bus

File: bus.kicad_sch

PPIDE

File: PPIDE.kicad_sch

GAL

File: GAL.kicad_sch

power

File: power.kicad_sch

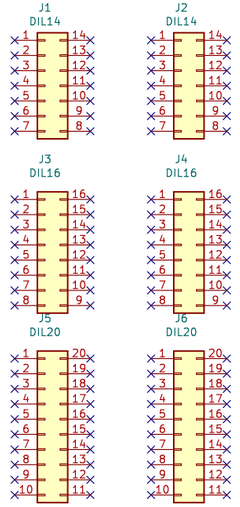
FDC

File: FDC.kicad_sch

buffers

File: buffers.kicad_sch

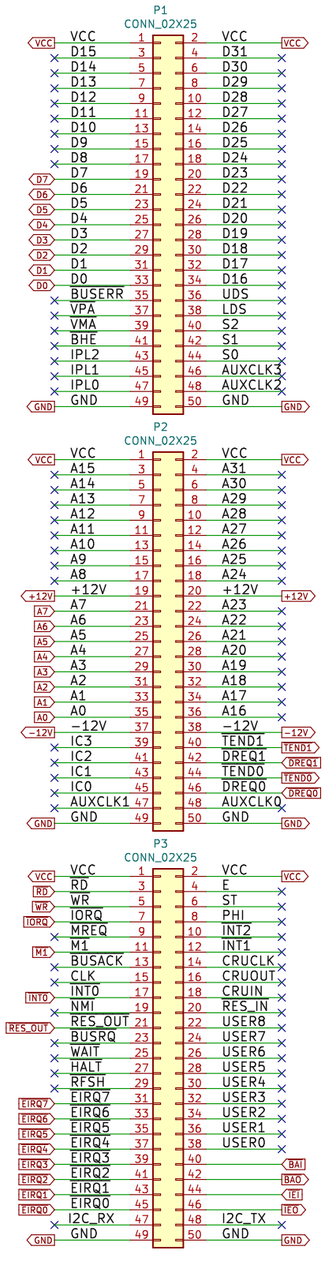
SPARE SOCKETS FOR DEBUGGING



Sheet: /
File: input-output.Disk.kicad_sch

Title:

Size: B	Date:	**Rev:**
KiCad E.D.A. kicad (6.0.11)		Id: 1/7



Sheet: /bus/		
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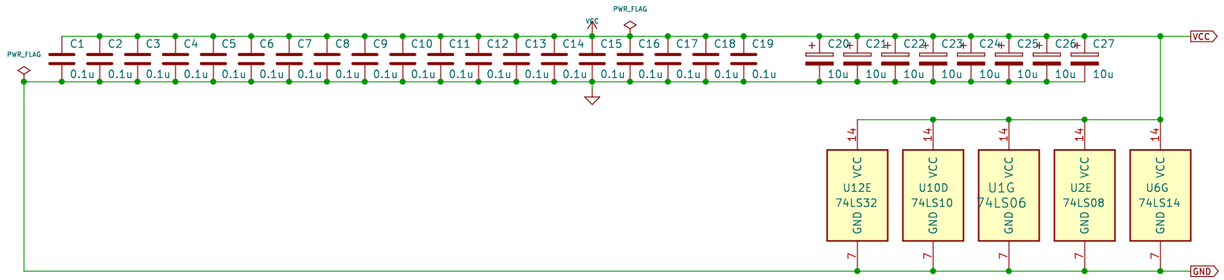
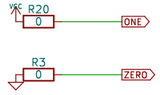
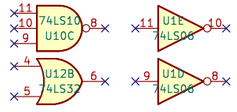
Title:		
Size: B	Date:	**Rev:**
KiCad E.D.A. kicad (6.0.11)		Id: 2/7





Spare Components

Spare Components



Sheet: /power/		
File: power.kicad_sch		
Title:		
Size: B	Date:	**Rev:**
KiCad E.D.A. kicad (6.0.11)		Id: 3/7

IO SELECTION CIRCUIT

U7

74LS688

IO PORT ADDR

SW1

SET IO PORT

RN1

10K

Note: Inhibit Board Operation
During Interrupts
M1 = low, IORQ = low

Note: IO Address Port $60-$63
1-2=on - A7 (low)
3-4=off - A6 (high)
5-6=off - A5 (high)
7-8=on - A4 (low)
9-10=on - A3 (low)
11-12=on - A2 (low)

U6E
74LS14

82C55A_PLCC

U8

J7

INTERRUPT

U1C
74LS08

R4
1000

NOTE: INT RELIES ON 4700
OHM PULL UP RESISTOR ON PROCESSOR

J8

INTERRUPT

U1B
74LS08

R9
1000

U6A
74LS14

U6B
74LS14

U6C
74LS14

U6D
74LS14

U6F
74LS14

R5
10K

R7
10K

R8
0

R10
10K

P5
PPI

K1
PPI PWR

P6
IDE

K2
IDE PWR

R6
470

D2
LED

R11
470

JP1
EXT LED

EXTERNAL
IDE LED

Sheet: /PPIDE/	
File: PPIDE.kicad_sch	
Title:	
Size: B	Date:
KiCad E.D.A. kicad (6.0.11)	Rev:
	Id: 4/7

IO SELECTION CIRCUIT

Note: Inhibit Board Operation
During Interrupts
M1 = low, IORQ = low

U9 74LS688
P=R
P0 P1 P2 P3 P4 P5 P6 P7
R0 R1 R2 R3 R4 R5 R6 R7
VCC GND

bA3 bA4 bA5 bA6 bA7 bIORQ CS_FDC

IO PORT ADDR
SW2
SET IO PORT
RN2 10K
VCC

Note: IO Address Port $E8-$EF
1-2 =off - A7 (high)
3-4 =off - A6 (high)
5-6 =off - A5 (high)
7-8 =on - A4 (low)
9-10 =off - A3 (high)

Note: IO Address Ports $30-$37
S1=on - A7 (low)
S2=on - A6 (low)
S3=off - A5 (high)
S4=off - A4 (high)
S5=on - A3 (low)
S6=xx - A2 (xx)
S7=xx - A1 (xx)
S8=xx - A0 (xx)

FLOPPY DRIVE INTERFACE

IO Ports
x0 read Main Status Register
x1 read/write Data In/Out
x2 read/write Terminal Count
x3 read/write User Reset FDC
x4 <none>
x5 write Load Control Register
x6 read DMA Acknowledge/write Load Operations Register
x7 read DMA Acknowledge and Terminal Count

U20 16 MHz
U22 24 MHz

NOTE: U12 OPTIONAL
SECONDARY CLOCK
FOR 150/300 KBPS
DRIVES. USE P5 1-2
CLOSED TO ENABLE:
DEFAULT IS 2-3 CLOSED

P7 CONN_3 GND

U10B 74LS10 · U10A 74LS10 · U2A 74LS08 · U2B 74LS08 · U12C 74LS32 · U12D 74LS32

bRESET USER_RESET TC DACK_AND_TC TEND
bA0 bA1 bA2 bIOW
U14 74LS138 A0 A1 A2 E3 E2 E1 O0 O1 O2 O3 O4 O5 O6 O7 VCC GND
LDCR DACK DACK_AND_TC MSR_DATA

U21 WD37C65BJM/WD PLCC
VCC RST TC /RD /WR /CS /DACK /LDOR /LDCR PCVAL DRV /DCHGEN
XT1 /XT1 XT2 /XT2 IRQ DMA /HS /WE /WD /DIRC /STEP /DS1 /DS2 /MO1/DS3 /MO2/DS4 /HDL /RWC/RPM /RDD /DCHG /WP /TR00 /IDX
DB0 DB1 DB2 DB3 DB4 DB5 DB6 DB7 A0
CAP1 CAP2

INT_FDC FDC_DMA

IBM floppy connector
A: = DS1 (no twist)
B: = DS2 (twist)

P10 F_FLOPPY
RP1 1000

NOTE: REPLACE RP1 WITH 150 OHM
9 PIN SIP RESISTOR PACK FOR
LEGACY FLOPPY DRIVES: 1000 OHM
FOR 3.5" IBM PC 1.44MB COMPATIBLE

EXTERNAL DMA INTERFACE

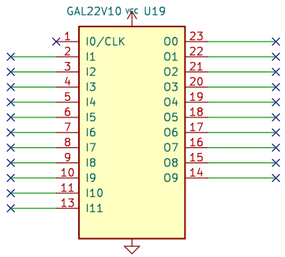
TEND U12A 74LS32 PULSE R16 470Ω
FDC_DMA U13 74LS00 RDY R17 470Ω
P8 CONN_3 TEND P8 CONN_3 DSEL0 DSEL1

J9 INTERRUPT
INT0 DB00 DB01 DB02 DB03 DB04 DB05 DB06 DB07
U11 74LS00 INT_FDC
NOTE: RELIES ON 4700 OHM PULL UP
RESISTOR ON Z80 PROCESSOR BOARD

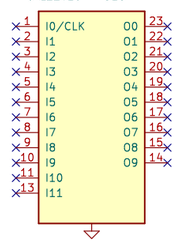
CS_FDC U20 74LS00 R15 470Ω D3 LED
FDC CHIP SELECT

Sheet: /FDC/
File: FDC.kicad_sch
Title:
Size: C | Date: | Rev:
KiCad E.D.A. kicad (6.0.11) | Id: 5/7

DISK IO GAL22V10



SPARE GAL FOR DEBUGGING

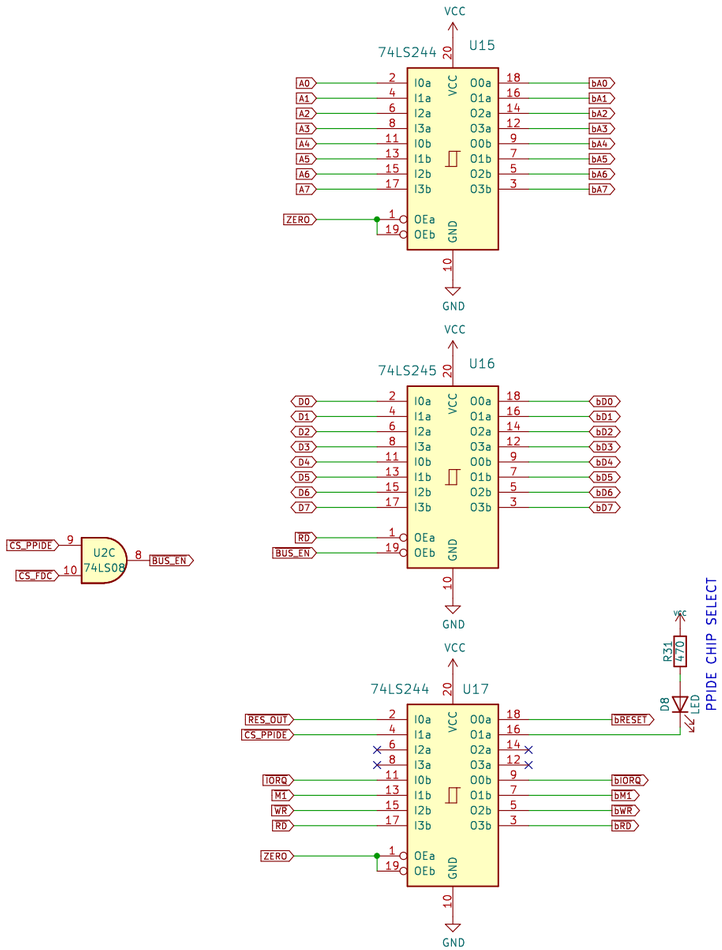


Sheet: /GAL/
File: GAL.kicad_sch

Title:

Size: B	Date:	**Rev:**
KiCad E.D.A. kicad (6.0.11)		Id: 6/7

Z80 BUS INTERFACE



Note: Buffers and Transceivers
respond to IO and MEM cycles

Sheet: /buffers/		
File: buffers.kicad_sch		
Title:		
Size: B	Date:	**Rev:**
KiCad E.D.A. kicad (6.0.11)		Id: 7/7