



BOB-II Pin Description

Version 1.2 ~ July 14, 1999

Pin	Description
1	V+12 IN, Raw power supply input. 9~15VDC unregulated source is acceptable. $I_{typ} \approx 65mA$ with no load on pin 3 (auxiliary power output) or pin 15.
2	Ground
3	V+5, $\pm 5\%$ regulated DC output. Up to 50mA available to external device (adds to pin 1 input current).
4	PD5, Reserved.
5	PD4/T0, Reserved.
6	PD3, Reserved.
7	PD2/INT0, "RS-232" serial input, inverted data, 5V logic levels. Connects directly to a UART TX output.
8	PD1, Reserved.
9	PD0, Reserved.
10	RES\, CPU Reset input (active low) ² .
11	PD6, Reserved.
12-13	PB0&1, Baud rate select inputs ² . Weak internal pullup (see notes). For 2400bps, ground both. For 4800bps, ground pin 13 only. For 9600bps, do nothing. For 19.2Kbps, ground pin 12 only.
14	PB2, Reset Flag output (active low), approx. 15mS negative pulse during CPU reset. Use external 4.7K pulldown resistor.
15	PB3, Mode Indicator output. Pulls low if input video is missing. Can drive LED with series resistor.
16	PB4, Video Mute output, pulses high while video output is not available.
17	PB5/MOSI, Video Chip Select (active low).
18	PB6/MISO, Video Data.
19	PB7/SCK, Video Clock.
20	SYNC, Composite sync output (separated from video input), 5V logic compatible.
21	CLVL, Character intensity control input, 1.0~3.0VDC range (ground for standard application).
22	SLVL, Screen/Background intensity control input, 1.0~3.0VDC range (ground for standard application).
23	CVO2, 2Vpp unbuffered Video Out #2 (no-connect for standard application).
24	CVO1, 2Vpp unbuffered Video Out #1 (tie to EF IN for standard application).
25	Ground
26	EF IN, Emitter Follower video buffer Input.
27	Ground for video output cable shield.
28	Video Output (EF output), buffered, delivers 1Vpp into 75 Ω terminated coaxial cable. Note: This output produces incidental bias, about +1VDC when correctly terminated.
29	Ground for video input cable shield.
30	Video Input, 75 Ω termination provided internally, 1Vpp composite video signal required. Tolerates up to +2.5VDC incidental bias.

Notes:

1. Only a few pins must be connected. See the **BOB-II FAQ** for basic hookup information.
2. In noisy electrical environments, bypass pin 10 (RES\) to ground with .001uF or more (may depend on external reset driver circuit, if used), and add 4.7K pullups to V+5 on pins 12 and 13 (unless permanently grounded for baud rate selection).