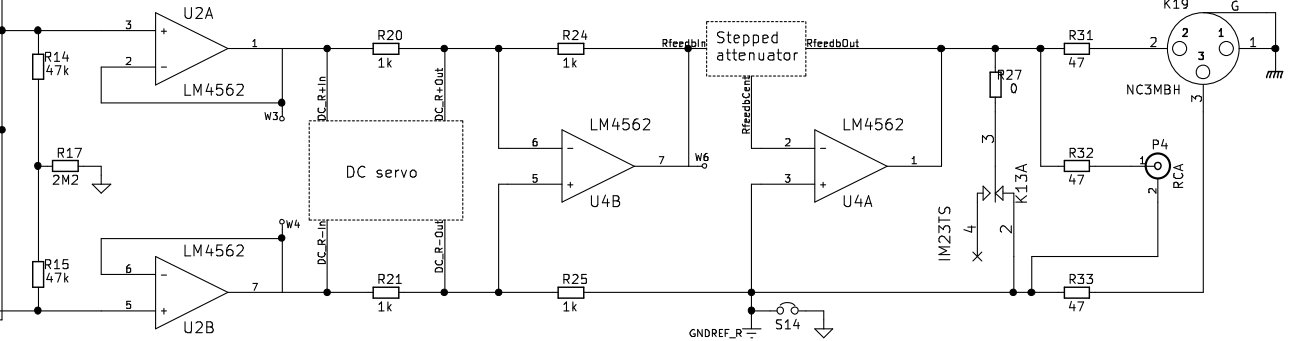
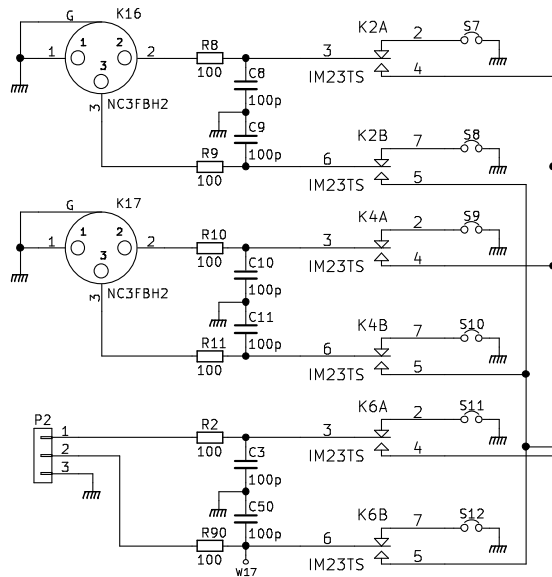
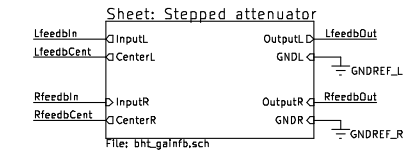
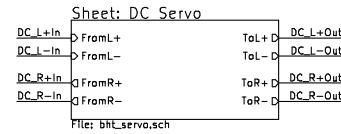
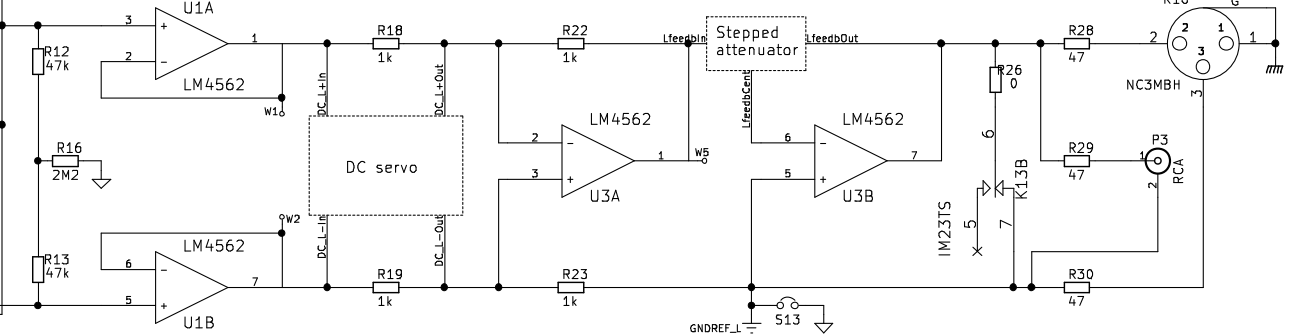
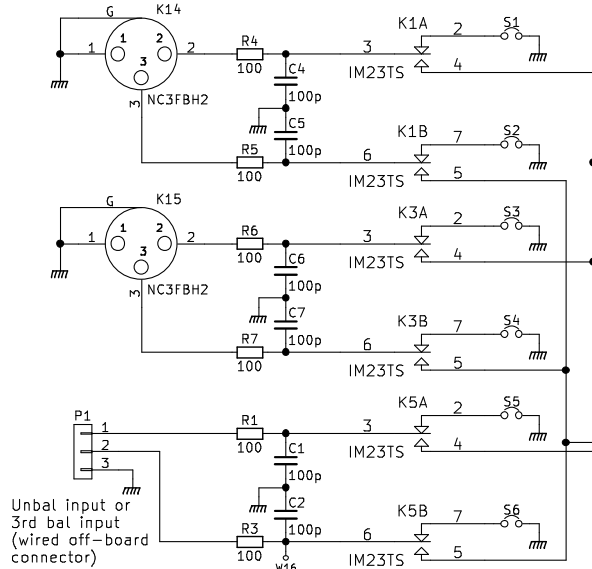


BHT PreAmp

Root sheet

(based on Bruno Putzeys' design)



Sheet: MCU

File: bht_mcu.sch

Sheet: PSU

File: bht_psu.sch

Tomi Nihitilä (Bruno Putzeys, Hans Polak)

Sheet: /
File: BHT_PreAmp_v10A.sch

Title: BHT PreAmp

Size: A4 Date: 2017-04-09
KiCad E.D.A. kicad 4.0.7

Rev: V1.0A
Id: 1/5

BHT PreAmp

Stepped Attenuator

(original design by Hans Polak)

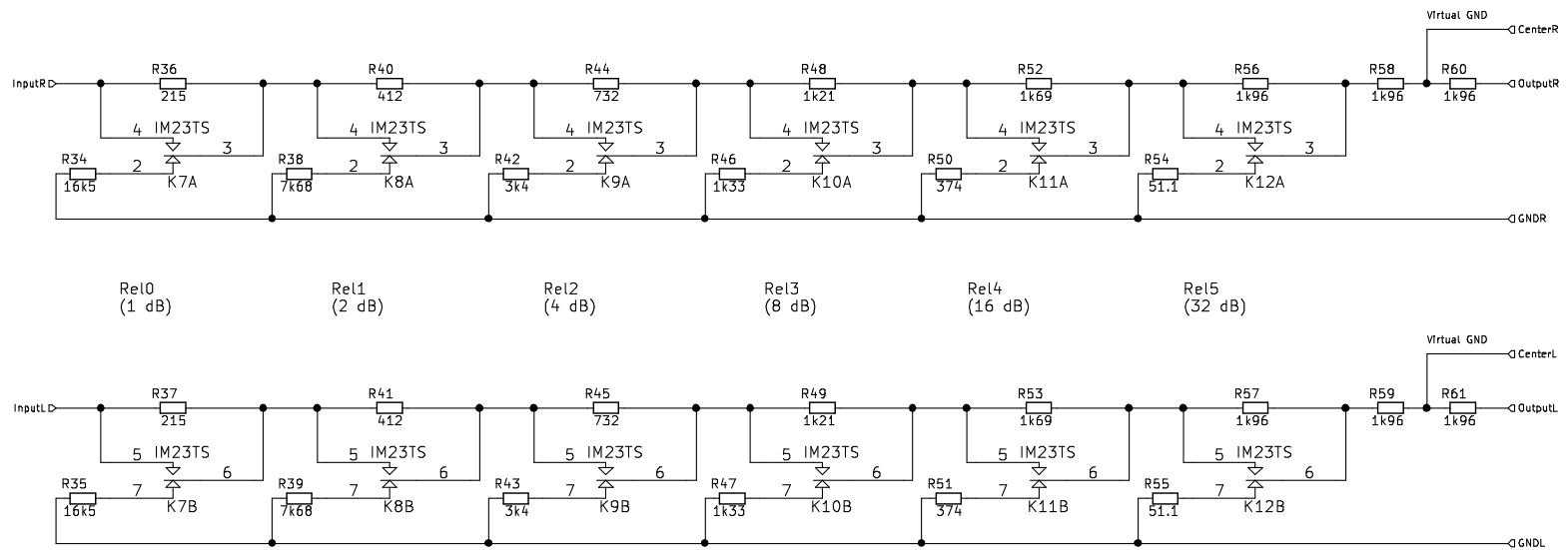
64 steps, 1 dB/step.

Max gain is R60/R58 (R61/R59).

With shown values:

—all relays on = 0 dB

—all relays off = -63 dB



Sheet: /Stepped attenuator/
File: bht_gainfb.sch

Title:

Size: A4 Date:

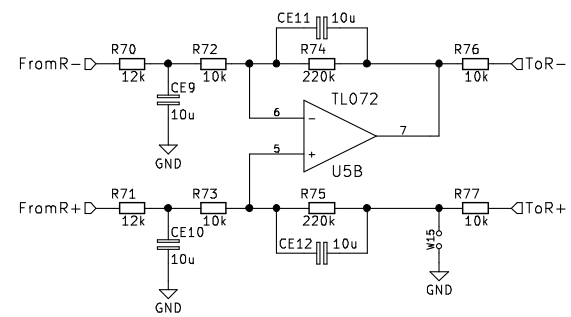
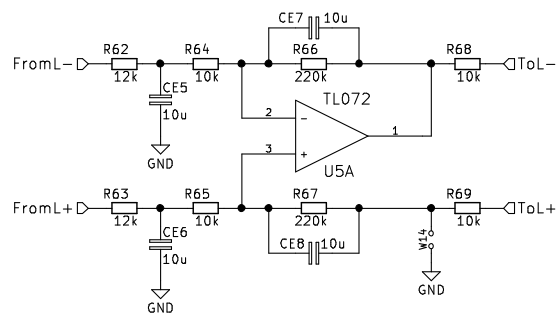
KiCad E.D.A. kicad 4.0.7

Rev:

Id: 2/5

BHT PreAmp

DC Servo



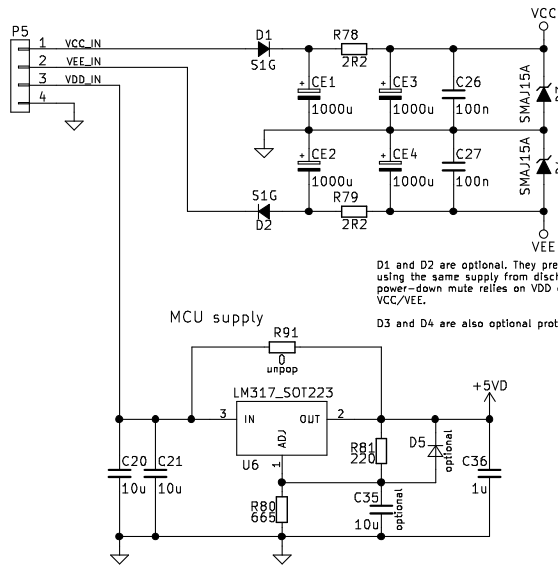
Sheet: /DC Servo/
File: bht_servo.sch

Title:

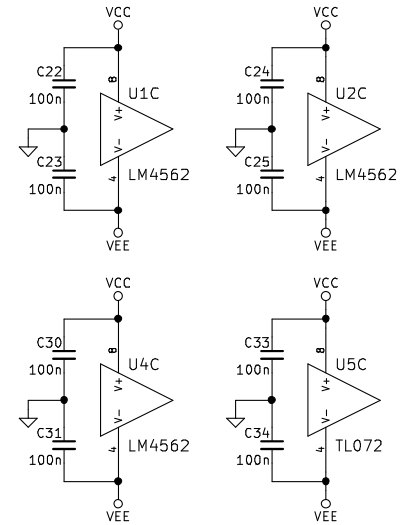
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KiCad E.D.A. kicad 4.0.7

Rev:
Id: 3/5

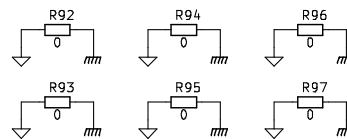
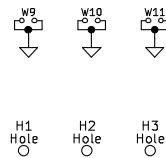
BHT PreAmp PSU



D1 and D2 are optional. They prevent other circuits/boards using the same supply from discharging reservoir caps as power-down mode relies on VDD collapsing faster than VCC/VEE.
D3 and D4 are also optional protection.



Signal ground - chassis ground
shorting links at Input/output connectors



Sheet: /PSU/
File: bht_psu.sch

Title:

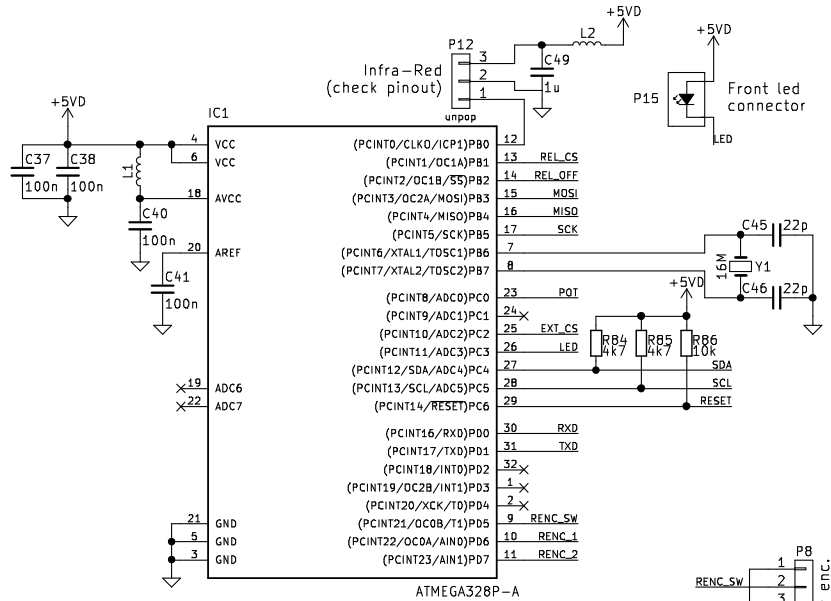
Size: A4 Date:
KiCad E.D.A. kicad 4.0.7

Rev:
Id: 4/5

BHT PreAmp

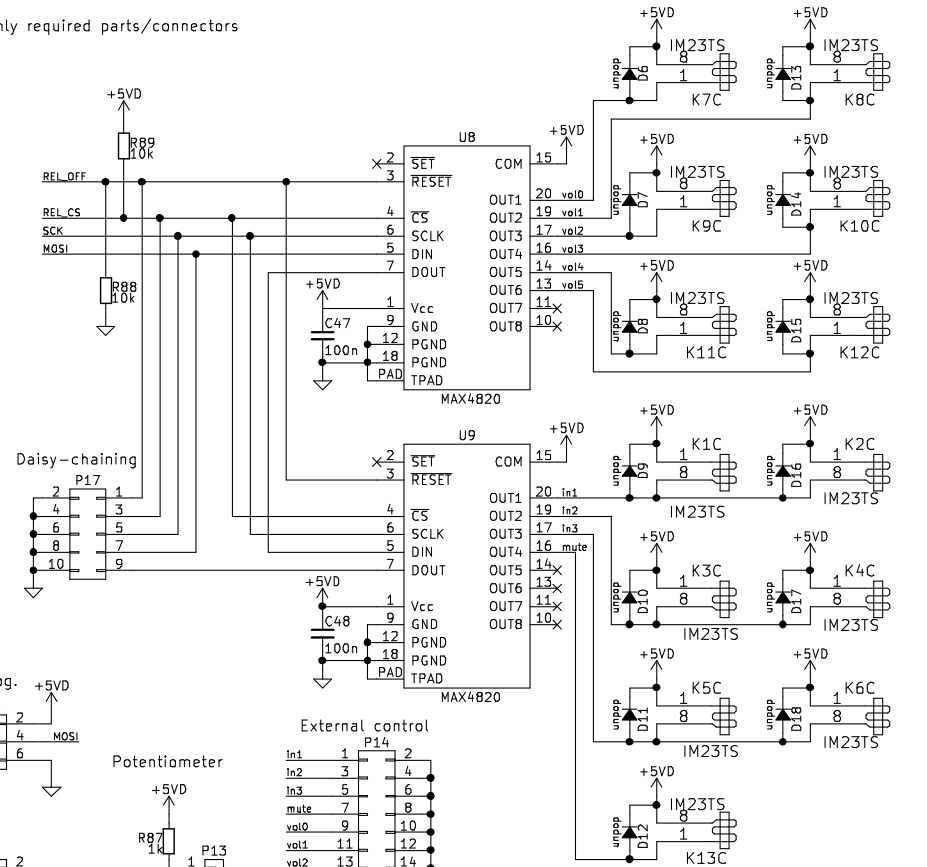
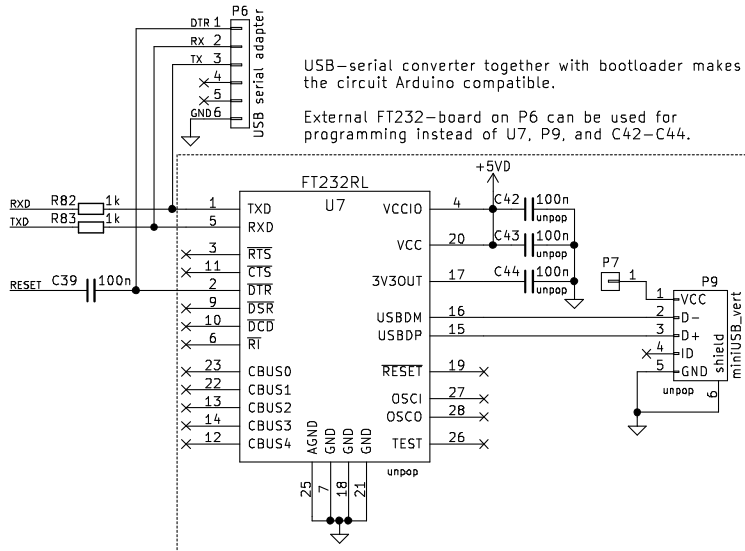
MCU

Populate only required parts/connectors



USB-serial converter together with bootloader makes the circuit Arduino compatible.

External FT232-board on P6 can be used for programming instead of U7, P9, and C42-C44.



MAX4820 has internal flyback protection diodes. Populate diodes when using external control.

Tomi Nihtilä

Sheet: /MCU/

File: bht_mcu.sch

Title: BHT PreAmp

Size: A4 Date: 2017-05-09

KiCad E.D.A. kicad 4.0.7

Rev: v1.0A

Id: 5/5