

# Quick Reference Guide



**Version 1**

July 2016

# Contact details

## PC-EFTPOS Contact Details

PC-EFTPOS office hours are Monday to Friday, 8:30am to 5:30pm EST.

PC-EFTPOS Reception: Phone **(02) 9998 9800**

PC-EFTPOS Website: <http://www.pceftpos.com/>

Software Release Website: <http://www.pceftpos.com.au/files/releasecd/>

Support Website: <http://support.pceftpos.com/>

General Enquiries Email: [support@pceftpos.com.au](mailto:support@pceftpos.com.au)

## CBA Contact Details

CBA help Desk Number: **1800 230 177**

24 hour 7 days to report all terminal faults or failures, merchant enquiries

Authorisations:

Call **1800 813 700** for all over the floor limit manual debit card transactions

Call **132 636** for all over floor limit credit card transactions

Charge Cards

Amex and JCB: **1300 363 614**

Diners: **1300 360 500**

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# 1 Introduction

The purpose of this document is to detail the screen design and transaction flow of the CBA EMV PC-EFTPOS release of software.

The following terminal devices are available for use:

- Ingenico IPP350
- Ingenico ICT250
- Ingenico IWL252

The terminals support the functionalities outlined in the table below:

Product Feature	IPP350	ICT250	IWL252
1. Purchase, Cash, and Refund transaction processing	✓	✓	✓
2. Electronic Fallback (EFB) processing	✓	✓	✓
3. Pre-swipe processing	✓	✓	✓
4. MasterCard EMV and contactless chip processing	✓	✓	✓
5. Visa EMV and contactless processing	✓	✓	✓
6. Low Value Payment processing (i.e. Visa Small Ticket, MasterCard QPS, and AMEX No Signature Program)	✓	✓	✓
7. Support for multi-merchant processing	✓	✓	✓
8. Internal printer	✗	✓	✓
9. Internal modem	✗	✓	✓
10. Internal contactless reader	✓	✓	✓
11. CBA settlement processing and reporting	✓	✓	✓
12. Support for CBA RSA / security standards	✓	✓	✓
13. AS2805 compliant messaging	✓	✓	✓
14. PC-EFTPOS integration	✓	✓	✓
15. CBA TMS integration for relevant parameter and software downloads	✓	✓	✓
16. American Express contact EMV and contactless EMV processing	✓	✓	✓
17. JCB contact EMV processing	✓	✓	✓

18. Cordless transaction processing using Bluetooth connectivity	✘	✘	✓
19. POS reference number sent with financial authorization messages to the host	✓	✓	✓
20. Unique card representation for financial transactions (sent back to the POS)	✓	✓	✓
21. UnionPay contact EMV processing	✓	✓	✓

The physical features of the devices can be seen below

## 1.1 iPP350



## 1.2 iCT250



### 1.3 iWL252 (Bluetooth Terminal)



## 2 User Interface









### 2.1 General Display Features

#### 2.1.1 Colour Screen






The terminals come with a colour display screen. Screen animation may also be used at certain points of a transaction to indicate that the terminal is actively processing the transaction or awaiting a response from the host, the TMS, or the POS.

#### 2.1.2 Status Bar

When the terminal is powered-on, the terminals' Operating System (OS) provides data to display the Status Bar consisting of the following information:

Information	Indicator	Description
System Date and Time		This shows the current system time and date.
Security Status		This indicates that Ingetrust keys have been injected and that terminal data is secure.
Power Condition		This indicates that the terminal is connected to mains power.
Battery Level		This is the charge level on the portable device and indicates whether or not the battery is currently charging. <i>Note: This is only displayed for the IWL252.</i>
Dial-up Modem Status		This indicates that the internal (dial-up) modem on the base is configured but not enabled.
		This indicates that the internal (dial-up) modem on the base is enabled and connection established.  While the modem is dialling, the Host number icon is coloured yellow, turning green and displaying "PSTN" text when connection is made.
Base Serial Number		This is the serial number of the base (cradle) to which the portable device is paired. <i>Note: This is only displayed for the IWL252.</i>
Smart Base Indicator		This indicates that the terminal is paired with a smart base.



		<i>Note: This is only displayed for the IWL252.</i>
Bluetooth Icon		The signal bars and the Bluetooth icon indicate the status of the Bluetooth link between the portable device and the base.  <i>Note: This is only displayed for the IWL252.</i>
		This indicates that a Bluetooth link has been established between the portable device and the base.  <i>Note: This is only displayed for the IWL252.</i>
		Terminal is within range of its Base and Bluetooth link has been interrupted. This icon is displayed until connection is re-established.  <i>Note: This is only displayed for the IWL252.</i>
		This icon will be displayed if terminal exceeds maximum operating range from its Base, and the Bluetooth link is broken.  <i>Note: This is only displayed for the IWL252.</i>
Contactless LEDs		The first LED, when continuously turned on (i.e. not flashing), indicates that contactless processing is enabled for the transaction. The rest of the LEDs are only turned on whilst the contactless transaction is being processed.

The following image shows how the segment will be displayed.



### 2.1.3 Contactless Card Read Channel Indicators

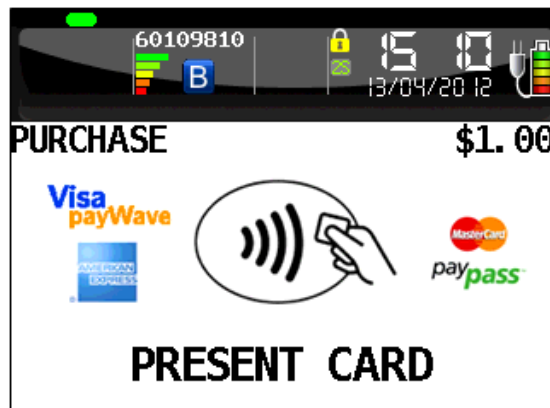
The terminals come with LEDs which indicate whether the contactless card read channel is activated or not.

**Note:** The contactless LEDs will also light up when the terminal is reset/powerd on until the application is running.

The contactless reader is only activated after a transaction request is received from the POS, and the transaction qualifies for contactless processing.


Brand logos for MasterCard, Visa, and AMEX contactless applications may also be displayed with the standard contactless symbol if the required images have been downloaded to the terminal from TMS, and the transaction qualifies for contactless processing (i.e. the transaction type is purchase without cashout or refund, and the amount is less than or equal to the contactless transaction limits for these applications).

The following screen shows all contactless brand logos displayed, which indicates that the transaction qualifies for contactless processing for MasterCard, Visa, and AMEX:



## 2.2 Idle Screen

The following table shows the start screen for the terminal and highlights any relevant attributes or parameters.


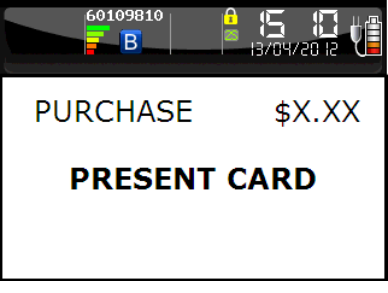
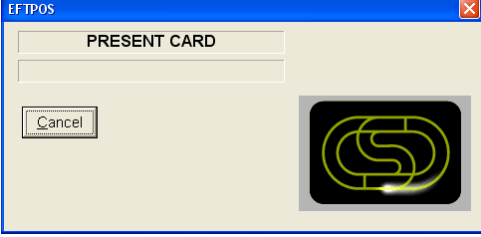
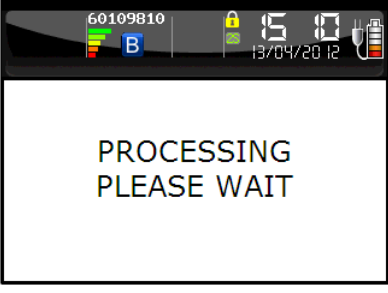
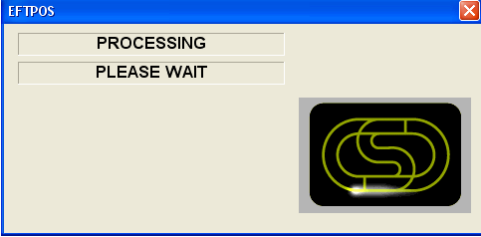
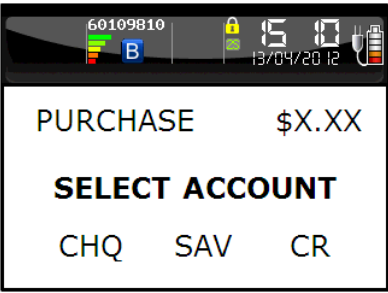
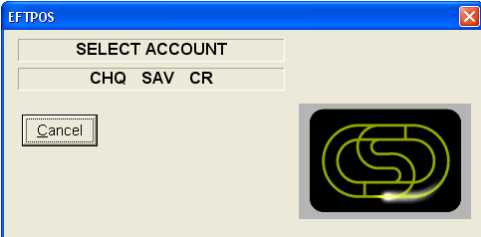
Terminal Display	POS Display	Action
	<p>Not Applicable</p>	<p>User initiates purchase transaction on the POS interface by selecting the transaction type, and entering the purchase amount.</p> <p><b>Status Indicator:</b> The text at the top of the screen under the 'Status Header' displays the status of the Terminal:          'READY' = Ready,          'RSA REQUIRED' = RSA Init Required,          'LOGON REQUIRED' = Logon Required          'TMS REQUIRED' = TMS Logon Required</p>

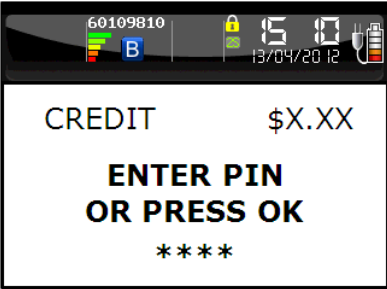
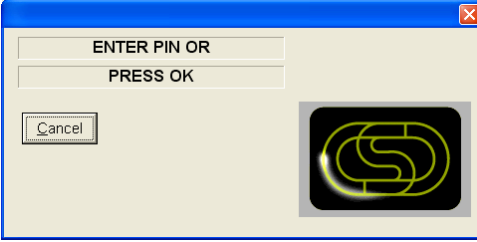
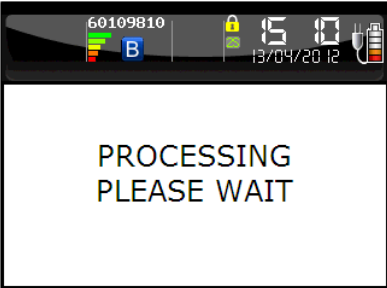
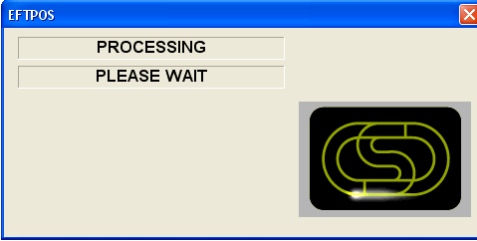
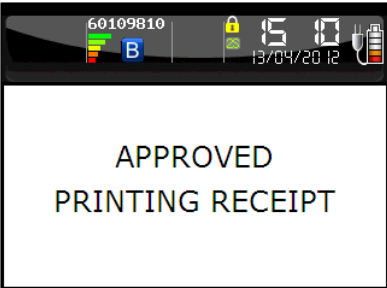

## 2.3 Financial Transactions

### 2.3.1 Purchase with PIN

The following flow shows a standard purchase transaction processed with a PIN.


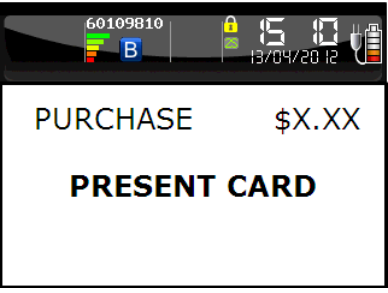
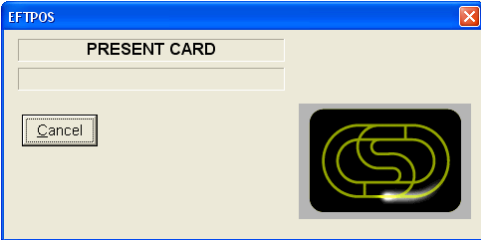
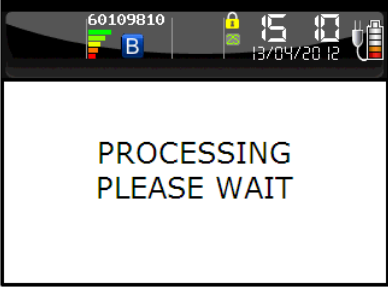
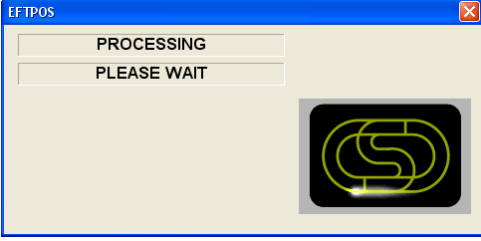
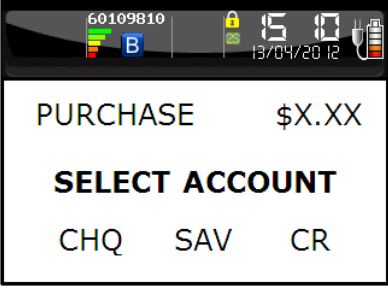
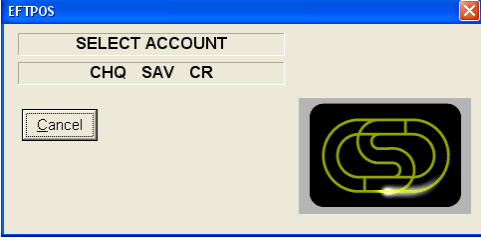
**Note:** The example below applies only to cards inserted or swiped through the magstripe reader. Contactless transactions with PIN are covered separately.

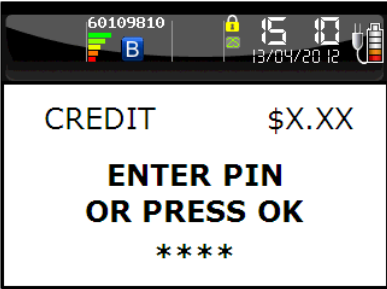
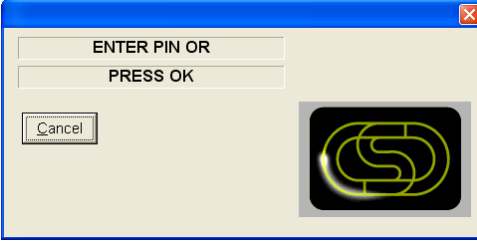
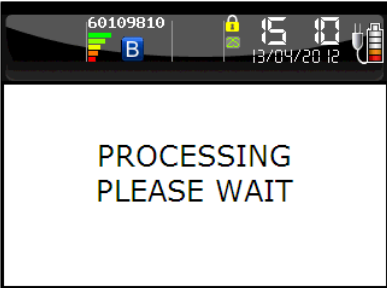
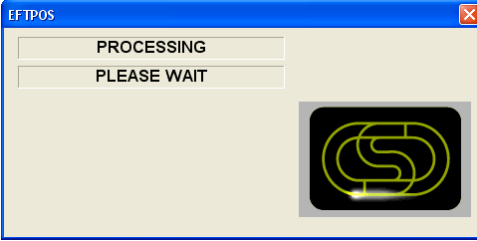
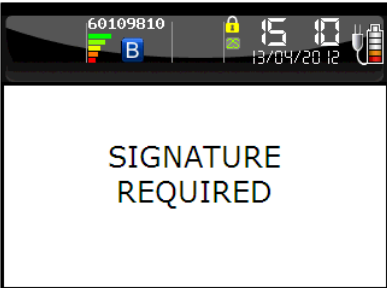
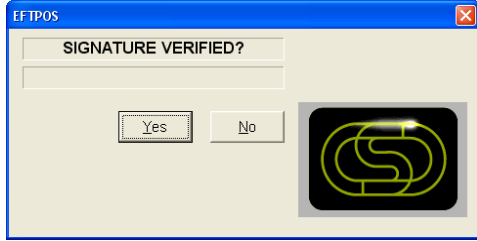
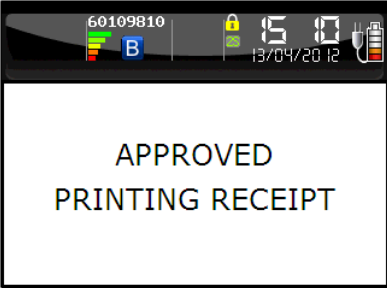

Terminal Display	POS Display	Action
 <p>Terminal display showing 'READY' and Commonwealth Bank logo. The top status bar includes the terminal ID '60109810', a battery icon, a signal strength indicator, and the date '13/04/2012'.</p>	<p>Not Applicable</p>	<p>Operator initiates purchase transaction on the POS by selecting the transaction type and entering the purchase amount.</p>
 <p>Terminal display showing 'PURCHASE \$X.XX' and 'PRESENT CARD'.</p>	 <p>POS display window titled 'EFTPOS' with 'PRESENT CARD' and a 'Cancel' button. A stylized 'S' logo is visible on the right side.</p>	<p>Card is swiped or inserted.</p>
 <p>Terminal display showing 'PROCESSING PLEASE WAIT'.</p>	 <p>POS display window titled 'EFTPOS' with 'PROCESSING PLEASE WAIT' and a stylized 'S' logo.</p>	<p>This screen is displayed during authentication for an EMV transaction.</p>
 <p>Terminal display showing 'PURCHASE \$X.XX' and 'SELECT ACCOUNT' with options 'CHQ SAV CR'.</p>	 <p>POS display window titled 'EFTPOS' with 'SELECT ACCOUNT' and options 'CHQ SAV CR' and a 'Cancel' button. A stylized 'S' logo is visible on the right side.</p>	<p>Cardholder selects their account type (if applicable).</p>

		<p>Cardholder enters their PIN or presses <b>[OK]/[Enter]</b>.</p>
		<p>This screen is displayed while the transaction is processed either online to the bank or offline for EMV or EFB.</p>
		<p>This screen is displayed once a response is received from the host or the transaction result is determined by the card and terminal.</p>

### 2.3.2 Purchase with Signature

The following flow shows a standard purchase transaction as initiated on the Point of Sale (POS) and processed with signature.


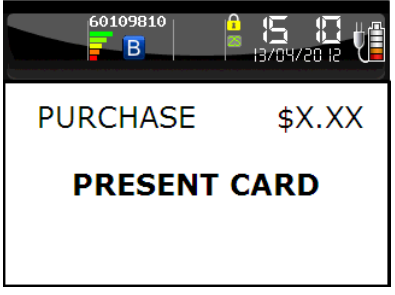

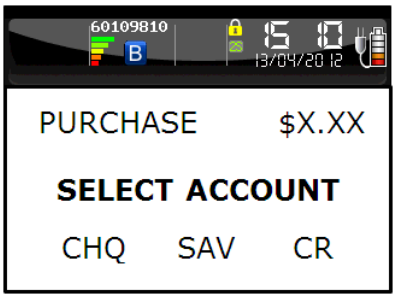
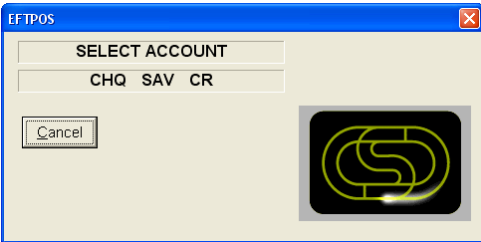
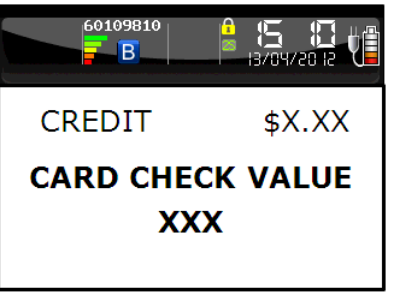
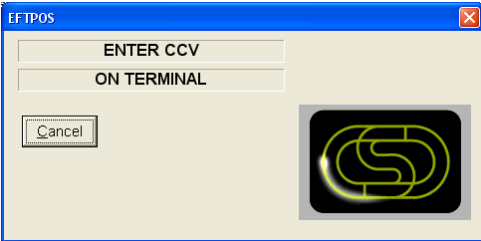
Terminal Display	POS Display	Action
 <p>Terminal display showing 'READY' and CommonwealthBank logo. The top status bar includes the number 60109810, a battery icon, a signal strength indicator, and the date 13/04/2012.</p>	<p>Not Applicable</p>	<p>Operator initiates purchase transaction on the POS by selecting the transaction type, and entering the purchase amount.</p>
 <p>Terminal display showing 'PURCHASE \$X.XX' and 'PRESENT CARD'.</p>	 <p>POS display window titled 'EFTPOS' with 'PRESENT CARD' and a 'Cancel' button. An EMV logo is visible on the right side of the window.</p>	<p>Card is swiped or inserted.</p>
 <p>Terminal display showing 'PROCESSING PLEASE WAIT'.</p>	 <p>POS display window titled 'EFTPOS' with 'PROCESSING PLEASE WAIT' and an EMV logo.</p>	<p>This screen is displayed during authentication for an EMV transaction.</p>
 <p>Terminal display showing 'PURCHASE \$X.XX' and 'SELECT ACCOUNT' with options 'CHQ SAV CR'.</p>	 <p>POS display window titled 'EFTPOS' with 'SELECT ACCOUNT' and options 'CHQ SAV CR' and a 'Cancel' button. An EMV logo is visible on the right side of the window.</p>	<p>Cardholder selects credit (if there are other account types on the card).</p>

		<p>Cardholder enters PIN or presses [OK]/[Enter].</p>
		<p>This screen is displayed while the transaction is processed either online to the bank or offline for EMV or EFB.</p>
		<p>Is displayed to indicate that a signature is required to complete the transaction.</p> <p>Operator verifies signature and presses [Yes] or [No] on the POS.</p>
		<p>This screen is displayed if the signature is correct and the transaction is approved.</p>

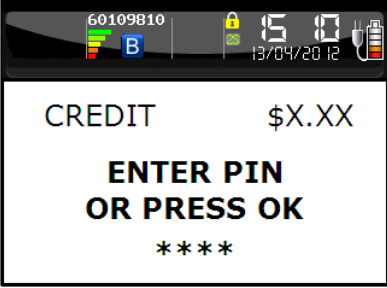
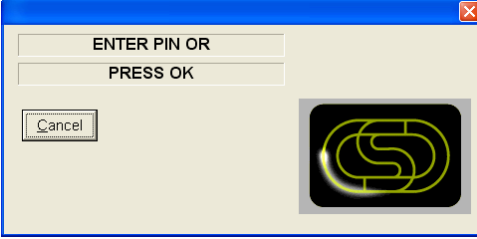
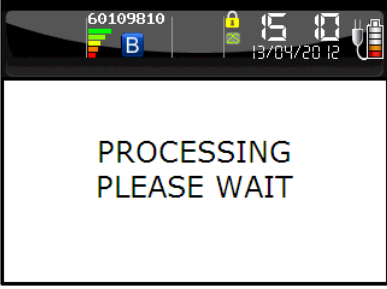
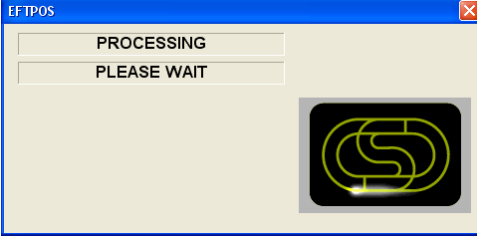
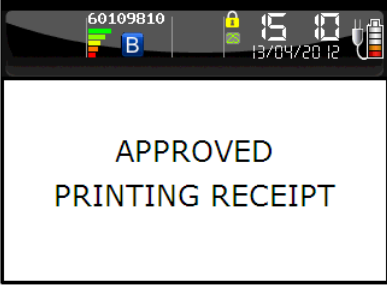
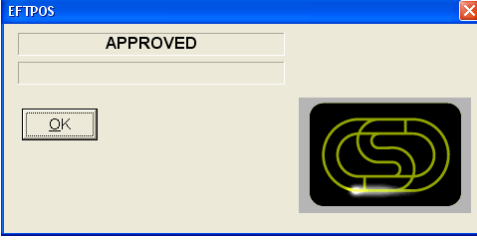
### 2.3.3 Purchase with CCV

The following flow shows a standard purchase transaction processed with a card check value (CCV).

**Note:** CCV is only prompted for manual entry and magstripe transactions (if the CCV Entry on Swipe functionality is enabled and the transaction amount is above the CCV Swipe Limit). The following example shows a magstripe transaction.

Terminal Display	POS Display	Action
	<p>Not Applicable</p>	<p>Operator initiates a purchase transaction on the POS interface by selecting the transaction type, and entering a transaction amount above the CCV Swipe Limit.</p>
		<p>Cardholder swipes their card through the magstripe reader.</p>
		<p>Cardholder selects their account type (if applicable).</p>
		<p>User enters the CCV into the terminal.</p>

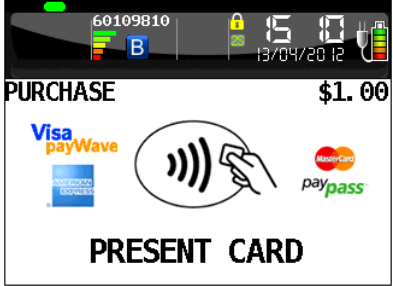



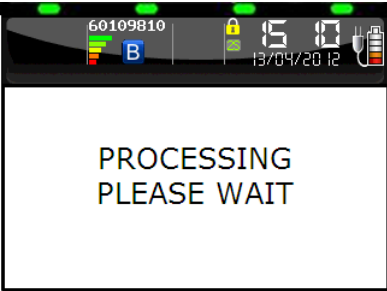
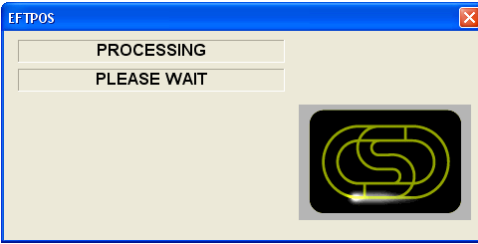

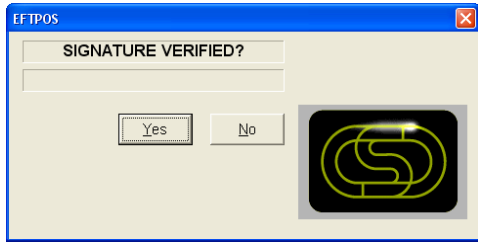
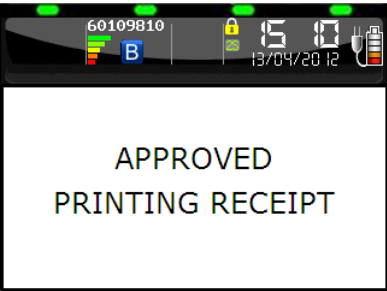

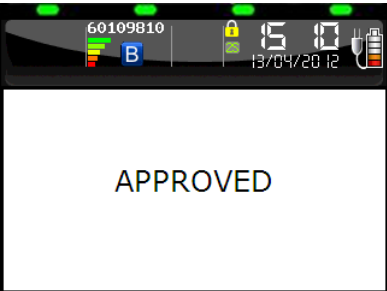

		<p>Cardholder enters their PIN or presses <b>[OK]/[Enter]</b>.</p>
		<p>This screen is displayed while the transaction is processed either online to the bank or offline for EFB.</p>
		<p>This screen is displayed if the transaction is approved.</p>

### 2.3.4 Purchase via Contactless

The following table shows a standard purchase transaction completed with a contactless card.

**Note:** The card should be kept within the contactless reader’s operating field until the terminal produces a beeping sound and displays “PROCESSING PLEASE WAIT”, which indicates that the reader has successfully read the card.


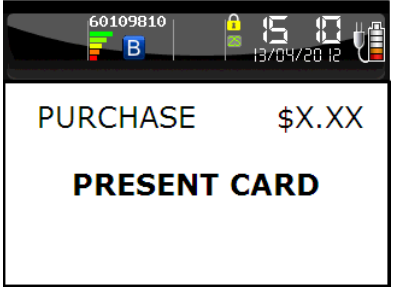

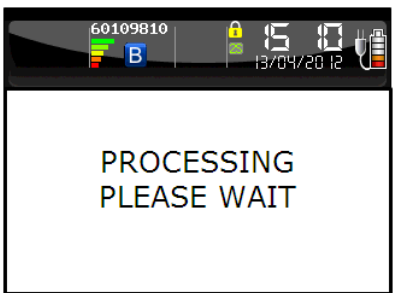
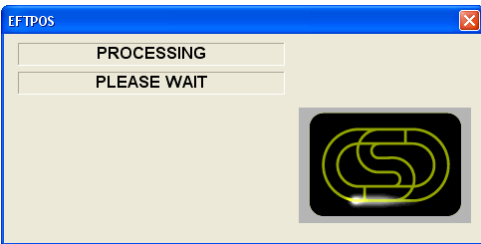
Terminal Display	POS Display	Action
	<p>Not Applicable</p>	<p>Operator initiates purchase transaction on the POS interface by selecting the transaction type and entering the purchase amount.</p>
		<p>The contactless reader is activated and waits for a contactless card to be tapped.</p> <p><b>Note:</b> The first contactless LED will be turned on to indicate that contactless processing is enabled. Scheme logos will also be displayed to indicate which contactless cards are supported for the transaction.</p>
		<p>This screen is displayed when the card details are read successfully by the contactless reader. It is now performing card/terminal processing.</p> <p><b>Note:</b> The terminal will emit a beeping sound once the card is successfully read. The card can then be removed from the operating field.</p>
		<p>This screen is displayed only when the transaction amount is above the Contactless CVM Limit. Cardholder enters their PIN or presses [OK]/[Enter].</p>

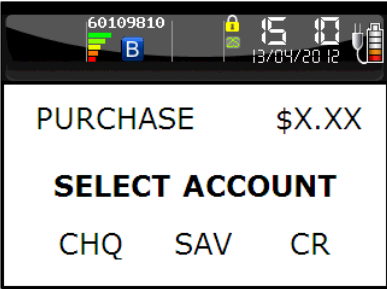
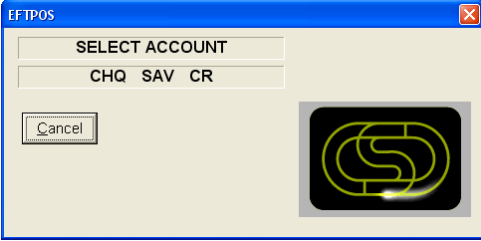
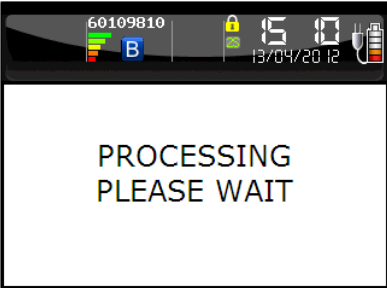
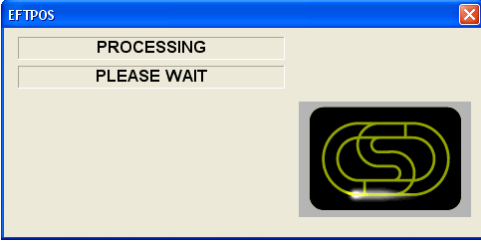
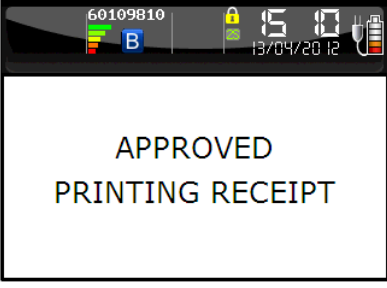

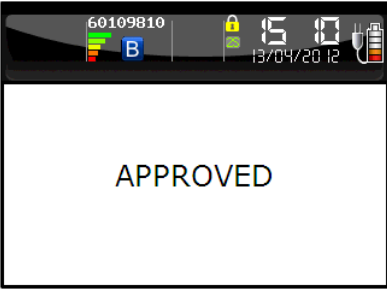

		<p>This screen is displayed whilst the transaction is processed either online to the bank or offline for EMV or EFB.</p>
		<p>This screen is displayed only when the terminal prompts for PIN entry, and PIN entry is bypassed (e.g. cardholder presses <b>[OK]/[Enter]</b>).</p>
		<p>This screen is displayed once a response (approval) is returned and receipt printing is enabled.</p>
		<p>This screen is displayed once a response (approval) is returned and receipt printing is disabled..</p>

### 2.3.5 Purchase with low value payment (LVP) processing

The following shows a purchase transaction completed successfully as an LVP transaction when all of the following conditions exist:


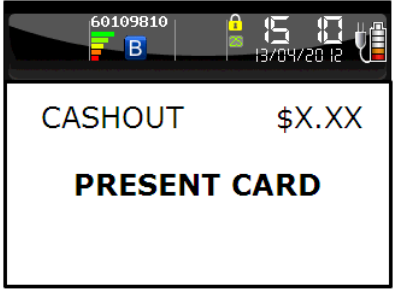

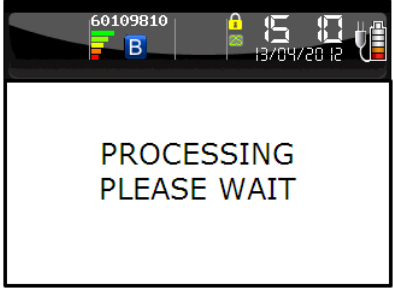
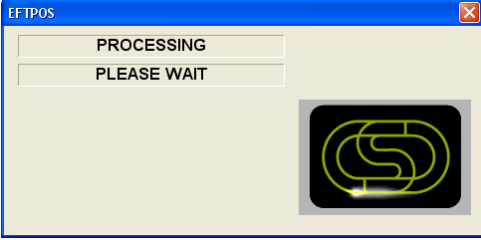
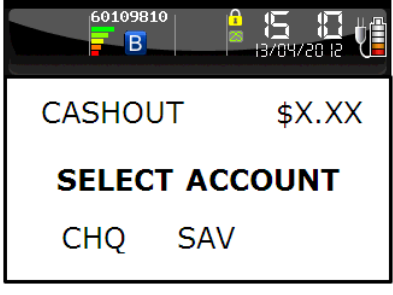

- LVP processing has been enabled for the terminal;
- the card is swiped or inserted;
- the card used is a debit, credit or prepaid Visa, MasterCard, or AMEX card;
- the credit account is selected;
- the transaction is not a fall back transaction and
- the total transaction amount (including tips and taxes) is less than or equal to the LVP limit.

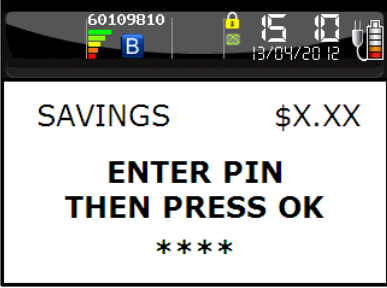


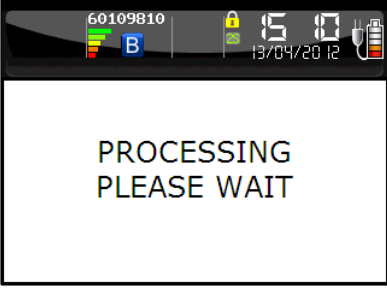
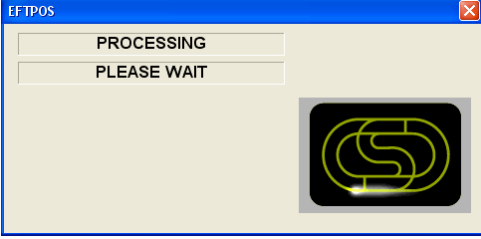

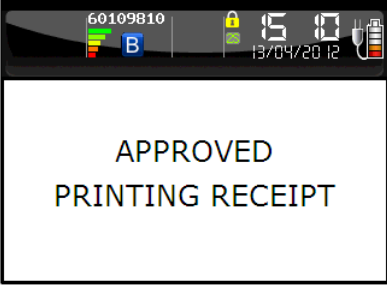
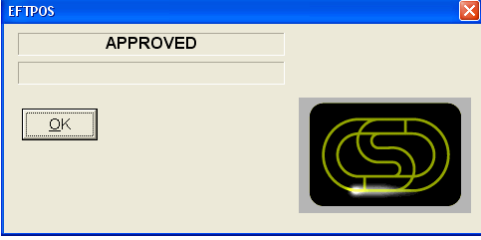

Terminal Display	POS Display	Action
 <p>Terminal display showing 'READY' and Commonwealth Bank logo. The top status bar includes the terminal ID '60109810', a battery icon, a signal strength indicator, and the date '13/04/20 12'.</p>	<p>Not Applicable</p>	<p>Operator initiates purchase transaction on the POS interface by selecting the transaction type and entering the purchase amount.</p>
 <p>Terminal display showing 'PURCHASE \$X.XX' and 'PRESENT CARD'.</p>	 <p>POS display window titled 'EFTPOS' with 'PRESENT CARD' and a 'Cancel' button. A stylized card icon is visible on the right.</p>	<p>Card is swiped or inserted.</p> <p><b>Note:</b> LVP processing applies only when the card has been swiped or inserted.</p>
 <p>Terminal display showing 'PROCESSING PLEASE WAIT'.</p>	 <p>POS display window titled 'EFTPOS' with 'PROCESSING PLEASE WAIT' and a stylized card icon.</p>	<p>This screen is displayed while the card is authenticated and the transaction is processed.</p> <p><b>Note:</b> This screen will either be displayed for a very short period of time or not at all.</p>

		<p>Cardholder selects credit (CR) account type. Only transactions using the credit account will qualify for LVP processing.</p> <p>In line with LVP processing, the terminal will not prompt for PIN (or other CVM) after this screen.</p>
		<p>This screen is displayed while the transaction is being processed.</p>
		<p>This screen is displayed once a response is returned and receipt printing is enabled. This will be controlled by the SUPPRESS CTLS RECEIPT parameter.</p> <p>If a response code of 08 was received from the host, the receipt will display response code 00 for LVP transactions.</p>
		<p>This screen is displayed once a response is returned and receipt printing is disabled.</p>

### 2.3.6 Cash Out Only


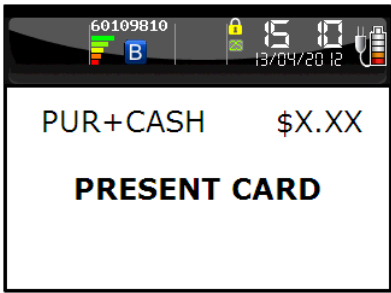
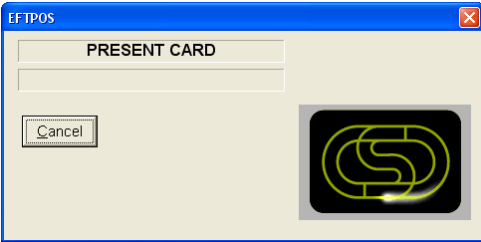
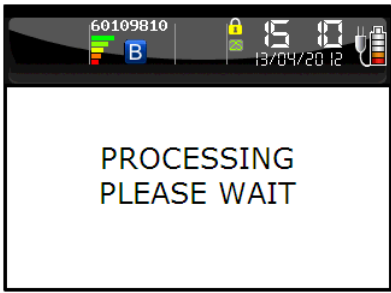
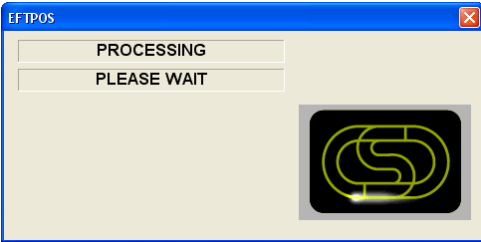
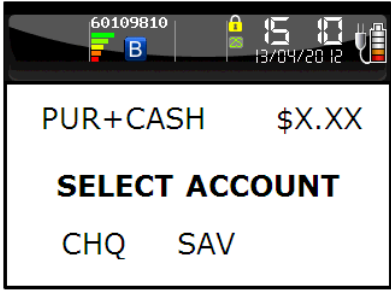
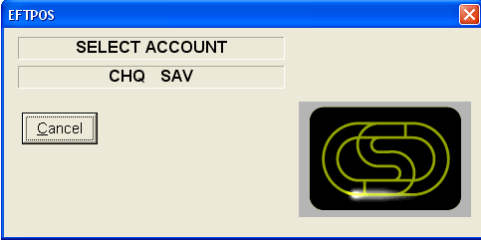
The following flow shows cash out only transaction processed with a PIN.

Terminal Display	POS Display	Action
	<p>Not Applicable</p>	<p>Operator initiates a 'cash out only' transaction via the POS.</p>
		<p>Card is swiped or inserted.</p>
		<p>This screen is displayed while the card is authenticated for an EMV transaction.</p> <p><b>Note:</b> This screen will either be displayed for a very short period of time or not at all.</p>
		<p>Cardholder selects their account type.</p>
		<p>Cardholder enters PIN and presses <b>[OK]/[Enter]</b>.</p>

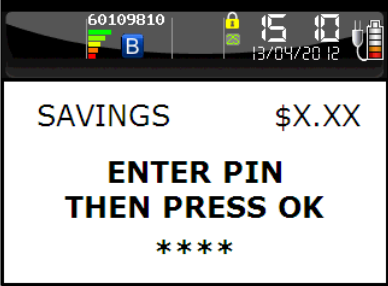


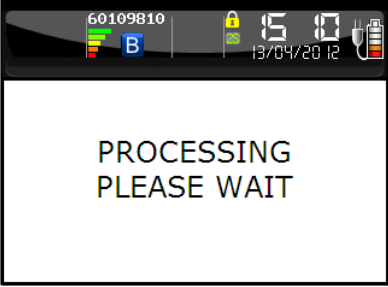
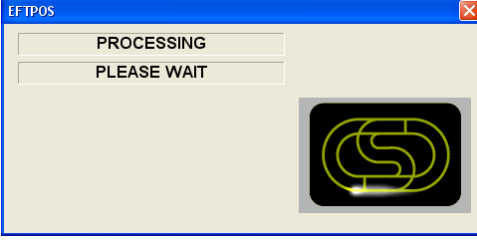

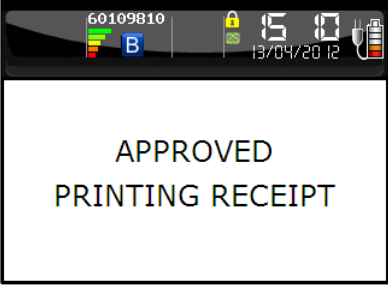


 <p>60109810 B 15:00 13/04/2012</p> <p>SAVINGS \$X.XX</p> <p><b>ENTER PIN THEN PRESS OK</b></p> <p>****</p>	 <p>ENTER PIN THEN PRESS OK</p> <p>Cancel</p> 	
 <p>60109810 B 15:00 13/04/2012</p> <p>PROCESSING PLEASE WAIT</p>	 <p>EFTPOS</p> <p>PROCESSING PLEASE WAIT</p> 	<p>This screen is displayed while the transaction is processed online to the bank.</p>
 <p>60109810 B 15:00 13/04/2012</p> <p>APPROVED PRINTING RECEIPT</p>	 <p>EFTPOS</p> <p>APPROVED</p> <p>OK</p> 	<p>This screen is displayed once a response is returned.</p>

### 2.3.7 Purchase with Cash out

The following flow shows a purchase with cash out transaction processed with a PIN.

Terminal Display	POS Display	Action
	<p>Not Applicable</p>	<p>Operator initiates a purchase transaction with cash out via the POS.</p>
		<p>Card is swiped or inserted.</p> <p><b>Note:</b> Contactless processing and manual card entry are disabled for purchase with cash out transactions.</p>
		<p>This screen is displayed while the card is authenticated for an EMV transaction.</p> <p><b>Note:</b> This screen will either be displayed for a very short period of time or not at all.</p>
		<p>Cardholder selects their account type.</p>
		<p>Cardholder enters their PIN and presses <b>[OK]/[Enter]</b>.</p>


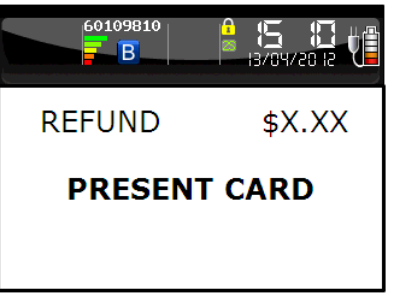

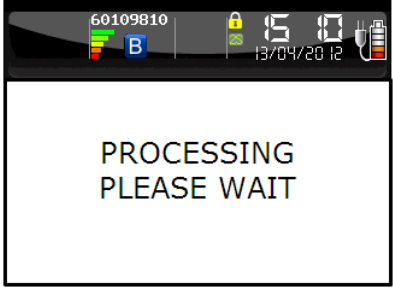
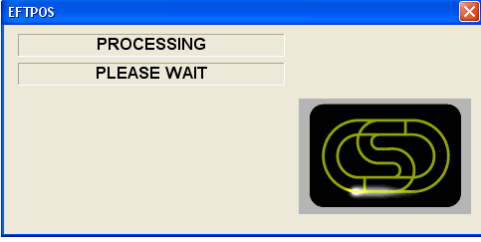
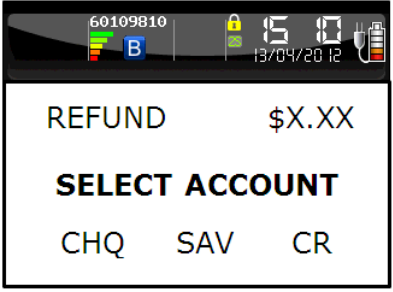
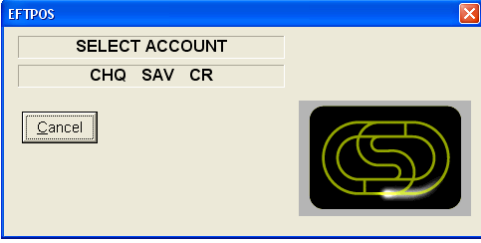


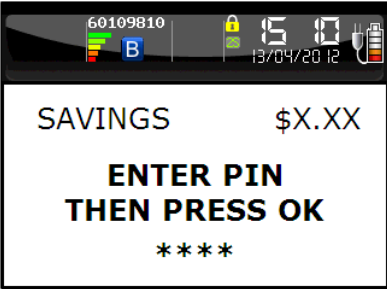

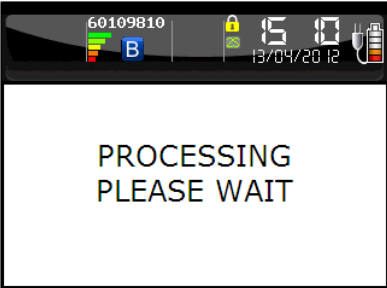
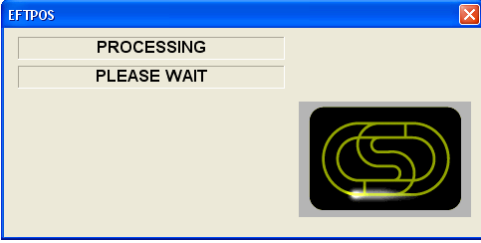
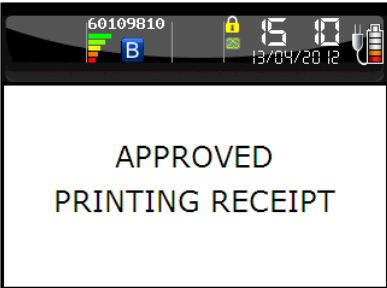

 <p>60109810 B 15:00 13/04/2012</p> <p>SAVINGS \$X.XX</p> <p><b>ENTER PIN THEN PRESS OK</b></p> <p>****</p>	 <p>EFTPOS</p> <p>ENTER PIN THEN PRESS OK</p> <p>Cancel</p> 	
 <p>60109810 B 15:00 13/04/2012</p> <p>PROCESSING PLEASE WAIT</p>	 <p>EFTPOS</p> <p>PROCESSING PLEASE WAIT</p> 	<p>This screen is displayed while the transaction is processed online to the bank.</p>
 <p>60109810 B 15:00 13/04/2012</p> <p>APPROVED PRINTING RECEIPT</p>	 <p>EFTPOS</p> <p>APPROVED</p> <p>OK</p> 	<p>This screen is displayed once a response is returned.</p>

### 2.3.8 Refund with PIN

The following flow shows a refund transaction processed with a PIN.

**Note:** All refunds for chip cards are completed using partial EMV processing only.


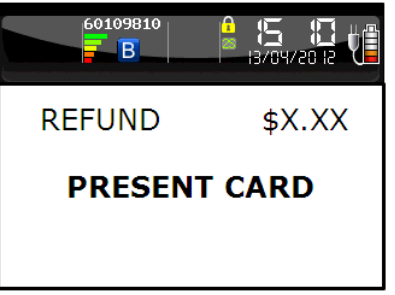

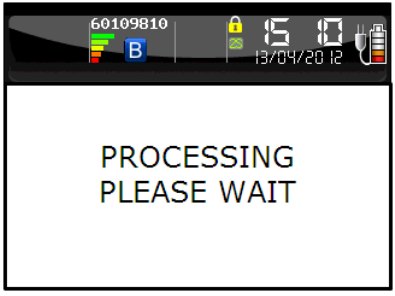
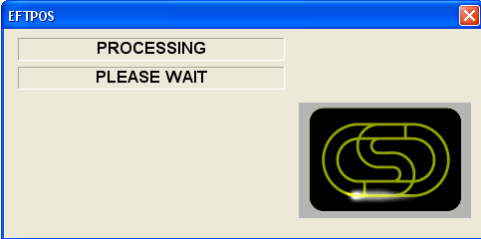
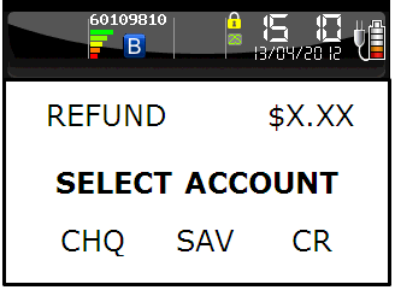
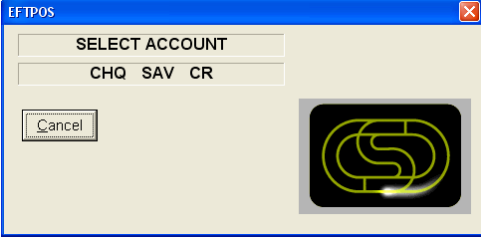
Terminal Display	POS Display	Action
 <p>Terminal display showing 'READY' and Commonwealth Bank logo. The top status bar includes the number 60109810, a signal strength indicator, a battery icon, and the date 13/04/20 12.</p>	<p>Not Applicable</p>	<p>Operator initiates a refund transaction via the POS.</p>
 <p>Terminal display showing 'REFUND \$X.XX' and 'PRESENT CARD' in large bold letters.</p>	 <p>POS display window titled 'EFTPOS' with 'PRESENT CARD' and a 'Cancel' button. A stylized card icon is visible on the right.</p>	<p>Card is swiped or inserted.</p>
 <p>Terminal display showing 'PROCESSING PLEASE WAIT' in large bold letters.</p>	 <p>POS display window titled 'EFTPOS' with 'PROCESSING PLEASE WAIT' and a 'Cancel' button. A stylized card icon is visible on the right.</p>	<p>This screen is displayed while the card is authenticated for an EMV transaction.</p> <p><b>Note:</b> Refund EMV transactions will be processed as early acquirer (partial EMV); after authentication, the transaction will step out of the full EMV processing flow.</p>
 <p>Terminal display showing 'REFUND \$X.XX' and 'SELECT ACCOUNT' in large bold letters, with 'CHQ SAV CR' below.</p>	 <p>POS display window titled 'EFTPOS' with 'SELECT ACCOUNT' and 'CHQ SAV CR' options, and a 'Cancel' button. A stylized card icon is visible on the right.</p>	<p>Cardholder selects their account type (if applicable).</p>

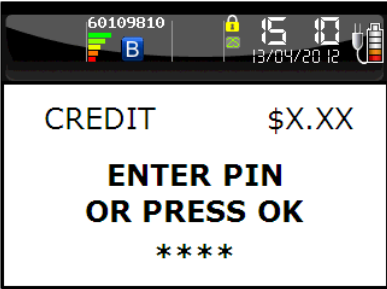

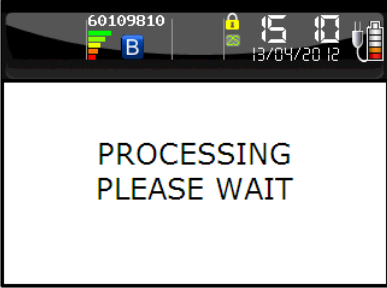
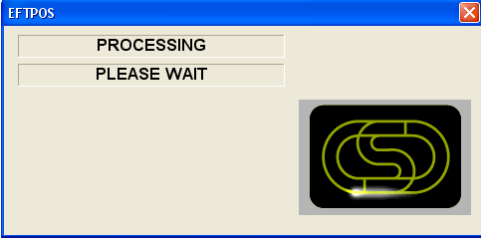

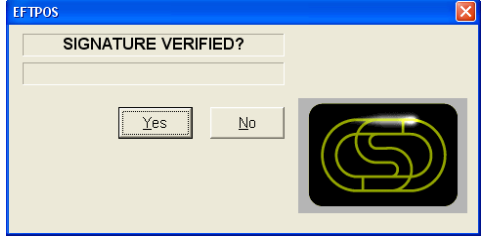
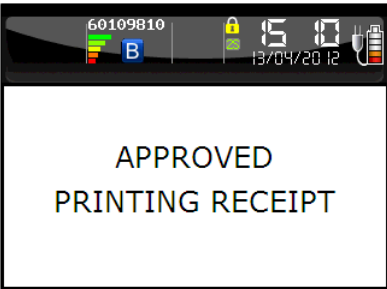

		<p>Cardholder enters their PIN and presses <b>[OK]/[Enter]</b>.</p>
		<p>This screen is displayed while the transaction is processed.</p>
		<p>This screen is displayed once a response is received from the host or the transaction result is determined by the card and terminal.</p>

### 2.3.9 Refund with Signature

The following flow shows a refund transaction processed with a signature.

**Note:** All refunds for chip cards are completed using partial EMV processing only.


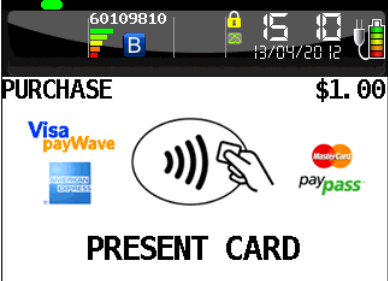

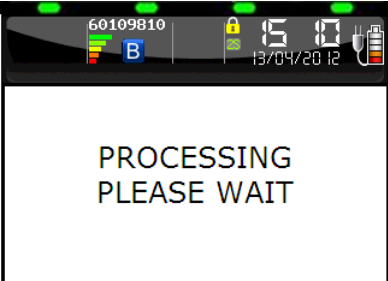
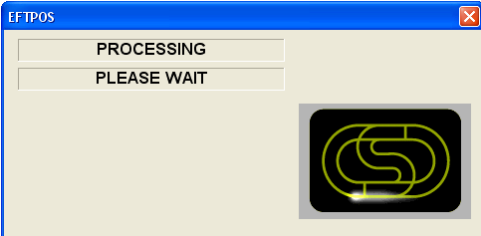
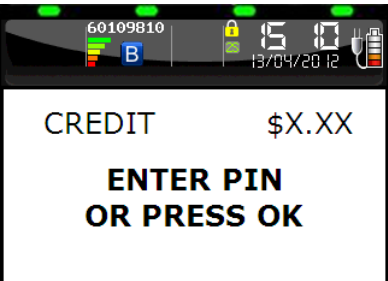
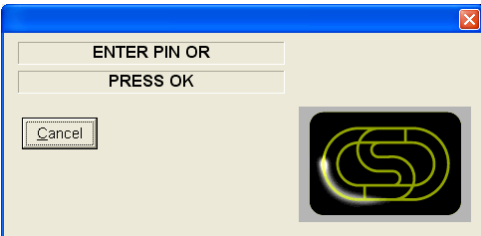
Terminal Display	POS Display	Action
 <p>Terminal display showing 'READY' and Commonwealth Bank logo. The top status bar includes the terminal ID '60109810', a 'B' logo, a lock icon, the time '15:00', and the date '13/04/2012'.</p>	<p>Not Applicable</p>	<p>Operator initiates a refund transaction via the POS.</p>
 <p>Terminal display showing 'REFUND \$X.XX' and 'PRESENT CARD'.</p>	 <p>POS display showing 'PRESENT CARD' screen with a card icon and a 'Cancel' button.</p>	<p>Card is swiped or inserted.</p>
 <p>Terminal display showing 'PROCESSING PLEASE WAIT'.</p>	 <p>POS display showing 'PROCESSING PLEASE WAIT' screen with a card icon.</p>	<p>This screen is displayed while the card is authenticated for an EMV transaction.</p>
 <p>Terminal display showing 'REFUND \$X.XX' and 'SELECT ACCOUNT' with options 'CHQ SAV CR'.</p>	 <p>POS display showing 'SELECT ACCOUNT' screen with 'CHQ SAV CR' options and a card icon.</p>	<p>Cardholder selects their account type (if applicable).</p>

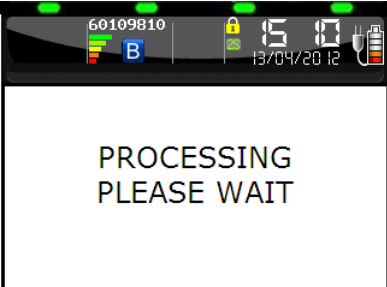
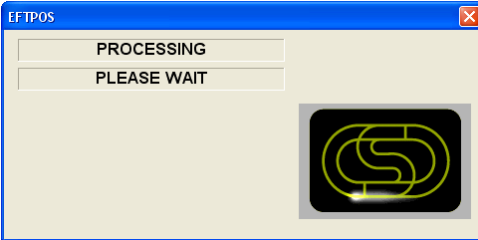

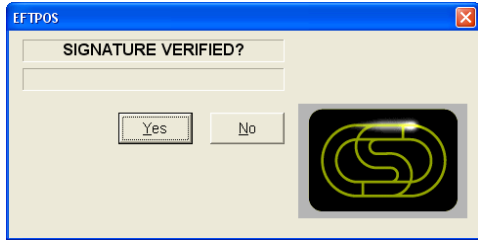
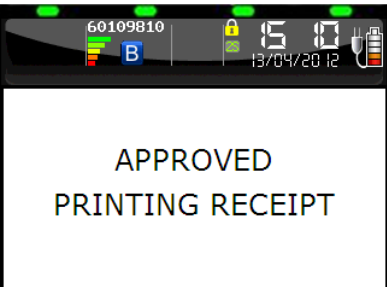
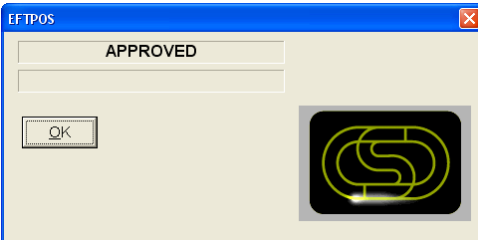
 <p>60109810 B 13/04/2012 CREDIT \$X.XX <b>ENTER PIN OR PRESS OK</b> ****</p>	 <p>ENTER PIN OR PRESS OK Cancel</p>	<p>Cardholder enters their PIN or presses <b>[OK]/[Enter]</b>.</p>
 <p>60109810 B 13/04/2012 <b>PROCESSING PLEASE WAIT</b></p>	 <p>EFTPOS PROCESSING PLEASE WAIT</p>	<p>This screen is displayed while the transaction is processed.</p>
 <p>60109810 B 13/04/2012 <b>SIGNATURE REQUIRED</b></p>	 <p>EFTPOS SIGNATURE VERIFIED? Yes No</p>	<p>This screen is displayed to indicate that a signature is required to complete the transaction.</p> <p>Operator verifies signature and presses [Yes] or [No] on the POS.</p> <p>The terminal will use the response code in the response message to determine whether a signature is required.</p>
 <p>60109810 B 13/04/2012 <b>APPROVED PRINTING RECEIPT</b></p>	 <p>EFTPOS APPROVED OK</p>	<p>This screen is displayed if the signature is correct and transaction is approved.</p>

### 2.3.10 Refund via Contactless

The following flow shows a refund transaction processed with a contactless chip card.

**Note:** All refunds for chip cards are completed using partial EMV processing only.


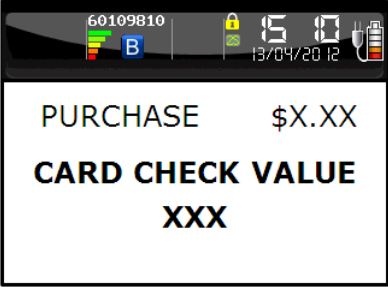

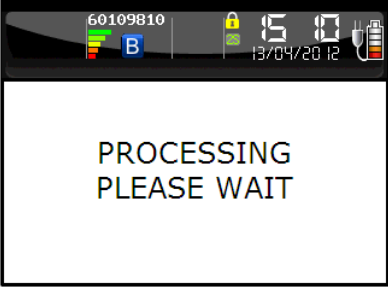
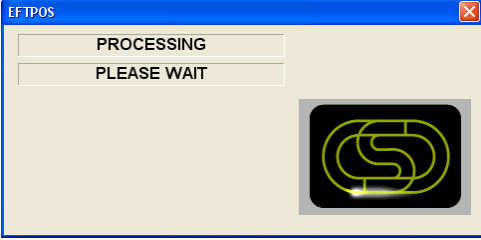
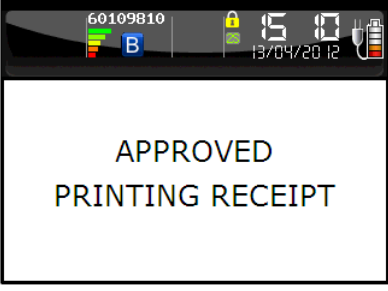

Terminal Display	POS Display	Action
	<p>Not Applicable</p>	<p>Operator initiates refund transaction on the POS interface by selecting the transaction type and entering the refund amount.</p>
		<p>The contactless reader is activated and waits for a contactless card to be tapped.</p> <p><b>Note:</b> The first contactless LED will be turned on to indicate that contactless processing is enabled. Scheme logos will also be displayed to indicate which contactless cards are supported for the transaction.</p>
		<p>This screen is displayed when the card details are read successfully by the contactless reader. It is now performing card/terminal processing.</p> <p><b>Note:</b> The terminal will emit a beeping sound once the card is successfully read. The card can then be removed from the operating field.</p>
		<p>This screen is displayed only when the transaction amount is above the Contactless CVM Limit. Cardholder enters their PIN or presses <b>[OK]/[Enter]</b>.</p> <p><b>Note:</b> PIN bypass may or may not be allowed based on rules described in <a href="#">PIN Entry</a>.</p>

		<p>This screen is displayed while the transaction is being processed.</p>
		<p>This screen is displayed only when the terminal prompts for PIN entry, and PIN entry is bypassed (i.e. cardholder presses <b>[OK]/[Enter]</b>), or when the terminal receives a 08 Response from Host.</p>
		<p>This screen is displayed once a response (approval) is returned. A receipt shall always be printed for a contactless refund transaction.</p> <p><b>Note:</b> The timeout period for this display is determined by the TMS parameter 'Dialog Timeout'.</p>

### 2.3.11 MOTO via the POS

The following flow shows a Mail Order/Telephone Order (MOTO) transaction where card information are entered on the POS.


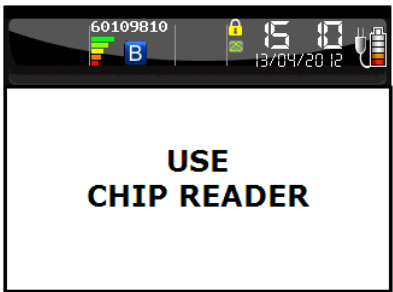

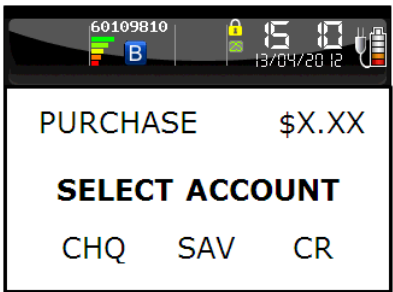
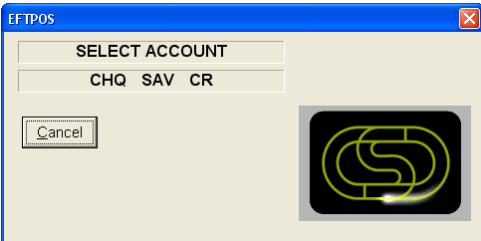
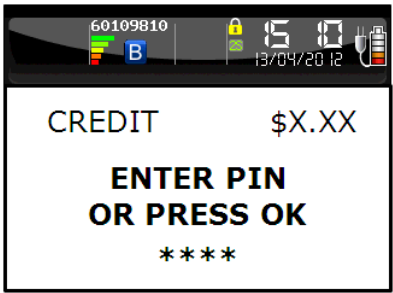
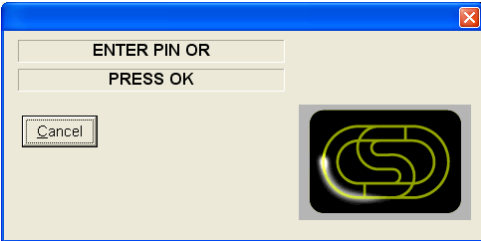
**Note:** MOTO transactions are cardholder-not-present/card-not-present transactions. MOTO must be enabled on TMS for the terminal for MOTO transactions to be processed.

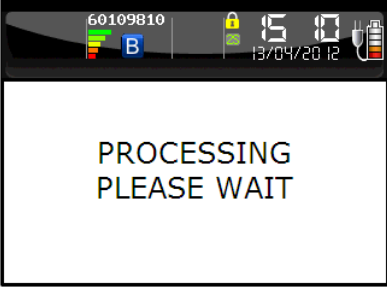
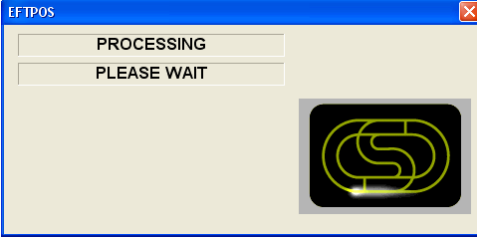
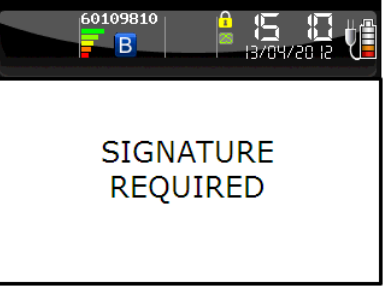

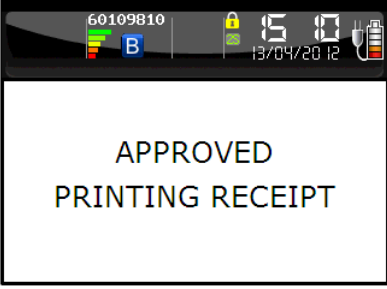
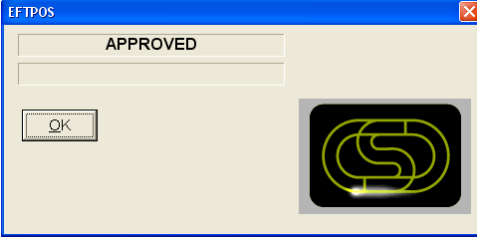
Terminal Display	POS Display	Action
	<p>Not Applicable</p>	<p>Operator initiates a MOTO transaction via the POS.</p> <p><b>Note:</b> In this example, the card number has already been captured and on the POS.</p>
		<p>Operator enters the card check value (CCV) on the terminal and presses <b>[OK]/[Enter]</b>.</p> <p><b>Note:</b> The User can choose not enter the CCV and simply press <b>[OK]/[Enter]</b>.</p>
		<p>This screen is displayed while the transaction is processed online to the bank.</p>
		<p>This screen is displayed if the transaction is approved. For MOTO transactions, a Merchant Copy will be printed.</p>



### 2.3.12 Swiped Start via POS interface


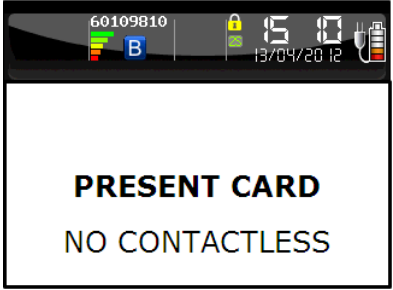

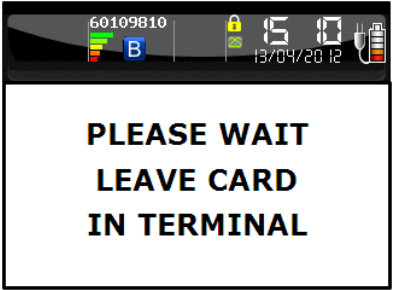
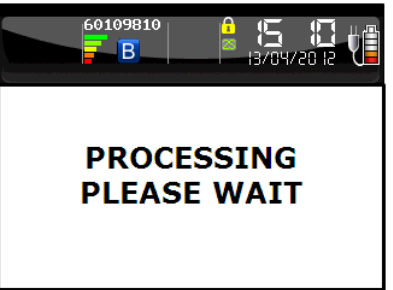
The following flow shows a transaction that has been initiated via a swipe start through the POS interface. This is a transaction where the track 2 data has already been obtained via another source rather than through the terminal.

Terminal Display	POS Display	Action
	<p>Not Applicable</p>	<p>Operator initiates a purchase transaction on the POS and indicates that it is swiped start via POS interface.</p>
		<p>This screen is displayed in the event track 2 information from a chip card is used to initiate the transaction. In this instance, the terminal will check the extended service code as per EMV processing to determine the type of card used and prompt accordingly.</p>
		<p>Cardholder selects their account type (if applicable).</p>
		<p>Cardholder enters PIN or presses [OK]/[Enter].</p>
		<p>This screen is displayed while the transaction is processed.</p>

		
		<p>This screen is displayed to indicate that a signature is required to complete the transaction.</p> <p>Operator verifies signature and presses [Yes] or [No] on the POS.</p> <p><b>Note:</b> This is only displayed if a Customer Present transaction type is selected.</p> <p><b>Note:</b> UnionPay Credit transaction will always require signature. This is configured via the "Force Signature" flag in CPAT.</p>
		<p>This screen is displayed if the transaction is approved.</p> <p><b>Note:</b> The timeout period for this display is determined by the TMS parameter 'Dialog Timeout'.</p>




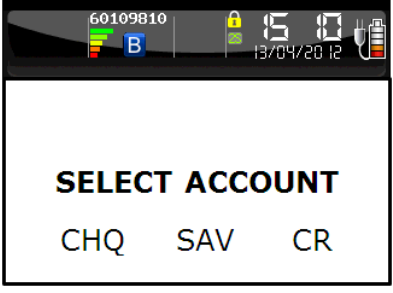
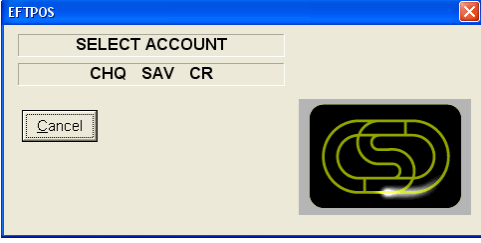
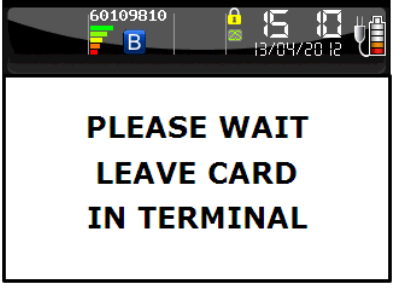
### 2.3.13 Query Card

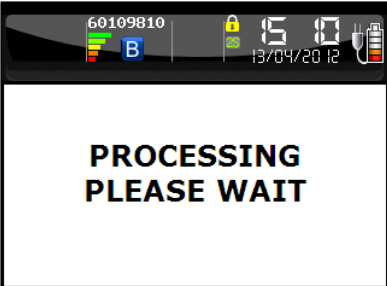
The following flow shows a transaction that has been initiated via a query card command.

Terminal Display	POS Display	Action
 <p>Terminal display showing 'READY' and Commonwealth Bank logo. The top status bar includes the number 60109810, a signal strength indicator, a battery icon, and the date 13/04/2012.</p>	<p>Not Applicable</p>	<p>Operator initiates a query card request via the POS.</p>
 <p>Terminal display showing 'PRESENT CARD' and 'NO CONTACTLESS'.</p>	 <p>POS display window titled 'EFTPOS' with 'PRESENT CARD' and a 'Cancel' button. A stylized 'S' logo is visible on the right side of the window.</p>	<p>Cardholder swipes or inserts the card into the terminal. The card details are then returned to the POS.</p> <p><b>Note:</b> Contactless processing is disabled for query card requests.</p>
 <p>Terminal display showing 'PLEASE WAIT LEAVE CARD IN TERMINAL'.</p>	<p>Not Applicable</p>	<p>If the card was inserted, this is displayed while the terminal waits for the next action (e.g. transaction request or cancellation) from the POS.</p>
 <p>Terminal display showing 'PROCESSING PLEASE WAIT'.</p>	<p>Not Applicable</p>	<p>If the card was swiped, this is displayed while the terminal waits for the next action (e.g. transaction request or cancellation) from the POS.</p>

### 2.3.14 Query Card Get Account


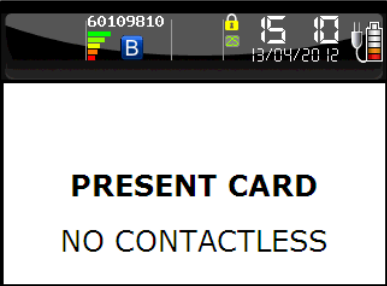

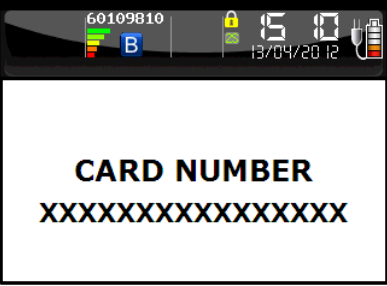

The following flows show a transaction that has been initiated with a query card and get account command from the POS. This then allows the user to use this information to initiate a subsequent transaction with the card and account details already captured.

Terminal Display	POS Display	Action
 <p>Terminal display showing 'READY' and Commonwealth Bank logo. The top status bar includes the number 60109810, a signal strength indicator, a battery icon, and the date 13/04/2012.</p>	<p>Not Applicable</p>	<p>Operator initiates a query card get account request via the POS.</p>
 <p>Terminal display showing 'PRESENT CARD' and 'NO CONTACTLESS'.</p>	 <p>POS display showing 'PRESENT CARD' screen with a card icon and a 'Cancel' button.</p>	<p>Cardholder swipes or inserts the card into the terminal. The card details are then returned to the POS.</p> <p><b>Note:</b> Contactless processing is disabled for all query card requests.</p>
 <p>Terminal display showing 'SELECT ACCOUNT' and options 'CHQ', 'SAV', 'CR'.</p>	 <p>POS display showing 'SELECT ACCOUNT' screen with options 'CHQ', 'SAV', 'CR' and a 'Cancel' button.</p>	<p>Cardholder selects their account type. The card and account details are then returned to the POS.</p>
 <p>Terminal display showing 'PLEASE WAIT LEAVE CARD IN TERMINAL'.</p>	<p>Not Applicable</p>	<p>If the card was inserted, this is displayed while the terminal waits for the next action (e.g. transaction request or cancellation) from the POS.</p>

	<p>Not Applicable</p>	<p>If the card was swiped, this is displayed while the terminal waits for the next action (e.g. transaction request or cancellation) from the POS.</p>
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### 2.3.15 Query Card with Manual Card Entry

The following flows show a transaction that has been initiated with a query card and get account command from the POS. This then allows the user to use this information to initiate a subsequent transaction with the card and account details already captured.

Terminal Display	POS Display	Action
	<p>Not Applicable</p>	<p>Operator initiates a query card request via the POS.</p>
		<p>Operator presses the blue <b>[Func]</b> button on the terminal to access the manual entry screen.</p> <p><b>Note:</b> Contactless processing is disabled for all query card requests.</p>
		<p>Operator enters the card number into the terminal and presses <b>[OK]/[Enter]</b>.</p>
		<p>Operator enters expiry date into the terminal and presses</p>

<p>60109810 13/04/20 12</p> <p><b>EXPIRY &lt;MMYY&gt; MMY</b></p>	<p>EFTPOS</p> <p>ENTER EXPIRY(MMY) ON TERMINAL</p> <p>Cancel</p>	<p>[OK]/[Enter].</p>
<p>60109810 13/04/20 12</p> <p><b>CARD CHECK VALUE XXX</b></p>	<p>EFTPOS</p> <p>ENTER CCV ON TERMINAL</p> <p>Cancel</p>	<p>Operator enters the card check value (CCV) on the terminal and presses [OK]/[Enter].</p> <p><b>Note:</b> The User can choose not enter the CCV and simply press [OK]/[Enter].</p>
<p>60109810 13/04/20 12</p> <p><b>PROCESSING PLEASE WAIT</b></p>	<p>Not Applicable</p>	<p>This is displayed while the terminal waits for the next action (e.g. transaction request or cancellation) from the POS.</p>

### 2.3.16 Store and Forward Transaction (Offline Transaction)

The following flow shows a standard purchase transaction processed offline as a SAF transaction.

**Note:** Store and Forward (SAF) is the ability to process offline transactions when the host is not available or there is a communication problem. A terminal is enabled for SAF processing using a SAF PROCESSING flag downloaded from TMS. SAF-enabled terminals will automatically process transactions offline (with no visible indication that it is in SAF processing mode).


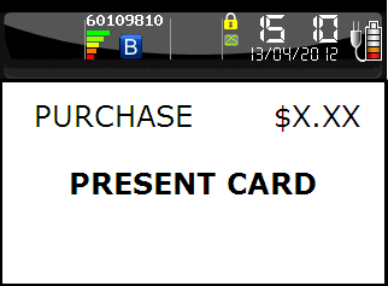

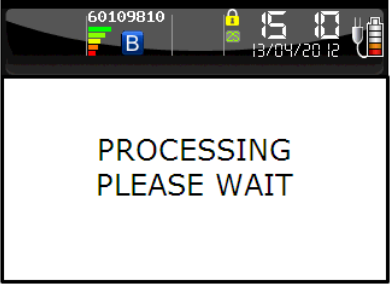
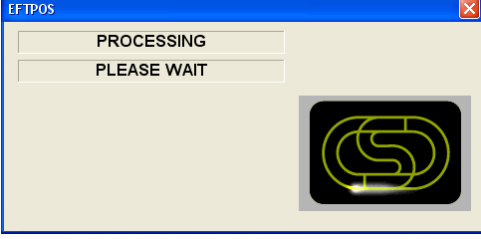
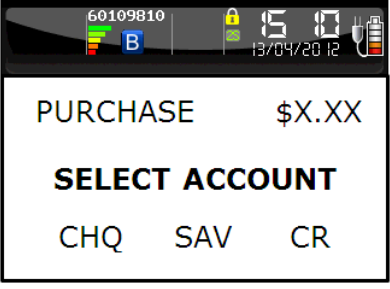
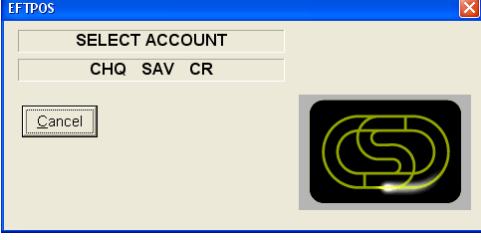
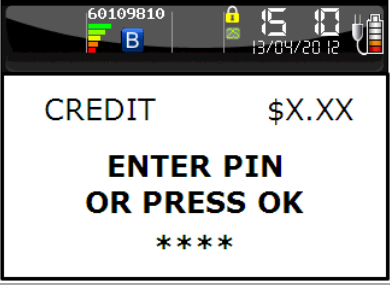
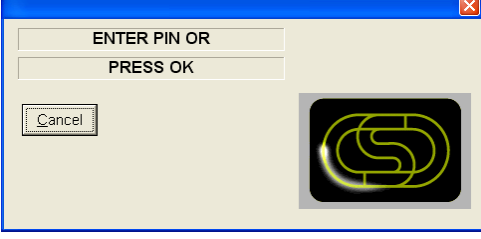
To determine if the transaction can be processed offline, the terminal checks the following:

- **Transaction Type.** A standard purchase or refund transaction may be processed offline. A purchase transaction with a cash component cannot be processed offline.
- **SAF Transaction Limit.** The terminal checks the current number of stored SAF transactions against the SAF TRAN LIMIT downloaded from TMS. If the limit has been reached, SAF is not allowed.
- **Card Read Method.** If the card is swiped or inserted, the transaction may be processed offline. If a contactless card is tapped, and Contactless SAF is enabled for the terminal, the transaction may be processed offline. If the card is manually entered, the transaction cannot be processed offline.
- **Card Expiry.** If the card used is expired, the transaction cannot be processed offline.

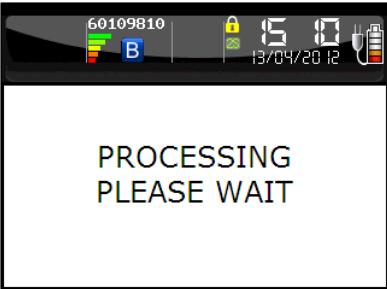
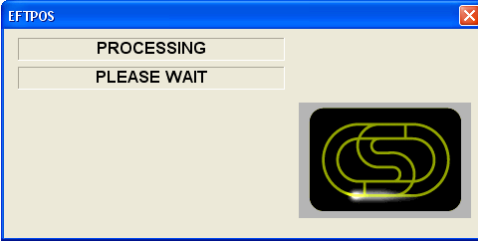
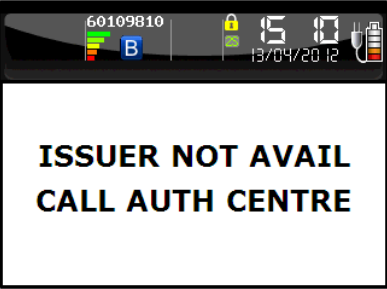

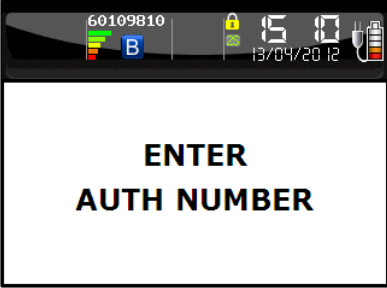

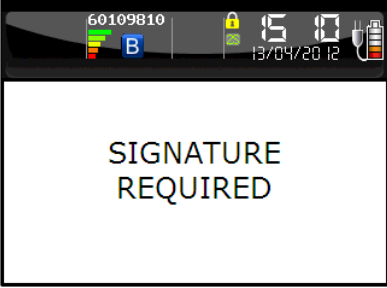
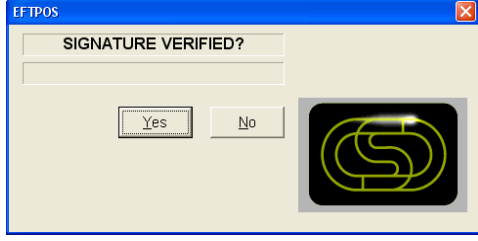
If the transaction can be processed offline, the terminal checks the debit or credit offline floor limit (depending on the account used/selected) downloaded from TMS.

- If the transaction amount is *under the offline floor limit*, the terminal will prompt the operator when a customer signature is required.
- If the transaction amount is *above the offline floor limit*, the terminal will cause the POS to prompt the operator when an offline authorization code is required.

If the transaction cannot be processed offline, the transaction will be declined with the error code being the original reason that the terminal attempted SAF processing (i.e. why the online processing failed).

Terminal Display	POS Display	Action
	<p>Not Applicable</p>	<p>Operator initiates purchase transaction on the POS by selecting the transaction type, and entering the purchase amount.</p>
		<p>Card is swiped, tapped or inserted.</p>
		<p>This screen is displayed during authentication for an EMV transaction.</p>
		<p>Cardholder selects their account type (if applicable).</p> <p><b>Note:</b> The terminal shall display only the accounts that are available for the card entered, and are valid for the transaction.</p>
		<p>Cardholder enters their PIN or presses <b>[OK]/[Enter]</b>.</p> <p><b>Note:</b> PIN bypass may or may not be allowed based on terminal processing rules and configuration.</p>



		<p>This screen is displayed while the terminal attempts to send the transaction to the host.</p>
		<p>After the online attempt fails, (due to a failure to connect to the Bank or issuer), a screen is displayed on the terminal and on the POS if an authorisation code needs to be entered.</p>
		<p>The Operator enters the auth number on the POS.</p> <p><b>Note:</b> If an authorisation code is required, the terminal shall prompt the merchant via the POS for entry of the value they obtain from the help desk. There is no timeout on the POS screen as it can take some time to call and obtain the value. The Operator can press the cancel button on the POS if they want to end the transaction.</p>
		<p>For magstripe transactions, this screen is displayed to indicate that a signature is required to complete the transaction.</p> <p>Operator verifies signature and presses [Yes] or [No] on the POS.</p> <p><b>Note:</b> The timeout for the signature required prompt will be configurable via a TMS parameter.</p>
		<p>This screen is displayed if the</p>




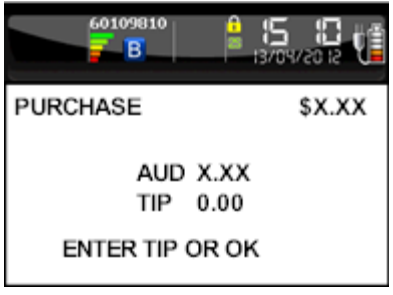
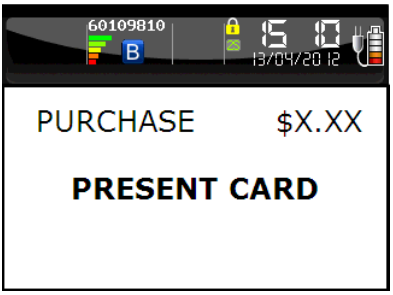

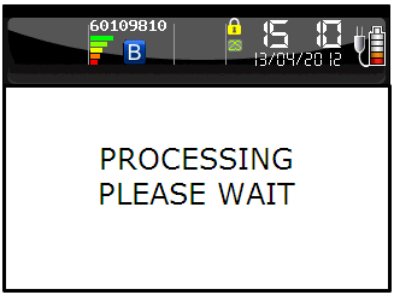
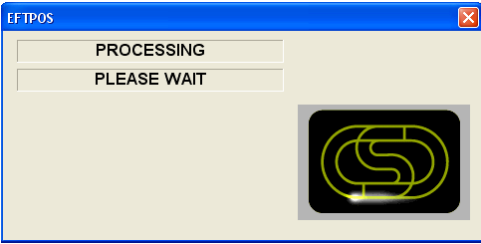
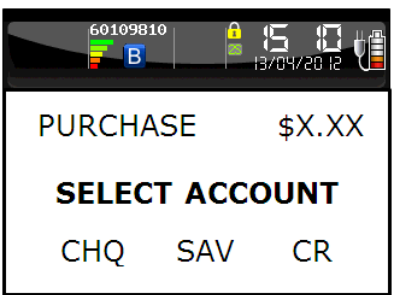
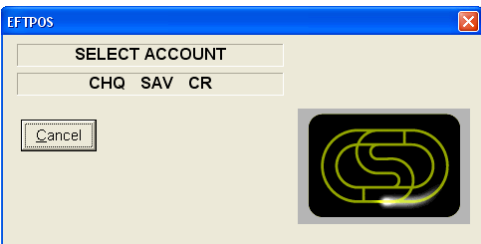
### 2.3.17 On Screen Tipping

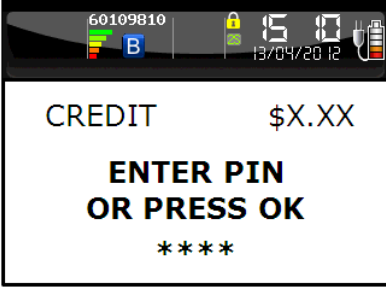
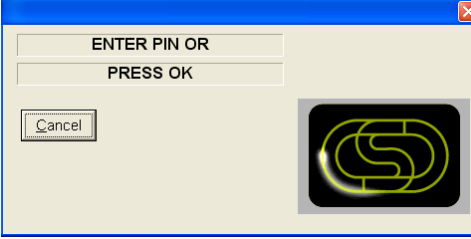
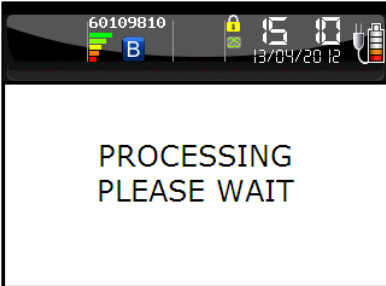
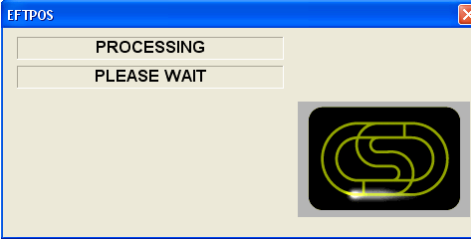
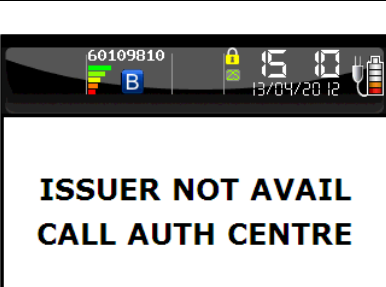
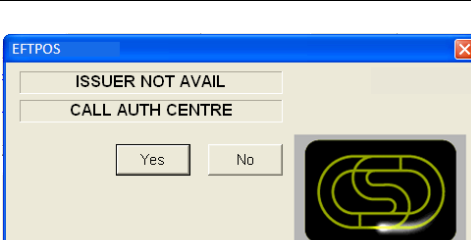
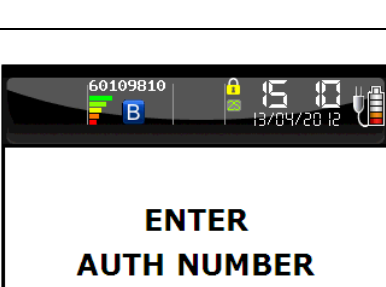
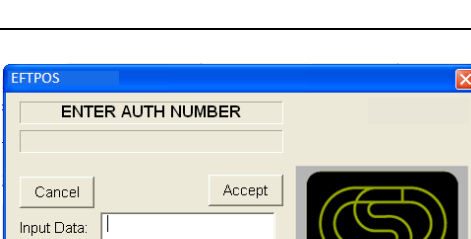


The following flow shows a tipping transaction initiated from POS with Tip enabled.

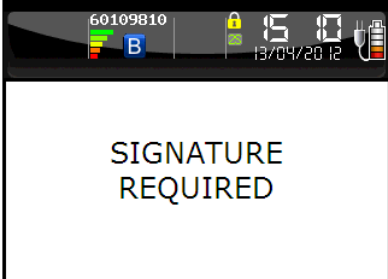
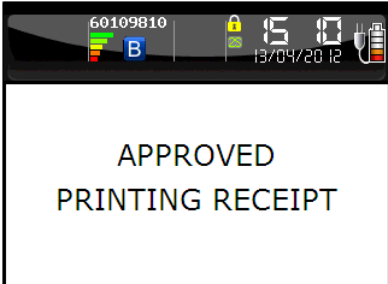

There are two different ways of implementing a tipping transaction on a CBA terminal.

1. CBA tipping
2. PCEFTPOS tipping

**CBA Tipping:** CBA tipping is used when the Tipping flag in TMS is enabled, the "Enable Tip" option is checked in POS and the Tipping DLL from PCEFTPOS is not present. The CBA Tipping flow is simple and adds only one additional step for the merchant to perform the tipping.


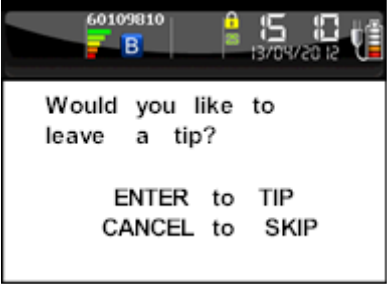
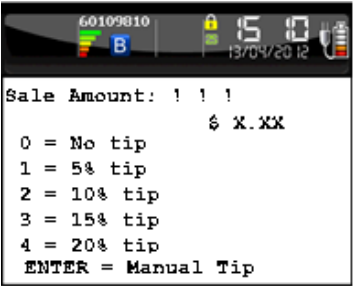
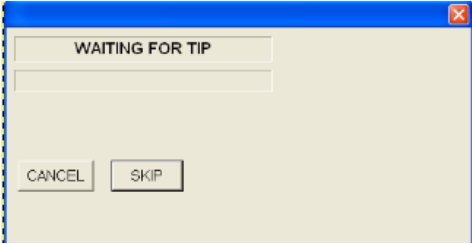
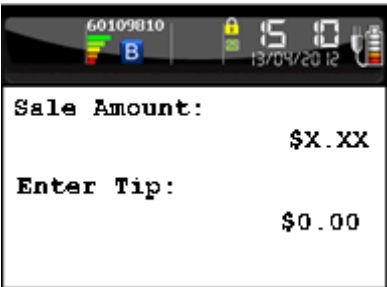
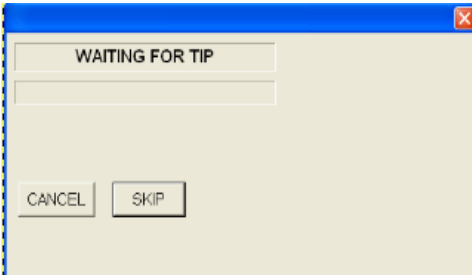
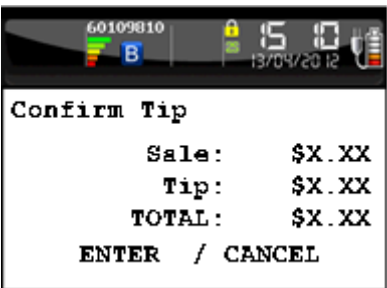
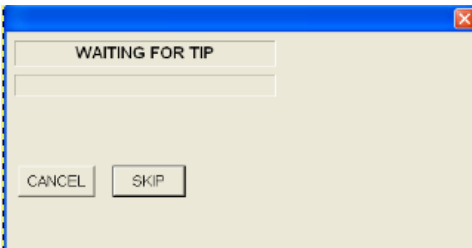
Terminal Display	POS Display	Action
	Not Applicable	Operator initiates purchase transaction on the POS by selecting the transaction type, and entering the purchase amount with the "Enable Tip" option checked.
		Tip is entered on this screen or press OK to bypass tipping
		Card is swiped, tapped or inserted. The tip amount is added to the total purchase amount.
		This screen is displayed during authentication for an EMV transaction.
		Cardholder selects their account type (if applicable). <b>Note:</b> The terminal shall display only the accounts that are available for the card entered, and are valid for the transaction.
		Cardholder enters their PIN or presses <b>[OK]/[Enter]</b> . <b>Note:</b> PIN bypass may or may not be allowed based on terminal

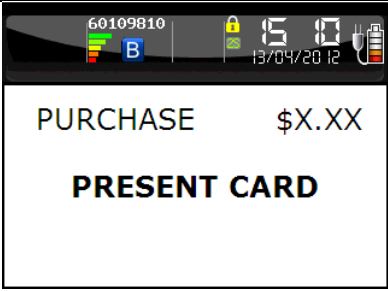

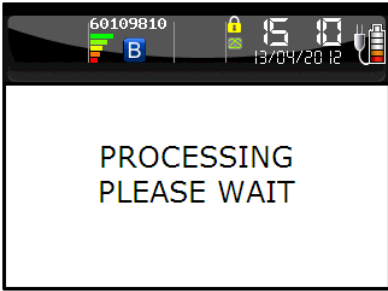
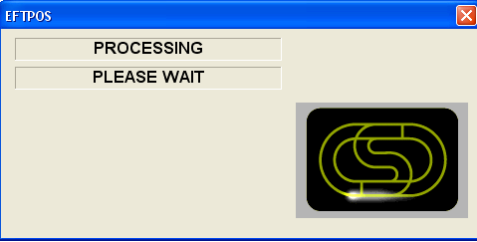
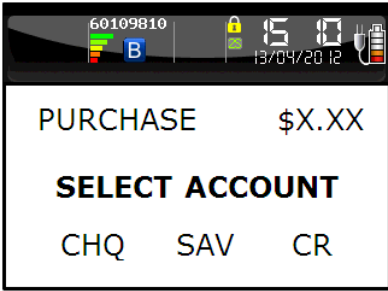
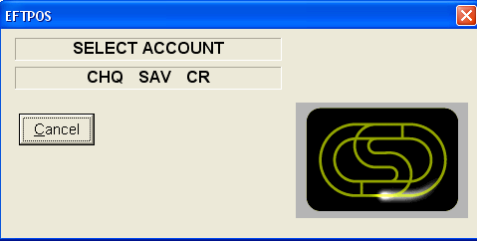
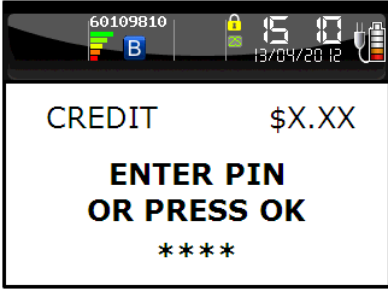

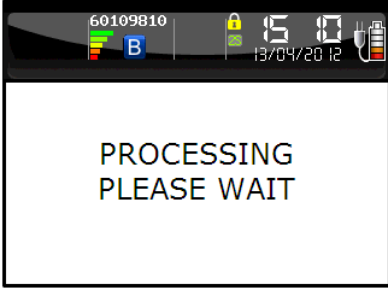
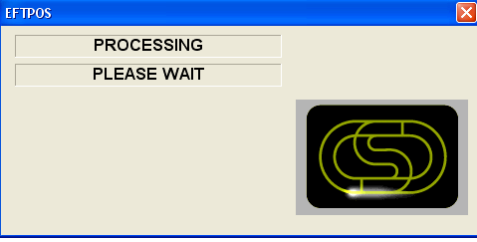
		<p>processing rules and configuration.</p>
		<p>This screen is displayed while the terminal attempts to send the transaction to the host.</p>
		<p>After the online attempt fails, (due to a failure to connect to the Bank or issuer), a screen is displayed on the terminal and on the POS if an authorisation code needs to be entered.</p>
		<p>The Operator enters the auth number on the POS.</p> <p><b>Note:</b> If an authorisation code is required, the terminal shall prompt the merchant via the POS for entry of the value they obtain from the help desk. There is no timeout on the POS screen as it can take some time to call and obtain the value. The Operator can press the cancel button on the POS if they want to end the transaction.</p>
		<p>For magstripe transactions, this screen is displayed to indicate that a signature is required to complete the transaction.</p> <p>Operator verifies signature and presses [Yes] or [No] on the POS.</p>

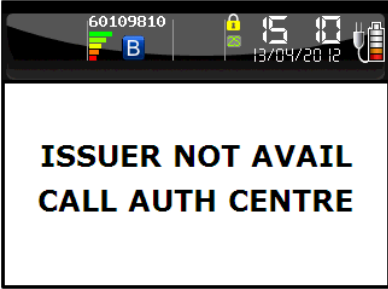

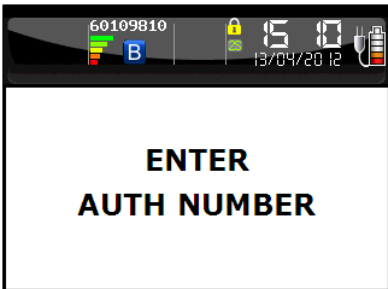

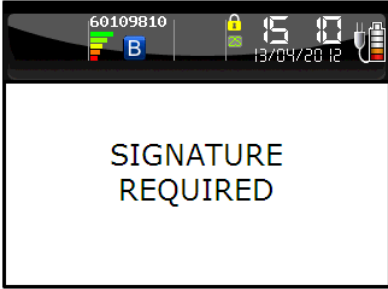
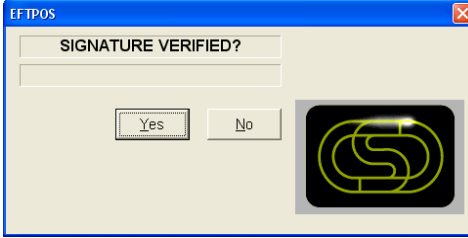
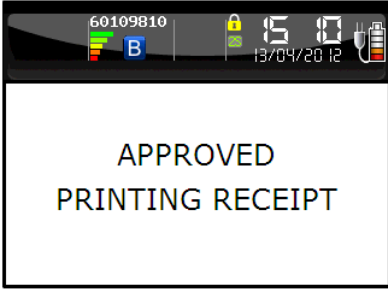

 <p>A screenshot of a mobile device screen. At the top, there is a status bar with the number 60109810, a signal strength indicator, a battery icon, and the time 13/04/2012. Below the status bar, the text 'SIGNATURE REQUIRED' is displayed in a large, bold, black font.</p>		<p><b>Note:</b> The timeout for the signature required prompt will be configurable via a TMS parameter.</p>
 <p>A screenshot of a mobile device screen. At the top, there is a status bar with the number 60109810, a signal strength indicator, a battery icon, and the time 13/04/2012. Below the status bar, the text 'APPROVED PRINTING RECEIPT' is displayed in a large, bold, black font.</p>	 <p>A screenshot of a PC window titled 'EFTPOS'. The window has a blue title bar with a close button. The main content area is light gray and contains the text 'APPROVED' in a bold, black font. Below the text is an 'OK' button. To the right of the text is a black square icon with a yellow signature.</p>	<p>This screen is displayed if the signature is correct and the transaction is approved.</p> <p><b>Note:</b> The timeout period for this display is determined by the TMS parameter 'Dialog Timeout'.</p>

**PCEFTPOS Tipping:** PCEFTPOS tipping uses the tipping DLL provided by PCEFTPOS.

The transaction has to be initiated by checking the "Enable Tip" flag on the POS. Terminal will enter the slave mode application and perform the tipping functionality as described in the screens below.

Terminal Display	POS Display	Action
	<p>Not Applicable</p>	<p>Operator initiates purchase transaction on the POS by selecting the transaction type, and entering the purchase amount with the "Enable Tip" option checked.</p>
		<p>The control is transferred to the slave application and the tip screen appears. Press Enter to enter Tip or Cancel to skip the Tip entry screen.</p>
		<p>Different options are provided for entering the Tip amount. Select any of the pre existing options or press ENTER to enter a manual tip amount.</p>
		<p>Manual tip entry screen is displayed. Enter the tip amount there is no % limit for the tip amount.</p>
		<p>Tip Confirmation screen which displays the purchase amount, tip amount and the total amount for the transaction. Press Enter for Confirmation or Cancel to cancel the tip.</p>
		<p>Card is swiped, tapped or inserted. The tip amount is added to the total purchase amount.</p>

 <p>PURCHASE \$X.XX <b>PRESENT CARD</b></p>	 <p>EFTPOS PRESENT CARD Cancel</p>	
 <p>PROCESSING PLEASE WAIT</p>	 <p>EFTPOS PROCESSING PLEASE WAIT Cancel</p>	<p>This screen is displayed during authentication for an EMV transaction.</p>
 <p>PURCHASE \$X.XX <b>SELECT ACCOUNT</b> CHQ SAV CR</p>	 <p>EFTPOS SELECT ACCOUNT CHQ SAV CR Cancel</p>	<p>Cardholder selects their account type (if applicable).</p> <p><b>Note:</b> The terminal shall display only the accounts that are available for the card entered, and are valid for the transaction.</p>
 <p>CREDIT \$X.XX <b>ENTER PIN OR PRESS OK</b> ****</p>	 <p>EFTPOS ENTER PIN OR PRESS OK Cancel</p>	<p>Cardholder enters their PIN or presses <b>[OK]/[Enter]</b>.</p> <p><b>Note:</b> PIN bypass may or may not be allowed based on terminal processing rules and configuration.</p>
 <p>PROCESSING PLEASE WAIT</p>	 <p>EFTPOS PROCESSING PLEASE WAIT Cancel</p>	<p>This screen is displayed while the terminal attempts to send the transaction to the host.</p>
		<p>After the online attempt fails,</p>

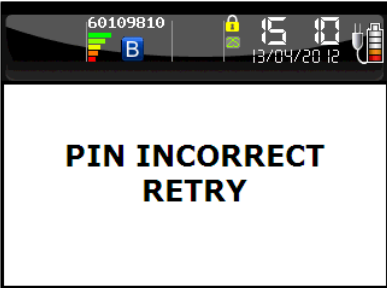
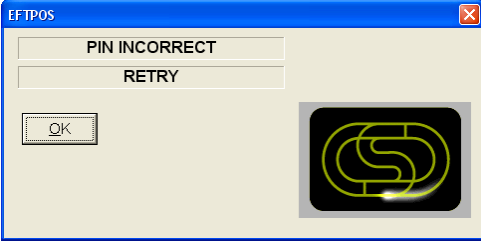
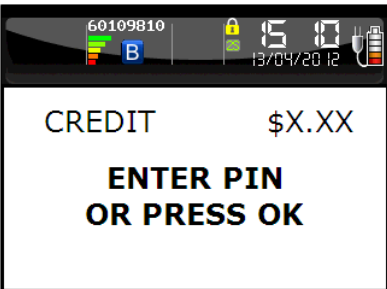
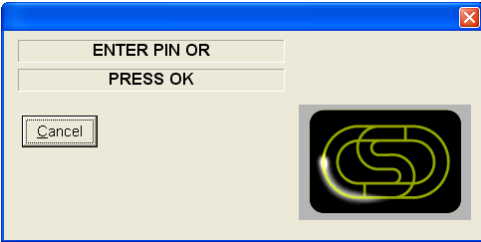
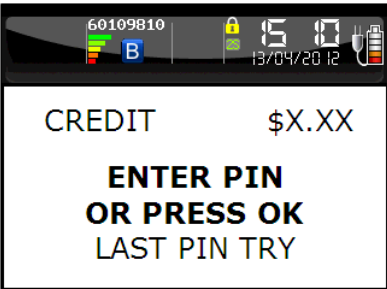
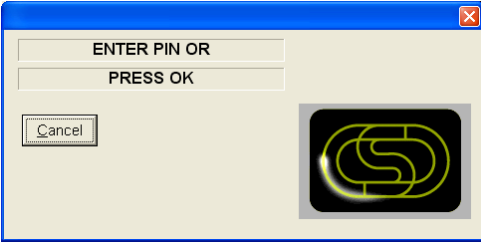
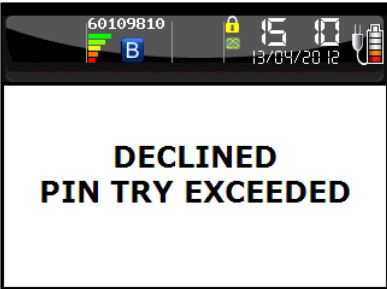
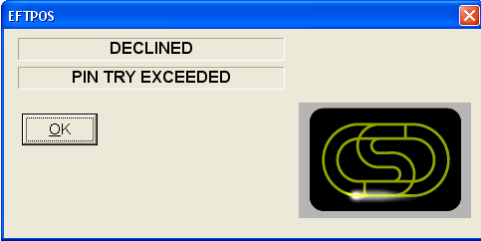
 <p><b>ISSUER NOT AVAIL CALL AUTH CENTRE</b></p>		<p>(due to a failure to connect to the Bank or issuer), a screen is displayed on the terminal and on the POS if an authorisation code needs to be entered.</p>
 <p><b>ENTER AUTH NUMBER</b></p>		<p>The Operator enters the auth number on the POS.</p> <p><b>Note:</b> If an authorisation code is required, the terminal shall prompt the merchant via the POS for entry of the value they obtain from the help desk. There is no timeout on the POS screen as it can take some time to call and obtain the value. The Operator can press the cancel button on the POS if they want to end the transaction.</p>
 <p><b>SIGNATURE REQUIRED</b></p>		<p>For magstripe transactions, this screen is displayed to indicate that a signature is required to complete the transaction.</p> <p>Operator verifies signature and presses [Yes] or [No] on the POS.</p> <p><b>Note:</b> The timeout for the signature required prompt will be configurable via a TMS parameter.</p>
 <p><b>APPROVED PRINTING RECEIPT</b></p>		<p>This screen is displayed if the signature is correct and the transaction is approved.</p> <p><b>Note:</b> The timeout period for this display is determined by the TMS parameter 'Dialog Timeout'.</p>



## 2.4 Non-Financial Screens

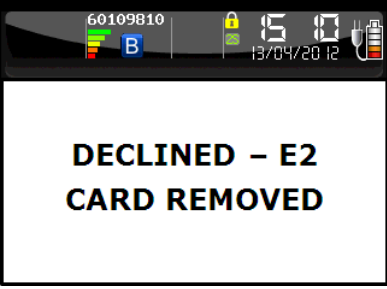
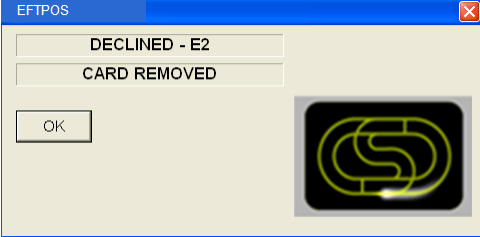
### 2.4.1 PIN Incorrect

The following screens are displayed in the event of a PIN error.

Terminal Display	POS Display	Action
		<p>This screen is displayed if a response code 55 is returned from the bank indicating the PIN was incorrect but that the cardholder can try again.</p> <p><b>Note:</b> This is for mag stripe transactions and EMV offline PIN only. Online PIN with EMV will not allow PIN retry.</p>
		<p>Terminal reverts back to the PIN entry prompt.</p>
		<p>This screen is displayed for offline PIN EMV transactions where the PIN tries remaining counter on the card has been decremented to 1.</p>
		<p>This screen is displayed if a response code 75 is returned from the bank indicating the PIN was incorrect and the cardholder has exceeded the number of tries.</p>

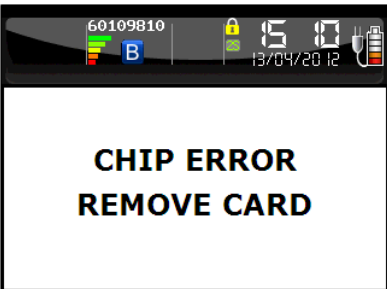
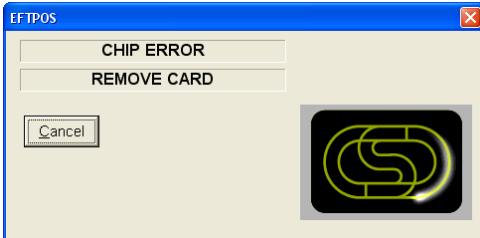
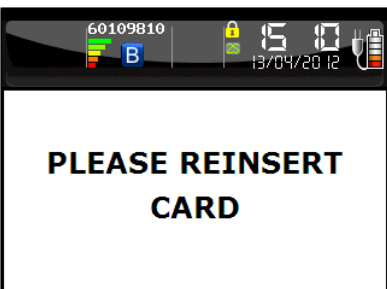
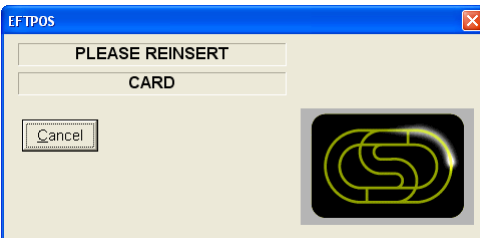
### 2.4.2 EMV Early Card Removal

The following screen is displayed in the event the chip card is removed from the reader prior to the completion on the transaction.

Terminal Display	POS Display	Action
		<p>This screen is displayed if the card is removed prior to the completion of the transaction. The terminal will then return to idle.</p>

### 2.4.3 EMV Technical Fall back

The following screens are displayed when the terminal does not receive a response after a card has been inserted into the chip reader or in the event an error is returned.

Terminal Display	POS Display	Action
		<p>This screen is displayed in the event a mute card is inserted into the chip reader i.e. a damaged chip, a card inserted the wrong way, a non-chip card inserted in chip reader.</p> <p><b>Note:</b> The screen will remain displayed until the card is removed.</p>
		<p>Once the card has been removed, the terminal will prompt the operator to re-insert the card.</p>
		<p>When the terminal cannot read the card after the second attempt and the scheme fallback parameter is enabled, the terminal will prompt the operator to use the magstripe reader.</p>

<p>Terminal display showing 'CHIP ERROR SWIPE CARD' with a status bar at the top containing the number 60109810, a lock icon, a battery icon, and the date 13/04/20 12.</p>	<p>EFTPOS window showing 'CHIP ERROR SWIPE CARD' with a 'Cancel' button and a stylized 'S' logo on the right.</p>	<p><b>Note:</b> Screen is displayed until the card is swiped.</p>
<p>Terminal display showing 'UNABLE TO PROCESS' with the same status bar as above.</p>	<p>EFTPOS window showing 'UNABLE TO PROCESS' with an 'OK' button and the stylized 'S' logo on the right.</p>	<p>This screen is displayed if the terminal is unable to read the card on the second attempt and the scheme fall back parameter is disabled.</p>

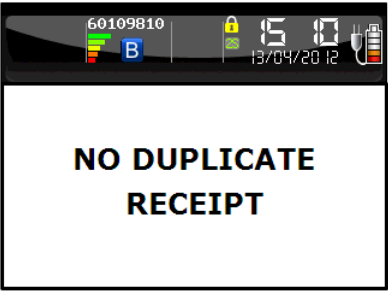
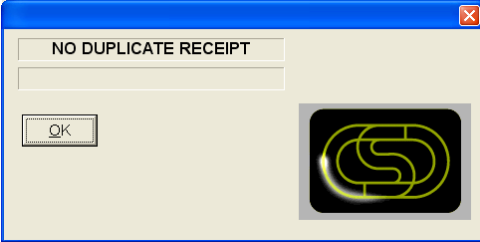
#### 2.4.4 Reversal Processing

The following screens are displayed in the event that a reversal is pending in the terminal.

Terminal Display	POS Display	Action
<p>Terminal display showing 'READY R' with the CommonwealthBank logo below. The status bar at the top is the same as in previous screenshots.</p>	<p>Not Applicable</p>	<p>An 'R' will be displayed in the top right hand corner if a reversal is pending.</p>
<p>Terminal display showing 'SENDING REVERSAL PLEASE WAIT' with the same status bar.</p>	<p>EFTPOS window showing 'SENDING REVERSAL PLEASE WAIT' with the stylized 'S' logo on the right.</p>	<p>This screen is displayed if a reversal is pending in the terminal and a condition has been satisfied to attempt to clear.</p>


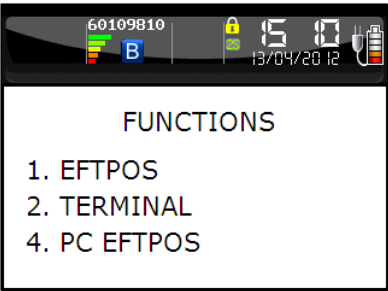
### 2.4.5 No Duplicate Receipt

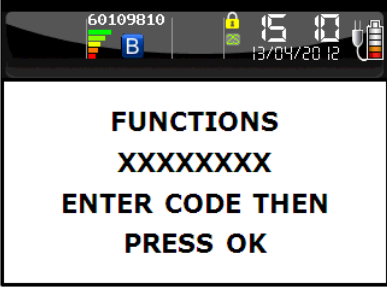
The following screens are displayed when a duplicate receipt command is triggered there are no receipts stored in the terminal.

Terminal Display	POS Display	Action
		<p>This screen is displayed when there are no receipts stored on the terminal.</p>

### 2.4.6 PC-EFTPOS Functions Menu

The following screens show how the PC-EFTPOS functions can be accessed using function codes.

Terminal Display	POS Display	Action
	<p>Not Applicable</p>	<p>The operator presses the <b>[Menu]</b> or <b>[Func]</b> button to enter the main Functions Menu.</p>
	<p>Not Applicable</p>	<p>The operator presses the <b>[4]</b> key to enter the PC-EFTPOS Functions Menu.</p>
	<p>Not Applicable</p>	<p>The operator enters a function code and presses <b>[OK]/[Enter]</b>.</p> <p><b>Note:</b> The table below lists the available PC-EFTPOS functions</p>

		<p>and the corresponding function codes.</p>
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The table below lists all of the available PC-EFTPOS functions:

Function Code	Description
7410	Configure terminal
4648	Perform RSA Initialisation
6566	Transmit Reversals and SAF
11112223	Application Configuration Menu
11112222 & 11112227	Configure Terminal Communications
11113333	Perform TMS Logon
11114440	Show EFT-Client on POS
11114441	Show EFTSRV on POS
11114442	Show EMS-client on POS
11114456	Set Date/Time

**Note:** All print functions will be accessed via the diagnostics function on the PC-EFTPOS Client. From there a configuration report listing all parameters can be printed.

## 2.5 Host Response Codes

AS2805 Response	Description	Print Message	POS Display	Terminal Display
00	Approved or completed successfully	APPROVED – 00	APPROVED	APPROVED
01	Refer to card issuer	DECLINED – 01 CONTACT CARD ISSUER	DECLINED – 01 CONTACT CARD ISSUER	DECLINED – 01 CONTACT CARD ISSUER
03	Invalid Merchant	DECLINED – 03 INVALID MERCHANT	DECLINED – 03 INVALID MERCHANT	DECLINED – 03 INVALID MERCHANT
04	Pick-up Card	DECLINED – 04 CONTACT CARD ISSUER	DECLINED – 04 CONTACT CARD ISSUER	DECLINED – 04 CONTACT CARD ISSUER
08	Honour with identification	APPROVED – 08	SIGNATURE REQUIRED	SIGNATURE REQD
11	Approved, No signature is required	APPROVED – 11	APPROVED	APPROVED
12	Invalid Transaction	DECLINED – 12 INVALID TRANSACTION	DECLINED – 12 INVALID TRANSACTION	DECLINED – 12 INVALID TRANS
13	Invalid Amount	DECLINED – 13 INVALID AMOUNT	DECLINED – 13 INVALID AMOUNT	DECLINED – 13 INVALID AMOUNT
14	Invalid Card Number (no such number)	DECLINED – 14 INVALID CARD NUMBER	DECLINED – 14 INVALID CARD NUMBER	DECLINED – 14 INVALID CARD NUM
21 on Transaction	No Action Taken	DECLINED – 21 SYSTEM ERROR	DECLINED – 21 SYSTEM ERROR	DECLINED – 21 SYSTEM ERROR
21 on Reversal or SAF	Approved reversal or SAF	NA	NA	NA
36	Restricted Card	DECLINED – 36 BANK NOT AVAILABLE	DECLINED – 36 BANK NOT AVAILABLE	DECLINED – 36 BANK NOT AVAIL

<b>AS2805 Response</b>	<b>Description</b>	<b>Print Message</b>	<b>POS Display</b>	<b>Terminal Display</b>
39	No Credit Account	DECLINED – 39 NO CREDIT ACCOUNT	DECLINED – 39 NO CREDIT ACCOUNT	DECLINED -39 NO CREDIT ACCT
41	Lost Card	DECLINED – 41 PHONE AUTH CENTRE	DECLINED – 41 PHONE AUTH CENTRE	DECLINED – 41 PHONE AUTH CENTR
42	No Universal Account	DECLINED – 42 NO ACCOUNT	DECLINED – 42 NO ACCOUNT	DECLINED – 42 NO ACCOUNT
43	Stolen card pick up	DECLINED – 43 PHONE AUTH CENTRE	DECLINED – 43 PHONE AUTH CENTRE	DECLINED – 43 PHONE AUTH CENTR
51	Not Sufficient Funds	DECLINED – 51 REFER CARD ISSUER	DECLINED – 51 REFER CARD ISSUER	DECLINED – 51 REFER CARD ISSUE
52	No Cheque Account	DECLINED – 52 NO CHEQUE ACCOUNT	DECLINED – 52 NO CHEQUE ACCOUNT	DECLINED – 52 NO CHEQUE ACCT
53	No Savings Account	DECLINED – 53 NO SAVINGS ACCOUNT	DECLINED – 53 NO SAVINGS ACCOUNT	DECLINED – 53 NO SAVINGS ACCT
54	Expired Card	DECLINED – 54 EXPIRED CARD	DECLINED – 54 EXPIRED CARD	DECLINED – 54 EXPIRED CARD
55	Incorrect PIN	DECLINED – 55 INCORRECT PIN	DECLINED – 55 INCORRECT PIN	DECLINED – 55 INCORRECT PIN
56	No Card Record	DECLINED – 56 CARD NOT VALID	DECLINED – 56 CARD NOT VALID	DECLINED – 56 CARD NOT VALID
57	Transaction not permitted to cardholder	DECLINED – 57 TRANS NOT ALLOWED	DECLINED – 57 TRANS NOT ALLOWED	DECLINED – 57 TRAN NOT ALLOWED
58	Transaction not permitted to terminal	DECLINED – 58 TRANS NOT ALLOWED	DECLINED – 58 TRANS NOT ALLOWED	DECLINED – 58 TRAN NOT ALLOWED
59	Suspected Fraud	DECLINED – 59 PHONE AUTH CENTRE	DECLINED – 59 PHONE AUTH CENTRE	DECLINED – 59 PHONE AUTH CENTR
60	Card Acceptor contact Acquirer	DECLINED – 60 PROCESSING ERROR	DECLINED – 60 PROCESSING ERROR	DECLINED – 60 PROCESSING ERROR
61	Exceeds Withdrawal Amount Limit	DECLINED – 61 OVER CARD LIMIT	DECLINED – 61 OVER CARD LIMIT	DECLINED – 61 OVER CARD LIMIT

<b>AS2805 Response</b>	<b>Description</b>	<b>Print Message</b>	<b>POS Display</b>	<b>Terminal Display</b>
62	Restricted Card	DECLINED – 62 TRANS NOT ALLOWED	DECLINED – 62 TRANS NOT ALLOWED	DECLINED – 62 TRANS NOT ALLOWED
75	Allowable PIN tries exceeded	DECLINED – 75 EXCEED PIN TRIES	DECLINED – 75 EXCEED PIN TRIES	DECLINED – 75 EXCEED PIN TRIES
91	Issuer or Switch Inoperative	DECLINED – 91 ISSUER NOT AVAILABLE	DECLINED – 91 ISSUER NOT AVAILABLE	DECLINED – 91 ISSUER NOT AVAIL
94	Duplicate Transaction	DECLINED – 94 DUPLICATE TRANS	DECLINED – 94 DUPLICATE TRANS	DECLINED – 94 DUPLICATE TRANS
96	System Malfunction	DECLINED – 96 RETRY TRANSACTION	DECLINED – 96 RETRY TRANSACTION	DECLINED – 96 RETRY TRANS
97	Reconcile Totals have been reset	SETTLED – 97	SETTLED – 97	SETTLED – 97
98	MAC Error	DECLINED – 98 MAC EROR	DECLINED – 98 MAC EROR	DECLINED – 98 MAC EROR
Q5	Settlement message already acknowledged.	DECLINED – Q5 ALREADY SETTLED	DECLINED – Q5 ALREADY SETTLED	DECLINED – Q5 ALREADY SETTLED
R1	Incorrect PIN Block Format	DECLINED – R1 PIN BLOCK ERROR	DECLINED – R1 PIN BLOCK ERROR	DECLINED – R1 PIN BLOCK ERROR
S1	Amount greater than Off-line-EFB credit/debit limit	DECLINED – S1 CALL FOR AUTH	DECLINED – S1 CALL FOR AUTH	DECLINED – S1 CALL FOR AUTH
Z6	Card Insertion Only – EMV	DECLINED – Z6 NO MANUAL ENTRY	DECLINED – Z6 NO MANUAL ENTRY	DECLINED – Z6 NO MANUAL ENTRY
Z8	Transaction amount too large	DECLINED – Z8 LOWER AMOUNT	DECLINED – Z8 LOWER AMOUNT	DECLINED – Z8 LOWER AMOUNT
Z9	Transaction Amount greater than Authorised Amount	DECLINED – Z9 INVALID AMOUNT	DECLINED – Z9 INVALID AMOUNT	DECLINED – Z9 INVALID AMOUNT



## 2.6 Terminal Response Codes

Response Code	Description	Print Message	POS Display	Terminal Display
E1	EMV Card is Mute	DECLINED – E1 MUTE CARD	DECLINED – E1 MUTE CARD	DECLINED – E1 MUTE CARD
E2	EMV card was removed before completion of the transaction	DECLINED – E2 CARD REMOVED	DECLINED – E2 CARD REMOVED	DECLINED – E2 CARD REMOVED
E3	EMV card is blocked	DECLINED – E3 CARD BLOCKED	DECLINED – E3 CARD BLOCKED	DECLINED – E3 CARD BLOCKED
E4	EMV Application is blocked	DECLINED – E4 APPLICATION BLOCKED	DECLINED – E4 APPLICATION BLOCKED	DECLINED – E4 APP BLOCKED
E5	EMV card error	DECLINED – E5 CARD ERROR	DECLINED – E5 CARD ERROR	DECLINED – E5 CARD ERROR
E6	AID's not supported	DECLINED – E6 CARD NOT ACCEPTED	DECLINED – E6 CARD NOT ACCEPTED	DECLINED – E6 CARD NOT ACCEPT
E7	Invalid EMV configuration	DECLINED – E7 EMV CONFIG ERROR	DECLINED – E7 EMV CONFIG ERROR	DECLINED – E7 EMV CONFIG ERROR
E8	Invalid Message received	DECLINED – E8 INVALID MESSAGE	DECLINED – E8 INVALID MESSAGE	DECLINED – E8 INVALID MESSAGE
EA	EMV PIN tries exceeded	DECLINED – EA PIN TRIES EXCEEDED	DECLINED – EA PIN TRIES EXCEEDED	DECLINED – EA PIN TRIES EXCEED
EB	Card Expired	DECLINED – EB EXPIRED CARD	DECLINED – EB EXPIRED CARD	DECLINED – EB EXPIRED CARD
EC	EMV Application not effective	DECLINED – EC INVALID CARD	DECLINED – EC INVALID CARD	DECLINED – EC INVALID CARD
ED	EMV Service not allowed	DECLINED – ED INVALID PRODUCT	DECLINED – ED INVALID PRODUCT	DECLINED – ED INVALID PRODUCT
EE	EMV fallback not allowed	DECLINED – EE SWIPE NOT ALLOWED	DECLINED – EE SWIPE NOT ALLOWED	DECLINED – EE SWIPE NOT ALLOW

<b>Response Code</b>	<b>Description</b>	<b>Print Message</b>	<b>POS Display</b>	<b>Terminal Display</b>
EF	EMV track2 Mismatch	DECLINED – EF TRACK 2 MISMATCH	DECLINED – EF TRACK 2 MISMATCH	DECLINED – EF TRACK 2 MISMATCH
EG	Refund Limit Exceeded	DECLINED – EG OVER REFUND LIMIT	DECLINED – EG OVER REFUND LIMIT	DECLINED – EG OVER LIMIT
EH	ICC read error	DECLINED – EH CHIP READ ERROR	DECLINED – EH CHIP READ ERROR	DECLINED – EH CHIP READ ERROR
EI	Manager password doesn't exist for refund	DECLINED – EI SET MANAGER PASSWORD	DECLINED – EI SET MANAGER PASSWORD	DECLINED – EI SET PASSWORD
IE	Insufficient battery level to process transaction	DECLINED – IE LOW BATTERY	DECLINED – IE LOW BATTERY	DECLINED – IE LOW BATTERY
M0	Message Format Error	DECLINED – M0 MESSAGE FORMAT ERROR	DECLINED – M0 MESSAGE FORMAT ERROR	DECLINED - M0 MSG FORMAT ERR
M1	STAN on response did not match request STAN	DECLINED – M1 STAN MISMATCHED	DECLINED – M1 STAN MISMATCHED	DECLINED – M1 STAN MISMATCHED
M2	Terminal ID on response did not match request Terminal ID	DECLINED – M2 TERM ID MISMATCH	DECLINED – M2 TERM ID MISMATCH	DECLINED – M2 TERM ID MISMATCH
M3	Non-existent merchant id was sent in the request from POS The merchant should initiate a logon to update the merchant list on the POS.	DECLINED – M3 INVALID MERCHANT	DECLINED – M3 INVALID MERCHANT	DECLINED – M3 INVALID MERCHANT

<b>Response Code</b>	<b>Description</b>	<b>Print Message</b>	<b>POS Display</b>	<b>Terminal Display</b>
M4	Multiple merchant processing is disabled on the terminal. The merchant can either request that multiple merchant processing is enabled by the host or process the transaction for the generic merchant.	DECLINED – M4 MULTI MERCH DISABLED	DECLINED – M4 MULTI MERCH DISABLED	DECLINED – M4 MULTI MERCH ERR
N0	Internal error, buffer size to small	DECLINED - NO SYSTEM ERROR	DECLINED - NO SYSTEM ERROR	DECLINED - NO SYSTEM ERROR
N1	File system error	DECLINED – N1 SYSTEM ERROR	DECLINED – N1 SYSTEM ERROR	DECLINED – N1 SYSTEM ERROR
N5	Record Doesn't Exist	DECLINED – N5 SYSTEM ERROR	DECLINED – N5 SYSTEM ERROR	DECLINED – N5 SYSTEM ERROR
N6	Invalid TLV tag	DECLINED – N6 SYSTEM ERROR	DECLINED – N6 SYSTEM ERROR	DECLINED – N6 SYSTEM ERROR
N7	Tag not found	DECLINED – N7 SYSTEM ERROR	DECLINED – N7 SYSTEM ERROR	DECLINED – N7 SYSTEM ERROR
P1	Transmission failure	DECLINED – P1 COMMUNICATION ERROR	DECLINED – P1 COMMUNICATION ERROR	DECLINED – P1 COMMS ERROR
P2	Communications receive timeout	DECLINED – P2 COMMUNICATION ERROR	DECLINED – P2 COMMUNICATION ERROR	DECLINED – P2 COMMS ERROR
P3	No acknowledgement received on PCEFTPOS communications	DECLINED – P3 COMMUNICATION ERROR	DECLINED – P3 COMMUNICATION ERROR	DECLINED – P3 COMMS ERROR
P4	PCEFTPOS communications protocol error	DECLINED – P4 COMMUNICATION ERROR	DECLINED – P4 COMMUNICATION ERROR	DECLINED – P4 COMMS ERROR

<b>Response Code</b>	<b>Description</b>	<b>Print Message</b>	<b>POS Display</b>	<b>Terminal Display</b>
P5	PCEFTPOS response invalid	DECLINED – P5 SYSTEM ERROR	DECLINED – P5 SYSTEM ERROR	DECLINED – P5 SYSTEM ERROR
P6	PCEFTPOS communications receive error	DECLINED – P6 COMMUNICATION ERROR	DECLINED – P6 COMMUNICATION ERROR	DECLINED – P6 COMMS ERROR
P7	Host communications connection timeout	DECLINED – P7 COMMUNICATION ERROR	DECLINED – P7 COMMUNICATION ERROR	DECLINED – P7 COMMS ERROR
PF	Print failed	DECLINED – PF PRINT FAILED	DECLINED – PF PRINT FAILED	DECLINED – PF PRINT FAILED
PR	POS request invalid	DECLINED - PR POS REQUEST INVALID	DECLINED - PR POS REQUEST INVALID	DECLINED - PR INVALID REQUEST
Q6	Signature Error	DECLINED – Q6 SIGNATURE ERROR	DECLINED – Q6 SIGNATURE ERROR	DECLINED – Q6 SIGNATURE ERROR
S0	Modem Error	DECLINED - S0 MODEM ERROR	DECLINED - S0 MODEM ERROR	DECLINED - S0 MODEM ERROR
S2	No Answer	DECLINED – S2 NO ANSWER	DECLINED – S2 NO ANSWER	DECLINED – S2 NO ANSWER
S3	Number Busy	DECLINED – S3 NUMBER BUSY	DECLINED – S3 NUMBER BUSY	DECLINED – S3 NUMBER BUSY
S4	No host phone number	DECLINED – S4 NO HOST PHONE NUMBER	DECLINED – S4 NO HOST PHONE NUMBER	DECLINED – S4 NO HOST NUMBER
S6	Carrier lost	DECLINED – S6 NO CARRIER	DECLINED – S6 NO CARRIER	DECLINED – S6 NO CARRIER
S7	No EFTServer	DECLINED – S7 NO EFT SERVER	DECLINED – S7 NO EFT SERVER	DECLINED – S7 NO EFT SERVER
S8	Link not setup on EFTServer	DECLINED – S8 NO EFT SERVER	DECLINED – S8 NO EFT SERVER	DECLINED – S8 NO EFT SERVER
SD	Message transmission interrupted by POS request	DECLINED – SD INTERRUPTED BY POS	DECLINED – SD INTERRUPTED BY POS	DECLINED – SD POS INTERRUPT

<b>Response Code</b>	<b>Description</b>	<b>Print Message</b>	<b>POS Display</b>	<b>Terminal Display</b>
T0	Terminal ready, returned in status request only	APPROVED	APPROVED	APPROVED
T2	No last transaction in terminal	DECLINED – T2 NO LAST TRANSACTION	DECLINED – T2 NO LAST TRANSACTION	DECLINED – T2 NO LAST TXN
T3	Invalid account selected	DECLINED – T3 INVALID ACCOUNT	DECLINED – T3 INVALID ACCOUNT	DECLINED – T3 INVALID ACCOUNT
T4	No Last Settlement details stored in terminal	DECLINED – T4 NO LAST SETTLEMENT	DECLINED – T4 NO LAST SETTLEMENT	DECLINED – T4 NO LAST SETTLMNT
T5	Cashout on International Cards	DECLINED - T5 CASHOUT NOT ALLOWED	DECLINED - T5 CASHOUT NOT ALLOWED	DECLINED - T5 CASHOUT NOT ALLOWED
T6	Cashout transaction above the cash out limit	DECLINED – T6 CASHOUT OVER LIMIT	DECLINED – T6 CASHOUT OVER LIMIT	DECLINED – T6 CASHOUT OVER LIM
TA	Card not accepted	DECLINED – TA CARD NOT ACCEPTED	DECLINED – TA CARD NOT ACCEPTED	DECLINED – TA CARD NOT ACCEPT
TC	LUHN check failed	DECLINED – TC INVALID CARD NUMBER	DECLINED – TC INVALID CARD NUMBER	DECLINED – TC INVALID CARD NO
TF	Logon Required	DECLINED – TF LOGON REQUIRED	DECLINED – TF LOGON REQUIRED	DECLINED – TF LOGON REQUIRED
TI	Operator Timeout	DECLINED – TI OPERATOR TIMEOUT	DECLINED – TI OPERATOR TIMEOUT	DECLINED – TI OPERATOR TIMEOUT
TM	Operator Cancelled	DECLINED – TM OPERATOR CANCELLED	DECLINED – TM OPERATOR CANCELLED	DECLINED – TM CANCELLED
TU	SAF pending	DECLINED – TU SAF PENDING	DECLINED – TU SAF PENDING	DECLINED – TU SAF PENDING
TV	Reversal pending	DECLINED – TV REVERSAL PENDING	DECLINED – TV REVERSAL PENDING	DECLINED – TU SAF PENDING

<b>Response Code</b>	<b>Description</b>	<b>Print Message</b>	<b>POS Display</b>	<b>Terminal Display</b>
TX	Card not accepted by CPAT	DECLINED – TX CARD NOT ACCEPTED	DECLINED – TX CARD NOT ACCEPTED	DECLINED – TX CARD NOT ACCEPT
X0	No Response	DECLINED – X0 NO RESPONSE	DECLINED – X0 NO RESPONSE	DECLINED – X0 NO RESPONSE
X7	MAC error	DECLINED – X7 MAC ERROR	DECLINED – X7 MAC ERROR	DECLINED – X7 MAC ERROR
X8	CNP Error	DECLINED – X8 CNP ERROR	DECLINED – X8 CNP ERROR	DECLINED – X8 CNP ERROR
XA	Header Length Error	DECLINED – XA HEADER LENGTH ERROR	DECLINED – XA HEADER LENGTH ERROR	DECLINED – XA HEADER LENGTH
XD	No Manual Entry Allowed	DECLINED – XD NO MANUAL ENTRY	DECLINED – XD NO MANUAL ENTRY	DECLINED – XD NO MANUAL ENTRY
XE	Transaction type not on card	DECLINED – XE TXN NOT SUPPORTED	DECLINED – XE TXN NOT SUPPORTED	DECLINED – XE TXN NOT SUPPORTED
XG	Transaction type not supported	DECLINED – XG TXN NOT SUPPORTED	DECLINED – XG TXN NOT SUPPORTED	DECLINED – XG TXN NOT SUPPORTED
XT	Configuration Required	DECLINED – XT CONFIG REQUIRED	DECLINED – XT CONFIG REQUIRED	DECLINED – XT CONFIG REQUIRED
XU	Batch Full	DECLINED – XU BATCH FULL	DECLINED – XU BATCH FULL	DECLINED – XU BATCH FULL
XX	Undefined error	DECLINED – XX SYSTEM ERROR	DECLINED – XX SYSTEM ERROR	DECLINED – XX SYSTEM ERROR
Y1	EMV offline approved	APPROVED – Y1	APPROVED	APPROVED
Y3	EMV unable to go online approved	APPROVED – Y3	APPROVED	APPROVED
Z1	EMV offline declined	DECLINED – Z1 CARD DECLINED	DECLINED – Z1 CARD DECLINED	DECLINED – Z1 CARD DECLINED

<b>Response Code</b>	<b>Description</b>	<b>Print Message</b>	<b>POS Display</b>	<b>Terminal Display</b>
Z3	EMV unable to go online, where 'X' = reason code, 'Y' = explanation	DECLINED – 'XX' 'YYYYYYYYYYYYYYYYYYYY'	DECLINED – 'XX' 'YYYYYYYYYYYYYYYYYYYY'	DECLINED – 'XX' 'YYYYYYYYYYYYYYYY YYYYYY'
Z4	EMV host approved, card declined	DECLINED – Z4 CARD DECLINED	DECLINED – Z4 CARD DECLINED	DECLINED – Z4 CARD DECLINED
Z5	Terminal Power failed during transaction	DECLINED – Z5 POWER FAIL	DECLINED – Z5 POWER FAIL	DECLINED – Z5 POWER FAIL