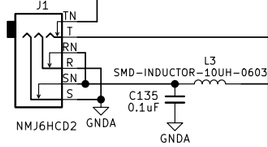
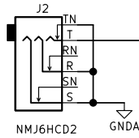
Sheet: ADC_DAC

EFFECT RETURN
(SDATA-IN 00)



EFF_RTN
LOOP_ENB

GUITAR INPUT
(SDATA-IN 01)



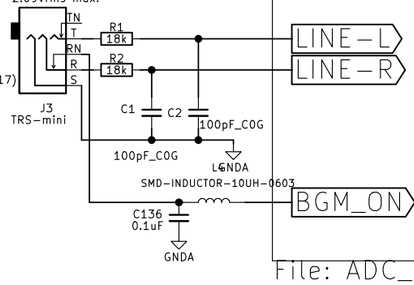
GUITAR_IN

Useable Phone Jacs:

NEUTRIK NMJ6HCD2
AMPHENOL ACJS-IH or
Yueqing Daier Electron PJ-644C

(Reference Level 0dB = 2Vr.m.s.)
2.09Vrms max.

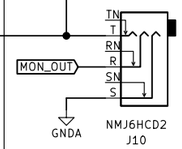
BGM INPUT
(SDATA-IN 16/17)



LINE-L
LINE-R
BGM_ON

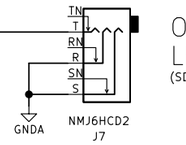
(Use weak pull-up option)

EFF_SND



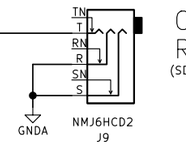
EFFECT SEND
(SDATA OUT 02)

OUT_LEFT



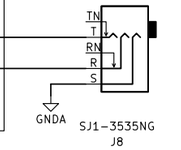
OUTPUT LEFT
(SDATA-OUT 17)

OUT_RIGHT



OUTPUT RIGHT
(SDATA-OUT 16)

PHONES_LEFT
PHONES_RIGHT

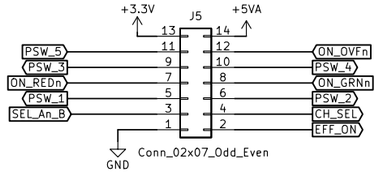


PHONES OUTPUT
(SDATA-OUT 16/17)

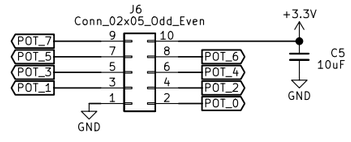
File: ADC_DAC.sch

Interconnect to CONTROL-BOARD

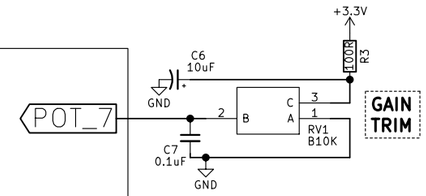
CONTROL & INDICATORS

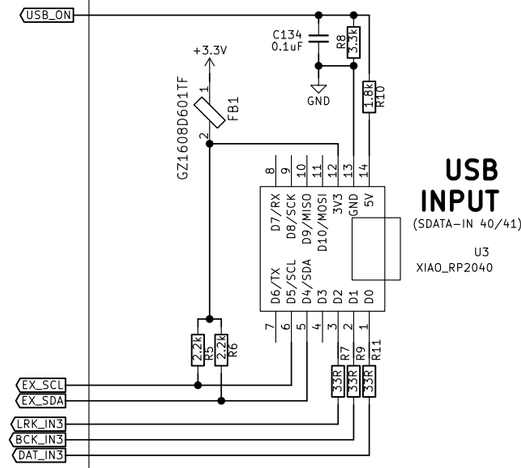


Multiplexed POT-VOLTAGES



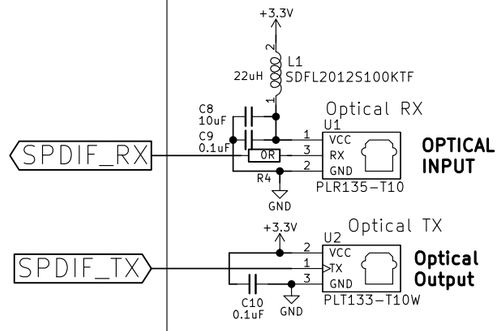
Sheet: DSP





USB INPUT
(SDATA-IN 40/41)

U3
XIAO_RP2040



File: DSP.sch

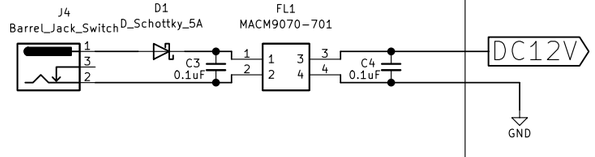
Sheet: BM83_BT-RX

File: BM83_BT-RX.sch

Sheet: PSU

215mA without BM83

DC12V INPUT
Center=
2.1mm Positive
Sleeve= 5.5mm



File: PSU.sch

MAIN BOARD
CONNECTORS

(Without BM83 version)
CyberPit 2025

Sheet: /
File: FreeDSP-G.sch

Title: FreeDSP-G Schematic Circuit Diagram

Size: A3	Date: 2025-02-20	**Rev: 0.2**
KiCad E.D.A. kicad (5.1.9-0-10_14)		Id: 1/5

TRIODERISER HEAD-AMP (+18dB)

BRIGHT (>1kHz)

Change to 1uF for pre-emphasis normalized overdrive.
(De-emphasis shoud have done in DSP processing)

ALTERNATIVE CHOICE
SELECT ONE AS YOU LIKE

※ Marked Capacitors are C0G for it's Sound Characteristics.

to I2S IN-0

fs=48kHz I2S

BGM AUDIO INPUT

(More than -20dBV)

to I2S IN-1

fs=48kHz I2S

I2S OUT-0

I2S OUT-1

※ Marked Capacitors are C0G for better Sound Characteristics.

EXTRA OUTPUT
(Free to use)

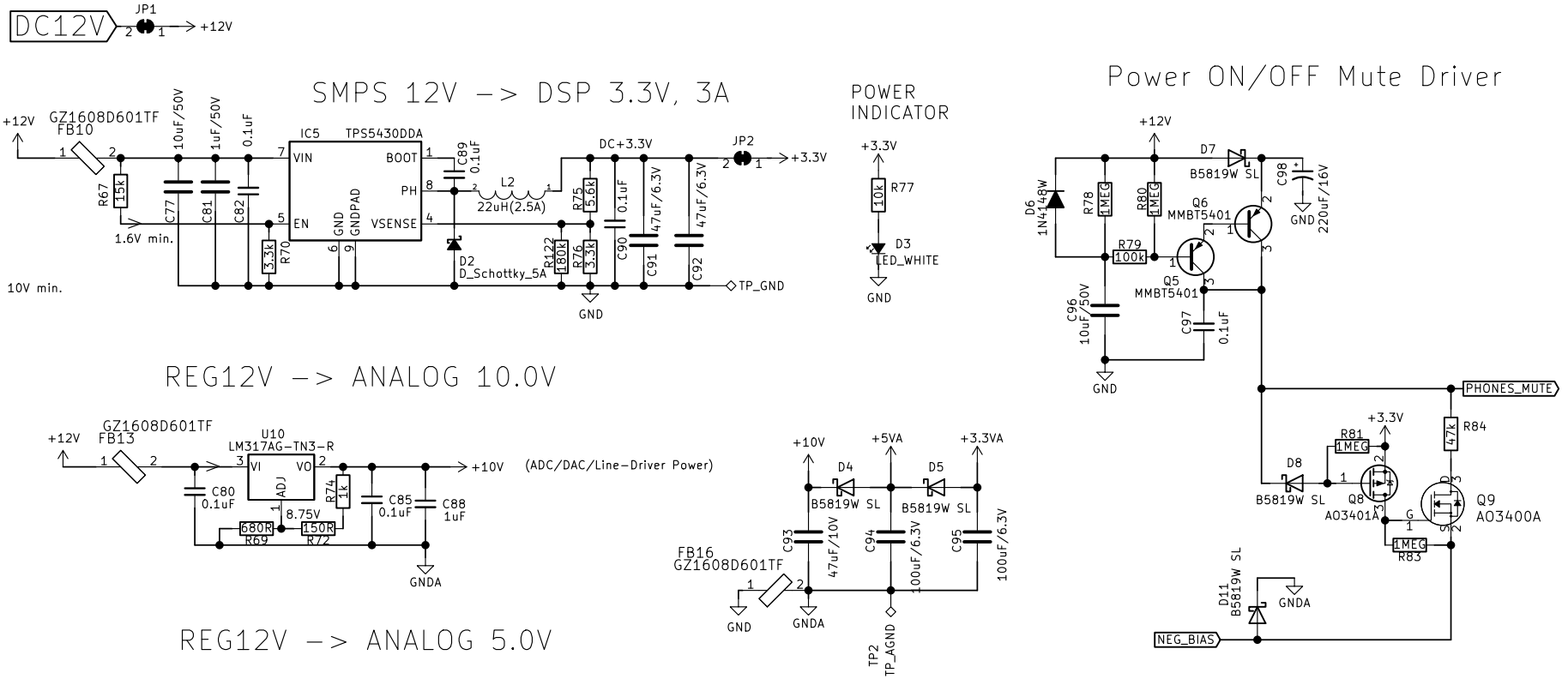
EFFECT LOOP SEND
(860mVpp max.)

MIXED OUTPUT-LEFT
(2V RMS)

MIXED OUTPUT-RIGHT
(2V RMS)

Headphones Amp

MAIN BOARD ANALOG PART	
CyberPit 2025	
Sheet: /ADC_DAC/ File: ADC_DAC.sch	
Title: FreeDSP-G Schematic Circuit Diagram	
Size: A3	Date: 2025-02-01
KiCad E.D.A. kicad (5.1.9-0-10_14)	Id: 2/5



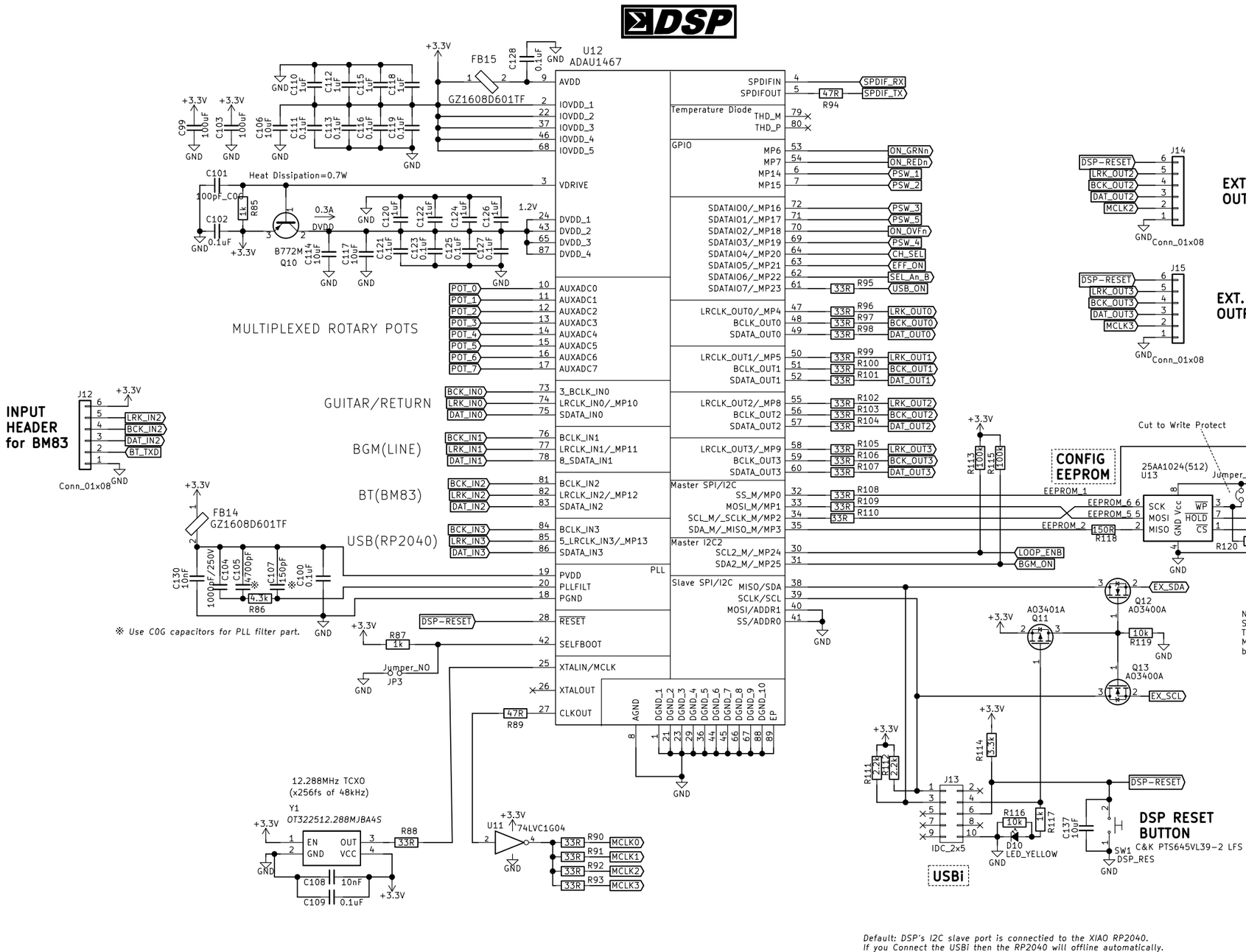
MAIN BOARD

CyberPit 2025

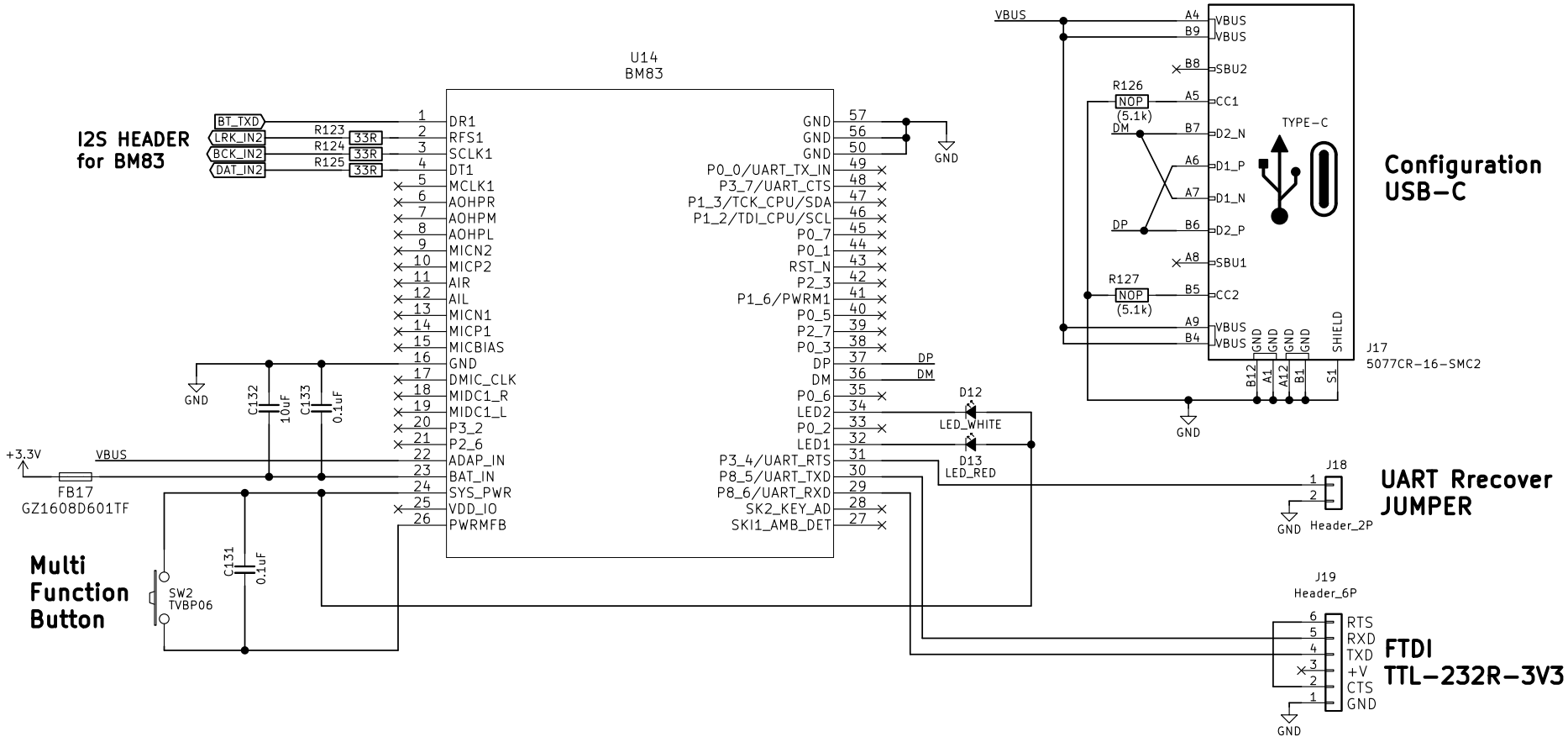
Sheet: /PSU/
File: PSU.sch

Title: FreeDSP-G Schematic Circuit Diagram

Size: A4	Date: 2025-02-27	**Rev: 0.2**
KiCad E.D.A. kicad (5.1.9-0-10_14)		Id: 3/5



MAIN BOARD DSP PART **CyberPit 2025**		
Sheet: /DSP/ File: DSP.sch		
Title: FreeDSP-G Schematic Circuit Diagram		
Size: A3	Date: 2025-02-20	**Rev: 0.2**
KiCad E.D.A. kicad (5.1.9-0-10_14)		Id: 4/5



Bluetooth Reciever (Microchip BM83SM1-00xx)

CyberPit 2025

Sheet: /BM83_BT-RX/
File: BM83_BT-RX.sch

Title: FreeDSP-G Schematic Circuit Diagram

Size: A4	Date: 2025-02-01	**Rev: 0.1**
KiCad E.D.A. kicad (5.1.9-0-10_14)		Id: 5/5