Monitor & Touchscreen Replacement

Monitor/Touchscreen Removal for Rx Games (for Aurora instructions skip to page 5)

1. Turn off and unplug the game.

2. Unlock the game, then open it by pulling the rear of the top bezel forward.

3. Disconnect the LCD power cable connector, the VGA cable connector, and the touchscreen controller power cable connector (see Figure 1). Disconnect the VGA cable ground wire by removing the nut securing it to the rear of the monitor.

   If you are replacing the monitor: Disconnect the OSD cable connector and then remove the OSD board from the Velcro securing it to the rear of the monitor (see Figure 1).

OSD CABLE CONNECTOR

OSD BOARD

VGA CABLE GROUND WIRE LOCATION

LCD POWER CABLE CONNECTOR

HINGE LOCATIONS

TOUCHSCREEN CONTROLLER

TOUCHSCREEN CONTROLLER CABLE CONNECTOR

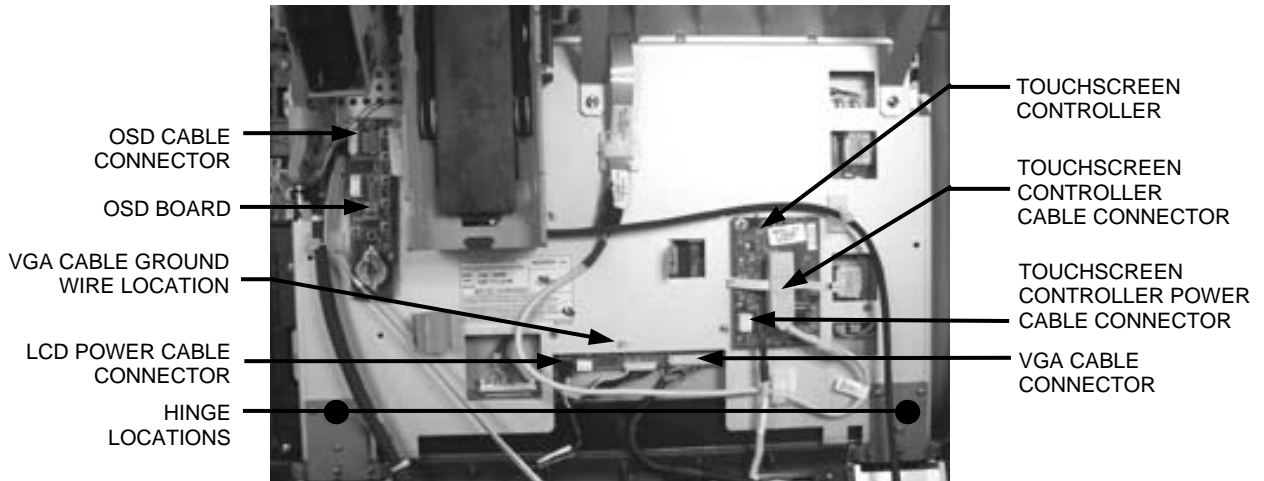TOUCHSCREEN CONTROLLER POWER CABLE CONNECTOR

VGA CABLE CONNECTOR

FIGURE 1 – MONITOR CONNECTIONS

4. Undo the thumbscrew securing the support arm to the monitor (see Figure 2). Lean the front bezel forward and lift it in order to slide the hinges free from the lower chassis. Place the front bezel face-down on something soft to support it.

MONITOR SUPPORT ARM

THUMBSCREW SECURING MONITOR SUPPORT ARM TO MONITOR

LOCATION OF BUTTON TO RELEASE MONITOR SUPPORT ARM

FIGURE 2 – SUPPORT ARM CONNECTION TO MONITOR

5. Remove the 4 screws securing the coin and bill acceptor bracket, then remove the bracket from the unit (see Figure 3). Remove wires from plastic twist wraps as necessary.
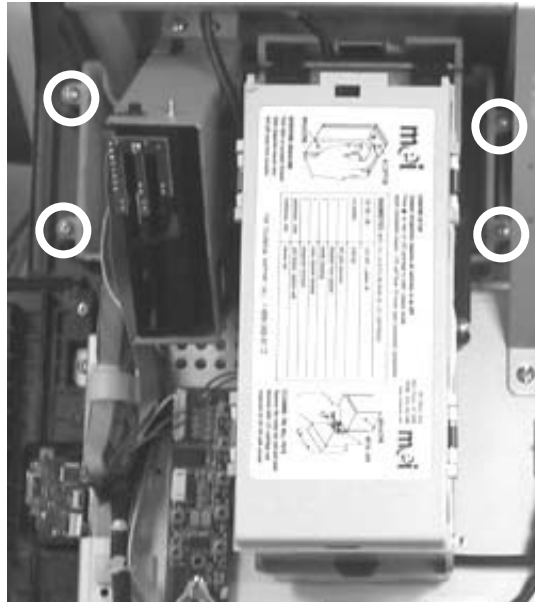
FIGURE 3 – LOCATION OF 4 SCREWS SECURING COIN & BILL ACCEPTOR BRACKET

6. Remove the 2 screws securing the touchscreen controller to the rear of the monitor assembly (see Figure 4), then move the touchscreen controller out of the way for the moment.

(SCREW LOCATED BEHIND BILL ACCEPTOR PLATE)

TOUCHSCREEN CONTROLLER RIBBON CABLE

SCREWS SECURING MONITOR BRACKETS TO MONITOR

2 SCREWS SECURING TOUCHSCREEN CONTROLLER

SCREWS SECURING PERIMETER OF MONITOR (11 PLACES)

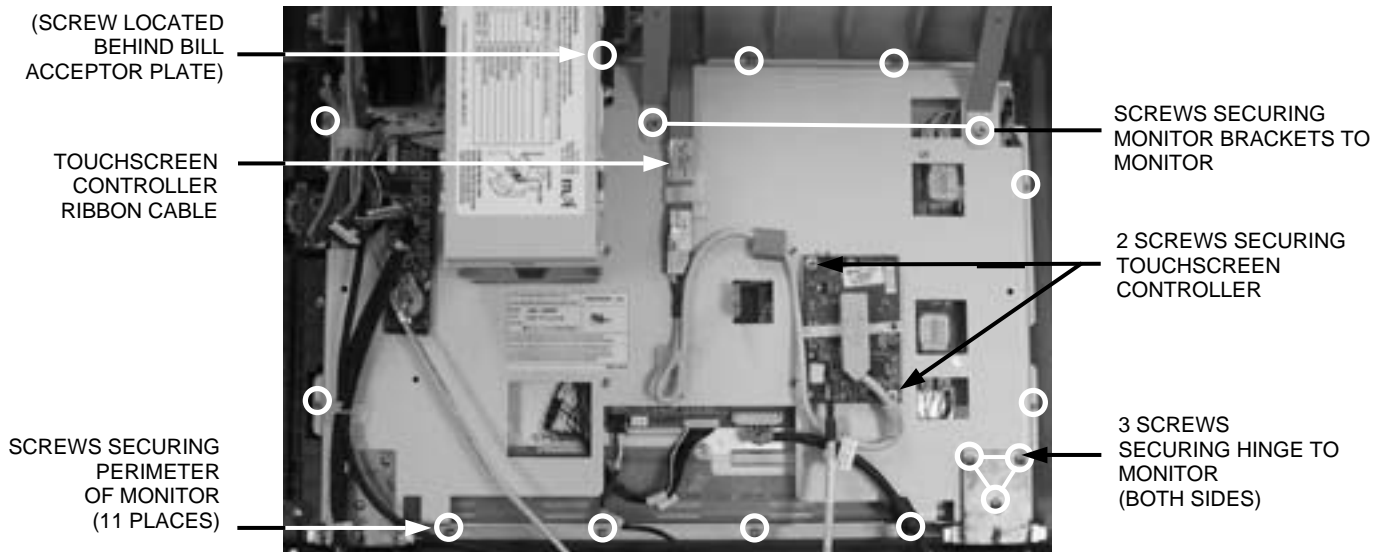3 SCREWS SECURING HINGE TO MONITOR (BOTH SIDES)

FIGURE 4 – SCREW LOCATION ON REAR OF MONITOR

7. Remove the screws securing the monitor brackets to the rear of the monitor assembly, then remove the 11 screws that secure the perimeter of the monitor (see Figure 4). Remove the monitor from the bezel.

8. *If you are replacing the monitor:* Remove the 3 screws securing each hinge to the bottom of the monitor (see Figure 4).

    If you are replacing the touchscreen: Note the orientation of the touchscreen (i.e. the positioning of the touchscreen ribbon cable and which side is the front of the touchscreen - the rear of the touchscreen will have tape on it, do NOT remove the backing of this tape), then lift the touchscreen out of the bezel. Undo the wraps around the touchscreen controller cable connector and detach it from the touchscreen controller (see Figure 1).

    NOTE: If there is no tape attached to the touchscreen you received, cut pieces of the supplied double-sided foam tape long enough to cover each edge of the touchscreen without overlapping. Remove the backing from ONLY ONE side of the tape and place it around the edge of the REAR of the touchscreen. The rear of the touchscreen can be identified by the tracing around the touchscreen. The side of the touchscreen with NO TRACING is the rear, and the tape should be applied to that side. Once the tape is in place, DO NOT remove the backing.

Monitor/Touchscreen Installation for Rx Games

NOTE: If the neoprene tape on the inside of the front bezel is worn, you may want to replace it with the neoprene tape provided. Remove the backing from one side of the tape and stick that side to the bezel. Do NOT remove the backing from both sides.

1. *If you are replacing the touchscreen:* Place the new touchscreen into the monitor bezel with the touchscreen controller ribbon positioned at the top of the bezel (see Figure 4). The touchscreen should rest flush against the foam on the inside of the bezel, and the tape on the new touchscreen should be positioned away from the bezel. **NOTE: Do NOT remove the backing from the tape on the touchscreen.** Replace the monitor on top of the touchscreen with the same orientation it had before you removed it from the system (see Figure 4). Be sure to wrap the touchscreen controller ribbon over the top of the monitor as shown in Figure 4. Attach the touchscreen controller cable connector to the touchscreen controller (see Figure 1), then secure the touchscreen controller to the back of the monitor using the same 2 screws you removed earlier (see Figure 4).

    If you are replacing the monitor: Place the new monitor on top of the touchscreen in the same orientation as the monitor you removed (see Figure 4). **NOTE: Do NOT remove the backing from the tape on the touchscreen.** Be sure that the touchscreen controller ribbon cable coming from the touchscreen is

wrapped over the monitor as shown in Figure 4. Secure the touchscreen controller to the back of the monitor using the same two screws you removed earlier (see Figure 4). Connect the OSD cable connector to the OSD board, then secure the OSD board to the Velcro on the rear of the new monitor (see Figure 1 for proper location). Attach the bottom hinges to the new monitor using the 6 screws (3 for each hinge) you removed earlier (see Figure 4). You may need to attach the provided wire clamps to the rear of the monitor assembly. If so, note their location on the rear of the monitor you removed, or use Figure 4 as a guide.

2. Resecure the 11 screws around the perimeter of the monitor (see Figure 4), and secure the monitor brackets to the rear of the monitor with the 2 screws you removed earlier (see Figure 4).

3. Place the coin and bill acceptor bracket back into place and resecure with the existing 4 screws (see Figure 3). Resecure wires in the plastic twist clamps where necessary.

4. Slide the bottom hinges on the front bezel into their mating clamps on the bottom of the Rx chassis. The bezel should be able to open and close smoothly.

5. Replace the thumbscrew that secures the support arm to the monitor (see Figure 2).

6. Reconnect the LCD power cable connector, and the touchscreen controller power cable connector (see Figure 1).

   If you are replacing the touchscreen only: Connect the VGA cable, and secure the VGA ground wire to the rear of the monitor with the nut you removed earlier (see Figure 1).

   If you are replacing the monitor: Remove the old VGA cable from the motherboard and plug the provided VGA cable into that port. Plug the new VGA cable into the monitor, and attach the new VGA cable ground wire to the rear of the monitor with the nut you removed earlier (see Figure 1 for location).

7. Press the button on the monitor support arm to release the arm (see Figure 2), then close and lock the top bezel.

8. Plug in and turn on the game. After the game boots, perform a touchscreen calibration. After doing so, ensure that the screen is properly aligned, and make any necessary adjustments with the monitor controls on the OSD board.

Monitor/Touchscreen Removal for Aurora Games

1. Turn off and unplug the game.

2. Unlock the rear door and open if it is hinged, or remove if it is detachable.

3. Reach under the center of the top of the cover to locate the rotary draw latch (see Figure 1). Turn the wing on the latch counterclockwise to disengage.

FIGURE 1 – ROTARY DRAW LATCH INSIDE TOP COVER

4. Unscrew the screw located in the center of the bottom of the cover (see Figure 2). Slowly lift the cover and disconnect the ground wire.

FIGURE 2 – SCREW IN CENTER OF BOTTOM COVER

5. Place something in front of the game to brace the bezel once the strain relief cord is undone, then remove the screw at the center of the marquee bezel and the 2 screws on the back of the bezel. For 17" games, remove the security screw inside the CPU section; for 19" and Widescreen games, remove the nut and washer securing the security bolt inside the CPU section. See Figure 3.

SCREW THROUGH MARQUEE

SCREWS ON BACK OF BEZEL

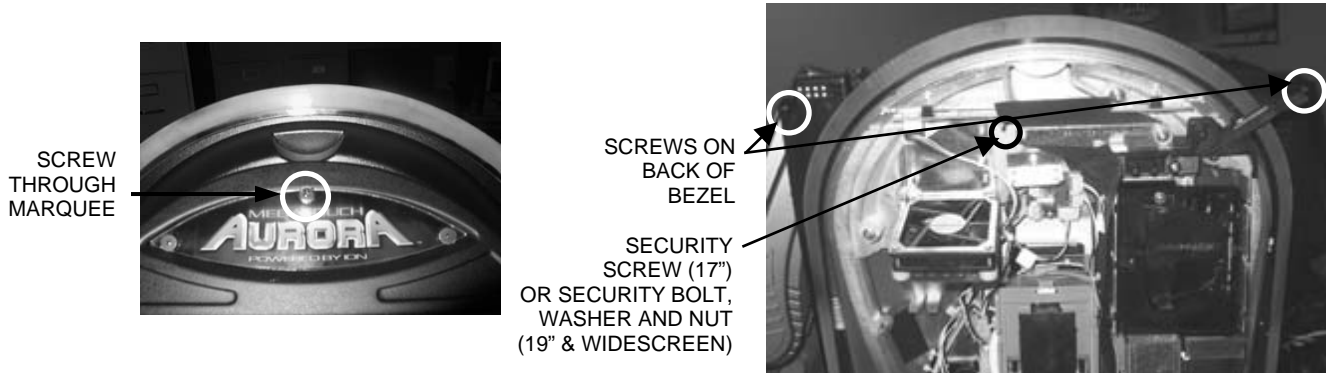SECURITY SCREW (17") OR SECURITY BOLT, WASHER AND NUT (19" & WIDESCREEN)

FIGURE 3 – SCREWS ON FRONT AND BACK OF BEZEL

6. Open the monitor assembly halfway and remove the screw fastening the strain relief cord. See Figure 4. Open the assembly all the way and rest it on a support.
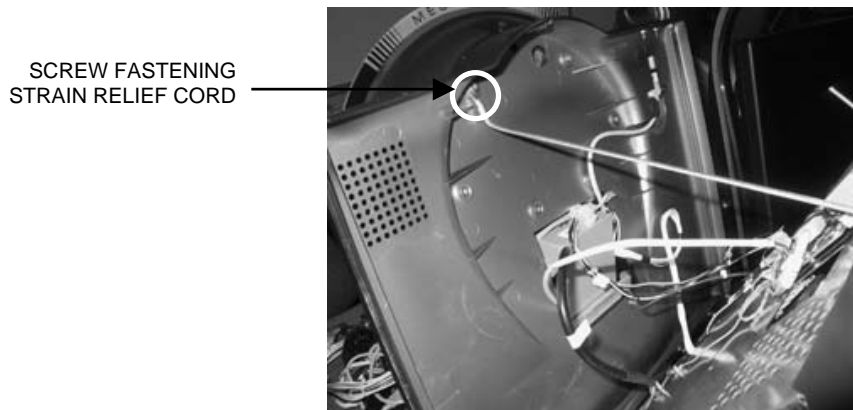

SCREW FASTENING STRAIN RELIEF CORD

FIGURE 4 – HALF-WAY OPEN MONITOR ASSEMBLY

7. Referring to Figure 5 for 17" games, and Figure 6 for 19" and Widescreen games, disconnect the VGA connector from the monitor. Remove the screw securing the VGA and touchscreen controller ground wires to the monitor (17"), or the nut securing the VGA and touchscreen controller ground wires to the ground screw on the back of the monitor (19" & Widescreen). *Note: On the Aurora Widescreen this nut may secure only the VGA ground wire.* Disconnect the 14-pin OSD cable (white wires) and the LCD power connector (yellow & black wires) from the monitor.
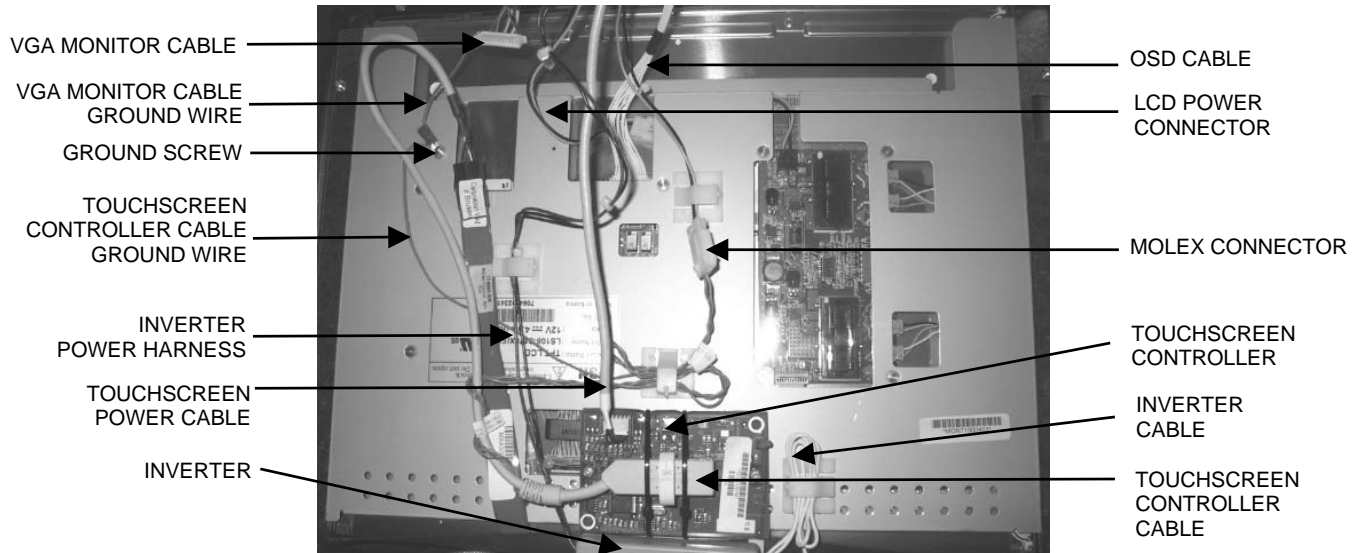
VGA MONITOR CABLE

VGA MONITOR CABLE GROUND WIRE

GROUND SCREW

TOUCHSCREEN CONTROLLER CABLE GROUND WIRE

INVERTER POWER HARNESS

TOUCHSCREEN POWER CABLE

INVERTER

OSD CABLE

LCD POWER CONNECTOR

MOLEX CONNECTOR

TOUCHSCREEN CONTROLLER

INVERTER CABLE

TOUCHSCREEN CONTROLLER CABLE

FIGURE 5 – REAR VIEW OF 17" MONITOR

VGA MONITOR CABLE

VGA MONITOR CABLE GROUND WIRE

GROUND SCREW AND NUT

TOUCHSCREEN CONTROLLER CABLE GROUND WIRE

TOUCHSCREEN POWER CABLE

TOUCHSCREEN CONTROLLER

OSD CABLE

LCD POWER CONNECTOR

INVERTER POWER HARNESS

MOLEX CONNECTOR

TOUCHSCREEN RIBBON CABLE

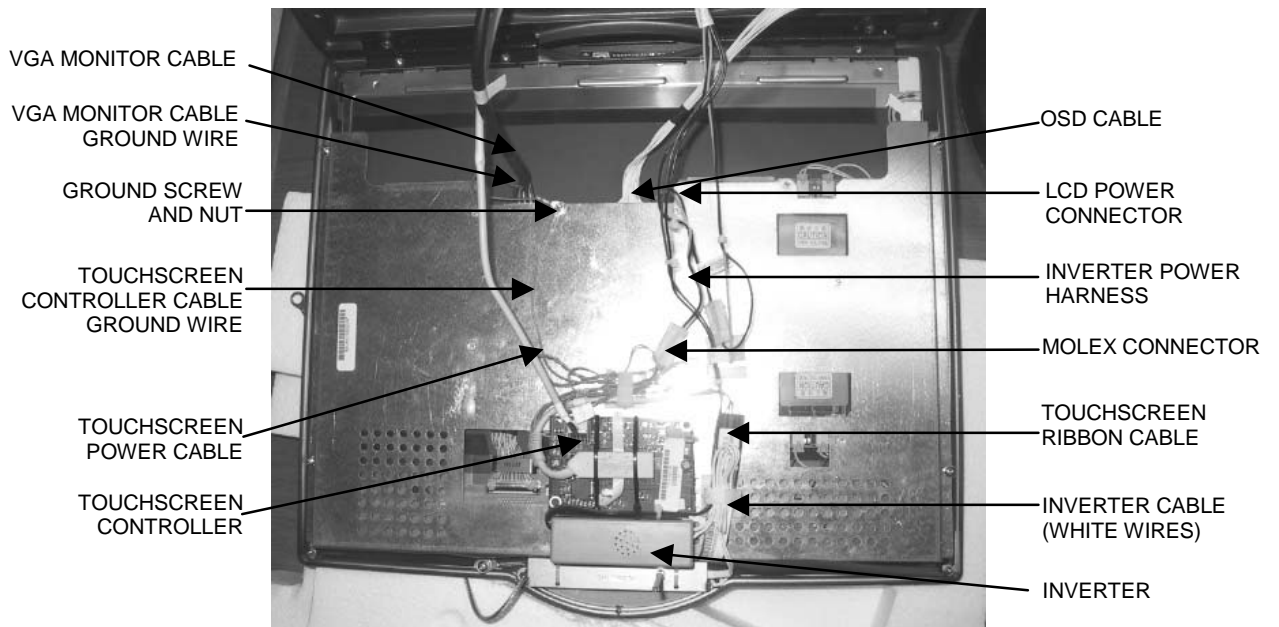INVERTER CABLE (WHITE WIRES)

INVERTER

FIGURE 6 – REAR VIEW OF 19" MONITOR

8. Disconnect the touchscreen power cable from the touchscreen controller, then disconnect the Molex connector, identified by the orange and gray wires (this does not exist on Aurora Widescreen systems). Refer to Figure 5 for 17" games, Figure 6 for 19" and Widescreen games.

9. Release harnesses from clamps; this may include the inverter cable, the inverter power harness, the Molex harness, the touchscreen controller cable, the touchscreen controller cable ground wire, the harness connecting the Molex connector to the power supply, and/or the touchscreen ribbon cable. Refer to Figure 5 for 17" games, and Figure 6 for 19" and Widescreen games.

10. *For 19" and Widescreen games:* Remove the inverter from the Velcro securing it to the LCD bracket (19") or touchscreen controller mounting plate (Widescreen) and carefully place it out of the way of the monitor assembly. See Figure 6.

11. Carefully cut the tie wraps around the touchscreen controller cable. If applicable, remove the 2 screws securing the touchscreen controller to its mounting plate (17" and Widescreen) or the LCD bracket (19"). On some 19" games the touchscreen controller is simply secured by Velcro, meaning there are no screws to remove. Remove the controller, as well as the fish paper underneath, though please note there is no fish paper underneath the touchscreen controller on Widescreen systems. See Figure 7.

    If you are replacing the touchscreen: Remove the touchscreen controller cable from the touchscreen controller (see Figure 5).

12. *For Widescreen games:* Unscrew the two standoffs that were located under the touchscreen controller. These are going through the mounting plate, securing it to the LCD bracket.

FIGURE 7 – TOUCHSCREEN CONTROLLER

13. Remove the 4 screws securing either the left and right LCD mounting brackets to the bezel (17") or the LCD bracket to the bezel (19" and Widescreen), then carefully slide the monitor assembly out of the bezel. See Figure 8 for 17" games, Figure 9 for 19" and Widescreen games.
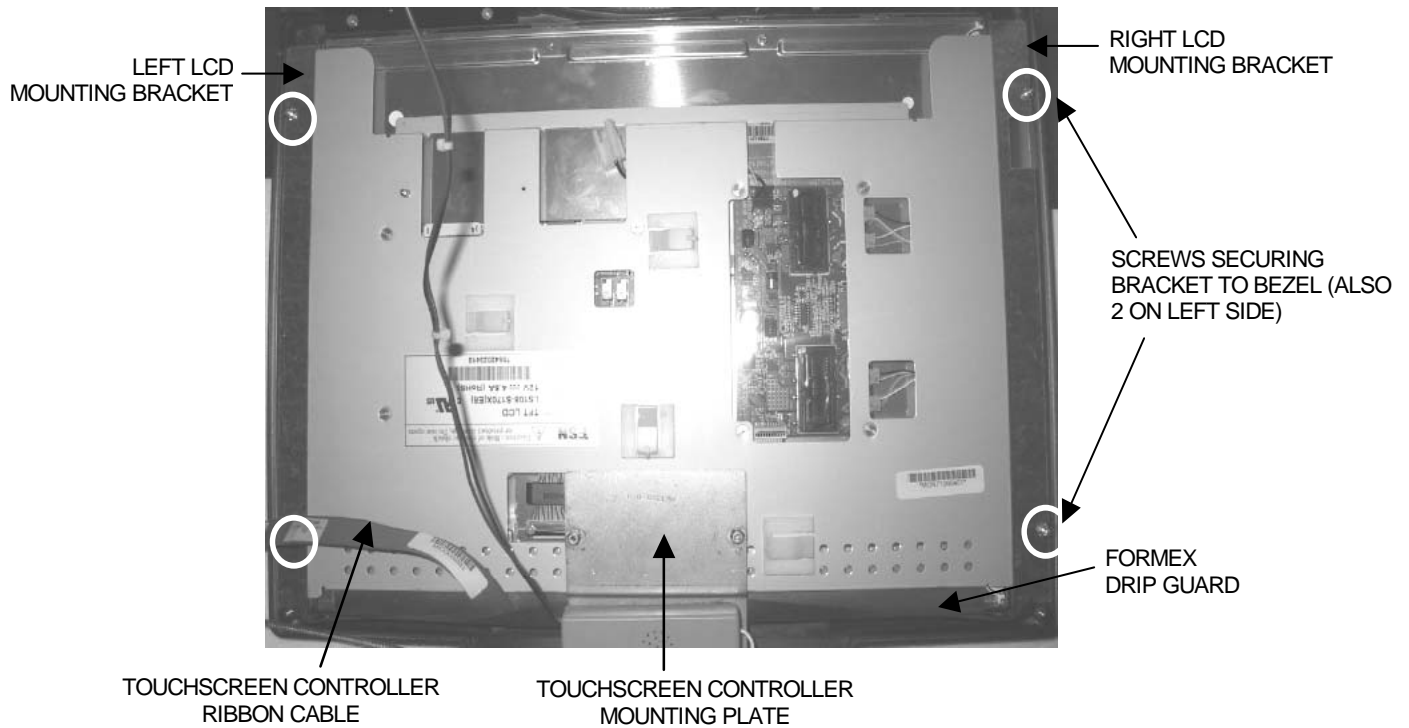
LEFT LCD MOUNTING BRACKET

RIGHT LCD MOUNTING BRACKET

SCREWS SECURING BRACKET TO BEZEL (ALSO 2 ON LEFT SIDE)

FORMEX DRIP GUARD

TOUCHSCREEN CONTROLLER RIBBON CABLE

TOUCHSCREEN CONTROLLER MOUNTING PLATE

FIGURE 8 – REAR VIEW OF 17" MONITOR

14. *For 17" games:* Remove the 4 screws securing the LCD mounting brackets to the monitor (2 per bracket). If replacing the monitor, remove the fish paper/foam tape strip attached to the top edge of the monitor. See Figure 8.

15. Note the orientation of the touchscreen (i.e. the positioning of the ribbon cable and which side is the front) before removing it from the monitor.

   For 17" and 19" games: Use dental floss to carefully cut the foam tape holding the screen to the monitor. Once the touchscreen is completely free from the monitor, remove any residual foam tape from the screen with denatured alcohol and clean the glass with an alcohol wipe.
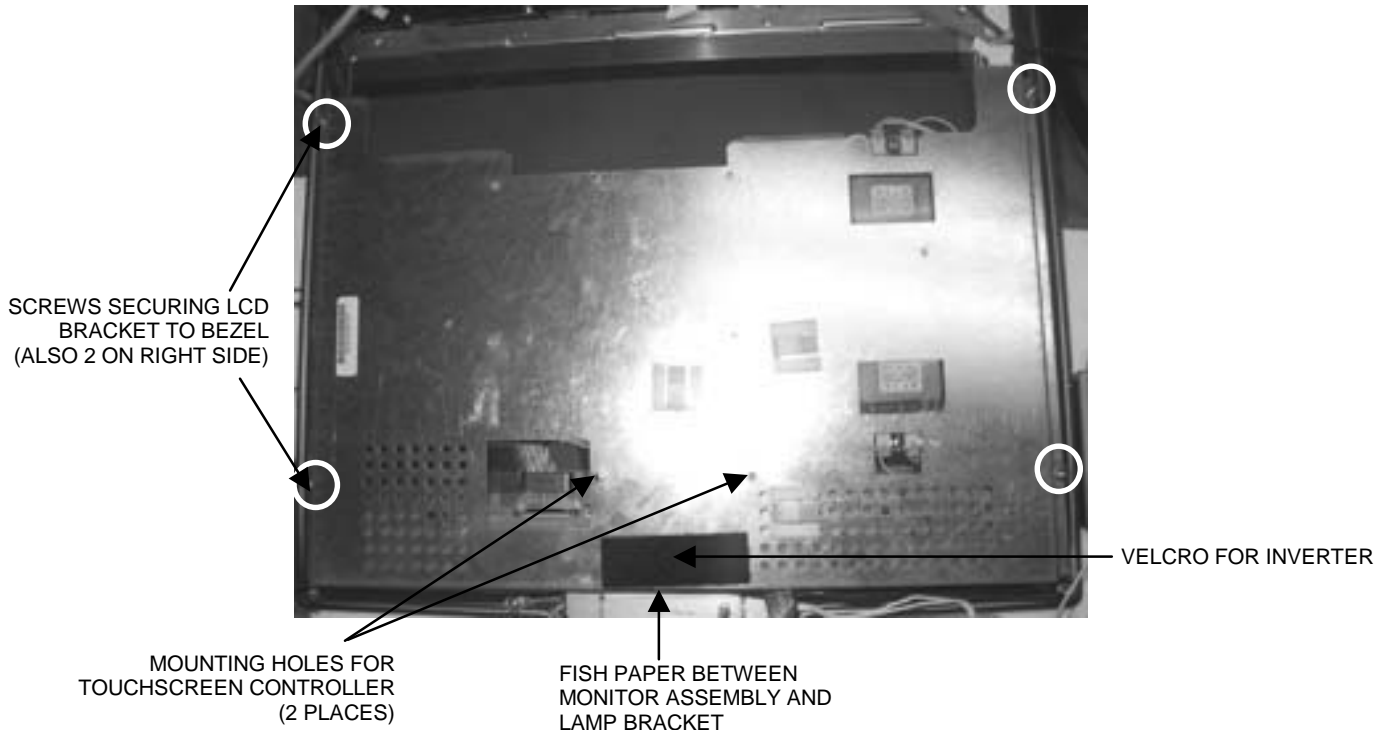
SCREWS SECURING LCD
BRACKET TO BEZEL
(ALSO 2 ON RIGHT SIDE)

VELCRO FOR INVERTER

MOUNTING HOLES FOR
TOUCHSCREEN CONTROLLER
(2 PLACES)

FISH PAPER BETWEEN
MONITOR ASSEMBLY AND
LAMP BRACKET

FIGURE 9 – REAR VIEW OF 19" MONITOR

Monitor/Touchscreen Installation for Aurora Games

1. Clean the glass on the LCD monitor that you will be using an alcohol wipe.

   For 17" and 19" games ONLY: Cut pieces of the supplied 1/2" foam tape long enough to cover the edges of the monitor without overlapping. After the tape is in place, peel off the backing.

   For Widescreen games: If the tape on the inside of the front bezel is looking worn, remove it and replace it with the provided neoprene tape. The tape sticks to the bezel, and the backing should NOT be removed.

   NOTE: Do NOT remove the backing of the tape that is attached to the Widescreen Touchscreen. If there is no tape attached to the touchscreen you received, cut pieces of the supplied double-sided foam tape long enough to cover each edge of the touchscreen without overlapping. Remove the backing from ONLY ONE side of the tape and place it around the edge of the REAR of the touchscreen. The rear of the touchscreen can be identified by the tracing around the touchscreen. The side of the touchscreen with NO TRACING is the rear, and the tape should be applied to that side. Once the tape is in place, DO NOT remove the backing.

2. *If replacing only the monitor:* Carefully place the touchscreen over the new monitor in the same manner it was attached to the old monitor, making sure that the screen is properly and evenly aligned over the monitor glass. Clean the front of the touchscreen with an alcohol wipe once it is in place. Reattach the fish paper foam tape strip to the top edge of the monitor (17" games only; see Figure 8). You may need to attach the provided wire clamps to the rear of the monitor assembly. If so, note their location on the rear of the monitor your removed.

If replacing only the touchscreen: Carefully place the new touchscreen over the monitor in the same manner as the old screen, making sure that the screen is properly and evenly aligned over the monitor glass. Clean the front of the touchscreen with an alcohol wipe once in place.

If replacing both the monitor and the touchscreen: Carefully place the new touchscreen over the new monitor in the same manner that the old touchscreen and monitor were attached, making sure that the screen is properly and evenly aligned over the monitor glass. Clean the front of the touchscreen with an alcohol wipe once it is in place. Reattach the fish paper foam tape strip to the top edge of the monitor/touchscreen assembly (17" games only; see Figure 8). You may need to attach the provided wire clamps to the rear of the monitor assembly. If so, note their location on the rear of the monitor your removed.

3. *For 17" games:* Replace the left and right mounting brackets on the monitor and secure each with 2 screws. Carefully slide the new monitor into the bezel, making certain that the edge of the monitor with the fish paper is secured underneath the touchscreen controller's mounting plate. Ensure that the monitor is properly centered, then secure the mounting brackets to the bezel with 4 screws. See Figure 8.

For 19" and Widescreen games: Carefully slide the new monitor assembly into the bezel, making sure (on standard 19" models) that the strip of fish paper is secured between the edge of the assembly with the Velcro and lamp mounting bracket. Ensure that the monitor is properly centered, then secure the LCD bracket to the bezel with 4 screws. See Figure 9.

4. *For 17" games:* Line up the touchscreen controller on the rectangular piece of fish paper. *If you replaced the touchscreen, connect the touchscreen controller cable to the touchscreen controller and secure with 2 tie wraps, making sure that the wraps go around the fish paper.* Position this touchscreen controller assembly on the mounting plate and secure with 2 screws. See Figure 7.

For 19" games: Replace the inverter on the Velcro. Place the rectangular piece of fish paper on the mounting holes on the LCD bracket. *If you replaced the touchscreen, carefully connect the touchscreen controller cable to the touchscreen controller and secure with 2 tie wraps*. Position the touchscreen

controller on top of the fish paper and secure to the LCD bracket with 2 screws or simply with Velcro. See Figure 7.

For Widescreen games: Resecure the two standoffs to the touchscreen controller bracket, making sure that the standoffs secure this bracket to the rear of the monitor. *If you replaced the touchscreen, carefully connect the touchscreen controller cable to the touchscreen controller, and secure it with two tie wraps.* Position the touchscreen controller over the two standoffs and secure it in place with two screws (see Figure 7). Replace the inverter on the Velcro.

5. *For 17" and 19" games:* Secure the inverter's cable and power harness under clamp(s) where necessary. See Figures 5 and 6.

6. Reconnect the LCD power connector (black and yellow wires), and secure the wires under a clamp where necessary.

7. *For 17" and 19" games:* Reconnect the touchscreen power cable to the touchscreen controller, then reconnect the Molex connector (orange and gray wires). Secure the Molex wires and the touchscreen ground wire under a clamp where necessary. See Figures 5 and 6.

8. Reconnect the 14-pin OSD connector and the VGA cable to the monitor. For 17" games, replace the touchscreen and VGA ground wires, and secure with 1 screw (see Figure 5). For 19" and Widescreen games, replace the touchscreen ground wire (where necessary) and VGA ground wire on the ground screw on the LCD bracket and secure with one nut (see Figure 6).

9. Replace the strain relief cord and secure in place with one screw. See Figure 4.

10. Close the monitor assembly completely, and fasten with 2 screws in the back of the bezel, 1 security screw (17") or security washer and nut (19" & Widescreen), and 1 screw in the front (through the marquee). See Figure 3.

11. Reconnect the ground wire to the rear cover and lower the cover into place, carefully lining up the 2 tabs on the cover with the 2 mating holes on the sides of the game. Make sure that the plastic lip on the bottom of the rear cover is behind the metal base. Tighten the screw securing the bottom of the door. (Figure 2). Turn the wing on the draw latch clockwise to engage the latch (see Figure 1).

12. Close (or reattach) and lock the rear door.

13. Plug in and turn on the game.

14. After the game boots, perform a touchscreen calibration. After doing so, ensure that the screen is properly aligned, and make any necessary adjustments with the monitor controls on the OSD board.