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Technology

INTRODUCING  
SYSTEM 3

INSTRUCTION MANUAL



(GAME #720)

(3 BALL GAME)

INSTRUCTION MANUAL

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GAME PROM:      SOUND PROMS:  
720/GPROM      720/DROM 1  
                  720/YROM 1

NOTE: ANY PROM CHANGES DURING PRODUCTION WILL BE INDICATED BY A REVISION NUMBER FOLLOWING THE GAME NUMBER. CONSULT YOUR DISTRIBUTOR FOR ANY PROM CHANGE UPDATE.

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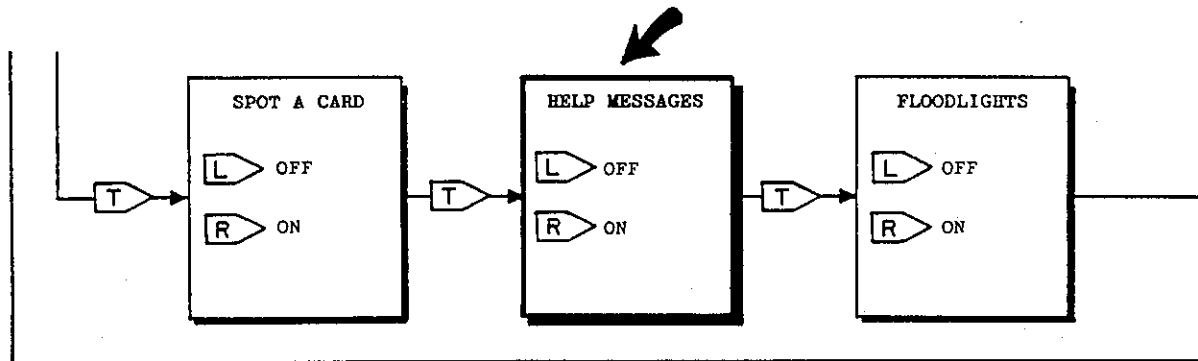
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**ERRATA SHEET**  
**ATTACHED TO AND A PART OF**  
**LIGHTS...CAMERA...ACTION**  
**(GAME #720)**

**GAME AS SHIPPED VARIES  
FROM THE INSTRUCTION  
MANUAL AS PRINTED.**

**CHANGED PAGE 13**

THE "HELP MESSAGES" STEP WAS OMITTED FROM THE FOLLOWING ILLUSTRATION. FOLLOWING IS THE CORRECT VERSION.



**CHANGED PAGE 14**

STEP 46 FLOOD LIGHTS SHOULD BE STEP 47 AND  
THE FOLLOWING WILL BECOME STEP 46.

46) HELP MESSAGES

OFF	=DISABLED
ON	=ENABLED

# **IMPORTANT NOTICE**

**THIS SHIPMENT HAS BEEN CAREFULLY INSPECTED AND  
PROPERLY PACKED BEFORE LEAVING THE FACTORY.**

**WE CANNOT ASSUME RESPONSIBILITY FOR BREAKAGE  
THAT MAY OCCUR IN TRANSPORTATION. IF THIS SHIPMENT IS  
DAMAGED IN ANY WAY, IMMEDIATELY NOTIFY THE CARRIER AND  
FILE DAMAGE REPORT SO THAT A SATISFACTORY ADJUSTMENT  
CAN BE MADE BY THEM.**

## **SYSTEM 3 OVERVIEW**

System 3 contains many new features which improve game play and reliability. Some of these features are as follows:

- 1) New lithium battery provides data retention for a minimum of 5 years under normal operation and virtually eliminates battery leakage. Also a low battery warning is given in the displays when the voltage drops to the critical level.
- 2) New interlocking connector system for improved reliability.
- 3) Use of High Speed CMOS technology for low power consumption and cooler operation.
- 4) Improved solenoid driver reliability due to simplified circuitry and the use of Rugged Power MOSFETS.
- 5) Lamp short protection.
- 6) Switch matrix input protection.
- 7) Easy line voltage adjustment on location.
- 8) Improved bookkeeping functions.
- 9) Improved display control.
- 10) Capability for operators to enter their own messages in the attract mode.

**“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. It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. 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.”

# I. INSTALLATION

## A. SET-UP

1. Bolt the legs to the cabinet.
2. Lift lightbox into an upright position. Be sure none of the cables are crimped in between the lightbox and cabinet.
3. Engage the snap in the rear of the lightbox to the cabinet.
4. To remove the lightbox backglass and gain servicing access to the electronics panel and the insert lamp assembly, proceed as follows:

Unlock the lightbox by turning the key a quarter turn counter-clockwise, the hinged speaker panel grill will swing out toward you.

The backglass is held in place in the retaining groove at the bottom ledge of the lightbox and the wood retaining tabs on each side. Lift the backglass up about an inch, pull the bottom of the backglass toward you and slide it down past the two wood retaining tabs, carefully set aside.

Unloosen the two wing nuts on the left side and push the lock slide upwards, this allows the lightbox lamp insert to swing out and gaining access to service the back side and access to the electronics panel.

To mount the flood light box assembly, see illustration on facing page.

5. Secure the lightbox to the cabinet with the bolts and washers provided. Reverse the aforementioned procedure as the first step to re-assemble the lightbox. To replace the backglass, slide the backglass up behind the wood retaining tabs and set down into the bottom retaining groove. To secure the backglass, pivot the speaker panel grill towards the backglass and turn the key clockwise a quarter turn, the lightbox is now locked.
6. Open the cabinet door and loosen the front moulding locking arm.
7. Remove the moulding from the playfield.

8. Slide the cabinet glass toward you and remove it.
9. Raise the playboard, slide it forward and rest it on its support.
10. Unravel and straighten out the power line cord located at the rear of the pinball cabinet.
11. Proceed to "B. CHECK-OUT".

## B. CHECK-OUT

1. Check that all cables are clear of moving parts.
2. Check for any loose wires.
3. Check switches for loose solder or other foreign matter.
4. Be certain all fuses are firmly seated.
5. Check transformer for any foreign matter across terminals.
6. Be sure that the Transformer Panel power input connector A12J5, corresponds to the supply voltage.
7. Check the setting of the normally open tilt switch on the underside of the playfield. One blade should be free-floating with a weight on the end.
8. Lower the playfield into the cabinet. Using the leg adjusters, level the playfield and set the pitch. Recommended pitch is 6°.
9. The plumb-bob tilt can be adjusted by loosening the clip and raising the plumb-bob to increase its sensitivity, or lowering it to decrease its sensitivity.
10. Reinstall the cabinet glass, front moulding and the lightbox assembly.
11. Plug the line-cord into a properly grounded 3-wire receptacle ONLY!
12. Refer to Section VI to make all necessary game adjustments.
13. **CAUTION!** If this game has been subjected to extreme cold, allow to warm up to room temperature.

## II. GAME PLAY AND SCORING

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### HOW TO PLAY

#### TOP LEFT HOLE

- SCORE 5,000.
- ENTER GUNFIGHT SCENE AND LIGHT GUNFIGHT SCENE COMPLETE WHEN FLASHING.
- ROTATE MINI-PLAYFIELD IF GUNFIGHT IS WON.
- CAPTURE BALL WHEN FLASHING.
- LIGHT LOOP SPECIAL WHEN FLASHING.

#### TOP RIGHT HOLE

- SCORE 20,000.
- LIGHT THE CARD IN THE LIGHTBOX THAT CORRESPONDS TO THE LIT CARD ON THE PLAYFIELD WHEN THE STAIR SCENE IS ACTIVE. LIGHTING 5 CARDS IN THE LIGHTBOX ADVANCES THE HANDS COMPLETED LAMPS, ROTATES THE MINI-PLAYFIELD IF (PLAYFIELD ROTATION = HARD), AND ALSO AWARDS THE FOLLOWING BASED ON THE PLAYER'S HAND:
  - 5 OF A KIND - 5 REPLAYS AND ENTER INITIALS.
  - 4 OF A KIND - 1 REPLAY AND SELECT-A-FEATURE.
  - FULL HOUSE - EXTRA BALL AND SELECT-A-FEATURE.
  - STRAIGHT - EXTRA BALL AND SELECT-A-FEATURE.
  - 3 OF A KIND - SELECT-A-FEATURE.
  - TWO PAIR - SELECT-A-FEATURE IF (SELECT-A-FEATURE = EASY). MYSTERY IF (SELECT-A-FEATURE = HARD).
  - ONE PAIR - SELECT-A-FEATURE IF (SELECT-A-FEATURE = EASY). MYSTERY IF (SELECT-A-FEATURE = HARD).
- ROTATE THE MINI-PLAYFIELD IF (PLAYFIELD ROTATION = EASY) AND THE STAIR SCENE IS ACTIVE.
- CAPTURE BALL WHEN FLASHING.
- ENTER SELECT-A-FEATURE WHEN FLASHING.
- AWARD SPECIAL WHEN FLASHING.
- ACTIVATE KICKSAVE IN THE NORMAL MODE (NO SCENES ACTIVE).

#### BOTTOM LEFT HOLE

- SCORE 20,000.

#### BOTTOM RIGHT HOLE

- SCORE 20,000.
- ADVANCE LOOP VALUE.
- ACTIVATE KICKSAVE IN THE NORMAL MODE (NO SCENES ACTIVE).

#### CENTER DROP TARGETS (3)

- SCORE 5,000.
- ADD 5,000 TO BONUS (3-BALL).  
ADD 3,000 TO BONUS (5-BALL).
- ADD 10,000 TO JACKPOT WHEN LIT (3-BALL).  
ADD 5,000 TO JACKPOT WHEN LIT (5-BALL).
- ALL TARGETS DOWN:
  - ADDS 25,000 TO JACKPOT BONUS (WHEN FLASHING).
  - SCORES 50,000 WHEN LIT (MULTIBALL).
  - STARTS "ENTER JACKPOT" LAMP FLASHING FOR A TIME PERIOD IF UNLIT AND ALSO TRIPS 2 OUTSIDE TARGETS IF (JACKPOT = EASY).
  - STARTS JACKPOT SCENE IF "ENTER JACKPOT" LAMP IS FLASHING.
  - ADVANCES JACKPOT LAMPS IF IN JACKPOT SCENE.
  - COLLECTS JACKPOT WHEN "COLLECT JACKPOT" IS FLASHING.

#### RIGHT DROP TARGETS (6)

- SCORE 5,000.
- ADD 5,000 TO BONUS (3-BALL).
- ADD 3,000 TO BONUS (5-BALL).
- ALL TARGETS DOWN:
  - SCORES 250,000 WHEN LIT (MULTIBALL).
  - LIGHTS TOP LEFT SPOT TARGET ("BEGIN STUNT SCENE") WHEN LIT.
  - LIGHTS "STUNT SCENE AWARDS EXTRA BALL" LAMP.
  - ADD A LETTER TO THE "BLOCKBUSTER" SEQUENCE IN NORMAL MODE (NO SCENES ACTIVE) AND MULTIBALL AND AWARD A SPECIAL WHEN THE SEQUENCE IS COMPLETE.

## II. GAME PLAY AND SCORING

### LEFT SPOT TARGETS (4)

- SCORE 5,000.
- LIGHT CORRESPONDING ARROW LAMP WHEN FLASHING.
- COMPLETING THE SEQUENCE AWARDS LIT VALUE. (ADVANCE MULTIPLIER, LIGHT LOCK, OR 100,000).
- DURING STUNT SCENE:
  - a) RIGHTMOST TARGET (#4) LIGHTS CORRESPONDING STUNT SCENE LAMP WHEN FLASHING.
  - b) COMPLETING THE STUNT SCENE TARGETS SCORES LIT VALUE (EXTRA BALL OR 1,000,000 POINTS).

### RIGHT SPOT TARGETS (3)

- SCORE 10,000.
- DURING STUNT SCENE:
  - a) LIGHT CORRESPONDING STUNT SCENE LAMP WHEN FLASHING.
  - b) COMPLETING THE STUNT SCENE TARGETS SCORES LIT VALUE (EXTRA BALL OR 1,000,000 POINTS).

### TOP RIGHT SPOT TARGET

- SCORE 10,000 WHEN UNLIT.
- SCORE 100,000 WHEN LIT.
- DURING STUNT SCENE:
  - a) SCORE 5000.
  - b) LIGHT CORRESPONDING STUNT SCENE LAMP WHEN FLASHING.
  - c) COMPLETING THE STUNT SCENE TARGETS SCORES LIT VALUE (EXTRA BALL OR 1,000,000 POINTS).

### TOP LEFT SPOT TARGET

- SCORE 5,000
- COLLECT COUNTDOWN BONUS WHEN FLASHING.
- BEGIN STUNT SCENE WHEN FLASHING.
- LIGHT LOOP "100,000" LAMP FOR A TIME PERIOD IF ALL OTHER LOOP AWARD LAMPS ARE UNLIT.
- LIGHT TOP LEFT SPOT TARGET (100,000) FOR ONE SHOT ONLY DURING NORMAL MODE (NO SCENES ACTIVE).

### LOOP

- SCORE 10,000 WHEN UNLIT.
- SCORE 100,000 WHEN FLASHING.
- SCORE 1,000,000 WHEN FLASHING.
- AWARD SPECIAL WHEN FLASHING.

### SPINNER

- SCORE 1,000.
- ENTER STAIR SCENE WHEN "SPIN" LAMP IS FLASHING.
- ROTATE CARD LAMPS WHEN IN STAIR SCENE.

### POP BUMPERS

- SCORE 2,000.
- ADD 5,000 TO JACKPOT (3-BALL).
- ADD 3,000 TO JACKPOT (5-BALL).

### TOP LEFT ROLLOVER BUTTON (STAR)

- SCORE 5,000.
- LIGHT TOP LEFT SPOT TARGET (100,000) FOR ONE SHOT ONLY DURING NORMAL MODE (NO SCENES ACTIVE).

### LEFT RETURN ROLLOVER

- SCORE 5,000.
- ACTIVATE KICKSAVE IF (KICKSAVE = EASY). ACTIVATE KICKSAVE DURING NORMAL MODE (NO SCENES ACTIVE) AND MULTIBALL ONLY IF (KICKSAVE = MEDIUM).

### RIGHT RETURN ROLLOVER

- SCORE 5,000.

### LEFT OUT ROLLOVER

- SCORE 20,000 UNLIT.
- SCORE 5,000 WHEN FLASHING.
- KICK BALL BACK INTO PLAY WHEN FLASHING.

### RIGHT OUT ROLLOVER

- SCORE 20,000.

### RUBBER SWITCHES

- SCORE 30.

### OUTHOLE

- COLLECT BONUS TIMES MULTIPLIER.
- SCORE 30,000 TIMES MULTIPLIER FOR EACH HAND COMPLETED.
- AWARD CATCH-UP IF FLASHING.

## **II. GAME PLAY AND SCORING**

### **MOVIE SCENES**

THERE ARE 5 SCENES IN THE GAME WHICH NEED TO BE COMPLETED IN ORDER TO LIGHT THE TOP RIGHT HOLE FOR "SELECT-A-FEATURE". THESE ARE THE GUNFIGHT SCENE, MULTIBALL SCENE, STAIR SCENE, JACKPOT SCENE, AND STUNT SCENE. THE APPROPRIATE SCENE COMPLETED LAMP WILL LIGHT AFTER THE CURRENT SCENE IS ENDED.

### **GUNFIGHT SCENE**

THE GUNFIGHT SCENE IS STARTED IN THE TOP LEFT HOLE WHEN FLASHING. BEATING THE OUTLAW TO THE DRAW WHEN THE WORD "DRAW" APPEARS IN THE DISPLAY AWARDS THE MYSTERY FEATURE TO THE PLAYER.

### **MULTIBALL SCENE**

A BALL CAN BE CAPTURED IN THE TOP RIGHT HOLE BY COMPLETING THE LEFT SPOT TARGET SEQUENCE. INSTANT MULTIBALL CAN BE ACHIEVED THROUGH EITHER SELECT-A-FEATURE OR THE MYSTERY FEATURE.

### **STAIR SCENE**

THE STAIR SCENE IS STARTED BY SHOOTING THE SPINNER. THEN THE LIT CARD IS TRANSFERRED INTO THE LIGHTBOX WHEN THE BALL ENTERS THE TOP RIGHT HOLE. WHEN 5 CARDS HAVE BEEN LIT THE SCENE IS COMPLETED AND THE PLAYER RECEIVES AN AWARD BASED ON HIS CARD HAND.

### **JACKPOT SCENE**

THE JACKPOT SCENE IS STARTED BY COMPLETING THE CENTER DROP TARGETS WHEN FLASHING. THE JACKPOT CAN BE WON BY ADVANCING THE FLASHING LAMP TO "COLLECT JACKPOT" BY HITTING THE CENTER DROP TARGET DOWN DURING THE TIME PERIOD ALLOWED. THE JACKPOT SCENE CAN ALSO BE STARTED DURING SELECT-A-FEATURE OR THE MYSTERY FEATURE.

### **STUNT SCENE**

THE STUNT SCENE CAN BE STARTED BY COMPLETING THE RIGHT DROP TARGETS AND THEN HITTING THE LEFT SPOT TARGET. COMPLETING THE FLASHING TARGETS DURING THE TIME PERIOD ALLOTED WILL AWARD THE LIT VALUE (1,000,000 OR EXTRA BALL). THE STUNT SCENE CAN ALSO BE STARTED DURING SELECT-A-FEATURE OR THE MYSTERY FEATURE.

### **ADDITIONAL FEATURES**

#### **SELECT-A-FEATURE**

IN THE SELECT-A-FEATURE MODE THE PLAYER HAS 5 SECONDS TO SELECT A FEATURE THAT APPEARS IN THE DISPLAY. THE RIGHT FLIPPER BUTTON IS USED TO CHANGE THE FEATURE AND THE LEFT FLIPPER BUTTON IS USED TO AWARD THAT FEATURE.

#### **MYSTERY FEATURE**

IN THE MYSTERY FEATURE AN AWARD IS RANDOMLY SELECTED AND THEN AWARDED TO THE PLAYER.

#### **COUNTDOWN BONUS**

THIS FEATURE IS AVAILABLE DURING SELECT-A-FEATURE AND MYSTERY. WHEN THIS MODE IS STARTED, A SCORE OF 3,000,000 POINTS APPEARS IN THE DISPLAY AND THEN COUNTS DOWN TO 0. HITTING THE LEFT SPOT TARGET BEFORE THE SCORE REACHES 0 WILL AWARD THE REMAINING SCORE TO THE PLAYER.

#### **CATCH-UP**

THIS FEATURE IS ONLY AVAILALE IN MULTIPLE PLAYER GAMES. ALSO, IT IS ONLY AVAILABLE DURING SELECT-A-FEATURE AND MYSTERY WHEN THE "CATCH UP" ACTIVE LAMP (GLASS STOP) IS FLASHING. WHEN THIS FEATURE IS AWARDED THE PLAYER-UP'S SCORE WILL

## **II. GAME PLAY AND SCORING**

BE MADE EQUAL TO THE NEXT HIGHEST PLAYER IN THE GAME AT THE END OF HIS BALL IN PLAY. IF THE PLAYER HAPPENS TO BE IN FIRST PLACE, HE WILL BE AWARDED 1,000,000 POINTS INSTEAD.

### **REVEAL MATCH**

THIS FEATURE IS AVAILABLE DURING SELECT-A-FEATURE WHEN THE MATCH IS ENABLED AND THE GAME MODE IS SET TO REPLAY. WHEN AWARDED THE PLAYER-UP WILL BE SHOWN WHAT HIS MATCH NUMBER WILL BE AT THE END OF THE GAME.

### **"BLOCKBUSTER" SPECIAL**

COMPLETING THE RIGHT DROP TARGETS DURING THE NORMAL MODE (NO SCENES ACTIVE) OR MULTIBALL IF (BLOCKBUSTER SPECIAL = EASY OR MEDIUM) WILL ADD A LETTER TO THE WORD "BLOCKBUSTER". COMPLETING THE WORD WILL AWARD A SPECIAL AND RESET THE SEQUENCE. THIS SEQUENCE IS COMMON TO ALL PLAYERS IN THE GAME. THE SEQUENCE IS MEMORIZED FROM GAME TO GAME IF (BLOCKBUSTER SPECIAL = EASY).

### III. TEST MODE

There are several functions accessible to the operator while in the test mode. These functions are Self-Test, Bookkeeping, Game Adjustments, and Burn-In. Each of these functions will be explained in detail later in this section. To enter the test mode, the game must be in the attract mode (Game Over). Then depress the Test button located just inside the front door of the game. The operator will be given a choice as to which function he wants to access. Depressing the appropriate button will select that function. To exit the test mode or change functions the slam switch (front door) must be activated or the power must be turned off.

#### I. SELF-TEST

This function will allow the operator to test all the hardware related devices in the game. Each test is described below.

#### A. MEMORY TEST

This function tests all memory devices on the Control Board (A1). If all the devices pass the test an "OK" will be displayed. If a failure occurs, a description of the faulty component will be displayed. Then after a short period of time the Game Prom check sum will be displayed. The Credit button can be used to restart this test.

#### B. LAMP MATRIX TEST

This test will allow the operator to single step through and check the operation of each lamp in the game. The left black cabinet button will decrement the active lamp number by one while the right black cabinet button will increment the active lamp number by one. The strobe number and the return number are combined to form the lamp number (strobe,return) which is shown in the display. The credit button can be used to restart this test.

#### C. RELAY AND SOLENOID TEST

This test will allow the operator to single step through and check the operation of each relay and solenoid driver in the game. The left black cabinet button will decrement the driver number shown in the display while the right black cabinet button will increment the driver number. The Credit button is then used to activate the driver for a short time period.

#### D. SWITCH MATRIX TEST

This test will allow the operator to test the operation of all the switches used in the game. If no switches are closed when this test is started, the message "ALL SWITCHES OPEN" will be displayed. If any switches are closed either before or after this test is started, the closed switch number(s) will be displayed. The strobe number and the return number are combined to form the switch number (strobe,return). The Credit button can be used to restart this test.

#### E. DISPLAY TEST

This test will allow the operator to test the operation of the individual digits and segments of the displays. Depressing the right black cabinet button will advance to the next step of the test. The displays will first step through all the individual segments followed by all the individual digits. The Credit button can be used to restart this test.

#### F. SOUND TEST

This test allows the operator to test the interface lines from the Control Board (A1) to the Sound Board (A6). Every time the right black cabinet button is depressed, a tone should be heard from the Sound Board. During each tone, the sound line connection which is being tested will be displayed. After the tone stops the sound line which is being tested will still be kept at a low level (<.8v) until the right black

### **III. TEST MODE**

cabinet button is depressed again or the Credit button is used to restart the test.

#### **G. FRONT DOOR TEST**

This test allows the operator to check the operation of the coin chutes used in the game. Utilizing this function will not affect any bookkeeping values. Each coin chute closure is categorized and shown in the display. The Credit button can be used to restart this test.

### **II. BOOKKEEPING**

The Test button is used to step through bookkeeping. The upper display will contain a description of each step while the lower display will contain the step number and two different bookkeeping values. The value in the leftmost column represents long term bookkeeping. The value in the rightmost column (in brackets) represents short term bookkeeping. These two values are provided so that the operator may compare recent performance with long term performance and then make any necessary game adjustments. The left black cabinet button will allow the operator to reset all of the long term bookkeeping except the coin chute counts (steps 1-3). The right black cabinet button will allow the operator to reset all of the short term bookkeeping. If the R.BOOK AUTO-RESET adjustment is on, the short term bookkeeping will automatically be reset after every 2000 plays (see Game Adjustments). Therefore, the operator does not need to reset the short term bookkeeping himself unless he prefers to follow his own procedure. Also, this feature will aid in adjusting the game payout percentage to the caliber of players in different locations. If there happens to be a major error in a long term bookkeeping value the letters ERR will appear to the right of that bookkeeping value. To correct this error the

long term bookkeeping must be reset. A description of each bookkeeping step is given in the test mode flowchart.

### **III. GAME ADJUSTMENTS**

This function allows the operator to make any adjustments to his game as necessary from time to time.

#### **A. FACTORY SETTINGS**

Upon entering the game adjustment section of bookkeeping, the operator is given a choice to load all factory settings or to single step through bookkeeping and adjust each value separately. If he chooses to enter the factory settings by depressing the Credit button, he will also be given a choice of what language to load. By using the right black cabinet button he may choose the appropriate language and then depress the Credit button to enter the settings. After the settings are loaded the display should show the message "FACTORY SETTINGS LOADED" for a short time and then proceed to game adjustment step 1. At any time during the previous steps the operator may either exit the test mode or depress the Test button to proceed immediately to game adjustment step 1.

**WARNING** Loading the factory settings will affect all previous game adjustment settings. Therefore be careful when selecting this feature.

#### **B. GAME ADJUSTMENT STEPS**

Each time the Test button is pressed a description of the next step appears in the upper display while the lower display contains the step number and the current status of that step.

- 1) SCORE REPLAY LEVEL 1
- 2) SCORE REPLAY LEVEL 2
- 3) SCORE REPLAY LEVEL 3

Each Score Replay Level may be set by using the left black cabinet button to decrement the score and the right black cabinet button to increment the score. The Credit

### III. TEST MODE

button can be used to load the factory setting for each individual level if desired. If the Auto-Percentaging adjustment is on, Replay Levels 2 & 3 can only be set to on or off. If Replay Level 2 is on, the score level will be set to two times Replay Level 1. If Replay Level 3 is on, the score level will be set to three times Replay Level 1. This allows the operator several combinations of levels in the Auto-Percentaging mode (i.e. 1, 1 & 2, 1 & 3, or 1 & 2 & 3).

- 4) HIGH GAME TO DATE 1
- 5) HIGH GAME TO DATE 2
- 6) HIGH GAME TO DATE 3
- 7) HIGH GAME TO DATE 4
- 8) HIGH GAME TO DATE 5

Each High Game To Date may be set by using the left black cabinet button to decrement the score and the right black cabinet button to increment the score. The Credit button can be used to load the factory setting for the displayed level and all those below it.

- 9) LEFT CHUTE SETTING
- 10) RIGHT CHUTE SETTING
- 11) CENTER CHUTE SETTING

These three steps will set the coinage required to receive credits on the machine. The left black cabinet button is used to decrement the credits to be issued for the active coin while the right black cabinet button is used to increment the credits to be issued. The Credit button is used to change the active coin. The operator may enter up to a four coin sequence. NOTE: If a coin sequence of less than four coins is used, enter 0 credits in each of the remaining coin positions.

Example. 1  
The following would be the setting for a 25 cent chute set to 50 cents for 1 play, 75 cents for 2 plays, and \$1.00 for 3 plays.

COIN 1 = 0 CREDITS  
COIN 2 = 1 CREDITS  
COIN 3 = 1 CREDITS  
COIN 4 = 1 CREDITS

#### Example 2

The following would be the setting for a 25 cent chute set to 50 cents per play.

COIN 1 = 0 CREDITS  
COIN 2 = 1 CREDITS  
COIN 3 = 0 CREDITS  
COIN 4 = 0 CREDITS

#### 12) GAME PERCENT PAYOUT

This step is used to set the game payout percentage used when the Auto-Percentaging adjustment is on. When the GAME MODE is set to Replay this setting refers to replay percentage. When the GAME MODE is set to Add a Ball this setting refers to extra ball percentage.

#### 13) MATCH PERCENT PAYOUT

This step is used to set the match payout percentage. If this step is set to zero, the match will be disabled.

#### 14) HIGH GAME REPLAYS

This step is used to set the number of replays to award when the highest game to date has been beaten.

#### 15) MAXIMUM CREDITS

This step sets the maximum number of credits allowed on the game.

#### 16) TILT WARNINGS

This step sets the number of tilts allowed before the ball in play is terminated.

#### 17) BALLS PER GAME

This step sets the game to 3-ball play or 5-ball play.

#### 18) GAME MODE

This step allows the game to be played in Replay, Add a Ball, or Novelty mode. In Replay mode all Specials and replays are allowed. In Add a Ball mode all Specials and Score Replay Levels award an extra ball in place of a replay. In Novelty mode all Specials award 1,000,000 points and the Score Level Replays are disabled. Also, in both the Add a Ball and Novelty modes the Match is disabled.

### III. TEST MODE

#### 19) LANGUAGE

This step allows the Test Mode Steps to be displayed in English, German or French.

#### 20) LEFT AND RIGHT CHUTES

This step allows the left and right coin chutes to be set as separate or the same. If the chutes are set to be the same, all the coins passing through either chute are totaled and the sum is used toward a credit based on the Left Chute Setting (step 9). Also, the sum will be displayed in the Left Chute Coins bookkeeping step and the Right Chute Coins step will not be used.

#### 21) LEFT AND RIGHT CHUTE BONUS

If this step is set to on, the player is allowed to add one coin for one credit if there are any credits remaining on the game, or during any game. If there are no credits left on the game at the time that the game ends the player is also allowed this option for a time period.

#### 22) AUTO-PERCENTAGING

If this step is set to on, the Score Replay Levels will be adjusted periodically by 100,000 points so that the Game Percent Payout setting will match the actual Replay Percentage displayed in bookkeeping. NOTE: If the GAME MODE is set to Add a Ball, the Extra Ball Percentage in bookkeeping is used in place of the Replay Percentage.

#### 23) REPLAY LIMIT

This step may be set to no limit or one per player per game.

#### 24) HIGH GAMES 2-5

This step will determine if High Games to Date (2-5) will be saved

or erased when power is turned off.

#### 25) ATTRACT SOUND

This step determines whether or not sounds are enabled during the attract mode (Game Over).

#### 26) ATTRACT MESSAGE

This step is used to enable or disable an operator message during the attract mode (Game Over). This step is also used to enter a message into memory. To enter a message press the Credit button. The current message will be displayed and the cursor position will be indicated by the flashing character. If the current position is blank, a flashing directional arrow will appear. This type of arrow will indicate which direction the cursor will move if the Credit button is pressed. The Credit button is also used to select characters after they have been chosen using the left and right black cabinet buttons.

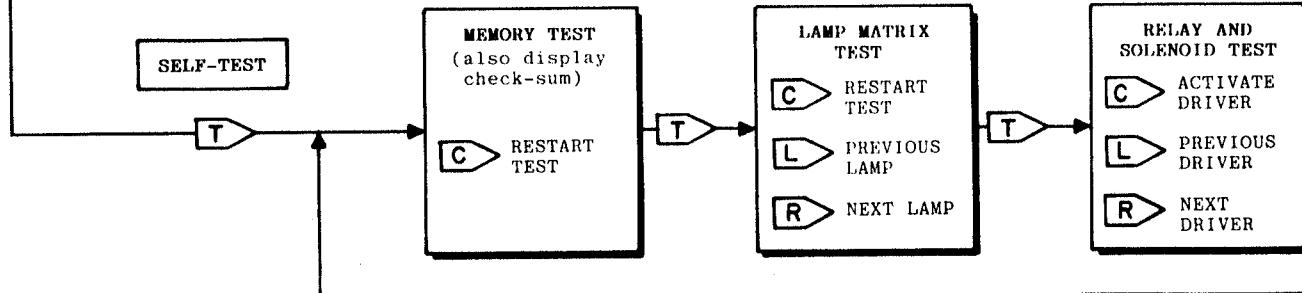
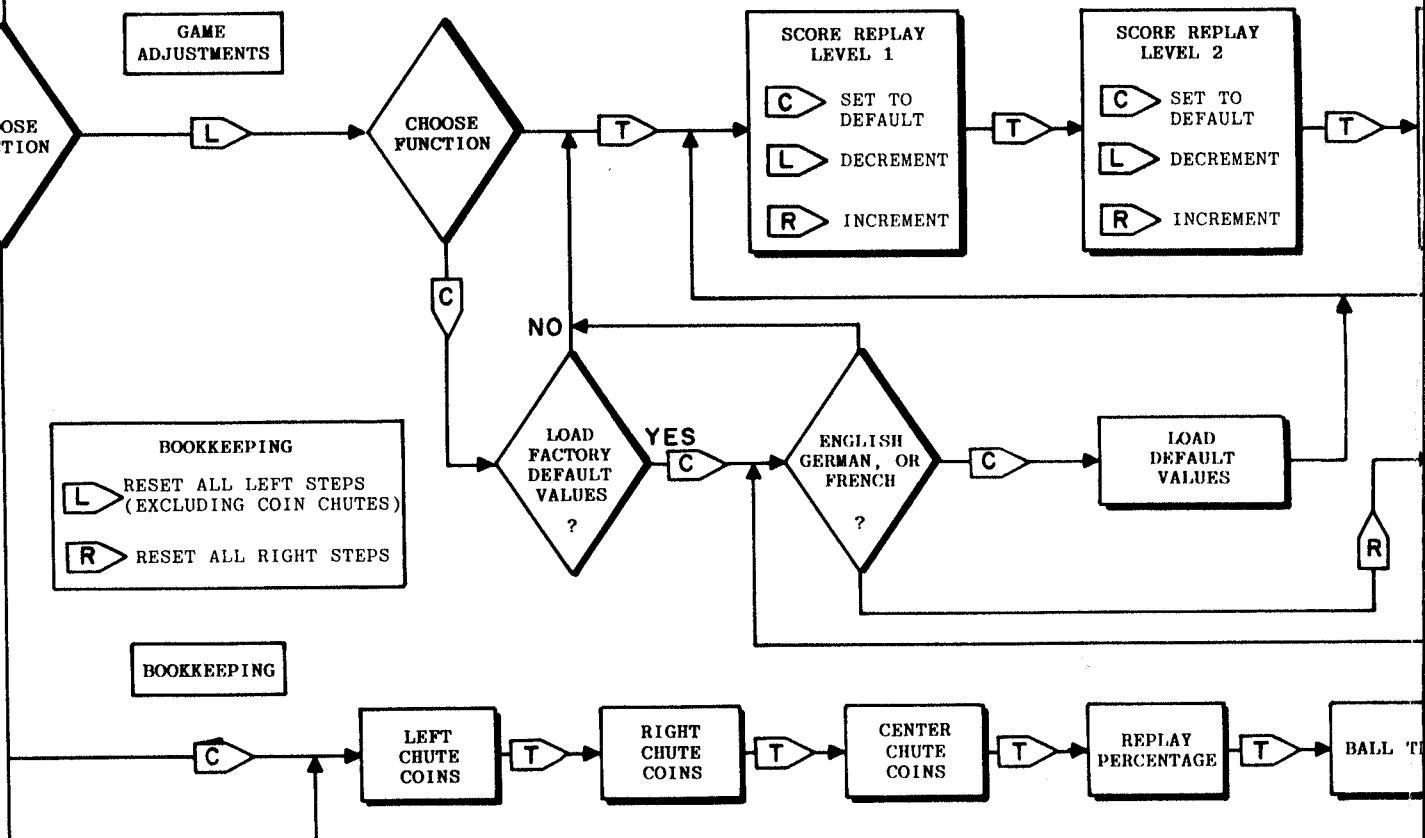
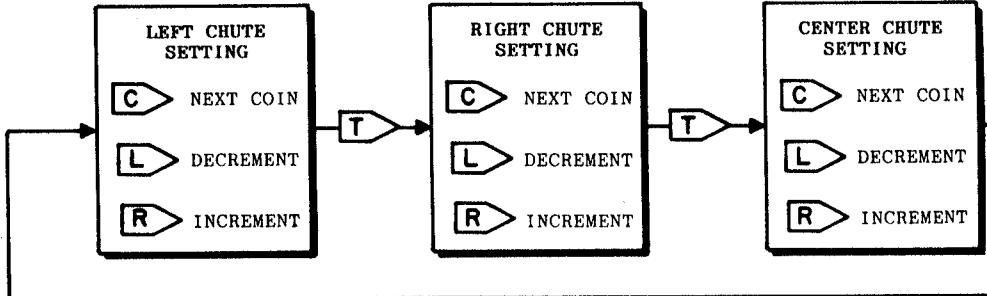
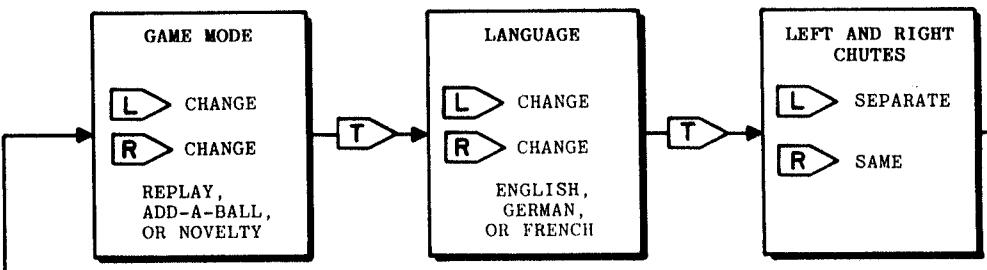
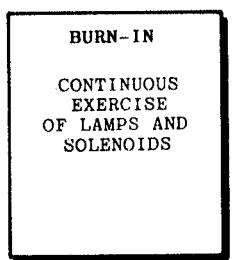
#### 27) FREE PLAY

If this step is set to on, a game may be started without any credits left on the machine.

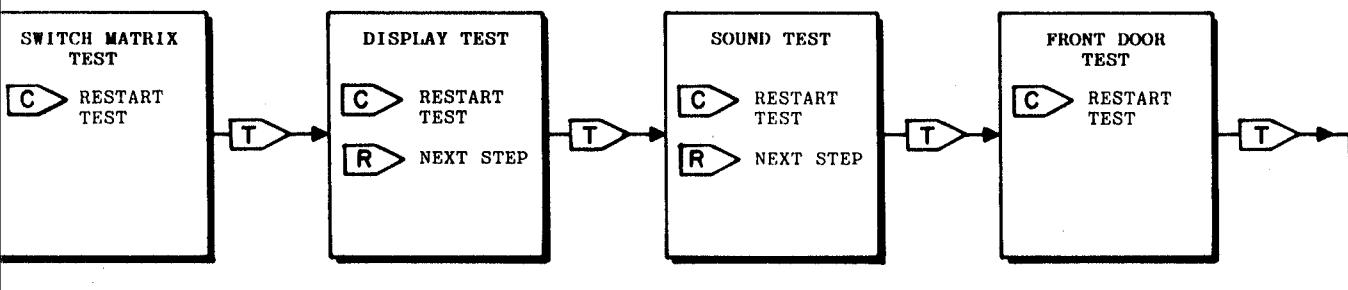
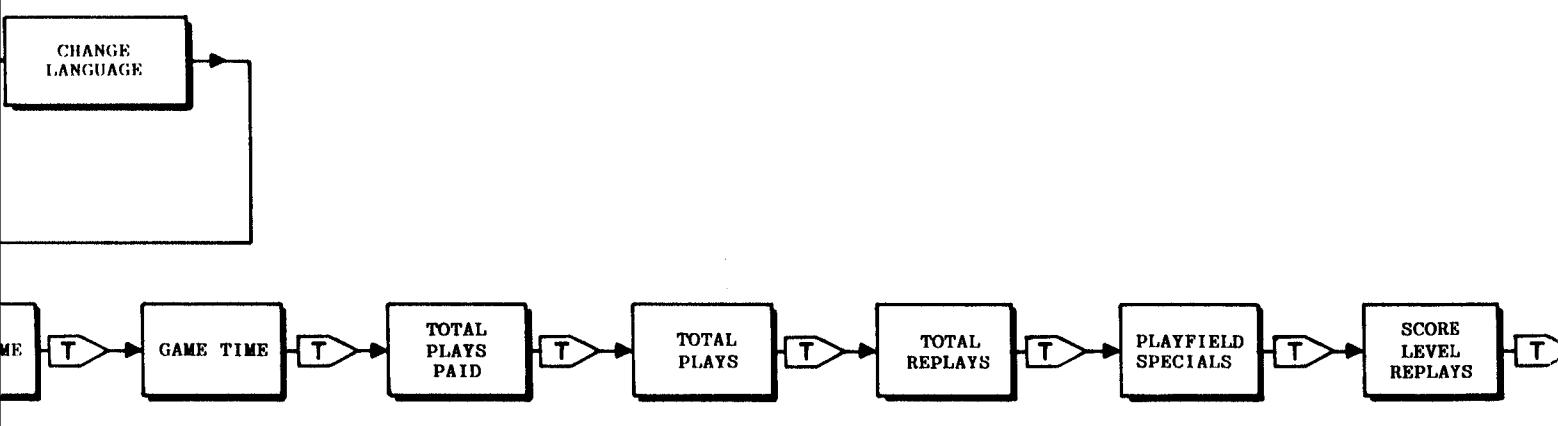
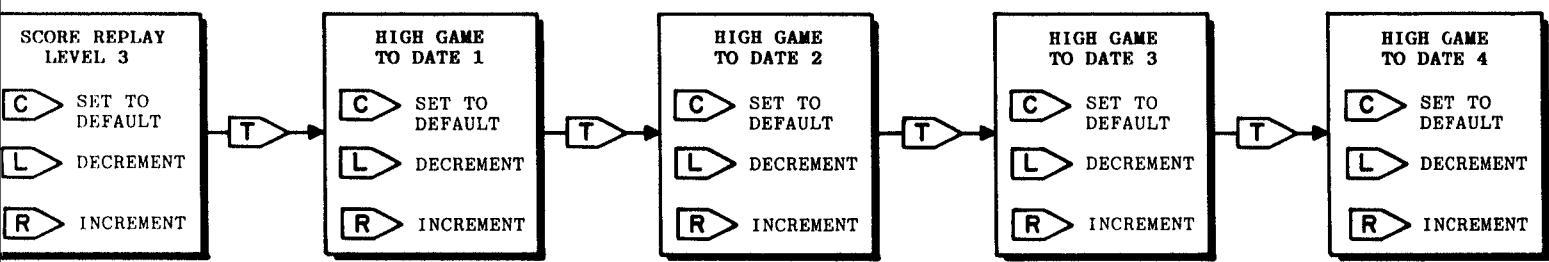
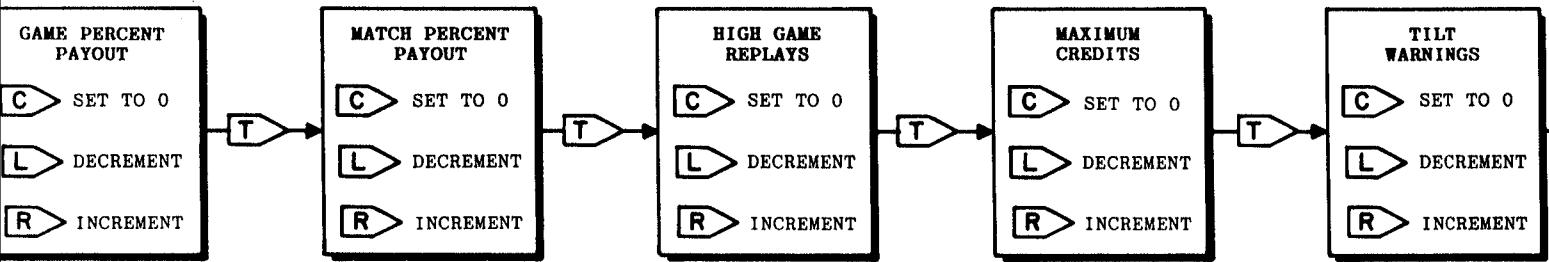
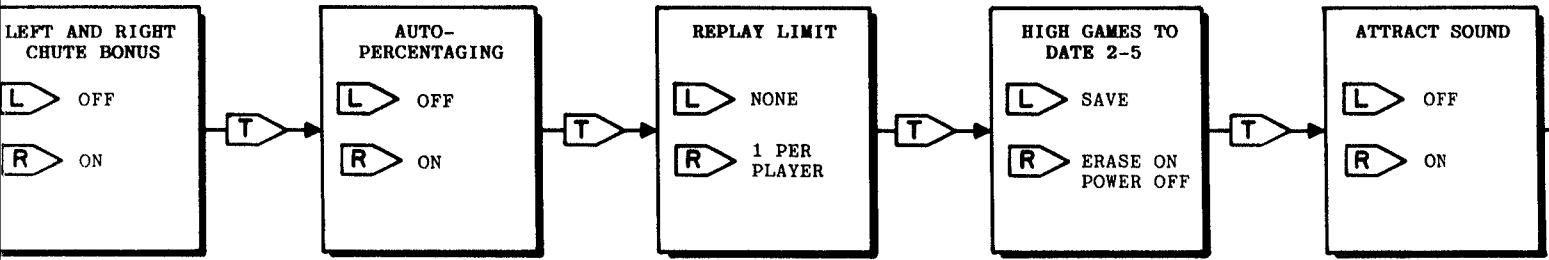
#### 28) RIGHT BOOKKEEPING AUTO-RESET

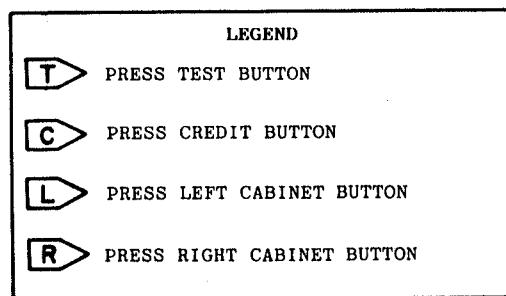
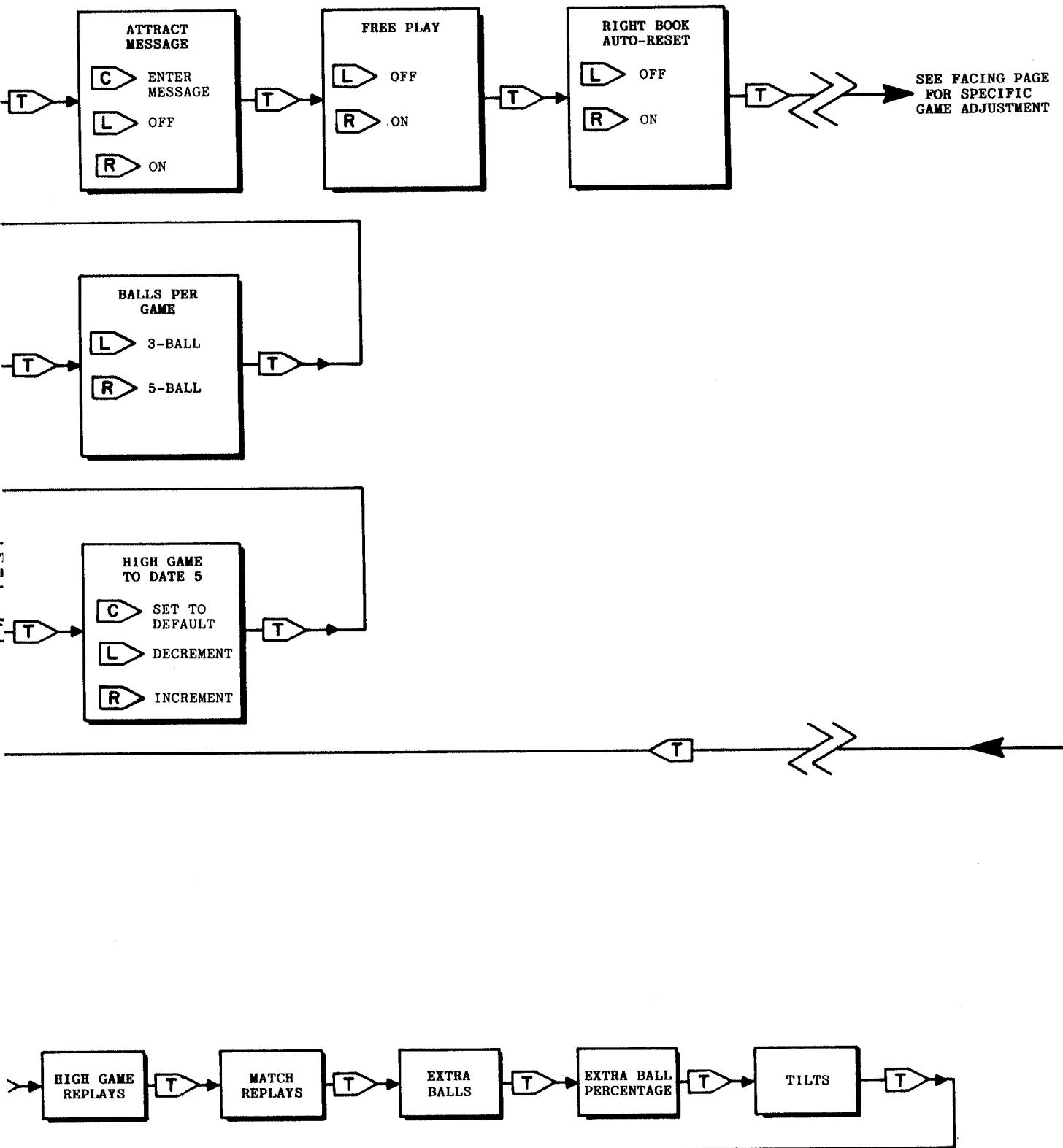
If this step is set to on, all the short term bookkeeping steps (in brackets) will reset after 2000 plays. Otherwise they will not reset until 10,000 games have been played on the machine.

See Page 14 for specific adjustments on this game.



### III. TEST MODE



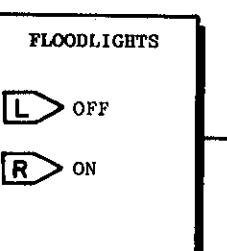
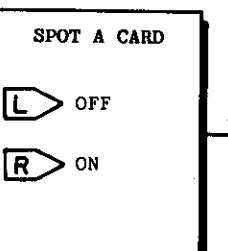
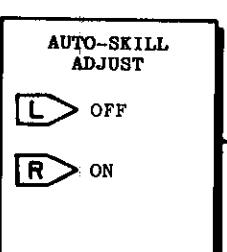
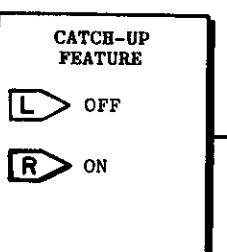
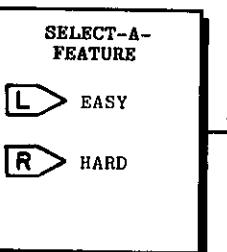
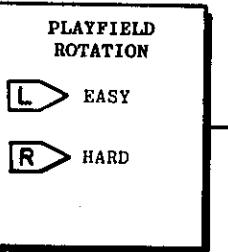
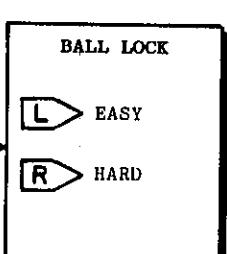
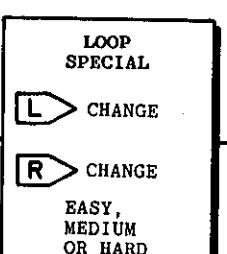
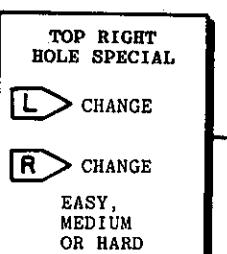
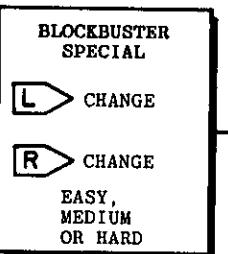
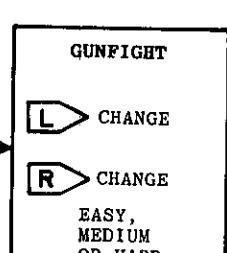
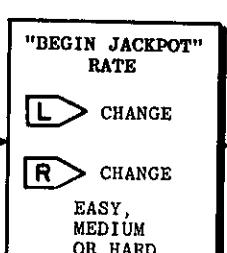
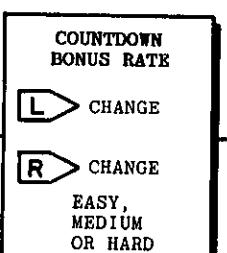
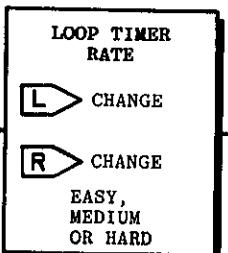
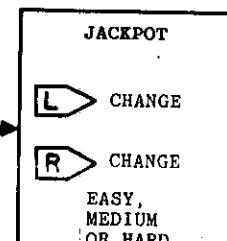
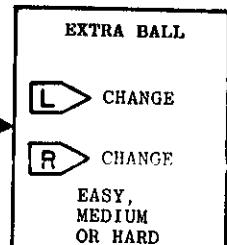
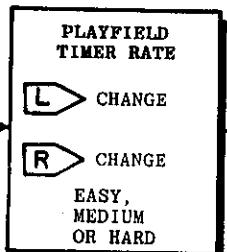
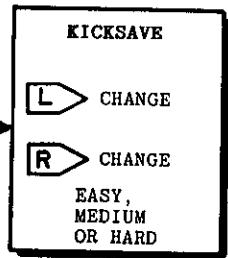


**NOTE:**  
THE TEST MODE CAN ONLY BE ACCESSED DURING THE ATTRACT MODE.

THE TEST MODE MAY BE EXITED BY EITHER ACTUATING THE SLAM SWITCH OR TURNING THE POWER OFF.

## SYSTEM 3 TEST MODE FLOWCHART

### III. TEST MODE



**SYSTEM 3**  
**TEST MODE FLOWCHART**

### III. TEST MODE

#### 29) KICKSAVE

- EASY =LONGEST ON TIME  
ENABLED BY LEFT RETURN ROLLOVER  
ENABLED AT BEGINNING OF BALL
- MEDIUM =MEDIUM ON TIME  
ENABLED BY LEFT RETURN ROLLOVER  
IN NORMAL MODE AND MULTIBALL  
ONLY
- HARD =SHORTEST ON TIME

#### 30) PLAYFIELD TIMER RATE

- THIS ADJUSTMENT CONTROLS THE 7-SEGMENT PLAYFIELD DISPLAY COUNTDOWN RATE DURING THE STUNT SCENE AND THE JACKPOT SCENE.
- EASY =LONGEST ON TIME
- MEDIUM =MEDIUM ON TIME
- HARD =SHORTEST ON TIME

#### 31) EXTRA BALL

- EASY = EACH PLAYER IS ALLOWED ONLY ONE EXTRA BALL FROM SELECT-A-FEATURE OR MYSTERY PER BALL IN PLAY
- MEDIUM =EACH PLAYER IS ALLOWED ONLY ONE EXTRA BALL IN PLAY FROM MYSTERY PER BALL IN PLAY (EXCLUDED FROM SELECT-A-FEATURE)
- HARD =EACH PLAYER IS ALLOWED ONLY ONE EXTRA BALL FROM MYSTERY PER GAME (EXCLUDED FROM SELECT-A-FEATURE)

#### 32) JACKPOT

- EASY =COMPLETING THE CENTER DROP TARGETS THREE TIMES DURING THE JACKPOT SCENE COLLECTS THE JACKPOT.  
ALSO THE TWO OUTSIDE CENTER DROP TARGETS ARE TRIPPED WHEN THE "ENTER JACKPOT" LAMP STARTS FLASHING
- MEDIUM =COMPLETING THE CENTER DROP TARGETS THREE TIMES DURING THE JACKPOT SCENE COLLECTS THE JACKPOT
- HARD =COMPLETING THE CENTER DROP TARGETS FOUR TIMES DURING THE JACKPOT SCENE COLLECTS THE JACKPOT

#### 33) LOOP TIMER RATE

- EASY =LONGEST ON TIME
- MEDIUM =MEDIUM ON TIME
- HARD =SHORTEST ON TIME

#### 34) COUNTDOWN BONUS RATE

- EASY =LONGEST TIME BETWEEN SCORE DECREMENTS
- MEDIUM =MEDIUM TIME BETWEEN SCORE DECREMENTS
- HARD =SHORTEST TIME BETWEEN SCORE DECREMENTS

#### 35) "ENTER JACKPOT" RATE

- EASY =LONGEST ON TIME
- MEDIUM =MEDIUM ON TIME
- HARD =SHORTEST ON TIME

#### 36) GUNFIGHT

- EASY =LONGEST TIME ALLOWED TO DRAW
- MEDIUM =MEDIUM TIME ALLOWED TO DRAW
- HARD =SHORTEST TIME ALLOWED TO DRAW

#### 37) BLOCKBUSTER SPECIAL

- EASY =MEMORIZE "BLOCKBUSTER" SEQUENCE FROM GAME TO GAME
- MEDIUM =RESET "BLOCKBUSTER" SEQUENCE FROM GAME TO GAME
- HARD =RESET "BLOCKBUSTER" SEQUENCE FROM GAME TO GAME AND DO NOT AWARD A LETTER IN THE SEQUENCE DURING MULTIBALL

#### 38) TOP RIGHT HOLE SPECIAL

- EASY =ENABLED TO BE LIT IN SELECT-A-FEATURE OR MYSTERY LONGEST ON TIME WHEN LIT
- MEDIUM =ENABLED TO BE LIT IN MYSTERY ONLY MEDIUM ON TIME WHEN LIT
- HARD =ENABLED TO BE LIT IN MYSTERY ONLY SHORTEST ON TIME WHEN LIT

#### 39) LOOP SPECIAL

- EASY =REMAINS LIT AFTER MULTIBALL TO TIME OUT
- MEDIUM =DISABLE AFTER MULTIBALL PLAY ENDS
- HARD =ONE SPECIAL ONLY ALLOWED IN THE LOOP

#### 40) BALL LOCK

- EASY =COMPLETING THE TOP LEFT SPOT TARGETS ONCE LIGHTS LOCK
- HARD =COMPLETING THE TOP LEFT SPOT TARGETS TWO TIMES LIGHTS LOCK

#### 41) PLAYFIELD ROTATION

- EASY =TOP LEFT HOLE ROTATES THE MINI-PLAYFIELD DURING THE STAIR SCENE
- HARD =TOP LEFT HOLE ROTATES THE MINI-PLAYFIELD DURING THE STAIR SCENE ONLY WHEN A CARD HAND IS COMPLETED

#### 42) SELECT-A-FEATURE

- EASY =AWARD SELECT-A-FEATURE FOR CARD HAND OF ONE OR TWO PAIR
- HARD =AWARD MYSTERY FOR CARD HAND OF ONE OR TWO PAIR

#### 43) CATCH-UP FEATURE

- OFF =DISABLED
- ON =ENABLED

#### 44) AUTO-SKILL ADJUST

- OFF =DISABLED
- ON =ADJUST TIMED FEATURES IN THE GAME TO PLAYER'S SKILL LEVEL

#### 45) SPOT A CARD

- OFF =DISABLED
- ON =SPOT TWO CARDS AT THE BEGINNING OF THE GAME AND THEN ONE EVERY TIME A CARD HAND IS COMPLETED DURING THE GAME

#### 46) FLOOD LIGHTS

- OFF =DISABLE USE OF FLOOD LIGHTS (USE IF FLOOD LIGHT ASSEMBLY IS NOT INSTALLED TO TOP OF LIGHTBOX)
- ON =ENABLE USE OF FLOOD LIGHTS (USE IF FLOOD LIGHT ASSEMBLY IS INSTALLED FOR MAXIMUM PLAY APPEAL)

### **III. TEST MODE**

#### **SOUND ADJUSTMENTS**

The speaker(s) output is controlled by the potentiometer mounted on a bracket located inside the cabinet next to the front door hinge.

Turning the potentiometer counter-clockwise will decrease the volume. Turning it clockwise will increase the volume.

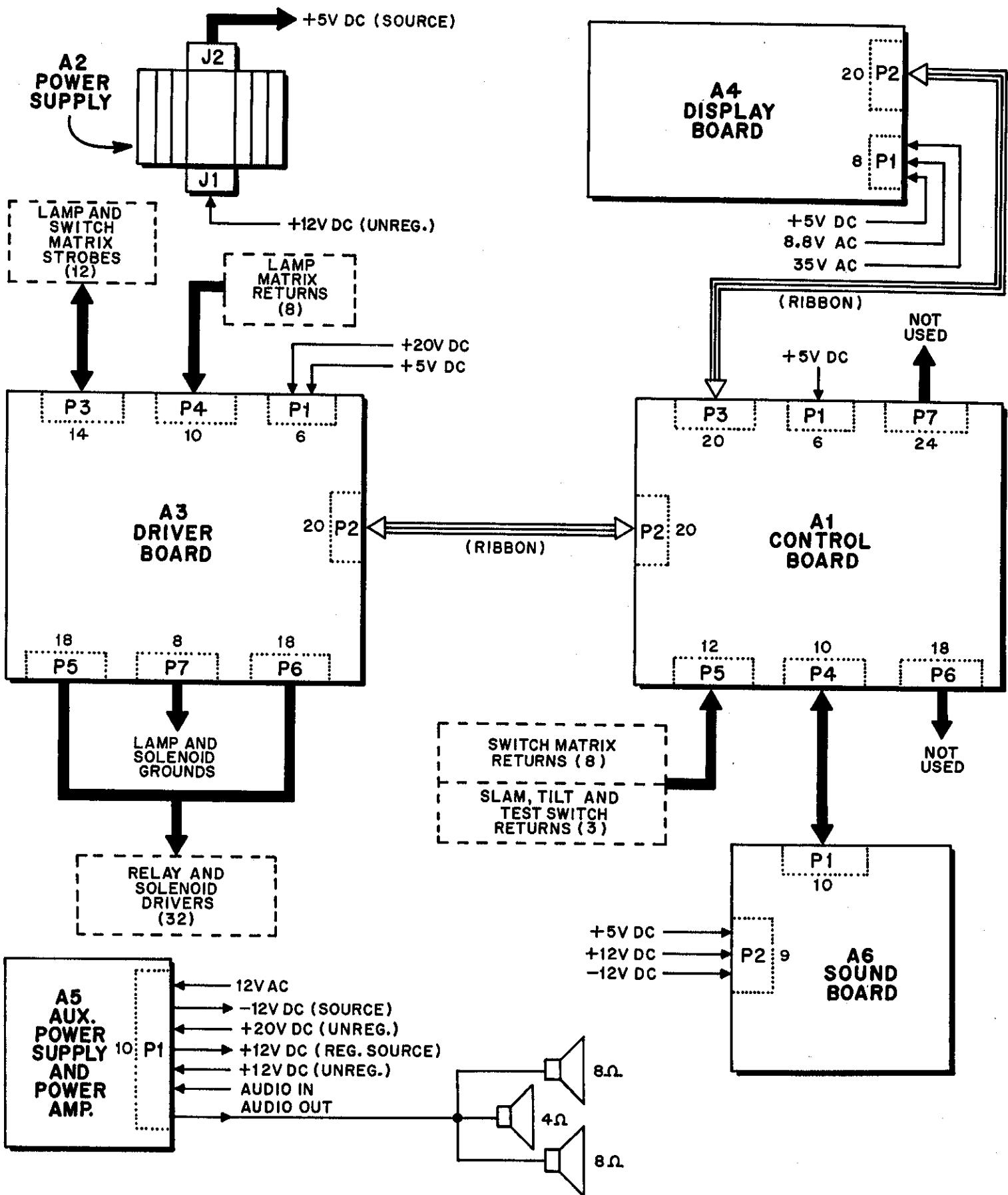
#### **POST ADJUSTMENTS**

The post at the mouth of the right outlane can be positioned for liberal/conservative play. The smaller opening produces a more liberal game.

#### **IV. BURN-IN**

This function can be used to continuously exercise all the lamps and solenoids in the game.

## IV. THEORY OF OPERATION



**FIGURE 1, SYSTEM 3 BLOCK DIAGRAM**

## IV. THEORY OF OPERATION

### A. CONTROL BOARD (A1)

The Control Board is supplied with 5vdc (A1P1) from the Power Supply (A2P2). The data contained in ram (U3) is kept valid when power is turned off by the lithium battery (BAT1) and controller (U6).

NOTE: When replacing either the battery, ram, or the controller there may be a message that appears in the display on power up the first time that indicates a low battery condition. If this occurs, turn the power off and back on again. The board should power up normally this time. If not, there is another problem on the board.

The Control board can accomodate either a 27512 or a 27256 Eeprom. JP1 must be installed for a 27512 or JP2 for a 27256 Game Prom. A 4 Mhz oscillator is configured using U17,R1,R2,C22,C23, and XTAL1. The oscillator output is then divided by 2 to a 2Mhz clock by U18 which is used as the input clock to the 65C02 (U1) microprocessor. The clock output of U1 (pin 39) is used as a sync signal for reading from or writing to the peripheral devices. Two versatile interface adapters (U4,U5) are used to develop the necessary control signals for the system. The waveform generated on the CB2 output of U4 triggers the NMI input of the microprocessor. This signal controls the display refresh rate. The display connector (A1P3) is comprised of several signals. The display blanking (DBLNK), digit strobe (DSTB), and digit data (DDATA) are generated by U4-17,U4-16, and U4-15 respectively. The display segment data is output by U7 and latched into the appropriate device on the display board by the display segment strobes (DS0-DS3). The driver board connector (A1P2) contains all the signals necessary to operate the lamp and switch matrix strobes, the lamp matrix returns, and the solenoids. The lamp clear (LCLR), lamp strobe (LSTB), and lamp strobe data

(LDATA) are generated by U4-12,U4-11, and U4-10 respectively. The appropriate lamp return data during each active lamp strobe is output by U7 and latched into U5 on the driver board by the lamp return data strobe (LDS). The solenoid data is output by U7 and latched into the appropriate Driver Board device (U1-U4) by the solenoid strobes (SS0-SS3). The switch matrix returns are input at A1P5, buffered by U19 and U20 and then input to U4. Discrete inputs are provided at A1P5 for the slam, tilt, and test switches. A reset circuit is configured using U13,U14,R3, and C24. When power is applied to the system, the microprocessor reset pin (U1-40) is held low for approximately 10 milliseconds. The system can also be reset by pressing the switch (SW1) on the board. Whenever a reset occurs the master reset signal (MR) (U18-9) is held low until the display strobe (DSTB) becomes active. At this point the master reset goes high which enables the peripheral IC's on the display board and driver board to accept data. A watchdog circuit is employed to monitor both the display digit strobe and the lamp strobe. This circuit is made up of U11,U12,U13,U16,R5,R6,R29, R32,R33,C20,C21,C28, and C29. If either the display strobe or the lamp strobe is missing for 330 milliseconds the system will be reset. The system will also be reset if the supply voltage drops below 4.5vdc. This voltage monitor is configured using U21,VR1,D1,D2,R34, and R35.

### B. POWER SUPPLY (A2)

The transformer panel delivers 12vdc to the input of the power supply. The regulated output voltage should be set to 5vdc by using potentiometer R3. This voltage is then supplied to the Control Board (A1), Driver Board (A3), Display Board (A4), Sound Board (A6), and any other auxillary board which may require it.

## IV. THEORY OF OPERATION

### C. DRIVER BOARD (A3)

Two voltages are supplied to this board at A3P1. The 5vdc is supplied from the Power Supply (A2) and the 20vdc is supplied from the transformer panel. The 20vdc is used to source the controlled lamps and the switch matrix. The Driver Board receives its data at A3P2 from the Control Board (A1P2). Solenoid data is latched into U1-U4. Lamp return data is latched into U5. Lamp and switch strobe data is shifted through U6 and U7. The comparators (U10, U11) are used to protect the MOSFETS (Q33-Q49). If a sensed input voltage exceeds the reference voltage ( $V_{ref}$ ), the corresponding MOSFET is turned off immediately following the lamp clear pulse (LCLR) supplied by U12 thus limiting the duty cycle. If the master reset signal (MR) is held low all lamps and solenoids will be disabled.

### D. DISPLAY BOARD (A4)

Several voltages are input to this board at A4P1. The power supply (A2) supplies 5vdc ( $V_{cc}$ ). The board develops  $V_{gg}$  from the 35vac supplied from the transformer panel. The transformer panel also sources 8.8vac to the display filaments. The display filaments are biased 9.1vdc above ground by the zener diode VR1. The display board incorporates two vacuum fluorescent display tubes (DSP1, DSP2). The tube's digits are driven by U9. The segments (a-n) of the upper display are driven by U3, U4, U7, and U8. The segments of the lower display are driven by U1, U2, U5, and U6. Figure 1 shows the basic display waveform. Data is sent from the Control Board (A1P3) to the Display Board (A4P2).

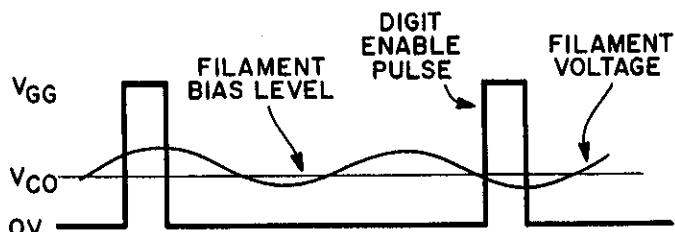


Figure 2. Display Waveform

### E. SOUND BOARD (A6)

The Sound Board consists of two 6502 microprocessor systems, a dual DAC, input ports to receive commands from the game Control Board, and a low level audio output, which is sent to the Auxiliary Power Supply Board for amplification.

The Sound Board requires three supply voltages +5V DC, +12V DC and -12V DC. In addition a power up reset signal is required from the Control Board.

#### SYSTEM CLOCK

A 4 MHz oscillator is configured with R11, R12, C14, C15, C22, XTAL-1 and T1. This 4MHz clock is divided by 4 to a 1 or 2 MHz clock for both processors clock input, pin 37 of N1 and T3. A 250 KHz signal from S1 pin 11 is the clock for the programmable timer section consisting of N5, H5, T5 and K5, pin 2.

#### INPUT CODE LATCH SYSTEM

Eight input lines from the Control Board come in on A6P1 and are pulled up by S1P1 and sent to the two input code latches A3 and B2, one for each microprocessor system. A2, pin 8, becomes a logic high when any of it's inputs are low. This output is connected to pin 11 of the input code latches (A3 and B2). A positive edge at pin 11 causes A3 and B2 to latch the data at their inputs. A2 pin 8 is also connected to the clock inputs of two flip flops, A4 pin 3 and A4 pin 11. When A2 pin 8 goes high, both flip flops are clocked, setting both Q outputs low. The Q outputs, A4 pin 6 and pin 8, are connected to both of the 6502's active low interrupt request lines, T3 and N1, pin 4. The Q outputs of A4 will stay low until the associated 6502 reads its input port therefore clearing the interrupt.

#### SYSTEM EPROMS

The sound board is designed to accommodate different types of EPROMS. Jumpers JP1, 2, 3, and 4 should be set to the proper position

## IV. THEORY OF OPERATION

based on the EPROM being used, (See Schematic Diagram).

### RESET

The Sound Board receives an external reset signal from A1P4 pin 10. This active low reset signal is pulled up by R34 and sent to G5, pin 1 (2-input AND gate). However, if a manual reset is desired, pushing switch SW2 will reset the processor.

### MAIN SUMMER

The main summer consists of R13 through R17 and B1, pins 12, 13 and 14. B1 pin 14 is the main output from the Sound Board, at A6P2 pin 9, and will swing plus or minus 5V peak to peak.

### F. AUXILIARY SOUND BOARD (A20)

The Auxiliary Sound Board consists of a YM2151 (U1) sound generator, a YM3014 (U2) DAC, and a LM324 op-amp (U3). The master Sound Board (A6), controls the YM2151 (U1) sound chip by sending commands via the data bus of the master Sound Board's T3 micro-processor. The YM2151 responds to these commands and serially sends sound data to the YM3014 DAC by means of the CLK, SD, and SH2 lines. The DAC converts this serial data into an analog signal which is buffered and amplified by U3, a LM324 op-amp. This analog signal is then sent back to the main summer of the master Sound Board (A6).

## V. GENERAL INFORMATION

### A. PRINTED CIRCUIT BOARDS ARE DESIGNATED AS FOLLOWS:

- A1 - Control Board
- A2 - Power Supply
- A3 - Driver Board
- A4 - Display Board
- A5 - Auxiliary Power Supply
- A6 - Sound Board
- A13 - Resistor Board
- A15 - Sensor Board
- A17 - Diode Board
- A20 - Auxiliary Sound Board

Printed circuit board connectors will be labeled AX-JX. For example, A3-J4 is the connector J4 to the driver board (A3).

### B. WIRE COLORS ARE SHOWN AS NUMBERS:

- 0 Black
- 1 Brown
- 2 Red
- 3 Orange
- 4 Yellow
- 5 Green
- 6 Blue
- 7 Violet
- 8 Gray
- 9 White

For example, 688 is a BLUE-GRAY-GRAY striped wire.

### C. FUSE AND COIL INFORMATION

#### TRANSFORMER PANEL/ISOLATION FUSES

F1	Line Input.....	110V AC....	8 Amp SLO-BLO
		220V AC....	4 Amp SLO-BLO
F2	Primary Power.....	110V AC....	5 Amp SLO-BLO
		220V AC....	2.5 Amp SLO-BLO
F3	Display Filament.....		1/2 Amp
F4	Display Filament.....		1/2 Amp
F5	Displays.....		1/4 Amp SLO-BLO
F6	Power Supply.....		3 Amp SLO-BLO
F7	Controlled Lamps.....		10 Amp SLO-BLO
F8	Solenoids.....		8 Amp SLO-BLO
F9	Playfield Illumination.....		5 Amp SLO-BLO
F10	Lightbox Illumination.....		15 Amp
F11	Aux. Power Supply.....		1/2 Amp
F12	Flood Lights.....		1 Amp SLO-BLO

## V. GENERAL INFORMATION

### PLAYBOARD FUSES AND COILS

FUSE	RATING	USAGE	COIL/COLOR
F15	1-1/2 Amp SLO-BLO	Top Left Pop Bumper	16570 (Green)
F16	1-1/2 Amp SLO-BLO	Top Right Pop Bumper	16570 (Green)
F17	1-1/2 Amp SLO-BLO	Bottom Pop Bumper	16570 (Green)
F18	1-1/2 Amp SLO-BLO	Left Kicking Rubber	5195 (White)
F19	1-1/2 Amp SLO-BLO	Right Kicking Rubber	5195 (White)
F20	1/2 Amp SLO-BLO	Ball Release, Outhole	26451 (Yellow)
F21	1/2 Amp SLO-BLO	Left Gunfighter Right Gunfighter Top Left Hole 3 Bank Trip (2)	26451 (Yellow) 26451 (Yellow) 26451 (Yellow) 26452 (Pink)
F22	1 Amp SLO-BLO	3 Bank Reset Top Right Hole Bottom Left Hole Bottom Right Hole Playboard Release 6 Bank Trip (6)	26926 (Blue) 17876 (Tan) 17876 (Tan) 17876 (Tan) 17876 (Tan) 26452 (Pink)
F23	1-1/2 Amp SLO-BLO	6 Bank Reset (2)	17876 (Tan)
F24	2 Amp SLO-BLO	Kick-Save	19300 (Orange)

# SERVICE NOTES

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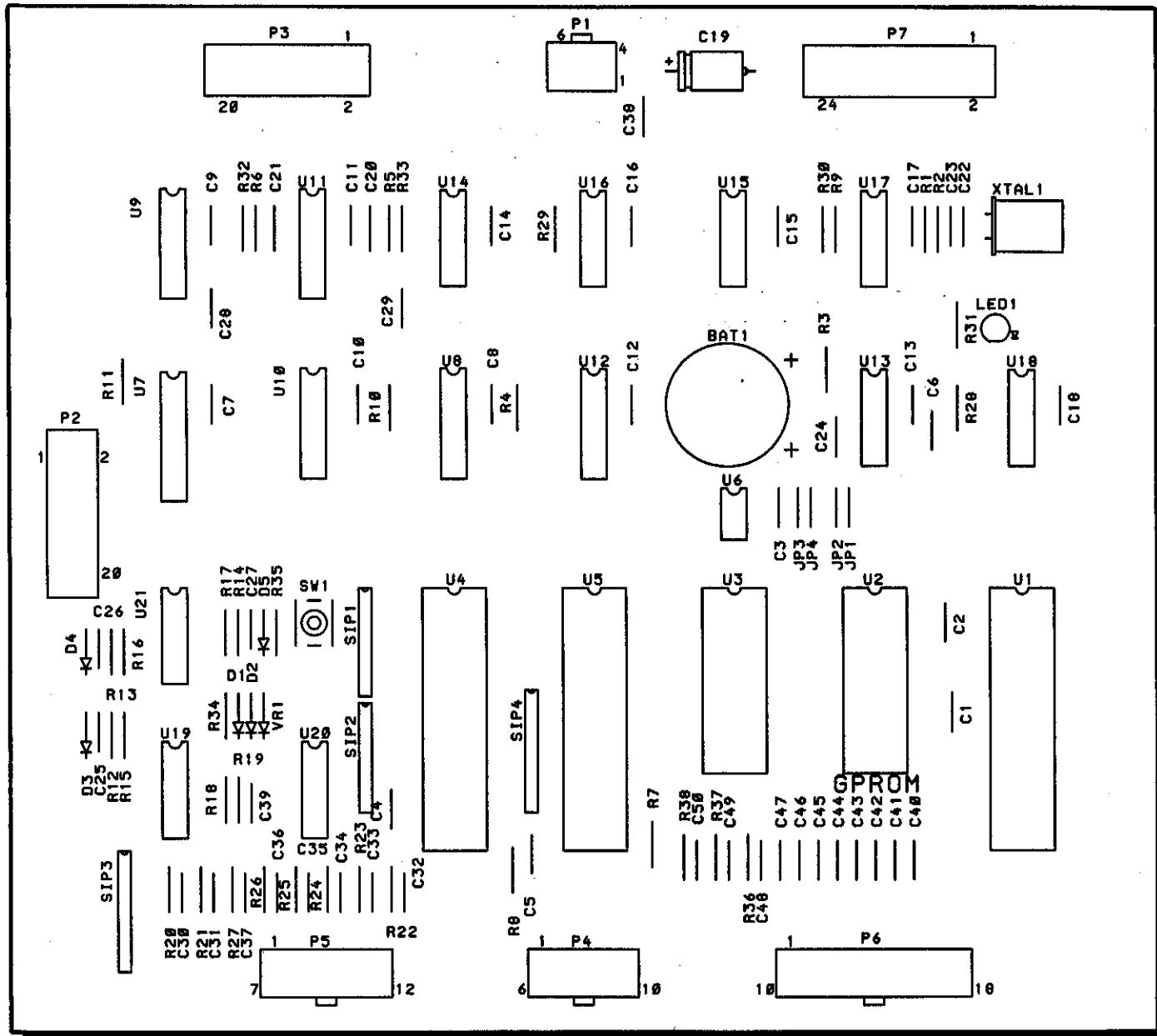
# VI. WIRING AND SCHEMATIC DIAGRAMS, PARTS LISTS

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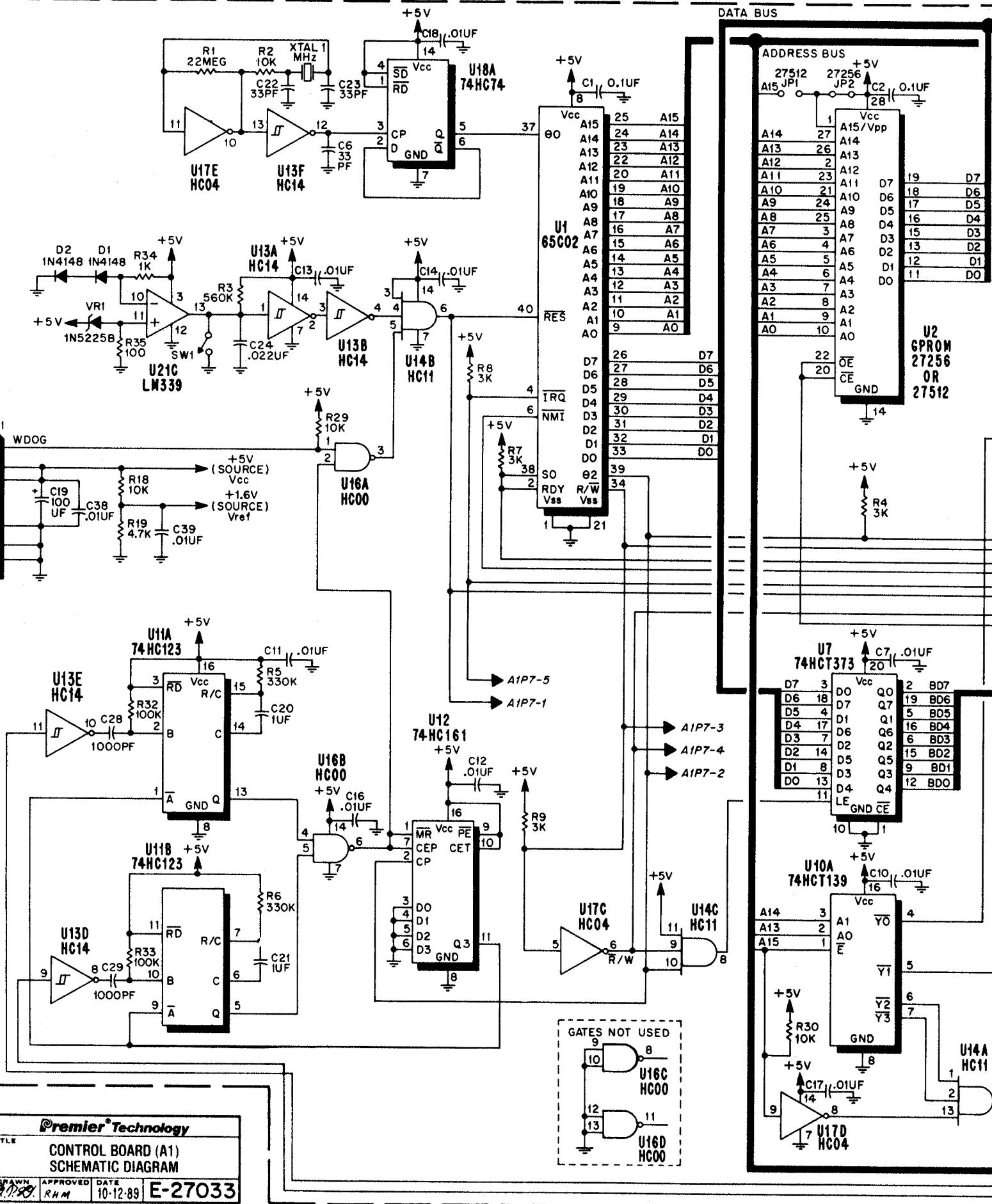
# VI. WIRING AND SCHEMATIC DIAGRAMS, PARTS LISTS

## CONTROL BOARD (A1) COMPONENT LOCATION

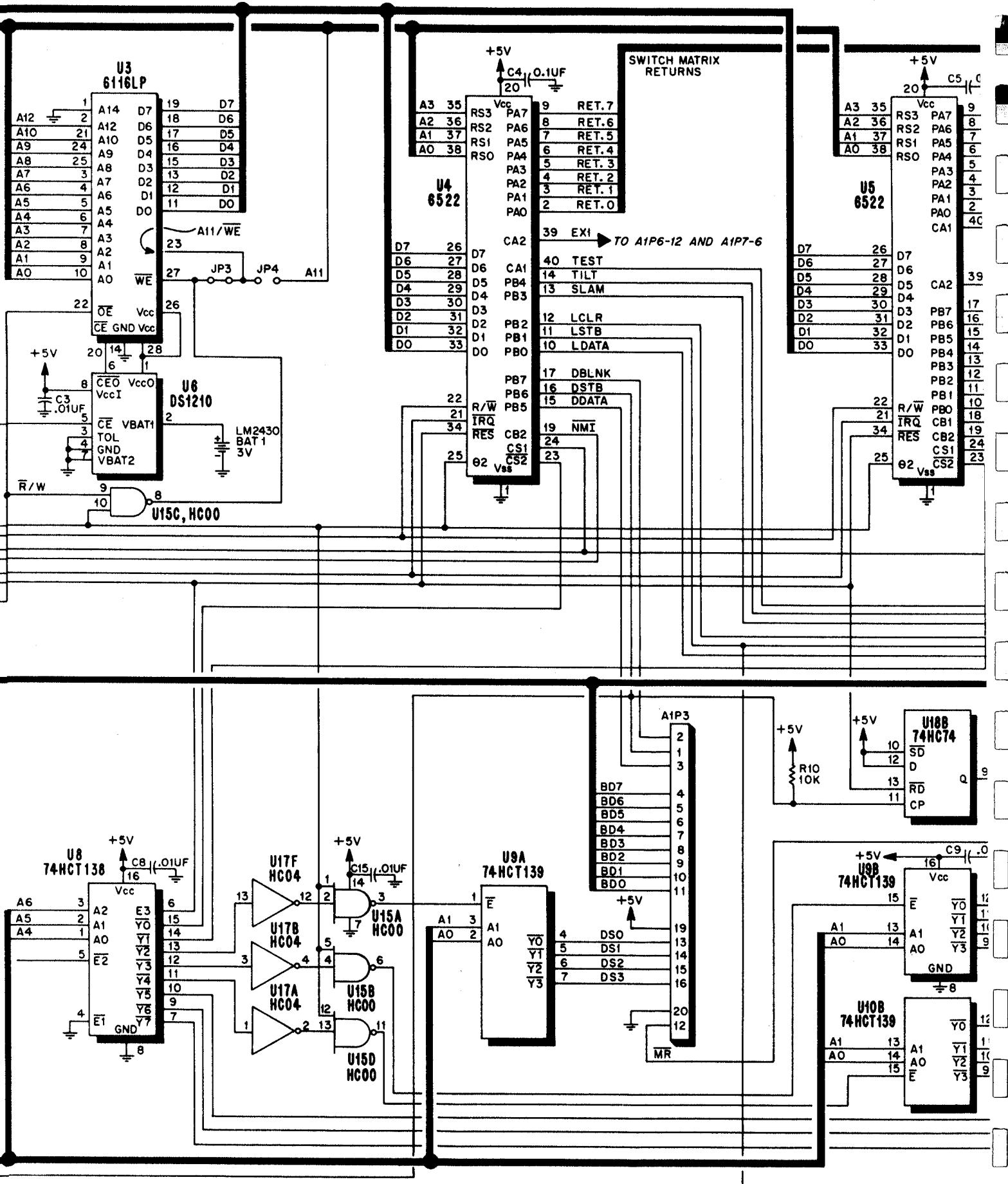


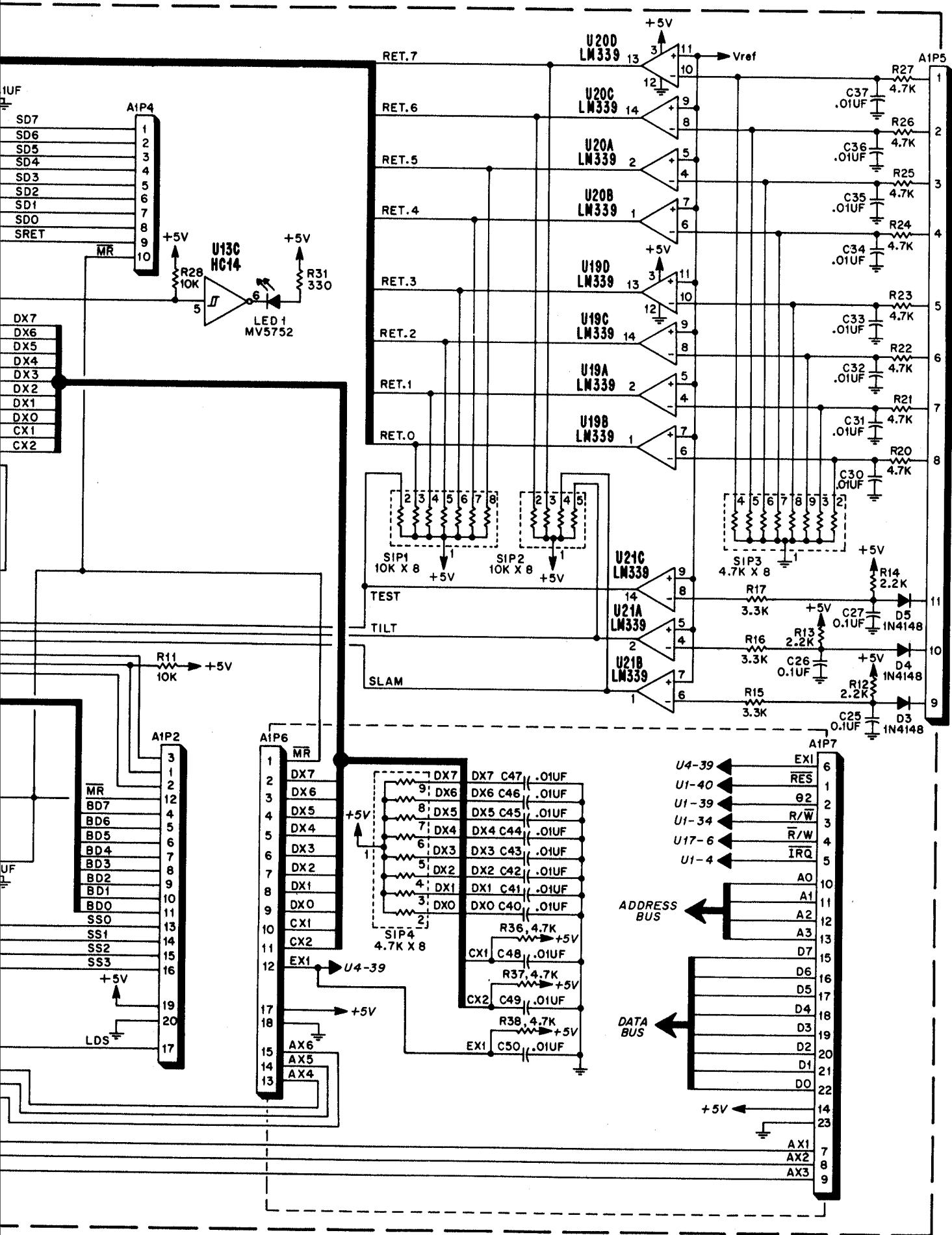
## CONTROL BOARD (A1) PARTS LIST

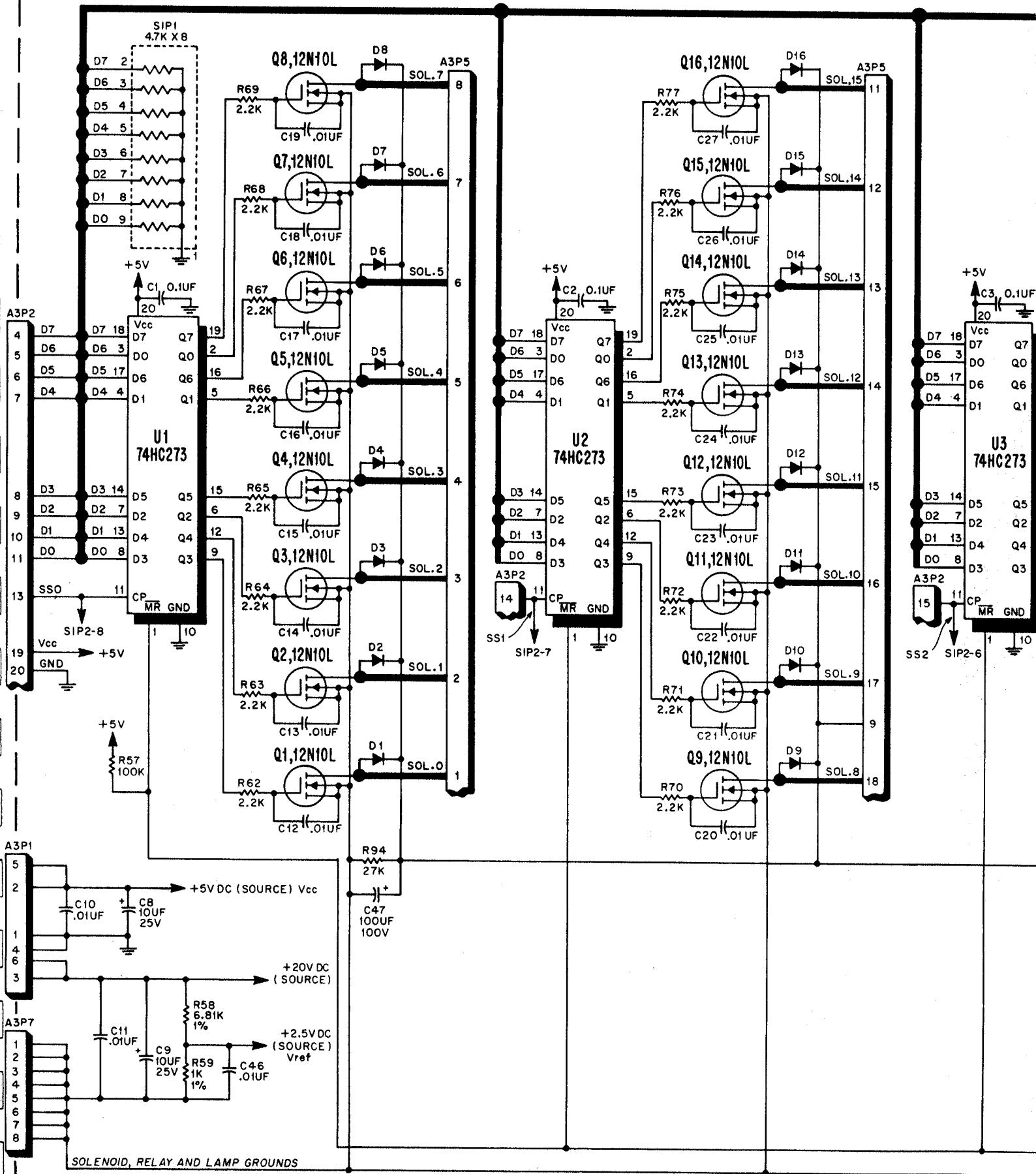
REFERENCE	DESCRIPTION	PART NUMBER	REFERENCE	DESCRIPTION	PART NUMBER
BAT 1	Control Board Assembly (A1)	MA-1360	U3	IC, 6116LP, 2K X 8, Static Ram	XO-928
C3,C7-C18,	Lithium Battery, LM2430, 3V	XO-925	U4,U5	IC, 6522AP, Versatile	XO-929
C30-C39	Capacitor, .01UF, +80% -20%, 50V	XO-229	U6	Interface Adaptor (VIA)	
C1,C2,C4,	Capacitor, 0.1UF, +80% -20%, 50V	XO-230	U7	IC, DS1210, Non-Volatile Controller	XO-930
C5,C25,C27	Capacitor, 33PF, 10%, 50V	XO-896	U8	IC, 74HCT138, Decoder	XO-932
C6,C22,C23	Capacitor, 1000UF, +80% -20%, 10V	XO-211	U9,U10	IC, 74HCT139, Dual Decoder	XO-933
C19	Capacitor, 1UF, 20%, 50V	XO-746	U11	IC, 74HC123, Dual Multivibrator	XO-934
C20,C21	Capacitor, .022UF, 10%, 50V	XO-873	U12	IC, 74HC161, Binary Counter	XO-935
C24	Capacitor, 10000PF, 10%, 100V	XO-296	U13	IC, 74HC14, Schmitt Hex Inverters	XO-936
C28,C29	Capacitor, 1N4148	XO-261	U14	IC, 74HC11, Triple "And" Gates	XO-937
D1-D5	Diode, 1N4148 (Red)	XO-270	U15,U16	IC, 74HC00, Quad "Nand" Gates	XO-782
LED 1	Resistor, 22 MEGOHM, 5%, 1/4W	XO-74	U17	IC, 74HC04, Hex Inverters	XO-888
R1	Resistor, 10K Ohm, 5%, 1/4W	XO-18	U18	IC, 74HC74, Dual "D" Flip-Flop	XO-939
R2,R10,R11,	VR1	VR1	U19,U21	IC, LM339, Quad Comparators	XO-583
R18,R28-R30	Resistor, 560K Ohm, 5%, 1/4W	XO-169	U21	Zener Diode, 1N5225B, 3V, 5%	XO-269
R3	Resistor, 330K Ohm, 5%, 1/4W	XO-47	XTAL1	Crystal, 4MHZ	XO-366
R5,R6	Resistor, 3K Ohm, 5%, 1/4W	XO-23	A1P1	Header, 6 Position	XO-910
R4,R7-R9	Resistor, 2.2K Ohm, 5%, 1/4W	A1P2,A1P3	A1P2	Header, 20 Position (Ribbon)	XO-940
R12-R14	Resistor, 3.3K Ohm, 5%, 1/4W	XO-27	A1P4	Header, 10 Position	XO-912
R15-R17	Resistor, 4.7K Ohm, 5%, 1/4W	XO-38	A1P5	Header, 12 Position	XO-913
R19-R27	Resistor, 330 Ohm, 5%, 1/4W	XO-7	Jumper, 22 Gauge, (2)	XO-469	
R31	Resistor, 100K Ohm, 5%, 1/4W	XO-34	SOCKET	Socket, 28 Pin Dip	XO-536
R32-R33	Resistor, 100K Ohm, 5%, 1/4W	XO-45			
R34	Resistor, 1K Ohm, 5%, 1/4W	XO-5			
R35	Resistor, 100 Ohm, 5%, 1/4W	XO-28			
SIP1,SIP2	Resistor Pack, 10K Ohm X 7, 5%, 1/4W	XO-926	C40-C50	Capacitor, .01UF, +80% -20%, 50V	XO-229
SIP3	Resistor Pack, 4.7K Ohm X 8	XO-161	R36-R38	Resistor, 4.7K Ohm, 5%, 1/4W	XO-7
SW1	Switch, N.O.	XO-897	SIP4	Resistor Pack, 4.7K Ohm X 8, 5%, 1/4W	XO-161
U1	IC, 65C02P2, CPU, 2MHZ	XO-927	A1P6	Header, 18 Position	XO-916

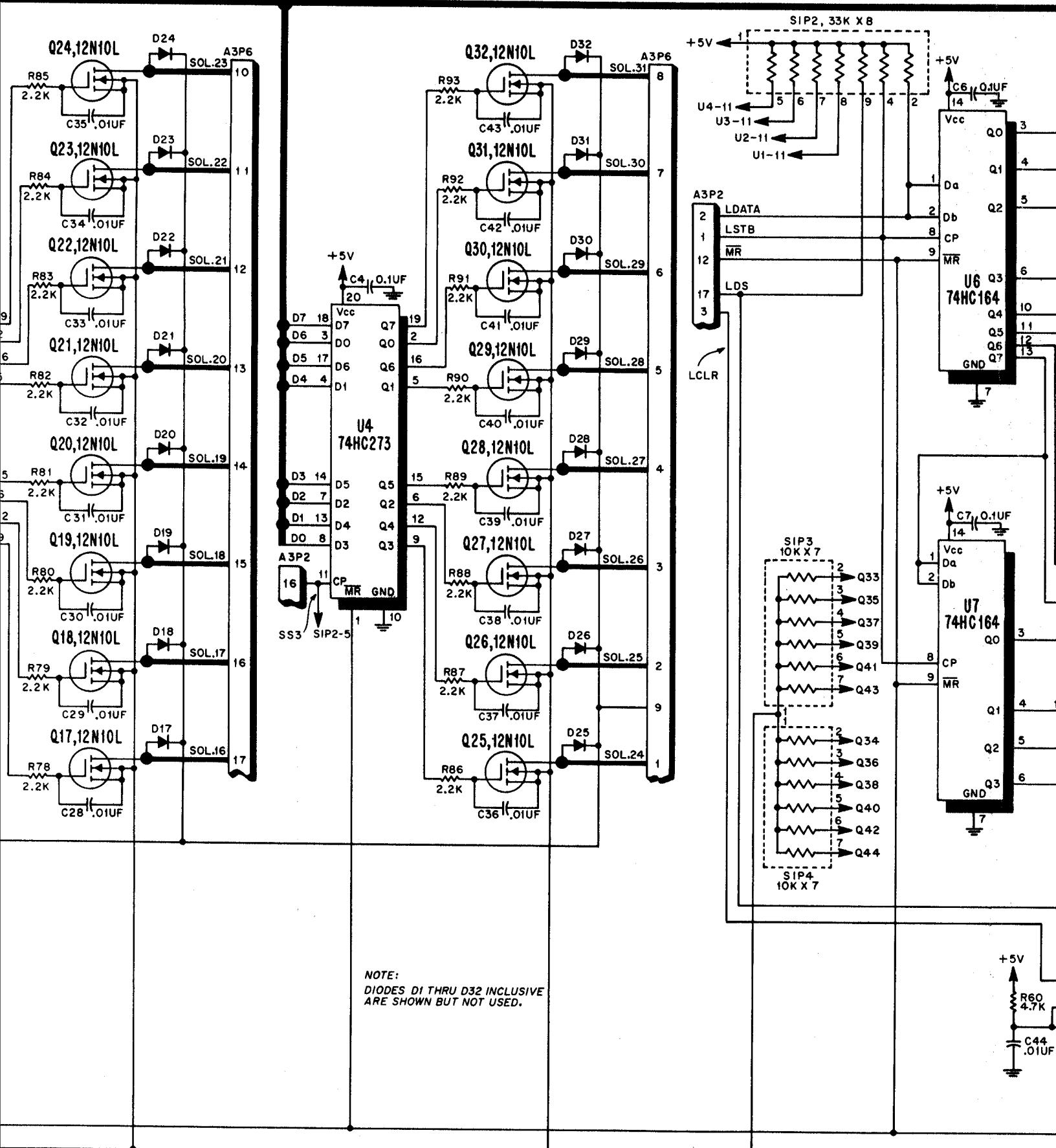


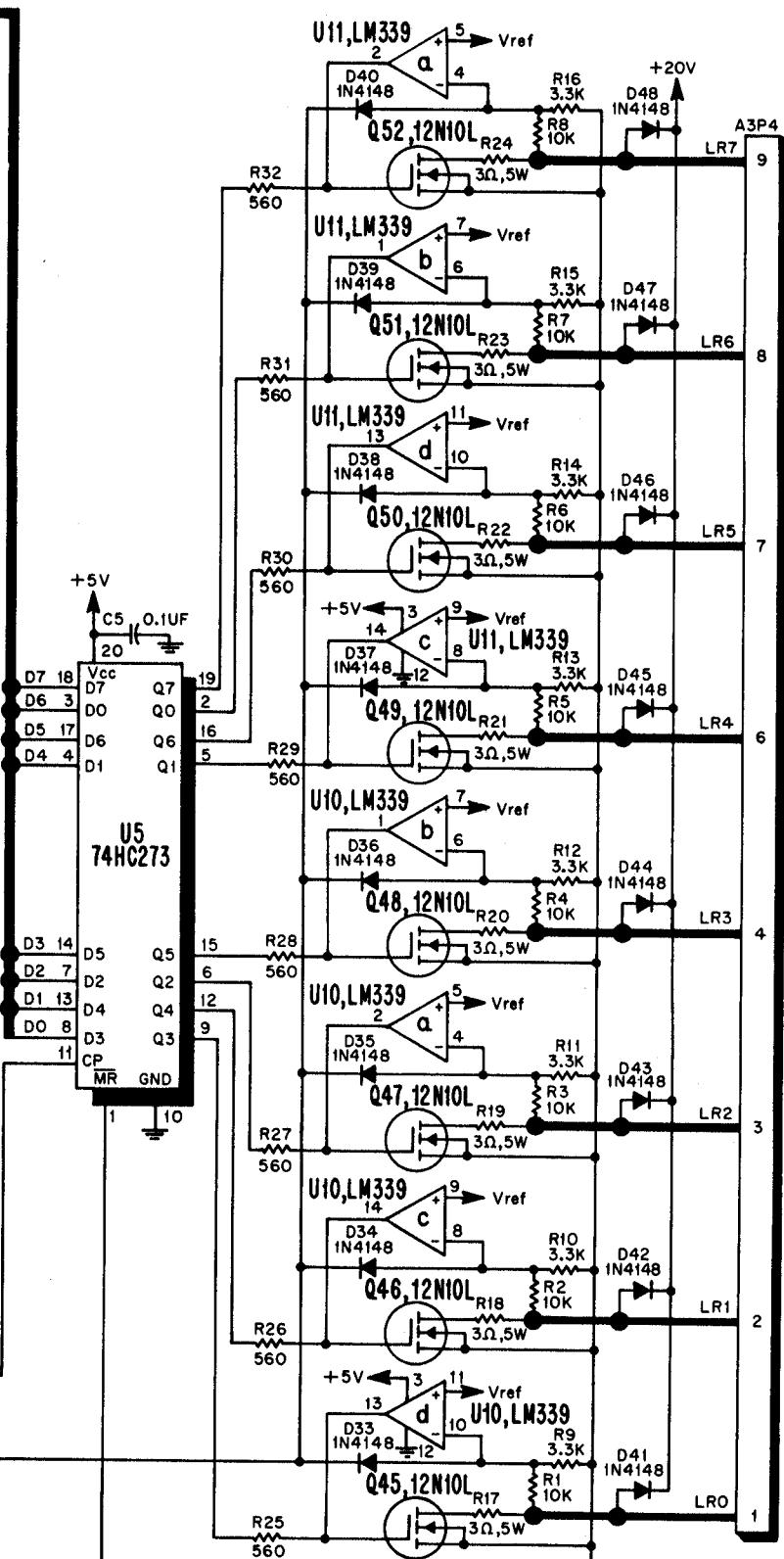
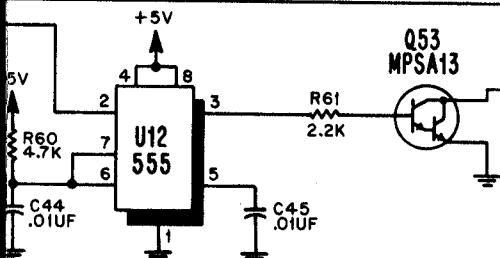
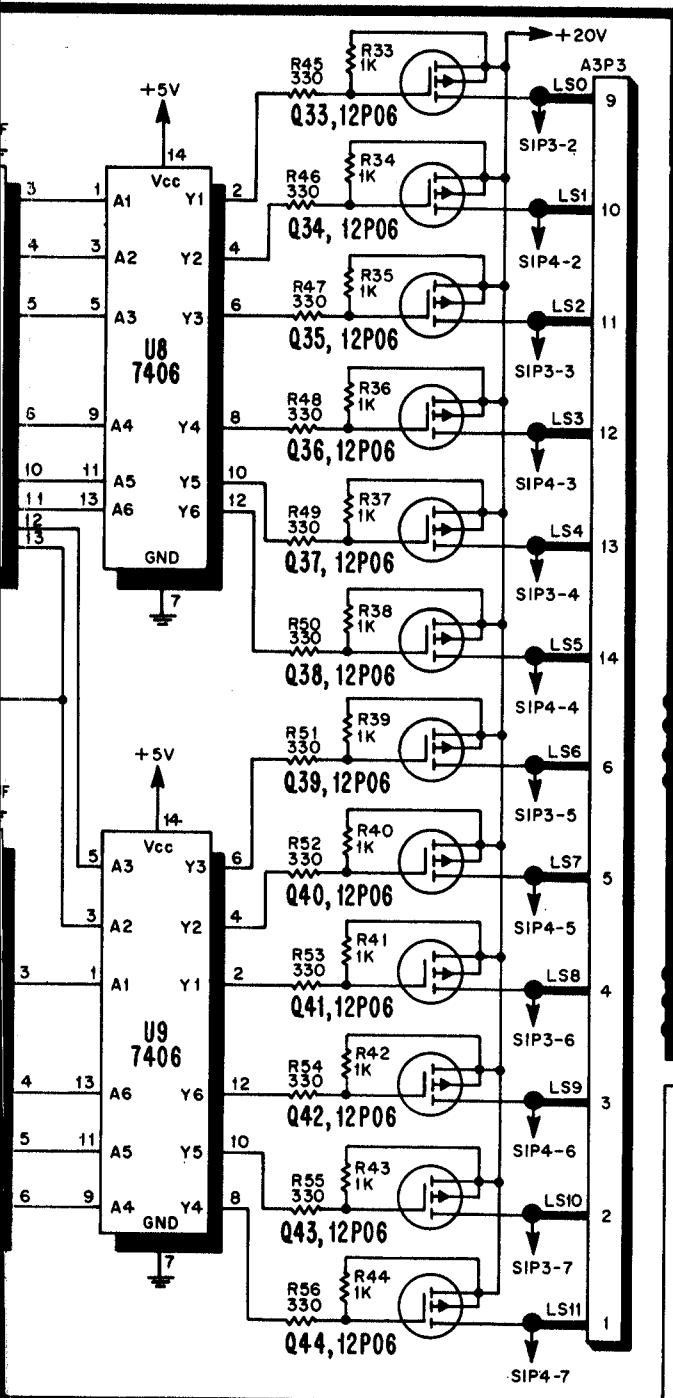
## VI. WIRING AND SCHEMATIC DIAGRAMS, PARTS LISTS







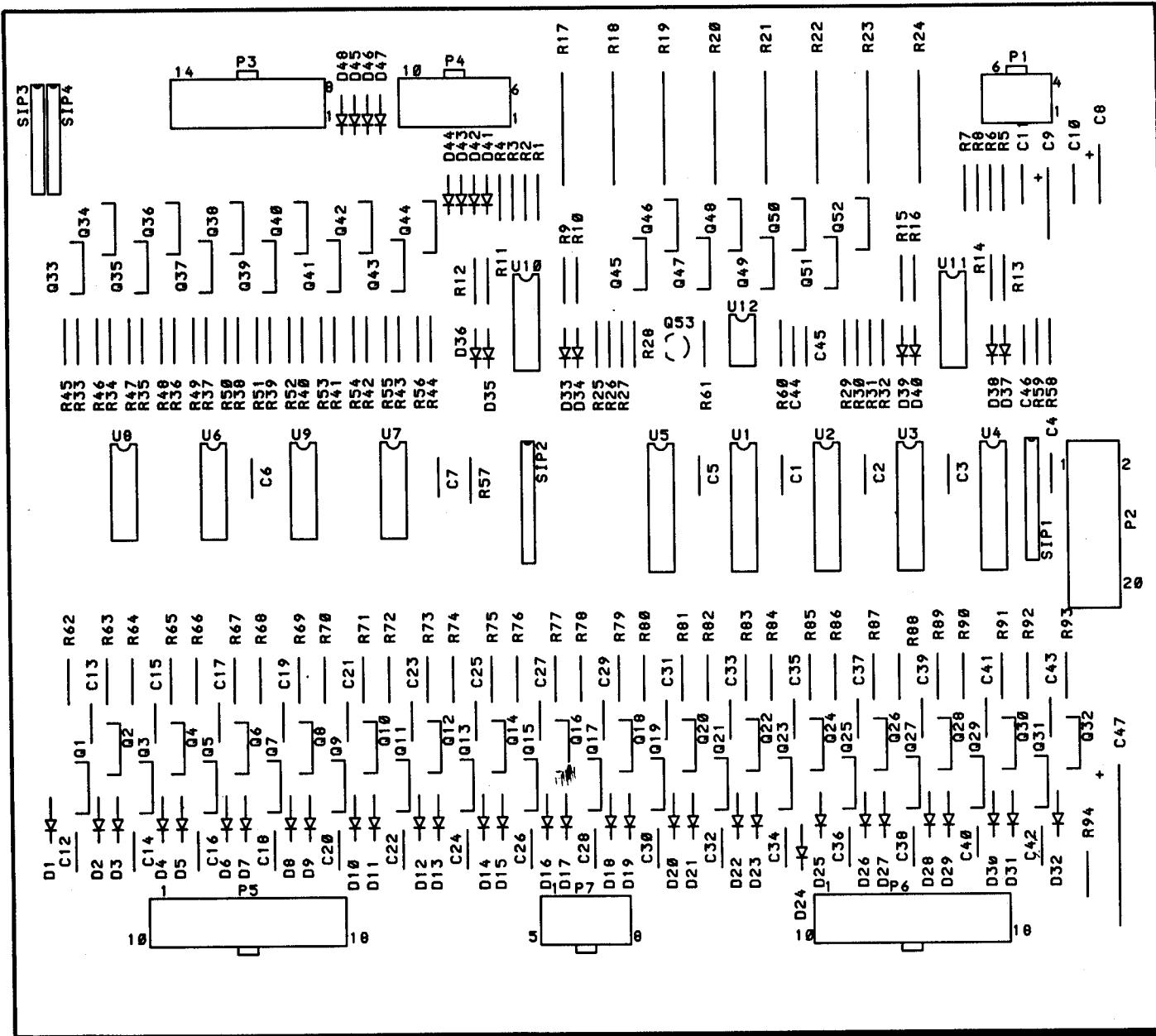




Premier Technology		
TITLE DRIVER BOARD (A3) SCHEMATIC DIAGRAM		
DRAWN BY R.P.B.	APPROVED BY R.H.M.	DATE 10-12-89
		E-27034

# VI. WIRING AND SCHEMATIC DIAGRAMS, PARTS LISTS

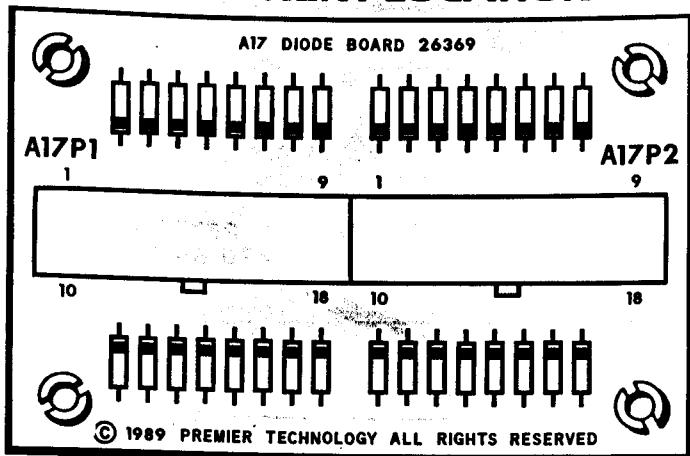
## DRIVER BOARD (A3) COMPONENT LOCATION



## DRIVER BOARD (A3) PARTS LIST

REFERENCE	DESCRIPTION	PART NUMBER	REFERENCE	DESCRIPTION	PART NUMBER
C1-C7	Driver Board Assembly (A3)	MA-1358	R58	Resistor, 6.81K Ohm, 1%, 1/4W	XO-943
C8	Capacitor, 0.1 UF, +80% -20%, 50V	XO-230	R59	Resistor, 1K Ohm, 1%, 1/4W	XO-944
C9	Capacitor, 10UF, 20%, 25V	XO-127	R60	Resistor, 4.7K Ohm, 5%, 1/4W	XO-7
C10,C11	Capacitor, 10UF, +80% -20%, 25V	XO-225	R61-R93	Resistor, 2.2K Ohm, 5%, 1/4W	XO-27
C45,C46	Capacitor, .01UF, +80% -20%, 50V	XO-229	R94	Resistor, 27K Ohm, 5%, 1/4W	XO-11
C12-C44	Capacitor, .01UF, 10%, 50V	XO-696	SIP1	Resistor Pack, 4.7K Ohm X 8.5%, 1/4W	XO-161
C47	Capacitor, 100UF, 20%, 100V	XO-958	SIP2	Resistor Pack, 33K Ohm X 8.5%, 1/4W	XO-945
D33-D48	Diode, 1N4148	XO-261	SIP3	Resistor Pack, 10K Ohm X 7.5%, 1/4W	XO-926
Q1-Q32,	Transistor, RFP12N10L,	XO-947	U1-U5	IC, Octal "D" Flip-Flops, 74HC273	XO-949
Q45-Q54	N-Channel MOSFET	XO-948	U6-U7	IC, Shift Register, 74HC164	XO-950
Q33-Q44	Transistor, RFP12P06,	XO-948	U8-U9	IC, Buffer, 7406	XO-85
Q53	P-Channel MOSFET		U10-U11	IC, Quad Comparator, LM339	XO-583
R1-R8	Transistor, MPSA13, Darlington	XO-304	U12	IC, Timer, NE555	XO-631
R9-R16	Resistor, 10K Ohm, 5%, 1/4W	XO-18	A3P1	Header, 6 Position	XO-910
R17-R24	Resistor, 3.3K Ohm, 5%, 1/4W	XO-38	A3P2	Header, 20 Position (Ribbon)	XO-940
R25-R32	Resistor, 3 Ohm, 5%, 5W	XO-942	A3P3	Header, 14 Position	XO-914
R33-R44	Resistor, 560 Ohm, 5%, 1/4W	XO-36	A3P4	Header, 10 Position	XO-912
R45-R56	Resistor, 1K Ohm, 5%, 1/4W	XO-5	A3P5	Header, 18 Position	XO-916
R57	Resistor, 330 Ohm, 5%, 1/4W	XO-34	A3P6		
	Resistor, 100K Ohm, 5%, 1/4W	XO-45	A3P7	Header, 8 Position	XO-911

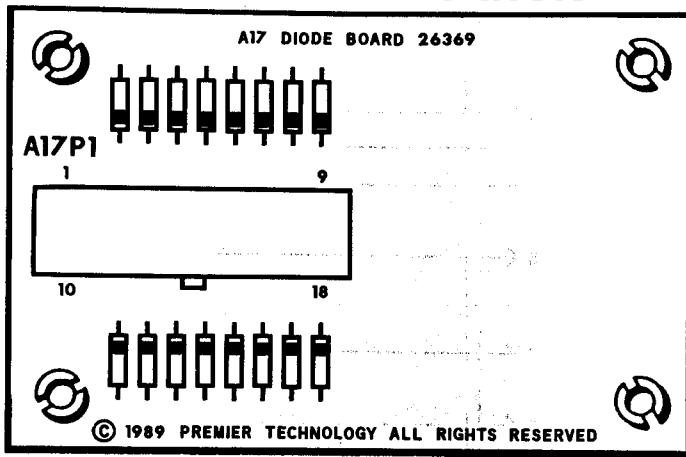
## DIODE BOARD (A17) COMPONENT LOCATION



## DIODE BOARD (A17) PARTS LIST

REFERENCE	DESCRIPTION	PART NUM
D1-D32 P1,P2	Diode Matrix Assembly (1A17) Diode, 1N4148 Header, 18 Position Circuit Board Support (4)	MA XO XO 23

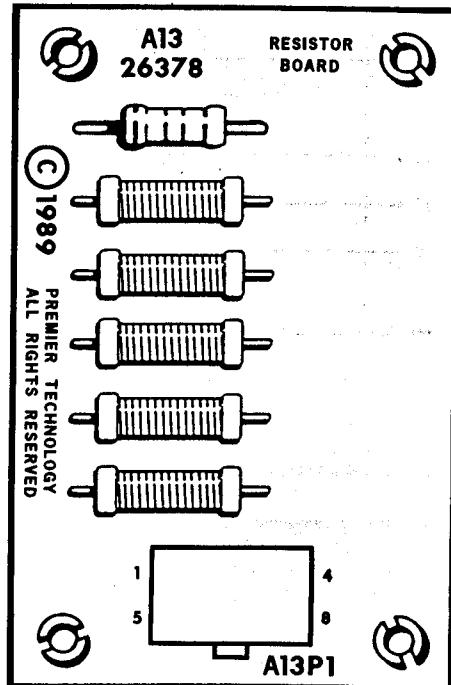
## DIODE BOARD (A17) COMPONENT LOCATION



## DIODE BOARD (A17) PARTS LIST

REFERENCE	DESCRIPTION	PART NUM
D1-D16 P1	Diode Matrix Assembly (2A17) Diode 1N4148 Header, 18 Position Circuit Board Support (4)	MA XO XO 23

## RESISTOR BOARD (A13) COMPONENT LOCATION

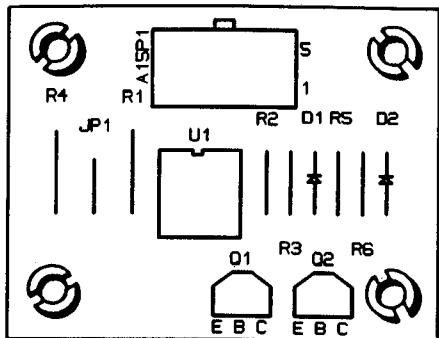


## RESISTOR BOARD (A13) PARTS LIST

REFERENCE	DESCRIPTION	PART NUM
R1	Resistor Board Assembly (A13)	MA
R2-R6	Resistor, 6.6 Ohm, 5%, 5W	XO
JP1	Resistor, 3.3 Ohm, 5%, 7W	XO
P1	Jumper, 22 Gauge	XO
	Header, 8 Position	XO
	Circuit Board Support (4)	23

# STATIC DIAGRAMS, PARTS LISTS

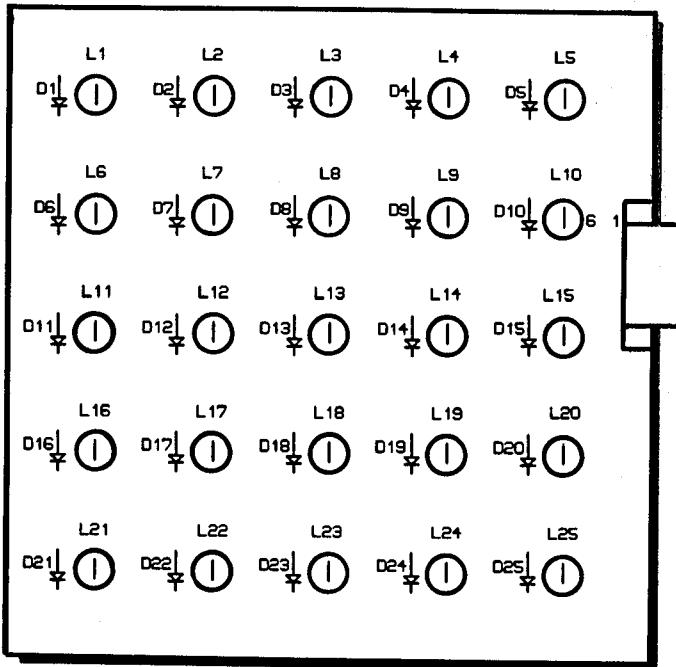
## SENSOR BOARD (A15) COMPONENT LOCATION



## SENSOR BOARD (A15) PARTS LIST

REFERENCE	DESCRIPTION	PART NUMBER
D1,D2	Sensor Board Assembly (A15)	MA-1334
Diode, 1N4148	XO-261	
JP1	Jumper, 22 Gauge	XO-469
Q1,Q2	Transistor, 2N3906 (PNP)	XO-588
R1,R4	Resistor, 10K Ohm, 5%, 1/2W	XO-62
R2,R5	Resistor, 47K Ohm, 5%, 1/4W	XO-30
R3,R6	Resistor, 22K Ohm, 5%, 1/4W	XO-42
U1	IC, Optocoupler, MCT6	XO-1000
A15P1	Header, 8 Position	XO-911
	Spacer (4)	23984

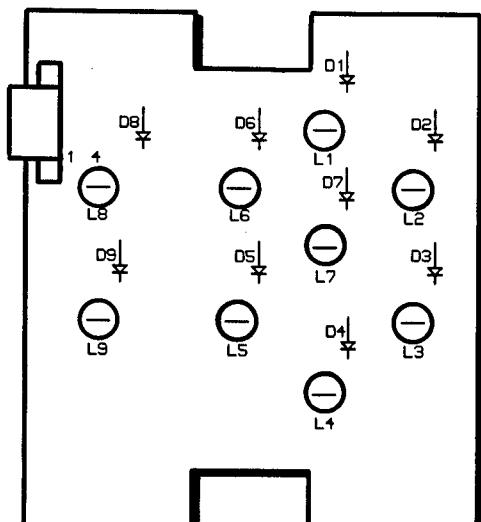
## LAMP BOARD COMPONENT LOCATION



## LAMP BOARD PARTS LIST

REFERENCE	DESCRIPTION	PART NUMBER
D1-D25	Lamp Board Assembly	MA-1335
L1-L25	Diode, 1N4004	XO-254
P1	Lamp, Type #44	LA-0
	Header, 10 Position	XO-998
	Socket, Lamp (25)	XO-962

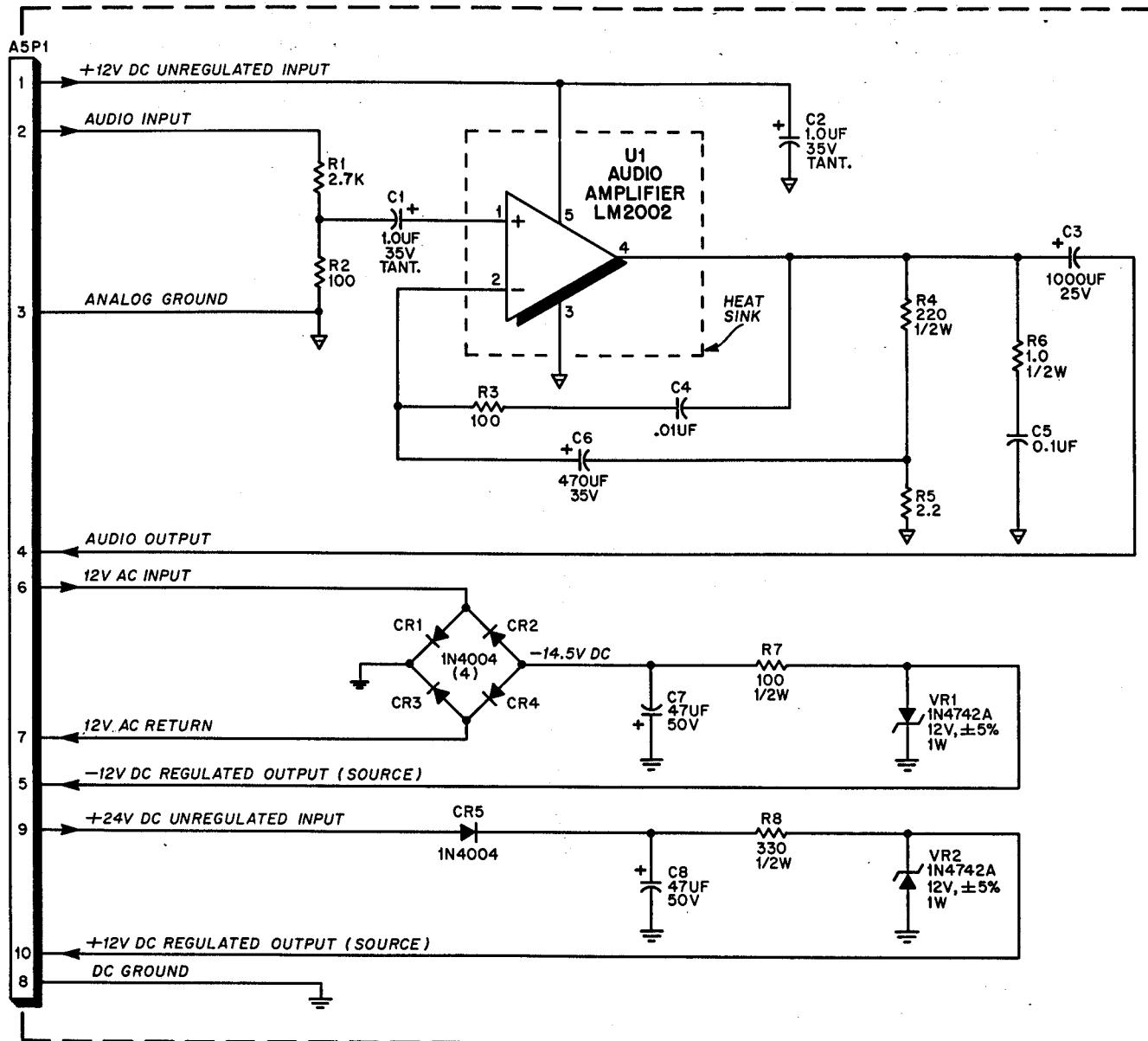
## LAMP BOARD COMPONENT LOCATION



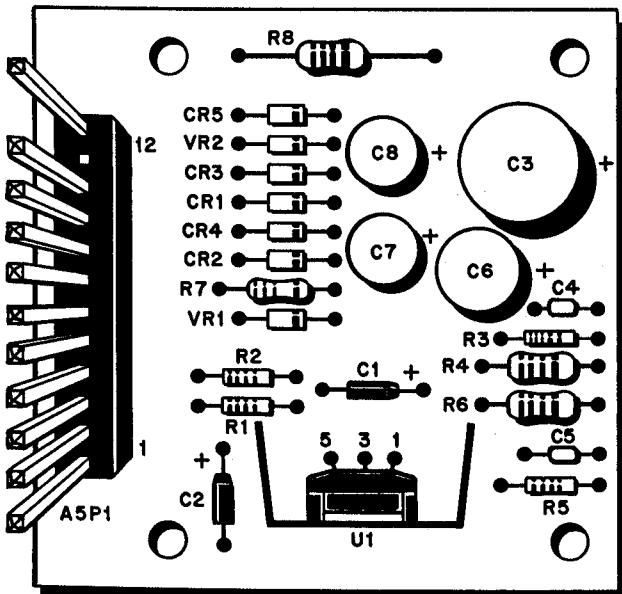
## LAMP BOARD PARTS LIST

REFERENCE	DESCRIPTION	PART NUMBER
D1-D9	Lamp Segment Board Assembly	MA-1336
L1-L9	Diode, 1N4004	XO-254
P1	Lamp, Type #44	LA-0
	Header, 6 Position	XO-999
	Socket, Lamp (9)	XO-962

# VI. WIRING AND SCHEMATIC DIAGRAMS, PARTS LISTS



## AUXILIARY POWER SUPPLY (A5) COMPONENT LOCATION

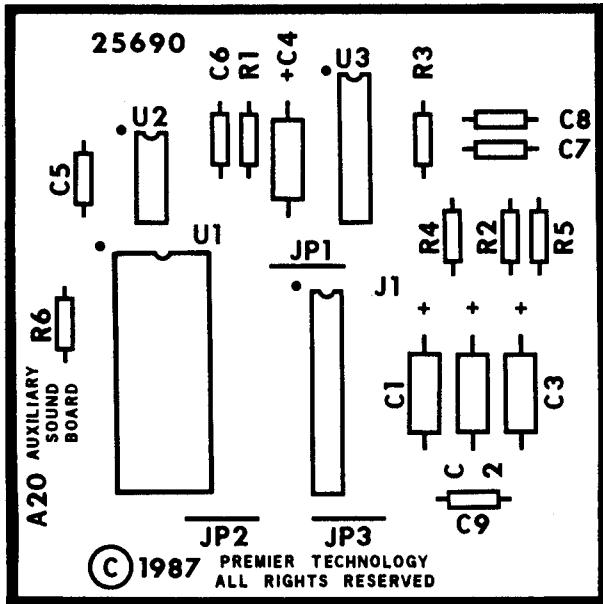


Premier Technology			
TITLE AUXILIARY POWER SUPPLY (A5) SCHEMATIC DIAGRAM			
DRAWN BY	APPROVED	DATE	E-24715
B.P.S.	RHM	9-OCT-85	

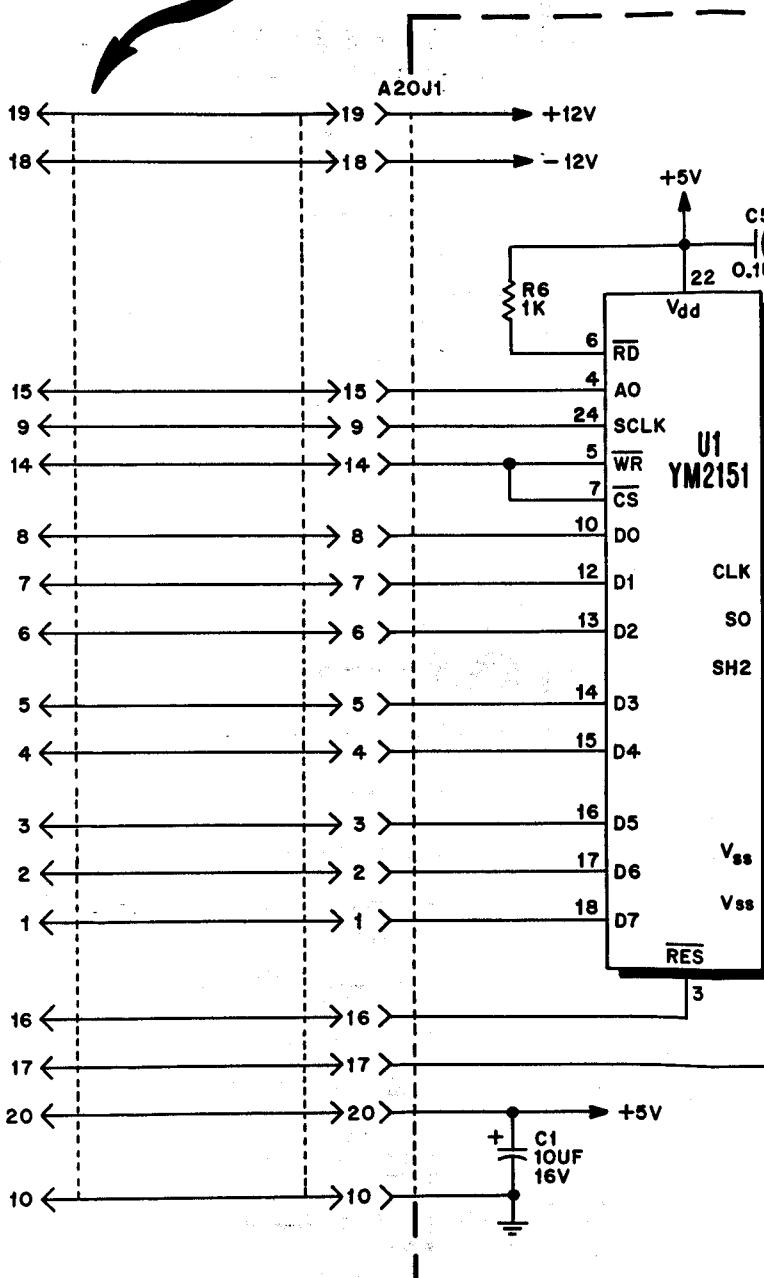
## AUXILIARY POWER SUPPLY (A5) PARTS LIST

REFERENCE	DESCRIPTION	PART NUMBER
C1, C2	Auxiliary Power Supply Capacitor, 1UF, 10%, 35V, TANT	MA-1366
C3	Capacitor, 1000UF, 25V	XO-715
C4	Capacitor, .01UF, +80%,-20%, 50V	XO-229
C5	Capacitor, 0.1UF, +80% -20%, 50V	XO-230
C6	Capacitor, 470UF, 35V	XO-284
C7, C8	Capacitor, 47UF, 50V	XO-210
CR1-CR5	Diode, 1N4004	XO-254
R1	Resistor, 2.7K Ohm, 5%, 1/4W	XO-6
R2, R3	Resistor, 100 Ohm, 5%, 1/4W	XO-28
R4	Resistor, 220 Ohm, 5%, 1/2W	XO-185
R5	Resistor, 2.2 Ohm, 5%, 1/4W	XO-595
R6	Resistor, 1 Ohm, 5%, 1/2W	XO-593
R7	Resistor, 100 Ohm, 5%, 1/2W	XO-52
R8	Resistor, 330 Ohm, 5%, 1/2W	XO-1001
U1	Audio Amplifier, LM2002	XO-550
VR1, VR2	Diode, Zener, 1N4742A, 12V, ±5%, 1W	XO-257
	Heat Sink	XO-472
	12 Position Connector	XO-879

## AUXILIARY SOUND BOARD (A20) COMPONENT LOCATION

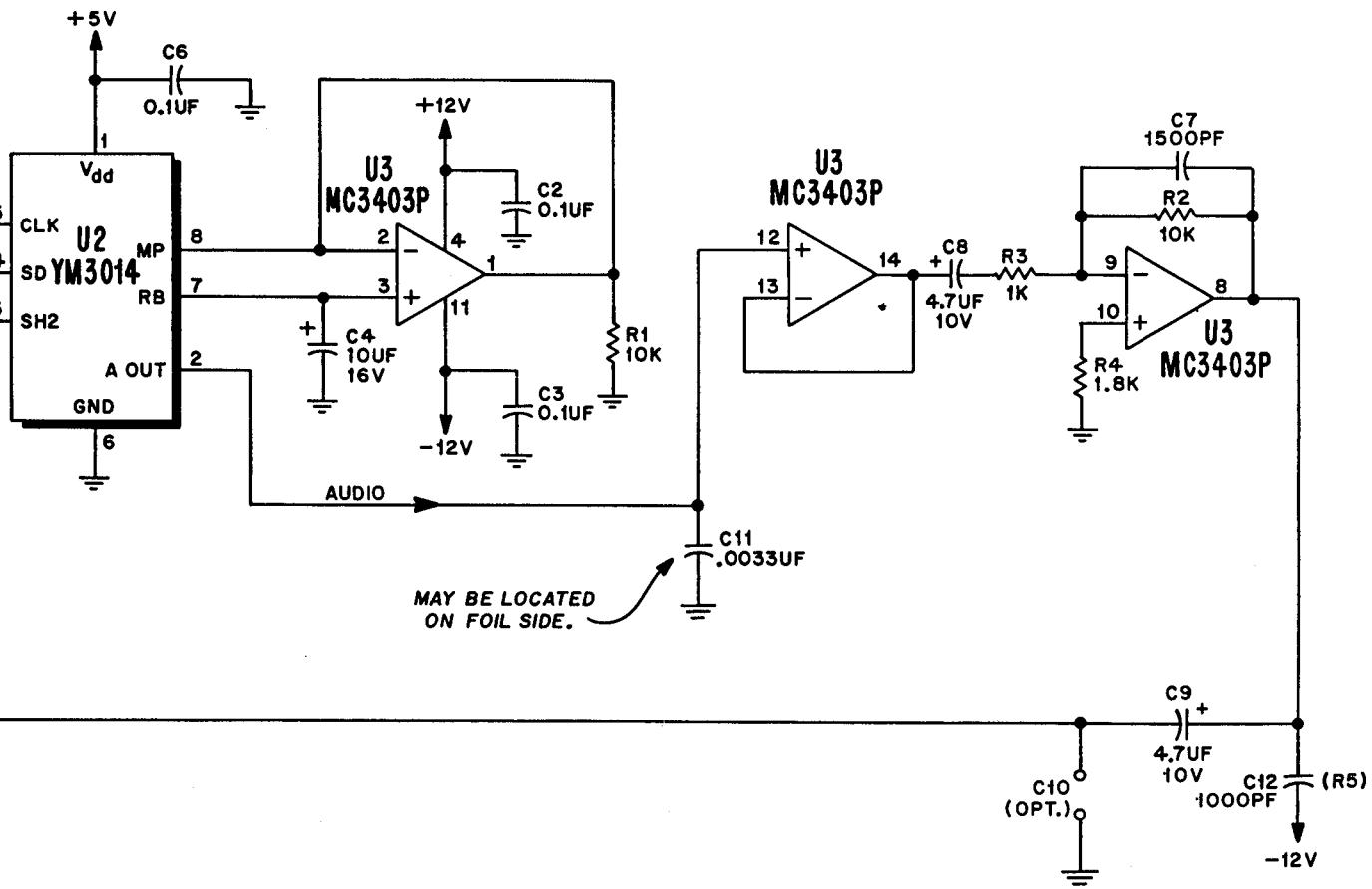
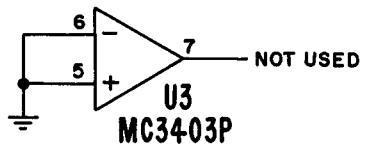


26778 RIBBON CABLE  
(TO S4 EXPAND SOCKET  
MA-886-720 SOUND BOARD)



## AUXILIARY SOUND BOARD (A20) PARTS LIST

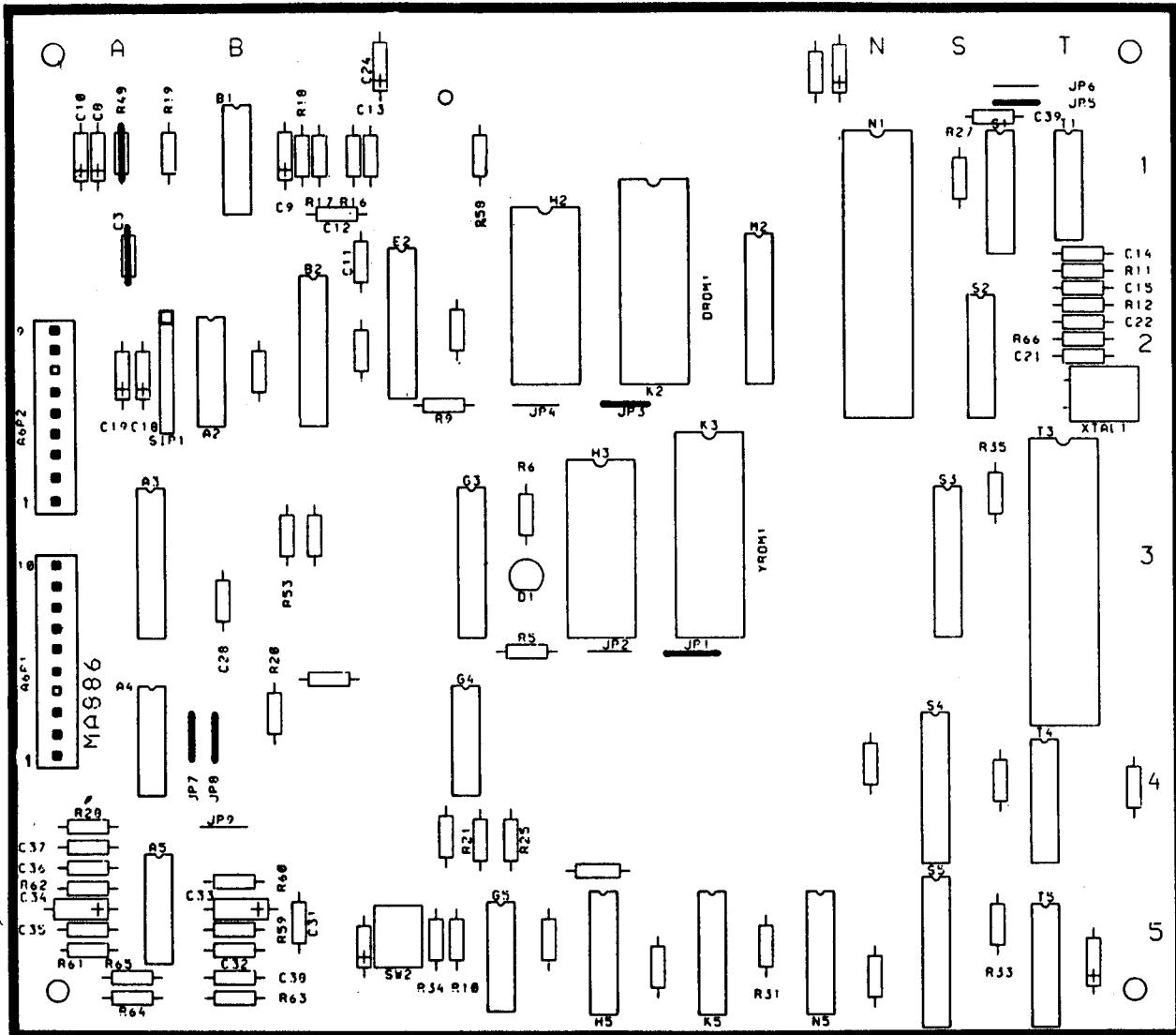
REFERENCE	DESCRIPTION	PART NUMBER
	AUXILIARY SOUND BOARD	MA-1033
C1, C4	CAPACITOR, 10UF, +80%-20%, 16V	XO-846
C2, C3, C5, C6	CAPACITOR, 0.1UF, +80%-20%, 50V	XO-230
C7	CAPACITOR, 1500PF, 5%, 50V	XO-954
C8, C9	CAPACITOR, 4.7UF, 10%, 10V	XO-226
C11	CAPACITOR, 3300PF, 10%, 100V	XO-600
C12 (R5)	CAPACITOR, 1000PF, 10%, 100V	XO-296
R1	RESISTOR, 10K OHM, 5%, 1/4W	XO-18
R2	RESISTOR, 10K OHM, 1%, 1/4W	XO-956
R3, R6	RESISTOR, 1K OHM, 5%, 1/4W	XO-5
R4	RESISTOR, 1.8K OHM, 5%, 1/4W	XO-37
U1	IC, SOUND CHIP, YM2151	XO-882
U2	IC, SERIAL DAC, YM3014	XO-883
U3	IC, QUAD OP-AMP, MC3403P	XO-953
	JUMPER, 22 GAUGE (3)	XO-469
	SOCKET, 20 PIN DIP	XO-491
	SOCKET, 24 PIN DIP	XO-529
	RIBBON CABLE	25699



Premier Technology		
TITLE AUXILIARY SOUND BOARD (A20)		
SCHEMATIC DIAGRAM		
DRAWN BY: 2020	APPROVED DATE: 9-20-88	E-26145
RHM		

# VI. WIRING AND SCHEMATIC DIAGRAMS, PARTS LISTS

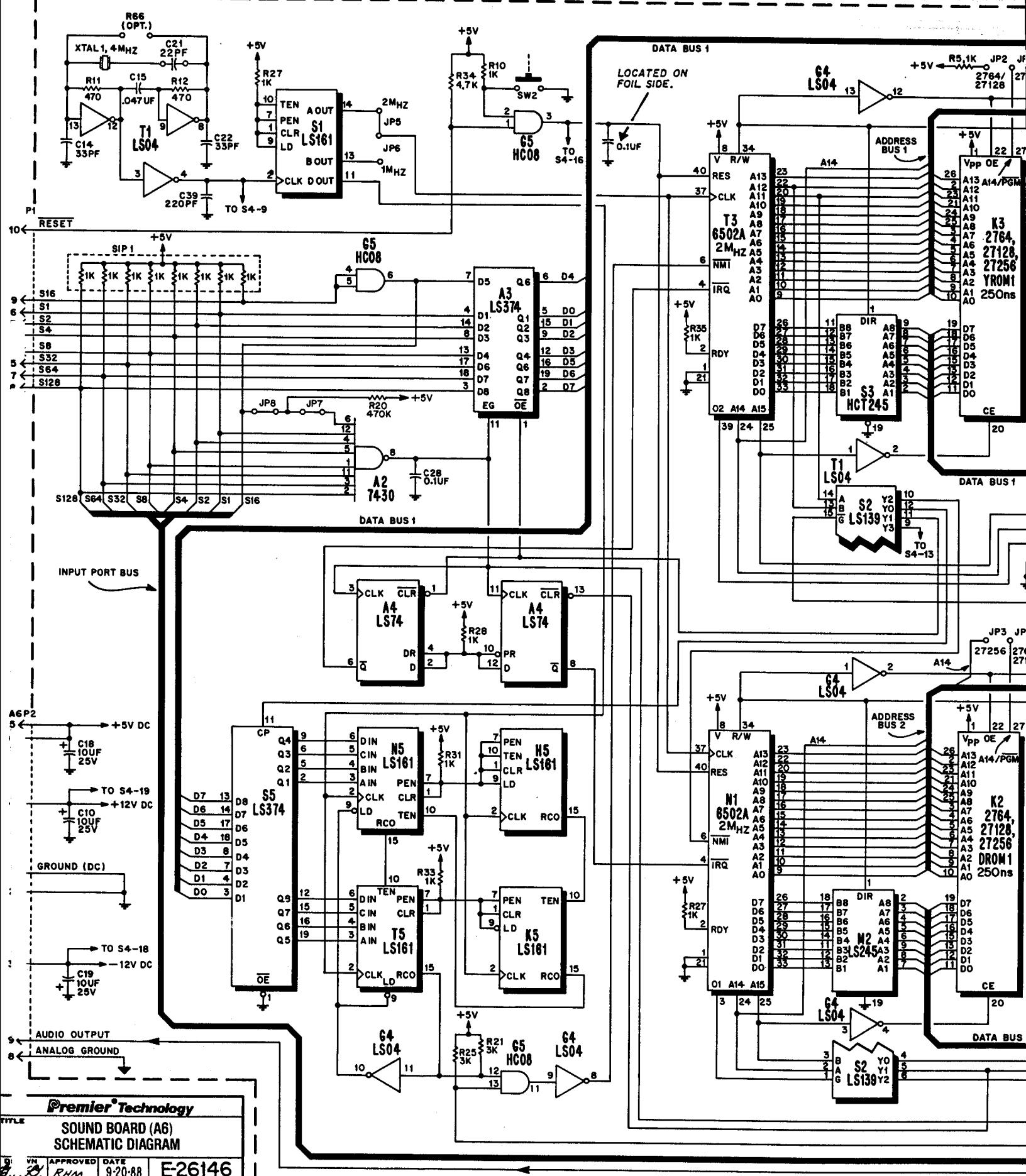
## SOUND BOARD (A6) COMPONENT LOCATION



## SOUND BOARD (A6) PARTS LIST

REFERENCE	DESCRIPTION	PART NUMBER	REFERENCE	DESCRIPTION	PART NUMBER
C13,C37	Sound Board Assembly (A6)	MA-886-720	R61,R62,R63	Resistor, 33K Ohm, 5%, 1/4W	XO-43
C8,C9,C10, C18,C19,C24	Capacitor, 1UF, 20%, 50V (Non. Polar.)	XO-746	R64	Resistor, 100K Ohm, 5%, 1/4W	XO-45
C33,C34 AND THREE UNMARKED CAPACITORS	Capacitor, 10UF, 20%, 25V (Tantalum)	XO-127	R65	Resistor, 27K Ohm, 5%, 1/4W	XO-11
C11,C12	Capacitor, 10PF, +80% -20%, 50V	XO-635	A2	IC, 7430, 8 Input NAND Gate	XO-643
C14,C22	Capacitor, 33PF, 10%, 100V	XO-896	A3,B2,S5	IC, 74LS374, Octal "D" Flip Flop	XO-96
C15	Capacitor, .047UF, 20%, 50V	XO-638	A4	IC, 74LS74, Dual "D" Flip Flop	XO-434
C21	Capacitor, 22PF, 10%, 50V	XO-633	A5	IC, MC3403P, Quad Op-Amp	XO-953
C28 AND SIXTEEN UNMARKED CAPACITORS	Capacitor, 0.1UF, +80% -20%, 50V	XO-230	B1	IC, MC3403P, Quad Op-Amp	XO-953
C31,C32	Capacitor, 0.1UF, 10%, 100V	XO-784	E2	IC, AD7528J, Multiplier DAC	XO-647
C35	Capacitor, 1000PF, 10%, 100V	XO-298	G3	IC, 74LS377, Octal "D" Flip Flop	XO-97
C36	Capacitor, 2200PF, 10%, 100V	XO-289	G4,T1	IC, 74LS04, Hex Inverter	XO-418
C38	Capacitor, .0033UF, 10%, 100V	XO-600	G5	IC, 74HC08, Quad 2 Input "AND" Gate	XO-872
C39	Capacitor, 220PF, 10%, 100V	XO-684	H2,H3	IC, 6116LP-15, 2K X 8 RAM	XO-928
D1	Diode, MW5752, (LED, Red)	XO-270	H5,K5,N5	IC, 74LS161, Synchronous Presetable	XO-440
R5,R9,R10, R27,R28,R31, R33,R35	Resistor, 1K Ohm, 5%, 1/4W	XO-5	S1,T5	Binary Counter	
R6	Resistor, 240 Ohm, 5%, 1/4W	XO-173	K2,K3	IC, Specified Per Game	
R11,R12	Resistor, 470 Ohm, 5%, 1/4W	XO-35	M2	IC, 74LS245, Octal Bus Transceiver	XO-79
R21,R25	Resistor, 3K Ohm, 5%, 1/4W	XO-23	N1,T3	IC, 6502A, CPU	XO-893
R16,R17,R58	Resistor, 10K Ohm, 5%, 1/4W	XO-18	S2	IC, 74LS139, Dual 1 of 4 Decoder	XO-419
R18	Resistor, 6.8K Ohm, 5%, 1/4W	XO-8	S3	IC, 74HCT245, Octal Bus Transceiver	XO-891
R20,R34	Resistor, 4.7K Ohm, 5%, 1/4W	XO-7	T4	IC, 74LS138, 1 of 8 Decoder	XO-437
			SIP 1	Resistor Pack 1K Ohm X 8	XO-493
			SW2	Switch, Pushbutton	XO-897
			XTAL 1	Crystal, 4 MHZ	XO-366
			A6P1,A6P2	Connector (2)	XO-879
				28 Pin Dip Socket (2)	XO-530
				Jumper, 22 Gauge (7)	XO-469
				20 Pin Dip Socket	XO-491

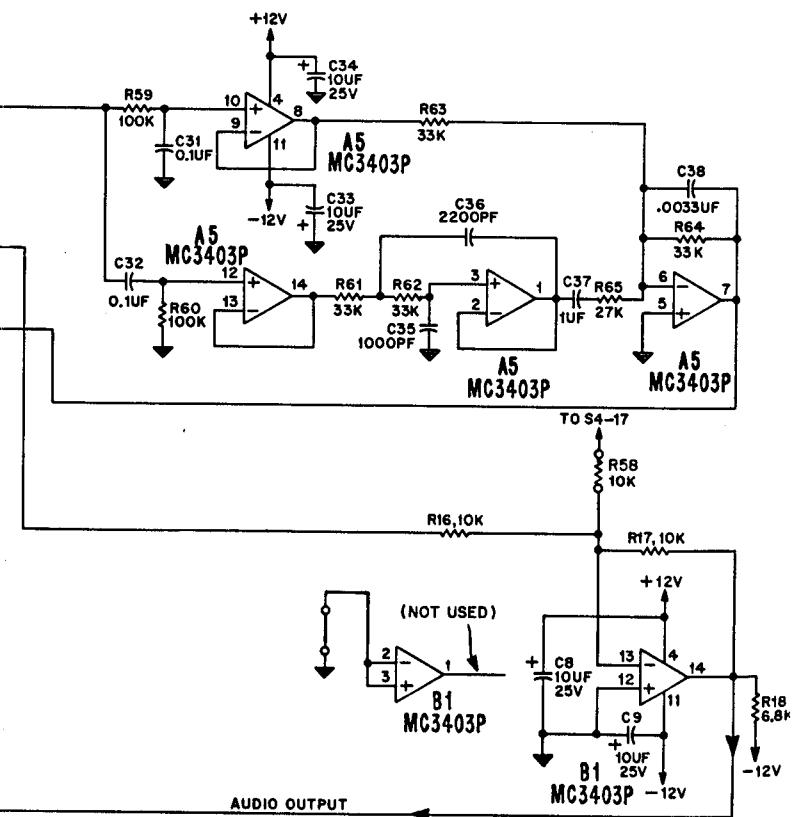
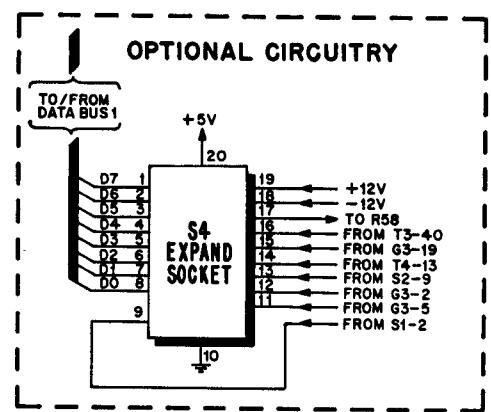
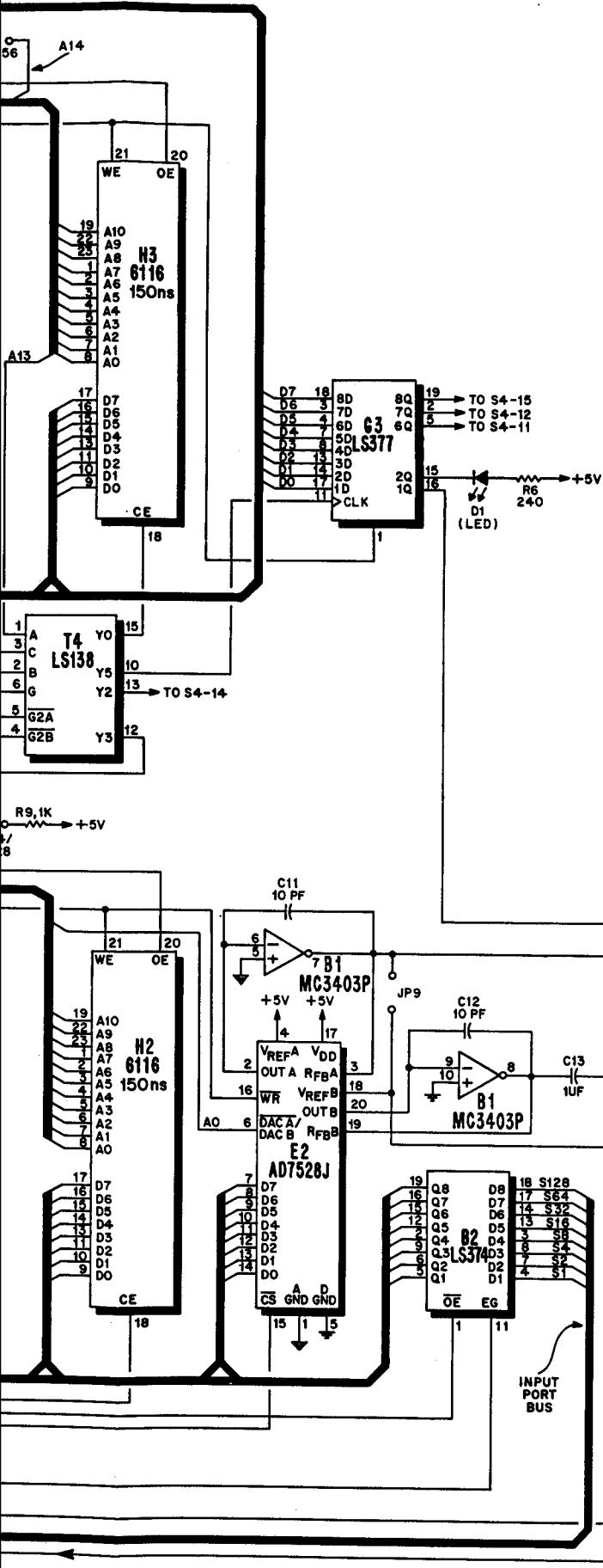
# VI. WIRING AND SCH



Premier Technology  
SOUND BOARD (A6)  
SCHEMATIC DIAGRAM  
E-26146

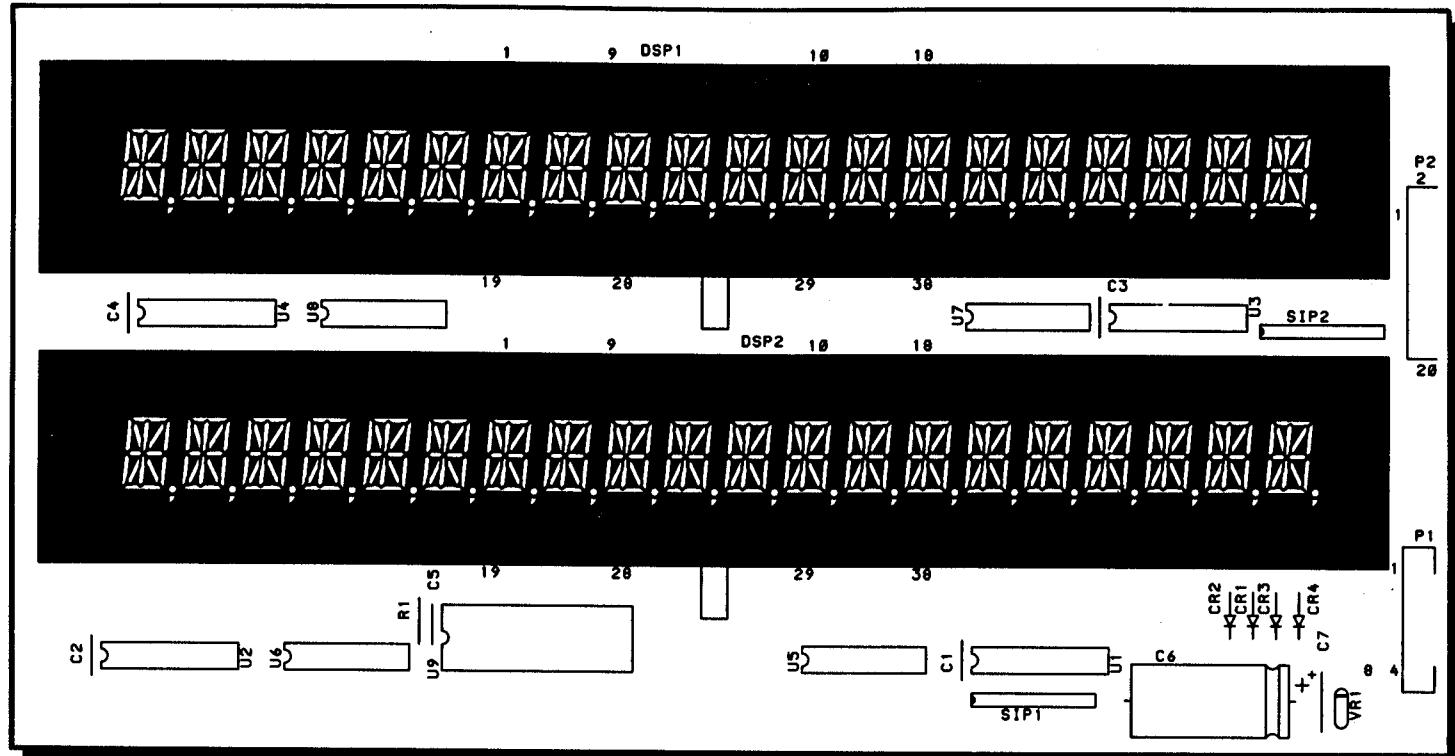
APPROVED DATE 9-20-88 E-26146

# EMATIC DIAGRAMS, PARTS LISTS



# VI. WIRING AND SCHEMATIC DIAGRAMS, PARTS LISTS

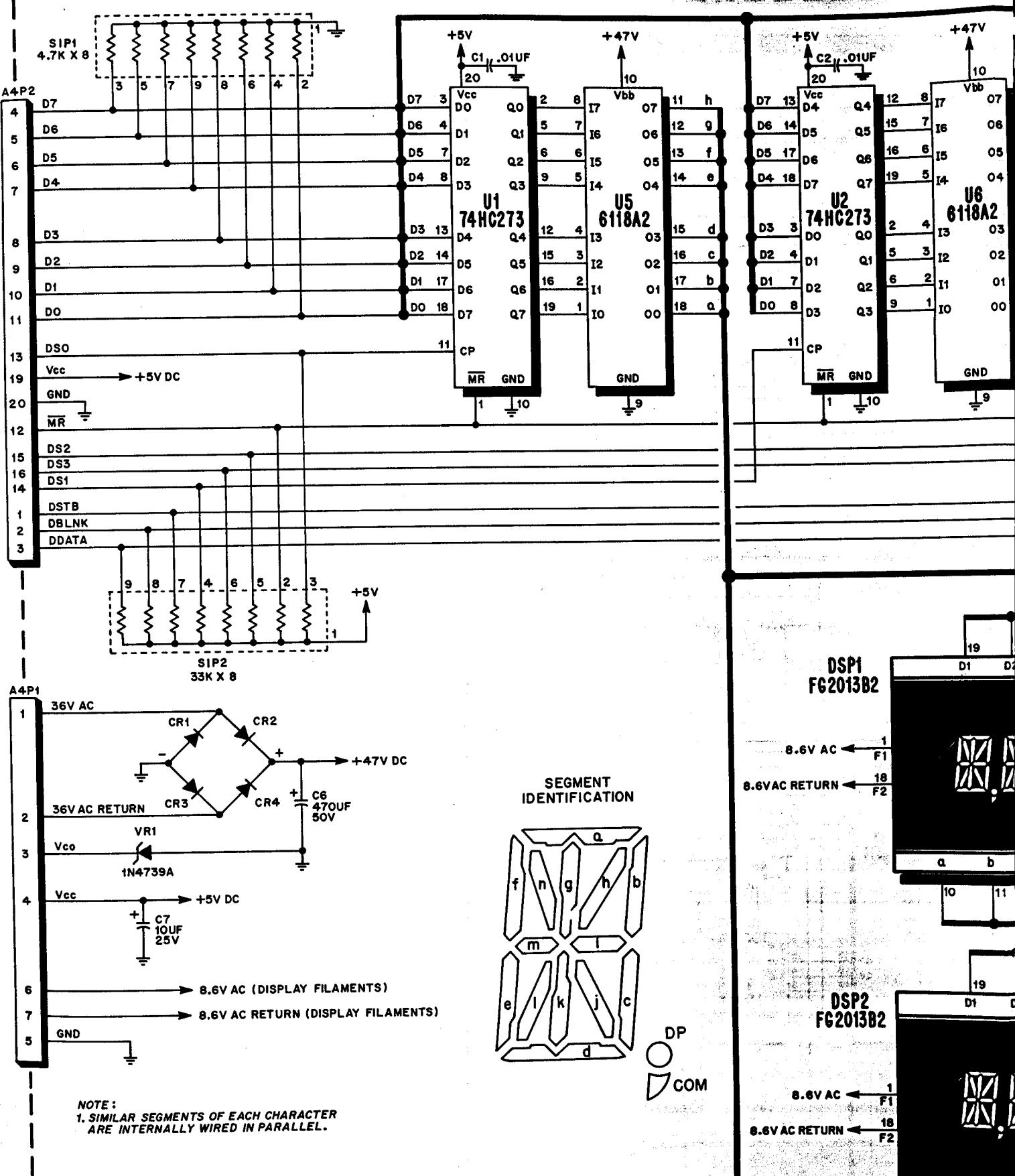
## DISPLAY BOARD (A4) COMPONENT LOCATION



## DISPLAY BOARD (A4) PARTS LIST

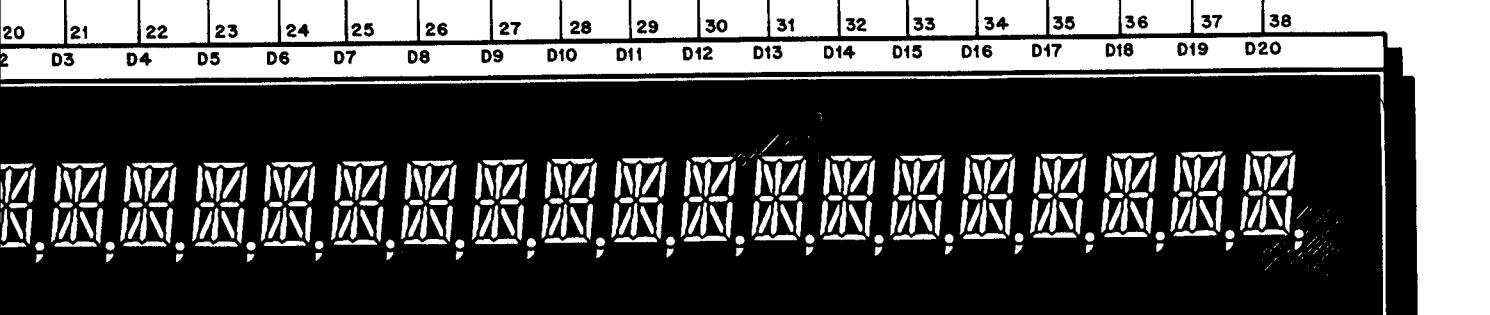
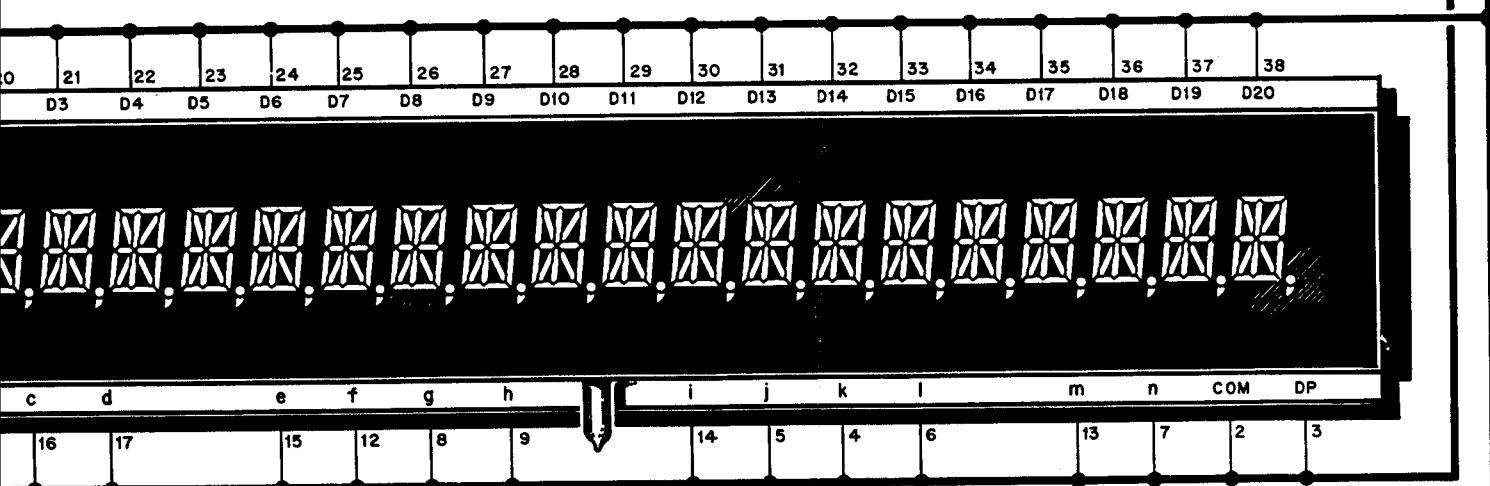
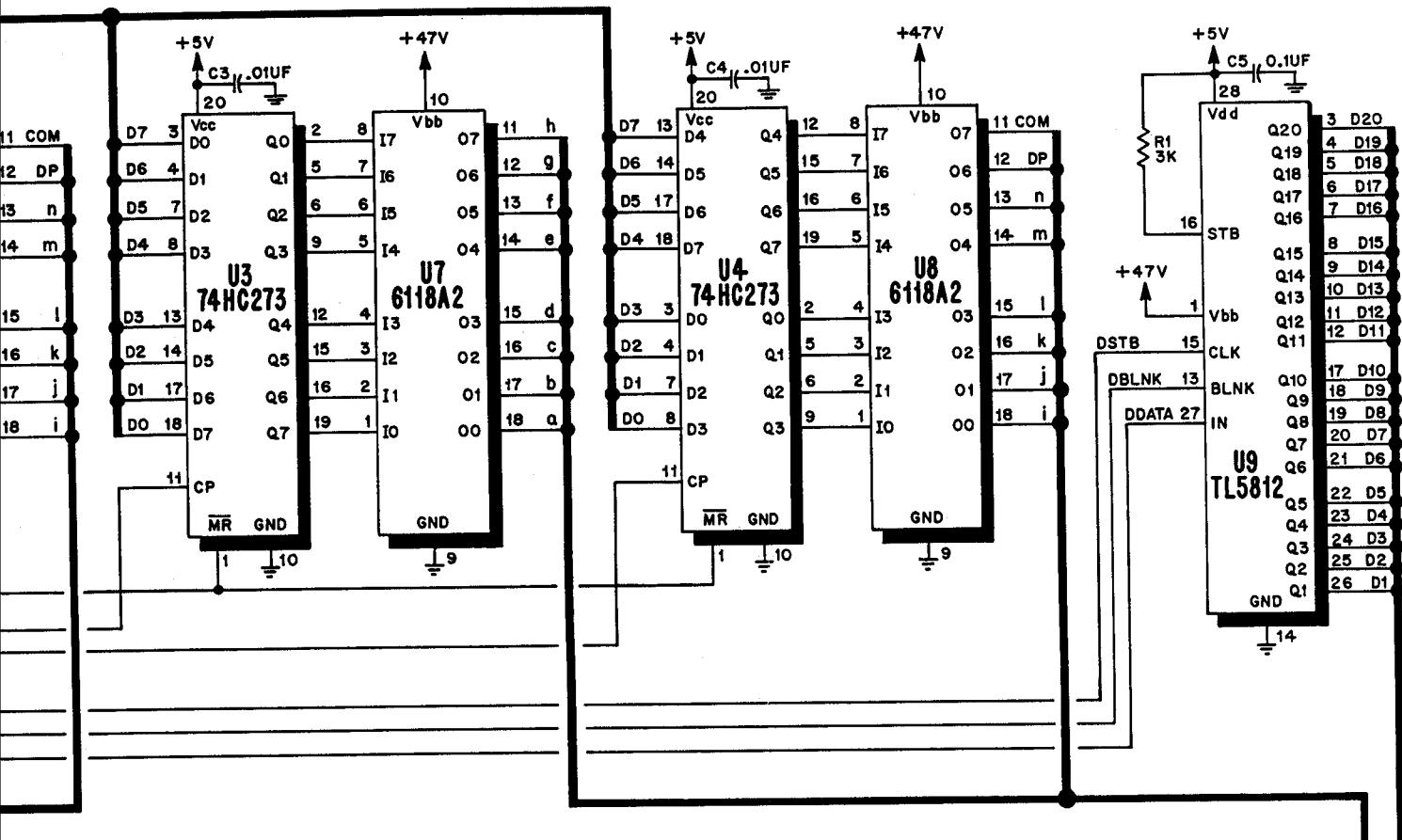
REFERENCE	DESCRIPTION	PART NUMBER
C1-C4	Display Board Assembly (A4)	MA-1361
C5	Capacitor,.01UF, +80%-20%, 50V	XO-229
C6	Capacitor, 0.1UF, +80%-20%, 50V	XO-230
C7	Capacitor 470UF, 50V	XO-847
CR1-CR4	Capacitor, 10UF, 20%, 25V	XO-127
DSP1,	Diode, 1N4004	XO-254
DSP2	Alphanumeric Display, FG2013B2	XO-901
R1	Resistor, 3K Ohm, 5%, 1/4W	XO-23
SIP1	Resistor Pack 4.7K Ohm X 8, 5%, 1/4W	XO-161
SIP2	Resistor Pack, 33K Ohm X 8, 5%, 1/4W	XO-945
U1-U4	IC, Octal "D" Flip-Flop, 74HC273	XO-949
U5-U8	IC, Display Drivers, 6118A2	XO-951
U9	IC, Latched Drivers, TL5812	XO-952
VR1	Diode 1N4739A, 9.1V Zener	XO-881
A4P1	Header, 8 Position	XO-920
A4P2	Header, 20 Position	XO-941
	Sponge Rubber, 1-1/4" (4)	24290A

## VI. WIRING AND SCHEMATIC

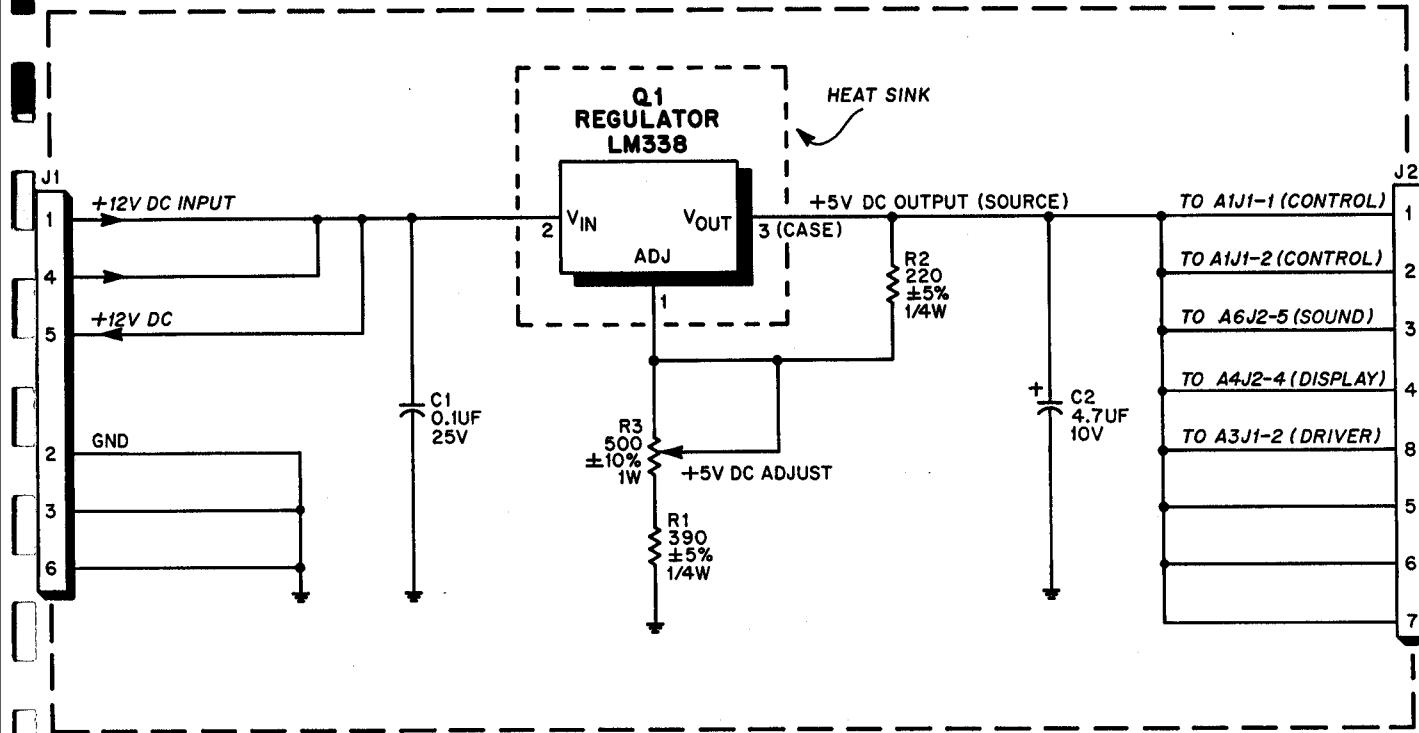


Premier Technology			
DISPLAY BOARD (A4) SCHEMATIC DIAGRAM			
DRAWN BY <i>R.P.S.</i>	APPROVED BY <i>RHM</i>	DATE 10-12-89	REVISION E-27035

# DIAGRAMS, PARTS LISTS

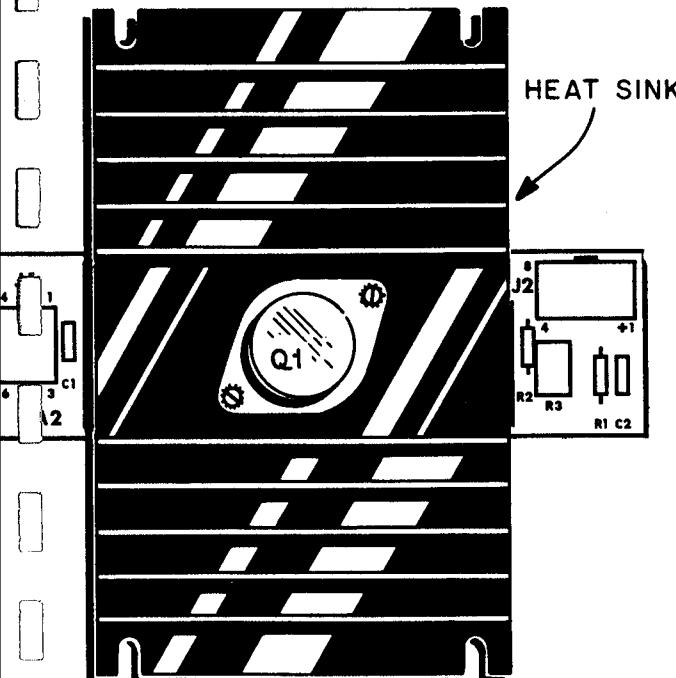


# VI. WIRING AND SCHEMATIC DIAGRAMS, PARTS LISTS



Premier Technology			
TITLE POWER SUPPLY (A2) SCHEMATIC DIAGRAM			
DRAWN G.P.S.	APPROVED RHM	DATE 12 FEB 85	E-24441

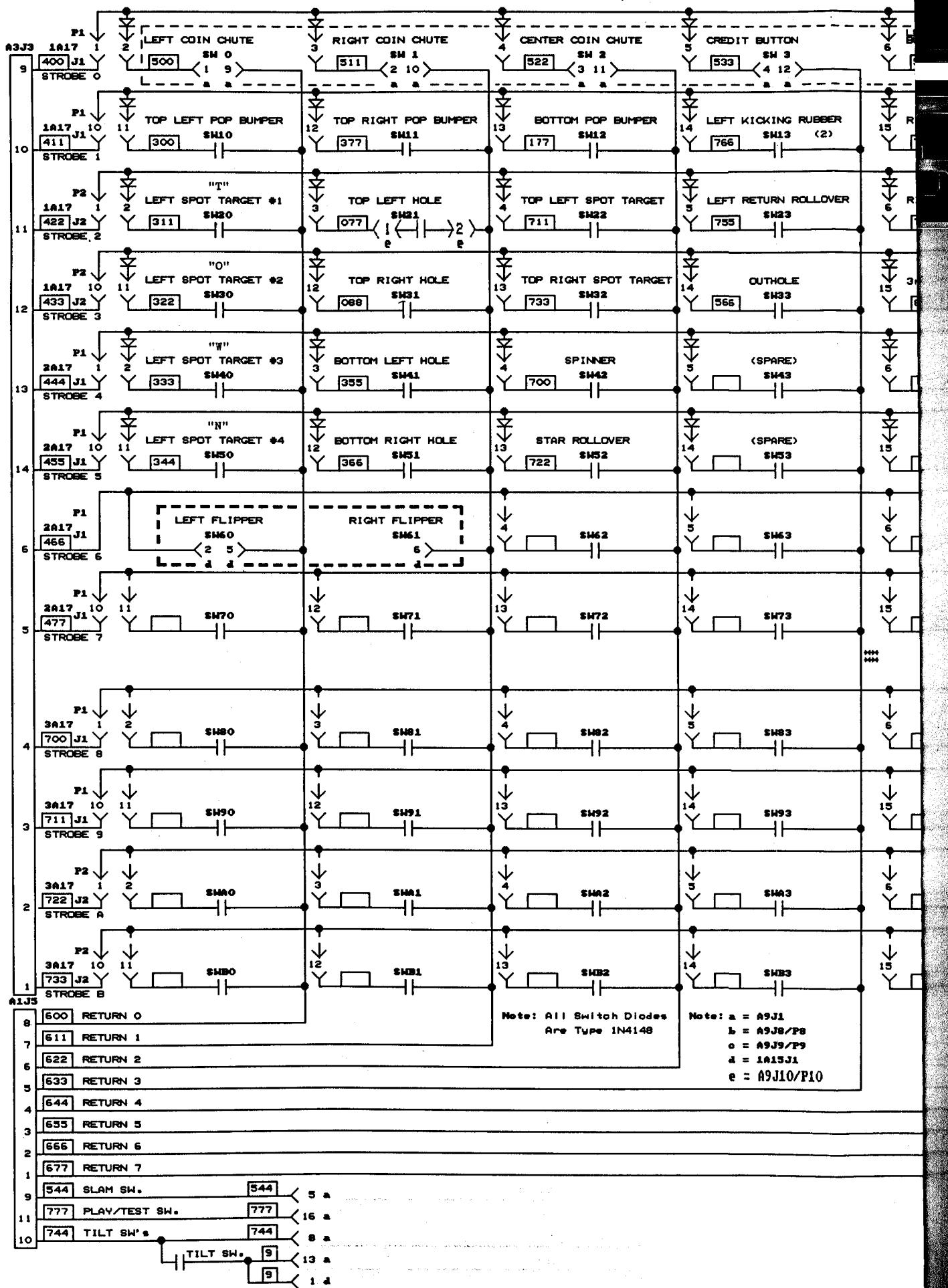
## POWER SUPPLY (A2) COMPONENT LOCATION



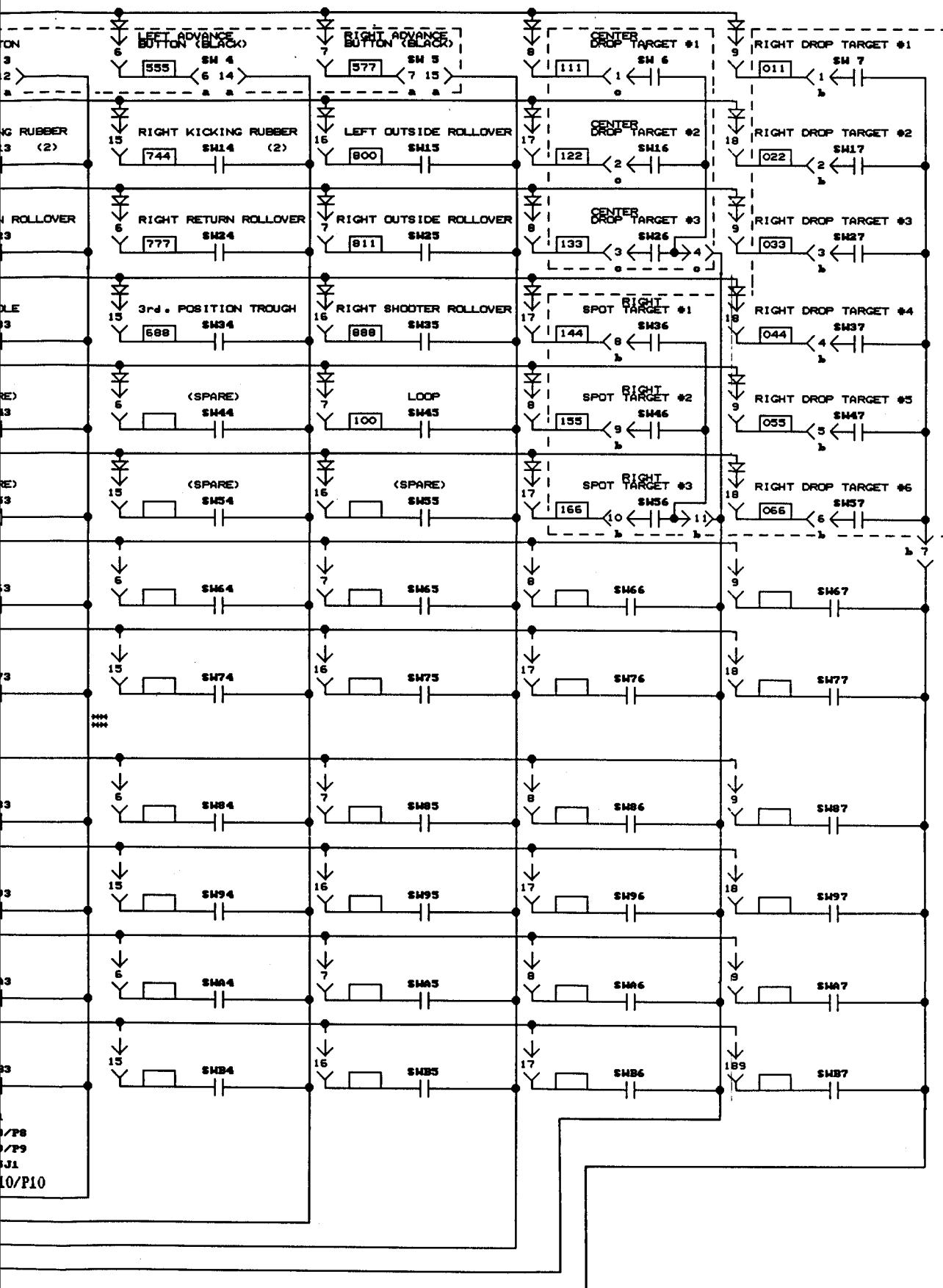
## POWER SUPPLY (A2) PARTS LIST

REFERENCE	DESCRIPTION	PART NUMBER
C1	Power Supply (A2) Capacitor, 0.1UF, +80% -20%, 50V	MA-1359
C2	Capacitor, 4.7UF, 10% 10V	XO-230
J1	Header, 6 Position	XO-226
J2	Header, 8 Position	XO-910
Q1	Regulator, LM338, (5 Amp)	XO-839
R1	Resistor, 390 Ohm, 5%, 1/4W	XO-845
R2	Resistor, 220 Ohm, 5%, 1/4W	XO-21
R3	Resistor, (Pot) 500 Ohm, 10%, 1W	XO-112
	Heat Sink	XO-534
	Insulator (Regulator)	XO-522
	Insulator (Regulator)	XO-523

# VI. WIRING AND SCHEMATIC DIAGRAM



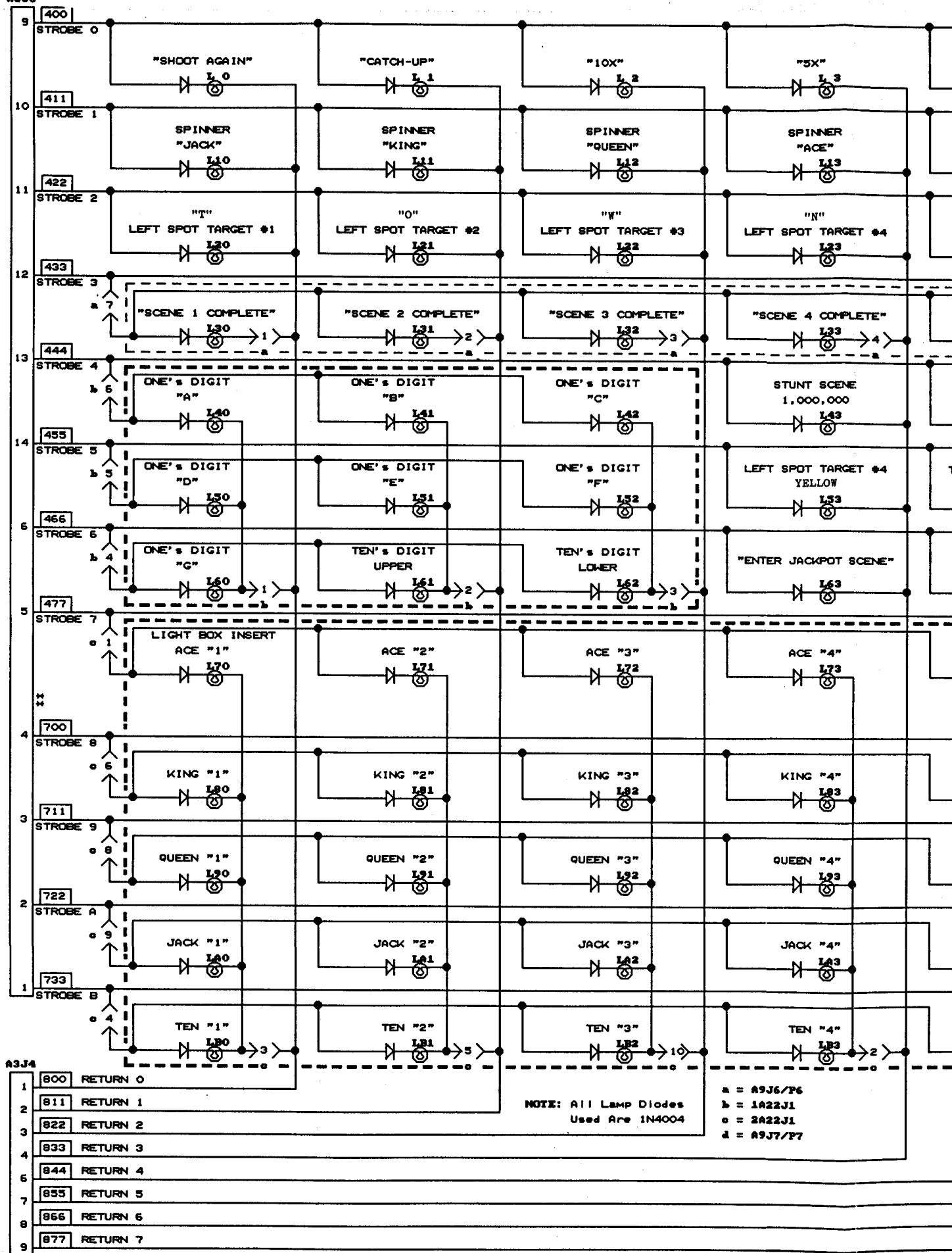
# STATIC DIAGRAMS, PARTS LISTS



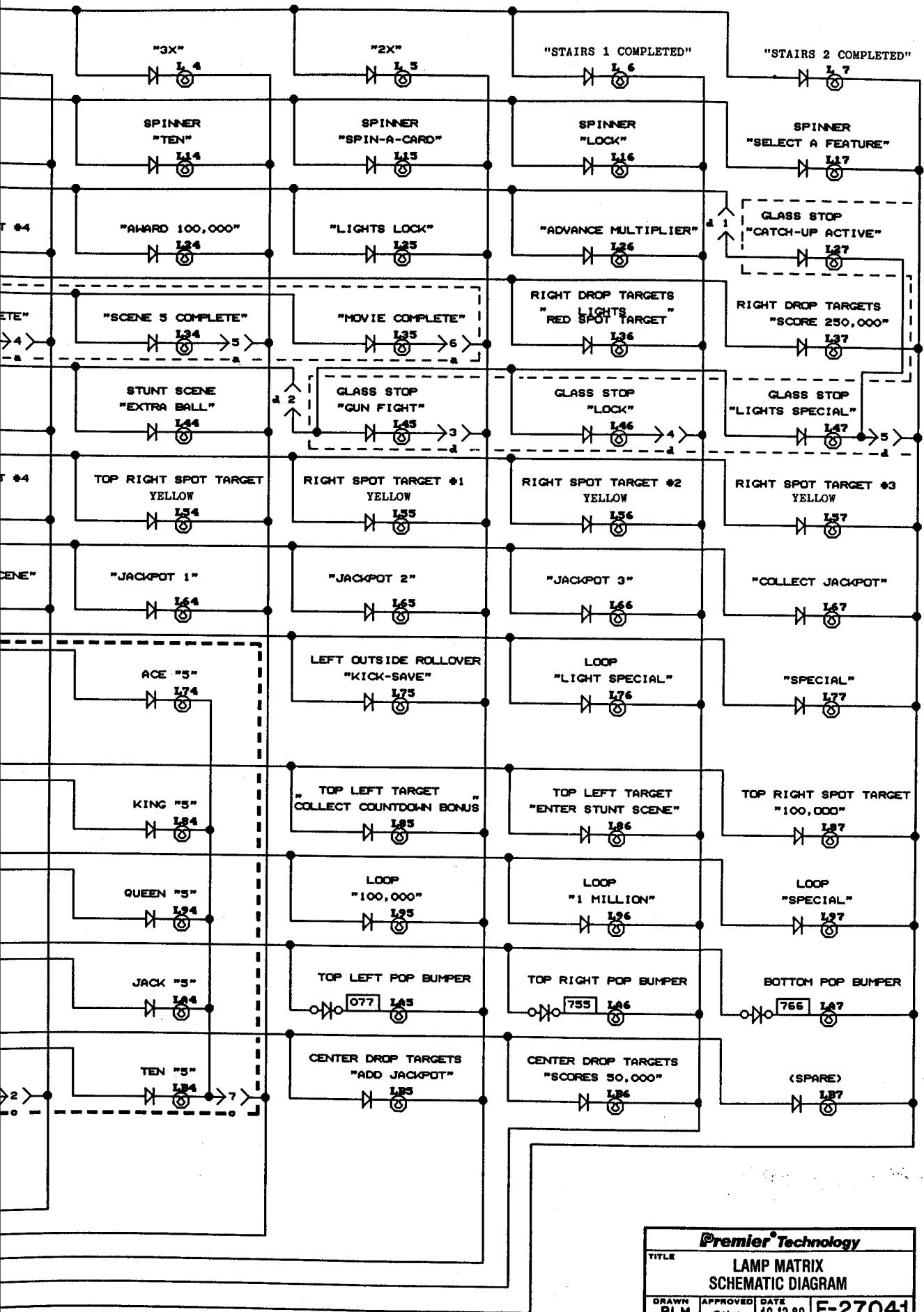
Premier Technology		
TITLE		
SWITCH MATRIX		
SCHEMATIC DIAGRAM		
DRAWN RLM	APPROVED RHM	DATE 10-12-89 E-27036

# VI. WIRING AND SCHEMATIC DIAG

A3J3

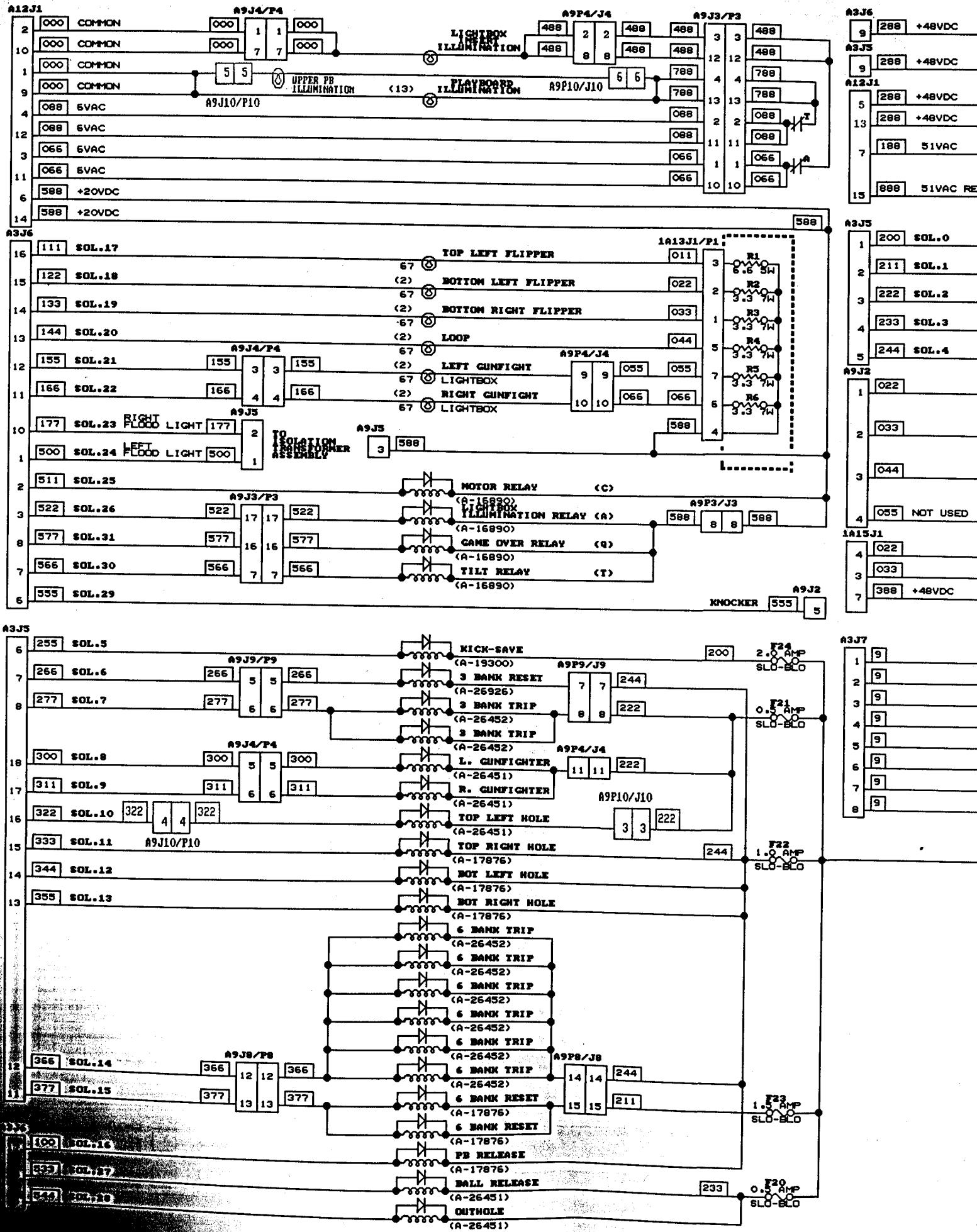


# C DIAGRAMS, PARTS LISTS

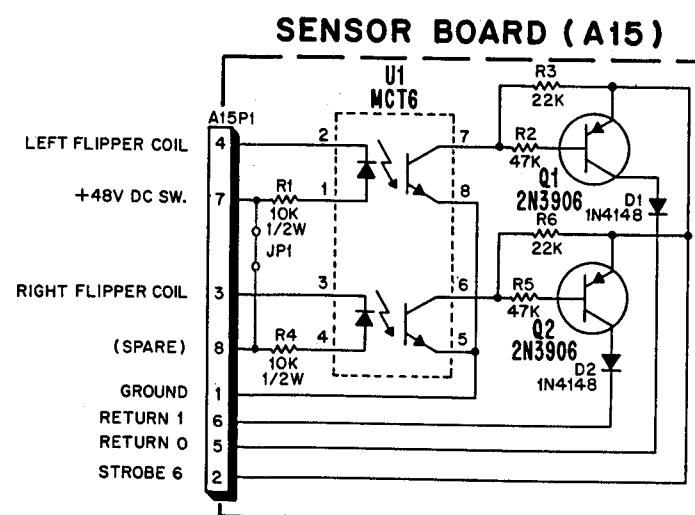
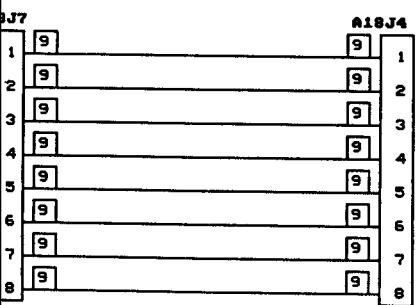
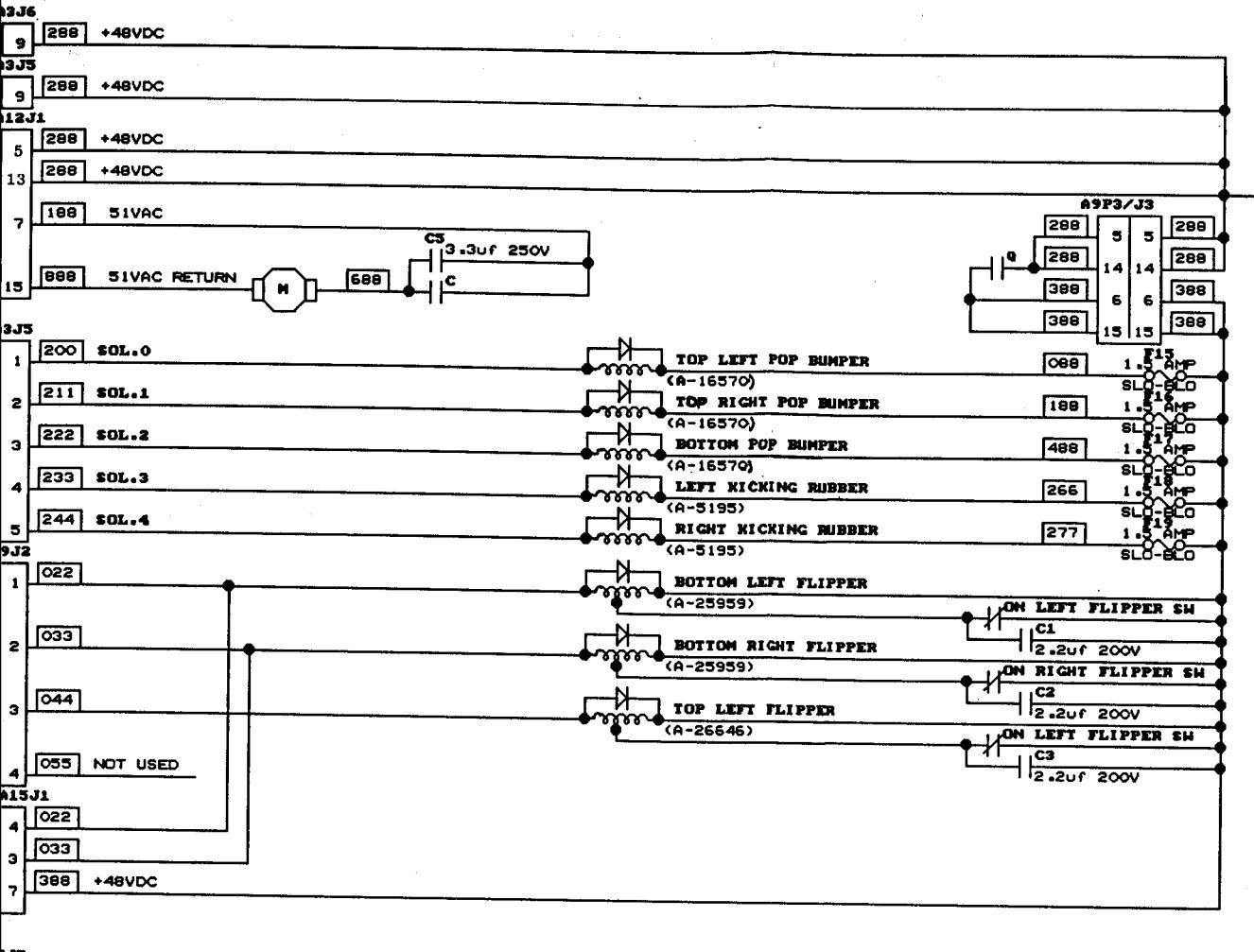


Premier Technology			
TITLE			
LAMP MATRIX			
SCHEMATIC DIAGRAM			
DRAWN RLM	APPROVED RHM	DATE 10-12-89	E-27041

# VI. WIRING AND SCHEMATIC DIAGRAM

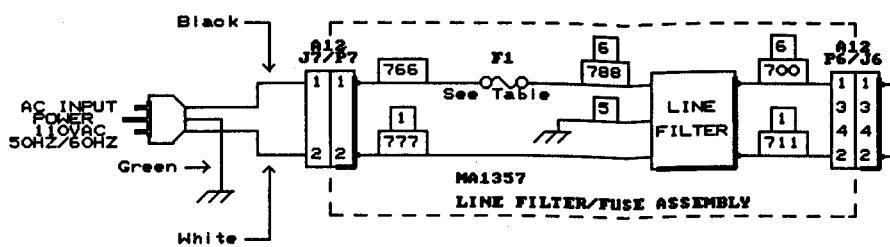


# IC DIAGRAMS, PARTS LISTS



Premier Technology		
TITLE		
PLAYBOARD SCHEMATIC DIAGRAM		
DRAWN RLM	APPROVED RHM	DATE 10-12-89 E-27038

# VI. WIRING AND SCHEMATIC DIAGRAM



AC INPUT  
POWER  
220VAC  
50Hz/60Hz

F1 LINE INPUT FUSE  
110VAC, 8 AMP, SLO-BLO  
220VAC, 4 AMP, SLO-BLO

FUSE DESIGNATIONS	
F1	LINE INPUT (See Table)
F2	PRIMARY POWER (See Note 1)
F3	DISPLAY FILAMENT (8.8VAC)
F4	DISPLAY FILAMENT (8.8VAC)
F5	DISPLAYS (35VAC)
F6	POWER SUPPLY (10VAC)
F7	CONTROLLED LAMPS (16VAC)
F8	SOLENOIDS (51VAC)
F9	PLAYFIELD ILLUMINATION
F10	LIGHTBOX ILLUMINATION
F11	AUX POWER SUPPLY (12.5VAC)
F12	FLOODLIGHTS (115VAC)

## NOTES:

1. PRIMARY POWER FUSE VALUES  
110VAC 8.0 AMP SLO-BLO  
220VAC 2.5 AMP SLO-BLO
2. XXX INDICATES WIRE COLOR
3. A12J5 SHOWN IN 110VAC OPERATION  
A12J10 SHOWN IN 110VAC OPERATION
4. CIRCUIT GROUND      EARTH GROUND

A12J5 WIRING VIEW PIN NUMBERS				
10	9			
5	4			
8	7			
6	5			
3	2			
1				
100VAC INPUT JUMPERS				
J2	9	8	J2	J3
J1	4	3	J1	J3
JUMPER WIRE COLORS 111				
110VAC INPUT JUMPERS				
J2	9	J2	7	J3
J1	4	J1	2	J3
JUMPER WIRE COLORS 222				
120VAC INPUT JUMPERS				
J2	J2	8	7	J3
J1	J1	3	2	J3
JUMPER WIRE COLORS 333				
200VAC INPUT JUMPERS				
10	9	8	J2	6
J1	4	3	J1	J2
JUMPER WIRE COLORS 444				
220VAC INPUT JUMPERS				
10	9	J2	7	6
J1	4	J1	2	J2
JUMPER WIRE COLORS 555				
240VAC INPUT JUMPERS				
10	J2	8	7	6
J1	J1	3	2	J2
JUMPER WIRE COLORS 666				

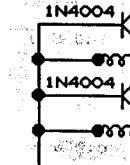
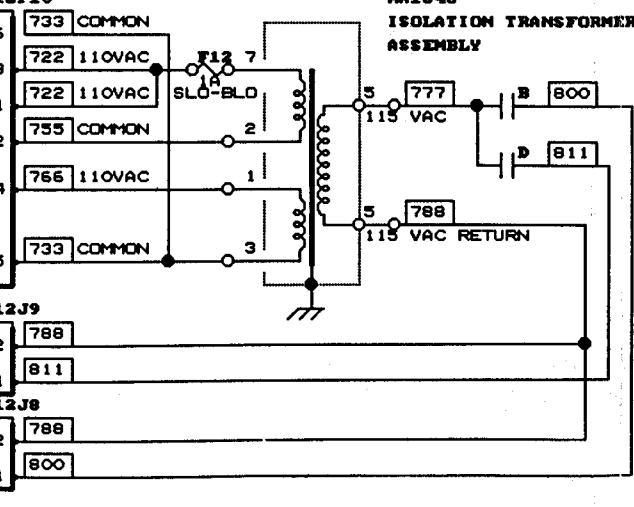
A12J10 WIRING VIEW PIN NUMBERS		
6	5	
5	4	
3	2	
1		
100VAC INPUT JUMPERS		
733	J2	J1
722	J2	J1
JUMPER WIRE COLORS 9		
110VAC INPUT JUMPERS		
733	5	J1
722	J1	1
JUMPER WIRE COLORS 9		
220VAC INPUT JUMPERS		
733	5	J1
722	J1	1
JUMPER WIRE COLORS 9		

COLOR CODE	
0	BLACK
1	BROWN
2	RED
3	ORANGE
4	YELLOW
5	GREEN
6	BLUE
7	VIOLET
8	GRAY
9	WHITE

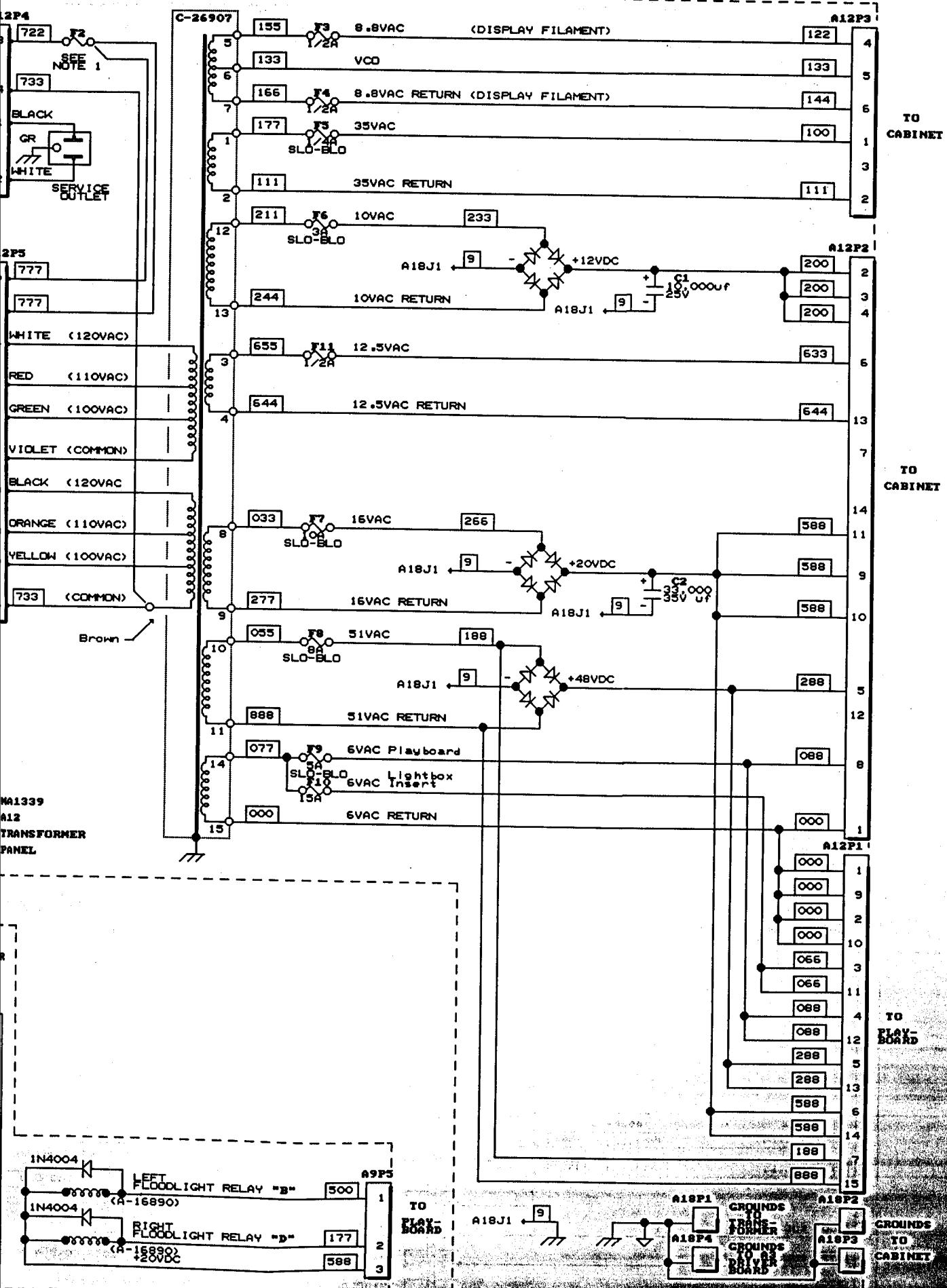
Premier® Technology

TRANSFORMER PANEL  
SCHEMATIC DIAGRAM

DRAWN RLM APPROVED RHM DATE 10-12-89 E-27039



# DIAGRAMS, PARTS LISTS



# VI. WIRING AND SCHEMATIC DIAGRAM

FROM TRANSFORMER PANEL

4	122	8.8VAC
5	133	VCO
6	144	8.8VAC RETURN
1	100	35VAC
3		
2	111	35VAC RETURN

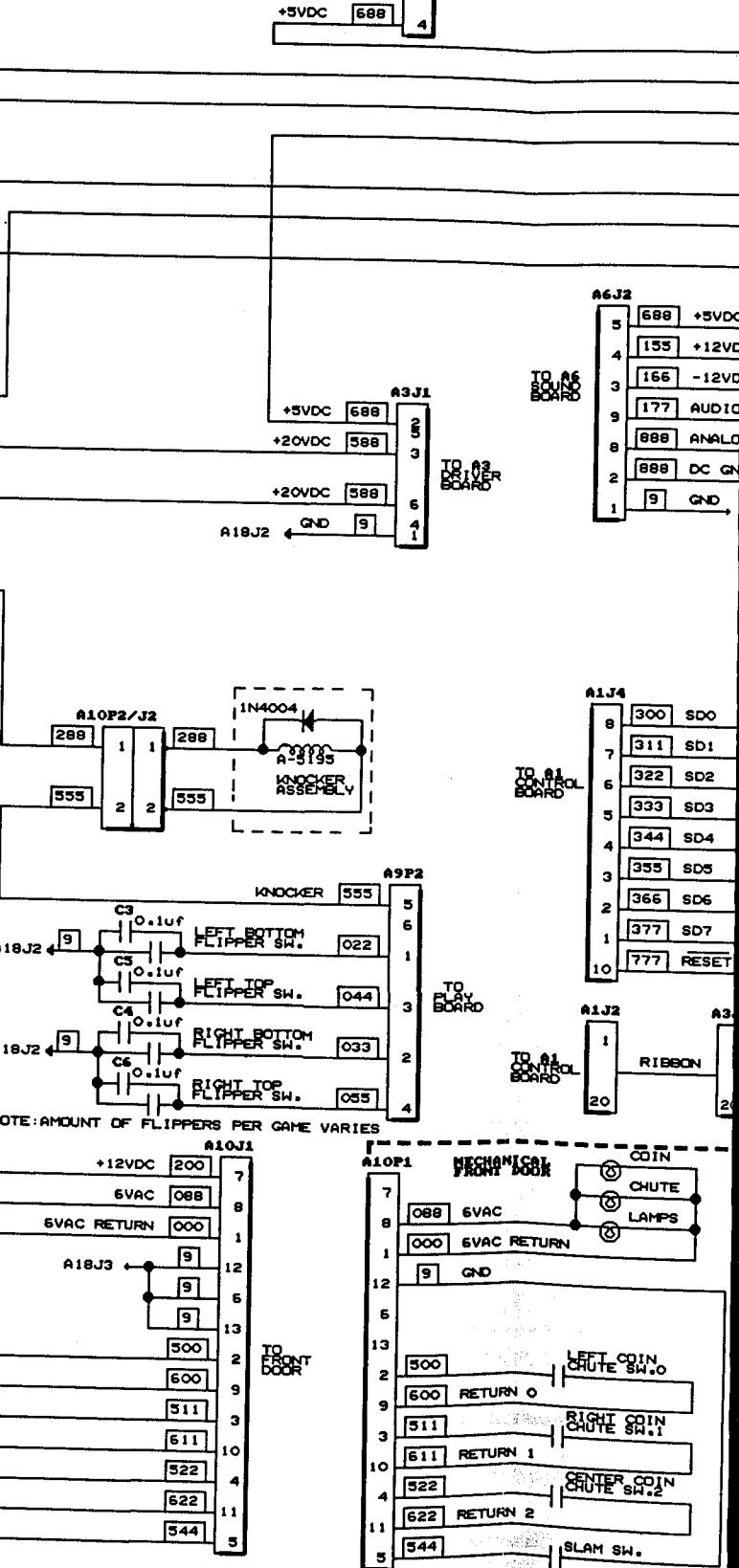
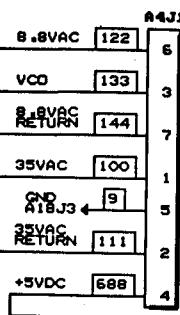
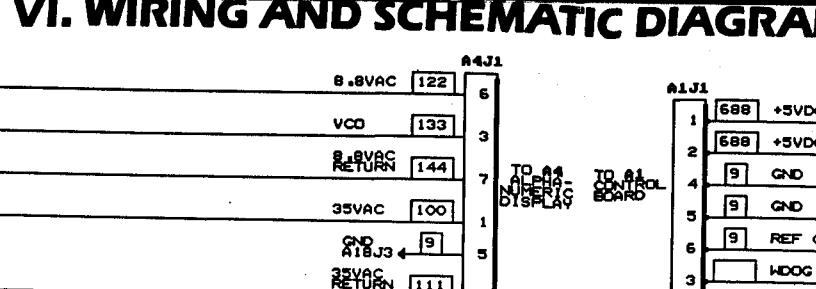
A12J2

2	200	+12VDC
3	200	+12VDC
4	200	+12VDC
6	633	12.5VAC
13	644	12.5VAC RETURN
7		
14		
11	588	+20VDC
9	588	+20VDC
10	588	+20VDC
5	288	+48VDC
12		
8	088	
1	000	

A9P1

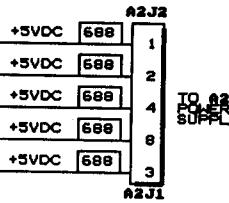
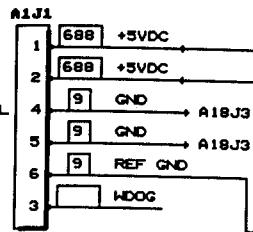
13	9	
8	744	PLUMB BOB TILT
16	777	BALL ROLL TILT
1	TEST SW.	
4	533	REPLAY BUTTON SW.3
12	633	RETURN 3
6	555	LEFT ADVANCE SW.4
14	644	RETURN 4
7	577	RIGHT ADVANCE SW.5
15	655	RETURN 5
1	500	SW 00
9	600	RETURN 0
2	511	SW 01
10	611	RETURN 1
3	522	SW 02
11	622	RETURN 2
5	544	SLAM SW.

TO PLAY BOARD

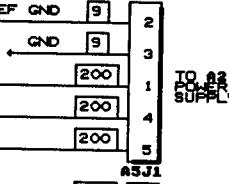


# IC DIAGRAMS, PARTS LISTS

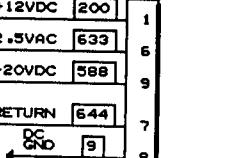
TO A1  
CONTROL  
BOARD



TO A2  
POWER  
SUPPLY

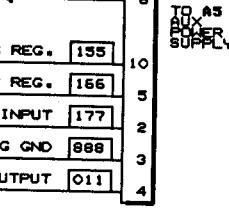


TO A2  
POWER  
SUPPLY



12.5VAC RETURN 644

DC GND 9



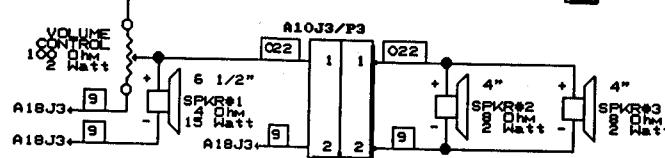
+12VDC REG. 155

-12VDC REG. 166

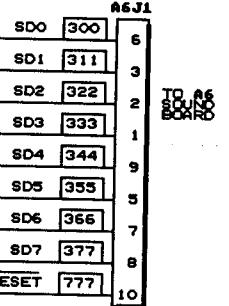
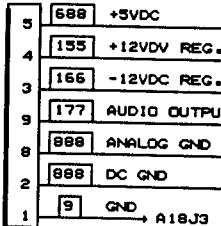
AUDIO INPUT 177

ANALOG GND 888

AUDIO OUTPUT 011



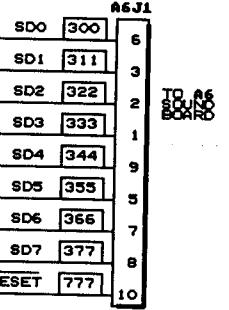
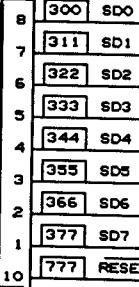
A6J2



TO A6  
SOUND  
BOARD

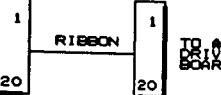
TO A1  
CONTROL  
BOARD

A1J4



TO A6  
SOUND  
BOARD

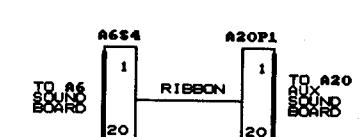
A1J2



TO A3  
DRIVER  
BOARD

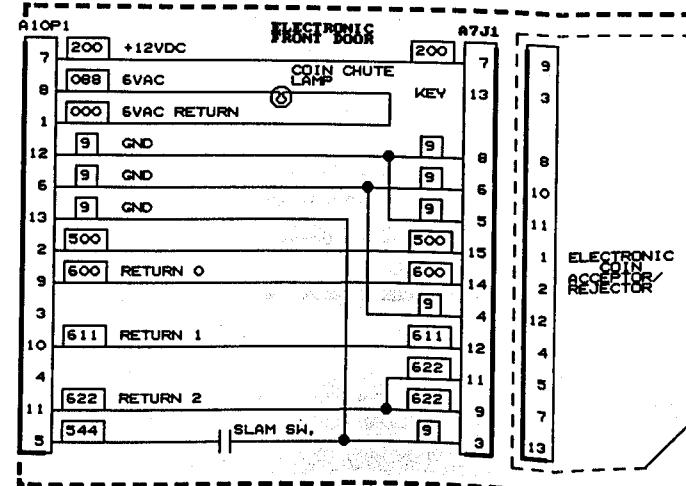


TO A1  
CONTROL  
BOARD



TO A20  
AUX  
SOUND  
BOARD

TO A1  
CONTROL  
BOARD



Premier® Technology  
CABINET/LIGHTBOX  
SCHEMATIC DIAGRAM  
DRAWN RLM APPROVED RHM DATE 10-12-89 E-27040

## VII. PARTS INFORMATION

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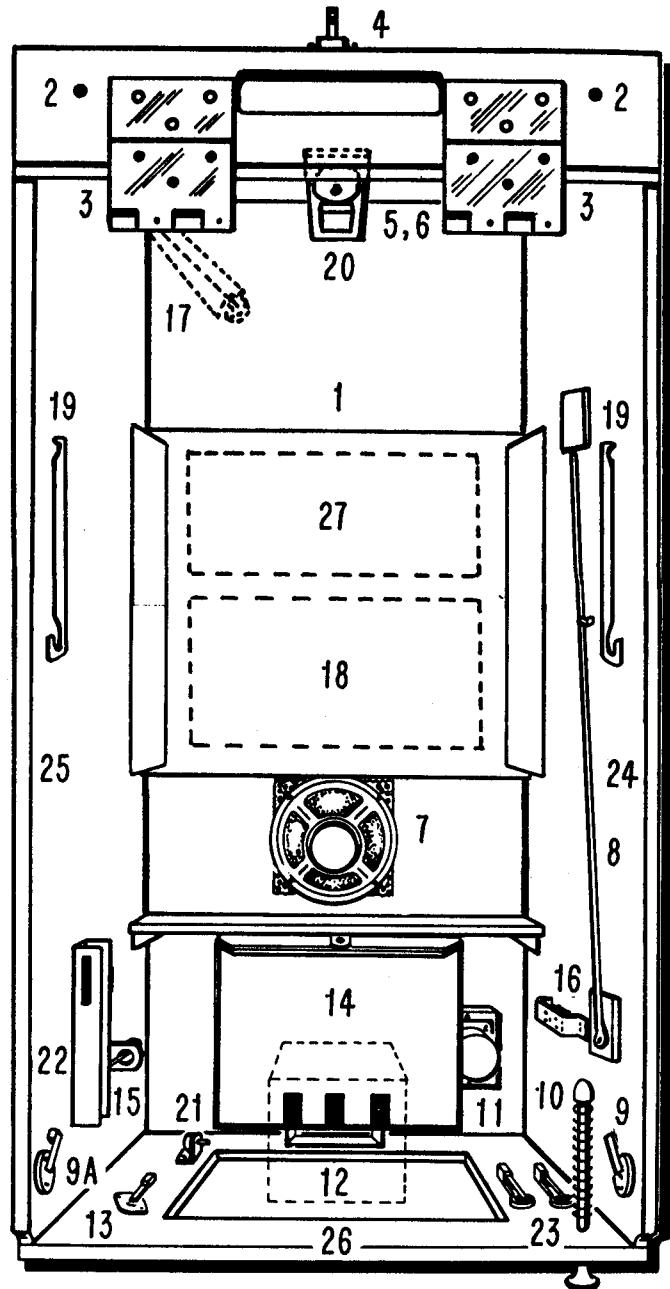
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LIGHTBOX PARTS.....	63

# VII. PARTS INFORMATION

## CABINET PARTS

### ITEM DESCRIPTION

ITEM	DESCRIPTION	PART NO.
1.	Cabinet	26904-720
2.	Lightbox Mounting Thumb Screw (2) (Not Shown, For Reference Only, Part of Lightbox Assembly)	FA-153
3.	Butt Hinge (2) (Attached to Lightbox)	26449
4.	"U" Bolt (P/O Lightbox)	24659
	Latch Assembly (P/O Cabinet)	21969
5.	Cable Assembly, Domestic (High Voltage)	MA-1350
6.	Line Cord (Domestic)	23365
	Line Cord Cover Plate	23364
7.	Speaker, 4 Ohm, 15W, 6-1/2"	EL-83
	Speaker Guard	20931
8.	Prop Stick, Playfield	23940
9.	Right Flipper Switch	26498
9A.	Left Flipper Switch	26054
10.	Ball Shooter Assembly	26314
11.	Switch, On/Off	23799
	Switch Plate (2)	18769
	Switch Housing	15163
12.	Front Door Assembly (Universal)	MA-1347
	Cable Assembly	26130
	Slam Switch (N/O)	FD-2
	6V DC Lamp, Wedge Base	FD-13
	Frame, Door	24159
	Two Chute Door	FD-14
	Black Button Bezel	FD-15
	Entry/Reject Button	FD-16
	Button Spring	FD-17
	Reject Flap	FD-18
	Clamp, Frame	FD-19
	Flat Lock and Cam Assembly	FD-20
	Base Plate with Pivot and Stud	FD-21
	Microswitch Bracket	FD-22
	Clear Plastic Cover for Microswitch	FD-23
	Coin Microswitch with Wire	FD-24
	Lampholder	FD-26
	Black Reject Bezel	FD-27
13.	Replay Switch Assembly	18092
14.	Cashbox	25309
	Cover	25315
	Liner (Small) (3)	24870
	Liner (Large) (2)	24871
15.	Plumb Bob Tilt Switch Assembly	358
	Strike Plate	MH-30
	Carbon, Tilt Bob	357
	Rod, Tilt	22043
	Bracket	14653
	Clip	MA-12
16.	Knocker Assembly	MA-352
	Bell Assembly (Gong) (When Used)	26684
17.	Cabinet Leg (4)	3775
	Leg Bolt (8)	MH-21
	3" Leg Adjuster (4)	FA-665
	3/8-16", Jam Nut (8)	MA-1339
18.	Transformer Panel Assembly	EL-42
	Bridge Rectifier (3)	MA-1348
	Cable Assembly (Secondary)	XO-830
	Capacitor, 10,000UF, 25V	XO-957
	Capacitor, 33,000UF, 35V	EL-10
	Fuse Block (8 Pos.)	23805
	Fuse Cover	EL-78
	Fuse Holder and Cap (F2)	EL-17
	Fuse Holder (1 Pos.)	EL-8
	F2, 5 Amp, SLO-BLO (110V AC)	EL-21
	F2, 2.5 Amp, SLO-BLO (220V AC)	EL-28
	F3, 1/2 Amp	EL-28
	F4, 1/2 Amp	EL-5
	F5, 1/4 Amp, SLO-BLO	EL-9
	F6, 3 Amp, SLO-BLO	EL-36
	F7, 10 Amp, SLO-BLO	EL-26
	F8, 8 Amp, SLO-BLO	EL-8
	F9, 5 Amp, SLO-BLO	EL-25
	F10, 15 Amp	EL-28
	F11, 1/2 Amp	EL-28
	Ground Bus Assembly	26794
	Outlet, Service	18133
	Transformer	26907
19.	Cabinet Pivot Bracket (Right)	25658
	Cabinet Pivot Bracket (Left)	25657
20.	Line Filter Assembly	MA-1356
	Fuse Holder	EL-78
	F1, 8 Amp, SLO-BLO (110V AC)	EL-26
	F1, 4 Amp, SLO-BLO (220V AC)	EL-33
	Line Filter	EL-50
	Line Filter (Germany)	EL-51
21.	Mounting Bracket	24149
	Control, Volume, 100 Ohm, 2W	XO-199
	Switch, PLAY/TEST	EL-57



### ITEM DESCRIPTION

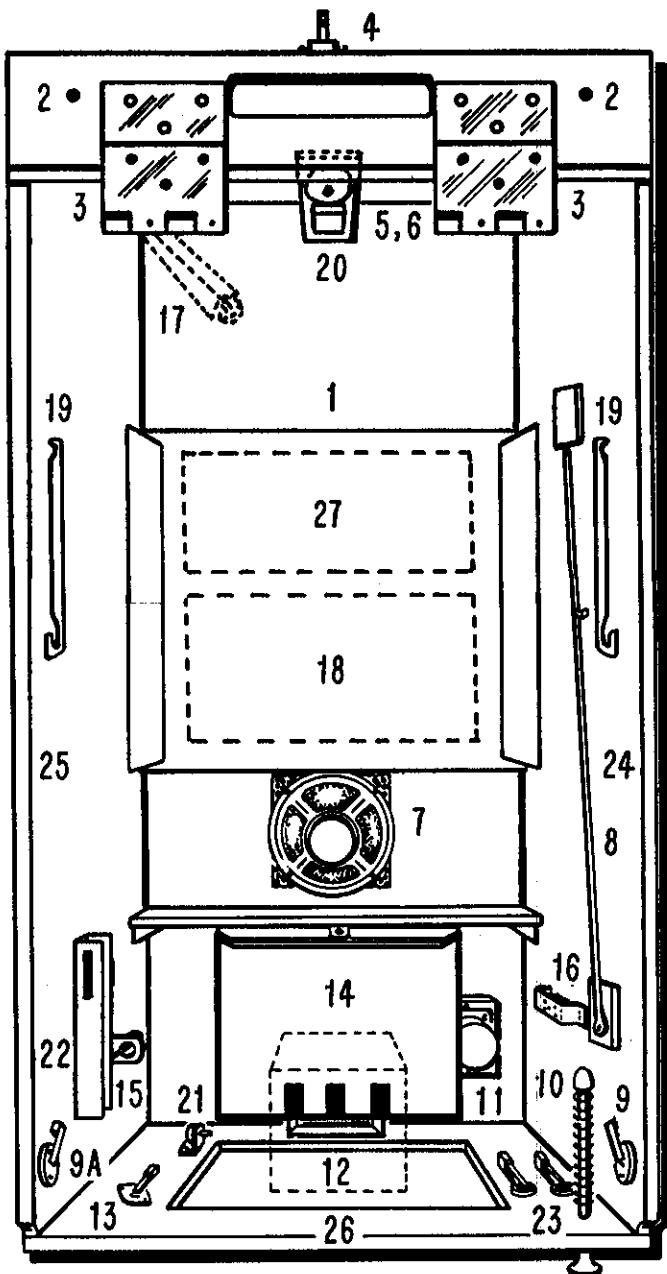
ITEM	DESCRIPTION	PART NO.
22.	Ball Roll Tilt Housing and Switch Assembly	24394
	Switch	24393
23.	Button Holder and Switch (2)	23503
	Pushbutton (2) (Black)	24293
24.	Right Moulding (Not Shown)	22735
25.	Left Moulding (Not Shown)	22736
26.	Front Moulding (Not Shown)	16951
27.	Isolation Transformer Panel	MA-1345
	Relay Cover (2)	26224
	Isolation Transformer	26226
	Mounting Board	26775
	Fuse, F12, 1 Amp SLO-BLO	EL-6
	Cable Assembly (Transformer)	MA-1349
	Cable Assembly (Floodlight Relay)	MA-1349
	"D" Relay	MA-882
	"B" Relay	MA-888

# VII. PARTS INFORMATION

## CABINET PARTS

### ITEM DESCRIPTION

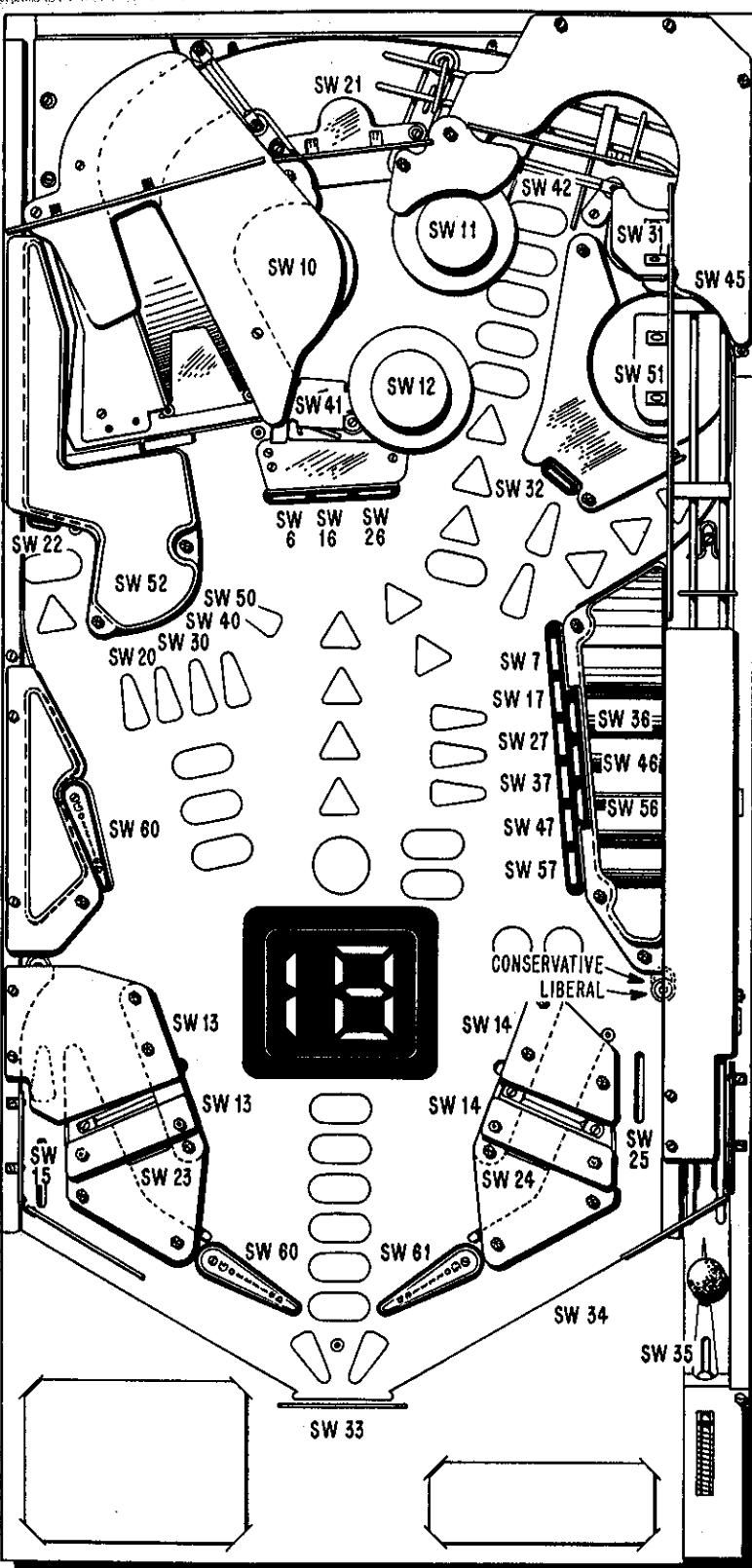
ITEM	DESCRIPTION	PART NO.
1.	Cabinet	26904-720
2.	Lightbox Mounting Thumb Screw (2) (Not Shown, For Reference Only, Part of Lightbox Assembly)	FA-153
3.	Butt Hinge (2) (Attached to Lightbox)	26449
4.	"U" Bolt (P/O Lightbox)	24659
	Latch Assembly (P/O Cabinet)	21969
5.	Cable Assembly, Domestic (High Voltage)	MA-1350
6.	Line Cord (Domestic)	23365
	Line Cord Cover Plate	23364
7.	Speaker, 4 Ohm, 15W, 6-1/2"	EL-83
	Speaker Guard	20931
8.	Prop Stick, Playfield	23940
9.	Right Flipper Switch	26498
9A.	Left Flipper Switch	26054
10.	Ball Shooter Assembly	26314
11.	Switch, On/Off	23799
	Switch Plate (2)	18769
	Switch Housing	15163
12.	Front Door Assembly (Universal)	
	Cable Assembly	MA-1347
	Slam Switch (N/O)	26130
	6V DC Lamp, Wedge Base	FD-2
	Frame, Door	FD-13
	Two Chute Door	24159
	Black Button Bezel	FD-14
	Entry/Reject Button	FD-15
	Button Spring	FD-16
	Reject Flap	FD-17
	Clamp, Frame	FD-18
	Flat Lock and Cam Assembly	FD-19
	Base Plate with Pivot and Stud	FD-20
	Microswitch Bracket	FD-21
	Clear Plastic Cover for Microswitch	FD-22
	Coin Microswitch with Wire	FD-23
	Lampholder	FD-24
	Black Reject Bezel	FD-26
13.	Replay Switch Assembly	18092
14.	Cashbox	25309
	Cover	25315
	Liner (Small) (3)	24870
	Liner (Large) (2)	24871
15.	Plumb Bob Tilt Switch Assembly	
	Strike Plate	358
	Carbon, Tilt Bob	MH-30
	Rod, Tilt	357
	Bracket	22043
	Clip	14653
16.	Knocker Assembly	MA-12
	Bell Assembly (Gong) (When Used)	MA-352
17.	Cabinet Leg (4)	26684
	Leg Bolt (8)	3775
	3" Leg Adjuster (4)	MH-21
	3/8-16", Jam Nut (8)	FA-665
18.	Transformer Panel Assembly	MA-1339
	Bridge Rectifier (3)	EL-42
	Cable Assembly (Secondary)	MA-1348
	Capacitor, 10,000UF, 25V	XO-830
	Capacitor, 33,000UF, 35V	XO-957
	Fuse Block (8 Pos.)	EL-10
	Fuse Cover	23805
	Fuse Holder and Cap (F2)	EL-78
	Fuse Holder (1 Pos.)	EL-17
	F2, 5 Amp, SLO-BLO (110V AC)	EL-8
	F2, 2.5 Amp, SLO-BLO (220V AC)	EL-21
	F3, 1/2 Amp	EL-28
	F4, 1/2 Amp	EL-28
	F5, 1/4 Amp, SLO-BLO	EL-5
	F6, 3 Amp, SLO-BLO	EL-9
	F7, 10 Amp, SLO-BLO	EL-36
	F8, 8 Amp, SLO-BLO	EL-26
	F9, 5 Amp, SLO-BLO	EL-8
	F10, 15 Amp	EL-25
	F11, 1/2 Amp	EL-28
	Ground Bus Assembly	26794
	Outlet, Service	18133
	Transformer	26907
19.	Cabinet Pivot Bracket (Right)	25658
	Cabinet Pivot Bracket (Left)	25657
20.	Line Filter Assembly	MA-1356
	Fuse Holder	EL-78
	F1, 8 Amp, SLO-BLO (110V AC)	EL-26
	F1, 4 Amp, SLO-BLO (220V AC)	EL-33
	Line Filter	EL-50
	Line Filter (Germany)	EL-51
21.	Mounting Bracket	24149
	Control, Volume, 100 Ohm, 2W	XO-198
	Switch, PLAY/TEST	EL-57



### ITEM DESCRIPTION

ITEM	DESCRIPTION	PART NO.
22.	Ball Roll Tilt Housing and Switch Assembly	24394
	Switch	24393
23.	Button Holder and Switch (2)	23503
	Pushbutton (2) (Black)	24293
24.	Right Moulding (Not Shown)	22735
25.	Left Moulding (Not Shown)	22736
26.	Front Moulding (Not Shown)	16951
27.	Isolation Transformer Panel	MA-1345
	Relay Cover (2)	26224
	Isolation Transformer	26226
	Mounting Board	26775
	Fuse, F12, 1 Amp SLO-BLO	EL-6
	Cable Assembly (Transformer)	MA-1349
	Cable Assembly (Floodlight Relay)	MA-1349A
	"D" Relay	MA-882
	"B" Relay	MA-888

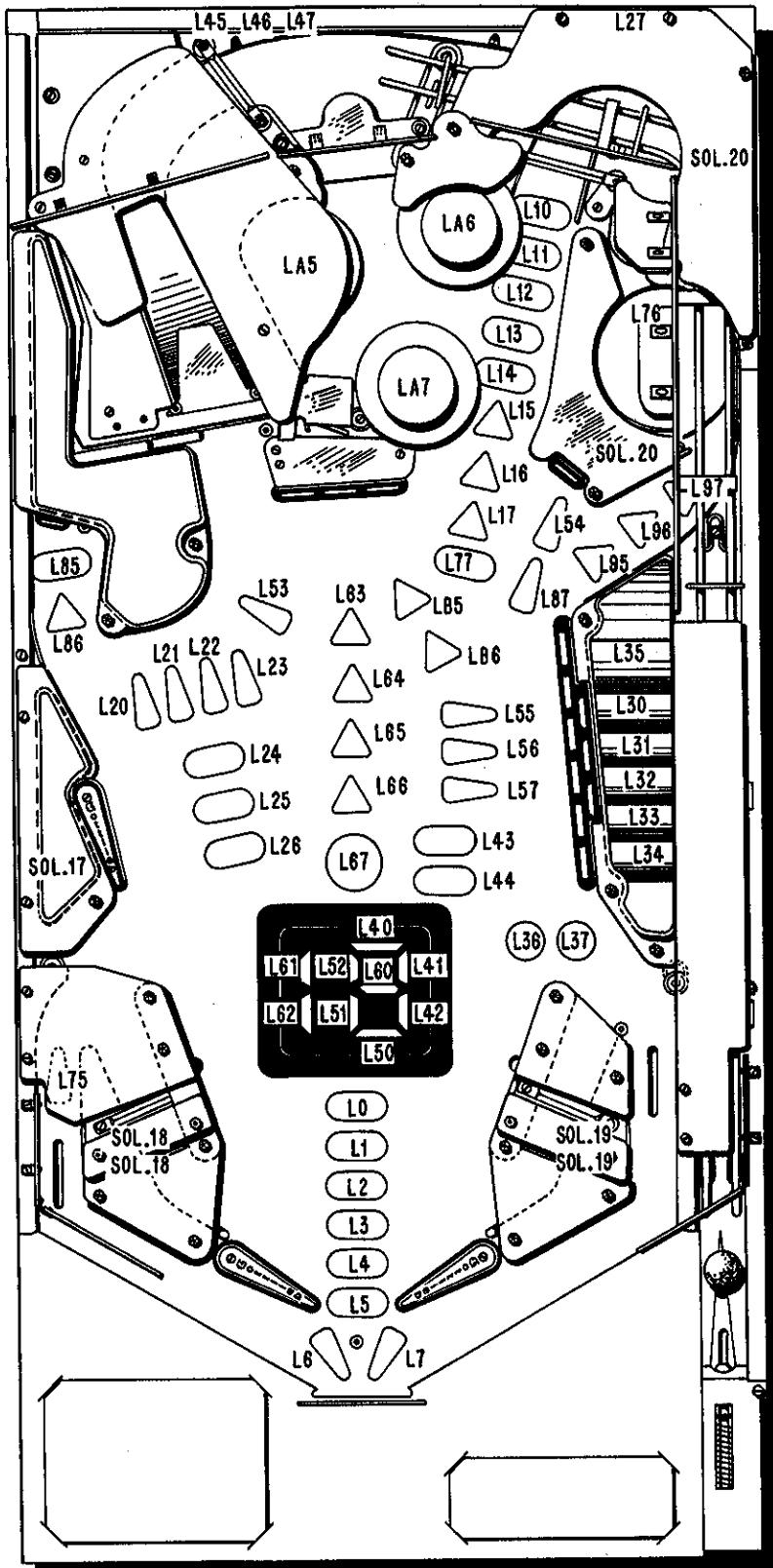
## VII. PARTS INFORMATION



## PLAYBOARD SWITCH ASSIGNMENTS

SWITCH MATRIX NUMBER	SWITCH ASSIGNMENT	PART NO.
SW 0	Left Coin Chute	P/O Front Door
SW 1	Right Coin Chute	P/O Front Door
SW 2	Center Coin Chute	P/O Front Door
SW 3	Credit Button	18092
SW 4	Left Advance Button	23503
SW 5	Right Advance Button	23503
SW 6	Center Drop Target #1	18094
SW 7	Right Drop Target #1	25894
SW 10	Top Left Pop Bumper	22705
SW 11	Top Right Pop Bumper	22705
SW 12	Bottom Pop Bumper	22705
SW 13	Left Kicking Rubber (2)	26939
SW 14	Right Kicking Rubber (2)	26939
SW 15	Left Outside Rollover	25824
SW 16	Center Drop Target #2	18095
SW 17	Right Drop Target #2	25894
SW 20	Left Spot Target #1 "T"	26924W
SW 21	Top Left Hole	21415
SW 22	Top Left Spot Target	26231U
SW 23	Left Return Rollover	25824
SW 24	Right Return Rollover	25824
SW 25	Right Outside Rollover	25824
SW 26	Center Drop Target #3	18093
SW 27	Right Drop Target #3	25894
SW 30	Left Spot Target #2 "O"	26924W
SW 31	Top Right Hole	21415
SW 32	Top Right Spot Target	25460T
SW 33	Outhole	26927
SW 34	3rd Position Trough	26845
SW 35	Right Shooter Rollover	25824
SW 36	Right Spot Target #1	25628T
SW 37	Right Drop Target #4	25894
SW 40	Left Spot Target #3 "W"	26924W
SW 41	Bottom Left Hole	21415
SW 42	Spinner	19353
SW 45	Loop	26921
SW 46	Right Spot Target #2	25628T
SW 47	Right Drop Target #5	25894
SW 50	Left Spot Target #4 "N"	26924W
SW 51	Bottom Right Hole	21415
SW 52	Star Rollover	12881
SW 56	Right Spot Target #3	25628T
SW 57	Right Drop Target #6	25894
SW 60	Lower Left Flipper	MA-1334
SW 61	Lower Right Flipper	MA-1334

## VII. PARTS INFORMATION



### SOLENOID FUNCTIONS

SOL. 0	TOP LEFT POP BUMPER	SOL. 16	PLAYBOARD RELEASE
SOL. 1	TOP RIGHT POP BUMPER	SOL. 17	TOP LEFT FLIPPER #67 (1)
SOL. 2	BOTTOM POP BUMPER	SOL. 18	BOTTOM LEFT FLIPPER #67 (2)
SOL. 3	LEFT KICKING RUBBER	SOL. 19	BOTTOM RIGHT FLIPPER #67 (2)
SOL. 4	RIGHT KICKING RUBBER	SOL. 20	LOOP #67 (2)
SOL. 5	KICK-SAVE	SOL. 21	LEFT GUNFIGHTER #67 (2) (POLICE)
SOL. 6	3 BANK RESET	SOL. 22	RIGHT GUNFIGHTER #67 (2) (OUTLAW)
SOL. 7	3 BANK TRIP COIL (2)	SOL. 23	"D" RELAY RIGHT FLOOD LIGHT (BLUE)
SOL. 8	LEFT GUNFIGHTER	SOL. 24	"B" RELAY LEFT FLOOD LIGHT (RED)
SOL. 9	RIGHT GUNFIGHTER	SOL. 25	"C" RELAY, MOTOR
SOL. 10	TOP LEFT HOLE	SOL. 26	"A" RELAY (LIGHTBOX ILLUMINATION)
SOL. 11	TOP RIGHT HOLE	SOL. 27	BALL RELEASE
SOL. 12	BOTTOM LEFT HOLE	SOL. 28	OUTHOLE
SOL. 13	BOTTOM RIGHT HOLE	SOL. 29	KNOCKER
SOL. 14	6 BANK TRIP COIL (6)	SOL. 30	"T" RELAY (PLAYFIELD ILLUMINATION)
SOL. 15	6 BANK RESET (2)	SOL. 31	"Q" RELAY (SWITCHED +48V DC)

## PLAYBOARD LAMP ASSIGNMENTS

### LAMP NUMBER      LAMP ASSIGNMENT

L0	"Shoot Again"
L1	"Catch-Up"
L2	"10X"
L3	"5X"
L4	"3X"
L5	"2X"
L6	"Hand 1 Completed"
L7	"Hand 2 Completed"
L10	Spinner "Jack"
L11	Spinner "King"
L12	Spinner "Queen"
L13	Spinner "Ace"
L14	Spinner "Ten"
L15	Spinner "Spin-A-Card"
L16	Spinner "Lock"
L17	Spinner "Select A Feature"
L20	Left Spot Target #1 "T"
L21	Left Spot Target #2 "O"
L22	Left Spot Target #3 "W"
L23	Left Spot Target #4 "N"
L24	"Award 100,000"
L25	"Lights Lock"
L28	"Advance Multiplier"
L27	Glass Stop "Catch-Up Active"
L30	"Scene 1 Complete"
L31	"Scene 2 Complete"
L32	"Scene 3 Complete"
L33	"Scene 4 Complete"
L34	"Scene 5 Complete"
L35	"Movie Complete"
L36	Right Drop Target "Red Spot Target"
L37	Right Drop Target "Score 250,000"
L40	One's Digit "A"
L41	One's Digit "B"
L42	One's Digit "C"
L43	Stunt Scene 1,000,000
L44	Stunt Scene "Extra Ball"
L45	Glass Stop "Gun Fight"
L46	Glass Stop "Lock"
L47	Glass Stop "Lights Special"
L50	One's Digit "D"
L51	One's Digit "E"
L52	One's Digit "F"
L53	Left Spot Target #4 YELLOW
L54	Top Right Spot Target YELLOW
L55	Right Spot Target #1 YELLOW
L56	Right Spot Target #2 YELLOW
L57	Right Spot Target #3 YELLOW
L60	One's Digit "G"
L61	Ten's Digit Upper
L62	Ten's Digit Lower
L63	"Enter Jackpot Scene"
L64	"Jackpot 1"
L65	"Jackpot 2"
L66	"Jackpot 3"
L67	"Collect Jackpot"
L75	Left Outside Rollover "Kick-Save"
L76	Loop "Light Special"
L77	"Special"
L85	Top Left Target
L86	"Collect Countdown Bonus"
L87	Top Left Target
L88	"Enter Stunt Scene"
L89	Top Right Spot Target
L95	"100,000"
L96	Loop "100,000"
L97	Loop "1 Million"
L98	Loop "Special"
LA5	Top Left Pop Bumper
LA6	Top Right Pop Bumper
LA7	Bottom Pop Bumper
LB5	Center Drop Targets
LB6	"Add Jackpot"
LB7	Center Drop Targets
LB8	"Scores 50,000"

The following lamps are located on the light box insert.

L70	ACE "1"
L71	ACE "2"
L72	ACE "3"
L73	ACE "4"
L74	ACE "5"
L80	KING "1"
L81	KING "2"
L82	KING "3"
L83	KING "4"
L84	KING "5"
L90	QUEEN "1"
L81	QUEEN "2"
L92	QUEEN "3"
L93	QUEEN "4"
L94	QUEEN "5"
LA0	JACK "1"
LA1	JACK "2"
LA2	JACK "3"
LA3	JACK "4"
LA4	JACK "5"
LB0	TEN "1"
LB1	TEN "2"
LB2	TEN "3"
LB3	TEN "4"
LB4	TEN "5"

### LIGHTBOX NOTE:

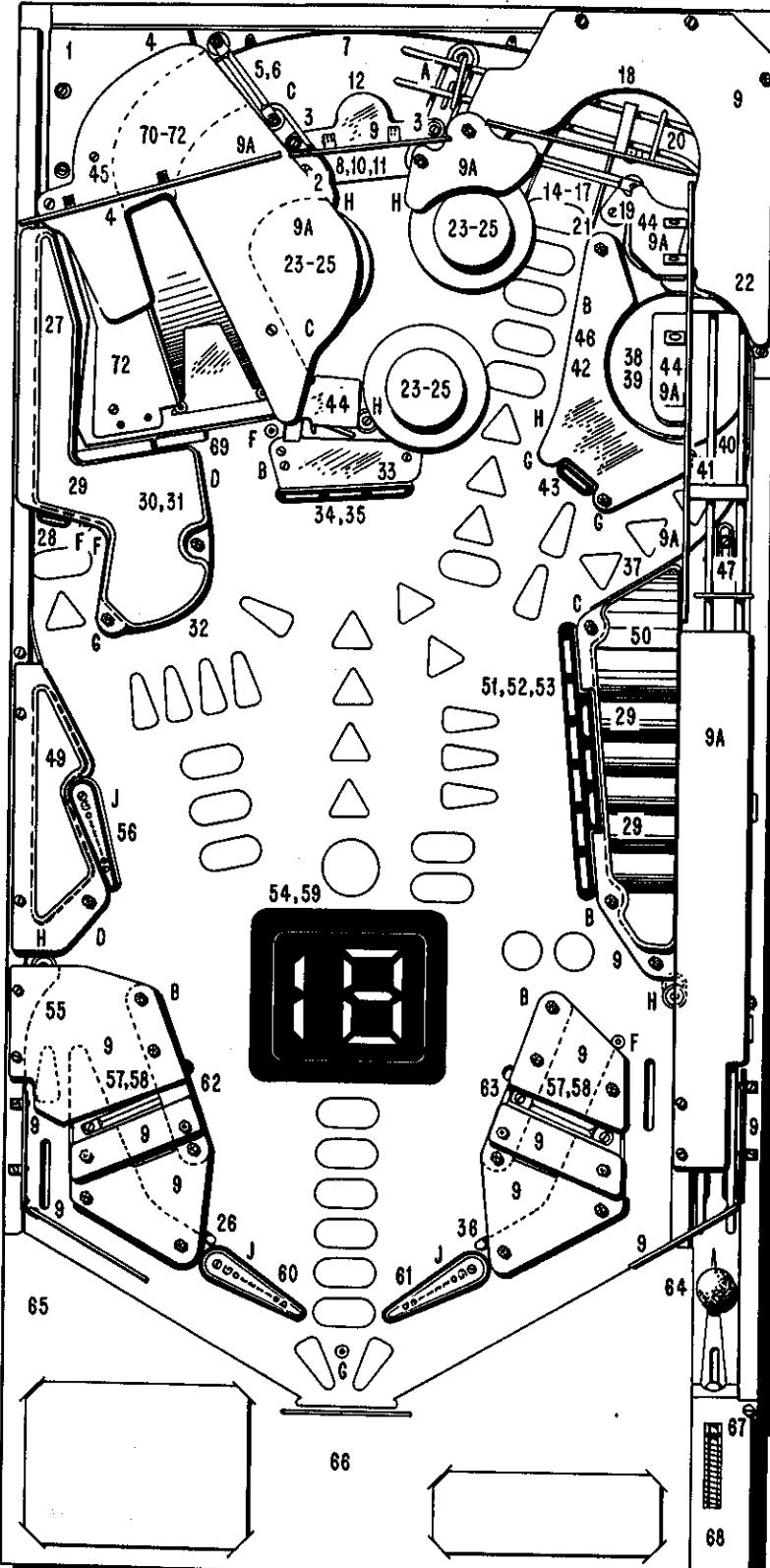
LEFT ARM ACTUATED BY SOL. 8
#67 LAMP ACTUATED BY SOL. 21
RIGHT ARM ACTUATED BY SOL. 9
#67 LAMP ACTUATED BY SOL. 22
BLUE SPOT LIGHT ACTUATED BY SOL. 23
RED SPOT LIGHT ACTUATED BY SOL. 24

## VII. PARTS INFORMATION

### PLAYBOARD PARTS INFORMATION

#### PARTS LIST

ITEM	DESCRIPTION	PART NO.
1	Molded Shield (Blue)	26806
2	Molded Shield (Blue)	26812
3	Ramp Spacer (2)	24880
4	Ramp Spacer (2)	25906
5	Gate Shield	17300
6	Gate Wireform	27098
7	Flat Rail	26798
8	Ball Deflector	26865
9	Plastic Shield Set	26870
9A	Plastic Shield Set	26981
10	Support Bracket	21458
11	Sponge Rubber Strip (2)	25457
12	Vertical Kicker Assembly	MA-1381
13	Ramp Spacer	25708
14	Swinging Target	24494
15	Target Shield	14043
16	Swinging Target Rod	20406
17	Nylon Washer (2)	20407
18	Flat Rail	26817
19	Ball Deflector	26866
20	Wire Ramp Assembly	26787
21	Ramp Post (2)	25701
22	Switch, Bracket, Actuator Assembly	26921
23	Pop Bumper Body And Socket, Red	MA-1374
24	Pop Bumper Cap, Red (3)	10434U
25	Pop Bumper Skirt, Red (3)	10433U
26	Ball Guide Rail	26183
27	Molded Shield (Blue)	26840
28	Spot Target Assembly, Red	26231U
29	Ball Deflector (3)	26453
30	Star Rollover Insert, Red	11966U
31	Star Rollover Button, White	11968
32	Spot Target Assembly, Blue (4)	26924W
33	Ball Deflector Bracket	26862
34	Drop Target Assembly (3 Position) (See Exploded View Illustration)	MA-1367
35	Target Arm, White (3)	11905Z
36	Ball Guide Rail	26185
37	Flat Rail	26820
38	Ball Deflector	26864
39	Block Spacer	26936
40	Wireform Gate	26898
41	Ball Gate Assembly	23410
42	Metal Shield	26867
43	Spot Target Assembly, Yellow	25460T
44	Vertical Kicker Assembly (3)	MA-1372
45	Rotating Table Stop	MA-1376
46	Ball Guide Rail	17106
47	Ramp Spacer	26942
48	Flat Rail	26813
49	Molded Shield (Blue)	26805
50	Molded Shield (Blue)	26841
51	Drop Target Assembly, (6 Position) (See Exploded View Illustration)	MA-1346
52	Target Arm, Black (6)	11905Y
53	Spot Target Assembly, Yellow (3)	25628T
54	Playboard Window	26893
55	Flat Rail	26815
56	Flipper Assembly Flipper Coil Flipper Switch	MA-1250A
57	Metal Shield (2)	26646
58	Wireform Gate (2)	26439
59	Baffle Support Bracket	17300
60	Flipper Assembly Flipper Coil Flipper Switch	21696
61	Flipper Assembly Flipper Coil Flipper Switch	26850
62	Kicker Assembly	MA-1250B
63	Kicker Assembly	25958
64	1-1/16" Steel Ball (3)	26439
65	Kicker Assembly	MA-1251B
66	Card Holder	25959
67	Ball Shooter Gauge	26438
68	Ball Shooter Assembly	17300
69	Pivot Block Support Assembly	21696
70	Motor Support Bracket	26850
71	Motor, 48V, 12RPM	MA-1083
72	Rotating Playboard Assembly (Shown Illustrated) A. Vacuum Form Ramp B. Ramp Flap C. Ball Deflector D. Plate Assembly E. Plastic Rivet (2) (Opposite Side, Not Shown) F. Motor Slip Coupling G. Nylon Bearing (2) H. Plate Assembly J. Plastic Spacer (4) K. Shaft L. Flat Rail M. Ball Deflector N. Hub-Support P. Plastic Shield Set	MA-1373



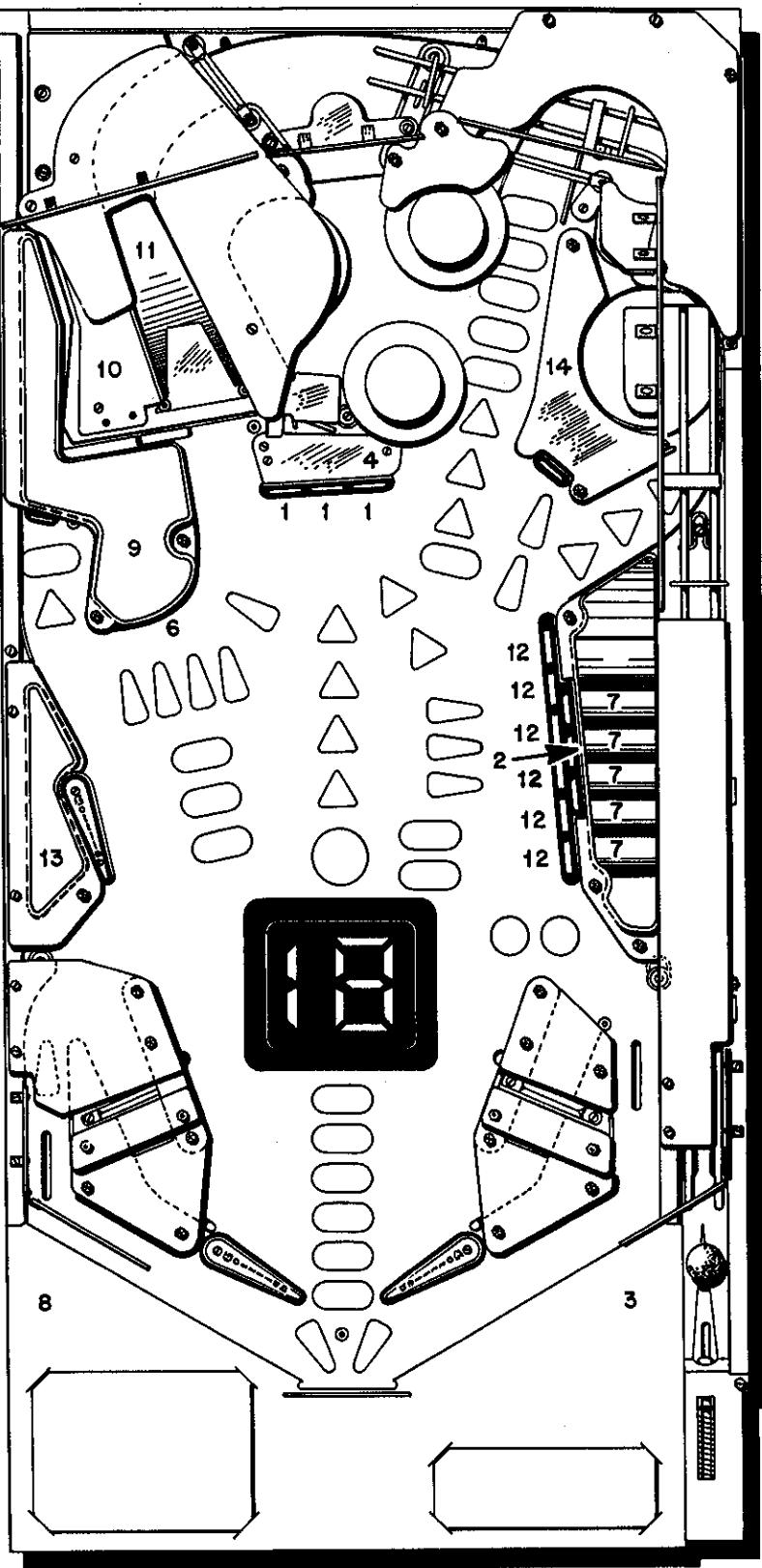
#### RUBBER RINGS

ITEM	DESCRIPTION	PART NO.
A	1-1/2"	10220
B	2" (5)	10221
C	3/4" (2)	10218
D	1" (2)	10219
F	Mini-Post Small (4)	14793
G	Mini-Post (4)	15705
H	3/8" (6)	10217
J	Flipper, Yellow (3)	13151T

#### MISCELLANEOUS PARTS

DESCRIPTION	PART NO.
Mini-Post Screw	14792
Plastic Post, Red, 1"	11561U
Mini-Post Screw	21574
Support Post, Red	20635U
Siamese Post, Red	17492U
Mini-Post Screw	25161
"A" Relay	MA-1021
"C" Relay	MA-1328
"Q" Relay	MA-23
"T" Relay	MA-25

## VII. PARTS INFORMATION



### PLAYBOARD DECAL ASSIGNMENTS

#### PARTS LIST

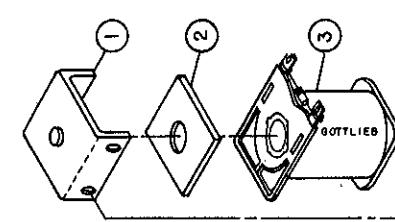
#### ITEM      LOCATION

#### PART NO.

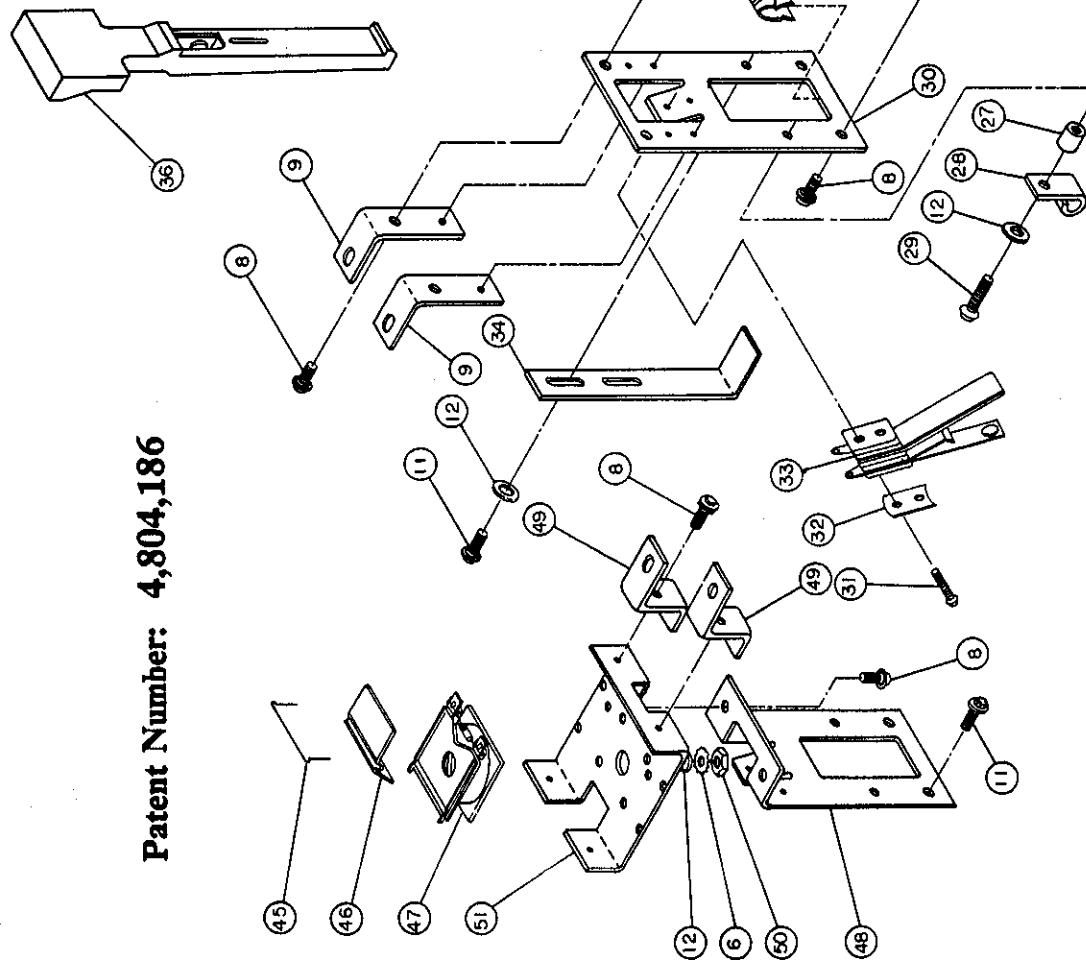
1	Drop Target (3)	25834
2	Molded Shield (Side)	26950
3	Cardholder (Right Side)	26951
4	Top Ball Jet	26954
5	Molded Shield (Front)	26956
6	Molded Shield (Top) (5)	26957
7	Molded Shield (Top) (5)	26958
8	Cardholder (Left Side)	26959
9	Molded Shield (Top)	26959
10	Vacuum Ramp	26960
11	Ramp Flap	26962
12	Drop Target (6)	26963
13	Molded Shield (Top)	26964
14	Metal Shield	26965
15	Flood Light Box	*27010
16	Flood Light Box	*27011

\* Not Shown, Mounted on Flood Light Box.

## VII. PARTS INFORMATION DROP TARGET PARTS



DROP TARGETS	WITHOUT TRIP COIL			WITH TRIP COIL		
	ITEM 14	ITEM 16	ITEM 22	ITEM 30	ITEM 48	ITEM 51
COIL PLATE	25618-1	25621-1	25615-2	25617-1	25619-1	25623-1
GUIDE PLATE	25621-1	25618-2	25615-2	25617-1	25619-1	25623-1
RESET ARM PLATE	25621-1	25621-2	25615-2	25617-2	25619-2	25623-2
SWITCH PLATE	25618-1	25618-2	25618-3	25617-3	25617-4	25623-4



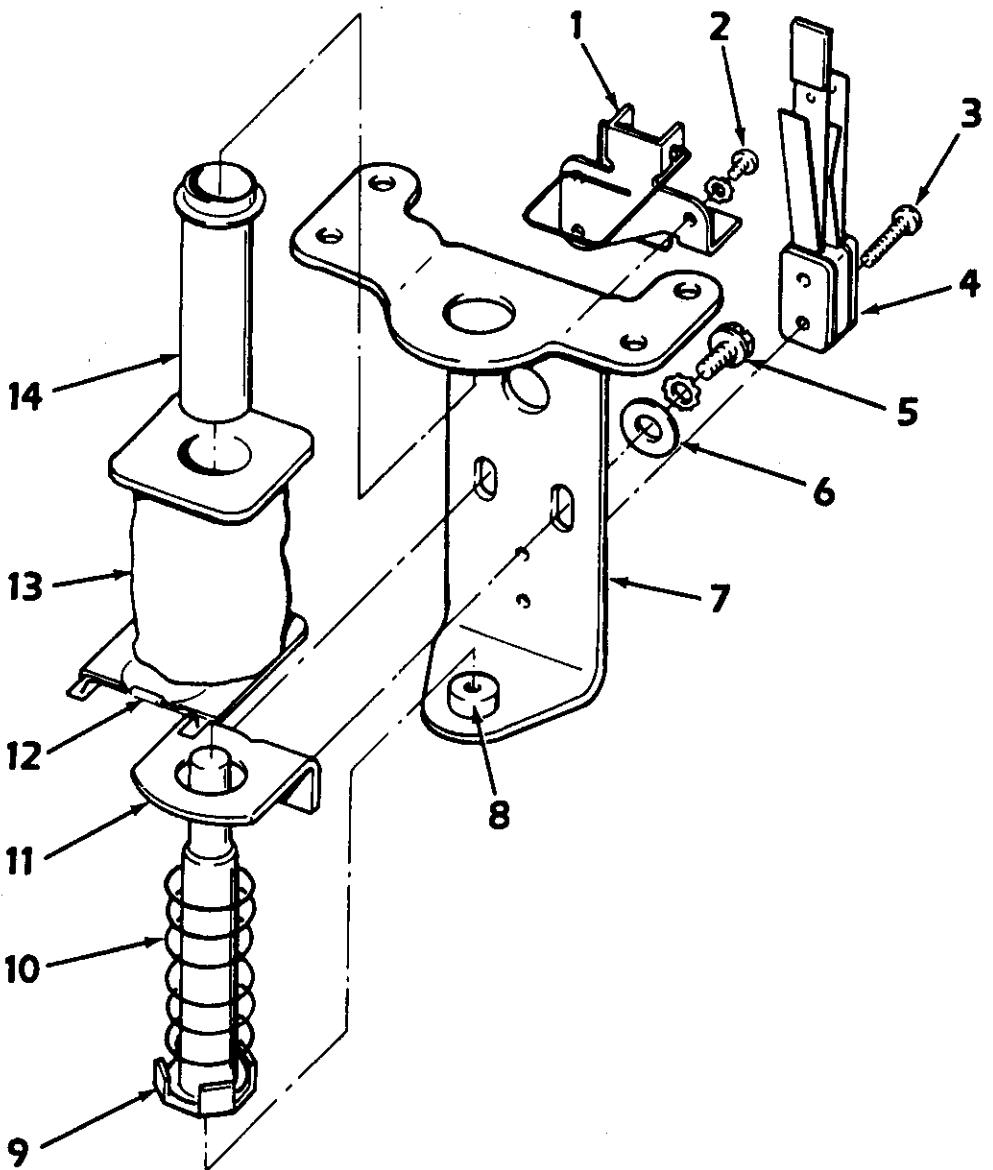
**Patent Number: 4,804,186**

PATENT DRAWINGS

ITEM	DESCRIPTION	PART NO.	ITEM	DESCRIPTION	PART NO.
<b>PARTS FOR SINGLE DROP TARGET</b>					
1	Coil Stop Mounting Bracket	16193	25	Plunger Spring	25607
2	Space Bar	25609	26	Clamp	25604
3	Coil Assembly (Includes Diode)	16192	27	#32 X 5/8" RHMS	2893
4	Drive Coil Housing	16192	28	#32 X 5/8" RHMS	M-39
5	#8-32 X 1/4" Head Cap Screw	F-65	29	Switch Plate	PA-73
6	#8 External Lockwasher	F-632	30	Switch Cover	See Chart
7	Teflon Slip In Core 2-1/4"	F-632	31	#40 X 1/2" RHMS	F-1
8	#8-32 X 1/4" RHMS	F-632	32	Switch	F-645
9	Mounting Bracket	12180	33	Plunger Stop Adjust Bracket	Specify Game
10	Reset Adjust Bracket (Left)	25613	34	Drop Target	Specify Game
11	#8-32 X 3/8" RHMS Sems	F-68	35	Drop Target	Specify Game
12	Internal Lockwasher	F-632	36	Retainer Clip	25935
13	#8-32 X 1/4" Internal Lockwasher	F-632	37	PARTS FOR DROP TARGET WITH TRIP COIL	
14	Coil Plate	F-73			
15	#8-32 X 1/2" RHMS Sems	22233	15	Armature Retainer Clip	18644
16	Spring Retaining Washer	1942	16	Armature	18643
17	Deflector Return Spring	46	17	Deflector Plate	18642
18	Guide Plate	47	18	Guide Plate	See Chart
19	#5-10 X 1/4" RHMS	FI-630	19	External Lockwasher	25612
20	#5 Hex Nut	FI-632	20	Mounting Bracket (Formed)	FI-632
21	Retaining Arm	50	21	#8-32 Hex Nut	See Chart
22	Plunger Arm	25610	22	Coil Plate	25611
23	Plunger Guide		23		

## VII. PARTS INFORMATION

### VERTICAL UPKICKER PARTS

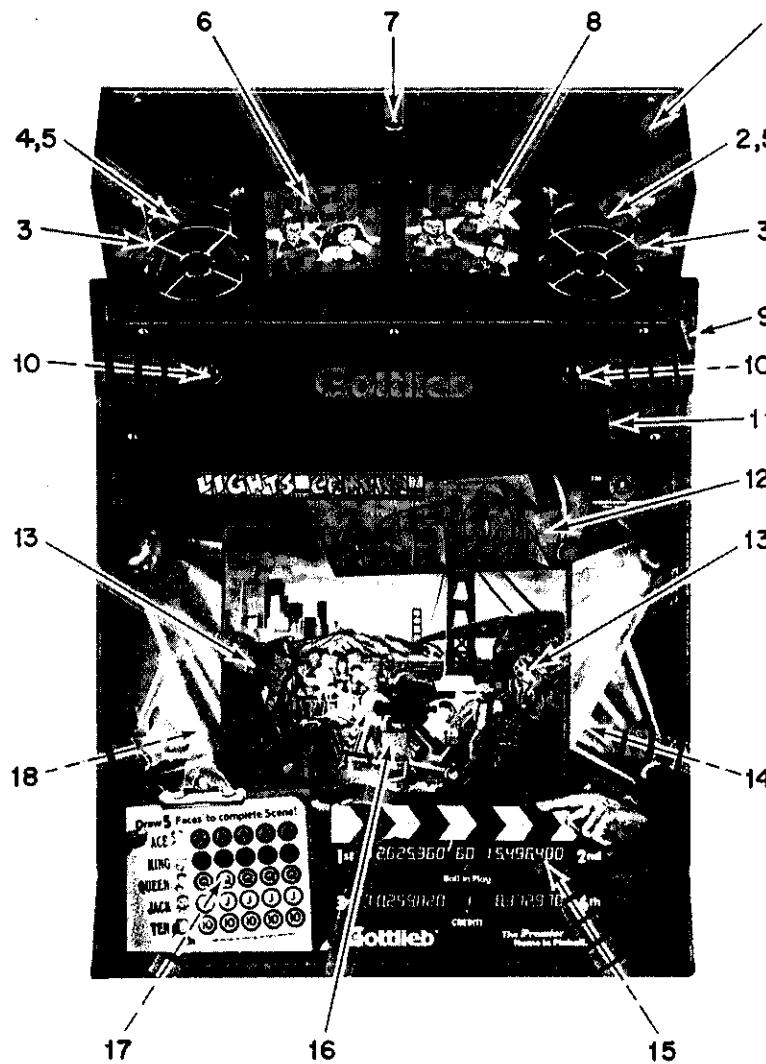


#### ITEM    DESCRIPTION

ITEM	DESCRIPTION	PART NO.
1	Upkicker Assemblies	MA-1372(3) and MA-1381
2	Wire Form and Bracket	21414
2	Screw - RHMS 6-32 X 3/16" Lg. (3)	FA-30
3	Screw - RHMS 5-40 x 5/8" Lg.	FA-2
4	Switch	21415
5	Slotted Hex - WHMS 8-32 X 5/16" Lg.	FA-67
6	Standard Washer #8	FA-617
7	Coil Mounting Bracket	21416
8	Rubber Grommet	5240
9	Plunger	21412
10	Spring	1942
11	Coil Mounting Bracket	15409
12	Diode, 1N4004	XO-254
13	Coil	17876(3) and 26451
14	Sleeve	21411

## VII. PARTS INFORMATION

### LIGHTBOX PARTS



ITEM	DESCRIPTION	PART NO.
1	Flood Light Box Assembly	MA-1382
2	Flood Light Lamp, Blue	26772
3	Wire Guard (2)	26937
4	Flood Light Lamp, Red	26773
5	Flood Light Lamp Socket (2)	26938
6	Decal	27010
7	Lock Assembly	26126
8	Decal	27011
9	Lightbox Assembly	MA-1337
10	Speaker, 4", 8 OHM, 2W (2)	24644
11	Speaker Panel Grill	26446
12	Front Panel Glass, Screened	26084
13	Styrene Die Cut Figure (2)	26895-720
14	Right Gunfighter Assembly	MA-1380
15	Display Board Assembly	MA-1361
16	Styrene Artwork Insert	26892-720
17	Lamp Board Assembly	MA-1335
18	Left Gunfighter	MA-1379

# Premier

## Technology

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TELEX 215009 PRMR  
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THE PREMIER HOTLINE  
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