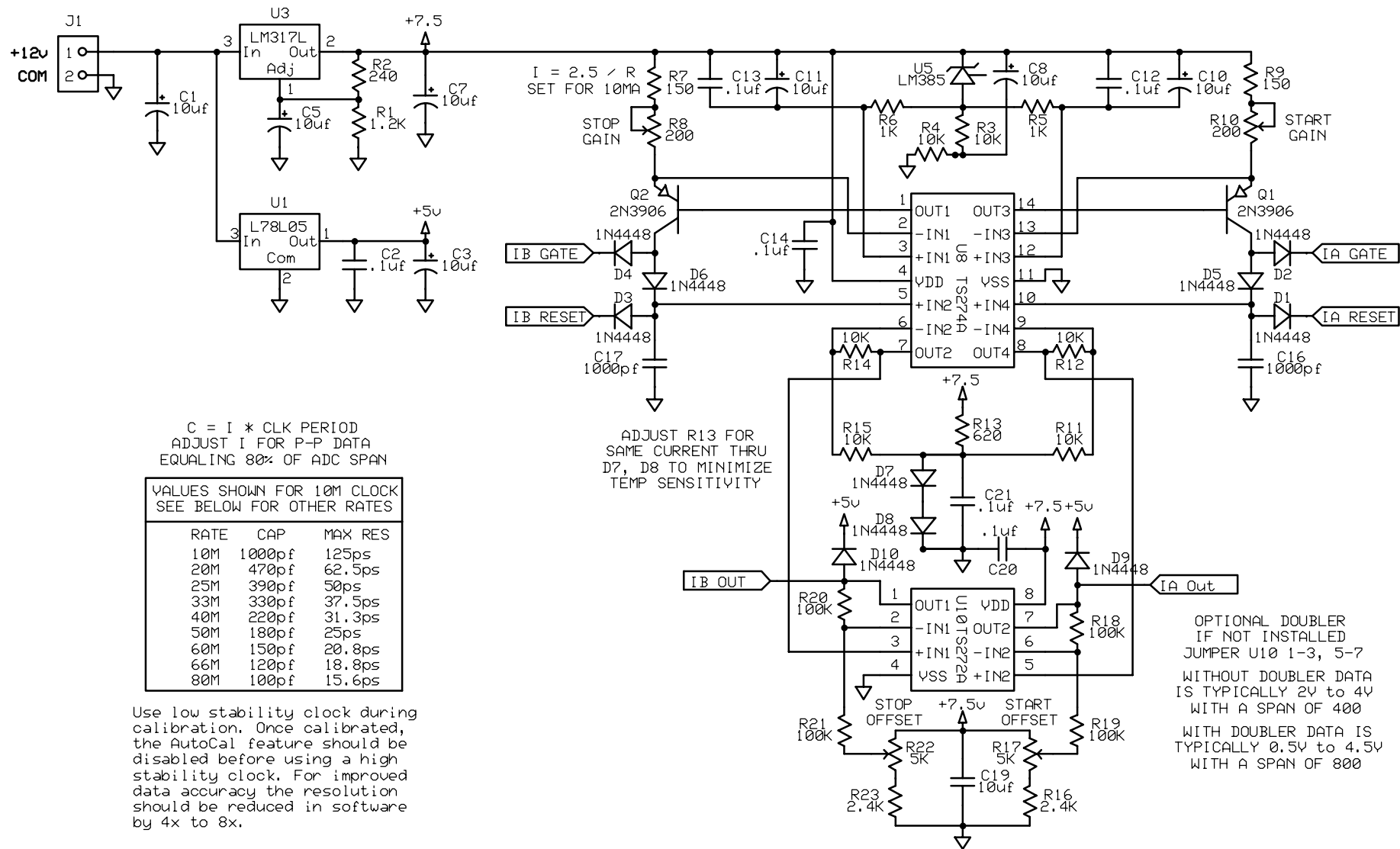


Revision Notes	
7/01/08	RHM L78L06 6v supply, LM385 1.2V ref, 2N7000 resets
Rev 1.1	Path lengths adjusted to equalize channel delay
2/15/10	RHM Revise to diode switching interpolator, new logic
Rev 2.0	LM317L 7.5v Supply, LM385 2.5v ref, 2 interrupts
6/05/10	RHM Add inverter to TMR1, gain / offset trimmers
Rev 2.1	Use 7.5v as bias supply, add offset resistors

Solid State Services		
PICTIC II		
Richard H McCorkle	Rev 2.1	Page 1
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C = I * CLK PERIOD
ADJUST I FOR P-P DATA
EQUALING 80% OF ADC SPAN

VALUES SHOWN FOR 10M CLOCK
SEE BELOW FOR OTHER RATES

RATE	CAP	MAX RES
10M	1000pf	125ps
20M	470pf	62.5ps
25M	390pf	50ps
33M	330pf	37.5ps
40M	220pf	31.3ps
50M	180pf	25ps
60M	150pf	20.8ps
66M	120pf	18.8ps
80M	100pf	15.6ps

Revision Notes	
7/01/08	RHM L78L06 6v supply, LM385 1.2V ref, 2N7000 resets
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Solid State Services	
PICTIC II Interpolator	
Richard H McCorkle	Rev 2.1
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	Page 2

ID NUMBER	DESCRIPTION	MOUSER P/N	6/2010 Pricing	
C16, C17	1000pf 100v 5% COG Capacitor	80-C320C102J1G5CA	\$ 0.20	\$ 0.40
C2, C4, C6, C9, C12, C13, C14, C15, C18, C20, C21	0.1uf 50v Ceramic Capacitor	80-C320C104K5R5CA	\$ 0.14	\$ 1.54
C22, C23, C24, C25, C26	1uf 25v Tantalum Capacitor	80-T350A105K025AT	\$ 0.41	\$ 2.05
C1, C3, C5, C7, C8, C10, C11, C19	10uf 16v Tantalum Capacitor	80-T350E106K016AT	\$ 0.48	\$ 3.84
D1, D2, D3, D4, D5, D6, D7, D8, D9, D10	1N4448 Small Signal Diode	512-1N4448	\$ 0.02	\$ 0.20
J1, J3	1x2 0.1" Header P/O 36P	649-68000-236HLF	\$ 0.53	\$ 0.53
J4, J5	1x3 0.1" Header P/O 36P			
J2	1x4 0.1" Header P/O 36P			
Q1, Q2	2N3906 PNP Transistor	512-2N3906BU	\$ 0.08	\$ 0.16
Q3	2N3904 NPN Transistor	512-2N3904BU	\$ 0.10	\$ 0.10
Q4	2N7000 N-CH FET	512-2N7000	\$ 0.22	\$ 0.22
R1	1.2K 1/4W 1% Resistor	271-1.2K-RC	\$ 0.13	\$ 0.13
R2	240 1/4W 1% Resistor	271-240-RC	\$ 0.13	\$ 0.13
R3, R4, R11, R12, R14, R15, R25	10K 1/4W 1% Resistor	271-10K-RC	\$ 0.13	\$ 0.91
R5, R6	1K 1/4W 1% Resistor	271-1K-RC	\$ 0.13	\$ 0.26
R7, R9	150 1/4W 1% Resistor	271-150-RC	\$ 0.13	\$ 0.26
R8, R10	200 1/4W 10% Cermet Trimmer	652-3266W-1-201LF	\$ 2.94	\$ 5.88
R13	620 1/4W 1% Resistor	271-620-RC	\$ 0.13	\$ 0.13
R16, R23	2.4K 1/4W 1% Resistor	271-2.4K-RC	\$ 0.13	\$ 0.26
R17, R22	5K 1/4W 10% Cermet Trimmer	652-3266W-1-502LF	\$ 2.94	\$ 5.88
R18, R19, R20, R21	100K 1/4W 1% Resistor	271-100K-RC	\$ 0.13	\$ 0.52
R24, R26	2.2K 1/4W 5% Resistor	291-2.2K-RC	\$ 0.10	\$ 0.20
R25	10K 1/4W 5% Resistor	291-10K-RC	\$ 0.10	\$ 0.10
U1	L78L05 +5V 100ma Regulator	511-L78L05AC2	\$ 0.45	\$ 0.45
U2	10 MHz 30PPM XO	815-ACH-10-EK	\$ 1.60	\$ 1.60
U3	LM317L Adj 100ma Regulator	512-LM317LZX	\$ 0.22	\$ 0.22
U4	74AC74 Dual D F/F	512-74AC74PC	\$ 0.86	\$ 0.86
U5	2.5V 20PPM Voltage Reference	595-LM385BLP-2-5	\$ 0.72	\$ 0.72
U6	74AC175 Quad D F/F	512-74AC175PC	\$ 0.97	\$ 0.97
U7	74AC163 4-bit Bin Counter	595-74AC163E	\$ 0.70	\$ 0.70
U8	TS274A Quad CMOS Op-Amp	511-TS274AIN	\$ 2.58	\$ 2.58
U9	16F688 Microcontroller	579-PIC16F688-I/P	\$ 1.66	\$ 1.66
U10	TS272A Dual CMOS Op-Amp	511-TS272ACN	\$ 1.45	\$ 1.45
U11	MAX232 TTL to RS232 Converter	595-MAX232N	\$ 1.09	\$ 1.09
			Total	\$36.00

Solid State Services

Materials List

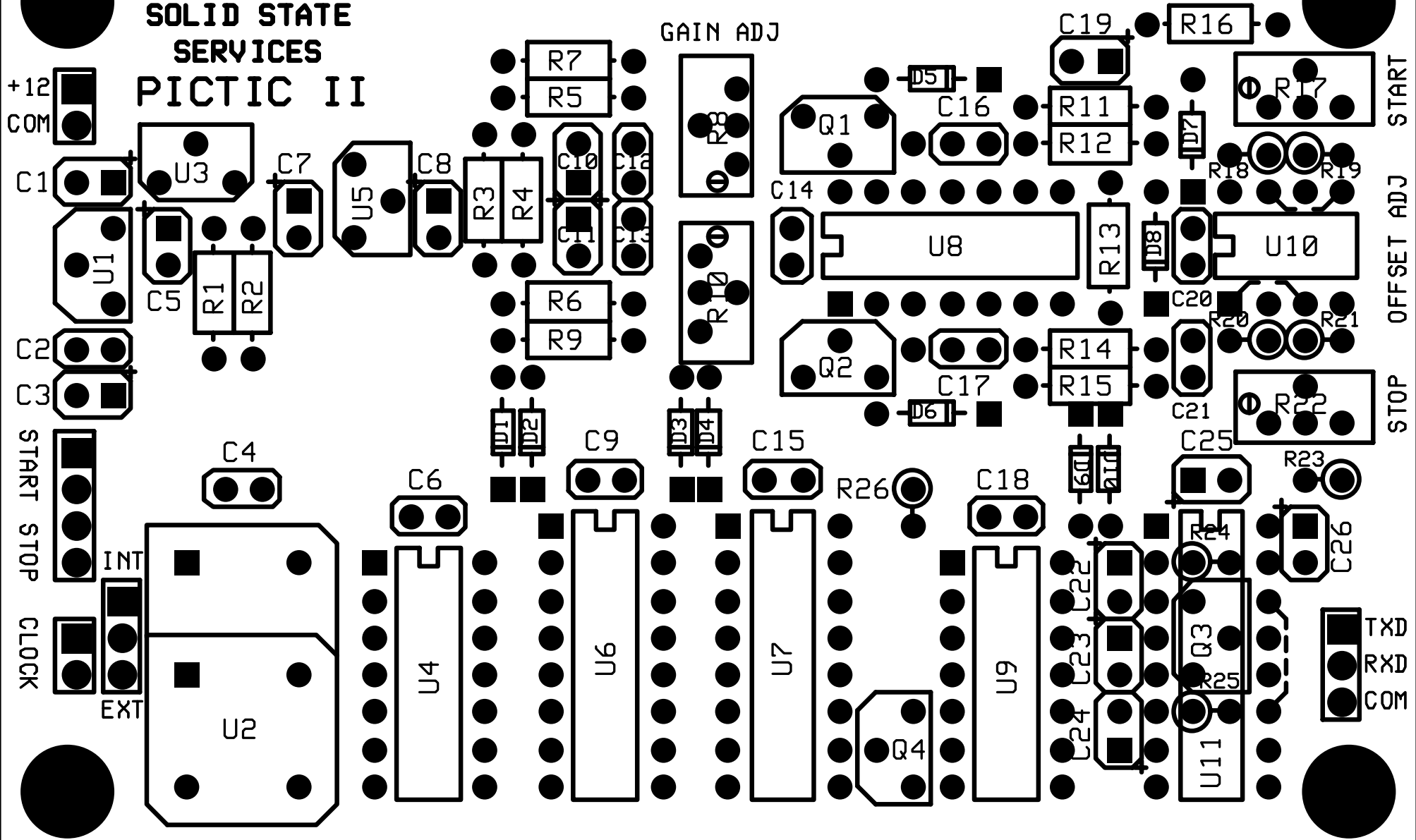
Richard H McCorkle

Rev 2.1

6/05/2010

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SOLID STATE SERVICES PICTIC II



+12
COM

C1

U1

C2

C3

START

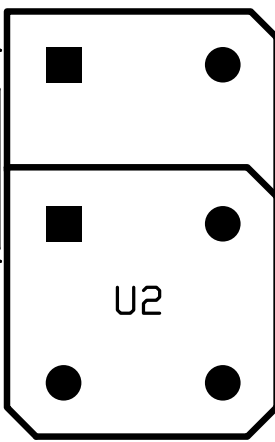
STOP

STOP

CLOCK

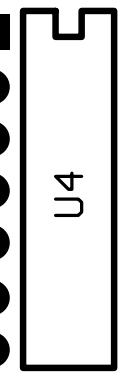
EXT

INT



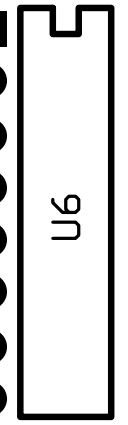
C4

C6



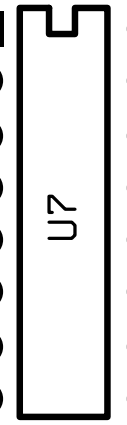
D1 D2

C9



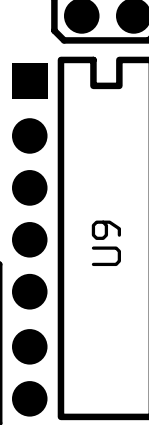
D3 D4

C15



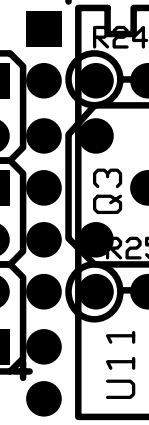
R26

C18



L24 L23 L22

C25

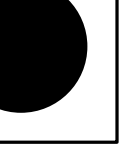
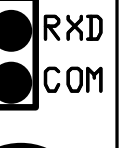
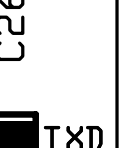
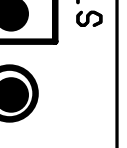
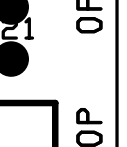
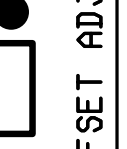
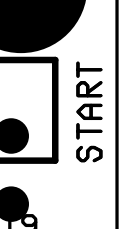
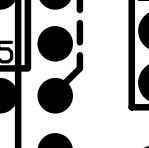
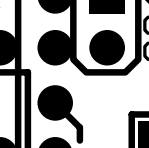
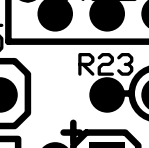
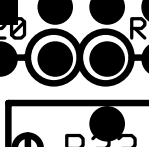
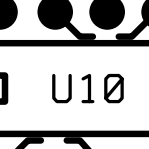
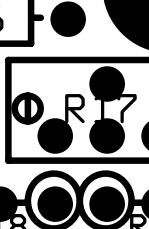
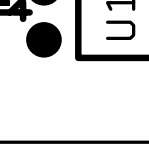
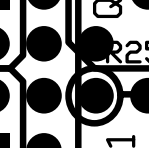
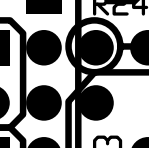
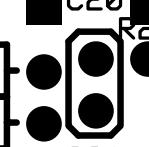
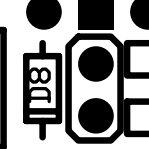
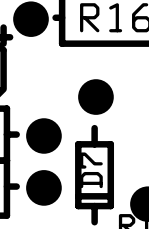
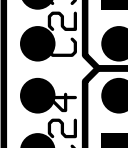
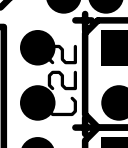
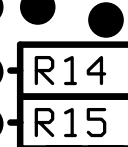
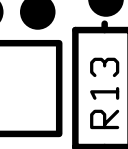
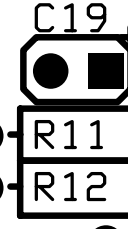
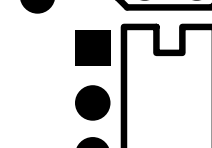
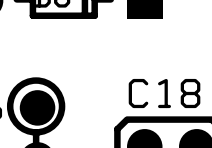
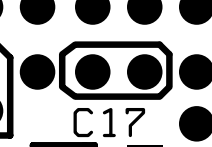
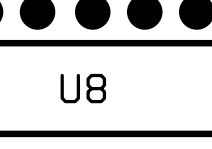
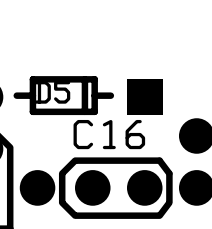
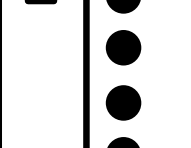
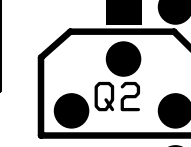
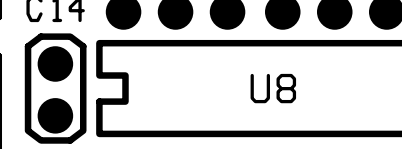
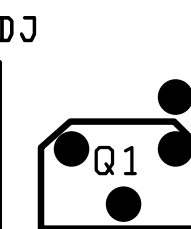
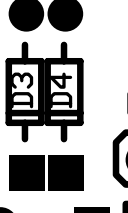
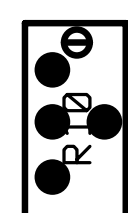
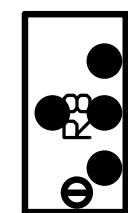


R23

C26

TXD
RXD
COM

GAIN ADJ



START

OFFSET ADJ

STOP