FUNCTIONAL SPECIFICATIONS

PlayCentral Terminal (PCT) Technical Manual Pennsylvania State Lottery

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SCIENTIFIC GAMES®

SG Documentation Policy

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REVISION RECORD

Version	Date	Modified By	Revisions
0.1	06/2009	Zellers	New manual that combined the field service and bench repair manuals.
0.2	10/2009	Riley	Incorporated feedback from SME
0.3	01/2011	Zellers	Incorporated feedback from SME
0.4	8/2011	Zellers	Incorporated feedback from SME
0.5	8/2011	Zellers	Added FCC statement

PREFACE

Overview of This Manual

This guide describes the maintenance operations for the Pennsylvania Lottery PlayCentral Terminal (PCT). It provides the technicians with information about performing the various maintenance operations, and guidelines to follow for troubleshooting and making decisions.

Chapters in this Manual

This technical manual contains the following chapters:

Section 1 – PlayCentral Terminal (PCT) Overview

Section 2 – Tools and Equipment

Section 3 – Installation Procedures

Section 4 – Quality Control (QC) Testing

Section 5 – Diagnostics

Section 6 – Component Procedures

Section 7 – Troubleshooting

Section 8 – Appendix A

Section 9 – Electronics Tray Test Form

Section 10 – Approvals

FCC Statements

FCC Part 15.21

Changes or modifications to an intentional or unintentional radiator herein not expressly approved by the party responsible for compliance could void the User's authority to operate this equipment.

FCC Part 15.105

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 their own expense.

CONTENTS

LIST OF FIGURES

SECTION 1
PLAYCENTRAL TERMINAL (PCT) OVERVIEW

1.1 Purpose

It is assumed that the reader has a good working knowledge of standard personal computer hardware and some experience repairing computer terminals.

The PCT comprises the following major assemblies:

- Central Processing Unit (CPU)
- Power Supplies
- Touch Screen Display
- Bill Acceptor Assembly
- Printer
- Ticket Dispenser Assembly
- Barcode Reader
- Document Scanner
- Cover Assembly

1.2 Components of the PlayCentral Terminal (PCT)

PlayCentral Terminal (PCT) is an automated on-line and instant ticket terminal used to advertise, sell, and dispense lottery tickets. Each terminal can be connected to a central computer system via a site-specific Wide Area Network (WAN) system. Components of the terminal are housed in a sturdy compact unit for convenient installation. A color liquid-crystal display (LCD) and touch screen interface offer the operator fast and easy access to a variety of transactions, such as placing wagers and validating tickets.

Figure 1: PlayCentral Terminal (PCT)

1.3 System Specifications

The following tables contain the specifications for PCT terminal. These items must be consistent with those in the global list of terms and acronyms.

1.3.1 Overall Dimensions

Dimension	Size
Height	72 inches
Width	35 inches
Depth	28 inches
Weight	570 pounds

Table 1: PCT Overall Dimensions

1.3.2 Electrical Requirements

Category	Value
Volt Range	90-260 VAC
Frequency Range	47-63 Hz
Current	3.0 A max (0.5 A average)

Table 2: PCT Electrical Requirements

1.3.3 Environmental Operating Range

Category	Value
Operating Temperature	0°C to 45°C (32°C to 113°F)
Transportation Temperature	-10°C to 60°C (-14°C to 140°F)
Operating Humidity	5% to 98% non-condensing

Table 3: PCT Environmental Operating Range

1.3.4 Interface

Category	Value
Serial Ports	2
Ethernet	1 10/100
USB	5
Cash Drawer	1
PCI	2 slots
Audio	2 Audio Out and 1 Audio In
Power outlet for the customer display	90-265 VAC
Keyboard/Key Pad	USB
Mouse (Disabled by Operating System)	USB

Table 4: PCT Interface

1.3.5 Instant Ticket Acceptance Level

Media	Low Range	High Range
Instant ticket pack width	1.4 inches	4.00 inches
Instant ticket length	2.0 inches	12 inches
Paper thickness	8 point	12 point

Table 5: PCT Environmental Operating Range

1.3.6 Component Part Numbers

Category	Part Number
Display - Clerk	SA15-0391
Electric Drawer	SA05-0151
Power Supply – 24V/2A max	PS60-0020
Power Supply – 12VDC	PS90-0008
Engine Board	PA50-0026-01
Hard Drive	DV660-0017
Cooling Fan	SA90-0362
Display – 4.7 with touch Kyocera	SA15-0377
Burster Tray	SA05-0152
ITVM Light Box	SA10-0349
Display – 19 inch	SA15-0390
Printer	SA25-0017
Bar Code Reader	SA30-0045-02
Scanner – 4 inch	SA30-0047-02
Scanner – 4 inch (External?)	SA30-0026-05
ITVM Tilt Switch	SA90-0031-01

Table 6: PCT Component Part Numbers

1.4 PCT Main Unit

The PlayCentral Terminal (PCT) Main Unit consists of the clerk display (SA15-0391), 4-inch scanner (SA30-0047-02), burster tray (SA05-0152), and 19 inch display (SA15-0390).

Figure 2: PCT Main Unit

1.5 Central Processing Unit (CPU)

The Central Processing Unit (CPU) provides all the necessary control functions for the PCT via:

- Operating system
- On-line and instant games application software
- Hardware controls

Other than player input, the only other input to the PCT is via a communication connection to the PA Host System.

Description	Specification
System Board	PCT uses a standard Windows/Intel (“Wintel”) System PCB system board. It contains, or is directly linked to, the following: • Microprocessor running at 1.5 GHz • Random Access Memory (RAM) • Hard Disk Drive (HDD) • Video AGP PCB • Modem PCB • Sound PCB • Interface PCI PCB
CPU	Intel® Celeron® M processor 1.5 GHz Cache 512KByte 2nd Level
Motherboard	Intel 82855GME, 400MHz FSB
Sound	Integrated AC97 controller
LAN	Integrated 10/100Mbits, Intel 82562EM Ethernet controller
Memory	DDR RAM 512MB SO-DIMM, PC1600/2100
NVRAM	0
SO-DIMM sockets	1, none available
Graphics Card	Integrated Intel Extreme Graphics II (dual head)
Hard Disk	2.5-inch format with 40GB
Cooling	CPU-fan - high quality with ball bearings and heat spreader plate Power Supply Fan
Operating System	Windows XP Embedded

Description	Specification
Ticket Dispenser Assembly Interface	PCT uses an Interface PCB to control commands sent between the CPU and up to sixteen (16) Bursting Assemblies.
Printer Interface	CPU includes an interface to the Printer.
Touch Screen Interface	CPU includes an interface to the Touch Screen Display.
Currency Validator Interface	CPU includes an interface to the Currency Validator.
Internal Interfaces	PCT also includes such interfaces that are necessary to route signals between the CPU and any other terminal peripherals not identified in this table. These interfaces also route all power between the CPU and these units.
External Communications	Communications capability includes: • Local/Wide Area Network (LAN/WAN) • Broadband or wireless-based systems **NOTE:** Satellite communications requires an Ethernet connection (RJ45).
RRS Interface	PCT includes an interface with RRS via RS232 serial interface. Future interface may include and not limited to wireless serial interface.

Table 7: Central Processing Unit (CPU)

1.6 Power Supplies

The PCT derives all necessary power from a single 110 V input AC line.

Additional outlets can be installed inside the PAT. All PCT power supplies shall be UL and FCC approved.

1.6.1 Power-Supplied PCT Components

The PCT includes all necessary internal Power Supply Unit(s), which provide necessary voltages, amperages, and wattages to supply:

- CPU (and its associated disk drives and PCBs)
- Bill Acceptor assembly
- Touch Screen
- 1-D Barcode Reader
- Document Scanner
- Printer Module (including the Cutter Unit)
- Security and signage systems

1.6.2 Back-up Power

The PCT employs a Commercial, Off-The-Shelf (COTS) Uninterruptible Power Supply (UPS) to provide sufficient backup power automatically, in the event of a loss of power to the terminal, to:

- Allow any current ticket transaction to be completed.
- Allow the CPU to shut down normally.
- Power the power Failure Alarm.
- Power the unauthorized Intrusion System sensors.
- If activated, power the Unauthorized Intrusion Alarm.

NOTE: The UPS can provide power for 15-35 minutes. If the power outage is estimated to last longer, the terminal will need to be shut down to prolong the life of the UPS.

1.6.3 Other Power Requirements

Additionally, with regard to power supplies, the PCT is required to:

- Meet or exceed industry standards with regard to Electromagnetic Interference (EMI).
- Contain an internal surge protector that meets or exceeds industry standards for computer related products.

1.7 Touch Screen Display

The Touch Screen Display is a full-color, graphic, backlit, LCD display.

Description	Specification
Minimum Resolution	1280 pixels wide x 1024 pixels high
Viewing Area (approximate)	11.75" x 15.4" (29.84cm x 39.12cm)
Dot Size	13 thousandths of an inch
Dot Pitch	12 thousandths of an inch
Colors	262,000 different colors (minimum)

Table 8: Touch Screen Display Specifications

The Touch Screen Display allows the player to purchase on-line and instant game tickets. The layout of the “touch buttons” on the screen is customizable and controlled by the application software. Appropriate areas of the game screens react when a player touches that area of the screen, initiating actions pre-programmed into the PCT software.

1.8 Bill Acceptor Assembly

The Bill Acceptor assembly facilitates currency validation and bill collection, storage, and removal. It is comprised of two components:

- Currency Validator
- Currency Cassette

The Currency Validator and Currency Cassette are physically connected and electronically interlocked.

1.8.1 Currency Validator

The Currency Validator scans each bill inserted into the PAT. It will be programmable to accept any bills authorized for acceptance by the Pennsylvania Lottery. However, at a minimum, the Currency Validator accepts any or all of the following U.S. currency:

- $1
- $5
- $10
- $20

NOTE: The PCT does not accept $2 bills.

If a bill of an acceptable denomination is inserted, the Currency Validator scans the bill to determine its authenticity. If the bill is authentic, the Currency Validator then:

- Passes the bill on to the Currency Cassette
- Credits the value of the bill to the current play session

NOTE: The bill may be inserted either face up, face down, face forward, or face backward.

If the bill is unacceptable (unreadable, counterfeit, foreign, unacceptable denomination), the Currency Validator returns that bill to the player.

The Currency Validator includes an interface to pass the validation and denomination information to the CPU.

1.8.2 Currency Cassette

The Currency Cassette is the repository for all accepted bills. The Bill Acceptor can accommodate Currency Cassettes that retain as many as 1000 bills.

The Currency Cassette is removable as a sealed unit. It must be removed from the Bill Acceptor assembly in order to remove any stored bills.

To minimize loss from theft, the cassette is locked using:

- One standard internal lock
- Optionally, hardware necessary to attach a padlock, of sufficient size to protect the contents of the cassette, between the cassette and the PCT chassis

NOTE: When the Currency Cassette is removed, the PCT will not accept bills. (However, no error message will display on the touch screen.)

1.9 Printer

The PCT printer is a serial printer and provides high-speed and on-line ticket printing. It has a self-adjustable ticket cutting mechanism, integrated into a single Field Replaceable Unit (FRU).

The printer uses a thermal roll paper stock of the following specifications:

3.25" (8.255 cm) wide

- Maximum paper roll diameter of 7.00" (17.78 cm).
- The print head resolution is 200 dpi.

Access for loading the paper into the print head is by feeding the paper into the rear of the print head.

1.9.1 Thermal Printer Paper

Characteristics	Specification
Paper Width	3 ¼ inches
Roll Core Diameter	1 ½ inches
Roll Size	5 3/8 inches
Basis Weight (lbs./rm 17 ins. X 22 ins – 500) (gm./sq. meter)	23.5 + 1/1 88.3 + 3.3
Caliper (inches)	Target: 0.0039 Range: 0.0037 – 0.0042
Tear (Elmendorf) MD (gm) CD (gm)	60 Nominal 70 Nominal
Stiffness (Gurley) MD (mg) CD (mg)	170 Nominal 60 Nominal
Sheffield Smoothness	50 Maximum
Image density on Atlantek 300 (12.0 volts) (MacBeth Densitometer)	1.25 – 1.38
Background (Colortouch with UV, 8 sheets)	90.0 average

Table 9: Thermal Printer Paper Characteristics

1.10 Ticket Dispenser Assembly

Four ticket dispenser assemblies exist in one drawer within the PCT with a maximum of 24 ticket dispenser assemblies (or six drawers). Each Ticket Dispenser Assembly is comprised of the following components:

- Ticket Pack Storage Area
- Burster Assembly
- Controller PCB
- Wiring Harness
- Enclosure or Upper Cover

1.10.1 Ticket Pack Storage Area

A Ticket Pack Storage Area is capable of accommodating instant ticket packs of the following dimensions (in inches):

- Minimum 2.00L x 1.40W x 0.50H
- Maximum 12.00L x 4.00W x 3.00H

Each Storage Area can hold a maximum 1,500 standard (2-inch) instant tickets.

1.10.2 Burster Assembly

The Bursting Assembly is capable of accommodating all instant ticket sizes of the following dimensions (in inches):

- Minimum 4.00W x 2.00L
- Maximum 4.00W x 12.00L

The Burster Assembly detaches one ticket from another by using seven different components.

1.10.2.1 Stepper Motor

The Stepper Motor provides a means of controlling the position of the ticket in the Bursting Assembly. It has the following capabilities:

- Both forward and backward movement
- Exerting a torque sufficient to burst all of the candidate tickets

1.10.2.2 Ticket Leading Edge Sensor

The Ticket Leading Edge Sensor senses the leading edge of each ticket as it exits the Bursting Assembly Drive Roller. It is positioned in the center of the paper path and in a location to accurately position the leading edge of the ticket.

1.10.2.3 Burster Blade

The Burster Blade separates one ticket from another without damaging either ticket.

1.10.2.4 Guide and Drive Rollers

The Guide and Drive Rollers provide guidance for tickets exiting the terminal without damaging either the ticket surface or the scratch off masking material.

1.10.2.5 Deflection Plate

The Deflection Plate redirects the ticket downwards to weaken the perforations between the tickets prior to bursting and to position the perforation for bursting. It is controlled, via the Drive Gearing, by the Stepper Motor.

1.10.2.6 Drive Gearing

The Drive Gearing transmits angular forces from the Stepper Motor to the Guide Rollers and the Deflection Plate. It includes a cam mechanism for controlling the Deflection Plate.

1.10.2.7 Chassis

The Chassis is made from injection-molded plastic. It contains all the components of the Bursting Assembly.

In addition, it includes the following fasteners:

- Mounting the Controller PCB without the need for alignment procedures
- Attaching the Chassis to the Dispenser Unit Mounting Frame without the need for alignment procedures

1.10.3 Controller PCB

The Controller PCB provides an interface between the Bursting Assembly and the Interface PCB in the CPU. It employs a proprietary SGI developed protocol for controlling the Bursting Assembly Stepper Motor and providing sensor and motor position data, via the Interface PCB, to the CPU.

Power Supplies

The following power supplies are provided for the Controller PCB:

- 24 volt @ 6 Amps
- 5 volt @ 8 Amps

1.10.3.1 Functions

The Controller PCB provides the following functions for controlling the issuance of instant tickets:

- Stepper Motor control (both forward and reverse)
- Ticket insertion sensing
- Ticket Leading Edge sensing
- Jammed ticket detection
- PCB Power conditioning (if necessary)

1.10.3.2 LED Indications

The Controller PCB can include any or all of the following indications:

- Dispenser Assembly Active/Healthy
- Dispenser Assembly Fault
- Dispenser Empty
- Ticket Jam

A single Light Emitting Diode (LED) is used to indicate these situations:

- Steady Power ON - Dispenser Assembly functioning normally
- Slow Flash Dispenser Assembly empty
- Rapid Flash Dispenser Assembly jammed or failed

1.10.3.3 Power Connectors

The Controller PCB can have separate connectors for power (20VDC, 5VDC, and Ground) and data.

1.10.3.4 Operating Conditions

All components used in the design of the Controller PCB are capable of operating under the following conditions:

- Temperature
- Minimum 5°C (40°F)
- Maximum 40°C (104°F)
- Humidity (non-condensing)
- Minimum 10.0%
- Maximum 90.0%

1.10.4 Enclosure or Upper Cover

The Enclosure or Upper Cover protects the Controller PCB from damage and debris intrusion.

1.11 Barcode (1D/2D) Reader

The PCT includes a 1D/2D Barcode Reader for scanning ticket packs to load into the bursters and pre-validation of on-line tickets.

1.12 Document Scanner

The scanner assembly is a Contact Image Sensor operating at 200 DPI. The scanner is used to read or validate play slips, terminal vouchers, and on-line tickets. The scanner reads the document and then transmits the information to the application software for processing. Reading occurs at 18 inches per second.

The scanner assembly also incorporates a brander. This mechanism allows for printing only on winning thermal tickets via a 24 MM wide thermal print head. The minimum document length is 2.5 inches. The brander is located on the right side of the scanner.

NOTE: The PCT retains all winning tickets up to a pre-determined limit and returns all non-winning tickets to the player.

1.13 Cover Assembly

The PCT Cover assembly is comprised of two sub-assemblies:

- Front Door
- Cabinet

The PCT Cover assembly meets the following specifications:

- Cabinet is a three-sided, single-piece structure constructed from 14-gauge steel with reinforced, overlapping seams, with an integral top and bottom.
- Front Door shall be hinged to the Cabinet, using internal hinges.
- Designed to meet all appropriate safety and ergonomic standards. It has no square corners or sharp edges to injure the players, retailers, or maintenance personnel.
- Sufficiently weighted to:
    - Prevent PCT from tipping over with or without the Front Door open and all the Dispenser Assembly Racks extended.
    - Deter theft.
- Includes sufficient space to accommodate:
    - Up to 24 Instant Ticket Dispensing Assemblies on six extendable, four berth Dispenser Unit Mounting Frames.
    - Following items, mounted below the Ticket Dispensing Assembly frames, on an extendable shelf:
        - Central Processor Unit (CPU)
        - Power Supply Unit
        - Printer Assembly
    - Currency Validator (CV).
    - Removable Currency Cassette.
    - 1D/2D Barcode Reader.
    - 3.25-inch Document Scanner.
    - All interconnecting wiring and wire harness ducting.

      NOTE: Wiring harness allows for the extension of all the frames and the shelf simultaneously.
- Sufficient space to accommodate the following optional items of equipment, which may be installed at a later date:
    - Combination SmartCard/MagCard Reader.

- Mechanical locks, intrusion sensors, and audible alarms are included to maximize security.
- Front Door is secured to the Cabinet with four (4) locking points, with tamper-proof and hardened, cut-proof pins on all four locking devices.

  NOTE: These locking points differ from the key locks that provide access to the PCT internal mechanisms and functions.

- Primary Lock is a two-position model with electrical connections.
  - Turning the key in the opposite direction from center shall disable the intrusion alarm system and open the kiosk front door.
  - Turning the key to the central position shall lock the front door and enable the intrusion alarm system.
  - Key can be removed only in the locked position.
- Intrusion alarm system operates at all times, even if main power is removed from the PAT.
- Includes all wiring necessary to interconnect the components of the ticket dispensing system.
- All wiring is bundled into harnesses. All portions of these harnesses that are accessible to the retailer are secured in quick-release conduits.
- All wiring harnesses and connectors are marked clearly and logically for identification.
- Includes side-mounted handles to allow easy transportation and handling.
- Provision for transportation using a Fork-Lift vehicle can be included in the chassis.
- Designed for easy access for servicing, ticket loading, and paper changing.

SECTION 2
TOOLS AND EQUIPMENT

2.1 Purpose

The following list identifies the tools and equipment (required and recommended) that you should maintain in your personal inventory for bench repair on a terminal.

Tools and Equipment	
Type	**Tool/Equipment**
Hand Tools	
	Screwdriver • Flathead • Philips #1 • Philips #2 • Jewelers • Magnetic
	Pliers (needlenose)
	Wrench • Allen • 1/16 inch
	Wire cutters / strippers
	Driver • Nut driver • 5/16 inch
Electronic	
	Multimeter
	Loopback plugs (for communications testing)
Cleaning Kit (optional)	
	Isopropyl alcohol
	Cloths (lint-free)
	Glass Cleaner (alcohol-free)
	Plastic Cleaner

Tools and Equipment	
Type	**Tool/Equipment**
Miscellaneous	
	USB Memory Stick (min 1Gb)
	Knife (sharp)
	Vacuum Cleaner (anti-static, with attachments)
	Flashlight (small)
	Loctite to prevent screws from vibrating
	Pencil (with eraser)
	Plain 8 ½ X 4 inch white paper

Table 10: Bench Repair Tools and Equipment

SECTION 3
INSTALLATION PROCEDURES

3.1 Overview

The following procedures are required in order to install the PCT terminal and its peripherals:

- Accessing the Master Link operating system
- Accessing the Aegis operating system
- Diagnostics – Communications_Aegis
- Installation Wizard
- Aegis Bar Code Method
- Configure PCT Communications
- Pinging Process

3.2 Accessing the Master Link Operating System

Prior to performing the PCT configuration, the installer must verify and record all information off the old PCT terminal. This is required to ensure that the new terminal is configured the same as the old terminal.

To access this information, you will need to power up the old PCT and access the tech diagnostic. Next you have to enter the communications configuration screen and record the information listed in the top of the display.

3.3 Accessing the Aegis Operating System

NOTE: The terminal will boot-up into the Master Link operating system.

The steps below will guide you through the process of entering the Aegis operating system for the communication configuration procedure:

1. Power on the terminal:
    a. UPS on/off switch
    b. Terminal on/off switch
2. Connect the USB keyboard to the USB ports located on the underside of the electronic drawer.
3. Press **[F9]** on the keyboard. This will close out the Master Link application and open the windows desk top.
4. Locate and select the icon labeled “Phase2”. This will launch the Aegis software

3.4 Diagnostics – Communications_Aegis

Boot the terminal and touch “Diagnostics”. Touch “Tech Signon” and sign in as a Field Engineer. Touch “Comm Diags”. Touch the “Aegis” button. Note that if “MasterLink” is the “Active Communications”, then touching “Aegis” will display a prompt indicating that the Terminal will need to be rebooted.

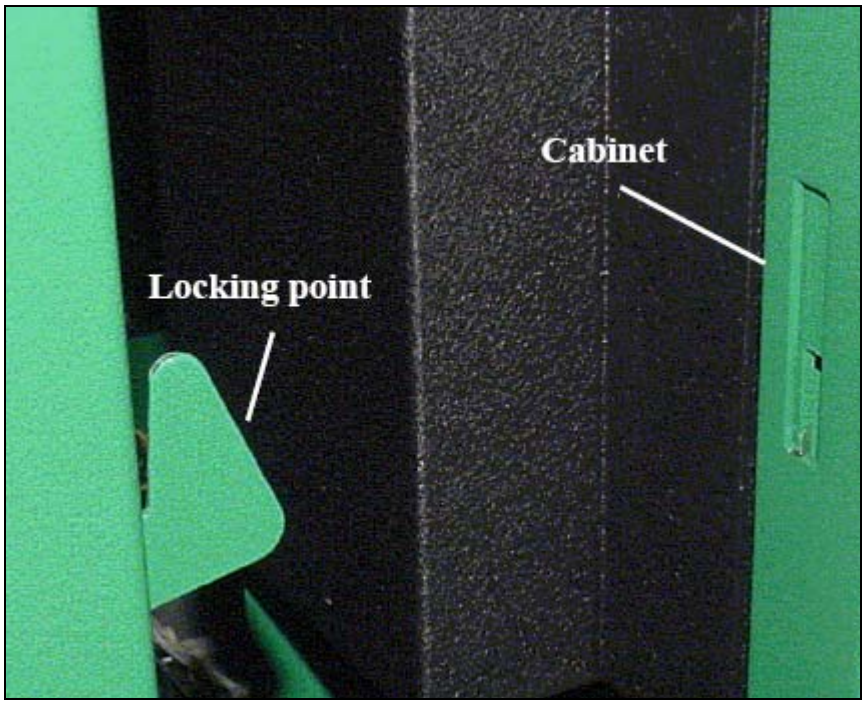

Figure 3: Diagnostics Screen – Communications Aegis

3.5 Installation Wizard

Once the terminal completes the reboot, repeat the steps in the Accessing the Master Link Operating System section. After touching the “Aegis” button, answer the following prompts as the Installation Wizard guides you through installation:

1. Enter the CFE IP address and touch **[OK]**.

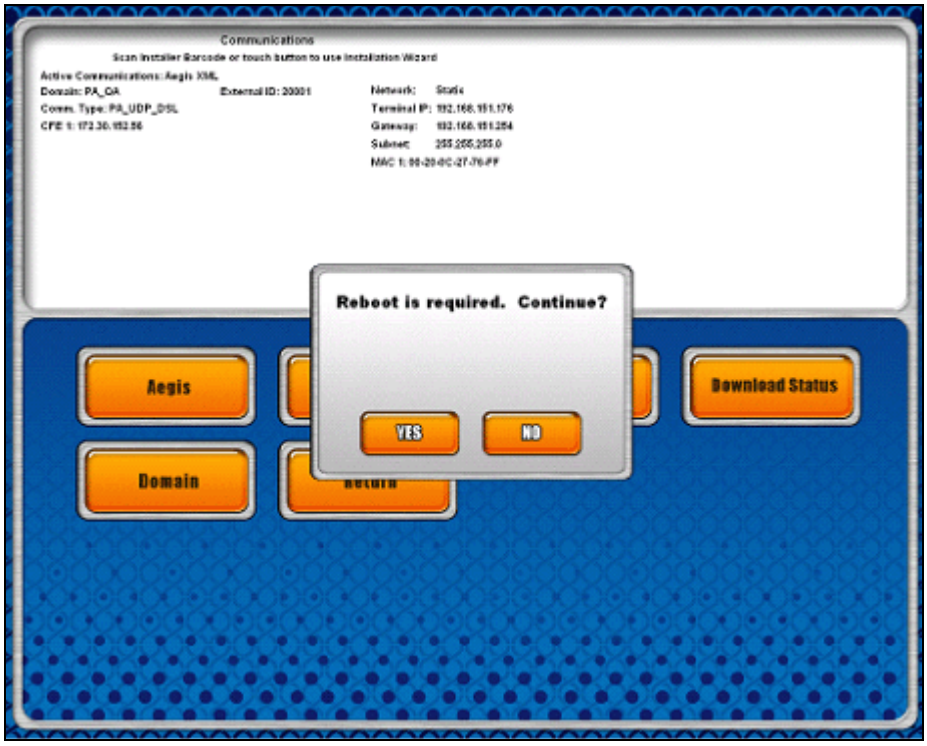

Figure 4: Enter CFE IP address pop-up

2. Touch **[Yes]** and repeat the previous step until all CFE IP addresses have been entered. When all CFEs have been entered, touch **[No]**.

   NOTE: Up to 12 CFE IP addresses can be entered.

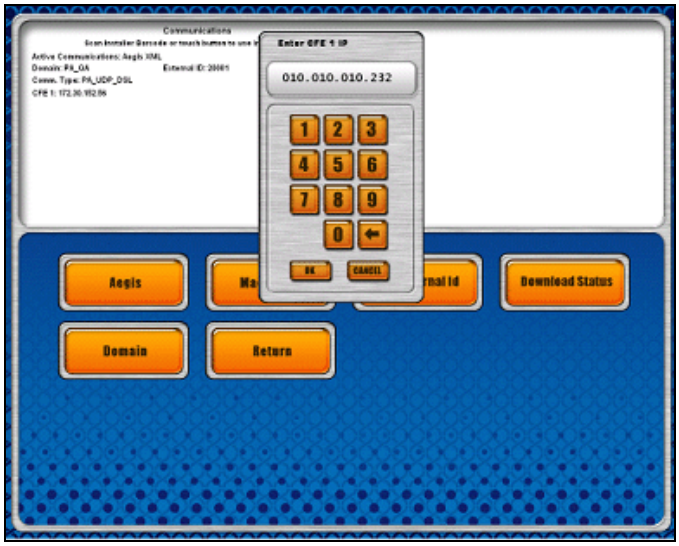

Figure 5: Enter another CFE IP address pop-up

3. Touch the Device Group that is the correct communications type for your retailer. If you do not see the correct device group, touch **[NEXT]** to display the second page of Device Groups.

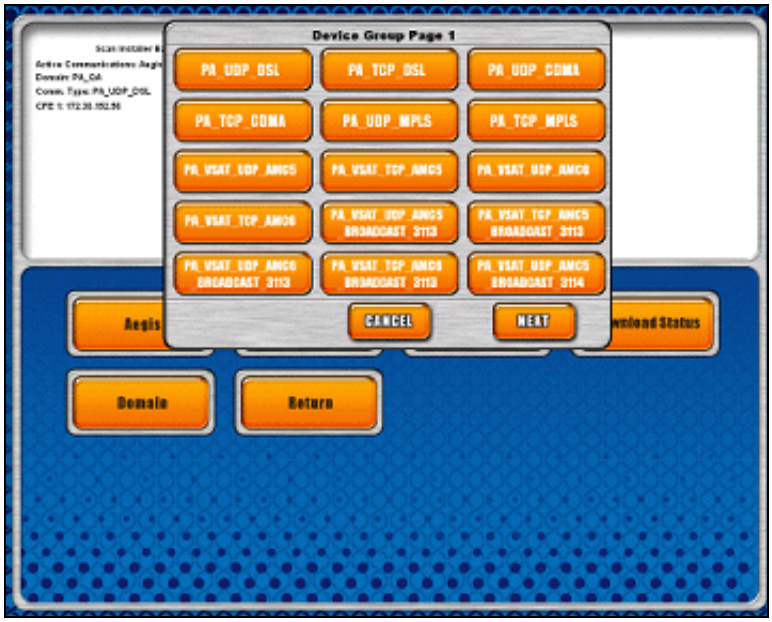

Figure 6: Device Group page 1 pop-up

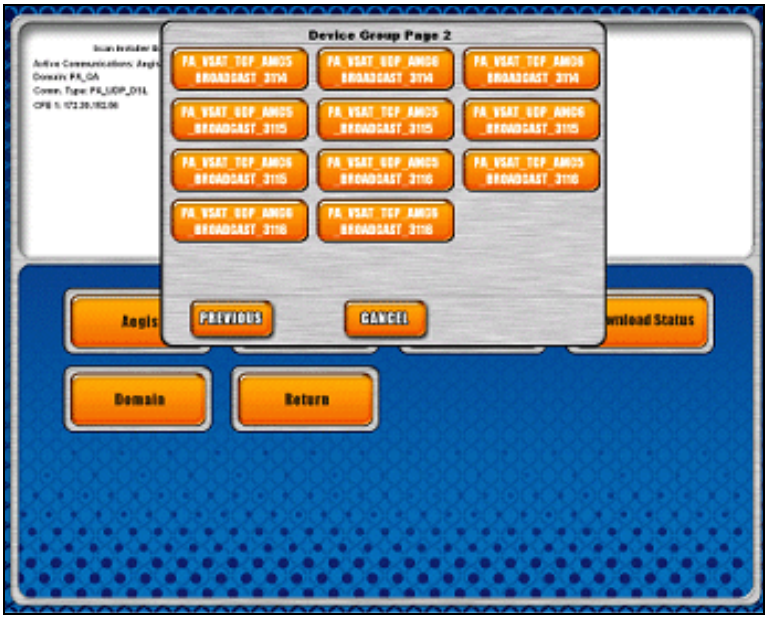

Figure 7: Device Group page 2 pop-up

4. If the Installation is successful, the Install Successful pop-up displays.

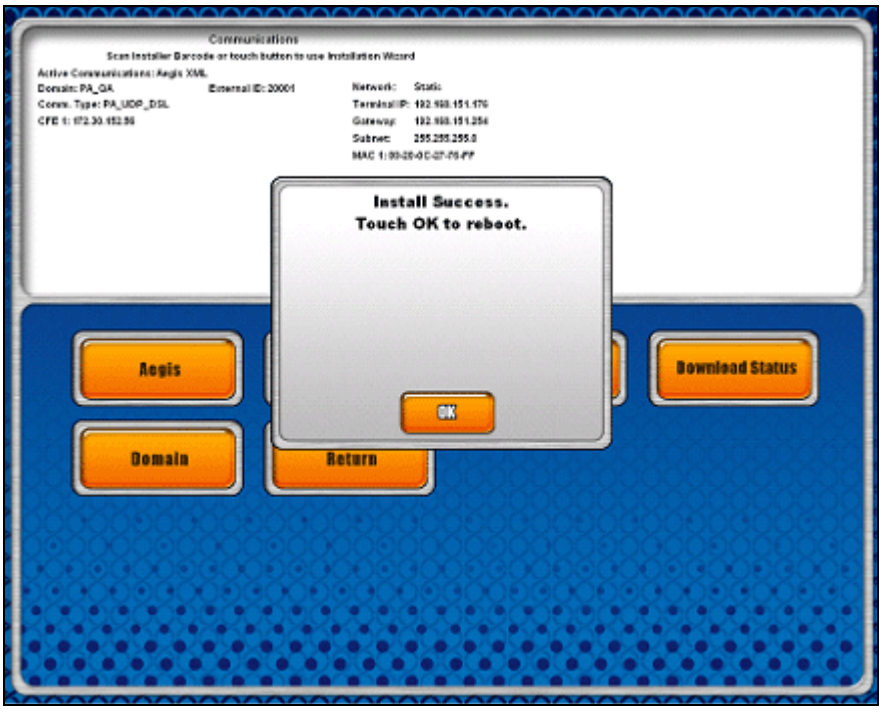

Figure 8: Install Successful pop-up

5. To use the new installation parameters, press **[OK]** to reboot the terminal.

6. When the installation succeeds, the Summary Screen shows the DLS IP addresses and ports that were installed.

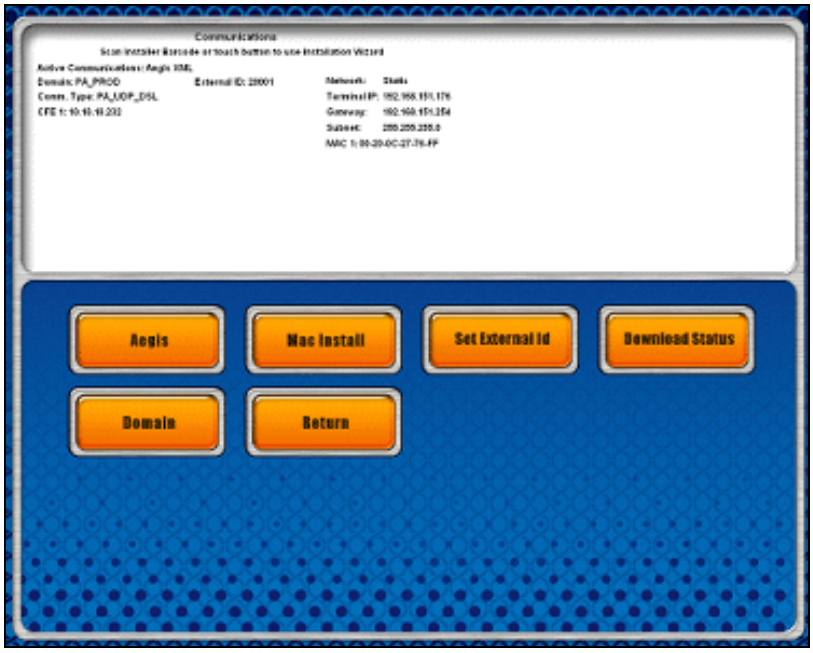

Figure 9: Summary Screen

7. Touch **[Set External Id]** to display the following pop-up.

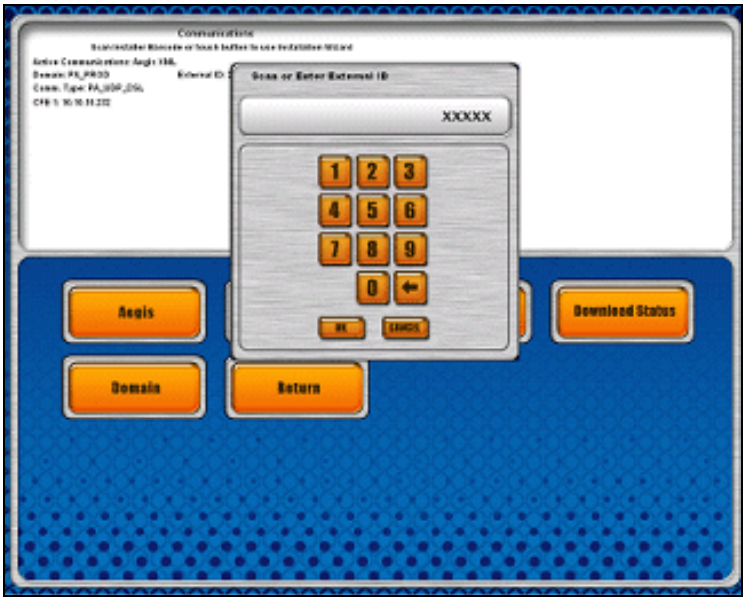

Figure 10: Scan or External Id pop-up

8. Either manually key in the last 5 digits of the 12-digit terminal serial number on the side/rear of the terminal or use the wireless barcode reader to scan the terminal serial barcode to enter the External ID. Example:

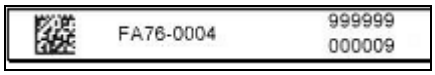

Figure 11: Sample External ID

9. Touch **[Domain]** to modify the domain, if necessary.

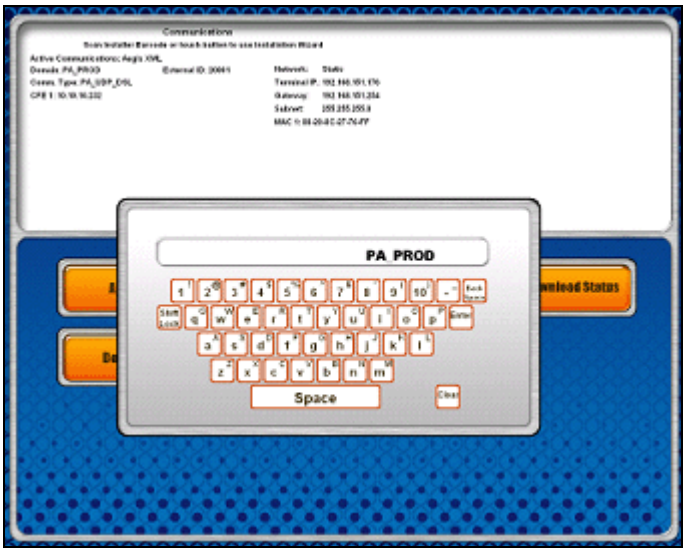

Figure 12: Modify Domain pop-up

10. The final step of the installation involves pressing the **[MAC Install]** button. See the Aegis document regarding MAC Installation for more details. If successful, a pop-up displays “Success”. While the MAC transaction is being sent, the following pop-up is displayed:

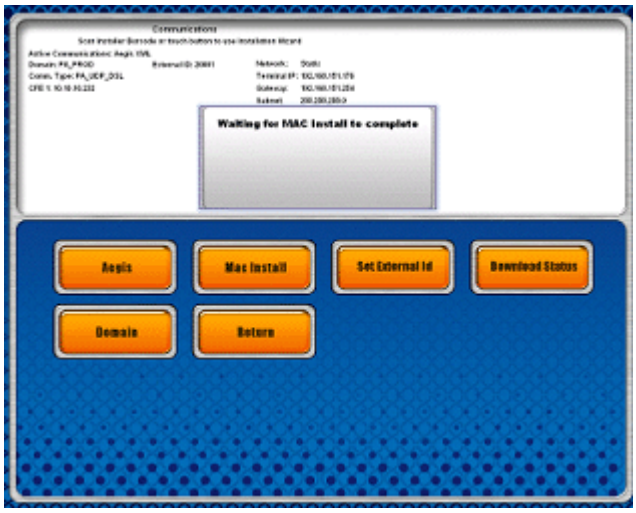

Figure 13: MAC Install Success pop-up

3.6 Aegis Bar Code Method

As an alternative to the Install method, a 2D bar code can be used instead. This bar code must be scanned with the side scanner from the Diagnostics - Communications screen in identical fashion to the Master Link bar code installation. Following is a sample Aegis Install bar code:

```
Aegis Install Barcode
External ID..........20443
Communication Type...1=PA_DSL, 2=PA_VSAT, 3=PA_CDMA
Number of FEPS = 4:
FEP 1: 10.135.133.30:3218
FEP 2: 10.135.133.32:3218
FEP 3: 10.135.233.30:3218
FEP 4: 10.135.233.32:3218

Barcode=11000204434010135133030032180101351330320321801013523303003218010135233030032180101352330320321
```

Figure 14: Sample Aegis Install Bar Code

Figure 15: Sample Aegis Bar Code

1. When the bar code is scanned in Diagnostics – Communications, the terminal will initialize the communications subsystem with the installation parameters from the bar code. If successful, the following prompt is displayed:

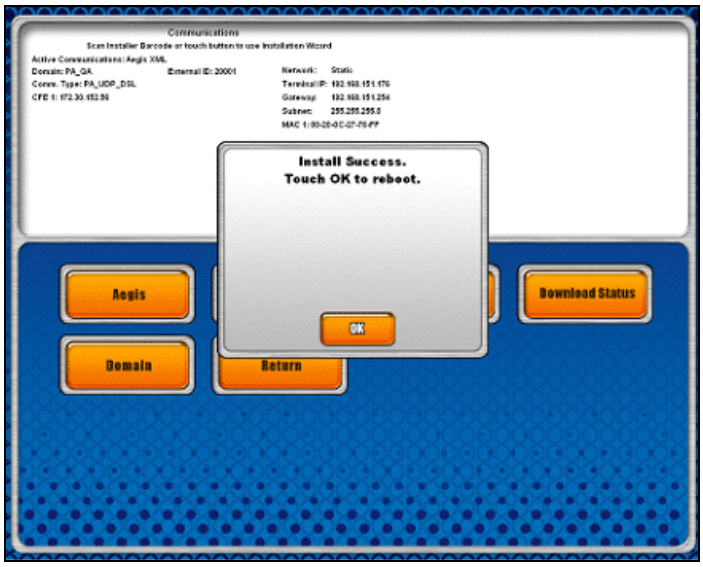

Figure 16: Install Success pop-up

2. After the reboot, the FE should wait 2-3 minutes for the terminal to automatically sign on, and then print a host report, to confirm connectivity. Online games should appear on the main as well.
3. Touch **[Set External Id]** to display the following pop-up to enter this value.
4. Use the wireless bar code reader to scan the serial number bar code on the back of the terminal.

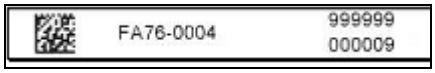

Figure 17: Sample External ID

5. The final step of the installation involves pressing the **[MAC Install]** button. See the Aegis document regarding MAC Installation for more details. If successful, a pop-up displays “Success”. While the MAC transaction is being sent, the following pop-up is displayed:

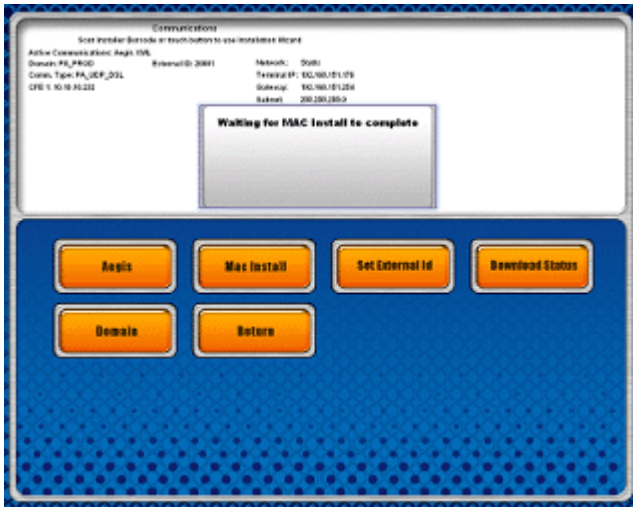

Figure 18: MAC Install Success pop-up

3.7 Configure PCT Communications

1. Allow the terminal to fully boot into the application.
2. Open front door or turn the red dotted key and login using 911911.
3. Make sure paper is loaded in the terminal printer.
4. Touch **[Comm Diags]**.
5. Touch **[Network Config]**.
6. Touch **[FEP List]**.
7. Remove any existing FEP's from the software using the **[Remove FEP]** button.
8. Touch **[Add FEP]**.
9. Key in appropriate Primary FEP address.
   - 192.168.140.37
10. Key in appropriate port number.
    - 5400
11. Key in appropriate Secondary FEP addresses.
    - 192.168.140.38
    - 192.168.141.37
    - 192.168.141.38
12. Key in appropriate port number.
    - 5400
13. Touch **[Network Config]**.
14. Touch **[Setup Retailer]**.
15. Key in the appropriate jurisdiction number (123).
16. Key in the appropriate line number, and touch **[OK]**.
17. Key in the appropriate poll number, and touch **[OK]**.
18. Key in Installer BC, and touch **[OK]** - (0016327318313854778198)
19. Key in Installer ID, and touch **[OK]** - (1)
20. Key in Installer PW, and touch **[OK]** - (778198)
21. Key in Retailer PRN, and touch **[OK]**.
22. Key in Retailer PW, and touch **[OK]**.
23. Key in Installer WO, and touch **[OK]** - (0000016601)

24. Touch **[Install]**. If properly configured and connected you will get an Installation Successful message.
25. After the “Successful Install” message displays, touch **[Return to Main Menu]**.
26. Touch **[Tech Functions]**.
27. Set Password One (1) (Initial Retailers password (IRP)).
28. Set Password Two (add 222222’s).
29. Set Machines ID (machine ID equals the terminals serial number but drop the zero).

3.8 PCT Installation Checklist

1. Open Door
    a. Red key = door open, Blue key = Reports, Green key = Bill Acceptor, Smaller key (no color) = Cash box and Black key = Electronic
2. Once opened replace hard drive if required
    a. If hard drive is replaced touch screen needs to be re-calibrated
3. Load paper (paper roll should feed from the top of the roll)
4. Re-calibrate touch screen if hard drive has been replaced
5. Configure PCT IP's under the network connections within windows
6. Go to the desktop and open the "Phase 2" application (this will launch Aegis)
7. Go to the communication diagnostic
8. Scan PDF if available, if not enter manually
9. Scan or manually enter the External ID" and call the NRO
10. Upon the NRO has set the external ID, sent the Mac address
11. Verify with the NRO that the Mac address has been received
12. Once the Mac address has been received
13. Reboot the PAT
    a. If the terminal is still booting into the desktop, locate the icon "lockreg"
    b. Answer "Yes" to the pop up. This will ensure that upon the next re-boot the terminal will come up in Master Link

3.9 Pinging Process

1. Connect keyboard to the USB port on the underside of the electronic tray.
2. Press <F9>. This will close out the running application and bring you into windows.
3. Press/Select <CTRL>, <ALT> & <DELETE> at the same time.
4. Select **[Task Manager]**.

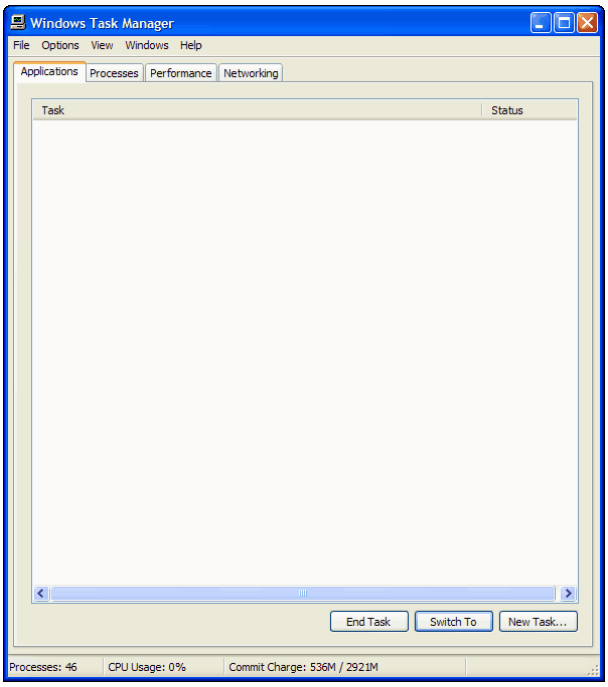

Figure 19: Windows Task Manager screen

5. Select **[New Task]**.

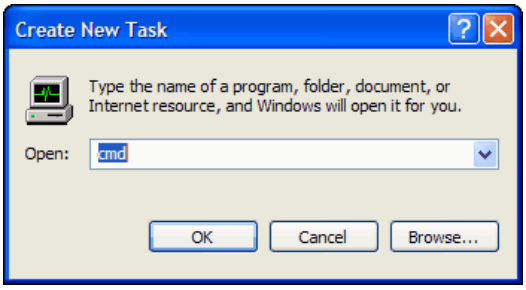

Figure 20: Create New Task pop-up

6. Type cmd and press **[OK]**. This opens the command screen.

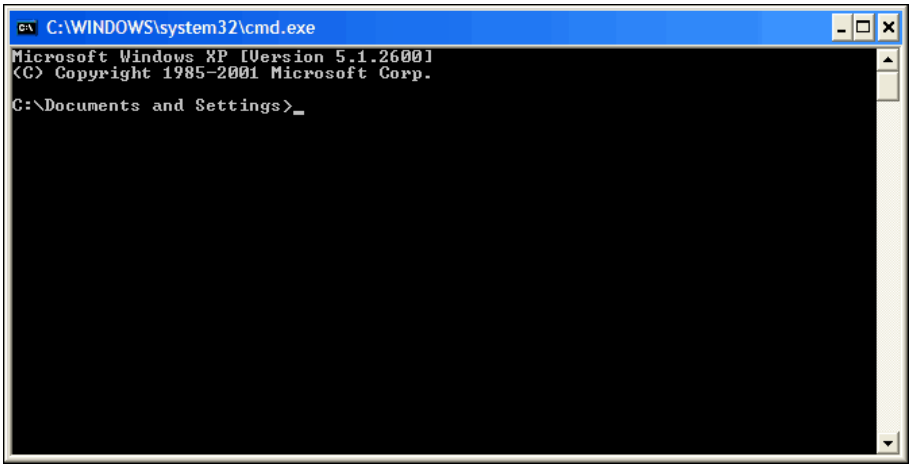

Figure 21: Task Manager Screen

7. At the prompt, type the following: [ping(sp)IP number] and select <RETURN>.

   Example: c:\Documents and Settings> ping 10.117.168.65

8. Verify that you received a return message indicating a successful ping.

SECTION 4
QUALITY CONTROL (QC) TESTING

4.1 Overview

This chapter provides Quality Control (QC) testing procedures for the PCT terminal.

4.2 Tools and Materials

The following tools and equipment are required in order to perform Quality Control (QC) testing procedures.

Required Tools and Materials	Additional Information
1 Roll of certified Thermal Printer Paper	RICOH 130LSB
Gray Scale Test Slips	SGI Part No. TL20-0006
Network RJ45 Loopback Tester	
No. 1 Phillips Head Screwdriver	
Online Test Tickets	
Play Slips for All Available Games	
Serial DB9 Loopback Tester	
Stylus Pen or equivalent	
Voided Instant Tickets	

Table 11: QC Required Tools and Materials

4.3 Setting up the Terminal

Perform the following steps to set up the terminal.

1. Remove a terminal from the shipping pallet.
2. Check for any physical damage that may have occurred during shipping on all components. (Assuming there is no physical damage, proceed with the installation.)
3. Locate the power cable at the back of the terminal.
4. Note: Do not plug the power cord into an electrical outlet until instructed to do so.
5. Place the terminal in the desired retailer location. Make sure that there is at least 1 inch / 2.54 cm of space on all sides of the terminal for proper air circulation. This will prevent the components from overheating.
6. Plug the terminal's power cord into the outlet.
7. Turn on the power after insuring the terminal has been connected correctly.
8. Perform routine terminal diagnostic procedures.
    a. Load paper into the printer.
    b. Printer test
        - Print 5 to 10 and verify print quality
    c. Scan the printed tickets
        - Verify scanned ticket printed a receipt
        - Scan a couple play slips, verifying the printed receipt is correct
    d. Barcode Reader
        - Scan several barcodes. Verify correct results
    e. Verify display and touch screen is functioning properly
    f. Verify the customer display is properly displaying information
    g. Communication Configuration and testing
        - See communication setup section

4.4 Loading Online Paper

To load paper into the PCT printer, the retailer must perform the following steps:

1. Open the PCT by performing the following steps:
    a. Insert the red key into the lower keyhole on the side panel and turn the key.
    b. Lift the PCT door handle on the side panel.
    c. Open the PCT door.
2. Release the print head by pulling up on the latch located on top-right side of the printer.

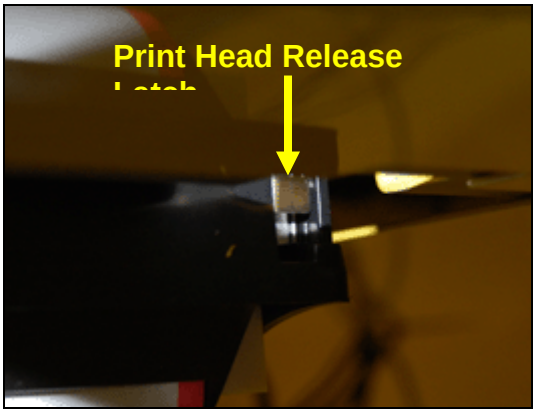

Figure 22: Print Head Release Latch

3. Remove any paper and push the print head firmly back into place, making sure that the print head is locked into place. (The print head makes an audible click when it is locked.)
4. Remove used roll from printer well. (Do not throw away paper spindle.)
5. Place paper spindle through new paper roll.
6. Place the new roll of paper and spindle onto the paper well brackets, feeding the paper from the bottom of the roll.
7. Insert the leading edge of paper under the print head. Push the edge into the slot and through the paper guide as far as it will go, about 1 inch. The printer will then automatically feed the paper and will cut off any excess paper.
8. Close and secure the PCT by performing the following steps:
    a. Lift the PCT door handle on the side panel.
    b. Shut the PCT door.
    c. Lock the PCT door and remove the red key.

    NOTE: The key can be removed only in the locked position.

4.5 Loading Instant Tickets

Perform the following steps to load paper into the printer.

1. Insert the blue key into the top barrel lock and turn the key.
2. Touch **[Burster Status]**.
3. Touch the green **[Load Pack]** button for the empty dispenser.
4. On the pop-up screen, scan or enter the game or pack number.
5. Either scan the Pack Activity Card, scan the instant ticket validation barcode, or manually enter the game/pack number.
6. After the game/pack number displays, touch **[OK]**.
7. Touch **[YES]** to load a pull pack or **[NO]** to load a partial pack. If loading a full pack, go to step 10
8. Enter the starting ticket and touch **[OK]**.
9. Enter the ending ticket and touch **[OK]**.
10. Open the drawer and insert the lowest numbered ticket into the burster.

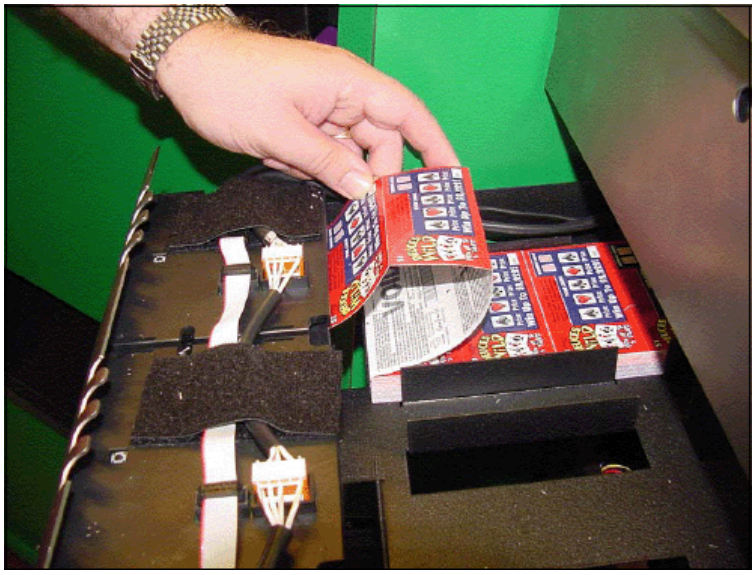

Figure 23: Inserting Instant Tickets into Burster

11. If the ticket is loaded correctly, the “Successfully Loaded” message pop-up displays.
12. Touch **[OK]** and close the drawer.

4.6 Final QC Testing Steps

Perform the following procedures:

1. Complete QC Testing checklists.
2. Record asset information.

Perform the following steps for QC Testing overview:

1. Complete a QC Testing Checklist for each terminal in order to record the terminal serial number and all of the external part serial numbers for the purposes of asset tracking (See QC Testing Checklist at the end of this section for a copy of the QC Testing Checklist).
2. Store all field-ready terminals (those that have passed QC testing) in a designated area.
3. Place any terminals that failed QC testing in an area designated for terminals waiting for repair.
4. As soon as possible after being recorded, record the asset tracking information in the Remedy system.

4.7 Loopback Testers Illustrated

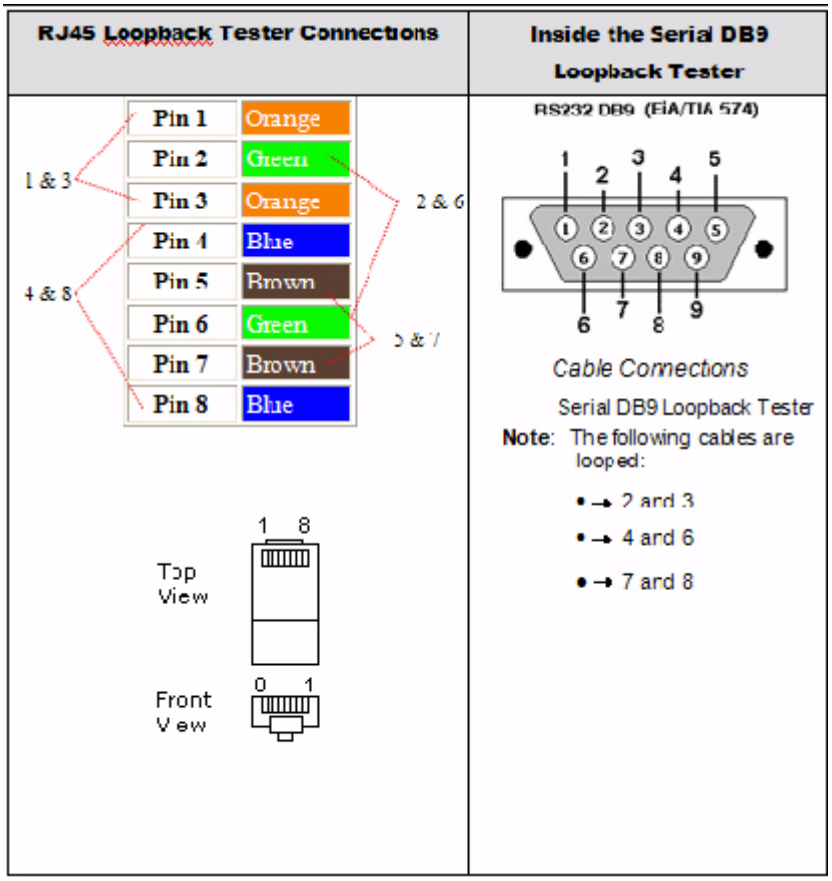

Figure 24: Loopback Testers Illustrated

SECTION 5
DIAGNOSTICS

5.1 Overview

This chapter describes the hardware tests, which should be performed during the quality assurance process of the PCT manufacturing.

Here we are focusing on the test functions provided by the terminal application. Other standard hardware tests, which are performed during the production of terminals, are described on a high level.

5.2 Diagnostics Screens

This section provides descriptions of the PCT diagnostics screens. They include:

- Printer Test
- Burster Test
- Scanner Test
- Interface Board
- Mother Board
- Burn-In Test
- SGI Engine
- SGI Engine FW
- Bill Accepter

5.3 Printer Test Screen

The printer test tab is divided into the following areas:

- Print Functions
- Firmware Controls
- Update Status

The functions located in each of these areas are described below.

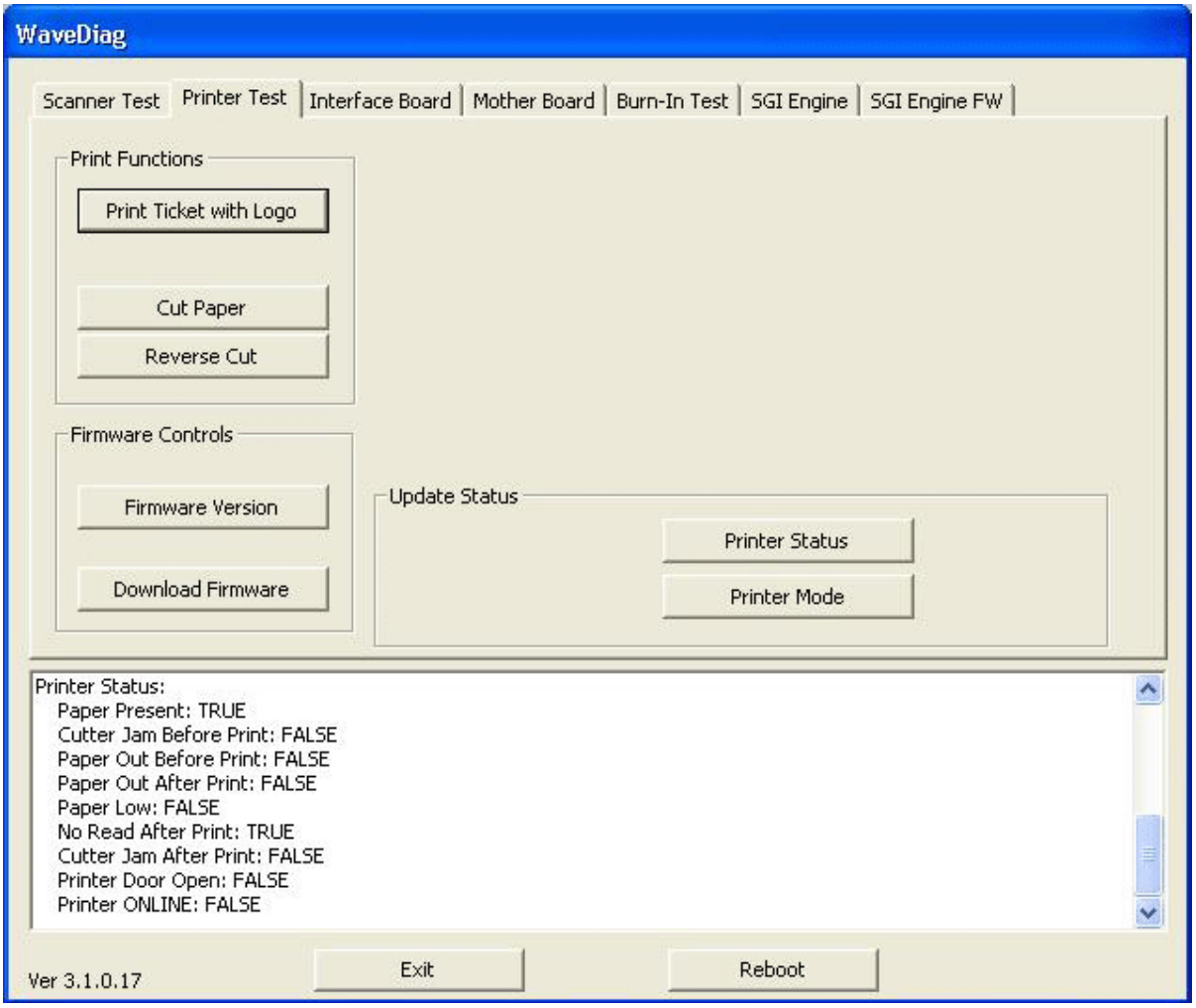

Figure 25: Printer Test Screen

5.3.1 Print Functions

The following selections are provided in the Print Functions area of the Printer Test tab:

5.3.1.1 Print Ticket with Logo

Description

Select this option to print a ticket containing a logo.

Preconditions

Unit must be operational.

Starting the Test

Select Print Ticket with Logo from the Print Functions area.

Flow

When this option is selected a ticket containing a logo is printed.

Ending the Test

The test ends automatically when the test is printed.

Analyzing Test Results

The test is successful if the ticket with logo is printed.

Exceptions

Unit does not print a ticket with logo.

Corrective Actions

DNA

5.3.1.2 Cut Paper

Description

Select this option to cut printer paper.

Preconditions

Unit must be operational.

Starting the Test

Select Cut Paper from the Print Functions area.

Flow

When this option is selected the paper is advanced and cut.

Ending the Test

The test ends automatically when the paper is cut.

Analyzing Test Results

The test is successful if the paper is cleanly and evenly cut.

Exceptions

Unit does not cut paper or does not cut cleanly or evenly.

Corrective Actions

Adjust or replace the blade.

5.3.1.3 Reverse Cut

This feature is currently not available.

5.3.2 Firmware Controls

The following selections are provided in the Firmware Controls area of the Printer Test tab:

Firmware Version – When selected provides the currently loaded firmware version.

Download Firmware - When selected provides a path to download firmware.

5.3.3 Update Status

The following selections are provided in the Update Status area of the Printer Test tab:

Printer Status – When selected provides a status on printer outputs (i.e. Paper Low, Door Open, etc...).

Printer Mode – When selected provides the printer and brander duty cycle.

5.4 Burster Test Screen

Located on the Burster Test tab are options for the seven burster trays as well as numerous burster options. To perform burster tests, select the relevant options then press the appropriate diagnostic button.

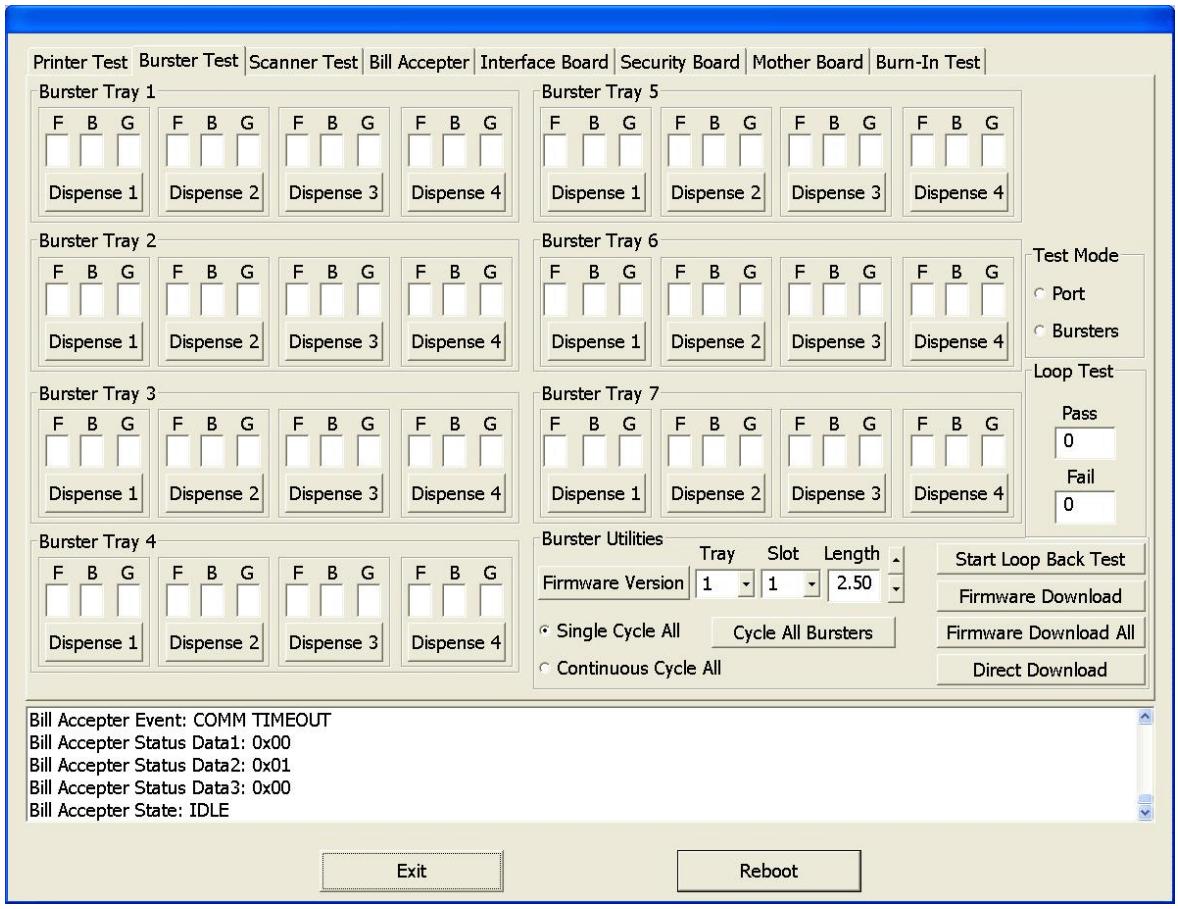

Figure 26: Burster Test Screen

5.4.1 Burster Tray

The following selections are provided in the Burster Tray areas of the Burster Test tab:

5.4.1.1 Dispense

Description

Select this option to dispense ticket from desired burster.

Preconditions

Unit must be operational and buster loaded.

Starting the Test

Select dispense 1, 2, 3, or 4 on desired tray.

Flow

Selected burster will separate and dispense ticket.

Ending the Test

Test ends automatically when ticket is dispensed.

Analyzing Test Results

Test is successful if dispensed ticket loads in tray.

Exceptions

Ticket does not separate or land in tray.

Corrective Actions

Ensure all cables and mechanical parts are positioned correctly.

F – Option for Front sensor (not used at this time).

B - Option for Back sensor (not used at this time).

G - Option for Gate sensor (not used at this time).

5.4.2 Test Mode

The following selections are provided in the Test Mode area of the Burster Test tab:

Port - Not used.

Bursters – To be selected for burster test

5.4.3 Loop Test

The following selections are provided in the Loop Test area of the Burster Test tab:

Pass – Option not used at this time.

Fail – Option not used at this time.

5.4.4 Burster Utilities

The following selections are provided in the Burster Utilities area of the Burster Test tab:

- Firmware Version – When selected provides the currently loaded firmware version.
- Cycle All Bursters – Select to start burster cycle
- Start Loopback Testing - Select this option to test the burster utilities.
- Firmware Download - When selected provides a path to download firmware.
- Firmware Download All - When selected provides a path to download all available firmware.
- Direct Download – Option not available.
- Single Cycle All – Select to cycle all loaded busters once.
- Continuous Cycle All – Select to continuously cycle all loaded busters until empty.

5.5 Scanner Test Screen

Located on the Scanner Test tab are eight scanner diagnostic buttons as well as numerous scanner setting options. To perform scanner tests, select the relevant scanner options then press the appropriate diagnostic button.

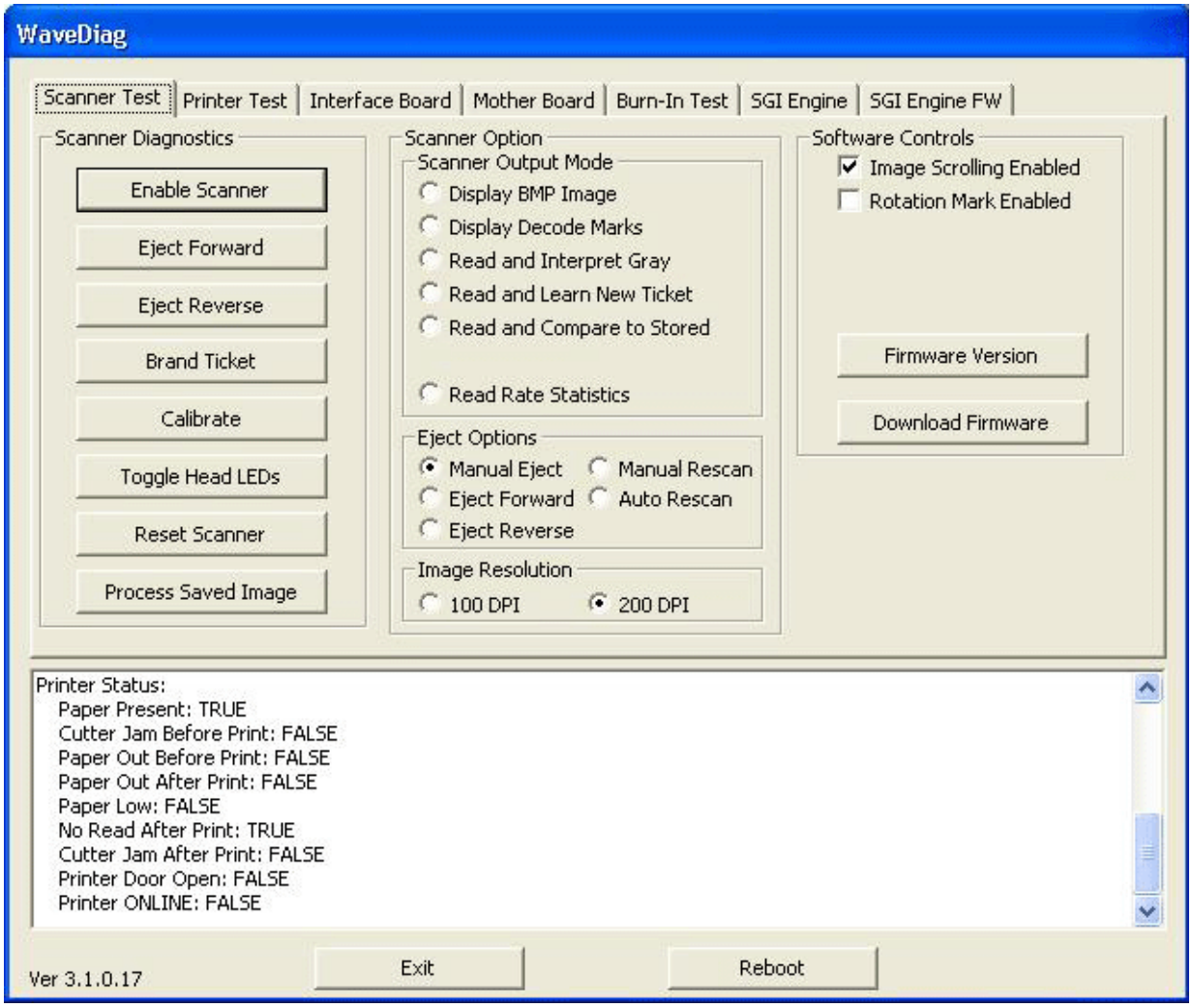

Figure 27: Scanner Test Screen

5.5.1 Scanner Diagnostics

The following selections are provided in the Scanner Diagnostics area of the Scanner Test tab:

5.5.1.1 Enable Scanner

Description

Select this option to activate the scanner. When this option is selected, the scanner will accept items for scanning.

Preconditions

Unit must be operational.

Starting the Test

Select **[Enable Scanner]** from the Scanner Diagnostics area.

Flow

When this option is selected the scanner becomes active and will accept items for feeding.

Ending the Test

DNA

Analyzing Test Results

The scanner should accept an item for feeding. If the scanner accepts the item, this diagnostic is considered to be successful.

Exceptions

Scanner does not accept item for feeding

Corrective Actions

Make sure Enable Scanner is selected and item properly fed.

5.5.1.2 Eject Forward

Description

Select this item to eject any item in the scanner drive in a forward direction.

Preconditions

Unit must be operational.

Starting the Test

Select **[Eject Forward]** from the Scanner Diagnostics area.

Flow

When this option is selected the scanner ejects any item in the scanner drive in a forward direction. If no item is currently in the scanner drive, the drive mechanism operates for approximately one second. After this interval a new item may be fed into the scanner.

Ending the Test

The test ends automatically.

Analyzing Test Results

If the scanner ejects the item in the drive or is heard to be operating if no item is in the drive, the test is successful.

Exceptions

Scanner does not operate/eject item.

Corrective Actions

Make sure item in drive is not jammed.

NOTE: Even if item is jammed, the drive mechanism should be heard to operate.

5.5.1.3 Eject Reverse

Description

Select this item to eject any item in the scanner drive in a backward direction.

Preconditions

Unit must be operational.

Starting the Test

Select **[Eject Reverse]** from the Scanner Diagnostics area.

Flow

When this option is selected the scanner ejects any item in the scanner drive in a backward direction. If no item is currently in the scanner drive, the drive mechanism operates for approximately one second. After this interval a new item may be fed into the scanner.

Ending the Test

The test ends automatically.

Analyzing Test Results

If the scanner ejects the item in the drive or is heard to be operating if no item is in the drive, the test is successful.

Exceptions

Scanner does not operate/eject item.

Corrective Actions

Make sure item in drive is not jammed.

NOTE: Even if item is jammed, the drive mechanism should be heard to operate.

5.5.1.4 Brand Ticket

Description

Select this button to brand a ticket.

Preconditions

Unit must be operational and scanner enabled. Eject option must be set to Manual Eject.

Flow

Feed ticket into scanner then select **[Brand Ticket]** from the Scanner Diagnostics area. The unit brands the ticket and displays the result in the message window at the bottom of the screen.

Ending the Test

The test ends automatically.

Analyzing Test Results

The test is successful if the ticket is branded and the following message appears in the message box: Brand Status: Brand OK

Exceptions

Ticket is not branded. Brand Status: Brand OK message is not displayed.

Corrective Actions

DNA

5.5.1.5 Calibrate

Description

Select this button to calibrate the scanner.

Preconditions

Unit must be operational and scanner enabled.

Flow

Select **[Calibrate]** from the Scanner Diagnostics area and feed an 8 ½ X 4 inch piece of white paper into scanner. This procedure calibrates the distance between the paper source and the light source, providing a precise measurement between the two.

Ending the Test

The test ends automatically.

Analyzing Test Results

The test is successful if the ticket is branded and the following message appears in the message box: Brand Status: Brand OK

Exceptions

Ticket is not branded. Brand Status: Brand OK message is not displayed.

Corrective Actions

DNA

5.5.1.6 Toggle Head LEDs

Description

Select this button to toggle on and off Head LEDs.

Preconditions

Unit must be operational.

Flow

Select [Toggle Head LEDs] from the Scanner Diagnostics area several times. Each time the button is selected the Head LEDs will alternately turn on and off.

Ending the Test

The test ends when the user stops selecting the related button.

Analyzing Test Results

The test is successful if Head LEDs turn on and off alternately with each button selection.

Exceptions

LEDs do not turn on and off as the Toggle Head LCDs button is selected.

Corrective Actions

DNA

5.5.1.7 Reset Scanner

Description

Select this button to reset the scanner

Preconditions

Unit must be operational.

Flow

Select **[Reset Scanner]** from the Scanner Diagnostics area. When selected, a reset command is sent to the scanner.

Ending the Test

The test ends automatically.

Analyzing Test Results

The test is successful if the scanner is reset.

Exceptions

Scanner is not reset.

Corrective Actions

DNA

5.5.1.8 Process Saved Image

Description

This option is used in conjunction with the options listed in the Scanner option-Scanner Output Mode section. Select this button to process the most recently scanned image according to the Scanner Output mode selected. The scanned option is displayed.

Preconditions

Unit must be operational.

Flow

1. Select the relevant option from the Scanner Output Mode area
2. Press Process Saved Image. The relevant information is displayed for the last item scanned. If a new item is fed into the scanner the information on the new item is displayed.

Ending the Test

The test ends when the user exits.

Analyzing Test Results

The test is successful if image of the scanned item is displayed.

Exceptions

Image of scanned item is not displayed.

Corrective Actions

Replace scanner.

5.5.2 Scanner Options

The following selections are provided in the Scanner Options area of the Scanner Test tab:

5.5.2.1 Scanner Output Mode

- Display BMP Image - Displays a bitmap (BMP) image of the scanned item.
- Display Decode Marks - Displays the decode marks of the scanned item.
- Read and Interpret Gray - Reads and interprets the gray areas of the scanned item. A calibration slip is required for this option.
- Read and Learn New Ticket - Scanned ticket is stored.
- Read and Compare to Stored - Scanned image is compared to the stored image. The result is displayed in the message area at the bottom of the screen.
- Read Rate Statistic - The rate statistics of the scanned image are displayed in the message area at the bottom of the screen.

5.5.2.2 Eject Options

Manual Eject - The scanned item does not feed through completely and must be manually removed from the scanner.

Eject Forward - The scanned item feeds entirely through the scanner.

Eject Reverse - The scanned item feeds through the scanner and then ejects the item backwards.

Manual Rescan - Select to manually rescan an item. Feed item into scanner upon selection of this option.

Auto Rescan - ???

5.5.2.3 Image Resolution

100 DPI - Resolution of scanned image will be 100 dots per inch.

200 DPI - Resolution of scanned image will be 200 dots per inch.

5.5.2.4 Software Controls

Image Scrolling Enabled - Select to allow scrolling of on screen of scanned image.

Rotation Mark Enabled – Select to allow the reading of ticket rotation mark.

Firmware Version – When selected provides the currently loaded firmware version.

Download Firmware - When selected provides a path to download firmware.

5.6 Interface Board Screen

The Interface Board tab is divided into the following areas:

- Serial Port Tests
- Barcode Reader/Ticket Checker

The functions located in each of these areas are described below.

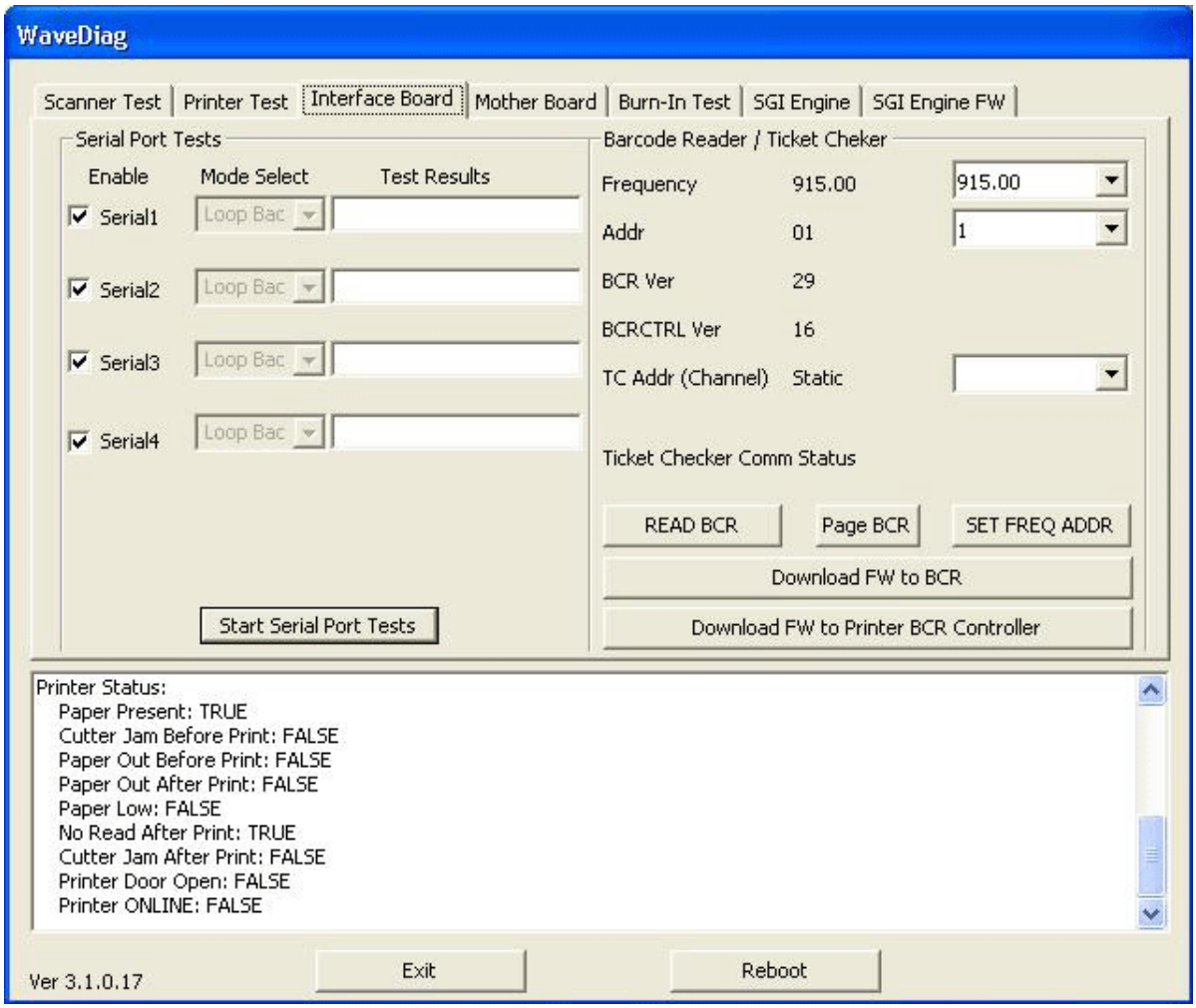

Figure 28: Interface Board Screen

5.6.1 Serial Port Tests

The following selections are provided in the Serial Port Tests area of the Interface Board tab:

5.6.1.1 Serial Port Test

Description

Select this option to test the terminal's serial ports.

Preconditions

Unit must be operational. A Serial Loopback connector must be attached to the port being tested.

Starting the Test

Select ports to test by placing a chicanery in the box next to each port to be tested. Select the relevant mode for each port by making a selection from the dropdown menu located next to each port. Select the **[Start Serial Port Test]** button to begin testing.

Flow

Once the testing has started, the result for each port is displayed in the Test Results box located next to each port. The ports are continually tested with the results being continually updated until the test is stopped by the user.

Ending the Test

Select the **[Stop Serial Test]** button (**[Start]** button now relabeled as **[Stop]**).

Analyzing Test Results

The number of passes and fails for each port are displayed in the Test Results boxes.

Exceptions

DNA

Corrective Actions

DNA

5.6.1.2 Barcode Reader/Ticket Checker

Frequency

This feature is currently not available.

Address (Addr)

This feature is currently not available.

BCR Version

Determines the firmware level of the symbol barcode reader.

BCRCTR Version

Determines the firmware level of the controller board.

TC Address (Addr) Channel

This feature is currently not available.

5.6.1.3 Read BCR

Displays the frequency, address and the BCR version of the barcode reader.

5.6.1.4 Page BCR

This feature is currently not available.

5.6.1.5 Set Frequency Address

This feature is currently not available.

5.6.1.6 Download FW to BCR

Provides a path to download firmware to the barcode reader.

5.6.1.7 Download FW to Printer BCR Controller

Provides a path to download firmware to the BCR Controller.

5.7 Mother Board Screen

The Mother Board tab is divided into the following two areas:

- NIC port
- Mother Board Accessories

The options and functions located in each of these areas are described below.

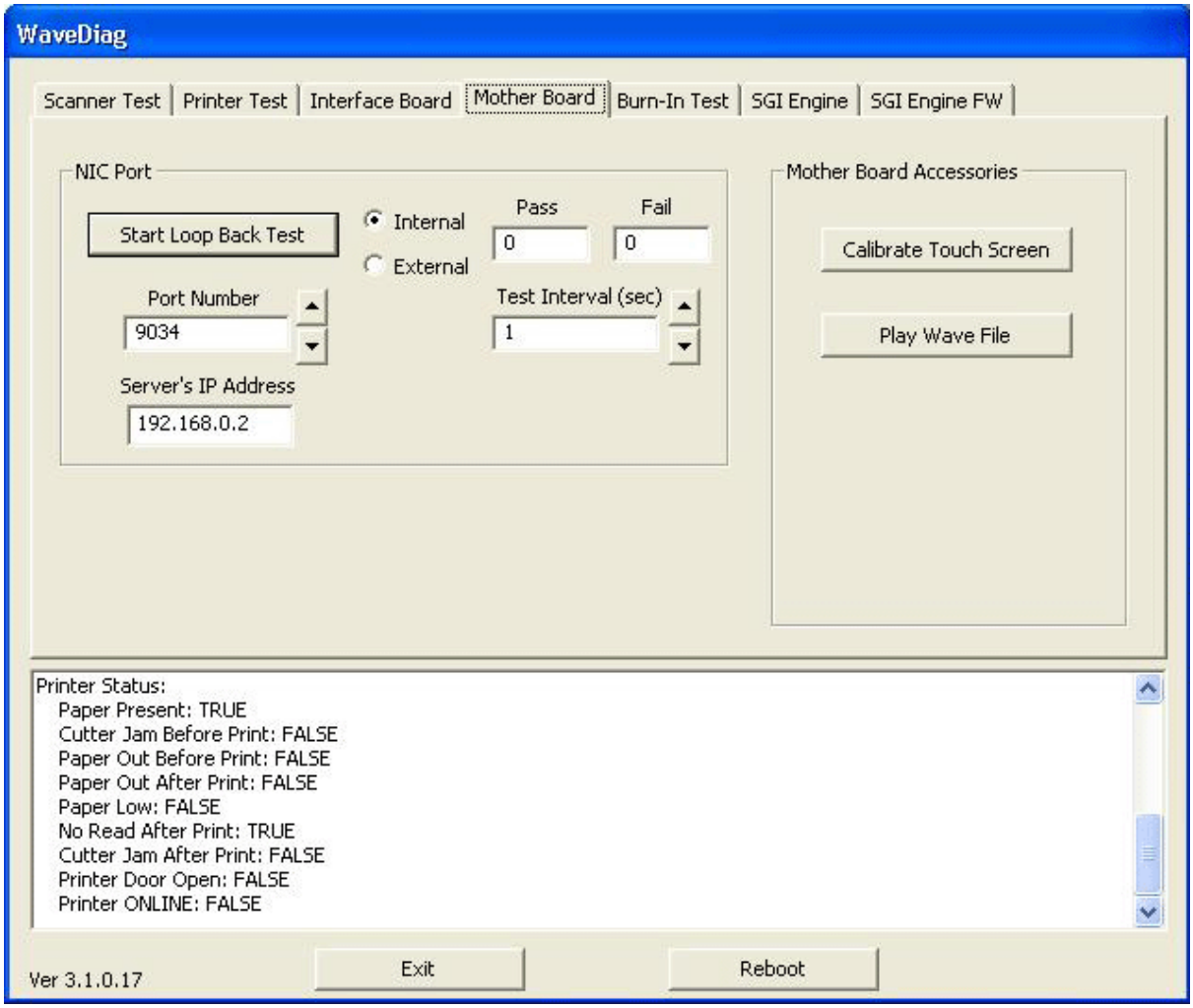

Figure 29: Interface Board Screen

5.7.1 NIC Port

The following selections are provided in the NIC Port area of the Mother Board tab:

5.7.1.1 Start Loop Back Test

Description

Select this option to test the NIC port.

Preconditions

Unit must be operational.

Starting the Test

Select internal or external.

Use the up and down arrows to select the port number.

Enter the relevant IP address in the Server's IP Address field.

Use the up and down arrow to enter the desired test interval in second in the Test Interval (sec) field. Value can be between 0 and 1000.

Press the **[Start Loop Back Test]** button to begin testing.

Flow

Once the testing has started, the relevant port is continuously tested at the selected interval until the user stops the test. The results of the test are displayed in the Pass and Fail fields. Each test iteration increments the number in either the Pass or Fail field depending on the test result.

Ending the Test

Select the **[Stop Loopback Test]** button (**[Start]** button now relabeled as **[Stop]**).

Analyzing Test Results

The number of passes and fails are displayed in the Pass and Fail fields, respectively.

Exceptions

DNA

Corrective Actions

DNA

Modem Port

This area of the Motherboard tab allows the user to test the modem port.

5.7.2 Mother Board Accessories

The following selections are provided in the Mother Board Accessories area of the Mother Board tab:

5.7.2.1 Calibrate Touch Screen

When selected launches the Touch Screen Calibration program.

5.7.2.2 Play Wave File

Description

Select this option to test the wave file.

Preconditions

Unit must be operational.

Starting the Test

Select Play Wave File from the Mother Board Accessories area.

Flow

After each successive selection of this button, the wave file plays.

Ending the Test

The test ends when the user stops pressing **[Play Wave File]**.

Analyzing Test Results

The test is successful if the wave file plays when **[Play Wave File]** is selected.

Exceptions

Wave file does not play.

Corrective Actions

DNA

5.8 Burn-In Test Screen

The Burn-In Test tab consists of a single are from which the following tests can be performed over a set period of time:

- Print Test Ticket
- Paper Cutter
- Hard Drive Test
- LCD Backlight Toggle
- Test Duration (hrs)
- Play Wave File
- Scanner Forward
- Toggle Scanner LEDs
- Customer Display
- Time Left

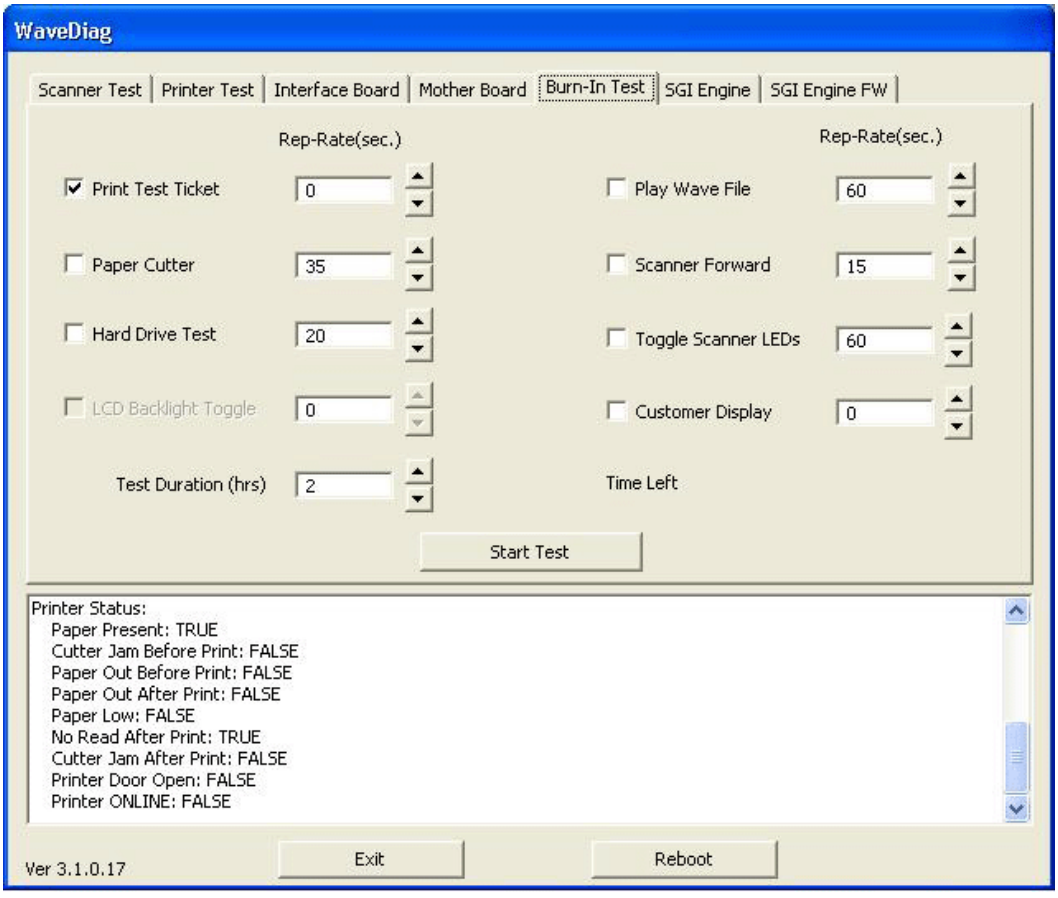

Figure 30: Burn-In Test Screen

5.8.1 Burn-In Tests

The tests contained on the Burn-In Test tab can be performed simultaneously in any combination, with the repetition rate for each test being set independently from zero to 10,000 seconds.

The tests and related options are described below.

5.8.1.1 Print Test Ticket

Description

Select this option to print test tickets.

Preconditions

Unit must be operational.

Starting the Test

1. Select test to be performed by checking the box next to test.
2. Set the repetition rate for the test. The repetition rate is given in seconds and must be between 0 and 10,000.
3. Set the test duration. The duration is set in hours and must be between 0 and 10,000.
4. Press the **[Start Test]** button to begin testing.

   NOTE: If test duration is set to 0, the system will immediately indicate that the test is complete, even though no testing is performed.

Flow

Once the test is started, the system performs the selected test at the set repetition rate for the selected number of hours or until the user stops the manually.

Ending the Test

The test ends when the entered test duration has expired or when the user selects the **[Stop Test]** button (**[Start]** button now relabeled as **[Stop]**)

Analyzing Test Results

Verify that the ticket prints at the selected rate.

Exceptions

None

Corrective Actions

None

5.8.1.2 Paper Cutter

Description

Select this option to test the paper cutter. For each repetition of the test, paper is advanced and cut.

Preconditions

Unit must be operational.

Starting the Test

1. Select test to be performed by checking the box next to test.
2. Set the repetition rate for the test. The repetition rate is given in seconds and must be between 0 and 10,000.
3. Set the test duration. The duration is set in hours and must be between 0 and 10,000.
4. Press the **[Start Test]** button to begin testing.

   NOTE: If test duration is set to 0, the system will immediately indicate that the test is complete, even though no testing is performed.

Flow

Once the test is started, the system performs the selected test at the set repetition rate for the selected number of hours or until the user stops the manually.

Ending the Test

The test ends when the entered test duration has expired or when the user selects the **[Stop Test]** button (**[Start]** button now relabeled as **[Stop]**).

Analyzing Test Results

Verify that cutter cycles at the selected rate.

Exceptions

DNA

Corrective Actions

DNA

5.8.1.3 Hard Drive Test

Description

Select this option to test the hard drive.

Preconditions

Unit must be operational.

Starting the Test

1. Select test to be performed by checking the box next to test.
2. Set the repetition rate for the test. The repetition rate is given in seconds and must be between 0 and 10,000.
3. Set the test duration. The duration is set in hours and must be between 0 and 10,000.
4. Press the **[Start Test]** button to begin testing.

   NOTE: If test duration is set to 0, the system will immediately indicate that the test is complete, even though no testing is performed.

Flow

Once the test is started, the system performs the selected test at the set repetition rate for the selected number of hours or until the user stops the manually.

Ending the Test

The test ends when the entered test duration has expired or when the user selects the **[Stop Test]** button (**[Start]** button now relabeled as **[Stop]**).

Analyzing Test Results

DNA

Exceptions

DNA

Corrective Actions

DNA

5.8.1.4 LCD Backlight Toggle

Description

Select this option to test LCD backlight.

Preconditions

Unit must be operational.

Starting the Test

1. Select test to be performed by checking the box next to test.
2. Set the repetition rate for the test. The repetition rate is given in seconds and must be between 0 and 10,000.
3. Set the test duration. The duration is set in hours and must be between 0 and 10,000.
4. Press the **[Start Test]** button to begin testing.

   NOTE: If test duration is set to 0, the system will immediately indicate that the test is complete, even though no testing is performed.

Flow

Once the test is started, the system performs the selected test at the set repetition rate for the selected number of hours or until the user stops the manually.

Ending the Test

The test ends when the entered test duration has expired or when the user selects the **[Stop Test]** button (**[Start]** button now relabeled as **[Stop]**).

Analyzing Test Results

Test is successful, if backlight toggle action operates.

Exceptions

Light toggle action does not operate.

Corrective Actions

DNA

Test Duration

Set the amount of time selected for the duration of the test.

Play Wave File

Set the amount of time the wave file is to be played.

5.8.1.5 Scanner Forward

Description

Select this option to test the scanner operation in a forward direction.

Preconditions

Unit must be operational.

Starting the Test

1. Select test to be performed by checking the box next to test.
2. Set the repetition rate for the test. The repetition rate is given in seconds and must be between 0 and 10,000.
3. Set the test duration. The duration is set in hours and must be between 0 and 10,000.
4. Press the **[Start Test]** button to begin testing.

   NOTE: If test duration is set to 0, the system will immediately indicate that the test is complete, even though no testing is performed.

Flow

Once the test is started, the system performs the selected test at the set repetition rate for the selected number of hours or until the user stops the manually.

Ending the Test

The test ends when the entered test duration has expired or when the user selects the **[Stop Test]** button (**[Start]** button now relabeled as **[Stop]**).

Analyzing Test Results

The test is successful, if the item is scanned.

Exceptions

Item is not scanned.

Corrective Actions

DNA

5.8.1.6 Toggle Scanner LEDs

Description

Select this option to test the scanner LEDs.

Preconditions

Unit must be operational.

Starting the Test

1. Select test to be performed by checking the box next to test.
2. Set the repetition rate for the test. The repetition rate is given in seconds and must be between 0 and 10,000.
3. Set the test duration. The duration is set in hours and must be between 0 and 10,000.
4. Press the **[Start Test]** button to begin testing.

   NOTE: If test duration is set to 0, the system will immediately indicate that the test is complete, even though no testing is performed.

Flow

Once the test is started, the system performs the selected test at the set repetition rate for the selected number of hours or until the user stops the manually.

Ending the Test

The test ends when the entered test duration has expired or when the user selects the **[Stop Test]** button (**[Start]** button now relabeled as **[Stop]**).

Analyzing Test Results

The test is successful, if the scanner LED toggle action operates.

Exceptions

LED toggle action does not operate.

Corrective Actions

DNA

Customer Display

Set the amount of time a message is displayed on the Flat Panel Display.

Time Left

???

5.9 SGI Engine Screen

The SGI Engine tab contains the following areas:

- General Purpose I/O
- Intrusion
- Display Brightness

The various options and tests located on the SGI Engine tab are described below.

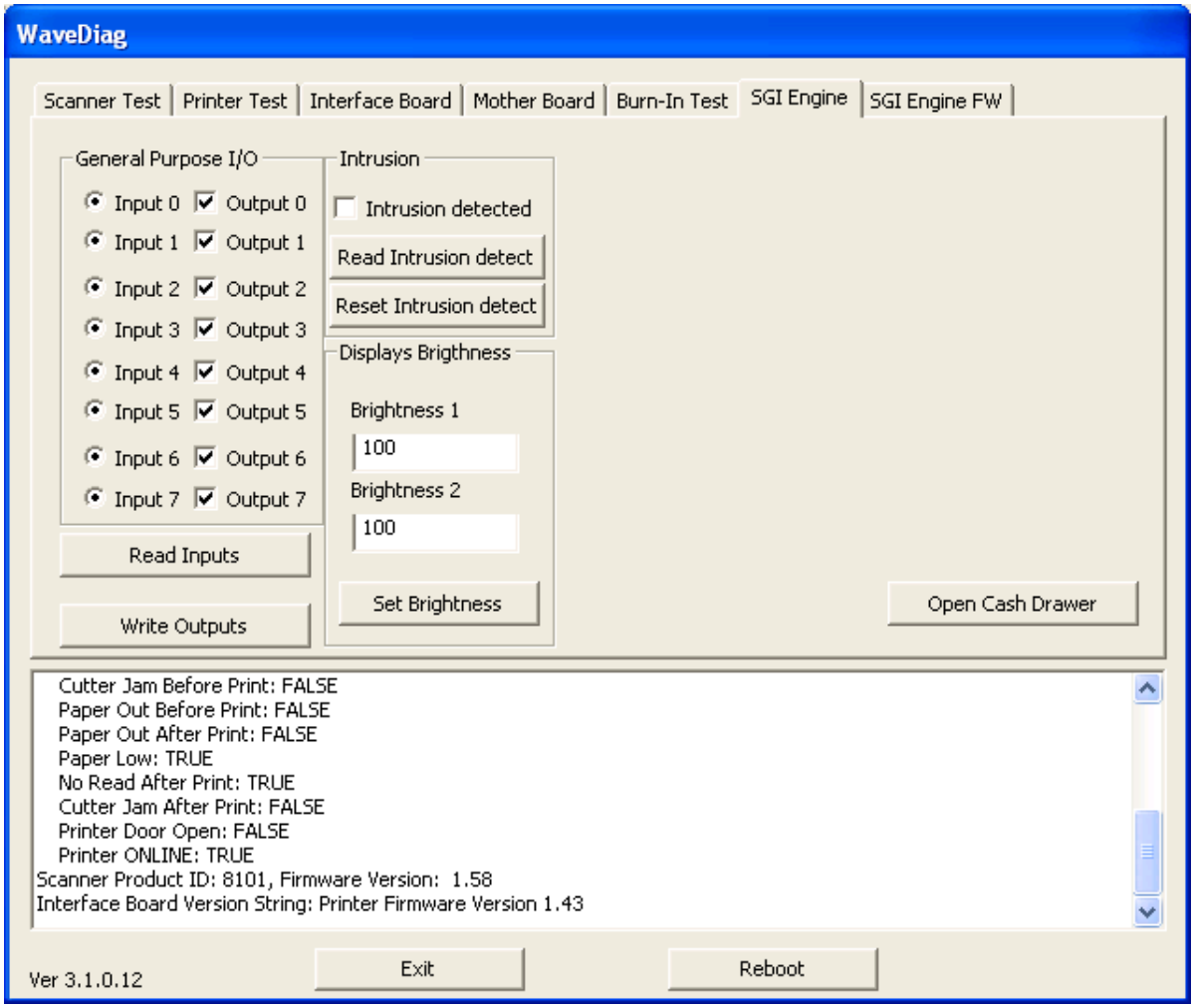

Figure 31: SGI Engine Screen

5.9.1 General Purpose I/O

5.9.1.1 Read Inputs

Inputs column is updated with the current status on input 0-7.

5.9.1.2 Write Outputs

Checked outputs will be set and unchecked cleared.

5.9.2 Intrusion

5.9.2.1 Reset Intrusion Detect

Current status is be shown in the intrusion detect field. If there has been an intrusion it is checked, otherwise it is unchecked.

5.9.3 Displays Brightness

Write the decried level from 100 – 255 in the box for brightness 1 and brightness 2 you want to change and press **[Set Brightness]**.

NOTE: The WaveDiags will not set values outside the rage from 100 to 255.

5.10 SGI Engine FW Screen

The SGI Engine FW tab contains the following areas:

- Platform Version Information
- Platform Configuration
- Download to Platform Devices

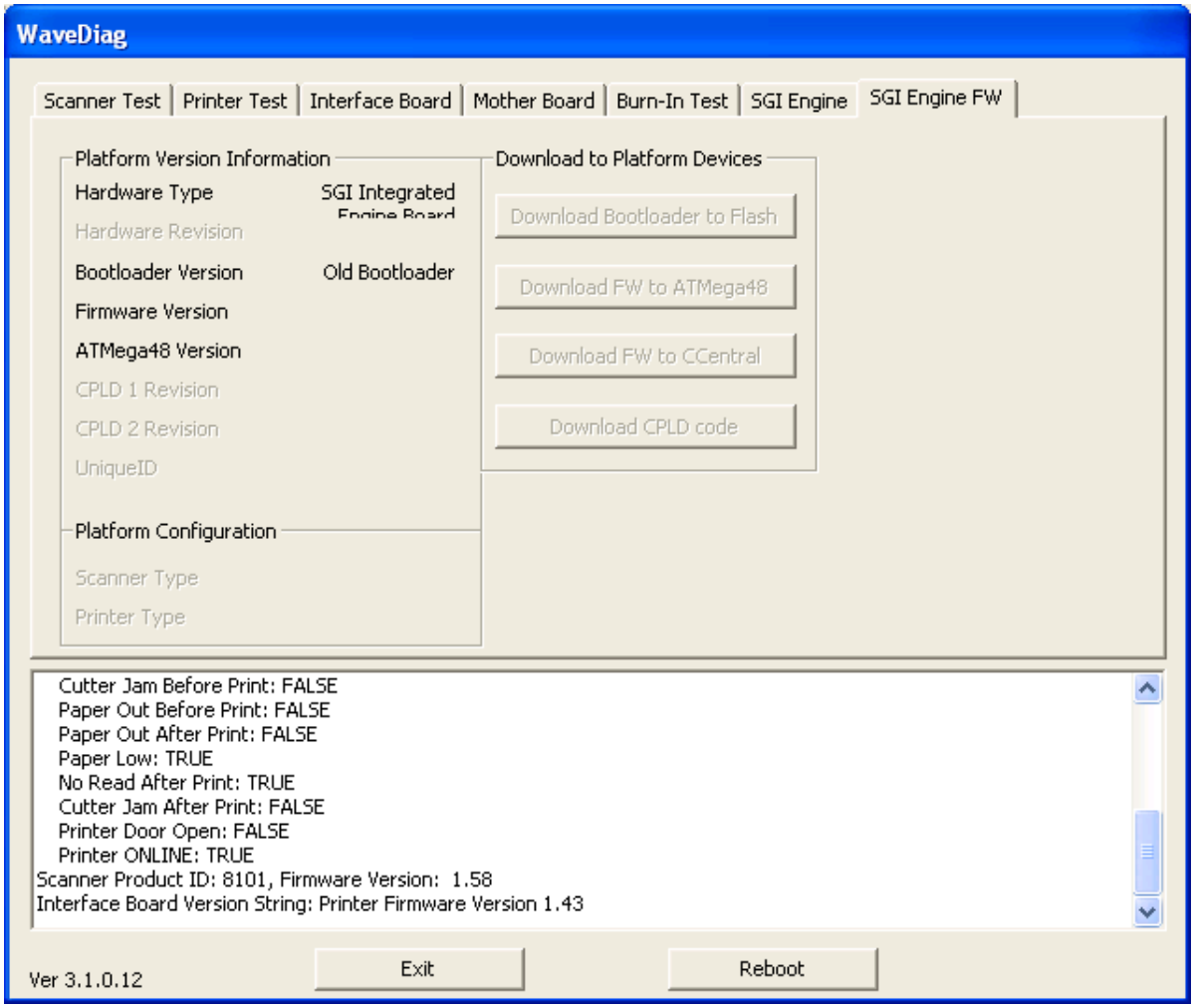

Figure 32: SGI Engine FW Screen

5.10.1 Platform Version Information

This area is informational only. It displays the values for the following:

- Hardware Type - Type of hardware located on the current platform (In this case SGI Interface Board)
- Hardware Revision - The revision letter of the current hardware
- Bootloader Version - Version number of the bootloader in mm.dd.yy.nn format
- Firmware Version - Version number of the firmware in dd.mm.yy.nn format.
- ATMega48 Version - Version number of the ATMega 48 in dd.mm.yy.nn format
- CPLD 1 Revision - Revision number of the first CPLD
- CPLD 2 Revision - Revision number of the second CPLD
- Unique ID - Unique Identification number of the platform

5.10.2 Platform Configuration

This area is informational only. It displays the values for the following:

- Scanner Type - The type of scanner installed in the unit for example, 8 inch Black/White
- Printer Type - The type of printer attached to the unit for example, 3 inch FTP639 Fujitsu

5.10.3 Download to Platform Devices

This area contains the following buttons:

Download Bootloader to Flash

Download FW to ATMega48

Download FW to Central

Download CPLD code

5.10.3.1 Download Bootloader to Flash

Description

This function is used if the Bootloader Version is less than 2.02.05.00.

Preconditions

Unit must be operational.

Starting the Test

Select the **[Download Bootloader to Flash]** button.

Flow

Once the option is selected a windows navigation dialogue appears. Navigate to c:\bootloader and select the relevant file.

When download finishes a message will appear in the Extrema Diag window.

Ending the Test

The test ends automatically when the bootloader has been downloaded.

Analyzing Test Results

Reboot PC to activate new Bootloader. The version will be displayed in the SGI Engine FW tab of Extrema Diag.

Exceptions

If the Bootloader Version is equal to or greater than 2.02.05.00 this option must be selected.

Corrective Actions

DNA

5.10.3.2 Download FW to ATMega48

This option does not apply to this hardware configuration.

5.10.3.3 Download FW to Central

This option does not apply to this hardware configuration.

5.10.3.4 Download CPLD code

This option does not apply to this hardware configuration.

5.11 Security Board Screen

The Security Board tab contains the following areas:

- Input Sensors
- Alarm Controls
- Firmware Controls

The various options and tests located on the Security Board tab are described below.

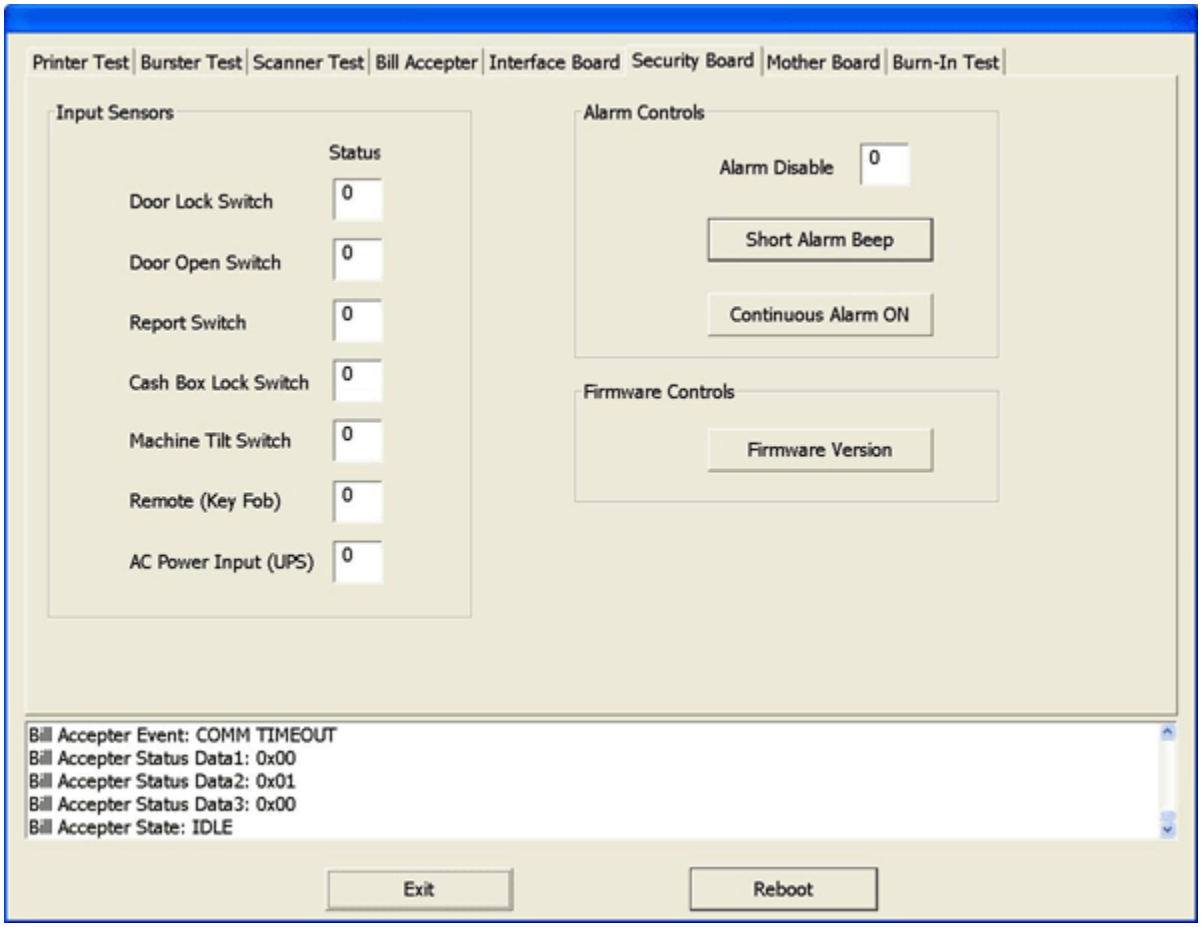

Figure 33: Security Board Screen

5.11.1 Input Sensors

This area is informational only. It displays the values for the following:

- Door Lock Switch -
- Door Open Switch -
- Report Switch -
- Cash Box Lock Switch -
- Machine Tilt Switch -
- Remote (Key Fob) -
- AC Power Input -

5.11.2 Alarm Controls

This area is informational only. It displays the values for the following:

- Alarm Disable –
- Short Alarm Beep –
- Continuous Alarm ON -

5.11.3 Firmware Controls

This area is informational only. It displays the values for the following:

- Firmware Version - When selected provides the currently loaded firmware version.

5.12 Bill Accepter Screen

The Bill Accepter diagnostic functions are located in a separate program from the rest of the terminal's diagnostics. To access the Bill Accepter diagnostics, click the GPT V2e icon. The technician will only use this screen to check or connect the communications for the terminal.

To connect the communications, perform the following:

1. Double click the GPT V2e icon on the Windows desktop. The GPT V2e Host Controller App screen displays.
2. Press **[V2]**.
3. Ensure that COM3 is selected in the communication drop down.
4. Press **[CONNECT]**.

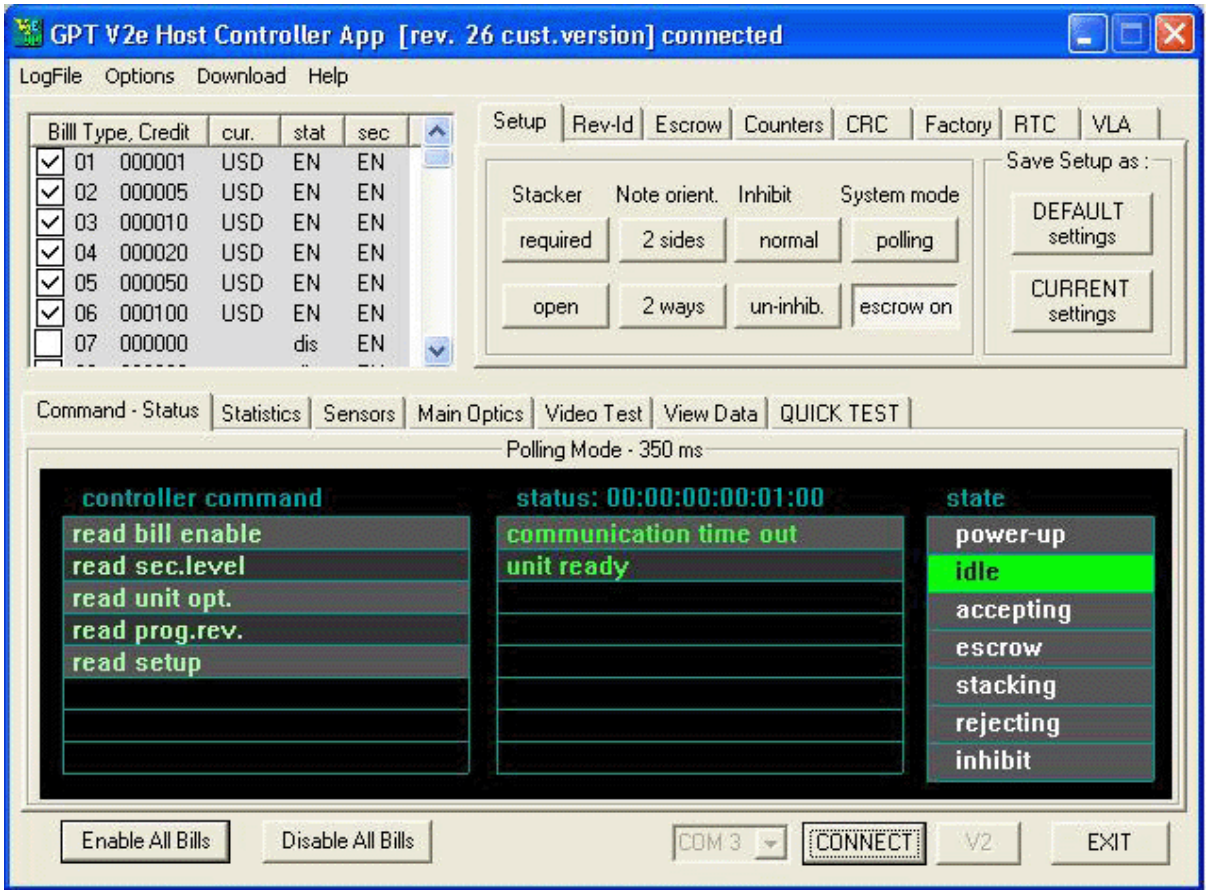

Figure 34: Bill Accepter Screen

SECTION 6
COMPONENT PROCEDURES

6.1 About this Section

The sections below provide the procedures for calibrating and/or configuring the following PCT components:

- Document Scanner
- Touch Screen
- Bar code Reader (BCR)

6.1.1 Document Scanner Calibration

Procedures

- Access the PCT diagnostic using the diagnostic application provided.
- Once the PCT diagnostic has loaded, select the Scanner tab at the top.
- Within this field select Enable Scanner then Calibrate Scanner.
- Now simply feed together, several sheets of the white (4” X 11”) paper.

Required tools/equipment

- Several 4” X 11” white sheets of paper

6.1.2 Touch Screen Calibration

There are three methods that allow you to calibrate the touch screen. Once the calibration program has been opened, simply follow the instruction; touching each displayed “+” in the middle. However all three required that the terminal is rebooted after completion.

Using a printed touch screen calibration barcode

1. To use the printed barcode to calibrate the touch screen, simply scan the barcode using the barcode reader attached to the printer.

Using the touch screen calibration function within the tech diagnostic

1. Exit the application; closing out all customer transactions.
2. Select the “diagnostic” icon.
3. Select “tech sign in” and sign in.
    a. Tech ID: 999999
    b. Password: 1234
4. Select the “touch screen calibration” icon and follow the on screen instructions.

Using the touch screen calibration function within the Extrema/Wave Diagnostic

1. Exit the application; closing out all customer transactions.
2. Select the “diagnostic” icon.
3. Select “tech sign in” and sign in.
    a. Tech ID: 999999
    b. Password: 1234
4. Select the “External Diagnostic” icon.
5. Select the top tab labeled “Mother Board”.
6. Select the icon “touch screen calibration” and follow the on screen instructions provided.

6.1.3 Barcode Reader Configuration

The hand held barcode reader (BCR) requires configuration after replacement. The reason is the reader’s communication with the printer controller board; which stores the configured communication parameters (device address and device frequency). In conjunction with the communication configuration, the reader will also require verification of each barcode type i.e., I2of5, Datamatix and PDFXXX.

6.2 Barcode Reader Address & Frequency Setup Procedures

This procedure instructs a technician on how to configure/pair the barcode reader (BCR) to the terminal.

NOTE: Failure to correctly perform this procedure will result in these devises not properly functioning.

Equipment and Tools:

- USB Keyboard
- USB Mouse

NOTE: The frequency range of the barcode reader is 900 to 928, using only whole (no half freq., .05) numbers i.e.: 900.00, 901.00 etc…

Sample: BCR: address= 2; frequency = 920

6.2.1 Pairing the Wireless Barcode Reader

NOTE: All addresses and frequencies should be determined prior to starting. Also, it is recommended using a mouse to making the necessary changes.

- Frequency - just to the right is a selection box. Using your mouse, scroll to the correct frequency and highlight it
- Address - same process as frequency
- BCR Ver - 29
- BCRCTRL Ver - 33
- Select “Set Freq Addr”
- Verify all information updates to the selections you made.

6.2.2 Replacing the Wireless Barcode Reader (BCR)

To replace the barcode reader, perform the following:

1. Shut down the terminal.
2. Wait for the terminal relay to shutdown.

   NOTE: You will hear five clicks as the terminal relay shuts down.
3. After the terminal relay shuts down, disconnect all power from the terminal.
4. Open the PAT:
   a. Insert the red key into the lower keyhole on the side panel and turn the key.
   b. Lift the PCT door handle on the side panel.
   c. Open the PCT door.
5. Turn the thumbscrew counter-clockwise to release the rear panel.
6. Pull out BCR and remove BCR unit.

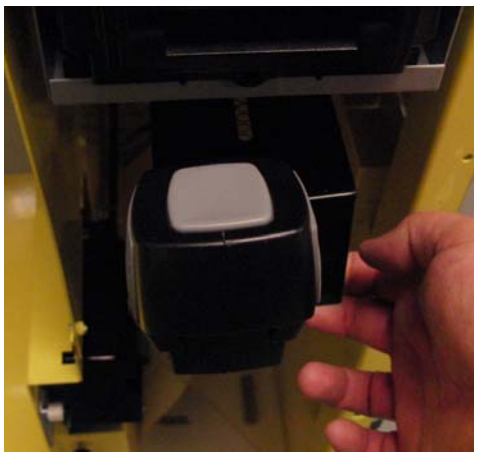

Figure 35: Bar Code Reader

7. Remove the four screws, washers, spacers, and spring securing the BCR Bracket.

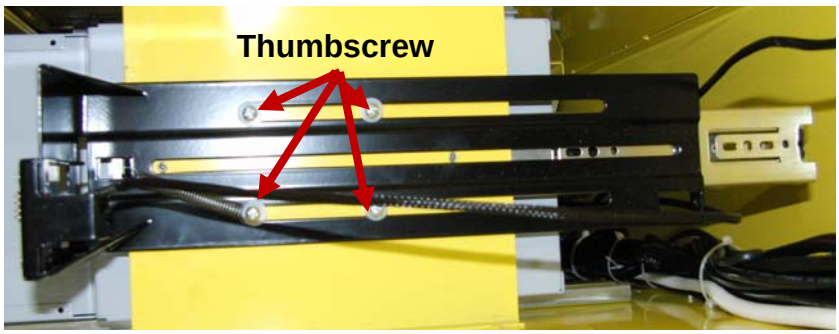

Figure 36: Four Screws

8. Cut or remove BCR cable.
9. Route new BCR cable, CA05-0584-01, through scanner tray.
10. Attach BCR cable, CA05-0584-01 to BCR PCB, PA20-0363.
11. Attach PA20-0363 and cover, CV30-0053-01, to new BCR Bracket, BR30-0317 using two screws SC74-0008. Secure cable with tie wrap, TW60-0001 to hole on BR30-0317.

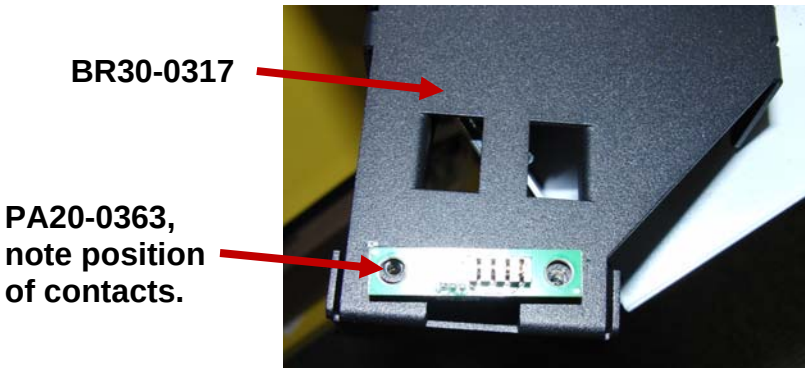

Figure 37: New BCR Bracket

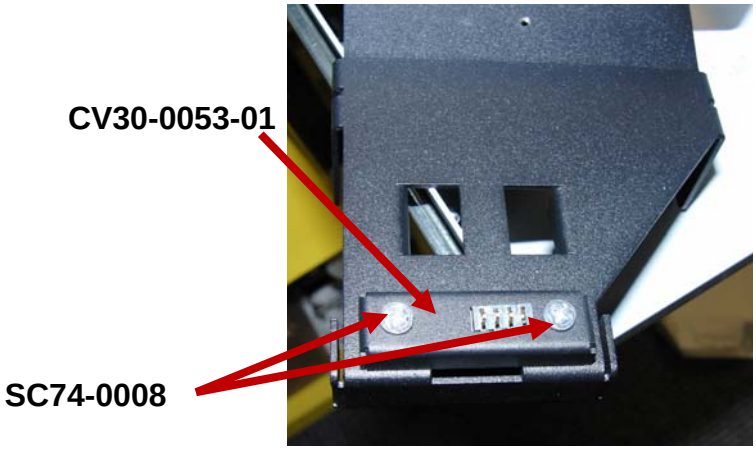

Figure 38: New BCR Bracket Screws

12. Remove plastic BCR cradle, BR20-0016, from the old metal bracket.

13. Place BCR in BCR cradle, BR20-0016.

Figure 39: BCR Cradle

14. Attach BCR in BCR cradle to new BCR bracket, BR30-0317. Make sure that tabs on BR20-0016 snap into place on BR30-0317.

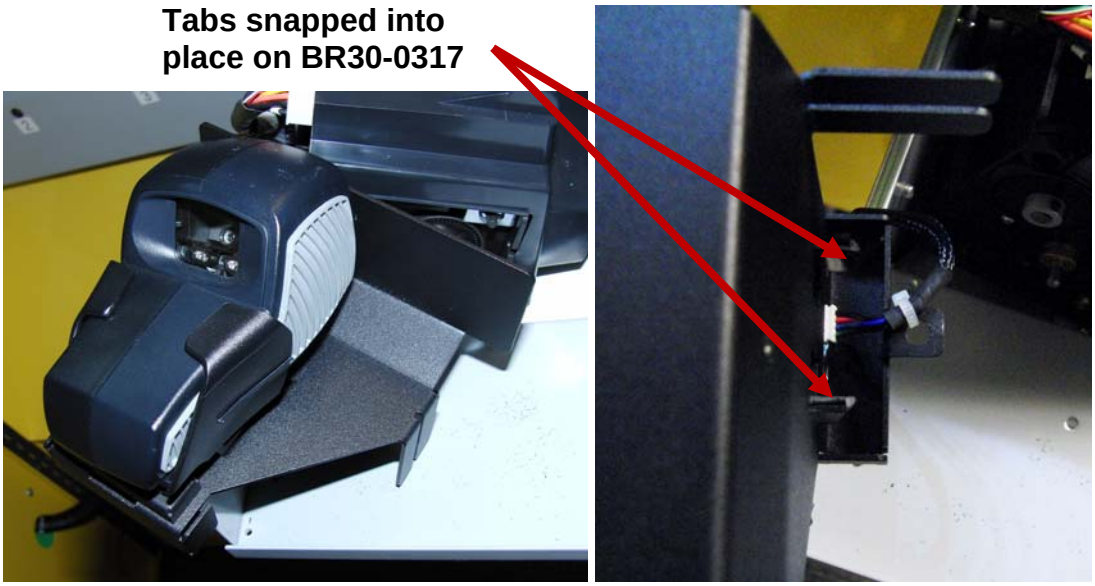

Figure 40: Attaching BCR Cradle

15. Pull out scanner tray on terminal and remove scanner using the two thumbscrews on the bottom of the tray. Set the scanner in the rear of the tray. There is no need to unplug the scanner.

16. Attach BCR assembly to the underside of the scanner tray using the two screws, SC73-0004.

Figure 41: Attaching BCR Cradle to Scanner Tray

17. Replace scanner and secure with the two thumbscrews.

Figure 42: Attached BCR Cradle

6.3 Front Advertisement Assembly

The Front Advertisement Assembly consists of three light panels.

6.3.1 Removing the Front Advertisement Lights

To remove the front advertising lights, perform the following:

18. Shut down the terminal.
19. Wait for the terminal relay to shutdown.

    NOTE: You will hear five clicks as the terminal relay shuts down.

20. After the terminal relay shuts down, disconnect all power from the terminal.
21. Open the PAT:
    d. Insert the red key into the lower keyhole on the side panel and turn the key.
    e. Lift the PCT door handle on the side panel.
    f. Open the PCT door.
22. Turn the thumbscrew counter-clockwise to release the rear panel.

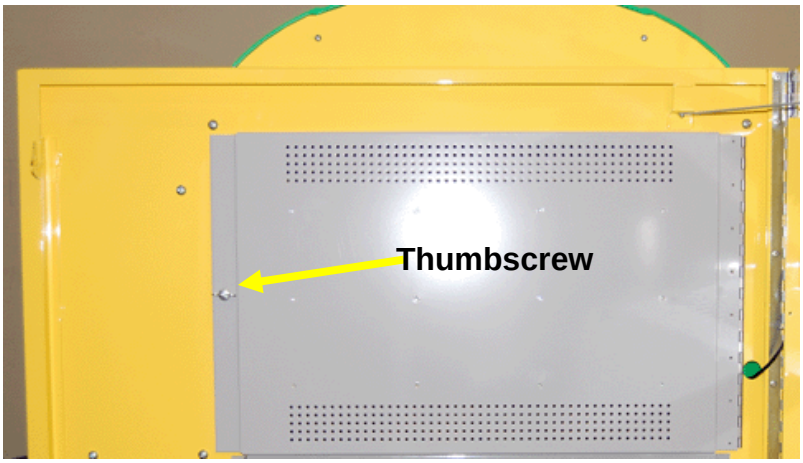

Figure 43: Front Advertisement Assembly – Rear Cover closed

23. Unplug the two (2) cables from each side of the light panel.

24. Remove the four (4) screws from light panel.

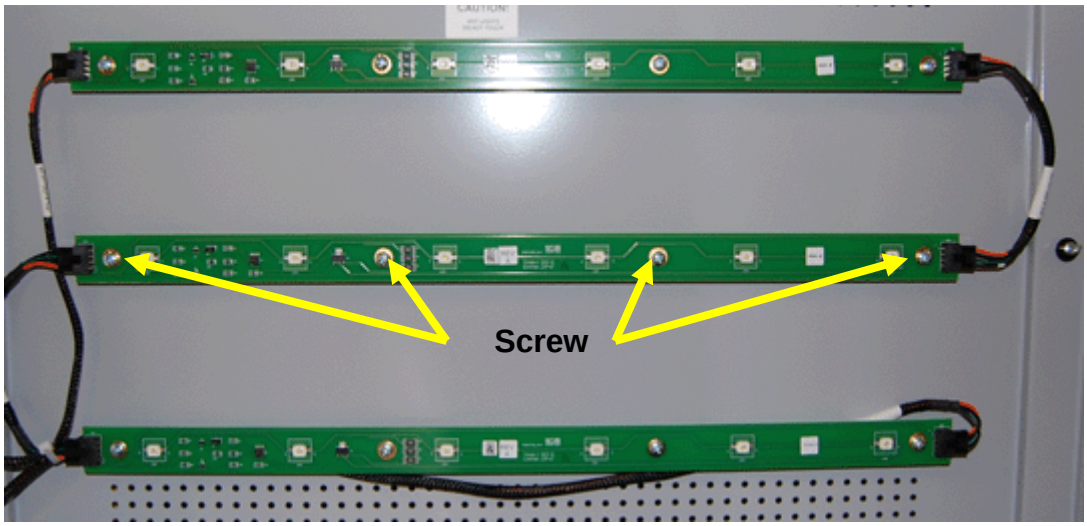

Figure 44: Light Panel

25. To replace the light panel, perform the steps above in reverse.

6.3.2 Removing the Front Advertisement Power Supply

To remove the front advertisement power supply, perform the following:

1. Shut down the terminal.
2. Wait for the terminal relay to shutdown.

   NOTE: You will hear five clicks as the terminal relay shuts down.
3. After the terminal relay shuts down, disconnect all power from the terminal.
4. Open the PAT:
   a. Insert the red key into the lower keyhole on the side panel and turn the key.
   b. Lift the PCT door handle on the side panel.
   c. Open the PCT door.

5. On the upper left of the terminal, remove the Front Advertisement Assembly - Power Supply Cover.

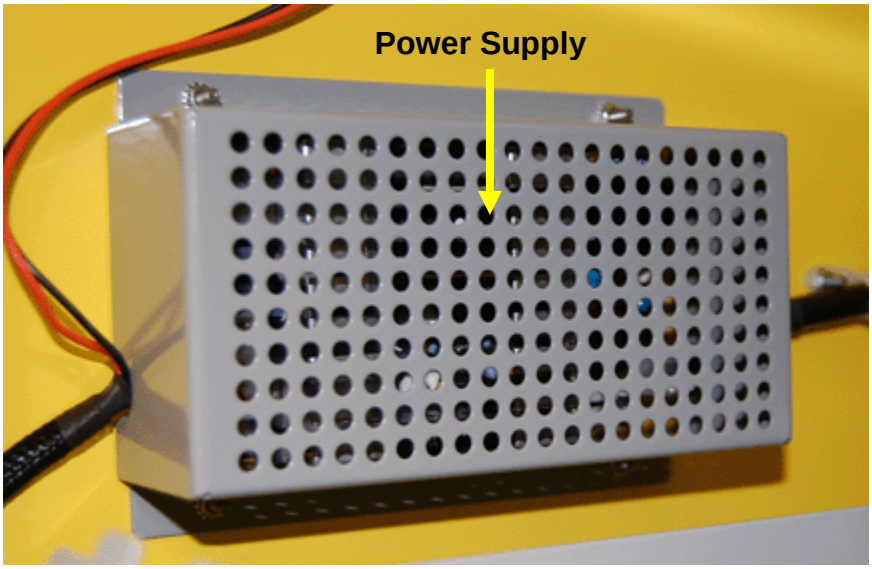

Figure 45: Front Advertisement Assembly - Power Supply Cover attached

6. Unplug the two (2) cables from the power supply.
7. Remove the four (4) screws holding the power supply to the terminal chassis.

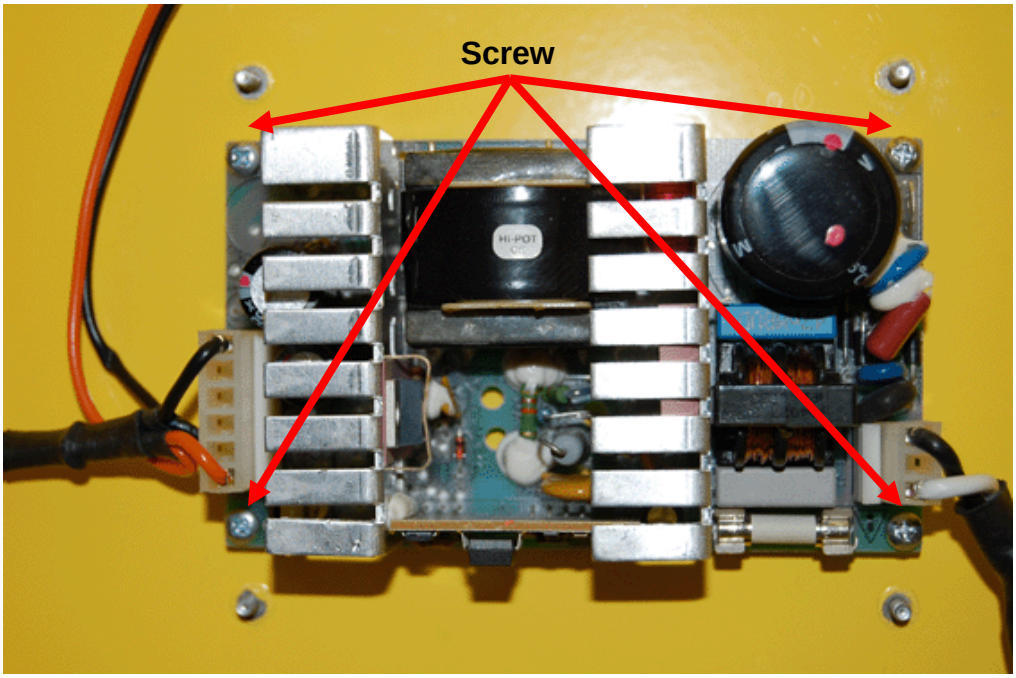

Figure 46: Front Advertisement Assembly - Power Supply

8. To replace the power supply, perform the steps above in reverse.

6.4 Display Assembly

The Touch Screen Display allows the player to purchase on-line and instant game tickets.

6.4.1 Removing the Display

To replace the terminal display, perform the following:

1. Shut down the terminal.
2. Wait for the terminal relay to shutdown.

NOTE: You will hear five clicks as the terminal relay shuts down.

3. After the terminal relay shuts down, disconnect all power from the terminal.
4. Open the PAT:
    a. Insert the red key into the lower keyhole on the side panel and turn the key.
    b. Lift the PCT door handle on the side panel.
    c. Open the PCT door.
5. On the inside of the front door, remove the Display Assembly cover.

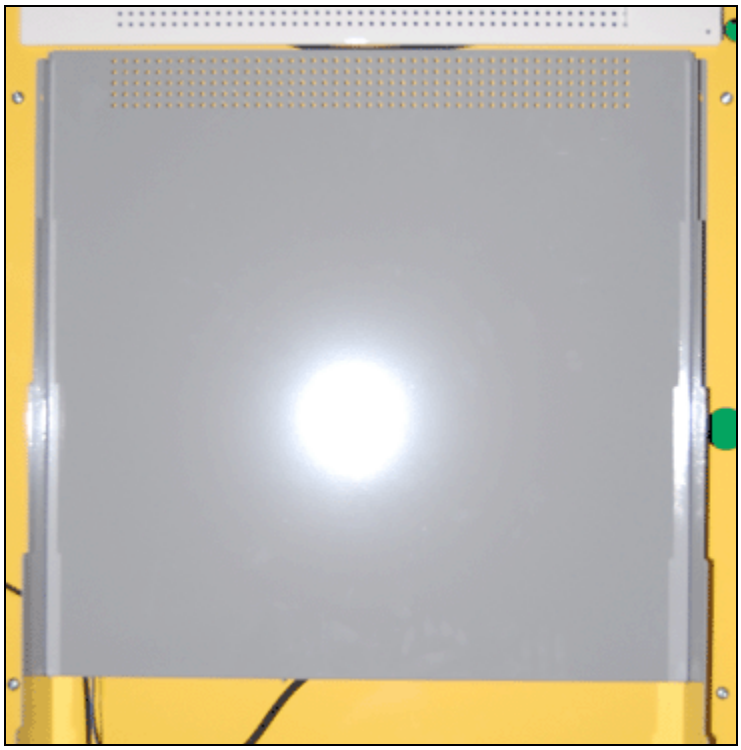

Figure 47: Display Assembly - Rear Cover

6. Unplug the two (2) cables from the dispenser tray light.

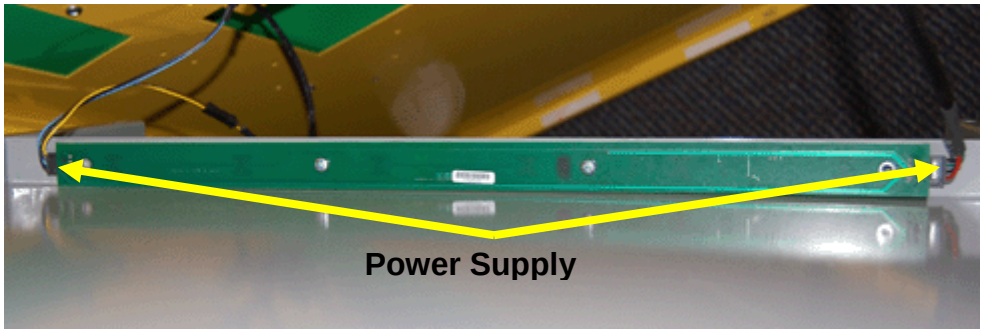

Figure 48: Dispenser Tray Light

7. Unplug the three (3) cables from the display.

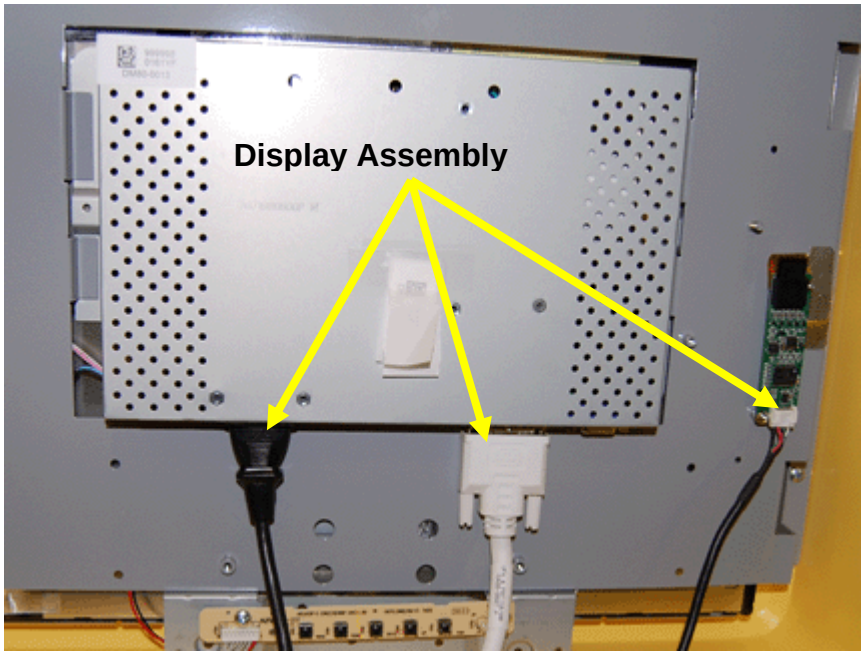

Figure 49: Display Assembly cables

8. Remove the six (6) screws attaching the display bracket to the terminal.

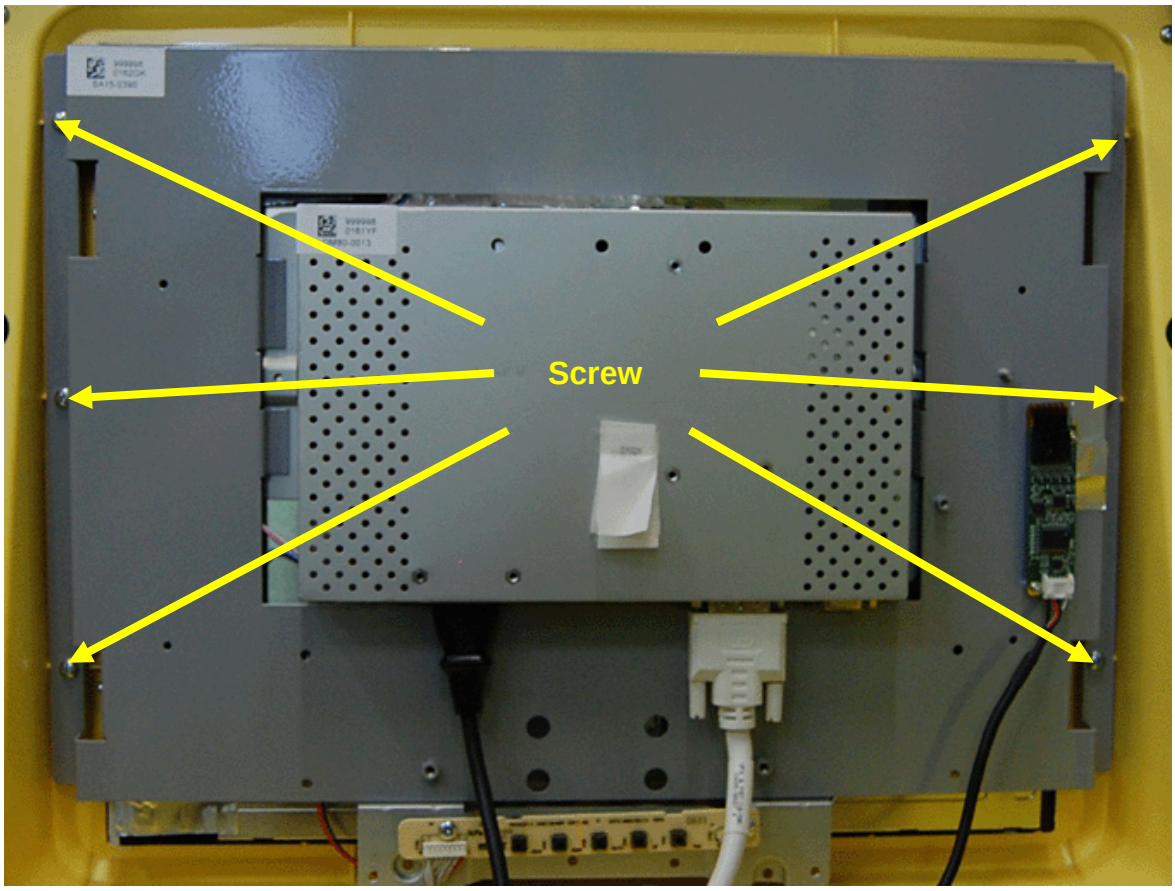

Figure 50: Display Assembly - Rear Bracket Attached

9. Remove the four (4) screws attaching the display to the display bracket.

Figure 51: Display Assembly - Rear Bracket Attached

10. Remove the display from the display bracket.
11. To replace the display, perform the steps above in reverse.

6.4.2 Adding a Second Monitor

To replace the terminal display, perform the following:

1. Shut down the terminal.
2. Wait for the terminal relay to shutdown.

NOTE: You will hear five clicks as the terminal relay shuts down.

3. After the terminal relay shuts down, disconnect all power from the terminal.
4. Open the PAT:
    a. Insert the red key into the lower keyhole on the side panel and turn the key.
    b. Lift the PCT door handle on the side panel.
    c. Open the PCT door.
5. On the inside of the front door, remove the Display Assembly cover.

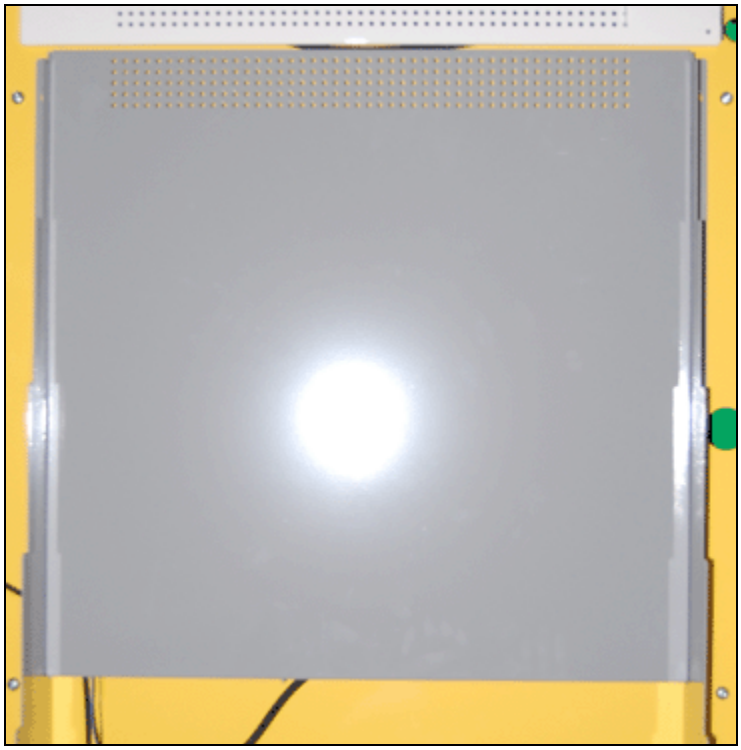

Figure 52: Display Assembly - Rear Cover

6. Pull on Handle HK20-0014 and twist to release the Display panel cover PL30-0020.
7. Take out 1 pc of the Display Panel Cover PL30-0020 and Advertising Display LG30-0082.
8. Disconnect and Remove the 3 LED strips PA20-0338.
9. Unplug the two (2) cables from the dispenser tray light.

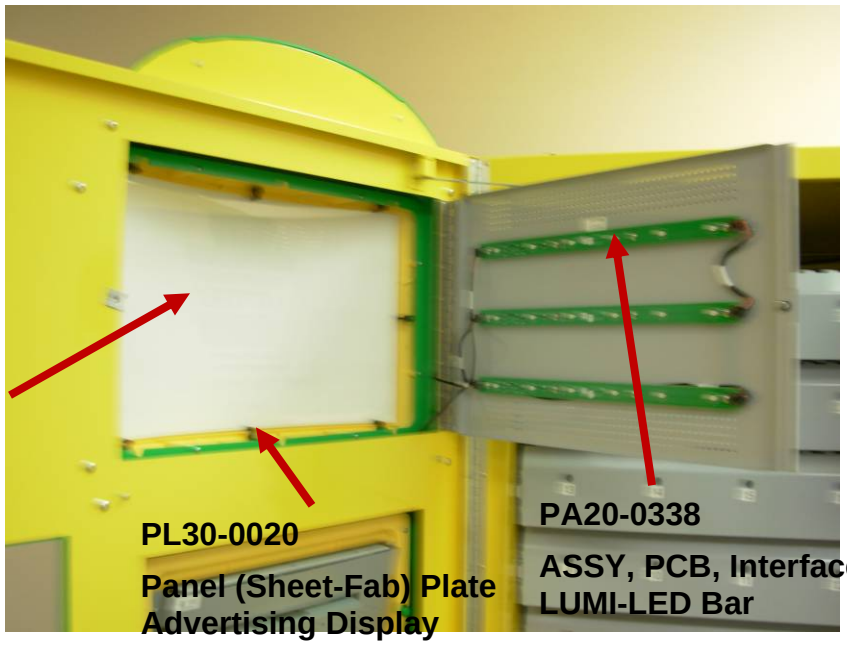

Figure 53: Display Assembly - Inside

10. Remove existing screws SC58-0003 securing BZ20-0052.

11. With another person holding the Bezel from front, the Display sub-assembly is mounted as shown with 8 new screws SC58-0009.
12. Remove 8 screws SC58-0003 to detach BZ20-0052 from the Front Bezel.

NOTE: Ensure the Clear Panel is firmly secured to the Front Bezel all round the periphery.

NOTE: Ensure both the LCD Display surface and the Clear Panel is clean, and free of stains/ dirt, before assembly.

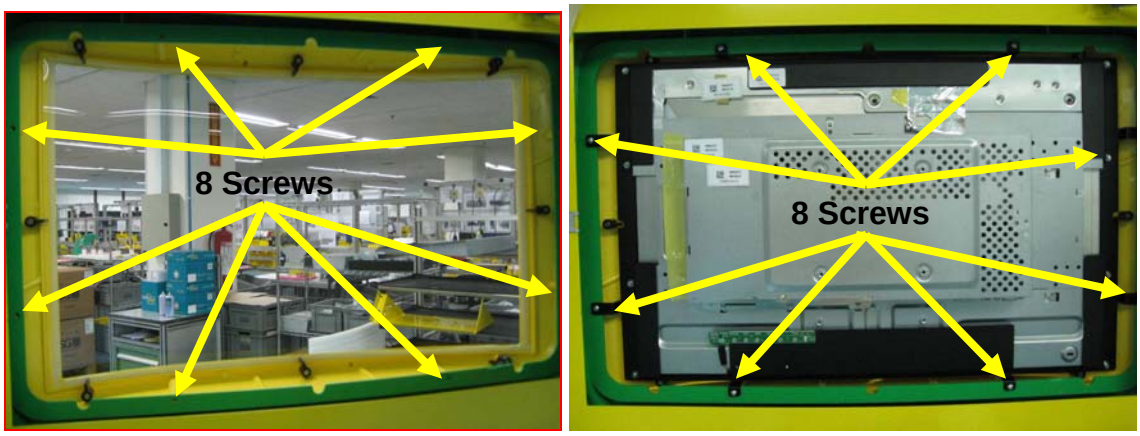

Figure 54: Display Assembly Screws

13. Insert CA90-0177 through the hole in the bezel from underneath as shown.
14. Start CA60-0109 (CA60-0007 if available) by inserting at the bottom of the door and work up to the opening in the bezel.
15. Secure CA70-0030 to CU90-0030. Note the orientation.

Figure 55: Display Assembly Cables

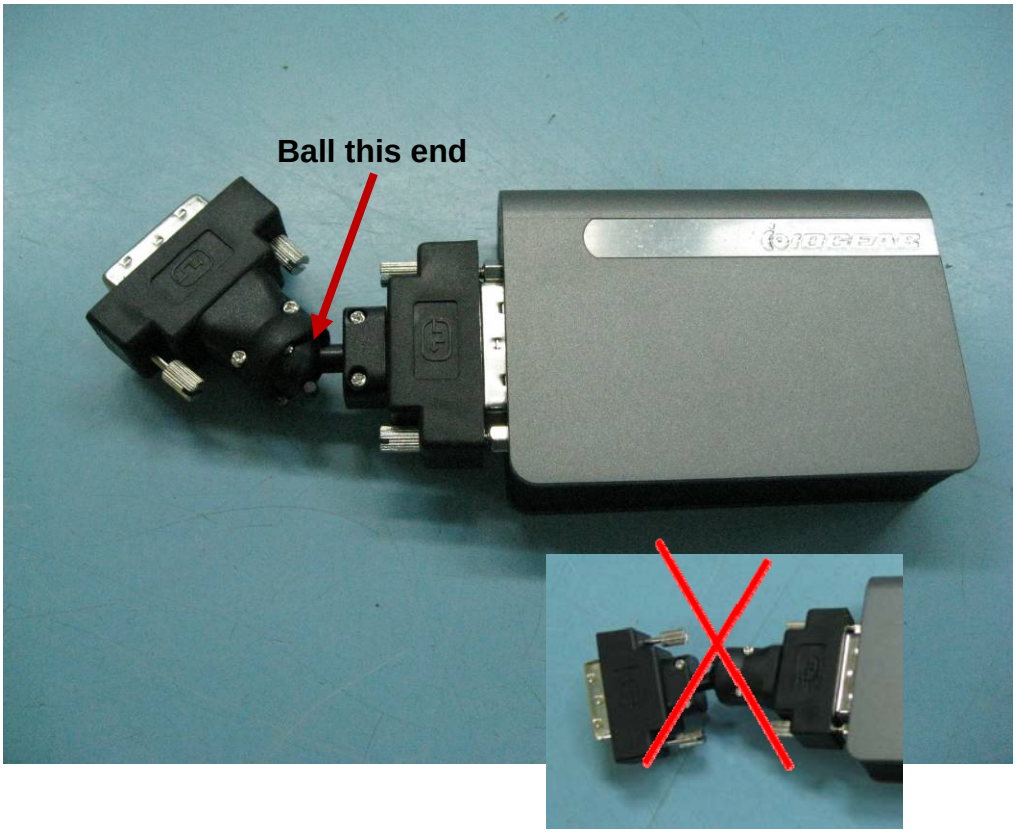

Figure 56: Display Connection

16. Connect other end of DVI CARD to the mini-USB.
17. Attach the assembly to the Display DVI port.

Figure 57: DVI Card

18. Attach Connector CN85-0045 to Power Cable CA60-0109 (CA60-0007 if available) and connect to Display power input.
19. Route the Cable of CA60-0109 (CA60-0007 if available) to CN84-0045 as shown.

20. Connect Power Connector to Display power port.

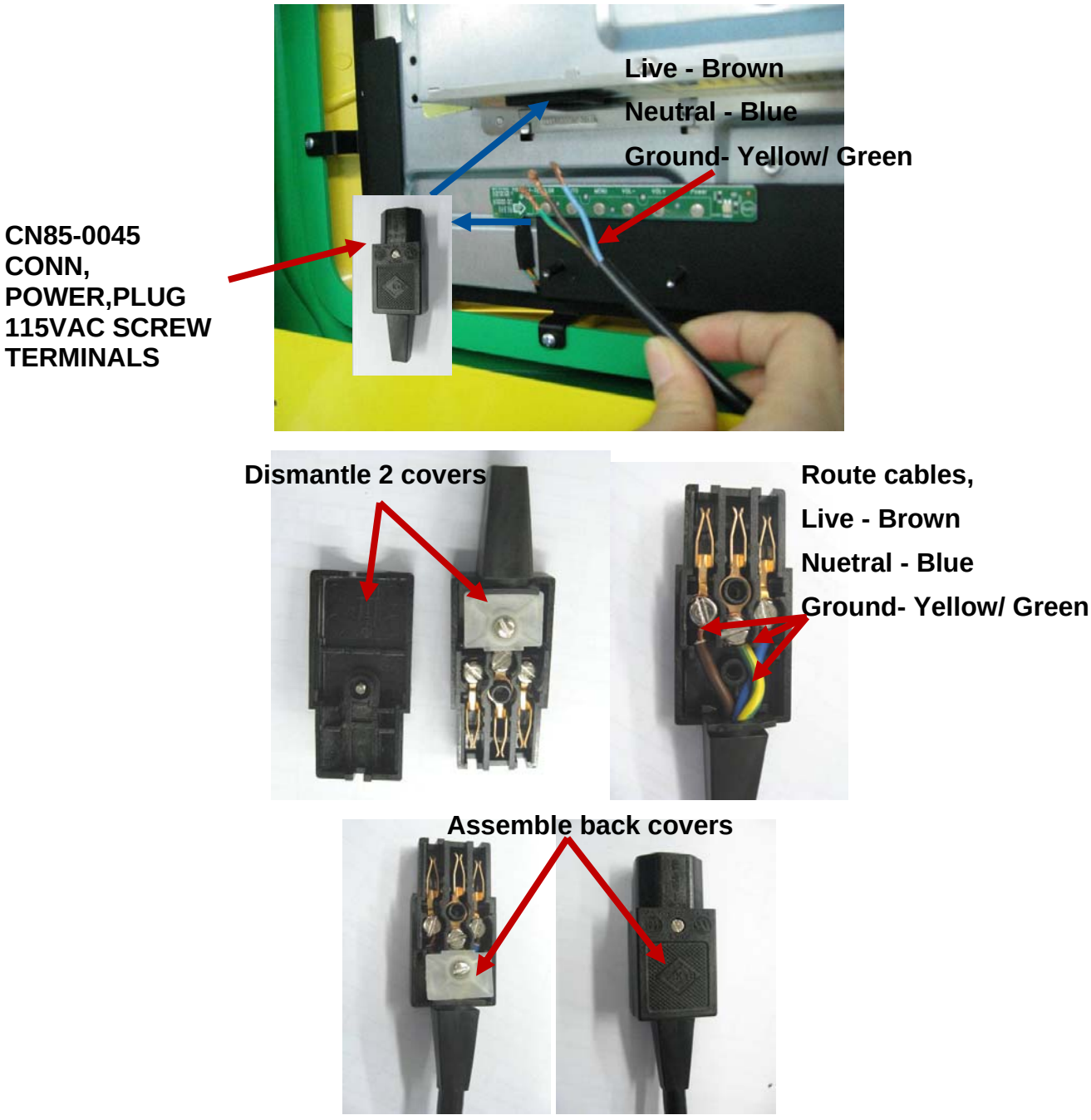

Figure 58: Power Connector

21. Route the other end of Power cable neatly through front door cable harness.
22. Route the other end of the USB cable through the opening near the top of the door and along the top of the main cabinet back to the E-Tray.
23. Route USB cable along top of cabinet to right side of inner wall and then through opening in back to E-Tray.

24. Change CA05-0543-01, 24V DC supply cable and connect to PA20-0338 (LED PCBA) in ticket chute and top of cabinet and Power Supply as shown.

Figure 59: DC Supply Cable

25. Connect the Power cable to the "Surge only" end of the UPS.

26. Route the USB neatly to the back of the E-Tray and connect to the USB port shown.

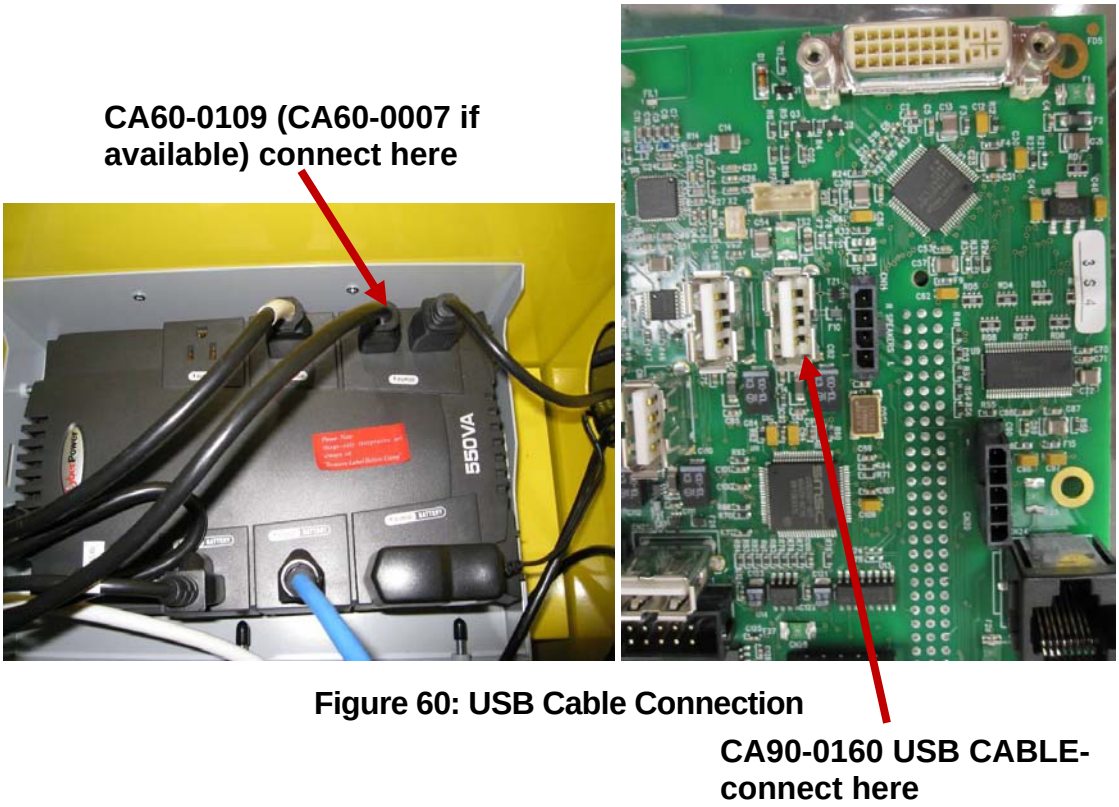

Figure 60: USB Cable Connection

6.5 Electronics Tray

The sections below provide the procedures for replacing the following PCT components:

- UPS Power Supply
- PC Power Supply
- Interface Board
- Mother Board
- Hard Drive

6.5.1 UPS Power Supply

To remove the UPS power supply, perform the following:

1. Shut down the terminal.
2. Wait for the terminal relay to shutdown.

   NOTE: You will hear five clicks as the terminal relay shuts down.
3. After the terminal relay shuts down, disconnect all power from the terminal.
4. Open the PAT:
   a. Insert the red key into the lower keyhole on the side panel and turn the key.
   b. Lift the PCT door handle on the side panel.
   c. Open the PCT door.
5. Disconnect all of the plugs connected to the UPS power supply.

Figure 61: UPS Power Supply

6. Remove the UPS power supply.
7. To replace the UPS power supply, perform the steps above in reverse.

6.5.2 PC Power Supply Unit

To remove the PC power supply, perform the following:

1. Shut down the terminal.
2. Wait for the terminal relay to shutdown.

   NOTE: You will hear five clicks as the terminal relay shuts down.
3. After the terminal relay shuts down, disconnect all power from the terminal.
4. Open the PAT:
   a. Insert the red key into the lower keyhole on the side panel and turn the key.
   b. Lift the PCT door handle on the side panel.
   c. Open the PCT door.
5. Disconnect all of the plugs connected to the PC power supply.
6. Remove the four (4) mounting screws.

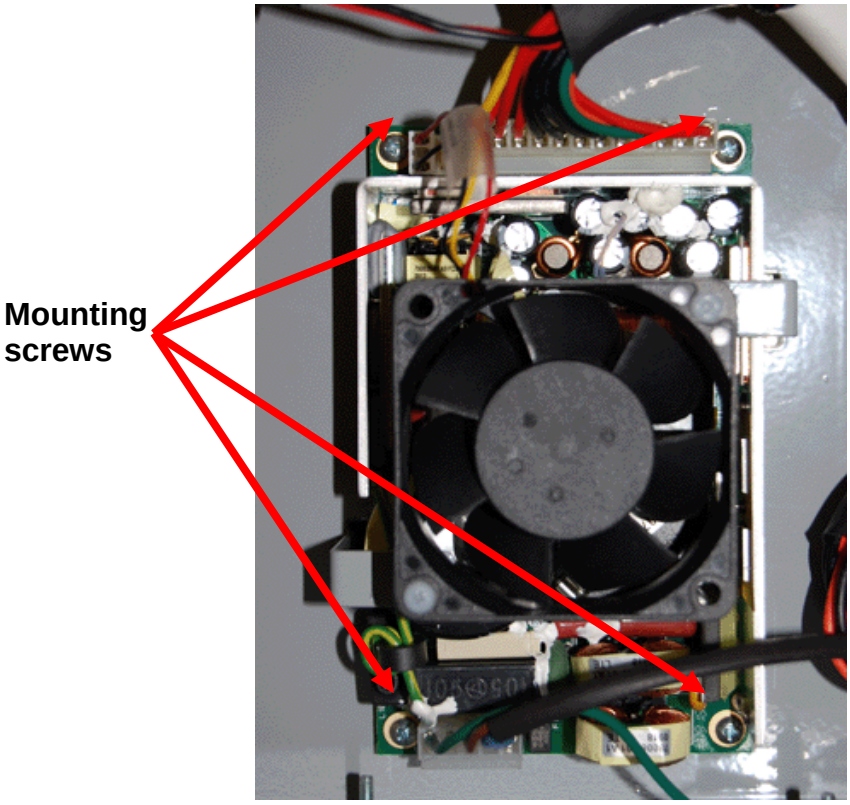

Figure 62: PC Power Supply

7. Remove the PC power supply.
8. To replace the PC power supply, perform the steps above in reverse.

6.5.3 Mother Board

The Mother Board is the master controller for the PCT terminal.

6.5.3.1 Identifying Mother Board Connections

The figure below identifies the location of selected cable connections on the Mother Board.

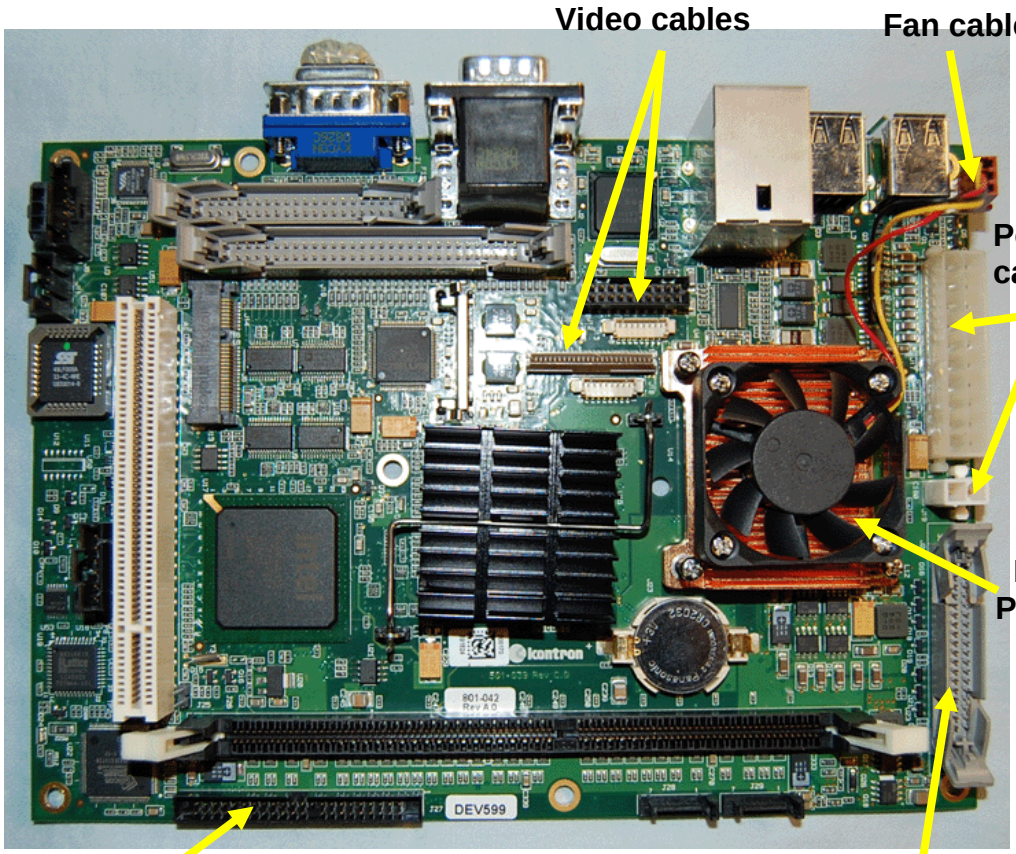

Figure 63: Mother Board

6.5.3.2 Replacing the Mother Board

The objective of this section is to define the procedures for replacing the mother board in the terminal. Following these procedures will help any individual accomplish this task successfully.

Required Tools and Equipment

- 1 PCT Terminal
- 1 Replacement mother board
- 1 Tool (part number: TL90-0358-RH)
- Phillips screwdriver

To replace the mother board, perform the following:

1. Shut down the terminal.
2. Wait for the terminal relay to shutdown.

   NOTE: You will hear five clicks as the terminal relay shuts down.
3. After the terminal relay shuts down, disconnect all power from the terminal.
4. Open the PAT:
   a. Insert the red key into the lower keyhole on the side panel and turn the key.
   b. Lift the PCT door handle on the side panel.
   c. Open the PCT door.
5. Unlock the Electronics Tray by inserting the black key into the lock above the tray.

Figure 64: Black Key Inserted

6. Slide the Electronics Tray out of the Electronics Tray housing and place on a flat, clear surface.

Figure 65: Removing the Electronics Tray

7. Remove the all cables from the mother board.
8. Use the tool (part number: TL90-0358-RH) to remove the motherboard from the electronics tray.

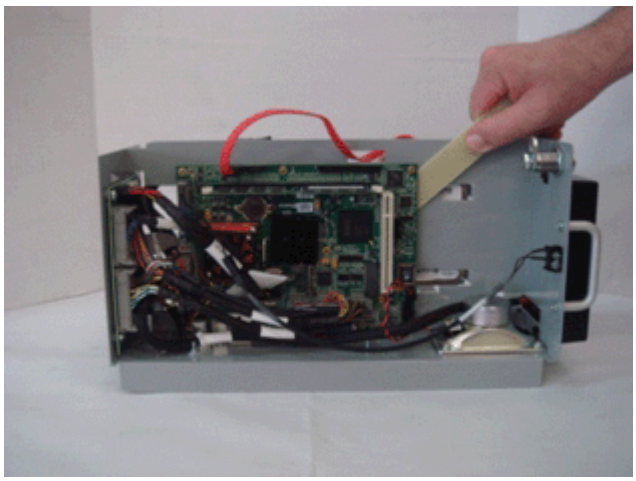

Figure 66: Removing the Mother Board from the Electronics Tray

9. Carefully place the new mother board onto the electronics tray.
10. Re-attach all the cables to the mother board.

11. After re-attaching all the cables, slide the electronics tray back into the electronics tray housing.

Figure 67: Re-inserting the Electronics Tray

12. Lock the electronics tray and remove the black key from the lock above the tray.
13. Close the PAT:
    a. Insert the red key into the lower keyhole on the side panel and turn the key.
    b. Lift the PCT door handle on the side panel.
    c. Close the PCT door.
14. Reconnect all power to the terminal.
15. Power up the terminal.

6.5.4 Interconnect Board

The Interconnect Board is located in the Electronics Tray.

6.5.4.1 Replacing the Interconnect Board

The objective of this section is to define the procedures for replacing the interconnect board in the PCT terminal. Following these procedures will help any individual accomplish this task successfully.

Required Tools and Equipment

- 1 PCT Terminal
- 1 Replacement interconnect board
- 1 Tool
- Phillips screwdriver

To replace the interconnect board, perform the following:

1. Shut down the terminal.
2. Wait for the terminal relay to shutdown.

   NOTE: You will hear five clicks as the terminal relay shuts down.
3. After the terminal relay shuts down, disconnect all power from the terminal.
4. Open the PAT:
   a. Insert the red key into the lower keyhole on the side panel and turn the key.
   b. Lift the PCT door handle on the side panel.
   c. Open the PCT door.

5. Unlock the Electronics Tray by inserting the black key into the lock above tray.

Figure 68: Black Key Inserted

6. Slide the electronics tray out of the electronics tray housing.

Figure 69: Removing the Electronics Tray

7. Remove the all cables from the interconnect board.
8. Use the tool (part number: TL90-0358-RH) to remove the interconnect board from the electronics tray.
9. Carefully place the new interconnect board onto the electronics tray.

10. Re-attach all the cables to the interconnect board.
11. After re-attaching all the cables, slide the electronics tray back into the electronics tray housing.
12. Lock the electronics tray and remove the black key from the lock above the tray.
13. Close the PAT:
    a. Insert the red key into the lower keyhole on the side panel and turn the key.
    b. Lift the PCT door handle on the side panel.
    c. Close the PCT door.
14. Reconnect all power to the terminal.
15. Power up the terminal.

6.5.5 Hard Drive

The Hard Drive is located in the Electronics Tray.

To replace the hard drive, perform the following:

1. Shut down the terminal.
2. Wait for the terminal relay to shutdown.

   NOTE: You will hear five clicks as the terminal relay shuts down.
3. After the terminal relay shuts down, disconnect all power from the terminal.
4. Open the PAT:
   a. Insert the red key into the lower keyhole on the side panel and turn the key.
   b. Lift the PCT door handle on the side panel.
   c. Open the PCT door.
5. Disconnect the wire from the hard drive.

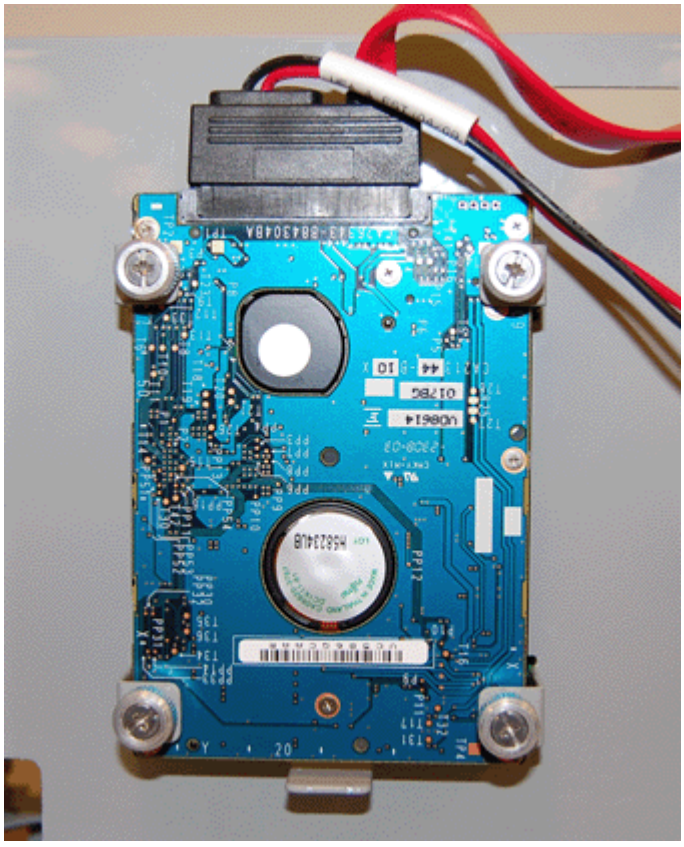

Figure 70: Hard Drive

6. Turn the four (4) thumbscrews counter clockwise and pull the hard drive up to remove it from the terminal.

Figure 71: Hard Drive Thumbscrews

7. To replace the hard drive, perform the steps above in reverse.

6.5.6 Document Scanner Assembly

To remove the document scanner, perform the following:

1. Shut down the terminal.
2. Wait for the terminal relay to shutdown.

   NOTE: You will hear five clicks as the terminal relay shuts down.
3. After the terminal relay shuts down, disconnect all power from the terminal.
4. Open the PAT:
   a. Insert the red key into the lower keyhole on the side panel and turn the key.
   b. Lift the PCT door handle on the side panel.
   c. Open the PCT door.
5. Pull out the document scanner tray.
6. Remove the printer cable from the back of the document scanner.

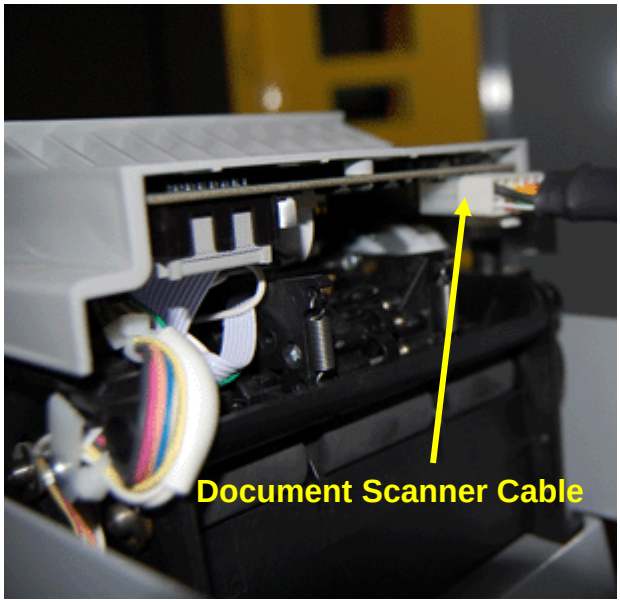

Figure 72: Document Scanner Cable

7. Remove the four (4) screws that attach the document scanner to the document scanner tray.
8. Replace the document scanner.
9. To replace the display, perform the steps above in reverse.

6.5.7 Clearing a Paper Jam

To clear a paper jam, perform the following:

1. Open the PAT:
    a. Insert the red key into the lower keyhole on the side panel and turn the key.
    b. Lift the PCT door handle on the side panel.
    c. Open the PCT door.
2. Pull out the document scanner tray.
3. Lift the lid of the document scanner.

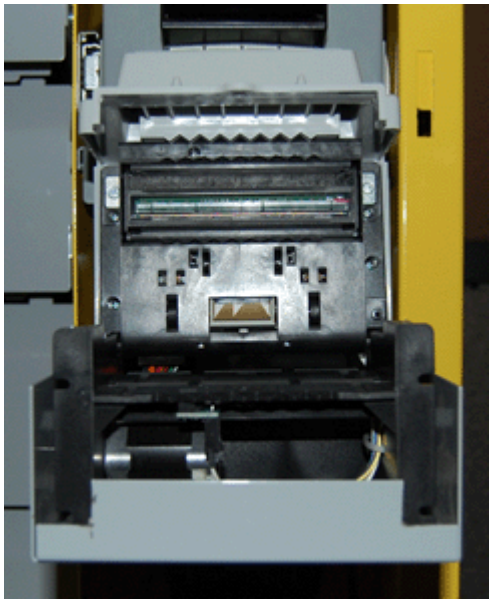

Figure 73: Document Scanner – Open

4. Remove the jammed paper.
5. Close the lid of the document scanner.
6. Push the document scanner tray back into its original position.
7. Close and lock the PCT door.

6.5.8 Replacing the Assembly Roller

To replace the assembly roller, perform the following:

1. Open the PAT:
    a. Insert the red key into the lower keyhole on the side panel and turn the key.
    b. Lift the PCT door handle on the side panel.
    c. Open the PCT door.
2. Place the assemble roller, RL10-0019, into the bracket, BR30-0265.

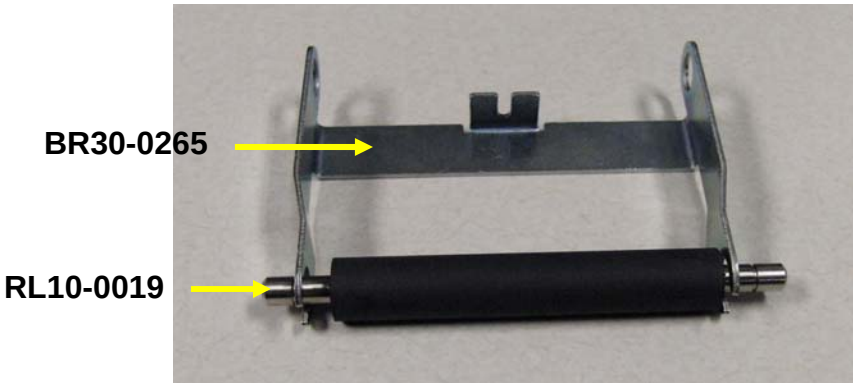

Figure 74: Assembly Roller and Bracket

3. Insert bearings (2X), BE70-0001, into the assembly.

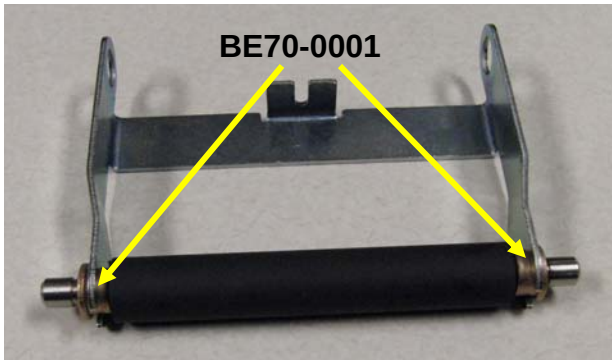

Figure 75: Assembly Roller Bearings

4. Attach e-rings (2X), RR60-0007, to RL10-0019.

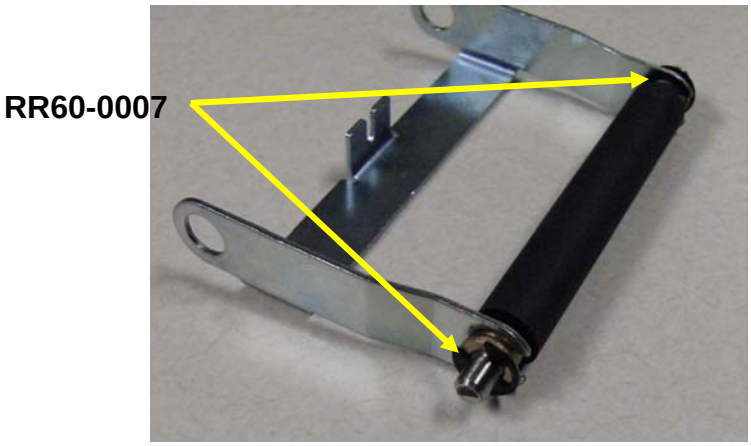

Figure 76: Assembly Roller Bearings

5. Attach assembly to bracket BR30-0341 by using two bearings, BE70-0001.

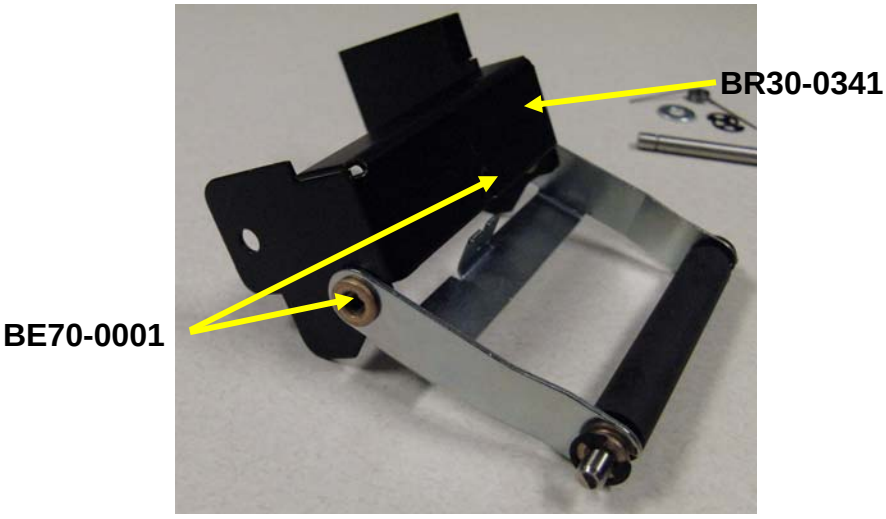

Figure 77: Assembly Roller Bearings

6. Insert shaft, SH10-0035, through bearings installed in step 4. While inserting shaft, position spring, SG80-0003, on shaft with spring arms in recesses of BR30-0341 and BR30-0265.

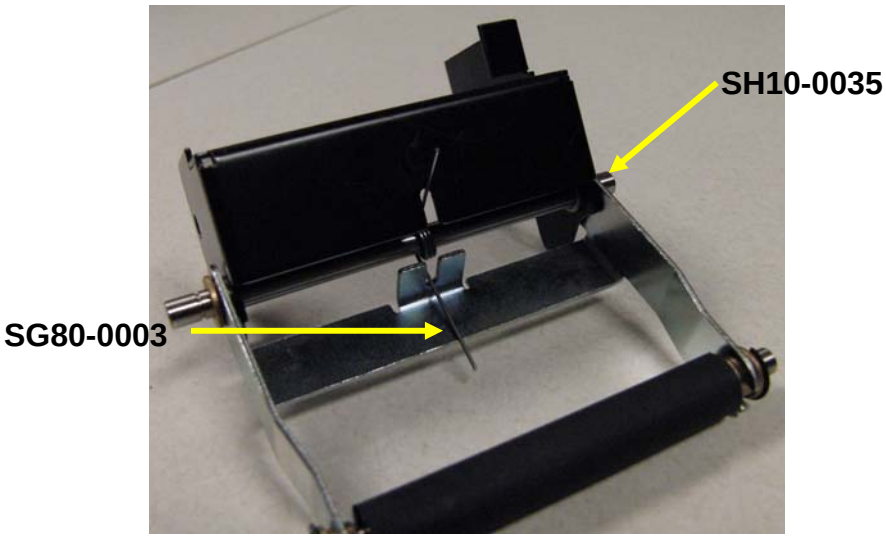

Figure 78: Assembly Roller Shaft and Spring

7. Insert washer, WA90-0138, onto end of shaft, SH10-0035.

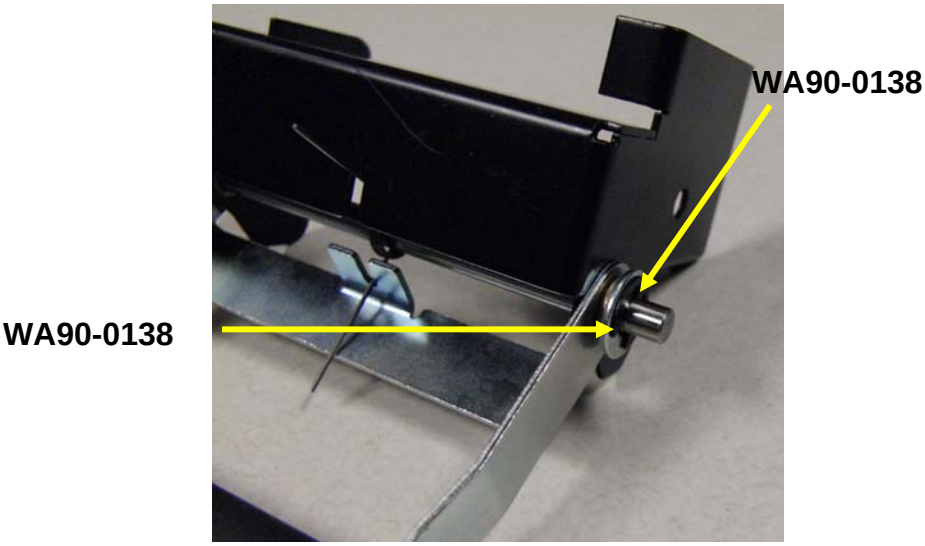

Figure 79: Assembly Roller Washer

8. Secure shaft, SH10-0035 with two retaining rings, RR60-0007.

9. Remove two SC76-0002 screws that are on the shaft, SH10-0039, closest to the printer. It may be necessary to hold the shaft with pliers to prevent it from rotating when removing screws. Remove the black plastic roller, SP60-3628, and washer, return to spares stock.

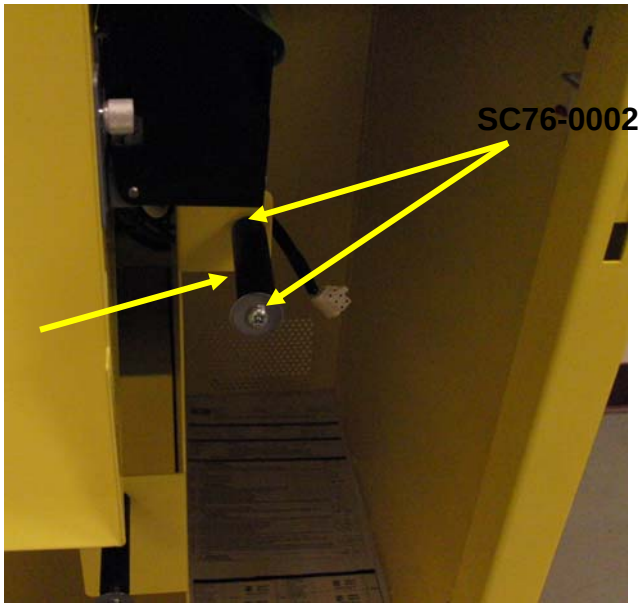

Figure 80: Assembly Black Plastic Roller and Screws

10. Place the bracket assembly from step 7 behind the cabinet flange. Replace shaft, SH10-0039, with the two screws, SC76-0002, making sure to run the screws through the swing arm bracket assembly.

Note how flanges for swing arm bracket secure to cabinet flange.

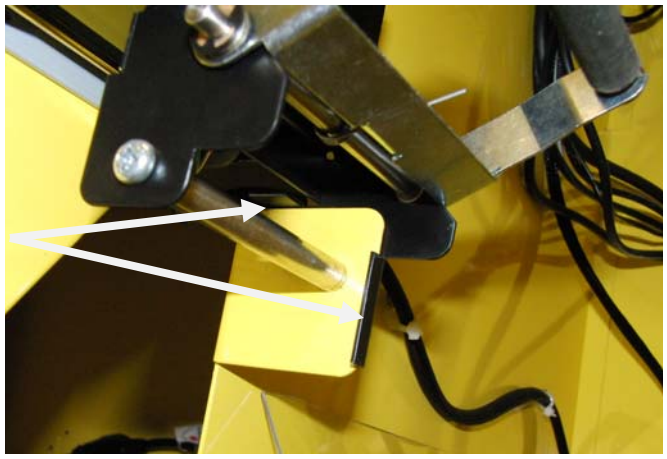

Figure 81: Assembly Swing Arm

11. Power down the terminal and remove printer assembly by loosening the two thumbscrews and all cable assemblies. Remove printer roller from bracket, BR30-0300.

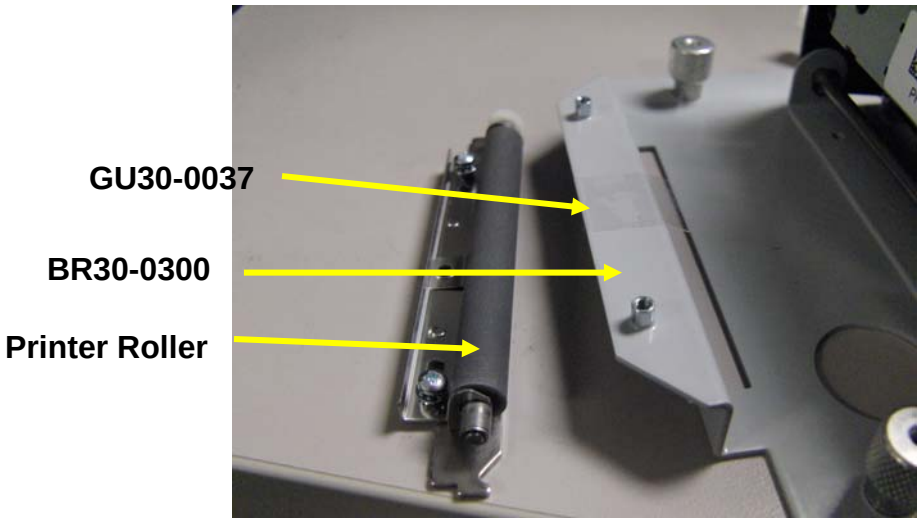

Figure 82: Printer Roller Bracket

12. Bend mylar, GU30-0037, with tool, TL90-0363. Attach GU30-0037 to BR30-0300, aligning the bend of GU30-0037 with the bend of BR30-0300.
13. Reattach the printer roller.
14. Reattach the printer assembly, secure the two thumbscrews and secure all cables.

6.6 Instant Ticket Assembly

The sections below provide the following procedures for these PCT components:

- Loading Instant Tickets
- Clearing an Instant Ticket Jam
- Replacing the Burster

6.6.1 Loading Instant Tickets

Up to three ticket packs may be loaded into a Burster at one time. To load a ticket pack, the retailer must perform the following steps:

NOTE: Before loading instant ticket packs, make sure the packs have been activated.

1. Open the PAT:
    a. Insert the red key into the lower keyhole on the side panel and turn the key.
    b. Lift the PCT door handle on the side panel.
    c. Open the PCT door.
2. Insert the blue key into the top barrel lock and turn the key.
3. Touch **[Burster Status]**.
4. Touch **[Load Pack]** for the empty dispenser. The Enter Pack Number pop-up screen displays.
5. Either scan the Pack Activity Card or manually enter the Game/Pack number. The Game/Pack number is displayed.

    NOTE: The instant ticket validation barcode can also be scanned.
6. Verify the Game/Pack number that is displayed matched the Pack Activity Card. If they match, touch **[OK]**.
7. Touch **[YES]** to load a full pack or **[NO]** to load a partial pack. If loading a full pack, go to step 10.
8. Enter the starting ticket and touch **[OK]**.
9. Enter the ending ticket and touch **[OK]**.
10. Open the drawer and insert the lowest ticket number into the slot in the front of the dispenser.
11. If the pack is loaded correctly, a “Successfully Loaded” pop-up message displays.
12. Touch **[OK]** and close the drawer.

13. Close and secure the PCT by performing the following steps:
    a. Lift the PCT door handle on the side panel.
    b. Shut the PCT door.
    c. Lock the PCT door and remove the red key.

    NOTE: The key can be removed only in the locked position.

6.6.2 Replacing the Burster

To replace a burster, perform the following:

1. Shut down the terminal.
2. Wait for the terminal relay to shutdown.

   NOTE: You will hear five clicks as the terminal relay shuts down.
3. After the terminal relay shuts down, disconnect all power from the terminal.
4. Open the PAT:
    a. Insert the red key into the lower keyhole on the side panel and turn the key.
    b. Lift the PCT door handle on the side panel.
    c. Open the PCT door.
5. Open an instant ticket drawer.
6. Remove the one (1) screw on the burster wire protective cover assembly.

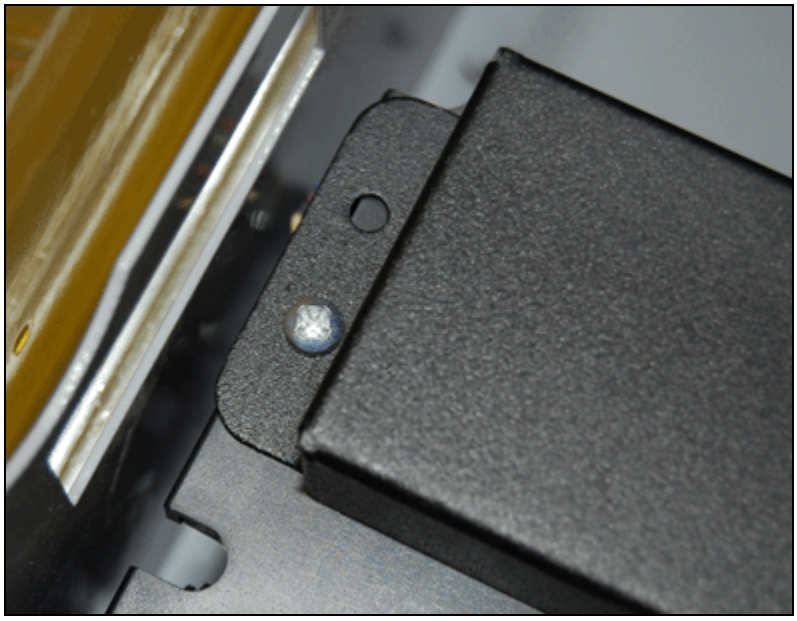

Figure 83: Burster Wire Protective Cover screw

7. After the burster wire protective cover assembly has been removed, detach the wires connected to the burster to be removed.

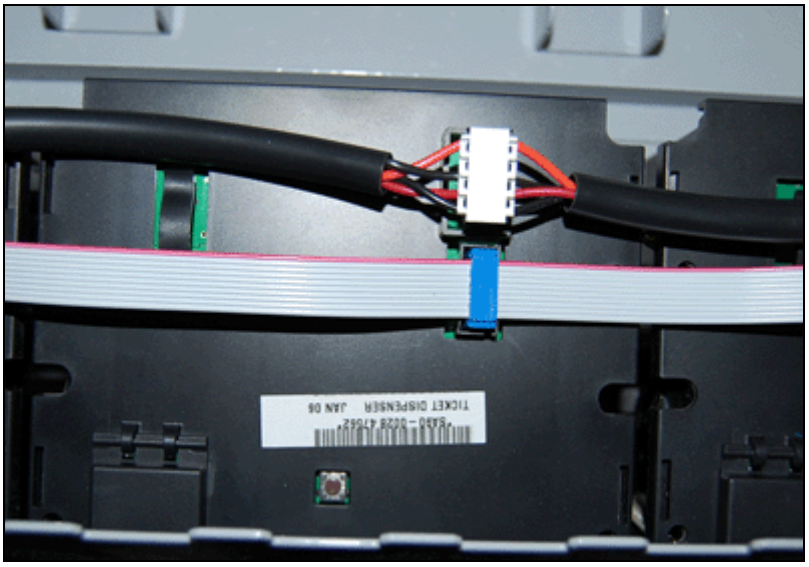

Figure 84: Burster Assembly Wires

8. Remove the two (2) burster assembly hex nuts at the base of the burster.

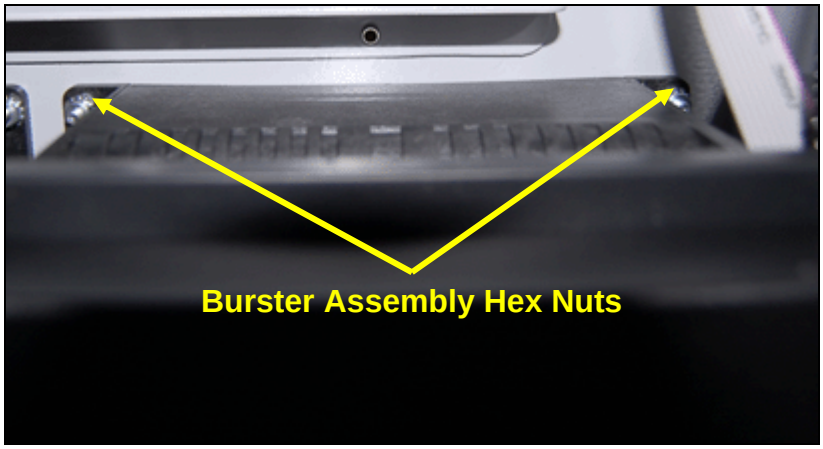

Figure 85: Burster Assembly Hex Nuts

9. To replace the burster, perform the steps above in reverse.

6.6.3 Clearing an Instant Ticket Jam

To clear a ticket jam in a Burster, perform the following:

1. Open the PAT:
    a. Insert the red key into the lower keyhole on the side panel and turn the key.
    b. Lift the PCT door handle on the side panel.
    c. Open the PCT door.
2. Insert the blue key into the top barrel lock and turn the key.
3. Touch **[Burster Status]**.
4. Pull out the Burster rack that has the jammed Burster.
5. Press the Reverse button located on the front top center of the Burster. The jammed ticket will reverse out of the Burster.

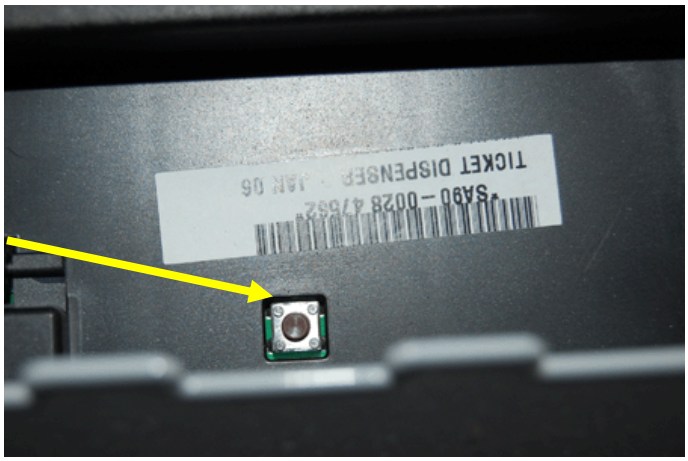

Figure 86: Reverse Button on Burster

6. If the jammed ticket is damaged, remove it from the pack.
7. On the Ticket Burster screen, confirm that the Burster indicates an Empty status.
8. Reload the pack into the Burster.
9. Close and secure the PCT by performing the following steps:
    a. Lift the PCT door handle on the side panel.
    b. Shut the PCT door.
    c. Lock the PCT door and remove the red key.

    NOTE: The key can be removed only in the locked position.

NOTE: The PCT does not reconcile inventory of damaged or otherwise unsellable tickets that are removed from a pack.

6.7 Printer Assembly

The PCT terminal houses a printer that automatically prints a variety of sales reports. It is integrated with the main housing and is equipped with a friction-type paper feed. The printer uses 3.25-inch-wide paper stock and prints at a speed of about six inches per second with a resolution of 200 dots per inch. The printer assembly includes a cutter assembly that automatically cuts each report.

6.7.1 Replacing the Printer

To replace the printer, perform the following:

1. Shut down the terminal.
2. Wait for the terminal relay to shutdown.

   NOTE: You will hear five clicks as the terminal relay shuts down.
3. After the terminal relay shuts down, disconnect all power from the terminal.
4. Open the PAT:
   a. Insert the red key into the lower keyhole on the side panel and turn the key.
   b. Lift the PCT door handle on the side panel.
   c. Open the PCT door.
5. Release the print head by pressing the side latch located on top- right side of the print head.

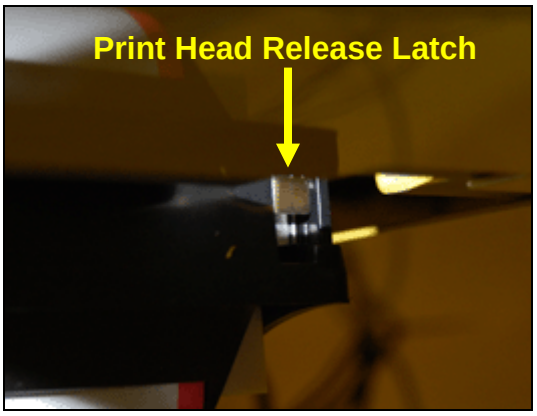

Figure 87: Print Head Release Latch

6. Remove the paper.
7. Close the print head.

8. Turn the two (2) thumbscrews counter clockwise to detach the printer from the terminal.

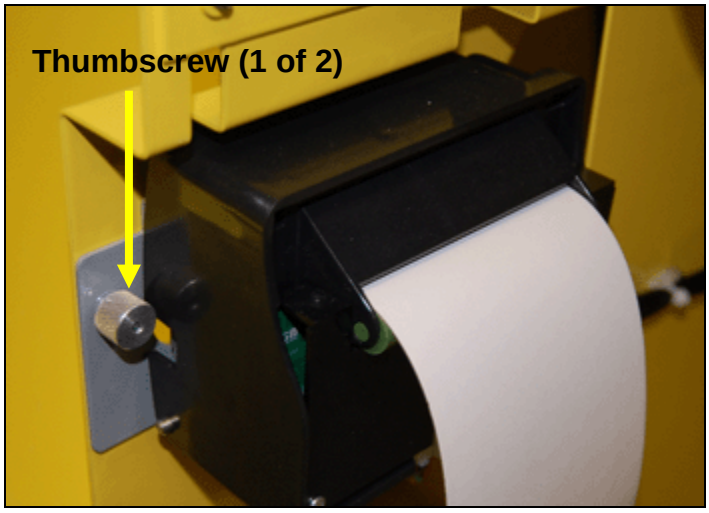

Figure 88: Printer Thumbscrew

9. Remove the printer cable from the back of the printer.

   NOTE: The cable connector that is removed has a locking clamp that will require pinching the locking tab to release. Pull the connector towards the rear of the printer.

10. Replace the printer.
11. Reconnect the printer cable.

    NOTE: Make sure that you have aligned the connector properly and then slowly insert until the clamp locks in place.

12. Properly dress the cable using one of the guide slots, and press the cable to secure in place.
13. Return the printer to its correct position.
14. Reload the paper.
15. Power up the terminal.

6.7.2 Loading Printer Paper

To load paper into the PCT printer, the retailer must perform the following steps:

1. Open the PCT by performing the following steps:
    a. Insert the red key into the lower keyhole on the side panel and turn the key.
    b. Lift the PCT door handle on the side panel.
    c. Open the PCT door.

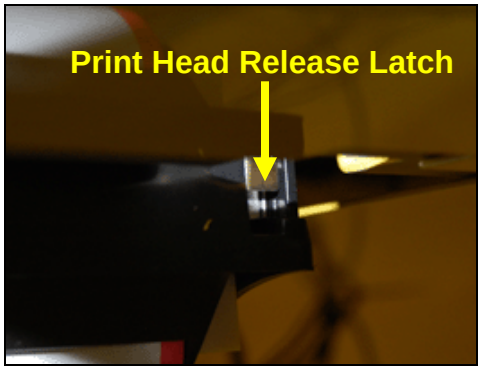

Figure 89: Print Head Release Latch

2. Release the print head by pulling up on the latch located on top-right side of the printer.
3. Remove any paper and push the print head firmly back into place, making sure that the print head is locked into place. (The print head makes an audible click when it is locked.)
4. Remove used roll from printer well. (Do not throw away paper spindle.)
5. Place paper spindle through new paper roll.
6. Place the new roll of paper and spindle onto the paper well brackets, feeding the paper from the bottom of the roll.
7. Insert the leading edge of paper under the print head. Push the edge into the slot and through the paper guide as far as it will go, about 1 inch. The printer will then automatically feed the paper and will cut off any excess paper.
8. Slide the drawer closed by lifting up and firmly pushing the drawer forward into the PAT.
9. Close and secure the PCT by performing the following steps:
    a. Lift the PCT door handle on the side panel.
    b. Shut the PCT door.
    c. Lock the PCT door and remove the red key.

NOTE: The key can be removed only in the locked position.

6.7.3 Clearing a Printer Jam

To clear a paper jam in the printer, the retailer must perform the following steps:

1. Open the PCT by performing the following steps:
    a. Insert a key into the lower keyhole on the side panel and turn the key.
    b. Lift the PCT door handle on the side panel.
    c. Open the PCT door.

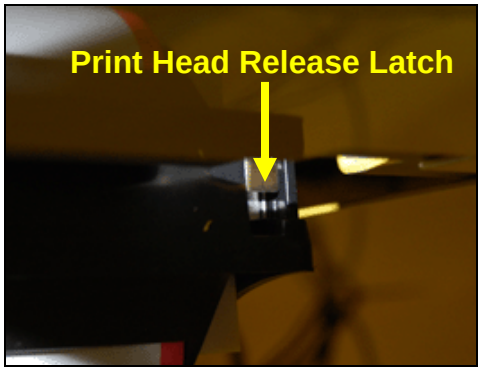

Figure 90: Print Head Release Latch

2. Release the print head by pressing the side latch located on right side of the print head.
3. Remove any paper and push the print head firmly back into place, making sure that the print head is locked into place. (The print head makes an audible click when it is locked.)
4. Re-feed paper back into the printer.
5. Close and secure the PCT by performing the following steps:
    a. Lift the PCT door handle on the side panel.
    b. Shut the PCT door.
    c. Lock the PCT door and remove the red key.

    NOTE: The key can be removed only in the locked position.

6.8 Removing the Currency Cassette

To remove the currency cassette, the retailer must perform the following steps:

1. Open the PCT by performing the following steps:
    a. Insert the red key into the lower keyhole on the side panel of PCT and turn the key.
    b. Lift the PCT door handle on the side panel.
    c. Open the PCT door.
2. With the green key, unlock the Bill Enclosure Cabinet and pull out the currency cassette tray.

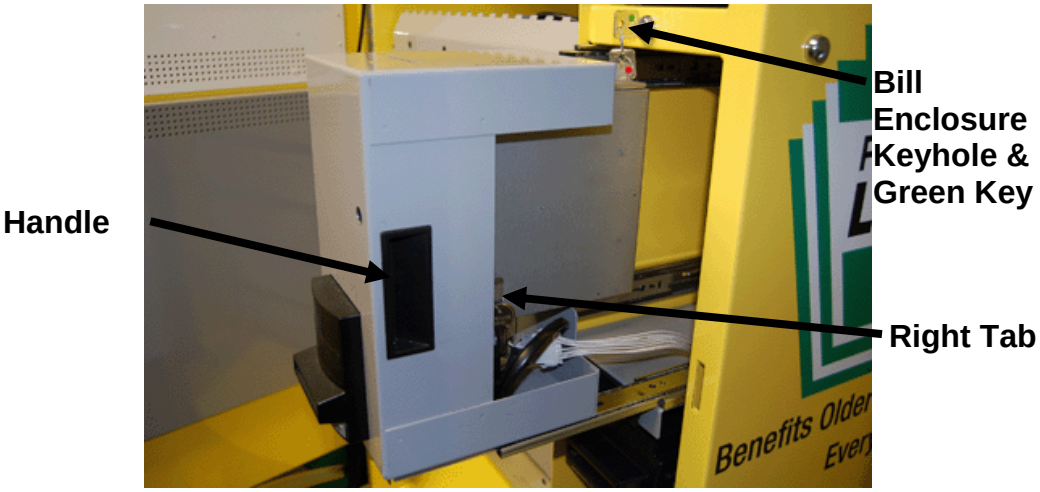

Figure 91: Bill Enclosure Cabinet

3. Press the two tabs on each side of the bill stacker and lift it up from the Bill Enclosure Cabinet.

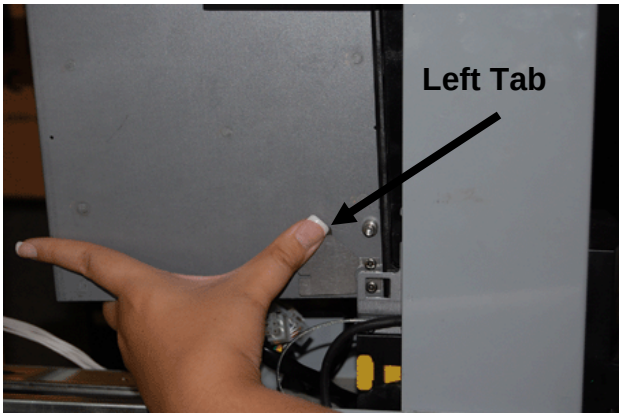

Figure 92: Print Head Release Latch

4. Insert the Currency Cassette key in the keyhole on the top of the cassette and unlock the cassette.

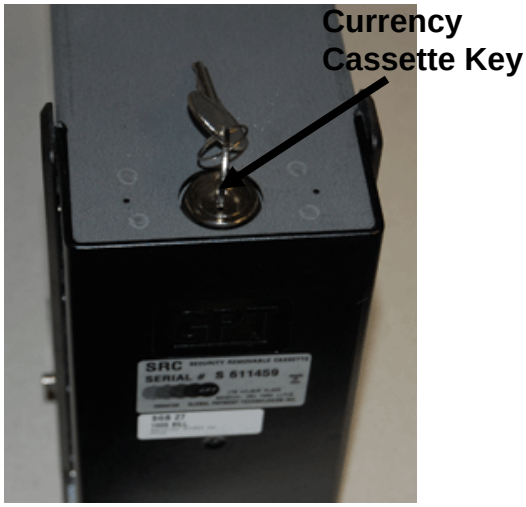

Figure 93: Currency Cassette Key

5. Remove the bills. Make sure that the bill plate springs back to the top of the cassette.
6. Lock the cassette door.
7. Return the cassette to the Bill Enclosure Cabinet, placing the cassette with the serial number label down, connecting the 14-pin connector, until the tabs click. There will be a whirling sound confirming that the Bill Acceptor has reset itself.

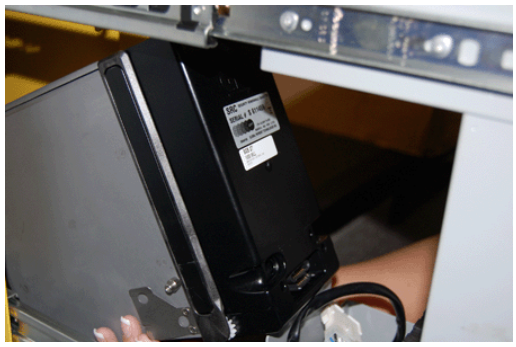

Figure 94: Reinsert Currency Cassette

8. Raise the Bill Enclosure Cabinet closed and lock it.

   NOTE: When the Currency Cassette is removed, the PCT will not accept bills.

9. Close and secure the PCT by performing the following steps:
   a. Lift the PCT door handle on the side panel.
   b. Shut the PCT door.
   c. Lock the PCT door and remove the red key.

   NOTE: The key can be removed only in the locked position.

6.9 Printer Ground Rework Process

1. Pull down or remove the jacket (heat shrink) of the existing printer cable CA05-0518-01_A.
2. Open the blue clamp on cable CA05-0614 and rout the thicker black ground wire, closest to the orange wire, through clamp.
3. Close the clamp tightly with pliers.

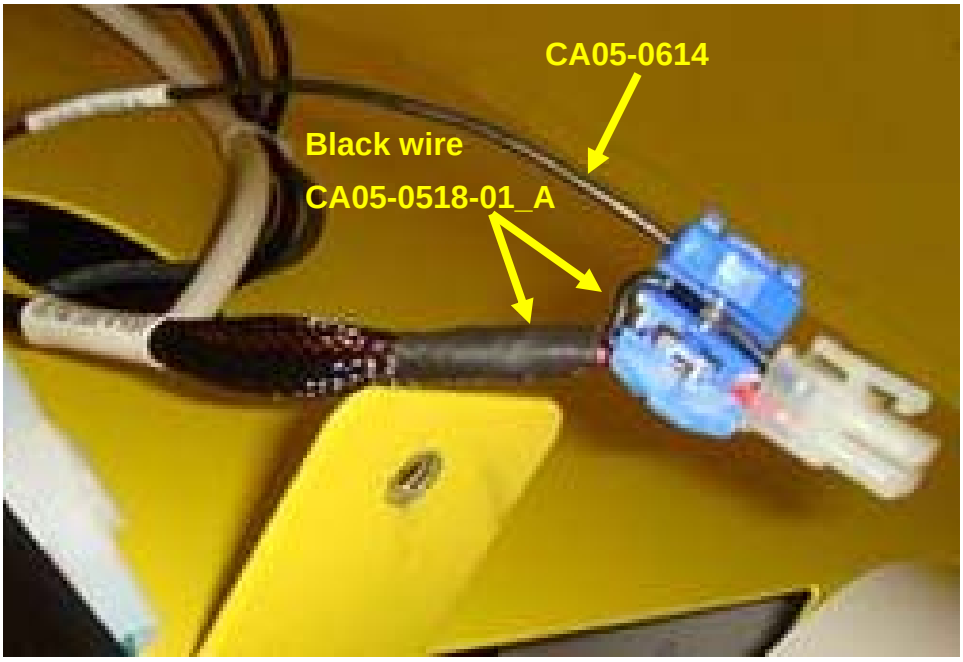

Figure 95: Routing the Exposed Printer Cable through the Blue Cable Clamp

Figure 96: The Closed Clamp on Cable

4. Secure the ring terminals of CA05-0614 and CA05-0613 to ground stud located on terminals cabinet wall as shown in photograph below (Tightening torque 6-7 kgfcm).

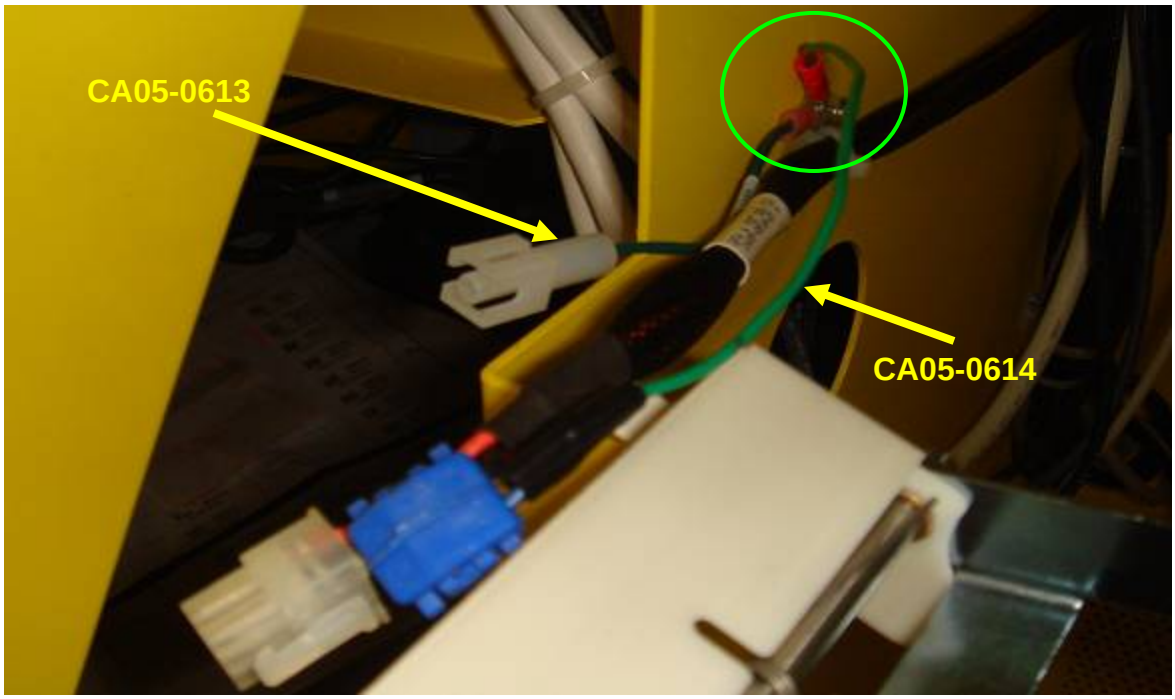

Figure 97: Connecting Printer Grounds to the Terminal's Cabinet Wall

5. Attach cable CA05-0610 to the printer's chassis:
   - Ensure Printer mechanism is properly grounded during rework by clamping metal printer chassis and connecting to earth ground as shown.

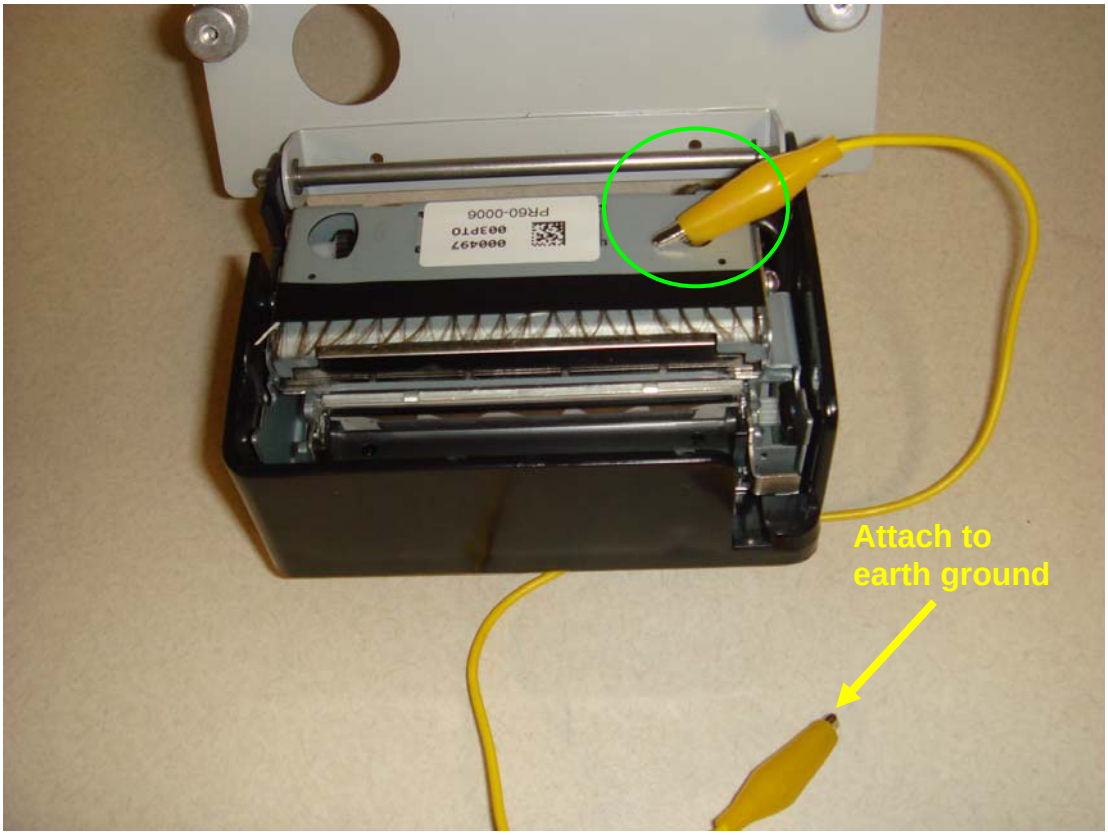

Figure 98: Grounding the Printer Chassis During Rework

- Locate the screw on side of the cutter chassis (See circle 1 below).
- Using cut out template, drill a .25” hole through the printer’s plastic sidewall allowing a screw driver to access the screw (See circle 2 below).

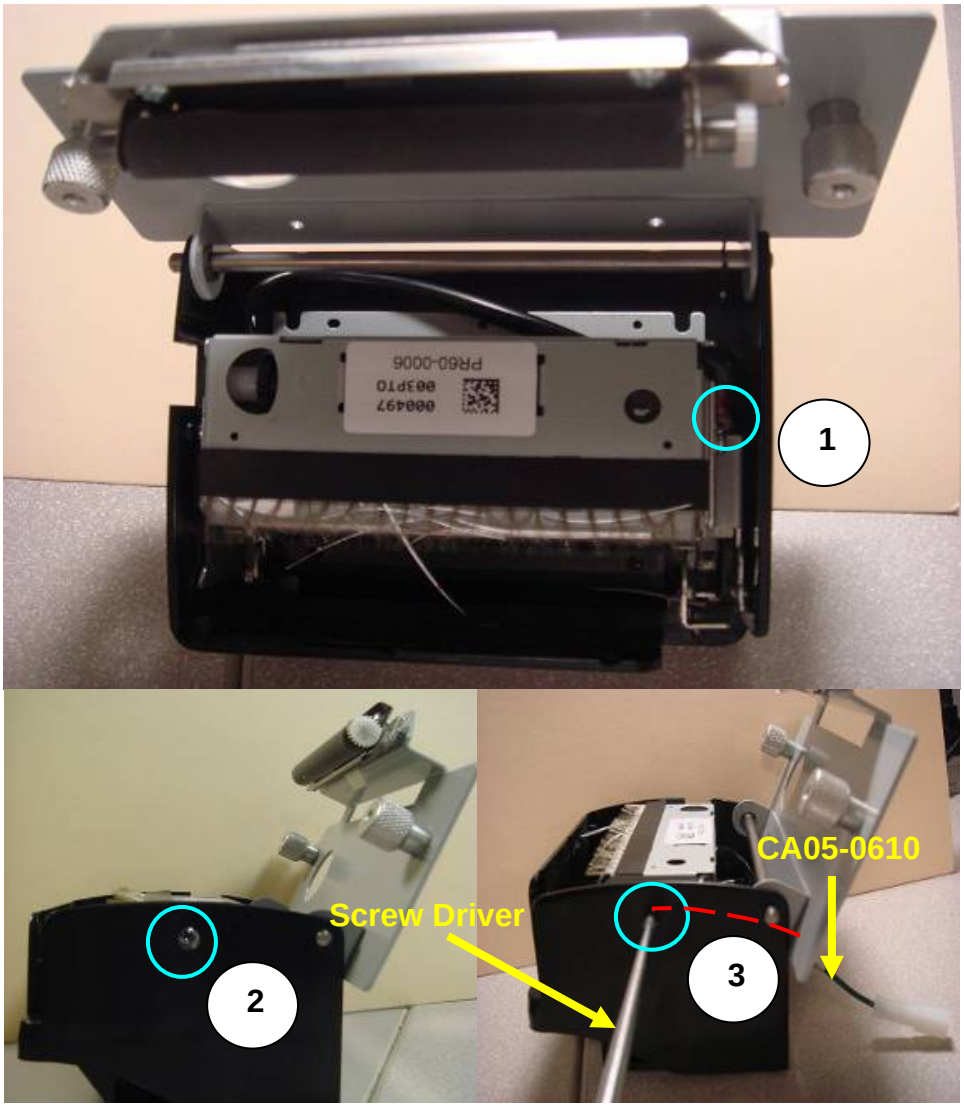

Figure 99: Accessing Printer Screw

- Remove screw at location of circle 2.
- Align ring terminal of CA05-0610 to printer chassis.
- Route CA05-0610 as indicated by the dashed red line in the photograph above and tighten the screw securing CA05-0610 to the printer’s chassis. Tightening torque 4-5 kgfcm. (See circle 3 in the above figure).

6. The position of the hole to be drilled is shown in the full sized template presented in the figure below.

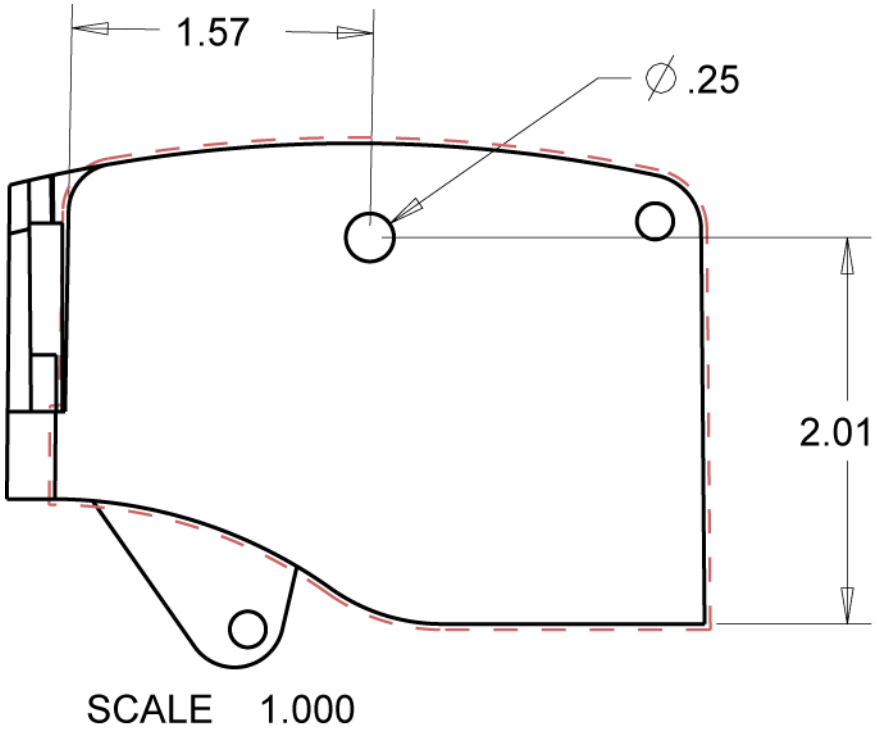

Figure 100: Template for Position of the Hole Drilled in the Printer's Sidewall

7. The routing of the ground cable as viewed from the bottom of the printer module is shown in the figure below.

Figure 101: Printer Ground Wire, Viewed from the Bottom of the Printer

8. When all connections have been completed the cables should appear as shown in the photograph below.

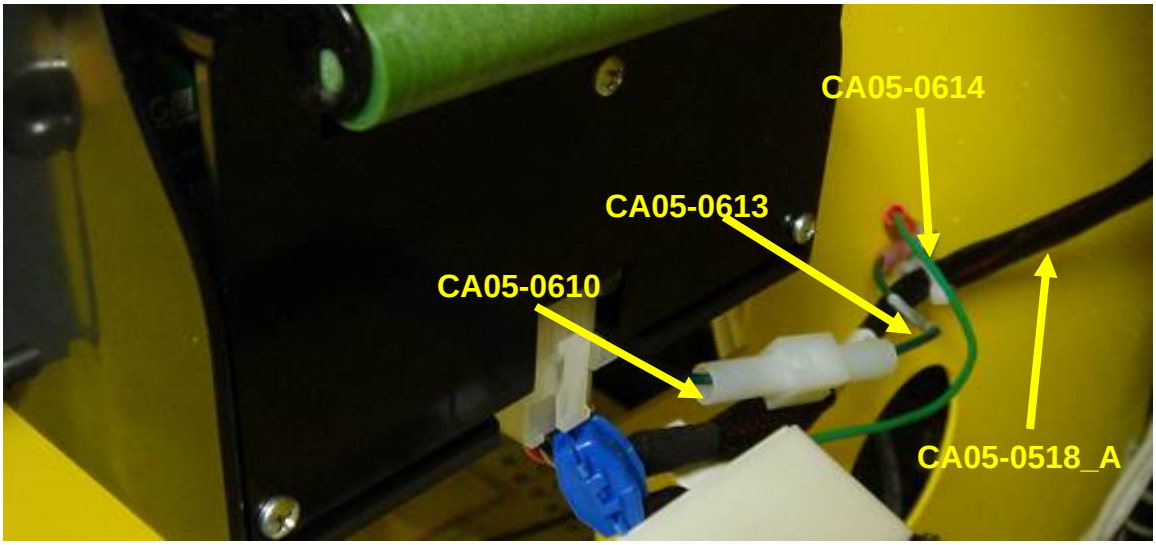

Figure 102: Modified Printer Grounding Complete

6.10 Electronics Tray Rework Instructions

The following upgrades to the electronics tray will be performed in the Depot. Each PCT will have its electronics tray swapped out in the field with a Depot modified tray. Ensure the Field Technicians remove 12v power from PA20-0347 (security board) before removing inner portion of electronic tray from PCT terminal and allow power supply to click until drained of power.

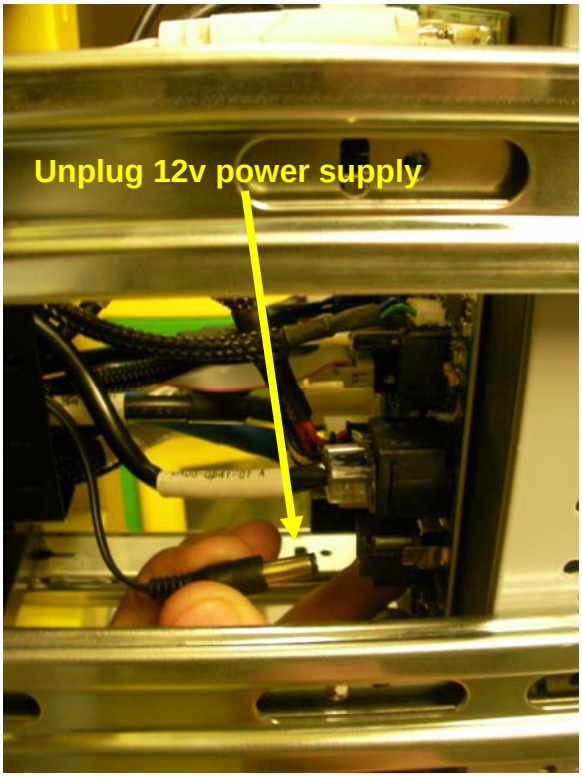

Figure 103: Unplug 12V Power

6.10.1 Modified Connection of the Security Board's USB Hub to the CPU

1. Replace the existing 60 pin cable, CA05-0445-02 with the revised cable, CA05-0612.

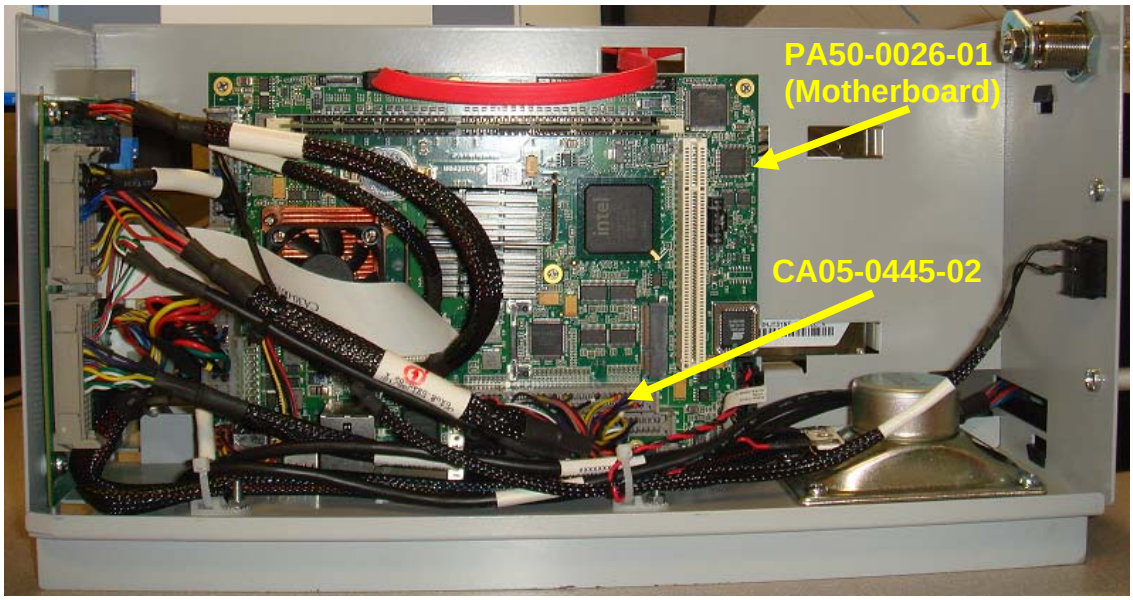

Figure 104: Removing old 60 Pin Cable

2. Take note the connectors on the end of the cable are keyed to ensure proper orientation with matting end. In addition, it is very important for the connector containing the green heat shrink identifier, on one pin, to be connected to the PA50-0026-01 (motherboard) as shown in the photograph below.

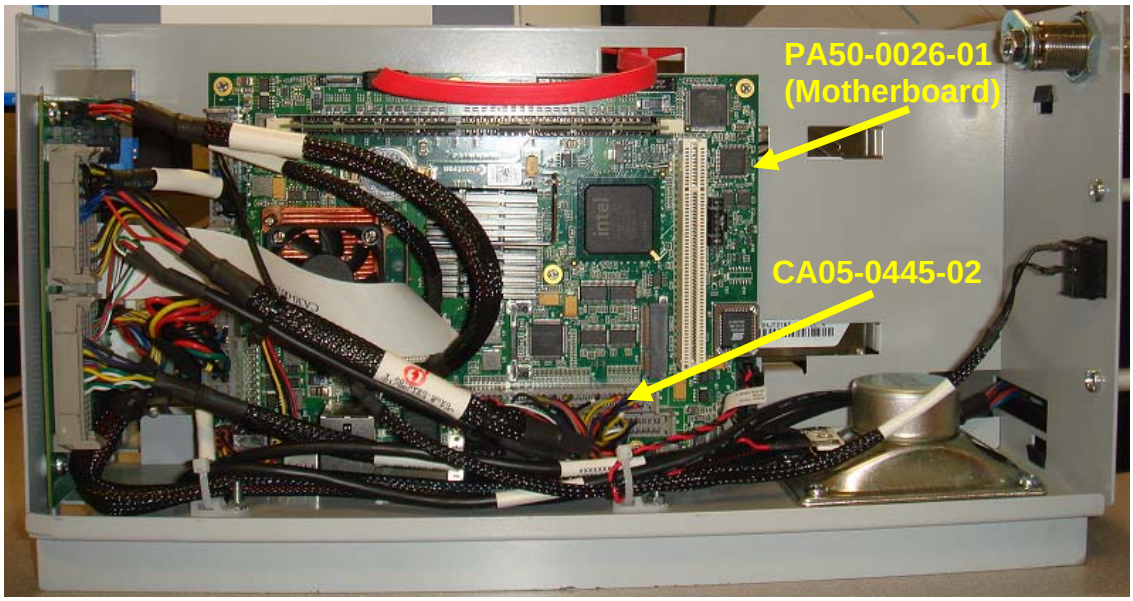

Figure 105: Connecting the new 60 Pin Cable to the Motherboard

6.10.2 Add Ferrite to the Hard Disk Drive 5 Volt Power Line

Attach the ferrite, ID65-0044, to the 5 volt power line for the hard disk drive as shown in the photograph below.

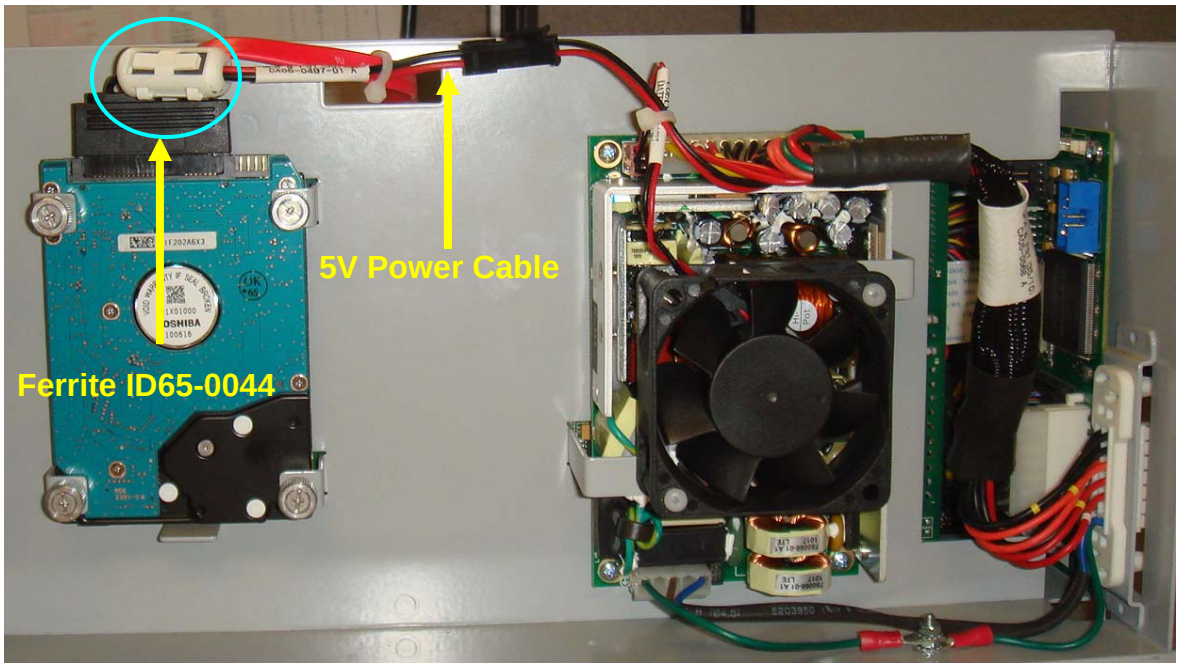

Figure 106: Ferrite Attached to the Disk Drive's 5 Volt Power Line

6.10.3 Install 1pc USB extension onto Electronic tray

Plug CA90-0179 USB Extension cable to one of available USB ports located on PA20-0347 security board and dress cable along cable harness in through the right side of main cabinet.

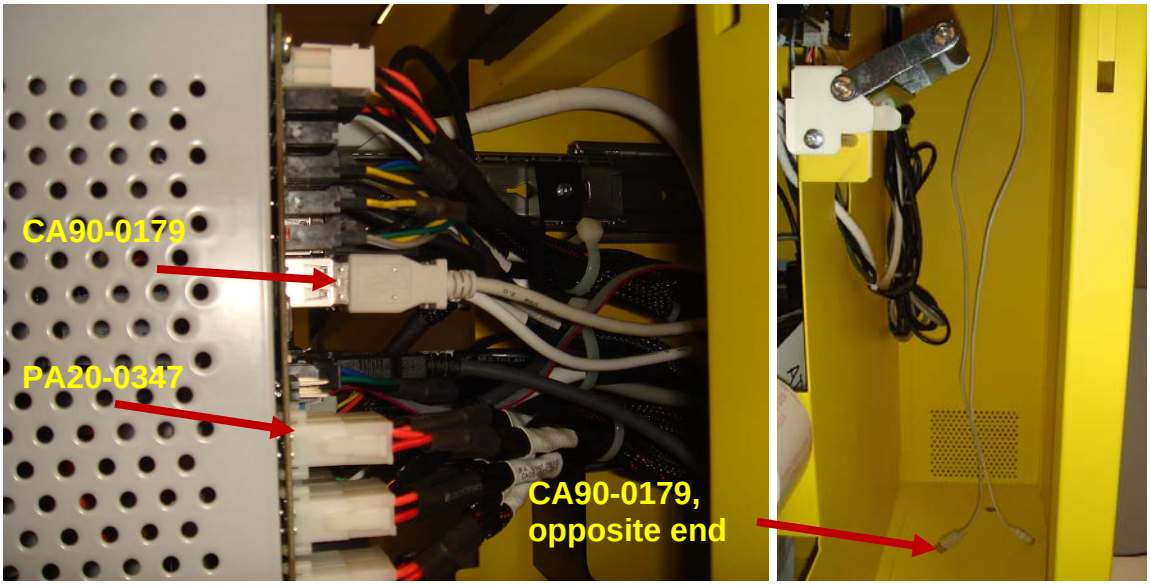

Figure 107: Plug in the USB Connector

6.10.4 Install 2pc USB extension onto Electronic tray

1. Secure CA10-0104 to front of electronic tray bracket, orientating the USB ports as shown in figure below. Tightening torque is 4-5 kgfcm.

Figure 108: USB Connectors

2. When attaching CA10-0104, USB extension, route cables through the existing cut-out of electronics tray; see circle 1a in the photograph below.

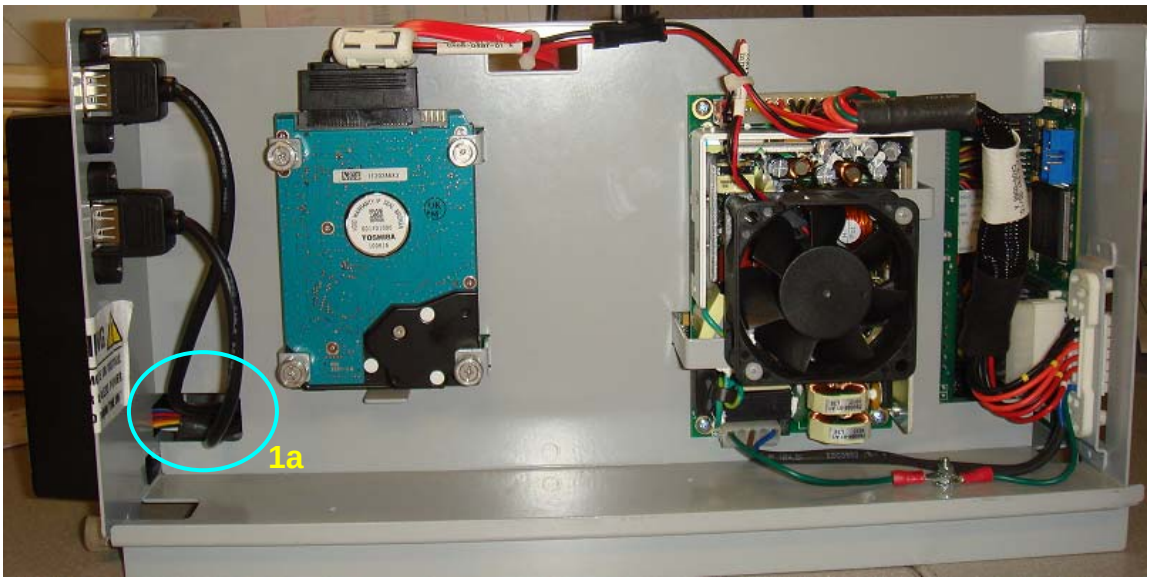

Figure 109: Attaching the New USB Extension Cable to the Electronics Tray

3. Rotate the e-tray 180º horizontally so that the motherboard becomes visible, as shown below. Continue routing the USB cables, from circle 1b to circle 2b, adding TW60-0001 to locations T1 and T2.

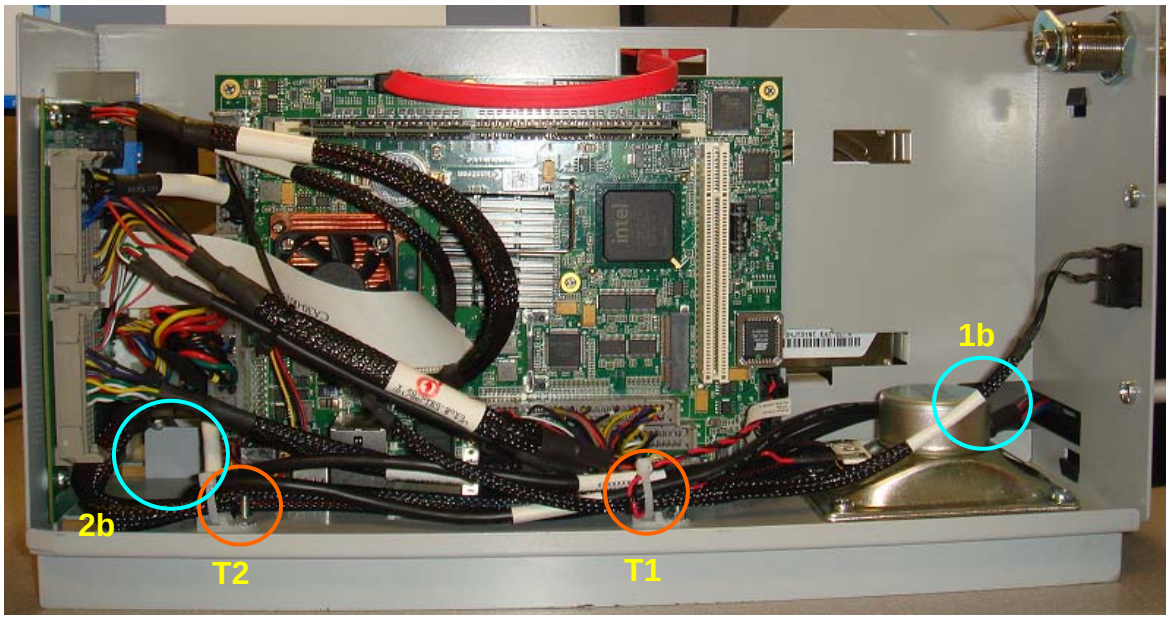

Figure 110: Routing the USB Cable Pass the Motherboard

4. Flip the e-tray 90º vertically to expose the bottom. Plug in the USB connectors into USB ports shown in circle 3c below.

Figure 111: Plug in the USB Connector

6.10.5 Power Harness Rework Instruction

1. Replace the existing power harness, CA05-0441-01, with harness, CA05-0568_B.
   - Unplug 4 locations (1-4), cutting tie wrap between 1&2 and remove two ground wires (5) using 7/32 nut driver as shown in figure below. When removing the two grounds, keep the 2 nuts (NU73-0001) and 1 star washer (WA73-0001) for the installation of CA05-0568_B.

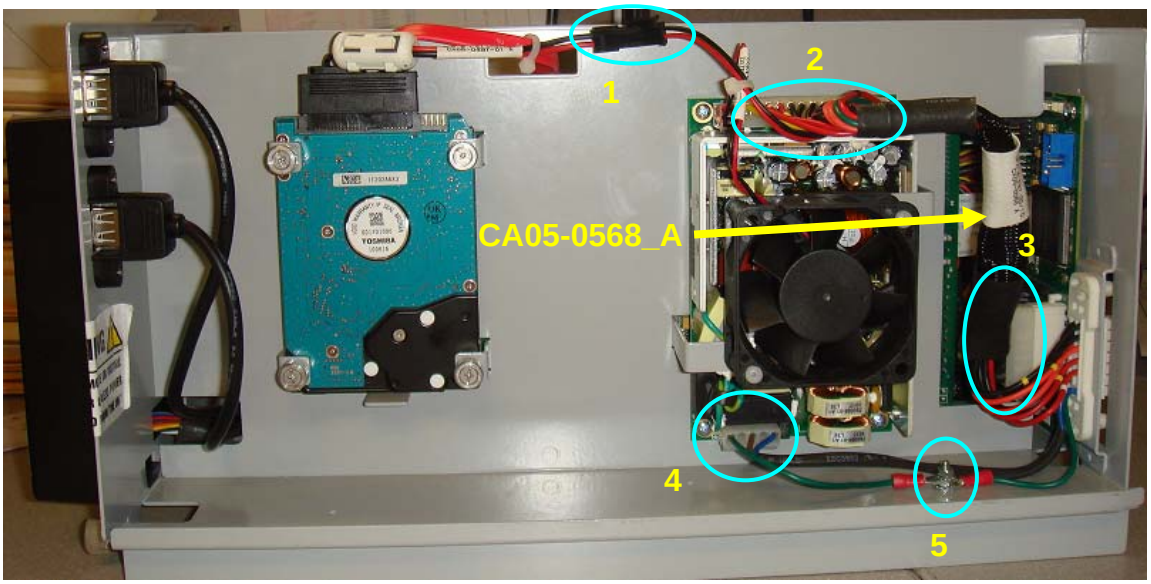

Figure 112: Power Harness Removal

   - Next remove CA05-0568_A from electronics tray by applying pressure to the AC/DC connector in below figure and pressing through electronic tray until loose.

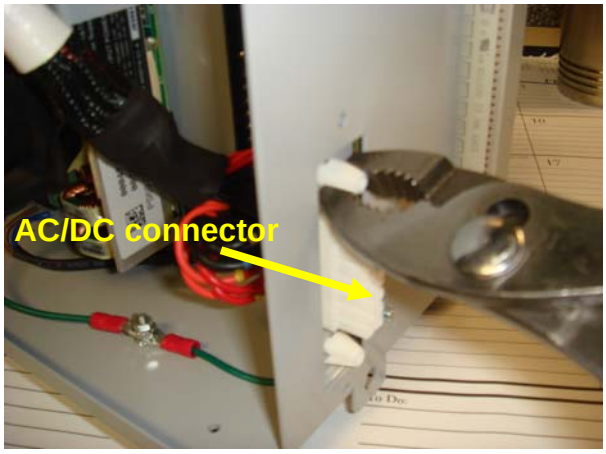

Figure 113: AC/DC connector removal

6.10.6 Power Harness installation Instruction

1. Install CA05-0568_B into electronics tray by plugging in connectors labeled 1-4 in figure below taking note to how each is keyed for proper insertion.

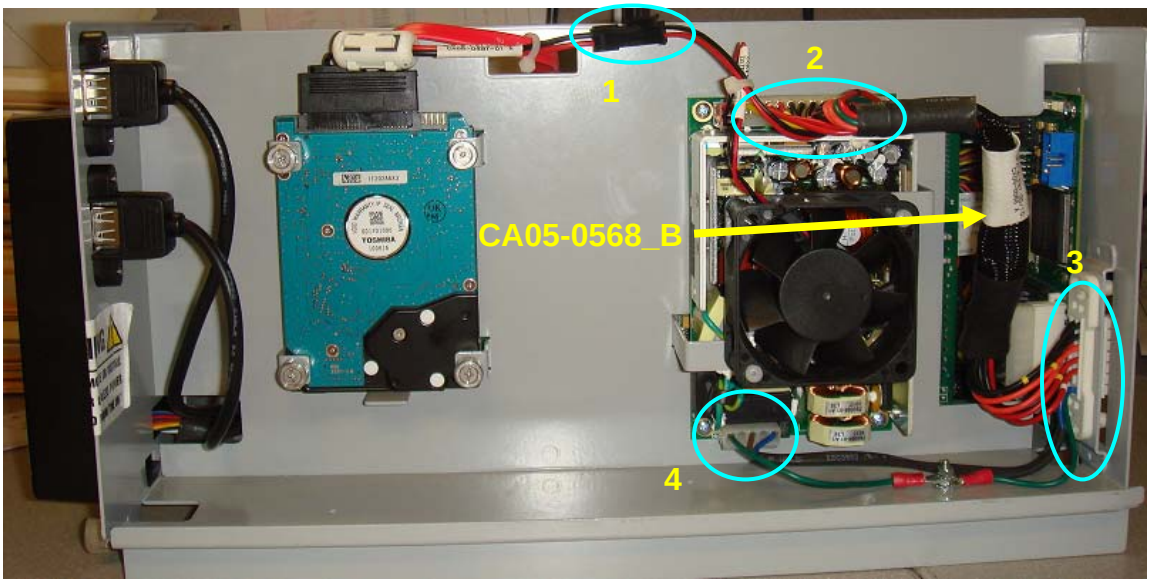

Figure 114: Power Harness Install (Inside)

2. When installing the AC/DC connector end through electronic tray ensure connector is oriented correctly, as it is very difficult to remove the part and salvage for reuse. Face the ribbed side of connector to the right of the electronic tray, or towards the 98 pin connector, as highlighted in figure below.

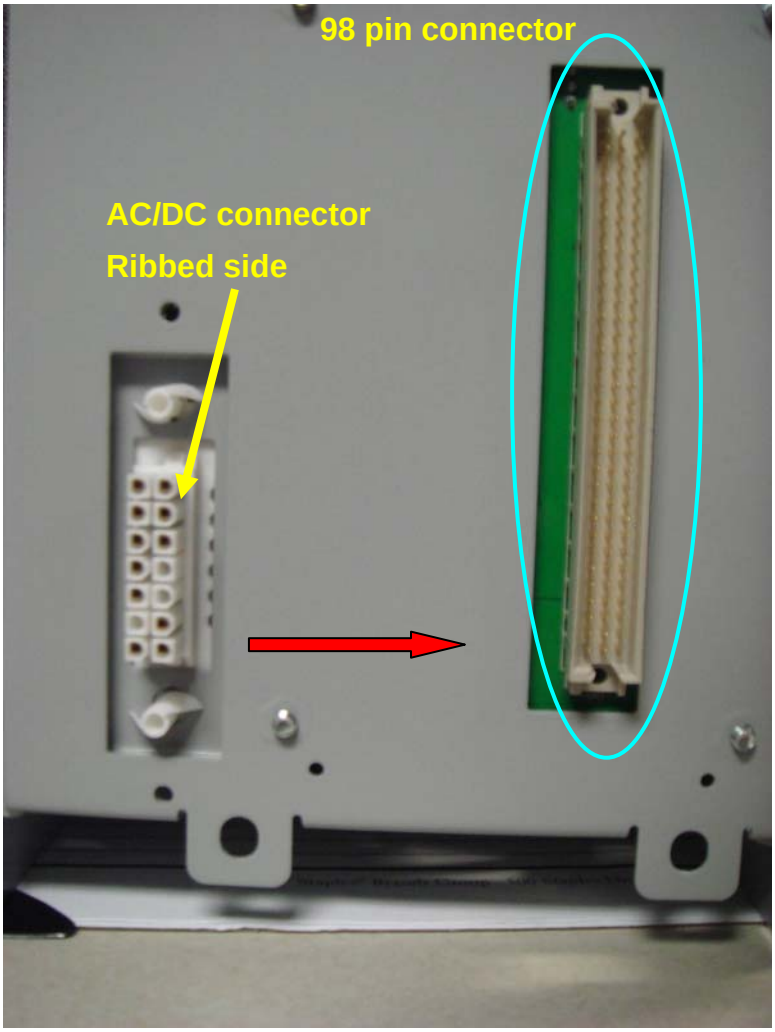

Figure 115: Power Harness AC/DC Connector Install

3. Lastly, secure two ground wires by first placing the star washer (WA73-0001) onto ground stud and then the ground wire leading from the AC/DC connector. Secure with one nut (NU73-0001) and then place second ground wire leading from the power supply connector (PS60-0019) onto ground stud and secure with second nut (NU73-0001). Tightening torque 6-7 kgfcm.

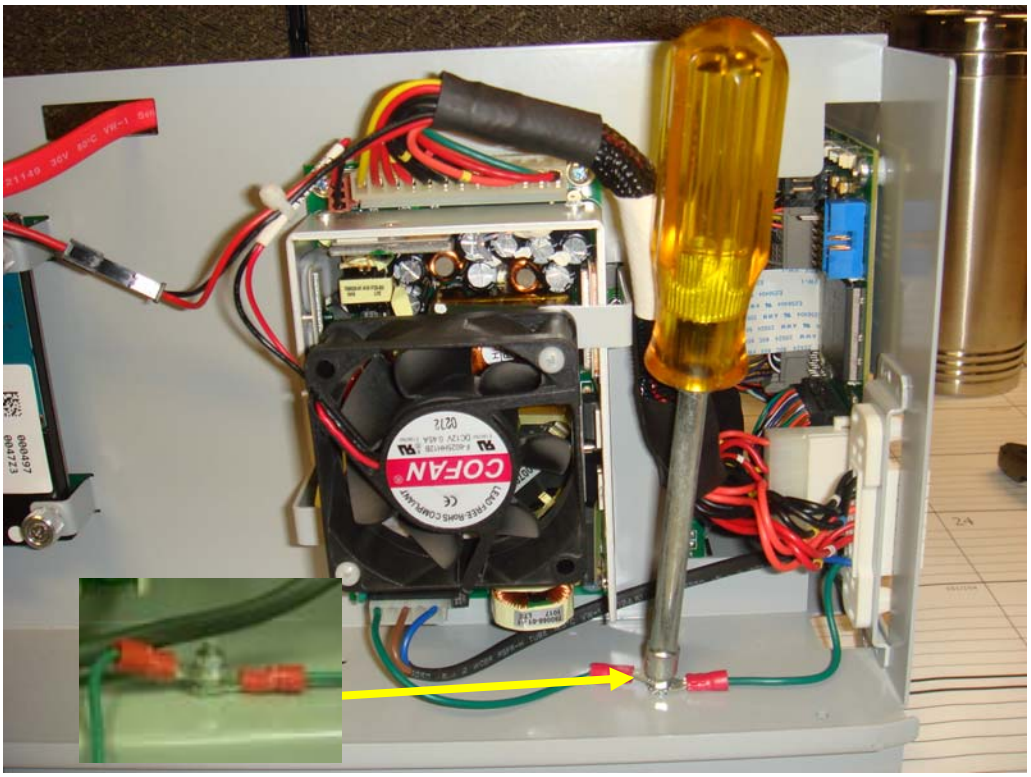

Figure 116: Ground Cable Install

6.10.7 Install USB Cable for USB/DVI Card

1. Cut the connectors off of each end of the existing 5 meter USB cable CA90-0160 which connects the security board to the USB/DVI card. If necessary, leave the existing cable in place, as there is no need to remove it from its wiring bundle.
2. Carefully route the new cable CA90-0177.
3. Dress the cable CA90-0177 with TW60-0001 referenced by the 6 green circles. The 4 red circles indicate the locations for BR20-0036 Bracket ITVM, USB Cable, secured with existing SC74-0020, from PA20-0338 LED Bar, taking note that one BR20-0036 has CA90-0177 tie-wrapped to it.

Figure 117: Cable Dressing

4. Continue the cable dressing of CA90-0177 with TW60-0001, indicated by the 3 green circles, spacing roughly 6” apart.

Figure 118: Cable Dressing Continued

5. Complete the dressing of CA90-0177 along the main harness, securing with 2pc TW60-0025 as indicated by 2 green circles. Finally, connect CA9-0177 to the PA20-0347 (Security board) into the previously used USB port of CA90-0160.

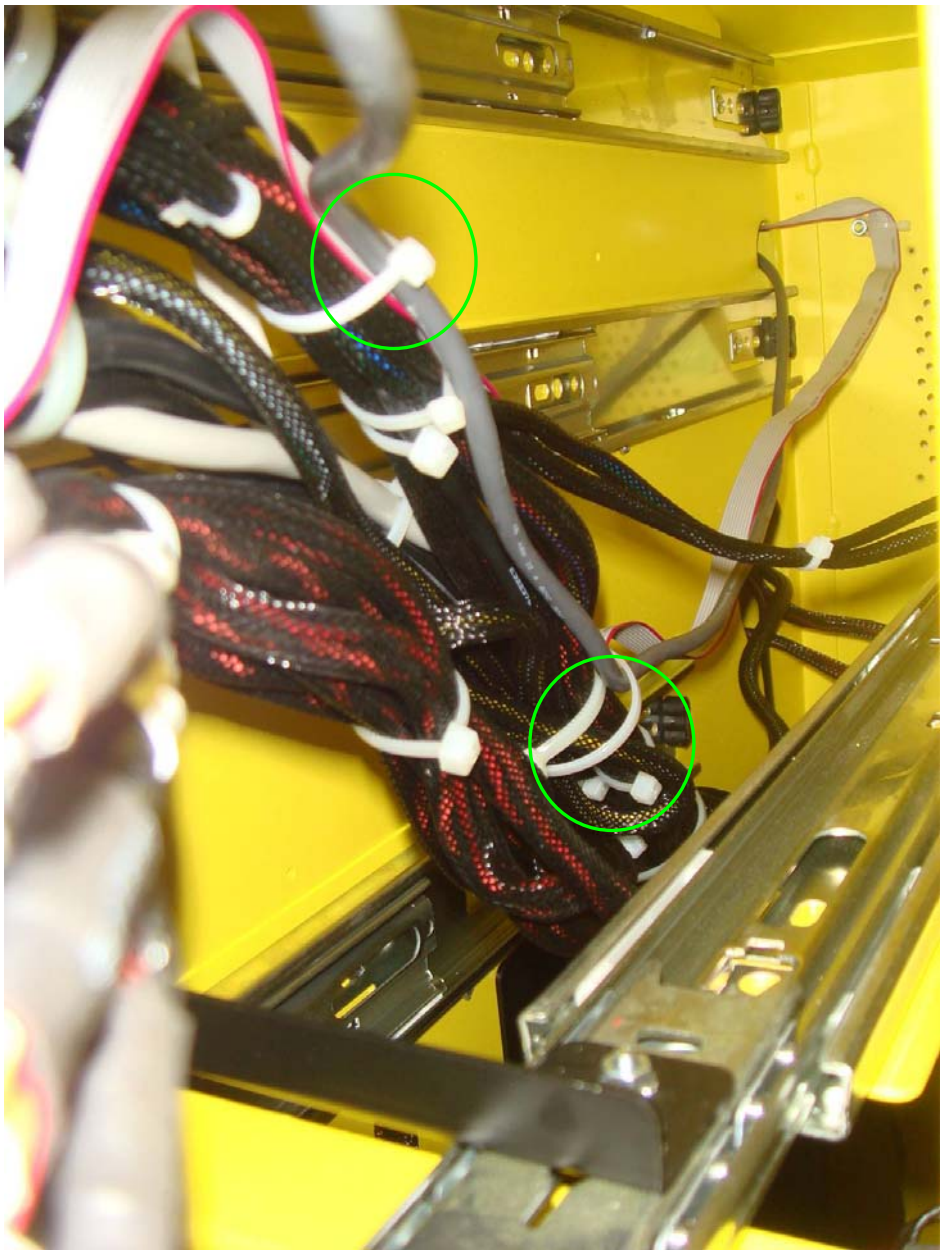

Figure 119: Cable Dressing Along Main Harness

6.11 CPU Fan Replacement

1. If the CPU fan has not been previously replaced in the field to the dual ball bearing, its speed is below 2,700 RPM's, or if it is vibrating and/or making abnormal sounds the fan should be replaced. When replacing the fan do not disturb the heat sink screws shown in the photograph below. Also, extreme caution should be used when replacing the fan as to not disturb the heat sink, the processor or compound between these two components.

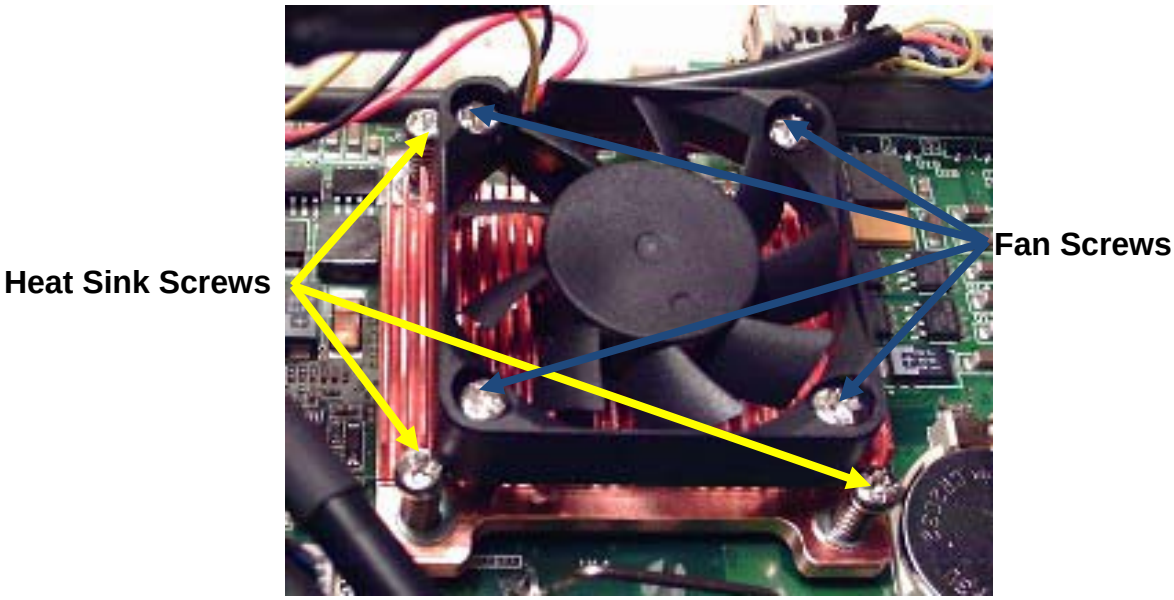

Figure 120: Fan and Heat Sink

2. For reference, the dual ball bearing fan part number is shown in figure below as being F-4010M12BII.

Figure 121: Dual Ball Bearing Fan

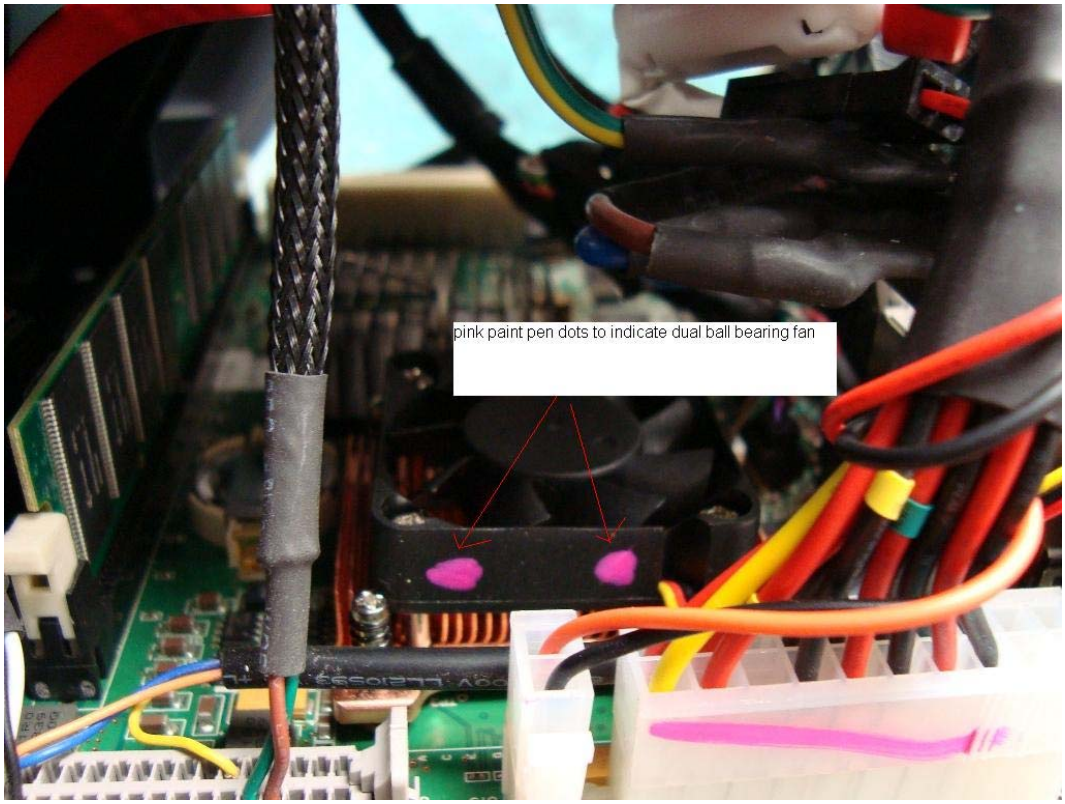

Figure 122: Dual Ball Bearing Fan Indication

6.12 Network Communications

6.12.1 Communications Installations in the Field

Prior to new installs, perform the following steps:

1. Contact the supervisor to obtain retailer information. If supervisor is not available, contact Operations.
2. Verify that Operations has activated retailer.

   NOTE: Refer to previous section, *Setting up Terminal Communications*, for terminal configuration procedures.

6.13 Other Communications Setup Procedures

The WAVE™ may also communicate with the network via the following devices:

- CDMA - dynamic
- Wireless - static

6.13.1 CDMA Setup

The CDMA device does not require confirmation. This is performed at the Depot prior to being issued to the install technician.

Important: The CDMA device must be located within 6-8 feet of the terminal. The following diagram shows CDMA connections.

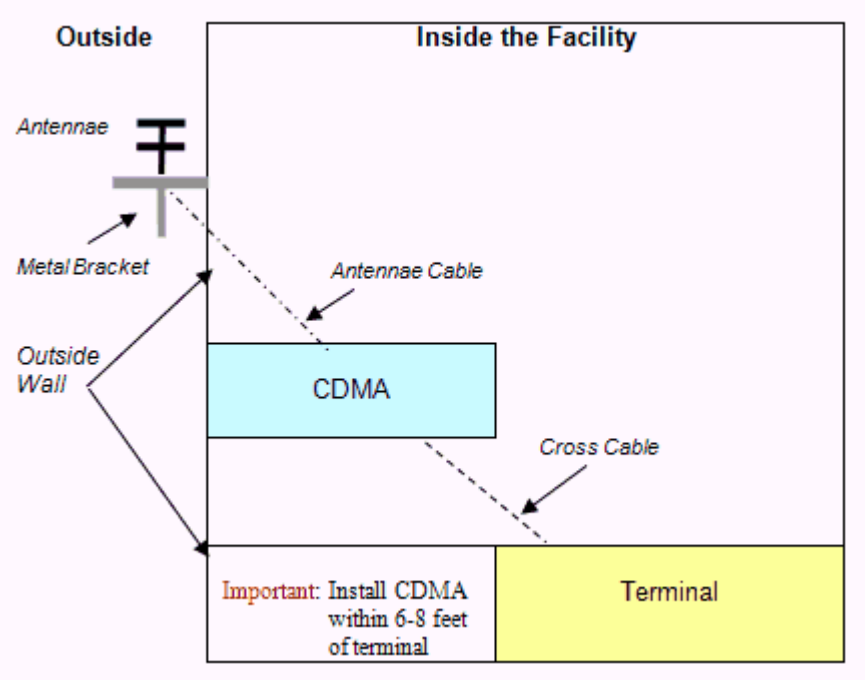

Figure 123: CDMA Communication Setup

6.13.2 Wireless Setup

Wireless communications will only be used in locations where inside wiring is not an option.

In all cases, the Router is always placed with the IDU, and the Bridge is placed with the terminal. The following diagram shows IDU, Router, and Bridge connections.

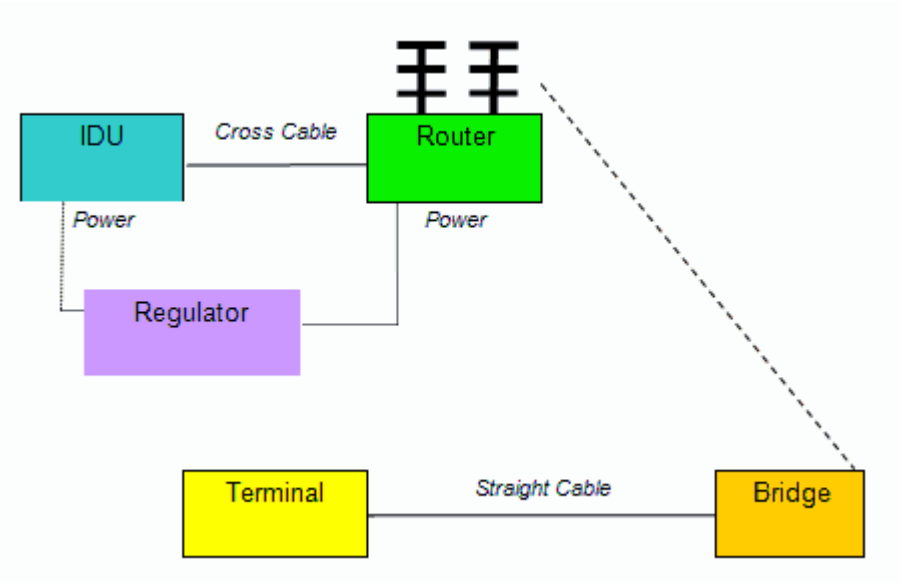

Figure 124: Wireless Communication Setup

SECTION 7
TROUBLESHOOTING

7.1 Overview

This chapter:

- Describes common problems for the terminal and all peripherals
- Provides step-by-step troubleshooting procedures for the terminal and the following peripherals/issues:
  - Printer
  - Document Scanner
  - Handheld Scanner
  - Touch Screen
  - Flat Panel Display
  - Hard Drive
  - Other

Troubleshooting tips follow.

NOTE: When ANY terminal problem occurs, ALWAYS power off the terminal and wait 5 seconds to reboot. This frequently solves the problem.

7.2 Replaceable Parts Management

The following information pertains to replaceable or spare parts. In an effort to use spare parts only when necessary, the following steps are recommended:

1. Each bench repair station will set up a testing area that includes storage space for one of each working terminal part.
2. The functionality of each part will be verified and labeled as a "test part."
3. Before replacing any suspected malfunctioning part, first replace the part with the test part; then test for functionality.
4. If the test part corrects the problem you are having with the terminal, you will know that the part should be replaced.

7.3 Printing Problems

Printer Topic	Troubleshooting Tips
Printer Jam	1. Attempt to remove jam or clear paper path. 2. Replace printer if problem persists.
Missing Print/No Print	1. Verify paper is properly loaded in printer. 2. Clean print head. 3. Recheck print quality by printing 10 test tickets. 4. Replace print head.
Paper Not Advancing	1. Verify paper is loaded correctly. 2. Verify printer door is properly closed. 3. Verify print head is securely locked. 4. Replace printer.
Partial or No Cut	1. Check the printer roller to make sure it rolls freely. 2. Verify printer door is properly closed. 3. Replace printer if problem persists.

7.4 Printing Problems

Document Scanner Topic	Troubleshooting Tips
Doc. Scanner - No Read	1. Cycle the scanner using the scanner utility eject function in Diagnostics. 2. Inspect read head and make sure it is in the flat position. 3. Make sure the doc scanner is clean. 4. Power off terminal and then power it on. 5. Calibrate the Document Scanner. 6. Replace Document Scanner assembly. 7. Replace terminal if problem persists.
Doc. Scanner - No Feed	1. Power off terminal and then power it on. 2. Cycle the scanner using the scanner utility eject function in the Diagnostics. 3. Insert a completed play slip into the doc scanner. 4. Replace Document Scanner assembly. 5. Replace terminal if problem persists.
Reading incorrectly	1. Verify scanner is clean. 2. Test scanner in Diagnostics. 3. Calibrate the Document Scanner. 4. Replace Document Scanner assembly. 5. Replace terminal if problem persists.
Doc Scanner - Noisy	1. Make sure that rollers are clean. 2. Replace Document Scanner assembly. 3. Replace terminal if problem persists.
Scanner motor stalls	1. Replace Document Scanner assembly. 2. Replace terminal if problem persists

7.5 Wireless Barcode Reader Problems

Wireless Barcode Reader Topic	Troubleshooting Tips
No light	1. Cycle power. 2. Replace ticket checker if problem persists.
No read	1. Verify power 2. Cycle power. 3. Verify cable is connected and not damaged. 4. Replace ticket checker if problem persists.

7.6 Charge Coupled Device (CCD) Reader Problems

CCD Topic	Troubleshooting Tips
No response for CCD	1. Verify LED's are lit. 2. Reconfigure the CCD Reader. 3. Replace the CCD Reader. 4. Replace the printer if problem persists. 5. Replace terminal if problem persists.

7.7 Touch Screen Problems

Touch Screen Topic	Troubleshooting Tips
No touch	1. Power off terminal and then power it on. 2. Verify cables are properly connected. 3. Replace the display assembly. 4. Replace terminal if problem persists.
No or partial video	1. Cycle power. 2. Verify cables are properly connected. 3. Replace the display assembly. 4. Replace terminal if problem persists.
Scratch	1. Ignore if scratch is minor. 2. Replace the display assembly.

Touch Screen Topic	Troubleshooting Tips
Calibration off	1. Recalibrate using Diagnostics function. 2. Make sure the bezel is not touching the touch screen. 3. Replace the display assembly. 4. Replace terminal if problem persists.
Touch screen distorted	1. Reboot the terminal. 2. Verify cables are properly connected. 3. Replace the display assembly. 4. Replace terminal if problem persists.

7.8 Flat Panel Display Problems

Flat Panel Display Topic	Troubleshooting Tips
No or partial video	1. Check power connection. 2. Verify data cable is connected and not damaged. 3. Replace display. 4. Replace terminal if problem persists.
Scratch	1. Check/secure connections between the speaker and Main Board. 2. If problem persists, replace the speaker.
Display shows distorted images or multiple colors	1. Check cables to ensure they are properly connected. 2. Replace display. 3. Replace terminal if problem persists.
Screen blank/does not work	1. Verify that terminal has power. 2. Verify data cables. 3. Replace terminal if problem persists.
Blue screen	1. Reboot the display. 2. Verify data cables. 3. Replace terminal if problem persists.

7.9 Other Problems

Other Topic	Troubleshooting Tips
Invalid wager	1. Call Operations to verify no system problems. 2. Determine if operator error: Ask the retailer to describe the function he/she was performing when problem occurred. 3. Verify slips/ functions. 4. Replace terminal if problem persists.
Cannot sign on	1. Call Operations to verify no system problems and to verify that retailer is still active in the system. 2. Check network cable to make sure it is working. 3. Verify retailer information is correct. 4. Verify password. 5. Verify touch screen is properly calibrated. 6. Replace terminal.
No power	1. Check/secure power cord connection to terminal and electrical outlet. 2. Verify that terminal has power; when initially powered on the terminal emits one beep tone. 3. Verify functionality of electrical outlet. 4. Replace terminal.
Application error/memory not read	Replace terminal.

7.10 Trouble Codes

Trouble Code	Code Description
0	State - Install Extrema
1	State - Extrema suspended
2	State - Meeting with State Rep.
3	State - Reinstall Extrema
4	State - Relocate Extrema
5	State - Remove Extrema
6	State - Retailer training
7	State – Site survey
8	State – Temp. removal
9	State Request – Sticker needed
10	Asset Verification needed
Communications Trouble Code	
250	IW – Wire damaged
251	IW – No crossover cable
252	IW – Wires hanging
253	IW – Biscuit block not within 8” of TIM
254	IW – No biscuit block
255	IW – No inside wiring
256	IW – Bad inside wiring
700	Communications – Check last transaction
701	Communications – Error: Comm off line
703	Communications – No REC
704	Communications – No XMT
705	Communications – No XMT/No REC
706	Communications – Send error
707	Communications – Storm / Lightening damage
708	Communications – Vendor meet
710	Communications – Waiting for comms
711	Communications – Waiting for system to verify versions
799	Communications – Add text

VSAT/IDU Trouble Code	
257	IDU – Not mounted
258	IDU – Not found
259	IDU – Broken pieces
260	IDU – Not working
261	IDU – Streaming
262	IDU – Configuration not correct
263	IDU – No power
264	IDU – No online light
265	IDU – No transmit
266	IDU – No receive
267	IDU – No outbound ID (SpaceNet)
268	IDU – LNB errors
269	IDU – Not configured on Radius Serv
270	IDU – Outbound errors
271	VSAT Dish – Broken pieces
272	VSAT Dish – Mount broken
273	VSAT Dish – Physically moved
274	VSAT Dish – Not aligned
275	VSAT Dish – Can’t get signal
276	VSAT Dish – Weak signal

ITR Trouble Code	
901	Instant Ticket Reader – No light
902	Instant Ticket Reader – No read
903	Instant Ticket Reader – No power
904	Instant Ticket Reader – Misreading
905	Instant Ticket Reader – Missing/Broken lens
999	Instant Ticket Reader – Add text

TIM Trouble Code	
500	TIM – Broken or loose parts
501	TIM – Broken or stained plastic
502	TIM – Can’t sign on
503	TIM – Frozen on one screen
504	TIM – Frozen, making unusual noise
505	TIM – Frozen, very warm
506	TIM – Makes loud noise (grinds)
507	TIM – Makes strange noise
508	TIM – No power
509	TIM – Not dedicated
511	TIM – Resets
512	TIM – Slow
513	TIM – Smells like smoke
514	TIM – Vandalism
515	TIM – Wrong totals / not a winner
516	Power Supply – Clicking
599	TIM – Add text

Printer Trouble Code	
100	TIM – Broken or loose parts
102	TIM – Broken or stained plastic
103	TIM – Can’t sign on
104	TIM – Frozen on one screen
105	TIM – Frozen, making unusual noise
107	TIM – Frozen, very warm
108	TIM – Makes loud noise (grinds)
109	TIM – Makes strange noise
110	TIM – No power
112	TIM – Not dedicated
113	TIM – Resets
114	TIM – Slow

Printer Trouble Code	
115	TIM – Smells like smoke
116	TIM – Vandalism
117	TIM – Wrong totals / not a winner
118	Power Supply – Clicking
119	TIM – Add text
120	Printer – Scrambled/Misaligned print
121	Printer – Short tickets
122	Printer – Smeared print
123	Printer – Paper not advancing
124	Printer – Printer door does not latch
125	Printer – Printer door does not open

Doc Scanner Trouble Code	
300	Doc Scanner – Always runs
301	Doc Scanner – Broken door
302	Doc Scanner – Broken lens clip
304	Doc Scanner – Maintenance
305	Doc Scanner – Missing pieces
306	Doc Scanner – No feed
307	Doc Scanner – No light
308	Doc Scanner – No read
309	Doc Scanner – Parts broken
310	Doc Scanner – Randomly runs
311	Doc Scanner – Reading too many numbers
312	Doc Scanner – Reading wrong numbers
313	Doc Scanner – Rollers not rolling
314	Doc Scanner – No power
315	Doc Scanner – Lens dirty
316	Brander – Light print
317	Brander – No brand
318	Brander – Smearing
320	Doc Scanner – Calibration needed

Doc Scanner Trouble Code	
399	Doc Scanner – Add text

LCD Trouble Code	
400	LCD – No response
401	LCD – Blank screen with cursor
402	LCD – Calibration off
403	LCD – Can’t clear display
404	LCD – Can’t take reports
405	LCD – Display black
406	LCD – Display blue
407	LCD – Display light
408	LCD – Flipping back and forth
409	LCD – Glass broken
410	LCD – Lines through screen
411	LCD – Missing screws
412	LCD – Partial display
413	LCD – Plastic broken
414	LCD – Slow response
499	LCD – Add text
400	LCD – No response
401	LCD – Blank screen with cursor
402	LCD – Calibration off
403	LCD – Can’t clear display

Supplies Trouble Code	
600	Supplies – Needed
601	Supplies – Ticket stock needed
602	Technician – PM needed
603	Technician – PR/PM
604	Technician – Operator instruction needed
605	Technician – Assisted over phone (must clone with trouble)

Supplies Trouble Code	
606	Technician – Store closed

Flat Panel Display Trouble Code	
1000	Flat Panel Display – Install
1001	Flat Panel Display – No power
1002	Flat Panel Display – Partial display
1003	Flat Panel Display – Relocate
1004	Flat Panel Display – Remove
1005	Flat Panel Display – Damaged

Hard Drive Trouble Code	
4000	Hard Drive – Frozen, illegal operation
4001	Hard Drive – Makes unusual sound
4002	Hard Drive – Needs newest version
4003	Hard Drive – Add text

7.11 Repair Codes

Repair Code	Code Description
0	State - Installed Extrema
1	State - Retailer training completed
2	State - Agent not licensed
3	State - Installed Flat Panel Display
4	State - Remove TIM
6	State - Temp. removal
7	State - Site survey
8	State - Relocated terminal
9	Agent - Refused install
10	State Request - Placed sticker
11	State - Reinstalled TIM
12	Asset verification performed
Communications Repair Code	
250	IW – Wire damaged
251	IW – No crossover cable
252	IW – Wires hanging
253	IW – Biscuit block not within 8” of TIM
254	IW – No biscuit block
255	IW – No inside wiring
256	IW – Bad inside wiring
257	Communications – Check last transaction
258	Communications – Error: Comm off line
259	Communications – No REC
260	Communications – No XMT
261	Communications – No XMT/No REC
262	Communications – Send error
263	Communications – Storm / Lightening damage
706	Communications – Vendor meet
708	Communications – Waiting for comms
709	Communications – Waiting for system to verify versions

Repair Code	Code Description
714	Communications – Add text
716	Communications - Reprovision
730	Satellite - Replaced transmitter
732	Satellite - Realigned dish
732	Satellite - Peak dish
731	Satellite - Dumped water transmitter
798	Communications - No trouble found
799	Communications - Add text

VSAT/IDU Repair Code	
264	IDU - Replaced pigtail
265	IDU - Reconfigured IDU
267	IDU - Relocated IDU
268	IDU - Reconfigured by SpaceNet
269	IDU - Mounted IDU
270	IDU - Installed IDU
271	IDU - Replaced IDU
272	IDU - Removed IDU
273	IDU - Installed power cord
274	IDU - Reset IDU
275	IDU - SpaceNet network issue
276	IDU - OPS rebuilt radius
277	VSAT Dish - Relocated
278	VSAT Dish - Removed
279	VSAT Dish - Replaced
280	VSAT Dish - Adjusted
281	VSAT Dish - Cleared obstruction
282	VSAT - Installed ODU
283	VSAT - Replaced ODU
284	VSAT - Removed ODU
285	VSAT - Installed LNB
286	VSAT - Replaced LNB

VSAT/IDU Repair Code	
287	VSAT - Removed LNB
288	CDMA - Reset Modem
289	CDMA - Reconfigured modem
290	CDMA - Tunnel is down (turn over to network group)
291	CDMA - Relocate antenna
292	CDMA - Install modem
293	CDMA - Replace modem
294	CDMA - Remove modem

ITR Repair Code	
901	Instant Ticket Reader - Reset scanner
902	Instant Ticket Reader - Calibrated
903	Instant Ticket Reader - Replaced
904	Instant Ticket Reader - Reseated scanner connection
905	Instant Ticket Reader - Replaced lens
907	Instant Ticket Reader - Tightened loose screws
997	Instant Ticket Reader - Replaced for customer satisfaction
998	Instant Ticket Reader - No trouble found
999	Instant Ticket Reader - Add text

TIM Repair Code	
500	TIM - Repaired broken plastic
501	TIM - Tightened loose hardware
514	TIM - Replaced power cord
518	Power supply - Replaced
520	TIM - Replaced comm's issue
521	TIM - Replaced bad touchscreen
522	TIM - Replaced bad LCD display
523	TIM - Replaced bad printer
524	TIM - Replaced bad doc scanner
525	TIM - Replaced broken printer door

TIM Repair Code	
526	TIM - Replaced Windows error message (Add text)
527	TIM - Replaced damaged by agent
528	TIM - Replaced bad ITR
529	TIM - Replaced keep resetting
530	TIM - Replaced broken plastic
531	TIM - Replaced will not boot into the application
532	TIM - Replaced unable to adjust
534	TIM - Reset
536	TIM - Plugged in power cord to TIM
542	TIM - AC bad ground (Add text)
543	TIM - Non-compliant AC
545	TIM - Replaced for customer satisfaction (Trouble with touchscreen)
546	TIM - Replaced for customer satisfaction (Trouble with display)
547	TIM - Replaced for customer satisfaction (Printer jams constantly)
548	TIM - Replaced for customer satisfaction (Doc scanner issue misreading)
549	TIM - Replaced for customer satisfaction (ITR issues misreading etc.)
550	TIM - Low voltage
595	TIM - Damaged by agent
596	TIM - Tightened loose screws
597	TIM - Replaced for customer satisfaction (Add text)
598	TIM - No trouble found
599	TIM - Replaced (Add text)

Printer Repair Code	
100	Printer - Replaced for missing print
102	Printer - Replaced add text
103	Printer - Rethreaded paper
105	Printer - Replaced, stops printing
108	Printer - Replaced for no lottery logo
109	Printer - Replaced for unique ID error

Printer Repair Code	
111	Printer - Replaced for short tickets
112	Printer - Replaced for paper jam
113	Printer - Adjusted cutter
119	Printer - Replaced for no cut
120	Printer - Replaced for bad sensors
121	Printer - Replaced for paper not advancing
126	Printer - Retracted cutter
127	Printer - Installed hardware
128	Printer - Adjusted release switch
129	Printer - Whole terminal replaced - Asset change
136	Printer - Cleared paper jam
138	Printer - Cleared cutter jam
155	Printer - Retrofit for print issue
164	Printer - Repaired mylar tab
165	Printer - Tightened loose gear
194	Printer - Cleaned print head
196	Printer - Tightened loose screws
197	Printer - Replaced for customer satisfaction
198	Printer - No trouble found
199	Printer - Adjusted C-clip

Doc Scanner Repair Code	
300	Doc Scanner - Replaced for no feed
301	Doc Scanner - No trouble found
302	Doc Scanner - Replaced for read problem
305	Doc Scanner - Tightened loose gear
306	Doc Scanner - Tightened loose screws
307	Doc Scanner - Replaced for no power
309	Doc Scanner - Replaced for broken pieces
311	Doc Scanner - Replaced for missing pieces
312	Doc Scanner - Replaced for no brand
315	Doc Scanner - Add text

Doc Scanner Repair Code	
319	Doc Scanner - Cleaned guides
320	Doc Scanner - Calibration complete
330	Doc Scanner - Cleaned lens
350	Brander - Cleaned brand head
360	Doc Scanner - Removed foreign object
365	Doc Scanner - Error: Invalid placement of tickets
366	Doc Scanner - Reinstalled spring clips
398	Doc Scanner - No trouble found

LCD Repair Code	
400	LCD - Replaced add text
401	LCD - Replaced no power
402	LCD - Adjusted border tape
403	LCD - Cleaned debris from inside of case
404	LCD - Plug in cable
405	LCD - Tightened screws
422	LCD - Adjusted contrast
424	LCD - Replaced blank
426	LCD - Replaced for dim display
428	LCD - Replaced for broken glass
429	LCD - Adjusted calibration
495	LCD - Replaced for customer satisfaction
498	LCD - No trouble found

Supplies Repair Code	
600	Supplies - Delivered
602	Technician - PM'd
603	PR visit
604	Technician - Operator instruct (add text)
605	Preventive maintenance - Agent refused
610	Technician - Store closed upon arrival

Supplies Repair Code	
612	Technician - Tech already there
616	Supplies - None needed
699	Technician - Problem resolved over phone (must clone with issue)

Flat Panel Display Repair Code	
1000	Flat Panel Display - No trouble found
1001	Flat Panel Display - Relocate
1002	Flat Panel Display - Removed
1003	Flat Panel Display - Replaced for customer satisfaction
1004	Flat Panel Display - Reseated cable
1005	Flat Panel Display - Replaced
1006	Flat Panel Display - Installed
1007	Flat Panel Display - Refused
1008	Flat Panel Display - Add text

Hard Drive Repair Code	
4000	Hard Drive - Replaced
4001	Hard Drive - Add text
4002	Hard Drive - Replaced for clicking
4003	Hard Drive - Replaced for customer satisfaction
4004	Hard Drive - Replaced for fatal exception
4005	Hard Drive - Replaced for illegal operations
4006	Hard Drive - Replaced for Windows error
4007	Hard Drive - Replaced for locked up TIM
4008	Hard Drive - Replaced updated revision
4099	Hard Drive - Replaced add text

SECTION 8
APPENDIX

Bill of Materials (BOM)

PCT Terminal Parts List

NOTE: Issue date of 09/12/2008.

Level	Part No.	Description	Qty
	FA84-0009	Final Assy - PA PAT	
1	BG65-0005	BUSHING, STRAIN RELIEF, HANDY BOX, 1/2 INCH KNOCK-OUT	1.00
1	BR20-0016	BRACKET(MOLDED),BCR CRADLE,WAVE PRINTER	1.00
1	BR30-0103	BRACKET (SHEET-FAB), CRS, DOOR LOCK SWITCH	1.00
1	BR30-0113	BRACKET (SHEET-FAB), CRS, ITVM DOOR SWITCH	1.00
1	BR30-0157	BRACKET (SHEET-FAB), CRS, ITVM UPS SUPPORT	1.00
1	BR30-0297	BRACKET(SHEET-FAB)BAR CODE SCANNER BRCKT	1.00
1	BR30-0301	BRACKET(SHEET-FAB),BRACKET, BILL SUPPORT	1.00
1	BR30-0303-01	BRACKET (SHEET-FAB),CABLE RESTRAINT A	6.00
1	BR30-0303-02	BRACKET (SHEET-FAB),CABLE RESTRAINT B	6.00
1	BR30-0303-03	BRACKET (SHEET-FAB),CABLE RESTRAINT C	6.00
1	BX60-0007	BOX, HANDY BOX, WITH 11 KNOCK-OUTS	1.00
1	BZ20-0051-03	BEZEL(MOLDED) ITVM CMPNNT INTRFC PMS354C	1.00
1	CA05-0516	ASSY, CABLE (DISCRETE), 4.7" DISPLAY, INTERIOR	1.00
1	CA05-0517	ASSY, CABLE (DISCRETE),4"SCANNER,ITVM	1.00
1	CA05-0518	ASSY, CABLE (DISCRETE),PRINTER,ITVM	1.00
1	CA05-0519	ASSY, CABLE (DISCRETE),BAR CODE READER	1.00
1	CA05-0520	ASSY, CABLE (DISC),ALARM DISABLE SWITCH,ITVM	1.00
1	CA05-0521	ASSY, CABLE (DISCRETE),SPARE SWITCH,ITVM	1.00
1	CA05-0522	ASSY, CABLE (DISCRETE),TILT_SWITCH,ITVM	1.00
1	CA05-0523	ASSY, CABLE (DISC),CASH_BOX_SWITCH,ITVM	1.00
1	CA05-0524	ASSY, CABLE (DISC),AUDIBLE_ALARM,ITVM	1.00
1	CA05-0525	ASSY, CABLE (DISCRETE),LOCK_SWITCH,ITVM	1.00
1	CA05-0526	ASSY, CABLE (DISC),BURSTER_RS-485,ITVM	1.00
1	CA05-0527	ASSY, CABLE (DISCRETE),BURSTER_POWER_ITVM	6.00
1	CA05-0528	ASSY, CABLE (DISC),FRONT_TOUCH_INT,ITVM	1.00

Level	Part No.	Description	Qty
1	CA05-0529	ASSY, CABLE (DISCRETE),FRONT_LIGHT,ITVM	1.00
1	CA05-0530	ASSY, CABLE (DISCRETE),MAG_CARD,ITVM	1.00
1	CA05-0532	ASSY, CABLE (DISCRETE),SPEAKERS,ITVM	1.00
1	CA05-0533	ASSY, CABLE (DISCRETE),UPS_AC_PWR,ITVM	1.00
1	CA05-0534	ASSY, CABLE (DISC),AC_DIRECT_POWER,ITVM	1.00
1	CA05-0535	ASSY, CABLE (DISCRETE),POWER_ON,ITVM	1.00
1	CA05-0536	ASSY, CABLE (DISCRETE),+12VDC_INPUT,ITVM	1.00
1	CA05-0537	ASSY, CABLE (DISCRETE),DVI_DISPLAY,ITVM	1.00
1	CA05-0538	ASSY, CBL(DISC),REPORT_SWITCH_INTRCNCT,ITVM	1.00
1	CA05-0539	ASSY, CABLE(DISC),KEY_LOCK_INTRCNCT,ITVM	1.00
1	CA05-0540	ASSY, CABLE(DISC),ETHERNET_INTRCNCT,ITVM	1.00
1	CA05-0541	ASSY, CABLE (DISCRETE),ETHERNET,ITVM	1.00
1	CA05-0542	ASSY, CABLE (DISCRETE),RF_RECEIVER_ITVM	1.00
1	CA20-0116	ASSY, CABLE (RIBBON),RS485_INTRCNCT,ITVM	1.00
1	CA60-0007	CORD, POWER, NEMA 5-15 TO OPEN LINE, 18AWG, SJT, BLACK	1.00
1	CD95-0010	CODE, SW, LICENSED SYSTEM, WINDOWS - XP EMBEDDED	1.00
1	CM60-0013	CAM,1IN LGTH,.625IN.HGHT,.287X.220DDHOLE	1.00
1	CM60-0014	CAM,2.5L,.75HT,OFFSET HOLE	1.00
1	CN85-0021	CONN, POWER, DUPLEX RECPT 2 POLE/3 WIRE, 5-15 AMP, BROWN	1.00
1	CV30-0052	COVER(SHEET-FAB),COVER, LED POWER SUPPLY	1.00
1	GU90-0018	GUIDE, 16 INCH THREE TRACK	9.00
1	HU20-0092	HOUSING (MOLDED),HSNG,FRONT,WAVE PRINTER	1.00
1	LG10-0007	LABEL (CUSTOM), CERTIFICATION, US TECH, FCC	1.00
1	LG10-0014	LABEL (CUSTOM), CERTIFICATION,CE,TUV NA	1.00
1	LG15-0005	LABEL (CUSTOM), IDENTIFICATION, UL/CSA MAIN GROUND	1.00
1	LG15-0021	LABEL (CUSTOM), PLAY CENTRAL 2, AC OUTLET LABEL	1.00
1	LG20-0045	LABEL (CUSTOM), INSTRUCTION, PA ITVM, BILL DENOMINATIONS	1.00
1	LG20-0046	LABEL (CUSTOM), INSTRUCTION, PA ITVM, BILL ORIENTATION	1.00
1	LG20-0136	LABEL (CUSTOM), INSTRUCTION,PA,MONEY,REMOVED	1.00
1	LG20-0137	LABEL (CUSTOM), INSTRUCTION,PA,ITVM,UI	1.00
1	LG20-0138	LABEL (CUSTOM), INSTRUCTION PA,ITVM,BRLE,AGE	1.00
1	LG25-0020	LABEL (CUSTOM), WARNING, POWER	1.00
1	LG25-0021	LABEL (CUSTOM), WARNING, COMPUTER ROOM	1.00
1	LG25-0022	LABEL (CUSTOM), WARNING, UPS	1.00
1	LL60-0021	KEY,ITVM,REPORT,BLUE DOT,KEYCODE TBD	1.00
1	LL71-0009	LOCK,REPORT,BLUE,K/A,2LEADS,KEYCODE TBD	1.00
1	LL72-0009	LOCKSET,CASH DR,K/D,2KYS,GREEN,KC TBD	1.00
1	LL73-0009	LOCKSET,ITVM,MASTERKEY,2KY,K/D,RED,KCTBD	1.00
1	LL75-0001	KEYCHAIN PA PATS	1.00

Level	Part No.	Description	Qty
1	NU73-0003	NUT, M3.5,W/KEP	4.00
1	NU74-0001	NUT, M4 KEP, HEX	8.00
1	PA20-0338	ASSY, PCB, INTERFACE,LUMI-LED BAR	1.00
1	PA20-0349	ASSY, PCB,INTF,BURSTER,RS485 SPLITTER	1.00
1	PE80-0006	UPS, 120V 300W 525VA 3 OUTLET PHONE LINE SURG W/SERIAL PORT	1.00
1	PG90-0001	PLUG, HOLE, BLACK, .375 DIA HOLE	1.00
1	PG90-0002	PLUG, RECEPTACLE SAFETY	2.00
1	PS60-0020	POWER SUPPLY, SWITCHING 24V/2A max	1.00
1	PS90-0008	POWER SUPPLY, 12VDC 500MA WALL MOUNT W/2.1MM POWER CONN	1.00
1	RH55-0009	READ HEAD, MAG CARD,(DUNK),USB	1.00
1	**SA05-0151**	**ASSY, COMPARTMENT,ELEC DRAWER,ITVM**	1.00
. 2	AU45-0005	SPEAKER (CUSTOM),ASSY,BJC	1.00
. 2	CM60-0014	CAM,2.5L,.75HT,OFFSET HOLE	1.00
. 2	DV60-0017	DRIVE,HARD DISK,40GB OR GREATER,SATA2.5"	1.00
. 2	SA90-0362	ASSY,FAN, ITVM/FN70-0020	1.00
. 2	IC78-0208	MEMORY MODULE,512MB,DDR SDRAM,184PIN DIM	1.00
. 2	LL74-0001	LOCK,ITVM,ELECTRONICS TRAY,K/A,KC TBD	1.00
. 2	MM65-0001	CHANNEL, plastic drawer slide BJCA	3.00
. 2	PA20-0347	ASSY,PCB,INTERFACE,INTERNAL BACKPLANE	1.00
. 2	PA20-0348	ASSY, PCB, INTERFACE,IN A BOX,ITVM	1.00
. 2	PA50-0026-01	ASSY, MB ENGINE 1.5G 855GME W/NO MEMORY	1.00
. 2	PS60-0019	POWER SUPPLY, SWITCHING 220W	1.00
. **2**	**SA15-0391**	**ASSY, DISPLAY,CLERK,ITVM**	1.00
. . 3	BL70-0023	BALLAST, BL INVTR,CCFL,12V/4W/635VrmsMax	1.00
. . 3	BZ20-0049-01	BEZEL(MOLDED)BEZEL,CLERK DISPLAYPMS 426C	1.00
. . 3	PA20-0321	ASSY, PCB, INFCE,4.7",INTER.,W/4WIRE TCH	1.00
. . 3	PT20-0022	PLATE (MOLDED),PLATE, CLERK DISPLAY	1.00
. . 3	**SA15-0377**	**ASSY, DISPLAY, 4.7 w/touch Kyocera**	1.00
. . 3	SC56-0061	SCREW, #6-19 X 3/8? PLASTITE PAN PHILLIPS	4.00
. . 3	SC72-0003	SCREW, M2.5 X 4MM, PPH, ZINC	2.00
. . 3	SC73-0002	SCREW, M3 X 4MM PPH, Z	4.00
. 2	SC73-0002	SCREW, M3 X 4MM PPH, ZINC PL	4.00
. 2	SC74-0019	SCREW, M4X6,PH,MACHINE	4.00
. 2	SF60-0030	STANDOFF, NYLON 1/4, SNAP-IN .156 DIA	1.00
. 2	SY35-0028	TRAY (SHEET-FAB),ELECTRICAL COMPARTMENT	1.00
. 2	SY35-0029	TRAY (SHEET-FAB),ELECTRONICS TRAY	1.00
1	**SA05-0152**	**ASSY, COMPARTMENT,ITVM 2008 BURSTER TRAY**	6.00
. 2	BR30-0303-03	BRACKET (SHEET-FAB),CABLE RESTRAINT COVER	6.00
. 2	CV30-0038	COVER (SHEET-FAB), ITVM, BURSTER CABLE COVER	6.00

Level	Part No.	Description	Qty
. 2	LL80-0012	LATCH,A3 SLIDE	12.00
. 2	PA20-0350	ASSY, PCB, INTFCE,BURSTER,RS485 LOOPBACK	6.00
. 2	PT30-0171	PLATE(SHEET-FAB)PLATE,BURSTER TRAY FRONT	6.00
. 2	RL10-0022	ROLLER (MACHINED), ITVM TICKET	6.00
. 2	SA90-0286-01	ASSY, INSTANT TICKET BURSTER-IF COM ELECTRONICS, MILLED-OUT	24.00
. . 3	BE70-0001	BEARING, SLEEVE, BRONZE, ID1/4IN/OD3/8IN X 1/4IN, FLANGED	120.00
. . 3	CA05-0475	ASSY,CABLE,8.5IN STEP MOTOR,NON RoHS	24.00
. . 3	CA40-0025	ASSY,CABLE,FROM MT60-0002; NON-RoHS	24.00
. . 3	CH20-0004-01	CHASSIS (MOLDED), NORYL, ITD MAIN, I/F COM BOARD, MILLED-OUT	24.00
. . 3	CL60-0005	CLAMP, CABLE, 3/4IN X 3/4IN, ADHESIVE, ABS, 4-WAY MOUNT	24.00
. . 3	CV20-0027	COVER (MOLDED), IF/COM BURSTER, SWITCH	24.00
. . 3	CV20-0029	COVER (MOLDED), IF-COM BURSTER, PCB	24.00
. . 3	GE14-0002	GEAR (MACHINED), SPUR, ALUM 12 TEETH, 32PITCH, 5MM BORE	24.00
. . 3	GE24-0007	GEAR (MOLDED), SPUR, DELRIN, ITD CAM	24.00
. . 3	GE24-0008	GEAR (MOLDED), SPUR, DELRIN, ITD CLUTCH	24.00
. . 3	GE24-0009	GEAR (MOLDED), SPUR, DELRIN, ITD IDLER	24.00
. . 3	GE24-0010	GEAR (MOLDED), SPUR, DELRIN, ITD DRIVE	48.00
. . 3	MT60-0002	MOTOR, STEPPER, 1.65IN SQ, SINGLE SHAFT, W/ 6 12IN LEADS	24.00
. . 3	PA70-0006	PCB, OEM INTERFACE, IF COM BUSTER ELECTRONICS	24.00
. . 3	PN65-0003	PIN, DOWEL, SS, 3/32IN OD X 1/2IN LG	48.00
. . 3	PT20-0009	PLATE (MOLDED), NORYL, ITD DEFLECTOR	24.00
. . 3	PT20-0010	PLATE (MOLDED), DELRIN, ITD CAM	24.00
. . 3	PT30-0127	PLATE (SHEET-FAB), SS, ITD, 85 DEGREE SEPERATOR	24.00
. . 3	RL10-0019	ROLLER (MACHINED), URETHANE, PRESSURE	24.00
. . 3	RL10-0020	ROLLER (MACHINED), URETHANE, FEED	48.00
. . 3	RR60-0003	E-RING, 1/8 ID .094 OD .230 .015 THK	24.00
. . 3	RR60-0007	E-RING, STEEL, 1/4IN SHAFT	96.00
. . 3	RR60-0008	E-RING, 3/16 ID .145, OD .335, .025 TKH	48.00
. . 3	SC54-0013	SCREW, #4-24 X 1/4 PPH HI-LOW	144.00
. . 3	SC73-0001	SCREW, M3 X 6MM PPH, ZINC PL	72.00
. . 3	SG20-0005	SPRING (CUSTOM), EXTENSION, BURSTER, ITVM	24.00
. . 3	SG60-0008	SPRING, COMPRESSION, MUSICWR, OD.188 X LG.31 X .030 WIRE DIA	48.00
. . 3	TW60-0001	TIE WRAP, NYLON, 3.9IN, .10 IN WIDTH, .87 IN MAX DIA	24.00
. . 3	WA90-0128	WASHER, NYLON .265 ID, .500 OD, .015 THICK	48.00
. 2	SC54-0036	SCREW, #4 X 1/4 PHIL PAN HD TYPE B, ZINC PL STEEL	12.00
. 2	SC56-0013	SCREW, #6- 32 X 3/4 PPH MS ZINCE PL SEM EXTERNAL	12.00
. 2	SC58-0031	SCREW, #8-32X1/4 MACHINE SCREW	24.00
. 2	SP60-3629	SPACER,1/4"OD,.166ID,1/8"L,NYLON6/6	12.00
. 2	SY35-0032	TRAY (SHEET-FAB),TRAY, BURSTERS	6.00

Level	Part No.	Description	Qty
1	**SA10-0348**	**ASSY,2008 ITVM,PA MAIN DOOR BEZEL 19"DP**	1.00
. 2	BR30-0299	BRACKET (SHEET-FAB),BRACKET, CCD SCANNER	1.00
. 2	BZ20-0050-03	BEZEL (MOLDED) ITVM MAIN PMS 354C	1.00
. 2	BZ20-0052-02	BEZEL (MOLDED) ITVM UPPER DSPLY PMS 108U	1.00
. 2	BZ20-0053-02	BEZEL(MOLDED)ITVM CUSTOMERDISPLAYPMS108U	1.00
. 2	BZ20-0054-02	BEZEL(MOLDED)ITVMTICKET BINACCENTPMS108U	1.00
. 2	FS60-0007	FASTENER, 1/4 TURN STUD,WING HEAD	1.00
. 2	FS65-0004	FASTENER, 1/4 TURN REC	1.00
. 2	FS90-0007	FASTENER,RETAINER FOR 1/4 TURN	1.00
. 2	HK20-0014	HANDLE(MOLDED)HANDLE ITVM GRAPHIC PANNEL	8.00
. 2	LG30-0082	LOGO (CUSTOM),PA ITVM ADVERTISING DISPLAY	1.00
. 2	PA20-0338	ASSY, PCB, INTERFACE,LUMI-LED BAR	1.00
. 2	PL30-0020	PANEL(SHEET-FAB)PLATEADVERTISING DISPLAY	2.00
. 2	PT30-0167	PLATE (SHEET-FAB),PLATE, DOOR DEFLECTOR	1.00
. 2	PT30-0169	PLATE(SHEET-FAB),PLATE, UPPER DOOR COVER	1.00
. 2	PT30-0170	PLATE(SHEET-FAB)PLATE,UPPER LED MOUNTING	1.00
. 2	**SA10-0349**	**ASSY,2008 ITVM LIGHT BOX,PA**	1.00
. 2	SC54-0036	SCREW, #4 X 1/4 PHIL PAN HD TYPE B, ZINC PL STEEL	12.00
. 2	SC56-0013	SCREW, #6- 32 X 3/4 PPH MS ZINCE PL SEM EXTERNAL	12.00
. 2	SC58-0031	SCREW, #8-32X1/4 MACHINE SCREW	24.00
. 2	SP60-3629	SPACER,1/4"OD,.166ID,1/8"L,NYLON6/6	12.00
. 2	SY35-0032	TRAY (SHEET-FAB),TRAY, BURSTERS	6.00
. . 3	CA05-0495	ASSY, CABLE (DISCRETE), LEDS PWR, SHORT	3.00
. . 3	PA20-0338	ASSY, PCB, INTERFACE,LUMI-LED BAR	3.00
. . 3	SC74-0020	SCREW,M4X8,PHIL.,PH,ZP,STL,	12.00
. 2	**SA15-0390**	**ASSY, DISPLAY,19INCH, W/ 5WIRE RES TOUCH**	1.00
. . 3	AD60-0015	TAPE, ADHESIVE, 10 MIL, CLEAR VHB 3M#F9473PC, 1/2IN, 60 YDS	0.03
. . 3	BR30-0298	BRACKET(SHEETFAB)BRCT I-INC LCD MOUNTING	1.00
. . 3	DM80-0013	MONITOR, 19IN ACT MATRIX TFT 1280 X 1024	1.00
. . 3	PA20-0313-01	ASSY, PCB, INTERFACE,5 WIRE TO SERIAL	1.00
. . 3	SC73-0004	SCREW, M3 X 5 SEM PPH, ZINC PL, W/INT TOOTH WASHER 6.3MM OD	2.00
. . 3	SC73-0034	SCREW,M3 x 12 PAN HD, CROSS RECESS	4.00
. . 3	SC74-0020	SCREW,M4X8,PHIL.,PH,ZP,STL,	2.00
. . 3	TS70-0017	TOUCHSCREEN, FLAT-PANEL,19IN, 5 WIRE RESISTIVE	1.00
. . 3	SC54-0069	SCREW #4 SHOULDER 440 THREAD 1/8SD 1/2SL	8.00
. 2	SC56-0011	SCREW, #6-19 X 1/4 PLASTITE, PST PPH	12.00
. 2	SC60-0020	SCREW, #10X3/8,HIGH-LOW ZINC PLATED	22.00
. 2	SC64-0002	SCREW, #14X1/2PPH,HI-LO,ZINC PLATED	16.00
. 2	SC74-0020	SCREW,M4X8,PHIL.,PH,ZP,STL,	10.00

Level	Part No.	Description	Qty
. 2	SG60-0172	SPRING, COMPRESSION 9/16L .240OD .022WD	8.00
. 2	TW85-0018	TUBING,SPLIT_HARNESS_3FT LENGTH,ITVM	1.00
1	**SA10-0350**	**ASSY,ITVM CABINET ,W/DOOR,4IS,BILL ACC,PMS TBD,**	1.00
. 2	MM60-0002	CASTER, ITVM RETRACTABLE	4.00
1	**SA25-0017**	**ASSY, PRINTER,2008 ITVM**	1.00
. 2	BG90-0002	BUSHING, FLX-P BRUSHES, FLX-10, 4 IN LENGTH, FIBER-COND ARC	1.00
. 2	BR30-0300	BRACKET(SHEET-FAB)BRACKETPRINTERSUPPORT	1.00
. 2	GU30-0027	GUIDE (SHEET-FAB), EXTREMA CX MYLAR PRINTER	1.00
. 2	HU20-0086	HOUSING (MOLDED), Printer Main BJCA	1.00
. 2	PA20-0300	ASSY, PCB, INTERFACE,USB FOR FUJITSU PRINTER	1.00
. 2	PR60-0006	PRINTER, LINE 82 1/2 MM THERMAL, FULL CUT	1.00
. 2	RL20-0008	ROLLER (MOLDED), Printer Assembly BJCA	1.00
. 2	RR60-0008	E-RING, 3/16 ID .145, OD .335, .025 TKH	2.00
. 2	SC54-0013	SCREW, #4-24 X 1/4 PPH HI-LOW	5.00
. 2	SC73-0005	SCREW, M3 X 6 SEMS, INT TOOTH PHIL PAN HEAD ZINC PL	2.00
. 2	SH10-0034	SHAFT (MACHINED), Printer Mounting BJCA	1.00
1	**SA30-0045-02**	**ASSY, READER,WAVE,BAR CODE READER,BUY**	1.00
. 2	AD45-0005	ADHESIVE(CUSTOM CUT),WAVE,BCR SPEAKER	1.00
. 2	AD60-0004	TAPE, ADHESIVE, VHB, DBL SIDE, 1/4 IN X .010 IN	0.08
. 2	BG90-0041	SE6700 SYMBOL READER RUBBER SHOCK MOUNT	1.00
. 2	BU20-0005	BUTTON (MOLDED),BUTTON,WAVE BCR	1.00
. 2	BY45-0003	BATTERY(CUSTOM),LITHIUM,WAVE PRINTER	1.00
. 2	BZ20-0041	BEZEL (MOLDED),LENS SHADE,WAVE BCR	1.00
. 2	BZ20-0042	BEZEL (MOLDED),TRIM PAD,RIGHT,WAVE BCR	1.00
. 2	BZ20-0043	BEZEL (MOLDED),TRIM PAD LEFT,WAVE BCR	1.00
. 2	CA30-0021	ASSY, CABLE (FLAT FLEX),30POS,.5MM,WAVE	1.00
. 2	HU20-0087	HOUSING (MOLDED),HOUSING,RIGHT,WAVE BCR	1.00
. 2	HU20-0088	HOUSING (MOLDED),HOUSING LEFT,WAVE BCR	1.00
. 2	LG25-1074	LABEL (CUSTOM), WARNING,BATTERY,ENGLISH	1.00
. 2	LN40-0013-01	LENS(CUSTOM),BCR LENS,WAVE BCR,W/ADHESIV	1.00
. 2	MM75-0050	GASKET,SINGLE SIDE ADHESIVE,PORON BCR BATTERY PAD	2.00
. 2	MS60-0005	ADHESIVE, LOCTITE 401	0.01
. 2	PA20-0319	ASSY, PCB, INTERFACE,CPU_RF_BATTERY_CH	1.00
. 2	RH65-0021	READ HEAD, OPTICAL,MOTOROLA PL6700	1.00
. 2	SC73-0006	SCREW, M3, X 10 PAN HD PHIL ZINC PL	3.00
. 2	SG60-0170	SPRING, COMPRESSION,Century Spring,10130	1.00
1	**SA30-0047-02**	**ASSY, READER,4IN SCANNER,RT2,BLACK PLASTIC**	1.00
. 2	CV20-0066	COVER (MOLDED), SCANNER BOTTOM BJCA	1.00
. 2	GU20-0091-01	GUIDE (MOLDED),SCANNER INLET,BJCA,BLACK	1.00

Level	Part No.	Description	Qty
. 2	NU56-0001	NUT, #6-32 KEPS, HEX, ZINC PL	4.00
. 2	PA20-0299	ASSY, PCB, INTERFACE,,4INCH SCANNER ,BF531 PROCESSOR	1.00
. 2	RR90-0147	RING, RETAINING 1/4 trn southco	1.00
. 2	**SA30-0026-05**	**4IN SCANNER, US-I/F COM,EXT.BRAND WIR USB**	1.00
. . 3	BE70-0007	BEARING, SLEEVE, OILITE, OD3/8IN X ID1/4IN X 3/16IN	4.00
. . 3	CA05-0136	ASSY, CABLE (DISCRETE), SCANNER DOCUMENT INPUT SENSOR	1.00
. . 3	CA05-0475-01	ASSY, CABLE,stepping motor 10.6"NONRoHS	1.00
. . . 4	CA40-0025	ASSY,CABLE,FROM MT60-0002; NON-RoHS	1.00
. . 3	CA30-0004-01	ASSY,CABLE(FLAT FLEX),PERH.IMG,4IS,8.5"	1.00
. . 3	CH20-0001-01	CHASSIS (MOLDED), 4IN SCANNER MAIN, US	1.00
. . 3	CL60-0020	CLAMP, CABLE, NYLON, SPLIT FLAT	1.00
. . 3	GE24-0005	GEAR (MOLDED), SPUR, DELRIN, 60T 48P, 1/4 BORE, 4IN SCANNER	2.00
. . 3	GE24-0006	GEAR (MOLDED), SPUR, DELRIN, 60T 48P 5MM BORE, 4IN SCANNER	1.00
. . 3	GU20-0020-02	GUIDE (MOLDED), LEXAN, 4IN SCANNER SCANHEAD MTG, PIC, US	1.00
. . 3	GU20-0023	GUIDE (MOLDED), POLYCARBONATE, 4IN SCANNER UPPER	1.00
. . 3	GU30-0031	GUIDE (SHEET-FAB), 4IN SCANNER READ HEAD	4.00
. . 3	ID65-0020	INDUCTOR, FERRITE CORE,INDUCTOR, FLAT RIBBON CABLE	2.00
. . 3	MT60-0002	MOTOR, STEPPER, 1.65IN SQ, SINGLE SHAFT, W/ 6 12IN LEADS	1.00
. . 3	PA25-0013	ASSY, PCB, ADAPTER, MINI TERMINAL READER INPUT SENSOR	1.00
. . 3	PH60-0001-02	PRINT HEAD, THERMAL,96DOT,24MM,100DPI,7"	1.00
. . 3	PN65-0001	PIN, DOWEL, SS, OD1/8IN X 3/8IN	2.00
. . 3	PT20-0005	PLATE (MOLDED), DELRIN, 4IN SCANNER PRINTHEAD SUPPOR	1.00
. . 3	PT30-0040	PLATE (SHEET-FAB), CRS, 8IN SCANNER MAGNET LATCHING	2.00
. . 3	PT30-0166	PLATE (SHEET-FAB),BRANDHEAD SPACER,040	1.00
. . 3	PT60-0002	PLATE, BARIUM FERRITE, MAGNET W/CENTER HOLE	4.00
. . 3	PT60-0003	PLATE, ZINC PLATED STEEL, MAGENT POLE PIECE W/CENTER HOLE	4.00
. . 3	RH65-0009	READ HEAD, OPTICAL, ANALOG, 88MM, 200DPI, +5V	1.00
. . 3	RL10-0017	ROLLER (MACHINED), NITRILE, 4IN SCANNER DRIVE	2.00
. . 3	RL10-0018	ROLLER (MACHINED), DELRIN, 4IN SCANNER PRESSURE	2.00
. . 3	RR60-0007	E-RING, STEEL, 1/4IN SHAFT	2.00
. . 3	RR90-0006	RING, RETAINING, CIRCULAR PUSH-ON	2.00
. . 3	SA90-0024-03	ASSY,4in scanner USB, brander pressure	1.00
. . . 4	CA05-0137-02	ASSY,CABLE(DISCRETE),SCNR,BRAND MOTOR, 6.3" LENGTH	1.00
. . . 4	GE24-0003	GEAR (MOLDED), SPUR, DELRIN, 4IN SCANNER COMPOUND	2.00
. . . 4	GE24-0004	GEAR (MOLDED), SPUR, DELRIN, 4IN SCANNER, W/CAM	1.00
. . . 4	PT20-0004-L	PLATE (MOLDED), POLYCARB, 4IN SCANNER BRANDER GEARING, LEFT	1.00
. . . 4	PT20-0004-R	PLATE (MOLDED), POLYCARB, 4IN SCANNER BRANDER GEARING, RIGHT	1.00
. . . 4	SC54-0009	SCREW, #4-40 X 1/4 TYPE SWAGEFORM PHILLIPS PAN HD, ZINC	5.00
. . . 4	SC54-0027	SCREW, #4-40 X 1/4 IN PPH SEM	2.00

Level	Part No.	Description	Qty
. . . 4	SH10-0018	SHAFT (MACHINED), SS, 4IN SCANNER BRANDER CAM	1.00
. . . 4	TW60-0002	TIE WRAP, NYLON, 7.9IN, .19 WIDTH, 1.75 MAX DIA	1.00
. . 3	SC52-0008	SCREW, #2 X 1/4, PFH SHEETMETAL, SS	4.00
. . 3	SC54-0009	SCREW, #4-40 X 1/4 TYPE SWAGEFORM PHILLIPS PAN HD, ZINC	2.00
. . 3	SC54-0013	SCREW, #4-24 X 1/4 PPH HI-LOW	2.00
. . 3	SC54-0047	SCREW, #4-20 X 1/4, PFH HI-LO, ZINC PL	2.00
. . 3	SC56-0006	SCREW, #6-32 X 3/16IN, HEX SOCKET, BLACK OXIDE, CUP PT, SET	3.00
. . 3	SC56-0007	SCREW, #6-19 X 3/8 PHIL HD BLUNT PT STEEL ZINC PL TY PE H-L	1.00
. . 3	SC73-0005	SCREW, M3 X 6 SEMS, INT TOOTH PHIL PAN HEAD ZINC PL	4.00
. . 3	SG20-0004	SPRING (CUSTOM), EXTENSION, MUSIC WIRE, 4IN SCANNER BRANDER	2.00
. . 3	SG40-0007	SPRING (CUSTOM), MW, 4IN SCANNER PRESSURE ROLLER	2.00
. . 3	SG60-0007	SPRING, COMPRESSION	2.00
. . 3	TW60-0001	TIE WRAP, NYLON, 3.9IN, .10 IN WIDTH, .87 IN MAX DIA	3.00
. . 3	TW60-0004	TIEWRAPLCKNG NYLN 8"L .10"W NATURAL2.0 D	1.00
. . 3	WA56-0007	WASHER, #6 .375 O.D. X .156 I.D. X .049 THK, TYPE A PLAIN	2.00
. . 3	WA90-0013	WASHER, THRUST ID.255 X OD.375 X .005THK, STAINLESS STL	2.00
. . 3	WA90-0128	WASHER, NYLON .265 ID, .500 OD, .015 THICK	2.00
. 2	SC54-0013	SCREW, #4-24 X 1/4 PPH HI-LOW	5.00
. 2	SC56-0027	SCREW, #6-32 X 1/2IN SEM, PPH, W/EXT STAR WASHER CHAMFER PT	4.00
. 2	SC90-0314-01	SCREW, 1/4 trn thmb Southco 82-12-320-16	1.00
. 2	SG60-0169	SPRING, COMPRESSION Southco 43-13-1-24/5	1.00
. 2	TW60-0001	TIE WRAP, NYLON, 3.9IN, .10 IN WIDTH, .87 IN MAX DIA	2.00
1	**SA90-0031-01**	**ASSY, ITVM TILT SWITCH, GEN 2**	1.00
. 2	AU70-0002	ALARM, SONALERT, 80-95 DB, 6-16V, 6-22MA, 2900 HZ CONTINUOUS	1.00
. 2	BR30-0102	BRACKET (SHEET-FAB), CRS, TILT SWITCH	1.00
. 2	NU56-0001	NUT, #6-32 KEPS, HEX, ZINC PL	2.00
. 2	NU56-0002	NUT, #6-32, HEX, NYLON	2.00
. 2	SC56-0020	SCREW, #6-32 X 1/4IN SEM, PPH, W/EXT STAR WASHER CHAMFER PT	2.00
. 2	SC56-0032	SCREW, #6- 32 X 7/16 PAN HD SLOT, NYLON	2.00
. 2	SC75-0001	SCREW, M5 X .8 X 12MM, SET	1.00
. 2	SP30-0004	SPACER (SHEET-FAB), ITVM TILT SWITCH BRACKET	1.00
. 2	SW90-0004-01	SWITCH, TILT, PENDULUM HANGER	1.00
. 2	SW90-0004-02	SWITCH, TILT, WIRE, PENDULUM ROD	1.00
. 2	SW90-0004-03	SWITCH, TILT, CONTACT RING	1.00
. 2	SW90-0004-04	SWITCH, TILT, TILT BOB	1.00
1	SA90-0032-02	ASSY, ITVM, RF RECIEVER, GEN 2	1.00
. 2	CA05-0178	ASSY, CABLE (DISCRETE),RF RECEIVER, TILT, ALARM	1.00
. 2	CE85-0014	COMM EQUIPMENT, 4 POSITION RELAY FUNCTION MODULE, 418 MHZ	1.00
. 2	CE85-0015	COMM EQUIPMENT, KEYFOB TRANSMITTER, 4 BUTTON, 418 MHZ	1.00

Level	Part No.	Description	Qty
1	SA90-0034	ASSY, ITVM PHONE AND DATA JACK	1.00
. 2	BR30-0117	BRACKET (SHEET-FAB), ITVM, DATA/PH JACK	1.00
. 2	PA25-0016	ASSY, PCB, ADAPTER, ITVM DATA PORT	1.00
. 2	SC56-0009	SCREW, #6-32 X 3/8IN, INTERNAL SEM PPH	2.00
1	**SA90-0035-03**	**ASSY,ITVM PACKAGING,2008 ITVM**	1.00
1	SA90-0350-02	ASSY,BCR CABLE TO PCB EXTENDED	1.00
	SA90-0363	ASSY,HUBBEL_EXT_TO_AC_POWER_RECEPTACLE	1.00
1	SC54-0024	SCREW,#4-20 X 1/4 PPH, PLASTITE, ZINC PL	2.00
1	SC73-0002	SCREW, M3 X 4MM PPH, ZINC PL	2.00
1	SC74-0019	SCREW, M4X6,PH,MACHINE	10.00
1	SC76-0002	SCREW, M6X12	4.00
1	SH10-0039	SHAFT (MACHINED)SHAFT PAPER ROLL SUPPORT	1.00
1	SP60-3628	SPACER,PLASTIC UNTHR.,.75OD,.385"OD,3"L	2.00
1	SW62-0019	SWITCH, PUSH BUTTON MOMENTARY, SPDT, PANEL MOUNT	3.00
1	SY30-0001	SHELF (SHEET-FAB),TRAY, TICKET	1.00
1	SY35-0030	TRAY (SHEET-FAB),SCANNER TRAY	1.00
1	SY35-0031	TRAY (SHEET-FAB),BILL ACCEPTOR TRAY	1.00
1	TM60-0012	FASTON, QUICK DISCONNECT, MALE, 18-22AWG, 187MIL X 20MIL	2.00
1	TW60-0014	TIE WRAP, ITVM, 36IN L, 11IN BNDLE DIA, 175# TEN., OFF WHITE	1.00
1	VL70-0020	VALIDATOR, BILL, USA, GPT AURORA	1.00
1	VL75-0009	CASSETTE,BILL,GPTAURORA1000BILL,KEYALIKE	1.00
1	WA64-0001	WASHER, .281ID,1"ID,.06THK,STAINLESS STL	4.00
1	WA90-0134	WASHER,CUP,NYLON,#4,.245 DIA.,	2.00

8.1 Schematics

8.1.1 Network Schematic

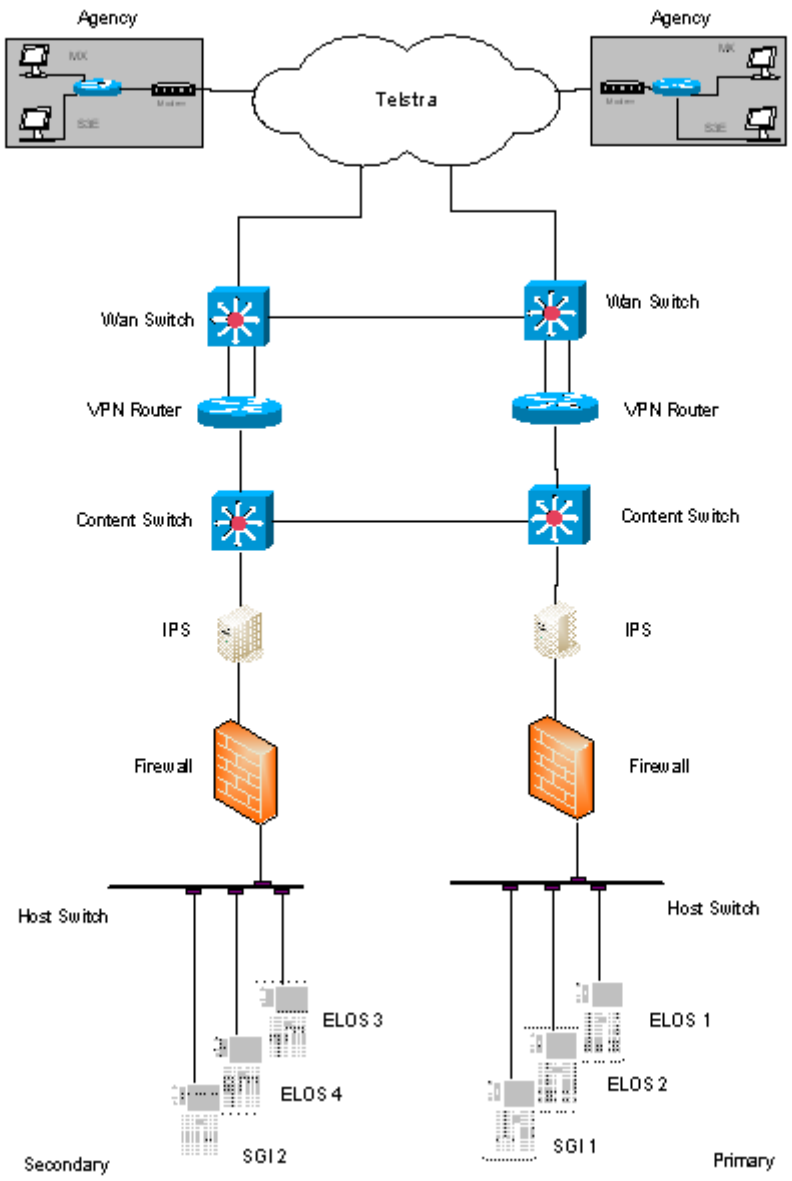

Figure 125: Network Schematic

8.2 Mechanical Drawings

8.2.1 Paper Roll Specification

Dimensions and tolerances associated with the printer roll are shown in the following diagram:

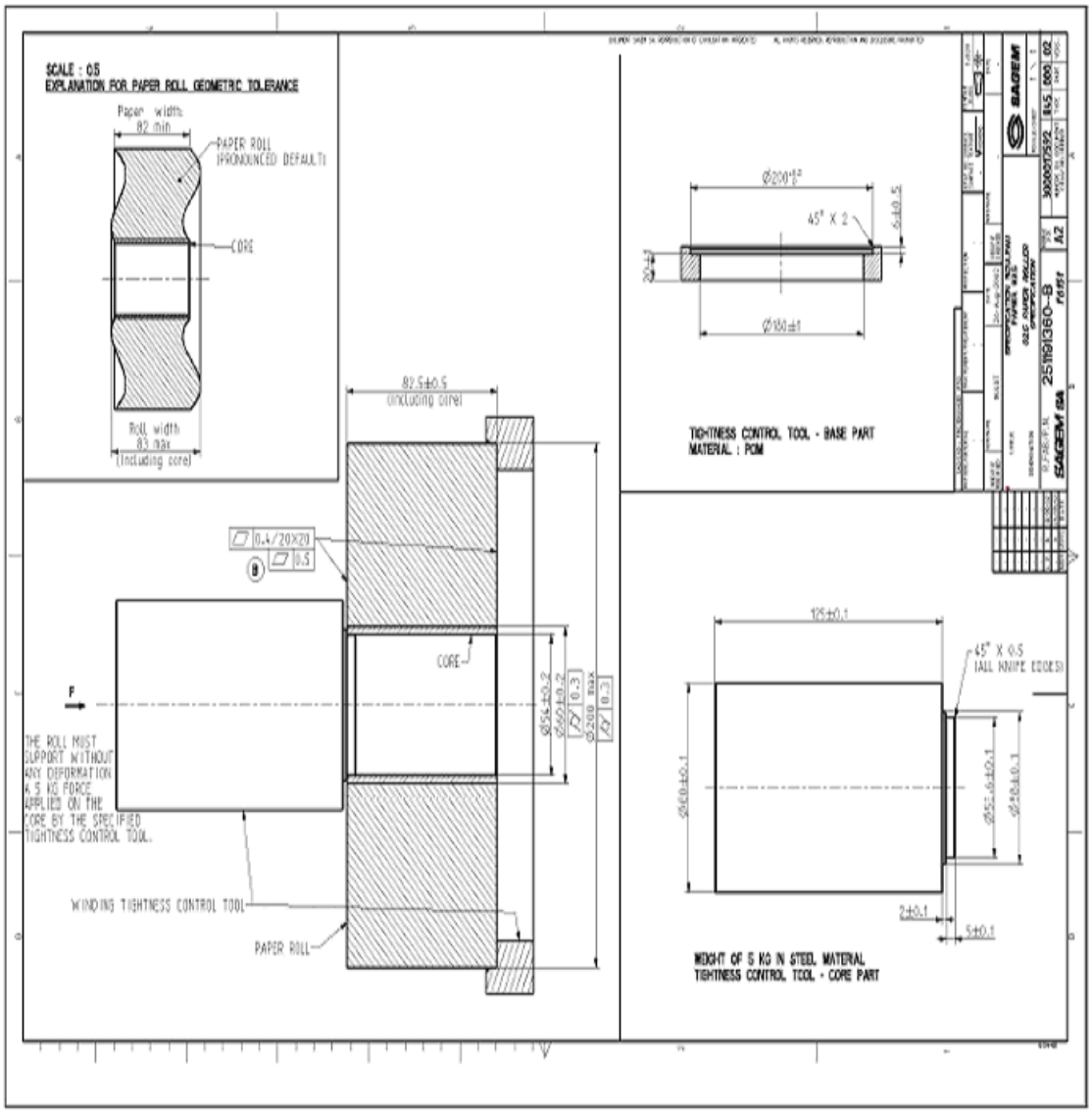

Figure 126: Printer Paper Roll Dimensions and Tolerances

8.2.2 PCT Block Diagram

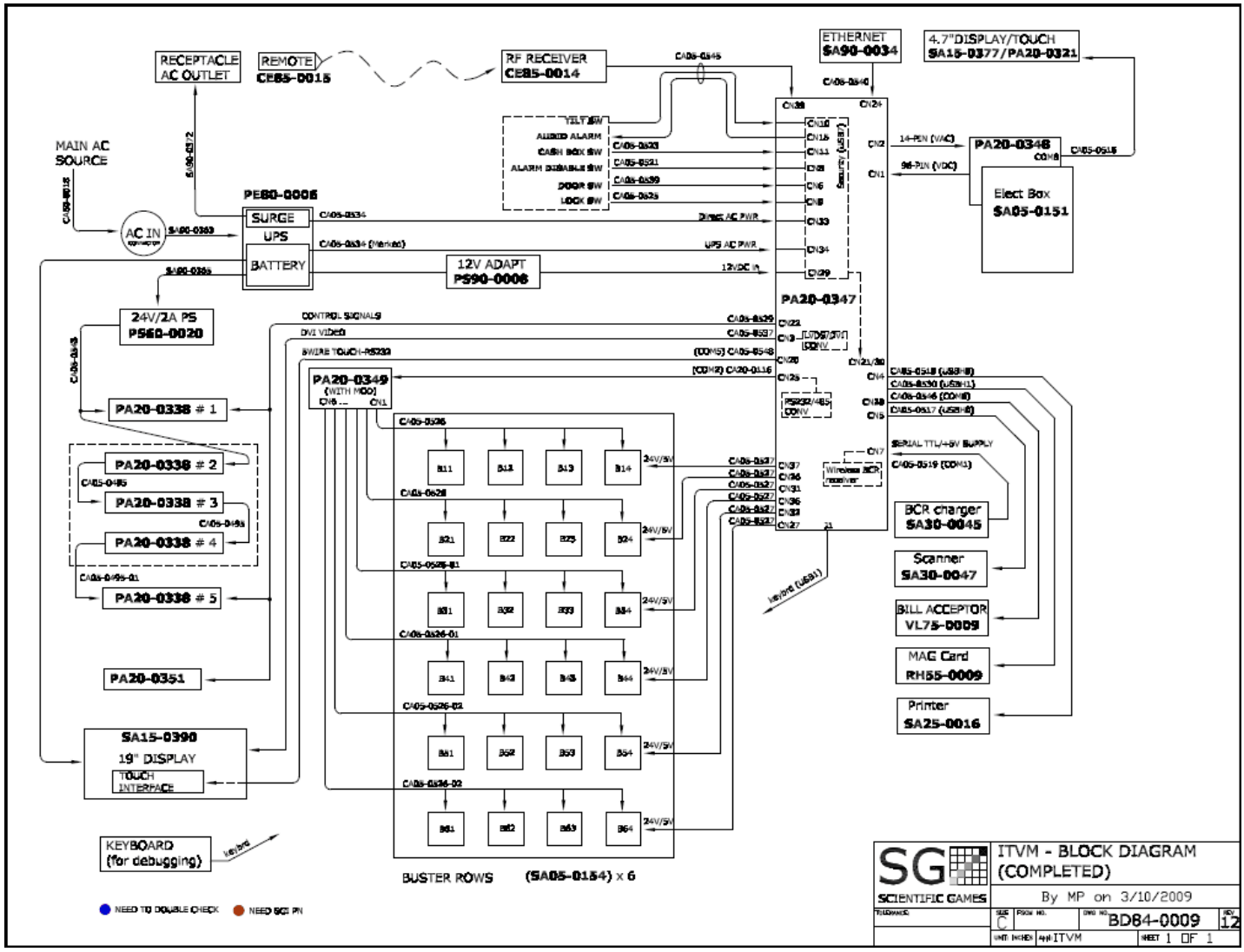

Figure 127: PCT Block Diagram

8.2.3 Interface Board Wiring Diagram

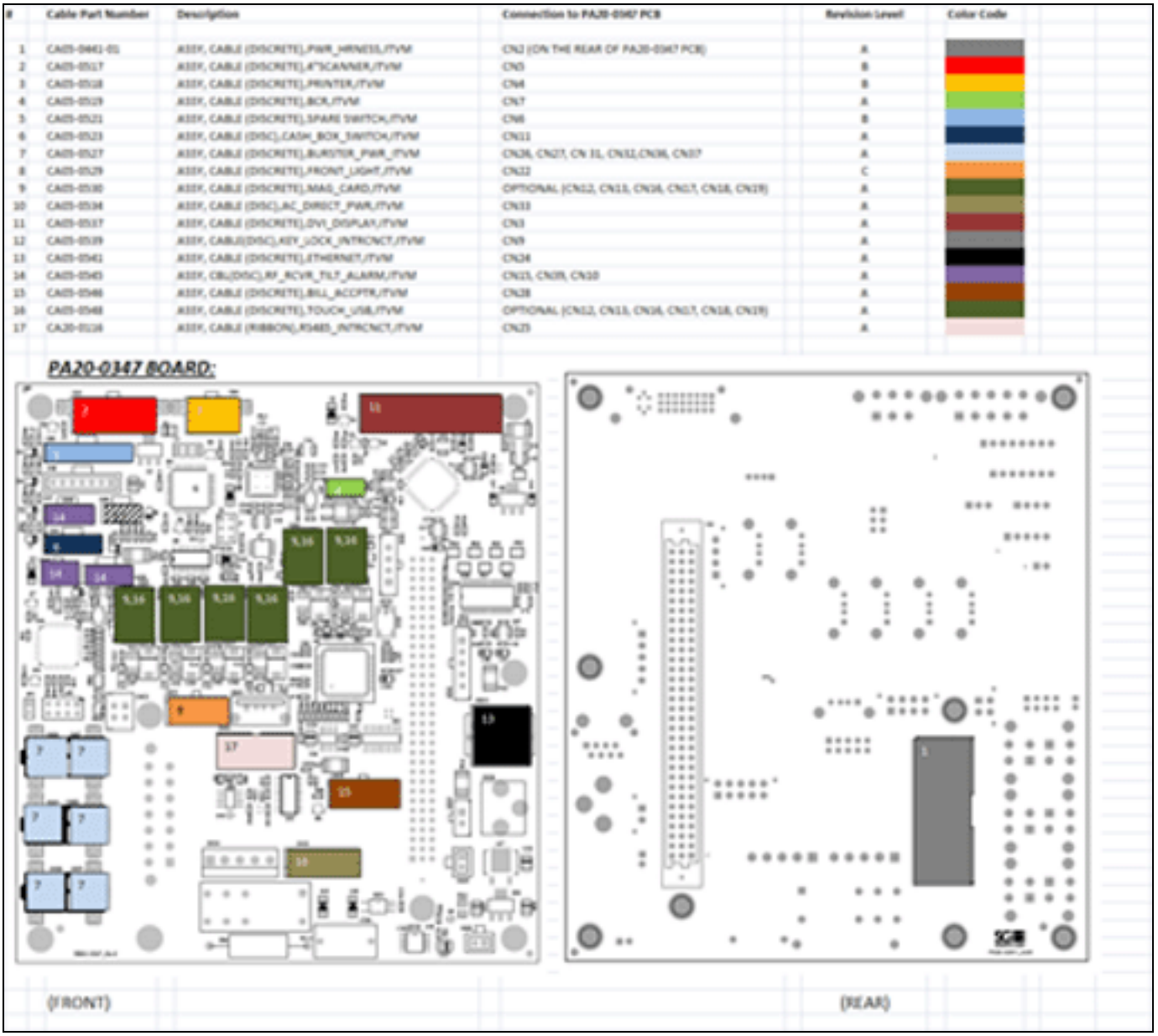

Figure 128: PCT Interface Board Wiring Diagram

8.2.4 Barcode Reader Initialization Functions

Figure 129: Sample Barcode - Enable Parameter Scanning

Figure 130: Sample Barcode - Set All Defaults

Figure 131: Sample Barcode - 12 of 5 – Any Length

<DATA> <SUFFIX 1>
(01h)

Figure 132: Sample Barcode - Data/Suffix

Disable Parameter Scanning
(00h)

Figure 133: Sample Barcode - Disable Parameter Scanning

SECTION 9
ELECTRONICS TRAY TEST FORM

9.1 Purpose

The following is the electronics tray test form.

THERMAL ACTIVITY TEST		
1min TAT 100% CPU Load	☐ PASS (I <60°C)	☐ FAIL (I ≥ 60°C)
SIGN HERE →	PERFORMED BY:	DATE:

VISUAL INSPECTION			
1.	**1. Visual Inspection:** **Front of Electronics Tray**	**PASS**	**FAIL**
1.1.	CA10-0104 (Dual USB) is securely fastened with 4 screws. (if applicable depending on E-Tray assembly)		
1.2.	Retailer display is secure.		
1.3.	Lock if functional.		
2.	**2. Visual Inspection:** **Right side facing front**	**PASS**	**FAIL**
2.1.	4 thumb turns securely fasten hard drive.		
2.2.	ID65-0044 is secured properly to CA05-0497-01.		
2.3.	Power supply fan has air moving towards power supply as indicated by arrow on fan.		
2.4.	Grounds are securely fastened into place.		
2.5.	All Cable connections are proper and secure.		
3.	**3. Visual Inspection:** **Left side facing front**	**PASS**	**FAIL**
3.1.	PA50-0026-01 (motherboard) is securely fastened.		
3.2.	PA50-0026-01 (Motherboard) processor fan is dual ball bearing.		
3.3.	All cables are properly dressed and secured with tie-wraps according to rework instructions.		
3.4.	All cable connections are proper and secure.		
SIGN HERE →	PASSED BY:	DATE:	

POWER ON FUNCTIONAL INSPECTION			
4.	**4. Power on Functional inspection:** **Bios version**	**PASS**	**FAIL**
4.1.	Ensure BIOS version is SGI2R027.		
4.2.	Ensure correct date and time and is set to GMT-5 time zone.		
5.	**5. Power on Functional inspection:** **Displays**	**PASS**	**FAIL**
5.1.	Retailer display has video and touch functions.		
5.2.	Main customer 19” display has proper video clarity.		

5.3.	Main customer 19” display is calibrated with 25 points.		
5.4.	Customer advertising display has proper video clarity.		
6.	**6. Power on Functional inspection:**: **USB Ports**	**PASS**	**FAIL**
6.1.	All USB ports are functional (8 or 6 depending on E-Tray version)		
7.	**7. Power on Functional inspection:** **Network Port**	**PASS**	**FAIL**
7.1.	Properly communicates through network port		
8.	**8. Power on Functional inspection:** **Bursters**	**PASS**	**FAIL**
8.1.	Electronic tray communicates to Bursters.		
9.	**9. Power on Functional inspection:** **Bill Acceptor**	**PASS**	**FAIL**
9.1.	Bill acceptor can be loaded with proper version US51VA71.		
10.	**10. Power on Functional inspection:** **Magnetic card reader**	**PASS**	**FAIL**
10.1.	Verify operational with correct read of Magnetic card.		
11.	**11. Power on Functional inspection:** **Document Scanner**	**PASS**	**FAIL**
11.1.	Verify scanner is has proper gray scale adjusted by verifying with TL20-0006 Rev 2.		
11.2.	Verify scanner firmware version is 1.17.		
11.3.	Scan printed Diagnostic test tickets.		
11.4.	Brand Diagnostic test tickets.		
11.5.	Ensure PA play slip is properly feed into reader with forward ejecting enabled to ensure proper calibration.		
12.	**12. Power on Functional inspection:** **Printer Test**	**PASS**	**FAIL**
12.1.	Verify printer firmware version is 1.46.		
12.2.	Verify Diagnostic test tickets are printed.		
12.3.	With black strip paper, verify proper paper low function, when strip changes from white (paper-low false) to black (paper-low true).		
13.	**13. Power on Functional inspection**: **Audio**	**PASS**	**FAIL**
13.1.	Speaker is functionally with clear audio.		
14.	**14. Power on Functional inspection**: **Barcode Reader**	**PASS**	**FAIL**
14.1.	Verify BCR CTRL 16 VER 25.		
14.2.	Proper read of any of the following: Interleaved 2 of 5 within range of 12 through 20 digits, Code 39 any ticket within range of 9 through 11 digits, Data Matrix bar code, PDF417 bar code.		
14.3.	PA20-0347 communicates in wireless mode with a SA30-0045-02.		
15.	**15. Power on Functional inspection**: **LED PA20-0338**	**PASS**	**FAIL**
15.1.	LED functions properly.		
16.	**16. Power on Functional inspection**: **Key Fob**	**PASS**	**FAIL**
16.1.	Key Fob is functional		

17.	**17. <u>Power on Functional inspection</u>:** **Switches**	**PASS**	**FAIL**
17.1.	Verify Security Board is loaded with version 2.15.		
17.2.	Verify Main Door reports “Door Locked” when in locked position when main door is closed and key is removed from the LL73-0009 and handle is pulled upon.		
17.3.	Verify Main Door report “Door unlocked” when key is in unlocked position.		
17.4.	Verify Door open/door closed		
17.5.	No Tilt/Tilt		
17.6.	Cash Box opened/Cash Box closed. Verify switch reports correctly when pulled upon while in locked position.		
SIGN HERE →	PASSED BY:	DATE:	

SECTION 10
APPROVALS

This specification document shall be signed by a representative of the Lottery, the responsible representative of SGI, and the Software Development Manager (SDM) for the Jurisdiction.

_____

IA Representative: Name 1, Title 1} {Date}

_____

IA Representative: Name 2, Title 2} {Date}

_____

{SGI Representative: Name 3, Title 3} {Date}

_____

{SGI Representative: Name 4, Title 4} {Date}

_____

{Name 5, Title 5} {Date}

_____

{Name 6, Title 6} {Date}

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