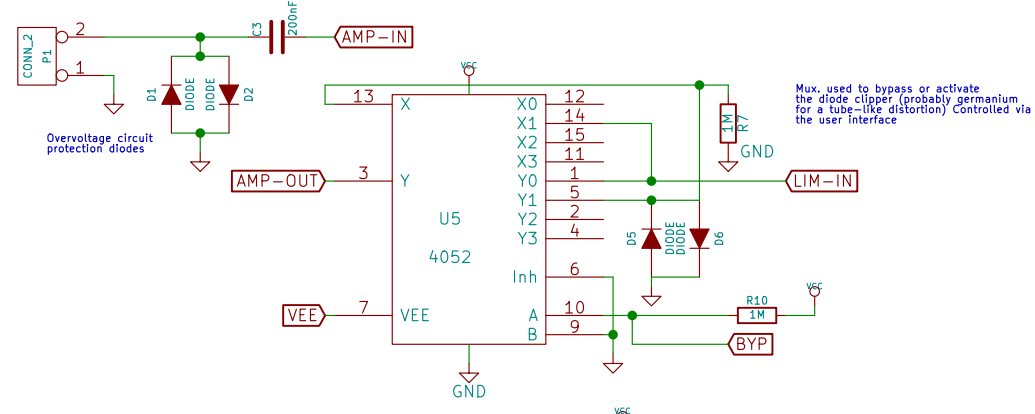


UART header used to program the Arduino bootloader and to debug/communicate with the microcontroller

Programming header used to flash the Arduino bootloader into the Atmega328p

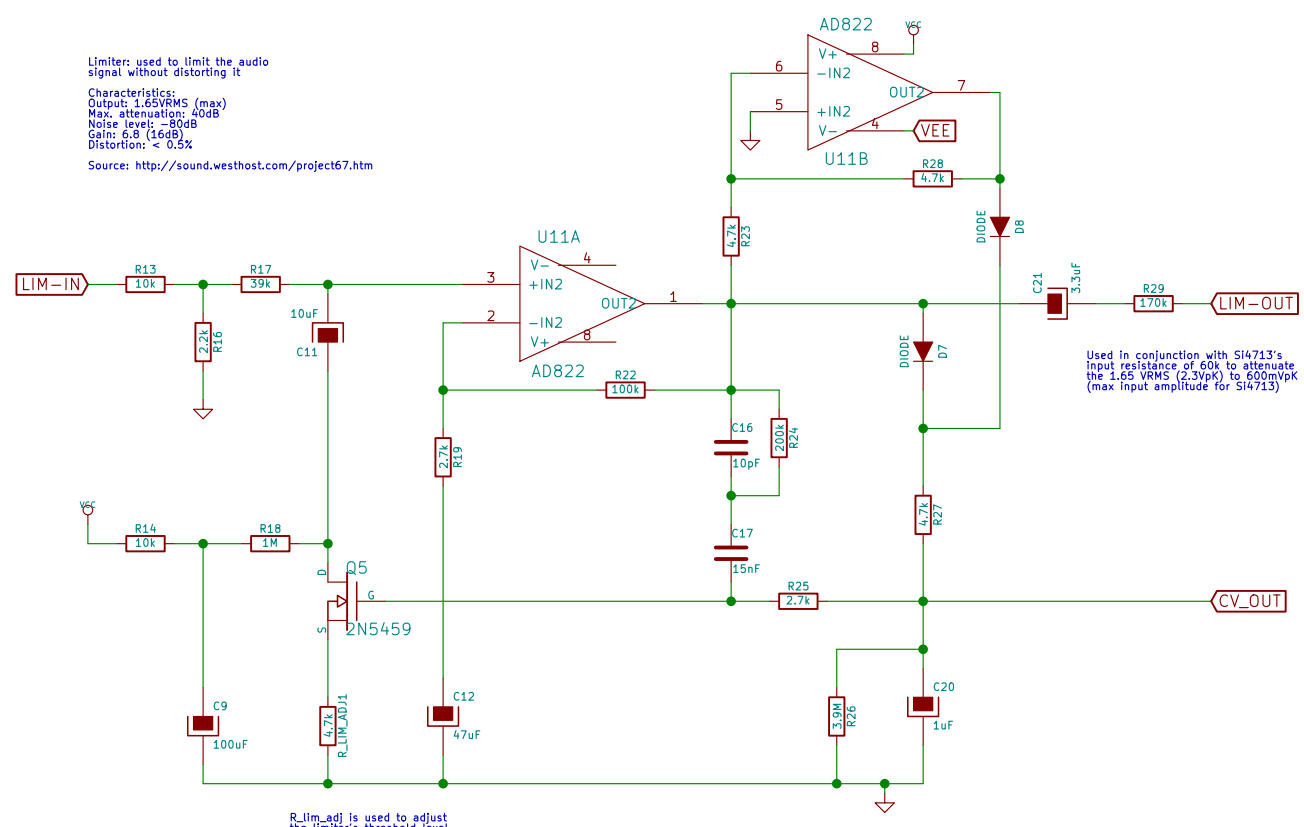


Max. used to bypass or activate the diode slipper (probably germanium for a tube-like distortion) controlled via the user interface

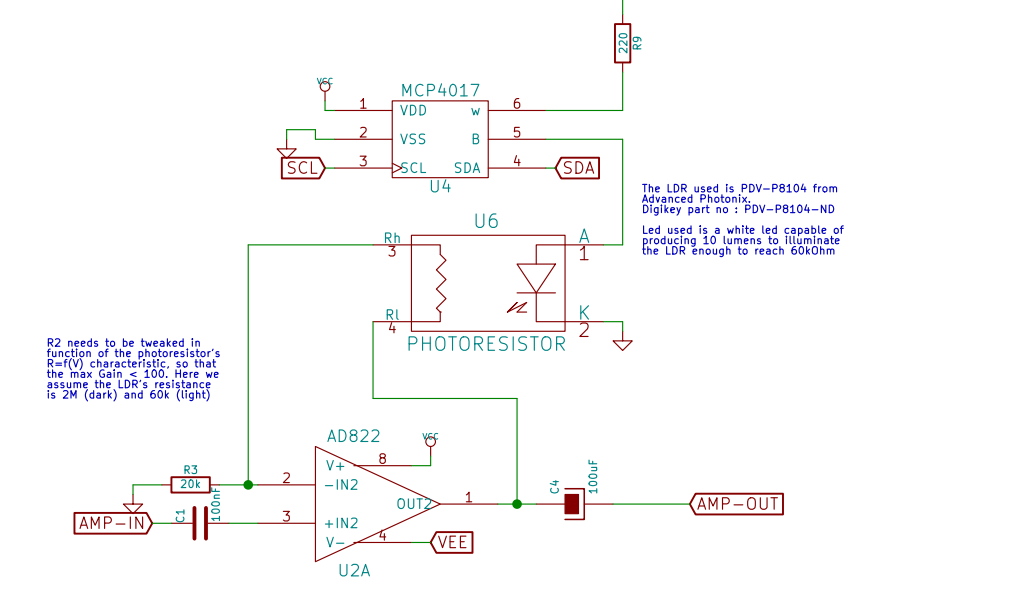
Limiter: used to limit the audio signal without distorting it

Characteristics:  
Output: 2.65Vrms (max)  
Max. attenuation: 40dB  
Gain: 0.5 (10dB)  
Distortion: < 0.5%

Source: <http://sound.westhost.com/project67.htm>



Used in conjunction with SI4713's input impedance of 50k to attenuate the 1.65 Vrms (2.5Vpk) to 800mVpk (max input amplitude for SI4713)



The LDR used is PDV-P8104 from Advanced Photonics. Digkey part no.: PDV-P8104-ND

Led used is a white led capable of producing 16 lumens, to illuminate the LDR enough to reach 60kOhm

R2 needs to be tweaked in function of the photoresistor's R\*(V) characteristics, so that the max. attenuation is 40dB. Here we assume the LDR's resistance is 2M (dark) and 60k (light)

Main amplifier: used to amplify the audio signal coming from guitar pickup (voltage range = 50mV to 200mV) to line-level (1.65V)

