

ROBOT ART & INNOVATION MACHINES

Rules & Regulations: Last modified on February 4, 2002

Originally Created by Dr. Mark Tilden, Rules adapted for the WCRG Games by Dave Hryniw

** 2002 Rule Change: Robot Art and Innovation Machines have been merged into a single, publicly-judged event.*

OBJECT:

Build, or modify, something along aesthetically pleasing lines that does something deliberately by itself. Purposefulness not essential. Or, using robotic principles (or tawdry but eloquent scientific justification), make a brand-new device that serves a not-so-obvious purpose.

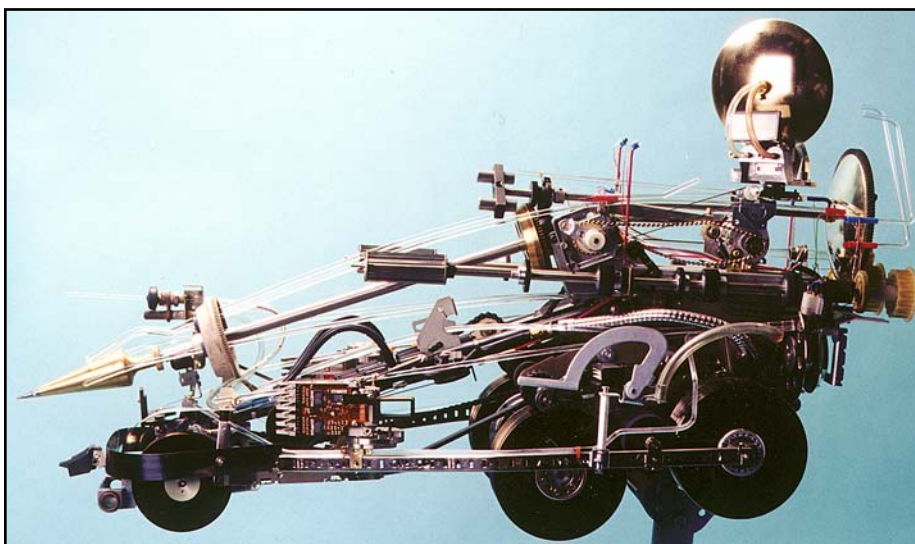
BACKGROUND:

One of the key hindrances to assembling something interesting is the idea that it must have a preset shape or purpose ahead of time. In the necessary process of just assessing your available components, you may stumble across an idea which will be initially obscure, but you can almost see the shape in the pieces before you. Therefore, take some advice; when in doubt, think with your hands and see what emerges.

Case in point, SunRinger 1.0: The Wedding-Cake Centerpiece shown above features 18 photodiodes wired up in two dual-strings producing 13.5 milliwatts of power, feeding into a 5.5 volt 0.047 farad computer-memory backup capacitor. Activation is achieved by a heavily-modified greeting card "Happy-Birthday" singer chip, which triggers a 50mm diameter DC pancake motor every 360 seconds. The motor is connected via a 0.020" steel wire to the bell mounts, which swings back and forth at approximately 2 Hertz. This device combines technical ingenuity with the appropriate aesthetics to add whimsy to a festive event. The only negative feedback received in regards to this device as from the cake decorator, who was forced by the incessant ringing to remove the light-bulb from her walk-in cooler.



Solar-powered Wedding Cake centerpiece. Powered by a twin-string of photodiodes producing 9 volts at 1.5mA, this device swung the bells to and fro every 6 minutes.



Don Post's... Artwork! Constructed of discarded computer hardware.

It's a great conversation stopper, and is an example of a valid Roboart contender.

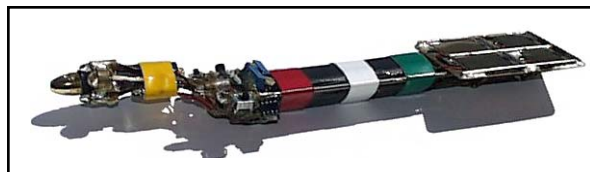
This competition is for those who dislike following any form of rules. More of a showing than a competition, the idea is to introduce severe design non-linearities into (un)commonplace devices, demonstrating the extremes of innovation. As well, it is interesting how often electrical and motorized improvements result in whole new sciences never dreamed of before.

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COMPETITOR DESIGN PARAMETERS:

Robot Art (or robot sculpture): The only requirement is that the work must move, blink or animate in some way. To give it a small bias, consideration will be given to devices that use solar energy in ambient lighting environments, and feature no "off" switch.

- 1 - Devices must have some sort of self-starting capacity which is derived from a deliberate conversion of electrical power into another form (i.e.: motorized toilets are allowed. Breeze-powered mobiles are not).
- 2 - Competitors may be of any size up to where said competitors cannot fit through a normal office door. There is no minimum size restriction
- 3 - Robot Competitors must not deliberately damage, soak, or scratch the display areas, other competitors, judges, or spectators in any way. The event organizers will disqualify any competitor they feel represents a danger.
- 4 - The device must use only mechanical power, or mechanical power converted from a source of electrical energy. Chemical, compressed gas, nuclear, or combustion power methods are not allowed to run in the competition area, though they will be allowed to run outside if acceptable to the designers and judges. Devices must not be dangerous, threatening, or explosive.



BEAM Flashlight - this hefty club built by Brant McKee is a solar-powered flashlight and so much more. Besides being a multi-colour LED flashlight, it features two switchable battery packs, a built-in oscillator, laser-pointer, night light mode and power jacks. It can be used to power other experiments. Think of this as a BEAM-style Swiss-Army flashlight.

JUDGING:

All entries will be judged based on public interest as decided by a poll. It is suggested to leave information & documentation regarding your device near it in case you're not around to describe its function! ★