

# LOST TOMB KIT

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***ELECTRONICS, INC.***

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## CONVERSION KIT

The boards you have received are mounted on a board and covered with a metal cage. This is NOT A SHIPPING CONTAINER. This new mounting system is required by the F.C.C. to meet their new standards for R.F. radiation. It MUST be left intact when installed in your machine to meet these regulations.

Your conversion kit includes:

- 1 - Set logic boards mounted on substrate and ground plane in R.F. Shield
- 1 - Cable harness
- 1 - Marque glass
- 1 - Monitor glass
- 1 - Control panel
- 1 - Schematic envelope
- 4 - Mounting screws
- 1 - E-Prom (difficult play)

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### SPECIAL NOTE

#### LOST TOMB CONVERSION

EARLY PRODUCTION RUNS OF STERN VIDEO GAMES, THE END AND THE EARLY SCRAMBLES, HAVE POWER SUPPLIES THAT MAY NOT BE COMPATIBLE WITH THE LOST TOMB CONVERSION.

THE END AND THE EARLY SCRAMBLES USED THE PS1100 POWER SUPPLY. THESE POWER SUPPLIES HAVE A LOWER CURRENT RATING THAN LOST TOMB REQUIRES AND MAY NOT PRODUCE ENOUGH CURRENT.

IF THE OLDER GAMES BEING CONVERTED HAVE EITHER OF THESE TWO POWER SUPPLIES, YOU CAN PURCHASE THE PS1200 POWER SUPPLY INEXPENSIVELY FROM YOUR DISTRIBUTOR. NO RETURN OF THE OLD POWER SUPPLY IS NECESSARY.

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### Instructions:

- Step 1: Remove the marque glass, monitor glass, and control panel. Replace monitor glass only at this time.
- Step 2: Loosen cable harness by taking it out of the cable clamps but do not remove. Remove old logic boards from machine. Using the mounting templet supplied with the kit, and following the measurements on the templet, drill four holes on the outside of the left side of the cabinet (looking from the back). Using the 4 carriage bolts, mount the new boards to the side of the cabinet. Insert carriage bolts from the outside. If nuts do not tighten properly add a washer between the nut and the wooden substrate of the boards. The bottom edge of the wooden board (edge connector down) should be even with the bottom of the back door. Check to make sure this provides enough clearance between the top of the boards and the anode of the C.R.T.

Step 3: To install the new cable you should use a step-by-step process, starting with the ON/OFF switch on the top of the cabinet. Gradually remove the old cable while replacing it with the new cable, matching connectors as you go. The new cable will fit exactly as the old one did.

NOTE: The orange dot on logic board edge connector must face up and to the left.

Step 4: For proper coin meter operation, connect the Orange/Green wire to the non-banded side of the diode, and the Yellow/Blue (or Yellow/Red) wire to the banded side of the diode.

Step 5: Before connecting the (3) pin connector to the line cord, check to be sure that the green (ground) wires are in the same position in both connectors. This wire was not in the same position in all games and may have to be moved in your game before Power Up. Should you need to make any changes to the connector before installations, the male pins in the main cable harness are the easiest to move.

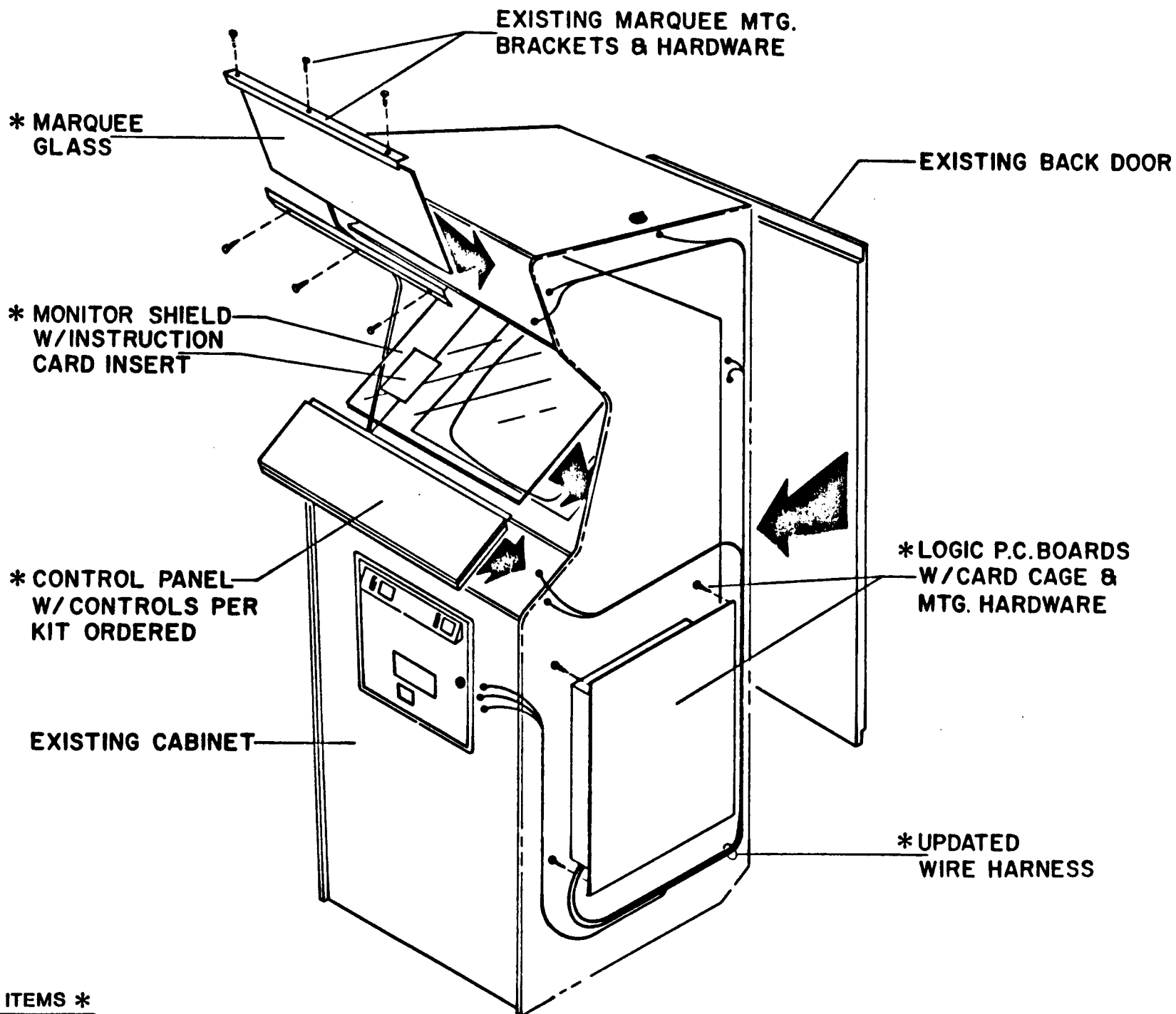
Step 6: Install Marque glass and Control panel.

NOTE: Because of the filter board in the logic cage, the switch grounds on both the Coin Door and the Control Panel are now at -5 V.D.C. This is already done in the new harness, but not reflected on the schematics. The -5 V.D.C. for the Coin Door comes from the Power Supply. The -5 V.D.C. for the Control Panel comes from position A 1 on the Logic Board Connector.

This kit will convert the following games:

|              |          |
|--------------|----------|
| THE END      | JUNGLER  |
| SCRAMBLE     | TURTLES  |
| SUPER COBRA  | AMIDAR   |
| ARMORED CAR  | MOON WAR |
| STRATEGY "X" |          |

NOTE: The monitor in Strategy "X" is mounted horizontally, it must be mounted vertically for proper game operation.



KIT ITEMS \*

*The object of the game is to work your way through to the bottom of the pyramid and escape. The pyramid consists of (91) rooms on (13) levels.*

#### **CONTROL PANEL**

*Left Joystick: Controls movement of the man.*

*Right Joystick: Controls direction of fire.  
Point joystick in the direction  
you wish to fire.*

*Zap Button: Zaps destroy nasties and walls  
in your general area.*

#### **GAME PLAY**

*Upon entering the room the Time Line starts to count down. Pick-up a chest to reset the Time Line. If the timer reaches zero, the earthquake starts and the walls begin to shoot. To stop the earthquake and shooting walls, pick-up a chest.*

*Chests supply bullets, zaps, or points.*

*In each room, one or more nasties will appear. Use bullets or zaps to destroy them. You do not have to destroy all the nasties to exit the room. The player may leave the room at any time. If no exit appears, pick-up the chest with the flashing key to open the exit.*

*Every fifth room in the pyramid is the throne room bonus. Stay on the path and pick-up the two chests. Rooms increase in value from 1,000 to a maximum 8,000 points for each chest.*

*Bonus man is awarded every 15,000 points.*

*This game has a buy in feature, which allows a certain amount of time at the end of each game, for the player to start where the last game ended.*

## SWITCH SETTINGS

| DIP 1 | DIP 2 | Number of lives |
|-------|-------|-----------------|
| OFF   | OFF   | Freeplay        |
| OFF   | ON    | 5 Lives         |
| ON    | OFF   | 3 Lives         |
| ON    | ON    | Superman *      |

\* NOTE: Superman setting makes your man invincible.  
This option is for test purposes for  
stepping through the rooms.

| DIP 3 | Attract mode sound |
|-------|--------------------|
| ON    | Yes                |
| OFF   | No                 |

| DIP 4 | DIP 5 A-10 | COIN | CREDIT |
|-------|------------|------|--------|
| OFF   | OFF        | 1    | 4      |
| OFF   | ON         | 1    | 3      |
| ON    | OFF        | 1    | 1      |
| ON    | ON         | 1    | 2      |

| DIP 4 | DIP 5 B-10 | COIN | CREDIT |
|-------|------------|------|--------|
|       |            | 4    | 1      |
|       |            | 3    | 1      |
|       |            | 2    | 1      |
|       |            | 1    | 1      |

## SWITCH TEST

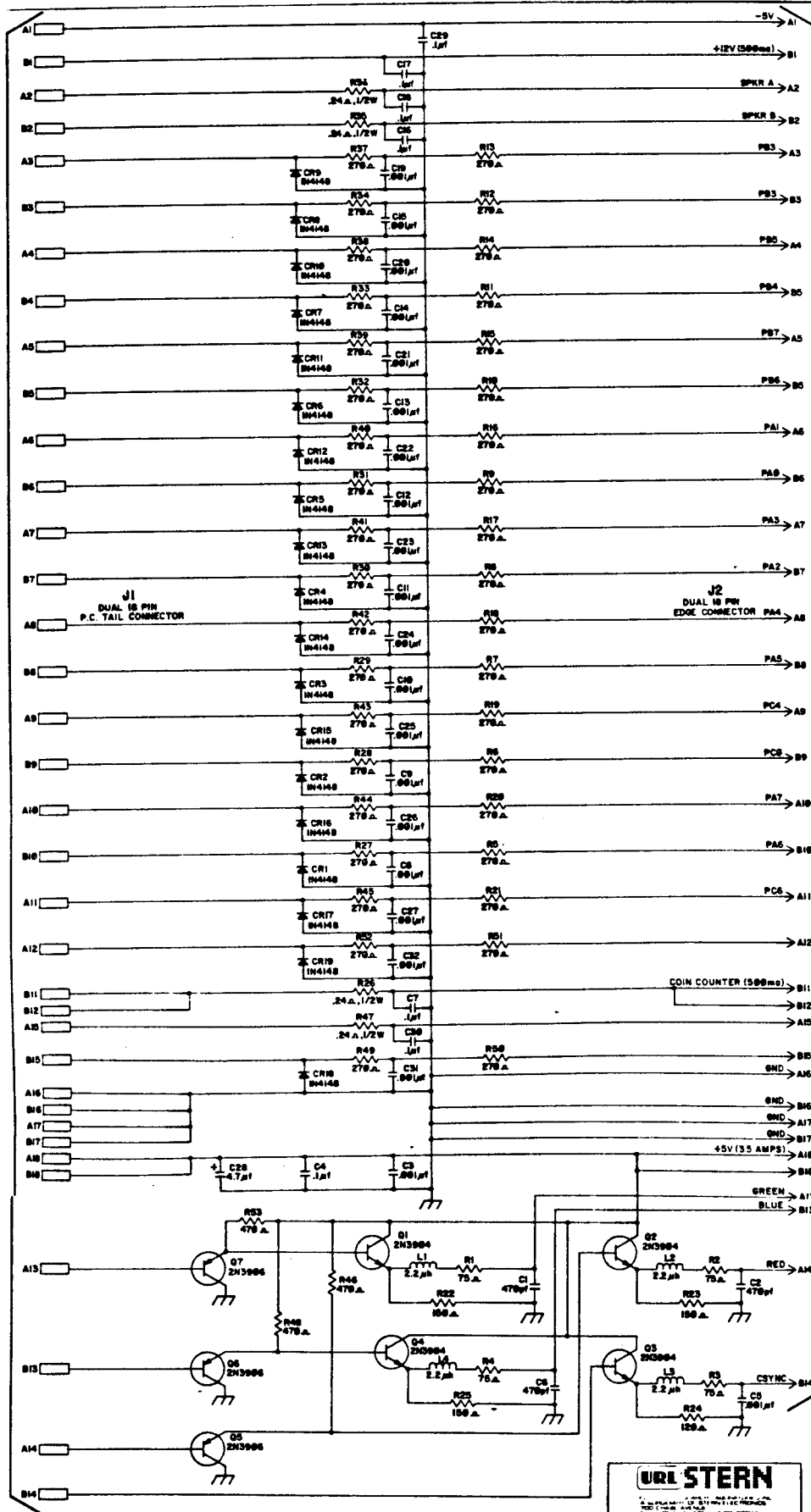
To activate the switch test, press and hold right hand joystick up during power-up. This will cause the machine to display the switch test on the screen. Refer to the chart below for switch identification:

LOST TOMB SWITCH CHART

| PA   | 7                       | 6                       | 5                                   | 4                                    | 3                                   | 2                                 | 1                     | 0                      |
|------|-------------------------|-------------------------|-------------------------------------|--------------------------------------|-------------------------------------|-----------------------------------|-----------------------|------------------------|
| PIN# | COIN<br>CHUTE 1<br>A-10 | COIN<br>CHUTE 2<br>B-10 | LEFT<br>STICK<br>MOVE<br>LEFT<br>B8 | LEFT<br>STICK<br>MOVE<br>RIGHT<br>A8 | LEFT<br>STICK<br>MOVE<br>DOWN<br>A7 | LEFT<br>STICK<br>MOVE<br>UP<br>B7 | 1 PLYR<br>START<br>A6 | 2 PLYRS<br>START<br>B6 |

| PB   | 7         | 6          | 5                                     | 4                                      | 3                                     | 2                                   | 1                                              | 0     |
|------|-----------|------------|---------------------------------------|----------------------------------------|---------------------------------------|-------------------------------------|------------------------------------------------|-------|
| PIN# | N/C<br>A5 | WHIP<br>B5 | RIGHT<br>STICK<br>SHOOT<br>LEFT<br>A4 | RIGHT<br>STICK<br>SHOOT<br>RIGHT<br>B4 | RIGHT<br>STICK<br>SHOOT<br>DOWN<br>A3 | RIGHT<br>STICK<br>SHOOT<br>UP<br>B3 | DIP 1<br>NO. OF LIVES<br>FREE PLAY<br>SUPERMAN | DIP 2 |

| PC   | 7   | 6          | 5   | 4         | 3                      | 2              | 1     | 0         |
|------|-----|------------|-----|-----------|------------------------|----------------|-------|-----------|
| PIN# | N/C | N/C<br>A11 | N/C | N/C<br>A9 | DIP 3<br>DEMO<br>SOUND | DIP 4<br>COINS | DIP 5 | N/C<br>B9 |



**URL STERN**

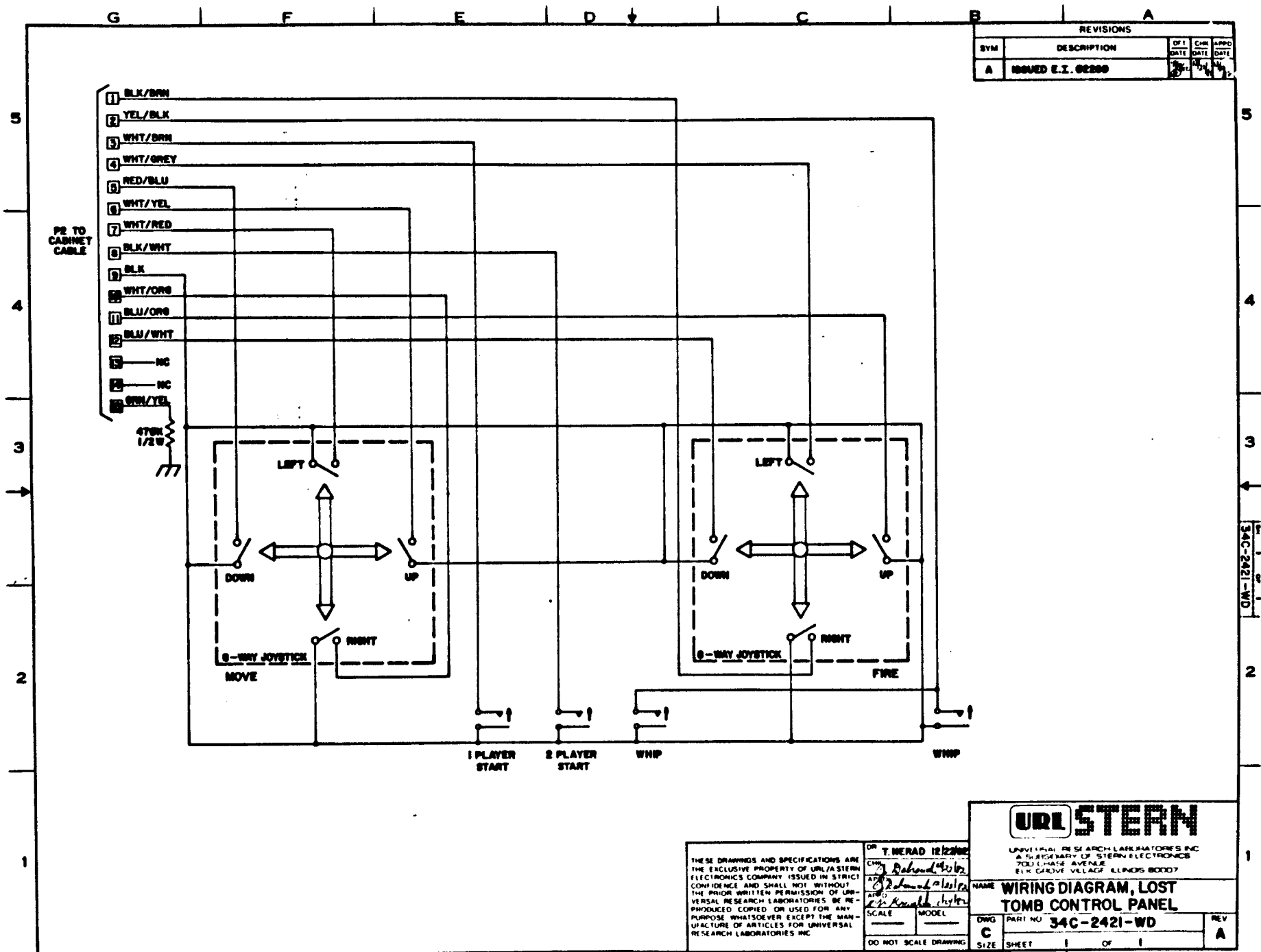
SCHEMATIC, CLAM SHELL

FILTER P.C. BOARD

340-2191-5

5/71 SHEET 1 OF 1





| REVISIONS |                   |         |          |          |
|-----------|-------------------|---------|----------|----------|
| SYM       | DESCRIPTION       | DATE    | BY       | APP'D    |
| A         | ISSUED E.I. 02200 | 12/1/58 | W. H. H. | W. H. H. |

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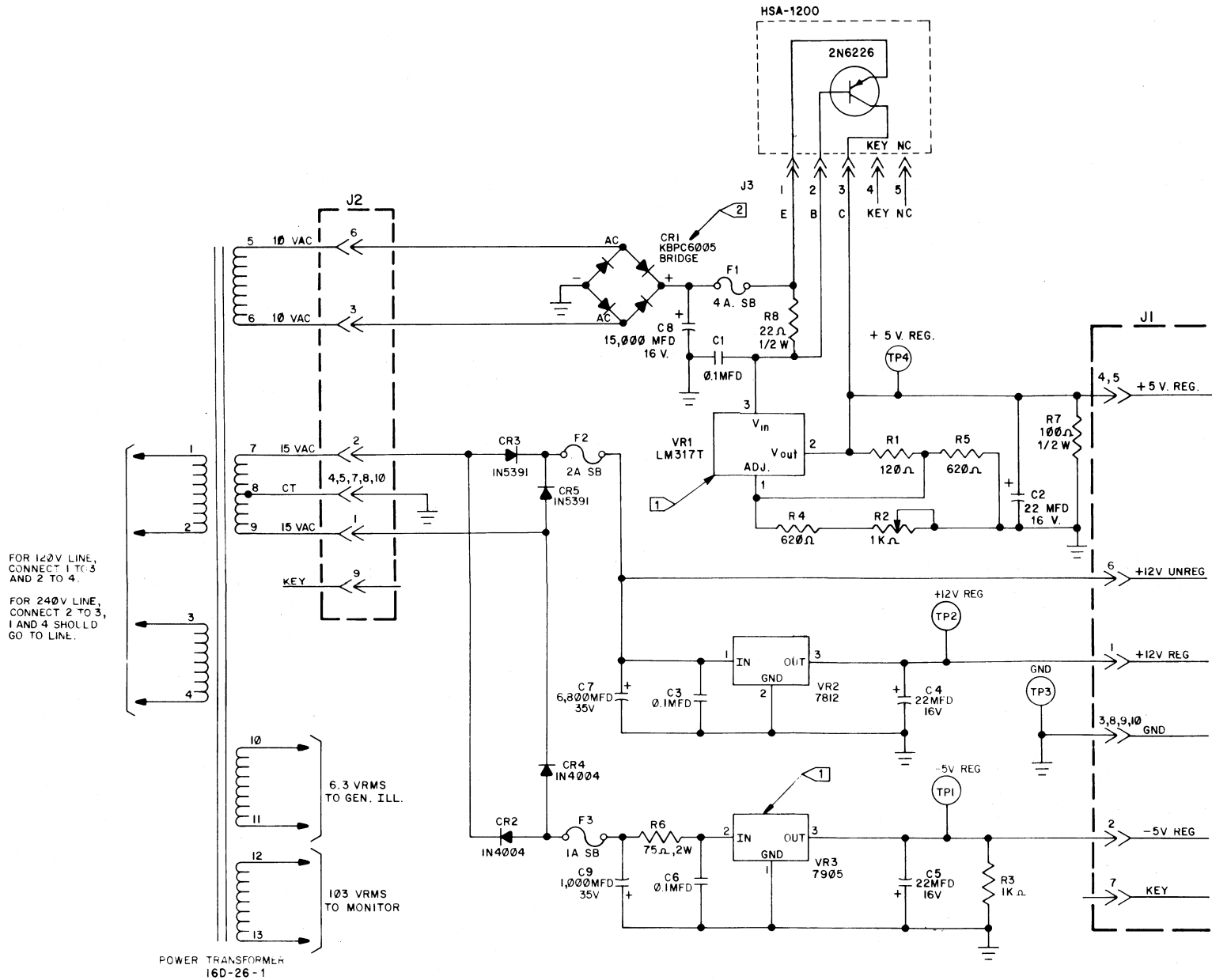
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UNIVERSAL RESEARCH LABORATORIES INC  
A SUBSIDIARY OF STERN ELECTRONICS  
700 CHASE AVENUE  
ELK GROVE VILLAGE, ILLINOIS 60007

NAME **WIRING DIAGRAM, LOST TOMB CONTROL PANEL**

DWG **C** PART NO **34C-2421-WD** REV **A**

SIZE **C** SHEET **1** OF **1**

| REVISIONS |                    |             |             |              |
|-----------|--------------------|-------------|-------------|--------------|
| SYM       | DESCRIPTION        | DFT<br>DATE | CHK<br>DATE | APPD<br>DATE |
| A         | ISSUED E.I. 00922. | 4/1/81      | 4/1/81      | 4/1/81       |

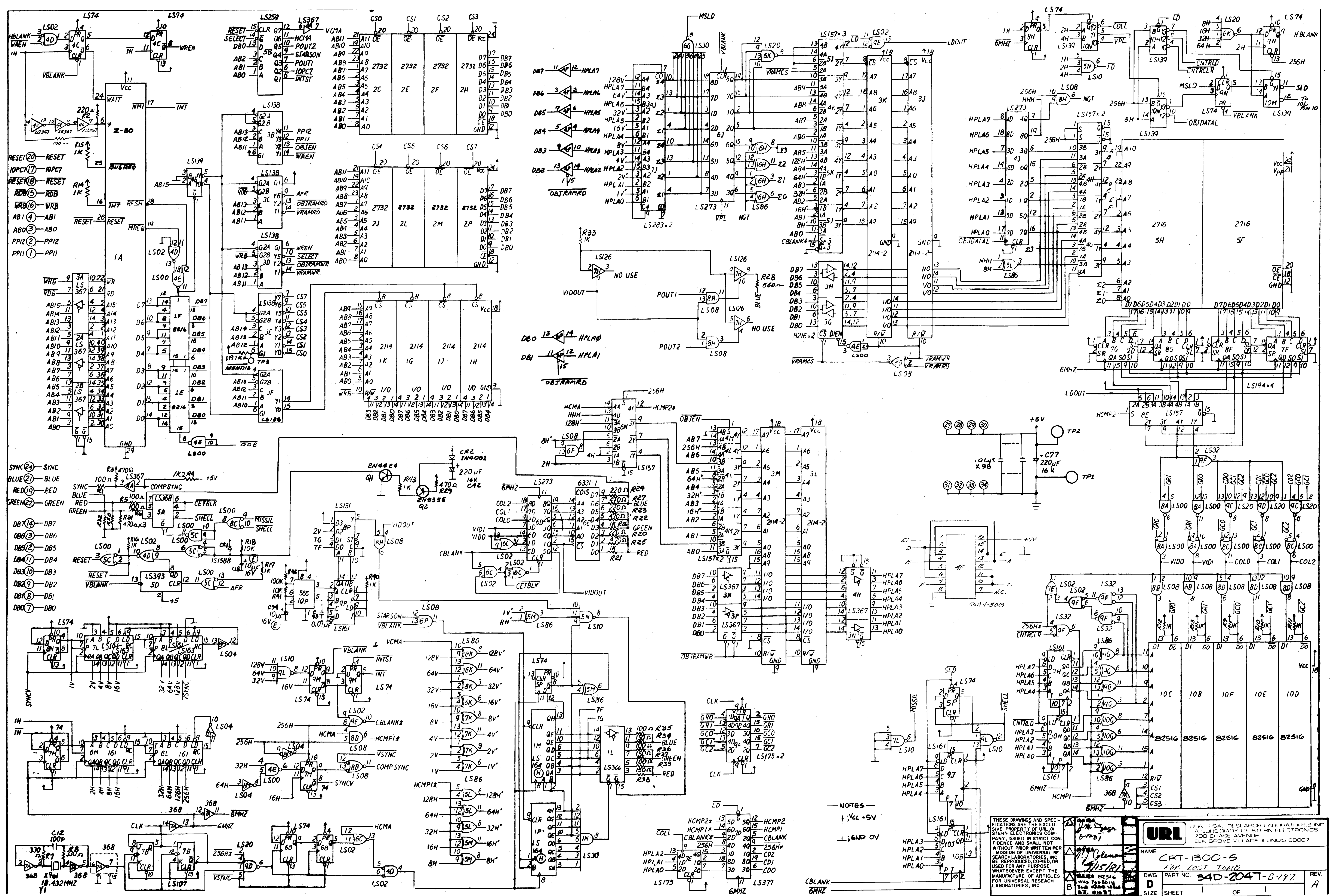


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**SCHEMATIC, POWER SUPPLY  
P.C. BOARD  
34C-978-S**







|                                                                                                                                                                                                          |                                                                                                                                     |                               |                                       |                      |
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|                                                                                                                                                                                                          |                                                                                                                                     | <p>DWG. <b>D</b></p>          | <p>PART NO. <b>34D-2047-B-197</b></p> |                      |
| <p>DATE <b>11/15/81</b></p>                                                                                                                                                                              | <p>BY <b>W. J. GLENN</b></p>                                                                                                        | <p>DWG. <b>D</b></p>          | <p>PART NO. <b>34D-2047-B-197</b></p> | <p>REV. <b>A</b></p> |
| <p>DATE <b>8/25/84</b></p>                                                                                                                                                                               | <p>BY <b>W. J. GLENN</b></p>                                                                                                        | <p>SIZE</p>                   | <p>SHEET <b>1</b> OF <b>1</b></p>     | <p>REV. <b>A</b></p> |