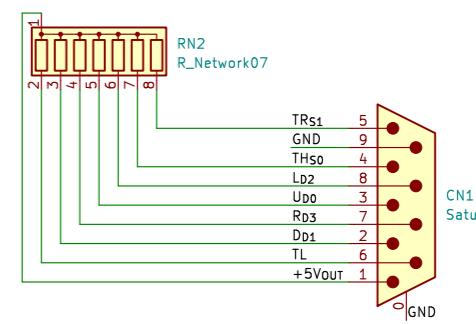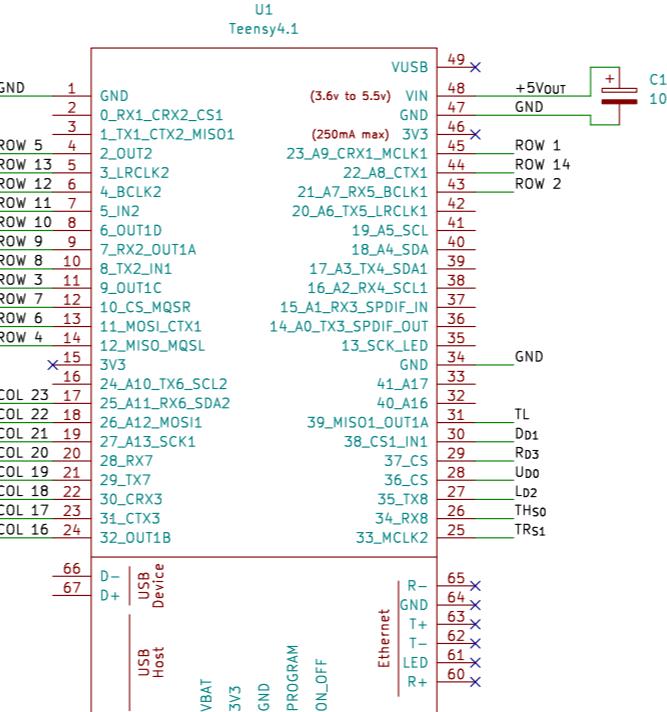Row & Column numbering correspond to the assigned CN2 pin inside the keyboard.

Pin 1 = +5V power
Pin 2 = Data 1
Pin 3 = Data 0
Pin 4 = REQuest (S1/TR)
Pin 5 = SELect (S0, TH)
Pin 6 = ACKnowledge (TL)
Pin 7 = Data 3
Pin 8 = Data 2
Pin 9 = GND

RN2
R_Network07

CN1
Saturn

TR$_{S1}$ 5
GND 9
TH$_{S0}$ 4
L$_{D2}$ 8
U$_{D0}$ 3
R$_{D3}$ 7
D$_{D1}$ 2
TL 6
+5V$_{OUT}$ 1
GND

SW1 RH CTRL
SW2 LH CTRL
ROW 1

SW3 RH SHIFT
SW4 LH SHIFT
ROW 2

SW5 F8 | SW6 F9 | SW7 F10 | SW8 F11 | SW9 F12 | SW10 PRINT SCREEN | SW11 SCROLL LOCK | SW12 PAUSE
ROW 3

SW13 ? / | SW14 _ \ | SW15 UP | SW16 LEFT | SW17 DOWN | SW18 RIGHT | SW19 PAGE DOWN | SW20 PAGE UP
ROW 4

SW21 > . | SW22 無変換 | SW23 カタカナ | SW24 前候補 | SW25 SPACE | SW26 Z | SW27 END
ROW 5

SW28 K | SW29 L | SW30 + ; | SW31 * : | SW32 }] | SW33 ENTER | SW34 X | SW35 HOME
ROW 6

SW36 I | SW37 O | SW38 P | SW39 ' @ | SW40 { [| SW41 DELETE | SW42 A | SW43 INSERT
ROW 7

SW44 (8 | SW45) 9 | SW46 - 0 | SW47 = - | SW48 _ ~ | SW49 | ¥ | SW50 S | SW51 BACKSPACE
ROW 8

SW52 < , | SW53 M | SW54 N | SW55 B | SW56 V | SW57 C
ROW 9

SW58 J | SW59 H | SW60 G | SW61 F | SW62 D | SW63 CAPS LOCK
ROW 10

SW64 U | SW65 Y | SW66 T | SW67 R | SW68 W | SW69 TAB | SW70 E | SW71 半角/全角
ROW 11

SW72 ' 7 | SW73 & 6 | SW74 % 5 | SW75 $ 4 | SW76 # 3 | SW77 " 2 | SW78 Q | SW79 ! 1
ROW 12

SW80 F7 | SW81 F6 | SW82 F5 | SW83 F4 | SW84 F3 | SW85 F2 | SW86 ESC | SW87 F1
ROW 13

SW88 RH ALT | SW89 LH ALT
ROW 14

U1
Teensy4.1

GND 1 — GND
2 — 0_RX1_CRX2_CS1
3 — 1_TX1_CTX2_MISO1
ROW 5 4 — 2_OUT2
ROW 13 5 — 3_LRCLK2
ROW 12 6 — 4_BCLK2
ROW 11 7 — 5_IN2
ROW 10 8 — 6_OUT1D
ROW 9 9 — 7_RX2_OUT1A
ROW 8 10 — 8_TX2_IN1
ROW 3 11 — 9_OUT1C
ROW 7 12 — 10_CS_MQSR
ROW 6 13 — 11_MOSI_CTX1
ROW 4 14 — 12_MISO_MQSL
15 — 3V3
16 —
COL 23 17 — 24_A10_TX6_SCL2
COL 22 18 — 25_A11_RX6_SDA2
COL 21 19 — 26_A12_MOSI1
COL 20 20 — 27_A13_SCK1
COL 19 21 — 28_RX7
COL 18 22 — 29_TX7
COL 17 23 — 30_CRX3
COL 16 24 — 31_CTX3
32_OUT1B

VUSB 49 — +5V$_{OUT}$
(3.6v to 5.5v) VIN 48 — GND
GND 47
(250mA max) 3V3 46 — ROW 1
23_A9_CRX1_MCLK1 45 — ROW 14
22_A8_CTX1 44 — ROW 2
21_A7_RX5_BCLK1 43
20_A6_TX5_LRCLK1 42
19_A5_SCL 41
18_A4_SDA 40
17_A3_TX4_SDA1 39
16_A2_RX4_SCL1 38
15_A1_RX3_SPDIF_IN 37
14_A0_TX3_SPDIF_OUT 36
13_SCK_LED 35
GND 34 — GND
40_A16 33
41_A17 32
39_MISO1_OUT1A 31 — TL
38_CS1_IN1 30 — D$_{D1}$
37_CS 29 — R$_{D3}$
36_CS 28 — U$_{D0}$
35_TX8 27 — L$_{D2}$
34_RX8 26 — TH$_{S0}$
33_MCLK2 25 — TR$_{S1}$

66 — D−
67 — D+
USB Device

USB Host
VBAT
3V3
GND
PROGRAM
ON_OFF

Ethernet
R− 65
GND 64
T+ 63
T− 62
LED 61
R+ 60

50 51 52 53 54
GND

C1
10µF

+5V$_{OUT}$
GND

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

RN1
10KΩ

COL 16 2
COL 17 3
COL 18 4
COL 19 5
COL 20 6
COL 21 7
COL 22 8
COL 23 9
1 +5V$_{OUT}$

github.com/BrettHallen
www.youtube.com/@Brfff
Brett Hallen
Sheet: /
File: Sega_Saturn_Keyboard.kicad_sch

Title: Sega Saturn Keyboard (HSS-0129)
Size: A3 | Date: 3/DEC/2025 | Rev: WIP
KiCad E.D.A. 9.0.5 | Id: 1/1