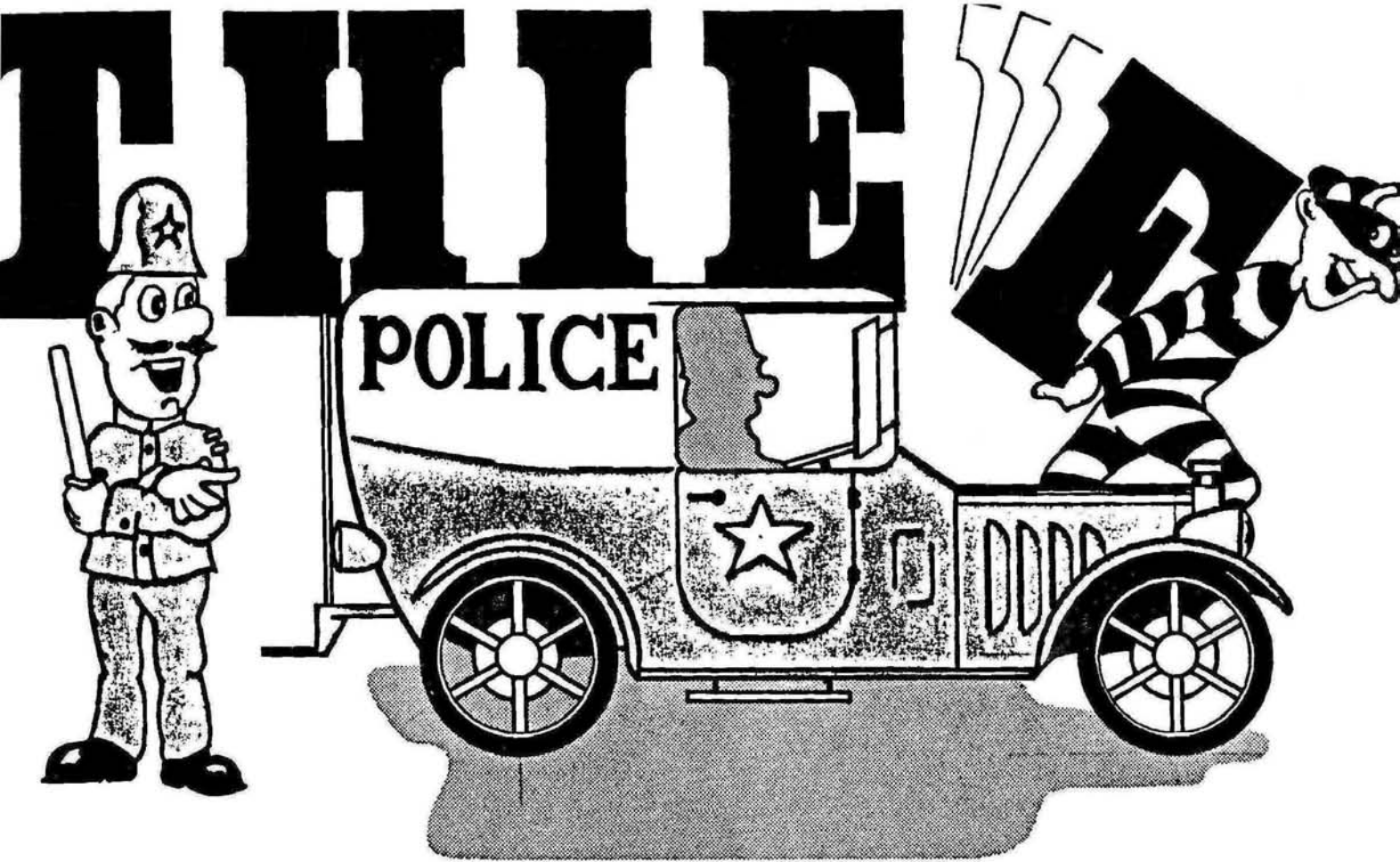


GDI



OWNER'S MANUAL

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WARNING

This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instructions manual, may cause interference to radio communications. As temporarily permitted by regulation it has not been tested for compliance with the limits for Class A computing devices pursuant to Subpart J of Part 15 of FCC Rules, which are 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 correct the interference.

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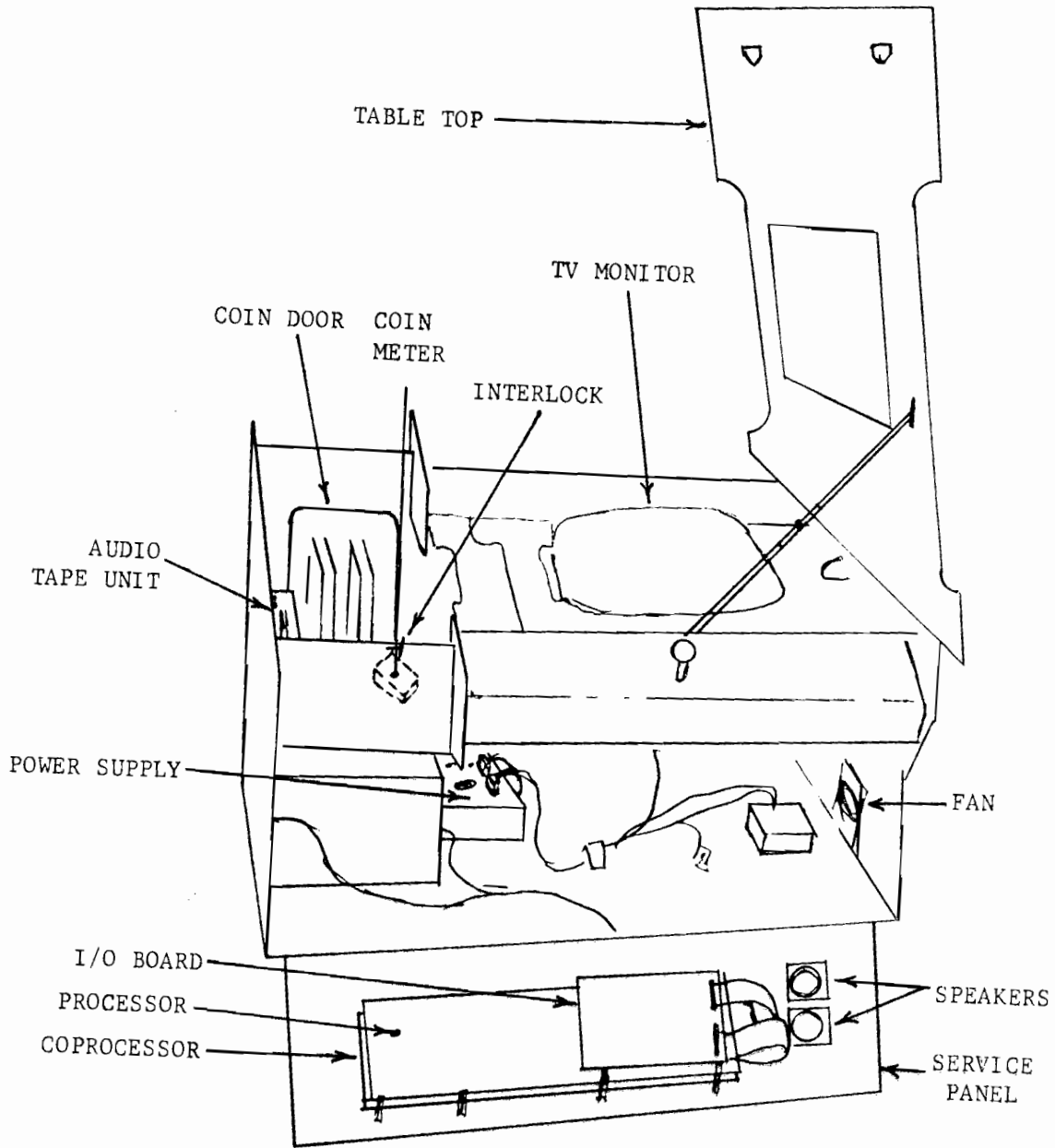
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PARTS LIST

- Control panel, 1st player
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- Service panel assembly
- Cabinet assembly
- CPU board
- I/O board
- Coprocessor board



COMPONENT LOCATIONS

GENERAL

HARDWARE CONCEPTS

This is composed of three printed circuit boards:

1. Processor board - whose circuits include;
 - a. Microprocessor
 - b. Memories (RAM and ROM)
 - c. Control logic
2. Interface (I/O) board - whose circuits include;
 - a. Sound synthesizers
 - b. Switch input decoding
 - c. Option DIP switches
3. Coprocessor board - which performs proprietary logic to increase performance of Z80 for graphics functions.

The processor board incorporates a Z80 central processor unit, the ROM for programming the game, and the game's display unit. Included is the hardware for generating the color display on the TV monitor. It's control logic permits the interface board to communicate with the microprocessor.

The interface board scans coin, start, joystick and other switch related inputs, and reports their status to the computer. The board also serves as the generator of synthesized sounds via it's two programmable sound generators (PSG) and amplifiers. This game uses a tape unit to supply it's special sound effects. It also controls the following functions:

1. Power to the tape unit (transistor switch)
2. Connect the left channel to speaker (relay contacts)
3. Connect right channel to speaker (relay contacts)

The tape unit is an automotive stereo type which contains an audio tape cassette. The interface unit controls the recorder, turning it on and off and "cueing" the individual tracks, as required.

CARE OF TAPE UNIT

A leaderless autoreverse cassette in the tape unit produces the audible chatter between cars as well as the sounds when they crash. When sound fails it may be due to a worn or bad cassette. Check by removing the game cassette from the tape unit and then inserting and playing a regular tape in it. If it plays, the game cassette is bad. If tape cassette replacement is all too frequent, be sure to check that the audio tape player is off during "game over". A replacement cassette may be ordered from GDI, Inc.

CARE OF PLAYER CONTROLS

The pushbutton parts used on the control panel of the game can be directly cross referenced to WICO replacements. The leaf switches are gold plated and may be cleaned by rubbing an ordinary piece of paper between the two surfaces. A point adjusting tool may be used to set the spacing. The joystick should be aligned so

that it is sensitive for deflection in all directions.

COIN MECHANISM

If the coin mechanism fails to accept coins after months of service, it generally requires cleaning.

INSTALLATION

CABINET LEVELERS

The cabinet is shipped with levelers. Install and adjust them to;

- A. Protect floors from scratches
- B. Keep the game steady

SOUND ADJUSTMENTS

The game incorporates four sound channels; Channels A, B, C and D. To make sound adjustments, start the game in the two player mode and then adjust channels A, B and C. To adjust channel D, it is easier to have a second party play the game while trimming the control on the tape unit. Adjust sound, as follows:

- Channel A. Siren tone. Adjust trimmer pot at location 7D on the interface board (see figure on page 10).
- Channel B. Dollar pick-up sound. Adjust trimmer pot at location 7C on interface board (see figure on page 10).
- CHANNEL C. Police chatter. On tape unit. Adjust volume of both channels C and D using the volume control. Balance channels C and D with the balance control.
- CHANNEL D. Car crash sounds. On tape unit. Adjust volume of both channels using volume control. Balance channels C and D with the balance control.

DEGAUSSING


This machine may require degaussing when installed in it's proposed location, or moved to a new location. Degaussing is evident when color changes occur on the TV monitor as the cabinet is rotated from say, a north/south direction to an east/west orientation. The degaussing procedure is as follows:

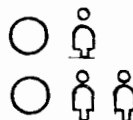
1. Start degaussing on Front (coin door) side of cabinet.
2. Next, do back side of cabinet.
3. Now, degauss TV monitor from a position above TV monitor.
4. Finally, continue degaussing from ir front of TV monitor while slowly moving degausser away from screen as far as possible.
5. Then, rotate degausser until it's field is perpendicular to TV monitor before turning it "off".

OPERATING INSTRUCTIONS

CONTROLS

The functions of the control panel, and associated operating controls, are as follows:

JOYSTICK 



Control Panel

JOYSTICK



Controls direction of Thief's car. Left directs Thief left, right directs Thief right, up - Thief moves up, and down, Thief moves down. Thief's car can move in only one direction at a time - and straight. Thief's car will stop if he bumps into anything - until his direction is changed by the joystick.



When pressed, game round is initialized for one player only. Game round continues until Thief's car is eliminated by crashing into a blue police car. Game then is initialized for another round with another allotted Thief car, etc. When all allotted Thief cars are eliminated, game ends. Player and score is displayed on the upper left side of TV monitor screen.



When pressed, game is initialized for two players. Game round is ended for first player when his Thief's car is eliminated, and then initialized for the second player. When second players Thief's car is eliminated, game round is initialized to point of interruption of first player, etc. Game rounds and levels continue until both players lose all their allotted Thief cars. Score of each player is separately displayed on top of TV monitor screen.

Coin door

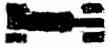
Accepts coins in either slot, and all coins accepted are displayed as credits on lower right-hand side of TV monitor screen to a total of 99 credits. Pressing 1 player button on control panel subtracts one credit from total. Pressing 2 players button subtracts two credits from total. Additional coins must be inserted to play game when credits displayed total 00.

Power Switch

Facing coin door side of cabinet, switch is located underneath left side of cabinet. Controls power to machine.

THE CHARACTERS

THIEF



Thief's car is the main character, and the only car controlled by the player. Its direction is under control of the joystick. The Thief's primary point scoring job during a round is to pick up all the green bills in the frame - although he can earn many bonus points by picking up a dollar sign and then crashing into red police cars. The more red cars he gets, the higher the bonus points earned - to a maximum of four red cars.

Police cars

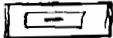


The round starts with blue colored police cars chasing the Thief's car around the maze. They end the round by crashing into the Thief's car. Police cars become vulnerable when they are red (Thief has picked up a dollar sign) and are bonus point scoring opportunities for Thief until they turn blue again.

CRIME LEVELS

There are 16 crime levels. A player advances into the next crime level when he has successfully picked up all the green bills in a maze. Each level presents a new challenge as game difficulty increases.

SCORING



Each green bill picked up

10 points



Red police cars

1st car - 100 points

2nd car - 500 points

3rd car - 1000 points

4th car - 2000 points

DIAGNOSTICS

TOP LEFT DIP SWITCH (See page 10)

SWITCH NUMBER								GAME FUNCTION CONTROLLED
1	2	3	4	5	6	7	8	
OFF	OFF							10,000 points per bonus car award
ON	OFF							20,000 points per bonus car award
OFF	ON							30,000 points per bonus car award
ON	ON							40,000 points per bonus car award
		ON						One bonus car award per game
		OFF						Bonus car award at points intervals set by switches 1 & 2
			ON					Bonus car(s) awards implemented in game
			OFF					Bonus car(s) awards not implemented in game
			* OFF	OFF	OFF	ON		Burn-in test (1st 2 digits in checksum = socket #)
			* ON	OFF	OFF	ON		Color bar display
			* OFF	ON	OFF	ON		Cross hatch grid
			* ON	ON	OFF	ON		Continuous color map writes
			* OFF	OFF	ON	ON		Video RAM address select writes
			* ON	OFF	ON	ON		I/O board driver test
			* ON	ON	ON	OFF		Display current options in effect

*Close SLAM switch or interrupt power to machine for each test
 *Switches 5, 6, 7 and 8 must be OFF in normal game mode

TOP RIGHT DIP SWITCH (See page 10)

SWITCH NUMBER								GAME FUNCTION CONTROLLED
1	2	3	4	5	6	7	8	
OFF	OFF							25¢ per game
ON	OFF							50¢ per game
OFF	ON							25¢ plays two games
ON	ON							25¢ plays one game and 50¢ plays three games
		OFF	OFF					3 cars per game
		ON	OFF					4 cars per game
		OFF	ON					5 cars per game
		ON	ON					7 cars per game
				*	*	ON	*	Cocktail table version of game
				*	*	OFF	*	Upright cabinet version of game

* Either ON or OFF

DIAGNOSTIC TESTS

GENERAL

The ROM test set supplied allows for testing the electronics game package (processor, interface and coprocessor boards).

Game diagnostics are enabled when switch 8 of the top left DIP switch is ON.

Game DIP switches are generally read by the processor only at power on. So, turn the game off and then on to signal a new switch setting.

Top Left DIP Switch (Page 10)

SWITCH NUMBER								DESCRIPTION OF TEST
1	2	3	4	5	6	7	8	
X	X	X	X	0	0	0	1	Burn-in test (1st digits in checksum = socket #
X	X	X	X	1	0	0	1	Color bar display
X	X	X	X	0	1	0	1	Cross hatch grid
X	X	X	X	1	1	0	1	Continuous color map writes
X	X	X	X	0	0	1	1	Video RAM address select writes
X	X	X	X	1	0	1	1	Video bit move
X	X	X	X	0	1	1	1	I/O board driver test
X	X	X	X	1	1	1	1	Reserved for future use

X = Any position
0 = Open
1 = Closed

BURN-IN TEST INSTRUCTIONS

SCOPE. The burn-in test consists of the following (see Typical Display - next page):

1. A checksum to determine the condition of all ROMs in the system
2. A harness/control/I/O board test sequence which displays the position of all switches in the system
3. A display of the individual switch positions of the two DIP switches on the I/O board
4. A 2114 RAM test - which tests the condition of the on-board RAM
5. A 4116 RAM test - which tests the display RAM
6. A coprocessor test - which tests sections of the coprocessor

Note that from time to time there may be a 4116 error message. Since the 4116 ICs are used in the video section, the game may still be very playable with a small fraction of errors.

Any error messages in the lower left side of the screen are caused by Coprocessor board problems. Errors such as "CNTXT ERR" or "ADDR XLAT ERR" are Coprocessor generated. If a large number of messages are received in the lower left hand side, either power is missing from the coprocessor or else the 50-pin flat cable is loose.

All errors other than 4116 are very serious and should be corrected immediately as they impair the earnings of the game.

Typical Display

(Checksums)	(Controls)	
00 (ok)	(Player 1)	
02 (ok)		
04 (ok)	. . . . .	← This is Player 1 control panel
06 (ok)		
08 (ok)		
10 (ok)	(Player 2)	
12 (ok)	.	
14 (ok)	. . . . .	← This is Player 2 control panel (cocktail version)
	.	
	. . . . .	← These are the DIP switches
	. . . . .	← . . Open circuit - - Closed circuit
	. . . . .	2114 ERR ← Bad 2114
D4=(ok)	. . . . .	4116 ERR ← Bad 4116
F4=(ok)	. . . . .

CAUTIONS

There are a number of dependences and limitations of this particular test ROM;

1. All tests depend on the existence of good RAM in the lowest 1K segment of memory
2. The tests used for the detection of errors and the 2114 and 4116 tests are very limited in their scope and ability to trace down subtle problems in these areas

CHECKSUMS. The checksum test adds the number contents in ROM and generates a checksum number. The test ROM has a table of correct values and upon finding the correct value displays (ok). If the number is incorrect, it will display a four digit number (16 bit hexadecimal checksum found). Anything other than the (ok), check the manual for any changes which may have been made to that ROM since the production of the test ROM.

DIP SWITCHES. This display is a visual presentation of each switch position on the DIP switches located on the I/O (small) board. This test is useful in determining the lowest level operation of the I/O panel.

PLAYER CONTROL DISPLAY. For problems in the harness and the adjustment of switches. This test indicates the opening and closing of switches on the;

1. Player 1 control panel
2. Player 2 control panel
3. Coin door

The dots (·) represent the identical switches and their correct relative positions on the panel of the game. An exception to this rule is on the player 2 panel. There the positions used for the one and two player start have been replaced with the COIN door switches. The symbols (·) and (*) represent the OPEN and CLOSED positions of the switches on the front panel.

THEORY OF OPERATION. Imbedded in the base of the ROMO ROM is code which detects the existence of a ROM14. If a ROM is found in this position, it checks for the proper contents at the beginning of the ROM14. If they are correct, the system begins execution at beginning of ROM 14 + 6.

COLBAR (Color Bar Display)

This routine generates a color bar pattern to test the operation of the video section. The test itself erases a byte to zero then writes to the selected plane of display memory.

This routine is especially useful for testing the wait line back to the CPU as well as the timing of writes.

The following must be running for this test to operate:

1. CPU and select logic to RAM/ROM
2. CPU RAM

VIDSEL (Video RAM select writes)

In this test, each of the video RAM select lines are selected. Each video RAM is read and written to in sequence. This test is designed to check that the video section is actually connected to the CPU section.

This test is used to check for the existence of /MRD + /MWR + /WAIT, as well as the address lines leading to the video RAMs and the signals internal to the video circuit. Each address line going to the video RAMs is exercised as well. In addition, the data written is incremented after each pass through the test.

The test will try to reset the video controller chip and then begin to read and write data to each of the address boundary location points 1, 2, 4, ::: last significant address. These are the only locations which will be written to.

Sync oscilloscope to the /OUT 0 select as this signals the start of a select sequence.

VIDBIT (Video bit move)

This routine generates a single bit write in each and every cell (byte) in the display memory. It is intended to detect bits stuck in individual planes.

In the normal operation of this routine, there are thirty two lines across the screen. On each pass the entire group moves to the side one single cell. Note that the test repeats after every eight writes because there are only eight bits to test per cell.

Since the memory is arranged as eight bit bytes to the processor and the internal representation is as 4 bit pixels, problems may be isolated as to whether they are of a 4 or 8 bit error pattern, internal to video, or in the interface between the two.

This test requires that the CPU and 2114 RAM section be functioning, as well as selects to these sections.

PSGTST (I/O board driver test)

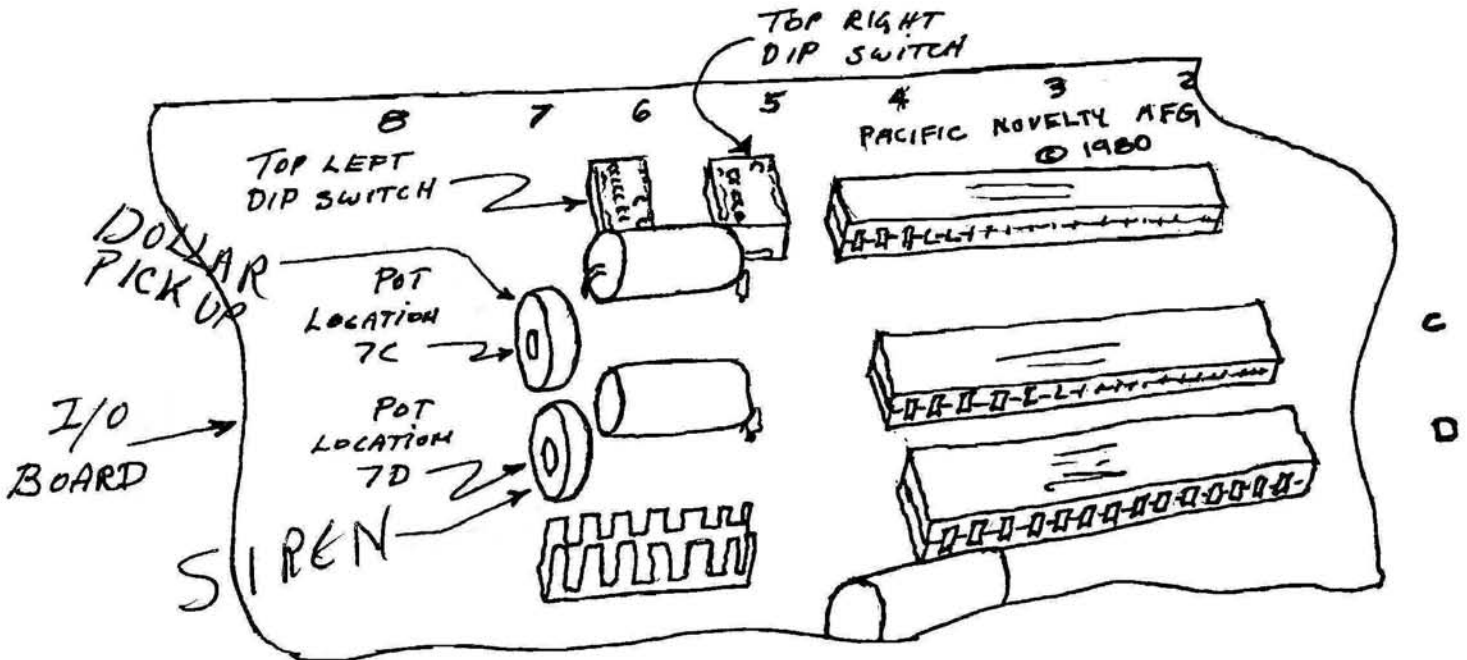
This is a test of the programmable sound generator and output driver.

In the PSG test, each channel of the PSG is, in sequence, frequency modulated at full volume.

After all the PSGs have been tested, the relays and transistor drivers are sequenced in order:

1. All units off
2. Tape power on, talk track on and coin meter on
3. Explosion track relay on
4. Explosion track relay off, coin meter off and talking track relay off
5. Repeat

During the testing, the 6 PSG channels (3 channels per PSG) are being frequency modulated. This causes an audible "whoop, whoop, whoop" sound and a pause.



I/O Panel, Control Locations

Service Panel Assembly, Parts List

PART NO.	QTY	DESCRIPTION
	1	Service panel
20B-20658	1	Panel hinge
1B-20661	2	Speaker grill
	2	Speaker
	1	Logic board assembly
2A-20714	2	Spacer, PCB
1A-20715	4	PCB mounting bracket
1A-20716	2	PCB mounting bracket
1A-20717	4	PCB mounting bracket
	22	Rd Hd Wood screw, #8 X 5/8
	4	Rd Hd Wood screw, #6 X 1/2
	2	Rd Hd Machine screw, 6 - 32 X 5/16
20A-20729	2	Hex nut, nylon
20A-20730	8K	Circuit board support, Richo LCB53N
20A-20728	2	Studded support, SCBS-18N

Cabinet Assembly, Parts List

PART NO.	QTY	DESCRIPTION
11D-20647	1	Cabinet
30D-20654	1	Glass - Top
8C-20655	1	Filter - Monitor
3D-20641	1	Bezel - 13" monitor
3D-20642	1	Cash box
D-20665	1	Control panel assembly
D-20666	1	Control panel assembly, 1 - 2 play
20B-20650	1	Hinge - Top
1B-20656	2	Glass retaining bracket
5A-20643	1	13" monitor
11A-20653	4	Control panel mounting block
11C-20651	2	Monitor mounting board
20-20652	1	Coin door
1A-20279	1	Interlock switch bracket
5-20510	1	Interlock switch
1A-20675	2	Vent grill
5A-6329	1	Toggle switch
1A-20710	1	On/off switch plate
20-20673	2	Latch & retainer
20-20674	1	Hinge lock
1A-20711	1	Hinge lock bracket
1A-20684	1	Courtesy outlet bracket
1B 20661	3	Speaker grill
1A-20709	1	12V meter mounting bracket
1A-20708	2	Top lock bracket
20A-20507		Toggle latch
	7	Carriage bolt, 8 - 32 X 1-1/4
	7	Flat washer, #8
	7	Hex nut, 8 - 32
	1	Power supply
5A-20264	1	Line filter
5A-20363	1	Varistor
		Insulating tubing, 2"
5A-20476	1	Line cord
5A-20731	1	Meter, 12V w/ bracket
	1	Tape player

Cabinet Assembly, Parts List (con't)

PART NO.	QTY	DESCRIPTION
	1	Fan
	4	Carriage bolt, 1/2 - 20 X 1-1/2
	4	Hex nut, 1/2 - 20
	4	Split lock washer, 1/4"
	8	Flat washer, 1/4"
	8	Wood screw, #6 X 1/2
	4	Rd Hd Mach. screw, 1/4 - 20 X 2
	2	Rd Hd Mach. screw, 6 - 32 X 3/8
	2	Hex nut, 6-32
	4	Carriage bolt, 10-32 X 1-1/2
	4	Split lockwasher, #10
	4	Hex nut, 10 - 32
	26	Rd Hd Wood screw, #8 X 5/8
	10	Rd Hd Mach. screw, 8 - 32 X 1/2
	10	Split lockwasher, #8
	8	Wood screw, black oxide, Torx, #8 X 3/8
17 -20735	11	Braided wire
3B-20467	2	Handle pull cover
	4	Rd Hd Mach, screw, 1/4 X 20 X 3
3A-20690-1	8	Twist loc - TL-250
3A-2-690-2	5	Twist loc - TL-350
3A-20690-3	2	Twist lock - TL-450
16A-20719	1	Serial # tag
23-20736		Black PVC vinyl, 1/32" X 1/2", 8'
5A-20262	1	Service outlet
20-20737	1	Spade terminal
	1	Molex connector, 19-09-1099
	1	Molex connector, 19-09-1069
	1	Molex connector, 03-09-1033
5 -20355	1	Molex connector, 03-09-2032
5 -20361	1	Molex connector, 03-09-2062
	2	Molex connector, 03-09-1063
	1	Molex connector, 03-09-1023
5 -20353	1	Molex connector, 03-09-2022
5A 20496	1	Molex connector, 09-50-7101
5 -20482	1	Molex connector, 03-06-2092

Cabinet Assembly, Parts List (con't)

PART NO.	QTY	DESCRIPTION
	1	Molex connector, 03-06-1092
	1	Molex connector, 19-09-1029
	1	Molex connector, 03-06-1152
	2	Molex connector, 09-50-3091
	2	Molex connector, 09-50-3081
5 -20346	3	Molex connector, 09-50-3061
	1	Molex connector, 09-50-3021
	1	Molex connector, 03-09-1093
5A-20556	43	Molex terminal, 02-09-1116
5A-20557	11	Molex terminal, 02-09-2116
5A-20553	64	Molex terminal, 08-50-0115
5A-20552	9	Molex terminal, 02-06-2101
5A-20551	24	Molex terminal, 02-06-1101
	1	Cable harness
	2	Speaker

CPU Board, Parts List

PART NO.	QTY	DESCRIPTION
		<u>ICs</u>
	4	74SL00
	1	7400
	1	74LS02
	1	74LS03
	3	74LS04
	3	74LS06
	1	74LS08
	2	74LS10
	5	74LS32
	5	74LS42
	3	74LS74
	4	74LS86
	1	74LS90
	7	74109
	7	74LS153
	3	74LS157
	2	74LS173
	10	74LS174
	2	74LS175
	2	74LS189
	4	74LS194
	1	74LS240
	5	74LS244
	2	74LS275
	6	2114L2 200ns access time or AM9114EPC
	8	2732 200ns access time, Intel type
	32	4116-2 200ns cycle time or Mk4116, AM9016, MM5290
	1	LM555 with 90 degree fold on leads
	1	TMS-9927 or SMC 5037
	1	Z80A 4mhz min or D780-1, Z80acpubl
		<u>DIODES</u>
	17	1N4148 or 1N914
	1	1N4004

CPU Board, Parts List (con't)

PART NO.	QTY	DESCRIPTION
		<u>TRANSISTORS</u>
	4	2N3904 or 2N2222, ITT2222
		<u>CRYSTALS</u>
	1	8.00 Mhz, small case
	1	20.0 Mhz, small case
		<u>CAPACITORS</u>
	2	.001 uf, monolythic ceramic
	1	.01 uf, monolythic ceramic
	102	.22 uf, monolythic ceramic
	3	1 uf, axial lead electrolytic
	3	100 uf, axial lead electrolytic
		<u>RESISTORS</u>
	1	100 ohm, 1/4 W, 5%
	9	150 ohm, 1/4 W, 5%
	8	330 ohm, 1/4 W, 5%
	7	1k ohm, 1/4 W, 5%
	4	2.2K ohm, 1/4 W, 5%
	2	100K ohm, 1/4 W, 5%
		<u>SOCKETS</u>
	34	16 pin, solder tail, low profile
	6	18 pin, solder tail, low profile
	8	24 pin, solder tail, low profile
	2	40 pin, solder tail, low profile
		<u>CONNECTORS</u>
	2	6 pin post wafer, Molex 2391 series 09-65-1061
		<u>FLAT CABLE HEADERS</u>
	1	50 pin male, straight header, Molex 10-56-3504.
		<u>PRINTED CIRCUIT BOARDS</u>
		CPU Board, revision 2A or later

I/O Board, Parts List

PART NO.	QTY	DESCRIPTION
		<u>ICs</u>
	3	74LS00
	1	74LS04
	1	74LS32
	1	74LS42
	1	74LS148
	2	74LS244
	1	74LS245
	1	8255-5 4Mhz version or AM8255A-5PC
	2	AY3-8910 G.I.
	2	LM380 linear
	2	LM383T with 90 degree fold on leads
		<u>DIODES</u>
	16	1N4148 or 1N914
	7	1N4004
		<u>TRANSISTORS</u>
	4	2N3904 or 2N2222, ITT2222
		<u>CAPACITORS</u>
	2	.001 uf, monolythic ceramic
	6	.1 uf, monolythic ceramic
	15	.22 uf, monolythic ceramic
	16	1 uf, axial lead electrolytic
	4	1 uf, tantalum dipped
	2	4.7 uf, axial lead electrolytic
	2	10 uf, axial lead electrolytic
	6	100 uf, axial lead electrolytic
	2	470 uf, axial lead electrolytic
	2	1000 uf, axial lead electrolytic
		<u>RESISTORS</u>
	4	2.7 ohm, 1/4 W, 5%
	16	100 ohm, 1/4 W, 5%
	4	120 ohm, 1/4 W, 5%

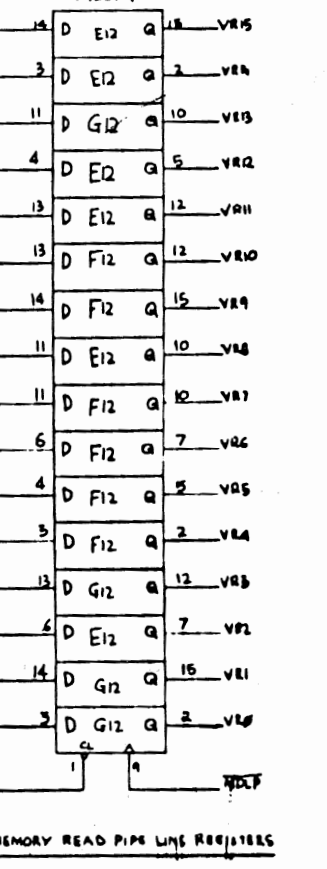
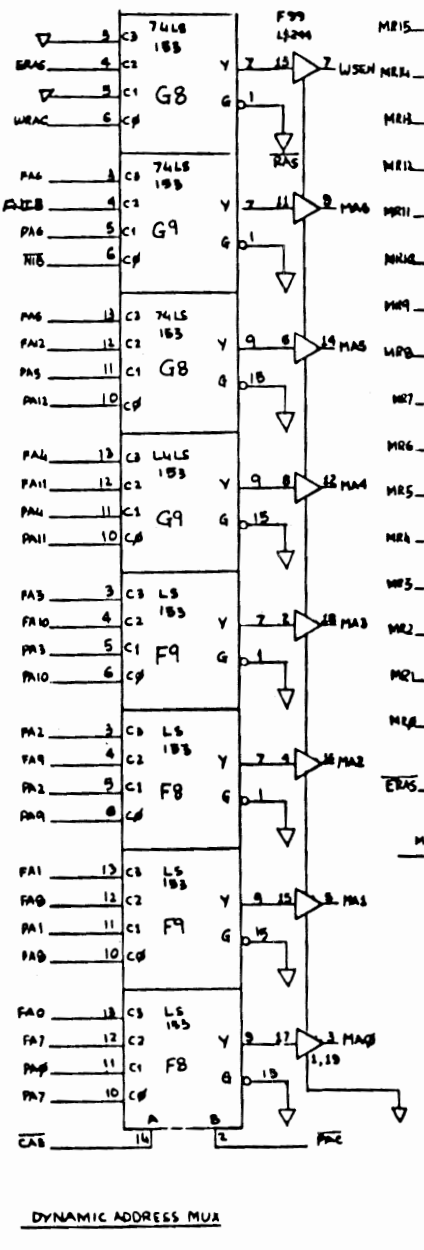
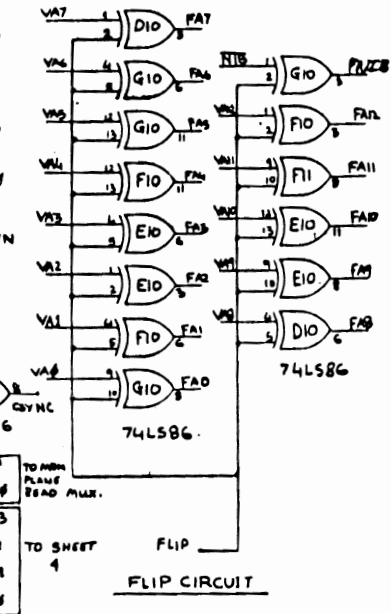
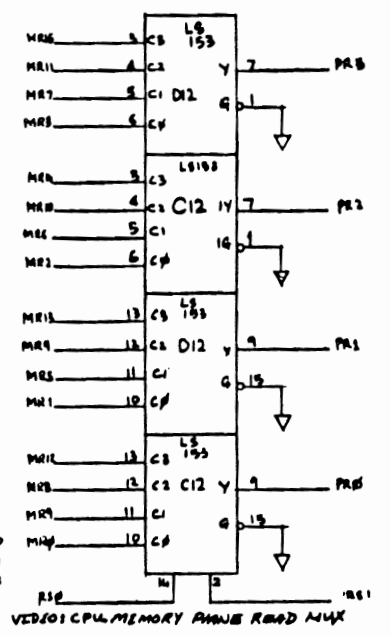
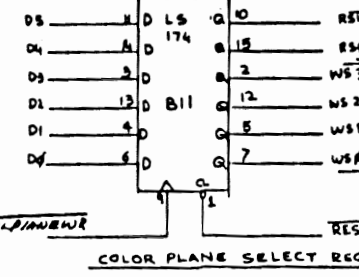
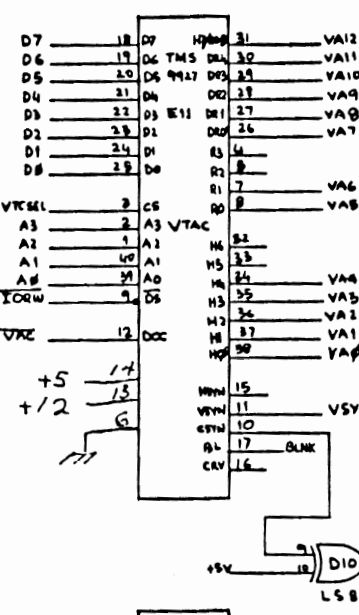
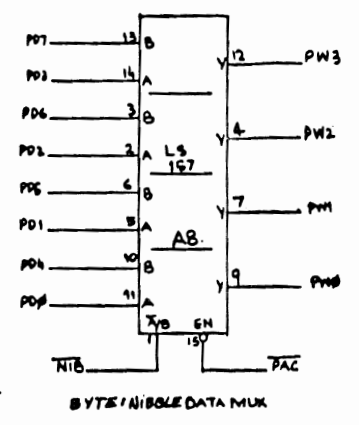
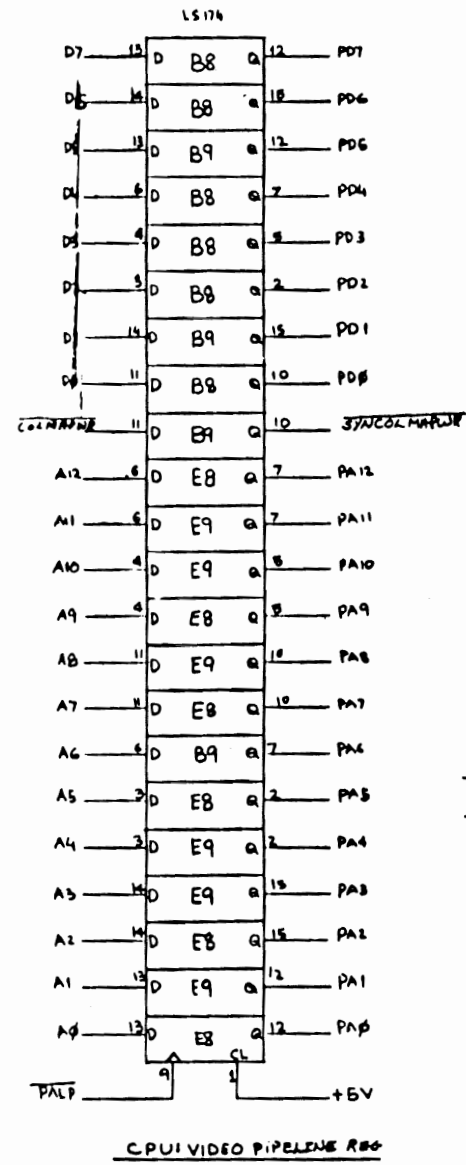
I/O Board, Parts List (con't)

PART NO.	QTY	DESCRIPTION
		<u>RESISTORS (con't)</u>
	2	150 ohm, 1/4 W, 5%
	2	220 ohm, 1/4 W, 5%
	11	1K ohm, 1/4 W, 5%
	4	1.2K ohm, 1/4 W, 5%
	6	2.2K ohm, 1/4 W, 5%
	2	10K ohm, 1/4 W, 5%
	1	47K ohm, 1/4 W, 5%
	2	100K ohm, 1/4 W, 5%
	1	1K resistor array of 15 resistors, pin 16 common, Bourns 4116R-002-102 or 16-2-102, 916C102X2PE
	1	47K resistor array of 15 resistors, pin 16 common, Bourns 4116R-002-473 or 16-2-473, 916C473X2PE
	2	10K trimpot, p.c. mount vertical, CTS X201R103-R1378115
		<u>SOCKETS</u>
	3	40-pin, solder tail, low profile
		<u>CONNECTORS</u>
	1	6 pin post wafer, Molex 2391 Series 09-65-1061
		<u>FLAT CABLE HEADERS</u>
	1	50 pin male, straight header, Molex 10-56-3504
		<u>SWITCHES</u>
	2	8 position dipswitch, single-pole-single throw
		<u>RELAYS</u>
	2	Single-pole, single-throw, 5 volt coil I.T.T. MZ-5HG
		<u>HARDWARE</u>
	3	Heatsink To-220, THM 6106-14
	6	Screw, Pan Head, 6-32 X 3/8
	6	Nut, 6-32 W/ integral lockwasher
		<u>PRINTED CIRCUIT BOARDS</u>
	1	I/O Board, revision 2A of later

Coprocessor Board, Parts List

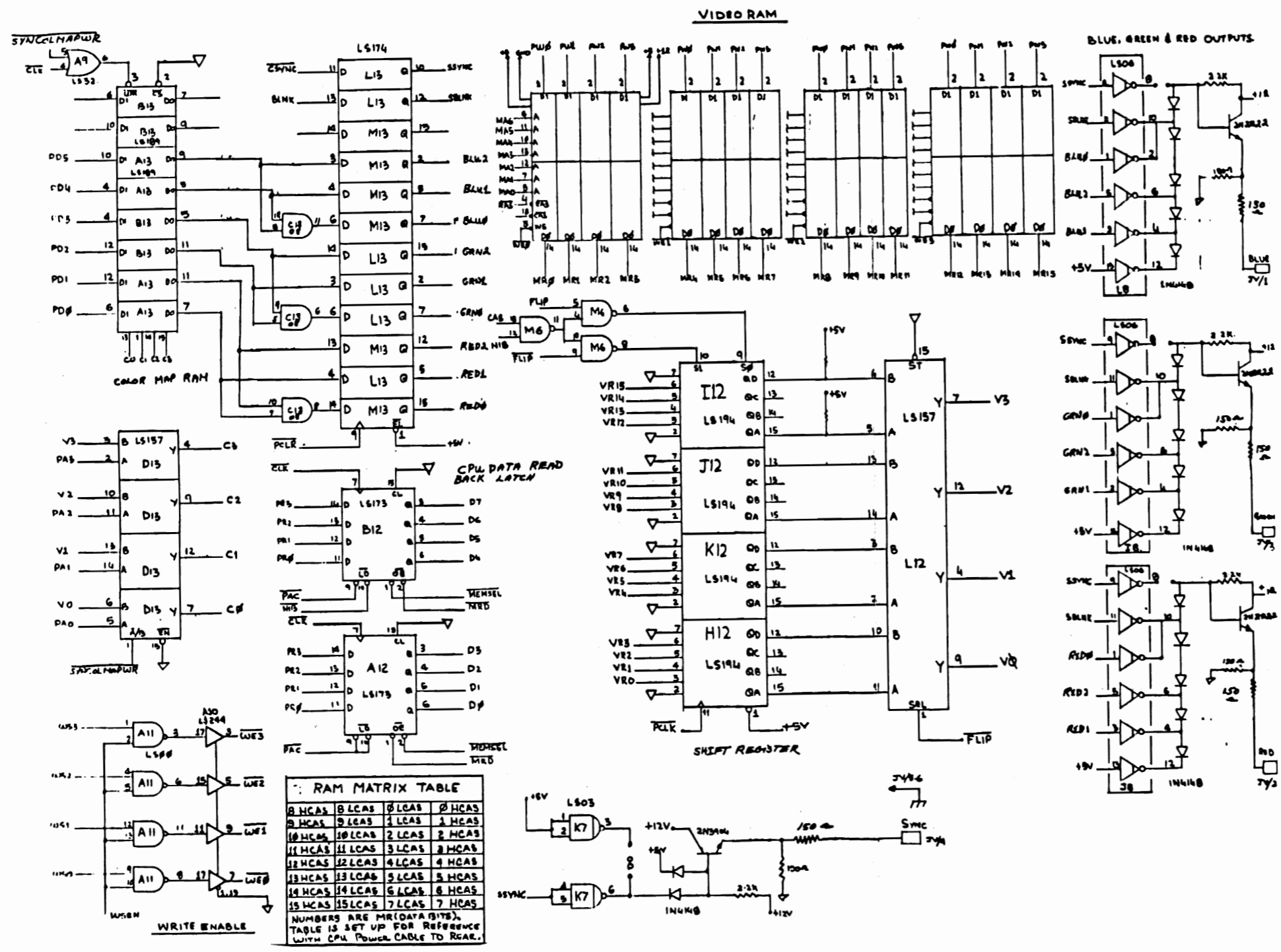
PART NO.	QTY	DESCRIPTION
		<u>ICs</u>
	1	74LS00
	1	74LS02
	1	74LS08
	1	74LS10
	3	74LS32
	4	74LS42
	2	74LS139
	4	74LS169A
	3	74LS240
	2	74LS244
	4	74LS245
	2	74LS257A
	4	74LS283
	2	74LS373
	3	74LS374
	2	74S472
	6	25S10 or 74S350
	8	25LS2569 or 74LS569
	6	2114L2 200ns access time or AM9114EPC
	2	450ns access time, Intel type
		<u>CAPACITORS</u>
	69	.22 uf, monolythic ceramic
	1	470 uf, axial lead electrolytic
		<u>SOCKETS</u>
	6	18 pin, solder tail, low profile
	2	20 pin, solder tail, low profile
	2	24 pin, solder tail, low profile
		<u>CONNECTORS</u>
	1	6 pin post wafer, Molex 2391 series 09-65-1061

DIAGRAMS SECTION



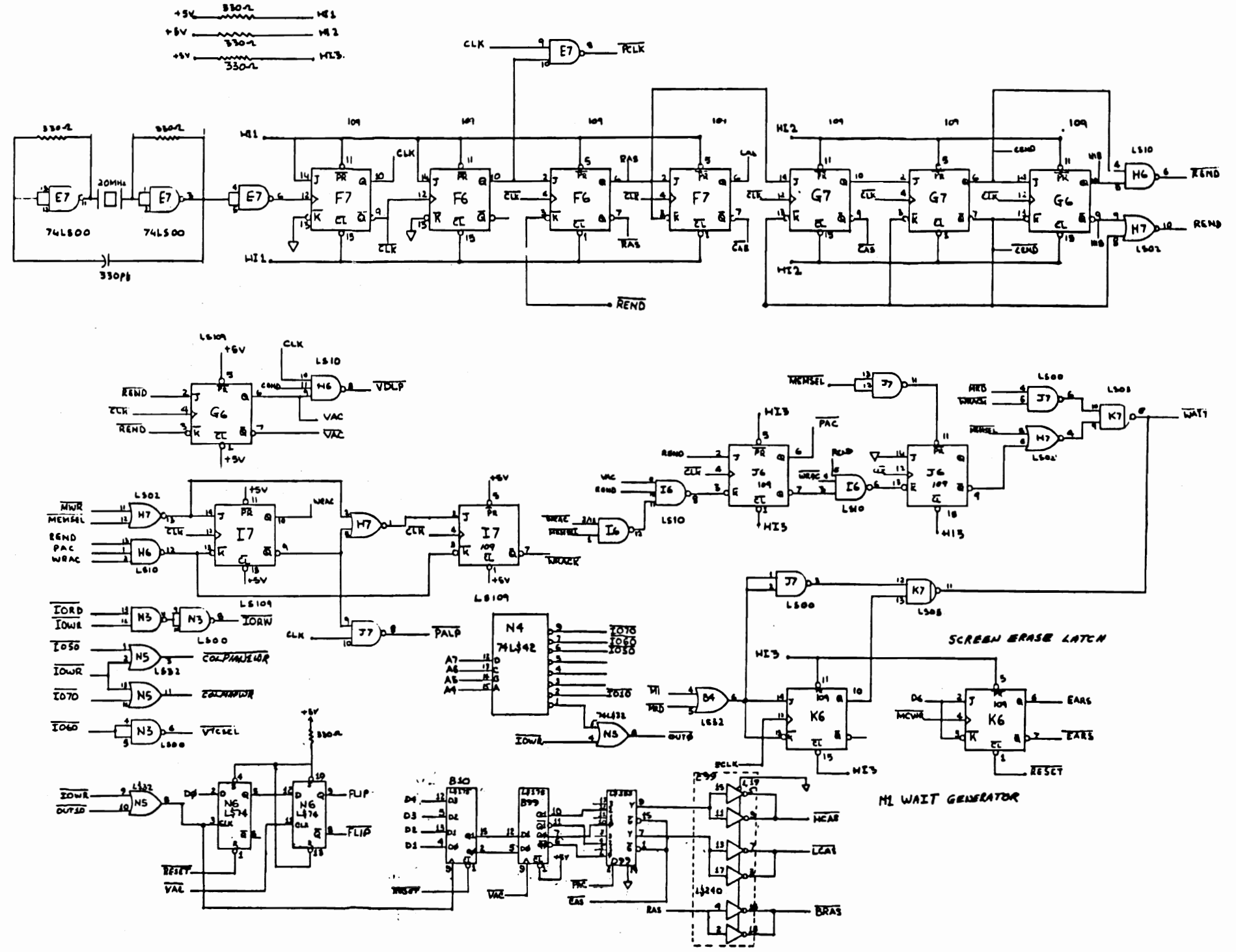
GDI GDI Inc.
 5945 N. ROGERS AVE. CHICAGO, IL 60646 / 13121 286-6722

NAME Processor, Schematic Diagram (Sheet 1 of 4)



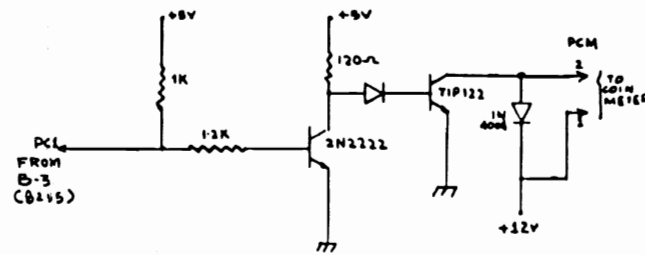
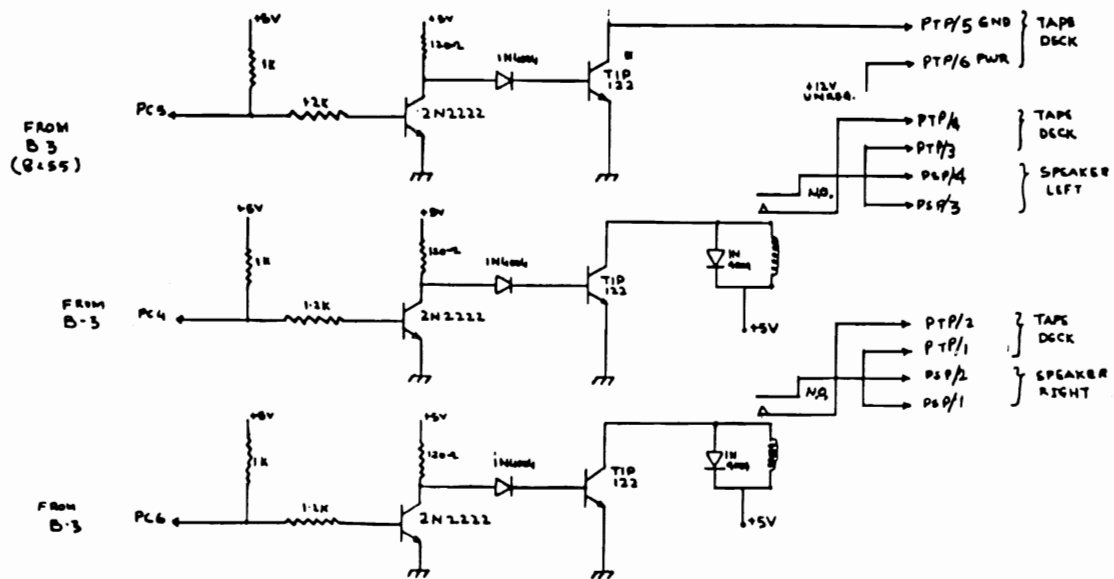
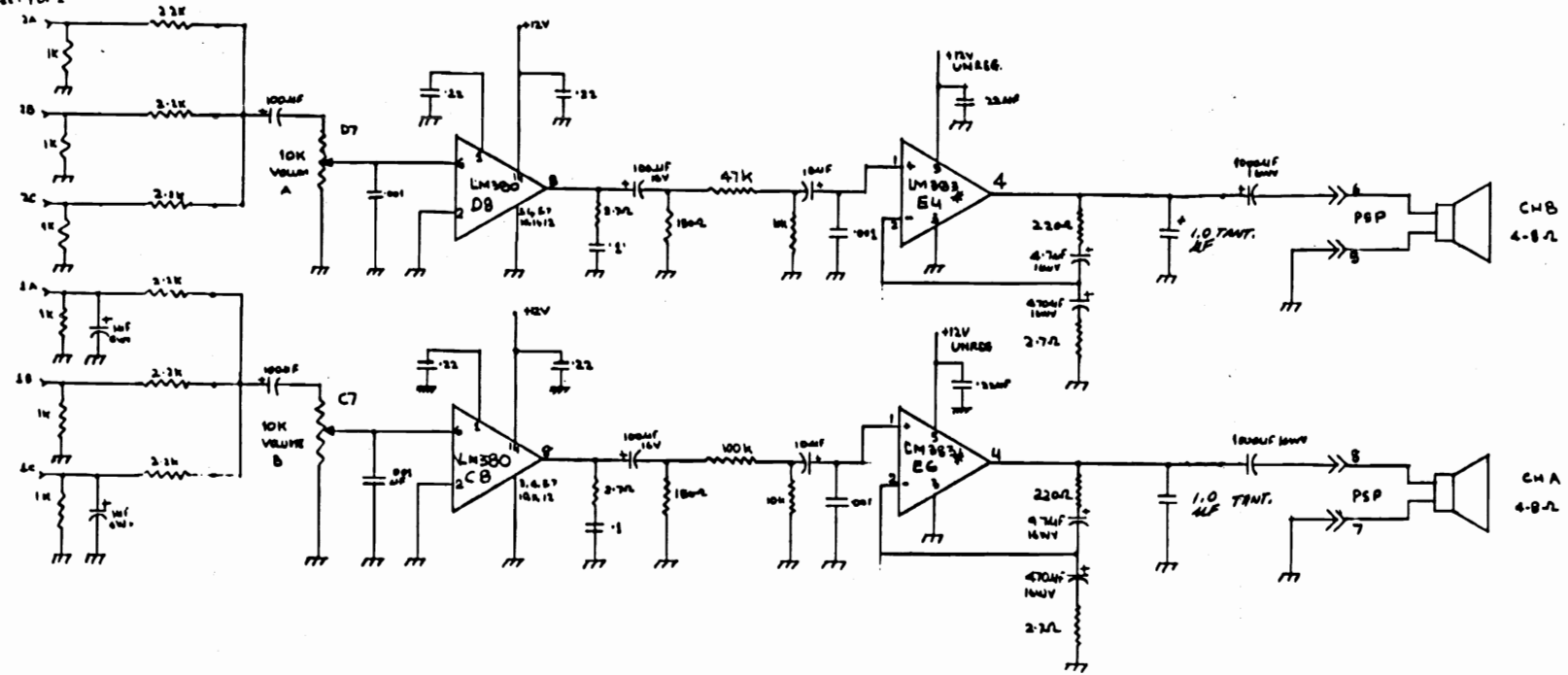
GDI Inc.
5945 N. ROGERS AVE. CHICAGO, IL. 60646 / (312) 286-6722

NAME Processor, Schematic Diagram (Sheet 2 of 4)

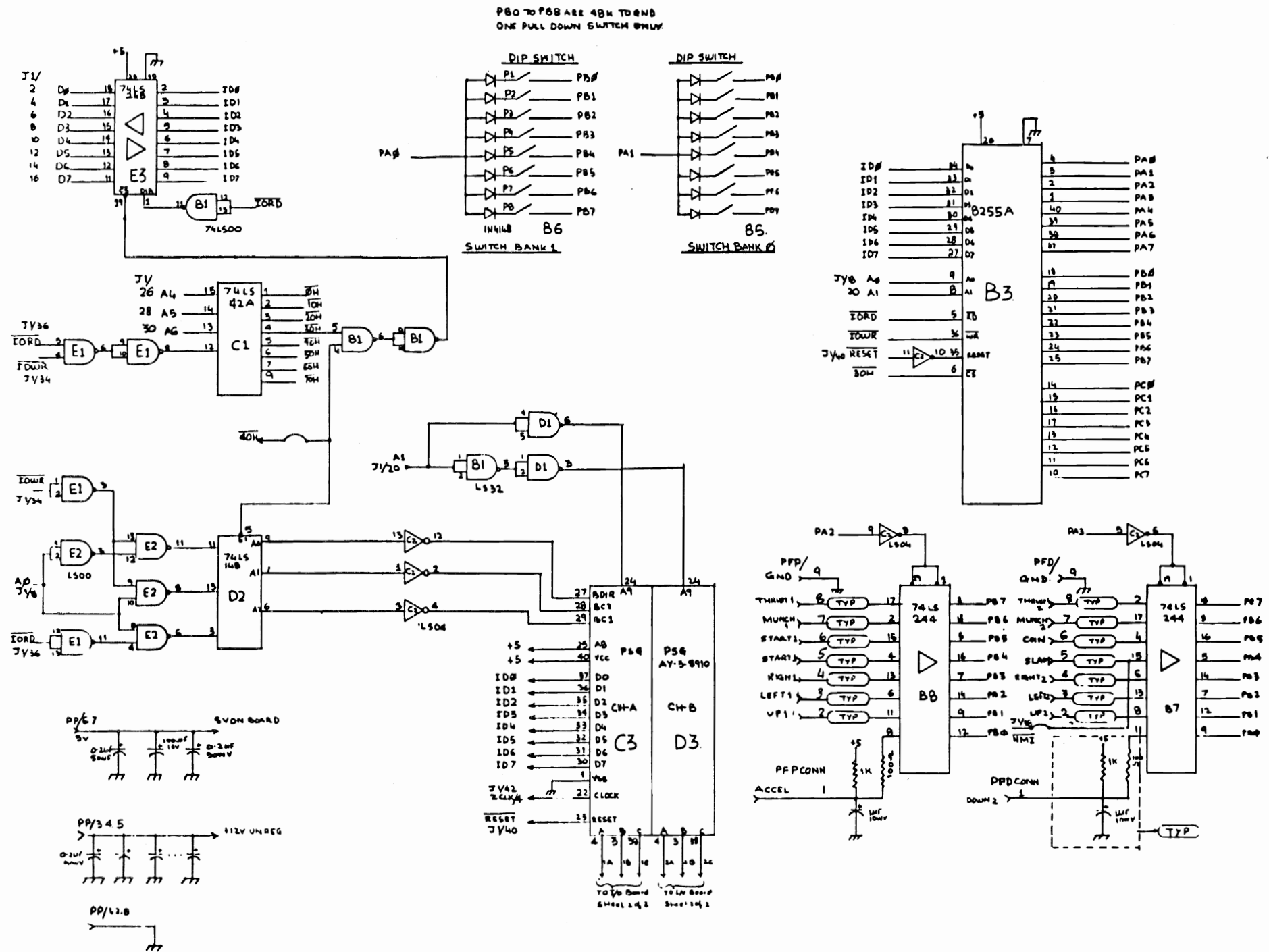


	GDI Inc. 5945 N. ROGERS AVE. CHICAGO, IL. 60646 / (312) 286-6722
	NAME Processor, Schematic Diagram (Sheet 3 of 4)

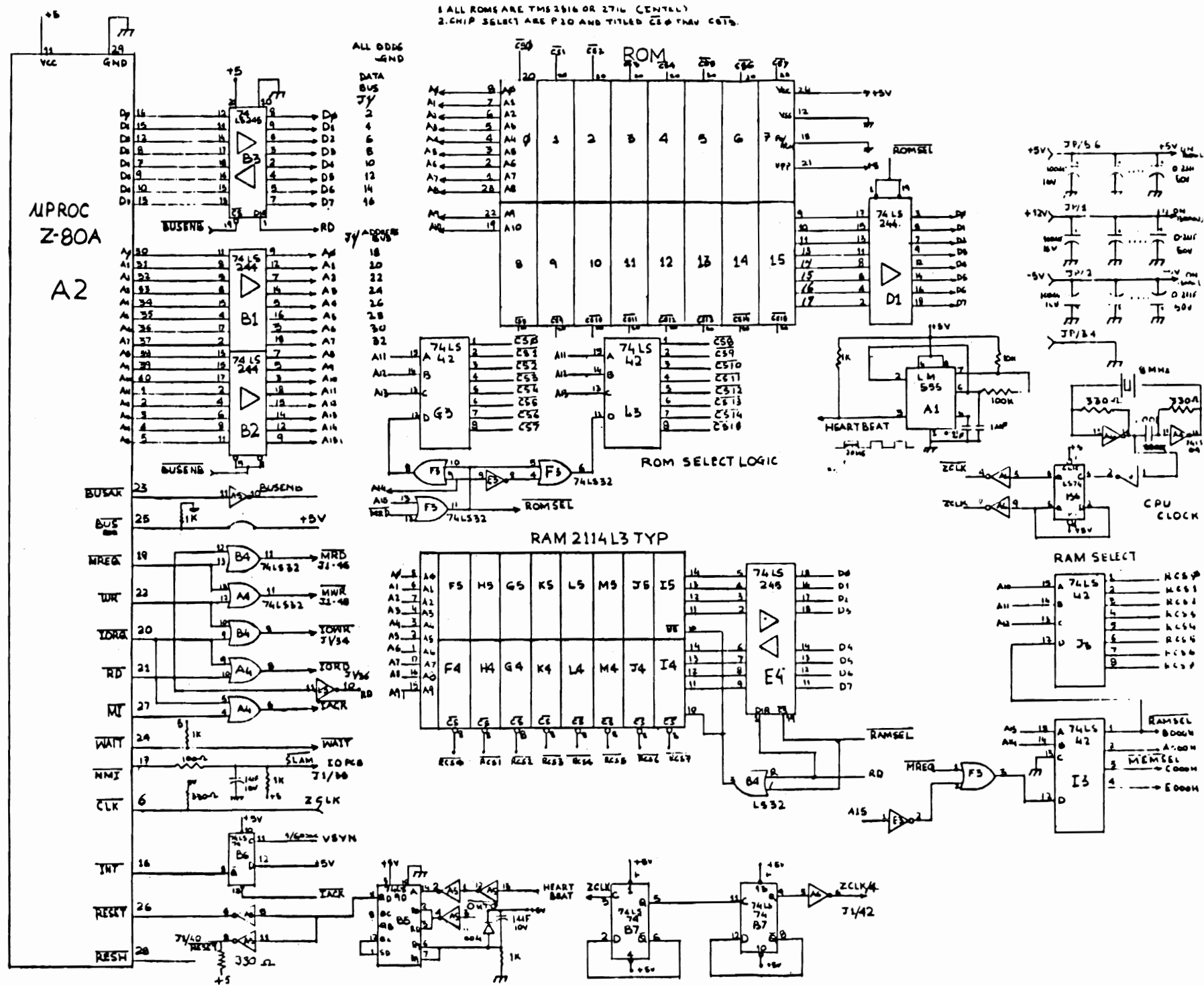
FROM PSC
SHEET 1 OF 2

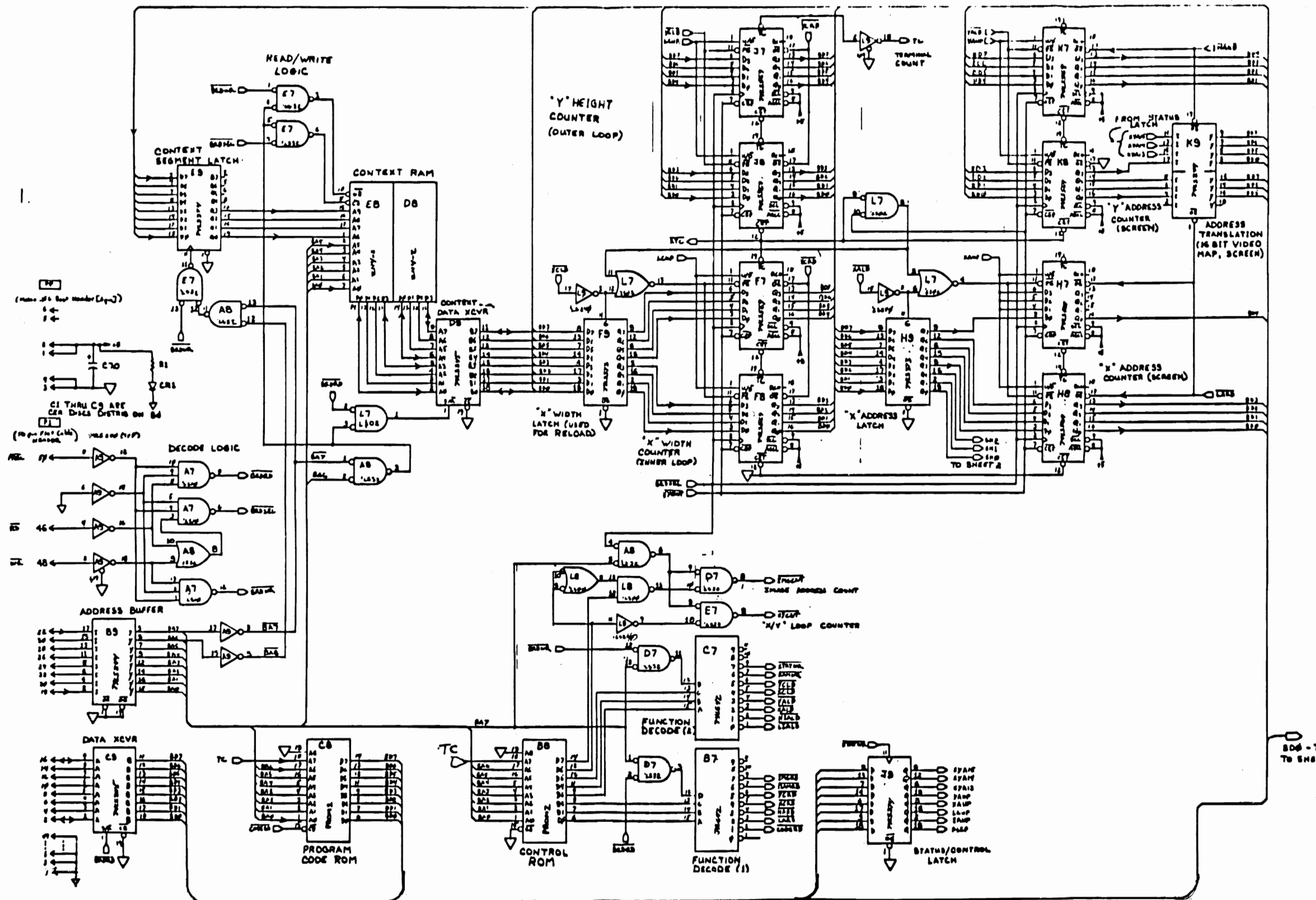



* HEAT SINK

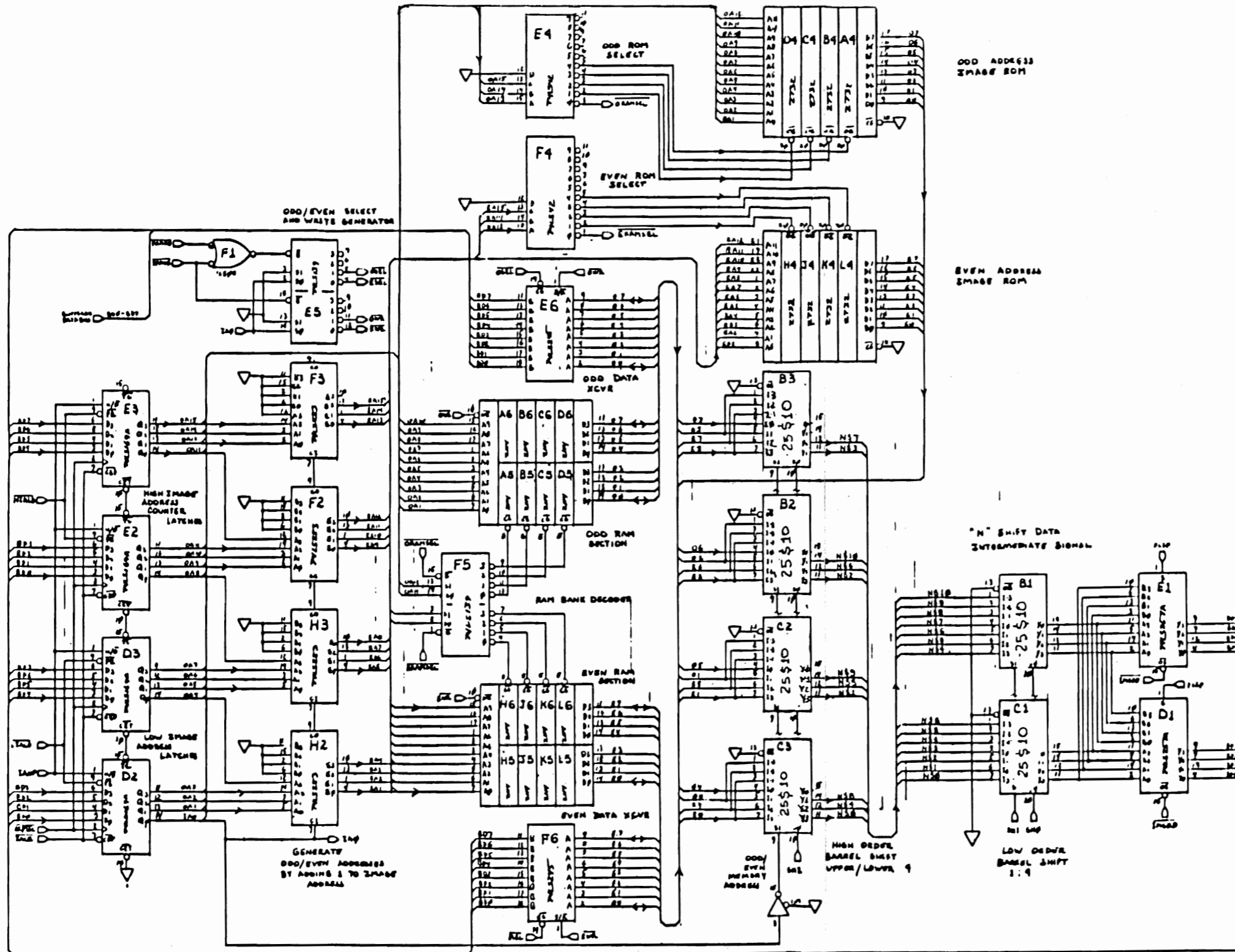


GDI	GDI Inc.
	5945 N. ROGERS AVE. CHICAGO, IL 60646 / (312) 286-6722
NAME I/O Schematic (Sheet 1 of 2)	



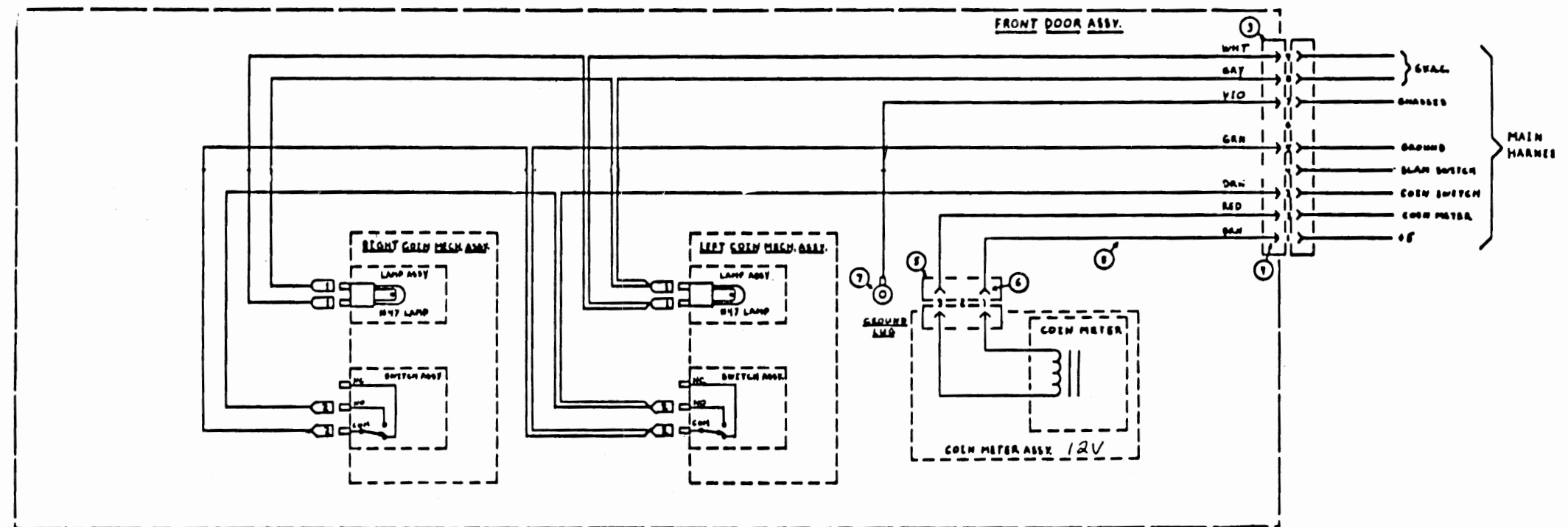


	GDI Inc. 5945 N. ROGERS AVE. CHICAGO, IL. 60648 / (312) 286-6722	
	NAME Coprocessor Schematic (Sheet 1 of 2)	

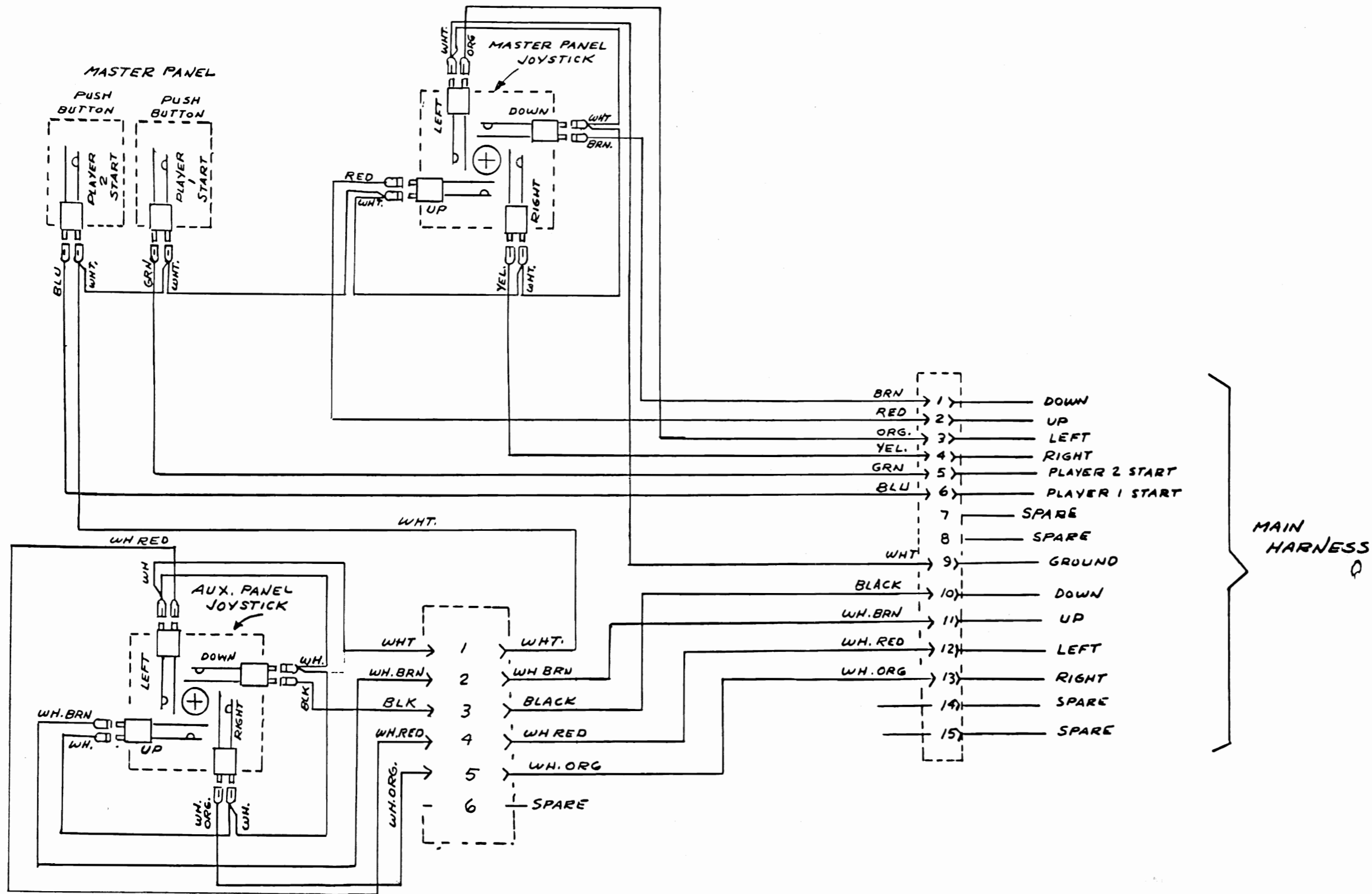


GDI	GDI Inc.
	5945 N. ROGERS AVE. CHICAGO, IL. 60646 / (312) 286-6722
NAME Coprocessor Schematic (Sheet 2 of 2)	

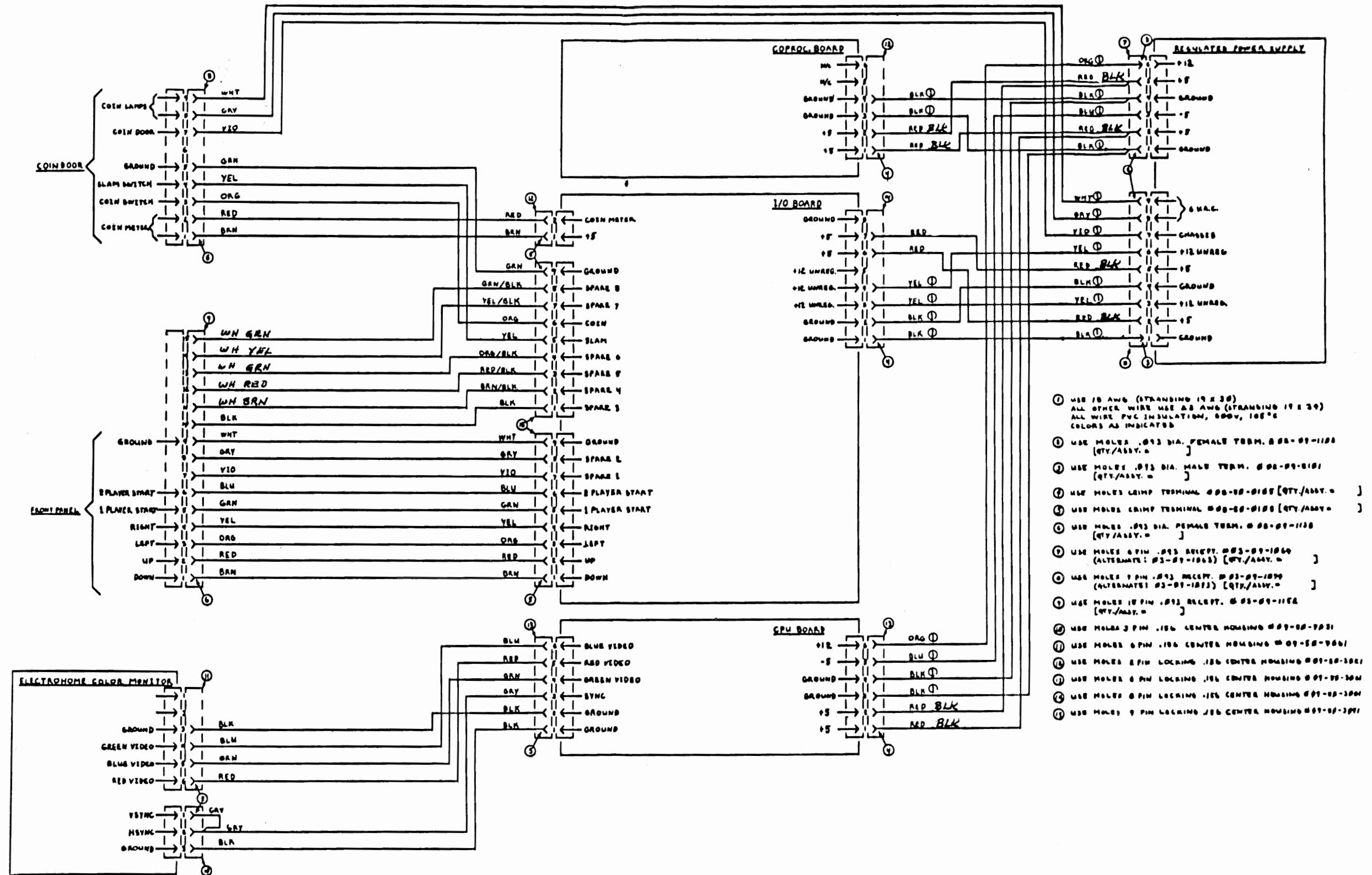
- ② USE .107"-.036" FASTON RECEPT. (20-34 AWG), DUALY INSULATED [QTY PER ASSY = 6]
- ③ USE .100"-.036" FASTON RECEPT. (20-34 AWG), PRE-INSULATED [QTY PER ASSY = 4]
- ④ USE MOLEX 03-07-1000 PLUG [QTY PER ASSY = 1]
- ⑤ USE MOLEX 03-07-1016 MALE .016 DIAM. TERM. [QTY PER ASSY = 6]
- ⑥ USE MOLEX 03-07-1000 RECEPT. [QTY PER ASSY = 1]
- ⑦ USE MOLEX 03-07-1130 FEMALE .016 DIAM. TERM. [QTY PER ASSY = 6]
- ⑧ USE #20 STD. DIEZEL RING TERMINAL
- ⑨ ALL WIRE USE 22 AWG (19-24 STANDARDS), PVC INSULATION, 600V, 100% COLOR AS INDICATED



GDI	GDI Inc. 5945 N. ROGERS AVE. CHICAGO, IL. 60646 / (312) 286-6722
NAME Coin Door Harness, Schematic Diagram	

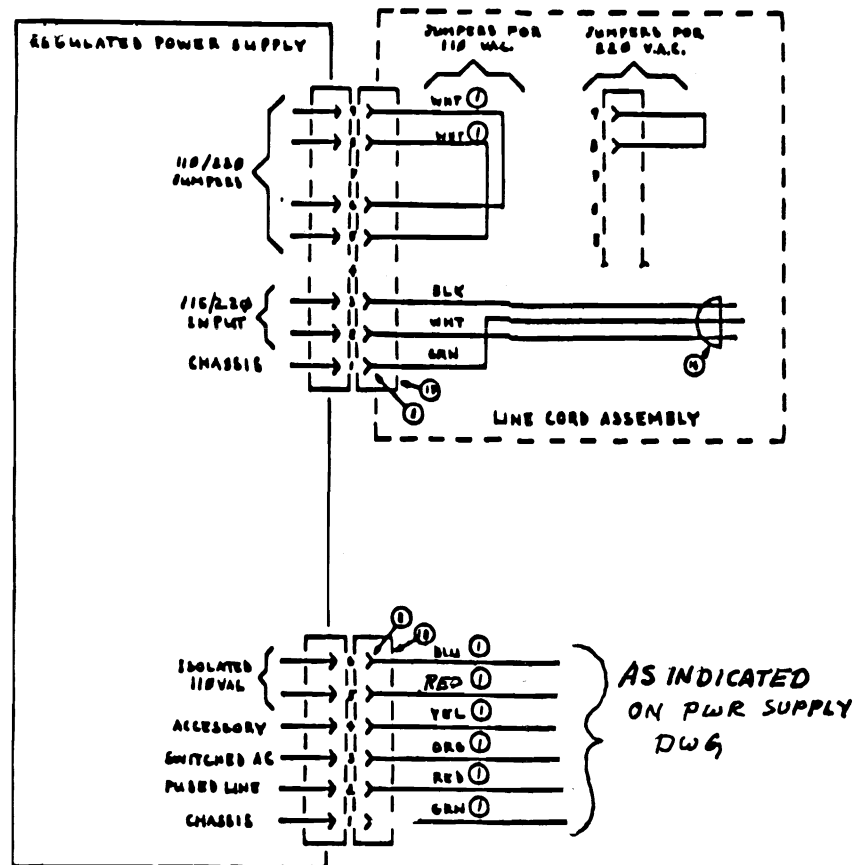


GDI	GDI Inc.
	5945 N. ROGERS AVE. CHICAGO, IL. 60646 / (312) 286-6722
NAME	Control Panels, Schematic Diagram

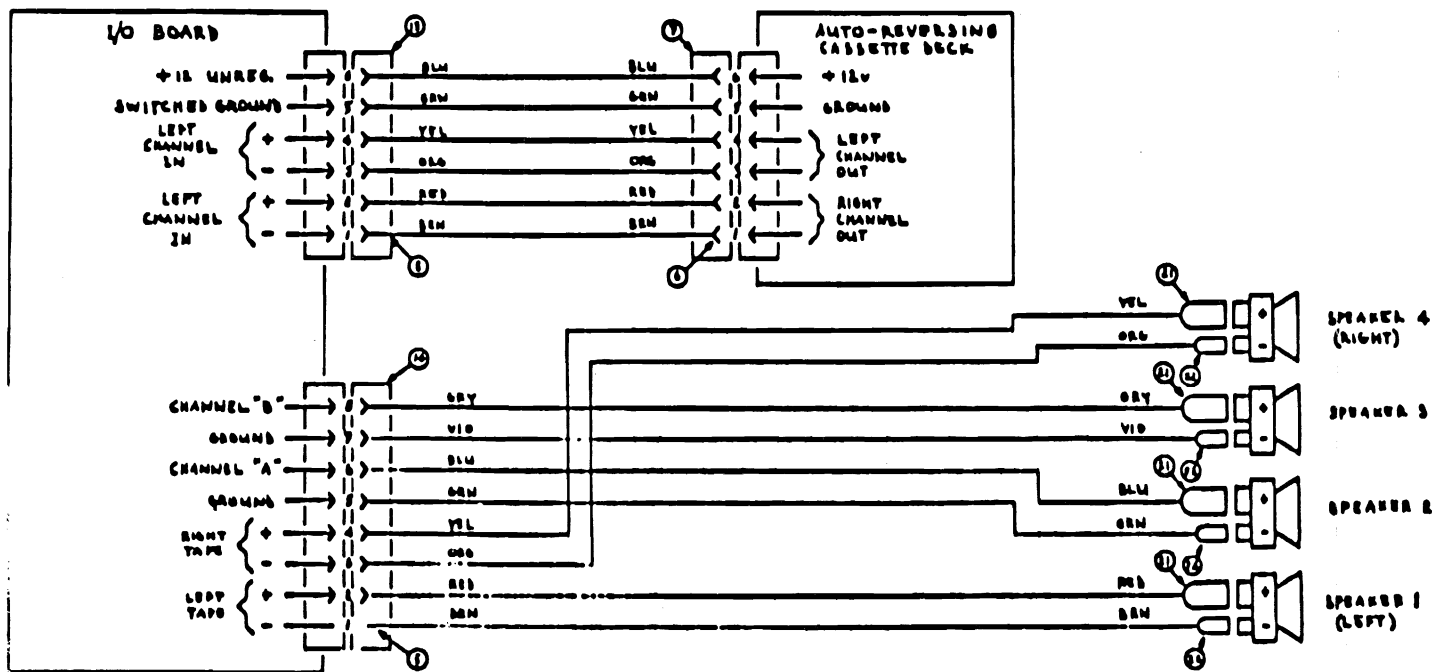


- ① USE 18 AWG (STRANDING 19 X 30)
ALL OTHER WIRE USE 22 AWG (STRANDING 19 X 30)
ALL WIRE PVC INSULATION, 600V, 105°C
COLORS AS INDICATED
- ② USE MOLES .013 DIA. FEMALE TERM. #02-09-1128
[QTY./ASST. =]
- ③ USE MOLES .013 DIA. MALE TERM. #02-09-0101
[QTY./ASST. =]
- ④ USE MOLES CRIMP TERMINAL #02-09-0100 [QTY./ASST. =]
- ⑤ USE MOLES CRIMP TERMINAL #02-09-0100 [QTY./ASST. =]
- ⑥ USE MOLES .013 DIA. FEMALE TERM. #02-09-1128
[QTY./ASST. =]
- ⑦ USE MOLES 6 PIN .013 RECEPT. #03-09-1060
(ALTERNATE: #3-09-1065) [QTY./ASST. =]
- ⑧ USE MOLES 9 PIN .013 RECEPT. #03-09-1070
(ALTERNATE: #3-09-1075) [QTY./ASST. =]
- ⑨ USE MOLES 10 PIN .013 RECEPT. #03-09-1152
[QTY./ASST. =]
- ⑩ USE MOLES 3 PIN .106 CENTER HOUSING #09-09-9031
- ⑪ USE MOLES 6 PIN .106 CENTER HOUSING #09-09-9001
- ⑫ USE MOLES 8 PIN LOCKING .106 CENTER HOUSING #09-09-10E1
- ⑬ USE MOLES 6 PIN LOCKING .106 CENTER HOUSING #09-09-10M
- ⑭ USE MOLES 8 PIN LOCKING .106 CENTER HOUSING #09-09-10M
- ⑮ USE MOLES 9 PIN LOCKING .106 CENTER HOUSING #09-09-10M

GDI	GDI Inc.
	5945 N. ROGERS AVE. CHICAGO, IL. 60646 / (312) 286-6722
NAME _____	
Harness Schematic (Front door & panel, DC pwr & Video)	

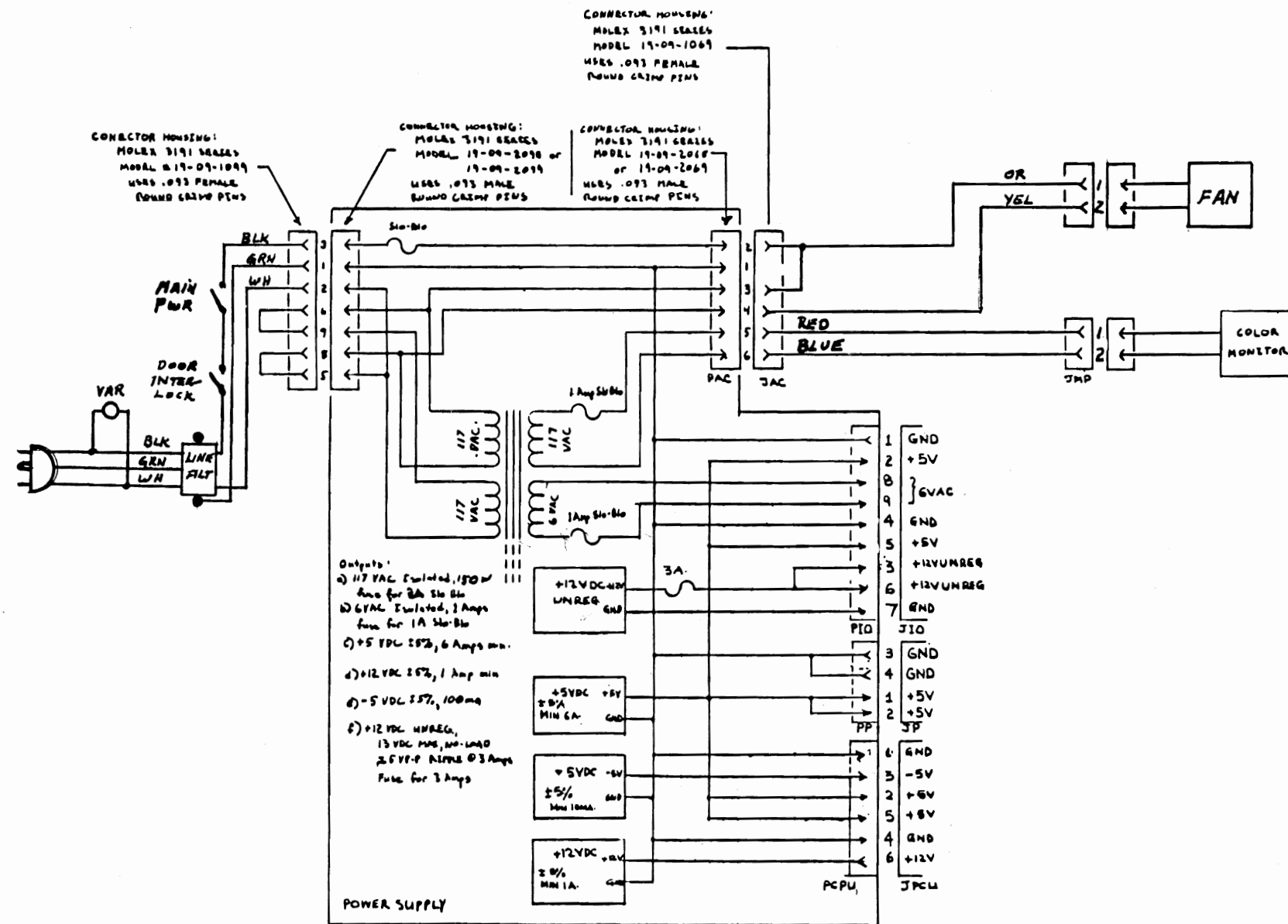


- ① THREE CONDUCTOR POWER SUPPLY CORD, 16 AWG (STANDARDS 10530), 6' LENGTH, BLACK (BT VINYL JACKET)
- ② USE HOLES 9 PIN .035 INTERNATIONAL RECEPT. # 19-09-1010
- ③ USE HOLES 6 PIN .035 INTERNATIONAL RECEPT. # 19-09-1009
- ④ USE HOLES 3 PIN .035 RECEPT. # 03-09-1033 (ALTERNATE: 03-09-1031)
- ⑤ USE .25" BY .035" PASTON RECEPT., FULLY INSULATED
- ⑥ USE .25" BY .035" PASTON RECEPT., FULLY INSULATED
- ⑦ USE .118" BY .035" PASTON RECEPT., FULLY INSULATED
- ⑧



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5945 N. ROGERS AVE. CHICAGO, IL. 60646 / (312) 286-6722

NAME
Main Harness Schematic



GDI	GDI Inc.
	5945 N. ROGERS AVE. CHICAGO, IL 60646 / (312) 286-6722
NAME Power Supply, Schematic Diagram	

WARRANTY

GDI warrants to the buyer that the following products will 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: (i) printed circuit boards (logic, audio, video, speech and power supply board) and parts thereon; (ii) television monitors.

The extent of this warranty applies and covers only electronic assemblies and does not include electro-mechanical components such as lamps, fuses, bulbs, switches, etc.

The sole liability of GDI under this warranty shall be, at its option, to repair, replace or credit buyer's account for such products returned to GDI during said warranty period, provided:

- (a) GDI is promptly notified upon discovery by buyer that said products are defective;
- (b) Said products are returned prepaid to GDI's plant; and
- (c) GDI's examination of said products discloses to its satisfaction that such alleged defects existed and were not caused by accident, common misuse, common neglect, alteration, improper repair, installation or improper testing.

In no event shall GDI be liable for loss of profits, loss of use, incidental or consequential damage.

This warranty is in lieu of all other warranties, express or implied, including the implied warranty of merchantability and fitness for a particular purpose, and of all other obligations or liabilities on the part of GDI.