

State University of New York at Buffalo
Department of Mechanical and Aerospace Engineering

MAE 476 / 576: Mechatronics
Spring Semester - 2003

Mini Assignment 3 (Part 1)

Theme: List of Stamp Related Resources

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Teaching Assistant: Chin-Pei Tang

MAE 576
MECHATRONICS

Mini Assignment -3

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DATE:01/31/03

BOOKS

1. [Micro Application Cookbook](#) * The Microcontroller Application Cookbook is a wide-ranging collection of 113 interface circuits designed around the BASIC Stamp II.
2. Basic Stamp by Kuhnel and Zahnert. <http://www.wd5gnr.com/bstoc.htm>
3. [Basic Stamp](#) - A pretty good book about Stamps (and the first one that was out). Pity there is no disk, and the translation is a bit rough in places. The first half is mostly review for anyone who has written any sort of Stamp program. But the back half is full of interesting projects (including motion detection, X10, networking, and more).
4. [Programming and Customizing the Basic Stamp Computer](#) - Scott Edwards is well-known in the Stamp world, especially to readers of Nuts & Volts where he used to write a column each month. This book is a little introductory -- if you have any experience with the Stamp, you'll probably skip right to the projects, which are pretty good.
5. [The Art of Electronics](#) - This is the best overall electronics book around. Nothing about Stamps per se, but absolutely everything you need to know about everything else.
6. [Microcontroller Projects with Basic Stamps](#).: Covers introductory material and advanced projects. A complete task-oriented Stamp command reference; covers BS1, BS2, BS2P, and BS2SX. Learn about advanced math, digital I/O, analog I/O, serial I/O, LCDs, keypads, motors, I/O expansion, and how to move to PIC or SX programming.

ONLINE COMPENDIA

1. LOSA-List of Stamp Applications: <http://www.hth.com/losa/>
2. <http://www.phanderson.com/stamp/tutorial.html>
3. [Al Williams Basic Stamp FAQ](#) - Very informative FAQ, you can also add your own.

MAKES/SELLS STAMP ACCESSORIES

1. http://www.rentron.com/PicBasic/stamp_stuff.htm
2. [Parallax](#) - Makers of the Basic Stamp. What can i say great company!
3. [Stamps in Class](#) - Great new Site Made by Parallax. Good for begginers.
4. [Scott Edwards Electronics](#) - Produce LCD's, Servo controllers, LCD Accessories, etc.
5. [Solutions Cubed](#) - Produce add-ons for the Stamp. Pocket watch, motor driver, ram pack, etc.

6. [AWC](#) - Produce add-ons for the Stamp that increase Ram, addition I/O's, Math capabilities such floating point math and more.
7. [Tower Hobbies](#) - R/C stuff & servo motors.
8. [AWC](#) - Prototyping and coprocessors
9. [Arrick Robotics](#) - Mobile robot using the Basic Stamp
10. [SEETRON](#) - LCD Backbacks
11. [Solutions Cubed](#) - Serial RAM, clocks, motor controls
12. [Future Standard](#) - Stamp accessories, X-10 home automation gear
13. [Bill & Jack](#) - Walking robot kit
14. [Decade Engineering](#) - Decade makes the BOB-II that allows you to display characters on a TV screen!
15. [MicroEngineering Labs](#) - Basic Compiler
16. [Basic Micro](#) - Basic Compiler
17. HVWTech [HVW Technologigies](#) - Serial LCD's, Motor Drivers, DIRRS, etc.

PROJECTS

1. <http://www.rentron.com/BasicStamp.htm>

eg: [Infrared data communications](#). This project shows how to build an infrared data communications system that lets your BASIC Stamps talk to each other over infrared light at up to 2400 baud. It's simple, it's excellent, and it's more fun than a barrel of Stamps..

2. <http://www.geocities.com/SiliconValley/Orchard/6633/projects.html>

eg: Interfacing a 2 wire EEPROM to the Stamp: This project will show you how to interface one of Microchip's 24XXXX 2 wire EEPROM's to the Stamp.

ONLINE TUTORIALS / FAQ

1. Basic Stamp 2 Tutorial and Applications:
<http://www.phanderson.com/stamp/tutorial.html>
2. BASIC Stamp integer math and related topics :
<http://www.emesys.com/BS2index.htm>
3. [Enhanced math for the Basic Stamp 2](#) - An introduction to the Stamp2 32-bit routines
4. [The complete Mac / BASIC Stamp II page](#) - Complete guide to connecting your Stamp to your MAC.
5. <http://www.faq-pro.com/faq/index.php?faq=1>

OTHER BASIC STAMP SITES

1. [The WeatherStamp Meteorological Station](#) - Using a Stamp to make a Weather monitor, great page with lots of info on how to interface ADC's, Real time clocks, shift registers, etc.
2. [Mike's Electronics Page](#) - Various electronics projects that Mike has done over the years.
3. [Peter Anderson's Page](#) - Tons of info here. Lots of kits, books, and components for sale.
4. [Vlad's Site](#) - Info on how to use a Stamp to communicate with a TI-82 calculator, robots and more.
5. [Bob Blick's Page](#) - A bunch of projects including an H-bridge, and using a 555 timer as an ADC.
6. [Tracy's Basic Stamp Page](#) - Very helpful page for learning stamp math, in includes doing logs, min, and max and much more with the stamp.
7. [Mark's Basic Stamp Page](#) - A few Stamp project including a stepper motor interface.
8. [BrokenBytes HomePage](#) - Thinking of making a DTMP Decoder? This is the place to go.
9. [J.D Richards Site](#) - RS485 to BASIC Stamp II Interface Board
10. [Brain's WebPage](#) - Simple QBASIC to BASIC Stamp II Serial Communication
11. [Parkis Homepage](#) - Using a Stamp for Caller ID.
12. [DCF-Clock](#) - Interfaces a dcf receiver module to a BASIC Stamp
13. [A Radio-controlled Digital Clock](#) - Displays time, day, year, and temperture.
14. [Roger's webpage](#) - Build An Inexpensive Repeater Controller from a Basic Stamp.
15. [Reynolds Electronics](#) - Basic Stamp, 8051, or Pic Microcontroller, Schematics and Projects
16. [KBOB's Basic Stamp and PIC page](#) - Basic Stamp projects, PIC Programming, and building a PIC programmer

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Mechatronic Books

[Mechatronics: Electronic Control Systems in Mechanical Engineering \(2nd Edition\)](#)

by W. Bolton, et al

[Mechatronics](#)

by Dan S. Neculescu

[Electromechanical Systems, Electric Machines, and Applied Mechatronics](#)

by Sergey Edward Lyshevski

[Mechatronics System Design](#)

by Devdas Shetty, Richard Kolk

[System Dynamics : Modeling and Simulation of Mechatronic Systems](#)

by Dean C. Karnopp (Author), et al

[Understanding Electro-Mechanical Engineering : An Introduction to Mechatronics](#)

by Lawrence J. Kamm

[Robotics, Mechatronics, and Artificial Intelligence: Experimental Circuit Blocks for Designers](#)

by Newton C. Braga

[Mechatronics: Mechanical System Interfacing](#)

by David M. Auslander, Carl J. Kempf

[Mechatronics and the Design of Intelligent Machines and Systems](#)

by D. A. Bradley (Editor), et al

[Mechatronics: Japan's Newest Threat \(Advanced Industrial Technology Series\)](#)

by V. Daniel Hunt

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Hobby shops selling Stamps

<http://www.digikey.com/>

<http://www.jameco.com/>

<http://www.hobbyengineering.com/>

<http://www.warburtech.com/>

<http://www.radioshack.com/>

<http://www.lynxmotion.com/>

<http://www.micromint.com/>

Stamp Accessories

http://www.apexvalue.com/basic_stamp_access.htm

Motor controller and Ultrasonic Ranger

<http://www.seetron.com/>

Serial LCDs

<http://www.phanderson.com/>

Serial Temperature Monitors

<http://www.selmaware.com/>

PC programs for capturing and visualizing data output from the BASIC Stamp

<http://www.solutions-cubed.com/>

Modules that offload tasks such as timekeeping and running motors from the main stamp processor

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<http://www.rentron.com/>

<http://www.melabs.com/mel/home.htm>

<http://www.elabinc.com/>

<http://members.tripod.com/~divelec/>

<http://www.decadenet.com/>

<http://www.high-techgarage.com/>

the *fire-stick*, an infrared remote link transmits and receives the state of of 4 parallel bits

popular and well supported compiler that allows you to burn code written for the BASIC Stamp (PBASIC) into standard PIC microprocessors

Offers a series of interesting modules that offload tasks from the BASIC Stamp. These include LCD modules as well as drivers for serial printers, keyboards and a variety of other functions.

powerful motors and controllers with BASIC Stamp connection

Offer low-cost OSD (On-Screen Display) modules and other video function blocks for use by system designers

offers a "timekeeper" module that mounts under the BS2, so that it does not take any board area. The module uses an I2C bus to address a DS1307 RTC and up to 16kx8 eeprom. Additional products are in the works. Great tutorials too!

Online Compendia of Stamp Applications

Home Automation Solutions:

<http://www.arwa-tech.com/electronics.htm>

Robotics

<http://www.cursoderobotica.com.ar/>

Complete weather station

<http://www.weatherstamp.com/>

Data loggers for specific biological application

<http://www.uia.ac.be/bio/pleco/TECH/technical.html>

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Books

Programming & Customizing the BASIC Stamp Computer -2nd Ed.

<http://www.melabs.com/products/books/bsbook.htm>

Basic Stamp

Covers both the hardware and software sides of the Parallax BASIC Stamp 1 and 2 microprocessor operation and design. The BASIC Stamp is built on PIC microcontroller hardware and uses PBASIC as its programming language, which makes it simple to use, but versatile enough to solve professional problems.

<http://www.amazon.com/exec/obidos/ASIN/0750672455/eg3communicationA/>

Microcontroller Application Cookbook

The Microcontroller Application Cookbook is the beginner's sourcebook for real-world machine control. It features over 100 schematics and code samples based on the popular BASIC Stamp2 Microcontroller.

<http://www.amazon.com/exec/obidos/ASIN/0615115527/eg3communicationA/>

Microcontroller Projects Using the Basic Stamp

Updated with a complete, task-oriented command reference for the BS2P Stamp and detailed instructions for new projects including Internet-to-Stamp gateways, test instruments, infrared remote controls, and robot motor controls. Includes a Basic Stamp emulator, a tool to program PIC chips, and practical advice for PC interfacing using serial EEPROMs, analog I/O capabilities.

<http://www.amazon.com/exec/obidos/ASIN/1578201012/eg3communicationA/>

Microcontroller Projects with Basic Stamps

Are you an old-hand at microcontroller design? Seasoned designers accustomed to using more arcane microcontrollers will find that Basic Stamps are easy, productive and fun to use. You will find practical advice for PC interfacing, using EEPROMs and other devices, as well as a task-oriented command reference, and chapters that cover analog I/O, serial communications, and LCDs and keypads.

<http://www.amazon.com/exec/obidos/ASIN/0879305878/Eg3communicationA/>

Programming and Customizing the Basic Stamp

A book/CD-ROM tutorial on the BASIC Stamp single-board computer, which runs a PIC Microcontroller and doesn't require any assembly language programming. Offers a primer on basic electronics, and coverage of both BASIC Stamp I and II, from understanding BASIC programs to PBASIC toolboxes and applications.

<http://www.amazon.com/exec/obidos/ASIN/0071371923/eg3communicationA/>

Electronic Magazines

NutsVolts.com Nuts & Volts Magazine: Exploring Electronics & Technology For The Hobbyist And Professional.

<http://www.nutsvolts.com/>

Retrofire.com Retrofire is dedicated to building better robots and more powerful rockets all with a mix of science and art! Active robotics web-newsletter.

<http://www.retrofire.com/>

LVR.com Serial Port Complete is a guide to designing, programming, installing, and troubleshooting computer links, including networks of multiple computers.

<http://www.lvr.com/>

HowStuffWorks.com How Stuff Works provides helpful information on programming the BASIC Stamp, creating a digital clock, thermometer, and more!

<http://www.howstuffworks.com/microcontroller.htm>

TUTORIALS

Basic Stamp Computer Tutorial

The Basic Stamp computer is a product of Parallax Incorporated. The Stamp manual provided by Parallax is often confusing and advanced for the person with no programming experience. This tutorial attempts to give the beginning programmer a little more detailed information about the function and use of the most common P-Basic commands used with the Stamp.

<http://www.tjhsst.edu/~jleaf/tec/stamp/stttutor1.htm>

Basic Stamp Tutorial

The Basic Stamp is a small microcontroller made by Parallax, Inc. which can be used for many simple prototyping and control applications. The Stamp understands a simplified variant of the BASIC programming language and programs are loaded into the Stamp from a PC via a cable that attaches to the PC parallel (printer) port.

<http://www.me.umn.edu/resources/desres/stamp/>

Serial Communication Tutorial

This tutorial deals with serial communication between the Stamp and other devices. The discussion presents some basics and illustrates how to interface the Stamp with a PC or other terminal device and how to interface with such serial devices as a serial LCD and our popular 8-channel temperature measurement unit.

http://www.phanderson.com/stamp/tutorial_10.htm

Basic Stamp Accessories Sites

Stamps in Class - Great new Site Made by Parallax. Good for beginners.
<http://www.stampsinclass.com/>

Scott Edwards Electronics - Produce LCD's, Servo controllers, LCD Accessories.
<http://www.seetron.com/>

Solutions Cubed - Produce add-ons for the Stamp. Pocket watch, motor driver, ram pack, etc.
<http://www.solutions-cubed.com/>

AWC - Produce add-ons for the Stamp that increase Ram, addition I/O's, Math capabilities such floating point math and more.
<http://www.al-williams.com/index.htm>

HVW Technologies - Serial LCD's, Motor Drivers, DIRRS, etc.
<http://www.hvwtech.com/pages/default.asp>

Basic Stamp Resources

L.O.S.A - List of Stamp Applications
<http://www.hth.com/losa/>

Parallax Ftp Site - Stamp Apps, Manual, and much more.
<ftp://ftp.parallaxinc.com/>

Al Williams Basic Stamp FAQ - Very informative FAQ, you can also add your own.
<http://www.wd5gnr.com/stampfaq.htm>

Shaun's Pages Shaun's BASIC Stamp pages provide a growing collection of application notes and technical tips.
<http://www.geocities.com/SiliconValley/Orchard/6633/index.html>

BASIC Stamp Web Ring BASIC Stamp computers, PIC microcontrollers, and related embedded technologies
<http://v.webring.com>

Brian Forbes

This site describes Brian's most excellent book on the internal operation of the BASIC Stamp II. His book is a must have for the professional or for the advanced enthusiast.
<http://members.aol.com/stamp2book>

Selmaware

Home of Stamp Plot Lite (free) and Stamp Plot Pro (inexpensive), PC programs for capturing and visualizing data output from the BASIC Stamp. Uses simple Debug commands to direct and format the output. Also available is the BISCIT system, a means of controlling a stamp system with Active-X controls over the internet
<http://www.selmaware.com/>

Hobby Shops

Tower Hobbies - R/C stuff & servo motors.
<http://www.towerhobbies.com/>

VENDORS

Technical Works

Technical Works is the home of the MockUp embeddable development boards for the Microchip PICmicro, **Parallax** Basic and Javelin Stamps, Uvicom (Scenix) SX, Basic Micro Atom 24, Micromint PicStic, and NetMedia BasicX microcontrollers. The MockUps are the most versatile development boards on the market and are the simplest way to get your microcontroller ideas working!
<http://www.technicalworks.com/>

Parallax, Inc.

Specializes in microcontroller hardware solutions and educational curriculum kits. Produces **BASIC Stamp** Microcontrollers which are small computers with a language set designed for interfacing to electronic circuits. Our most recent product addition is the BS2p24 and BS2p40.
<http://www.parallaxinc.com/>

Peter Anderson's Home Page

PC Parallel Port, PIC, **BASIC Stamp**, 68HC11 resources. NEW PIC16F87X Development Package with Serial in Circuit Debugger. Serial Cable, Main MPLAB ICD Board.
<http://www.phanderson.com/>

Rentron.com

Welcome to Rentron.com. Here you'll find a growing selection of projects, tutorials and products for the PicBasic Compilers, **BASIC Stamp**, Microchip PIC, 8051 microcontroller, remote control.
<http://www.rentron.com/>

Crownhill Associates

Quicker and easier than C or Assembler, this true compiler creates fast compact code that can be loaded directly into the popular PIC Microcontrollers. Full compatibility with the **Parallax BASIC Stamp I** and **II** modules allows use of the vast range of documentation and tried and tested code available from **Parallax** Inc and third party providers supporting the **Parallax BASIC Stamp I** and **II** modules.
<http://www.picbasic.co.uk/>

CSMicro Systems

Editor IDE Software CodeDesigner PicBasic/Pro Edition CodeDesigner Basic Micro Edition CodeDesigner **Basic Stamp** Edition CodeDesigner BasicX Edition CodeDesigner Scenix Edition Electronic Design Software FilterDesigner NE555 TimerDesigner Web Server Software MicroWebServ Embedded Web Server SitePlayer
<http://www.csmicrosystems.com/>

HVW Technologies Inc.

SumoBot: Autonomous Mini-Sumo class robot. With infrared sensors and built-in **BASIC Stamp II**.
<http://www.hvwtech.com/>
<http://www.emesystems.com/BS2links.htm>

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Stamp Related Resources:

Books:

1. The Microcontroller Application Cook Book Volume 1 & Volume 2 -- Matt Gilliland;
2. Inside Basic Stamp II -- Brain Forbes;
3. Programming and Customizing the Basic Stamp --Scott Edwards;
4. Stamp II Communications and Control Projects -- Tom Petruzzellis, Thomas Petruzzellis;
5. The Microcontroller Application Cookbook -- Matt Gilliland, Ken Gracey;
6. The Microcontroller Application Cookbook, Vol 2. with BASIC Stamp 2 Homework Board --Matt Gilliland;
7. Microcontroller Projects Using the Basic Stamp 2nd Edition -- Al Williams;
8. Basic Stamp --Claus Kuhnel, Klaus Zahnert;
9. The Basic Stamp 2 - Tutorial and Applications -- Peter H. Anderson;
10. Basic Stamp Data Book. Newnes Publishing; 1997;
11. Programming and Customizing the Basic Stamp. McGraw Hill; 1998;

Online Tutorials:

1. <http://www.phanderson.com/stamp/tutorial.html>
2. <http://www.iguanalabs.com/mbktut/>
3. FAQ's <http://www.faq-pro.com/faq/index.php?faq=1>
4. <http://www.myke.com/>
5. <http://tutor.al-williams.com/pic-intro.html>
6. <http://www.tjhsst.edu>
7. <http://www.me.umn.edu>

Online Resources/Articles:

1. <http://www.al-williams.com/som.htm>
2. <http://home.epix.net/~iracerc/stamp.html>
3. <http://www.emesys.com/BS2index.htm>
4. <http://micro.filetap.com/>
5. <http://groups.yahoo.com/group/basicstamps/>
6. <http://www.geocities.com/SiliconValley/Orchard/6633/index.html>: Check Shaun's Page for more accessories.
7. <http://www.rentron.com/>
8. <http://www.hth.com/cat-02.htm>
9. <http://www.audiomulch.com/midipic/>
10. <http://www.elektronikladen.de/basicstamp.html>

Suppliers:

1. <http://www.al-williams.com/index.htm>
2. <http://www.microchip.com/1010/index.htm>
3. <http://www.scenix.com/>
4. <http://www.micromint.com/>
5. <http://www.seetron.com/>
6. <http://www.dontronics.com/index.html>
7. <http://warburtontechnology.saffas.com/>

Accessories Purchase:

8. <https://www.jameco.com/cgi-bin/ncommerce3/ExecMacro/Jameco/home.d2w/report>
9. <http://www.digikey.com/scripts/US/DKSUS.dll?KeywordSearch>
10. <http://www.digikey.com/scripts/us/dksus.dll?Criteria?Ref=68567&Cat=31851010>
11. <http://www.digikey.com/scripts/us/dksus.dll?Criteria?Ref=68567&Cat=31851044>
12. <http://www.digikey.com/scripts/us/dksus.dll?Criteria?Ref=68567&Cat=31851451>

Information regarding Interfacing:

1. <http://www.hth.com/easytap/>
2. <http://www.hth.com/plm-24/>
3. <http://www.acroname.com/robotics/info/examples/GP2D02-4/GP2D02-4.html>
4. http://www.phanderson.com/T_kit/stamp_interface.html

Miscellaneous sites:

1. KIT DÉVELOPPEMENT 8051: http://www.pro-conceptmdm.com/francais/prod_board.htm#
2. Collection of Books : <http://www.tinaja.com/books/bkpic.asp> ,
<http://www.eg3.com/WebID/embedded/basic/stamp/blank/book.htm>
3. <http://www.wd5gnr.com/stamplink.htm>
4. <http://www.wd5gnr.com/top10.htm>
5. Tips: <http://www.wd5gnr.com/hc11.htm>
6. http://tutor.al-williams.com/pldham_files/frame.htm
7. <http://tutor.al-williams.com/>
8. <http://www.dlpdesign.com/usb/usb245.html>
9. <http://www.dlpdesign.com/usb/usb232.html>
10. Stamp Collection Index: <http://www.nutsvolts.com/stmpindx.htm> ,
<ftp://nutsvolts.com/stampaps/>
11. PIC Microcontroller and Basic Stamp : <http://www.doc.ic.ac.uk/~ih/doc/pic/>
12. <http://www.milinst.com/stamps/stamps.htm>

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List of Stamp-Related Resources

BASIC Stamp Books:

["The Nuts and Volts of BASIC Stamps" Volumes 1-3](#)

[BASIC Stamp, Second Edition](#)

[Microcontroller Application Cookbook](#)

[StampWorks](#)

[Programming and Customizing the BASIC Stamp Computer](#)

[Microcontroller Projects Using the BASIC Stamp](#)

Online Compendia of Stamp Applications

<http://www.hth.com/losa.htm> -- Currently not working

[Nuts & Volts Index of BASIC Stamp Apps](#)

[Parallax Customer Apps](#)

<http://www.tradetech.co.nz/basic%20stamp/applications.htm>

<http://www.emesystems.com/BS2links.htm>

[ChipCenter](#)

[Reynold's Electronics](#)

[Stamps in Class](#)

<http://bmbiris.bmb.uga.edu/wampler/compcnt/sld036.htm>

Stamp Accessories & Retailers

[Parallax](#)

[ApexValue](#)

MiniHW_3_Cole

[Mouser Electronics](#)

[Arwa Technologies](#)

[Stamps In Class](#)

[Robot Store](#)

[Trade Tech-](#)

[Dark Robot](#)

Good Links (lists, etc.):

<http://www.geocities.com/SiliconValley/Orchard/6633/started.html>

Great link:

http://dmoz.org/Science/Technology/Electronics/Reference/BASIC_Stamp/

<http://www.geocities.com/SiliconValley/Orchard/6633/links.html>

<http://www.solutions-cubed.com/basicstamp.htm>

Google Directory:

http://directory.google.com/Top/Science/Technology/Electronics/Reference/BASIC_Stamp/

[Weather Stamp Apps](#)

<http://www.pic-c.com/links/stamps.html>

Books

From Parallax website:

- The Nuts and Volts of BASIC Stamps Book Volumes 1, 2, and 3 - written by Parallax Inc.
- How to Build Your Own Prize-Winning Robot - written by Ed Sobey
- BASIC Stamp, Second Edition – written by Claus Kühnel and Klaus Zahnert
- Microcontroller Projects Using the BASIC Stamp - written by Al Williams
- Microcontroller Application Cookbook - written by Matt Gilliland
- Robot Sumo: The Official Guide. – written by Pete Miles
- ---- there are many more listed -----

Online Compendia of Stamp Applications

<http://www.parallax.com>

<http://www.emesystems.com/BS2links.htm>

<http://www.geocities.com/SiliconValley/Orchard/6633/links.html>

<http://groups.yahoo.com/group/basicstamps/>

<http://www.bobblick.com/techref/projects/projects.html>

<http://home.earthlink.net/~parkiss/>

<http://members.aol.com/jonwms/persint.html#stamp>

<http://www.geocities.com/siliconvalley/park/1302/robotz.htm>

Collection of BS links

Collection of BS links

Yahoo message group.

A number of projects by Bob Blick.

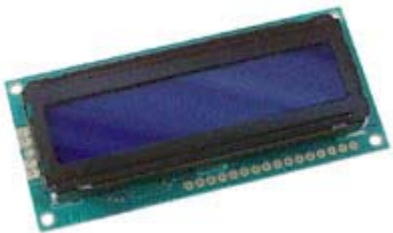

Programs and modifications

Interesting apps ex. Games, light controls

BS controlled robot


Stamp Accessories

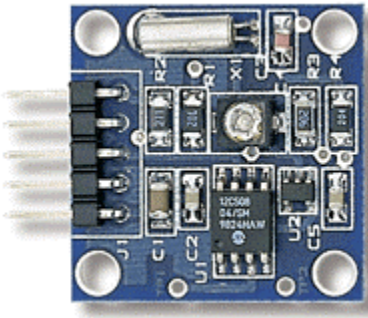
Examples:

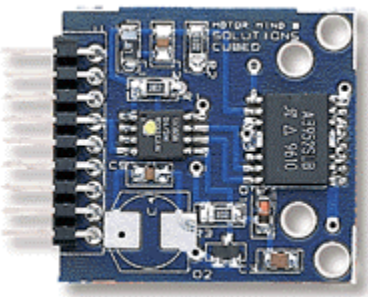
	<p>2 x 16 Serial Backlit LCD</p> <p>Can serve as output display for BS apps.</p>
	<p>Serial Keypad and LCD</p> <p>Interface as a keypad for BS apps.</p>

<http://www.arwa-tech.com/electronics.htm>

<http://www.arwa-tech.com/electronics.htm>

	X10 Lamp Module Control regular lamps with a BS program
	http://www.arwa-tech.com/electronics.htm

	Pocket Watch B Can provide a timebase for BS apps
	http://www.parallaxinc.com/html_files/products/BS_Accessories/s3_mmb_pwb.asp

	Motor Mind B Can Provide DC motor speed and directional control
	http://www.parallaxinc.com/html_files/products/BS_Accessories/s3_mmb_pwb.asp

Many other accessories include things like:

- Infrared Detectors
- RF Modules
- Video Transmitters/ Receivers/ Cameras
- Servo Motors
- The Stache which can transport up to 15 Basic Stamp programs for download in the field.
- Temperature Probes
- Speakers.

Hobby shops selling stamps

<http://www.jcminventures.com>

<http://www.hvwtech.com/pages/products1.asp?CatID=7>

Lots of online places to buy BS's but not many of them identify themselves as Hobby shops.

Robot kits some of which feature the BS

Hobby Shops

Jameco Electronics at	http://www.jameco.com/
Digi-key.com	http://www.digikey.com/
BG Micro	http://www.bgmirco.com/
Electronic Express	http://www.elexp.com/
All Electronics Corporation	http://www.allcorp.com/
Circuit Specialists, Inc. internet catalog	http://www.web-tronics.com/
MOUSER Electronics	http://www.mouser.com/
Alltronics.com	http://www.alltronics.com/
Dontronics	http://www.dontronics.com/index.html
Radioshak	http://www.radioshack.com/

Online Compendia

1. FIRST <http://www.usfirst.org/>
(FIRST (For Inspiration and Recognition of Science and Technology) is the largest non-profit educational user of BASIC Stamps)
2. IC Master <http://www.icmaster.com/>
3. Web links for Educational Basic Stamp links is given at (online compendia of basic stamp applications) http://www.stampsinclass.com/html_files/links.htm
The website also includes customer projects that are worked out with basic stamps. Book list for basic stamp is provided for sale purpose. The website got the basic stamp material.
4. Site made by parallax called <http://www.stampsinclass.com/>
5. Scott Edwards Electronics, inc. <http://www.seetron.com/>
6. Solutions³ <http://www.solutions-cubed.com/stamparticles.htm>
7. Stamp Projects
<http://www.geocities.com/SiliconValley/Orchard/6633/projects.html>
8. <http://www.geocities.com/SiliconValley/Orchard/6633/projects.html>
9. Web site of Blob Blick with his projects <http://www.bobblick.com/>
10. Nuts&Volts Magazine: Stamp Applications Columns
<http://www.nutsvolts.com/stmpindx.htm>
11. Application Notes and Tips for Display products, contains Stamps-Related Column with stamp applications. http://www.seetron.com/lcd_andex.htm
12. Online PBASIC code samples and utilities:
<http://members.aol.com/ionwms/persint.html#stamp>
13. <http://www.rentron.com/BasicStamp.htm>
14. List of Stamp Applications – great idea source
www.hth.com/losa
15. Tracy Allen's Stamp resources – very technical
www.emesystems.com/BS2index.htm

Stamp Accessories

1. National Semiconductor <http://www.national.com/>
2. Apexvalue.com http://www.apexvalue.com/basic_stamp_access.htm
3. CV-Tech Australia Pty Limited <http://www.cvtech.com.au/schools/>
4. ARWA Technologies incorporation <http://www.arwa-tech.com/electronics.htm>
5. Site made by parallax called <http://www.stampsinclass.com/>
6. Scott Edwards Electronics, inc. <http://www.seetron.com/>
7. Solutions³ <http://www.solutions-cubed.com/>
(The web of “Solutions³” is given with Articles previously published on Basic Stamps applications)

8. <http://www.high-techgarage.com/products/>
(The site provides tutorial, support and software for the products)

Books:

1. What's a Microcontroller? Text, v1.9
(How to install the BASIC Stamp in the Board of Education, using the breadboard, blinking an LED with a pushbutton.)
2. Microcontroller Projects with Basic Stamps By Al Williams
Book details with purchase rate are given in the website: <http://www.al-williams.com/sbook.htm>
3. There are a collection electronic books on basic stamps at
<http://www.rentron.com/books.htm>
like a) Microcontroller Application Cookbook: which is a wide-ranging collection of 113 interface circuits designed around the BASIC Stamp II.
b) Microcontroller Application Cookbook Volume 2, By Matt Gilliland
c) Experimenting with the PicBasic Pro Compiler, etc
4. BASIC Stamp By Claus Kühnel and Klaus Zahnert
<http://www.ebookstech.com/samples/BH/bsSample.asp>
5. Getting Started In Electronics By Forrest Mims
<http://www.gorobotics.net/products/index.php?sort=Books>
6. Engineer's Notebook By Forrest Mims
<http://www.epemag.com/bukfmenb.htm>

Journals

Electronicproducts The Engineer's Magazine of Product Technology
<http://www.electronicproducts.com/>

Book Resources

- Electronic Express <http://www.elexp.com/>
- <http://www.powells.com/subsection/ElectricityHobbyElectronics.html>

Stamp Related Recourses

Books-

1. Robot Builder's Bonanza by Gordon McComb
2. Microcontroller projects using the Basic Stamp- Al Williams
3. Sumo Bot- Build your own remote controlled Programmable Sumo Bot- Mike Predco, Ben Wirz
4. [**The Microcontroller Application Cookbook: Volume 1 with Hardware and Code Samples Featuring the Basic Stamp 2-**](#) Matt Gilliland
5. [**PIC Microcontroller Project Book-**](#) John Iovine
6. [**Stamp II Project Book: 20 Communications Projects-**](#) Thomas Petruzzellis
7. [**Programming and Customizing the Basic Stamp-**](#) Scott Edwards
8. [**Microcontroller Application Cookbook: Featuring the Basic Stamp 2-**](#) Matt Gilliland
9. [**Basic Stamp: An Introduction to Microcontrollers-**](#) Claus Kuhnel, Klaus Zahnert
10. [**Programming PIC Microcontrollers with PICBASIC-**](#) Chuck Hellebuyck

Online Compendia of Stamp Applications

1. <http://www.wd5gnr.com/stampfaq.htm> - This is a stamp FAQ with lists of posting and programs
2. <http://www.geocities.com/SiliconValley/Orchard/6633/> - Although this is not a commercial site, it is well organized and
3. [**Web Stamp**](#) - An archive of some Basic Stamp Applications.
4. [**Stamps Archive**](#) - An archive of all the messages posted in the Basic Stamp Mailing list.
5. [**Nuts & Volts Stamp applications**](#) - Another archive of Basic Stamp Apps.
6. [**HTH Stamp Archive**](#) - Another Ftp Stamp app archive.
7. [**L.O.S.A**](#) - List of Stamp Applications
8. [**Parallax Ftp Site**](#) - Stamp Apps, Manual, and much more.
9. [**Al Williams Basic Stamp FAQ**](#) - Very informative FAQ, you can also add your own.

Stamp Accessories- Electronic components etc. (Information pasted from Second site in the online Compendia Section.)

[**Jameco**](#) - Inexpensive, good selection of components and IC's. (free catalog)

[**Parallax**](#) - Makers of the Basic Stamp. What can I say great company!

[**Stamps in Class**](#) - Great new Site Made by Parallax. Good for begginers.

[**Scott Edwards Electronics**](#) - Produce LCD's, Servo controllers, LCD Accessories, etc.

[**Solutions Cubed**](#) - Produce add-ons for the Stamp. Pocket watch, motor driver, ram pack, etc.

[**AWC**](#) - Produce add-ons for the Stamp that increase Ram, addition I/O's, Math capabilities such floating point math and more.

Nicholas Gill
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[HVW Technologies](#) - Serial LCD's, Motor Drivers, DIRRS, etc.

Hobby Shops selling Stamps-
[Tower Hobbies](#) - R/C stuff & servo motors.

Other Suitable Categories-

There are a number of people who I know that can be used as a source of information. For example during this course, Dr. Krovi can be considered as a source of information. Matt Szymanski will be another source for me after this course is finished. I also have a friend outside of work who is familiar with other types of microchips.

Mini Homework 3

BasicStamp Related Resources

MiniHW_3_Jadhav

Books	Online Compendia	Stamp Accessories	Hobby Shop	Others
Programming and Customizing the Basic Stamp Computer, Scott Edwards	http://www.reconnsworld.com Robot Projects step by step description	http://www.arwa-tech.com/electronics.htm Accessories for home automation	http://www.gibsonteched.net Various robot and LEGO kits	http://groups.yahoo.com/group/basicstamps email group
Microcontroller Projects Using the Basic Stamp, Al Williams	http://www.howstuffworks.com/microcontroller.htm Description of how microprocessor work for newcomers	http://www.seetron.com LCD & VFD	http://www.robotoz.com.au	http://bmbiris.bmb.uga.edu/wampler/comptcont/sld036.htm Some amazing Application using BasicStamp
Basic Stamp, Claus Kuhnel, Klaus Zahnert	http://www.mcmanis.com/chuck/robotics/stamp-decode.html Assembly Language Programming of PIC	http://www.rfdigital.com	http://www.wmberg.com Mechanical Components	http://www.snakerobots.com/main.htm Interesting Application Using BasicStamp
StampWorks, Jon Williams	http://www.eettaiwan.com/ARTICLES/2002FEB/PDF/2002FEB20_AMD_MPC_EMS_AN08.PDF interface the LTC1298 ADC to basic Stamp	http://www.microcontroladores.com	http://mindstorms.lego.com/	http://www.voiceofidaho.org/VOIBSII.pdf Application Using BasicStamp
The Microcontroller Application Cookbook, Vol 2. with BASIC Stamp 2 Homework Board by Matt Gilliland	http://bmbiris.bmb.uga.edu/wampler/comptcont/sld036.htm	http://www.dontronics.com/index.html	http://www.joker-robotics.com/	
Stamp II Communications and Control Projects by Tom Petruzzellis, Thomas Petruzzellis	http://www.cim.mcgill.ca/~mabous/RESEARCH/Remote.htm Interfacing Remote Control	http://www.parallax.com	http://www.mrrobot.com/	
The Basic Stamp 2 - Tutorial and Applications by Peter H. Anderson	http://stage.itp.nyu.edu/~dano/physical/prog.html BasicStamp Programming Introduction	http://www.allelectronics.com	http://www.robotics.com/	

MiniHW_3_Jadhav

Chetan Jadhav
Person # 30429541

Resources for Basic Stamp

Mechatronics

Mini-assignment 3

Preeti Joshi : psjoshi@buffalo.edu

www.acsu.buffalo.edu/~psjoshi

	Books	Author
1	Basic Stamp Manual, version 2	
2	The Nuts and Volts of BASIC Stamps Volume #3	
3	Microcontroller Application Cookbook	Matt Gilliland; October 2000; Woodglen
4	StampWorks Manual Version 1.2	
5	BASIC Stamp Second Edition	Claus Kuhnel & Klaus Zahnert
6	Programming and Customizing the Basic Stamp	Scott Edwards; March 2001; McGraw-Hill
7	Basic Stamp: An Introduction to Microcontrollers	Claus Kuhnel, Klaus Zahnert; 2nd Ed, July 2000; Newnes
8	Microcontroller Projects With Basic Stamps	Al Williams; October 1999; R & D Books
9	Programming and Customizing the Basic Stamp Computer	Scott Edwards; March 1998; McGraw-Hill
10	The Basic Stamp 2 - Tutorial and Applications	Peter H. Anderson; February 1998; Peter H. Anderson
11	Basic Stamp: An Introduction to Microcontrollers	Claus Kuhnel, Klaus Zahnert; March 1997; Butterworth-Heinemann
	Online Compendia	
1	http://www.geocities.com/stampic/HATEM_PROJECTS.HTM	Basic Stamp Projects
2	http://www.geocities.com/stampic/HATEM_PROJECTS.HTM	Basic Stamp Links and Information
3	http://www.nutsvolts.com/stmpindx.htm	Stamp Applications
4	http://www.hth.com/filelibrary/txtfiles/losa.txt	LOSA
	Stamp Accessories	
1	http://www.parallaxinc.com/html_files/products/products_listing.htm	Parallax
2	http://www.cvtech.com.au/stampsinclass/pr ice.htm#Basic%20Stamp%20Starter%20Kits%20and	Stamps in Class, Australia

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3	http://www.tradetech.co.nz/basic%20stamp/downloads.htm	(Parallax Inc)
4	http://www.stampsinclass.com/	Stamps in Class
5	http://www.milinst.com/index.htm	Milford accessories
6	http://www.emesystems.com/	EME systems
	Hobby Shops selling Stamps	
1	http://www.generation5.org/aisolutions/howto01.shtml	Generation 5
2	http://www.phanderson.com/stamp/starter.html	Peter H. Anderson - Embedded Processor Control
3	http://www.rentron.com/	Reynolds Electronics
4	http://www.hvwtech.com/pages/default.asp	HVW shops
5	http://warburtontechnology.saffas.com/	Warburton Technology
	http://www.elproducts.com/	Chuch Hellebuyck's Electronic Products

Basic Stamp Books

- **Programming and Customizing the BASIC Stamp Computer-2nd edition** by Scott Edwards
- **Microcontroller Projects with BASIC Stamps** by Al Williams
- **BASIC Stamp Second Edition** by Claus Kühnel and Klaus Zahnert
- **Les BASIC Stamp** (in French!) by Christian Tavernier
- **StampWorks Manual Version 1.1**

Basic Stamp Applications

- **L.O.S.A:** <http://www.hth.com/filelibrary/txtfiles/losa.txt>
- **Stamp vs PICs in Commercial Applications:**
<http://www.phanderson.com/stamp/commercial.html>
- **BASIC Stamp Applications:**
<http://www.tradetech.co.nz/basic%20stamp/applications.htm>
- **Shaun's Basic Stamp II Project's:**
<http://www.geocities.com/SiliconValley/Orchard/6633/projects.html>
- **Nuts & Volts Magazine, List of Stamp Applications:**
<http://www.nutsvolts.com/stmpindx.htm>

Basic Stamp Accessories

- **Parallax BASIC STAMP Accessories:**

http://www.parallaxinc.com/html_files/downloads/downloads_accessories.htm

- **APEXValue BASIC STAMP Accessories:**

http://www.apexvalue.com/basic_stamp_access.htm

- **CVTech BASIC STAMP Accessories:**

<http://www.cvtech.com.au/stampsinclass/price.htm#Basic%20Stamp>

- **ARWA-Tech BASIC STAMP Accessories:**

<http://www.arwa-tech.com/electronics.htm>

- **Robot Store:**

<http://www.robotstore.com/catalog/list.asp?cid=13>

Shops Selling Basic Stamp

- Robot Store: <http://www.robotstore.com>
- Parallax:
http://www.parallax.com/html_pages/products/basicstamps/basic_stamps.asp
- GazBot Robotics: <http://www.gazbot.com>
- HVWTech:
<http://www.hvwtech.com/pages/products1a.asp?CatID=7&SubCatID=27>
- RF Digital Corp. :
http://www.rfdigital.com/subcategory.htm?subcategory=Basic_Stamp_Microcontrollers

Resources for Basic Stamp

books

- The microcontroller application cookbook by matt gilliland , volume 1 and 2
- Programming and customizing the basic stamp by scott edwards
- The basic stamp 2 – tutorial and applications by peter H.Anderson
- Microcontroller projects with basic stamps by Al Williams

Online Compendia

<http://www.geocities.com/SiliconValley/Orchard/6633/projects.html>

<http://www.bobblick.com/index.html>

<http://www.geocities.com/SiliconValley/Orchard/6633/projects.html>

<ftp://nutsvolts.com/stampaps/>

Stamp Accesories

<http://www.digikey.com/>

<http://www.dunfield.com/>

<http://www.steroidmicros.com/>

<http://www.iar.com/>

Hobby Shop and Vendor web sites

<http://www.towerhobbies.com/>

<http://www.grainger.com/>

<http://www.wirz.com/>

<http://www.maplin.co.uk/>

IC manufacturers

- <http://www.nsc.com/>
- <http://www.dalsemi.com/>
- <http://www.design-net.com/>
- <http://www.maxim-ic.com/>

MECHATRONICS – MAE576

MINIASSIGNMENT #3

Submitted by: Gaurav Kimothi

UB Person No: 3059-5804

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Stamp related books

TITLE	AUTHOR	PUBLISHER
Programming and customizing the Basic Stamp	Scott Edwards	McGraw-Hill
Programming and customizing the Basic Stamp Computer	Scott Edwards	McGraw-Hill
The microcontroller application cookbook featuring the Basic Stamp 2	Matt Gilliland	WoodGlen Press
Basic Stamp: An introduction to Microcontrollers	Klaus Zahnert, Claus Kuhnel	Butterworth-Heinemann
Microcontroller Projects using the Basic Stamp	Al Williams	CMP Books
Basic Stamp Manual Version 2.0	Parallax Inc. Staff	Parallax Inc.
Basic Stamp Collecting	George Register, LS Gattis, Louie Smith Gattis III	Cheetah Publishing
Basic Stamp Collecting for pathfinders: A youth enrichment skill		Cheetah Publishing
Stampworks Manual Version 1.1	Jon Williams	Parallax Inc.
Les Basic Stamp	Christian Tavernier	
The Nuts and Bolts of Basic Stamps: Volume1-3		Parallax Inc.
Basic Stamp 2p Commands, Features and Projects	Klaus Zahnert, Claus Kuhnel	
Inside the Basic Stamp 2	Brian Forbes	

Online Compendia of Stamp Applications

- 1) Nuts & Bolts Magazine: Index of Stamp Applications
<http://www.nutsvolts.com/stmpindx.htm>
- 2) LOSA- List of Stamp Applications <http://www.hth.com/losa/>
- 3) Basic Stamp Applications
<http://www.tradetech.co.nz/basic%20stamp/applications.htm>
- 4) Web Stamp <http://www.geocities.com/SiliconValley/Orchard/6633/links.html>
- 5) HTH Stamp Archive <http://www.hth.com/filelibrary/BS2-IC/>
- 6) Parallax FTP Site <ftp://ftp.parallaxinc.com/>
- 7) Parallax Basic Stamp 1 applications <http://www.dontronics.com/stamp.html#app>

Stamp Accessories

- 1) Parallax <http://www.parallax.com/>
- 2) Stamps in Class <http://www.stampsinclass.com/>
- 3) Nuts and Bolts Magazine <http://www.nutsvolts.com/>
- 4) Scott Edwards Electronics <http://www.seetron.com/>
- 5) Solutions Cubed <http://www.solutions-cubed.com/>
- 6) AWC Electronics <http://www.al-williams.com/index.htm>
- 7) HVW Technologies <http://www.hvwtech.com/pages/default.asp>
- 8) Tower Hobbies <http://www.towerhobbies.com/>
- 9) The WeatherStamp Meteorological Station <http://www.weatherstamp.com/>
- 10) Mike's Electronics Page <http://www3.ns.sympatico.ca/michael.rankin/>
- 11) Peter Anderson's Page <http://www.phanderson.com/>
- 12) Vlad's Site <http://hem2.passagen.se/jaksel/>
- 13) Bob Blick's page <http://www.bobblick.com/index.html>
- 14) EME Systems <http://www.emesys.com/>
- 15) Mark's Homepage <http://www.mastincrosbie.com/mark>
- 16) Enhanced Math for the Basic Stamp2
http://www.silab.it/frox/stamp/bs2_math.htm
- 17) Reynolds Electronics <http://www.rentron.com/>
- 18) The Complete MAC/ Basic Stamp2 Page <http://www.43south.co.nz/stamps/>
- 19) Fred Kockelbergh, Deptt. Of Biology, University of Antwerp, Belgium
<http://www.uia.ac.be/bio/pleco/TECH/technical.html>
- 20) Shaun Wilson Basic Stamp2 Page
<http://www.geocities.com/SiliconValley/Orchard/6633/index.html>
- 21) Visual Basic and the Basic Stamp2 <http://www.picobay.com/VB.html>

Hobby Shops Selling Basic Stamp

- 1) Jameco Electronics: <http://www.jameco.com/>
- 2) Maplin Electronics: <http://www.maplin.co.uk/>
- 3) HVW Technologies: <http://www.hvwtech.com/>
- 4) Radio Shack: <http://www.radioshack.com/>
- 5) Digi-Key: <http://www.digikey.com/>
- 6) All Electronics Corporation: <http://www.allcorp.com/>
- 7) Mouser Electronics: <http://www.mouser.com/>
- 8) Alltronics: <http://www.alltronics.com/>
- 9) WarBurton Technology: <http://warburtontechnology.saffas.com/>
- 10) Pond Electronics: <http://www.pond.ie/>

Books :

- **Programming and Customizing the Basic Stamp**
by [Scott Edwards](#).
- [Stamp II Communications and Control Projects](#) -- by Tom Petruzzellis,
Thomas Petruzzellis; Paperback.
- [Stamp II Communications and Control Projects](#) -- by Tom Petruzzellis,
Thomas Petruzzellis; Paperback.
- [The Microcontroller Application Cookbook](#)
by Matt Gilliland, Ken Gracey.
- [The Microcontroller Application Cookbook, Vol 2. with BASIC Stamp 2 Homework Board](#)
by Matt Gilliland.
- [Basic Stamp](#)
by Claus Kuhnel, Klaus Zahnert.
- [The New Southern Basics: Traditional Southern Food for Today](#)
by Martha Phelps Stamps.
- [Stamp II Communications and Control Projects](#)
by Tom Petruzzellis, Thomas Petruzzellis.
- [Microcontroller Projects With Basic Stamps](#)
by Al Williams.
- [Basic Philately](#)
by Kenneth A. Wood.
- [StampWorks](#)
by Jon Williams, Parallax Inc.
- [Microcontroller Projects Using the Basic Stamp 2nd Edition](#)
by Al Williams.
- [The Basic Stamp 2 - Tutorial and Applications](#)
by Peter H. Anderson.
- [Basic Philately](#)
by Wood.
- [The Nuts and Volts of BASIC Stamps, Volume 3](#)
Matt Gilliland's [Microcontroller Application Cookbook](#)
- [StampWorks](#) Jon Williams - 200 pp.
- [Microcontroller Application Cookbook Volumes 1 and 2.](#)

Accessories:

- http://www.parallaxinc.com/html_files/downloads/downloads_accessories.htm
- <http://www.cvtech.com.au/stampsinclass/price.htm#Basic%20Stamp>
- http://www.stampsinclass.com/html_files/kits/stampworks.asp
- <http://www.nutsvolts.com/adlinks.htm>
- <http://www.tradetech.co.nz/basic%20stamp/downloads.htm>
- <http://www.arwa-tech.com/electronics.html>
- <http://www.mouser.com/catalog/612/73.pdf>
- <http://www.geocities.com/stampic/links.htm>
- <http://www.rentron.com/>
- <http://www.radioshack.com/product.asp?catalog%5Fname=CTLG&category%5Fname=CTLG%5F010%5F017%5F001%5F000&product%5Fid=900%2D8761>
- <http://216.239.33.100/search?q=cache:yRppPaYaEokC:homepages.paradise.net.nz/dkwinter/pic.htm+basic+stamp+shops&hl=en&ie=UTF-8>

Applications:

- [L.O.S.A](http://www.hth.com/losa.htm) Text file of Stamp Applications, includes URLs to projects www.hth.com/losa.htm
- **Nuts and volts Magazine**
[Stamp Applications from Nuts and Volts magazine](http://www.nutsvolts.com/stmpindx.htm) (also, see [our articles](#)) <http://www.nutsvolts.com/stmpindx.htm>
- <http://www.tradetech.co.nz/basic%20stamp/applications.htm>
- http://www.parallaxinc.com/html_files/customer_apps/customer_apps.htm
- [EME Systems](#): Electronically Monitored Ecosystems. Home of the OWL2c, and tons of information on the BASIC Stamp. Excellent page on the [Stamp IISX](#).
- [Bob Blick's Uses for Basic Stamps](#) : Good examples of projects. Schematics and code listings.

- [Seetron's LCD Application Notes](#) : Output graphs with a Stamp.
- [Shaun's Basic Stamp Projects](#) : RF Remote Control, Visual Basic Interfacing, Altimeter.
- Radio Shack
<http://www.radioshack.com/searchplus.asp?type=ALL&find=basic+stamp&pagetype=toggle>.
- [The Microcontroller Application Cookbook](#).

Hobby shops selling stamps:

- Leff Electronics .
- HVWTech.
- River Junction Hobbies .
- J & C Hobbies .
- A.B. Charles & Sons .
- Hooter Chassis & Hobby Shop, .
- Radio Shack .