P1

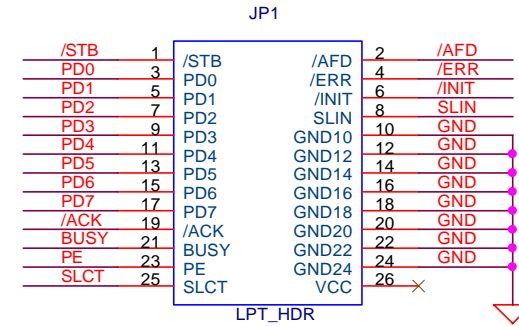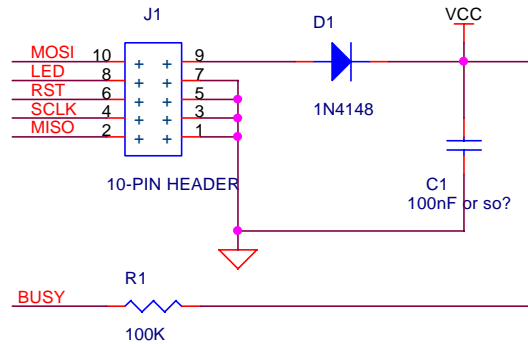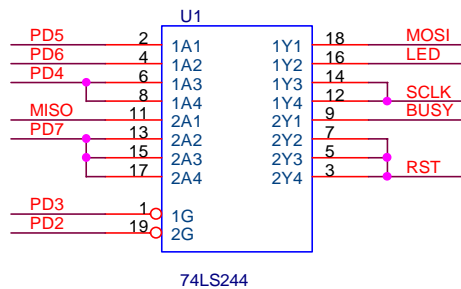| 1 | /STB |
14	/AFD
2	PD0
15	/ERR
3	PD1
16	/INIT
4	PD2
17	SLIN
5	PD3
18	GND
6	PD4
19	GND
7	PD5
20	GND
8	PD6
21	GND
9	PD7
22	GND
10	/ACK
23	GND
11	BUSY
24	GND
12	PE
25	GND
13	SLCT

CONNECTOR DB25 MALE

The Atmel dongle is housed in a 25-to-9-way adapter
housing, with a 25-way D-type plug at the printer port end
and a 10-way header at the other (See left).

But if you are lashing your circuit on 0.1" grid prototyping
board, you may prefer to use a 26-way header (see right)
and make up a 25-way D plug to 26-way ribbon-cable
mounted socket adapter. This adapter can then be used
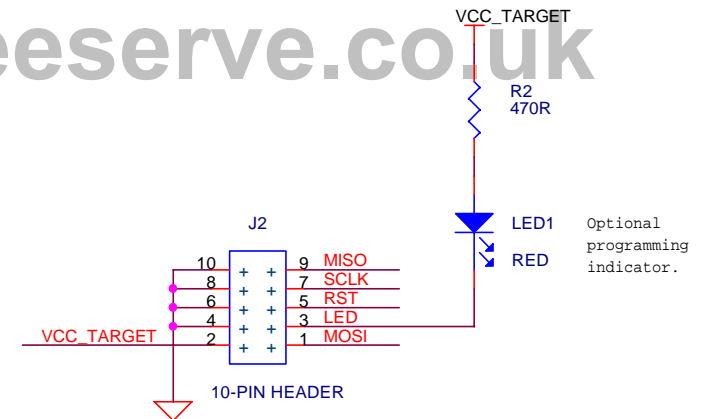on other printer-port driven projects.

JP1

/STB	1	/STB	/AFD	2	/AFD
PD0	3	PD0	/ERR	4	/ERR
PD1	5	PD1	/INIT	6	/INIT
PD2	7	PD2	SLIN	8	SLIN
PD3	9	PD3	GND	10	GND
PD4	11	PD4	GND	12	GND
PD5	13	PD5	GND	14	GND
PD6	15	PD6	GND	16	GND
PD7	17	PD7	GND	18	GND
/ACK	19	/ACK	GND	20	GND
BUSY	21	BUSY	GND	22	GND
PE	23	PE	GND	24	GND
SLCT	25	SLCT	VCC	26	

LPT_HDR

DRAFT! www.howell1964.freeserve.co.uk

U1

PD5	2	1A1	1Y1	18	MOSI
PD6	4	1A2	1Y2	16	LED
PD4	6	1A3	1Y3	14	
	8	1A4	1Y4	12	SCLK
MISO	11	2A1	2Y1	9	BUSY
PD7	13	2A2	2Y2	7	
	15	2A3	2Y3	5	
	17	2A4	2Y4	3	RST
PD3	1	1G			
PD2	19	2G			

74LS244

J1

MOSI	10		9	
LED	8		7	
RST	6		5	
SCLK	4		3	
MISO	2		1	

10-PIN HEADER

D1
1N4148

VCC

C1
100nF or so?

R1
BUSY
100K

NB: This header is the 'wrong' way round (rotated)
with respect to the target board connector.
Either this was a mistake, or done deliberately
to trip up people trying to make their own.
You must decide whether to use the
"stupid but compatible with Atmel dongle and cable" way,
or the "sensible but different" pin X to pin X wiring.
Personally I favour the latter, but if there is a chance of
mixing things then Murphy's law applies!

Alternatively you can make sure nobody uses the wrong
cable, by soldering the cable at the dongle end!

VCC_TARGET

R2
470R

LED1 Optional
RED   programming
      indicator.

J2

	10		9	MISO
	8		7	SCLK
	6		5	RST
	4		3	LED
VCC_TARGET	2		1	MOSI

10-PIN HEADER

This is the way the headers should be at the target.
Seen looking down onto header pins, pin 1 is bottom right.
All targets should have this pinout.
Keyed box headers should ensure plugs are connected
the right way round.

Title	Atmel Programming Dongle	
Size A4	Document Number K1003	Rev 0.1
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