1500SE UPGRADE DOCUMENT
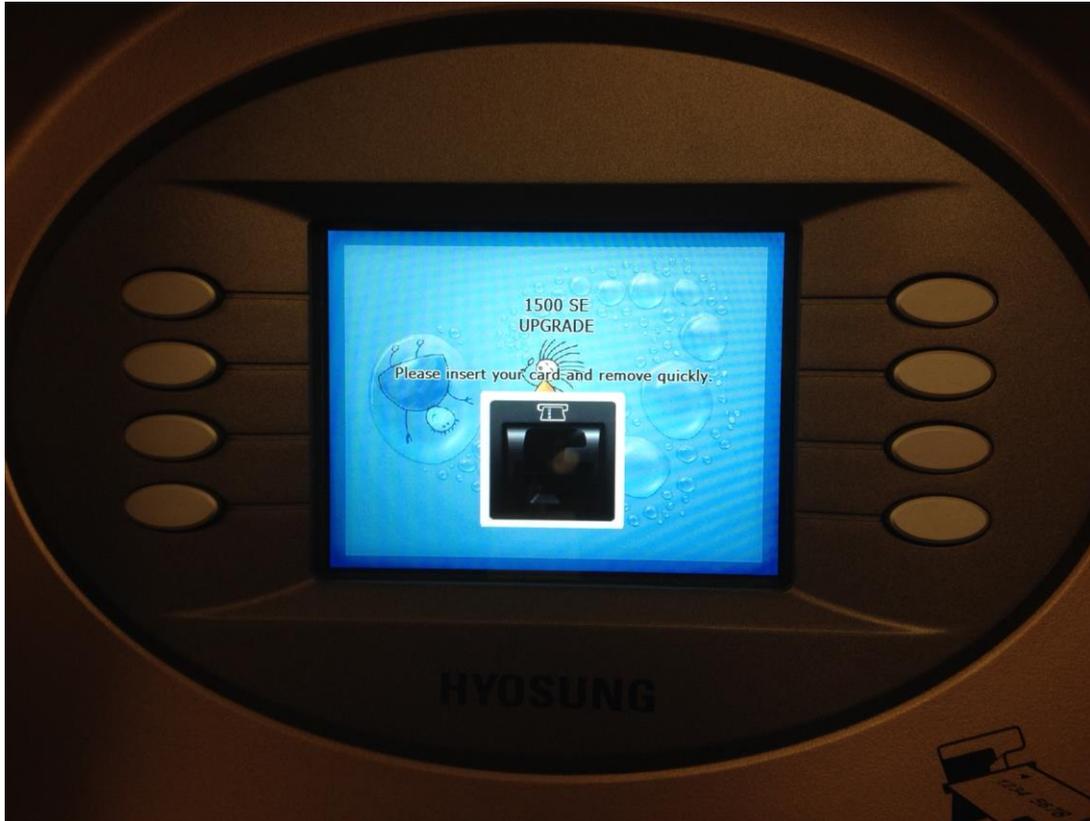
Version 1.05
November 11, 2014

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<u>Overview</u>

The 1500SE Upgrade Kit (Part Number #7900001583), has been designed to allow an existing model 1500 ATM to be field upgraded and made compatible with other current WINCE6.0 ATMs. This kit includes the capability for TCP/IP, as well as Dial-Up communications, and the ability to reset the Master Password and load software without NHPro. The Upgrade Kit consists of the following hardware components:

- WINCE6.0 I/O Board, Main Control Board and Cabling
- 5.7 inch Color LCD Display Monitor with Ribbon Cable
- EMV Card Reader with Cable

The following minimum versions of software are required to support the 1500SE:

- US WINCE6.0 V06.01.11
- CA WINCE6.0 V06.01.08

<u>Receipt Printer Compatibility Check</u>

Select Model 1500POS ATMs with older style Receipt Printers (Printer Control Board with 8 Dip Switches) may require a printer firmware upgrade to be compatible with the 1500SE Upgrade. If the firmware is not updated, you will experience issues such as the inability to print 40 characters per line or extra line feeds on the receipts. To check the firmware version on the Model 1500POS printer, perform the following steps to obtain this information:

From the OPERATOR FUNCTION menu select REPORT, then S/W VERSION.

Press ENTER to receive a print-out. See the examples on the following page. The receipt printer firmware version will display as: SPR ROM   V00.0x.xx

```
          S/W VERSION                          S/W VERSION
=====================================   =====================================
  TODAY:   11/04/2014  07:44:51           TODAY:   11/04/2014  07:44:51

  CANADA,   NH-1500,  MONO                 CANADA,   NH-1500,  MONO
-------------------------------------   -------------------------------------
  BIOS             : V21.21.05             BIOS             : V21.21.05
  APPLICATION      : V21.21.21             APPLICATION      : V21.21.21
  RMS              : V05.01.00             RMS              : V05.01.00
-------------------------------------   -------------------------------------
  SPR ROM          : V00.02.00             SPR ROM          : V00.03.05
  CDU ROM(A10)32   : V00.01.04             CDU ROM(A10)32   : V00.01.04
  EPP ROM          : V03.02.01             EPP ROM          : V03.02.01
       < SEGMENT CHECK SUM >                   < SEGMENT CHECK SUM >
-------------------------------------   -------------------------------------
  BIOS : 0E48      SYSTEM : 4C8C           BIOS : 0E48      SYSTEM : 4C8C
  APPL : 8C15      TABLE  : 1E86           APPL : 8C15      TABLE  : 1E86
```

If the firmware version of the printer is V00.02.00 up through V00.03.05, a firmware upgrade to V00.03.07 will be required for the printer to correctly print receipts following the 1500SE Upgrade. Details for removing the EPROM chip from the printer control board and returning to the NHA Repair Center for upgrade can be found in Appendix A – Printer Firmware Upgrade, later in this document.

If the print-out shows a firmware version of V00.03.07, or V00.05.xx or higher, no firmware upgrade is required. See Section 11 – Receipt Printer Settings for additional information.

Installation Procedures

The following instructions will guide you through the process of unplugging and removing select components from your model 1500 ATM, and then replacing with the Upgrade Kit components.

1. Unlock and Open the Front Panel

    Insert the key and turn it clockwise. With the key turned, rack out the Front Panel.
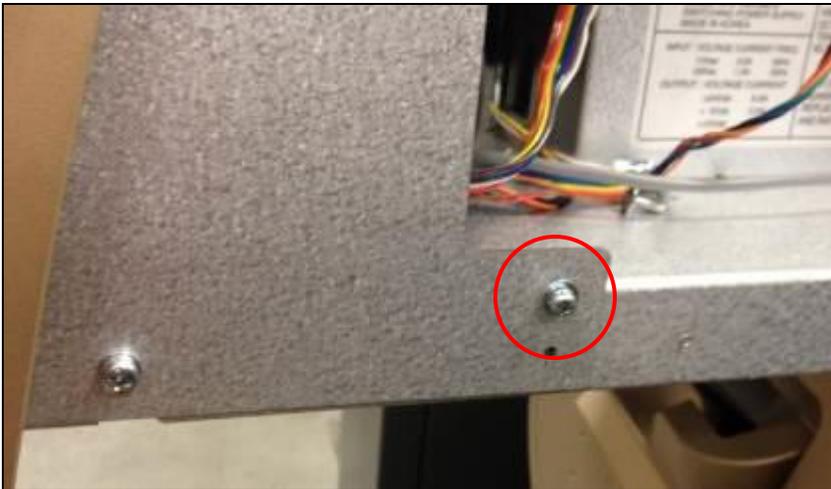
2. Power OFF the ATM

   Turn OFF the Power by setting the Main S/W to the "0" position.

3. Lean the Front Panel forward

   Remove (and retain) the screw located on both sides of the Front Panel in order to allow the Front Panel to lean forward.

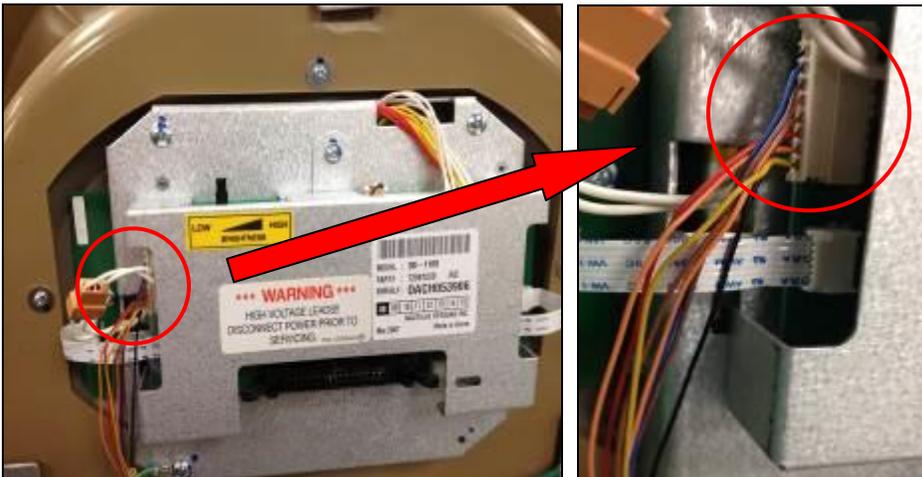4. Remove the existing Card Reader

   Removing the Card Reader involves three steps:
   a. Unscrewing and removing a plastic bracket guiding the Card Reader cable
   b. Disconnecting the cable from the rear of the LCD Display Monitor
   c. Removing two screws attaching the Card Reader to the Front Panel

4a. Unscrew and remove the plastic bracket, located above the rear of the Card Reader, which is used to guide the Card Reader cable.

4b. Unplug the Card Reader cable from the rear of the LCD Display Monitor.

4c. Remove (and retain) the two screws attaching the Card Reader to the Front Panel, and remove the Card Reader through the front of the ATM.

5. <u>Remove the existing LCD Display Monitor</u>

Removing the LCD Display Monitor involves four steps:
a. Disconnecting the Monitor ribbon cable from its Main Control Board connection
b. Disconnecting the Speaker cable from its connection at the rear of the Monitor
c. Unscrewing the two green grounding straps from the rear of the Monitor
d. Removing four screws attaching the Monitor to the Front Panel

5a. Disconnect the Monitor ribbon cable from its Main Control Board connection.
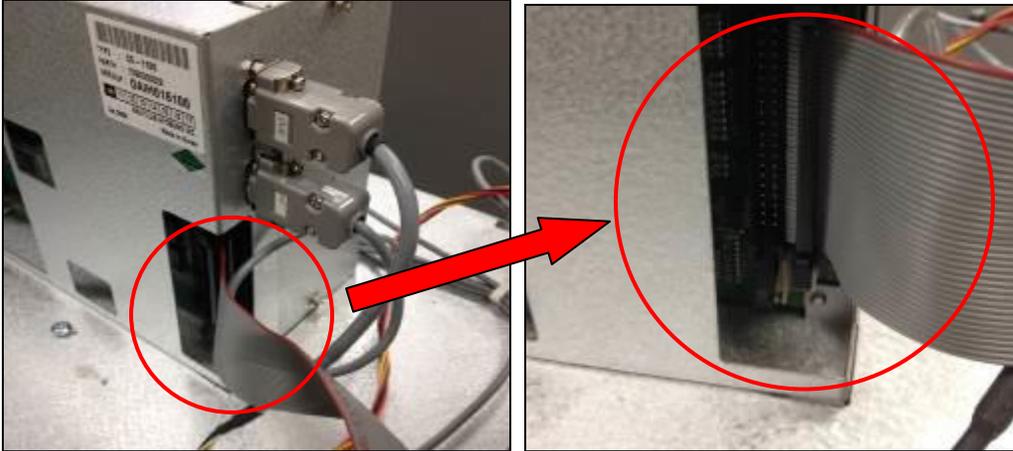
5b. Disconnect the Speaker cable from its connection at the top right rear of the Monitor.

5c. Unscrew the two green grounding straps from both sides at the rear of the Monitor.

5d. Remove (and retain) the four screws attaching the Monitor to the Front Panel, and remove the Monitor and ribbon cable through the front of the ATM.

6. Remove the existing Main Control Board

   Removing the Main Control Board involves three steps:
   a. Disconnecting the EPP Keypad and ADA Serial Plug Connections on the metal housing at the front of the Main Control Board
   b. Disconnecting multiple cable connections at the rear of the Main Control Board
   c. Unscrewing grounding straps at the rear base of the Main Control Board housing

6a. Unscrew and disconnect the EPP Keypad and ADA serial connections at the front of the Main Control Board. This ADA serial connector and cable will no longer be used and can be removed from the ATM. NOTE: CANADIAN ATMS WILL NOT HAVE THE ADA CONNECTOR.

6b. Disconnect all of the cable connections at the rear of the Main Control Board. The new Main Control Board comes with the required cable connectors to attach internal cabling that will remain in the ATM. You will also need to disconnect the RJ11 phone cable from its connection at the top rear of the Modem.


6c. The Main Control Board and metal housing is attached to the ATM with two screws at the rear base. Green grounding straps are attached at this same location. Remove the two screws (and retain). The Main Control Board and housing can now be lifted and removed.
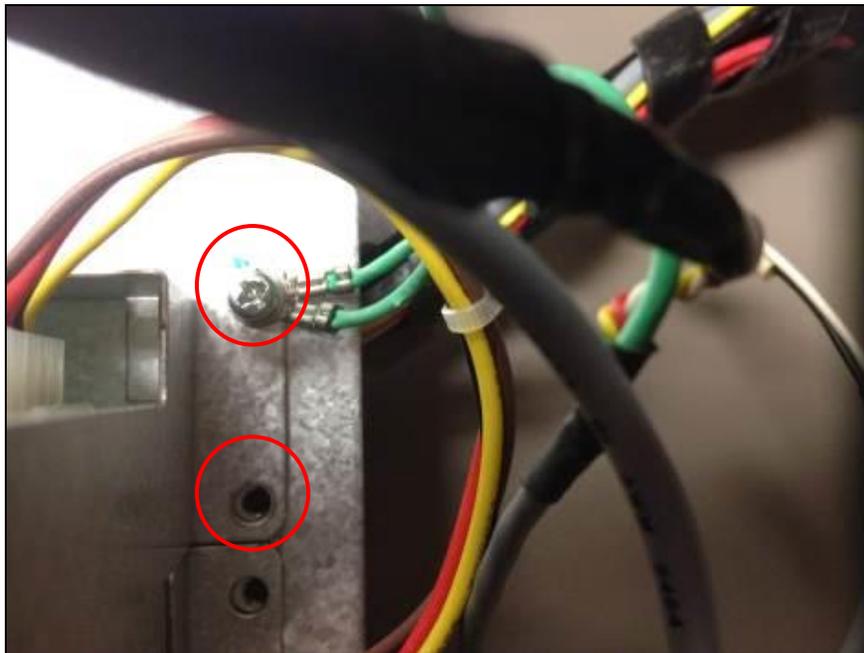
7. Remove the existing ADA Board and ADA Jack Cable – US INSTALLATIONS ONLY

    The new Main Control Board comes with on-board ADA support, and its own ADA Jack interface cable. Disconnect the existing interface cable connected to the Hyosung ADA Jack on the underside of the Front Panel. The separate ADA board found on some model 1500 ATMs can also be removed by unscrewing and removing the two screws shown.
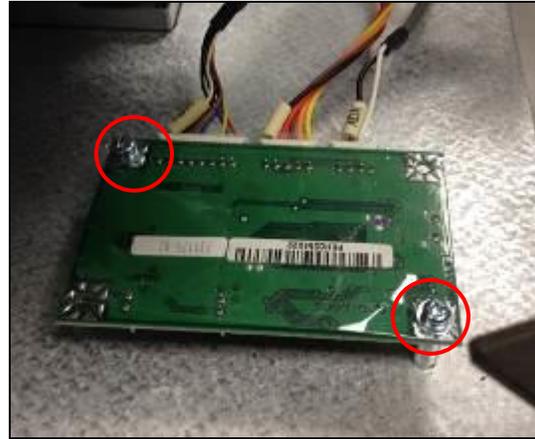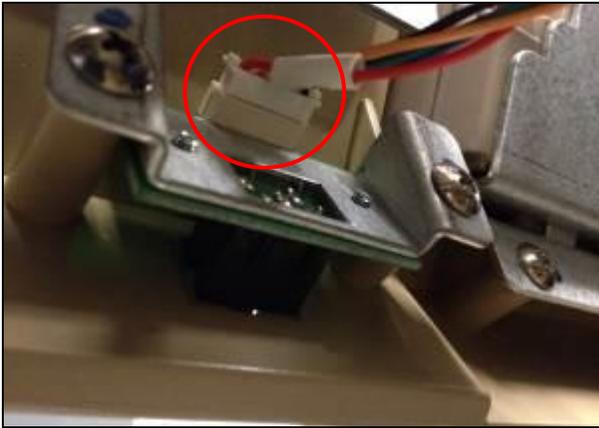
8. Install the new Main Control Board

    Installing the new Main Control Board involves four steps:
    a. Aligning the Main Control Board in place
    b. Attaching, along with the grounding straps, using the two retained screws
    c. Connecting multiple cable connections at the rear of the Main Control Board
    d. Attaching the EPP Serial Plug Connector

    NOTE: FOR CANADIAN ATM INSTALLATIONS ONLY - THE FOLLOWING STEP MUST BE PERFORMED IN ORDER TO DISABLE THE ADA SUPPORT WITHIN THE ATM -
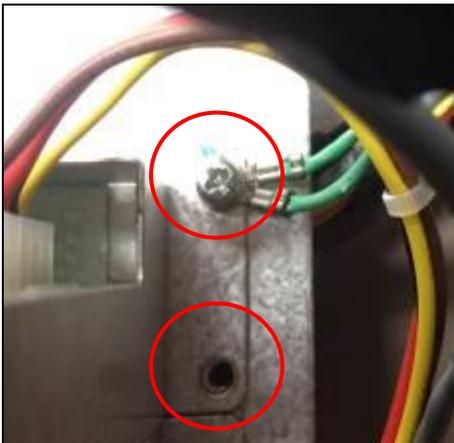
    Place a Jumper over the pins on the Main Board, as shown, prior to installation:
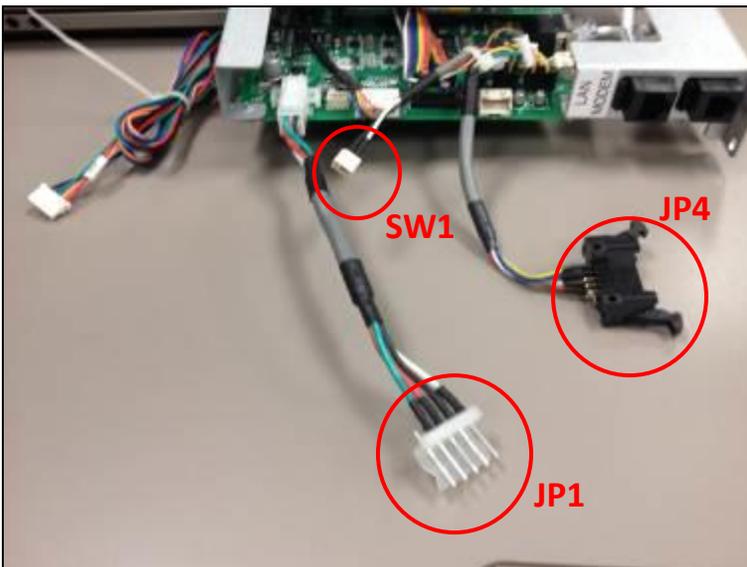
8a. Place the Main Control Board housing so that the front metal tab fits into the slot on the tray of the ATM.


8b. Align the grounding straps and, utilizing the two retained screws, attach the housing to the ATM as shown.

8c. You will need to connect the new Main Control Board cables to the **JP1**, **SW1** and **JP4** cables previously disconnected from the old Main Board.

The LAN and Modem cable connections are now located at the bottom rear of the Board. If you are using Dial-Up communications, attach the RJ11 phone cable to the bottom port, labeled MODEM. If you are going to be using TCP/IP communications, attach the RJ45 LAN cable to the uppermost port, labeled LAN. The LAN cable can be routed through the opening at the top rear of the ATM out to the wall connection.
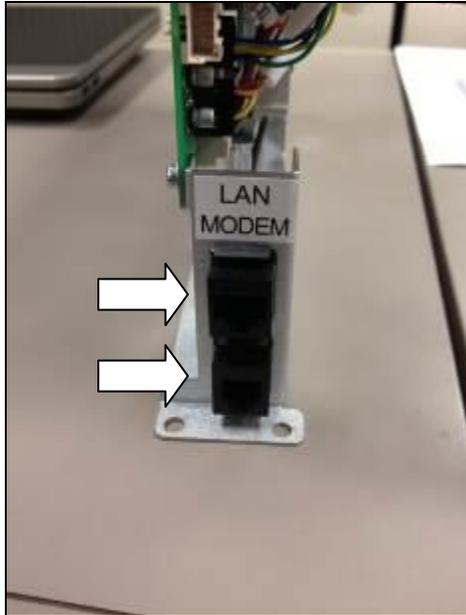

8d. The EPP Keypad Serial Connector should be attached to the port, labeled EPP, on the front of the Main Control Board.

Properly route all cables and secure them in place within the ATM.

NOTE: FOR US ATM INSTALLATIONS <u>ONLY</u> - The new ADA interface cable is connected at one end to the top of the Main Control Board. This cable needs to be routed so the other end can be connected to the Hyosung ADA Jack on the underside of the Front Panel.
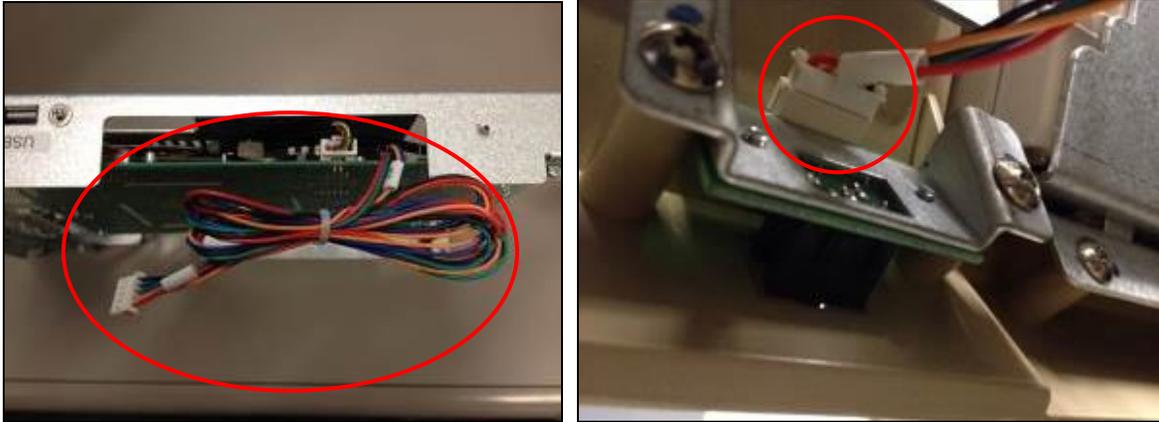

9. <u>Install the new LCD Display Monitor</u>

Installing the new LCD Display Monitor involves four steps:
a. Aligning the Monitor and attaching to the Front Panel with the four retained screws
b. Attaching the green grounding straps to the rear of the Monitor
c. Connecting the Speaker cable to the port on the rear of the Monitor
d. Attaching the ribbon cable from the Monitor to the Main Control Board connection
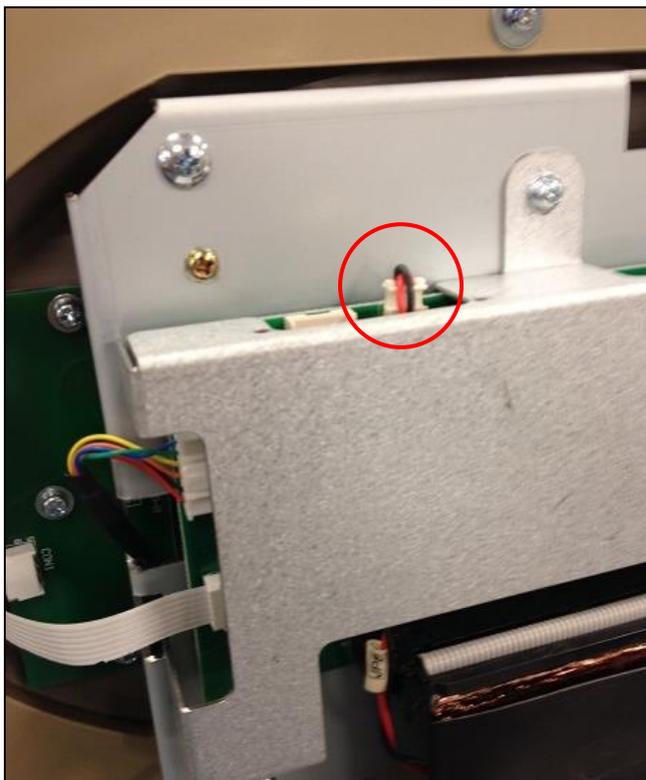
9a. Insert the LCD Monitor Display through the opening from the front of the Front Panel.
     Attach to the panel with the four retained screws.

9b. Re-attach the green grounding straps on the left and right sides of the rear of the Monitor.
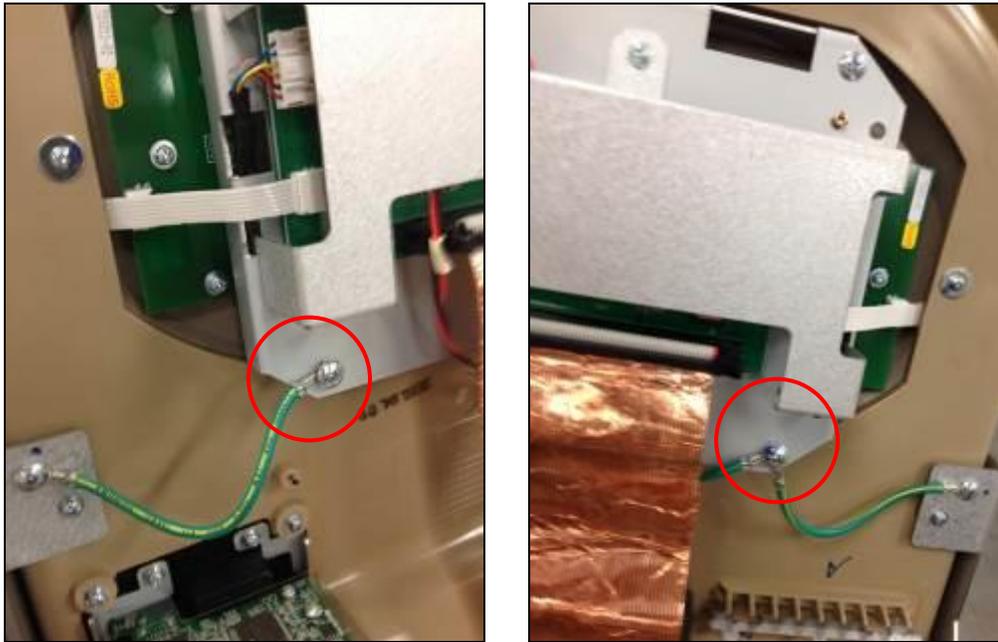

9c. Re-connect the Speaker cable to the port on the top left rear of the monitor.

9d. Attach the ribbon cable from the rear of the Monitor to the connector on the side of the Main Control Board. Install the cable so that it does not interfere with the Receipt Printer or other components within the ATM.

For better access, you may want to remove the screw holding the Receipt Printer in place and temporarily moving it out of the way.
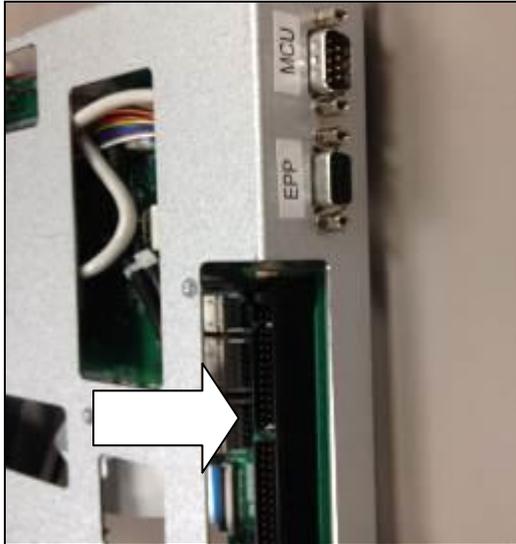

10. Install the new EMV Card Reader

Installing the new EMV Card Reader involves two steps:
a. Inserting and attaching the Card Reader to the Front Panel
b. Connecting the Card Reader cable to the MCU connector on the front of the Main Control Board

10a. Insert the EMV Card Reader through the opening from the front of the Front Panel. Attach to the panel with the two retained screws.
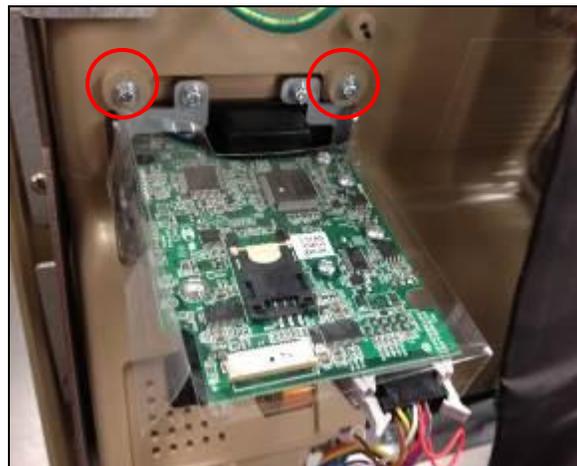
10b. The Card Reader Serial Connector should be attached to the port labeled MCU, on the front of the Main Control Board.

11. Receipt Printer Settings

If the Receipt Printer Control Board has 8 Dip Switches, set Dip Switch 2 to the OFF position and have all other Dip Switches set to the ON position.
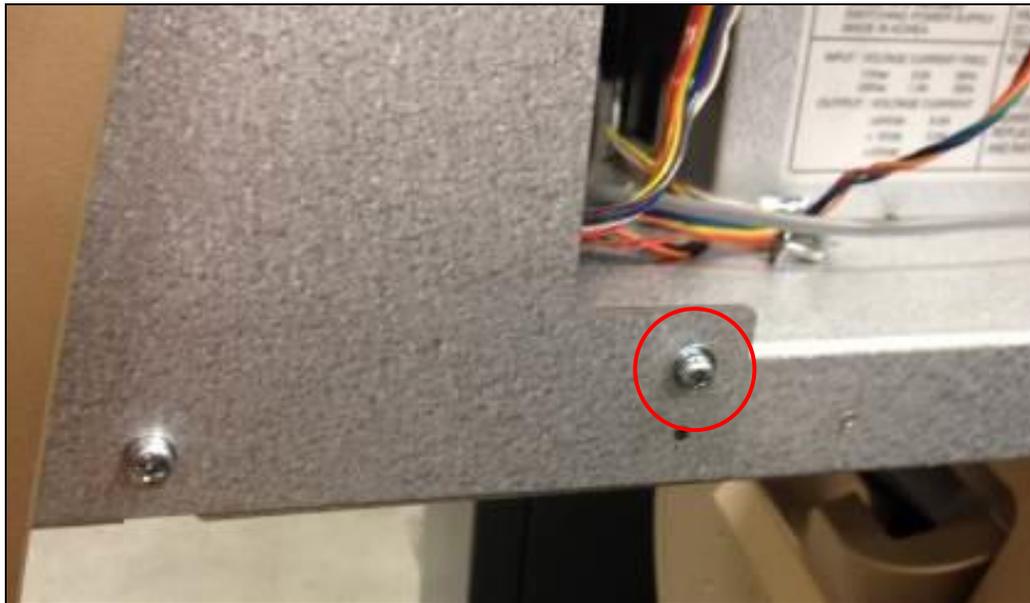
If the Receipt Printer Control Board has only 2 Dip Switches, set Dip Switch 1 to the OFF position and Dip Switch 2 to the ON position.

12. Place the Front Panel back into Position

Replace the retained screws on both sides of the Front Panel in order to lock it back into "operating" position.

13. "Insert Card" Decal

Place the "Insert Card" Decal on the front fascia of the ATM, above the EMV Card Reader.

14. Power ON the ATM

Turn ON the Power by setting the Main S/W to the "1" position.
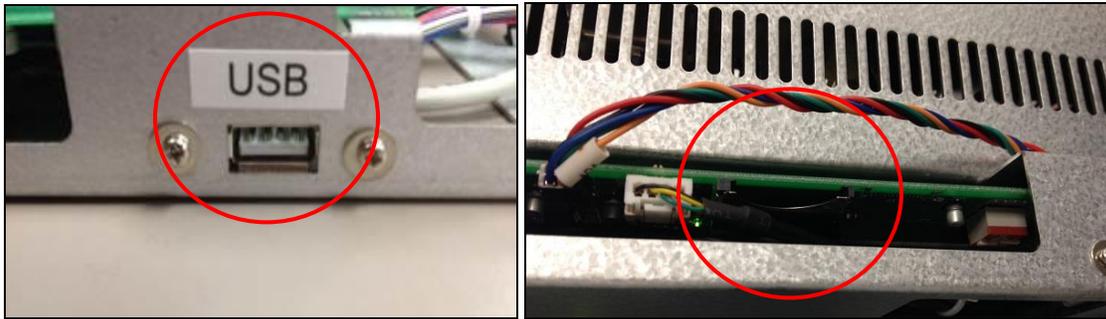
15. <u>Load New ATM Software</u>

The following minimum versions of software are required to support the 1500SE:

- US WINCE6.0 V06.01.11
- CA WINCE6.0 V06.01.08

The new Main Control Board contains a USB Port on the top of the metal housing, as well as a SD Card port on the top of the board that can be used for loading software.

Appendix A – Printer Firmware Upgrade

If the firmware version of the printer is V00.02.00 up through V00.03.05, a firmware upgrade to V00.03.07 will be required for the printer to correctly print receipts following the 1500SE Upgrade. Follow the instructions below for removing the EPROM chip from the 1500POS printer control board.

The EPROM is located in the following position on the printer control board:
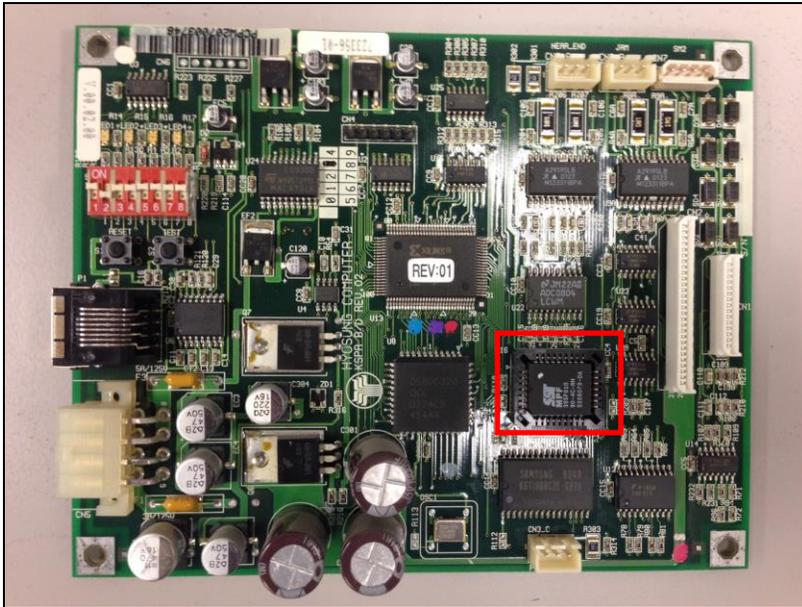
Use a small clip at the corner of the EPROM to loosen and safely remove from the board.
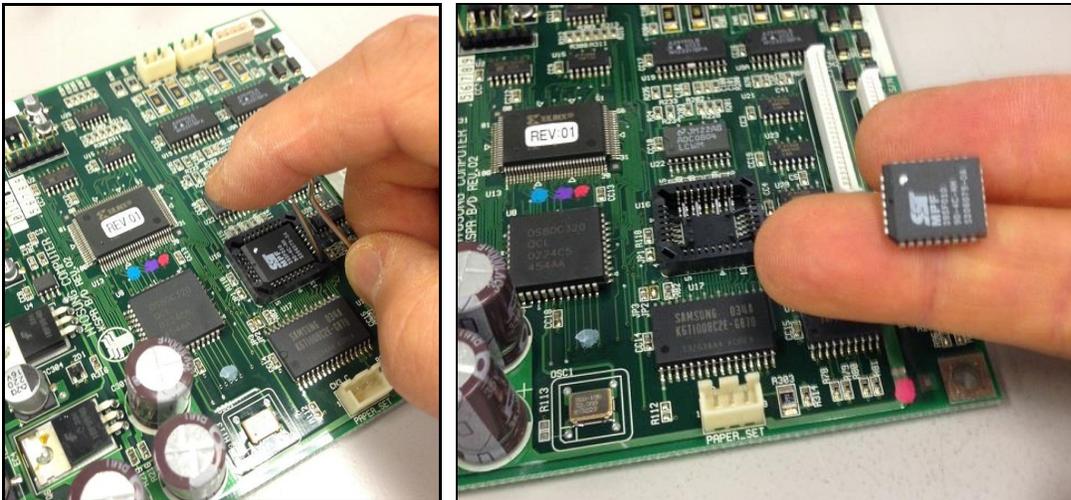
Follow the procedures found in "Technical Service Bulletin No. 08081" for returning the EPROM for a firmware upgrade.