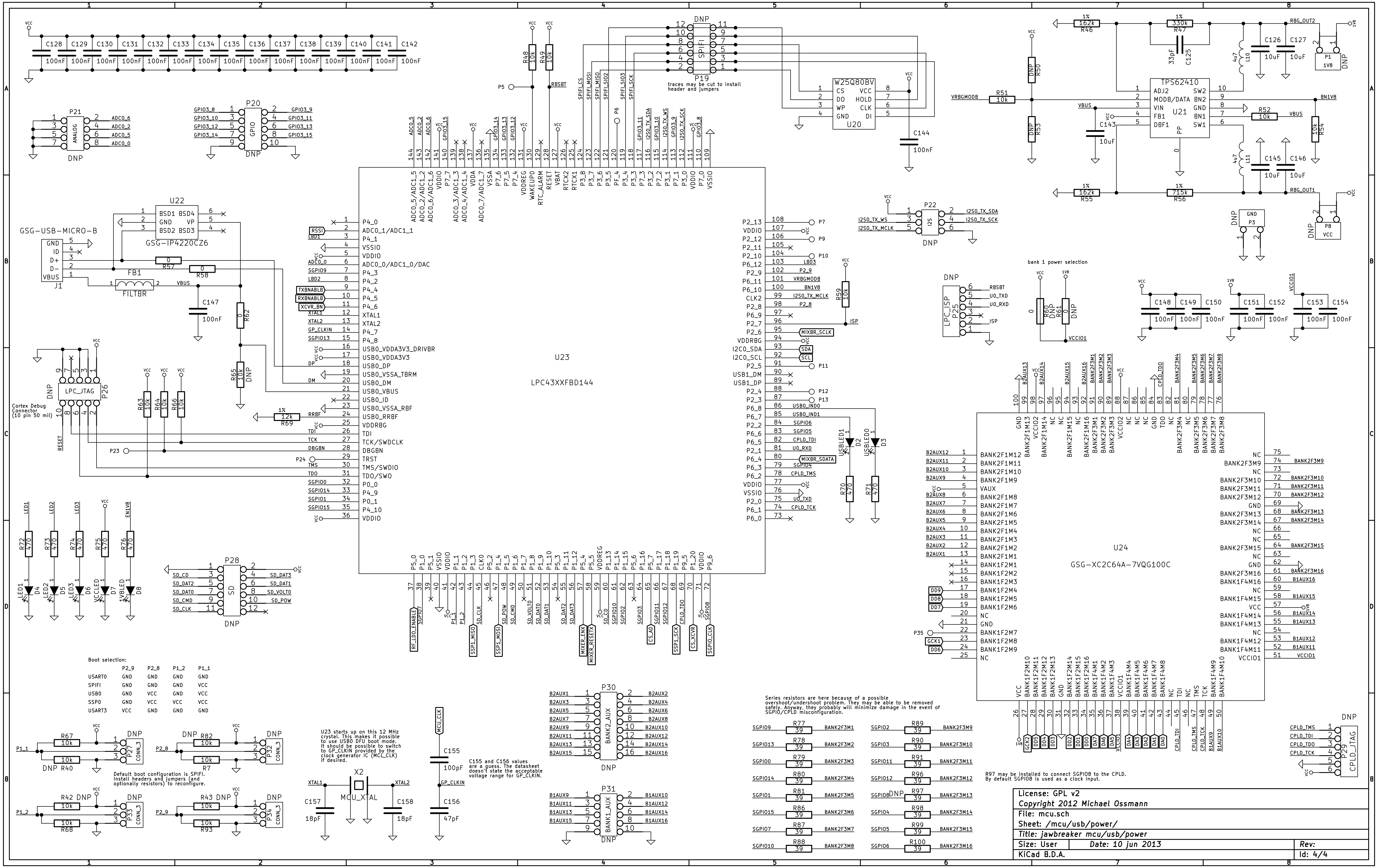


Boot selection:

	P2_9	P2_8	P1_2	P1_1
USART0	GND	GND	GND	GND
SPIFI	GND	GND	GND	VCC
USB0	GND	VCC	GND	VCC
SSP0	GND	VCC	VCC	VCC
USART3	VCC	GND	GND	GND

Default boot configuration is SPIFI. Install headers and jumpers (and optionally resistors) to reconfigure.

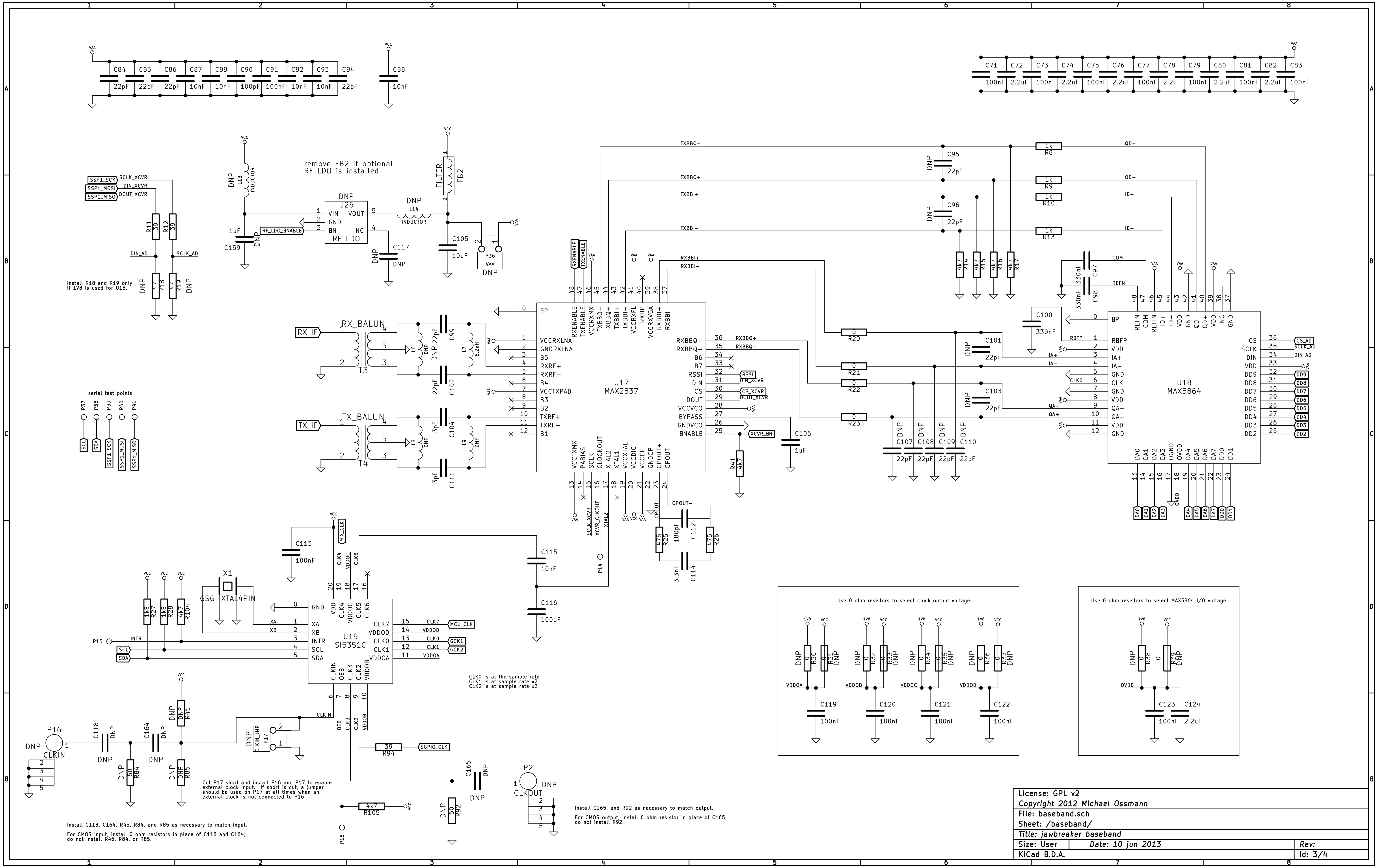
U23 starts up on this 12 MHz crystal. This makes it possible to use USB0 DFU boot mode. It should be possible to switch to GP_CLKIN provided by the clock generator IC (MCL_CLK) if desired.

C155 and C156 values are a guess. The datasheet doesn't state the acceptable voltage range for GP_CLKIN.

Series resistors are here because of a possible overshoot/undershoot problem. They may be able to be removed safely. Anyway, they probably will minimize damage in the event of SGPIO/CPLD misconfiguration.

R97 may be installed to connect SGPIO8 to the CPLD. By default SGPIO8 is used as a clock input.

File: mcu.sch
Sheet: /mcu/usb/power/
Title: jawbreaker mcu/usb/power
Size: User | *Date: 10 jun 2013* | *Rev:*
KiCad E.D.A. | Id: 4/4



Install R18 and R19 only if 1V8 is used for U18.

CLK0 is at the sample rate
CLK1 is at sample rate x2
CLK2 is at sample rate x2

Cut P17 short and install P16 and P17 to enable external clock input. If short is cut, a jumper should be used on P17 at all times when an external clock is not connected to P16.

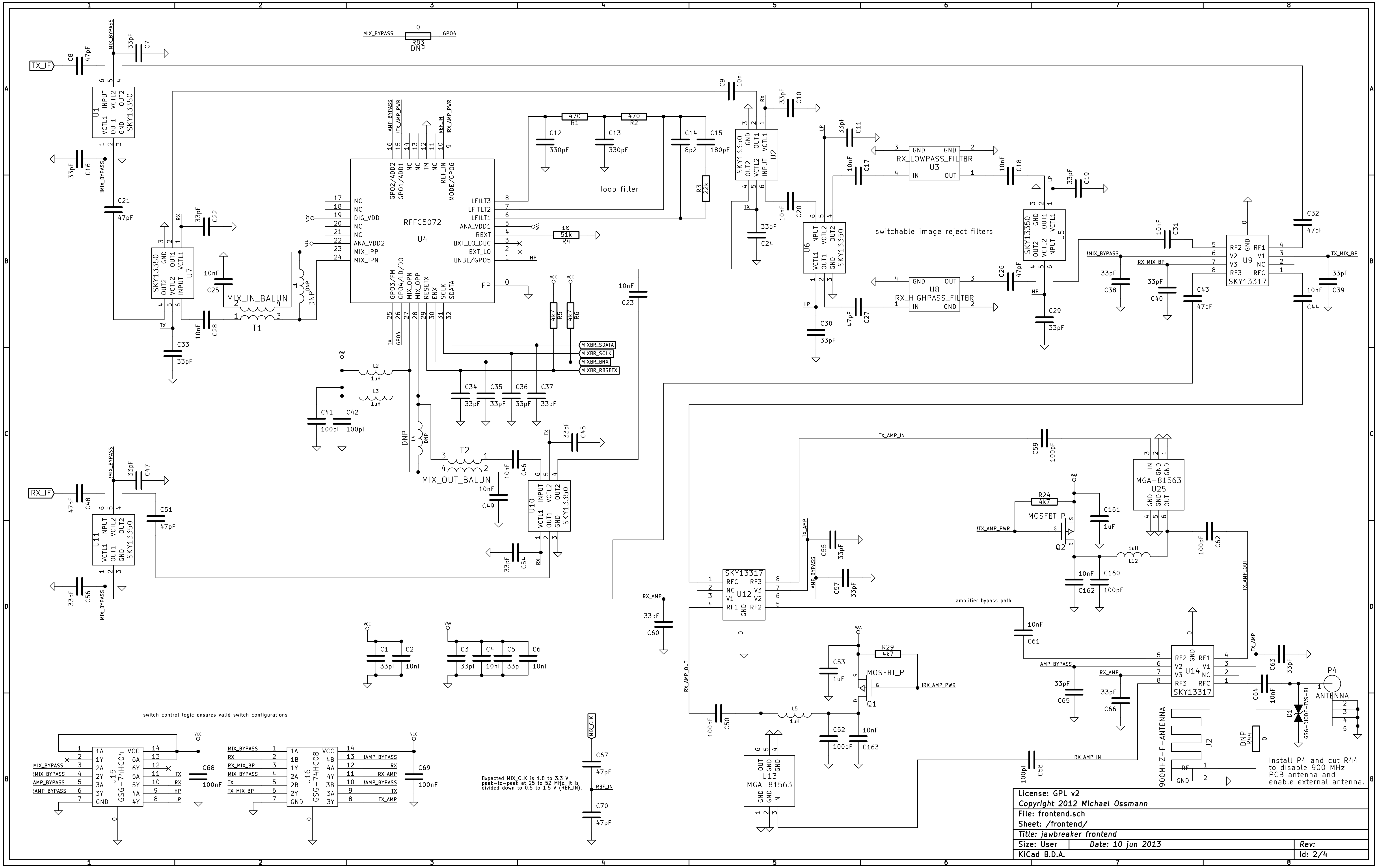
Install C118, C164, R45, R84, and R85 as necessary to match input.

For CMOS input, install 0 ohm resistors in place of C118 and C164; do not install R45, R84, or R85.

Install C165, and R92 as necessary to match output.

For CMOS output, install 0 ohm resistor in place of C165; do not install R92.

File: baseband.sch
Sheet: /baseband/
Title: jawbreaker baseband
Size: User *Date: 10 jun 2013* Rev:
KiCad B.D.A. Id: 3/4



loop filter

switchable image reject filters

amplifier bypass path

switch control logic ensures valid switch configurations

Expected MIX_CLK is 1.8 to 3.3 V peak-to-peak at 25 to 52 MHz. It is divided down to 0.5 to 1.5 V (RBF_IN).

Install P4 and cut R44 to disable 900 MHz PCB antenna and enable external antenna.

File: frontend.sch
Sheet: /frontend/
Title: jawbreaker frontend
Size: User Date: 10 jun 2013 Rev:
KiCad B.D.A. Id: 2/4