



### Bill Of Materials

- U1: ATMEGA8/88
- C1, C2, C5: 0.1uF
- C3 C4: 22pF
- E1: 47uF/10V
- D1, D2: 1N4007
- D3: LED (green)
- D4: LED (red)
- R1, R10: 10K
- R3, R4: 47 Ohms
- R2: 1.5K
- R7, R8: 330 Ohms
- R5, R6, R9: 1K
- Q1: 2N3904 (NPN)
- X: 12.0MHz crystal
- USB: USB (type-B) connector

NOTE: (1) J1 is for updating/upgrading FW of on-board MCU  
 (2) J3 is for USBasp option (SPI speed selection)

Title			AVRISP-mkII/USBasp programmer		
Size	Number	Revision			
B		<a href="http://www.fun4diy.com">http://www.fun4diy.com</a>			
Date:	20-Feb-2011	Sheet of			
File:	C:\USBasp_v2\USBasp.dtb	Drawn By:	<a href="http://www.fun4diy.com">www.fun4diy.com</a>		