MasterCard International



# MasterCard® PayPass™ Contactless Transit Pilots

# Installation Guides



**Version: A**

# Table of Contents

# Revision History

| Version | Status | Date | Author | Reason |
|---|---|---|---|---|
| 0.1 | Draft | 13/5/2009 | Ian Queen | Initial version based on Initial pilot Installation Guide – after meeting at VeriFone |
| 0.2 | Draft | 21/5/2009 | Ian Queen | Added photographs and diagnostic codes |
| 0.3 | Draft | 22/6/2009 | Ian Queen | Revised cable diagram and incorporated comments after feedback. |
| 0.4 | Draft | 30/9/09 | Ian Queen | Updates required for UL |
| 0.5 | Draft | 07/09/09 | Ian Queen | FCC statement added |
| A | Formal release | 09/10/09 | Ian Queen | Document content now stable |
| | | | | |

# 1 Introduction

## 1.1 Background

In summer 2006, MasterCard commenced a pilot, the purpose of which was to test the feasibility of utilizing the *PayPass* architecture to allow customer access to the underground transit system at select sites throughout the New York metropolitan area. MasterCard co-operated with Citibank and New York Metropolitan Transit Authority (MTA) to trial this new concept for which a new architecture and infrastructure was built. The initial New York MTA Subway pilot solution performed transactions offline.

Two further major opportunities were subsequently identified.

- The first opportunity is to support a turnstile solution that will support an online, IP based mode of operation and will support the MTA existing pilot. The pilot will be extended into the bus environment within Manhattan. This will involve deploying contactless readers on buses, where the requirement is for an online transaction to be performed using wireless / mobile technology.
- The second opportunity is to support a pilot with the Port Authority of New York and New Jersey, who wish to deploy a solution in the PATH rapid transit system (railway) CAM and on the New Jersey Transit (NJT) buses.

The phase 2 of the pilot requires the solution to be modified to support an online, IP based mode of operation, in both the subway using a "wired" connection and on buses, using "wireless".

New hardware variants have been developed for the following environments:

- New York MTA Subway Upgrade PPCR004
- New York MTA Bus PPCR003
- New Jersey PATH Rail PPCR002
- New Jersey Transit Bus PPCR003

## 1.2 Scope

The purpose of this document is to define the installation and supporting diagnostic operations to allow the solution to be correctly installed in the various environments.

Refer to the appropriate section of the document depending on the environment in which the solution is to be deployed.

# 2 New York MTA Subway Upgrade

This procedure defines how to perform an upgrade to a phase 1 pilot installation to the phase 2 pilot installation. It does **not** define how to install the phase 2 installation into a subway turnstile from scratch.

## 2.1 Background

Phase 1 of the pilot comprised the installation of a Secura and contactless card reader in subway turnstiles on the New York subway. Communications between the Secura and the payment platform was achieved using a modem dial-up.

For phase 2, the Secura and contactless card readers are being replaced. Note that the existing mounting plates within the subway turnstile will be re-used and the following installation process will outline how this shall be done. Communications shall now be achieved using IP over an Ethernet cable.

## 2.2 What is Supplied?

The MTA Upgrade part number is: **PPCR004**.

It comprises:

1. Contactless Reader Assembly
2. Secura Control Unit Assembly
3. Adapter Plate, 08840-01-R
4. OTI Contactless Reader Cable, 08829-02-R
5. LED Board Cable, 08828-02-R
6. LAN Cable, 08836-01-R
7. Solenoid Cable, 08827-01-R

## 2.3 Tools Required

The following tools are required to install the VeriFone-supplied equipment for the pilot installations.

- 5mm Allen Key
- 4.0, 5.5, 7.0 and 8.0 AF Nut Spanners
- T25 and T30 Torx Drivers

## 2.4 Installation Pre-requisites

The following pre-requisites must be in place before the installation can proceed.

1. An ethernet cable has been run into the turnstile, terminated with a female RJ45 connection point.
2. A 3-Pin (110v) power socket has been run into the turnstile providing power within these ratings: 100-240Vac 0.7A, 50/60Hz
3. The phase 1 installation is still present in the turnstile.
4. The Secura Control Unit is pre-loaded with the application software.

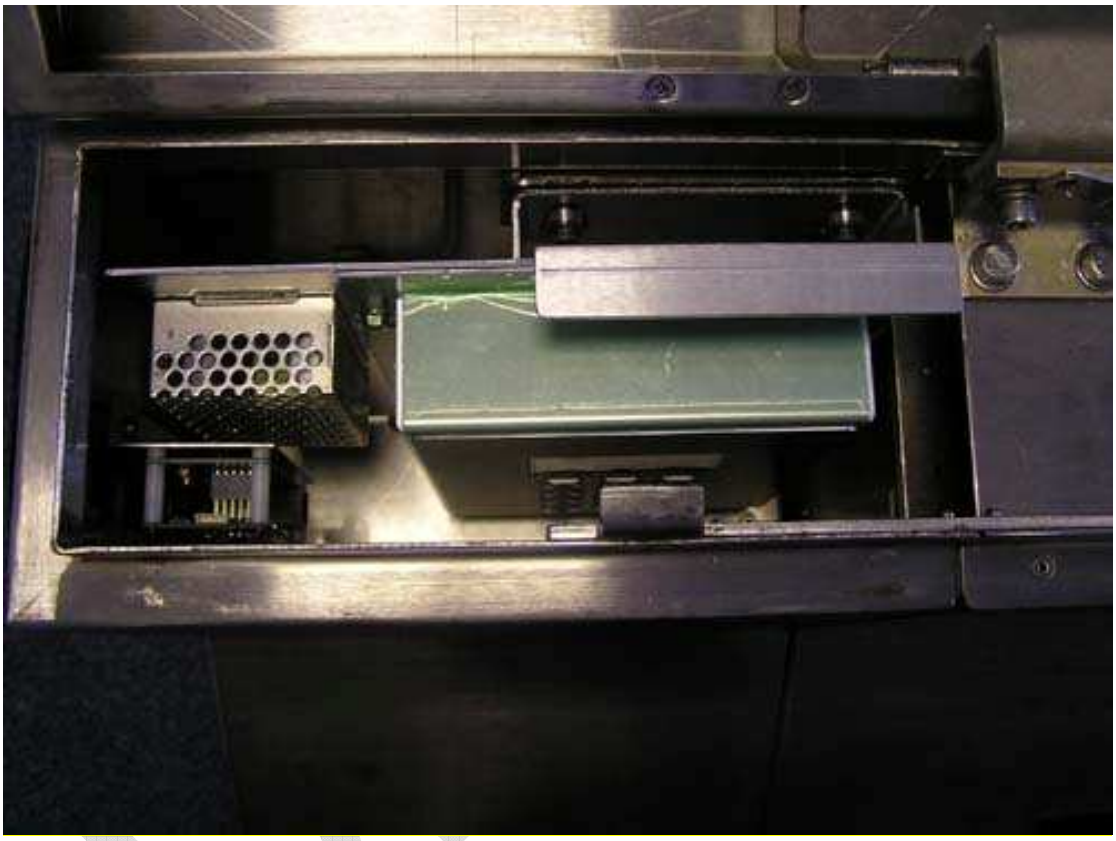
## 2.5 Upgrade Process

References annotated **[value]** in this section are to the assemblies / items defined in section 2.2.

### 2.5.1 Stage 1 – Remove Existing Phase 1 Hardware

**The first stage of the upgrade is to remove the existing phase 1 solution.**

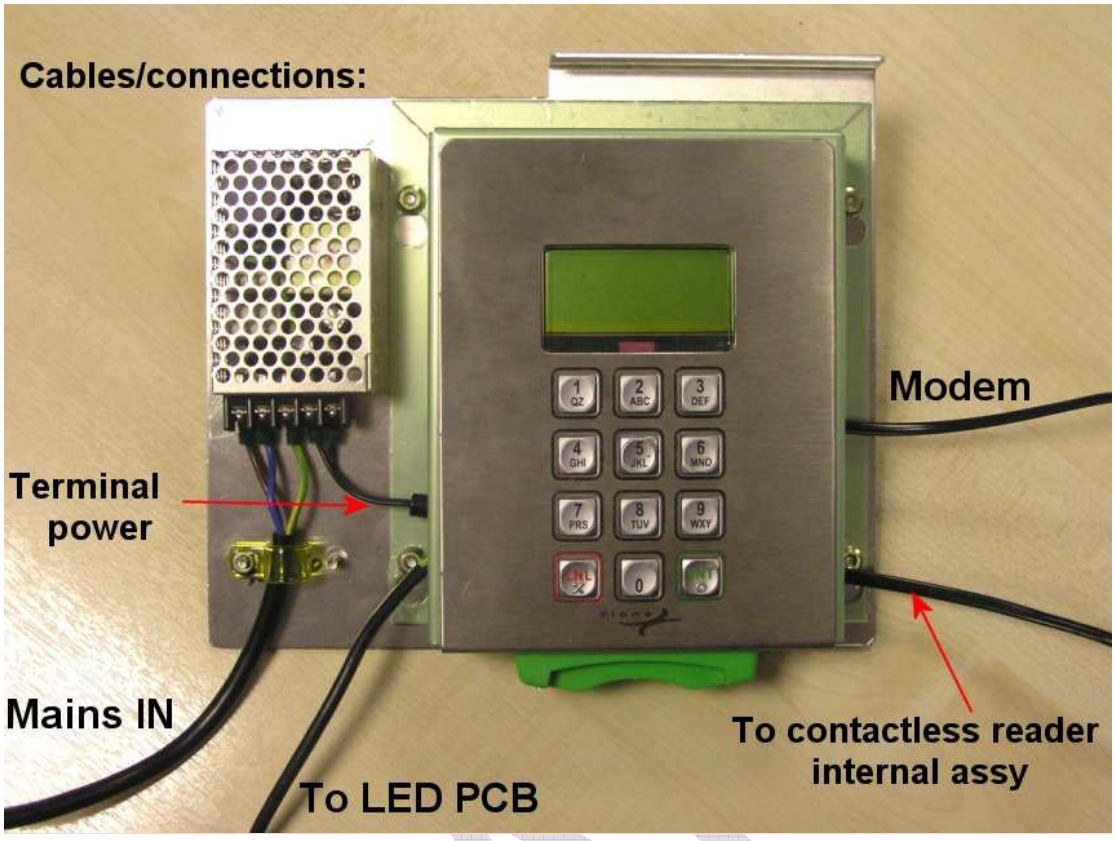
2. Open the top of the turnstile to reveal the phase 1 installation, as shown.



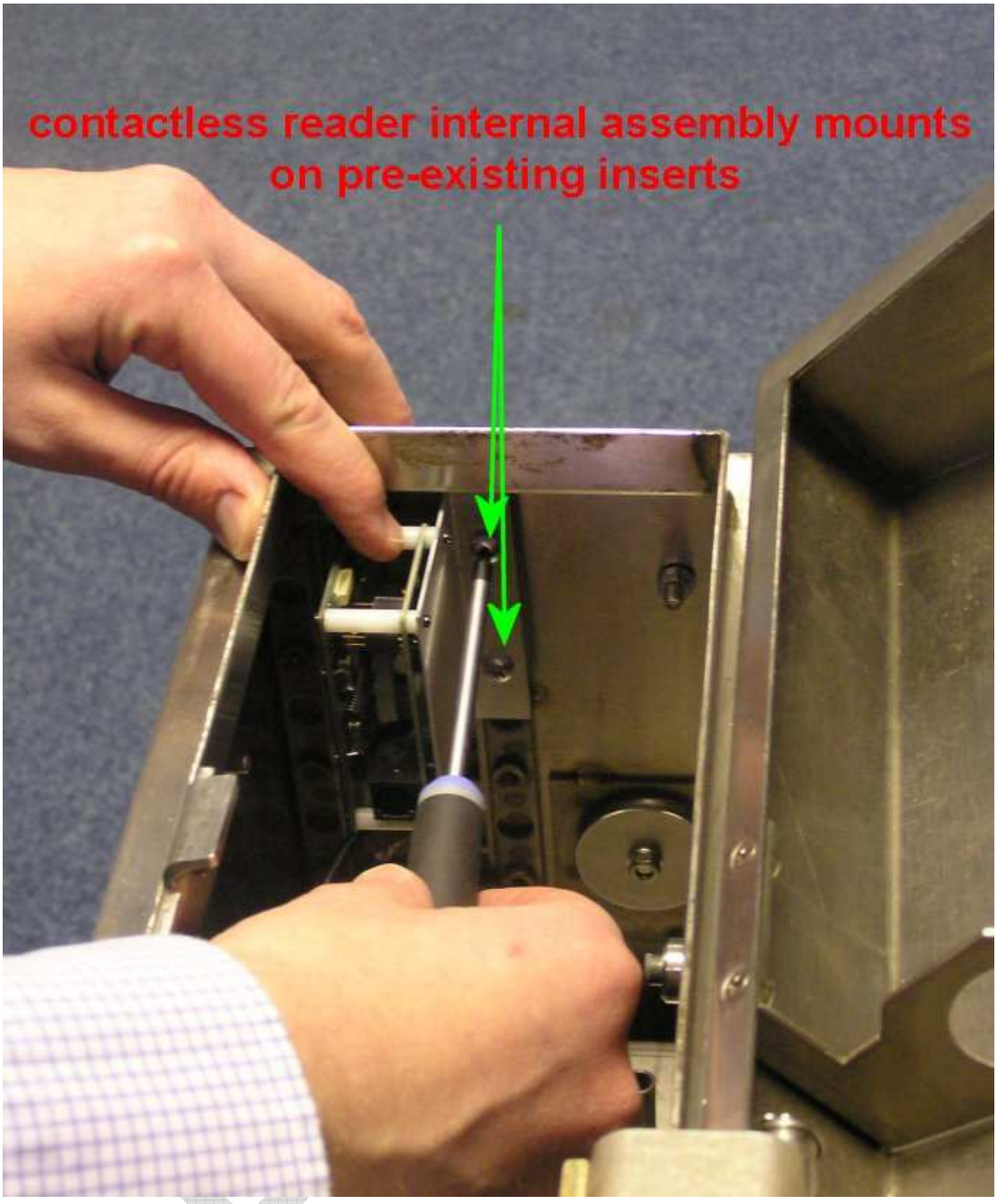
3. Power down the terminal by unplugging in the 3-Pin plug.

4. Carefully slide the Secura Integration Module up and out of the turnstile, ensuring that the assembly is disengaged from the sprung bushes.

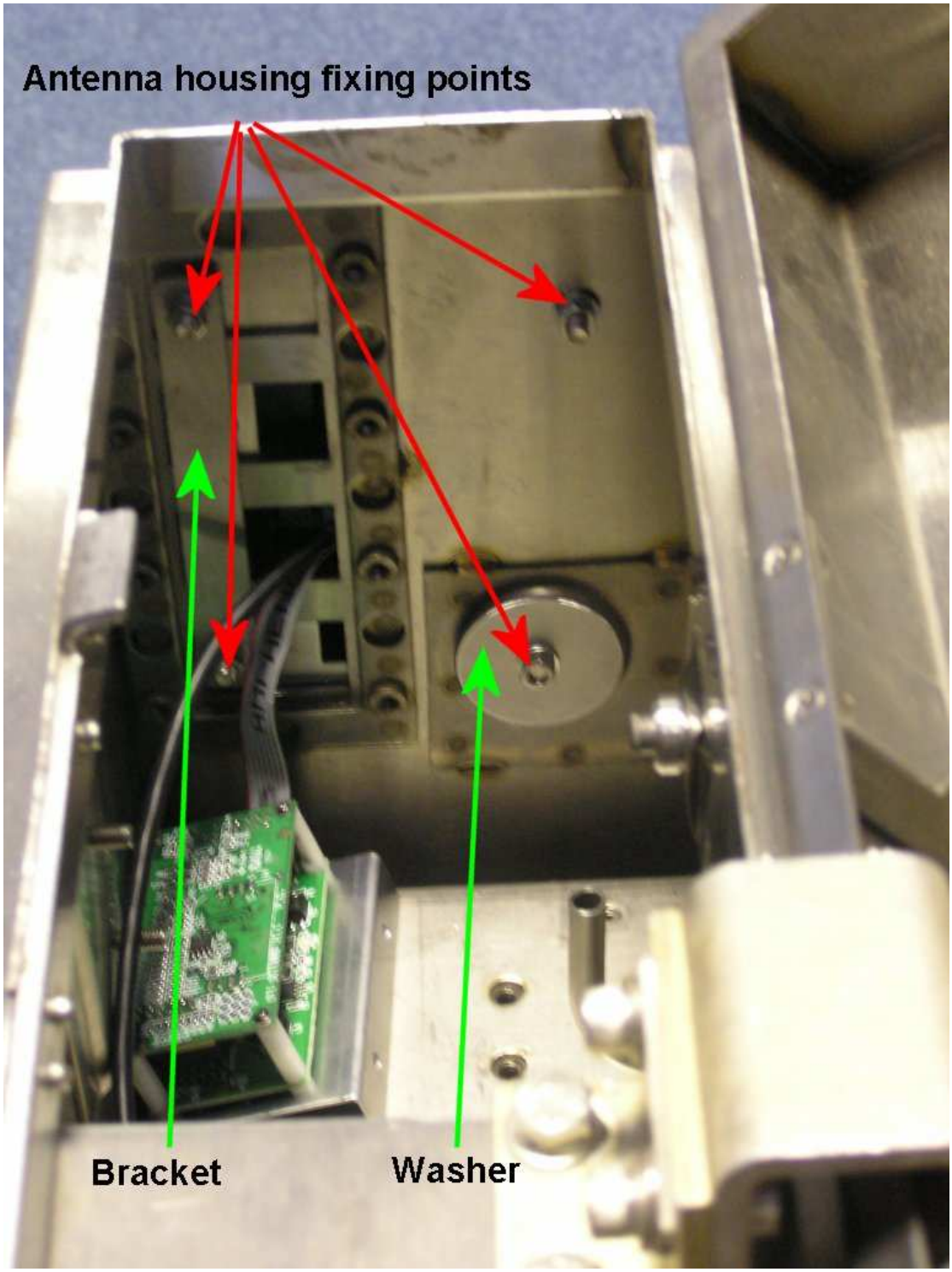
5. Rest the Secura Integration Module resting on top of the on the top of the turnstile.



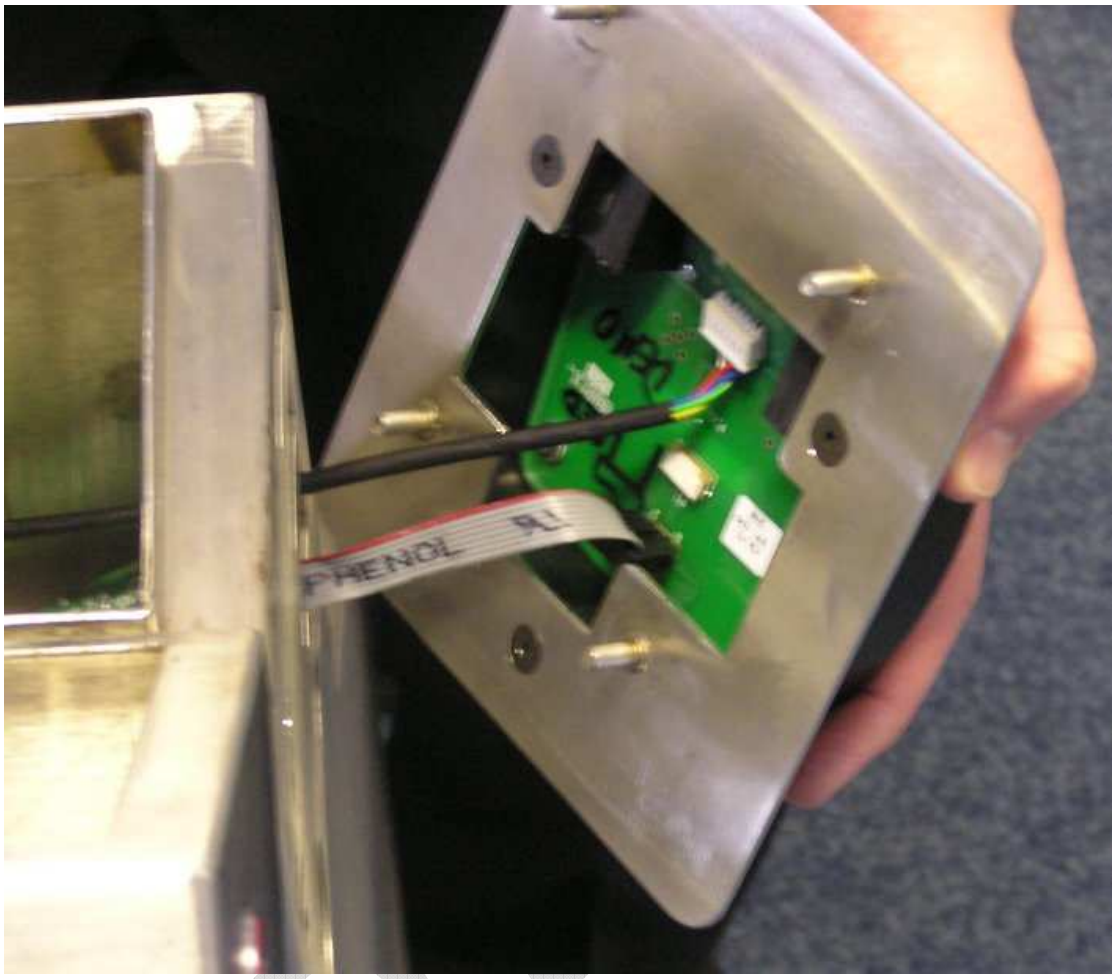

6. Detach the "Secura to LED Indicator Board Cable" as shown above.
7. Detach the "Secura to Contactless Reader Cable" as shown above.
8. Detach the "Secura to modem cable" as shown above.
9. Remove the Contactless Reader Assembly (interior) by removing 2 screws as shown to the right.




10. Remove the Contactless Reader Assembly (exterior) by loosening the 4 fixing bolts as shown below – retain the bracket and washer for fixing the new hardware.




11. Disconnect the ribbon cable connecting the Contactless Reader Assembly (exterior) and Contactless Reader Assembly (interior).
12. The Contactless Reader Assembly (interior) can now be removed.
13. The Contactless Reader Assembly (exterior) can now be removed, as shown below.




14. Removal of the phase 1 hardware is now complete.
15. Ensure that you retain the bolts, bracket and washer, as you will need these for the phase 2 installation.

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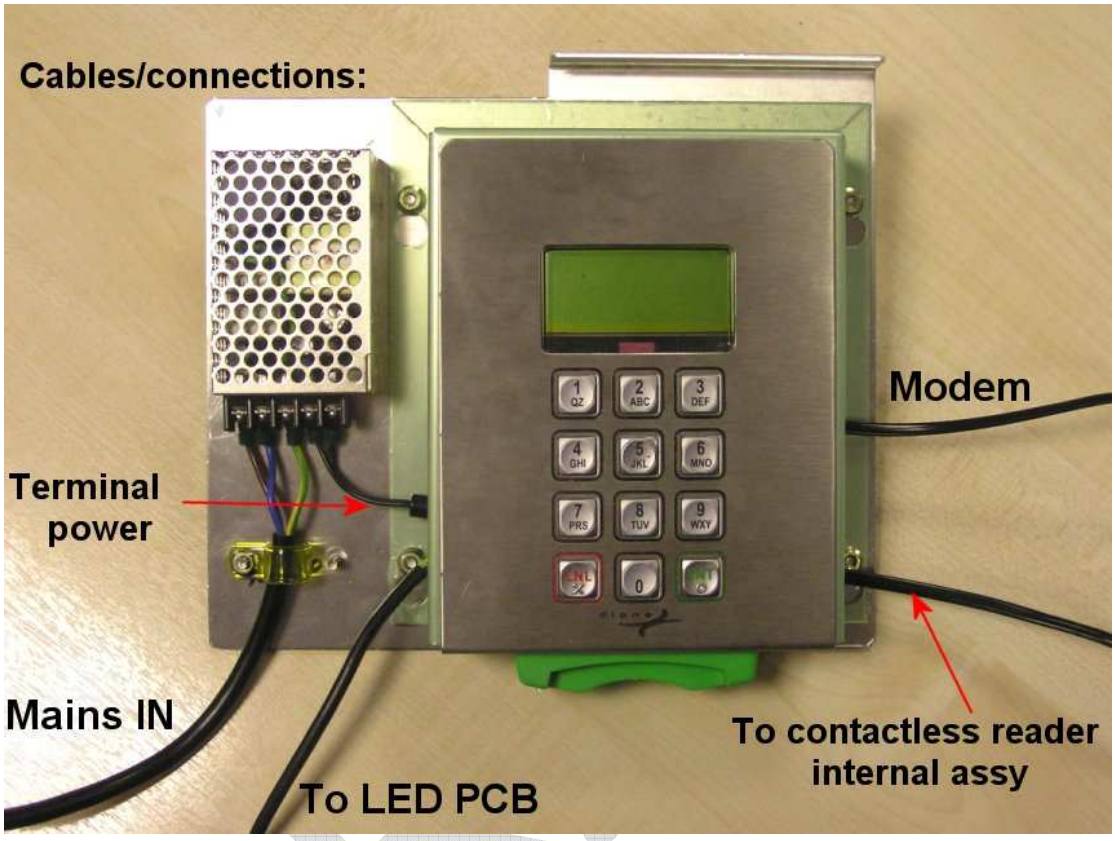
### 2.5.2 Stage 2 – Fixing Phase 2 hardware to the Mounting Plate

1. You will need to retain the Secura mounting plate, as it is required to mount the phase 2 solution. Remove the 4 bolts left and right of the Secura, (see below) taking care to retain the bolts for fixing the phase 2 solution.




2. Attach the adapter plate [3] to the mounting plate.
3. Attach the phase 2 Secura Control Unit [2] to the adapter plate [3].
4. The Secura is now ready to install in the turnstile.

### 2.5.3 Stage 3 – Installing the Phase 2 hardware

1. Select the Contactless Reader Assembly [1]. Ensure that the OTI Reader cable [4] and the LED Board cable [5] are attached to the card reader assembly.

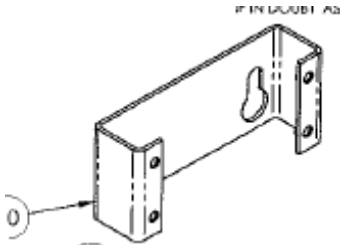

2. Position so that the attached cable assemblies can be fed through the second lowest square aperture on the front of the turnstile, as shown. Feed the two cable assemblies through the aperture.

3. Secure the contactless card reader assembly to the turnstile using the bracket [retained from phase 1], washer [retained from phase 1] and bolts [retained from phase 1].

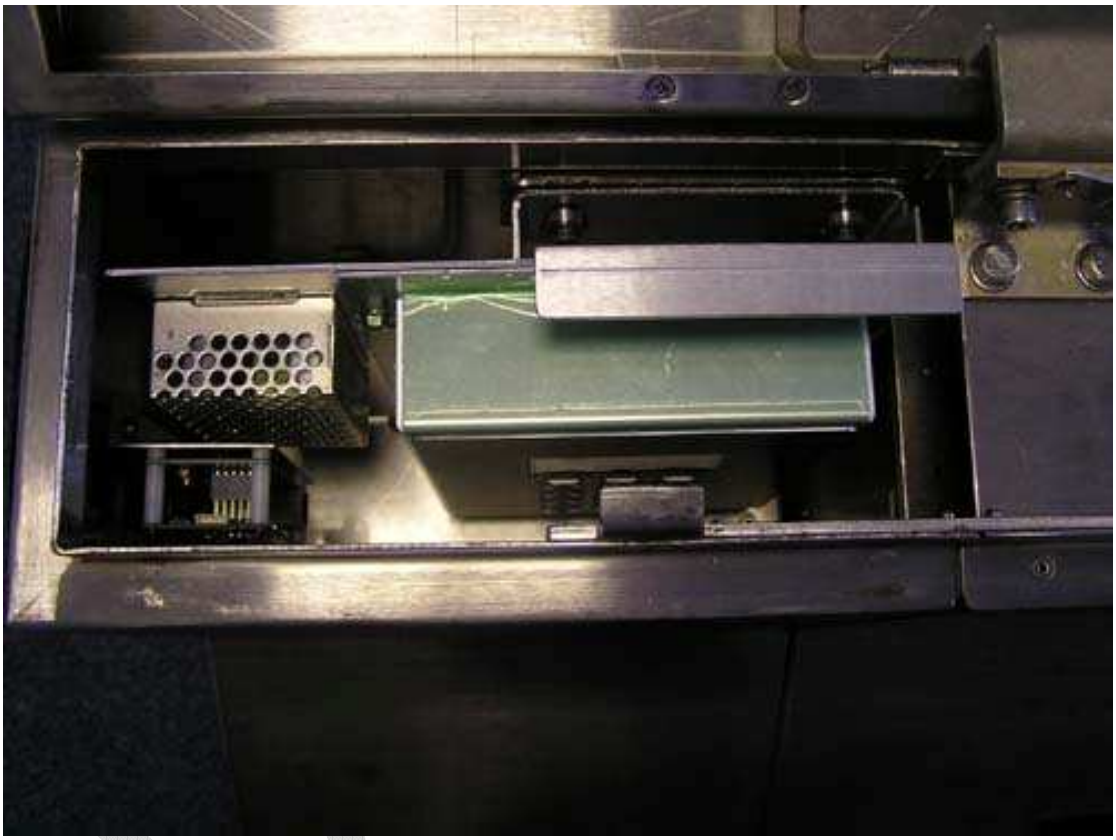
**NOTE PLEASE ENSURE THAT THE POWER CABLE IS NOT PLUGGED INTO THE 3-PIN SOCKET BEFORE THE NEXT STEP.**

4. Attach LAN cable [6] to the connection point in the turnstile.
5. Rest the Secura on the top of the turnstile.
6. Attach the Secura Control Unit Assembly [2] to the LED Indicator Board Cable [5] as shown above.
7. Attach the Secura Control Unit Assembly [2] to Secura to Contactless Reader Cable [4] as shown above.
8. Attach the Secura Control Unit Assembly [2] to the LAN cable [6] as shown above.
9. Attach the Secura Control Unit Assembly [2] to Solenoid cable [7]
10. Ensure that all connection points are fully home.
11. With the Secura still resting on the top of the turnstile, **plug in the power** and ensure that the Secura powers up correctly and the LEDS light up. The Secura display will display a couple of events, namely:
    - Event 20 – power up
    - Event 23 – In Service
16. The terminal may attempt to contact MMS at this point, to pick up its configuration. This will take a few moments to complete.
17. A number of self-tests can then be carried out using the key board functions of the Secura. Refer to section 5 for full details of the available functions.
    a) Select function 37 on the keyboard, press 3, 7 then ENT. This will switch on the green LEDs
    b) Select function 38 on the keyboard, press 3, 8 then ENT. This will switch on the green LEDs
    c) Select function 26 on the keyboard, press 2, 6 then ENT. This will exercise the green LEDs, the red LEDS and fire a turnstile release (solenoid) pulse.
    d) If the terminal has not contacted MMS when power was applied, perform a communications test to ensure that connectivity with MMS can be established satisfactorily. Do this by selecting function 46.
    e) Test that communications with the Transit Payment Platform Authorisation Server can be established by performing function 44.
    f) Test that communications with the Transit Payment Platform Batch Server can be established by performing function 45.
    g) Ensure that the terminal is taken out of diagnostic mode by performing function 10.
    h) Other available test functions can be performed – refer to section 5 for full details of the available functions.
18. Remove power by unplugging the 3-Pin plug.
19. Position the Secura into the body of the turnstile ensuring that the cables are not trapped or likely to be stretched when positioning the Secura into its bracket.

20. Position the keyholes on the bracket on the rear of the Secura so that they engage with the Sprung Mounting Bushes on the turnstile itself.



21. Carefully slide the Secura down until the key holes engage fully against the sprung bushes and the assembly is secure. The completed installation should look like:



22. Physical installation of the hardware is complete. Power up the terminal by plugging in the 3-Pin plug.
23. The terminal is ready for use.

# 3 New Jersey and New York MTA Bus Installations

This procedure defines how to install the phase 2 pilot solution in the bus environment.

The solution comprises the card reader assembly, which is installed at the agreed point on the bus where the consumer can tap his / her card, and the Secura Control Unit Assembly, which is installed out of site. In addition, the antenna is fitted on the roof of the bus to ensure the best available GPRS / GPS signal.

## 3.1 What is Supplied?

The NY MTA and NJT Bus part number is: **PPCR003**.

It comprises:

1. Contactless Reader Assembly
2. Secura Control Unit Assembly
3. OTI Contactless Reader Cable, 08829-02-R
4. LED Board Cable, 08828-02-R
5. 12-way multi-core cable (reel)
6. Antenna and cable
7. Flexible tubing
8. Support bracket
9. Outer Case

Note that items 8 and 9 form a "black box" in which the Secura Control Unit Assembly is housed.

## 3.2 Tools Required

The following tools are required to install the VeriFone-supplied equipment for the pilot installations.

- 5mm Allen Key
- 4.0, 5.5, 7.0 and 8.0 AF Nut Spanners
- T25 and T30 Torx Drivers
- Wire Strippers
- Milti-meter

## 3.3 Installation Pre-requisites

1. 24V power must be supplied. The solution will not operate on 12V. Please measure the voltage to ensure that 24V is available. Note that installation should not be performed if a 24V supply is not available. It is assumed that the transit agency will provide a suitable terminator for the provision of the 24V supply from the bus. For safety reasons it is essential that the 24V supply is fused at 2A.
2. Ensure that cables to be connected to the PPCR003 are suitably strain relieved as this is not provided at the entry points to the PPCR003 so as to allow for a wide range of cable sizes.

3. Please ensure that an inspection of the bus has been performed by the transit agency, and all problems noted, before you accept responsibility for the bus. This is an important step.
4. The Secura is pre-loaded with the application software.

## 3.4 Installation Process

The Installation process comprises six main parts, as outlined in the following sub-sections.

### 3.4.1 Install the Antenna

1. Ensure that the area where the antenna is to be positioned is cleaned.
2. Drill a hole on the bus roof – position to be agreed between installer and transit agency, with a view to ensuring best placement relative to internal situation of solution. Note that the antenna cables are 15 feet
3. Ensure that the antenna fixing instructions – supplied with the antenna - are followed precisely, taking particular note of how the cleaning and adhesive agents are to be used. Failure to do so will result in the antenna becoming detached.
4. Feed the antenna cable through the hole.
5. Run the antenna cable to the where the Secura will be housed inside the bus
6. Apply the epoxy glue around the hole
7. Affix the antenna to the bus roof securely?

Point 1 Point 4 Point 5

### 3.4.2 Run the Interconnect Cable

The Interconnect cable joins the Secura Control Unit Assembly and the Contactless Reader Assembly.

1. Cut a sufficient length of 12-way multi-core cable to allow it to be comfortably run between the sites of the Secura Control Unit Assembly and the contactless card reader assembly. Note that the maximum length of cable connecting the Secura and the Contactless Reader shall be no more than 15 feet.
2. Ensure that the cable is not twisted or pinched anywhere along its length
3. Strip 12cm (4.7in) of the cable sheath at both ends, to facilitate connection to the Secura and Contactless Reader respectively.

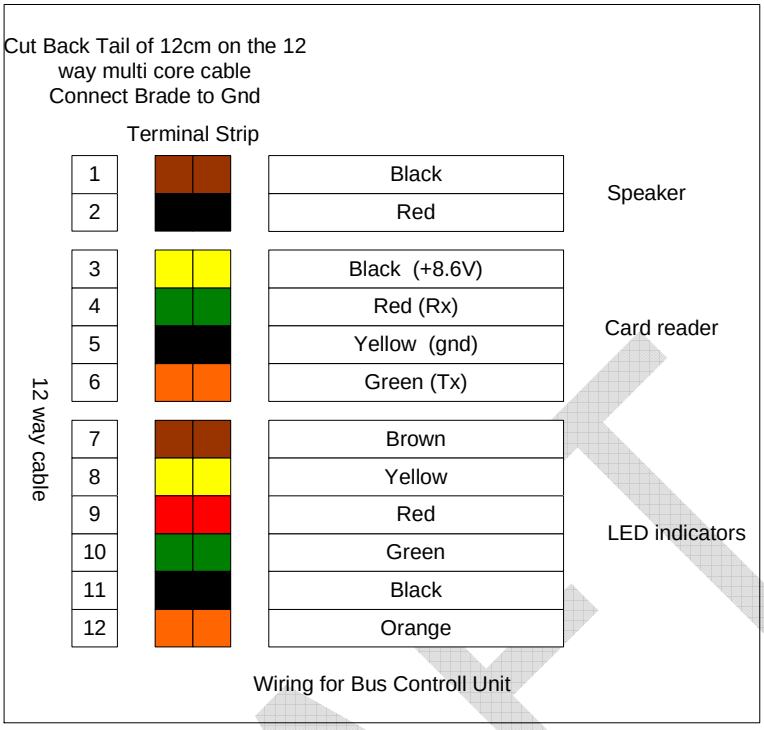
### 3.4.3 Install the Secura Control Unit

1. Attach the support bracket [8] to the agreed position on the bus, as shown:



2. Cut about 15cm (6in) of flexible tubing
3. Feed the antenna cables through the flexible tubing
4. Feed the power cables through the flexible tubing
5. Feed the cables into the support bracket as shown. The 12-way connector cable shall be fed through the left aperture. The antenna cable, power cable and GPS cable shall be fed through the right hand aperture as shown. Note that that antenna cable should be fed through before the other two, as the connector is quite large relative to the aperture.

6. Connect the 12-way multi-core to the Secura Control Unit Assembly, using the following diagram as a guide.

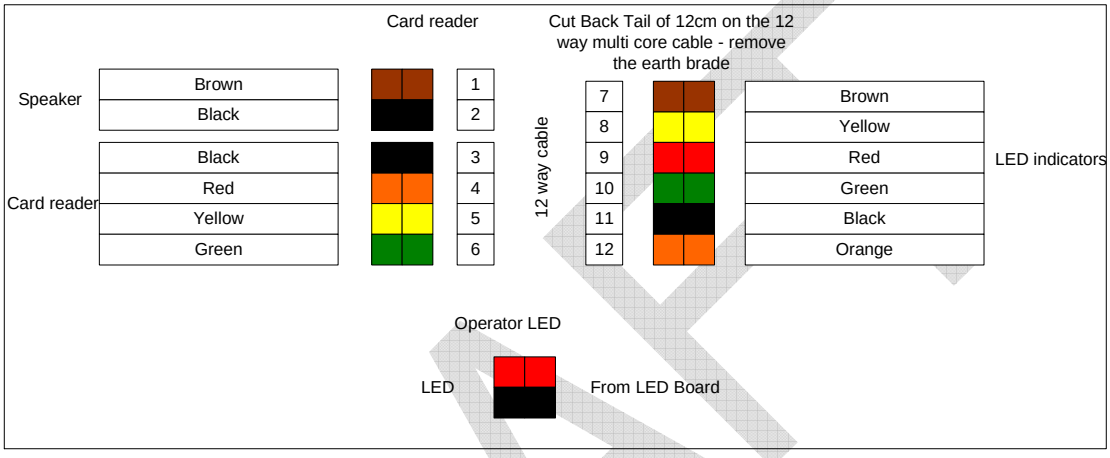



7. Have a colleague double-check the multi-core connections. Please note that it is absolutely essential that the connections are secured properly and the wiring diagram is correctly followed. Incorrect connection will possibly blow the LEDs in the contactless card reader assembly.
8. Connect power cables to the Secura power supply – attach the positive supply to the terminal marked 17-32V and the negative supply to the terminal marked 0V, using the blue crimps. These should be applied using a suitable tool such as RS Components 265-2697. The crimp is of nominal size 0.25 inch for a cable size of 1.5 – 2.5mm.
9. Attach the antenna cable to the GPRS / GPS wireless modem on the Secura Control Unit Assembly
10. Attach the Secura Control Unit Assembly to the Support bracket as shown:

### 3.4.4 Install the Contactless Card Reader Assembly

The fixing points / metal tubing will be pre-installed.

1. Remove the clamps
2. Remove the 4 screws from the base of the unit
3. Prise the bottom away from the tube, revealing the connectors
4. Feed the 12-way cable through the grommet on the base of the assembly.
5. Connect the 12-way multi-core to the Card Reader Assembly, using the following diagram as a guide.




6. You will need to measure the voltage between pins 3 and 5, i.e. power and ground. The voltage must NOT be below +7.5V. Measure on the card reader side. If the voltage is below +7.5V, you will need to reduce the cable length. There is a drop of 0.08V per metre of cable.
7. Have a colleague double-check the multi-core connections. Please note that it is absolutely essential that the connections are secured properly and the wiring diagram is correctly followed. Incorrect connection will possibly blow the LEDs in the contactless card reader assembly.
8. Re-attach the clamps and the four hex screws, ensuring to lightly grease the hex bolts which are used to secure the clamp on the handrail, in order to prevent corrosion and to facilitate later removal if required.


9. Clamp the contactless card reader into the desired position on the bus, as shown to the right.

### 3.4.5 Functional Test

1. Have the bus apply power to the solution. Ensure that the Secura powers up correctly and the LEDS light up on the contactless card reader assembly. The Secura display will display a couple of events, namely:
    - Event 20 – power up
    - Event 23 – In Service
2. A number of self-tests can then be carried out using the keyboard functions of the Secura. Refer to section 5 for full details of the available functions.
    a) Select function 37 on the keyboard, press 3, 7 then ENT. This will switch on the green LEDs
    b) Select function 38 on the keyboard, press 3, 8 then ENT. This will switch on the green LEDs
    c) Select function 26 on the keyboard, press 2, 6 then ENT. This will exercise the green LEDs, the red LEDS and fire a turnstile release (solenoid) pulse.
    d) If the terminal has not contacted MMS when power was applied, perform a communications test to ensure that connectivity with MMS can be established satisfactorily. Do this by selecting function 46.
    e) Test that communications with the Transit Payment Platform Authorisation Server can be established by performing function 44.
    f) Test that communications with the Transit Payment Platform Batch Server can be established by performing function 45.
    g) Ensure that the terminal is taken out of diagnostic mode by performing function 10.
    h) Other available test functions can be performed – refer to section 5 for full details of the available functions.

### 3.4.6 Fit Cover

1. Once the functional tests have passed successfully, fit the outer cover to the solution as shown:

2. Sign the bus back over to the transit agency

# 4 New Jersey PATH Rail Installation

This procedure defines how to perform an installation of the phase 2 solution into a NJ PATH Rail subway turnstile and CAM.

## 4.1 Background

For NJ PATH Rail installations, the solution is to be fitted within a cabinet, the CAM, which stands adjacent to the turnstile. The contactless reader card reader shall be fitted on exterior of the CAM and the Secura Control Unit shall be fitted on an available shelf within the CAM. The Secura will be attached via the solenoid cable to the turnstile's release mechanism. The duration of the solenoid pulse which releases the turnstile needs to be calibrated during the installation process.

## 4.2 What is Supplied?

The NJ PATH Rail part number is: **PPCR002**.

It comprises:

1. Contactless Reader Assembly
2. Secura Control Unit Assembly
3. Power cable, 08826-02-R
4. Mains cable, 08839-01-R
5. Solenoid Cable, 08827-02-R
6. OTI Contactless Reader Cable, 08829-01-R
7. LED Board Cable, 08828-01-R
8. LAN Cable, 08836-01-R

Note that where possible, cables will be pre-fitted to the assemblies

## 4.3 Tools Required

The following tools are required to install the VeriFone-supplied equipment for the pilot installations.

- 5mm Allen Key
- 4.0, 5.5, 7.0 and 8.0 AF Nut Spanners
- T25 and T30 Torx Drivers

## 4.4 Installation Pre-requisites

1. An ethernet cable has been run into the CAM, terminated with a female RJ45 connection point.
2. A 3-Pin (110v) power socket has been run into the turnstile.
3. The Secura is pre-loaded with the application software.
4. A cable has been pre-fitted to the turnstile release mechanism.
5. Any existing unused electronics have been re4moved from the CAM, i.e. the shelf is free for the Secura Control Unit to be installed.

**NOTE PLEASE ENSURE THAT THE POWER CABLE IS NOT PLUGGED INTO THE 3-PIN SOCKET BEFORE INSTALLATION COMMENCES.**

## 4.5 Installation Process

The Installation process comprises the following steps.

### 4.5.1 Hardware Installation

1. Open the CAM door.
2. Fix the Secura Control Unit Assembly to the shelf within the CAM.
3. Drill 4 holes on the right door of the CAM using the template supplied.
4. Fix the contactless card reader assembly to the door and secure with the fixing bolts provided.
5. Attach the Secura to the LED Indicator Board Cable using the LED Board Cable, 08828-01-R.
6. Attach the Secura to the Contactless Reader using OTI Contactless Reader Cable, 08829-01-R.
7. Attach the Secura to the LAN cable.
8. Attach the Secura to the turnstile release using the Solenoid Cable, 08827-02-R. Ensure that the terminals are connected red to red and black to black.
9. Ensure that all connection points are fully home.

### 4.5.2 Functional Test

1. **Plug in the power** and ensure that the Secura powers up correctly and the LEDS light up. The Secura display will display a couple of events, namely:
    - Event 20 – power up
    - Event 23 – In Service
2. The terminal may attempt to contact MMS at this point, to pick up its configuration. This will take a few moments to complete.
3. A number of self-tests can then be carried out using the key board functions of the Secura. Refer to section 5 for full details of the available functions.
    a. Select function 37 on the keyboard, press 3, 7 then ENT. This will switch on the green LEDs
    b. Select function 38 on the keyboard, press 3, 8 then ENT. This will switch on the green LEDs
    c. Select function 26 on the keyboard, press 2, 6 then ENT. This will exercise the green LEDs, the red LEDS and fire a turnstile release (solenoid) pulse.
    d. If the terminal has not contacted MMS when power was applied, perform a communications test to ensure that connectivity with MMS can be established satisfactorily. Do this by selecting function 46.
    e. Test that communications with the Transit Payment Platform Authorisation Server can be established by performing function 44.

f. Test that communications with the Transit Payment Platform Batch Server can be established by performing function 45.

g. Ensure that the terminal is taken out of diagnostic mode by performing function 10.

h. Other available test functions can be performed – refer to section 5 for full details of the available functions.

4. Close the CAM – the solution is ready for use.

# 5 Terminal Application Functions

The terminal application supports a number of simple manual functions to trigger certain events on the terminal as follows:

Enter the desired two digit code to select the desired function. For example, to drop the application to MONITOR, press '19' followed by ENT and the application will terminate, passing control to the firmware MONITOR program.

| Function Code | Function Name | Description |
|---|---|---|
| 00 | Enter Diagnostic Mode | Enter into the diagnostic mode.<br>Diagnostic functions will only be available if application is in the diagnostic mode.<br>MMS or TPB will not be contacted when the application is in the diagnostic mode except for when force dialled |
| 10 | Exit Diagnostic Mode | Exit from the diagnostic mode |
| 01 | Show the Terminal ID | This function code checks the terminal Id by displaying the ID of the terminal |
| 17 | Force MMS | This function forces an MMS connection and receives configuration files from MMS server if there are any available on MMS |
| 18 | Force TPB | This function forces a connection with the Transit Platform Batch server and uploads the transaction batch record and receives hot card files if any. |
| 19 | Force Monitor | Force the terminal into monitor mode. |
| 20 | Rename System File | This function code renames the startup file to _system_SAV. Running function 19 will then allow the application to be exited without immediately restarting |
| 26 | Exercise Functions | This function code is an exercise function, executing 37,38,39 in sequence |
| 37 | Illuminate Green LED | This function code switches on the green LED. |
| 38 | Illuminate Red LED | This function code switches on the red LED |
| 39 | Open Turnstile | This function code opens the turnstile for 1 second |
| 40 | Build Transaction File | This function code builds the transaction File. It is more a development function than a diagnostic one. |
| 41 | Enter Test PAN | This function code receives a PAN from terminal keypad for processing. It allows diagnostic transactions to be performed in a when no card is available. |

| Function Code | Function Name | Description |
|---|---|---|
| 42 | Process PAN file | This function code processes a list of PANS from a file |
| 43 | Test LANG4 Network Card | This function code checks whether LANG4 card is working correctly or not. |
| 44 | Transit Platform Server Communications Test | This function code tests the availability of TP server by connecting to it and display the appropriate success and failure message on the terminal display |
| 45 | Transit Platform Batch Server Communications Test | This function code tests the availability of TP batch server and display the appropriate success or failure message on the terminal display |
| 46 | MMS Server Communications Test | This function code tests the availability of MMS server and display the appropriate success or failure message on the terminal display |
| 47 | Contactless Reader Test | This function code checks working of OTI card reader. |
| 48 | OTI Start | This function code sends a polling command to OTI and waits for the card tap from the user for 5 seconds, and then displays the PAN and expiry date of the tapped card |
| 49 | OTI Stop | This function code sends stop polling command to the OTI reader so that no more card taps will be read |
| 50 | Report LANG4 Firmware Version | This function code displays the Firmware Version of the LANG4 card |
| 51 | Report OTI Card Reader Firmware Version | This function code displays the Firmware Version of the OTI card reader |
| 52 | Ping Server | This function code takes the IP address of the machine from the user, pings it and displays the success or failure message. |
| 53 | Audio Test | This function code tests the audio device by beeping once on the secure terminal. |
| 54 | Report SECURA Firmware Version | Displays the Secura firmware version |
| 55 | Display LANG4 IP address | Displays the LANG IP address |
| 56 | Display LANG4 Gateway Address | Displays the LANG Gateway address |
| 57 | Display LANG4 Subnet mask | Displays the LANG Subnet Mask |
| 58 | Set Turnstile Pulse duration | Takes input from user for turnstile opening duration (in Milliseconds) |

| Function Code | Function Name | Description |
|---|---|---|
| 59 | Show GPS Coordinates | Displays the current GPS coordinates (only available in bus deployed environment) |
| 60 | Upgrade LANG4 firmware | Initiates the LANG firmware upgrade. Will prompt the user to enter the FTP server IP address which is hosting the LANG firmware image file (imagez.bin) |

## 5.1 Application Files

The following files require to be loaded:

**Software/Application modules' names are as listed below:**

| | |
|---|---|
| DIAGN.PGM | |
| LANG4.PGM | |
| BATCH.PGM | |
| BINCHK.PGM | |
| CALLMNGR.PGM | |
| CONFIG.PGM | |
| DIRECTOR.PGM | The main application module |
| EVTLOG.PGM | |
| GPS.PGM | Handles the GPS functionality in the bus environment |
| ISO8583.PGM | |
| LANGDATA.PGM | |
| OTICARD.PGM | |
| PASSBCK.PGM | |
| PROTMNGR.PGM | |
| SECURITY.PGM | |
| TXN.PGM | |
| UI.PGM | |

**Configuration files' names are as below:**

| | |
|---|---|
| IDENTITY.CFG | Contains basic initial configuration data including MMS communications details |
| BRG.DAT | Contains the coordinates of the bus stops. Used only in the bus environment) |
| ACTIVE.CDN | The BIN file |

**Certificate files' names are as below:**

DIAGN.CRT
LANG4.CRT
BATCH.CRT
BINCHK.CRT
CALLMNGR.CRT
CONFIG.CRT
DIRECTOR.CRT
EVTLOG.CRT

GPS.CRT

ISO8583.CRT

LANGDATA.CRT

OTICARD.CRT

PASSBCK.CRT

PROTMNGR.CRT

SECURITY.CRT

TXN.CRT

UI.CRT

When loaded as outlined in the previous section, the terminal will attempt to contact the MasterCard Management System (MMS) to pick up its individual configuration. The MMS contact details are held in the IDENTITY.CFG file.

MMS must therefore have been setup to expect the contact from each terminal.

# Appendix A MONITOR Functions

If the application is running perform a function 20 followed by a function 19 to drop into the MONITOR program.

Effectively the User Interface of the terminal firmware, the Monitor program provides several useful functions, as follows. In MONITOR mode the terminal display will read SECURAPP MONITOR and show the date and time.

To scroll through the various MONITOR functions, press the '1' key. When the option you wish to select is shown, press the ENT key to select the desired (displayed) function.

The functions are:

**LOCAL LOAD**

Allows software and/or configuration and data files to be transferred between the Secura and an attached PC. This function is used when loading the application, as outlined above

**RESET MASTER**

This allows any application or data files held in the terminal memory to be cleared. Often useful to do this before completely loading an application. A password will be prompted for. This is 79318624.

**CHANGE DATE**

Self explanatory

**CHANGE TIME**

Self explanatory

**LOAD PROGRAM**

Allows control to be passed to a loaded application. The list of available application modules will be shown. To scroll through them, press '1'. The MasterCard application is invoked by selecting the DIRECTOR program.

**CHANGE SPEED**

Allows the comms speed for the Secura to PC link to be changed

# Appendix B FCC Statement.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) this device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.

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