

About ScrapArtsMusic's Instruments



Percussion instruments, most often considered the backbone of a musical ensemble, do much more than keep rhythm; percussion instruments can also provide melody and harmony. Nowhere is this more evident than at a ScrapArtsMusic (**SAM**) concert. The **SAM** ensemble is comprised of highly-trained musicians playing original percussion instruments. Each invented instrument is hand-crafted by artistic director Gregory Kozak from recycled materials, and the ensemble has developed innovative techniques to create a rich array of sounds and textures.

SAM is not the first musical group to showcase the musical potential of unconventional instruments. Some of the most innovative composers of the 20th Century, including Edgard Varèse, John Cage, Harry Partch and the Baschet Brothers, were renowned for their use of, and/or creation of, unconventional instruments. These musical pioneers set the stage for **SAM** and its daring innovation on percussion-based music.

By creating mobile instruments and choreographing the performers, **SAM** infuses an exciting additional layer of visual interest and rhythmic complexity. The ensemble's desire is to give full expression to the physicality of percussion and the passion of music generally.

Each **SAM** performance incorporates 145 unique hand-made instruments. While most traditional percussion instruments fall into the two main categories of membranophones and idiophones, **SAM**'s invented instruments also include the categories of chordophones and aerophones.¹

The following overview serves as an introduction to the instruments created by Gregory Kozak for ScrapArtsMusic. Original ScrapArtsMusic instruments are indicated by italics.

IDIOPHONES

Idiophones are musical instruments in which sound is primarily produced by the actual body of the instrument vibrating, rather than by a string, membrane, or column of air. Idiophones can be sounded in

a number of ways, including stamping, shaking, striking or plucking. Some common idiophones are bells, chimes, xylophones and maracas.

SAM has created 73 original idiophones:



Gong & Chime Arrays



Steel Hose Couplings



Stainless Steel Ribs



Junk-on-a-stick



Bell flower



Alumo-Springs

- 6 *Artillery Shells* (each with its own pitch)
- 1 *Plankophone* (on wheels)
- 4 *Resonating Boxes for Ribs* (on wheels)
- 1 *Nail Violin + Bow*
- 1 *Gong Array* (featuring 3 different gongs)
- 1 *Bell Flower* (9 different pitches—on wheels)
- 13 *Alumo-Plates* (each with its own pitch)
- 10 *Steel Hose couplings* (each with its own pitch)
- Set of 15 stainless steel *Ribs* (each with own pitch)
- 2 *Brass Artillery Shells* (each with its own pitch)
- 1 *Chime Array* supporting *Artillery Shells* (on wheels)
- 5 *Alumo-Bowls* (each with varying sonic qualities and pitches)
- 2 *Alumo-Springs* (each with its own pitch)

¹ There are many ways that musical instruments have been categorized over the centuries. One system widely used by ethnomusicologists and referenced in this document, is the Sachs Hornbostel Classification System. When it first appeared in 1914, four top level categories were identified: idiophones, membranophones, chordophones, and aerophones. A revision was made in 1940 when the new category of electrophones was introduced. Sachs Hornbostel Classification System is based on what first produces the initial sound in the instrument.

- 2 *Thunder Sheets*
- 1 *Pipe Gong*
- 8 *Junk-on-a-sticks*
- 3 *Rubber Pipes* (each with its own pitch)
- 1 *Orange wood block*

MEMBRANOPHONES

Instruments that produce sound through the vibration of a stretched membrane or skin are called membranophones. The most common membranophone instrument is the drum. Gregory Kozak has created a variety of new drums for SAM based on unique aluminum shell designs.

SAM uses 15 original membranophones:



Ziggurat Drum



Humunga Drum



Scorpion Drums

- 1 *Mini Zig Drum Kit* – features two 8”, 10”, and 12” *mini zig toms*, one *snare drum*, and one *semi-globe bass drum*
- 2 *Ziggurat Drums* (on mobile stands)
- 2 *B-52 Drums* (on mobile stands)
- 2 *Hourglass Drums* (on mobile stands– each drum can be tuned to a different pitch)
- 2 *Humunga Drums* (on mobile stands – each can be tuned to 2 different pitches)
- 6 *Scorpion Drums* (each tuned to a unique pitch; on mobile stands)

AEROPHONES

An aerophone is a musical instrument that produces sound through the vibration of air. The instrument itself does not vibrate, nor do strings or membranes. A column of air can be set in vibration – as in wind instruments, or by interrupting the air-flow by an edge, as in free-reeds. Examples of conventionally known aerophones include sirens, Udu drums, flutes, oboes, clarinets, bagpipes and accordions.

SAM has created and uses 55 aerophones:



Sigh-chordions



PVC Towers



Annoyophone

- 5 *Bilge Hose Whorlies* (each with its own pitch)
- 1 *Flying Can*
- 12 *Sigh-chordions* (each with its own pitch)
- 7 *PVC Towers* (each with its own pitch)
- 5 *Annoyophones* (each with its own pitch)
- 18 *Marine Exhaust Hose* (each with its own pitch)

CHORDOPHONES

Instruments that produce sound through the vibration of a string or strings are called chordophones. Plucking, striking, or playing it with a bow vibrates the string of a chordophone. Pianos, banjos, and sitars are examples of chordophones.

SAM currently uses 1 chordophone in concert:

- 1 *Mojo* (a 13-stringed instrument with balloon resonators, on wheels)



Mojo

STRIKERS

A striker is the beating device used to create sound. It can be a drumstick, a clapper, a mallet or a bow. Gongs, Bells and Xylophones are examples of instruments that use a striker.

SAM uses more than 100 strikers in each performance, including:

- Mallets of varying types
- Sticks of varying sizes
- 1 bass drum pedal

WEBSITES OF INTEREST

www.scrapartsmusic.com

Virtual home of innovative action percussionists ScrapArtsMusic. For more information about Gregory Kozak, SAM's instruments, photos, video, tour dates, etc.

www.corporeal.com

Life and works of iconoclastic American composer, theorist, and instrument builder Harry Partch

www.baschet.org

Official site of the Baschet Brothers, including information on their fantastic instruments and pedagogical foundation

w3.rz-berlin.mpg.de/cmp/varese.html

Information on the innovative French composer Edgar Varese

www.pbs.org/wnet/americanmasters/database/cage_j.html

www.JohnCage.info

Two sites devoted to John Cage, the influential American composer known for non-traditional use of musical instruments

www.otherminds.org

A global New Music community where composers, students, and listeners share and learn about innovative music

www.oddmusic.com

A source for unique, unusual, ethnic, or experimental music and instruments

www.windworld.com

An extensive site about experimental musical instruments

www.pas.org

Online home to the Percussive Arts Society

ScrapArtsMusic is represented by John Lambert & Assoc.

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