SYSTEM INFORMATION MANUAL

CRATER RAIDER U.R.

Bally

MIDWAY MFG. CO.

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Bally MIDWAY

Invites You To Use

OUR **TOLL FREE** NUMBERS FOR
SERVICE INFORMATION CONCERNING THIS GAME, OR ANY
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INSTALLATION

1. Remove keys from the taped coin return slot and unlock to 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 holes - one in each corner - and install the "CABINET LEVELING LEGS" in them.

   * Level the cabinet.

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

4. Connect the 3-pronged line cord to a 3-slot A.C. wall outlet to insure proper grounding.

5. The power ON/OFF switch is located:

   UPRIGHT MODEL: On top to the left rear of the cabinet.

TO SERVICE THE CONTROL PANEL(S)

1. UPRIGHT MODEL:

   * The control panel is held in place by three (3) clamps.

     They are spring loaded to provide constant positive pressure on the strike plates.

     AFTER turning power to the game off, they can be reached through the coin door.

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

     Once they are released, unhook them from their latch plates. The third clamp is located near the center of the control panel.

   * To remove the control panel:

     Raise it up and tilt it toward you until you can see the cable behind it.

     Cradling the control panel between yourself and the cabinet, disconnect it from its cabling and any miscellaneous hardware.

   * The control panel is now loose and may be serviced.

   * To reinstall the control panel, reverse this procedure.

REMOVAL OF THE MAIN-DISPLAY-GLASS

1. UPRIGHT MODEL:

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

    * **Using the on/off switch, turn the power to the game off** and remove the control panel.

    * Remove the screws which secure the main-display-glass retainer in place and remove the retainer. This frees the 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.

REMOVAL OF THE T.V. BEZEL ASSEMBLY

1. UPRIGHT MODEL:

    NOTE: The bezel diffuser can be easily reached through the rear access door.

    * Using the on/off switch, turn the power to the game off and remove the rear access door.

    * Remove the screws that secure the bezel assembly to the T.V. monitor and the bezel diffuser may be removed.

VOLUME CONTROL POT / OPTION SWITCH LOCATIONS

The volume control pot is located, along with the credit switch and the self-test switch, just inside the cabinet on the left side of the coin door frame. The option switches are located as shown in the attached P.C. Board reference drawing. For adjustment, they can be reached through the games rear 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.

GAME OPERATION

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 most complete way of checking for proper game operation and is quite easy to use.

The Self-Test mode may be entered at any time and from any mode of operation. Simply locate the black slide switch inside the coin box compartment and slide it to the Self-Test position. With this switch in the Self-Test position, activate the slam switch located on the coin door. The game will enter the Self-Test mode immediately and display the following test menu....

1. SELF DIAGNOSTICS
2. SOUNDS
3. PLAYER INPUT
4. BOOKKEEPING
5. MACHINE SET-UP
6. CHANNEL TEST
7. PRESET
8. GRID DISPLAY

POSITION CURSOR BY MOVING JOYSTICK UP & DOWN
HIT FIRE BUTTON FOR TEST

1. SELF DIAGNOSTICS: This test is designed to effectively locate and identify any malfunction of the on-board computer. When selected, the game enters this mode immediately and begins scanning the memory stored in rom and ram. If a defective component is found during the scan, that component and it's location will be displayed on screen. It will take about 15 seconds to perform the entire test.

2. SOUNDS: When selected, this test will display a menu of sounds. The first two selections on the menu are ALL and EXIT. If you move the cursor to select ALL, the game will automatically perform a test of all the sounds on the menu. If you move the cursor to select EXIT, the game will exit the sound test and return to the main menu page. While in the sound test, any selection on the sound menu may be tested individually by positioning the cursor next to that sound and pressing the fire button.

3. PLAYER INPUT: This test is designed to confirm the operation of all player inputs and devices in the game. For example, when you wish to test the coin switches on the coin door, you would enter this test and activate te coin switches. if the switches are operating properly, the screen will display the words COIN CHUTE 1 or COIN CHUTE 2 depending on which coin switch has been activated. All inputs, controls, service switches, player selection buttons, etc. may be tested in the same manner. To exit this test, activate the coin door slam switch.

4. BOOKKEEPING: A very useful tool, this test is designed to assist you in tuning your game for your location. When selected, the screen displays a complete and highly accurate account of all games played. The information displayed includes high scores, low scores, coins collected, longest and shortest games played. There is also an extensive score report and time report that may be accessed by positioning the cursor next to those selections. To exit this test, position cursor next to EXIT and press the fire button.

5. MACHINE SET-UP: This test allows you to set your options with ease. When selected, a full menu of options will be displayed. A cursor appears in the left column and is used to select the option you wish to adjust. The coins per credit, difficulty level, and # of bases, etc. are adjusted on this screen. Using the joystick, position the cursor next to the option you want to adjust. Use the player one and player two select buttons to adjust the values. To exit this test, position the cursor next to EXIT and press either the player one or the player two button.

6. CHANNEL TEST: This test is self-functional and therefore when entered will perform the test automatically. It's purpose is to test all three channels heard through the left speaker and all three channels heard through the right speaker. If any of the six tones are not heard during this test, you may be experiencing a sound problem. To exit this test, simply press the fire button.

7. PRESET: When selected, PRESET will set all Machine Set-Up options to the factory recommended values. In addition, it will reset all bookkeeping values to zero.

8. GRID DISPLAY: This test was designed to display a crosshatch pattern used in adjusting the color monitor. This pattern may be used to adjust convergence, color balance, vertical linearity, and vertical/horizontal size. To exit this test, simply press the fire button.

ATTRACT MODE

1. The Attract mode starts:

   • Just after power has been turned on to the game.

   • After a Self-Test has been completed. (Performing a Self-Test sets the credits in the games memory to zero "0".)

   • After a play has been finished and there are no more credits left in the games memory.

   • No matter where the game is in the Attract mode sequence, it will immediately go to the Ready-To-Play mode display as soon as a game has been paid for.

READY-TO-PLAY MODE

1. The Ready-To-Play mode starts when enough coins have been accepted for a 1 or a 2 player game.

2. The Ready-To-Play mode ends when either the "1 PLAYER" or the "2 PLAYER" push button is pressed.

3. If no START button is pressed, the displays will remain on the monitor screen indefinitely.

PLAY MODE

1. The Play mode begins when either the "1 PLAYER" or the "2 PLAYER" start button is pressed.

2. The Play mode ends when all of your PLAYERS have been eliminated. When this happens, "GAME OVER" is written across the center of the monitor screen.

HIGH SCORE/INITIAL MODE:

If your score was high enough to become one of the game's best scores, the game will go into the High Score/Initial mode immediately after the "GAME OVER" display. If your score is not high enough to cause the game to go into the High Score/Initial mode, it will either go to the Attract mode (if there are no more credits left in its memory) or into the Ready-To-Play mode (if there are still credits left in its memory).

Follow the ON-SCREEN instructions to enter your initials next to your score in the league of the best players to date.

After the High Score/Initial mode, the game will either go to the Attract mode (if there are no more credits left in its memory) or into the Ready-To-Play mode (if there are still credits left in its memory).

TWO PLAYER OPERATION

In the two player mode, the rules of play are the same as in the single player mode. There are some additional rules, however.

1. The players must take turns at the controls.

2. Your turn lasts until the pursuers eliminate your PLAYER. At this point, the game will do one of several things depending on whether or not the caught PLAYER was your last or if you still have others remaining in reserve.

PLAYER ELIMINATED — OTHERS REMAINING IN RESERVE

* The GAME stops.

* Next, the Rack changes to the Rack number the other player is in, and what's left of the other players Rack and his PLAYER appear on the screen.

* Play then begins for the other player.

PLAYER ELIMINATED — NO OTHERS REMAINING IN RESERVE

* Game displays "GAME OVER".

* The Rack changes to the Rack number the other player is in, what's left of the other players Rack and his PLAYER appear on the monitor screen, and game play then begins for the other player (unless your score was high enough to cause it to go into the High Score/Initial Mode, in which case it will go there first and then to the remaining player so he can finish his turn).

* After the last player has finished his game, the game will either go to the High Score/Initial Mode if his score was high enough, to the Attract mode (if there are no more credits left in its memory), or into the Ready-To-Play mode (if there are still credits left in its memory).

CRATER   RAIDER

OPTION   SWITCH   SETTINGS

///////////////////SWITCH NO. 1 - AT B 3 - LOCATED ON SOUND I/O P.C. BOARD///////////////////

DURING GAME PLAY:	SW#1 NOT USED	SW#2	SW#3	SW#4 NOT USED	SW#5 NOT USED	SW#6 NOT USED	SW#7 NOT USED	SW#8 NOT USED	SW#9 NOT USED	SW#10
** ATTRACT MODE SOUNDS OFF		OFF								
ATTRACT MODE SOUNDS ON		ON								
** ONE COIN METER			OFF							
TWO COIN METERS			ON							
** NORMAL OPERATION										OFF
FREEZE VIDEO										ON

///////////////////SWITCH NO. 3 - AT D 14 - LOCATED ON SOUND I/O P.C. BOARD///////////////////

	SW#1	*SW#2	*SW#3	*SW#4
** NORMAL OPERATION	OFF			
SOUND I/O DIAGNOSTIC MODE	ON			
** NORMAL OPERATION RAM/ROM TEST INDICATES TEST RESULTS VIA YELLOW L E D ON SOUND I/O BOARD: FAST FLASH = BAD ROM SLOW FLASH = BAD RAM		OFF ON		
** NORMAL OPERATION OSCILLATOR TEST			OFF ON	
** NORMAL OPERATION FILTER TEST				OFF ON

* NO EFFECT IF SW#1 OF SWITCH NO. 3 IS IN THE "OFF" POSITION. ** FACTORY RECOMMENDED SETTINGS.	**PART NO. M051-00A57-R007**

THE REMAINDER OF YOUR NEW GAME'S MOST COMMON OPTION SETTINGS
ARE CONDUCTED DURING YOUR GAME'S SELF-TEST MODE

OPTION SWITCH "3"

S/S I/O A084-90913-AA57

OPTION SWITCH "1"

```
1  2  3  4  5  6  7  8
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ON

OFF