

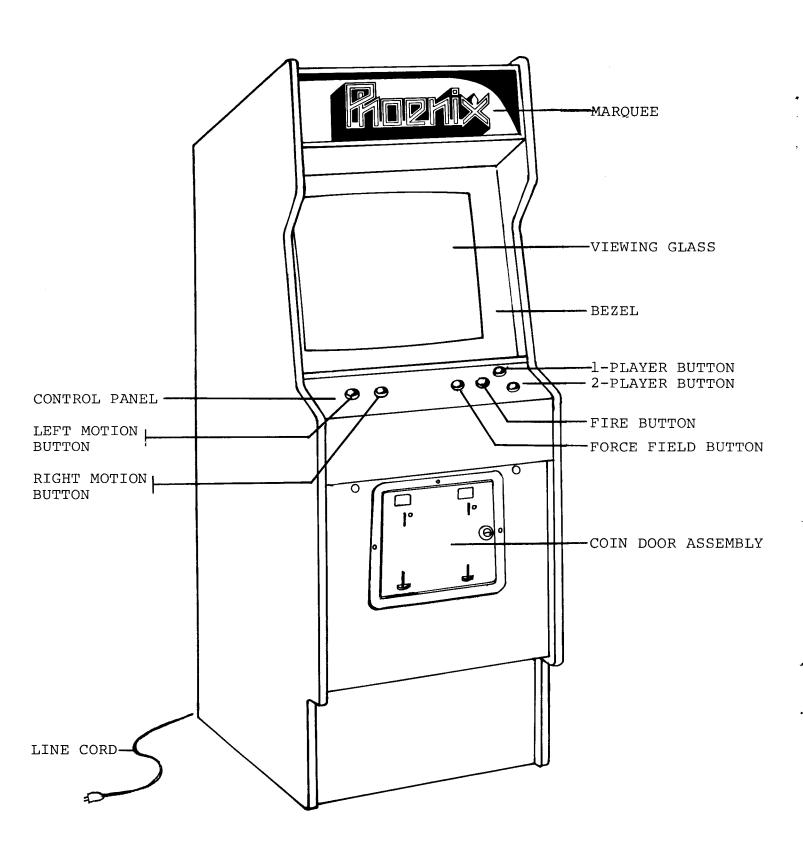
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	110/220 POWER INTERCONNECT DIAGRAM (361-10-0900)) 14	
	C.P.U. HARNESS INTERCONNECT DIAGRAM(364-10-1000	-	
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	LOGIC BOARD SCHEMATIC (364-62-0800	•	
	COIN DOOR WIRING DIAGRAM (364-62-1000	•	

USER INFORMATION - F.C.C.

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 pursuant to Subpart J of Part 15 of F.C.C. 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 take whatever measures may be required to correct the interference.



19" PHOENIX VIDEO UPRIGHT

PHOENIX

PHOENIX is an exciting new space game, with special audio and visual effects, challenging the skills of the most experienced player. Fascinating visual graphics and extraterrestrial sounds add to the intensity of this game.

There are five basic stages to each round of play. After a melodious introduction, the first stage begins with a wave of sixteen (16) small Phoenixes attacking the spaceship. They drop missiles and dive at the spaceship, in an effort to destroy it.

The spaceship maneuvers left and right, evading the missiles and birds, and fires rockets, attempting to destroy the birds.

The spaceship can utilize the "Force Field" as a means of protection from the missiles and birds, and can destroy the Phoenixes by colliding with them while in the Force Field. The Force Field only lasts a few seconds and then cannot be used for approximately five (5) seconds afterward.

After the first wave of Phoenixes are destroyed, a second wave appears, and can be destroyed in the same manner as in the first stage.

The third stage begins with a wave of eight (8) "Eggs" that are transformed into blue Phoenix birds that attack the spaceship. These birds can be destroyed by rocket fire from the spaceship. If the rocket hits the bird on center, the bird is destroyed. If the rocket hits the bird to the left or right of center, only that wing of the bird is destroyed. The wing will regenerate itself in a short time.

After all the blue Phoenixes have been shot down, the fourth stage appears on the screen. Two banks of eggs appear (four eggs in each row), and are transformed into pink Phoenixes, and can be destroyed in the same manner as the blue birds.

The fifth stage is the attack of the spacefortress, which sends down waves of small birds to attack the spaceship, in addition to direct missile fire from the spacefortress. Spaceship rocket fire can penetrate and break down the protective barrier shielding the space creature in the spacefortress. The fifth stage

is completed when the rocket from the spaceship destroys the space creature and the spacefortress with a direct hit.

Good aim and timing are critical to high scoring. Birds destroyed while in flight (with wings flapping), will score 200 points each, and eggs hit in the process of hatching also have higher point values.

Delayed destruction of the spacefortress also gives the player high point values.

When bonus levels are achieved, additional spaceships are added to your game. The bonus level may be adjusted to award bonus spaceships at 3,000 and 30,000 points, 4,000 and 40,000 points, 5,000 and 50,000 points, or 6,000 and 60,000 points.

INSTALLATION

Your game was shipped from the factory in ready-to-play condition. A brief inspection is suggested before the machine is removed from the carton. If there is damage to the shipping carton, contact the freight carrier for claim purposes. External damage could indicate possible damage to the cabinet and/or electronic components.

After the carton has been satisfactorily inspected, remove the machine from the shipping carton.

Examine the interior of the game for disconnected wires, cables or harnesses and make sure electronic devices are securely mounted in their sockets, etc. Record the game serial number, since it will be required for reference and servicing.

ELECTRICAL REQUIREMENTS

Unless otherwise specified, this game is set to operate at 110 Volts A.C. See Figure -1- for 110/220 VAC conversion instructions.

Power Supply Chassis schematic information and parts list are included in this manual.

FIGURE -1-

110/220 VAC CONVERSION INSTRUCTIONS

- 1. This video arcade game has a harnessing configuration that allows the machine to be operated from either a 110 VAC or 220 VAC @ 50 or $60~{\rm H_Z}$ power source, with only minor changes. The only items requiring a change are the fuses and the jumper plug on the game power transformer.
- 2. First, unplug the machine from the wall outlet to completely eliminate shock hazards.
- Next, remove the two fuses in the A.C. distribution bracket.
- 4. Then, remove the jumper plug on the game power transformer located on the floor of the machine.
- 5. Now, depending on what voltage you wish to run the game from, do the following:
 - 110 VAC: Replace the two fuses that go in the bracket with 3-AMP SLOW-BLOW types. Next, plug in the ORANGE jumper plug labeled 110 VAC.

 The machine can now be operated with an input voltage of 110 Volts AC.
 - 220 VAC: Replace the two fuses that go in the bracket with 1½ AMP SLOW-BLOW types.

 Next, plug in the RED jumper plug labeled 220 VAC. The machine can now be operated with an input voltage of 220 Volts AC.

NOTE: All games shipped from CENTURI, INC. are in the 110 VAC configuration.

GAME INSTRUCTIONS:

- 1. INSERT COIN(S) INTO SLOT.
- 2. SELECT 1 OR 2 PLAYER BUTTON.
- 3. MOVE THE SPACESHIP RIGHT AND LEFT, DODGING FROM ATTACK OF PHOENIX AND DESTROYING IT BY FIRING BUTTON.
- 4. SHELTER SPACESHIP BY PRESSING FORCE FIELD BUTTON.
- 5. ADDITIONAL SPACESHIP IS ADDED WHEN BONUS SCORE IS ACHIEVED.
- 6. THE GAME IS OVER WHEN ALL THE SPACESHIPS HAVE BEEN DESTROYED.

GAME SCORING:



= 20, 40 and 80 Points.



= 200 Points.



► = 50 to 100 Points (Hatching = 100 to 800 Points).



= 1,000 to 9,000 Points.

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 insure this.

The volume control is located on the bottom side of the printed circuit board farthest from the side of the cabinet, and can be accessed through the rear 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:

CENTURI, INC.

Customer Service Department

#800-327-7710 (Outside the state of Florida)

#305-556-5888 (In Florida)

OPERATOR OPTIONAL SWITCH SETTINGS

The option switches are located on the CPU board. The option switches and audio control can be reached through the back of the machine.

The following settings will assist you with your selections:

OPTIONAL SWITCH SETTINGS

Switches 1 and 2 control the number of times the player may have his spaceship destroyed before the game is over. The following truth table lists these switch settings:

SWITCH 1:	SWITCH 2:	NUMBER OF SPACESHIPS:
OFF	OFF	6
ON	OFF	5
OFF	ON	4
ON	ON	3

Switches 3 and 4 control the score at which one or two free spaceships are awarded according to the following truth table:

SWITCH 3:	SWITCH 4:	SHIP SCORE:	SHIP SCORE:
OFF	OFF	6,000	60,000
ON	OFF	5,000	50,000
OFF	ON	4,000	40,000
ON	ON	3,000	30,000

Switches 6, 7 and 8 are factory adjustments, and must be left in OFF position.

PARTS LIST

NO.	PART NUMBER:	DESCRIPTION:	<u>USAGE</u> :
1 2	50010249LS 50010252LS	74LS245 I.C. 74LS374 I.C.	1 3
3	50010232BS	74LS244 I.C.	2
4	50010275LS	74LS136 I.C.	1
5 6	50010248LS 50010221LS	74LS138 I.C. 74LS163 I.C.	4 3 3
7	50010045LS	74LS157 I.C.	3 3
8	50010002LS	74LS00 I.C.	4
9 10	50010096LS 50010141LS	74LS08 I.C.	3
	5001014115		1
11 12	50010105LS	74LS32 I.C.	4
13	50010170LS 50010019LS	The state of the s	1 3
14	50010026LS		1
15	50010030LS		1
16 17	50010276LS 50010197	74L470 I.C. 7405 I.C.	3 1 1 1 2
18	50010197		1
19	50010277	8085 C.P.U.	1
20	50020003	LM380 I.C.	1
21 22	50010254	LM324 I.C.	2
23	50010001 50010281	555 Timer I.C. 4006 I.C.	2 5 1
24	50020086	564 Transistor	1
25	50040082	.047 mfd, 25 V. Disc Ceramic Capacitor	13
26 27	50040001 50040141	.lmfd, 25 V. Disc Ceramic Capacitor .001mfd, 50 V. Disc Ceramic Capacitor	2 7
28	50040151	330pf, 25 V. Disc Ceramic Capacitor	1
	50040049	.01mfd, 25 V. Disc Ceramic Capacitor	2
30	50040153	.022mfd, 25 V., Disc Ceramic Capacitor	1
	50060104	47mfd, 50 V. Alum. Lytic Rad. Cap.	4
32 33	50060031 50060126	100mfd, 25 V., Alum. Lytic Rad. Cap.	1
34	50060120	470mfd, 30 V., Alum. Lytic Rad. Cap. 10mfd, 16 V., Alum. Lytic Rad. Cap.	1 1
35	50060165	10 mfd,25 V., Dipped Tantalum Cap.	9
36 37	50060166 50060163	.47mfd, 35 V., Dipped Tantalum Cap.	1 2
38	50060163	<pre>lmfd, 35 V., Dipped Tantalum Cap. 6.8mfd, 25 V., Dipped Tantalum Cap.</pre>	2
39	50120004	10K PCB Trimmer Potentiometer	2 1
40	50360007	5-Pin Resistor, 1K Ohm	1
41	50360006	9-Pin Resistor Pack, 1K Ohm	3
42 43	50030256 50030051	100 Ohm, \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	8
44	50030051	1K Ohm, ¼ W., Resistor 2.7K Ohm, ¼ W., Resistor	12 2
45	50030063	10K Ohm, ¼W., 5% Resistor	2 16
46 47	50030014 50030150	270 Ohm, ¼W., 5% Resistor	9
48	50030150	47K Ohm, ¼W., 5% Resistor 330 Ohm, ¼W., 5% Resistor	9
49	50030007	100K Ohm, ¼W., 5% Resistor	2 4
50	50030010	470 Ohm, ¼W., 5% Resistor	2

PARTS LIST

NO.	PART NUMBER:	DESCRIPTION:	<u>USAGE</u> :
51	50030086	33K Ohm, ¼W., 5% Resistor	6
	50030197		3
	50030265		2
	50030266		1
	50100014	1N914 Diode	7
		8-Pin Solder Tail Socket, Low Profile	5
		40-Pin Solder Tail Socket, Low Prof.	1
	50150158		6
	50150130		
	50150111	16-Pin Solder Tail Socket, Low Prof.	
61	50150112	18-Pin Solder Tail Socket, Low Prof.	1
	50040136	.05mf, Mylar Capacitor	1
	50130034		1
_	50150256	· · · · · · · · · · · · · · · · · · ·	5 2
		Printed Circuit Board - CPU	1
		P.C.B. Interconnect Cable	2

PARTS LIST

NO.	PART NUMBER:	DESCRIPTION:	USAGE:
1 2 3 4 5 6 7 8 9	5001022LS 50010022LS 50010019LS 50010274LS 50010262LS 50010252LS 50010093LS 50010030LS 50010045LS 50010249LS	74LS86 I.C. 74LS74 I.C. 74LS132 I.C. 74LS283 I.C. 74LS374 I.C. 74LS151 I.C. 74LS174 I.C.	4 1 1 3 3 4 4 4 2
17 18	50010005 50010185 50010242 50010273LS 50040082 50040141 50040049 50040150 50040001 50040142	7404 I.C. 2716 I.C. 2114 I.C. 74LS244 I.C047mf, 25 V., Disc Ceramic Cap00lmf, 50 V., Disc Ceramic Cap0lmf, 25 V., Disc Ceramic Cap. 390pf, 25V., Ceramic Disc Caplmf, 25 V., Ceramic Disc Cap. 150 pf, 50 V., Disc Ceramic Cap.	1 12 8 1 7 2 2 1 15
21 22 23 24 25 26 27 28 29 30	50060028 50070014 50030004 50030111 50150110 50150111 50150112 50150158 50150061 50150256	22mf, Alum. Lytic Radial Cap. 11MH _Z Crystal 1.2K, ¼W., 5% Resistor 100 Ohm, ½W., 5% Resistor 14-Pin Solder Tail Socket, Low Profile 16-Pin Solder Tail Socket, Low Profile 18-Pin Solder Tail Socket, Low Profile 20-Pin Solder Tail Socket, Low Profile 24-Pin Solder Tail Socket, Low Profile 50-Pin P.C.B. Header, Ansley#609-5007E	e 19 e 8 e 6 e 12
31	50210216	P.C. Board, Logic	1

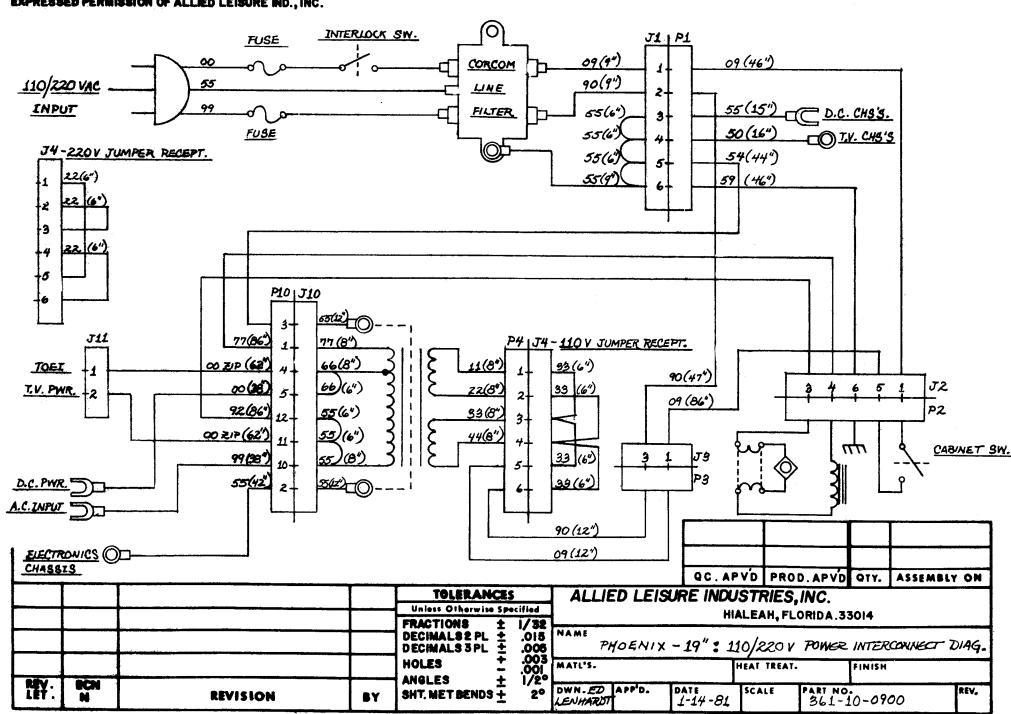
PARTS LIST - SHINDENGEN POWER SUPPLY

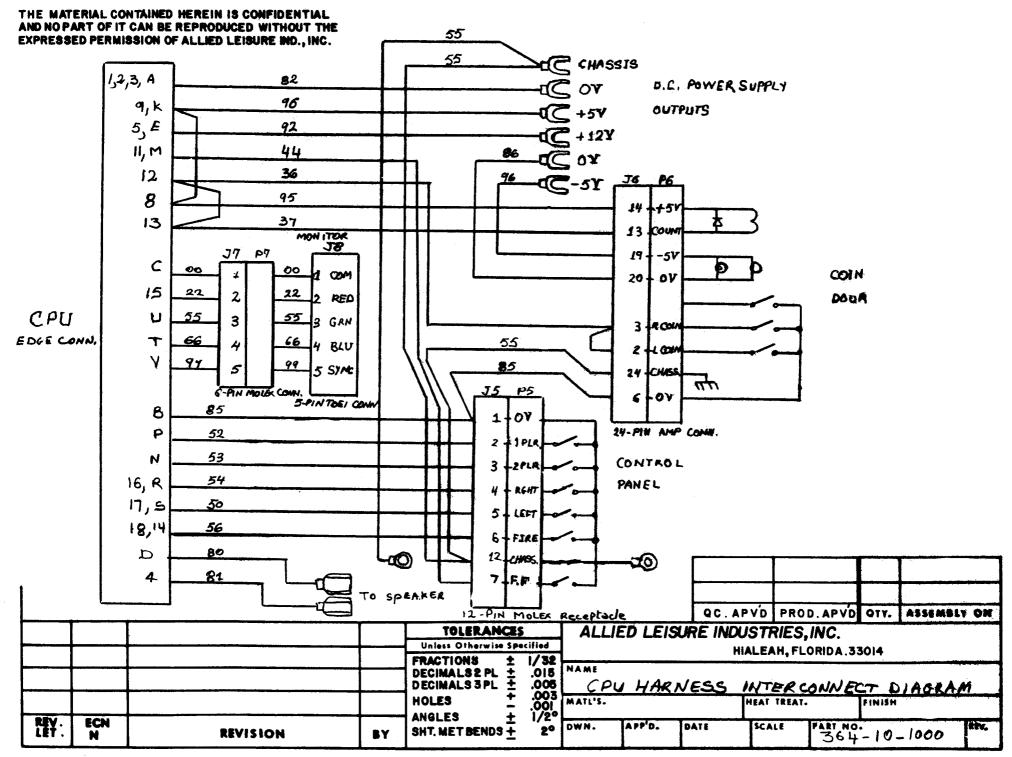
SYMBOL:	<pre>DESCRIPTION: Transformer, Single Phase, 24 VA</pre>	<pre>USAGE:</pre>
L1 L2, L4 L3	Choking Coil, 1.6 mH, 1.5A Choking Coil, SF-T8-50S-03 Choking Coil, SF-HP-2A-03	1 2 1
D1 D2 D3, D6 D4 D5, D7 D12, D13 D14 RF1	Diode, V19G Diode, V06C Diode, 1S1588 Diode, S15S3 Diode, 5CH1M Diode, F113B Diode, F113B Diode, S4VB40 (Bridge Type)	1 2 1 2 2 1 1
Q1 Q2 Q3 Q4	Transistor, 2SC2504 Transistor, 2SD467 (B) Transistor, 2SC460(B) Transistor, 2SA673(B)	1 1 1
ICl	Integrated Circuit, RM723DC or HA17723G-02	1
PCl	Photo Coupler, PS2001	1
R1 R8, R9 R3, 1-4 R4 R12 R28 R7 R26 R23 R10 R27 R2 R22 R21 R6 R11 R20 R17 R19 R18 R5 R16 R29 R39 R38 R24	Resistor, 2 Watt, 15 Ohm Resistor, 1 Watt, 56 Ohm Resistor, 1 Watt, 100 Ohm Resistor, 1 Watt, 470 Ohm Resistor, 1 Watt, 0.56 Ohm Resistor, 1 Watt, 0.82 Ohm Resistor, 1/4 Watt, 22 Ohm Resistor, 1/4 Watt, 33 Ohm Resistor, 1/4 Watt, 68 Ohm Resistor, 1/4 Watt, 330 - 470 Ohm Resistor, 1/4 Watt, 220 Ohm Resistor, 1/4 Watt, 270 Ohm Resistor, 1/4 Watt, 330 Ohm Resistor, 1/4 Watt, 68 Ohm Resistor, 1/4 Watt, 68 Ohm Resistor, 1/4 Watt, 68 Ohm Resistor, 1/4 Watt, 470 Ohm Resistor, 1/4 Watt, 680 Ohm Resistor, 1/4 Watt, 1.2K Ohm Resistor, 1/4 Watt, 1.2K Ohm Resistor, 1/4 Watt, 1.0K Ohm Resistor, 1/4 Watt, 220K Ohm Resistor, 1/4 Watt, 20K Ohm Resistor, 1/4 Watt, 27 Ohm Resistor, 1/4 Watt, 4.7K Ohm Resistor, 1/4 Watt, 5.6K Ohm Resistor, 1/4 Watt, 5.6K Ohm Resistor, 1/4 Watt, 5.6K Ohm	1 2 4 1 1 1 1 1 1 1 1 1 1 1
R25 RV1	Resistor, 1/4 Watt, 150 Ohm Variable Resistor, RJ-6P501	1 1

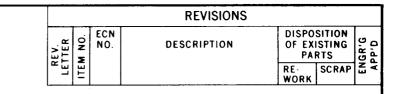
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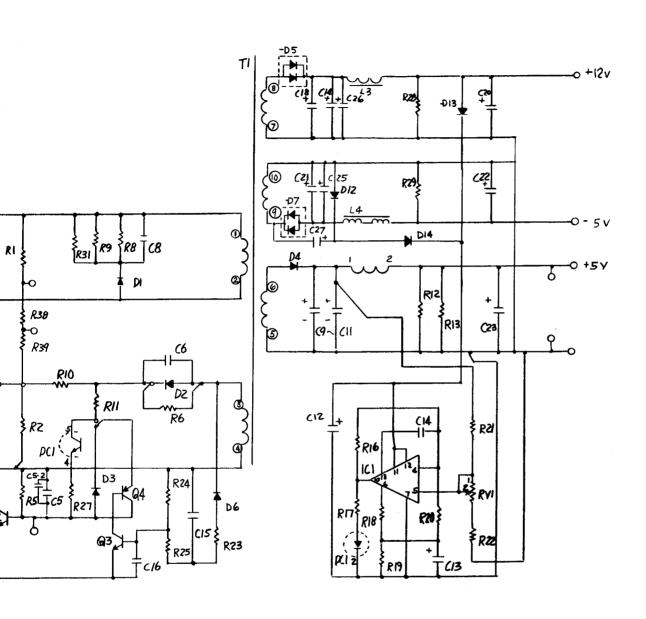
SYMBOL:	DESCRIPTION:		USAGE:
C1, C2	Capacitor, ECK-DALL)2E	2
C3-1,-2	Capacitor, 160VSN10		2
C9, C10	Capacitor, SM10VB-2		2
Cl1, C23	Capacitor, SM10VB-2		2
C12, C13,C15	Capacitor, SL25VB-10		3
C27	Capacitor, SL25VB-10		1
C18,C19,C20	Capacitor, SM35VB-10		3
C26	Capacitor, SM35VB-10		1
C21,C22,C25	Capacitor, SM16VB-10		3
C5	Capacitor, DMY21H472		1
C6	Capacitor, DMY21H104		1
C14,C16	Capacitor, DMY21H222		2
C4	Capacitor, CM20XC51		1
C8	Capacitor, MDD22G473	3K	1
C5-2	Capacitor, DMY21H222	2K	1
F1, F2	Enclosed Type Fuse,	3A	2

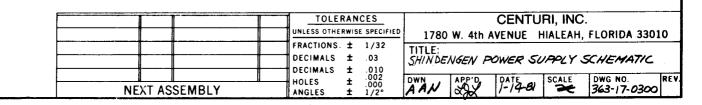
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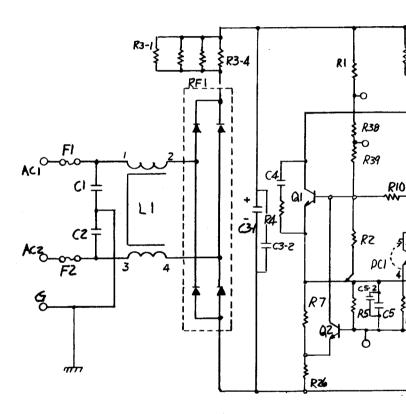


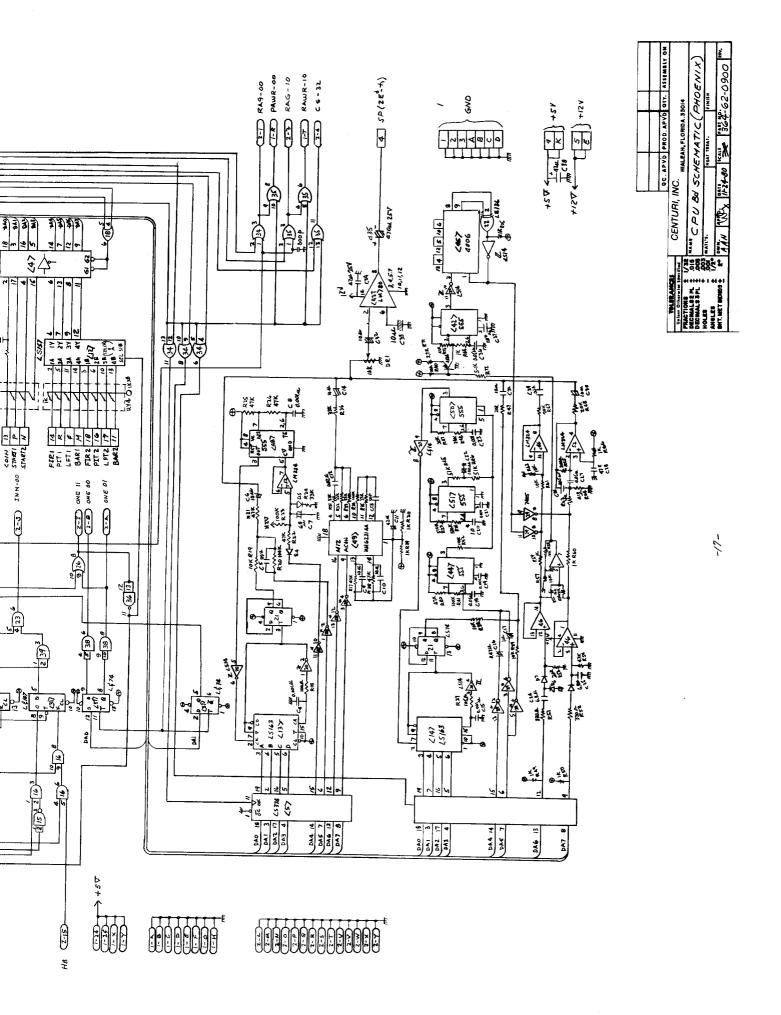


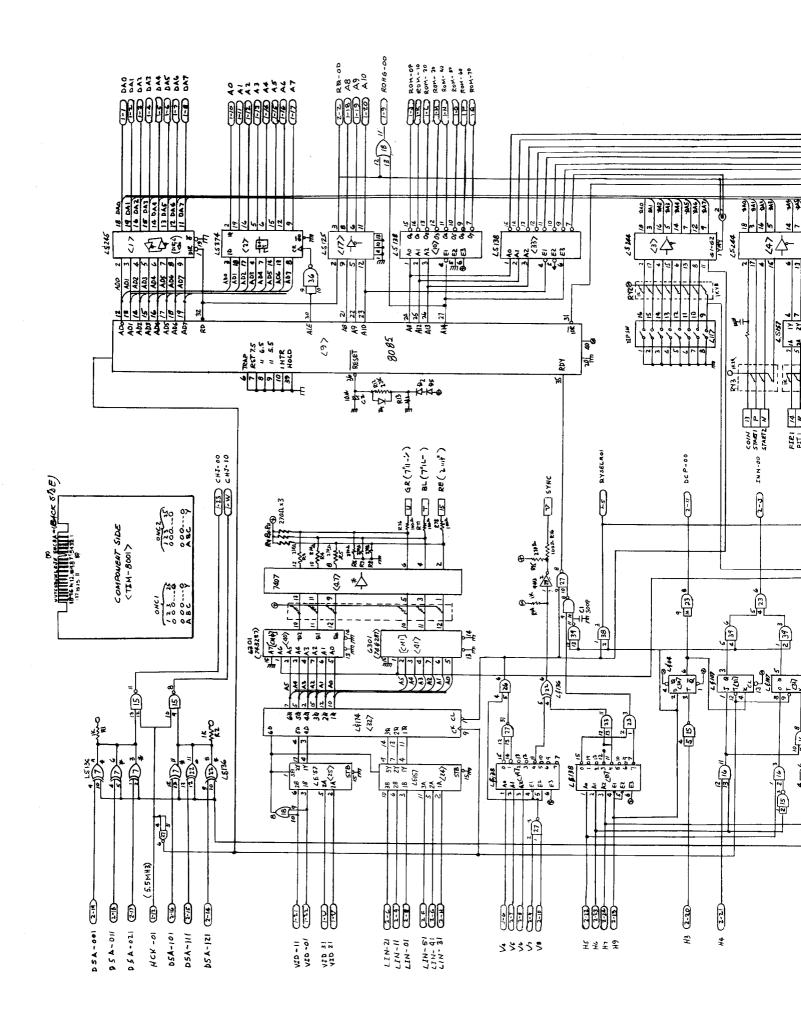


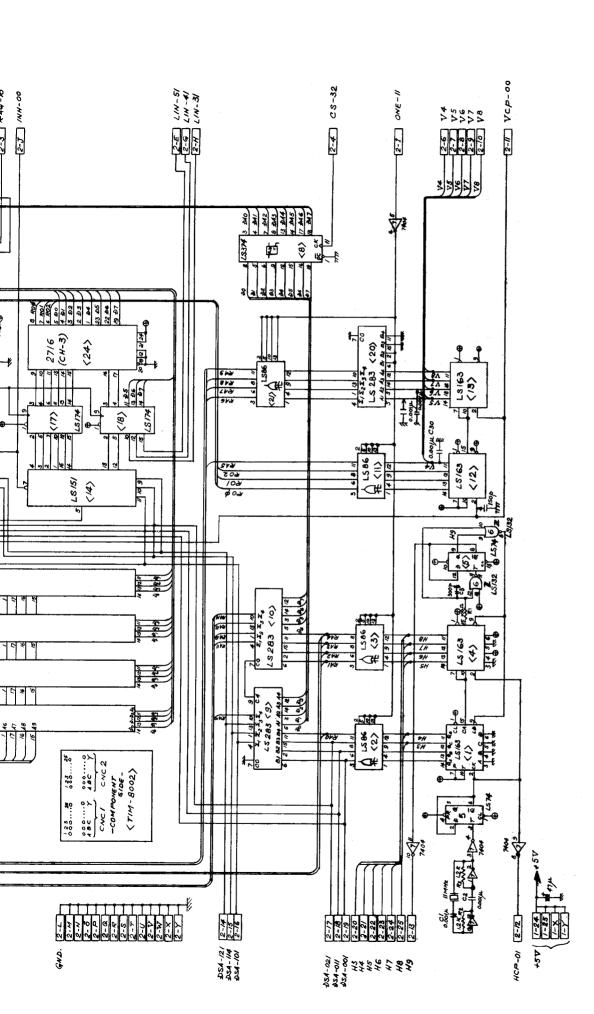


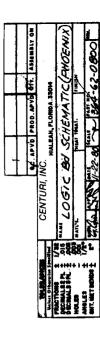


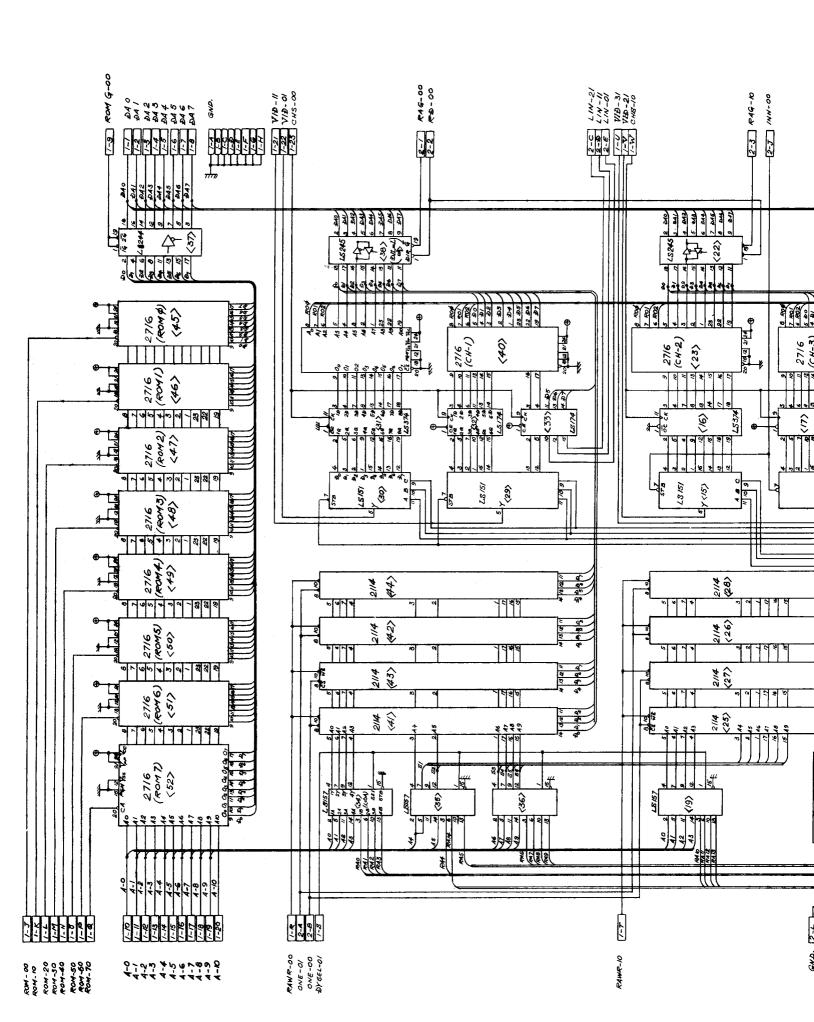


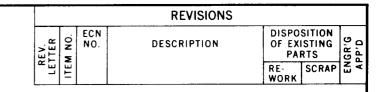


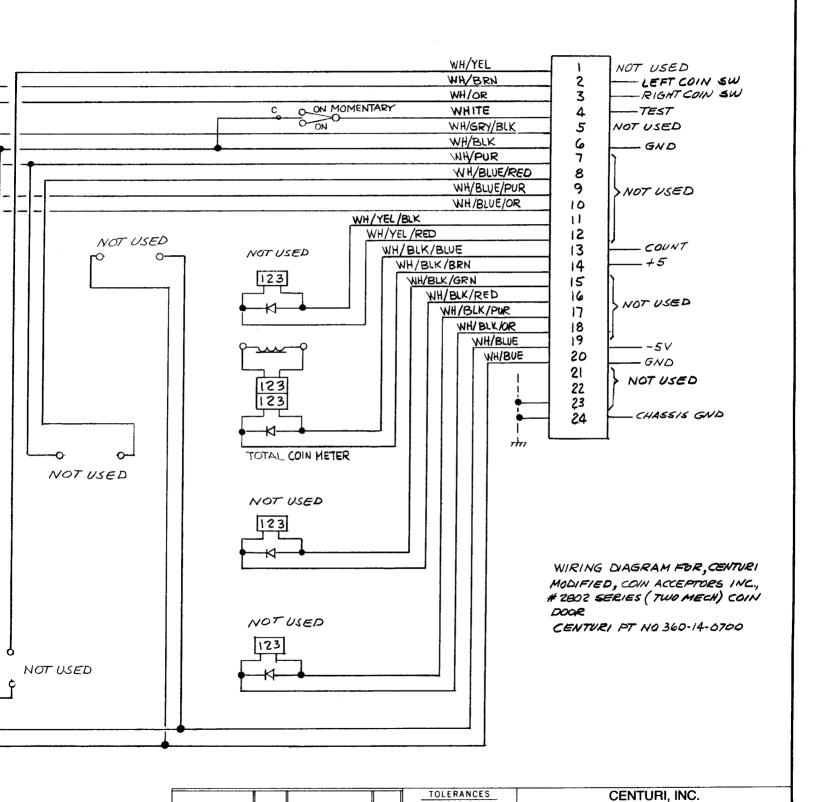












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DWN AAM

FRACTIONS ± 1/32

DECIMALS ±

DECIMALS

HOLES

ANGLES

1780 W. 4th AVENUE HIALEAH, FLORIDA 33010

COIN DOOR WIRING DIAGRAM

SCALE

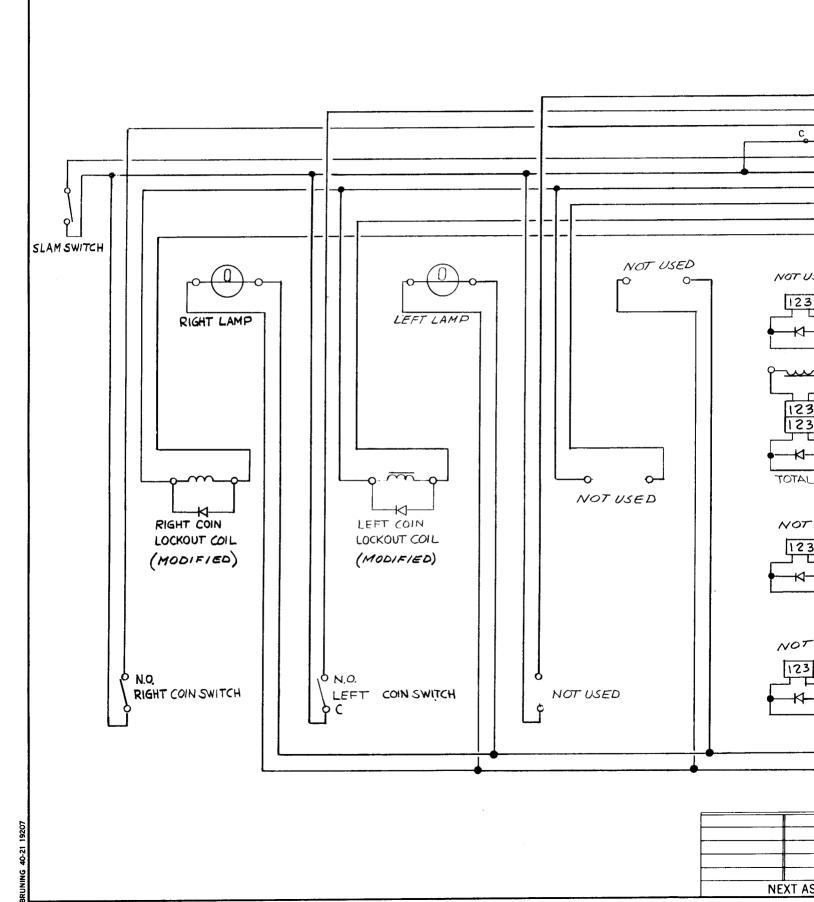
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364-62-1000

REV.

APP'DE DATE

NEXT ASSEMBLY



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