

Addendum

Notation Version of GPO

The Finale version of GPO is very similar to the Standard version but there are important differences which make it more compatible with the way most notation programs handle MIDI data.

The biggest general difference: All instruments in the notation version use the Kontakt Player's Pedal Mode 1, "Standard Sustain." Most of the differences in programming are a consequence of this fundamental difference in pedal modes. The programming differences are:

Legato mode – controlled by cc#68 (instead of cc#64.) This difference applies to all strings, woodwinds, and brass instruments. Please note that instruments which normally use standard sustain pedal (e.g. piano, harpsichord, vibraphone, celesta, etc.) continue to use cc#64 for the sustain function.

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.

The cc#7 and cc#10 Option in the Kontakt player is active to allow notation programs to control relative MIDI volume and panning.

The keyswitched "playable rolls" in the percussion have been omitted from the notation version to make it compatible with the Kontakt Player's Pedal Mode 1. That leaves only two percussion instruments that contain keyswitches, and these keyswitches choose between full-decay and damped versions of the two instruments (bass drum and timpani,) not "playable rolls."

Directory of Instruments in Notation version of Personal Orchestra

The following directory gives the name and a brief description of the orchestral instrument sounds contained in Garritan Personal Orchestra. There is also a chart of the available controllers available for each instrument. Leg = cc#68 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 is automatic variability of intonation, VAR 2 is automatic variability of timbre, ALT = up and down bowstrokes, BDFund is to control the fundamental of the bass drum. KS represents Keyswitching. Length represents sample length. For detailed information about the controllers, please refer to the chapter entitled "Playing Personal Orchestra Instruments", as well as the individual instrument sections in this guide.

THE BRASS INSTRUMENTS

nki name:

Description:

Controls:

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Bass Trombone 1 Solo	Principal Bass Trombone. Plays one octave lower than a conventional trombone. Made by Bach	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Bass Trombone 2 Solo	2nd Bass Trombone. A different bass trombone with a brighter tone	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Bass Trombone 2 Solo ag	Same as Bass Trombone 2 Solo, but programmed for a more aggressive sound	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Contratuba Solo	Principal Contratuba. Plays lower than a conventional tuba. Specially made by Melton	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
French horn 1 Solo	Principal Solo French Horn	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
French horn 1 Solo KS	A keyswitch version of the French Horn 1 Solo instrument <ul style="list-style-type: none"> ○ C-2 = Regular Sustains ○ D-2 = Mutes 	Leg, MW, Vel, Port, VAR 1, VAR 2, KS, Length
French horn 1 Solo ag	The same as French Horn 1 Solo but with a more aggressive sound	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
French horn 1 Plr1*	Associate Ensemble Instrument for building ensembles, 1st player in an ensemble derived from the Principal French Horn Instrument	Leg, 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"> ○ C-2 = Regular Sustains ○ D-2 = Mutes 	Leg, 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	Leg, 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"> ○ C-2 = Regular Sustains ○ D-2 = Mutes 	Leg, 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	Leg, 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"> ○ C-2 = Regular Sustains ○ D-2 = Mutes 	Leg, 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	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
French horn 2 Solo Ag	The same as French Horn 2 Solo but programmed for a more aggressive sound	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
French horn 2 Plr1*	Associate Ensemble Instrument for building ensembles, 1st player in an ensemble derived from the 2nd French Horn Instrument	Leg, 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	Leg, 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	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
French Horn Solo Mute	Principal French Horn played with a Straight Mute (Sordino)	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
French Horn Mute Plr1*	Associate Ensemble Instrument for building ensembles, 1st player in an ensemble derived from the French Horn	Leg, MW, Vel, Port, VAR 1, VAR 2, Length

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	Muted Instrument	
French Horn Mute Plr2*	Associate Ensemble Instrument for building ensembles, 2nd player in an ensemble derived from the French Horn Muted Instrument	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
French Horn Mute Plr3*	Associate Ensemble Instrument for building ensembles, 3rd player in an ensemble derived from the French Horn Muted Instrument	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
FHorn f Overlay	A different Solo French Horn played <i>forte</i> and intended to be layered with other horns to create a fuller section sound	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
FHorn f Overlay Ag	The same as FHorn f Overlay but programmed for a more aggressive sound	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
FHorn ff Overlay	A different Solo French Horn played <i>fortissimo</i> and intended to be layered with other horns to create a brassier section sound	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Tenor Tbone Solo	Principal Solo Tenor Trombone, Make: Conn	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Tenor Tbone Solo KS	A keyswitch version of the Tenor Tbone Solo instrument <ul style="list-style-type: none"> ○ C-2 = Regular Sustains ○ D-2 = Mutes ○ 	Leg, MW, Vel, Port, VAR 1, VAR 2, KS, Length
Tenor Tbone Solo Ag	The same as the Tenor Tbone Solo but programmed for a more aggressive sound	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Tenor Tbone Plr1*	Associate Ensemble Instrument for building ensembles, 1st player in an ensemble derived from the Principal Trombone Instrument	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Tenor Tbone Plr1 KS*	A keyswitch version of Tenor Tbone Plr1 <ul style="list-style-type: none"> ○ C-2 = Regular Sustains ○ D-2 = Mutes 	Leg, MW, Vel, Port, VAR 1, VAR 2, KS, Length
Tenor Tbone Plr2*	Associate Ensemble Instrument for building ensembles, 2nd player in an ensemble derived from the Principal Trombone Instrument	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Tenor Tbone Plr2 KS*	A keyswitch version of Tenor Tbone Plr2 <ul style="list-style-type: none"> ○ C-2 = Regular Sustains ○ D-2 = Mutes 	Leg, MW, Vel, Port, VAR 1, VAR 2, KS, Length
Tenor Tbone Plr3*	Associate Ensemble Instrument for building ensembles, 3rd player in an ensemble derived from the Principal Trombone Instrument	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Tenor Tbone Plr3 KS*	A keyswitch version of Tenor Tbone Plr3 <ul style="list-style-type: none"> ○ C-2 = Regular Sustains ○ D-2 = Mutes 	Leg, MW, Vel, Port, VAR 1, VAR 2, KS, Length
Tenor Tbone Solo Mute	Principal Tenor Trombone played with a Straight Mute (Sordino)	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Tenor Tbone Mute Plr1*	Associate Ensemble Instrument for building ensembles, 1st player in an ensemble derived from the Tenor Trombone Muted Instrument	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Tenor Tbone Mute Plr2*	Associate Ensemble Instrument for building ensembles, 2nd player in an ensemble derived from the Tenor Trombone Muted Instrument	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Tenor Tbone Mute Plr3*	Associate Ensemble Instrument for building ensembles, 3rd player in an ensemble derived from the Tenor Trombone Muted Instrument	Leg, MW, Vel, Port, VAR 1, VAR 2, Length

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Tbone Overlay	A different Solo Trombone played <i>forte</i> and intended to be layered with other trombones to create a fuller section sound	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Tbone Overlay Ag	The same as Tbone Overlay but programmed for a more aggressive sound	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Tpt 1 Solo	Principal Solo C Trumpet	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Tpt 1 Solo KS	A keyswitch version of the Tpt 1 Solo instrument <ul style="list-style-type: none"> ○ C-2 = Regular Sustains ○ D-2 = Mutes 	Leg, MW, Vel, Port, VAR 1, VAR 2, KS, Length
Tpt 1 Solo Ag	The same as Tpt 1 Solo but programmed for a more aggressive sound	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Tpt 1 Plr1*	Associate Ensemble Instrument for building ensembles, 1st player in an ensemble derived from the Principal Trumpet Instrument	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Tpt 1 Plr1 KS*	A keyswitch version of Tpt 1 Plr1 <ul style="list-style-type: none"> ○ C-2 = Regular Sustains ○ D-2 = Mutes 	Leg, MW, Vel, Port, VAR 1, VAR 2, KS, Length
Tpt 1 Plr2*	Associate Ensemble Instrument for building ensembles, 2nd player in an ensemble derived from the Principal Trumpet Instrument	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Tpt 1 Plr2 KS*	A keyswitch version of Tpt 1 Plr2 <ul style="list-style-type: none"> ○ C-2 = Regular Sustains ○ D-2 = Mutes 	Leg, MW, Vel, Port, VAR 1, VAR 2, KS, Length
Tpt 1 Plr3*	Associate Ensemble Instrument for building ensembles, 3rd player in an ensemble derived from the Principal Trumpet Instrument	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Tpt 1 Plr3 KS*	A keyswitch version of Tpt 1 Plr3 <ul style="list-style-type: none"> ○ C-2 = Regular Sustains ○ D-2 = Mutes 	Leg, MW, Vel, Port, VAR 1, VAR 2, KS, Length
Tpt 2 Solo	2 nd Solo Trumpet. A different trumpet with a brighter sound than Tpt 1	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Tpt 2 Plr1*	Associate Ensemble Instrument for building ensembles, 1st player in an ensemble derived from the 2 nd Trumpet Instrument	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Tpt 2 Plr2*	Associate Ensemble Instrument for building ensembles, 2nd player in an ensemble derived from the 2 nd Trumpet Instrument	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Tpt 2 Plr3*	Associate Ensemble Instrument for building ensembles, 3rd player in an ensemble derived from the 2 nd Trumpet Instrument	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Tpt Piccolo NV Solo	Piccolo Trumpet played with no vibrato. Made by Bach Stradivarius	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Tpt Piccolo V Solo	Piccolo Trumpet played with vibrato	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Tpt Solo Straight Mute	Principal Trumpet played with a Straight Mute (Sordino)	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Tpt Straight Mute Plr1*	Associate Ensemble Instrument for building ensembles, 1st player in an ensemble derived from the Muted Trumpet Instrument	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Tpt Straight Mute Plr2*	Associate Ensemble Instrument for building ensembles, 2nd player in an ensemble derived from the Muted	Leg, MW, Vel, Port, VAR 1, VAR 2, Length

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	Trumpet Instrument	
Tpt Straight Mute Plr3*	Associate Ensemble Instrument for building ensembles, 3rd player in an ensemble derived from the Muted Trumpet Instrument	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Tpt Overlay	A different Solo Trumpet played <i>forte</i> and intended to be layered with other trumpets to create a fuller section sound.	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Tpt Overlay Ag	The same as Tpt Overlay but programmed for a more aggressive sound	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Tuba 1 Solo	Principal Solo Bass Tuba. Made by Bohland Fuchs	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Tuba 2 Solo	2 nd Solo Bass Tuba with a different tone	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Tuba 2 Solo Ag	The same as Tuba 2 Solo but programmed for a more aggressive sound	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Tuba Overlay	A different Solo Tuba played <i>forte</i> and intended to be layered or played solo for a fuller sound	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Tuba Overlay Ag	The same as Tuba Overlay but programmed for a more aggressive sound	Leg, MW, Vel, Port, VAR 1, VAR 2, Length

THE HARP INSTRUMENTS		
nki name	Description	Controls
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-2 = Chromatic Harp ○ D-2 = Glissando Harp ○ G-2 = Harp Harmonics 	Vel (vol), SusDp
Harp 2 KS	A keyswitch instrument containing all the Harp 2 instruments: <ul style="list-style-type: none"> ○ C-2 = Chromatic Harp ○ D-2 = Glissando Harp ○ G-2 = Harp Harmonics 	Vel (vol), SusDp
Harp Harmonics 1	Venus Harp playing harmonics	SusDp
Harp Harmonics 2	Wurlitzer Harp playing harmonics	SusDp

THE KEYBOARDS INSTRUMENTS		
<i>nki name:</i>	<i>Description:</i>	<i>Controls:</i>
Celesta	The celesta is a keyboard percussion instrument which produces very soft, crystalline bell-like tones. Made by Mustel	Vel (vol), SusDp, Sus (sus)
Glass Harmonica	Emulation of a glass harmonica	Vel (vol)
Harpsichord KS (A5,B5,C6)	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"> ○ C-2 – 8' Stop, Brighter Sound ○ D-2 – 8' & 4' Stop. Mellow Sound ○ E-2 – 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)
Pipe Organ	The pipe organ is a German Baroque organ built by Rudolf von Beckerath. It has 3 manuals, and pedals, each containing from 7 to 11 individual stops. Stops include: <ul style="list-style-type: none"> ○ Baroque Plen Reed Ped ○ Baroque Plen Reeds ○ Baroque Plenum Ped ○ Baroque Plenum ○ Brustwerk All stops ○ Cornet ○ Flutes ○ Full Organ ○ Haupt Mix ○ Hauptwerk All Stops ○ Prinzipal ○ Scharf IV ○ Symphonic Plenum 	Vel (vol) Fund, FiltLV, FiltFQ

THE PERCUSSION INSTRUMENTS		
<i>nki name:</i>	<i>Description:</i>	<i>Controls:</i>
Basic Orch Percussion	<ul style="list-style-type: none"> • C2 - bass drum hit • C#2 - bass drum roll (mod wheel) • D2 thru G-2 - 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 • 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 	Vel (vol), BDFund, BD Aggressive control VAR 1, VAR 2

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	<ul style="list-style-type: none"> right hand G#4 - large gong A4 - medium gong 1 A#4 - tam tam 	<ul style="list-style-type: none"> C6 – triangle short 	
Bass Drum KS	<p>The bass drum is the largest drum in the orchestra. C1 is a bass drum hit. C#1 is a bass drum roll. The Bass Drum has a tunable fundamental (controllable by CC# 20). Made by Ludwig</p> <p>Keyswitches:</p> <ul style="list-style-type: none"> C-2 = Hits full decay D-2 = Hits hand damped 		BDFund, Vel (vol), KS, VAR 1, VAR 2 aggressive control
Crotales	Crotales resemble small cymbals and produce a definite pitch		Vel (vol), VAR 1, VAR 2
Cymbals (includes Gong & Tam-Tam)	<p>Cymbals are large thin metal discs that are played by being struck together:</p> <ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> 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	The Glockenspiel is another name for orchestral bells and consists of tuned metal bars that are struck with a hard beater		Vel (vol), VAR 1, VAR 2
Grand Symphonic Marimba & Marimba	The Orchestral Marimba has two rows of wooden bars that are played with beaters (mallets)		Vel (vol), SusDp, VAR 1, VAR 2
Handbells	Handbells are sets of brass bells, each tuned to a particular note of the scale		Vel (vol), VAR 1, VAR 2
Percussion Toys	<p>Assorted percussion instruments family commonly known as "toys"</p> <ul style="list-style-type: none"> A#2 - cowbell 1 B2 - cowbell 2 C3 - cowbell 3 C#3 - gourd 1 D3 - gourd 2 D#3 - shaker 1 E3 - shaker 2 C4 - tambourine pop 	<ul style="list-style-type: none"> C#4 - tambourine shake D4 - castanet hit D#4 - castanet roll E4 - clave 1 F4 - clave 2 F#4 - ratchet G4 - sleigh bells G#4 - marktreet A4 - triangle short - sustain pedal down for damped A#4 - triangle long - sustain pedal down for damped 	Vel (vol), VAR 1, VAR 2
Snares	<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 		Vel (vol), VAR 1, VAR 2

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	<ul style="list-style-type: none"> • 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) 	
Timpani KS	<p>Also known as the "Kettledrums" being shaped like huge copper kettles and are 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>Keyswitches:</p> <ul style="list-style-type: none"> ○ C-2 = Hits full decay ○ D-2 = Hits hand damped 	Vel (vol), KS, VAR 1, VAR 2
Tubular Bells	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	Vel (vol), SusDp, VAR 1, VAR 2
Vibraphone	The Vibraphone has two rows of metal bars with electric resonators that produce a distinctive vibrato or throbbing effect. The sustain pedal activates the standard sustain function.	Vel (vol) Sus Attack, Length, TrmLev, TrmSpd
Wind Machine	A wind machine is an effects instrument that emulates the sound of wind. Made by Amati	MW (vol)
Xylophone	The Xylophone has two rows of graduated wooden bars, mounted in a frame, that are played with beaters (mallets)	Vel (vol), SusDp,

THE STRING SECTION INSTRUMENTS		
<i>nki name:</i>	<i>Description:</i>	<i>Controls:</i>
Vln 1 Lush	A lush sustain with strong vibrato played by a twelve-player 1 st violin section	Leg, MW, Vel, Port, Length, VAR 1, VAR 2
Vln 1 Lush Mutes	Same as above played Sordino (with the mutes)	Leg, MW, Vel, Port, Length, VAR 1, VAR 2
Vlns 1 Pizzicato	1 st Violin section played pizzicato. Velocity controls volume level and timbre changes (brighter at higher velocities)	Vel (vol), VAR 1, VAR 2,
Vlns 1 Short Bows KS	<p>1st Violin section played short bow style controlled by velocity</p> <p>Has keyswitch for bow direction control:</p> <ul style="list-style-type: none"> ○ D-2 = automatically alternating bow strokes ○ D#-2 = bow stroke 1 ○ E-2 = bow stroke 2 	Vel (vol), KS, Length, VAR 1, VAR 2
Vlns 1 Short Bows KS ag	<p>Vlns 1 Short Bows with more aggressive sound, controlled by velocity. Has bow direction control keyswitch.</p> <p>Has keyswitch for bow direction control:</p> <ul style="list-style-type: none"> ○ D-2 = automatically alternating bow strokes ○ D#-2 = bow stroke 1 	Vel (vol), KS, Length, VAR 1, VAR 2

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	<ul style="list-style-type: none"> ○ E-2 = bow stroke 2 	
Vlns 1 Sustain+Short	1 st Violin section strings that combine characteristics of both long and short bows into single instruments.	Leg, MW, Vel, Port, Length, VAR 1, VAR 2
Vlns 1 Sustain+Short ag	Vlns 1 Sustain + Short with more aggressive sound, controlled by the mod wheel controller or CC#1	Leg, MW, Vel, Port,
Vlns 1 Sustain+Short Mutes	Same as above played Sordino (with the mutes)	Leg, MW, Vel, Port, Length, VAR 1, VAR 2
Vlns 1 Tremolo	1 st Violin section played tremolo	Leg, MW, Vel, Port, Length, VAR 1, VAR 2
Vlns 1 Trills Half	1 st Violin section played half-step trills	Leg, MW, Vel, Port, Length, VAR 1, VAR 2
Vlns 1 Trills Whole	1 st Violin section played whole-step trills	Leg, MW, Vel, Port, Length, VAR 1, VAR 2
Vlns 1 KS	<p>A keyswitch instrument containing all 1st Violins instruments</p> <ul style="list-style-type: none"> ○ C-2 = Sus+short (legato with sustain pedal) ○ C#-2 = Sus+short mutes (legato with sustain pedal) ○ D-2 = Automatically alternating up and downbows ○ D#-2 = Upbows ○ E-2 = Downbows ○ F-2 = Pizzicato ○ F#-2 = Tremolo mutes (legato with sustain pedal) ○ G-2 = Tremolo (legato with sustain pedal) ○ G#-2 = Half step trills mutes (legato with sustain pedal) ○ A-2 = Half step trills (legato with sustain pedal) ○ A#-2 = Whole step trills mutes (legato with sustain pedal) ○ B-2 = Whole step trills (legato with sustain pedal) 	Leg, MW, Vel, Port, VAR 1, VAR 2, KS, Alt, Length
Vln 2 Lush	A lush sustain with strong vibrato played by a ten-player 2nd violin section	Leg, MW, Vel, Port, Length, VAR 1, VAR 2
Vln 2 Lush Mutes	Same as above played Sordino (with the mutes)	Leg, MW, Vel, Port, Length, VAR 1, VAR 2
Vlns 2 Pizzicato	2 nd Violin section played pizzicato. Velocity controls volume level and timbre changes (brighter at higher velocities)	Vel (vol), VAR 1, VAR 2, Length
Vlns 2 Short Bows KS	<p>2nd Violin section played short bow style controlled by velocity</p> <p>Has keyswitch for bow direction control:</p> <ul style="list-style-type: none"> ○ D-2 = automatically alternating bow strokes ○ D#-2 = bow stroke 1 ○ E-2 = bow stroke 2 	Vel (vol), KS, Length, VAR 1, VAR 2
Vlns 2 Short Bows KS ag	<p>2nd Violin section Short Bows with more aggressive sound, controlled by velocity. Has bow direction control keyswitch.</p> <p>Has keyswitch for bow direction control:</p> <ul style="list-style-type: none"> ○ D-2 = automatically alternating bow strokes 	Vel (vol), KS, Length, VAR 1, VAR 2

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	<ul style="list-style-type: none"> ○ D#-2 = bow stroke 1 ○ E-2 = bow stroke 2 	
Vlns 2 Sustain+Short	2nd Violin section strings that combine characteristics of both long and short bows into single instruments	Leg, MW, Vel, Port, Length, VAR 1, VAR 2
Vlns 2 Sustain+Short ag	Vlns 2 Sustain + Short with more aggressive sound, controlled by the mod wheel controller or CC#1	Leg, MW, Vel, Port, Length, VAR 1, VAR 2
Vlns 2 Sustain+Short Mutes	Same as above played Sordino (with the mutes)	Leg, MW, Vel, Port, Length, VAR 1, VAR 2
Vlns 2 Tremolo	2nd Violin section played tremolo	Leg, MW, Vel, Port, Length, VAR 1, VAR 2
Vlns 2 Trills Half	2nd Violin section played half-step trills	Leg, MW, Vel, Port, Length, VAR 1, VAR 2
Vlns 2 Trills Whole	2nd Violin section played whole-step trills	Leg, MW, Vel, Port, Length, VAR 1, VAR 2
Vlns 2 KS	<p>A keyswitch instrument containing all 2nd Violins instruments</p> <ul style="list-style-type: none"> ○ C-2 = Sus+short (legato with sustain pedal) ○ C#-2 = Sus+short mutes (legato with sustain pedal) ○ D-2 = Automatically alternating up and downbows ○ D#-2 = Upbows ○ E-2 = Downbows ○ F-2 = Pizzicato ○ F#-2 = Tremolo mutes (legato with sustain pedal) ○ G-2 = Tremolo (legato with sustain pedal) ○ G#-2 = Half step trills mutes (legato with sustain pedal) ○ A-2 = Half step trills (legato with sustain pedal) ○ A#-2 = Whole step trills mutes (legato with sustain pedal) ○ B-2 = Whole step trills (legato with sustain pedal) 	Leg, MW, Vel, Port, VAR 1, VAR 2, KS, Alt, Length
Violas Lush	A lush sustain with strong vibrato played by a ten-player viola section.	Leg, MW, Vel, Port, Length, VAR 1, VAR 2
Violas Lush Mutes	Same as above played Sordino (with the mutes)	Leg, 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	<p>Viola section played short bow style controlled by velocity</p> <p>Hidden keyswitch for bow direction control:</p> <ul style="list-style-type: none"> ○ D-2 = automatically alternating bow strokes ○ D#-2 = bow stroke 1 ○ E-2 = 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. Has bow direction control keyswitch	Vel (vol), KS, Length, VAR 1, VAR 2

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	Has keyswitch for bow direction control: <ul style="list-style-type: none"> ○ D-2 = automatically alternating bow strokes ○ D#-2 = bow stroke 1 ○ E-2 = bow stroke 2 	
Violas Sustain+Short	Viola section strings that combine characteristics of both long and short bows into single instruments	Leg, MW, Vel, Port, Length, VAR 1, VAR 2
Violas Sustain+Short ag	Violas Sustain + Short with more aggressive sound, controlled by the mod wheel controller or CC#1	Leg, MW, Vel, Port, Length, VAR 1, VAR 2
Violas Sustain+Short Mutes	Same as above played Sordino (with the mutes)	Leg, MW, Vel, Port
Violas Tremolo	Viola section played tremolo	Leg, MW, Vel, Port, Length, VAR 1, VAR 2
Violas Trills Half	Viola section played half-step trills	Leg, MW, Vel, Port, Length, VAR 1, VAR 2
Violas Trills Whole	Viola section played whole-step trills	Leg, MW, Vel, Port, Length, VAR 1, VAR 2
Violas KS	A keyswitch instrument containing all Viola instruments <ul style="list-style-type: none"> ○ C-2 = Sus+short (legato with sustain pedal) ○ C#-2 = Sus+short mutes (legato with sustain pedal) ○ D-2 = Automatically alternating up and downbows ○ D#-2 = Upbows ○ E-2 = Downbows ○ F-2 = Pizzicato ○ F#-2 = Tremolo mutes (legato with sustain pedal) ○ G-2 = Tremolo (legato with sustain pedal) ○ G#-2 = Half step trills mutes (legato with sustain pedal) ○ A-2 = Half step trills (legato with sustain pedal) ○ A#-2 = Whole step trills mutes (legato with sustain pedal) ○ B-2 = Whole step trills (legato with sustain pedal) 	Leg, MW, Vel, Port, VAR 1, VAR 2, KS, Alt, Length
Cellos Lush	A lush sustain with strong vibrato played by an eight-player cello section.	Leg, MW, Vel, Port, Length, VAR 1, VAR 2
Cellos Lush Mutes	Same as above played Sordino (with the mutes)	Leg, 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
Cellos Short Bows KS	Cello section played short bow style controlled by velocity Has keyswitch for bow direction control: <ul style="list-style-type: none"> ○ D-2 = automatically alternating bow strokes ○ D#-2 = bow stroke 1 ○ E-2 = 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. Has bow direction control	Vel (vol), KS, Length, VAR 1, VAR 2

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	<p>keyswitch Has keyswitch for bow direction control:</p> <ul style="list-style-type: none"> ○ D-2 = automatically alternating bow strokes ○ D#-2 = bow stroke 1 ○ E-2 = bow stroke 2 	
Cellos Sustain+Short	Cello section strings that combine characteristics of both long and short bows into single instruments	Leg, MW, Vel, Port, Length, VAR 1, VAR 2
Cellos Sustain+Short ag	The Cellos Sustain+Short instrument with a more aggressive sound, controlled by the mod wheel controller CC#1	Leg, MW, Vel, Port, Length, VAR 1, VAR 2
Cellos Sustain+Short Mutes	Same as above played Sordino (with the mutes)	Leg, MW, Vel, Port, Length, VAR 1, VAR 2
Cellos Tremolo	Cello section played tremolo	Leg, MW, Vel, Port, Length, VAR 1, VAR 2
Cellos Trills Half	Cello section played half-step trills	Leg, MW, Vel, Port, Length, VAR 1, VAR 2
Cellos Trills Whole	Cello section played whole-step trills	Leg, MW, Vel, Port, Length, VAR 1, VAR 2
Cellos KS	<p>A keyswitch instrument containing all Cello instruments</p> <ul style="list-style-type: none"> ○ C-2 = Sus+short (legato with sustain pedal) ○ C#-2 = Sus+short mutes (legato with sustain pedal) ○ D-2 = Automatically alternating up and downbows ○ D#-2 = Upbows ○ E-2 = Downbows ○ F-2 = Pizzicato ○ F#-2 = Tremolo mutes (legato with sustain pedal) ○ G-2 = Tremolo (legato with sustain pedal) ○ G#-2 = Half step trills mutes (legato with sustain pedal) ○ A-2 = Half step trills (legato with sustain pedal) ○ A#-2 = Whole step trills mutes (legato with sustain pedal) ○ B-2 = Whole step trills (legato with sustain pedal) 	Leg, MW, Vel, Port, VAR 1, VAR 2, KS, Alt, Length
Basses Lush	A lush sustain with strong vibrato played by a seven-player double bass section.	Leg, MW, Vel, Port, Length, VAR 1, VAR 2
Basses Lush Mutes	Same as above played Sordino (with the mutes)	Leg, 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
Basses Short Bows KS	<p>Double Bass section played short bow style controlled by velocity</p> <p>Has keyswitch for bow direction control:</p> <ul style="list-style-type: none"> ○ D-2 = automatically alternating bow strokes ○ D#-2 = bow stroke 1 ○ E-2 = bow stroke 2 	Vel (vol), KS, Length, VAR 1, VAR 2
Basses Short Bows KS ag	Basses Short Bows instrument with more aggressive	Vel (vol), KS, Length, VAR

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	<p>sound, controlled by velocity. Has bow direction control keyswitch for bow direction control:</p> <ul style="list-style-type: none"> ○ D-2 = automatically alternating bow strokes ○ D#-2 = bow stroke 1 ○ E-2 = bow stroke 2 	1, VAR 2
Basses Sustain+Short	Bass section strings that combine characteristics of both long and short bows into single instruments	Leg, MW, Vel, Port, Length, VAR 1, VAR 2
Basses Sustain+Short ag	Basses Sustain+Short instrument with more aggressive sound, controlled by the mod wheel controller CC#1	Leg, MW, Vel, Port, Length, VAR 1, VAR 2
Basses Sustain+Short Mutes	Same as above played Sordino (with the mutes)	Leg, MW, Vel, Port, Length, VAR 1, VAR 2
Basses KS	<p>A keyswitch instrument containing all Bass instruments</p> <ul style="list-style-type: none"> ○ C-2 = Sustain ○ C#-2 = Sustain mute ○ D-2 = Automatically alternating ○ D#-2 = Upbows ○ E-2 = Downbows ○ F-2 = Pizzicato ○ F#-2 = Playable tremolo mute ○ G-2 = Playable tremolo 	Leg, MW, Vel, Port, VAR 1, VAR 2, KS, Alt, Length
Basses Tremolo	Double Bass section played tremolo	Leg, MW, Vel, Port, Length, VAR 1, VAR 2
Full Strgs 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 Strgs Short Bows KS	<p>Full String section played short bow style</p> <p>Has keyswitch for bow direction control:</p> <ul style="list-style-type: none"> ○ D-2 = automatically alternating bow strokes ○ D#-2 = bow stroke 1 ○ E-2 = bow stroke 2 	Vel (vol), KS, Length, VAR 1, VAR 2
Full Strgs Sustain+Short	Full String section that combine characteristics of both long and short bows into single instruments	Leg, MW, Vel, Port, Length, VAR 1, VAR 2
Full Strgs Sustain+Short ag	Full Strgs Sustain+Short instrument with more aggressive sound, controlled by the mod wheel controller CC#1	Leg, MW, Vel, Port, Length, VAR 1, VAR 2
Full Strgs Sustain+Short Mutes	Same as above played Sordino (with the mutes)	Leg, MW, Vel, Port, Length, VAR 1, VAR 2
Full Strgs KS	<p>A keyswitch instrument containing all Full Strings instruments</p> <ul style="list-style-type: none"> ○ C-2 = Sus+short (legato with sustain pedal) ○ C#-2 = Sus+short mutes (legato with sustain pedal) ○ D-2 = Automatically alternating up and downbows ○ D#-2 = Upbows ○ E-2 = Downbows ○ F-2 = Pizzicato ○ F#-2 = Tremolo mutes (legato with sustain pedal) ○ G-2 = Tremolo (legato with sustain pedal) 	Leg, MW, Vel, Port, VAR 1, VAR 2, KS, Alt, Length

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	<ul style="list-style-type: none"> ○ G#-2 = Half step trills mutes (legato with sustain pedal) ○ A-2 = Half step trills (legato with sustain pedal) ○ A#-2 = Whole step trills mutes (legato with sustain pedal) ○ B-2 = Whole step trills (legato with sustain pedal) 	
Full Strgs Tremolo	Full Strings section played tremolo	Leg, MW, Vel, Port, Length, VAR 1, VAR 2
Full Strgs Trills Half	Full Strings section played half-step trills	Leg, MW, Vel, Port, Length, VAR 1, VAR 2
Full Strgs Trills Whole	Full Strings section played whole-step trills	Leg, MW, Vel, Port, Length, VAR 1, VAR 2

THE SOLO STRINGS INSTRUMENTS		
<i>nki name:</i>	<i>Description:</i>	<i>Controls:</i>
Violin 1 Gagli Solo	Gagliano Solo Violin, Principal Violin. Combines characteristics of both long and short bows	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Violin 1 Gagli KS Solo	A keyswitch version of the Violin Gagli Solo instrument <ul style="list-style-type: none"> ○ C-2 = Sustain ○ C#-2 = Sustain mute ○ D-2 = Automatically alternating up and downbows ○ D#-2 = Upbows ○ E-2 = Downbows ○ F-2 = Pizzicato ○ F#-2 = Playable tremolo mute ○ G-2 = Playable tremolo ○ G#-2 = Playable muted trills (extended intervals can be chosen with cc16) ○ A-2 = Playable trills (extended intervals can be chosen with cc16) ○ A#-2 = Playable whole step muted trills ○ B-2 = Playable whole step trills 	Leg, MW, Vel, Port, VAR 1, VAR 2, KS, Alt, Length
Violin 1 Gagli Plr1*	1st player in an ensemble derived from the Principal Violin	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Violin 1 Gagli Plr2*	2nd player in an ensemble derived from the Principal Violin	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Violin 1 Gagli Plr3*	3rd player in an ensemble derived from the Principal Violin	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Violin 1 Gagli 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 Strad Solo	Stradivari Solo Violin, Concertmaster, Combines characteristics of both long and short bows.	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Violin 2 Strad Solo KS	A keyswitch version of the Violin 2 Strad Solo instrument <ul style="list-style-type: none"> ○ C-2 = Sustain ○ C#-2 = Sustain mute ○ D-2 = Automatically alternating up and downbows 	Leg, MW, Vel, Port, VAR 1, VAR 2, KS, Alt, Length

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	<ul style="list-style-type: none"> ○ D#-2 = Upbows ○ E-2 = Downbows ○ F-2 = Pizzicato ○ F#-2 = Playable tremolo mute ○ G-2 = Playable tremolo ○ G#-2 = Playable muted trills (intervals chosen with cc16) (extended intervals can be chosen with cc16) ○ A-2 = Playable trills (extended intervals can be chosen with cc16) ○ A#-2 = Playable whole step muted trills ○ B-2 = Playable whole step trills 	
Violin 2 Strad Plr1*	1st player in an ensemble derived from the Concertmaster Violin	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Violin 2 Strad Plr2*	2nd player in an ensemble derived from the Concertmaster Violin	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Violin 2 Strad Plr3*	3rd player in an ensemble derived from the Concertmaster Violin	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Violin 2 Strad 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 Guarn Solo	Guarneri Solo Violin, Associate Principal. Combines characteristics of both long and short bows	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Violin 3 Guarn Solo KS	<p>A keyswitch version of the Violin 3 Guarn Solo instrument</p> <ul style="list-style-type: none"> ○ C-2 = Sustain ○ C#-2 = Sustain mute ○ D-2 = Automatically alternating up and downbows ○ D#-2 = Upbows ○ E-2 = Downbows ○ F-2 = Pizzicato ○ F#-2 = Playable tremolo mute ○ G-2 = Playable tremolo ○ G#-2 = Playable muted trills (extended intervals can be chosen with cc16) ○ A-2 = Playable trills (extended intervals can be chosen with cc16) ○ A#-2 = Playable whole step muted trills ○ B-2 = Playable whole step trills 	Leg, MW, Vel, Port, VAR 1, VAR 2, KS, Alt, Length
Violin 3 Guarn Plr1*	1st player in an ensemble derived from the Associate Principal Violin	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Violin 3 Guarn Plr2*	2nd player in an ensemble derived from the Associate Principal Violin	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Violin 3 Guarn Plr3*	3rd player in an ensemble derived from the Associate Principal Violin	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Violin 3 Guarn 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
Viola Solo	18 th Century Solo Viola, Principal Viola. Combines characteristics of both long and short bows.	Leg, 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"> ○ C-2 = Sustain ○ C#-2 = Sustain mute ○ D-2 = Automatically alternating up and 	Leg, MW, Vel, Port, VAR 1, VAR 2, KS, Alt, Length

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	<p>downbows</p> <ul style="list-style-type: none"> ○ D#-2 = Upbows ○ E-2 = Downbows ○ F-2 = Pizzicato ○ F#-2 = Playable tremolo mute ○ G-2 = Playable tremolo ○ G#-2 = Playable muted trills (extended intervals can be chosen with cc16) ○ A-2 = Playable trills (extended intervals can be chosen with cc16) ○ A#-2 = Playable whole step muted trills ○ B-2 = Playable whole step trills 	
Viola Pir1*	1st player in an ensemble derived from the Principal Viola	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Viola Pir2*	2nd player in an ensemble derived from the Principal Viola	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Viola Pir3*	3rd player in an ensemble derived from the Principal Viola	Leg, 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
Cello 1 Solo	Vuillaume Solo Cello, Principal Cello. Combines characteristics of both long and short bows.	Leg, 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"> ○ C-2 = Sustain ○ C#-2 = Sustain mute ○ D-2 = Automatically alternating up and downbows ○ D#-2 = Upbows ○ E-2 = Downbows ○ F-2 = Pizzicato ○ F#-2 = Playable tremolo mute ○ G-2 = Playable tremolo ○ G#-2 = Playable muted trills (extended intervals can be chosen with cc16) ○ A-2 = Playable trills (extended intervals can be chosen with cc16) ○ A#-2 = Playable whole step muted trills ○ B-2 = Playable whole step trills 	Leg, MW, Vel, Port, VAR 1, VAR 2, KS, Alt, Length
Cello 1 Pir1*	1st player in an ensemble derived from the Principal Cello	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Cello 1 Pir2*	2nd player in an ensemble derived from the Principal Cello	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Cello 1 Pir3*	3rd player in an ensemble derived from the Principal Cello	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Cello 2 Solo	Montagnana Solo Cello, Assistant Principal. Combines characteristics of both long and short bows	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Cello 2 Solo KS	<p>A keyswitch version of the Cello 2 Solo instrument</p> <ul style="list-style-type: none"> ○ C-2 = Sustain ○ C#-2 = Sustain mute ○ D-2 = Automatically alternating up and downbows ○ D#-2 = Upbows ○ E-2 = Downbows ○ F-2 = Pizzicato 	Leg, MW, Vel, Port, VAR 1, VAR 2, KS, Alt, Length

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	<ul style="list-style-type: none"> ○ F#-2 = Playable tremolo mute ○ G-2 = Playable tremolo ○ G#-2 = Playable muted trills (extended intervals can be chosen with cc16) ○ A-2 = Playable trills (extended intervals can be chosen with cc16) ○ A#-2 = Playable whole step muted trills ○ B-2 = Playable whole step trills 	
Cello 2 Pir1*	1st player in an ensemble derived from the Assistant Principal Cello	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Cello 2 Pir2*	2nd player in an ensemble derived from the Assistant Principal Cello	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Cello 2 Pir3*	3rd player in an ensemble derived from the Assistant Principal Cello	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Cello 3 Solo	Gofriller Solo Cello, Associate Principal. Combines characteristics of both long and short bows	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Cello 3 Solo KS	<p>A keyswitch version of the Cello 3 Solo instrument</p> <ul style="list-style-type: none"> ○ C-2 = Sustain ○ C#-2 = Sustain mute ○ D-2 = Automatically alternating up and downbows ○ D#-2 = Upbows ○ E-2 = Downbows ○ F-2 = Pizzicato ○ F#-2 = Playable tremolo mute ○ G-2 = Playable tremolo ○ G#-2 = Playable muted trills (extended intervals can be chosen with cc16) ○ A-2 = Playable trills (extended intervals can be chosen with cc16) ○ A#-2 = Playable whole step muted trills ○ B-2 = Playable whole step trills 	Leg, MW, Vel, Port, VAR 1, VAR 2, KS, Alt, Length
Cello 3 Pir1*	1st player in an ensemble derived from the Assistant Principal Cello	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Cello 3 Pir2*	2nd player in an ensemble derived from the Assistant Principal Cello	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Cello 3 Pir3*	3rd player in an ensemble derived from the Assistant Principal Cello	Leg, 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
Dbl Bass Solo	18 th Century Solo Double Bass. Principal. Combines characteristics of both long and short bows	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Dbl Bass Solo KS	<p>A keyswitch version of the Dbl Bass Solo instrument</p> <ul style="list-style-type: none"> ○ C-2 = Sustain ○ C#-2 = Sustain mute ○ D-2 = Automatically alternating up and downbows 	Leg, MW, Vel, Port, VAR 1, VAR 2, KS, Alt, Length

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	<ul style="list-style-type: none"> ○ D#-2 = Upbows ○ E-2 = Downbows ○ F-2 = Pizzicato ○ F#-2 = Playable tremolo mute ○ G-2 = Playable tremolo ○ G#-2 = Playable muted trills (extended intervals can be chosen with cc16) ○ A-2 = Playable trills (extended intervals can be chosen with cc16) ○ A#-2 = Playable whole step muted trills ○ B-2 = Playable whole step trills 	
Dbl Bass Plr1*	1st player in an ensemble derived from the Principal Double Bass	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Dbl Bass Plr2*	2nd player in an ensemble derived from the Principal Double Bass	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Dbl Bass Plr3*	3rd player in an ensemble derived from the Principal Double Bass	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Dbl 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 WOODWIND INSTRUMENTS		
<i>nki name:</i>	<i>Description:</i>	<i>Controls:</i>
Alto Flute Solo	Principal Alto Flute. The Alto flute plays four notes lower than a conventional flute. Made by Mönning	Leg, 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	Leg, 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	Leg, 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	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
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	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Bass Clarinet Plr1*	Associate Ensemble Instrument for building ensembles, 1st player in an ensemble derived from the Principal Bass Clarinet Instrument	Leg, 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	Leg, 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	Leg, 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	Leg, 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	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Bass Flute Plr1*	Associate Ensemble Instrument for building ensembles, 1st	Leg, MW, Vel, Port, VAR 1,

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	player in an ensemble derived from the Principal Bass Flute Instrument	VAR 2, Length
Bass Flute Plr2*	Associate Ensemble Instrument for building ensembles, 2nd player in an ensemble derived from the Principal Bass Flute Instrument	Leg, 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	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Bassoon 1 Solo	Principal Solo Bassoon. Made by Heckel	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Bassoon 2 Solo	2nd Bassoon. A different bassoon with a different tone	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Bassoon 1 Plr1*	Associate Ensemble Instrument for building ensembles, 1st player in an ensemble derived from the Principal Bassoon Instrument.	Leg, 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	Leg, 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	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Bb Clarinet Solo	Principal Solo Bb Clarinet. Made by Buffet	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Bb Clarinet Plr1*	Associate Ensemble Instrument for building ensembles, 1st player in an ensemble derived from the Principal Bb Clarinet Instrument	Leg, 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	Leg, 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	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Contrabass Clarinet Solo	Principal Contrabass Clarinet. Plays an octave lower than the bass clarinet	Leg, 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	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Contrabassoon 2 Solo	2ns Contrabassoon. Has a wider note range and a different tone quality. Made by Schreiber	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Eb Clarinet Solo	Principal Eb Solo Clarinet. Plays four notes higher than the Bb Clarinet.	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
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.	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
English Horn 2 Solo	2 nd English horn (cor anglais) with a different tone and more pronounced vibrato. Made by Loree	Leg, 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	Leg, 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	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
English Horn 1 Plr3*	Associate Ensemble Instrument for building ensembles, 3rd	Leg, MW, Vel, Port, VAR 1,

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	player in an ensemble derived from the Principal English Horn Instrument.	VAR 2, Length
Flute Solo Vib	Principal Solo Flute. Played Vibrato, Made by Haynes	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Flute Solo NV	Principal Solo Flute. Played Non Vibrato	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Flute Solo KS	A keyswitch version of the Flute Solo instrument <ul style="list-style-type: none"> ○ C-2 = Vibrato ○ D-2 = Non-vibrato ○ E-2 = Flutter 	Leg, MW, Vel, Port, VAR 1, VAR 2, KS, Length
Flute Solo Flutter	Principal Solo Flute. Played flutter tongue	Leg, 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	Leg, 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	Leg, 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	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Oboe 1 Modern Solo	Principal Solo Oboe	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Oboe 2 Modern Solo	2 nd Solo Oboe with a little more vibrato. Made by Püchner	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Oboe 3 Modern Solo	3 rd Solo Oboe with a slightly different tone and more pronounced vibrato	Leg, 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	Leg, 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	Leg, 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	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Oboe Classical Solo	4 th solo oboe. Older vintage instrument with a different tone quality	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Oboe D'Amore	Solo Oboe D'Amore	Leg, 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	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Piccolo NV Solo	Principal Piccolo played without vibrato	Leg, MW, Vel, Port, VAR 1, VAR 2, Length
Piccolo Solo KS	A keyswitch version of the Piccolo Solo instrument <ul style="list-style-type: none"> ○ C-2 = Vibrato ○ D-2 = Non-vibrato ○ E-2 = Flutter 	Leg, MW, Vel, Port, VAR 1, VAR 2, KS, Length
Piccolo Flutter	Principal piccolo played flutter tongue	Leg, MW, Vel, Port, 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 French horn 1 Plr1*, Plr2*, or Plr3* with French horn 1 (solo).*

Quick MIDI Controller Reference Guide for Notation Version of GPO

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.
		Also controls dynamic level of recorded percussion ‘rolls’ in affected instruments	Controls dynamic level of ‘rolls’ on snares, bass drum, cymbals, etc.
7	Volume	Turned on 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). You must activate it in the Kontakt player options panel.
10	Pan	Turned on by default.	Since all the instruments in GPO are pre-panned based on their place in the orchestra, this is turned off by default. If you wish GPO to respond to automated panning adjustments sent by your controller or sequencer you must turn this option on in the Kontakt player options

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			panel.
16	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 keyswitches.) Values as they relate to trill intervals: 0-32 = half step 33-64 = whole step 65-96 = minor third 97-127 = major third
	Hidden Saturation Controller (aggressive strings/brass as well as bass drum)		Controls bow noise on aggressive string instrument patches as well adding a more forceful sound to the aggressive brass and bass drum patches. Used to add 'grit' to the sound. 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.
17	Hidden Vibrato Speed Controller (NV 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, which do not normally use vibrato in standard practice. This only affects Non-Vibrato (NV) patches. This controller does not affect true vibrato instruments.
19	Hidden Portamento Aid – pitchbend disabled layer	Controls portamento between legato/slurred notes and detache notes.	All stringed 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 which require portamento.
	Bass Drum Fundamental <u>Shown:</u> BDFUND	Controls the strength of the lowest frequencies.	Adds low frequency strength to the Bass Drum as well as most Organ patches.
	Attack Speed <u>Shown:</u> 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 length/release time of the sample.	Controls the length/release time of most instruments in GPO. Especially useful with the Short Bow instruments to give shorter bow strokes. This is also useful for legato string section passages to smooth transitions. Can be applied to double and triple tonguing in the brass.
	Damping (vibraphone)	Simulates damped playing on the vibraphone.	For the vibraphone, can be used to simulate damped playing. Only affects sustain pedal up playing on the vibraphone.

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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 ‘machinegun’ effect.
	Frequency Filtering <u>Shown:</u> FILTLV (organ)	Controls filter strength..	For all Organ patches this is used for filter strength, this control is to be used along with CC# 23.
	Tremolo Level <u>Shown:</u> TRMLEV (vibraphone)	Continuously variable tremolo control.	When used with GPO’s vibraphone, controls the tremolo level. To be used with CC# 23.
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 ‘machinegun’ effect.
	Filter Center Frequency <u>Shown:</u> 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 <u>Shown:</u> 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	Controls standard sustain on piano, harpsichord, celeste, etc.	For use with pedal mode 1, “Normal Sustain/Sostenuto.”
68	Legato	Controls legato on strings and tongue/slur on woodwinds, and brass.	
Aftertouch	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, which do not normally use vibrato in standard practice. Only affects Non-Vibrato (NV) patches. This controller does not affect true vibrato instruments. 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 GPO.	Controls the initial attack strength of all “Expressive” mod wheel controlled instruments in GPO. For all “Percussive” (keyed, percussion, or non sustained patches) this controls volume/timbre.

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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. Notation version is set to a range of +/-12 semitones.
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