This board tells the coatamatic plug (remote computer) when there is filament current. The primary of transformer T1 is in series with the filament. The output of the transformer generates the supply for the op-amp LM741 and also one of its inputs. The other input is adjustable to set the current at which the relay operates to short pins 4 and 5 on the coatamatic plug. Usual faults: 1. Zener diodes go faulty - can destroy the board. 2. Bridge Rectifier goes faulty. R2 The above 2 faults normally occur when the filament current has been very high - for instance when the filament transformer in the Red-Box R3 8K2 goes short circuit. RR SKB 1.2/04 R4 330K 1 D2 8K2 6V8 0.47uF R8 10K TRANSFORMER R10 <sub>560</sub>R 1 D3 R6 6V8 N1 2K2 R7 10K LM741 C3 = 47uF K1 To Coatamatic Plug 2K7 R1 2K7 D31A3140 47uF Title Signal Print for EKS110, drawn by Colin Hinson for Highland-Scientific Any comments on this diagram: please email Colin@Highland-Scientific.com **Document Number** Size Rev Thursday, January 05, 2012 Date: Sheet