

CLOAK & DAGGER™*

Installation Instructions for Joust[†], Robotron: 2084[†], or Stargate[†]

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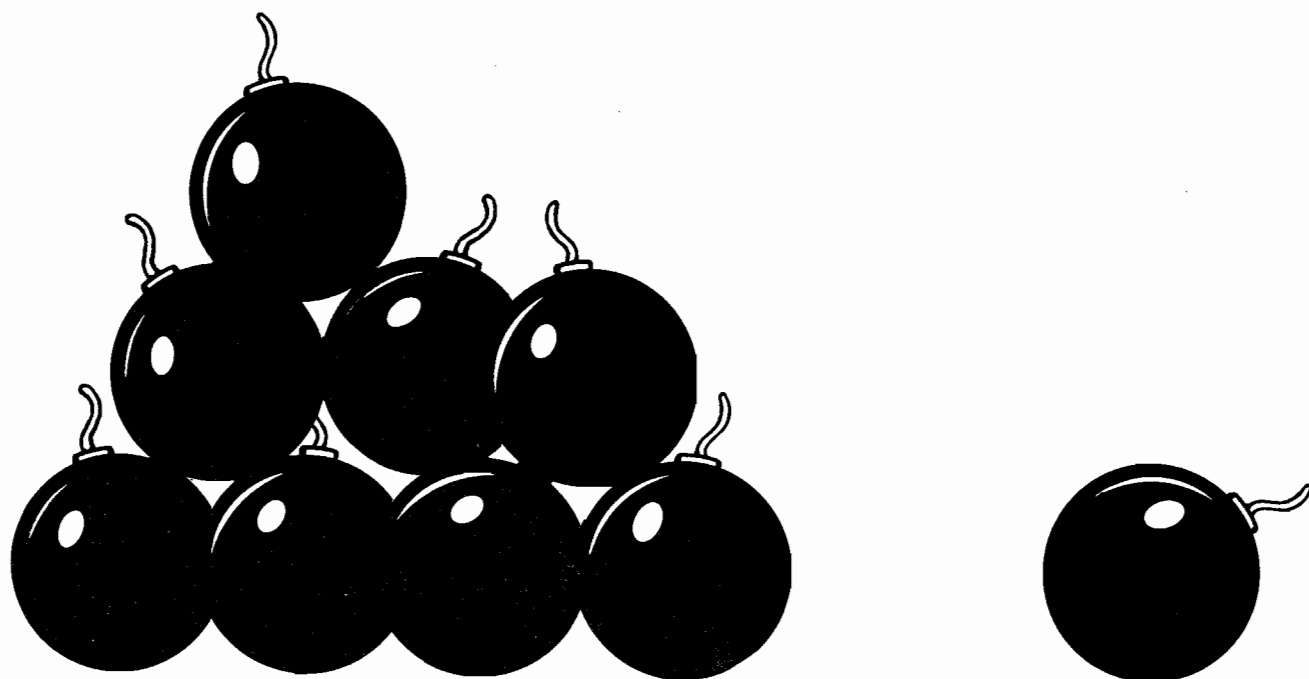
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CLOAK & DAGGER™

Installation Instructions for Joust†, Robotron: 2084†, or Stargate†



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INSTALLATION INSTRUCTIONS FOR JOUST*, ROBOTRON: 2084*, STARGATE*INTRODUCTION

The following information includes the necessary installation instructions for changing the Joust™, Robotron: 2084™, and Stargate™ games into a CLOAK & DAGGER™ game. The modifications include changing the cabinet graphics, the control panel, the attraction shield, the display shield, the game printed-circuit boards, and harness assembly. A CLOAK & DAGGER Schematic Package is provided for the game circuitry. If you have a schematic set that was originally provided for your Joust, Robotron: 2084, or Stargate game, save the power supply, sound printed-circuit board, and monitor schematics.

KIT PARTS INVENTORY

Check the contents of the CLOAK & DAGGER Retrofit Kit (A041462-02) before proceeding with the retrofit procedure. The parts included in this retrofit kit are listed in Table 1.

Table 1 Retrofit Kit Contents for Joust, Robotron: 2084, or Stargate
A041462-02

| Part No. | Quantity | Description |
|------------|----------|---|
| A037701-01 | 1 | Electromagnetic Interference (EMI) Cage and Guides Assembly--includes |
| 037700-02 | 1 | EMI Cage |
| 178047-032 | 4 | PCB Guide |
| A040733-01 | 1 | EMI Shield and Dual PCB Assembly--includes |
| A039431-01 | 1 | CLOAK & DAGGER Interconnect PCB |
| A039938-21 | 1 | CLOAK & DAGGER Slave PCB |
| A039942-21 | 1 | CLOAK & DAGGER Master PCB |
| A040404-01 | 1 | EMI Shield PCB |
| 72-1604F | 4 | #6-36 x 1/4-Inch Cross-Recessed Steel Screw |
| 034536-02 | 1 | 0.50-Inch Thick Foam Pad |
| 034536-03 | 1 | 1.12-Inch Thick Foam Pad |
| A041464-01 | 1 | Control Panel Assembly--includes |
| A041465-01 | 1 | Control Panel and Decal Assembly |
| A040729-01 | 1 | Control Harness Assembly |
| 171021-001 | 2 | 8-Position Joystick Assembly |

--continued on next page--

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Table 1 Retrofit Kit Contents for Joust, Robotron: 2084,
or Stargate (continued)

| Part No. | Quantity | Description |
|------------|----------|--|
| A041511-01 | 1 | Retrofit Main Harness Assembly |
| A041510-01 | 1 | Main Harness |
| 119006-103 | 1 | 10 k Ω Dual Potentiometer |
| A041937-01 | 1 | Extension Harness |
| SP-242 | 1 | CLOAK & DAGGER Schematic Package |
| ST-242-01 | 1 | CLOAK & DAGGER Chart with Self-Test Procedure and Option Switch Settings |
| TM-242 | 1 | CLOAK & DAGGER Operators Manual |
| 72-1816F | 4 | #8-32 x 1-Inch Long Cross-Recessed, Pan-Head Machine Screw (used to mount wood panel to cabinet wall) |
| 75-048S | 4 | #8 Split-Lock Washer (used to mount wood panel to cabinet wall) |
| 75-018S | 4 | #8 Flat Washer (used to mount wood panel to cabinet wall) |
| 038086-01 | 1 | Shock Warning Label |
| 038158-03 | 1 | Product ID Label |
| 039450-01 | 1 | FCC Compliance Label |
| 041471-01 | 1 | Left Side-Panel Decal |
| 041471-02 | 1 | Right Side-Panel Decal |
| 041478-01 | 1 | Display Shield |
| 041474-01 | 1 | Attraction Shield |
| 041476-02 | 1 | Attraction Shield Semi-Rigid Film |
| 041477-02 | 1 | Wood Mounting Panel for EMI Shield Assembly |
| 175004-708 | 2 | #8 Flat Fiber Washer (used to mount EMI cage to wood panel) |
| 176015-112 | 3 | #10 x 3/4-Inch Long Cross-Recessed, Pan-Head Screw (1 used to mount EMI cage to wood panel; 2 used on control panel) |

NOTE

The Master, Slave, and Interconnect Printed-Circuit Boards are already installed in the EMI Cage of the retrofit kit.

TOOLS REQUIRED

The tools listed in Table 2 (or their equivalents) are required to perform a complete retrofit.

Table 2 Tools Required

| Quantity | Description | Purpose |
|----------|--------------------------------------|--|
| 1 | 7/16-Inch Hex Nut Driver | Remove hardware from control panel |
| 1 | Phillips-Head Screwdriver | Remove and install retainers, attraction shield, display shield, and harness |
| 1 | Squeegee | Install decal graphics |
| 1 | X-ACTO™ Knife or Suitable Substitute | Install decal graphics |
| 1 | Small Handsaw | Remove Cleating |

RETROFIT INSTRUCTIONS

NOTE

These procedures must be performed by qualified service personnel. All interior and exterior surfaces should be clean and free of foreign material before starting this retrofit procedure.

The following procedures are arranged in a sequence recommended for performing the retrofit modification. The parts of your game that are affected by the retrofit (see Figure 1) are removed first. Then, the CLOAK & DAGGER kit parts are installed.

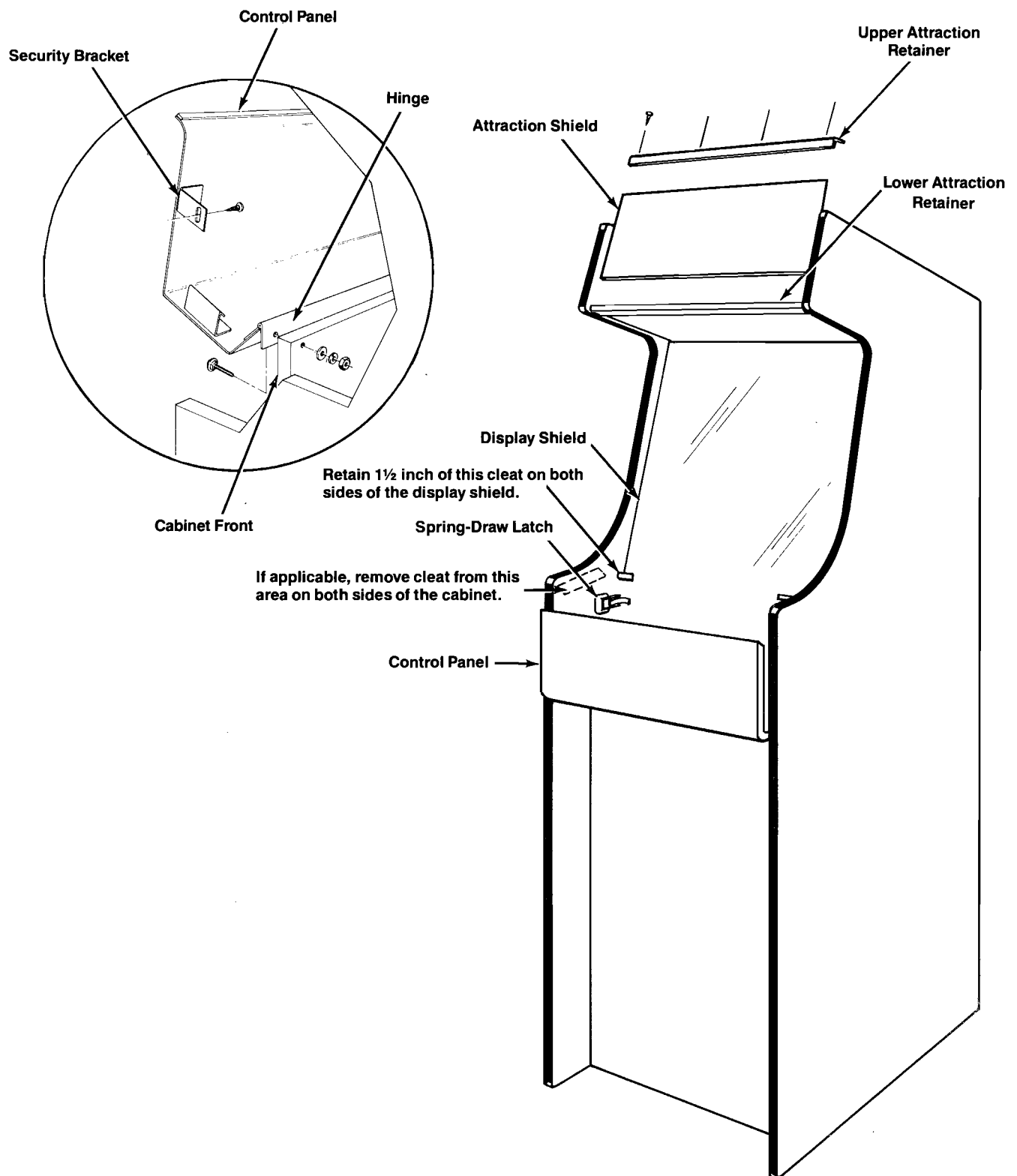


Figure 1 Attraction Shield, Display Shield, and Control Panel Replacement



WARNING



Unplug the game before performing the following procedures.

Remove Part of the Harness Assembly

CAUTION

DO NOT REMOVE the game's harness wiring to the following items:

- Power Supply Transformer Connector
- Power Supply Heat-Sink Connector
- Fluorescent Tube
- Speaker
- Safety Interconnect Switch at Rear of Cabinet
- On/Off Switch
- Monitor AC

BE SURE TO REMOVE THE REAR ACCESS PANEL FIRST in the next series of instructions, or it may fall on you.

1. Unlock and remove the rear access panel.
2. Reach inside the game cabinet and release the two spring-draw latches on the right side of the hinged rear door.
3. Open the hinged rear door.
4. Unplug the coin-door connector.
5. Use a Phillips-head screwdriver to remove the coin-door interlock switch.
6. Unplug the control-panel connectors.
7. Unplug the sound PCB connectors. Remove and discard the microprocessor and ROM socketed integrated circuits on the sound PCB.
8. Unplug the speaker connector.
9. Unplug the top two power-supply PCB connectors. BE SURE TO LEAVE THE TRANSFORMER CONNECTOR AND HEAT-SINK CONNECTOR ATTACHED.

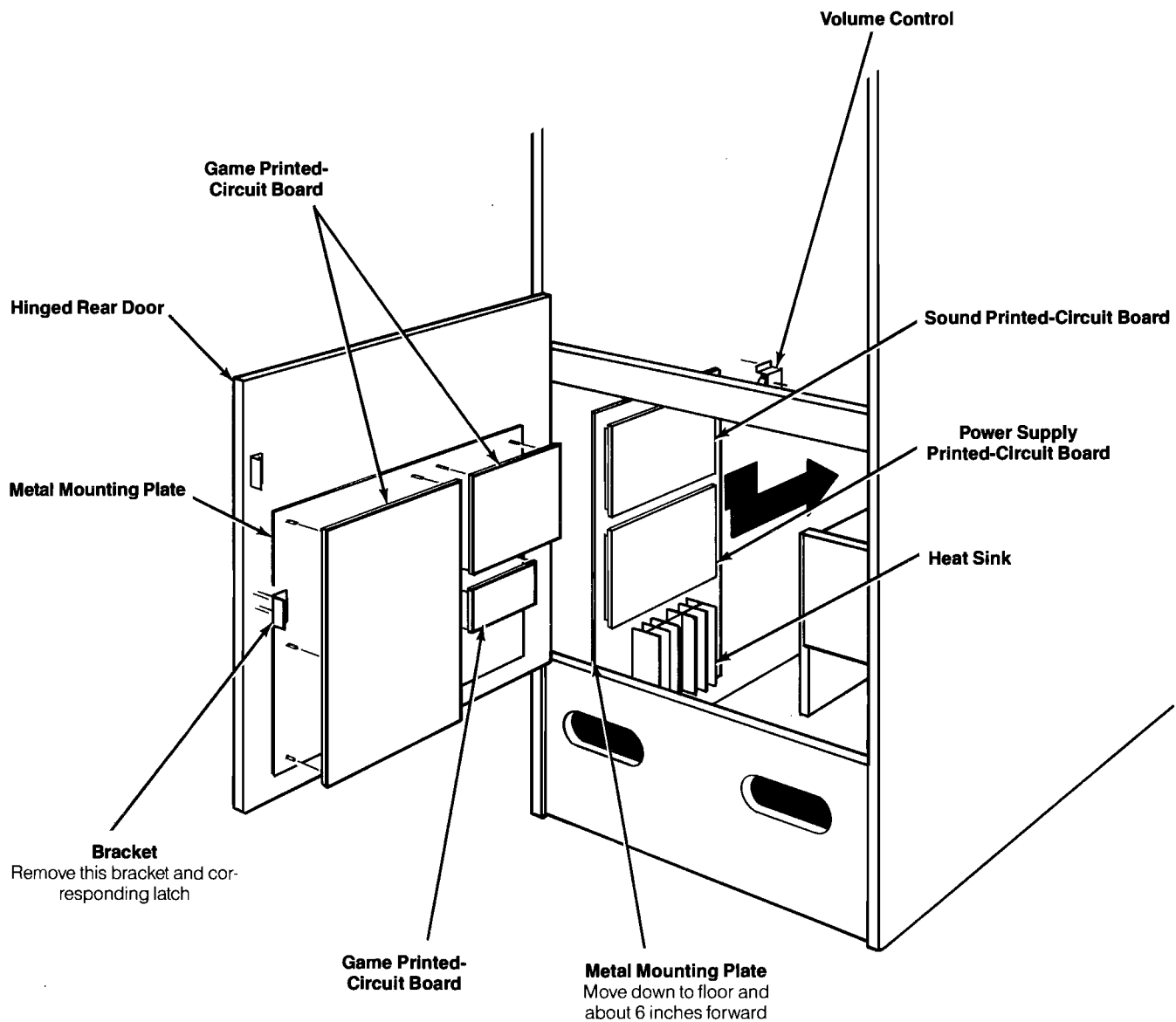
10. Remove the volume control from the U-shaped bracket that is located on the side of the cabinet next to the sound PCB. SAVE THE BRACKET AND SCREWS FOR THE CLOAK & DAGGER VOLUME CONTROL INSTALLATION.
11. Unplug the signal connector on the monitor PCB.
12. Unplug the connectors from the game printed-circuit boards mounted on the hinged rear door.
13. Remove the white nylon harness screw-down clamps that secure the loosened harness wires. BE SURE TO SAVE THESE CLAMPS AND SCREWS FOR INSTALLING THE CLOAK & DAGGER HARNESS.
14. Discard the removed harness.

Remove the Game Printed-Circuit Boards

1. Use a Phillips-head screwdriver to remove the screws that secure the three game printed-circuit boards to the spacers on the hinged rear door (see Figure 2).
2. Remove the lower spring-draw latch from the cabinet wall and its bracket from the hinged rear door to permit closing the door when the EMI cage is installed (see Figure 2).

Remove the Control Panel

1. Reach inside the game cabinet and release the two spring-draw latches on the sides of the cabinet to the rear of the control panel (see Figure 1).
2. From the front of the game cabinet, open the control panel and cut the ground braid from the center bolt.
3. Use a 7/16-inch nut driver to remove the hardware securing the control-panel hinge to the inside wall of the cabinet front panel. BE SURE TO SAVE THIS HARDWARE FOR INSTALLING YOUR CLOAK & DAGGER CONTROL PANEL.
4. Remove the control panel from the game cabinet.
5. Remove the hook in the center cleat at the bottom of the monitor area.
6. Use a small handsaw to cut away the center of the display-shield support cleat. Leave 1 1/2" of cleat on the outer edges.
7. If applicable, remove any cleating on the cabinet sides that might interfere with closing the control panel.

**Figure 2 Rear View of Game Cabinet**

Remove the Attraction Shield

Use the Phillips-head screwdriver to remove the hardware that fastens the upper attraction shield retainer to the cabinet (see Figure 1). Remove the retainer and attraction shield. BE SURE TO KEEP THE HARDWARE AND RETAINER FOR REASSEMBLY.

Remove the Display Shield

From the front of the game, slide the display shield up and lift it out clear of the cleats at the lower edge of the monitor.

Remove the Metal Mounting Plate

1. Remove the hardware securing the metal mounting plate that holds the Sound PCB, the heat sink, and the power supply PCB (see Figure 2). BE SURE TO SAVE THE HARDWARE.
2. Move the metal plate approximately 6 inches toward the front of the cabinet and down to rest on the floor of the cabinet.
3. Secure the metal plate to the cabinet wall using the previously removed hardware.

Install the Display Shield

Slide the CLOAK & DAGGER display shield into the cabinet, clearing the cleats at the lower edge (see Figure 1).

Install the Control Panel

1. Position the CLOAK & DAGGER control panel on the game cabinet, matching the three holes for the hardware.
2. Install the hardware that secures the control panel hinge to the cabinet wall.
3. Be sure the existing ground braid is caught between the washer and nut on the side of the control panel.
4. Close the control panel.
5. Reach up through the coin door and fasten the two spring-draw latches at the sides of the cabinet.
6. From the back of the game, use a Phillips-head screwdriver to drive a #10 screw through the security brackets located on the sides of the control-panel.

Install the Attraction Shield

1. Position the CLOAK & DAGGER attraction film behind the attraction shield and slide them (as one unit) into the lower attraction retainer (see Figure 1).
2. Hold the upper retainer firmly against the top of the attraction shield and attach the upper retainer to the game cabinet with the mounting hardware.

Install the Wood Panel for the EMI Cage

Mount the wood panel included in the kit to the stand-offs on the hinged rear door with the four #8-32 x 1-inch screws and #8 split-lock and flat washers (see Figure 3).

Attach the EMI Cage to the Wood Mounting Panel

1. Slide the EMI cage into the wooden cleats on the mounting panel
2. Attach the EMI cage to the wood mounting panel with the #10 x 3/4-inch screw and the two #8 flat fiber washers (see Figure 3).

NOTE

If you wish to change the option-switch settings, do so at this time. Refer to the CLOAK & DAGGER Operators Manual, TM-242, for further option-switch setting information.

Install the CLOAK and DAGGER Retrofit Main Harness

NOTE

All CLOAK & DAGGER retrofit harness connectors are keyed to fit properly.

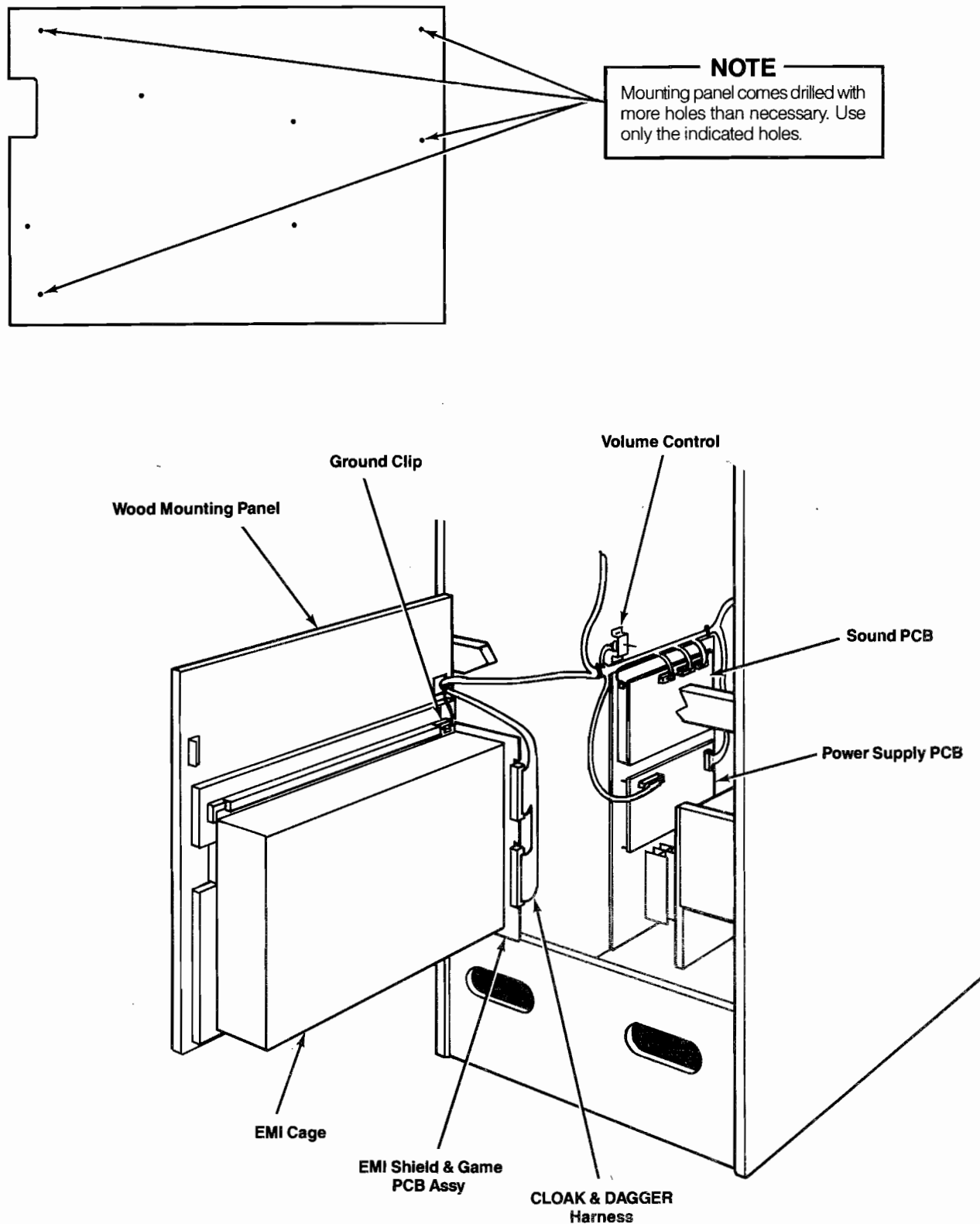


Figure 3 CLOAK & DAGGER Harness and EMI Cage Installation

▲ ————— WARNING ————— ▲

The Power Supply PCB configuration and the location of its 6-pin connector are variable. If needed, add the extension harness provided (part no. A041937-01). BE SURE TO ROUTE THE EXTENSION HARNESS AROUND THE HEAT SINK.

1. Install the volume control on the U-shaped bracket removed earlier. DO NOT attach the bracket to the cabinet wall at this time.
2. Plug the two keyed-to-fit 44-pin edge connectors into the EMI Shield PCB on the end of the EMI cage. Attach the ground clip to the top of the EMI cage (see Figure 3).
3. Plug in the two keyed-to-fit power-supply base connectors. Secure the harness to the power-supply base with the white nylon adhesive-backed mount.
4. Plug in the three keyed-to-fit connectors to the sound PCB. Attach the grounding clip to the metal mounting plate behind the sound PCB.
5. Plug in the coin-door connector at the coin door.
6. Route the harness across the coin door; secure with existing screw-on clamps. Plug in the two control-panel connectors.
7. Plug in the speaker connector.
8. Plug the monitor signal connector into the main monitor PCB.
9. Secure the CLOAK and DAGGER harness with the white nylon screw-on clamps removed earlier. Follow a routing similar to that shown in Figure 3.

Install the Self-Test Chart

1. Staple the CLOAK & DAGGER self-test chart on the inside of the rear access panel.
2. Close the hinged rear door and secure the spring draw clamps inside the cabinet.
3. Install the rear access panel on the game cabinet.

Perform a Self-Test

1. Plug the game in.
2. Turn on the game.
3. Perform the self-test procedure as described in the CLOAK & DAGGER Operators Manual, TM-242.
4. Ensure that the "EXIT" signs on both the right and left elevator doors are visible during normal game play by setting the width control to the narrowest width possible.

Apply the Labels

1. Remove the protective backing from the product identification label, the FCC compliance label, and the shock warning label included in the CLOAK & DAGGER kit.
2. Apply the three labels to the back of the game cabinet directly above the rear access panel.

Attach the Side-Panel Decals

NOTE

We recommend that the following procedure be performed by two persons. One person may have difficulty handling the cabinet and the large decals.

1. Mix a normal dishwashing solution of approximately three quarts of water and any liquid dishwashing detergent in a shallow pan.
2. Tip the game cabinet sideways and gently lay it on a soft blanket.
3. Thoroughly clean the side of the game cabinet to ensure the removal of all dust.
4. Use a sponge to liberally apply the water and detergent solution over the entire side of the game cabinet.
5. Grasp the top edge of the appropriate decal for the side of the game cabinet. Hold the decal up off the floor and peel away the protective backing.

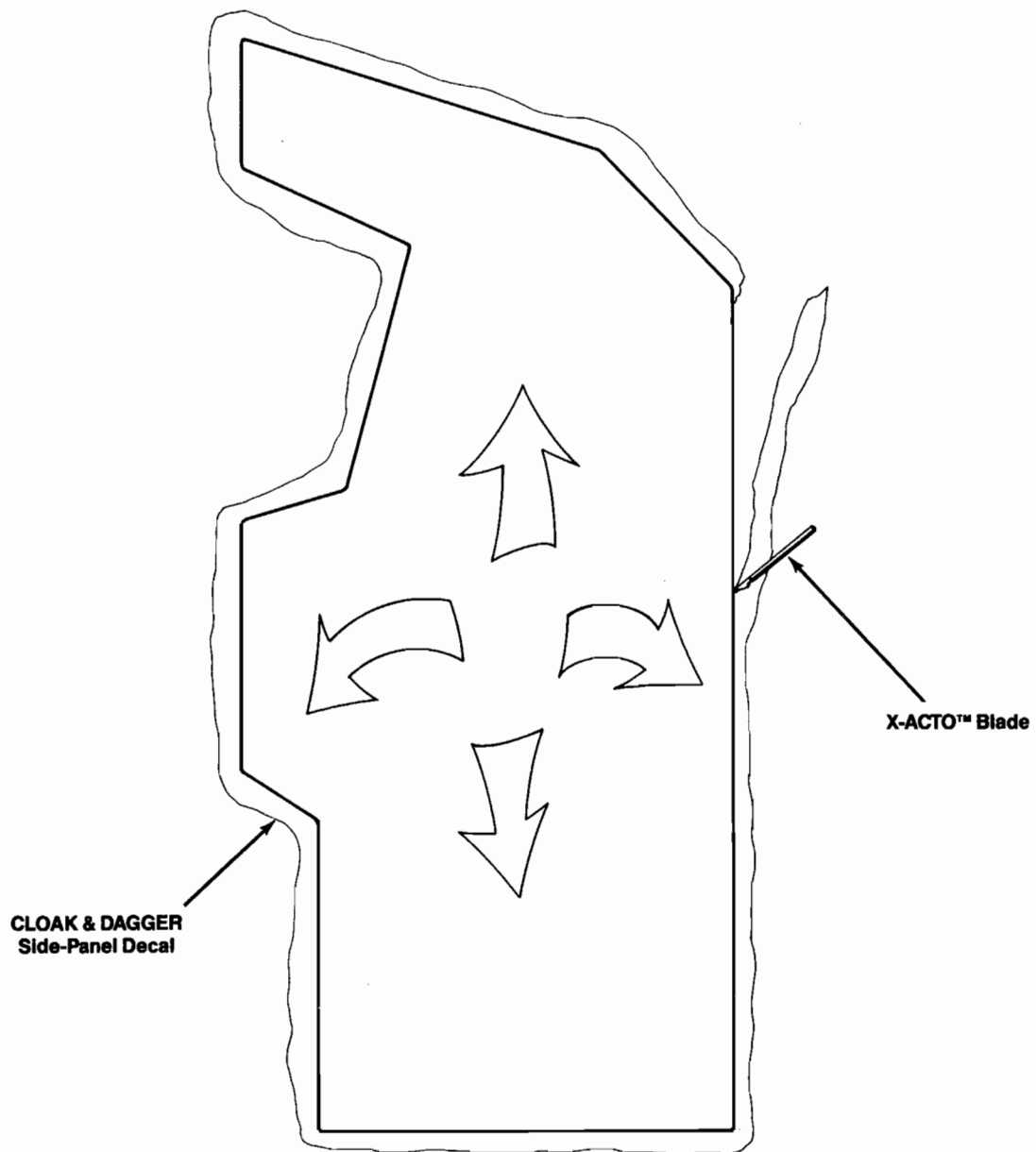


Figure 4 CLOAK & DAGGER Decal Installation

6. Gently lay the decal, sticky side down, in the center of the wet surface of the game cabinet (see Figure 4). Position the decal to ensure that the color graphics are centered on the side of the cabinet.
7. With the decal down and in position, use the squeegee to remove all the excess water and detergent from beneath the decal by quickly working from the center to the outside edges. Hint: If any air bubbles form, puncture them with a pin or the tip of an X-ACTO™ blade. Rub gently with a soft cloth to disperse air.
8. Insert a #11 X-ACTO™ blade or suitable substitute between the T-molding and cabinet wall and, following the contour of the cabinet, cut off the excess decal. Rub the cut edges with a soft cloth to smooth down any rough edges.
9. When the wrinkles are removed and the decal is free of all excess water and detergent, gently turn the game cabinet over to the opposite side. Be careful to avoid damaging the freshly applied decal.
10. Repeat steps 2 through 9 for the remaining decal.
11. Carefully raise the cabinet to the upright position.
12. When both decals are firmly affixed, remove the protective covering.
13. Use a lint-free cloth to wipe off any excess water and detergent from inside and outside of the cabinet. Allow time to dry before proceeding!

Change Your Original Schematic Set to Reflect the CLOAK & DAGGER Retrofit.

A CLOAK & DAGGER Schematic Package is provided for the game circuitry. If you have a schematic set that was originally provided for your game, save the power supply, sound printed-circuit board, and monitor schematics.

Kit Warranty

Seller warrants that its electronic parts supplied in this kit are free from defects in material and workmanship under normal use and service for a period of ninety (90) days from date of shipment. None of the Seller's other products or parts thereof are warranted.

If the electronic parts supplied in this kit fail to conform to this warranty, Seller's sole liability shall be, at its option, to repair, replace, or credit Buyer's account for such electronic parts which are returned to Seller during said warranty period, provided:

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