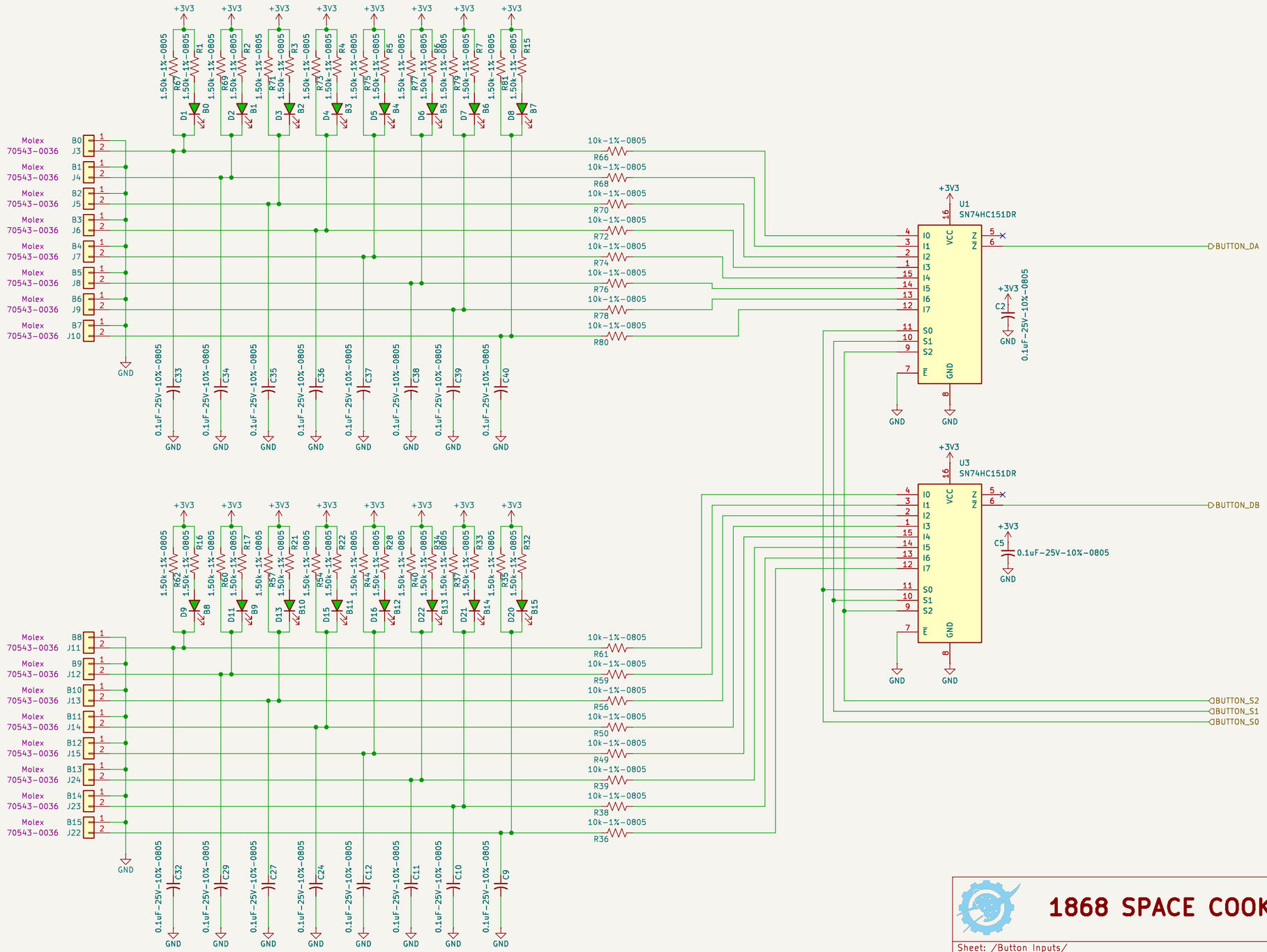
Molex 70543-0036 DC_IN J21
Molex 70543-0036 BATT J20
GND
File: power-supply.kicad_sch
4/6
Power Supply
+V_DC
+V_BAT
V_PS
V_PS
RP2350 Datasheet
File: board-id.kicad_sch
5/6
Board ID
ID0
ID1
4mA @ 3.3V
File: encoder-inputs.kicad_sch
6/6
Encoder Inputs
ENC0_A
ENC0_B
ENC0_PWM
ENC1_A
ENC1_B
ENC1_PWM
File: joystick-inputs.kicad_sch
3/6
Joystick Inputs
ADC0
ADC1
ADC2
ADC_SCK
ADC_MISO
ADC_CS
75mA @ 3.3VA
File: button-input.kicad_sch
2/6
Button Inputs
BUTTON_DA
BUTTON_DB
BUTTON_S0
BUTTON_S1
BUTTON_S2
32mA max @ 3.3V
+3V3
R55
1.50k-1%-0805
C25
0.1uF-25V-10%-0805
GND
+5V
+3V3
VSYS
VBUS
3V3
RESET
3V3_EN
GPIO0
GPIO1
ID0
ID1
GPIO2
GPIO3
GPIO4
GPIO5
GPIO6
GPIO7
SPI1_RX
SPI1_CSn
SPI1_SCK
GPIO11
GPIO12
GPIO13
GPIO15
GPIO16
ADC_VREF
+3V3A
ADC0
ADC1
ADC2
AGND
35mA @ 3.3V
A1
RaspberryPi_Pico2
GPIO17
GPIO18
SPI0_TX
SPI0_RX
SPI0_CSn
SPI0_SCK
GPIO14
CAN_IRQ
CAN_RX_IRQ
SPI0_MOSI
SPI0_MISO
SPI0_CS
SPI0_SCK
CAN_TX_IRQ
C23
0.1uF-25V-10%-0805
U5
MCP2518FDT-H/SL
SDI
SDO
CS
SCK
INT
INT0/GPIO0/XSTBY
INT1/GPIO1
OSC2
OSC1
VDD
VSS
TXCAN
RXCAN
SOF
20mA @ 3.3V
U4
4.0 MHz
EN
OUT
+Vs
7mA @ 3.3V
C4
0.1uF-25V-10%-0805
CANTX
CANRX
U8
MCP2558FD
TXD
RXD
S
Vio
Vdd
CANH
CANL
70mA max @ 5V
30mA avg
C17
0.1uF-25V-10%-0805
C19
0.1uF-25V-10%-0805
J18
V_PS
CAN_L
CAN_H
CAN
MFG: Molex
MFG P/N: 0705430038
J19
Molex
70543-0036
H1 MountingHole
H2 MountingHole
H3 MountingHole
H4 MountingHole
FID1 Fiducial
FID2 Fiducial
FID3 Fiducial
FID4 Fiducial
FID5 Fiducial
FID6 Fiducial
G1
Space Cookies Logo

1868 SPACE COOKIES

Sheet: /
File: Pico-ButtonBoard-v1.kicad_sch

Title: Pico Button Board

Size: B	Date: 2025-12-30	**Rev: 1**
KiCad E.D.A. 9.0.6		Id: 1/6

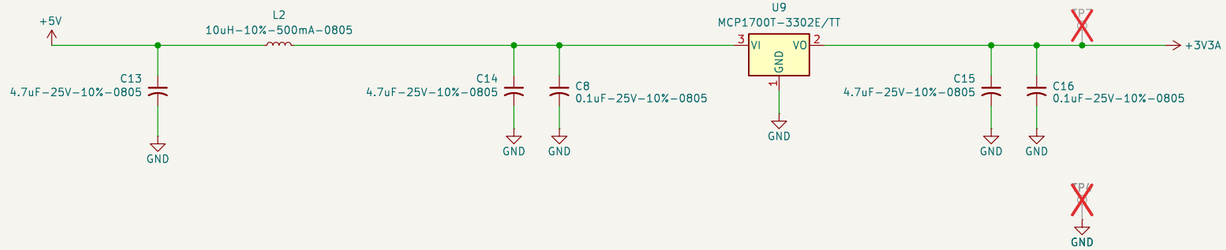


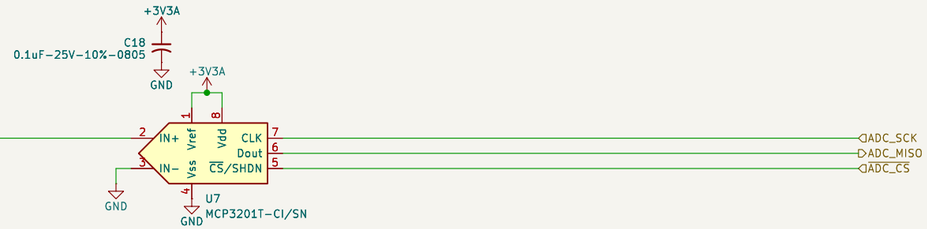
1868 SPACE COOKIES

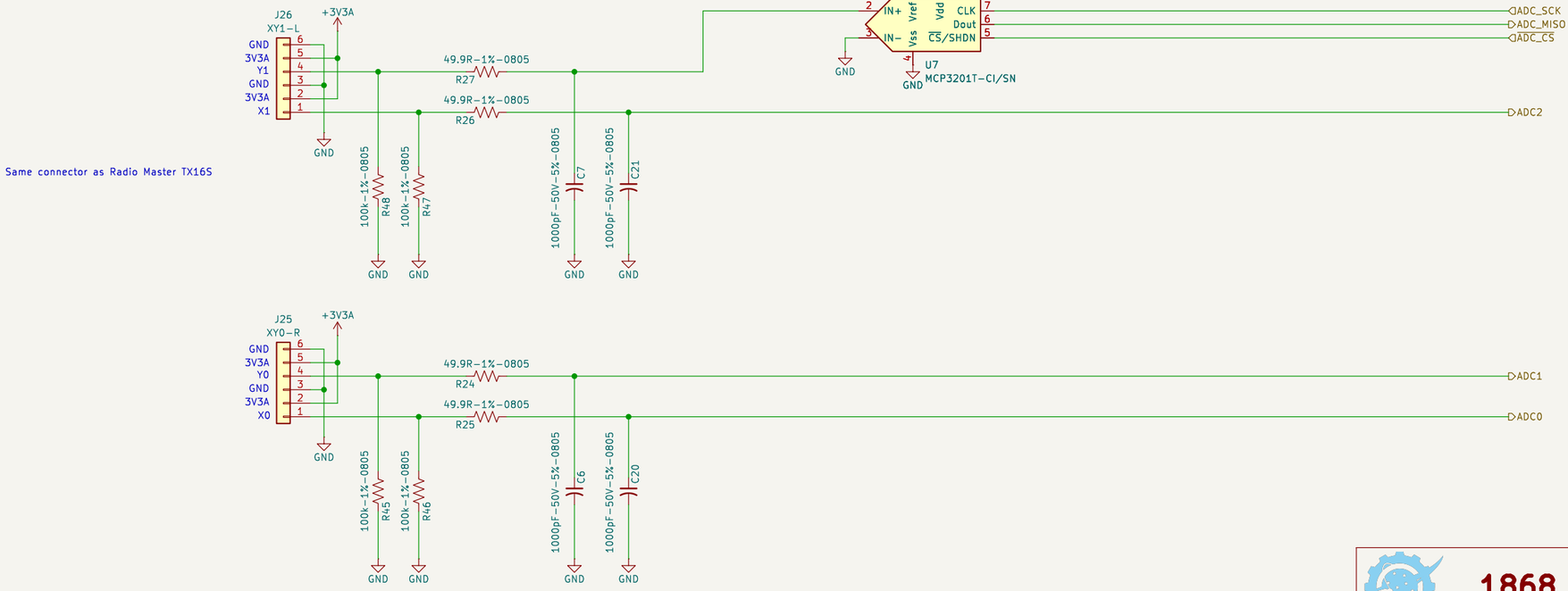
Sheet: /Button Inputs/
File: button-input.kicad_sch

Title: Pico Button Board

Size: B	Date: 2025-12-30	**Rev: 1**
KiCad E.D.A. 9.0.6		Id: 2/6







Same connector as Radio Master TX16S

1868 SPACE COOKIES

Sheet: /Joystick Inputs/
File: joystick-inputs.kicad_sch

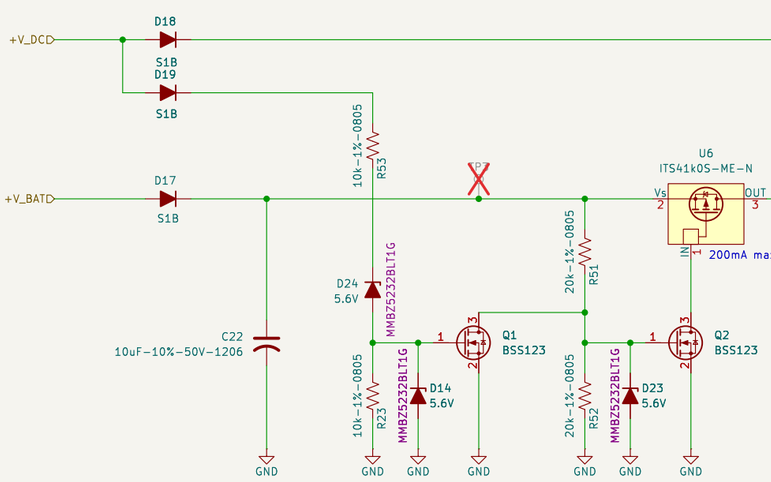
Title: Pico Button Board

Size: B	Date: 2025-12-30	**Rev: 1**
KiCad E.D.A. 9.0.6		Id: 3/6

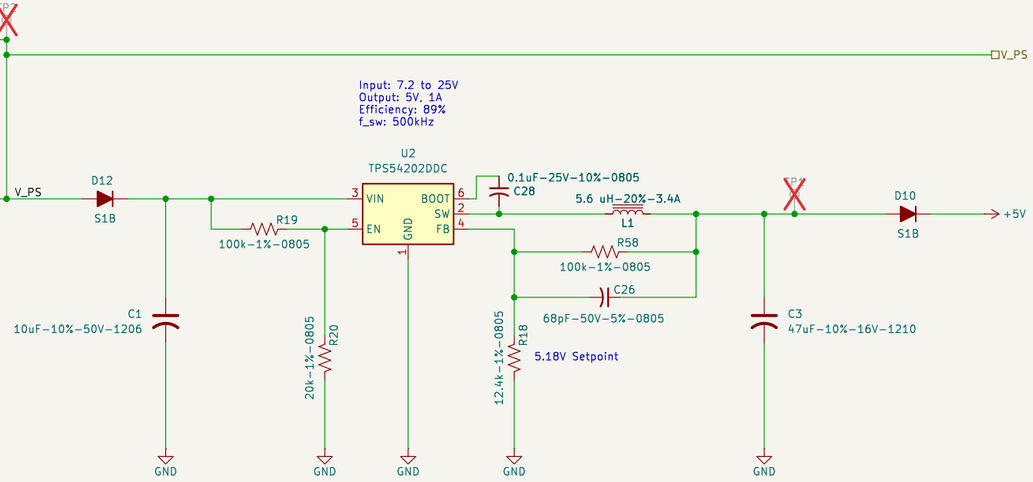
Power supply input range: 8V – 30V
– Allows use of M12 and M18 Milwaukee battery packs.

– Input power can be sourced from either a Milwaukee battery pack an AC power adapter.
– Voltage of the battery pack may be higher than the AC adapter.
– The battery pack is disabled from supplying power whenever the AC adapter is greater than 9V.
– All inputs are protected from reverse polarity

Battery Backup



5V Power Supply



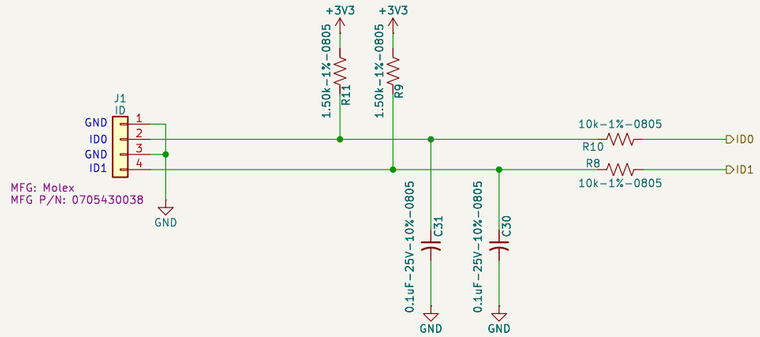
TPS54202-DCDC-Analysis

1868 SPACE COOKIES

Sheet: /Power Supply/
File: power-supply.kicad_sch

Title: Pico Button Board

Size: B	Date: 2025-12-30	**Rev: 1**
KiCad E.D.A. 9.0.6		Id: 4/6

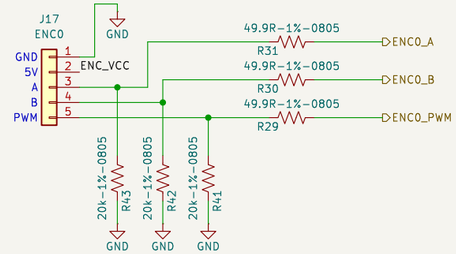


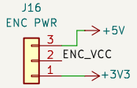
1868 SPACE COOKIES

Sheet: /Board ID/
File: board-id.kicad_sch

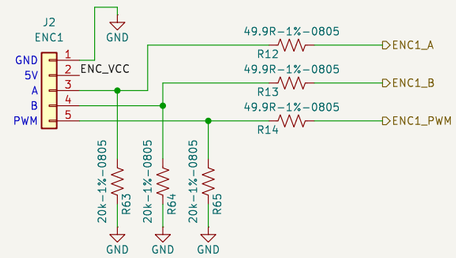
Title: Pico Button Board

Size: B	Date: 2025-12-30	**Rev: 1**
KiCad E.D.A. 9.0.6		Id: 5/6





EXAMPLE CODE: Github: PIO PWM Input Code



1868 SPACE COOKIES

Sheet: /Encoder Inputs/
File: encoder-inputs.kicad_sch

Title: Pico Button Board

Size: B	Date: 2025-12-30	**Rev: 1**
KiCad E.D.A. 9.0.6		Id: 6/6