

CENTURI, INC 245 W. 74TH PLACE HIALEAH, FL. 33014 Tel. #(305) 558-5200

CUSTOMER SERVICE:
Tel. #(305) 558-5200 (In Florida)
Tel. #(800) 327-7710 (Outside Florida)

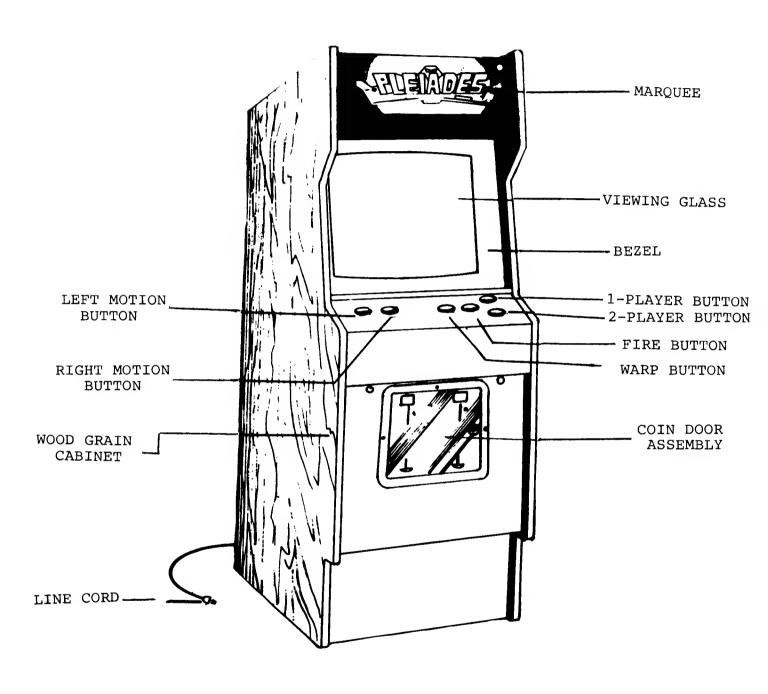
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USER INFORMATION - F.C.C.

WARNING:

THIS EQUIPMENT GENERATES, USES AND CAN RADIATE RADIO FREQUENCY ENERGY AND IF NOT INSTALLED AND USED IN ACCORDDANCE 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.



PLEIADES is the most recent of the Centuri video games. With its many interesting visual and audio effects, this game is sure to challenge the most avid player.

Each round of play includes four different stages. With the onset of the melodious background tune, the first stage of play begins.

Against a backdrop of planets and twinkling stars, the Earth City must be protected from sixteen attacking Martians. These Martian attackers have the ability to transform from flying Martians (30 points), to walking Martians (80 points), or to UFOs' (150 points). The walking Martians build barriers across the Earth City. These barriers must be destroyed.

The Earth Spaceship can be maneuvered right and left. With the use of the "warp" button, it can be randomly relocated when necessary. These, plus a backup of stationary defense weapons, aid in protecting the Earth City and Spaceship, as well as in destroying the Martian Attackers. When all but the two final Martians have been destroyed, a tone of dusk shades the Earth City. As these two attackers meet their end, the Earth Spaceship ascends into space to meet the challenge of Stage II.

In this second stage of play, the Earth Spaceship encounters eight Space Monsters (50-100 points). To destroy these Monsters, they must be hit in the direct center. When a Space Monster with burning wings is destroyed, up to 400 points can be added to your score. When all the Space Monsters have been destroyed, the Earth Spaceship prepares for Stage III.

In this third stage of play, the Earth Spaceship is confronted with the Martian Space Battleship and its unseen forces. This Martian Battleship contains five closed chambers, each protected by a rocket flame. Each chamber opens periodically at random, to release a defending reserve of Martian attackers. When a flame below an open chamber is extinguished, point value of the Martian Space Battleship increases. This enemy ship can be destroyed by either eliminating all sixteen Martian attackers, or by extinguishing all five rocket flames. When the Martian Space Battleship finally explodes, the Earth Spaceship moves on to Stage IV.

This last stage of play begins with an emergency signal, "SOS, SOS, SOS, AT ONCE RETURN TO EARTH". The Earth Spaceship is now ready to be guided on its journey, through a landing corridor, back to its home base. The Earth Spaceship must be carefully maneuvered around other spaceships in order to avoid destruction. Clearing flags will add bonus points to your score. When the Earth Spaceship has been safely maneuvered to its

arrival target, 500 to 4,000 points will be added to your score, while bursts of fireworks greet your arrival and signal the beginning of a new round of play.

When bonus levels are achieved, spaceships will be added to your score. The bonus levels may be adjusted to award spaceships at 3,000 and 30,000 points, or 4,000 and 40,000 points, or 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 the 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:

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 $60\mathrm{H_{Z}}$ power source, with only minor changes. The only items requiring a change are the fuses and the jumper plug on the game power transformer.

FIRST: Unplug the machine from the wall outlet to completely eliminate shock hazards.

SECOND: Remove the two fuses in the A.C. distribution bracket.

THIRD: Remove the jumper plug on the game power transformer located on the floor of the machine.

FOURTH: 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 the 3 AMP, SLOW-BLOW types. Next, plug in the <u>orange</u> jumper plug labeled 110 VAC. The machine can now be operated with an input voltage of 110 Volts A.C.

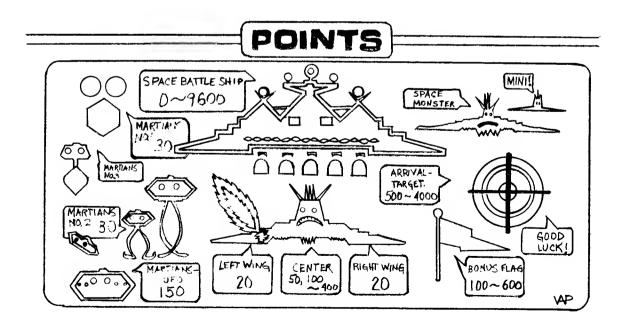
220 VAC

Replace the two fuses that go in the bracket with 1½-AMP, SLOW-BLOW types. Next, plug in the <u>red</u> jumper plug labeled 220 VAC. The machine can now be operated with an input voltage of 220 Volts A.C.

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

GAME INSTRUCTIONS:

- 1. INSERT COIN(S).
- SELECT 1-PLAYER OR 2-PLAYER BUTTON.
- 3. USE CONTROL BUTTONS TO MANEUVER SPACECRAFT LEFT AND RIGHT.
- 4. USE FIRE BUTTON TO DESTROY ATTACKING ALIENS.
- 5. WARP BUTTON WILL RANDOMLY RELOCATE SPACECRAFT DURING GAME PLAY.
- 6. PHASE I: DESTROY FROM GROUND BASE ALL ATTACKING ALIENS.
 - PHASE II. PROTECT SPACECRAFT BY DESTROYING ATTACKING SPACE MONSTERS WITH ROCKET FIRE. SPACE MONSTERS MUST BE HIT IN THE CENTER TO BE DESTROYED.
 - PHASE III. DESTROY SPACE BATTLE SHIP AND COSMIC ENEMIES WITH RAPID ROCKET FIRE.
 - PHASE IV. RETURN TO EARTH THROUGH LANDING CORRIDOR.
 MANEUVER AROUND OTHER SPACESHIPS TO AVOID
 DESTRUCTION. CLEARING BONUS FLAGS ADDS
 POINTS TO SCORE.
- 7. GAME IS OVER WHEN ALL SPACECRAFT ARE DESTROYED.



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:

SCORE
000
000
000
000

SWITCH 5: OFF- 25¢ PER GAME ON- 50¢ PER GAME

SWITCH 6: FACTORY SETTING; REMAINS IN OFF POSITION

SWITCH 7: OFF- NO SOUND IN ATTRACT MODE ON- SOUND IN ATTRACT MODE

SWITCH 8: OFF- UPRIGHT CABINET ON- COCKTAIL TABLE

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)

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, ±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.

CPU BOARD ASSEMBLY

PARTS LIST

	DADE MUNDED	DESCRIPTION.	USAGE:
<u>NO</u> .	PART NUMBER	DESCRIPTION:	1
$\frac{1}{2}$.	50010249LS 50010252LS	74LS245 I.C. 74LS374 I.C.	
3.	50010232HS 50010273LS	74LS244 I.C.	3 2 2 2 2 3
4.	50010275LS	74LS136 I.C.	2
5.	50010248LS	74LS138 I.C.	2
6.	50010221LS	74LS163 I.C.	2
7.	50010002LS	74LS00 I.C. 74LS08 I.C.	1
8. 9.	50010096LS 50010141LS	74LS100 1.C. 74LS125 I.C.	1
10.		74LS32 I.C.	4
11.	50010170LS	74LS14 I.C.	1
12.	500101701B	74LS74 I.C.	1
13.	50010030LS	74LS174 I.C.	1
14.	50010045	74157 I.C.	1 3 1
15.	50010197	7405 I.C.	1
16. 17.	50010136 50010142	4066 I.C. 7407 I.C.	1
18.	50010142	556 I.C.	4
	50010309	7910E I.C.	4 1
20.	50010231	BIPOLAR PROM: 7611-5 (HARRIS)	2
21.	50010277	8085 CPU	1
22.	50020003	LM380 I.C.	1
23.	50010254	LM324 I.C.	2
2 4. 25.	50010281 50010311	MC14006B I.C. X-I.C.	1 1 2 1 1 1 6 2
26.	50010312	Y-I.C.	ī
27.	50010312	Z-I.C. .047mfd, 25V., DISC CERAMIC CAPACITOR 0.1mfd, 25V., DISC CERAMIC CAPACITOR	1
28.	50040082	.047mfd, 25V., DISC CERAMIC CAPACITOR	6
29.		0.1mfd, 25V., DISC CERAMIC CAPACITOR	2 4
30.	50040049	.01mfd, 25V., DISC CERAMIC CAPACITOR	4
31.	50040066	470pf, 16V., DISC CERAMIC CAPACITOR	1
32.	50040011	0.001mfd, 16V., DISC CERAMIC CAPACITOR	7
33.	50040171	47pf, 16V., DISC CERAMIC CAPACITOR 470mfd, 25V., ELECTROLYTIC AXIAL CAPACITOR	1 1
34. 35.	50060189 50060190	47mfd, 25v., ELECTROLYTIC RADIAL CAPACITOR	5
36.	50060191	10mfd, 16V., DIPPED TANTALUM CAPACITOR	12
37.	50060192	6.8mfd, 16V., DIPPED TANTALUM CAPACITOR	4
38.	50060193	2.2mfd, 16V., DIPPED TANTALUM CAPACITOR	2
39.	50040172	.01mfd, 16V., MYLAR CAPACITOR	1 1
40.	50040173	.001mfd, 16V., MYLAR CAPACITOR	1
41.	50040174	0.1mfd, 25V., MYLAR CAPACITOR	14
42. 43.	50120004 50360007	10K PCB TRIMMER POTENTIOMETER 5 PIN RESISTOR PACK, 1K OHM	1 1
44.	50360006	9 PIN RESISTOR PACK, 1K OHM	3
45.	50030256	100 OHM, ኣw., 5% RESISTOR	8
46.	50030051	1K OHM, W., 5% RESISTOR	18
47.	50030063	10K OHM, 14W., 5% RESISTOR	13
48.	50030014	270 OHM, ¼W., 5% RESISTOR 47K OHM, ¼W., 5% RESISTOR	7 4
49. 50.	50030150 50030095	330 OHM, ¼W., 5% RESISTOR	4
٠٠٠.	50030075	Jou Janes Do Managaron	-

PARTS LIST

\underline{NO} .	PART NUMBER	DESCRIPTION:	USAGE:
	50030007		7
	50030010		1
	50030086	33K OHM, ¼W., 5% RESISTOR	3
	50030265		6
	50030215		16
	50030276		_
	50030195		1 3 3 3
	50030275		3
	50030152	150 OHM, ¼W., 5% RESISTOR	3
60.	50150111	16-PIN SOLDER TRAIL SOCKET, LOW PROF.	5
61.	50150060	40-PIN SOLDER TRAIL SOCKET, LOW PROF.	1
62.	50150110	14-PIN SOLDER TRAIL SOCKET, LOW PROF.	1
		8 POSITION DIP SWITCH	1
64.	50150256	50-PIN PCB HEADER, AINSLEY #609-5007ES	2
		PRINTED CIRCUIT BOARD- CPU	1
	50100014		8
67.	50170050	INSULATED WIRE, 30AWG., (FOR MOD.)	30"
68.	50030148	39K OHM, ¼W., 5% RESISTOR	1

ROM BOARD ASSEMBLY

PARTS LIST

NO.	PART NUMBER	DESCRIPTION:	USAGE:
1.	50010221LS	74LS163 I.C.	4
2.	50010022LS	74LS86 I.C.	4
3.	50010262LS	74LS283 I.C.	3
4.	5001009 6 LS	74LS08 I.C.	1
5.	50010248LS	74LS138 I.C.	2
6.	50010252LS	74LS374 I.C.	3
7.	50010002LS	74LS00 I.C.	1
8.	50010019LS	74LS74 I.C.	1
9.	50010093LS	74LS151 I.C.	4
10.	50010030LS	74LS174 I.C.	4
11.	50010249LS	74LS245 I.C.	2
12.	50010237LS	74LS244 I.C.	1
13.	50010005	7404 I.C.	1
14.	50010045	74157 I.C.	4
15.	50010310	2114 I.C. (200ns)	8
16.	50010171	2716 I.C. (EPROM SINGLE SUPPLY)	12
17.	50030004	1.2K OHM, ¼W., 5% RESISTOR	2
18.	50030256	100 OHM, ¼W., 5% RESISTOR	1
19.	50060190	47mfd, 25V., RADIAL LYTIC CAPACITOR	1
20.	50040174	0.1mfd, 25V., MYLAR CAPACITOR	14
21.	50040066	470pf, 16V., DISC CERAMIC CAPACITOR	2
22.	50040141	1000pf, 50V., DISC CERAMIC CAPACITOR	2
23.	50040142	150pf, 50V., DISC CERAMIC CAPACITOR	1
24.	50150061	24-PIN SOLDER TRAIL SOCKET, LOW PROF.	12
25.	50150256	50-PIN PCB HEADER, AINSLEY #609-5007ES	2
26.	50070014	11.000 MHZ CRYSTAL	1
27.	50210225	ROM PRINTED CIRCUIT BOARD	1

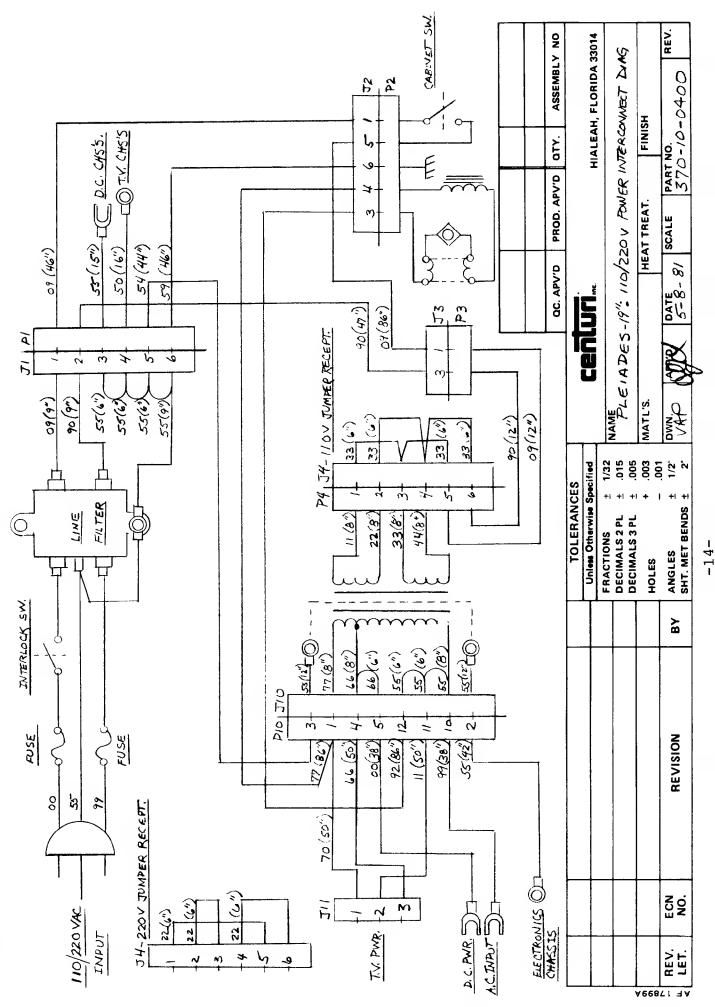
PARTS LIST - SHINDENGEN POWER SUPPLY

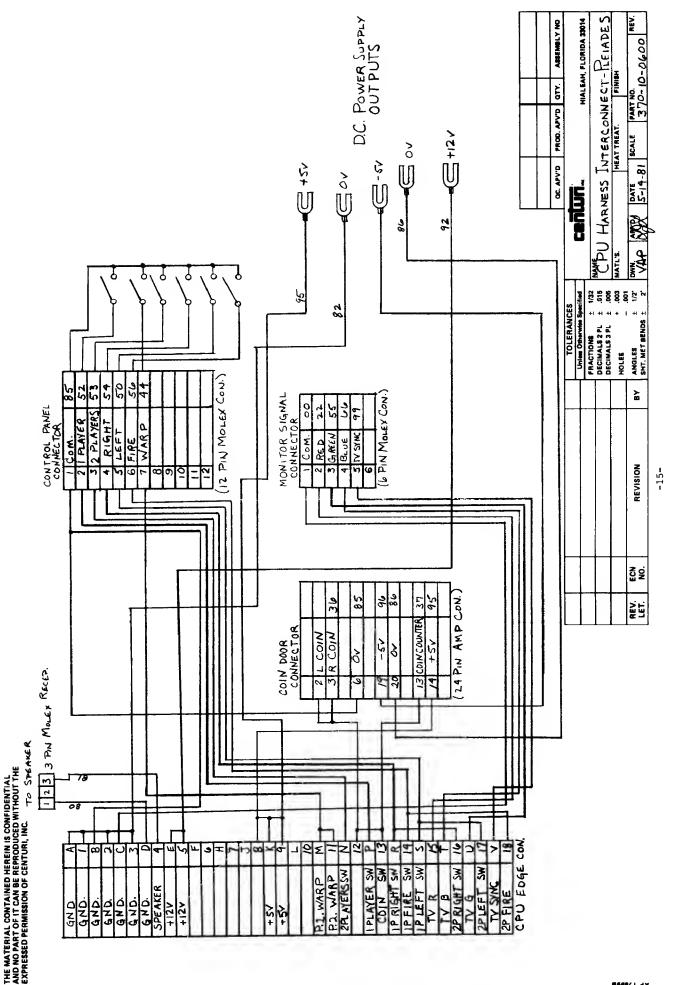
SYMBOL:	<u>DESCRIPTION</u> :	<u>USAGE</u> :
Т1	TRANSFORMER, SINGLE PHASE, 2A VA	1
	CHOKING COIL, 1.6mH, 1.5A CHOKING COIL, SF-T8-50S-03 CHOKING COIL, SF-HP-2A-03	1 2 1
D1 D2 D3, D6 D4 D5, D7 D12, D13 D14 RF1	DIODE, V19G DIODE, V06C DIODE, 1S1588 DIODE, S15S3 DIODE, 5CH1M DIODE, F113B DIODE, F113B DIODE, S4VB40(BRIDGE TYPE)	1 1 2 1 2 2 2 1 1
Q1 Q2 Q3 Q4	TRANSISTOR, 2SC2504 TRANSISTOR, 2SD467(B) TRANSISTOR, 2SC460(B) TRANSISTOR, 2SA673(B)	1 1 1 1
IC1 PC1	INTEGRATED CIRCUIT, RM723DC or HA17723G-02 PHOTO COUPLER, PS2001	1 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 R25 RV1	TRANSISTOR, 2SC460(B) TRANSISTOR, 2SA673(B) INTEGRATED CIRCUIT, RM723DC or HA17723G-02 PHOTO COUPLER, PS2001 RESISTOR, 2 WATT, 18 OHM RESISTOR, 2 WATT, 47K OHM RESISTOR, 2 WATT, 15 OHM RESISTOR, 1 WATT, 56 OHM RESISTOR, 1 WATT, 56 OHM RESISTOR, 1 WATT, 100 OHM RESISTOR, 1 WATT, 0.56 OHM RESISTOR, 1 WATT, 0.56 OHM RESISTOR, 1 WATT, 0.82 OHM RESISTOR, 1 WATT, 0.82 OHM RESISTOR, 1/4 WATT, 33 OHM RESISTOR, 1/4 WATT, 33 OHM RESISTOR, 1/4 WATT, 33 OHM RESISTOR, 1/4 WATT, 30 OHM RESISTOR, 1/4 WATT, 20 OHM RESISTOR, 1/4 WATT, 27 OHM RESISTOR, 1/4 WATT, 68 OHM RESISTOR, 1/4 WATT, 1.2K OHM RESISTOR, 1/4 WATT, 5.6K OHM RESISTOR, 1/4 WATT, 150 OHM VARIABLE RESISTOR, RJ-6P501	1 2 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

PARTS LIST - SHINDENGEN POWER SUPPLY

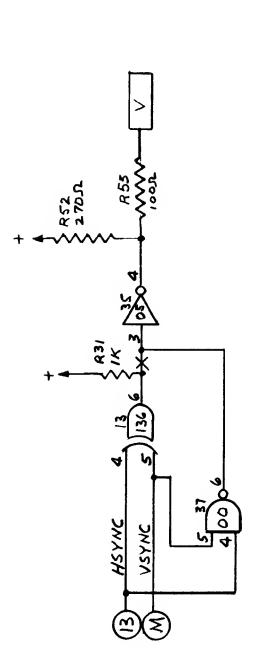
SYMBOL:	DESCRIPTION:	<u>USAGE</u> :
C1, C2	CAPACITOR, ECK-DAL102E	2
C3-1,-2	CAPACITOR, 160VSN100	2
C9, C10	CAPACITOR, SM10VB-2200	2
C11, C23	CAPACITOR, SM10VB-2200	2
C12, C13, C15	CAPACITOR, SL25VB-10	3
C27	CAPACITOR, SL25VB-10	1
C18, C19, C20	CAPACITOR, SM35VB-1000	3
C26	CAPACITOR, SM35VB-1000	1
C21, C22, C25	CAPACITOR, SM16VB-1000	3
C5	CAPACITOR, DMY21H472K	1
C6	CAPACITOR, DMY21H104K	1
C14, C16	CAPACITOR, DMY21H222K	2
C4	CAPACITOR, CM20XC511K5	1
C8	CAPACITOR, MDD22G473K	1
C5-2	CAPACITOR, DMY21H222K	1
F1, F2	ENCLOSED TYPE FUSE, 3A	2





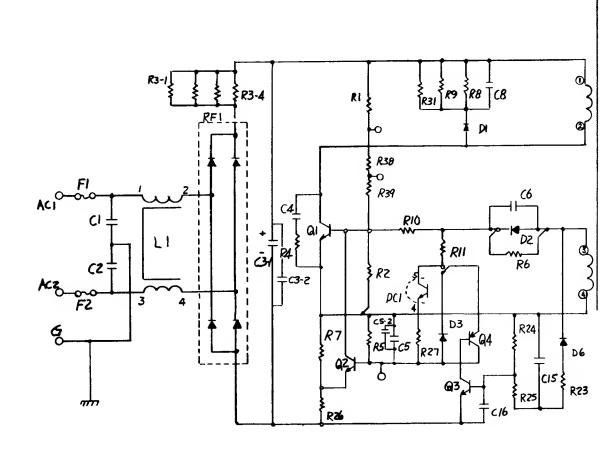


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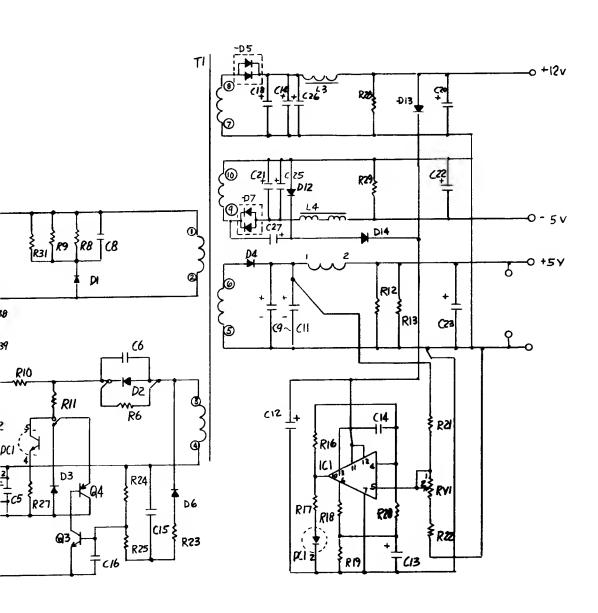
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