


# C3PO CONTROL SYSTEM DRAWING INDEX

SHEET NUMBER	DRAWING TITLE	REV	ISSUE DATE	DRAWING NUMBER	DRAWING TITLE	REV	ISSUE DATE	DRAWING NUMBER	DRAWING TITLE	REV	ISSUE DATE
-	-	-	-	-	-	-	-	-	-	-	-
1	DRAWING INDEX	-	09/26/2014	-	-	-	-	-	-	-	-
2	INSTRUMENTATION SYMBOLS	-	09/26/2014	-	-	-	-	-	-	-	-
3	120 VAC POWER DISTRIBUTION	-	09/26/2014	-	-	-	-	-	-	-	-
4	(PS1) 12 VOLT DC POWER	-	09/26/2014	-	-	-	-	-	-	-	-
5	(PS2) 12 VOLT DC POWER	-	09/26/2014	-	-	-	-	-	-	-	-
6	(PS3) 5 VOLT DC POWER	-	09/26/2014	-	-	-	-	-	-	-	-
7	ARDUINO MEGA / ARDUINO UNO CONNECTION	-	09/26/2014	-	-	-	-	-	-	-	-
8	ARDUINO MEGA / WIRELESS REMOTE CONNECTION	-	09/26/2014	-	-	-	-	-	-	-	-
9	MAESTRO / ARDUINO MEGA TX/RX CONNECTION	-	09/26/2014	-	-	-	-	-	-	-	-
10	SERVO INTERCONNECTION	-	09/26/2014	-	-	-	-	-	-	-	-
11	INTENTIONALLY LEFT BLANK	-	09/26/2014	-	-	-	-	-	-	-	-
12	POWER DISTRIBUTION ASSEMBLY	-	09/26/2014	-	-	-	-	-	-	-	-
13	CONTROL SYSTEM ASSEMBLY	-	09/26/2014	-	-	-	-	-	-	-	-
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18	-	-	-	-	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-	-	-
21	-	-	-	-	-	-	-	-	-	-	-
22	-	-	-	-	-	-	-	-	-	-	-
23	-	-	-	-	-	-	-	-	-	-	-
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**TOLERANCES**  
DO NOT SCALE DRAWING

±1/16" DIMENSIONS UNLESS NOTED OTHERWISE  
±1/16" DIMENSIONS UNLESS NOTED OTHERWISE  
±0.010" DIMENSIONS UNLESS NOTED OTHERWISE  
±1/60" DIMENSIONS UNLESS NOTED OTHERWISE

REV	DATE	DESCRIPTION	BY	CHNG BY	ISSUE NO.



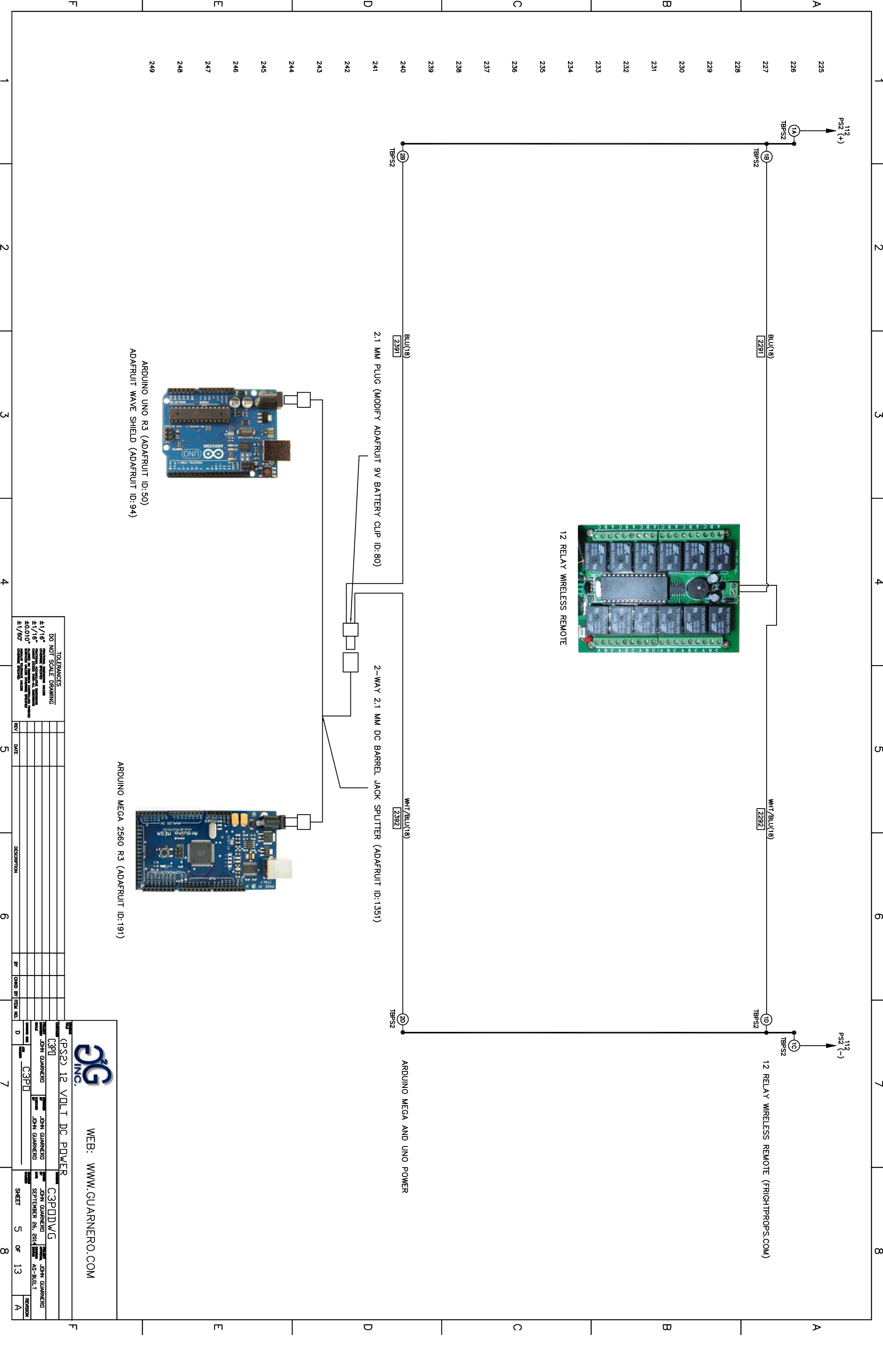
WEB: [WWW.GUARNERO.COM](http://WWW.GUARNERO.COM)

C3PD DRAWING INDEX	C3PDW/G	
DESIGNED BY: JOHN GUARNERO	CHECKED BY: JOHN GUARNERO	DATE: SEPTEMBER 26, 2014
DRAWN BY: JOHN GUARNERO	APPROVED BY: JOHN GUARNERO	REVISION: AS-BUILT
SHEET 1 OF 13		REVISION A









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ARNDINO UNO R3 (ADAFRUIT ID: 50)  
ADAFRUIT WAVE SHIELD (ADAFRUIT ID: 94)

ARNDINO MEGA 2560 R3 (ADAFRUIT ID: 191)

2.1 MM PLUG (MODIFY ADAFRUIT 9V BATTERY CLIP ID: 80)

2-WAY 2.1 MM DC BARREL JACK SPLITTER (ADAFRUIT ID: 1351)

12 RELAY WIRELESS REMOTE

12 RELAY WIRELESS REMOTE (FRIGHTTROPSC.COM)

ARNDINO MEGA AND UNO POWER

DO NOT SCALE DRAWING  
±1/16" DIMENSIONAL TOLERANCES UNLESS SPECIFIED OTHERWISE  
±1/16" DIMENSIONAL TOLERANCES UNLESS SPECIFIED OTHERWISE  
±0.010" DIMENSIONAL TOLERANCES UNLESS SPECIFIED OTHERWISE  
±1/60" DIMENSIONAL TOLERANCES UNLESS SPECIFIED OTHERWISE

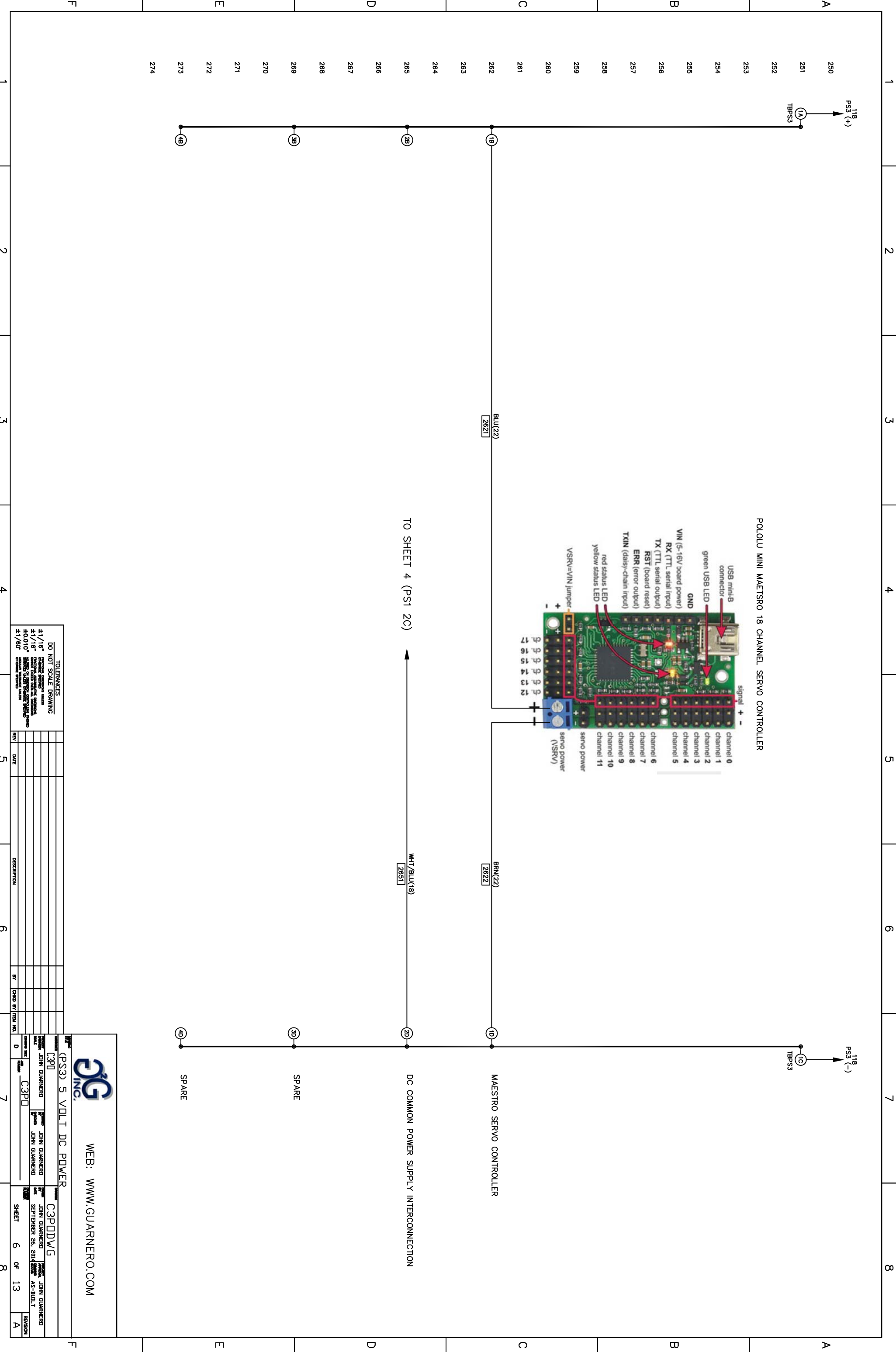
REV	DATE	DESCRIPTION	BY	CHKD BY	FRM NO.

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PS2) 12 VOLT DC POWER C3PDDY/G

DESIGNED BY	JOHN GUARNERO	DATE	SEPTEMBER 26, 2014
CHECKED BY	JOHN GUARNERO	DATE	SEPTEMBER 26, 2014
APPROVED BY	JOHN GUARNERO	DATE	SEPTEMBER 26, 2014

SHEET 5 OF 13



**3G INC.**  
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(PS3) 5 VOLT DC POWER

DESIGNER	C3P	CHECKED	C3P/DY/G
DATE		DATE	
BY		BY	
CHNG BY		CHNG BY	
REV		REV	
DATE		DATE	
DESCRIPTION		DESCRIPTION	

**TOLERANCES**  
DO NOT SCALE DRAWING

±1/16"	FORMING FINISH	±1/16"	FORMING FINISH
±1/16"	FORMING FINISH	±1/16"	FORMING FINISH
±0.010"	FORMING FINISH	±0.010"	FORMING FINISH
±1/60"	FORMING FINISH	±1/60"	FORMING FINISH

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REVISION A



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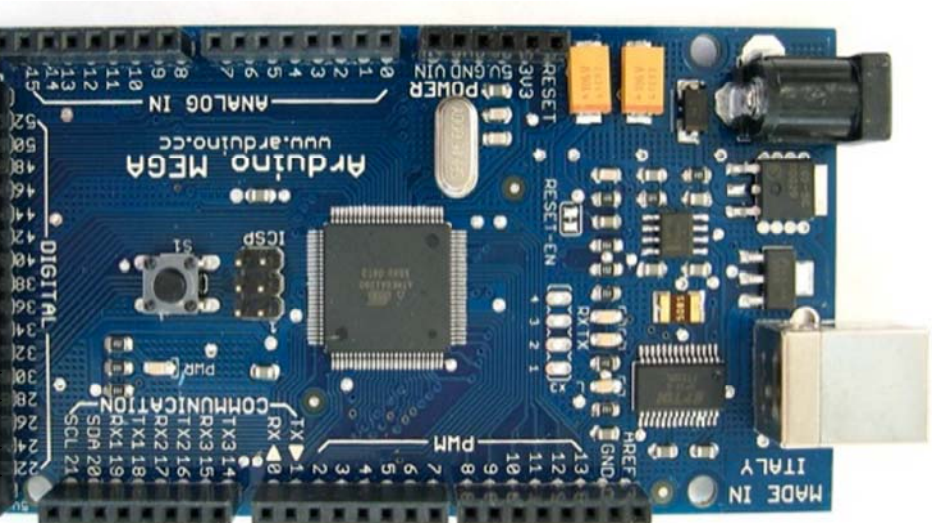
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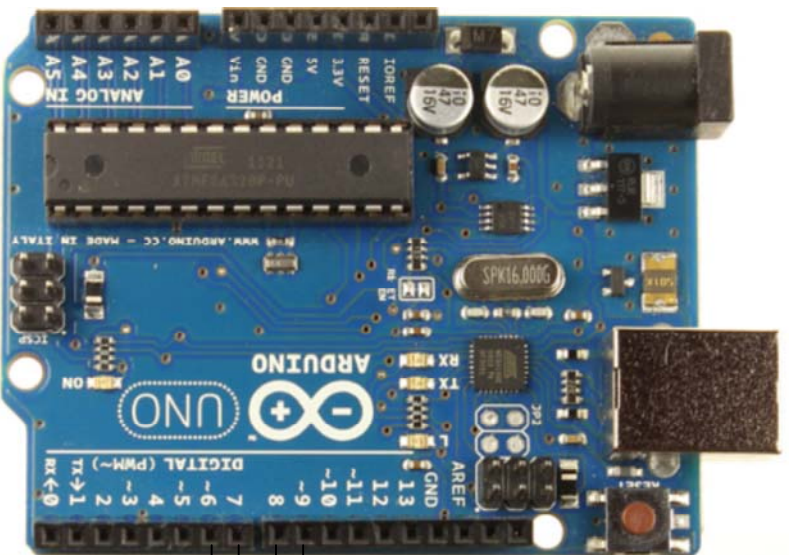
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ARDUINO MEGA 2560 R3 (ADAFRUIT ID:191)

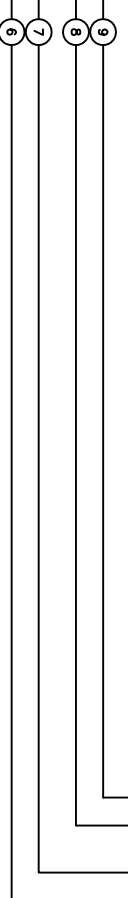


ARDUINO UNO R3 (ADAFRUIT ID:50)



ARDUINO MEGA OUTPUTS  
CONTROL AUDIO  
SELECTION ON ARDUINO  
UNO VIA BINARY CODE

26  
24  
22



ARDUINO UNO INPUTS  
FOR DETERMINATION OF  
AUDIO SELECTION VIA  
BINARY CODE (1,2,4,BUFFERANCES  
DO NOT SCALE DRAWING

±1/16"  
±1/16"  
±0.010"  
±1/60"

REV	DATE	DESCRIPTION	BY	CHKD BY	ISSUE NO.



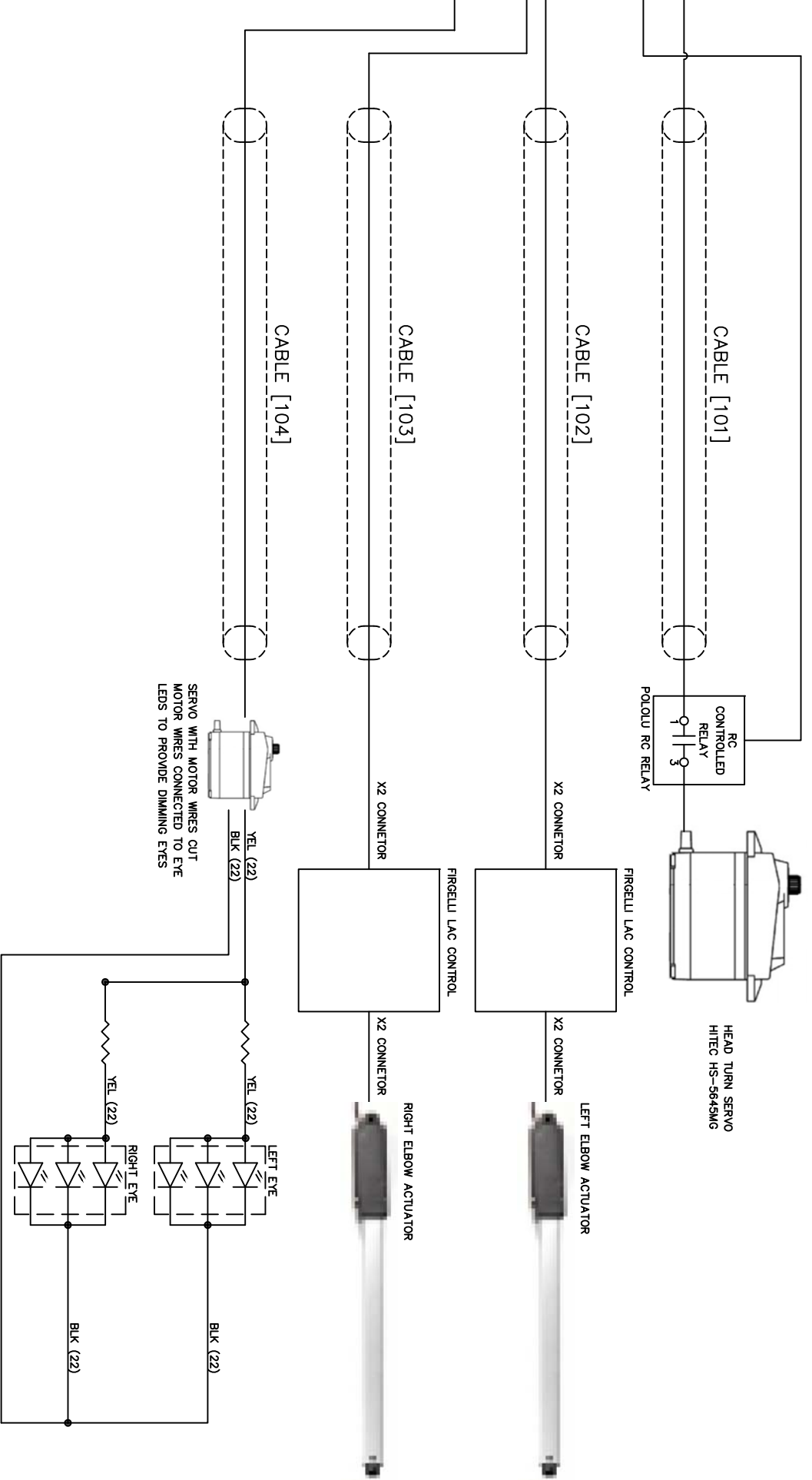
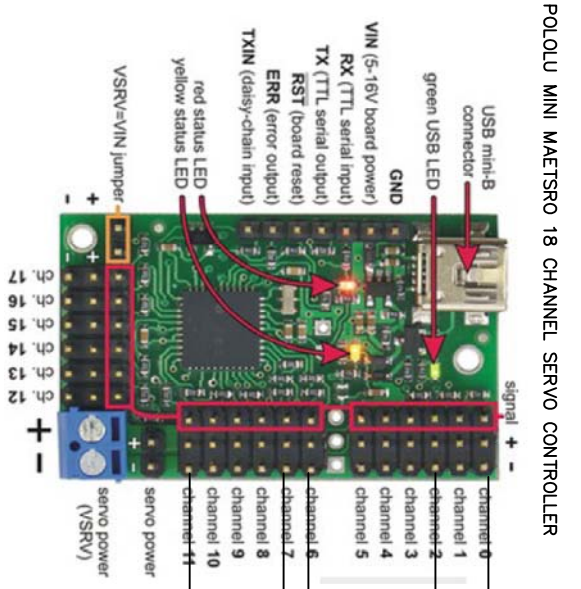
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<b>ARDUINO MEGA / ARDUINO UNO CONNECTION</b> C3PD		<b>ARDUINO UNO CONNECTION</b> C3PDV/G	
DESIGNED BY	JOHN GUARNERO	DESIGNED BY	JOHN GUARNERO
DATE	SEPTEMBER 26, 2014	DATE	SEPTEMBER 26, 2014
REV	AS-BUILT	REV	AS-BUILT
SHEET 7 OF 13		SHEET 7 OF 13	
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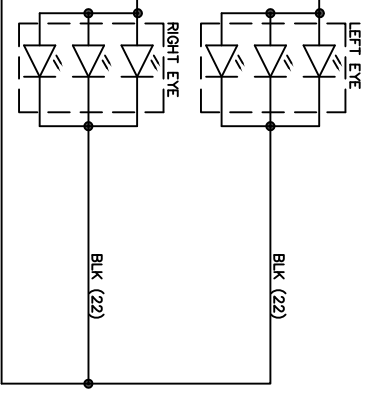








SERVO WITH MOTOR WIRES CUT  
MOTOR WIRES CONNECTED TO EYE  
LEADS TO PROVIDE DIMMING EYES



1	2	3	4	5	6	7	8
A	B	C	D	E	F	A	B

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**SERVO INTERCONNECTION**

DESIGNED BY: JOHN GUARNERO  
DATE: SEPTEMBER 26, 2014  
REVISED BY: JOHN GUARNERO

AS-BUILT

REVISION

**TOLERANCES**

DO NOT SCALE DRAWING

±1/16" DIMENSIONAL TOLERANCE UNLESS SPECIFIED OTHERWISE

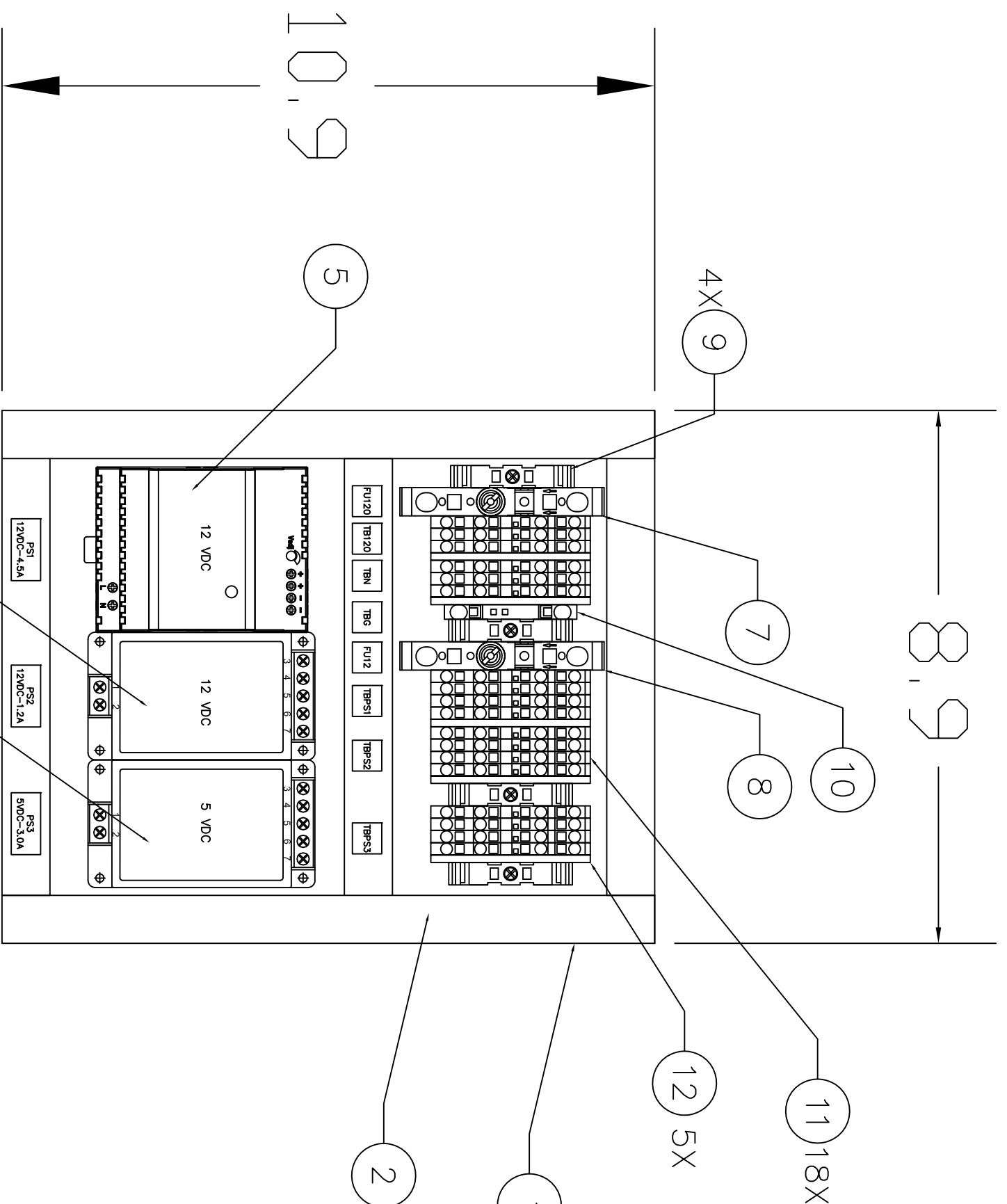
±1/16" HOLE POSITION TOLERANCE UNLESS SPECIFIED OTHERWISE

±0.010" SURFACE FINISH UNLESS OTHERWISE SPECIFIED

±1/60" ANGULAR TOLERANCE UNLESS OTHERWISE SPECIFIED

REV	DATE	DESCRIPTION	BY	CHKD BY	HELD NO.





QTY	MANUFACTURER	PART NUMBER	DESCRIPTION
1	EDISON	AGC4	4 AMP FUSE (1/4" X 1-1/4")
1	EDISON	AGC5	5 AMP FUSE (1/4" X 1-1/4")
10	PHOENIX	3030187	STB2.5, PLUG IN BRIDGE FBS 4-5
5	PHOENIX	3030459	STB2.5, ENDCOVER
18	PHOENIX	3031270	STB2.5, TERMINAL BLOCK
1	PHOENIX	3031380	ST-4 GROUND BLOCKS
4	PHOENIX	0800886	END BLOCK
1	PHOENIX	3025587	ZFK 6-DREHSILED 24 (6,3X32) FUSE BLOCK
1	PHOENIX	3025574	ZFK 6-DREHSILED 250 (6,3X32) FUSE BLOCK
3	PHOENIX	0801733	DIN RAIL (PER FT)
1	AUTOMATION-DIRECT	PSC-12-060	POWER SUPPLY 12VDC 4.5A (54W) LOW PROFILE
1	AUTOMATION-DIRECT	PSE12-115	POWER SUPPLY 12VDC 1.25A (15W) ENCAP
1	AUTOMATION-DIRECT	PSE05-115	POWER SUPPLY 5VDC 3A (15W) ENCAP
1	AUTOMATION-DIRECT	TTE-1015G-1	WIRE DUCT, 1.0 x 1.5 IN., 1/PK, GRY, THIN
1	AUTOMATION-DIRECT	HW-MP1210CS	SUB PANEL WHITE STEEL 12X10 IN

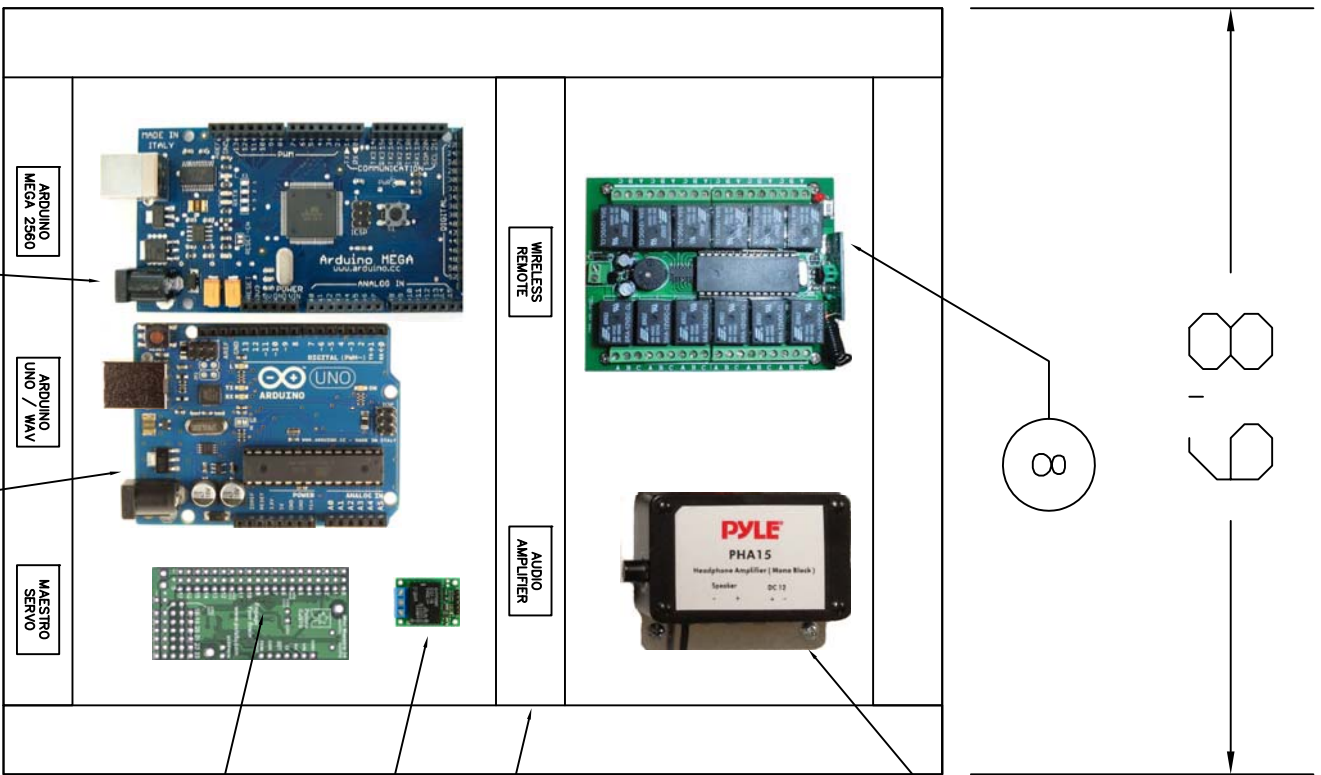
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TOLERANCES  
 DO NOT SCALE DRAWING  
 ±1/16" DIMENSIONAL TOLERANCE UNLESS SPECIFIED  
 ±1/16" HOLE POSITION TOLERANCE UNLESS SPECIFIED  
 ±0.010" SURFACE FINISH UNLESS SPECIFIED  
 ±1/80" DIMENSIONAL TOLERANCE UNLESS SPECIFIED

REV	DATE	DESCRIPTION	BY	CHKD BY	FRM NO.

DATE	BY	CHKD BY	FRM NO.	REVISION





QTY	MANUFACTURER	PART NUMBER	DESCRIPTION
1	POLOLU	2804	RC SWITCH
1	AUTOZONE	-	8 OHM SPEAKER
1	FRIGHTPROPS.COM	-	12 RELAY WIRELESS REMOTE
1	PYLE	PHA15	HEADPHONE AMPLIFIER
1	ADAFRUIT	ID: 94	ADAFRUIT WAVE SHIELD
1	ADAFRUIT	ID: 50	ARDUINO UNO R3
1	ADAFRUIT	ID: 191	ARDUINO MEGA 2560 R3
1	POLOLU	-	MINI MAESTRO 18 CHANNEL SERVO CONTROLLER
1	AUTOMATION-DIRECT	TIE-1015G-1	WIRE DUCT, 1.0 x 1.5 IN., 1/PK, GRY, THIN
1	AUTOMATION-DIRECT	HW-MP1210CS	SUB PANEL WHITE STEEL 12X10 IN

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CONTROL SYSTEM ASSEMBLY

TOLERANCES  
DO NOT SCALE DRAWING

±1/16"	FINISH	AS-BUILT
±1/16"	FORM	AS-BUILT
±0.010"	POSITION	AS-BUILT
±1/60"	PERPENDICULARITY	AS-BUILT
±1/60"	PLUMBER	AS-BUILT
±1/60"	SHAFT	AS-BUILT
±1/60"	SHAFT	AS-BUILT
±1/60"	SHAFT	AS-BUILT

REV	DATE	DESCRIPTION	BY	CHKD BY	ISSD NO.

DESIGNED BY	JOHN GUARNERO	CHECKED BY	JOHN GUARNERO
DRAWN BY	JOHN GUARNERO	APPROVED BY	JOHN GUARNERO
DATE	SEPTEMBER 26, 2014	SCALE	AS-BUILT
SHEET	13	OF	13
REVISION	A		