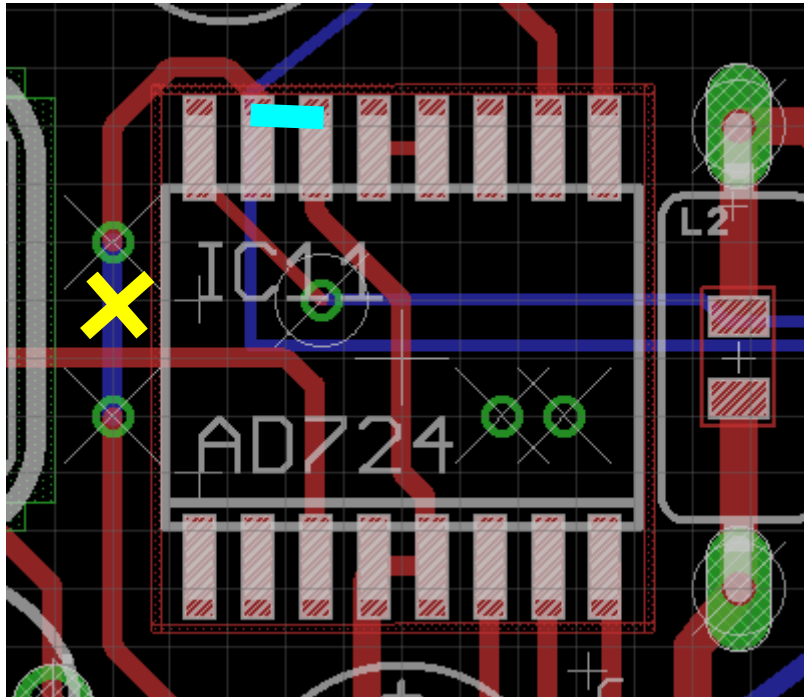
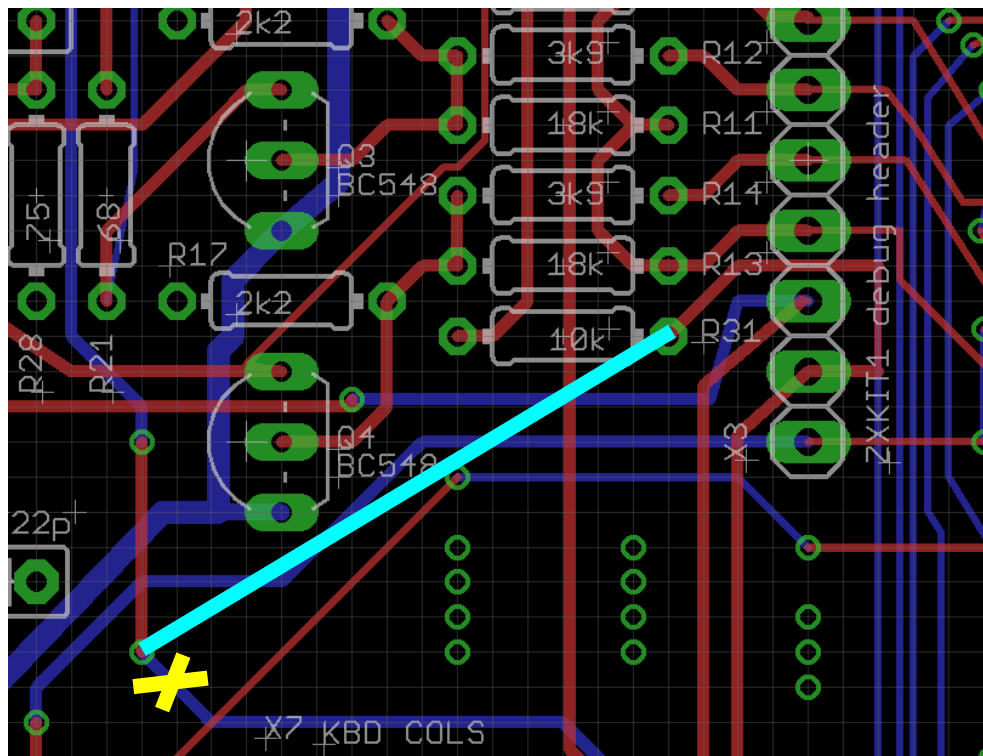


## Manual to upgrade KARABAS rev.B1 PCB to work with 1024kB RAM Extension PCB:

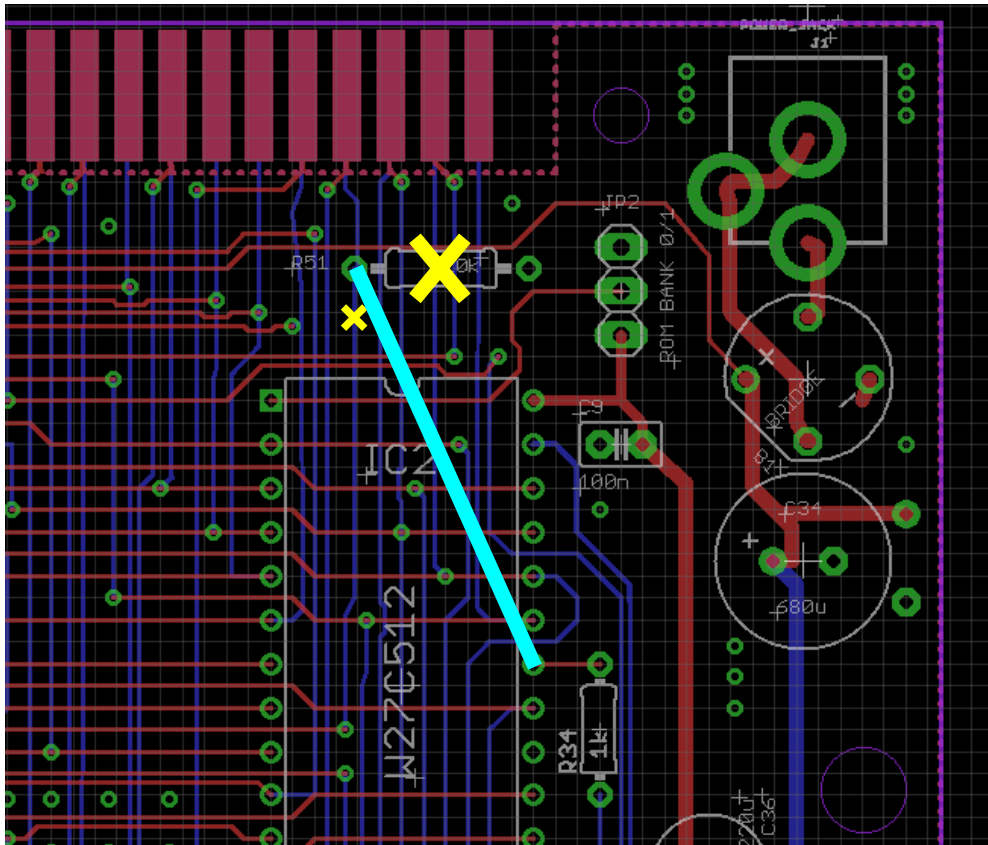
1) free signal VIDEO\_VSYNC (PIN\_96 Altera), PAL coder VS signal (P15) short to VCC (P14):



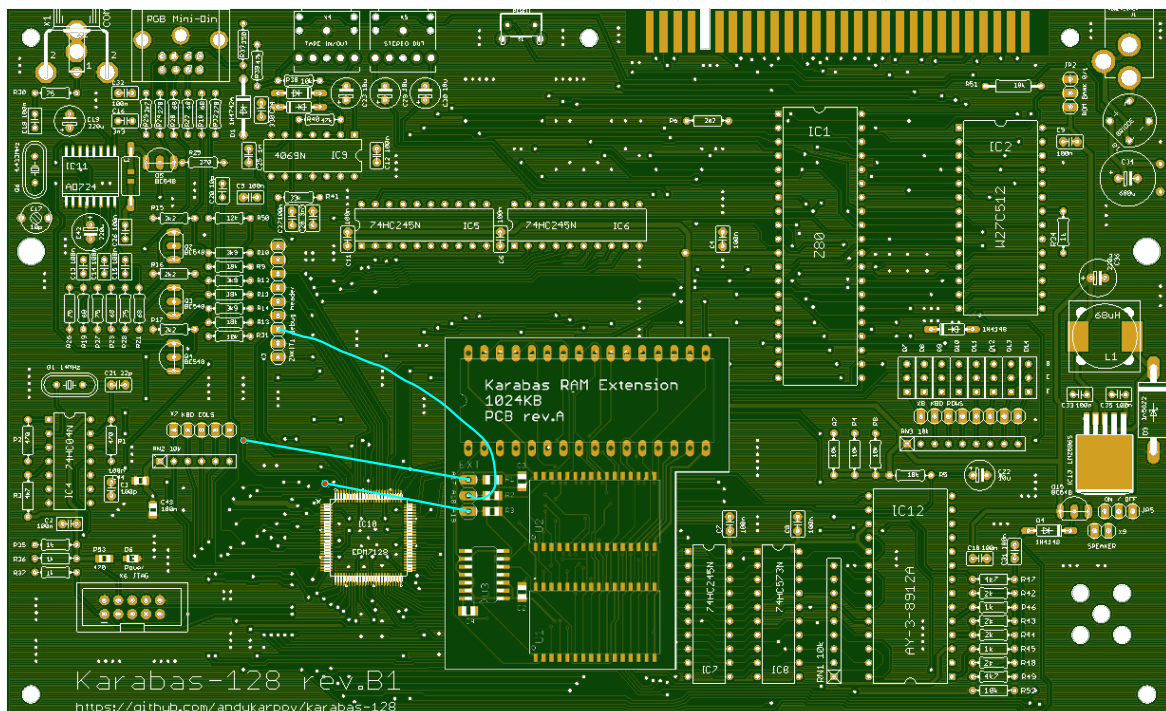
2) free signal VIDEO\_SYNC (PIN\_98 Altera), re-route sync signal from VIDEO\_HSYNC (PIN\_94 Altera) to the Q5 base instead of VIDEO\_SYNC:



3) free signal BUS\_N\_ROMCS (PIN\_24 Altera), remove resistor R51, re-route ZX BUS signal BUS\_N\_ROMCS to the ROM's pin 22 (IC2):



4) Solder RAM extension board instead of IC3 directly, without sockets, otherwise it will not fit by height. If the board has a socket for IC3 - remove it before. Connect RAM Extension board signals A17 with PIN\_98 Altera, A18 with PIN\_96 Altera, A19 with PIN\_24 Altera through the nearest vias / solder pads:



5) Upload an updated CPLD firmware from git branch ...