

Meadows Games, Inc.

# Meadows Lanes

## SERVICE MANUAL



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MEADOWS LANES

MODEL ML-1

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## INTRODUCTION

MEADOWS LANES, a game of skill, is a video bowling game. The player must locate the "Bowler" inside the gutters and then bowl the ball either fast or slow. If the ball is not going exactly where the player wants it to he can hook the ball either to the right or to the left, but he can only hook the ball one time. The instructions are printed on the video screen and will provide the proper instructions for whatever options that the operator has selected.

## WARRANTY

PRINTED CIRCUIT BOARDS: Contact the distributor from whom the game was purchased for warranty repair and/or replacement information.

NOTE: Any PCB repair attempted by anyone other than factory authorized service people, or any damage due to improper handling or use shall void any existing warranty. Proper procedures for removal and replacement, as outlined in manual, must be adhered to.

DISPLAY MONITOR: Contact the distributor from whom the game was purchased for warranty repair and/or replacement information.

NOTE: Any monitor repair attempted by anyone other than factory authorized people, or any damage due to improper handling or use, shall void any existing warranty.

ALL EQUIPMENT RETURNED TO THE FACTORY MUST HAVE RETURN AUTHORIZATION NUMBER AND TRAVEL FREIGHT PREPAID. PLEASE LIST SYMPTOMS OR PROBLEMS TO EXPEDITE REPAIRS.

## MEADOWS LANES SETUP AND CHECKOUT

When the game is received and unpacked, save all packing materials in the event that it was damaged and must be returned. After reading "CABINET ENTRY" section, proceed to inspect the interior of the cabinet for loose or damaged connectors, wires, hardware, etc. If everything seems in satisfactory condition, plug the game in and play it as described in the section "GAME SEQUENCE". For questions about length of play time, coins per game, sound level, or anything relating to picture image, see the section "ADJUSTMENTS/MAINTENANCE".

### GAME SEQUENCE

#### CONTROL AND SWITCH FUNCTIONS

COIN: Operator selectable:

1 coin, 25¢, per player

2 coins, 50¢, per player

TIME: Operator selectable

unlimited time to bowl ball

3 seconds to bowl ball

5 seconds to bowl ball

START GAME: Clears the instructions and starts the game

DISPLAY MONITOR: The one player score is displayed on the left side of the monitor and the second player score is displayed on the right side. When a two player game is finished the word "WINNER" is written under the player with the highest score. In case of a tie the word "TIE" is written across the bowling alley. The score displayed on the monitor is scored exactly the same way that real bowling is scored.

#### CABINET ENTRY

Entry into the MEADOWS LANES cabinet is at three points: the coin door, the back door, and the control panel.

#### COIN DOOR

The coin door is hinged to open from right to left giving access to the following:

- Coin Box
- Coin Mechanism
- Control Panel Wing Nuts

#### BACK DOOR

The back door tilts out from the top and lifts up for removal. This allows access to the following:

- Display Monitor
- Harness
- Logic PCB
- Sound PCB

## CONTROL PANEL

To open the control panel open the coin door first. Remove the two wing nuts located up towards the control panel to the left and right. Finally, swing the control panel away from the cabinet. This will give access to the following:

- Cleaning Monitor/Inner Plexiglass
- Plexiglass Removal
- Speaker
- Start Switch
- Player Controls

## COIN ACCEPTOR OPERATION, ADJUSTMENT AND MAINTENANCE

SEE FIGURE 1

The detection and rejection of undesired or counterfeit coins are determined by size (both thickness and diameter), weight and metallic composition.

The transfer cradle (#9) is used to test both the size and weight of the coin. The coin must first pivot an "undersize" lever (10) to unlock the transfer cradle and can be returned by actuating the wiper operating lever (17). Oversize diameter coins will fail to pass between the transfer cradle and the wiper and can be returned by operating the wiper lever. Coins that are oversize in thickness will fail to pass between the magnet gate (11) and the main channel (5) and will have to be dislodged by actuating the wiper operating lever. Underweight coins will fail to overcome the transfer cradle counterweight and can be returned by operating the wiper lever.

A magnet is used to test the metallic composition of the coin. Highly magnetic coins, such as steel or iron, will be retained by the magnet and can be returned by actuating the wiper operating lever. Coins having comparatively high magnetic properties will be slowed down by the magnet and will drop off the rail short of the accept entrance and will be returned. Coins having little or no magnetic properties, such as brass or zinc, will pass through the magnetic field so fast they will overshoot the accept entrance and will be returned.

#### ADJUSTMENT

All coin acceptors leave the factory adjusted for maximum performance. If, however, more critical adjustment is desired, or if the unit has been disassembled for cleaning, the following adjustment procedure is suggested.

#### KICKER AND SEPARATOR

- a. Set the acceptor on a level surface with the back of the unit facing you (the kicker and separator are on the back).
- b. Loosen the screws holding the kicker (1) and the separator (3) and move both the kicker (2) and the separator (4) as far to the right as they will go. Tighten the screws lightly.
- c. Insert several test coins (both old and new) and note that some are returned by striking the separator.



- d. Loosen the separator screw and move the separator a slight amount to the left. Retighten the screw.
- e. Insert the test coins again, and if some are still returned, repeat Step d until all coins are accepted.
- f. Loosen the kicker screw and move the kicker a slight amount to the right.
- g. Insert the test coins again and, if some of them are returned, repeat Step f until all coins are accepted.
- h. Be sure that both screws are tight after the adjustments have been made.

#### THE MAGNETIC GATE

- a. Set the acceptor with the front of the unit facing you in the test position.
- b. Turn the magnet gate adjustor (12) out (counter-clockwise) until none of the coins will fit through.
- c. With a coin resting in the transfer cradle, turn the adjustor in (clockwise) until the coin barely passes through the magnet gate.
- d. Test this adjustment using several coins, and if any fail to pass through the magnet gate, repeat Step c until all coins are accepted.
- e. Fix the gate adjustor in this position with a drop of glue or Loctite, if necessary.

### ACCEPTOR MAINTENANCE

Depending on the environment in which the acceptor is used, periodic preventative maintenance should be performed.

The mainplate (5) may be cleaned with any liquid household cleaner. Thorough rinsing and drying are necessary to remove deposits and/or film. Remove all metal particles from the magnet by guiding a screwdriver along the edges of the magnet. Remove the transfer cradle and undersize lever and clean the bushings and pivot pins and re-assemble. Spray the entire unit lightly with WD-40, a silicone lubricant.

### COINS PER GAME, ADJUSTMENT

The number of plays per coin is switch adjustable to either 1 coin per game or 2 coins per game. See the illustration of the Logic PCB for switch details.

### GAME TIME, ADJUSTMENT

Length of time for player to bowl the ball can be set for unlimited time, 3 seconds or 5 seconds. See Logic PCB illustration for switch details.

## DISPLAY MONITOR, ADJUSTMENT AND MAINTENANCE

The display monitor contains the following adjustments from left to right:

Contrast: Adjustments for clear picture

Brightness: Adjustment to suit location

Vertical Hold: Adjustment if picture flips

Horizontal Hold: Adjustment if picture has diagonal lines  
or is distorted

For any maintenance see your "DISPLAY MONITOR MANUAL".

For access to display monitor see "Back Door" section under "CABINET ENTRY".

### PCB REMOVAL

Before removing PCB's, power cord should be disconnected. Note the position of PCB to the connector to ensure proper connection upon replacement.

### TROUBLE SHOOTING HINTS

#### TESTING COMPONENTS OF GAME

BUTTONS & COIN SWITCH are normally closed. When pushed they are open. The buttons can be by-passed by pulling off one of the terminals.

HARNESSES can be tested by an ohm-meter or continuity checker.

FUSES are checked by visual inspection or continuity checker.

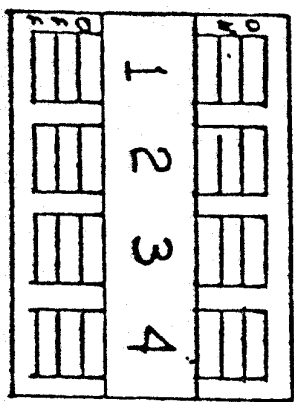
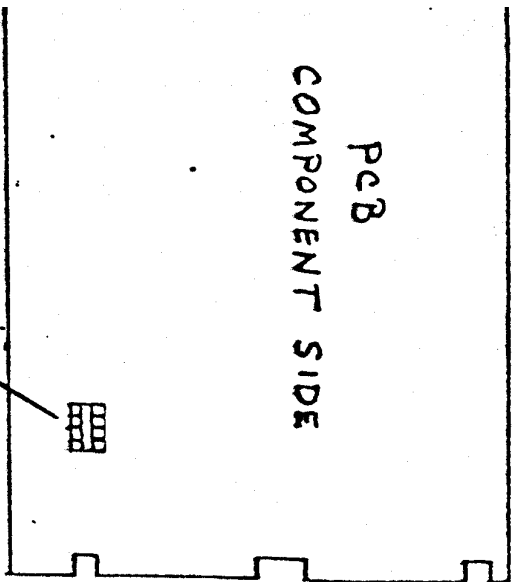
LOGIC PCB, SOUND PCB & TV MONITOR can be checked by substitution of a good replacement. Repair of logic PCB, sound PCB & monitor should only be serviced by experienced technicians.

NO PICTURE: Check if back of picture tube is lit, if not, inspect fuses, power cord, and power outlet. If these are good and tube is not lit, repair of monitor is necessary.

If the tube is lit, check adjustments of brightness and contrast.

Test continuity of logic board pins #1 and #3 (5 volt dc power supply), and pin #5 (video output). If all check out, the problem is either the logic PCB or the monitor.

NO SOUND: Check the adjustment of the volume control on the Sound PCB. Check the speaker, logic PCB, and TV monitor.



SWITCH NUMBER				FUNCTION
1	2	3	4	
OFF		-		NO TIME LIMIT TO BOWL BALL
ON	OFF	-		3 SEC. TIME LIMIT TO BOWL BALL
ON	ON	-		5 SEC. TIME LIMIT TO BOWL BALL
		-		
		-	OFF	25¢ / PLAYER
		-	ON	50¢ / PLAYER

UNIT NUMBER	001
FROM	0000000000
TO	0000000000
FUNCTIONS	0000000000
OPERATOR	0000000000
DATE	0000000000
TIME	0000000000
LOCATION	0000000000
REVISION	0000000000
OPERATOR	0000000000
DATE	0000000000
TIME	0000000000
LOCATION	0000000000
REVISION	0000000000

MEADOWS LANES  
OPERATOR OPTIONS

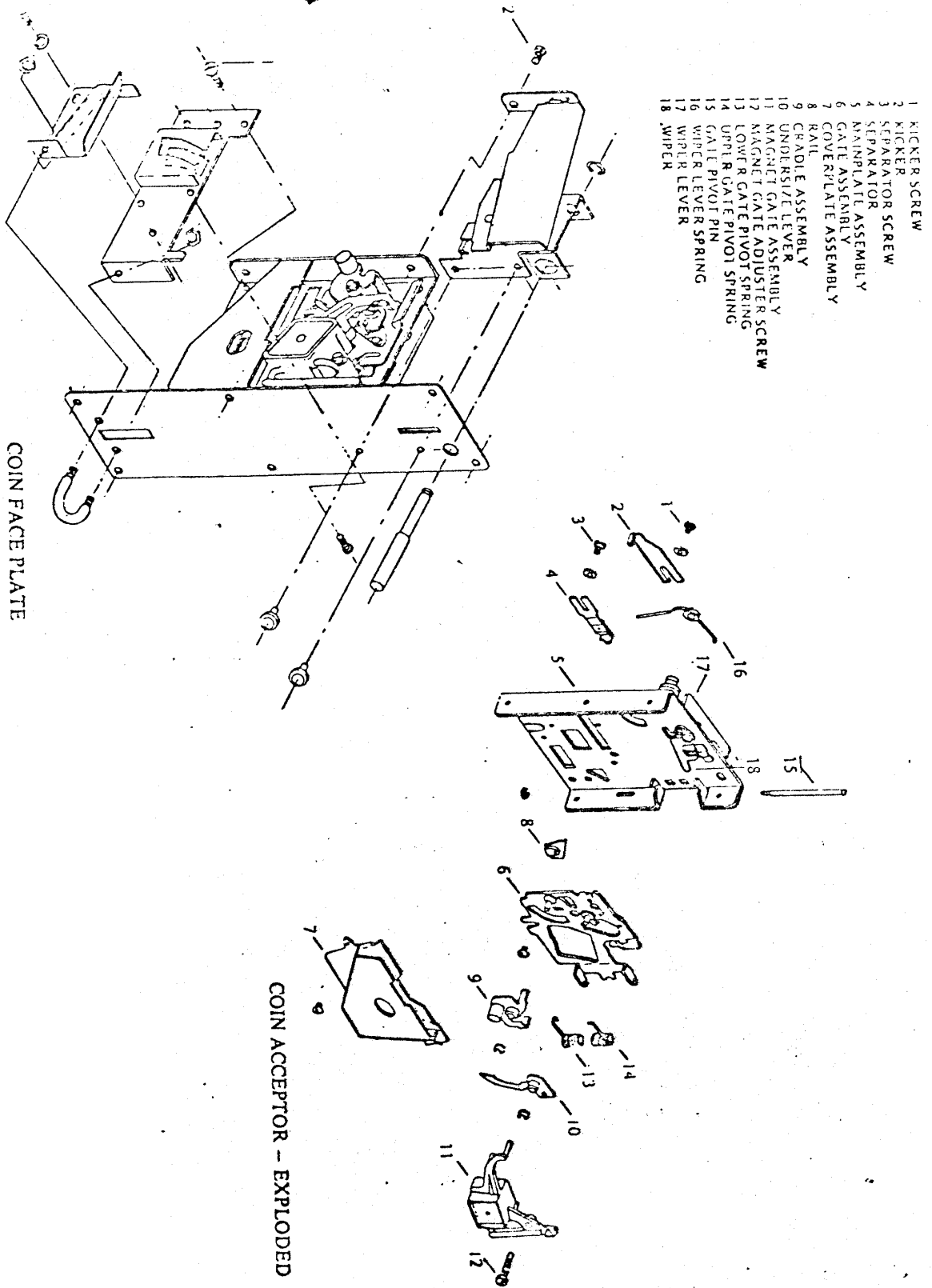
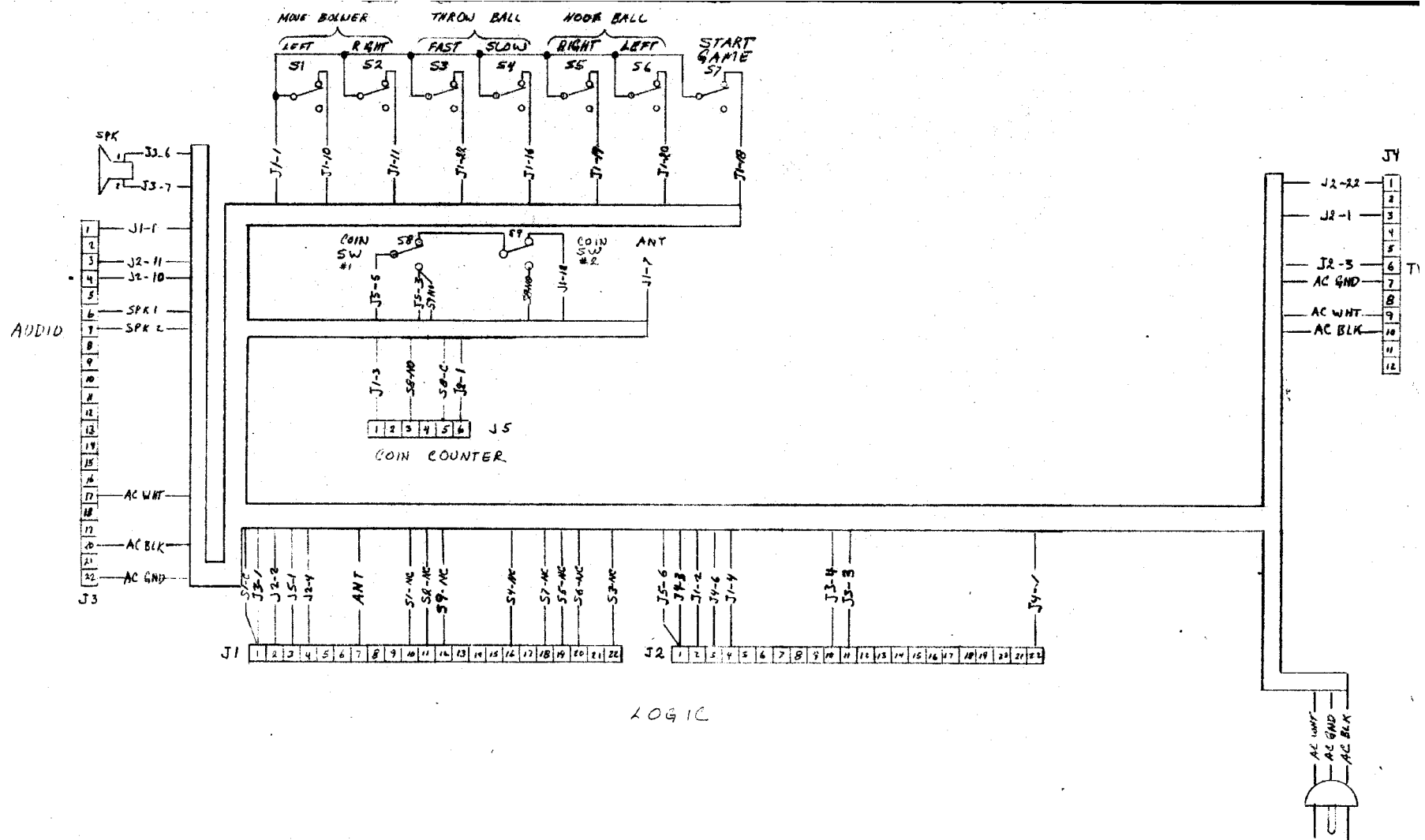
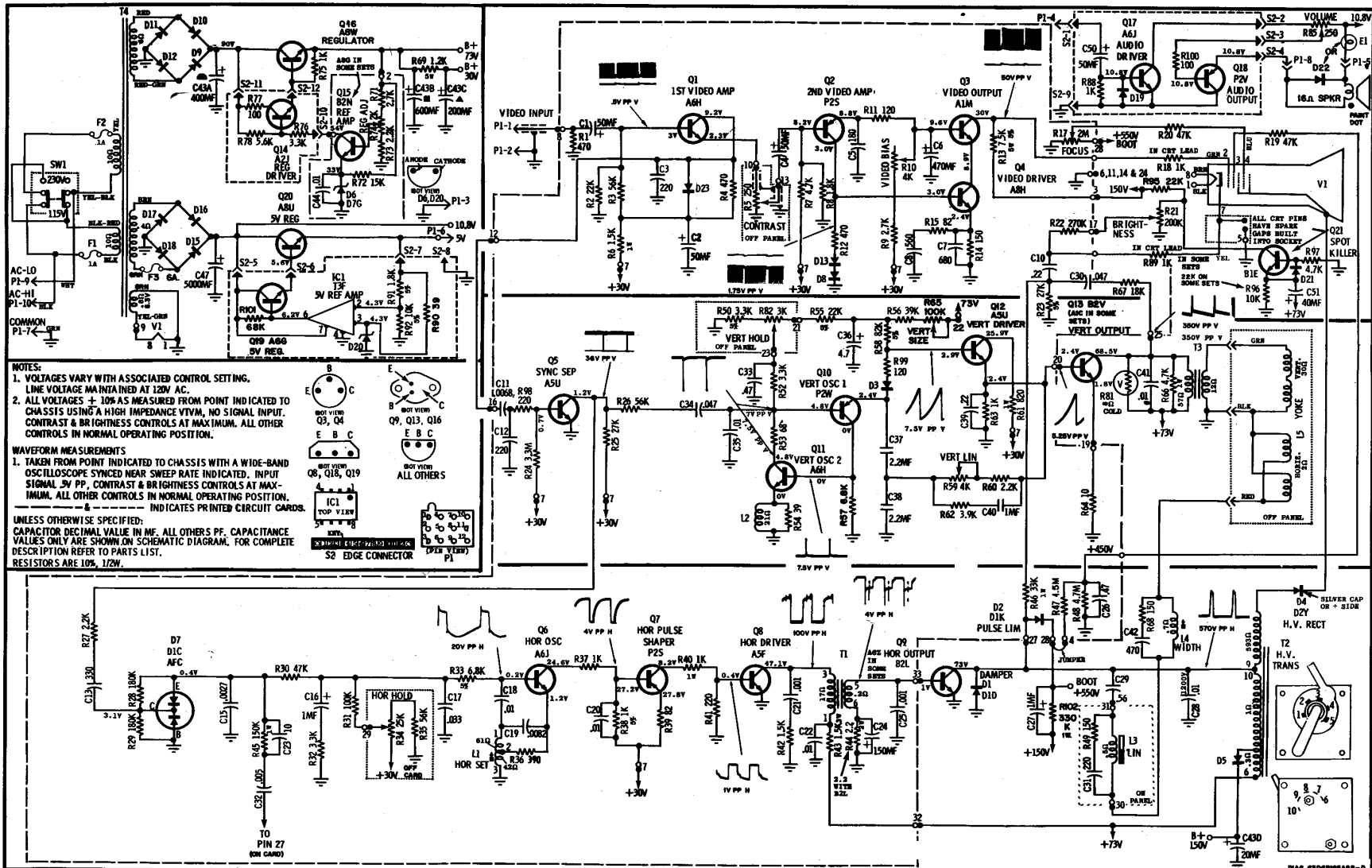


FIGURE 4







**NEW and ORIGINAL -- From Meadows Games**

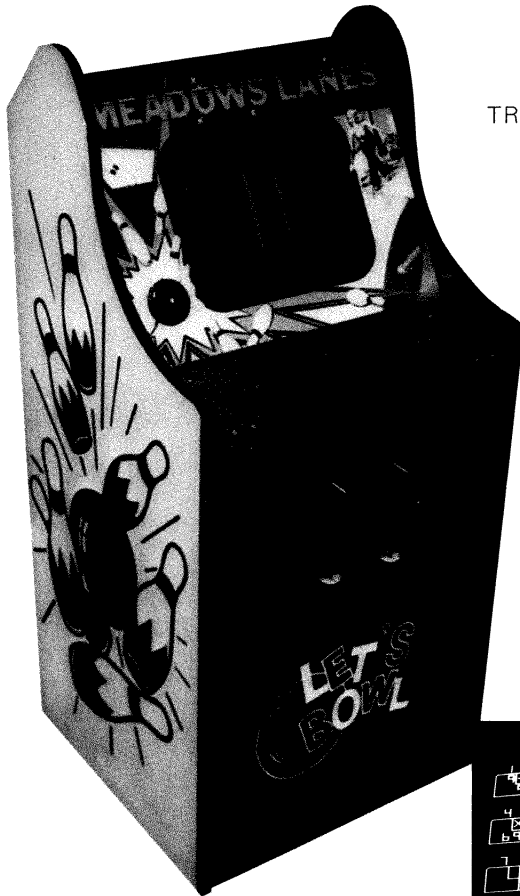
# **MEADOWS LANES** T.M. Model ML

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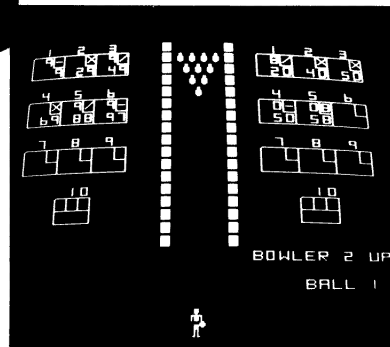
Finally . . . one of the worlds favorite indoor sports comes to the TV Screen.

HAVE YOU TRIED TO GET AN OPEN LANE LATELY?  
YOU'LL WAIT IN LINE TO PLAY MEADOWS LANES . . . TOO!!

Not enough room for the big mechanical bowling games on your location?  
TRY MEADOWS LANES FOR ALL THE REALISM, FUN & EXCITEMENT  
OF THAT AGE OLD SPORT -- BOWLING.



- Upright and cocktail models
- 1 or 2 player game
- Move the bowler into position
- Bowl the ball - FAST or SLOW
- Hook the ball - LEFT or RIGHT
- Accurate score keeping for each player frame for frame
- Realistic "bowling alley" sound effects
- Attract mode when not being played
- 10 full frames per bowler
- Double Coin Door
- Indestructible Pushbutton Control
- Operator Adjustable Time Option
- Operator Adjustable Coin Option
- Unequaled Meadows Reliability & Quality
- Microprocessor Logic
- 19" Solid State Monitor (Upright & Cocktail)
- Instructions can be programmed for other languages.



See your MEADOWS Distributor  
for full details or contact us at:

**MEADOWS GAMES, INC.**

181 Commercial Street Sunnyvale, California U.S.A. 94086  
Phone: (408) 732-8110

- **DIMENSIONS:**
- Upright: 55.5"H x 24.5"D x 26.5" W
- ★ Cocktail: 28.5"H x 35"D x 35"W
- **WEIGHT**
- Upright: 150 lbs.
- ★ Cocktail: 130 lbs.

★ Ask your distributor about the  
versatile Meadows "HI-LO"  
Cocktail Table

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