

SMACK 'N ALIEN

OWNERS AND SERVICE MANUAL

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GAME FEATURES

We are proud to present The new Smack 'N Alien™ arcade game. We have succeeded in taking an old arcade favorite and changing it into a new and exciting game by adding features not available in any of the previous “Wacky” games.

The game is presented in a unique multidimensional cabinet that includes a beautifully sculpted astronaut figure, colorful graphics, and truly funny alien sound effects.

The astronaut body is made out of a high impact fiberglass gel coat material with the graphics clear coated into it.

Inside the astronaut’s “belly” are the aliens that you must beat back into the astronaut to win the game. The “aliens” are virtually unbreakable injection molded plastic assemblies that incorporate multicolor lighting. The lighting consists of vibration proof LED’s.

The game electronics are designed from reliable parts proven in years of service in other games. We have purposely used “low tech” components in an effort to make this a more robust, cost effective design that is also easy to service.

All of the cabinet decals are laminated with a glossy high strength polyester overlay for a rich glossy look and great scratch and chemical resistance.

The Smack 'N Alien™ game also includes an adjustable Ticket Bonus for winning the game. Of course, you have full control of all game functions and ticket payout percentaging with our extensive software programming capabilities.

GAME PLAY

The game play is basically the same as other “Wacky” games with one big difference....” DON’T HIT RED ALIENS”.

In this game you can only hit the aliens when they are GREEN in color. If you hit the aliens when they are RED, the game will temporarily stop to penalize you for your error.

The game is broken up into three “Rounds” and the game is over at the end of the third round.

When the game is over your score is displayed along with information on how many tickets you have won. After this display, the game will also give you the high score of the day.

After a short period of time, the attract mode will be displayed. This mode will show the high score of the day, and will tell the customer how many points they must get to win the ticket bonus. The display will also tell the customer how big the ticket bonus is.

ASSEMBLY

SET UP

BEFORE YOU BEGIN

WARNING: WHEN INSTALLING THIS GAME, A THREE PRONG GROUNDED A.C. RECEPTACLE MUST BE USED. FAILURE TO DO THIS COULD RESULT IN SERIOUS INJURY TO YOURSELF OR OTHERS. FAILURE TO USE A GROUNDED RECEPTACLE COULD ALSO CAUSE IMPROPER GAME OPERATION, OR DAMAGE THE ELECTRONICS.

DO NOT DEFEAT THE GROUND PRONG ON THE POWER CORD FOR THE SAME REASONS AS GIVEN ABOVE. USING AN IMPROPERLY GROUNDED OUTLET COULD VOID YOUR WARRANTY.

1. We will assume you have taken the box off of the game skid to access this manual.
2. Remove the game from the packing skid.
3. Find the permanent location for the game and see that the game is level. This can be done by the following:
 - Check to see if you can rock the game. If you can, you need to use the adjustable feet on the bottom of the game.
 - Open the coin door. On the inside left of the game are the latches that open the top of the cabinet. Open the latches. The top of the game should open and close smoothly. If it doesn't, the game is out of square. If the top of the game binds on the back of the cabinet, lower the front left leveler. If the top of the game binds on the front of the cabinet lower the rear left leveler.
4. Plug the game into a good working A.C. Receptacle.

NOTE: IT IS EXTREMELY IMPORTANT THAT THE A.C. OUTLET USES THE PROPER VOLTAGE TO ENSURE PROPER FUNCTION OF THE GAME. DO NOT USE AN EXTENSION CORD UNLESS ABSOLUTELY NECESSARY. IF YOU MUST USE AN EXTENSION CORD, MAKE IT AS SHORT AS POSSIBLE, AND MAKE SURE IT IS AT LEAST A 16 GA. CORD THAT IS U.L./CSA OR CE APPROVED.

IF YOUR VOLTAGE IS NOT WITHIN THE NORMAL SPECIFICATIONS FOR THIS GAME'S RATING, PLEASE CONSULT OUR SERVICE DEPARTMENT BEFORE USING THIS PRODUCT. WE WILL ADVISE YOU ON ADJUSTMENTS THAT CAN BE MADE TO ASSURE SAFE AND PROPER OPERATION OF THE GAME.

GAME TESTING

1. If your game uses tickets, it is important to load tickets into the game at this time. If your game is set to use tickets and they are not in the game, you will get a CALL ATTENDANT error.
2. Run coins through each coin slot at least 10 times to assure proper operation of the micro switches.
3. When you power up the game look on the upper right hand corner of the display unit. If you see a single red dot in the corner, you have a coil bed error that needs to be repaired.
4. Check to see that the aliens seem to move properly during the game.
5. Check to see that the ticket dispenser works when the game is over.

GAME VOLUME

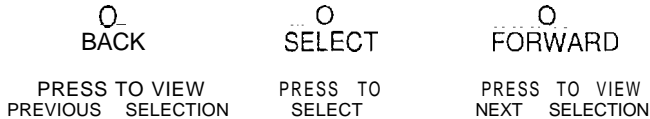
There are 2 volume control pots located on the Main P.C. board. Adjust these to a suitable volume level.

PLEASE ADJUST EACH POT THE SAME AMOUNT TO RETAIN THE PROPER SOUND BALANCE.

CUSTOMIZING OUR GAME

PROGRAMMING MODE

Programming of the Smack 'N Alien™ game is accomplished through the 3 push buttons located just inside the coin door. The left hand button is used to move back through the stated options. The center button is used to select the available options, and the right hand button is used to move forward through the stated options.



The option menus are basically menus with sub-menus for each option. For example: You start with the main menu. Using the forward or back button you will see sub menus such as "tests", "audits", etc. When you reach a menu you want, you press the center button to select it.

Below is a listing that shows the Main Menu with the sub-menus shown below it.

MAIN MENU

START GAME	RETURNS TO NORMAL GAME PLAY
"TESTS"	GOES TO TEST MENU
"ADJUSTMENTS"	GOES TO ADJUSTMENTS MENU
"AUDITS" MENU	GOES TO AUDITS MENU
"SCORE STATS"	GOES TO SCORE STATISTICS MENU

TEST MENU

MAIN MENU	RETURNS TO MAIN MENU
ALIEN TEST	PRESS FORWARD TO SELECT COIL, PRESS PREVIOUS FOR UP / DOWN
COIL BED'	CYCLES THROUGH ALIENS AND WILL REPORT ANY ERRORS IF PRESENT • WILL DISPLAY "NO ERRORS" IF WORKING PROPERLY * WILL FLASH ALIEN IN ERROR RED + GREEN ALTERNATELY IF BAD * WILL BYPASS BAD ALIEN DURING NORMAL GAME PLAY IF POSSIBLE * WILL DISPLAY A RED PIXEL IN UPPER RIGHT CORNER OF GAME DURING NORMAL GAM PLAY
SWITCH TEST	ALIEN COLOR IS RED IF DOWN, GREEN IF UP
FLASH TEST	1= 1ST SET OF FLASHERS 2= 2ND SET OF FLASHERS 3= 3RD SET OF FLASHERS 4= 4TH SET OF FLASHERS

CUSTOMIZING YUUK GAME

ATTRACT SET	ATTRACT TIME DISABLED 1 MINUTE (FACTORY DEFAULT) 2 MINUTES 3 MINUTES 4 MINUTES 5 MINUTES 10 MINUTES 20 MINUTES
TICKET SIZE	POINTS PER TICKET 1 POINT PER TICKET (FACTORY DEFAULT) 2 POINTS PER TICKET
ROUND TIME	2 TO 40 SECONDS (DEFAULT 14 SECS.)
COIL ARMING	AUTO BYPASS OF BAD ALIENS AT POWER UP DISABLE= AUTO BYPASS OFF ENABLE= AUTO BYPASS ON (FACTORY DEFAULT)
TICKET MECH	TICKET MECH ON /OFF (DEFAULT = ON)

AUDIT MENU

MAIN MENU	RETURN TO MAIN MENU
CLR AUDITS	CLEAR AUDITS PROMPTS FOR VERIFICATION
COINS	SHOWS TOTAL COINS TAKEN
PAYOUT	SHOWS TOTAL TICKET PAYOUT
JKPOTS	SHOWS TOTAL JACKPOTS WON

SCORE STATS

MAIN MENU

RETURN TO MAIN MENU

CLR STATS

CLEARs STATISTICS, PROMPTS FOR VERIFICATION

- 0 = NUMBER OF GAMES THAT SCORED BETWEEN 0-9
- 10 = NUMBER OF GAMES THAT SCORED BETWEEN 10-19
- 20 = NUMBER OF GAMES THAT SCORED BETWEEN 20-29
- 30 = NUMBER OF GAMES THAT SCORED BETWEEN 30-39
- 40 = NUMBER OF GAMES THAT SCORED BETWEEN 40-49
- 50 = NUMBER OF GAMES THAT SCORED BETWEEN 50-59
- 60 = NUMBER OF GAMES THAT SCORED BETWEEN 60-69
- 70 = NUMBER OF GAMES THAT SCORED BETWEEN 70-79
- 80 = NUMBER OF GAMES THAT SCORED BETWEEN 80-89
- 90 = NUMBER OF GAMES THAT SCORED BETWEEN 90-99
- 100= NUMBER OF GAMES THAT SCORED BETWEEN 100-109
- 110= NUMBER OF GAMES THAT SCORED BETWEEN 110-119
- 120= NUMBER OF GAMES THAT SCORED BETWEEN 120-129
- 130= NUMBER OF GAMES THAT SCORED BETWEEN 130-139
- 140= NUMBER OF GAMES THAT SCORED BETWEEN 140-149
- 150= NUMBER OF GAMES THAT SCORED BETWEEN 150-159
- 160= NUMBER OF GAMES THAT SCORED BETWEEN 160 AND UP
- MAX= MAXIMUM SCORE

TICKET SCHEDULE

THIS TICKET SCHEDULE REFLECTS THE TOTAL **ALIEN COUNT** NORMALIZED (SCALED) TO 14 SECOND DEFAULT ROUNDS. THIS MEANS IF FOR EXAMPLE THE ROUND TIME IS SET TO :

- 14 SECONDS (DEFAULT) ALIEN COUNT FOR GIVEN PAYOUT LINE ARE 100% (14114) OF SHOWN (NORMALIZED) VALUES IN TABLE
- 10 SECONDS ALIEN COUNT FOR GIVEN PAYOUT LINE ARE 71.4% (10114) OF SHOWN (NORMALIZED) VALUES IN TABLE
- 20 SECONDS ALIEN COUNT FOR GIVEN PAYOUT LINE ARE 143% (20114) OF SHOWN (NORMALIZED) VALUES IN TABLE

NOTE: THIS KEEPS TICKETS SCHEDULE RELATIVE (SCALED) TO A FIXED REFERENCE POINT.

CUSTOMIZING YOUR GAME

TOTAL ALIENS
FOR 20 SECOND
ROUND TIME
(EXAMPLE)

TOTAL ALIENS
FOR DEFAULT
(14 SECOND OR
OR NORMALIZED)
ROUND TIME

**BOLD NUMBERS ARE FACTORY
DEFAULT VALUES**

DIFFICULTY			PAYOUT SETTING(NUMBER OF TICKETS)		
			LOW	MEDIUM	HIGH
TOO EASY	1-19	1-13	2	4	6
	20-39	14-27	4	6	8
	40-59	28-41	6	8	10
	60-79	42-56	10	14	16
	80 & UP	56 & UP	JACKPOT	JACKPOT	JACKPOT
E A S Y	1-30	1-21	2	4	6
	31-60	22-42	4	6	8
	61-90	43-63	6	8	10
	91-111	64-83	10	14	16
	120 & UP	84 & UP	JACKPOT	JACKPOT	JACKPOT
MEDIUM	1-35	1-28	2	4	6
	36-70	26-49	4	6	8
	71-106	50-74	6	8	10
	107-139	75-97	10	14	16
	140 & UP	98 & UP	JACKPOT	JACKPOT	JACKPOT
HARD	1-44	1-31	2	4	6
	45-90	32-63	4	6	8
	91-134	64-94	6	8	10
	135-159	95-119	10	14	16
	171 & UP	120 & UP	JACKPOT	JACKPOT	JACKPOT
VERY HARD	1-49	1-34	2	4	6
	50-97	35-68	4	6	8
	98-144	69-101	6	8	10
	145-193	102-134	10	14	16
	192 & UP	135 & UP	JACKPOT	JACKPOT	JACKPOT

MAINTENANCE

CLEANING

Cleaning is easily accomplished by using any mild glass cleaner or mild soapy solution to remove dirt and grease. To keep the game looking it's best however, it would be a good idea to periodically finish cleaning the game with the following materials:

- Automotive paste wax - This should be used on all of the Astronaut body surfaces to help seal and preserve the painted finish.
- Spray furniture polish - this should be used to clean and protect all of the other exterior game surfaces. We recommend the use of Pledge™ furniture polish.
- Upholstery cleaner -this can be sprayed onto the cloth surface of the mallet. and vacuumed off when dry.

LUBRICATION

We DO NOT recommend the use of any lubricants anywhere on the game.

The only moving parts on the game are the Alien Head assemblies. If you notice any sticking or binding of the Alien Heads check the following:

- Dirt on the solenoid shafts - Remove the solenoid shafts and clean with isopropyl alcohol. Finish wiping clean with a good grade of spray furniture polish only.
- Check that the micro switch actuators are not too tight. If the switch actuators are too tight, bend by hand so that they do not impede the up or down movement of the Alien Head.
- Wear - If excessive solenoid body wear is noted, replace the solenoid coil.

TROUBLESHOOTING & REPAIR

QUICK TROUBLESHOOTING

PROBLEM	PROBABLE CAUSE	SOLUTION
GAME WILL NOT START	NO POWER TO GAME MAIN FUSE B-OWN BAD COIN SWITCH BAD COIN MECHANISM BAD COIN DCOR HARNESSING BAD MAIN P.C.BOARD	CHECK A.C. OUTLET FOR VOLTAGE CHECK OR REPLACE FUSE CHECK OR REPLACE COIN SWITCH ADJUST OR REPLACE COIN MECHANISM CHECK & REPAIR HARNESSING REPAIR OR REPLACE MAIN P.C. BOARD
NO OR LOW GAME VOLUME	BAD MAIN P.C. BOARD VOLUME TURNED DOWN BAD SPEAKER BAD SPEAKER HARNESSING	REPAIR OR REPLACE MAIN P.C. BOARD ADJUST BOTH VOLUME CONTROLS REPLACE SPEAKER REPLACE HARNESSING
NO DISPLAY	BAD DISPLAY UNIT BAD MAIN P.C. BOARD BAD COMBO BOARD (I/O) BAD DISPLAY HARNESS	REPAIR OR REPLACE DISPLAY UNIT REPAIR OR REPLACE MAIN P.C. BOARD REPAIR OR REPLACE BAD COMBO BOARD REPAIR OR REPLACE HARNESS
NO TICKET DISPENSING	NO TICKETS IN DISPENSER BAD TICKET DISPENSER BAD HARNESSING BAD MAIN P.C. BOARD TICKET DISPENSER TURNED OFF DISPENSER SET IMPROPERLY	ADD TICKET TO DISPENSER REPAIR OR REPLACE BAD DISPENSER REPAIR TICKET HARNESSING REPAIR OR REPLACE MAIN P.C. BOARD TURN ON DISPENSER IN PROGRAMMING ADJUST DISPENSER IN PROGRAMMING
ALIENS DO NOT LIGHT	BAD MAIN P.C. BOARD BAD COMBO BOARD BAD COIL BED HARNESSING BAD ALIEN HEAD P.C. BOARD BAD ALIEN HEAD HARNESS BAD COIL BED HARNESSING BAD CABINET HARNESSING	REPAIR OR REPLACE MAIN P.C. BOARD REPAIR OR REPLACE COMBO BOARD REPAIR OR REPLACE HARNESSING REPLACE ALIEN HEAD ASSEMBLY REPAIR OR REPLACE ALIEN HEAD ASSY REPAIR COIL BED HARNESSING REPAIR CABINET HARNESSING
ALIENS DO NOT POP UP	BAD MAIN P.C. BOARD BAD COMBO BOARD BAD CABINET HARNESSING BAD COIL BED HARNESSING BAD COMBO BOARD FUSE BENT ALIEN HEAD SHAFT BINDING MICRO SWITCH BAD OR WORN SOLENOID COIL	REPAIR OR REPLACE MAIN P.C. BOARD REPAIR OR REPLACE COMBO BOARD REPAIR CABINET HARNESSING REPAIR COIL BED HARNESSING REPLACE COMBO BOARD FUSE REPLACE ALIEN HEAD ADJUST MICRO SWITCH REPLACE SOLENOID COIL
ALIEN DOES NOT RESPOND WHEN HIT	BAD MICRO SWITCH BAD COMBO BOARD BAD MAIN P.C. BOARD BAD COIL BE3 HARNESS	ADJUST OR REPLACE MICRO SWITCH REPAIR OR REPLACE COMBO BOARD REPAIR OR REPLACE REPAIR HARNESS
"SECRET" BONUS ROUND DOESN'T WORK	BAD SLAM SWITCH BAD MAIN P.C. BOARD BAD HARNESSING	ADJUST OR REPLACE SLAM SWITCH REPAIR OR REPLACE MAIN P.C. BOARD REPAIR HARNESSING
NO MARQUEE LIGHTING	BAD BRIGHTSTICK FLORESCENT NO A.C. POWER	REPLACE BULB ASSEMBLY CHECK FOR PROPER VOLTAGE

WARNING: ALWAYS REMOVE POWER TO THE GAME BEFORE ATTEMPTING ANY SERVICE, UNLESS NEEDED FOR SPECIFIC TESTING. FAILURE TO OBSERVE THIS PRECAUTION COULD RESULT IN SERIOUS INJURY TO YOURSELF OR OTHERS.

OPERATIONAL BACKGROUND

TROUBLESHOOTING PHILOSOPHY

To find problems with the game, always first check what should be obvious. See that the game is plugged in, and that all of the fuses on the game are good. This includes the fuse that is located INSIDE the power module.

Next, check to see that all of the connectors are firmly seated, and that none of the wires have pulled out of them.

When trying to find out if specific components are bad or not, try swapping them with components from another player station to see if the problem moves with the component, or stays where it was. This will help you to know if you have a problem with a specific component, or maybe a problem with either the wiring or the Main P.C. Board.

Use extreme caution when using probes or volt meters if the game is powered up. If doing continuity checks, it is important to disconnect the harnessing at both ends, as attached they may yield erroneous results.

If P.C. Boards are suspected as causing problems, check to see that all of the I.C. chips are firmly seated on the boards.

MECHANICAL REPAIR

COIL BED

The coil bed houses all of the moving parts in the Smack 'N Alien™ game. The Solenoid Coils and Alien Heads can be serviced while the coil bed is still installed in the game. The astronaut body must be removed to service the Alien Heads. The entire coil bed may also be removed if desired for service.

ASTRONAUT BODY REMOVAL

1. Open the coin door. There are 2 latches on the upper left hand side of the game that lock the top of the game to the cabinet. Unlock the 2 latches.
2. Lift the top of the game open by lifting up on the knees of the astronaut.
3. There are 4 bolts and washers that secure the astronaut to the top of the cabinet. Remove the 4 bolts and washers.
4. Carefully lift the astronaut body straight off of the Alien heads.
5. Replace in the reverse order.

NOTE: BE SURE WHEN TIGHTENING THE BOLTS ON THE ASTRONAUT BODY THAT THE ALIEN HEADS ARE CENTERED IN THE HOLES IN THE ASTRONAUTS CHEST. FAILURE TO DO SO COULD CAUSE THE ALIENS TO BIND ON THE SIDES OF THE HOLES.

SOLENOID COIL REPLACEMENT

1. Turn off all A.C. power and unplug game. Open the coin door and unhook the latches that secure the top of the cabinet.
2. Open the top of the cabinet.
3. Determine which coil is defective and remove as follows:

TROUBLESHOOTING & REPAIR

- A) Remove the plastic switch actuator at the bottom of the Alien Head Shaft by removing the Allen Head Screw and washer. Pull the actuator off the shaft.
 - B) Remove the rubber bumper and plastic washer from the Alien Head Shaft.
 - C) Remove the anti-rotation pin from the micro switch / solenoid mounting flange by twisting it from the flange.
 - D) Remove the 2 Nylock Nuts and washers that secure the solenoid into the coil bed assembly.
 - E) Remove the mounting flange and carefully lower the solenoid coil from the coil bed assembly.
 - F) Disconnect the 2 fast-on tabs the connect the Solenoid coil to the coil bed harnessing. Slide the coil off of the Alien Head shaft.
 - G) Connect the 2 fast-ons from the Solenoid coil to the coil bed harnessing. BE SURE TO CONNECT THE ORANGE TO THE ORANGE WIRE, AND THE BLACK TO THE BLACK WIRE.
 - H) Slide the solenoid onto the Alien Head Shaft and up into the coil bed assembly. NOTE: IT IS IMPERATIVE THAT THE SOLENOID COIL WIRES ARE KEPT OUT FROM UNDER THE SOLENOID COIL WHEN INSTALLING IT INTO THE COIL BED. FAILURE TO KEEP THE WIRES OUT OF THE WAY CAN RESULT IN THE SOLENOID COIL NOT FULLY SEATING INTO THE COIL BED ASSEMBLY AND CAUSING WIRE PINCHING OR DAMAGE TO THE SOLENOID COIL ITSELF.
 - I) Slide the Solenoid mounting flange up into position and secure with the nylock nuts and washers.
 - J) Finish assembly of the unit observing how the other assemblies are constructed.
3. Remove the rubber bumper and plastic washer from the Alien Head Shaft.
 4. Remove the anti-rotation pin from the micro switch / solenoid mounting flange by twisting it from the flange.
 5. Disconnect the 3 pin connector from the Alien Head assembly at the top of the coil bed assembly.
 6. Lift the Alien Head assembly from the coil bed assembly.
 7. Reassemble in reverse order.

ALIEN HEAD ASSEMBLY REPLACEMENT

1. Open the game and remove the Astronaut body as described above.
2. Remove the plastic switch actuator at the bottom of the Alien Head Shaft by removing the Allen Head Screw and washer. Pull the actuator off the shaft.

ELECTRONIC REPAIR ELECTRONIC AND ELECTRICAL REPAIR

The following section will describe repair procedures and trouble shooting hints for the game electronics.

Please read the section "Operational Background" in the beginning of Maintenance and Trouble Shooting to get a good understanding of the game's basic operating parameters.

WARNING: EXERCISE CAUTION WHENEVER WORKING WITH ELECTRONICS, THEY CAN BE VERY SUSCEPTIBLE TO DAMAGE FROM SHORT CIRCUITING, OR PHYSICAL ABUSE. ALWAYS UNPLUG THE GAME WHEN WORKING ON HIGH VOLTAGE AREAS OF THE GAME, SUCH AS THE TRANSFORMER.

USE EXTREME CAUTION WHEN USING VOLT METERS TO DO CIRCUIT CHECKS IF THE GAME POWER HAS BEEN LEFT ON.

ALWAYS REMOVE ANY BATTERY BACK-UP POWER WHEN WORKING ON THE GAME. THIS IS NECESSARY, AS SOME CIRCUITS ARE CONSTANTLY UNDER POWER FROM THE BATTERY.

WHEN USING A VOLT METER, BE SURE IT IS SET TO THE CORRECT VOLTAGE OR RESISTANCE RANGE, BEFORE USING. THIS CAN PREVENT POSSIBLE DAMAGE TO THE P.C. BOARD OR MISDIAGNOSIS.

ALWAYS REMOVE POWER TO THE GAME WHEN PLUGGING OR UNPLUGGING P.C. BOARDS.

IT IS NECESSARY TO USE I.C.E. REPLACEMENT PARTS TO CONTINUE WARRANTY COVERAGE. USE OF NON-I.C.E. APPROVED PARTS WILL NOT ONLY VOID YOUR WARRANTY, BUT COULD CAUSE SERIOUS HARM TO THE GAME, OR CAUSE SERIOUS BODILY INJURY.

IF YOU HAVE ANY QUESTIONS REGARDING REPAIR AFTER READING THIS SECTION, CALL OUR SERVICE DEPARTMENT AT 1-800-342-3433 BEFORE PROCEEDING.

MAIN & COMBO P.C. BOARD

The Main & Combo (input / output) P.C. boards are assessable through the top of the game. Remove all power before servicing these P.C. boards. When re-installing these boards, use the original mounting holes in the cabinet whenever possible.

DISPLAY P.C. BOARD

Remove the display board from the game as follows:

1. Open the lock at the top of the control panel.
2. Lift up on the lock to lift the display graphics panel. Pull out on the lock to pull out the bottom of the display.
3. Remove the display from the game.
4. Remove the fasteners that hold the display panel to the game.
5. Remove the harness connectors from the display board.
6. Assemble in the reverse order

CHANGING VOLTAGES

The Smack 'N Alien™ arcade game is built for 110-120 VAC input voltage. If you need your game to operate on a different voltage, the following must be changed:

FOR 90-1 00 VAC OPERATION

- STEP UP THE FLORESCENT LIGHTING
- RE-STRAP MAIN POWER TRANSFORMER

FOR 220-240 VAC OPERATION

- STEP DOWN FLORESCENT LIGHTING
- RE-STRAP MAIN POWER TRANSFORMER
- CHANGE VOLTAGE SELECT ON SWITCHING POWER SUPPLY

FOR EITHER OF THESE CHANGES, CONTACT OUR SERVICE DEPARTMENT. WE WILL SUPPLY YOU WITH THE PROPER TRANSFORMER FOR THE FLORESCENT LIGHTING, A TRANSFORMER INTERFACE ADAPTER CABLE, AND DIRECTIONS ON HOW TO ADAPT YOUR GAME.

FUSE VALUES AND LOCATIONS

3 IN 1 (COMBO) P.C. BOARD

- F1 15 AMP, 32 VOLT
- F2 4 AMP, 250 VOLT
- F3 4 AMP, 250 VOLT
- F4 4 AMP, 250 VOLT
- F5 4 AMP, 250 VOLT
- F6 4 AMP, 250 VOLT
- F7 4 AMP, 250 VOLT
- F8 4 AMP, 250 VOLT MDQ (SLOW BLOW)
- F9 4 AMP, 250 VOLT
- F10 7 AMP, 250 VOLT
- F11 5 AMP, 250 VOLT

ON CABINET FLOOR FUSE BLOCK

- 3 AMP, 250 VOLT MDQ (SLOW BLOW) X 2

PARTS LISTINGS

MECHANICAL PARTS

201 CHROME T MOLDING
213 BLACK T MOLDING
WA1003 SPACER
WA1 004 UPPER GAS SHOCK MOUNTING PLATE
WA1005 LOWER GAS SHOCK MOUNTING PLATE
WA1010 HOSE MOUNTING PLATE
WA1 050 GAS SHOCK
WA1051 LATCH
WA1053 PLUNGER
WA1054 LIMITING PIN
WA201 1 ALIEN HEAD ASSEMBLY
WA3002 SPRING CAP
WA3003 COIL CAP
WA3004 BUSHING, MALLETT
WA3006 ALIEN SHAFT CAP
WA3007 GRILLE, 16" X 5"
WA3008 GRILLE, 5" X 5"
WA3020 ASTRONAUT BODY
WA3021 ASTRONAUT ARM
WA3022 ASTRONAUT LEG
WA4001 HOSE, BLUE
WA4002 HOSE, RED
WA4010 MALLETT
WA401 1 GROMMET, COIL BED
WA4012 BUMPER, ALIEN SHAFT
4004 COLLAR RUBBER (LARGE BUMPER)
5014 CAM LOCK
6250 8-32 X 3/4 ALLEN HEAD CAP SCREW
6'251 NYLON WASHER .905 OD X .510 ID
6252 NYLON WASHER 1.375 OD X .525 ID
6253 ROLL PIN 1/8" X 1/16"
PC60631 1/4 • 20 CABINET INSERT
UC1002 PODIUM LATCH BRACKET

ELECTRONIC / ELECTRICAL PARTS

211 SWITCH, LOW TICKET
1008 BULB, #555
1017 LED HOLDER
2005 BULB, #906
2132 BULB, GE BRIGHT STICK
2289 RESET • PROGRAMMING BUTTON

8106 MICRO SWITCH, CUSTOM LEVER
FP2007 SPEAKER, 4" ROUND
HH5005 TICKET DISPENSER, ENTROPY
HD20224X 5 VOLT COUNTER ASSEMBLY
WA2060X HARNESS, ALIEN COIL BED
WA3001 X SOLENOID COIL
WA2002X TRANSFORMER
WA2004X HARNESS, EARTH GROUND
WA201 0 POWER SUPPLY, SWITCHING
WA2012 SWITCH, SLAM
WA2031 X DISPLAY PC BOARD, TRI COLOR
WA2032X 3 IN 1 (COMBO) P.C. BOARD
WA2034X MAIN P.C. BOARD
WA205 1 X HARNESS, DISPLAY
WA2053X HARNESS, SPEAKER
WA2056X HARNESS, MARQUEE
WA2057X HARNESS, DOOR
WA2058X HARNESS, POWER
WA2059X HARNESS, ALIEN BED INTERFACE
WA2061X HARNESS, TRANSFORMER
WA2062X HARNESS, WEDGE SOCKET
WA5001 COIN DOOR

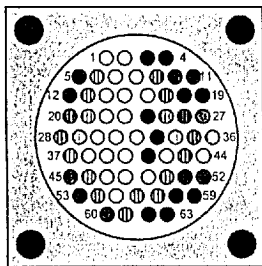
GRAPHICS & DECALS

WA7001 DECAL, REAR UPPER PANEL
WA7002 DECAL, ASTRONAUT BED
WA7003 DECAL, WHEEL
WA7004 DECAL, ALIEN N COUNTER
WA7005 DISPLAY PANEL
WA7006 DECAL, REAR PANEL LOWER SET
WA7007 DECAL, ICE
WA7008 DECAL, ALIENS
WA7027 MARQUEE
WA9001 SERVICE MANUAL

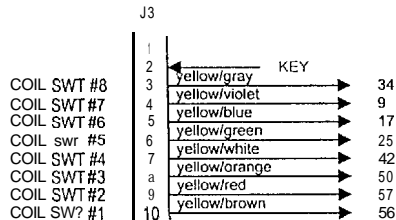
TITLE WIRING DIAGRAM

DESCRIPTION	#WA2059X	FILENAME	ALIEN
	ALIEN INTERFACE HARNESS		M.VSD
		DRAWN BY	RMO

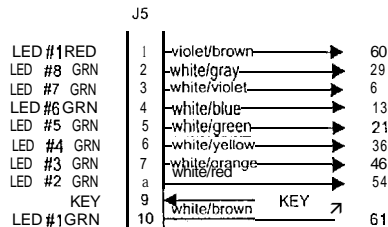
DATE 11/19/98 REVISED 2/25/99 PAGE 2 OF 6



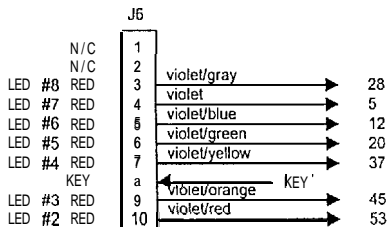
63 PIN CIRCULAR PLUG #8111
FEMALE PIN #8112
CLAMP #8110



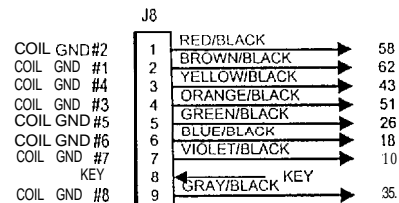
10 PIN HOUSING #2291
CONTACT PIN #2201



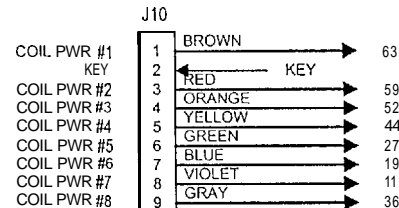
10 PIN HOUSING #2291
CONTACT PIN #2201



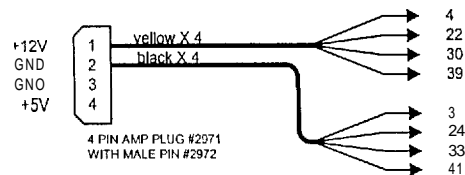
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CONTACT PIN #2201

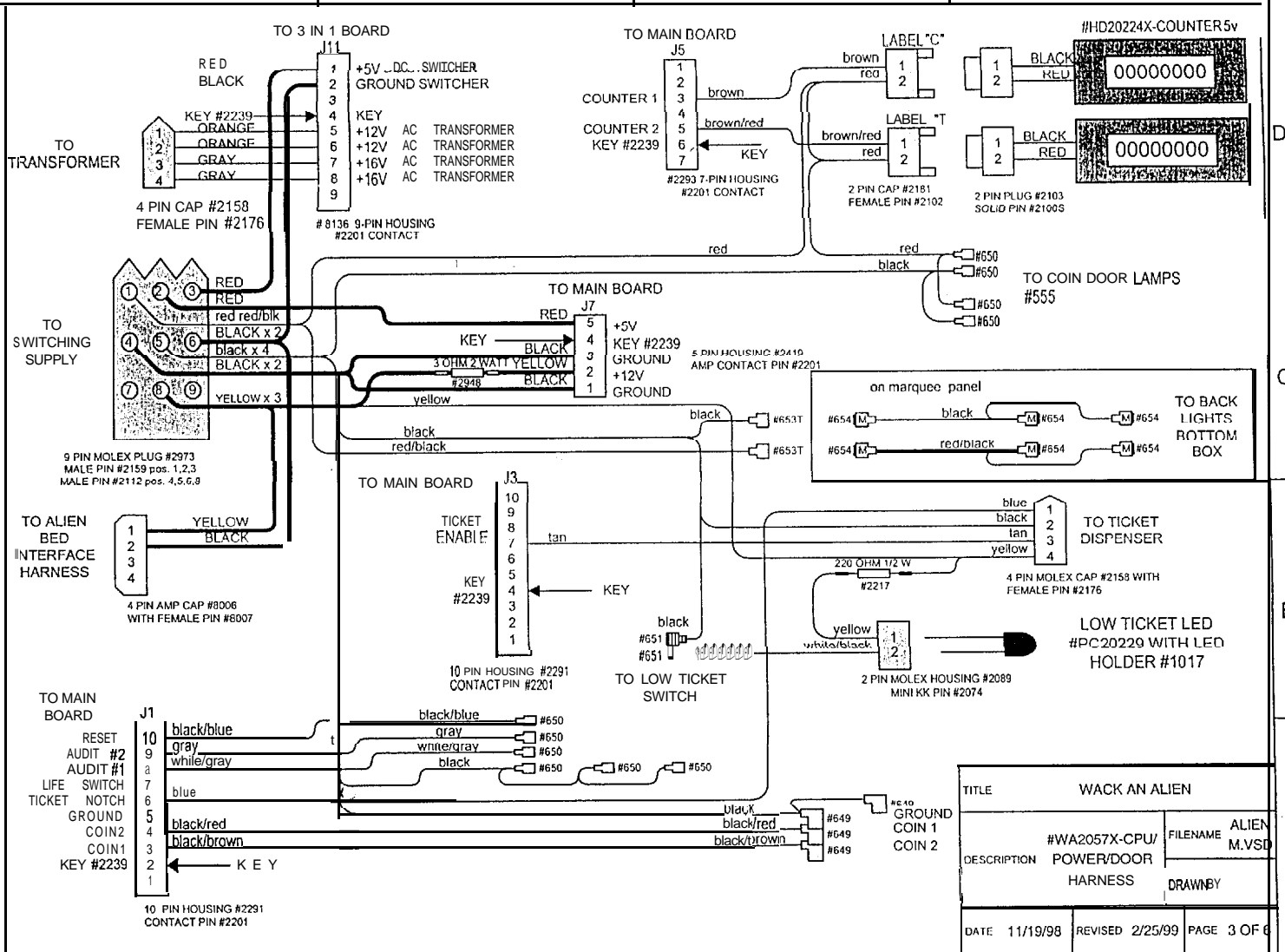


9 PIN HOUSING #8136
CONTACT PIN #2201

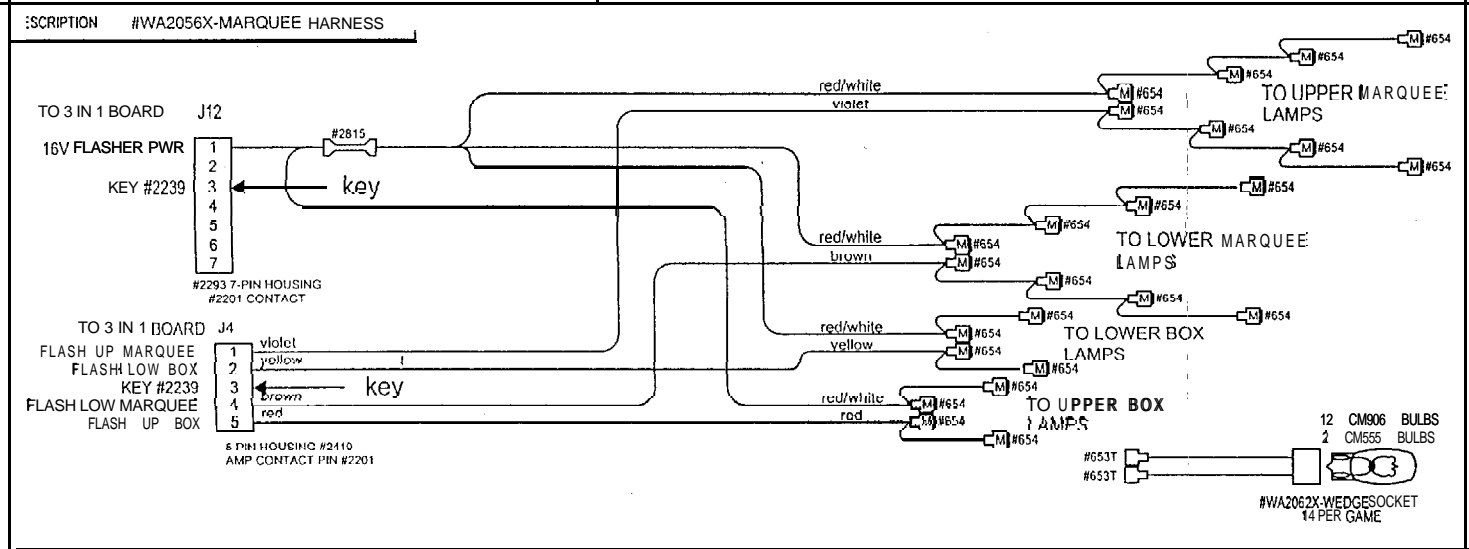
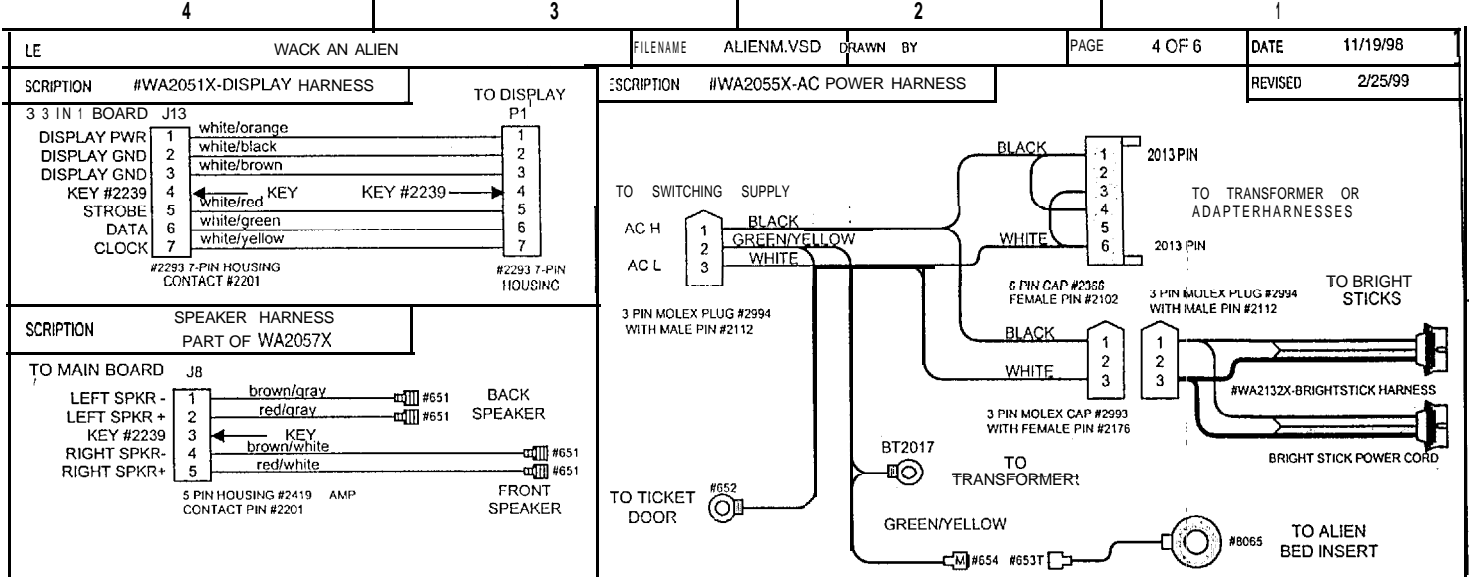


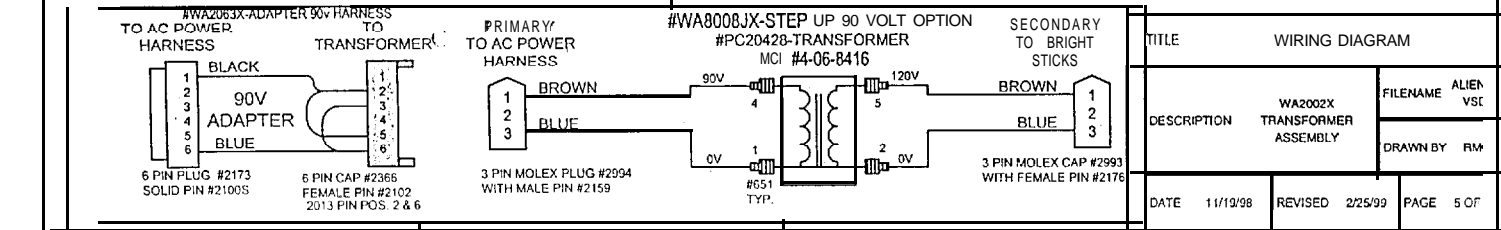
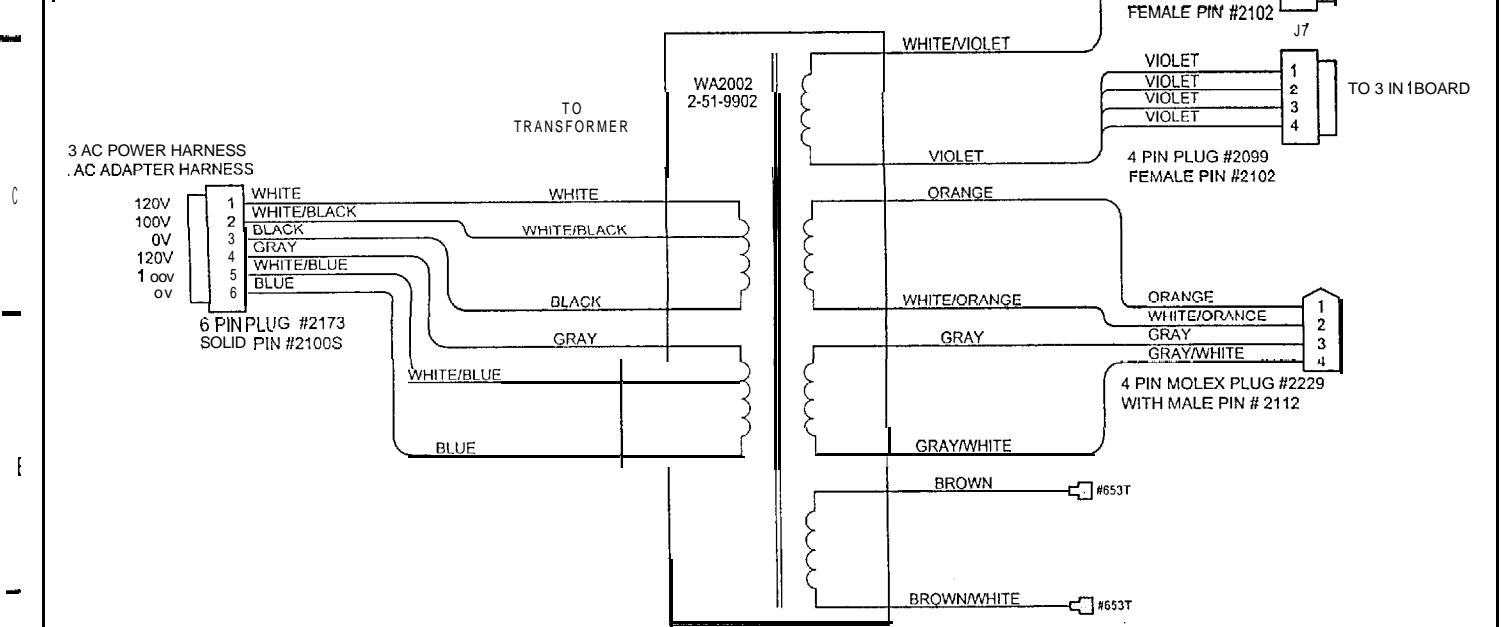
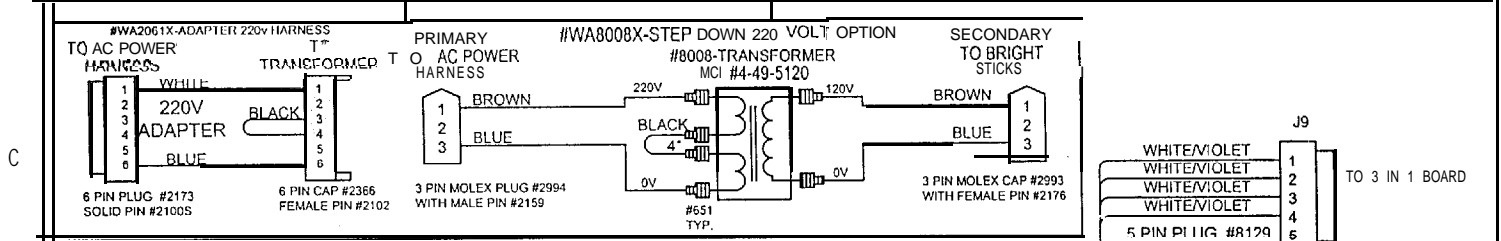
9 PIN HOUSING #8136
CONTACT PIN #2201





TITLE		WACK AN ALIEN	
DESCRIPTION	#WA2057X-CPU/	FILENAME	ALIEN
	POWER/DOOR		M.VSD
HARNESS		DRAWNBY	
DATE	11/19/98	REVISED	2/25/99
PAGE		3 OF 6	



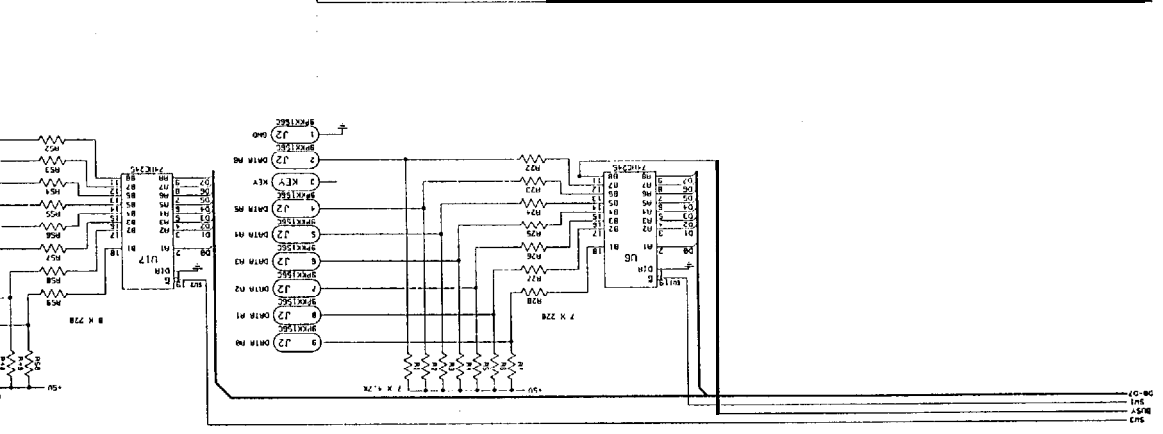
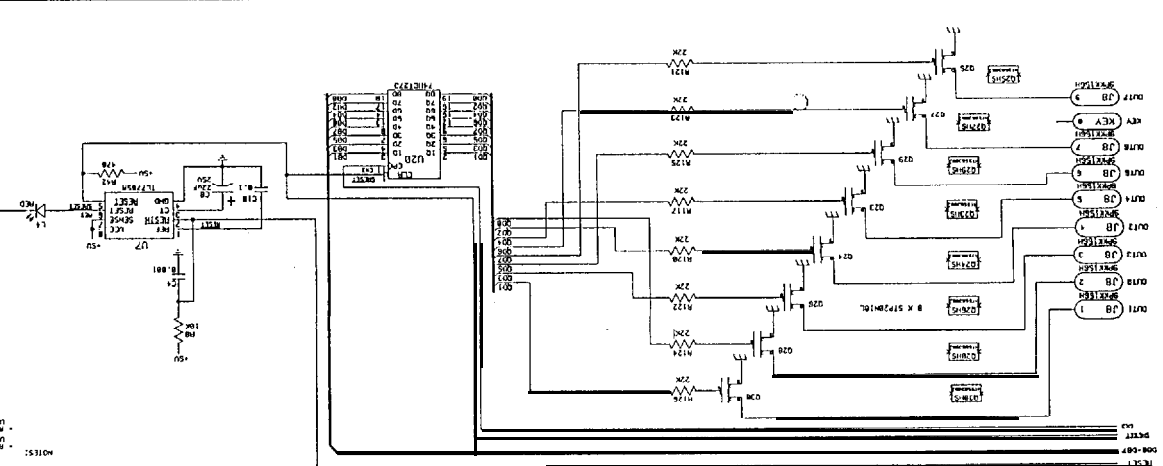


TITLE		WIRING DIAGRAM	
DESCRIPTION	WA2002X TRANSFORMER ASSEMBLY	FILENAME	ALIEN VSC
		DRAWN BY RM	
DATE	11/19/98	REVISED	2/25/99
		PAGE	5 OF

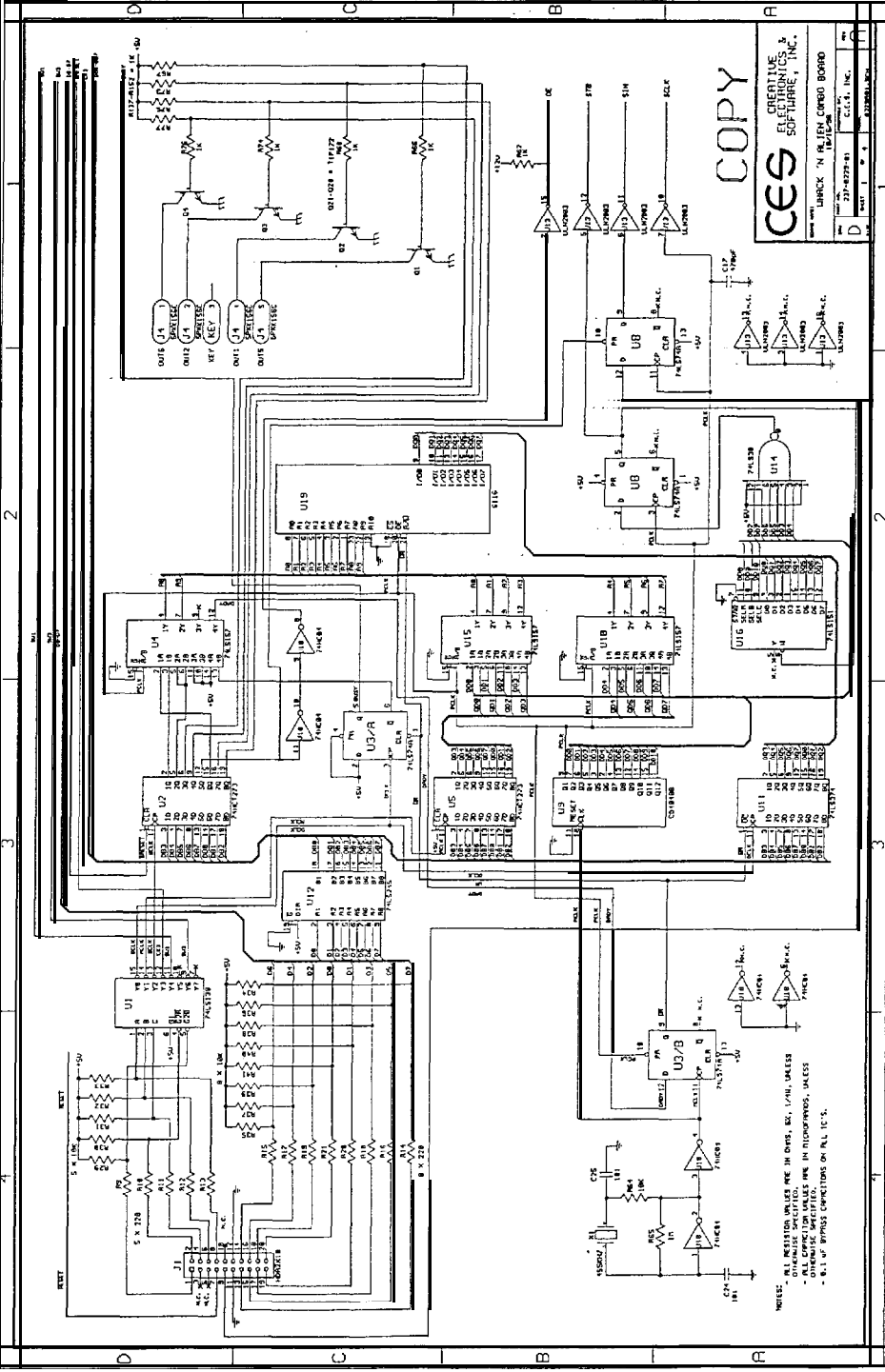
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CES
 CREATIVE ELECTRONICS
 SUPPLY, INC.
 1000 W. 15th St.
 LAUREL, IN 46050
 TEL: 317-837-8100
 FAX: 317-837-8101
 C.C.I. INC.
 1000 W. 15th St.
 LAUREL, IN 46050
 TEL: 317-837-8100
 FAX: 317-837-8101

COPY

NOTES:
 - ALL RESISTOR VALUES ARE IN OHMS, EX. 1/K, UNLESS OTHERWISE SPECIFIED.
 - ALL CAPACITOR VALUES ARE IN MICROFARADS, UNLESS OTHERWISE SPECIFIED.
 - ALL IC SYMBOLS CONFORM TO I.C. 7.

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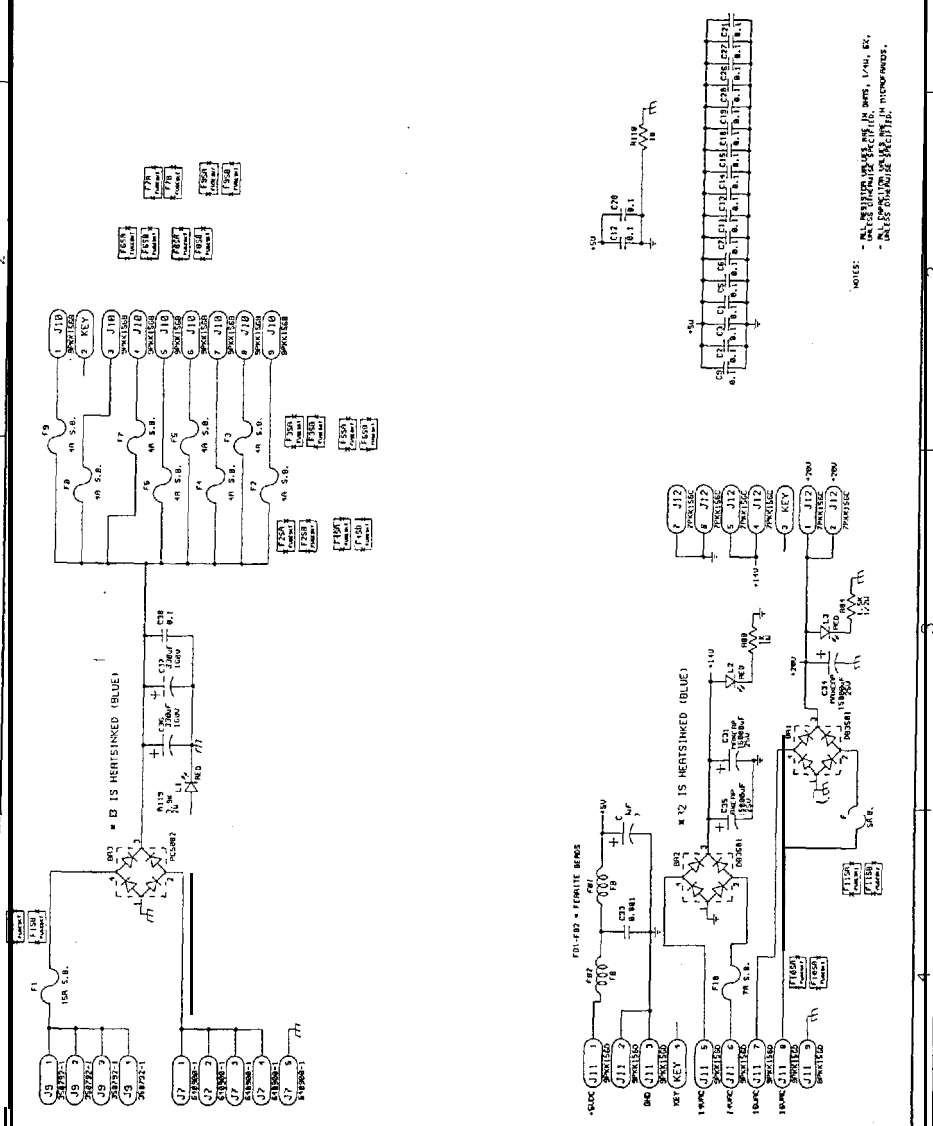
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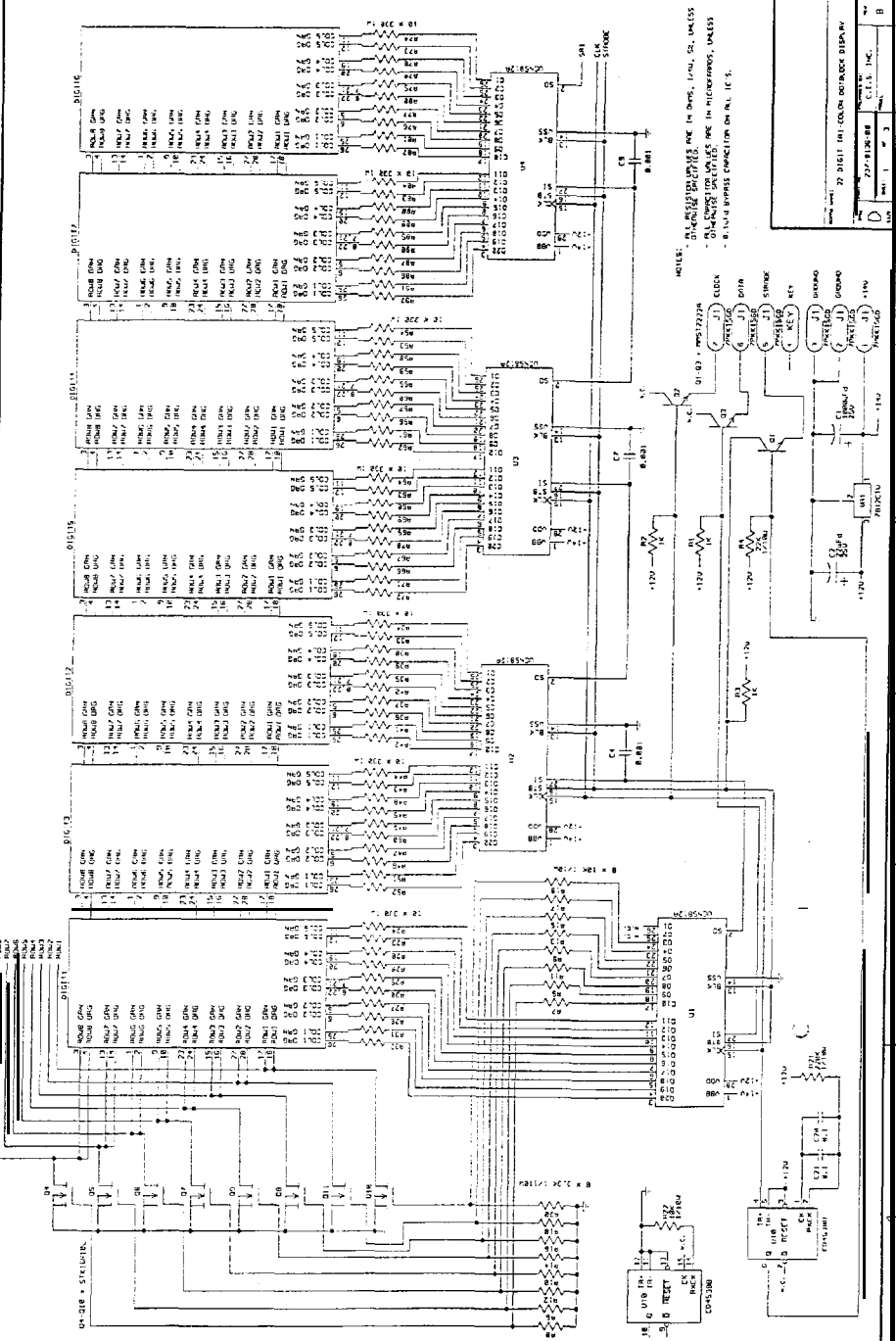
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D C B A

D C B A

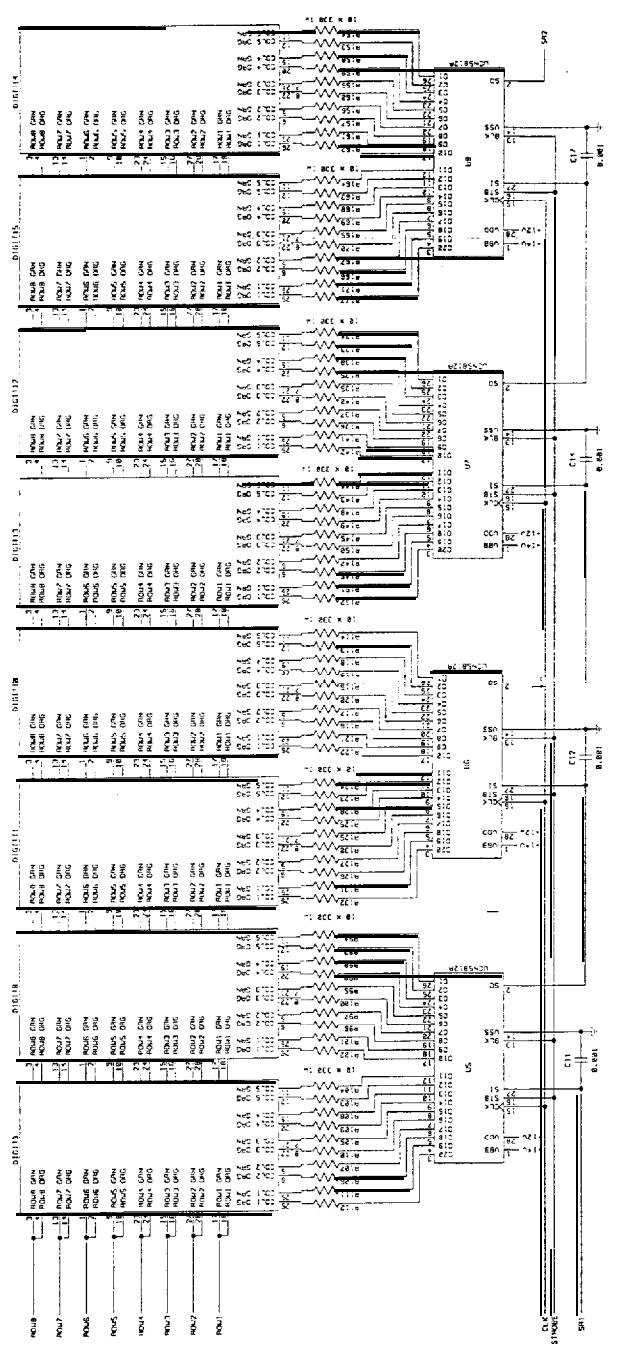


NOTE:
 1. ALL RESISTORS ARE IN OHMS, UNLESS OTHERWISE SPECIFIED.
 2. ALL CAPACITORS ARE IN MICROFARADS, UNLESS OTHERWISE SPECIFIED.
 3. R-100 IS A 100 OHM RESISTOR CONNECTION ON R-100.

REV	DATE	BY	CHK
1	11-1-68	J. J. B.	J. J. B.
2	11-1-68	J. J. B.	J. J. B.
3	11-1-68	J. J. B.	J. J. B.

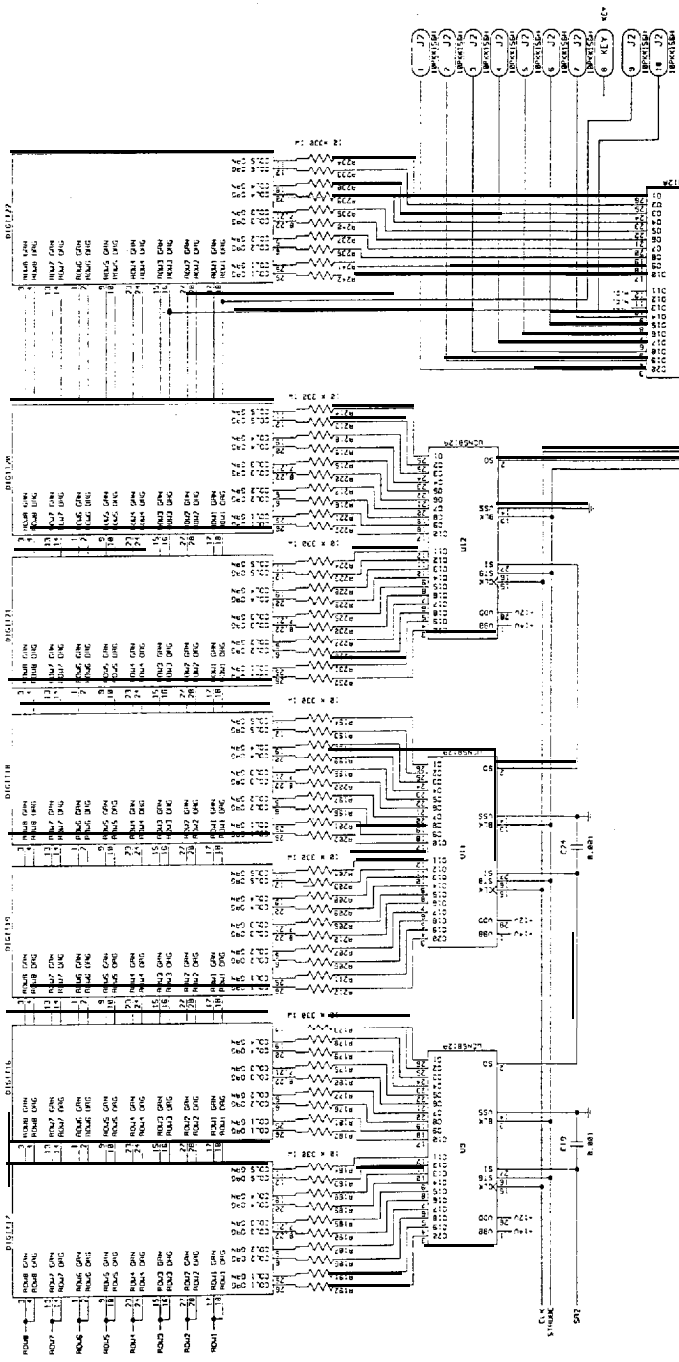
27-DIGIT FULL-CYCLE DISTANCE DISPLAY
 27-DIGIT FULL-CYCLE DISTANCE DISPLAY
 27-DIGIT FULL-CYCLE DISTANCE DISPLAY

04-210 - STEADIES
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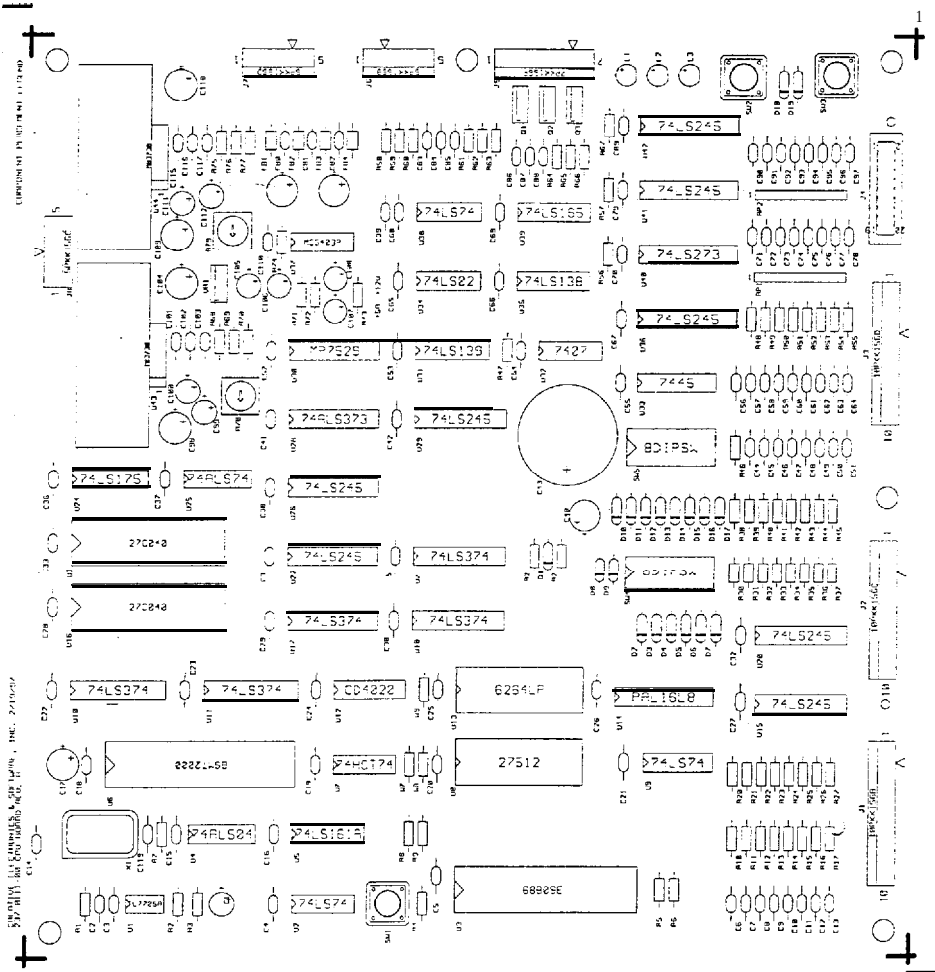
NOTES:
 1. ALL CONNECTIONS ARE IN DIMS. UNLESS OTHERWISE SPECIFIED.
 2. ALL CONNECTIONS ARE IN DIMS. UNLESS OTHERWISE SPECIFIED.
 3. ALL CONNECTIONS ARE IN DIMS. UNLESS OTHERWISE SPECIFIED.

DRAWING NO. 27-0111-101 COLUMN ROUTING DIAGRAM
 DATE 7/18/68
 E.C.S. INC.
 REV. 2 OF 3
 101



NOTE: ALL RESISTOR VALUES ARE IN OHMS, UNLESS OTHERWISE SPECIFIED.
 UNLESS OTHERWISE SPECIFIED, ALL LOGIC IC'S ARE IN A STANDARD PACKAGE.
 - WAVE FORMS OBTAINED ON ALL IC'S.

DATE	REV	BY	CHKD
11/15/68	1	J. J. B. / J. J. B.	J. J. B.
72-DIGIT MULTI-LINE DIGITAL DISPLAY C.I.S. INC. 777-BIRMINGHAM BIRMINGHAM 5, ALA.			



307-10111, 101-10111, 101-10111, 101-10111, INC. 2/10/82

COMPONENTS BY VALUE IN \$10.00 TO \$100.00

ENCLOSURE ATTACHMENTS AND SERIALS THE

C27

R2+2 R23+
 R2+1 R22+
 R2+0 R21+
 R220 R23+
 R230 R22+

R222 R22+
 R221 R22+
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R222 R21+
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C25

R212 R22+
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C24

R202 R15+
 R201 R15+
 R200 R15+
 R150 R19+
 R150 R15+

C23

R152 R18+
 R151 R18+
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 R150 R16+

C19

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C17

R152 R16+
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C15

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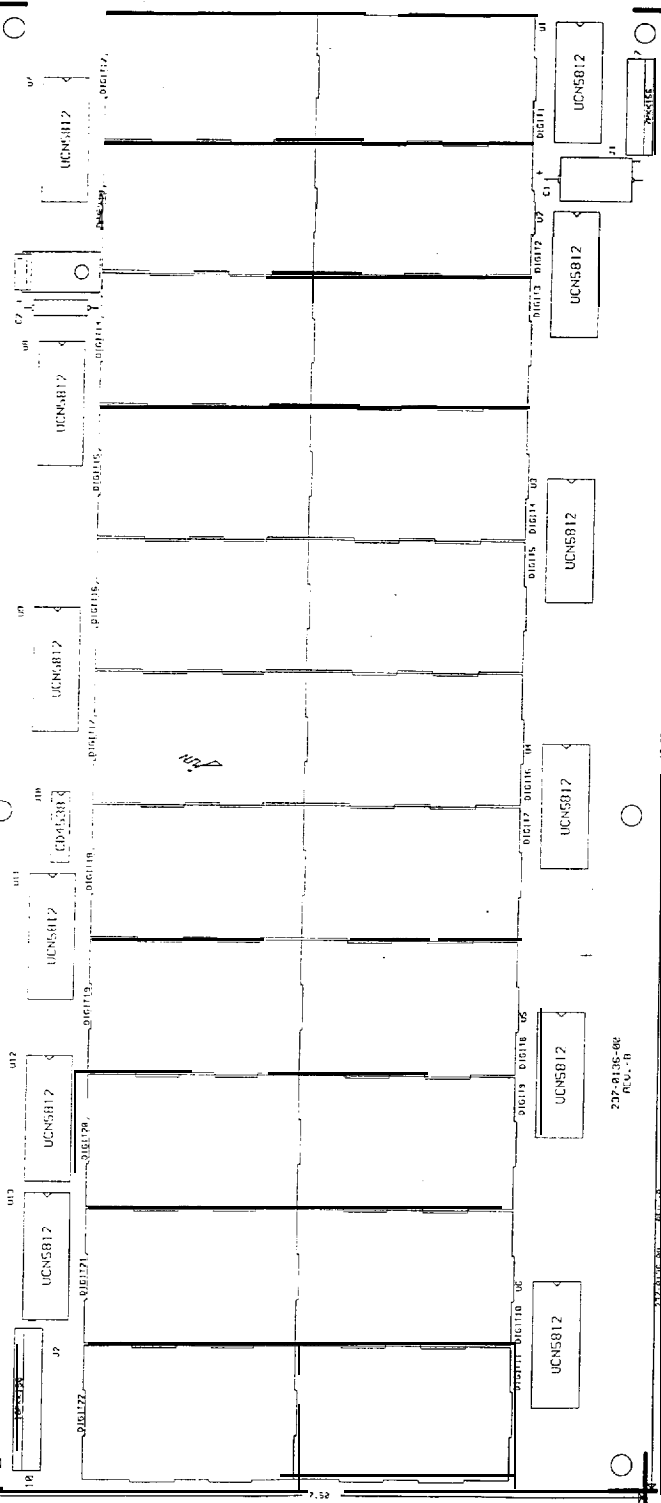
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ENCLOSURE ATTACHMENTS AND SERIALS THE

ORIENTAL ELECTRONICS AND SUPPLY INC.

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207-0136-02
REV. B

COMPANY 308 11