

# OPERATION



## OPERATING MANUAL

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## INTRODUCTION

The coin-operated version of **Operation**<sup>™</sup> is a licensed product from Hasbro, based on the universally popular board game. As in the original board game, the player must “extract” a “body part” to win tickets.

The player may select and “extract” any of the body parts. However, one of the body parts is the “Bonus” part, and is signaled by a flashing display. When a player successfully “extracts” the “Bonus” part, the value is multiplied by the declining factor on the center display, and the player is awarded the ticket value x the timer, for a larger progressive type win. *The faster you play, the more you win!*

## OPERATION OPTIONS & SETTINGS

To change settings, press the **ERROR RESET** button located inside the front door. *Operation must be in attract mode to access and change settings.*

The **OPTION NUMBER** is displayed on the **POINTS** display.

The **CURRENT VALUE** is displayed in the **BONUS AWARD** display.

Move the joystick **UP** to **INCREASE** the **OPTION NUMBER**.

Move the joystick **DOWN** to **DECREASE** the **OPTION NUMBER**.

Move the joystick **RIGHT** to **INCREASE** the **OPTION VALUE**.

Move the joystick **LEFT** to **DECREASE** the **OPTION VALUE**.

Press the **LOWER FORCEPS** button to **EXIT** and **SAVE** the settings.

## OPTIONS & SETTINGS

#	OPTION	RANGE (DEFAULT)	COMENTS
1	COINS PER PLAY	1-8 (1)	SETS # OF COINS REQUIRED TO PLAY ONE GAME
2	GAME TIME	10-60 (30)	SETS MAX. # OF SECONDS FOR ONE GAME PLAY
3	BONUS MULTIPLIER	5-35 (10)	SETS MULTIPLE FOR VALUE OF BONUS "BODY PART" ( <u>DOES NOT APPLY WHEN OPTIONS 11 OR 12 ARE ACTIVE</u> )
4	GRACE PERIOD	0-5 (1)	SETS # OF SECONDS BEFORE GAME TIME BEGINS
5	ATTENDANT PAY	0-900 (500)	SETS MAX. # OF TICKETS TO BE PAID DIRECTLY BY GAME
6	FLAT PAY	0=OFF; 1=10 (0)	SETS EQUAL TICKET VALUES FOR ALL "BODY PARTS" ( <u>WILL OVERRIDE OPTION 10</u> )
7	SOUND IN ATTRACT	0=OFF; 1=ON (1)	ELIMINATES SOUND WHEN GAME IS NOT BEING PLAYED
8	DEMO MODE (5 TICKET PAY), NO METERS / COIN ERRORS	0=OFF; 1=ON (0)	NO COIN(S) NEEDED TO PLAY. GAME WILL PAY 5 TICKETS. METERS WILL NOT RECORD.
9	MERCY TICKETS	0=OFF; 1-10 (0)	SETS # OF TICKETS PAID IF NO WINNER RECORDED
10	TICKET SETTING	1-8 (3)	VALUES WILL BE SET RANDOMLY AMONG ALL TARGETS. SEE TABLE BELOW FOR VALUES. ( <u>GAME WILL RANDOMLY SELECT 13 VALUES WITHIN THE RANGE SET</u> )
11	PLAY TILL YOU LOSE	0=OFF; 1=ON (0)	PLAYER CAN KEEP PLAYING UNTIL A MISS OCCURS. ( <u>OPTIONS 11 &amp; 12 ARE MUTUALLY EXCLUSIVE</u> )
12	PLAY AGAINST TIME	0=OFF; 1=ON (1)	PLAYER KEEPS PLAYING UNTIL TIME RUNS OUT.
13	VALUE OF COIN	1-200 (25)	VALUE OF EACH COIN (IN CENTS)
14	VALUE OF TICKET	1-5 (1)	VALUE OF TICKET (IN CENTS)

PAYTABLE NUMBER	8	7	6	5	4	3	2	1
VALUES (Distributed Randomly)	14	12	10	8	6	4	2	1
	15	13	11	9	7	5	3	2
	16	14	12	10	8	6	4	3
	17	15	13	11	9	7	5	4
	18	16	14	12	10	8	6	5
	19	17	15	13	11	9	7	6
	20	18	16	14	12	10	8	7
	21	19	17	15	13	11	9	8
	22	20	18	16	14	12	10	9
	23	21	19	17	15	13	11	10
	24	22	20	18	16	14	12	11
	25	23	21	19	17	15	13	12
	26	24	22	20	18	16	14	13
	27	25	23	21	19	17	15	14
28	26	24	22	20	18	16	15	
x	27	25	23	21	19	17	16	

**BOOKKEEPING**  
**(FOR INFORMATION ONLY)**

15	PAYOUT PERCENTAGE	VALUE OF AVG. TICKETS PER GAME DIVIDED BY COST OF GAME ( <u>MUST SET PROPER VALUES IN OPTIONS 13 &amp; 14</u> )
16	TICKETS PER GAME	AVG. # OF TICKETS PAID PER GAME PLAYED
17	HIT FREQUENCY	PERCENTAGE OF WINS PER GAMES PLAYED

**NOTE:** To clear bookkeeping, press the ATTENDANT PAY button while option 15, 16 or 17 is on the displays.

To restore factory settings, cycle the AC power while holding both the ERROR RESET and ATTENDANT PAY buttons for at least 5 seconds.

# DIAGNOSTIC MODE

To enter Diagnostic Mode, hold **Attendant Pay** button while powering up the game, until you hear a beep, then release button.

**Test 1:** The playfield displays will start counting 0-9, and then 10-90 to self-test all of the digits. *This test will repeat until you advance to the next test.*

The **Attendant Pay** button will **advance** you to the next test.

**Test 2:** The body cavity displays will be numbered from 1 to 13 in a U-shaped pattern to make sure that they are wired correctly.

**Test 3:** Will light the 'rim' of each cavity on the playfield, starting at 'brain freeze' and working down and up in a u-shaped pattern. *This test will also repeat until you advance to the next test.*

## Test 4:

- (1) Will light up the 13 back board lights, one at a time, starting at WRITER'S CRAMP moving counterclockwise to BROKEN HEART;
- (2) then the nose light;
- (3) the front corner LED strips;
- (4) and playfield border LED strips all at once. *Again, this test will keep cycling until you proceed to the next one.*

**Test 5:** Will light up the TIME, MULTIPLIER, and SCORE displays on the head. They will all count 0-9 and 10-90, then the SCORE display will count 100-900.

**Test 6:** Pressing attendant pay again will show 14, 15, and 16 in those same displays from left to right.

**Test 7:** Will light up the timer column LED's and turn rows off one by one starting at the top working downward.

**Test 8:** The final test will check the gantry, the playfield cavities, the coin mechs, ticket dispenser, joystick, switches and meters.

- (1) Use the **joystick** to move the **gantry** in any direction and test the **limit switches**.
- (2) Press the '**drop**' button to test the **up/down motor and up/down limit switches**.
- (3) **Insert a coin to advance the coin meter** by one and display either a 1 or a 2 depending on which mech is used.
- (4) Press the **Error Reset** button to **increment the ticket meter** by 3 and dispense 3 tickets. It will also display a 3 on the top display.
- (5) Test the playfield by hooking a wire to GND (the forceps are connected to GND) and touching the bottom of each cavity. The LED's around the cavity should light up and you should hear a 'winner' sound. If you touch the outer rim of a cavity, the nose should light up and you should hear the 'loser' buzzer.

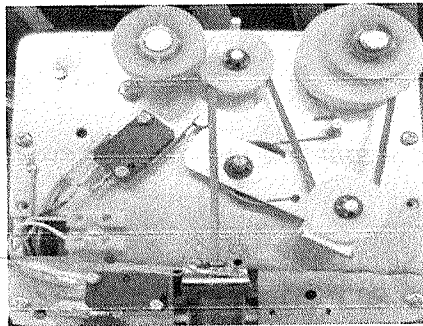
## ERROR CODES

“BRAIN FREEZE” light is flashing on back panel on power up: Indicates a TWI communication error.

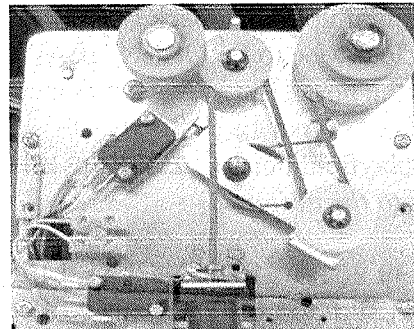
“Er” is visible on the POINTS display and “0” is visible on the MULTIPLIER display: Indicates gantry did not return to the home position, or at least one of the limits switches is not being read.

## CORD WINDING

It is possible that the cord connecting the forceps may unwind all the way and wind back up in the opposite direction. If you think that may be the case, compare your gantry to the pictures below:



CORRECT WINDING



INCORRECT WINDING