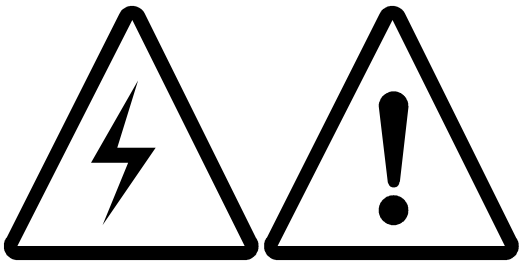
SX-PT

Secure Payment Terminal

(CANADIAN VERSION)

STARTUP AND SERVICE



For your Safety

Here are some basic guidelines for working with electricity:

Before working on a circuit, go to the main service panel and remove the fuse or trip the breaker that controls that circuit.

Tape a sign to the panel warning others to leave the circuit alone while you work.

Before touching any wire, use a voltage tester to make sure it's not live.

Whenever you check for voltage in a receptacle, check both outlets – each may be controlled by a separate wiring circuit.

When replacing fuses, turn off the main power first. Make sure your hands and feet are dry, and place one hand behind your back to prevent electricity from making a complete circuit through your chest. Touch a plug fuse only by its insulated rim.

Remove cartridge fuses with a fuse puller.

Use tools with insulated handles and ladders made of wood or fibreglass.

To protect children, place safety cover over any unused outlets.

This manual contains important information about the SX-PT Outdoor Payment Terminal. Please review all of the information contained in this manual to ensure proper and safe operation.

Warning

Incorrect installation may create hazardous conditions resulting in injury to personnel and/or damage to the system.

Installation to be completed by a qualified technician /electrician, experienced in installing Petroleum Equipment in a Class 1 Div 1 or 2 environment.
Installation needs to be done in conformance with all applicable NFPA codes.

Installation must conform to all applicable provisions of the National Electric Code.

Installation must to conform to all applicable local codes: electrical, safety, and fire department.

SX-PT Terminal requires a dedicated 120vac power circuit.

SX-PT requires a UPS for backup and clean power.

Location and Site Preparation

The site owner is responsible for all site preparation, electrical wiring and connections. This work must be done in accordance with applicable National, State/Provincial, and Local Building and Electrical codes.

The SX-PT Terminal is designed to be installed of Class II hazardous locations. The unit must be at least 18 inches (46cm) away from conventional pumps, and 24 inches (61cm) from overhead pumps or dispensers. Approved Electrical "Y" Seal (EYS) connectors must be used in accordance with all applicable electrical codes.

All peripheral equipment connected to the system must be UL or CSA listed and be equipped with suitable interfaces for use with the SX-PT.

All field-installed electrical wiring connected to the SX-PT Terminal must be rated for operation at a minimum temperature of 90°C (194°F). High voltage (120VAC) conductors must be 12 AWG minimum. Low voltage conductors should be a minimum of 20 AWG.

Free space in the junction box(es) feeding the Pump Control Unit (usually located in the pedestal) must not be less that the minimums shown in the table below:

120 VAC wiring

The SX-PT Terminal power supply must be wired to a 120 VAC 60 Hz UPS-backed power supply. Maximum current draw is 5 Amps. The UPS is usually housed in the same building as the Site Computer and also supplies power to the Site Computer and Communications Box. Ensure that the 120VAC power cable to the SX-PT Terminal is properly sized to carry the required current.

The SX-PT Terminal is internally equipped with two sets of receptacles, one for UPS power and one for non-UPS power. Terminate the UPS AC power line to the UPS AC receptacle box and non-UPS AC power line to the non-UPS AC receptacle box. Ensure that the ground wire from each incoming line is properly connected to the ground screw inside its respective receptacle box. See the drawing below.

General

1. Always observe ESD prevention measures:
2. Wear a wrist strap securely connected to ground.
3. Use ESD safe bags to contain sensitive electronics, including the iX and SPM module, when not installed.
4. Ensure the power at the panel is off and locked out procedures have been followed.
5. Secure the area around the installation to prevent accidents
6. Inspect the shipped parts and verify all components were received

Procedure

1. Open the bezel doors on both sides of the dispenser for access to both sides.

2. Disconnect all cables to the Duo-Cat board above the Igem board on side A, and remove the cabling and Duo-CAT board from the dispenser. Save the printer data cables for use later.

3. Working from side B, remove the cables and ground strap from the existing BCB panel assembly, unscrew the screws holding the panel to the bezel, and remove the panel from the dispenser.

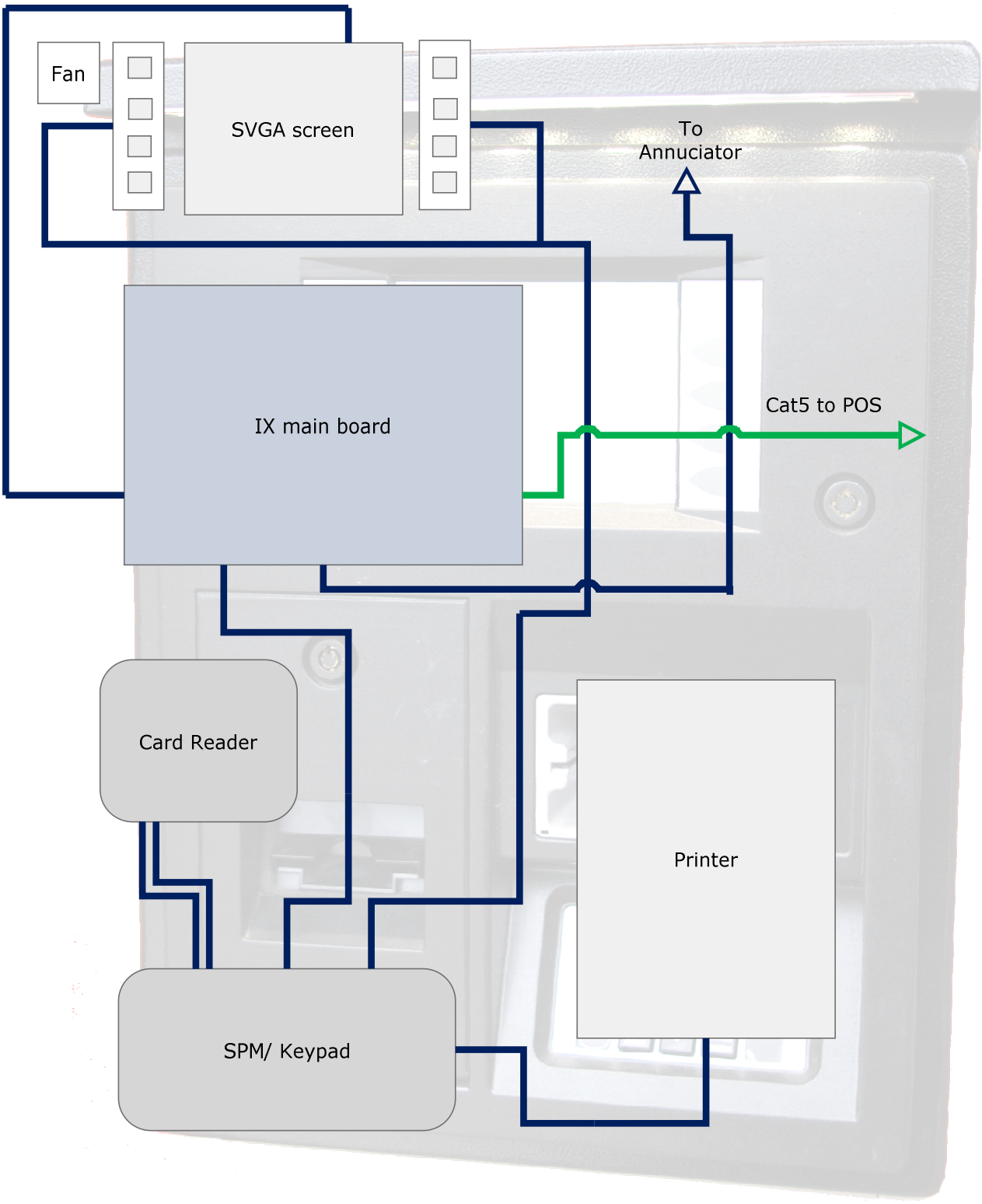
4. Still on side B, remove the Igem display power cable, part number 887593-002.

5. Unscrew and remove the card reader panel.

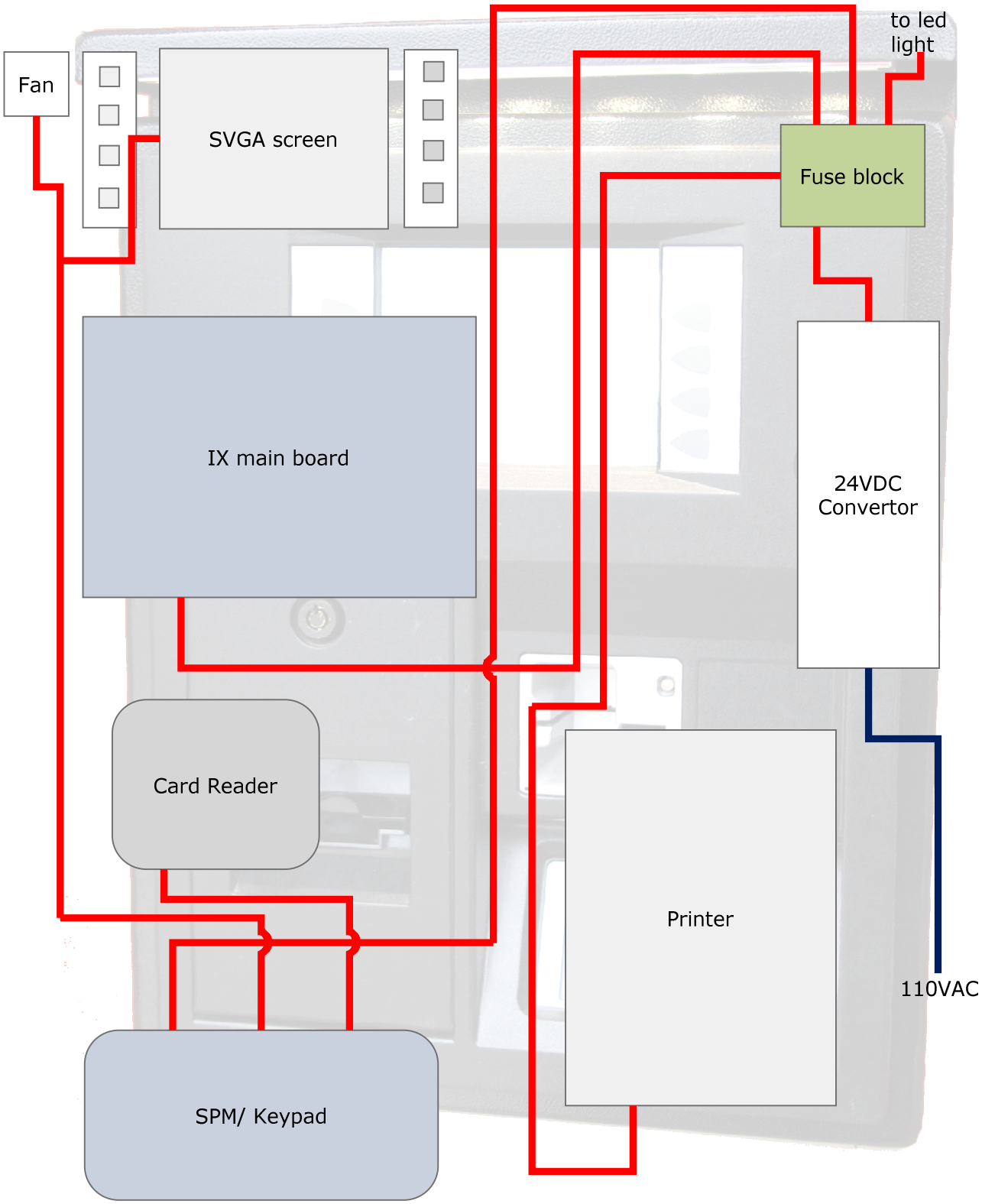
5. 1 Insert the new iX panel assembly, making sure the softkeys are oriented correctly (blank softkeys are at the top.) Use SCR 6-32 x 3/8 screws to fasten in place.

6. Insert the SPM module assembly and secure it in place.
Connect the ground strap (formerly used to ground the BCB) and the SPM module ground strap to the upper left corner of the iX. Attach the eyelets UNDERNEATH the iX board and verify that the

Sx-PT Data wiring schematic



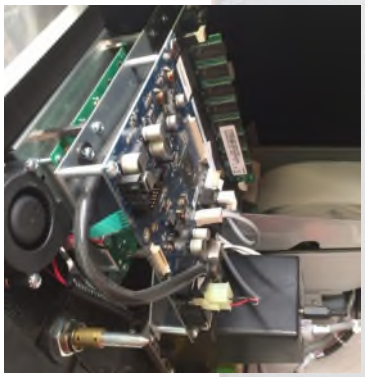
Sx-PT 24VCD wiring schematic



Overview

Module Assemblies of the SX-PT Terminal

Bezel Module Assembly(BMA)



This assembly contains all the major process equipment essential is the bezel and all parts mounted to it

QTY	PART NUMBER	DESCRIPTION
1	BMB-01-001	BRACKET
1	B518K-A0/S1MST-1-3/4/S502K-C-BLK	DOOR LOCK
1	PCA-24-002	POWER CABLE ASSY - 24 VDC CABLE -POWER M
1	PCA-24-003	POWER CABLE ASSY - 24VDC- PRINTER CABLE A
1	PCA-24-004	POWER CABLE ASSY - 24VDC -SPM
1	DCA-01-001	DATA CABLE ASSY ANNUCIATOR
1	DCA-02-001	DATA CABLE ASSY - SVGA SCREEN
1	DCA-03-001	DATA CABLE ASSY - PRINTER
1	RR-AR4BR1-12G	USAB CABLE - SPM TO IX BOARD
1	891734-001	FAN
2	1645	STAND- OFF
2	1956	STAND- OFF
2	8716-ND	STAND- OFF
1	803-DT	BEZEL GASKET
3	708910	1/4" CABLE CAMP
1	WU0010002-0001	Secure Card reader
1	892638-xxx-xxx	SPM / Keypad
1	WU001812-0001	IX board
1	891687-R01	DW10 Printer
1	892131-001	LCD, QVGA screen

This is a cat 5 connection located on the right side of the blue IXboard as indicated with the red circle.

Power Module Assembly(PMA)

The PMA provides 24VDC to the fuse block to be distributed to the major components of the SX-PT terminal and option boards. The PMA consists of the following:

QTY	PART NUMBER	DESCRIPTION
1	PMB-01-001	BRACKET
1	R11-2-10.0A-B06CV-V	SWITCH
1	A3193007/BO3-03	TERMINAL / COVER
1	WM027313-0001	24VDC SUPPY
1	887223-001	FUSE BLOCK
1	PCA-110-001	POWER CABLE ASSY 110 VAC - POWER MODLE
1	PCA-24-001	POWER CABLE ASSY - 24 VDC CABLE -POWER M
2	708910	1/4" CABLE CLAMP
8	SCREWS	MISC SCREWS

The power connection is done on the PMA 110vac

Heater Module Assembly(HMA)

The HMA is a thermostatically controlled heater assembly which is installed on the roof of the enclosure:

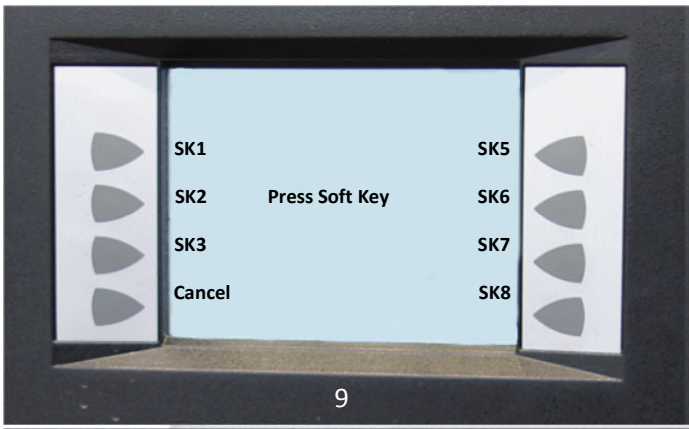
QTY	PART NUMBER	DESCRIPTION
1	HMB-01-001	BRACKET
1	AO-08-QCV-B	SWITCH
1	C80-55W-115V-0-0	HEATER
1	886495-002	ANNUCIATOR
1		WIRE HARNESS
1	0215010.MXESPP	FUSE

Enclosure Module Assembly EMA)

This is the enclosure assembly consisting of:

QTY	PART NUMBER	DESCRIPTION
1	EMA-01-001	ENCLOSURE
Opt	EMB-01-001	BRACKET 3-1/4 X 5-1/4
Opt.	EMB-02-001	BRACKET 5-3/4 X 5-3/4 POSTS
Opt.	EMB-03-001	BRACKET 5-3/4 X 5-3/4 PRESS NUTS
3	SCREWS	SCREWS
12	NUTS	NUTS
1	RLDS-1-400	LED LIGHTS
3	70916	5/8" CABLE CLAMP
1	BOX	SHIPPING BOX

Screen sequence for initiation of the SX-PT Terminal software version 2.2.17.0



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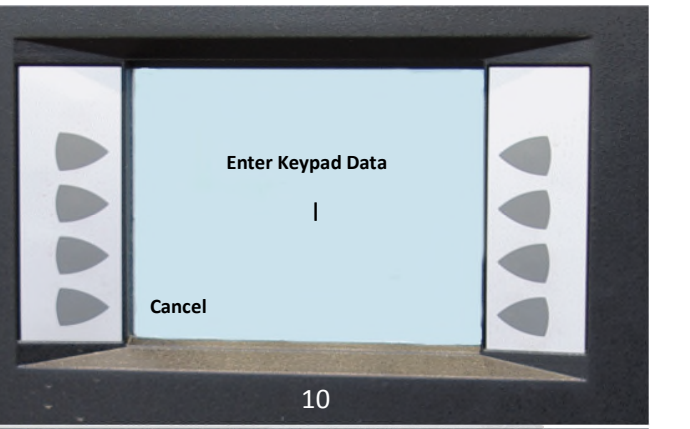

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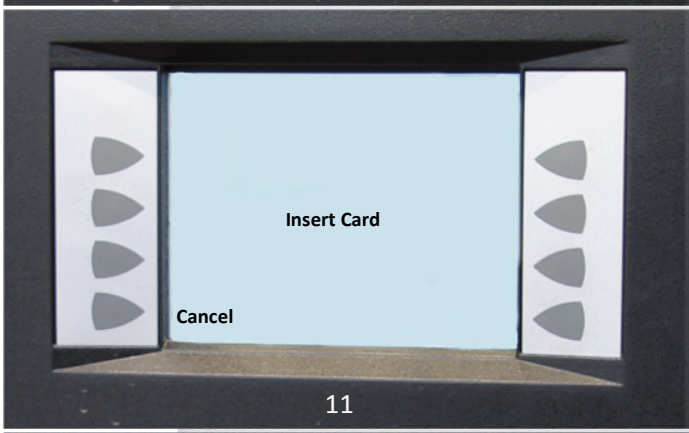

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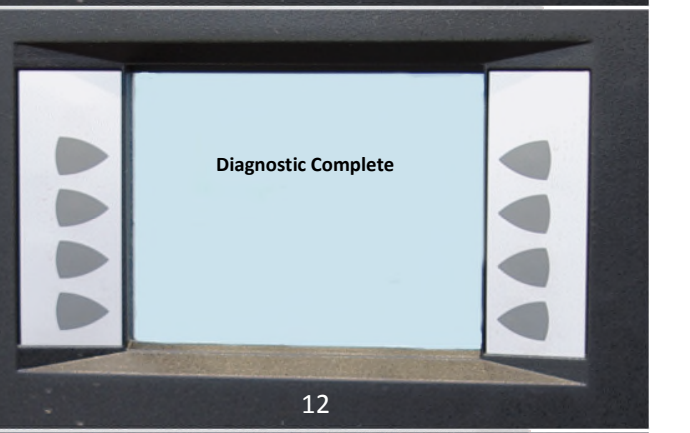

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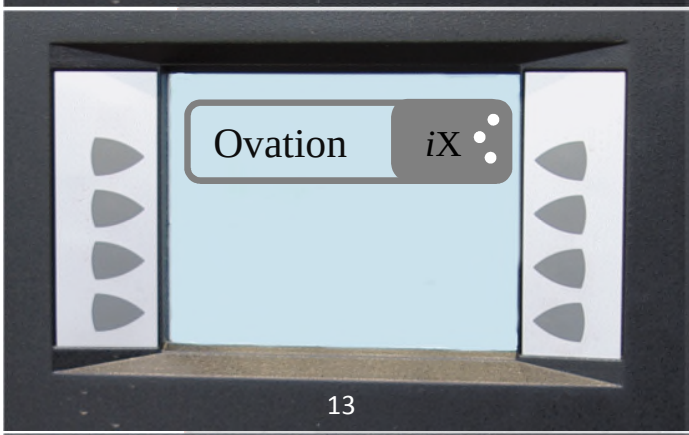

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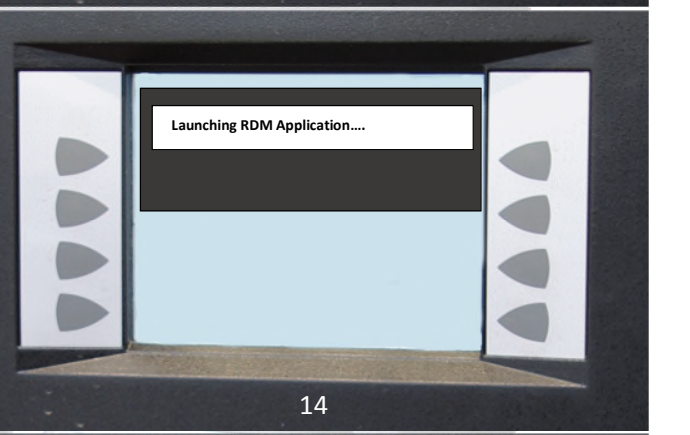

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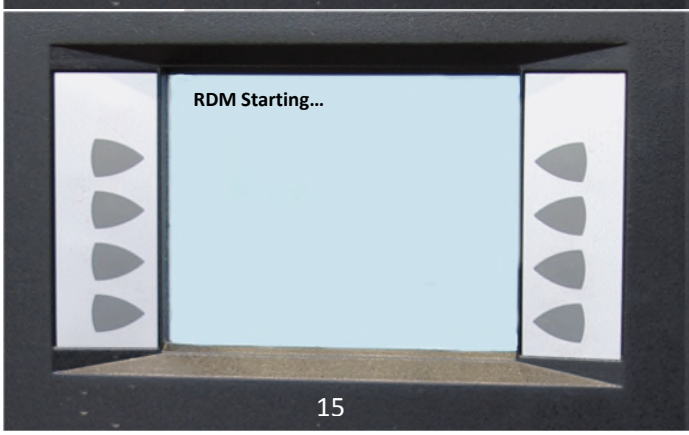

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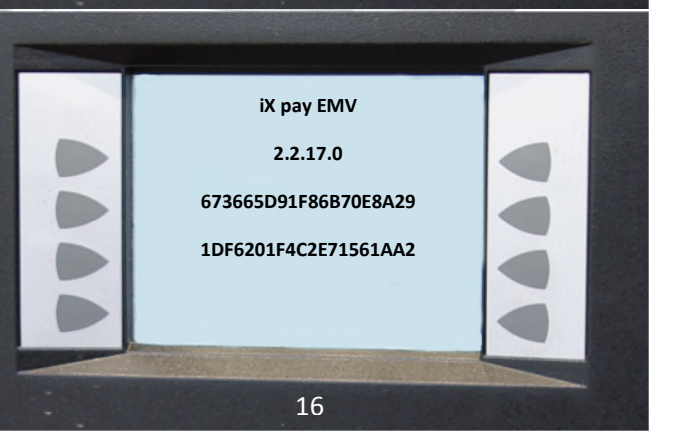

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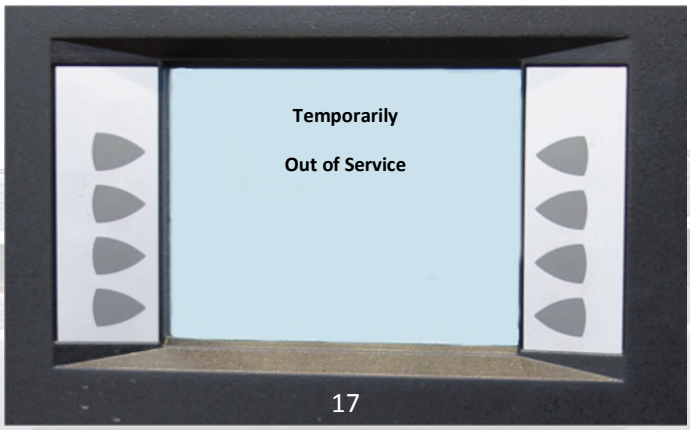


17

Offline Idle screen

The Terminal will reboot after screen #12 automatically and run through screens 13 to 17

PERFORM STEPS A) THROUGH C) AS NECESSARY, THEN PERFORM STEP D).

A) TO RUN TEST SALES WITH THE POS BEFORE PLACING THE SPM INTO THE OPERATION MODE, SELECT PRODUCTION TEST AND ENTER THE ACCESS CODE (STEP 14). THIS WILL ALLOW 30 MINUTES TO ESTABLISH POS COMMUNICATIONS AND TEST SALES. FOR 30 MINUTES, THE SCREEN WILL DISPLAY THE DEFAULT PROMPT "PLEASE PAY INSIDE (E01)" AND THEN RETURN TO THE PRODUCTION TEST SCREEN. NOTE: THE PRODUCTION TEST SCREEN IS NOT DISPLAYED AGAIN ONCE THE SPM IS PLACED INTO THE OPERA- TION MODE. NOTE: A REBOOT IS REQUIRED TO EXIT SOONER THAN 30 MINUTES.

B) TO PERFORM THE BEZEL DEVICES TEST AGAIN, SELECT DIAGNOSTIC, ENTER THE ACCESS CODE (STEP 14), AND PERFORM TEST AS SHOWN IN PREVIOUS STEPS 3 THRU 6. PRESS CANCEL WHEN FINISHED TO RETURN TO THE ABOVE SCREEN.

C) TO VIEW THE IXCAT, SPM OR CARD READER SOFTWARE REVS, SELECT SYS. INFO AND THE SCREEN ON PAGE 15 WILL BE DISPLAYED. PRESS CANCEL WHEN FINISHED TO RETURN TO THE ABOVE SCREEN.

D) PLACE THE SPM INTO THE OPERATION MODE BY SELECTING OPERATION AND ENTER ACCESS CODE (STEP 14) AND THEN PROCEED TO STEP 15

E) DIAGNOSTIC AND MAINTENANCE MODES

F) As shown in the Startup instructions, the Bezel Device tests and the DM configuration screens are displayed automatically when the SPM is powered-up for the very first time. Once the SPM is placed into operation, re-configuration if needed and the diagnostic self-tests can be performed - as with any iX application - by rebooting and pressing softkey 2 when the "One Moment Please" prompt is displayed. Now however, the Diagnostic mode allows much easier access to the self-tests.

G) Diagnostic Mode

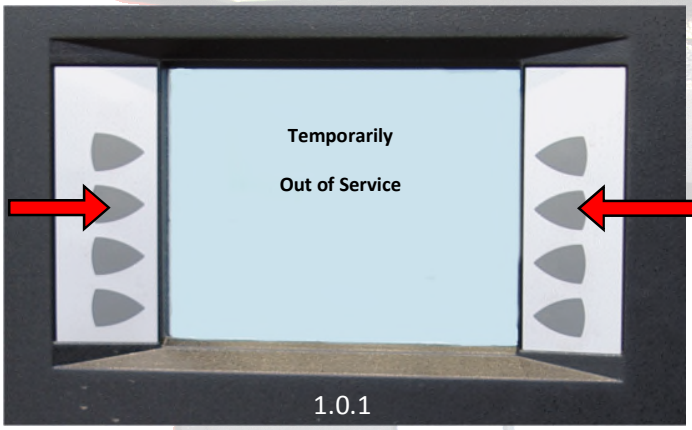
H) An easy way to perform the self-tests or check battery status is by entering the Diagnostic mode. This mode is available while the dispenser is in the operating idle state by simultaneously pressing the two top softkeys (softkey 1 and 5) on the display panel. This is also a good way to quickly get a configura- tion report without rebooting the iX, assuming the SPM is working.

I) To get just a configuration report without testing the CAT bezel devices, once in the Diagnostic mode, just press Cancel at each self-test screen and the report will print. Then, press Cancel to return the dispenser to the operating idle state. Also, at anytime during normal operation, a CAT Status report will print when the two bottom softkeys are pressed simultaneously.

J) Follow the procedure below to enter the Diagnostic mode and perform the tests

1.0 AT THE ONLINE OR OFFLINE IDLE SCREEN,

PRESS SOFTKEYS 2 & 6 SIMULTANEOUSLY, THE BELOW SCREEN WILL BE DISPLAYED



1.0.1

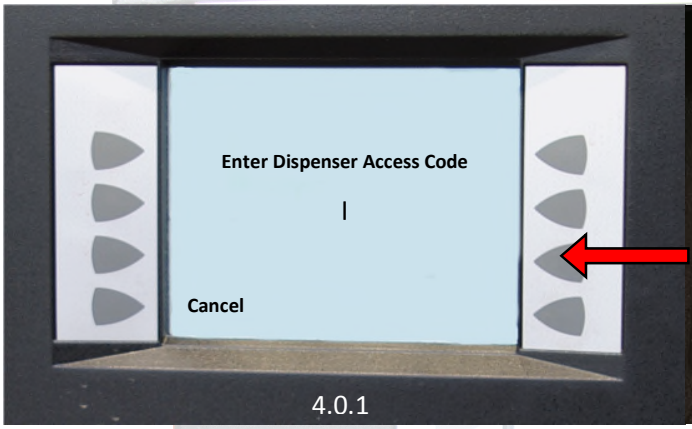
2.0 This screen will appear

2.0.1

3.0 Select Diagnostics

3.0.1

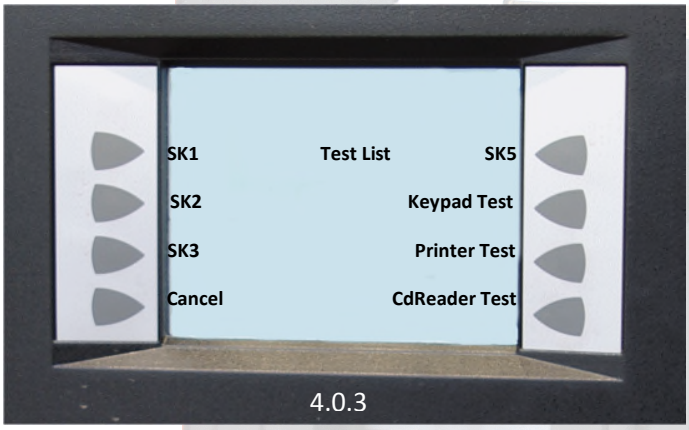
4.0 Enter the Dispenser Access Code **8311** on the Keypad and press the OK/Enter key



4.0.1

4.0.2

This Diagnostics screen will appear, start diagnostics test with the SK keys

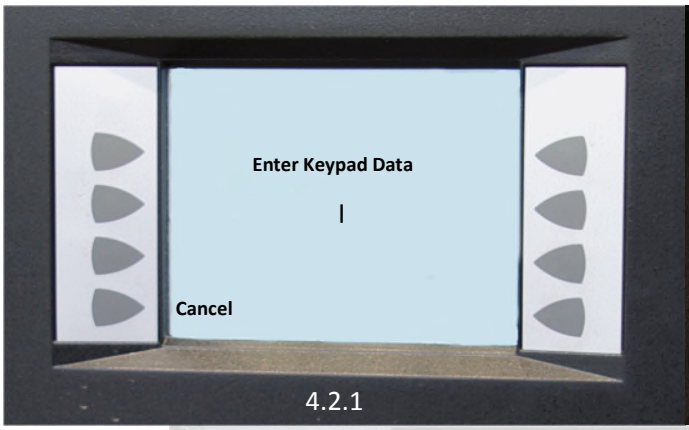


4.0.3

4.1 Press SK1, SK2, SK3 and SK5 – audible response from each key

Soft Keys test complete

4.2 Test the Spm/Keypad keys and Side keys - press all the keys - audible response from each

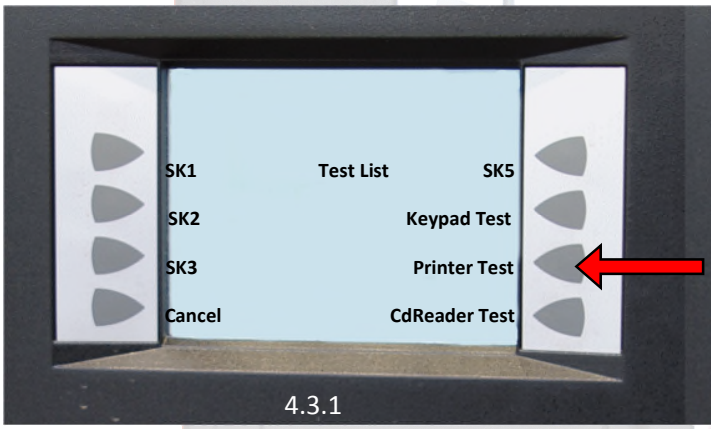


4.2.1

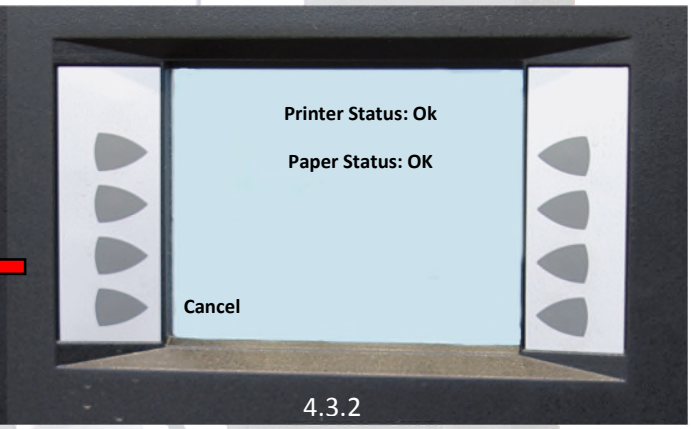
4.2.2

Keypad Test Complete – press Cancel

4.3 Printer Test – the printer will print a diagnostic slip



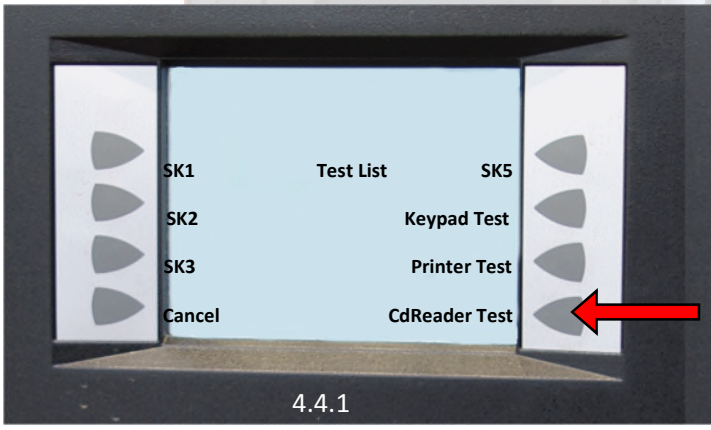
4.3.1



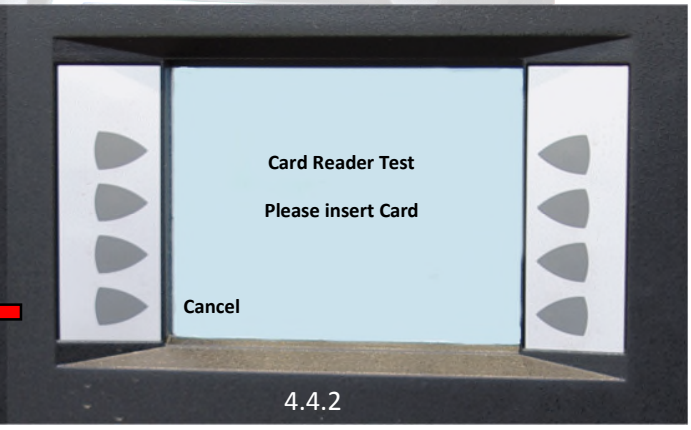
4.3.2

Printer Test Complete – press Cancel

4.4 Card Reader Test

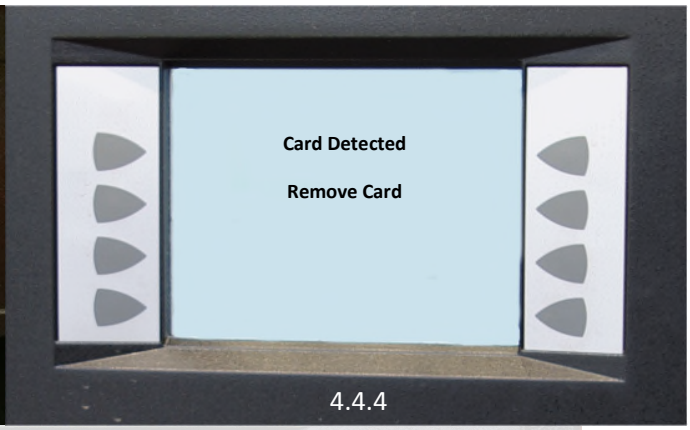


4.4.1

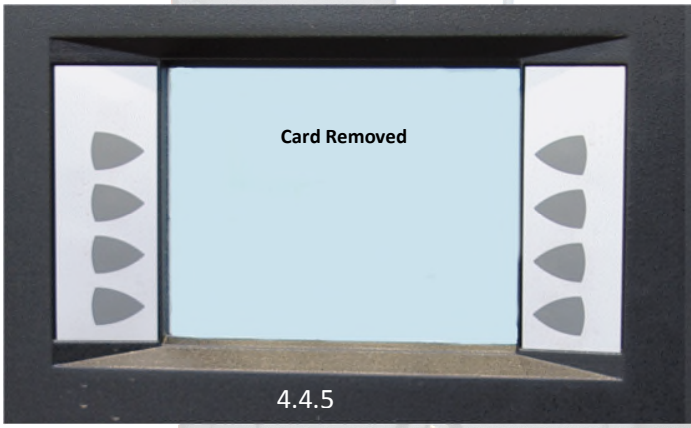


4.4.2

4.4.3



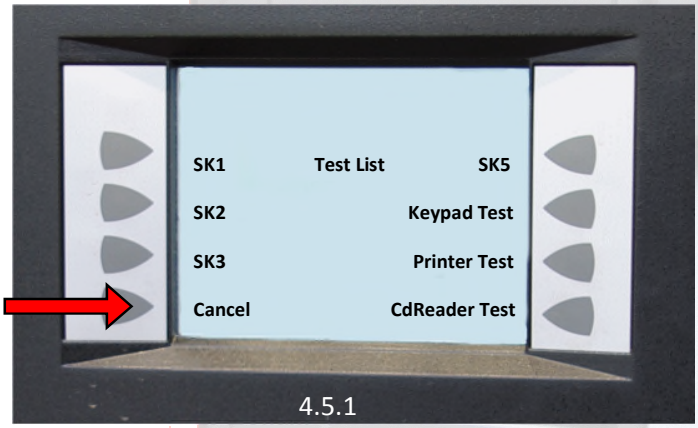
4.4.4



4.4.5

4.4.6

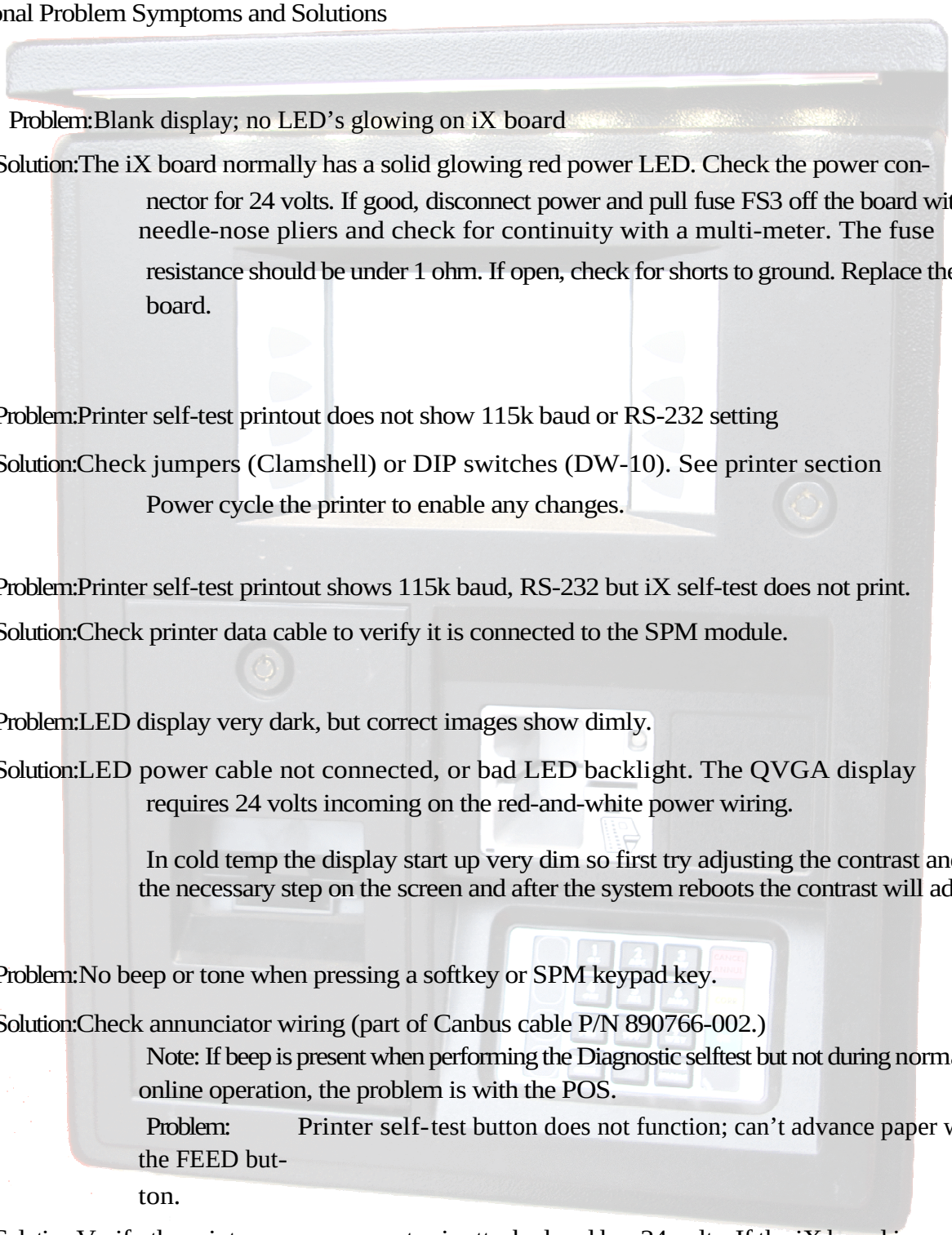
Card reader Test Complete – Press Cancel



4.5.1

4.5 Press Cancel to return / escape

Additional Problem Symptoms and Solutions



Problem: Blank display; no LED's glowing on iX board

Solution: The iX board normally has a solid glowing red power LED. Check the power connector for 24 volts. If good, disconnect power and pull fuse FS3 off the board with small needle-nose pliers and check for continuity with a multi-meter. The fuse resistance should be under 1 ohm. If open, check for shorts to ground. Replace the iX board.

Problem: Printer self-test printout does not show 115k baud or RS-232 setting

Solution: Check jumpers (Clamshell) or DIP switches (DW-10). See printer section

Power cycle the printer to enable any changes.

Problem: Printer self-test printout shows 115k baud, RS-232 but iX self-test does not print.

Solution: Check printer data cable to verify it is connected to the SPM module.

Problem: LED display very dark, but correct images show dimly.

Solution: LED power cable not connected, or bad LED backlight. The QVGA display requires 24 volts incoming on the red-and-white power wiring.

In cold temp the display start up very dim so first try adjusting the contrast and follow the necessary step on the screen and after the system reboots the contrast will adjust.

Problem: No beep or tone when pressing a softkey or SPM keypad key.

Solution: Check annunciator wiring (part of Canbus cable P/N 890766-002.)

Note: If beep is present when performing the Diagnostic selftest but not during normal online operation, the problem is with the POS.

Problem: Printer self-test button does not function; can't advance paper with the FEED button.

Solution: Verify the printer power connector is attached and has 24 volts. If the iX board is powered down, unplug the printer data cable and run self-test again. (Paper will not advance if the CAT control board is powered down.

Problem: At iX bootup, a message displays on the screen “No SPM” and the bootup.

Solution: Verify the USB cable between iX and SPM is installed. Verify that the SPM power cable is installed. Voltage at the connector should be 24 volts

Problem: At iX bootup, the QVGA screen will not pass the main screen progress bar.

Solution: Verify that the SPM power between iX and SPM is installed.

Problem: At iX bootup, the QVGA screen is not showing the progress bar.

Solution: Verify that the RAM is installed correctly in the iX to be confident remove RAM and reinstall it. If the issue is still not resolved the SDcard within the iX is corrupted replace SDcard

Appendix A – Specifications

SX-PT Terminal Specifications

Dimensions (H x W x D) (approx.)	470mm x 355mm x 286mm [18.5”x 11.25”x14.0”]
Weight	21 kg [47 lbs]
Ambient Temperature Rating	-40°C to +45°C [-40°F to 110°F]
Power Requirements	120 VAC, 60 Hz, 5 Amps

SX-PED Pedestal 48”

Dimensions (approximate)	1200mm x 355mm x 265mm [47.25”x 14.0”x10.1”]
Weight	18kg [40 lbs]

SX-PED Pedestal 36” (Special order)

Dimensions (approximate)	921mm x 355mm x 1265mm [36.25”x 14.0”x10.1”]
Weight	12kg [26 lbs]

SX-PT Terminal Parts Warranty Information

Concept 2 Design Inc. (“C2D”) warrants that all electric or electronic equipment, including accessories manufactured by C2D will be free from defects in material and/or workmanship under normal use and service for a period of 12 months from the date of installation, at the location chosen by the Purchaser (the "Warranty Period”). If a defect in the Equipment becomes apparent during the Warranty Period, C2D will repair or replace the defective Equipment at its facility. The warranty will not extend to goods subjected to misuse, neglect, accident, or improper installation or maintenance or which may have been altered or repaired by anyone other than C2D or its authorized representative.

The buyer’s acceptance of delivery of the goods constitutes acceptance of the foregoing warranties and remedies, and all conditions and limitations thereof.

Purchaser must notify C2D in writing of any defect in the Equipment within fourteen (14) days of discovery of the defect and obtain a “Return Approval” (RA) number before returning the defective equipment prepaid to C2D’s facility. The Equipment must be suitably packed and insured for shipping to C2D’s facility at Purchaser’s risk and expense. After repair or replacement of the defective Equipment, C2D will ship the Equipment to the Purchaser F.O. B at the Purchaser’s address.

C2D’s liability under this Warranty shall be limited to repair or replacement of defective Equipment and shall in no case exceed the purchase price of the Equipment sold herewith. C2D shall make reasonable repairs, replacement and corrections within reasonable time but shall not be liable for the delay in the repair or replacement. The foregoing Warranty is in lieu of all other warranties, express or implied. Concept 2 Design Inc. shall not be liable for any direct, indirect, incidental or consequential damage or loss of product.

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