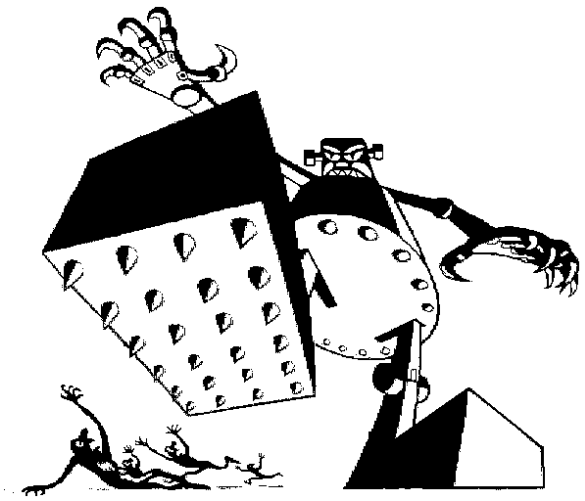
P.A.R.T.S



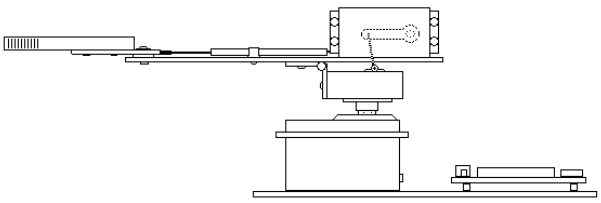
Marvin Green marvin@agora.rdrop.com
821 SW 14th St. Troutdale OR 97060 (503) 666-5907

Issue # 12

ARMBOT:

Several months ago I decided to put together a robotic arm to use with the BOTBoard. The design goal was to keep it as simple - simple - simple. Not to mention cheap. The arm I came up with has 3 axis's of movement. It can rotate left and right, lift up and down, and open and close the gripper. The arm uses three unmodified RC servo's that are controlled by a 68HC11 on a BOTBoard. The entire arm can be put together in a couple of hours.

The arm is lots of fun to play with. It's challenging to program the arm to pick up objects. The best user interface might be an analog joystick plugged into the AD ports on the BOTBoard and converted into a position. The ARMBOTs forearm can be easily mounted on any robot..



I have put together a partial kit and instructions for the ARMBOT. The kit includes all the custom plastic pieces needed to build the arm. The manual includes parts list, diagrams, drilling and assembly instructions.

The partial kit with the arm, shoulder mount, shoulder hinge, base platform, mounting brackets and other pieces, including the manual, is only $12.95.

Basic Stamp vs. 68HC11:

Like other gearheads, I have been wondering what this Basic Stamp thing is all about. I like to use the 68HC11 in my robot projects so I wanted to see what the Basic Stamp could offer against the 68HC11.

Here is a simple chart that gives some comparisons.

	PIC Basic Stamp	MC68HC11A1
CPU Speed	4mhz to 20mhz	2mhz
Program Speed / Sec.	~ 2000	~ 1000000
Programming Language	BASIC	Assembly
Easy of programming	Very Easy	Not Easy
I/O Lines	8 lines	38 lines
Resources	A/D and PWM in software	8 A/D and 5 timers, 4 PWM in hardware.
Cost for Board *	~ $40	~ $25
Cost of Chip *	~ $20	~ $5
Development system	~$100	~ FREE
Current and Voltage	3-6v - 2ma	5v - 15ma
RAM and EEPROM	16 / 256	256 / 512
* Prices may vary!		

Meeting Changes:

The Multinomah County Library is remoldeling, and after August will no longer have public meeting rooms. So a search is on for a PARTS meeting place. I found that ITT Technical Institute is very interested in hosting a meeting room for our group. If you have any thoughts on the matter, give me a call. Also spread the word about PARTS. Lets get this club moving!

Next Issue: Solor Roller Robot, build a robot to race around in the sun.

Other Robotics Clubs

Atlanta Hobby Robotics Association
P.O. Box 2050
Stone Mountain, GA 30086
bbs: Robots R4U 404.978.7300

The Robot Group
PO Box 164334
Austin, TX 78701
tel: 512.794.9105
net: <robot-group@cs.uteaxs.edu>

Austin Robotics Group
608 Garden Path Cove
Round Rock, TX 78736
tel: 512.244.6707

Connecticut Robotics Society
P.O. Box 127
Canaan CT 06018
tel: 203.824.0542

The Dallas Personal Robotics Group
P.O. Box 1626
Hurst, TX 76053

LA Area Robotics and Automation Group
<la-rgroup@cad.ucla.edu>
Los Angeles, CA

Robot Society of Southern CA
10471 S. Brookhurst
Anaheim, CA 92804
tel: 714.535.8161

Robotics Club of Maryland
Computer Science Dept.
A.V. Williams Bldg. (115)
University of Maryland
College Park, Md. 20742-3255
contact: Stephen Klueter, President
net: <steveck@Glue.umd.edu>

The Robotics Society of America
PO Box 1205
Danville, CA 94526-1205
tel:415.550.0588
fax: 415.550.0411
bbs: 415.648.6427 (supports 14.4Kb)
net: <bsmall@sfrsa.com>

Seattle Robotics Society
P.O. Box 30668
Seattle, WA 98103-0668
tel: 206.782.5989
SRS also operates a bbs: 206.633.2905

Triangle Amateur Robotics Club
P.O. Box 17523
Raleigh, NC 27619
tel: 919.782.8703
net: sasrer@unx.sas.com (Rodney Radford)