

# Journeys

## A Penny for your Whistle

After a night of heavy Guinness consumption, this mournful tin whistle might be all the sonic assault your tender head can take.

## Allegorical String

String instruments are amongst the oldest known to man. They transcend time and culture-each of which imparts its own distinctive technological stamp, whether that be bow, bridge, fret, hammer, or wheel. Here in the 21st century, we've created our own technological stamp-the string instrument that has no strings. With String Studio, we can create entirely new string instruments; modeled allegories to imagined physical strings. Who knew that mathematics-the same mathematics that helps you balance your checkbook-could create sounds like this?

## Antiquated Machinery

To invoke the spirit of a vintage medieval hurdy-gurdy, simply hold one or two notes with your left hand (this simulates turning the crank on a hurdy-gurdy, which stimulates the drone strings). Then, play your melody with the right hand, keeping both in the near-vicinity of middle-C. A period costume is optional but, if you go that route, something moth-eaten and threadbare will evoke the broken-down feel of this old machine.

## Aomori Prefecture

Aomori Prefecture is at the northern most tip of Japan's main island and, every year, Aomori City hosts the Nebuta Festival from August 2-7. Gigantic floats and costumed dancers parade down the street, fueled by the pulsing thunder of flatbed trucks filled with Taiko drummers. Alas, we've never had the opportunity to attend but, thanks to String Studio and this energetic Taiko patch, we can play in a 2-octave range below middle-C and wistfully imagine how grand it must be.

## **Appalachian Heartthrob**

If you frequently play traditional 19th century Appalachian music atop the Great Smokey Mountain range, you probably own several finely-crafted, hourglass-shaped dulcimers—each punctuated with numerous heart-shaped sound holes. If, like us, your studio is full of keyboards and computers, you'll be happy to know that this patch will help you fit in at the next jam session down in the "holler." For you city slickers, that's mountain speak for "valley." Alas, we don't know the mountain term for "geek playing a laptop at a folk festival."

## **Ascot's White Piano**

Before the 1980's gave us those awful, bloated "power ballads," we had sweet, gentle ballads. The best of these featured introspective, minimal accompaniment—the kind you might play on a white piano in an empty white room in an 18th century mansion near Ascot in Berkshire, England.

## **Backwards Barrett**

"Um," we hear you say, "this patch doesn't sound backwards." Precisely. You see, Syd Barrett (for whom this patch was named) used so much backward guitar in his songs that, well, when you play Barrett backwards, it actually sounds forwards. Chicanery aside, this is actually an exceptionally bluesy patch—solidly reminiscent of the electric guitar without being a blatant copy. Think bluesy. Play rhythmically. Have an attitude.

## **Bamboo Shoots**

Strings can be formed from metal, nylon, and (in less aware times) cat guts. But why should we limit our materials? What about, oh, say... bamboo!? OK, so bamboo isn't blessed with infinite sustain and it takes a firm strike to set it in motion. But it has a nice hollow, percussive, woody quality that sits nicely in a mix.

## Behind the Vielle

Medieval fiddles came in all shapes and sizes and were precursors to the modern violin. Early version began to appear around the 10th century and, by the 13th or 14th century, they began to more closely resemble the instruments we know today. The French vielle is one of the most common and popular of these medieval fiddles and now, thanks to String Studio, you can get behind your very own virtual vielle.

## Bit of a Banjo

This patch is designed to put one in mind of a banjo; albeit a banjo with a loose head. Get those fingers nice and limber 'cause a good banjo requires some mighty rapid pickin'. So, if you want to take String Studio to your next hootenanny, you best have flying fingers... and this patch.

## Blue Bawu

A fresh take on an ancient instrument. Though the Chinese bawu resembles a flute, it's actually a reed instrument. Requiring a healthy set of lungs to keep the reed vibrating, the single-octave instrument has a haunting and melancholy sound. In its String Studio incarnation, the tiny reed is replaced by a vibrating string. This not only eliminates the need for healthy lungs, it also extends the instrument's playable range to about 4-octaves while maintaining its mournful quality.

## Buchlastic Bubbling

It's not really all that "bubbly," and it doesn't sound all that much like a Buchla... but then what, exactly, does a Buchla sound like? Often they're a bit too esoterically weird for traditional compositions, so this patch merely distills the squeaky, freaky bits into a nice little rhythm pattern. In other words, it's not a Buchla-it's merely "buchlastic." And, if you're wondering what can possibly be considered "ethnic" about the sound of a Buchla, consider the fact that "outer space" is more foreign to us humans than Asia, Africa, Europe, South America, or any other earth-bound continent. Aliens have a culture too. So make like an alien (or a Buchla player) and experiment with different arpeggiator patterns and Sync settings to alter the sound.

## **Buzzing Bridge**

This patch features a couple of sonic attributes popular in other cultures that, essentially, have been eliminated in western string instruments: the buzzing bridge and the sympathetic strings. While this particular patch can certainly flavor a song on its own, it was actually designed to be doubled with other String Studio patches. Essentially, if you have a cleanly plucked or hammered sound and you want to "send it on an eastern journey," simply instantiate a second instance of String Studio and load up this patch. Your formerly pristine string synth will now have that buzzing, droning quality.

## **Byrd Watcher**

An emulation of a Rickenbacker 360 12-string electric guitar. This instrument's legendary status was cemented in the 1960's, where it was featured prominently in many of the era's biggest songs and was, for the most part, the definitive sound for The Byrds.

## **Calder Mobile**

Alexander Calder was an American artist and sculptor who is most remembered for his monstrously large, metallic mobiles-the bulk of which are still on public display in and around public buildings throughout North America. If you ever get a chance to whack one of these things, they make a satisfyingly resonant metallic sound. Each of the mobile's dangling, oddly damped bits of curiously shaped metal has its own characteristic sound, which makes one wonder if a Calder mobile can be coaxed into duty as a musical instrument. We happen to know, for fact, that this is indeed possible. We saw it in the early 1980's at a John Cage concert. Four musicians armed with hammers would run about the poor Calder, striking it mercilessly to send it spinning about wildly whilst making an awful cacophonous racket. The musicians would then retreat, check their musical scores, grab a new compliment of hammers, and go about pulverizing the Calder once again. Now, thanks to this patch, you can appreciate the sonic delights of a Calder concerto.

## **Can Dead Dance?**

In the 1980's, 4AD recording artists Dead Can Dance introduced their medieval influences to an entire generation of disenfranchised youth seeking an alternative to George Michael, Wang Chung, and Tiffany. In the early 21st century, Applied Acoustics introduced their string modeling program to an entire generation of disenfranchised youth seeking an alternative to static string samples. Sometimes the sounds of progress are rooted in the distant past. In the case of this santur patch, we would surmise those roots extend back about 2000 years.

## **Can Do Kayageum**

Inspired by the Korean kayageum (a silk stringed instrument descending from the zheng), this eminently playable patch belongs in the collection of every discerning synthesist with a taste for the exotic.

## **Chamberlin's New Chamber**

This is a thoroughly modern and imagined sound but, like most imagined sounds, has roots in reality. In this case, the hauntingly atonal and hissing beauty of the Mellotron and Chamberlin provide the inspiration for the patch. If Harry Chamberlin had invented his instrument in the 21st century, rather than 1946, perhaps it would have sounded like this? Or, perhaps, he would simply have used String Studio... but then there would have been no inspiration for the design of this patch. And, thus, we'll leave you to ponder "the butterfly effect" as you finger your new Chamberlin.

## **Cinema Wistfulness**

We've all heard this sound. Those of us, at least, who have experienced even a single art film. Let's set the scene: the protagonist, experiencing a low point in his life, wistfully reflects on a previous moment of happiness. You, the underpaid and unappreciated film composer must provide a suitably elegiac score. Tickle an ivory or two with this patch, paying particular attention to the highest regions of your keyboard. In no time, you'll have completed the cue, and will be ready to move on to the scene where the protagonist overcomes adversity and experiences a heroic redemption.

## **Clockworks Concerto**

This patch envisions a walk through an old European village at noon; not the buskers nor street performers, but the churches. All manner of bells and chimes ring in the hour with a cacophony of unmatched tunes. Your mission, should you choose to accept it, is to create your own cacophonous symphony of clockworks sounds using this surprisingly delicate patch.

## **Coral Riff**

The Coral Electric Sitar was one of the defining sounds of the late 1960's. This sound approximates the Coral's trippy timbres, particularly if performed with judicious quantities of pitch bend. We've heard tale of people who tried to play chords on a Coral and proclaimed the instrument "useless." We assume you won't make the same mistake with this patch. It is, after all, a riffer's instrument, not a strummer's.

## **Cymulated Cymbalom**

A classic, resonating hammered dulcimer sound that's wrapped in ambience. It achieves its hammer bounce through use of a digital delay, rather than using the hammer exciter. This makes the hammer "drops" equally spaced, rather than accelerated (as would be the case with a real under-damped hammer). Since this particular sound is meant to bathe in undamped resonances and reverberations, this technique prevents the sound from becoming dense and unmanageable.

## **Daisy Theorbo**

Daisy Rock is a company that makes electric, acoustic, and bass guitars specifically for girls. This patch ponders the musical question, "what if Daisy Rock expanded into... oh, let's say medieval, renaissance, and baroque instruments?" This patch, we imagine, emulates the Daisy Rock version of the theorbo (a 'bass' lute first developed in the 16th century). The original instrument was invented to accompany singers, so why not a version for the singer/songwriter?

## **Dig In**

One of the most pleasing qualities of electromechanical pianos is the way they "bite" when you really dig into the notes. This mellow, Rhodes-inspired patch swirls in smooth seduction when played at low velocities, but barks a bit when played sharply. A wonderfully playable patch for keyboardist who relish their weighted action key beds.

## **East of the Qanat**

Qanats are irrigation tunnels that tap subterranean water sources and funnel it to towns and villages. If you put your ear up to this particular qanat, you'll be able to hear music, indigenous to the water's eastern source, piping through the tunnel.

## **EBow-lution**

If you own a guitar, there's a good chance you have an EBow buried somewhere in the bottom of your guitar case. Toss a 9-volt battery into this handheld device, turn it on, and place it over your guitar string-it'll generate a small electromagnetic field that sets your guitar string in motion. Unlike a pick, the EBow results in slow attacks and infinite sustain. Don't you wish you had something similar for your keyboard? Now you do... it's a virtual EBow for your virtual string synth.

## **Edo Reminiscence**

Japan's Edo period, established in 1603 by the first shogun, Tokugawa Ieyusa, lasted for 264 years-until 1867, when the 15th and final Tokugawa shogun officially relinquished his power, thus ushering in the Meiji era. This mini history lesson serves as a sound cue for this patch. If you're bidding on a film score whose protagonist is described as a "shogun," you'll know this patch can help you land that job.

## Fairlight Phantom

A house or a Fairlight? That was the question facing many musicians when the Fairlight CMI Series II was released in 1980. For a mere US\$60,000, this 8-bit, 30 kHz, 64 kB sampler could be yours. More than a few of us guys with our Minimoogs rocking precariously atop our arch-topped Rhodes pianos became financial wizards-learning all about the time value of money and, exactly, how long it would take to pay that thing off. In 1980, the prime interest rate was a whopping 20%. So (assuming we could even find someone to give us a prime rate loan) our calculations indicated we would be paying \$1000/month for 30 years to finance that Fairlight. This means that a \$60,000 instrument would actually cost us \$360,000 over 30 years. Astoundingly, here in 2007 (when this patch was designed), we would still have 3 years remaining before that Series II was all ours. If you were one of the folks who actually did finance a Fairlight, you might not want to know that we have successfully recreated its grainy, heavily-aliased sound using String Studio-a plugin retailing for less than 1/2 of 1% of the cost of a Fairlight. Sorry.

## Flowering Power

Neo-psychedelic pop tunes all showcased a few "mind blowing" sonic attributes. Drastic equalization and tremolo were two of the more prominent ones. This guitar patch possesses both, but neither to such an extreme that the patch loses its versatility. It starts off cleanly then, if held for a couple of seconds, it blooms-"flowering" into a psychedelic tremolo. It's never as ostentatious as Tommy James' crimson colored clover garden but, rather, is more akin to a turquoise-tinted oregano patch.

## Flutey Lutey

Take a look at any performance photograph of Bob Dylan before he went electric, then note his requisite folk-era instrumentation: a guitar slung over the shoulder and a harmonica affixed to a contraption around the neck. Now imagine replacing the guitar with a lute and the harmonica with a flute. That's what we did when we created this patch, which has an edgy, lute-like attack and a mellow, flute-like decay. Oh, and since Dylan went electric way back at the Newport Folk Festival in 1965, we decided to electrify our own patch. As such, arpeggios will bring out this patch's nuances much better than two-fisted chords.

## **Foiled Again**

Pianos aren't the only instruments that can be "prepared." This patch imagines a hakkebord with bits of foil wrapped about its strings and wedged across the bridge. This produces a satisfyingly organic 'buzz' when hammered, and makes an ideal alternative to more standard dulcimer sounds.

## **Fractured Heart**

There are a million ways to break a heart, and as many ways to imply that break sonically. From the sound of this oddly resonant bit of fractured bowing, we'd guess this particular heart was pulverized.

## **Fretful Frets**

In general, harps don't have frets. But what if they did? And what if your constant practicing had worn those frets right down to the fretboard? Your harp strings would surely buzz... much like this instrument's. Sure, you could have it re-fretted, but then your fretted harp would sound like everyone else's fretted harp. And where's the soul in that? Vive la différence!

## **Gig at Castle Dracul**

At Castle Dracul, the shadows don't quite follow the figures and the resonances don't quite follow the Romanian fiddle player. It's all a bit unsettling but, at least, the wine is good.

## **Glissandobro**

This sound's intended purpose is to create glissandos. It combines harp-like elements with attack characteristics more common to a bell tree. Though glissandos are its designed intent, the oxymoronic mechanically organic nature of the sound also yields itself to the creation of interesting arpeggiations and ostinato accompaniments.

## Greasy Frets

Musicians can be such practical jokers. Short-sheeting your band mates is one thing, but when you start putting motor oil on their guitar strings... well, that's just cruel. This patch emulates the effect of such a practical joke. The greasy frets make it downright impossible for the guitarist to fret a note cleanly, and his fingers slip and slide over the strings.

Fortunately, we also emulated the effect of a cleaning rag. To wipe the strings dry, simply press the damper pedal as you play, and the slippery sound is eliminated. We suggest that, for maximum playability, you keep the damper pedal down, then release it whenever you want to trigger the "slip" effect on a note or two.

## Guzheng Height

Modeled on a modern Chinese guzheng, this patch will achieve even greater authenticity if you think like a guzhengist. So get acquainted with your pitch bend wheel, and don't forget the importance of the occasional glissando.

## Ha Long Bay

One day, whilst surfing the web and shirking our sound design responsibilities, we stumbled upon a series of photographs of Ha Long Bay in Vietnam. Like most good shirkers, we dug a little deeper-learning more about Ha Long, finding more photos and, in general, fantasizing about visiting yet another place that we'll probably never have the time nor money to visit. All the while, we were mindlessly twiddling String Studio parameters and, when we awoke from our fantasies about traveling to Ha Long Bay, we discovered that we'd programmed a String Studio patch to take us there... sonically, of course. But, it's a start. Don't forget to wiggle the pitch bend and mod wheels.

## Half Speed

Sometimes a bass guitar isn't bass enough. Old-fashioned tape jockeys used to solve this problem by recording the bass with the tape running at double speed. Then, they would cut the speed in half (dropping the sound of the bass by an octave), and record the other instrumentation. This patch replicates the half-speed bass sound with its elongated attack cycle and muffled highs.

## **Hard Rock Hackbrett**

The sound of a dampened German hammered dulcimer with humbucking pickups running through a vintage Fender Bassman amp... we think.

## **Harmonic Resonance**

Who needs frets? When you touch a string at a precise mathematical interval, it'll emit a beautiful harmonic tone-void of the fundamental and pure as snow. And, speaking of snow, when it's that cold the icicles around you resonate at odd frequencies, which impart a crystalline quality to the sound... an effect we emulate here at no extra charge.

## **Heavy Metal Tar**

Answering the musical question, "if a high school auto shop class got together to make a Turkish tar out of spare automotive parts, what would it sound like." Surprisingly musical—at least for a Volkswagen Beetle.

## **Horning In**

This lonely brass player seems to have wandered into the wrong acoustical modeling program. Captured by a pack of killer kanuns, he's now held captive and forced to blow his haunting tunes in the court of King String.

## **Hubcap Hat**

It turns out that Volkswagen Beetle are good for more than making Heavy Metal Tars. Their hubcaps, when pounded into the proper shape, make dandy high hats. We've heard tale of some folks even using VW's for transportation!

## **Hula Helper**

Copious use of the sustain pedal and a languid legato technique will introduce a little bit of a lap steel sound and a smidgeon of synth attitude into this patch. The effects are subtle, but build over time. Perfect for infusing a bit of luau flair into your tired old rave.

## **Instant Stravinsky**

In the two octaves centered around middle-C, just try to play something nice and sweet. We dare you. Within 20 seconds, if you don't start playing rapid, random notes like a frantically possessed violinist, you're not "getting" this patch. And we don't even want to know what hideous modifications Igor made to his violin to achieve that aggressively synthetic sound in the lower octaves...

## **Junoesque**

Back in the day, whilst trying to make our Juno synths sound like strings, we often took a few detours along the way-generating sounds that, though vaguely string-like, were of a purely synthetic nature. Load up this patch, pound out a few chords, and take the express train all the way back to the 1980's. Warning: May induce mullet-nostalgia. Avoid use of grooming aids.

## **Kanun Song**

There are more variances in the sound produced by each kanun than there are in Minimoogs. But, in the same way you can't play decent Prog Rock without a Minimoog, you can't play good Turkish music without a kanun, so here's your passport to the Ottoman Empire. Oh, and in spite of the bad pun, this patch has nothing to do with the music of Kurt Weill.

## **Karplus Tunnel Syndrome**

In 1983, Kevin Karplus and Alex Strong published a method for modeling the sound of a plucked string using a burst of white noise and a variation of comb filtering. In 2005, Applied Acoustics released String Studio, an entire real-time virtual synthesizer dedicated to creating the sound of plucked, hammered, and bowed strings. The sound you hear is that of your old, off-line Karplus-Strong algorithm going down the tubes...

## **Kickin' the L100**

This patch was designed to emulate the sound of Keith Emerson kicking the reverb springs in his Hammond L100 organ during a performance of America with The Nice. Unless you actually are Keith Emerson, you might think this patch has limited appeal, but there's actually a fair amount of sonic diversity spread across the entire multi-octave range of this patch. So, if your name is "Trent," or if you're called upon to play the Einsturzende Neubauten catalog for your local High School's spring prom, you'll find there's something here for you, too.

## **Killer Keluri**

This bamboo, free-reed mouth instrument was once a popular accompaniment to ritual headhunting ceremonies in northwestern Borneo. The disappearance of these rituals has, consequently, had an adverse effect on this instrument's popularity and, today, only a handful of aging tribal elders still play them. Since these elders don't do traveling shows, we could find only a couple recordings on which to base this patch. Perhaps the keluri virtuosos would scoff at our attempt but, really, it's more of an approximation than a recreation. And we doubt seriously if any such virtuosos will actually ever get their hands on String Studio. Stick close to middle-C if you want that "authentic" keluri sound. Avant-gardists are free to wander further afield.

## **Knobs and Whatnot**

In the 1970's, synthesizers had knobs. Young, long-haired rockers would tweak these knobs endlessly in an effort to make their analog gear sound somewhat akin to a stringed instrument. Today, we have splendidly realistic mouse-driven soft synths, like String Studio. Old, long-haired rockers now tweak these pixels endlessly in an effort to make them sound somewhat akin to their old analog synths. We'll leave you to ponder the irony as you play this patch.

## **Laika Balalaika**

In 1957, Laika, a stray dog found wandering the streets of Moscow, became the first living creature to orbit the earth. Sort of. Laika unfortunately died several hours into her flight. Like Laika, the balalaika is also of Russian origin. Featuring 3-strings and a triangular body, we're not sure whether one has ever actually been in orbit. If it has, it would likely have returned to earth sounding somewhat like this.

## **Learytron**

If Timothy Leary had been an instrument designer and not just a psychologist, there's every reason to expect his invention would sound remarkably like this patch. With such an instrument, the notion of "turn on, tune in, drop out" would have an aural realization, and today's instrument collectors would have another object sitting proudly amongst their Mellotrons and sitars.

## **Lucky Freeman**

What if Bob Moog had never been born? What, then, would Keith Emerson have played for his solo at the end of Lucky Man? What if string synthesizer designer, Ken Freeman, had stepped in to fill the Moogless void? Would Emerson's solo have been played on this?

## **Lucy's Harpsichord**

If the name doesn't give away the inspiration for this patch, playing a simple triad should suffice.

## **Lynch's iPod**

We borrowed David Lynch's iPod when he wasn't looking, and used the opportunity to perform a careful spectral analysis of its contents. So, if you want to write something that'll end up on David Lynch's iPod, here's the patch to use.

## **Meddler's Bass**

This patch is a simulation of Roger Waters' bass sound in "One of These Days," which is the opening track on Pink Floyd's "Meddle" album. Actually, Waters used many variations of this sound through the 1970's. Have a listen to "Have a Cigar" from "Wish You Were Here," or "Run Like Hell" from "The Wall."

## **Mello Yellotron**

You know it. You love it. It's a recreation of the finest in low-fidelity: The Mellotron. Of course, Mellotrons will ostensibly sound like whatever instrument is recorded on the tapes loaded into it. But given enough use and neglect, most every Mellotron tape eventually devolves into this sound.

## **Mic'n the Mechanics**

In spite of an instrument designer's best intentions, it's often the mechanical and electrical defects that give an instrument its warmth and soul. For example, can you imagine a Hammond organ without its key click? This so-called defect was exploited and used to delicious effect by generations of Hammond players. Alas, that description has nothing to do with this patch, which is actually the sound made by recording an electric piano with microphones jammed into the works. By recording the instrument with closely-mounted microphones and mixing it with the instrument's output jack, the hammer, damper and mechanical noises are more prominent and pronounced. Delectable defects abound in this trippy electric piano patch.

## **Midsummer Night**

Puck and his playful guild of faeries are all over this otherwise pastoral and classically-inspired patch. Use it to add a little magic and mischief to your own compositions.

## **Moody Ouds**

If you're into the kind of patch where you hold down one finger, and an entire dance floor hit emerges from your speakers, this isn't the patch for you. Of course, you own String Studio, so this can't possibly describe you-you're a musician. As such, this patch benefits from a bit of crafty technique. There are a lot of nuances that come into play based on how hard you hit the notes and, more importantly, how staccato you play them. In fact, this instrument has the most character if played using a very soft staccato touch. Perhaps the best way to come to grips with this patch is to play a minor-3rd trill-varying velocity and note duration. Once you get down with the trill and all the subtle sonic interactions, throw in a few root notes with the left hand, and modulate up and down the keyboard. Yeah, that's it. Now you're playing like a moody oudist. Isn't that more fun than just pressing a note and holding it?

## **Moroccan Road Trip**

This tinny, resonant dulcimer can transport you to Morocco faster and cheaper than any airliner. Use your fingers like hammers if you really want to "nail" the sound.

## **Mystic 60's**

When you hop into your time machine and travel back to the late 1960's to play an Eastern-tinged and extended space jam, you'll want to make sure to bring along this patch. How you explain your laptop computer to your band mates is up to you. Dripping with vaguely inharmonic sympathetic string resonances and featuring a slight electric sitar attack, this patch practically spells "m-e-l-l-o-w."

## **Ominous Abbey**

If you hear this bowed sound emerging from the depths of some forgotten catacombs beneath an abbey that, heretofore, was assumed abandoned... run away. Quickly.

## One Degree Kelvin

This patch models the sound of a frozen, ice-encrusted, crystalized zither as it might sound when played at one degree Kelvin. We may have taken a bit of extra creative license here since, we suspect, any attempt to pluck a zither at a single degree above absolute zero would likely result in a shattered zither. By the way, you can also use String Studio to recreate the sound of an instrument played at zero degrees Kelvin. Simply instantiate the plugin, then play nothing. Theoretically, no sound can occur at absolute zero, which means String Studio also makes a wonderful virtual John Cage plugin. Now, aren't you glad you bought this plugin?

## Opium Den

Opium interferes with brain activity, slowing the thought process considerably... at least that's what we've been told. As a result, the brain loses the ability to respond to note attacks, hearing only the sound of the drone strings. This sound is meant to replicate music as it's heard by the inebriated residents of an opium den. It's also great to double with other, less resonant, String Studio patches to create full-bodied instruments with drone strings (like sarods and sitars).

## Ossuary

Ossuaries don't, by nature, make any sound. If they did, then zombie films would be documentaries, not flights of fancy. But sweep those decrepit old creatures right out of your mind, because this patch imagines a more spiritual ossuary; filled with benevolent spirits who wrap you in shrouds of quiet contemplation. It emulates the sound of music that has passed on... much like the folks in the ossuary.

## Overblown

Does is sound exactly like a ney? Nay. But it is an inspiring and adaptable, woody, overblown flute sound that's suitable for both solo and ensemble performances.

## **Parallel Time**

In Dark Shadows, a supernatural soap opera popular in the late-60's and early-70's, the character of Barnabas Collins, a vampire, was often able to transcend time. In one story line, Barnabas went neither forward nor backward in time, but sideways. That is, he entered 'parallel time,' in which all the people he knew were living entirely different lives because, in this time band, they had made different decisions in life. This patch explores what rock music might have sounded like if the violinist, and not the guitarist, had been at the forefront of rock 'n roll. Shredding would sound wholly different and yet, somehow, similar... probably a lot like this patch.

## **Persnickety Piezo**

The sort of over-stimulated, model-on-the-edge-of-instability sound that could only come from String Studio. Fragile as fine crystal and just as beautiful.

## **Piamba**

It's a marimba! No... it's a piano! No... it's... a... um... a piamba! Yeah, that's it. And, thanks to the magic of String Studio virtualization technology, it takes up far less room than the actual monstrosity would require.

## **Piped In From Budapest**

Sometimes we look at the word "string" in "String Studio" and see it as a challenge. "Who are you," we ask, "to tell us what kind of sounds to make?" Of course, it's only a plug in and can't answer. Perfect. So with our dander up and a frown upon our face, we occasionally strive to coax other sounds out of String Studio. Case in point is this nice pipe organ sound.

## **Pistol Pasta**

This patch blends a synthetic jaw harp on the left hand with a guitar sound on the right to invoke the feeling of an Ennio Morricone spaghetti western score.

## **Polka Dot**

Boldly dotted clothing was certainly nothing new, but that didn't prevent it from becoming all-the-rage in Britain during the late 19th Century. Since this dotted clothing was frequently worn to festive outings, and since polka music was also popular, the pattern was dubbed, "polka dots." And what, exactly, does this useless bit of trivia have to do with this particular patch? Nothing, actually. Except that, by reading the word "polka" over-and-over again, you're now subliminally inclined to play this patch in a polka-like manner, which is exactly what it was designed for.

## **Psaltery Seductress**

There's a kind of seductive allure to the music of the middle ages. The simplicity of the arrangements, the grinding of the hurdy-gurdy and, of course, the sultry sounds of the bowed psaltery, as lovingly imitated by this patch.

## **Pulmonary Excitation**

In some regions, a paucity of horses resulted in a shortage of bows. With no bows to draw across their strings, early instrument designers improvised by placing strings inside their neys, which they then excited by blowing across them. Actually, we completely fabricated this story, but that didn't stop us from creating a physical model of the instrument.

## **Quarkist**

In the past, music was made by setting reeds, strings, or other mechanical objects into pleasingly tuned vibrations. In the present, it's made by mathematical models of mechanical excitations, which then set speaker cones into vibration. In the future, music will once again result from the direct stimulation of vibrating objects, only the objects will be quarks—those little subatomic particles yet to be seen, but theorized into existence. Quarks will have a pure, pleasing tone when excited with an exact electrical charge, but will not be capable of generating much bass. Consequently, the popularity of quark music (as performed by 'quarkists') will give the world new dance steps with names like "The Tremble," and "The Quiver." Really. We wouldn't make this stuff up.

## **Rich Man's Baby**

There's a psychedelic noodle that runs throughout Baby You're a Rich Man, from The Beatles' Magical Mystery Tour. That sound emanates from a tawdry little instrument called the Clavioline, which is most famous for wheezing out the organ solo in Del Shannon's Runaway. Obviously, that sound and the one in Baby You're a Rich Man are worlds apart. The goal for this patch, therefore, is not to emulate a Clavioline but to give you a flexible and adaptable sound for creating your own psychedelic noodles. Take your cue from The Beatles to figure out how best to employ it.

## **Richter Bass**

The Richter Scale was developed in 1935 for the purpose of measuring the intensity of seismic activity. Even if they don't live in California, Japan, or another quake-prone region, most musicians have experienced the rumbling intensity of a rocker's bass guitar amp. This patch models it all: the bass, the amp, and the rattling sound of anything not nailed down.

## **Rick & Roll Bass**

In the mid 1970's, if you were in a band, you were "glam." And if you played bass, it was a Rickenbacker 4000 series bass, run hot enough to melt the tubes in your Ampeg bass head. Odds are, you also have some pretty silly promotional photos hidden in a drawer...

## **Road Weary Wurli**

If it sounds too good to be true, it probably is. So, if you surf over to eBay and see a Wurlitzer electric piano, described as "slightly used" and going for a \$99 "Buy it now" price, odds are pretty good that it'll sound like this. We're still not sure where that rattling sound is coming from, but you can thank Applied Acoustics for saving you \$99 and including this sound in your bank.

## **Rose Colored**

Truth be told (and we have no reason not to), we've got a real "thing" for the hurdy-gurdy. Did we just say the hurdy-gurdy? Actually, there's no such thing as a definitive hurdy-gurdy. They make 'em with large wheels. They make 'em with small wheels. They make 'em with string-adjusted buzzing bridges, wedge-adjusted buzzing bridges, and no buzzing bridges at all. You can get 'em with two drone strings; three drone strings; even as many as five drone strings. Sometimes there's only one melody string, sometimes there are two... or three. They can be chromatic or diatonic. They can be box-shaped, pear-shaped, guitar-shaped, or lute-like. In other words, modeling the hurdy-gurdy is impossible. This, of course, gives us creative license to do whatever we want. So we made this idealized version of a buzzless hurdy-gurdy, with the idea that it will "sit in the mix" better than some of the more skittish hurdy-gurdy sounds.

## **Rustic Psaltery**

Music junkies that we are, we own dozens of CD's featuring songs from antiquity. A surprising number of them feature this particularly edgy psaltery sound. I'm sure it had those 13th century parents muttering something about "kids today." "That's not music," they would exclaim, "that's just noise. In my day, we chanted. That was real music."

## **Saloon Abomination**

In the 19th century, if you travelled west of the Mississippi River and stopped in a saloon, this was likely the sound you would hear. At least, that's what Hollywood would have us believe. Maybe the old west isn't your thing? No problem. We can also recommend this patch for your next silent film accompaniment gig.

## **Schroeder's Clavier**

Did you ever wonder how, in those old Peanuts cartoons, Schroeder managed to get such a rich, full-bodied tone from that pathetic little toy piano? The answer, of course, is "post production." A dedicated team of researchers from Applied Acoustics were able to obtain the original raw footage from those Peanuts television specials and hear, for the first time, the sound of Schroeder's actual piano. They then carefully modeled it for this collection. Oh, incidentally, that same team also discovered that Charlie Brown's voice was dubbed! The actual actor has a heavy Italian accent... another illusion shattered.

## **Scream Studio**

For this patch, we suggest atonal chord structures and some heavy-handed marcato stabbing, all realized with the best Bernard Herrmann impression you can muster. The aggressive bowing assures that legato passages will be every bit as disconcerting as the staccato ones, making "Scream Studio" a cornucopia of inspiration for any composer working in the teen scream slasher genre.

## **Seasick Santur**

Perhaps this is a bit of a misnomer since it's not really the santur that's seasick. After all, a santur is an inanimate object and, thus, not prone to sickness. No, my friend, it's you that's seasick. And that's exactly why this santur sounds like it does. Hold a note and you'll be making a dash for the starboard railing. Play staccato and it'll be like Dramamine to your ears. Mix a little left-hand legato with a little right-hand staccato, and just watch the unhealthy, greenish bloom form upon the cheeks of your suddenly subdued fans. If audience alienation isn't your bag, you might find this patch useful for those cinematic scenes in which the hero has, unwittingly, consumed a drugged beverage and is nearly ready to pass out.

## **Sepulchral Spirit**

There's a saying that "dead men tell no tales," but no one ever said "dead men play no tunes." This literary oversight gives us poetic license to create the sound of someone (or something) fiddling in the sepulcher. Those of you who are less morose will easily find other equally-suitable uses for this distant, disembodied bowing sound.

## **Shakey Hand**

Many plucked string instruments have limited sustain. Musicians compensate for this lack of sustain by rapidly picking a single note in an up/down direction. If you play fast enough, the many notes give the sonic illusion of one sustain note with tremolo. If you wiggle your fretting finger at the same time, you'll also induce vibrato. Couple the two and you induce a feeling of restless unease, which is probably what caused this fellow's hands to shake in the first place.

## **Silicon Zen Garden**

Playing music is a form of meditation-its intricate harmonies and resonances have a restorative power on the soul. This patch is the sonic equivalent of a zen garden. Designed for quiet, contemplative noodling, we recommend playing single root notes on the left hand and improvising melodies with the right. Let the intricate and random rhythms guide you... but keep it simple. Zen masters don't play two fistful chords and, with this patch, neither should you.

## **Snake Charmer**

Unless Applied Acoustics one day releases a product called "Wind Studio," wind lovers must find clever ways to "trick" the string model into believing it can create a sinewy, oboe-like sound. Oh, wait... that's what's happening here.

## **Soliloquy**

This simple but elegant patch can be played across the entire keyboard, morphing smoothly from a hollow and forlorn left hand to a sharp and plaintive right hand. If Hamlet had been Turkish rather than Danish, and if he had expressed his feelings through music rather than words, and if he had owned String Studio, and if he wasn't fictional... oh, never mind.

## **Squaring the Deal**

As a general rule, if you're orchestrating a piece of music and you want a sound that's "sharp and biting," you go for the strings. If you want a sound that's "hollow and rich," you might turn to a clarinet. But what if you want something in between? You might give this patch a try.

## **Suspension Bridge**

One day, whilst thinking about all the various types of strings and stringed instruments, we realized that suspension bridges are very much like zithers-really, really big zithers. Each vertical cable is like a giant, stretched string. And each vertical cable is a different length, with the long "bass" cables residing near the tower and the shorter "treble" cables at the center of the span. If only we had a team of muscular men wielding giant hammers to "play" the bridge, it might sound something like this...

## **Sympathetic Cause**

One of the most alluring aspects of such classical Indian instruments as the sarod and sitar is their drone strings. Those strings you don't actually play; the strings that are set in sympathetic vibration by those that you excite manually. This patch is inspired by such Indian classics and, though not an exact replica, will benefit greatly if you "think sitar" while playing it. Maximum drone is achieved with minimal key velocity. The greater the velocity, the less sympathetic the sound.

## **Tar Nation**

This richly realized instrument crosses a dulcimer with a 12-string, and adds some chromatically tuned drone strings. An ideal patch on which to apply your faux finger picking keyboard technique.

## **The Lesson**

You wanted an electric guitar, but your mother had other ideas. You wanted to play in a rock band. She wanted to you to play with the London Philharmonic. Guess who won? So, every week you hauled that silly, infernal, fretless screech machine to the local music store and, with fear and loathing, frantically bowed it's grimy little strings in an all out effort to avoid the wrath of your dour old instructor. But fear drove you to succeed and, honestly, you weren't half-bad-unless you got a little overzealous and leaned too heavily into the bow. Oh, the hideous racket that produced! Now, thanks to String Studio, you can relive those trying times. Dig a little too heavy into the keys and feel your instructor's scornful gaze burn a hole through your soul. Enjoy.

## **Theorbow**

Jimmy Page, when he was with The Yardbirds, would occasionally pull out a violin bow and take to sawing the strings on his Telecaster—an act he continued throughout his days with Led Zeppelin. It's fairly common practice to pluck an instrument designed for bowing but, due to the curvature of the neck, it's far less common to bow an instrument meant for plucking. Still, we doubt Mr. Page was the first person to bow his lute in a performance, and thus began the flight of fancy upon which this patch took wing. It's the sound of a 17th century theorbo being bowed, rather than plucked. And, for those that think this patch sounds nothing like a theorbo, we counter with the question, "Did Jimmy's Telecaster sound like a Telecaster when subjected to the bow?" We rest our case.

## **This Old Man**

This old man, he plays harp, he plays arps upon his harps. And so should you... play arpeggios, that is. Lots of them. Play them in sync with the delay effect, turn on your recorder, and in 45 minutes you'll have a CD full of tunes you can hawk all over Taos, New Mexico. Or Sedona, Arizona. Or the new age artist community of your choice.

## **Timesteps**

Beads of sweat on the forehead; dutch angles; close ups of clock faces—these are all visual conventions that the film industry uses to convey anxious moments. Moments spent waiting for the jury to deliver a verdict. Moments spent waiting for an important phone call. Moments that require musical accompaniment. Moments awaiting the use of this patch.

## **Tireless Strummer**

Allergic to sweating? Suffering from Carpal Tunnel Syndrome? Lazy? String Studio to the rescue! This patch is designed to do all your strumming for you. You're still responsible for fingering your own chords and, if you don't want all your songs to sound the same, you're also responsible for changing the arpeggiator pattern to suit your mood. Hey, there's no such thing as a free lunch, and there's no such thing as a free strummer... just a tireless one.

## **Too Far Right**

The name of this patch is not a political statement, though it might be considered politically incorrect by lefties, for whom this patch should be called "Too Far Left." Reason? It emulates the sound created when you pluck the guitar strings on the wrong side of the bridge.

## **Toxic Drip**

Everyone knows a steel drum, when struck with a mallet, makes a wonderful sound. Not everyone, however, knows that an open steel drum, sitting in an abandoned factory and slowly filling with toxic fluid dripping from an overhead pipe also makes a wonderful sound... at least not many that have lived to tell about it. Now you can experience all the sonically delightful pitter patter of dripping toxic waste, courtesy of Applied Acoustics. We take chances so you don't have to.

## **Transcendental Santur**

Normally, when you hammer a note on a santur, you get a sound rooted in the physical realities of one-note-per-strike. But this is a transcendental santur, meaning it is not held captive by the laws of the physical world. This instrument, instead, interprets the striking of a string as a mere "suggestion" -often returning several, seemingly irrational notes to the performer. It is, perhaps, the sonic equivalent of pi. And you thought it just sounded "broken."

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## **Tremors**

If you hit a single note with this patch, you'll hear String Studio's bouncing hammer model doing its thing. So what? So, that's not how you're supposed to play this patch. It needs a little "technique" to come alive. Try playing some eighth note arpeggios. Notice how the patch starts to resemble the rapid-picking technique employed by mandolin, banjo, and other such players? If you do, then you're well on your way to using this patch effectively.

## **Triad Fantasy**

Hold down a simple, three note chord and let this fanciful patch work its magic. It plays a gentle melody without any additional prodding. All you have to do is pick and choose your chord changes and time them accordingly. The arpeggiator, digital delay, and Filter LFO are all set to different note values and synchronized to the beat. So changing any of these Sync settings will produce all new fantasies, as will changing the arpeggiator pattern. With little effort, you could create a CD full of gently evolving tunes, and market it to wellness spas all over the world. Hey, it's a living.

## **Tribal Beat**

The concept of a vibrating string stretched over a resonating cavity is not that far removed from the concept of a vibrating animal skin stretched over a resonating cavity—unless you look at it mathematically, at which point the similarity ends. And that's why "String Studio" is not called "Drum Studio". Never ones to let reality stand in the way of a good concept, we coerced String Studio into emulating a tribal drum. This particular drum is tuned one octave below middle-C, which is where you should concentrate your finger tapping.

## **Tsukamoto**

The films of Shinya Tsukamoto are often dark, intelligent, and surreal. Cyberpunk manifestations abound; particularly in such early films as Tetsuo, The Iron Man.

This patch is an homage to Tsukamoto's dark side.

Surprisingly usable over an entire 88-note span, this patch evolves throughout-making it a wonderfully unsettling pad that's perfect for cyberpunk, horror, industrial bands, or the avant-garde. A word of warning: if you're brave enough to venture into the 4th octave above middle-C, some potentially painful sonic surprises await.

## **Tweeter Tweaker**

Can you say the name of this patch three times in a row? We can't... but then we just program 'em. This one emulates the sound of a tightly strung zither being assailed with the peen end of a hammer. Equal parts nasty and nice... sort of like a Trick-or-Treater at Halloween. In fact, every Trick-or-Treater takes a Tweeter Tweaker traveling. Hmm... we can actually say that last sentence. Go figure.

## **Upright Wronged**

Pity the poor rehearsal hall upright. Abused and unappreciated. Gouged and dented. It's not just a piano-it's a coat rack, a drink holder, and a footrest. And, for all its years of faithful service, it receives only mockery and derision.

## **Vampire Planet**

This patch was inspired by Mario Bava's 1965 classic film, *Terrore nello spazio* (known in English as *Planet of the Vampires*). Not that this sound actually appears in the film-it just sounds like the film looks. Hollow. Remote. Eerie. Sparse playing is rewarded. So, too, are holding notes for long periods, playing staccato, playing low notes, and playing high notes-all in a random way. Incidentally, *Planet of the Vampires*, besides inspiring this patch, also inspired 1982's *Alien*. Did you ever guess there was so much trivia to be gleaned from a sound collection?

## **Victor's Clavocaster**

Not many people realize that, when he wasn't busy cobbling together human beings, Victor Frankenstein had a hobby-cobbling together musical instruments. Here's an emulation of his little known Clavocaster, which he created one stormy evening using some spare Fender bits, a handful of Hohner parts, and a healthy helping of lightning.

## **Virginal**

Smaller than a harpsichord and oriented such that the strings run parallel (rather than perpendicular) to the keyboard, virginals were the instruments of choice amongst well-heeled Europeans in the 16th and 17th centuries. This patch will likely become your "go to" sound for those all-night Baroque jam sessions.

## **Waits Walks the Floor**

If you like your upright bass to sound as drunk as your audience, consider using this Tom Waits inspired bass patch to slop up the low end.

## **Wallenda's Wires**

Since the late 18th century, the Wallenda family has thrilled audiences with all manner of high flying circus performances—culminating, with the arrival of Karl, in the high wire act. Unfortunately, without a resonant cavity to amplify the vibrations, the sounds of the actual high wires have gone unheard... until now.

## **Wandering Violin**

Speaking from our own experiences, few things polarize the sexes as potently as the strolling violinist. To men, he's a sweaty guy in an ill-fitting tux who interferes with their meal and disturbs their conversation. To women, he's a harbinger of romance—a realization of a childhood fantasy. Please don't write us any angry letters... we're only talking about our own personal experiences, here. Still, it got us thinking: Could you stroll with a laptop? And, if you could, would men be less inclined to dismiss you (assuming, of course, you weren't using last years' technology)? Would women still find romance in a guy sauntering about with a laptop and a strap-on keyboard? We don't know. If any of you is brave enough to give it a try, here's the patch for your stroll around the restaurant.

## Washtub Bass

Sometimes all you want from your bass is a nice, dull thud. If you're the sort that likes the solid foundation you get from a Hofner 4-string and a set of flat wound strings, you'll probably find some use for this patch. If you're the type that thinks a bass isn't a bass unless the neck is a foot wide and strung with at least 7 round-wound strings, you should look elsewhere in this library for your ultimate bass patch.

## Waterpick

This is decidedly not an emulation of a popular oral health device (which, incidentally, is spelled without the letter, "c"). Instead, this is the much more subtle, surreal, and hauntingly beautiful Afghan rubab-played by dripping water upon its strings, rather than with the more traditional plucking technique. This instrument's delicate quality is more apparent when one's fingers emulate the frequency of water dripping from a cave ceiling, and not the onslaught of a torrential downpour.

## Waxy Blues

Back in 1920's, when you "cut" a record, you literally "cut a record." Recording technology involved cutting a groove directly into a spinning platter, which was then used as a physical master from which duplicate disks were pressed. We get nostalgic any time we hear these old records, which is odd since we're not nearly that old. Still, there's a certain "something" about the sound of those old dobros and banjos. This patch should take you, your song, and your audience on a little trip to the Mississippi Delta of the 1920's.

## Wheezy Wheel

That buzzing bridge. That squeaky crank. That wince-inducing wheeze of the whirring wheel contacting the string. All are unmistakable attributes of a hurdy-gurdy, a truly lovely instrument if treated kindly. This patch is not an emulation of a hurdy-gurdy. Rather, it's a "re-imagining" of one—a patch that shares some of the hurdy-gurdy's sonic eccentricities without consciously imitating it. If you use this to play Bach, you'll wreck the old boy's music, for sure. But, if you're playing something decidedly less 'modern,' this patch might just wheeze itself into the song's supporting cast.

## **Whisk Broom**

When a collection of strings are brought together, terminated at both ends and set in motion, it's called a 'musical instrument'. When a collection of strings are brought together, bunched and terminated at only one end, it's called a broom. Brooms are for sweeping, which is exactly what this particular string model does to a resonant filter.

## **Whispering Heil**

In 1973, Bob Heil gave one of his patented Talk Boxes to Peter Frampton, who later used it judiciously on his multi-platinum live album, Frampton Comes Alive. Now, before you dive into this patch and expect it to automatically articulate phrases like "Do you feel like we do?" ... just stop. This is a "whispering" Talk Box and, as such, exerts a more subtle style of formant modulation than Peter's mouth. This makes the patch useful for arpeggiated chords, as well as leads.

## **Who Erhu?**

Apologies to Pete Townshend for appropriating his song title and converting it to a bad pun. This patch emulates the sound of an electric erhu... we're not sure we've ever heard an electric erhu, but if we had, we're certain it would sound a lot like this.

## **WiFiLess Cafe**

Today, if asked to conjure up a mental image of a cafe, one would likely picture a half dozen small tables, each containing a single individual who sits alone and stares vacantly into their laptop computer. The hissing of steam and the faint sound of key strokes provide the only sonic accompaniment, save for the cheesy ring tone that occasionally emanates from a pair of pants or a backpack. This is decidedly not the cafe to imagine when you load this sound into String Studio. Think Fellini. Think Godard. Think in black and white. Imagine actually having a conversation with a human being and not a little sliver of electronics. Got the picture? Good. Here's your patch.

## **Wood Spirit's Serenade**

This ancient, eastern fiddle was carved from a tree containing a wood spirit. Much like Glenn Gould, this spirit likes to hum along with the tune but, unlike Glen, this spirit's voice is rather high and shrill. After all, wood spirits have tiny throats.

## **You Talkin' to Me?**

Although it wasn't likely Applied Acoustics' intention, with a little bit of coaxing, you can turn "String Studio" into "Scat Studio." Try pulling up this patch when your music director requests something a little funkier than the average psaltery, sitar, dulcimer, or zither.

## **Zildjian's PZM**

Pressure Zone Microphones (PZM's) are omnidirectional surface microphones. Placed on a large flat surface, such as a table or the floor, they give a smooth response and are ideal for recording live bands or, perhaps, a group of executives around a conference table. They are less than ideal when mounted to a ride cymbal, which makes us wonder what Zildjian was thinking when they released this particular product... what's that you say? Zildjian did not release such a product? Well, they should have. And to prove it, we've created this physical model of an acoustic guitar recorded with just such a microphone.