

KOOLKLOX

**“BARE BONES” KIT
PARTS LIST
ALL PART NUMBERS ARE FROM
DIGIKEY.COM
DATASHEETS FOR ALL PARTS AVAIL ON THEIR
WEBSITE IN PDF
Parts in **GREEN** are included with kit
**TTL NIXIE Digital Clock
Rev. 2
January 19, 2011****



BARE BONES PARTS LIST

DIGIKEY/MFG PART #	QTY.	DESCRIPTION
RESISTORS		
CF14JT270RCT-ND	2	270 ohm (red-violet-brown-gold), ¼ watt resistor
CF14JT1K50CT-ND	25	1.5k (brown-green-red-gold), ¼ watt resistor
CF14JT1K80CT-ND	4	1.8k (brown-grey-red-gold), ¼ watt resistor
CF14JT3K90CT-ND	1	3.9k (orange-white-red-gold), ¼ watt resistor
CF14JT4K70CT-ND	4	4.7k (yellow-violet-red-gold), ¼ watt resistor
CF14JT10K0CT-ND	8	10k (brown-black-orange-gold), ¼ watt resistor
CF14JT22K0CT-ND	5	22k (red-red-orange-gold), ¼ watt resistor
CF14JT33K0CT-ND	6	33k (orange-orange-orange-gold), ¼ watt resistor
CF14JT47K0CT-ND	15	47k (yellow-violet-orange-gold), ¼ watt resistor
CF14JT56K0CT-ND	1	56k (green-blue-orange-gold), ¼ watt resistor
CF14JT100KCT-ND	3	100k (brown-black-yellow-gold), ¼ watt resistor
CF14JT200KCT-ND	1	200k (red-black-yellow-gold), ¼ watt resistor
CF14JT270KCT-ND	1	270k (red-violet-yellow-gold), ¼ watt resistor

CAPACITORS and INDUCTORS

BC2672CT-ND	1	220pF capacitor
BC2665CT-ND	4	0.1uF capacitor
493-1215-ND	1	2.2uF/350 volt electrolytic
P810-ND	1	47uF/16 volt electrolytic
P5143-ND	1	2200uF/16 volt electrolytic
M8282-ND	2	22uH RF choke, J.W. Miller/ Bourns

DIODES and LED's

1N5392	4	100 volt/1.5 amp rectifier
1N4005	4	600 volt/1 amp rectifier
36-3PURP	36	LED, 3mm, purple

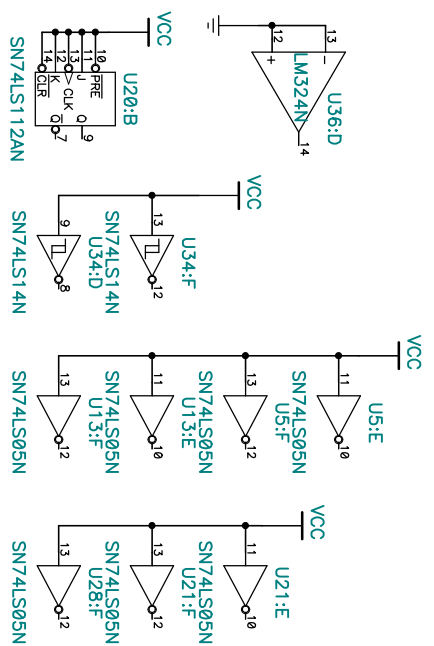
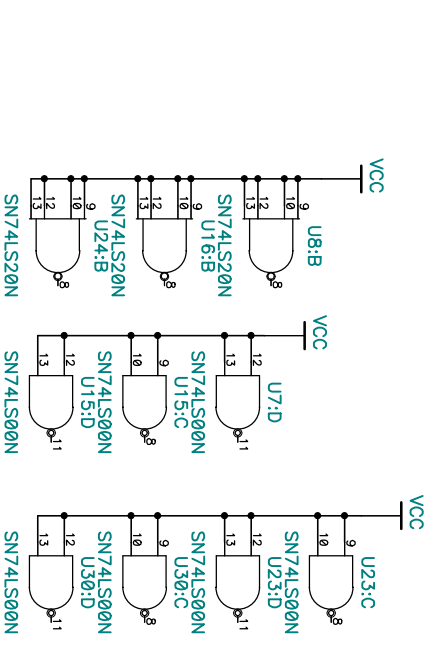
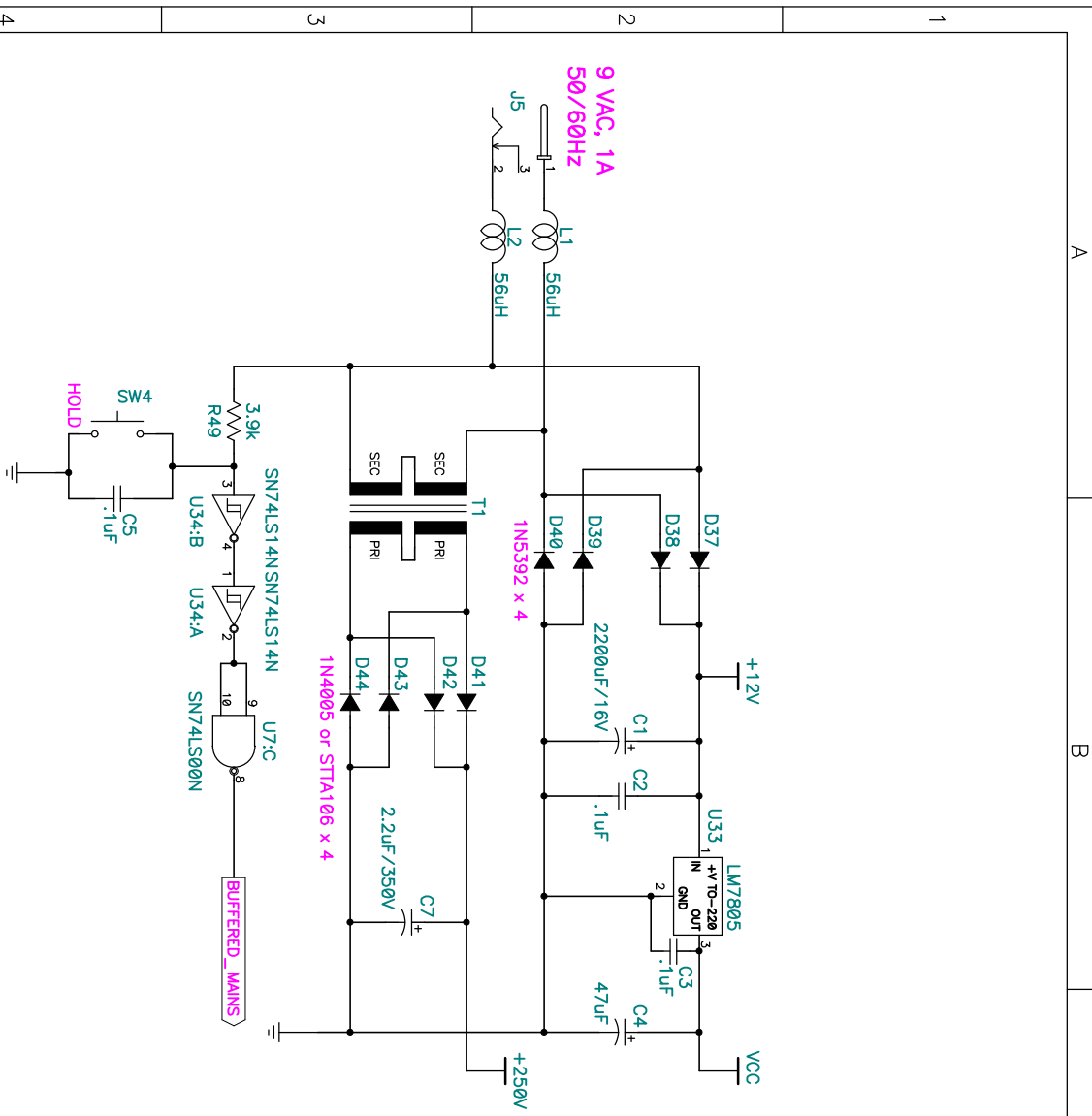
TRANSISTORS and IC's ALL PROVIDED EXCEPT FOR REGULATOR

42-MPSA42	50	MPS-A42, 300 volt, NPN, transistor
42-MPSA92	1	MPS-A92, 300 volt, PNP, transistor
50-LM324	1	IC, Quad OP amp
51-74LS00	4	IC, Quad, NAND gate
51-74LS05	4	IC, Hex INVERTER
51-74F14	1	IC, Hex Schmidt trigger
51-74LS37	4	IC, Quad, NAND buffer
51-74LS40	4	IC, Dual, quad input NAND
51-74F112	16	IC, Dual J-K Flip Flop
51-74LS112	1	IC, Dual J-K Flip Flop
LM7805ACT-ND	1	IC, +5 volt regulator

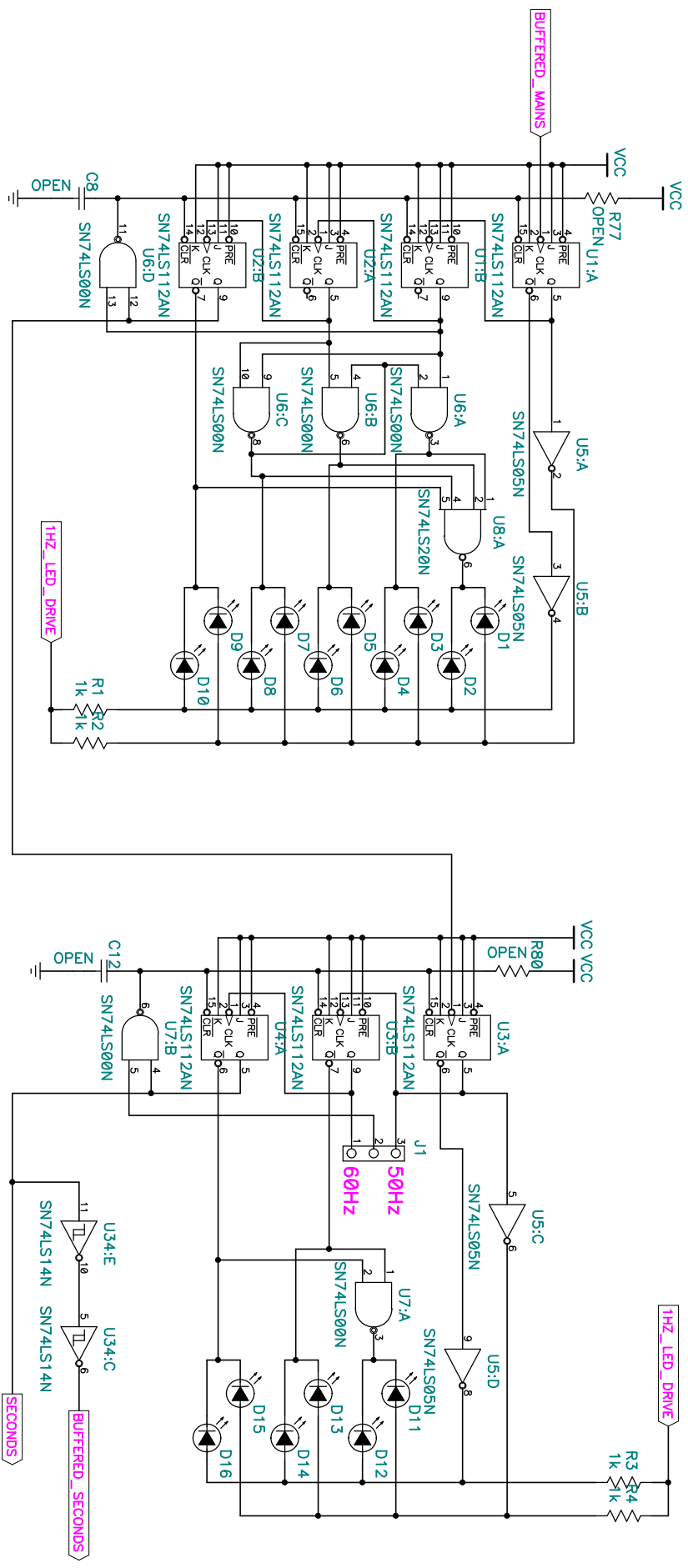


PARTS LIST (CONTINUED)

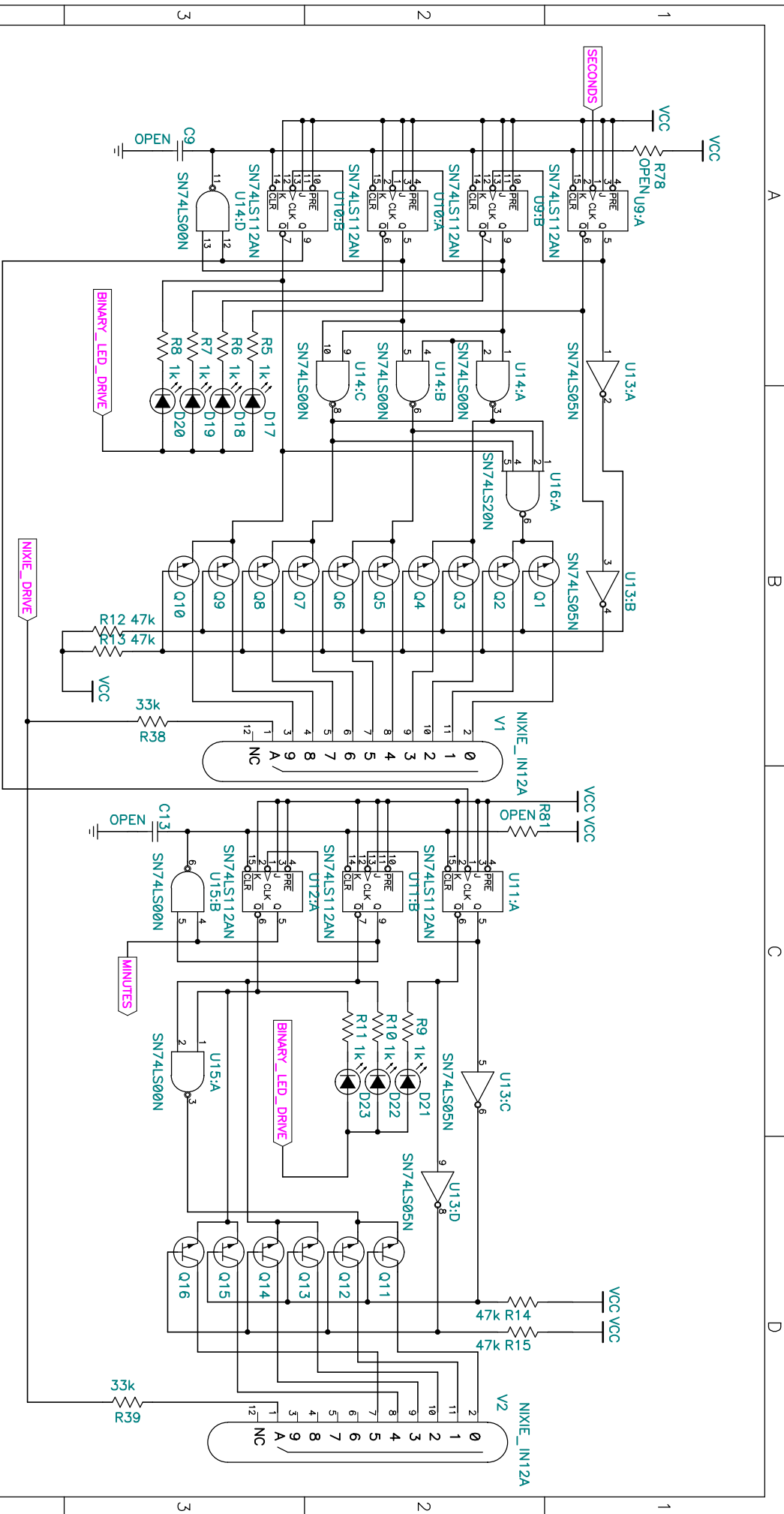
PART #	QTY.	DESCRIPTION
TUBES, TRANSFORMERS, CONNECTORS, SWITCHES		
IN12A	6	NIXIE Tube, 0-9
MT3102-ND	1	Power transformer, 10 volt, 5VA, Tamura
T1126-P5-ND	1	Wall transformer, 9VAC, 1amp
NOTE: <i>MUST BE AC NOT DC. Not more than 10VAC (HV transformer limited)</i>		
Optional	18	IC socket, 14 pin
Optional	17	IC socket, 16 pin
3M9472-ND	1	Connector, 8 position right angle header
S9001-ND	3	Connector, Jumper
CP-047R-ND	1	Connector, Power
SW409-ND	6	Switch, pushbutton
HARDWARE		
HS104-1-ND	1	Heatsink, TO-220, voltage regulator
Screw	1	Screw, 6-32x5/16, pan head
Nut	1	Nut, 6-32
Washer	1	#6 lockwasher
PCB		
79-TTLNIX-R2	1	Printed circuit board (PCB)



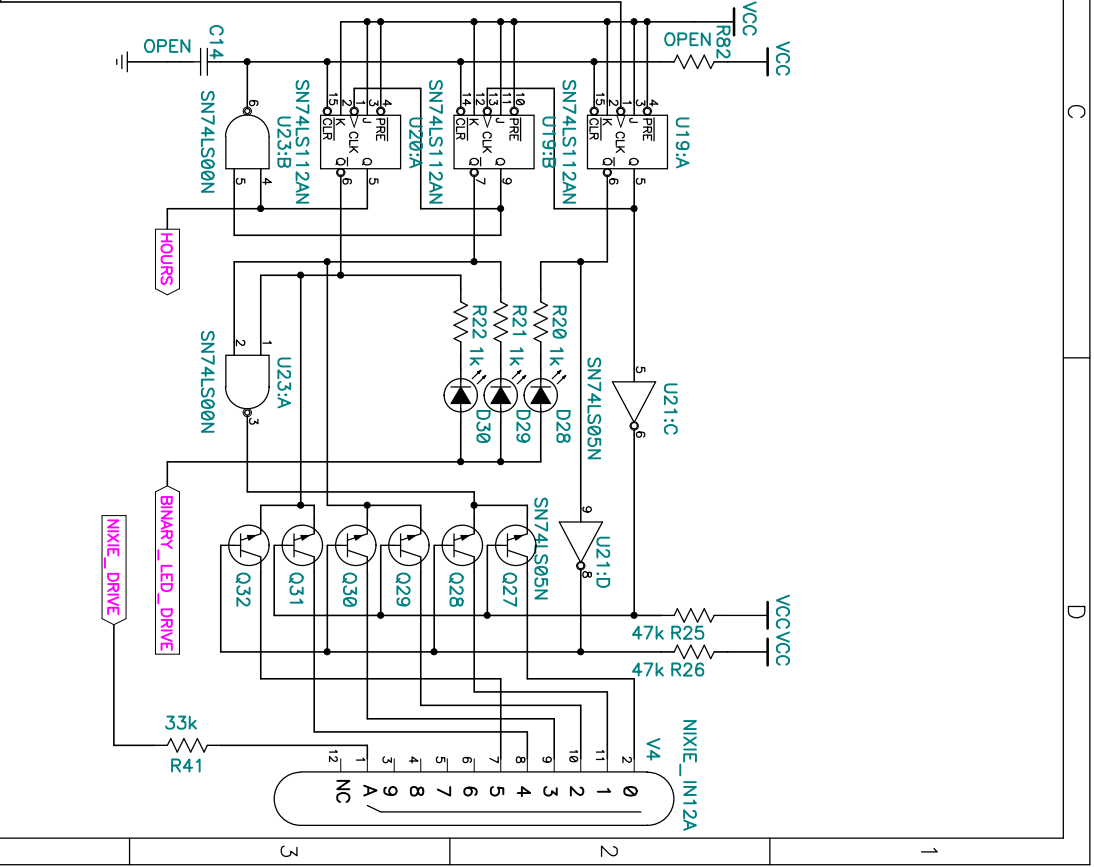
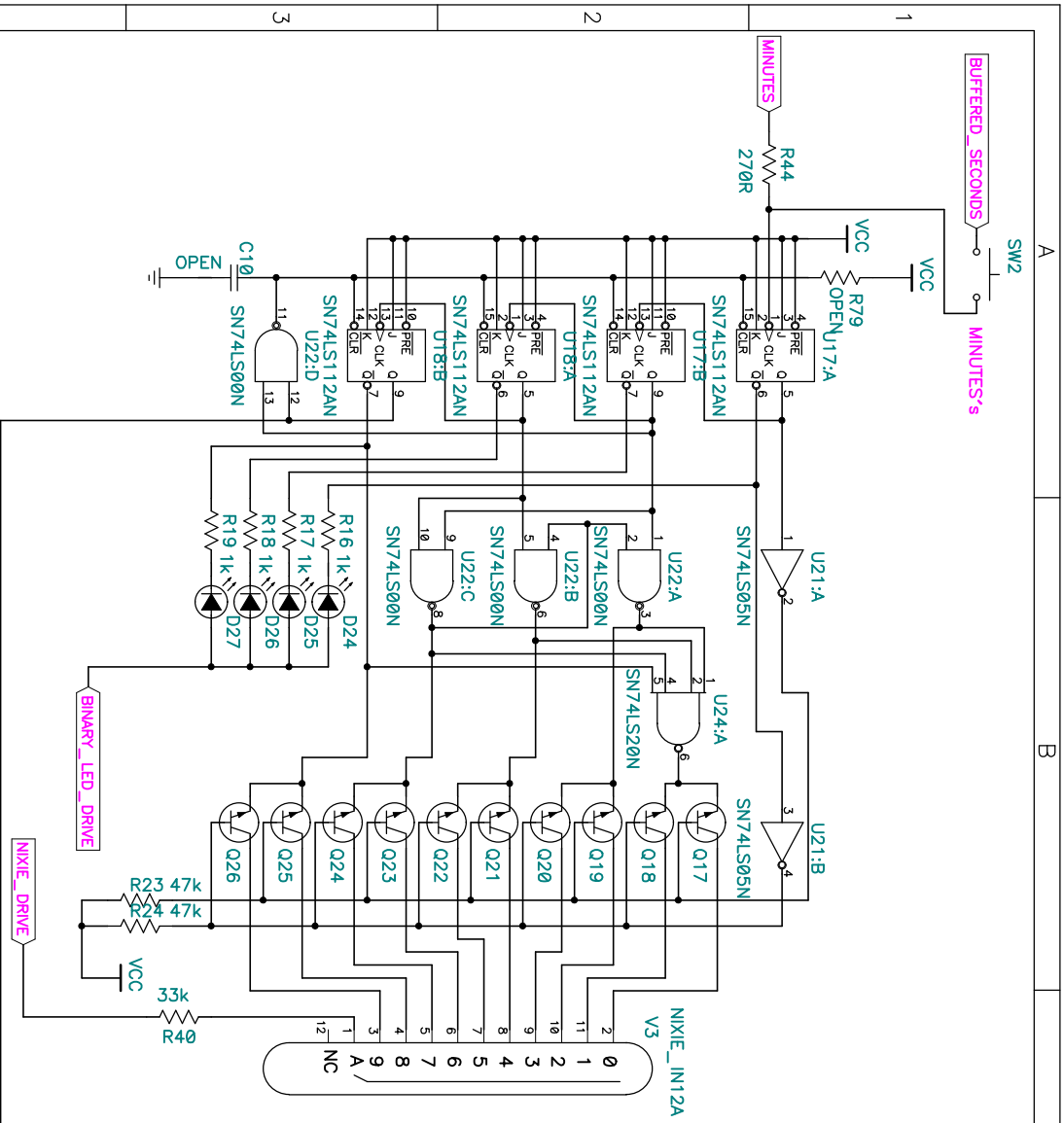
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Size	Number	Rev	
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Date	Drawn By		Rev
12/15/2010	MLA		
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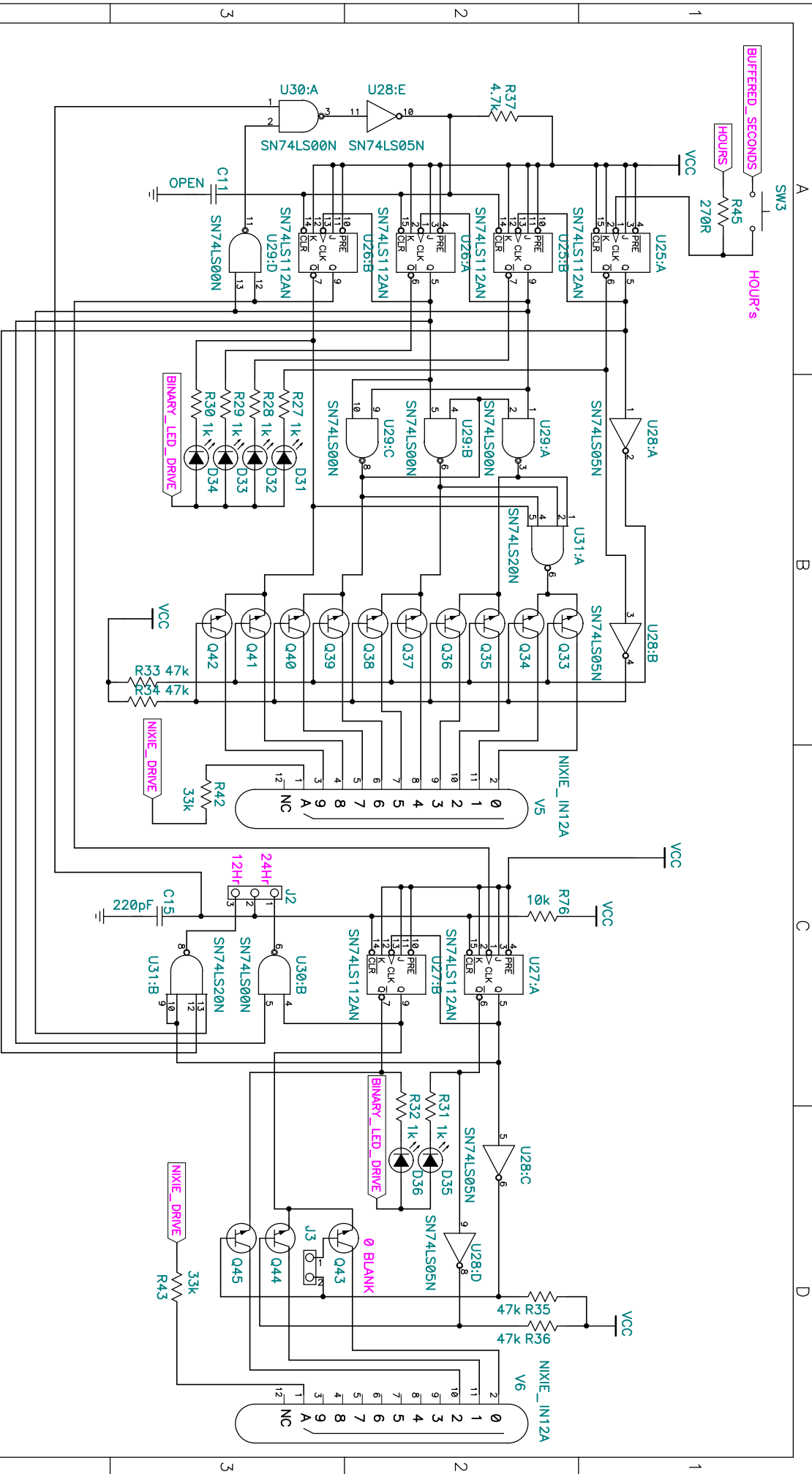
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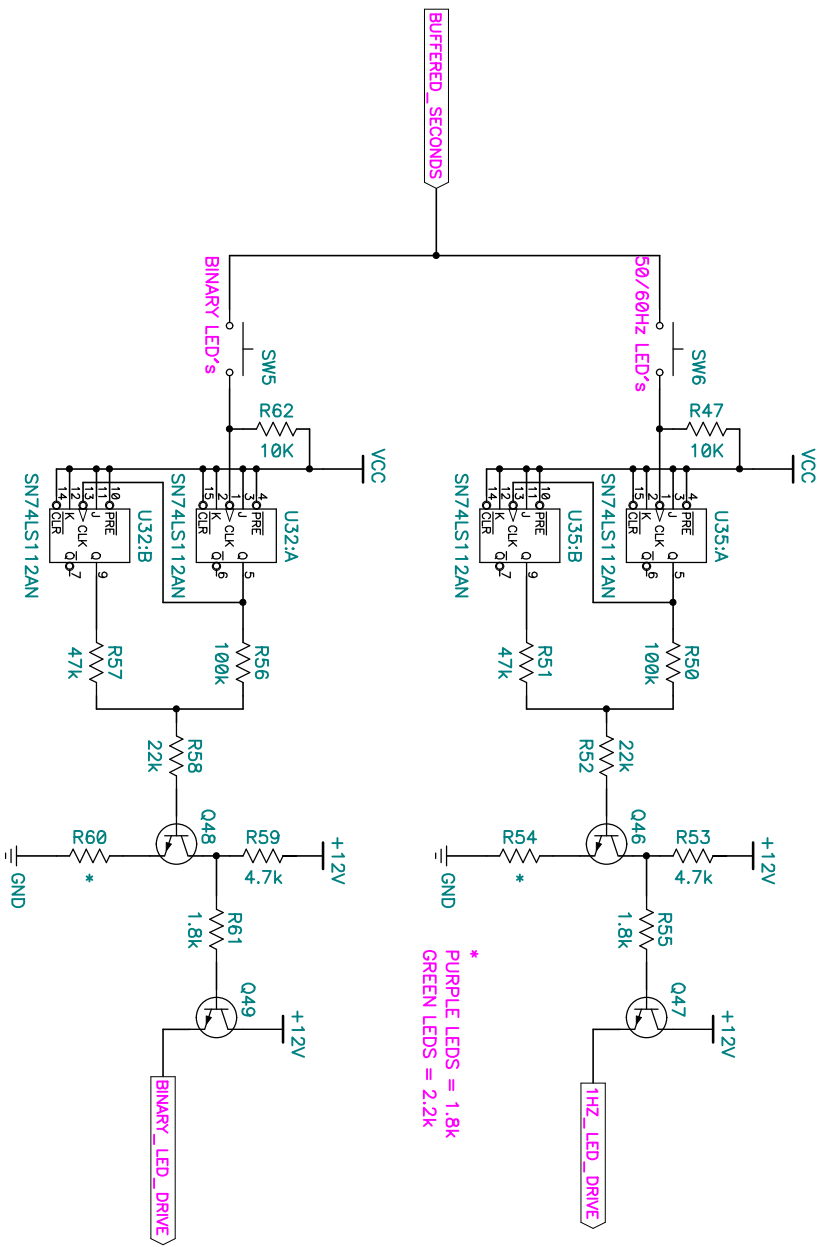
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	Sheet	3 of 7



Title	TTL NIXIE 121510
Size	B
Number	MINUTES
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Drawn by	MJA
Sheet	4 of 7



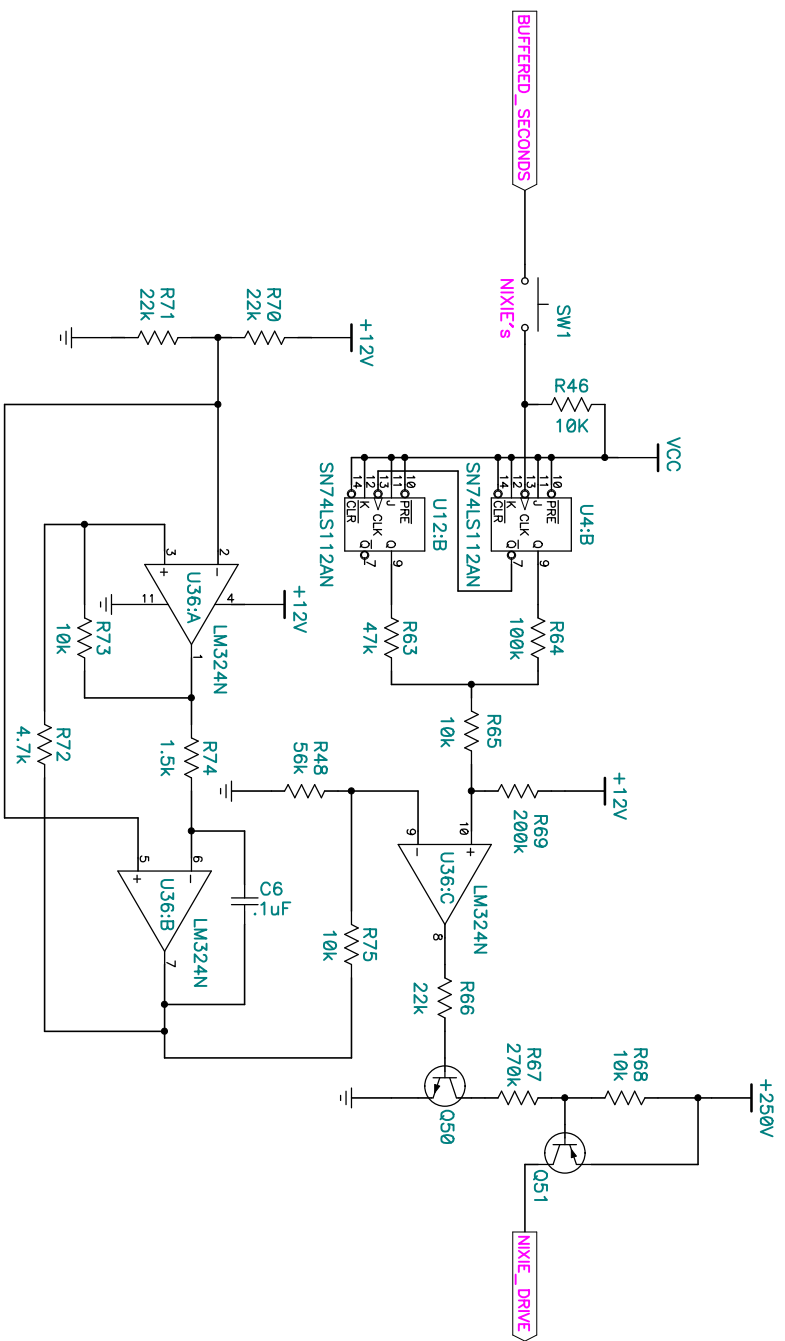
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Size	B	Number
Date	12/15/2010	Drawn by
Filename	ttl_nixie_121510.sch	Sheet
		of
		7
Rev	2	



* PURPLE LEDES = 1.8K
 * GREEN LEDES = 2.2K



Title		TTL NIXIE 121510	
Size	Number	Rev	
B	LED DRIVER	2	
Date	Drawn by		MA
12/15/2010	MA		
Filename	ttl_nixie_121510.sch	Sheet	6 of 7



Title		TTL NIXIE 121510	
Size	Number	Rev	
B	NIXIE DRIVER	2	
Date	12/15/2010	Drawn by	MA
Filename	ttl_nixie_121510.sch	Sheet	7 of 7