MIDI Interface

MIDI In
J1
DIN-5_FEMALE

R1 220
C1 0.1u
GND
D1 1N914
VCC
R12 470
U1 H11L1
GND
MIDI_IN

MIDI Sync In
J2
DIN-5_FEMALE

R2 220
C2 0.1u
GND
D2 1N914
VCC
R13 470
U2 H11L1
GND
MIDI_SYNC_IN

MIDI Out
J3
DIN-5_FEMALE

R4 33
VCC
GND
R3 10
MIDI_OUT

U3 Pico
Raspberry Pi Pico

Pin	Signal		Signal	Pin
1	GPIO0		VBUS	40
2	GPIO1		VSYS	39
3	GND		GND	38
4	GPIO2		3V3_EN	37
5	GPIO3		3V3	36
6	GPIO4		ADC_VREF	35
7	GPIO5		GPIO28_ADC2	34
8	GND		AGND	33
9	GPIO6		GPIO27_ADC1	32
10	GPIO7		GPIO26_ADC0	31
11	GPIO8		RUN	30
12	GPIO9		GPIO22	29
13	GND		GND	28
14	GPIO10		GPIO21	27
15	GPIO11		GPIO20	26
16	GPIO12		GPIO19	25
17	GPIO13		GPIO18	24
18	GND		GND	23
19	GPIO14		GPIO17	22
20	GPIO15		GPIO16	21

SWCLK 41 GND 42 SWDIO 43

MIDI_OUT
MIDI_IN
HOLD
HOLD_LED
MIDI_SYNC_IN
CHORDS_LED
ONOFF_LED
ONOFF
MODE
MODE_RANDOM_LED
MODE_UP_DOWN_LED
MODE_DOWN_LED
MODE_UP_LED
OCT
OCT1_LED

ADC_VREF
TEMPO
GATE
SYNC
TEMPO_LED
SYNC_LED
OCT5_LED
OCT4_LED
OCT3_LED
OCT2_LED

VCC +5V GND
VCC
C5 10u
Board-level decoupling
GND

GNDA
GND

3 2 1 J4
Conn_01x03_Pin
Debug port
GND

H1 MountingHole
H2 MountingHole
H3 MountingHole
H4 MountingHole
H5 MountingHole
H6 MountingHole

VCC PWR_FLAG
+5V PWR_FLAG
GND PWR_FLAG
GNDA PWR_FLAG
ADC_VREF PWR_FLAG

NOTE: These are all driven by the Pico

Buttons and LEDs

SW1 SW_PUSH — SYNC
SW2 SW_PUSH — MODE
SW3 SW_PUSH — OCT
SW4 SW_PUSH — ONOFF
SW5 SW_PUSH — HOLD
GND

D3 Green R5 220 — TEMPO_LED
D4 Green R6 220 — SYNC_LED
D5 Green R7 220 — MODE_UP_LED
D6 Green R8 220 — MODE_DOWN_LED
D7 Green R9 220 — MODE_UP_DOWN_LED
D8 Green R10 220 — MODE_RANDOM_LED
D9 Green R11 220 — OCT1_LED
GND

D10 Green R14 220 — OCT2_LED
D11 Green R15 220 — OCT3_LED
D12 Green R16 220 — OCT4_LED
D13 Green R17 220 — OCT5_LED
D14 Red   R18 220 — ONOFF_LED
D15 Green R19 220 — CHORDS_LED
D16 Green R20 220 — HOLD_LED
GND

Analog input

Tempo
RV1 10k (B)
ADC_VREF
R21 15k
TEMPO
C3 1u
GNDA

Gate
RV2 10k (B)
ADC_VREF
R22 15k
GATE
C4 1u
GNDA