Bill of Materials

Main Controller

Source Data From: **MainController.SchDoc**
Project: **PrintingProjectAllDocs.PrjPCB**
Organization: **U of U Computer Engineering**

Creation Date: 8/28/2012   1:56:56 PM
Print Date: 28-Aug-12   1:57:05 PM

Footprint	Comment	LibRef	Designator	Description	Vendor	Quantity	Price	total Price
RAD-0.3	Cap	Cap	C1, C2, C3, C4, C5, C6, C7, C8, C9	Capacitor	Taydaelectronics	9	0.03	$0.27
DO-41	1N4001	1N4001, Diode 1N4001	D1, D2, D3, D4, D5, D6, D7	1.0 Ampere General Purpose Rectifier, 1 Amp General Purpose Rectifier	Taydaelectronics	7	0.01	$0.07
DSUB1.385-2H9	D Connector 9	D Connector 9	J1, J2, J3, J4, J5	Receptacle Assembly, 9 Position, Right Angle	Taydaelectronics	5	0.48	$2.40
MainPowerConnector	Header 4	Header 4	P1	Header, 4-Pin	Taydaelectronics	1	0.04	$0.04
HDR1X5	Header 5	Header 5	P2, P5, P8, P14, P16, P17, P18, P19	Header, 5-Pin	Taydaelectronics	8	0.05	$0.40
HDR1X2	Header 2	Header 2	P3, P9, P12	Header, 2-Pin	Taydaelectronics	3	0.02	$0.06
HDR1X6	Header 6	Header 6	P4	Header, 6-Pin	Taydaelectronics	1	0.06	$0.06
HDR1X7	Header 7	Header 7	P6	Header, 7-Pin	Taydaelectronics	1	0.07	$0.07
PIN1	Spare	Plug	P7	Plug	Taydaelectronics	1	0.00	$0.00
HDR1X6	Garage_HVAC	Header 6	P10	Header, 6-Pin	Taydaelectronics	1	0.06	$0.06
HDR1X3	Header 3	Header 3	P11	Header, 3-Pin	Taydaelectronics	1	0.03	$0.03
HDR1X9	TempSenseBoard1	Header 9	P13, P15	Header, 9-Pin	Taydaelectronics	2	0.09	$0.18
2N3904	2N3904	2N3904	Q1, Q2, Q3, Q4, Q5	NPN General Purpose Amplifier	Taydaelectronics	5	0.01	$0.05
AXIAL-0.3	Res1	Res1	R1, R2, R3, R4, R5	Resistor	Taydaelectronics	5	0.01	$0.05
N014	SN7416N	SN7416N	U1, U2, U5	Hex Inverter Buffer / Driver with High-Voltage Outputs	Taydaelectronics	3	0.18	$0.54
NT024D	SN74HC154NT	SN74HC154NT	U3	4-Line to 16-Line Decoder / Demultiplexer	Digi-Key	1	3.70	$3.70
Teensy2.0++	Teensy2.0++	Teensy2.0++	U4	The teensy 2.0 from www.PJRC.com	Taydaelectronics	1	24.0	$24.00
ISOWATT220AB	L7812CP	L7805CP	VR1	Positive Voltage Regulator	Taydaelectronics	1	0.24	$0.24
ISOWATT220AB	L7805CP	L7805CP	VR2	Positive Voltage Regulator	Taydaelectronics	1	0.24	$0.24
						57		$32.46

Approved   **Notes**

Bill of Materials

Power Board BOM For Schematic Document [PowerAndFanBoard.SchDoc]

Source Data From: **PowerAndFanBoard.SchDoc**

Project: **PrintingProjectAllDocs.PrjPCB**

Organization: **U of U Computer Engineering**

Creation Date: 8/28/2012   1:57:22 PM

Print Date: 28-Aug-12   1:57:30 PM

Footprint	Comment	LibRef	Designator	Description	Vendor	Quantity	Price	total Price
RAD-0.3	Cap	Cap	C1, C2, C3, C4, C5, C6, C7, C8, C9, C10, C11, C12, C13, C14, C15, C16, C17, C18, C19, C20, C21, C22, C23, C24	Capacitor	Taydaelectronics	24	0.03	$0.72
DO-41	1N4001	Diode 1N4001	D1, D2, D7, D8, D10, D12, D14	1 Amp General Purpose Rectifier	Taydaelectronics	7	0.01	$0.07
DO-35	Diode 1N4148	Diode 1N4148	D3, D5	High Conductance Fast Diode	Taydaelectronics	2	0.01	$0.02
LED	RED_LED	LED0	D4, D9, D13, D15, D18, D20, D21	Typical INFRARED GaAs LED	Taydaelectronics	7	0.04	$0.28
LED	GREEN_LED	LED0	D6, D11, D16, D17, D19, D22, D23	Typical INFRARED GaAs LED	Taydaelectronics	7	0.04	$0.28
MainPowerConnector	Header 4	Header 4	P1	Header, 4-Pin	Taydaelectronics	1	0.04	$0.04
HDR1X3	Header 3	Header 3	P2, P3, P8	Header, 3-Pin	Taydaelectronics	3	0.03	$0.09
HDR1X2	Header 2	Header 2	P4, P5, P6, P7	Header, 2-Pin	Taydaelectronics	4	0.02	$0.08
AXIAL-0.3	Res1	Res1	R1, R2, R3, R4, R5, R6, R7, R8, R9, R10, R11, R12, R13, R14, R15, R16, R17, R18, R19, R20, R21, R22, R23, R24, R25, R26, R27, R28, R29, R30, R31, R32	Resistor	Taydaelectronics	32	0.01	$0.32
PCBComponent_1	nintendo_power_reset	nintendo_power_reset	S1		All Electronics	1	1.0	$1.00
N08E	LM555CN	LM555CN	U1	Timer	Taydaelectronics	1	0.14	$0.14
N014	SN7416N	SN7416N	U2, U4, U6	Hex Inverter Buffer / Driver with High-Voltage Outputs	Taydaelectronics	3	0.18	$0.54
N14A	LM339N	LM339N	U3, U5	Low Power Low Offset Voltage Quad Comparator	Taydaelectronics	2	0.17	$0.34
ISOWATT220AB	L7812CP	L7805CP	VR1, VR4, VR6	Positive Voltage Regulator	Taydaelectronics	3	0.24	$0.72
ISOWATT220AB	L7805CP	L7805CP	VR2, VR3, VR5, VR7	Positive Voltage Regulator	Taydaelectronics	4	0.24	$0.96
						101		$5.60

Approved

Notes

Bill of Materials | HVAC & Garage Control

Source Data From: **HeatingAC_Garage.SchDoc**

Project: **PrintingProjectAllDocs.PrjPCB**

Organization: **U of U Computer Engineering**

Creation Date: 8/28/2012   1:57:51 PM

Print Date: 28-Aug-12   1:58:01 PM

Footprint	Comment	LibRef	Designator	Description	Vendor	Quantity	Price	total Price
RAD-0.3	Cap	Cap	C1, C2	Capacitor	Taydaelectronics	2	0.03	$0.06
LED-0	LED_White	LED0	D1, D2, D3, D4	Typical INFRARED GaAs LED	Taydaelectronics	4	0.04	$0.16
DO-41	1N4001	1N4001	D5, D6, D7, D8, D9, D10, D11	1.0 Ampere General Purpose Rectifier	Taydaelectronics	7	0.01	$0.07
DSUB1.385-2H9	D Connector 9	D Connector 9	J1	Receptacle Assembly, 9 Position, Right Angle	Taydaelectronics	1	0.48	$0.48
Relay SPDT	SPDT	SPDT	K1, K2, K3, K4, K5, K6, K7		Taydaelectronics	7	0.64	$4.48
HDR1X2	Header 2	Header 2	P1	Header, 2-Pin	Taydaelectronics	1	0.02	$0.02
HDR1X3	Header 3	Header 3	P2	Header, 3-Pin	Taydaelectronics	1	0.03	$0.03
HDR1X7	Header 7	Header 7	P3	Header, 7-Pin	Taydaelectronics	1	0.07	$0.07
2N3904	2N3904	2N3904	Q1, Q2, Q3, Q4, Q5, Q6, Q7	NPN General Purpose Amplifier	Taydaelectronics	7	0.01	$0.07
AXIAL-0.3	Res1	Res1	R1, R2, R3, R4, R5, R6, R7, R8, R9, R10, R11, R12, R13, R14, R15, R16, R17, R18, R19, R20, R21, R22, R23	Resistor	Taydaelectronics	23	0.01	$0.23
DIP4	OptoCoupler	OptoCoupler	U1, U3, U4		Taydaelectronics	3	0.3	$0.90
N014	SN7416N	SN7416N	U2	Hex Inverter Buffer / Driver with High-Voltage Outputs	Taydaelectronics	1	0.18	$0.18
						58		$6.75

Approved   **Notes**

Bill of Materials

Bi-Polar Motor driver BOM For Schematic Document [MotorController.SchDoc]

Source Data From: **MotorController.SchDoc**

Project: **PrintingProjectAllDocs.PrjPCB**

Organization: **U of U Computer Engineering**

Creation Date: 8/28/2012   1:58:31 PM

Print Date: 28-Aug-12   1:58:42 PM

Footprint	Comment	LibRef	Designator	Description	Vendor	Quantity	Price	total Price
RAD-0.3	Cap	Cap	C1, C2	Capacitor	Taydaelectronics	2	0.03	$0.06
DO-201AD	Diode 1N5408	Diode 1N5408	D1, D2, D3, D4, D5, D6, D7, D8	3 Amp Medium Power Silicon Rectifier Diode	Taydaelectronics	8	0.03	$0.24
LED-0	LED0	LED0	D9	Typical INFRARED GaAs LED	Taydaelectronics	1	0.04	$0.04
DO-35	Diode 1N4148	Diode 1N4148	D10	High Conductance Fast Diode	Taydaelectronics	1	0.01	$0.01
HDR1X6	Header 6	Header 6	P1	Header, 6-Pin	Taydaelectronics	1	0.06	$0.06
HDR1X4	Header 4	Header 4	P2	Header, 4-Pin	Taydaelectronics	1	0.04	$0.04
2N3904	2N3904	2N3904	Q1, Q2, Q3, Q4, Q5, Q6, Q7, Q8, Q9, Q10	NPN General Purpose Amplifier	Taydaelectronics	10	0.01	$0.10
AXIAL-0.3	Res1	Res1	R1, R2, R3, R4, R5, R6, R7, R8, R9, R10, R11, R12, R13, R14, R15, R16, R17, R18, R19, R20, R21, R22	Resistor	Taydaelectronics	22	0.01	$0.22
TO-220	TIP126	TIP126	U1, U2, U3, U4	TIP126 -PNP	Taydaelectronics	4	0.35	$1.40
TO-220	TIP120	TIP120	U5, U6, U7, U8	NPN 60V -5A TO-220	Taydaelectronics	4	0.26	$1.04
N08E	LM555CN	LM555CN	U9	Timer	Taydaelectronics	1	0.14	$0.14
648-06	MC74HC194N	MC74HC194N	U10	4-Bit Bidirectional Universal Shift Register	Digi-Key	1	0.68	$0.68
NE016	SN754410NE	SN754410NE	U11	Quadruple Half-H Driver	U of U	1	0.00	$0.00
						57		$4.03

Approved   **Notes**

Bill of Materials

Damper Section

Source Data From: **DamperSection.SchDoc**

Project: **PrintingProjectAllDocs.PrjPCB**

Organization: **U of U Computer Engineering**

Creation Date: 8/28/2012   1:59:13 PM

Print Date: 28-Aug-12   1:59:24 PM

Footprint	Comment	LibRef	Designator	Description	Vendor	Quantity	Price	total Price
DO-41	1N4001	1N4001	D1, D2, D3, D4, D5, D6, D7, D8, D9, D10, D11, D12, D15, D16, D17, D18	1.0 Ampere General Purpose Rectifier	Taydaelectronics	16	0.01	$0.16
LED-0	LED_White	LED0	D13, D14, D19, D20	Typical INFRARED GaAs LED	Taydaelectronics	4	0.04	$0.16
DSUB1.385-2H9	D Connector 9	D Connector 9	J1, J2, J3, J4	Receptacle Assembly, 9 Position, Right Angle	Taydaelectronics	4	0.48	$1.92
Relay SPDT	SPDT	SPDT	K1, K2, K3, K4, K5, K6, K7, K8, K9, K10, K11, K12, K13, K14, K15, K16		Taydaelectronics	16	0.64	$10.24
HDR1X4	Header 4	Header 4	P1	Header, 4-Pin	Taydaelectronics	1	0.04	$0.04
HDR1X2	Header 2	Header 2	P2	Header, 2-Pin	Taydaelectronics	1	0.02	$0.02
HDR1X7	Header 7	Header 7	P3	Header, 7-Pin	Taydaelectronics	1	0.07	$0.07
2N3904	2N3904	2N3904	Q1, Q2, Q3, Q4, Q5, Q6, Q7, Q8, Q9, Q10, Q11, Q12, Q13, Q14, Q15, Q16, Q17, Q18, Q19, Q20	NPN General Purpose Amplifier	Taydaelectronics	20	0.01	$0.20
AXIAL-0.3	Res1	Res1	R1, R2, R3, R4, R5, R6, R7, R8, R9, R10, R11, R12, R13, R14, R15, R16, R17, R18, R19, R20, R21, R22, R23, R24, R25, R26, R27, R28, R29, R30, R31, R32, R33, R34, R35, R36, R37, R38, R39, R40	Resistor	Taydaelectronics	40	0.01	$0.40
						103		$13.21

Approved	Notes	

Bill of Materials

Sprinkler Control BOM For Schematic Document [SprinklerBoard.SchDoc]

Source Data From: SprinklerBoard.SchDoc

Project: PrintingProjectAllDocs.PrjPCB

Organization: U of U Computer Engineering

Creation Date: 8/28/2012   2:00:07 PM

Print Date: 28-Aug-12   2:00:17 PM

Footprint	Comment	LibRef	Designator	Description	Vendor	Quantity	Price	total Price
DO-41	1N4001	1N4001	D1, D2, D3, D4, D5, D6	1.0 Ampere General Purpose Rectifier	Taydaelectronics	6	0.01	$0.06
LED-0	LED_White	LED0	D7, D8, D9, D10, D11, D12	Typical INFRARED GaAs LED	Taydaelectronics	6	0.04	$0.24
DSUB1.385-2H9	D Connector 9	D Connector 9	J1	Receptacle Assembly, 9 Position, Right Angle	Taydaelectronics	1	0.48	$0.48
Relay SPDT	SPDT	SPDT	K1, K2, K3, K4, K5, K6		Taydaelectronics	6	0.64	$3.84
HDR1X7	Header 7	Header 7	P1	Header, 7-Pin	Taydaelectronics	1	0.07	$0.07
2N3904	2N3904	2N3904	Q1, Q2, Q3, Q4, Q5, Q6	NPN General Purpose Amplifier	Taydaelectronics	6	0.01	$0.06
AXIAL-0.3	Res1	Res1	R1, R2, R3, R4, R5, R6, R7, R8, R9, R10, R11, R12, R13, R14	Resistor	Taydaelectronics	14	0.01	$0.14
N014	SN7416N	SN7416N	U1	Hex Inverter Buffer / Driver with High-Voltage Outputs	Taydaelectronics	1	0.18	$0.18
DIP16	74AC138B	74AC138B	U2	3-to-8 Line Decoder Inverting	Taydaelectronics	1	0.25	$0.25
						42		$5.32

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Bill of Materials

Source Data From: **TemperatureSensorBlock.SchDoc**

Project: **PrintingProjectAllDocs.PrjPCB**

Organization: **U of U Computer Engineering**

Creation Date: 8/28/2012   2:00:57 PM

Print Date: 28-Aug-12   2:01:06 PM

Footprint	Comment	LibRef	Designator	Description	Vendor	Quantity	Price	total Price
RAD-0.3	Cap	Cap	C1, C2, C3, C4, C5	Capacitor	Taydaelectronics	5	0.03	**$0.15**
HDR1X2	Header 2	Header 2	P1, P2, P3, P4, P5, P6, P7, P8, P9, P10, P12, P13, P14, P15, P16, P17, P18, P19, P20, P21, P22, P23, P24, P25, P26, P27, P28, P29, P30, P31, P32, P33	Header, 2-Pin	Taydaelectronics	32	0.02	**$0.64**
HDR1X12	Header 12	Header 12	P11	Header, 12-Pin	Taydaelectronics	1	0.12	**$0.12**
AXIAL-0.3	Res1	Res1	R1, R2, R3, R4, R5, R6, R7, R8, R9, R10, R11, R12, R13, R14, R15, R16, R17, R18, R19, R20, R21, R22, R23, R24, R25, R26, R27, R28, R29, R30, R31, R32	Resistor	Taydaelectronics	32	0.01	**$0.32**
N16E	CD4051BCN	CD4051BCN	U1, U2, U3, U4	8-Channel Analog Multiplexer/Demultiplexer	Taydaelectronics	4	0.23	**$0.92**
						74		$2.15

Approved	Notes		

Bill of Materials

Source Data From: **WirelessCommunications.SchDoc**

Project: **PrintingProjectAllDocs.PrjPCB**

Organization: **U of U Computer Engineering**

Creation Date: 8/28/2012   2:01:47 PM

Print Date: 28-Aug-12   2:02:00 PM

Footprint	Comment	LibRef	Designator	Description	Vendor	Quantity	Price	total Price
RAD-0.3	Cap	Cap	C1, C2	Capacitor	Taydaelectronics	2	0.03	$0.06
HDR1X5	Header 5	Header 5	P1	Header, 5-Pin	Taydaelectronics	1	0.05	$0.05
HDR1X2	Header 2	Header 2	P2, P7, P8, P9	Header, 2-Pin	Taydaelectronics	4	0.02	$0.08
HDR1X10	Header 10	Header 10	P3, P4, P5	Header, 10-Pin	Taydaelectronics	3	0.10	$0.30
HDR1X7	Header 7	Header 7	P6	Header, 7-Pin	Taydaelectronics	1	0.07	$0.07
AXIAL-0.3	Res1	Res1	R1	Resistor	Taydaelectronics	1	0.01	$0.01
RFM12-transceiver	RFM12 transceiver	RFM12 transceiver	T1	www.futurlec.com 433 MHZ transceiver	futurlec	1	7.90	$7.90
Teensy2.0	Teensy	Teensy2.0	U1	The teensy 2.0 from www.PJRC.com, chang clock to 8MHz	PJRC	1	16.00	$16.00
						14		$24.47

Approved   **Notes**

Bill of Materials

Microphone Mixer

Source Data From:	**MicMixer.SchDoc**
Project:	**PrintingProjectAllDocs.PrjPCB**
Organization:	**U of U Computer Engineering**

Creation Date:	8/28/2012	2:02:45 PM
Print Date:	28-Aug-12	2:02:58 PM

Footprint	Comment	LibRef	Designator	Description	Vendor	Quantity	Price	total Price
RAD-0.3	Cap	Cap	C1, C2, C3, C4, C5, C6, C7, C8, C9, C10	Capacitor	Taydaelectronics	10	0.03	$0.30
PIN2	Mic1	Mic1	MK1, MK2, MK3, MK4, MK5, MK6, MK7, MK8, MK9, MK10, MK11, MK12, MK13, MK14, MK15, MK16	Microphone	Taydaelectronics	16	0.25	$4.00
HDR1X9	Header 9	Header 9	P1	Header, 9-Pin	Taydaelectronics	1	0.09	$0.09
HDR1X2	Header 2	Header 2	P2, P3, P4, P5, P6, P7, P8, P9	Header, 2-Pin	Taydaelectronics	8	0.02	$0.16
HDR1X3	Header 3	Header 3	P10, P11	Header, 3-Pin	Taydaelectronics	2	0.03	$0.06
2N3904	BC548B	2N3904	Q1, Q2	NPN General Purpose Amplifier	Taydaelectronics	2	0.01	$0.02
2N3904	2N3904	2N3904	Q3, Q4	NPN General Purpose Amplifier	Taydaelectronics	2	0.01	$0.02
AXIAL-0.3	Res1	Res1	R1, R2, R3, R4, R5, R6, R7, R8, R9, R10, R11, R12, R13, R14	Resistor	Taydaelectronics	14	0.01	$0.14
N16E	CD4051BCN	CD4051BCN	U1, U2, U3, U4	8-Channel Analog Multiplexer/Demultiplexer	Taydaelectronics	4	0.23	$0.92
						59		$5.71

Approved	Notes

Bill of Materials

Speaker Mixer

Source Data From: **SpeakerMixer.SchDoc**

Project: **PrintingProjectAllDocs.PrjPCB**

Organization: **U of U Computer Engineering**

Creation Date: 8/28/2012   2:03:49 PM

Print Date: 28-Aug-12   2:04:01 PM

Footprint	Comment	LibRef	Designator	Description	Vendor	Quantity	Price	total Price
LED-0	LED_White	LED0	D1, D2, D3, D4	Typical INFRARED GaAs LED	Taydaelectronics	4	0.04	$0.16
HDR1X8	Header 8	Header 8	P1	Header, 8-Pin	Taydaelectronics	1	0.08	$0.08
HDR1X3	Header 3	Header 3	P2, P3, P4, P5, P6, P7, P8, P9, P10	Header, 3-Pin	Taydaelectronics	9	0.03	$0.27
2N3904	2N3904	2N3904	Q1, Q2, Q3, Q4	NPN General Purpose Amplifier	Taydaelectronics	4	0.01	$0.04
AXIAL-0.3	Res1	Res1	R1, R2, R3, R4, R5, R6, R7, R8	Resistor	Taydaelectronics	8	0.01	$0.08
N16E	CD4051BCN	CD4051BCN	U1, U2	8-Channel Analog Multiplexer/Demultiplexer	Taydaelectronics	2	0.23	$0.46
						28		$1.09

Approved	Notes