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BD118 App. boards

4 July 2012

Bi-directional RF Remote Control application boards

These simple application boards use firmware based on the familiar CTA88 remote control systems to implement a bi-directional control link. A system consists of a master board (which initiates communication burst cycles) and a slave (which responds to them). In hardware terms these boards are the same, but have different firmware loaded.

Figure 1: BD118 application boards

A single relay output is provided on each board, controlled by a logic (or switch) input on the "opposite" board. This product only operates in one mode: the radio link operates continuously, and the output simply reflects the state of the input ("momentary" operation).

The radio link uses a 10% duty cycle, 0.3 second burst cycle. The data format employed has an 8 bit address, which is set up on a DIP switch.

LED indicators are provided for power, relay output state and "valid communication link established". (On the "master" this LED is lit constantly if the link is functional. On the "slave" board this LED blinks on with each burst received from the master)

Features
- 8 bit address select switch
- A relay to control mains powered devices rated up to 8A, 240VAC
- Visual LED indication of power, valid code received and active relay
- RF module range testing
- Logic or Switch input for momentary control of relay
- Momentary relay output
- Setup is simple as Plug-and-Play

Kit Contents

The BD118 Application kit is supplied with the following contents:

- 1   BD188 Encoder/Decoder Master board
- 1   BD188 Encoder/Decoder Slave board
- 2   Radiometrix Transceiver module *(ordered separately)*
- 2   1/4-wavelength monopole or helical antennas
- 1   BD118 Application board manual
- 1   Data sheet of Radio module ordered

Additional requirement
- External power supply (24V, 12V and 5V version available)

Features:

Interfaces	
Output	8amp 240v rated SPDT "change over" relay 3.81mm pitch 3 way 2 part "Phoenix" type terminal
Input	Active low logic input Pullup to 5v, and protection diodes, provided Compatible with N/O volt-free closing contact 3.81mm pitch 2 way 2 part "Phoenix" type terminal
Power	24v, 12v and 5v versions available 40mA max (plus relay coil current) 3.81mm pitch 2 way 2 part "Phoenix" type terminal
RF	SMA (or optional terminal block)

Indicators	
	Power on LED (red)
	Relay state LED (red)
	Valid Comms. LED (green)

BD118 control chip	
	Clock 10MHz (ceramic resonator)
	Data rate 3.6kbps Biphase coded burst
	Addressing User programmable 8bit address (DIP switch)
	Response time <0.5s

Size	
	76 x 63 x 16mm (excluding connectors)
	(four 3.3mm diameter mounting holes are provided)

Operating temperature	
	-20 to +70 degrees centigrade (some radios may be limited to -10/+55)
	(Storage -30 to +70 degrees)

Radio modules	
	Any BiM pinout transceiver
	(RDL2, NiM2, any BiM)
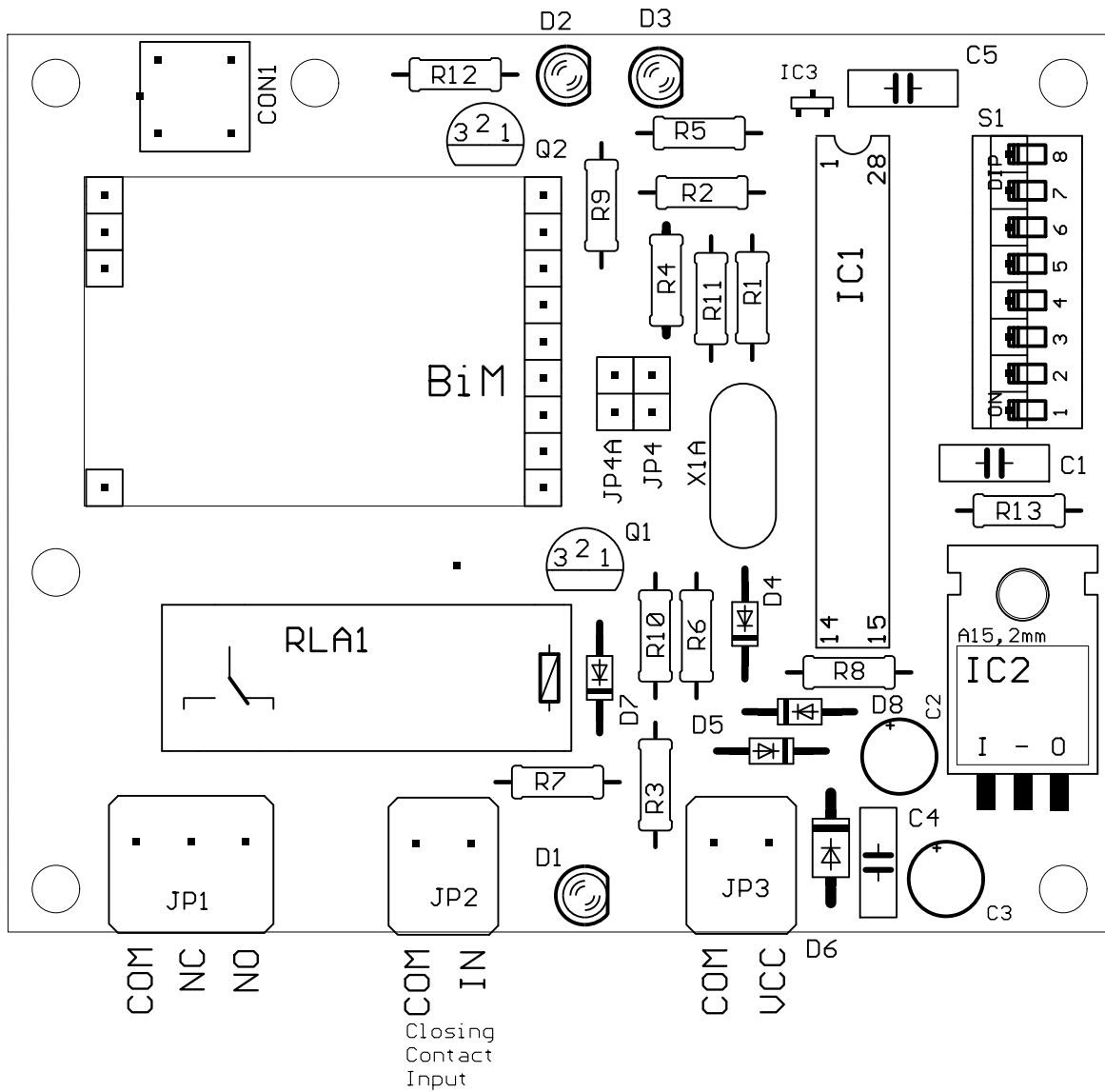
Figure 2: BD118 Board Component Layout
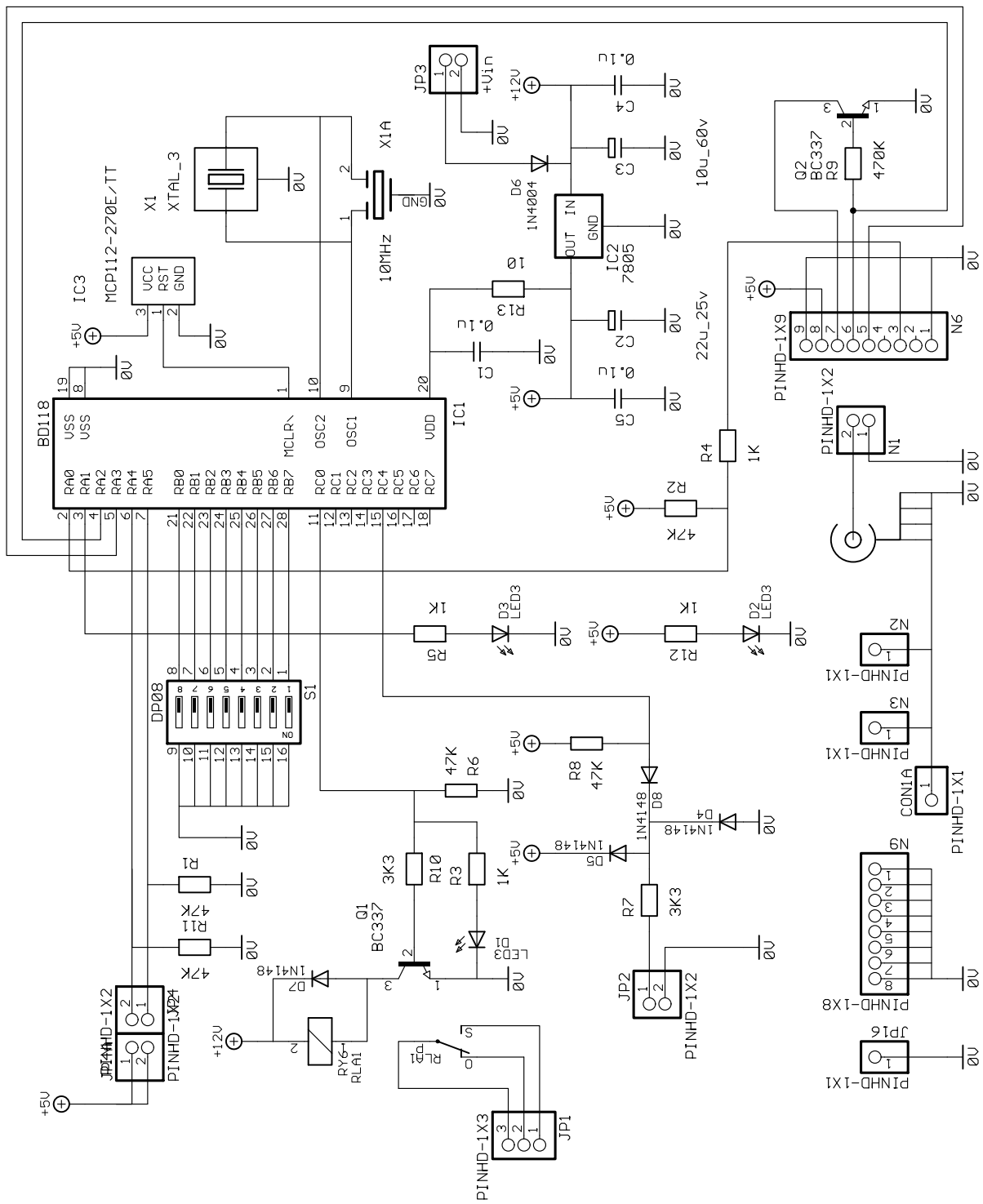
Figure 3: BD118 Schematics

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The Intrastat commodity code for all our modules is: 8542 6000

R&TTE Directive

After 7 April 2001 the manufacturer can only place finished product on the market under the provisions of the R&TTE Directive. Equipment within the scope of the R&TTE Directive may demonstrate compliance to the essential requirements specified in Article 3 of the Directive, as appropriate to the particular equipment.
Further details are available on The Office of Communications (Ofcom) web site:
http://www.ofcom.org.uk/radiocomms/ifi/

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