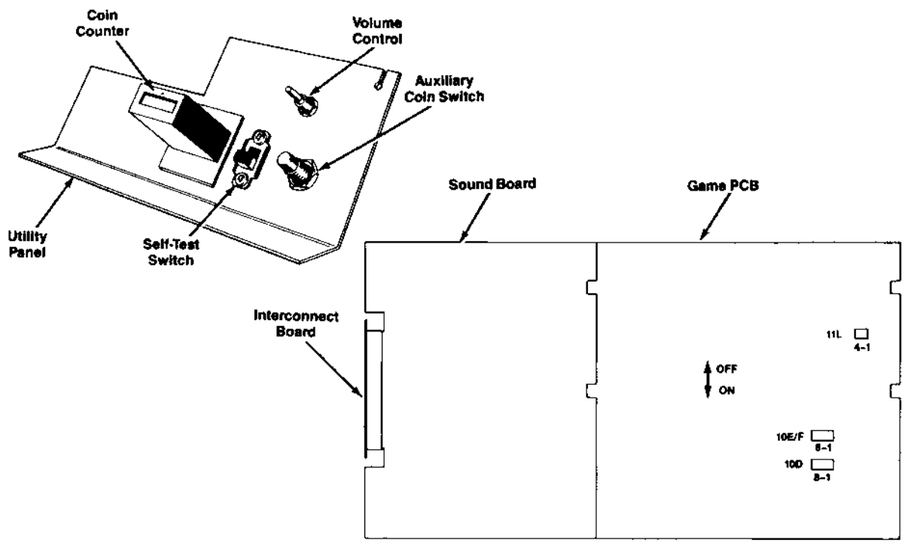
STAR WARS*



Switch Locations

Switch Settings for Play Options

Settings of 8-Toggle Switch on Star Wars Game PCB *(at 10D)* 1	2	3	4	5	6	7	8	Option
On	On							6 Starting Shields
Off	On							7 Starting Shields
On	Off							8 Starting Shields◀
Off	Off							9 Starting Shields
		On	On					Easy game play
		Off	On					Moderate game play◀
		On	Off					Hard game play
		Off	Off					Hardest game play
				On	On			0 Bonus Shields for Destroying Death Star
				Off	On			1 Bonus Shield for Destroying Death Star◀
				On	Off			2 Bonus Shields for Destroying Death Star
				Off	Off			3 Bonus Shields for Destroying Death Star
						On		Music in the Attract Mode◀
						Off		No Music in the Attract Mode
							On	Freeze Mode
							Off	Normal Game Play Mode◀

Switch Settings for Coin and Credit Options

Settings of 8-Toggle Switch on Star Wars Game PCB *(at 10E/F)* 1	2	3	4	5	6	7	8	Option
On	On							Free Play
Off	On							2 Credits
On	Off							1 Credit◀
Off	Off							½ Credit
								Left Coin Mechanism
		On						1 Coin◀
		Off						2 Coins
								Right Coin Mechanism
			On	On				1 Coin◀
			Off	On				4 Coins
			On	Off				5 Coins
			Off	Off				6 Coins
								Bonus Coin Adder
					On	On	On	0 Bonus Coins Added◀
					Off	On	On	1 Bonus Coin Added for 2 Coins
					On	Off	On	1 Bonus Coin Added for 4 Coins
					Off	Off	On	2 Bonus Coins Added for 4 Coins
					On	On	Off	1 Bonus Coin Added for 5 Coins
					Off	On	Off	1 Bonus Coin Added for 3 Coins
					On	Off	Off	0 Bonus Coins Added
					Off	Off	Off	0 Bonus Coins Added

Switch Settings for Special Options

Settings of 4-Toggle Switch on Star Wars Game PCB *(at 11L)* 1	2	3	4	Option
On	Not used	Not used	Not used	Outputs of coin counter driver 1 and 2 tied together (for 1 counter) ◀
Off				Outputs of coin counter driver 1 and 2 separate (for 2 counters)

◀*Manufacturer's recommended settings*

Self-Test Procedure

This game will test itself and provide data to show that the game circuitry and control are operating properly. Self-test data is presented visually on the video display. No additional equipment is required.

We suggest you perform a self-test when you first set up, each time you collect money, when you change the game options, or when you suspect game failure.

Self-Test Displays

Fourteen self-test displays provide a visual check of the game statistics, options, switch settings, mathbox circuitry, display circuitry, and the condition of the read-only memory (ROM) and random-access memory (RAM). The first self-test display (Size and Centering) is obtained in the Attract Mode. When the self-test switch is turned on during the Attract Mode, the game enters the Self-Test Mode. Turning the self-test switch off during the Self-Test Mode returns the game to the Attract Mode.

NOTE

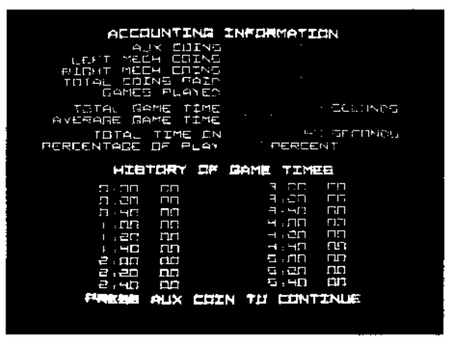
Before selecting the Self-Test Mode and with the game in the Attract Mode, check that a small blue dot is displayed within ¼-inch of the edge in each corner of the screen. The remaining self-test displays are obtained while the game is in the Self-Test Mode.

NOTE

The following self-test displays are arranged in the sequence in which they occur after the self-test switch is set to the on position. Press the auxiliary coin switch to end each display and obtain the next display. Pressing the auxiliary coin switch will advance through the displays. After the last display has ended, the sequence starts over with the Switch Test display. To start with the Accounting and Game Times display, the self-test switch must first be turned off and then on again.

Accounting and Game Times Display

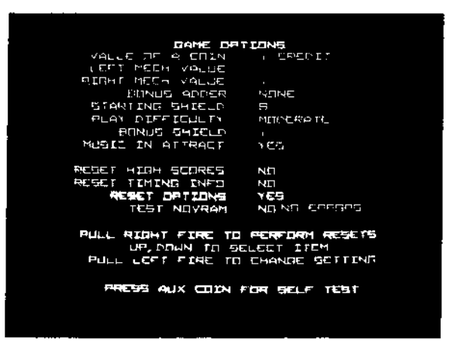
Enter the Self-Test Mode by pushing the self-test switch to the up position. The Accounting and Game Times display will appear first. The totals on this display are those accumulated since the accounting and game times information was last reset. (Refer to Game Options Display for the reset procedure.) The coin accounting information, which is the first four statistics in the Accounting Information section of the display, cannot be reset. They are accumulated from the date the game was manufactured, or since the NOVRAM last failed or was replaced.



Accounting and Game Times Display

Game Options Display

Press the auxiliary coin switch to obtain the Game Options display. Use this display to view or change game option settings; reset high scores; reset accounting and game time information; or test the NOVRAM.



Game Options Display

The first section of the Game Options display shows the option settings that have been selected by either the option switches on the Main PCB or by the flight control. The second section of the Game Options display shows the reset and NOVRAM test operations that are selectable with the flight control. Press the auxiliary coin switch to end this display.

Changing the Game Options. Any of the options displayed in the first section of the Game Options display can be changed without setting the option switches on the Main PCB. Select the option to be changed by moving the flight control up or down. Press the left-hand fire trigger to cycle through the available options as indicated in the right-hand column; stop on the desired option setting. The changed option is immediately stored in the NOVRAM and is unaffected by turning off the power or the self-test switch. The options can also be changed to those selected by the option switches located on the Main PCB. If the self-test circuitry malfunctions or the option settings cannot be maintained by the software, the game will default to the hardware switch settings on the Main PCB (refer to Resetting the Options for more details).

Resetting the High Scores. The top ten scores and player initials are displayed in the high-score table during the Attract Mode. All high scores can be reset using the Game Options display. Select *RESET HIGH SCORES* by moving the flight control up or down. Press the left-hand fire trigger and note that *YES* appears in the right-hand column. Then press the right-hand fire trigger to perform the reset operation, which is completed when *NO* appears in the right-hand column.

Resetting the Timing Information. The games played and the timing information in the Accounting and Game Times display can be reset using the Game Options display. Select *RESET TIMING INFO* by moving the flight control up or down. Press the left-hand fire trigger and note that *YES* appears in the right-hand column. Then press the right-hand fire trigger to perform the reset operation, which is completed when *NO* appears in the right-hand column.

Resetting the Options. The option settings shown on the Game Options display can be reset (defaulted) to those selected by the option switches located on the Main PCB. Select *RESET OPTIONS* by moving the flight control up or down. Press the left-hand fire trigger and note that *YES* appears in the right-hand column. Then press the right-hand fire trigger to perform the reset operation, which is completed when *NO* appears in the right-hand column.

Testing the NOVRAM. The NOVRAM can be tested using the Game Options display. Select *TEST NOVRAM* by moving the flight control up or down. Press the left-hand trigger and check that *NO ERRORS* appears in the right-hand column. If the NOVRAM is defective, a message *ERROR AT* and a hexadecimal number will appear which indicates that the NOVRAM should be replaced. Testing the NOVRAM should only be performed if a defective part is suspected because each test decreases the life of the NOVRAM.

Hardware Errors Display

Press the auxiliary coin switch and wait about seven seconds to obtain the Hardware Errors display. This display shows the condition of the game RAM and ROM. If no hardware errors exist, the message *NO ERRORS DETECTED* will be displayed. If there is a RAM or ROM failure, the display will identify the failed component and give its location.

Switch Test Display

Press the auxiliary coin switch to obtain the Switch Test display. Perform the following procedure to verify that the game switches are operating properly:

1. One at a time, press the fire triggers and thumb push-buttons. Note that a message appears on the display that indicates which switch was pressed.
2. Actuate the right and left coin mechanisms and note that a message appears that indicates which coin mechanism was actuated.
3. Position the flight control to form a single dot in the center of the smallest box in the *POT TEST* portion of the display.
4. Carefully release the flight control and note that the dot remains centered within the smallest box. If a line forms that extends outside the frame of the smallest box, the flight control potentiometers may be misaligned.
5. Tilt the flight control handles forward and backward; note that a line forms from the center of the smallest box and moves out and back in relation to the handle position. Tilt the handles to the extreme forward and backward position; note that the line extends past the frame of the box with open corners but not beyond the frame of the largest box.
6. Turn the flight control fully clockwise and counterclockwise with the handles at the extreme forward then backward positions. Note that the line travels over a full 360° while not extending outside the area between the largest box and the box with the open corners.
7. Verify that the option settings for the switches at location 10D and 10E/F shown at the bottom center of the display match those selected on the corresponding option switches (F = off, N = on).

Mathbox Tests Display

Press the auxiliary coin switch to obtain the Mathbox Tests display. The first test verifies that the *MATHBOX READY* signal is operating normally. If it is not, the message *BAD MATHBOX READY LINE* appears and no further mathbox tests are performed. If the *MATHBOX READY* signal is correct, then the divider and matrix circuitry should be tested. If no problems exist in the divider or matrix circuitry, the messages *NO DIVIDER ERRORS* and *NO MATRIX ERRORS* are displayed. If divider errors exist, the message *DIVIDER ERRORS* will appear and each error will be indicated with an option-switch setting for the corresponding diagnostic. Also, the numbers used on the test with the expected answer and the incorrect answer received will be displayed for each test in error.

If matrix errors exist, the message *MATRIX ERRORS* will appear with the corresponding option switch settings for the diagnostic. Some matrix errors do not have a corresponding diagnostic. In this case, there will be no option-switch setting.

Crosshatch Pattern Display

Press the auxiliary coin switch to obtain the Crosshatch Pattern display. Verify that the corners are closed and the diagonal lines form symmetrical diamond-shaped squares, that all four corners of the border are completely visible and are within ¼-inch from the black edge of the screen, that the pattern is not tilted more than ¼-inch between corners, and that the pattern is a uniform green color. If any of the preceding characteristics are not correct, refer to the linearity adjustment procedure in the Analog Vector-Generator schematic diagrams.

Grid Pattern Display

Press the auxiliary coin switch to obtain a Grid Pattern display. Check that the grid colors advance through the order of red, green, blue, purple, white, yellow, and turquoise each time the fire trigger is pressed. Check that the grid lines do not exhibit pincushioning or barreling and the lines are straight within ⅛-inch. Check that the convergence does not exceed 2.0 mm, as checked with the white grid.

If any of the preceding display characteristics are not correct, refer to the linearity adjustment procedure in the Analog Vector-Generator schematic diagrams and to the convergence adjustment procedure in the Display Manual.

Intensity Test Display

Press the auxiliary coin switch to obtain the Intensity Test display. Check that the top row of color bars are red, blue, and green. Check that all three sets of color bars have six lines with the same intensity, and that the bars underneath the top row are white, yellow, turquoise, and purple. The words *DIM, LOW,* and *HIGH* appear in the bottom center of the display. If the word *OFF* can be seen, the display is too bright. If the word *LOW* cannot be seen, the display is not bright enough.

Bipolar Offset Test Display

Press the auxiliary coin switch to obtain the Bipolar Offset Test TEST display. The line width should be ⅛-inch or less. If not, adjust the X/Y bipolar offset potentiometers located in the digital-to-analog converter and bipolar current sources circuit on the Analog Vector-Generator PCB.

Scale Test Display

Press the auxiliary coin switch to obtain the Scale Test Linear display. A large green square should appear in the center of the screen and then smoothly shrink to a point. Next, a large green *SCALE TEST LINEAR AND BINARY* square appears and shrinks smoothly, then pauses and continues to shrink. There should be eight pauses before the square shrinks to a point. After each pause and just when the square begins to shrink, the size of the square should not change appreciably. If a large change in the size of the square occurs, an error may exist. After the eighth pause, the sequence repeats with the Scale Test Linear and Binary display.

Important Note to Operators:

If the operators manual was not included in this game when you unpacked it, contact your distributor to get a free copy. (All Atari manuals for coin-operated games also include complete illustrated parts lists.)

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