

# XQuadra.POS

Release 1.0.0

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User Manual Version 0.1

*English Version*



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# 1. XQuadra.POS General Information

## 1.1 Introduction

XQuadra.POS is a Virtual Point-Of-Sale (POS) software designed and developed to work with Gemplus Card Reader to make transactions on XQuadra.Express, XQuadra.Business and XQuadra.Enterprise. It handles all the transaction information and data written on customers' cards such as Points and Values and these are deducted/added according to the transactions made.



## 1.2 Main Features & Functionality

The following are the main features offered by XQuadra.POS:

- **Application Selection (on XQuadra.Business and XQuadra.Enterprise)** – enables you to select an application from a maximum of 6 applications saved on customers' cards.
- **Transactions Handling** – takes care of each transaction executed and handled on the POS in a safe and accurate manner
- **View Customers' Card Balance** – enables you to display the Customers' Points and Values stored on the card.
- **View Customers' Card History** – enables you to display the last 5 transactions made on Customers' Card.

## 1.3 System Requirements

These are the minimum PC requirements to run XQuadra.POS:

- *Pentium IV 2.0 GHz*
- *512MB Ram*
- *Operating System : Windows 2000, Windows XP, Windows Vista, Windows 7*
- *Initial Hard Disk space of 100MB*

## 2. Smart Cards

### 2.1 About Smart Card SLE 5542

The SLE 5542 Smart Card has an intelligent 256 bytes with Write Protection and Programmable Security Code (PSC) and with ISO 7816 smart card interface. SLE 5542 is a standard, low-cost memory Smart Card. It has a 256 x 8-bit EEPROM data memory with 32 x 1-bit protection memory. The SLE 5542 is a fully-compatible, upgraded version of the SLE 4442 Smart Card.

To ensure the future availability of this product type, whilst still ensuring backward compatibility to previous products, Infineon has migrated the data carrier family to the IMEM CMOS technology. IMEM is conceived for security applications and offers unsurpassed physical and electrical protection schemes.

### 2.2 Features

These are the SLE 5542 features:

- *100% functional compatibility to SLE 4442*
- *256 x 8-bit EEPROM organization of Data Memory*
- *32 x 1-bit Protection Memory*
  - *Byte-wise write protection of first 32 addresses (byte 0...31) of Data Memory*
  - *Manufacturer Code for unique identification of application*
- *Data Memory (addresses 0...255) alterable only after verification of 3-Byte*
- *Programmable Security Code (PSC)*
- *Two-wire link protocol*
  - *Byte-wise addressing*
  - *End of processing indicated at data output*
- *Contact configuration and Answer-to-Reset (synchronous transmission) in accordance to standard ISO/IEC 7816*
- *Sophisticated electrical characteristics*
  - *Ambient temperature -40 ... +80°C for chip, -25 ... +80°C for module*
  - *Supply voltage 5 V ± 10 %*
  - *Supply current < 3 mA (typical 600 µA)*
  - *EEPROM erase / write time 5 ms*
  - *ESD protection typical 4,000 V*
  - *EEPROM Endurance minimum 100,000 erase / write cycles*
  - *Data retention for minimum of 10 years*
- *Advanced 1.2 µm CMOS-technology optimised for security layout*
  - *EEPROM-cells protected by shield*
  - *Shielding of deeper layers via metal*
  - *Sensory and logical security functions*
  - *No isolation on backside necessary*

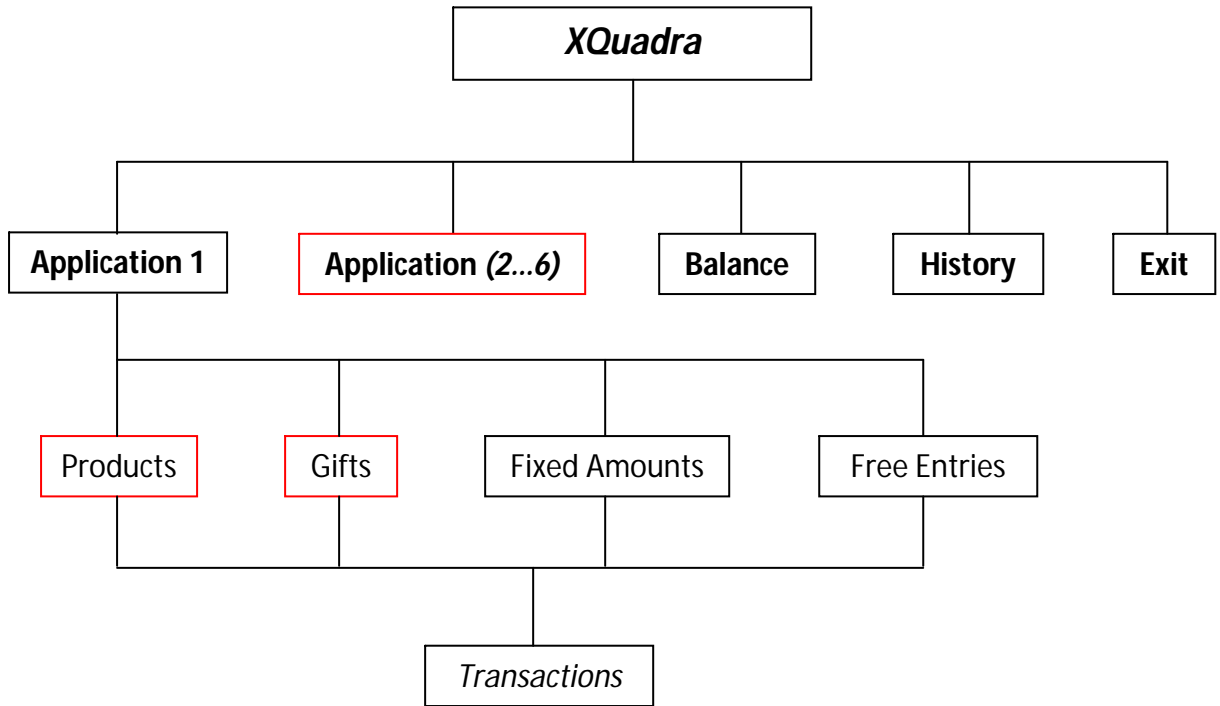
## 3. XQuadra Products General Comparison Chart

### 3.1 Express VS Business VS Enterprise

	Express	Business	Enterprise
Companies Configuration	No	1	Unlimited
Campaigns Configuration	1	1	Unlimited
Applications Configuration	Up to 6	Unlimited	Unlimited
Products Shopping Cart	No	Yes	Yes
Gifts Shopping Cart	No	Yes	Yes
Groups	No	Unlimited	Unlimited
Cards	Up to 400	Unlimited	Unlimited
Security	No	Yes	Yes
Multi User	No	Yes	Yes
Login Authentication	No	Yes	Yes
Web Services	No	Yes	Yes
User Management	No	Yes	Yes
Data Auditing	No	Yes	Yes
Other Functions	Yes	Yes	Yes
Transactions Upload	Yes	Yes	Yes
Auto Generate Cards	No	Yes	Yes
Create Batch Cards	No	Yes	Yes
Data Migrations	No	Yes	Yes
Reports	Yes	Yes	Yes
Transactions	Yes	Yes	Yes
Transaction Statistics	No	Yes	Yes
Data Reports	No	Yes	Yes
Virtual POS (Gemplus Terminal)	1	Up to 9	Unlimited
POSce (XAC Terminal)	1	Up to 9	Unlimited
INGENICO ( <i>Proprietary</i> Terminal)	1	No	No

## 4. POS Menu

### 4.1 Tree View Menu



#### Menu options available

	Express	Business	Enterprise
<b>Application 1</b>	Yes	Yes	Yes
Products - Transactions	No	Yes	Yes
Gifts - Transactions	No	Yes	Yes
Fixed Amounts - Transactions	Yes	Yes	Yes
Free Entries - Transactions	Yes	Yes	Yes
<b>Application (2..6)</b>	No	Yes	Yes
Products - Transactions	No	Yes	Yes
Gifts - Transactions	No	Yes	Yes
Fixed Amounts - Transactions	No	Yes	Yes
Free Entries - Transactions	No	Yes	Yes
<b>Balance</b>	Yes	Yes	Yes
<b>History</b>	Yes	Yes	Yes
<b>Exit</b>	Yes	Yes	Yes

## 5. POS User Interface

### 5.1 Interface Description

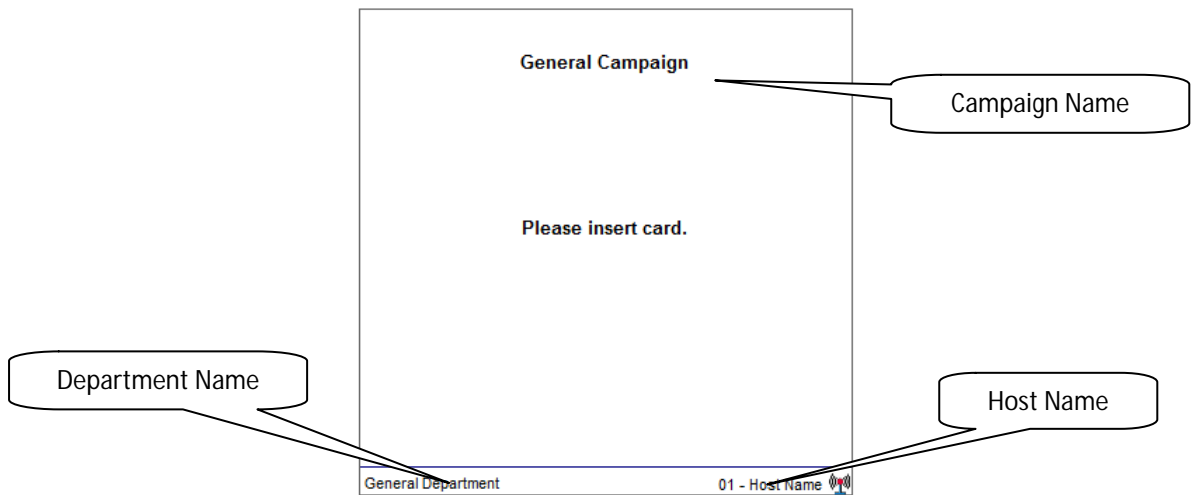


Figure 5.1

#### Screen Description

##### **Campaign Name**

This is the Campaign Name entered in XQuadra and for which the terminal has been configured. XQuadra.Express caters for just **ONE** campaign.

##### **Department Name**

This is the Department Name for which the campaign is running.

Since XQuadra.Express is intended for small businesses and no departments are included, the Department Name is set to default "Department".

##### **Host Name**

This is the Computer Name on which XQuadra.POS is running.



## 5.2 Main Menu Screen

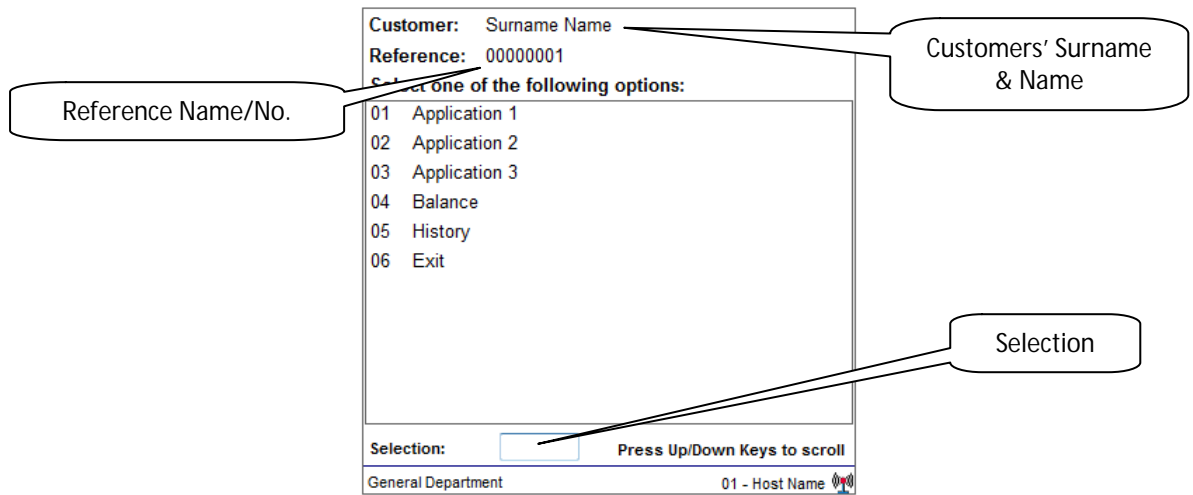


Figure 5.2

### Screen Description

#### Customer

This is the Customers' Surname & Name saved on the card.

#### Reference

This is the Customers' Reference name/number on the card.

#### Selection

Select an option, type in the number for that selection and press "Enter".

### Selection options

XQuadra.Express	XQuadra.Business / XQuadra.Enterprise
<p><b>01 - Application Name</b> This is the Application Name.</p>	<p><b>01 - ... Application Name</b> This is the Application Name.</p>
<p><b>02 - Balance</b> This shows the Balance on the Customers' Card (Points &amp; Values).</p>	<p><b>The 3<sup>rd</sup> number from the bottom options list - Balance</b> This shows the Balance on the Customers' Card.</p>
<p><b>03 - History</b> This shows the History of the last 5 transactions recorded on the Customers' Card.</p>	<p><b>The 2<sup>nd</sup> number from the bottom options list - History</b> This shows the History of the last 5 transactions recorded on the Customers' Card.</p>
<p><b>04 - Exit</b> This closes the Virtual POS.</p>	<p><b>The last number from the options list - Exit</b> This closes the Virtual POS.</p>

### 5.3 Application/s Screen

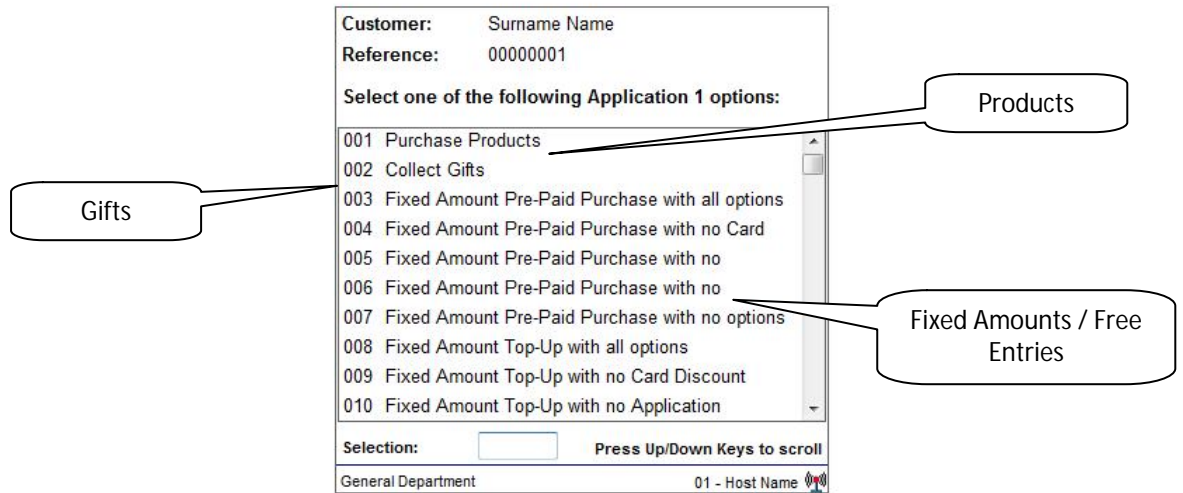


Figure 5.3

In XQuadra.Business and XQuadra.Enterprise, if the selected Application has Products and Gifts, the first two options listed will be Products and Gifts. Then the rest of the list depends on the Fixed Amounts and Free Entries entered. The last option in the list is used to Exit from the Application/s section.

#### Screen Description

##### Selection

Select an option from the list, type in the number for that selection and press "Enter".

<b>Fixed Amounts</b>		
	<b>Value</b>	<b>Points</b>
<i>Pre-Paid Purchase</i>	No	No
<i>Top-Up</i>	No	No
<i>Free Entry</i>	No	No
<i>Gift</i>	No	No
<i>Cash Purchase</i>	No	No

<b>Free Entries</b>						
	<b>Fixed Value</b>		<b>Free Entry</b>		<b>Multiply</b>	
	<b>Value</b>	<b>Points</b>	<b>Value</b>	<b>Points</b>	<b>Value</b>	<b>Points</b>
<i>Pre-Paid Purchase</i>	Yes	No	Yes	Yes	Yes	No
<i>Top-Up</i>	Yes	No	Yes	Yes	Yes	No
<i>Free Entry</i>	Yes	No	Yes	Yes	Yes	No
<i>Gift</i>	Yes	No	Yes	Yes	Yes	No
<i>Cash Purchase</i>	Yes	No	Yes	Yes	Yes	No

## Products Shopping Cart

(For XQuadra.Business & XQuadra.Enterprise **ONLY**)

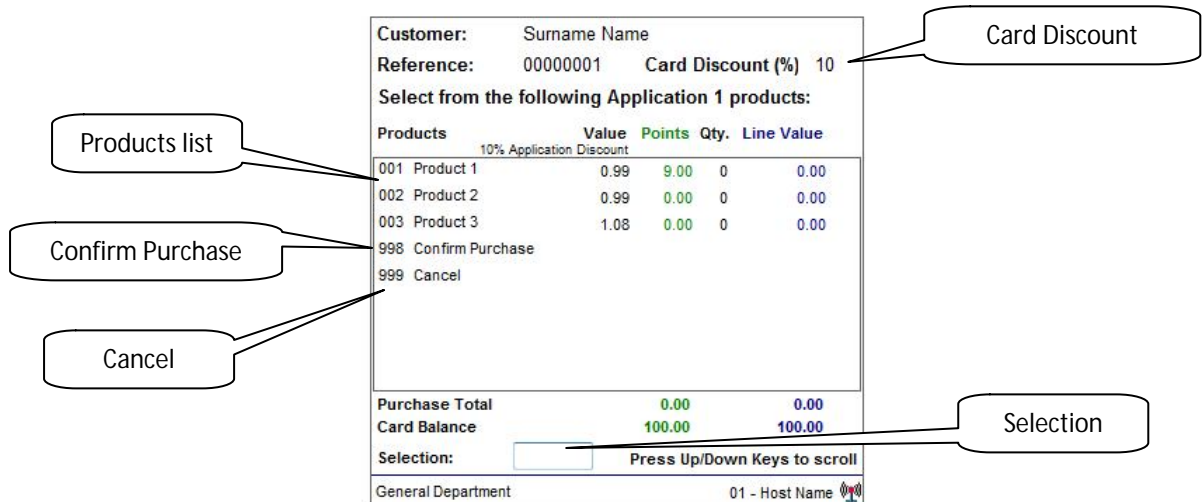


Figure 5.4

### Screen Description

#### Card Discount

This is the Customers' Card Discount saved on the card.

#### Products - 001 - ...

A list of Products in the selected application.

#### Confirm Purchase - 998

An option to Confirm Products purchase.

#### Cancel - 999

An option to Cancel Products purchase.

#### Selection

Select a Product from the Products list, type in the number for that selection and press "Enter".

## Gifts Shopping Cart

(For XQuadra.Business & XQuadra.Enterprise **ONLY**)

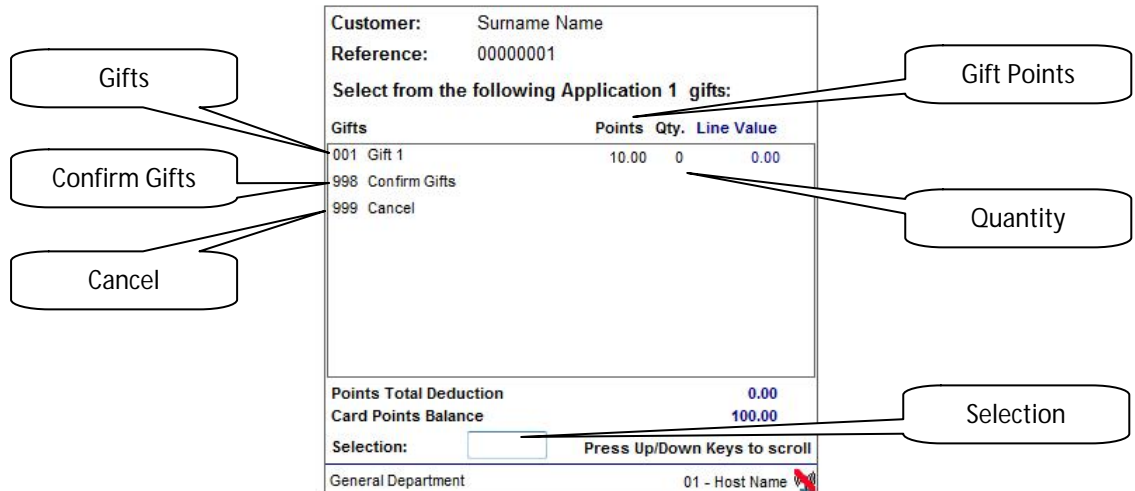


Figure 5.5

### Screen Description

#### **Gifts - 001 - ...**

A list of gifts in the selected application.

#### **Confirm Gifts - 998**

An option to Confirm Gifts.

#### **Cancel - 999**

An option to Cancel Gifts.

#### **Gift Points**

A number of points for each Gift.

#### **Quantity**

Quantity of Gifts ordered.

#### **Selection**

Select a Gift from the Gifts list, type in the number for that selection and press "Enter".

## Fixed Amounts

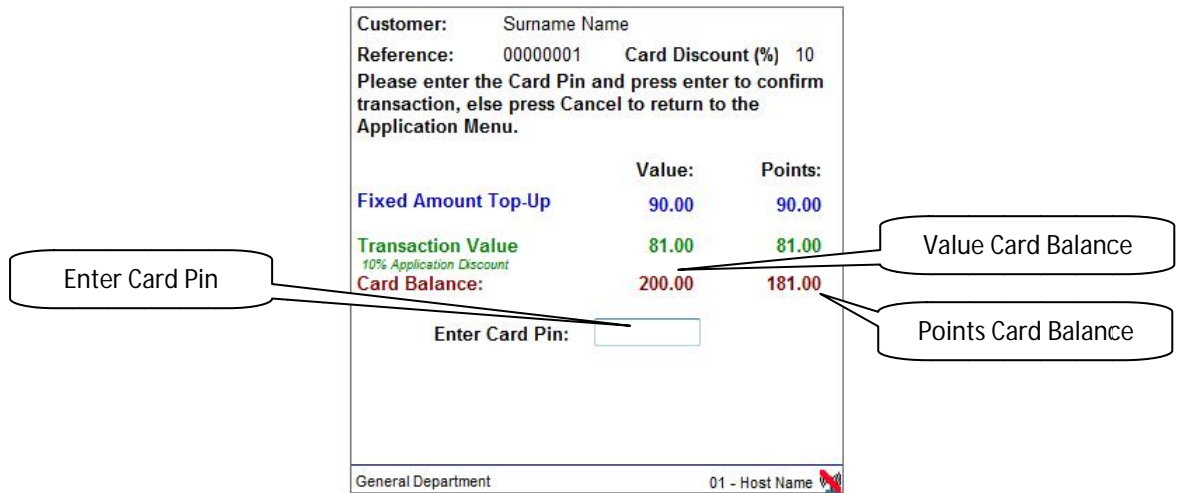


Figure 5.6

## Screen Description

### Value Card Balance

The Customers' Card Amount Value after doing the Fixed Amount Transaction.

### Points Card Balance

The Customers' Card Amount of Points after doing the Fixed Amount Transaction.

### Enter Card Pin

The Card Pin is required only if this option is chosen in XQuadra.Express & XQuadra.Administration. If this option is chosen, the Customer should enter the Card Pin before making a transaction.

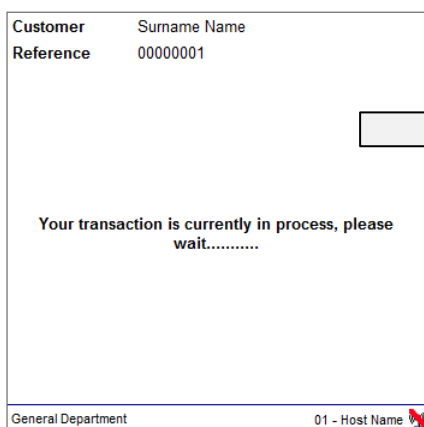


Figure 5.7

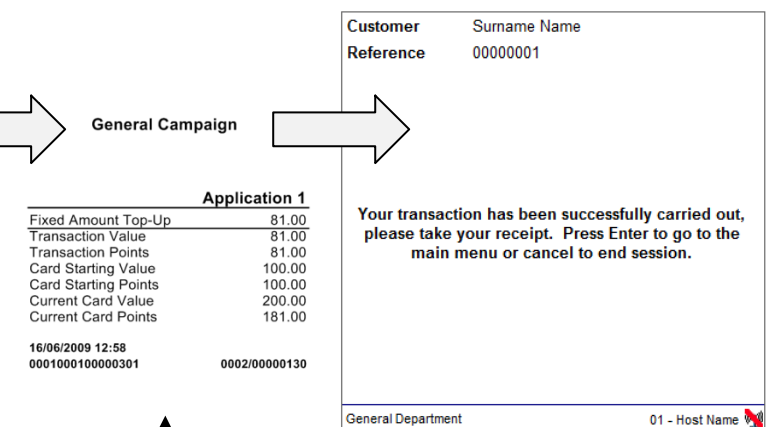


Figure 5.8

Transaction Receipt

If the Card Pin is accepted, the transaction is processed and if in XQuadra.Express/XQuadra.Administration the "Print" option is chosen, the Transaction Receipt is previewed and can also be printed.

### Free Entries

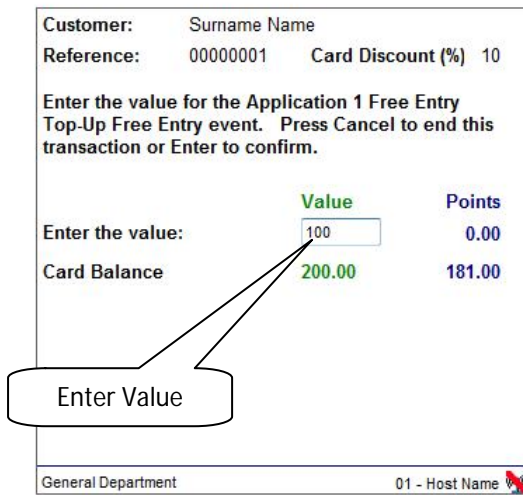


Figure 5.9

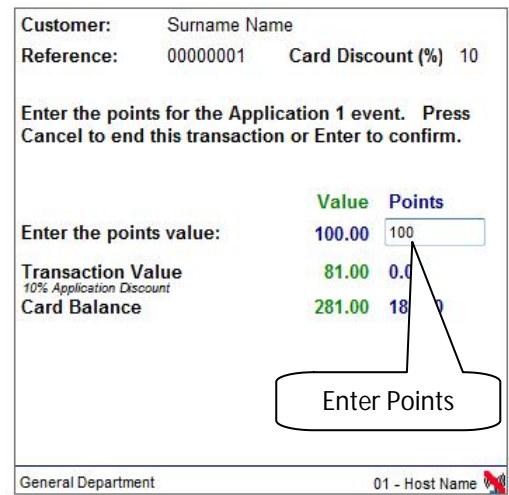


Figure 5.10

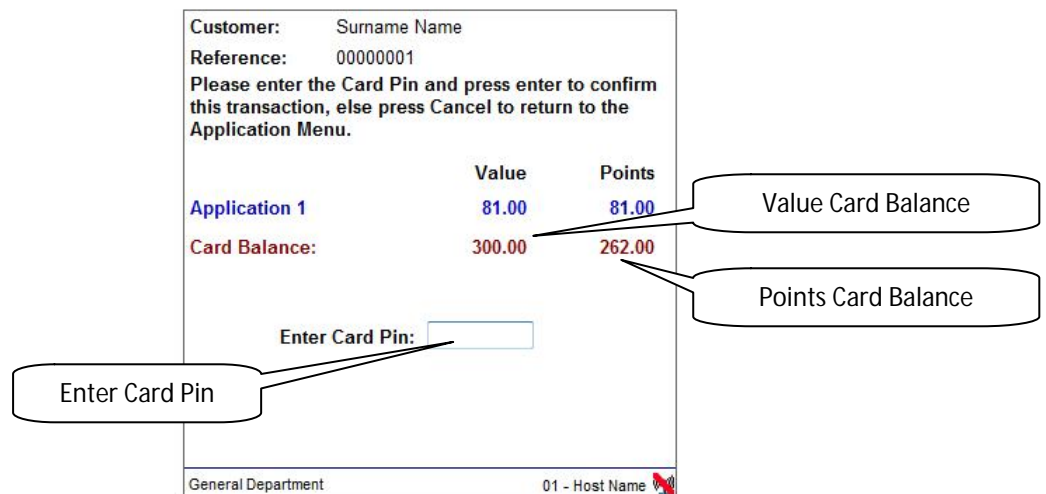


Figure 5.11

### Screen Description

#### Enter Value

Enter the Free Entry Value.

#### Enter Points

Enter the Free Entry Points.

#### Value Card Balance

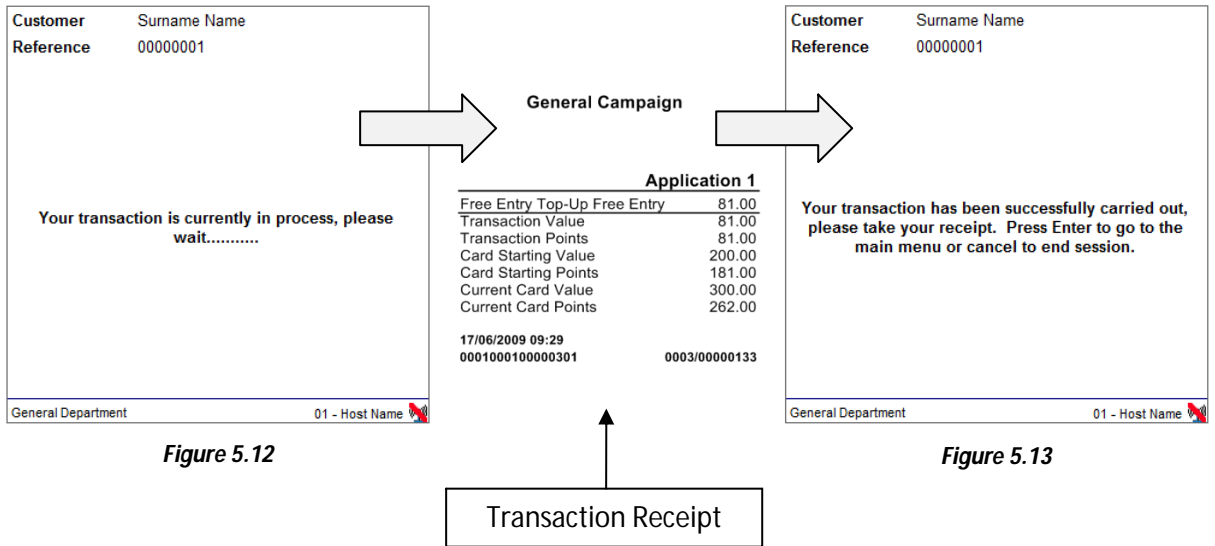
The Customers' Card Amount Value after doing the Fixed Amount Transaction.

#### Points Card Balance

The Customers' Card Amount of Points after doing the Fixed Amount Transaction.

#### Enter Card Pin

The Card Pin is required only if this option is chosen in XQuadra.Express and XQuadra.Administration. If this option is chosen, the Customer should enter the Card Pin before making a transaction.



If the Card Pin is accepted, the transaction is processed and if in XQuadra.Express/XQuadra.Administration the "Print" option is chosen, the Transaction Receipt is previewed and can also be printed.

## 5.4 Balance Screen

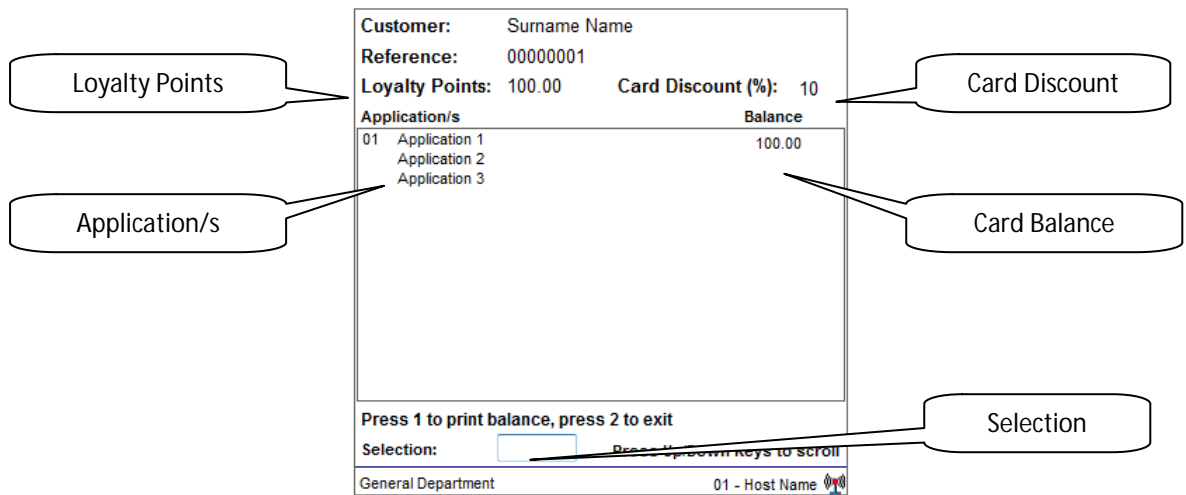


Figure 5.14

### Screen Description

#### **Application/s**

The Application Names stored on the Customers' card.

#### **Balance**

The Customers' card Balance for each application group (*Groups are available in XQuadra.Business and XQuadra.Enterprise ONLY*).

#### **Card Discount**

The Customers' card Discount provided by the Client.

#### **Loyalty Points**

The Customers' amount of Loyalty Points accumulated.

#### **Selection**

Select an option from 1 -2, type in the number for that selection and press "Enter".

1. To print Balance
2. To Exit from the Balance section



## 5.5 History Screen

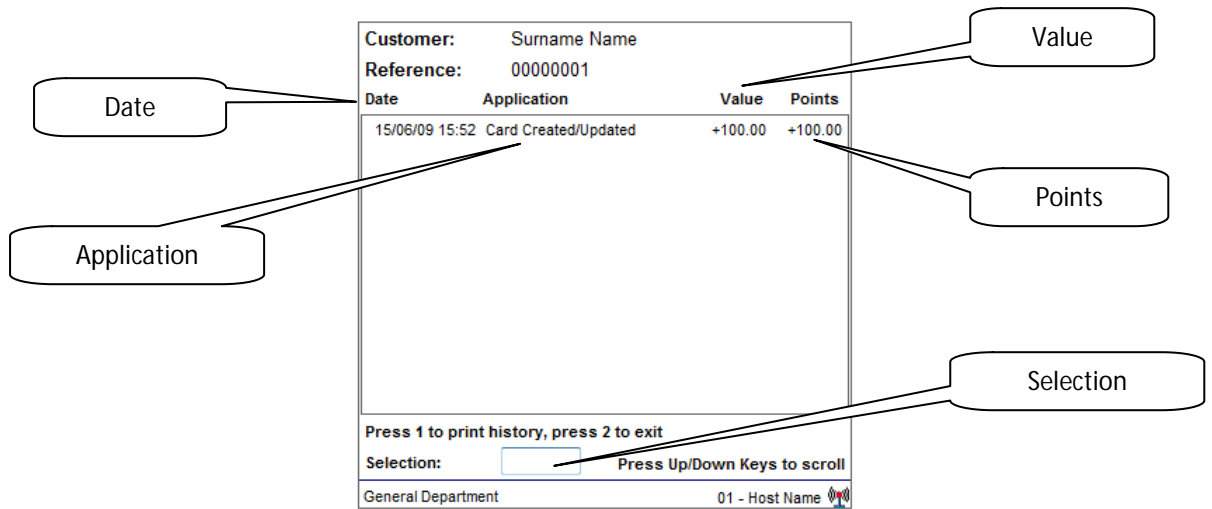


Figure 5.15

Figure 5.15 shows the Card History. This section displays the last five transactions carried out on the card.

### Screen Description

#### **Date**

The Date of the selected transaction.

#### **Application**

The Application Name on which the transaction was carried out.

#### **Value**

The Value added/subtracted for each transaction.

#### **Points**

The Points added/subtracted for each transaction.

#### **Selection**

Select an option from 1 -2, type in the number for that selection and press "Enter".

1. To print History
2. To Exit from the History section

## 6. Glossary

Name	Description
<b>Client</b>	<i>The Client refers to the Owner of the solution.</i>
<b>CMOS</b>	<i>Complementary Metal Oxide Semiconductor (CMOS) is a technology for making integrated circuits. CMOS technology is used in microprocessors, microcontrollers, static RAM, and other digital logic circuits. CMOS technology is also used for a wide variety of analog circuits such as image sensors, data converters, and highly integrated transceivers for many types of communication.</i>
<b>Customer</b>	<i>The Customer refers to the Owner of the Smart Card.</i>
<b>Gemplus</b>	<i>Is a device manufactured by Gemalto to read Smart Cards.</i>
<b>POS Terminal</b>	<i>POS terminals (in comparison to central terminal) are handheld or desktop devices that can conduct transactions with smart or mag-stripe cards.</i>
<b>Smart Card</b>	<i>Also called IC card, chip card or memory card (for certain types). A card formed of a plastic body with a chip (or module) embedded in a special cavity.</i>
<b>Terminal</b>	<i>Any device that can communicate with a smart card (e.g., reader, coupler...). Certain terminals can operate in standalone mode, while others must be connected to a central information system to access an application.</i>
<b>XAC</b>	<i>XAC is a leading R&amp;D/Manufacturing company focused on transaction automation devices.</i>
<b>XQuadra.Business</b>	<i>XQuadra.Business refers to the Business Edition software of XQuadra.</i>
<b>XQuadra.Enterprise</b>	<i>XQuadra.Enterprise refers to the Enterprise Edition software of XQuadra.</i>
<b>XQuadra.Express</b>	<i>XQuadra.Express refers to the Express Edition software of XQuadra.</i>
<b>XQuadra.POS</b>	<i>XQuadra.POS refers to the terminal software used with the Gemplus Card Reader.</i>
<b>XQuadra.POSCe</b>	<i>XQuadra.POSCe refers to the terminal software used with the XAC Terminal T201.</i>