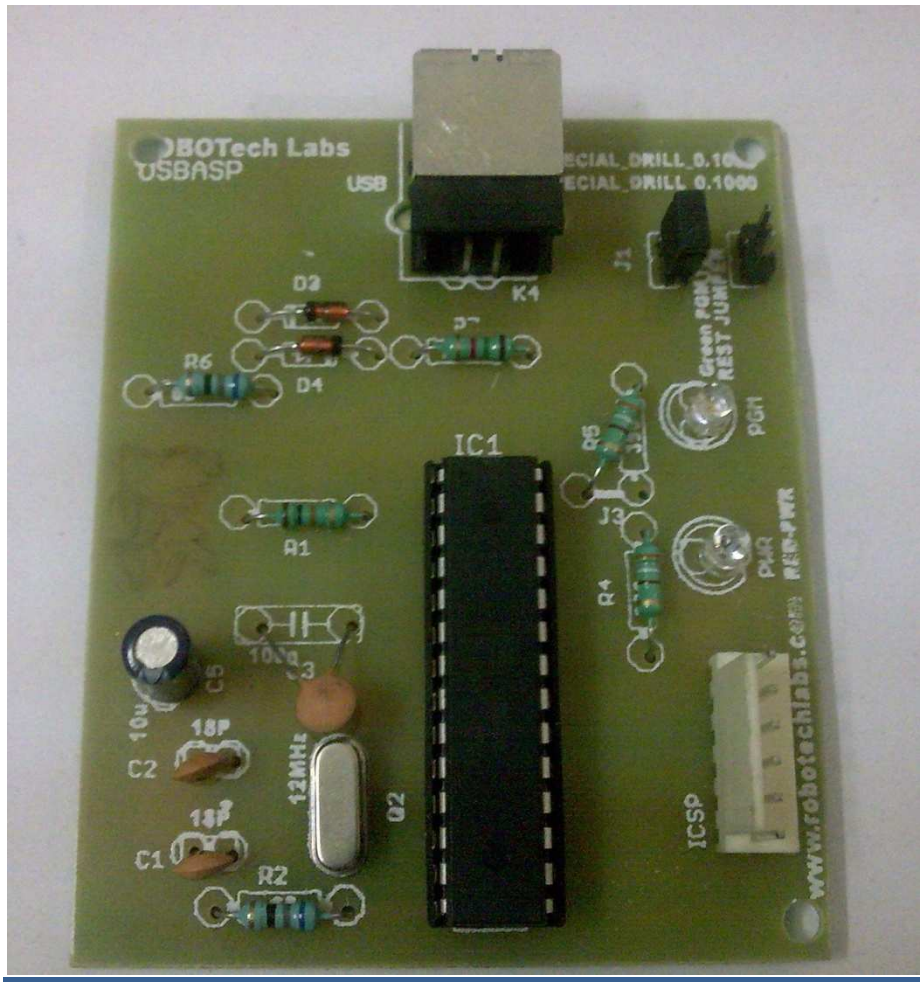

USBASP PROGRAMMER

Introduction

USBasp is an open-source USB in-circuit programmer for Atmel AVR controllers. It simply consists of an ATMega48 or an ATMega8 and a couple of passive components. The programmer uses a firmware-only USB driver; no special USB controller is needed. AVRDUDE supports USBasp since version 5.2.

Features

- Works under multiple platforms. Linux, Mac OS X and Windows XP/Vista (32 bit only) are tested.
- No special controllers or smd components are needed.
- Programming speed is up to 5kBytes/sec.
- SCK option to support targets with low clock speed (< 1.5MHz).

Drivers

On Linux and MacOS X no kernel driver is needed. Windows requires a driver for USBasp: which can be downloaded from
http://www.fischl.de/usbasp/usbasp.2009-02-28.tar.gz

Steps for installing USBasp drivers

- Connect USB cable to USBasp.
- Connect cable directly to USB port of computer avoiding Hubs.
- Wait for windows information “New Hardware Found USBASP”. If device is not detected, check the board for errors and reconnect again.
- After device is detected Driver setup wizard opens. Select where USBASP driver is located. It is in directory you’ve downloaded with firmware. If you unpacked in C: drive, than driver should be in C:\usbasp.2010-12-29\bin\win-driver\ and press next.
- After successful setup, USBasp should appear in the device list in the device manager.

Jumper settings of USB programmer

The fuse bit settings of a brand new chip of AVR is configured such that the AVR can only be programmed at low speed. J1 Jumper is used to choose the speed of the programmer.

SET J1 JUMPER for LOW SPEED.
REMOVE J1 JUMPER for HIGH SPEED.

Therefore, while programming a brand new AVR set J1 Jumper for programming at low speed. Also change the fuse bits of the new AVR such that it supports high speed programming. There is no need of J1 jumper for future

programming of the new AVR after following the previous step.

J2 Jumper is used for burning the USBasp firmware into the chip. Don’t use it unless required as it can damage the firmware in the USBasp.