

**Operation Manual** 



90MAN-01-B

**Copyright 2008 Patent Pending All Rights Reserved** 

# Table of Contents

Game Play	3
Game Set-up	4
Technical Description	5
Programming	6-10
Error Codes	9
Electronic Components	11-13
Game Specifications	13
Parts	14

## Red Hot Game Play

The object of Red Hot is to time the ball drop so the maximum number of balls fall into the "Red Hot" slots. Filling all 6 "Red Hot" slots wins the Jackpot. Filling less than 6 "Red Hot" slots pays outs from 2-15 tickets depending on the number of slots filled. See chart below for ticket payout. In addition to the "Red Hot" slots, there are Blue Mystery Bonus slots. Landing in 1 of those slots pays out the "Mystery Bonus" – from 2-25 tickets.

Number of Red Hots filled	<b>Tickets Dispensed</b>
1 Red Hot	2
2 Red Hots	3
3 Red Hots	5
4 Red Hots	10
5 Red Hots	15
6 Red Hots	Jackpot Value

LED Lighting

Red Hot utilizes low voltage (12 v) LED lighting throughout the game for general illumination and accents.





## Game Set-up

## Red Hot Marquee Assembly

- 1. Position base near power source (AC connection is located at the left rear)
- 2. Unscrew the Lower Marquee mounts on each side of the cabinet
- 3. With one person on each side slowly raise the marquee poles making sure to keep the marquee level.
- 4. Insert the connector for the marquee thru the hole in the RIGHT side of the cabinet
- 5. Secure screws to attach the lower marquee mount to the cabinet in the UP position.
- 6. Open RIGHT ticket dispenser door and connect the marquee power connector.
- 7. Connect AC line cord to power source
- 8. Load tickets in ticket dispenser



# **Technical Operation**

Stepper Controller Board (SCB)



### Wheel Position

Wheel position in Red Hot is determined by an optical sensor that communicates with the CPU board. The CPU receives a HOME signal from an optical sensor located behind the wheel. There is a pin inserted into the wheel and when the pin passes thru the optical sensor it blocks the beam and the sensor sends a signal to the CPU telling it that it has detected the HOME pin. This HOME signal lets the CPU know the exact position of the wheel.

A stepper controller board (SCB) controls a stepper motor that rotates the wheel. The wheel rotation is broken up into many "steps" and the CPU counts these "steps." Because the CPU knows where the HOME position is and it's counting every "step" it knows exactly where the wheel is at any time.

## Scoring – Ball Sensor

There is an optical transmitter located on the left side of each wheel that transmits a beam thru the holes in the wheel and a receiver behind the wheel that detects the beam. When a ball falls into a slot it blocks the optical beam and the position of that slot is communicated to the CPU. Since we know the position of the wheel at all times, we can identify each hole and know if it is a RED HOT or a MYSTERY BONUS hole. The CPU counts how many RED HOT or MYSTERY BONUS balls a player has and awards the corresponding number of tickets.

## **Ball Optical Sensor Observation Point**

You may verify the operation of the Ball Transmitter and Receiver optos from the rear of the cabinet. There are 2 observation points; one on the left and one on the right (see pictures below). Under normal operation you should see a FLASHING LED as the beam is broken. If the LED is off or always on there is a problem with one of the optos, a voltage or wiring problem to the optos.





**Power Distribution Board** 



### 1. Entering Programming Mode

To enter program mode, <u>press and hold</u> the **RIGHT** button located on the **Power Distribution Board** located in the lower left cabinet at the front of the electronics assembly. After 2 seconds, **"TOTALS"** will appear on the **LCD Display** (located in the lower left cabinet at the rear of the electronics assembly). At this time, release the button. **"COINS IN"** with the number of coins received will be displayed. The game is now in Program Mode.

**PLEASE NOTE** that from this point forward, the LEFT (**BUTTON 2**) and the RIGHT (**BUTTON 1**) buttons on the Power Distribution Board are the buttons used to navigate thru the programming options. The **PROGRAM** button (middle button) is not used. Each programming option is displayed on the **LCD Display** (located in the lower cabinet at the rear of the cashbox enclosure), with the functions shown for Buttons 1 and 2.

### 2. COINS IN

The total coins received through the coin mechanism are displayed. The total will rollover to zero when it reaches 1,000,000,000. Depressing **BUTTON 2** will display "TICKETS OUT".

## 3. TICKETS OUT

The total tickets dispensed are displayed. The total will rollover to zero when it reaches 1,000,000,000. Depressing **BUTTON 2** will display "CLEAR G1 TICKETS OWED?", and/or "CLEAR G2 TICKETS OWED?" or "ENTER PROGRAMMING MODE?".

## 4. "CLEAR TICKETS OWED?"

This option is displayed only if there are tickets that are owed that have not been dispensed, and will show the number of tickets. Depressing **BUTTON 1** will clear these tickets from the system, and "TICKETS CLEARED" will be displayed. This option will be shown for each game separately. Depressing **BUTTON 2** will display "ENTER PRO-GRAM MODE?"

## 5. "ENTER PROGRAM MODE?"

Depressing **BUTTON 1** at this time will enter the area of Program Mode where parameters may be changed. Depressing **BUTTON 2** will return the game to Run Mode.

## 6. "ENTER PASSCODE?"

To be able to change programming parameters or reset the counters, a 4-digit passcode must be entered. The default passcode is 0000. To enter the passcode, Depress **BUTTON 1** to change the digit from 0 to 9, then press **BUTTON 2** to move to the next digit. After all digits have been entered correctly, depressing **BUTTON 2** will Display the first programming option, "CHANGE PASSCODE?".

## 7. "CHANGE PASSCODE?"

Depressing **BUTTON 1** will allow for changing the passcode. Depressing **BUTTON 2** will move to "DISPLAY CONTRAST".

### IMPORTANT!!! ONCE THE PASSCODE IS CHANGED, THE DEFAULT OF 0000 WILL NO LONGER WORK! BE SURE TO SAVE THE PASSCODE IN A SAFE PLACE!

Entering the new passcode is accomplished in the same way that entering the passcode is done, as explained in (6.).

### 8. DISPLAY CONTRAST

This option sets the contrast for the LCD Display. Depress and hold **BUTTON 1** until the desired contrast is reached, then release **BUTTON 1**. Depressing **BUTTON 2** will move to the next option, "PLAY MODE VOL-UME".

### 9. PLAY MODE VOLUME

This option sets the speaker volume during game play. When this option is entered, the game's background music will play continuously. Depressing **BUTTON 1** will increase/decrease the volume. As long as **BUTTON 1** is depressed, the volume will increase until the maximum is reached, then decrease until the volume is off. Depress and hold **BUTTON 1** until the desired volume is reached. Releasing **BUTTON 1** at any time and then depressing it again will change the direction of the volume adjustment. Depressing **BUTTON 2** will display the next option, "ATTRACTION MODE VOLUME".

### **10. ATTRACTION MODE VOLUME**

This option sets the speaker volume during Attraction Mode. When this option is entered, the game's background music will play continuously. Depressing **BUTTON 1** will increase/decrease the volume. As long as **BUTTON 1** is depressed, the volume will increase until the maximum is reached, then decrease until the volume is off. Depress and hold **BUTTON 1** until the desired volume is reached. Releasing **BUT-TON 1** at any time and then depressing it again will change the direction of the volume adjustment. Depressing **BUTTON 2** will display the next option, "JACKPOT MODE VOLUME".

## **11. JACKPOT MODE VOLUME**

This option sets the speaker volume during a Jackpot Event. When this option is entered, the game's background music will play continuously. Depressing **BUTTON 1** will increase/decrease the volume. As long as **BUTTON 1** is depressed, the volume will increase until the maximum is reached, then decrease until the volume is off. Depress and hold **BUTTON 1** until the desired volume is reached. Releasing **BUT-TON 1** at any time and then depressing it again will change the direction of the volume adjustment. Depressing **BUTTON 2** will display the next option, "ATTRACTION FREQUENCY".

### **12. ATTRACTION FREQUENCY**

This option sets the frequency at which the attraction mode occurs. The settings are from OFF to every 30

minutes. Depressing **BUTTON 1** will change the settings in 1-minute increments from OFF to 30 minutes, then back to OFF. Depressing **BUTTON 2** displays the next option, "COINS PER CREDIT".

#### **13. COINS PER CREDIT**

This option sets the number of coins required for a credit. The settings are from 1 to 8 coins per credit. Depressing **BUTTON 1** will change the setting from 1 to 8, then back to 1. Depressing **BUTTON 2** displays the next option, "JACKPOT INCREMENT"

#### **14. JACKPOT INCREMENT**

Every time a credit is logged onto the game, the jackpot value is incremented by this amount. The setting is from 1 to 20 in increments of 1. Depressing **BUTTON 1** will change this setting from 1 to 20, and then revert back to 1. Depressing Depressing **BUTTON 2** will display the next option, "JACKPOT TYPE".

#### **15. JACKPOT TYPE**

This option selects whether the jackpot values for games 1 and 2 are independent of each other or are synchronized. Depressing **BUTTON 1** will change the option from "SEPARATE" to "COMBINED" and then back again. Depressing **BUTTON 2** will display the next option, "SELECT PAYOUT TABLE".

#### **16. SELECT PAYOUT TABLE**

This option selects the ticket payout table for the game. Options are 1-Coin, 2-Coin, 3-Coin, and 4-Coin. Depressing **BUTTON 1** will change the option. See "Settings" at the end of this section for the actual payout values. **PLEASE NOTE: changing this option sets the Coins Per Credit, Jackpot Increment, and Jackpot Starting Value to the appropriate default settings for the option selected. A change in the graphics indicating the ticket payout values will also be required. Depressing <b>BUTTON 2** will display the next option, "JACKPOT START VALUE".

#### **17. JACKPOT START VALUE**

This option sets the starting value for the Jackpot. Depressing **BUTTON 1** will increment the value by 50 from the minimum to maximum allowed values for the payout table selected (please refer to Default Values at the end of this section for allowed values for each table). Depressing **BUTTON 2** will display the next option, "MERCY TICKET".

### **18. MERCY TICKET**

This option sets the Mercy Ticket Option to Off, 1, 2, or 3 tickets. Depressing **BUTTON 1** will change the setting. Depressing **BUTTON 2** will display the next option, "WHEEL SPEED"

### **19. WHEEL SPEED**

This option changes the speed of the wheel. Depressing **BUTTON 1** will change the setting from 1 (slowest) to 5(fastest). Depressing **BUTTON 2** displays the next option, "DISPLAY TICKETS OWED".

#### **20. DISPLAY TICKETS OWED**

If this option is turned on, tickets that are won are displayed and counted down on the Jackpot Display. If there are no tickets to be paid out, then the Jackpot Value is displayed. If this option is turned off, then only the Jackpot Value is displayed. Depressing **BUTTON 1** will change this option. Depressing **BUTTON 2** will enter the Resetting Totals Section.

### **21. RESETTING TOTALS**

The totals displayed at the beginning of Program Mode (COINS IN, TICKETS OUT) may be reset to zero here. The total number for each will be displayed. Depressing **BUTTON 1** will clear the total, and zero will be displayed, confirming that the count has been cleared. Depressing **BUTTON 2** will display the next total. Depressing **BUTTON 2** after all of the totals have been displayed will display the next option, "ENTER PROGRAM MODE?"

#### 22. "ENTER PROGRAM MODE?"

This option gives the opportunity to re-enter program mode if it is necessary to change any options again. Depressing **BUTTON 2** leaves Program Mode and the game returns to normal, Run Mode.

#### ERROR CODES

- E-1 BALL SENSOR ERROR
- E-2 HOME SENSOR ERROR
- E-3 TICKET ERROR

#### **DEFAULT SETTINGS (ALL PAYOUT TABLES)**

PASSCODE	0000
PLAY MODE VOLUME	21
ATTRACTION MODE VOLUME	42
JACKPOT MODE VOLUME	MAX
ATTRACTION FREQUENCY	5 Minutes
MERCY TICKET	OFF
WHEEL SPEED	1

<u>SETTINGS (1-COIN PAYOUT)</u>	
COINS PER CREDIT	1 Coin
	4
STARTING JACKPOT	100
MIN-MAX STARTING JACKPOT	50-200
PAYOUT - 1 RED	2
PAYOUT - 2 REDS	3
PAYOUT - 3 REDS	5
PAYOUT - 4 REDS	5 10
PAYOUT - 5 REDS	10
PAYOUT - S KEDS PAYOUT - BONUS	15 2-25
	2-25
<u>SETTINGS (2-COIN PAYOUT)</u>	
COINS PER CREDIT	2 Coins
JACKPOT INCREMENT	8
STARTING JACKPOT	200
MIN-MAX STARTING JACKPOT	100-400
PAYOUT - 1 RED	4
PAYOUT - 2 REDS	6
PAYOUT - 3 REDS	10
PAYOUT - 4 REDS	20
PAYOUT - 5 REDS	30
PAYOUT - BONUS	4-50
<u>SETTINGS (3-COIN PAYOUT)</u>	
SETTINGS (3-COIN PAYOUT) COINS PER CREDIT	3 Coins
	3 Coins 12
COINS PER CREDIT	
COINS PER CREDIT JACKPOT INCREMENT	12
COINS PER CREDIT JACKPOT INCREMENT STARTING JACKPOT	12 300
COINS PER CREDIT JACKPOT INCREMENT STARTING JACKPOT MIN-MAX STARTING JACKPOT	12 300 150-600
COINS PER CREDIT JACKPOT INCREMENT STARTING JACKPOT MIN-MAX STARTING JACKPOT PAYOUT - 1 RED	12 300 150-600 6
COINS PER CREDIT JACKPOT INCREMENT STARTING JACKPOT MIN-MAX STARTING JACKPOT PAYOUT - 1 RED PAYOUT - 2 REDS	12 300 150-600 6 9
COINS PER CREDIT JACKPOT INCREMENT STARTING JACKPOT MIN-MAX STARTING JACKPOT PAYOUT - 1 RED PAYOUT - 2 REDS PAYOUT - 3 REDS PAYOUT - 4 REDS	12 300 150-600 6 9 15
COINS PER CREDIT JACKPOT INCREMENT STARTING JACKPOT MIN-MAX STARTING JACKPOT PAYOUT - 1 RED PAYOUT - 2 REDS PAYOUT - 3 REDS	12 300 150-600 6 9 15 30
COINS PER CREDIT JACKPOT INCREMENT STARTING JACKPOT MIN-MAX STARTING JACKPOT PAYOUT - 1 RED PAYOUT - 2 REDS PAYOUT - 3 REDS PAYOUT - 4 REDS PAYOUT - 5 REDS PAYOUT - 5 REDS PAYOUT - BONUS	12 300 150-600 6 9 15 30 45
COINS PER CREDIT JACKPOT INCREMENT STARTING JACKPOT MIN-MAX STARTING JACKPOT PAYOUT - 1 RED PAYOUT - 2 REDS PAYOUT - 3 REDS PAYOUT - 4 REDS PAYOUT - 5 REDS PAYOUT - 5 REDS PAYOUT - BONUS <u>SETTINGS (4-COIN PAYOUT)</u>	12 300 150-600 6 9 15 30 45 6-75
COINS PER CREDIT JACKPOT INCREMENT STARTING JACKPOT MIN-MAX STARTING JACKPOT PAYOUT - 1 RED PAYOUT - 2 REDS PAYOUT - 3 REDS PAYOUT - 3 REDS PAYOUT - 5 REDS PAYOUT - 5 REDS PAYOUT - 5 REDS PAYOUT - BONUS <u>SETTINGS (4-COIN PAYOUT)</u> COINS PER CREDIT	12 300 150-600 6 9 15 30 45 6-75 4 Coins
COINS PER CREDIT JACKPOT INCREMENT STARTING JACKPOT MIN-MAX STARTING JACKPOT PAYOUT - 1 RED PAYOUT - 2 REDS PAYOUT - 3 REDS PAYOUT - 3 REDS PAYOUT - 4 REDS PAYOUT - 5 REDS PAYOUT - 5 REDS PAYOUT - 5 REDS PAYOUT - BONUS <u>SETTINGS (4-COIN PAYOUT)</u> COINS PER CREDIT JACKPOT INCREMENT	12 300 150-600 6 9 15 30 45 6-75 4 Coins 16
COINS PER CREDIT JACKPOT INCREMENT STARTING JACKPOT MIN-MAX STARTING JACKPOT PAYOUT - 1 RED PAYOUT - 2 REDS PAYOUT - 3 REDS PAYOUT - 4 REDS PAYOUT - 5 REDS PAYOUT - 5 REDS PAYOUT - 5 REDS PAYOUT - BONUS <u>SETTINGS (4-COIN PAYOUT)</u> COINS PER CREDIT JACKPOT INCREMENT STARTING JACKPOT	12 300 150-600 6 9 15 30 45 6-75 4 Coins 16 400
COINS PER CREDIT JACKPOT INCREMENT STARTING JACKPOT MIN-MAX STARTING JACKPOT PAYOUT - 1 RED PAYOUT - 2 REDS PAYOUT - 3 REDS PAYOUT - 3 REDS PAYOUT - 4 REDS PAYOUT - 5 REDS PAYOUT - 5 REDS PAYOUT - 5 REDS PAYOUT - 80NUS <u>SETTINGS (4-COIN PAYOUT)</u> COINS PER CREDIT JACKPOT INCREMENT STARTING JACKPOT MIN-MAX STARTING JACKPOT	12 300 150-600 6 9 15 30 45 6-75 4 Coins 16 400 200-800
COINS PER CREDIT JACKPOT INCREMENT STARTING JACKPOT MIN-MAX STARTING JACKPOT PAYOUT - 1 RED PAYOUT - 2 REDS PAYOUT - 3 REDS PAYOUT - 3 REDS PAYOUT - 5 REDS PAYOUT - 5 REDS PAYOUT - 5 REDS PAYOUT - BONUS <u>SETTINGS (4-COIN PAYOUT)</u> COINS PER CREDIT JACKPOT INCREMENT STARTING JACKPOT MIN-MAX STARTING JACKPOT PAYOUT - 1 RED	12 300 150-600 6 9 15 30 45 6-75 4 Coins 16 400 200-800 8
COINS PER CREDIT JACKPOT INCREMENT STARTING JACKPOT MIN-MAX STARTING JACKPOT PAYOUT - 1 RED PAYOUT - 2 REDS PAYOUT - 3 REDS PAYOUT - 3 REDS PAYOUT - 4 REDS PAYOUT - 5 REDS PAYOUT - 5 REDS PAYOUT - 5 REDS PAYOUT - 80NUS <u>SETTINGS (4-COIN PAYOUT)</u> COINS PER CREDIT JACKPOT INCREMENT STARTING JACKPOT MIN-MAX STARTING JACKPOT PAYOUT - 1 RED PAYOUT - 2 REDS	12 300 150-600 6 9 15 30 45 6-75 4 Coins 16 400 200-800 8 12
COINS PER CREDIT JACKPOT INCREMENT STARTING JACKPOT MIN-MAX STARTING JACKPOT PAYOUT - 1 RED PAYOUT - 2 REDS PAYOUT - 3 REDS PAYOUT - 3 REDS PAYOUT - 5 REDS PAYOUT - 5 REDS PAYOUT - 5 REDS PAYOUT - 80NUS <u>SETTINGS (4-COIN PAYOUT)</u> COINS PER CREDIT JACKPOT INCREMENT STARTING JACKPOT MIN-MAX STARTING JACKPOT PAYOUT - 1 RED PAYOUT - 2 REDS PAYOUT - 3 REDS	12 300 150-600 6 9 15 30 45 6-75 4 Coins 16 400 200-800 8 12 20
COINS PER CREDIT JACKPOT INCREMENT STARTING JACKPOT MIN-MAX STARTING JACKPOT PAYOUT - 1 RED PAYOUT - 2 REDS PAYOUT - 3 REDS PAYOUT - 3 REDS PAYOUT - 5 REDS PAYOUT - 5 REDS PAYOUT - 5 REDS PAYOUT - 80NUS <u>SETTINGS (4-COIN PAYOUT)</u> COINS PER CREDIT JACKPOT INCREMENT STARTING JACKPOT MIN-MAX STARTING JACKPOT PAYOUT - 1 RED PAYOUT - 2 REDS PAYOUT - 3 REDS PAYOUT - 4 REDS	12 300 150-600 6 9 15 30 45 6-75 4 Coins 16 400 200-800 8 12 20 40
COINS PER CREDIT JACKPOT INCREMENT STARTING JACKPOT MIN-MAX STARTING JACKPOT PAYOUT - 1 RED PAYOUT - 2 REDS PAYOUT - 3 REDS PAYOUT - 3 REDS PAYOUT - 5 REDS PAYOUT - 5 REDS PAYOUT - 5 REDS PAYOUT - 80NUS <u>SETTINGS (4-COIN PAYOUT)</u> COINS PER CREDIT JACKPOT INCREMENT STARTING JACKPOT MIN-MAX STARTING JACKPOT PAYOUT - 1 RED PAYOUT - 2 REDS PAYOUT - 3 REDS	12 300 150-600 6 9 15 30 45 6-75 4 Coins 16 400 200-800 8 12 20





**Power Supply** 

## **Electronic Components & Game Specs**



Parts







Ball LED & Solenoid

Ball LED Assy w/ Overlay

**Ball Opto Transmitter** 

Ball LED PCB



Jackpot 5 Digit Display



**Credit Display** 



Wheel Motor Assy



**Stepper Controller** 



CPU



**Power Distribution PCB** 



Jackpot Display Plexi



**Opto Trans & Solenoid** 



**Hi Current PCB** 



Coin Chute & Mechs



Wheel Assembly



**Control Panel**