



Devotion in Motion

Om Mani Padme Hum—say what?

The Addendum staff had to delve deep into our Sanskrit vocabulary to come up with this sacred Buddhist mantra. There's no clear English translation, and interpretations of the meaning vary from source to source, but the phrase is universally invoked to infuse compassion during meditation and prayer.

The mantra can be found adorning Buddhist prayer wheels, known as, 'khor. Each cylindrical wheel is mounted on a spindle made from materials like metal, wood, leather or coarse cotton. Spinning the wheel is synonymous with reciting a prayer.

As far as the Addendum staff is concerned, there have been no known prayer wheels powered by gears—until now.

"Devotion @ 50 rpm" is an artistic installation of five translucent cylinders modeled after the Buddhist prayer wheels. Instead of manually spinning the wheels, artist Erich Schrempp automated them with small gearmotors. He chose to substitute the traditional mantra with brilliantly painted gears on Duratrans transparencies, which are illuminated by LED automotive bulbs inside the cylinders.

Schrempp's materials also consisted of threaded steel rods, soldered brass and copper fittings, 50 rpm gearmotors, superwhite LED automotive bulbs, 110 VAC to 12 VDC power supply, aluminum fan blades, steel hardware and copper wiring, in addition to melamine board, foam disc, interval timer and

fabric. The display is powered on a total of 21.5 watts.

Aside from the artistic and conceptual concepts Schrempp developed, he had some more practical factors to consider in production. "Vibration was what concerned me most," he says. "Vibration's destructive force is like the tide: slow but relentless. With five motors turning 4,000 rpm each (geared 80:1 down to a manageable 50 rpm), I imagined the piece dismantling itself in pretty short order. Being old school when it comes to these things, I opted for dozens and dozens of lockwashers and tightened down all the nuts on the threaded rods to within an inch of their lives."

The kinetic sculpture held up perfectly for the eight-week installment at Sullivan Galleries in Chicago.

Vibration wasn't the only technical concern Schrempp had. "The practical aspects of making this thing work for 400 hours of operation were always on my mind. I wanted it to use as little power as possible, seeing how its Tibetan counterparts relied on the outstretched palms of passers-by for propulsion," he says. "This led to using the LED automotive bulbs, which together with the motors consumed a paltry 22 watts or so. This, in turn, solved the heat problem. The fact that the wheels were pretty flammable also argued for keeping the heat down. Going with existing automotive technology meant that everything could be 12 Volts DC, and a great many parts were to be had at Pep Boys."

The Addendum staff is grateful people are still finding practical, convenient uses for automotive parts.

"Devotion @ 50 rpm" was a joint venture between Schrempp and Winzeler Gear, but the idea materialized from some Instamatic camera pictures Schrempp's mother took decades ago on a vacation. "My mother was certainly the one who first told me about the prayer wheels. I wish I had a great story to tell about this, but the fact is that the image of those spinning cylinders pretty much gathered dust in the back of my mind for about thirty years before the opportunity to do a piece for the Sullivan Galleries came up," he says. "I started designing much wider, shallower cylinders in the first sketches, and then noticed the resemblance to the Tibetan wheels and changed the proportions accordingly."

Personal dogma wasn't an inspiration for the piece. Schrempp doesn't consider himself a religious person; although he holds a special respect for the peaceful nature of Buddhism. "It's the one major religion that isn't armed to the teeth, so you have to give them some credit for practicing what they preach," he says.

"Whether you believe every word of the Bible or think that God is Santa Claus for grown-ups, you can't ignore how profoundly the world is affected by the faith people put in ideas that can never be proven or disproven," he says. "It's about as far from engineering as you can get, which is why I enjoyed joining the two in this piece." ☀