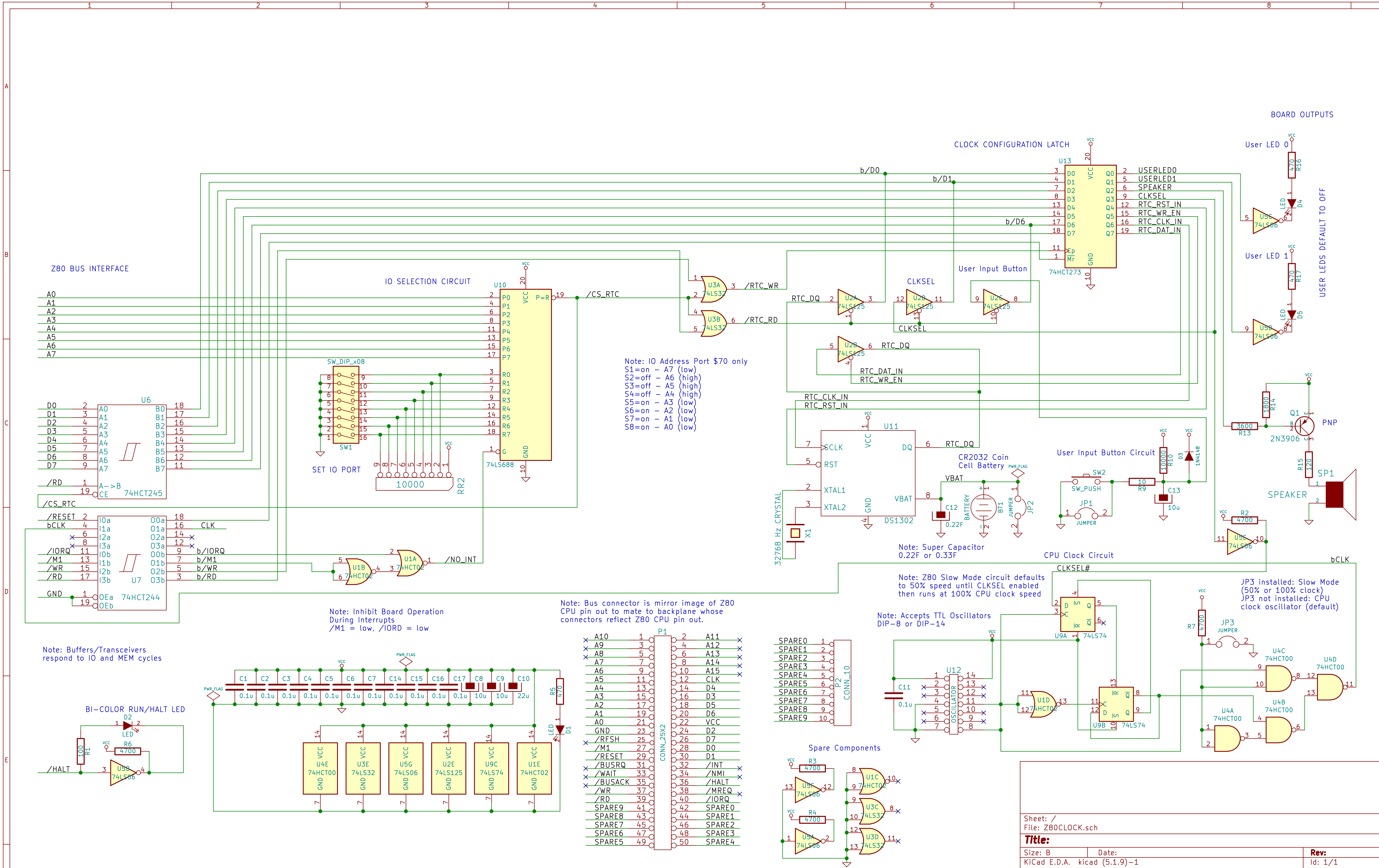
Z80 BUS INTERFACE
IO SELECTION CIRCUIT
CLOCK CONFIGURATION LATCH
BOARD OUTPUTS
User LED 0
User LED 1
USER LEDS DEFAULT TO OFF
User Input Button
CLKSEL
Note: IO Address Port $70 only
S1=on – A7 (low)
S2=off – A6 (high)
S3=off – A5 (high)
S4=off – A4 (high)
S5=on – A3 (low)
S6=on – A2 (low)
S7=on – A1 (low)
S8=on – A0 (low)
SET IO PORT
SW_DIP_x08
SW1
RR2
10000
U6 74HCT245
U7 74HCT244
U10 74LS688
U13 74HCT273
U11 DS1302
/CS_RTC
/RTC_WR
/RTC_RD
RTC_DQ
RTC_DAT_IN
RTC_WR_EN
RTC_CLK_IN
RTC_RST_IN
USERLED0
USERLED1
SPEAKER
CLKSEL
b/D0
b/D1
b/D6
/NO_INT
b/IORQ
b/M1
b/WR
b/RD
/RESET
bCLK
CLK
GND
CR2032 Coin
Cell Battery
VBAT
BATTERY
BT1
JP2
JUMPER
PWR_FLAG
C12 0.22F
32768 Hz CRYSTAL
X1
Note: Super Capacitor
0.22F or 0.33F
User Input Button Circuit
SW2 SW_PUSH
JP1
R9 10
R10 10000
C13 10u
D3 1N4148
Q1 2N3906 PNP
R13 3600
R14 1800
R15 120
SP1 SPEAKER
R2 4700
U5E 74LS06
CPU Clock Circuit
CLKSEL#
Note: Z80 Slow Mode circuit defaults
to 50% speed until CLKSEL enabled
then runs at 100% CPU clock speed
Note: Accepts TTL Oscillators
DIP–8 or DIP–14
U12 OSCILLATOR
C11 0.1u
U9A 74LS74
U9B 74LS74
U1D 74HCT02
U4A 74HCT00
U4B 74HCT00
U4C 74HCT00
U4D 74HCT00
R7 4700
JP3 JUMPER
JP3 installed: Slow Mode
(50% or 100% clock)
JP3 not installed: CPU
clock oscillator (default)
Note: Inhibit Board Operation
During Interrupts
/M1 = low, /IORD = low
Note: Buffers/Transceivers
respond to IO and MEM cycles
BI–COLOR RUN/HALT LED
D2 LED
R1 100
R6 4700
U5B 74LS06
/HALT
C1 C2 C3 C4 C5 C6 C7 C14 C15 C16 C17 0.1u
C8 10u
C9 10u
C10 22u
R5 470
D1 LED
U4E 74HCT00
U3E 74LS32
U5G 74LS06
U2E 74LS125
U9C 74LS74
U1E 74HCT02
Note: Bus connector is mirror image of Z80
CPU pin out to mate to backplane whose
connectors reflect Z80 CPU pin out.
P1 CONN_25X2
A10 A11 A9 A12 A8 A13 A7 A14 A6 A15 A5 CLK A4 D4 A3 D3 A2 D5 A1 D6 A0 VCC GND D2 /RFSH D7 /M1 D0 /RESET D1 /BUSRQ /INT /WAIT /NMI /BUSACK /HALT /WR /MREQ /RD /IORQ SPARE9 SPARE0 SPARE8 SPARE1 SPARE7 SPARE2 SPARE6 SPARE3 SPARE5 SPARE4
P2 CONN_10
SPARE0 SPARE1 SPARE2 SPARE3 SPARE4 SPARE5 SPARE6 SPARE7 SPARE8 SPARE9
Spare Components
R3 4700
R4 4700
U5F 74LS06
U5A 74LS06
U1C 74HCT02
U3C 74LS32
U3D 74LS32
Sheet: /
File: Z80CLOCK.sch
Title:
Size: B
Date:
Rev:
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