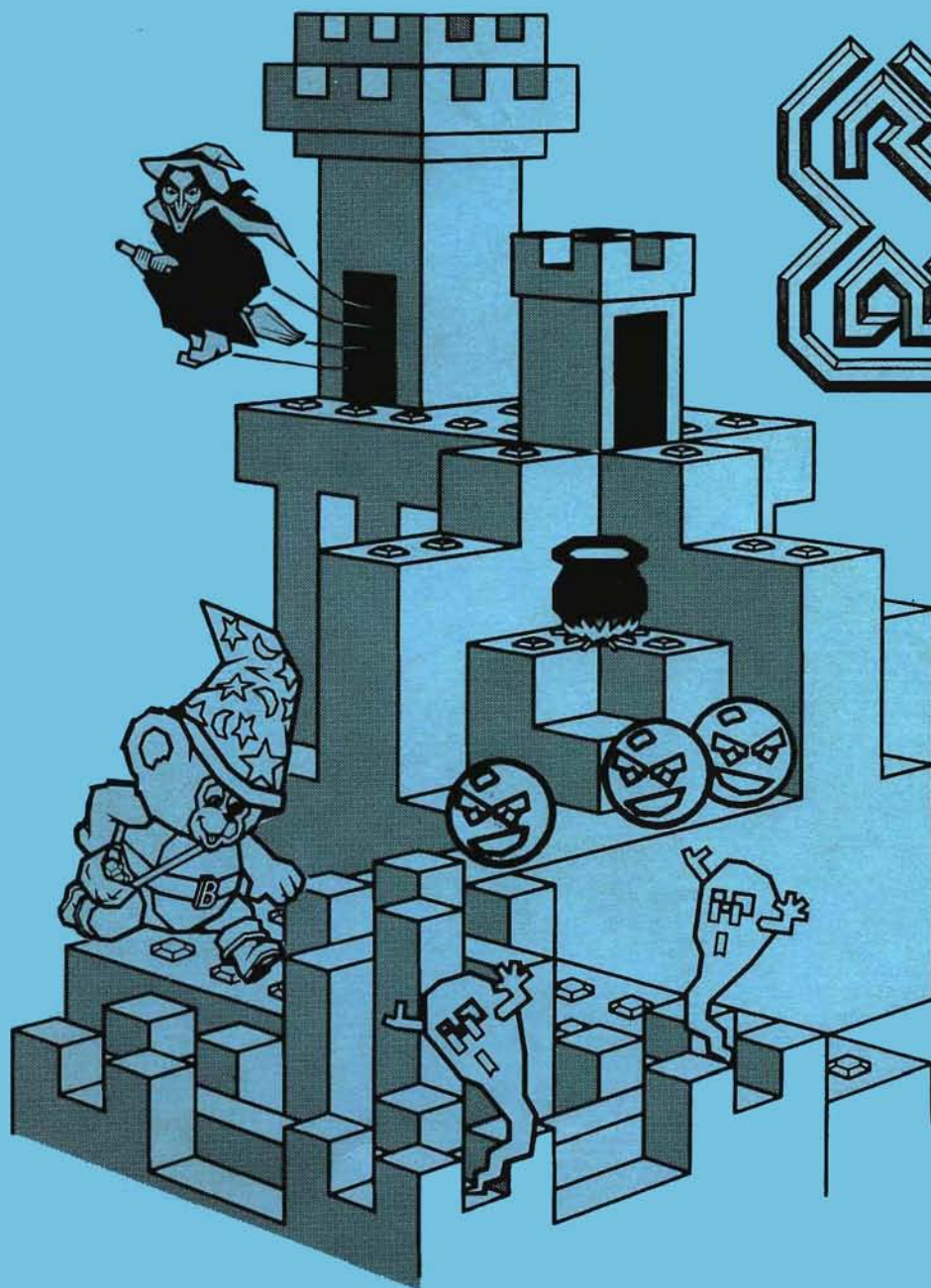


# Conversion Instructions for Arabian™, Food Fight™, Dig Dug, and Kangaroo™



# CRYSTAL CASTLES™




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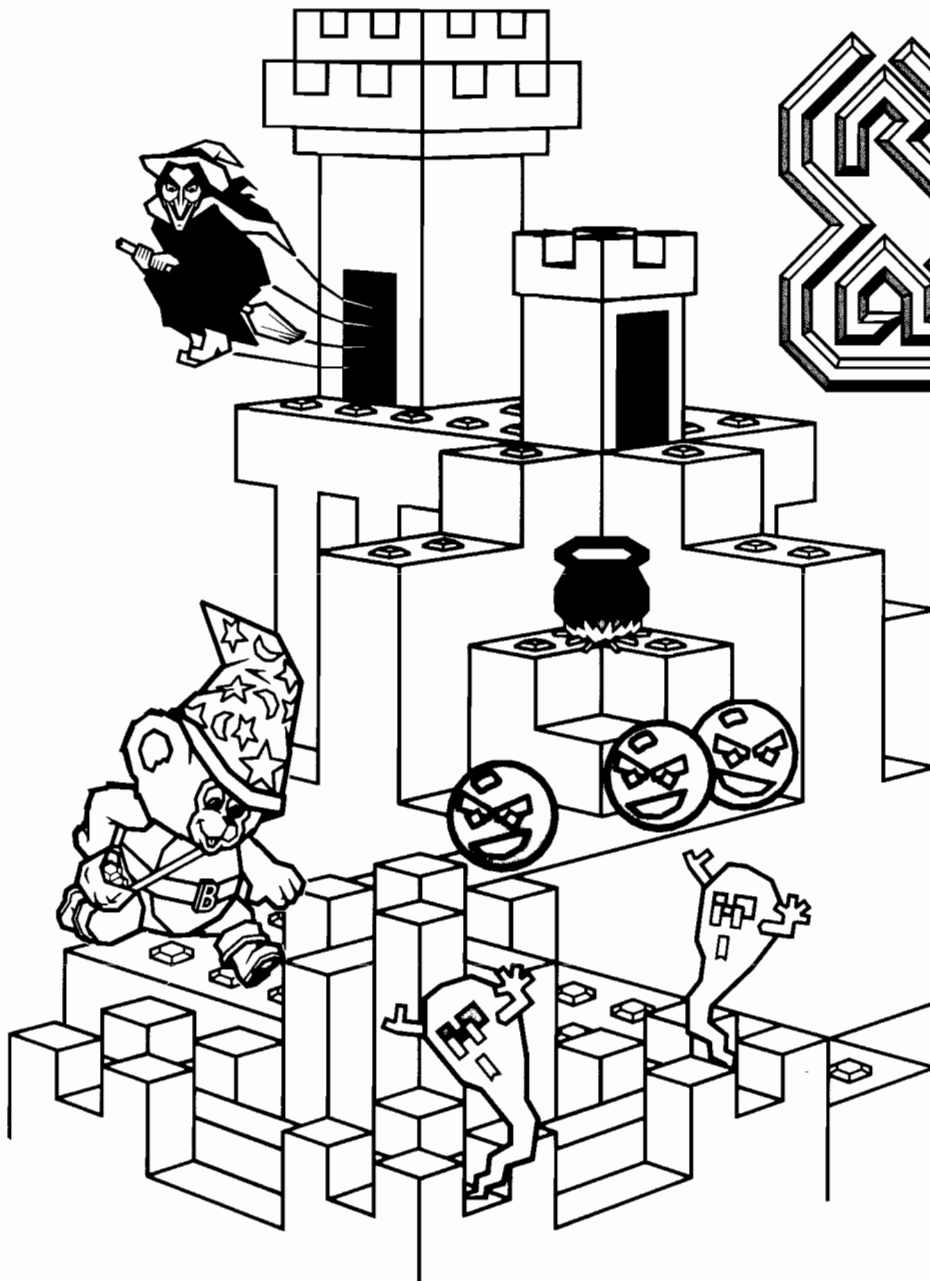
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# Conversion Instructions for Arabian™, Food Fight™, Dig Dug™, and Kangaroo™



# CRYSTAL CASTLES™



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# Safety Summary

The following safety precautions apply to all game operators and service personnel. Specific warnings and cautions will be found throughout this manual where they apply.

## ▲ WARNING ▲

**Properly Ground the Game.** Players may receive an electrical shock if this game is not properly grounded! To avoid electrical shock, do not plug in the game until it has been inspected and properly grounded. This game should only be plugged into a grounded 3-wire outlet. If you have only a 2-wire outlet, we recommend you hire a licensed electrician to install a grounded outlet. Players may receive an electrical shock if the control panel is not properly grounded! After servicing any parts on the control panel, check that the grounding clip is firmly secured to the metal tab on the inside of the control panel. Only then should you lock up the game.

**AC Power Connection.** Before connecting the game to the AC power source, verify that the proper voltage-selection plug is installed on the game's power supply.

**Disconnect Power During Repairs.** To avoid electrical shock, disconnect the game from the AC power source before removing or repairing any part of the game. When removing or repairing the video display, extra precautions must be taken to avoid electrical shock because high voltages may exist within the display circuitry and cathode-ray tube (CRT) even after power has been disconnected. Do not touch internal parts of the display with your hands or with metal objects! Always discharge the high voltage from the CRT before servicing this area of the game. To discharge the CRT: Attach one end of a large, well-insulated, 18-gauge jumper wire to ground. Momentarily touch the free end of the grounded jumper to the CRT anode by sliding it under the anode cap. Wait two minutes and discharge the anode again.

**Use Only ATARI Parts.** To maintain the safety integrity of your ATARI game, do not use non-ATARI parts when repairing the game. Use of non-ATARI parts or other modifications to the game circuitry may adversely affect the safety of your game, and injure you or your players.

**Handle Fluorescent Tube and CRT With Care.** If you drop a fluorescent tube or CRT and it breaks, it may implode! Shattered glass can fly six feet or more from the implosion.

**Use the Proper Fuses.** To avoid electrical shock, use replacement fuses which are specified in the parts list for this game. Replacement fuses must match those replaced in fuse type, voltage rating, and current rating. In addition, the fuse cover must be in place during game operation.

## CAUTION

**Properly Attach All Connectors.** Make sure that the connectors on each printed-circuit board (PCB) are properly plugged in. Note that they are keyed to fit only one way. If they do not slip on easily, do not force them. A reversed connector may damage your game and void the warranty.

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CRYSTAL CASTLES Conversion Instructions  
for Arabian, Kangaroo, Food Fight, and Dig Dug

INTRODUCTION

This document contains the instructions necessary for changing Arabian, Kangaroo, Food Fight, and Dig Dug into a Crystal Castles game. The modifications include changing the cabinet graphics, control panel, attraction shield, display shield, display mounting panel, game printed-circuit boards, and harness assembly. A Crystal Castles Schematic Package (SP-241) is provided for the game circuitry. If you have the schematic set that was originally provided for your game, save the power supply and display schematics.

KIT PARTS INVENTORY

Check the contents of the Crystal Castles Conversion Kit (A042300-xx) before proceeding with the conversion procedure. The parts listed in Table 1 are included or are available as options to the Crystal Castles Conversion Kit.

Table 1 Conversion Kit Contents  
A042300-xx

Part No.	Quantity	Description
A035435-01	1	Regulator/Audio II PCB Assembly (Acceptable substitutes are A035435-02, and -04)
A040721-01	1	EMI Shield PCB and Game PCB Assembly
A042301-01	1	Crystal Castles Control Panel Assembly (see CO-265-01 for part information)
A042367-01	1	Main Harness and Component Assembly
A042561-01	1	EMI Cage and Guides (Dig Dug and Kangaroo only)
75-040S	4	#10 Split-Lock Washer (for mounting video display)
75-99511	4	#10-24 Nut/Washer Assembly (for mounting video display)
72-1124S	4	#10-24 x 1.50-Inch Pan-Head Cross-Recessed Machine Screw (for mounting video display)
037410-01	1	Attraction Shield
038158-01	1	Product ID Label
039450-01	1	FCC Compliance Label
039750-01	1	Display Bezel
042304-01	1	Attraction Film with Crystal Castles Graphics
042305-01	1	Left Side-Panel Decal with Crystal Castles Graphics (optional)
042305-02	1	Right Side-Panel Decal with Crystal Castles Graphics (optional)
040911-01	1	Crystal Castles Display Shield
042307-01	1	Display Template
042339-02	1	EMI Cage Mounting Panel (Dig Dug and Kangaroo only)
L2A	1	Crystal Castles Kit Label
102014-001	1	Adhesive Black Vinyl Film (to cover front panel of Food Fight cabinet)

\*\* continued on next page \*\*

Table 1 Conversion Kit Contents, continued  
A042300-xx

Part No.	Quantity	Description
175004-708	1	#8 Flat Fiber Washer (for PCB)
175007-001	8	#10 Flat Fender Washer (for installing video display)
176015-112	2	#10 x 3/4 Inch Cross Recessed Screw (for attaching EMI Cage to mounting panel)
176020-220	3	#8 x 1-1/4 Inch Cross-Recessed Screw (for attaching EMI-cage mounting panel to cabinet)
177003-040	4	#10-24 T-Nut (for installing display)
CO-265-01	1	Supplement to Crystal Castles Conversion Instructions (Control Panel Assembly)
SP-241	1	Crystal Castles Schematic Package
ST-241-01	1	Crystal Castles Self-Test Chart
TM-241	1	Crystal Castles Operators Manual

TOOLS REQUIRED

The tools listed in Table 2 are required to perform a complete retrofit.

Table 2 Tools Required

Quantity	Description	Purpose
1	Phillips-Head Screwdriver	Removing and installing harness, PCBs, video display, and EMI cage mounting panel
1	1/8-Inch Allen Wrench	Removing attraction shield and retainers
1	7/16-Inch Hex Wrench	Removing control panel and video display
1	11/32-Inch Nut Driver	Disconnecting ground wires from power supply base
1	1/4-Inch Combination Wrench	Removing video display
1	Sabre (or Coping) Saw	Modifying video display mounting panel
1	Black Adhesive Tape	Securing bezel to cabinet
1	Hammer	Removing PCB cleats and mounting block and installing T-nut at display panel
1	1-Inch Chisel	Removing PCB cleats and mounting block
1	Electric Drill with 5-32 & 1/4-Inch Bits	Modifying video display mounting panel and installing EMI cage mounting panel
1	Squeegee	Installing decal graphics
1	Plastic Sheet or Drop Cloth	Protect cabinet interior from sawdust
1	X-ACTO™ Knife	Installing decal graphics and control panel decal
1	Safety Goggles	Removing video display
1 pr	Gloves	Removing video display
1	Large C-Clamp (optional)	Securing mounting panel on cabinet wall while installing hardware

CONVERSION INSTRUCTIONS

## NOTE

These procedures must be performed by qualified service personnel. All interior and exterior surfaces of the cabinet and the working area should be clean and free of foreign material before starting the procedures.

The following procedures are arranged in a sequence recommended for performing the conversion. The parts of your game that are affected by the conversion are removed first. The Crystal Castles kit parts are installed next.

## WARNING

Unplug the game before performing the following procedures.

A. DISCONNECT THE MAIN HARNESS ASSEMBLY

Perform the following procedure to disconnect the main harness assembly (see Figure 1).

1. Unlock and remove the rear access panel.
2. Unplug the coin-door connector.
3. Unplug the utility-panel connector.
4. Unplug the control-panel connector.
5. Unplug the game PCB and Regulator/Audio II PCB connectors.
6. Unplug the connector from the power-supply harness and disconnect ground wires.
7. Unplug the video display connector. (Remember whether the connector is five- or six-pin. This will ensure your using the correct connector when installing the Crystal Castles harness.) Disconnect the green ground wire (for Arabian and Kangaroo only).

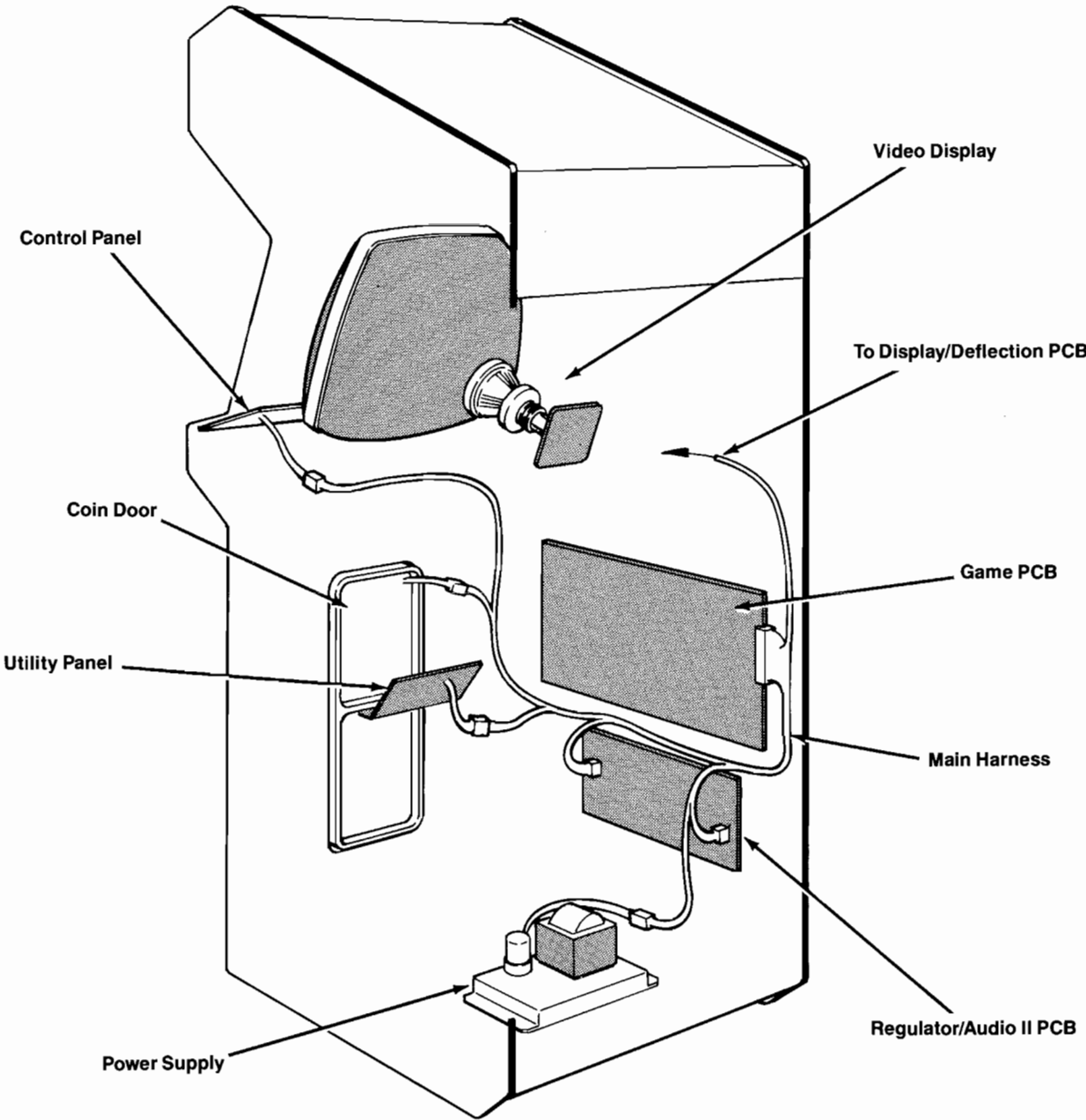


Figure 1 Removing and Replacing the Main Harness

8. Keep the original harness in the nylon screw-down clamps. This harness can be used as a routing guide and removed while installing the Crystal Castles harness.

#### B. REMOVE THE GAME PRINTED-CIRCUIT BOARDS

Perform the following procedure to remove the game printed-circuit boards (PCBs).

##### Dig Dug and Kangaroo

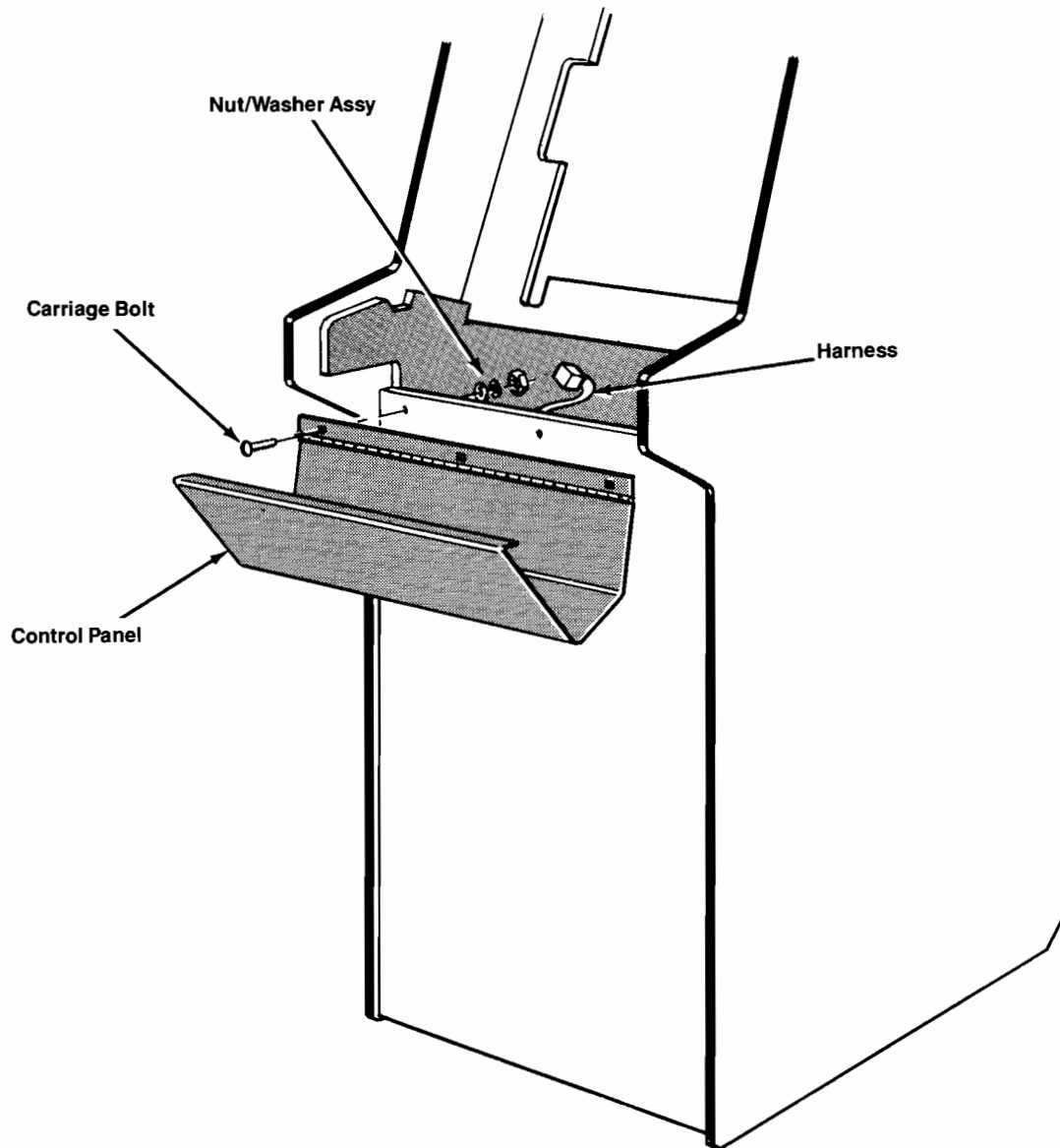
Remove any screws or tie wraps that may secure the edge connector(s) to the game PCB(s). Disconnect the edge connectors.

1. For Kangaroo games, remove the wood screws that attach the top PCB retainer cleat to the cabinet. Remove this cleat.
  2. Pry the plastic retainers away from the end of the video PCB before removing the PCBs from the PCB retainer cleating.
  3. Use a hammer and chisel to remove the plastic retainers, the bottom cleat, and the foam pad from the side of the cabinet.
- 
1. For Dig Dug games, use a Phillips-head screwdriver to remove the hardware that secures the game PCB to the cabinet.
  2. Slide the game PCB out of the guides. Use a hammer and chisel to remove the PCB guides and the square mounting block.
  3. Remove the foam pad from the side of the cabinet, leaving the area as clean as possible.

##### Arabian and Food Fight

The game PCB is located inside the electromagnetic interference (EMI) cage.

1. Pull the nylon snap-in fasteners on the EMI Shield PCB to the unlocked position.
2. Carefully slide the EMI Shield PCB and attached game PCB straight out of the guides.
3. Use a Phillips-head screwdriver to remove the screws securing the EMI Shield PCB to the spacers and game PCB.



**Figure 2 Removing the Control Panel**



4. Push the EMI Shield PCB off the game PCB by applying pressure with your thumbs to the edge connectors.
5. Use a Phillips-head screwdriver to remove the screws connecting the game PCB to the spacers. Save the hardware and spacers for reassembly.

#### C. REMOVE THE REGULATOR/AUDIO II PCB

Perform the following procedure to remove the game Regulator/Audio II PCB. This step is not necessary for Arabian or Food Fight games. If you have an Arabian (see CAUTION below) or Food Fight game, proceed to step D.

#### CAUTION

Because of manufacturing deviations, some Arabian games may not have an Regulator/Audio II PCB suitable for Crystal Castles. Please ensure that your game has the correct Regulator/Audio II PCB (see Table 1). For example, if your game has a -06 Regulator/Audio II PCB, you need to replace it with a -01 PCB. Use the mail card at the back of this manual to receive a free Regulator/Audio II PCB.

1. Remove the hardware that secures the Regulator/Audio II PCB to the cabinet. Save the hardware for installing the Crystal Castles Regulator/Audio II PCB.
2. Carefully remove the PCB from the retainer(s). Do not twist the board, as this may loosen connections or components.

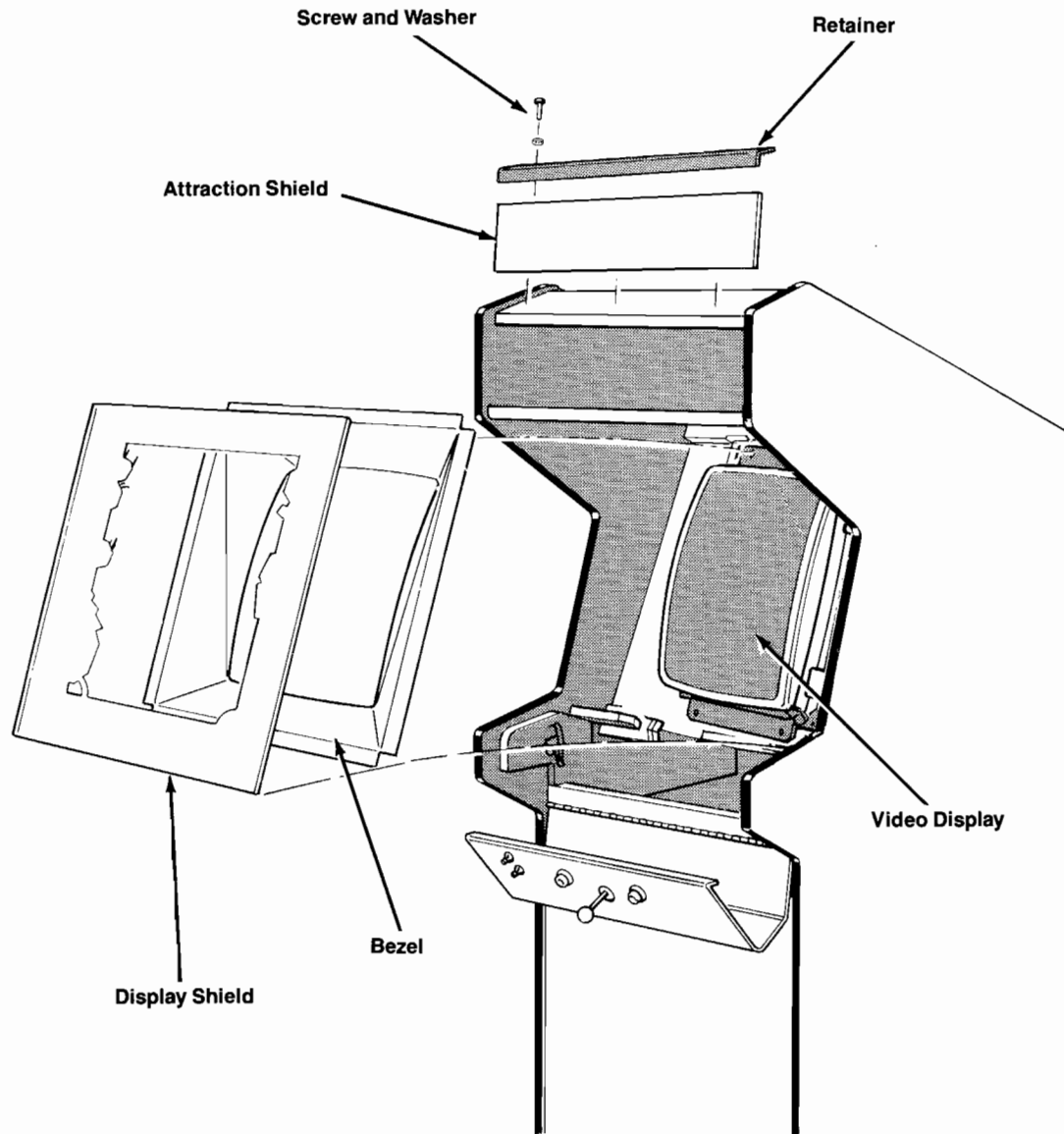
#### NOTE

The parts list for the Crystal Castles Regulator/Audio II PCB is in the Crystal Castles Operators Manual (TM-241).

#### D. REMOVE THE CONTROL PANEL & VIDEO DISPLAY SHIELD

Perform the following procedure to remove the control panel from the game cabinet (see Figure 2).

1. Unlock and open the coin door.



**Figure 3 Removing the Attraction Shield and Display Shield**

2. Reach up through the coin-door opening and release the two spring-draw latches on the inside of the cabinet near the control panel.
3. Disconnect the control-panel harness connector from the game power harness.
4. Use a 7/16-inch hex wrench to remove the three nuts and carriage bolts securing the control panel to the game cabinet.
5. Lift the control panel off of the cabinet. Save the hardware for installing the Crystal Castles control panel.
6. Carefully slide the video display shield out of the cabinet (see Figure 3).
7. Remove the bezel for Dig Dug, Kangaroo, and Arabian games.

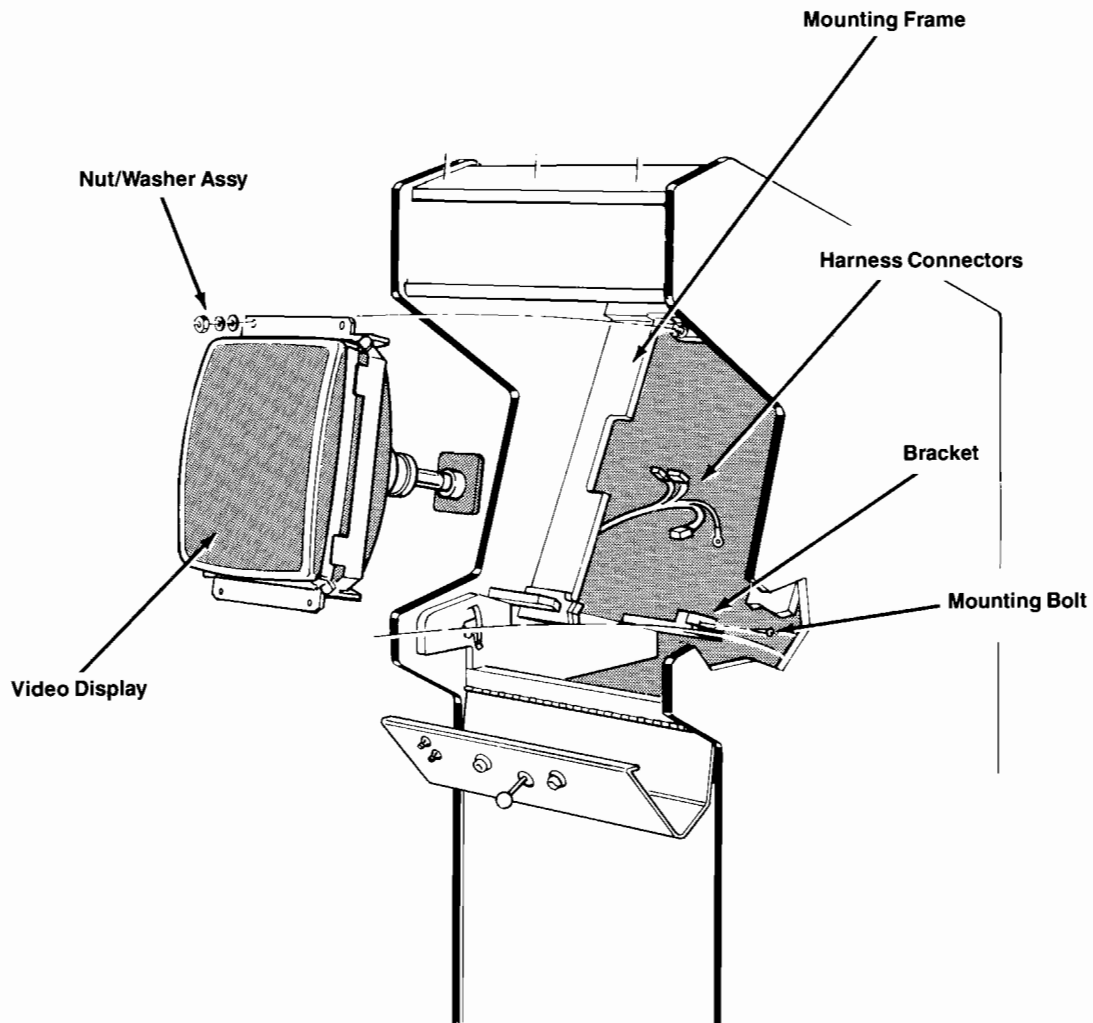
#### E. REMOVE THE ATTRACTION SHIELD

Perform the following procedure to remove the attraction shield from the game cabinet (see Figure 3).

1. From the front of the game, use a 1/8-inch Allen wrench to remove the screws securing the upper attraction-shield retainer to the cabinet. Remove this retainer.
2. LOOSEN the hardware securing the lower attraction-shield retainer to the cabinet. Leave this retainer attached to the cabinet.
3. Slide the attraction shield out of the cabinet.

#### F. REMOVE THE DISPLAY

Perform the following procedure to remove the display from the game cabinet for Dig Dug, Kangaroo, and Arabian games. If you have a Food Fight game, proceed to step I.



**Figure 4 Removing the Electrohome/Matsushita Video Display**

!                      WARNING                      !

Shock Hazard

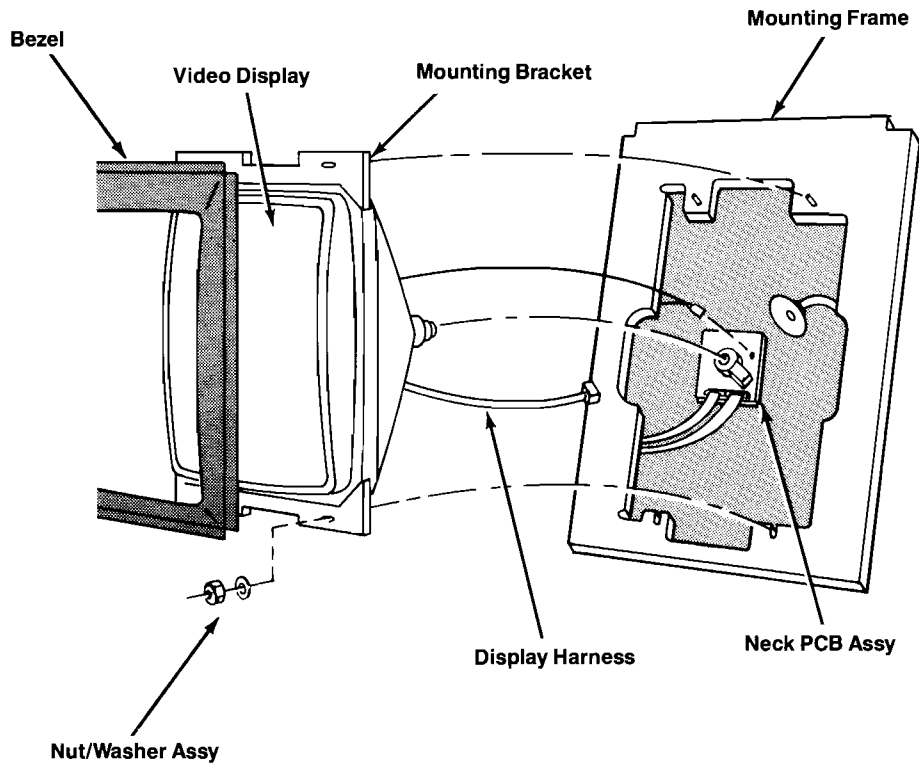
High voltages may exist in any video display, even with power disconnected. Use extreme caution and do not touch electrical parts of the display with your hands or with metal objects!

Implosion Hazard

If you drop the display and the cathode-ray tube breaks, it may implode! Shattered glass may cause personal injury within a 6-foot radius. To avoid injury, we recommend that two people, wearing gloves and safety goggles, perform the following procedures.

Electrohome or Matsushita Display (see Figure 4)

1. Be sure the display harness connectors are unplugged.
2. Discharge the high-voltage from the cathode-ray tube (CRT) before proceeding:
  - a. Attach one end of a large, well-insulated, 18-gauge jumper wire to ground.
  - b. Momentarily touch the free end of the grounded jumper to the CRT anode by carefully sliding the jumper under the anode cap.
  - c. Wait two minutes and repeat step 2b.
3. The rear of the display chassis is attached to a mounting bracket and wooden cleat. Use a 7/16-inch hex wrench and Phillips-head screwdriver to remove the hardware that secures the chassis to this bracket and cleat. Discard this hardware.
4. If you haven't already done so, lift the display shield out of the cabinet.
5. Carefully remove the cardboard display bezel.
6. Using a 7/16-inch hex wrench remove the hardware that secures the front of the display chassis to the wood frame.
7. Carefully pull the video display out through the front of the cabinet. Place the display on a padded table in a clean, protected area.



**Figure 5 Removing the ATARI Video Display**

ATARI Display (see Figure 5)

1. Discharge the high-voltage from the cathode-ray tube (CRT) before proceeding:
  - a. Attach one end of a large, well-insulated, 18-gauge jumper wire to ground.
  - b. Momentarily touch the free end of the grounded jumper to the CRT anode by carefully sliding the jumper under the anode cap.
  - c. Wait two minutes and repeat step 1b.
2. Disconnect the CRT neck-pin connector, anode lead, yoke connector (J105 of the Deflection PCB), degaussing coil connector (J104 on the Deflection PCB), and the 1-pin DAG spring connector.
3. Carefully remove the cardboard display bezel.
4. Use a 7/16-inch hex wrench to remove the hardware from the front of the display-mounting frame.
5. Carefully pull the CRT assembly out through the front of the cabinet and place in a clean, protected area.

G. MODIFY THE DISPLAY-MOUNTING FRAME

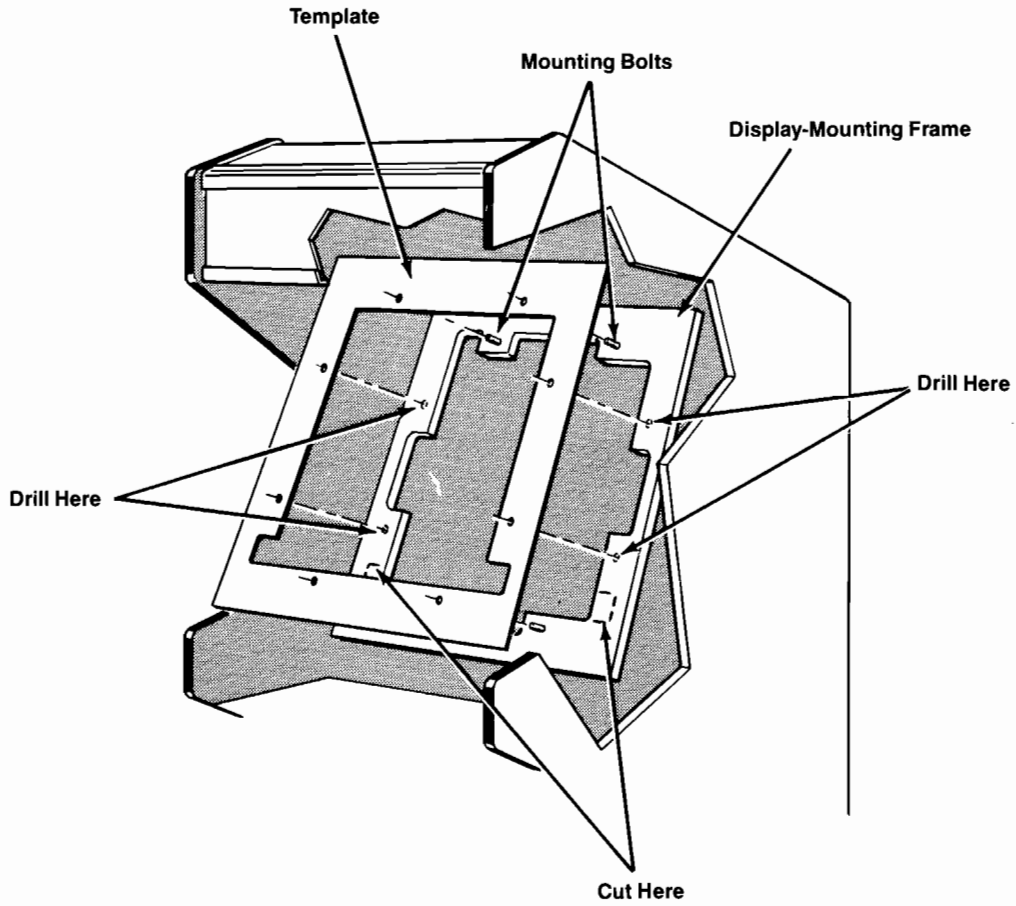
Perform the following procedure to modify the display-mounting frame (see Figure 6). This step is only required for Dig Dug, Kangaroo, and Arabian.

The display-mounting frame in your game must be slightly modified because the video display has to be rotated 90° to a horizontal position. Use a sabre saw (or coping saw) to cut the mounting frame where needed. Perform the following procedures.

1. Position the display-rotate template holes over the mounting bolts located at the top of the display-mounting frame. The template is cut to fit correctly over the appropriate bolts.
2. Use a dark felt-tip pen to mark the display-mounting frame through the holes of the template. Outline the inside portion to be cut out of the frame. Remove the template.

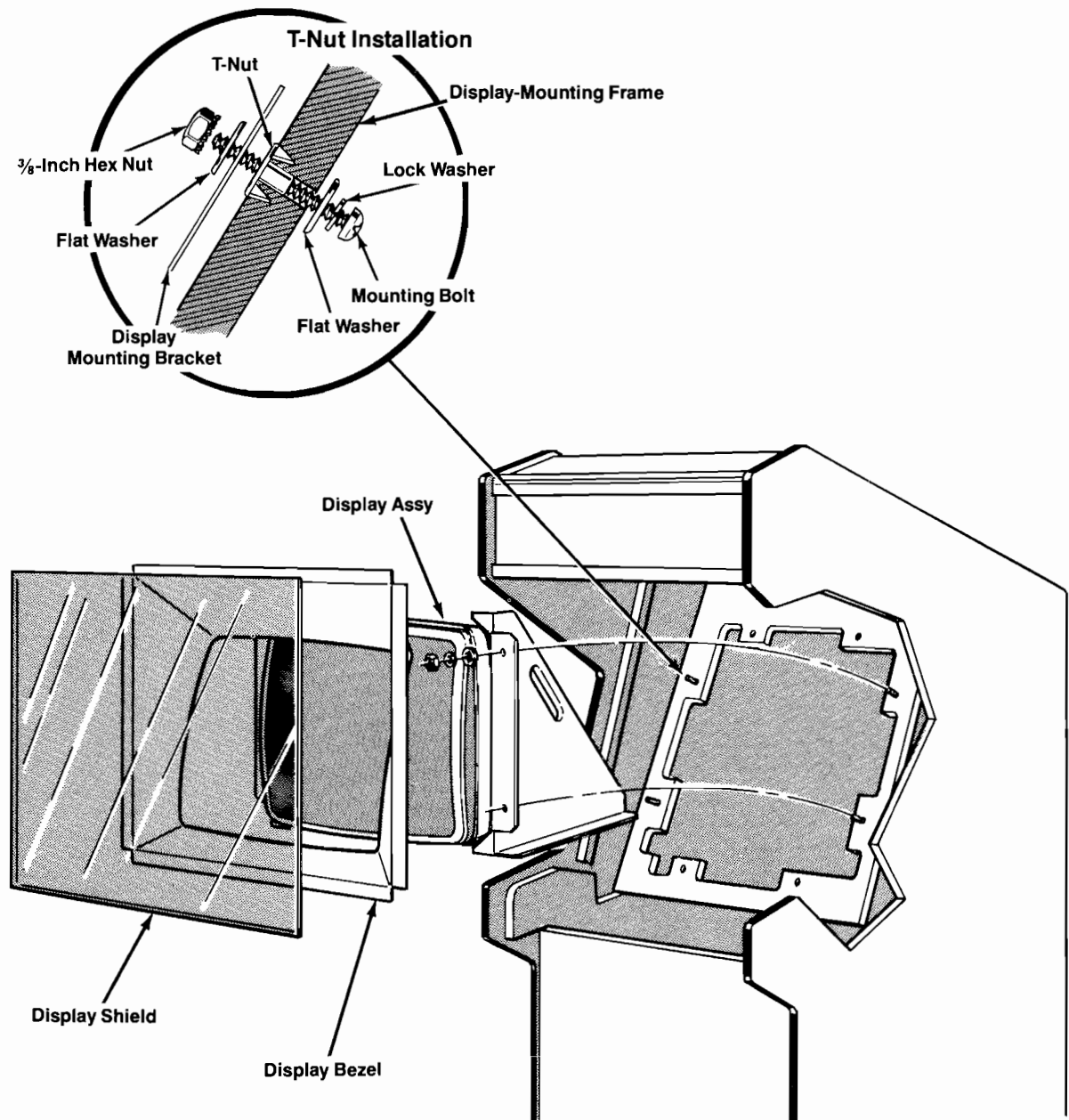
**NOTE**

Lay a sheet of plastic or a drop cloth over the inside of the cabinet to save clean-up time from the next step.



**Figure 6 Modifying the Display-Mounting Frame**





**Figure 7 Installing the Video Display**

3. Use an electric drill with a 1/4-inch bit to drill out the holes marked in step 2.
4. Use a sabre saw (or coping saw) to cut the wood from the mounting frame by following the lines marked from the template.

#### H. INSTALL THE DISPLAY

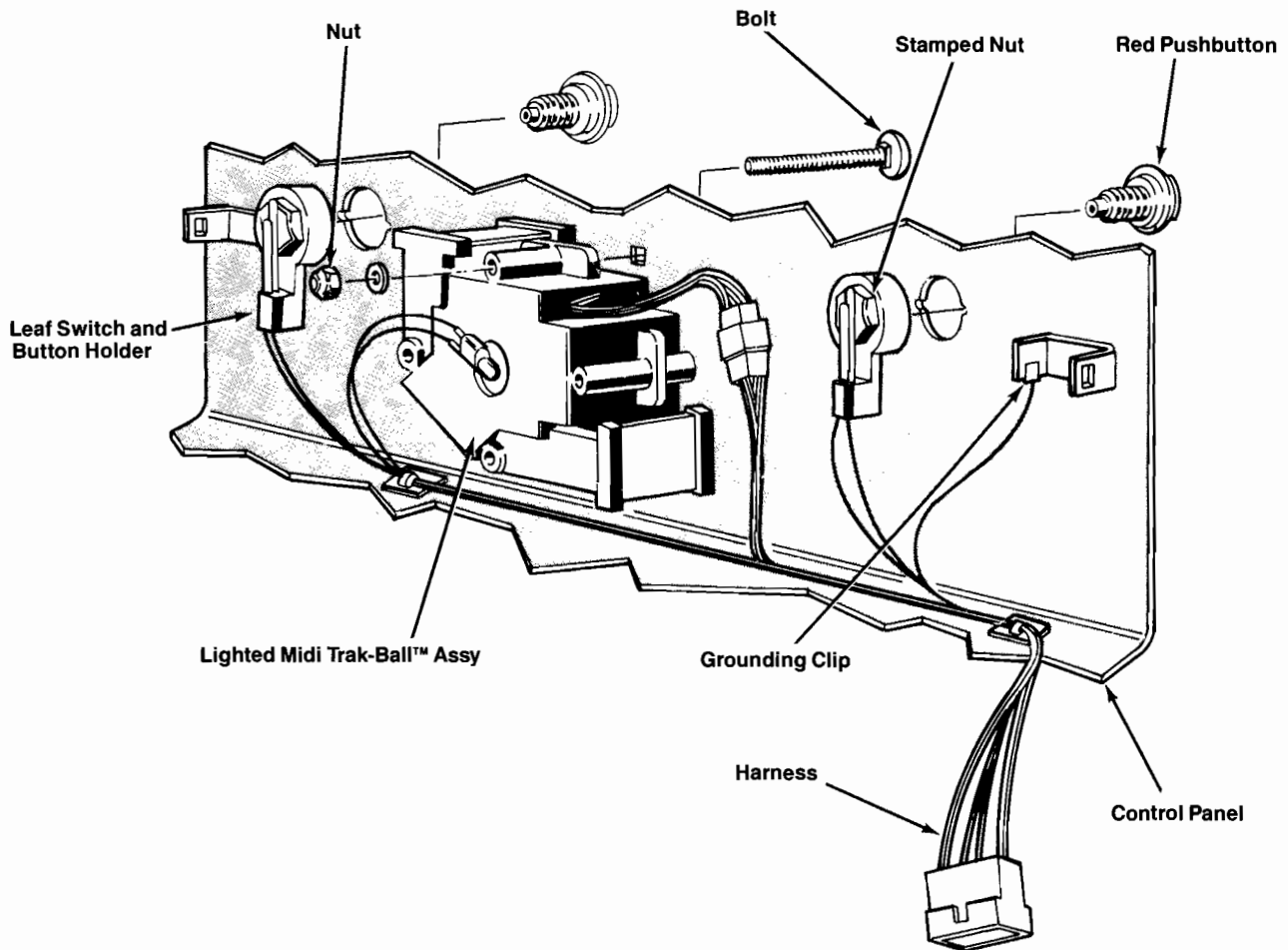
Perform the following procedure to install the display (see Figure 7) into Dig Dug, Kangaroo, and Arabian.

1. Remove all wood chips and sawdust from the cabinet.
2. From the front of the cabinet, use a hammer to install the T-nuts through the newly drilled holes in the display-mounting frame as shown in Figure 7.
3. From the rear of the cabinet, use a Phillips screwdriver to secure and tighten the four screws and washers until the T-nuts are firmly imbedded in the display-mounting frame as shown in Figure 7.
4. From the front of the cabinet, carefully insert the display, with the chassis on the bottom, into the display-mounting frame and onto the four bolts installed in step 2.
5. Align the bezel and secure it to the cabinet with black tape.

#### I. ASSEMBLE THE CONTROL PANEL

##### Apply the Decal

1. Using an X-ACTO™ knife, carefully make a horizontal slit in the protective backing sheet on the Crystal Castles control-panel decal to divide it into two parts. DO NOT cut into the decal.
2. Remove the upper half of the protective backing from the decal.
3. Carefully position the Crystal Castles decal so that the holes in the decal align with the holes in the control panel.
4. Using the palm of your hand, press the decal firmly against the control panel. You will need to wrap the decal around the control panel.
5. Remove the bottom half of the protective backing sheet from the decal and repeat step 4.



**▲ WARNING ▲**

Players may receive an electrical shock if this control panel is not properly grounded. After installing the control panel, make sure that the grounding clip is secured to the metal tab on the inside of the control panel.

**Figure 8 Assembling the Crystal Castles Control Panel**

Install the Hardware

1. Insert the red pushbutton through the back of the control panel. Then place the leaf switch and button holder over the pushbutton (see Figure 8).
2. Secure the parts together using the 5/8-inch stamped nut. Tighten until secure.
3. Attach the ground lead to the metal extrusion on the control panel.

Install the Lighted Trak-Ball™

1. Align the holes in the Trak-Ball assembly with the holes in the control panel.
2. From the top of the control panel, insert four 3-inch carriage bolts through the Trak-Ball and control panel (see Figure 8).
3. From the bottom of the control panel, install four locknuts onto the carriage bolts. Do not tighten to more than 18 lbs. of torque.

**CAUTION**

Over-torquing will cause binding of the bearings and Trak-Ball, which will result in excessive wear or damage to the Trak-Ball assembly.

J. INSTALL THE DISPLAY SHIELD

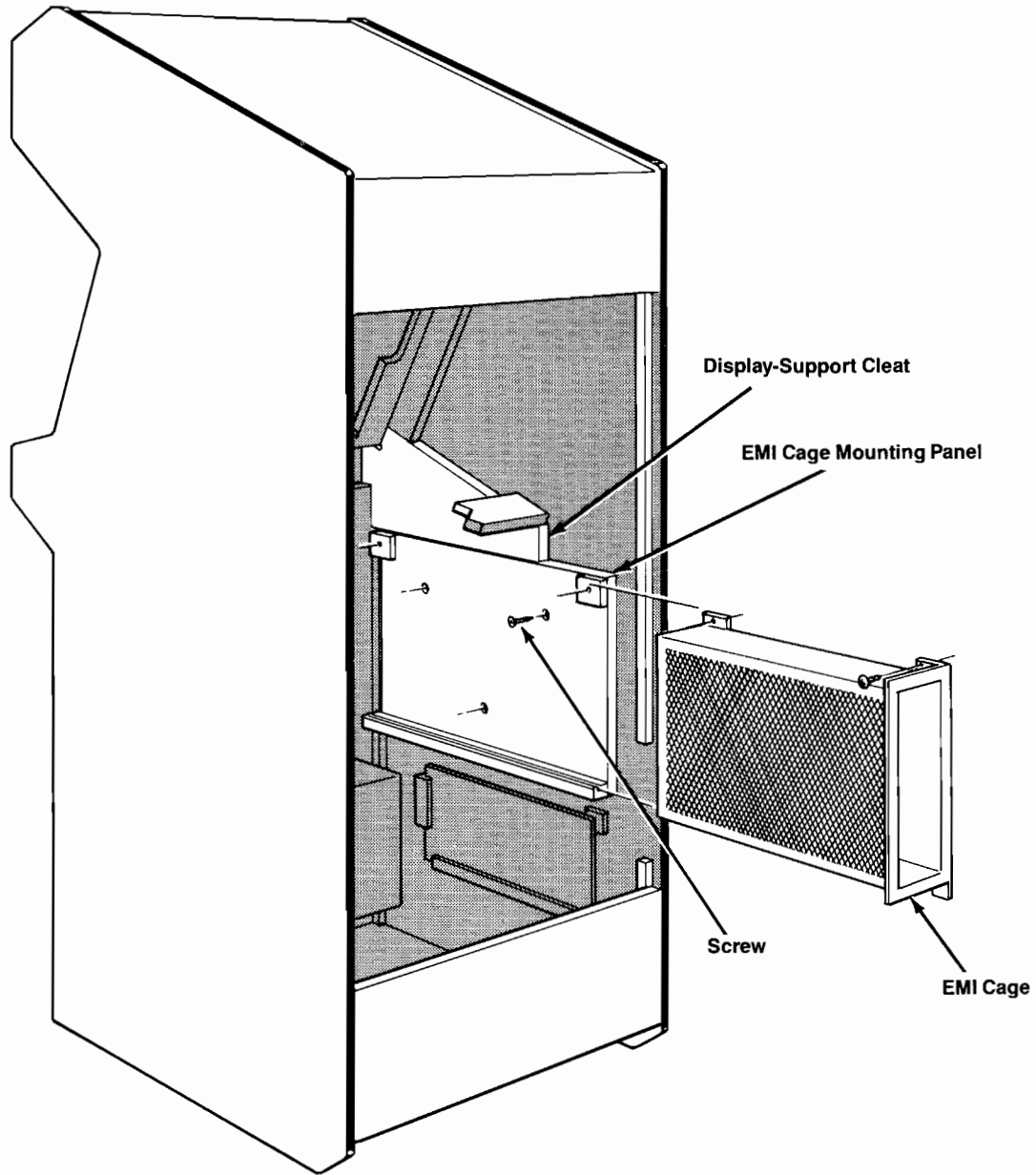
Perform the following procedure to install the display shield (see Figure 3).

1. Place the Crystal Castles display shield into the groove below the attraction panel area.
2. Set the bottom of the display shield in place.

K. INSTALL THE CONTROL PANEL

Perform the following procedure to install the control panel (see Figure 2).

1. Apply the black foam tape to the edge of the control panel that touches the display shield.



**Figure 9 Installing the Mounting Panel**

2. Position the Crystal Castles control panel on the game cabinet.
3. Use a 7/16-inch hex driver to install the carriage bolts that secure the control panel to the cabinet.
4. Close the control panel.
5. From the back of the game, fasten the two spring-draw latches on each side of the cabinet to the control panel.

#### L. INSTALL THE ATTRACTION SHIELD

Perform the following procedure to install the attraction shield (see Figure 3).

1. While the lower attraction shield retainer is loose, slide the Crystal Castles attraction shield (clear glass) into place from the top of the cabinet.
2. Slide the Crystal Castles attraction film behind the attraction shield.

#### NOTE

Be sure the upper and lower retainers of your game have foam tape on them. The foam tape keeps the attraction panel from vibrating and possibly cracking.

3. Place the upper retainer firmly against the top of the attraction shield.
4. Use a 1/8-inch Allen wrench to install the mounting hardware.
5. Tighten the lower retainer against the attraction shield.

#### M. INSTALL THE EMI CAGE MOUNTING PANEL

Perform the following procedure to install the EMI cage wooden mounting panel (see Figure 9). This step is only required for Dig Dug and Kangaroo. If you have an Arabian or Food Fight game, proceed to step N.

1. Use a hammer and chisel to remove the existing cleats and foam pad(s) from the cabinet. Do not remove the Regulator/Audio II PCB cleats.

2. Slide the wooden mounting panel as far forward in the cabinet as possible pushing it upward so it touches the display support cleat.

NOTE

The following step is difficult to perform alone. Use a large C-clamp to secure the mounting panel to the cabinet wall if you have no help.

3. Use an electric drill with a 5/32-inch bit to drill the pilot holes for the mounting screws.
4. Use a Phillips-head screwdriver and the three 1 1/4-inch cross-recessed screws to mount the wooden panel onto the cabinet wall (see Figure 9).

N. INSTALL THE CRYSTAL CASTLES CONVERSION MAIN HARNESS

Perform the following procedure to install the Crystal Castles conversion main harness (see Figure 1).

NOTE

All Crystal Castles conversion harness connectors are keyed to fit properly. Be sure to follow a routing similar to the original game.

1. Remove the screw-down tie wrap from the keyed-to-fit 6-or 9-pin (whichever is appropriate) from the old power-supply harness connector.
2. Attach the ground wires with the 11/32 hex driver.
3. Plug in the Crystal Castles keyed-to-fit 6-or 9-pin (whichever is appropriate) power-supply harness connector.
4. Plug in the coin-door connector at the coin door.
5. Plug in the control-panel connector.
6. Plug in the utility-panel connector.

7. Remove the screw-down tie wraps securing the old harness to the front panel of your game cabinet. Discard the old harness.
8. Plug in the five-pin (or six-pin) video display connector.

NOTE

If the game picture rolls horizontally and vertically during self test, swap the two six-pin video display connectors. If your game has a Matsushita display, use the connector that has only five wires. All other displays use the connector with six wires.

! WARNING !

Be sure to tie back any excess harness connectors in the display yoke area. This action will prevent arcing to the wires or connectors.

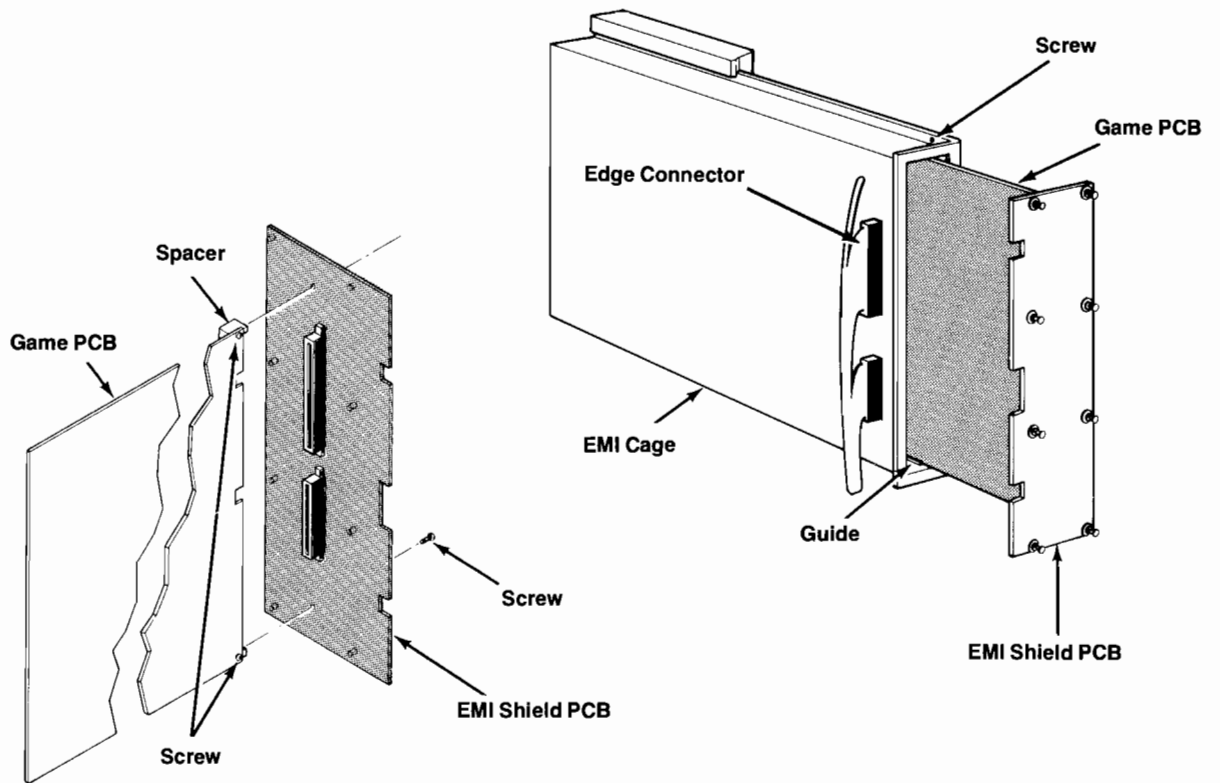
9. Plug in the keyed-to-fit power harness connector into the video display.
10. Remove the screw located on the lower left video display bracket and use it to attach the green ground wire.
11. Secure the Crystal Castles harness to the front and to the side (just below the wood mounting panel) of the game cabinet with the white nylon screw-down tie wraps (see Figure 1).

O. INSTALL THE CRYSTAL CASTLES REGULATOR/AUDIO II PCB

Perform the following procedure to install the Crystal Castles Regulator/Audio II PCB.

1. Slide the Regulator/Audio II PCB into the wooden cleat.
2. Use the existing hardware to install the PCB.





Grounding Clip not shown.

Figure 10 Installing the Game PCB

## NOTE

The end of the Regulator/Audio II PCB containing the three connectors goes to the back of the cabinet.

## CAUTION

Since there can be two six-pin connectors used on the Regulator/Audio II PCB, be sure the connector with orange and violet wires attaches to P6 on the Regulator/Audio II PCB. If your game has a connector with two red wires, DO NOT use it!

3. Plug in the Crystal Castles main harness wire connectors to the Regulator/Audio II PCB.

P. ATTACH THE EMI CAGE TO THE MOUNTING PANEL

Perform the following procedure to attach the EMI cage to the wooden mounting panel on the side of the cabinet (see Figure 9). This step is only necessary for Dig Dug and Kangaroo.

1. Slide the EMI cage into the slot on the bottom wooden cleat, allowing room to attach the ground clip.
2. Use a Phillips-head screwdriver to attach the EMI cage in two places to the wooden mounting panel with the #10 3/4-inch screws.
3. Attach the ground clip to the bottom of the EMI cage.
4. Attach the Crystal Castles main harness edge connectors to the EMI Shield PCB.
5. Ensure that the Crystal Castles main harness is secured with the screw-down tie wraps.

Q. INSTALL THE GAME PCB

Perform the following procedure to install the Crystal Castles game PCB into the Food Fight and Arabian cabinets (see Figure 10).

1. Use a Phillips-head screwdriver to attach the EMI Shield PCB to the game PCB with the spacers and 1/4-inch screws.

2. Slide the PCB assembly into the EMI cage.
3. Install the nylon snap-in fasteners, grommets, and washers.

NOTE

If you wish to change the option-switch settings, do so at this time. Refer to the Crystal Castles Operators Manual, TM-241, for further option-switch setting information.

R. INSTALL THE SELF-TEST CHART

1. Staple the Crystal Castles self-test chart on the inside of the rear access panel.
2. Install the rear access panel on the game cabinet.

S. PERFORM A SELF-TEST

1. Plug the game in.
2. Turn the game on.
3. Perform the self-test procedure described in the Crystal Castles Operators Manual (TM-241).
4. Turn the game off.

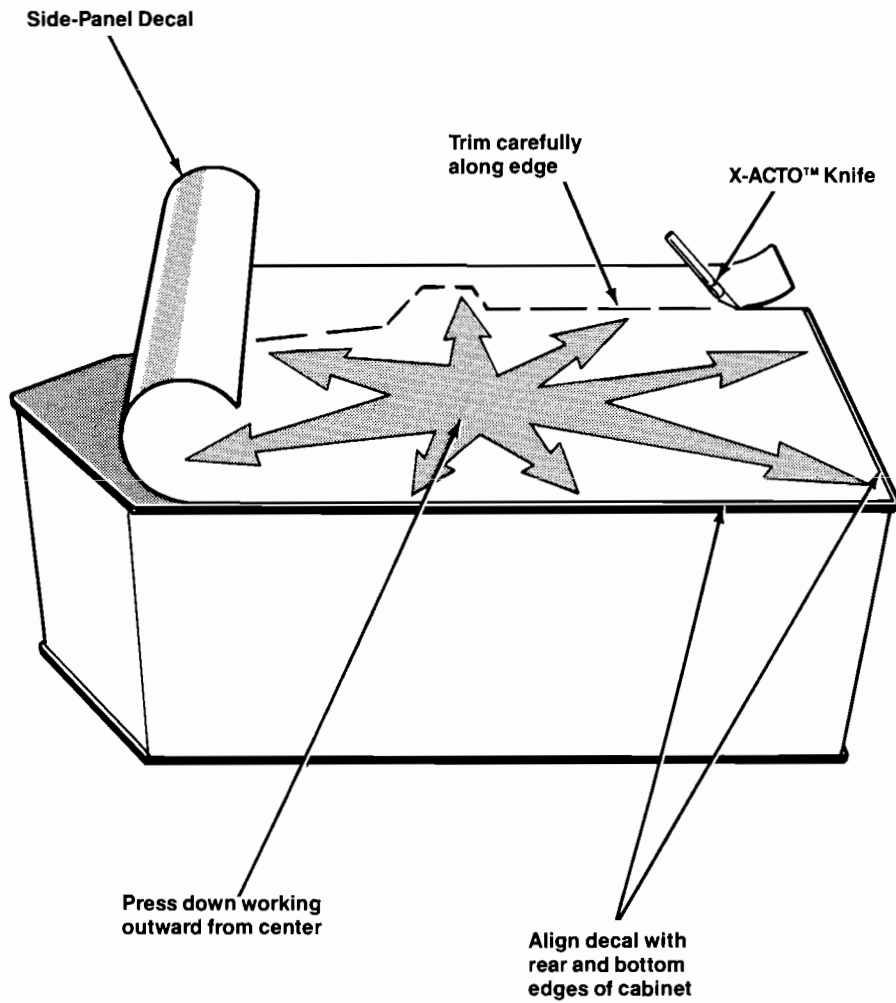
T. APPLY THE LABELS

NOTE

Do not remove or mark any of the existing labels on the game cabinet.

Perform the following procedure to apply the Crystal Castles conversion kit and FCC compliance labels on the game cabinet.

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



**Figure 11 Installing the Side-Panel Decals**

#### U. APPLY THE SIDE-PANEL DECALS (optional)

Perform the following procedure to apply the Crystal Castles game decals (see Figure 11).

NOTE

The Crystal Castles side panels decals are not included in the kit. However, if you wish to receive free decals, use the order form provided at the back of this document.

1. Mix a normal dishwashing solution of approximately three quarts of water and liquid dishwashing detergent in a bucket.
2. Clean the sides of the game cabinet to ensure the removal of all dust.

NOTE

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

3. Tip the game cabinet sideways and gently lay it on a blanket.
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 and off of the floor and peel away the protective backing.
6. Gently lay the decal, sticky side down, on the wet surface of the game cabinet. Position the decal to ensure that the graphics are centered on the side of the cabinet (see Figure 11).
7. Align the bottom and rear edges of the decal with the bottom and rear edges of the cabinet.
8. After the decal is 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 (see Figure 10). 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.

9. Carefully 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 cloth to smooth down any rough edges.
10. 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.
11. Repeat steps 2 through 9 for the remaining decal.
12. Carefully raise the cabinet to the upright position.
13. When both decals are firmly affixed, remove the protective covering.
14. 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.

#### V. INSTALL THE FRONT-PANEL DECAL

The front-panel decal is provided to cover the graphics on Food Fight cabinets. Perform the following procedure to install the front-panel decal onto your Food Fight game.

1. Using an X-ACTO™ knife, carefully make a horizontal slit in the protective backing sheet on the decal to divide it into two parts. DO NOT cut into the decal.
2. Remove the upper half of the protective backing from the decal.
3. Position the top portion of the decal so that it is aligned with the coin door and both sides of the cabinet.
4. Using the palm of your hand, press the decal firmly against the cabinet.
5. Remove the bottom half of the protective backing sheet from the decal and repeat steps 3 and 4.

#### W. INSPECT THE CRYSTAL CASTLES GAME

Before applying power, perform the following procedure to ensure that the game is modified correctly.

1. Carefully check that the conversion has been properly performed.

2. Verify that the ground wires have been attached to the video display, EMI cage, and control panel.
3. When you are confident that all instructions were properly followed, close and lock the rear access panel.
4. Reach up through the coin-door opening and latch the two spring-draw latches to the control panel.
5. Plug in the game power cord.

#### X. UPDATE THE GAME DOCUMENTATION

The Crystal Castles Schematic Package is provided for the game circuitry. However, save the power supply and display schematics from the schematic set originally provided for your game and keep it with the Crystal Castles Schematic Package.

## To Receive a Free Set of Multi-Color Side-Panel Decals

The multi-color side-panel decals for your Crystal Castles™ Conversion Kit were not included when the kit was shipped to you. However, if you want a set, mail this letter to Atari Customer Service and they will send you these decals at no charge, while supplies last. No postage stamp is necessary if mailed in the U.S.A.

The part numbers of the decals are: Left—042305-01, and right—042305-02.

Game Serial No. that was shipped with your kit \_\_\_\_\_

Name \_\_\_\_\_

Firm \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Area Code \_\_\_\_\_ Phone \_\_\_\_\_

Distributor    Operator   Other \_\_\_\_\_



Tape This Edge

First Fold



No postage  
necessary if  
mailed in the  
United States

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# **BUSINESS REPLY MAIL**

FIRST CLASS PERMIT NO. 173 MILPITAS, CA

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POSTAGE WILL BE PAID BY ADDRESSEE

**Atari Inc.**  
**Attn: Field Service/Coin-Op Division**  
**737 Sycamore Drive**  
**P.O. Box 906**  
**Milpitas, California 95035**



Second Fold

From: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

# 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:

- (a) Seller is promptly notified in writing upon discovery by Buyer that said products are defective;
- (b) Such products are returned prepaid to Seller's plant; and
- (c) Seller's examination of said products discloses to Seller's satisfaction that such alleged defects existed and were not caused by accident, misuse, neglect, alteration, improper repair, installation, or improper testing.

In no event shall Seller be liable for loss of profits, loss of use, incidental or consequential damages.

*Except for any express warranty set forth in a written contract between Seller and Buyer which contract supersedes the terms herein, this warranty is expressed in lieu of all other warranties expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose, and of all other obligations or liabilities on the Seller's part, and it neither assumes nor authorizes any other person to assume for the Seller any other liabilities in connection with the sale of products by Seller.*

The use of any non-Atari parts may void your warranty, according to the terms of the warranty. The use of any non-Atari parts may also adversely affect the safety of your game and cause injury to you and others. Be very cautious in using non-Atari-supplied components with our games, in order to ensure your safety.

Atari distributors are independent, being privately owned and operated. In their judgment they may sell parts or accessories other than Atari parts or accessories. Atari cannot be responsible for the quality, suitability or safety of any non-Atari part or any modification including labor which is performed by such distributor.