X-Scale to X2 Conversion

Field Upgrade Procedures

(Models RL/FT5000/RT2000)

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Introduction

This guide covers the steps for upgrading your current X-Scale terminal configuration (hardware/software) with X2 assemblies/ software. These procedures include a list of tools and hardware required for the conversion.

NOTE: Terminal Software is pre-loaded in the X2 main board assembly.

Scope

These procedures apply to all Triton certified service personnel involved in the process of maintaining or converting Triton ATMs.

STOP!

This installation will require replacement of the X-Scale main board. The current terminal parameters and journal records *will* be affected or lost. Before proceeding with this upgrade, it is HIGHLY RECOMMENDED that you first - SAVE TERMINAL PARAMETERS and JOURNAL RECORDS to an external storage device (USB thumbdrive). The procedures for saving AND restoring terminal parameters and saving journal records are located in APPENDIX A.

Note: Journal Records may also be saved using Triton Connect.

Next, PRINT the CONFIGURATION SUMMARY. You may also want to print the journal records as well.

After restoring parameters, print another Configuration Summary and verify the saved parameters are correct (you will have to reconfigure the cassette setup/parameters). Also verify the screen/button options and perform some diagnostics on the hardware installed. Check Appendix A.

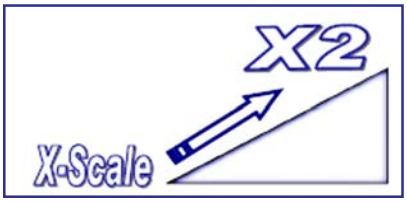
Below is a checklist of items that we recommend you perform or check prior to and after this upgrade:

CONFIGURATION CHECKLIST	
Option	**Management Function**
Configuration Summary	Terminal Status
Communication (Terminal/TC)	Terminal Configuration
Download Working Keys	Key Management
Cassette Parameters/Setup	Terminal Configuration
Trial Cassette/Cassette Close	Terminal Close Functions
Day Close	Terminal Close Functions
ISO/Surcharge	Terminal Configuration
Graphics/Screen Options	Terminal Configuration

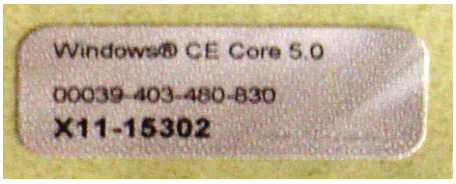
CONTENTS

IDENTIFYING AN X2 CONVERTED UNIT

X-Scale to X2 field conversion requires numerous hardware items to be replaced. To identify a unit that has been field upgraded with this kit, a label (shown below) may have been affixed to the X2 Main Board assembly for identification. Attach the CE sticker to the white ID label.



Attach the CE sticker to the white ID label.



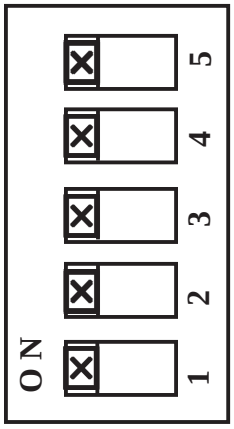
CONFIGURE THE DOCKING BOARD

Before installing the upgrade kits, you must configure the docking board assembly dip switches for the model units display. The following table shows the settings for configuring J1 (Video select).

Note: The RT2000 conversion kit is only available for the 10.4" display.

LCD SELECTION SETTINGS					
Product	**DIP 1**	**DIP 2**	**DIP 3**	**DIP 4**	**DIP 5**
FT5K	**ON**	**OFF**	**ON**	**ON**	**OFF**
RL5K	**ON**	**OFF**	**ON**	**ON**	**ON**
RT2K (10.4")	**ON**	**OFF**	**ON**	**ON**	**OFF**
*** All switch settings factory set to "ON".**					

J1



CONFIGURE THE REAR SERVICE PANEL JUMPER

If you have the Rear Service Panel (RSP) for the FT5000 or RT2000, you must also set the jumper for your RSP (**J11** located on the Docking Board assembly). The current FT5000 RSP (Figure 1) must have the jumper set to "DTR". The RT2000 RSP is a touchscreeen display (Figure 2) that must have the jumper set to "12V".

NOTE: The RSP shown in Figure 1 (for FT5000) will be replaced with the touchscreen display (Figure 2) at a date TBD. If your FT5000 comes with this touchscreen display, remember to set the jumper to "12V".

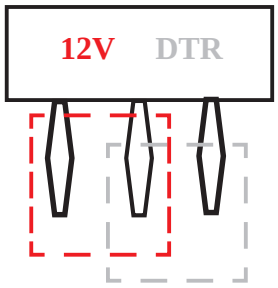
Figure 1. Rear Service Panel (RSP).

"DTR" required for Rear Service Panel.

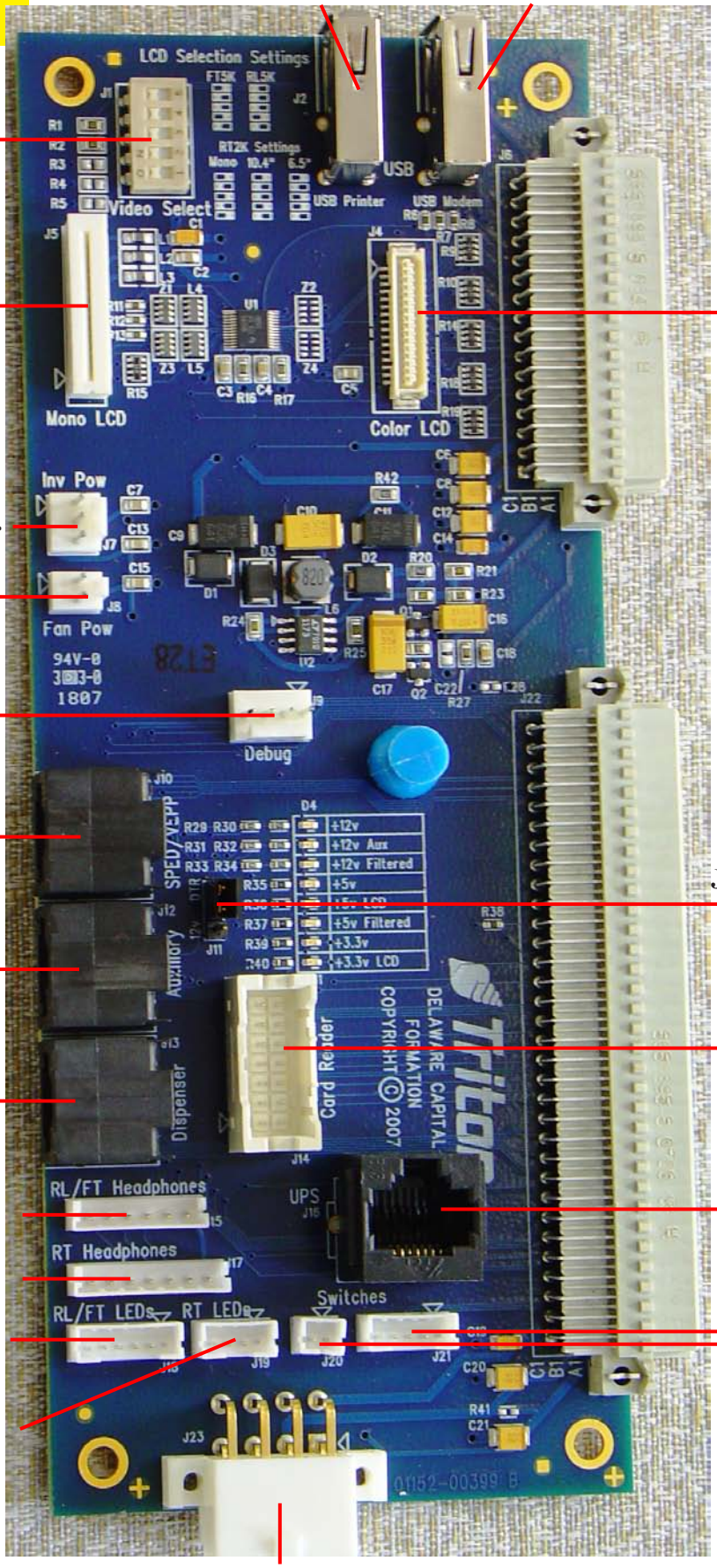
Figure 2. Touchscreen Operator Service Panel

"12V" required for Operator Service Panel (touchscreen)

J11



DOCKING BOARD



J2 - Printer USB port

J3 - Modem USB port

J1 -Video select (Dip switches)

J5 - Mono LCD (RT mono display)

J4 - Color LCD

J7 - Inverter power

J8 - Fan power

J9 - Debug (not used)

J10 - SPED/VEPP (RJ-45 port)

J11 - Rear Service Panel (jumper - 12V / DTR)

J12 - Auxillary (RJ-45 port)

J14 - Card reader

J13 - Dispenser (RJ-45 port)

J15 - RL / FT Headphones

J16 - UPS (RJ-45 port)

J17 - RT Headphones

J20, J21 - Switch (Door alarms - not used)

J18 - RL / FT LEDs

J19 - RT LEDs

J23 - Docking Board power

RL5000 X-Scale to X2 Upgrade Conversion

Overview

The X-Scale to X2 conversion requires replacement of numerous hardware items.

The following items (minimum) will be replaced from the current RL5000 X-Scale hardware configuration:

- Main Board Assembly
- Docking Board
- Printer Assemblies

Printer controller

Power cable (printer controller)

Low paper sensor cable

Data cable (ribbon)

Presenter board

Presenter cable

Controller cover

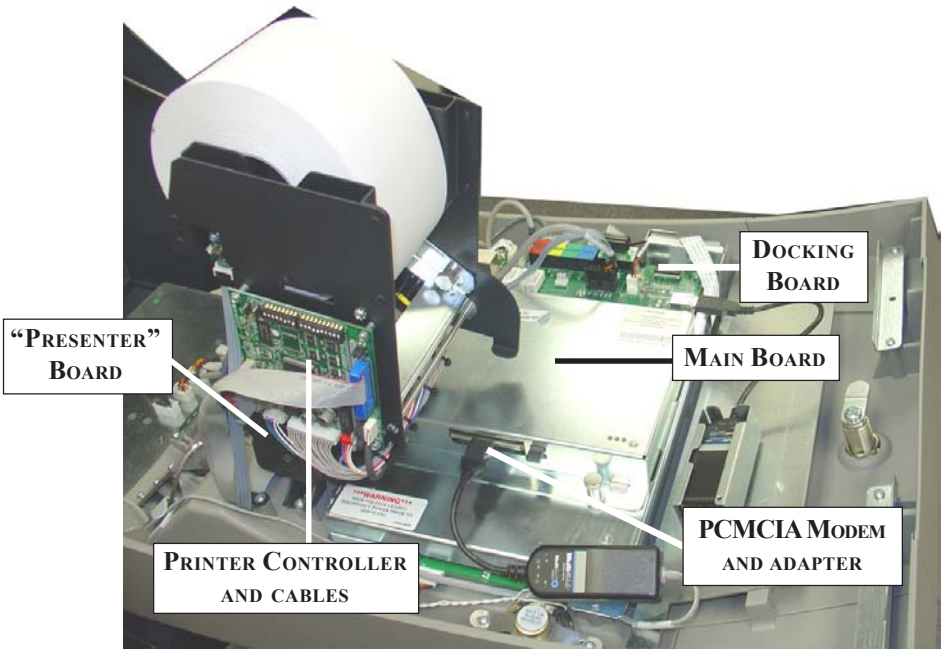
- Card Reader Cables

(Dip, EMV, Motorized) - applicable

If you ordered the optional Modem kit and/or Power Supply-TDM Upgrade kit(s), the following items will also be replaced:

- PCM/CIA Modem and phone line adapter
- Power Supply

NOTE: If your RL5000 is equipped with a TDM dispensing mechanism (any), you will be required to replace the "single" power supply currently install and upgrade the TDMs firmware software. You will require a PC or laptop computer to perform the TDM upgrade procedure.



X-Scale Assemblies
(that will be replaced)

REQUIRED PARTS AND TOOLS

TOOLS REQUIRED		
#1 and #2 Phillips screwdriver (Magnetic recommended) Diagonal cutters - 11/32" (9mm) nutdriver ESD wrist strap with grounding cord		
RL5000 X-SCALE TO X2 UPGRADE KIT 06200-20228		
PARTS SUPPLIED - SOME PART NUMBERS MAY BE SUPERCEDED		
PART NUMBERS	**DESCRIPTION**	**QUANTITY**
07000-00302	X2 Upgrade Kit Label	1
09110-00077	X2 Main Board Assembly	1
09100-00400	Docking Board (Color display)	1
01500-10119	Controller Board, Printer, USB/Cutter and Cable	1
09120-07064	Power Cable, Printer31"	1
09120-07060	Data Cable, Printer, USB42"	1
09120-00340	Cable, Low Paper Sensor	1
09100-00258	PCB, Presenter Board	1
09120-00339	Cable, Printer Presenter	1
03011-01834	Cover, Printer Controller	1
Modem Kit		
03015-00214	Modem, USB, Triton	1
09120-07069	Cable, Modem, USB	1
03011-01810	Mounting Bracket, Modem	1
02054-00172	Screw, Phillips, Washer-head	5
Power Supply and TDM Upgrade Kit (P/N 06200-08123)		
09200-00109	Power Supply (Dual)	1
09120-07032	Cable, Power Supply Adapter, TDM	1
09120-07014	TDM Download Cable	1
Card Reader Cables		
*09120-07053	Cable, Card Reader, I65 (EMV)	1
*09120-00827	Cable, Card Reader, Magtek 215 (Dip)	1
*09120-00284	Cable, Card Reader, 3K5 (Motorized)	1
03072-00015	Ty Wrap	15
	* Use cable for applicable card reader type	

INSTALLING THE RL5000 X2 UPGRADE KIT

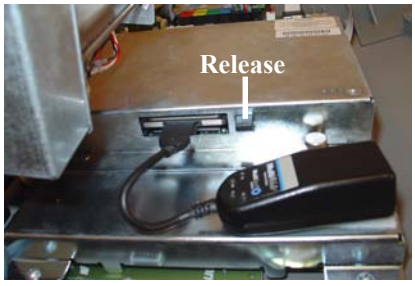
Note: Before proceeding with the upgrade procedures, terminal power ***MUST*** be removed. Enter **MANAGEMENT FUNCTIONS > SYSTEM PARAMETERS > SHUT DOWN THE TERMINAL.** When prompted *"It is now safe to turn off your computer"* on the screen, open the control panel and turn the power switch on the power supply to the **<OFF>** (0) position.

1. **REMOVE PAPER ROLL** - Open the control panel and remove the paper roll/spindle from the receipt printer.

Open control panel.

Remove paper roll from printer

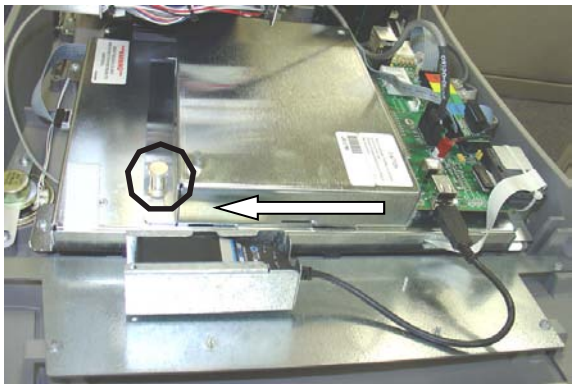
2. **REMOVE PCMCIA MODEM AND PHONE LINE ADAPTER (IF APPLICABLE)** - Disconnect the phone line from the phone line adapter. Push the release button for the modem card slot and remove both the PCMCIA modem card and phone line adapter.



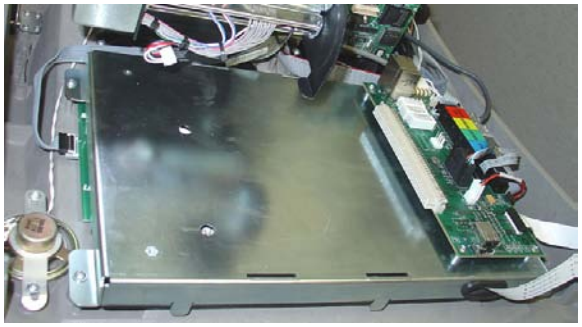
Push release button.

Remove PCMCIA modem card and phone line adapter.

3. **REMOVE MAIN BOARD ASSEMBLY** - Pull the release pin on the main board assembly and slide assembly from docking board. This assembly will be replaced.

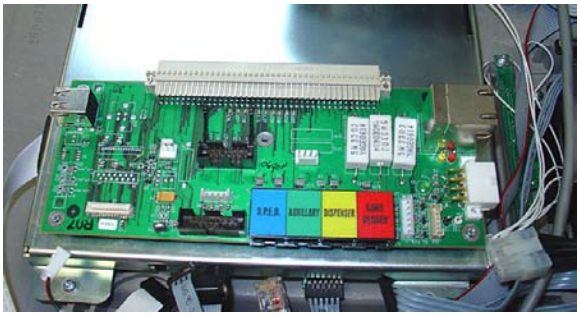


Pull release pin and slide assembly.

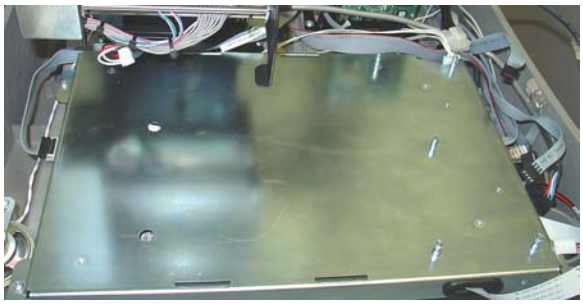


Main board removed.

4. **REMOVE DOCKING BOARD ASSEMBLY -** Disconnect all cables to the docking board. Using a phillips screwdriver, remove the screw that secures board and remove the docking board. This assembly will be replaced. Retain the screw.



Remove all cables from docking board.

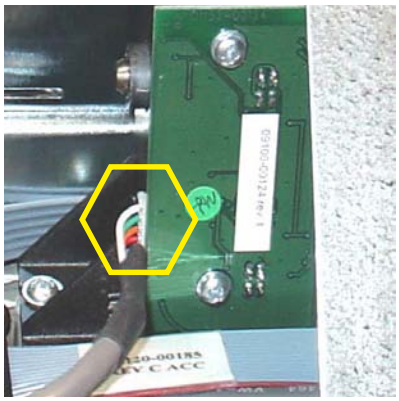


Docking board removed.

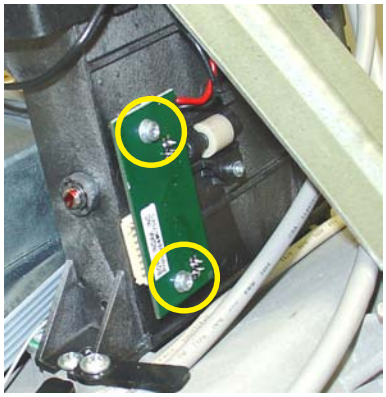
5. **REMOVE/REPLACE PRINTER "PRESENTER" BOARD:**

A. Disconnect the printer presenter board cable. This cable will be replaced.

B. Using a phillips screwdriver, remove the two (2) screws that secure the presenter board. Retain the screws. Next, disconnect the two (2) wire cable from the board and remove the board. This board will be replaced.



Presenter board cable.



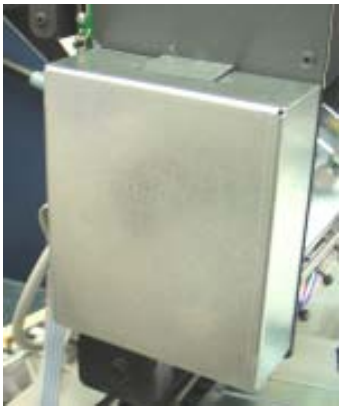
Remove screws.

C. Connect the two (2) wire cable previously removed to the new presenter board and secure board to the presenter with the screws previously removed.

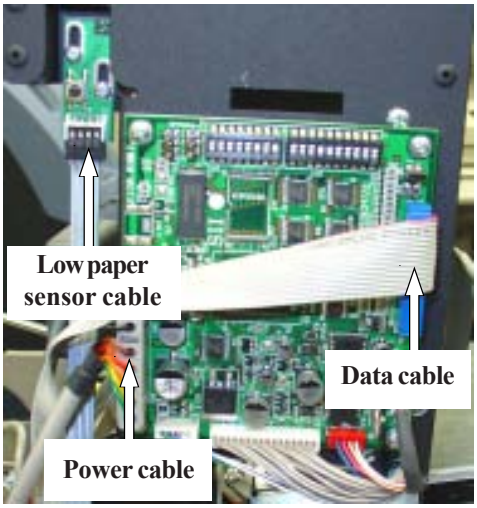
New presenter board installed.

6. REMOVE/REPLACE PRINTER "CONTROLLER" ASSEMBLY:

A. Remove the printer controller board cover, if installed. Disconnect the power, data, and low paper sensor cables from the printer controller board and from the low paper sensor board shown. These cables and the cover will be replaced.



Printer controller cover.



Printer controller cables.

B. Disconnect the card reader cable from the card reader. Using a phillips screwdriver, remove the screw that secures the TVS pack from the printer bracket shown below. Remove the card reader/TVS pack cable. This will be replaced in later steps.

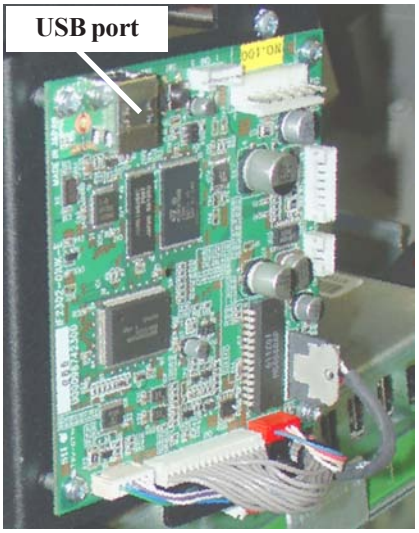
Disconnect/remove card reader cable .

C. Disconnect the remaining cables to the printer controller board. Next, using a phillips screwdriver, remove the four (4) screws that secure the board to the printer bracket. Remove the controller board - this will be replaced. Retain these screws.

All cables removed from old controller board.

D. Install the new printer controller (P/N 01260-00022/23) with screws previously removed. Ensure screws are securely tightened! ***Note: The USB port on the assembly will be facing UP when installed.*** Reconnect the cables removed in **Step 6(C).**

Note: The rest of the printer controller cables will be installed in Step 8.



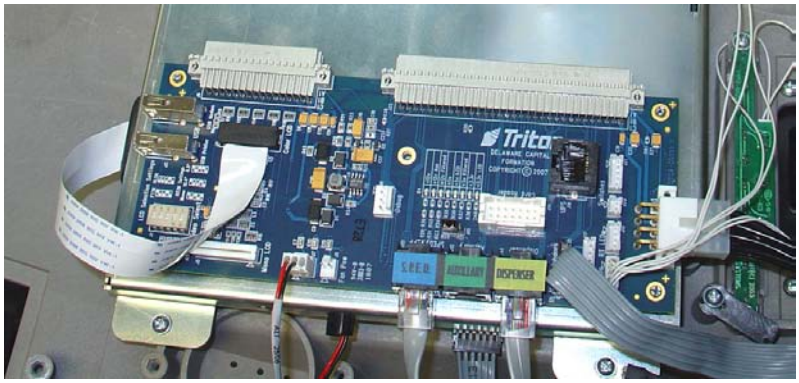
New controller with lower cables installed.

7. **INSTALL NEW DOCKING BOARD ASSEMBLY** - ***Note: Before installing, verify the video select dip switches have been properly set for the RL5000. See page 4 for correct settings***.

Using the screw previously removed from old docking board, install new assembly and secure.

Reconnect: ***DISPLAY LCD RIBBON CABLE (J4)***
INVERTER CABLE (J7)
SPED RJ-45 CABLE (J10)
DISPENSER RJ-45 CABLE (J13)
RL/FT HEADPHONE CABLE (J15)
RL/FT LED CABLE (J18)
DOCKING BOARD POWER CABLE (J23)
USB MODEM (MULTITECH TYPE, IF APPLICABLE) - (J3)

Note: Refer to the Docking Board diagram on Page 5 for connector designations.



Docking board installed and some cables connected.

*** IMPORTANT ***

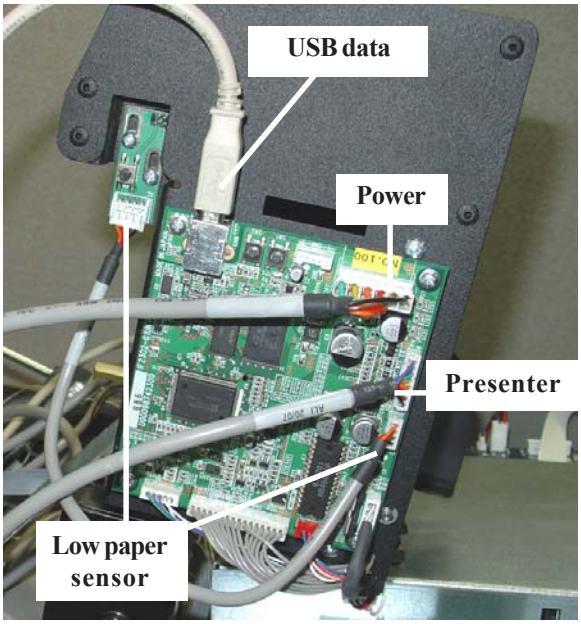
The RL5000 display cable (ribbon) may have a ferrite attached to it. **REMOVE THE FERRITE** (open it up) before connecting the cable to the docking board. The ferrite is no longer required for the X2 upgrade.

8. INSTALL /CONNECT NEW PRINTER CONTROLLER CABLES:

A. Connect the new power (P/N 09120-07064), low paper sensor (P/N 09120-00340), and USB data (P/N 09120-07060) cables to the printer controller. Next, install one end of the new printer presenter board cable (P/N 09120-00339) to the presenter board and other end to the printer controller. Note that the presenter cable no longer is connected to the docking board.

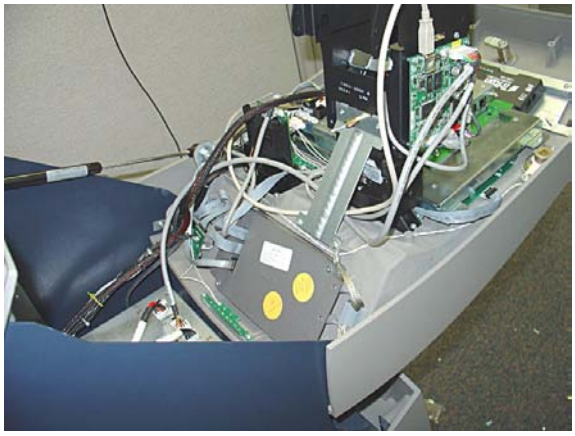
B. Route the power cable and connect to the power supply. Route the USB data cable to the **DOCKING BOARD** and connect to the **PRINTER USB PORT (J2).**

C. Install the new printer controller cover (P/N 03011-01834).



Connect new cables to controller assembly.

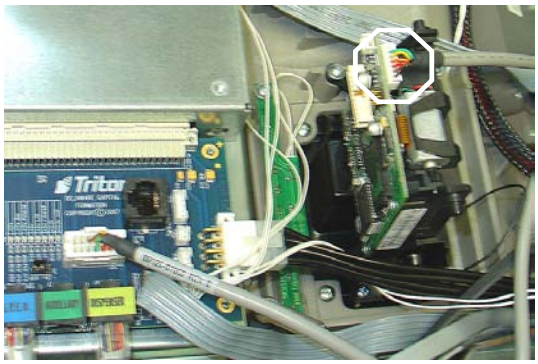
Presenter board.



Route cables under strut.

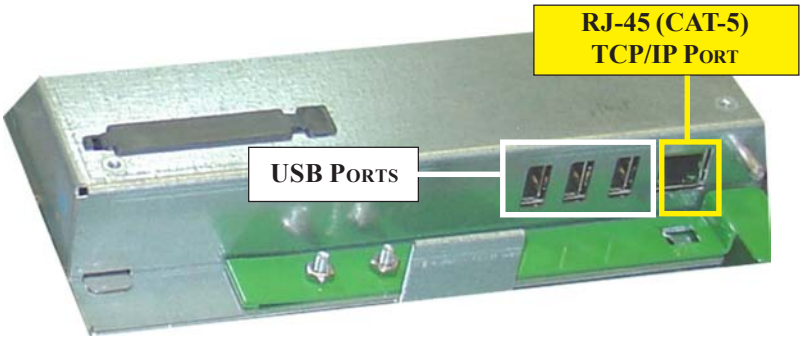
9. REMOVE / REPLACE CARD READER CABLE - Connect the new card reader cable to the reader. Connect the other end to the **DOCKING BOARD (J14).**

Note: Upgrade kits come with multiple cable types. Install the applicable cable to your card reader type (EMV, Dip, Motorized).

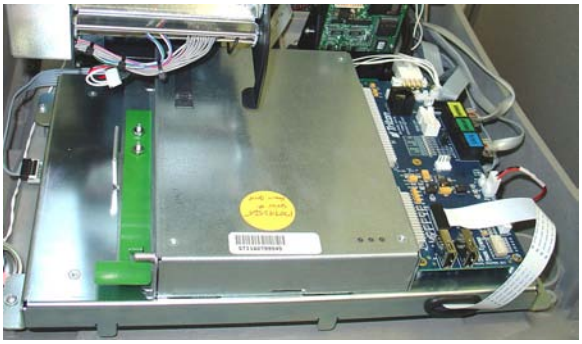


Install new card reader cable.

10. INSTALL NEW X2 MAIN BOARD ASSEMBLY - Align tabs on X2 main board with slots on display assembly. Slide main board into docking board assembly until the green handle locks in place.



X2 Main Board



X2 main board installed.

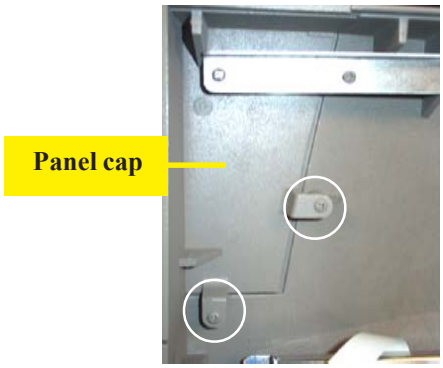
11. REMOVE ALL REPLACED CABLES - All cables that have been replaced may be removed from the unit. Route the new cables and secure together with the Ty wraps included, if preferred.

All cables routed/connected to Docking board.

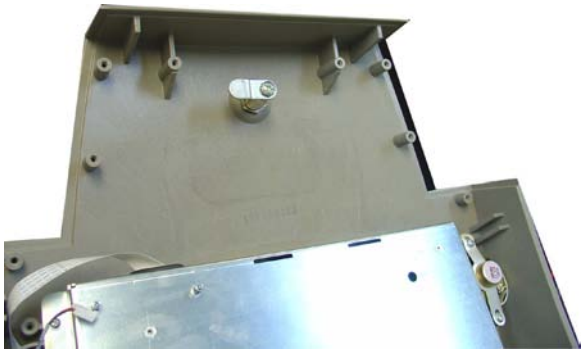
OPTIONAL MODEM ASSEMBLY / HARDWARE - The following shows installation of the optional Triton USB modem and the bracket/ cable included.

- Using a phillips screwdriver, remove the two (2) screws shown from ***each*** panel cap located on the control panel (Figures 1 and 2). Retain the screws.

  Note: If your ATM has the panels removed due to topper signage, use the screws (Qty. 5) included in kit for the next step.

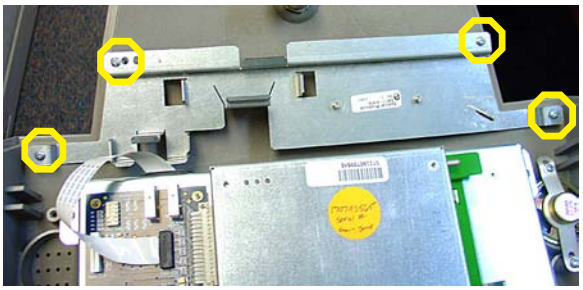


Remove 2 screws.

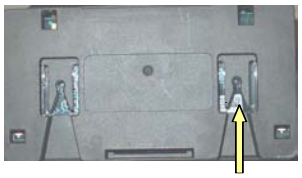


Panels caps removed for hightopper signage.

- Using the four (4) screws previously removed, install the new modem bracket. Next, install the new Triton USB modem by aligning the slots on the bottom of the modem with the tabs on the bracket. Slide modem assembly until it snaps in place. Connect the modem USB cable (P/N 09120-07069) to the modem and Docking board **USB PORT (J3)**. Last, reconnect the phone line cable to the modem.



Install new modem bracket.



Modem slots.

Mount/connect new modem.

OPTIONAL POWER SUPPLY AND TDM UPGRADE KIT OPTION:

The Power Supply replacement procedures are available on the Triton web site.. The document (TDN 07103-00163) describes the steps involved.

The TDM Firmware Upgrade procedure (TDN 07103-00168) and software are also available on the Triton web site. The download cable (P/N 09120-07014) and TDM adapter cable (P/N 09120-07032) are included with this optional kit accessories. You will need a PC or laptop computer to perform the firmware update.

FT5000 X-SCALE TO X2 UPGRADE CONVERSION

OVERVIEW

The X-Scale to X2 conversion requires replacement of numerous hardware items.

The following items (minimum) will be replaced from the current FT5000 X-Scale hardware configuration:

- MAIN BOARD ASSEMBLY
- DOCKING BOARD
- PRINTER ASSEMBLIES

PRINTER CONTROLLER

POWER CABLE (PRINTER CONTROLLER)

LOW PAPER SENSOR CABLE

DATA CABLE (RIBBON)

PRESENTER BOARD

PRESENTER CABLE

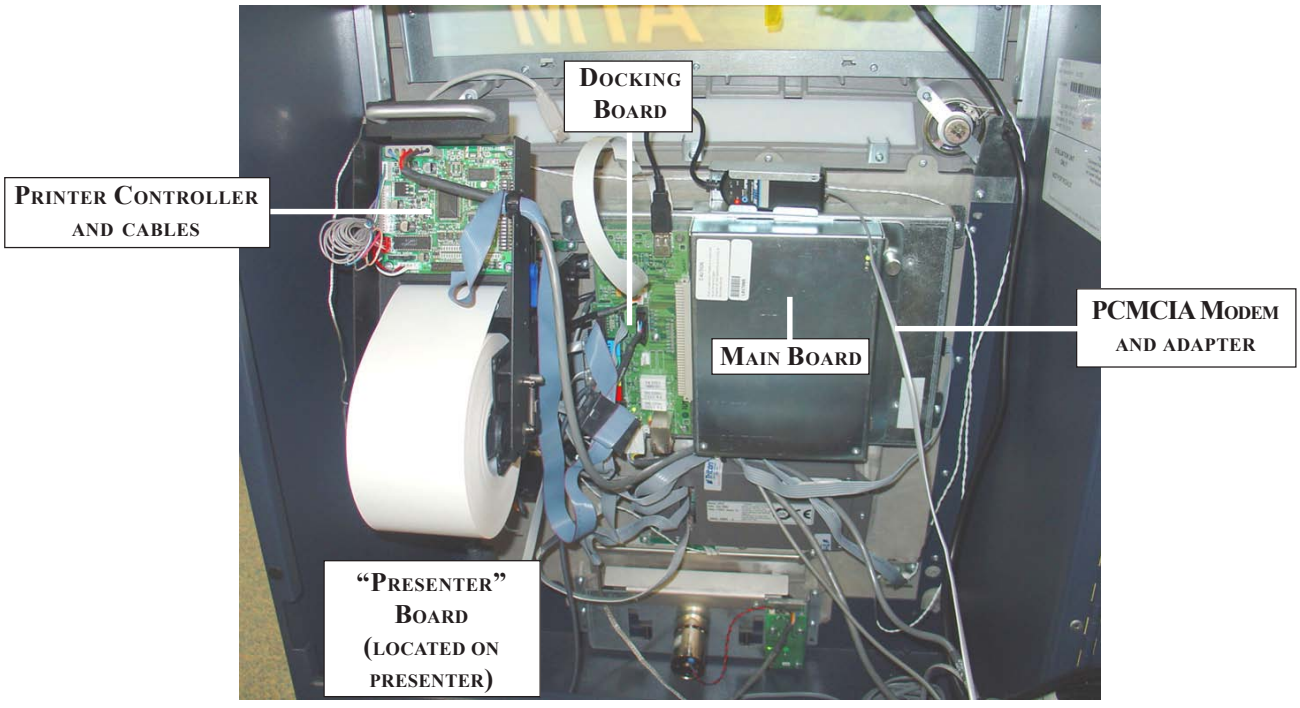
CONTROLLER COVER

- CARD READER CABLES

(DIP, EMV, MOTORIZED) - APPLICABLE

If you ordered the optional Modem kit, the following items will also be replaced:

- PCM/CIA MODEM AND PHONE LINE ADAPTER



X-SCALE ASSEMBLIES
(THAT WILL BE REPLACED)

REQUIRED PARTS AND TOOLS

TOOLS REQUIRED		
#1 and #2 Phillips screwdriver - long and short (Magnetic recommended) Diagonal cutters #T-20 Torx driver ESD wrist strap with grounding cord		
FT5000 X-SCALE TO X2 UPGRADE KIT 06200-20229		
PARTS SUPPLIED - SOME PART NUMBERS MAY BE SUPERCEDED		
PART NUMBERS	**DESCRIPTION**	**QUANTITY**
07000-00302	X2 Upgrade kit Label	1
09110-00077	X2 Main Board Assembly	1
09100-00400	Docking Board (Color display)	1
01500-10119	Controller Board, Printer, USB/ Cutter and cable	1
09120-07065	Power Cable, Printer50"	1
09120-07059	Data Cable, Printer, USB20"	1
09120-07068	Cable, Low Paper Sensor14"	1
09100-00258	PCB, Presenter Board	1
09120-07062	Cable, Printer Presente 23"	1
03011-01835	Cover, Printer Controller	1
02054-00020	Screw, #4-40, 1/4", Conewasher	5
02054-00160	Screw, #4-40, 1/4" Tapping Pan, Phillips-head	2
Modem		
03015-00214	Modem, USB, Triton	1
09120-07069	Cable, Modem, USB 5.5"	1
03011-01836	Mounting Bracket, Modem,(FT/RT)	1
Card Reader Cables		
*09120-07053	Cable, Card Reader, 165 (EMV)	1
*09120-00827	Cable, Card Reader, Magtek 215 (Dip)	1
*09120-00284	Cable, Card Reader, 3K5 (Motorized)	1
03072-00015	Ty Wrap	15
	* Use cable for applicable card reader type	

INSTALLING THE FT5000 X2 UPGRADE KIT

Note: Before proceeding with the upgrade procedures, terminal power ***MUST*** be removed.

FROM FRONT DISPLAY: Enter **MANAGEMENT FUNCTIONS > SYSTEM PARAMETERS > SHUT DOWN THE TERMINAL.** When prompted *"It is now safe to turn off your computer"* on the screen, open the cabinet sleeve door and turn the power switch on the power supply to the **<OFF>** (0) position.

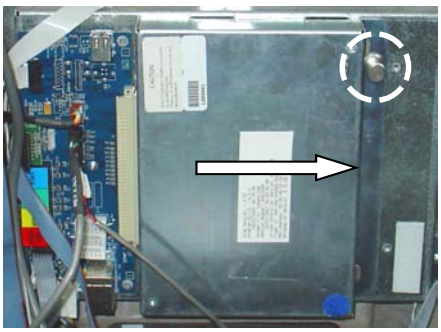
FROM REAR SERVICE OPERATOR PANEL (FT/RT): Enter **MANAGEMENT FUNCTIONS > MAIN MENU > SHUT DOWN THE TERMINAL**. When prompted *"It is now safe to turn off your computer"* on the screen, open the cabinet sleeve door and turn the power switch on the power supply to the **<OFF>** (0) position.

1. **REMOVE PAPER ROLL** - Open rear cabinet door. Remove the paper roll/spindle from the receipt printer.

2. **REMOVE PCMCIA MODEM AND PHONE LINE ADAPTER (IF APPLICABLE)** - Disconnect the phone line from the phone line adapter. Push the release button for the modem card slot and remove both the PCMCIA modem card and phone line adapter.

Paper roll removed.

3. **REMOVE MAIN BOARD ASSEMBLY** - Pull the release pin on the main board assembly and slide unit from docking board. This assembly will be replaced.



Pull release pin and slide assembly.

Main board removed.

4. **REMOVE DOCKING BOARD ASSEMBLY -** Disconnect all cables to the docking board. Using a phillips screwdriver, remove the screw that secures board and remove the docking board. This assembly will be replaced. Retain the screw.

Remove all cables/ screw from docking board.

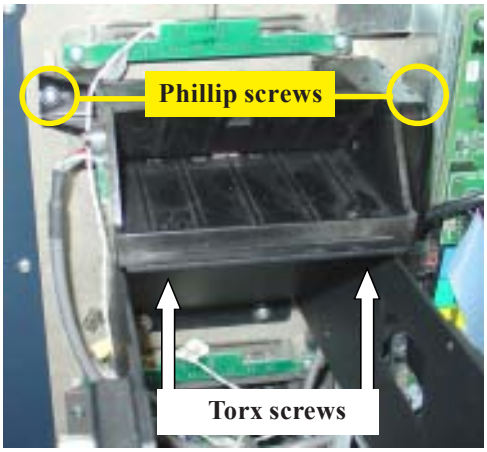
Docking board removed.

5. REMOVE/REPLACE PRINTER "PRESENTER" BOARD:

A. Lift the printer handle and rotate the printer assembly down.

B. The presenter is secured to the printer bracket (2 Torx screws) and control panel (2 phillips head screws).

Pull handle and rotate printer assembly down.



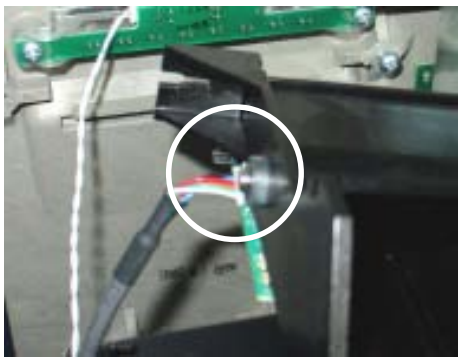
Presenter screw locations.

C. Remove the two (2) Torx screws with a #20 Torx driver. Next, remove the two (2) phillips head screws. Retain all the screws.

D. Disconnect the presenter cable and remove the presenter. The presenter board cable will be replaced.

Remove Torx screws.

Remove phillips screws.

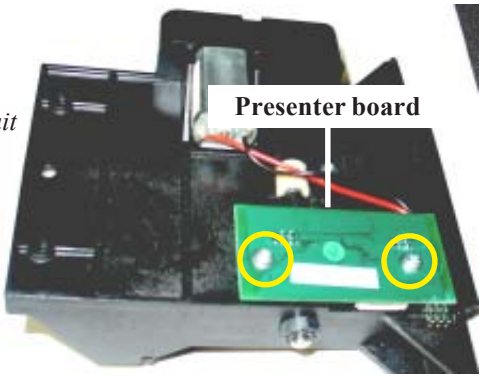


Disconnect presenter cable.

E. Place the presenter assembly on a flat surface. Using a phillips screwdriver, remove the two (2) screws that secure the presenter board shown. Next, disconnect the two (2) wire cable from the board and remove the board. This will be replaced.

F. Connect the two (2) wire cable previously removed to the new presenter board and secure board to the presenter with the screws previously removed.

Presenter circuit board.



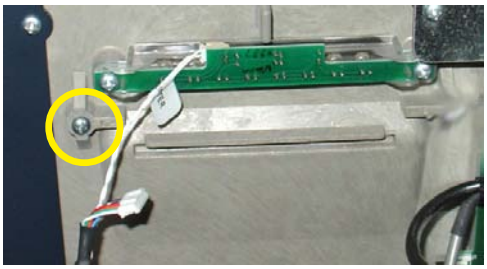
Presenter board removed.

G Using a phillips screwdriver, start one (1) of the phillips head screws previously removed in the control panel.

H. Connect the new presenter board cable (P/N 09120-07062) to the presenter board. The other end will be connected later to the new printer controller assembly.

I. Insert the presenter assembly on the screw and start the other. **DO NOT** tighten the phillips head screws at this time. Next, install the Torx screws previously removed. Tighten all screws.

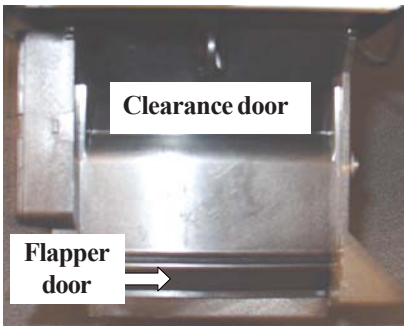
J. Rotate the printer assembly up until it locks in place.



Start phillips head screw.

**** IMPORTANT ****

After installation of presenter assembly, check to ensure the flapper door moves freely. The LED wires and speaker wires should be clear of the flapper door. Also, the jam clearance door **MUST** be closed to process receipts.

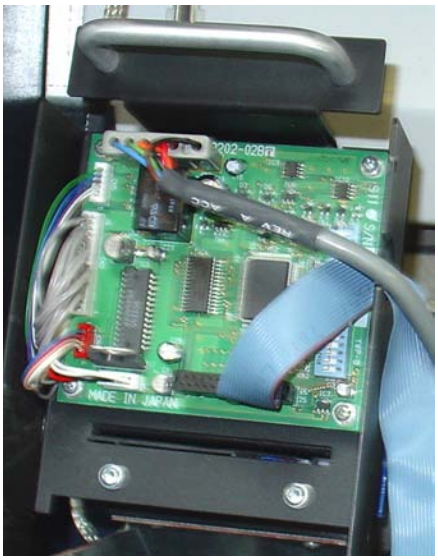


6. REMOVE/REPLACE PRINTER "CONTROLLER" ASSEMBLY:

A. Remove the printer controller cover. This cover will be replaced. Disconnect ***all*** the cables to the printer controller board. Also, disconnect the low paper sensor cable end from the sensor board.

Note: The printer controller power, data, and low paper sensor cables will be replaced.

B. Using a phillips screwdriver, remove the four (4) screws that secure the board to the printer assembly and remove the controller board - this will be replaced. ***Note: The screws will also be replaced.***



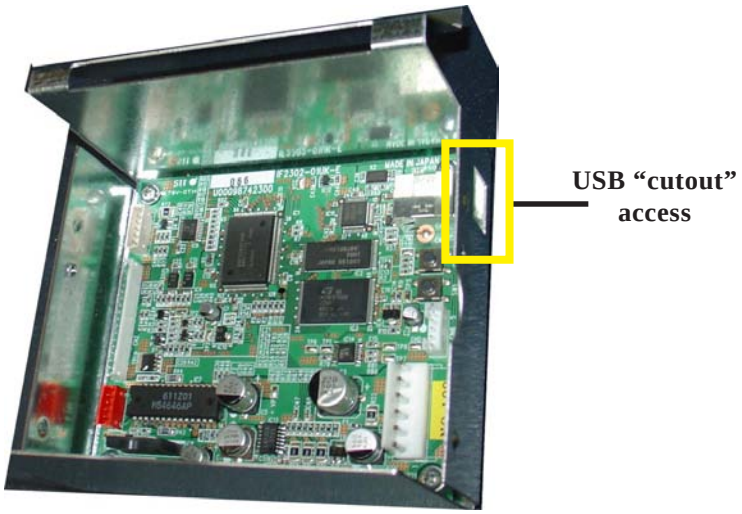
Printer controller cables.

All cables removed from old controller board.

Printer controller removed.

C. Place the new printer controller cover on a flat surface. Install the new printer controller (P/N 01260-00022/23) inside the cover and secure with four (4) conehead phillips head screws included in kit. Ensure the screws are securely tightened! ***Note: The USB port on the assembly will be facing towards the "cutout" on the cover.***

New printer controller cover.



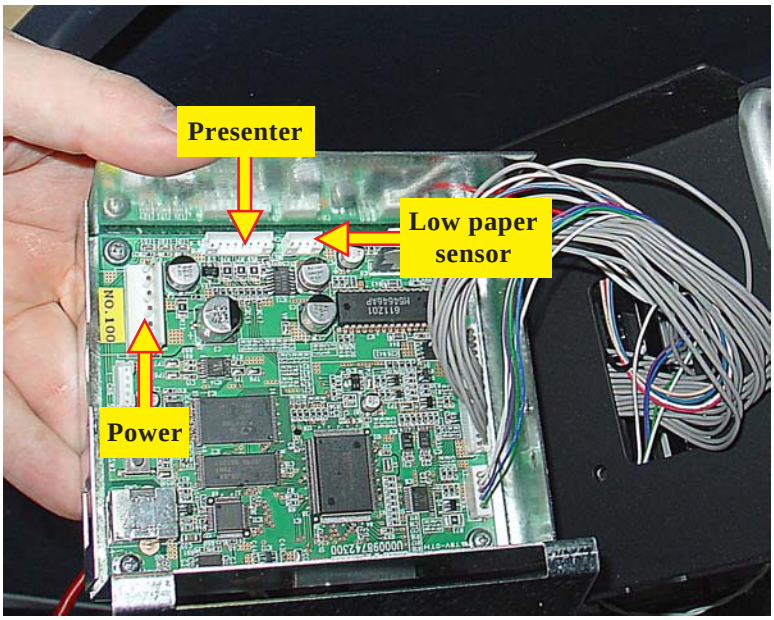
Printer controller installed in cover.

D. Connect cables to printer controller board:

➢ Reconnect the printer cables to the new controller board. ***Note: If these cables are ty wrapped and hard to connect, recommend carefully cut ty wrap to better access cables for connectivity to the controller.***

➢ Connect the new power (P/N 09120-07065) and low paper sensor (P/N 09120-07068) cables to the printer controller.

➢ Connect the new presenter board cable (P/N 09120-07062) previously installed to the presenter in **Step 5(H)** to the controller board. Note that this presenter cable no longer is connected to the docking board.



Location of cable connections.

E. Turn the cover assembly towards the printer bracket shown at right. ***Note: The USB port will be facing "Right" when installed.***

Face cover assembly towards printer bracket.

➢ Carefully insert assembly into printer bracket. Ensure the gray cables are in the cover slot shown.

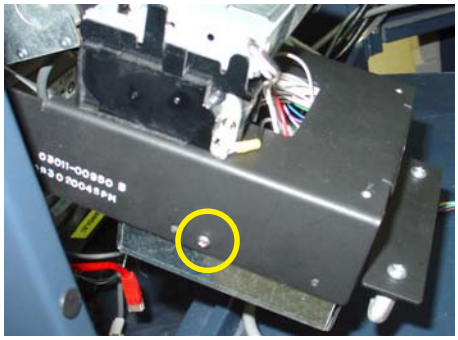
➢ Secure the cover assembly to the printer bracket with the two (2) tapping phillips-head pan screws included in kit. Start with one (1) screw on the ***Right-side*** of the bracket.

➢ Lift the handle on the printer assembly and rotate down. Install the other screw on the ***Left-side*** of the bracket.

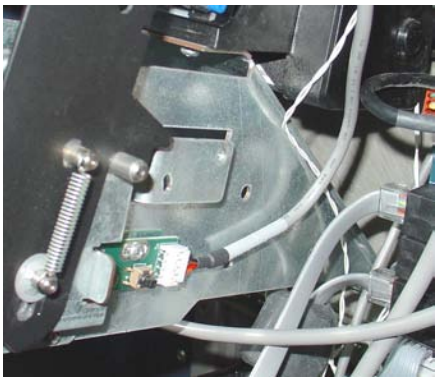
➢ Lift the printer assembly back up to the operate position.

➢ Connect the other end of the low paper sensor cable to the sensor board shown below.

Insert cover assembly and secure right side with screw.



Rotate assembly down and secure left side with screw.



Low paper sensor board..

NOTE: YOU MAY WANT TO CONNECT THESE CABLES PRIOR TO SECURING DOCKING BOARD FOR EASE OF CONNECTIVITY.

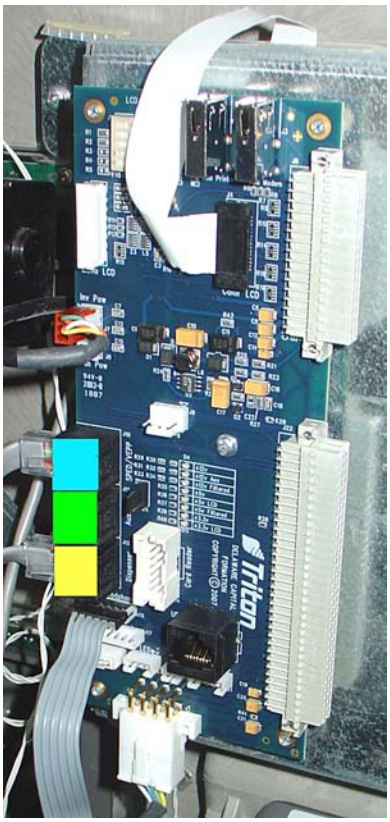
7. INSTALL NEW DOCKING BOARD ASSEMBLY

Note [1]: Before installing, verify the video select dip switches have been properly set for the FT5000. See page 4 for correct settings.

Note [2]: If you have the Rear Service Panel, verify the jumper (J11) is properly set for your panel. See page 4 for correct panel and setting.

Using the screw previously removed from old docking board, install new assembly and secure. Reconnect:

DISPLAY LCD RIBBON CABLE (J4)
RL/FT HEADPHONE CABLE (J15)
INVERTER CABLE (J7)
RL/FT LED CABLE (J18)
SPED RJ-45 CABLE (J10)
DOCKING BOARD POWER CABLE (J23)
DISPENSER RJ-45 CABLE (J13)
USB MODEM (MULTITECH TYPE, IF APPLICABLE) - (J3)
AUXILLARY (J12 - REAR SERVICE PANEL, IF APPLICABLE)



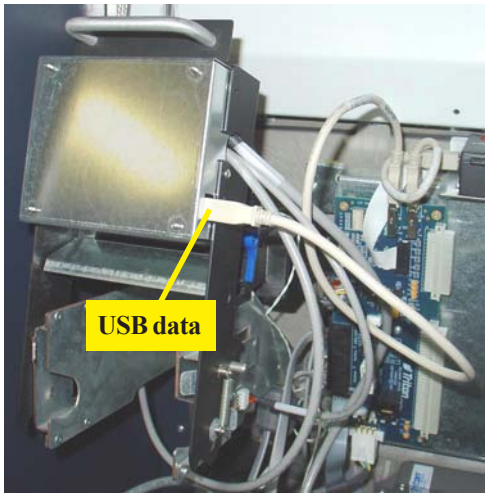
*** IMPORTANT ***

The FT5000 display cable (ribbon) may have a ferrite attached to it. **REMOVE THE FERRITE** (open it up) before connecting the cable to the docking board. The ferrite is no longer required for the X2 upgrade.

8. ROUTE/CONNECT PRINTER CONTROLLER CABLES:

A. Connect one end of the new USB data cable (P/N 09120-07059) to the printer controller and the other end to the **PRINTER USB PORT (J2)** on the docking board.

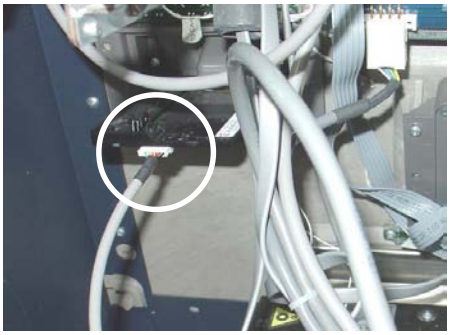
B. Route/connect the controller power cable over to the power supply.



Printer controller cables connected.

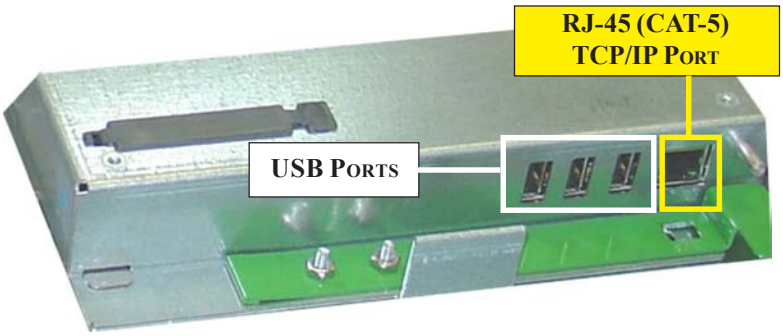
9. REMOVE/REPLACE CARD READER CABLE - Remove the card reader cover (if applicable). Disconnect and remove the old card reader cable(s) from the card reader. Install the new cable to the card reader and the **DOCKING BOARD (J14).**

Note: Upgrade kits come with multiple cable types. Install the applicable cable to your card reader type (EMV, Dip, Motorized).



Remove/replace card reader cable.

10. INSTALL NEW X2 MAIN BOARD ASSEMBLY - Align tabs on X2 main board with slots on display assembly. Slide main board into docking board assembly until the green handle locks in place.



X2 Main Board.

X2 main board installed.

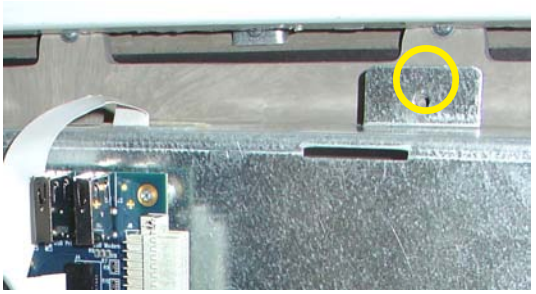
11. REMOVE ALL REPLACED CABLES - All cables that have been replaced may be removed from the unit. Route the new cables and secure together with the Ty wraps included, if preferred.

Note: If you prefer to keep the replaced cables in the unit, ty wrap them so they do not interfere with any components, mechanical/ electrical.

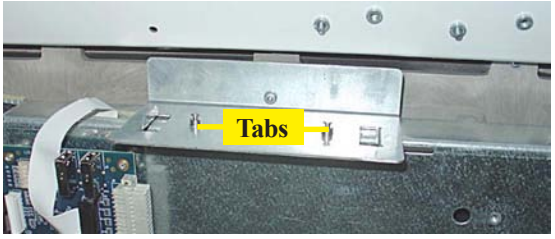
X2 upgrade complete.

OPTIONAL MODEM ASSEMBLY / HARDWARE - The following shows installation of the optional Triton USB modem and the bracket/cable included.

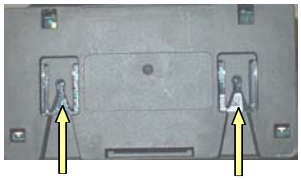
- Using a phillips screwdriver, remove and retain the screw shown. Mount and secure the new modem bracket with screw previously removed (Figure below).
- Next, install the new USB modem by aligning the slots on the bottom of the modem with the tabs on the bracket. Slide modem assembly until it snaps in place. Connect the modem USB cable (P/N 09120-07069) to the modem and Docking board **USB PORT (J3)**. Last, reconnect the phone line cable to the modem.



Screw removed



Install new modem bracket.



Modem slots.

Mount/connect new modem.

RT2000 X-SCALE TO X2 UPGRADE CONVERSION

OVERVIEW

The X-Scale to X2 conversion requires replacement of numerous hardware items.

The following items (minimum) will be replaced from the current RT2000 X-Scale hardware configuration:

- MAIN BOARD ASSEMBLY
- DOCKING BOARD
- PRINTER ASSEMBLIES

PRINTER CONTROLLER

POWER CABLE (PRINTER CONTROLLER)

LOW PAPER SENSOR CABLE

DATE CABLE

PRESENTER BOARD

PRESENTER CABLE

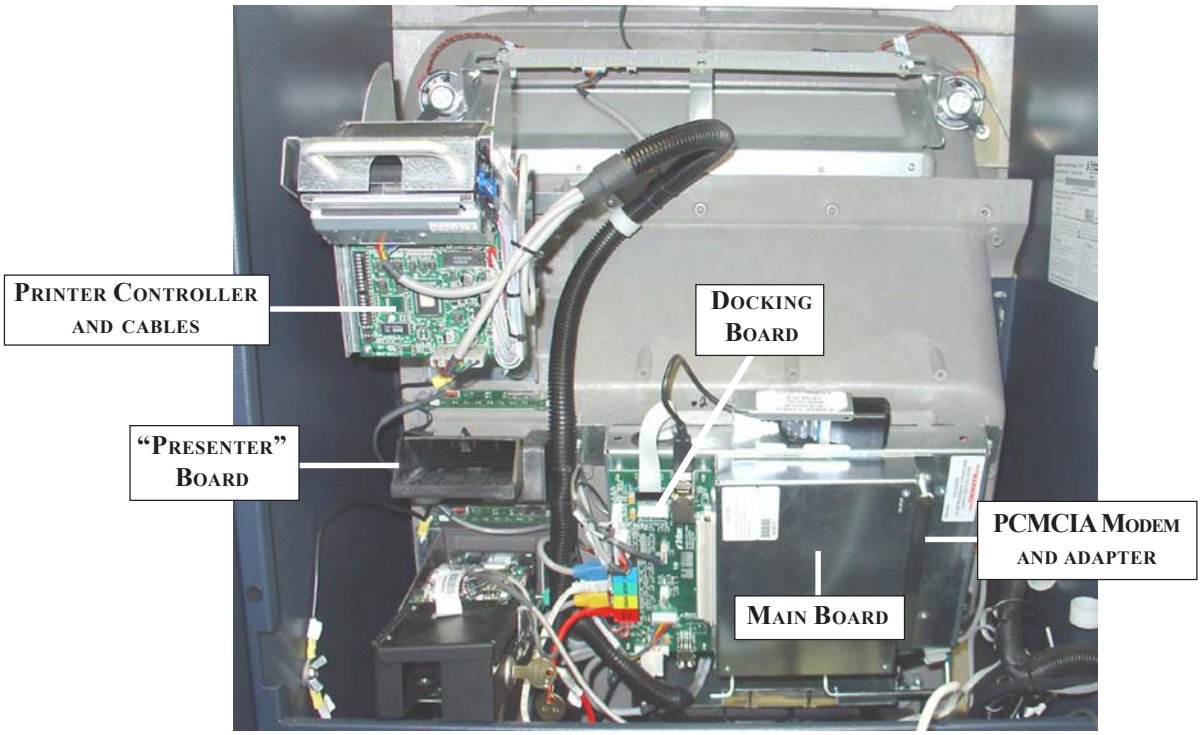
- CARD READER CABLES

(DIP, EMV, MOTORIZED) - APPLICABLE

If you ordered the optional Modem kit and/or Power Supply-TDM Upgrade kit(s), the following items will also be replaced:

- PCM/CIA MODEM AND PHONE LINE ADAPTER
- POWER SUPPLY

NOTE: If your RT2000 is equipped with a "single" power supply, you will be required to replace with a "dual" and upgrade the TDMs firmware software. You will require a PC or laptop computer to perform the TDM upgrade procedure.



X-SCALE ASSEMBLIES
(THAT WILL BE REPLACED)

REQUIRED PARTS AND TOOLS

TOOLS REQUIRED		
#1 and #2 Phillips screwdriver - long and short (Magnetic recommended) Diagonal cutters - 11/32" (9mm) Nutdriver ESD wrist strap with grounding cord		
RT2000 X-SCALE TO X2 UPGRADE KIT 06200-20330		
PARTS SUPPLIED - SOME PART NUMBERS MAY BE SUPERCEDED		
PART NUMBERS	**DESCRIPTION**	**QUANTITY**
07000-00302	X2 Upgrade Kit Label	1
09110-00077	X2 Main Board Assembly	1
09100-00400	Docking Board (Color display)	1
01500-10119	Controller Board, Printer, USB/ Cutter and cable	1
09120-07063	Power Cable, Printer76"	1
09120-07058	Data Cable, Printer, USB rightangle 35"	1
09120-00340	Cable, Low Paper Sensor	1
09100-00258	PCB, Presenter Board	1
09120-07061	Cable, Printer Presente 35"	1
Modem		
03015-00214	Modem, USB, Triton	1
09120-07069	Cable, Modem, USB 5.5"	1
03011-01836	Mounting Bracket, Modem,(FT/RT)	1
Power Supply and TDM Upgrade Kit (P/N 06200-08123)		
09200-00090	Power Supply (Dual)	1
09120-07032	Cable, Power Supply Adapter, TDM	1
09120-07014	TDM Download Cable	1
Card Reader Cables		
* 09120-07053	Cable, Card Reader, 165 (EMV)12"	1
* 09120-00827	Cable, Card Reader, Magtek 215 (Dip)	1
* 09120-00284	Cable, Card Reader, 3K5 (Motorized)	1
03072-00015	Ty Wrap	15
* Use applicable cable for card reader type		

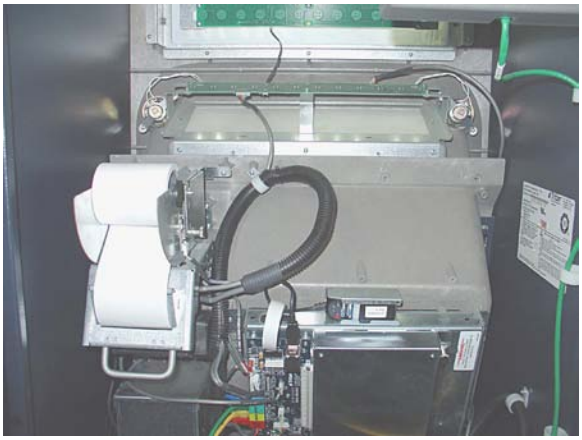
INSTALLING THE RT2000 X2 UPGRADE KIT 10.4 inch display ONLY

Note: Before proceeding with the upgrade procedures, terminal power ***MUST*** be removed.

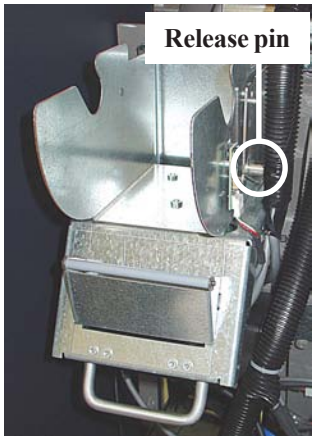
FROM FRONT DISPLAY: Enter **MANAGEMENT FUNCTIONS > SYSTEM PARAMETERS > SHUT DOWN THE TERMINAL.** When prompted *"It is now safe to turn off your computer"* on the screen, open the cabinet sleeve door and turn the power switch on the power supply to the **<OFF>** (0) position.

FROM REAR SERVICE OPERATOR PANEL (FT/RT): Enter **MANAGEMENT FUNCTIONS > MAIN MENU > SHUT DOWN THE TERMINAL**. When prompted *"It is now safe to turn off your computer"* on the screen, open the cabinet sleeve door and turn the power switch on the power supply to the **<OFF>** (0) position.

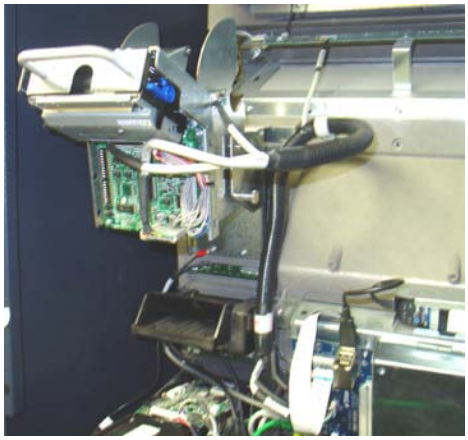
1. **REMOVE PAPER ROLL / ROTATE PRINTER ASSEMBLY** - Open rear cabinet door. Remove the paper roll/spindle from the receipt printer. Grasp the handle below the printer feed slot and pull the release pin located on the right side of printer bracket. Rotate the assembly up and release the pin until it locks in the service position.



Open rear cabinet door.



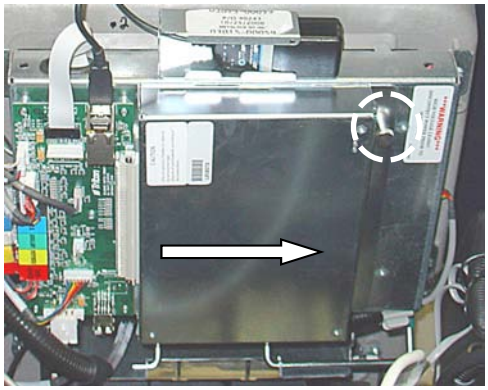
Paper roll removed.



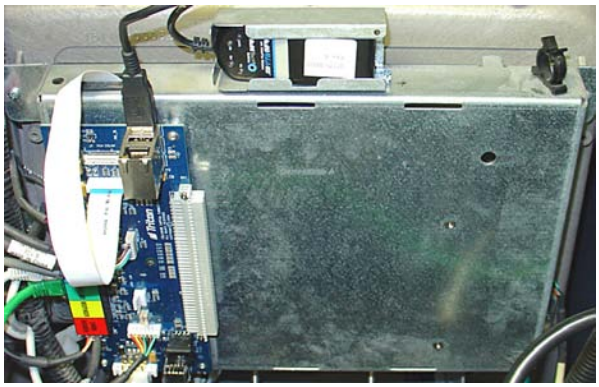
Rotate assembly up.

2. **REMOVE PCMCIA MODEM AND PHONE LINE ADAPTER (IF APPLICABLE)** - Disconnect the phone line from the phone line adapter. Push the release button for the modem card slot and remove both the PCMCIA modem card and phone line adapter.

3. **REMOVE MAIN BOARD ASSEMBLY** - Pull the release pin on the main board assembly and slide unit from docking board. This assembly will be replaced.



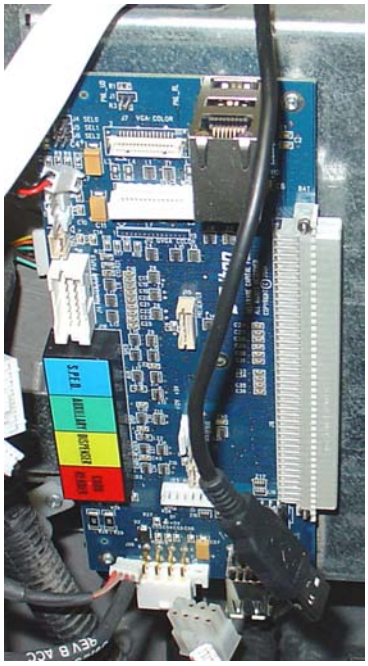
Pull release pin and slide assembly.



Main board removed.

4. REMOVE DOCKING BOARD ASSEMBLY - Disconnect all cables to the docking board shown at right. Using a phillips screwdriver, remove the screw that secures board and remove the docking board. This assembly will be replaced. Retain the screw.

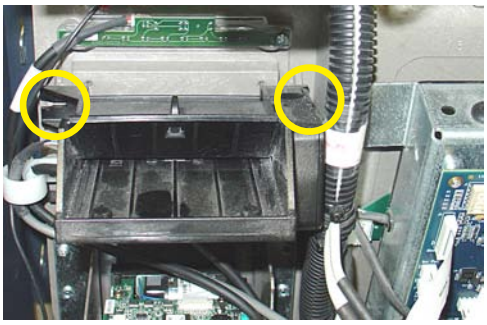
Docking board removed.



Remove all cables/screw from docking board.

5. REMOVE/REPLACE PRINTER "PRESENTER" BOARD:

A. Using a long-shaft phillips screwdriver, remove the two (2) screws that secure the presenter assembly and remove the presenter. Next, disconnect the presenter cable from the presenter board. This cable will be replaced. Retain the screws.



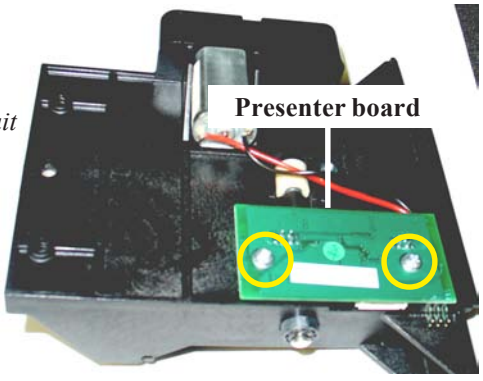
Remove screws that secure presenter.

Presenter assembly removed.

B. Place the presenter assembly on a flat surface. Using a phillips screwdriver, remove the two (2) screws that secure the presenter board shown. Next, disconnect the two (2) wire cable from the board and remove the board. This will be replaced.

C. Connect the two (2) wire cable previously removed to the new presenter board and secure board to the presenter with the screws previously removed.

Presenter circuit board.



Presenter board removed.

D. On the new presenter board, connect one end of the new presenter board cable (P/N 09120-07061). The other end will be connected later to the new printer controller assembly.

E. Start one (1) of the phillips head screws previously removed in the control panel. Insert the presenter on the screw and start the other. Tighten both screws.

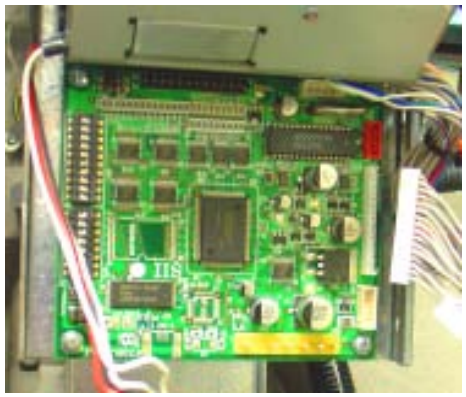
Connect the new presenter cable.

6. REMOVE/REPLACE PRINTER "CONTROLLER" ASSEMBLY:

A. Disconnect ***all*** the cables to the printer controller board. Also, disconnect the low paper sensor cable from the sensor board. The printer controller power, data, and low paper sensor cables will be replaced.

B. Using a phillips screwdriver, remove the four (4) screws that secure the board to the printer assembly and remove the controller board - this will be replaced. Retain the screws.

Printer controller cables.



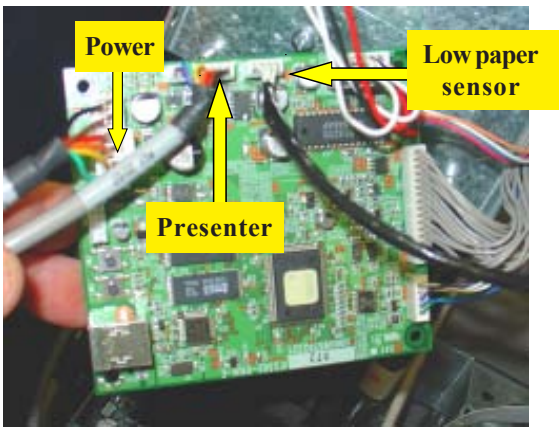
All cables removed from old controller board.

Printer controller removed.

C. Connect cables to new printer controller board (P/N 01260-00023) - ***Note: For ease of connectivity, <u>Do Not</u> mount the controller board yet.*** Holding the printer controller in your hand:

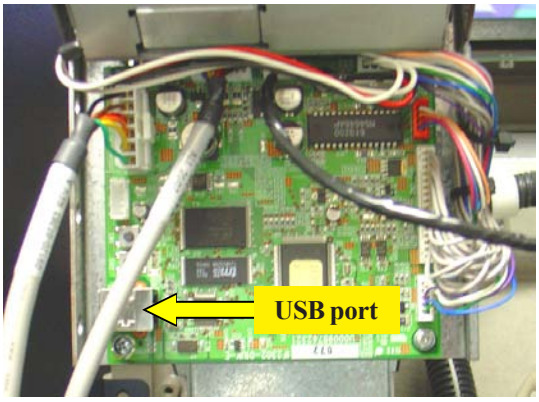
- Reconnect the printer assembly cables.
- Connect the new power (P/N 09120-07063) and low paper sensor (P/N 09120-00340) cables.
- Connect the printer presenter board cable (P/N 09120-07062) previously installed to the presenter in Step 5(D) to the controller board. Note that this presenter cable no longer is connected to the docking board.

Printer assembly cables connected.

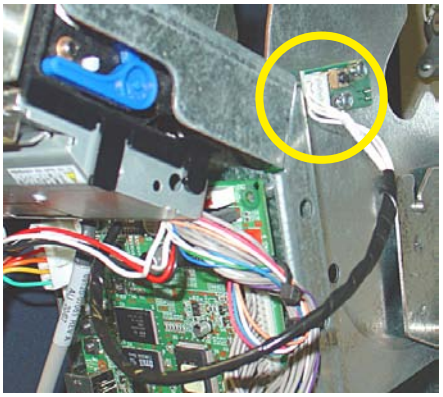


Power, low paper, and presenter cables connected.

D. Mount/secure the printer controller board using the four (4) screws previously removed. Ensure the screws are securely tightened! ***Note: The USB port on the assembly will be facing Lower Left when installed.*** Next, connect the other end of the low paper sensor cable to the sensor board.



Controller board mounted.



Low paper sensor cable connected.

NOTE: YOU MAY WANT TO CONNECT THESE CABLES PRIOR TO SECURING DOCKING BOARD FOR EASE OF CONNECTIVITY. AT THE TIME OF THIS DOCUMENT RELEASE, 5.7" AND 6.5" DISPLAYS WILL NOT BE SUPPORTED.

7. INSTALL NEW DOCKING BOARD ASSEMBLY

***Note [1]: Before installing, verify the video select dip switches have been properly set for your RT2000. See page 4 for correct display settings* (10.4").**

Note [2]: If you have the Rear Service Panel, verify the jumper (J11) is properly set for the touchscreen panel. See page 4 for correct setting.

Using the screw previously removed from old docking board, install new assembly and secure. Reconnect:

FOR 10.4" DISPLAYS (COLOR):

DISPLAY LCD RIBBON CABLE (J4)
INVERTER CABLE (J7)
FAN POWER (J8)
SPED RJ-45 CABLE (J10)
DISPENSER RJ-45 CABLE (J13)
USB MODEM (MULTITECH TYPE, IF APPLICABLE) - (J3)
RT HEADPHONES (J17)
RT LEDS (J19)
DOCKING BOARD POWER (J23)
AUXILLARY (J12 - REAR SERVICE PANEL, IF APPLICABLE)

*** IMPORTANT ***

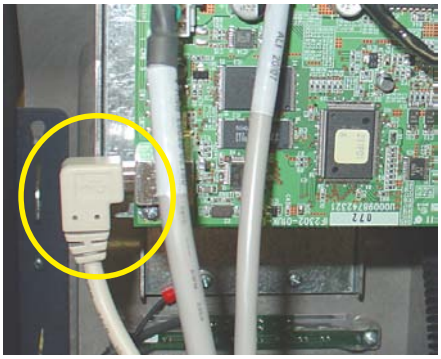
The RT2000 display cable (ribbon) ***may*** have a ferrite attached to it. **REMOVE THE FERRITE** (open it up) before connecting the cable to the docking board. The ferrite is no longer required for the X2 upgrade.

8. ROUTE/CONNECT PRINTER CONTROLLER CABLES:

A. Connect one end of the new USB data cable (P/N 09120-07059) to the printer controller and the other end to the **PRINTER USB PORT (J2)** on the docking board.

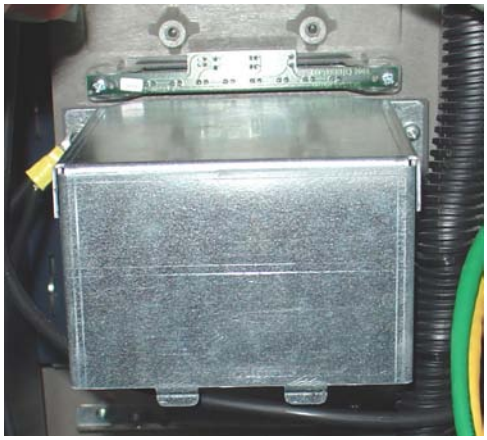
B. Route/connect the controller power cable over to the power supply.

C. Pull the release pin on the printer assembly and rotate assembly down to the operate position.

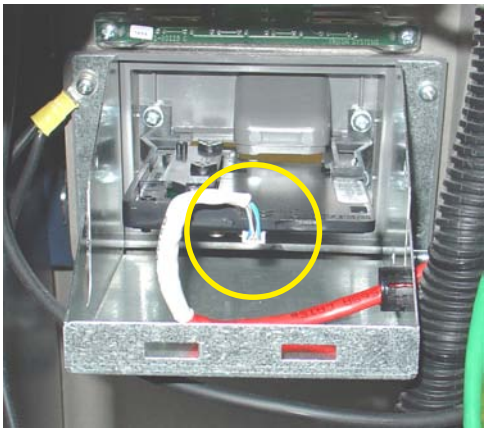


9. REMOVE/REPLACE CARD READER CABLE - Remove the card reader cover (if applicable). Disconnect and remove the old card reader cable(s) from the card reader. Install the new cable to the card reader and the **DOCKING BOARD (J14).**

Note: Upgrade kits come with multiple cable types. Install the applicable cable to your card reader type (EMV, Dip, Motorized).

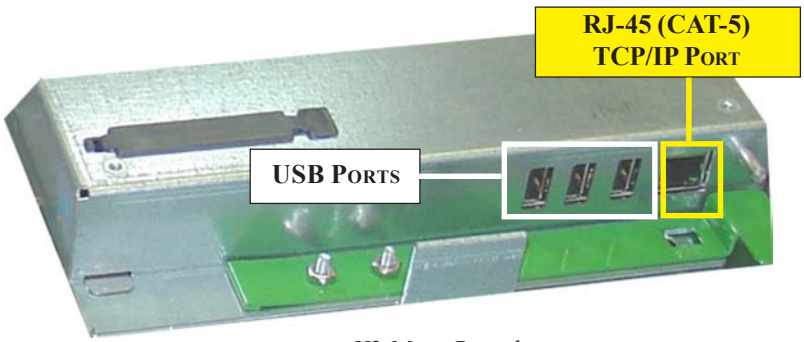


Remove cover (dip card reader installed)



Remove/replace reader cable.

10. INSTALL NEW X2 MAIN BOARD ASSEMBLY - Align tabs on X2 main board with slots on display assembly. Slide main board into docking board assembly until the green handle locks in place.



X2 Main Board.

X2 main board installed.

11. REMOVE ALL REPLACED CABLES - All cables that have been replaced may be removed from the unit. Route the new cables and secure together with the Ty wraps included, if preferred.

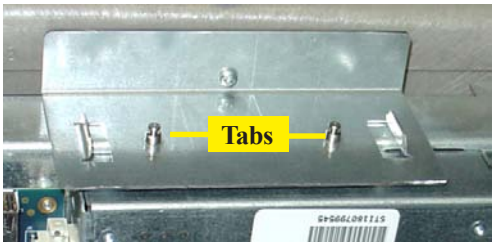
Note: If you prefer to keep the replaced cables in the unit, ty wrap them so they do not interfere with any components, mechanical/electrical.

OPTIONAL MODEM ASSEMBLY / HARDWARE - The following shows installation of the optional Triton USB modem and the bracket/ cable included.

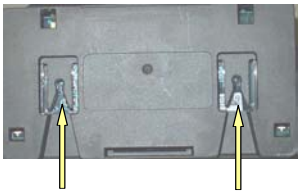
- Using a phillips screwdriver, remove and retain the screw shown. Mount and secure the new modem bracket with screw previously removed (Figure below).

- Next, install the new USB modem by aligning the slots on the bottom of the modem with the tabs on the bracket. Slide modem assembly until it snaps in place. Connect the modem USB cable (P/N 09120-07069) to the modem and Docking board **USB PORT (J3)**. Last, reconnect the phone line cable to the modem.

Screw removed



Modem bracket tabs.



Modem slots.

New modem installed/connected.

OPTIONAL POWER SUPPLY AND TDM UPGRADE KIT OPTION:

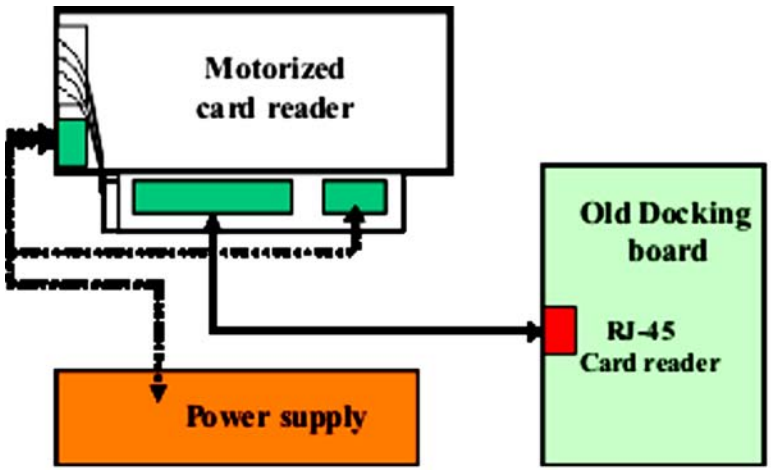
The Power Supply replacement procedures are located on the Software CD included in kit. The document (TDN 07103-00163B) describes the steps involved.

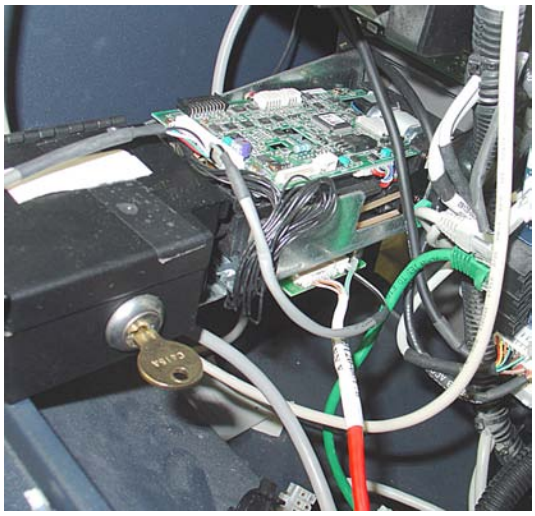
The TDM Firmware Upgrade procedure (TDN 07103-00168) and software required is located on the Software CD included in kit. The download cable (P/N 09120-07014) and TDM adapter cable (P/N 09120-07032) are included with this optional kit accessories. You will need a PC or laptop computer to perform the firmware update.

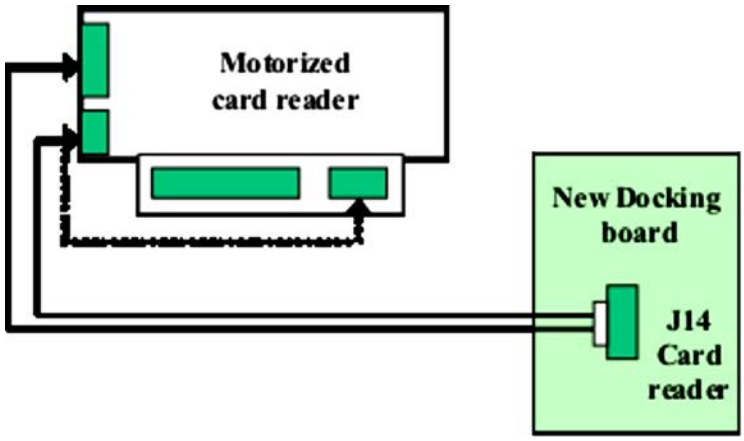
NOTE: If you have already upgraded your power supply to a dual and updated the TDM firmware, you do not require this optional kit.

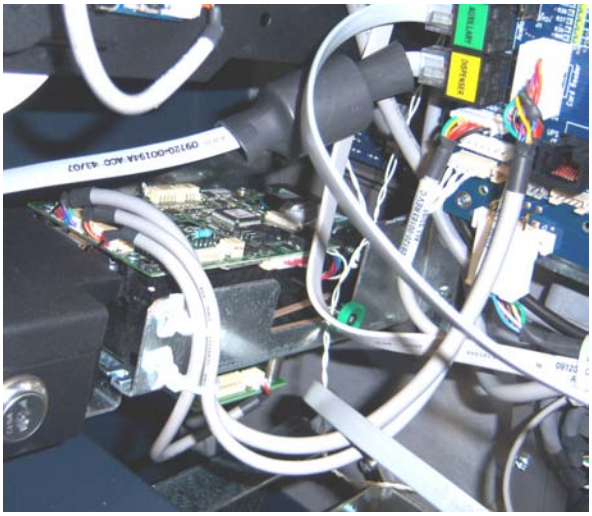
Cabling for Motorized Card Reader

Current cables connectivity for X-Scale units









Cable connectivity for Triton Modem

Appendix A
Saving Journal Records / Parameters
Perform Operation Checks

SAVE JOURNAL RECORDS

DESCRIPTION:

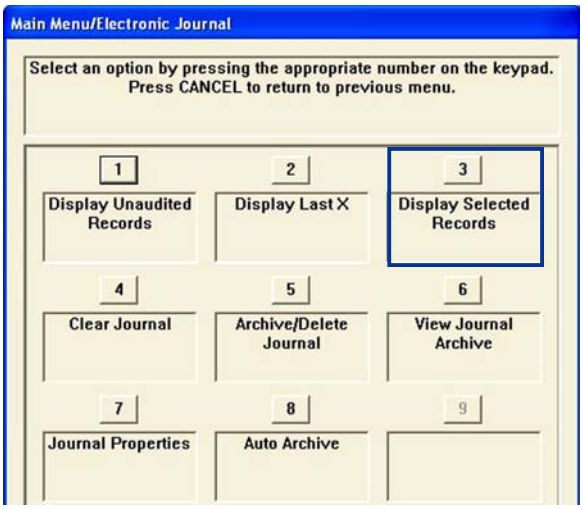
To view/save journal records, select the **DISPLAY SELECTED RECORDS** function. This allows you the option to specify if you want to save just **"UNAUDITED"** records, **"AUDITED"** or "both **(ALL)**". You may also select the "type" of journal records to save (All, transaction, text record, cassette close, day close, or parameter change).

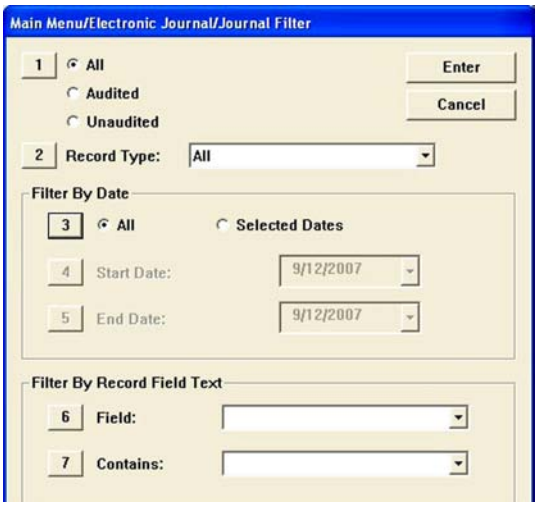
NOTE: ***FOR THIS X2 UPGRADE, RECOMMEND SAVING ALL JOURNAL RECORD TYPES (AUDITED/UNAUDITED) WITH NO START/END DATES (FILTER BY DATE OPTION <3> - ALL.***

The journal records are displayed in a management report dialog that can be printed to the receipt printer or saved to an external memory device. If used, ***an external memory device must be installed in a USB port "before" this option is selected.*** The Display Unaudited Records saves journal files in a text (.txt) format. They can be viewed by a text editor (Wordpad, Notepad).

ACCESS INSTRUCTIONS:

1. From the **ELECTRONIC JOURNAL** menu screen, select the **DISPLAY SELECTED RECORDS** option by pressing **<3>** on the keypad.





ALL/AUDITED/UNAUDITED. Press **<1>** to toggle through the available options: **ALL** records, all unaudited records, or all audited records.

RECORD TYPE. Press **<2>** to toggle the type of journal record to view: **ALL**, transaction, text record, cassette close, day close, or parameter change.

FILTER BY DATE

ALL/SELECTED DATES. Press **<3>** to toggle between **"ALL"** or "Selected Dates". If "all" is selected, the Start and End dates are "grayed" out. If "Selected Dates" is selected, specify the start date and end date.

START DATE. Specify the starting date for the range of journal records to consider. When selected, a date-entry dialog appears. Type the date in the format MMDDYYYY. Use the arrow key to toggle between the Month, Day, and Year fields. Press the **<ENTER>** key to accept it.

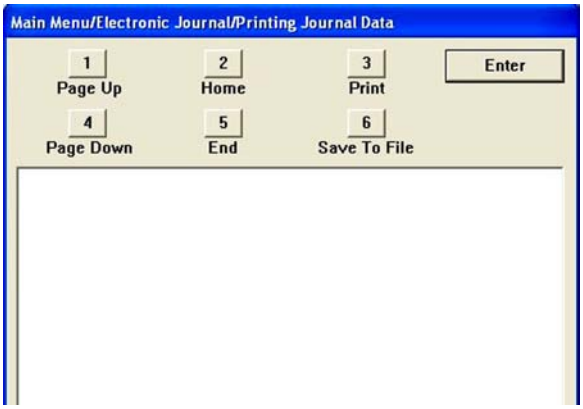
END DATE. Specify the ending date for the range of journal records to consider. When selected, a date-entry dialog appears. Type the date in the format MMDDYYYY. Use the arrow key to toggle between the Month, Day, and Year fields. Press the **<ENTER>** key to accept it.

FILTER BY RECORD FIELD TEXT

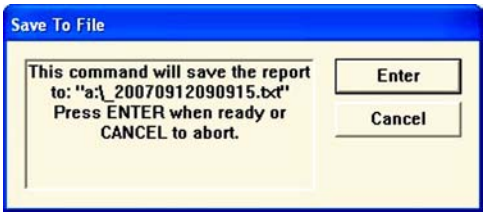
FIELD. To see only those records that match a certain field criteria, select the applicable field here. The field types available to select will be determined by the current record type (see Record type above).

CONTAINS. When this button is selected, a text-entry dialog appears. Enter a text string to search for. Only those records that contain the text string will be returned in the management report. This function is only applicable to the text record.

The report is displayed in a management report dialog that can be printed to the receipt printer or saved to an external memory device. The **DISPLAY SELECTED RECORDS** options save Journal files in a text (.txt) format. They can be viewed by a text editor.



➲ Press **<6>** to **"SAVE TO FILE"**. The following prompt will appear:



Note: With an external storage device installed, the prompt will be display like the example below:

"\Hard Disk\071983179_20070912103959.txt"

➲ Press **<ENTER>** to continue and save the journal records.

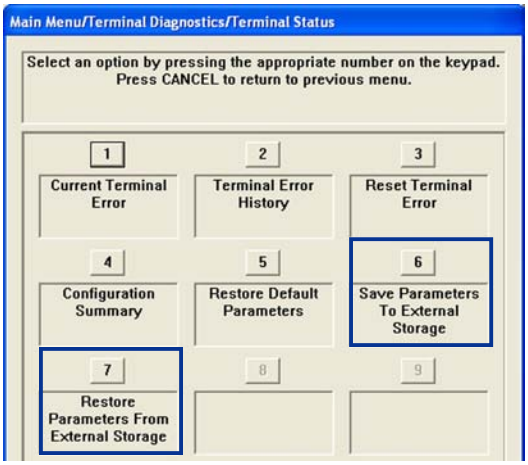
SAVE / RESTORE PARAMETERS USING AN EXTERNAL STORAGE

DESCRIPTION:

Use the ***"Save Parameters to an External Device"*** function to save the current terminal parameters to an external storage device that is attached to a USB port.. Should it ever become necessary to restore the parameters, the ***"Restore Parameters From External Device"*** function can be used to quickly configure the terminal with the saved parameters.

NOTE: For upgrading the terminal from an X-Scale to an X2 platform, you may save the parameters from the X-Scale by attaching a USB storage device to any available USB port on the "X-Scale Docking Board". You will restore the parameters to the X2 upgrade by attaching the saved parameters on the USB storage device to the "X2 Main Board".

1. Unlock and open the control panel (RL5000) or cabinet sleeve door (FT5000/RT2000).
2. Locate one of the USB port connectors ***(see note above)***



ACCESS INSTRUCTIONS:

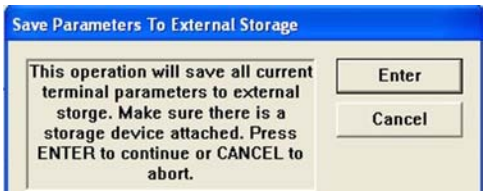
1. From the **MAIN MENU** screen, select the **TERMINAL STATUS** option by pressing **<8>** on the keypad.
2. To **SAVE PARAMETERS TO EXTERNAL STORAGE**, press **<6>** on the keypad.
3. To **RESTORE PARAMETERS FROM EXTERNAL DEVICE**, press **<7>** on the keypad.

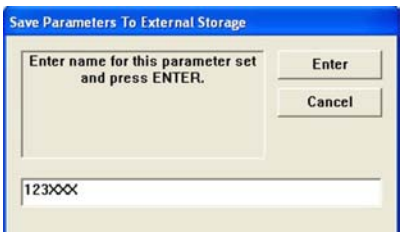
DESCRIPTION:

The **SAVE PARAMETERS TO EXTERNAL STORAGE** function saves the current terminal parameters to an external storage device (jumpdrive) attached to a USB port.

For the case where an XScale ATM is being upgraded to X2, the system should import parameters from XScale.

- Select **<6>** on the keypad. The following prompt appears. Press **<ENTER>** to continue.
- Enter a name for this saved parameter file. Press **<ENTER>**. ***Note: Saved parameter files extension is (.TSF)***
- At the confirmation dialog, remove the jumpdrive.



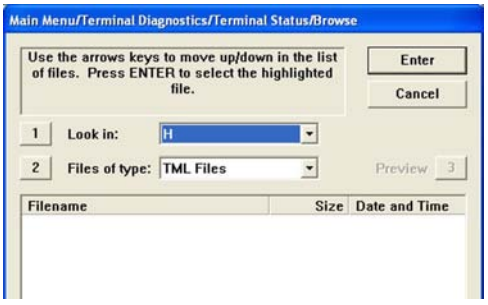


DESCRIPTION:

The **RESTORE PARAMETERS FROM EXTERNAL STORAGE** function restores a previously saved set of parameters from a USB external storage device ***(see note above for USB device placement).***

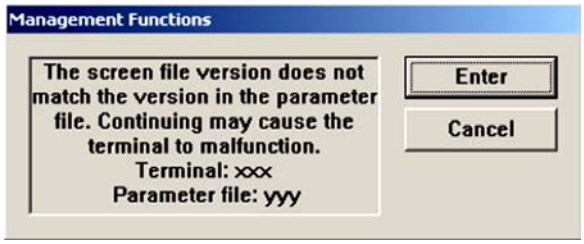
- Select **<7>** on the keypad. The screen at right appears.
- **LOOK IN**. Press **<1>** to cycle through the destinations of the saved parameter file. Select **"USB DEVICE"**.
- **FILES OF TYPE.** Press **<2>** to select the saved parameter file type and name. Use the **<ARROW>** keys to move up/down in the list of files. Press **<ENTER>** to select the highlighted file.

  Note: Saved parameter files extension is (.TSF)



➲ The saved parameters will be loaded on the terminal. At the confirmation dialog, remove the jumpdrive.

NOTE: Since the X2 screen file has different functionality than the XScale screen files, when importing parameters from XScale the user will be warned that the screen file versions are different. Here is a sample warning screen:



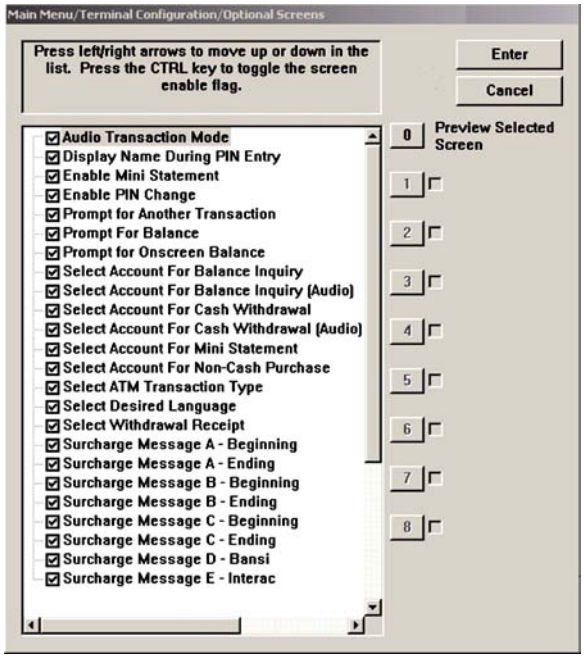
The user should press **<ENTER>** for each warning screen and **<CONTINUE>**. Verify all parameter settings are correct after the restore is complete.

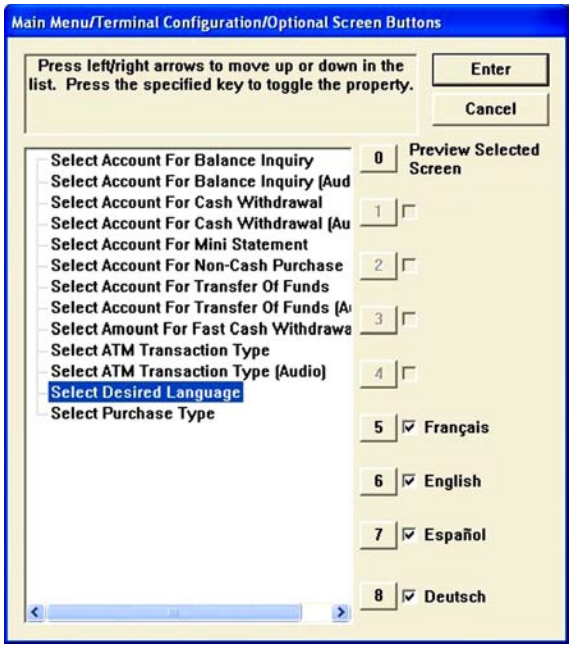
OPTIONAL SCREENS / SCREEN BUTTONS

The **OPTIONAL SCREENS** option in Management Functions > Terminal Configuration will enable the user to configure the optional features as desired. The example of the Optional Screens dialog below includes all of the optional features.

Important: There are NO country-specific options in the Optional Screens dialog: all options apply equally to all countries targeted by the combined screen file.

The **OPTIONAL SCREEN BUTTONS** function helps you customize the terminal by presenting only selected buttons for various customer screen. Use this option to enable (checked) or disable (unchecked) these buttons to the customer and to preview a selected screen button configuration.





The following table shows the default settings for Optional Screens and Optional Screen Buttons.

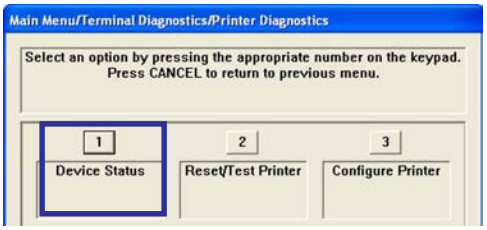
UNITED STATES					
Optional Screen	**ON**	**OFF**	**Optional Screen Buttons**	**ON**	**OFF**
Audio Transaction Mode	Y				
Display Name During PIN Entry	Y				
Enable Mini Statement		Y			
Enable PIN Change		Y			
Prompt for Another Transaction		Y			
Prompt for Balance		Y			
Prompt for Onscreen Balance		Y			
Select Account for Balance Inquiry	Y		Checking	Y	
			Savings	Y	
			Credit	Y	
Select Account for Balance Inquiry (Audio)	Y		Checking	Y	
			Savings	Y	
			Credit	Y	
Select Account for Cash Withdrawal	Y		Checking	Y	
			Savings	Y	
			Credit	Y	
Select Account for Cash Withdrawal (Audio)	Y		Checking	Y	
			Savings	Y	
			Credit	Y	
Select Account for Mini Statement	Y		Checking	Y	
			Savings	Y	
			Credit	Y	
Select Account for Non-Cash Purchase	Y		Checking	Y	
			Savings	Y	
			Credit	Y	
			Select Account for Transfer of Funds		
			Checking to Savings	Y	
			Saving to Checking	Y	
			Credit to Checking	Y	
			Select Account for Transfer of Funds (Audio)		
			Checking to Savings	Y	
			Saving to Checking	Y	
			Credit to Checking	Y	

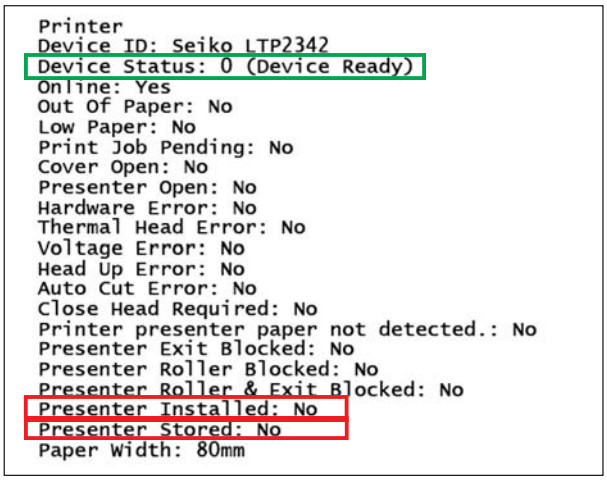
			Select Amount for Fast Cash Withdrawal		
			10	Y	
			20	Y	
			30	Y	
			40	Y	
			50	Y	
			Other Amount	Y	
Select ATM Transaction Type	Y		PIN Change		Y
			Mini Statement		Y
			Purchase		Y
			Withdrawal – No Receipt		Y
			Withdrawal	Y	
			Transfer of Funds	Y	
			Balance Inquiry	Y	
			Select ATM Transaction Type (Audio)		
			Withdrawal	Y	
			Balance Inquiry	Y	
			Transfer of Funds	Y	
Select Desired Language	Y		French	Y	
			English	Y	
			Spanish	Y	
			German	Y	
Select Withdrawal Receipt		Y			
Surcharge Message A - Beginning					
Surcharge Message A - Ending	Y				
Surcharge Message B - Beginning		Y			
Surcharge Message B - Ending		Y			
Surcharge Message C - Beginning		Y			
Surcharge Message C - Ending		Y			
Surcharge Message D - Bansi		Y			
Surcharge Message E - Interac		Y			

CHECK OPERATION OF PRINTER

ACCESS INSTRUCTIONS:

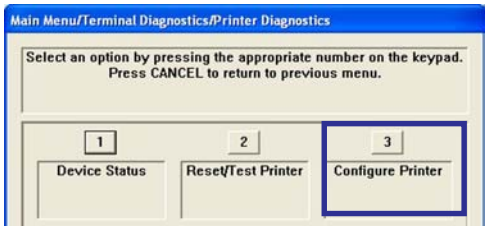
1. From the **DIAGNOSTICS** screen, select the **PRINTER** option by pressing **<6>** on the keypad.
2. Press option **<1>, DEVICE STATUS.** A Management report is displayed.

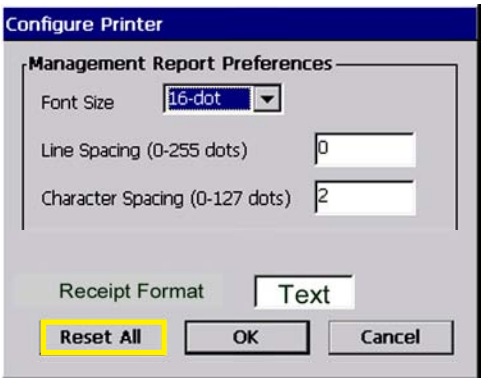




3. Scroll down to the **"Presenter Installed"** and the **"Presenter Stored"** line items. If there is a difference in the status report between either **(ex: "Presenter Installed": YES, "Presenter Stored": NO)**, proceed to the next step.

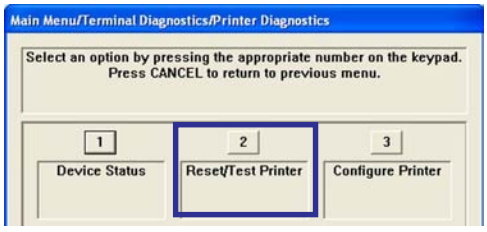
4. Press **<3>**, **CONFIGURE PRINTER.** Press the **<CLEAR>** key to scroll down/highlight the **"Reset All"** option. Press the **<ENTER>** key.





5. Perform another **DEVICE STATUS** to verify "Presenter Installed" and "Presenter Stored" status are the same. Also verify if the "Device Status" line item reflects: **0 (Device Ready**).

   NOTE: Recommend perform a Reset/Test Printer function (Option <2>). This function re-initializes and then performs an operational test of the printer.

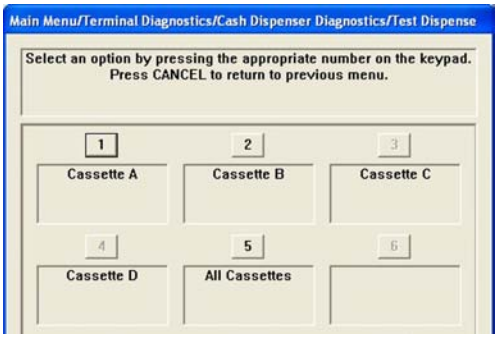


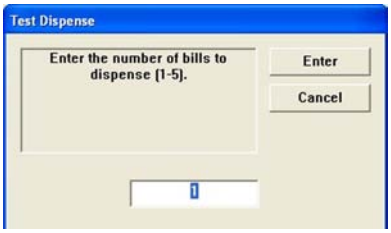
CHECK OPERATION OF DISPENSER

ACCESS INSTRUCTIONS:

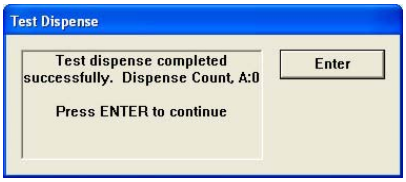
1. From the **DIAGNOSTICS** screen, select the **DISPENSER** option by pressing **<4>** on the keypad.
2. From the **DISPENSER** screen, select the **TEST DISPENSE** option by pressing **<3>** on the keypad.

Press the number on the keypad for the cassette(s) and enter the desired value. Press **<Enter>**. Repeat for the remaining cassettes that are available.





Next, press the **<Enter>** key to perform the test. The dispenser will dispense the note(s) from the cassette(s) into the reject cassette, compartment, or reject vault, if applicable. When the test is completed, the user will be prompted that test was completed successfully.



CHECK OPERATION OF CARD READER

ACCESS INSTRUCTIONS:

1. From the **DIAGNOSTICS** screen, select the **CARD READER** option by pressing **<5>** on the keypad.
2. Select option **<3>, SCAN CARD**. When prompted, insert and remova a card. Thedialog box will either verify the tracks scanned or respond with an error message.