

A. Self-Test Display

When the power switch is turned on, Food Fight enters the automatic selftest mode, which tests playfield RAM, program ROM, and non-volatile RAM (NVRAM). At the beginning of these tests, both the one-player and two-player LEDs are lit. (This is so that the success or failure of the tests can be indicated even if the messages cannot be displayed on the monitor.)

If the playfield RAM and program RAM are working, then the one-player LED turns off and the message RAM OK is displayed on the screen.

If the playfield RAM fails, the one-player LED flashes one through four times followed by a pause. The playfield RAM number displayed corresponds to the board location of the faulty chip as shown in Table 2-1.

Table 2-1 Playfield RAM Locations

Playfield RAM Number	Board Location
1	3K
2	3L
3	3M
4	3N

If the program RAM fails, the one-player LED remains on, and the number of the bad chip is displayed. The program RAM number corresponds to the board location of the faulty chip as shown in Table 2-2.

Table 2-2 Program RAM Locations

Program RAM Number	Board Location
0	8B
1	8A
2	9B
3	9A

After the RAM is checked, the checksums for program ROM are verified. If all ROMs check out correctly, then the two-player LED is turned off and the message ROM OK is displayed. If there are faulty chips, then the ROM number

of each faulty chip is displayed. The ROM number corresponds to the board location of the faulty chip as shown in Table 2-3.

Table 2-3 Program ROM Locations

ROM Number	Board Location
0	9C
1	8C
2	9D
3	8D
4	9E
5	8E
6	9F
7	8F

After the program ROM is checked, the checksums for the NVRAM are verified. If all sections of the NVRAM check, then the message NVRAM OK is displayed. If any section of NVRAM fails, then the name of the faulty section is displayed and factory values from program ROM are used instead of the values from that section.

If playfield RAM, program RAM, and NVRAM check out correctly, Food Fight goes into the attract mode after five seconds. If NVRAM fails, the game will go into the attract mode when the THROW button has been pushed.

The five sections of NVRAM are as follows:

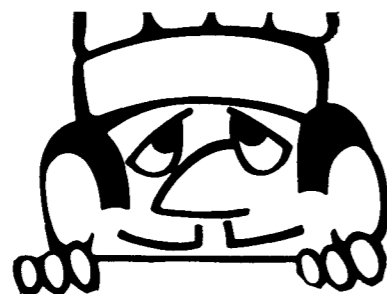
STATISTICS holds the values for the statistics display (see the description under Self-Test Menu). These values can be reset using the options menu.

TIME AND CREDITS holds the total time the machine has been on, and the total number of credits. These appear at the bottom of the statistics display and cannot be reset.

HIGH SCORES holds the player initials, scores, and levels achieved for the top three high-scoring games. These values appear at the top of the high-score table during the attract mode and can be reset using the options menu.

OPTIONS holds the current settings for the game options, which can be displayed and/or changed using the options menu.

JOYSTICK VALUES holds the maximum and minimum values for the analog joystick. See the description of Joystick Calibration under the TESTS option of the self-test menu.



B. Self-Test Menu

Food Fight has a menu-driven self-test mode which is entered by turning the self-test switch on. Turning the self-test switch off at any time during self-test mode causes the game to return to the attract mode.

Immediately after the self-test switch is turned on, the main self-test menu appears as shown in Figure 2-1. Three choices are available—TESTS, STATISTICS, and OPTIONS. Move the joystick up or down to change the current selection, which is displayed in red. Push the THROW button to select.

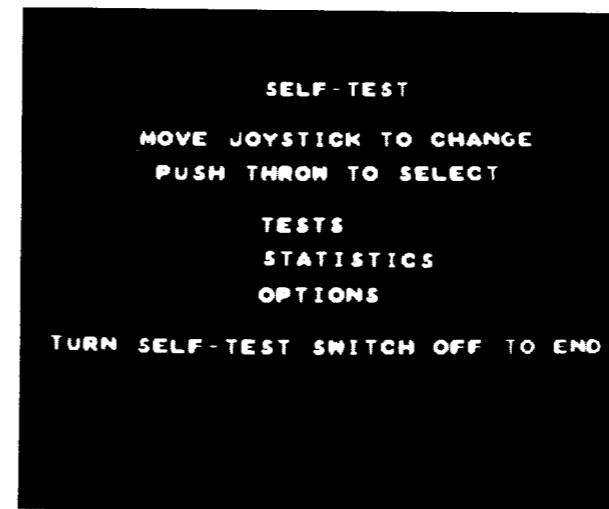


Figure 2-1 Main Self-Test Menu

NOTE
The two-player start button can be used to cycle through the selections in any of the self-test menus so the game can be tested even if the joystick is faulty.

Hardware Tests

Selecting TESTS causes the hardware test menu to appear as shown in Figure 2-2. There are five choices available—JOYSTICK CALIBRATION, SWITCH TEST, COLOR PATTERN, CONVERGENCE PATTERN, and SOUND TEST. Use the joystick and THROW button to select any option. Push the one-player start button to return to the main self-test menu.

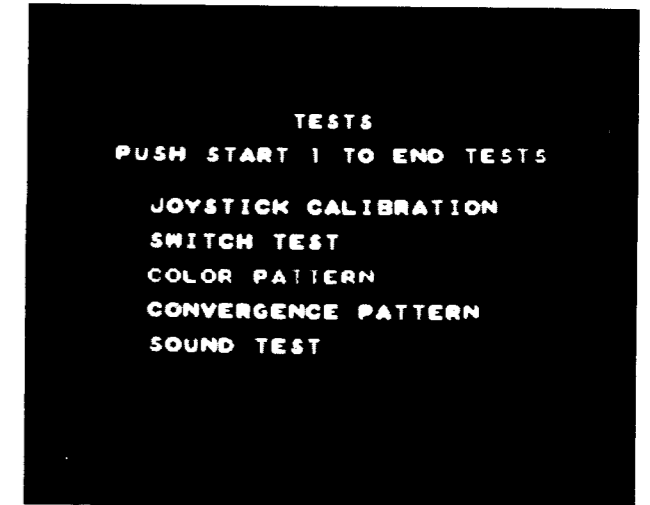


Figure 2-2 Hardware Tests Menu

JOYSTICK CALIBRATION resets the joystick minimum and maximum values, and should be used whenever the NVRAM or joystick is replaced. Hold the joystick steady for a full five seconds in each direction (left, right, up, down) to store new values. Push the one-player start button to return to the TESTS menu.

NOTE
Food Fight is equipped with a self-calibrating joystick, which checks its maximum and minimum values while the game is being played. Initial values are set at the factory and stored in NVRAM. When Food Fight is turned off, the NVRAM values are updated. Each time Food Fight is turned on, the current values are read out of NVRAM. If NVRAM fails (see the description under Automatic Self-Test), then the joystick is recalibrated as the game is being played. In this case, the control will be sluggish for the first game or two after the game is turned on.

