombone 2 Solo AG	Same as Bass Trombone 2 Solo, but programmed for a more aggressive sound	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length, Vib, AG
Trombone Solo	Principal Solo Tenor Trombone, Made by Conn	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length, Vib
Trombone Solo KS	A keyswitch version of the Trombone Solo instrument	SusLeg, MW, Vel, Port, VAR 1, VAR 2, KS, Length, Vib
	<ul style="list-style-type: none"> • C1 = Open • D1 = Mutes 	
Trombone Solo AG	The same as the Trombone Solo but programmed for a more aggressive sound	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length, Vib, AG
Trombone Plr1*	Associate Ensemble Instrument for building ensembles, 1st player in an ensemble derived from the Principal Trombone Instrument	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Trombone Plr1* KS	A keyswitch version of Trombone Plr1	SusLeg, MW, Vel, Port, VAR 1, VAR 2, KS, Length
	<ul style="list-style-type: none"> • C1 = Open • D1 = Mutes 	
Trombone Plr2*	Associate Ensemble Instrument for building ensembles, 2nd player in an ensemble derived from the Principal Trombone Instrument	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Trombone Plr2* KS	A keyswitch version of Trombone Plr2	SusLeg, MW, Vel, Port, VAR 1, VAR 2, KS, Length
	<ul style="list-style-type: none"> • C1 = Open • D1 = Mutes 	
Trombone Plr3*	Associate Ensemble Instrument for building ensembles, 3rd player in an ensemble derived from the Principal Trombone Instrument	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Trombone Plr3* KS	A keyswitch version of Trombone Plr3	SusLeg, MW, Vel, Port, VAR 1, VAR 2, KS, Length
	<ul style="list-style-type: none"> • C1 = Open • D1 = Mutes 	
Trombone Solo Mute	Principal Tenor Trombone played with a Straight Mute (Sordino)	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length


THE BRASS INSTRUMENTS		
ARIA name:	Description:	
TROMBONES:		
Trombone Mute Plr1*	Associate Ensemble Instrument for building ensembles, 1st player in an ensemble derived from the Tenor Trombone Muted Instrument	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Trombone Mute Plr2*	Associate Ensemble Instrument for building ensembles, 2nd player in an ensemble derived from the Tenor Trombone Muted Instrument	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Trombone Mute Plr3*	Associate Ensemble Instrument for building ensembles, 3rd player in an ensemble derived from the Tenor Trombone Muted Instrument	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Trombone Overlay	A different Solo Trombone played forte and intended to be layered with other trombones to create a fuller section sound	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Trombone Overlay AG	The same as Trombone Overlay but programmed for a more aggressive sound	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length, AG
SAM Trombone Plr1* KS	Associate Ensemble Instrument for building ensembles, 1st player in an ensemble derived from the SAM Trombone KS instrument <ul style="list-style-type: none"> • C1 = Open • D1 = Mutes 	SusLeg, MW, Vel, Port, VAR 1, VAR 2, KS, Length, Vib
SAM Trombone Plr2* KS	Associate Ensemble Instrument for building ensembles, 2nd player in an ensemble derived from the SAM Trombone KS instrument <ul style="list-style-type: none"> • C1 = Open • D1 = Mutes 	SusLeg, MW, Vel, Port, VAR 1, VAR 2, KS, Length, Vib
SAM Trombone Plr3* KS	Associate Ensemble Instrument for building ensembles, 3rd player in an ensemble derived from the SAM Trombone KS instrument <ul style="list-style-type: none"> • C1 = Open • D1 = Mutes 	SusLeg, MW, Vel, Port, VAR 1, VAR 2, KS, Length, Vib
SAM Tbone Section KS	Keyswitched Trombone Section (3) <ul style="list-style-type: none"> • C0 = Open • D0 = Mutes 	SusLeg, MW, Vel, Port, VAR 1, VAR 2, KS, Length
SAM Trombone Solo KS	Keyswitched SAM solo trombone <ul style="list-style-type: none"> • C1 = Open • D1 = Mutes 	SusLeg, MW, Vel, Port, VAR 1, VAR 2, KS, Length, Vib
SAM Bass Trombone Solo KS	Keyswitched SAM solo bass trombone <ul style="list-style-type: none"> • C0 = Open • D0 = Mutes 	SusLeg, MW, Vel, Port, VAR 1, VAR 2, KS, Length, Vib

THE BRASS INSTRUMENTS


ARIA name:	Description:	
TUBAS:		
Contratuba Solo	Principal Contratuba in BBb. Plays lower than a conventional tuba. Made by Melton	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length, Vib
Tuba 1 Solo	1st Solo Bass Tuba.	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length, Vib
Tuba 2 Solo	2nd Solo Bass Tuba with a different tone	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length, Vib
Tuba 2 Solo AG	The same as Tuba 2 Solo but programmed for a more aggressive sound	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length, Vib, AG
Tuba Overlay	A different Solo Tuba played <i>forte</i> and intended to be layered or played solo for a fuller sound	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Tuba Overlay AG	The same as Tuba Overlay but programmed for a more aggressive sound	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length, AG
SAM Tuba Solo KS	Keyswitched SAM Solo Tuba <ul style="list-style-type: none"> • C-1 = Open • D-1 = Mutes 	SusLeg, MW, Vel, Port, VAR 1, VAR 2, KS, Length, Vib


THE PERCUSSION INSTRUMENTS			
ARIA name:	Description:		
PERCUSSION:			
Basic Orchestral Percussion	C1 - bass drum hit C#1 - bass drum roll (Mod Wheel) D1 thru G2 - timpani hit left hand G#2 - side drum hit left hand A2 - side drum hit right hand A#2 - side drum roll (mod wheel) B2 - snare drum hit left hand C3 - snare drum hit right hand C#3 - snare drum roll (mod wheel) D3 thru G4 - timpani hit right hand G#4 - large gong A4 - medium gong 1 A#4 - tam tam B4 - medium gong 2	C5 - piatti cymbal 1 C#5 -piatti cymbal 2 D5 - piatti cymbal 3 D#5 - crash cymbal E5 - choke cymbal F5 - cymbal hit (ping) left hand F#5 - cymbal hit (ping) right hand G5 - cymbal hit (ping) choke G#5 - cymbal roll (mod wheel) A5 - cymbal roll (mod wheel) with release hit A#5 - cymbal roll crescendo B5 – triangle long C6 – triangle short	Vel (vol), BDF, BD AG VAR 1, VAR 2
Bass Drum	The bass drum is the largest drum in the orchestra. C1 is a bass drum hit. C#1 is a bass drum roll controlled by the mod wheel (CC#1). The Bass Drum has a tunable fundamental (controllable by CC# 20). Made by Ludwig.		BDF, Vel (vol), VAR 1, VAR 2, AG
Crotales KS	Crotales resemble small cymbals and produce a definite pitch Playable rolls keyswitch: <ul style="list-style-type: none"> • C2 = Standard single hits • D2 = Playable release trigger rolls 		Vel (vol), KS, VAR 1, VAR 2
Cymbals (includes Gong & Tam-Tam)	G#4 - large gong A4 - medium gong 1 A#4 - tam tam B4 - medium gong 2 C5 - piatti cymbal 1 C#5 -piatti cymbal 2 D5 - piatti cymbal 3 D#5 - crash cymbal	E5 - choke cymbal F5 - cymbal hit (ping) left hand F#5 - cymbal hit (ping) right hand G5 - cymbal hit (ping) choke G#5 - cymbal roll (mod wheel) A5 - cymbal roll (mod wheel) with release hit A#5 - cymbal roll crescendo	Vel (vol), VAR 1, VAR 2
Glockenspiel KS	The Glockenspiel is another name for orchestral bells and consists of tuned metal bars that are struck with a hard beater Playable rolls keyswitch: <ul style="list-style-type: none"> • C4 = Standard single hits • D4 = Playable release trigger rolls 		Vel (vol), KS, VAR 1, VAR 2


THE PERCUSSION INSTRUMENTS																				
ARIA name:	Description:																			
PERCUSSION:																				
Grand Symphonic Marimba KS & Marimba KS	<p>The Orchestral Marimba has two rows of wooden bars that are played with beaters (mallets)</p> <p>Playable rolls keyswitch:</p> <ul style="list-style-type: none"> C0 = Standard single hits D0 = Playable release trigger rolls 	Vel (vol), SusDp, KS, VAR 1, VAR 2																		
Handbells KS	<p>Handbells are sets of brass bells, each tuned to a particular note of the scale</p> <p>Playable rolls keyswitch:</p> <ul style="list-style-type: none"> C2 = Standard single hits D2 = Playable release trigger rolls 	Vel (vol), KS, VAR 1, VAR 2																		
Percussion Toys KS	<p>Assorted percussion instruments family commonly known as “toys”</p> <table border="0"> <tr> <td>A#2 - cowbell 1</td> <td>E4 - clave 1</td> </tr> <tr> <td>B2 - cowbell 2</td> <td>F4 - clave 2</td> </tr> <tr> <td>C3 - cowbell 3</td> <td>F#4 - ratchet</td> </tr> <tr> <td>C#3 - gourd 1</td> <td>G4 - sleigh bells</td> </tr> <tr> <td>D3 - gourd 2</td> <td>G#4 - marktreet</td> </tr> <tr> <td>D#3 - shaker 1</td> <td>A4 - triangle short - sustain pedal down for damped</td> </tr> <tr> <td>E3 - shaker 2</td> <td>A#4 - triangle long - sustain pedal down for damped</td> </tr> <tr> <td>C4 - tambourine pop</td> <td></td> </tr> <tr> <td>C#4 - tambourine shake</td> <td></td> </tr> </table> <p>Playable rolls keyswitch:</p> <ul style="list-style-type: none"> C2 = Standard single hits D2 = Playable release trigger rolls 	A#2 - cowbell 1	E4 - clave 1	B2 - cowbell 2	F4 - clave 2	C3 - cowbell 3	F#4 - ratchet	C#3 - gourd 1	G4 - sleigh bells	D3 - gourd 2	G#4 - marktreet	D#3 - shaker 1	A4 - triangle short - sustain pedal down for damped	E3 - shaker 2	A#4 - triangle long - sustain pedal down for damped	C4 - tambourine pop		C#4 - tambourine shake		Vel (vol), KS, VAR 1, VAR 2
A#2 - cowbell 1	E4 - clave 1																			
B2 - cowbell 2	F4 - clave 2																			
C3 - cowbell 3	F#4 - ratchet																			
C#3 - gourd 1	G4 - sleigh bells																			
D3 - gourd 2	G#4 - marktreet																			
D#3 - shaker 1	A4 - triangle short - sustain pedal down for damped																			
E3 - shaker 2	A#4 - triangle long - sustain pedal down for damped																			
C4 - tambourine pop																				
C#4 - tambourine shake																				
Snare KS	<p>Orchestral snare drum with & without snares engaged, including snare rolls</p> <ul style="list-style-type: none"> G#2 - side drum hit played with the left hand A2 - side drum hit played with the right hand A#2 - side drum roll (mod wheel) B2 - snare drum hit played with the left hand C3 - snare drum hit played with the right hand C#3 - snare drum roll (mod wheel) <p>Playable rolls keyswitch:</p> <ul style="list-style-type: none"> C2 = Standard single hits D2 = Playable release trigger rolls 	Vel (vol), KS, VAR 1, VAR 2																		

THE PERCUSSION INSTRUMENTS		
ARIA name:	Description:	
PERCUSSION:		
Timpani KS	<p>Also known as the “Kettledrums,” shaped like huge copper kettles and easily noticeable onstage</p> <ul style="list-style-type: none"> • D1 thru G2 - timpani hits played with the left hand • D3 thru G4 - timpani hits played with the right hand <p>Playable rolls keyswitch (playable with right hand hits only):</p> <ul style="list-style-type: none"> • C0 = Standard single hits • D0 = Playable release trigger rolls 	Vel (vol), KS, VAR 1, VAR 2
Tubular Bells KS	<p>Tubular Bells are also known as Orchestral Chimes and consist of a series of lightweight metal tubes of varying length that are hung vertically in a frame and struck with a mallet</p> <p>Playable rolls keyswitch:</p> <ul style="list-style-type: none"> • C2 = Standard single hits • D2 = Playable release trigger rolls 	Vel (vol), SusDp, KS, VAR 1, VAR 2
Vibraphone KS	<p>The Vibraphone has two rows of metal bars with electric resonators that produce a distinctive vibrato or throbbing effect. The sustain pedal activates sustain but uses pedal mode 2.</p> <p>Playable rolls keyswitch:</p> <ul style="list-style-type: none"> • C1 = Standard single hits • D1 = Playable release trigger rolls 	Vel (vol) Sus, KS, Length, At, TL, TS
Vibraphone (std pedal)	<p>The Vibraphone has two rows of metal bars with electric resonators that produce a distinctive vibrato or throbbing effect. Uses Standard sustain pedal. Does not include KS playable rolls.</p>	Vel (vol), Sus, Length, At, TL, TS
Wind Machine	<p>A wind machine is an effects instrument that emulates the sound of wind.</p>	MW (vol)
Xylophone KS	<p>The Xylophone has two rows of graduated wooden bars, mounted in a frame, that are played with beaters (mallets)</p> <p>Playable rolls keyswitch:</p> <ul style="list-style-type: none"> • C3 = Standard single hits • D3 = Playable release trigger rolls 	Vel (vol), SusDp, KS


THE HARP INSTRUMENTS

ARIA name:	Description:	
HARPS:		
Chromatic Harp 1	Venus Harp with a mellow sound	Vel (vol), SusDp
Chromatic Harp 1 Lite	A lite version of the Chromatic Harp 1 instrument	Vel (vol), SusDp
Chromatic Harp 2	Wurlitzer Harp with a clearer sound	Vel (vol), SusDp
Chromatic Harp 2 Lite	A lite version of the Chromatic Harp 2 instrument	Vel (vol), SusDp
Glissando Harp 1	Maps Harp 1 samples to the white notes of the keyboard. Simulate harp glissandos in real time by running your finger up and down the white notes.	MIDI maps are used to emulate the pedals.
Glissando Harp 2	Maps Harp 2 samples to the white notes of the keyboard. Same as above but uses the Wurlitzer harp samples	MIDI maps are used to emulate the pedals.
Harp 1 KS	A keyswitch instrument containing all the Harp 1 instruments: <ul style="list-style-type: none"> • C-1 = Chromatic Harp • D-1 = Glissando Harp • E-1 = Harp Harmonics 	Vel (vol), SusDp
Harp 2 KS	A keyswitch instrument containing all the Harp 2 instruments: <ul style="list-style-type: none"> • C-1 = Chromatic Harp • D-1 = Glissando Harp • E-1 = Harp Harmonics 	Vel (vol), SusDp
Harp Harmonics 1	Venus Harp playing harmonics	SusDp
Harp Harmonics 2	Wurlitzer Harp playing harmonics	SusDp


THE KEYBOARD INSTRUMENTS		
ARIA name:	Description:	
KEYBOARDS:		
Celesta	The celesta is a keyboard percussion instrument that produces very soft, crystalline bell-like tones. Made by Mustel	Vel (vol), SusDp, Sus (sus)
Glass Armonica	Emulation of a glass armonica	Vel (vol)
Harpsichord KS	The harpsichord is a double manual French harpsichord made by Hubbard. The stops are selected by keyswitches as follows: <ul style="list-style-type: none"> • C0 – 8’ Stop, Brighter Sound • D0 – 8’ & 4’ Stop. Mellow Sound • E0 – Buff Stop, Muted Sound 	Keyswitch, Vel (vol), Sus (sus)
Steinway Piano	Steinway Concert Grand Piano, Chromatic with 2 dynamics	Vel (vol), Sus (sus)
Steinway Piano Lite	Steinway Concert Grand Piano, 2 dynamics – fewer samples	Vel (vol), Sus (sus)
Steinway Piano Duo 1 & Duo2	The Keyboard is mapped so two keyboards do not have samples in common. They can be used in piano duos	Vel (vol), Sus (sus)


THE PIPE ORGAN		
ARIA name:	Description:	
CONCERT PIPE ORGAN:	 <p>The pipe organ is a German Baroque organ built by Rudolf von</p>	
Baroque Plenum	This is the Baroque Plenum Stop of the Pipe Organ, without reeds, or full stops, using a large number of the Baroque-sounding stops to produce a full, rich sound	MW (vol), FD, FL, FF
Baroque Plen Reed Pedal	Full reed pedals, or pedal plenum with reeds, using a large number of the organ’s baroque reed pedal stops to produce a powerful and deep sound	MW (vol), FD, FL, FF
Baroque Plen Reeds	Full reed stops, or plenum with reeds, using a large number of the organ’s baroque-sounding reed stops	MW (vol), FD, FL, FF
Baroque Plenum Pedal	Pedal Plenum without reeds, or full pedals, using a large number of the organ’s baroque pedal stops	MW (vol), FD, FL, FF


THE PIPE ORGAN		
ARIA name:	Description:	
Brustwerk All stops	All stops on brustwerk. The brustwerk are the stops in front of other ranks, often encased above the keyboard, in 'breast' of the organ	MW (vol), FD, FL, FF
Cornet	Cornet - a versatile stop, usable either as a solo stop or in combination	MW (vol), FD, FL, FF
Flutes	Combination Flutes (8', 4', 1'). The flute stop has a soft clear sound.	MW (vol), FD, FL, FF
Full Organ	Pulling out all the stops	MW (vol), FD, FL, FF
Haupt Mix	A mixture of stops on the hauptwerk manual without reeds	MW (vol), FD, FL, FF
Hauptwerk All Stops	All stops on the hauptwerk manual.	MW (vol), FD, FL, FF
Prinzipal	Prinzipal 8' - the principal tone of the pipe organ and considered to be its most important stop	MW (vol), FD, FL, FF
Scharf IV	A mixture of four pipes.	MW (vol), FD, FL, FF
Symphonic Plenum	Combination stop, using a large number of the of various flutes and reeds stops to produce a full, rich, and powerful sound. The "Plenum" is the sound produced by the organ with a large number or all its stops	MW (vol), FD, FL, FF


THE SOLO STRINGS INSTRUMENTS		
ARIA name:	Description:	
SOLO VIOLIN:		
Violin 1 Solo	Gagliano Solo Violin, Principal Violin. Combines characteristics of both long and short bows	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Violin 1 KS Solo	<p>A keyswitch version of the Violin Gagliano Solo instrument</p> <ul style="list-style-type: none"> • C1 = Sustain • C#1 = Sustain mute • D1 = Automatically alternating up and downbows • D#1 = Upbows • E1 = Downbows • F1 = Pizzicato • F#1 = Playable tremolo mute • G1 = Playable tremolo • G#1 = Playable muted trills (extended intervals can be chosen with CC#15) • A1 = Playable trills (extended intervals can be chosen with CC#) • A#1 = Playable whole step muted trills • B1 = Playable whole step trills 	SusLeg, MW, Vel, Port, VAR 1, VAR 2, KS, Alt, Length
Violin 1 Plr1*	1st player in an ensemble derived from the Principal Violin	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Violin 1 Plr2*	2nd player in an ensemble derived from the Principal Violin	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Violin 1 Plr3*	3rd player in an ensemble derived from the Principal Violin	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Violin 1 Pizz Solo	Solo Gagliano Violin played pizzicato. Velocity controls volume level and timbre changes (brighter at higher velocities)	Vel (vol), VAR 1, VAR 2, Length
Violin 2 Solo	Stradivari Solo Violin, Concertmaster. Combines characteristics of both long and short bows	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length


THE SOLO STRINGS INSTRUMENTS


ARIA name:	Description:	
SOLO VIOLIN:		
Violin 2 Solo KS	A keyswitch version of the Violin 2 Solo instrument <ul style="list-style-type: none"> • C1 = Sustain • C#1 = Sustain mute • D1 = Automatically alternating up and downbows • D#1 = Upbows • E1 = Downbows • F1 = Pizzicato • F#1 = Playable tremolo mute • G1 = Playable tremolo • G#1 = Playable muted trills (extended intervals can be chosen with CC#15) • A1 = Playable trills (extended intervals can be chosen with CC#15) • A#1 = Playable whole-step muted trills • B1 = Playable whole-step trills 	SusLeg, MW, Vel, Port, VAR 1, VAR 2, KS, Alt, Length
Violin 2 Plr1*	1st player in an ensemble derived from the Concertmaster Violin	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Violin 2 Plr2*	2nd player in an ensemble derived from the Concertmaster Violin	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Violin 2 Plr3*	3rd player in an ensemble derived from the Concertmaster Violin	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Violin 2 Pizz Solo	Solo Stradivari played pizzicato. Velocity controls volume level and timbre changes (brighter at higher velocities)	Vel (vol), VAR 1, VAR 2, Length
Violin 3 Solo	Guarneri Solo Violin, Associate Principal. Combines characteristics of both long and short bows	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length


THE SOLO STRINGS INSTRUMENTS		
ARIA name:	Description:	
SOLO VIOLIN:		
Violin 3 Solo KS	A keyswitch version of the Violin 3 Solo instrument <ul style="list-style-type: none"> • C1 = Sustain • C#1 = Sustain mute • D1 = Automatically alternating up and downbows • D#1 = Upbows • E1 = Downbows • F1 = Pizzicato • F#1 = Playable tremolo mute • G1 = Playable tremolo • G#1 = Playable muted trills (extended intervals can be chosen with CC#15) • A1 = Playable trills (extended intervals can be chosen with CC#15) • A#1 = Playable whole-step muted trills • B1 = Playable whole-step trills 	SusLeg, MW, Vel, Port, VAR 1, VAR 2, KS, Alt, Length
Violin 3 Plr1*	1st player in an ensemble derived from the Associate Principal Violin	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Violin 3 Plr2*	2nd player in an ensemble derived from the Associate Principal Violin	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Violin 3 Plr3*	3rd player in an ensemble derived from the Associate Principal Violin	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Violin 3 Pizz Solo	Solo Guarneri Violin played pizzicato. Velocity controls volume level and timbre changes (brighter at higher velocities)	Vel (vol), VAR 1, VAR 2, Length
* Plr instruments do not share samples with each other but must not be used with the solo instruments from which they are derived to avoid phasing problems; e.g. don't use Violin 2 Plr1*, Plr2*, or Plr3* with Violin 2 Solo instruments. The same applies to all Plr instruments listed below.		

THE SOLO STRINGS INSTRUMENTS		
ARIA name:	Description:	
SOLO VIOLA:		
Viola Solo	18th Century Solo Viola, Principal Viola. Combines characteristics of both long and short bows.	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Viola Solo KS	<p>A keyswitch version of the Viola Solo instrument</p> <ul style="list-style-type: none"> • C1 = Sustain • C#1 = Sustain mute • D1 = Automatically alternating up and downbows • D#1 = Upbows • E1 = Downbows • F1 = Pizzicato • F#1 = Playable tremolo mute • G1 = Playable tremolo • G#1 = Playable muted trills (extended intervals can be chosen with CC#15) • A1 = Playable trills (extended intervals can be chosen with CC#15) • A#1 = Playable whole-step muted trills • B1 = Playable whole-step trills 	SusLeg, MW, Vel, Port, VAR 1, VAR 2, KS, Alt, Length
Viola Plr1*	1st player in an ensemble derived from the Principal Viola	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Viola Plr2*	2nd player in an ensemble derived from the Principal Viola	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Viola Plr3*	3rd player in an ensemble derived from the Principal Viola	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Viola Pizz Solo	Solo Viola played pizzicato. Velocity controls volume level and timbre changes (brighter at higher velocities)	Vel (vol), VAR 1, VAR 2, Length


THE SOLO STRINGS INSTRUMENTS		
ARIA name:	Description:	
SOLO CELLO:		
Cello 1 Solo	Vuillaume Solo Cello, Principal Cello. Combines characteristics of both long and short bows.	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Cello 1 Solo KS	<p>A keyswitch version of the Cello 1 Solo instrument</p> <ul style="list-style-type: none"> • C0 = Sustain • C#0 = Sustain mute • D0 = Automatically alternating up and downbows • D#0 = Upbows • E0 = Downbows • F0 = Pizzicato • F#0 = Playable tremolo mute • G0 = Playable tremolo • G#0 = Playable muted trills (extended intervals can be chosen with CC#15) • A0 = Playable trills (extended intervals can be chosen with CC#15) • A#0 = Playable whole-step muted trills • B0 = Playable whole-step trills 	SusLeg, MW, Vel, Port, VAR 1, VAR 2, KS, Alt, Length
Cello 1 Plr1*	1st player in an ensemble derived from the Principal Cello	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Cello 1 Plr2*	2nd player in an ensemble derived from the Principal Cello	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Cello 1 Plr3*	3rd player in an ensemble derived from the Principal Cello	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Cello 2 Solo	Montagnana Solo Cello, Assistant Principal. Combines characteristics of both long and short bows	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length


THE SOLO STRINGS INSTRUMENTS		
ARIA name:	Description:	
SOLO CELLO:		
Cello 2 Solo KS	<p>A keyswitch version of the Cello 2 Solo instrument</p> <ul style="list-style-type: none"> • C0 = Sustain • C#0 = Sustain mute • D0 = Automatically alternating up and downbows • D#0 = Upbows • E0 = Downbows • F0 = Pizzicato • F#0 = Playable tremolo mute • G0 = Playable tremolo • G#0 = Playable muted trills (extended intervals selectable with CC#15) • A0 = Playable trills (extended intervals selectable with CC#15) • A#0 = Playable whole-step muted trills • B0 = Playable whole-step trills 	SusLeg, MW, Vel, Port, VAR 1, VAR 2, KS, Alt, Length
Cello 2 Plr1*	1st player in an ensemble derived from the Assistant Principal Cello	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Cello 2 Plr2*	2nd player in an ensemble derived from the Assistant Principal Cello	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Cello 2 Plr3*	3rd player in an ensemble derived from the Assistant Principal Cello	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Cello 3 Solo	Gofriller Solo Cello, Associate Principal. Combines characteristics of both long and short bows	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length

THE SOLO STRINGS INSTRUMENTS		
ARIA name:	Description:	
SOLO CELLO:		
Cello 3 Solo KS	<p>A keyswitch version of the Cello 3 Solo instrument</p> <ul style="list-style-type: none"> • C0 = Sustain • C#0 = Sustain mute • D0 = Automatically alternating up and downbows • D#0 = Upbows • E0 = Downbows • F0 = Pizzicato • F#0 = Playable tremolo mute • G0 = Playable tremolo • G#0 = Playable muted trills (extended intervals selectable with CC#15) • A0 = Playable trills (extended intervals selectable with CC#15) • A#0 = Playable whole-step muted trills • B0 = Playable whole-step trills 	SusLeg, MW, Vel, Port, VAR 1, VAR 2, KS, Alt, Length
Cello 3 Plr1*	1st player in an ensemble derived from the Assistant Principal Cello	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Cello 3 Plr2*	2nd player in an ensemble derived from the Assistant Principal Cello	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Cello 3 Plr3*	3rd player in an ensemble derived from the Assistant Principal Cello	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Cello Pizz Solo	Solo Cello played pizzicato. Velocity controls volume level and timbre changes (brighter at higher velocities)	Vel (vol), VAR 1, VAR 2, Length


THE SOLO STRINGS INSTRUMENTS		
ARIA name:	Description:	
SOLO DOUBLE BASS:		
Double Bass Solo	18th Century Solo Double Bass. Principal. Combines characteristics of both long and short bows	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Double Bass Solo KS	<p>A keyswitch version of the Double Bass Solo instrument</p> <ul style="list-style-type: none"> • C-1 = Sustain • C#-1 = Sustain mute • D-1 = Automatically alternating up and downbows • D#-1 = Upbows • E-1 = Downbows • F-1 = Pizzicato • F#-1 = Playable tremolo mute • G-1 = Playable tremolo • G#-1 = Playable muted trills (extended intervals selectable with CC#15) • A-1 = Playable trills (extended intervals selectable with CC#15) • A#-1 = Playable whole-step muted trills • B-1 = Playable whole-step trills 	SusLeg, MW, Vel, Port, VAR 1, VAR 2, KS, Alt, Length
Double Bass Plr1*	1st player in an ensemble derived from the Principal Double Bass	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Double Bass Plr2*	2nd player in an ensemble derived from the Principal Double Bass	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Double Bass Plr3*	3rd player in an ensemble derived from the Principal Double Bass	SusLeg, MW, Vel, Port, VAR 1, VAR 2, Length
Double Bass Pizz Solo	Solo Double Bass played pizzicato. Velocity controls volume level and timbre changes (brighter at higher velocities)	Vel (vol), VAR 1, VAR 2, Length


THE STRING SECTION INSTRUMENTS		
ARIA name:	Description:	
1st VIOLIN SECTION:		
Violins 1 Lush	A lush sustain with strong vibrato played by a twelve-player 1st violin section	SusLeg, MW, Vel, Port, Length, VAR 1, VAR 2
Violins 1 Lush Mutes	Same as above played Sordino (with mutes)	SusLeg, MW, Vel, Port, Length, VAR 1, VAR 2
Violins 1 Pizzicato	1st Violin section played pizzicato. Velocity controls volume level and timbre changes (brighter at higher velocities)	Vel (vol), VAR 1, VAR 2
Violins 1 Short Bows KS	1st Violin section played short bow style Keyswitch for bow direction control: <ul style="list-style-type: none"> • D1 = automatically alternating bow strokes • D#1 = bow stroke 1 • E1 = bow stroke 2 	Vel (vol), KS, Length, VAR 1, VAR 2
Violins 1 Short Bows KS AG	Violins 1 Short Bows with more aggressive sound, controlled by velocity. Keyswitch for bow direction control: <ul style="list-style-type: none"> • D1 = automatically alternating bow strokes • D#1 = bow stroke 1 • E1 = bow stroke 2 	Vel (vol), KS, Length, VAR 1, VAR 2, AG
Violins 1 Sus+Short	1st Violin section strings that combine characteristics of both long and short bows into single instruments.	SusLeg, MW, Vel, Port, Length, VAR 1, VAR 2
Violins 1 Sus+Short AG	Violins 1 Sustain + Short with more aggressive sound, controlled by the Mod Wheel controller or CC#1	SusLeg, MW, Vel, Port, AG
Violins 1 Sus+Short Mutes	Same as above played Sordino (with mutes)	SusLeg, MW, Vel, Port, Length, VAR 1, VAR 2
Violins 1 Tremolo	1st Violin section playing tremolo	SusLeg, MW, Vel, Port, Length, VAR 1, VAR 2
Violins 1 Trills Half	1st Violin section playing half-step trills	SusLeg, MW, Vel, Port, Length, VAR 1, VAR 2
Violins 1 Trills Whole	1st Violin section playing whole-step trills	SusLeg, MW, Vel, Port, Length, VAR 1, VAR 2


THE STRING SECTION INSTRUMENTS		
ARIA name:	Description:	
1st VIOLIN SECTION:		
Violins 1 KS	<p>A keyswitch instrument containing all 1st Violins instruments</p> <ul style="list-style-type: none"> • C1 = Sus+short (legato with sustain pedal) • C#1 = Sus+short mutes (legato with sustain pedal) • D1 = Automatically alternating up and downbows • D#1 = Upbows • E1 = Downbows • F1 = Pizzicato • F#1 = Tremolo mutes (legato with sustain pedal) • G1 = Tremolo (legato with sustain pedal) • G#1 = Half-step trills mutes (legato with sustain pedal) • A1 = Half-step trills (legato with sustain pedal) • A#1 = Whole-step trills mutes (legato with sustain pedal) • B1 = Whole-step trills (legato with sustain pedal) 	<p>SusLeg, MW, Vel, Port, VAR 1, VAR 2, KS, Alt, Length</p>


THE STRING SECTION INSTRUMENTS		
ARIA name:	Description:	
2nd VIOLIN SECTION:		
Violins 2 Lush	A lush sustain with strong vibrato played by a ten-player 2nd violin section	SusLeg, MW, Vel, Port, Length, VAR 1, VAR 2
Violins 2 Lush Mutes	Same as above played Sordino (with mutes)	SusLeg, MW, Vel, Port, Length, VAR 1, VAR 2
Violins 2 Pizzicato	2nd Violin section played pizzicato. Velocity controls volume level and timbre changes (brighter at higher velocities)	Vel (vol), VAR 1, VAR 2, Length
Violins 2 Short Bows KS	2nd Violin section played short bow style Keyswitch for bow direction control: <ul style="list-style-type: none"> • D1 = automatically alternating bow strokes • D#1 = bow stroke 1 • E1 = bow stroke 2 	Vel (vol), KS, Length, VAR 1, VAR 2
Violins 2 Short Bows KS AG	Violins 1 Short Bows with more aggressive sound, controlled by velocity. Keyswitch for bow direction control: <ul style="list-style-type: none"> • D1 = automatically alternating bow strokes • D#1 = bow stroke 1 • E1 = bow stroke 2 	Vel (vol), KS, Length, VAR 1, VAR 2, AG
Violins 2 Sustain+Short	2nd Violin section strings that combine characteristics of both long and short bows into single instruments	SusLeg, MW, Vel, Port, Length, VAR 1, VAR 2
Violins 2 Sus+Short AG	Violins 2 Sustain + Short with more aggressive sound, controlled by the Mod Wheel controller or CC#1	SusLeg, MW, Vel, Port, Length, VAR 1, VAR 2, AG
Violins 2 Sus+Short Mutes	Same as above played Sordino (with mutes)	SusLeg, MW, Vel, Port, Length, VAR 1, VAR 2
Violins 2 Tremolo	2nd Violin section playing tremolo	SusLeg, MW, Vel, Port, Length, VAR 1, VAR 2
Violins 2 Trills Half	2nd Violin section playing half-step trills	SusLeg, MW, Vel, Port, Length, VAR 1, VAR 2
Violins 2 Trills Whole	2nd Violin section playing whole-step trills	SusLeg, MW, Vel, Port, Length, VAR 1, VAR 2

THE STRING SECTION INSTRUMENTS


ARIA name:	Description:	
2nd VIOLIN SECTION:		
Violins 2 KS	<p>A keyswitch instrument containing all 2nd Violins instruments</p> <ul style="list-style-type: none"> • C1 = Sus+short (legato with sustain pedal) • C#1 = Sus+short mutes (legato with sustain pedal) • D1 = Automatically alternating up and downbows • D#1 = Upbows • E1 = Downbows • F1 = Pizzicato • F#1 = Tremolo mutes (legato with sustain pedal) • G1 = Tremolo (legato with sustain pedal) • G#1 = Half-step trills mutes (legato with sustain pedal) • A1 = Half-step trills (legato with sustain pedal) • A#1 = Whole-step trills mutes (legato with sustain pedal) • B1 = Whole-step trills (legato with sustain pedal) 	SusLeg, MW, Vel, Port, VAR 1, VAR 2, KS, Alt, Length


THE STRING SECTION INSTRUMENTS		
ARIA name:	Description:	
VIOLA SECTION:		
Violas Lush	A lush sustain with strong vibrato played by a ten-player viola section.	SusLeg, MW, Vel, Port, Length, VAR 1, VAR 2
Violas Lush Mutes	Same as above played Sordino (with mutes)	SusLeg, MW, Vel, Port, Length, VAR 1, VAR 2
Violas Pizzicato	Viola section played pizzicato. Velocity controls volume level and timbre changes (brighter at higher velocities)	Vel (vol), VAR 1, VAR 2, Length
Violas Short Bows KS	Viola section played short bow style Keyswitch for bow direction control: <ul style="list-style-type: none"> • D1 = automatically alternating bow strokes • D#1 = bow stroke 1 • E1 = bow stroke 2 	Vel (vol), KS, Length, VAR 1, VAR 2
Violas Short Bows KS AG	Violas Short Bows instrument with more aggressive sound, controlled by velocity. Keyswitch for bow direction control: <ul style="list-style-type: none"> • D1 = automatically alternating bow strokes • D#1 = bow stroke 1 • E1 = bow stroke 2 	Vel (vol), KS, Length, VAR 1, VAR 2, AG
Violas Sus+Short	Viola section strings that combine characteristics of both long and short bows into single instruments	SusLeg, MW, Vel, Port, Length, VAR 1, VAR 2
Violas Sus+Short AG	Violas Sustain + Short with more aggressive sound, controlled by the Mod Wheel controller or CC#1	SusLeg, MW, Vel, Port, Length, VAR 1, VAR 2, AG
Violas Sus+Short Mutes	Same as above played Sordino (with mutes)	SusLeg, MW, Vel, Port,
Violas Tremolo	Viola section playing tremolo	SusLeg, MW, Vel, Port, Length, VAR 1, VAR 2
Violas Trills Half	Viola section playing half-step trills	SusLeg, MW, Vel, Port, Length, VAR 1, VAR 2
Violas Trills Whole	Viola section playing whole-step trills	SusLeg, MW, Vel, Port, Length, VAR 1, VAR 2


THE STRING SECTION INSTRUMENTS		
ARIA name:	Description:	
VIOLA SECTION:		
Violas KS	<p>A keyswitch instrument containing all Viola instruments</p> <ul style="list-style-type: none"> • C1 = Sus+short (legato with sustain pedal) • C#1 = Sus+short mutes (legato with sustain pedal) • D1 = Automatically alternating up and downbows • D#1 = Upbows • E1 = Downbows • F1 = Pizzicato • F#1 = Tremolo mutes (legato with sustain pedal) • G1 = Tremolo (legato with sustain pedal) • G#1 = Half-step trills mutes (legato with sustain pedal) • A1 = Half-step trills (legato with sustain pedal) • A#1 = Whole-step trills mutes (legato with sustain pedal) • B1 = Whole-step trills (legato with sustain pedal) 	SusLeg, MW, Vel, Port, VAR 1, VAR 2, KS, Alt, Length


THE STRING SECTION INSTRUMENTS		
ARIA name:	Description:	
CELLO SECTION:		
Cellos Lush	A lush sustain with strong vibrato played by an eight-player cello section.	SusLeg, MW, Vel, Port, Length, VAR 1, VAR 2
Cellos Lush Mutes	Same as above played Sordino (with mutes)	SusLeg, MW, Vel, Port, Length, VAR 1, VAR 2
Cellos Pizzicato	Cello section played pizzicato. Velocity controls volume level and timbre changes (brighter at higher velocities)	Vel (vol), VAR 1, VAR 2, Length


THE STRING SECTION INSTRUMENTS		
ARIA name:	Description:	
CELLO SECTION:		
Cellos Short Bows KS	Cello section played short bow style Keyswitch for bow direction control: <ul style="list-style-type: none"> • D0 = automatically alternating bow strokes • D#0 = bow stroke 1 • E0 = bow stroke 2 	Vel (vol), KS, Length, VAR 1, VAR 2
Cellos Short Bows KS AG	Cellos Short Bows instrument with a more aggressive sound, controlled by velocity. Keyswitch for bow direction control: <ul style="list-style-type: none"> • D0 = automatically alternating bow strokes • D#0 = bow stroke 1 • E0 = bow stroke 2 	Vel (vol), KS, Length, VAR 1, VAR 2, AG
Cellos Sus+Short	Cello section strings that combine characteristics of both long and short bows into single instruments	SusLeg, MW, Vel, Port, Length, VAR 1, VAR 2
Cellos Sus+Short AG	The Cellos Sustain+Short instrument with a more aggressive sound, controlled by the Mod Wheel controller CC#1	SusLeg, MW, Vel, Port, Length, VAR 1, VAR 2, AG
Cellos Sus+Short Mutes	Same as above played Sordino (with mutes)	SusLeg, MW, Vel, Port, Length, VAR 1, VAR 2
Cellos Tremolo	Cello section playing tremolo	SusLeg, MW, Vel, Port, Length, VAR 1, VAR 2
Cellos Trills Half	Cello section playing half-step trills	SusLeg, MW, Vel, Port, Length, VAR 1, VAR 2
Cellos Trills Whole	Cello section playing whole-step trills	SusLeg, MW, Vel, Port, Length, VAR 1, VAR 2

THE STRING SECTION INSTRUMENTS		
ARIA name:	Description:	
CELLO SECTION:		
Cellos KS	<p>A keyswitch instrument containing all Cello instruments</p> <ul style="list-style-type: none"> • C0 = Sus+short (legato with sustain pedal) • C#0 = Sus+short mutes (legato with sustain pedal) • D0 = Automatically alternating up and downbows • D#0 = Upbows • E0 = Downbows • F0 = Pizzicato • F#0 = Tremolo mutes (legato with sustain pedal) • G0 = Tremolo (legato with sustain pedal) • G#0 = Half-step trills mutes (legato with sustain pedal) • A0 = Half-step trills (legato with sustain pedal) • A#0 = Whole-step trills mutes (legato with sustain pedal) • B0 = Whole-step trills (legato with sustain pedal) 	SusLeg, MW, Vel, Port, VAR 1, VAR 2, KS, Alt, Length

THE STRING SECTION INSTRUMENTS		
ARIA name:	Description:	
DOUBLE BASS SECTION:		
Basses Lush	A lush sustain with strong vibrato played by a seven-player double bass section.	SusLeg, MW, Vel, Port, Length, VAR 1, VAR 2
Basses Lush Mutes	Same as above played Sordino (with mutes)	SusLeg, MW, Vel, Port, Length, VAR 1, VAR 2
Basses Pizzicato	Double Bass section played pizzicato. Velocity controls volume level and timbre changes (brighter at higher velocities)	Vel (vol), VAR 1, VAR 2, Length

THE STRING SECTION INSTRUMENTS		
ARIA name:	Description:	
DOUBLE BASS SECTION:		
Basses Short Bows KS	Double Bass section played short bow style Keyswitch for bow direction control: <ul style="list-style-type: none"> • D-1 = automatically alternating bow strokes • D#-1 = bow stroke 1 • E-1 = bow stroke 2 	Vel (vol), KS, Length, VAR 1, VAR 2
Basses Short Bows KS AG	Basses Short Bows instrument with more aggressive sound, controlled by velocity. Keyswitch for bow direction control: <ul style="list-style-type: none"> • D-1 = automatically alternating bow strokes • D#-1 = bow stroke 1 • E-1 = bow stroke 2 	Vel (vol), KS, Length, VAR 1, VAR 2, AG
Basses Sus+Short	Bass section strings that combine characteristics of both long and short bows into single instruments	SusLeg, MW, Vel, Port, Length, VAR 1, VAR 2
Basses Sus+Short AG	Basses Sustain+Short instrument with more aggressive sound, controlled by the Mod Wheel controller CC#1	SusLeg, MW, Vel, Port, Length, VAR 1, VAR 2, AG
Basses Sus+Short Mutes	Same as above played Sordino (with mutes)	SusLeg, MW, Vel, Port, Length, VAR 1, VAR 2
Basses KS	A keyswitch instrument containing all Bass instruments <ul style="list-style-type: none"> • C-1 = Sustain • C#-1 = Sustain mute • D-1 = Automatically alternating • D#-1 = Upbows • E-1 = Downbows • F-1 = Pizzicato • F#-1 = Playable tremolo mute • G-1 = Playable tremolo 	SusLeg, MW, Vel, Port, VAR 1, VAR 2, KS, Alt, Length
Basses Tremolo	Double Bass section playing tremolo	SusLeg, MW, Vel, Port, Length, VAR 1, VAR 2

THE STRING SECTION INSTRUMENTS		
ARIA name:	Description:	
FULL STRING SECTION:		
Full Strings Pizz	Full String section played pizzicato. Velocity controls volume level and timbre changes (brighter at higher velocities)	Vel (vol), VAR 1, VAR 2, Length
Full Strings Short Bows KS	Full String section played short-bow style Hidden keyswitch for bow direction control: <ul style="list-style-type: none"> • D-1 = automatically alternating bow strokes • D#-1 = bow stroke 1 • E-1 = bow stroke 2 	Vel (vol), KS, Length, VAR 1, VAR 2
Full Strings Sus+Short	Full String section that combines characteristics of both long and short bows into single instruments	SusLeg, MW, Vel, Port, Length, VAR 1, VAR 2
Full Strings Sus+Short AG	Full Strings Sustain+Short instrument with more aggressive sound, controlled by the Mod Wheel controller CC#1	SusLeg, MW, Vel, Port, Length, VAR 1, VAR 2, AG
Full Strings Sus+Short Mutes	Same as above played Sordino (with mutes)	SusLeg, MW, Vel, Port, Length, VAR 1, VAR 2
Full Strings KS	A keyswitch instrument containing all Full Strings instruments <ul style="list-style-type: none"> • C-1 = Sus+short (legato with sustain pedal) • C#-1 = Sus+short mutes (legato with sustain pedal) • D-1 = Automatically alternating up and downbows • D#-1 = Upbows • E-1 = Downbows • F-1 = Pizzicato • F#-1 = Tremolo mutes (legato with sustain pedal) • G-1 = Tremolo (legato with sustain pedal) • G#-1 = Half-step trills mutes (legato with sustain pedal) • A-1 = Half-step trills (legato with sustain pedal) • A#-1 = Whole-step trills mutes (legato with sustain pedal) • B-1 = Whole-step trills (legato with sustain pedal) 	SusLeg, MW, Vel, Port, VAR 1, VAR 2, KS, Alt, Length

THE STRING SECTION INSTRUMENTS		
ARIA name:	Description:	
FULL STRING SECTION:		
Full Strings Tremolo	Full Strings section playing tremolo	SusLeg, MW, Vel, Port, Length, VAR 1, VAR 2
Full Strings Trills Half	Full Strings section playing half-step trills	SusLeg, MW, Vel, Port, Length, VAR 1, VAR 2
Full Strings Trills Whole	Full Strings section playing whole-step trills	SusLeg, MW, Vel, Port, Length, VAR 1, VAR 2

THE CHOIR INSTRUMENTS		
ARIA name:	Description:	
CHOIR:		
Full Choir Lite KS	A full choir of soprano, alto, tenor, and bass sections combined. <ul style="list-style-type: none"> • C0 = Ahhs • D0= Oohs 	SusLeg, MW, Vel, Port, Length, VAR 1, VAR 2, KS

CODA





Conclusion

We have presented a general picture of Personal Orchestra in this guide. We have outlined how to install and use the ARIA player, the various instruments and controls, and other salient information.

You now have a virtual orchestra at your fingertips. The next move is up to you.

We cordially invite you to share the music you make with Garritan Personal Orchestra with us and with others. Feel free to post your orchestral work on our forum or submit it for inclusion in our demo pages.

May you make wonderful music!

Getting Help

The first place to look for a solution to any problem you may be experiencing is in this manual. The next best place is the separate ARIA Player manual. Please read these manuals before contacting support. Next, check the readme files (if any) that contain important information and all last-minute changes that were not available when creating this guide. Whenever you encounter problems, you should also check if you have installed the latest updates. The version number of your software is displayed in the Settings tab. Updates are released regularly to fix known problems and improve the software.

Selecting the “Get Help” button in the “Settings” tab in the ARIA Player will link directly to the Support site. To better assist you, we will ask you for all information about your hardware and software environments. In your report, you should include a description of the problem, the steps you have taken to try to remedy the problem, the specs of your computer, and a description of your software and hardware.

If there is a severe technical issue (crash, empty UI), please go to the “Generate Logs” link. For Windows the link is in the Start Menu, and Mac users can find the Generate Log link in your library’s folder. This link will open a window and will allow you to create a log on your desktop. Please attach the log to an e-mail and send it to us. That will help us identify the issue so we can get back to you.

If you are unable to find a solution to your problem by any of the above methods, please visit our support page, <http://www.garritan.com/support>. The best way to get the help you need is by giving us plenty of detailed information about the problem you are having. We do ask you to read this guide thoroughly and exhaust the other avenues of support before contacting us.

Regarding Third-Party Customer Service: Please do not call Garritan for technical support regarding any third-party application. Please contact the respective companies for support.

For the Latest... The ARIA Player is dynamic software that is evolving and growing. Please check the support area of our website at www.garritan.com for the latest up-to-date information, troubleshooting, FAQs, helpful hints, and tutorials. Another resource is the support forums, where you can discuss problems directly with other users and with experts from our forums.



The Garritan Community

Learn, Share Music, & Stay up to date

I welcome you to join the Garritan Community.

Owning the Garritan Personal Orchestra gives you much more than a product. One of the most valuable benefits is membership in the Garritan community of musicians.

The Garritan Forum is where Garritan users from around the world come to discuss everything related to soundware and music. It's the perfect way to find the latest news and announcements, ask questions, and share your music made with Garritan Personal Orchestra. If you want to browse, share your music, share your thoughts about the sounds, impart knowledge, listen to demos, learn, and interact with other users—this is the place! You can also communicate privately with other musicians (PM), respond to polls, participate in real-time chats, read how-to tutorials, and get support and help from others. There is a wealth of information among the tens of thousands of posts in the forum and a convenient 'search' feature to find what you are looking for.

The Garritan forum can be accessed at: <http://www.garritan.com/forum>. There is a special subsection dealing with Personal Orchestra on the Garritan forum.

You don't have to register to browse posts, but before you can post, you will have to sign up. Registration is fast, simple, and absolutely free, so please join our community today! In addition to the official Garritan Forum, there are other independent Garritan Communities where you can find valuable information and interact with other users. I urge you to contribute and be a part of the Garritan Community, where you will find an indispensable resource for musicians.



Acknowledgments

Producing the Garritan Personal Orchestra would not have been possible without the combined help, talent, and support of many extraordinary people. I am grateful to those who have contributed and would like to thank them all.

I especially wish to thank Tom Hopkins for transforming these samples into a masterpiece. This library would not have been possible without Tom's programming magic. Again Tom has done miracles.

I am extremely grateful for the musicians from the US, Canada, the UK, New Zealand, and the Czech Republic who have played for this collection. I wish space permitted to list you all. Thanks for enduring the endless scales, sore fingers, and numb lips.

Thanks to Pauline Kim for her performance on the Stradivari violin. Thanks to the University of British Columbia and McGill University for providing some of the facilities and sounds used in this collection. Special thanks go to Joyce Hinton, Director at the Chan Center for the Performing Arts and to David Simpson, Director of Recording & Audio University of British Columbia. I am grateful to Frank Opolko and Joel Wapnick of the McGill University Faculty of Music for their invaluable help and for paving the way. They are the pioneers in chromatic orchestral sampling. Thanks to Jim Bredouw for the use of his Steinway. Thanks to Petr Pololanik for conducting instrumentalists in the Czech Republic and for his advice and insights. And thanks to Crispin Hands for conducting in Vancouver. I wish to acknowledge Paul Gilreath, author of *The Guide to MIDI Orchestration*, for providing valuable insights.

The custom-made ARIA sample engine for Personal Orchestra was developed by David Viens of Plogue Art et Technologie Inc. David Viens and his team took up the task brilliantly, and brought forth the super-charged and technologically stunning Aria sample engine used for this project. Thanks also to Sebastien Beaulieu, Eric Patenaude, and Pascal Maheux for assisting with the development of the engine. And a special thanks to Max Deland for managing this huge project. I wish to thank Magnus Jonsson for providing a special edition of Ambience reverb. Thanks to Maarten Spruijt, Vincent Beijer, and Marco Deegenars from Project SAM for their outstanding brass samples.



A special thanks goes to Jeff Hurchalla. And hats off to the League of Extraordinary Beta-testers. I wish to thank Prof. Jim Williams, Dan Kury, Bill DeWitt, Jack Cannon, Robert Davis, David Sosnowski, Pat Azzarello, Jim Ortner, Trond Bjornard Ph.D., Rick Schneblin, Randy Bowser, Jeremy & Julian Soule, Houston Haynes, Mike Moscariello, Kevin Gates, Danny Williams, Peter O'Regan, Francesco Marchetti, Colton Provias, Sean Hannifin, and Alan Belkin. And thanks to James Mireau for the fantastic GUI work for ARIA and graphics. Thanks to Crispin and Jeremy Soule for your help and friendship. Thanks to Frank Spitznagel for his diligent work and efforts that laid the cornerstone for developing this library.

Thanks to Mark Simon and David Burnett for providing Northern Sounds Forums to exchange ideas and support one another. I would also like to thank Stephen Croes, Dean of Music Technology, and Kurt Biederwolf, Chair of the Music Synthesis Department at Berklee College of Music. Stephen and Kurt were very helpful in discussing many of the problems facing music students that led to the development of this library as a creative solution for students. Many thanks to Steinway & Sons. And a special thank you to Wendy Carlos.

Downloadable Sounds and Other Garritan Libraries

Get More Sounds Instantly and Easily!

Download sounds quickly and easily to expand your musical palette. Simply go to the “Settings” tab in the ARIA Player and click on the “Get More Sounds” button. You’ll be taken to the Garritan Download Shop, where you will be able to download additional sounds and libraries.

Please be sure to check out World Instruments, Authorized Steinway Virtual Concert Grand, Jazz & Big Band, Concert & Marching Band, and other soundware products.

For information on all the Garritan libraries and upcoming new products, visit our website at:
www.garritan.com

Products from Garritan

- World Instruments
- Jazz & Big Band
- Concert & Marching Band
- Classic Pipe Organs
- Instant Orchestra
- Harps



Free Interactive Orchestration Course!

Open To All Without Charge.

We are pleased to make available to you to the Interactive Edition of “Principles of Orchestration” based upon Nikolay Rimsky-Korsakov’s celebrated text.

With Garritan Personal Orchestra you now have a fine orchestra at your fingertips. A well-crafted orchestration is a thing of beauty and it is important for a well-rounded musician to possess a basic knowledge of orchestration. As with composing or arranging for a real orchestra, knowledge and experience are essential for producing successful results.

One of the most effective ways to learn orchestration is by listening and simultaneously seeing it on the score. Live playback of the score examples imparts an added dimension, conveying concepts far more clearly and immediately than simply viewing what’s on a printed page.

In this Interactive Edition we have provided exactly that facility: score excerpts that allow the learner to simultaneously listen and follow visually. There are some 275 animated scores embedded within the relevant portions of the text.

The ability to hear various orchestral realizations of the different examples from Rimsky-Korsakov’s works, on-demand, is invaluable and books alone cannot provide this level of instruction.

To get started, go to <http://www.garritan.com/forum> or go to the www.garritan.com website and follow the links to the course.

This course is completely free and can be an invaluable resource as your embark on your musical journey.





GPO 4

GARRITAN



WWW.GARRITAN.COM