PRELIMINARY OWNER/OPERATOR'S SECTION

PAC-LAND U.R.

BALLY
Midway MFG. CO

INSTALLATION

1. Unlock and open the coin box door.

2. Remove four (4) "CABINET LEVELING LEGS" from inside the coin box.

3. Tip the cabinet to the side and remove the shipping cleats from its bottom.

   ○ Locate the threaded fittings - one in each corner - and install the "CABINET LEVELI
   LEGS" in them.

   ○ Level the cabinet.

   ○ When finished, the cabinet should be stable in the upright position.

4. Plug the game into a standard A.C. wall outlet ONLY .

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------WARNING------

Game MUST be
properly grounded.
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5. The power ON/OFF switch is located:

   UPRIGHT MODEL: On top of the cabinet toward the back.

LINE VOLTAGE SAFETY INTERLOCK SWITCHES

Line voltage SAFETY INTERLOCK SWITCHES have been provided for your protection. The loca-
tions of these SAFETY INTERLOCK SWITCHES are:

UPRIGHT MODEL: Inside the rear of the cabinet where the access door, when closed, wil
                     be able to depress the switch plunger.

When the cabinet access door(s) are secured in place, the SAFETY INTERLOCK SWITCH plunger(
are in a fully depressed condition. The game circuit can function normally.

When any cabinet access door(s) are opened, the SAFETY INTERLOCK SWITCH plunger(s) are in
partially extended condition. This isolates the game circuit from the line voltage.

To restore power to the game circuit with the access door(s) open, gently pull the SAFETY
INTERLOCK SWITCH plunger(s) out to the fully extended condition. **THIS IS TO BE USED FOR**
SERVICING THE GAME ONLY!

TO SERVICE THE CONTROL PANEL(S)

1. UPRIGHT MODEL:

- The control panel is held in place by bassick clamps.

- They are spring loaded to provide constant positive pressure on their latch
  plates.

- They can be reached through the coin door **AFTER turning power to the game**

- To release the clamps, lift up and toward the center of the control panel.

- Once they are released, unhook them from their latch plates.

- To open the control panel for servicing:

- Raise it up and tilt it toward you until you can see the cabling behind it

- The control panel is now loose and may be serviced but remains tethered to
  game by a plastic strap.

- To completely remove the control panel, disconnect it from its cabling and
  miscellaneous hardware, and remove the wing nut securing it to the plastic

- The control panel is now free and can be removed.

- To reinstall the control panel(s), reverse this procedure.

REMOVAL OF THE MAIN-DISPLAY-GLASS AND/OR THE T.V. BEZEL ASSEMBLY

1. UPRIGHT MODEL:

NOTE: In order to do this, the control panel **MUST** be removed first. See th
"UPRIGHT MODEL" procedure.

- **Turn the power to the game off** and remove the control panel. This frees t
  main-display-glass so it can be removed.

- By putting your finger in the hole in the middle of the main-display-glass
  support, you can lift it up and out.

- Loosen the screws which secure the T.V. bezel-diffuser-clamps in place.

- Move the clamps to the side and the bezel diffuser may be removed.

- Remove the bezel securing screws and the bezel with it's bezel-difuser-cla
  their screws may be removed.

- To reinstall the T.V. bezel assembly and the main-display-glass, reverse
  procedure.

VOLUME CONTROL POT / OPTION SWITCH LOCATIONS

The volume control pot(s) and option switches are located as shown in the attached
Board reference drawing. For adjustment, it/they may be reached through the games
access door.

To make the sounds louder, turn the volume pot clockwise as you face it.

To make the sounds less loud, turn the volume pot counterclockwise as you face it.

G A M E   O P E R A T I O N

Your new game is a one or a two player model with a color T.V. monitor. The game has five possible modes of operation: ATTRACT, READY-TO-PLAY, PLAY, HIGH SCORE/INITIAL, and SELF-TEST.

SELF-TEST MODE

The Self-Test mode is a special mode for checking the game switches and computer functions. It is the easiest and best way to check for proper operation of the entire game.

NOTE: Putting the game into Self-Test will cause it to erase any CREDITS it has on it from its memory.

You may begin a Self-Test at any time after the power to the game is on by pushing down on the spring loaded Self-Test switch. The game enters the Self-Test mode immediately. It will take about 5 seconds to perform the following 7 checks on itself.

1. ROM TEST: ROM OK appears.

2. RAM TEST: RAM OK appears.

3. SUB TEST: SUB OK appears.

4. UPRIGHT/TABLE: UPRIGHT appears.

5. COIN 1:   1 COIN 1 CREDIT appears.

5. COIN 2:   1 COIN 1 CREDIT appears.

6. MYPAC: 3 appears.
    (players)

7. RANK: A appears.

8. SOUND 00 appears.   Pushing the left or right direction control buttons should cause
                          the numbers to change **AND** a sound to be heard. Pushing the jump
                          buttons, game start buttons, and the coin switches should
                          cause **ONLY** a sound to be heard.

9. EXTEND TYPE: A appears.

10. ATS: ON appears.

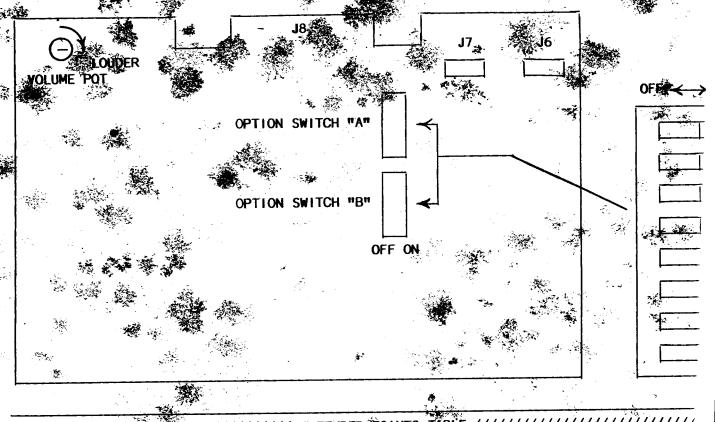11. RND: OFF appears.

CROSS HATCH PATTERN

Pressing the service button while in the Self-Test mode causes a cross hatch pattern to appear on the monitor. Pressing it again, causes the cross hatch to disappear.

PAC-LAND

OPTION SWITCH SETTINGS - DIP SWITCH "A"

////////////////////////////////////SELF-TEST MODE/////////////////////////////////////

		SW#1	SW#2	SW#3	SW#4	SW#5	SW#6	SW#7	SW#8
*	NORMAL OPERATION	OFF							
	SELF-TEST ENGAGED	ON							

////////////////////////////////////NUMBER OF PLAYER'S PER GAME/////////////////////////////////////

		SW#1	SW#2	SW#3	SW#4	SW#5	SW#6	SW#7	SW#8
*	3 PLAYER'S		OFF	OFF					
	2 PLAYER		OFF	ON					
	4 PLAYER'S		ON	OFF					
	5 PLAYER'S		ON	ON					

////////////////////////////////////COIN SWITCH NUMBER 1/////////////////////////////////////

				SW#1	SW#2	SW#3	SW#4	SW#5	SW#6	SW#7	SW#8
*	1	COIN	1	CREDIT				OFF	OFF		
	1	COIN	2	CREDITS				OFF	ON		
	2	COINS	1	CREDIT				ON	OFF		
	3	COINS	1	CREDIT				ON	ON		

////////////////////////////////////ATTRACT MODE SOUND/////////////////////////////////////

		SW#1	SW#2	SW#3	SW#4	SW#5	SW#6	SW#7	SW#8
*	SOUND IN ATTRACT MODE						OFF		
	NO SOUND IN ATTRACT MODE						ON		

////////////////////////////////////COIN SWITCH NUMBER 2/////////////////////////////////////

				SW#1	SW#2	SW#3	SW#4	SW#5	SW#6	SW#7	SW#8
*	1	COIN	1	CREDIT							OFF	OFF
	1	COIN	2	CREDITS							OFF	ON
	2	COINS	1	CREDIT							ON	OFF
	3	COINS	1	CREDIT							ON	ON

* INDICATES FACTORY RECOMMENDED SETTINGS

PART NO. M051-00B64-A007

PAC - LAND

OPTION SWITCH SETTINGS - DIP SWITCH "B"

// EXTENDED POINTS //

VARIOUS OPTIONS	SW#1	SW#2	SW#3	SW#4	SW#5	SW#6	SW#7	SW#8
A	OFF	OFF	OFF					
B	OFF	OFF	ON					
C	OFF	ON	OFF					
D	OFF	ON	ON					
E	ON	OFF	OFF					
F	ON	OFF	ON					
G	ON	ON	OFF					
H	ON	ON	ON					

// DIFFICULTY LEVEL //

RANK	A	AVERAGE		OFF	OFF
RANK	B	EASY		OFF	ON
RANK	C	HARD		ON	OFF
RANK	D	VERY HARD		ON	ON

// GAME CONTINUITY //

*	NORMAL	OFF
	RUNNING	ON

// FREEZE VIDEO //

*	NORMAL	OFF
	FREEZE	ON

// TRIP SELECT //

*	YES	OFF
	NO	ON

* INDICATES FACTORY RECOMMENDED SETTINGS

PART NO. M051-00B64-A007

LOUDER

VOLUME POT

OPTION SWITCH "A"

OPTION SWITCH "B"

OFF ON

J8

J7

J6

OFF

///////////////////////////////////// EXTENDED POINTS TABLE /////////////////////////////////////

OPTION SWITCH SETTING	1ST EXTENSION AT:	2ND EXTENSION AT:	3RD EXTENSION AT:	4TH EXTENSION AT:	5TH EXTENSION AT:	6TH EXTENSION AT:
A	30,000	80,000	150,000	300,000	500,000	1,000,000
B	30,000	100,000	200,000	400,000	600,000	1,000,000
C	40,000	100,000	180,000	300,000	500,000	1,000,000
D	30,000	80,000	EVERY 100,000			
E	50,000	150,000	EVERY 200,000			
F	30,000	80,000	150,000			
G	40,000	100,000	200,000			
H	40,000					

```
Pac Land Logic Board Connections
-------------------------------
J8.44P Edge Connector (The pole key is located between E and F)
225J-22221-488DDK (Pitch 3.96mm)

   A  GND                             1  GND
   B  Speaker +                       2  Speaker -
   C  Lockout Solenoid                3  Coin Counter
   D  1 P Start Lamp                  4  2 P Start Lamp
   E  + 12v                           5  +12v
   F  +5v                             6  +5v
   H  GND                             7  GND
   J  Service Switch                  8  Test Switch
   K  Coin 1 Switch                   9  Coin 2 Switch
   L  1 P Start Switch               10  2 P Start Switch
   M  Player 1 Jump Switch           11  Player 2 Jump Switch
   N  Player 1 Left                  12  Player 2 left
   P                                 13
   R  Player 1 Right                 14  Player 2 Right
   S                                 15
   T                                 16
   U                                 17
   V                                 18
   W                                 19
   X                                 20
   Y  Coin Counter 2                 21  Table GND
   Z  GND                            22  GND

Notes:
1. The lockout solenoid and the coin counter's power supply is +12v.
2. The start lamp's power supply is +5v.
3. Each microswitch is connected onto the N.O. terminal.  Each GND is
   connected onto the COM terminal.
4. TABLE GND - for the table, the GND is connected.  Others, the GND is
   not connected.


J6.6P Plug Housing (Socket Connector)

   1  Video Red
   2  Video Green                  Housing   1-480704-0
   3  Video Blue                   Contact   350689-1 AMP
   4  Video Sync
   5  Video GND
   6

J7.3P Plug Housing (Socket Connector)

   1  +12v 1A                      Housing   1-480704-0
   2  GND                          Contact   350689-1 AMP
   3  +5v 4A
```

```
--------------------------------------------------------------------------
Name Of Game: Pac Land                                        Manuf: Namco
--------------------------------------------------------------------------
Switch "A" Settings
--------------------------------------------------------------------------
Option                     | SW1 | SW2 | SW3 | SW4 | SW5 | SW6 | SW7 | SW8 |
---------------------------|-----|-----|-----|-----|-----|-----|-----|-----|
Normal Play Mode           | OFF |     |     |     |     |     |     |     |
Test Mode                  | ON  |     |     |     |     |     |     |     |
---------------------------|-----|-----|-----|-----|-----|-----|-----|-----|
3 Pac-Mans Per Game        |     | OFF | OFF |     |     |     |     |     |
2 Pac-Mans Per Game        |     | OFF | ON  |     |     |     |     |     |
4 Pac-Mans Per Game        |     | ON  | OFF |     |     |     |     |     |
5 Pac-Mans Per Game        |     | ON  | ON  |     |     |     |     |     |
---------------------------|-----|-----|-----|-----|-----|-----|-----|-----|
Coin 1: 1 Coin / 1 Credit  |     |     |     | OFF | OFF |     |     |     |
        1 Coin / 2 Credits |     |     |     | OFF | ON  |     |     |     |
        2 Coins/ 1 Credit  |     |     |     | ON  | OFF |     |     |     |
        3 Coins/ 1 Credit  |     |     |     | ON  | ON  |     |     |     |
---------------------------|-----|-----|-----|-----|-----|-----|-----|-----|
Attract Sound On           |     |     |     |     |     | OFF |     |     |
Attract Sound Off          |     |     |     |     |     | ON  |     |     |
---------------------------|-----|-----|-----|-----|-----|-----|-----|-----|
Coin 2: 1 Coin / 1 Credit  |     |     |     |     |     |     | OFF | OFF |
        1 Coin / 2 Credits |     |     |     |     |     |     | OFF | ON  |
        2 Coins/ 1 Credit  |     |     |     |     |     |     | ON  | OFF |
        3 Coins/ 1 Credit  |     |     |     |     |     |     | ON  | ON  |
--------------------------------------------------------------------------


Switch "B" Settings
--------------------------------------------------------------------------
Option                     | SW1 | SW2 | SW3 | SW4 | SW5 | SW6 | SW7 | SW8 |
---------------------------|-----|-----|-----|-----|-----|-----|-----|-----|
ALWAYS OFF                 |     |     |     | OFF | OFF |     |     | OFF |
---------------------------|-----|-----|-----|-----|-----|-----|-----|-----|
Free Man Points A          | OFF | OFF | OFF |     |     |     |     |     |
Free Man Points B          | OFF | OFF | ON  |     |     |     |     |     |
Free Man Points C          | OFF | ON  | OFF |     |     |     |     |     |
Free Man Points D          | OFF | ON  | ON  |     |     |     |     |     |
Free Man Points E          | ON  | OFF | OFF |     |     |     |     |     |
Free Man Points F          | ON  | OFF | ON  |     |     |     |     |     |
Free Man Points G          | ON  | ON  | OFF |     |     |     |     |     |
Free Man Points H          | ON  | ON  | ON  |     |     |     |     |     |
---------------------------|-----|-----|-----|-----|-----|-----|-----|-----|
Game Continuity Normal     |     |     |     |     |     | OFF |     |     |
Game Continuity Running    |     |     |     |     |     | ON  |     |     |
---------------------------|-----|-----|-----|-----|-----|-----|-----|-----|
Screen Hold Normal         |     |     |     |     |     |     | OFF |     |
Screen Hold Stop           |     |     |     |     |     |     | ON  |     |
--------------------------------------------------------------------------
```

Free Man Points Table

	1st	2nd	3rd	4th	5th	6th
A	30,000	80,000	130,000	300,000	500,000	1,000,000
B	30,000	100,000	200,000	400,000	600,000	1,000,000
C	40,000	100,000	180,000	300,000	500,000	1,000,000
D	30,000	80,000	Every 100K			
E	50,000	150,000	Every 200K			
F	30,000	80,000	150,000			
G	40,000	100,000	200,000			
H	40,000					