

Resonance: Emotional Mallets

An Impact Soundworks Sample Library
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Overview

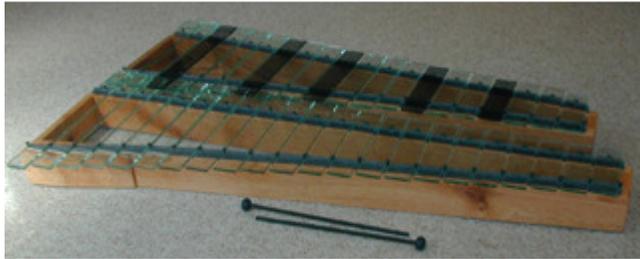
Resonance is an incredibly unique library that contains a collection of custom-made instruments crafted from stone, glass, metal, and wood. We recorded thousands of sounds using a variety of creative and experimental playing and recording techniques, evoking a wide range of timbres: ethereal bowed stones, powerful metal strikes, subtle wood percussion, beautiful glass belltones, and **much, much more**.

As we combed through the recordings, we found that the wealth of sounds were ripe for further sound design. With the help of programmer and sound designer [Iain Morland](#), we took it upon ourselves to create a suite of versatile textures, ambiences, pads, basses, leads, impacts and percussion built from the original audio. As with our other libraries, we intended for **Resonance** to be immediately playable, useful and intuitive.

This library was not designed to be “epic” – though you can certainly use it for that. There are countless sample libraries available that focus on big, loud percussion, or dramatic sounds soaked in reverb. Our vision was instead to capture these amazing found & custom instruments in a more intimate setting; close-miced with a touch of room air (and in great depth, of course!) Inspired by composers like Thomas Newman and Danny Elfman, we hope you will find the wide variety of timbres in **Resonance** to be as usable as they are inspiring.

The Instruments

Aquarion



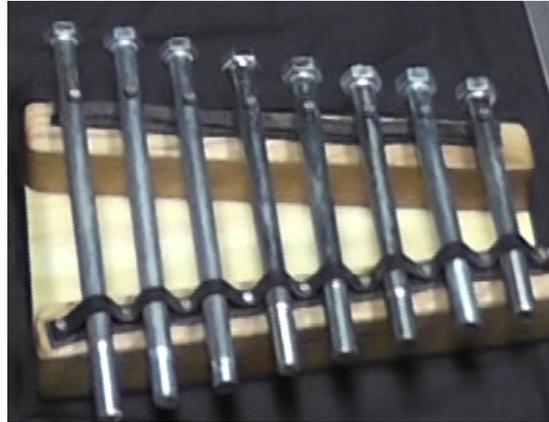
A marimba-type instrument built with a wood frame and all-glass keys. Produces a sonorous, warm tone with a surprisingly solid low-end.

Bass Tongue Drum



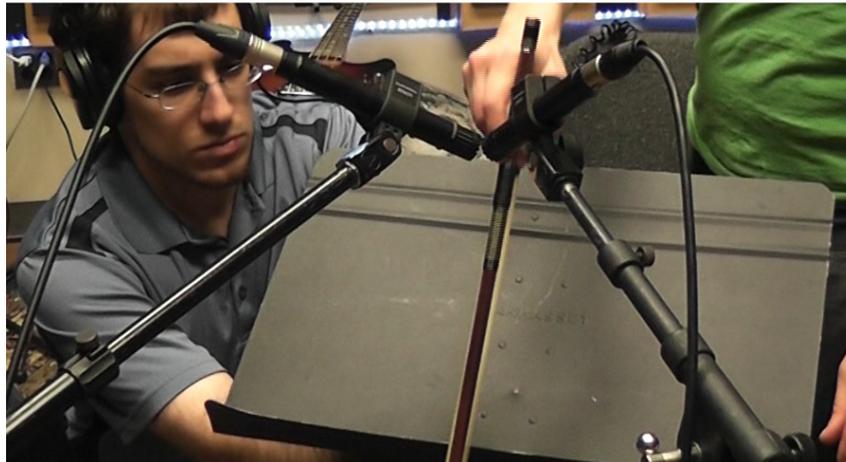
A hollow, wood drum with two untuned 'tongues'. Has an interesting resonant tail and made for a great hand drum.

Boltophone



A series of solid metal bolts with pentatonic tuning. They produce a very clear sound, particularly when struck with metal mallets, and made for some great bowed textures.

Bowed Metal



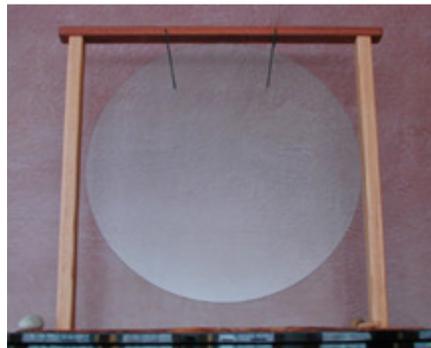
This poor music stand was tortured for over an hour with a cello bow. We coaxed some intense roars, screams and even low tonal notes out of it.

Gamelan Ensemble



The boltophone, wrenchophone, stonaphone and pipeharp played in unison. Very beautiful with pentatonic tuning.

Glass Gong



Simply a sheet of treated glass played gently with soft mallets. Produces an incredibly pure-sine like tone.

Glass Tongue Drum



Similar to the bass tongue drum but with a larger opening and glass tongues instead of wood ones. Not tonal, but each of the keys produces separate harmonics, making for an interesting percussive instrument.

Metal Sheet

(Not pictured)

A cookie sheet struck with mallets for a splashy, thunder sheet-type percussive sound.

Metal Ensemble

(Not pictured)

Two cookie sheets, the music stand and whale drum played percussively in unison. A very big sound.

Pot Lids

(Not pictured)

We found five pot lids in our kitchen that produced incredible tones when struck. So, we sampled them using large rubber mallets. Similar in sound to tibetan singing bowls.

Pipeharp



Hollow copper piping tuned and played with both soft rubber and metal mallets. One of the most beautiful sounds in **Resonance** thanks to its upper harmonics and long release.

Stonaphone



A marimba or xylophone-type instrument with stone keys and a wood frame. Incredibly, the keys are tuned quite well. Though lacking a very long release time, this produces a warm, earthy mallet tone.

Whale Drum



Built from a propane tank, this 100+ pound monster received tuned tongues which we played using numerous implements and techniques. The soft dynamics are reminiscent of a hang drum.

Wrenchophone



A series of tuned metal wrenches that reacted particularly well to being struck with metal mallets. We still have no idea how Jim managed to build this one and give it proper tuning.

Sound Content

The library has patches split into two categories: "Natural" and "Designed". The Natural patches are authentic recordings with no processing, while the Designed patches use offline and live processing to mangle and morph the sounds in creative new directions (pads, impacts, basses, keyboards, etc.)

There are **33** Natural Combinator patches, and **48** Designed Combinator patches split into 6 categories: Impacts & FX, Keyboards & Mallets, Leads & Basses, Percussion, Textures & Ambience, and Tonal Pads.

The NN-XT patches are used within the Combinator patches and contain the same audio, without the bonus effects and tweaks in the Combinator.

Virtually all Natural sounds were also sampled in **great detail** with extensive chromatic sampling, multiple dynamic (velocity) layers, and round robin (repetition) samples for maximum realism and expression!

User Interface (UI)

All patches share some common features in the Combinator UI.

- * Mid-Sweep / EQ: When EQ is enabled, the Mid-Sweep knob controls the frequency boost range.
- * Squash / Saturator: When Saturator is enabled, the Squash knob controls the depth of the saturation.
- * Reverb: Adds reverb ambience to the instrument.
- * Imager: Enables stereo widening.
- * Release: Controls the release time of the sounds.
- * Limiter: Adds a hard limiter to prevent clipping.

The Thor instance labeled **Thor FX** adds a couple of additional controls:

- * DDL / DDL Feedback: Digital delay and feedback amount.
- * Chorus / Chorus Mod/Rate: Digital chorus and modulation amount/rate.

Patch List

Aquarion - FX: Atonal / prepared playing techniques (snare wires, scrapes) with each key mapped to a new sound.

Aquarion: Chromatic multisampled instrument mapped from C0 to C6.

Bass Tongue Drum: Percussive sound mapped to C2, D2, E2 and F2. 3rd and 4th octaves add unison.

Boltophone - Bowed Long: Extended bowed sustains mapped from C1 to C6.

Boltophone - Bowed Short: Shorter bowed sustains mapped from C1 to C6.

Boltophone - Mallets: Chromatic multisampled instrument w/ rubber mallets, mapped from C1 to C6.

Boltophone - Metals: Chromatic multisampled instrument w/ metal mallets, mapped from C1 to C6.

Bowed Metal: Untuned & atonal sounds (scrapes, roars, FX) mapped from C1 to G#4 in a menu. 1-3 per key.

Gamelan Ensemble: Chromatic tuned ensemble mapped from C0 to C5.

Glass Gong - Chromatic: Chromatic tuned instrument mapped from C1 to C6.

Glass Gong: Percussive instrument producing a single tone. C2 and D2 differ in attack timbre/transient.

Glass Tongue Drum - Body: Percussive instrument mapped from C2 to F2 on white notes only.

Glass Tongue Drum - Tongues: Percussive instrument mapped from C2 to C3, white notes only.

Metal Ensemble - Dry: Untuned percussive ensemble mapped from C1 to C5; key changes pitch of sound.

Metal Ensemble - Wet: Same as above, but has a deeper, bassier tone.

Metal Sheet: Solo percussive instrument. C2 has softer hits, D2 has a harsher attack timbre.

Pipeharp - Bowed: Sustained bowed instrument mapped from C1 to C6.

Pipeharp - FX: Atonal / prepared playing techniques mapped in a menu from C1 to C#4.

Pipeharp - Mallets: Chromatic multisampled instrument w/ soft mallets, mapped from C1 to C6.

Pipeharp - Metals: Chromatic multisampled instrument w/ metal mallets, mapped from C1 to C6.

Pot Lids - Chromatic: Chromatic tuned instrument mapped from D#-1 to D#6.

Pot Lids - FX: Atonal / prepared playing techniques mapped in a menu from C1 to A4, white notes only.

Pot Lids - Tuned Wood: Chromatic tuned instrument mapped from C1 to C6 (harsher mallet attack).

Pot Lids: Untuned resonating instruments mapped from C2 to G2, white notes only. No pitch control.

Stonaphone - Bowed: Sustained bowed instrument mapped from C0 to C5.

Stonaphone - Mallets: Chromatic multisampled instrument mapped from C0 to C5.

Whale Drum - FX: Atonal / prepared playing techniques mapped in a menu from C1 to B3.

Whale Drum - Inharmonic: Multisampled atonal, untuned percussive hits mapped on C2, D2 and E2.

Whale Drum - Mallets: Chromatic multisampled instrument mapped from C0 to C6.

Wrenchophone - Bolts Authentic: Chromatic multisampled instrument mapped from C1 to C5, metal mallets.

Wrenchophone - Bolts Optimized: Same as above, but with tweaked tuning/mapping for a smoother sound.

Wrenchophone - Mallets Authentic: Chromatic multisampled instrument mapped from C1 to C5, soft mallets.

Wrenchophone - Mallets Optimized: Same as above, but with tweaked tuning/mapping for a smoother sound.

The 48 **Designed** patches fall into the following categories:

Impacts & FX: Cinematic hits, atmospheres and ambience, typically atonal.

Keyboards & Mallets: Playable, chromatic, tuned instruments with quick attacks.

Leads & Basses: Sustained timbres ideal for bass or lead-playing purposes.

Percussion: Individual and ensemble sounds, untuned and highly playable.

Textures & Ambience: Evocative pads and swelling sounds, typically tonal but ideally played one note at a time.

Tonal Pads: More traditional pads that can be played in chords with different voicings.

Credits

Resonance would not have been possible without the hard work of numerous individuals and organizations. Most notably, we would like to thank **Jim Doble** of [Elemental Design Percussion](#). Jim worked with us to create and ship most of the incredibly unique instruments we recorded. Without his expert craftsmanship, this library simply would not have been possible. If you enjoyed the sounds of **Resonance**, we encourage you to visit his website and browse his catalog!

Performances: Andrew Aversa, Gabriel Globus-Hoenich

Additional Performances: Jillian Aversa, Steve Davit

Engineering: Alec Henninger

Editing: Iain Morland, Andrew Aversa, Chris Gordon

Sound Design: Andrew Aversa, Iain Morland

Scripting: Andrew Aversa

Beta Testing: Jeff Ball, Wilbert Roget II, Dirk Ehlert, Erik Ekholm

Photography / Filming: Jillian Aversa

Artwork: Blake "PROTODOME" Troise

Impact Soundworks would also like to thank Drexel University in Philadelphia, PA for allowing us the use of their storage facilities. Finding a place to keep a truckload of percussive instruments is not easy. Reason conversion by Anthony Mena.

Troubleshooting and Feedback

Have you used this library in a project recently or have a demo or song that you'd like to share? You can email us (admin@impactsoundworks.com) or tell the world at our Facebook page here: <http://www.facebook.com/ImpactSoundworks>

You can also catch us on Twitter at [@ISoundworks!](#)

We encourage all our users to share and promote their work. Word of mouth is the #1 way people find our samples, so it also helps us to produce more great libraries for you! For any technical support issues regarding the library, don't hesitate to email support@impactsoundworks.com.

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