QUANTUM LEAP RA

THE DEFINITIVE RARE AND ETHNIC VIRTUAL INSTRUMENT

EASTWEST

VIRTUAL INSTRUMENT

INCLUDES SPECIAL VERSION OF NATIVE INSTRUMENTS KOMPAKT SAMPLER

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Contents:

Introduction

QUANTUM LEAP RA - RARE AND ETHNIC VIRTUAL INSTRUMENT

In ancient Egypt, RA was regarded as the creator of everything, the god of the sun. RA is usually represented with the body of a man and the head of a hawk, holding an ankh & sceptre. The chief location of RA worship was Heliopolis (a Greek word meaning city of the sun). We thought RA would be an appropriate name for the largest, and most comprehensive rare and ethnic virtual instrument ever made.

RA was born a few years ago, as a sample library called “Rare Instruments.” All of the sounds from Rare Instruments are included in RA, but this only represents approximately one-tenth of the content. We recorded the other ninety percent of RA at Ocean Way studios in Hollywood. Because of the size and complexity of the project, I brought in two talented producers, Pacemaker and Tony Austin to co-produce RA with me. They have worked on other Quantum Leap projects and had some great ideas for RA. We spent time hunting down the best ethnic artists on the West Coast. Los Angeles is so ethnically diverse and blessed with excellent institutions like Cal Arts, it is actually the ideal place to record a rare and ethnic collection.

RA is a 14 Gigabyte virtual instrument that covers many typical, and some unusual instruments, from 6 areas of the World -

1. Africa
2. Americas and Australia
3. Europe
4. Far East
5. India
6. Middle East and Turkish Empire.

So what is so special about RA compared to other ethnic collections? For a start, I think you will really love these sounds for the same reason that Rare Instruments was so popular. Every instrument or ensemble was sampled extensively, so the character of the instrument was preserved. Ethnic (or World) music is all about expression and how the instrument is played. To sample a Turkish wind instrument and not capture the bending, swelling and wavering of the notes is to miss the point completely. We made a big effort to keep things very organized, consistent and intuitive, which is necessary with a collection of this size. Every instrument has many articulations and fx that range from very controlled, to very expressive. This allows you to actually “play” the instrument with authentic results. We also came up with some innovative ideas for achieving realistic legato. We call this QLegato™.

Introduction Continued..

You will find RA has amazing sound quality. This is the famous Ocean Way sound: an amazing collection of vintage mics and a custom API console. RA was captured with a phase accurate 8-mic setup that gives a complete 3 dimensional image of the instrument. It is this type of sound that takes to artificial or sampled reverb extremely well. The sound is clear and broad. Mics used were Neumann U67 (U47s as alternates), Neuman M50, AKG C12 and Shoepps.

Another cool aspect of this virtual instrument is the fact that we recorded ethnic ensembles. This was done with African drums, bagpipes, gamelan and a Middle Eastern string section. The sound of these ensembles cannot be realistically simulated by layering solo instruments.

RA was a very expensive project, but well worth the cost. A lot of thought went into selecting instruments that would appeal to composers of all types, from dance music, to film. You might want to put the middle eastern string section in your next pop tune, or the hardanger fiddle in a sweeping romantic score ala LOTR.

You might also be surprised at how little percussion is included in this giant ethnic collection. The reason is, we already covered much of this in Quantum Leap Stormdrum. Stormdrum is the ideal companion to RA. The percussion in RA compliments Stormdrum perfectly.

You can have a lot of fun with RA. The possibilities are simply endless, especially when you mix the sounds of different cultures together. Load up the middle eastern string section, apply an Indian or Egyptian tuning from the micro-tuning presets and play octaves. Make a really cool groove with the didgeridoo fx and the Vietnamese jaw harp. Take a classical filmscore piece and replace all of the instruments with their ethnic counterparts: strings with middle eastern string section, solo violin or cello with electric baritone violin, hardangerfiddle or erhu, french horn with alpenhorn, flute with dizi, oboe with duduk, percussion with taikos and African percussion, harp with kora, trombones with rag dung etc. etc.... Or perhaps try the hurdy gurdy, hardanger fiddle, washburn guitar, mandolin and the dizi and make an interesting folk ensemble or the gamelan ensemble with the ney flute, duduk and esraj. And don't forget the reverb!

Nick Phoenix - Producer
QUANTUM LEAP

Credits

Produced by Nick Phoenix, Tony Austin and Pacemaker

Executive Producer: Doug Rogers

Engineering and Mastering: Nick Phoenix

Editing: Pacemaker, Tony Austin, Jared Selter, Justin Harris, Jonathan Marmor, Arne Schulze, Claudia Phoenix, Nick Phoenix and James Rickabaugh

Programming: Pacemaker, Jared Selter, Tony Austin, Justin Harris and Nick Phoenix

Graphic Design: Steven Gilmore and Doug Rogers

Photography: Claudia Phoenix and Tony Austin

PDF Manual by Claudia Phoenix, Nick Phoenix, Doug Rogers, Pacemaker and Tony Austin

Special Thanks to Ocean Way and the artists

The Complete Line of

QUANTUM LEAP VIRTUAL INSTRUMENTS:

Hardcore Bass XP

RA

Stormdrum

Symphonic Choirs

Symphonic Orchestra Gold

Symphonic Orchestra Gold Pro

Symphonic Orchestra Platinum

Symphonic Orchestra Platinum Pro

Symphonic Orchestra Silver

Symphonic Orchestra Silver Pro

Nick Phoenix

Birthplace: London, England
Age: 37
Axe: Keyboards
Hobbies: Concrete Pool Skating, Playing Grateful Dead Songs on a Yamaha GS-1 and Bush Bashing

Nick is responsible for all of the Quantum Leap libraries to date, either as the sole producer or co-producer. The inspiration for these libraries has always come from experience as a composer. QL libraries to date: QL Guitar and bass, QL Brass, QL Rare Instruments, QL Voices of the Apocalypse, QL 56 Strat, QL Stormdrum, QL Hardcore Bass, QL Colossus, QL RA, EWQL Symphonic Orchestra Pro (Silver, Gold and Platinum) and Symphonic Choirs . Nick has scored over 500 film trailers and has recently begun scoring more TV and film. Look for “Nightmare on Elm Street, Real Nightmares” this spring on CBS. He has also begun collaborating with BT on film projects.

Tony “digital-t” Austin

Birthplace: Los Angeles, California
Age: 26
Axe: Drums and computer
Hobbies: Walking along quiet beaches contemplating the meaning of life through his urban poetry.

Tony Austin began his journey to the digital world of music at the age of seven. It was at this age that Tony came in contact with one of the innovators of music technology Roger Linn (inventor of the Linn Drum and MPC60 Drum machines). Roger Linn facilitated Tony’s need to create and guided him through the complex world of midi and digital music production. It was through this experience that Tony Austin eventually realized his passion for composing, arranging, engineering, and producing. Currently Tony co-owns a company, in Los Angeles California, with Pacemaker called Soundwarrior. As a team they have many credits in film/tv composition, sound consulting, and sample library development.

Pacemaker

Birthplace: N/A
Age: N/A
Axe: keytar
Avocation: Shoegazer

Ocean Way Recording, Hollywood, CA, Studio B

Custom-built 48 input Ocean Way/API console with GML moving fader automation and separate 24 channel monitor mix inputs returnable to stereo buss. Pro Tools HD.

Control Room 15’w x 18’d x 9’h, Main Room 35’w x 45’d x 24’h

Using RA

Programs in RA fall into 3 categories:

1. Keyswitches
2. Live
3. Elements

Keyswitches use keys at the bottom of an 88 key keyboard to switch programs within the keyswitch. The keys used to do the switching are always listed at the end of the program name.

EXAMPLE: Washbrn GTR KS C0-D#0.nki

Here KS stands for keyswitch, and C0-D#0 means that CO, C#0, D0 and D#0 are used to switch to a different program within this keyswitch program. Keyswitches in RA generally have all of the programs of the instrument wrapped up into one program. This is very useful, because it allows you to have instant access to the entire instrument, and only tie up one midi channel. There is a 17 page document at the end of this manual which describes every detail of all of the keyswitches and Live programs in RA.

“Live” programs in RA are simple, very playable programs that generally use the most common and useful articulations of the instrument. They also tend to have cool articulations assigned to the higher velocities. They can be used in live situations, or any time you want something simple and playable, that captures the essence of the instrument.

The “Elements” folder contains all of the basic programs of the instrument. It also contains other cool programs like round robin programs. If you don’t like using keyswitches, use these. Also look here for FX programs.

Notes:

The programs in Africa are somewhat basic and do not use keyswitching or live programs. There are also no “Elements” folders, as they are unneccesary.

Multis are not used in RA, but of course you can create and save your own multi setups.

Micro-tuning in RA

Everything in RA has been meticulously tuned to a western, equal-tempered scale. This means that you can use these sounds with any other sounds you have, without any tuning problems. We have also offered a few programs in their un-tuned state as an alternative. These un-tuned versions retain more of the original character of the instrument, but may not mix well in your composition. If this is the case, use the tuned version. It was not possible to offer authentically tuned versions of each instrument, because that is a very complicated task. But we were dedicated to providing a way to easily apply alternate tunings to every program. The Kontakt/Kompakt engine supports micro-tuning, but we found that the NI presets generally did not work for RA, so we programmed our own. This was very difficult, so we concentrated on making a few very usable presets. We may offer more in the future. Please contact Nick at bunschel@aol.com, if you are interested in programming or sharing new micro-tuning presets.

RA Micro-tuning Presets:

Arabian in C F G.nkp
Chinese Lu in B.nkp
Chinese Lu in D.nkp
Chinese Lu in G.nkp
Egyptian in C G.nkp
Egyptian in E A.nkp
S. Muklund (Indian) In A.nkp
S. Muklund (Indian) In D.nkp
S. Mukund (Indian) in C.nkp
Shruthi (Indian) In A.nkp
Shruthi (Indian) in C.nkp
Shruthi (Indian) In D.nkp
West African in C.nkp
Western.nkp

Controllers in RA

CC0- Volume
CC1- Mod-Wheel controls filter
CC7- Panning
CC11- Expression

Please enable CC0 and CC7 in the Kompakt options and restart Kompakt before using RA.

RA Instruments

Africa

African Dual Wooden Shakers (Ewe)
African Metal Shakers (Ewe)
Atsimevu
Axatse
Batas
Berkete
Dejembe Ensemble
Ekpiri
Ewe Drum Ensemble
Ewe Bombshell
FromTonFrom
Gankokwe Large
Gyil
Kalimbas
Kidi
Kora
Log Drums
Ngoni
Udu

Americas And Australia

1890 Washburn Guitar
American Jaw Harp
Banjo
Berimbau
Cuban Percussion
Didjeridoo
Dobro
First Nations Cedar Flute
Mandolin
Pan Flute
Ukelele

Europe

Alpenhorn
Bag Pipe Ensemble
Bass Recorder
Frame Drums
Gadulka
Hardanger Fiddle
Highland Pipes
Hurdy Gurdy
Irish Low Whistle
Launeddas
Uilleann Pipes

Far East

Dizi
Erhu
Gamelan Ensemble
Gongs
Koto
Rag Dung
Shakuhachi
Shamisen
Taiko Drums
Vietnamese Jawharp

India

Bansuri
Baritone Violin (Electric)
Esraj
Sarangi
Sitar
Tablas
Tambura

Mid East & Turkish Empire

Armenian Duduk
Bulgarian Duduk
Mid East Fiddle
Mid East String Section
Ney Flute
Oud
Qandahar Dumbek
Santoor
Turkish Duduk
Yali Tambur
Zourna

Africa

Bata

Origins

Bata drums were first introduced in the Yorba Land region, what is now called Southwest Nigeria. They were invented during the reign of King Sango and were considered his royal drum. The Bata drums are mostly played in medium sized ensembles. They were traditionally used for a variety of purposes, including allowing a king to summon people to court, announcing visitors to the king, sending messages such as announcements or warnings to all within hearing range, and most importantly for ritual purposes to speak prayers.

Construction

The wood Shelled carved Bata is shaped mush like an hourglass. It is meant to be play parallel to the ground, hung from the shoulder of resting on the musicians lap. There are two animal skinned heads on either side of the drum. One is of lower pitch and the other is of higher pitch. Most Batas vary in size. A typical ensemble of Batas will normally consist of small, medium, and large sized drums.

Techniques

Because of the tonal nature of the Yoruba language, the Batas are typically played to speak certain phrases or passages in the Yoruban tongue. For the purpose of this sample library we have included two basic articulations that are most common to the Bata. The most basic articulation is the Open Tone. This is accomplished by striking the head of the drum with a bare flat hand and letting the sound sustain. When played correctly, the Open Tone produces a sound that is mostly comprised of the fundamental pitch of the drum. The second most common articulation is the Open Slap. This is accomplished by striking the head of the drum with a slightly curved bare hand. When played correctly, this articulation produces a brighter higher pitched sound.

Berkete

Origins

The Berkete, also known as the Gungon, is from the West African country Ghana. It can mostly be found in the central and northern regions of Ghana. The Berkete is usually played in medium sized ensembles and is accompanied by an ensemble of African talking drums.

Construction

The wood Shelled carved Berkete is shaped like a bass drum and varies in size, mostly 14 inches in diameter. The thin goatskin head is strung with a medium gauge gut string on the outside in order to produce a sustained raspy sound.

Techniques

There are two basic articulations played on the Berkete. The open hit and the mute hit. Striking the head with a stick while letting the drum fully sustain produces the open hit. The mute hit is produced by striking the drum with a stick while pressing the stick firmly into the head to cut of the sustain of the drum.

Djembe Ensemble

Origins

The Djembe originated from the Mali Empire around the time of the 12th century. The Mali Empire covered an area that encompasses significant portions of the present-day countries of Mali, southern and western Mauritania, Guinea and Senegal. It has been said that the Djembe was invented for King Sunjata Keita and was held as a shine for many years before it was publicly played.

Construction

The Djembe is carved from wood. It has a shape similar to a whine glass. Presently the drumheads are made from calf, deer, or goat skin. The heads are strung with rope in a very particular pattern around the drum in order to fasten the drum skin to its wooden body. As an option, some Djembe players attach metal fin shaped ornaments to the drum called Ksink-Ksink. These are usually made from tin or aluminum and have metal rings fastened to them. This produces a raspy rattling sound when the drumhead is struck.

Techniques

For the purpose of this sample library we have included three basic articulations and one extended articulation. The most basic articulation is the Open Tone. The Open Tone is accomplished by striking the drum with a bare flat hand toward the edge of the head while allowing the drum to fully sustain. When played correctly, the Open Tone produces a full, round and fundamental sound. The easiest articulation to play is the Bass Tone. This is accomplished by striking the drum with a flat bare hand in the center of the head while allowing the sound to sustain. This produces a sub harmonic bass sound. The most difficult articulation of the basic three is the Open Slap. This is accomplished by striking the drum towards the edge of the head with a slightly curved hand. When played correctly, this produces a brighter higher pitched sound. We have also included a Grace Note articulation. Many Djembe players use this articulation in order to quietly subdivide or keep time while playing patterns or solos. The Grace Note articulation is accomplished by quietly tapping the tips of the finger on the edge of the drumhead.

Ewe Percussion
Instruments : Ewe Drum Ensemble , Atsimevu, Kidi, Axatse and Gonkowe

Origins
These instruments are from the West African country Ghana and are native to the Ewe tribe. The Ewe people mostly use these instruments for cultural ceremonies, rituals and celebrations and are accompanied by an ensemble of dancers and singers.

Construction
The drums (Atsimevu and Kidi) are constructed of wood, either as one solid carved piece or, as is more common, of wooden slats bound by metal rings. The drum heads are usually made out of a skin of a deer or antelope and are held on the drums by strings attached to a number of tuning pegs. The shaker (Axatse) is made out of a gourd, hollowed out by removing the seeds, and covered with a net of beads or seeds. They look very similar to the shekere but with one noticeable difference, the top of the gourd is not cut off. This is done to give the Axatse a brighter and sharper sound that makes it cut over the loud ensemble of drums that it accompanies. The Bells (Gonkowe) are made from iron hand forged in a distinct traditional shape by blacksmiths. The structure of the Gonkowe consists of a larger low pitch forged iron and a smaller high pitch one permanently stacked together. The larger forged iron bell is considered as the parent and smaller high pitch one is considered the child in the protective bosom of the parent. They look very similar and could even be considered relatives of the agogo bells.

Techniques
The drums are played by striking the head with a full bare hand and/or a stick. Striking different positions and manipulating the head by damping it with the hand produces a series of pitches, which form the basic vocabulary of the Ewe drums. The Axatse is played by striking it lightly on the thigh and the palm. When struck off of the thigh, a dry rattling sound is produced. When struck with the hand in a clap-like manner, it produces a rattling sound combined with a higher tonal component due to the vibration of the air inside the gourd. The Gonkowe is thought of as a substitute for the human voice and imitates the manner in which the mouth produces speech. It is played with a stick held in one hand and the larger bell resting on the thigh of the performer who usually sits.

Frontomfrom

Origins

The Frontomfrom is from the central region of Ghana. It is mostly played by the Ashanti tribe.

Construction

The wood shell carved Frontomfrom is a large cylindrical up right standing drum. Typically the Frontomfrom can range from 3 feet to 8 feet high. The head is made from goatskin and it tied by string to a number of tuning peg around the drum.

Techniques

The Frontomfrom is sruck by an angled stick or by bare hand. There are three basic ways to play the Frontomfrom. The open stick hit, the open hand hit, and the stick mute. The stick is produced by sticking the head of the drum while firmly pressing the stick against the head in order to mute the sustain of the drum.

Gyil

Origins

The gyil is a 14-18 key xylophone played by the Dagara people in Ghana, Burkina Faso, and Cote D'Ivoire. It is the national instrument of the Lobi and Dagara people . Throughout West Africa, the people believe that its woody sound comes from a vibration of water that physically balances the water in the bodies of humans and animals.

Construction

The gyil's wooden keys resonate over gourds, which each have holes lined with papery spider egg-sacks. These vibrating membranes create a buzzing sound, or "spirit," around the melody that is a crucial element in music across Africa. The 14-18 wooden slats are suspended, on a frame, over the gourds. Its sound is like the Western marimba, yet more earthy in character. Gyil music is to the ear as a kaleidoscope looks to the eye - a dazzling matrix of consistent yet ever-changing interlocking elements engaged in dynamic conversation.

Techniques

South of the Sahara Desert in West Africa there is a long standing tradition of gyil artistry. In the gyil tradition, every rural community has its own style of playing, its own tonality, and its own musical masters. The instrument is played with a pair of large soft mallets or sometimes with sticks.

Kora

Origins

The Kora is found in all Mande cultures. It is played by the Mandinka in Gambia, Senegal and Guinea Bissau, the Malinke or Maninka in Guinée, the Bambara or Bamana in Mali and the Dioula in Côte d'Ivoire (Ivory Coast). Though, it's Gambia and Casamance (South Senegal) where it has the greatest importance for social life. The Kora has a centuries-old tradition and has been played at royal courts, where the musicians and griots belonged to the personnel. The Kora was mentioned 1799 for the first time in literature by Mungo Park.

Construction

The Kora is a West African harp of the family of bridge harps or harp-lutes. The Kora often said to be a mix between a harp and banjo/ lute/guitar. It's the highest developed string instrument of Africa. The construction of the instrument as well as the music are unique in the world.The Kora has a big hemispherical body, a long neck and two planes with 11 and 10 strings running in notches at the sides of an upright mounted bridge. Its body is traditionally made from a calabash cut in half and covered with cow-hide. Strings are commonly made from fishing line and are arranged into two planes - one for the right hand and one for the left hand.

Techniques

The playing style resembles the finger picking blues guitar, the placement of the strings allows for the playing of chords and harmonies and fast melodic runs. The strings are plucked by the thumb and forefinger of each hand. The Kora can also be tapped (like a drum) for rhythms and effect. It is played as a solo instrument, accompanying a singer, or as part of an orchestra.

Log Drums

Origins

This particular Long Drum, natively called “Ekwe”, originates from the eastern region of Nigeria.

Construction

The Log Drum is made from a hollowed out wooded log with two rectangular holes carved out from the side of it. The piece of wood that separates the two rectangular holes is severed in the middle. This is done in order to produce two areas of the drum that vary in pitch.

Techniques

Typically, the Log Drum is played by striking the side of the drum over either of the two carved out rectangles. The Log Drum is most commonly play with a bare stick or a rubber tipped mallet.

Ngoni

Origins

The Ngoni is a lute. There is much confusion about this name. Ngoni signifies string instrument which can be a harp or a lute. Possibly this is the ancestor of the 5-string banjo (as some tunings and playing styles prove). The Ngoni is probably the oldest of the Jaliya instruments, older than the Balafon and the Kora.

Construction

The come in various sizes and pitch heights - Ngoni Ba, the big, deep one and Ngoni Micin, the small, highpitched one. The number of strings varies between 1 and 7. The most common type has 4 strings, 2 long ones and 2 short ones. The long ones are shortened with left hand fingers like a guitar, the short ones are tuned to a certain note of the scale depending on the song being played.

Techniques

The playing technique specially for the right hand is very complicated and uses a lot of ornamentation, sound variations and also percussive knocking. Instruments with more than 4 strings have additional short strings to extend the tonal range. For every typical song there is a special tuning with separate fingering. The Ngoni has a huge repertoire of songs both pentatonic (i.e. Bambara music in Mali) and heptatonic (Jaliya music compatible to Kora and Balafon). As it is a fretless lute, there are many exotic microtonal modes being used that can be played without retuning the strings for the intervals second, third, sixth, seventh. The fourth is either pure or sharp, the fifth and the octave are always pure. Some players use finger picks for right thumb and forefinger.

Kalimbas

Origins

The Kalimba is a modern version of the African mbira. In the 1920's, Hugh Tracey came from England to Rhodesia (now Zimbabwe) to help his older brother run a tobacco farm. He became fascinated by the local music culture. Through the encouragement of prominent composers such as Ralph Vaughan Williams and Gustav Holst, he decided to make a study of African music and eventually create the International Library of African Music. The mbira was one of his greatest interests and created the Kalimba based on the African mbira. Introduced by Tracy in the early 1960's, Kalimba was the registered trademark for his diatonic instrument that soon became popular around the world. The word Kalimba literally means little music. It was well suited for Western music and made it easy for the performer to play harmony using both thumbs. As with the mbira, the name Kalimba is know throughout much of Africa, but regionally, the name mbira is more commonly used in Zimbabwe.

Construction

The basic Kalimba is a modern mbira with a sound box with metal keys or tongues (called lamellas) attached on the top. The keys or tongues are sometimes made from cane. The sound box is Kyatt wood (an African hardwood), with keys or tongues made out of European spring steel. The keys usually consist of 20 to 24 metal tongues mounted across two bars at one end attached to the sound box with a wooden dowel holding them in place. The bar closest to the sound hole serves as a bridge, the other to provide a means for the dowel to hold the keys (tongues) in place. The free ends of the keys (tongues) are positioned at different lengths to produce the variety of pitches. The length of the vibrating end of the keys (tongues) determines the pitch (a shorter key or tongue produces a higher pitch, and a longer key or tongue produces a lower pitch).

Techniques

The Kalimba produces a haunting, fluid percussive sound that is considered tranquil and enchanting. It can be a solo instrument or as an accompaniment to singers, musicians and dancers. The keys or tongues are plucked with the thumbs, or with combinations of thumbs and fingers. Since you can play either simultaneously or alternating between both thumbs, harmonic and rhythmic effects are possible. Many effects can be employed by plucking up or down on the keys (tongues). The Treble Kalimba has the same seventeen-note range, but it also has a sound box that provides deep resonance to distinguish it from the Celeste Kalimba. The Alto Kalimba features the same sound box as the Treble Kalimba, but has a more limited fifteen-note range.

Udu

Origins

The udu is a vessel drum originally from the Igbo people of Nigeria. Traditionally it was a water jug with another hole in the side, played by women for ceremonial music. The origins of the drum have been traced back to Central and Southern Nigeria, and it has been Found that, although we're using the term udu, the side hole pot drum is known by many different names, depending on the tribal areas and particular ceremonies in which it is used.

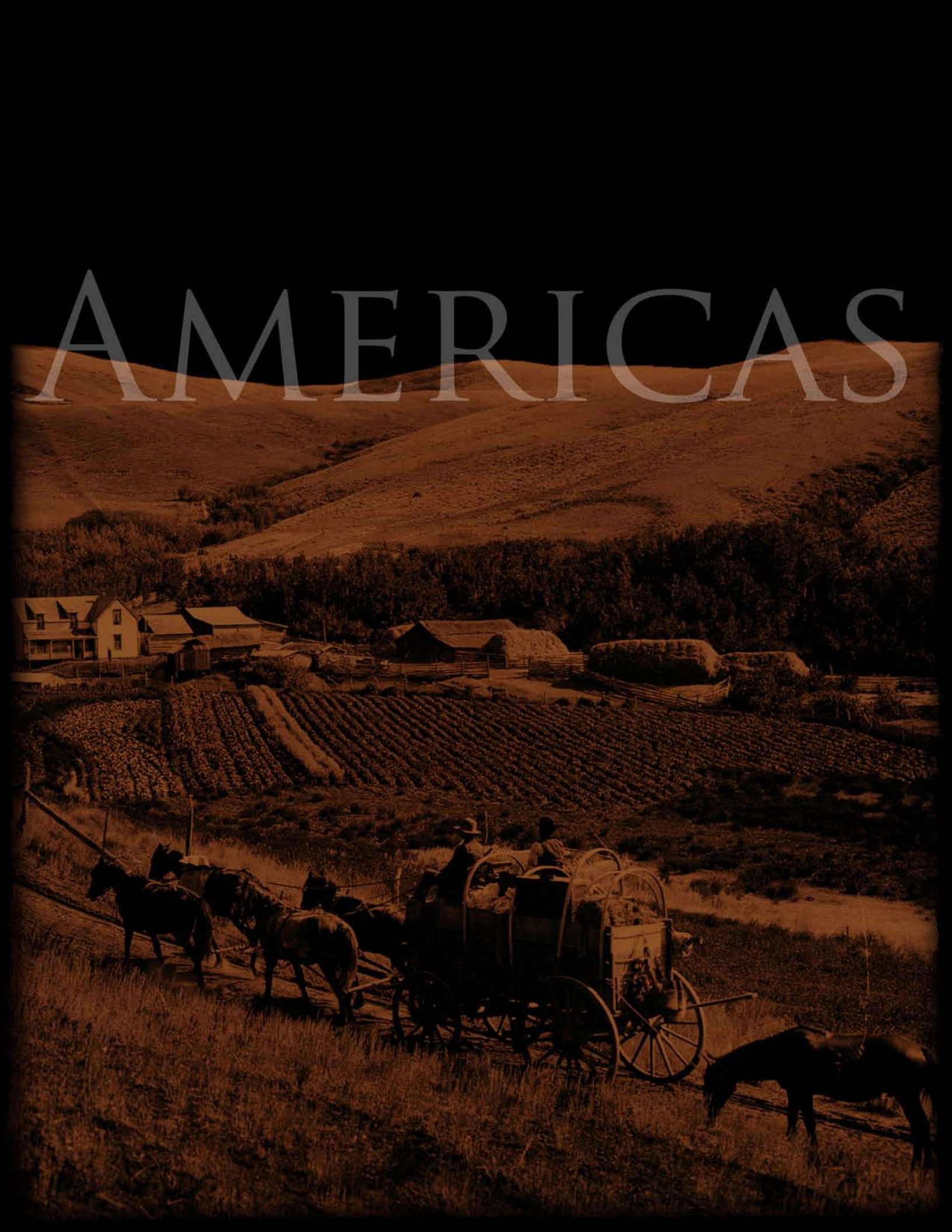
Construction

The traditional method for making an udu is to pound a lump of soft earthen clay over a firm spherical form known as a lump mould. The lump of clay is placed on the mould and tempted into shape around it with a large flat stone. It is then carefully beaten to uniform thickness with handmade paddles a little like huge wooden spoons or ping pong bats. Following this it is cut down to a half sphere on the mould. This half sphere becomes the bottom half of the drum. The top half is then constructed using the coil method, which involves building up long lengths of clay, one upon another, before squeezing, paddling, and shaping them up and into the sides of the drum. What follows is an elaborate drying and polishing process that is said to take at least one month.

Techniques

The drum can be played in a number of ways; for example, by sitting cross legged on the floor, one can put the drum in one's lap with one hand over each hole. The hand on the top controls the pitch while the other plays over the hole on the side. One can use the palms, finger tips, slap in the fashion of conga playing, or even play them with mallets or brushes. It is also possible to stand-mount Udu drums and play them standing up. For RA we sampled a very large udu played with a paddle.

AMERICAS



Banjo

Origins

The Banjo was acquired into the traditions of many cultures through the African slave trade. African slaves, built the design of the early banjo on instruments native to their regions of Africa. It eventually reached America, where the instrument became popular among white men in the Minstrels. During the American parlour era, or ‘classical’ era, there were many virtuoso banjo players, and it became popular as both a symphony orchestra member and solo instrument. Additionaly, the banjo became an essential instrument during the jazz era and was used in many jazz ensembles. The 1929 stock market collapse and following depression is credited with wiping out the banjo’s popularity, because it’s sound was so joyful, it was quickly replaced with the arch-top guitar. It was re-popularized into American country and bluegrass by Bill Monroe, where it is most commonly used to this day.

Construction

The modern construction is a metal body in the form of a drum and fretted wooden neck with five strings. A gut or animal skin is stretched across the top makes the resonator while a tone ring lines the inside of the top - the tone ring is made of brass, steel, or wood (birch maple) and is character-isitic of the banjo’s tone -- each material used to create the ring results in a banjo with a very different tone one apart from the next.

Techniques

There are many different tunings used to play a banjo, the most common being the ‘Open-G’ tuning, which is, gDGBD, the small ‘g’ being an octave higher than the ‘G’ on the third string. Traditionally, the banjo is played in seated and resting the body between the legs. Finger-picks are used to pluck the banjo, the most common being metal picks on the finger and plastic on the thumb.

Berimbau

Origins

Much is unknown of the exact native origins of the Berimbau. However it is known that the African's brought the Berimbau to Brazil during the massive slave trade to South America. It was in Brazil where the Berimbau became closely associated with the Afro-Brazilian martial dancing art know as Capoeira.

Construction

The Berimbau is composed of a bow-like body with a metal string attached to both ends. Attaches to the bottom end of the bow, closest to the performers body, is a gourd shaped resonator made from Calabash know as the Cabaça. The Cabaça is used for amplification and produces the trademark "wah-wah" sound that uniquely identifies the instruments.

Techniques

The Berimbau is played by striking the metal string with a thin wooded stick. The performer then controls the timbre of the sound by moving the Cabaça against his/her body. Further control of the sound can be achieved by pressing a coin shaped stone against the vibrating string in order to produce a raspy muting sound that gradually chokes the sustain of the instrument.

Cuban Percussion

Origins

The Cuban percussion, in this portion of the library, includes the Congas, Bongos, and the Timbales. The exact origins of these instruments are unknown due to the fact that they were brought to Cuba during slave trade to southern America around the 19th century. Many agree that these instruments derived from a mixture of African cultures.

Construction

The Congas are constructed of wood, either as one solid carved piece or of wooden slats bound by metal rings. The drumhead is fastened on the top of the drum by metal lugs.

The Bongos are constructed by attaching two small circular drums to a small wooden block. Typically the two drums vary in size in order to create two differing pitches.

The Timbales consists of two different sizes, one headed, tom-tom like, brass made drums suspended by a metal stand.

Techniques

For the purpose of this library, we have sampled the basic “open tone” technique of striking these drums. However, for the Conga we have included the following extra techniques:
Marcha – A technique of rocking the palm on the hand and the fingers back and forth in order to produce a time marking or subdivision in between the various other techniques.
Mute Slap – Achieved by muting the drumhead with one hand while striking with slightly curved finger with the other hand.
Open Slap – Much like the “Mute Slap” only without muting the drumhead.

Didjeridoo

Origins

The didjeridoo's ancient origins suggest that it is one of the oldest instruments in the world, with an aboriginal history that stretches back 40,000 years. It is used by aboriginals in sacred ceremonies and healing rituals. They believe the continuous drone to be the voice of the earth, which reaches into the universe's collective subconsciousness.

Construction

A hollowed out cactus which is reversed -- traditionally a portion of eucalyptus tree hollowed out by ants is used. Resin or bees wax is formed into a mouthpiece at the end of the tube.

Techniques

Circular breathing is a fundamental technique. Tongue shape and momentum create variation in tone.

Dobro

Origins

The early desire for a design such as the modern day dobro, was to create a guitar that could compete with the loud brass instruments used in popular music of the early 1900s. John Dopyera and Rudy Beauchamp are credited with the 1927 National tri-cone resonator design, body made of metal. One year later, John Dopyera had started his own company with the help and financial backing of the Beauchamp brothers, he debuted the patented 'DOBRO', a singled cone resonator, with a spider bridge, and body made of wood. Not long after that, National manufactured its single resonator version of the 'DOBRO'. After some legal battles, with each side suing the other, they formed the National-Dobro company in 1932. Family members founded the Original Musical Instrument company in 1967 and made resonators up until 1970 when they re-acquired the 'DOBRO' name. Gibson musical instruments acquired Original Musical Instruments in 1993 and after that time, since they owned the patent to the 'DOBRO' name, decided that these instruments should be referred to as 'resophonic guitars'.

Construction

A wood or metal bodied guitar with one to three aluminum cone resonators to enhance amplification. Maple is the traditional wood of choice, but the construction will vary depending on the luthier, wood painted with steel enhances the tone. There is a resonator placed in the guitar which, depending on the guitar, can point out towards the top of the guitar, or back towards the back of the guitar. The 'spider' bridge is an eight legged support which spans the disc and helps in string vibration.
6 strings are common

Techniques

Traditional dobro technique is to rest the guitar horizontally either on the lap, or with a strap to position the guitar at such an angle. The right hand uses finger-picks and the left hand holds a steel slide. Open tunings are the most common tunings, one common standard is the 'Open-G' tuning - GBDG-BD. String gauges are lighter and so a lighter touch is required to play the guitar.

First Nations Cedar Flute

Origins

Traditionally used by the Plains Indians in courting ceremonies and so it has been given the name of ‘love flute’. Men serenaded his intended bride in a ritual and some from time

Construction

Handcrafted double chamber cedar flute. The double chamber into chamber one which is blown into, the second chamber is sectioned off from the first and contains the finger holes. The blown air travels from first to second by the means of a joining totem animal carved on top of the flute, which guides the air through a passage and into the second. The totem animal compresses the air giving the unique tone to the flute.

Techniques

Since there is no embochure and no reed it is fairly simple to play and can be played by almost any-one. Tuning is often specific to key and so flutes in different keys are required.

American Jaw Harp

Origins

Being a member of the plucked idiophones family of instruments, its origins are unclear -- this jaw harp is a folk instrument common in many cultures throughout the world. Among early American settlements, it was commonly bartered and became a popular instrument among those voyaging west. In many countries it has significance as a ceremonial and religious instrument. In England it is called ‘Gewgaw’, in Norway ‘munnharpa’, in Italy ‘Scacciapensieri’, France ‘Guimbarde’, Germany ‘Maultrommel’, in Russia ‘Vargan’, in Siberia ‘Khomus’, in Bali ‘Gengong’. Throughout the ages, the most common name is the ‘trump’.

Construction

The key-shaped frame is traditionally made from iron or silver, and occasionally bamboo -- a metal stem protrudes from the tip of the key.

Techniques

The base of the key shaped frame is placed in the mouth and the tip is left out of the mouth. The stem protruding from the key is plucked while manipulation of the size and shape of the the mouth changes pitch. The mouth cavity amplifies the sound of the harp.

Mandolin

Origins

The mandolin is a distant relative of the lute. The lute is a distant relative of the oud. Instruments of the lute lineage also begin to appear in 2000 B.C.E in Mesopotamia, they are small fretless stringed instruments used with a plectrum. Although, there are also depictions of the lute-type of instrument of cave paintings dated between 15000 B.C.E and 8500 B.C.E., which depict a man playing a one stringed instrument with a bow. In Europe, the mandolin has a 250 year history -- where it was used prominately in Italy -- and Antonio Stradivari, the famous violin maker, even made mandolinos for a time. Italian immigrants brought the mandolin to America, where it gained popularity as a both a folk and classical instrument. It was quite popular in the vaudeville circuit. Orville Gibson is responsible for making the mandolin popular in America today. His designs were of such quality that they inspired investors to create a company in his name called the 'Gibson Mandolin-Guitar Mfg. Co. Ltd. Known today as Gibson Guitars. In 1940, mandolin began to be used by in bluegrass and country - and it was Bill Monroe that popularized the instrument to a hole new audience.

Construction

Traditionally, a small bodied instrument with a short neck and 4 pairs of strings. The pairs of strings are duplicated in octaves. Sound-holes or F-holes similar to those used on a violin located on either side of the strings on the body of the guitar project the sound.

Techniques

The standard tuning is the same as a violin - fifths - GDAE. It is played with a pick - and serious picking technique such as flat-picking and cross-picking is required.

Pan Flute

Origins

Panpipes date back to ancient civilizations, and are one of the oldest musical instruments according to archaeological record. Evidence is found in ancient Egyptian civilizations, as well as excavations throughout Europe, there is also evidence of the pan pipes in 3500 B.C.E. Mesopotamia and additional evidence of the design has been found in India, Asia, and Africa. There has also been evidence found in Viking civilizations dating to the 10th century and Roman excavations in France have uncovered 7 pipes tuned to the ionian scale. 'Pan' was a God of ancient Greek mythology who protected pastoral people and their herds. Pan lovesick over rejected love from a nymph name Syrinx, played sad songs on a flute that he had made from a cane. Today it is very popular in South America.

Construction

In ancient times the pan flute was made of hollow animal bones held together with calf rope. Today, Pipes are traditionally constructed of bamboo -- as the length of bamboo joint decreases the pitch increases. Some makers line the inner tube with a protective cover made of wooden ply.

Techniques

Longer pipes are traditionally held in the right hand and it is an end blown (vertical) flute.

1890 Washburn Guitar

This guitar was bought on an ebay estate sale in 2003 for $200. On the inside, there is a wood press label which states ‘Lyon & Healy Of Chicago’, and at the tip of the head there is ‘Patent Applied For’ is stamped into the neck. It was in pretty rough shape, the finger board was damaged, the bridge decayed, several flathead screws used as pegs held three loose strings together -- it was unplayable. I called upon the services of Tim Frick, a gifted luthier friend of mine (and an excellent builder of electric basses) located in the san francisco bay area. After several months of life lived as a wallflower in his shop, he restored it for me, fashioning a new fingerboard (and a re-fret job) and bridge from brazilian rosewood. As always, he does excellent work -- it is the nicest guitar I have ever played -- the samples you have here are a taste of what it can do... -Pacemaker

Ukelele

Origins

Manuel Nunes together with Joao Fernandes and Augustine Dias migrated to Hawaii in 1879 to wok in the sugar cane fields. Nunes was a master instrument builder from Portugal and over time he, together with Fernandes and Dias, invented what is now known as the ukelele. Impressed with the beautiful timbre the instrument could create, Hawaiians gave the title Ukelele to the instrument meaning ‘jumping fleas’. This instrument is a symbol of Hawaiian identity and spirit.

Construction

4-stringed (some builders make between 4 and 10 string ukeleles) small shaped guitar. The wooden body, is traditionally constructed from wood harvested from the Hawaiian Islands such as Koa, Hawaiian Mahogany, Milo, Kulawood -- although wood varies dependent on the luthier. Different sizes are made as well, which are of different register - standard size, concert size, tenor and baritone. Traditionally, nylon strings are the strings of choice -- some makers prefer to use steel.

Techniques

The soprano, concert and tenor standard tunings are tuned as follows AECG, while the baritone is tuned as follows EBGD. Soft picks are sometimes used to create a unique mellow tone.


Europe

Alpenhorn

Origins

Also known as ‘alphorn’, the instrument comes from Switzerland (and some other European countries) and is traditionally used by mountaineers. 2000 years or more ago, Celtic tribes first settling in the Northern Alps, used the Alphorn for everyday rituals boths sacred and secular.

Construction

Typically from 1 1/2 to 3 meters in length, the Alpenhorn is a wind instrument made of thin strips of birchwood fashioned into a tube. The thin strips are placed in water and soaked until they are tender and can be shaped into the tube, they are then meticulously covered with bark. The mouthpiece is wooden and cup-shaped.

Techniques

Since the only openings for the alphorn are at the mouthpiece and horn end, when blown, the resulting tone will be a natural harmonic series to the fundamental of the horn ‘Ranz des Paches’ is the most famous melody of the alphorn, popularized by Beethoven in his Pastoral Symphony.

Bass Recorder

Origins

Origins are the subject of a very passionate academic debate -- the end blown flute is as old as civilization itself -- but it is not known specifically when the recorder itself came into existence. Solid evidence, in the form of actual playable recorders, dates from the 16th century Renaissance.

Construction

Considered a member of the 'fipple' flute family. A 'fipple' is a block in the blowing ending which creates a narrow passageway compressing a stream of air into the bore -- this gives the recorder its characteristic clear sound. Crafted from the finer aged woods - the material used is dependent upon the maker - and although all sorts of exotic woods are used, ultimately the bore and windway design of each recorder is most important.

Techniques

End blown flute which has the range of two octaves to two and and one half octaves. Both left and right hands play the finger holes and the mouth is placed on the lip.

Frame Drum

Origins

Frame drums are amongst the oldest and most culturally represented drums of the world. The existence of the frame drum dates back well before recorded history and is depicted in sculptures and painting by a multitude of artists, throughout the world, throughout the history of humankind. For this library we have sampled the style of frame drum that was influenced by Western European culture.

Construction

The frame drum is very simple in its basic form. It is constructed of a wooden hoop, or frame, with a drumhead fastened on one end of it. Frame drums vary in size, typically from around 10 – 20 inches in diameter. A common embellishment to the construction of the frame drum is to fasten a gut string to the inside of the head in order to produce a raspy, vibrating sound to the sustain of the instrument.

Technique

Typically the frame drum is held upright by the performer. Classical frame drum technique relies heavily on the dominant hand (the one not always holding the drum) with the second hand uses only a couple of fingers to aid in filling and/or subdividing. The Frame Drum is typically played by combining various different finger, hand, and muting techniques in order to produce complex, conversational type, patterns.

Gadulka

Origins

Origins are Bulgarian, it is found in central Bulgaria, the Balkans and Thrace. It is the most ancient folk instrument in Bulgaria. An older relative of the Gadulka is the Greek Lyra.

Construction

Pear-shaped, hollow, wooden, stringed instrument played with a bow. The entire instrument is carved from a single piece of wood cut from a sycamore, walnut or pear tree. 3 playable strings, 11 sympathetic strings.

Techniques

3 main strings are tuned AEA (I V I), although tuning will vary depending on the country of origin. Played held upright and rested on the knee or played horizontally and held with a strap rested in the center of the chest like a saxophone. The finger-tips of the left hand form the melody by playing the strings on the neck -- they slide up and down the neck without touching the fingerboard.

Hardanger Fiddle

Origins

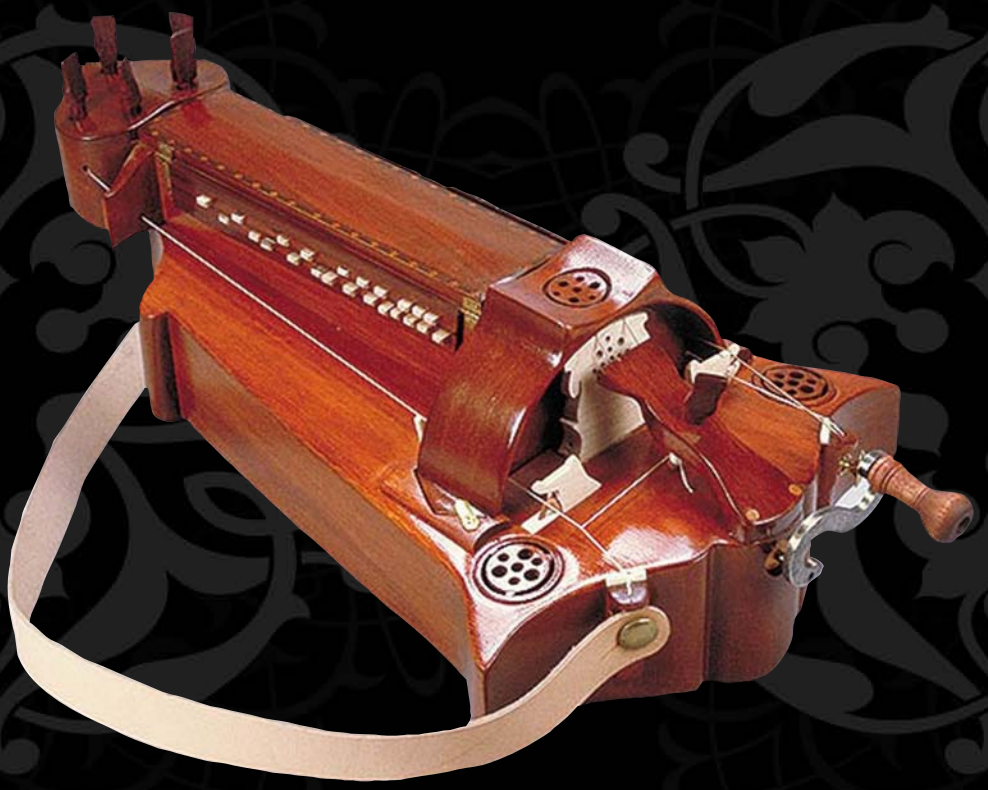
A Norwegian violin, called ‘hardingfele’ is recognized as the national instrument of Norway. The oldest known fiddle of this type was made in Ullensvaang, Norway in 1651 by Olav Jonsson Jaastad. There are over 1000 documented songs for the hardanger fiddle, each tune is individual and has a lineage as individual and as well-preserved as the melody itself.

Construction

Construction is similar to a violin, additionally there are four to five additional sympathetic strings and a slightly flatter fingerboard. Each fiddle is typically a great art piece, detailed inlays cover the body, mother-of-pearl inlays cover the fingerboard and the scroll is usually carved into the head of an animal or mythic being.

Techniques

Tunings vary greatly, and there are more than 20 ways to tune -- so there is no standard tuning. Traditional technique is polyphonic. Authentic technique is non-vibrato. We also recorded vibrato as in LOTR.



Hurdy Gurdy

Origins

First mentioned in 942 A.C.E and first depicted in Europe in the 12th century.
The early designs were so large that it took two players to perform -- one cranking the wheel and one playing the keys. In the 13th century, it became popular in dance music, and the size of the instrument began to decrease, so flying solo was possible. In the 18th century, the French developed an interest for it and their design is standard today.

Construction

Wooden body in the shape of a small cello, in place of where the tailpiece of a cello might hang, a wheel which requires rosin, is turned by a crank which rests where the endpin might go in a cello. Strings rest on the wheel and as the crank is turned, the wheel vibrates the strings -- this simulates a bow gliding over strings. A box rests over where the neck of a cello may be, the box holds keys which press down on the strings to create pitches. Although certain strings have fixed pitches which are used as drone strings (much like how a bagpipe drones).

Techniques

The right hand turns the wheel while the left hand plays the tune on the keys. Continuously turning the wheel allows for continuous sound, much like a bag pipe -- to give the effect that it is one long continuous breath. It is easy to bang out a basic tune on the hurdy gurdy, but does take some time to develop advanced technique.

Irish Low Whistle

Origins

Irish traditional folk music. It is a descendent of the recorder family and of all end blown flutes, while exact origins are unclear.

Construction

Early designs were made of wood, later, metals such as nickel and brass were used. A end blown fipple flute, the ‘bore’ the hollow main tube of the instrument has six finger-holes. The bore is either cylindrical or conical and contains a mouthpiece at one end which hoses the fipple a duct which draw air towards a cut in the side of the mouthpiece.

Techniques

Range is roughly an octave. Characteristic technique is very fast vibrato.

Launeddas

Origins

Origins date back to 700 - 900 B.C.E in Sardinia where secular statuettes depict a player of the Launeddas. It is a symbol of Sardinian identity.

Construction

A polyphonic reed instrument made up of three different sizes of fen canes. The lowest and longest is called ‘tumbu’, which is tuned to the tonic, ‘sa mancosa manna’ and mancosedda’ are the other two pipes -- they are both melodic pipes. On these two canes there are five finger holes each four fingered by the left and right hands simultaneously.

Techniques

The instrument requires a constant flow of air and so circular breathing technique is necessary. ‘sa mancosa manna’ and mancosedda’ are played simultaneously and different combinations of the holes creates different types of ‘cunzertus’.

Highland Pipes

Origins

Highland pipes' Scottish history dates back to the 14th century, by the 16th and 17th centuries, when elaborate decoration of pipes was commonplace. Historically played outdoors in secular events.

Construction

Historical design consists of an air bag, made of sheepskin with five pipes bound into it, a bass drone, two tenor drones the mouthpiece and a melody chanter. The chanter, a short pipe with eight holes and a thumbhole.

Techniques

The bag is filled with air by the player through the blow pipe, pressure from the left arm on the bag controls the flow of air to the melody chanter and drones. The range of the melody chanter is a ninth. The tonic is around a b-flat, and the scale includes a flat seventh.

Uillean Pipes

Origins

Uilleann pipes' origins date back to the beginning of the 18th century, when they appeared in Ireland. True origin is probably mainland Europe, possibly France.

Construction

Modern uilleann design consists of the chanter, three drones and three regulators, seven actual pipes in all. The chanter plays the melody, the three drones, which toggle on or off are each an octave apart and the three regulators have 4 to 5 keys which play notes to harmonize with the drone and chanter.

Techniques

Traditionally played seated and indoors, uilleann pipes are played in all sorts of social situations and styles of music. Improvisation of tunes and ornamentation is par for the style of the music. The range is two full octaves on the chanter, playing chromatically is possible with the use of dry reeds.

Far East

Erhu

Origins

Evolved from the ‘Xiqin’, an early Chinese form of bowed instrument popular in the 8th century, Chinese origins of the Erhu date back as early as the 18th century. The Erhu, together with the Zhonghu, GaoHu, and XiHu form the ‘Huqin’ family of Chinese Instruments.

Construction

This 80 centimeter fiddle consists of two steel strings and is played with a horsehair bamboo bow. The bow hair, rosined on both sides, is attached to the main instrument and in performance is passed through the strings. The head of the neck, similar to the western violin’s scroll, is often carved out of shapes such as a bat or dragon head. The base of the neck attaches to a mahogany, ebony or sandalwood body and is covered with a snakeskin membrane which helps to amplifies the sound of the fiddle.

Techniques

Played in a seated position, the Erhu rests vertically on the left thigh while the left hand holds the neck of the fiddle and the right hand holds the bow. Pushing the bow to sounds the lower string and pulling the bow to sounds the higher string. The Erhu is most commonly tuned in fifths, the lower string usually tuned to ‘D’ while the upper string usually tuned to ‘A’. Performance range is anywhere from one octave to three octaves depending on skill level.

Dizi

Origins

‘Di’ is a term used to describe all Chinese flutes. ‘Hengdi’ is a Chinese term used to describe a tranverse flute -- a flute which is slide blown. Chinese origins of the tranverse flute can be traced back to the Han Dynasty (206 B.C.E). The term ‘Dizi’ is a Chinese term used to describe any flute with a membrane. This unique membrane addition -- the ‘Muo Kong’ -- was added by Liu Xi during the Tang Dynasty (618-907 A.C.E). Aside from the Muo Kong, The transverse flute is found in many cultures around the world, and it’s ancient origins can be traced back to paintings of the ‘Ney’ Flute depicted in paintings in the pyramids of ancient Egypt. The Dizi is used to accompany in Chinese Opera.

Construction

The Dizi is most commonly constructed from bamboo, but is also fashioned from stone or jade. Consists of six finger holes and the unique additional hole, the ‘Muo Kong’ located between the lip and other holes. The ‘Muo Kong’ is a thin membrane made from the inside of the bamboo shoot (and sometimes said to be constructed of a thin piece of rice paper). When played, the membrane vibrates to create the characteristic buzzing, resonating sound of the flute which enhances sound projection.

Techniques

The most common range is about two and one quarter octaves. The instrument itself is tuned to a diatonic major scale with the seventh slightly lowered in pitch. Notes outside of the scale are accomplished by partially blocking holes. Many accomplished Dizi players own a set of seven flutes -- one for each key. Despite the limited technique of the instrument, the standard of technical ability is very high.

Balinese Gamelan

Origins

The Balinese Gamelan is native to the Indonesian culture. There are two types of Gamelan orchestras. For the purposes of this sample library we sampled Gamelan instruments that originate from the country of Bali. The other type of Gamelan ensemble, which originates from the country of Java, differs slightly in construction, instrumentation and composition. Traditionally, gamelan is only played at certain occasions such as ritual ceremonies, special community celebrations, shadow puppet shows, and for the royal family. Gamelan is also used to accompany dances in court, temple, and village rituals.

Construction

The gamelan orchestra is comprised of a large variety of instruments. For this library we have sampled two instrument types.

The Metallophones (Calung, Katana, and Pamade) are constructed much like a Vibraphone. They are made from a number of tuned metal bars suspended above an elaborately carved wooden stand.

Continued on next page.....

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The Gongs (Gamelan Gong & Kajar and Byeon) look like most brass made Chinese gongs with one distinct difference. Instead of having a flat striking surface, the Gamelan gongs have a bell or nipple shaped striking surface in the center of the gongs. This is done in order to produce a tone that is rich in the fundamental harmonic of the gong. The gongs are tuned to specific notes in the Gamelan scale. The Gamelan Gong and Kajar serve a time keeping purpose. It is because of this purpose that they are mostly tuned to the root note of the scale of the particular Gamelon composition. The Byeon is a group of scale-tuned gongs suspended horizontally on a wooed stand.

Techniques

The Metallophones are played by striking the tuned metal bars with a metallic hammer shaped stick. The larger gong is played by striking the nipped shaped center with a large soft circular mallet. The Kajar and Byeon are play by striking the nipple shaped center with a miniature bat shaped wooded mallet.

Gongs

Origins

According to Chinese tradition, gongs came from the country of Hsi Yu in the western region, between Tibet and Burma. The gong is mentioned in writings during the early sixth century, in the time of Emperor Hsuan Wu (AD 500-516).

Constructions

Most gongs are made from casting molten metal composites of brass, tin, copper, lead, zinc and iron. These molten composites are hammer into shape, smoothed by a lathing tool, then tuned. After tuning, some gongs are polishes and then decorated with paint and embroidery.

Techniques

The basic technique to playing a gong is quite simple. Striking the center of the gong with a large soft mallet produces the most recognizable sound. However, many extended techniques have been developed in order to produce sound effect type timbre. These techniques include scraping the gong with a metal claw or striking it with various odd shaped mallets.

Koto

Origins

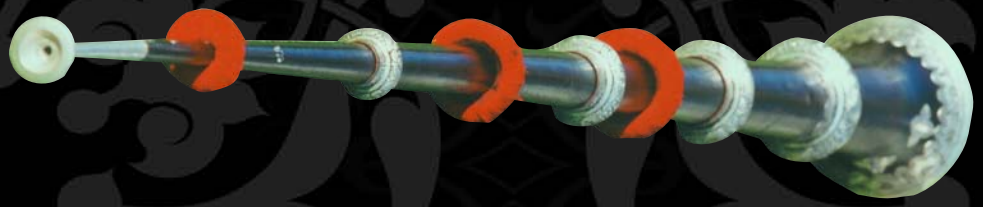
Ancient origins are traced back to China while the Koto was introduced into Japanese culture between the 7th and 8th century. Repetoire was passed down by apprenticeship. Originally reserved for the royal court, Yatsuhashi Kengyo, a blind Koto player made much effort to make the instrument more accessible to common people.

Construction

The Koto is an appoximately 180cm table zither with 13 strings. The hollow body is made of Paulownia wood (a deciduous tree native to Asia). Sound resonates from sound holes carved on the side of each end of the body. Each string is the same length, and are connected to each end of the body by means of anchored bridges while adjustable bridges for every string called 'ji' elevate each string from the body. Tuning is created by adjusting positions of the 'ji' along the body to create variations in fundamental pitch for each string.

Techniques

Traditionally, it is played seated on the floor. The player uses small picks called 'tsume', attached to the thumb, index and middle finger of the right hand to pluck the string on the right hand side of the 'ji'. While the left hand, pushes away (to decrease pitch) and pulls towards (to increase pitch) the strings on the left hand side of the 'ji' to create melody.



Rag Dung

Origins

Used in a specific ritual by a mysterious sect of the Karma Kaputa Tibetan monks.

Construction

Constructed from copper and range anywhere from 1 to 6.5 meters. They are built in sections so that they can be telescoped for easier transportation. The shorter horns are used to create higher tones, while the longer drones are used to create the fundamental drones.

Techniques

Circular breathing creates the drones which are played in intervals of thirds or fifths.

Shakuhachi

Origins

Ancient origins of the Shakuhachi can be traced to Korea and China -- although centuries of tradition have resulted in an instrument with construction and technique much different from its ancestors. The shakuhachi is depicted in japanese sacred art as far back as the 8th century. It earned a reputation as a spiritual meditation instrument of the travelling Komoso (a Fuke sect of Zen Buddhist monks), who's meditation pieces for the Shakuhachi were called 'honkyoku'. While honkyoku songs are arrhythmic, many are very technically demanding. During the Mejii Period, the Fuke sect was abolished, and so Shakuhachi performance was temporarily forbidden. However, modern performance consists of both solo and ensemble Shakuhachi performance.

Construction

The shakuhachi is hollowed-out bamboo tube with 4 holes in front and one in back. The word Shakuhachi can be divided into two words 'shaku' and 'hachi' and both are definitions of measurement. One 'shaku' is equal to 30 centimeters (1 shaku = .994 feet) -- 'Hachi' means 8. 1.8 shaku equal to 54 centimeters is the most common length of the Shakuhachi. While most bamboo shoots are cut at 1.8 shaku, the bamboo shoots vary in length between joints and so graduated sizes are manufactured in tenths of a shaku (1.8, 1.6(E), 2.1 (B), and 2.4(A)) -- The larger the instrument the lower the pitch. There lip which the player blows out of is sharped so as to achieve maximum precision in pitch definition.

Techniques

The Shakuhachi, similar to the recorder is held vertically and end blown. The most common range is 2 octaves plus a fifth The five holes are tuned to a pentatonic scale while any whole can be bent in pitch by up to a tone and so it is possible to play a complete chromatic scale. Additional tones outside the range of the instrument are obtained by partially covering the holes of the instrument and changing blowing angle.

Shamisen

Origins

Ancient origins can be traced to China -- it evolved from the Chinese instrument called the Sanxian -- and was brought from China to the Southern Islands of Ryukyu and then imported into Japan. Shamisen is the principle instrument of the Japanese musical theater called Kabuki. The Shamisen is played in the debayashi (the main music ensemble of the Kabuki) on a raised platform on the right side of the stage. Shamisen is found in both the Nagauta and Joruri styles of Japanese music. In the latter part of the seventh century Nagauta, known as long song, consisted of a lyrical and simple style. Joruri accompanies a narrator during a play of the Joruri theatre. The modern style of Shamisen playing -- Tsugaru-jamisen -- evolved in the early part of the 20th Century from a blind man's -- Chikuzan Takahashi --interpretation of traditional folk songs. Tsugaru-jamisen's style is very improvised and has a bluegrass flavour with much flashy fingerwork.

Construction

A three stringed instrument almost one meter in length. The top, similar to the violin's scroll is called a 'tenjin' which connects to a neck called the 'sao', which is joined with the body called a 'dou'. The 'dou' is a drum-like shape manufactured of wood and covered on either side with cat or dog skin, amplifies the sound of the Shamisen as it is Both neck and body are detachable to assist in transportation. The strings are manufactured from silk. 'Sawari' is a characteristic buzzing sound created when the bottom string travels over a hump. The 'bachi' is the pick used to strike the strings and can be fashioned from a variety of different sources -- wood, plastic and other natural sources.

Techniques

Shamisen is most commonly used to accompany a singer as described in the styles above, although in more modern eras, it has evolved into a solo classical instrument. There are three main tunings:

1.) 'Hon chosi' (main tuning): I - IV - I
2.) 'Niagari' (raising the second string): I - V - I
3.) 'San sagari' (lowering the third string): I - V - VII

Taiko Drums

Origins

Taiko drums are native to the Japanese culture and date back to well before the 6th century. One of the first uses of Taiko was as a battlefield instrument. They were primarily used to intimidate and scare the enemy. The modern version of the taiko is a design that is only about 100 years old.

Construction

Literally, the Japanese word Taiko means “fat drum,” although there is a vast array of shapes and sizes of Taiko drums. Typically the Taiko drum is made from a wood carved, barrel like, shell with animal skin on both sides of the drum.

Techniques

The Taiko drums are typically played with wooden sticks that are heavy and large in diameter. There are two basic ways to strike the Taiko drum. Most tradition Taiko drum patterns require the player strike the drum on the animal skinned head and on the wood shelled body. RA contains taiko samples from one large drum. More taikos can be found on Stormdrum and EWQL Symphonic Orchestra Pro.

Vietnamese Jaw Harp

Origins

Dan Moi (Vietnamese Brass Hmong Harps) are made by a Hmong tribe of the northern mountains of Vietnam. Dan Moi means “Lip instrument.” It is made of Curled brass and is much lighter gauge than the Chong Moua Lee design. The Dan Moi is a courting instrument. It has a delightful sound as lovers would play music to communicate with each other.

Construction

It is made out of a thin piece of brass with a flexible “tongue” in the middle. When you finish playing you tuck it into a bamboo case decorated with colorful ribbon.

Techniques

It is played against the lips instead of the teeth. It gives a rewarding sound, full of brilliant harmonics, but it is fragile and must be treated with care.


India

Bansuri

Origins

Being a tranverse flute, the bansuri, is one of the most ancient of musical instrument designs. In India, the bansuri has a rich history of the folk musics of India sacred and secular. It has a special connection to Lord Krishna, as the legend is depicted, Krishna is a sheepherder with magical powers who plays the flute.
In modern Indian times, it is used in folk, popular, religious, and in classical music. Panna Lal Ghosh earned a great deal of credit for making the bansuri flute popular this century in Indian Classical music, and also in his additions to design of the modern bansuri. The name ‘bansuri’ comes from two Hindi words: ‘banse’ which means bamboo, and ‘sur’, which means ‘melody’.

Construction

Made of bamboo (occasionally made of reed) and sealed on one end with six uniformly placed holes. Due to its ability to create overtones where a metal flute cannot bamboo is the preferred source of material. Traditionally close to 33 centimeters in length, longer lengths create lower pitches. In more modern times, many bansuris have an added seventh fingerhole, which adds flexibilitiy, control and extends the upper registers into a third octave.

Techniques

In Hindustani music, the range is two octaves. Essential elements of flute technique include proper breath and tongue techniques. Modulation of tone, timbre such glissando, and half tones, can be achieved by partially covering holes. Recently, the bansuri has been used in film scores, to achieve Shakuhachi-type overblown effects.

Electric Baritone Violin

Origins

The electric baritone violin is a 7-string instrument of recent origin. It is very popular in modern South Indian music.

Construction

7 string violin with a wide bridge and a pickup.

Techniques

Technique is similar to a violin, except more chordal music can be achieved, because of the extra strings. The extended scale (low notes) is well suited to the mysterious melodies of India. In RA we used the pickups, Neumann mics and a guitar amp to get the sound you hear.

Esraj

Origins

Of Indian origin, approximately 200 years old. The esraj is used in central and eastern regions of India, while the Dilruba is found throughout the north. The esraj is used in a wide variety of musical genres -- it happens to be Sri Chinmoy's selection of choice!

Construction

The esraj is half sitar (the neck) and half sarangi (the resonator and body).
It is also considered twin sibling to the dilruba -- the main differences in construction are tuning peg construction, and sympathetic strings. It is made entirely of wood, and has a resonator on the body made from a stetched animal skin. It's long-neck has 20 frets, 4 playable metal strings, and 12 to 15 sympathetic strings. It is played with a violin or sarangi bow.

Techniques

The esraj is so similar to the dilruba that if you learn either, you can trade off easily between the two. The frets on the esraj are used primarily as pitch guidelines, proper technique does not require that they be played. The left hand rests on the strings lightly above the fret. The right hand holds the bow. It is played sitting on the floor, and rests between the legs much like a cello.

Sarangi

Origins

Many of India's musical instruments -- especially those ones that are bowed -- are said to originate from the 'Dhanuryantram' otherwise known as the bow and arrow. The reverberating sound of the arrow leaving the bow is said to have inspired many early native tribes to create bowed instruments. The sarangi has a deep history, the instrument is so old that there are many theories as to its origins -- although, many are grandiose -- there are none which are exact. There is a legend which tells of a physician who one day, weary from travelling, and seeking shelter from the hot sun, lay down under the shade of a tree to rest. As he was drifted asleep, he heard an enticing musical sound from the forest. Leaving his shady resting spot, he sought out to the find the roots of this sound. After travelling into the forest for a while, the physician came upon the skin of a dead monkey gently caressing the branch of a tree in the breeze. Inspired by the soulful nature of this phenomenon, the physician, created the sarangi. Other tales describe Boo Ali Ibn Sina, an Egyptian disciple, in place of the physician. Whatever the ancient origin, the sarangi is the most notorious bowed instrument of Indian music -- today it is played in North Indian (Hindustani) music.

Construction

The sarangi has a neck and body constructed from tun wood, a resonator made from animal skin, 3 playable metal strings, and 30 - 40 sympathetic strings.
It is played with a bow which looks similar to a violin bow but the horse hair tapers towards the wood the closer it reaches towards the tip and is heavier.

Techniques

Traditionally played seated, the instrument rests on the thigh, the left hand holds the neck and plays melodies, the right hand holds the bow palm upwards. The left hand plays the playable strings with the top of the fingernails, talcum powder is used to ease sliding up and down the string.

Sitar

Origins

The sitar came from the Indo-Pakistan subcontinent during the collapse of the Mughal Empire in the 17th. Persian lutes were used in the Mughal courts for centuries, and it is evident that the sitar evolved from these.
A 18th century fakir named Amir Khursru is accredited with the first sitar design said to be developed from the Pesian 'Sehtar'. Khursru's grandson, Masit Khan, continued in the family tradition. Khan is recognized as one of the most influential musicians in the development of this early sitar design, and his style of compositions are remembered today as 'Masitkhani Gat'. In modern times, the sitar is used in Hindustani (Northern) Classical Indian music.

Construction

Fretted, long-necked, stringed instrument made of tun or teak wood with a resonator typically made of a gourd. Most designs have 20 strings: 7 playable and 13 sympathetic. The 20 Frets are raised -- to allow room underneath for sympathetic strings to pass -- and adjustable for more accurate tuning. Fine tuning is accomplished via beads at the base of the bridge and with the pegs -- It is characteristically difficult to tune. A plectrum called a 'mezrab' is used by the right hand to pluck the strings, while the left hand plays the neck.

Techniques

The 7 playable strings are divised as follows: 3 strings cover the upper three octaves, 3 strings called 'cikari', are designated rhythm strings, a fourth string, covers the lower bass octave. Sitar, as with most all Indian Classical instruments, is learned by apprenticeship with a master of the instrument over a long period of time.

Tabla

Origins

The Tabla is the most popular percussion instrument used in North Indian Classical music. The exact origin of the Tabla is not known for sure. It is surrounded in mystery and there are many theories as to its birth. The tabla is shown in temple carvings which date to around the second century AD. It is difficult to know how the Tabla was invented as there are so many stories about its origin.

Construction

The name “tabla” describes the arrangement of two drums; the Danya, made of wood, is the high pitched one, and the Baya, made of metal, is the low pitched one. Both of the bowl shaped drums feature a very complex drumhead, made from five section of membrane, fastened to the body with rawhide straps. Wooden dowels are inserted in between the rawhide straps and the drum shell in order to change the tension on the head, there by affecting the overall pitch of the drum.

Techniques

Each movement or position of the hand on the Tabla produces a different sound and has a specific name or syllable (these are called ‘bols’). For this library we have included a variety of sounds that almost make up the entire tabla alphabet.

Tambura

Origins

Used in both Hindustani (Northern) and Carnatic (Southern) Indian Classical musics. In Northern India it is known as ‘Tanpura’, in Southern India it is called ‘Tambura’.

Construction

ong-necked, four stringed wooden instrument with no frets. The ‘jawari’ or flat bridge which the strings rest on, increases the width of the string vibration which is charactersitic of the warm drone of the Tambura. Three of the four strings are made of steel, the fourth is made of brass.

There are three different constructions of the Tambura:

1.) The Northern Indians use the ‘Miraj’ style, between 1-2 meters, the main body made of teak or tun wood and the resonator section is made from a gourd.
2.) The Southern Indians use the ‘Tanjore’ style, between 1-2 meters, the main body made of teak or tun wood. The ‘Tanjore’ style differs in that the long neck narrows at the head and the resonator section is constructed from wood.
3.) The ‘Tampuri’ style is smaller in size, less than 1 meter. The resonator is smaller, and construction made entirely from wood increases its durability. The smaller size makes it easier to transport.

Techniques

Tuning for the four strings are in the dominant, tonic, tonic, tonic order and are plucked very softly to create a drone. The Tambura is the main instrument to accompany vocal performance in Indian classical music. In performance, the resonator is placed on the right thigh and held upright while playing.

Middle East

Qandahar Dumbek

Origins

Arabian in origin, the Dumbek is commonly found in Turkey, the Balkan countries, and North Africa. This large and deep sounding dumbek comes from Iraq.

Constructions

The body of the Dumbek is shaped like an hourglass and typically made from nickel, ceramic, or compress aluminum. The Dumbek we sampled for this library was made of metal and much larger then most typical Dumbeks, thus giving a much lower fundamental pitch.

Techniques

The name “Dumbek” is derived from the two basic techniques of striking the drum. “Dum” is the bass tone and “Bek” is the high-pitched crack sound made by striking the drum towards the edge of the drumhead. We have also sampled a number of non-traditional techniques for the purposes of this library.

Duduk

Origins

The Armenian Duduk (‘Dziranapogh’ is the traditional Armenian name meaning apricot pipe) has perhaps the richest and oldest history -- of all of the double-reeded woodwind instruments -- stretching back before the common era. ‘Duduk’ is the adopted name taken a Russian pipe instrument called ‘dudka’. The Duduk design emigrated from Armenia to many other countries. In Turkey, it is called ‘Mey’, in Iraq and Iran it is called ‘Balaban’, in Georgia it is called ‘dudki’, in Azerbaijan it is called ‘balamam’, and it is also found in derivatives throughout areas such as Persia and the Balkans. Many consider the Duduk the heart and soul of Armenian music. For RA, we sampled 3 duduks. One from Armenia, one from Turkey and one small duduk from Bulgaria.

Construction

In ancient times it was constructed from bone, today the double-reeded wind instrument is most commonly constructed from aged apricot wood. There are 8 holes on the front and on the back there is a thumb hole. An additional tuning hole is constructed on the horn end of the instrument which depending on the maker can be on front or back. Sizes vary -- the most common being 28, 33 and 40 cm. The ‘ramish’ (name for the double reed) is anywhere from 9-14 cm in length and consists of two pieces of cane cut from a reed of the shores of the Arax River in Armenia. The reeds are assembled in a duck-billed configuration. Tuning the Duduk is accomplished by an adjustable wood binding which surrounds the ‘ramish’. Sliding this binding along the ‘ramish’ opens or closes the reeds.
The reed is generally wider than most reeds which gives it its characteristic mournful sound

Techniques

Diatonic in scale and has the range of one octave. Notes outside of the pentatonic range are achieved with special fingering techinqes. The width of the reeds demands more breath from the player. An adjustment in pressure from the lips and adjustment in finger position creates variation in dynamics.
Most commonly Duduk is performed in pairs. One player performs the melody of the song, while another player, called ‘the damkash’, uses circular breathing to perform the ‘dam’, a constant tonic drone.

Middle Eastern Violin

Origins

European strings were first introduced to the Middle East during Napolean's rather failed attempt in capturing Egypt in 1798.

Construction

Same construction as the European Violin and Cellos.

Techniques

Violin techniques include the European under-the-chin-style of playing, and a knee-style called 'gamba' style. Turkish tuning for the violin, GDAD, slightly differs from the European GDAE style tuning. Arabic tuning differs slightly still being GDGD. Characteristic performance techniques are very decorative with melismas, slurs and slides, trills, wider vibrato, and double stops. Because of the fretless design of the violin, it is easily able to adapt to playing in the quartertone structures of the 'Maqam'. The ensemble in RA was recorded with 4 violins on the left and 3 cellos on the right playing one octave down.

Ney Flute

Origins

Tomb paintings of the pyramids of Ancient Egypt dating between 3000-2500 B.C.E depict Ney flute players while Archealogical excavations at Ur, an ancient city in Mesopotamia -- know known as present day Iraq -- have uncovered early specimens of the Ney flute. The Ney is common through the Arabic world, Persia and Turkey. 'Ney' is the Farsi word for reed, named after a plant from which it is fashioned.

Construction

Traditionally cut from a nine segment section of the Arundo Donax plant take from the Nile River, the Ney is an end-blown flute with six finger holes on the front and one thumb hole on the back. On the front of the Ney, the hole closest to the mouthpiece end is opened partially, while the rest are fully opened. The embouchure is bevelled, and in modern times is fitted with turned wood, bone, and horn. Traditional Egyptian Neys have wire wrapped at the mouthpiece end of the flute to add decoration and support to the flute's construction. Emblems at the mouthpiece end signify the flute's key signature and/or signature of the flute maker, these are etched and ink filled or burned in.

Techniques

Different lengths determine pitch and most players have a set of flutes to play in different keys, although, accomplished players through advanced finger and blowing techniques can achieve a 3 octave range on one Ney. The 'Rast' mode is the Arabic 'Maqam' (mode) easiest to achieve from the Ney: for those of you out there with more a Euro-centric worldview, the 'Rast' is the same as the 'Dorian' mode. The 'Bridge' is a characteristic polyphonic mode of the Ney, it is achieved when the Ney player plays the same note an octave apart. Characteristically, the player plays notes within the musical range of the instrument and a sub-harmnonic to achieve the 'Bridge'.

Oud

Origins

The Oud is an short-necked, half pear-shaped, plucked lute of the Arab world, the direct ancestor of the European lute. The oud first appears in Mesopotamia during the Kassite period (1600-1150 B.C.) with a small oval body. Oud's name derives from the Arabic for 'wood', and this refers to the strips of wood used to make its rounded body. It is the principal instrument of the Arab world, and is of secondary importance in Turkey (ud), Iran, Armenia and Azerbaijan. It is known both from documentation and through oral tradition, as the king, sultan or emir of musical instruments, the most perfect of those invented by the philosophers.

Construction

There are five pairs of strings on an oud, each pair tuned to the same pitch, and a single string which is also the thickest and known as the bamteli in Turkish. The most common way to tune the oud is to tune each string a fourth apart. The neck of the oud, which is short in comparison to the body, has no frets and this contributes to its unique sound. The most common string combination is five pairs of strings tuned in unison and a single bass string, although up to thirteen strings may be found. Strings are generally made of nylon or gut.

Techniques

Different tunings are used and the Turkish-style oud has a brighter tone than its Arab counterpart, partially because of higher tuning. In Ra, we use the Arabic oud. The strings of the oud are traditionally plucked using an eagle's feather, known in the Arab world as a risha (and in Turkey as a mizrap). However, eagle feathers are not readily available nowadays, so modern players have looked to other materials from which to fashion a pick. Many professional players use a risha made from horn (of a cow, for example). To ensure that the oud is at a comfortable height, many players use a footstool of the type used by classical guitarists, but you could simply cross one leg over the other. The face of the oud should be vertical and the strings/neck horizontal.

Santour

Origins

‘Santoor’ is a persian word meaning one-hundred strings, ‘shata tantri veena’, it’s Sanskrit name, means ‘a hundred-stringed lute’. Ancient origins can be traced back to the Sufi mystics who used the 100-stringed instrument as an accompaniment to the sacred hymns of the music they called ‘Sufiana Mausiqi’. Addtionally, the early Persian origins date back to the 16th century and depict a plucked instrument. By the 17th century the modern design still in use today, is the 72-string ‘Santour’ as it is called in Iran, Iraq and Turkey. Being a member of the hammer dulcimer family of instruments, derivatives found around the globe include the 45-stringed Chinese ‘Yang-Qin’, the 135 stringed German Hackbrett, the Grecian ‘Santoori’, the Finnish ‘Kentele’, the Hungarian ‘Cimbalon’ and the Indian ‘Santoor’.

Construction

A wooden instrument with steel strings, the frame is most commonly constructed from walnut or maple while the top and bottom consist of veneer or plywood. Most commonly, 29 wood bridges (although 31 and 33 bridged ‘Santours’ exist) rest on the soundboard (top) of the instrument and support the strings. Strings are attached to either side of the soundboard by pins. The Persian ‘Santour’ has adjustable bridges to aide in tuning, while others, such as the Indian ‘Santoor’ have fixed bridges and tuning pins for each string on the right side of the soundboard aides tuning in others. In the Indian design, each bridge holds 3 strings which are tuned to the same pitch. The frame is trapezoid in shape, so string length at the base are longer and therefore lower in pitch than strings at the top. Light wood mallets are used to strike the string.

Techniques

Mallets are held by both left and right hands, and are used to lightly strike the string. Playing the mallets in close or far proximity to the bridges can create very different timbre. Mute tones are created when one hand mutes the strings in various postions while the other strikes creating different timbre at each position.

Yali Tambur

Origins

Turkish instrument of ancient origin.

Construction

The soundbox is of a drum-like banjo design, a round metal body covered with a animal skin. It is a stringed instrument with sympathetic strings in addition to the playable strings.

Techniques

Played with a bow or plucked. Often the drone string is plucked repetitively, while the other strings are bowed.

Zourna

Origin

Ancient origins date back to the 9th century where the Zourna is mentioned in the Armenia tale ‘David of Sasoun’ which has become symbolic for the struggle for emanicipation of the Armenian nation. It is widely used in Armenia and Bulgaria. Derivatives are found in many places including India (‘Shenay’), Greece (‘Zourna’), Yugoslavia (‘Zurla’), France (‘Bombarde’), Tunis (‘Zokra’), Iran (‘Tzurnay’), Lebanon and Iraq (‘Zamr’), Morocco (‘Ghaytah’ or ‘Raita’), and Turkey.

Construction

In Armenia, Zourna is traditionally constructed from the wood of an apricot tree, while derivatives in other countries are constructed from the woods of plum, walnut and saber trees. Seven holes in front and one in back, an additional tuning hole is found at the horn end (‘Kalak’) of the Zourna. Wider finger holes allow for one to achieve chromatic tones more easily. Zourna is constructed in different sizes ranging from 30 to 60 centimeters. Different lengths of the instrument determine different ranges of pitch. The ‘Metem’ is the protruding tube at the reed end of the horn. On the ‘Metem’, the ‘Avurtluk’ is hollowed-out circular tube designed to assist the player in circular breathing. The ‘Ramish’ or reed consists of two elements. A piece of flattened cane consists of the reed portion which attaches to a circular tube of metal forming the mouthpiece.

Techniques

Characteristically a very loud instrument, proper technique requires heavy air pressure and circular breathing. Due to the loud volume of the instrument it is traditionally played outside during festive and celebratory events. With an approximate range of one octave, partially covering finger holes or ‘half-holing’ allows the performer to obtain chromatic pitches outside the range of the horn. Similar to the Duduk, the Zourna is often played in pairs: one player, called the ‘damkash’, sustains a ‘dam’ (drone) while the other performs the melody. Traditionally, it is almost always accompanied by the Armenian ‘Dhol’ drum.

EWQL RA - Instrument Articulation Abbreviation Key		
Abbreviation	Definition	Notes/Examples
5ths	Perfect 5th Interval	A slide or chord sampled in Perfect Fifth intervals
Acc	Accent	Accent made by bow biting string or tongue tightening on windhole
Arp	Arpeggio	Broken ascending or descending chord inverted in any sequential order
Basic	Basic Articulation	Most commonly performed articulation of instrument
Big	Big	Simulates a performance of more players than sampled
Bnd	Bend of Note	An adjustment of the fundamental without pause
BODY	Body Generated	A ceremonial shaker worn on the body in performance
Bow	Horse Hair and Wood	Stringed instrument performance with bow direction down or up
Bridge	Wooden Object supporting strings	Performed close to the bridge to give a more nasal or harsh timbre
Chrom	Chromatic	Pitched percussive peformance - where pitches are stretched to accomodate twelve tones
Dbl	Double	Doubled articulation
DN	Down	A stringed instrument's bow or pick direction
Drn	Drone	A looped fundamental performed by a string or wind
Exp	Expressive	An exaggerated crescendo followed by a decrescendo
f	Forte	An Italian term used to describe a louder dynamic
Fall	Fall	An expressive drop in pitch at the end of phrase
Flutter	Flutter Tongue	An expressive vibration created by a fast moving tongue
Fst	Fast	A shorter phrase

Abbreviation	Definition	Notes/Examples
FX	Effects	Characteristic or uncharacteristic performance of the musical qualities of the instrument
Gliss	Glissando	An Italian term used to describe an ascending or descending musical phrase perfomed in a rapid and gliding manner
Grace	Grace note	Arrhythmic embellishment above or below the fundamental
Groove	Looped Phrase	A Looped musical phrase establishing a continuous pocket of rhythym
Harm	Harmonic	A frequency integral to the fundamental established by lightly touching the string or overblowing wind
Hi	Hi	Higher pitched articulation
Hrd	Hard	A more aggressive attack
HT	Half-Tone (Semi-Tone)	The interval between a tone in the western twelve tone scale
KS	Keyswitch	A switch between multiple articulations by the stroke of specific keys called 'key-switches'
Leg	Legato	Designed to create quick and smooth musical phrases
Live	Live	A velocity switching program which simulates more realistic and charateristic performances
Lng	Long	A longer phrase of any given articulation
Low	Low	Lower pitched articulation
Lyrical	Lyrical	A sweeter phrase
Med	Medium	A medium dynamic
mf	Mezzo Forte	An Italian term used to describe a moderately loud dynamic
Maj3rd	Major 3rd	An articulation consisting of Major 3rd intervals
Min3rd	Minor 3rd	An articulation consisting of Minor 3rd intervals

Abbreviation	Definition	Notes/Examples
Mldy	Melody	A program consisting of melismas characteristic of the native musical qualities of the instrument
MOD	Modulation Crossfade	Modulation crossfades between more than one articulation
mp	Mezzo Piano	An Italian term used to describe a moderately soft dynamic
Mute FX	Effects	Effect muting the string
Neck	Neck	An articulation where pick, finger or bow is positioned over the fretboard or neck of the instrument
NV/NVB/Non Vib	Non Vibrato	An articulation where the fundamental maintains consitent pitch for its duration
Oct	Octave	The fundamental stretches one octave higher or lower during the phrase
Open	Open	Most commonly performed articulation of instrument
Ornament	Ornament	A small embellishment characteristic of the native musical qualities of the instrument
Ovrblwn	Overblown	The wind instrument is overblown to create an overtone or harmonic in place of the fundamental
P	Piano	An Italian term used to describe a softer dynamic
P4th	Perfect 4th Interval	A Slide or Chord sampled in Perfect Fourth Intervals
PK	Pick	Pick on string
RT/Resonance	Release Trail	Decay of the articulation in the sampled space
RR	Round Robin	The press of every key Alternates between Up and Down Bow or Pick, or Left and Right Hand Strokes
Scrape	Scrape	Pick is scraped across the string creating a harsh timbre
Sft	Soft	Soft articulation

Abbreviation	Definition	Notes/Examples
sFz/sF	Sforzando	An Italian term used to descibe a strongly accented note
Sht	Short	A short phrase
SLD	Slide	A transition in pitch from one fundamental to another
Slur	Slur	“, smooth
Slw	Slow	A longer phrase
Spic	Spiccato	An Italian term used to describe short articulations of the bow bouncing off the string
Spit	Spit	Short accents, course in timbre, created by saliva forced through a wind instrument
Stac	Staccato	An Italian term used to describe stiff and detached performance
Strum	Strum	Designed to simulate the charatersitic attack of a pick strumming
Sus	Sustained	A sustained phrase
Trem/Trm	Tremolo	An Italian term used to describe rapid repetition of the fundamental
Trl/Trill	Trill	An Italian term used to describe the rapid repetition between the fundamental and a note above or below
Turn	Turn	A small embellishment
UP	Up	Describes the direction of the bow or pick
VB/VIB	Vibrato	An Italian term used to describe the perpetual but expressive change in pitch of the fundamental
VS	Velocity Switch	A program which uses velocity to switch between multiple articulations
Western	Western Feel	feel not necessarily charactersitc of the native musical qualities of the instrument
Wide	Wide	Slower and wider vibrato
WT	Whole-Tone (Full-Tone)	The interval representing one tone in the western twelve tone scale

Quantum Leap RA Program List

Africa

Bells

- Ewe Large Bombshell.nki
- Ewe Medium Bombshell.nki
- Gankokwe Large.nki
- Gankokwe Small.nki

Drums

- 3Ft FromTonFrom.nki
- 5Ft FromTonFrom.nki
- Atsimevu.nki
- Batas.nki
- Berkete.nki
- Dejembe Ensemble.nki
- Ewe Drum Ensemble.nki
- Kidi.nki
- Large Udu.nki
- Log Drums.nki

Pitched Percussion

- Gyil Mallet + Stick.nki
- Gyil Mallet Untuned.nki
- Gyil Mallet.nki
- Gyil Stick.nki
- Kalimba Low Untuned.nki
- Kalimba Low.nki
- Kalmiba Hi Untuned.nki
- Kalmiba Hi.nki
- Kalmiba Hi-Wah Untuned.nki
- Kalmiba Hi-Wah.nki
- Log Drums Melodic.nki

Plucked

- Kora.nki
- Ngoni RR.nki

Shakers and Rattles

- African Dual Wooden.nki
- African Metal.nki
- Axatse.nki
- Ekpiri Shelled BODY.nk
- Ekpiri Shelled Sht.nki

Americas And Australia

Percussion

Berimbau
- Berimbau Basic.nki
- Berimbau Chrom.nki
- Berimbau FX.nki
- Berimbau RR Chrom.nki

Cuban Percussion
- Cuban percussion RR.nki

Plucked

1890 Washburn Guitar
- Washbrn GTR KS C0-D#0.nki
- Washbrn GTR Live.nki
  - Elements
  - Washbrn GTR Finger.nki
  - Washbrn GTR Harm.nki
  - Washbrn GTR Pick RR.nki
  - Washbrn GTR Strum DN.nki
  - Washbrn GTR Strum RR.nki
  - Washbrn GTR Strum UP.nki

American Jaw Harp
- American Jawharp VS.nki
- American Jawharp.nki

Banjo
- Banjo Bridge.nki
- Banjo Neck.nki
- Banjo RR.nki

Dobro
- Dobro KS C0-D1.nki
- Dobro Live 1.nki
- Dobro Live 2.nki
- Dobro Live 3.nki
- Dobro Live 4.nki
- Dobro Live 5.nki
- Dobro Live 6.nki
  - Elements
  - Dobro Mute FX.nki
  - Dobro Open.nki
  - Dobro Slide Fst DN.nki

Dobro Slide Fst UP.nki
Dobro Slide Full DN.nki
Dobro Slide Full UP.nki
Dobro Slide P4th NV.nki
Dobro Slide P4th VIB.nki
Dobro Slide Pwr UP A.nki
Dobro Slide Pwr UP B.nki
Dobro Slide Slw DN.nki
Dobro Slide WT UP Fall.nki
Dobro Slide WT UP.nki
Dobro Slur UP DN.nki
Dobro Trem FX WT UP.nki
Dobro Trem FX.nki

Mandolin
Mandolin KS C0-E0.nki
Mandolin Live 1.nki
Mandolin Live 2.nki
Elements
Mandolin Noises.nki
Mandolin Slide UP.nki
Mandolin Sus RR.nki
Mandolin Trm Fst.nki
Mandolin Trm Slw.nki

Ukelele
Ukelele PK DN.nki
Ukelele PK RR.nki
Ukelele PK UP.nki

Wind

Didjeridoo
Didj Drones A.nki
Didj Drones C#.nki
Didj Drones D.nki
Didj Drones F#.nki
Didj Drones Live.nki
Didj Fx A.nki
Didj Fx C#.nki
Didj Fx D.nki
Didj Fx F#.nki
Grooves
Didj Loop A 100bpm.nki
Didj Loop A 135bpm.nki
Didj Loop A 160bpm.nki
Didj Loop A 165bpm.nki

Didj Loop A 95bpm.nki
Didj Loop C# 100bpm.nki
Didj Loop C# 115bpm.nki
Didj Loop C# 120bpm.nki
Didj Loop C# 125bpm.nki
Didj Loop C# 139bpm.nki
Didj Loop C# 140bpm.nki
Didj Loop C# 160bpm.nki
Didj Loop C# 165bpm.nki
Didj Loop C# 185bpm.nki
Didj Loop C# 201bpm.nki
Didj Loop C# 73bpm.nki
Didj Loop C# 74bpm.nki
Didj Loop C# 80bpm.nki
Didj Loop D 100bpm.nki
Didj Loop D 103bpm.nki
Didj Loop D 122bpm.nki
Didj Loop D 128bpm.nki
Didj Loop D 130bpm.nki
Didj Loop D 150bpm.nki
Didj Loop D 156bpm.nki
Didj Loop D 170bpm.nki
Didj Loop D 77bpm.nki
Didj Loop D 80bpm.nki
Didj Loop D 88bpm.nki
Didj Loop F# 105bpm.nki
Didj Loop F# 115 6-4.nki
Didj Loop F# 115bpm.nki
Didj Loop F# 130bpm.nki
Didj Loop F# 74bpm.nki
Didj Loop F# 80bpm.nki
Didj Loop F# 85bpm.nki
Didj Loop F# 95bpm.nki

First Nations Cedar Flute
FNC Flute KS C0-G#0.nki
FNC Flute Live.nki
Elements
FNC Flute Exp Mldy 1.nki
FNC Flute Exp Mldy 2.nki
FNC Flute Flutter.nki
FNC Flute Leg Non Vib.nki
FNC Flute Leg Vib Exp.nki
FNC Flute Non Vib Exp.nki
FNC Flute Stac.nki
FNC Flute Vib Exp 1.nki

FNC Flute Vib Exp 2 RR.nki
Pan Flute
Pan Flute KS C0-D#0.nki
Elements
Pan Flute Non Vib.nki
Pan Flute NV VB MOD Acc.nki
Pan Flute NV VB MOD.nki
Pan Flute Stac NV RR.nki
Pan Flute Stac.nki
Pan Flute Sus Vib.nki

Europe

Bowed

Gadulka
Gadulka KS C0-F0.nki
Gadulka Live.nki
Elements
Gadulka Bow DN.nki
Gadulka Bow UP.nki
Gadulka Dbl Bow Exp.nki
Gadulka Non Vib 1.nki
Gadulka Non Vib 2.nki
Gadulka Resonance.nki
Gadulka Stac.nki
Gadulka Sus Vib 1.nki
Gadulka Sus Vib 2.nki
Gadulka Trem.nki

Hardanger Fiddle
Hardanger KS C0-G#0.nki
Hardanger Live.nki
Elements
Hardanger 5ths.nki
Hardanger Exp NV.nki
Hardanger Exp Vib.nki
Hardanger Legato NV RR.nki
Hardanger Mldy.nki
Hardanger NV VB MOD.nki
Hardanger Short RR.nki
Hardanger Spic RR.nki
Hardanger Sus Vib.nki
Hardanger Trl HT.nki
Hardanger Trl WT.nki

Hurdy Gurdy
- Hurdy Gurdy KS C0-F0.nki
- Hurdy Gurdy Live.nki
  - Elements
  - Hurdy Gurdy Dbl Hi.nki
  - Hurdy Gurdy Dbl Low.nki
  - Hurdy Gurdy Drone 1.nki
  - Hurdy Gurdy Drone 2.nki
  - Hurdy Gurdy Drone 3.nki
  - Hurdy Gurdy Drone 4.nki
  - Hurdy Gurdy Drone 5.nki
  - Hurdy Gurdy Non Vib f.nki
  - Hurdy Gurdy Non Vib mf.nki
  - Hurdy Gurdy Non Vib mp.nki
  - Hurdy Gurdy Non Vib p.nki
  - Hurdy Gurdy Nov Vib VS.nki
  - Grooves
  - Hurdy Gurdy Groove 01.nki
  - Hurdy Gurdy Groove 02.nki
  - Hurdy Gurdy Groove 03.nki
  - Hurdy Gurdy Groove 04.nki
  - Hurdy Gurdy Groove 05.nki
  - Hurdy Gurdy Groove 06.nki
  - Hurdy Gurdy Groove 07.nki
  - Hurdy Gurdy Groove 08.nki
  - Hurdy Gurdy Groove 09.nki
  - Hurdy Gurdy Groove 10.nki

Percussion

Frame Drum
- Large Frame Drm Basic.nki
- Large Frame Drm FX.nki
- Medium Frame Drm.nki
- Small Frame Drm.nki

Winds & Reeds

Alpenhorn
- Alpenhorn KS C5-G5.nki
  - Elements
  - Alpenhorn Exp Fst.nki
  - Alpenhorn Exp Slw.nki
  - Alpenhorn Exp.nki
  - Alpenhorn Non Vib.nki
  - Alpenhorn Slide Oct DN.nki
  - Alpenhorn Slide Oct UP.nki

- Alpenhorn Stac.nki
- Alpenhorn Sus Vib.nki
- Alpenhorn Sus.nki

Bag Pipe Ensemble
- Bag Pipe Ens VS Untuned.nki
- Bag Pipe Ens VS.nki

Bass Recorder
- Bass Recorder KS C0-D0.nki
  - Elements
  - Bass Recorder Exp Fst.nki
  - Bass Recorder Exp Vib.nki
  - Bass Recorder Sus Vib.nki

Highland Pipes
- Highland Pipes VS.nki

Irish Low Whistle
- IRL Lo Whs KS C0-B0.nki
- IRL Lo Whs Live 1.nki
- IRL Lo Whs Live 2.nki
- IRL Lo Whs Live 3.nki
  - Elements
  - IRL Lo Whs Bnd HT UP.nki
  - IRL Lo Whs Bnd WT UP.nki
  - IRL Lo Whs Exp Mldy 1.nki
  - IRL Lo Whs Exp Mldy 2.nki
  - IRL Lo Whs Exp Mldy 3.nki
  - IRL Lo Whs Exp Mldy 4.nki
  - IRL Lo Whs Exp Mldy 5.nki
  - IRL Lo Whs Irish Vib.nki
  - IRL Lo Whs Non Vib.nki
  - IRL Lo Whs Sht.nki
  - IRL Lo Whs Stac 1.nki
  - IRL Lo Whs Stac 2.nki
  - IRL Lo Whs Stac RR.nki
  - IRL Lo Whs Sus Acc.nki
  - IRL Lo Whs Western Vib.nki

Launeddas
- Launeddas KS C0-D0.nki
- Launeddas Live.nki
  - Elements
  - Launeddas Exp Mldy.nki
  - Launeddas Grace.nki

Launeddas Non Vib.nki

Uilleann Pipes

Uilleann Pipes KS C0-D#0.nki

Uilleann Pipes Live.nki

Elements

Uilleann Drn and Regulators.nki

Uilleann Pipes Vib VS.nki

Uilleann Pipes Exp Bend VS.nki

Uilleann Pipes Basic VS.nki

Far East

Bowed

Erhu

Erhu KS C0-A0.nki

Erhu Live.nki

Elements

Erhu Exp Vib Sft.nki

Erhu Stac DN.nki

Erhu Non Vib Sft.nki

Erhu Non Vib Hrd.nki

Erhu Exp Vib Fst.nki

Erhu Non Vib Med.nki

Erhu Slide DN 2.nki

Erhu Stac RR.nki

Erhu Exp Vib Slw.nki

Erhu Leg.nki

Erhu Slide UP 2.nki

Erhu Trill.nki

Erhu Slide UP 1.nki

Erhu Slide DN 1.nki

Erhu Sus Vib.nki

Erhu Stac UP.nki

Perc

Gamelan

Byeon FX.nki

Byeon Group Tuned.nki

Byeon Group Untuned.nki

Calung Tuned.nki

Calung Untuned.nki

Gamelan Ensemble Tuned.nki

Gamelan Ensemble Untuned.nki

Gamelan Gong & Kajar.nki

- Katana Group Tuned.nki
- Katana Group Untuned.nki
- Pamade Tuned.nki
- Pamade Untuned.nki

Gongs
- Chinese Gong 34 Inches.nki
- Chinese Gong VS.nki
- Thai Gong 23 inches.nki
- Thai Gong VS.nki

Taiko Drums
- Taiko Drums ALL.nki
  - Elements
  - Dragon Taiko 1.nki
  - Dragon Taiko 2.nki
  - Taiko Bass Drum.nki
  - Taiko Big and Bassy.nki
  - Taiko Big Punch.nki
  - Taiko Big Resonance.nki
  - Taiko Deep And Woody.nki
  - Taiko Earthquake.nki
  - Taiko Ensemble.nki
  - Taiko Hands.nki
  - Taiko Light And Bassy.nki
  - Taiko Light Sticks.nki
  - Taiko Medium Room.nki
  - Taiko Medium Sticks.nki
  - Taiko Punchy 2.nki
  - Taiko Punchy.nki
  - Taiko Room ambient.nki
  - Taiko Soft 2x Hits.nki
  - Taiko Thunder.nki

Plucked

Koto
- Koto KS C0-F#0.nki
- Koto Live 1.nki
- Koto Live 2.nki
  - Elements
  - Koto Arp.nki
  - Koto DBL.nki
  - Koto Exp Vib.nki
  - Koto HT UP.nki
  - Koto Non Vib.nki
  - Koto Pick Scrape.nki

- Koto Sus Vib.nki
- Koto Trem.nki

Shamisen
- Shamisen KS C0-E0.nki
- Shamisen Live.nki
  - Elements
  - Shamisen Pick Sft.nki
  - Shamisen Slur Vib Fst.nki
  - Shamisen Slur.nki
  - Shamisen Sus.nki
  - Shamisen Vib Fst.nki
  - Shamisen Vib Sft.nki

Vietnamese Jawharp
- Vietnamese Jawharp RR.nki
- Vietnamese Jawharp.nki

Wind

Dizi
- Dizi KS C0-A#0.nki
- Dizi Live 1.nki
- Dizi Live 2.nki
  - Elements
  - Dizi Exp Vib 1.nki
  - Dizi Exp Vib 2.nki
  - Dizi Flutter.nki
  - Dizi Legato.nki
  - Dizi Mldy 1.nki
  - Dizi Mldy 2.nki
  - Dizi Non-vib.nki
  - Dizi Stac Trill.nki
  - Dizi Sus Vib.nki
  - Dizi Trem.nki
  - Dizi Trill.nki

Rag Dung
- Rag Dung KS C0-D0.nki
  - Elements
  - Rag Dung Non Vib 1.nki
  - Rag Dung Non Vib 2.nki
  - Rag Dung Non Vib 3.nki
  - Rag Dung Non Vib 4.nki
  - Rag Dung NV 4-Way RR.nki
  - Rag Dung Stac 1.nki
  - Rag Dung Stac 2.nki

Rag Dung Stac 3.nki
Rag Dung Stac RR.nki
Rag Dung Sus Vib Slw.nki

Shakuhachi
Shakuhachi KS C0-C#1.nki
Shakuhachi Live.nki
Elements
Shakuhachi Exp NV.nki
Shakuhachi Harm FX.nki
Shakuhachi Leg NV.nki
Shakuhachi Leg Vib.nki
Shakuhachi Lg NV VB MOD.nki
Shakuhachi Mldy 1.nki
Shakuhachi Mldy 2.nki
Shakuhachi Mldy 3.nki
Shakuhachi Mldy 4.nki
Shakuhachi Non Vib.nki
Shakuhachi Ovrblwn 1.nki
Shakuhachi Ovrblwn 2.nki
Shakuhachi Spit 2RR.nki
Shakuhachi Spit 4RR.nki
Shakuhachi Spit 6RR.nki
Shakuhachi Sus Vib.nki
Shakuhachi Trill.nki

India

Bowed

Baritone Violin
Baritone VLN KS C0-A0.nki
Bartione VLN Live 1.nki
Bartione VLN Live 2.nki
Elements
Baritone VLN Exp Vib.nki
Baritone VLN Lyrical.nki
Baritone VLN Marc.nki
Baritone VLN Ornament.nki
Bartione VLN Fls Harm.nki
Bartione VLN Leg Exp.nki
Bartione VLN Leg NV RR.nki
Bartione VLN Spic RR.nki
Bartione VLN Stac RR.nki
Bartione VLN Sus Leg RR.nki

Esraj
- Esraj KS C0-E1.nki
- Esraj Live 1.nki
- Esraj Live 2.nki
  - Elements
  - Esraj Leg 1.nki
  - Esraj Leg 2.nki
  - Esraj Leg 3.nki
  - Esraj Leg 4.nki
  - Esraj SLD 4th DN.nki
  - Esraj SLD 4th UP.nki
  - Esraj SLD HT DN.nki
  - Esraj SLD HT UP fst.nki
  - Esraj SLD HT UP.nki
  - Esraj SLD Maj3rd DN.nki
  - Esraj SLD Maj3rd UP.nki
  - Esraj SLD Min3rd DN.nki
  - Esraj SLD Min3rd UP.nki
  - Esraj SLD WT DN.nki
  - Esraj SLD WT UP.nki
  - Esraj Sus.nki
  - Esraj Trill HT UP.nki
  - Esraj Trill WT DN.nki

Sarangi
- Sarangi KS C0-C#1.nki
- Sarangi Live.nki
- Sarangi Mldy KS C0-A0.nki
- Sarangi RT.nki
  - Elements
  - Sarangi Bend DN.nki
  - Sarangi Bend UP.nki
  - Sarangi Leg Vib 1.nki
  - Sarangi Leg Vib 2.nki
  - Sarangi Mldy 01.nki
  - Sarangi Mldy 02.nki
  - Sarangi Mldy 03.nki
  - Sarangi Mldy 04.nki
  - Sarangi Mldy 05.nki
  - Sarangi Mldy 06.nki
  - Sarangi Mldy 07.nki
  - Sarangi Mldy 08.nki
  - Sarangi Mldy 09.nki
  - Sarangi Mldy 10.nki
  - Sarangi Mldy 11.nki
  - Sarangi Non Vib 1.nki

Sarangi Non Vib 2.nki
Sarangi Non Vib 3.nki
Sarangi Non Vib 4.nki
Sarangi Non Vib 5.nki
Sarangi Non Vib 6.nki
Sarangi Non Vib 7.nki
Sarangi Trem.nki
Sarangi Vib.nki

Perc

Tablas

Tabla & Baya.nki
Tabla Funky.nki
Tabla Only.nki
Tablas Basic.nki

Plucked

Sitar

Sitar KS C0-G0.nki
Sitar Live 1.nki
Sitar Live 2.nki
Elements
Sitar Bends.nki
Sitar Drone.nki
Sitar Drop FX.nki
Sitar FX 1.nki
Sitar Fx 2.nki
Sitar FX 3.nki
Sitar Gliss.nki
Sitar Slide HT UP.nki
Sitar Slide WT UP.nki
Sitar Sus DN.nki
Sitar Sus RR.nki
Sitar Sus UP.nki
Sitar Trem.nki
Sitar Trill HT.nki
Sitar Trill WT.nki

Tambura

Tambura 4-Way RR.nki

Wind

Bansuri

Bansuri KS C0-B0.nki
Bansuri Live 1.nki
Bansuri Live 2.nki

Elements
Bansuri Bnd Lng.nki
Bansuri Bnd WT UP.nki
Bansuri Exp Harm 1.nki
Bansuri Exp Harm 2.nki
Bansuri Flutter Exp.nki
Bansuri Flutter.nki
Bansuri Harm FX.nki
Bansuri Leg.nki
Bansuri Short Spit 1.nki
Bansuri Spit Lng 1.nki
Bansuri Spit Lng 1+2 RR.nki
Bansuri Spit Lng 2.nki
Bansuri Spit Sht 1+2 RR.nki
Bansuri Spit Sht 2.nki
Bansuri Sus Non Vib.nki
Bansuri Sus Vib.nki
Bansuri Turn.nki

Mid East & Turkish Empire

Bowed

Mid East Fiddle
Mideast FDL KS C0-A0.nki
MidEast FDL Live 1.nki
Elements
MidEast FDL Exp sFz.nki
MidEast FDL Mldy Slw.nki
MidEast FDL Non Vib F.nki
MidEast FDL Non Vib M.nki
MidEast FDL Non Vib P.nki
MidEast FDL Non Vib VS.nki
MidEast FDL Slur DN 1.nki
MidEast FDL Slur DN 2.nki
MidEast FDL Slur UP 1.nki
MidEast FDL Slur UP 2.nki
MidEast FDL Sus Vib.nki
MidEast FDL Turn 1.nki
MidEast FDL Turn 2.nki

Mid East String Section
MidEast Strings BIG 1.nki
MidEast Strings BIG 2.nki
MidEast Strings BIG 3.nki
MidEast Strings KS C0-F0.nki

- MidEast Strings Live 1.nki
- MidEast Strings Live 2.nki
  - Elements
  - MidEast Strings Exp Vib.nki
  - MidEast Strings Leg.nki
  - MidEast Strings Slur DN.nki
  - MidEast Strings Slur UP.nki
  - MidEast Strings Sus Vib.nki
  - MidEast Strings Turn.nki

Yalli Tambur
- Yalli Tambur Live 1.nki
- Yalli Tambur Live 2.nki
- Yalli Tambur KS C0-A0.nki
  - Elements
  - Yalli Tambur Drone.nki
  - Yalli Tambur Exp Non Vib.nki
  - Yalli Tambur Exp Vib.nki
  - Yalli Tambur Exp.nki
  - Yalli Tambur Grace HT.nki
  - Yalli Tambur Leg Fst.nki
  - Yalli Tambur Leg Sht.nki
  - Yalli Tambur Leg.nki
  - Yalli Tambur Mldy HT.nki
  - Yalli Tambur SLD FX.nki
  - Yalli Tambur SLD UP HT.nki
  - Yalli Tambur SLD UP WT.nki
  - Yalli Tambur Trill HT.nki
  - Yalli Tambur Trill WT.nki

Hammered Plucked

Oud
- Oud KS C0-F#0.nki
- Oud Live 1.nki
- Oud Live 2.nki
- Oud Live 3.nki
- Oud Live 4.nki
- Oud Live 5.nki
  - Elements
  - Oud Non Vib RR.nki
  - Oud SLD DN.nki
  - Oud SLD UP.nki
  - Oud Trem Vib.nki
  - Oud Trem.nki
  - Oud Vib RR.nki
  - Oud Wide Vib.nki

Santoor
- Santoor KS C0-G#0.nki
- Santoor Live 1.nki
- Santoor Live 2.nki
  - Elements
  - Santoor Exp HT Hrd.nki
  - Santoor Exp HT Sft.nki
  - Santoor Exp Lng.nki
  - Santoor Exp sFz.nki
  - Santoor Exp Sht.nki
  - Santoor Exp WT Hrd.nki
  - Santoor Exp WT Soft.nki
  - Santoor Mute.nki
  - Santoor sFz Exp.nki
  - Santoor Sus 1.nki
  - Santoor Sus 2.nki
  - Santoor Sus RR.nki
  - Santoor Trem.nki

Percussion

Qandahar Dumbek
- Qandahar Dumbek.nki

Wind

Armenian Duduk
- A Duduk KS C0-C#1.nki
- A Duduk Live 1.nki
- A Duduk Live 2.nki
- A Duduk Mldy KS 1 C0-C2.nki
- A Duduk Mldy KS 2 C0-B0.nki
  - Elements
  - A Duduk Drone Exp Vib.nki
  - A Duduk Drone Non Vib.nki
  - A Duduk Drone Sus Sft.nki
  - A Duduk Drone Sus Vib.nki
  - A Duduk Exp Lng HT UP.nki
  - A Duduk Exp Mldy 1.nki
  - A Duduk Exp Mldy 2.nki
  - A Duduk Exp Mldy 3.nki
  - A Duduk Exp Sht HT UP 1.nki
  - A Duduk Exp Sht HT UP 2.nki
  - A Duduk Exp Vib Grace.nki
  - A Duduk Exp Vib SHT 1.nki
  - A Duduk Exp Vib SHT 2.nki
  - A Duduk Exp Vib SHT 3.nki

A Duduk Exp Vib.nki
A Duduk Exp WT UP.nki
A Duduk Non Vib 1.nki
A Duduk Non Vib 2.nki
A Duduk Sus Vib 1.nki
Melodies
A Duduk Mldy 01.nki
A Duduk Mldy 02.nki
A Duduk Mldy 03.nki
A Duduk Mldy 04.nki
A Duduk Mldy 05.nki
A Duduk Mldy 06.nki
A Duduk Mldy 07.nki
A Duduk Mldy 08.nki
A Duduk Mldy 09.nki
A Duduk Mldy 10.nki
A Duduk Mldy 11.nki
A Duduk Mldy 12.nki
A Duduk Mldy 13.nki
A Duduk Mldy 14.nki
A Duduk Mldy 15.nki
A Duduk Mldy 16.nki
A Duduk Mldy 17.nki
A Duduk Mldy 18.nki
A Duduk Mldy 19.nki
A Duduk Mldy 20.nki
A Duduk Mldy 21.nki
A Duduk Mldy 22.nki
A Duduk Mldy 23.nki
A Duduk Mldy 24.nki
A Duduk Mldy 25.nki
A Duduk Mldy 26.nki
A Duduk Mldy 27.nki
A Duduk Mldy 28.nki
A Duduk Mldy 29.nki
A Duduk Mldy 30.nki
A Duduk Mldy 31.nki
A Duduk Mldy 32.nki
A Duduk Mldy 33.nki
A Duduk Mldy 34.nki
A Duduk Mldy 35.nki
A Duduk Mldy 36.nki
A Duduk Mldy 37.nki

Bulgarian Duduk
- B Duduk KS C0-C#1.nki
- B Duduk Live 1.nki
- B Duduk Live 2.nki
  - Elements
  - B Duduk Exp Slw Trill.nki
  - B Duduk Exp Vib Fst 2.nki
  - B Duduk Exp Vib Fst.nki
  - B Duduk Exp Vib SLW.nki
  - B Duduk Exp Vib.nki
  - B Duduk Fst Bnd Up.nki
  - B Duduk Leg.nki
  - B Duduk Ornament.nki
  - B Duduk Sht HT UP.nki
  - B Duduk Stac RR.nki
  - B Duduk Sus Non Vib.nki
  - B Duduk Sus Vib Slw.nki
  - B Duduk Vib Bnd Up 1.nki
  - B Duduk Vib Bnd Up 2.nki
  - B Duduk Vib Bnd Up 3.nki

Ney Flute
- Ney Flute Live 2.nki
- Ney Flute Live 1.nki
- Ney Flute KS C0-A0.nki
  - Elements
  - Ney Flute Exp Mldy.nki
  - Ney Flute Exp VIb.nki
  - Ney Flute Grace 1.nki
  - Ney Flute Grace 2.nki
  - Ney Flute Grace 3.nki
  - Ney Flute Leg.nki
  - Ney Flute Non Vib.nki
  - Ney Flute sFz.nki
  - Ney Flute Sus Slur.nki
  - Ney Flute Sus Vib Fall.nki
  - Ney Flute Sus Vib.nki

Turkish Duduk
- T Duduk KS C0-D1.nki
- T Duduk Live 2.nki
- T Duduk Live 1.nki
  - Elements
  - T Duduk Bnd Up Fst 1.nki

- T Duduk Bnd Up Fst 2.nki
- T Duduk Bnd Up Fst 3.nki
- T Duduk Bnd Up Slw.nki
- T Duduk Exp Mldy 1.nki
- T Duduk Exp Mldy 2.nki
- T Duduk Exp Mldy 3.nki
- T Duduk Exp Vib Slw.nki
- T Duduk Leg Exp 1.nki
- T Duduk Leg Exp 2.nki
- T Duduk Slur DN.nki
- T Duduk Slur Up.nki
- T Duduk Stac 2RR.nki
- T Duduk Stac 3RR.nki
- T Duduk Sus Bnd DN.nki
- T Duduk Vib Bnd UP.nki

Zourna

- Zourna KS C0-A#0.nki
- Zourna Live.nki
  - Elements
  - Zourna Exp Mldy 1.nki
  - Zourna Exp Mldy 2.nki
  - Zourna Exp Mldy 3.nki
  - Zourna Exp Mldy 4.nki
  - Zourna Exp.nki
  - Zourna Grace.nki
  - Zourna Leg 1.nki
  - Zourna Leg 2.nki
  - Zourna Non Vib.nki
  - Zourna Sus Vib RR.nki
  - Zourna Trill.nki

Quantum Leap RA - Keyswitch and Live Programs Ingredients List			
Americas and Australia			
Instrument	Keyswitch/Live	Program	Order - Velocity Layer
Washburn GTR			
	Washburn GTR ‘KS C0-D#0’		
		Washburn GTR ‘Finger’	C0
		Washburn GTR ‘Pick RR’	C#0
		Washburn GTR ‘Strum RR’	D0
		Washburn GTR ‘Harm’	D#0
	Washburn Guitar ‘Live’		
	(VS + RR)	Washburn GTR ‘Pick RR’	1
		Washburn GTR ‘Slide’	2
Dobro			
	Dobro ‘KS C0-D1’		
		Dobro ‘Open’	C0
		Dobro ‘Slide Slw DN’	C#0
		Dobro ‘Slide P4th UP NVB	D0
		Dobro ‘Slide P4th Up Vib’	D#0
		Dobro ‘Slur UP DN’	E0
		Dobro ‘Slide WT UP Fall’	F0
		Dobro ‘Slide WT UP’	F#0
		Dobro ‘Trem FX WT UP’	G0
		Dobro ‘Trem FX’	G#0
		Dobro ‘Slide Fst DN’	A0
		Dobro ‘Slide Fst UP’	A#0
		Dobro ‘Slide PWR UP A’	B0
		Dobro ‘Slide PWR UP B’	C1
		Dobro ‘Slide Full DN’	C#1
		Dobro ‘Slide Full UP’	D1
		Dobro ‘Mute FX’	Always
	Dobro ‘Live 1’		
	(VS)	Dobro ‘Open’	1
		Dobro ‘Slide P4th UP NVB	2
	Dobro ‘Live 2’		
	(VS)	Dobro ‘Open’	1
		Dobro ‘Slide WT UP Fall’	2
	Dobro ‘Live 3’		
	(VS)	Dobro ‘Open’	1
		Dobro ‘Slide WT UP’	2
	Dobro ‘Live 4’		
	(VS)	Dobro ‘Open’	1
		Dobro ‘Slur DN UP	2

Americas and Australia Cont'd			
Instrument	Keyswitch/Live	Program	Order - Velocity Layer
Dobro Cont'd	Dobro 'Live 5'		
	(VS)	Dobro 'Open'	1
		Dobro 'Trem FX'	2
	Dobro 'Live 6'		
	(VS)	Dobro 'Open'	1
		Dobro 'Trem FX WT UP'	2
Mandolin			
	Mandolin 'KS C0-E0'		
		Mandolin 'Sus RR'	C0
		Mandolin 'Slide UP'	C#0
		Mandolin 'Trm Slw'	D0
		Mandolin 'Trm Fst'	D#0
		Mandolin Live 2	E0
	Mandolin 'Live 1'		
	(VS + RR)	Mandolin 'Sus RR'	1
		Mandolin 'Trm Slw'	2
	Mandolin 'Live 2'		
	(VS + RR)	Mandolin 'Sus RR'	1
		Mandolin 'Slide UP'	2
Didjeridoo			
	Didj 'Drones Live'	Selected Drones A, C#, D F#	
FNC Flute			
	FNC Flute 'KS C0-G#0'		
		FNC 'Leg Vib Exp'	C0
		FNC 'Leg Non Vib'	C#0
		FNC 'Leg Exp 2 RR'	D0
		FNC 'Non Vib Exp'	D#0
		FNC 'Exp Vib 1'	E0
		FNC 'Stac'	F0
		FNC 'Exp Melody 1'	F#0
		FNC 'Exp Melody 2'	G0
		FNC 'Flutter'	G#0
	FNC Flute 'Live'		
	(VS)	FNC 'Leg Vib Exp'	1
		FNC 'Exp Melody 2'	2
Pan Flute			
	Pan Flute 'KS C0-D#0'		
		Pan Flute 'Sus Vib'	C0
		Pan Flute 'Non Vib'	C#0
		Pan Flute 'NV VB MOD'	D0
		Pan Flute 'Stac RR'	D#0

Europe			
Instrument	Keyswitch/Live	Program	Order - Velocity Layer
Gadulka			
	Gadulka ‘KS C0-F0’		
		Gadulka ‘Sus Vib 1’	C0
		Gadulka ‘Non Vib 1+2 RR’	C#0
		Gadulka ‘DBL Bow Exp’	D0
		Gadulka ‘Bown DN+UP RR’	D#0
		Gadulka ‘Trem’	E0
		Gadulka ‘Stac’	F0
	Gadulka ‘Live’		
	(VS)	Gadulka ‘Leg Vib 1’	C0
		Gadulka ‘DBL Bow Exp’	C#0
Hardanger Fiddle			
	Hardanger ‘KS C0-G#0’		
	(RR)	Hardanger ‘Sus Vib’	C0
		Hardanger ‘Leg Non Vib RR’	C#0
		Hardanger ‘Exp Vib’	D0
		Hardanger ‘Exp Non Vib’	D#0
		Hardanger ‘Short RR’	E0
		Hardanger ‘Spic RR’	F0
		Hardanger ‘Melody’	F#0
		Hardanger ‘Trill HT’	G0
		Hardanger ‘Trill WT’	G#0
	Hardanger ‘Live’		
		Hardanger ‘Exp Vib’	1
		Hardanger ‘Sus Vib’	1
Hurdy Gurdy			
	Hurdy Gurdy ‘KS C0-F0’		
		Hurdy Gurdy ‘Non Vib VS’	C0
		Hurdy Gurdy ‘DBL Low’	C#0
		Hurdy Gurdy ‘DBL Hi’	D0
		Hurdy Gurdy ‘Drone 1’	D#0
		Hurdy Gurdy ‘Drone 3’	E0
		Hurdy Gurdy ‘Drone 5’	F0
	Hurdy Gurdy ‘Live’		
		Hurdy Gurdy ‘Drone 1’	1
		Hurdy Gurdy ‘Drone 2’	2
		Hurdy Gurdy ‘Drone 3’	3
		Hurdy Gurdy ‘Drone 4’	4
		Hurdy Gurdy ‘Drone 5’	5
		Hurdy Gurdy ‘DBL Low’	1 to 3
		Hurdy Gurdy ‘DBL Hi’	4 to 5

Europe Cont'd			
Instrument	Keyswitch/Live	Program	Order - Velocity Layer
Alpenhorn			
	Alpenhorn 'KS C5-G5'		
		Alpenhorn 'Sus Vib'	C5
		Alpenhorn 'Sus'	C#5
		Alpenhorn 'Non Vib'	D5
		Alpenhorn 'Exp'	D#5
		Alpenhorn 'Exp Fst'	E5
		Alpenhorn 'Slide Oct DN'	F5
		Alpenhorn 'Slide Oct UP'	F#5
		Alpenhorn 'Stac'	G5
Bass Recorder	Bass Recorder 'KS C0-D0'		
		Bass Recorder 'Sus Vib'	C0
		Bass Recorder 'Exp Vib Fst'	C#0
		Bass Recorder 'Exp Vib'	D0
Irish Low Whistle			
	IRL Lo Whs 'KS C0-B0'		
		IRL Lo Whs 'Irish Vib'	C0
		IRL Lo Whs 'Western Vib'	C#0
		IRL Lo Whs 'Non Vib'	D0
		IRL Lo Whs 'Bnd WT UP'	D#0
		IRL Lo Whs 'Bnd HT UP'	E0
		IRL Lo Whs 'Short'	F0
		IRL Lo Whs 'Stac 3RR'	F#0
		IRL Lo Whs 'Exp Melody 1'	G0
		IRL Lo Whs 'Exp Melody 2'	G#0
		IRL Lo Whs 'Exp Melody 3'	A0
		IRL Lo Whs 'Exp Melody 4'	A#0
		IRL Lo Whs 'Exp Melody 5'	B0
	IRL Lo Whs Live 1		
	(VS)	IRL Lo Whs 'Sus Vib Fst'	1
		IRL Lo Whs 'Bnd WT UP'	2
	IRL Lo Whs Live 2		
	(VS)	IRL Lo Whs 'Sus Vib Fst'	1
		IRL Lo Whs 'Exp Mldy 1'	2
	IRL Lo Whs Live 3		
	(VS)	IRL Lo Whs 'Sus Vib Fst'	1
		IRL Lo Whs 'Exp Mldy 5'	2

Europe Cont'd			
Instrument	Keyswitch/Live	Program	Order - Velocity Layer
Launeddas			
	Launnedas 'KS C0-D0'		
		Launneddas 'Non Vib'	C0
		Launneddas 'Grace'	C#0
		Launneddas 'Exp Mldy'	D0
	Launnedas 'Live'		
	(VS)	Launneddas 'Non Vib'	1
		Launneddas 'Grace'	2
		Launneddas 'Exp Mldy'	3
Uilleann Pipes			
	Uilleann Pipes 'KS C0-D#0'		
		Uilleann Pipes 'Basic VS'	C0
		Uilleann Pipes 'Vib VS'	C#0
		Uilleann Pipes 'Exp Bend VS'	D0
		Uilleann Pipes 'Live'	D#0
	Uilleann Pipes 'Live'		
	(VS)	Uilleann Pipes 'Basic VS'	1
		Uillian Pipes 'Exp Bnd VS'	2
Far East			
Erhu			
	Erhu 'KS C0-A0'		
		Erhu 'Sus Vib'	C0
		Erhu 'Exp Vib Sft'	C#0
		Erhu 'Exp Vib Slw'	D0
		Erhu 'Exp Vib Fst'	D#0
		Erhu 'Leg'	E0
		Erhu 'Non Vib Hrd'	F0
		Erhu 'Slide Dn 1'	F#0
		Erhu 'Slide Up 2'	G0
		Erhu 'Stac RR'	G#0
		Erhu 'Trill'	A0
	Erhu 'Live'		
	(VS)	Erhu 'Exp Vib Sft'	1
		Erhu 'Sus Vib'	2
		Erhu 'Slide UP 1'	3

Far East Cont'd			
Instrument	Keyswitch/Live	Program	Order - Velocity Layer
Koto			
	Koto 'KS C0-F#0'		
		Koto 'Sus Vib'	C0
		Koto 'Exp Vib'	C#0
		Koto 'Non Vib'	D0
		Koto 'HT UP'	D#0
		Koto 'Pick Scrape'	E0
		Koto 'DBL Hit'	F0
		Koto 'Trem'	F#0
	Koto 'Live 1'		
	(VS)	Koto 'Non Vib'	1
		Koto 'Sus Vib'	2
		Koto 'HT UP'	3
		Koto 'DBL Hit'	4
	Koto 'Live 2'		
	(VS)	Koto 'Non Vib'	1
		Koto 'Sus Vib'	2
		Koto 'HT UP'	3
		Koto 'Pick Scrape'	4
Shamisen			
	Shamisen 'KS C0-E0'		
		Shamisen 'Pick Soft'	C0
		Shamisen 'Sus'	C#0
		Shamisen 'Vib Fst'	D0
		Shamisen 'Sft Vib'	D#0
		Shamisen 'Slur'	E0
	Shamisen 'Live'		
	(VS)	Shamisen 'Pick Soft'	1
		Shamisen 'Sus'	2
		Shamisen 'Slide Up'	3
Dizi			
	Dizi 'KS C0-A#0'		
		Dizi 'Sus Vib'	C0
		Dizi 'Exp Vib 1'	C#0
		Dizi 'Exp Vib 2'	D0
		Dizi 'Legato'	D#0
		Dizi 'Non Vib'	E0
		Dizi 'Stac Trill'	F0
		Dizi 'Trill'	F#0
		Dizi 'Trem'	G0
		Dizi 'Flutter'	G#0
		Dizi 'Melody 1'	A0
		Dizi 'Melody 2'	A#0

Far East Cont'd			
Instrument	Keyswitch/Live	Program	Order - Velocity Layer
Dizi			
	Dizi 'Live 1'		
	(All)	Dizi 'Trem'	All
		Dizi 'Legato'	All
	Dizi 'Live 2'		
	(VS)	Dizi 'Sus Vib'	1
		Dizi 'Sus Vib'	2
		Dizi 'Stac Trill'	2
Rag Dung			
	Rag Dung 'KS C0-D0'		
		Rag Dung 'Non Vib 1,2,3'	C0
		Rag Dung 'Sus Vib Slw'	C#0
		Rag Dung 'Sus Vib 1,2,3'	D0
Shakuhachi			
	Shakuhachi 'KS C0-C#1'		
		Shakuhachi 'Sus Vib'	C0
		Shakuhachi 'Exp Vib'	C#0
		Shakuhachi 'Leg Vib'	D0
		Shakuhachi 'Leg Non Vib'	D#0
		Shakuhachi 'Non Vib'	E0
		Shakhuachi 'Overblown 2'	F0
		Shakuhachi 'Overblown 1'	F#0
		Shakuhachi 'Spit 4RR'	G0
		Shakuhachi 'Harm FX'	G#0
		Shakuhachi 'Trill'	A0
		Shakuhachi 'Mldy 1'	A#0
		Shakuhachi 'Mldy 2'	B0
		Shakuhachi 'Mldy 3'	C1
		Shakuhachi 'Mldy 4'	C#1
	Shakuhachi 'Live'		
	(VS + RR)	Shakuhachi 'Sus Vib'	1
		Shakuhachi 'Exp Vib'	2
		Shakuhachi 'Leg Vib'	3
		Shakuhachi 'Spit 4RR'	All

India			
Instrument	Keyswitch/Live	Program	Order - Velocity Layer
Baritone Violin			
	Baritone VLN ‘KS C0-A0’		
		Baritone VLN ‘Leg NV RR’	C0
		Baritone VLN ‘Sus Leg RR’	C#0
		Baritone VLN ‘Leg Exp’	D0
		Baritone VLN ‘Lyrical’	D#0
		Baritone VLN ‘Exp Vib’	E0
		Baritone VLN ‘Fls Harm’	F0
		Baritone VLN ‘Marc’	F#0
		Baritone VLN ‘Stac RR’	G0
		Baritone VLN ‘Spic RR’	G#0
		Baritone VLN ‘Ornament’	A0
	Baritone VLN ‘Live 1’		
	(RR)	Baritone VLN ‘Exp Vib’	1
		Baritone VLN ‘Sus Leg DN’	2
	Baritone VLN ‘Live 2’		
	(VS)	Baritone VLN ‘Sus Leg DN’	1
		Baritone VLN ‘Ornament’	2
Esraj	Esraj ‘KS C0-E1’		
		Esraj ‘Sus’	C0
		Esraj ‘Leg Fst’	C#0
		Esraj ‘Leg 2’	D0
		Esraj ‘Leg 3’	D#0
		Esraj ‘Leg 4’	E0
		Esraj ‘Slide HT UP’	F0
		Esraj ‘Slide HT DN’	F#0
		Esraj ‘Slide WT UP’	G0
		Esraj ‘Slide WT DN’	G#0
		Esraj ‘Slide Min3rd UP’	A0
		Esraj ‘Slide Min3rd DN’	A#0
		Esraj ‘Slide Maj3rd UP’	B0
		Esraj ‘Slide Maj3rd DN’	C1
		Esraj ‘Slide P4th UP’	C#1
		Esraj ‘Slide P4th DN’	D1
		Esraj ‘Trill HT UP’	D#1
		Esraj ‘Trill HT DN’	E1
	Esraj ‘Live 1’		
	(RR)	Esraj ‘Sus’	1
		Esraj ‘Leg 1’	2
		Esraj ‘Leg 3’	3
		Esraj ‘Leg 4’	4
		Esraj ‘Leg 2’	5

India Cont'd			
Instrument	Keyswitch/Live	Program	Order - Velocity Layer
Esraj			
	Esraj 'Live 2'		
	(VS)	Esraj 'Leg Fst'	1
		Esraj 'Sus'	2
		Esraj 'Slide HT UP Fst'	3
		Esraj 'Trill HT UP'	4
Sarangi			
	Sarangi 'KS C0-C#1'		
		Sarangi 'Vib'	C0
		Sarangi 'Leg Vib 1'	C#0
		Sarangi 'Leg Vib 2'	D0
		Sarangi 'Non Vib 2'	D#0
		Sarangi 'Bend DN'	E0
		Sarangi 'Bend UP'	F0
		Sarangi 'Trem'	F#0
		Sarangi 'Mldy 1'	G0
		Sarangi 'Mldy 2'	G#0
		Sarangi 'Mldy 3'	A0
		Sarangi 'Mldy 4'	A#0
		Sarangi 'Mldy 6'	B0
		Sarangi 'Mldy 7'	C1
		Sarangi 'Mldy 8'	C#1
	Sarangi 'Mldy KS C0-A0'		
		Sarangi 'Mldy 1'	C0
		Sarangi 'Mldy 2'	C#0
		Sarangi 'Mldy 3'	D0
		Sarangi 'Mldy 4'	D#0
		Sarangi 'Mldy 6'	E0
		Sarangi 'Mldy 7'	F0
		Sarangi 'Mldy 8'	F#0
		Sarangi 'Mldy 9'	G0
		Sarangi 'Mldy 10'	G#0
		Sarangi 'Mldy 11'	A0
	Sarangi 'Live'		
	(VS)	Sarangi 'Vib'	1
		Sarangi 'Bend UP'	2

India Cont'd			
Instrument	Keyswitch/Live	Program	Order - Velocity Layer
Sitar			
	Sitar 'KS C0-A#0'		
		Sitar 'Sus RR'	C0
		Sitar 'Slide HT UP'	C#0
		Sitar 'Slude WT UP'	D0
		Sitar 'FX 3'	D#0
		Sitar 'FX 1	E0
		Sitar 'Trem'	F0
		Sitar 'Trill HT'	F#0
		Sitar 'Trill WT'	G0
	Sitar 'Live 1'		
	(VS + RR)	Sitar 'Trem'	1
		Sitar 'Bends'	2
		Sitar 'Drone'	All
		Sitar 'Sus RR'	All
	Sitar 'Live 2'		
	(VS + RR)	Sitar 'Bends'	1
		Sitar 'Trill HT'	2
		Sitar 'Drone'	All
		Sitar 'Sus DN'	All
Bansuri			
	Bansuri 'KS C0-B0'		
		Bansuri 'Sus Vib'	C0
		Bansuri 'Leg'	C#0
		Bansuri 'Sus Non Vib'	D0
		Bansuri 'Exp Harm 1'	D#0
		Bansuri 'Exp Harm FX'	E0
		Bansuri 'Bnd Lng'	F0
		Bansuri 'Bnd WT UP'	F#0
		Bansuri 'Flutter Exp'	G0
		Bansuri 'Flutter'	G#0
		Bansuri 'Spit LNG RR'	A0
		Bansuri 'Spit SHT RR'	A#0
		Bansuri 'Turn'	B0
	Bansuri 'Live 1'		
	(VS)	Bansuri 'Leg'	1
		Bansuri 'Sus Vib'	2
		Bansuri 'Exp Harm FX'	3
	Bansuri 'Live 2'		
	(VS)	Bansuri 'Leg'	1
		Bansuri 'Sus Vib'	2
		Bansuri 'Spit SHT 1'	2

Mid East & Turkish Empire			
Instrument	Keyswitch/Live	Program	Order - Velocity Layer
MidEast Fiddle			
	MidEast FDL ‘KS C0-A0’		
		MidEast FDL ‘Sus Vib’	C0
		MidEast FDL ‘Non Vib’	C#0
		MidEast FDL ‘Exp sFz’	D0
		MidEast FDL ‘Slur UP 1’	D#0
		MidEast FDL ‘Slur UP 2’	E0
		MidEast FDL ‘Slur DN 1’	F0
		MidEast FDL ‘Slur DN 2’	F#0
		MidEast FDL ‘Turn 1’	G0
		MidEast FDL ‘Turn 2’	G#0
		MidEast FDL ‘Mldy Slw’	A0
	MidEast FDL ‘Live’		
	(VS)	MidEast FDL ‘Sus Vib’	1
		MidEast FDL ‘Slur HT UP’	2
MidEast Strings			
	Mideast Strings ‘Big 1’		
		MidEast Strings ‘Sus Vib’	All
		MidEast Strings ‘Leg’	All
	Mideast Strings ‘Big 2’		
		MidEast Strings ‘Exp Vib’	All
		MidEast Strings ‘Leg’	All
	Mideast Strings ‘Big 3’		
		MidEast Strings ‘Exp Vib’	All
		MidEast Strings ‘Sus Vib’	All
	MidEast Strings ‘KS C0-F0’		
		MidEast Strings ‘Sus Vib’	C0
		MidEast Strings ‘Exp Vib’	C#0
		MidEast Strings ‘Leg’	D0
		MidEast Strings ‘Slur UP’	D#0
		MidEast Strings ‘Slur DN’	E0
		MidEast Strings ‘Turn’	F0
	MidEast Strings ‘Live 1’		
	(VS)	MidEast Strings ‘Sus Vib’	1
		MidEast Strings ‘Leg’	1
		MidEast Strings ‘Slur UP’	2
	MidEast Strings ‘Live 2’		
	(VS)	MidEast Strings ‘Sus Vib’	1
		MidEast Strings ‘Leg’	1
		MidEast Strings ‘Turn’	2

Mid East & Turkish Empire Cont'd			
Instrument	Keyswitch/Live	Program	Order - Velocity Layer
Yalli Tambur			
	Yalli Tambur 'KS C0-A0'		
		Yalli Tambur 'Leg'	C0
		Yalli Tambur 'Leg Fst'	C#0
		Yalli Tambur 'Exp'	D0
		Yalli Tambur 'Exp Vib'	D#0
		Yalli Tambur 'Grace HT'	E0
		Yalli Tambur 'Slide WT UP'	F0
		Yalli Tambur 'Trill HT'	F#0
		Yalli Tambur 'Trill WT'	G0
		Yalli Tambur 'Mldy HT'	G#0
		Yalli Tambur 'Slide FX'	A0
	Yalli Tambur 'Live 1'		
	(VS)	Yalli Tambur 'Exp Vib'	1
		Yalli Tambur 'Trill HT'	2
		Yalli Tambur 'Drone'	All
	Yalli Tambur 'Live 2'		
	(VS)	Yalli Tambur 'Leg'	1
		Yalli Tambur 'Trill HT'	2
		Yalli Tambur 'Drone'	All
Oud			
	Oud 'KS C0-F#0'		
		Oud 'Non Vib RR'	C0
		Oud 'Vib RR'	C#0
		Oud 'Wide Vib'	D0
		Oud 'Slide UP'	D#0
		Oud 'Slide DN'	E0
		Oud 'Trem'	F0
		Oud 'Trem Vib'	F#0
	Oud 'Live 1'		
	(VS + RR)	Oud 'Non Vib DN'	1
		Oud 'Non Vib RR'	2
		Oud 'Vib RR'	2
		Oud 'Wide Vib'	3
	Oud 'Live 2'		
	(VS + RR)	Oud 'Non Vib DN'	1
		Oud 'Non Vib RR'	2
		Oud 'Vib RR'	2
		Oud 'Slide UP'	3
	Oud 'Live 3'		
	(VS + RR)	Oud 'Non Vib DN'	1
		Oud 'Non Vib RR'	2
		Oud 'Vib RR'	2
		Oud 'Slide DN'	3

Mid East & Turkish Empire Cont'd			
Instrument	Keyswitch/Live	Program	Order - Velocity Layer
Oud			
	Oud 'Live 4'		
	(VS + RR)	Oud 'Non Vib DN'	1
		Oud 'Non Vib RR'	2
		Oud 'Vib RR'	2
		Oud 'Trem Vib'	3
	Oud 'Live 5'		
	(VS + RR)	Oud 'Vib RR'	All
		Oud 'Trem'	2
Santoor			
	Santoor 'KS C0-G0'		
		Santoor 'Sus RR'	C0
		Santoor 'Mute'	C#0
		Santoor 'sFz Exp'	D0
		Santoor 'Exp SHT'	D#0
		Santoor 'Exp Lng'	E0
		Santoor 'Exp sFz'	F0
		Santoor 'Exp WT Hrd'	F#0
		Santoor 'Exp WT Sft'	G0
		Santoor 'Trem'	G#0
Santoor			
	Santoor 'Live 1'		
	(RR)	Santoor 'Sus RR'	All
		Santoor 'Exp SHT'	All
	Santoor 'Live 2'		
	(RR)	Santoor 'Sus RR'	All
		Santoor 'Trem'	All
A Duduk			
	A Duduk 'KS C0-C#1'		
		A Duduk 'Sus Vib 1'	C0
		A Duduk 'Non Vib 1'	C#0
		A Duduk 'Non Vib 2'	D0
		A Duduk 'Exp Vib'	D#0
		A Duduk 'Exp Vib SHT 1'	E0
		A Duduk 'Exp Vib SHT 2'	F0
		A Duduk 'Exp Vib SHT 3'	F#0
		A Duduk 'Exp Vib Grace'	G0
		A Duduk 'Exp SHT HT UP'	G#0
		A Duduk 'Exp Lng HT UP'	A0
		A Duduk 'Exp WT UP'	A#0
		A Duduk 'Exp Melody 1'	B0
		A Duduk 'Exp Melody 2'	C1
		A Duduk 'Exp Melody 3'	C#1

Mid East & Turkish Empire Cont'd			
Instrument	Keyswitch/Live	Program	Order - Velocity Layer
A Duduk			
	A Duduk 'Live 1'		
	(VS)	A Duduk 'Exp Vib'	1
		A Duduk 'Exp SHT HT UP'	2
	A Duduk 'Live 2'		
	(VS)	A Duduk 'Exp WT UP'	1
		A Duduk 'Mldy 1'	2
	A Duduk 'Mldy KS 1 C0-C2'		
		A Duduk 'Mldy 1'	C0
		A Duduk 'Mldy 2'	C#0
		A Duduk 'Mldy 3'	D0
		A Duduk 'Mldy 4'	D#0
		A Duduk 'Mldy 5'	E0
		A Duduk 'Mldy 6'	F0
		A Duduk 'Mldy 7'	F#0
		A Duduk 'Mldy 8'	G0
		A Duduk 'Mldy 9'	G#0
		A Duduk 'Mldy 10'	A0
		A Duduk 'Mldy 11'	A#0
		A Duduk 'Mldy 12'	B0
		A Duduk 'Mldy 13'	C1
		A Duduk 'Mldy 14'	C#1
		A Duduk 'Mldy 15'	D1
		A Duduk 'Mldy 16'	D#1
		A Duduk 'Mldy 17'	E1
		A Duduk 'Mldy 18'	F1
		A Duduk 'Mldy 19'	F#1
		A Duduk 'Mldy 20'	G1
		A Duduk 'Mldy 21'	G#1
		A Duduk 'Mldy 22'	A1
		A Duduk 'Mldy 23'	A#1
		A Duduk 'Mldy 24'	B1
		A Duduk 'Mldy 25'	C2

Mid East & Turkish Empire Cont'd			
Instrument	Keyswitch/Live	Program	Order - Velocity Layer
A Duduk			
	A Duduk 'Mldy KS 2 C0-B0'		
		A Duduk 'Mldy 26'	C0
		A Duduk 'Mldy 27'	C#0
		A Duduk 'Mldy 28'	D0
		A Duduk 'Mldy 29'	D#0
		A Duduk 'Mldy 30'	E0
		A Duduk 'Mldy 31'	F0
		A Duduk 'Mldy 32'	F#0
		A Duduk 'Mldy 33'	G0
		A Duduk 'Mldy 34'	G#0
		A Duduk 'Mldy 35'	A0
		A Duduk 'Mldy 36'	A#0
		A Duduk 'Mldy 37'	B0
B Duduk			
	B Duduk 'KS C0-C#1'		
		B Duduk 'Sus Vib Slw'	C0
		B Duduk 'Sus Non Vib'	C#0
		B Duduk 'Leg'	D0
		B Duduk 'Exp Vib Slw'	D#0
		B Duduk 'Exp Vib Fst'	E0
		B Duduk 'Exp Vib'	F0
		B Duduk 'Stac'	F#0
		B Duduk 'Fst Bnd UP'	G0
		B Duduk 'SHT HT UP'	G#0
		B Duduk 'Exp Slw Trill'	A0
		B Duduk 'Vib Bnd UP 1'	A#0
		B Duduk 'Vib Bnd UP 2'	B0
		B Duduk 'Vib Bnd 3'	C1
		B Duduk 'Ornament	C#1
	B Duduk 'Live 1'		
	(VS)	B Duduk 'Exp Vib Fst'	1
		B Duduk 'Exp Vib'	2
	B Duduk 'Live 2'		
	(VS)		
		B Duduk 'Exp Bnd UP 2'	1
		B Duduk 'Exp Slw Trill'	2

Mid East & Turkish Empire Cont'd			
Instrument	Keyswitch/Live	Program	Order - Velocity Layer
Ney Flute			
	Ney Flute 'KS C0-A0'		
		Ney Flute 'Sus Vib'	C0
		Ney Flute 'Exp Vib'	C#0
		Ney Flute 'Leg'	D0
		Ney Flute 'Non Vib'	D#0
		Ney Flute 'sFz'	E0
		Ney Flute 'Sus Vib Fall'	F0
		Ney Flute 'Grace 1'	F#0
		Ney Flute 'Grace 2'	G0
		Ney Flute 'Grace 3'	G#0
		Ney Flute 'Exp Mldy'	A0
	Ney Flute 'Live 1'		
	(VS)	Ney Flute 'Sus Vib'	1
		Ney Flute 'Leg'	2
	Ney Flute 'Live 2'		
	(VS)	Ney Flute 'Sus Vib'	1
		Ney Flute 'Grace 1'	2
T Duduk			
	T Duduk 'KS C0-D1'		
		T Duduk 'Vib Bnd UP'	C0
		T Duduk 'Leg Exp 2'	C#0
		T Duduk 'Exp Vib Slw'	D0
		T Duduk 'Leg Exp 1'	D#0
		T Duduk 'Bnd UP Fst 3'	E0
		T Duduk 'Bnd UP Fst 2'	F0
		T Duduk 'Sus Bnd DN'	F#0
		T Duduk 'Slur DN'	G0
		T Duduk 'Slur UP'	G#0
		T Duduk 'Stac RR'	A0
		T Duduk 'Exp Mldy 1'	A#0
		T Duduk 'Exp Mldy 2'	B0
		T Duduk 'Exp Mldy 3'	C1
		T Duduk 'Bnd UP Slw'	C#1
		T Duduk 'Bnd UP Fst 1'	D1
	T Duduk 'Live 1'		
	(VS)	T Duduk 'Leg Exp 2'	1
		T Duduk 'Vib Bnd 2'	2
		T Duduk 'Bnd UP Fst 3'	3
	T Duduk 'Live 2'		
	(VS)	T Duduk 'Leg Exp 2'	1
		T Duduk 'Vib Bnd UP'	2
		T Duduk 'Exp Mldy 1'	3

Mid East & Turkish Empire Cont'd			
Instrument	Keyswitch/Live	Program	Order - Velocity Layer
Zourna			
	Zourna 'KS C0-A#0'		
		Zourna 'Sus Vib RR'	C0
		Zourna 'Non Vib'	C#0
		Zourna 'Exp'	D0
		Zourna 'Leg 1'	D#0
		Zourna 'Leg 2'	E0
		Zourna 'Grace'	F0
		Zourna 'Trill'	F#0
		Zourna 'Exp Mldy 1'	G0
		Zourna 'Exp Mldy 2'	G#0
		Zourna 'Exp Mldy 3'	A0
		Zourna 'Exp Mldy 4'	A#0
	Zourna 'Live'		
	(VS + RR)	Zourna 'Leg'	1
		Zourna 'Sus Vib RR'	2
		Zourna 'Trill'	3

QUANTUM LEAP RA

THE DEFINITIVE RARE AND ETHNIC VIRTUAL INSTRUMENT

EASTWEST

VIRTUAL INSTRUMENT

INCLUDES SPECIAL VERSION OF NATIVE INSTRUMENTS KOMPAKT SAMPLER

NI Mac Win