

## Modification to run CPU09CMI on 5MHz bus.

Now we need the Q clock on the 09FLP

Replace xtal into 20MHz.

Replace C1 and C2 by 15pF.

Place 10M smd between crystal pins.

Replace GAL CMI\_1 by CMI-4\_1

Only use the HD63C09.

### Skip next if already on 16Mhz modification!

*On top side:*

Cut trace between U4-14 and J1 C-21 (B\_VMA-)

For REV:0.9 print only cut trace from J1 A23 to R15

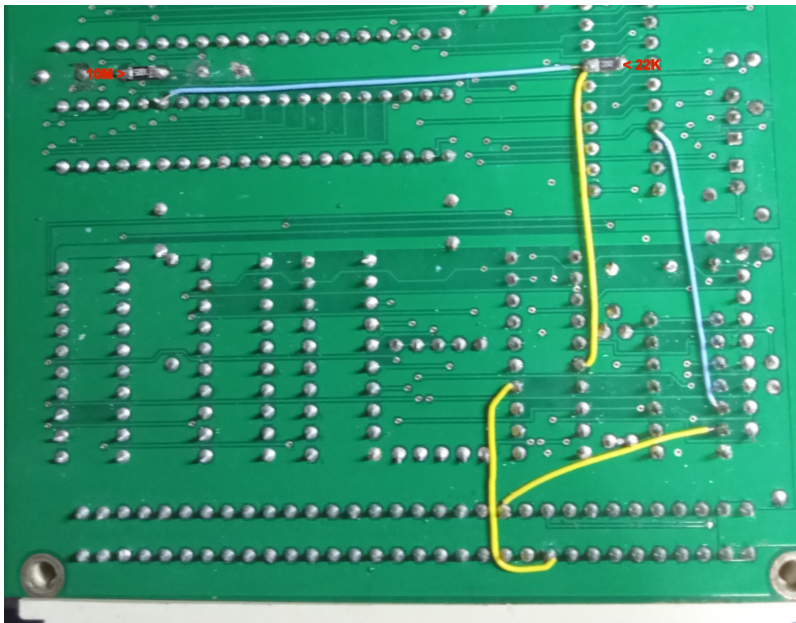
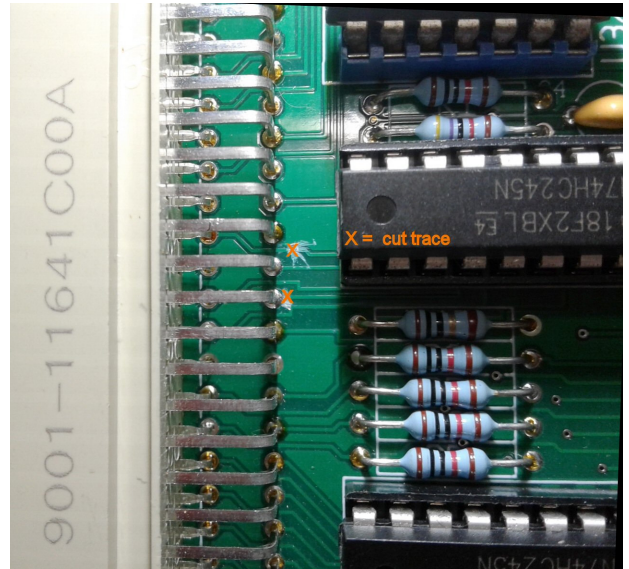
*On solder side:*

Cut trace between U13-19 and via (OVMA-)

Place 22K resistor between U13-19 and Gnd

Place wire from U6-35 to U13-19 (blue) and U4-6 (Q) (yellow)

Place wire from U4-14 to J1 A-23 (B\_Q) (yellow)



Place wire from U3-7 to J1 C-21 (B\_VMA-), **Or:**  
**To keep CPU09CMI 68x02 compatible**  
**or need VMA- signal with 68x02 on the bus**  
**for CPU09GPP or CPU09RAM card.**

*On top side:*

Cut trace between U3-4 and U3-5

*On solder side:*

Place wire from U3-5 to U13-9 (VMA) (blue)

Place wire from U3-6 to J1 C-21 (B\_VMA-) (yellow)

Remarks:

Only tested ACIA with HD63B50 chip.

CPU09RAM, CPU09IDE and FLXMIN + 09FLP still work fine.

Should work on REV:0.9 and REV:1.1 print

With 12 MHz xtal the S6802, MC68B02 can still work.

