

ECHO-10

Complete Entertainment System

TECHNICAL SUPPORT MANUAL



JVL



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SAFETY INFORMATION

- 1. Read Instructions:** Read instructions before proceeding with the installation and operation of the product.
- 2. Heed Warnings:** Follow all warnings on the product and in the operating instructions.
- 3. Overloading:** Do not overload wall outlets or extension cords. This can result in fire or electric shock.
- 4. Object and Liquid Entry:** Never push foreign objects into this product through openings as they may touch dangerous voltage points that could result in a fire or electric shock.
- 5. Servicing:** It is dangerous to service this product yourself. Refer to qualified service personnel.
- 6. Replacement Parts:** When replacement parts are required, use only replacement parts specified by the manufacturer.
- 7. Safety Check:** Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.

Additional Safety Information for the User

Verify Line Voltage Before Use: Your JVL machine has been designed for use with 115/230V 60/50Hz AC current. Connection to another line voltage can create a safety hazard. If you have any questions about the voltage requirements, contact your local distributor.

WARNING:

To prevent fire or shock hazard, do not expose this appliance to rain or moisture. It has been designed for indoor operation only.

The appliance is not suitable for installation in an area where a water jet would be used. The appliance must not be cleaned by a water jet.

If the supply cord is damaged, it must be replaced by a special cord available from the manufacturer or its service agent, or the same type as the original.

Changes or modifications not expressly approved by JVL Labs could void the user's authority to operate the equipment.

NOTE: *This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.*

If you require any assistance, please contact Technical Support at 1-800-296-6657.

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1. GENERAL DESCRIPTION

ECHO is a countertop with following features:

- 22 inch LCD screen that delivers a true HD entertainment experience
- LCD screen featuring red accents and a glossy piano finish
- Four speakers, a subwoofer and a high quality tri-band acoustic system
- Reliable storage with a high capacity SD card
- A large spill-resistant power-pad for optimal gaming performance
- Large capacity for coins and bills
- Separate access for money and electronics redefines security and serviceability
- Wi-Fi and USB connectivity
- 3 degree lockable turntable, designed especially for touch screen applications

Here are the main components of this countertop:



Dimensions: 22" W x 21" H x 15" D

Weight: 38lbs

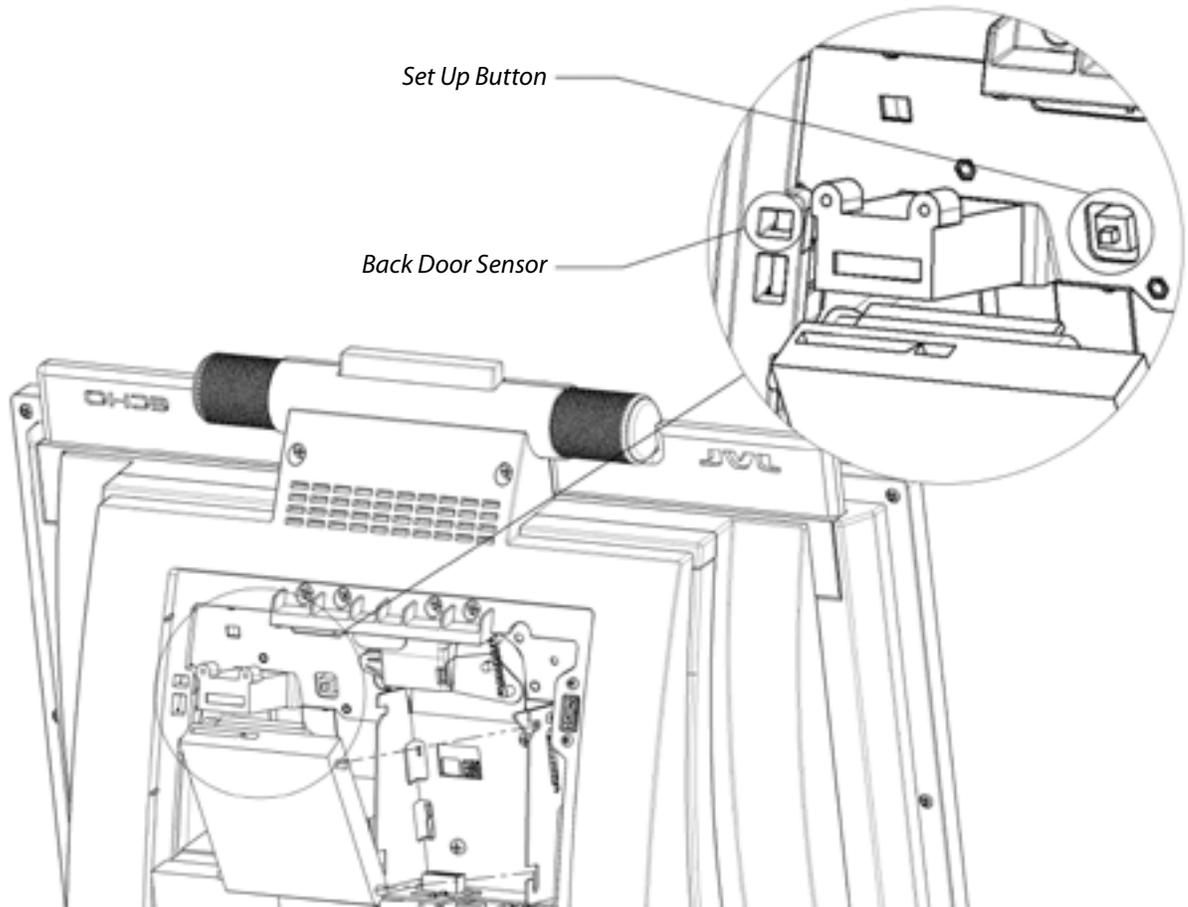
Coin Box Capacity: 1.6L

Mars Bill Acceptor (or other) 700 bills

General description

Operator Information:

After opening back door, you will have access to the Setup Button.



2. FLASH MEMORY CARD REPLACEMENT

1. Turn off the countertop and disconnect the AC power supply.
2. Open the lock and tilt the top of the Back Door towards you to remove it completely (see Fig. 1 on page 26 for details).
3. Remove the freely installed Cashbox by lifting upwards, then pulling it towards you (see Fig. 2 on page 27 for details).
4. Unscrew 4 Machine Screws:
(Two- #8-32 x 1-1/4" and two #8-32 x 3/8") and open the monitor to gain access to all electronic components (see Fig. 3 on page 28 and Fig. 4 on page 29 for details).
5. Press on the snaps of the Inner Cover to unlock them. Tilt the cover towards you, and then slide the Inner Cover upwards. Move it along the Monitor Stopper Cable and set it aside (see Fig. 5 on page 30 for details).
6. Unscrew one Hex Nut #8-32. Lift the Inner Box to release the latches then tilt the top of the box towards you to gain access to the SD Memory card slot (see Fig. 6 on page 30 and Fig. 7 on page 31 for details).
7. Press onto the existing SD Memory card to eject it from its socket. Replace it with the new one (see Fig. 7 on page 31 for details).
8. Reassemble the countertop by following the previous steps in reverse order.

NOTE: For part numbers see Appendix B

3. GAME BOX REPLACEMENT

1. Turn off the countertop and disconnect the AC power supply.
 2. Open the lock and tilt the top of the Back Door towards you to remove it completely (see Fig. 1 on page 26 for details).
 3. Remove the freely installed Cashbox by lifting upwards, then pulling it towards you (see Fig. 2 on page 27 for details).
 4. Unscrew 4 Machine Screws:
(Two- #8-32 x 1-1/4" and two #8-32 x 3/8") and open the monitor to gain access to all electronic components (see Fig. 3 on page 28 and Fig. 4 on page 29 for details).
 5. Press on the snaps of the Inner Cover to unlock them. Tilt the cover towards you, and then slide the Inner Cover upwards. Move it along the Monitor Stopper Cable and set it aside (see Fig. 5 on page 30 for details).
 6. Unplug all connectors from the CPU Box. These connectors are:
 - USB upgrade cable (1) HNS-CT09-723
 - Power Pad cable (2) HNS-CT09-704
 - Touch screen cable (3) HNS-CT09-716
 - I/O Board cable (4) HNS-CT09-713
 - Network cable (5) HNS-CT09-727
 - LVDS cable (6) HNS-CT09-780
 - Audio cable (7) HNS-CT09-730
- See Fig. 8 on page 31 for details
7. Unscrew one Hex Nut #8-32. Lift the Inner Box upwards to release the latches then rotate the CPU box to gain access to the AC cable connector (see Fig. 6 on page 30 and Fig. 9 on page 32 for details).
 8. Disconnect the DC Harness from the CPU Box. Remove the CPU Box from the machine (see Fig. 10 on page 32 for details).
 9. Press onto the SD Memory card to eject it from the existing CPU Box. Insert the memory card into the new CPU Box (see Fig. 11 on page 33 for details).
 10. Reassemble the countertop by following the previous steps in reverse order.

NOTE: For part numbers see Appendix B

4. GAME BOX FANS REPLACEMENT

1. Turn off the countertop and disconnect the AC power supply.
 2. Open the lock and tilt the top of the Back Door towards you to remove it completely (see Fig. 1 on page 26 for details).
 3. Remove the freely installed Cashbox by lifting upwards, then pulling it towards you (see Fig. 2 on page 27 for details).
 4. Unscrew 4 Machine Screws:
(Two- #8-32 x 1-1/4" and two #8-32 x 3/8") and open the monitor to gain access to all electronic components (see Fig. 3 on page 28 and Fig. 4 on page 29 for details).
 5. Press on the snaps of the Inner Cover to unlock them. Tilt the cover towards you, and then slide the Inner Cover upwards. Move it along the Monitor Stopper Cable and set it aside (see Fig. 5 on page 30 for details).
 6. Unplug all connectors from the CPU Box. These connectors are:
 - USB upgrade cable (1) HNS-CT09-723
 - Power Pad cable (2) HNS-CT09-704
 - Touch screen cable (3) HNS-CT09-716
 - I/O Board cable (4) HNS-CT09-713
 - Network cable (5) HNS-CT09-727
 - LVDS cable (6) HNS-CT09-780
 - Audio cable (7) HNS-CT09-730
- See Fig. 8 on page 35 for details
7. Unscrew one Hex Nut #8-32. Lift the Inner Box upwards to release the latches then tilt the top of the box towards you to gain access to the AC cable connector (see Fig.6 on page 30 and Fig. 9 on page 32 for details).
 8. Disconnect the AC cable from the CPU Box. Remove the CPU Box from the machine (see Fig. 10 on page 32 for details).
 9. Unscrew two machine screws #6-32 x 1/4" (see Fig. 12 on page 33 for details).
 10. Disconnect the two fan cables from the CPU Board. Remove the Fan Holder bracket from the CPU Box (see Fig.13 on page 34 for details).
 11. Unscrew four screws, remove the old fans, and install the new fans. Make sure the fans' orientation is correct; airflow should be directed onto the CPU and Mobile Graphics chip (see Fig. 14 on page 35 for details).
 12. Reassemble the countertop by following the previous steps in reverse order.

NOTE: For part numbers see Appendix B

5. COIN MECHANISM REPLACEMENT

1. Turn off the countertop and disconnect the AC power supply.
2. Open the lock and tilt the top of the Back Door towards you to remove it completely (see Fig. 1 on page 26 for details).
3. Remove the freely installed Cashbox by lifting upwards, then pulling it towards you (see Fig. 2 on page 27 for details).
4. Lift the Coin Acceptor Lock upwards and tilt the Coin Acceptor towards you (see Fig. 15 on page 36 for details).
5. Unplug the Coin Acceptor (if electronically controlled) and remove it from the countertop (see Fig. 16 on page 36 for details).
6. Replace the old Coin Acceptor with the new one.
7. Reassemble the countertop by following the previous steps in reverse order.

NOTE: For part numbers see Appendix B

6. COIN SENSOR REPLACEMENT

1. Turn off the countertop and disconnect the AC power supply.
2. Open the lock and tilt the top of the Back Door towards you to remove it completely (see Fig. 1 on page 26 for details).
3. Remove the freely installed Cashbox by lifting upwards, then pulling it towards you (see Fig. 2 on page 27 for details).
4. Lift the Coin Acceptor Lock upwards and tilt the Coin Acceptor towards you (see Fig. 15 on page 36 for details).
5. Unplug the Coin Acceptor (if electronically controlled) and remove it from the countertop (see Fig. 16 on page 36 for details).
6. Unplug the Coin Sensor connector (see Fig. 17 on page 37 for details).
7. Unscrew two machine screws #8-32 x 1/4". Remove the Coin Acceptor Bracket from the machine (see Fig. 18 on page 38 for details).
8. Unscrew two machine screws #4-40 x 1/4" and replace the old JVL Sensor PCB with the new one (see Fig. 44 on page 52 for details).
9. Reassemble the countertop by following the previous steps in reverse order.

NOTE: For part numbers see Appendix B

7. MONITOR UNIT REPLACEMENT

1. Turn off the countertop and disconnect the AC power supply.
2. Open the lock and tilt the top of the Back Door towards you to remove it completely (see Fig. 1 on page 26 for details).
3. Remove the freely installed Cashbox by lifting upwards, then pulling it towards you (see Fig. 2 on page 27 for details).
4. Unscrew 4 Machine Screws:
(Two- #8-32 x 1-1/4" and two #8-32 x 3/8") and open the monitor to gain access to all electronic components (see Fig. 3 on page 28 and Fig. 4 on page 29 for details).
5. Press on the snaps of the Inner Cover to unlock them. Tilt the cover towards you, and then slide the Inner Cover upwards. Move it along the Monitor Stopper Cable and set it aside (see Fig. 5 on page 30 for details).
6. Unplug the following connectors from the CPU Box:
 - LVDS cable (6) HNS-CT09-780
 - Touch screen cable (3) HNS-CT09-716See Fig. 20 on page 39 for details
7. Unscrew one Hex Nut #8-32 and free the Touch Screen USB cable from the clamp (see Fig. 21 on page 39 for details).
8. Disconnect the Monitor Door Stopper Cable from the Monitor by unscrewing one machine screw #8-32 x 3/8" (see Fig. 22 on page 40 for details).
Attention, the Monitor Assembly has to be secured at this moment, as it will fall if not properly handled.
9. Remove the Monitor assembly by lifting upwards. Replace with the new one.
10. Reassemble the countertop by following the previous steps in reverse order.

NOTE: For part numbers see Appendix B

8. BILL ACCEPTOR REPLACEMENT

1. Turn off the countertop and disconnect the AC power supply.
 2. Open the lock and tilt the top of the Back Door towards you to remove it completely (see Fig. 1 on page 26 for details).
 3. Remove the freely installed Cashbox by lifting upwards, then pulling it towards you (see Fig. 2 on page 27 for details).
 4. Unscrew 4 Machine Screws:
(Two- #8-32 x 1-1/4" and two #8-32 x 3/8") and open the monitor to gain access to all electronic components (see Fig. 3 on page 28 and Fig. 4 on page 29 for details).
 5. Press on the snaps of the Inner Cover to unlock them. Tilt the cover towards you, and then slide the Inner Cover upwards. Move it along the Monitor Stopper Cable and set it aside (see Fig. 5 on page 30 for details).
 6. Unplug the following connectors from the CPU Box:
 - LVDS cable (6) HNS-CT09-780
 - Touch screen cable (3) HNS-CT09-716
- See Fig. 20 on page 36 for details
7. Unscrew one Hex Nut #8-32 and free the Touch Screen USB cable from the clamp (see Fig. 21 on page 39 for details).
 8. Disconnect the Monitor Door Stopper Cable from the Monitor by unscrewing one machine screw #8-32 x 3/8" (see Fig. 22 on page 40 for details).
 9. Remove and set aside the Monitor assembly by lifting upwards.
 10. Disconnect the following connectors from the amplifier PCB:
 - Upper Tweeters connector (1)
 - Mid-range speakers connector (2)
 - Subwoofer speakers connector (3)
 - CPU Box audio cable connector (4)
 - Power cable connector (5)
- See Fig. 23 on page 44 for details
11. Unscrew one Hex Nut #8-32 and disconnect the Bill Acceptor Ground cable from the stud (PEM) (see Fig. 24 on page 41 for details).
 12. Remove the Bill Cassette (see Fig. 25 on page 41 for details).
 13. Remove the Bill Acceptor Cover by sliding it upward (see Fig. 26 on page 42 for details).
 14. Unscrew one Machine Screw #8-32 x 3/8" (see Fig. 27 on page 42 for details).
 15. Slide the Bill Acceptor and bracket upwards and remove by tilting them towards you to gain access to Bill Acceptor connector (see Fig. 28 on page 43 for details).
 16. Disconnect the BA Harness connector from the Bill Acceptor (depending on the type of Bill Acceptor).
 17. Set aside the Bill Acceptor with Bill Acceptor bracket.

Bill acceptor replacement

18. Unscrew four Hex Nuts #8-32 to detach the Bill Acceptor from the Bill Acceptor bracket. Replace the old Bill Acceptor with the new one (see Fig. 29 on page 44 for details).
19. Reassemble the countertop by following the previous steps in reverse order.

NOTE: For part numbers see Appendix B

9. I/O BOARD REPLACEMENT

1. Turn off the countertop and disconnect the AC power supply.
2. Open the lock and tilt the top of the Back Door towards you to remove it completely (see Fig. 1 on page 26 for details).
3. Remove the freely installed Cashbox by lifting upwards, then pulling it towards you (see Fig. 2 on page 27 for details).
4. Unscrew 4 Machine Screws:
(Two- #8-32 x 1-1/4" and two #8-32 x 3/8") and open the monitor to gain access to all electronic components (see Fig. 3 on page 28 and Fig. 4 on page 29 for details).
5. Press on the snaps of the Inner Cover to unlock them. Tilt the cover towards you, and then slide the Inner Cover upwards. Move it along the Monitor Stopper Cable and set it aside (see Fig. 5 on page 30 for details).
6. Unplug all connectors from the I/O Board:
 - Service Lights cable connector (1) HNS-CT09-708
 - Fan cable connector (2) HNS-CT09-719
 - I/O Board USB cable connector (3) HNS-CT09-713
 - BA Harness connector (4) See note
 - I/O Board Power cable connector (5) HNS-CT09-702/712
 - Counter cable connector (6) HNS-CT09-714
 - Door Switch cable connector (7) HNS-CT09-703
 - Upper Glass Illumination cable connector (8) HNS-CT09-724
 - Reject Button Illumination cable connector (9) HNS-CT09-708

See Fig. 30 on page 44 for details.

Note. Cash harness part numbers vary depending on the type of coin acceptor and bill acceptor.

7. Unscrew two Machine Screws #4-40 x 3/16" and remove the existing I/O Board (see Fig. 31 on page 45 for details).
8. Carefully remove the Dallas Key and place it into the new I/O Board (see Fig. 32 on page 45 for details).
9. Reassemble the countertop by following the previous steps in reverse order.

NOTE: For part numbers see Appendix B

10. COUNTER REPLACEMENT

1. Turn off the countertop and disconnect the AC power supply.
2. Open the lock and tilt the top of the Back Door towards you to remove it completely (see Fig. 1 on page 26 for details).
3. Remove the freely installed Cashbox by lifting upwards, then pulling it towards you (see Fig. 2 on page 27 for details).
4. Unscrew 4 Machine Screws:
(Two- #8-32 x 1-1/4" and two #8-32 x 3/8") and open the monitor to gain access to all electronic components (see Fig. 3 on page 28 and Fig. 4 on page 29 for details).
5. Press on the snaps of the Inner Cover to unlock them. Tilt the cover towards you, and then slide the Inner Cover upwards. Move it along the Monitor Stopper Cable and set it aside (see Fig. 5 on page 30 for details).
6. Disconnect the Counter Cable connector (6) from the I/O Board (see Fig. 30 on page 44 for details).
7. Unscrew two Machine Screws #4-40 x 3/16" and lift the I/O Board upwards to remove the Counter Cable, located underneath the board (see Fig. 31 on page 45 for details)
8. Unscrew one Machine Screw M3 x 6 and replace the old counter with the new one (see Fig. 33 on page 46 for details).
9. Reassemble the countertop by following the previous steps in reverse order.

NOTE: For part numbers see Appendix B

11. POWER PAD ASSEMBLY REPLACEMENT

1. Turn off the countertop and disconnect the AC power supply.

Following two steps are for security purposes only (not to let coin from cashbox get into machine).

2. Open the lock and tilt the top of the Back Door towards you to remove it completely (see Fig. 1 on page 26 for details).

3. Remove the freely installed Cashbox by lifting upwards, then pulling it towards you (see Fig. 2 on page 27 for details).

4. Unscrew six Tapping Screws #8 x 3/8" and carefully pull the Power Pad Assembly upwards to gain access to the Power Pad USB cable (see Fig. 34 on page 47 for details).

5. Disconnect the Power Pad USB cable connector from the Joystick Board (see Fig. 35 on page 47 for details).

6. (Optional) If equipped with the RFID Board, disconnect the RFID cable connector from the Joystick Board (see Fig. 36 on page 48 for details).

7. Replace the old Power Pad Assembly with the new one.

8. Reassemble the countertop by following the previous steps in reverse order.

NOTE: For part numbers see Appendix B

12. UPPER GLASS REPLACEMENT

1. Turn off the countertop and disconnect the AC power supply.
2. Open the lock and tilt the top of the Back Door towards you to remove it completely (see Fig. 1 on page 26 for details).
3. Remove the freely installed Cashbox by lifting upwards, then pulling it towards you (see Fig. 2 on page 27 for details).
4. Unscrew 4 Machine Screws:
(Two- #8-32 x 1-1/4" and two #8-32 x 3/8") and open the monitor to gain access to all electronic components (see Fig. 3 on page 28 and Fig. 4 on page 29 for details).
5. Unscrew four Tapping Screws #8 x 3/4" (see Fig. 37 on page 48 for details).
6. Replace the Upper Glass with the new one.
7. Reassemble the countertop by following the previous steps in reverse order.

NOTE: For part numbers see Appendix B

13. UPPER GLASS LIGHTS PCB REPLACEMENT

1. Turn off the countertop and disconnect the AC power supply.
2. Open the lock and tilt the top of the Back Door towards you to remove it completely (see Fig. 1 on page 26 for details).
3. Remove the freely installed Cashbox by lifting upwards, then pulling it towards you (see Fig. 2 on page 27 for details).
4. Unscrew two Machine Screws #8-32 x 1-1/4" and open the monitor to gain access to all electronic components (see Fig. 3 on page 28 and Fig. 4 on page 29 for details).
5. Unscrew four Tapping Screws #8 x 3/4" (see Fig. 37 on page 48 for details) and set aside the Upper Glass.
6. Disconnect the cable from the PCB (see Fig. 38 on page 49 for details)
7. Pull the Upper Glass Lights PCB towards you and press onto the snaps to release the PCB. You may need to use a flat head screwdriver to push the PCB from behind (see Fig. 39 on page 49 for details).
8. Reassemble the countertop by following the previous steps in reverse order.

NOTE: For part numbers see Appendix B

14. AMPLIFIER PCB REPLACEMENT

1. Turn off the countertop and disconnect the AC power supply.
2. Open the lock and tilt the top of the Back Door towards you to remove it completely (see Fig. 1 on page 26 for details).
3. Remove the freely installed Cashbox by lifting upwards, then pulling it towards you (see Fig. 2 on page 27 for details).
4. Unscrew 4 Machine Screws:
(Two- #8-32 x 1-1/4" and two #8-32 x 3/8") and open the monitor to gain access to all electronic components (see Fig. 3 on page 28 and Fig. 4 on page 29 for details).
5. Press on the snaps of the Inner Cover to unlock them. Tilt the cover towards you, and then slide the Inner Cover upwards. Move it along the Monitor Stopper Cable and set it aside (see Fig. 5 on page 30 for details).
6. Unscrew one Hex Nut #8-32, slide the Amplifier Shield upwards and pull to release.
This lifted position will allow you easy access to connectors (see Fig. 40 on page 50 for details).
7. Unplug the following connectors from the Amplifier PCB:
 - Upper Tweeters connector (1)
 - Mid-range speakers connector (2)
 - Subwoofer speakers connector (3)
 - CPU Box audio cable connector (4)
 - Power cable connector (5)

See Fig. 41 on page 50 for details

8. Unscrew two Machine Screws #4-40 x 3/16" (see Fig. 42 on page 51 for details) and replace the old Amplifier PCB with the new one.
9. Reassemble the countertop by following the previous steps in reverse order.

NOTE: For part numbers see Appendix B

15. POWER SUPPLY REPLACEMENT

NOTE: You will need a short Philips head screwdriver.

1. Turn off the countertop and disconnect the AC power supply.
2. Open the lock and tilt the top of the Back Door towards you to remove it completely (see Fig. 1 on page 26 for details).
3. Remove the freely installed Cashbox by lifting upwards, then pulling it towards you (see Fig. 2 on page 27 for details).
4. Unscrew two Machine Screws #8-32 x 3/8", and move the Coin Out Tray out of the way by pushing it to the left (see Fig. 43 on page 51 for details).
5. Unscrew three Machine Screws #8-32 x 1/4" (see Fig. 44 on page 56 for details).
6. Tilt and position the Power Supply Assembly as shown in Fig. 45 on page 53 to remove it from the countertop. Disconnect AC and DC cables from the old Power Supply Board.
7. Unscrew 4 Machine Screws #6-32 x 3/8" (see Fig. 46 on page 53 for details)
8. Replace the old Power Supply with the new one.
9. Reassemble the countertop by following the previous steps in reverse order.

NOTE: For part numbers see Appendix B

16. MAIN FAN REPLACEMENT

NOTE: You will need a short Philips head screwdriver.

1. Turn off the countertop and disconnect the AC power supply.
2. Open the lock and tilt the top of the Back Door towards you to remove it completely (see Fig. 1 on page 26 for details).
3. Remove the freely installed Cashbox by lifting upwards, then pulling it towards you (see Fig. 2 on page 27 for details).
4. Unscrew two Machine Screws #8-32 x 3/8", and move the Coin Out Tray out of the way by pushing it to the left (see Fig. 43 on page 51 for details).
5. Unscrew three Machine Screws #8-32 x 1/4" (see Fig. 44 on page 56 for details).
6. Tilt and position the Power Supply Assembly as shown in Fig. 45 on page 53 to remove it from the countertop. Disconnect AC and DC cables from the Power Supply Board.
7. Unscrew the two screws and open the monitor to gain access to all electronic components (see Fig. 47 on page 54 for details).
8. Press on the snaps of the Inner Cover to unlock them. Tilt the cover towards you, and then slide the Inner Cover upwards. Move it along the Monitor Stopper Cable and set it aside (see Fig. 5 on page 30 for details).
9. Disconnect following connector from I/O Board:
 - Fan cable (2) HNS-CT09-719(see Fig. 30 on page 44 for details).
10. Unscrew two Machine Screws #8-32 x 1/4" (see Fig. 48 on page 54 for details). Be careful not to lose the washers with these screws.
11. Unscrew one Machine Screw #8-32 x 1/4" and move the Fan Cover to the left to remove (see Fig. 49 on page 55 for details).
12. Unscrew two Machine Screws #4-40 x 3/8" and replace the old Fan with the new one (see Fig. 50 on page 55 for details).
13. Reassemble the countertop by following the previous steps in reverse order.

NOTE: For part numbers see Appendix B

17. SERVICE LIGHTS PCB REPLACEMENT

1. Turn off the countertop and disconnect the AC power supply.
2. Open the lock and tilt the top of the Back Door towards you to remove it completely (see Fig. 1 on page 26 for details).
3. Remove the freely installed Cashbox by lifting upwards, then pulling it towards you (see Fig. 2 on page 27 for details).
4. Disconnect the Service Lights cable connector from the Service Lights PCB (see Fig. 51 on page 56 for details).
5. Unscrew two Machine Screws #4–40 x 3/16" and replace the old PCB with the new one (see Fig. 52 on page 56 for details).
6. Reassemble the countertop by following the previous steps in reverse order.

NOTE: For part numbers see Appendix B

18. WI-FI ADAPTER REPLACEMENT

1. Turn off the countertop and disconnect the AC power supply.
2. Open the lock and tilt the top of the Back Door towards you to remove it completely (see Fig. 1 on page 26 for details).
3. Remove the freely installed Cashbox by lifting upwards, then pulling it towards you (see Fig. 2 on page 27 for details).
4. Carefully move to your right side Wi-Fi adapter. Disconnect it and replace with the new one (see Fig. 53 on page 57 for details).
5. Reassemble the countertop by following the previous steps in reverse order.

NOTE: For part numbers see Appendix B

19. MODEM REPLACEMENT

1. Turn off the countertop and disconnect the AC power supply.
2. Open the lock and tilt the top of the Back Door towards you to remove it completely (see Fig. 1 on page 26 for details).
3. Remove the freely installed Cashbox by lifting upwards, then pulling it towards you (see Fig. 2 on page 27 for details).
4. Unscrew 4 Machine Screws:
(Two- #8-32 x 1-1/4" and two #8-32 x 3/8") and open the monitor to gain access to all electronic components (see Fig. 3 on page 28 and Fig. 4 on page 29 for details).
5. Press on the snaps of the Inner Cover to unlock them. Tilt the cover towards you, and then slide the Inner Cover upwards. Move it along the Monitor Stopper Cable and set it aside (see Fig. 5 on page 30 for details).
6. Locate the USB cable coming from the original modem and disconnect it from the CPU Box (See Fig. 54 on page 57 for details).
7. Disconnect the phone cable from the modem and remove the modem from the machine (See Fig. 57 on page 58 for details).
8. If necessary, disconnect the phone cable from the ESD PCB and replace it with the new one (See Fig. 56 on page 58 for details).
9. Install the new modem. Use Velcro fastener to mount it into the machine (See Fig. 57 on page 58 for details).
10. Reassemble the countertop by following the previous steps in reverse order.

NOTE: For part numbers see Appendix B



Appendix A

(Assembly Drawings)

ECHO

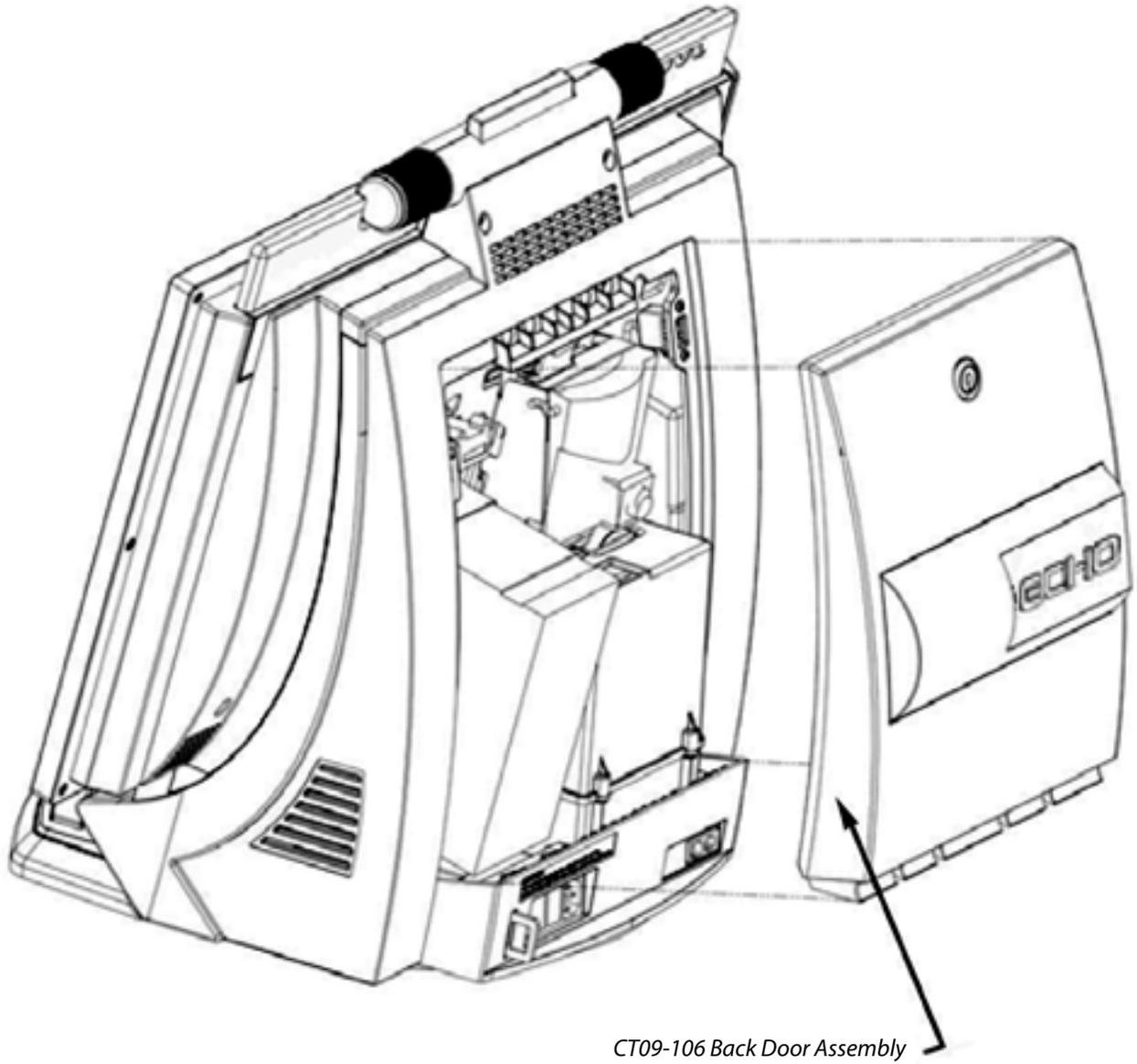


Fig. 1

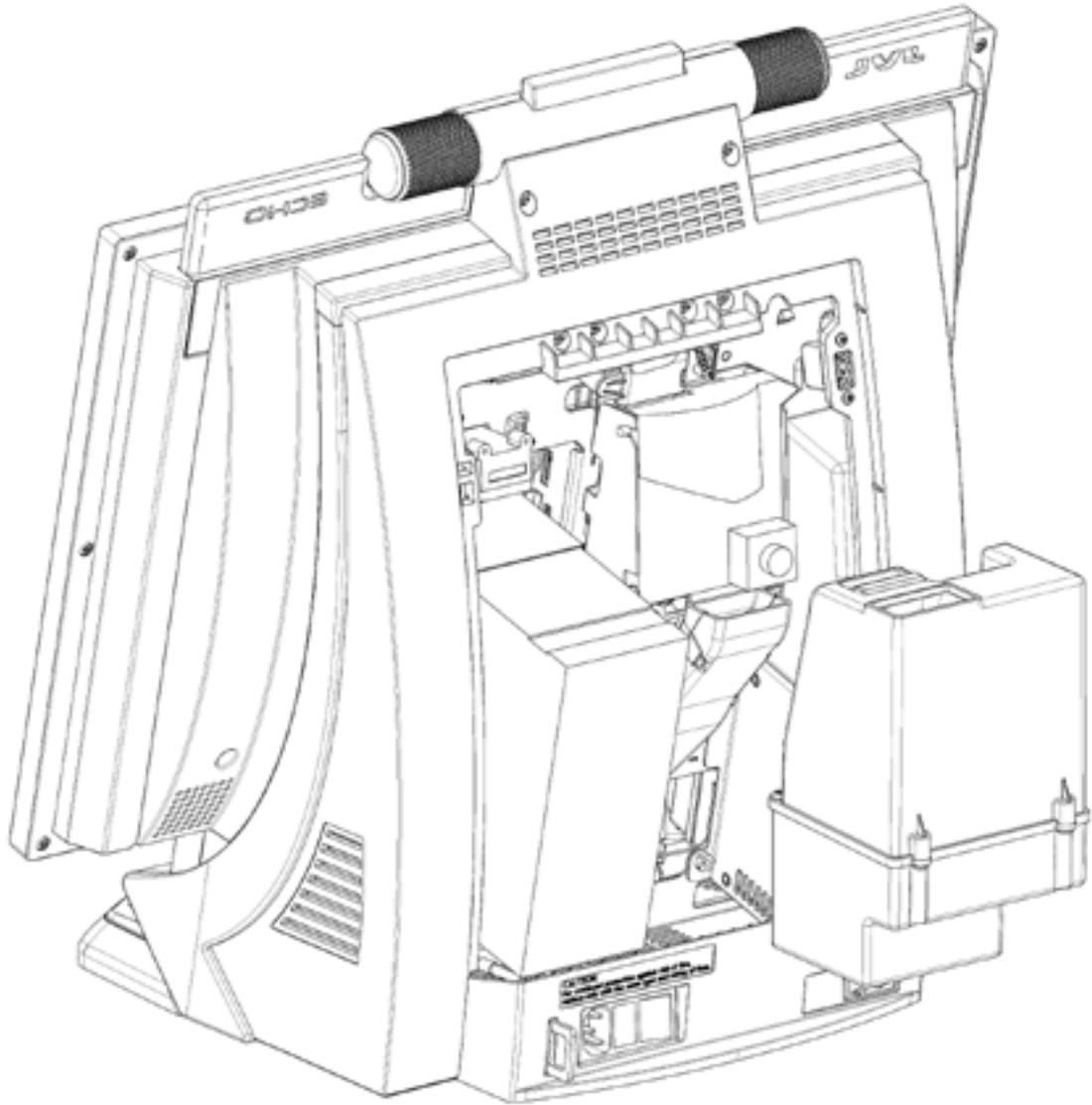


Fig. 2

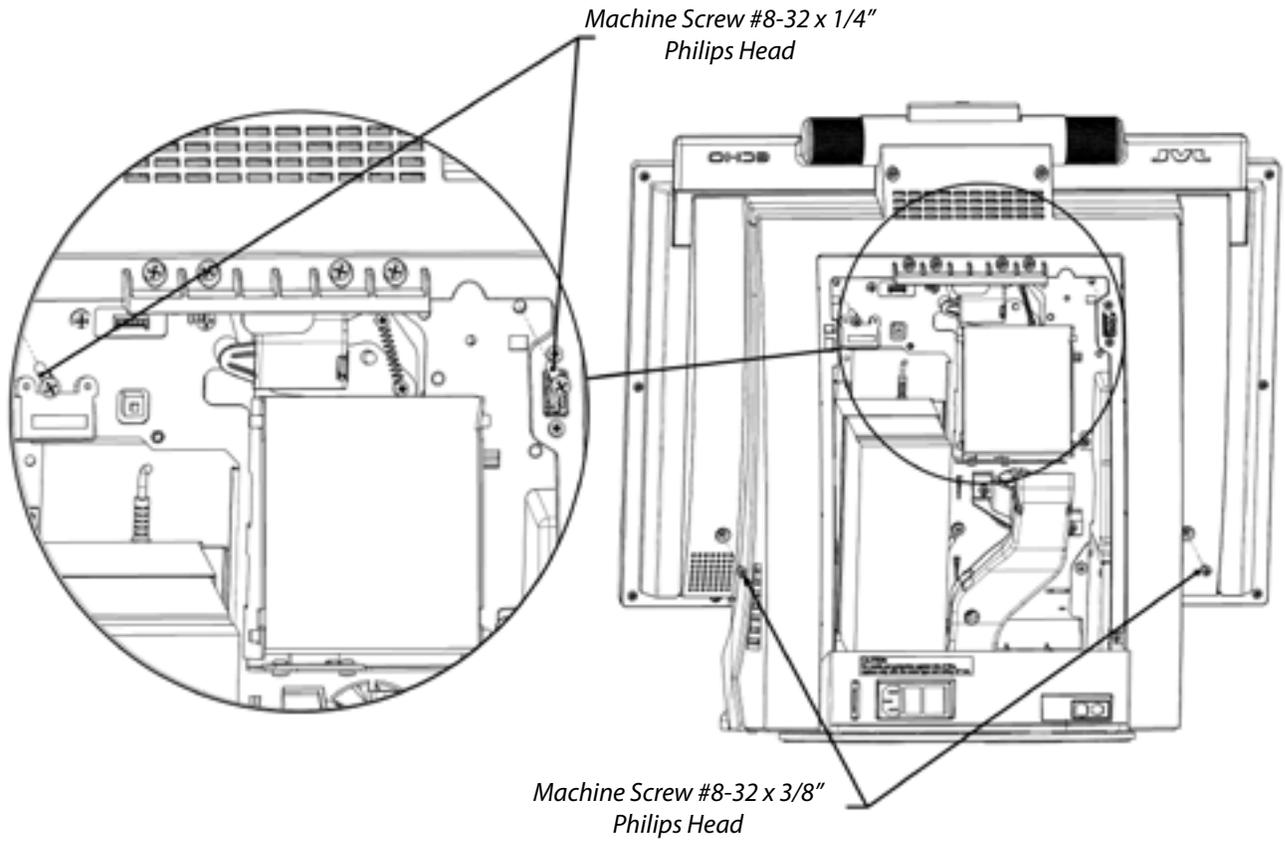


Fig. 3

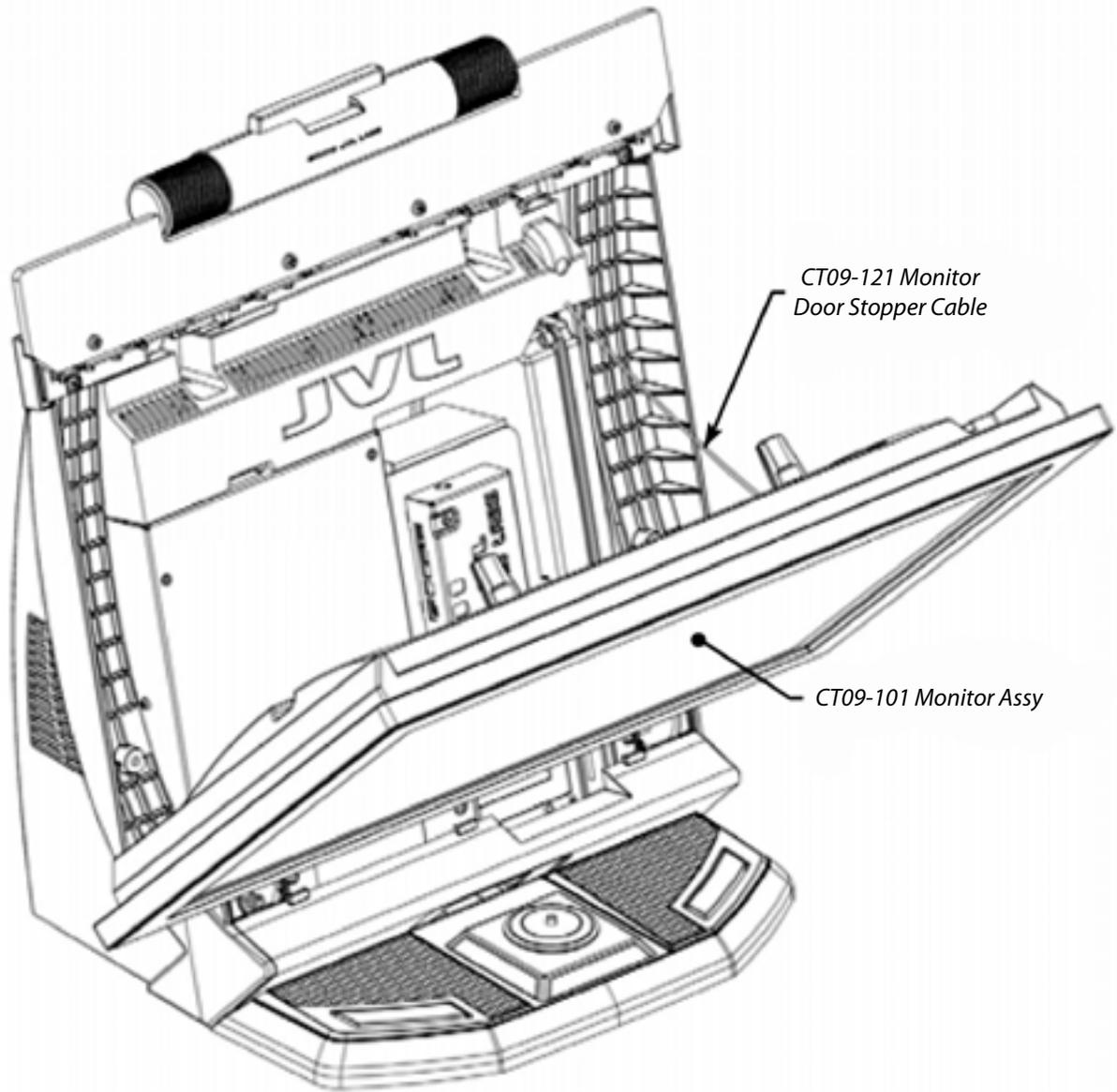


Fig. 4

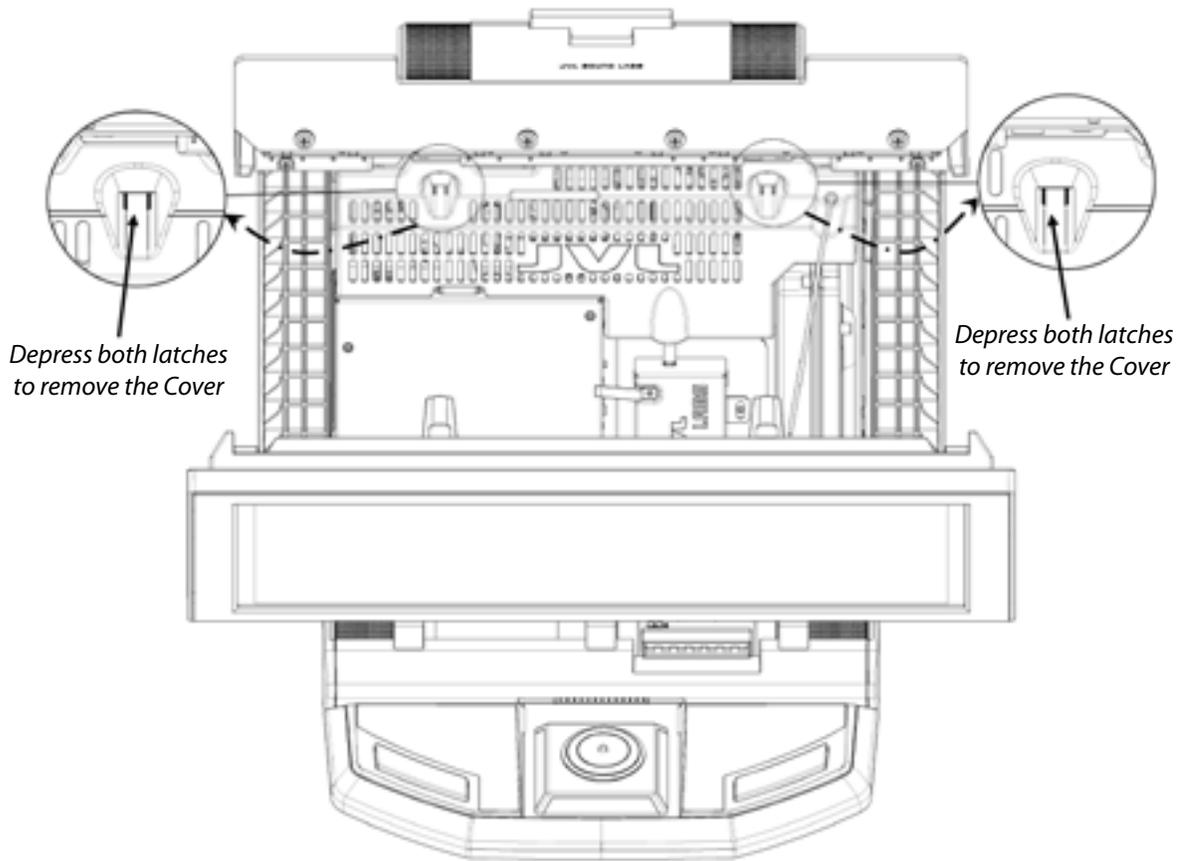


Fig. 5

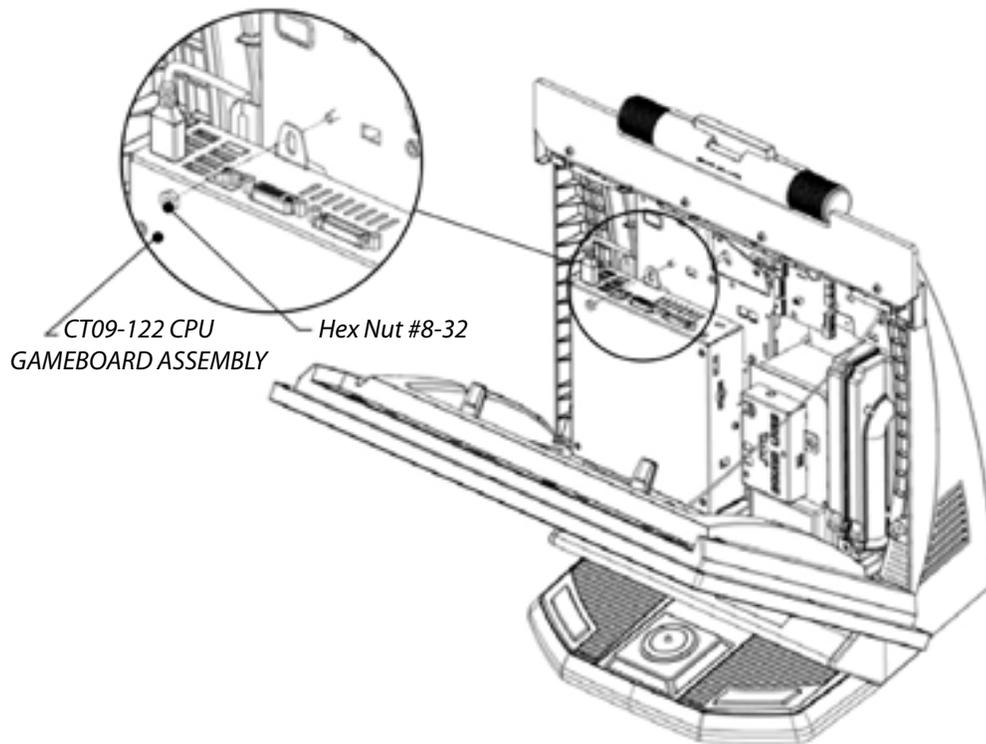


Fig. 6

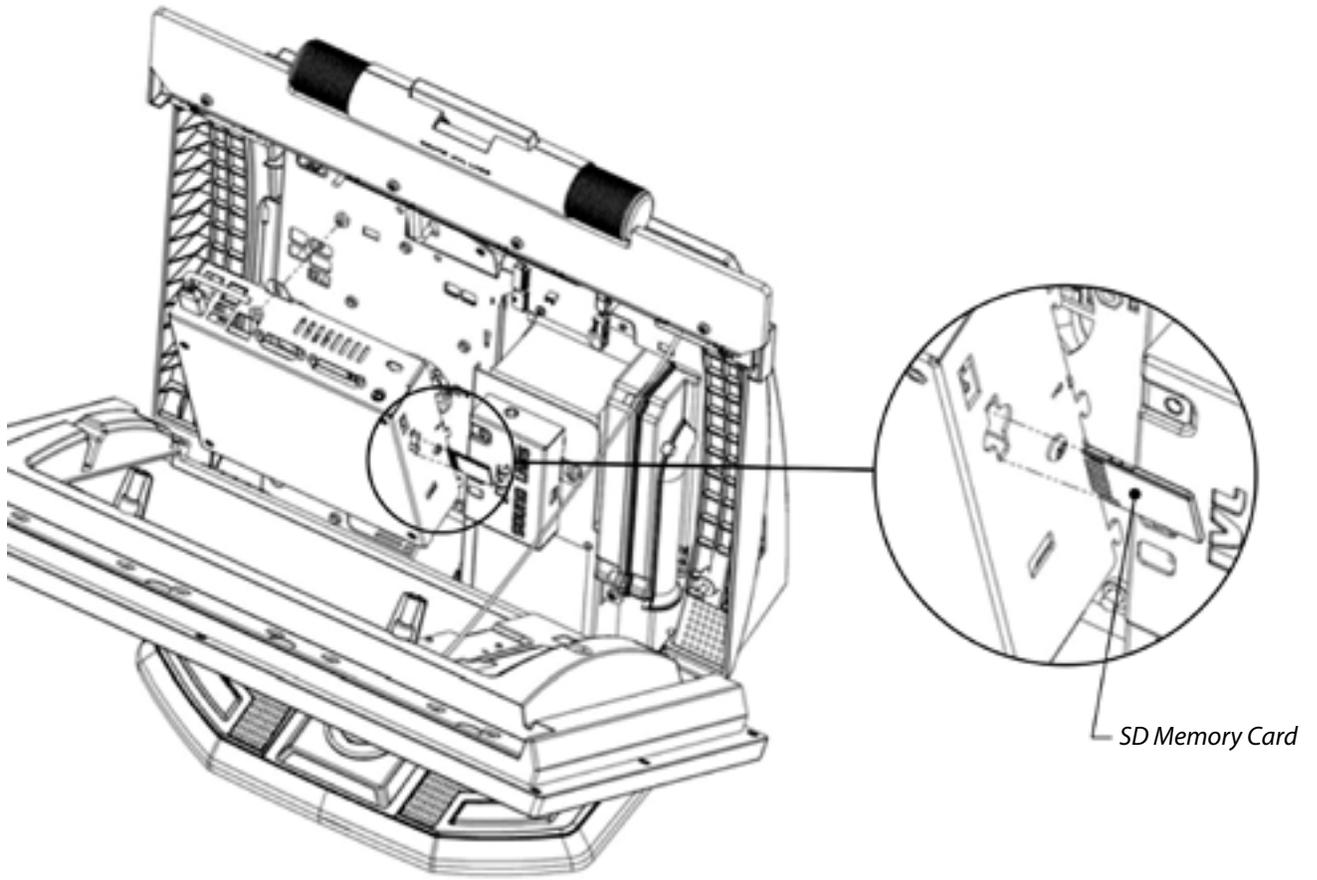


Fig. 7

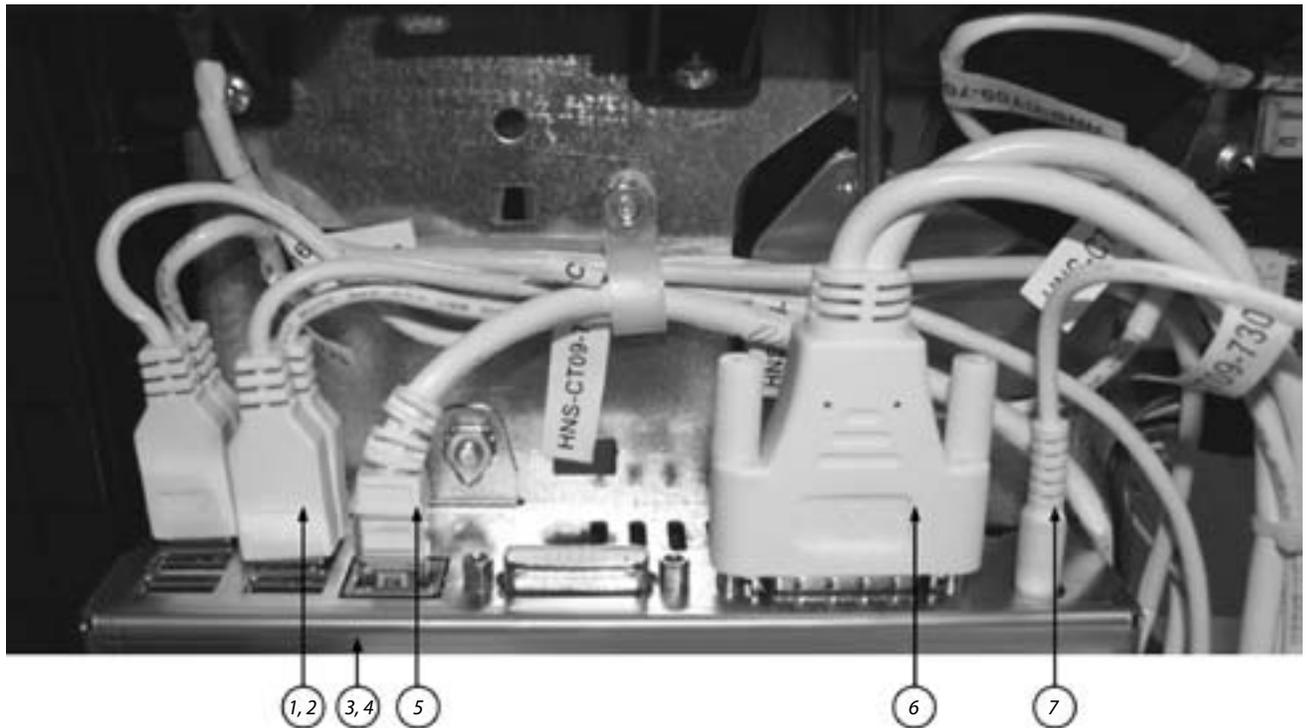


Fig. 8

Appendix A



Fig. 9



Fig. 10

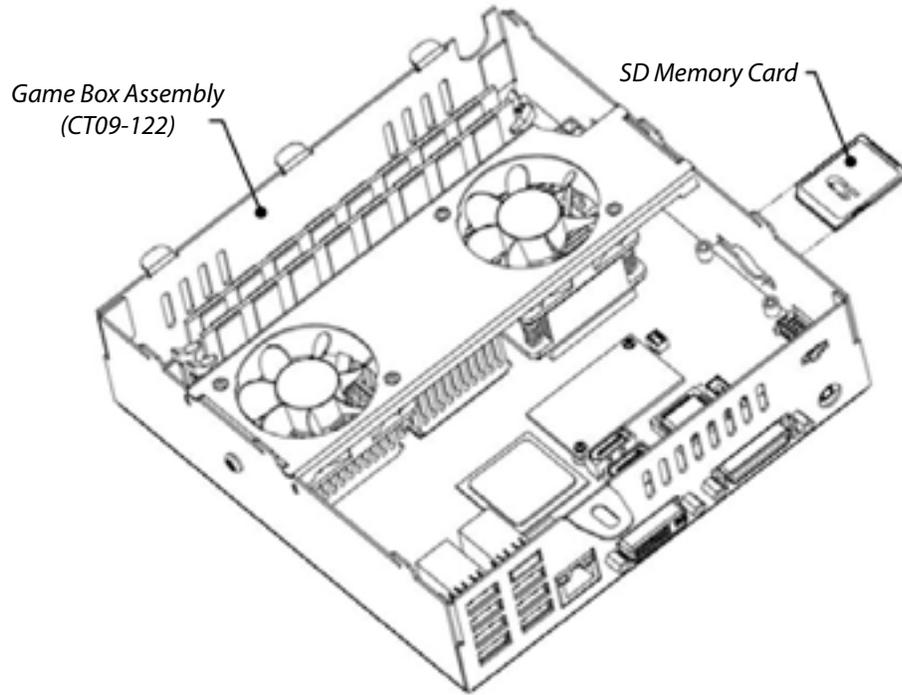


Fig. 11

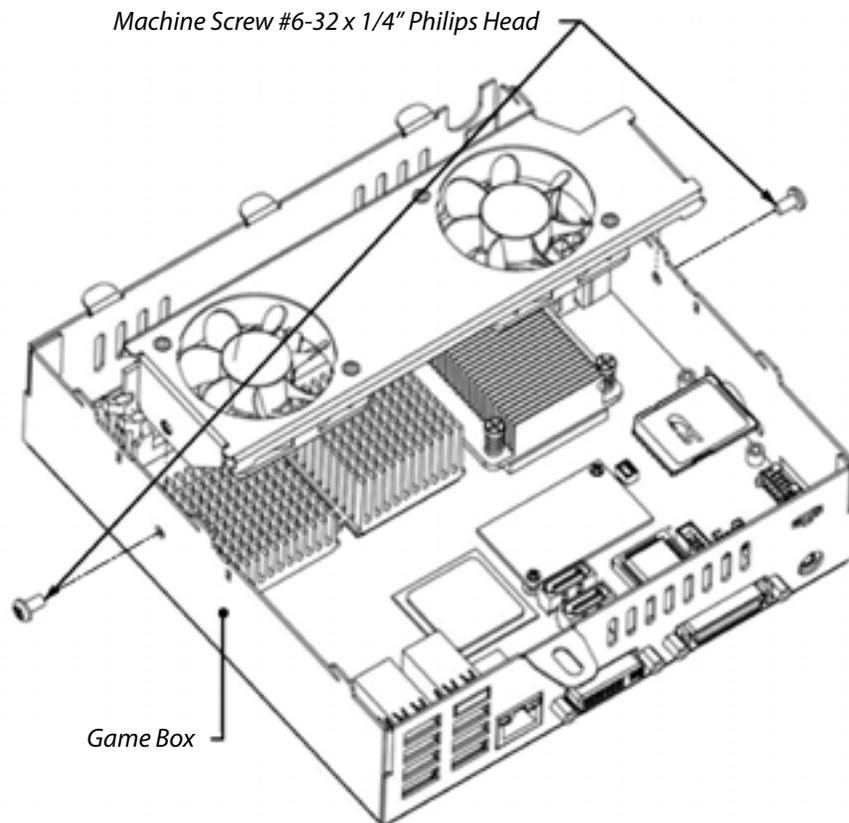


Fig. 12

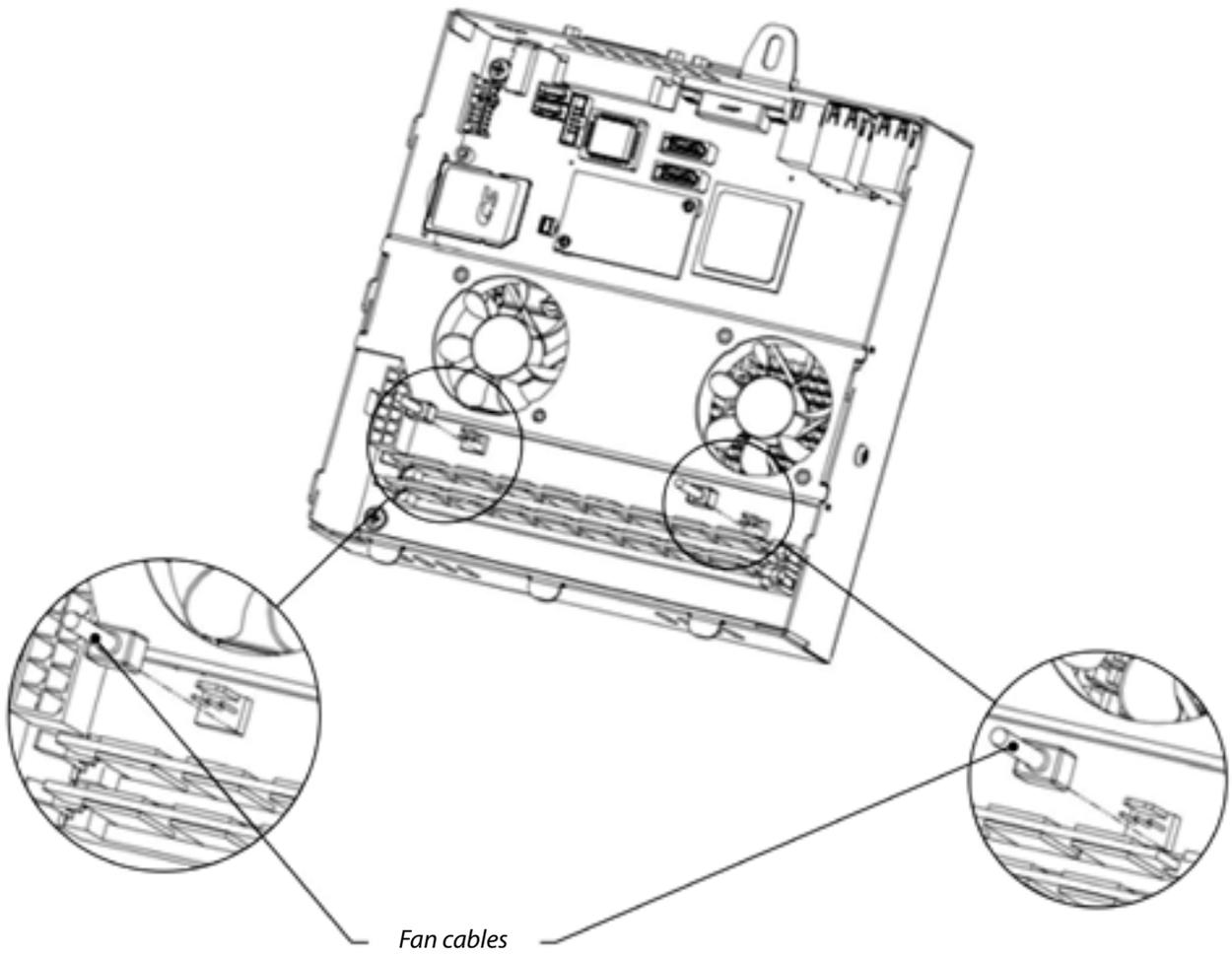


Fig. 13

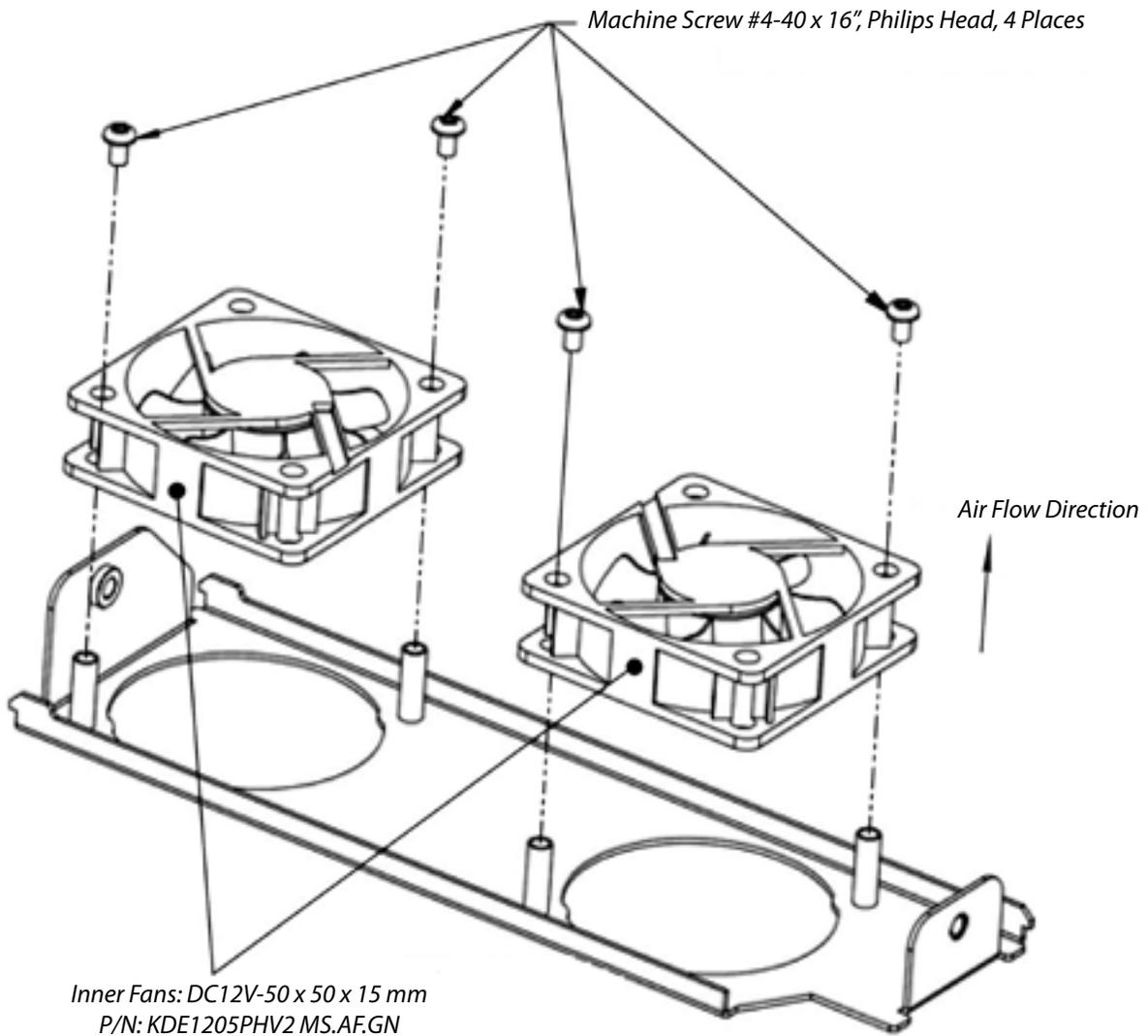


Fig. 14

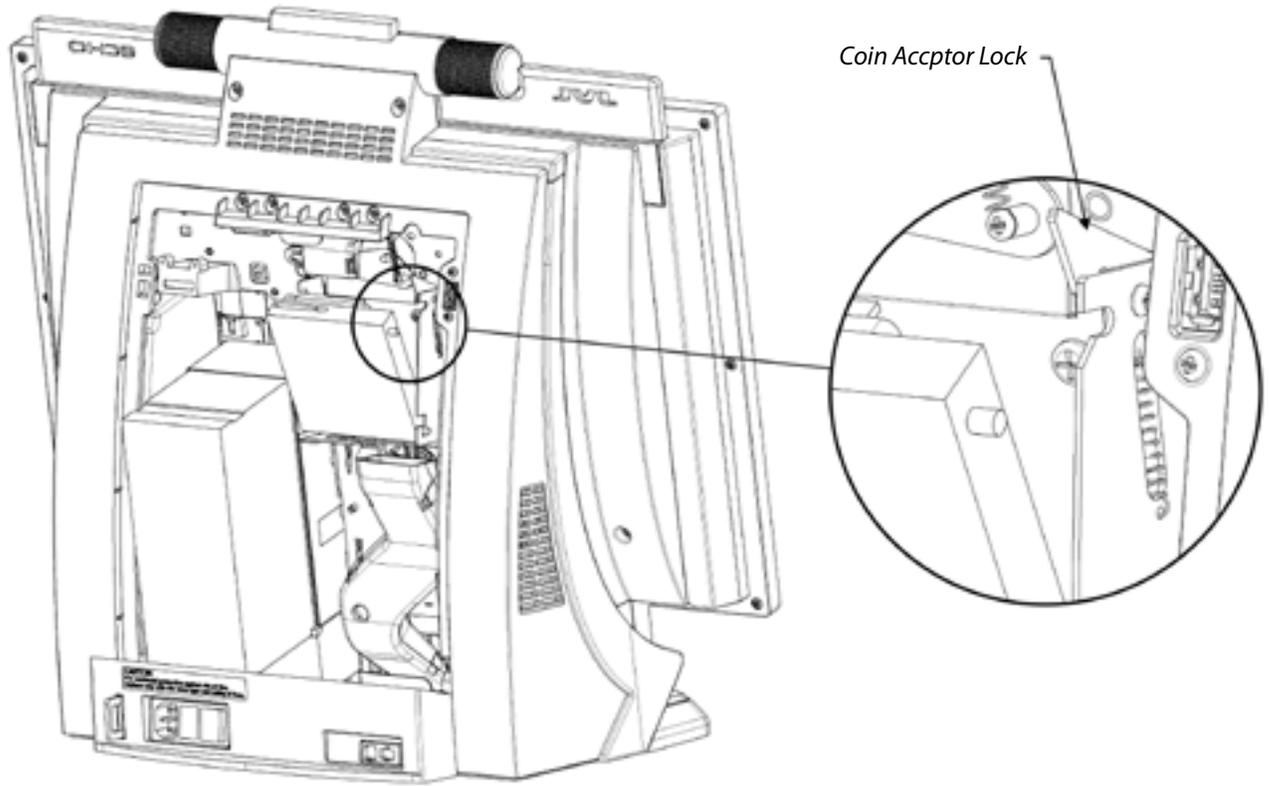


Fig. 15

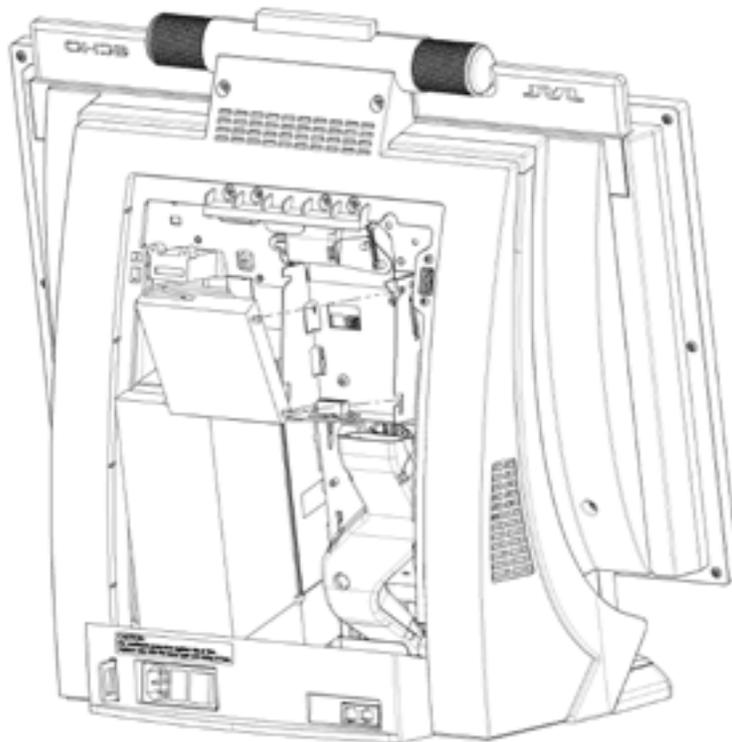


Fig. 16

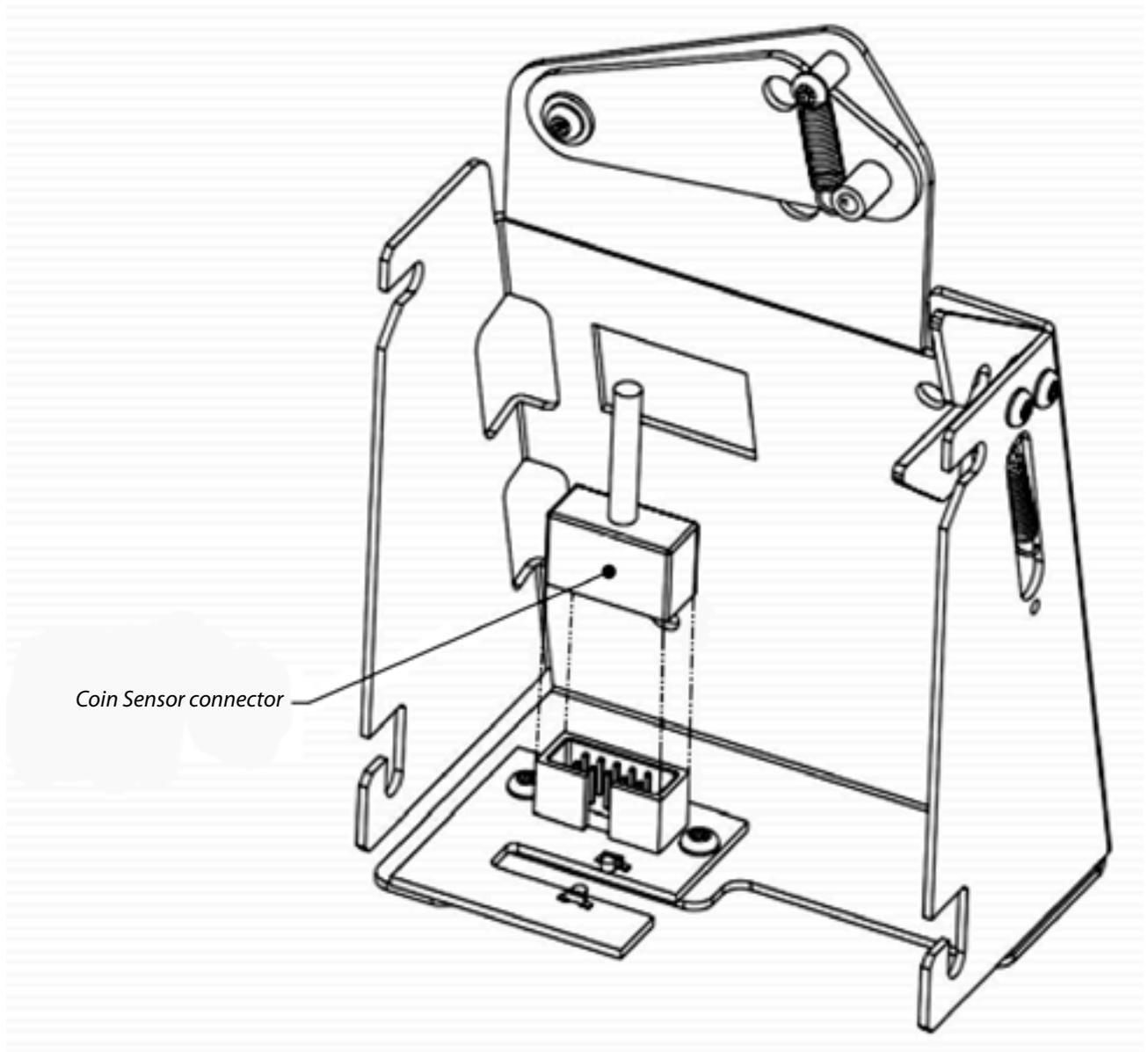


Fig. 17

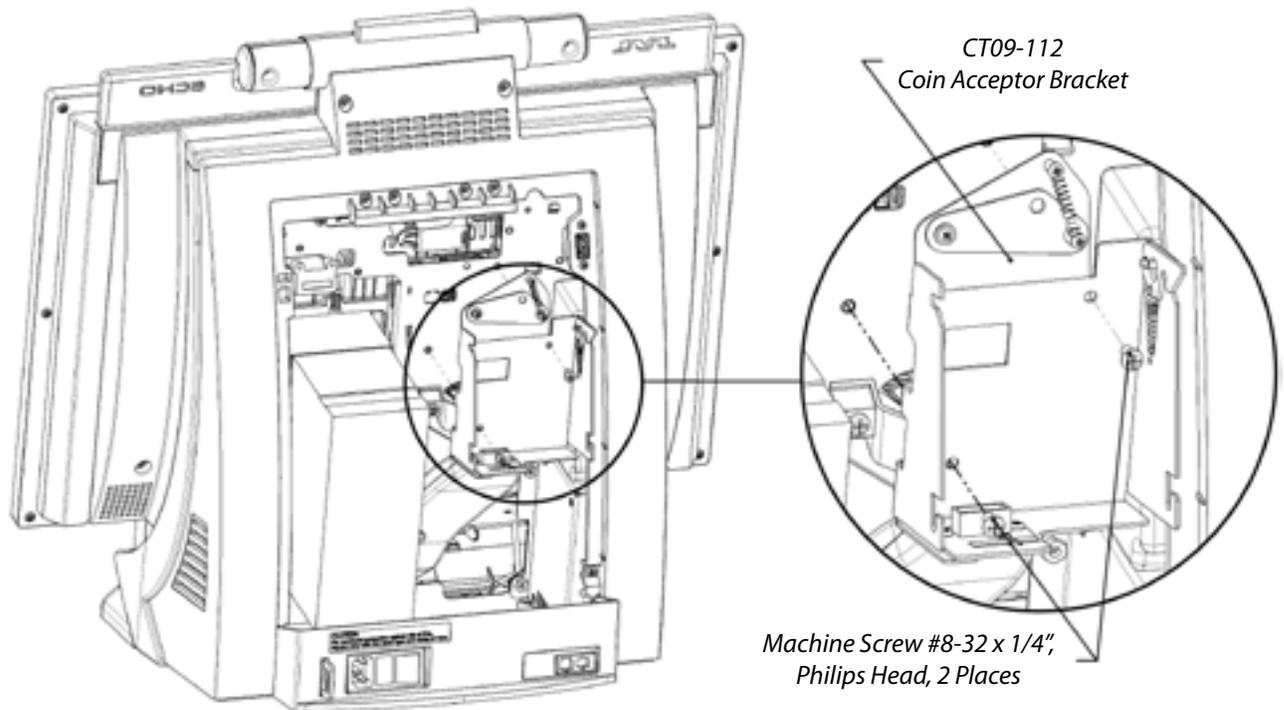


Fig. 18

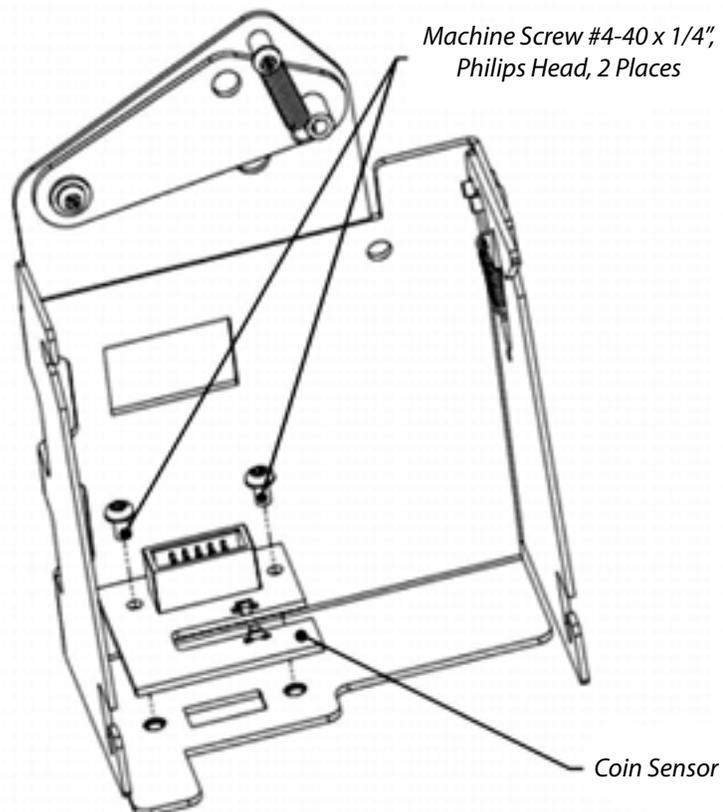


Fig. 19

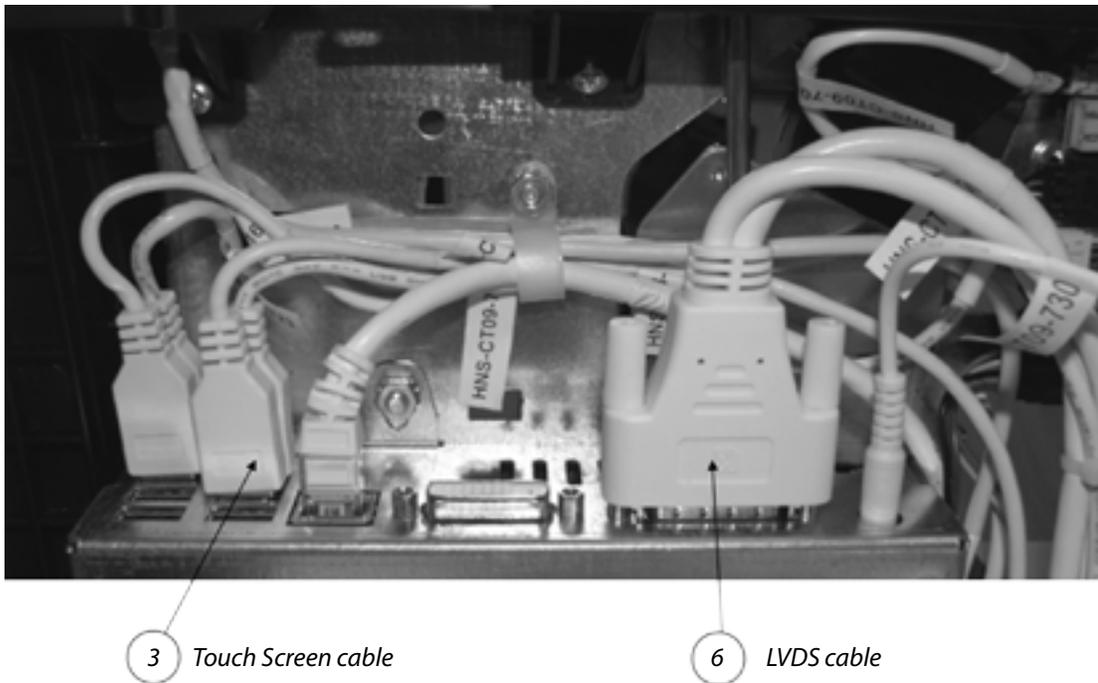


Fig. 20

NOTE: Touch screen USB cable is labeled HNS-CT09-716 and can be connected to any USB slot on the Game Box.



Fig. 21

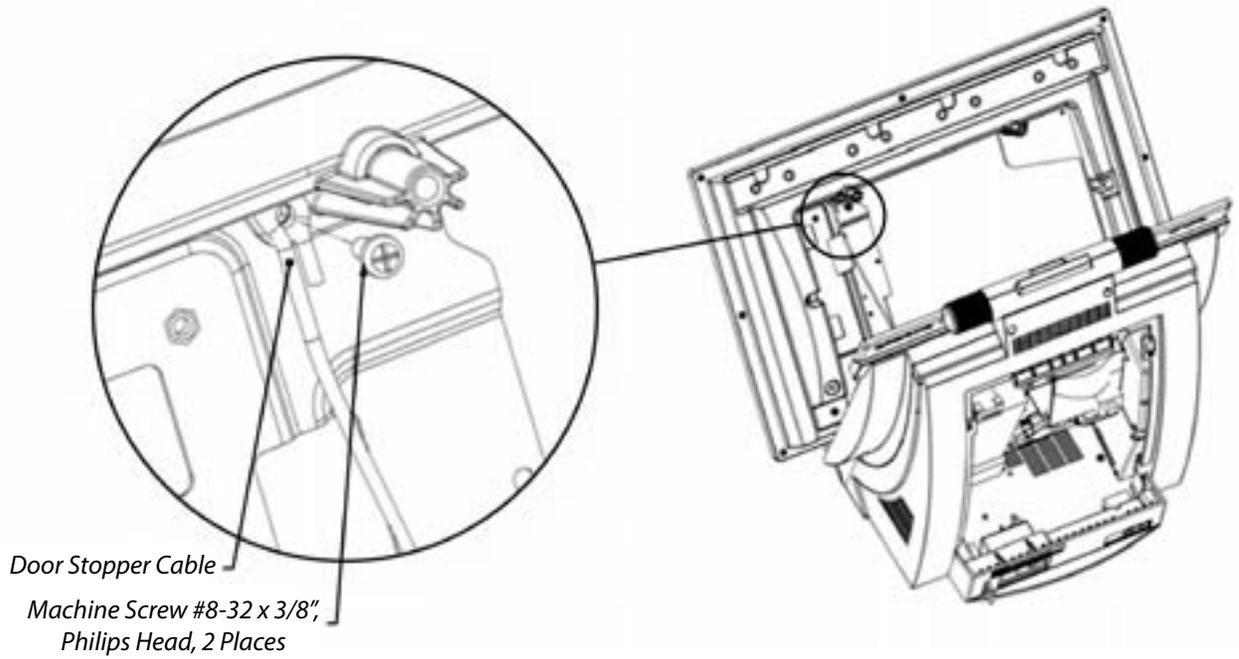


Fig. 22

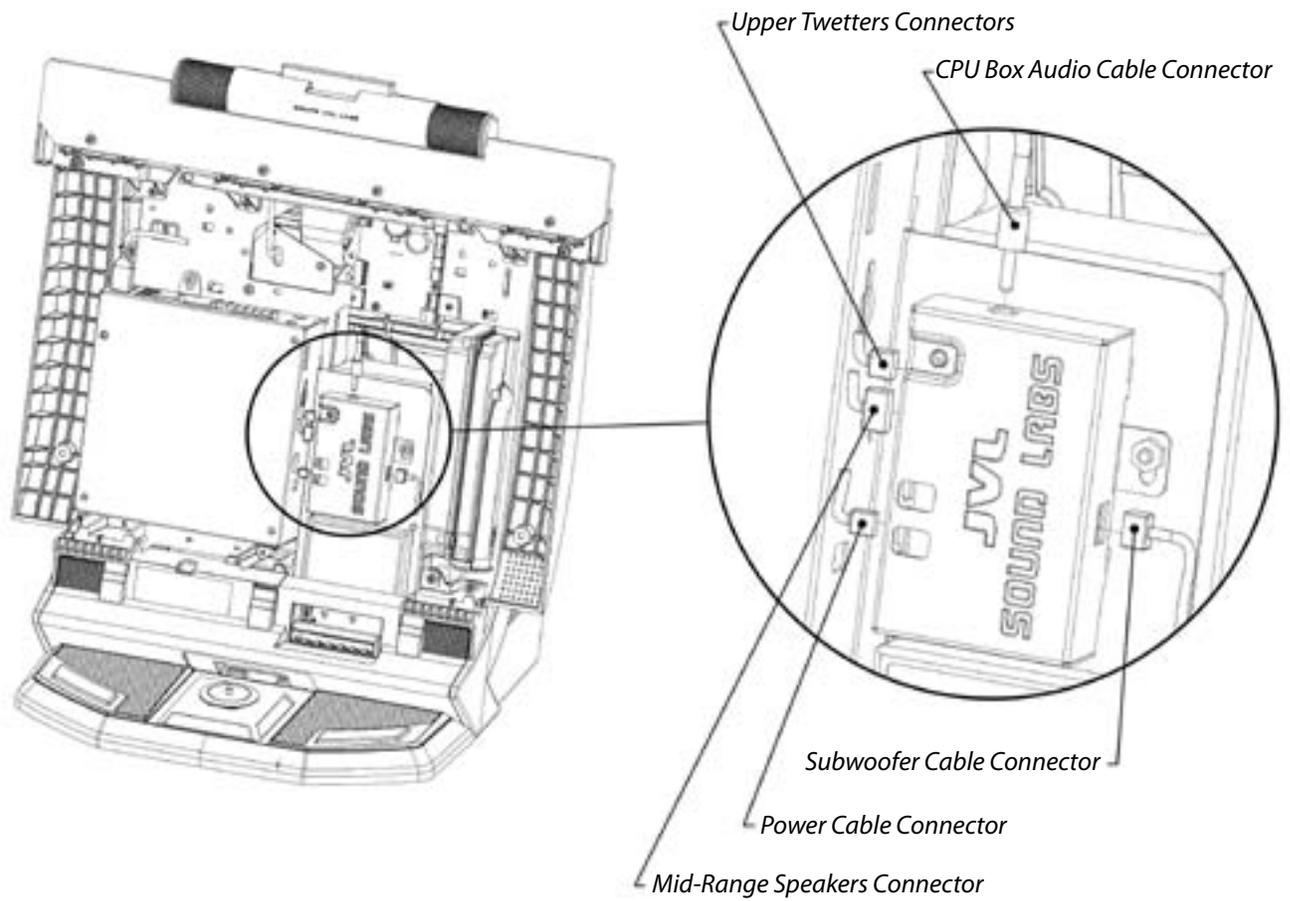


Fig. 23

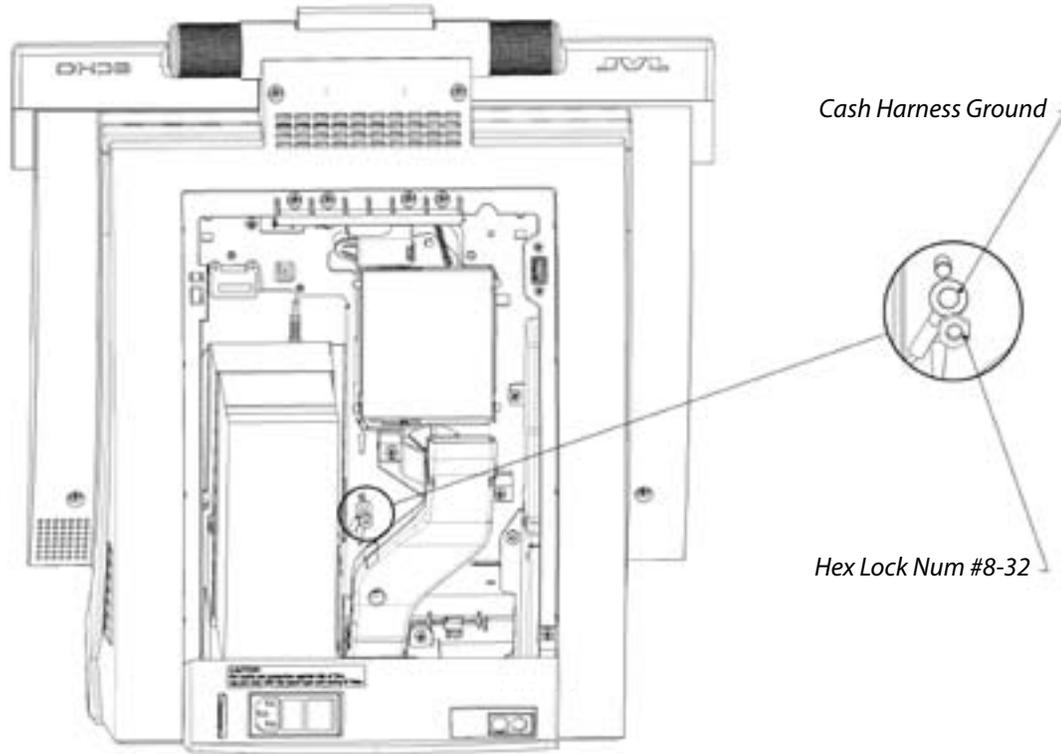


Fig. 24

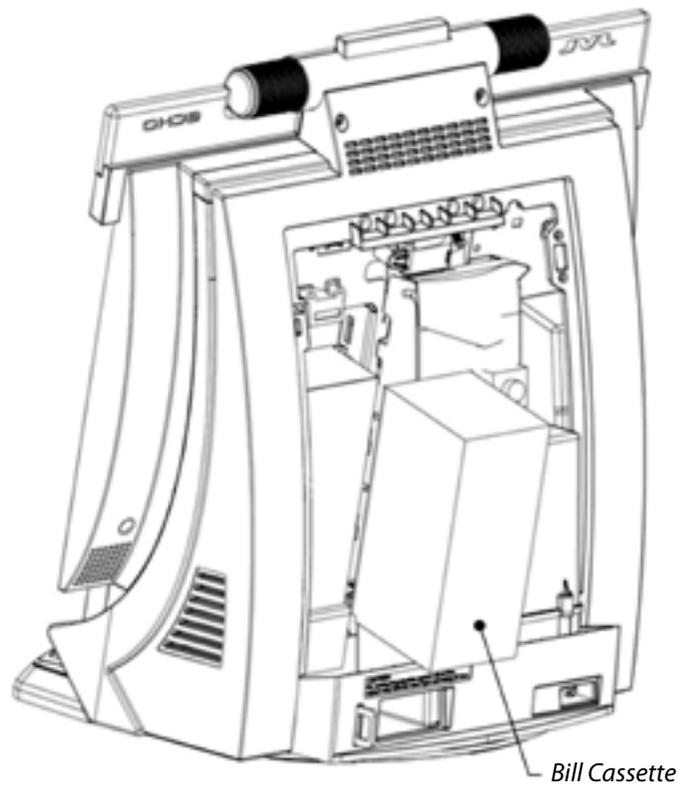


Fig. 25

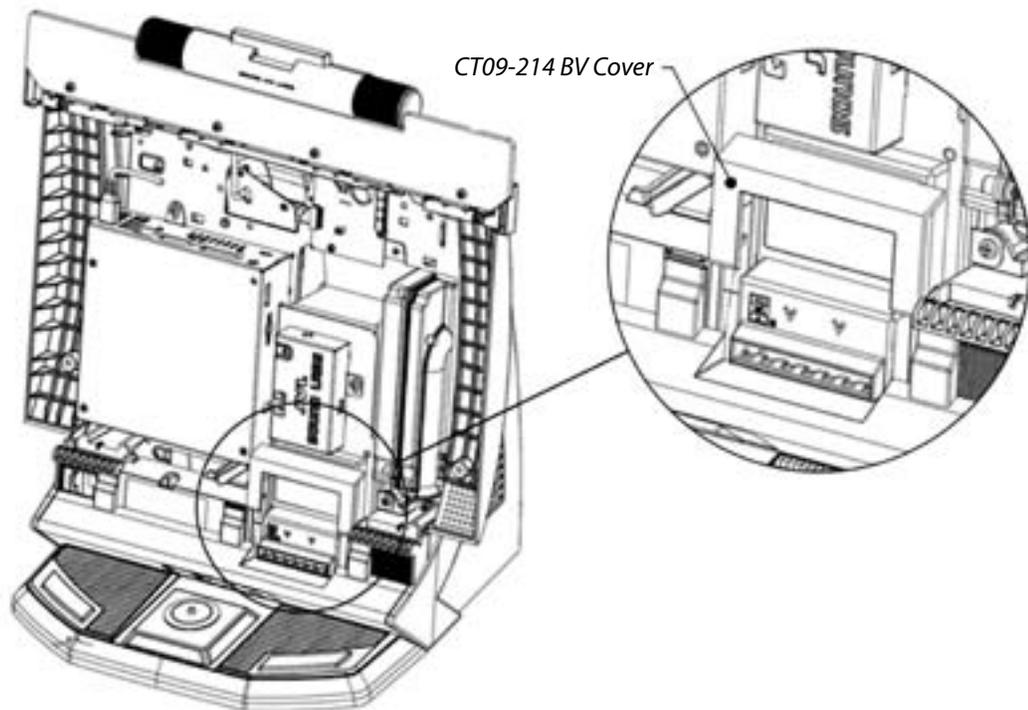


Fig. 26

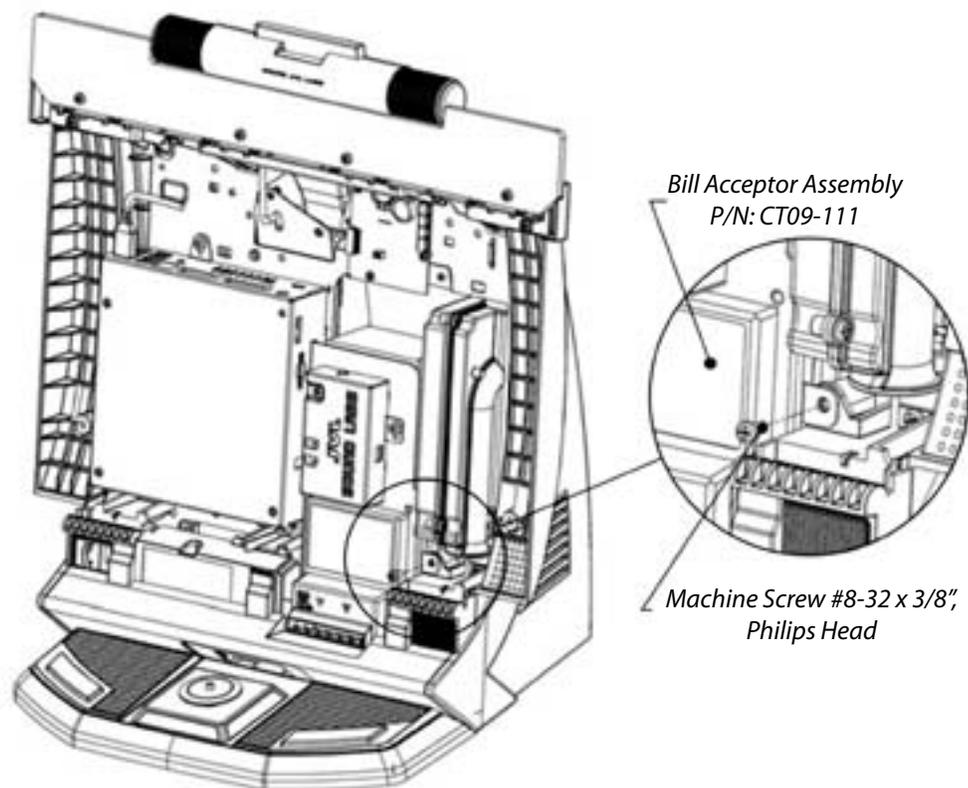


Fig. 27

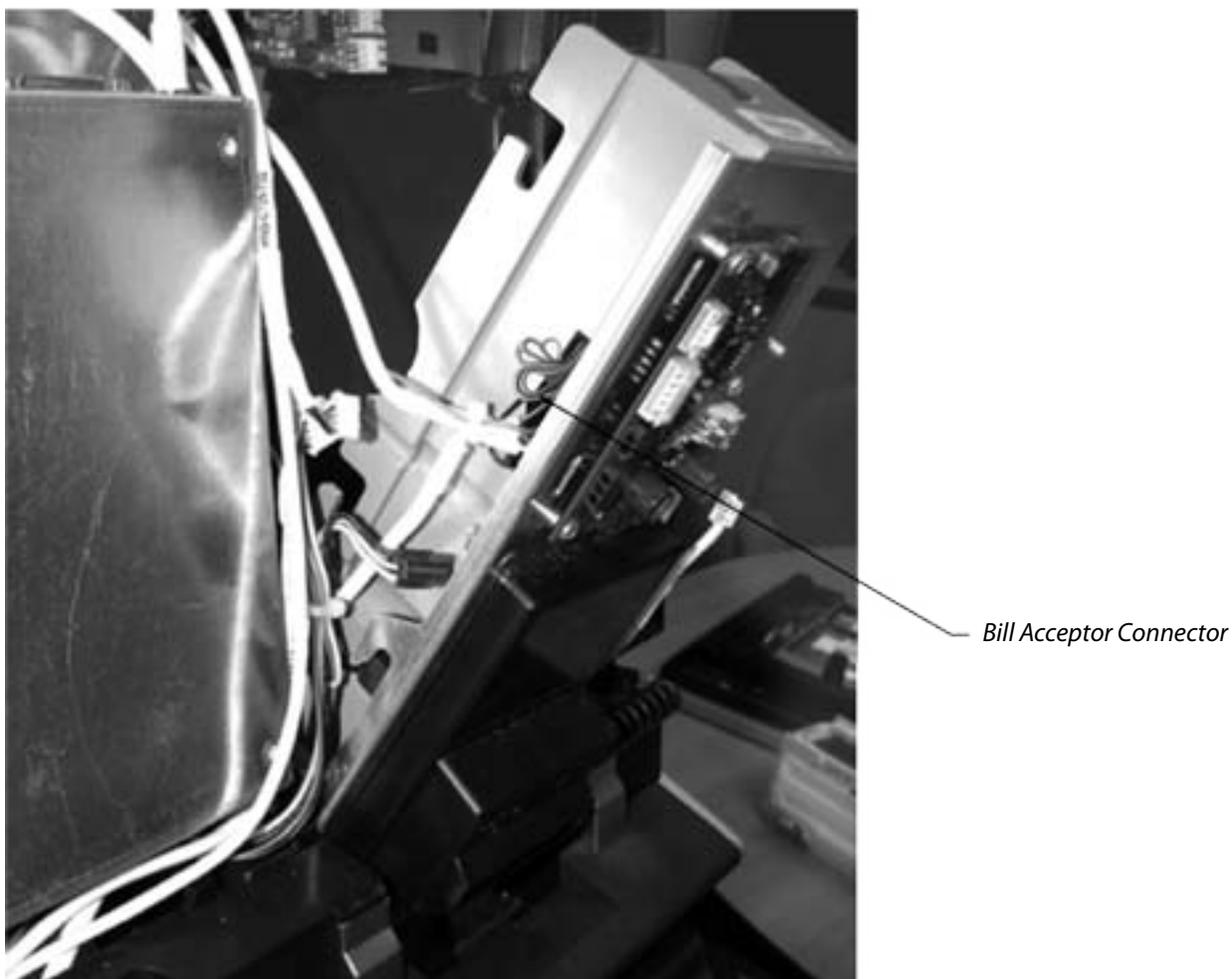


Fig. 28

NOTE:

- 1) Amplifier Shield not shown in this picture.
- 2) Position of Bill Acceptor Connector may vary depending on the model and type (Mars Bill Acceptor shown in the picture).

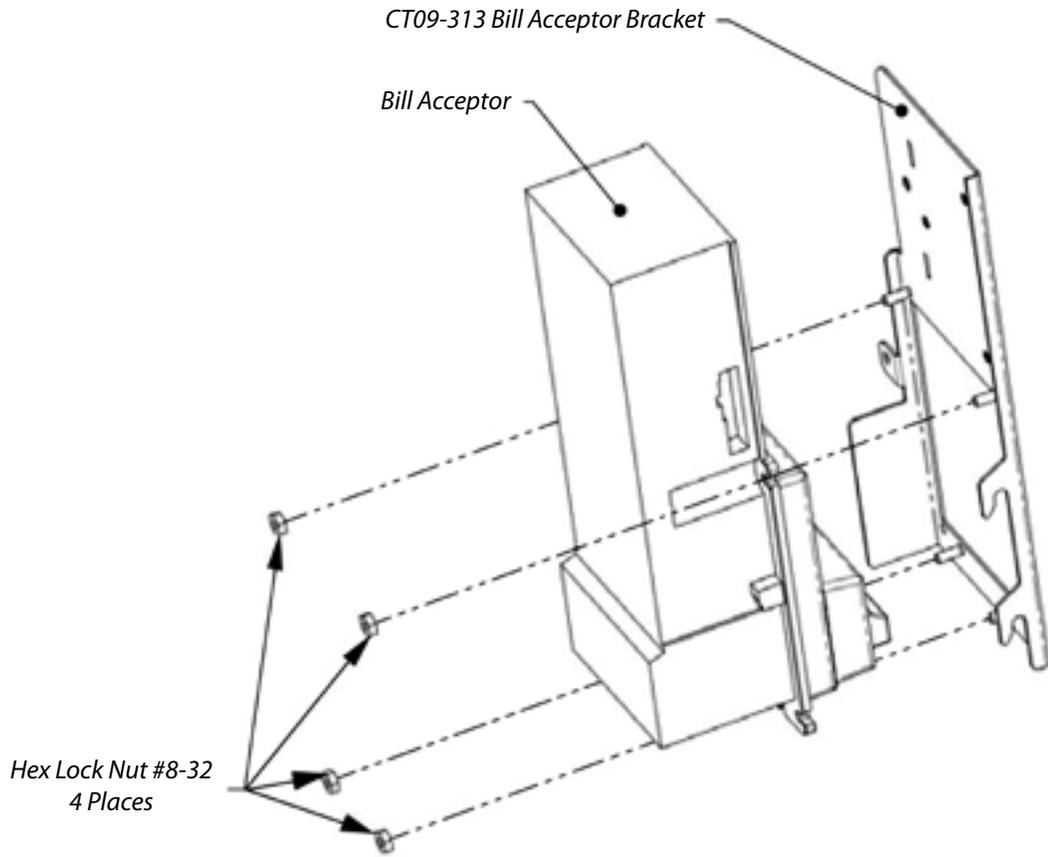


Fig. 29



Fig. 30

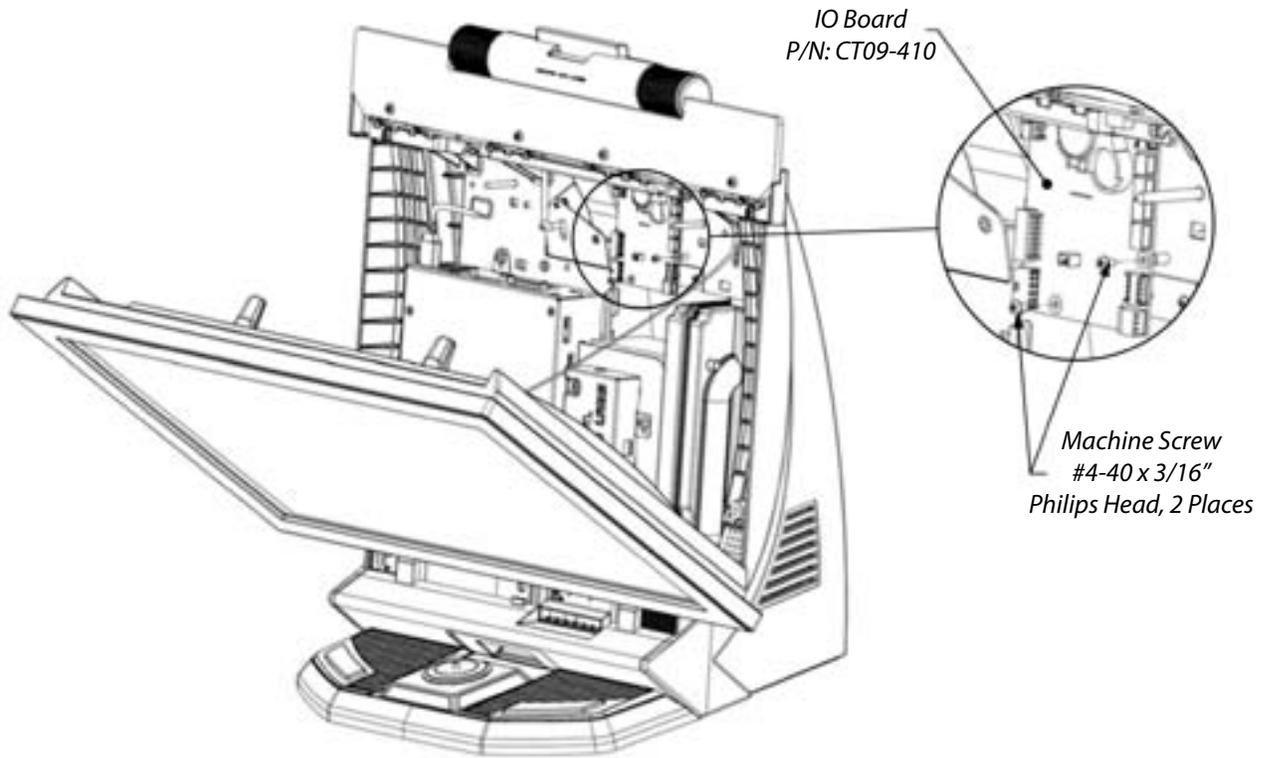


Fig. 31

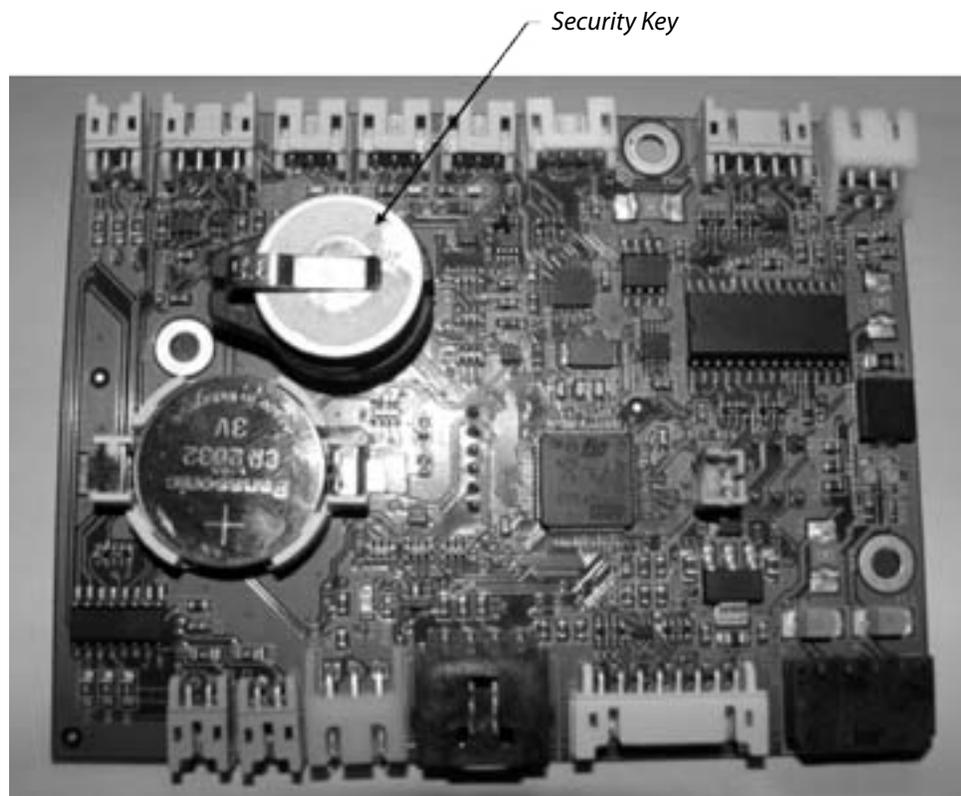


Fig. 32

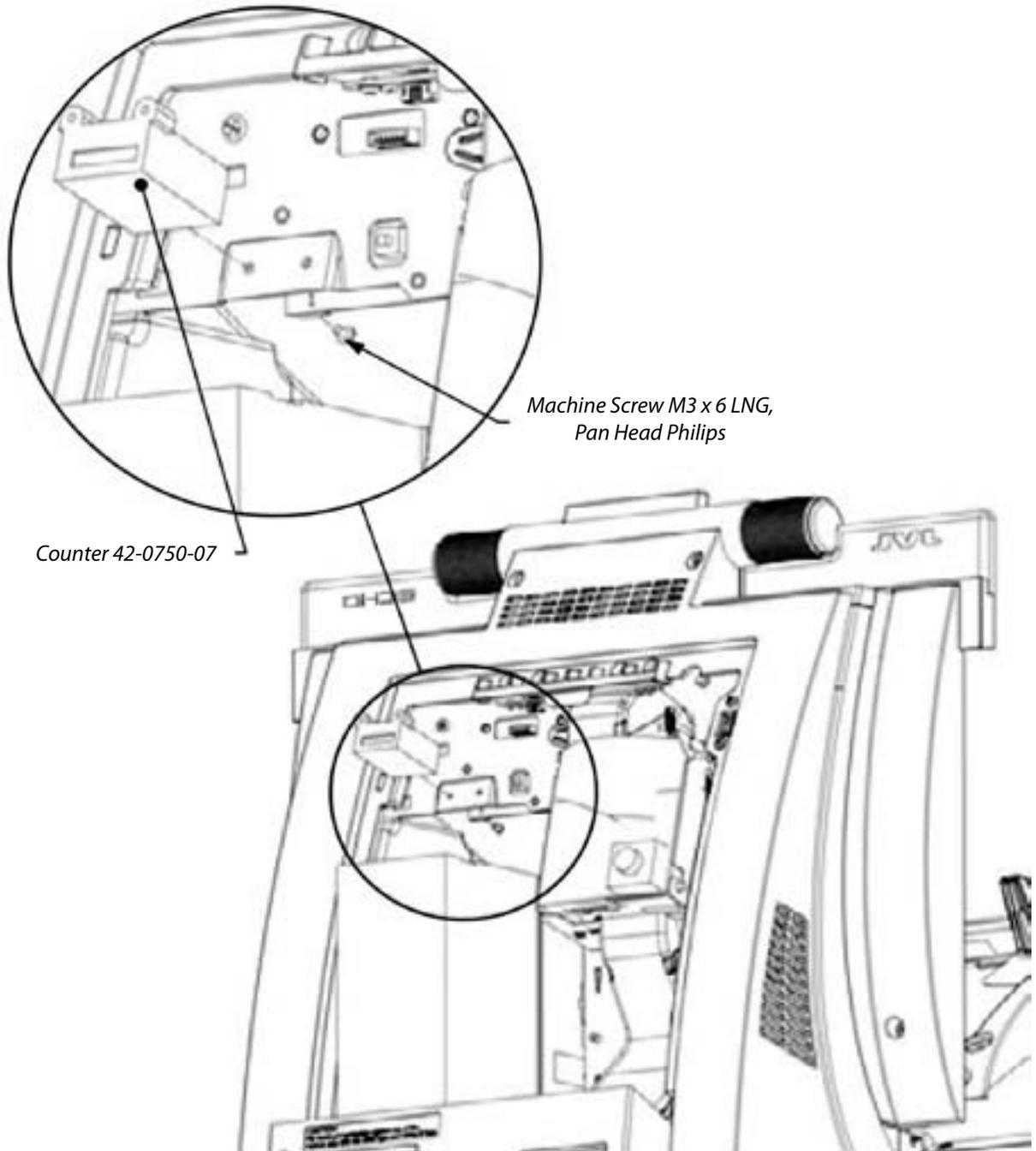


Fig. 33

Appendix A

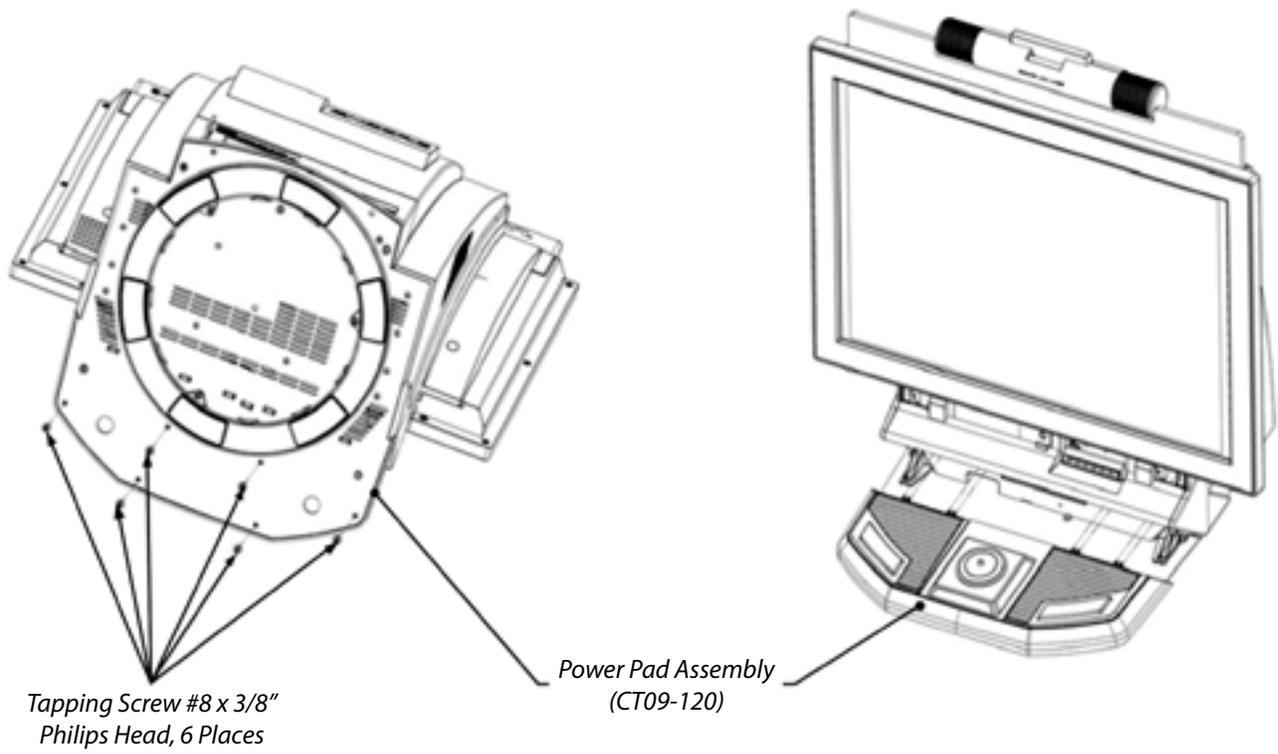


Fig. 34

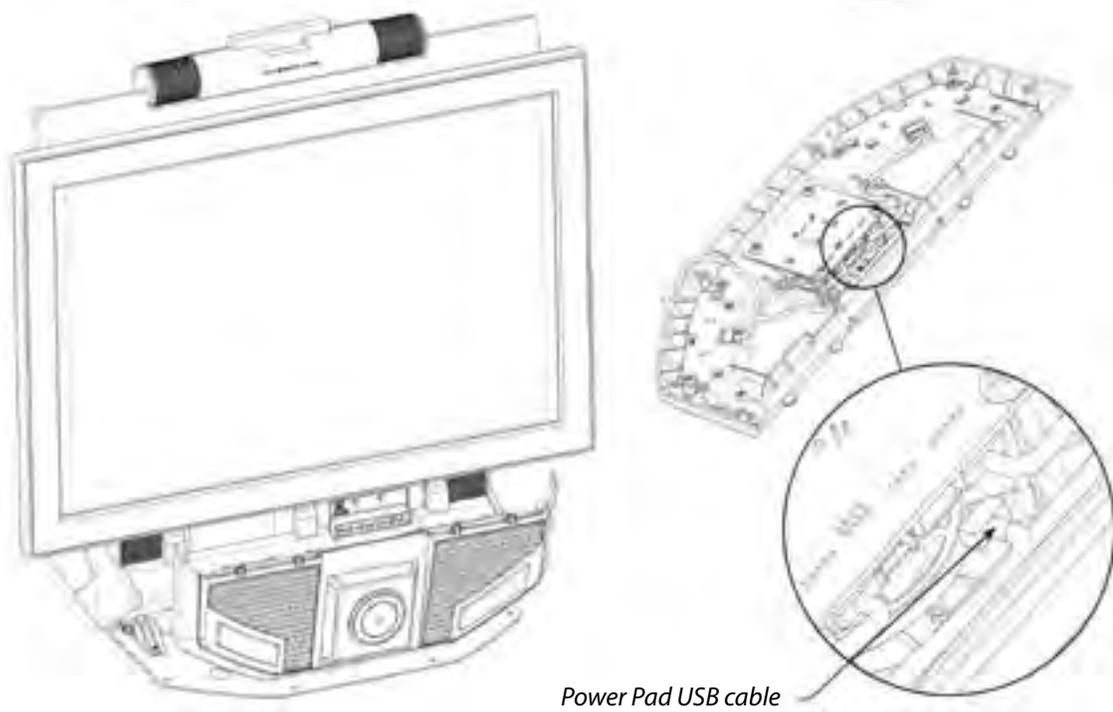


Fig. 35

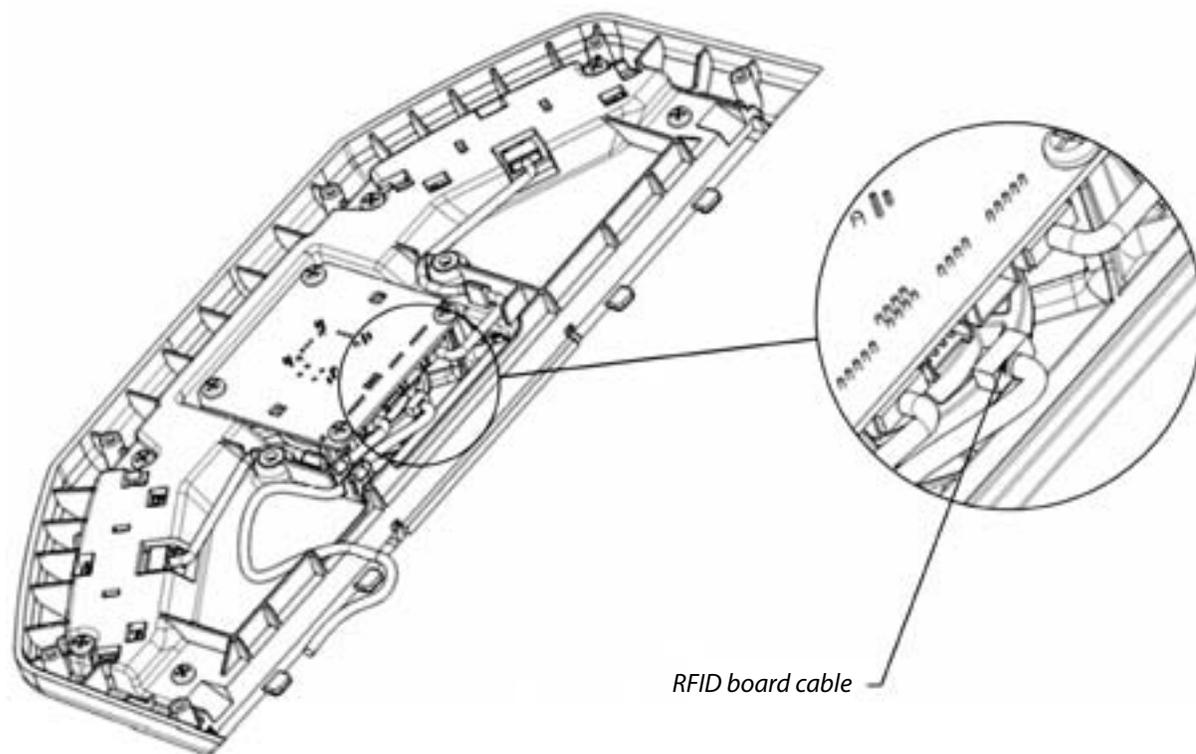


Fig. 36

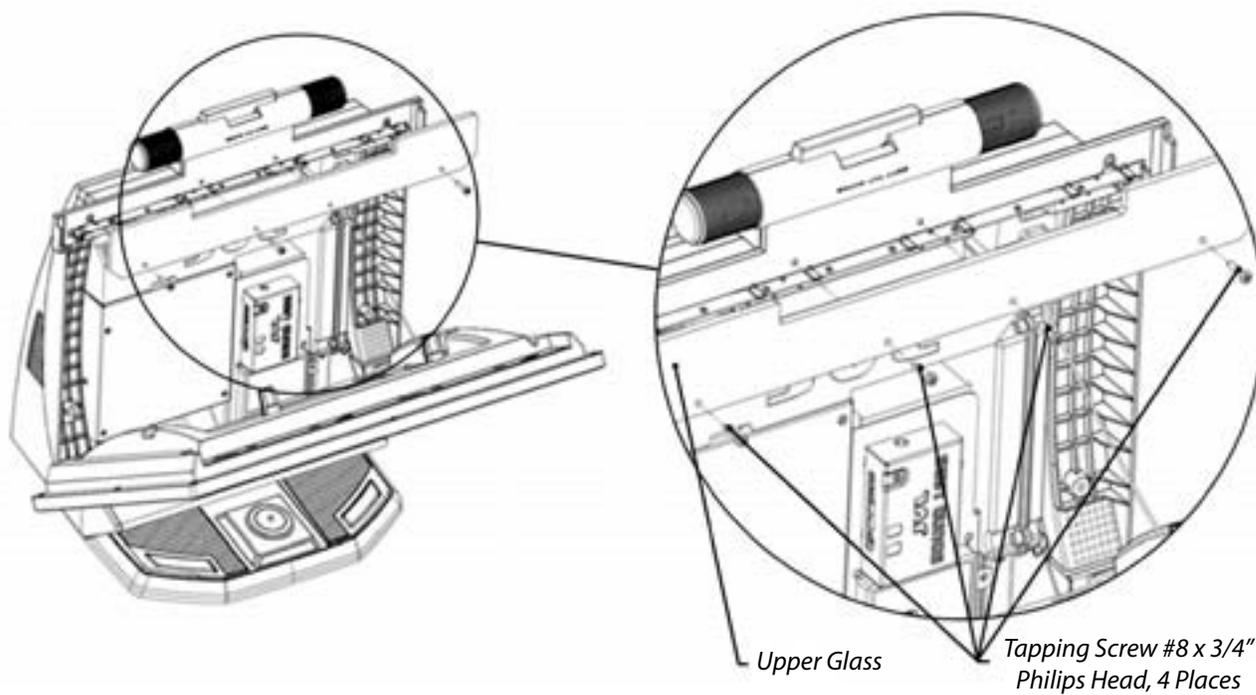


Fig. 37

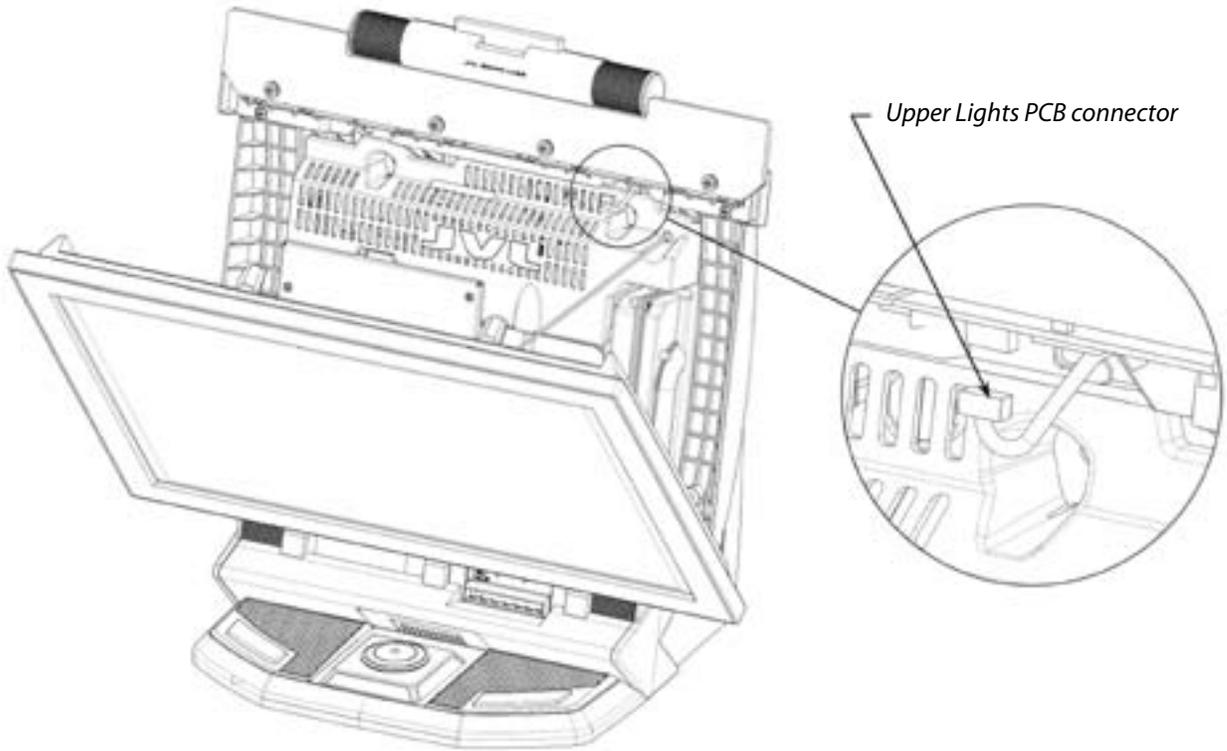


Fig. 38

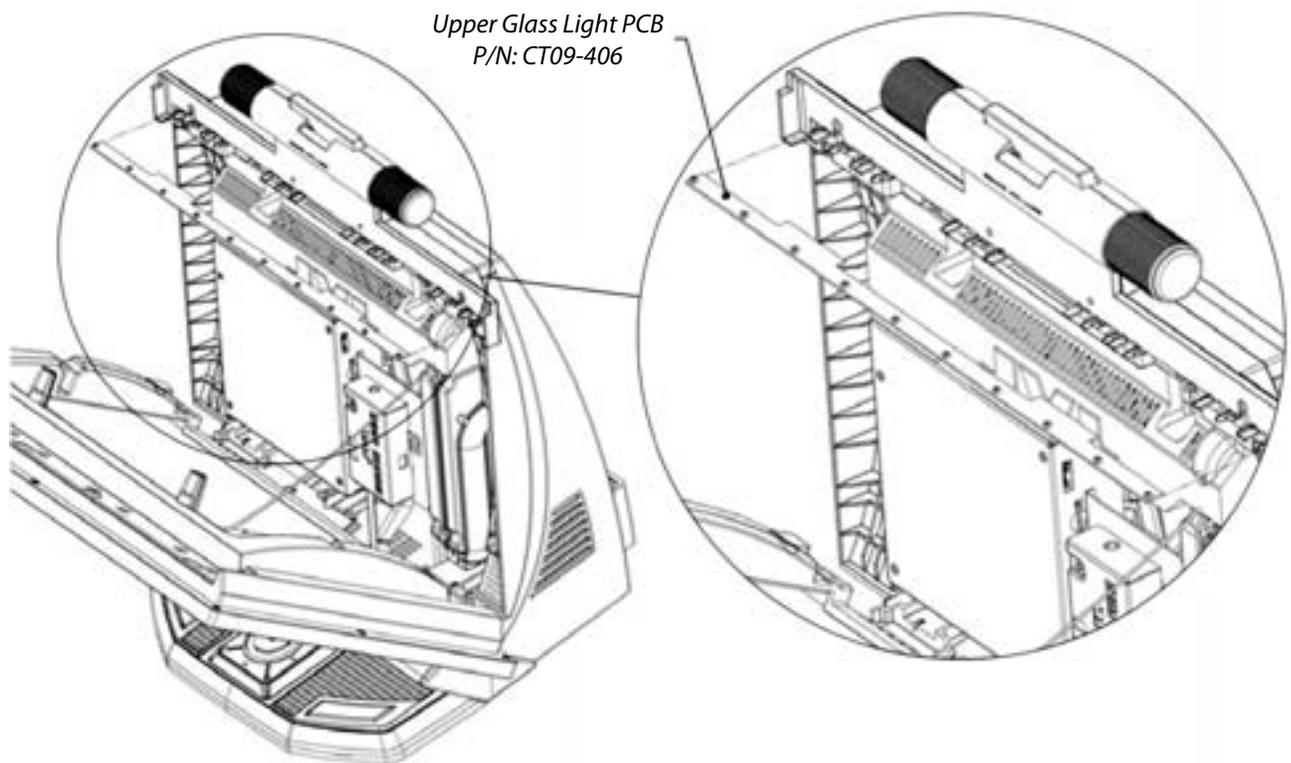


Fig. 39

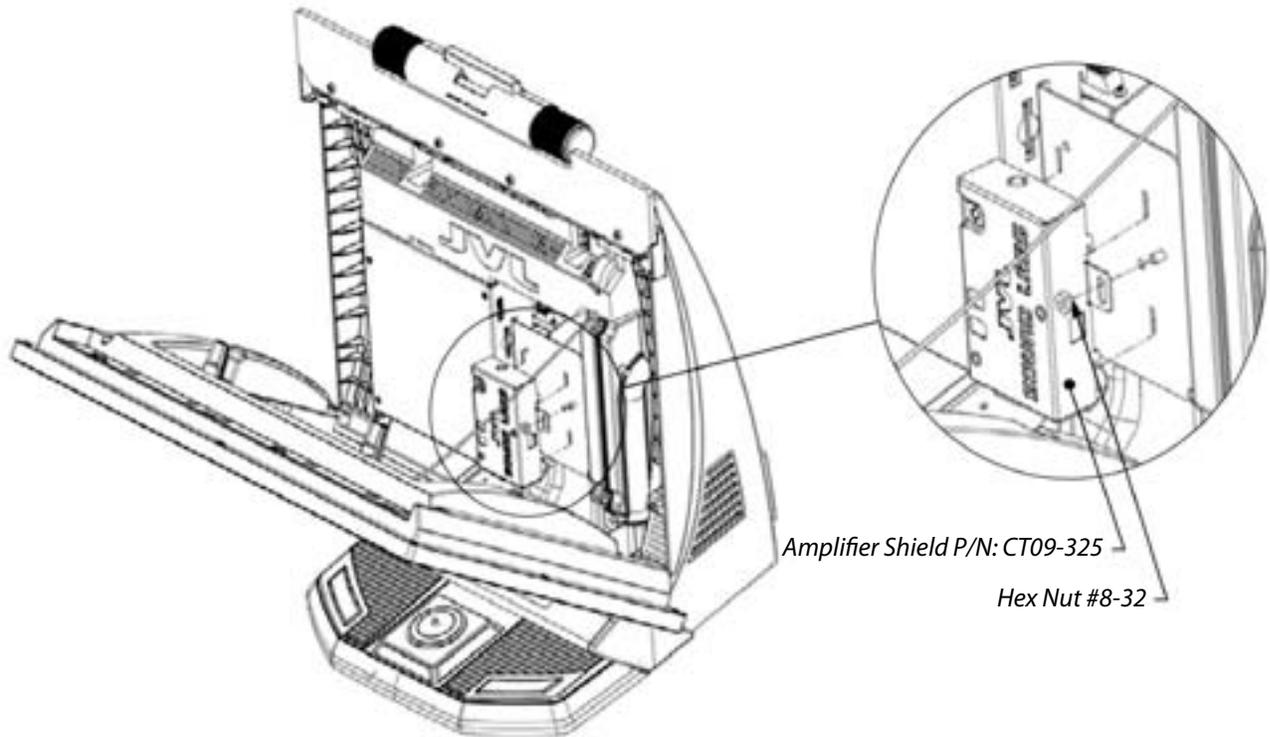


Fig. 40

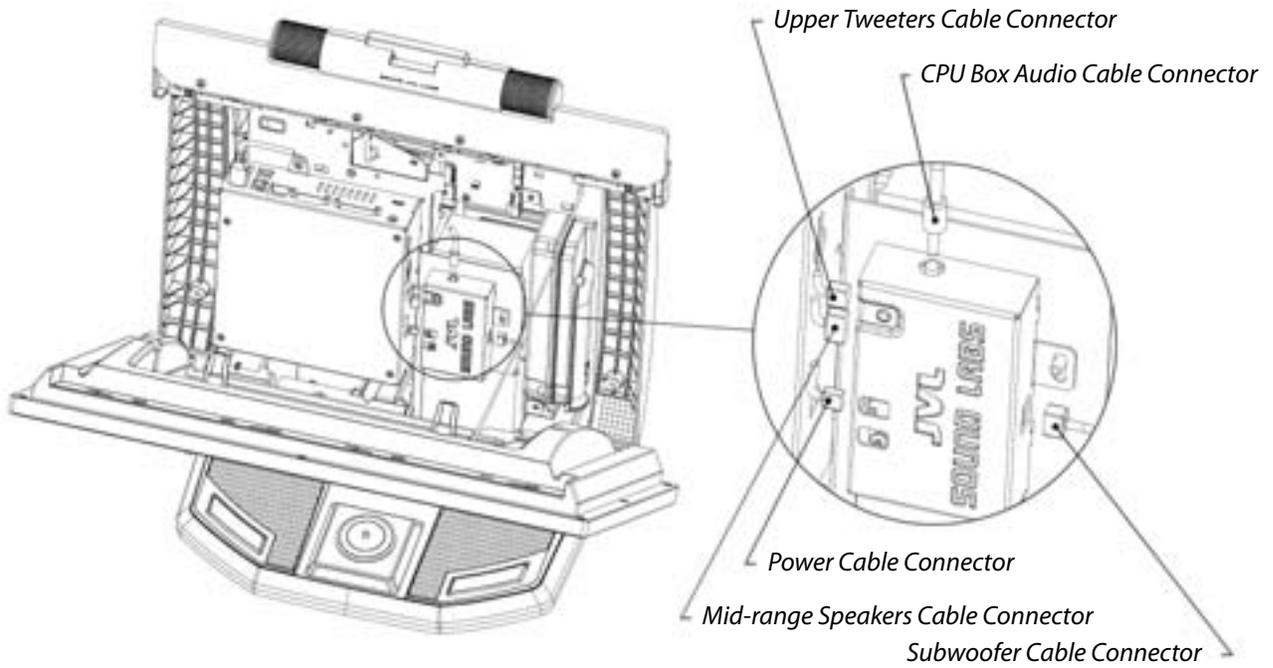


Fig. 41

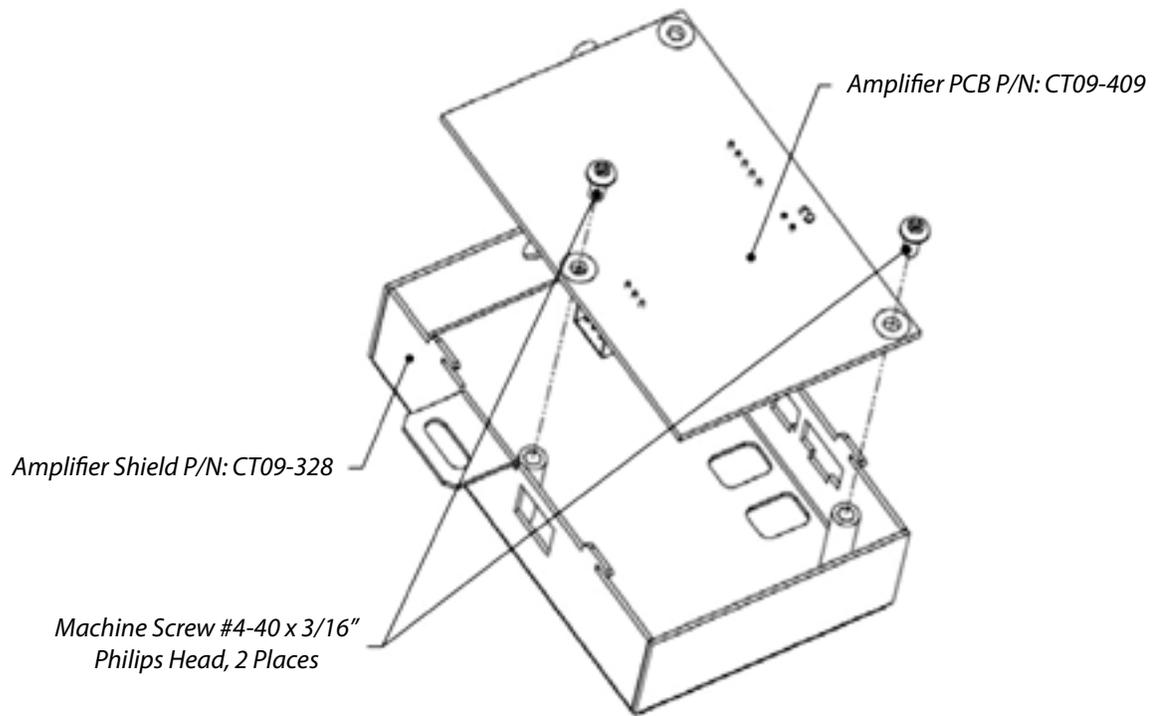


Fig. 42

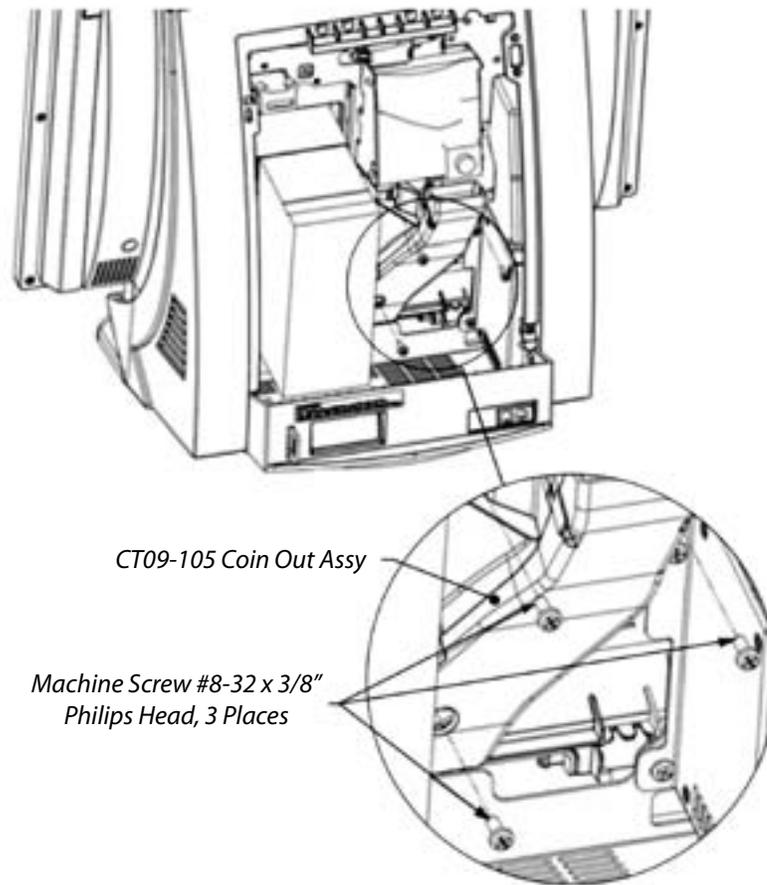


Fig. 43

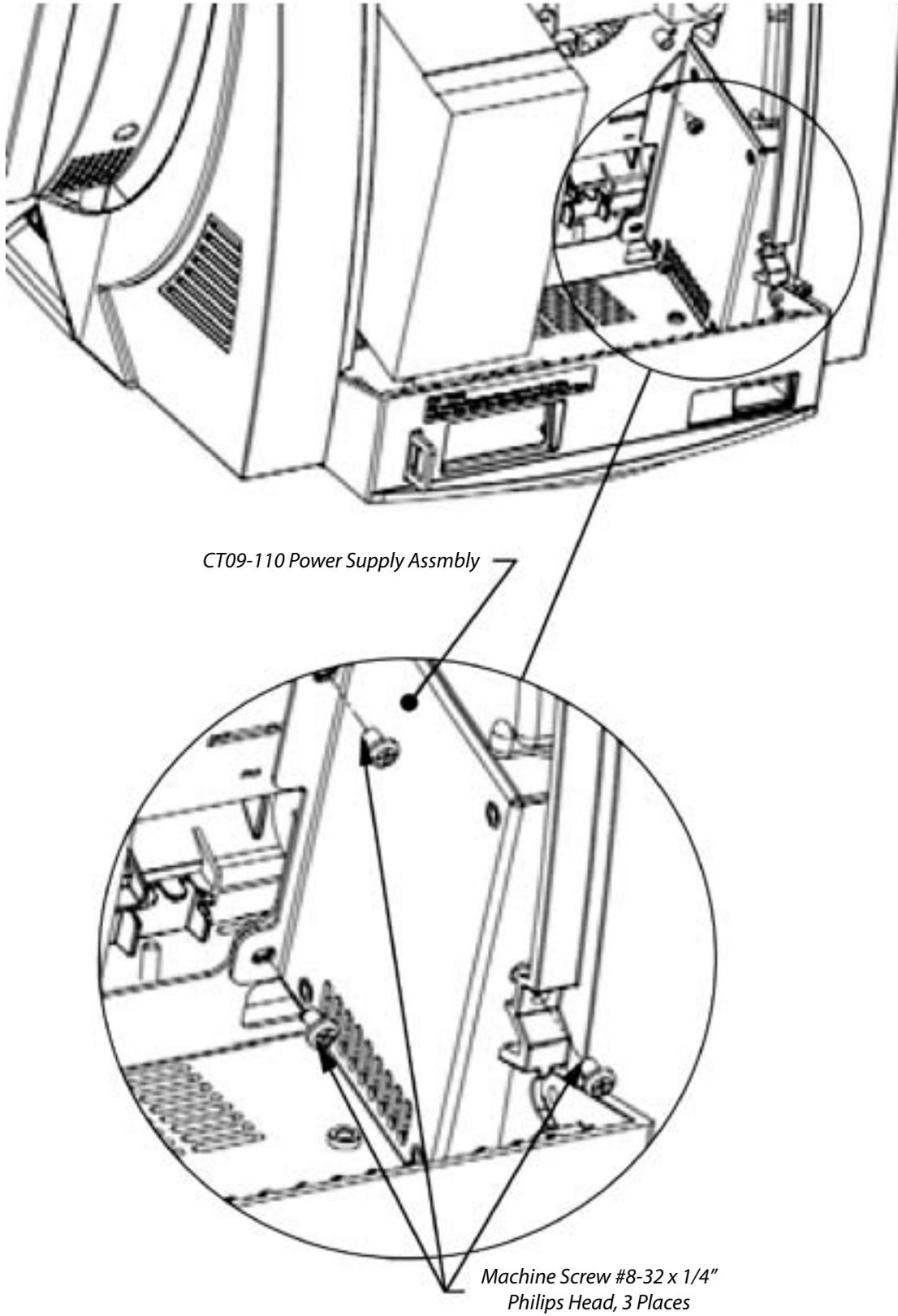


Fig. 44

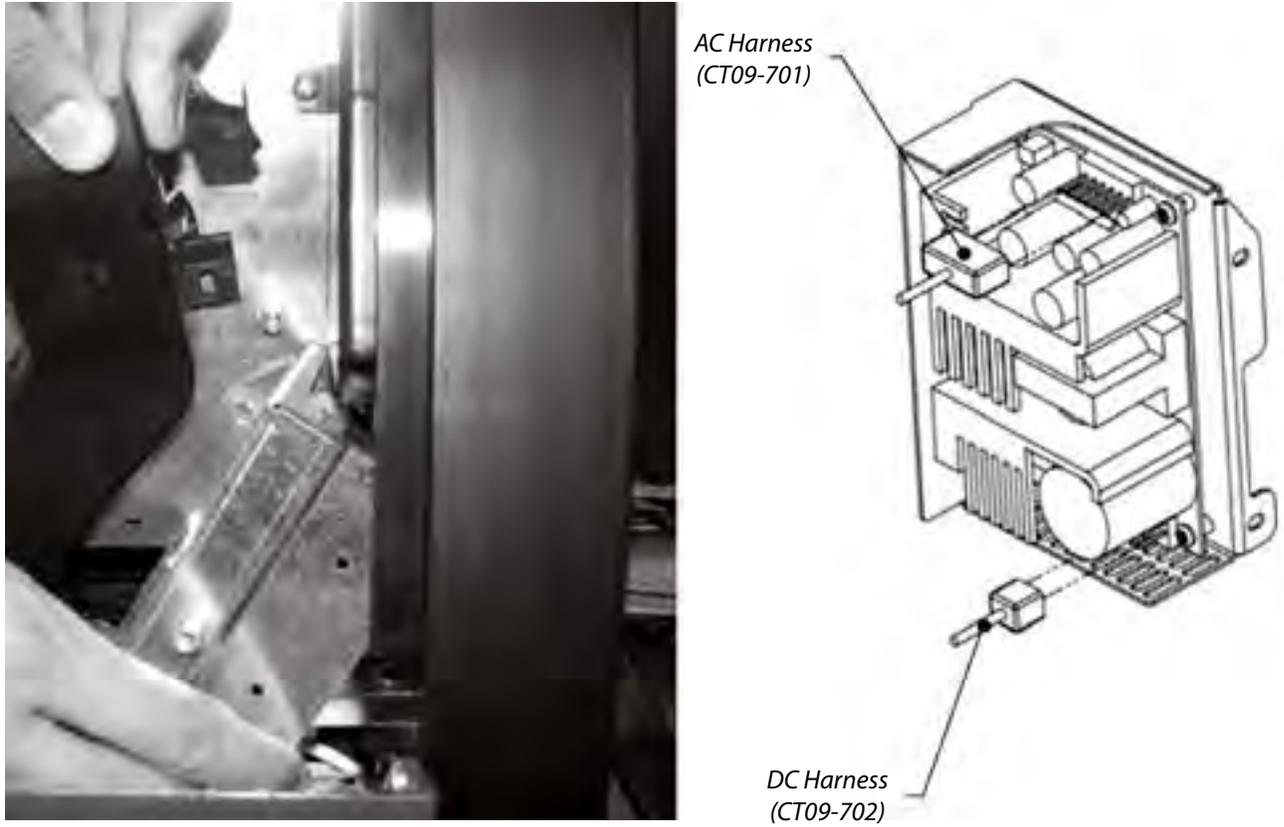


Fig. 45

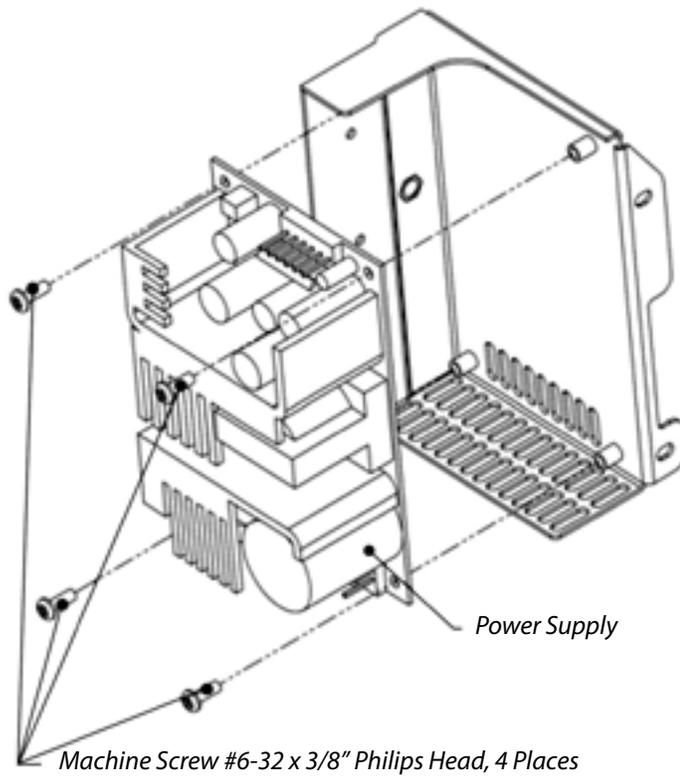


Fig. 46

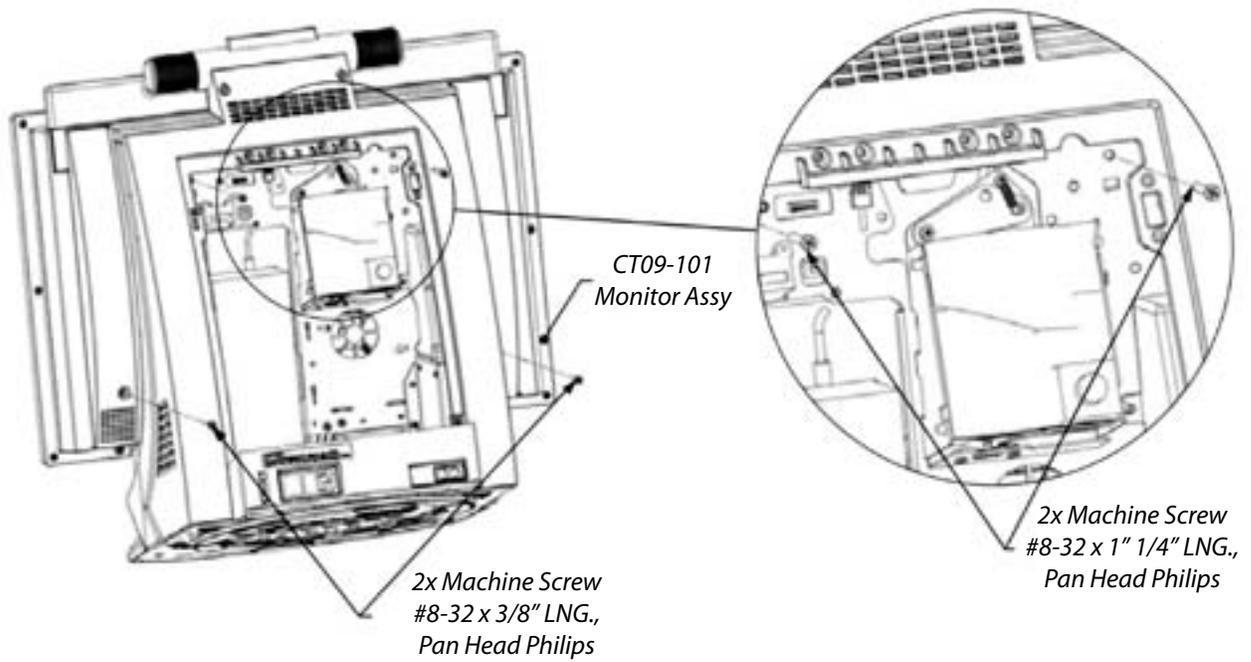


Fig. 47

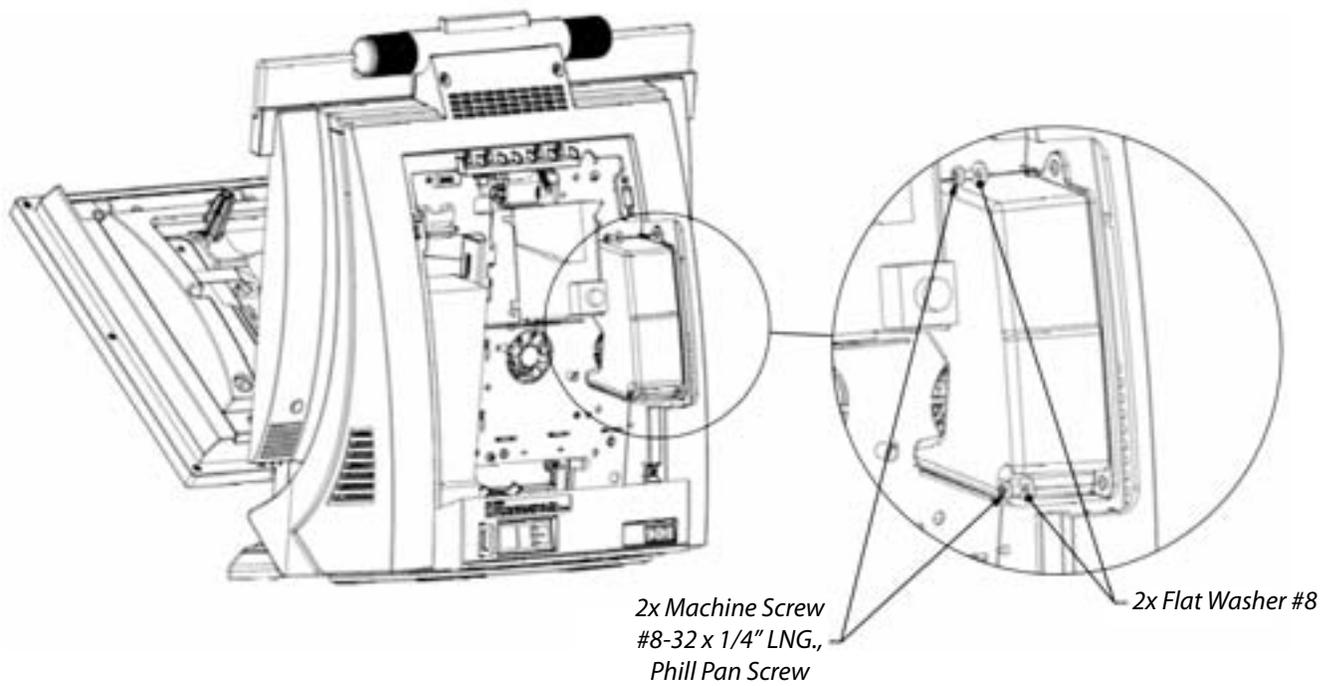


Fig. 48

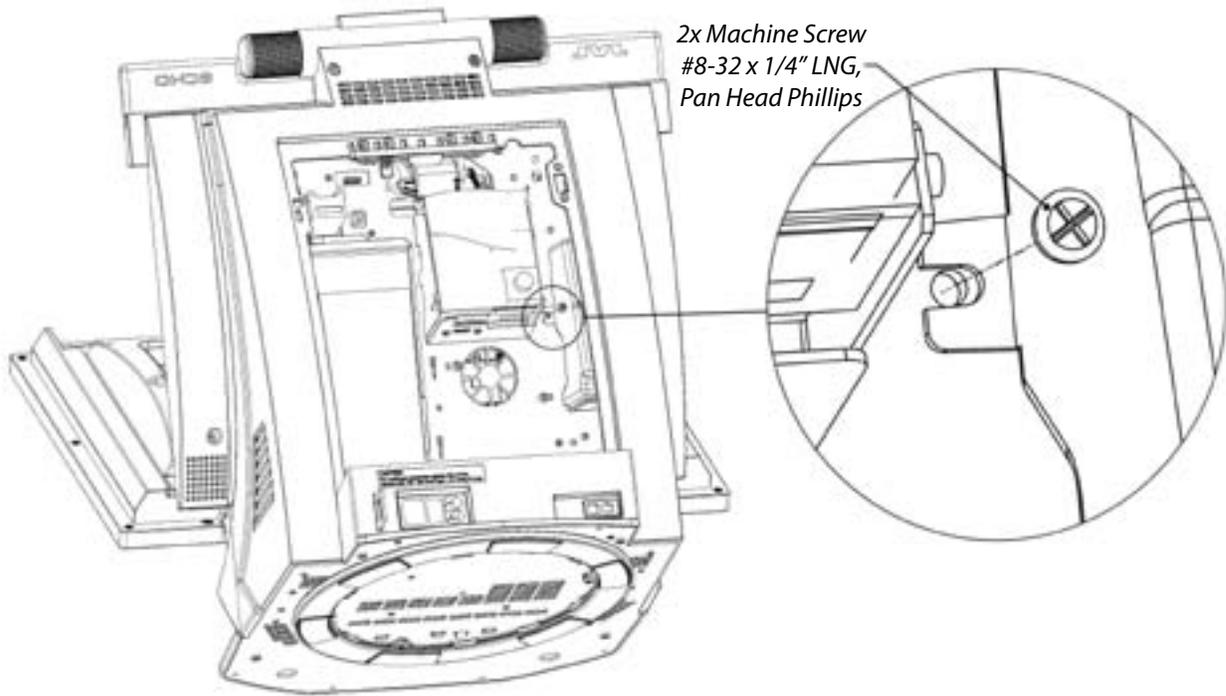


Fig. 49

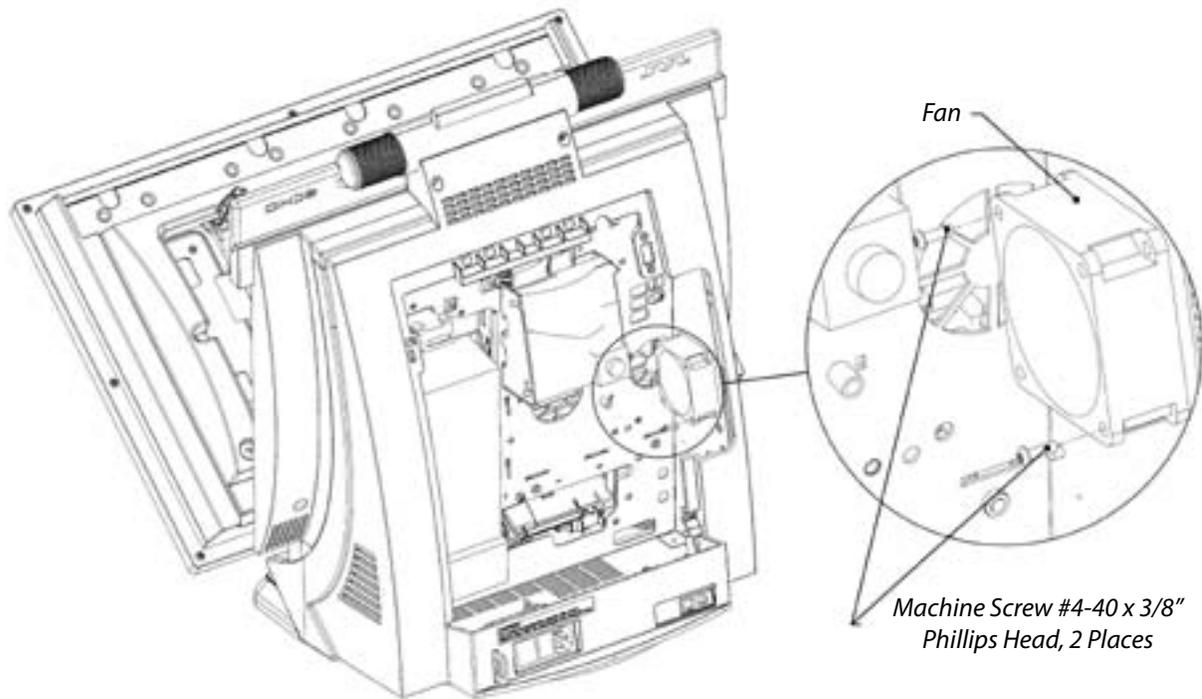


Fig. 50

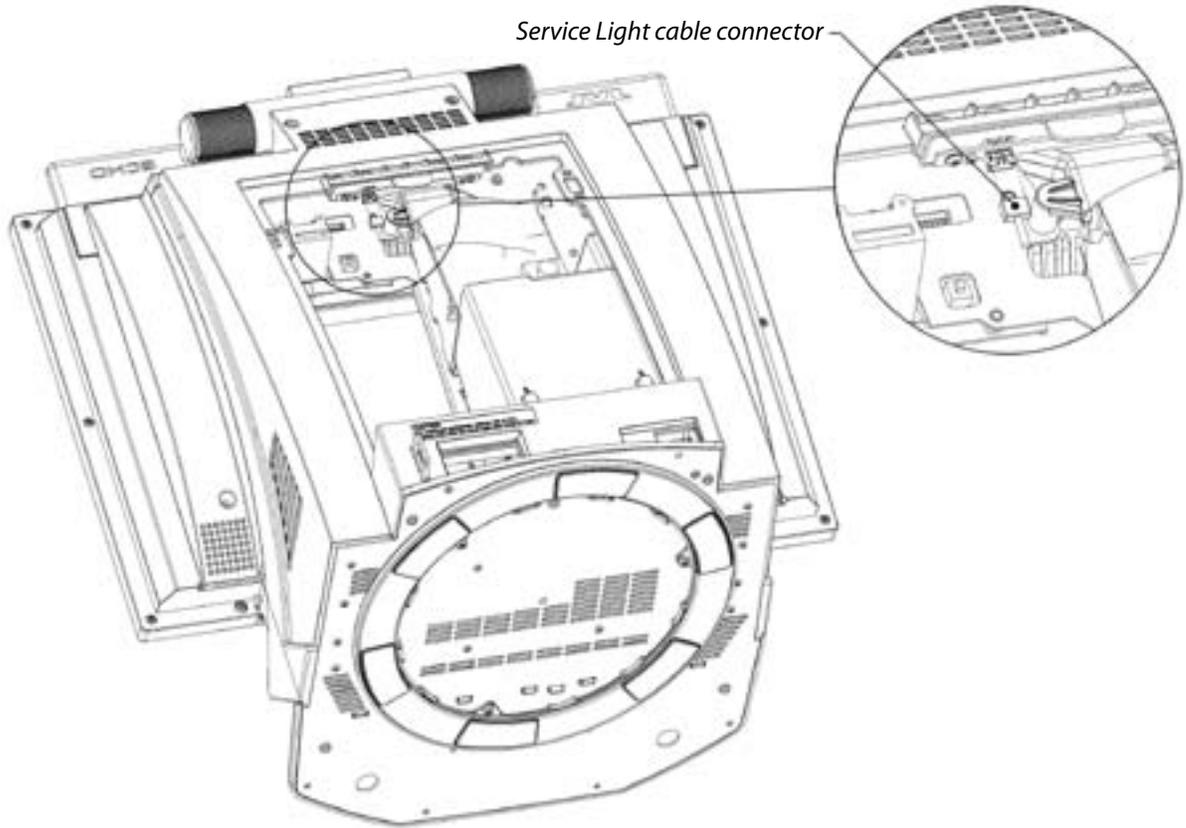


Fig. 51

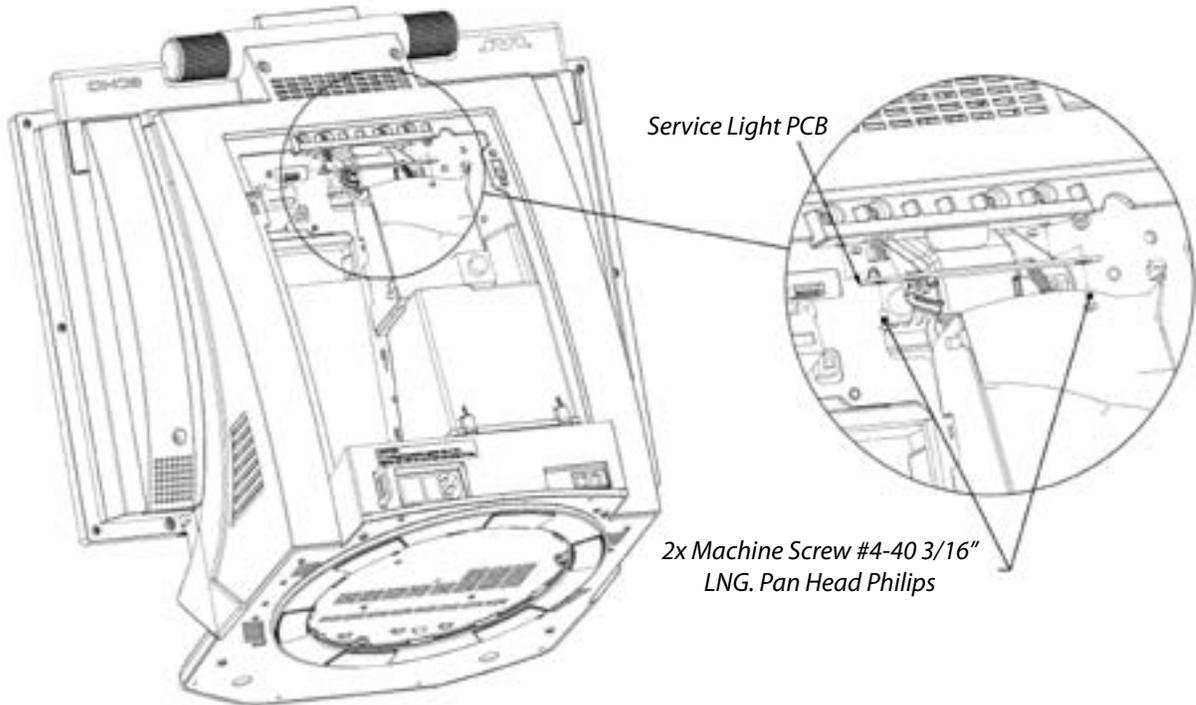


Fig. 52



Fig. 53

NOTE: Velcro fastener helps to mount the Wi-Fi adapter in the right place as shown in the picture.



Fig. 54



Fig. 55

NOTE: Velcro fastener helps to mount the modem in the right place as shown in the picture (See Fig. 55).

Appendix A

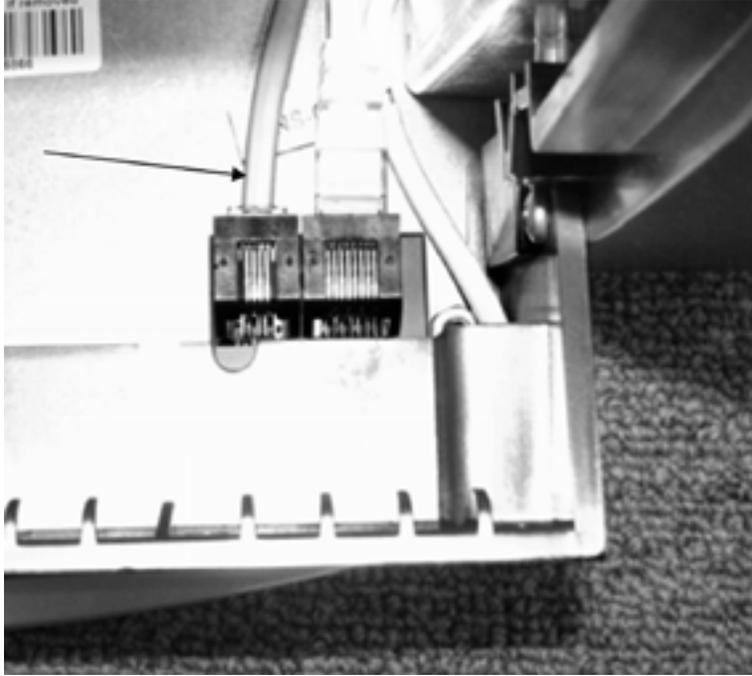


Fig. 56



Fig. 57



Appendix B

(Parts Breakdown)

ECHO

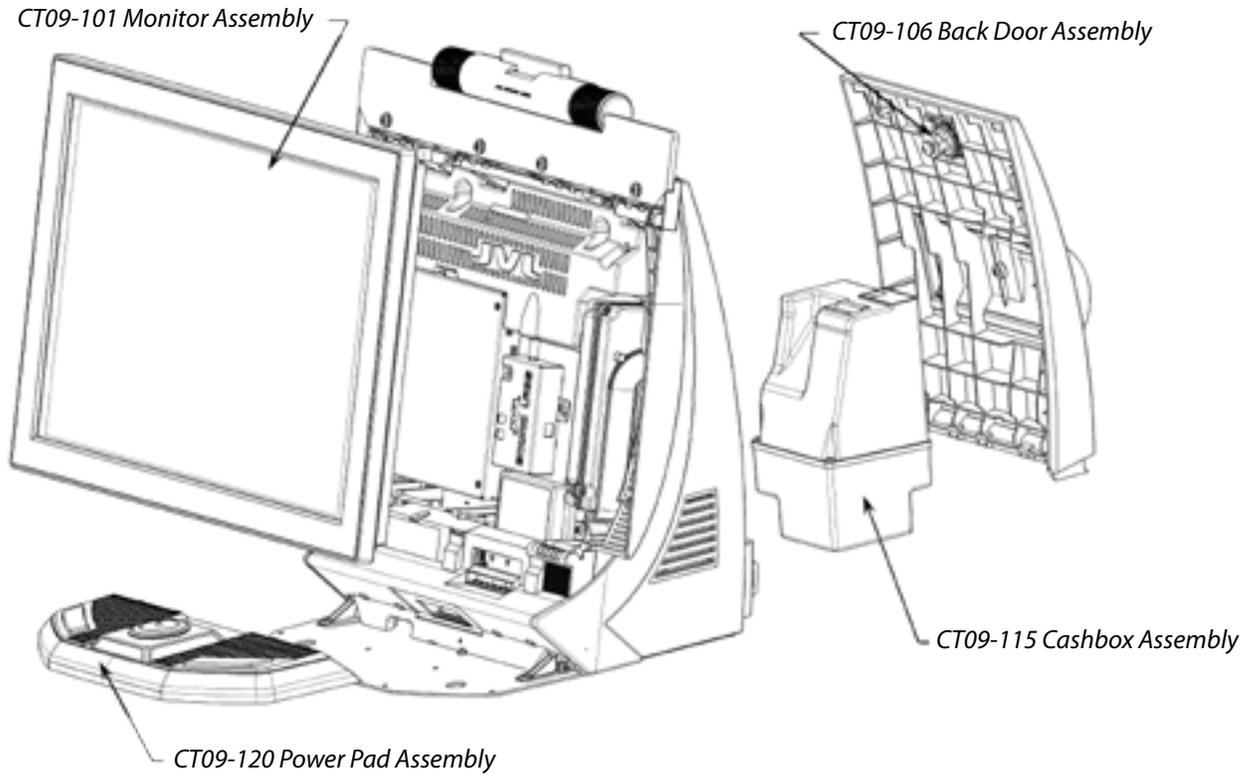


Fig. A-1

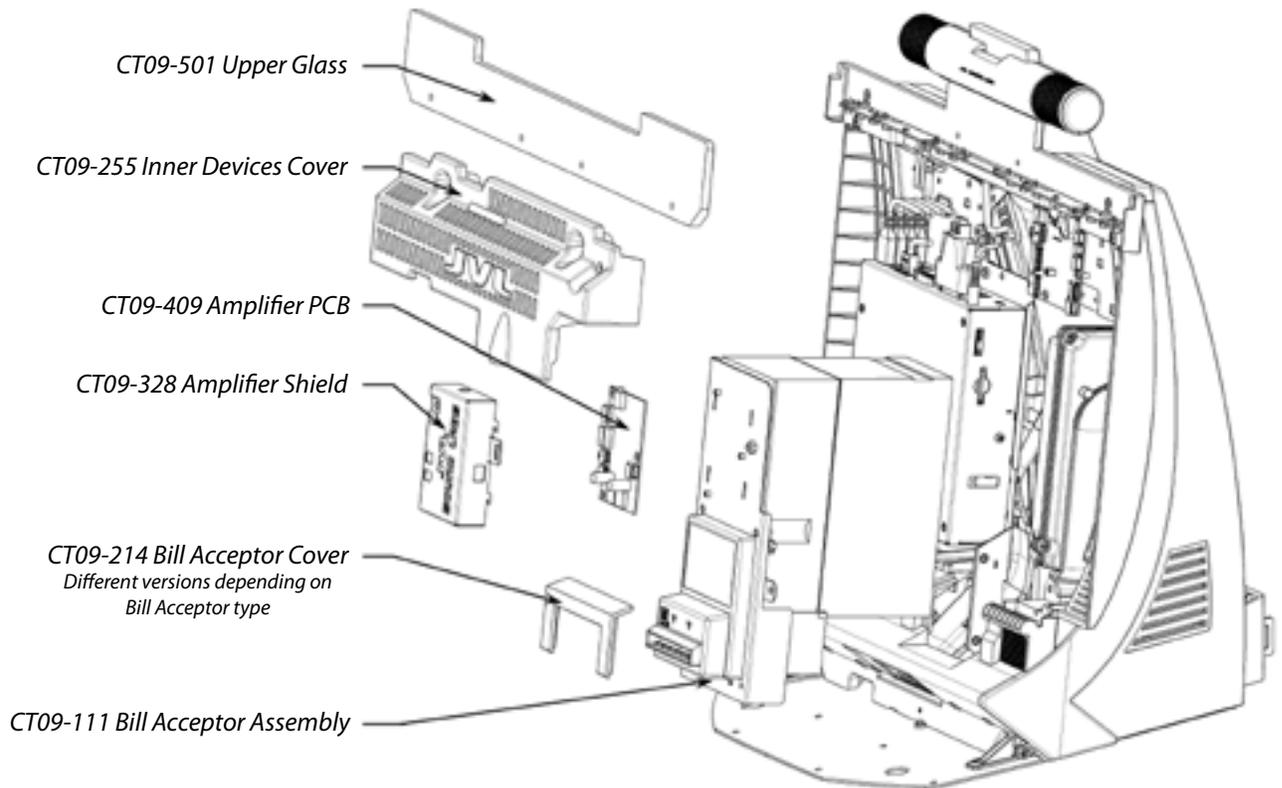


Fig. A-2

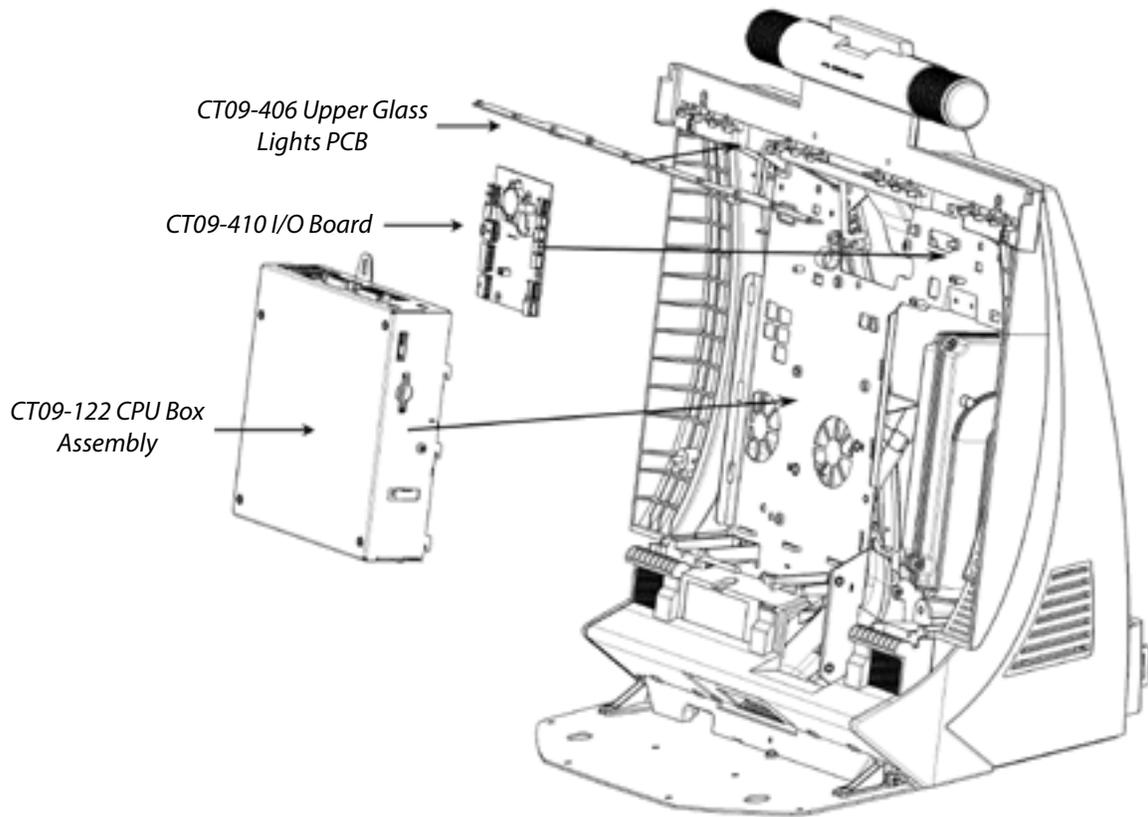


Fig. A-3

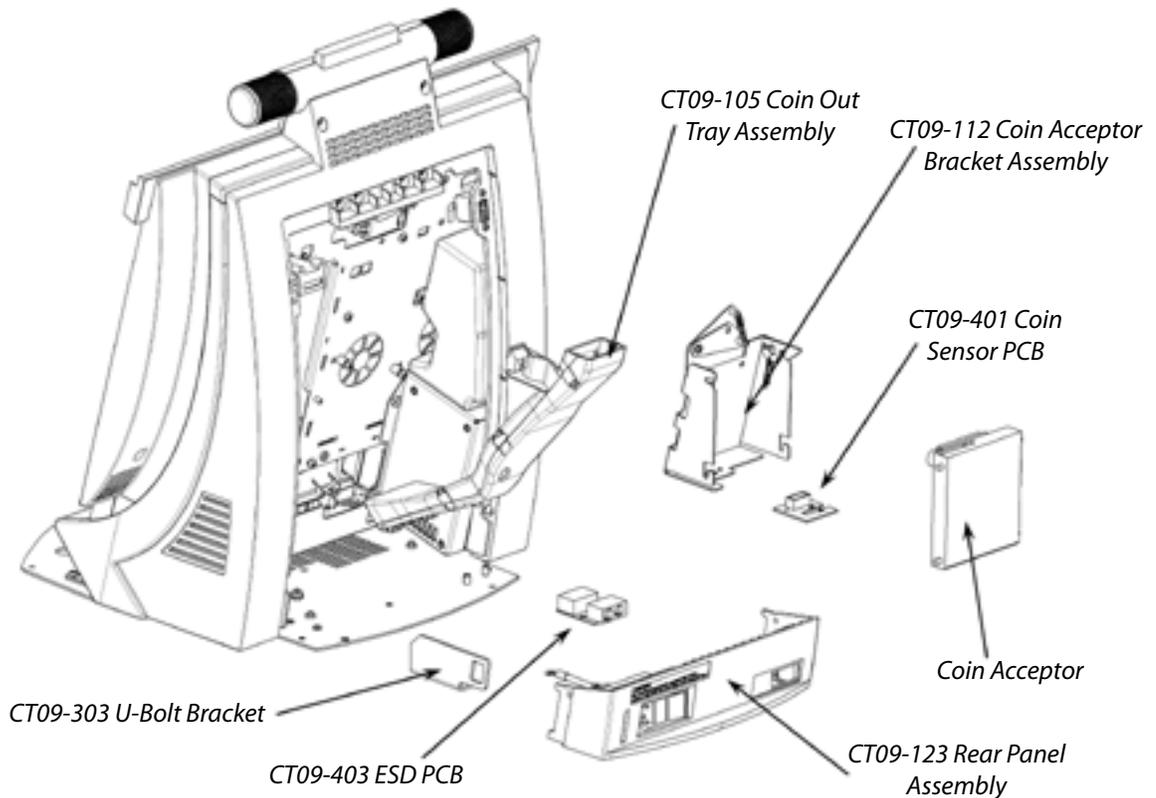


Fig. A-4

Appendix B

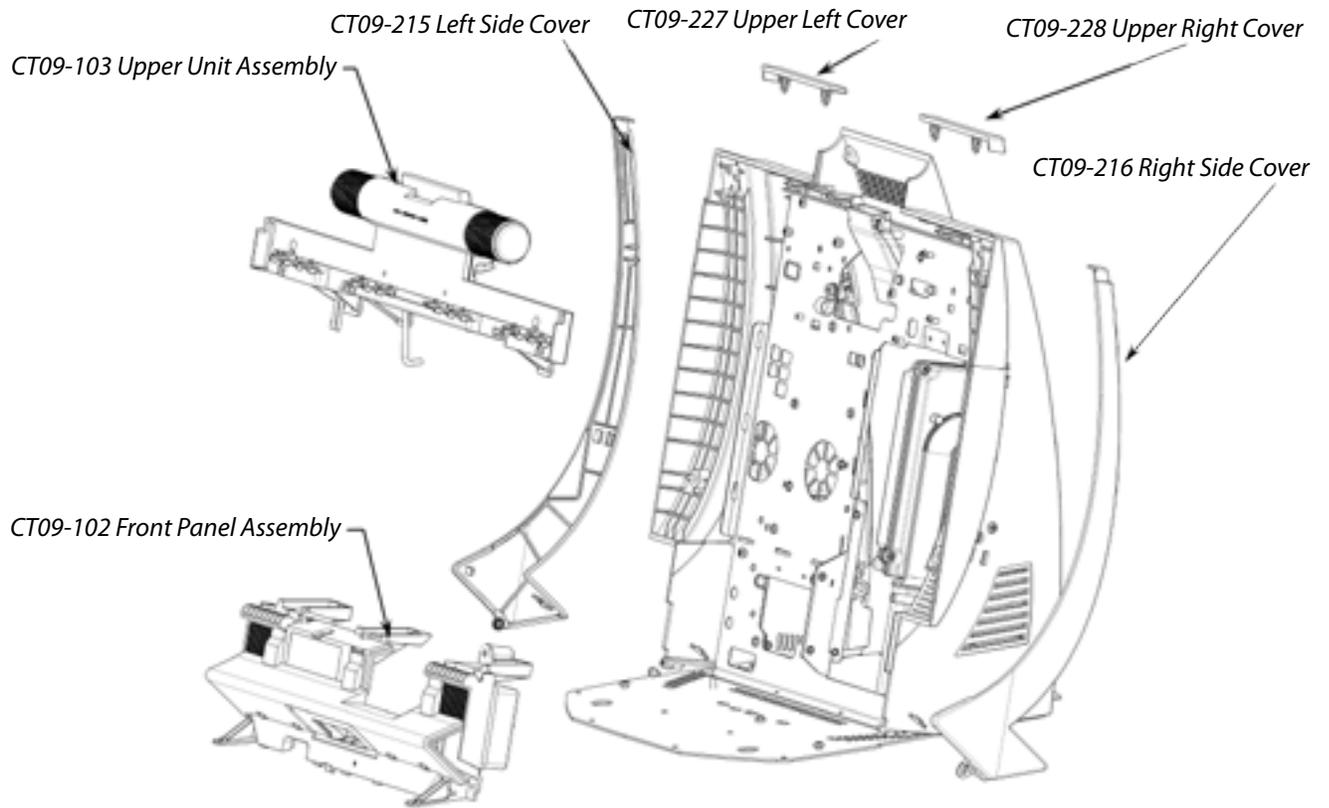


Fig. A-5

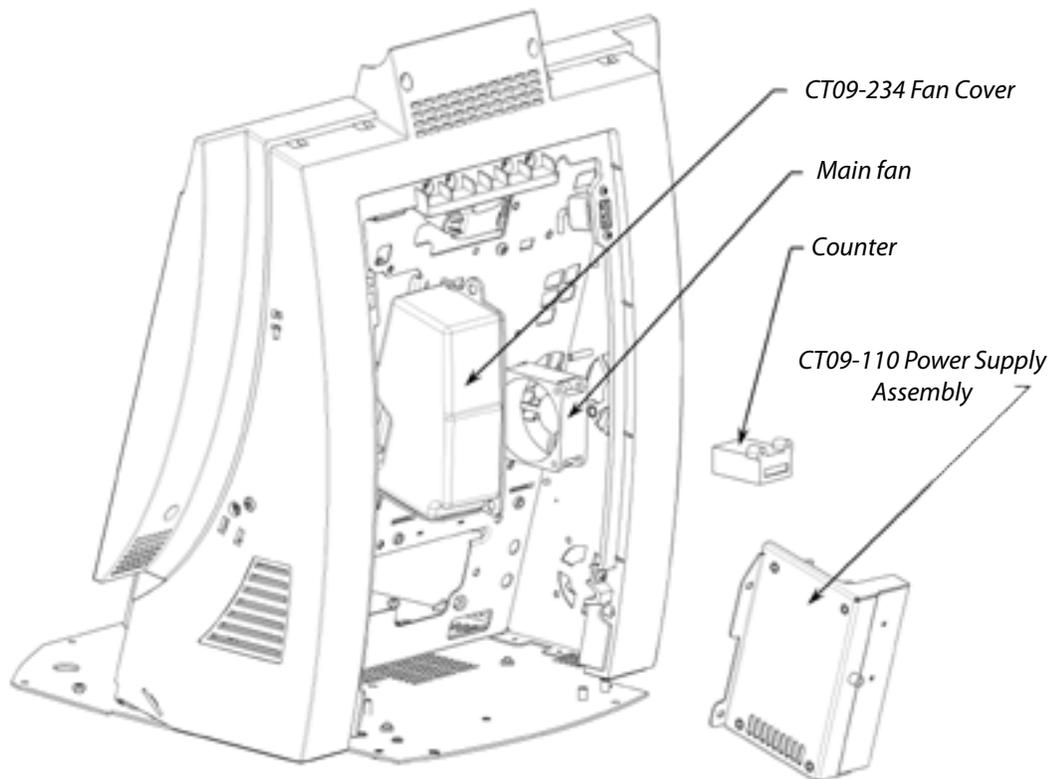


Fig. A-6

Appendix B

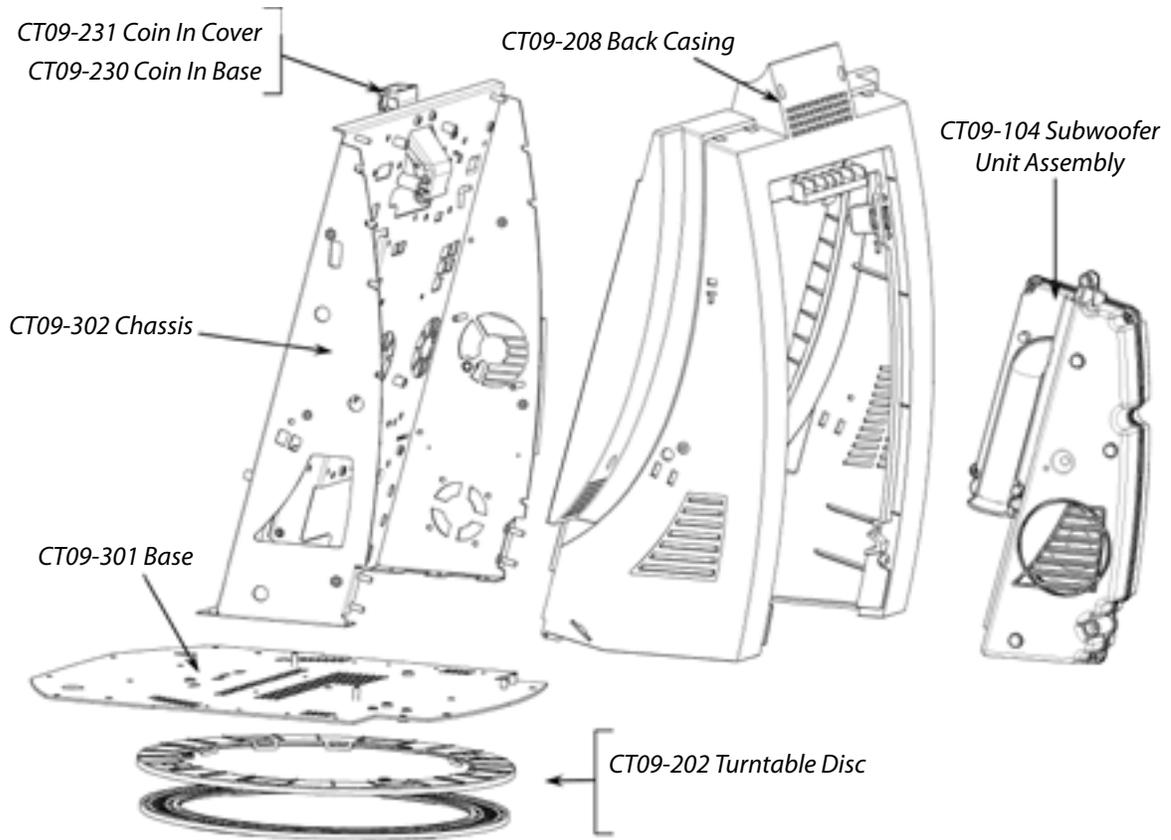


Fig. A-7

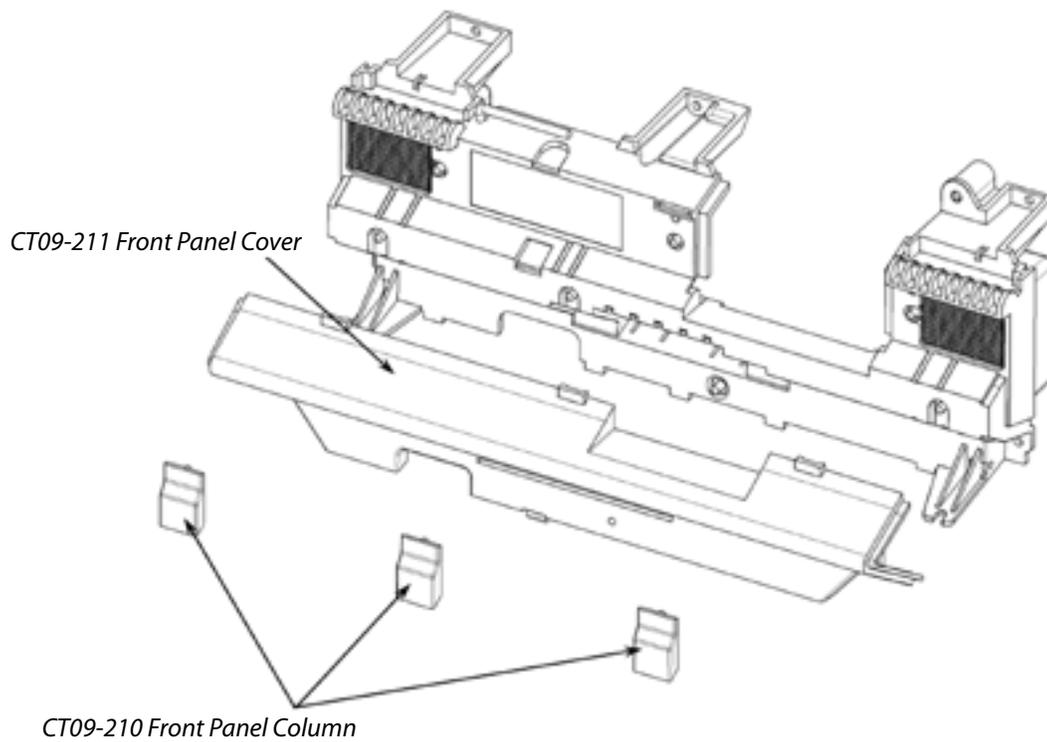


Fig. A-8

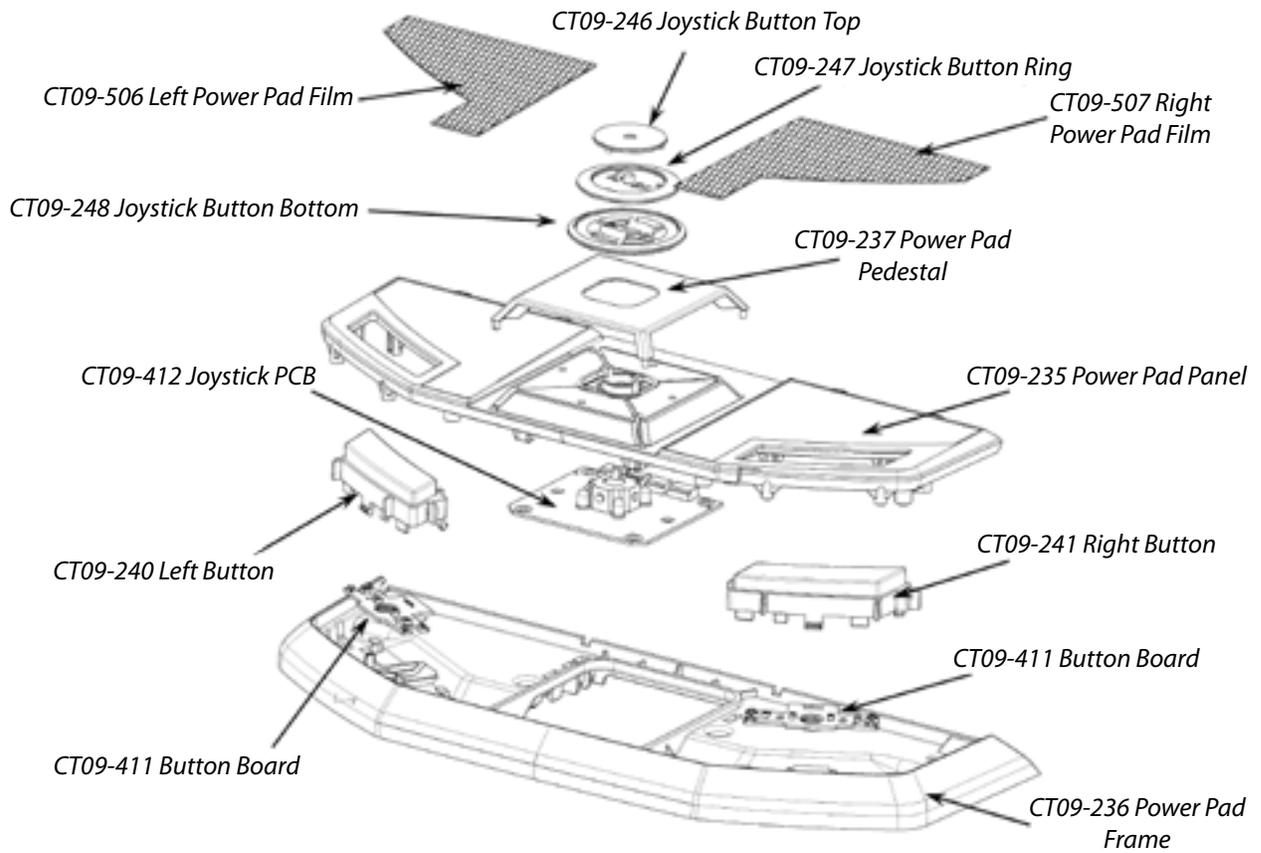


Fig. A-9