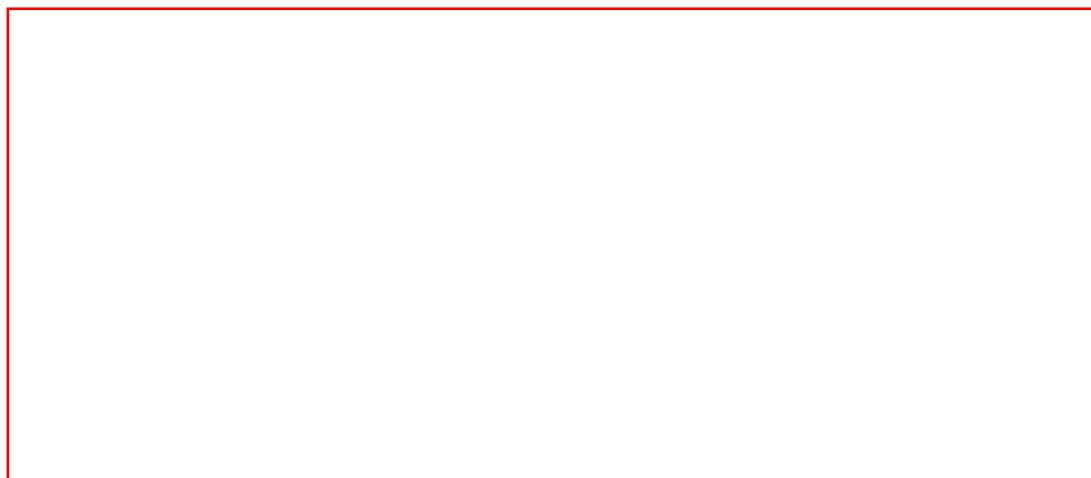


COASTAL

SWEET SHOPPE

(MODEL 201B)
(FIRMWARE VER MA1889)

OPERATOR'S MANUAL



WMH-201B SERIAL INDEX

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1. Function:

In general, this model consists of two sections, the Software and the Hardware. Follow below its applications:

Software: Its edited in the INTEL MCS-51 assembly, main CPU is 8052.

Hardware: It consists of 5 sections listed below. (Refer to drawing)

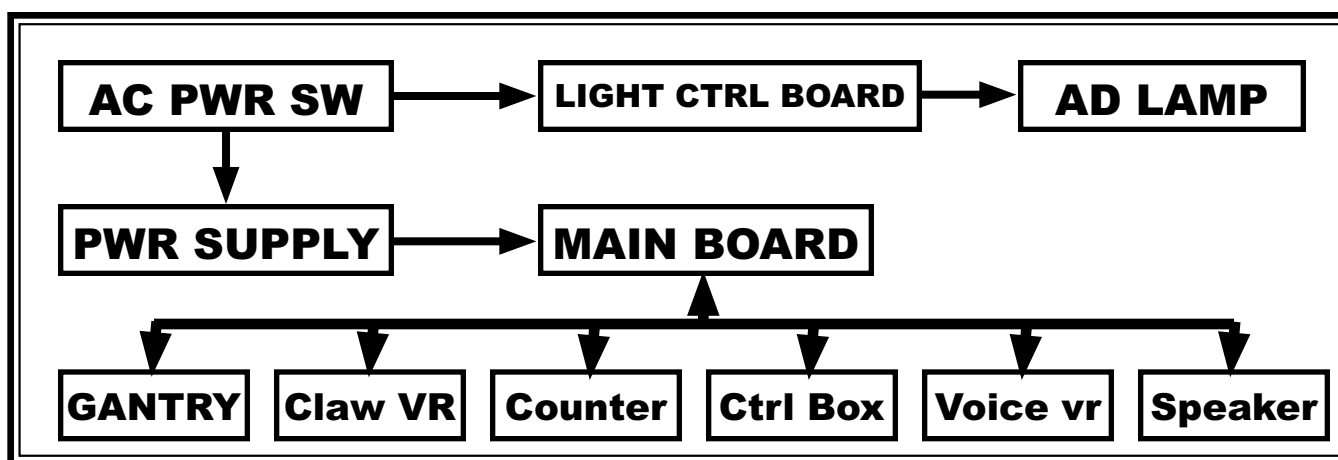
A. Display: It mainly displays the number of coin insertion and the operation data of machine.

B. Gantry: It includes 3 drive motorsn claw coil and scout SW. It employs a joystick or controlling SW to control the movement of the claw.

C. Operation: It employs a joystick or controlling SW to control the gantry.

D. Music: It employs 8052 to coordinate high quality music IC UM3567 and 8910 to produce music and sounds.

E. Voice: The coordination of 8052 and API8001 produces voice sounds.



2. How to play:

1. Insert coins/tokens into coin slot. The display will show credits and the counter will record coins in.

2. When there is Super Card (optional) adjust pin 3 on DIP sw1 to 'ON'.

Joystick operation:

Use joystick to move claws above your selected object.

Then select the preferred Bonus from Super Card and press 'DESCEND' to catch your object. If the light of Super Card stops at 'WITH ADDED STRENGTH', player wins extra strength for the catch. If light stops at 'ONE MORE FREE GAME' or 'TWO MORE FREE GAMES', then player wins one or two free games, respectively.

Push button operation:

Use 'RIGHT' and 'FRONT' buttons to move claws above selected object.

Then select the preferred Bonus from Super Card and press any button to catch your object. ins extra strength for the catch. If light stops at 'ONE MORE FREE GAME' or 'TWO MORE FREE GAMES', then player wins one or two free games, respectively.

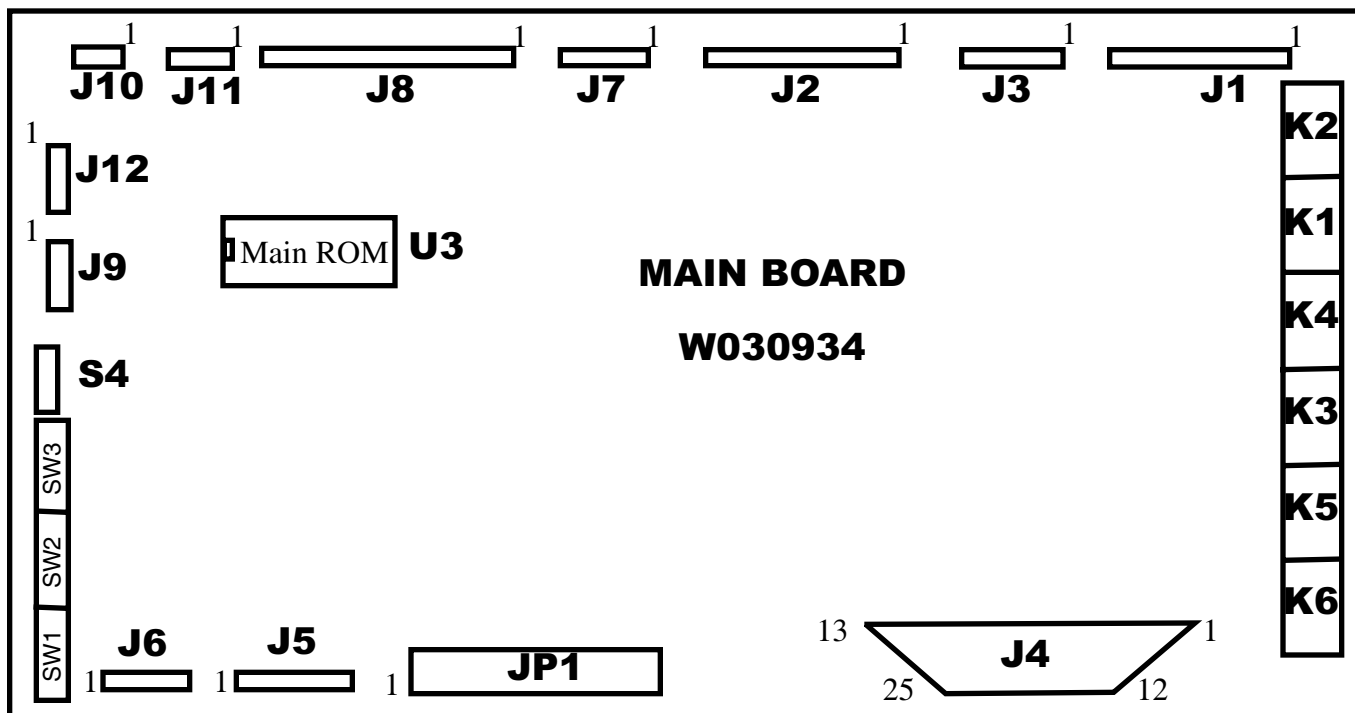
Joystick operation:

At pressing 'DESCEND' button or if time is expired (game's playing time is adjustable), the gantry drives motor to lower down claws and then catch object. If 'catch in air' function is enabled, press 'DESCEND' button again and the claws can catch the item in the air.

Push button operation:

At pressing any buttons right after releasing 'RIGHT' or 'FRONT' buttons or if time is expired (game's playing time is adjustable), the gantry drives motor to lower down claws and then catch object. If 'catch in air' function is enabled, press 'DESCEND' button again and the claws can catch the item in the air.

After the closing of the claw the claw will rise up until it touches the STOP-UP switch. Then the claw will move to the exit area and release.



J1	Color	Connection
1	Black	GND
2	Brown	Joystick - Front SW (N.O.)
3	Red	Joystick - Back SW (N.O.)
4	Orange	Joystick - Right SW (N.O.)
5	Yellow	Joystick - Left SW (N.O.)
6	Green	Descend SW (N.O.)
7	Blue	
8	Black	GND
9	Gray	Descend (or →) button lamp
10	White	(↑) button lamp

J3	Color	Connection
1	Black	Connected to Super Card
2	Green	
3	Yellow	
4	Orange	
5	Red	
6	Brown	
7		
8	Blue	

J2	Connected to Display Board
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J7	Color	Connection
1	RD/WH	+12V Output
2	OR/WH	COIN 1 Meter
3	YW/GN	COIN 2 Meter
4	GN/WH	OUTPUT Meter
5	BL/WH	TICKET Meter

J1	Color	Connection
1	Brown	TILT SW (N.O.)
2	Purple	
3	Black	GND
4	Black	Coin Selector 1 - GND
5	WH/GN	Coin Selector 1 - Coin Signal
6	Red	Coin Selector 1 - +12V
7	Red	Coin Selector 2 - +12V
8	WH/BL	Coin Selector 2 - Coin Signal
9	Black	Coin Selector 2 - GND
10	Black	Ticket Dispenser - GND
11	GN/WH	Ticket Dispenser - OUT
12	White	Ticket Dispenser - IN
13	Red	Ticket Dispenser - +12V
14	Red	+12V
15	Gray	
16	Black	GND
17		
18	Green	Coin Inhibit Input -

J11	Color	Connection
1		Reserved.
2		
3		
4		
5		

J10-1	Color	Connection
1		Reserved.
2		
3		
4		

J10	Color	Connection
1	Blue	Output Sensor - GND
2	Gray	Output Sensor - signal
3	Brown	Output Sensor - +12V

J12	Color	Connection
1		Reserved.
2		
3		
4		
5		
6		
7		
8		

J9	Color	Connection
1-6		Reserved.

J6	Color	Connection
1	White	Volume VR - Pin 1
2	Red	Volume VR - Pin 2
3	Black	Volume VR - Pin 3
4	Black	Speaker -
5	Purple	Speaker +

J5	Color	Connection
1	Red	VR1 Signal
2	Orange	VR1 COM
3	Yellow	VR2 Signal
4	Green	VR2 COM
5	Pink	Voltmeter +
6	Black	Voltmeter -

J1	Color	Connection
1	Black	GND
2	Black	GND
3	Black	GND
4	Yellow	+5V Input
5	Yellow	+5V Input
6	Red	+12V Input
7	Red	+12V Input
8	Orange	+24V Input
9	Orange	+24V Input
10	Purple	+48V Input

J1	Color	Connection
1	BR/WH	Front / Back Motor +
2	RD/WH	Left / Right Motor -
3	OR/WH	Up / Down Motor -
4	White	Claw Coil
5	GN/WH	
6	BL/WH	Stop - Front / Back SW (N.O.)
7	WH/BR	
8	VI/WH	Stop - Left / Right SW (N.O.)
9	Pink	Stop - Up SW (N.C.)
10	Black	Stop - Down SW (N.O.)
11	WH/BL	
12	GY/BK	
13	WH/GN	+12V Output
14	Brown	Back / Front Motor -
15	Red	Left / Right Motor +
16	Orange	Up / Down Motor +
17	Yellow	Claw Coil
18	Green	
19	Blue	Stop - Front / Back SW COM
20	Purple	Stop - Left / Right SW COM
21	Gray	Stop - Up / Down SW COM
22	WH/VI	GND
23	PK/BL	
24	RD/YL	
25	YL/GN	

J13	Color	Connection
1,2		Reserved.

S4	Color	Connection
1-8		Reserved.

DIP SWITCH INSTRUCTIONS

Program no.: MA1889

Main Board: W021208

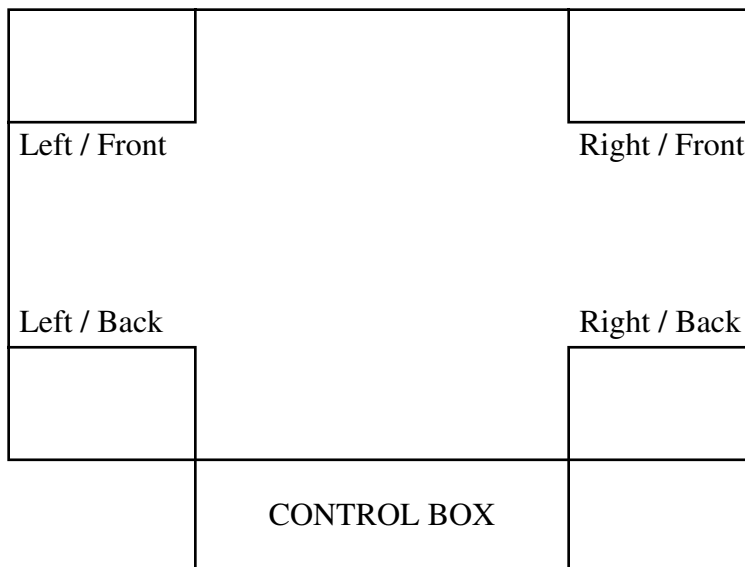
DIP SWITCH 1		1	2	3	4	5	6	7	8
RESERVED	FIXED	OFF							
Position where claws open at the exit	Claw lowers down then releases object.		ON						
	Claw releases object at top position.		OFF						
Super Card Function	WITH			ON					
	WITHOUT			OFF					
Catching In The Air	WITH				ON				
	WITHOUT				OFF				
Exit Door Direction	Opposite from original direction front to back.					ON			
	Same as original.					OFF			
Original Direction	Right / Back side						ON		
	Left / Back side						OFF		
Demo Game in attract mode	WITH	Plays every 20 min. (Claws do not close.)						ON	
	WITHOUT							OFF	
Demo Music	WITH								ON
	WITHOUT								OFF

DIP SWITCH 2		1	2	3	4	5	6	7	8
Coin 1 Setup (Number of coin pulses per play)	6:1	ON	ON						
	4:1	OFF	ON						
	2:1	ON	OFF						
	1:1	OFF	OFF						
Coin 2 Setup (Number of bill acceptor pulses per play)	4:1			ON	ON				
	3:1			OFF	ON				
	2:1			ON	OFF				
	1:1			OFF	OFF				
Operation Mode	BUTTON					ON			
	JOYSTICK					OFF			
Save Credits on power off	WITH						ON		
	WITHOUT						OFF		
Ability to change inner values	WITH							ON	
	WITHOUT							OFF	
Play till you win function	WITH								ON
	WITHOUT								OFF

1. Play till you win function: Output sensor must be installed.

2. Automatic Demo: Hold 'FRONT' and 'RIGHT' and turn power on.

Reference diagram of original & exit directions:



CLAW STRENGTH INSTRUCTIONS

VR1: This will adjust the first stage of claw grabbing power. It starts when the object is grabbed and ends when the claw goes all the way to the top.

VR2: This will adjust the second stage of claw grabbing power. It starts when the gantry starts moving towards the exit until the claws open.

Adjustment Procedures:

**Adjust COIN1 to N.C. then power on, display will show 'CO'.
Adjust COIN1 back to N.O.**

Joystick Operation:

- 1. Pull joystick to 'BACK' to adjust VR1, display will show C1.**
- 2. Pull joystick to 'RIGHT' to adjust VR2, display will show C2.**
- 3. Pull joystick to 'FRONT' to check maximum claw power, display will show C3.**

Push button operation:

- 1. Press button '2' to adjust VR1, display will show C1.**
- 2. Press button '1' to adjust VR2, display will show C2.**
- 3. Press both buttons '1' and '2' to check maximum claw power, display will show C3.**

INNER VALUE SETUP INSTRUCTIONS

Adjust the 7th pin of DIP SW2 to ON and turn power on. The display will blink '00'.

To select an item for inspection / change item's value:

**Move joystick 'FRONT' (or press button 2) to change the right digit.
Move joystick 'RIGHT' (or press button 1) to change the left digit.
Press 'DESCEND' button to select item / confirm change.**

ITEM	SET UP CONTENTS	INNER VALUE	NOTES
00	Ready to proceed with setup	-	7th pin of DIP SW2 has to be turned back off.
01	Number of prizes paid after inserting coins in COIN1.	0	
02	Number of prizes paid after inserting coins in COIN2.	0	
03	Number of coins needed for number of credits in item '04' (COIN1)	1	If adjusted to '0', will automatically adjust to '1'.
04	Number of credits given when number of coins in item '03' inserted (COIN1)	1	If adjusted to '0', will automatically adjust to '1'.
05	Number of coins needed for number of credits in item '04' (COIN2)	1	If adjusted to '0', will automatically adjust to '1'.
06	Number of credits given when number of coins in item '03' inserted (COIN2)	1	If adjusted to '0', will automatically adjust to '1'.
07	Quantity of pay-out balls won.	0	
08	Quantity of pay-out ball when not a winner.	0	
09	Number of times claw's strong power given as bonus.	10	If adjusted to '0', will modify to '256'.
10	Game play time (in seconds)	50	If adjusted to less than 5 seconds, will automatically adjust to 5 seconds.
11	Reserved	3	

ITEM	SET UP CONTENTS	INNER VALUE	NOTES
12	'N' times for 'one more free game' in Super Card.	8	Valid only with Super Card.
13	'N' times for 'two more free game' in Super Card.	3	Valid only with Super Card.
14	'N' times for 'with added strength' in Super Card.	1	Valid only with Super Card.
15	Average set up value for items 12-14.	99	Set up the average chance to win Bonus in item 12-14 within 'N' games. If set less than 11, will automatically adjust according to table below.
16	Reserved	1111	
17	Reserved	2	
18	Reserved	3	
19	Reserved	0	
20	Reserved	1	
21	Reserved	1	

ITEM 15 SETUP INSTRUCTIONS

If the setup value < 11, the system will modify the value as follows:

When setup value is equal to	Setup value is changed to	When setup value is equal to	Setup value is changed to
0	100	6	160
1	110	7	170
2	120	8	180
3	130	9	190
4	140	10	200
5	150	11	11

i.e: item 12 = 8, item 13 = 3, item 14 = 1, item 15 = 0 (100)

Within a cycle of 100 games there will be 8 chances of '1 free game', 3 chances of '2 free games' and 1 chance of 'added strength' given out. Bonuses do not accumulate through cycles and reset at the end of each cycle. Cycles are recorded even when power is turned off.

TESTING INSTRUCTIONS

1. Systems testing:

Adjust COIN1 & COIN2 to N.C. then power on, display will show 'CC'. Adjust DIP SW2 to test each item. Press 'DESCEND' to scroll thru each item.

DIP SW2	Description	Notes
1	Display	
2	DIP SWITCHES	1. 1st : a row, 2nd: b row, ... 7th: g row, 8th: blink 2. ON: light, OFF: dark 3. DIP SW1 shown in right display. 4. DIP SW2 shown in left display.
4	IC 3567	Press any button to cycle through songs.
5	IC API8001	Press any button to cycle voice sounds.
6	IC 8910	Press any button to cycle music sounds.
7	Clear records	1. Display shows 'CL'. 2. Clear all records to 0 and re-enter setup values to memory.
8	Enter setup value	1. Displays blinking 'Ld'. 2. Setup value is saved when display stops blinking.

2. Claw strength:

Adjust COIN1 to N.C. then power on, display will show 'C0'.

Joystick operation	Testing items	Display showing
Pull joystick 'BACK'	VR1	C1
Pull joystick 'RIGHT'	VR2	C2
Pull joystick 'FRONT'	Maximum claw power	C3

3. Gantry:

Adjust COIN2 to N.C. then power on, display will show 'a0'.

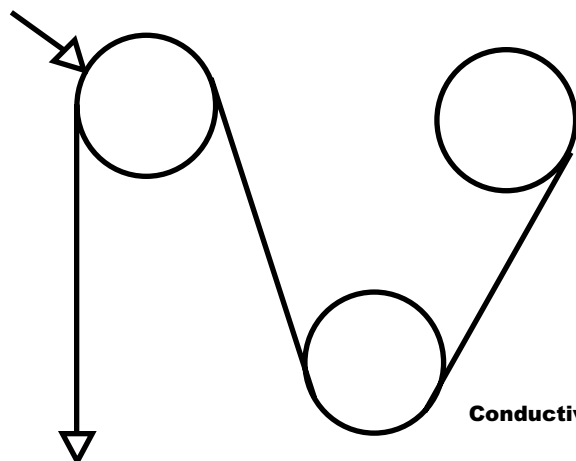
Joystick operation	Case	Display showing
Pull joystick 'BACK'	Lower Claw	a3
Pull joystick 'FRONT'	Raise Claw	a4
'DESCEND' & 'RIGHT'	Motor moves right	b1
'DESCEND' & 'LEFT'	Motor moves left	b2
'DESCEND' & 'BACK'	Motor moves back	b3
'DESCEND' & 'FRONT'	Motor moves forward	b4

4. Error codes:

Error Code	Description	Error Code	Description
E0	CPU Bit breakdown	E6	Flap door / control board breakdown
E1	Stop-up SW breakdown	E9	Counter meter not connected.

WINDING CORD INSTRUCTIONS

Conductive-Cord Wheel (Winding Cord & Assembly II No. 9)



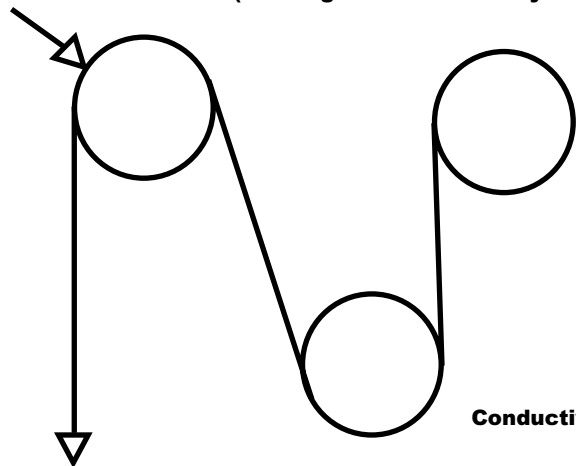
Winding-Cord Wheel (Winding Cord & Assembly II No. 6)

Conductive-Cord Wheel (Winding Cord & Assembly II No. 7)

Connected to claws

[Correct winding method]

Conductive-Cord Wheel (Winding Cord & Assembly II No. 9)



Winding-Cord Wheel (Winding Cord & Assembly II No. 6)

Conductive-Cord Wheel (Winding Cord & Assembly II No. 7)

Connected to claws

[Improper winding method]

When displays show 'd' blinking at power on and after display test, this means the cord is improperly wound. Turn off power and adjust COIN2 to N.C. then power on again. Display will show 'a0'. Hold joystick 'FORWARD' and the motor will lower down claw and the display will read 'a4'. Adjust COIN2 back to N.O. and the claw will be properly wound.

Note: The program will still work with the cord improperly wound, but it will reduce the life span of the cord.

TROUBLESHOOTING

1. Take caution with the positive and negative poles of the DC power (+5V,+12V, +24V, +48V) in this machine when repairing it. Connect the poles correctly in order to avoid burning the PCB and/or operation under abnormal conditions.

2. Coins/tokens cannot be inserted into coin slot:

- (1) Check if anything is stuck in the coin slot.**
- (2) Check if coin slot is damaged.**
- (3) Check if coin selector is correct type.**

3. Coins/tokens are returned after coin in:

- (1) Check if coins/tokens are the correct type.**
- (2) Check if harness is correctly connected.**
- (3) Check if coin selector is correct type.**

4. No credit after coin in:

- (1) Check if harness is correctly connected.**
- (2) Check if coin SW is set to N.O.**

5. Claw does not lower:

- (1) The winding cord is improperly wound. Hold stop-up SW and cycle power. The cord should wind properly now.**
- (2) Check if winding cord is out of the track. If so, wind cord back on track and cycle power. (Remove top and front covers of gantry motor to check.)**
- (3) Excessive shaking of machine can cause malfunction.**

6. Display is blinking 'C0':

- (1) Switch on coin selector is set on N.C. Set to N.O.**
- (2) Coin sensor is blocked or out of alignment.**
- (3) Someone has tried to cheat coin selector (stringing).**

7. Gantry does not return to home position:

- (1) Cycle power. If gantry still wont return, check that stop-back SW and stop-left SW are connected properly and working properly.**
- (2) Bad PCB.**

8. Gantry does not move forward and/or backwards:

- (1) Check switches on joystick.**
- (2) Check that J1 is connected on main PCB.**
- (3) Check that stop-front and stop-back switches are connected and working properly.**
- (4) Check that front-back motor is connected and working properly. Also check shaft pinion on motor.**
- (5) Check that J4 is connected on main PCB.**
- (6) Check that gantry harness is connected properly.**

9. Gantry does not move left and/or right:

- (1) Check switches on joystick.**
- (2) Check that J1 is connected on main PCB.**
- (3) Check that stop-left switch is connected and working properly.**
- (4) Check that left-right motor is connected and working properly. Also check shaft pinion on motor.**
- (5) Check that J4 is connected on main PCB.**
- (6) Check that gantry harness is connected properly.**

10. Claw does not lower when 'DESCEND' button is pressed:

- (1) Check that 'DESCEND' SW is functioning properly.**
- (2) Check harness connecting 'DESCEND' switch.**
- (3) Check that J1 is connected on main PCB.**

If 'DESCEND' button is functional:

- (1) Check that up-down motor is connected and working properly.**
- (2) Check winding cord.**
- (3) Check that J4 is connected on main PCB.**

11. Claw does not lower (or lowers slightly) and then closes and returns home:

- (1) Check if winding cord is stuck.**
- (2) Check that stop-down switch is connected and working properly.**

12. Claw does not open after reaching exit:

- (1) Check that stop-left and stop-back switches are connected and working properly.**
- (2) Check that J4 is connected on main PCB.**

13. Claw does not rise after grabbing:

- (1) Check that stop-up switch is connected and working properly.**

14. Claw does not rise and gantry does not move at all:

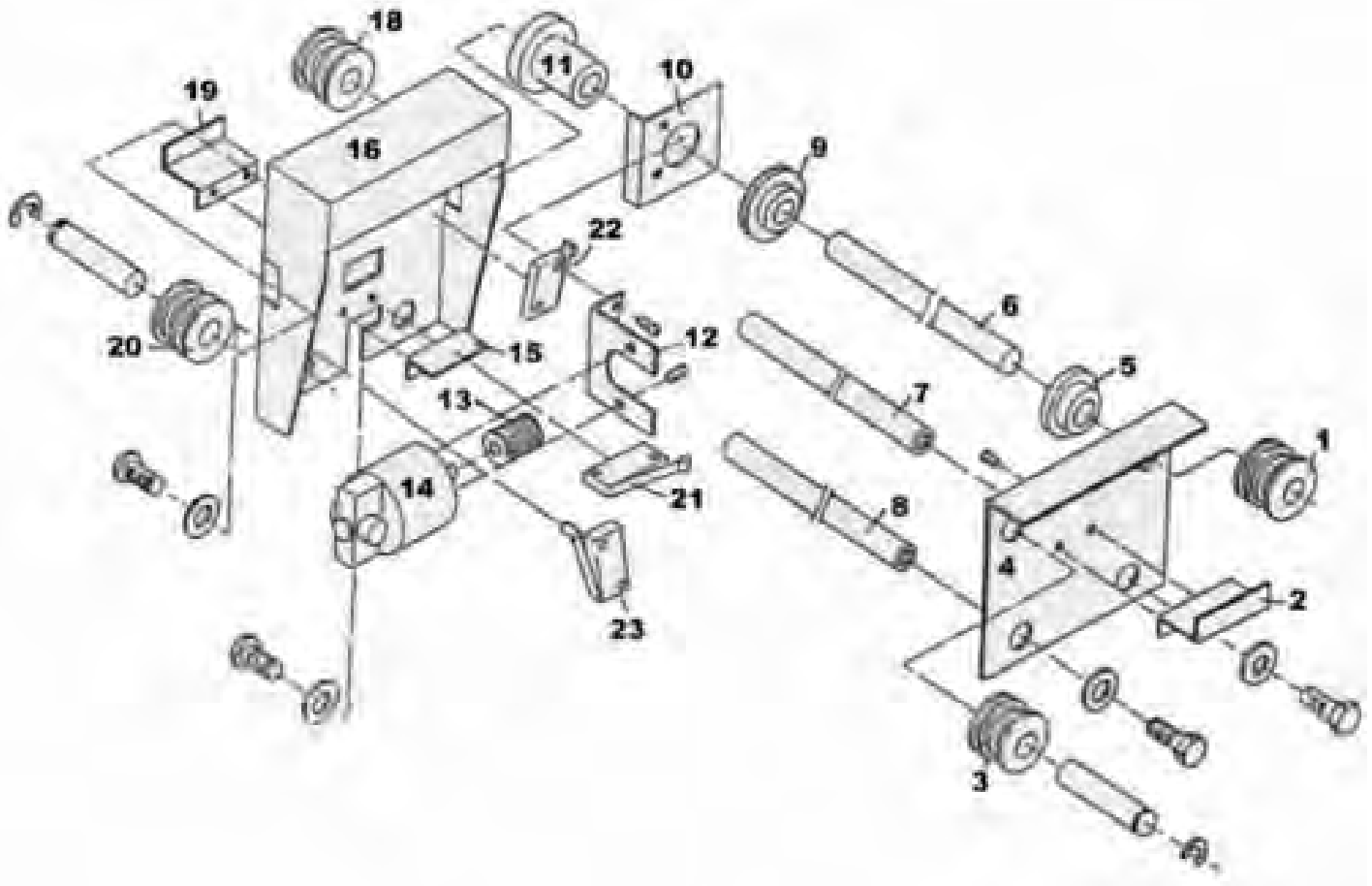
- (1) Check that up-down motor is connected and working properly. Also check shaft pinion on motor.**

15. Claw does not close and returns to home position:

- (1) Check fuse for claw. If fuse is good, you may have bad PCB.**
- (2) If fuse is blown, replace it. If it blows again, replace claw coil.**
- (3) Check that VR1 and VR2 are working properly.**

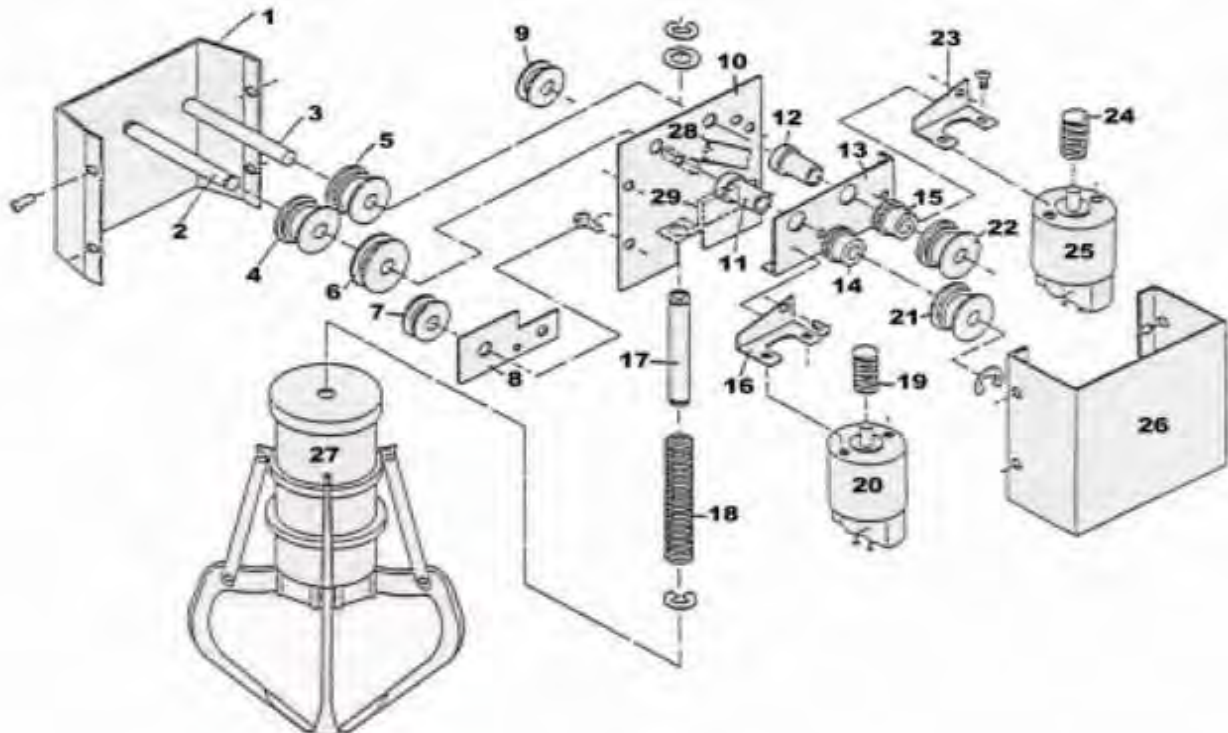
GANTRY & ASSEMBLY I

Number	Description	Code #
1, 3, 18, 20	Front / Back Wheel	S002
2, 19	X-Y Overhead Crane Fixing Plate	P008
4	Right Plate	P015
5	Fixed Bearing	S004
6	Propeller Shaft	S014
7, 8	Fixed Shaft	S013
9	Black Cog	S007
10	Bearing Stand	P007
11	Bearing	S001
12	Motor Fixing Stand	P006
13	Motor Shaft Pinion	S016
14	Front / Back Motor	SE5475M-21145-30Y
15	Stop-left Switch Stand	P004
16	Left Cover Plate	P014
21	Stop-left Switch	
22	Stop-front Switch	
23	Stop-back Switch	



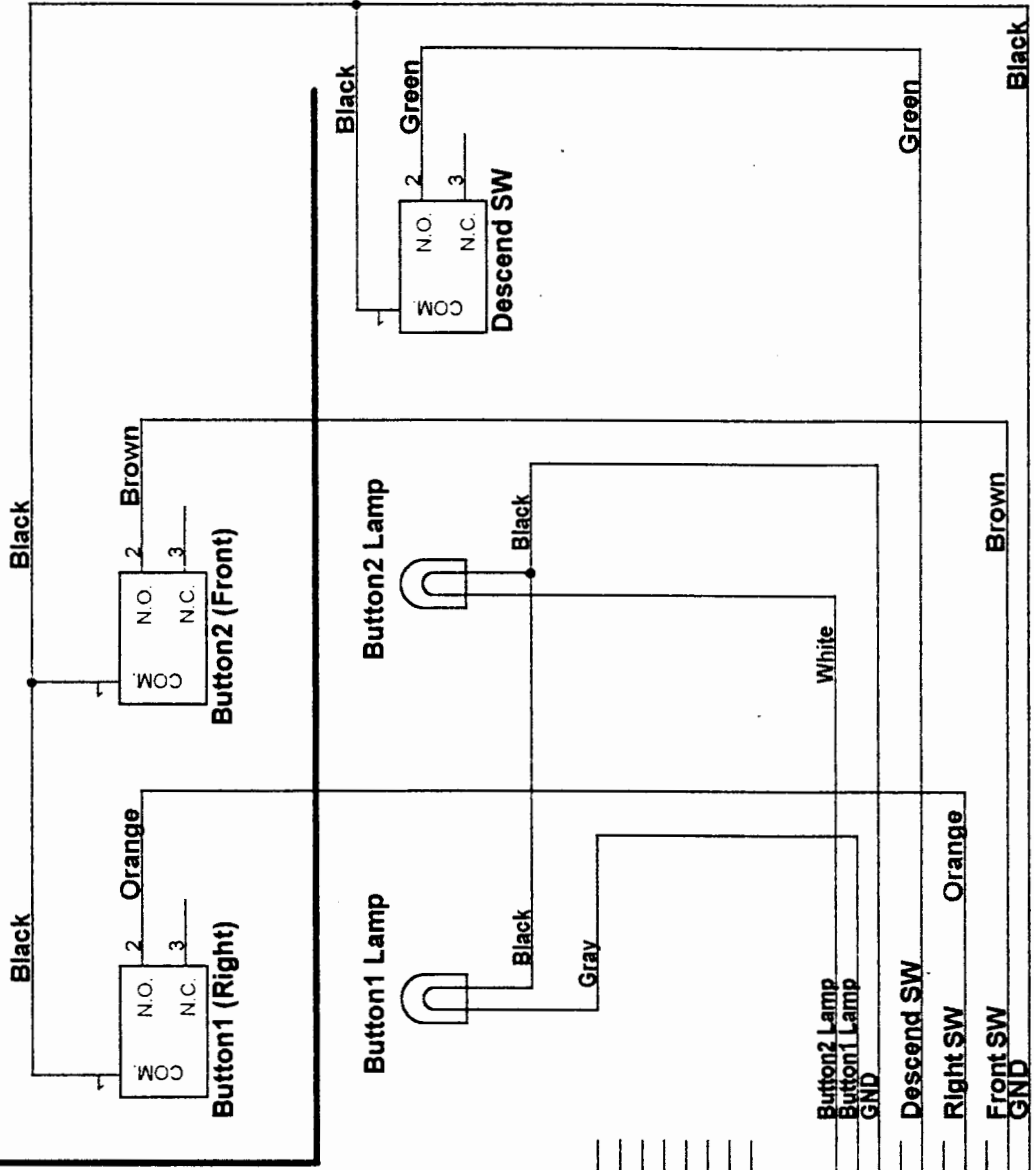
GANTRY & ASSEMBLY II

Number	Description	Code #
1	Middle Outer Cover Plate	P013
2	Propeller Shaft	S008
3	Propeller Shaft	S009
4, 5, 21, 22	Left / Right Wheel	S006
6	Winding-cord Wheel	S003
7, 9	Conductive-cord Wheel	S005
8	Control Plate For Claw	P009
10	Middle-motor Iron Plate	P001
11, 12	Bearing	S001
13	Middle Bearing Stand	P003
14, 15	Black Cog	S007
16, 23	Motor Fixing Stand	P006
17	Conduit	S015
18	Up / Down Spring	L002
19, 24	Motor Shaft Pinion	S016
20	Up / Down Motor	SE5075M-27095-30Y
25	Left / Right Motor	SE5475M-21145-30Y
26	Middle Inner Cover Plate	P012
27	Claw Kit	Small / Large Claw
28	Stop-down Switch	
29	Stop-up Switch	



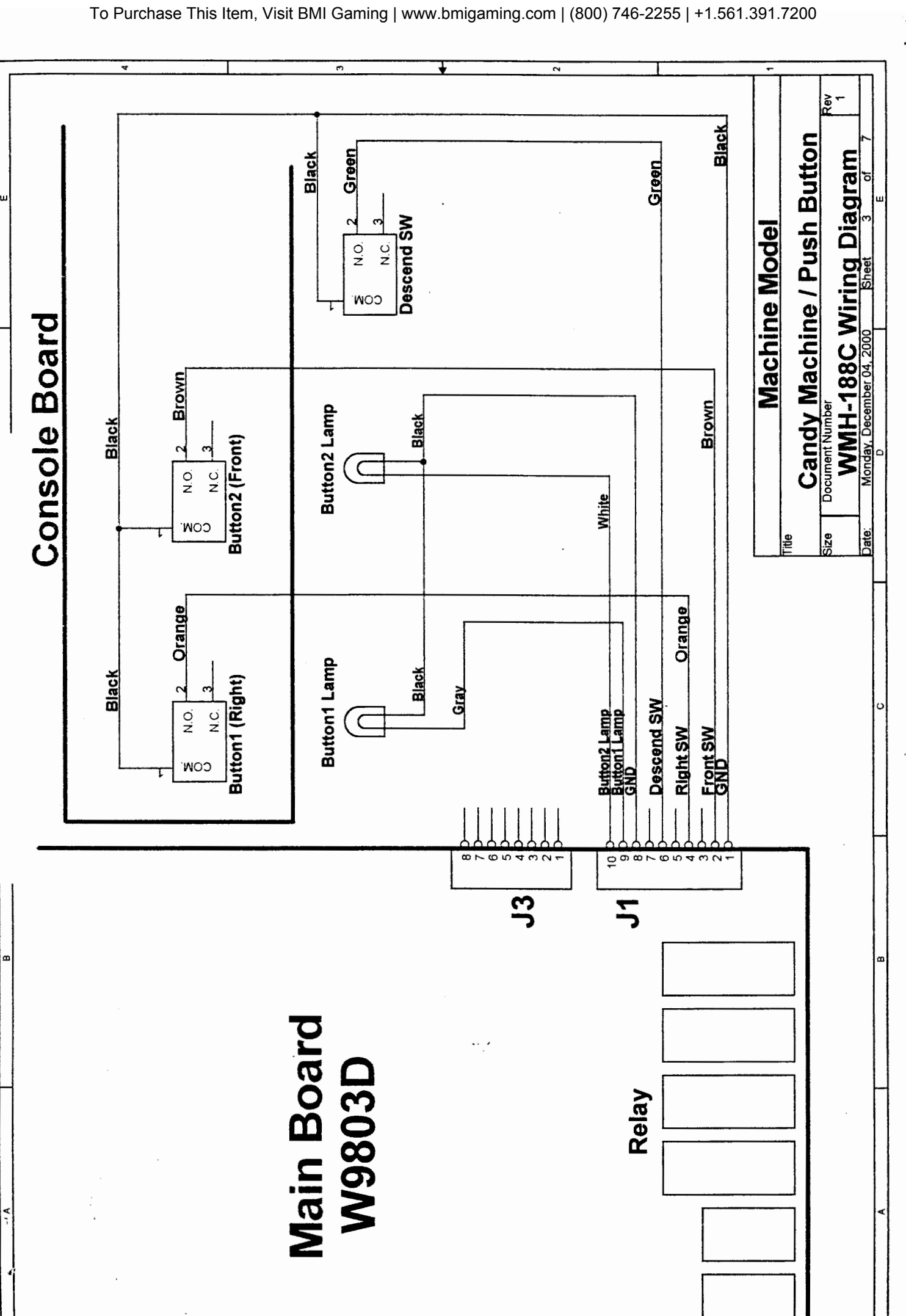
Main Board W9803D

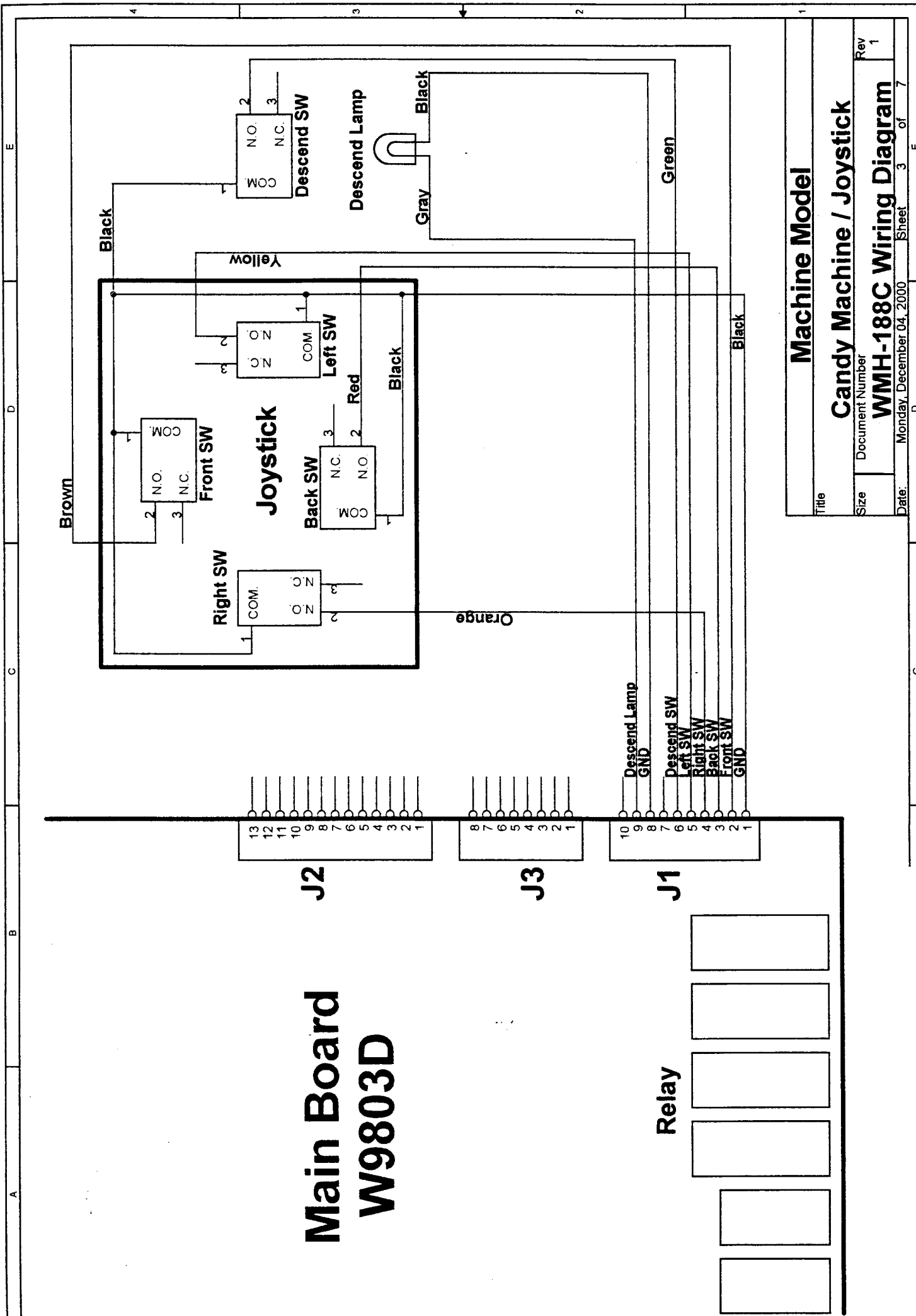
Console Board



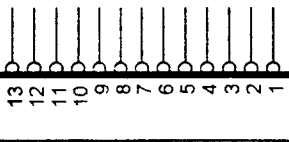
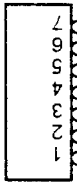
Relay

Machine Model	
Candy Machine / Push Button	
Document Number	Rev 1
WMH-188C Wiring Diagram	
Date: Monday, December 04, 2000	Sheet 3 of 7

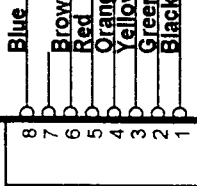




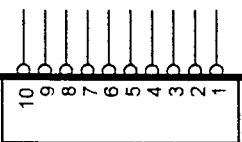
Super Card W9707



J2



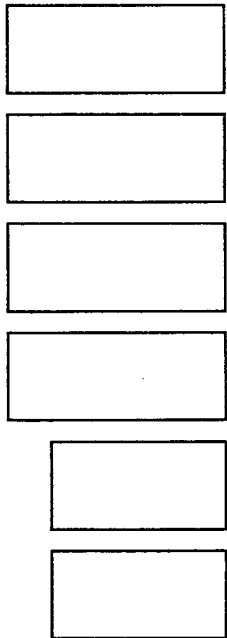
J3



J1

Main Board W9803D

Relay



Super Card Connecting Way

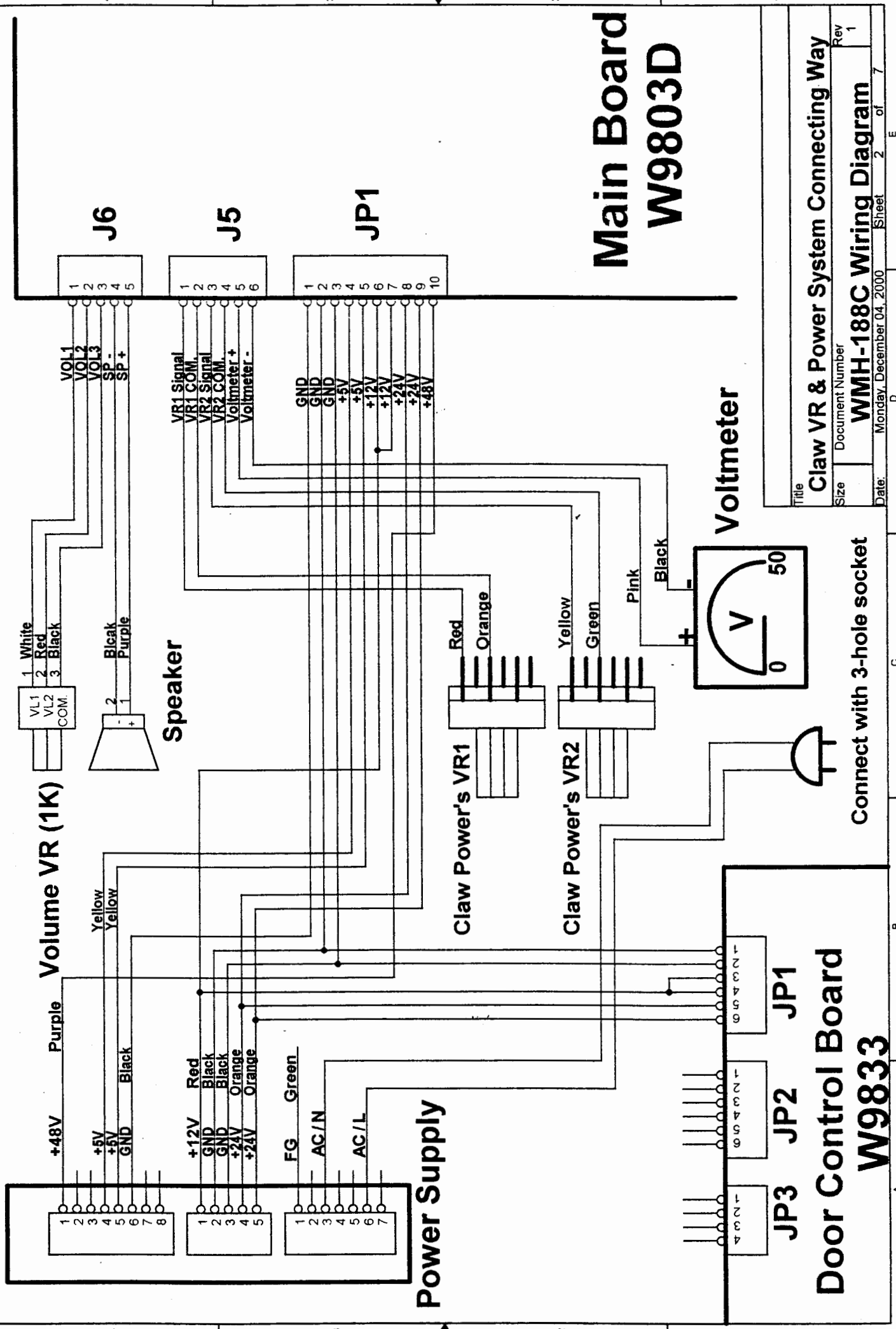
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Rev: 1

Date: Monday, December 04, 2000
Sheet: 7 of 7

D E

B

A



Title		Claw VR & Power System Connecting Way	
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Date:	Monday, December 04, 2000	Sheet	2 of 7
Date:		Monday, December 04, 2000	
Date:		Monday, December 04, 2000	

Connect with 3-hole socket

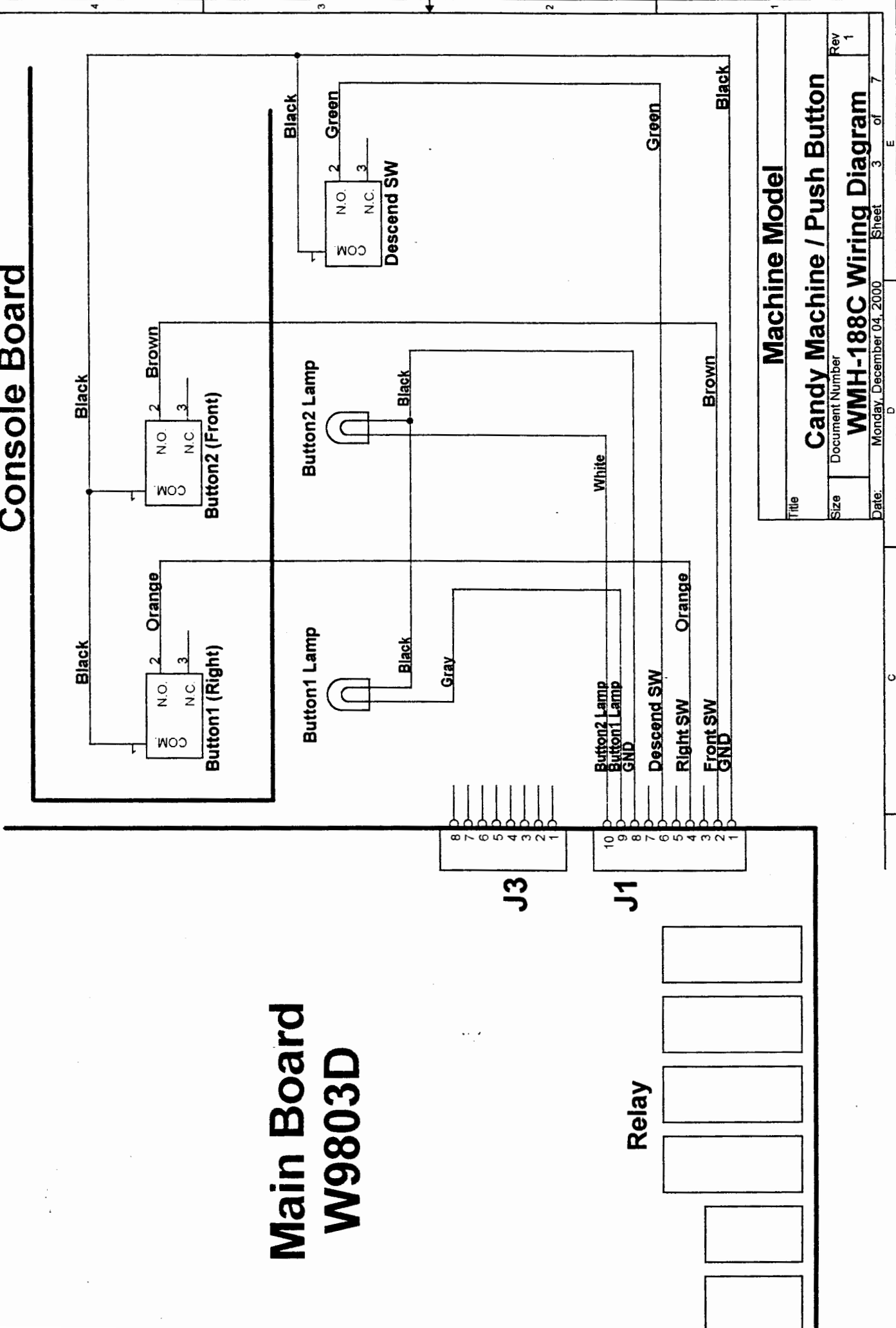
D E

B

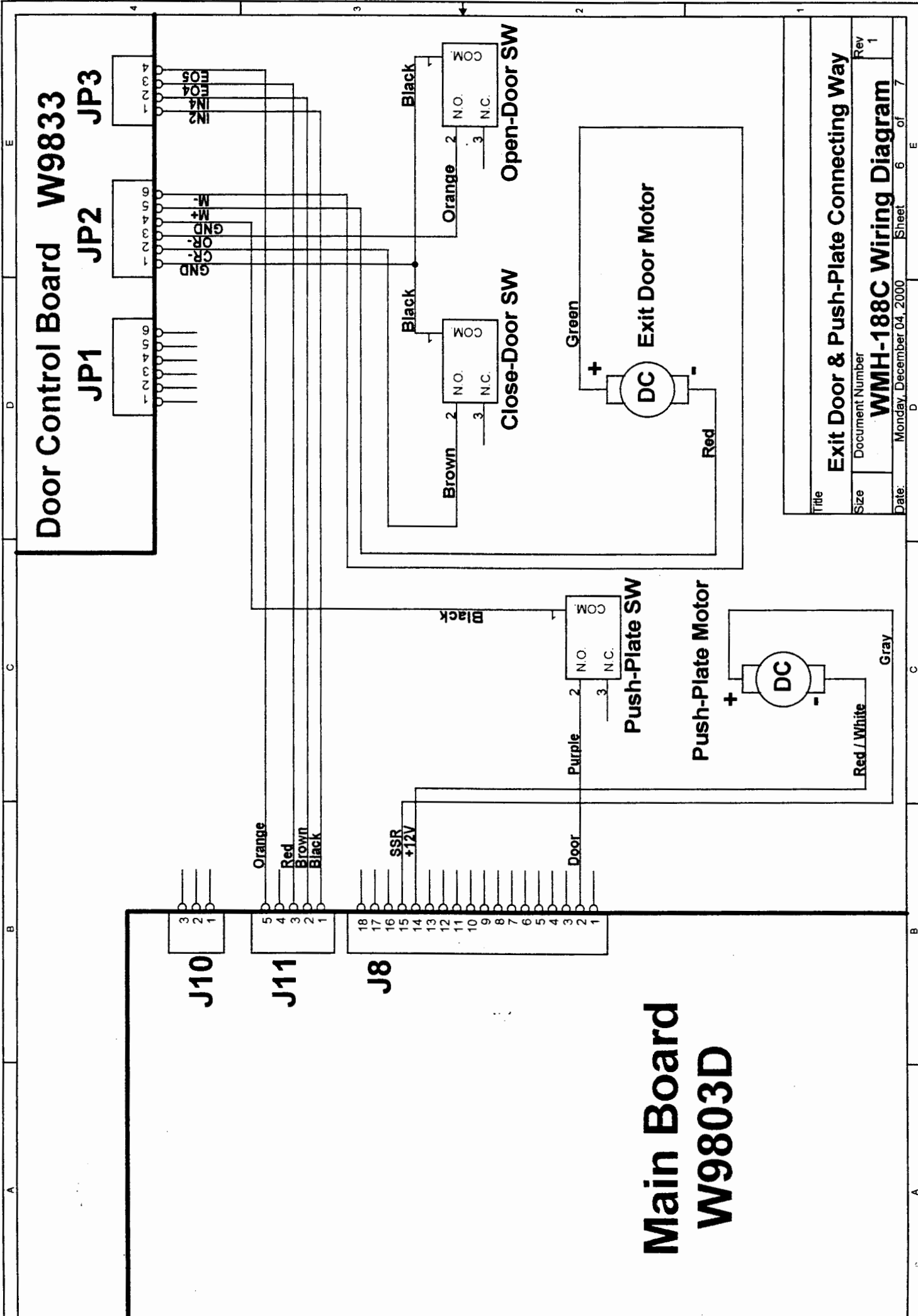
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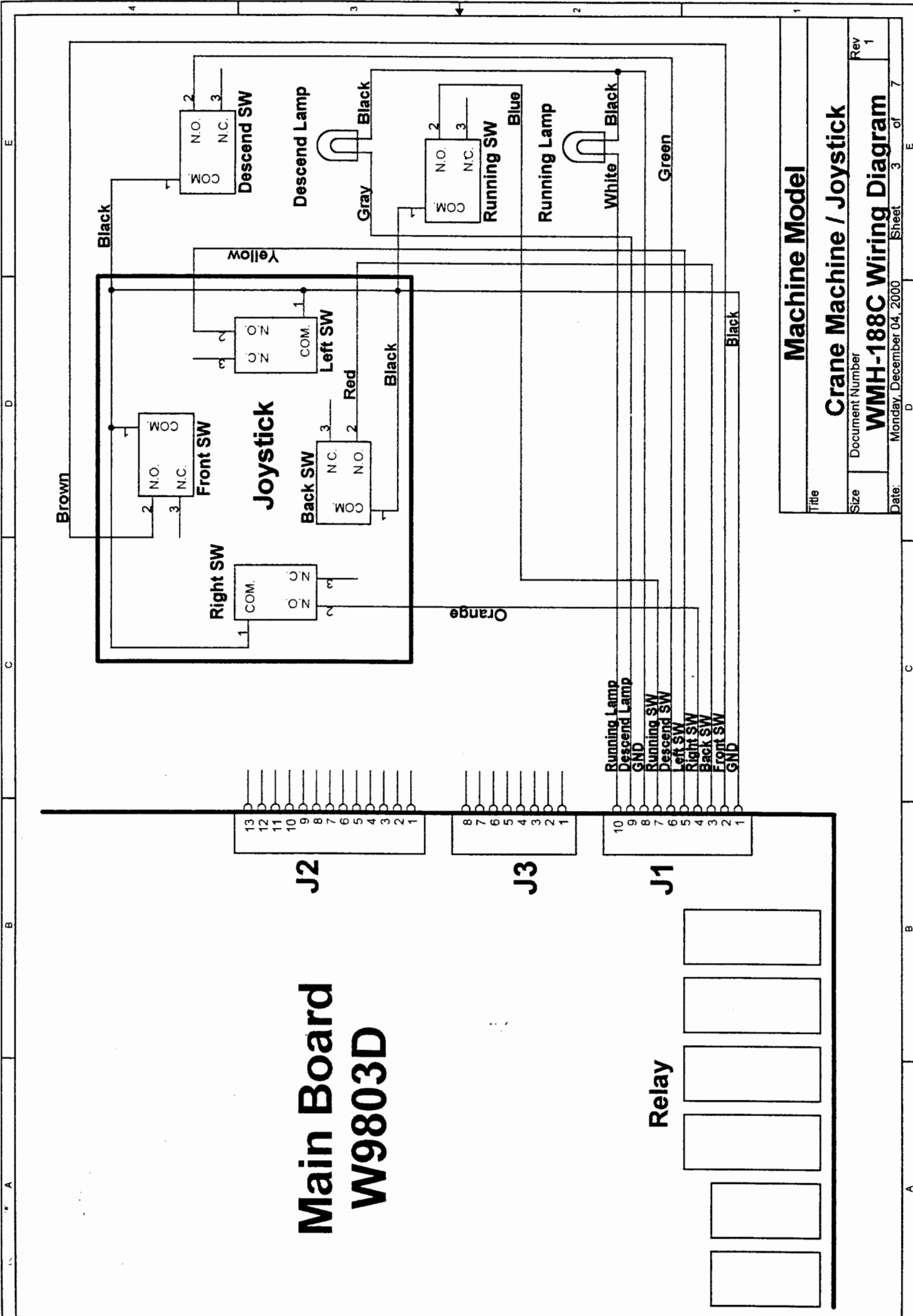
Console Board

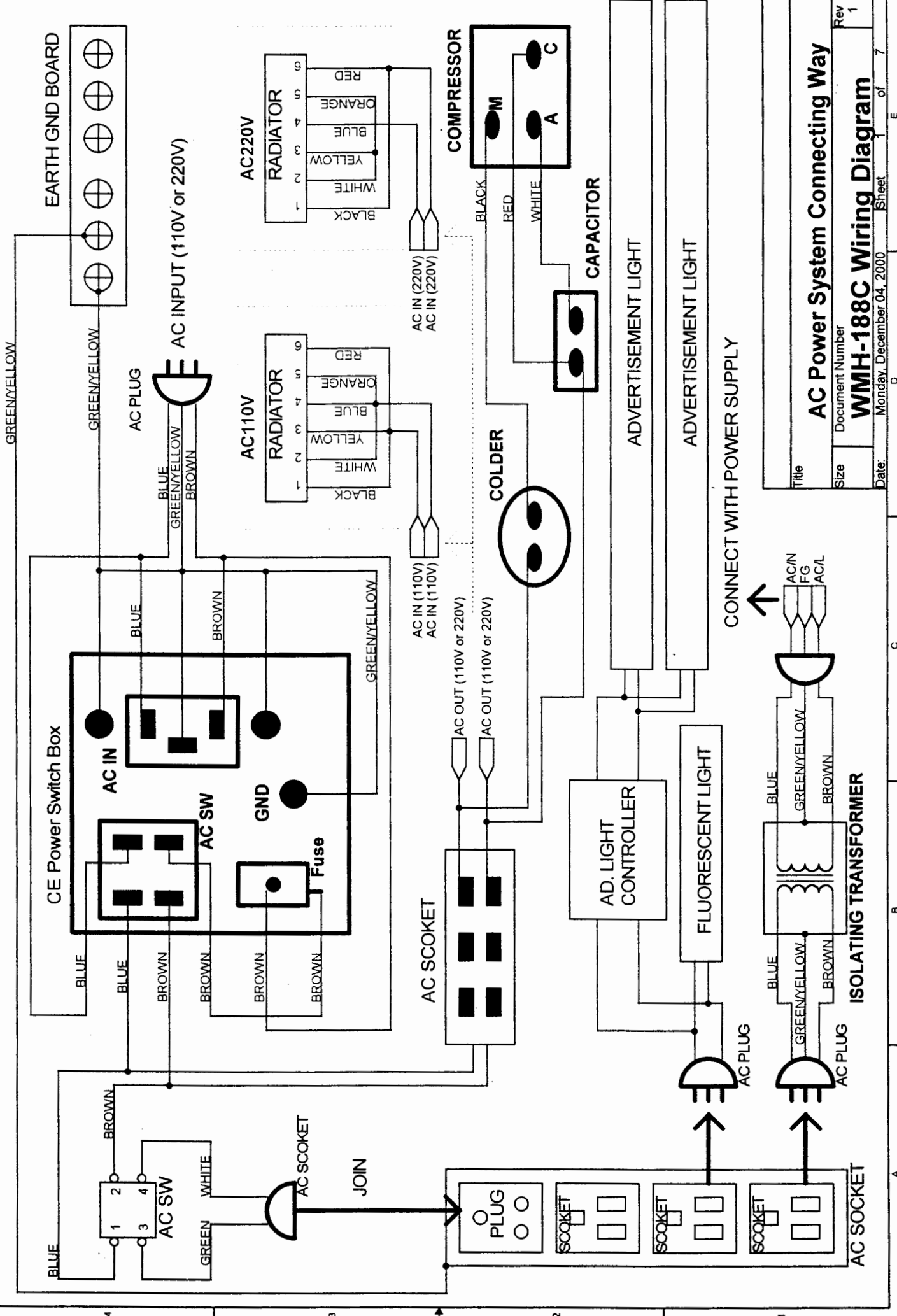
Main Board W9803D



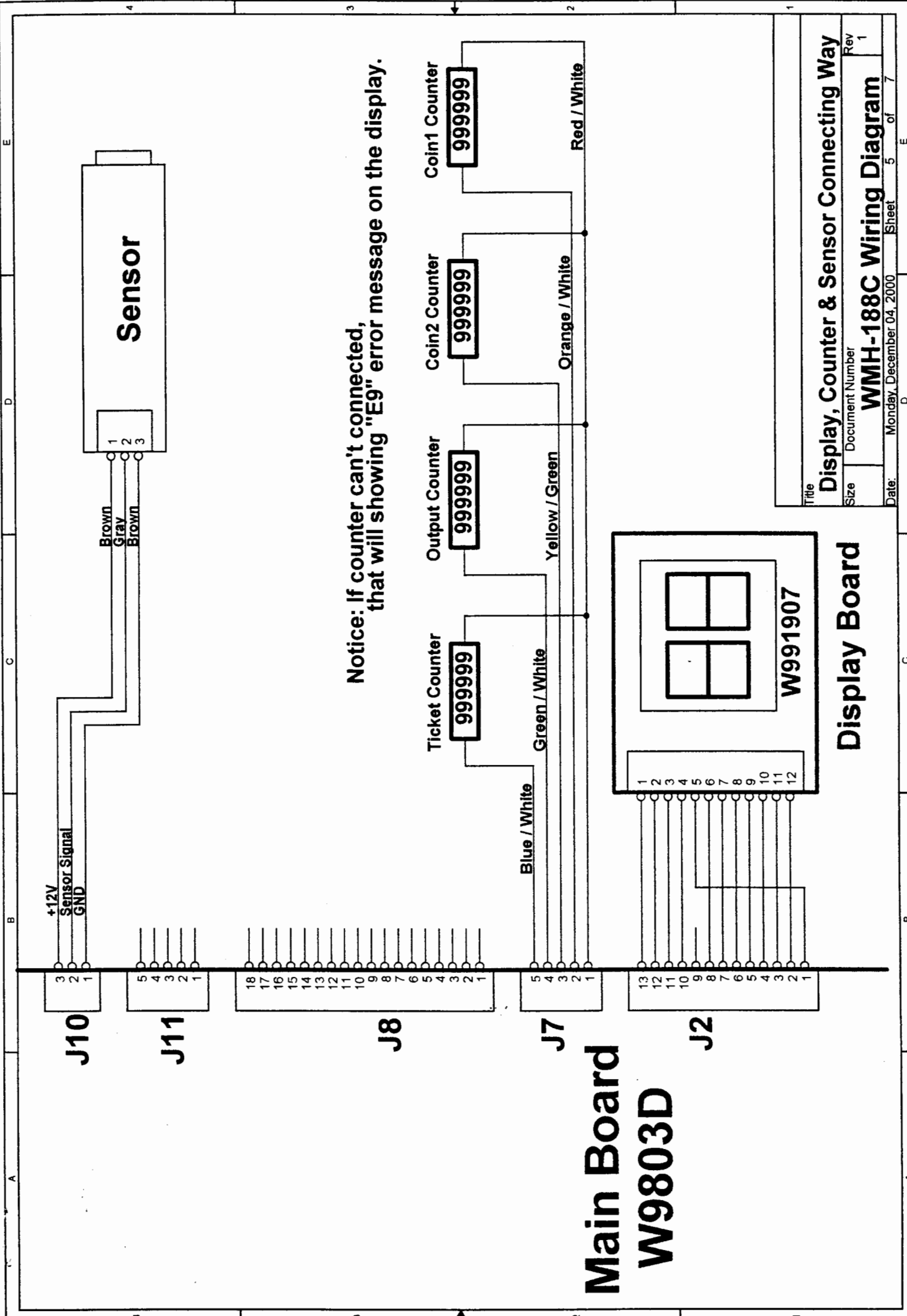
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Size		Candy Machine / Push Button	
Document Number		WMH-188C Wiring Diagram	
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AC Power System Connecting Way
WMH-188C Wiring Diagram
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Notice: If counter can't connected, that will showing "E9" error message on the display.

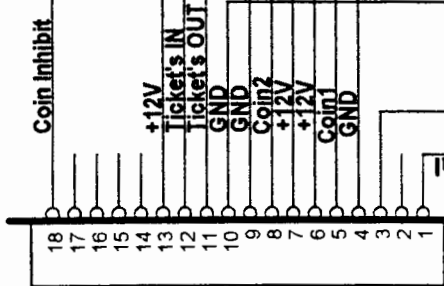
**Main Board
W9803D**

**Display Board
W991907**

Title		Display, Counter & Sensor Connecting Way	
Size	Document Number	Rev	1
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WMH-188C Wiring Diagram			

Main Board W9803D

J8



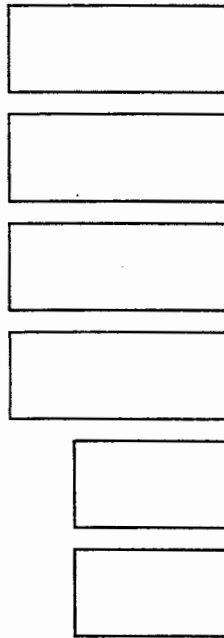
Notice1: Electronic Coin Selector must adjust to "N.O."

Notice2: Mechanical Coin Selector's coin signal wire must be connected at "N.O."

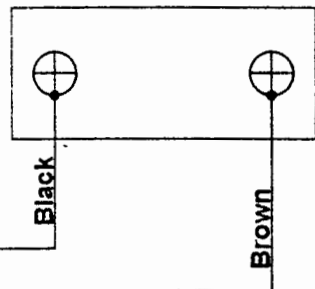
Notice3: If Coin Selector 1 adjust to "N.C." then it can adjustments for the power of claw.

Notice4: If Coin Selector 2 adjust to "N.C." then it can testing for X-Y Overhead Crane.

Relay

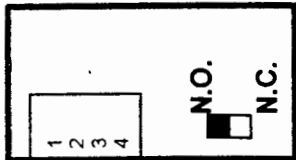


Level Steelyard signal
Level Steelyard COM.



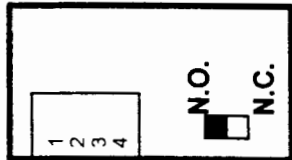
Level Steelyard

Coin Selector 2



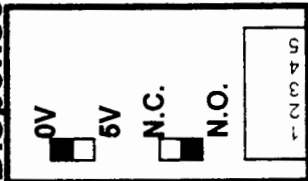
Red
White / Blue
Black
Green

Coin Selector 1



Red
White / Green
Black
Green

Ticket Dispenser



Green / White
Red
Black
White

Title
Coin Selector, Ticket Dispenser & Level Steelyard Connecting Way

Size
Document Number

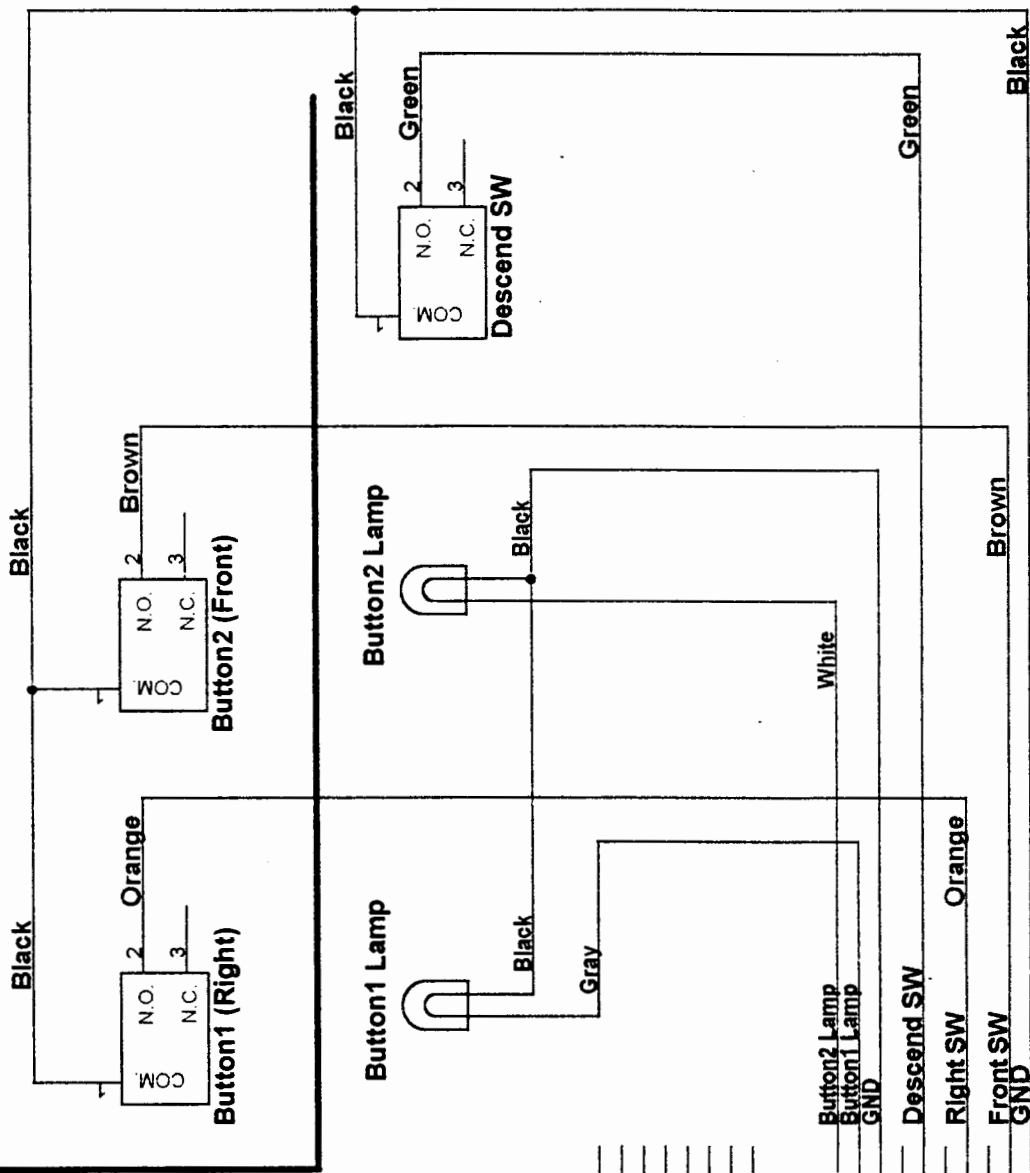
WMH-188C Wiring Diagram

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Console Board



Main Board W9803D

Relay

J3

J1

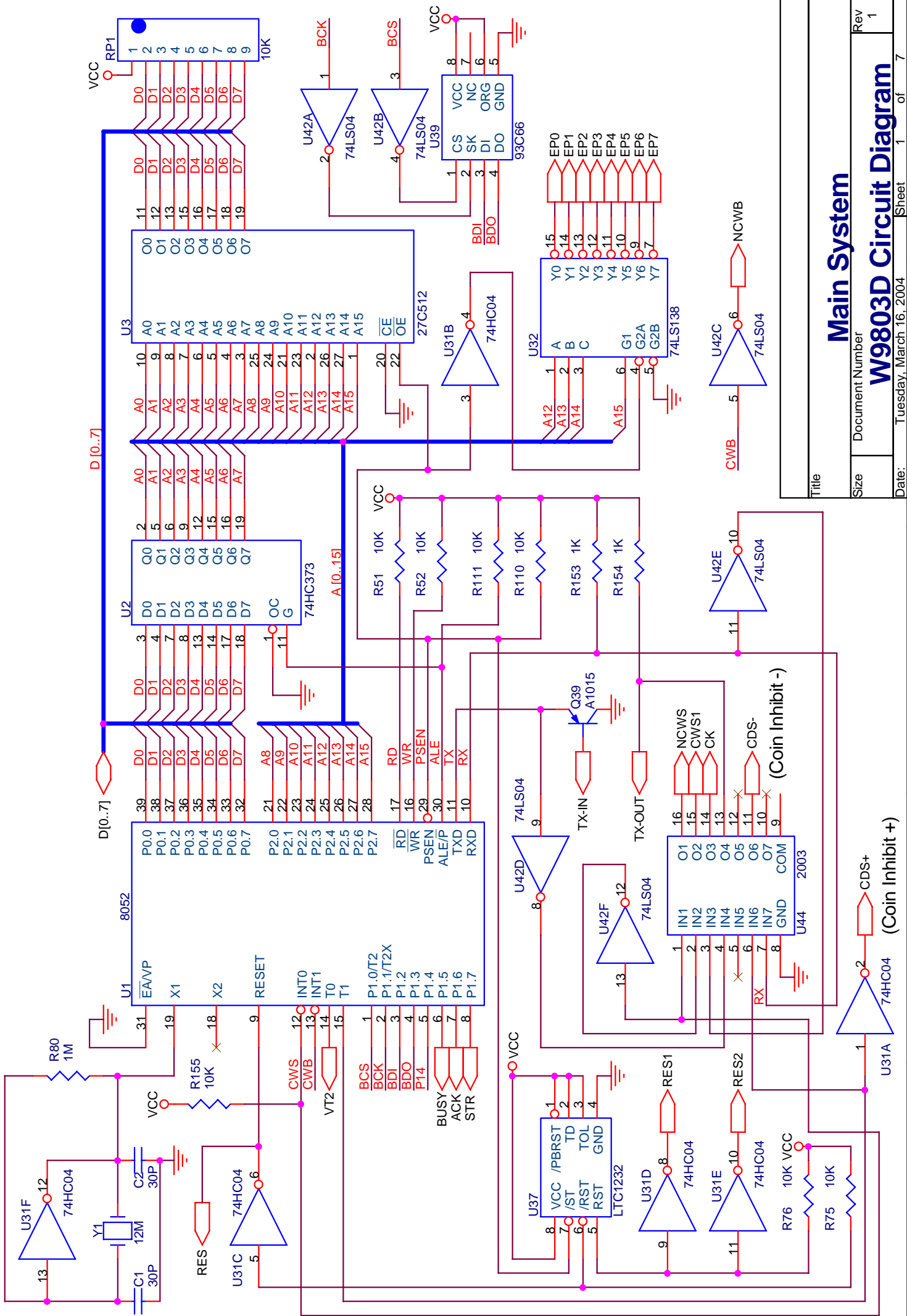
Button2 Lamp
Button1 Lamp
GND
Descend SW
Right SW
Front SW
GND

Machine Model

Candy Machine / Push Button

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WMH-188C Wiring Diagram

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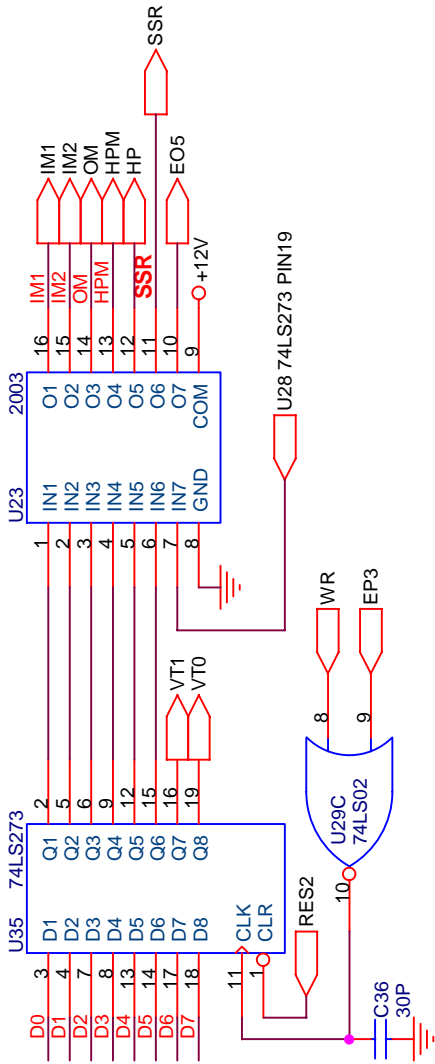


Main System

W9803D Circuit Diagram

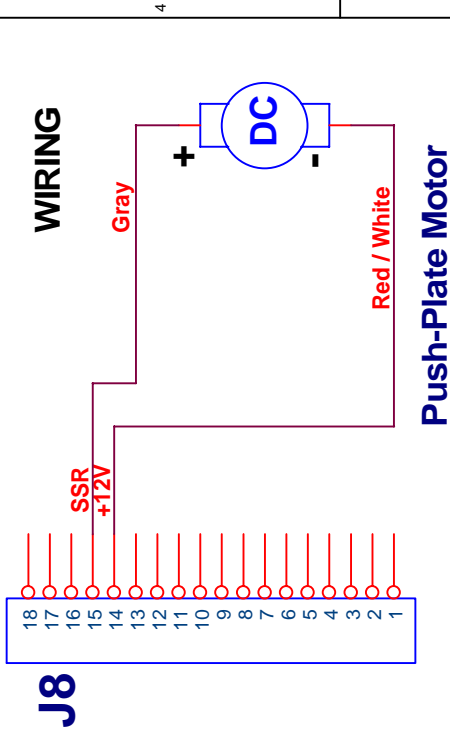
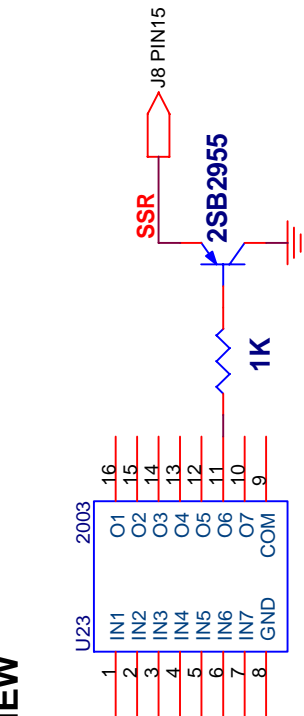
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CIRCUIT DIAGRAM



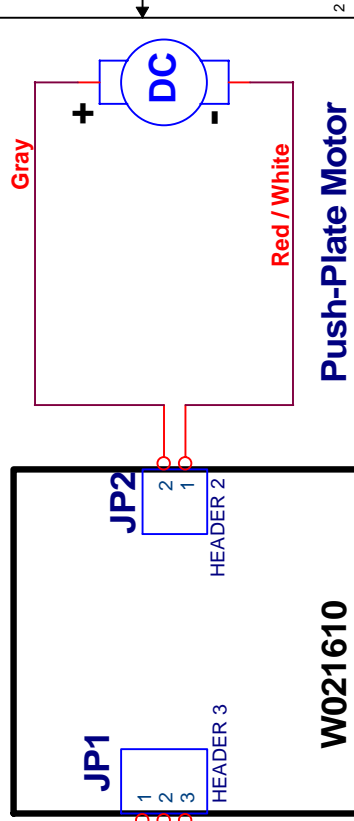
ORIGINAL

NEW



WIRING

Push-Plate Motor



Push-Plate Motor

Push-Plate Control

Document Number

WMH-188C Wiring Diagram

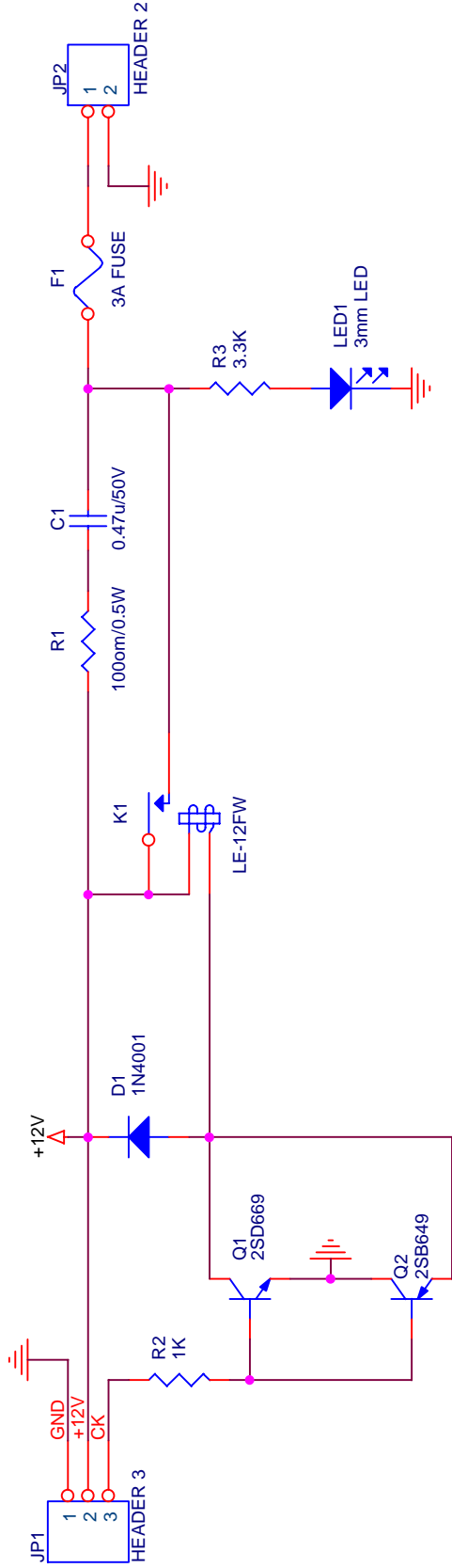
Date: Tuesday, March 16, 2004

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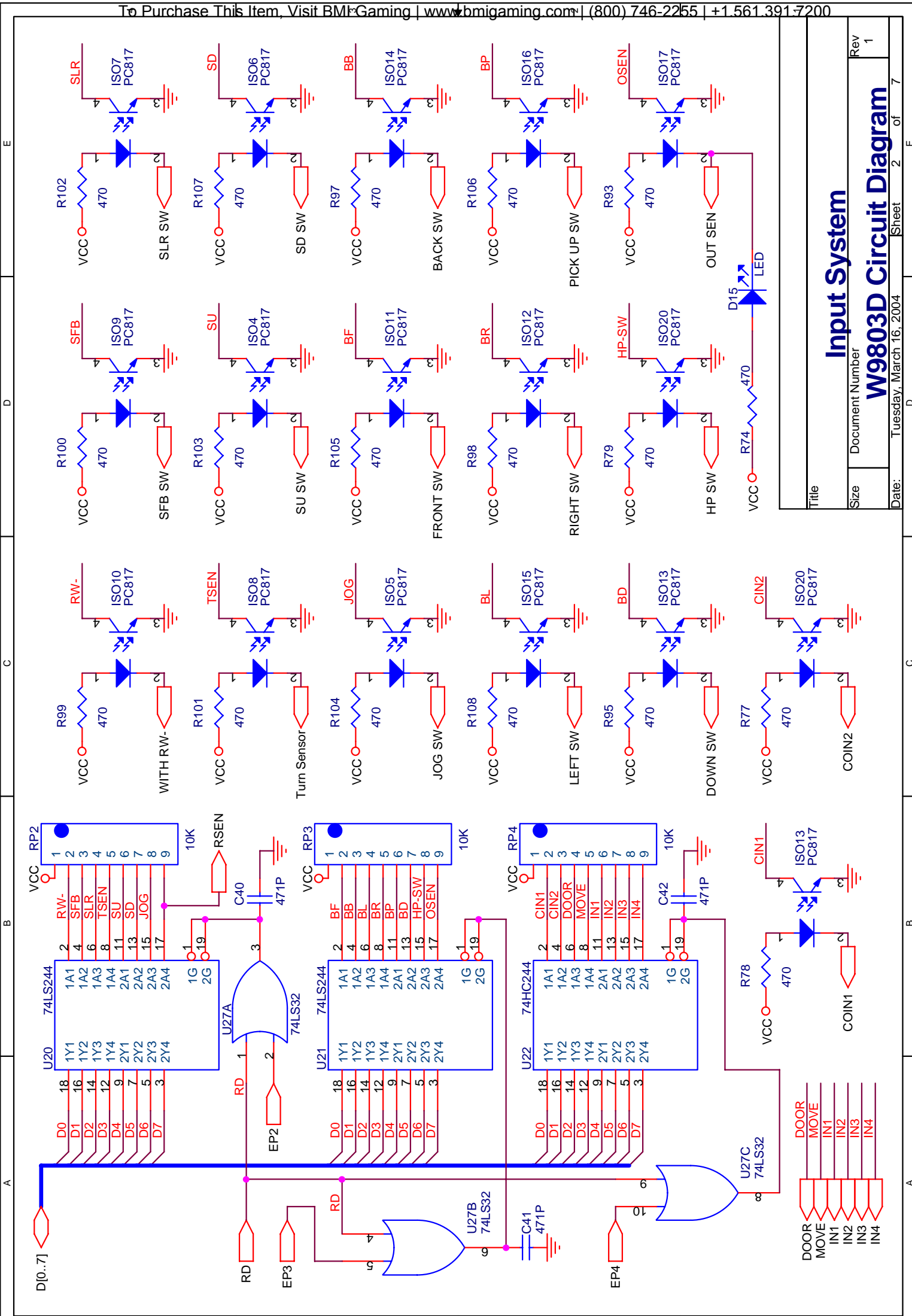
Rev

1

W021610 CIRCUIT DIAGRAM



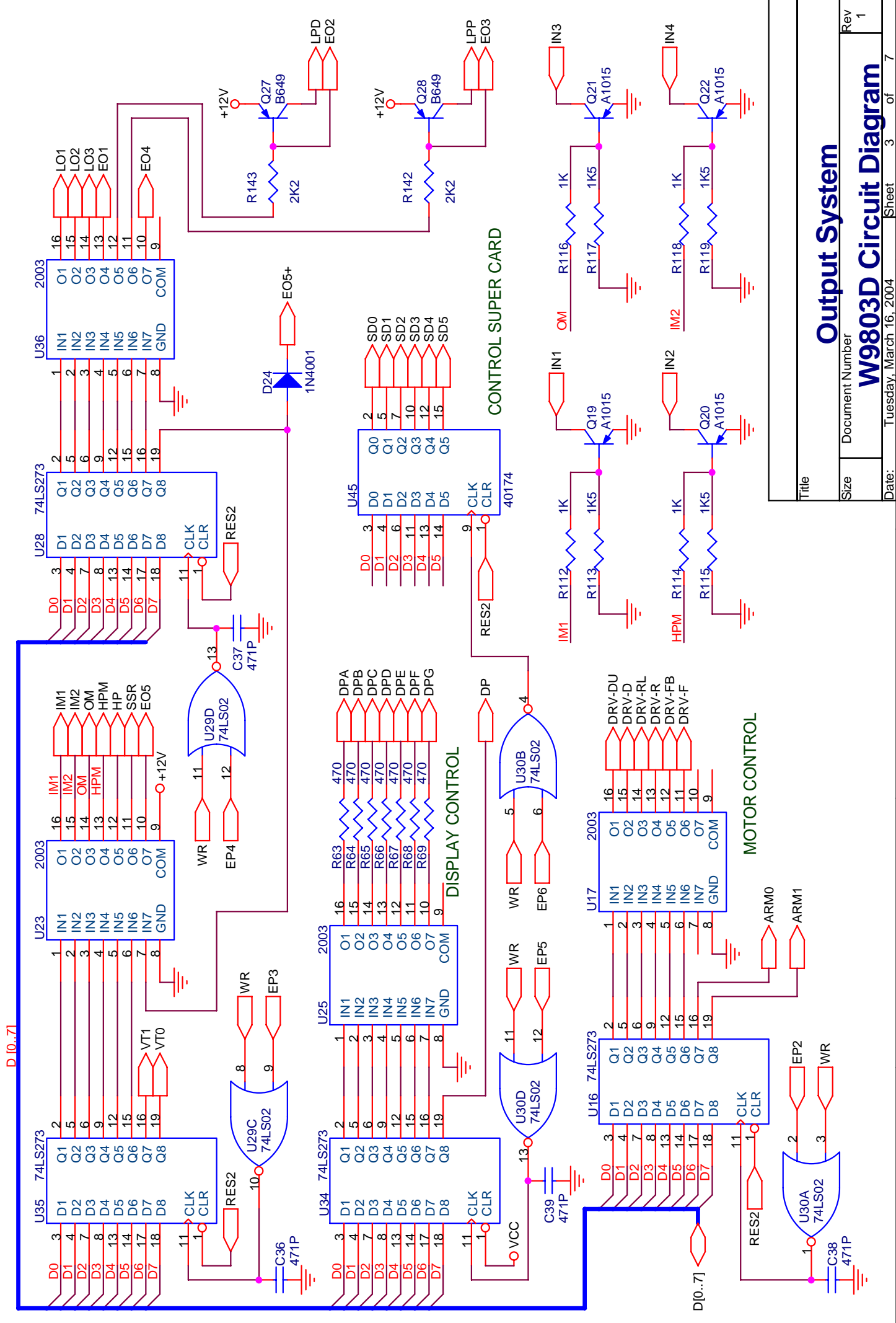
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Input System

W9803D Circuit Diagram

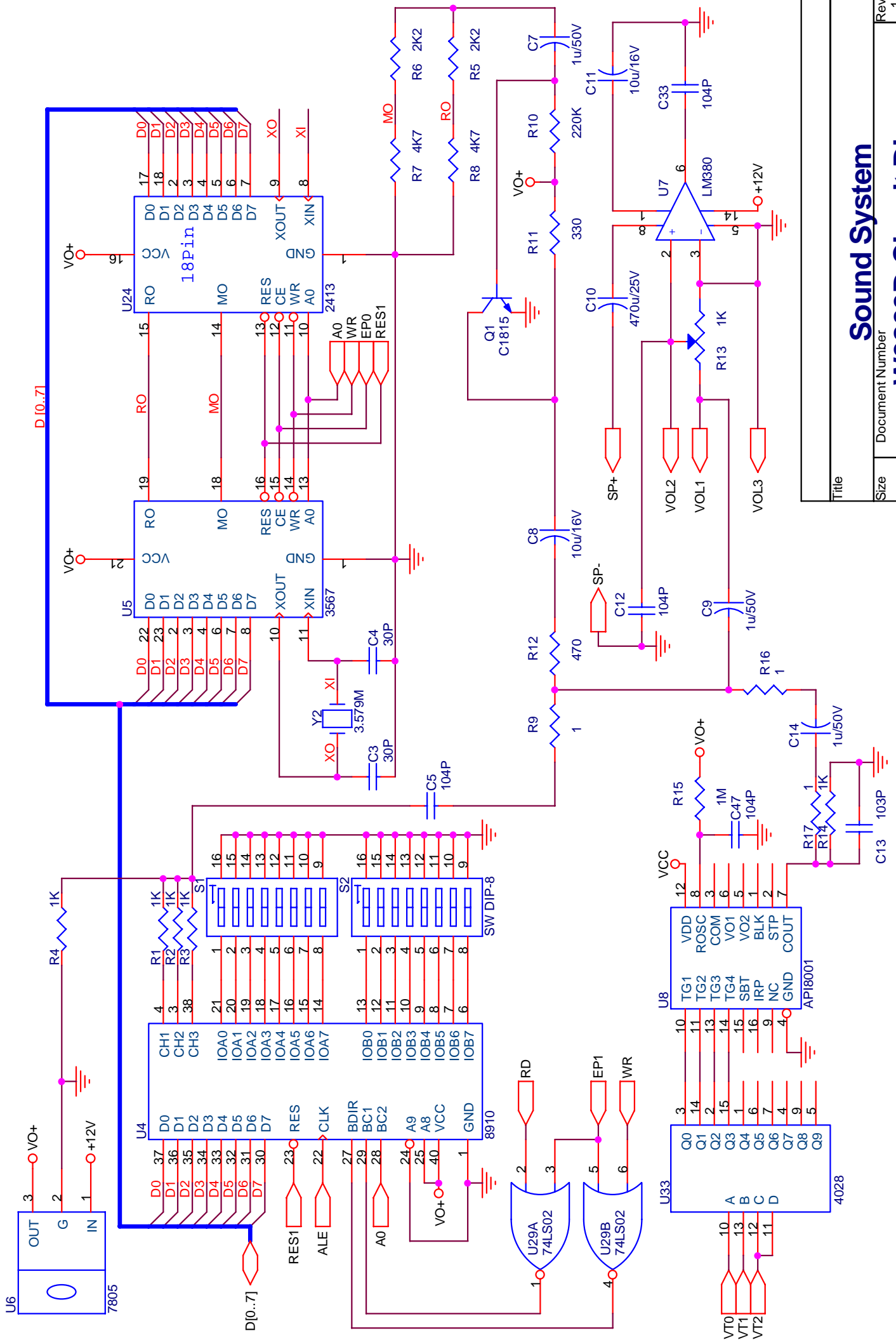
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Output System

W9803D Circuit Diagram

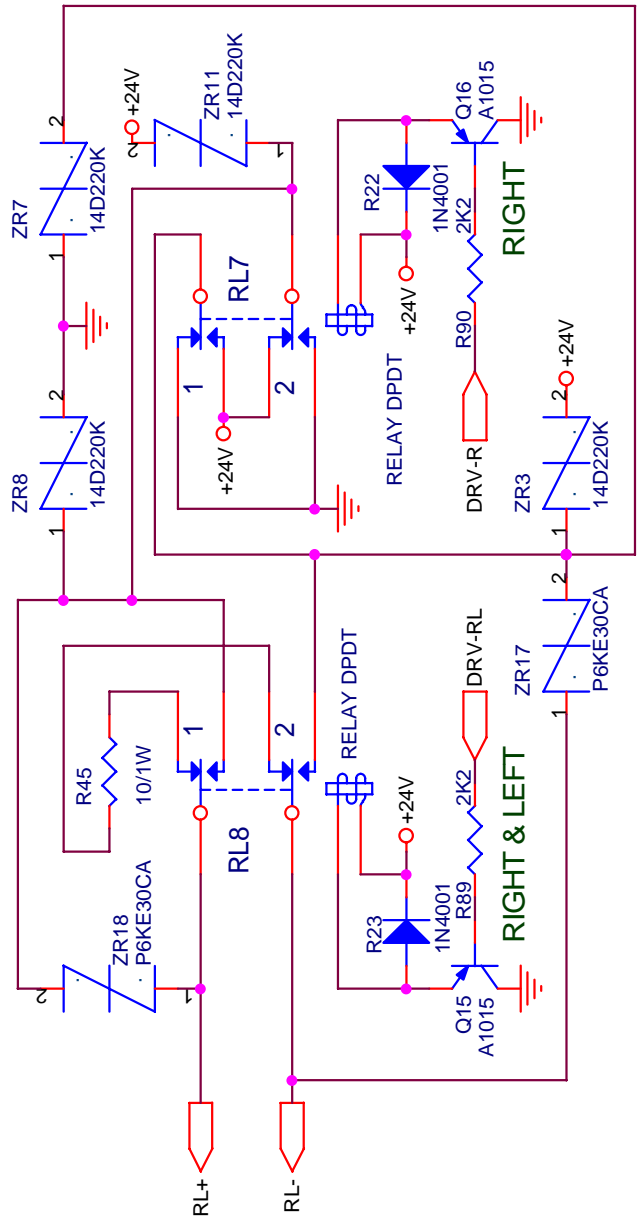
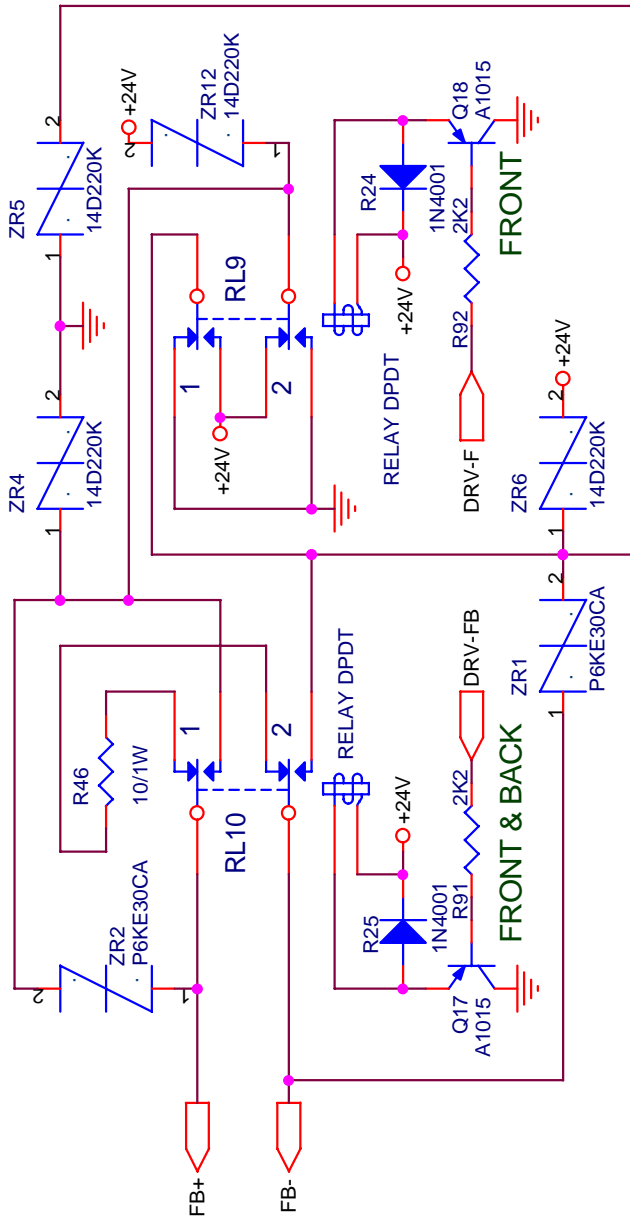
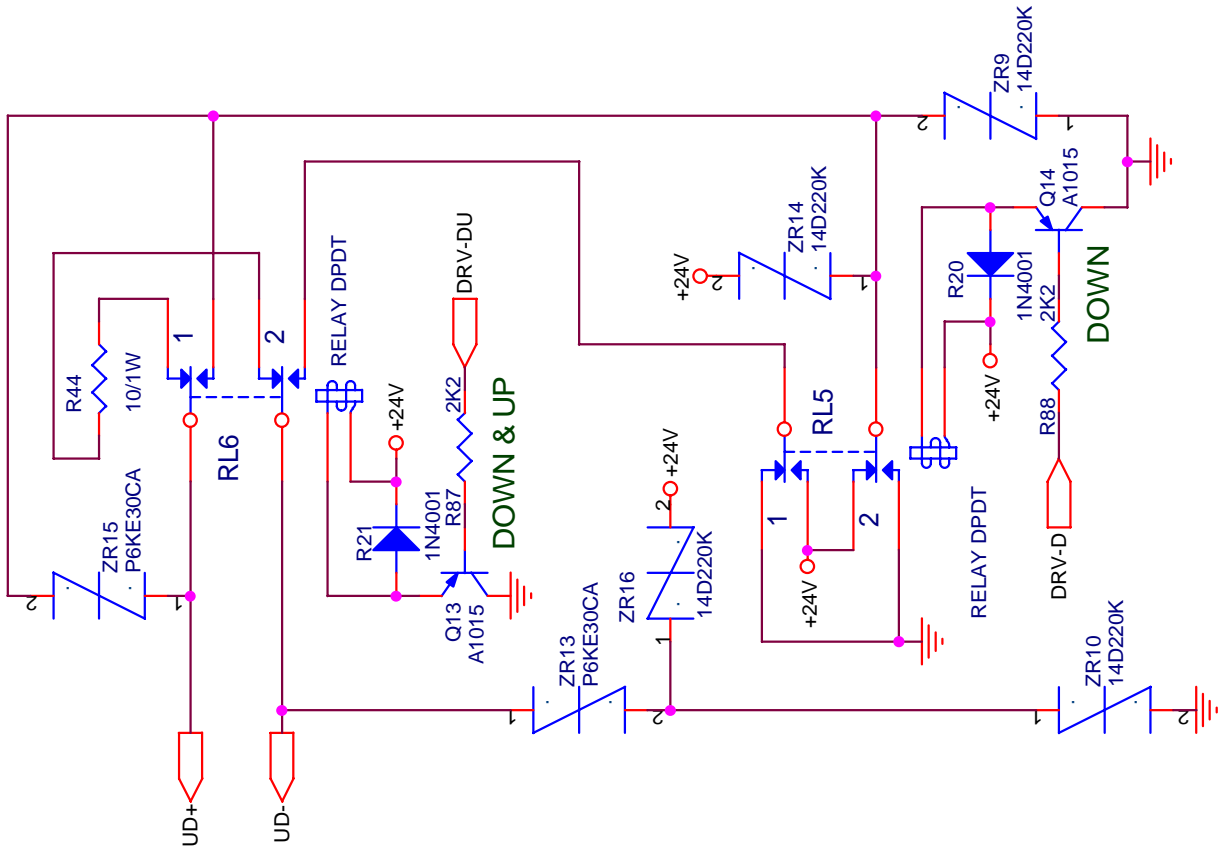
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Sound System

W9803D Circuit Diagram

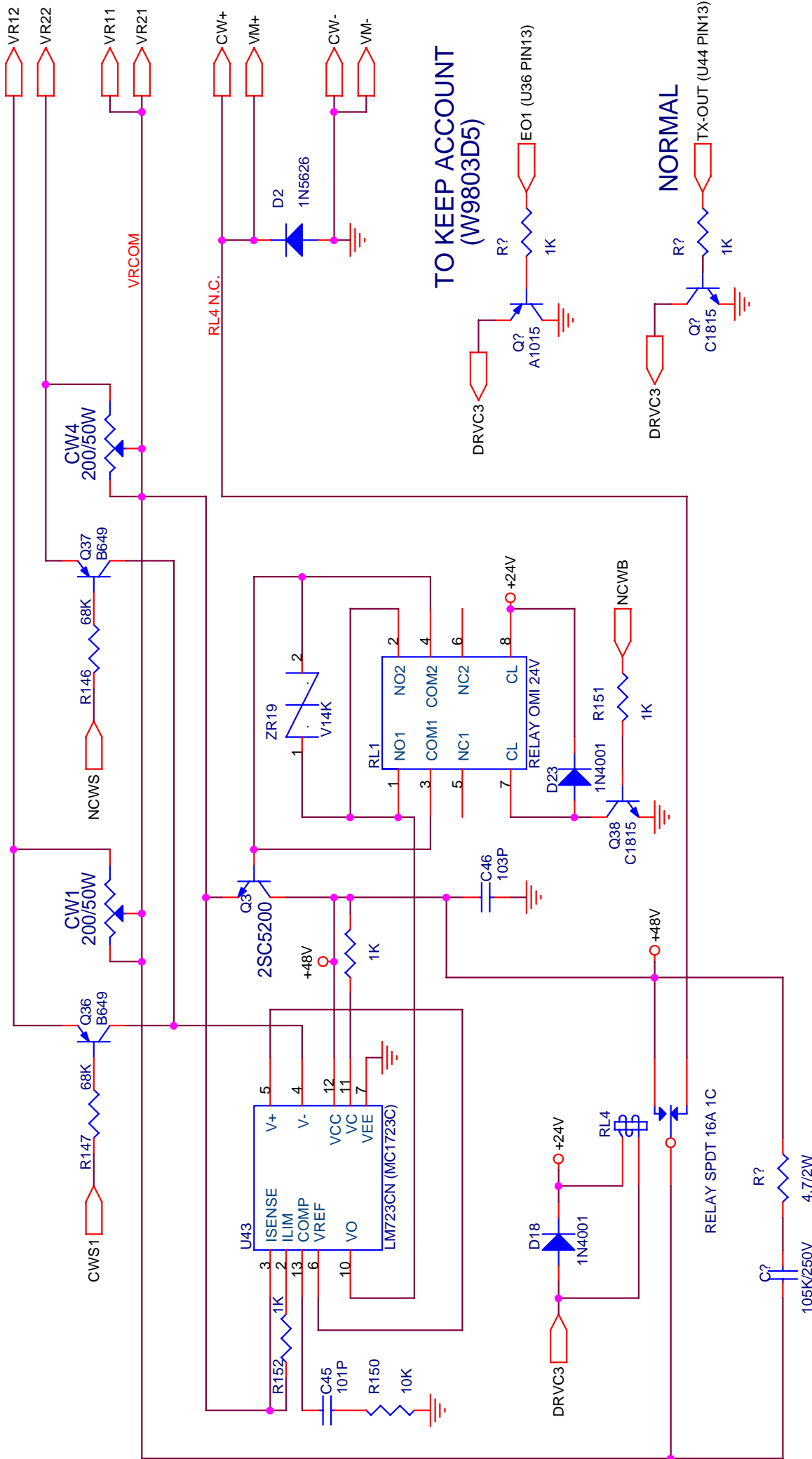
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Motor Control

W9803D Circuit Diagram

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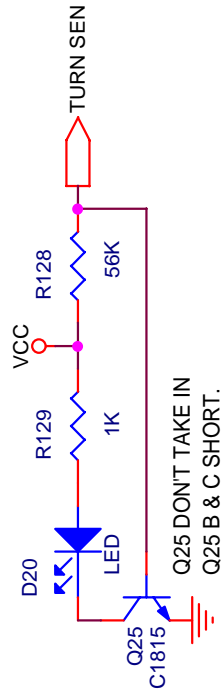
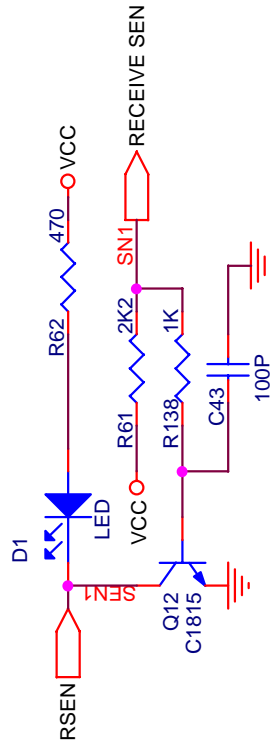
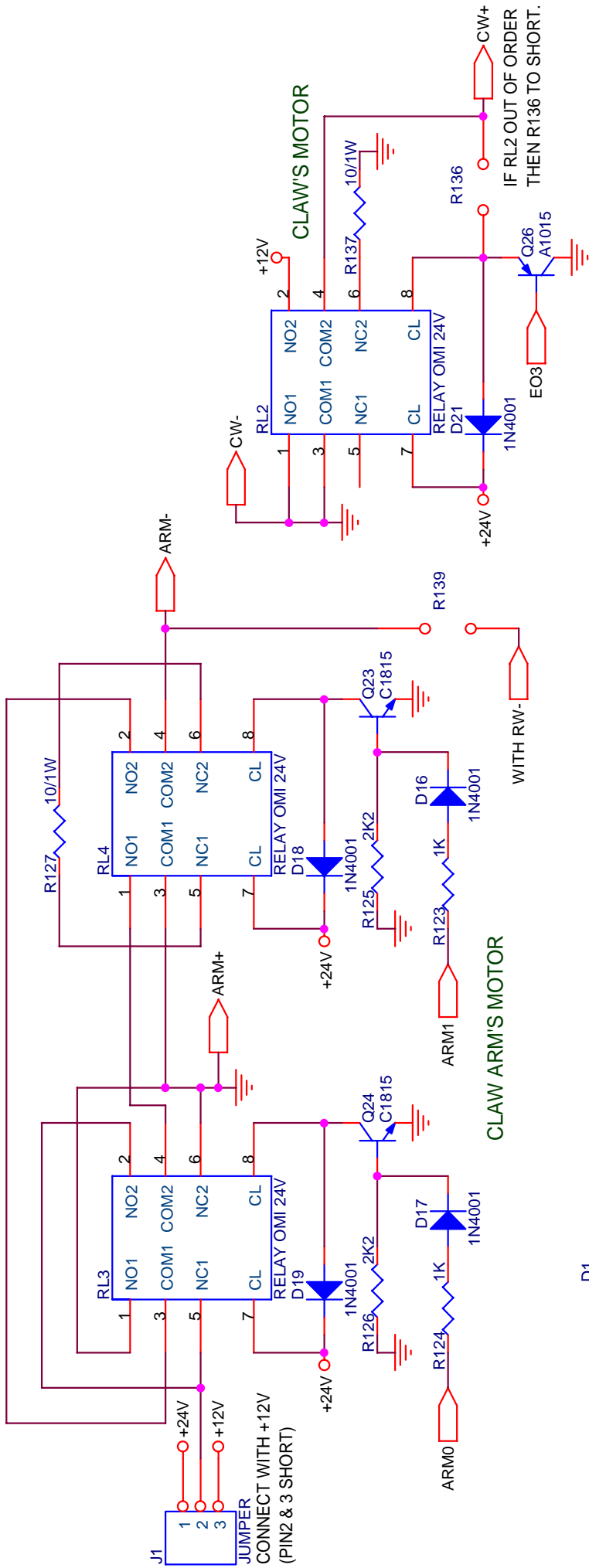


**TO KEEP ACCOUNT
(W9803D5)**

NORMAL

3-Claws Control W9803D Circuit Diagram

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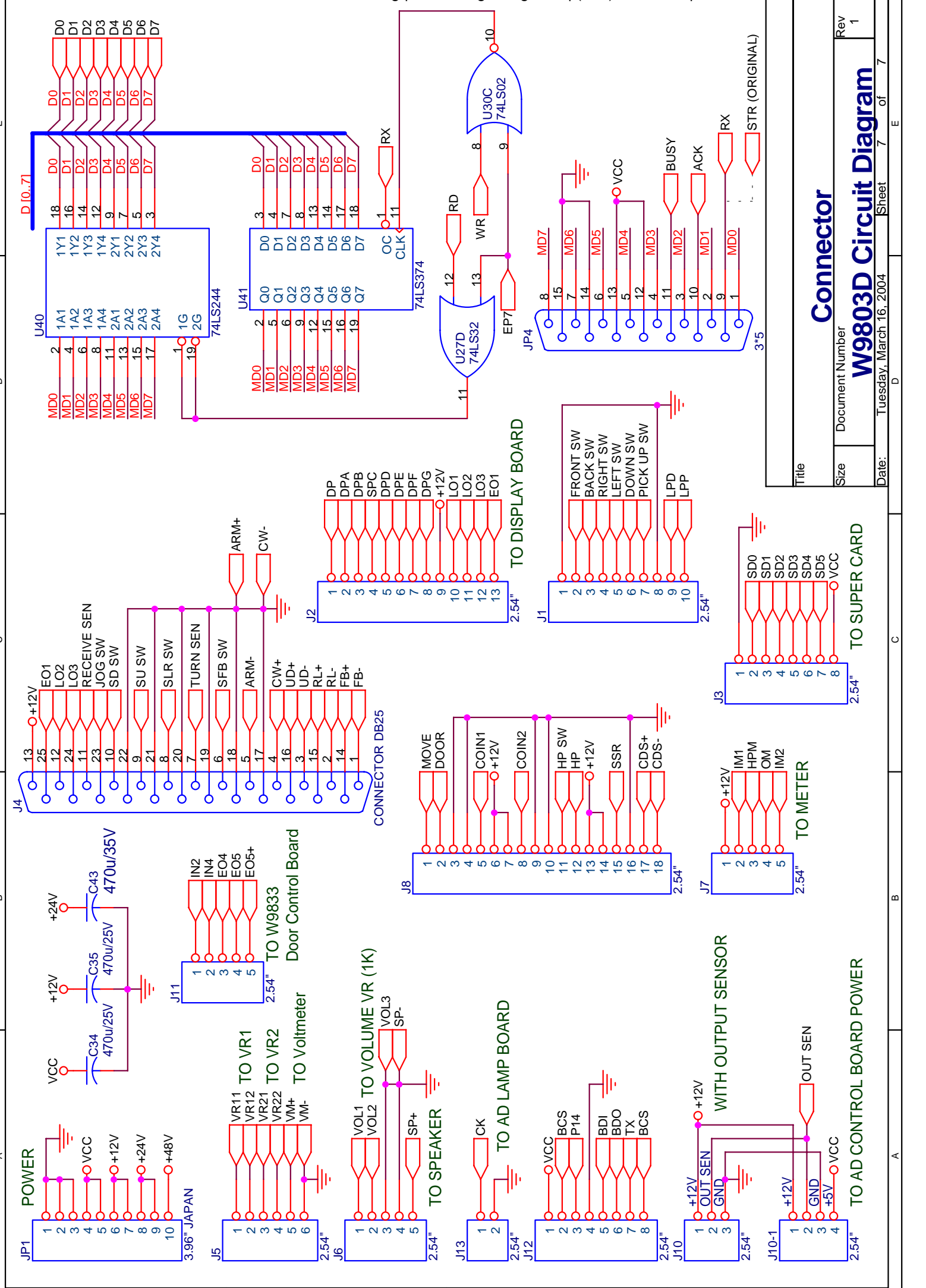


Q25 DONT TAKE IN
Q25 B & C SHORT.

2-Claws Control

W9803D Circuit Diagram

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Connector

W9803D Circuit Diagram

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