

# **NAUGHTY BOY**

**OPERATION AND MAINTENANCE  
MANUAL**

**CINEMATRONICS, INC.  
1841 FRIENDSHIP DRIVE  
EL CAJON, CA 92020  
(714) 562-7000**

**TELEX: CINEMAT ELCJ 697891  
CALL TOLL FREE: (800) 854-2666  
IN CALIFORNIA CALL: (714) 562-7000  
SALES: 8-5 (PST) WEEKDAYS  
SERVICE: 8-5 (PST) WEEKDAYS**

NAUGHTY BOY  
GAME MANUAL

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CINEMATRONICS, INC.

**WARNING:**

This equipment generates, uses, and can radiate radio frequency energy; and, if not installed and used in accordance with the Instruction's Manual, may cause interference to radio communication. As temporarily permitted by regulation, it has not been tested for compliance pursuant to Subpart J of Part 15 of FCC rules, which is designed to provide reasonable protection against such interference. Operation of this equipment in a residential area is likely to cause interference in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.

## WARRANTY

Cinematronics, Inc. warrants the goods to be free from defects in material and workmanship under normal use and service for a period of ninety (90) days from the date of shipment from factory. Cinematronics makes no representation or warranties concerning the goods whether express or implied by operation of law or otherwise, including those of merchantability or fitness for any particular purpose, or with respect of patent infringement, except as may be specifically made herein. Cinematronics limits its warranty obligations herein to the repair or replacement of such parts which have been returned to Cinematronics' plant at purchaser's expense and which examination shall disclose Cinematronics' satisfaction to have been so defective and to the shipment of such repaired or replacement parts to the purchaser F.O.B. the shipping point.

This warranty does not apply to any Cinematronics' product which has been altered or repaired by unauthorized personnel or service facilities or any products which have had the unit serial number altered or removed.

Upon acceptance of the goods, the purchaser agrees to assume all liability for damages and/or bodily injury by the purchaser or any other person and to hold Cinematronics, Inc. harmless from liability or claims arising from the use of the goods by any person. Purchaser further agrees to indemnify Cinematronics, Inc. from any liability, claim, cause of action or litigation resulting from the use or misuse of the goods by any person.

Parts returned for warranty service must be packaged so that no damage is incurred during the shipment. Full documentation and instructions must accompany returned parts. Parts must be shipped prepaid to:

Cinematronics, Inc.  
1841 Friendship Drive  
El Cajon, CA 92020

CUSTOMER SERVICE PROCEDURES  
FOR AUTHORIZED CINEMATRONICS' DISTRIBUTORS

It is the desire of Cinematronics, Inc. to provide efficient and courteous service should the need arise. We have a fully staffed Customer Service Department and encourage you to call our toll-free number: (800) 854-2666 for technical assistance between the hours of 8:00 A.M. and 5:00 P.M., California time, Monday through Friday.

In order to provide the very best service possible, the following procedure for ordering or returning parts must be followed:

1. All equipment ordered from Customer Service, whether in or out of Warranty, must be placed with a Distributor's purchase order, either by mail or verbally by telephone.
2. Advance replacement items may be obtained only during the term of the Warranty and when such items are available, using the same procedure as when ordering parts. When ordering a PCB, please include with your order the game serial number and the number of the PCB you wish replaced.
3. All items received as advance replacements will, after a period of thirty (30) days, become the property of the Distributor, with applicable charges applied in the event Customer Service has not received the defective item against which the advance replacement was made.
4. The Distributor must call this facility for an RMA number prior to returning any item. Please be prepared to provide us with the game serial number and the PCB number when requesting an RMA.
5. In all situations covered above, and in all other situations, the Warranty offered by Cinematronics, Inc. is applicable and should be fully understood.
6. Parts returned for service must be packaged so that no damage is incurred during the shipment. Cartons without a prominently displayed RMA number will not be accepted. Full

documentation including game serial number, PCB number on outside of package, and reason for return must accompany parts. Ship prepared to:

Cinematronics, Inc.  
Customer Service Department  
1841 Friendship Drive  
El Cajon, CA 92020

(800) 854-2666

(714) 562-7000

## RECEIVING AND INSTALLING

### RECEIVING INSPECTION

Your game was shipped in ready-to-play condition. However, after removal of the shipping carton, a brief visual examination is suggested.

Naturally, you will want to make note of any physical damage to the game cabinet and its external components for freight claim purposes. Considering the quality of the shipping carton, any damage to the exterior would indicate possible interior damage as well.

The interior of the game should also undergo a brief examination for: loose mounting hardware (check to be sure that the major components are still securely mounted); disconnected or loose wires, cables or harnesses; electronic devices loose in their sockets; etc.

At this time the game serial number should be logged. Remember that the game serial number will be required if you need service from your distributor. Please complete the postage-free reply card and mail immediately.

### ELECTRICAL REQUIREMENTS

Unless specified otherwise, your game was shipped to operate at 115 VAC, 50/60 Hz.

A good earth ground is essential for the proper operation of this game or for that matter, any electronic device. Problems with instability and erratic operation of computer-type devices can usually be traced to an ineffective ground system. Therefore, plug the game into a properly wired three prong outlet. If a three prong to a two prong AC adaptor must be used, an alternate method of grounding the third prong must be used.

## NAUGHTY BOY

### GAME DESCRIPTION

#### GAME PLAY

Game play for Naughty Boy proceeds through four different screens. These screens will appear in sequence. Each time a player successfully maneuvers through all four screens, the screens repeat their appearance, with more objects moving at higher speeds. In addition, after successfully completing even numbered rounds, the player is awarded a bonus round.

#### SCREEN ONE

This screen begins with Naughty Boy standing in a forest. In front of him are several monsters. There is also a safety zone that can be entered through two red doors, which the monsters cannot enter. The same type of doors appear on fences along the side of the screen. Naughty Boy can appear on the other side of the screen by passing through one of these doors.

As Naughty Boy moves towards the top of the screen, the images scroll downwards. Above the forest is a series of fences, then a group of ponds, and finally, walls of a fortress. Some goblins guard the top portion of the screen.

Naughty Boy must maneuver his way through the forest, past the fences and ponds and destroy the flags that are flying on the fortress. The player controls Naughty Boy with a four position joystick. In addition, a throw button allows the player to throw rocks at objects to destroy them.

Naughty Boy must avoid contact with the monsters and goblins or he will be destroyed. Also, a dragon will randomly appear on the ponds breathing fire. If Naughty Boy is hit by the fire, he will be destroyed.

The safety zone allows Naughty Boy to attack the monsters and goblins without danger by throwing rocks at them outside. A timer begins to decrease whenever Naughty Boy is inside the

safety zone. Once the timer reaches zero, the red doors disappear and Naughty Boy can be attacked.

Periodically, a question mark will appear on the screen. If Naughty Boy hits the question mark with a rock, he will become invincible to attack from the monsters and goblins for a short time. Naughty Boy can still be destroyed by the dragon. After the question mark is hit, different objects will appear in the same spot. These objects will score bonus points when hit with rocks.

Once Naughty Boy reaches the fortress, he must hit all the flags with rocks. Two flags can be destroyed with one throw, if the rock lands in between two flags. Once all the flags are destroyed, Naughty Boy will proceed to the next screen.

If Naughty Boy is destroyed before he is able to destroy all the flags, he will reappear at the starting position of the screen he is currently in. Any flags destroyed by Naughty Boy remain destroyed.

Naughty Boy always throws in the direction that he is facing. The distance a rock is thrown is determined by how long the throw button is depressed.

#### SCREEN TWO

This screen is an open field. A safety zone is in the center of the field. Monsters and goblins are scattered around the field. Robots guard the fortress at the top of the screen.

Play proceeds as in the first screen. The dragon appears randomly in the field above the safety zone. Once all the flags are destroyed, Naughty Boy will appear in the next screen.

#### SCREEN THREE

Naughty Boy begins his adventure in the center of a maze. Goblins and monsters will chase Naughty Boy through the maze. At the top of the maze is the safety zone. Above the safety zone is the fortress. No dragons appear in this screen.

#### SCREEN FOUR

In this screen Naughty Boy is standing between the safety zone and some ponds. The dragon will randomly appear in the ponds. Above the ponds is a series of fences and walls. Once Naughty Boy passes through these, he reaches the fortress.

If all the flags are destroyed in this screen, Naughty Boy will appear in Screen One. However, Naughty Boy must fight more objects which are moving faster. This is true for every screen that Naughty Boy goes through.

#### BONUS PLAY

After successfully completing even numbered rounds, the player is given a bonus play. During bonus play, Naughty Boy flies back and forth at the top of the screen in a balloon. A fuel gauge above the balloon indicates how much bonus play is left. At the bottom of the screen, a female monster runs back and forth.

Naughty Boy throws objects out of the balloon and tries to hit the monster on the head. If the monster is struck, she changes expressions momentarily. The fuel gauge decreases as play proceeds. Play continues until the fuel runs out.

Play continues until all of a player's Naughty Boys are destroyed. A player can earn one extra Naughty Boy based upon his score achieved and the operator adjustable level selected.

#### SCORING

Monsters, Goblins & Robots	- 250 Points to 9000 Points
Flags	- 200 Points to 2000 Points
Bonus Objects	- 500 Points to 9000 Points

#### FEATURES

1. Number of Naughty Boys per game operator adjustable is 2, 3, 4 or 5.

2. Point level at which the extra Naughty Boy is awarded is operator adjustable at 10,000, 30,000, 50,000 or 70,000 points.

3. Four coinage options.
4. Easy/hard switch for longer game life.
5. Four different screens and bonus play round.
6. Fifty difficulty levels.
7. Throw distance controlled by the throw button.

NAUGHTY BOY  
OPTION SWITCH SETTINGS

OPTION	FACTORY SETTING	DESCRIPTION	1	2	3	4	5	6	7	8
NUMBER OF NAUGHTY BOYS		2	ON	ON						
	X	3	OFF	ON						
		4	ON	OFF						
		5	OFF	OFF						
EXTRA BOY		10,000 Points			ON	ON				
	X	30,000 Points			OFF	ON				
		50,000 Points			ON	OFF				
		70,000 Points			OFF	OFF				
CREDITS		2 Coin, 1 Play					ON	ON		
	X	1 Coin, 1 Play					OFF	ON		
		1 Coin, 2 Play					ON	OFF		
		4 Coin, 3 Play					OFF	OFF		
DIFFICULTY	X	Easier							ON	
		Harder							OFF	
GAME TYPE		Upright								ON
		Cocktail								OFF

## ROUTINE MAINTENANCE & SERVICE

Because of the solid state electronic circuitry, this machine should require very little maintenance and only occasional adjustments. However, it is necessary to take measures to ensure this.

The volume control is located on the rear of the coin door and can be accessed by opening the coin door.

The video monitor has been properly adjusted before shipping. Occasionally minor adjustments are necessary. See monitor specifications and schematics for technical information. Adjustment controls for the monitor are located at the rear of the monitor.

This machine should be serviced only by a qualified technician.

Do not make any adjustments on this machine while the power is on.

For service information, contact:

CINEMATRONICS, INC.  
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## POWER SUPPLY

The computer board in this game operates most efficiently and reliably when the power supply is set so that the voltage on the board is 5.0 volts,  $\pm 0.1$  volts. To check this, place a meter across 5 volts and ground at the edge connector. If necessary, adjust the screwdriver control on the power supply so the meter reads between 4.9 and 5.1 volts.

**NAUGHTY BOY**  
**PARTS LISTS**

PARTS LIST  
NAUGHTY BOY TOP ASSEMBLY

CINEMATRONICS PART NUMBER	DESCRIPTION	QTY.
38-10640-01	<u>Assy, Fluorescent Lamp</u>	<u>1</u>
01-10505-01	Lamp, Fluorescent	1
26-10588-01	Fixture, Lamp, Fluorescent	1
87-11668-01	Assy, Harn Fluorescent Lamp	1
25-10579-01	Ty Rap, W/O Eyelet	7
25-10580-01	Ty Rap, W/Eyelet	3
34-11271-01	Wire, 18AWG, Twtd, Blk/Wht	
35-10614-01	Pin, Male, Molex	2
 <u>38-11698-02</u>	<u>Assy, Coin Door W/Lamps</u>	<u>1</u>
20-10896-11	Coin Door W/Lamps Cocktail	1
22-10899-01	Decal, "Cinematronics"	1
25-10556-01	Nut, Hex #4-40	3
25-10570-01	Washer, Lock #4 Internal	3
38-11702-02	Assy, Coin Meter/Vol Ctl	1
20-10868-11	Brkt, Short Vol. Cntl/Counter	1
25-10557-01	Nut, Hex #6-32	2
25-10563-01	Screw, Machine, #6-32 x 1/2" Pan Hd P	2
25-10571-01	Washer, Lock, #6 Internal	2
<u>38-11757-01</u>	<u>Assy, Coin Meter</u>	<u>1</u>
29-11754-01	Meter, Coin 6 Volt (KEISU NR-06)	1
35-10614-01	Pin, Male, Molex	2
38-10961-04	Assy, Vol Ctl	1
26-10589-01	Knob, Volume	1
51-10722-01	Pot, W. Lk. Wsr/Nut, 10K Ohm	1
87-10955-01	Assy, Har, Vol Ctl	1
34-11719-01	Wire, 22AWG Blue/Red/Blk Twist	
35-10614-01	Pin, Male, Molex	1
35-10615-01	Pin, Female, Molex	2
<u>87-11680-01</u>	<u>Assy, Harn Coin Door</u>	<u>1</u>
25-10579-01	Ty Rap, W/O Eyelet	<u>4</u>
25-10905-01	Clamp, Cable 3/16", Plastic	4
34-10597-01	Wire, 22AWG, Blk	
34-10599-01	Wire, 22AWG, Yellow	
34-10603-01	Wire, 22AWG, Grey	
34-10906-01	Wire, 22AWG, Twisted, Brown/White	
41-10885-01	Conn, 9 Cir F, Molex 03-09-2092	1

PARTS LIST  
NAUGHTY BOY TOP ASSEMBLY

CINEMATRONICS PART NUMBER	DESCRIPTION	QTY.
<u>38-11434-01</u>	<u>Assy, Monitor, Color Raster</u>	<u>1</u>
<u>87-11711-01</u>	<u>Assy, Harn Raster Mon to CPU</u>	<u>1</u>
<u>34-10597-01</u>	<u>Wire, 22AWG, Blk</u>	<u>2</u>
<u>34-10606-01</u>	<u>Wire, 22AWG, Red</u>	
<u>34-10598-01</u>	<u>Wire, 22AWG, Green</u>	
<u>34-10605-01</u>	<u>Wire, 22AWG, Blue</u>	
<u>34-10607-01</u>	<u>Wire, 22AWG, White</u>	
<u>35-10614-01</u>	<u>Pin, Male, Molex</u>	<u>5</u>
<u>35-10615-01</u>	<u>Pin, Female, Molex</u>	<u>7</u>
<u>41-10954-01</u>	<u>Conn, 6 Cir F, Molex 03-09-2062</u>	<u>1</u>
<u>41-10651-01</u>	<u>Conn, Female Crimp Term, Molex</u>	<u>1</u>
<u>41-11724-01</u>	<u>Conn, 6 Cir Crimp Term 09-50-7061</u>	<u>1</u>
<u>25-10579-01</u>	<u>Ty Rap, W/O Eyelet</u>	<u>3</u>
 <u>38-11737-01</u>	<u>Assy, Circuit Panel</u>	<u>1</u>
<u>38-11733-02</u>	<u>Assy, Boards W/Vol Mod</u>	<u>1</u>
<u>38-11738-02</u>	<u>Assy, Board MT-09 W/Vol Mod</u>	<u>1</u>
<u>34-10594-01</u>	<u>Wire, 30AWG, Blue, KYNAR</u>	
<u>63-10781-01</u>	<u>Cap, .005mf 50V DISC 20%</u>	<u>1</u>
<u>38-11738-01</u>	<u>Assy, Board MT-09</u>	<u>1</u>
<u>38-11739-01</u>	<u>Assy, Board MT-10</u>	<u>1</u>
<u>20-11687-01</u>	<u>Plate, Mntg Logic/Audio</u>	<u>1</u>
<u>25-10557-01</u>	<u>Nut, Hex #6-32</u>	<u>4</u>
<u>25-11756-01</u>	<u>Screw, Machine #6-32 x 2" PH PN</u>	<u>4</u>
<u>25-11752-01</u>	<u>Washer, #6 Lock (Split Ring)</u>	<u>4</u>
<u>25-11753-01</u>	<u>Spacer, Nylon #6-5/8" (Smith 4025)</u>	<u>8</u>
<u>25-11749-01</u>	<u>Washer, #6 Flat</u>	<u>4</u>
 <u>32-11736-01</u>	<u>Cabinet, Upright Color Raster SH</u>	<u>1</u>
 <u>38-11673-01</u>	<u>Assy, Ctl Pnl</u>	<u>1</u>
<u>20-11673-01</u>	<u>Ctl Pnl</u>	<u>1</u>
<u>22-11674-01</u>	<u>Decal, Ctl Pnl</u>	<u>1</u>
<u>37-11192-01</u>	<u>Button, Short, White, Cocktail</u>	<u>2</u>
<u>37-11192-02</u>	<u>Button, Short, Red</u>	<u>1</u>

PARTS LIST  
NAUGHTY BOY TOP ASSEMBLY

CINEMATRONICS PART NUMBER	DESCRIPTION	QTY.
37-11373-01	Switch, W/Plastic Mntg Brkt, Short	3
25-10559-01	Nut, Pal 5/8"	3
25-10558-01	Nut, Hex, #10-24	4
25-10572-01	Washer, Lock, #10 Internal	8
25-10909-01	Bolt, Carriage, 3/16" x 3/4", Blk OX	4
50-11763-01	Assy, Joystick 4 Pos WICO 15-9518	1
25-11688-01	Screw, Machine 8-32 x 1/2"	4
<u>87-11679-01</u>	<u>Assy, Harn Ctl Pnl</u>	<u>1</u>
34-10596-01	Wire, 22AWG/TC, Buss	
34-10597-01	Wire, 22AWG, Blk	
34-10607-01	Wire, 22AWG, White	
34-10598-01	Wire, 22AWG, Green	
34-10600-01	Wire, 22AWG, Purple	
34-10599-01	Wire, 22AWG, Yellow	
34-10603-01	Wire, 22AWG, Grey	
34-10604-01	Wire, 22AWG, Brown	
34-10605-01	Wire, 22AWG, Blue	
34-10602-01	Wire, 22AWG, Orange	
35-10614-01	Pin, Male, Molex	9
41-10885-01	Conn, 9 Cir F, Molex 03-09-2092	1
25-10579-01	Ty Rap, W/O Eyelet	8
23-11152-01	Tape, Foam 3/4"	
<u>38-10894-01</u>	<u>Assy, Coin Drawer</u>	<u>1</u>
20-10862-01	Brkt, Coin Box Tong	1
20-10864-01	Handle, Coin Box	1
20-10871-01	Coin Box	1
20-10872-01	Cover, Coin Box	1
<u>38-11700-01</u>	<u>Assy, P.S./Transformer (Raster)</u>	<u>1</u>
20-11606-01	Plate, Mtg, P/S, Transformer	1
25-10551-01	Bolt, Carriage, 3/16" x 1/2" Black O	8
25-11607-01	Stand-Off, Nylon, Locking, DLCBS-14	4
25-11612-01	Washer, Lock #8	8
25-11613-01	Nut, #8-32	8

PARTS LIST  
NAUGHTY BOY TOP ASSEMBLY

CINEMATRONICS PART NUMBER	DESCRIPTION	QTY.
<u>38-11723-01</u>	Assy, Transformer ISOL Ravenswood	<u>1</u>
<u>43-11704-01</u>	Transformer, ISOL Ravenswood	<u>1</u>
<u>87-11688-01</u>	Assy, Harn Trans/Monitor	<u>1</u>
<u>87-11768-01</u>	Assy, Harn Trans/P.S.	<u>1</u>
<u>87-11767-01</u>	Assy, Harn Trans Gnd.	<u>1</u>
<u>81-11685-01</u>	PCA, Regulator +12V, -5V	<u>1</u>
<u>20-10520-01</u>	Heat Sink, Thermalloy 6071B	<u>2</u>
<u>20-10521-01</u>	Heat Sink, Thermalloy 6072B	<u>2</u>
<u>25-10556-01</u>	Nut, Hex #4-40	<u>4</u>
<u>25-10570-01</u>	Washer, Lock, #4 Internal	<u>4</u>
<u>25-10974-01</u>	Screw, Machine 4-40-3/8" Pan HD PH	<u>4</u>
<u>41-10661-01</u>	Conn, 6 Cir WAF, Molex 09-18-506	<u>1</u>
<u>53-10732-01</u>	Res, 470 Ohm 1/4W 5% C	<u>1</u>
<u>53-10734-01</u>	Res, 1K Ohm 1/4W 5% C	<u>1</u>
<u>53-11707-01</u>	Res, 150 Ohm 5W Ceramic "Block"	<u>3</u>
<u>63-10784-01</u>	Cap, .1mf 50V Disc 20%	<u>4</u>
<u>63-11128-01</u>	Cap, 22mf 50V Electrolytic Radial	<u>3</u>
<u>65-10812-01</u>	Diode, 1N4003, Encpl	<u>4</u>
<u>66-11705-01</u>	Trans, 7812	<u>1</u>
<u>66-11706-01</u>	Trans, 7905	<u>1</u>
<u>80-11685-01</u>	PCB, Regulator +12V, -5V	<u>1</u>
<u>82-10842-30</u>	Power Supply, Data Power	<u>1</u>
 <u>38-10638-01</u>	 Assy, Speaker	 <u>1</u>
<u>20-11382-01</u>	Grill, Speaker	<u>1</u>
<u>71-10834-01</u>	Speaker	<u>1</u>
 <u>87-11681-02</u>	 Assy, Harn Main W/Conn	 <u>1</u>
<u>87-11681-01</u>	Assy, Harn Main	<u>1</u>
<u>34-10597-01</u>	Wire, 22AWG, Blk	
<u>34-10598-01</u>	Wire, 22AWG, Green	
<u>34-10599-01</u>	Wire, 22AWG, Yellow	
<u>34-10600-01</u>	Wire, 22AWG, Purple	
<u>34-10602-01</u>	Wire, 22AWG, Orange	
<u>34-10603-01</u>	Wire, 22AWG, Grey	

PARTS LIST  
NAUGHTY BOY TOP ASSEMBLY

CINEMATRONICS PART NUMBER	DESCRIPTION	QTY.
34-10604-01	Wire, 22AWG, Brown	
34-10605-01	Wire, 22AWG, Blue	
34-10606-01	Wire, 22AWG, Red	
34-10607-01	Wire, 22AWG, White	
34-10608-01	Wire, 18AWG, Red	
34-10610-01	Wire, 18AWG, Black	
34-11407-01	Wire, 18AWG, Yellow	
35-10614-01	Pin, Male, Molex	15
35-10615-01	Pin, Female, Molex	14
41-11746-01	Conn, Edge 36P Sullins EZM18DSEH	1
41-10649-01	Conn, 9 Cir M, Molex 03-09-1093	1
41-10648-01	Conn, 15 Cir F, Molex 03-09-2153	1
41-10883-01	Conn, 3 Cir M, Molex 03-09-1038	1
41-10647-01	Conn, 12 Cir M, Molex 03-09-1122	1
41-10657-01	Conn, 6 Cir M, Molex 03-09-1063	1
<u>87-11677-01</u>	<u>Assy, Harn Ctl Pnl Interface</u>	<u>1</u>
34-10597-01	Wire, 22AWG, BLK	
34-10607-01	Wire, 22AWG, White	
34-10598-01	Wire, 22AWG, Green	
34-10600-01	Wire, 22AWG, Purple	
34-10599-01	Wire, 22AWG, Yellow	
34-10603-01	Wire, 22AWG, Grey	
34-10604-01	Wire, 22AWG, Brown	
34-10605-01	Wire, 22AWG, Blue	
34-10602-01	Wire, 22AWG, Orange	
35-10615-01	Pin, Female, Molex	18
41-10660-01	Conn, 15 Cir M, Molex 03-09-1152	1
41-10649-01	Conn, 9 Cir M, Molex 03-09-1093	1
25-10579-01	Ty Rap, W/O Eyelet	6
25-10580-01	Ty Rap, W/Eyelet	3

PARTS LIST  
NAUGHTY BOY TOP ASSEMBLY

CINEMATRONICS PART NUMBER	DESCRIPTION	QTY.
<u>87-11755-01</u>	<u>Assy, Harn Coin Door Inter. Raster</u>	<u>1</u>
34-10597-01	Wire, 22AWG, Blk	
34-10599-01	Wire, 22AWG, Yellow	
34-10600-01	Wire, 22AWG, Purple	
34-10606-01	Wire, 22AWG, Red	
34-11719-01	Wire, 22AWG Blu/Red/Blk Twist	
41-10885-01	Conn, 9 Cir F, Molex 03-09-2092	1
41-10649-01	Conn, 9 Cir M, Molex 03-09-1093	1
35-10614-01	Pin, Male, Molex	9
35-10615-01	Pin, Female, Molex	7
25-10579-01	Ty Rap, W/O Eyelet	5
25-10580-01	Ty Rap, W/Eyelet	2
<u>87-11701-01</u>	<u>Assy, AC Power Cord Harn</u>	<u>1</u>
25-10561-01	Nut, Wire	1
25-10579-01	Ty Rap, W/O Eyelet	15
25-10580-01	Ty Rap, W/Eyelet	5
34-10608-01	Wire, 18AWG, Red	
34-10609-01	Wire, 18AWG, Blue	
34-10610-01	Wire, 18AWG, Black	
34-10908-01	Wire, 18AWG, Orange	
34-11187-01	Wire, Stripe, 18AWG, Red/Black	
34-11412-01	Wire, 18AWG, Brown	
34-11718-01	Wire, 18AWG, Blu/Blk	
35-10614-01	Pin, Male, Molex	14
35-10615-01	Pin, Female, Molex	5
35-10617-01	Terminal, Female, Quick Disconnect	2
41-10647-01	Conn, 12 Cir M, Molex 03-09-1122	1
41-10657-01	Conn, 6 Cir M, Molex 03-09-1063	1
41-10884-01	Conn, 12 Cir F, Molex 03-09-2121	1
87-10967-01	Assy, Cord, AC Power	1

PARTS LIST  
NAUGHTY BOY TOP ASSEMBLY

CINEMATRONICS PART NUMBER	DESCRIPTION	QTY.
<u>87-11692-01</u>	<u>Assy, Harn Speaker</u>	<u>1</u>
34-10906-01	Wire, 22AWG, Twisted, Brown/White	
35-10614-01	Pin, Male, Molex	2
35-10617-01	Terminal, Female, Quick Disconnect	2
25-10580-01	Ty Rap, W/Eyelet	2
41-10659-01	Conn, 3 Cir F, Molex 03-09-2038	1
<u>38-10892-01</u>	<u>Assy, Interlock Swt, Back Panel</u>	<u>1</u>
20-10863-01	Brkt, Interlock Switch	1
37-10893-01	Switch, Interlock	1
20-11376-02	Retainer, Marquee Plexi Upper 23	1
20-11377-02	Retainer, Marquee Plexi Lower 23	1
21-11666-03	Plexi, Front Screened	1
21-11694-01	Plexi Smoked 23. 75 x 20	1
21-11741-02	Plexi, Marquee Screened	1
22-11742-01	Decal, Side	2
25-10553-01	Bolt, Carriage, 3/16" 2", Black OX	4
25-10560-01	Nut, Wing, 3/16" #10-24	6
25-10568-01	Washer, Flat, #10 x 1/2"	23
25-10551-01	Bolt, Carriage, 3/16" x 1/2" Black O	1
25-11392-01	Bolt, Carriage, 3/16" x 1 1/4", Blk	16
25-10566-01	Screw, Wood, #8 x 5/8", Bx Dr Blk, OX	22
25-11613-01	Nut, #8-32	24
25-11721-01	Hook, Key	1
<u>38-11728-02</u>	<u>Kit, Spares</u>	<u>1</u>
18-11732-01	Screwdriver, BX DR #8 VACO TR-2	1
25-10566-01	Screw, Wood, #8 x 5/8", BX DR BLK, OX	6
67-11580-01	Fuse, 5AMP Slow Blow	1
67-10832-01	Fuse, 5AMP, 3AG	1

PARTS LIST  
NAUGHTY BOY TOP ASSEMBLY

CINEMATRONICS PART NUMBER	DESCRIPTION	QTY.
21-10831-01	Bezel, CRT, Formed	1
22-10542-01	Label, "Patent Notice"	1
22-10544-01	Label, "Unit Wired For"	1
34-10903-01	Braid, Flat, Tinner Copper, 3/16"	10
35-11096-01	Lug, Ground	6
72-11734-01	Manual, Operator	1
<u>38-11758-02</u>	<u>Assy, Shipping Cont. Raster Short</u>	<u>1</u>
15-11179-01	Cap	2
15-11180-01	Pads, Corner	4
15-11181-01	Pallet Foam	1
15-11759-01	Sleeve, Game (29x33x72) 600DW	1
15-11760-01	Banding, Plastic 3/8"	
The following parts are used on the Cocktail Table game cabinet ONLY:		
20-11420-01	Rail, CRT Mtg	2
21-11715-01	Plexi, Smoked Top	1
32-11427-01	Cabinet, W/Back	1
32-11428-01	Bracket, Glass Holder	1
32-11556-01	Bkt, Speaker	1
25-11722-01	Leveler, Leg	4
38-11439-01	Assy, Speaker	1
25-11414-01	Screw, Wood, #8-1 1/4", BX DR, BLK O	2
71-10834-01	Speaker	1
<u>38-11441-01</u>	<u>Assy, Coin Box</u>	<u>1</u>
20-10871-02	Coin Drawer	1
20-10872-02	Cover, Coin Drawer	1
<u>38-11691-01</u>	<u>Assy, Ctl Pnl Plyr #1</u>	<u>1</u>
20-11691-01	Ctl Pnl Plyr #1	1
22-11744-01	Decal, Ctl Pnl Plyr #1	1

PARTS LIST  
NAUGHTY BOY TOP ASSEMBLY

CINEMATRONICS PART NUMBER	DESCRIPTION	QTY.
38-11691-02	<u>Assy, Ctl Pnl Plyr #2</u>	<u>1</u>
20-11691-02	Ctl Pnl Plyr #2	1
22-11744-02	Decal, Ctl Pnl Plyr #2	1
38-11716-01	<u>Assy, Power Supply Raster</u>	<u>1</u>
20-11709-01	Plate, Mntg P/S & Trans	1
87-11710-01	<u>Assy, Harn Ctl Pnl Inter</u>	<u>1</u>
25-10579-01	Ty Rap, W/O Eyelet	5
25-10580-01	Ty Rap, W/Eyelet	2
34-10597-01	Wire, 22AWG, Blk	
34-10598-01	Wire, 22AWG, Green	
34-10599-01	Wire, 22AWG, Yellow	
34-10600-01	Wire, 22AWG, Purple	
34-10602-01	Wire, 22AWG, Orange	
34-10603-01	Wire, 22AWG, Grey	
34-10604-01	Wire, 22AWG, Brown	
34-10605-01	Wire, 22AWG, Blue	
34-10607-01	Wire, 22AWG, White	
35-10614-01	Pin, Male, Molex	1
35-10615-01	Pin, Female, Molex	30
41-10648-01	Conn, 15 Cir F, Molex 03-09-2153	1
41-10649-01	Conn, 9 Cir M, Molex 03-09-1093	2
87-11708-01	<u>Assy, Harn Ctl Pnl #1</u>	<u>1</u>
87-11708-02	<u>Assy, Harn Ctl Pnl #2</u>	<u>1</u>
34-10596-01	Wire, 22AWG/TC, Buss	
34-10597-01	Wire, 22AWG, Black	
34-10607-01	Wire, 22AWG, White	
34-10598-01	Wire, 22AWG, Green	
34-10600-01	Wire, 22AWG, Purple	
34-10599-01	Wire, 22AWG, Yellow	
34-10603-01	Wire, 22AWG, Grey	
34-10604-01	Wire, 22AWG, Brown	

PARTS LIST  
NAUGHTY BOY TOP ASSEMBLY

CINEMATRONICS PART NUMBER	DESCRIPTION	QTY.
34-10605-01	Wire, 22AWG, Blue	
34-10602-01	Wire, 22AWG, Orange	
35-10614-01	Pin, Male, Molex	9
41-10885-01	Conn, 9 Cir F, Molex 03-09-2092	1
25-10579-01	Ty Rap, W/O Eyelet	8
92-11740-01	Glass, Top Screened	1
20-11156-01	Grill, Heat Vent	2
23-11425-01	Tape, Foam 1.5"	

PARTS LIST  
ELECTRONIC BOARDS

CINEMATRONICS PART NUMBER	DESCRIPTION	QTY.
<u>38-11733-01</u>	<u>Assy, Boards NB</u>	
<u>38-11820-01</u>	<u>Assy, Game NB 8201 (NB)</u>	1
<u>81-11821-01</u>	<u>Assy, Game NB 8201</u>	1
36-10621-01	Socket, 24 Pin, IC Dip Solder Tail	8
36-11784-01	Socket, 40 Pin Diptail	1
37-11824-01	Switch, Dip 8 Pos DC5V 1A Uni-Aut	1
44-10679-01	IC, 74LS04	1
44-10680-01	IC, 74LS08	1
44-10683-01	IC, 74LS32	3
44-10689-01	IC, 74LS157	1
44-10690-01	IC, 74LS163	1
44-11028-01	IC, 74LS74	1
44-11029-01	IC, 74LS138	2
44-11036-01	IC, 7407	1
44-11340-01	IC, 74LS125	1
44-11343-01	IC, LM556	2
44-11478-01	IC, 74LS153	1
44-11483-01	IC, 74LS174	1
44-11486-01	IC, 74LS244	3
44-11487-01	IC, 74LS245	2
44-11492-01	IC, 74LS374	2
44-11825-01	IC, 74LS14	2
44-11827-01	IC, 74LS145	2
44-11828-01	IC, LM324	2
44-11829-01	IC, LM380	1
44-11830-01	IC, I4006B	1
44-11831-01	IC, I4066B	1
44-11832-01	IC, TMS-3615	1
44-11833-01	IC, Z-80A	1
44-11834-01	IC, 2114/4	2
53-10726-01	RES, 100 OHM 1/4W 5% C	7
53-10727-01	RES, 150 OHM 1/4W 5% C	4

PARTS LIST  
ELECTRONIC BOARDS

CINEMATRONICS PART NUMBER	DESCRIPTION	QTY.
53-10731-01	RES, 330 OHM 1/4W 5% C	3
53-10732-01	RES, 470 OHM 1/4W 5% C	2
53-10735-01	RES, 1.5K OHM 1/4W 5% C	41
53-10737-01	RES, 2K OHM 1/4W 5% C	6
53-10746-01	RES, 10K OHM 1/4W 5% C	10
53-10749-01	RES, 20K OHM 1/4W 5% C	10
53-10756-01	RES, 47K OHM 1/4W 5% C	5
53-10924-01	RES, 33K OHM 1/4W 5% C	5
53-10928-01	RES, 100K OHM 1/4W 5% C	4
53-10931-01	RES, 200K OHM 1/4W 5% C	6
53-11308-01	RES, 510K OHM 1/4W 5% C	1
53-11836-01	RES, 510 OHM 1/4W 5% C	2
63-10782-01	CAP, .01mf 50V Disc 20%	1
63-10940-01	CAP, .001mf 50V Disc 20%	1
63-10993-01	CAP, 47mf 50V Electrolytic Radial	3
63-11100-01	CAP, .01uf 50V Film	3
63-11370-01	CAP, 10mf 50V Electrolytic	15
63-11837-01	CAP, 1mf 50V Electrolytic	14
63-11838-01	CAP, 2.2mf 50V Electrolytic	3
63-11839-01	CAP, 470mf 50V Electrolytic	1
63-11840-01	CAP, .047mf 50V Disc	15
66-11841-01	Trans, 2SC-1815	1
80-11821-01	Board, NB-8201	1
87-11842-01	Assy, R. Cble Flat 50 Cir	2
44-11826-01	IC, 74LS136	1
05-11823-01	Assy, E Prom Kit NB-8201 (NB)	1
02-11823-01	E Prom, #1 NB	1
02-11823-02	E Prom, #2 NB	1
02-11823-03	E Prom, #3 NB	1
02-11823-04	E Prom, #4 NB	1
02-11823-05	E Prom, #5 NB	1
02-11823-06	E Prom, #6 NB	1
02-11823-07	E Prom, #7 NB	1
02-11823-08	E Prom, #8 NB	1

PARTS LIST  
ELECTRONIC BOARDS

CINEMATRONICS PART NUMBER	DESCRIPTION	QTY.
<u>38-11820-02</u>	<u>Assy, Game NB 8202 (NB)</u>	<u>1</u>
<u>81-11822-01</u>	<u>Assy, Game NB 8202</u>	<u>1</u>
36-10620-01	Socket, 16 Pin, IC, Dip Solder Tail	2
36-10621-01	Socket, 24 Pin, IC, Dip Solder Tail	8
44-10677-01	IC, 74LS00	2
44-10679-01	IC, 74LS04	2
44-10680-01	IC, 74LS08	2
44-10686-01	IC, 74LS86	4
44-10687-01	IC, 74LS107	1
44-10688-01	IC, 74LS151	4
44-10689-01	IC, 74LS157	9
44-10690-01	IC, 74LS163	4
44-11028-01	IC, 74LS74	3
44-11029-01	IC, 74LS138	2
44-11032-01	IC, 74LS174	5
44-11341-01	IC, 7404	2
44-11487-01	IC, 74LS245	2
44-11490-01	IC, 74S283	3
44-11492-01	IC, 74LS374	3
44-11826-01	IC, 74LS136	1
44-11843-01	IC, 6301	2
44-11834-01	IC, 2114/4	8
53-10726-01	RES, 100 OHM 1/4W 5% C	1
53-10734-01	RES, 1K OHM 1/4W 5% C	1
53-11306-01	RES, 1.2K OHM 1/4W 5% C	2
63-10780-01	CAP, 47OPF 50V Disc 20%	1
63-10790-01	CAP, 47mf 50v Electrolytic Axial	1
63-10940-01	CAP, .001mf 50V Disc 20%	2
63-11840-01	CAP, .047mf 50V Disc	16
69-11844-01	Crystal, 12 MHZ HC-18/U	1
80-11822-01	Board, NB-8202	1
05-11823-02	Assy, E Prom Kit NB-8201 (NB)	1
02-11823-09	E Prom, #9 NB	1
02-11823-10	E Prom, #10 NB	1

PARTS LIST  
ELECTRTONIC BOARDS

CINEMATRONICS PART NUMBER	DESCRIPTION	QTY.
02-11823-11	E Prom, #11 NB	1
02-11823-12	E Prom, #12 NB	1
02-11823-13	E Prom, #13 NB	1
02-11823-14	E Prom, #14 NB	1
02-11823-15	E Prom, #15 NB	1
02-11823-16	E Prom, #16 NB	1

NAUGHTY BOY  
BOARD EDGE CONNECTOR PIN-OUT LIST

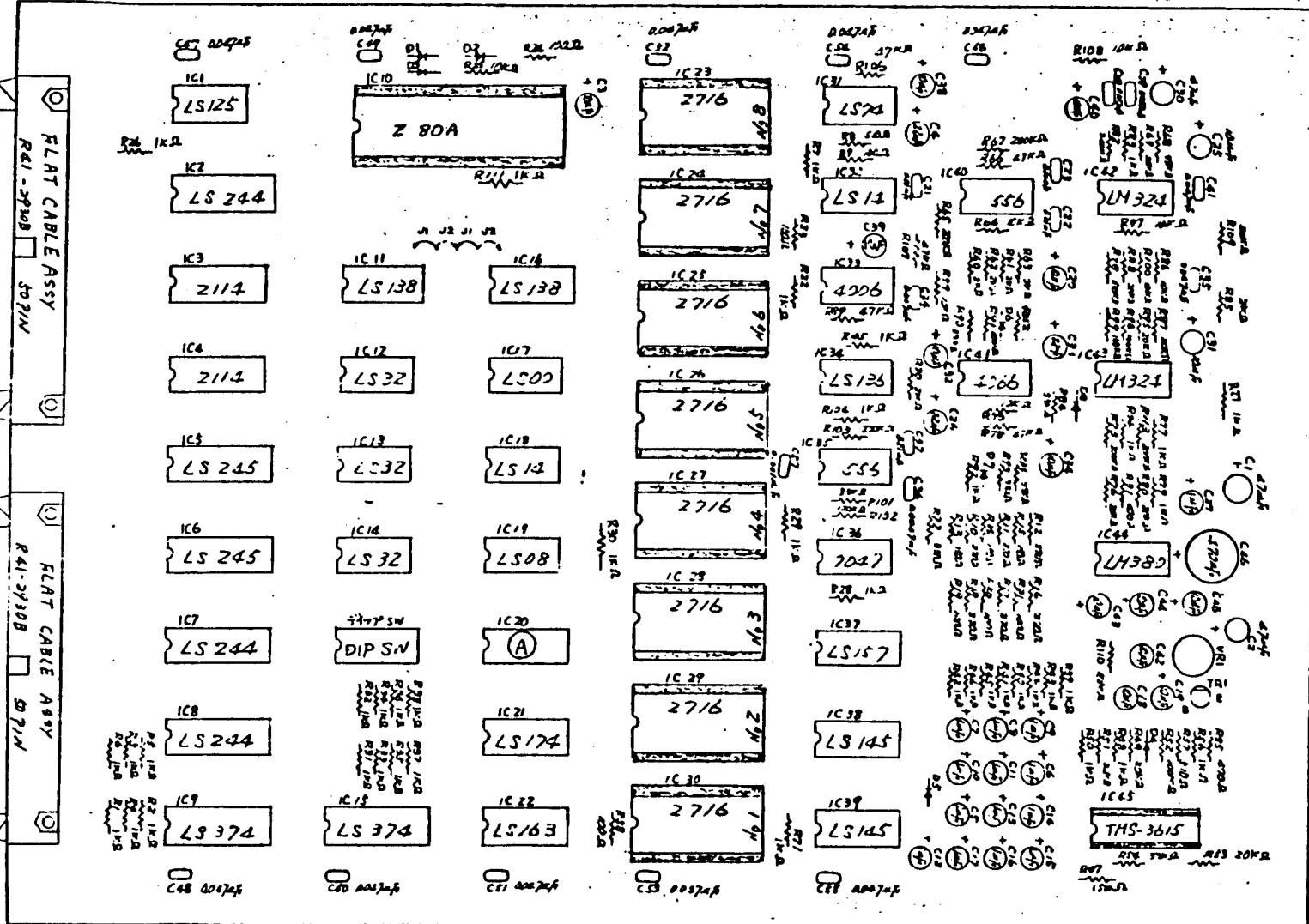
<u>EDGE CONN. PIN (J1)</u>	<u>FUNCTION</u>	<u>TO</u>	<u>WIRE COLOR</u>
J1-A	Ground, Monitor	J6-1	Black
J1-1	Ground, Power Supply	J5-1	Black
J1-B	Ground, Volume Pot	J2-7	Black
J1-2	Ground, Connector Switch	J2-1	Black
J1-C	Not Used		
J1-3	Ground, Control Panel	J3-7	Black
J1-D	Speaker Ground	J4-1	Black
J1-4	Speaker Output	J4-2	Brown
J1-E	Not Used		
J1-5	Coin Switch	J2-2	Yellow
J1-F	Not Used		
J1-6	Not Used		
J1-H	+12 Volts	J5-4	Yellow
J1-7	+12 Volts	--	--
J1-J	Volume Pot	J2-5	Red
J1-8	Volume Pot	J2-6	Blue
J1-K	+5 Volts	J5-2	Red
J1-9	+5 Volts, Counter	J2-4	Red
J1-L	Not Used		
J1-10	Not Used		
J1-M	Player Two - Up	J3-6	Violet
J1-11	Player One - Up	J3-10	Violet
J1-N	Player Two - Down	J3-4	Gray
J1-12	Player One - Down	J3-12	Gray
J1-P	Player Two - Right	J3-2	Blue
J1-13	Player One - Right	J3-14	Blue
J1-R	Player Two - Left	J3-1	Orange
J1-14	Player One - Left	J3-15	Orange

NAUGHTY BOY  
BOARD EDGE CONNECTOR PIN-OUT LIST

<u>EDGE CONN. PIN (J1)</u>	<u>FUNCTION</u>	<u>TO</u>	<u>WIRE COLOR</u>
J1-S	Monitor - Red	J6-2	Red
J1-15	Player Two - Start	J3-8	White
J1-T	Monitor - Blue	J6-4	Blue
J1-16	Player One - Start	J3-9	Green
J1-U	Monitor - Green	J6-3	Green
J1-17	Player One - Fire	J3-11	Yellow
J1-V	Monitor Sync.	J6-5	White
J1-18	Player Two - Fire	J3-5	Yellow

# APPENDIX A

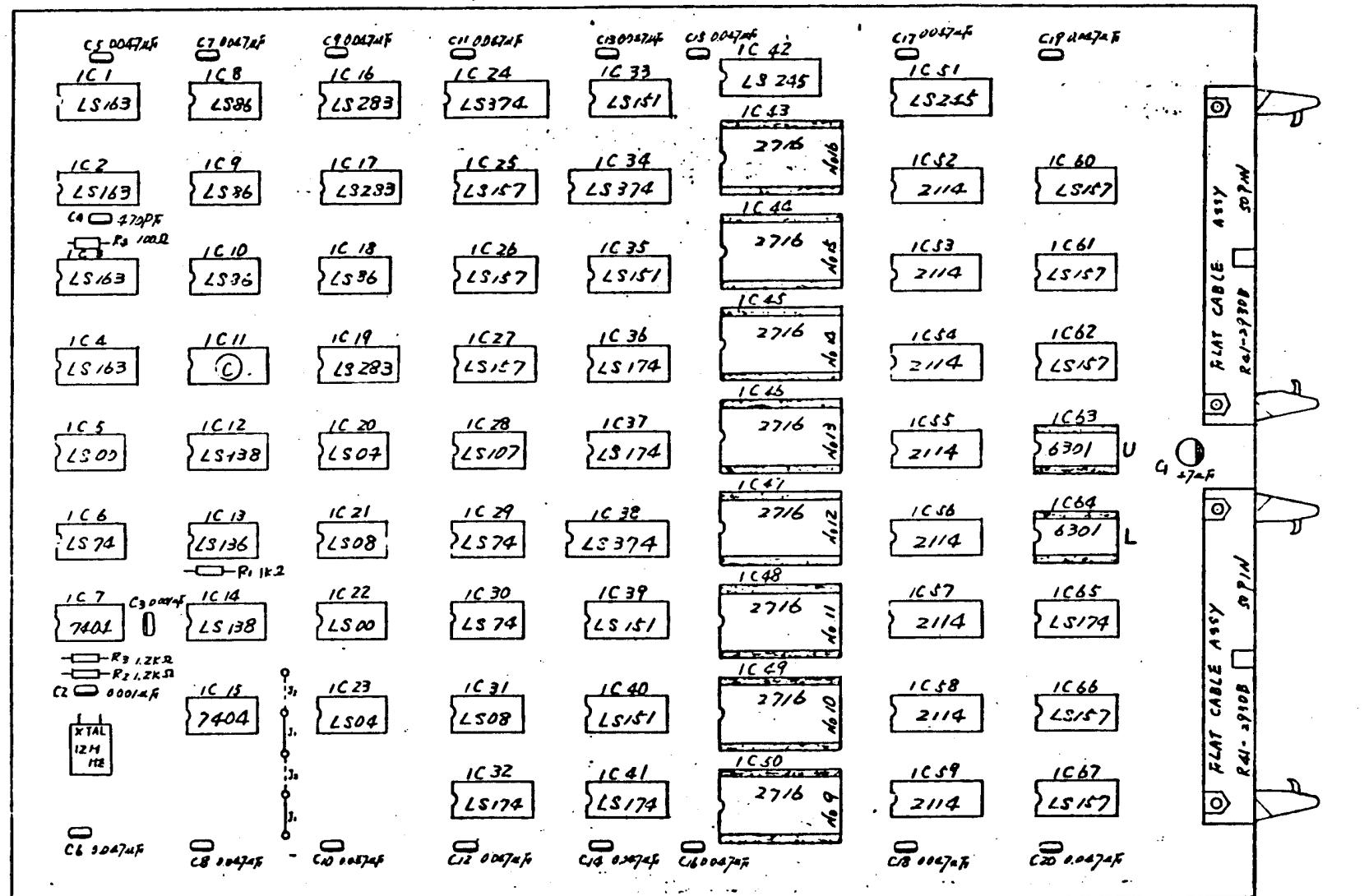
Assembly Drawings  
Schematics  
and  
Wiring Diagrams



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IC SOCKET (接脚)。

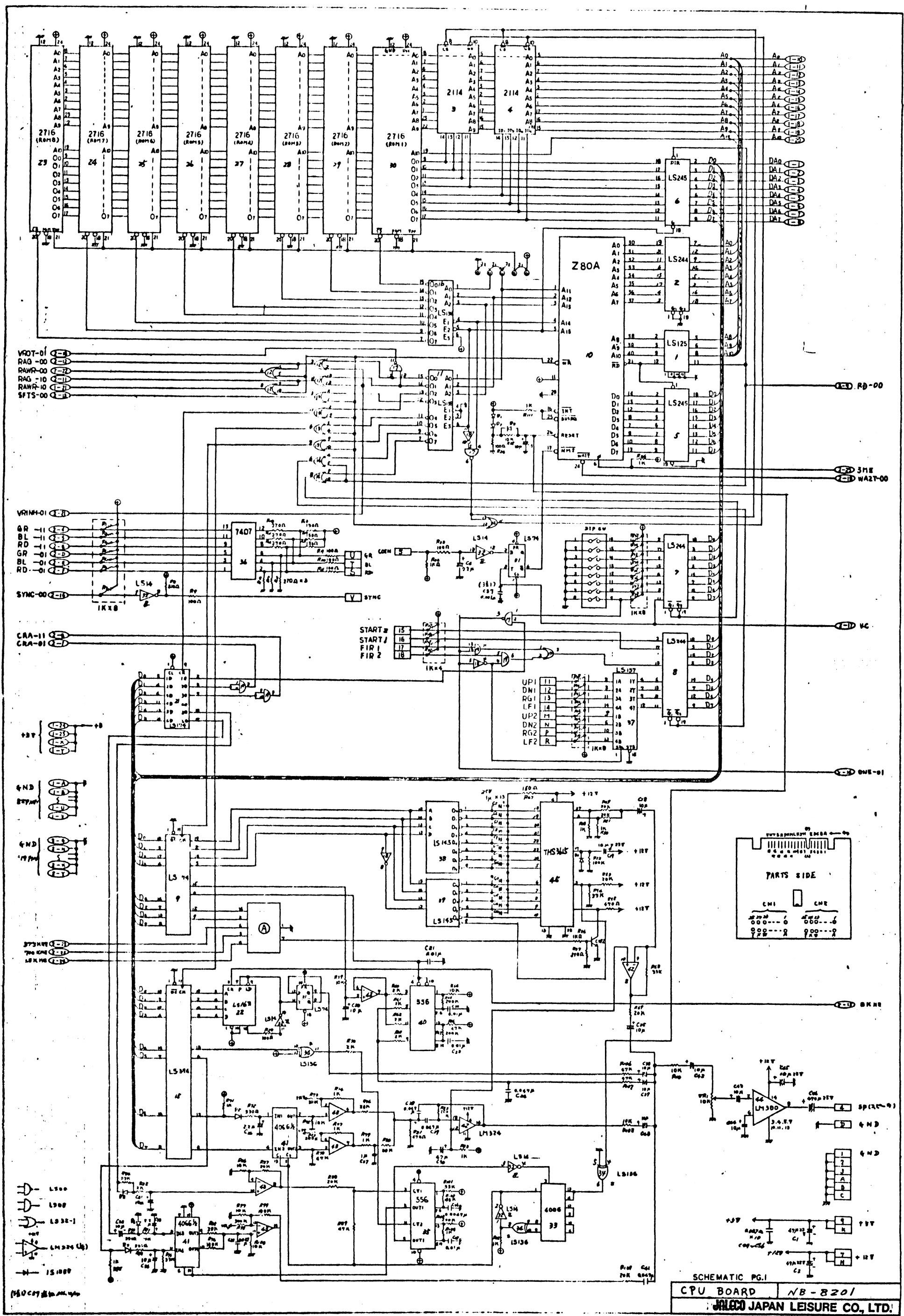
No.	CHG-DATE	SING	MATERIAL	DATE 14-12-81	DRAWING NAME
A	..		TREAT	THIRD ANGLE P.	CPU BD.
B	..		COM. DIFF ±	SCALE 1/1	ALIGNMENT-No.1
龍 証 檢 查 該 計 図				DRAWING No.	CHG.No.
(簽)	(簽)			NB-8Z01	

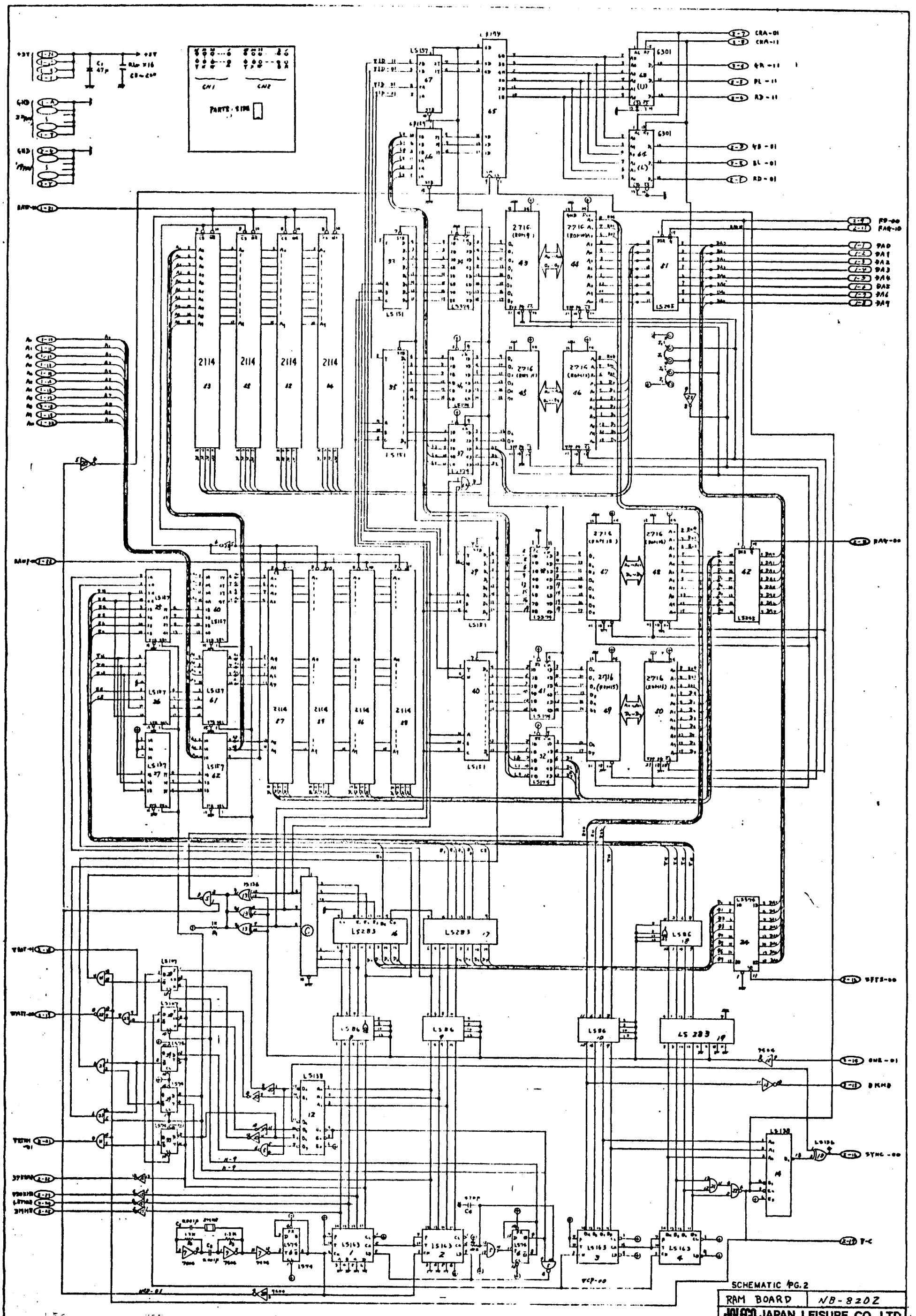


NO	CHEC DATE	SIGN	MATERIAL	DATE M-A-2-81	DRAWING NAME
1	..		TREAT	THIRD ANGLE P.	RAM BD.
2	..		COM. DIFF	SCALE 1/	ALIGNMENT - N.2
3	..				

NB - 8222

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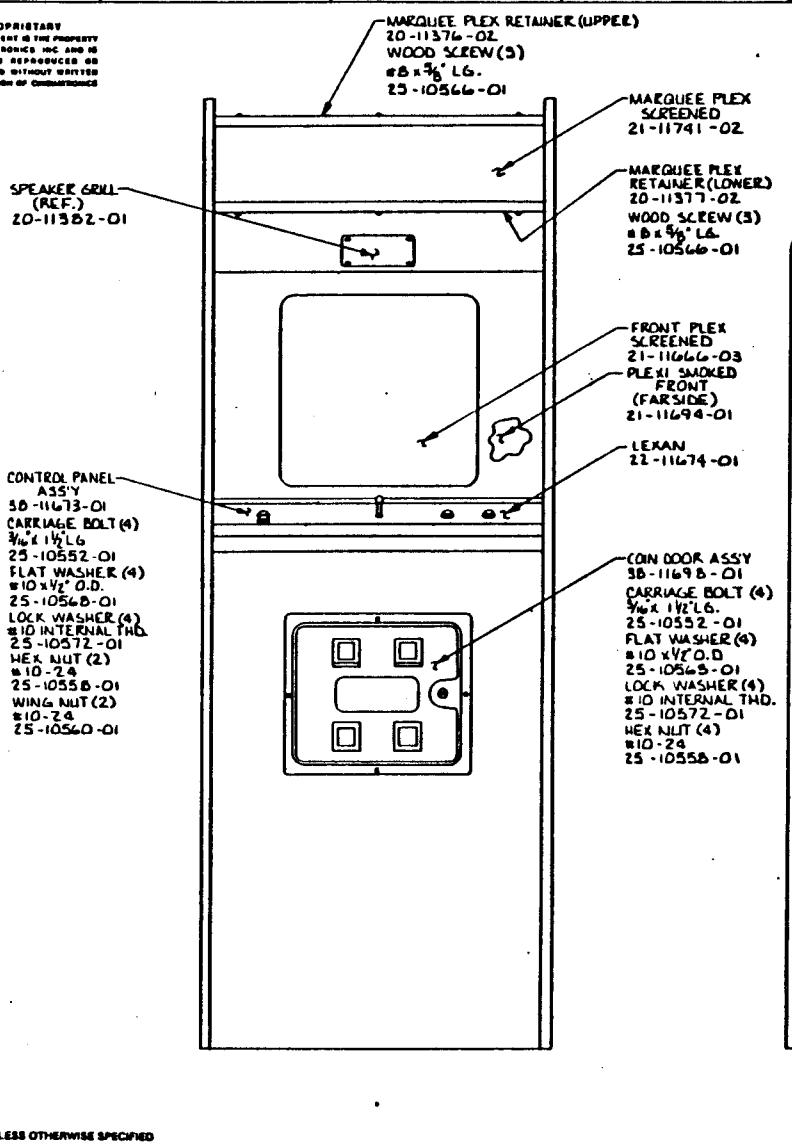




**SCHEMATIC PG. 2**

<b>RAM BOARD</b>	<b>NB-8202</b>
<b>JNLCO JAPAN LEISURE CO., LTD.</b>	

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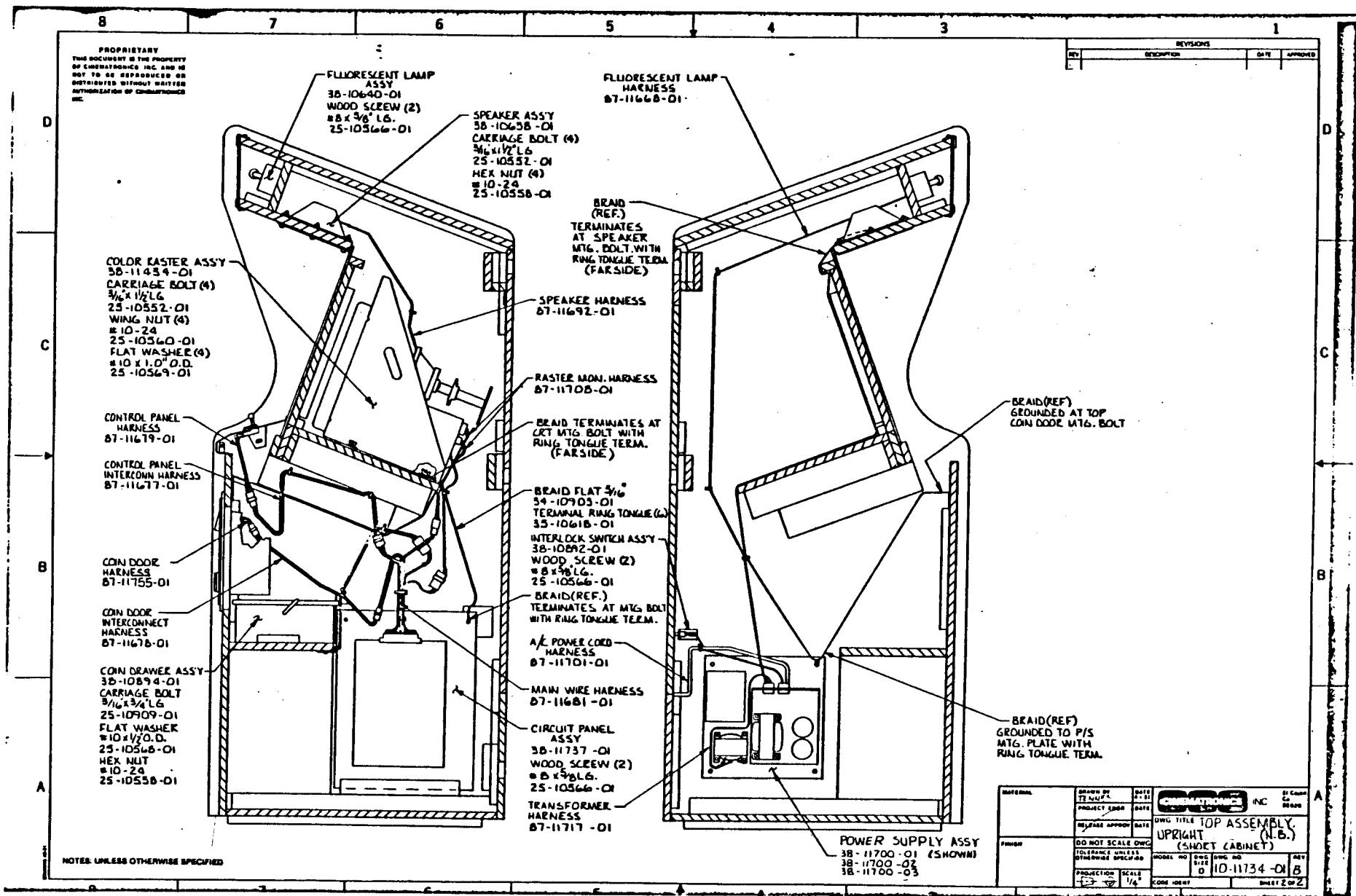


NOTES: UNLESS OTHERWISE SPECIFIED

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	ORIG ECO REV A 01A	4-15-02	
B	RWD PER ECO	ECO 170	4-15-02

MATERIAL:	DRAWN BY:	DATE:	01 CIRCUITRONICS INC
PLATE, ALUMINUM	W.P.	4/15/02	
PLATE, ALUMINUM	W.P.	4/15/02	
DO NOT SCALE DWG			
TOLERANCE UNLESS STATED ELSEWHERE			
PROJECTION SCALE	1/8" = 1'-0"	V4	
MODEL NO.	SIZE	REV.	
10-11734-01	D	B	
COMPONENT			

8 7 6 5 ↑ 4 3 2 1



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D

D

C

C

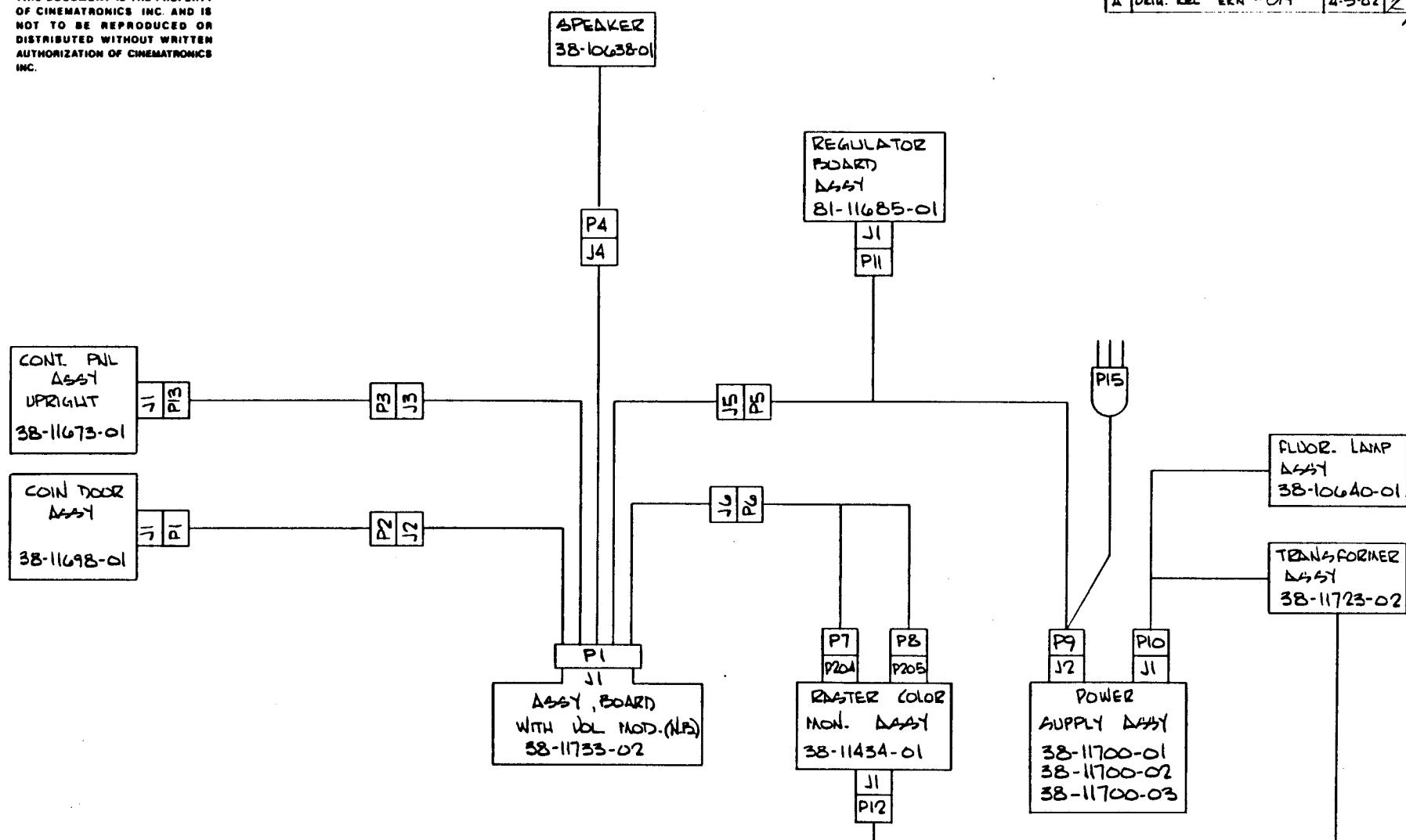
B

B

A

A

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NOTES: UNLESS OTHERWISE SPECIFIED

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3

2

1

**REVISIONS**

REV	DESCRIPTION	DATE	APPROVED
A	ORIG. REL ERN *019	4-5-82	LJH

MATERIAL:	DRAWN BY: F. RAMIREZ	DATE: 5-26-82
FINISH:	PROJECT, ENGR: K. KIMBER	DATE: 5-5-82
	RELEASE APPROV'D DATE: 5-5-82	
	DO NOT SCALE DWG	
	TOLERANCE: UNLESS OTHERWISE SPECIFIED	
	PROJECTION: <input checked="" type="checkbox"/> SCALE: <input type="radio"/> NONE	
CODE IDENT:	SIZE C	DWG NO. 11-11734-01
		REV. A
		SHEET 1 OF 1

**CINEMATRONICS** INC. El Cajon Ca. 92020

**DWG TITLE**  
**INTERCONNECT DIAGRAM**  
**UPRIGHT (N.P.)**

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INC.

CONNECTOR	FROM	TO	COLOR	AWG	PIN	LENGTH	REMARKS
PI-1	J5-1		BLACK	18	SC	11.0	ANALOG GND
PI-A	J6-1			22			
PI-2	J2-1						
PI-3	J2-7		(TW)				
PI-5	J5-7		BLACK	22	SC	11.0	SIGNAL GND
PI-C							NOT USED
PI-4	J4-2		BROWN	22	SC	11.0	ANALOG OUTPUT
PI-D	J4-1		BLACK	22	SC	11.0	ANALOG INPUT
PI-E	J3-2		YELLOW	22	SC	11.0	COM GND
PI-G							NOT USED
PI-H							NOT USED
PI-F							NOT USED
PI-7							+12V
EDGEE CBL. SULLIVANS P/N E81007-005	PI-H	J5-4	YELLOW	18	SC	11.0	+12V
PI-B	J2-6		BLUE (TW)	22			VOL CTL HLD
OR EQUIV.			(RD) (TW)				
PI-1	J1-5						VOL CTL HLD
OUR P/N							
PI-9	J2-4		(RD)				+5V
PI-K	J5-2		RED	22	SC	11.0	+5V
PI-10							NOT USED
PI-L							NOT USED
PI-11	J5-10		VIOLET	22	SC	11.0	PWR 1 UP
PI-M	J5-6		VIOLET				PWR 2 UP
PI-12	J5-12		GRAY				PWR 1 DN
PI-N	J5-4		GRAY				PWR 2 DN
PI-15	J5-14		BLUE				PWR 1 RWD
PI-P	J5-2		BLUE				PWR 2 RWD
PI-14	J5-15		ORANGE				PWR 1 LEFT
PI-R	J5-1		ORANGE				PWR 2 LEFT
PI-S	J5-8		WHITE				PWR 1 RMT
PI-T	J5-2		RED				PWR 1 SRT
PI-U	J5-9		GREEN				CRT POWER
PI-V	J5-4		BLUE				CRT WSDN
PI-W	J5-11		YELLOW				PWR 1 FBS
PI-X	J5-3		GREEN				PWR 2 FBS
PI-Y	J5-5		YELLOW				TU AVNC
PI-Z	J5-5		WHITE	22	SC	11.0	

CONNECTOR	FROM	TO	COLOR	AWG	PIN	LENGTH	REMARKS
J2	J2-1	PI-1	BLACK	22			
COIN DOOR MOLEY P/N 03-09-1075	J2-2	PI-5	YELLOW				F
OR EQUIV.	J1-3						
OUR P/N	J2-4	PI-9	RED				M
41-10649-01	J2-5	PI-1	RED (TW)				F
9 CIR. MALE	J2-6	PI-8	BLUE (TW)				M
	J2-7	PI-5	BLUE (TW)				
	J2-8	PI-5	BLACK (TW)	22			F
	J2-9						NOT USED
							NOT USED
J3	J5-1	PI-2	ORANGE	22			
CTRL PNL MOLEY P/N 03-09-1055	J5-2	PI-P	BLUE	22			M
OR EQUIV.	J5-3	PI-N	GRAY	22			
OUR P/N	J5-4	PI-18	YELLOW				NOT USED
41-10648-01	J5-5	PI-M	VIOLET				
15 CIR. FEMALE	J5-6	PI-15	BLACK				
	J5-7	PI-3	BLACK				
	J5-8	PI-16	WHITE				
	J5-9	PI-16	GREEN				
	J5-10	PI-11	VIOLET				
	J5-11	PI-17	YELLOW				
	J5-12	PI-12	GRAY	22			M
	J5-13	PI-13	GRAY				
	J5-14	PI-15	BLUE	22			M
	J5-15	PI-14	ORANGE	22			M
▲	J4-1	PI-0	BLACK	22			
	J4-2	PI-4	BROWN	22			
	J4-3						NOT USED
J5	J5-1	PI-1	BLACK	18			
	J5-2	PI-K	RED	22			
	J5-3						NOT USED
	J5-4	PI-H	YELLOW	18			
POWER SUPPLY	J5-5						NOT USED
MOLEY P/N 03-09-1172	J5-6						
OR EQUIV.	J5-7						
OUR P/N	J5-8						
41-10647-01	J5-9						
12 CIR. MALE	J5-10						
	J5-11						
	J5-12						
JK	J6-1	PI-A	BLACK	22			
MONITOR MOLEY P/N 03-09-1053	J6-2	PI-S	RED				
OR EQUIV.	J6-3	PI-U	GREEN				
OUR P/N	J6-4	PI-T	BLUE				
41-10647-01	J6-5	PI-V	WHITE	22			
6 CIR. MALE	J6-6						NOT USED

7. WIRES TO PI PINS B, B + J ARE TWISTED WIRES.  
 6. EDGE CONNECTOR PI PINS 7 + K ARE JUMPERS.  
 5. REF. BT-116B1-01 FOR ASSY DRAWING.  
 4. SC - SOLDER CONNECT / SINK TUPNG.  
 3. F - FEMALE SOCKET MOLEY P/N 03-09-111B OUR P/N 35-10615-01.  
 2. M - MALE PIN MOLEY P/N 03-09-211B OUR P/N 35-10614-01.  
 ▲ J4 SPEAKER MOLEY P/N 03-09-1058 OR EQUIV. OUR P/N 41-10685-01 5 CIR. MALE.
- NOTE: UNLESS OTHERWISE SPECIFIED

TOL:	PI-A	
	+1.0	-0.0
PI-B	PI-B	
	D	H
PI-C	PI-C	
	PI-C	PI-C
PI-D	PI-D	
	PI-D	PI-D
PI-E	PI-E	
	PI-E	PI-E
PI-F	PI-F	
	PI-F	PI-F
PI-G	PI-G	
	PI-G	PI-G
PI-H	PI-H	
	PI-H	PI-H
PI-I	PI-I	
	PI-I	PI-I
PI-J	PI-J	
	PI-J	PI-J
PI-K	PI-K	
	PI-K	PI-K
PI-L	PI-L	
	PI-L	PI-L
PI-M	PI-M	
	PI-M	PI-M
PI-N	PI-N	
	PI-N	PI-N
PI-O	PI-O	
	PI-O	PI-O
PI-P	PI-P	
	PI-P	PI-P
PI-Q	PI-Q	
	PI-Q	PI-Q
PI-R	PI-R	
	PI-R	PI-R
PI-S	PI-S	
	PI-S	PI-S
PI-T	PI-T	
	PI-T	PI-T
PI-U	PI-U	
	PI-U	PI-U
PI-V	PI-V	
	PI-V	PI-V
PI-W	PI-W	
	PI-W	PI-W
PI-X	PI-X	
	PI-X	PI-X
PI-Y	PI-Y	
	PI-Y	PI-Y
PI-Z	PI-Z	
	PI-Z	PI-Z

CINEMATRONICS INC

03-09-1058

WIRE LIST - MAIN HARNESS

UPRIGHT / COCKTAIL (N.B.)

REV A

DATE 4-1-82

PAGE NO. 1

DRAWING NO. BT-116B1-01

SCALE 1:1

REV B

DATE 4-1-82

PAGE NO. 2

DRAWING NO. BT-116B1-01

SCALE 1:1

REV C

DATE 4-1-82

PAGE NO. 3

DRAWING NO. BT-116B1-01

SCALE 1:1

REV D

DATE 4-1-82

PAGE NO. 4

DRAWING NO. BT-116B1-01

SCALE 1:1

REV E

DATE 4-1-82

PAGE NO. 5

DRAWING NO. BT-116B1-01

SCALE 1:1

REV F

DATE 4-1-82

PAGE NO. 6

DRAWING NO. BT-116B1-01

SCALE 1:1

REV G

DATE 4-1-82

PAGE NO. 7

DRAWING NO. BT-116B1-01

SCALE 1:1

REV H

DATE 4-1-82

PAGE NO. 8

DRAWING NO. BT-116B1-01

SCALE 1:1

REV I

DATE 4-1-82

PAGE NO. 9

DRAWING NO. BT-116B1-01

SCALE 1:1

REV J

DATE 4-1-82

PAGE NO. 10

DRAWING NO. BT-116B1-01

SCALE 1:1

REV K

DATE 4-1-82

PAGE NO. 11

DRAWING NO. BT-116B1-01

SCALE 1:1

REV L

DATE 4-1-82

PAGE NO. 12

DRAWING NO. BT-116B1-01

SCALE 1:1

REV M

DATE 4-1-82

PAGE NO. 13

DRAWING NO. BT-116B1-01

SCALE 1:1

REV N

DATE 4-1-82

PAGE NO. 14

DRAWING NO. BT-116B1-01

SCALE 1:1

REV O

DATE 4-1-82

PAGE NO. 15

DRAWING NO. BT-116B1-01

SCALE 1:1

REV P

DATE 4-1-82

PAGE NO. 16

DRAWING NO. BT-116B1-01

SCALE 1:1

REV Q

DATE 4-1-82

PAGE NO. 17

DRAWING NO. BT-116B1-01

SCALE 1:1

REV R

DATE 4-1-82

PAGE NO. 18

DRAWING NO. BT-116B1-01

SCALE 1:1

REV S

DATE 4-1-82

PAGE NO. 19

DRAWING NO. BT-116B1-01

SCALE 1:1

REV T

DATE 4-1-82

PAGE NO. 20

DRAWING NO. BT-116B1-01

SCALE 1:1

REV U

DATE 4-1-82

PAGE NO. 21

DRAWING NO. BT-116B1-01

SCALE 1:1

REV V

DATE 4-1-82

PAGE NO. 22

DRAWING NO. BT-116B1-01

SCALE 1:1

REV W

DATE 4-1-82

PAGE NO. 23

DRAWING NO. BT-116B1-01

SCALE 1:1

REV X

DATE 4-1-82

PAGE NO. 24

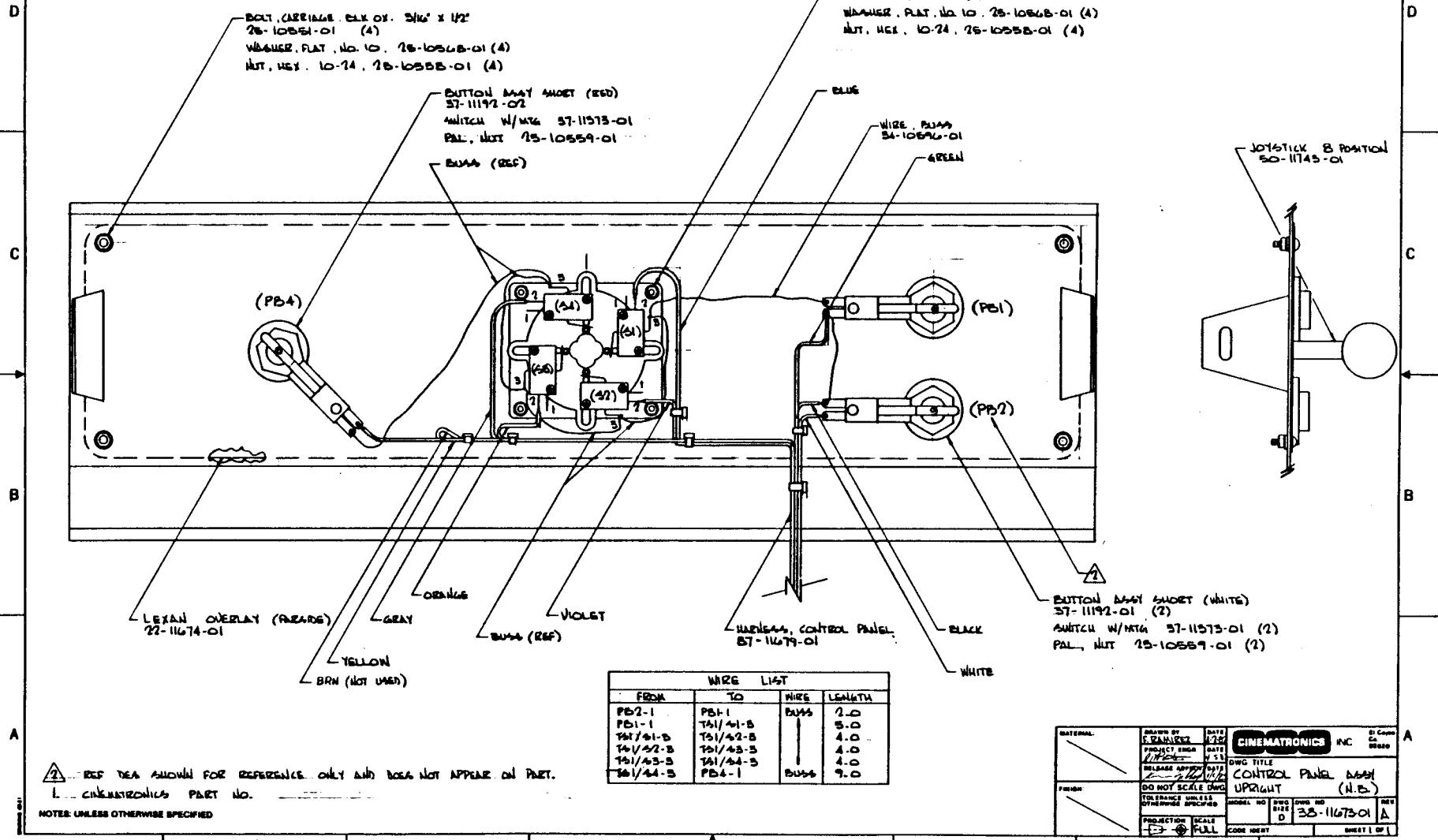
DRAWING NO. BT-116B1-01

SCALE 1:1

8 7 6 5 ↓ 4 3 1

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REV	DESCRIPTION	DATE	APPROVED
A	ORIG REL ERM 01A	6-5-87	ZJ



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REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
B	ORIG REL ERN #013	3/25/02	<i>[Signature]</i>

D

D

C

C

→

←

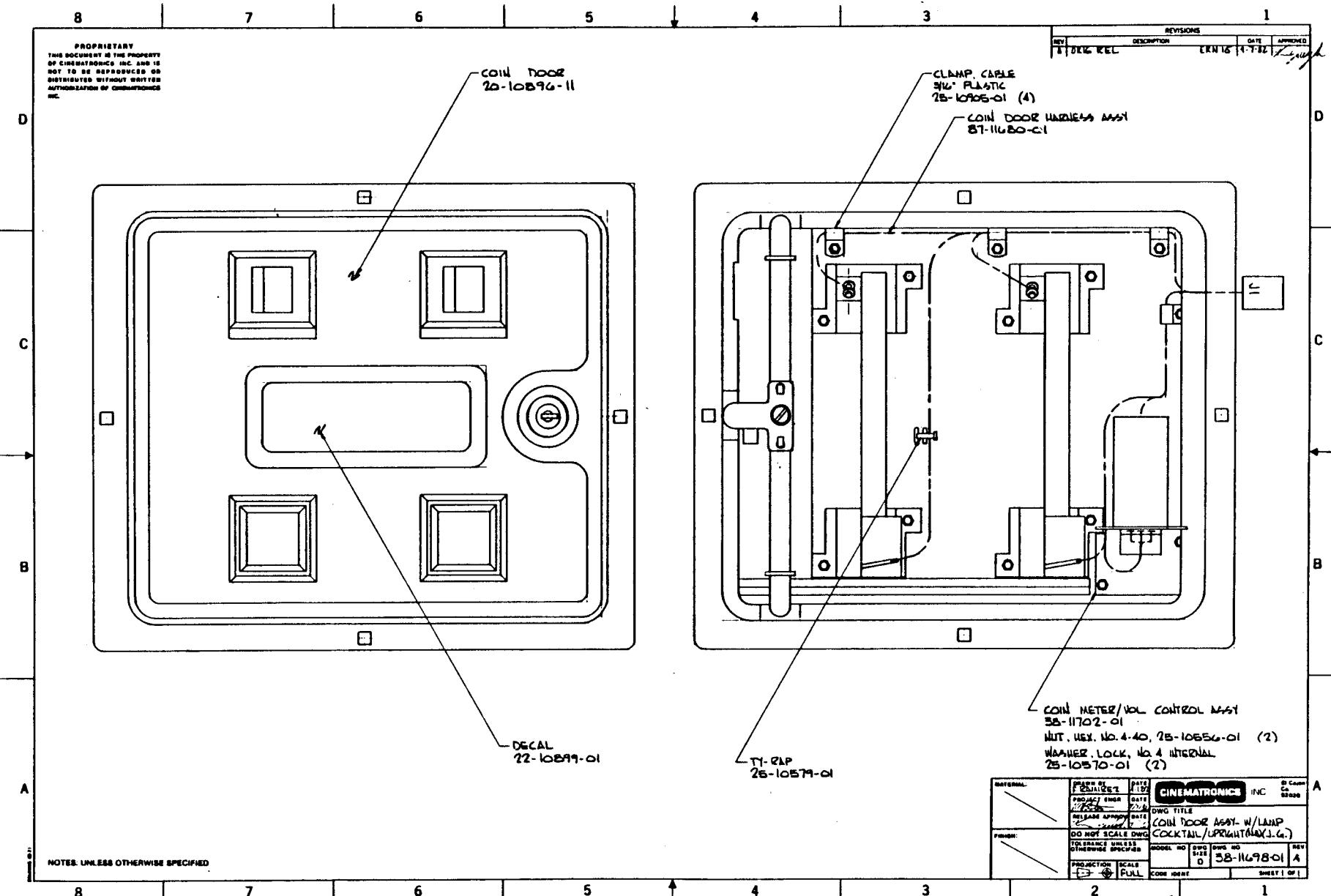
B

B

CONNECTOR	FROM	TO	COLOR	AWG	PIN	LENGTH	REMARKS
<u>P13</u>	P13-1	P3-7	BLACK	22	F	36.0	GND
	P13-2	P3-8	WHITE				2 PLR START
	P13-3	P3-9	GREEN				1 PLR START
MOLEX PIN 03-09-1093 OR EQUIV.	P13-4	P3-10	VIOLET				CONT. LEVEL UP
OUR P/N	P13-5	P3-11	YELLOW				JUMP
	P13-6	P3-12	GREY				CONT. LEVEL DN
	P13-7	P3-13	BROWN				FIRE
9 CIR. RECEPT.	P13-8	P3-14	BLUE				CONT. LEVEL RIGHT
	P13-9	P3-15	ORANGE	22	F	36.0	CONT. LEVEL LEFT
<u>P3</u>	P3-1						NOT USED
	P3-2						
	P3-3						
	P3-4						
	P3-5						
MOLEX P/N 03-09-1152 OR EQUIV.	P3-6	P13-1	BLACK	22	F		NOT USED
OUR P/N	P3-7	P13-2	WHITE				GND
	P3-8	P13-3	GREEN				2 PLR START
	P3-9	P13-4	VIOLET				1 PLR START
15 CIR. RECEPTACLE	P3-10	P13-5	YELLOW				CONT. LEVEL UP
	P3-11	P13-6	GREY				JUMP
	P3-12	P13-7	BROWN				CONT. LEVEL DN
	P3-13	P13-8	BLUE				FIRE
	P3-14	P13-9	ORANGE	22	F		CONT. LEVEL RIGHT
							CONT. LEVEL LEFT

NOTES: UNLESS OTHERWISE SPECIFIED

MATERIAL:	DRAWN BY: <i>F. Ramirez</i>	DATE: 3-24-02
FINISH:	PROJECT ENGR: <i>R. Martin</i>	DATE: 3/25/02
RELEASE APPROV. DATE		
DO NOT SCALE DWG		
TOLERANCE: UNLESS OTHERWISE SPECIFIED		
PROJECTION:	SCALE:	CINEMATRONICS INC. El Cajon Ca. 92020
CODE IDENT.		SHEET 1 OF 1
MODEL NO.	DWG. NO.	REV.
C	BB-11677-01	B



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REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
B	ORIG. REL. ERN #013	3-25-82	<i>[Signature]</i>

CONNECTOR	FROM	TO	COLOR	AWG	PIN	LENGTH	REMARKS
<u>J1</u>  COIN DOOR INTERFACE MDLEX # 03-09-2092 △ 41-10B85-DI	J1-1	(VOL)	(BLK)	(22)	(F)		3
	J1-2	(COUNTER)		(22)	(M)		3
	J1-3	RT. SWITCH	GRY	22	M	20.0"	
	J1-3	LFT. SWITCH	YELLOW	22	M	24.75"	
	J1-4	(COUNTER)		(22)	(M)		3
	J1-5	(VOL)	(RED)	(22)	(F)		3
	J1-6	(VOL)	(BLUE)	(22)	(F)		3
	J1-7	RT. SWITCH	BLK	22	F	20.0" SWITCH GND	
	J1-8	LAMP 1	WHT	△	22	M 14.25"	LIGHT
	J1-8	LAMP 2	WHT	△	22	M 19.25"	LIGHT
	J1-9	LAMP 1	BRN	△	22	M 14.25"	LIGHT
	J1-9	LAMP 2	BRN	△	22	M 19.25"	LIGHT
LFT. SWITCH RT. SWITCH						30.75"	JUMPER

△ TO BE ADDED AT NEXT ASSEMBLY.

△ STRIP BACK 3/8" FOR SOLDER

△ CINEMATRONICS PART NO.

NOTES

TOL.  
+1.0"  
-0.0"

MATERIAL:	DRAWN BY: TENNES	DATE: 3/14/82	CINEMATRONICS INC. El Cajon Ca. 92020
PROJECT ENGR: <i>RJH</i>	DATE: 3/14/82	RELEASE APPROV: DATE	
FINISH: BREAK ALL SHARP EDGES AND DEBURR ALL HOLES.		DO NOT SCALE DWG	
TOLERANCE: UNLESS OTHERWISE SPECIFIED		PROJECTION: SCALE:	
MODEL NO.	DWG SIZE	DWG NO.	REV.
		88-116BD-01	B
CODE IDENT.		SHEET 1 OF 1	

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REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	ORIG. REL. #016	4-14-82	<i>C. Ramirez</i>
B	LENGTH CHGD ELO#173	4-16-82	<i>C. Ramirez</i>

D

D

CONNECTOR	FROM	TO	COLOR	AWG	PIN	LENGTH	REMARKS	CONNECTOR	FROM	TO	COLOR	AWG	PIN	LENGTH	REMARKS
P1	PI-1	P2-7	BLACK	22	M	34.25		P2	P2-1	PI-7	BLACK		F		
	PI-2	P2-4	WHITE	22	F	34.25			P2-1	PI-9	BROWN		-		
	PI-2	CRI-CATHODE							P2-2	PI-3	YELLOW		M		
COIN DOOR	PI-3	PI-4	YELLOW	22	F	3.0		MAIN WIRE HARZ	P2-3	PI-4	GREY		M		
MOLEX P/N	PI-3	P2-2	YELLOW	1	-	34.25		MOLEX P/N	P2-4	PI-2	WHITE		F		
03-09-1093	PI-3	P2-3	GREY	1	F	34.25		03-09-2092	P2-4	CR2-ANODE					
△41-10649-01	PI-4	P2-3	GREY	1	-			△41-10885-01	P2-4	P1-5	RED		M		
	PI-4	PI-3	YELLOW	22	-				P2-5	△ P1-6	BLUE		F		
	PI-4	CRI-ANODE							P2-7	△ P1-1	BLACK		M		
	PI-5	△ P2-5	RED	22	M	34.25			P2-8	CR2-CATHODE					
	PI-6	△ P2-6	BLUE	1	M				P2-8	P1-8	RED		M		
	PI-7	P2-1	BLACK		M				P2-9						NOT USED
	PI-8	P2-8	RED	1	F										
	PI-9	P2-1	BROWN	22	F	34.25									

B

B

1. THIS WIRES ARE TWISTED.

2. CATHODE SIDE —— ANODE SIDE OF DIODE.

3. CINEMATRONICS INC. PART NO.

NOTES: UNLESS OTHERWISE SPECIFIED

MATERIAL:	DRAWN BY: <i>F. Ramirez</i>	DATE: 4-15-82
FINISH:	PROJECT ENGR: <i>W. Lee</i>	DATE: 4-14-82
TOL:	RELEASE APPROV: <i>E. G. Lee</i>	DATE: 4-14-82
+1.0 -0.0	DO NOT SCALE DWG	
	TOLERANCE: UNLESS OTHERWISE SPECIFIED	
	PROJECTION: SCALE: +---@ FULL	
	CODE IDENT.	SHEET 1 OF 1

**CINEMATRONICS**  
INC.  
El Cajon  
Ca.  
92020

DWG TITLE: WIRE LIST -  
COIN DOOR INTERCONNECT  
UPRIGHT/COCKTAIL (J.G. #N.B.)

MODEL NO. DWG DWG NO. REV.  
SIZE C 88-11755-01 B

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REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	ORIG REL ERN #13	3-26-81	<i>[Signature]</i>
B	ECO 164 ADD 2'A' To P8	3-31-82	<i>[Signature]</i>

CONNECTOR	FROM	TO	COLOR	AWG	PIN	LENGTH	REMARKS
<u>P6</u>	P6-1	P7-3	BLK	22	M	15.75	
CPU BD	P6-1	P8-3	BLK	22	M		
MOLEX #	P6-2	P8-6	RED	22	M		
03-09-2062	P6-3	P8-5	GRN	22	M		
△ 41-10954-01	P6-4	P8-4	BLU	22	M		
	P6-5	P7-1	WHT	22	M		
	P6-5	P7-2	WHT	22	M	15.75	
	P6-6						NOT USED
<u>P7</u>							
RASTER MON	P7-1	P6-5	WHT	22	F		
MOLEX #	P7-2	P6-5	WHT	22	F		{ △ 2
09-50-7031	P7-3	P6-1	BLK	22	F		
△ 41-11727-01	P7-3	P6-1	BLK	22	F		
<u>P8</u>							
RASTER MON	P8-1						NOT USED
MOLEX #	P8-2						NOT USED
09-50-7061	P8-3	P6-1	BLK	22	F		
△ 41-11724-01	P8-4	P6-4	BLUE	22	F		
	P8-5	P6-3	GRN	22	F		{ △ 2
	P8-6	P6-2	RED	22	F		

3. M = MALE PIN, MOLEX PIN 02-09-2118.  
 2 F = CRIMP TERMINALS MOLEX PIN 08-50-0106  
 △ P/N 35-10880-01.

△ CINEMATRONICS PART NO.

NOTES: UNLESS OTHERWISE SPECIFIED

TOLERANCE	FINISH:
+ 1.0	
- 0.0	

MATERIAL:	DRAWN BY: TENNIES	DATE: 3-9-81
PROJECT ENGR:	RELEASE APPROV'D BY:	DATE: 1/16/81
		DATE: 1/16/81
	DO NOT SCALE DWG	
	TOLERANCE: UNLESS OTHERWISE SPECIFIED	
	PROJECTION:	SCALE:
	CODE IDENT. SHEET 1 OF 1	
REV. B	DWG NO. 88-11711-01	SIZE C

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REVISIONS			
REV	DESCRIPTION	DATE	APPROVED

D

D

C

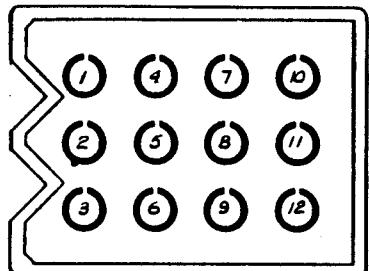
C

B

B

A

A

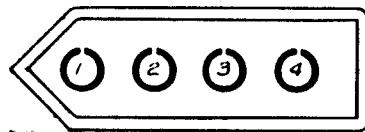


J1

J1 CONNECTOR DATA		
PIN NO	WIRE COLOR	FUNCTION
J1-1	GRN	CHASSIS GND
J1-2	WHT	TXFMR LUG #9
J1-3	RED/BLK	TXFMR LUG #1
J1-4	BROWN (2)	6.9VAC GND
J1-5	WHITE (2)	6.9VAC
J1-6	YEL	SPOT KILL (25WUE)
J1-7	RED/GRAY	+25V
J1-8	BLU (2)	-25V
J1-9	ORG (2)	+5V
J1-10	ORG	+5V
J1-11	BLK (2)	+5V RETURN
J1-12	BLK / WHT	-25V RETURN



NOTES: UNLESS OTHERWISE SPECIFIED



J2

J2 CONNECTOR DATA		
PIN NO	WIRE COLOR	FUNCTION
J2-1	BLACK	TXFMR LUG #1
J2-2	WHITE	TXFMR LUG #3
J2-3	BLACK	TXFMR LUG #2
J2-4	WHITE	TXFMR LUG #4

POWER SUPPLY CONNECTORS  
BOTH J1 & J2 AS VIEWED FROM THE  
FRONT OF POWER SUPPLY.

MATERIAL:	DRAWN BY:	DATE
	C. Williams	9-29
FINISH:	PROJECT ENGR:	DATE
BREAK ALL SHARP EDGES AND DEBURR ALL HOLES.	C. Williams	9-29
DO NOT SCALE DWG		
TOLERANCE: UNLESS OTHERWISE SPECIFIED		
PROJECTION:	SCALE:	REV.
		A
CODE IDENT.		SHEET / OF /

**CINEMATRONICS INC.**  
El Cajon  
Co.  
B2020

**DWG TITLE**  
**POWER SUPPLY**  
**PINOUT ILLUSTRATION**

MODEL NO. DWG NO. REV.  
SIZE C 72-10877-03 A

4

3

2

1

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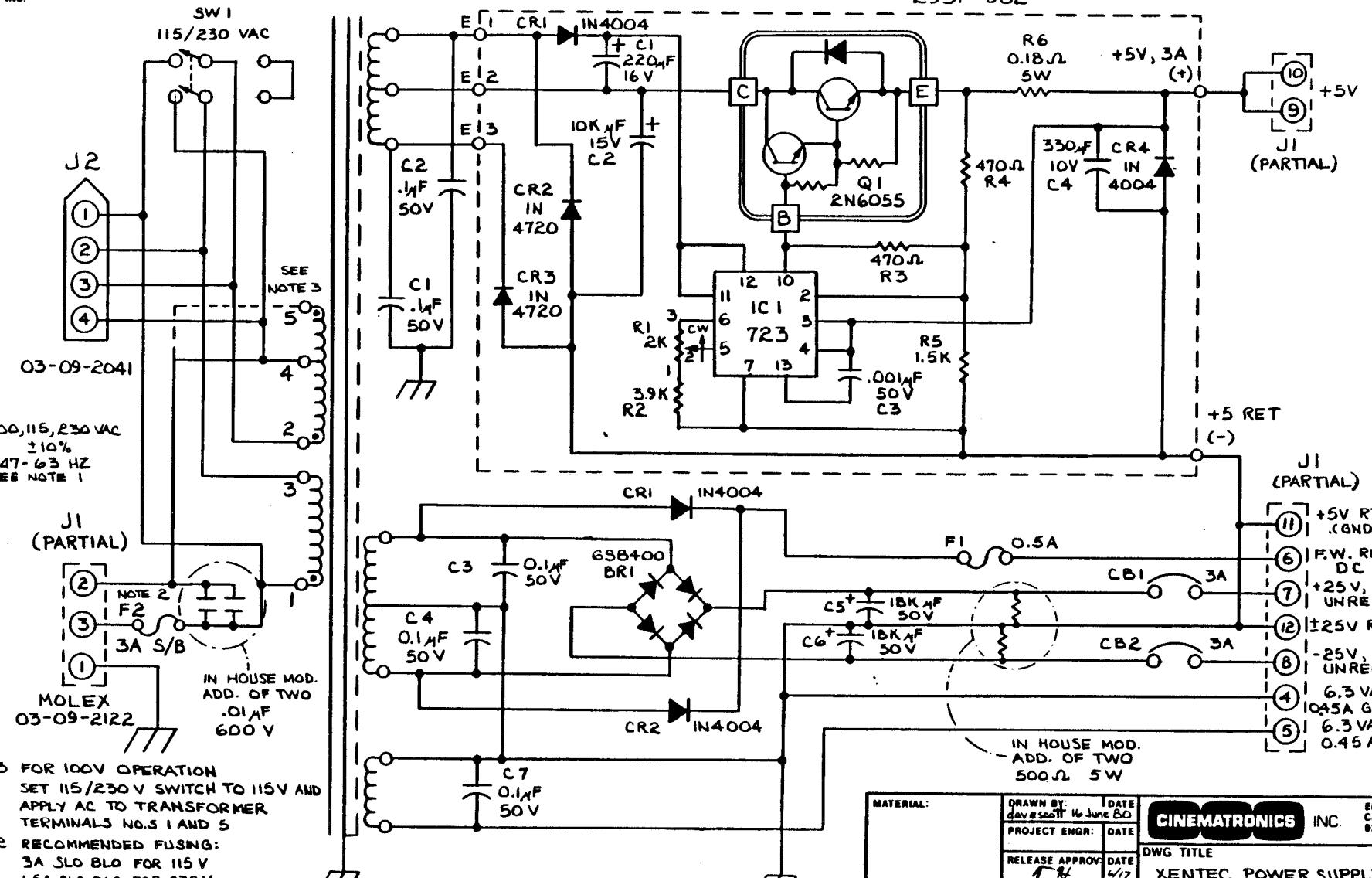
REVISIONS			
REV	DESCRIPTION	DATE	APPROVED

D

D

TI

2951 - D02



5 UNUSED COMPONENTS: CR5, CR6

4. REF. DRAWINGS: ASSY 2921-A01, PCB 2951-D01

MATERIAL:	DRAWN BY: davescott	DATE: 16 June 80
FINISH:	PROJECT ENGR:	RELEASE APPROV DATE: 6/17
		DO NOT SCALE DWG
		TOLERANCE: UNLESS OTHERWISE SPECIFIED
		PROJECTION: SCALE:
		CODE IDENT.

**CINEMATRONICS INC.**  
El Cajon  
Ca.  
92020

DWG TITLE  
**XENTEC POWER SUPPLY**

MODEL NO	DWG SIZE	DWG NO.	REV.
72-10B42-12	C		B

SHEET 1 OF 1

4

3

2

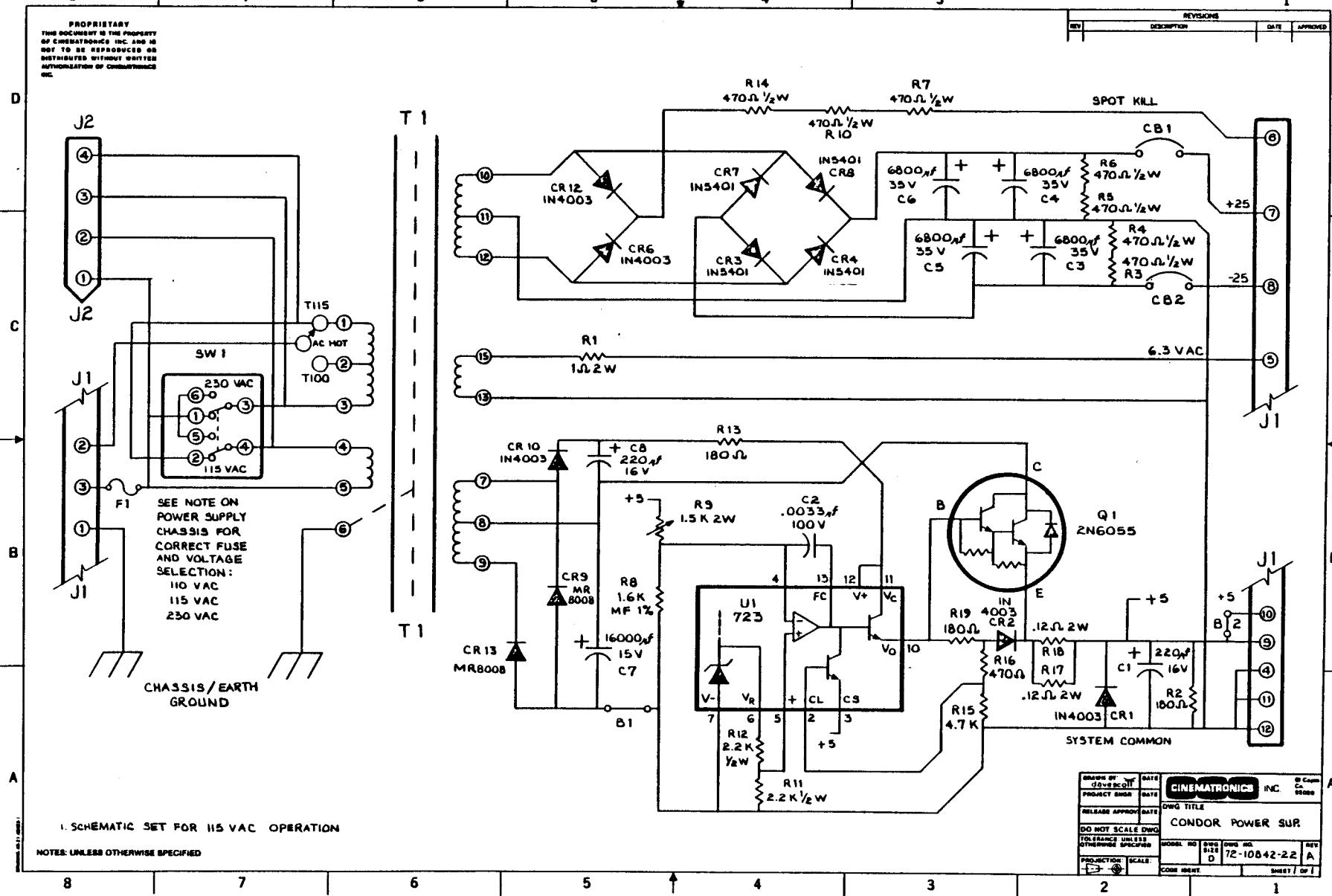
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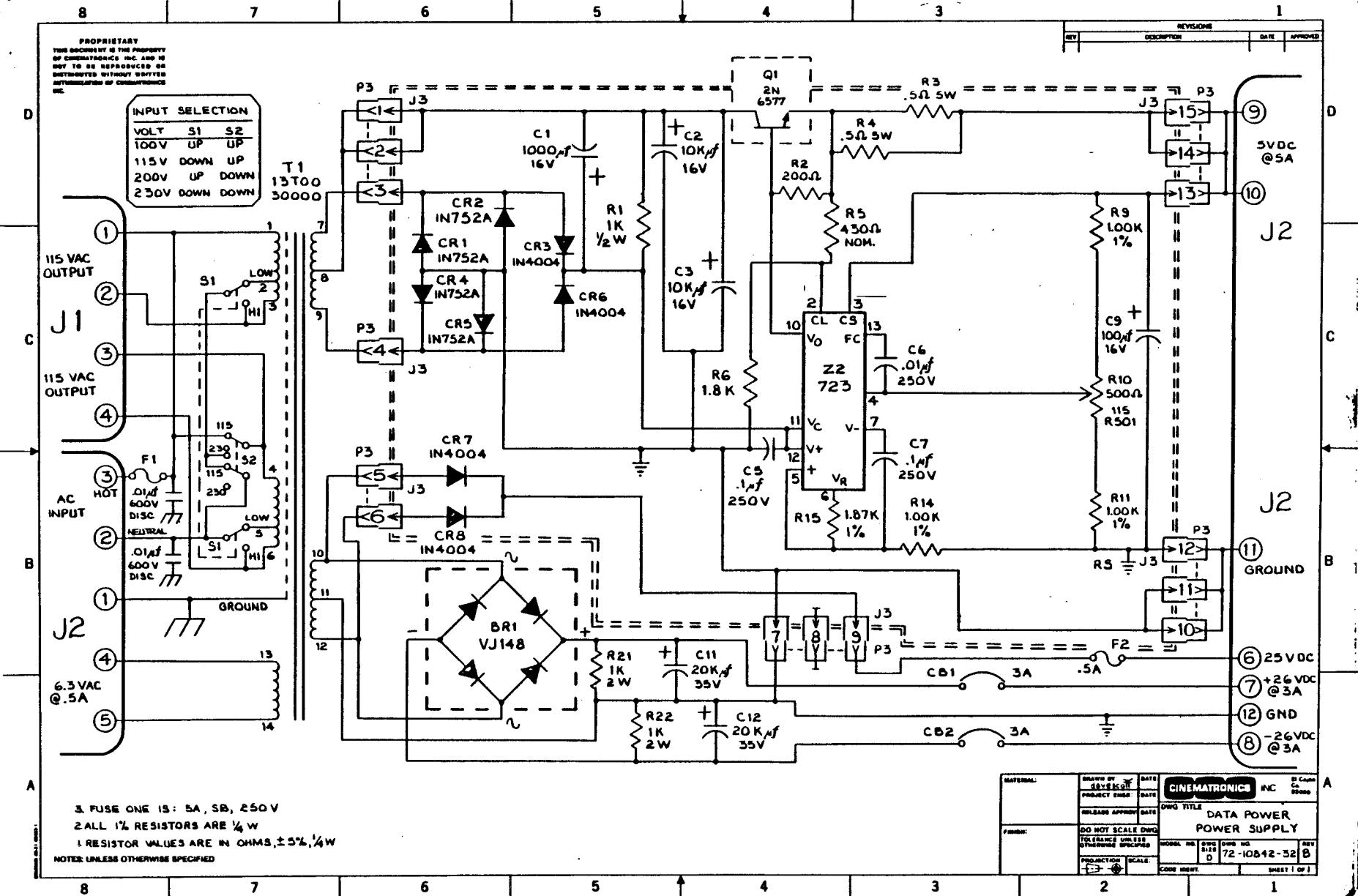
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A

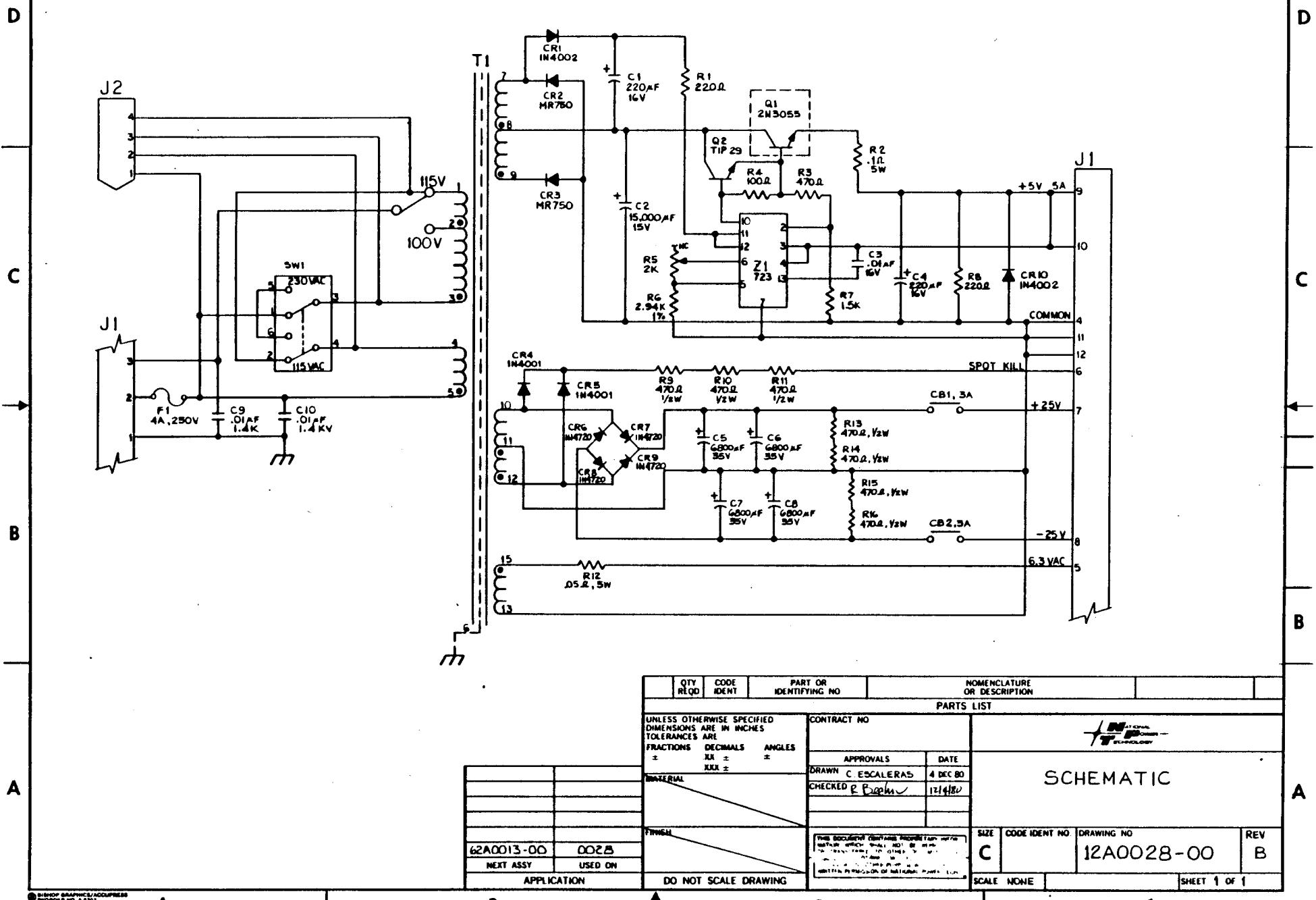
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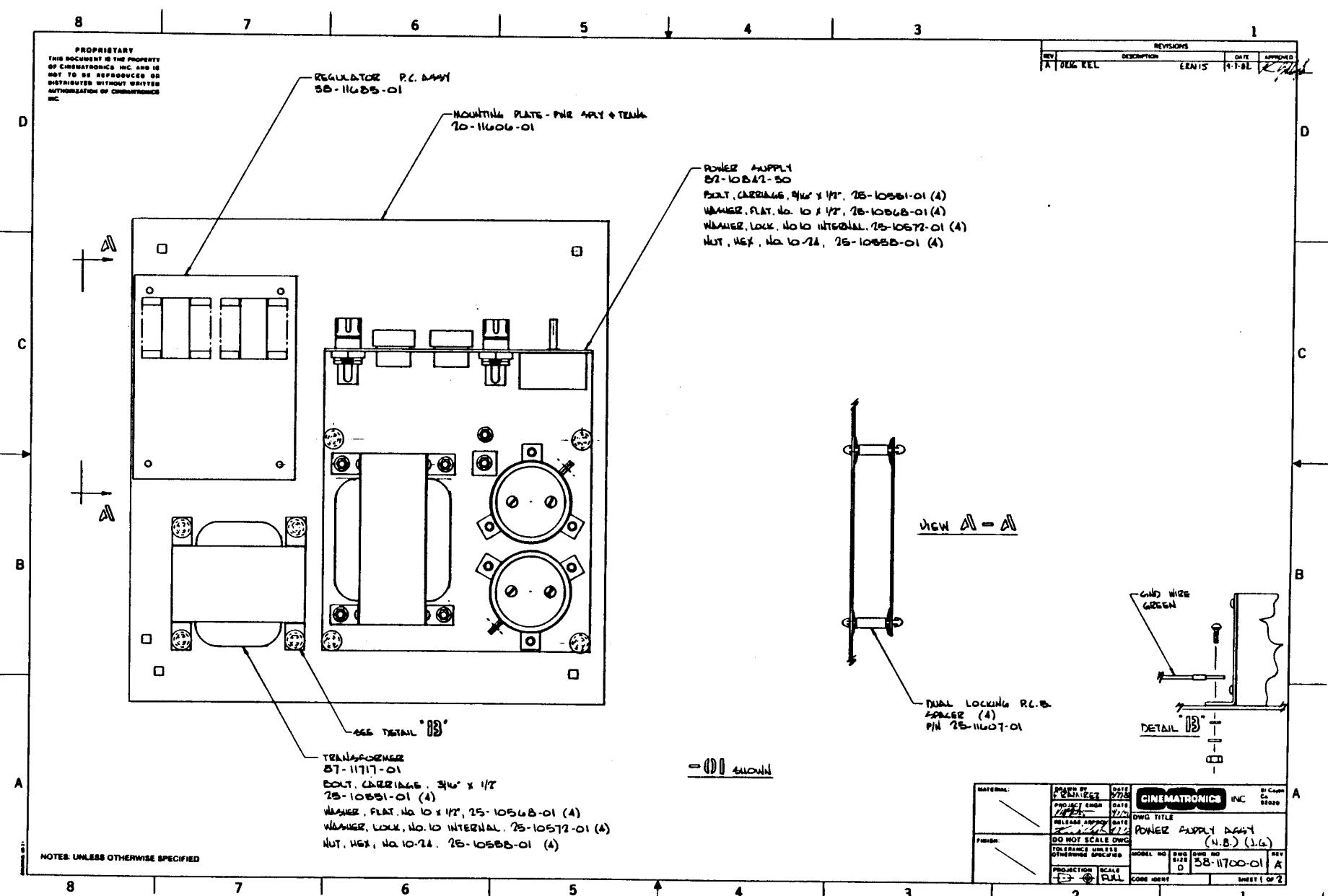




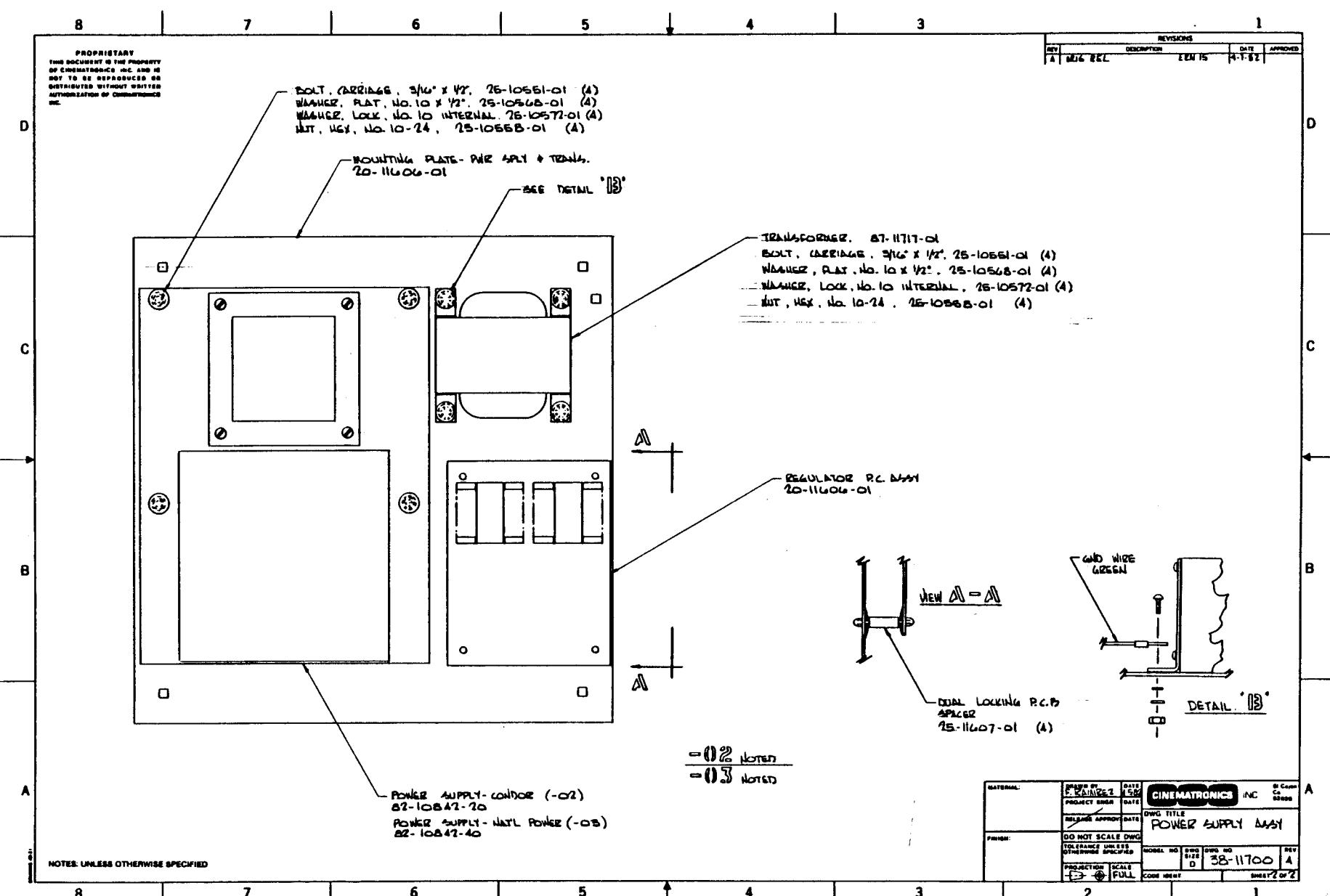
4 3 2 1

REVISED			
ZONE	LTR	DESCRIPTION	DATE APPROVED
O1		PROTOTYPE	4 DEC 80 RAL
A		PRODUCTION RELEASE	13 JAN 81
B		ADD C9,10 - SEE ECO 0026 "A"	29 JAN 81 RAL





REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	REV B&C	LEN 15	4-1-82



4

3

2

1

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	ORIG REL ERN#018	4-16-82	<i>Engr</i>

D

D

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AS VIEWED FROM  
WIRE SIDE.



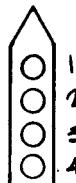
FEMALE QUICK  
DISCONNECTS (REF)

WHITE BLACK

P12

ASSY TRANSFORMER  
MONITOR HARNESS  
87-11688-01  
BLACK & WHITE TWISTED PAIR, 18 GA

AS VIEWED FROM  
WIRE SIDE.



WHITE

ASSY TRANSFORMER  
BND. HARNESS  
87-11767-01  
GREEN, 18 GA

TERMINAL, RING TONGUE  
(REF)

P10

ASSY TRANSFORMER  
PWR SUPPLY HARNESS  
87-11768-01  
BLACK & WHITE TWISTED, 18GA

ADD  $\frac{3}{32}$  HEAT SHRINK TUBING TO ALL TERMINALS.

NOTES: UNLESS OTHERWISE SPECIFIED

4

3

2

1

TOLERANCE  
+1.0  
-0.0

FINISH:

DO NOT SCALE DWG

TOLERANCE: UNLESS  
OTHERWISE SPECIFIED

PROJECTION: SCALE:

CODE IDENT.:

MATERIAL:	DRAWN BY: <i>C. Ramirez</i>	DATE: 4-16-82
	PROJECT ENGR: <i>V. M. C.</i>	DATE: 4-16-82
	RELEASE APPROV. DATE:	
	DWG TITLE ASSY.	
	CINEMATRONICS INC.	
	El Cajon Ca. 92020	
	TRANSFORMER + COLOR RASTER (J-4.)	
MODEL NO.	DWG SIZE	DWG NO.
	C	38-11723-01
	REV.	A
CODE IDENT.:		
SHEET 1 OF 1		

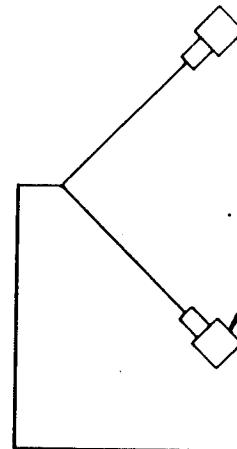
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1

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TERMINAL, FEMALE, QUICK DISCONNECT, .032 X .250 FULLY INSULATED  
 SPEC. TYTON NO. PV22JFIGT OR NY22JFIGT  
 CINE. NO. 35-11772-01 (2)

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	ORIG REL ERU #01B	4-16-82	L. J. G.

D

D

C

C

B

B

B

B

A

A

I. F = FEMALE SOCKET, MOLEX NO. 02-09-1118.

NOTES: UNLESS OTHERWISE SPECIFIED

TOL
+1.0
-0.0

MATERIAL:	DRAWN BY: F. RAINIERE 2	DATE: 11/02	<b>CINEMATRONICS INC</b> El Cajon Ca. 92020
FINISH:	PROJECT ENGR: Mark	RELEASE APPROV'D: DATE: 11/11/82	
	DO NOT SCALE DWG		
	TOLERANCE: UNLESS OTHERWISE SPECIFIED		
PROJECTION: <input checked="" type="checkbox"/>	SCALE: FULL	MODEL NO: 87-11688-01	DWG. NO: A
CODE IDENT.	SHEET 1 OF 1		

4

3

2

1

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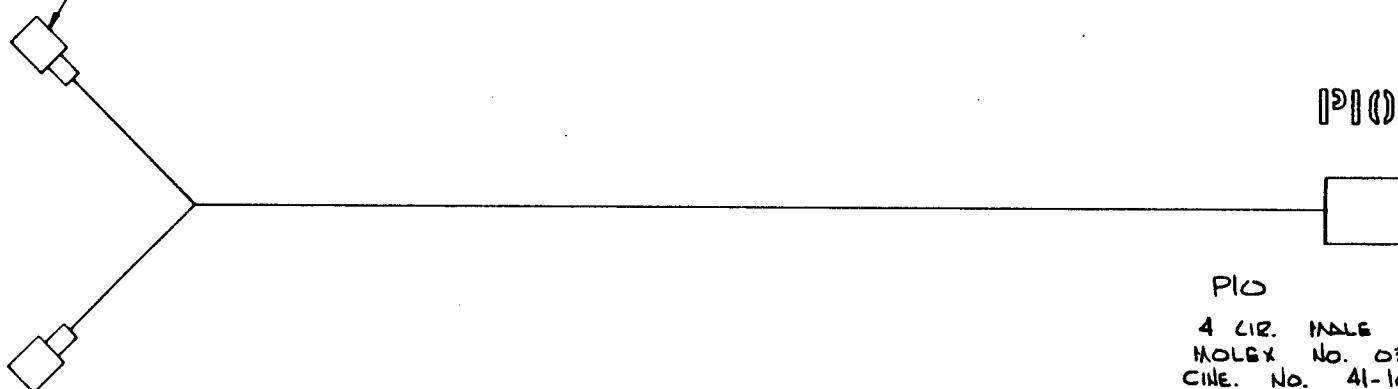
REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	ORIG REL ERN #018	4-16-82	C. J. G.

D

D

C

C



B

B

PIN	COLOR	AWG	PIN	LENGTH	FUNCTION
1	BLACK	18	M	15.0	
2	WHITE	18	M	15.0	
3					NOT USED
4					NOT USED

A

A

I. M = MALE PIN, MOLEX NO. 02-09-211B.  
 NOTES: UNLESS OTHERWISE SPECIFIED

TOL.
+1.0
-0.0

MATERIAL:	DRAWN BY: F. RAMIREZ	DATE: 4-16-82
FINISH:	PROJECT ENGR: M. S.	RELEASE APPROV DATE: 4-16-82
	DO NOT SCALE DWG	DWG TITLE: HARNLESS ASSY - TRANSF. & POWER SUPPLY
	TOLERANCE: UNLESS OTHERWISE SPECIFIED	MODEL NO: DWG NO: REV: 87-11768-01 A
	PROJECTION: SCALE: TOP: FULL	CODE IDENT. SHEET 1 OF 1

4

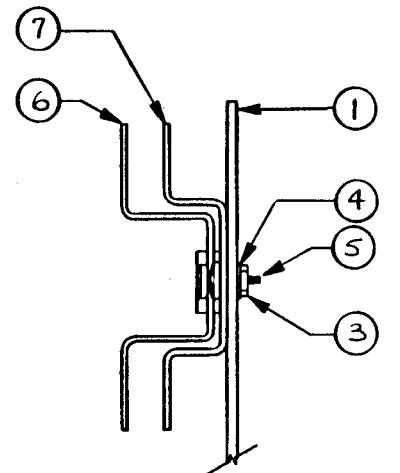
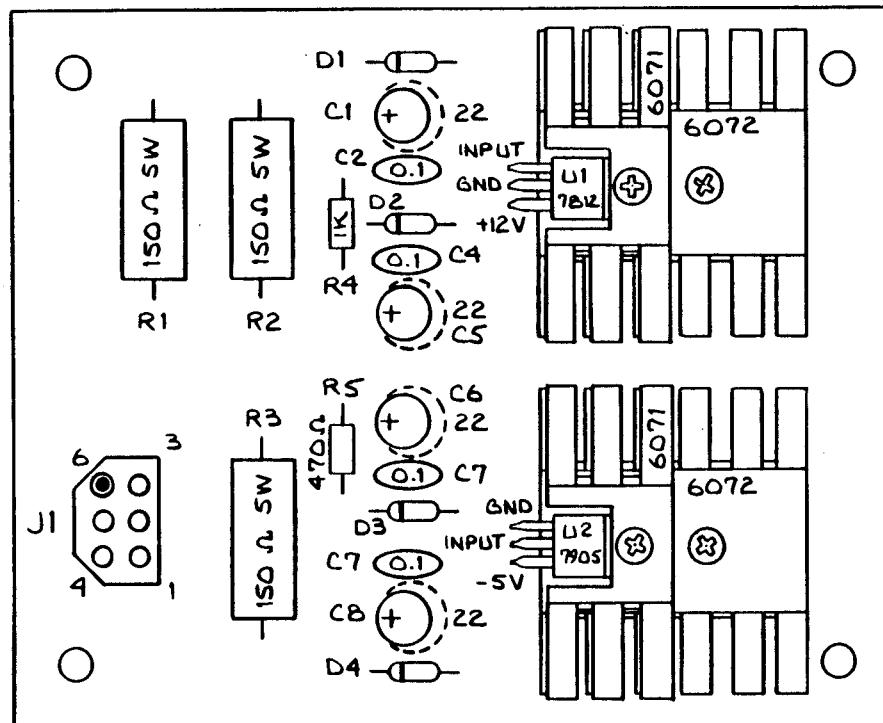
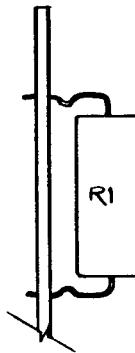
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REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
B	ORIGINAL RELEASE ERN 012	19 MAR 1982	<i>[Signature]</i>



REFERENCE OF  
ITEM NUMBER ON  
ENGINEERING  
PARTS LIST  
PL 11685

S. R4 AND RS ARE 1/4WATT, 5% CARBON, VALUES ARE IN OHMS

- 4. ELECTROLYTIC CAPACITOR WITH POLARITY MARK AND LOCATION FOR OVERSIZED CAPACITOR
- 3. IS A DISK CAPACITOR
- 2. CAPACITOR VALUES ARE IN MICRO FARADS, 50 V
- 1. ALL DIODES ARE IN4003

NOTES: UNLESS OTHERWISE SPECIFIED

MATERIAL:	DRAWN BY: <i>[Signature]</i>	DATE: 16 MARCH 1981
FINISH:	PROJECT ENGR: <i>[Signature]</i>	RELEASE APPROVED DATE: 16/3/81
	DO NOT SCALE DWG	El Cajon Ca. 92020
	TOLERANCE: UNLESS OTHERWISE SPECIFIED	CINEMATRONICS INC.
	PROJECTION:  SCALE: 2:1	DWG TITLE: P.C.A. REGULATOR +12 AND -5 VOLTS
		MODEL NO. B1-11685-01 REV. B
		DWG SIZE C
		CODE IDENT. <i>[Signature]</i>
		SHEET 1 OF 1

4

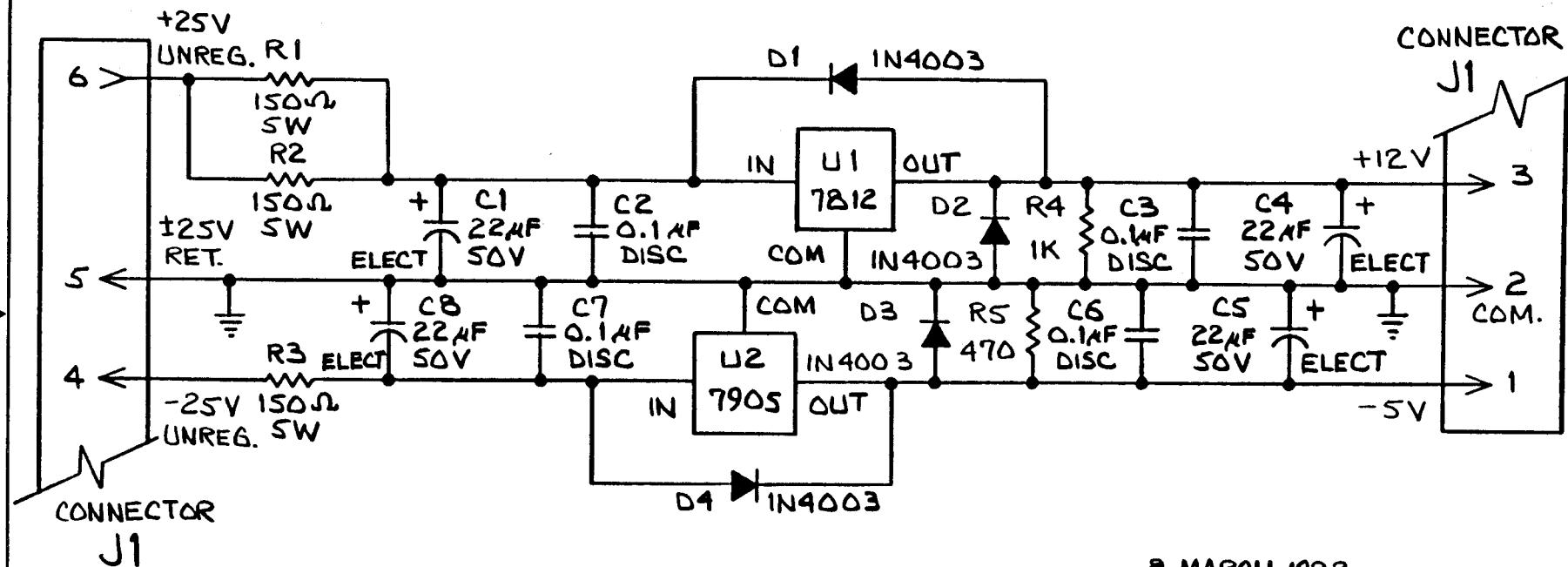
3

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REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
B	ORIGINAL RELEASE ERN 012	19 MAR 1982	<i>[Signature]</i>



J1

2. R4 AND RS VALUES ARE IN OHMS  
1. R4 AND RS ARE  $\frac{1}{4}$  WATT, 5% CARBON  
NOTES: UNLESS SPECIFIED OTHERWISE

8 MARCH 1982

MATERIAL:	DRAWN BY: <i>[Signature]</i>	DATE: <i>7/1/82</i>	CINEMATRONICS INC. El Cajon Ca. 92020
FINISH:	PROJECT ENGR: <i>[Signature]</i>	RELEASE APPROV: <i>[Signature]</i>	
DWG TITLE REGULATOR +12, -5 VOLTS			
TOLERANCE: UNLESS OTHERWISE SPECIFIED	MODEL NO. DWG NO. B 72-11685-00 B		
PROJECTION: SCALE: 	CODE IDENT. SHEET 1 OF 1		

4

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1

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REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	ORIG REL	ERN 15	4-7-62

D

D

C

C

B

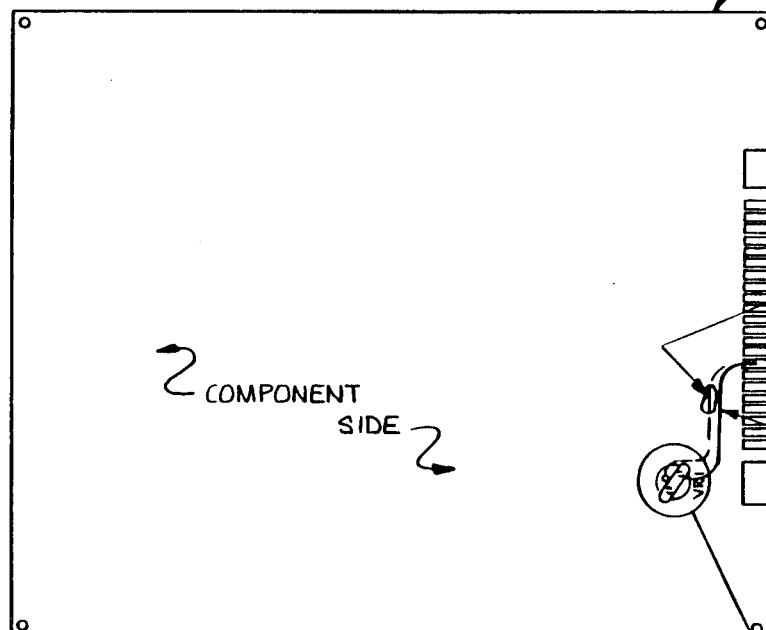
B

B

B

A

A



ASS'Y BOARD (N.B.)  
 38-11733-01

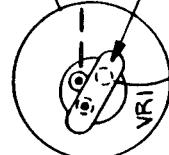
INSTALL THIS WIRE  
 FROM FAR SIDE

SOLDER TO PIN 8 (COMP. SIDE) & PIN 1 (CIR. SIDE).  
 BOTH SIDES AS SHOWN.

USE BUSSWIRE  
 P/N 34-10596-01  
 2 PLACES

⚠ REMOVE POT FROM VRI LOCATION AND INSTALL  
 CAPACITOR, .005 MF, 50V, DISC AS SHOWN  
 P/N 63-11584-01

NOTES: UNLESS OTHERWISE SPECIFIED



MATERIAL:	DRAWN BY: TENNES	DATE: 4-6-62	El Cajon Ca. 92020
PROJECT ENGR:	DATE:	RELEASE APPROV:	DWG TITLE
			CINEMATRONICS INC.
FINISH:	DO NOT SCALE DWG	DATE:	ASS'Y BOARD
	TOLERANCE: UNLESS OTHERWISE SPECIFIED		N/VOLUME MOD (N.B.)
PROJECTION:	SCALE:	MODEL NO.	DWG NO.
		C	38-11733-02
		CODE IDENT.	SHEET 1 OF 1

4

3

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REVISIONS

REV	DESCRIPTION	DATE	APPROVED
A	ORIC RELEASE ERN#013	3/25/82	PJ

CONNECTOR	FROM	TO	COLOR	AWG	PIN	LENGTH	REMARKS
P4							
MAIN WIRE HARN	P4 - 1	SPEAKER	BRN	22	M	45.0	▲
MOLEX P/N 03-09-2038	P4 - 2	SPEAKER	WHT	22	M	45.0	▲
△ 41-10659-01	P4 - 3						NOT USED

△ CINEMATRONICS PART NO.

⚠ WIRES TERMINATE AT SPEAKER END WITH  
WITH FEMALE QUICK DISCONNECTS,  
CINEMATRONICS P/N 35-10617-01

NOTES:

TOL.  
+1.0"  
-0.0"

MATERIAL:	DRAWN BY: TEJNEES	DATE 3/15/82
FINISH:	PROJECT ENGR: K. MATS	DATE 3/15/82
BREAK ALL SHARP EDGES AND DEBURN ALL HOLES.		RELEASE APPROV: DATE
DO NOT SCALE DWG		
TOLERANCE: UNLESS OTHERWISE SPECIFIED		
PROJECTION:	SCALE:	
CODE IDENT.		SHEET 1 OF 1

**CINEMATRONICS INC.** El Cajon Ca. 92020

DWG TITLE  
**WIRE LIST-(COCKTAIL)  
SPEAKER HARNESS (JG)**

MODEL NO. DWG SIZE DWG NO. REV.  
**80-11692-01 A1**

4

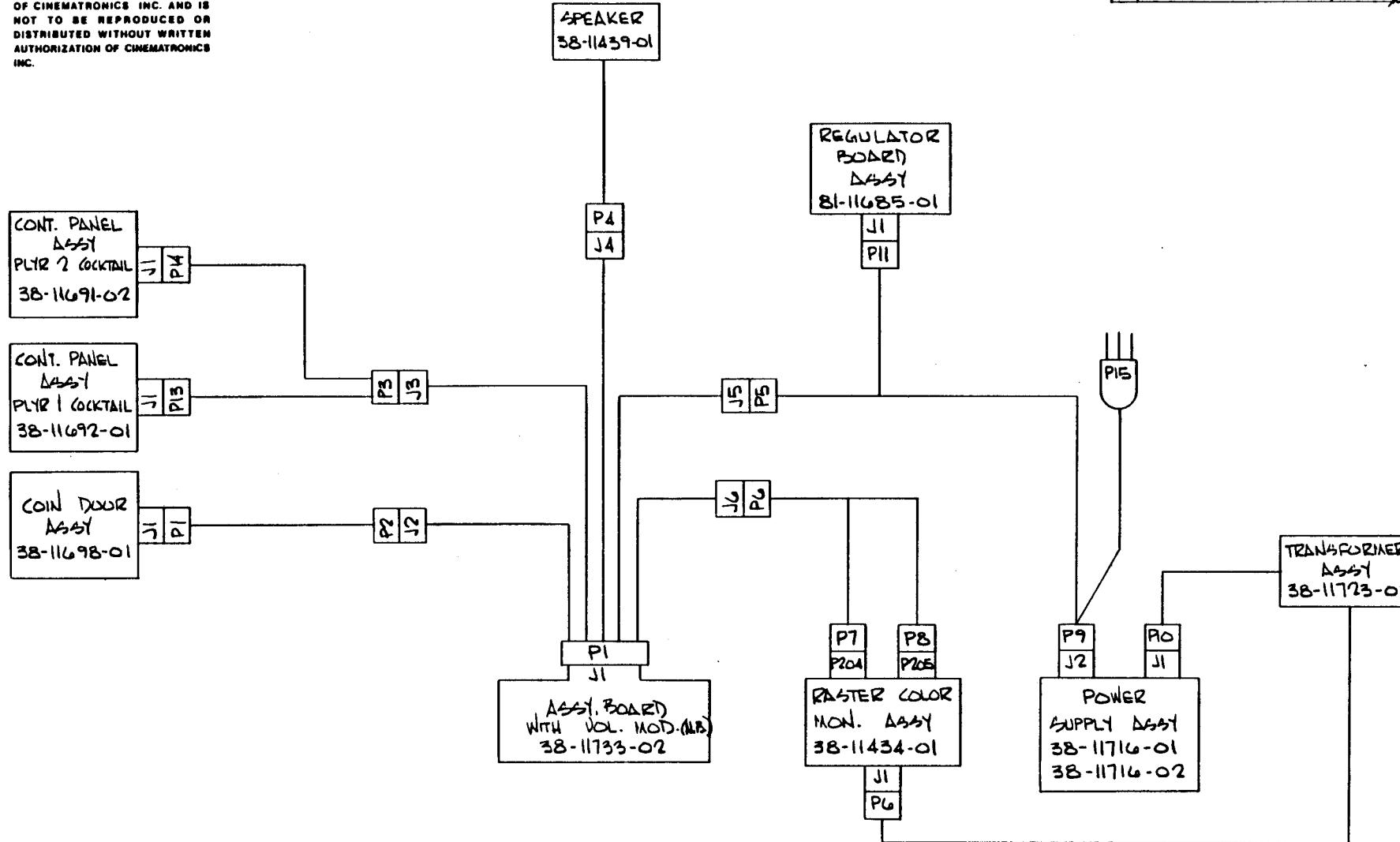
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1

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REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	ORIG RE ERN # 014	4-5-82	<i>[Signature]</i>



NOTES: UNLESS OTHERWISE SPECIFIED

MATERIAL:	DRAWN BY: <i>F. Ramirez</i>	DATE: 5/26/82
FINISH:	PROJECT ENGR: <i>K. Morris</i>	DATE: 4/5/82
RELEASE APPROV'D DATE: <i>[Signature]</i> 4/5/82		
DO NOT SCALE DWG		
TOLERANCE: UNLESS OTHERWISE SPECIFIED		
PROJECTION: <i>-&gt;</i>	SCALE: NONE	REV. A
CODE IDENT. 11-11735-01		SHEET 1 OF 1

**CINEMATRONICS** INC. El Cajon Co. 92020  
DWG TITLE: INTERCONNECT DIAGRAM COCKTAIL (N.B.)  
MODEL NO. DWG NO. SIZE C 11-11735-01 REV. A

4

3

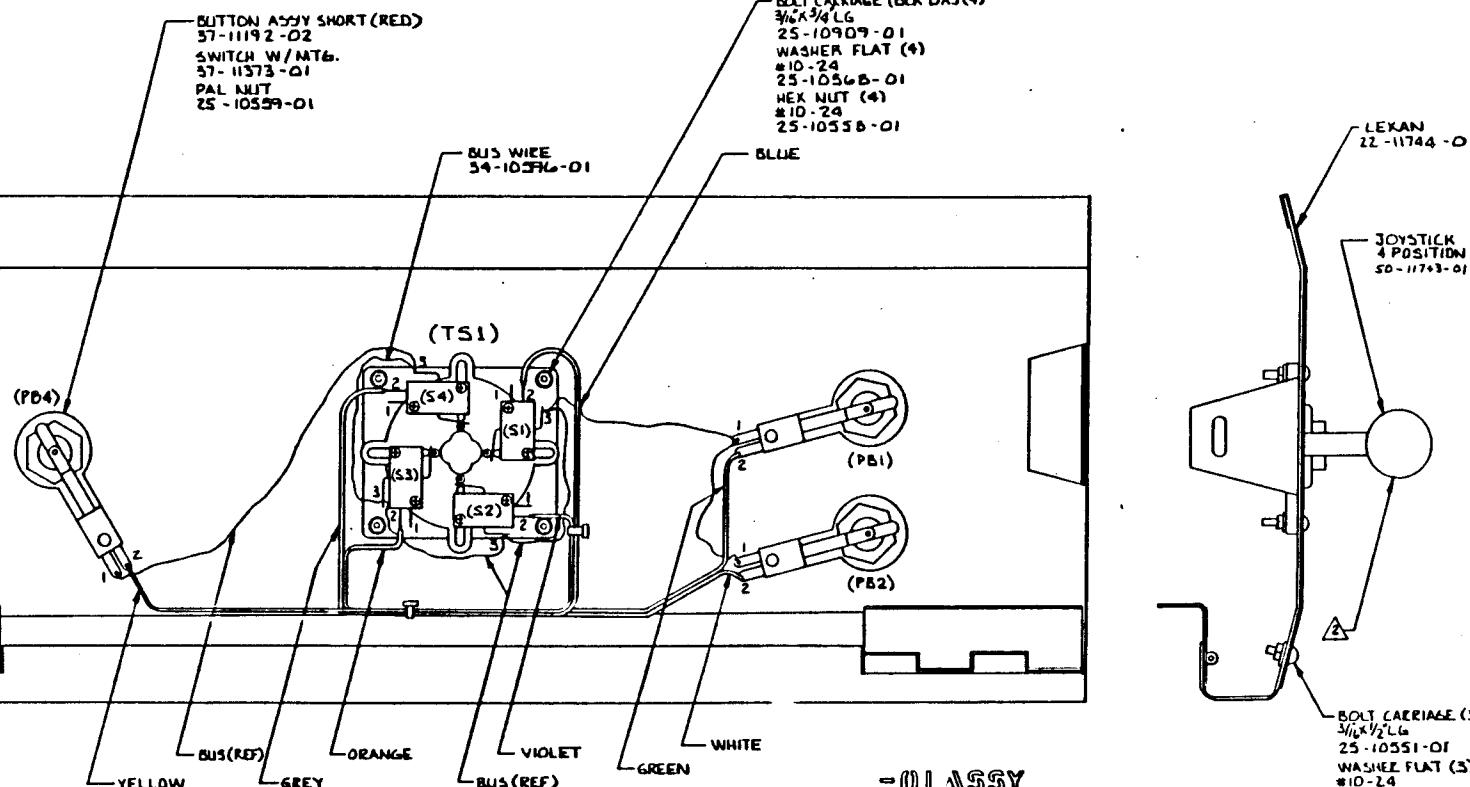
2

1

8 7 6 5 4 3 1

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REVISIONS  
REV. DESCRIPTION DATE APPROVED  
A WORK REL ERN 15 4-1-82



3 REF. DES. SHOWN FOR REFERANCE  
ONLY AND DO NOT APPEAR ON PART.

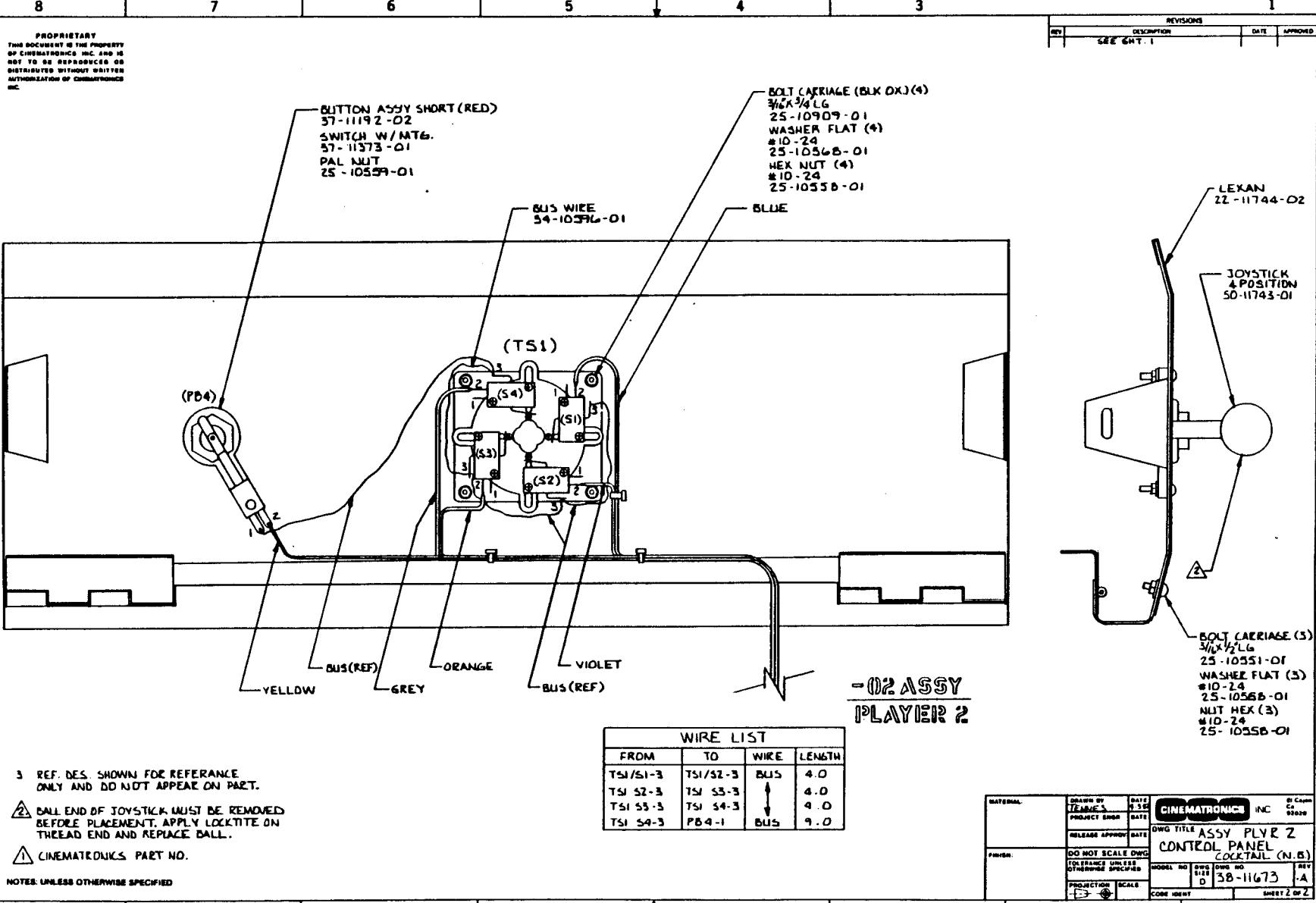
2 BALL END OF JOYSTICK MUST BE REMOVED  
BEFORE PLACEMENT. APPLY LOCTITE ON  
THEEND END AND REPLACE BALL.

CINEMATRONICS PART NO.

NOTES UNLESS OTHERWISE SPECIFIED

WIRE LIST			
FROM	TO	WIRE	LENGTH
PB2-1	PB1-1	BUS	3.0
PB1-1	TS1/S1-3		5.0
TS1/S1-3	TS1/S2-3		4.0
TS1/S2-3	TS1/S3-3		4.0
TS1/S3-3	TS1/S4-3		4.0
TS1/S4-3	PB4-1	BUS	9.0

MATERIAL	DRAWN BY F. J. STROH DATE 1-1-82	REV. A
FINISH	RELEASE APPROVED DATE DO NOT SCALE DWO TOLERANCE UNLESS OTHERWISE SPECIFIED	PRINTED 1-1-82 SCALE 1:1 CODE IDENT D-38-11673 REV. A
DWO TITLE ASSY PLVR CONTROL PANEL COCKTAIL (N.B.)		



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REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	ORIG REL ERN # 012	3-25-82	<i>[Signature]</i>

D

D

C

C

B

B

A

A

CONNECTOR	FROM	TO	COLOR	AWG	PIN	LENGTH	REMARKS
P3  EDGE CONN. MOLEX P/N 03-09-1152 OR EQUIV. OUR P/N 41-10660-01 15 CIR. MALE	P3-1	P14-9	ORANGE	22	M	28.0	
	P3-2	P14-8	BLUE		F		
	P3-3	P14-7	BROWN				
	P3-4	P14-6	GRAY				
	P3-5	P14-5	YELLOW				
	P3-6	P14-4	VIOLET				
	P3-7	P14-1	BLACK				
	P3-7	P13-1	BLACK				GND NO. 2
	P3-8	P13-2	WHITE				GND NO. 1
	P3-9	P13-3	GREEN				
	P3-10	P13-4	VIOLET				
	P3-11	P13-5	YELLOW				
	P3-12	P13-6	GREY				
	P3-13	P13-7	BROWN				
	P3-14	P13-8	BLUE				
	P3-15	P13-9	ORANGE	22	F	10.0	
P13  PLAYER NO.1 MOLEX P/N 03-09-1093 OR EQUIV. OUR P/N 41-10649-01 9 CIR. MALE	P13-1	P3-7	BLACK	22			GND NO. 1
	P13-2	P3-8	WHITE				
	P13-3	P3-9	GREEN				
	P13-4	P3-10	VIOLET				
	P13-5	P3-11	YELLOW				
	P13-6	P3-12	GREY				
	P13-7	P3-13	BROWN				
	P13-8	P3-14	BLUE				
	P13-9	P3-15	ORANGE	22			
P14  PLAYER NO.2 MOLEX P/N 03-09-1093 OR EQUIV. OUR P/N 41-10649-01 9 CIR. MALE	P14-1	P3-7	BLACK	22			GND NO. 2
	P14-2						NOT USED
	P14-3						NOT USED
	P14-4	P3-6	VIOLET				
	P14-5	P3-5	YELLOW				
	P14-6	P3-4	GREY				
	P14-7	P3-3	BROWN				
	P14-8	P3-2	BLUE				
	P14-9	P3-1	ORANGE	22			

NOTES: UNLESS OTHERWISE SPECIFIED

TOLERANCE  
+1.0  
-0.0

MATERIAL:	DRAWN BY: F. RAMIREZ	DATE: 3-1-82
RELEASE APPROV:	PROJECT ENGR: K. Miller	DATE: 3-1-82
		DWG TITLE: WIRE LIST -
		CONTROL PNL INTERCONN.
		COCKTAIL (J.G.)
CODE IDENT.	MODEL NO. 88-11710-01	REV. A
SHEET 1 OF 1	DWG NO. 88-11710-01	SIZE C

