

DCS-110 CIRCUIT REDESIGN

IN AUTO MODE:

- POWER AVAILABLE TO AUTO RELAYS ONLY WITH AUTO/MANUAL SWITCH IN "AUTO"
 - SHUTTER POWER ACTIVATED BY EXTERNAL SIGNAL (A GROUND)
 - SHUTTER DIRECTION IS "CLOSE" WHEN RELAY ACTUATED, "OPEN" OTHERWISE
 - WATCHDOG RELAY IS NORMALLY "ON"
-
- AUTO CONTROL WHEN AUTO/MANUAL IN "AUTO", WATCHDOG AT "ON"
 - A SWITCH OF WATCHDOG TO "OFF", A FAILURE OF +24V POWER, OR BOTH, PRODUCES A STEADY "CLOSE" VOLTAGE AT THE OUTPUT. THERE IS NO EFFECT OF EITHER IN "MANUAL" MODE

IN MANUAL MODE:

- STATE OF AUTO RELAYS OR WATCHDOG IS IRRELEVANT

NOTE THAT THIS CIRCUIT USES TERMINALS #10, #11, #12 ON THE AUTO/MANUAL SWITCH WHICH PREVIOUSLY WERE USED TO INTERRUPT, IN "MANUAL" POSITION, ANY INCOMING SIGNAL TO THE SHUTTER POWER RELAY, K802. IN THE PRESENT CIRCUIT SUCH A SIGNAL WOULD ACTIVATE THE RELAY IN "MANUAL" MODE, BUT TO NO EFFECT

CONCERN: IN THIS CIRCUIT, AS IN PREVIOUS INCARNATIONS, SHUTTER MOTOR POWER (AS WELL AS DOME ROTATOR MOTOR POWER) PASS THROUGH THE AUTO/MANUAL AND OPEN/CLOSE (CLOCKWISE/ COUNTERCLOCKWISE) SWITCHES. THE OPERATION CURRENTS CAN BE ~7A WHICH IS A LOT FOR THE SWITCH RATINGS.

NOTE THE DOME ROTATION PART OF THE CIRCUIT IS UNCHANGED

* THE INTENT/CONSTRAINT WAS TO MAKE USE OF EXISTING COMPONENTS WITH MINIMAL MODIFYING.

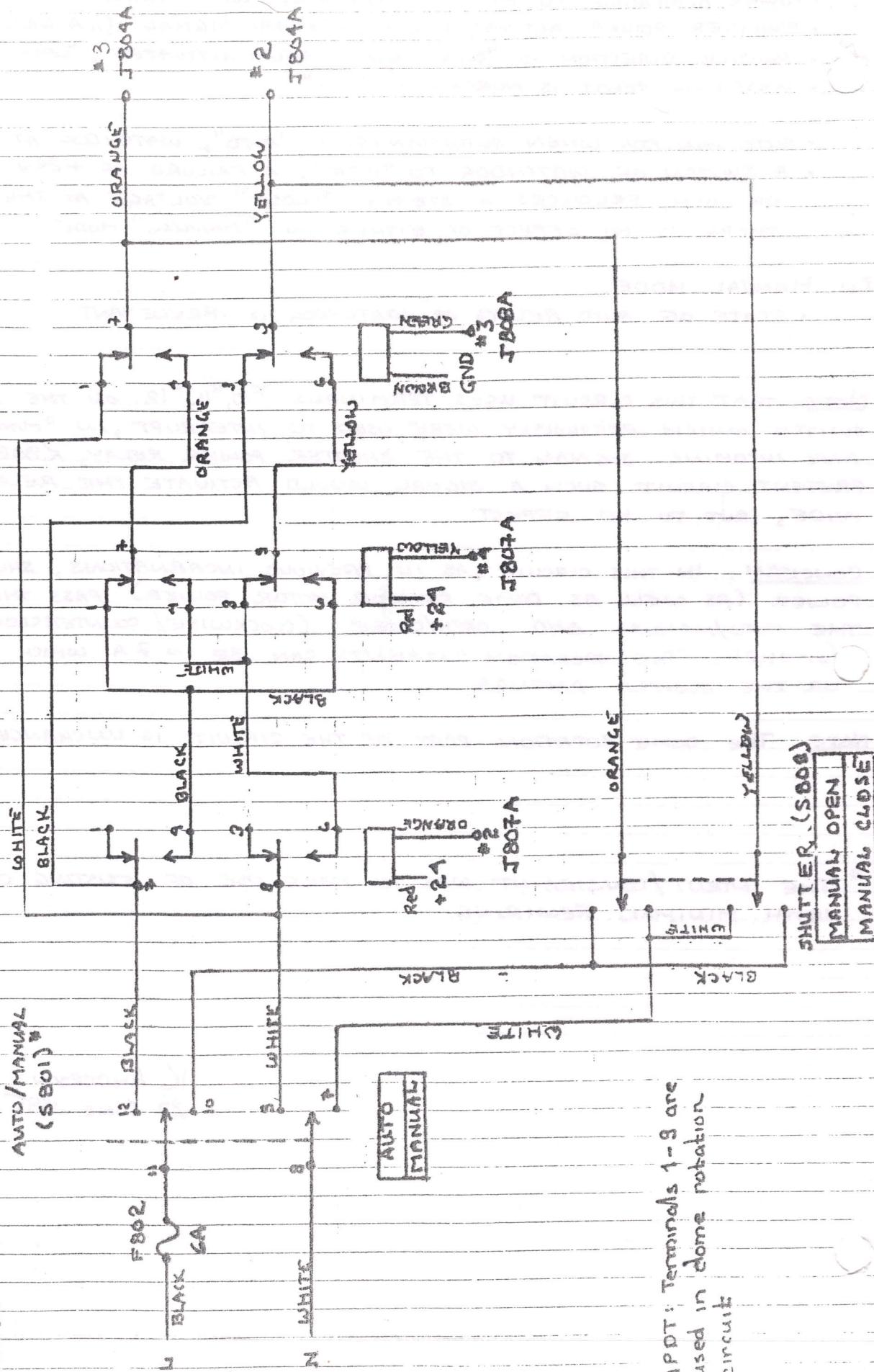
K. ANDERSON
27 JUNE 1995

DCB-110

Circuit Redesign Shutter Control (Part 2)

7688 (100)
and many
" " ,
Aug 1955 .
Sep 29 1955 - and 69
27 June 1955

AUTO	SHUTTER	POWER	(K802)	<table border="1"><tr><td>OFF</td><td>ON</td></tr></table>	OFF	ON
OFF	ON					
AUTO	SHUTTER	DIRECTION	(K804)	<table border="1"><tr><td>OPEN</td><td>CLOSE</td></tr></table>	OPEN	CLOSE
OPEN	CLOSE					
WATCHDOG	TIMER	RELAY	(K806)	<table border="1"><tr><td>OFF</td><td>ON</td></tr></table>	OFF	ON
OFF	ON					



Q9 PDT: Terminals 1-3 are used in dome rotation circuit

LOWER IN SHUTTER

$L_D = 76\text{m}$

$P_{VE} = 0\text{V}$
 $C_{LS} = \text{NOT MODE}$

-

$R = H$

$W = N$

$BK = N$

$AK = H$

$W = N$

$R = N$

$L_D = 44\text{m}$

$P_{VE} = 0\text{V}$

$OVS = \text{NOT MODE}$

-

$R = N$

$W = N$

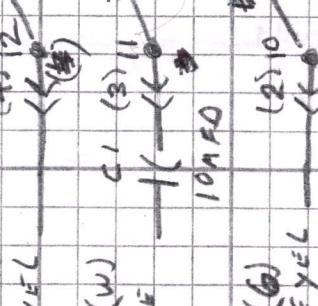
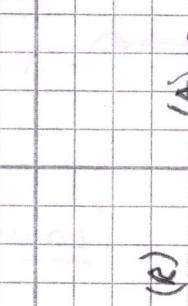
$BK = N$

$AK = H$

$W = N$

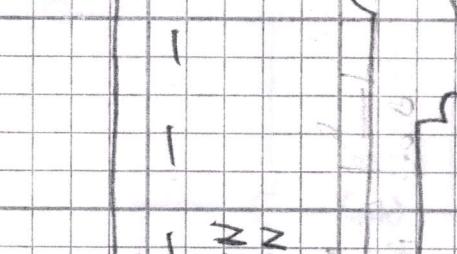
$R = N$

$L_D = 44\text{m}$



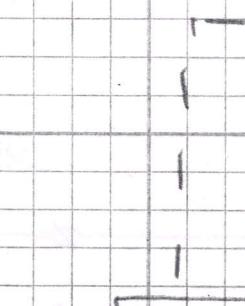
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(B)



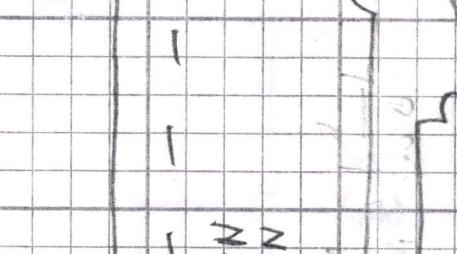
(C)

(D)



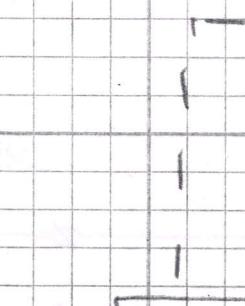
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(F)



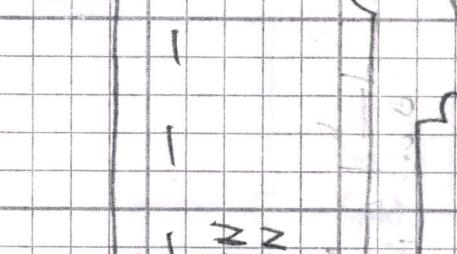
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(H)



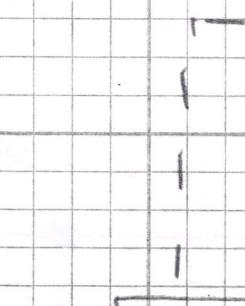
(I)

(J)



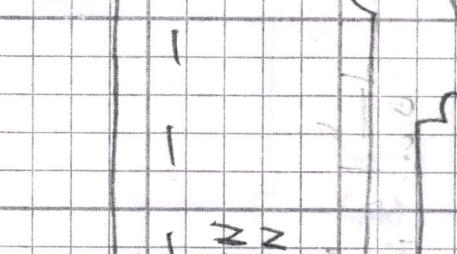
(K)

(L)



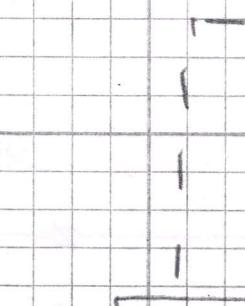
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(N)



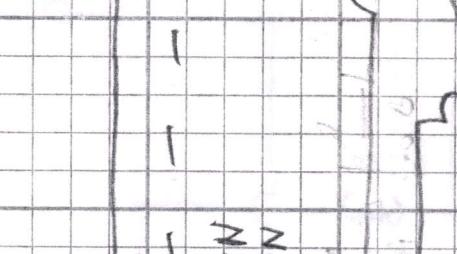
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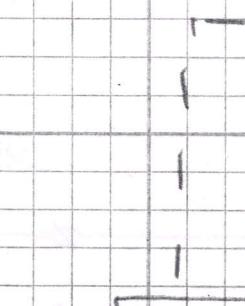
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(R)



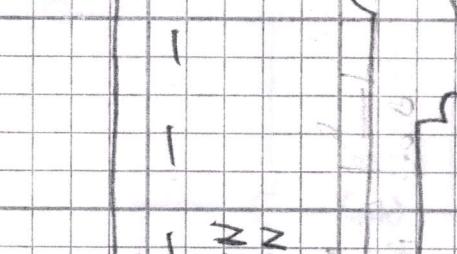
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(T)



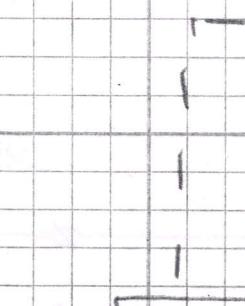
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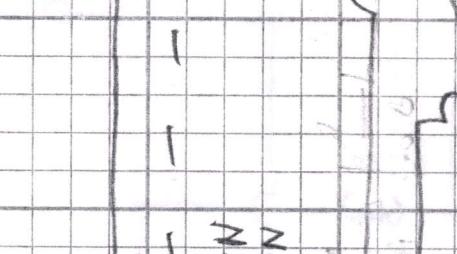
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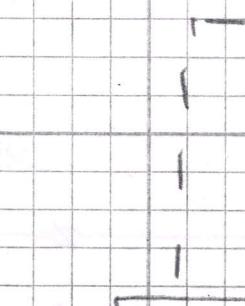
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(Z)



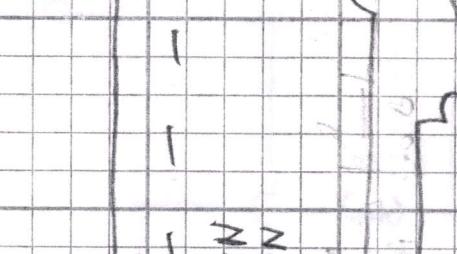
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(CC)

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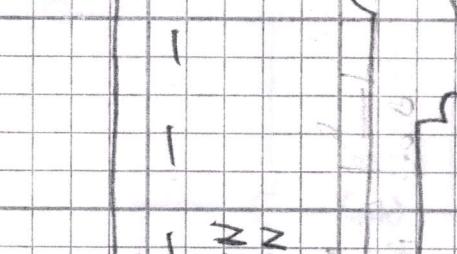
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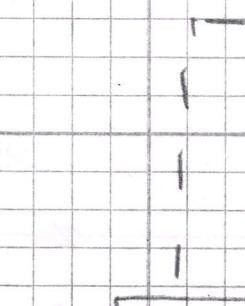
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(HH)



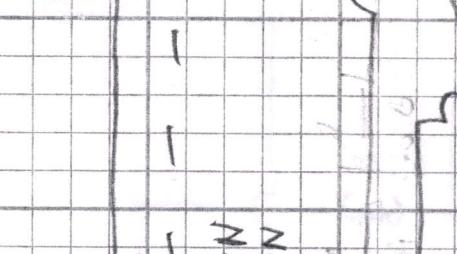
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(JJ)



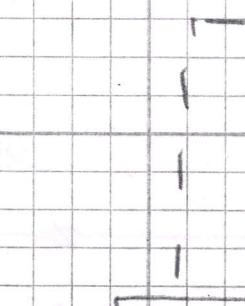
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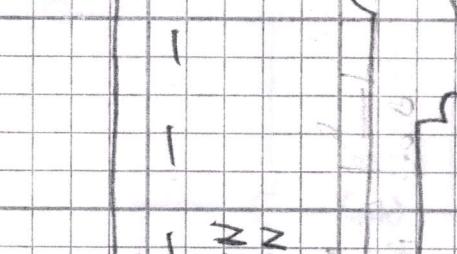
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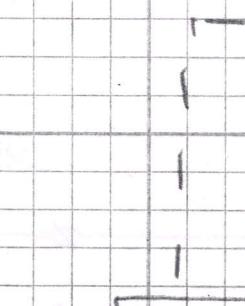
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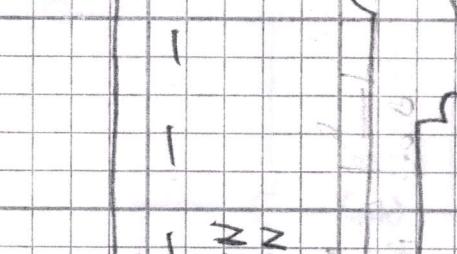
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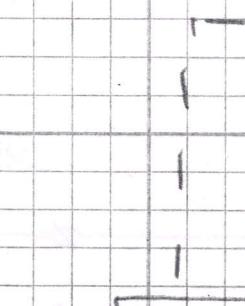
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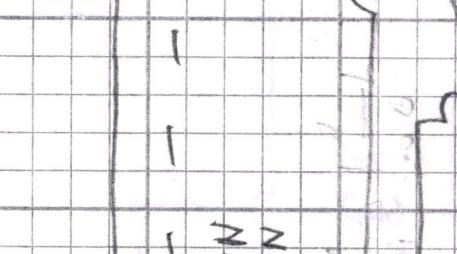
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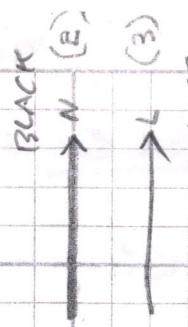
LIMIT CABLE

1 - RED

2 - BLK

3 - WHT

4 - GRN



BLACK
(E)

WHITE
(W)

GREEN
(G)

RED
(R)

WHITE
(

MOTOR RELAY

(R2)

4

R2A

MOTOR CONN

CABLE

MOTOR

(BLK) YEL

3

C1

4

GRN

GRN

WHT

WHT

BLU

2

3

BLK

BLK

BLU/YEL

1

2

BLK

BLK

BLK/YEL

RED

RED

BLK

BLK

BLK

UPPER LIMIT RELAY

(R1)

5

R2A

(UPPER)
LIMIT
CONN.

CABLE

UPPER L/S

N/C

2

BLK

N/C

A

6

BLK

4

BLK

N/C

A

7

N/C

8

—

9

R2A

N/C

N/C

10

BLK

1

R2A

N/C

B

3

WHT

R2-6

R2-5

(LOWER)
LIMIT
CONN.

2

BLK

4

GRN

LOWER L/S

A

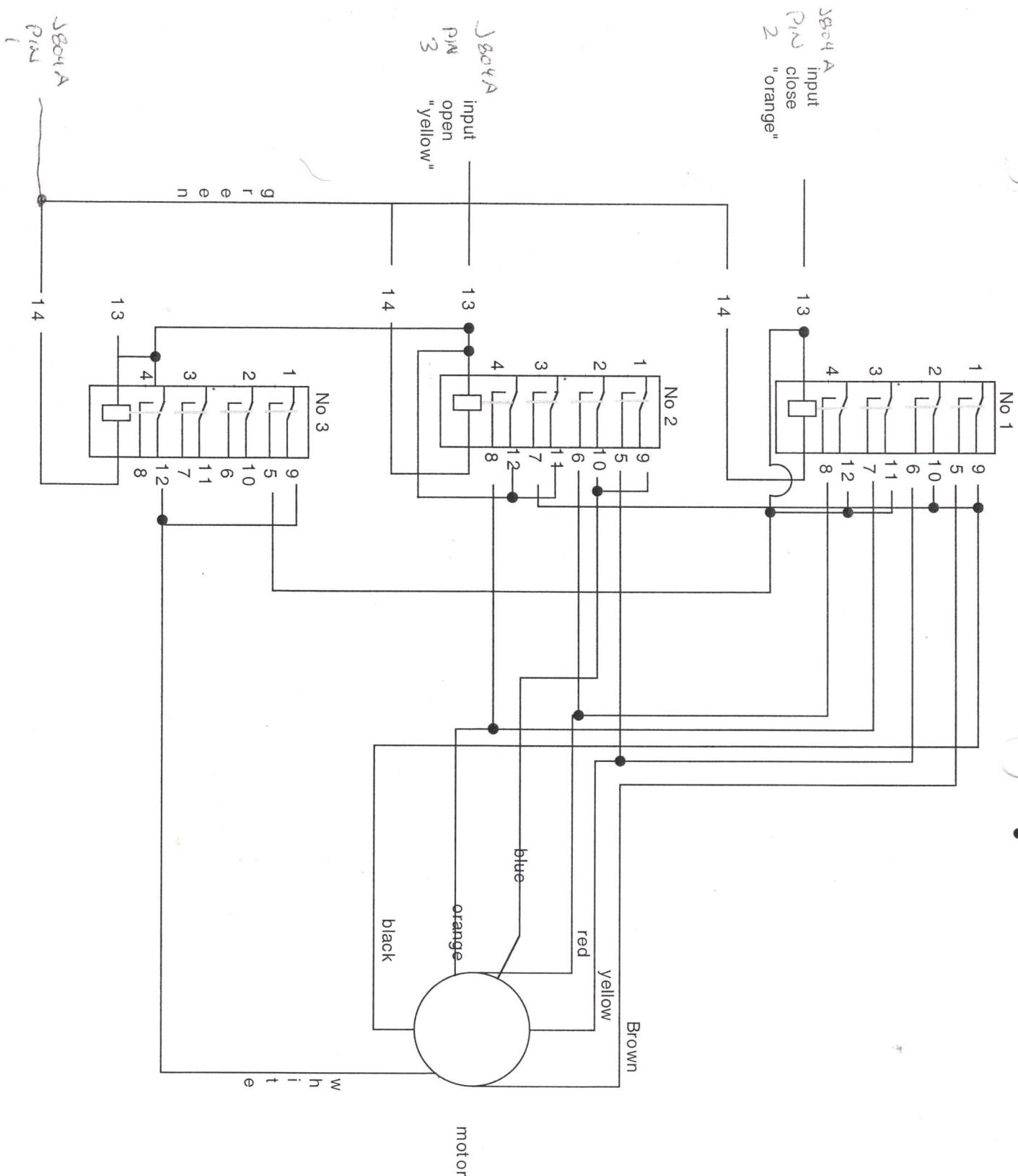
R2-12

R2D

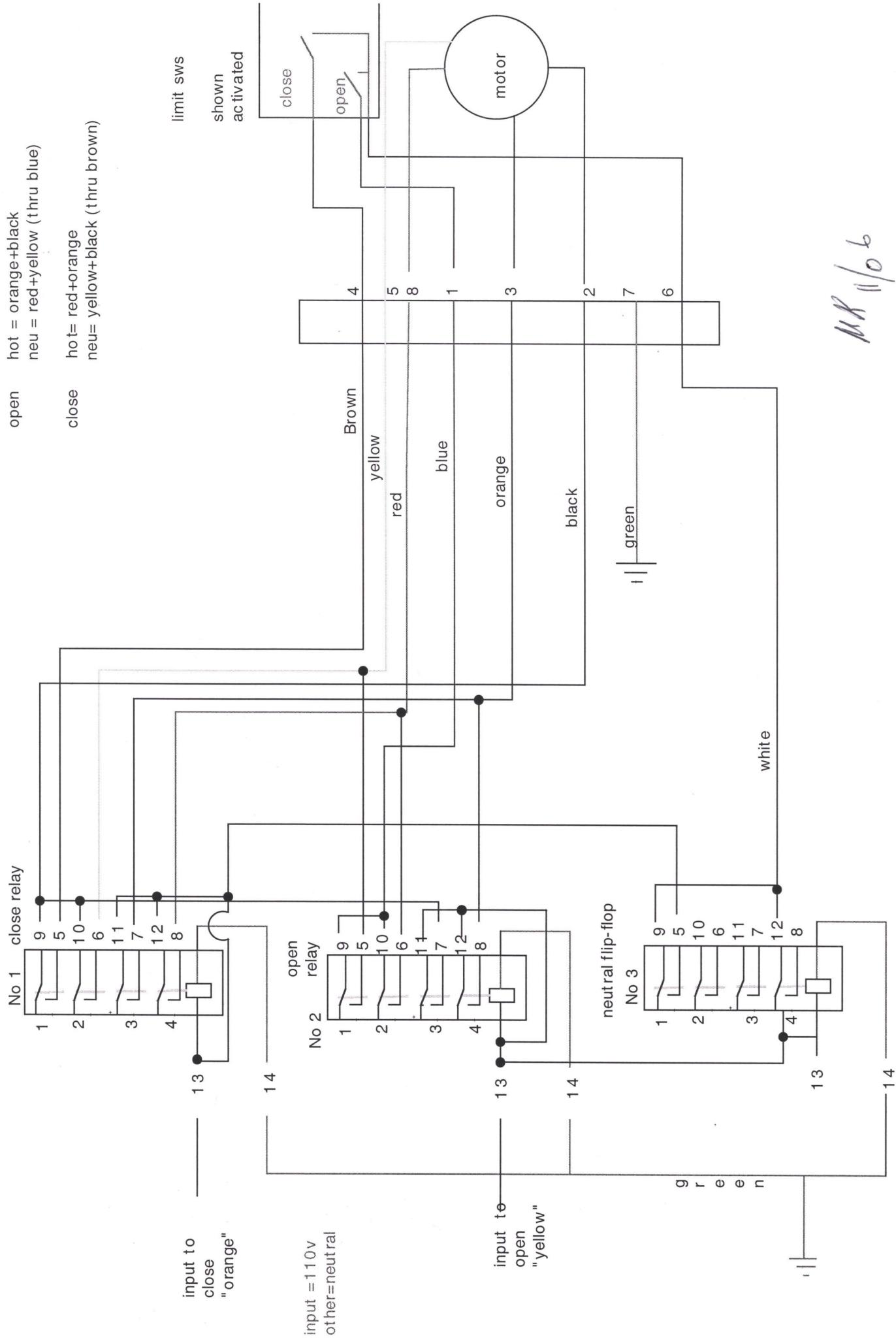
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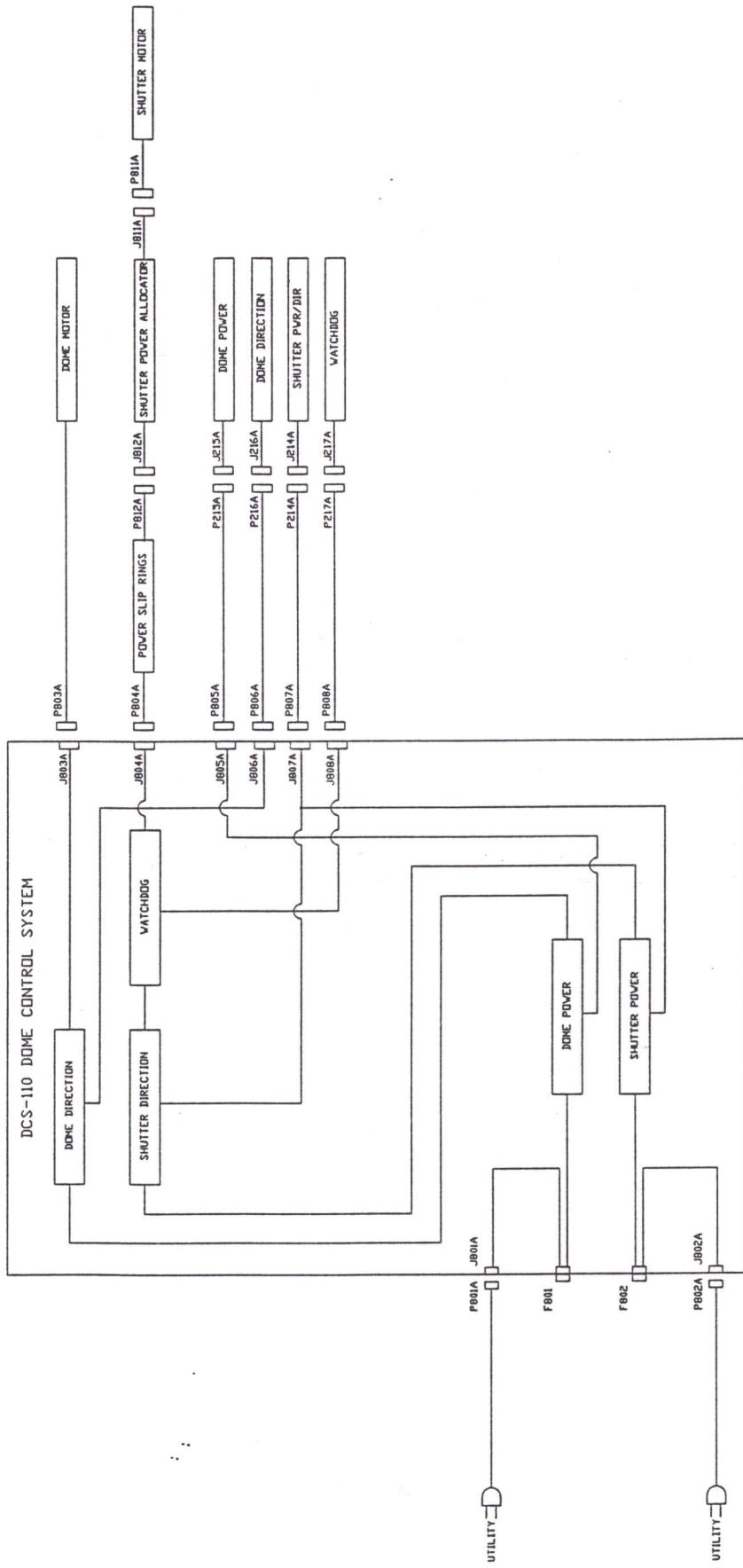
WHT

B



red = limit on
close
orange = power
white = limit on
open





AutoScope Corporation
 P.O. Box 2560 Mesa, Arizona 85244-2560 U.S.A.
 Phone 602/871-8844 Fax 602/871-6887
 DECT-110 DECT-5.5-110 DOME CONTROL SYSTEM
 KXV GS/1/14/94

DCS-SI.

LOWER IN SHUTTER

$L_0 = 16\text{m}$

$P_{M1} = 0\text{V}$
 $CLS = NOT M000$

$L_0 = H$ $G = H$ $W = N$ $SH = N$
 $CLS = NOT motor$

$BK = H$ $G = H$ $W = N$ $R = N$

$L_0 = H$ $G = H$

$P_{M2} = 0\text{V}$
 $CLS = NOT M000$

$BK = H$ $G = H$ $W = N$ $R = N$

$L_0 = H$ $G = H$

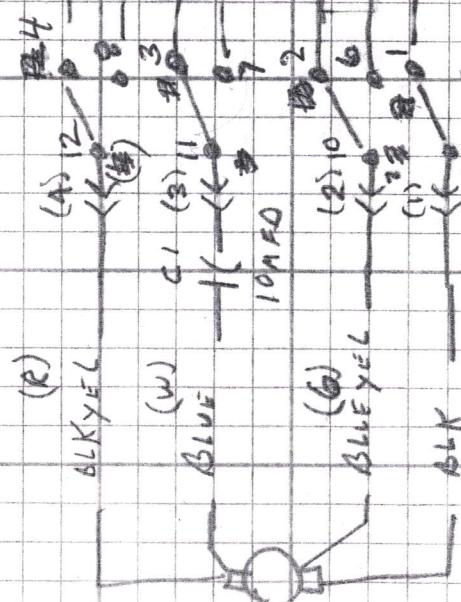
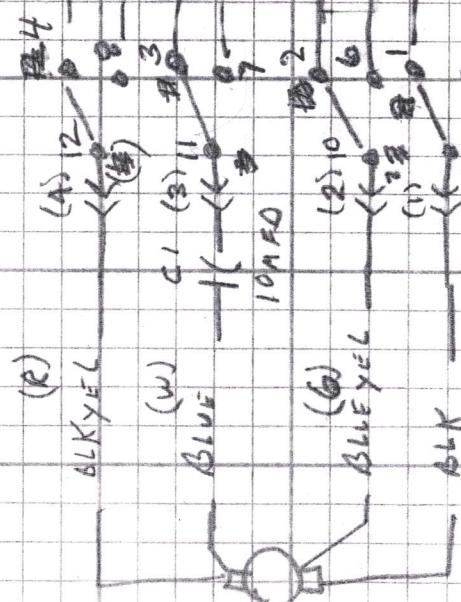
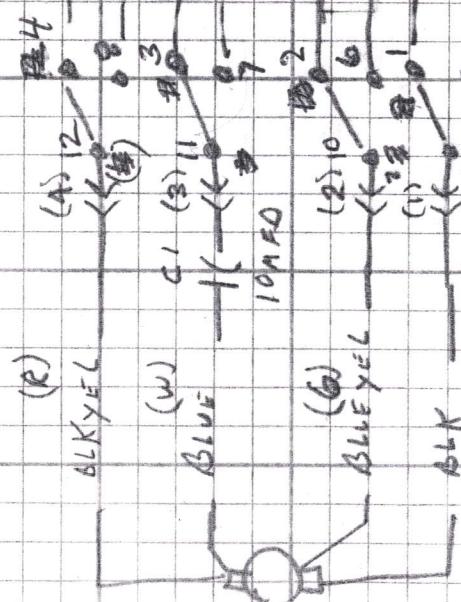
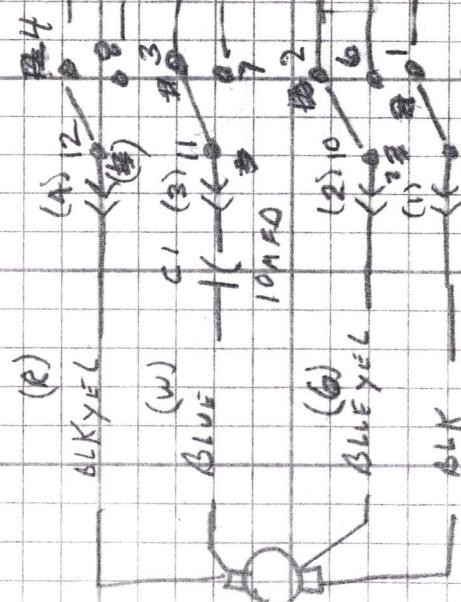
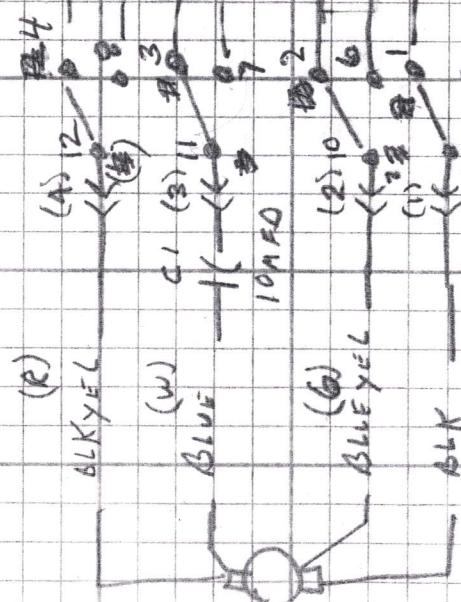
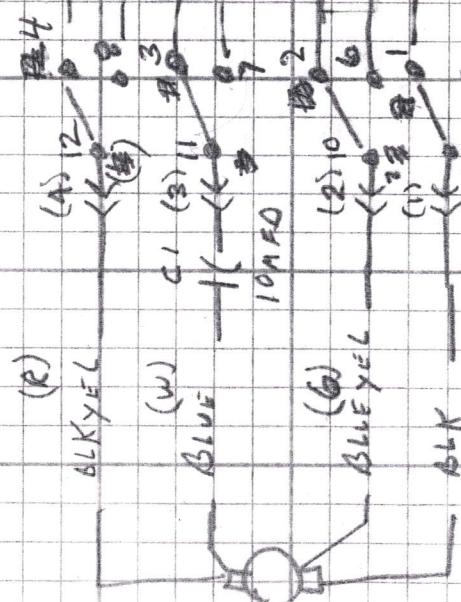
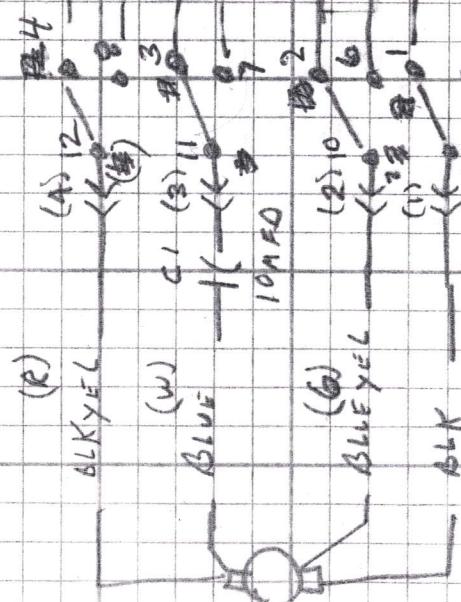
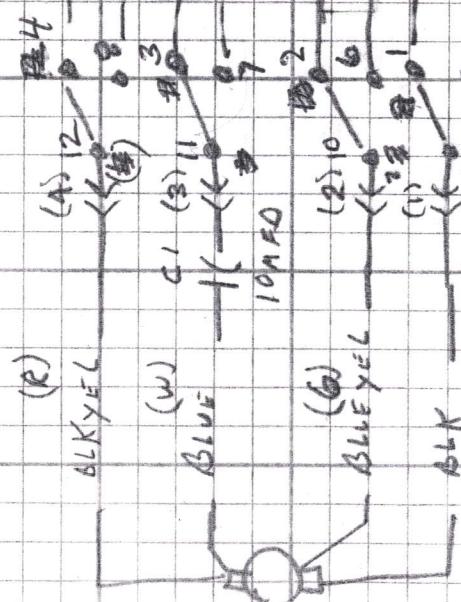
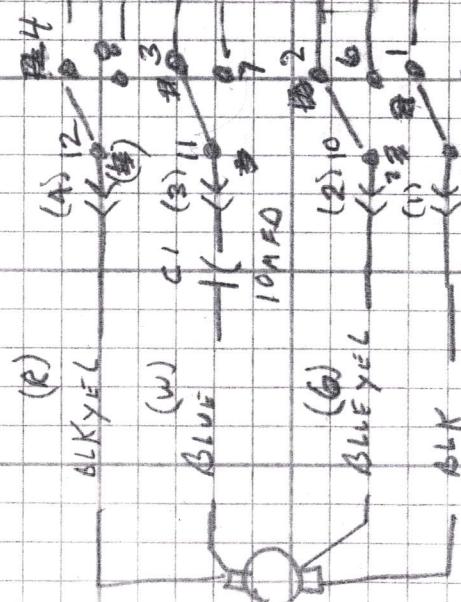
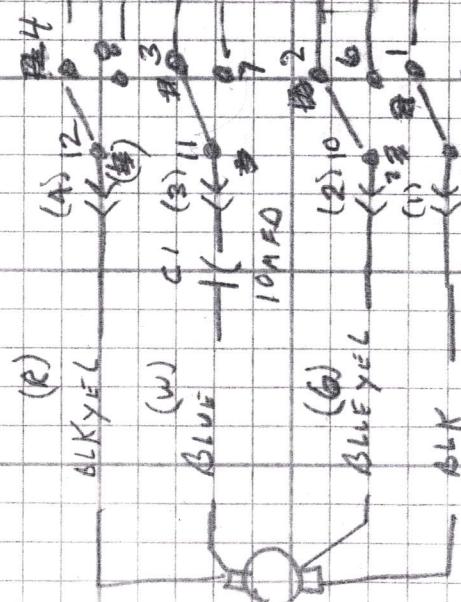
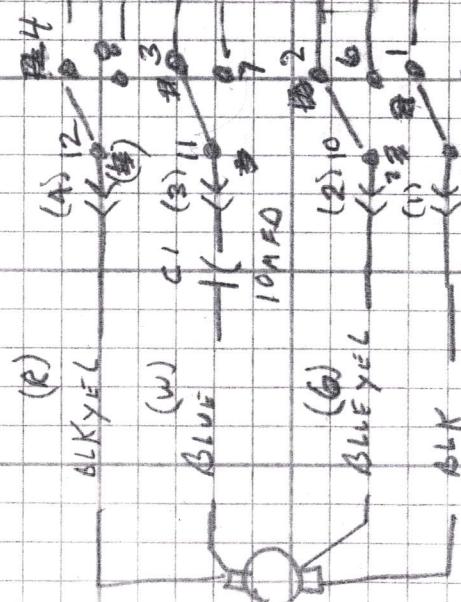
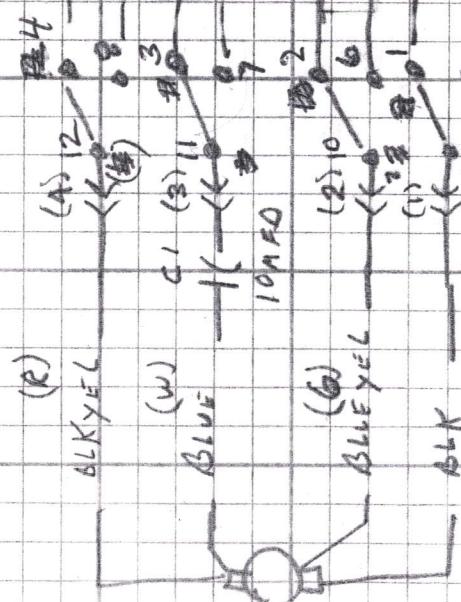
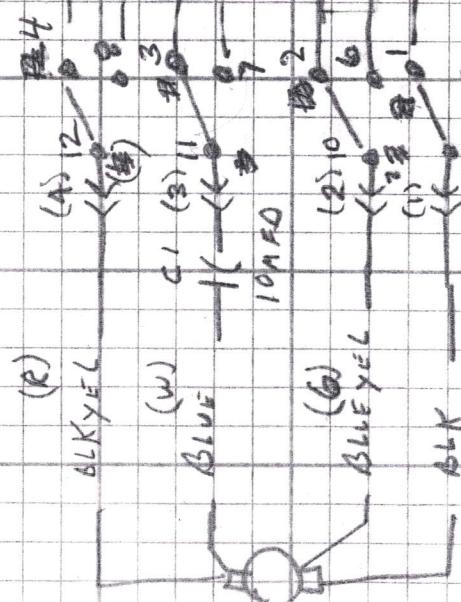
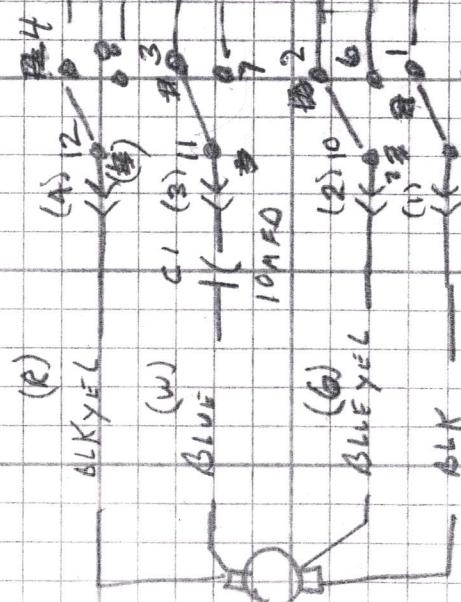
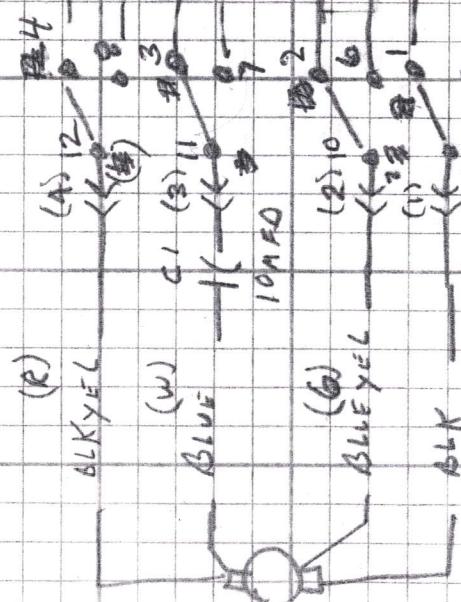
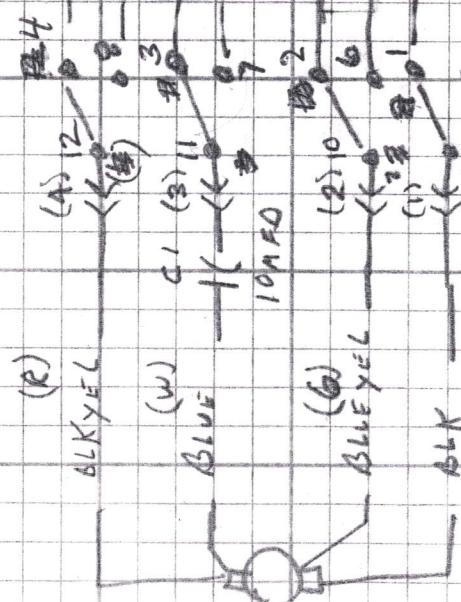
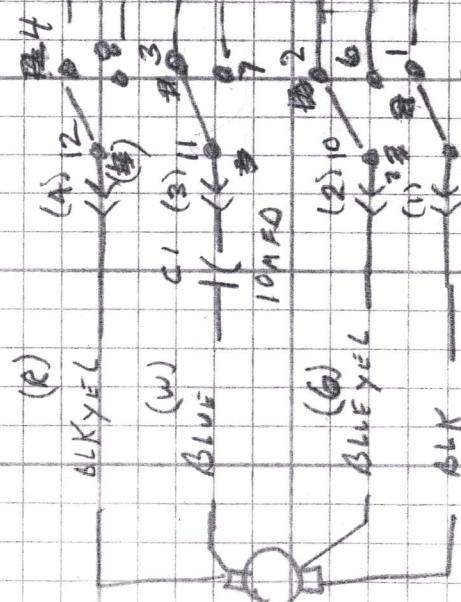
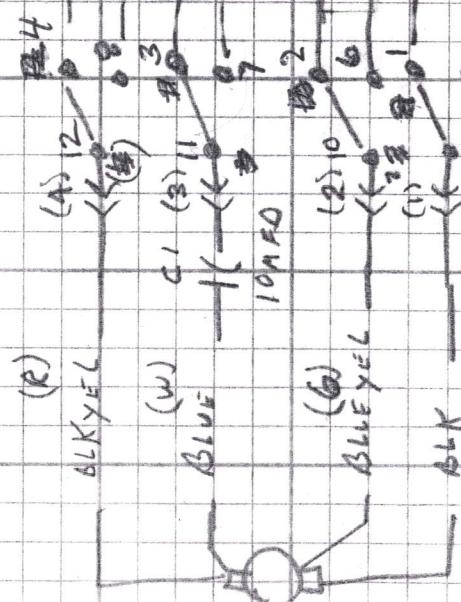
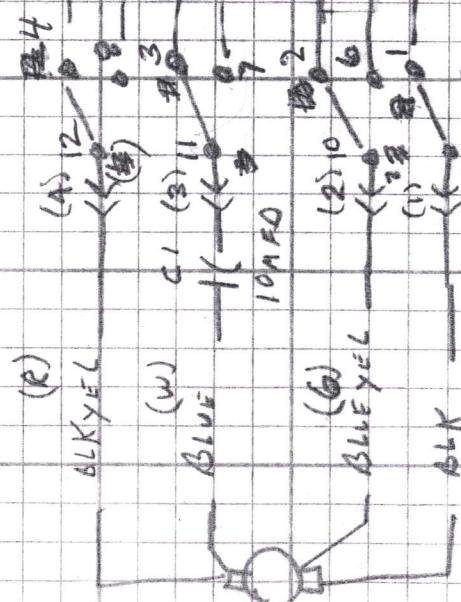
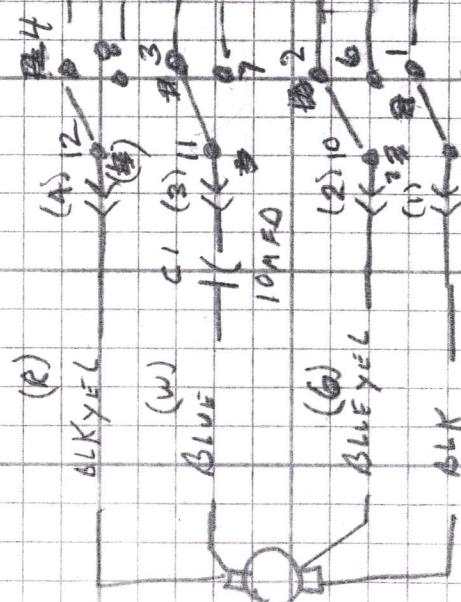
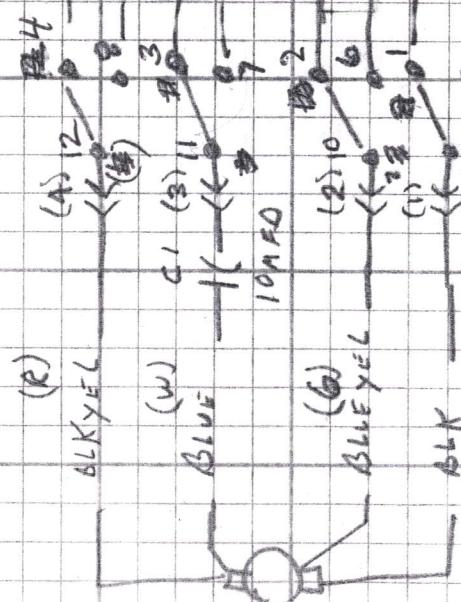
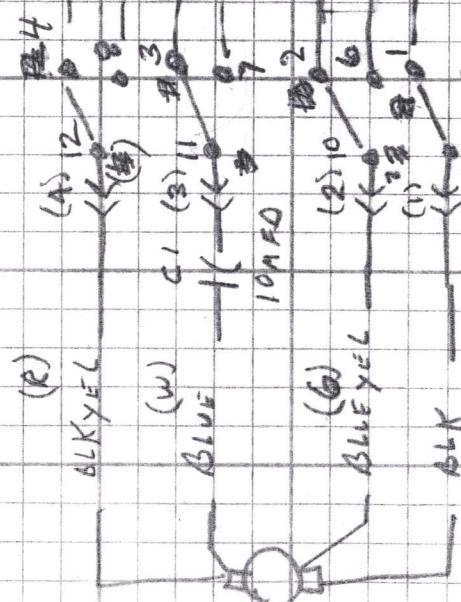
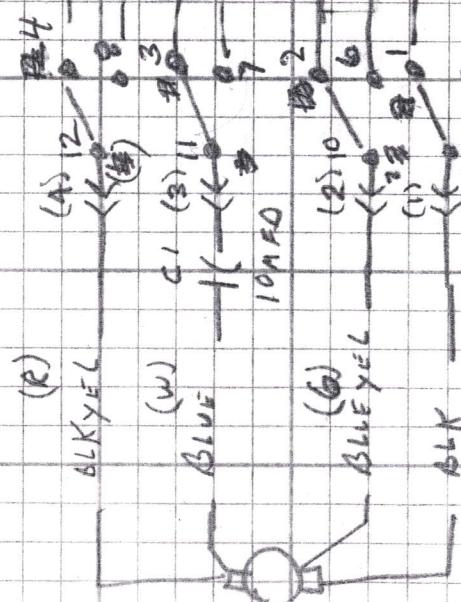
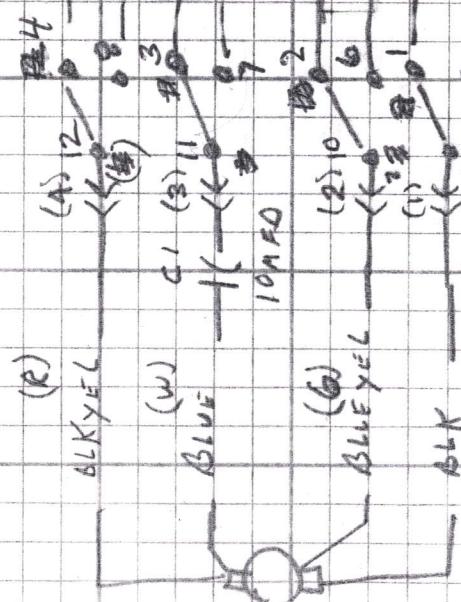
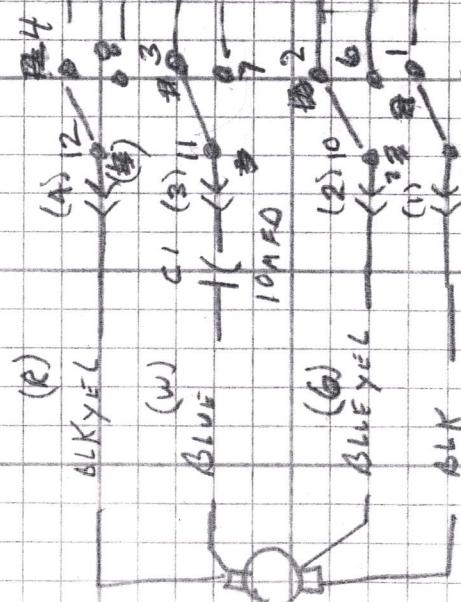
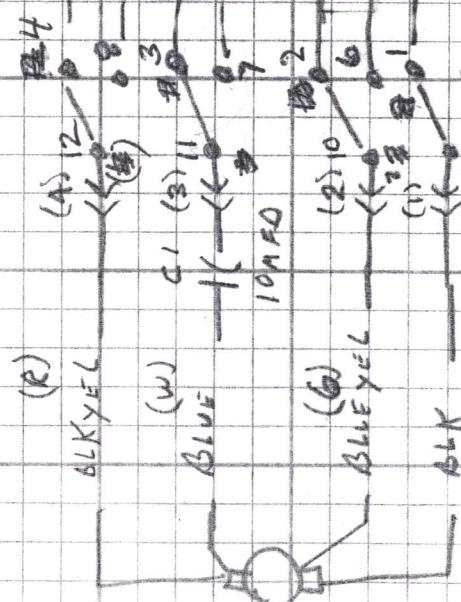
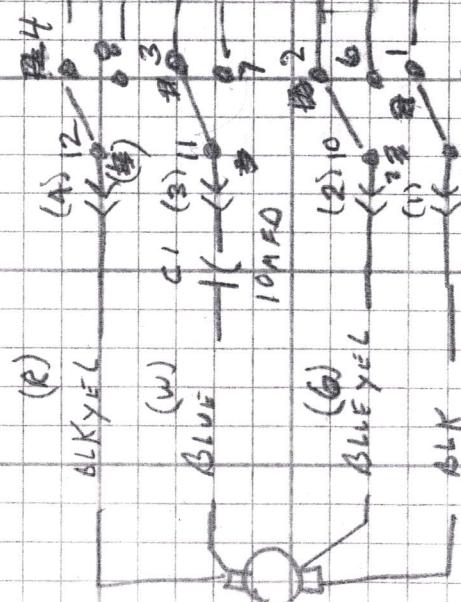
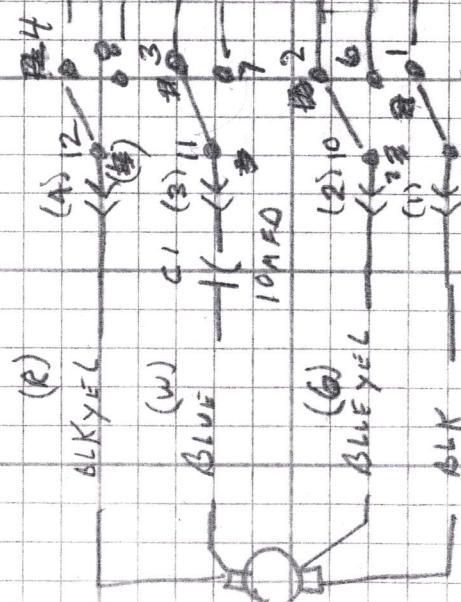
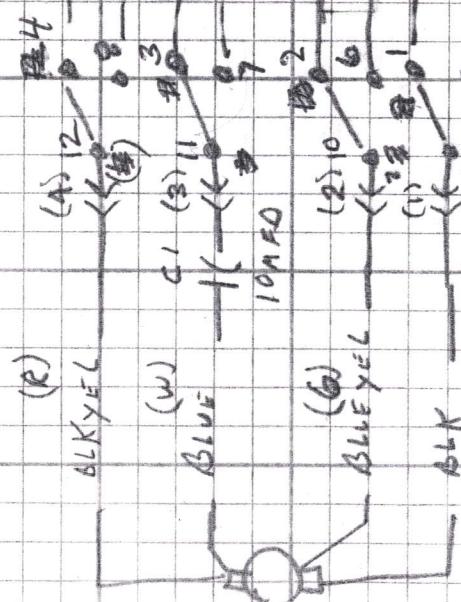
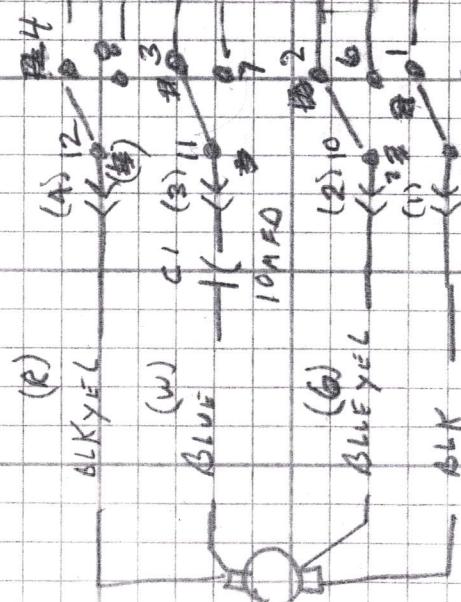
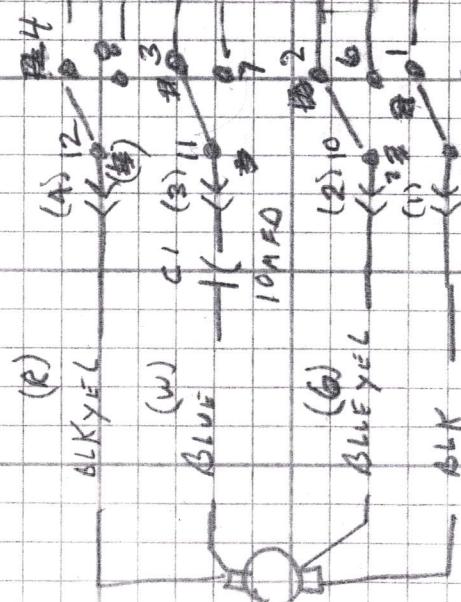
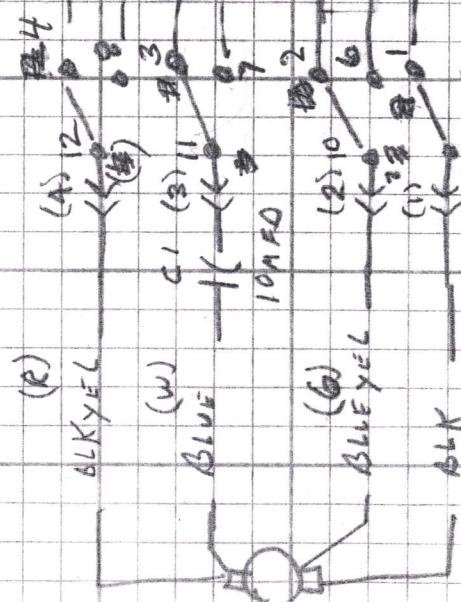
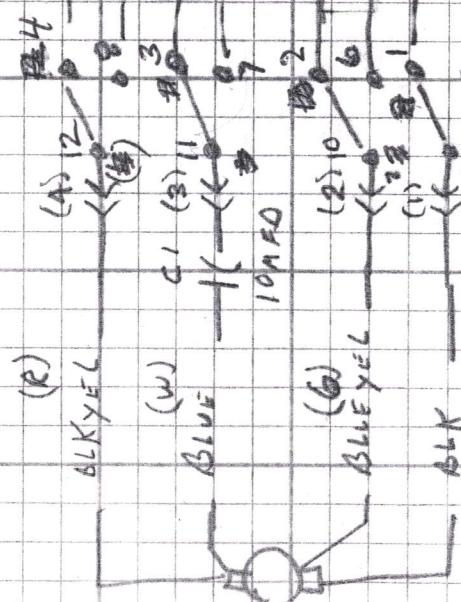
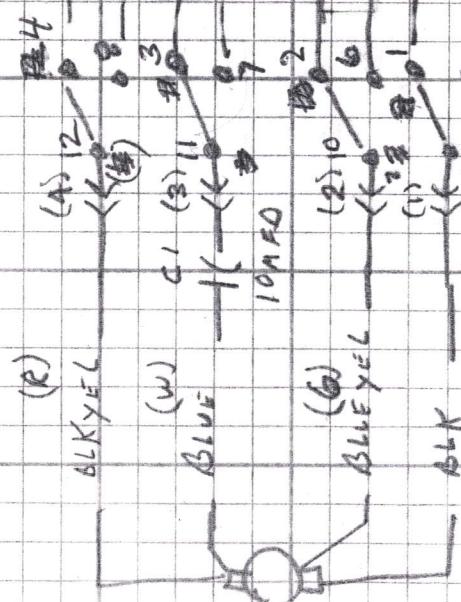
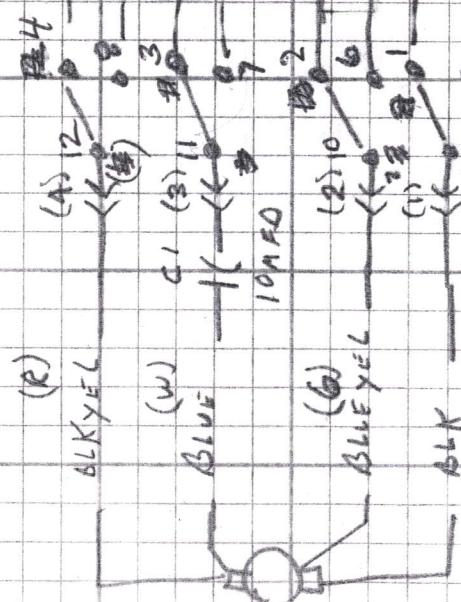
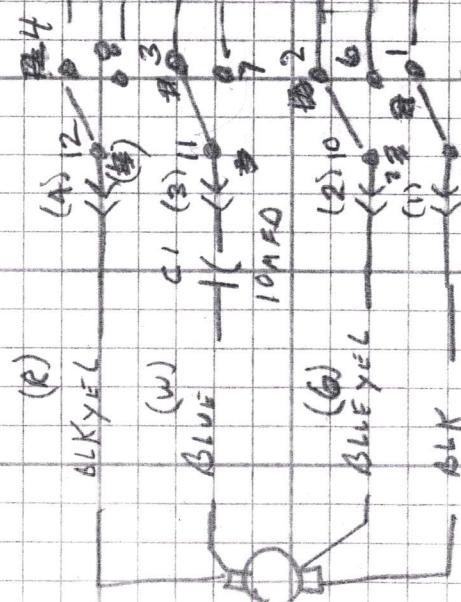
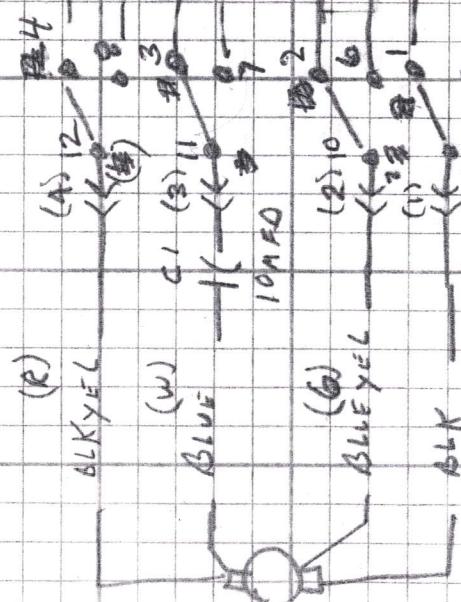
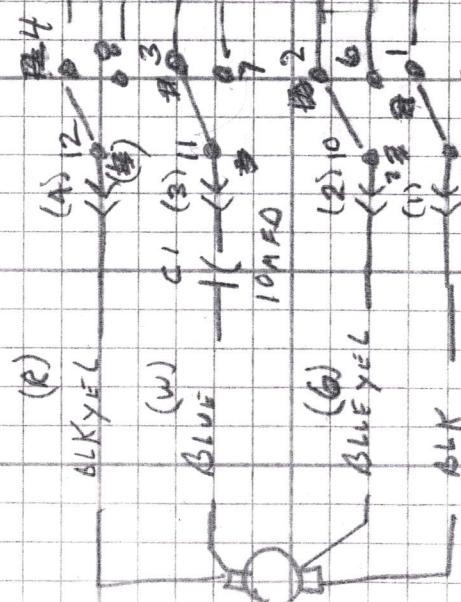
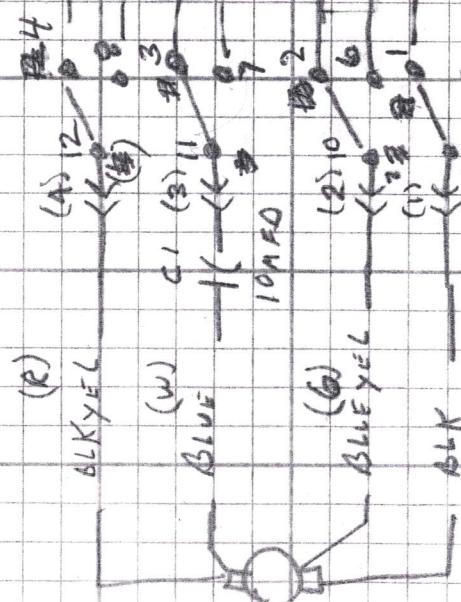
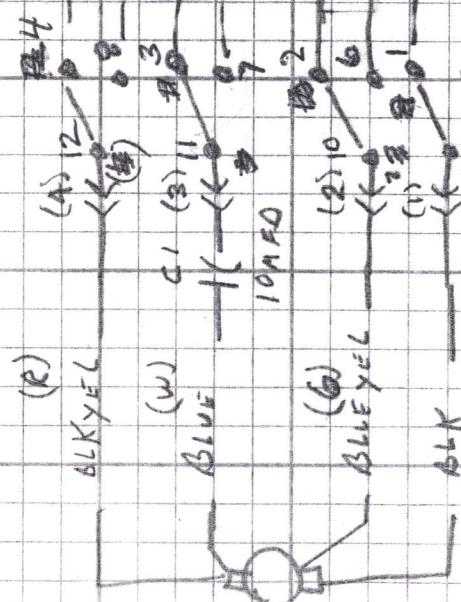
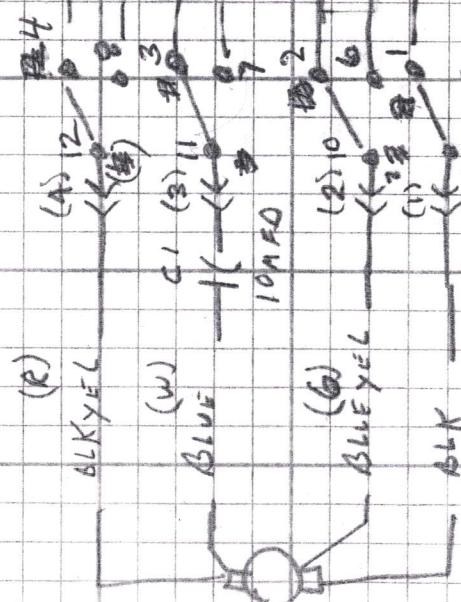
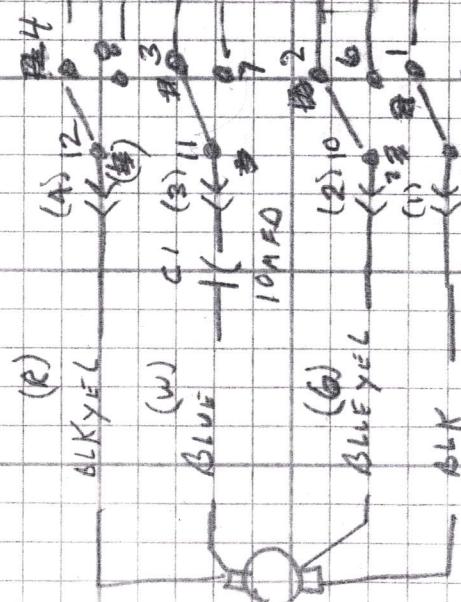
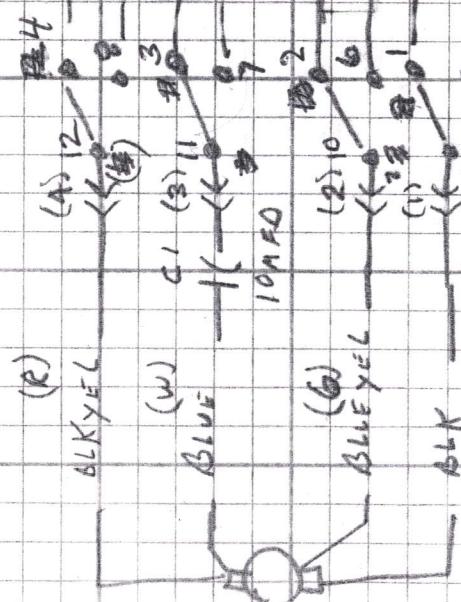
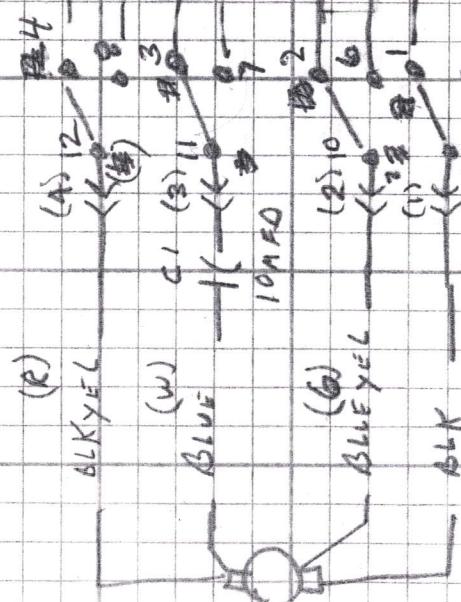
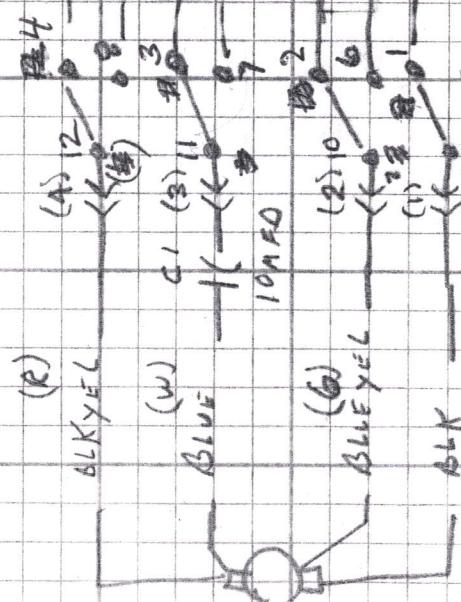
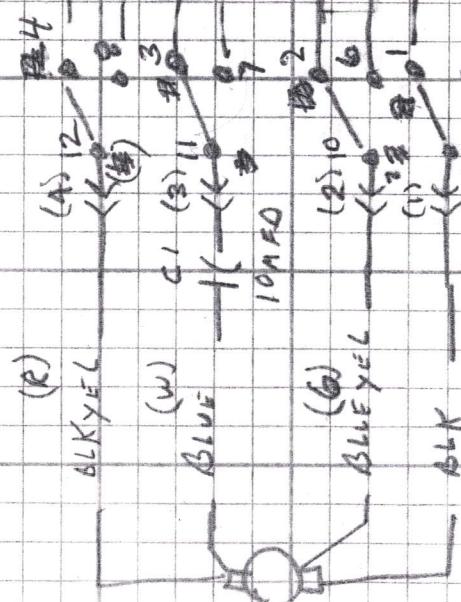
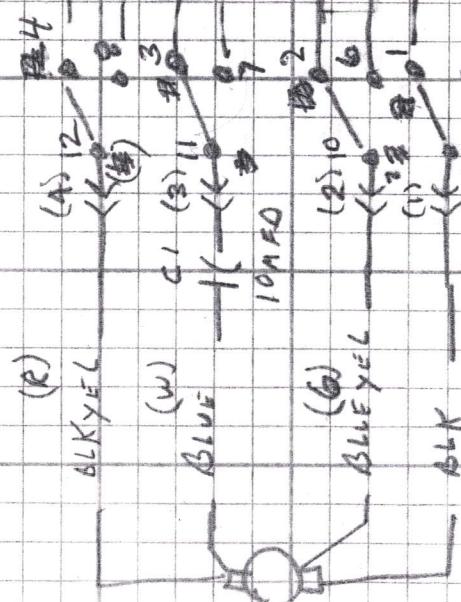
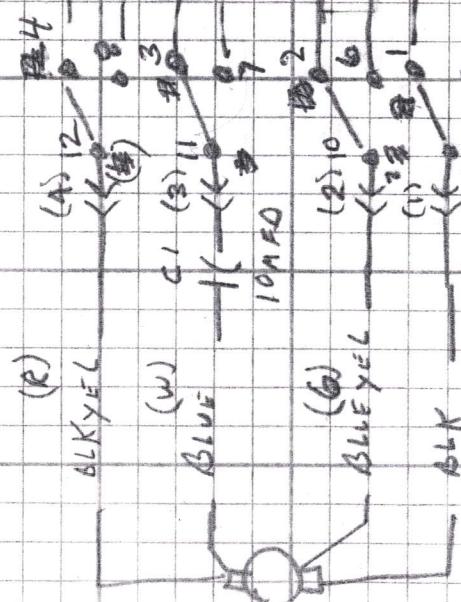
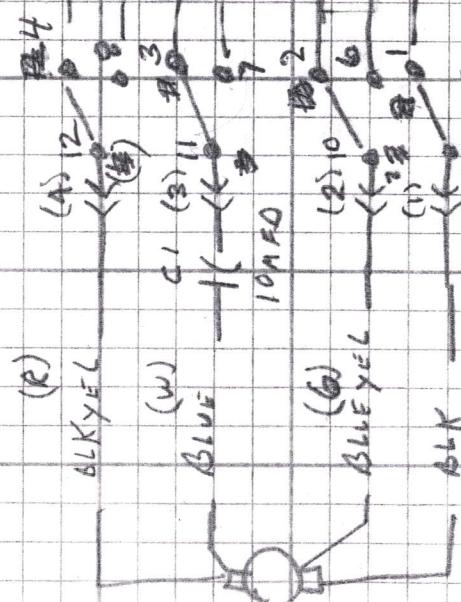
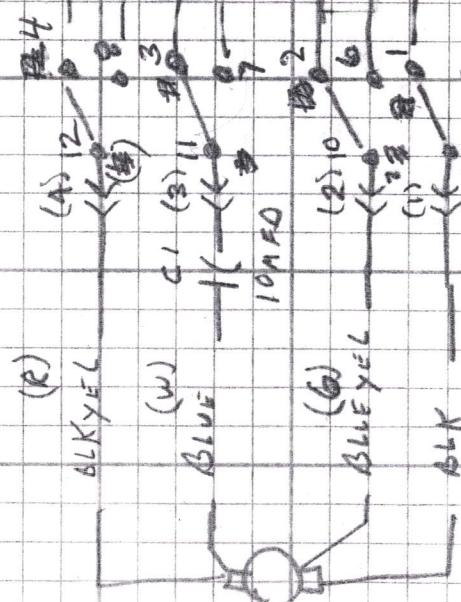
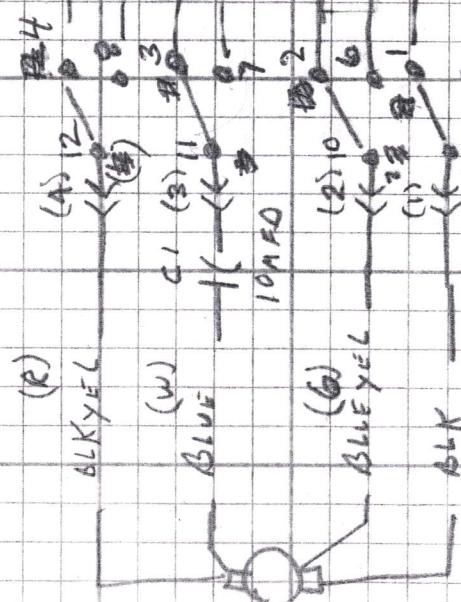
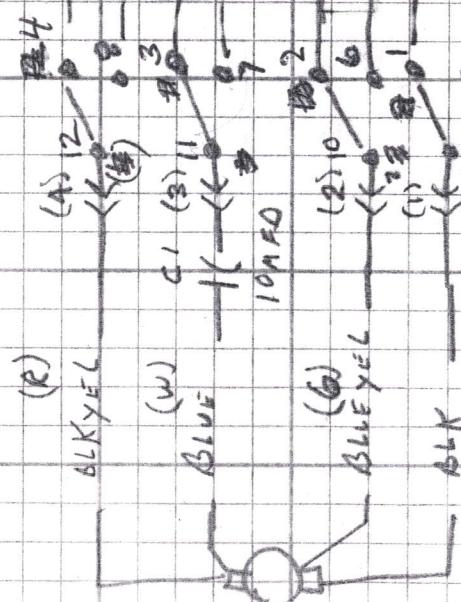
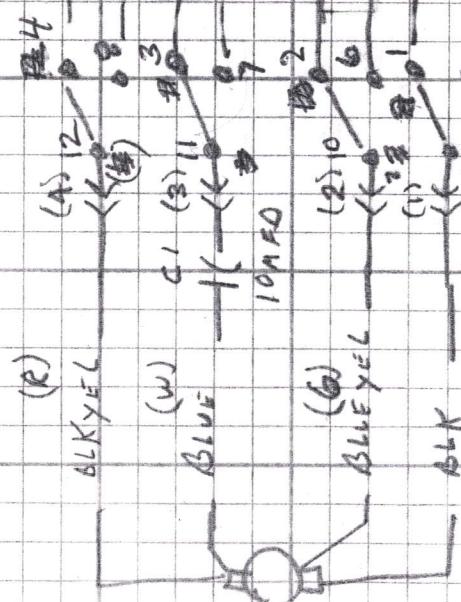
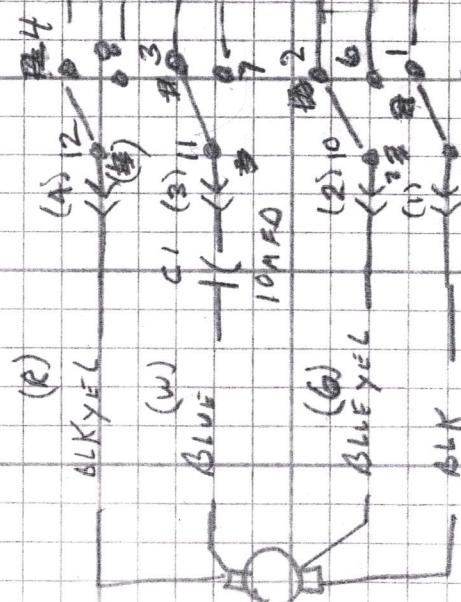
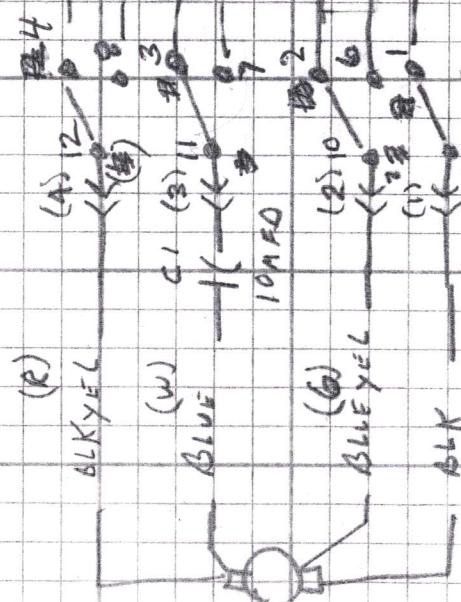
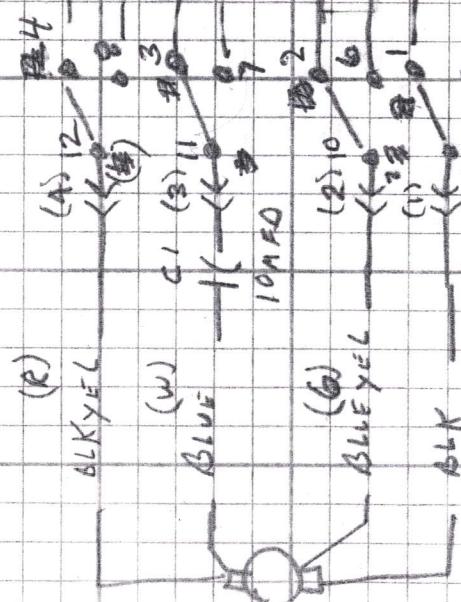
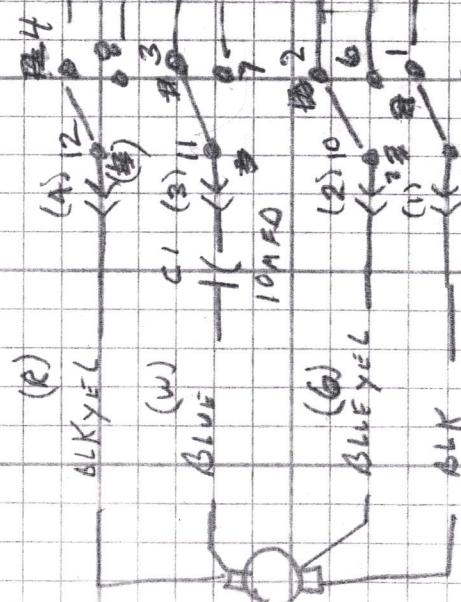
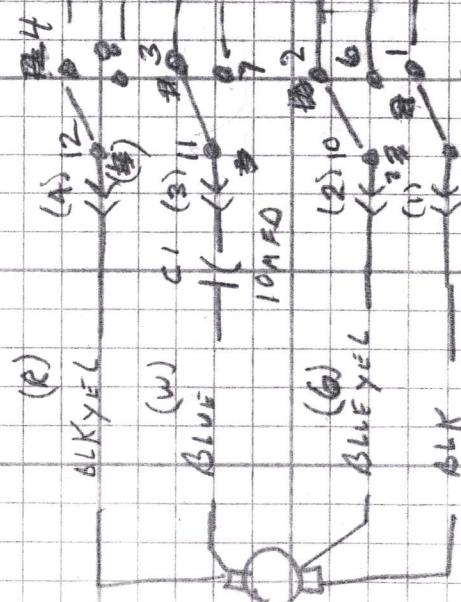
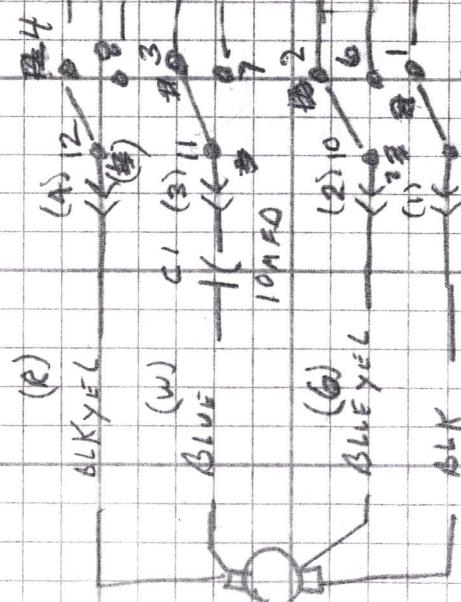
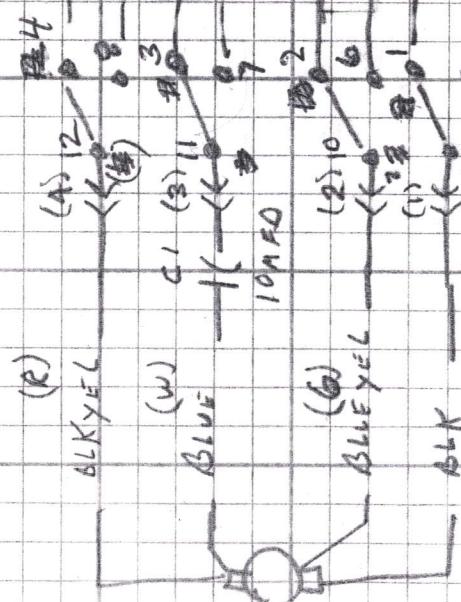
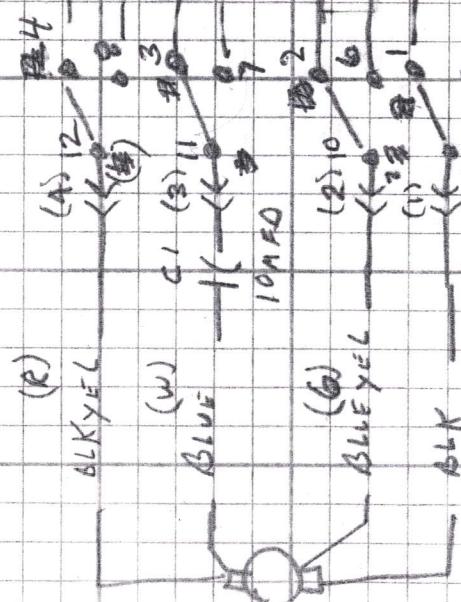
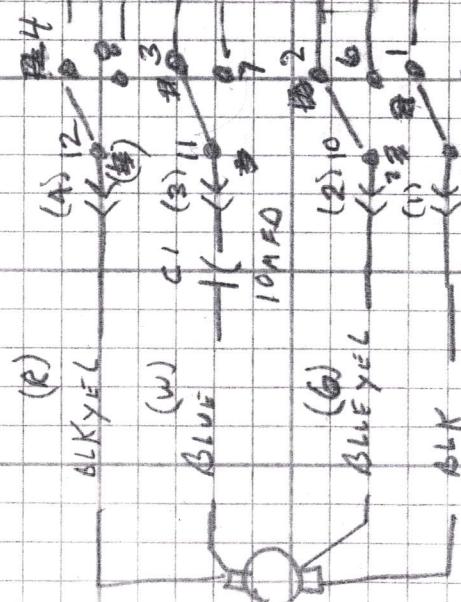
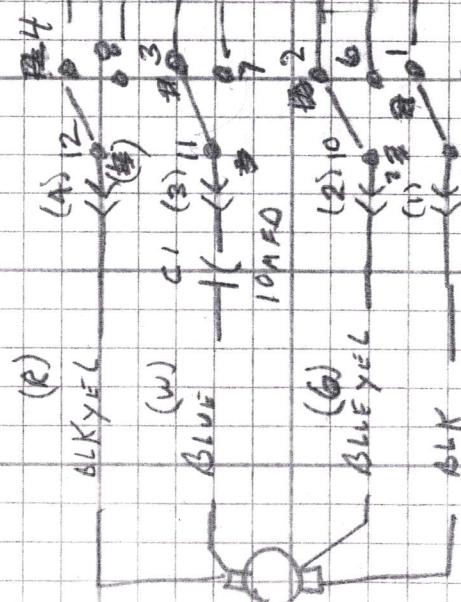
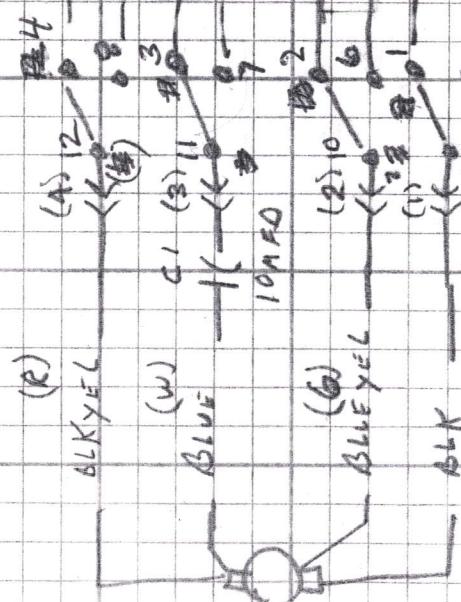
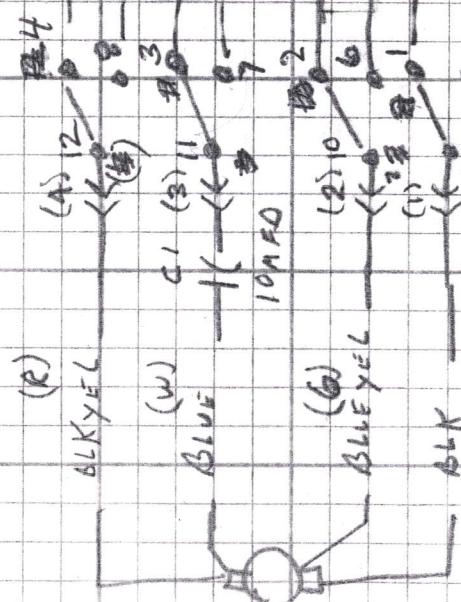
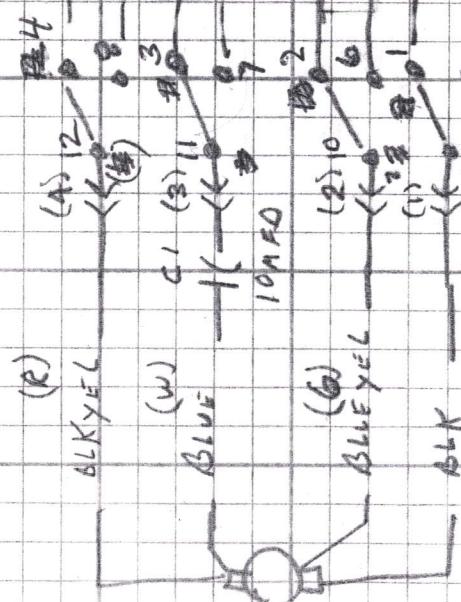
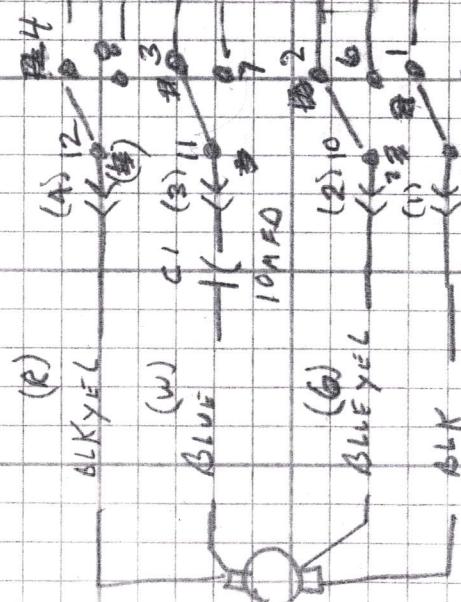
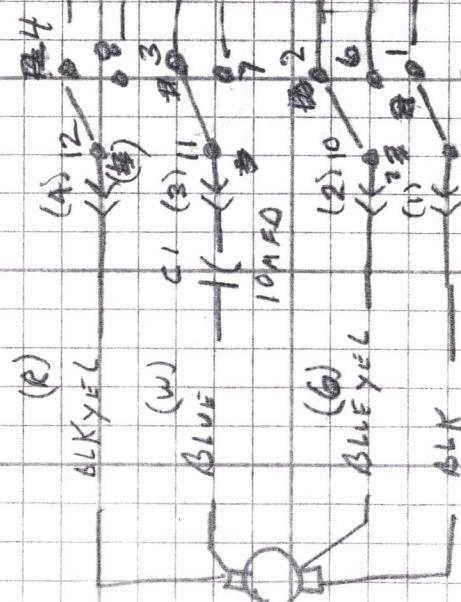
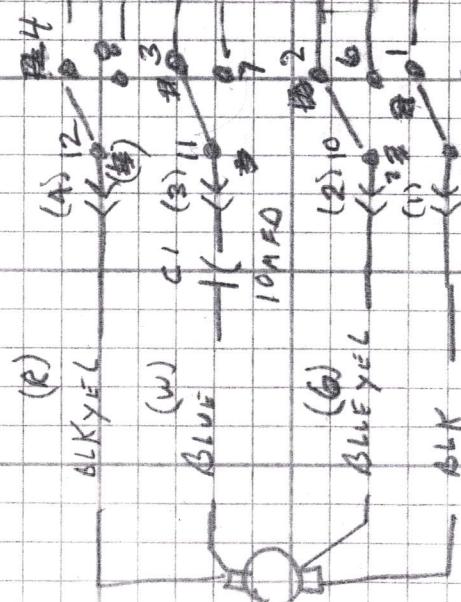
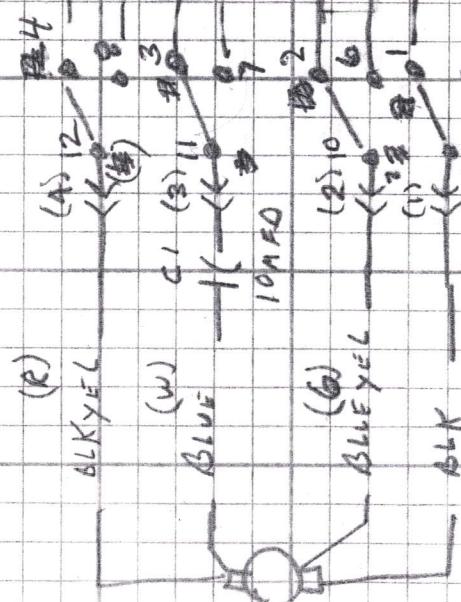
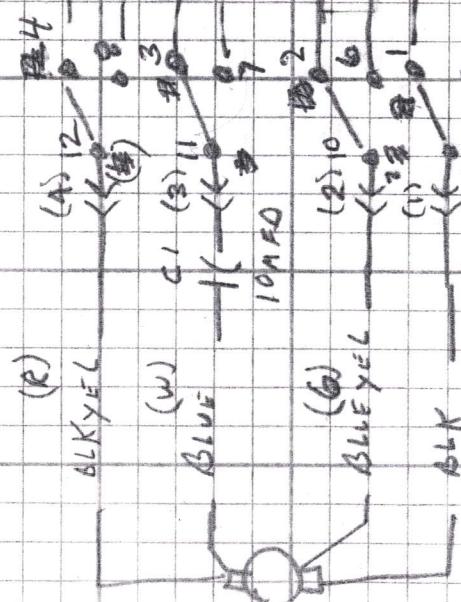
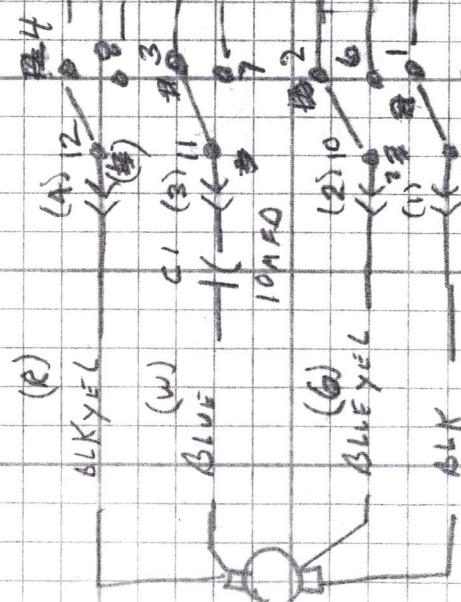
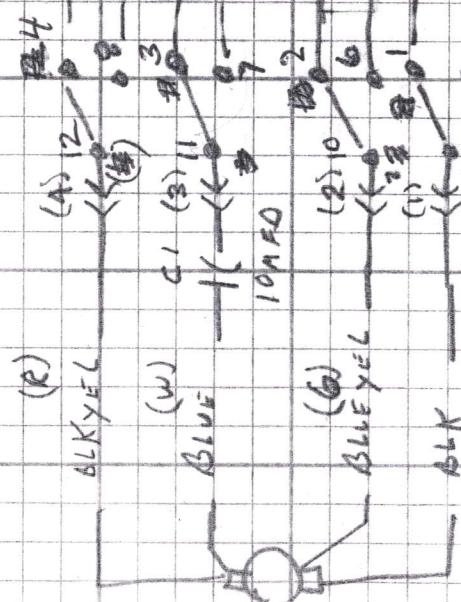
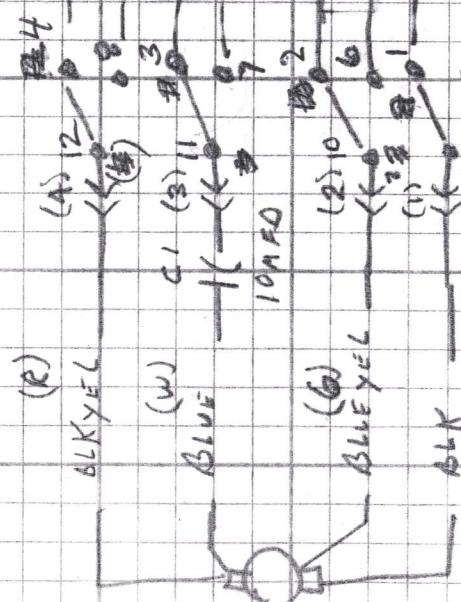
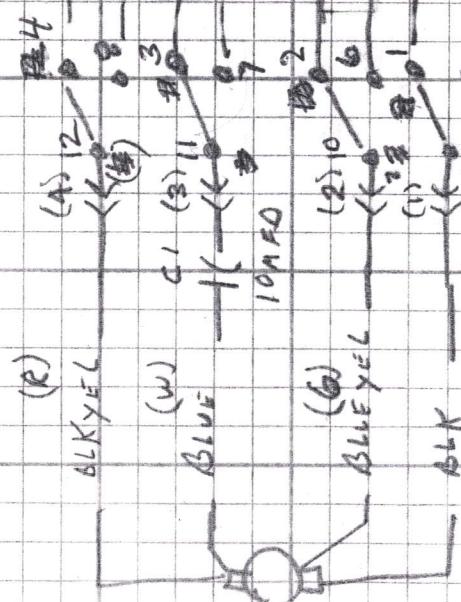
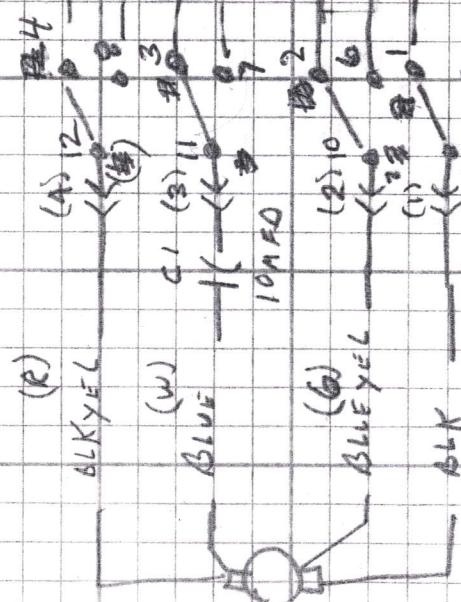
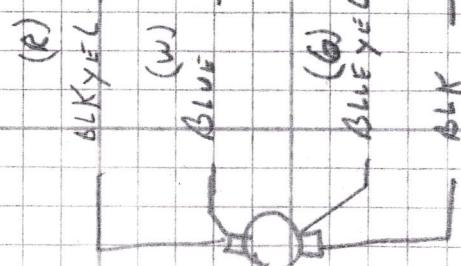
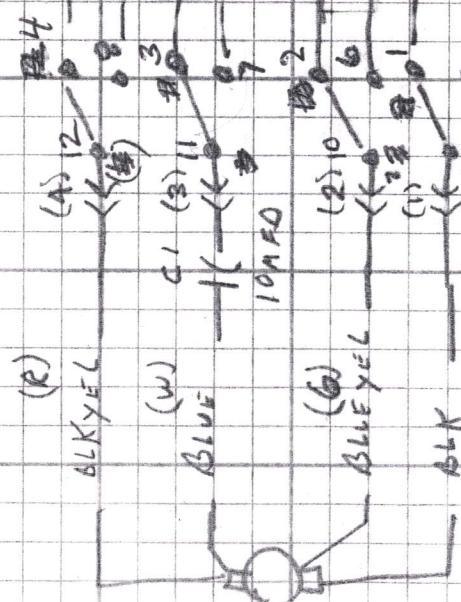
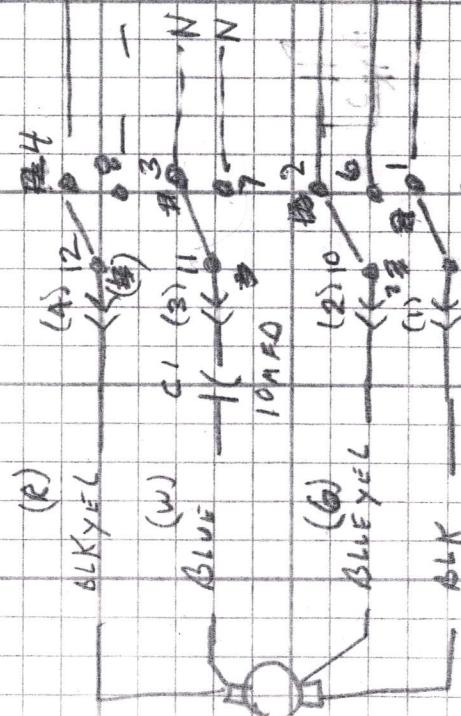
$P_{M3} = 0\text{V}$
 $CLS = NOT M000$

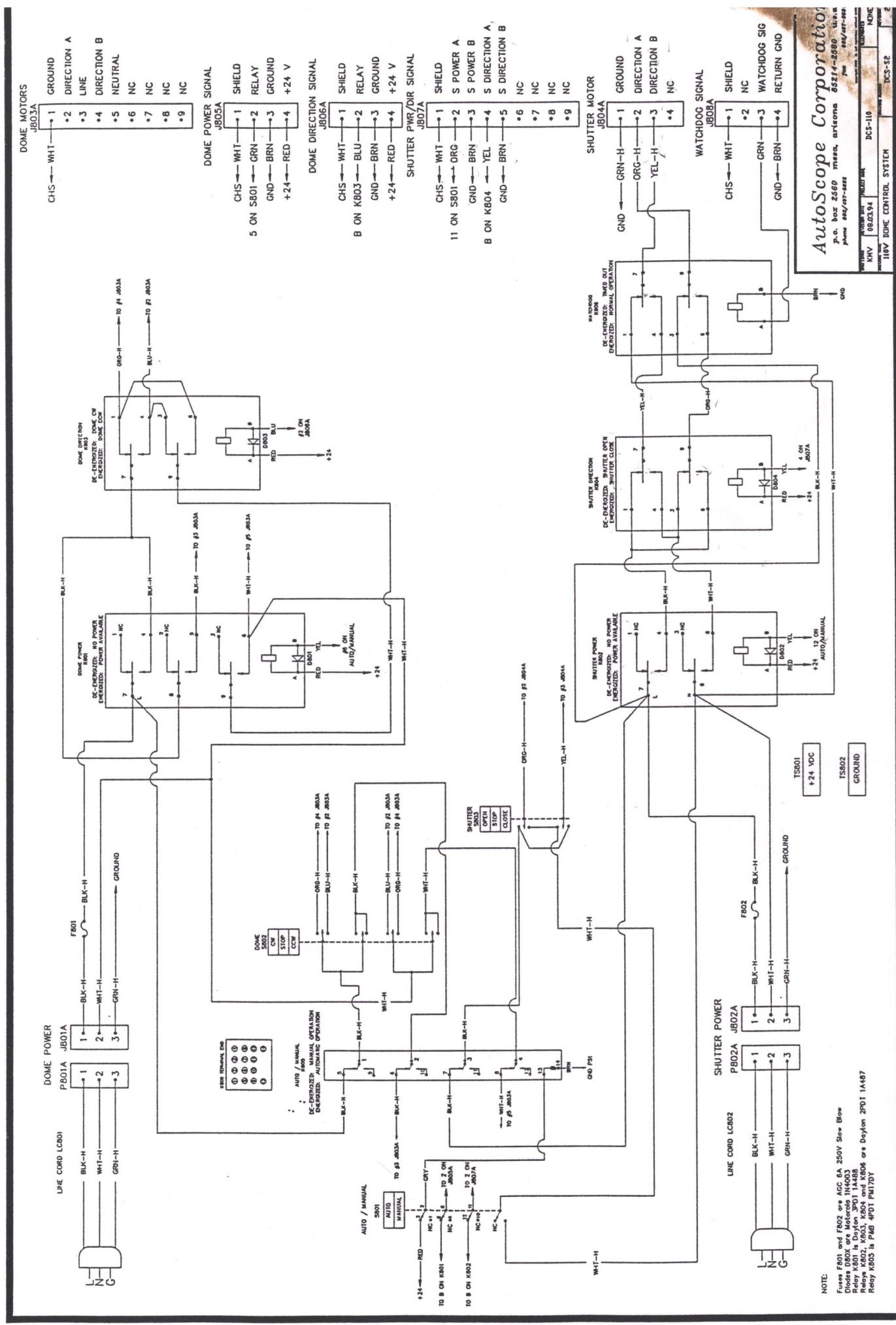
$BK = H$ $G = H$ $W = N$ $R = N$

$L_0 = H$ $G = H$

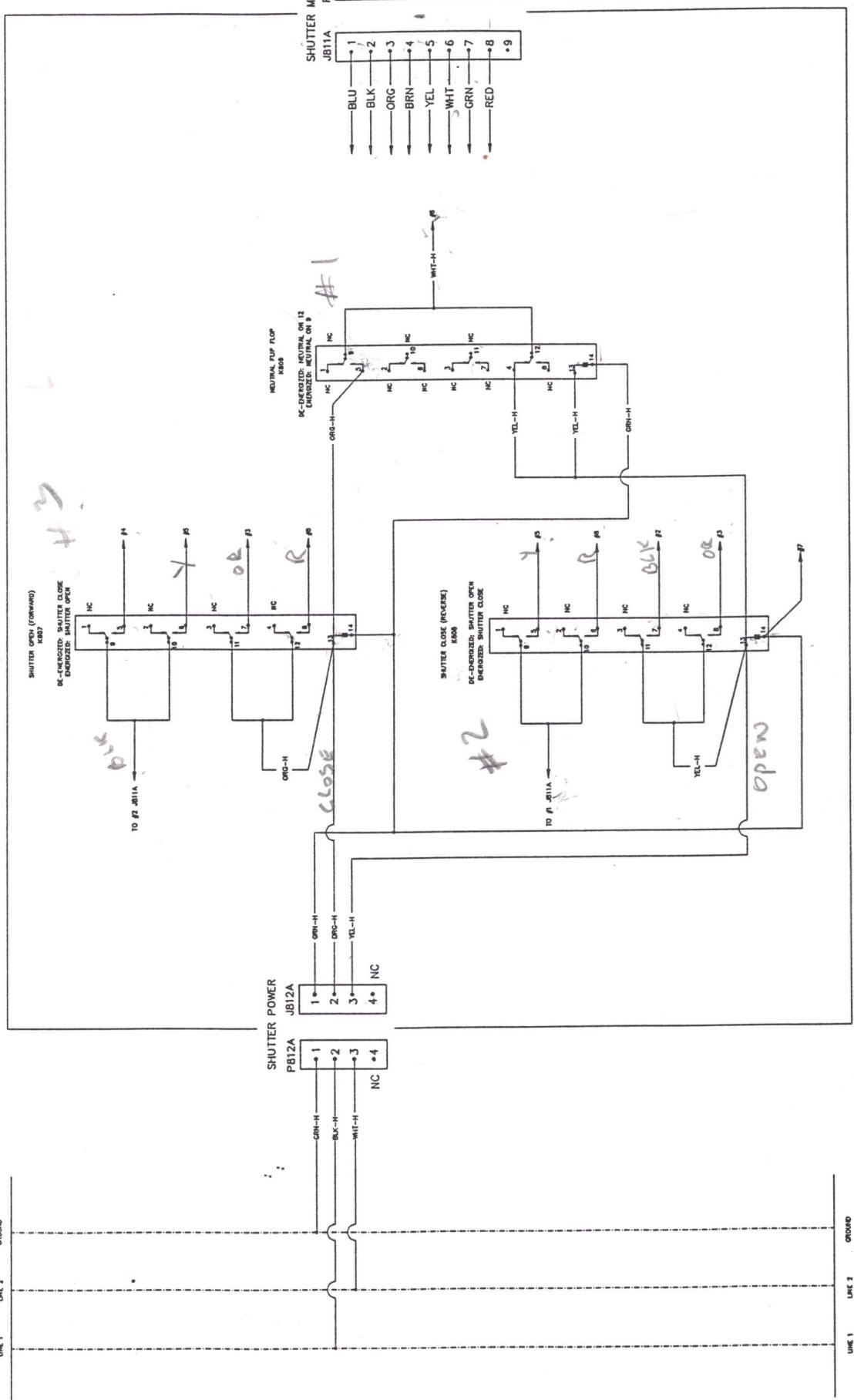
LIMIT CABLE

- 1 - RED
- 2 - BLK
- 3 - WHT
- 4 - GRN



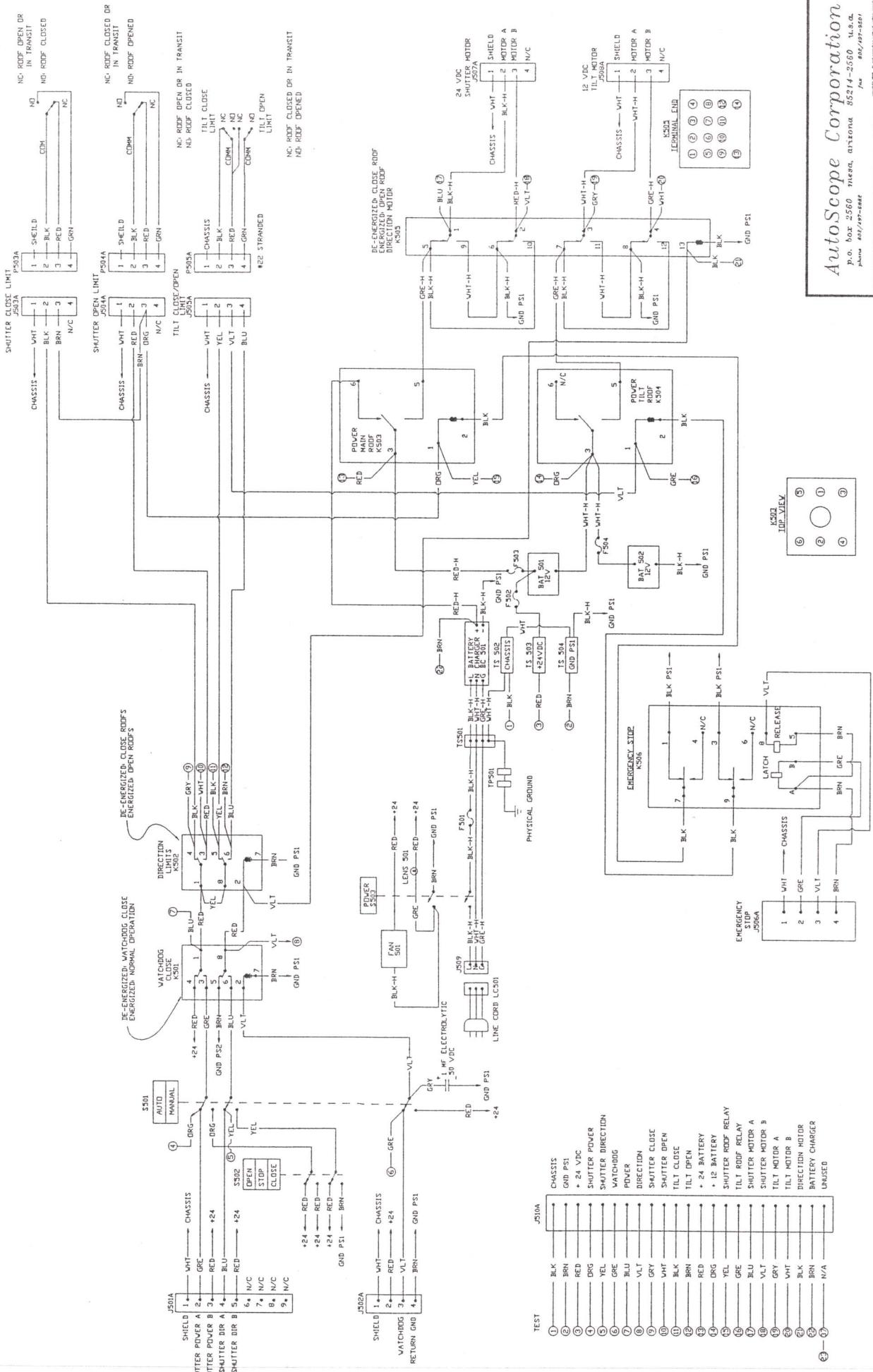


DCS-S2



AutoScope Corporation
P.O. Box 2060 Mesa, Arizona 85214-2060 U.L.C.
Phone 602/467-8488 Fax 602/467-8485

PCS-S3



NCS-SI

Central Nodules

Drawing shows the motor, limit switches, and relay/control box. The capacitor is inside the control box.

Motor is a Bodine,
Parallel-Shaft AC
Gearmotor, Type 34R-Z,
Model 0454.

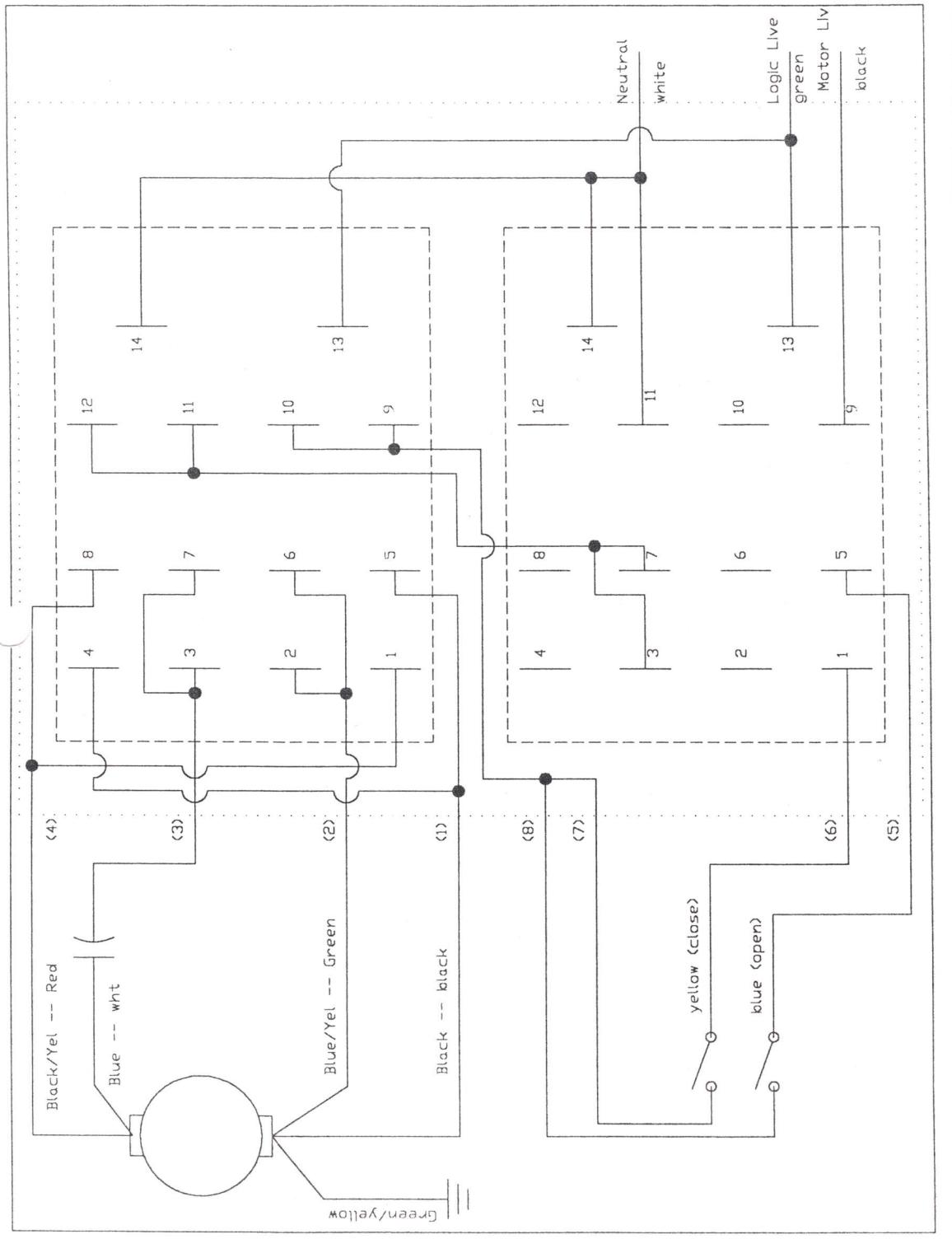
The Capacitor is
enclosed with Bodine

replacable with source part number 494 00081.
The relays are Omron
NY4, 120 VAC / 5A.
The assy is connected
to power through
cluster rail.
Designer:
David L. Summers

4/2010 Date
Bardoloni Avenue
No. 1

NMSU 1-Meter
Project Name and Address

1 of 2



Leinen Stütter

πιδιζ

Lower Shutter pwr

