

# KOMA FieldKit

Sheet: [KomaFieldKit-v5-AudioProcessing](#) Sheet: [KomaFieldKit-v5-AudioOut](#)

Audio  
Processing

Audio  
Out

File: [KomaFieldKit-v5-AudioProcessing.sch](#) File: [KomaFieldKit-v5-AudioOut.sch](#)

Sheet: [KomaFieldKit-v5-CVProcessing](#)

CV  
Processing

Motor  
Control

Sheet: [KomaFieldKit-v5-MotorControl](#)

LFO

Sheet: [KomaFieldKit-v5-LFO](#)

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Sheet: [KomaFieldKit-v5-Radio](#)

Radio

Power /  
Mechanical

Sheet: [KomaFieldKit-v5-PowerMechanic](#)

Analog Signal  
Interface

Sheet: [KomaFieldKit-v5-AnalogSignal](#)

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- Current Consumption -
  - Quiescent 80mA
  - Speaker Full Blast +220mA
  - DC Int. Full Blast +500mA
  - Total Full Blast 800mA
  - Total Margin 850mA

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Sheet: /

File: [KomaFieldKit-v5.sch](#)

**Title: Field Kit PR1**

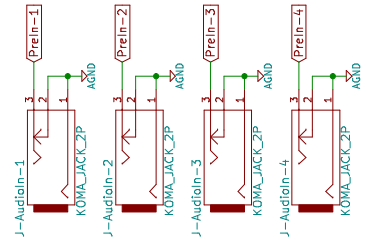
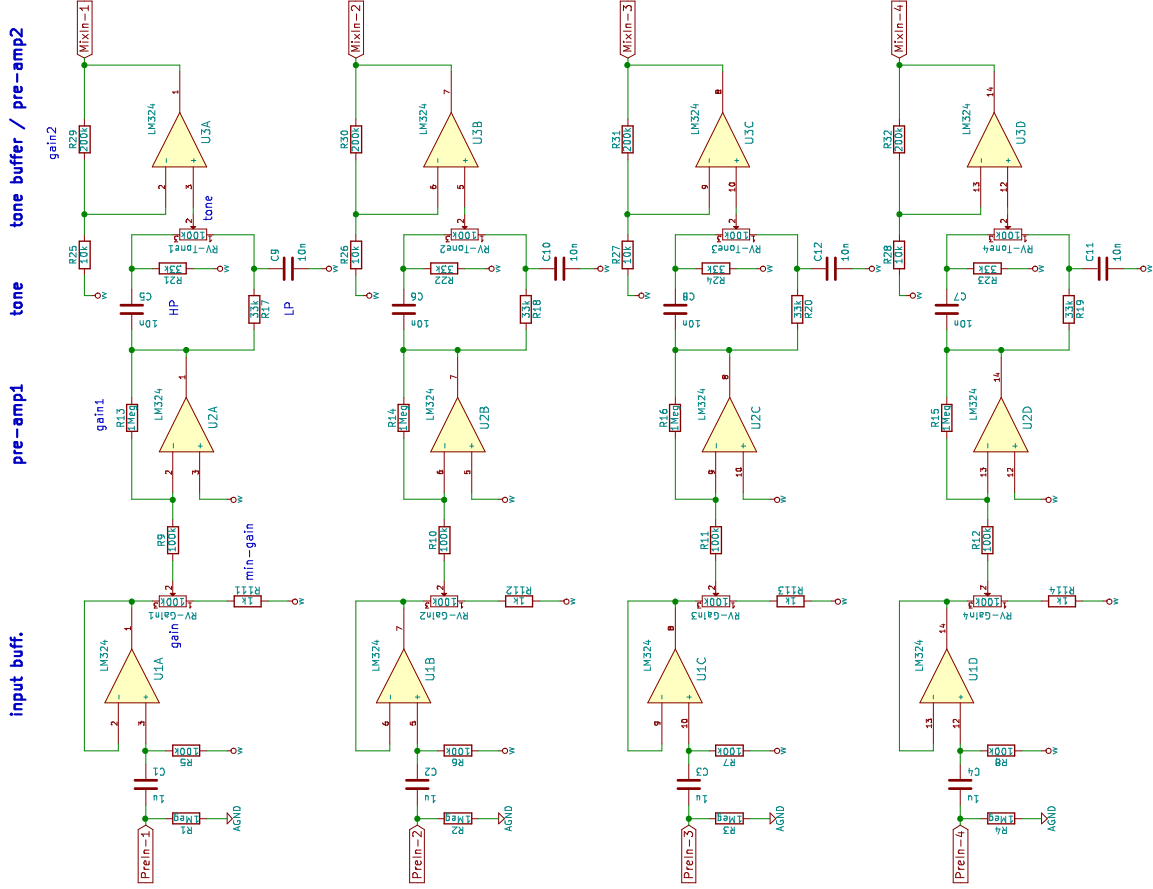
Size: A4 Date: 13 / 07 / 2017

Rev: 1

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# Pre-Amp / Tone

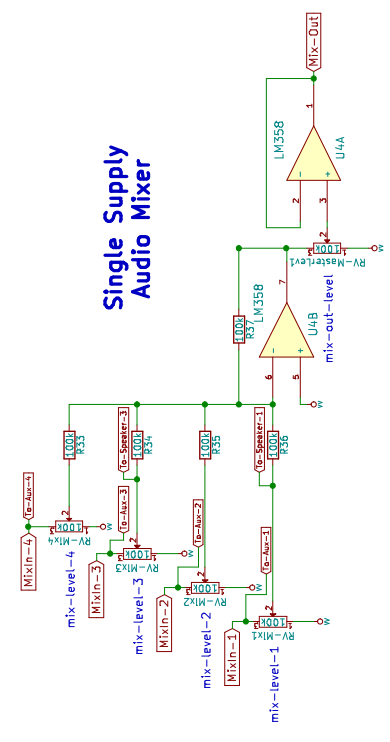


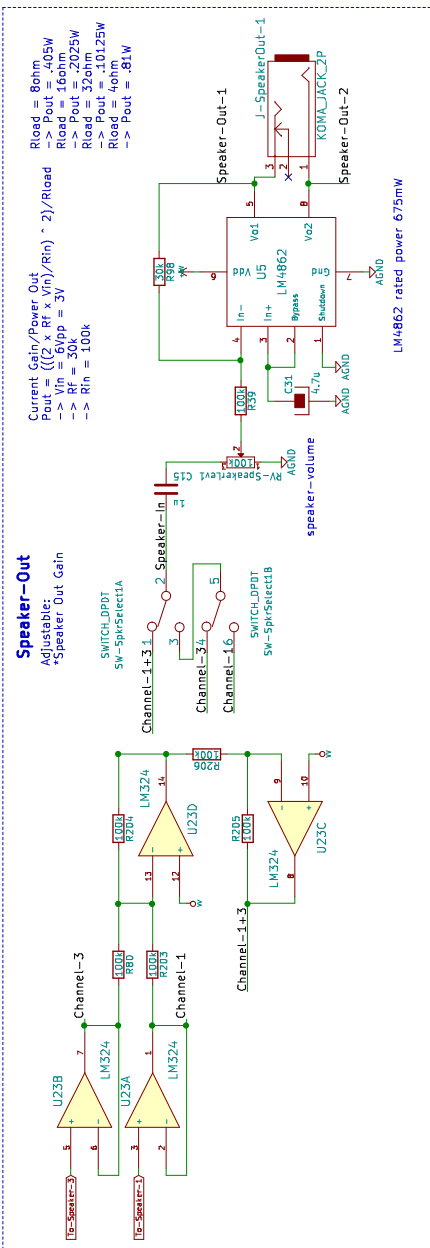
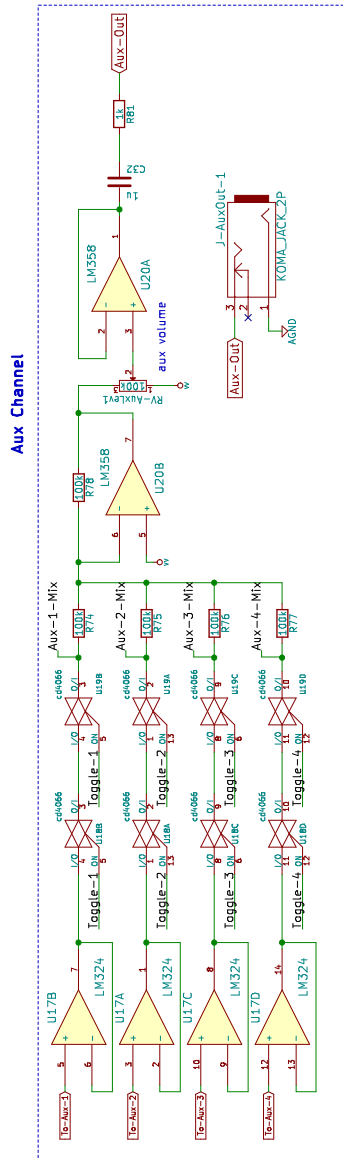
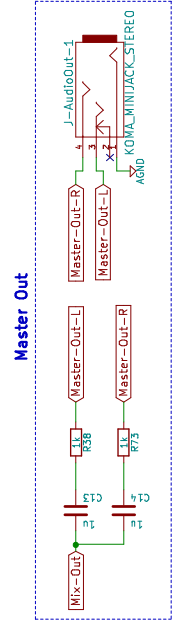
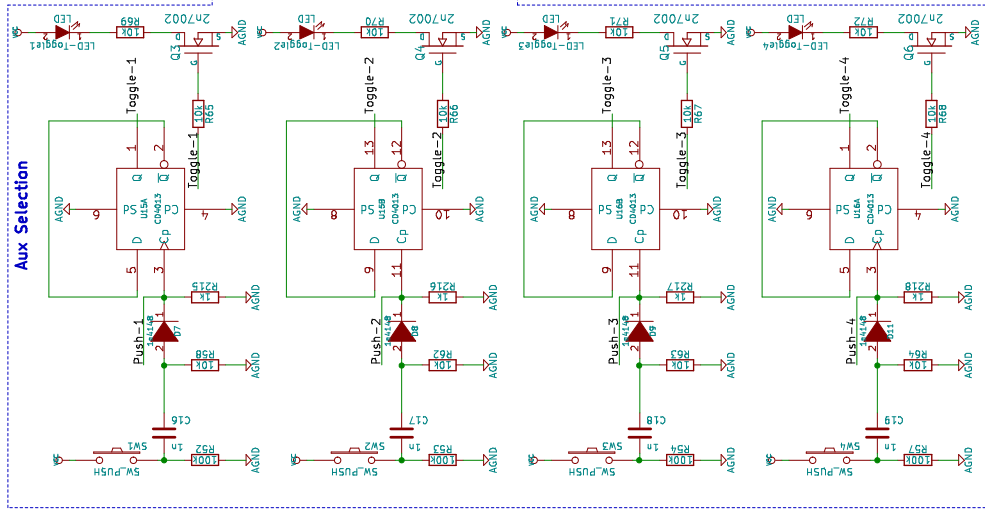
## FieldKit

### Audio Processing

Adjustable:  
 \*Max Gain.  
 \*Tone Cutoff Freq.

## Single Supply Audio Mixer





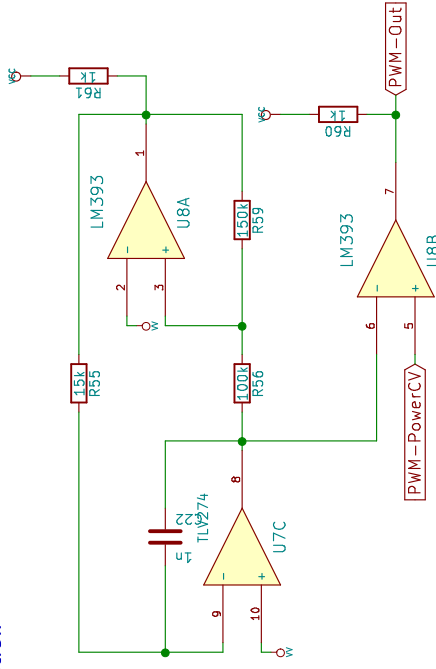
Current Gain/Power Out  
 $P_{out} = ((Z \times R_f \times V_{in}) / R_{in})^2 / R_{load}$   
 $\rightarrow R_f = 50k$   
 $\rightarrow R_{in} = 100k$   
 $\rightarrow P_{out} = 101.25W$   
 $\rightarrow P_{out} = .81W$

Adjustable:  
 -Speaker Out Gain

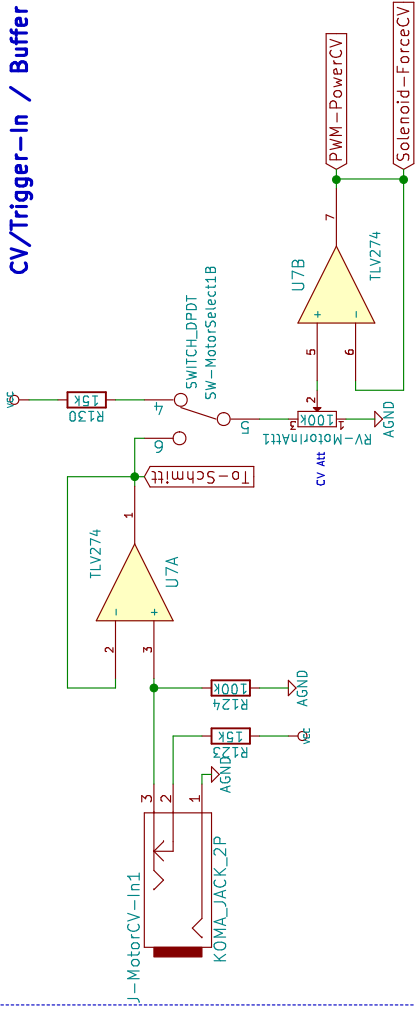
SWITCH\_DPDT SW-5p3srselectia  
 SWITCH\_DPDT SW-5p3srselectib  
 Channel-1-4-3-1  
 Channel-3-4-1-6-5  
 Channel-1-6



### PWM Generation

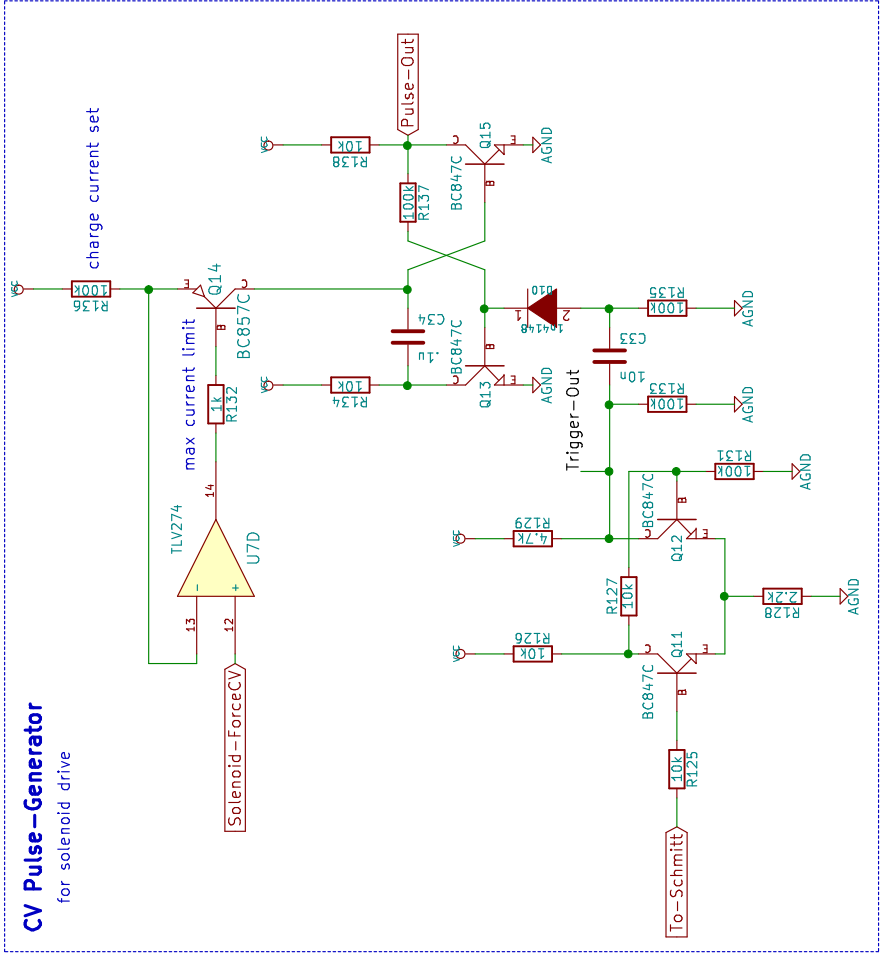


### CV/Trigger-In / Buffer

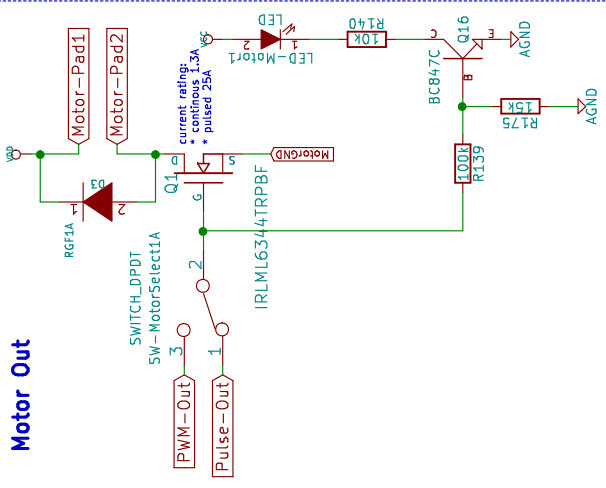


### CV Pulse-Generator

for solenoid drive

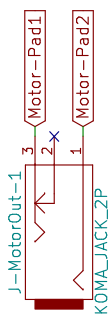


### Motor Out



FieldKit  
Motor  
Control

Adjustable:  
\* Pulse Length



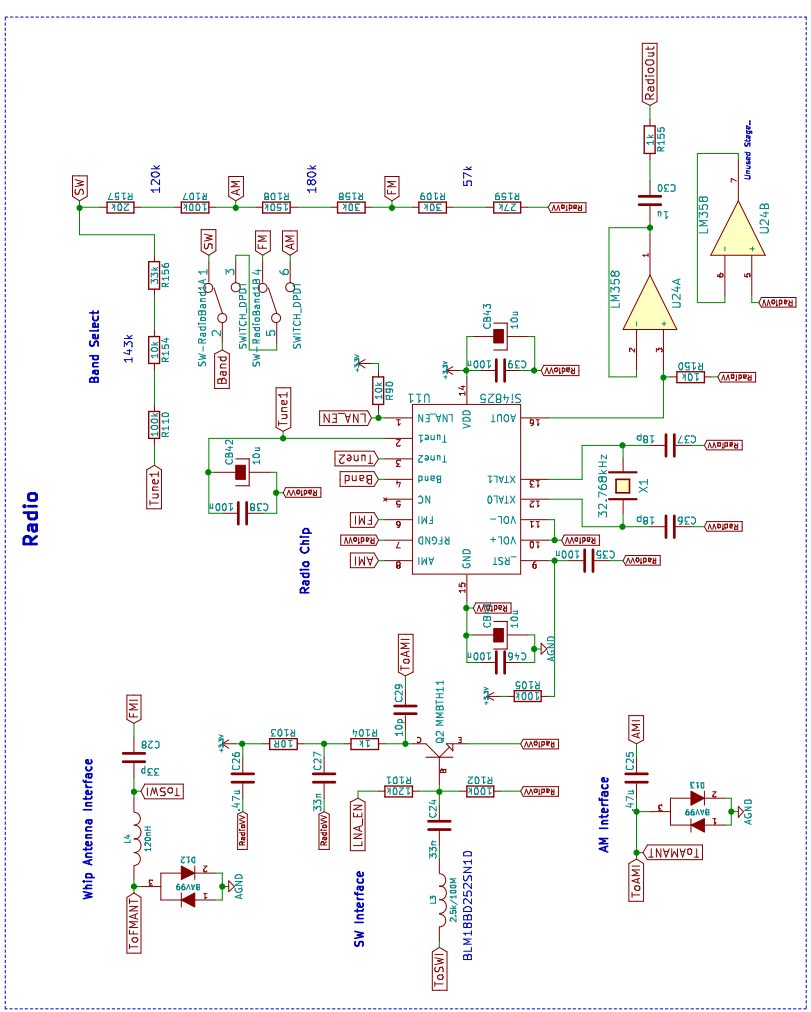
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Sheet: /KomaFieldKit-v5-MotorControl/  
File: KomaFieldKit-v5-MotorControl.sch

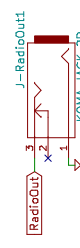
Title: Field Kit PR1 - DC Interface

Size: A4 Date: 13 / 07 / 2017  
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Id: 5/9



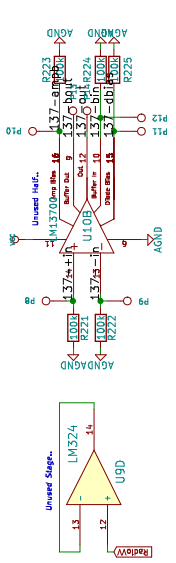
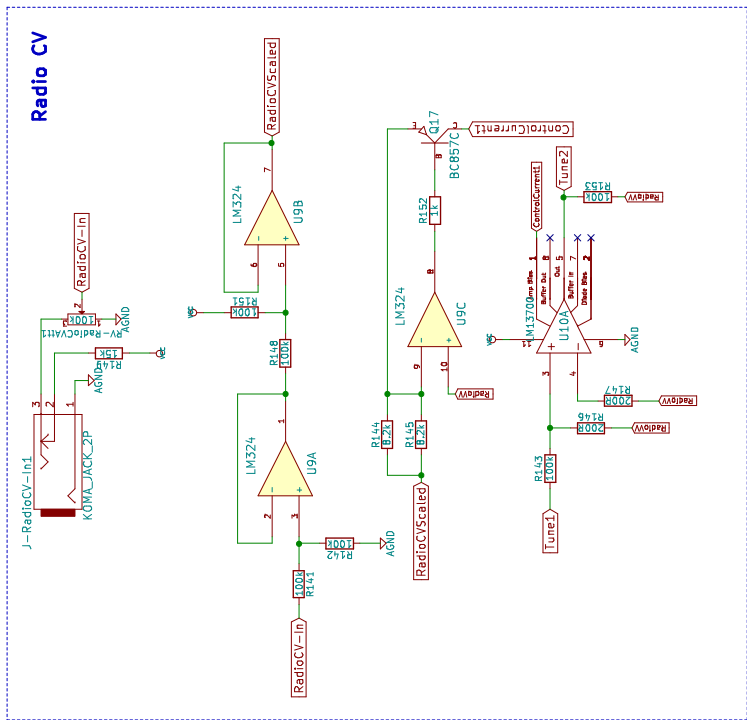
**Radio**



FM Range:  
 ( VHF Band II )  
 87.5Mhz - 108Mhz, De-emphasis 50us  
 Chip Band Select: FM2 = 87Mhz - 108Mhz, De-emphasis 50us  
 Res to GND = 57k

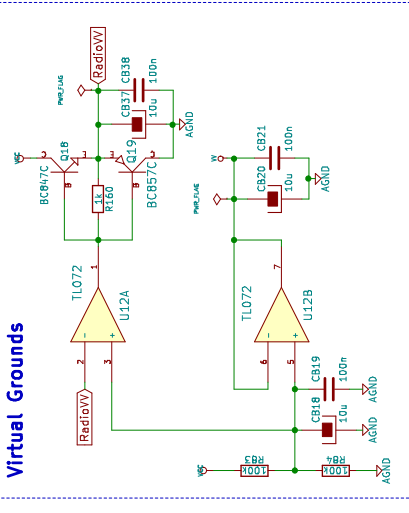
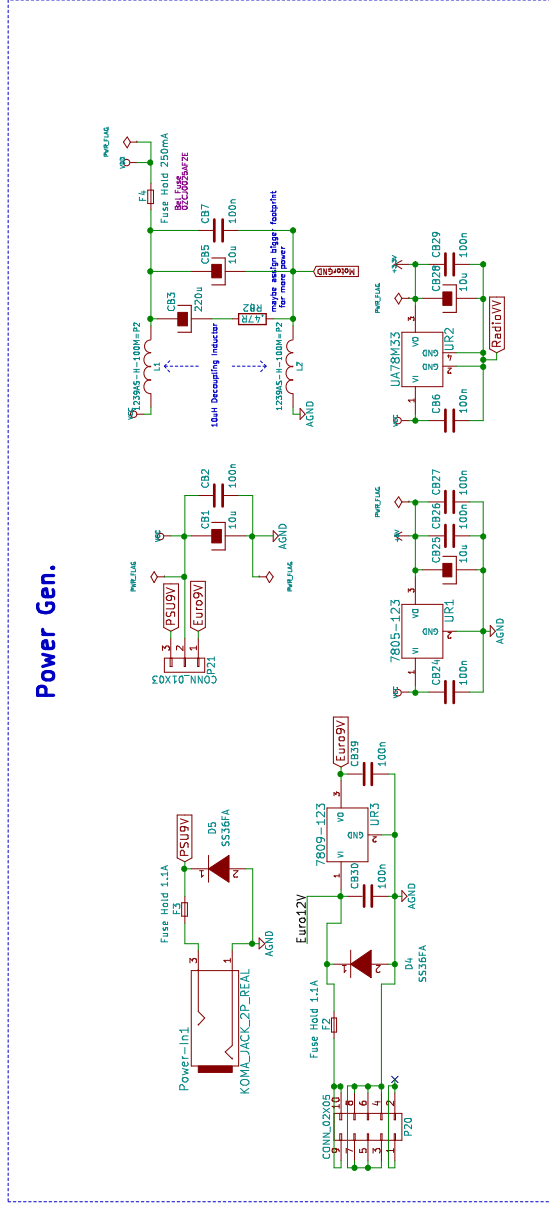
AM Range:  
 ( Medium Wave )  
 530.5KHz - 1600KHz, 9KHz spacing  
 Chip Band Select: AM2 = 532 - 1620KHz, 9KHz separation  
 Res to GND = 237kOhm

SW Range:  
 ( Full Range )  
 2.3Mhz - 28.5Mhz, SW0 = 5.9 - 18Mhz, Wide  
 Chip Band Select: SW0 = 5.9 - 18Mhz, Wide  
 Res to GND = 357kOhm



Fieldkit  
 AM/FM/SW  
 Radio

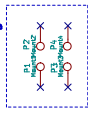
## Power Gen.



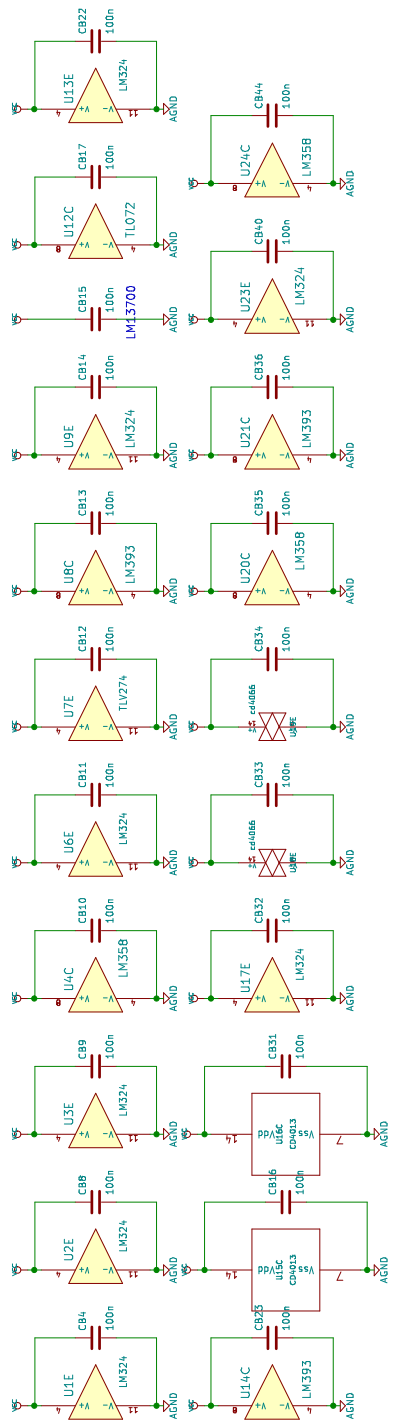
## Virtual Grounds

Fieldkit  
Power

## Mounting

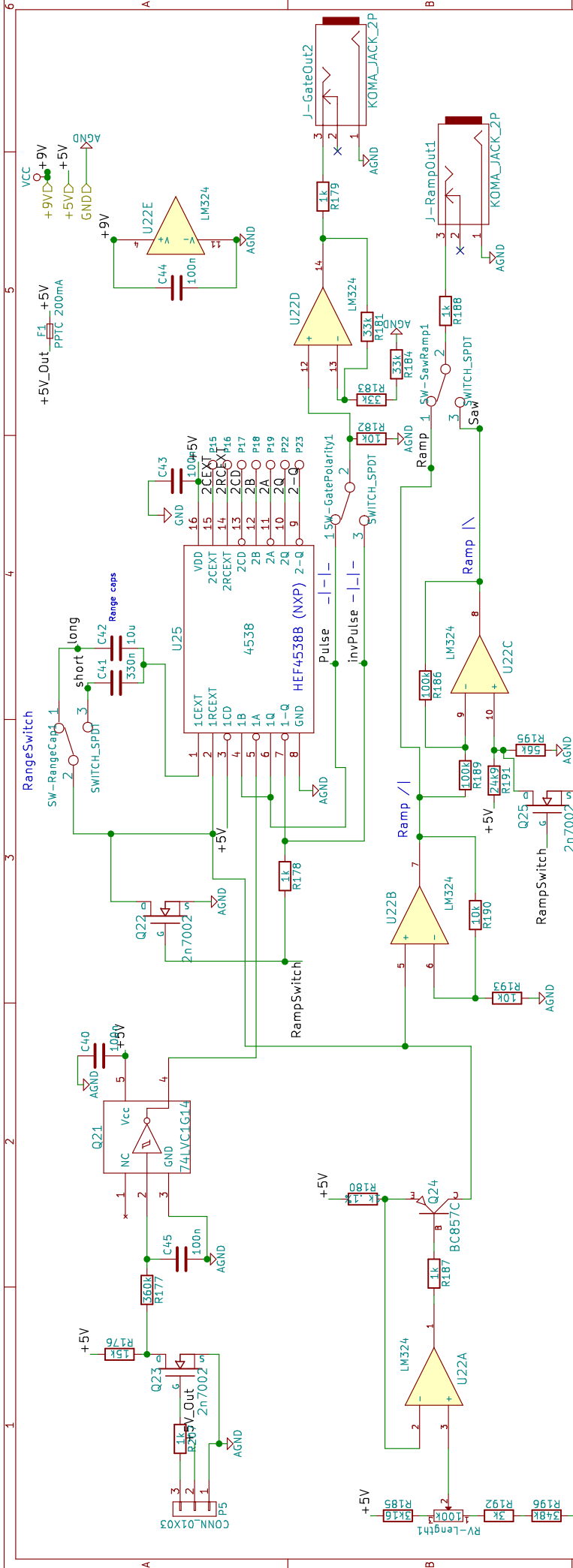


## IC Powering



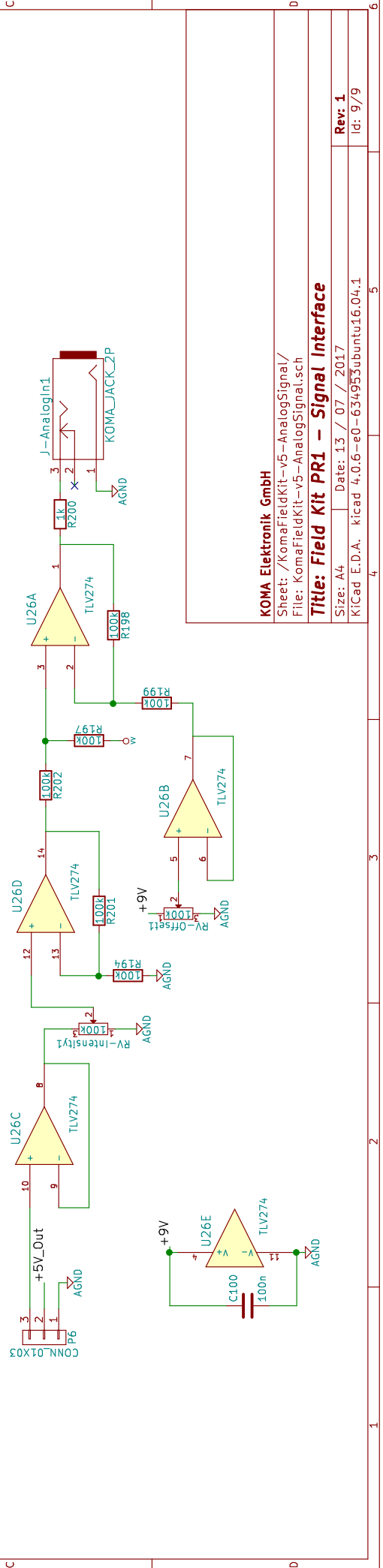






## SWITCH SENSOR INTERFACE

### ANALOG SENSOR INTERFACE



**KOMA Elektronik GmbH**  
 Sheet: /KomaFieldKit-v5-AnalogSignal/  
 File: KomaFieldKit-v5-AnalogSignal.sch  
**Title: Field Kit PR1 - Signal Interface**  
 Size: A4 | Date: 13 / 07 / 2017  
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**Rev. 1**  
 Id: 9/79