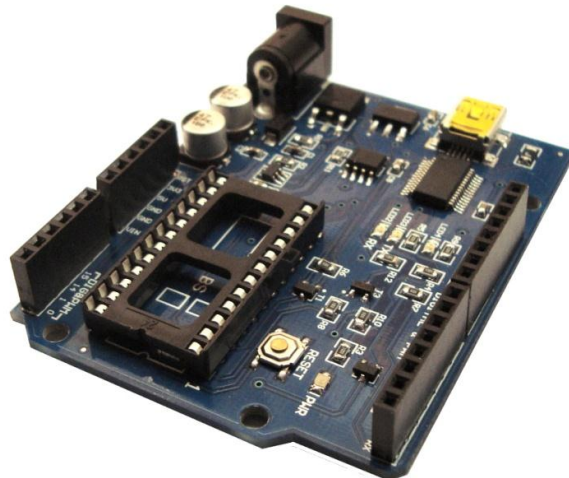# User's Manual

StampDuino

Rev. 1.0

MCI-MA-0142

MCI Electronics.

Luis Thayer Ojeda 0115. Oficina 402
Santiago, Chile

www.olimex.cl

Tel: +56 2 3339579
Fax: +56 2 3350589

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Attention: Any changes or modifications done to the device will void its warranty, unless expressly authorized by MCI Electronics.

Manual Code: MCI – MA - 0142

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1   INTRODUCTION

This board was designed to be used with the Basic Stamp 2 modules, and their most recent Arduino versions. This way, the board is compatible with most Arduino shields.

With StampDuino you can program your Basic Stamps fast and easily, by using a USB mini cable and the software provided by Parallax.

This module can be powered through the USB port or by an external power source. If your system requires more than 500 mA (maximum current provided by the USB port), you will need an external power supply. When using an external power supply connected to the 5V Power Jack, a maximum of 1A can be drawn.

An LED is connected to pin 13, which can be used to make output tests (digital and PWM), and as a visual feedback.

This board was designed to be compatible with most Arduino shields, reducing space and size requirements, with the purpose of optimizing the users systems. For instance, by using our Arduino Relay Shield you will be able to read 2 dry contact inputs and control 2 relays, building a control system.

The StampDuino also has a 3.3VDC regulator, to make the board more versatile and able to work easily with other devices. The regulator has a limit of 150mA.

There is tutorial to work with Basic Stamp, which can be downloaded from **here**.

2   FEATURES

- Power and communication through USB port.
- Stampduino keeps all the 16 digital I/O & PWM pins free to use.
- Compatible with some Arduino shields.
- Integrated serial communication LEDS (FTDI).
- LED connected to pin 13.
- Reset button.
- 7 to 12 VDC can be used.
- Fuse protected USB port.

3 DEVICE PARTS
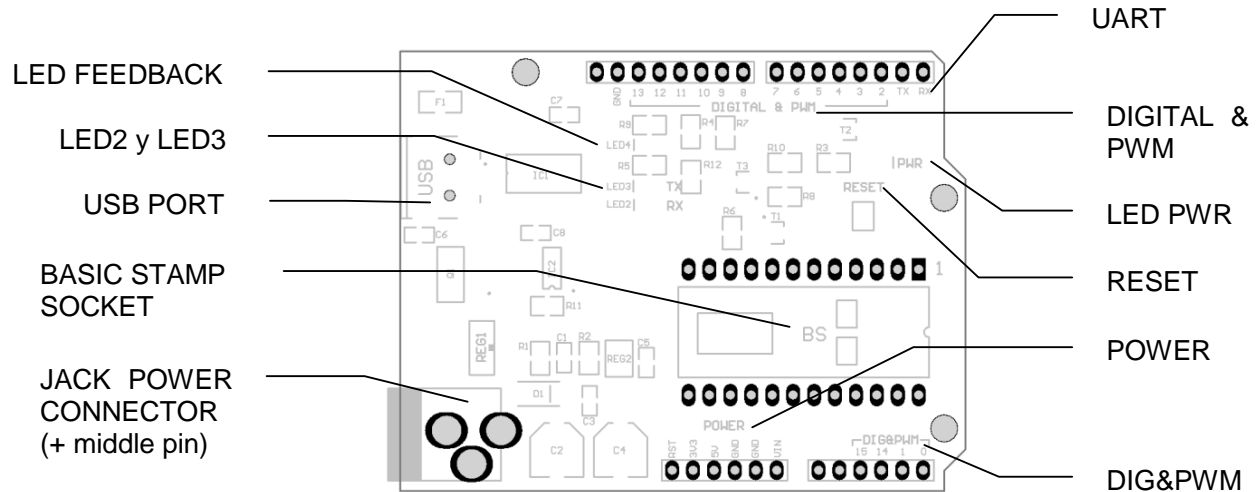
- *USB PORT:* USB input for communication and/or power.

- *JACK POWER CONNECTOR:* external power input. Can be used with while the USB port is connected (positive, middle pin connector).

- *BASIC STAMP SOCKET:* Basic Stamp module socket (DIP socket version).

- *UART:* Basic Stamp serial communication.

- *DIGITAL & PWM:* general purpose pins.

- *DIG&PWM:* general purpose pins.

- *POWER:* Board output power.

- *LED PWR:* Energized board LED indicator.

- *LED4:* LED feedback.

- *LED2 y LED3:* UART communication LED indicator.

- *RESET:* Basic Stamp Reset switch

4   DEVICE CONFIGURATION

4.1   Preliminary configuration

These next steps must be followed before using the device:

1. Connect the Basic Stamp board to the StampDuino as shown in the following picture: (IMPORTANT: ensure all the pins are properly placed, if not, irreparable damage may be done to the Basic Stamp module).
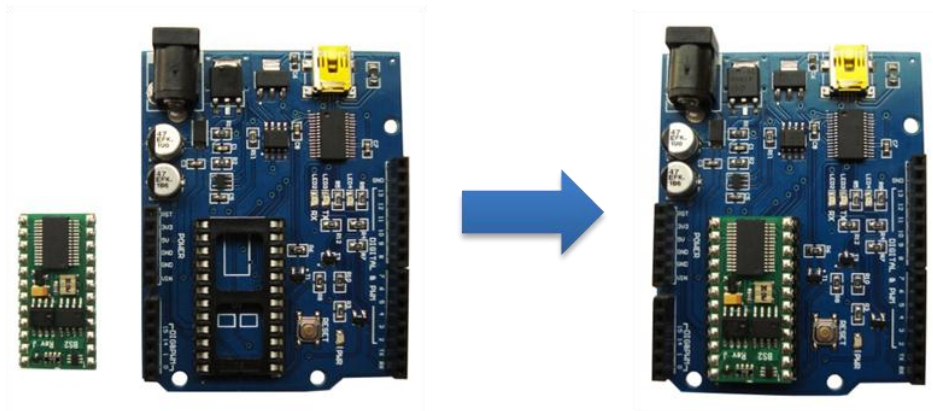
2. Connect the USB cable to the input port.

4.2   Basic Stamp Editor Software

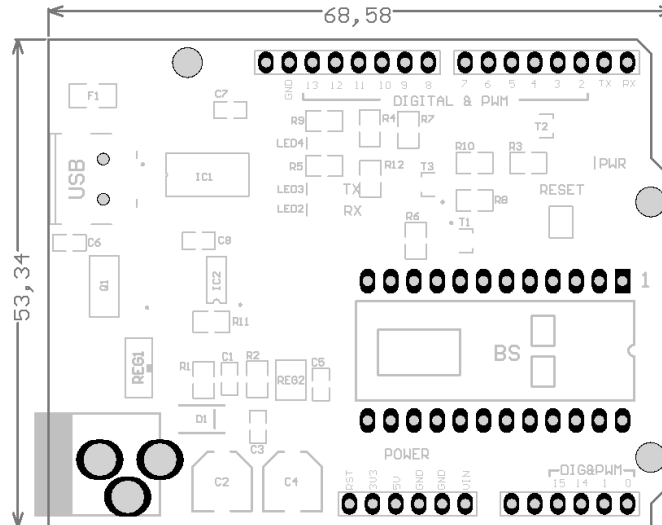Basic Stamp Editor is software developed by Parallax, which allows programming the different Basic Stamp Boards.

This software can be downloaded directly from here.

5   ELECTRICAL CHARACTERISTICS

- Power voltage range: 7-12 VDC.

- Average power consumption: ~20 mA.

- 3.3V 150mA regulator.

Luis Thayer Ojeda 0115 Of. 402 ▪ Santiago, Chile ▪ Tel. +56 2 3339579 ▪ info@olimex.cl
www.olimex.cl

6   MECHANICAL CHARACTERISTICS

Dimensions: 68.58mm x 53.34mm (length x width)

7   NOTES

- *Every time the USB port is connected the Basic Stamp resets, even if the board is powered through the Power Jack.*
- *When using a shield connected to the board, ensure it doesn't make contact with the Basic Stamp module. Stackable Header Kits are recommended for the Arduino (MCI-PRT-00746).*

8   DOCUMENT HISTORY

Revision	Date	Edited by	Description/Changes
1.0	February 08, 2012	Diego Muñoz	Initial document version