

LOST TOMB KIT



ELECTRONICS, INC.

700 Chase Avenue
Elk Grove Village, IL 60007
312/981-9600

TOLL FREE SERVICE (800) 621-6424 ILL. ONLY (800) 572-1948

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)

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.

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.

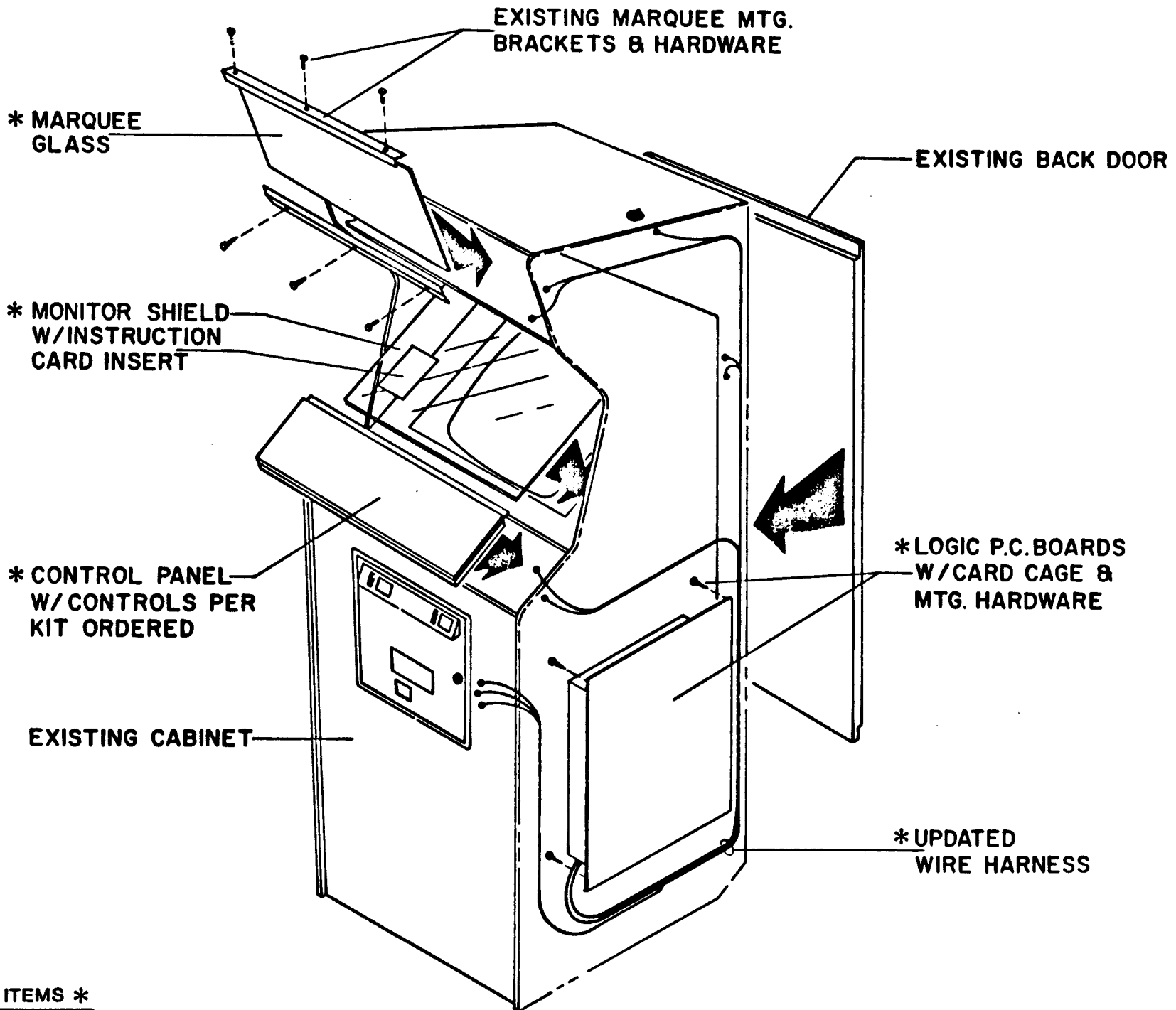
Step 6: Install Marque glass and Control panel.

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

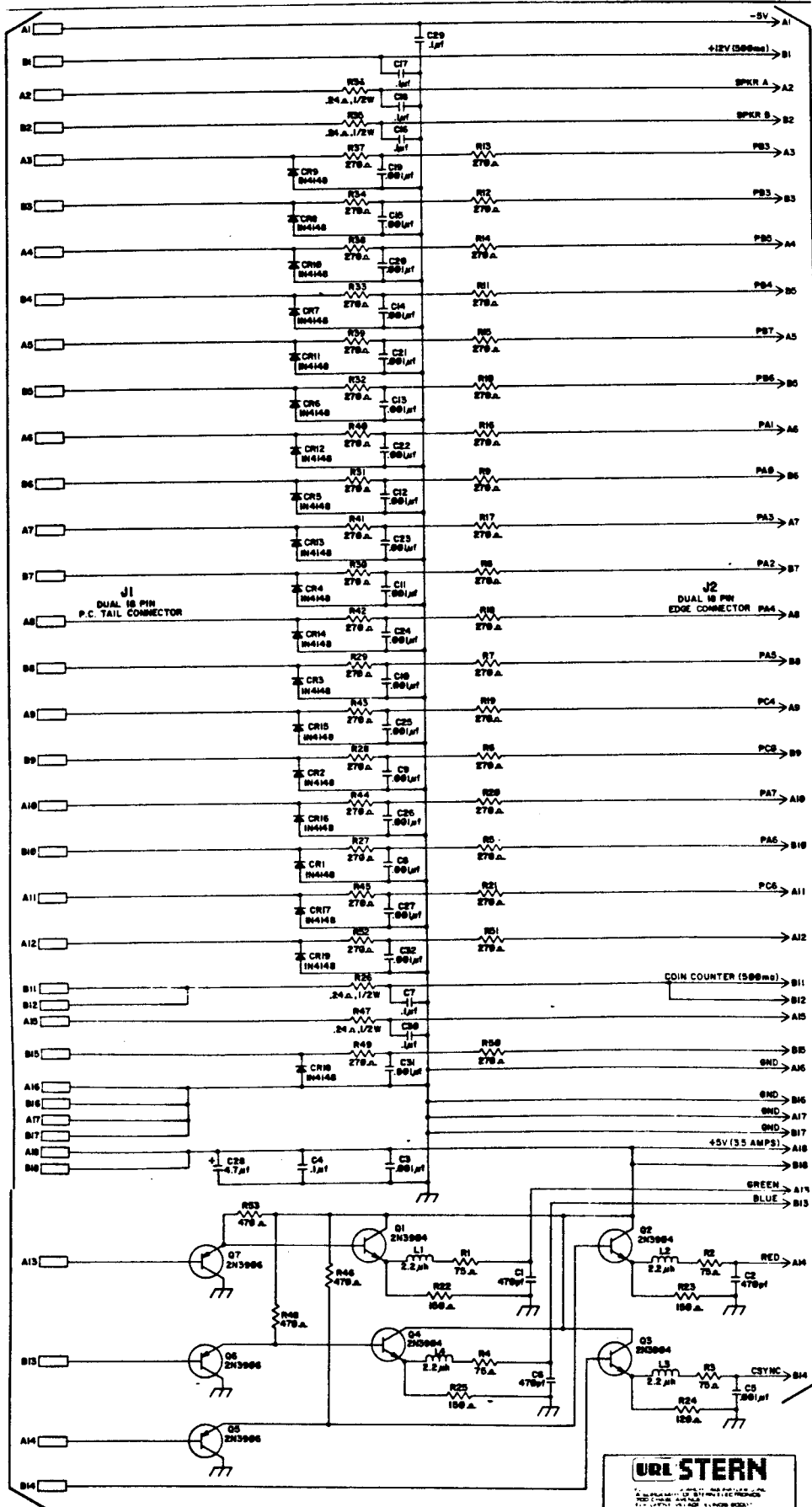
To activate the switch test, press and hold right hand joystick up during power-up. This will cause the machine to display the switch test on the screen. Refer to the chart below for switch identification:

LOST TOMB SWITCH CHART

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

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

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

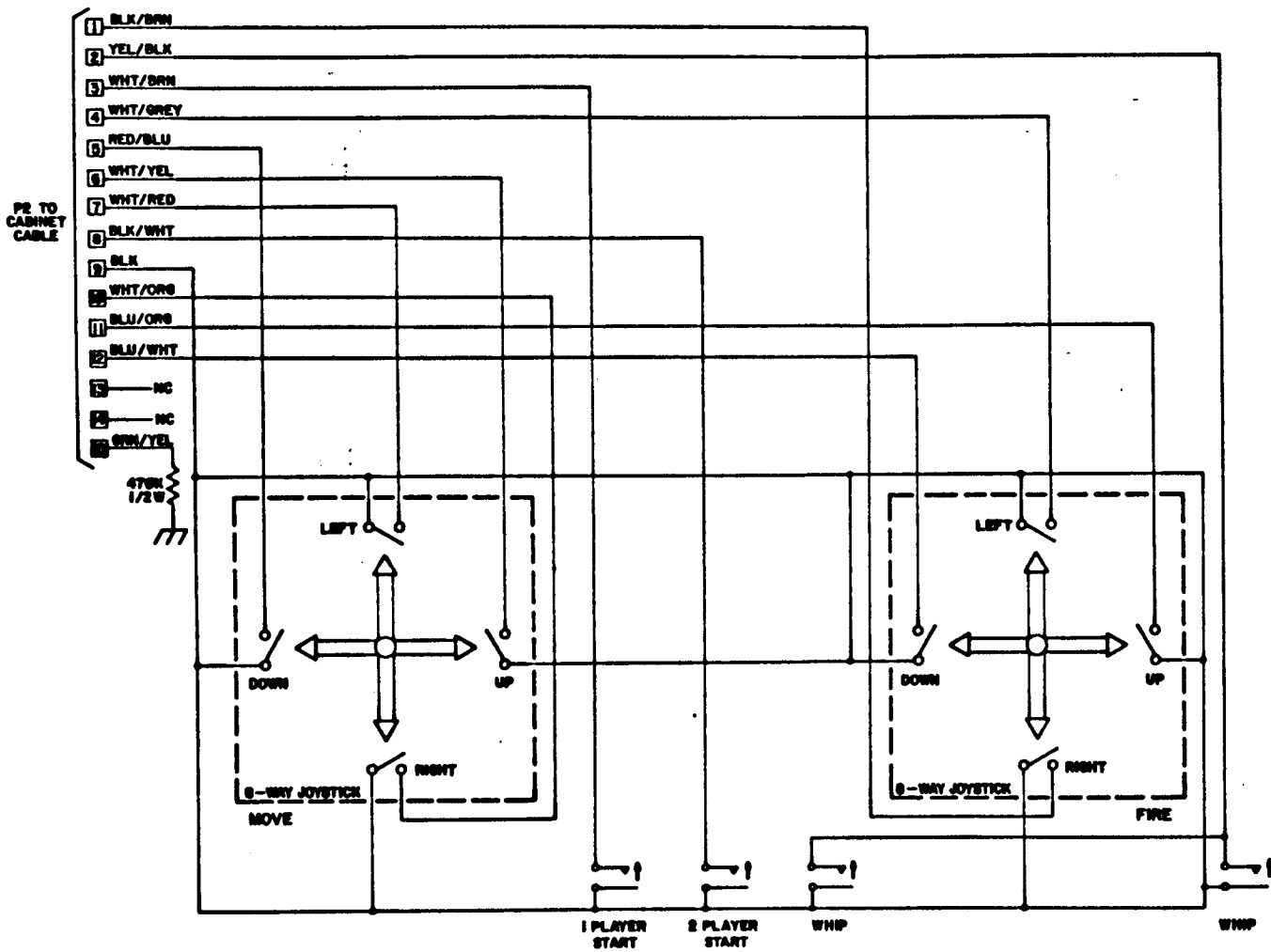


URL STERN
 A. STERN & CO. INC. 100 N. 10TH ST. PHILADELPHIA, PA. 19107
 TEL. (215) 562-1200 FAX (215) 562-1201
 WWW.URLSTERN.COM

**SCHEMATIC, CLAM SHELL
 FILTER P.C. BOARD**

REV. 9
 340-2191-5
 SHEET 1 OF 1

REVISIONS				
BYM	DESCRIPTION	DTI DATE	CHK DATE	APPD DATE
A	ISSUED E.I. 02200			



UNIVERSAL RESEARCH LABORATORIES INC
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 700 CHASE AVENUE
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UNIVERSAL RESEARCH LABORATORIES INC

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

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

SIZE: SHEET 1 OF 1

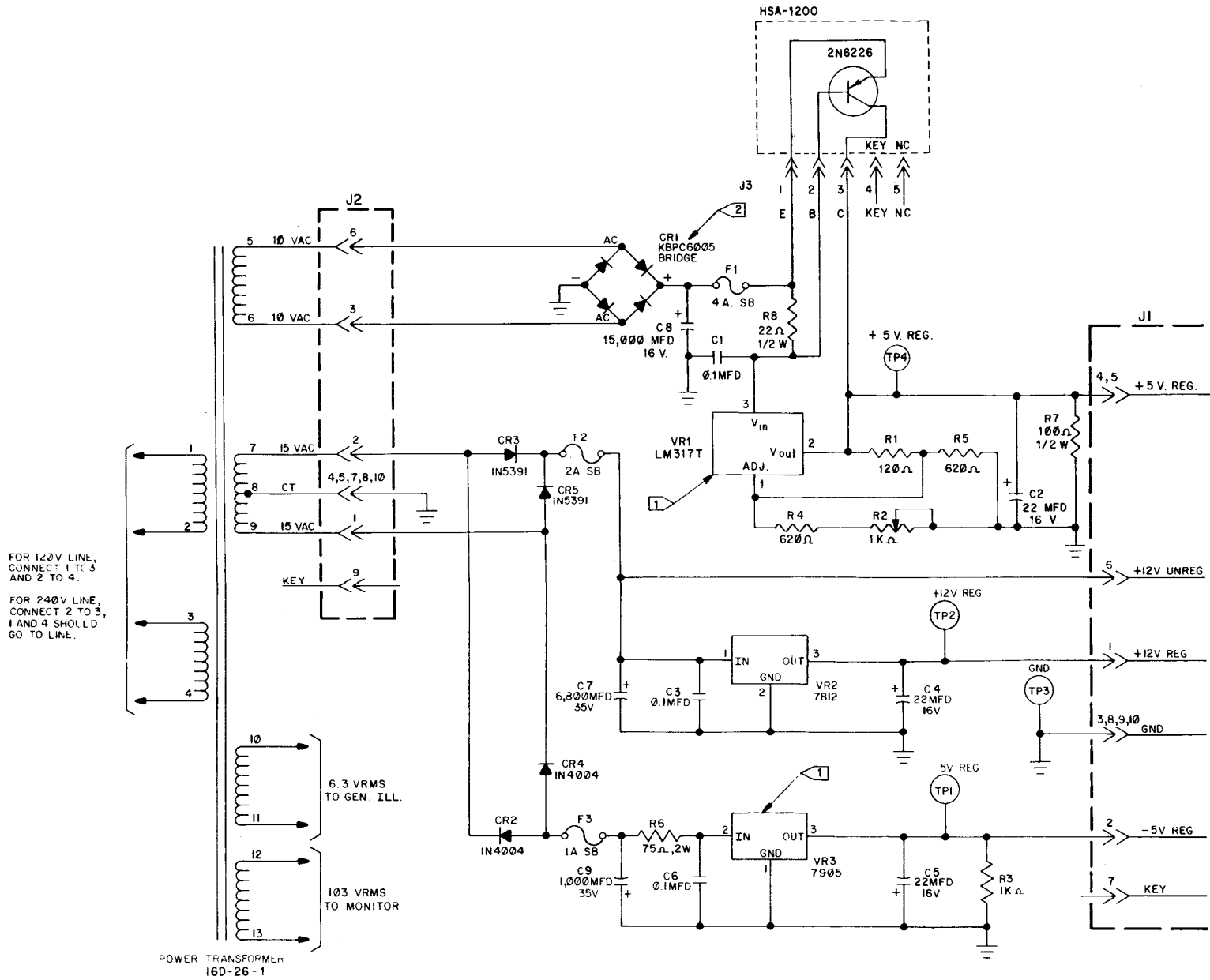
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DR: T. HERAD 12/2/68
 CHK: Robert Miller
 APP: Robert Miller
 REV: Keith Miller

SCALE: MODEL: DO NOT SCALE DRAWING

34C-2421-WD

REVISIONS				
SYM	DESCRIPTION	DPT DATE	CHK DATE	APPD DATE
A	ISSUED E.I. 00922.	4/11/78	JL	



FOR 120V LINE, CONNECT 1 TO 3 AND 2 TO 4.
FOR 240V LINE, CONNECT 2 TO 3, 1 AND 4 SHOULD GO TO LINE.

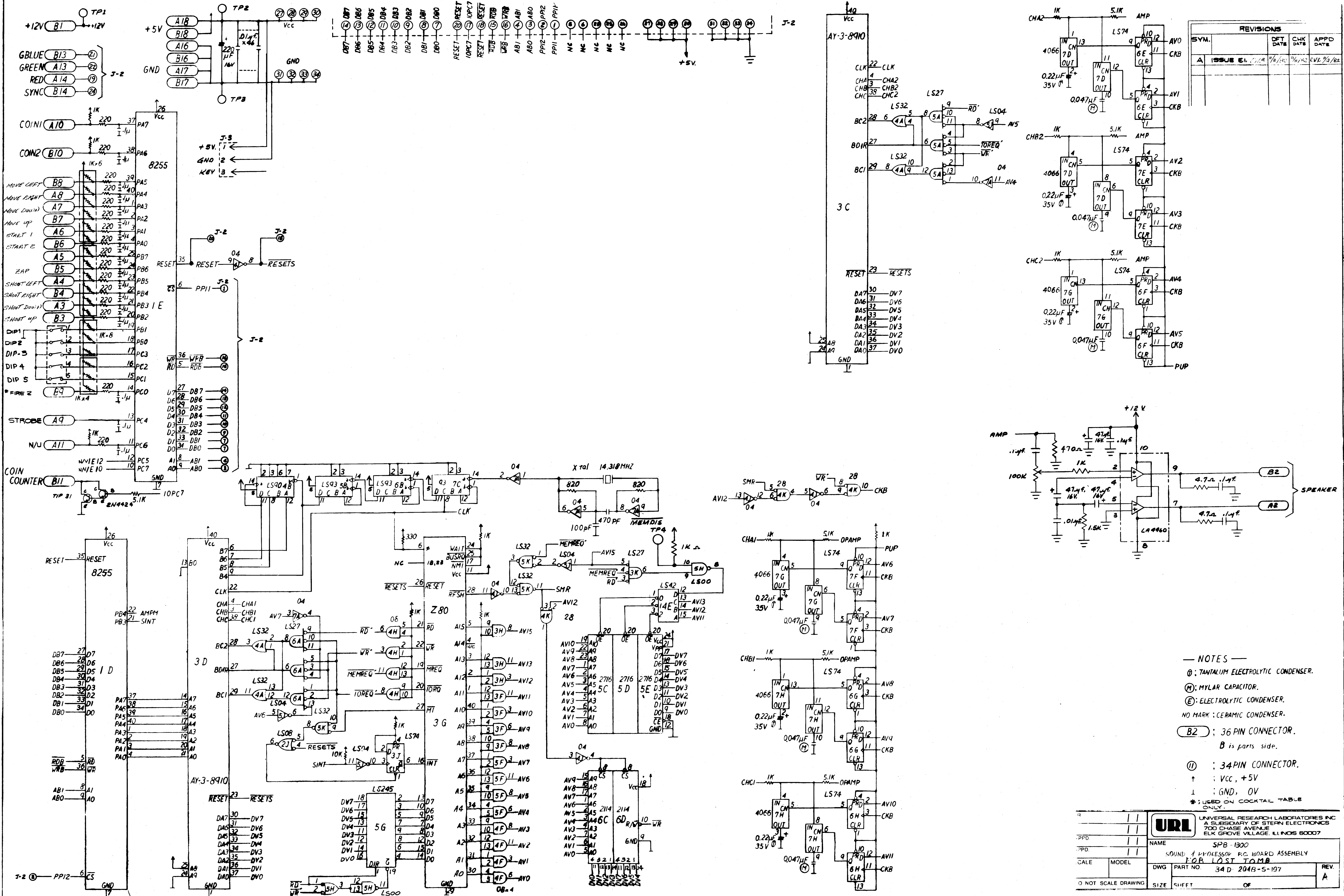
POWER TRANSFORMER 160-26-1

- NOTES
- 1 SHOULDER WASHER REQUIRED ON MOUNTING STUD
 - 2 GENERAL INSTRUMENTS.

STERN ELECTRONICS, INC.
 1725 Diversy Parkway, Chicago, Illinois 60614
 (312) 935-6600, Telex 25-4651
 Toll Free Service Assistance (800) 621-6424

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

34C-978-S

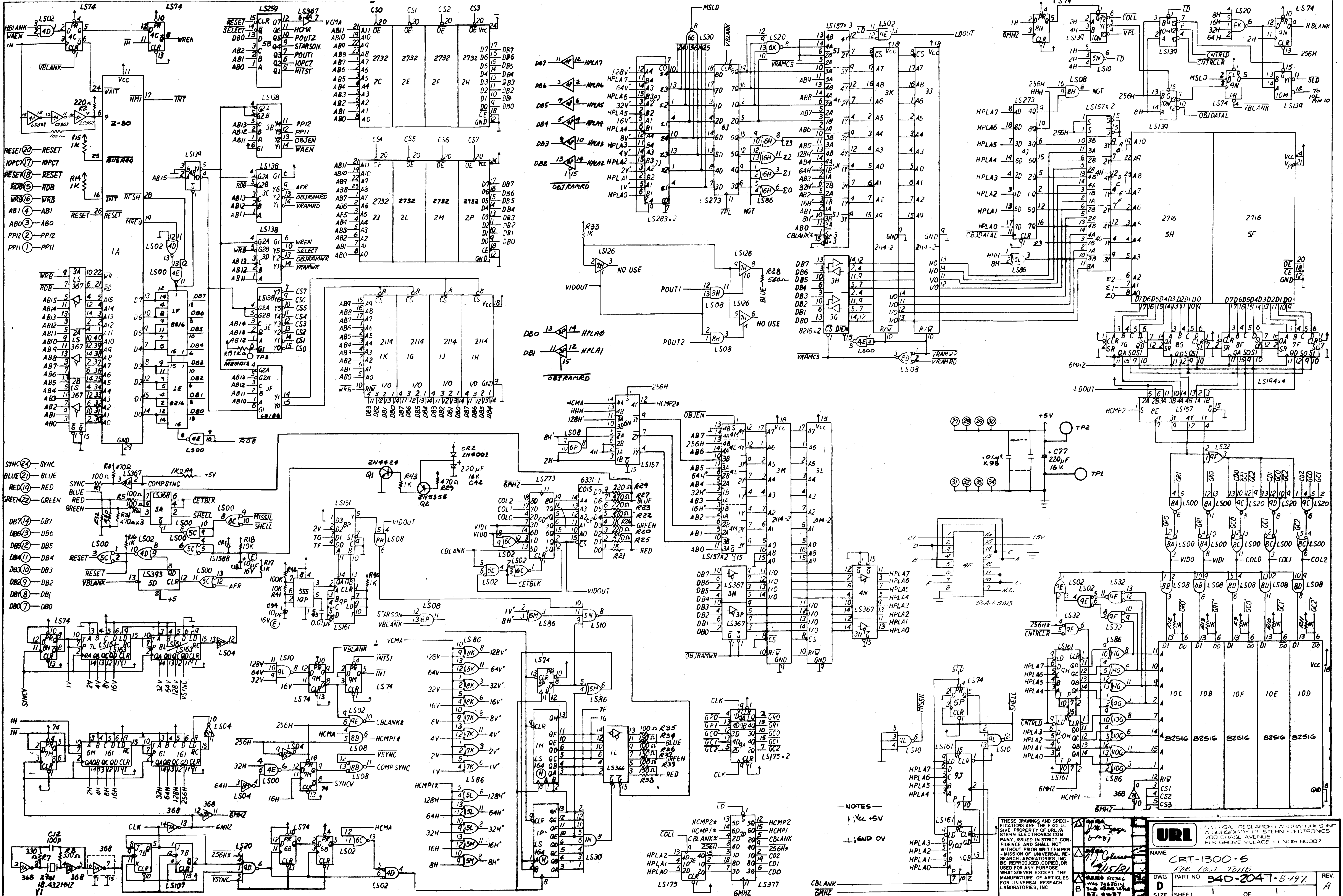


REVISIONS				
SYM.	ISSUE	DATE	CHK DATE	APPD DATE
A	1			

- NOTES —
- ⊕: TANTALUM ELECTROLYTIC CONDENSER.
 - Ⓜ: MYLAR CAPACITOR.
 - ⓔ: ELECTROLYTIC CONDENSER.
 - NO MARK: CERAMIC CONDENSER.
 - B2**: 36 PIN CONNECTOR.
B is parts side.
 - Ⓜ: 34 PIN CONNECTOR.
 - †: VCC, +5V
 - Ⓛ: GND, 0V
 - *: USED ON COCKTAIL TABLE ONLY.

NAME	SPB-1300
DATE	34D-2048-5-197
MODEL	FOR LOST TOMB
REV.	A

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



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URL
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NAME: CRT-1300-S
 PART NO: 34D-2047-B-197
 DWG: D
 SIZE: SHEET 1 OF 1
 REV: A