SOUL IN THE MACHINE

Band Details:

Soul in the Machine is a live electronic dance band. It differs greatly from more conventional music shows in three principle ways:

1. Soul in the Machine plays electronic dance music
2. The musicians actually play most of the music (as opposed to spinning it on a turntable)
3. All of the instruments, with the exception of the keyboards, were custom built by the band. So is the lighting, which is as large a component of the show as the sound.

Soul in the Machine strives to add greater visual stimulation to the primal aural excitement experienced by fans of electronica. It intends to exhibit unique electronic instrumentation built specifically to complement the Brave, Old World of the music synthesizer.

Electronic Music is compelling for many of us because it allows great complexity in timbre, something that, prior to the advent of modern sound synthesis, was not able to be plumbed to the great depths being explored today. Soul in the Machine intends to bring some performance 'magic' to this new aural world: the magic of the live musician coupled with the lighting effects of custom instrumentation.

As always, the audience will be the judge.

INSTRUMENTS

Laser Harp:

Conceived, designed, and built in early 2002, the laser harp was the first instrument Soul in the Machine built that was both functional and visually stimulating. Today it remains nearly unchanged from its original incarnation, although a significant upgrade is in the works that will allow for alternate tunings to be used. Currently the laser harp is tuned chromatically, like a piano, which can be limiting.

The laser harp is played by breaking any of the laser beams.
Phototransistors mounted in the bottom of the harp detect the change in light amplitude, and trigger a series of electrical events that eventually result in a MIDI signal being sent to the synthesizers. Depending on the song, the harp can also send information that depends on where the laser-harpist breaks the string. This allows for pitch bends, filter changes, etc.

The top curved portion of the harp was laser-cut from a large sheet of stainless steel. The box sections that makeup the side and the bottom were fabricated by us, as was the truss constitutes the large vertical member.
This truss was used by necessity; originally in its place was an aluminum box section, but it was too flimsy and caused false triggers any time the laserharp was bumped. The truss provides a stiff and light solution, and looks interesting to boot. We were pleased enough with its advantages that many instruments have the same or similar designs.

Henry is the primary laserharp player, although Erik will jump in every now and then.

Drumwall:

Probably more time has been spent building and rebuilding the drumwall than any other single instrument. The current drumwall is actually our 3rd attempt, and the drums are the fourth revision. Although the very first drum design was a spectacle to behold, it proved to be unreliable and dangerous. The 2nd and 3rd designs were ugly and difficult to play. With the current design, we've finally achieved a drum that is both highly playable and visually stimulating.

Within each drum is a set of lights that is instantly reactive to what we're playing. When you hear a sound coming from a particular drum, you will see a light that accompanies that sound. And if you pay attention, the light will have the same characteristics as that sound. For example, a sound with a long decay will have a slowly fading light. Or, a sound with an echo will have lights that echo as well.

The Octopus is the drummer, so the drumwall is his baby. The drumwall is certainly big enough for more that one drummer, and on several songs Henry and Erik will be playing the drums alongside the Octopus.

Marimba:

The marimba is similar to a normal marimba, with two exceptions.
It's electronic, so we can make it sound like whatever we want it to, and it is flanked by two double-helix light sculptures that are interconnected to the marimba and provide a visual feast.

The stainless steel double helixes have 288 individually controllable light channels, so the visual possibilities are vast. Watch the two towers during a show and notice how the patterns correlate with whatever the marimba is playing.

Erik plays the marimba.

The Slide:

The tall, trussed-out, shiny, stainless steel object is perhaps our most odd instrument. Like many of our projects, Henry decided to make this new instrument that would "take a day or two". Well, it took significantly longer than that, as we kept feature-creeping and fixing inadequacies with the original design. The end result, however, is quite captivating (judging from audience response)

The slide is played by moving the big handle up and down. That's it. The handle is connected to a big roller chain, which turns wheel that is connected to some electronics. The electronics send out MIDI signals that effectively change the quality (or timbre) of a sound. You'll see the slide being played with phat sounds that can morph from one extreme to another.

Henry is the chief slide-player.

Bass Drum:

Like everything else, the bass drum is made entirely out of stainless steel.
It's so heavy that we had to make a crane to lift it onto the stage.

None of us play the bass drum - it's there to do the job that we just didn't feel like doing. 4 to the floor. Notice that each of the mallets has individually controllable lights within, as well as the drum itself. Look even closer, and you'll notice that the mallets are made from carbon fiber.
This was one of the few applications where stainless steel didn't cut it… too heavy. The carbon mallets are light and strong, which allow for quick response time.