

UW ECE ARDUOMETER

R. B. DARLING

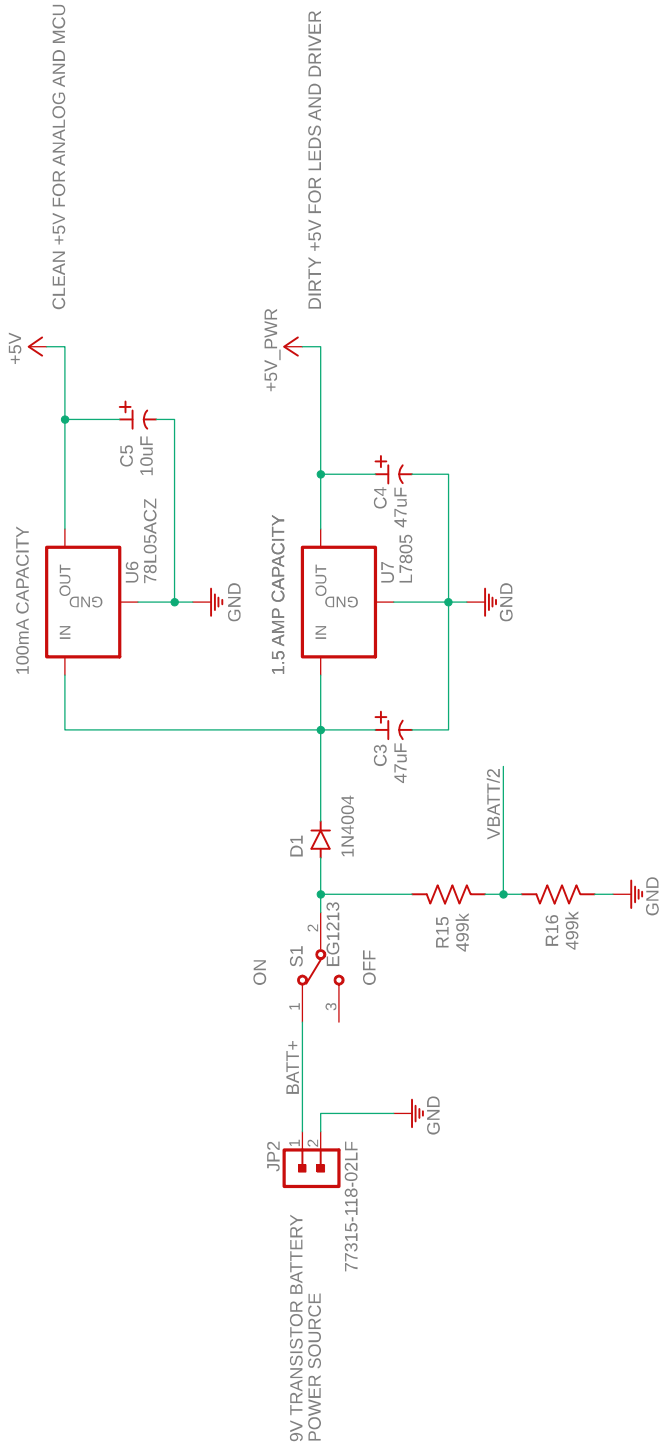
TITLE: arduometer1 DISPLAY

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R. B. DARLING

TITLE: arduometer1 POWER

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Designator	Qty	Description	Fitted	Category	SubCat	Series	Value	Rating	Tolerance	Package	Features
BarePCB	1	Custom PCB, 2-layer	Fitted								Oshpark mid-size run pricing
C1, C2	2	CAP CER 18PF 200V 5% RADIAL	Fitted	CAP	CER	GoldMax 300	18pF	200V	5%	Radial	general purpose, formed leads
C3, C4	2	CAP ALUM 47uF 16V 20% RADIAL	Fitted	CAP	ALUM	UMA	47uF	16V	20%	Radial	audio grade, 6.3mm dia x 6.0 mm height
C5	1	CAP ALUM 10uF 16V 20% RADIAL	Fitted	CAP	ALUM	UMR	10uF	16V	20%	Radial	audio grade, 4.0mm dia x 5.0 mm height
C6, C7, C8, C9, C10, C11, C12, C13, C14, C15	10	CAP CER 0.1uF 50V 10% RADIAL	Fitted	CAP	CER	GoldMax 300	0.1uF	50V	10%	Radial	general purpose, formed leads
D1	1	DIODE GEN PURP 1N4004 AXIAL	Fitted	DIODE	GEN PURP		1N4004	400V, 1A		DO41	standard recovery, <500ns
D2	1	DIODE GEN PURP 1N4148 AXIAL	Fitted	DIODE	GEN PURP		1N4148	100V, 200mA		DO35	4ns recovery, 4pF
DISP1, DISP2	2	DISPLAY LED 7SEG LTC4727	Fitted	DIODE	LED 7SEG		LTC4727	2V, 20mA		DIP16	0.98mcd, red, 639nm, common cathode
JP1	1	CONN HDR 2x3-POS 2.54MM	Fitted	CONN	HDR	Bergstik	2x3 male vertical	3A		thru hole	double row vertical, 0.100 pitc,h 0.025 post, 0.230 head
JP2	1	CONN HDR 2-POS RA 2.54MM	Fitted	CONN	HDR	Bergstik	1x2 male RA	3A		thru hole	single row horizontal, 0.100 pitch, 0.025 post, 0.230 head
JP3, JP4	2	CONN HDR 6-POS 2.54MM	Fitted	CONN	HDR	Bergstik	1x6 male vertical	3A		thru hole	single row vertical, 0.100 pitch, 0.025 post, 0.230 head
L1	1	IND FIXED 10UH 370MA 750MOHM TH	Fitted	IND	FIXED	78F	10uH	370mA	5%	thru hole	wirewound ferrite, Q=40@7.9MHz
PB1, PB2	2	SWTCH SPST TACT	Fitted	SWTCH	TACT	TL1105	TL1105	12VDC, 50mA		thru hole	6.0mm x 6.0mm x 8.0mm actuator height, 160gf, SPST-NO
R1, R7, R11, R12, R13, R14	6	RES 100k 1/4W 1% AXIAL	Fitted	RES	AXIAL	MFR	100k	1/4W	1%	thru hole	100ppm/C tempco, 2.4mm dia x 6.3mm lo
R2	1	RES 25.5k 1/4W 1% AXIAL	Fitted	RES	AXIAL	MFR	25.5k	1/4W	1%	thru hole	100ppm/C tempco, 2.4mm dia x 6.3mm lo
R3	1	RES 0.20 3W 1% AXIAL	Fitted	RES	AXIAL	ALSR	0.20	3W	1%	thru hole	4.57mm dia x 12.7mm long
R4	1	RES 49.9k 1/4W 1% AXIAL	Fitted	RES	AXIAL	MFR	49.9k	1/4W	1%	thru hole	100ppm/C tempco, 2.4mm dia x 6.3mm lo
R5	1	RES 976k 1/4W 1% AXIAL	Fitted	RES	AXIAL	MFR	976k	1/4W	1%	thru hole	100ppm/C tempco, 2.4mm dia x 6.3mm lo
R6	1	RES 30.1k 1/4W 1% AXIAL	Fitted	RES	AXIAL	MFR	30.1k	1/4W	1%	thru hole	100ppm/C tempco, 2.4mm dia x 6.3mm lo
R8	1	RES 1.00k 1/4W 1% AXIAL	Fitted	RES	AXIAL	MFR	1.00k	1/4W	1%	thru hole	100ppm/C tempco, 2.4mm dia x 6.3mm lo
R9	1	RES 10.0k 1/4W 1% AXIAL	Fitted	RES	AXIAL	MFR	10.0k	1/4W	1%	thru hole	100ppm/C tempco, 2.4mm dia x 6.3mm lo
R10	1	RES 2.49k 1/4W 1% AXIAL	Fitted	RES	AXIAL	MFR	2.49k	1/4W	1%	thru hole	100ppm/C tempco, 2.4mm dia x 6.3mm lo
R15, R16	2	RES 499k 1/4W 1% AXIAL	Fitted	RES	AXIAL	MFR	499k	1/4W	1%	thru hole	100ppm/C tempco, 2.4mm dia x 6.3mm lo
S1	1	SWTCH SLIDE SPDT RA	Fitted	SWTCH	SLIDE	EG	EG1213	30V, 200mA		thru hole	SPDT, BBM, PCB RA mount
U1	1	IC MCU ATMEGA328P DIP28	Socket	IC	MCU	AVR	ATMEGA328P			DIP28	20 MHz 8-bit MCU, 32kB flash, 2kB RAM, 1kB EEPROM, 1 MSSP, 1
U2	1	IC DISPDVR MAX7219 DIP24	Socket	IC	DISPDVR		MAX7219CNG+			DIP24	USART, 23 I/O, 6-ch 10-b ADC
U3, U4	2	IC AMP AD623 DIP8	Socket	IC	AMP		AD623ANZ	2.7~12V		DIP8	8-digit, 7-segment + DP, 4-wire serial inter
U5	1	IC VREF LT1009 TO92	Fitted	IC	VREF		LT1009ILP	2.50V, 10mA	0.2%	TO92	RRO, instr amp, 800 kHz, 0.3 V/us, 17 nA input, 25 uV offset
U6	1	IC REG 78L05A TO92	Fitted	IC	REG		L78L05ACZ-AP	30V, 100mA		TO92	fixed, shunt voltage regulator, 35ppm/C, 400 uA min
U7	1	IC REG L7805 TO220	Fitted	IC	REG		L7805ABV	35V, 1.5A		TO220	+5.0V fixed output, 2V dropout, over temp prot, short prot
	1	SOCKET IC DIP28	Fitted	SOCKET	IC	Diplomate DL		1A		DIP28	+5.0V fixed output, 2V dropout, over temp prot, short prot
	1	SOCKET IC DIP24	Fitted	SOCKET	IC	Diplomate DL		1A		DIP24	open frame, solder tail
	2	SOCKET IC DIP8	Fitted	SOCKET	IC	Diplomate DL		1A		DIP8	open frame, solder tail
Y1	1	XTAL QTZ 16.000MHZ	Fitted	XTAL	QTZ	HC-49USX	16.000 MHz	20pF, 40 ohm	0.003%	thru hole	open frame, solder tail
MH1, MH2, MH3, MH4	4	MISC MTHL 4-40 PTD-1									ATcut 20pF 40Ohm fundamental, 50ppm stability, 30ppm tolerance
TP1	1	CONN BIND POST, BANANA, RED		CONN	BIND POST	BU	red	2500V, 15A			Mounting hole, #4-40 screw, plated
TP2	1	CONN BIND POST, BANANA, BLACK		CONN	BIND POST	BU	black	2500V, 15A			fluted head, threaded turret
TP3	1	CONN BIND POST, BANANA, GREEN		CONN	BIND POST	BU	green	2500V, 15A			fluted head, threaded turret
CASE	1	BOX ABS TRN BLUE		CASE		H		IP40, UL94HB			fluted head, threaded turret
PCB SCREWS	4	SCREW #4 X 1/4" PHIL PAN HEAD		SCREW			#4 x 1/4" phil pan				translucent blue, 9V battery compartment, split sides with end panel
FTDI BASIC	1	BRIDGE USB 2.0 MODULE		BRIDGE	USB			5V			thread cutting for plastic
											USB 2.0 to UART bridge, FTDI basic, Arduino compatible handshake lines

