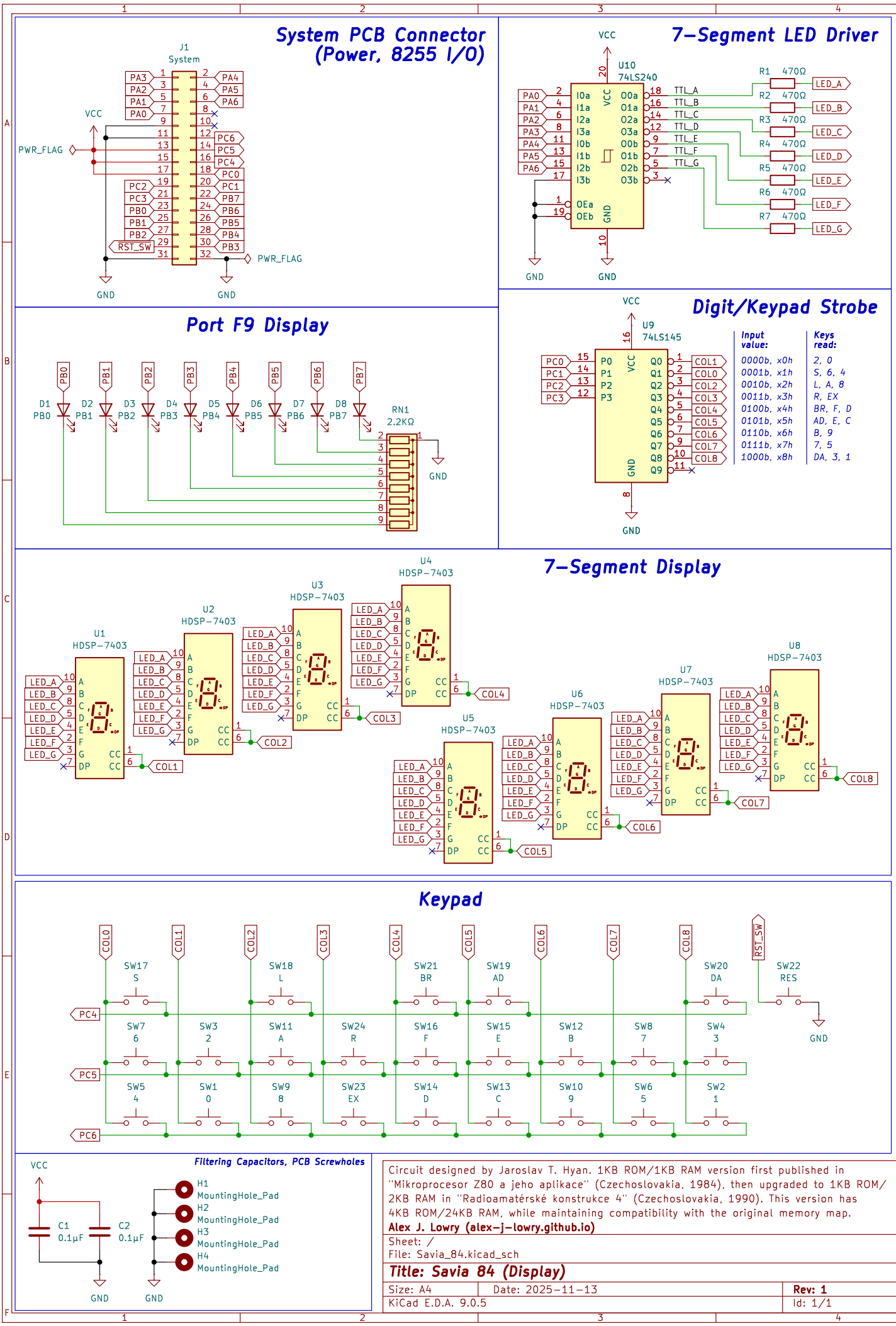
System PCB Connector (Power, 8255 I/O)
J1
System
PA3 PA2 PA1 PA0 PA4 PA5 PA6
PC6 PC5 PC4 PC0 PC1 PB7 PB6 PB5 PB4 PB3
PC2 PC3 PB0 PB1 PB2 RST_SW
VCC
PWR_FLAG
GND
7-Segment LED Driver
U10
74LS240
I0a I1a I2a I3a I0b I1b I2b I3b OEa OEb
O0a O1a O2a O3a O0b O1b O2b O3b
TTL_A TTL_B TTL_C TTL_D TTL_E TTL_F TTL_G
R1 R2 R3 R4 R5 R6 R7 470Ω
LED_A LED_B LED_C LED_D LED_E LED_F LED_G
Port F9 Display
D1 D2 D3 D4 D5 D6 D7 D8
PB0 PB1 PB2 PB3 PB4 PB5 PB6 PB7
RN1
2.2KΩ
Digit/Keypad Strobe
U9
74LS145
PC0 PC1 PC2 PC3
P0 P1 P2 P3
Q0 Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9
COL1 COL0 COL2 COL3 COL4 COL5 COL6 COL7 COL8
Input value: 0000b, x0h 0001b, x1h 0010b, x2h 0011b, x3h 0100b, x4h 0101b, x5h 0110b, x6h 0111b, x7h 1000b, x8h
Keys read: 2, 0 S, 6, 4 L, A, 8 R, EX BR, F, D AD, E, C B, 9 7, 5 DA, 3, 1
7-Segment Display
U1 HDSP-7403
U2 HDSP-7403
U3 HDSP-7403
U4 HDSP-7403
U5 HDSP-7403
U6 HDSP-7403
U7 HDSP-7403
U8 HDSP-7403
COL1 COL2 COL3 COL4 COL5 COL6 COL7 COL8
Keypad
SW17 S
SW18 L
SW21 BR
SW19 AD
SW20 DA
SW22 RES
SW7 6
SW3 2
SW11 A
SW24 R
SW16 F
SW15 E
SW12 B
SW8 7
SW4 3
SW5 4
SW1 0
SW9 8
SW23 EX
SW14 D
SW13 C
SW10 9
SW6 5
SW2 1
PC4 PC5 PC6
RST_SW
Filtering Capacitors, PCB Screwholes
C1 0.1µF
C2 0.1µF
H1 MountingHole_Pad
H2 MountingHole_Pad
H3 MountingHole_Pad
H4 MountingHole_Pad
Circuit designed by Jaroslav T. Hyan. 1KB ROM/1KB RAM version first published in "Mikroprocesor Z80 a jeho aplikace" (Czechoslovakia, 1984), then upgraded to 1KB ROM/2KB RAM in "Radioamatérské konstrukce 4" (Czechoslovakia, 1990). This version has 4KB ROM/24KB RAM, while maintaining compatibility with the original memory map.
Alex J. Lowry (alex-j-lowry.github.io)
Sheet: /
File: Savia_84.kicad_sch
Title: Savia 84 (Display)
Size: A4
Date: 2025-11-13
Rev: 1
KiCad E.D.A. 9.0.5
Id: 1/1