ATARI

STAR WARS

RETURN OF THE JEDI

A Warner Communications Company

NOTE TO OPERATORS

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

When the self-test switch is turned on, the game enters the Self-Test Mode. Turning the self-test switch off at any time during the Self-Test Mode causes the game to return to the Attract Mode. After Screen 7–Grid Pattern, the sequence starts over with Screen 1–Hardware Test.

Screen 1–Hardware Test

The Hardware Test screen, as shown in Figure 1 provides a visual check of the game RAM, ROM, and associated circuitry. The condition of the RAM circuitry is displayed in the top half of the screen and, after about a one-second delay, the condition of the ROM circuitry is displayed in the bottom half of the screen. An error message indicates that the RAM, ROM, or associated circuitry may be faulty. If the RAM and ROM test passes, the message *ZPAGE-ALPHA-COLOR RAM OK* and five *ROM AT XX: OK* messages will appear. The *ZPAGE-ALPHA-COLOR RAM OK* message indicates that the zero-page RAM at location 14B/C, the alphanumerics RAM at location 2R, and the color RAM at locations 12P, 12R, and 12S are operating properly. The *ROM AT XX: OK* messages indicate that the ROM at the specified locations are operating properly.

If the RAM test fails, either a colored screen or an error message appears. A red screen indicates a failure in the zero-page RAM circuitry; a green screen indicates a failure in the alphanumerics RAM circuit; and a magenta screen indicates a failure in the color RAM circuitry. A failure in other tested RAMs displays a *RAM AT XX BAD* message in the top half of the screen, as shown in Figure 1. (Several error messages may mean a faulty address.) If the ROM test fails, a *ROM AT XX: BAD* message appears in the bottom half of the screen (for one or more of the five ROMs tested). Press the auxiliary coin switch to obtain Screen 2.
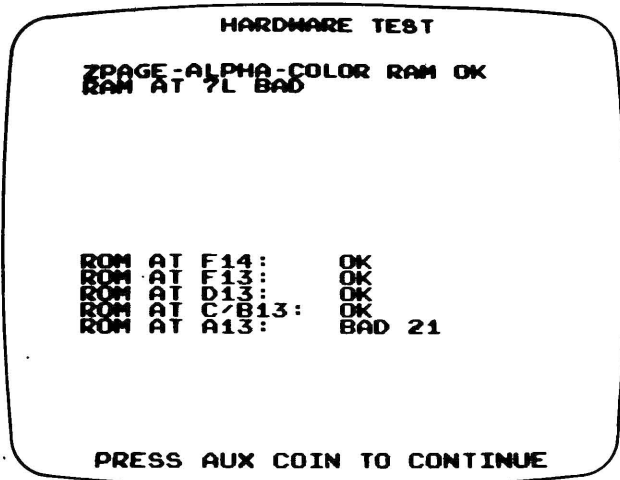
The following information appears in the Statistics display:

- TOTAL GAMES PLAYED shows the total number of free and paid games played.
- TOTAL GAME TIME shows the total time, in seconds, of all the games played.
- AVERAGE GAME TIME shows the average time, in seconds, of all the games played.

Resetting the Statistics. The statistics information can be reset by pressing both flight-control thumb buttons simultaneously. Press the auxiliary coin switch to obtain Screen 3.

Screen 3–Game Options

The Game Options screen provides a visual check of the current option settings. The Options display is also used to change the options or reset the top 10 high scores in the high-score table.

Changing the Options. Change the options by moving the flight control up or down to select the option to be changed, which is indicated by a flashing readout. Then press either fire trigger to select the desired option setting.

Resetting the High Scores. The top 10 high scores displayed in the Attract Mode can be reset by pressing the fire trigger. After the readout at the bottom of the screen changes to *RESET HIGH SCORES: YES*, press the auxiliary coin switch. The readout should change to *RESET HIGH SCORES: DONE,* which indicates that the top 10 high scores have been reset. (The bottom 10 scores are retained in RAM and are reset when the game power or the self-test switch is turned on.) Press the auxiliary coin switch to obtain Screen 4.

> **NOTE**
> For complete instructions on how to set the game's options, refer to Chapter 2 of the operators manual.

Figure 1 RAM/ROM Test Fails

Screen 2–Statistics

The Statistics screen, as shown in Figure 2, provides a visual check of the game statistics. The statistics information is accumulated either from the first time the game was turned on or from the last time the statistics were reset.
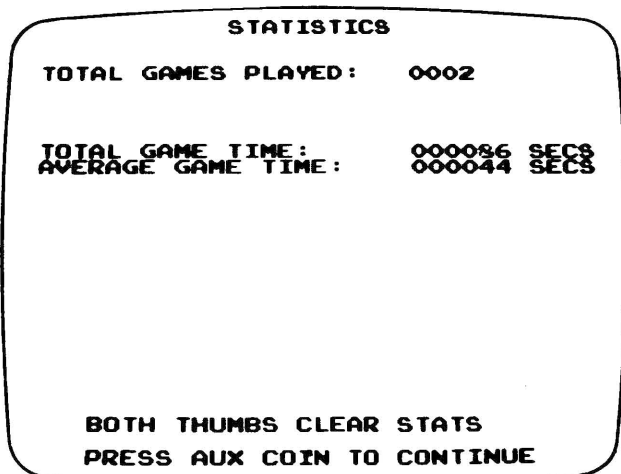

Figure 2 Statistics

Table 1 Coin & Credit Settings

Option	Setting
Credit Options	1 Coin
	2 Coins ◄†
	3 Coins
	4 Coins
Left Mechanism Value	1 Coin ◄†
	2 Coins
Right Mechanism Value	1 Coin ◄†
	4 Coins
	5 Coins
	6 Coins
Bonus Adder	No Bonus Coins Added ◄†
	Free Play
	1 Bonus Coin for 2 Coins
	1 Bonus Coin for 3 Coins
	2 Bonus Coins for 4 Coins
	1 Bonus Coin for 5 Coins
	1 Bonus Coin for 4 Coins

Table 2 Game Option Settings

Option	Setting
No. of Starting Lives	Three Lives
	Four Lives
	Five Lives ◄†
	Six Lives
Difficulty Levels	Easy†
	Medium ◄
	Difficult
Bonus Life Awarded	Every 30,000 points†
	Every 40,000 points ◄
	Every 50,000 points
Reset High Scores	Yes
	No ◄†

◄*Manufacturer's recommended settings for American games.*
†*Manufacturer's recommended settings for European games.*

Screen 4 Sound Processor Test

The Sound processor Test screen is used to verify that the sound-generating circuits are operating properly. When the display appears, press the flight control right or left thumb buttons to increment or decrement through the 65 available sounds, as indicated by the *SOUND NUMBER: XX* readout on the screen. (Not all the sounds are used during game play.) Press either fire trigger to start the sound. The voice segments will finish and then repeat each time the fire trigger is pressed. The remaining sounds will stop immediately and then repeat each time the fire trigger is pressed. If the sound-generating circuit has failed, the message *SOUND PROCESSOR BAD* will appear near the center of the screen. Press the auxiliary coin switch to obtain Screen 5.

Screen 5–Control Test

The Control Test screen is used to verify that the game switches are operating properly and that the flight control's vertical and horizontal ranges are within acceptable limits. Perform the following procedure to verify that the game switches and flight-control potentiometers are operating properly.

1. Press both thumb buttons simultaneously.
2. Turn the flight control fully clockwise and hold until the horizontal high (HHI) numbers are stable (about one second).
3. Turn the flight control fully counterclockwise and hold until the horizontal low (HLO) numbers are stable (about one second).
4. Tilt the flight control to the extreme forward position and hold until the vertical low (VLO) numbers are stable (about one second).
5. Tilt the flight control to the extreme backward position and hold until the vertical high (VHI) numbers are stable (about one second).
6. Press either fire trigger and check the message under the RANGE column. If the horizontal and vertical ranges are within acceptable limits, the message *OK* should appear opposite the hexadecimal numbers for both the horizontal and vertical ranges. If the ranges are not within the acceptable limits, the message *BAD* will appear opposite the unacceptable range(s).

> **NOTE**
> If the flight control range is not within acceptable limits, the vertical and horizontal potentiometers may be misaligned. Refer to *Aligning the Flight Control Potentiometers* in Chapter 3 of the operators manual for mechanical alignment procedures.

7. Actuate the right and left coin mechanisms. Note that a message appears, indicating that the coin mechanisms are operating properly.
8. One at a time, press the fire triggers and thumb buttons. Note that a message appears, indicating that the fire triggers and thumb buttons are operating properly.

Press the auxiliary coin switch to obtain Screen 6.

Screen 6–Color Bars

The Color Bars screen is used to verify that the video circuits are operating properly and that the display is adjusted for the appropriate colors. The display should contain four horizontal color bars with eight shades in each color bar. Examine the Color Bars display for the following characteristics:

- The four color bars (from top to bottom) should be red, green, blue, and gray, with each color bar containing eight segments of progressively darker shades of the same color. The eighth segments should be barely visible (view the screen with low ambient light).
- All the color bars should have the same relative intensity.

If the display characteristics are not correct, refer to the Display Manual for the adjustment procedure or to determine the possible cause of failure. Press the auxiliary coin switch to obtain Screen 7.

Screen 7–Grid Pattern

The Grid Pattern screen is used to verify that the display size, centering, linearity, and convergence are properly adjusted. Examine the grid pattern for the following characteristics:

- The four solid boxes in the four corners of the frame around the grid pattern should touch all four corners of the screen.
- Grid lines should exhibit no pincushioning or barreling and the lines should be straight within 3.0 mm.
- Convergence should not exceed 2.0 mm.

If the display characteristics are not within these limits, refer to the Display Manual for the linearity and convergence adjustment procedures or to determine the possible cause of failure.

> **NOTE**
> Press the auxiliary coin switch after Screen 7, Grid Pattern, to repeat the self-test sequence, beginning with Screen 1–Hardware Test.