SPACE INVADERS

SERVICE INSTRUCTIONS

TAITO AMERICA CORPORATION
1256 Estes Avenue, Elk Grove Village, IL 60007

BLACK & WHITE

#960014
NAME OF PART (SEE Figs. 1 and 2)

- TV Screen
- Coin Slot
- 1-PLAYER START
- 2-PLAYER START
- Control Lever
- Fire Button
- Cash Box

Fig. 1

Plate covering Power Switch and Main Fuse

Fig. 2

Power Plug & Cord
- Avoid rough handling in transportation; the picture tube is fragile.

- Taito "Cocktail Space Invaders" is for indoor use.

- Install the machine on flat-surfaced floor and provide suitable space around the machine.

- Do not install the machine in a location with exposure to direct sunlight or excessive heat.

- Ensure that all PCB connections are secure.

- Insert the power plug into a properly grounded outlet.
HANDLING NOTE AND WARNING:

NOTE:

Erroneous or partial picture may appear on the screen when the machine is first switched on. This is typical of the characteristics of the CPU, and will correct itself automatically when the power switch is turned off and on.

WARNING:

TAITO "Cocktail Space Invaders" uses a CPU and the latest solid-state circuitry for long life, however, certain precautions must be observed to avoid damage.

1. Do not attempt to service with ordinary test equipment. Service should be done by a qualified technician.

TAITO America Service Department can be reached toll-free outside Illinois at: #800-523-0666, or in Illinois: #312-981-1000

2. Never connect or disconnect any of the solid-state modules while the power is on.

Routine Maintenance:

Owing to the solid-state electronic circuitry, this machine should require very little maintenance and only occasional adjustments.

Playing Instructions:

One or two players.

Insert coin(s).

1 Coin - 1 play (3 laser bases...ADJUSTABLE).
2 Coins - 2 plays (or 2 player game).

Select one or two player game.

As the "attacking sound" is heard, invaders appear on the screen. Also, a laser base and four fortresses appear on the lower side of the screen.

To move the laser base left or right, push the control buttons, or move control knob depending on model.

To fire laser, push the fire button.

In two player mode, the play alternates between the two.
Scoring:

- 🛡️ 30 points
- 🛡️ 20 points
- 🛡️ 10 points

Function Description of Game:

Invaders advance step by step against the laser base as they move left and right.

Fortresses are gradually destroyed by the attack of invaders. They are also destroyed by laser.

As the number of invaders decreases, they move faster.

UFO hit gives the player mystery score (50, 100, 150 or 300 points).

When score reaches 1,500 points (adjustable), a bonus laser base appears and a "beep" sound is generated.

Game ends when all laser bases are hit by invader missiles or when invaders overrun the base.

Up to 99 coins can be credited.

Adjustments on Power Supply P.C. Board: (See Figure 3)

Caution: The D.C. voltages should be set within limits. Failure to do so may result in destruction of the ICs. Voltages are factory set and should need no adjustment.

To check the output voltages, measure them on the G-connector or the T-connector. (See cable block diagram).
FIGURE 3

+12V VR ... Pot for adjusting 12V,
(ADJUSTABLE RANGE: 12V - 15V DC)

-12V VR ... Pot for adjusting -12V,
(ADJUSTABLE RANGE: -12V - 15V DC)

+5V VR ... Pot for adjustable 5V,
(ADJUSTABLE RANGE: 5V - 6V)

-5V VR ... Pot for adjustable -5V,
(ADJUSTABLE RANGE: -5V - -6V DC)

Adjustments on Game & Sound P.C. Board:
(See Figure 4 and Tables 1 and 2)

To decrease the sound, turn each pot (VR1 - VR8) as shown below:

FIGURE 4
- VR1 ... Pot for adjusting volume of UFO.
- VR2 ... Pot for adjusting volume of laser base when firing.
- VR3 ... Pot for adjusting volume of laser base when destroyed.
- VR4 ... Pot for adjusting volume of invaders when destroyed.
- VR5 ... Pot for adjusting volume of "beep" when bonus is awarded.
- VR6 ... Pot for adjusting volume of invaders when advancing.
- VR7 ... Pot for adjusting volume of UFO when destroyed.
- VR8 ... Pot for adjusting total sound volume.

- SW1, SW2 ... Switches for adjusting the number of laser bases.

**Optional Settings:**

<table>
<thead>
<tr>
<th>Laser Bases</th>
<th>SW1</th>
<th>SW2</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>ON</td>
<td>ON</td>
</tr>
<tr>
<td>4</td>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td>5</td>
<td>ON</td>
<td>OFF</td>
</tr>
<tr>
<td>6</td>
<td>OFF</td>
<td>OFF</td>
</tr>
</tbody>
</table>

(Table 1)

The number of laser bases is preset at "3" at the factory.

- SW 4 ... Switch for adjusting bonus points.

**Optional Settings:**

<table>
<thead>
<tr>
<th>Score</th>
<th>SW 4</th>
<th>Laser Base</th>
</tr>
</thead>
<tbody>
<tr>
<td>1500</td>
<td>ON</td>
<td>1</td>
</tr>
<tr>
<td>1000</td>
<td>OFF</td>
<td>1</td>
</tr>
</tbody>
</table>

(Table 2)

The bonus points are preset at "1500" at the factory.

- SW 8 ... Switch for adjusting play pricing displayed on the screen. When this switch is set in "ON" position, the play pricing is displayed on the screen as follows:
1 coin - 1 player, 2 coins - 2 players.
("OFF" position: nothing is displayed).
- **SW5, SW6, and SW7.**
  These switches are factory adjustments, and should be set in "ON" position.

- **SW5...** Switch for checking of RAM and game sound (see Figure 4).
  "ON" position: checking of RAM and game sound can be made.
  Normally, this switch is to be set at "OFF" position.
  
  **NOTE:** This check can be made only when the CPU PC Board (A) is used.

- **ADJUSTMENTS ON TV MONITOR:** (See Figure 5)
The TV monitor is properly adjusted before shipping, however, if necessary, readjust as follows:

**Horizontal Hold:** Adjust the H. HOLD control if the picture is warped or broken into diagonal lines.

**Vertical Hold:** Adjust the V. HOLD control if the picture rolls vertically across the screen.

**Screen Contrast and Brightness:** Adjust the CONT. and the BRIGHT controls to keep the screen clear.

**Focus:** Screen FOCUS control.

**Adjustments of Supply Voltage:** (See Figure 6)

If the voltage of the power supply is low, the picture on the screen sometimes flickers. In that case, change the terminal of the power transformer in the cabinet. This adjustment is obtained by using the change-over switch.

![Change-Over Switch Diagram](image)

**Figure 6**
* Typical Picture During Play: (See Figure 7)

![Diagram of a laser base game interface]