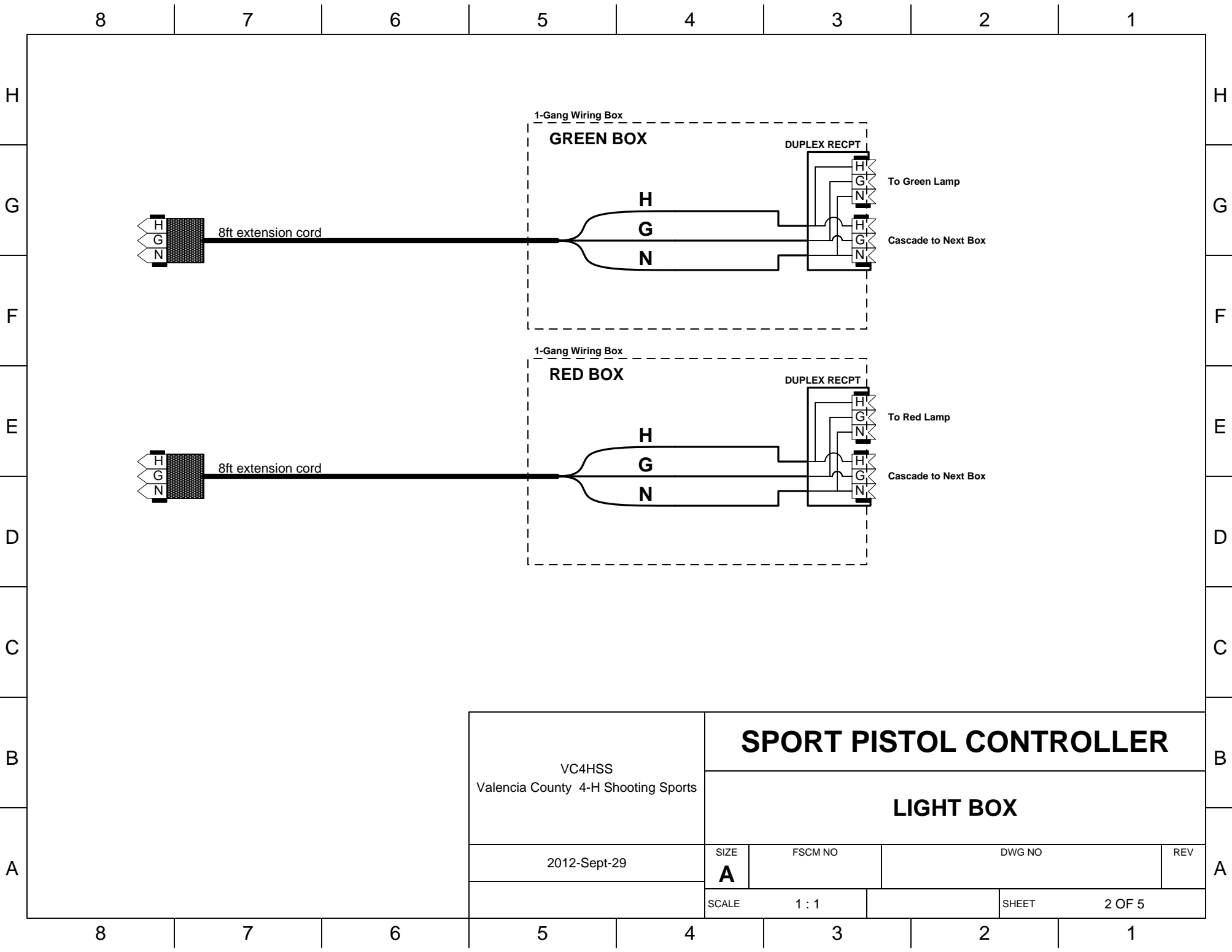
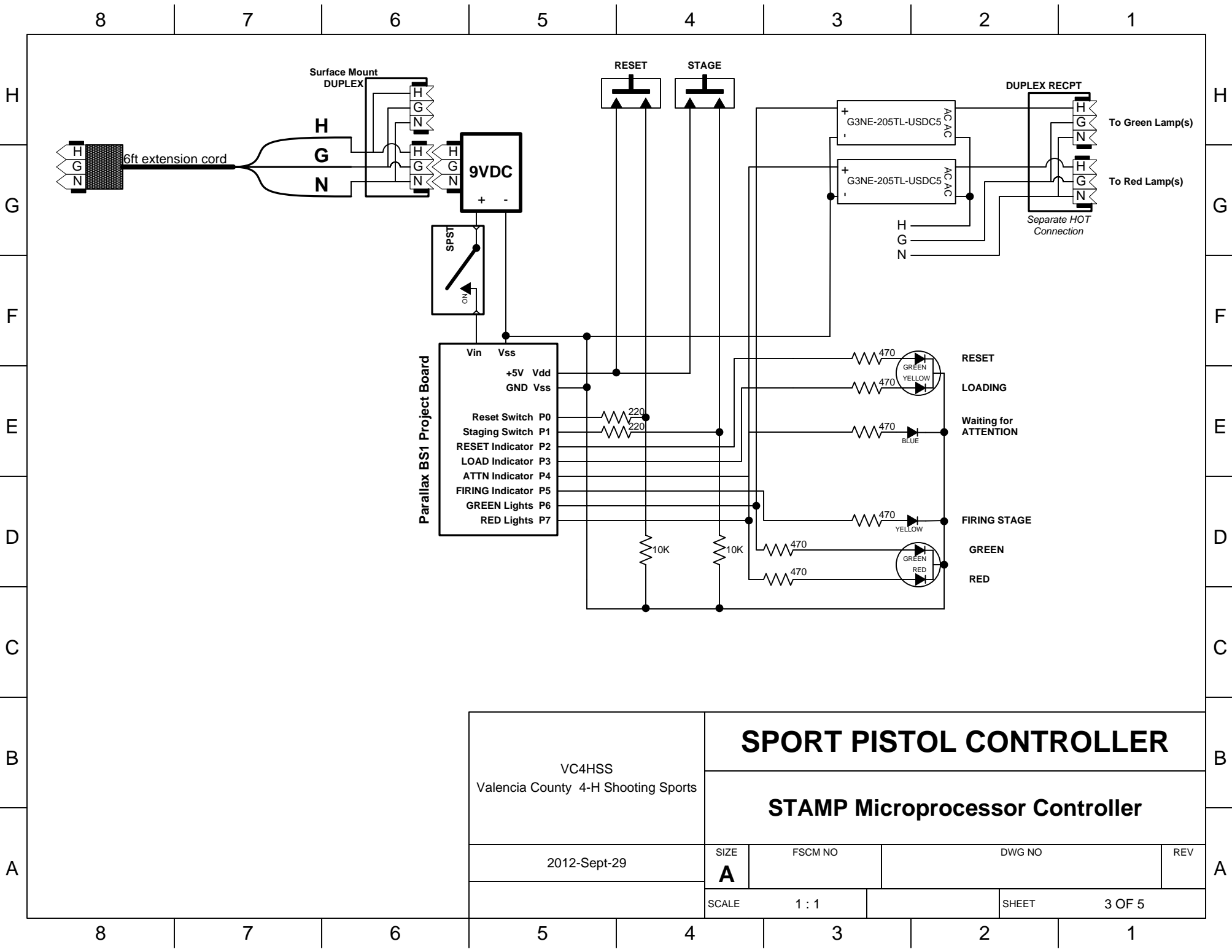


VC4HSS Valencia County 4-H Shooting Sports		SPORT PISTOL CONTROLLER		
		Manual Controller		
2012-Sept-29	SIZE A	FSCM NO	DWG NO	REV
	SCALE	1 : 1	SHEET	1 OF 5



VC4HSS Valencia County 4-H Shooting Sports		SPORT PISTOL CONTROLLER		
		LIGHT BOX		
2012-Sept-29	SIZE	FSCM NO	DWG NO	REV
	A			
	SCALE	1 : 1	SHEET	2 OF 5



VC4HSS Valencia County 4-H Shooting Sports		SPORT PISTOL CONTROLLER		
		STAMP Microprocessor Controller		
2012-Sept-29	SIZE	FSCM NO	DWG NO	REV
	A			
	SCALE	1 : 1	SHEET	3 OF 5

8

7

6

5

4

3

2

1

H

G

F

E

D

C

B

A

H

G

F

E

D

C

B

A

MANUAL CONTROLLER

- 1) 3-Gang Electrical Work Box
- 2) 3-Gang Box Cover Plate (Décor)
- 3) 8-ft 16ga Outdoor Extension Cord
- 4) SPST 15A Decorator Switch
- 5) 3-Way 15A Decorator Switch
- 6) Decorator Receptacle
- 7) 14ga or 16ga Hookup Wire
(cut 2-ft off Ext cord for this)

Cost = Approx \$30

LIGHT BOXES

- 1) 2 ea 1-Gang Electrical Work Box
- 2) 2 ea 1-Gang Cover Plate
- 3) 2 ea Receptacle (to fit cover plate)
- 4) 2 ea 8-ft 16ga Outdoor Ext Cord
- 5) 2 ea Plug in Bulb Adapter
- 6) Green Décor Bulb
- 7) Red Décor Bulb

Cost = Approx \$50 for 2 boxes

BS-1 PROCESSOR CONTROLLER

- 1) 8-ft 16ga Outdoor Extension Cord
- 2) BS-1 Project Board – Digikey P/N: 27112-ND
- 3) Toggle Switch – Mouser P/N: 506-A103P3YZQ04
- 4) 2 ea Momentary Switch – Mouser P/N: 107-3029-EVX
- 5) 2 ea 2A Fuseholders – Mouser P/N: 576-0345LS1HX020
- 6) 2 ea OMRON 5A Solid State Relays – Mouser P/N: 653-G3NE-205TL-USDC5
(If you use DC bulbs you will have to substitute normal coil relays)
- 7) 2 ea 220-ohm 1/8W resistors
- 8) 2 ea 10K-ohm 1/8W resistors
- 9) 6 ea 470-ohm 1/8W resistors
- 10) GREEN/RED LED Indicator – Digikey P/N: 492-1214-ND
- 11) GREEN/YELLOW LED Indicator – Digikey P/N: 492-1213-ND
- 12) BLUE LED Indicator – Digikey P/N: 492-1539-ND
- 13) YELLOW LED Indicator – Digikey P/N: 492-1538-ND
- 14) 3-Gang Electrical Work Box
- 15) 3-Gang Work Box cover plate (solid)
- 16) 2 ea 2 outlet receptacle – Surface mount
- 17) 9VDC “Wallwart” Power Supply

Cost = Approx \$150

You will also need 2 75ft to 100ft extension cords to go between the controller & the light boxes. Approx Cost - \$50

SPORT PISTOL CONTROLLER

VC4HSS
Valencia County 4-H Shooting Sports

Parts Lists

2012-Sept-29	SIZE A	FSCM NO	DWG NO	REV
	SCALE	1 : 1	SHEET	4 OF 5

8

7

6

5

4

3

2

1

8

7

6

5

4

3

2

1

H

G

F

E

D

C

B

A

H

G

F

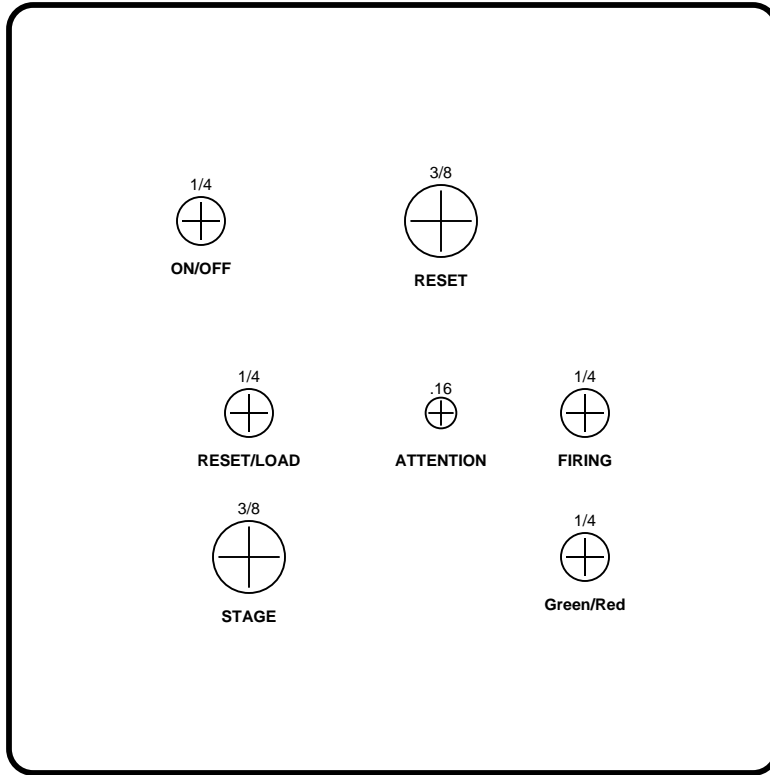
E

D

C

B

A



VC4HSS
Valencia County 4-H Shooting Sports

SPORT PISTOL CONTROLLER

Switch Panel

2012-Sept-29

SIZE A	FSCM NO	DWG NO	REV
------------------	---------	--------	-----

SCALE

1 : 1	SHEET	5 OF 5
-------	-------	--------

8

7

6

5

4

3

2

1

SP_V1.bs1

```
1 ' {$STAMP BS1}
2 ' {$PBASIC 1.0}
3 ' VC4HSS - SPORT PISTOL RAPID FIRE CONTROLLER
4 '
5 ' Stage Controller for Sport Pistol
6 ' 120929 - Ver 1.0 - JHM
7 '
8 SYMBOL ResetWrk = B2 ' RESET button workspace
9 SYMBOL StageWrk = B3 ' STAGE button workspace
10 SYMBOL loop = B4 ' general loop variable
11 SYMBOL loop1 = B5 ' general loop variable
12 SYMBOL shot = B6 ' Shot Number count variable
13
14 SYMBOL RESETsw = 0 ' RESET Switch
15 SYMBOL STAGESw = 1 ' STAGING Switch
16 SYMBOL RESETind = 2 ' RESET indicator
17 SYMBOL LOADind = 3 ' LOAD stage indicator
18 SYMBOL ATTNind = 4 ' ATTENTION stage indicator
19 SYMBOL FIREind = 5 ' FIRING stage indicator
20 SYMBOL GREENind = 6 ' GREEN LIGHTS indicator
21 SYMBOL REDind = 7 ' RED LIGHTS indicator
22 '
23
24 RESET_MAIN:
25 ' -- RESET/STOP State - Prior to LOAD
26 INPUT RESETsw ' Pin 0 - RESET/STOP Switch
27 INPUT STAGESw ' Pin 1 - STAGING Switch
28
29 OUTPUT RESETind ' RESET indicator = ON
30 PIN2 = 1
31 OUTPUT LOADind ' LOAD indicator = OFF
32 PIN3 = 0
33 OUTPUT ATTNind ' ATTN indicator = OFF
34 PIN4 = 0
35 OUTPUT FIREind ' FIRING STAGE indicator = OFF
36 PIN5 = 0
37 OUTPUT GREENind ' GREEN LIGHTS & indicator = OFF
38 PIN6 = 0
39 OUTPUT REDind ' RED LIGHTS & indicator = OFF
40 PIN7 = 0
41 DEBUG CR, "* VC4HSS-SPORT PISTOL-RAPID FIRE CONTROLLER *", CR
42 DEBUG " * --- Version 1.0 - Sept 29, 2012 - JHM --- *", CR
43 DEBUG " == RESET STAGE ==", CR
44
45 Reset_Hold:
46 BUTTON RESETsw, 1, 255, 0, ResetWrk, 1, RESET_MAIN
47 BUTTON STAGESw, 1, 255, 0, StageWrk, 1, LOAD_MAIN
48 PAUSE 100
49 DEBUG "."
50 GOTO Reset_Hold
```

```
51
52 ' /\ /\ /\ /\ /\ /\ /\ /\ /\ /\ /\ /\ /\ /\ /\ /\
53 LOAD_MAIN: 'LOAD stage - 1 minute
54 PIN2 = 0 'RESETind
55 PIN3 = 1 'LOADind = ON
56 PIN4 = 0 'ATTNind
57 PIN5 = 0 'FIREind
58 PIN6 = 0 'GREENind
59 PIN7 = 0 'REDind
60 DEBUG CR, "--LOAD STAGE--", CR
61 ' Delay 60 seconds
62 PAUSE 1000
63 FOR loop = 1 TO 59
64     BUTTON RESETsw, 1, 255, 0, ResetWrk, 1, RESET_MAIN ' Allow for reset
65     PAUSE 1000
66 NEXT
67 PIN4 = 1 'Bring ATTNind ON
68 DEBUG CR, "--WAITING FOR ATTENTION--", CR
69 Load_Hold:
70     PIN3 = 0 'Bring LOADind OFF
71     BUTTON RESETsw, 1, 255, 0, ResetWrk, 1, RESET_MAIN ' Allow for reset
72     BUTTON STAGESw, 1, 255, 0, StageWrk, 1, ATTN_MAIN ' Wait for Stage>ATTN
73 GOTO Load_Hold
74
75 ' /\ /\ /\ /\ /\ /\ /\ /\ /\ /\ /\ /\ /\ /\ /\ /\
76 ATTN_MAIN: ' 7 Second ATTENTION phase
77 PIN4 = 1 'ATTNind = ON
78 PIN5 = 1 'FIREind = ON
79 PIN6 = 0 'GREENind
80 PIN7 = 1 'REDind = ON
81 DEBUG CR, "--ATTENTION--", CR
82 FOR loop = 1 TO 7
83     BUTTON RESETsw, 1, 255, 0, ResetWrk, 1, RESET_MAIN ' Allow for reset
84     PAUSE 1000
85     'DEBUG "A"
86 NEXT
87 DEBUG CR
88 '***** Shots 1-5
89 PIN4 = 0 'Turn OFF ATTN
90 PIN5 = 1 'Turn on FIRING
91 FOR shot = 1 TO 4
92     'DEBUG shot
93     PIN7 = 0 'Turn OFF RED
94     PIN6 = 1 'Turn ON GREEN
95     'DEBUG "--GREEN-"
96     FOR loop = 1 TO 30
97         BUTTON RESETsw, 1, 255, 0, ResetWrk, 1, RESET_MAIN ' Allow for reset
98         PAUSE 100
99     NEXT
100     PIN6 = 0 'Turn OFF GREEN
```

SP_V1.bs1

```
101 PIN7 = 1 'Turn ON RED
102 'DEBUG "-RED-", CR
103 FOR loop = 1 TO 70
104     BUTTON RESETsw, 1, 255, 0, ResetWrk, 1, RESET_MAIN ' Allow for reset
105     PAUSE 100
106 NEXT
107 NEXT
108 'DEBUG "SHOT = 5 "
109 PIN7 = 0 'Turn OFF RED
110 PIN6 = 1 'Turn ON GREEN
111 'DEBUG "-GREEN-"
112 FOR loop = 1 TO 30
113     BUTTON RESETsw, 1, 255, 0, ResetWrk, 1, RESET_MAIN ' Allow for reset
114     PAUSE 100
115 NEXT
116 'DEBUG "-RED-", CR
117 PIN5 = 0 'Turn OFF FIRING
118 PIN6 = 0 'Turn OFF GREEN
119 PIN7 = 1 'Turn ON RED
120 DEBUG "***** STOP *****", CR
121 DEBUG "* PRESS A BUTTON TO RESET *", CR
122 Stop_Hold:
123     ' WAIT for either pushbutton & then RESET
124     BUTTON RESETsw, 1, 255, 0, ResetWrk, 1, RESET_MAIN
125     BUTTON STAGESw, 1, 255, 0, StageWrk, 1, RESET_MAIN
126 GOTO Stop_Hold
```