

Date:	/ledbox.sch						
Tool:	Monday: 16 October 2017 'pmt' 16:36:03						
Component Count:	69						
Individual Components:							
Item	Qty	Reference(s)	Populate	Value	Footprint	LibPart	Datasheet
		C201	Yes	10u	Capacitors_SMD:C_0805	device:C	
		C202	Yes	22p	Capacitors_SMD:C_0805	device:C	
		C203	Yes	470p	Capacitors_SMD:C_0805	device:C	
		C301	Yes	10u	Capacitors_SMD:C_0805	device:C	
		C302	Yes	100n	Capacitors_SMD:C_0805	device:C	
		C401	Yes	100n	Capacitors_SMD:C_0805	device:C	
		C402	Yes	100n	Capacitors_SMD:C_0805	device:C	
		C403	Yes	100n	Capacitors_SMD:C_0805	device:C	
		C404	Yes	100n	Capacitors_SMD:C_0805	device:C	
		C405	Yes	100n	Capacitors_SMD:C_0805	device:C	
		C407	Yes	100n	Capacitors_SMD:C_0805	device:C	
		C408	Prototype	22p	Capacitors_SMD:C_0805	device:C	
		C409	Prototype	22p	Capacitors_SMD:C_0805	device:C	
		C501	Yes	4u7	Capacitors_THT:CP_Radial_D5.0mm_P2.00mm	device:CP	
		C502	Yes	100n	Capacitors_SMD:C_0805	device:C	
		C503	Yes	100n	Capacitors_SMD:C_0805	device:C	
		C504	Yes	47u	Capacitors_THT:CP_Radial_D6.3mm_P2.50mm	device:CP	
		CON401	Yes	AVR_ISP	Pin_Headers:Pin_Header_Straight_2x03	atmel:AVR-ISP-6	
		D201	Yes	1N4148	Diodes_SMD:D_SOD-123	device:D	
		D202	Yes	1N4148	Diodes_SMD:D_SOD-123	device:D	
		D301	Yes	LRTBG6TG	ledbox-newfootprints:LED-6-BIG	ledbox-newsymbols:LRTBG6TG	http://www.osram-os.com/Graphics/XPic4/00067263_0.pdf
		D302	Yes	LED1	LEDs:LED_0805	device:LED	
		D303	Yes	LED2	LEDs:LED_0805	device:LED	
		D501	Yes	1N4148	Diodes_SMD:D_SOD-123	device:D	
		D502	Yes	LED2	LEDs:LED_0805	device:LED	
		J201	Yes	Bus	Pin_Headers:Pin_Header_Straight_2x05	conn:Conn_02x05_Odd_Even	
		J301	Yes	IR LED	Pin_Headers:Pin_Header_Straight_1x03	conn:Conn_01x03	
		J302	Yes	Button	Pin_Headers:Pin_Header_Straight_1x02	conn:Conn_01x02	
		J401	Yes	Power	Socket_Strips:Socket_Strip_Straight_2x03	conn:Conn_02x03_Odd_Even	
		J402	Yes	Power	Socket_Strips:Socket_Strip_Straight_2x04	conn:Conn_02x04_Odd_Even	
		J403	Yes	Power	Socket_Strips:Socket_Strip_Straight_2x05	conn:Conn_02x05_Odd_Even	
		J404	Yes	Port D	Socket_Strips:Socket_Strip_Straight_1x03	conn:Conn_01x03	
		J405	Yes	Port B	Socket_Strips:Socket_Strip_Straight_1x04	conn:Conn_01x04	
		J406	Yes	Port C	Socket_Strips:Socket_Strip_Straight_1x05	conn:Conn_01x05	
		J407	Yes	ADC6	Socket_Strips:Socket_Strip_Straight_1x03	conn:Conn_01x03	
		J408	Yes	ADC7	Socket_Strips:Socket_Strip_Straight_1x03	conn:Conn_01x03	
		J501	Yes	6.5V-12V	Connectors_Terminal_Blocks:TerminalBlock_Phoenix_MKDS1.5-2pol	conn:Conn_01x02	
		J502	Yes	5V	Connectors_Terminal_Blocks:TerminalBlock_Phoenix_MKDS1.5-2pol	conn:Conn_01x02	
		R201	Prototype	1k	Resistors_SMD:R_0805	device:R	
		R202	Prototype	150	Resistors_THT:R_Axial_DIN0207_L6.3mm_D2.5mm_P7.62mm_Horizontal	device:R	
		R203	Prototype	1k	Resistors_SMD:R_0805	device:R	
		R204	Yes	10k	Resistors_SMD:R_0805	device:R	
		R205	Yes	100	Resistors_SMD:R_0805	device:R	
		R206	Yes	22k	Resistors_SMD:R_0805	device:R	
		R207	Yes	3k3	Resistors_SMD:R_0805	device:R	
		R208	Yes	2k2	Resistors_SMD:R_0805	device:R	
		R301	Yes	10k	Resistors_SMD:R_0805	device:R	
		R302	Yes	10k	Resistors_SMD:R_0805	device:R	
		R303	Yes	10k	Resistors_SMD:R_0805	device:R	
		R304	Yes	150	Resistors_SMD:R_0805	device:R	
		R305	Yes	82	Resistors_SMD:R_0805	device:R	
		R306	Yes	22	Resistors_SMD:R_0805	device:R	
		R307	Yes	22	Resistors_SMD:R_0805	device:R	
		R308	Yes	430	Resistors_SMD:R_0805	device:R	
		R309	Yes	430	Resistors_SMD:R_0805	device:R	
		R310	Yes	10k	Resistors_SMD:R_0805	device:R	
		R311	Yes	82	Resistors_SMD:R_0805	device:R	
		R401	Yes	1k	Resistors_SMD:R_0805	device:R	
		R402	Yes	1k	Resistors_SMD:R_0805	device:R	
		R403	Yes	1k	Resistors_SMD:R_0805	device:R	
		R501	Yes	430	Resistors_SMD:R_0805	device:R	
		SW301	Yes	Reset	Buttons_Switches_THT:SW_PUSH_6mm_h5mm	switches:SW_Push	
		SW302	Yes	Push 1	Buttons_Switches_THT:SW_PUSH_6mm_h5mm	switches:SW_Push	
		SW303	Yes	Push 2	Buttons_Switches_THT:SW_PUSH_6mm_h5mm	switches:SW_Push	
		U201	Yes	ST485C	Housings_SOIC:SOIC-8_3.9x4.9mm_Pitch1.27mm	ledbox-newsymbols:SN75176B	http://www.st.com/content/ccc/resource/technical/document/datasheet/4b/81/a8/cd/8a/72/47/82/CD00002183.pdf/files/CD00002183.pdf/cr:content/translations/en.CD00002183.pdf
		U301	Yes	ULN2003	Housings_SOIC:SOIC-16_3.9x9.9mm_Pitch1.27mm	interface:ULN2003	http://www.ti.com/lit/ds/symlink/ulq2004a.pdf
		U401	Yes	ATMEGA88-20AU	Housings_QFP:TQFP-32_7x7mm_Pitch0.8mm	atmel:ATMEGA88-20AU	http://www1.microchip.com/downloads/en/DeviceDoc/Atmel-2545-8-bit-AVR-Microcontroller-Atmega48-88-168_Datasheet.pdf
		U501	Yes	AZ1117-5.0	TO_SOT_Packages_SMD:SOT-223-3Lead_TabPin2	regul:AZ1117-5.0	
		Y401	Prototype	20MHz	Crystals:Crystal_HC49-SD_SMD	device:Crystal	
Collated Components:							
Item	Qty	Reference(s)	Populate	Value	Footprint	LibPart	Datasheet
1	2	C201; C301	Yes	10u	Capacitors_SMD:C_0805	device:C	
2	3	C202; C408; C409	Yes; Prototype	22p	Capacitors_SMD:C_0805	device:C	
3	1	C203	Yes	470p	Capacitors_SMD:C_0805	device:C	
4	9	C302; C401; C402; C403; C404; C405; C407; C502; C503	Yes	100n	Capacitors_SMD:C_0805	device:C	
5	1	C501	Yes	4u7	Capacitors_THT:CP_Radial_D5.0mm_P2.00mm	device:CP	
6	1	C504	Yes	47u	Capacitors_THT:CP_Radial_D6.3mm_P2.50mm	device:CP	
7	1	CON401	Yes	AVR_ISP	Pin_Headers:Pin_Header_Straight_2x03	atmel:AVR-ISP-6	
8	3	D201; D202; D501	Yes	1N4148	Diodes_SMD:D_SOD-123	device:D	
9	1	D301	Yes	LRTBG6TG	ledbox-newfootprints:LED-6-BIG	ledbox-newsymbols:LRTBG6TG	http://www.osram-os.com/Graphics/XPic4/00067263_0.pdf
10	1	D302	Yes	LED1	LEDs:LED_0805	device:LED	
11	2	D303; D502	Yes	LED2	LEDs:LED_0805	device:LED	
12	1	J201	Yes	Bus	Pin_Headers:Pin_Header_Straight_2x05	conn:Conn_02x05_Odd_Even	
13	1	J301	Yes	IR LED	Pin_Headers:Pin_Header_Straight_1x03	conn:Conn_01x03	
14	1	J302	Yes	Button	Pin_Headers:Pin_Header_Straight_1x02	conn:Conn_01x02	
15	1	J401	Yes	Power	Socket_Strips:Socket_Strip_Straight_2x03	conn:Conn_02x03_Odd_Even	
16	1	J402	Yes	Power	Socket_Strips:Socket_Strip_Straight_2x04	conn:Conn_02x04_Odd_Even	
17	1	J403	Yes	Power	Socket_Strips:Socket_Strip_Straight_2x05	conn:Conn_02x05_Odd_Even	
18	1	J404	Yes	Port D	Socket_Strips:Socket_Strip_Straight_1x03	conn:Conn_01x03	
19	1	J405	Yes	Port B	Socket_Strips:Socket_Strip_Straight_1x04	conn:Conn_01x04	
20	1	J406	Yes	Port C	Socket_Strips:Socket_Strip_Straight_1x05	conn:Conn_01x05	
21	1	J407	Yes	ADC6	Socket_Strips:Socket_Strip_Straight_1x03	conn:Conn_01x03	
22	1	J408	Yes	ADC7	Socket_Strips:Socket_Strip_Straight_1x03	conn:Conn_01x03	
23	1	J501	Yes	6.5V-12V	Connectors_Terminal_Blocks:TerminalBlock_Phoenix_MKDS1.5-2pol	conn:Conn_01x02	
24	1	J502	Yes	5V	Connectors_Terminal_Blocks:TerminalBlock_Phoenix_MKDS1.5-2pol	conn:Conn_01x02	
25	5	R201; R203; R401; R402; R403	Yes; Prototype	1k	Resistors_SMD:R_0805	device:R	
26	1	R202	Prototype	150	Resistors_THT:R_Axial_DIN0207_L6.3mm_D2.5mm_P7.62mm_Horizontal	device:R	
27	5	R204; R301; R302; R303; R310	Yes	10k	Resistors_SMD:R_0805	device:R	
28	1	R205	Yes	100	Resistors_SMD:R_0805	device:R	
29	1	R206	Yes	22k	Resistors_SMD:R_0805	device:R	
30	1	R207	Yes	3k3	Resistors_SMD:R_0805	device:R	
31	1	R208	Yes	2k2	Resistors_SMD:R_0805	device:R	
32	1	R304	Yes	150	Resistors_SMD:R_0805	device:R	
33	2	R305; R311	Yes	82	Resistors_SMD:R_0805	device:R	
34	2	R306; R307	Yes	22	Resistors_SMD:R_0805	device:R	
35	3	R308; R309; R501	Yes	430	Resistors_SMD:R_0805	device:R	
36	1	SW301	Yes	Reset	Buttons_Switches_THT:SW_PUSH_6mm_h5mm	switches:SW_Push	
37	1	SW302	Yes	Push 1	Buttons_Switches_THT:SW_PUSH_6mm_h5mm	switches:SW_Push	
38	1	SW303	Yes	Push 2	Buttons_Switches_THT:SW_PUSH_6mm_h5mm	switches:SW_Push	
39	1	U201	Yes	ST485C	Housings_SOIC:SOIC-8_3.9x4.9mm_Pitch1.27mm	ledbox-newsymbols:SN75176B	http://www.st.com/content/ccc/resource/technical/document/datasheet/4b/81/a8/cd/8a/72/47/82/CD00002183.pdf/files/CD00002183.pdf/cr:content/translations/en.CD00002183.pdf
40	1	U301	Yes	ULN2003	Housings_SOIC:SOIC-16_3.9x9.9mm_Pitch1.27mm	interface:ULN2003	http://www.ti.com/lit/ds/symlink/ulq2004a.pdf
41	1	U401	Yes	ATMEGA88-20AU	Housings_QFP:TQFP-32_7x7mm_Pitch0.8mm	atmel:ATMEGA88-20AU	http://ww1.microchip.com/downloads/en/DeviceDoc/Atmel-2545-8-bit-AVR-Microcontroller-Atmega48-88-168_Datasheet.pdf
42	1	U501	Yes	AZ1117-5.0	TO_SOT_Packages_SMD:SOT-223-3Lead_TabPin2	regul:AZ1117-5.0	
43	1	Y401	Prototype	20MHz	Crystals:Crystal_HC49-SD_SMD	device:Crystal	