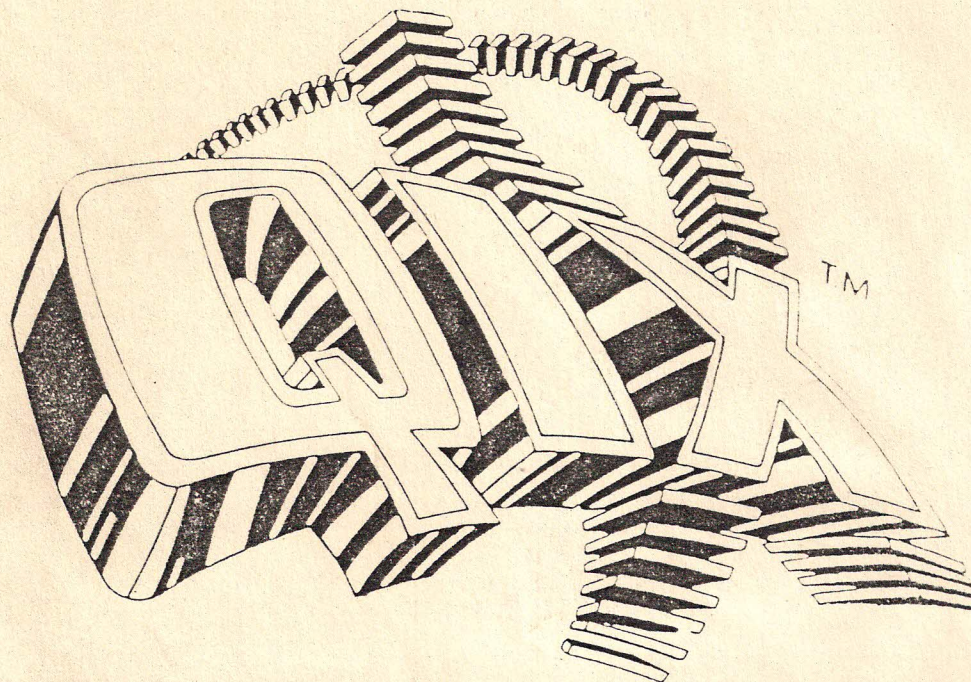
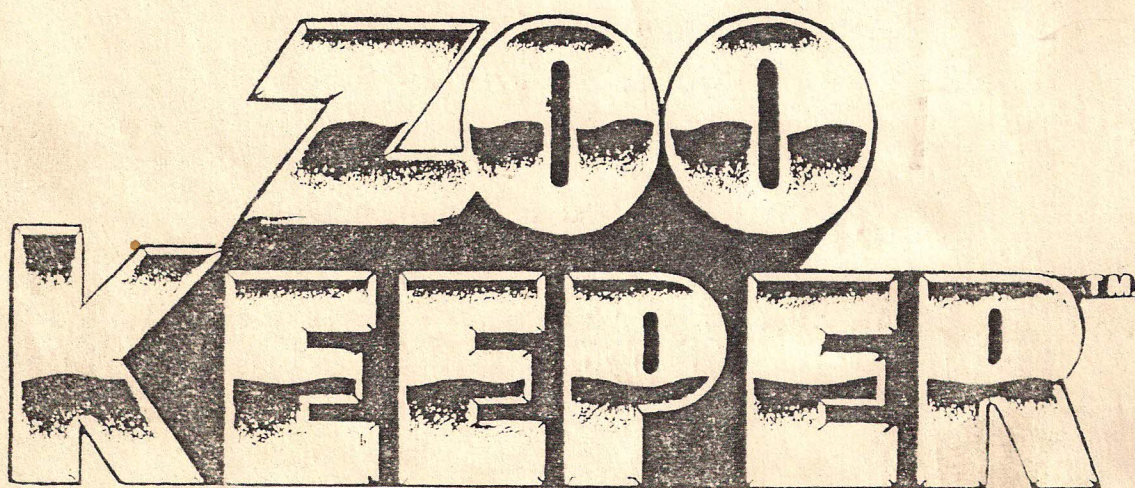


TAITO AMERICA CORPORATION

CONVERSION KIT



TO



WARNING

The parts contained in this game conversion kit must be installed in accordance with the instructions contained in this Service Manual. Failure to follow these instructions in every detail could result in the creation of illegal interference to radio and TV reception.

Taito America Corporation has verified that, when this conversion kit is installed without deviation from these instructions, the equipment will then comply with the requirements of Part 15 of FCC Rules for a Class A computing device. The manufacturer will not be responsible for incomplete or improper conversions.

After such installation in accordance with the instructions, the enclosed NOTICE AFTER CONVERSION should be applied to the back of the game cabinet so as to cover up any previous notice regarding FCC Rules.

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This manual will guide you in the conversion of your QIX upright game to ZOO KEEPER. We urge you to read through the instructions and study the drawings before beginning the conversion.

Perform the instruction steps in the order presented.

1. Check the parts supplied in this kit against the parts list included in this manual.
2. Clear CMOS backed up memory.
 - a. WITH GAME ON remove W1 from the top (Video) PCB. Turn game off and wait about one minute.
 - b. Put W1 back in PCB and unplug the game from the outlet.
3. Remove QIX Control Panel.
 - a. Release the latch at each end of the control panel (access through coin door opening).
 - b. Tilt the panel outward from the top and disconnect the cable connector on the right.
4. Remove QIX Coverglass.
 - a. Loosen (but do not remove) three (3) screws holding the coverglass front bracket.
 - b. Remove and save the rear coverglass retaining bracket and three (3) screws. Slide the coverglass out.
5. Remove PC Boards.
 - a. Disconnect all cables connected to the PC boards.
 - b. Remove the PC boards from the ground plate. Remove and discard ground plate from rear door. Save the machine screws.
 - c. Follow the enclosed rework instructions and rework the bottom (Data) board. See Figure 5 and 6.
6. Install New ZOO KEEPER ROMS.
 - a. Locate the ROM/IO Board (08-00003-001). Remove EPROMS located in sockets U3 through U10, U12 through U19, and U25 through U27. Some sockets may already be vacant. Also remove the three (3) jumper plugs from sockets U1, U22, and U29. Install EPROMS U12-U19 and U25-U27 only. Eeproms U3-U10 are already loaded in the expansion ROM board. Be careful to avoid bent leads or improper connections. The markings on the labels designate the socket. The two jumper plugs also supplied must be installed with the notched end facing the J5 connector. Jumper 26-00002-032 - Sockets U2, U29
7. Rotate Monitor.
 - a. Disconnect the video cable, power cable and ground wire from the monitor.
 - b. Open the rear service door all the way.
 - c. Remove the two (2) rear monitor rail carriage bolts from the cabinet sides and swing the monitor down to the stop blocks.
 - d. Remove and discard the plastic monitor shroud.
 - e. Disconnect and discard the Instruction Lamp.
 - f. Remove the four (4) mounting bolts from the corners of the metal monitor bracket.

- g. Slide the monitor and bracket to the rear and lift out of the cabinet.

Rotate the monitor and bracket 90 degrees clockwise and slide them back inside the cabinet. See FIGURE 1.
 - i. Install and tighten the four (4) monitor bracket mounting bolts.
 - j. Install the Instruction light assembly to the new plastic monitor shroud by inserting the lamp holders into the holes near the bottom. Install the shroud in the cabinet with the instruction light cable off to the right. Connect the marquee cable to the instruction power cable in the cabinet.
 - k. Swing the monitor up into position and install the two (2) monitor rail carriage bolts. Install the flatwashers and Keps nuts and tighten.
 - l. Unfold the Rear Door Template and flatten the creases. Cut the template carefully along the shaded area which is the Hinge Relief and monitor openings.
 - m. CAREFULLY align the template on the inside EDGES of the rear door as shown. DO NOT align the template on the door hinge. Tape the template in place. Mark the perimeter of the monitor opening and the location of the eight (8) bolt holes on the door. Remove the template.
 - n. Cut out the monitor opening and drill 1/4 inch holes at the eight (8) bolt locations.
 - o. Mount the Rear Door Cup to the outside of the door with the Taito logo up. Secure with eight (8) #10 carriage bolts, flatwashers and Kep nuts. The carriage bolt heads must be on the outside.
 - p. Reconnect the video cable, power cable and ground wire to the monitor. Connect the instruction lamp harness.
8. Install New Ground Plate and PC Boards.
 - a. Install the new ground plate by inserting two (2) #8 X 11/16 screws (provided) into the locating holes in the center of the plate and mounting it on the right side (looking from the rear) of the cabinet. Locate it as close to the cabinet floor and as far toward the front of the cabinet as possible.
 - b. Mount the top and bottom PCB's on the ground plate. Run the long ribbon cable under the top PCB. Mount the center PCB but do not put screws in the top left and middle holes. Using the spacers and long screws mount the *expansion* ROM PCB with the ribbon connector toward the top of the cabinet. Connect all the ribbon cables as they were before except connect J3 of the top (Video) PCB to J3 of the *expansion* ROM PCB. SEE FIGURE 2.

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- c. Connect R15-3 power cable (supplied) between J12 on the expansion ROM board and J1 on the bottom (Data) PCB. SEE FIGURE 2.
 - d. Install the board shield. Attach the shield with (16) screws AND FLAT WASHERS. Handle the shield carefully.
 - e. Reroute the main harness so that the cables can be connected to the PCB's. SEE FIGURE 2.
 - f. Connect the 16" braided cable to one of the mounting screws for the shield. Connect the other end to the power supply ground plate. Tie wrap any excess cable away from the supply to avoid electrical problems.
 - g. Mount the coin door processor to the right side of the cabinet between the PCB set and the door with four (4) long wood screws (supplied). SEE FIGURE 2.
9. Connect the main harness.
 - a. Connect R15-2 cable (supplied) between J15 on the coin door processor and J15 on the middle (Rom) PCB. SEE FIGURE 2.
 - b. Connect the power cable that originally went to the bottom (Data) PCB to J11 on the expansion ROM PCB. Connect the other end of the cable to J11 on the middle (Rom) PCB. SEE FIGURE 2.
 - c. Connect the power, video and memory protect cables to the top (Video) PCB.
 - d. Connect the cable from the coin door to J15A on the coin door processor.
 - e. Connect one end of the new control panel harness to J16 on the middle (Rom) PCB. Route this cable along the existing cable harness to the front control panel area.
 10. Install Ground Braids.
 - a. Connect the 28 inch ground braid from the power supply PC board mounting screw to a convenient chassis screw on the monitor. Scrape any green solder mask from the mounting hole pad before assembly. See FIGURE 3.
 - b. Connect the 9 inch ground braid from the power cord filter box to the power supply PC board mounting screw. Scrape any green solder mask from the mounting hole pad before assembly. See FIGURE 3.
 11. Install ZOO KEEPER Coverglass.
 - a. Clean the coverglass with a non-abrasive cleaner.
 - b. Install the coverglass from the rear of the cabinet.
 - c. Tighten the three (3) screws on the front coverglass bracket.
 - d. Install the coverglass retaining bracket at the rear with three (3) screws.
 12. Install ZOO KEEPER Control Panel.
 - c. Remove cable assembly from control panel being careful not to break any tabs off of the leaf switches.
 - b. Remove the joystick, buttons and wood braces from the control panel.
 - c. Remove the leaf switches (4) and the switch plate from the joystick. Install the switches on the new 8-way switch plate and replace the the switch plate back on the joystick.
 - d. Install the joystick (with new actuator), buttons and wood braces on the ZOO KEEPER control pan metal. SEE FIGURE 4.
 - e. Connect the new control panel cable to the switches. Every switch is connected to a black wire. Use FIGURE 4 as guide in connecting the colored wires.
 13. Install ZOO KEEPER Marquee.
 - a. Remove the three (3) allen screws and retaining bracket. The marquee will slide out of the guides.
 - b. Remove and save the two (2) plastic "U" channel guides from the marquee.
 - a. Attach the two (2) plastic "U" channel pieces to the sides of the new marquee and slide it up into the cabinet.
 - b. Attach the marquee bracket with three (3) allen screws.
 14. FINAL TEST AND FAULT ANALYSIS
 - a. With coin door open, pullout bottom interlock switch only. Turn the game on, the screen should display the "Location name" frame. Proceed through the test screen using "ADV TEST" switch location on the Coin Door. Stop when the screen displays the "ZOO KEEPER" frame.
 - b. Manually trip the "credit" switches, or coin up the game to 4 credits. Close and lock the coin door. Play NOT LESS THAN (two) two player game If only one complete game can be played, there is most likely a problem relating to the coin door processor installation. Recheck step 8 of the conversion instructions. The rear door can now be closed and locked.
 19. Attach FCC Compliance Label. Affix the new self-adhesive FCC Compliance label OVER the original non-compliance label on the rear of the cabinet.
 20. Attach FBI warning label. Affix the self-adhesive FBI warning label on the outside of the rear door near the top in the center. THE COVERSION IS COMPLETE.

CONVERSION KIT

DESCRIPTION	QUANTITY	PART NUMBER
Rom expansion PCB	1	08-00112-001
Coin door processor	1	08-00039-006
Coin door processor cable	2	09-00229-001
Control panel harness	1	09-00225-001
ZK control panel metal	1	07-00322-001
RFI Shield	1	61-00336-001
EPROM Set ZK	1	16-00029-001
Coverglass, ZOO KEEPER	1	47-00016-007
Marquee, ZOO KEEPER	1	47-00012-016
Ground Plate	1	61-00337-001
Shroud, Monitor	1	63-00053-001
Cover, rear door	1	63-00148-001

CONTROL PANEL PACK

DESCRIPTION	QUANTITY	PART NUMBER
Plate 8-way	1	63-00032-006
Acutator	1	63-00030-001
Harness, control panel	1	09-00272-001

PARTS PACK

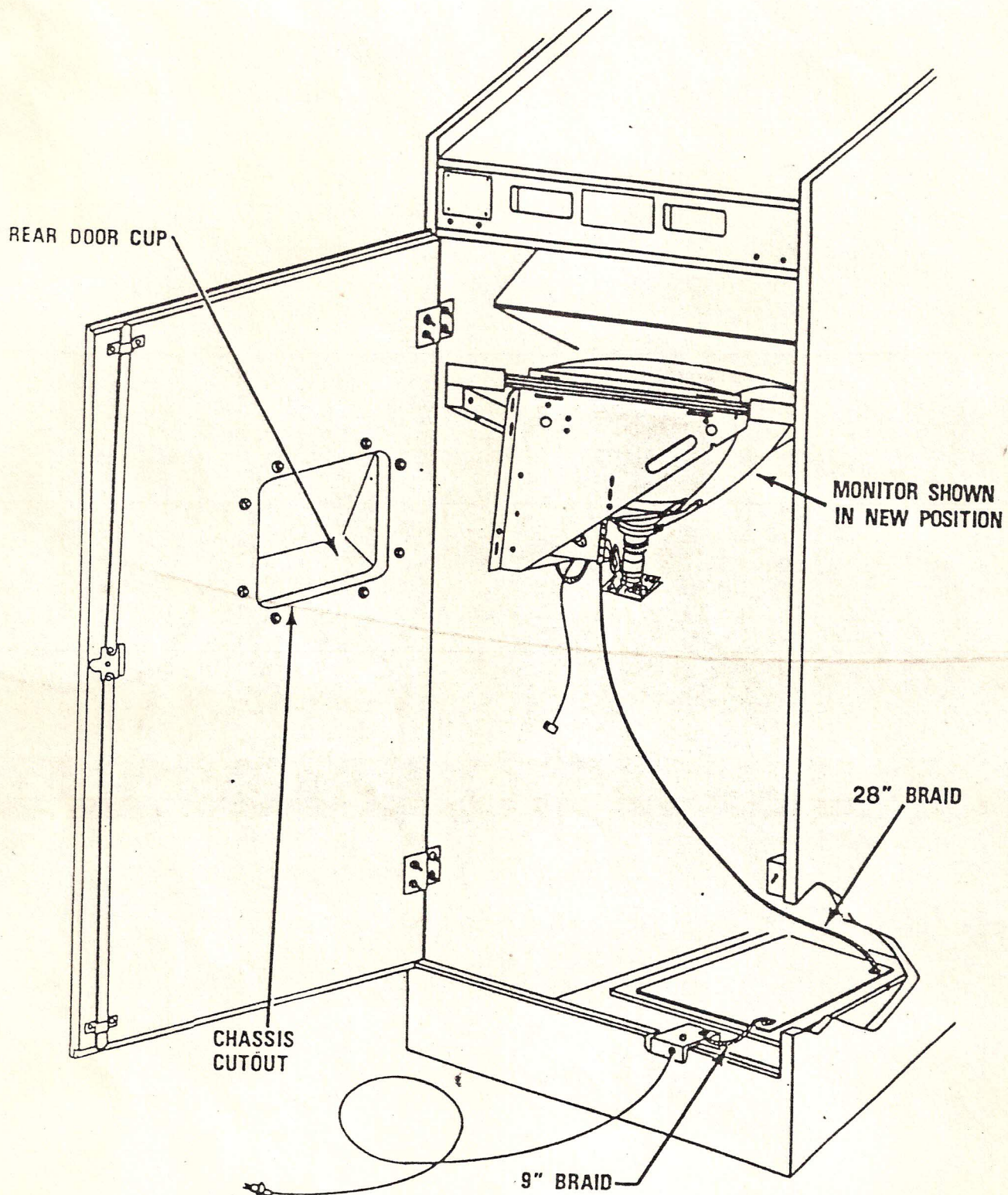
DESCRIPTION	QUANTITY	PART NUMBER
Braided Cable, 9"	1	09-00260-001
Braided Cable, 16"	1	09-00260-002
Braided Cable, 28"	1	09-00260-003
Instr. light assy	1	07-00126-001
#6 X 1 1/4 Screw	2	51-02002-013
#8 X 11/16 Screw	17	51-00005-001
#10 X 7/8 washer	8	55-01004-010
Spacer	2	59-00060-001
Ty wrap 4"	5	59-00003-001
#10 X 24 bolt	8	51-03004-013
#10 X 24 nut	8	54-02004-001

MANUAL PACK

DESCRIPTION	QUANTITY	PART NUMBER
LED value card	1	79-00067-001
Game Manual	1	72-00036-001
Conversion Manual	1	72-10016-001
FCC Generic Compliance Label	1	79-00070-001
FBI Warning label	1	79-00074-001
Free game warning	1	79-00072-001

MONITOR MOUNTING

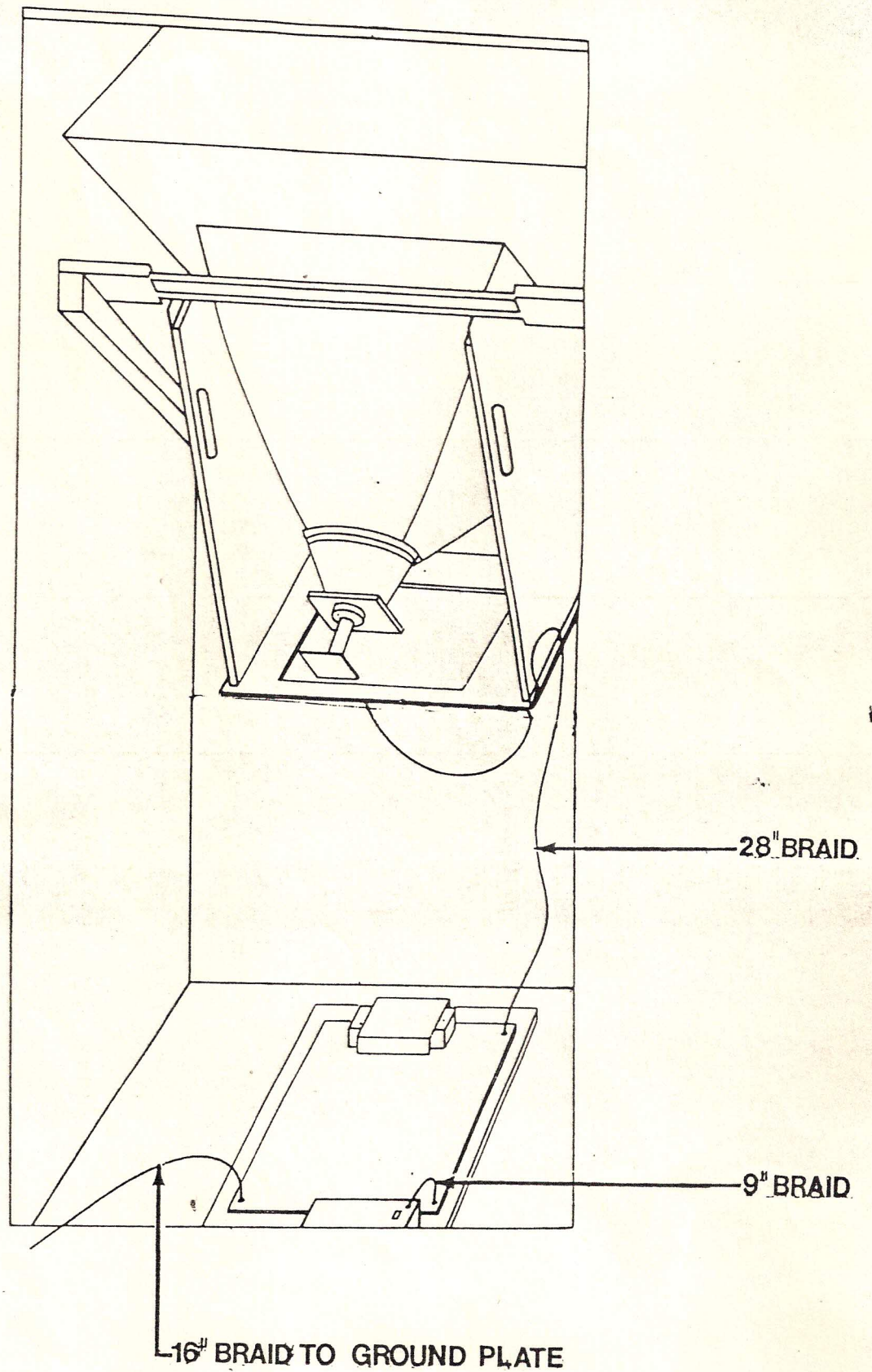
FIGURE



NOTE: PC BOARD SET AND
HARNESS NOT SHOWN.

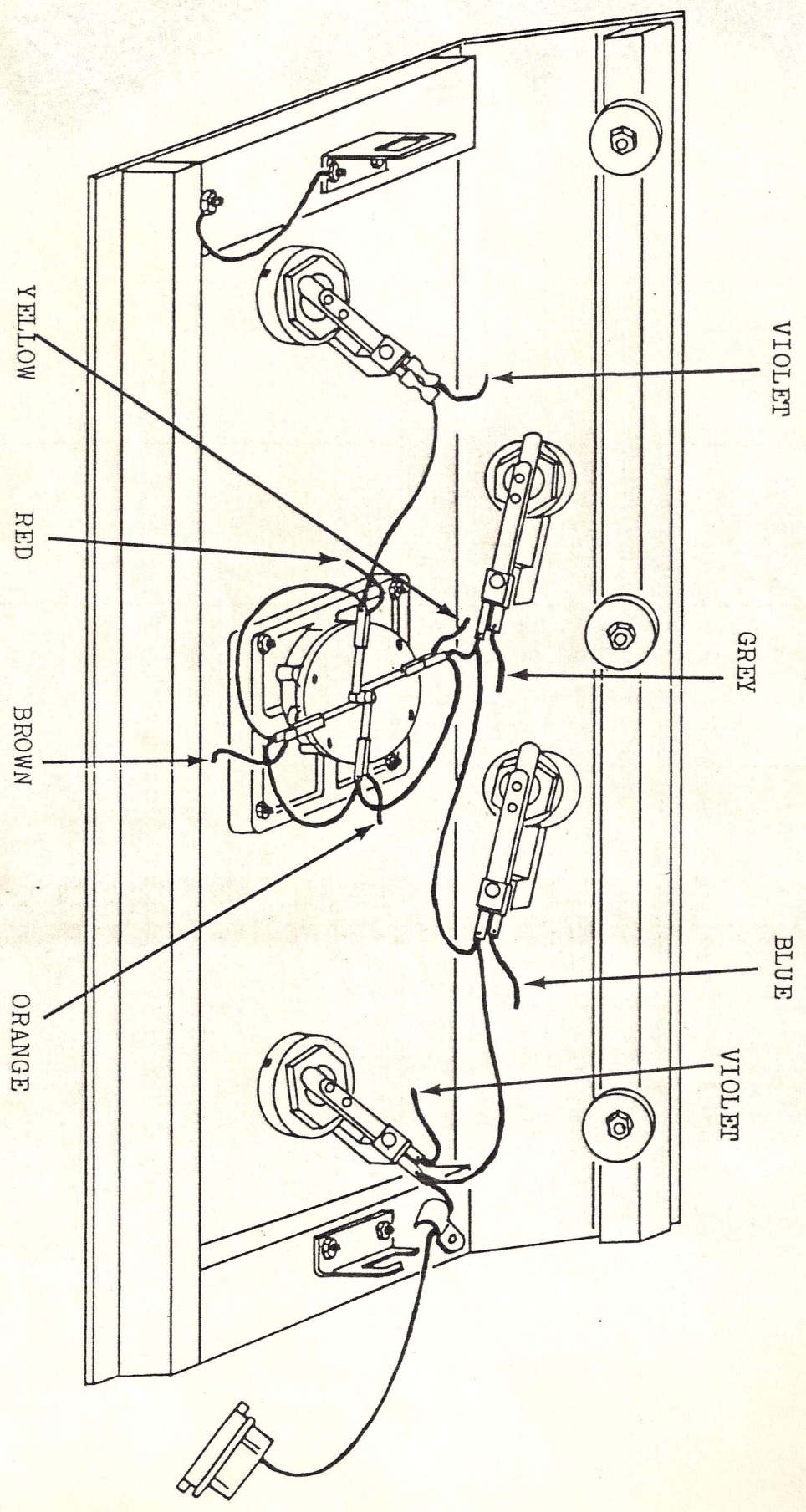
MONITOR GROUNDING

FIGURE 3



ZOO KEEPER CONTROL PANEL WIRING

FIGURE 4



DATA/SOUND PROCESSOR COMPONENT LAYOUT

FIGURE

