Subject: new robotics toy!
Posted by lauren on Fri, 31 May 2013 03:27:54 GMT
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Message-ID:
Date: Wed, 19-Sep-84 06:24:21 EDT
Article-I.D.: sri-arpa.12164
Posted: Wed Sep 19 06:24:21 1984
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From: Lauren Weinstein

Sometime ago, I brought up the subject of the Radio Shack (Robatron/Armatron) robot arm as a possible cheapo robotic arm for experimentation. The unit was fairly cheap (around $30-$40) at least in comparison to existing alternatives. While some experimenters have successfully interfaced the unit to computers in very elaborate fashions, it is a tough task due to the mechanical nature (only one actual motor) of the arm linkages.

I eventually decided not to buy the unit.

Now, a new toy has appeared, which I have already bought and with which I am very pleased. The unit I bought is the "Robotix 2000" from Milton Bradley. It costs around $48 at typical discount. This immensely clever robotic building toy goes far, far beyond the capabilities of the Radio Shack arm at a similar price. The basic unit consists of a wide variety of plastic parts (levers, extension arms, bases, elbows, etc.), 4 battery powered electric motors (internal gearing, very high torque), and all sorts of other parts. They easily fit together through a very clever "octagon" arrangement that seems unlikely to wear out easily. There is also a somewhat cheaper unit (the "Robotix 1000") with only 2 motors and fewer of other parts as well.

The unit I bought can be assembled in an infinite number of ways -- in 15 minutes I built a robot hand (padded pinchers are included) that used all four motors, had high flexibility, and something like a three inch grip. Motors can also be used for propelling the entire unit for rolling or walking. A lot can be done with the four motors, and by December additional motors will be available for about $14/pair, as well as other parts packages. Some simple experiments to test the lifting power of the unit, and the ability of the plastic pieces to take heavily out-of-balance weights, was quite surprising. While I had no convenient way to measure the weights I was using, I was impressed with how much weight could be lifted without stalling the motors. In fact, I was unable to stall the motors with any weight easily at hand which could be conveniently gripped. (I was able to lift weights

that would fall back down when power was removed, but that's to be expected with weights beyond a certain point.)

Perhaps most importantly, since the motors are all individually controllable, the unit should be exceedingly trivial to interface to computers, and also appears to be ideally designed for the addition of feedback sensors of various types.

Given that most robotics equipment for experimenters costs many hundreds of dollars at a minimum, this unit seems like a good buy for the casual experimenter.

Oh yes, it's *lots* of fun, too!

--Lauren--

Subject: Re: new robotics toy!
Posted by jbn on Fri, 31 May 2013 03:28:27 GMT
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Message-ID:
Date: Wed, 26-Sep-84 21:23:38 EDT
Article-I.D.: wdl1.441
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Date-Received: Thu, 4-Oct-84 03:51:21 EDT
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Nf-From: wdl1!jbn Sep 26 17:52:00 1984

Another breakthrough from Milton Bradley, makers of the Milton Bradley Big Trak, a programmable mobile tracked toy.
