

**SHARK**

## SHARK MANUAL

### A. GENERAL GAME OPERATION

#### 1. Power-Up Sequence

When power is applied to the machine there is a short delay of approximately 10 seconds before the machine plays a "power-up" tune to announce that it is ready to play. During the power up period the machine is performing six tests on its own hardware, the successful completion of each being signalled by a single flash of a LED on the M.P.U. module (A1) and a simultaneous tone from the sound system. After power-up the machine goes into attract mode waiting for a game to be played.

#### 2. Attract Mode

In this mode the four score windows display the player's score for the last game, alternating with the highest score to date. Some lamp flashing will occur on the playfield. As coins are inserted a "coin-in" tune will sound and the accumulated credit will be shown in the credit window.

#### 3. Game Start

A game is started by pressing the credit button located on the front end of the cabinet. The first player's score flashes '00', a '1' appears in the ball-in-play window, the credit display is recuded by one and a "player-up" tune is played. Additional players are posted each time the credit button is pressed. Up to four players can play at a time, each player's turn being indicated by the flashing of score display. The credit button has no effect after the fourth player has been added or the credit display reads '0'. Pressing the credit button after the first player has scored cancels the game and posts the first player for a new game.

When a game is started a background sound may be produced depending on game option switch 11.

The background sound will increase in pitch periodically while the ball is in play as long as scoring occurs.

#### 4. Game Scoring

Shooting the ball initiates play. Bumpers and spinners score 100 points or 1000 points when lit. Side kickers score 10 points. Rebound switches score 50 points. Outlanes score 5000 points.

- i) Outside return lanes - scores 500 points or 500 points and extra ball when extra ball wedges are lit
- ii) Horseshoe target - scores 1000 points plus one bonus advance or when lit 5000 points, 3 bonus advances and spots the next letter in SHARK
- iii) Horseshoe - scores 5000 points plus one bonus advance or when lit the value of the bottom 3 drop target bank
- iv) Kicker - scores 1000 points plus one bonus advance. When 50000 point wedge lit 50000 points are scored. When extra ball wedge is flashing an extra ball is awarded
- v) Extra ball wedge - this feature turns on every 35 scores of 100 points or more for approximately 8 seconds
- vi) Top 3 lanes, inside return lanes - scores 500 points plus one bonus advance. Making any lane, lights its respective grey shark. Making top right lane or top left lane with its grey shark lit, lights the red shark. When both red sharks are lit the 50000 points kicker wedge is lit.

When the top three grey sharks are made the centre target of the horseshoe is lit.

When the inside return lane grey sharks are lit for the first time, depending upon option switch 13, the pop bumpers are lit or the pop bumpers and horseshoe wedges are lit. When the inside return lanes are made the second time, the pop bumpers and horseshoe wedges are lit.

When all 5 grey sharks are lit for the first time the extra ball wedges are lit in the outside return lanes. When all grey sharks are lit for the second time, a special is awarded.

- vii) Lower 3 drop target bank - each target scores 500 points. Completing all three targets for the first time lights the spinner target and scores 10000 points.

Completing all 3 targets for the second time scores 15000 points.

Completing all 3 targets for the third time scores 20000 points.

Completing all 3 targets for the fourth time, depending upon option switch 14, scores 25000 points or 25000 points and special

Completing all 3 targets for the fifth time scores a special

This feature has a memory option. If the option is used the lit insert lamps are remembered throughout the game.

- viii) Left 3 drop target bank, top 3 drop target bank - each target scores 1000 points or 5000 points and one bonus advance when lit. As each target is made, the corresponding SHARK insert is lit. When the 2 or 3 drop target bank is completed they reset.

Completing all SHARK inserts for the first time scores 10000 points and lights 10000 point light

Completing all SHARK inserts for the second time scores 10000 points and lights the '2X' lamp

Completing all SHARK inserts for the third time scores 10000 points and lights the '3X' lamp

Completing all SHARK inserts for the fourth time scores 10000 points and lights the '5X' lamp

Completing all SHARK inserts for the fifth and subsequent times scores 30000 points and lights the 30000 points lamp

- ix) Bonus - once the maximum bonus of 39000 points is achieved, no more bonus points can be accumulated. Bonus lamps score 1000 points each. The value of the multiplier lit determines how many times the bonus is counted off. The bonus is collected when the ball enters the out-hole.

Memory options exist for Bonus multiplier and Bonus count 10000 points, 20000 points, 30000 points to be remembered throughout the player's game.

## 5. Outhole Sequence

After the ball returns to the outhole and there is only one player the "ball-in-play" number will advance by one. If there is more than one player, "ball-in-play" will remain the same and the next player's turn is indicated by the flashing score. However, if the ball enters the outhole without scoring it is returned to the same player for replay. The game continues until each player has played the allowable number of balls (adjustable). The "game-over" light will then be lit and an optional "game-over" tune will sound. A random "match" number appears and the match light is lit (optional). If the number is the same as the last two digits in the players score, a free game is awarded.

6. Extra Balls

When a player wins an extra ball a unique tune is played and the two "shoot again" lights on the playfield will flash alternatively during the play of the regular ball. Once this ball enters the outhole, the score display will flash to prompt the same player and the "ball-in-play" number will not advance.

7. Tilt

If the machine is tilted during play a tilt sound is made, all scoring will stop and the bumpers, flipper and kickers are disabled. Bonus points are not collected. The player only resumes control of the machine after the current ball enters the outhole.

8. Slam

Slamming the machine will result in a more severe penalty. The current game is cancelled, score displays and feature lights to out and the machine will remain "dead" for approximately 10 seconds. After this delay the "power-up" tune is played, the "game-over" light is lit and the machine returns to attract mode.

B. SELF TEST SEQUENCE

Self test can be entered at any time by pressing the push button on the inside of the front door. By pressing the button once the sequence is started with the test number 1. Subsequent tests are activated by re-pressing the button. For all except the first test, the self test number is displayed in the "ball-in-play" window. Tests 1 to 5 are routine maintenance checks. Tests 6 to 17 are bookkeeping functions, designed to help the operator perform certain accounting tasks.

1. Routine Maintenance Tests

Test 1 - Display Test : All five displays cycle 0 to 9 and repeat continuously.

Test 2 - Feature Lamp Test : All switched lamps flash on and off continuously.

Test 3 - Solenoid Test : All solenoids are activated one at a time in a continuous sequence. The flipper solenoids may be tested by holding both flipper buttons in during the test. Solenoid identification numbers are shown in the player score displays. Refer to Appendix 1 for a Solenoid Identification Chart.

Test 4 - Switch Test : The switch assembly is searched for stuck contacts. If any are found the identification number of the first set encountered is flashed on the player score displays. The number remains until the fault is cleared. Other numbers may follow if more stuck contacts are present. Once stuck switches are found "00" is displayed. Refer to Appendix 2 for a switch identification chart.

Test 5 - Sound Test : The 10 points sound is pulsed continuously.

2. Bookkeeping Functions

The bookkeeping functions are displayed in the all player score windows. The test number appears in the "ball-in-play" window.

Test 6 - First High Score Level : The game is designed to award a free game or extra ball (optional) at each of three score levels. Any desired level from 10000 to 999000 can be set. The level can be increased by 10000 points at a time by holding in the credit button. It can be decreased by 1000 points at a time by holding in the slam switch inside the coin door. The level can be reset to "00" by simultaneously operating the slam and coin door switches.

Test 10 - This test displays the total number of times the coin switches have operated with the coin door open. The number is normally not resettable.

Test 11 - This test displays the total coins through both chutes with the coin door closed. The number is normally not resettable.

Test 12 - Number of free games awarded with the coin door closed. This figure can be reset by simultaneously operating the slam and coin door switches.

Test 13 - Number of paid games with the coin door closed. This figure can be reset as for test 12.

Test 14 - Number of times the Highest Score to Date changes with the coin door closed. Can be reset as for test 12.

Test 15 - Number of extra balls awarded with the coin door closed. Can be reset as for test 12.

Test 16 - Number of tilts and slams with coin door closed. Can be reset as for test 12.

Test 17 - This test displays the percentage of free games to paid games awarded with the coin door closed. The percentage can be reset as for test 12. It should be noted that the number of free games and paid games displayed in tests 12 and 13 are not affected when the percentage is reset. The ratio is calculated using separate date areas.

Pressing the self test button once more while in test 17 causes the game to return to attract mode after performing the power-up sequence. For a more rapid return to attract mode, self test can be aborted at any stage by turning the power off, then on.

A self test time out feature is built into the machine so that it can never be left in any test mode. After about two minutes in any self test the game automatically resets by going through the power-up sequence. (For maximum flexibility, however, this time-out feature can be disabled by first switching power off, then setting switch 24 on the M.P.U. board, A1 to the OFF position).

C. GAME FEATURE ADJUSTMENTS

Each game has twenty four switches located on the M.P.U. board, A1, that allow play to be customised to the location. The switches are contained in 3 packages and number S1-S8, S9-S16 and S17-S24. Game adjustments must be made while the power is turned off.

Credits/Coin Adjustments : The credits/coin options are set by means of switches 1, 2 and 3. There are 8 different settings as shown below.

| <u>Switches</u> |     |     | <u>Credits/Coin</u> |
|-----------------|-----|-----|---------------------|
| 1               | 2   | 3   |                     |
| OFF             | OFF | OFF | 1/1                 |
| ON              | OFF | OFF | 1/2                 |
| OFF             | ON  | OFF | 1/3                 |
| ON              | ON  | OFF | 1/4                 |
| OFF             | OFF | ON  | 1/1, 3/2 *          |
| ON              | OFF | ON  | 1/2, 2/3 *          |
| OFF             | ON  | ON  | 2/3, 4/5 * #        |
| ON              | ON  | ON  | 2/5 #               |

\* Coin Counter reset at first score of each ball

# No credits until third coin dropped

# No credit until fifth coin dropped

High Score Award : At each of the three high score levels, the game can be programmed to give either an extra ball or a free game by setting switch 4.

| <u>Switch 4</u> | <u>Award</u> |
|-----------------|--------------|
| OFF             | FREE GAME    |
| ON ✓            | EXTRA BALL   |

Match Feature : With this feature on a random number appears in the "ball-in-play" window at game over. If this number matches the tens digit in the player's score, a free game is awarded. The feature is controlled by switch 5.

| <u>Switch 5</u> | <u>Match Feature</u> |
|-----------------|----------------------|
| ON              | ON                   |
| OFF ✓           | OFF                  |

High Score to Date Award

| <u>Switch</u> |     | <u>Award</u> |
|---------------|-----|--------------|
| 6             | 7   |              |
| OFF           | OFF | NO AWARD     |
| ON            | OFF | 1 FREE GAME  |
| OFF           | ON  | 2 FREE GAMES |
| ON            | ON  | 3 FREE GAMES |

Coin Alarm Sound

The alarm sound may be turned ON or OFF by switch 9

| <u>Switch 9</u> | <u>Alarm Sound</u> |
|-----------------|--------------------|
| OFF             | DISABLED           |
| ON              | ENABLED            |

Bonus 10000 point, 20000 point, 30000 point Memory:

Bonus count may be remembered from ball to ball for each player depending on switch 10

| <u>Switch 10</u> | <u>Bonus Count Memory</u> |
|------------------|---------------------------|
| OFF              | DISABLED                  |
| ON               | ENABLED                   |

Background Sound Feature:

A background sound may be produced during play depending on the setting of switch 11

| <u>Switch 11</u> | <u>Background Sound</u> |
|------------------|-------------------------|
| OFF              | DISABLED                |
| ON               | ENABLED                 |



Bottom 3 Drop Target Memory : Bottom 3 drop target insert values may be remembered from ball to ball using option switch 12

| <u>Switch 12</u> | <u>Bottom 3 Drop Target Memory</u> |
|------------------|------------------------------------|
| OFF              | DISABLED                           |
| ON               | ENABLED                            |

Bottom Inside Return Lanes: Horseshoe wedges may be linked with pop bumpers.

First time both inside return lanes are made pop bumpers will be lit, second time horseshoe wedges will be lit OR first time both pop bumpers and horseshoe wedges are lit

| <u>Switch 13</u> | <u>Pop Bumpers/Horseshoe wedges</u> |
|------------------|-------------------------------------|
| OFF              | NOT LINKED                          |
| ON               | LINKED                              |

Bottom 3 Drop Target: 25000 point insert and special insert may be linked together by option switch 14.

| <u>Switch 14</u> | <u>25000 point/special</u> |
|------------------|----------------------------|
| OFF              | NOT LINKED                 |
| ON               | LINKED                     |

Coin Alarm: A coin alarm is available using switch 15. This sets a maximum time for coin travel through the coin chute. If this time is exceeded the credit is not incremented and an alarm sound can occur depending on the setting of switch 9. This function only operates with the coin door closed.

| <u>Switch 15</u> | <u>Coin Alarm</u> |
|------------------|-------------------|
| OFF              | DISABLED          |
| ON               | ENABLED           |

Ball per Game:

| <u>Switch 16</u> | <u># Balls/Game</u> |
|------------------|---------------------|
| OFF              | 3                   |
| ON               | 5                   |

Maximum Credits: The limit on the number of games that can be accumulated by either inserting coins or winning free games is set by switches 17 and 18.

| <u>Switch</u> |     | <u>Maximum Credits</u> |
|---------------|-----|------------------------|
| 17            | 18  |                        |
| OFF           | OFF | 5                      |
| ON            | OFF | 10                     |
| OFF           | ON  | 15                     |
| ON            | ON  | 20                     |

- Note:
1. When lowering the credit limit any surplus credits are lost
  2. Coin counters operate regardless of maximum credit settings

Multiplier Memory: Option switch 21 enables the 2x, 3x multiplier to be remembered throughout the player's game

| <u>Switch 21</u> | <u>Multiplier Memory</u> |
|------------------|--------------------------|
| OFF              | DISABLED                 |
| ON               | ENABLED                  |

Free Game Sound:

| <u>Switch 22</u> | <u>Sound When Free Game Awarded</u> |
|------------------|-------------------------------------|
| OFF              | SPECIAL TUNE                        |
| ON               | KNOCKER                             |

Self-test Time-out Option: The machine can be set by switch 24 to automatically exit self-test after 2 minutes in any one test

| <u>Switch 24</u> | <u>Time Out Feature</u> |
|------------------|-------------------------|
| OFF              | DISABLED                |
| ON               | OPERATIVE               |

Note: Any unused switches should be turned OFF

APPENDIX 1

Solenoid Identification Chart for "Shark"

The following chart may be used with self test number 3 to identify the solenoids of the game.

| <u>Identification Number</u> | <u>Solenoid Description</u> |
|------------------------------|-----------------------------|
| 01                           | KNOCKER (If installed)      |
| 02                           | BOTTOM 3 DROP TARGET        |
| 03                           | '2' DROP TARGET             |
| 04                           | TOP '3' DROP TARGET         |
| 05                           | KICKER                      |
| 06                           | NOT USED                    |
| 07                           | OUTHOLE KICKER              |
| 08                           | NOT USED                    |
| 09                           | LEFT TOP BUMPER             |
| 10                           | RIGHT TOP BUMPER            |
| 11                           | MIDDLE TOP BUMPER           |
| 12                           | RIGHT SLINGSHOT             |
| 13                           | NOT USED                    |
| 14                           | LEFT SLINGSHOT              |
| 15                           | COIN LOCKOUT                |
| 16                           | FLIPPER ENABLE RELAY        |
| 17                           | BUMPER LAMPS                |

APPENDIX 2

Switch Identification Chart for "Shark"

The following chart may be used with self test number 4 to identify the switches of the game

| <u>Id. Number</u> | <u>Switch Description</u> | <u>Id. Number</u> | <u>Switch Description</u>           |
|-------------------|---------------------------|-------------------|-------------------------------------|
| 01                | REBOUND                   | 21                | LEFT OUTSIDE RETURN <del>1</del> A  |
| 02                | TILT                      | 22                | 2 DROP TARGET 2                     |
| 03                | CREDIT                    | 23                | NOT USED                            |
| 04                | RIGHT OUTLANE             | 24                | 2 DROP TARGET 1                     |
| 05                | LEFT OUTLANE              | 25                | BOTTOM 3 DROP TARGET <del>1</del> 3 |
| 06                | HORSESHOE ROLLOVER 1      | 26                | BOTTOM 3 DROP TARGET <del>1</del> 2 |
| 07                | NOT USED                  | 27                | BOTTOM 3 DROP TARGET <del>1</del> 1 |
| 08                | SPINNER                   | 28                | TOP 3 DROP TARGET 3                 |
| 09                | SLAM                      | 29                | TOP 3 DROP TARGET 2                 |
| 10                | COIN DOOR                 | 30                | TOP 3 DROP TARGET <del>1</del>      |
| 11                | HORSESHOE TARGET          | 31                | NOT USED                            |
| 12                | RIGHT INSIDE RETURN LANE  | 32                | NOT USED                            |
| 13                | LEFT INSIDE RETURN LANE   | 33                | LEFT BUMPER                         |
| 14                | HORSESHOE ROLLOVER 2      | 34                | RIGHT BUMPER                        |
| 15                | NOT USED                  | 35                | MIDDLE BUMPER                       |
| 16                | COIN SWITCHES             | 36                | RIGHT SLINGSHOT                     |
| 17                | RIGHT TOPLANE             | 37                | LEFT SLINGSHOT                      |
| 18                | MIDDLE TOPLANE            | 38                | KICKER                              |
| 19                | LEFT TOPLANE              | 39                | NOT USED                            |
| 20                | RIGHT OUTSIDE RETURN LANE | 40                | OUTHOLE                             |