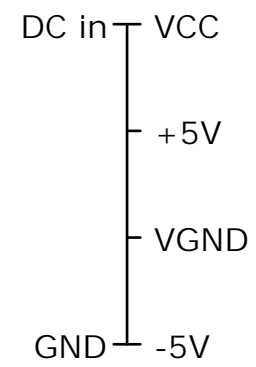
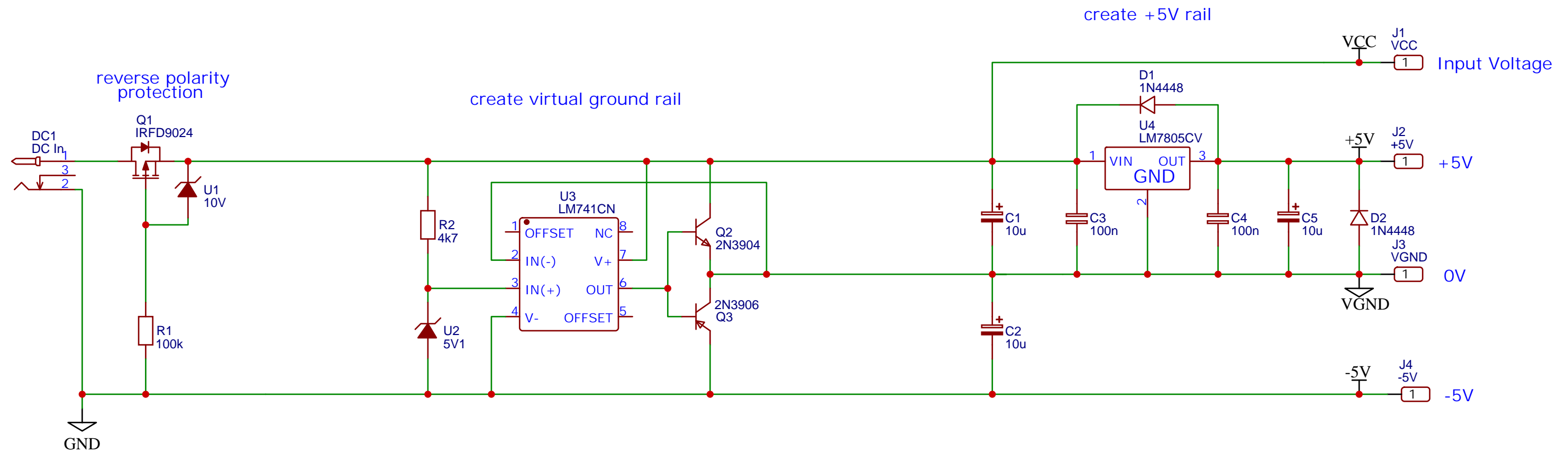


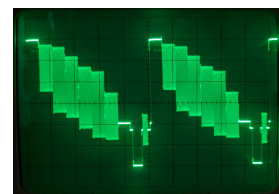
Create Voltage Rails



Input GND needs to be isolated from mains ground!



TITLE: Power		REV: 1.1
	Company: MasterMind Productions	Sheet: 1/2
	Date: 2023-06-16	Drawn By: Human



JP1
RCA Video IN

contrast
(gain)

RP2
1k

R23
10k

R24
1k

RP1
1k

U6
JUMPER3

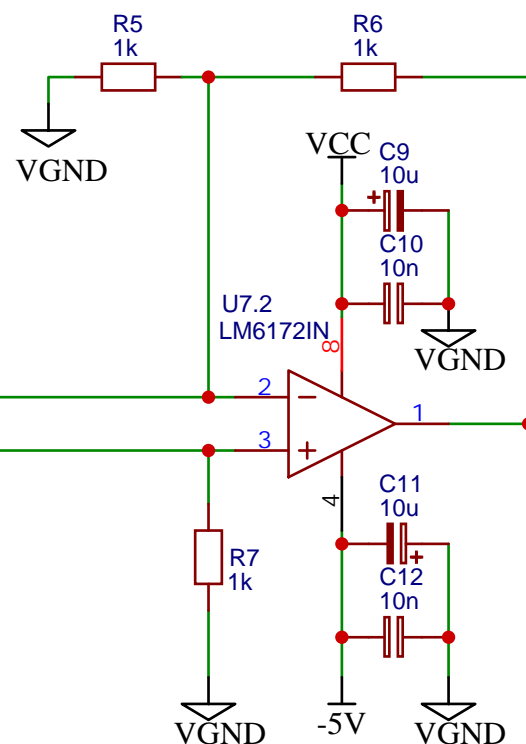
inv.
1

non-inv.
2

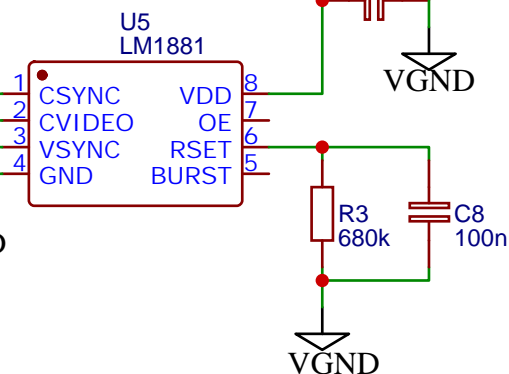
3

Op-Amp 1

- amplify with a gain of ~0..1 (gain potentiometer)
- 3-pin-Jumper for switching between inverting and non-inverting



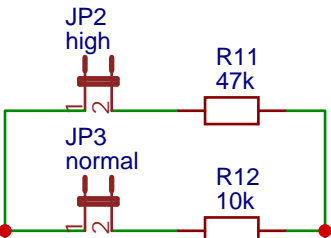
sync separation



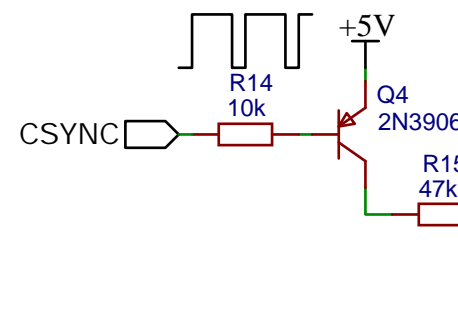
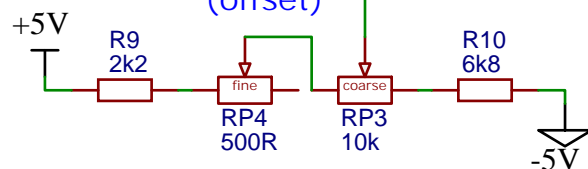
Op-Amp 2

- inverting amplification with a selectable gain of 4.5 or 21.4
- offset-control with potentiometer

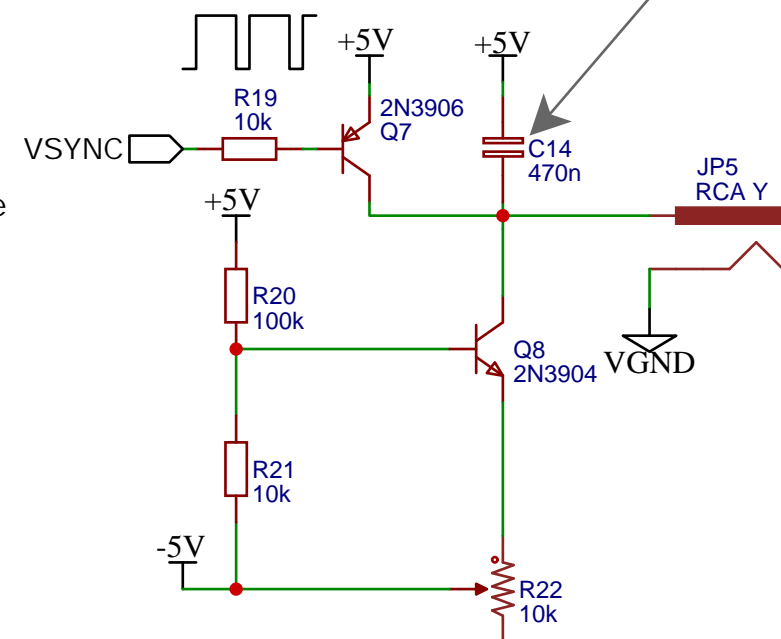
amplification range
 $47k/(2k2) = 21.4x$ gain
 $10k/(2k2) = 4.5x$ gain



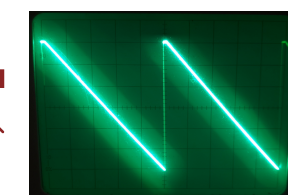
brightness (offset)



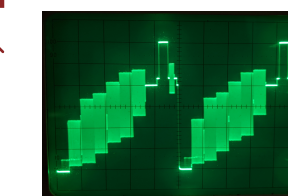
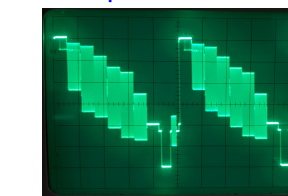
horizontal ramp



vertical ramp



amplified video



TITLE: Signal conversion		REV: 1.1
Company: MasterMind Productions		Sheet: 2/2
Date: 2023-06-16		Drawn By: Human