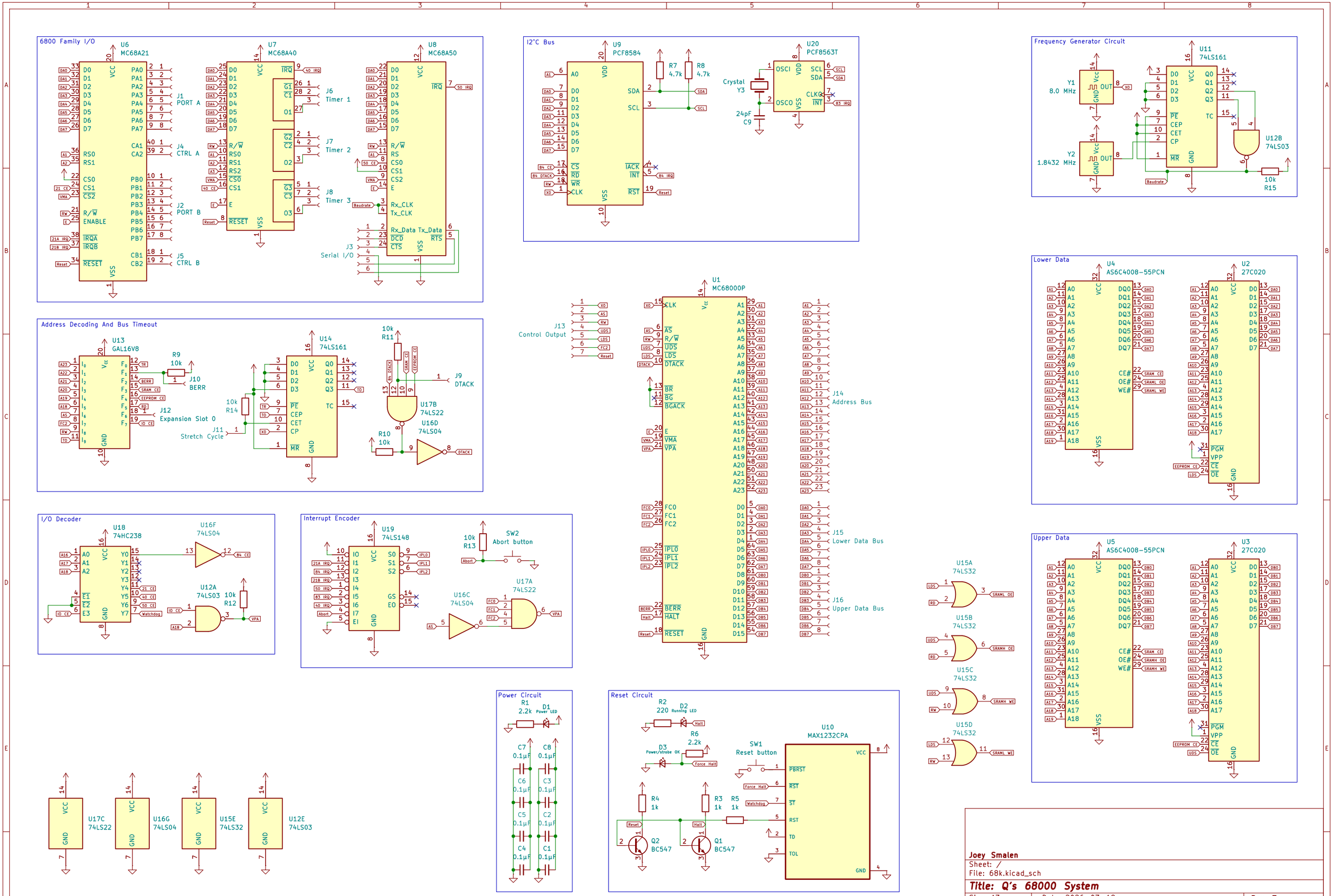
6800 Family I/O
U6 MC68A21
U7 MC68A40
U8 MC68A50
J1 PORT A
J2 PORT B
J3 Serial I/O
J4 CTRL A
J5 CTRL B
J6 Timer 1
J7 Timer 2
J8 Timer 3
I2C Bus
U9 PCF8584
U20 PCF8563T
R7 4.7k
R8 4.7k
Crystal Y3
24pF C9
Frequency Generator Circuit
U11 74LS161
U12B 74LS03
Y1 8.0 MHz
Y2 1.8432 MHz
10k R15
Address Decoding And Bus Timeout
U13 GAL16V8
U14 74LS161
U17B 74LS22
U16D 74LS04
R9 10k
J10 BERR
J12 Expansion Slot 0
J11 Stretch Cycle
10k R14
10k R11
R10 10k
J9 DTACK
U1 MC68000P
J13 Control Output
J14 Address Bus
J15 Lower Data Bus
J16 Upper Data Bus
Lower Data
U4 AS6C4008-55PCN
U2 27C020
Upper Data
U5 AS6C4008-55PCN
U3 27C020
I/O Decoder
U18 74HC238
U16F 74LS04
U12A 74LS03
10k R12
Interrupt Encoder
U19 74LS148
10k R13
SW2 Abort button
U16C 74LS04
U17A 74LS22
U15A 74LS32
U15B 74LS32
U15C 74LS32
U15D 74LS32
Power Circuit
R1 2.2k
D1 Power LED
C7 0.1µF
C8 0.1µF
C6 0.1µF
C3 0.1µF
C5 0.1µF
C2 0.1µF
C4 0.1µF
C1 0.1µF
Reset Circuit
R2 220
D2 Running LED
R6 2.2k
D3 Power/strobe OK
SW1 Reset button
U10 MAX1232CPA
R4 1k
R3 1k
R5 1k
Q2 BC547
Q1 BC547
U17C 74LS22
U16G 74LS04
U15E 74LS32
U12E 74LS03
Joey Smalen
Sheet: /
File: 68k.kicad_sch
Title: Q's 68000 System
Size: A3
Date: 2026-03-18
Rev: 3
KiCad E.D.A. 10.0.1
Id: 1/1