

Musical Clocks: a new look at an old idea

Dolf Kamper

Musical clocks are the surprise hit of the past decade. Clocks that spiral, twist, glitter, and sing are fast becoming the most popular clock in your store. Rhythm's *Small World* clocks started out in clock stores and jewelry stores, but now you can find versions made by Seth Thomas and Seiko in nearly every kind of store. Electronic musical clocks now grace the walls of gift stores and department stores worldwide. These sparkling wall hangings have been mistakenly dismissed as a passing fad by more than one purist, but actually clocks like the Rhythm *Timecracker* are a modern addition to a long tradition of musical clocks.

On the surface the showy quality of modern musical clocks seems to be unique to the American aesthetic. Shoppers today love to be dazzled by the novelty of the little dancing figures and the psychedelic dreamscape of a splitting dial, or fairy tale castles in the clouds. It may be of some small surprise however to learn that these devices, while in fresh packaging, are neither new nor limited to American tastes.

European master craftsmen invented the musical and animated timepiece and they are still producing some of the finest examples.

Music in the Black Forest...

Starting in the 15th century clockmakers in the Black Forest in Germany were busy during their winter months with building painted "Shield Clocks." These were initially very simple timekeepers with, at the most, a time and strike mechanism. By the early 19th Century these clockmakers had combined their efforts with the other cottage industries native to the Black Forest. Glass makers and carvers worked to add animation and music to the timekeeping mechanism.



When the native glass blowers joined the clockmakers in Schonach, they brought music to these clocks. Bells of differing sizes and pitches were blown of glass and the new clocks' resonant and peaceful tunes wafted over the drudgery of life in Baroque times. Instead of beating a single gong,

clocks now had a polyphonic chime controlled by the mechanics of wooden gears and pins.

Today, the 111 year-old Black Forest clock manufacturer Rombach und Haas makes a beautiful example of these Baroque clocks. Four glass bells of four different pitches chime a kind of blissful melody every quarter hour. This technology is well before the precise and recognizable Westminster chimes so, while primitive, the sounds are similar to serene windchimes on a summer evening.



Rottenburg by Rombach und Haas
(available from North Coast Imports)

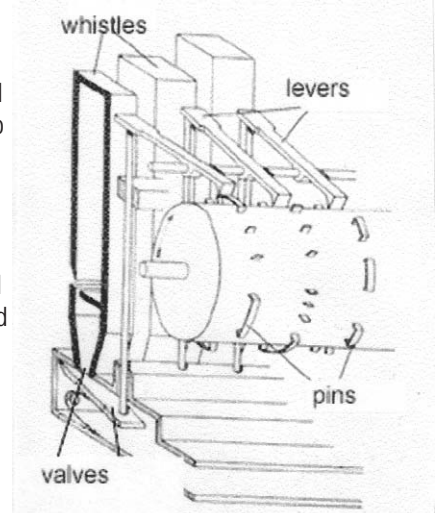
Animated Woodchopper cuckoo clock with dancing figurines by Rombach und Haas - plays two tunes (available from North Coast Imports)



Rhythm's *Timecracker* (available from Rhythm of North America)

Organ clocks...

Mechanical musical instruments have a long history which developed parallel to clock making. In 1738 Jacques de Vaucanson in Paris made his first automatic flute clock. In the Nineteenth Century Joseph Haydn wrote what is clearly the most important music for mechanical organ, or organ clock. These machines had pins placed on a turning barrel which opened valves to allow air to pass through organ pipes. New organ (or flute) clocks are still available from a few very specialized clock makers around the world.



Mechanical musical instruments evolved through many phases. The barrel with pins eventually gave way to punched cards or punched rolls of paper.

Automatic instruments such as player pianos, organs, drums, and even banjos and violins could read the punched paper much as a musician reads notes on a page. The punched card idea incidentally found its most important influence in the foundation of the digital computer.

Music with animation and the birth of the cuckoo clock...

Antique flute clock from the Black Forest circa 1850

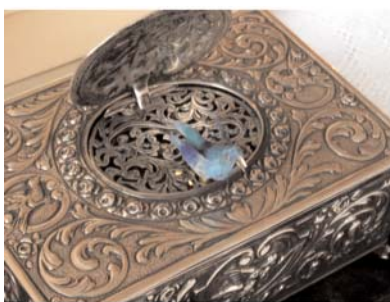


Clock with large animated cuckoo bird by Rombach und Haas (available from North Coast Imports)

reproduced the complicated call of the nightingale. These fine pieces are still available with animated singing birds in cages. Tiny birds move their heads, beaks, and wings as they sing very florid and melismatic melodies which are produced by a slide whistle and tiny bellows.

Meanwhile, as these musical devices evolved, woodcarvers were working on adding all kinds of animation to accompany the music. Initially the carvers modeled every part of their everyday lives in rural Europe. There exist early examples of clocks with animated church-bell-ringers, beer drinkers, and dumpling eaters. Every fear and fantasy was expressed in these automata. Even Death was given a performance with a carving of the Grimm Reaper swinging his scythe in time to the swinging pendulum. Eventually the cuckoo bird was added to the mechanical whistles and the cuckoo clock was born.

Other birds also made their appearance. The Astronomical Clock (circa 1354) in the Strassbourg cathedral features a crowing rooster. Early German automata even



Animated whistling bird (available from North Coast Imports)

Today the cuckoo clock remains the world's most popular musical clock. The turning barrel set with pins has evolved into a mechanism which we now call the "Music Box." The modern Music Box movement rings a clear coda to the cuckoo call, and today you can hear modern melodies like *The Happy Wanderer* and *Edelweiss*.

What is often forgotten about the traditional cuckoo clock (and any mechanical musical clock) is that the sounds are mechanical, and therefore analog in the truest sense of the word. In mechanical music you are hearing "real sound" that is, sound that is not artificially reproduced through digital or electronic processes. Although there is no live performer involved, the sound from a mechanical cuckoo clock is more similar to what you hear in a live piano recital (for example) than what you hear in a recording of a piano recital. Today this distinction is often ignored in an age which is dominated by recorded and electronically manufactured music.

Electronic music...

The latest phase in the development of musical clocks has been the addition of synthesized music. Synthesized music is not new, the early days of electronic music took place immediately after the second world war. Karlheinz Stockhausen's "Electronic Studies 1 and 2" are regarded to be the classical examples of this type of music. He used a magnetic tape recording of naturally produced sounds to create new sounds. The sounds are manipulated using tape recorders and by the time you listen to the completed piece you have no conception how this otherworldly music was created. It is usually performed with the audience completely surrounded by at least 12 speakers in a dark room. The alien sounds seem to physically occupy a space in front of you, behind you, or suspended above you.



Karlheinz Stockhausen, composer

Composers continued to work with manufactured or synthesized sounds. In 1964 Robert Moog built the Moog synthesizer. This machine was one example of how sounds could be artificially constructed by electronic modifications. The Moog synthesizer was made famous in Walter Carlos's *Switched On Bach* records where he performed the music of J.S. Bach using synthesized sounds.



Walter Carlos's Moog synthesizer

Although not "live" sound, electronic sounds can be easily manipulated for the listener's enjoyment. The volume can be controlled, new songs can be easily added or removed, and adjustments can be made at the touch of a few buttons. Electronic instruments are also not susceptible to wear or atmospheric changes the same way mechanical instruments are. In some circumstances, sounds which are naturally produced are not as "in tune" or "in rhythm" the same way electronic sounds can be. Mechanical sounds are more natural and therefore more organic than electronic sounds.

Rhythm's *Timecracker* (available from Rhythm of North America)

These synthesized sounds can today be found in clocks by Rhythm, Seth Thomas, and Seiko as well as quartz mechanisms which reproduce the natural clock chimes. These very popular clocks use the technology developed by Moog and others to play our favorite tunes with lovely polyphonic accompaniment. Like the musical clocks developed in the Black Forest 200 years earlier, Rhythm clocks have charming animation.

Today, modern pastimes are expressed in these clocks. Where the clockmakers of the 19th Century had clocks depicting the everyday life of a medieval farmer, the 21st century clocks have turning Ferris Wheels, baseball games, and glittering lights.

Craftsmen in the Black Forest have not been left behind in keeping abreast of this technology. Hekas, for example, produces quartz cuckoo clocks which electronically reproduce not only the cuckoo call, but also the whistling of other birds, as well as the burbling of a nearby brook. They even have one model which plays 12 polyphonic tunes. Each melody is charmingly constructed of synthesized sounds and plays directly after the cuckoo call every hour.



quartz cuckoo clock with music by Hekas (available from NCI)

The next time you have a customer in your store who is interested in musical clocks, take a moment to educate them about the many examples which are available today. Talk to your customer about the advantages of electronic sounds compared to the advantages of analog sounds in a mechanical clock. Customers need to be able to easily see all the animation and hear the music on all your musical clocks. A picture or a clock hung without its weights is never enough to show the customer the beautiful capabilities of your musical clock collection.

Musical clocks have evolved through centuries of technical inventions and musical compositions. These interesting and beautiful timepieces never fail to capture the imagination and their allure hasn't faded in almost 300 years. While clocks are no longer a necessity in the home, the musical clock will always be welcome to add another dimension of fascination to timekeeping.

Dolf Kamper is Vice President of North Coast Imports, Inc. a national distributor of clocks from around the world. He is also a composer and trumpet player that has performed with the Omaha Symphony, Orquesta de Nueve Leon, and the Kirchenorchester Saarland. Mr. Kamper is also the founding director of the ANALOG arts ensemble. Visit www.dolfkamper.org for more information.

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